

# CITY of NOVI CITY COUNCIL

**Agenda Item L**  
**January 26, 2009**

**SUBJECT:** Approval to award a contract for design engineering services for the West Oaks Regional Detention Basin Improvements project to Spalding DeDecker, for a not-to-exceed fee of \$9,100.

**SUBMITTING DEPARTMENT:** Engineering *ES*

**CITY MANAGER APPROVAL:** *pu A*

<b>EXPENDITURE REQUIRED</b>	<b>\$ 9,100</b>
<b>AMOUNT BUDGETED</b>	<b>\$ 84,000</b>
<b>APPROPRIATION REQUIRED</b>	<b>N/A</b>
<b>LINE ITEM NUMBER</b>	<b>210-211.00-865.133</b>

**BACKGROUND INFORMATION:**

The West Oaks Regional Detention Basin is located on City property adjacent to Donelson Drive in the southwest portion of the West Oaks shopping center, and serves the majority of this shopping center. The basin is maintained by the City of Novi, and has been identified as a high priority improvement in the 2007 Storm Water Master Plan Phase II. The project includes the repair or replacement of two inlet pipes, repair of eroded areas at an inlet and along banks, improvement of the outlet control structure, improved access to the basin, storm water pretreatment and basin habitat improvements, and other minor tasks. A map has been included for reference.

The attached Request for Proposals (RFP) was sent to the six engineering consulting firms that have been pre-qualified for utility engineering work. Four proposals were received and each was evaluated using Qualifications Based Selection (QBS) procedures. The results of staff review of the proposals are as follows:

Firm	Design Fee	Construction Engineering Fee %	Staff Review Score	Proposal Rank
Spalding DeDecker	\$9,100	7.3 %	1572.5	1
Orchard Hiltz & McCliment	\$29,000	9.7 %	1265	2
URS Corporation	\$19,500	7.5 %	1135	3
Anderson Eckstein & Westrick	\$16,188	10.0 %	1027.5	4

Of the four firms that submitted proposals, Spalding DeDecker had the highest staff review score and met all requirements listed in the RFP (see attached Spalding DeDecker proposal dated January 8, 2009 and Engineering staff's proposal scoring summary for reference). Spalding DeDecker had the lowest design fee and the lowest overall construction engineering fee percentage. As with other recent projects, only the design fee is being awarded at this time. Construction engineering will be awarded at the time of construction award.

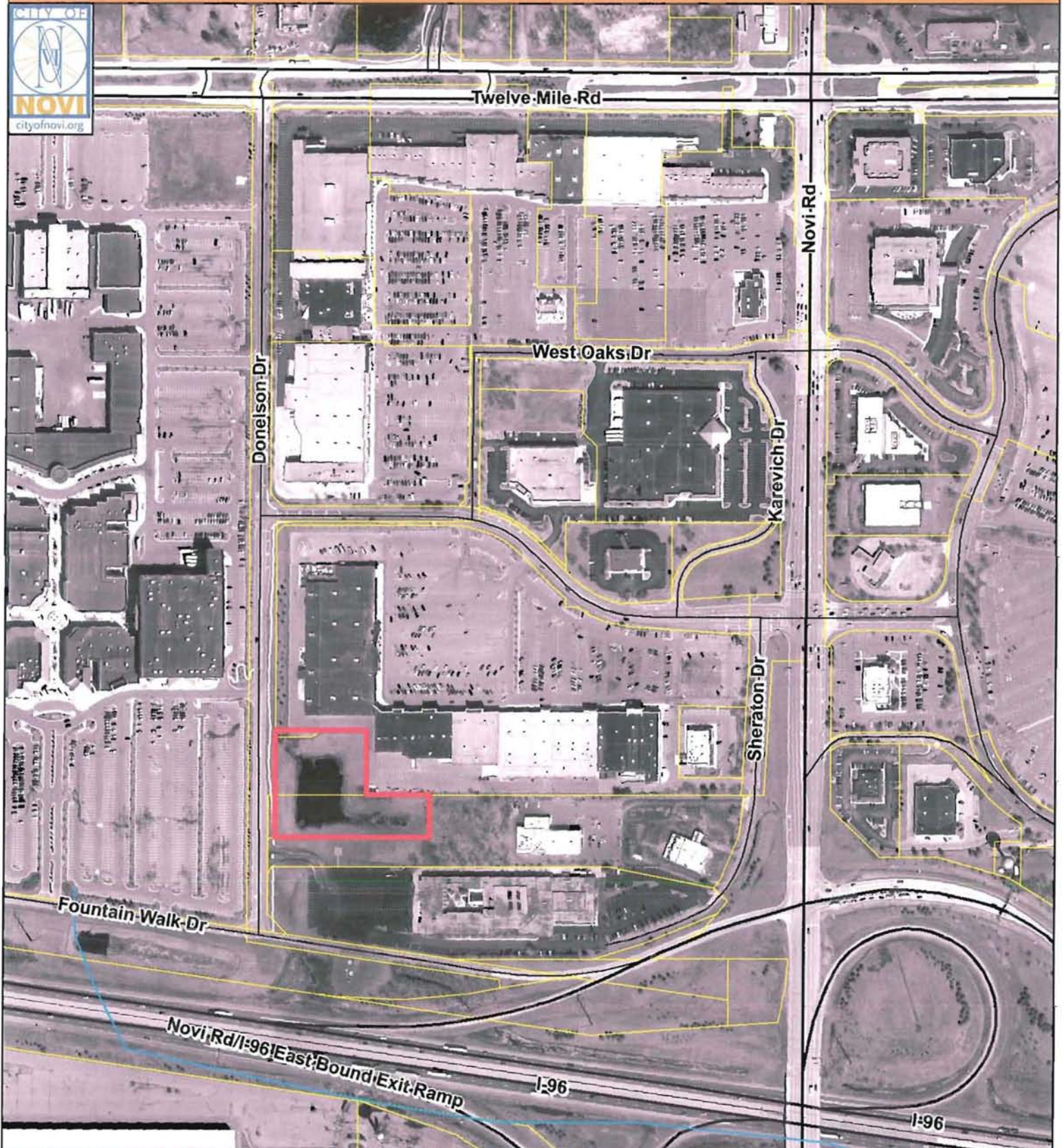
Spalding DeDecker has completed engineering services for many recent projects for the City including the Crowe/Ingersol Drive rehabilitation, the Meadowbrook Commons Detention Basin retrofit, and the 11 Mile/Delwal water main extension.

**RECOMMENDED ACTION:** Approval to award a contract for design engineering services for the West Oaks Regional Detention Basin Improvements project to Spalding DeDecker, for a not-to-exceed fee of \$9,100.

	1	2	Y	N
<b>Mayor Landry</b>				
<b>Mayor Pro Tem Gatt</b>				
<b>Council Member Burke</b>				
<b>Council Member Crawford</b>				

	1	2	Y	N
<b>Council Member Margolis</b>				
<b>Council Member Mutch</b>				
<b>Council Member Staudt</b>				

# WEST OAKS REGIONAL DETENTION BASIN Location Map



## CITY OF NOVI

ENGINEERING DIVISION  
45175 W TEN MILE RD  
NOVI, MI 48375-3024  
(248) 347-0454  
MAP AUTHOR: Ben Gray



1 INCH = 400 FEET

MAP PRINT DATE: 12/16/09

### 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 1979 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

## SCORING SUMMARY

**Project Description:** Design Engineering for West Oaks Basin Improvements

**RANK 1= LOW, x= BEST (x = number of firms reponding)**

<b>TOTAL SCORES</b>	<i>Item weight:</i> 25	30	30	15	Totals	<i>Rank</i>
Anderson Eckstein & Westrick	10.5	14	7.5	8	<b>1027.5</b>	4
Fishbeck Thompson Carr & Huber	No Proposal Submitted					
Orchard Hiltz & McCliment	5	14	15.5	17	<b>1265</b>	2
Stantec	No Proposal Submitted					
Spalding DeDecker	20	15	14.5	12.5	<b>1572.5</b>	1
URS Corporation	14.5	7	12.5	12.5	<b>1135</b>	3

TOTALS 50 50 50 50

### SCORING CRITERIA

1. Engineering Fee
2. Evaluation of Approach and Understanding of Project, Evaluation of Schedule, and Proposed Staff
3. Analysis of subjective statements applicable to the project as required on the RFP (Value added items)
4. Evaluation of past performance on City projects



## REQUEST FOR PROPOSALS CITY OF NOVI

### ENGINEERING SERVICES FOR WEST OAKS REGIONAL DETENTION BASIN IMPROVEMENTS

December 17, 2008

This Request for Proposals (RFP) for West Oaks Regional Detention Basin Improvements is being sent to the firms selected in the Utility Qualification Process completed on March 19, 2007.

#### **Project Description**

The project consists of the repair and improvement of the West Oaks Regional Detention Basin located in the southwest portion of the West Oaks shopping center, west of Novi Road and south of Twelve Mile. The project includes the repair or replacement of two inlet pipes, repair of eroded areas at an inlet and along banks, improvement of the outlet control structure, improved access to the basin, recommendation for storm water pretreatment, recommendation for basin habitat improvement, and other minor tasks.

The basin is located on City property adjacent to Donelson Drive. As-built plans for two projects related to this basin are included in Exhibit B for your reference. This project was recommended by the 2005 Storm Water Master Plan Phase II which can be reviewed on our website or via this link: <http://www.cityofnovi.org/Services/PublicWorks/StormWaterInfo.asp#MasterPlanPhaseIIFeb2007>

The original construction estimate for the project, which did not include the storm water pre-treatment or the pump station abandonment, was \$108,000. Construction of the project should occur during the summer of 2009.

#### **SCOPE OF SERVICES**

The selected consultant shall conduct the following activities:

- 1.) Upon authorization by the City Council and the City Engineer, the Consultant shall:
  - Review the Storm Water Phase II recommendations relating to this project, visit the site, and review the existing basin drawings.
  - Attend a kick-of meeting with city staff.
  - Determine the extent of storm water pretreatment appropriate for each of the basin inlets (e.g. oil/gas separation, sedimentation treatment, no treatment). The vegetated channels and open water areas downstream of this development shall be evaluated to determine the level of treatment provided by these existing features and to determine whether additional treatment is necessary at the basin inlets.
  - Determine the potential benefit of the installation of stump islands and habitat improvement structures to the open water area as recommended in the Phase II Storm Water Master Plan. This may include minor sediment removal.
  - Prepare a preliminary design and construction cost estimate for the following project components:
    - repair or replacement of two 24-inch inlet pipes that have separated at a joint,
    - restoration of the eroded areas around the 48-inch inlet pipe,

- raising the bar grate on the outlet control structure 4-6 inches above the concrete structure to prevent clogging,
  - construction of a reinforced, vegetated swale at two locations along the north side of the basin that accept drainage from the parking lot to the north. The vegetated swale should be designed with the intent to provide some level of pretreatment prior to discharge into the basin.
  - installation of a gauge so the depth of sediment and standing water can be determined from the bank of the basin,
  - construction of an access drive to the basin outlet control structure from Donelson Drive,
  - abandon the old storm sewer pump station at the northwest corner of the basin (outside the limits of the basin), which appears to have been already partially abandoned,
  - installation of pretreatment structures or other pretreatment method, if deemed necessary.
  - installation of stump islands and habitat improvement structures to the open water area, if deemed necessary,
- Contact and coordinate with all utility companies with facilities within the project boundary.
  - Prepare construction plans specifications and cost estimates for the project (see tasks listed above). The plans must comply with City of Novi standards and regulations unless otherwise approved by the City Engineer. A revised construction cost estimate will be required prior to bidding.
  - Coordinate all work with state and local agencies to acquire any permits required. The consultant shall include a permit application fees as part of their design phase fees.
- 2.) The Consultant shall complete a soil erosion and sedimentation control plan for the project in compliance with Part 91 of P.A. 451 of 1994, Chapter 29 of the Novi Code of Ordinances and the City of Novi SESC Program Manual. The consultant shall also provide a completed SESC application, SESC Checklist and three (3) sets of plans at such time as the SESC plan has been approved by Engineering.
- 3.) The consultant shall provide a Progress Status Report to the Engineering Department every other Friday (beginning on 1/23) using the form provided by the Engineering Department.
- 4.) In addition to the submittals stated elsewhere in this scope, the Consultant shall provide the following submittals:
- The Consultant shall submit **four (4) sets** of plans and one (1) copy of cost estimates for review to the City Engineer at 30% complete.
  - The Consultant shall submit **four (4) sets** of plans and **one (1) set** of specifications and a construction cost estimate at 90% complete for review and comment.
  - The Consultant shall distribute **four (4) sets** of as-bid drawings and specifications to the City at the time of construction bidding (clearly marked as "BID SET") along with all subsequent addenda at the same time they are sent to planholders. The submittals shall be made to the following departments directly as shown in the schedule below:

Department	Bid Sets (Paper) AND All Addenda	Addenda Only	Electronic Version of Bid Set
City Clerk's Office 45175 W Ten Mile, Novi, MI 48375	1 set		
Lisa DeMeo, Engineering 45175 W Ten Mile, Novi, MI 48375	2 sets		1 set
Sue Morianti, Purchasing 45175 W Ten Mile, Novi, MI 48375		1 set	
Benny McCusker, DPW 26300 Delwal, Novi, MI 48375	1 set		

- The consultant shall also submit the as-bid drawings and specifications in pdf format to the City Engineer at the time of bidding as well as a CD of the digital file converted to AutoCAD format.
  - The Consultant shall also provide all plan sets required for permit application submittal to any agencies as required.
  - At the end of the project, the consultant shall submit to City Engineering all project reports and documents, and written recommendation regarding final acceptance of the project. The Consultant, shall also prepare record drawings and transmit one (1) digital copy of as-built plan in .tif format (400 dpi minimum), two (2) plan copies, and a CD containing the digital file of the record drawings in the City standard format (AutoCAD), and provide such information to the Engineering Division within three (3) months following substantial completion of the project.
- 5.) As a part of the Design Phase, the Consultant shall prepare bid documents and provide assistance to the City Engineering and Purchasing Departments with the bidding of the project, including coordinating and facilitating the pre-bid meeting, preparation of contract addenda, plan revisions, responding to bidder inquiries, review of bids, and recommendation of award to City Engineering. All bidding activities shall be coordinated through the Engineering Division and Purchasing Department. Following the bid opening, the consultant shall provide to Sue Morianti, Purchasing Manager (via email [smorianti@cityofnovi.org](mailto:smorianti@cityofnovi.org) ) the planholders list for the project and documentation that all addenda, if any, were sent to all planholders. The consultant shall copy the Project Manager in Engineering on this email. The consultant shall also provide bid tabulation and award recommendation letter to Engineering (with a copy sent to the Purchasing Manager).
- 6.) Contract administration services shall include, but not be limited to: reviewing shop drawings furnished by the contractor at the pre-construction meeting, coordinating and running the pre-construction meeting, ensuring compliance with contract documents, regular consultation with City Engineering, interpretation of plans and specifications, preparation and certification of pay estimates, staking, full-time construction inspection during active construction, and materials testing along with final testing and project review. The Consultant must also promptly attend to resident concerns and complaints as they become known.
- 7.) During the construction phase the Consultant shall be responsible for administering and enforcing the soil erosion and sedimentation control plan as an agent for the City under the Authorized Public Agency (APA) program in compliance with the City of Novi *Authorized Public Agency Soil Erosion and Sedimentation Control Program Manual*. The Consultant shall also be responsible for soil erosion and sedimentation control inspections of the project for compliance with the approved soil erosion and sedimentation control plan. The inspections

must be completed by an individual who has current certification through the Michigan Department of Environmental Quality under Part 91. The inspections must occur at regular intervals and soil erosion and sedimentation control inspection logs must be maintained and provided to City staff as required. The Consultant shall also be responsible for instituting corrective measures in the field to prevent soil erosion and sedimentation as required, and for overseeing the Contractor's Storm Water Operator.

#### **DOCUMENT AND FILE FORMAT**

All documents shall be submitted to the City of Novi in an electronic format as specified by the Engineering Division.

#### **CONSULTANT QUALIFICATIONS**

The Consultant has been pre-qualified to provide engineering consulting services for utility projects.

#### **CONSULTANT SELECTION**

As a pre-qualified consultant, the selection for this project will be based on the fee proposal, which is labeled as Exhibit A, in addition to the consultant's project understanding, approach, schedule, staffing plan, and past performance on City engineering projects.

<u>Criteria</u>	<u>Weight</u>
Engineering Fee	25%
Evaluation of Approach and Understanding of Project, Evaluation of Schedule, and Proposed Staff	30%
Analysis of subjective statements applicable to the project as required on the RFP (Value added items)	30%
Evaluation of past performance on City projects	15%

The selected consultant will enter into an agreement with the City of Novi to perform the services listed in this Request for Proposals. The City's standard Consulting Engineering Agreement is included as Exhibit C.

#### **PROPOSAL SUBMITTALS**

To be considered, sealed fee proposals (and one UNBOUND original and five bound copies) must arrive at the Purchasing Department, 45175 W. Ten Mile Road, Novi, Michigan 48375 on or before **3:00 PM** Local Prevailing Time, **Thursday, January 8, 2009** addressed to City Clerk's office, and clearly labeled WEST OAKS REGIONAL DETENTION BASIN IMPROVEMENTS.

There will be no exceptions to this requirement and the City of Novi shall not be held responsible for late, lost, or misdirected proposals. Submitted proposals shall include:

- The completed fee proposal (Exhibit A).
- A proposed schedule for the project.
- A rate sheet or fee schedule depicting the Consultant's hourly rates that could be applied to additional work as may be necessary, for each category of staff that would work on the project.
- A detailed discussion of the proposed approach to the project, in detail (including any value-added concepts and related costs/savings that would improve the overall project (i.e., cost savings, time savings, innovation, etc.)).

**USE OF CITY LOGO IN YOUR PROPOSAL IS PROHIBITED.**



In the hiring of employees for the performance of work under this contract, neither the contractor, subcontractor, nor any person acting in their behalf shall by reason of race, creed, color, age, height, weight, sex, sexual preference or handicap discriminate against any person qualified to perform the work required in the execution of the contract.

All proposals must remain valid for one hundred twenty (120) days from due date and cannot be withdrawn during this period.

Questions regarding this Request for Proposals may be directed to:

Civil Engineer, Ben Croy, P.E. (248) 735-5635

-or-

Civil Engineer, Brian Coburn, P.E. (248) 735-5632

The City of Novi reserves the right to accept any or all alternative proposals and to award the project to other than the firm with the lowest fee proposal, waive any irregularities or informalities, or both, to reject any or all proposals, and in general, to make award in any manner deemed by the City, in its sole discretion, to be in the best interests of the City of Novi.

**Exhibits**

- A - Fee Proposal
- B- Background Information
- C - Engineering Consultant Agreement



January 8, 2009

City of Novi  
Office of the City Clerk  
45175 W. Ten Mile Road  
Novi, Michigan 48375

**Re: Request for Proposal: Engineering Services for West Oaks Regional Detention Basin Improvements**  
SDA Proposal: PR08-334

Dear Ms. Moranti:

Spalding DeDecker Associates, Inc. (SDA) is pleased to provide the following proposal for Engineering Services for West Oaks Regional Detention Basin Improvements pursuant to your RFP dated December 17, 2008. We have assembled a strong Team from our Municipal Design, Survey, and Construction Engineering departments for this project and believe we are exceptionally qualified for a number of reasons:

- SDA's Project Team is very familiar with detention basin design, construction, and maintenance.
- SDA's Project Team is ready to initiate work on this project immediately to meet the deadlines specified in the RFP and our proposal.
- Our Design and Construction key personnel are familiar with the City of Novi construction standards, and SDA maintains a local staff of qualified technicians working on projects in the City of Novi, managed from our new Brighton Township office.
- During design and construction, we seek to identify and implement value-added services for this project.

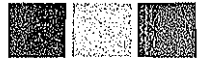
Furthermore, we will work to deliver a successful project on all levels: within budget, within schedule, with utmost safety, and with minimal public inconvenience.

Attached, please find five (5) bound and one unbound original proposals for our services. We trust that you will find our proposal to be thorough with regard to your needs in providing engineering services for the West Oaks Regional Detention Basin Improvements. We look forward to working with you on this project.

Very Truly Yours,  
**SPALDING DEDECKER ASSOCIATES, INC.**

James L. Van Tiffin, PE  
Project Manager  
Assistant Department Manager, Municipal Engineering

# Understanding



City of Novi  
Engineering Services for West Oaks Regional Detention Basin Improvements  
PR08-334  
January 8, 2009

## Section

- 1 Understanding and Approach
- 2 Key Personnel
- 3 Subconsultant Information
- 4 Schedule
- 5 Fee and Rate Schedule



SPALDING DEDECKER ASSOCIATES, INC.

Engineering | Infrastructure | Land Development | Surveying  
(800) 598-1600

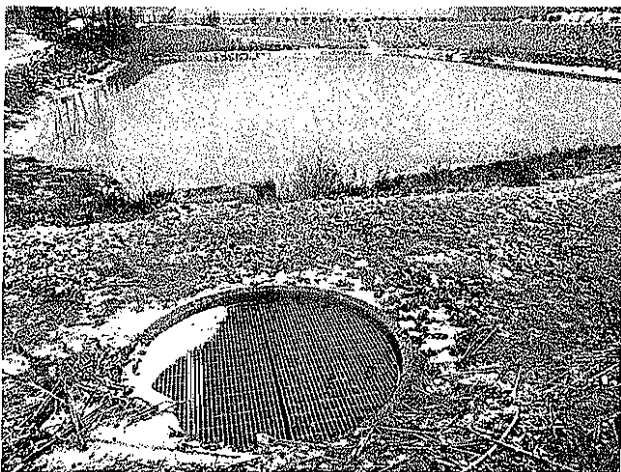
City of Novi  
Engineering Services for West Oaks Regional Detention Basin Improvements  
PR08-334

# Understanding and Approach

Spalding DeDecker Associates, Inc. (SDA) has reviewed and understands the requirements detailed in the Request for Proposals dated December 17, 2008, for the West Oaks Regional Detention Basin Improvements.

## PROJECT APPROACH

The project consists of repair and improvement of the West Oaks Regional Detention Basin located in the southwest portion of the West Oaks Shopping Center. The basin repairs include replacement of two inlet pipes and repair of eroded areas at an inlet and along the banks of the basin through construction of a vegetated swale. The vegetated swale will also incorporate pretreatment of the storm water. The basin improvements include modifications to an existing outlet control structure, construction of an access drive to the basin outlet, and if deemed necessary, installation of pretreatment structures for water quality and stump islands for habitat improvement. Other site modifications include installation of a gauge for sediment and standing water depth and full abandonment of an old storm sewer pump station.



SDA's design team will be headed by *Maria Sedki, PE, CFM* and assisted by *Brian McKissen, PE, CFM*. They will develop ways to design repairs and improvements to the West Oaks Regional Detention Basin to meet the needs of the basin's operation and maintenance, improve the water quality, improve the basin habitat, and meet the goals and objectives of the 2005 Storm Water Master Plan Phase II.

The project approach herein highlights the specific areas that our experienced engineers will carefully consider throughout the design and construction phases.

## PROGRESS STATUS REPORTS

Throughout the duration of the project, *Jim Van Tiflin, PE*, the overall Project Manager, will keep the City of Novi updated on the progress of the project. Bi-weekly Progress Status Reports will be submitted to the City every other Friday beginning on January 23, 2009. Our staff is familiar with the report format. Even though we will be submitting the reports every other week, we will also remain in contact with the City team verbally on a regular basis, as well as through electronic mail and other written communications.

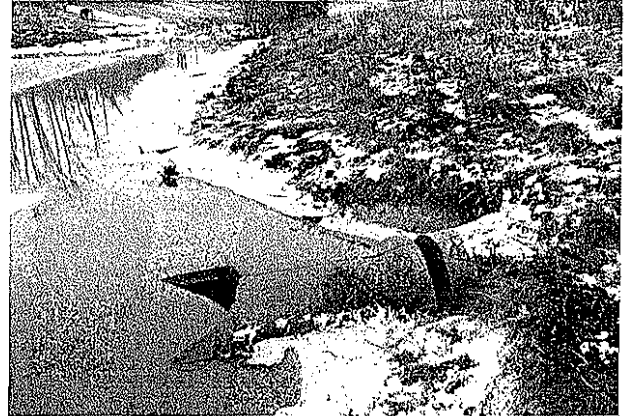
# Understanding and Approach

## TOPOGRAPHICAL SURVEY

*Michael DeDecker, PS* will be the task manager in charge of the survey work on this project. The survey crew will prepare a topographical survey for the purpose of basin site improvements.

Site benchmarks will be established in relation to the NAVD88 datum, and horizontal control will be measured in state plane coordinates for the Michigan South Zone according to the 1986 adjustment of the NAD83 datum.

Underground utilities will be shown based upon a combination of record information and actual field measurements, including measuring storm pipe invert elevations, outlet and inlet inverts, outlet structure elevations, basin grades at the top and toe of slopes, adjacent edge of parking lot grades, water depth, and the location of existing utilities in the vicinity of the basin. Right-of-way and parcel lines will be graphically shown based upon actual field measurements.



All survey monuments located within the vicinity of the project limits will be labeled and marked. During the construction phase, the Contractor will be shown the location of the monuments and will be required to protect them during construction.

## KICK-OFF MEETING

To ensure that the proposed design and construction staging meets the needs of the City, SDA design staff will attend a City of Novi hosted kick-off meeting with City staff to discuss the proposed design and construction aspects of the project.

## PRELIMINARY LAYOUT (30%)

Preliminary Design Plans will include the topographical survey, alternatives for proposed basin improvements including recommended pre-treatment devices, stump island habitat improvements, location of the vegetated swales, and layout of the proposed access drive.

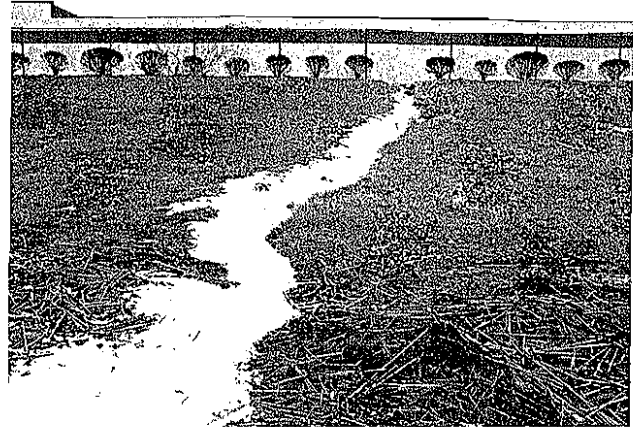
A preliminary construction cost estimate will be developed. The preliminary cost estimate, as well as four sets of plans will be submitted to the City as part of the preliminary layout.

As part of our ISO Design Procedures, we are required to perform a walk-through at the project site with a member of our Construction Engineering Department and an Owner's representative (if available) once the preliminary layout has been defined. As part of the walk, we will identify and resolve utility concerns that may exist.

# Understanding and Approach

## CONTRACT DOCUMENTS

Once the site improvements of the basin are defined and approved by the City, the plans and specifications for construction will be prepared. The construction drawings will include plan views of the basin, showing surface topography, underground utilities, access drive layout and cross-section, swale layout and cross-section, and structural details and improvements. Structural details will include outlet repairs, pre-treatment devices, stump island details, pump station abandonment details, and outlet repairs. The plans will be designed in accordance with City of Novi standards, and the City's Standard Detail sheets will be included in the plan set.



## Pretreatment

We have visited the site and reviewed the as-built plans for the basin to evaluate potential retrofits to the existing basin design for pretreatment of the storm water prior to entering or leaving the basin. Prior to implementing a retrofit design, an evaluation of the level of treatment provided by the downstream water areas will be conducted. This will be determined by evaluating the "treatment train" effect by processes such as settling and vegetative filtering of pollutants.

Several best management practices (BMPs) will be considered based on the test results and include structural oil/gas and sediment separation devices, vegetated swales, baffles within the basin to extend flow length, retrofits to the outlet structure for sediment control, aquatic vegetation, and shade trees to control the pond's temperate. There are two larger inlet pipes of 42" and 54" which discharge into the basin. We feel it is not cost effective to construct a structural BMP for these inlets due to their size and depth. Alternative BMP measures will be considered for these inlets such as street sweeping and the cleaning of catch basin sumps.

## Wetlands and Sediment Removal

We do not foresee the need for a wetland permit or sampling of basin sediments for removal to an acceptable landfill and have not included them in our fee schedule. In the event that these services are required upon developing our final recommendations, SDA will team with ASTI Environmental Services, Inc., under the direction of *Dianne Martin*. ASTI adds a number of environmental services to our team including, but not limited to, lake management, watershed planning, wetland planning, design and restoration, and ecological assessments.

## Habitat Improvements

The potential benefits of the installation of stump islands within the pond for improvements to the aquatic habitat will be considered. Considerations will take into account existing or potential fish species within the pond and the benefit of providing stump islands as a source of cover. Other habitat improvements that can be considered include incorporating native aquatic vegetation into the basin which would assist in

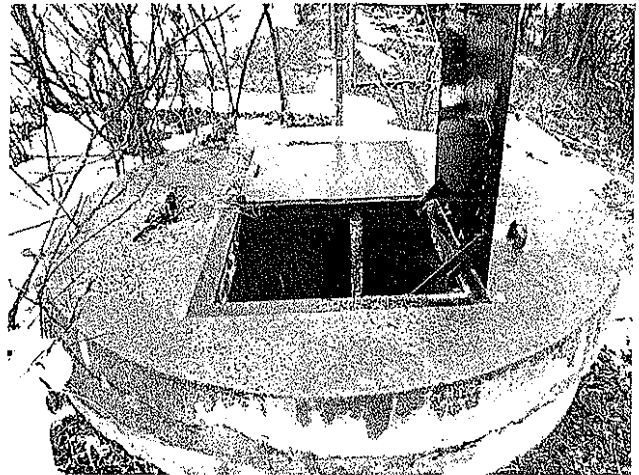
# Understanding and Approach

addressing water quality and water temperature and the installation of shade trees along the south and west side of the basin. Both aquatic vegetation and shade trees will help maintain cooler water temperatures during the warmer summer months. This would provide a more favorable habitat within the basin and the receiving streams.

## **Structural Repairs and Soil Erosion Control Measures**

The design plans will incorporate structural improvements to some of the basin's appurtenances including repair/replacement of two 24-inch inlet pipes, restoration of eroded areas around a 48-inch inlet pipe, and adjustments to a bar grate on the outlet control structure to prevent clogging. The end sections will be evaluated to determine the causes of failure such as undercutting or gravity. Based on this determination a solution such as placing concrete bedding, restrained pipe, anchor system, or slope armoring will be designed.

It was noted during our site visit that a muskrat was in the basin. Muskrats make their homes by burrowing and creating a network of tunnels into the banks of lakes, ponds, and basins. These burrows can lead to soil erosion and undermining of outlet and inlet structures. Consideration will be made to address the muskrat(s) upon acceptance of this proposal.



The design plans will also outline a vegetated swale to address the soil erosion created by the storm water discharge through two curb cuts in the parking lot to the north. We envision that the vegetated swales will extend from the existing curb cuts and along the north and east sides of the basin and will be constructed at a moderate slope to encourage storage and infiltration. Native vegetation will be planted on a permeable soil within the swale to provide pretreatment of the storm water discharge. An armored outlet from the swale to the basin will be incorporated in such a way that the swale design will not interfere with current mowing and maintenance practices.

## **Install Gauge**

A USGS Style A Staff Gauge will be installed in the basin to provide a quick and easy visual indicator of water and sediment depth. The gauge will be located so that it is readily accessed and read from the banks of the basin.

## **Access Drive**

The engineering plans will incorporate an access drive from Donelson Drive to the outlet control structure. The access drive will be designed to allow for heavy maintenance equipment and to prevent unnecessary soil erosion.

# Understanding and Approach

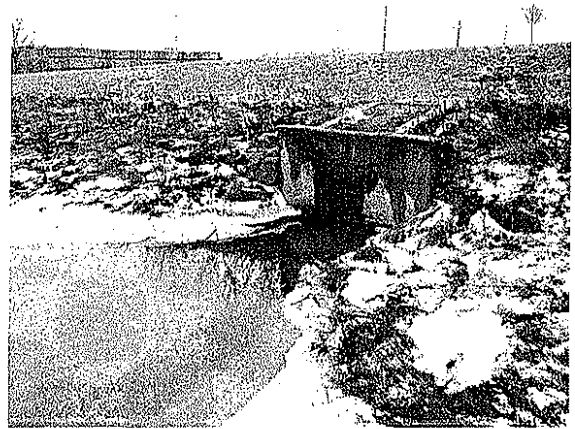
## **Abandon Existing Old Pump Station**

We will prepare a design to fully abandon the existing old pump station. Our site visit revealed that the pump station has been partially abandoned. The appurtenances appear to be removed, and the pump station concrete structure has been partially filled with granular soil. The design plans will call for removing the top section of the pump station to a depth of five feet and backfilling the station.

## **Permit Acquisition**

Upon the City's review of the Preliminary Plans, SDA will prepare the permit application for a City of Novi Soil Erosion and Sedimentation Control (SESC) permit in accordance with Part 91 and Chapter 29 of the City Code.

We do not anticipate that any additional permits will be required and have not included them in our fee schedule. In the event that our recommendations require wetland or dredging permits from the City of Novi and the Michigan Department of Environmental Quality (MDEQ), we will work with ASTI Environmental Services, Inc. to secure the necessary permits.



The SDA Design Team will provide permit follow-up and will field any questions or requests from permitting agencies, as directed by the City, necessary to secure permit approvals.

## **90% Plans**

Four sets of 90% complete design plans and one set of specifications will be submitted to the City for review as required. Per our ISO requirements, a meeting will be held with the City to discuss the documents and the revised construction cost estimate.

## **BIDDING**

Once the Permitting Agency and City's comments have been reviewed and incorporated into the final plans, the bid documents will be issued (four sets of plans and specifications). SDA will then facilitate the pre-bid meeting, prepare and issue addendums as needed, respond to contractor inquiries, review the bids, and provide recommendations for award.

## **CONSTRUCTION**

### **Construction Administration**

*Ted Meadows* will be the Contract Administrator for the project. Ted will conduct an internal kick-off meeting with the design group, ensuring a smooth transition from design bid phase to the award phase of the project.

During the comprehensive pre-construction meeting, all pertinent items will be addressed in a discussion led by Ted Meadows. Possession of required permits will be verified; emergency contact information will be exchanged; construction schedules will be submitted and reviewed; communication protocols will be





# Understanding and Approach

established; pay estimate protocol will be explained; and project close-out and successful completion criteria will be established. Shop drawings will be collected from the Contractor and reviewed prior to construction.

## **Soil Erosion and Sedimentation Control (SESC)**

During the construction phase, SDA will be responsible for administering and enforcing the SESC plan. The inspections will be completed by *the construction technician assigned to the job*. All of SDA's full time construction technicians hold current certifications through the Michigan Department of Environmental Quality under Part 91.

## **Inspection**

SDA's Construction Engineering group will provide an experienced construction technician to inspect the day-to-day construction activities for this project. SDA has a number of well-qualified construction technicians that have inspected and managed multiple construction projects of this nature. The construction technician will be documenting the project using Field Manager software; will make as-built sketches where necessary; and will capture project progress with digital photographs. A **web-based project portal site will be created specifically for this project**, and construction daily reports, project photographs, and engineer pay certificates, will be posted.

## **Communication**

SDA's assigned construction technician will respond quickly to commercial queries during the construction phase. Prior to the start of construction, Ted Meadows and the assigned construction technician will establish relationships with businesses most affected by the construction.

## **Construction Layout**

Our survey crew will stake out the location of the storm sewer end sections, structural BMPs, vegetated swale, and access drive.

## **As-Builts**

SDA will provide Record Documents according to Novi's ordinance number 07-124.17 effective June 1, 2007. SDA will provide record rim and invert elevations on the storm sewer structures and end sections, structural BMPs, final grades of the detention basin and access drive, vegetated swale, and location of habitat improvement structures.

## **SCHEDULE**

We have prepared a schedule for the design and construction of this project. The schedule is located in Section 4 of this proposal and has been developed with an anticipated start date of January 20, 2009.

# Understanding and Approach

## VALUE-ADDED CONCEPTS

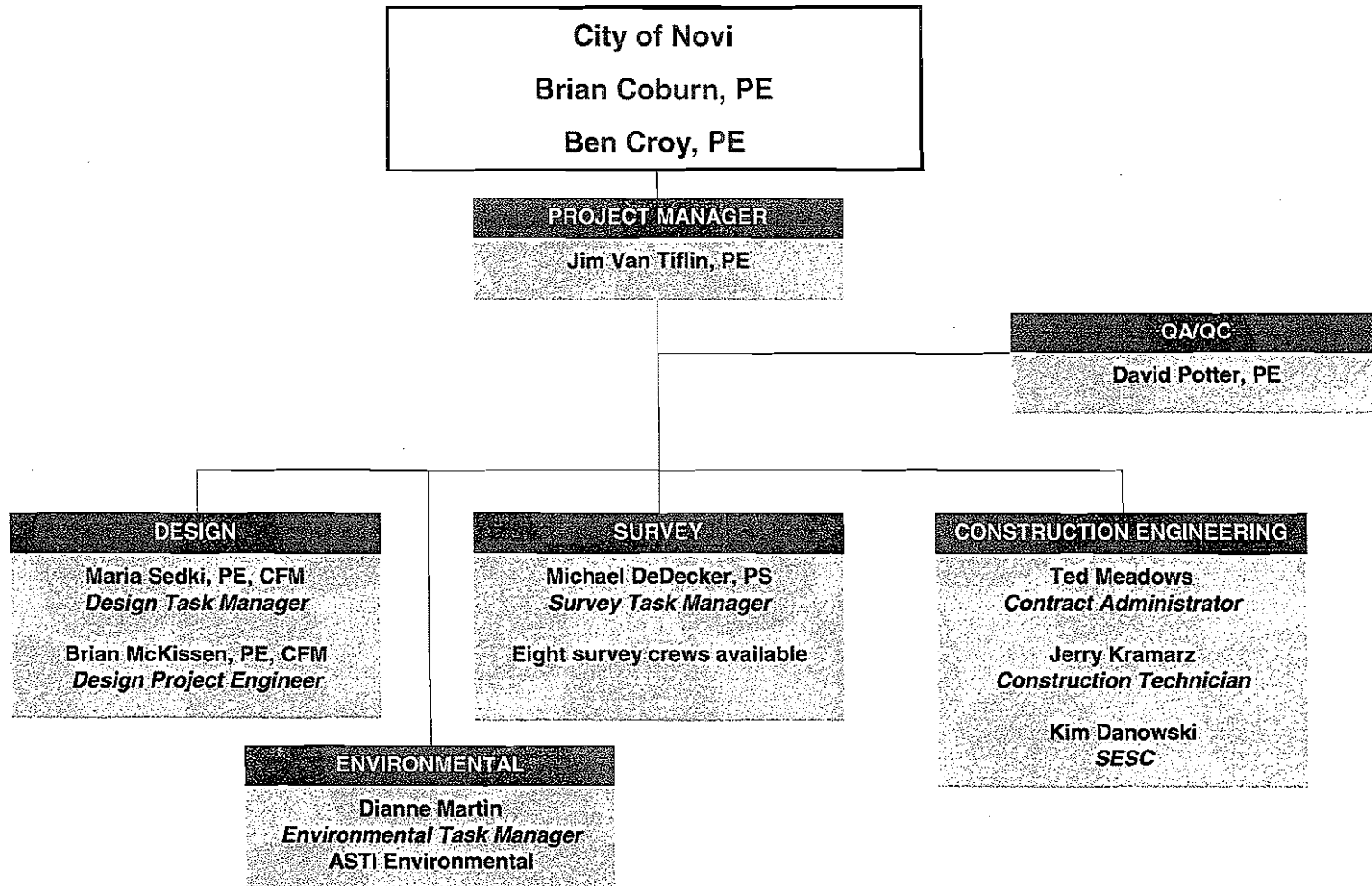
As described in greater detail throughout our Project Approach, SDA offers the following Value-Added Concepts:

- **Aquatic Vegetation** – The potential for planting of native aquatic vegetation can be considered to further enhance the basin and receiving stream's habitat and water quality. Aquatic vegetation can improve water quality through a filtering effect, provide shade to maintain cooler water temperatures during the warmer summer months, and provide shelter for aquatic life.
- **Shade Trees** – The potential for planting native species of shade trees along the south and west sides of the basin can be considered to maintain cooler water temperatures during the warmer summer months. Maintaining cooler temperatures in the basin will provide a more favorable habitat both in the basin and in the receiving streams.
- **Nuisance Animals** – Muskrats construct burrows along the banks of lakes, ponds, and basins. These burrows can lead to soil erosion and undermining of outlet and inlet structures. Consideration will be made to address the muskrat(s) within the West Oaks Regional Detention Pond upon acceptance of this proposal.

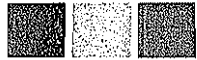
Spalding DeDecker Associates, Inc. strives to be "The Benchmark of Excellence" for our clients through applications of its Guiding Principles and Quality Procedures. SDA will provide innovative design and engineering solutions that ultimately result in a better quality of life for residents and visitors in the City of Novi. Thank you for considering our services.



# Organization Chart



# Resume



## James L. Van Tiflin, PE

Project Manager

Mr. VanTiflin has 16 years of experience in the industry. He is the Assistant Department Manager of the Municipal Engineering Department. Jim has spent his entire career with Spalding DeDecker Associates, Inc. Mr. Van Tiflin's engineering experience includes the design of sanitary sewers, pump stations, water mains, storm sewers, and local county roads, as well as review of the development plans for compliance with Township Ordinances/ Master Plans and sound engineering practices. He works closely with all County and state agencies having jurisdiction to ensure that all requirements are met. He also has experience in writing contract specifications and construction contract administration.

Jim is currently serving as the client contact for Macomb Township and Armada Townships. Municipal Engineering project management involves the coordination of all aspects of a project including client and public relations as well as working with a project team to meet the requirements of the scope of work. Mr. Van Tiflin provides engineering expertise for the successful support and continuous improvement of municipal projects to provide quality in workmanship and value for project budgets. Jim has also served as an internal auditor for the company's ISO Certification.

### RELEVANT EXPERIENCE

**Engineering Consultations, Clinton, White Lake and Macomb Townships., MI** – Performed detailed site development engineering plan review for conformance with current Engineering Standards. Participated in planning matters related to site development and master planning. Performed detailed review of residential plot plans. Developed special assessment projects for water, sewer, and paving projects. Attended public meetings to provide recommendations to provide both general and project specific recommendations.

**24 Mile Road Sanitary Sewer S.A.D., Macomb Township, MI** – Provided overall project management for the design of 600 feet of 15-inch trunkline sanitary sewer. Obtained municipal approvals and permits for the project and provided documents for easement acquisition. Also performed construction contract administration including processing payment estimates, change orders, and construction engineering consultations.

**Romeo Plank Water Main Replacement, Macomb Township, MI** - Provided overall project management for the replacement of one and a half miles of 16-inch water main. Supervised design team, maintained constant contact with the client, and obtained all necessary permits. The project also included coordinating the acquisition of all easements and the simultaneous design and construction of Township utilities with a county road widening project.

**Marseilles Road Sanitary Sewer S.A.D. and Water Main Replacement, Macomb Township, MI** – Provided overall project management for the design of 1,750 feet of 10-inch sanitary sewer financed through a Special Assessment District. The project also included the replacement of 1,700 feet of existing 6-inch water main with new 8-inch which was financed through Capital Improvement Program funds. Obtained municipal approvals

### EDUCATION

BSCE, Michigan State University, 1992

### REGISTRATION

PE, Michigan, 1997

### PROFESSIONAL AFFILIATIONS

American Water Works Association  
(AWWA) – Member since 2005

### SPECIALIZED TRAINING

American Council of Engineering  
Companies (ACEC) – Project Manager  
Training

PSMJ Resources, Inc. - Project  
Management Bootcamp

Leadership Macomb

# Resume



and permits for the project and provided documents for easement acquisition through a tight residential area.

**Section 36 Water Main Rehabilitation, Macomb Township, MI** - Performed construction contract administration including processing payment estimates, change orders, and construction engineering consultations.

**Ordinance Update, Macomb Township, MI** - Reviewed Water & Sewer and Land Development Ordinances as well as the Engineering & Construction Standards and drafted updates to meet current engineering practices and Township procedures.

**Gratiot Avenue Water Main Replacement, Clinton Township, MI** - Designed 12,000 feet of 12-inch water main to replace an old 10-inch water main to provide better pressure in the area. Also wrote contract specifications, obtained municipal approval, bid project, and performed construction contract administration.

**Paving Standards Update, Macomb Township, MI** - Developed new standard details for paving of roads, parking lots and pedestrian pathways which could be used by the Township as well as the County Road Commission.

**Quinn Road Water Main Replacement, Clinton Township, MI** - Designed 6,800 feet of 12-inch water main. Wrote contract specifications and obtained municipal approvals and permits for the project. This water main replaced an old 8-inch main to provide better pressure in the area.

**Geographic Information Systems (GIS), Clinton Township, MI** - Supervise system maintenance including mapping of underground utilities and pavement, property splits and combinations, zoning changes, and flood plain information. Also supervised implementation of new operating system using touch screen technology.

**19 Mile Road Water Main Replacement, Clinton Township, MI** - Designed 5,400 feet of 16-inch water main to replace an old 16-inch water main which was in disrepair, wrote contract specifications, obtained municipal approvals, and bid and awarded project.

**Moravian Drive Water Main S.A.D., Clinton Township, MI** - Designed 1,500 feet of 8-inch water main. Wrote contract specifications and obtained municipal approvals and permits for the project. This project included extending the water main across the Clinton River to provide a loop for a previously dead-end water main.

**Utica Road Sanitary Sewer and Pump Station, Clinton Township, MI** - Designed a sanitary sewer pump station, 3,100 feet of 10-inch sanitary sewer, and 1,200 feet of 6-inch force main. This sewer eliminates existing septic fields along a portion of the Clinton River and Red Run Drain.

**Harrison Boulevard Water Main, Sanitary Sewer, Storm Sewer and Concrete Paving S.A.D., Clinton Township, MI** - Designed improvements along a 1,800-foot section of residential subdivision right-of-way previously served by septic systems, wells and a gravel

# Resume

road. Wrote contract specifications and obtained municipal approvals and permits for the project. This project was intended to promote development of a mostly undeveloped subdivision.

**23 Mile Road Sanitary Sewer and Water Main Replacement, Macomb Township, MI -** Provided overall project management for the replacement of one mile of 42-inch sanitary sewer and 16-inch water main. Supervised design team, maintained constant contact with the client, and obtained all necessary permits. The project also included coordinating the acquisition of all easements and the simultaneous design and construction of Township utilities with a county road widening project.

**Sanitary Pump Station No. 7 Replacement, Macomb Township, MI -** Provided overall project management for the replacement of a 24 cubic feet per second sanitary pumping station, ¼ mile of 20-inch force main and ½ mile of 16-inch water main. Supervised design team, maintained constant contact with the client, and obtained all necessary permits. The project also included coordinating the acquisition of all easements and real estate necessary to construct the utilities as designed.

**Fire Station No. 3 Training Tower, Macomb Township, MI -** Provided overall project management for the design and construction of all site work necessary for a 2,100 square foot training tower. The project included the design of 24,000 square feet of reinforced concrete pavement and associated storm sewer, the concrete building foundation and 500 feet of 8-inch water main. Supervised the design team, maintained contact with the client, and obtained all necessary permits.

**South Nunnely Road Sanitary Sewer, Clinton Township, MI -** Designed 3,400 feet of 12-inch and 10-inch sanitary sewer approximately 30 feet in depth with limited right-of-way. Wrote contract specifications and obtained municipal approvals and permits for the project. This project included a major drain crossing and pavement repair.

**21 Mile and Fairchild DWSD Water Supply Connection, Macomb Township, MI -** Provided overall project management for the design of a 16" water supply connection to the DWSD distribution system. The project included the installation of separate water meter and pressure reducing chambers and associated telemetry. Obtained municipal approvals and permits for the project. This project included coordination with the Township in acquiring easements.

**23 Mile Road Sanitary Sewer, Macomb Township, MI -** Provided overall project management for the design of 7,900 feet of 10-inch to 36-inch trunkline sanitary sewer and 7.5 cubic feet per second pumping station for a river crossing. Obtained municipal approvals and permits for the project. This project included coordination with several local developers in acquiring easements and connections for residential developments.

**Cordelia Drive Paving S.A.D., Clinton Township, MI -** Supervised the design and prepared contract documents for the installation of 4,300 square yards of 9-inch concrete pavement and 1,830 feet of 12-inch to 42-inch storm sewer for a public road within an existing industrial subdivision. This project included obtaining all permits and approvals for



# Resume



construction.

**Macomb Township Civic Center Complex, Macomb Township, MI** - Performed construction contract administration for new civic center complex. The project included the installation of 2,600 feet of 10-inch to 15-inch sanitary sewer, 4,100 feet of 8-inch to 16-inch water main, 4,900 feet of 12-inch to 48-inch storm sewer, a five acre detention basin, a 1,200 foot relocation of the McBride Drain and a half mile extension of Broughton Road with two side streets to serve the new Township Hall. Provided coordination between both general contractors on site, processed payment estimates and change orders, and provided construction engineering consultations.

**Card Road Sanitary Sewer, Macomb Township, MI** - Provided overall project management for the design of 5,300 feet of 10-inch to 21-inch trunkline sanitary sewer. Obtained municipal approvals and permits for the project. This project included coordination with several local developers in acquiring easements and connections for residential developments.

**Luchtman and 26 Mile Road Water Main, Macomb Township, MI** - Provided overall project management for the design of 8,000 feet of 12-inch to 16-inch trunkline water main. Obtained municipal approvals and permits for the project. This project included coordination with several local developers in acquiring easements and connections for residential developments.

**Card Road Sanitary Sewer, Macomb Township, MI** - Provided overall project management for the design of 4,500 feet of 10-inch to 18-inch trunkline sanitary sewer. Obtained municipal approvals and permits for the project. This project included coordination with the Township in acquiring easements and connections for proposed residential developments. Also performed construction contract administration including processing payment estimates, change orders, and construction engineering consultations.

**Groesbeck Highway Rear Lot Storm Sewer S.A.D., Clinton Township, MI** - Supervised the design and preparation of contract documents for the installation of 3,900 feet of 18-inch to 42-inch storm sewer for an existing industrial subdivision. This project included obtaining all permits and approvals for construction. Performed construction contract administration including processing payment estimates, change orders, and construction engineering consultations.

**Penrod Drive Sanitary Sewer and Water Main, Clinton Township, MI** - Designed 3,100 feet of 8-inch water main and 3,100 feet of 15-inch sanitary sewer. Wrote contract specifications and obtained municipal approvals and permits for the project. This project included installing the sanitary sewer approximately 30 feet deep within limited right-of-way and capping a bituminous road.



# Resume

## David L. Potter, PE QA/QC

Vice President / Treasurer  
Municipal Department Manager

David L. Potter, PE has 7 years with SDA with 28 years of experience in the industry. Potter manages and directs the Municipal and Construction Engineering Department. He is familiar with the variety of the engineering concepts, practices, and procedures needed to meet today's client's expectations. As the Department Manager, he plans and directs all aspects of municipal and construction engineering services within SDA. Dave ensures responsive project planning and execution, as well as quality construction and performance. Project services include documentation tracking, detailed planning, preliminary and final design, permitting, scheduling, and contract administration of engineering projects. Dave also ensures that all initiatives and processes are in conformance with SDA's established ISO 9001 policies and objectives, which ensures efficient coordination and completion of construction engineering projects and currently serves as QA/QC Coordinator on several design projects.

Potter's experience in civil engineering and construction engineering covers a wide variety of projects for both public and private clients. These have included municipal road bond programs, MDOT locally funded bridge and major roads, and special intersection signal projects. His experience includes tasks related to major public works ranging from the design and construction engineering of transmission water mains, deep interceptor sewers, water booster pump stations, sanitary pump stations, earthen dam construction, lake improvement projects, wetland mitigation projects, storm water master drainage plan development, county drain maintenance projects and local and county soil erosion and sedimentation control programs.

### RELEVANT EXPERIENCE

**Storm Water Management/Implementation Planning, West Bloomfield Township, MI** – Department Manager responsible for the development and implementation of the Township's Stormwater Management/Implementation Plan. Responsibilities included serving as Technical Advisor and QA/QC on final report. Project consisted of preparing an inventory, inspection and deficiency reporting for existing private storm water basins and stormwater conveyance system. The establishment of an Annual Reporting system for these facilities and recommendations for improvements. Responsible for the review of documentation regarding legal access, the review of ordinance requirements and recommendations for ordinance modifications, and application of Flood Control ordinances to these drainage systems within the Township.

**Lake Improvement Study, Eagle Lake, Waterford, MI** – Department Manager responsible for preparing the Eagle Lake Improvement study. Responsibilities included serving as Technical Advisor and QA/QC on final report. Study includes water quality analysis with testing for dissolved oxygen, phosphorous, nitrogen, pH, and Chlorophyll-a, a sediment analysis testing for 12 metals, PCBs and PNAs, and a theoretical nutrient budget. Performed aquatic plant survey and contour mapping of lake bottom. The legal Lake access rights were researched and an assessment map was developed.

### EDUCATION

B.S., Civil Engineering, 1985,  
New Mexico State University  
M.S., Civil Engineering, 1998,  
Wayne State University

### REGISTRATION

Professional Engineer, Michigan,  
35821, 1990  
Professional Engineer, California,  
46109, 1989

### PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers  
(ASCE) Member since 1988  
ASCE Michigan Southeastern Branch  
Board Member, 2008

### SPECIALIZED TRAINING

MDOT Field Manager  
  
Safe-2-Build Safety Training  
  
Red Cross CPR and First Aid

ACEC/MDOT Materials Acceptance  
Process Training

Construction Specifications Institute  
Cert. Documents Technologist - 2005

### TRAINING/CERTIFICATIONS

MDEQ Storm Water Operator  
Construction Sites 1994 No. C-00216  
  
MDEQ Certificate No. 02-344 for Part  
91, Soil Erosion and Sedimentation  
Control.  
  
MDEQ Storm Water Operator Industrial  
Sites 1996 No. I-02684



# Resume



Recommendations include a short term and long term management plan and a budget with financing options was presented to the Lake Improvement Board for implementation.

**Review of Lake Improvement Study Reports and Lake Improvement Board Member -** Project Manager with the Oakland County Drain Commissioner's Office responsible for the review of Lake Improvement Study reports and participation as a Lake Improvement Board Member for the lake Improvement Boards for Scott Lake, Waterford, Watkins Lake, Waterford, Lake Ona, White Lake, Cedar Island Bay, White Lake, Big Lake, Highland, and Duck Lake, Highland, Oakland County, Michigan.

**Scott Lake - Level Control Structure and Augmentation Well Study -** Project Manager with the Oakland County Drain Commissioner's Office responsible for the preparation of the preliminary plans and augmentation well study for the Scott Lake - Lake Improvement Board.

**Kellogg Lake - Lake Improvement Study Report,** Highland Township, Michigan. Project Manager responsible for the preparation of the Lake Improvement Study Report, including coordinating the aquatic plant study, water chemistry analysis and topographical surveys. Report was presented to the Lake Improvement Board for Kellogg Lake, and it's residents and was approved by the State of Michigan.

**Soil Erosion and Sedimentation Control Services, Oakland County, Troy, MI -** Department Manager in charge of Soil Erosion and Sediment Control inspections for the City of Troy. Responsible for conducting inspection of all Commercial and Industrial Sites under construction in the City. Prepared reports and digital photographs for the City of Troy, which document non-compliance issues on sites. Reports listing sites that are deficient are issued for action by the City of Troy.

**Soil Erosion and Sedimentation Control Program -** Oakland County Drain Commissioner's Office, Project Engineer-in-charge from 1990 to 1993, responsible for the review of construction plans to assure compliance with State of Michigan Soil Erosion and Sedimentation Control Act. Revised the Oakland County Soil Erosion and Sedimentation Control Manual, Published 1990. Hosted numerous Soil Erosion and Sedimentation Control Public Presentations and training seminars. Project Manager responsible for the conceptual design of the Caddell Drain - Streambank Stabilization Control Project, Farmington Hills, and the planning and design of the Price Dam - Downstream Bank Stabilization Control Project, Pontiac, Michigan.

**Storm Water Management Master Plan -** City of Novi, Michigan Project Manager for the implementation, review and revisions to the Storm Water Management Master Plan. Responsible for the design and construction of 100-year regional storm water detention basins, and review of the impacts to the regulated FEMA Flood Insurance Study (FIS) floodplains. Responsibilities also included environmental and real estate reviews to determine property needs, utility coordination, and hosting public meetings. Developed 5-year capital improvement programs with City staff. Responsible for project control and construction management from design to construction completion.

**Storm Water Drainage Project Planning -** Project Engineer with the Oakland County Drain

# Resume



Commissioner's Office responsible for the review of the preliminary design and cost estimates for the Harmony Drain, Maplehurst Drain, Hampton Drain, McIntyre Drain, McPherson Drain all located in Auburn Hills, Oakland County, Michigan.

**Storm Water Drainage Project Apportionment Studies** - Project Engineer with the Oakland County Drain Commissioner's Office responsible for the preparation of apportionment studies for the Pebble Creek Drain, Farmington Hills, Jensen Drain, Rochester Hills, Crake Drain, Ireland Drain, Bishop Drain, Rochester Hills, Dorothy Webb Drain, West Bloomfield Township, Wixom Drain, Wixom, Van Tassel Drain, Orion Township, and McIntyre Drain, Auburn Hills, all located in Oakland County, Michigan.

**Storm Water Drainage Design and Specifications** - Project Engineer responsible for the preparation of preliminary and final design for the Birdsland Drain Design, Waterford, Barrington Cove Condominiums, Orion Township, both located in Oakland County, Michigan, and Mid-Garden Storm Drainage Project Design, City of Garden City, Wayne County, Michigan, and A.W. Jones Subdivision Drainage Improvements, Washington Township, Macomb County, Michigan. As Project Manager for Oakland County Drain Commissioner's Office reviewed contract specifications for the Wolf Drain, Rochester Hills, Oakland County, Michigan.

**Storm Water Drainage Construction Project Management** - Project Engineer with the Oakland County Drain Commissioner's Office responsible for the preparation of monthly construction progress pay estimates for the Fredericks Drain Phase II, Evergreen-Farmington Segment II, Contract #4, #5, #6, #7, #9, & #21, Oaks Drain, Pontiac, Pebble Creek - Phase II, Farmington Hills, and Lueders Drain, Rochester Hills, Oakland County, Michigan. Project Manager responsible for the project development of Bishop Drain, Rochester Hills, and Paint Creek As-Built Project, Oakland Township, Oakland County, Michigan.

**City of Trenton Construction Improvements, Trenton, MI** - Responsible for the Construction Contract Administration for this project which would allow for the transport, storage, and treatment of wet weather flows up to and including flows from a 100 year - 24 hour design rain event. The proposed improvements consist of a Retention Basin Enlargement, a new Retention Basin Pump Station, two sanitary sewer interceptors (River North Interceptor and River South Interceptor), utility relocations, new water mains to improve pressure, and new street construction. The River North Interceptor project consists of constructing a new interceptor sewer and a lift station. The interceptor ranges in size from 12-inches at its upstream end to 60-inches at the inlet to the lift station. The total length of the interceptor is over 20,900 lineal feet. The depth of cut on this project ranges from 17 to 34 feet. The River South Interceptor project consists of constructing a new interceptor sewer along Jefferson Ave. in the industrial part of the City. The interceptor ranges in size from 21" to 36." The total length of the interceptor is over 6,600 lineal feet. PVC pipe and fiberglass manholes make this project unique to the industry. The cost of this project was \$22.0 million dollars.

# Resume

## Maria E. Sedki, PE, CFM

Design Task Manager

Maria Sedki, PE, CFM has 12 years with SDA and 16 years of experience in the industry. Sedki is a leader in her profession. In her role as a Project Manager, Maria is responsible for organizing the highly complex activities for the development, implementation, and maintenance of water and wastewater projects. Project management involves the coordination of all aspects of a project including client relations and working with a project team to meet the requirements of the scope of work through concept development, design and construction administration.

Ms. Sedki is an experienced project manager specializing in sewer system inspection, analysis, and design. During her career at Spalding DeDecker Associates, Inc., Ms. Sedki has worked on multiple Flow Monitoring Studies, Infiltration and Inflow Studies, Sewer System Evaluation Surveys, and Corrective Action Programs. She has been responsible for organizing the programs, managing multiple field crews, developing databases, and coordinating information with Owners.

She has developed and calibrated US EPA SWMM models using GPS field data and XP SWMM software for entire sewer systems.

Maria has extensive experience in acquiring State and Federal Funding, including State Revolving Funds, for large local projects. She has a detailed understanding of grant/funding requirements and regulations

Her design experience includes pump stations, sanitary and storm sewer systems, water mains, water master meter and PRV stations, as well as many forms of manhole and sewer rehabilitation projects.

**New Haven School Sewer Extension, Macomb Township, MI** – Project Manager in charge of designing approximately 5,400 ft of 18" to 24" sanitary sewer in the North end of Macomb Township. Purpose of the project is to provide sewer service to the New Haven School System located in Ray Township.

**New Haven School Trunk Line Water Main Extension, Macomb Township, MI** – Project Manager in charge of designing approximately 12,500 ft of 12" to 20" of ductile iron water main in the North end of Macomb Township. Purpose of the project is to provide water service to the New Haven School System located in Ray Township.

**Macomb Corners Park Phase II Sanitary Sewer, Macomb Township, MI** – Design Manager in charge of designing approximately 1,200 LF of 15" truss pipe along the north line of 25 Mile Road in Macomb Township. The purpose of this project is to extend a trunkline sanitary sewer to serve Phase II of the Township Park.

**Sewer Separation Project, City of Inkster, MI** – Lead Designer on a project to separate approximately 3,500 lft of combined sewers. Project includes a hydraulic analysis of system to define size of proposed storm sewers and verify capacity of existing (sanitary) sewers and the installation of 9,500 lft of 12" to 36" sewer.

### EDUCATION

MS Environmental Engineering, 1994,  
University of Michigan

BS Civil Engineering, 1992, University  
of Michigan

### REGISTRATION

Professional Engineer, Michigan,  
43831, 1998

### PROFESSIONAL AFFILIATIONS

Water Environmental Federation  
Michigan Water Environment  
Association  
ACEC- New leaders Chair

### CERTIFICATIONS

ASFPM Certified Floodplain Manager  
MDEQ Storm Water Operator  
Construction Site A-1J  
Certified 40 hours HAZWOPER in  
accordance with 29 CFR 1910.120(e)  
Certified Confined Space Entry &  
Certified Confined Space Tunnel  
Rescue

### SPECIALIZED TRAINING

XP SWMM Hydraulic modeling

# Resume

**Trenton SSO Construction Improvement Projects, MI** – Under current MDEQ standards, the City of Trenton was required eliminate wet weather Sanitary Sewer Overflows (SSO). SDA was contracted to design and administer the construction of the proposed improvements that would allow for the transport, storage, and treatment of wet weather flows up to and including flows from a 100 year – 24 hour design rain event. Upgrades include the construction of new sanitary sewer trunk line and pump stations, the enlargement of the existing retention basin, the upgrade of all existing pump stations, the elimination of overflow bypasses, and the elimination of wet weather infiltration and inflow sources.

- **River North Interceptor, Trenton, MI** – Designed and prepared construction plans and specifications for 8,300 lft of 24" to 60" interceptor sewer. The depth of cut ranged from 20 to 35 feet. The project also included miscellaneous utility relocations, new water mains to improve pressure and new street construction.
- **Jefferson Ave. Pump Station, Trenton, MI** - Served as project manager responsible for all aspects of the design of a 27,000 gpm bypass pump station with vertical mixed flow pumps. Included in the design were modifications to the WWTP chlorination system and bypass controls.
- **Waste Water Treatment Plant Pump Station, Trenton, MI** - Project was funded by State Revolving Fund (SRF). Designed, prepared construction plans, specification documents for Pump Station mechanical work and site engineering including water main, sanitary sewer, storm drainage, grading, and paving.
- **Elizabeth Park Pump Station, Trenton, MI** - Designed, prepared construction plans, specification documents for Pump Station mechanical work and site engineering including water main, sanitary sewer, storm drainage, grading, and paving.

**Lake St. Clair Clean Water Initiative CSO Control Projects** - for Macomb County Public Works Commissioner's Office and Southeast Macomb Sanitary District. During wet weather storm events, the collection system surcharges due to excessive inflow and rainfall induced infiltration that results in basement flooding and combined and sanitary sewer overflow discharges into Lake St. Clair. The Clean Water Initiative project was set up to reduce the amount of combined and sanitary sewer overflow discharges into the lake. Projects included:

- **Relief Sewer from Bon Brae to Hoffman Pump Station, Hoffman Pump Station Improvements and Martin Drain Throttling Gate** - Project Engineer for many aspects of the design phases including approximately 13,400 linear feet of 48-inch relief sewer parallel to Jefferson Ave. from the Hoffman Pump Station to Bon Brae designed to provide adequate capacity for conveyance of flows from the 25-year 24-hour storm. Flow equalization chambers were designed along the route to balance levels within the existing and proposed interceptor systems. The capacity of the existing Hoffman Pump Station was increased to 25 cfs from the existing 17.4 cfs. The improvements to the pump station included replacing the pumps, motors, electrical and mechanical

# Resume

systems and structural renovations. A new control building was added. The pumps at the pump station were replaced with three chopper pumps. The Martin Drain Regulator that controls the wet and dry weather flows from Roseville and northern St. Clair Shores was replaced. The new gates were designed to connect to the SCADA system and are capable of modulating to maximize the transport ability of the interceptor.

- **Dry Weather Infiltration Removal, South Macomb Sanitary District, MI** - Developed a program to eliminate the dry weather infiltration sources in the South Macomb Sanitary District. The program includes sewer televising and cleaning, joint sealing and chemical root treatment.

**Chapaton Dry Weather Standby Power, Macomb County Public Works Commissioner, MI** – Served as Project Manager for the design of the standby power system that would provide a third level of standby power to the 28 million gallon retention treatment basin and the 690,000 gpm pump station. The project included providing a 255 kW natural gas generator, coring through a 24" reinforced concrete exterior wall, a 36" reinforced concrete interior wall, and the connection of the generator to the existing SCADA system.

**Pump Station #7 Replacement, Macomb Township, MI**- Currently serving as Project Manager responsible for all aspects of the design of an 11,000 gpm pump station. Pump Station includes an 18 ft diameter, 50 ft deep wet well with four submersible pumps, valve chamber, isolation chamber, meter chamber, control building, an onsite standby generator, and forcemain river crossing. Project also includes the abandonment of the existing pump station and forcemain.

**26 Mile Road Pump Station Upgrade, Lenox Township, MI** – Currently serving as Design Project Manager responsible for the upgrade of the pump station from 400 gpm to 1,200 gpm. Project includes replacement of the submersible pumps, upgrade of the forcemain, replacement of the on-site standby generator, and construction of a new meter chamber.

**23 Mile Road Pump Station, Macomb Township, MI** - Served as Project Manager responsible for all aspects of the design of a 3,500 gpm pump station with submersible pumps. Included in the design was a 12ft diameter wet well and a 14'x11' valve chamber.

**Bridgewater Pump Station, Macomb Township, MI** – Served as Project Manager responsible for the design of a 100 gpm pump station with two submersible pumps, a valve chamber and a 4" forcemain.

**Miller Rd Pump Station Improvements, Dearborn, MI** - Served as project engineer responsible for the design of the mechanical aspects of the pump station, including flow calculations and pump selections. Also responsible for the coordination of the project between the structural, electrical, architectural, and site works components.

**21 Mile Road and Fairchild Water Master Meter and PRV, Macomb Township, MI** – Currently serving as Lead Designer for the Project which consists of hot tapping the existing DWSD 42" water transmission main with a proposed 16" water main, installation of a

# Resume

packaged Master Meter Station and a packaged PRV Station and connecting the outgoing 16" watermain to the existing Macomb Township water distribution system.

24 Mile Rd & Romeo Plank PRV Replacement and 24 Mile Rd & Card PRV Replacement, Macomb Township, MI – Currently serving as Lead Designer for the replacement of the two existing pressure reducing valves at both PRV stations with one valve. The PRV's were carefully chosen to be able to handle the large variance in pressure expected from the DWSD water system.

Sewer Separation Project, City of Inkster, MI – Currently serving as Lead Designer on a project to separate approximately 3,500 lft of combined sewers. Project includes a hydraulic analysis of system to define size of proposed storm sewers and verify capacity of existing (sanitary) sewers.

Sewer Lining Program, City of Rochester Hills, MI - Designed and prepared construction plans and specifications for curred-in-place (CIPP) lining of 8" to 12" sewers as well as for pipe bursting some 12" sewer.

Manhole Rehabilitation Program, City of Rochester Hills, MI - Designed and prepared construction plans and specifications for the rehabilitation of approximately 570 manholes in the City of Rochester Hills. The rehabilitation included replacing manhole frames and covers, wrapping manhole frames, removing steps, and sealing the interior of the manholes.

## RELEVANT PRESENTATIONS

- Water Environment Federation, 2008, "City of Trenton, MI, 100-year SSO Elimination Program", Hogan, Sedki
- Water Environment Federation, 2005, "Can Dry Weather Infiltration and Inflow be Cost Effectively Removed from a Combined Sewer System?", Rabbaig and Sedki
- Water Environment Federation, 2004, "100 Year Storm SSO Control", Hogan, LaCross and Sedki
- Michigan Water Environment Association, 2003, "Trenton SSO Elimination Program", LaCross and Sedki

# Resume



## **Brian McKissen, PE, CFM**

Design Project Engineer

Brian McKissen, PE, CFM has nine years with SDA with ten years of experience in the industry. McKissen provides innovative approaches to complex projects. He has knowledge of commonly-used concepts, practices, and procedures within the municipal engineering field. As the Project Engineer, Brian supports the project and Project Manager by performing design evaluations and providing recommendations to development and design that improve the quality of service. Through technical knowledge and excellent communication, he will ensure his workmanship is in conformance with the projects' scope of work and SDA's ISO 9001 established policies and objectives.

McKissen has experience in municipal engineering including the design of sanitary sewer, storm sewer, water main, and road design. He has a strong background in floodplain management, which includes a comprehensive understanding of the Federal Emergency Management Agency (FEMA) National Flood Insurance Program and State floodplain regulations. Brian assists several communities and school districts in the implementation of the NPDES Phase II program including Public Education, IDEP activities, and Storm Water Pollution Prevention Initiative compliance. His experience also includes storm water and flood plain modeling, water systems modeling, and the maintenance and development of Geographic Information Systems (GIS). His responsibilities include the preparation of cost estimates, engineering plans, and bid documents, permits applications, sketches, and easement documentation preparation, bid review and recommendations, and contract administration. Brian has extensive experience in site plan review for conformance to local, state and federal regulations and in accordance with accepted engineering practices. This includes reviewing site plans, reviewing and approving construction plans, and attending pre-construction meetings. McKissen is also experienced in AutoCAD, HEC-RAS, XP-SWMM, WaterCAD, and ArcGIS.

### RELEVANT EXPERIENCE

**Storm Water Management/Implementation Planning, West Bloomfield Township, MI** – Project Engineer responsible for the development and implementation of the Township's Stormwater Management/Implementation Plan. Responsibilities include the inventory, inspection and deficiency reporting for existing private storm water basins and stormwater conveyance system. The establishment of an Annual Reporting system for these facilities and recommendations for improvements. Responsible for the review of documentation regarding legal access, the review of ordinance requirements and recommendations for ordinance modifications, and application of Flood Control ordinances to these drainage systems within the Township.

**Floodplain Management Plan Review, City of Novi, MI** – Project Engineer responsible for review of the City of Novi's Floodplain Management Plans for commercial, industrial, and residential developments throughout the City. Review floodplain management plans to verify that they meet City, State, and Federal requirements.

### EDUCATION

BS Civil Engineering, 1999, Lawrence  
Tech University

### REGISTRATION

Professional Engineer, Michigan,  
6201051513, 2004  
Association of State Floodplain  
Managers Certified Floodplain  
Manager, 2007

### PROFESSIONAL AFFILIATIONS

Association of State Floodplain  
Managers  
American Society of Civil Engineers

### SPECIALIZED TRAINING

HEC-RAS 3.1.3, July 2006  
ESRI taught class for ARC GIS,  
December 2000

# Resume

**Lake Improvement Study, Eagle Lake, Waterford, MI** – Project engineer for preparing Lake Improvement study. Study includes water quality analysis with testing for dissolved oxygen, phosphorous, nitrogen, pH, and Chlorophyll-a, a sediment analysis testing for 12 metals, PCBs and PNAs, and a theoretical nutrient budget. Performed aquatic plant survey and contour mapping of lake bottom. The legal Lake access rights were researched and an assessment map was developed. Recommendations include a short term and long term management plan and a budget with financing options.

**Jamian Drain, West Bloomfield, MI** – Prepared HEC-RAS model of existing drain conditions for drain improvement project. Improvements include excavating and dredging 2,300 cubic yards of material, drainage structure improvements, 8,000 plantings, and bank restoration along 1,500 LF of open drain.

**Macomb Corners Park, McBride Drain Hydraulic Study, Macomb Township, MI** – Design Engineer Responsible for preparing HEC-RAS analysis of McBride Drain for expansion of the existing Macomb Corners Park. Park improvements include one vehicular bridge and three pedestrian bridges across the McBride Drain. Responsible for submittal of hydraulic report to the Michigan Department of Environmental Quality for permits.

**Lane Drain Hydraulic Study, City of Troy, MI** – Design Engineer responsible for preparing HEC-RAS analysis of the Lane Drain for the construction of a site condominium development. Responsible for submittal to the Federal Emergency Management Agency (FEMA) for a Conditional Letter of Map Revision.

**Forsythe Drain Clean-Out, Clinton Township, MI** – Design Engineer responsible for preparing plans, developing contract specifications, and obtaining municipal approvals and permits for the clean-out and rehabilitation of approximately 3320 feet of the Forsythe County Drain.

**NPDES Phase II Assistance, Watershed Based Permit, Macomb Township, MI** – Responsible for providing assistance to the Township towards permit compliance with the Township's MDEQ Phase II Stormwater General Permit and Certificate of Coverage (COC) through various sub-watersheds. Responsible for overseeing the implementation of the Public Education Plan (PEP), Illicit Discharge Elimination Plan (IDEP), and Storm Water Pollution Prevention Initiative (SWPPI). Responsible for preparing SWPPI and annual report outlining Township's progress for submittal to the Michigan Department of Environmental Quality. Attend subwatershed meetings and represent the Township by participating in the planning process for the Watershed Management Plan. Prepares watershed education materials for distribution in Township publications.

**NPDES Phase II Assistance, Watershed Based Permit, Lenox Township, MI** – Responsible for providing assistance to the Township towards permit compliance with the Township's MDEQ Phase II Stormwater General Permit and Certificate of Coverage (COC) through various sub-watersheds. Responsible for overseeing the implementation of the Public Education Plan (PEP), Illicit Discharge Elimination Plan (IDEP), and Storm Water Pollution Prevention Initiative (SWPPI). Responsible for preparing SWPPI and annual report outlining Township's progress for submittal to the Michigan Department of Environmental



# Resume



Quality. Attend subwatershed meetings and represent the Township by participating in the planning process for the Watershed Management Plan.

**NPDES Phase II Assistance, Watershed Based Permit, Avondale School District –** Responsible for providing assistance to the School District towards permit compliance with the District's MDEQ Phase II Stormwater General Permit and Certificate of Coverage (COC) through various sub-watersheds. Responsible for overseeing the implementation of the Public Education Plan (PEP), Illicit Discharge Elimination Plan (IDEP), and Storm Water Pollution Prevention Initiative (SWPPI). Responsible for preparing SWPPI and annual report outlining District's progress for submittal to the Michigan Department of Environmental Quality. Attend subwatershed meetings and represent the Township by participating in the planning process for the Watershed Management Plan. Prepares watershed education materials for distribution in District publications.

**NPDES Phase II Assistance, Watershed Based Permit, Mt. Clemens, MI –** Responsible for providing assistance to the City towards permit compliance with the Cities MDEQ Phase II Stormwater General Permit and Certificate of Coverage (COC) through the Clinton River East Subwatershed. Responsible for preparing Storm Water Pollution Prevention Initiative (SWPPI) and annual report outlining Cities progress for submittal to the Michigan Department of Environmental Quality.

**NPDES Phase II Assistance, Jurisdictional Based Permit, Gibraltar School District –** Responsible for providing assistance to the School District towards permit compliance with the District's MDEQ Phase II Stormwater General Permit and Certificate of Coverage (COC) through the Jurisdictional-Based Option. Responsible for overseeing the implementation of the Public Education Plan (PEP), Illicit Discharge Elimination Plan (IDEP), Public Involvement and Participation Plan (PIPP), Pollution Prevention and Good Housekeeping Plan (PPGHP), Construction Site Storm Water Runoff Control Plan (CSSWRCP), and Post-Construction Storm Water Management Program (P-CMP). Responsible for preparing annual report outlining District's progress for submittal to the Michigan Department of Environmental Quality. Prepares watershed education materials for distribution in District publications.

# Resume



## Michael F. DeDecker, PS

Survey Task Manager

Michael F. DeDecker, PS has 14 years of experience in the industry. In his role as a Survey Project Manager, Mike is responsible for organizing the highly complex activities for the development and implementation of surveying and mapping projects. Project management involves the coordination of all aspects of a project including client relations and working with a project team to meet the requirements of the scope of work. DeDecker provides surveying expertise for the successful support and continuous improvement of survey and mapping projects to provide quality in workmanship and value for project budgets.

As Project Manager, DeDecker supervises project surveyors, survey draftsmen, and field crews. He performs project quality control, project research, boundary calculations, survey computations and field data analysis. Mike is experienced in various aspects of surveying including providing boundary and topographical surveys and overseeing large construction layout projects. He is proficient in preparing ALTA/ACSM Land Title Surveys and has particular experience in surveying for municipal infrastructure projects.

### RELEVANT EXPERIENCE

**Municipal Design Projects, Various Municipalities, MI** - Project Manager in charge of providing topographical and right of way surveys to SDA design staff for numerous projects in the Townships of Clinton, Macomb, White Lake, Lenox, Van Buren, and West Bloomfield, and the Cities of Novi, Troy, Rochester Hills, Detroit, Trenton, Orchard Lake Village, Wyandotte and Livonia. Projects included water main, sanitary sewer, storm sewer, and pavement design. Included updating benchmark records for the communities as part of each project. Subsequently oversaw the surveying layout for the individual projects.

**As Needed Engineering Staking Services, Port Huron, St. Clair County, MI** - Survey Project Manager – As needed preliminary staking and verification staking for various state construction projects for the Michigan Department of Transportation - Port Huron TSC service area.

**Southeast Macomb Sanitary District Construction Improvements, St. Clair Shores, MI** - Manager responsible for providing topographical survey along Jefferson Avenue. The configuration of the infrastructure presented challenges in accurately mapping the underground utilities. Subsequently managed the surveying layout for this large project.

**River North and River South, Trenton, MI** - Project Manager responsible for providing topographical survey along an approximately four mile long route for the combined sewer overflow elimination project. Included creating a high-precision vertical network and corresponding benchmark book for the area. Vertical measurements were adjusted using least squares methods and software. Mapping combined aerial mapping and conventional measurements. Of particular difficulty was the mapping of the underground infrastructure.

**George W. Kuhn Drain Contract Number 4, Madison Heights, MI** - Project Manager responsible for providing a detailed topographical and boundary survey to a multi-firm design team for design of \$85-million in improvements to the underground Retention

### EDUCATION

BS, Surveying Engineering, 1994, Ferris State University

### REGISTRATION

Professional Surveyor, Michigan, 44282, 1998

### PROFESSIONAL AFFILIATIONS

Michigan Society of Professional Surveyors, Southeast Chapter (President, 2005; Chapter Representative to State Board 2006)  
American Congress on Surveying and Mapping (ASCM)

### SPECIALIZED TRAINING

Courses Civil Engineering, 1995, Wayne State University  
Courses, 1992, Michigan State University

# Resume



Treatment Facility (RTF). Survey involved establishing precise horizontal control using GPS and conventional traverse methods, and also establishing precise vertical control. Mapping utilized a combination of aerial mapping and conventional surveying measurements. Mapping was also performed in the underground RTF, which required special techniques to transfer the horizontal and vertical control from above into the RTF through access manholes. This also involved the survey crew using full safety gear and following detailed permit entry confined space entry procedures.

Harsen's Island Bridge, St. Clair County, MI - Project Manager in charge of performing a hydrographic survey consisting of cross-sections of the St. Clair River adjacent to Harsen's Island in St. Clair County, Michigan. We utilized a hydrographic system from Innerspace Technology for the project, consisting of a depth sounder, GPS position link, along with an electronic data logger and navigation software on a lap top computer. The system allowed SDA to establish the proposed cross-sections and utilize the navigation software to traverse the river along the proposed route, regardless of the swift current. The combination of equipment allowed us to collect depth and position data at a frequent interval, and store this positional information electronically. This data was later downloaded to the computer server in our office, and used to create cross-sections and a DTM surface using AutoCAD.

Carpenter Road Reconstruction, Ann Arbor, MI – Survey Project Manager - SDA is responsible for construction layout of: 2.16 miles of road reconstruction including earthwork, underground storm drainage, and aggregate subbase construction, hot mix asphalt, concrete pavement andn concrete curb and gutter on Carpenter Road from Textile northerly to I-94 and 0.50 miles of cold milling, hot mix asphalt surfacing and sidewalk construction on Carpenter Road from I-94 northerly to Ellsworth Road, in Washtenaw County, Michigan.

Jackson Road Reconstruction, Scio Township, MI - Survey Project Manager - Responsible for oversight of surveying construction layout for two miles of boulevard road construction including underground utilities.

Dixboro Road/Bridge Project, Ann Arbor, MI - Survey Project Manager – Responsible for all of construction staking for reconstruction and realignment of Dixboro Road and new bridge construction over Huron River.

South Washington County Interceptor: Lift Station L-73 Tunnel, Woodbury, MN - Survey Project Manager – Researched layout equipment and obtained technical data and oversaw computations performed by senior project surveyor. Project included two miles of tunneling for gravity sewer, with depths reaching seventy feet in some areas. SDA computed alignment with gradual curves that could be negotiated by the tunnel-boring machine. Computed the number of deflectors needed and necessary spacing to approximate the curves with a series of short chords, deflecting the tunnel guiding laser along this approximated curve. Provided data to contractor for placing targets in the field.

Allen Road Tunnel Survey, Taylor, MI - Survey Project Manager – Project manger responsible for computations and oversight of field layout work and office CAD work. The project included approximately 14,500 linear feet of tunneling work using a tunnel boring

# Resume

machine (TBM) for the installation of a gravity sewer. The engineering plans prepared by others contained a conceptual alignment, and required that the contractor submit for approval a detailed alignment plan. We were hired by Ric-Man Construction, Inc. to prepare the alignment submittals and physically set the alignment in the field. We worked with the client to establish the design criteria, taking into account the limitations on turning radius for the TBM. The alignment was revised during construction to accommodate the as-built location of mining shafts, which were moved from their proposed locations due to conflicts with underground utilities. The tunnel centerline was set in the field at regular intervals, and supplemental control was set during the course of the project. The project also included checking surface features for settlement before, during, and after the construction phase.

**DTW As Needed Surveying Services, Romulus, MI - Survey Project Manager –** As needed surveying services, which may include horizontal and vertical control, topographical surveys, and boundary surveys. Included **Railroad Right of Way Survey along Norfolk Southern Railroad** for encroachment determination of existing billboard. Performed research of sign leases and railroad right of way information and coordinated work with railroad.

**FEMA Flood Study, Troy, MI - Survey Project Manager –** Project manager for approximately 100 cross-sections and 14 structure details over 4.04 miles of drain for hydraulic survey performed according to *FEMA Guidelines and Specifications for Flood Hazard Mapping Partners* specifications. Used GPS to establish control and perform a portion of the cross-sections

**Severstal NA Blast Furnace B Monitoring, Dearborn, MI - Survey Project Manager –** Three-dimensional monitoring of blast furnace for movement due to concerns over structural integrity from explosion. Established targets including permanently mounted prisms and reflective targets and tabulated results in spreadsheet.

**DWSD Romeo Arm Interceptor Failure, Sterling Heights, MI - Survey Project Manager –** Photogrammetric control survey, topographical mapping, and construction layout related to the failure of a fifty-foot deep, eleven-foot diameter interceptor sewer and related sink hole. Provided monitoring of adjacent houses and pavement to check for movement.

**DWSD North Service Center, Troy, MI - Survey Project Manager –** Three-dimensional monitoring of existing water mains and temporary retaining walls to check for movement during construction activities.

**Marathon Ashland Subsidence Surveys, Woodhaven, Michigan; Canton, Ohio; and Catlettsburg, West Virginia - Survey Project Manager –** Provided yearly monitoring of benchmarks and reference points to check for subsidence.

# Resume



## Ted Meadows

Contract Administrator

Ted has 9 years of exceptional experience in municipal construction engineering. In his role as Construction Manager, Ted is responsible for managing public and private construction engineering projects. Construction Engineering (CE) management involves the coordination of all aspects of a project including client relations and working with a project team to meet the requirements of the scope of work. Ted provides field and office expertise for the successful support and continuous improvement of CE projects to provide quality in workmanship and value for project budgets.

Currently Mr. Meadows is the construction operations supervisor for projects within the City of Novi. Ted has worked in the construction phase of numerous public works and private development projects on behalf of our municipal clients. As the supervisor of the construction staff, Ted is responsible for the daily construction activities for all projects including staff scheduling, construction observation procedures, staff training, as-built plan review, walkthroughs, punch lists, and project close out.

### RELEVANT EXPERIENCE

#### Storm Water Management

Detention Pond Retrofit, Fish Habitat and Streambank Erosion Assessment, and Water Quality Monitoring and Assessment Project, Northville Township, MI – Senior Construction Technician

Stormwater GIS and GPS Projects, Northville Township, MI – Senior Construction Technician responsible for assisting Township in meeting requirements of NPDES Voluntary General Stormwater Permit. Assisted in obtaining grant funding to map approximately 150 Johnson Creek Outfalls using handheld GPS. Canoeed along Johnson Creek, using the GPS to obtain the location and attributes of the outfalls along the creek. Attribute information included outfall shape, diameter, width, material, condition, and photographs. Possible illicit discharges were tracked by rating, color, clarity, floatables, odor, and flow source, among others. The resultant GIS provided Township staff with the capability of “visiting” the site by hotlinking the respective photographs with inventory results.

#### Wastewater

SAD 170 Phase 1B and 2B, City of Novi, MI – Senior Construction Technician responsible for the supervision of installation of over 10,000 feet of new trunk line sanitary sewer. Responsible for over seeing inspection, pavement and site restoration, contract documentation, and processing pay certifications.

#### General Services

General Engineering and Construction Services, City of Novi, MI - Senior Construction Technician that supervised field and office construction technicians. Performed project quality control, construction contract administration, soil erosion and sedimentation control procedures, surveying, and observation of paving and tunneling operations. Oversaw work

### EDUCATION

BS Environmental Science, University of Kansas, 1997

### SPECIALIZED TRAINING /

### CERTIFICATIONS

MDOT Certified Density Technician  
MDOT Certified Aggregate Technician  
MDOT Concrete Paving Inspector

Concrete Technician & Concrete Construction Inspector Level I  
Concrete Field Testing Technician Level I

MDEQ Certificate of Training for Part 91 Soil Erosion and Sedimentation Control  
Radiation Safety Officer  
USDOT HAZMAT Certification  
HDPE Pipe Fusion Academy

# Resume



done in multifamily and single family developments throughout Oakland County.

**General Engineering and Construction Services, Northville Township, MI - Senior Construction Technician** that supervised field and office construction technicians. Performed project quality control, construction contract administration, soil erosion and sedimentation control procedures, surveying, and observation of paving and tunneling operations. Oversaw work done in multifamily and single family developments throughout Wayne County.

## Water Main

**2006 Northville Township Water Main Improvements, Northville Township, MI – Senior Construction Technician** responsible for the replacement of one mile of existing water main in existing subdivisions and related pavement and site restoration. Responsible for over seeing inspection, contract documentation, and processing pay certifications.

**Bradner and Franklin Road Water Main Replacement, Northville Township, MI - Senior Construction Technician** responsible for the replacement of two miles of existing water main in an existing subdivision and related pavement and site restoration. Responsible for over seeing inspection, contract documentation, and processing pay certifications.

**Northville Road Water Main Replacement, Northville Township, MI - Senior Construction Technician** responsible for the replacement of one mile of existing water main with directionally drilled HDPE water main through the Middle Rouge Watershed site. Responsible for over seeing inspection, site restoration, contract documentation, and processing pay certifications.

**Five Mile Road Water Main Replacement, Phase I, Northville Township, MI - Senior Construction Technician** responsible for the replacement of one mile of existing water main with directionally drilled ductile iron lock joint pipe in existing subdivisions. Responsible for over seeing inspection, pavement and site restoration, contract documentation, and processing pay certifications.

## Pavement

**Livingston/Mill Street Repairs, Village of Pinckney, MI – Senior Construction Technician** responsible for removal and replacement of four blocks of bituminous road with associated storm sewer. Responsible for over seeing inspection of pavement and storm sewer, construction documentation, coordinating site testing, and quality control.

**Northville Community Park Paving Improvements, Northville Township , MI - Senior Construction Technician** responsible for observing construction of new bituminous parking lot and associated storm sewer and drainage. Responsible for observing construction of pavement and storm sewer, construction documentation, material testing, and quality control.



# Resume

## Jerry Kramarz

Construction Technician

With more than 35 years in the construction and inspection industries, Jerry is adept in many levels of construction engineering. He has knowledge of commonly-used concepts, practices, and procedures within the construction engineering field. Under the guidance of a Construction Manager or Resident Project Representative, Mr. Kramarz will perform the daily tasks necessary to document construction activities and ensure compliance with the required Public Acts and City Ordinances. He will work under immediate supervision and according to pre-established guidelines to perform the functions of the job.

### RELEVANT EXPERIENCE

**Crowe & Ingersol Road Reconstruction, Novi, Michigan** – Construction Technician for demolition and reconstruction of Crowe Drive and a portion of Ingersol Drive. The project consisted of removing and replacing existing concrete roads with a new bituminous asphalt road cross-section, installation of associated storm sewer improvements and updating sidewalks to current ADA standards.

#### Asphalt Resurfacing Program for the City of Dearborn, Michigan

Twelve years of experience in this annual program, which included checking structures and pavement conditions to establish quantities for bid. Mr. Kramarz ran inspection of prep crews, concrete replacement, and asphalt placement to final punch list. Programs completed within two percent +/- of budget.

#### Sidewalk Program for the City of Dearborn, Michigan

Involved in initial survey, establishing quantities for bid, and inspection of projects for five years. Frequent contact with residents. Concrete testing (cylinders, slump air checks, temperature) was completed about every 100 cubic yards of concrete placed. Programs completed within two percent +/- of budget.

#### Pavement Repair for the City of Dearborn, Michigan

Involved list of "must dos" and specific areas to be brought up to standards throughout the City. The "must dos" involved water department repairs, sewerage department repairs, and attending to general complaints from local property owners. Repairs to storm structures and pipe on both concrete and asphalt roadways. Daily contact with City residents. Daily concrete and asphalt testing. Completed within 1.5% +/- of budget. Mr. Kramarz worked on this program for 6 years.

#### Specific Projects throughout City of Dearborn, Michigan

Inspection of Fairlane Town Center, Fairlane Woods, Fairlane Meadows, and Commerce Park South. Reconstruction of Monroe Blvd (Outer Drive to Michigan Avenue), Military (Beech to Cherry Hill), the Tournament Players Golf Course subdivision and club house, and the building of Mercury Drive from Hubbard Drive to Southfield Service Drive, among other projects. All involved placement or replacement of water mains, storm sewers, sanitary sewers, and roadways. Inspection of replacement of water mains, live sanitary sewers, and

### EDUCATION

Strategic Planning Courses, University of Michigan – Dearborn

Construction Inspection and Supervision Courses, University of Toledo

Construction Technologies Program, Henry Ford Community College

Journeyman Carpenter, Detroit Apprentice Training Center

### SPECIALIZED TRAINING

Confined Space Entry and Rescue

Ferris State University:

Construction Practices

Michigan Aggregate Technician Level I

Michigan Bituminous Technician Level I

Asphalt Paving Operations

Density Control Testing

Pump Systems Basics for Designers & Contractors

### CERTIFICATIONS

State of Michigan:

S-1 Water Distribution License

Concrete Technician Level II

Waterworks Systems Operations

Soil Erosion & Sedimentation Control

Storm Water Operator

# Resume



beautification projects.

## Private Projects throughout Plymouth Township, Michigan

Mr. Kramarz's responsibilities involved checking paperwork (insurance, permits, assessment of fees); setting up pre-cons with owners, contractors, subcontractors, engineers, surveyors, utility companies and the departments of fire, building and DPW. He assigned inspection personnel and coordinated any changes that were necessary with engineers, contractors, and the township departments involved. Checked record drawings and distributed final record drawings. Also checked bonds, waivers, and any punch lists necessary to finalize projects.

Included projects such as:

Subdivisions--Country Acres, Andover (numerous phases)

Commercial Projects--Bosch, Karmann, DeMattia, Finrel Ross, Lear and Royo

Smaller Projects--Home Depot, banks, smaller distribution companies, churches and condominium projects

All above involved storm systems, sanitary, and water main placement.

## Municipal Projects, Plymouth Township, Michigan

Successfully accomplished inspection of Township park projects, inspection of Township building (such as the new Township hall and the reconstruction of the parking lot at the DPW facility), cleaning and televising of sanitary sewers, construction of a new water tower, and set up and inspection of the sidewalk program for eight years.

## Private Projects for Monroe Township, Michigan

Checking paperwork (permits, insurance, bonds and fee assessments); setting up pre-cons with owners, contractors, subcontractors, engineers, surveyors, the City of Monroe (water), Monroe County Drain Commission, the Monroe County Road Commission, Township Building Department, Fire Department, Clerk's office, and utilities for subdivisions and a few commercial sites. Inspection personnel were assigned and changes were brought to the attention of design engineers and the proper entity (Drain Commission, Road Commission, Township Engineer, or Water Department). Responsible for final approval of as-builts, final inspection, and project close-out. Also responsible for storm systems, sanitary sewers, water mains, and final walk throughs of the ROWs and pump stations for eight years.

## Luna Pier, 1999 to 2007

Inspected pavement resurfacing, pavement reconstruction projects, and a condominium project.

## Salem Township, 1999 to 2002

Checking placement of roads (subgrade, stone placement, and asphalt placement) and drainage systems. Checking punch lists and as-builts.

Stephenson Highway, 14 Mile to I-75, Troy, MI – Construction Technician for construction of this pavement rehabilitation project. John was responsible for full construction engineering of 1.75 miles of rehabilitation of Stephenson Highway from 14 Mile



# Resume



to I-75. The project included concrete curb repair and placement; installation of storm sewer to provide for drainage; relocation and rehabilitation of crossover lanes; pavement and joint repair; replacement of sections of roadway; bituminous overlay; and geometric improvements. SDA provided complete construction engineering services including construction inspection, contract administration, material testing and construction survey QA. The project included federal and state funding.

**West Bloomfield Pathway Program, West Bloomfield, Michigan** - Construction Technician for 4+ miles of new 8' asphalt and 6' concrete pathway in several locations around the Township as improvements to sidewalks around the Township's Civic Center and replacement damaged bituminous and concrete pathways throughout the Township. The work included extensive grading, retaining walls, segments of wooden boardwalk through environmentally sensitive areas, and pedestrian signal improvements.

# Resume



## Kimberly Danowski

SESC Construction Technician/Specialist

Kimberly Danowski has two years of experience with SDA and 16 years in the construction industry. Kim has numerous responsibilities within various levels of engineering. She has a thorough understanding of engineering concepts, practices, and procedures that are expected throughout the engineering profession. Kim's work experience is a combination of field work on infrastructure projects and the associated contract administration that is required to implement such projects. Kim has performed construction inspection, processed material certifications, shop drawings, pay estimates, and contract modifications, and has reviewed construction plans and specifications. Kim is knowledgeable in the areas of project scheduling and project estimating and cost control.

Kim has field experience as a Construction Engineering Inspector. This includes the inspection of construction operations with water main, sanitary and storm drain installation, She has experience with FieldBook and FieldManager while working as a Construction Engineer. Kim also has experience in Microsoft Excel and Microsoft Project. She also performs Land Improvement reviews with the Municipal Department.

### RELEVANT EXPERIENCE

#### General Engineering Services for the City of Novi, MI

**Municipal Department** responsibilities include: reviewing Residential LIP plans for proper compliance with overall grading and drainage plans in newer residential development

**Construction Department** Manages the required SESC inspections for approx 40 Construction sites in the City of Novi. Responsibilities include: conducting SESC inspections for the City of Novi as required by the MDEQ. preparing SESC reports with photos and Notice of Deficiencies; contacting and following-up with the contractors to gain compliance with any violations.

**General Construction Engineering Services for the Cities of: Troy, Novi, Mount Clemens, and the Township of Lenox** - Services included but not limited to: Construction inspection and contract administration for various utility and other infrastructure projects in municipalities throughout southeastern Michigan. Services include: field measurement and interpretation of design plans & specifications for QA/QC; written, drawn, and photographic documentation of site activities; the processing of pay estimates, change orders, shop drawings, and material certifications. In addition, Soil Erosion and Sedimentation Control Inspection services, Storm Water Operator services, and footing and final grade inspections in several municipalities.

**Numerous Municipalities throughout Southeastern Michigan** - Served as Construction Technician on behalf of numerous municipalities in Southeastern Michigan. Services included processing shop drawings and reviewing material certifications. Inspection duties included the supervision and documentation of construction operations on a variety of commercial and retail sites including water main/sanitary sewer/storm drain installation,

### EDUCATION

BS Civil Engineering, 1987  
Concentration in Construction Management  
University of Michigan

### SPECIALIZED TRAINING

MDEQ Certificate No 07-0256 for part 91, Soil Erosion and Sedimentation Control, Expires 2/28/12

MDEQ Storm Water Management Construction Site A-1, No C-13490, Expires 7/1/12

MDOT Concrete Paving Inspection Module completed January 2007

# Resume



## Previous Experience

**Project Engineer** for a General Contractor - assisted Project Managers with project organization and scheduling. Reviewed shop drawings, attended OAC progress meetings

**Various Municipalities** - Responsibilities have included Plan reviewer, Building Inspector, Property Maintenance and Zoning Inspector

**Turner Construction** - Field Engineer for Two Prudential Plaza; Special Projects Division; (SPD) Project Manager



# RESUME

ASTI ENVIRONMENTAL



**DIANNE C. MARTIN**  
**Director of Resource Assessment and Management**

## PROFILE

### Certifications

Professional Wetland Scientist #1313, Society of Wetland Scientists, 2001  
Michigan DEQ Wastewater Treatment Operator for Classification C-2f, Constructed Wetlands, January 2001  
Michigan Department of Natural Resources Endangered Species Permit # 1553, renewed 2007  
HAZWOPER Certification and 8 Hour Refresher, August 2007  
United States Army Corp of Engineers Wetland Delineation Training, August 1998

### Education

Eastern Michigan University, M.S., 1996, Aquatic Ecosystem Biology  
Western Michigan University, B.S., 1993, Biology and Environmental Studies  
Short Course, 1998, Matthei Botanical Gardens, Sedges  
Short Course, 1999, Kellogg Community College, Grasslands Management  
Short Course, 2000, Matthei Botanical Gardens, Grasses  
Short Course, 2000, Wetland Training Institute, Planning Hydrology for Constructed Wetlands  
Short Course, 2000, Institute for Wetlands and Coastal Training and Research, Asters and Goldenrods  
Short Course, 2001, Matthei Botanical Gardens, Woody Plants in Winter  
Short Course, 2001, Institute for Wetlands and Coastal Training and Research, Shrubs of Michigan  
Short Course, 2002, Matthei Botanical Gardens, Woodland Wildflower Restoration  
Conference, 2003, Lorman Educational Services, Zoning and Land Use in Michigan  
Conference, 2003, SEMCOG, Integrating Water and Natural Resource Protection into the Planning Process  
Conference, 2004, Restoring Fish and Wildlife in Michigan's Great Lakes Areas of Concern  
Conference, 2005, Local Government Programs for the Protection of Wetlands

### Experience History

Director, ASTI ENVIRONMENTAL  
Ecologist, ASTI ENVIRONMENTAL  
Field Supervisor, Missouri Department of Conservation  
Teaching Assistant, Eastern Michigan University

### Professional Memberships

Society of Wetland Scientists, Michigan Municipal League, Commercial Real Estate for Women

### Professional Background

Ms. Martin has significant experience in ecological assessment, with an emphasis on aquatic ecosystems. Her work includes wetland delineation, wetland/inland lakes and streams permits, wetland mitigation, biomonitoring, reclamation plans, ecological inventories, threatened and endangered species surveys, restoration planning, natural features inventories, and environmental assessments and impact statements.

### **Years Experience:**

10—ASTI ENVIRONMENTAL  
3—other firms, government

## **WETLAND DELINEATION AND MITIGATION**

### Wetland Inventories

Oversaw ASTI staff in conducting wetland inventories for the City of East Lansing and for the Charter Township of Clinton, using GIS and field assessment.

### City/Township Wetland Consultant

Acts as environmental consultant for the City of Orchard Lake Village, Oakland County, City of East Lansing, Ingham and Clinton Counties, and Putnam Township, Livingston County. Verifies delineations, reviews site plans, permits and mitigation plans, and resolves violations. Has also provided expert testimony and contested case support.

### Wetland Delineations

Performed wetland delineations on parcels from 1 acre to over 900 acres in size in Washtenaw, Livingston, Monroe, Oakland, St. Clair, Macomb, and Wayne Counties.

### Wetland Mitigation

Designed mitigation wetlands in Oakland, Washtenaw, Macomb, and Jackson Counties up to 20 acres in size. Located mitigation sites, oversaw construction activities, including seeding and planting of vegetation, and developed monitoring criteria.

### Wetland Permits, Commercial and Residential Development

Wrote wetland permit applications for small and large sites in southern Michigan.

### Biomonitoring

Performed biomonitoring (field work and report preparation) of mitigation wetlands throughout southeastern Michigan.

### Treatment Wetland

Operates and maintains a 5-acre constructed treatment wetland for the cleansing of VOC-contaminated ground water.

## **ENVIRONMENTAL ASSESSMENTS**

### Ecological Assessment & Inventory, Baraga County Airport Expansion, 285 acres

Inventoried plant communities, delineated and assessed streams and wetlands, and conducted threatened and endangered species assessment on a 285-acre parcel in Michigan's Upper Peninsula. This ecological assessment information was compiled into an Environmental Assessment for MDOT.

### Ecological Assessment & Inventory, Sanilac County, Marlette Municipal Airport Expansion, 200 acres

Inventoried plant communities, delineated and assessed streams and wetlands, and conducted threatened and endangered species assessment on a 200-acre parcel near Marlette, MI. This information was compiled into an Environmental Assessment for MDOT.

## **THREATENED AND ENDANGERED SPECIES**

### Survey, Brownstown Twp., Wayne County

Surveyed project area for state endangered smallmouth salamander and state threatened Eastern fox snake.

### Survey, Ferrysburg, Ottawa County

Surveyed project area used for mining industrial sand for *American Ginseng*.

### Survey, Belle River at Weber Road, Macomb County

Surveyed project area for all state and federally protected freshwater mussels.

### Indiana Bat Habitat Surveys, Various Townships, Various Counties

Surveyed project area for the state and federally protected Indiana bat habitat.

## **ECOLOGICAL RESTORATION AND HABITAT MANAGEMENT PLANS**

### Rouge Green Corridor, Habitat Inventory and Management Planning, Oakland County, Michigan

Acted as project manager for a complete riparian and aquatic habitat mapping, inventory and assessment, including the development of corridor wide and site-specific habitat management plans for the Rouge Green Corridor.

### Cell Unit Mining and Reclamation Plans, TechniSand, Inc., Various Counties in Western Michigan

Wrote mining plans and developed upland forest, lake, and wetland end-use restoration plans for sand dune mining sites in western Michigan.

### Prairie Restoration, Paint Creek Trailway, Oakland County

Inventoried remnant prairie and developed a prairie restoration plan for a 3-acre prairie adjacent to the Paint Creek Trailway.

### Gateway to the Detroit River International Wildlife Refuge, Wayne County

Created restoration plans for the "Gateway" and headquarters for the Detroit River International Wildlife Refuge, including daylighting the Monguagon Drain, creating treatment wetlands, restoring upland oak-hickory forest, and re-creating oak savannah and prairie grassland communities.

## **BIOLOGICAL, BOTANICAL, AND NATURAL FEATURES INVENTORIES**

### Natural Features Inventory and Zoning Ordinance Development, Grand Haven, Michigan

Acted as project manager for a GIS-based (with ground truthing) natural features inventory and development of zoning language to protect high quality sensitive areas within the City.

### Botanical Inventory, Detroit River International Wildlife Refuge, Humbug Marsh Unit, Wayne County, Michigan

Conducted a comprehensive botanical inventory on the 410-acre site and evaluated the ecological integrity of each habitat type. Provided management recommendations to the USFWS and assisted with the site's master planning.

### Botanical Inventory, Commerce Twp., Oakland County, Michigan

Conducted a comprehensive botanical inventory on a 330-acre site. Both aquatic and terrestrial habitats were surveyed. Performed a floristic quality analysis within each discrete community type and for the entire site.

### Survey, Dune Lands, Van Buren County, Michigan

Conducted seasonal vegetation surveys throughout entire 100 acre project area and performed a floristic quality assessment on the various community types.

### Survey, Dune Lands, Ottawa County, Michigan

Conducted seasonal vegetation surveys throughout entire 500 acre project area and performed a floristic quality assessment on the various community types.

### Survey, Old Mission Point, Grand Traverse County, Michigan

Conducted vegetation surveys on over 500 acres of parkland and live-trapped small mammals for identification.

## **WETLAND RESEARCH**

### Missouri River Post-Flood Evaluation Project, Department of Conservation, Missouri

Field supervisor for a wetland inventory of vegetation and macroinvertebrates on twenty-four research sites along the Missouri River. Assessed vegetation dynamics following a major flood event. Collected, identified, and prepared specimens of flora for a special collection at the Dunn-Palmer Herbarium, University of Missouri.

### Rouge River Frog and Toad Survey, Michigan

Conducted spring call counts for frog and toad species on eighteen quarter sections within the middle section of the Rouge River watershed.

### Research on Sedimentation in Wetlands

Studied effects of incoming sediment discharge into wetlands upon the invertebrate community and various water quality parameters, Independence Lake, Washtenaw County.

## **VOLUNTEER WORK**

### Adopt-a-Stream Program, Huron River Watershed Council, Ann Arbor, Michigan

Since 1993, collected and identified benthic macroinvertebrates for water quality assessment. Gathered stream data for informational purposes. Assisted in various aspects of program development, community education, and conference logistics.

### Environmental and Natural Resource Law Center of Costa Rica, San Jose, Costa Rica

Compiled an annotated bibliography for research purposes and composed an introduction to a hazardous waste management proposal for Costa Rica.

## **PUBLICATIONS/PRESENTATIONS**

Presentation (Joint Presentation with Michigan Department of Environmental Quality Staff): Wetlands and Development in Michigan. Michigan Housing Council. Novi, MI. March 2004.

Presentation: Stony Creek Metropark Wetland Mitigation. Huron-Clinton Metropark Authority Inservice Staff Training. Shelby Township, MI. December 2003.

Presentation: Successful Wetland Mitigation Design and Implementation. MDEQ Transportation and the Environment Conference. Jackson, MI. March 2002.

Martin, D.C. and R. K. Neely. 2001. Benthic macroinvertebrate response to sedimentation in a *Typha angustifolia* L. wetland. Wetland Ecology and Management 9: 441-454.

Mazourek, J., D. Martin, D. Humburg, and L. Fredrickson. Post Flood Vegetation Communities. In: D.D. Humburg and Burke, V.J., editors, 1999. Initial Biotic Survey of Lisbon Bottoms, Big Muddy National Fish and Wildlife Refuge. U.S. Geological Survey, Biological Resources Division Biological Science Report USGS/BRD/BSR-2000-0001. 76pp.

Presentation: Effects of Sedimentation on Wetland Macroinvertebrates. Michigan Academy of Sciences, Arts, and Letters. 1996.

# FIRM PROFILE

APPLIED SCIENCE & TECHNOLOGY, INC. (ASTI)

## CORPORATE OFFICES

Phone: 800.395.ASTI

Central Great Lakes Office      10448 Citation Drive  
Suite 100  
Brighton, MI 48116  
Phone: 810.225.2800  
FAX: 810.225.3800

Western Great Lakes Office      660 Cascade West  
Parkway SE, Suite 210  
Grand Rapids, MI 49503  
Phone: 616.957.5601  
FAX: 616.957.5629

Internet Address      <http://www.asti-env.com>

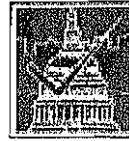
E-mail Address      [environmental@asti-env.com](mailto:environmental@asti-env.com)

## OVERVIEW

Applied Science & Technology, Inc. (ASTI) has provided environmental and engineering services to industry and government since 1985. ASTI service groups are staffed by engineers and scientists certified as professional engineers, hazardous materials managers, regulatory compliance managers, professional geologists, environmental professionals, underground storage tank professionals, wetland scientists, environmental trainers, asbestos inspectors, environmental property assessors, building inspectors and management planners.

We routinely provide services in the Great Lakes region and have completed projects throughout the United States and Canada and in Eastern Europe. For industry and business, ASTI provides **investigation, compliance, permitting, and remediation services** to assist in achieving compliance with federal, state, and local environmental regulations. For property acquisition and management, ASTI provides **assessment, inspection, and restoration services** to evaluate site impacts, provide documentation for liability protection and manage natural features.

## INDUSTRIAL SERVICES



**Compliance Assessment Services** include compliance assessments, annual reporting, permit and plan assistance, EMS/ISO 14001 design and implementation, health and safety programs, training, industrial hygiene monitoring, spill and operations plans, noise assessment, routine water and process discharge monitoring, SESC permits, waste management unit closures, waste investigations, feasibility studies, risk assessments, disposal site audits, site assessment and site remediation.

**Operation and Maintenance Services** include routine monitoring, temporary staffing, training, pollution control equipment O & M, and remediation equipment O & M.



**Air Quality Services** provide complete air emissions compliance services including permitting, Title V evaluations, worker exposure monitoring, emissions inventories, PSD demonstrations, ventilation studies, dispersion monitoring and appropriate technology screening.

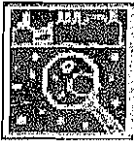


**Site Remediation and Impact Investigations** include the design of remediation systems, agency negotiation, feasibility studies, site specific risk assessments, groundwater modeling, remediation and removal actions, site reclamation, site restoration, and soil and groundwater remediation.

**Underground Storage Tank Services** include RBCA evaluations, tank investigations, UST and AST compliance, tank removal and recycling, remediation system operation and maintenance, and UST and LUST closures.



## PROPERTY ACQUISITION SERVICES



**Site Assessment Services** include property assessments per the ASTM standards, phase I site assessments, transaction screens, database searches, due care plans, mold investigations, indoor air equality evaluations, site closure, soil and groundwater investigations, baseline environmental assessments, asbestos inspections, remediation, wetlands identification and management, and GIS mapping.

**Site Closure Services** include due care plans, assessment of appropriate closure standards, engineered controls, management controls deed restrictions and corrective action.



**Ecological Services** include CE's and EA's for NEPA Clearance, environmental assessments, environmental impact statements, floodplain/floodway analysis, historic surveys, natural features mapping, resource restoration, right of way clearance, SEE studies, threatened and endangered species surveys, wetlands assessment, wetlands mitigation and permitting, ecological risk assessments, habitat management and CAD/GIS mapping.



**Brownfield Redevelopment Services** include Brownfield financing assistance, Brownfield grant application assistance, asbestos management, remediation cost assessments, removal actions, soil and groundwater impact delineation, treatment system design and installation, contaminant mapping and modeling, evaluation of remediation alternatives and groundwater and soils treatment.

**Groundwater and Soil Investigations** include identification and mapping of groundwater and soils contamination, evaluation and implementation of remediation alternatives, and monitoring system installation and operation.



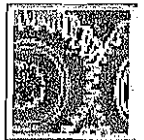
## INFRASTRUCTURE SERVICES

**Resource Assessment and Management Services** include wetland delineation, permitting, and mitigation, wetland mitigation banking, habitat management plans, threatened and endangered species surveys, natural features inventories, mining restoration plans, wetland and prairie restorations/recreations, floodplain determinations, hazard mitigation planning and water quality assessments.



**Clearance Services** include comprehensive SEE studies and NEPA clearance including historic and archaeological preservation, air quality impacts, floodplain impacts, wildlife impacts, hazardous waste management and water quality assessments and wetland impacts.

**Design Services** include GIS/CAD services, engineering design, landscape planning, mining reserve analysis, pollution control system design, remediation system design.



**Treatment Alternatives** include wetlands treatment systems, stormwater runoff control, wastewater treatments, groundwater and soils remediation systems and



**Project Management Services** are available for projects requiring multiple subcontractors and can include contract management, contractor/subcontractor evaluation, project implementation, quality assurance review and site specific health and safety plans.



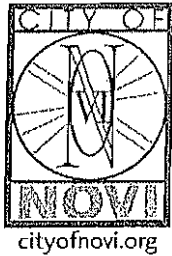
**ASTI** For more information on environmental programs for your business, please contact Mr. Thomas Wackerman, President at **Applied Science & Technology, Inc. 800.395.ASTI** (twacker@asti-env.com) or visit our website at [www.asti-env.com](http://www.asti-env.com).



City of Novi  
West Oaks Regional Detention Basin Improvements

ID	Task Name	Duration	Start	Finish	2009											
					Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
1	<b>West Oaks Regional Detention Basin Improvements</b>	<b>153 days</b>	<b>Tue 1/20/09</b>	<b>Thu 8/20/09</b>	▶											
2	Kickoff Meeting with City	1 day	Tue 1/20/09	Tue 1/20/09												
3	<b>Design Phase</b>	<b>58 days</b>	<b>Wed 1/21/09</b>	<b>Fri 4/10/09</b>	▶											
4	Topographical Survey	8 days	Wed 1/21/09	Fri 1/30/09												
5	Preliminary Design (30%)	9 days	Mon 2/2/09	Thu 2/12/09												
6	Preliminary (30%) Plans to City for Review	1 day	Fri 2/13/09	Fri 2/13/09												
7	Comments from City	5 days	Mon 2/16/09	Fri 2/20/09												
8	Final Design (90%)	24 days	Mon 2/23/09	Thu 3/26/09												
9	Final (90%) Plans and Specifications to City for Review	1 day	Fri 3/27/09	Fri 3/27/09												
10	Comments from City	5 days	Mon 3/30/09	Fri 4/3/09												
11	Revise Plans	5 days	Mon 4/6/09	Fri 4/10/09												
12	<b>Bidding Phase</b>	<b>36 days</b>	<b>Mon 4/13/09</b>	<b>Mon 6/1/09</b>	▶											
13	Issue Plans for Bid	1 day	Mon 4/13/09	Mon 4/13/09												
14	Bidding Phase	25 days	Tue 4/14/09	Mon 5/18/09												
15	Bid Opening	1 day	Tue 5/19/09	Tue 5/19/09												
16	Recommendation to Council	1 day	Wed 5/20/09	Wed 5/20/09												
17	Approval by City Council	8 days	Thu 5/21/09	Mon 6/1/09												
18	<b>Construction Phase</b>	<b>49 days</b>	<b>Mon 6/15/09</b>	<b>Thu 8/20/09</b>	▶											
19	Notice to Proceed	1 day	Mon 6/15/09	Mon 6/15/09												
20	Construction	47 days	Tue 6/16/09	Wed 8/19/09												
21	Construction Completion	1 day	Thu 8/20/09	Thu 8/20/09												

Wed 1/7/09



**EXHIBIT A  
FEE PROPOSAL  
CITY OF NOVI**

**ENGINEERING SERVICES FOR  
WEST OAKS REGIONAL DETENTION BASIN IMPROVEMENTS**

We the undersigned propose to furnish to the City of Novi services consistent with the Request for Qualifications dated January 11, 2007 and Request for Proposals dated December 16, 2008, respectively. Design fees will be paid on an hourly basis for actual work performed to a maximum as proposed. A separate fee schedule is being provided should the City request additional work on an hourly basis.

Project	Phase	Total Fee
West Oaks Regional Detention Basin Improvements	Design Phase (no soil borings)	\$ 9,100.00
	Construction Cost Estimate: \$ 143,675.00	
	Construction Phase: <u>7.3</u> % of Construction Cost	\$ 10,488.00
	<b>TOTAL ESTIMATED FEE*</b>	<b>\$ 19,588.00</b>

\*Total Estimated Fee consists of a not-to-exceed design phase fee and a fixed percentage construction phase fee which is used to estimate an approximate fee amount based on the cost estimate above. The actual construction phase fee will be established when the project is awarded to a contractor by multiplying the fixed percentage provided and the bid price of the successful bidder.

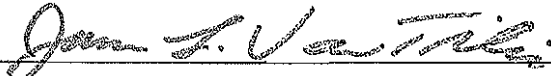
**PLEASE TYPE:**

Company Name: Spalding DeDecker Associates, Inc.

Address: 905 E. South Blvd., Rochester Hills, Michigan 48307

Agent's Name: James L. Van Tiflin, PE

Agent's Title: Project Manager / Assistant Dept. Manager, Municipal Engineering

Agent's Signature: 

Telephone Number: (248) 844-5400 Fax Number: (248) 844-5404

E-mail Address: jvantiflin@sda-eng.com Date: 1/8/09



# SPALDING DEDECKER ASSOCIATES, INC.

905 South Boulevard East • Rochester Hills • Michigan 48307 • Tel 248 844 5400 • Fax 248 844 5404

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT NAME: West Oaks Regional Detention Basin Improvements  
 CLIENT NAME: City of Novi  
 PREPARED BY: B. McKissen

PROJECT NO: PR08-334  
 CHECKED BY: J. Van Tiffin  
 DATE: 1/8/2009

NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>GENERAL</b>					
	Bonds, Ins. & Initial Set-up Expense (3% max)	1	LS	\$2,800.00	\$2,800.00
	Audio-Visual Tape Coverage of Construction Area	1	LS	\$1,500.00	\$1,500.00
	Soil Erosion & Sediment Control	1	LS	\$3,000.00	\$3,000.00
<b>BASIN IMPROVEMENTS</b>					
	Repair 24" Basin Inlets	2	LS	\$2,000.00	\$4,000.00
	Restore Eroded Areas Around 48" Inlet	1	LS	\$4,000.00	\$4,000.00
	Raise Bar Grate on Outlet Control Structure	1	LS	\$2,000.00	\$2,000.00
	Construct Reinforced Vegetated Swales	350	LF	\$15.00	\$5,250.00
	Install Staff Gage	1	EA	\$500.00	\$500.00
	Construct Access Drive	1	LS	\$6,200.00	\$6,200.00
	Pretreatment BMP (24"-27")	4	EA	\$22,000.00	\$88,000.00
	Abandon Pump Station	1	LS	\$2,000.00	\$2,000.00
	Install Stump Islands	1	LS	\$1,000.00	\$1,000.00
	Seed & Mulch	3,100	SY	\$3.75	\$11,625.00
	Surface Restoration	1	LS	\$5,000.00	\$5,000.00
	Mobilization	1	LS	\$ 6,800.00	\$ 6,800.00
<b>OPINION OF PROBABLE CONSTRUCTION COST</b>					<b>\$ 143,675.00</b>

*In providing opinions of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's opinions of probable construction costs are made on the basis of the Consultant's professional judgement and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's opinion of probable construction cost.*

**Spalding DeDecker Associates, Inc.**  
**City of Novi, Michigan**  
**"Hourly Rate Schedule"**



**PROFESSIONAL SERVICES**

The engineering and surveying services of SDA will be performed under the overall supervision of Principals and Department Managers of our firm. Fees will be based upon the time worked on the project by engineering, surveying, technical, construction technicians and clerical personnel assigned to the project.

<b><u>Classification</u></b>	<b><u>Hourly Rate</u></b>
Department Manager	\$140.00
Project Manager	\$123.00
Senior Project Engineer/Senior Project Surveyor +	\$121.00
Project Engineer/Project Surveyor/Resident Project Representative +	\$103.00
Project Accountant +	\$103.00
Operation & Maintenance Specialist+	\$ 99.00
Engineer +	\$ 94.00
Surveyor+	\$ 94.00
Designer/Mapping Specialist +	\$ 87.00
Drafter/Technician/Surveyor Assistant/Engineering Assistant +	\$ 73.00
Two-person Survey Crew (Crew Chief & Instrumentman w/truck and equipment) or Sewer Crew +	\$159.00
Additional Survey/Construction Tech Assistants (if necessary) +	\$ 54.00
Construction Technician I +	\$ 68.00
Construction Technician II +	\$ 75.00
Senior Construction Technician +	\$ 91.00

+ Overtime services will be charged at a rate equal to 1.3 times the indicated rate. "Overtime" is time worked in excess of 8 hours per day.

**REIMBURSABLE EXPENSES:** The following items are reimbursable to the extent of 110% of actual expenses (including subcontracting expense) accrued for the project.

1. Printing and Reproduction
2. Subcontracted Services.
3. Shipping and Handling Charges