



CITY of NOVI CITY COUNCIL

Agenda Item D December 18, 2017

SUBJECT: Approval of recommendation from the Consultant Review Committee to award the Agreement for Civil Engineering Private Development Field Services to Spalding DeDecker for a five-year term and adoption of associated fees and charges, effective December 18, 2017.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division

CITY MANAGER APPROVAL: 

BACKGROUND INFORMATION:

The contract with the City's current consultant for civil engineering field services for private development projects, Spalding DeDecker Associates, Inc. (SDA), expires on December 17, 2017. This consultant primarily provides engineering services related to private development, such as review of residential plot plans, construction inspection, project closeout paperwork assistance, and the completion of record drawings. The current contract was awarded at the April 23, 2012 City Council meeting and became effective on May 1, 2012 as a two-year contract. This contract has been extended four times, most recently on February 6, 2017.

The pending expiration of the contract resulted in the City issuing a Request for Qualifications (RFQ) to consulting engineering firms. Listing minimum qualifications helped to ensure the responding firms met certain critical criteria, such as staff credentials, number of qualified staff, distance from the City, and relevant municipal experience. The RFQ was posted publicly and resulted in responses from three firms.

The review process consisted of two components: 1) reviewing and scoring each of the qualifications; and 2) opening sealed fee proposal forms from the most qualified firm(s). The three submittals were evaluated by staff from Public Services, Community Development and Finance Departments, using the Qualifications Based Selection (QBS) process, with an emphasis on each firm's experience and understanding of the scope.

The results of the staff review of qualifications were as follows:

Firm	Staff Review Score	Proposal Rank
Spalding DeDecker (SDA)	332	1
AECOM	145	2
Giffels Webster Engineers	123	3

Of the three firms that submitted qualifications, SDA had the highest staff review score and met all the requirements listed in the RFQ. Since their score was significantly higher than the two other firms' scores, theirs was the only fee proposal opened. The proposed fees are generally comparable to those awarded as the most recent extension of the contract in 2017.

The staff review team recommends awarding the consulting agreement with Spalding DeDecker based on the review of qualifications and proposed fees. SDA has performed field civil engineering services for private development for Novi since 2005, and staff has been satisfied with SDA's performance. SDA received the highest review score and has proposed fees that are generally comparable to those awarded as an extension of the contract in 2017.

The Consultant Review Committee (CRC) convened on this matter on Monday, November 27, 2017 and concurs with staff's recommendation to award a contract to SDA. Furthermore, the language in the agreement has recently been updated by the City Attorney for additional clarity and liability protection.

The work completed under this agreement is completely funded by fees charged to developers and builders. Therefore, staff recommends approval of the adoption of fees and charges per the fee proposal provided by SDA, dated October 16, 2017.

RECOMMENDED ACTION: Approval of recommendation from the Consultant Review Committee to award the Agreement for Civil Engineering Private Development Field Services to Spalding DeDecker for a five-year term and adoption of associated fees and charges, effective December 18, 2017.



CITY OF NOVI, MICHIGAN
REQUEST FOR QUALIFICATIONS (RFQ)
REQUEST FOR FEE PROPOSALS (RFP)
September 26, 2017

**CIVIL ENGINEERING PRIVATE DEVELOPMENT
FIELD SERVICES**

A. General. The City of Novi, Michigan, population 59,395, located in Oakland County, seeks a highly qualified firm to provide civil engineering private development field services for private commercial, industrial and residential development sites. The selected consultant will provide professional engineering services in support of the City Council, Planning Commission, and the City's Public Services and Community Development Departments. Details pertaining to the City and its organization are available on the City's website, www.cityofnovi.org.

The qualifications and approved fees for civil engineering private development field services will remain in effect for a period up to five (5) years from the date of City Council approval. The qualifications period may be extended beyond five years at the discretion of City Council.

The City will follow a two-step selection process. The Statement of Qualifications will be reviewed and the firms deemed to be the most qualified in the disciplines involved will be selected for a short list. The Fee Proposals of those firms will then be opened and reviewed. The City's evaluation of the most qualified firms in conjunction with their proposed fees will determine the recommendation to City Council for the final selection of one firm.

B. Schedule. The process for selecting a civil engineering field services consultant will follow this schedule:

City issues RFQ & RFP	September 26, 2017
Deadline for written questions regarding RFQ & RFP	October 10, 2017
Qualifications and fee proposals submittal due	October 17, 2017
Award by City Council and date of Contract start	December 18, 2017

C. Minimum Qualifications. Firms interested in submitting qualifications shall meet the following minimum requirements:

- 1) The firm should have an established office, prior to the date of this RFQ, within thirty (30) miles of the City of Novi that is staffed with personnel who provide civil engineering field services.
- 2) With the exception of geotechnical/sub-surface investigation services, the firm shall perform all duties listed below in the Scope of Services section of this RFQ without the use of sub-consultants.
- 3) The firm shall employ a minimum of three (3) licensed professional engineers, all of whom shall be registered in the State of Michigan.
- 4) The firm shall employ at least one (1) licensed professional surveyor who shall be registered in the State of Michigan.
- 5) The firm shall employ a qualified Project Manager, who has a minimum of ten (10) years of experience in construction management and/or inspection related services on commercial, industrial and residential development sites. This individual shall have knowledge of construction standards, specifications and details similar to those used by the City of Novi, Oakland County, Michigan Department of Environmental Quality, and Michigan Department of Transportation.
- 6) The firm shall employ and be capable of providing a minimum of five (5) qualified full-time construction inspectors other than the project manager during the term of the contract.
- 7) The firm shall employ at least one person certified in administering Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act as enforced by the Michigan Department of Environmental Quality – Water Bureau. Because the City of Novi is a Municipal Enforcing Agency, a firm that only presents a certified Storm Water Operator will not meet this requirement.
- 8) The firm shall employ at least one person registered as a Certified Floodplain Manager (CFM).
- 9) The firm shall have at a minimum, ESRI® ArcGIS® for Desktop version 10 or better and AutoCad® 2016 or higher software packages for record drawing preparation.
- 10) The firm shall demonstrate that it possesses relevant municipal engineering consulting experience.

D. Scope of Services. The following describes the duties and responsibilities of the civil engineering field services consultant and constitutes the basis for the firm's qualifications submittal and fee determination.

Core Services under Construction Inspection Fee Schedule:

See Appendix A-1 for an example of a Construction Inspection Fee Schedule.

- 1) Coordinate and conduct all pre-construction (environmental, full-site, special and/or supplementary) meetings relating to site plan work, including, the preparation of meeting agenda and minutes; review of shop drawings and material specifications; and handling follow-up questions or responses to private contractors/developers/engineers.
- 2) Implement procedures to coordinate with all other City Staff and outside consultants involved with soil erosion and sedimentation control, wetlands and woodland protections, traffic control and other governmental agencies as needed for a seamless project review and observation team.
- 3) Provide construction inspection, material testing review, easement review, storm water facilities inspections, and preparation of record or as-built drawings for paving and utility construction for private developments. The fee basis of inspection is based on the percentage of construction cost.
 - a) Construction Inspection – The consultant will provide for full-time and/or part-time inspection services for all site work related infrastructure items as indicated in Appendix A-1. This includes the preparation of a daily inspection report and any report attachments (i.e., photographs, drawings, testing reports, etc.). All said reports are to become the property of the City of Novi.
 - b) Material Testing Review – The consultant shall coordinate and supervise the developer’s material testing firm for any and all compacted fills, densities and strengths for proposed utility and/or pavement installations. The consultant shall also be able to provide a third-party geotechnical sub-consultant for any instances where the developer’s geotechnical firm is in question. Any and all costs associated with the geotechnical firm shall be solely accepted by the consultant.
 - c) Acceptance Document Management and Easement Review – The consultant shall collect the acceptance document submittals, provide receipt emails and provide a review of all public acceptance documents and any other easement or agreement documents associated with private development projects. Review of exhibits is to verify that the survey exhibits and legal descriptions match the City’s approved development plans and intent of the easement or agreement.
 - d) Storm Water Facilities Inspections – The consultant shall perform a field review of the constructed storm water detention facility to confirm that grades and volumes conform to the approved construction plans. A separate report must

be prepared and submitted to the City indicating substantial conformance or deficiencies.

- e) Record Drawings – The consultant shall prepare electronic as-builts or record drawings for all private development projects based on the applicants engineer or surveyors established site plan submittal. See Appendix A-2 for a detailed narrative description of the final record drawing submittal to the City.
- 4) Provide occupancy certificate inspection services for projects that have outstanding work items remaining (and financial guarantees posted with the City to ensure completion). The consultant shall provide one initial and two follow-up site visits to generate punch lists or observation to complete punch lists. Perform inspections and make resultant recommendations for financial guarantee adjustments and occupancy permits. Coordinate with the Department of Public Services on a final temporary certificate of occupancy walk-through inspection. See Appendix A-3 for Walk-Through requirements of the developments of which the consultant’s inspection will include.
- 5) Conduct separate right-of-way inspections and associated reports as they relate to approved site plans issued by the City of Novi. Timing and specifications regarding the City’s right-of-way normally differs from that of the private property which requires special attention.
- 6) Provide a separate inspection of site amenities (i.e., above-ground site plan features, excluding landscaping and building façade) and associated reports prior to the issuance of a full certificate of occupancy to the development.
- 7) Perform maintenance and guarantee bond inspections and provide associated reports (prior to the expiration of the bond) to City Public Services Staff. Maintenance Bonds are held with the City for a period of two-years on all proposed public infrastructure (i.e., water mains, sanitary sewer and street paving).

Additional Core Services:

- 8) Planning Document Review - The consultant shall provide a review of easement or agreement documents associated with private development projects per the Planning Site Plan Review to verify that the survey exhibits and legal descriptions match the City’s approved development plans. The documents will include Master Deed Exhibit B, conservation easement exhibits, and exhibits of covenants and restrictions.
- 9) Perform soil erosion and sedimentation control plan reviews, inspections and ordinance violation investigations as per the Michigan Department of Environmental Quality – Natural Resources and Environmental Protection Act – Part 91 program for all commercial, industrial and residential site developments. Time and frequency of reviews and inspections will be determined by the City of Novi. Also, the consultant should be aware that the City of Novi’s Municipal Enforcing Agency (MEA) program could be audited by

the State of Michigan during the contract period. See Appendix A-4 for an SESC permit application with plan review fee and an SESC Fee Determination.

- 10) Conduct Land Improvement (and Minor Land Improvement) plot plan reviews and on-site inspections of grading/drainage, grades of structures brick ledges, footings, sidewalks, driveways within the road right-of-way, etc., with the Community Development and Public Services Departments for individual residential lots and existing structures. The consultant will utilize existing Land Improvement Review checklists, Appendix A-5, and make recommendations for revisions as necessary. The consultant will coordinate plot plan review with other City consultants as necessary.

As-Needed Services:

- 11) Provide court testimony for ordinance enforcement, as needed.
- 12) Attend public meetings (i.e., hearings, homeowner association meetings, etc.) as directed by the City of Novi.
- 13) Review site plans for compliance with all City codes and requirements.
- 14) Review FEMA Floodplains, conduct floodplain inspections and prepare/update the City's FEMA Community Rating System (CRS).
- 15) Provide spot inspections for private projects that do not have an associated site plan (i.e., linear projects by franchised utilities).
- 16) Conduct minor engineering studies and reviews (e.g., culvert design), as needed.
- 17) Provide Completion Agreement inspections to quantify the outstanding work and provide an Incomplete Site Work Financial Guarantee recommendation. Completion Agreements are executed for projects that require an extension of the construction permits beyond the initial 2 years and 12 months thereafter pursuant to Section 26.5-5 of the City of Novi Ordinance.

Deliverables (approval letters, rejection letters, sign-offs, punch lists, inspection reports, Inspector's Daily Reports or IDR's, etc.) in digital format, shall be submitted to appropriate City staff no later than five (5) working days after the work is performed.

E. Format Requirements for Qualifications Submittal.

The qualifications submittal shall contain no more than 15 pages using a 10-point font size, excluding transmittal letter, resumes of key people, Index/Table of Contents, tables, charts, and graphic exhibits. Each qualifications submittal shall adhere to the following order and content of sections. The submittal should be straightforward, concise and provide common explanations of technical terms that are used. Submittals that appear to be unrealistic in the terms of technical commitments, lack of technical competence or are indicative of failure to comprehend the complexity and risk of the requirements spelled-out in the RFO may be rejected.

The following sections are to be included in the submittal, in the following order:

- 1) Cover letter – A cover letter, not to exceed three pages in length, should summarize key elements of the submittal. An individual authorized to enter into a contract with the City of Novi must sign the letter. The letter must stipulate that the submittal price(s) will be valid until a contract is awarded or for a period of at least 120 days, whichever occurs first; and shall indicate the address and telephone number of the firm's nearest office to the City of Novi and the primary office from which the services described in the RFQ will be provided.
- 2) Background and Project Summary Section – This section should describe the firm's understanding of the City and its needs relative to the services described in the RFQ; the objectives to be accomplished; and a detailed description of the services to be rendered.
- 3) Methodology Section – Provide a detailed description of the approach to be used to provide the services described in the RFQ, including:
 - a) an Implementation Plan that describes in detail the methods for providing these services, including controls the firm implements to manage similar projects;
 - b) a detailed description of efforts the firm will undertake to achieve client approval and to satisfy the requirements of the RFQ;
 - c) a detailed description of specific tasks the firm will require from City Staff, if any, to successfully complete the services.
- 4) Staffing Section – Provide résumés of individuals who will be performing these services and indicates the functions that each person will carry out. (During the contract period, if the firm chooses to assign different personnel, then the firm must submit their names and qualifications, including information listed above, to the City for advanced approval.)
- 5) Qualifications Section – This section should describe the qualifications of the firm in regard to providing similar scopes of service within the past five (5) years. Information presented in this section shall include:
 - a) A general summary of the firm's demonstrated capabilities and experience.
 - b) Detailed descriptions of projects similar in nature to the services described in the RFQ.
 - c) Names of key staff who participated in referenced projects and their specific responsibilities with respect to the services described in the RFQ.
 - d) A minimum of three (3) references from entities that received similar services from the firm. The City of Novi reserves the right to contact any of the organizations or individuals listed.

Information provided shall include: 1) client name, 2) project description, 3) project start and end dates, and 4) client contact name, telephone number and e-mail address.

F. Fee for Services. In a separate sealed envelope, provide a completed fee determination form (Attachment A) for services described in the RFQ. Fees will be effective for the five-year term of the agreement. Fees may be reviewed and negotiated by mutual agreement of the City of Novi and the firm for a renewable additional one-year term.

****The Fee will be evaluated separately for the short-listed candidates only.****

G. Qualifications Submittal Evaluation. The City's consultant evaluation and selection process is based on the Qualifications Based Selection (QBS) process for professional services. The City will evaluate each of the following criteria in its percentage of importance:

- 1) Compliance with the RFQ requirements – 15%.
- 2) Understanding and approach to the Scope of Services – 25%.
- 3) Recent experience and references in conducting similar scopes of work for other public agencies – 40%.
- 4) Staff's educational background, work experience and relevant consulting experience – 20%.

The City may contact and evaluate the firm's references; contact the firm to clarify any response; contact any of the firm's current clients; solicit any information from any available source concerning any aspect of a submittal; and seek and review any other information deemed pertinent to the evaluation process.

The evaluation committee will not be obligated to accept the lowest priced submittal, but shall make an award recommendation based on the best interests of the City. After qualifications submittals have been reviewed, discussions with prospective firms may or may not be required. If scheduled, the oral interview will be a question/answer format for the purpose of clarifying the intent of any portions of the submittal. The firm's primary individual who would be directly responsible for carrying out the contract, if awarded, shall be present at the oral interview.

A Notification of Intent to Award will be sent to the selected firm. Award is contingent on the successful negotiation of final contract terms. Negotiations shall be confidential and not subject to disclosure to competing firms unless an agreement is reached. If contract negotiations cannot be concluded successfully, the City may negotiate a contract with the next highest scoring firm or withdraw the RFQ.

H. Term of Engagement. The term of the agreement will be five years. The qualifications period may be extended beyond five years at the discretion of City Council.

I. Disclosures. A firm that responds to this RFQ shall indicate in the qualifications submittal any existing conflicts of interest and potential conflicts of interest that may arise if the firm is awarded a contract, in addition provide a list of current municipal contracts within Oakland, Genesee, Wayne, Washtenaw, Macomb and Livingston Counties. If applicable, provide a list of property and other assets the firm owns that are located within the City of Novi.

J. Standard Terms and Conditions.

- 1) Addenda – The City reserves the right to amend this RFQ prior to the submittal due date.
- 2) Cost for Preparing Submittal – The cost for developing the submittal is the sole responsibility of the firm. All submittals become the property of the City.
- 3) Contract Discussions – Prior to award, the apparent successful firm may be required to enter into discussion with the City to resolve any contractual differences. These discussions are to be finalized and all exceptions resolved within one (1) week from notification. If no resolution is reached, the submittal may be rejected and discussions will be initiated with the second highest scoring firm.
- 4) Confidentiality Requirements – Submittals are subject to the Freedom of Information Act, and as such the City cannot protect proprietary data that may be contained in the firm’s submittal.
- 5) Financial Information – The City reserves the right to request a submitting firm to provide sufficient data to allow for an evaluation of the firm’s financial status.
- 6) Insurance Requirements – Within ten (10) consecutive calendar days of award of contract, the successful firm must furnish the City with the Certificates of Insurance proving coverage as specified in Appendix A-6. Also, these certificate(s) shall name the City of Novi, its officers and agents, as additionally insured by endorsement. Failure to furnish the required certificates within the time allowed may result in disqualifying the firm for contract award.

The City strongly encourages all submitting firms to review the Sample Agreement (Appendix A-7) and Insurance Requirements before responding to the Request for Qualifications, and to notify the City of any exceptions to the requirements prior to making a submittal.

K. Process for Making a Qualifications Submittal.

- Content of Submittal – The submittal must use the format indicated in the Format Requirements for Qualifications Submittal section of this RFQ.
- Preparation of Submittal – Each submittal must be prepared simply and economically, sufficient to provide a complete, accurate and reliable presentation. Avoid the use of elaborate promotional materials.
- Number of Submittals – Submit one (1) bound original and five (5) CD's, each containing one (1) complete copy of your submittal in sufficient detail to allow for a thorough evaluation and comparative analysis.
- Submittal Due Date – Completed qualifications submittals along with proposed fee determination forms must be submitted by **3:00 pm, October 17, 2017**, in separate sealed envelopes marked "Civil Engineering Private Development Field Services - Qualifications" and "Civil Engineering Private Development Field Services - Fee Determination", respectively, to:

*City of Novi
Clerk's Office
45175 W. Ten Mile Road
Novi, Michigan 48375-3024*

- Inquiries – Questions about this RFQ must be directed in writing, via e-mail to:

Theresa Bridges, Construction Engineer

tbridges@cityofnovi.org

From the date that this RFQ is issued until a firm is selected and the selection is announced, firms are not allowed to communicate for any reason with any City employee other than the one individual listed above in regard to this RFQ. The City reserves the right to reject any submittal for violation of this provision. Only written questions will be accepted, and only written responses to questions will be binding upon the City.

October 17, 2017

Cortney Hanson
City of Novi
Clerk's Office
45175 Ten Mile Road
Novi, MI 48375

**Re: Fee Proposal for Civil Engineering Private Development Field Services
Proposal No.: PR17-320**

Dear Ms. Hanson:

Spalding DeDecker is pleased to provide the following Fee Determination for Civil Engineering Private Development Field Services for 2017 - 2022 to the City of Novi. Our goal is to provide consulting engineering and surveying services of the highest quality, effective project management, and innovative solutions to deliver projects on-time and within budget.

We have reviewed the Request for Fee Proposals for Civil Engineering Private Development Field Services for 2017-2022, dated September 26, 2017, and understand the City's required scope of services. We have also reviewed the draft agreements and have no objection to the language.

We have completed Attachment A of the RFP, which is attached to this letter.

We are committed to delivering quality consulting engineering services to the City of Novi, and we look forward to continue working with you and remaining part of the City of Novi Team.

Sincerely,

SPALDING DEDECKER



Ted Meadows
Senior Project Manager



ATTACHMENT A

FEE DETERMINATION FORM

City of Novi, Michigan

<u>Description</u>	<u>Fee</u>	<u>Unit/Rate</u>
Land Improvement Review		
Residential (Plot Plans)		
Review	\$ 110.00	Lump sum
Each review for Builder initiated change	\$ 100.00	Lump sum
Footing inspection and one re-inspection	\$ 130.00	Lump sum
Additional footing inspection (after second)	\$ 100.00	Per Inspection
Final grade inspection	\$ 185.00	Lump sum
Additional final grade inspection	\$ 130.00	Per Inspection
Minor Land Improvement		
Review	\$ 70.00	Lump sum
Inspection	\$ 70.00	Lump sum
Construction Inspection and Acceptance Document Management & Review		
(Fixed Fee % of Construction Cost to include initial Pre-construction and TCO preparation meetings; ROW, Detention Basin and Site Amenities inspections, reporting and follow-up)		
(1) * Utilities/Roads (construction cost < or = \$50,000)	% 11	Min. Fee \$ 2050
(2) * Utilities/Roads (construction cost \$50,001 to \$100,000)	% 9	Min. Fee \$ 5250
(3) * Utilities/Roads (construction cost \$100,001 to \$300,000)	% 6	Min. Fee \$ 8250
(4) * Utilities/Roads (construction cost > \$300,001)	% 4	Min. Fee \$ 19000
(5) Private Improvement Inspection (grading, storm facilities, site amenities, on-site paving)	% 2.5	Min. Fee \$ 300
(6) Additional Pre-Construction meetings	\$ 380.00	Lump sum
(7) Additional Occupancy Inspections (after third)	\$ 200.00	Per Inspection
* = fee to be based on sanitary sewer, storm sewer, water main and paving calculated separately. See fee sheet in Appendix A-1 for clarification.		
Record Drawing Preparation (As-built prepared by consultant)		
(Fixed Fee % of Construction Cost to include Maintenance Bond inspections)		
Utilities/Roads captured on As-built drawings	% 2.5	Min. Fee \$ 2000
Soil Erosion and Sedimentation Control Review and Inspections		
(Refer to "Inspection Fee Escrow Determination" form attached as Appendix A-4)		
(1) Soil Erosion Control Permit Application Review for Site Plans (including two re-reviews)	\$ 40.00/acre	Min. Fee \$ 300.00
(2) Additional Soil Erosion Control Permit Application Review for Site Plans (after third)	\$ 100.00	Per Review
(3) Site Plan Soil Erosion Control Inspection, if disturbed area is less than 5 acres	\$ 125.00	Per Inspection
(4) Site Plan Soil Erosion Control Inspection, if disturbed area is 5 acres through 15 acres	\$ 145.00	Per Inspection
(5) Site Plan Soil Erosion Control Inspection, if disturbed area is greater than 15 acres	\$ 220.00	Per Inspection

Fee Determination Continued

(6)	Review and one inspection for Residential Land Improvements	\$	135.00	Lump sum
(7)	Violation work involving inspection, report and follow-up	\$	70.00	Hourly
(8)	Citation work involving inspection report, follow-up, Ordinance Enforcement office meeting and court appearance	\$	110.00	Hourly
Planning Document Review (Design and Construction Inspection)				
(1)	Master Deed Exhibit B	\$	25.00/acre	Min. Fee \$ 500.00
(2)	Legal Document Exhibits (including one re-review)	\$	450.00	Lump sum
(3)	Additional Legal Document Exhibits review (after second)	\$	100.00	Per Review
Court Testimony – Fee to be invoiced monthly for actual time expended		\$	145.00	Hourly
Preliminary Engineering Plan Review – (Includes Administration and Review)				
	Less than 15 Acres	\$	35.00/acre	Min. Fee \$400
	Greater than 15 Acres	\$	26.00/acre	Min. Fee \$550
Final Engineering Plan Review – (Includes Administration and Review)				
	Less than 15 Acres	\$	190.00/acre	Min. Fee \$500
	Greater than 15 Acres	\$	175.00/acre	Min. Fee \$500
Minor Engineering (Design and Construction Inspection)				
(1)	Studies and reviews (e.g., culvert design)	\$	95.00	Hourly
(2)	Inspection (spot) for non-site planned or linear projects (e.g., Franchised Utility projects)	\$	75.00	Hourly
(3)	Completion Agreement Inspection	\$	100.00	Hourly
Flood Plain Review (may include one (1) inspection for field verification purposes)		\$	N/A	Lump sum
(1)	Major Floodplain Use Permit	\$	2500.00	Lump sum
(2)	Minor Floodplain Use Permit	\$	300.00	Lump sum
(3)	Individual Residential Floodplain Use Permit	\$	300.00	Lump sum
(4)	Additional Flood Plain Services (e.g., meetings, CRS updating)	\$	105.00	Hourly

I hereby certify that the information provided above is correct to best of my ability and will remain valid for a period of One Hundred and Twenty (120) days from the date of receipt by the City of Novi.

Spalding DeDecker Associates, Inc.

Firm Name

Ted Meadows

Authorized Representative – Printed Name



Authorized Representative - Signature

10/16/2017

Date of Signature



Civil Engineering Private Development Field Services City of Novi

October 17, 2017
PR17-320

 SPALDING DeDECKER

(800) 598-1600
www.sda-eng.com

City of Novi
Civil Engineering Private Development Field Services
Request for Qualifications (RFQ)
Request for Fee Proposals (RFP)
PR17-320
Due: October 17, 2017

- 1 Cover Letter
- 2 Background and Project Summary
- 3 Methodology
 - A. Methodology
 - B. Exhibits
- 4 Staffing
- 5 Qualifications

October 17, 2017

Cortney Hanson
City of Novi
Clerk's Office
45175 Ten Mile Road
Novi, MI 48375

**Re: Qualifications for Civil Engineering Private Development Field Services
Proposal No.: PR17-320**

Dear Ms. Hanson:

The City of Novi is one of those unique communities that is able to combine its ability to anticipate and satisfy the needs and desires of its citizens, while being able to work with developers to enable sustained positive noteworthy growth. As a result, the City can take pride in its solid support of the business community while having friendly neighbors, outstanding schools, and exceptional parks and recreation programs.

Having been part of this equation for more than 12 continuous years, Spalding DeDecker (SD) understands your community. We recognize the speed of business is an important part of successful responsible growth of the City. As a result, SD is sensitive to working with contractors on private development sites to facilitate quick resolutions of any challenges resulting in minimal down time. While time is money for business, we are steadfast in maintaining quality as we work with developers on any challenges.

Our goal is to provide consulting engineering and surveying services of the highest quality, effective project management, and innovative solutions to deliver projects on-time and within budget. Further, to enhance our ability to do so, we are transitioning from our Livonia Office to a new office in the City of Novi.

We have assembled a team of considerable depth and expertise, providing construction engineering for private commercial, industrial, and residential development sites. Several of our team members have worked in similar roles for the City of Novi for as many as a dozen years. Our team is very knowledgeable of your staff, policies, and procedures for a variety of infrastructure related projects. Additionally, we understand the need to communicate with not only you and your staff, but with the citizens and business of Novi as well. All of this experience will be brought to you on this important contract.

Founded in 1954, as a municipal engineering firm, SD's portfolio is widely diverse, encompassing a variety of construction engineering for private projects. Throughout the past 63 years, SD has developed an excellent reputation for providing municipalities with effective solutions for the many projects communities encounter through infrastructure expansion and maintenance needs.

SD brings unique elements to its project execution, including a genuine commitment to delivering top-quality services to our clients through the use of our ISO-based procedures. This assures our clients of a standardized office and field program throughout the life of the project, a process most other firms do not offer. This means we get it right the first time.



As an employee-owned engineering and surveying firm with 73 professionals on staff, we all believe in listening to our clients and understanding their needs. In the current economic and development climate, we understand that every dollar must be spent wisely, whether from the City itself or from a developer. Innovative solutions will be pursued, so project requirements are met at the least possible cost.

Attached please find one bound original, and five CDs containing one complete copy of our submittal. We trust that you will find our statement of qualifications to be thorough.

On behalf of our 73 employees of SD, we would like to express our gratitude for the opportunity to serve the City of Novi as an Engineering Consultant for Civil Engineering Private Development Field Services for the past 12 years. We look forward to continuing our partnership throughout the next five-year period and beyond.

Sincerely,

SPALDING DEDECKER

A handwritten signature in black ink that reads "Ted Meadows". The signature is written in a cursive style with a large, sweeping initial "T".

Ted Meadows
Senior Project Manager

Understanding of the City of Novi's Field Service Minimum Qualifications

Spalding DeDecker (SD) understands the City of Novi seeks to contract a qualified Consulting Civil Engineering firm to provide a variety of civil engineering private development field services for private commercial, industrial, and residential development sites. SD will utilize a team of professionals and trained technicians to provide the required services to the City of Novi. We understand the City of Novi has multiple departments, each providing its own specific service to their residents and business community. With that said, SD's



goal is to continue to clearly communicate and promptly coordinate with the various City Departments, enabling the City to provide quality services to the community of Novi. As the City of Novi's Consulting Engineer, SD offers the following current qualifications:

1. All three of Spalding DeDecker's offices are within 30 miles of the City of Novi. SD's Livonia office is located at 39293 Plymouth Road, Suite 102, Livonia, Michigan 48150. The City of Novi Field Engineering services are currently provided from our Livonia office, *but we are in transition to an office within the City of Novi.*
2. SD currently performs all the services listed in the Scope of Services section without the use of any sub-consultants.
3. Our firm has 12 Professional Engineers on-call for any needs the City of Novi may require. All are licensed in the State of Michigan. We also have Professional Engineers registered in 38 additional states.
4. SD employs five Professional Surveyors licensed in the State of Michigan. Survey services for the City will be led by Mike DeDecker, PS.
5. SD's Construction Project Manager for the City of Novi is Ted Meadows. Ted has 20 years of experience and has been with SD for the past 10 years. Through his nearly 15 years of serving the City of Novi, Ted has developed strong relationships with staff and has a detailed understanding of the City's construction standards, specifications, and details. Also, Ted has assisted multiple City staff in developing and implementing construction practices and procedures for efficient infrastructure delivery. Mr. Meadows is familiar with multiple software packages for recording daily reports and pictures. At SD, we use FieldBook and FieldManager; both packages are required by MDOT for their recording of reports.
6. SD employs 14 field technicians. Specifically, Paul Swartz, Heather Gendron, Kevin Schroeder, Mike Freckelton, Ray Ryan, and Kim Danowski will continue inspection of the construction operations in the City of Novi. All SD Construction Engineering Department staff is proficient in preparing daily reports with FieldBook software and creating captioned photos with Xnview. Throughout the past 12 years all have developed working relationships with City staff which has resulted in a better understanding of the City's procedures and construction details and standards. Also, this improved communication results in higher efficiency and an improved final product and service to the City departments, residents, and businesses.
7. SD's Construction Engineering Department has five technicians certified in Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act as enforced by the Michigan Department of Environmental Quality (MDEQ) – Water Bureau. SD also employs seven Certified Storm Water Operators.
8. We employ two Certified Floodplain Managers (CFMs): Scott Isenberg, PE and Kim Danowski.

9. SD has available the following list of software packages that are used to prepare and complete record drawings for the City of Novi: ESRI ArcGIS Desktop (ArcView & ArcInfo) Version 10.2, and AutoCAD (AutoCAD 2016/Civil 3D 2015 [upgrading soon to 2018], AutoCAD Land Development Desktop 5/Map 3D, and Microstation V8i, Select Series 4). D also incorporates Trimble Business Center for processing GPS measurements.

SD's valued experience with the City over the past 12 years, qualifications, and commitment provide SD with the necessary tools to continue to serve the City with the edge it needs to assist the citizens and businesses to achieve success and prosperity.

We not only recognize there are specific qualifications to be met as the Civil Engineering Field Services Consultant but will also continue to provide the following required field engineering services to assist the departments at the City of Novi:

- Coordinate and conduct all Pre-Construction Meetings relating to all site work. This includes Environmental, Site, Full-site, Special, Supplementary, and/or Temporary Certificate of Occupancy Preparation Meetings.
- Conduct Land Improvement Reviews and inspections for individual residential lots (e.g., grading / drainage, grades of structures, brick ledges, and footings).
- Coordinate with all other relevant City Consultants and City Departments: Wetland and Woodland Consultants, City Attorneys, Traffic Consultant, Engineering Department, Department of Public Works, Community Development Department, Treasurer's Office, Accounting and Finance, Ordinance Enforcement, Mayor's Office, and City Council.
- Perform soil erosion and sedimentation control plan reviews, inspections, and ordinance violation investigations.
- Provide construction inspection, acceptance, document and easement review, storm water facilities inspection, and preparation of record as-builts drawings for paving and utility construction for private developments.
- Provide occupancy certificate inspection services for projects that have outstanding work items and financial guarantees posted with the City to ensure completion. Perform inspections and make resultant recommendations for financial guarantee adjustments and occupancy permits.
- Complete right-of-way inspections and associated reports as they relate to approved site plans issued by the City.
- Provide inspection of site amenities and provide associated reports (e.g., above-ground site plan features, excluding landscaping and building facade).
- Perform utility and street maintenance and guarantee bond inspections and provide associated reports (prior to expiration of the bond) to City Engineering and DPS Staff.
- Provide court testimony for ordinance enforcement, as needed.
- Attend Public Meetings (e.g., hearings, homeowner association meetings, etc.), as directed by the City.
- Review site plans for compliance with all City codes and requirements.
- Review FEMA Floodplain, conduct floodplain inspections, and prepare/update the City's FEMA Community Rating System (CRS).



- Provide spot inspections for private projects that do not have an associated site plan but include linear projects by franchised utilities.
- Conduct minor engineering studies and reviews (e.g., culvert design), as needed.
- Provide approval letters, rejection letters, punch lists, inspection reports, and Inspector's Daily Reports (IDR's). All documents will be submitted to appropriate City staff no later than five working days after the work is performed.

SD will work with the City of Novi's staff and administration with respect to any of the aforementioned services and will complete assignments in a timely fashion.

We would like to point out that on many construction projects issues arise that were not anticipated during the design, review, or construction phase of a project. These issues usually require quick action to minimize inconvenience to the public and reduce the potential for additional costs incurred by the municipality or developer. SD has extensive experience reacting to these issues as they occur and has responded very quickly to the needs of the City of Novi. One example of this proactive approach is from the Everbrook Academy plan review performed by Mr. Meadows prior to the Pre-Construction Meeting. Mr. Meadows noted the water main proposed to be open cut across Beck Road. Knowing Beck Road is a major thoroughfare within the City and interrupting traffic flow for a water main crossing would not be acceptable, Ted recommended to the City's Engineering Department a water main bore and jack be provided in lieu of the open cut trench. This recommendation was welcomed and implemented saving the residents and businesses the inconvenience and frustration of closing Beck Road.

Another example of this proactive approach was while Mr. Meadows reviewed the Manchester development proposed plans; he noted the plans called for a minimum slope directional drill installation practice for the sanitary sewer crossing below Novi Road. Mr. Meadows recommended at the pre-construction meeting the contractor investigate an option to bore and jack the sanitary sewer, allowing more control of grade and installation. Again, this recommendation was used, resulting in successful installation of the sanitary sewer.

These are just some of the examples in which SD has shown we are not only here to manage or observe and report construction in the City of Novi, but we inspect construction and look for better alternatives and solutions. We strive to be active partners in the successful development and growth of the community while maintaining the integrity which makes the City of Novi a great place to live.

Furthermore, as the Municipal Engineers for several large communities in the Metro Detroit area, SD has the professional staff and office locations that enable us to be proactive in this regard on a daily basis. The close proximity of SD's Livonia office to the City of Novi will sustain our ability to respond to urgent issues as they arise. In addition to the close proximity of our office location, SD's on-site presence will continue with a full-time construction inspector. SD will coordinate and schedule testing services as needed and will work with neighboring municipalities, private developers, other consulting engineers, builders, contractors, and property owners, while minimizing inconveniences and delays.

Our goal is to serve the City of Novi with clear and concise communication, professional, experienced, and well-trained staff to provide timely response during day-to-day operations, as well as address issues that arise throughout the life of a project. We feel that when we are serving a community, we are active participants of the community, thus motivating us to perform at a high level. This commitment to quality of service for the City of Novi is what we believe distinguishes SD from other Municipal Engineering firms.

SCOPE OF CORE SERVICES

The following numbered sections correspond to the Request for Qualifications, Section D – Scope of Services.

1) Environmental, Full-Site, Special and/or Supplementary Pre-Construction Meeting & Coordination

Spalding DeDecker (SD) will continue to follow the same high quality approach and procedures to perform Pre-Construction Meetings as we have over the last 12 years. Our system has proven to be a solid and detailed procedure to document, coordinate, communicate, and establish requirements for projects within the City of Novi. SD will coordinate with the City to lead Environmental, Special, Supplementary, and Full-Site Pre-Construction Meetings. We will coordinate with appropriate City staff to schedule the requested meeting. We anticipate the Pre-Construction meetings will continue to be held at City Hall, if the City wishes. Once a date and time have been established, SD will provide the development's prime contact an invitation for the Pre-Construction Meeting.

See Exhibit A for a sample of Full Site Pre-Construction Meeting Minutes.

In preparation for the meeting, SD will produce a meeting agenda, sign-in sheet, City-required Façade Inspection Checklist (if applicable), and Requirements for a Site Walkthrough & Project Completion Checklist (whichever is necessary, Non-Residential or Residential). In addition, SD will continue to prepare for meetings by obtaining the approved construction plans from the Community Development Department, receiving all applicable permits and City documents including the City's Grading Permit, Soil Erosion Permit, Pre-Construction Meeting Checklist, Treasurer's Checklist, and Site Plan Review Letter. A detailed review of the approved construction plans and City documents will be completed before creating the Pre-Construction Meeting Agenda along with key staff making a site visit to familiarize ourselves with the project site. We believe this brings added value with the additional detailed review of the approved plans. We perform this review to ensure any irregularities (errors or omissions) are noted prior to moving forward with construction. We conduct this additional review as a proactive measure to ensure all City construction standards and details are followed by the development.

At the meeting, SD will introduce all attendees. We will gather all party's contact information with the sign-in sheet and business cards folder that will be electronically saved and emailed to all attending the meeting. We will provide a brief description of the project explaining the scope of the public utilities, paving, and storm drainage. Primary and secondary contacts will be established from the Developer, as well as permits, fees, and bonds that have been received. Environmental Site issues such as soil erosion, woodland and wetland requirements will be covered and discussed at this meeting. The City of Novi's Woodland and Wetland Consultant, ECT, will review the applicable woodland or wetland permits and requirements at the pre-construction meeting.

Prior to reviewing the Public Utility requirements, SD will notify the Developer to coordinate with the necessary consultants and City Engineering Division if environmental impacts or City ROW impacts are associated with extending private utility services and to call MISS DIG! We will also inform them it is the Developer's responsibility to verify all utility locations prior to the start of new underground utility construction. Neither the City of Novi nor its agents are to be held responsible for exact location of said utilities. At this time, we will also request a certificate of insurance from the underground contractor naming the City of Novi, Spalding DeDecker, and any additional City agents as additionally insured. The certificate of insurance must be provided to SD before any construction may begin on the project.

At this point of the pre-construction meeting we will present the requirements for construction materials submittals. SD will review the submittals for compliance with City of Novi specifications, standards, and details. Contractors will submit material certifications to SD for review and approval. We will provide a review letter approving or rejecting each submittal. Any materials not submitted but required by the project will be addressed in the review letter as well. SD will provide this service as a proactive measure to avoid deficient material being delivered to a project, which would result in delays and additional undue cost. The construction materials submittals must be approved before construction may begin on any underground utility for a project. *See Exhibit B for a sample of a Material Certifications Review Letter.*

Following the aforementioned notifications to the developer, SD presents City requirements and procedures for installation of the public utilities and paving. We will notify the applicant of the necessary plan submittal for any potential dewatering. We will review approved materials to be used, installation requirements, and testing procedures for the water main, sanitary sewer, and storm sewer. Paving cross-sections, materials, and location of specific cross-sections are communicated at the Pre-Construction Meeting, as well as material testing procedures. Most importantly, Fire and Safety services, phone numbers, and procedures are identified at the meeting. Project completion procedures, acceptance document requirements, and general Building Department issues are also reviewed, such as the Façade Inspection and Requirements for a Site Walkthrough.

A few key items we will continue to include in all meeting minutes are: 1) the requirement of a paving preparation meeting for private parking lot project; 2) notice of MDOT's Special Provision for Crushed Concrete, that the use of crushed concrete is prohibited on the project within 100 feet of any water course; and 3) concrete and bituminous paving will not be allowed between the first of November and the following first of May without special permission from the City Engineer and the Department of Public Services.

Before the meeting is adjourned, any attendees' additional issues and/or questions will be addressed. The questions are either answered at the meeting, or SD notes the question in the meeting minutes and following the meeting will research the question and provide an answer to the representative in writing within the notes portion of the Pre-Construction Meeting Minutes. Finally, a schedule is estimated, and the meeting is adjourned.

Upon completion of the Pre-Construction Meeting, SD revises the meeting minutes and emails portable data files (.pdf) files of the following to all attendees: Pre-Construction Meeting Minutes, Business Cards, Façade Inspection, Grading Permit, and Requirements for a Site Walkthrough.

2) Coordination with City Staff and Outside Consultants

SD understands the coordination with City services and consultants is critical in the success of an efficiently delivered construction project. SD has a long-standing relationship with current City staff members and understands their duties, as well as current outside City consultants as they relate to responsibilities in the management of private development. We will continue to communicate with the City staff and consultants in writing, via letters or email, phone calls or in person with one, if not all, of the following entities: RCO, WRC, City Community Development Department, Engineering Division, Code Enforcement Division, Finance Department, Planning Division, Treasurer Department, Water and Sewer Department, City Attorney Johnson, Rosati, Schultz & Joppich, City Traffic Consultant AECOM, and City Wetland and Woodland Consultant, ECT.

An example procedure of this detailed proactive communication with the City Staff is the Bi-Weekly Private Development Status meeting we hold with the City's Engineering Division and Community Development Department. As a group, we meet every other week to keep the City staff informed of the current status of each project. We include construction site milestones such as the completion of public utilities, testing of utilities, pavement installation, walkthrough and punch list completion, issuing of required project completion letters as well as maintenance bond inspection. This is a large, all-encompassing meeting/procedure that will continue to be followed.

In addition, over the past year, Wayne County has required they become more involved in the private development review for the City of Novi. With respect to this additional government oversight, SD will provide Wayne County Department of Public Services a DVD and approval letter of the results for sanitary sewer air tests and televising.

We realize the importance of communication and coordination between these City departments and consultants is vital in the successful efficient management of private development projects.

3) Construction Inspection Services for Private Developments

a) Construction Inspection

SD will provide full-time and/or part-time Construction Inspectors to perform inspection of private development infrastructure. SD's Civil Engineering Field Services include inspection of Contractor's work to comply with City of Novi standards and details, communication and coordination with the City Engineering Division before, during, and after construction. We will prepare Inspector's Daily Reports with MDOT's FieldBook Software, we will provide pictures captioned with notes of construction progress, sketches of completed work, and updated field measured plans for completion of Record Set Drawings. In addition we will provide the City with Sanitary and Storm Sewer Lead Sheets noting the field measured location of the end leads and elevations. SD will provide **full-time** field inspection for the installation of water main, sanitary sewer, storm sewer, and public pavement in the ROW. We will provide part-time inspection of private development pavement out of the public ROW. In addition to the pavement inspection, we will inspect the sidewalks for conformance with ADA standards and the approved plan. SD will schedule and witness all water main pressure testing, bacteria testing, and flushing of poly pigs for constructed water main. We will also continue to schedule and witness the sanitary sewer televising and air testing for approval with City Standards and Details. SD will continue to provide supplemental inspection of the sanitary sewer lead from the Monitoring Manhole to the building. This assists the Community and Development Department to ensure the sanitary lead to a private business was constructed properly. SD's personnel assure that each element of the project is constructed in compliance with the plans and specifications approved by the City of Novi.



During construction of private developments, communication will be of the utmost importance. Our inspectors will contact Ted Meadows first with any issues or questions that may arise. If Mr. Meadows has any additional questions or feels the issue requires notification to the City, he will contact the City of Novi Engineering Division. We feel one point of contact with the City provides efficient communication and less chance for confusion.

The project Daily Reports are prepared using the current version of MDOT's FieldBook software, using laptops in the field. All field construction photographs will be taken and archived in digital format. Daily Reports and photographs are then downloaded to our Office Technician's computer to manage the information and report with MDOT's FieldManager. The reports are then reviewed and signed by Mr. Meadows. These reports, testing reports, and photographs are submitted to the City of Novi digitally for review and archiving. *See Exhibit C for sample Inspector's Daily Report.*

Construction technicians will update the approved plan with field measured information gathered and witnessed during construction. The following is a list of field measured information to be updated on the approved plans: sanitary and storm invert elevations, sanitary and storm sewer slopes, water main top of pipe elevations, hydrant finish grade elevations, horizontal locations for any type of public utility structure if constructed in different location than proposed, and any conflicts or crossings of public and private utilities.

b) Material Testing

Material testing services in regard to private projects are provided by the Developer. At the Site Pre-Construction Meeting, SD will request the name of the firm who will be providing the material testing for the project and will explain the necessary testing and coordination measures to be followed. The

Developer is responsible for hiring a material testing agency for the testing of any fills, backfill of trenches, proof-rolls, and paving on-site. In addition to the material testing firm, SD inspection staff will witness proof rolls of sub-base material for stability to determine if any undercuts are necessary and their limits. We also verify if minimum density requirements are being met by contractors during compaction of backfill, base aggregate, and/or pavements. The testing agency generates reports and provides them to SD for review and compliance. The testing agency also forwards the test reports within the footprint of the building to the City's Building Department. We can provide QA/QC material testing if any inadequate testing procedures are observed of the Developer's testing agency. SD utilizes the services of Testing Engineers & Consultants, Inc. (TEC) for any testing.

c) **Acceptance Document Management and Easement Review**

SD and the City Attorney review and approve the Acceptance Documents for private development projects. On a daily basis, we will pick up any Acceptance Documents submitted to the Community Development Department and process them at our office, as we have been doing since the first of the year. The initial document submittals include stormwater facility maintenance easement agreements, utility easements, and access easements. Final document submittals include the initial documents, executed, with the addition of bills of sale for public utilities and roads, waivers of lien, sworn statements, and warrantee deeds for new road right-of-way. SD will scan the originals and send an email copy and receipt acknowledgement to Community Development, Engineering, Planning, and the City Attorney for their records.

Initial Document Review

Initial acceptance document packages are held and not reviewed until after completion of the Pre-Construction Meeting. During the initial document review, we will thoroughly verify the easement exhibits and descriptions concur with the City-approved construction plans. If there are any discrepancies, we will work directly with the developer to have these documents revised prior to execution. SD will also review storm water maintenance easement agreements for conformance to the City's Storm Water Ordinance. This includes not only a review of the included survey exhibits, but also confirmation of the proposed maintenance items and frequency defined in the maintenance schedule. Our Senior Engineer, Taylor Reynolds, makes communication a priority and will be in frequent contact with applicants via e-mail and phone in order to expedite our review process and request necessary revisions. As part of our initial document review letters, SD will also advise applicants of the timing and requirements for the final acceptance document approval necessary for obtaining their Temporary Certificate of Occupancy (TCO).

Final Document Review

Final acceptance document packages are reviewed within one week of receipt. Upon compilation of the as-built information from our inspection records and survey data for publically accepted utilities, SD will review the executed final acceptance documents. We will verify the as-built public improvements are located properly within the proposed easement. If changes have been made in the field and a public utility has been constructed outside of the originally proposed easement, we will request the necessary changes to the associated easement legal descriptions. SD will also confirm the receipt of the required Waivers of Lien, Bill of Sale, and Contractor's Sworn Statements for Roads and Utilities. Working closely with the applicant until all documents are satisfied, we will strive to provide the City with an approval package prior to the urgent TCO request. As there is often a tight window between the completion of the acceptance documents and the granting of a TCO, we will take a "drop everything" approach to finalize these documents. **See Exhibit D for sample Acceptance Document Review.**

Off-Site Document Review

In addition to the Initial and Final Documents, we have also been reviewing off-site easement documents and would like to continue providing this service to the City. The off-site easement documents are not part of the standard acceptance document package, as they are handled during the site plan review stage, rather than after construction plan approval. Since construction cannot occur until off-site easements are in place, SD reviews off-site easement within one week of their submittal date. The document processing

follows the process noted above, with the exception that a fully executed document is reviewed, revised, approved, and provided to the City Attorney prior to construction. The off-site easement descriptions are also re-visited once construction is complete in order to confirm the off-site utilities were constructed within the proposed easements, and adjustments are made and coordinated with the City Attorney as necessary.

d) Storm Water Facilities Inspections

One of the items necessary for a private development to complete prior to the issuance of a TCO or building permits is the acceptance of the storm water facilities. SD will perform inspections to the storm sewer, pretreatment structures, outlet control structures, detention basin and underground detention systems to ensure private developments are meeting requirements of the approved plan.

SD will confirm the proposed volumes of above ground or underground detention systems are met as well as verify the contours and grades have been met per the approved plan. For above ground detention systems, we will verify the volume and grades by attaining the developments spot elevations and contours of the completed basin. Calculations are then performed to determine the as-built volume. In the case of an underground detention system, we document dimensions and sizes of the underground system then perform additional calculations to verify whether the volume was maintained for the system. In addition, SD inspects and performs a walkthrough of the constructed storm system for debris and any damage. If either is noted during the inspection, then the developer is responsible for the correction. At this time, SD will provide the City with a Storm Water Detention System Inspection letter detailing whether the system is approved or not accepted. We will copy the applicant on this letter and describe what needs to be corrected so they may take the appropriate action to resolve the issue. Once the system is either initially approved or the corrections are made, we will provide the City with an approved Storm Water Detention System Inspection letter. **See Exhibit E for sample Storm Water Detention System Inspection.**

e) Record Drawing Preparation

SD has worked closely with the City to provide record drawings meeting the needs of their Engineering Division and GIS staff. Our work is based upon the City's document, *Requirements for Record Drawing Submittals*. Our work flow includes a two-stage process as follows:

CAD Drawing for Black-Line Paper Drawings (Standard Record Drawings)

Field-measurements are performed for underground utilities including water main, storm sewer, sanitary sewer and pavement within the public right-of-way. All measurements are referenced to the City of Novi vertical datum, which is the *North American Vertical Datum of 1988 (NAVD88)*. Measurements include pavement elevations, structure rim elevations, pipe invert elevations, length of pipe between structures, and pipe slope. Information is added to the engineering plans prepared by others, with the design information crossed-out and the measured information added with the notation "AB" to signify an as-built measurement. Detention basin volume is computed for the as-constructed basin, and the storm sewer and volume calculations are updated on the plans accordingly. Plans are plotted to a portable document format (.pdf) file and provided to the City electronically.

CAD Drawing Used to Facilitate Conversion to GIS Data

In addition to the record drawings created from the engineering plans by others, we produce a separate drawing to facilitate transfer of the data directly into the City's GIS. We have worked closely with the GIS Manager to format our data to avoid re-work and manual data entry performed by the City. **The process has saved the City many hours of time and thousands of dollars of expense and perhaps lessened the need for the City to add personnel to manually enter the data.** We currently provide all of the data including the requested attributes in a geo-database file, allowing the City to directly import the information into their GIS.

This step in the task requires that we locate all structures in relation to the Michigan State Plane Coordinate System, South Zone, in reference to the NAD 1983 (1986 adjustment) datum. All structures and pipe are drawn in a

CAD drawing, and object data is attached to all symbols and lines. Each object has a facility ID, indicating data such as rim elevation, pipe invert elevations and direction, and pipe type for structures, and pipe length, slope, and size for pipes. When the drawing is complete, it is exported to **shape files** for direct input into the City's GIS.

For sites with a detention basin, field-measurements are obtained along the top and toe of slope, and detailed information is measured for the inlet and overflow structures. A digital terrain model and contours are produced for the basin. Using the field-measured data, the pond volume is computed and compared with the design criteria. This information appears in the drawing provided to the City, along with detention basin computations.

4) Occupancy Certificate Inspection for Projects with Outstanding Site Items and Occupancy Inspections and Financial Guarantee Adjustments

SD will perform preliminary and final site walkthroughs consisting of one initial walkthrough and two follow-up walkthroughs with City staff to assist in issuing a TCO and Certificate of Occupancy (C of O) as well as issuing of Building Permits. The City of Novi Engineering Division, Community Development Department and SD have developed a detailed document (Non-Residential and Residential Requirements for a Site Walkthrough & Project Completion) and process for these occupancy inspections. This document and process is presented at all Pre-Construction Meetings and TCO Preparation meetings as a proactive measure to avoid delays of a TCO, C of O or issuing of building permits.

Non-Residential Development Occupancy Inspections and Procedures

Once the site utilities have been installed and the road/parking lot stone base has been installed, a preliminary walkthrough is performed of the storm structures. This inspection is focused primarily on the storm sewer structures in the curbs and pavement due to the possibility of damage after the stone base has been placed. At this time, SD ensures these catch basins are located and centered per the approved plan and verifies they are completely sealed inside and out. This specific detail has been identified as an important item for the life of the surrounding pavement. SD is also prepared to look at all utility structures at this time, if requested by the contractor. If there are any deficiencies noted at this inspection, a punch list will be provided to the development's contractor for completion.

In addition to reviewing the storm structures, SD will hold the Pavement Preparation meeting on site with the general contractor, sub-contractors, and City representative. At this time, we review the details and locations of the approved curb, sidewalk, and pavement cross-sections to be used on site. We will also review the traffic control safety plan, as well as any other traffic or safety issues relative to the project. SD feels safety of the public is the top priority for any project, this is why we will address it at any point of a project but specifically always at the Pavement Preparation meeting. We will hold this meeting to eliminate any confusion of what is expected, and to give the project additional guidance and oversight in completing the project per the plan.

- **Temporary Certificate (TCO) or Occupancy Procedures**

Once the base course of asphalt has been placed, the developer can request a Private Development Inspection. When this occurs, SD will coordinate a walkthrough with the City's Engineering Department and the Developer to review the site utilities, grading, and pavement. The site utilities and pavement are reviewed for compliance with City standards and details, and a punch list is formulated if necessary and presented to the Developer for corrections.

Once the punch list items are complete, SD will verify them for acceptance. If the items are all found to be satisfactory, SD provides the City with an Acceptable-for-Service Declaration. The Acceptable-for-Service Declaration informs the City "the site utilities and base course pavement for this project have been constructed in accordance with the approved construction plans." This document recognizes the site utilities and **base course asphalt** are satisfactory at this time. This follows the protocol for Chapter 26.5 of the Novi Code Ordinances.

In addition to the notification of the site being currently satisfactory, SD recommends to the City an applicable adjusted amount for the incomplete financial guarantee. The recommended financial guarantee amount is a current cost estimate for the remaining top course of asphalt to be placed, any possible asphalt road repairs and

any minor punch list items. This amount is generally a reduction and incorporates the City multiplier of 1.2. *See Exhibit F for sample Acceptable-for-Service Declaration.*

- **Certificate of Occupancy (C of O) Procedures**

The final paving and landscaping must be completed in order for C of O walkthrough to take place. The Developer submits another Request for Private Development Inspection form to the City which is forwarded to SD. We, the City and the Developer will review the site utilities, grading, and paving for conformance with the plans and City requirements. We will then provide a punch list to the Developer for satisfactory completion of noted items.

The Site Amenities Inspection is performed during the C of O walkthrough as well. This inspection is a verification of completed site plan items. A more detailed description of the Site Amenities Inspection is found in Section 6 of this Methodology.

In addition to the punch list items, the storm sewer system must be cleaned and vacuumed to remove all sediment and debris. SD witnesses the storm sewer cleaning. A disposal manifest is also required to ensure the waste is disposed of properly at a certified landfill.

If no punch list is generated or the final punch list items are complete, the disposal manifest is provided, and the Site Amenities Inspection is approved. With the approval, the site is recommended to the Engineering Department for acceptance. SD will submit a Site Work Final Approval letter to the Engineering Department and will recommend the Incomplete Site Work/Utilities Financial Guarantee be released. *See Exhibit G for sample Site Work Final Approval Letter.*

Residential Development Building Permit Inspections and Procedures

This process is very similar to the Non-Residential Development inspections but is different since it is tailored towards building permits. With this in mind, SD will complete the same preliminary storm structure review and site utility walkthroughs but will also issue a Ready-for-Use letter. The Ready-for-Use is intended to inform the City that all the water mains and sanitary sewers have been installed, properly tested, and acceptable at this time. This is a notification to assist the City in granting model building permits to a development. *See Exhibit H for sample Ready-for-Use Letter.*

At this point the base course paving of the site takes place. Following the pavement being installed SD will perform a walkthrough with the City Engineering Department and Water and Sewer staff of the site utilities, grading, paving, and general conformance of the site regarding site improvements. In addition, we also ensure the site is stabilized with seed and mulch up to ten feet behind the curbs and ten feet either side of the rear yard drains. This practice is to ensure the site has stabilization buffers to combat soil erosion in case the residential site is left open for long periods of time completing residential construction. We will provide the developer and contractors punch lists for corrections. Upon confirming all punch list items are complete, we will provide our Acceptable-for-Service Declaration with a recommended financial guarantee amount for any incomplete items; top course of asphalt, and potential pavement repairs. We understand the vital nature of this document, and that it is part of necessary pieces for the Community Development Department to issue all building permits and that is why Spalding DeDecker is prepared to act quickly and efficiently to these requests. *See Exhibit I for sample Acceptable-for-Service Declaration.*

Upon successful completion of a residential development or the milestone build out of 90%, SD will return to the site to review all of the public utilities, pavement, and structures in the public ROW. This is to ensure the site improvements after home construction are complete as originally intended. At this time we also require the storm structures be cleaned and a disposal manifest be provided. Once punch lists are completed and all are found to be satisfactory we will issue the Site Work Final Approval letter approving all public utility and pavement improvements and recommending release of the financial guarantee. *See Exhibit J for sample Site Work Final Approval Letter.*

5) Right-Of-Way (ROW) Inspections

SD will provide ROW inspections for private developments in the City. We are familiar with the procedures and protocols for completion of these inspections. When performing a ROW inspection, SD will visit the site and review drives, sidewalks, pavements, curbs, utility structures, and grades for damage and conformance with the plan and City standards and details. SD will complete ROW inspections per the ROW Inspection Checklist and will include pictures of the current conditions, and ultimately a recommendation notice to the City and Developer of the acceptance or rejection of the ROW. *See Exhibit K for sample Right-of-Way Report.*

In addition, we will provide full-time inspection of the pavement improvements in RCOC right-of-way or City of Novi right-of-way. These improvements will be inspected for accordance with the plan and City standards and details. We will coordinate with RCOC inspectors when necessary and Inspection Daily Reports with caption pictures will be provided for the City.

6) Site Amenities Inspection

SD will continue to perform Site Amenities Inspections as part of our engineering field services for the City of Novi. As part of our proactive mindset, we have added in our Pre-construction Meeting minutes, notes to developments to follow the approved photometric plan and to be sure to install the bike racks as shown on the plan. From our many years of experience, these two specific items have been occasionally ignored by the applicants creating delays at C of O. SD will review the site improvements per the Site Amenities checklist prior to C of O.

See Exhibit L for sample Site Amenities Checklist.

7) Utility and Street Maintenance and Guarantee Bond Inspections

Upon notification from the City that a project maintenance bond is close to expiration, our project manager, Ted Meadows will schedule a site inspection to review the condition of all public utilities and public ROW pavement. SD will issue an inspection report detailing conditions of relevant public utilities/roads with recommendations for correction if warranted.

The second component is a follow-up inspection after the Developer/Contractor team has taken corrective action where required. At that point, SD will perform a final inspection to verify the work has been completed to the satisfaction of SD and appropriate City staff. A Utility/Street Maintenance Bond Inspection Approval will be issued if all punch list items are complete, or another punch list if the items are found to be unacceptable.

See Exhibit M for sample Utility Maintenance and Guarantee Bond Inspection.



8) Planning Document Review

During the Site Plan review stage, SD and the City Attorney also review and approve Planning Documents for private development projects. We will review legal descriptions for Master Deed Exhibit Bs, conservation easements, preservation easements, wetland easements, woodland easements, and easements of covenants and restrictions against the current set of review plans provided by the Planning Department. We will review the Master Deed Exhibit Bs in detail for the overall property legal description confirming scope and survey closure and we will complete a cursory review verifying the utility and/or conservation easements shown on the Exhibit B are in the proper location. Detailed legal description review of the easements will be completed through the Acceptance Document Review process after the City has approved construction plans.

Planning Documents are submitted to SD via email directly from the Planning Department. Originals are kept on file at the City. This process occurs during the City's plan review process, prior to issuance of a City-approved construction plan set. Our review response will be directed only to the City, without copy to the applicant, allowing the Planning Department to incorporate our comments into an overall City review response.

9) Soil Erosion and Sedimentation Control (SESC) Responsibilities

SD currently employs five personnel licensed in Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act per the Michigan Department of Environmental Quality (MDEQ). Kim Danowski will be our lead inspector for soil erosion inspections. Kim and our other SESC professionals are familiar with MDEQ techniques of reducing and controlling erosion on construction sites, as well as Novi's staff, ordinances, procedures, and documentation processes. Many have been trained during previous work assignments with state and local agencies or have been recently certified by the MDEQ as a Soil Erosion and Sedimentation Control Operator.

SD will provide the Community Development Director with enforcement support through involvement with the Code Enforcement Division. We will provide the Code Enforcement Division and Engineering Division with inspection reports generated from our site visits. SD understands SESC site inspection is a critical function of this service. Upon receiving the SESC permits, Appendix A - Inspection Fee Escrow Determination, and an approved Soil Erosion plan, SD will provide the following on-site inspection services:

- Inspection for approval of silt fence and mud mat(s) locations and installation for SESC compliance.
- Inspection for installation of approved inlet protection filters in existing and constructed storm sewer catch basins.
- Observe conditions of adjacent roads to ensure they are swept and maintained regularly.
- Routine inspections according to established procedures to ensure that SESC measures are maintained.
- Inspections after rain events to ensure that SESC measures have not been compromised.
- Verify permit is posted on-site.
- Provide reports on City of Novi standard forms to the Code Enforcement Department, as well as the Engineering Division by email and hand delivery. **See Exhibit N for sample Soil Erosion Sedimentation Report.**
- Provide written notification of deficiencies to developers' representatives and the City of Novi.
- Attend Show of Cause Hearing, when necessary.
- Review site for acceptable stabilization and close out of the Soil Erosion Sedimentation permit and submit close-out document. **See Exhibit O for sample Soil Erosion Sedimentation Report Close-Out Letter.**

A typical project has the following procedures and documents in place to provide maintenance, enforcement, and acceptance of soil erosion measures:

1. Periodic inspections are performed throughout the project as outlined in the City Ordinance, by the MDEQ, and per the approved soil erosion permit and Appendix A. Reports will be generated and forwarded to the Code Enforcement Division, Engineering Division, and Developer's Representative.
2. We will review the issues to be corrected with the Developer over the phone, as well as in writing. If documented deficiencies are not completed in a timely manner, an official Notice of Deficiency will be forwarded to the Developer's Representative and City outlining any corrective actions that must be taken to bring the site into conformance, as well as the date for the corrections to be completed.
3. Failure to correct items in the Notice of Deficiency on the site will result in a recommendation to the City to schedule a Show Cause Hearing which may result in a stop work order and fines for the applicant.
4. Once the site is completely stabilized with thick mowable grass, the Developer may request a Soil Erosion Completion Inspection. SD will visit the site, make a determination of whether the stabilization is acceptable, and provide the City with appropriate rejection or acceptance letter.

10) Land Improvement Review and Inspections

SD will provide Land Improvement Reviews and Inspections in coordination with the Novi Community Development Department. Over our 12 years of service to the City, we have kept each review electronically and/or with a hard copy. We log in each review and inspection from the initial LIP grading plot plan submittal to the Final Grade inspection approval. This vast reference data base gives us the ability to address any grading issues that arise over time on past lots we have reviewed and approved.

Land Improvement Review letters will be provided to the City, as well as to the builder and City Architect. SD understands this service includes both new residential construction and improvements to existing structures (Minor Land Improvement Reviews). SD reviews the proposed Land Improvement to assure conformance with existing standards and ordinances. Review elements include, but are not limited to, legal description review, grading, and drainage conformance with development master grading plans, pavement and sidewalks, structure locations, and elevations. SD utilizes the existing Land Improvement Plot Plan checklist when performing LIP reviews. SD currently coordinates with the City's Community Development Department and with the Woodlands and Wetlands consultant (ECT) to assure consistent communication and on-time reviews. *See Exhibit P for a sample of a Land Improvement Review Letter.*

SD has developed Footing and Grading Inspection procedures with the City of Novi through our Construction Engineering Department. These procedures include receiving an email request from the City on the day before the Footing or Grading Inspection is to be performed, which initiates the inspection. We then pull the requested approved plot plan. The following day we perform the requested Footing or Grading Inspection on the requested date and time. To expedite the approval process we have implemented a process of scanning in and electronically filing all plot plans once approved. In addition, all inspection approvals or rejections are emailed with the scanned as-built plan.

- **Footing Inspections**

Footing Inspections are completed within one day of the request. Once the Footing Inspection is complete, we provide the City an email of whether the inspection was approved or rejected, the field measured top of footing elevation, and the amount it differed from the proposed elevation.

- **Grading Inspections**

Grading Inspections are allowed two days to perform the inspection per the Community Development Department standard. When a request is made via email for a Grading Inspection, SD will perform the inspection by verifying field measured spot elevations, slopes, lot drainage, structure locations and elevations, sidewalk slopes, stop box accessibility, utility castings free of damage and exposed to grade, all debris removed from lot, and drive slopes are met per the approved plot plan meeting City of Novi standards and ordinances. Once the inspection is complete, we will provide the City with an email with a scanned signed approved as-built plot plan stating whether the inspection was approved or rejected. If the Grading Inspection is rejected, we will provide an explanation of the deficient items and the plot plan with field measured elevations and slopes. We keep a copy of this document for our records as well until the lot has met all required items.

11) Court Testimony for Ordinance Enforcement

SD will provide a registered Professional Engineer experienced with court proceedings to provide expert testimony on cases involving ordinance violations or otherwise. SD understands the formal procedures for notification, citation, and violations and is prepared to assist City staff and attorneys with enforcement actions.

Our Municipal Project Manager, Dave Richmond, PE, has experience in testimony in a court of law as an expert witness regarding design and construction issues. He will be available to represent the City of Novi, if needed, for court testimony on behalf of the City for ordinance enforcement procedures and other litigation matters.

12) Attend Public Meetings and Hearings

The SD professional staff committed to the City of Novi has extensive experience in both preparing and hosting all forms of municipal Public Informational Meetings and SAD Public Comment Meetings and Hearings. Mr. Dave Richmond and Mr. Ted Meadows and other various staff will participate and manage construction related, environmental, and plan review-related meetings.

All public meeting agendas will be drafted and presented to City staff prior to the meetings to assure conformance with City goals. We will prepare meeting minutes and distribute to attendees as requested by the City.

13) Site Plan Review

SD has been providing private development plan review services for municipalities throughout southeast Michigan for more than 60 years. Such plan reviews include commercial site plans, condominium site plans, and subdivision plats. Through this vast experience, we have been able to design a system for plan reviews that upholds the integrity of our clients' codes, ordinances, standards, and master plans, while providing the developers with a predictable process for obtaining approvals. Serving fast-growing communities over the years, like Clinton Township, Macomb Township, and Plymouth Township, has given us decades of experience to develop and refine this system. Processing large volumes of projects requires reviews be tracked closely, deadlines set, and review comments distributed clearly in writing. The general process for performing these plan review services is outlined below.

For better consistency, plans are reviewed by the engineer(s) specifically assigned to work on the City of Novi projects. However, as a full-service consulting firm, our review engineer(s) have additional technical staff available in-house that can assist them in completing a wide range of plan review details. These professionals include hydraulic engineers, certified floodplain managers, traffic engineers, surveyors, and construction technicians.

- **Tracking System:** The incoming plans are assigned identifying job numbers and recorded on our project board and electronic database to ensure timely action.
- **Commercial and Condominium Site Plan Review:** All site plans will be reviewed in accordance with the City of Novi's current Zoning and Code of Ordinances, Master Land Use Plan, and Engineering Standards. Within one week of receiving the plans to review, a letter will be generated to the City outlining the detailed review.
- **Platted Subdivision Review:** Tentative Preliminary Plats, Final Preliminary Plats, and Final Plats for proposed subdivisions will be reviewed for compliance with Zoning Ordinance and the Subdivision Control Act. Within one week of receiving the plans to review, a letter will be generated to the City outlining the detailed review.
- **Construction Plan Review:** SD will review the detailed construction drawings in accordance with the latest standards of the City of Novi, including opinions of probable cost and supporting documentation. Typically this work includes a detailed review of public and private underground utilities, paving (roads, sidewalks, pathways, parking lots, etc.), grading, drainage, and other infrastructure improvements made to the site. Typically the construction plans will be reviewed, and a letter outlining the review will be forwarded to the City. Within one week of receiving the plans to review, a letter will be generated to the City outlining the detailed review.

14) Floodplain Review

SD provides floodplain use reviews for many of our client communities who participate in the National Flood Insurance Program, including the City of Novi. With two Certified Floodplain Managers (CFMs), we have a strong understanding of the process requirements established by the City, as well as the Michigan Building Code, Michigan Department of Environmental Quality (MDEQ), and Federal Emergency Management Agency (FEMA). We are prepared to provide review services consistent with those requirements. SD routinely provides reviews of Letters of Map Change, such as Letters of Map Revision (LOMR) and Letters of Map Amendment (LOMA) for submittal to

the Federal Emergency Management Agency and uses current hydrology/hydraulic software to design and/or review storm water management systems involving regulated floodplains. Our staff routinely works with the MDEQ and FEMA staff to address floodplain regulatory compliance issues. **See Exhibit Q for sample Preliminary Floodplain Use Permit Review.**

SD's Certified Floodplain Managers are also familiar with FEMA's Community Rating System (CRS). Our staff can assist the City of Novi to maintain or improve their current CRS class. We have a strong understanding of the individual activities that are assessed in the CRS program and can provide further guidance and recommendations on those activities. SD will assist the City's Floodplain Coordinator in the documentation and record keeping necessary to maintain your flood insurance status.

15) Private Projects without a Site Plan Spot Inspections

SD will provide experienced and well-trained staff to accommodate the City on any project on which our assistance is requested. Our ongoing experience, knowledge, and relationships with City staff and various departments position us well to provide quality spot inspections for projects with these specialized unique requirements.

16) Minor Design and Construction Projects, Studies, and Reviews

SD currently serves several municipalities in Michigan. We are extremely capable and experienced in providing major and minor design services to our clients for a full range of municipal needs. We find that once the scope of a project is established with one of our municipal clients, the staff engineer serving the community is more than capable of meeting the City's needs in regards to minor project design, studies, and miscellaneous reviews. Mr. Dave Richmond, PE will coordinate these professional services, should the City of Novi request assistance.

17) Completion Agreement Inspections

Completion Agreement inspections are a unique and important part of the City's process for providing projects and the City staff a current status of the project improvement. When a Completion Agreement is requested SD is prepared to visit the site, inspect the requested site improvement, provide a punch list or report back to the city stating what items remain incomplete with an associated incomplete site work financial guarantee dollar amount to complete the item. We will use all current data and tools to provide a thorough inspection and detailed financial guarantee amount.

- **Deliverables**

All deliverables explained in this document; Inspector's Daily Reports, Pre-Construction Meeting Minutes, SESC Reports, Material Certification letters, LIP Review letters, approval and rejection letters, etc. will be submitted by SD to the City electronically within five working days of the work being completed.



CITY OF NOVI
HINO MOTORS
 45450 Twelve Mile Road
FULL SITE PRE-CONSTRUCTION MEETING MINUTES
 June 20, 2017
 3:00 PM
 SDA Job No.: NV17-220



A pre-construction meeting was held on June 20, 2017 at the City of Novi offices for the above referenced project. The meeting started at 3:00 PM. The attendees signed the sign-in sheet and provided cards for the card wallet. The following people were in attendance:

NAME	REPRESENTING	PHONE
Ted Meadows	Spalding DeDecker Associates, Inc. (Construction) tmeadows@sda-eng.com	(248) 762-5116
Theresa Bridges	City of Novi (Engineering) tbridges@cityofnovi.org	(248) 735-5625
Sarah Marchioni	City of Novi (Community Development) smarchioni@cityofnovi.org	(248) 347-0430
Scott Roselle	City of Novi (Water and Sewer) sroselle@cityofnovi.org	(248) 735-5644
Ryan Doski	Superior Excavating ryan@superiorexcavating.com	(248) 431-2941
Bob Zscherer	RCOC rzscherer@rcoc.org	(248) 302-1851
Jason Wiegand	GDC jasonw@gendev.com	(248) 759-9613
Teresa Bruce	GDC teresab@gendev.com	(248) 231-3615
Matt Carmer	ECT mcarmer@ectinc.com	(248) 890-7612
Don Sines	D&R Earth Moving dsines@drearthmoving.com	(517) 586-4033

- Construction of an approximately 124,418 square-foot office/industrial building and associated parking. Site access is proposed by a new curb cut in Twelve Mile Road and secondary access by a new curb cut in Taft Road.
- Water service will be provided by a proposed water main extension from the existing 16-inch water main in 12 Mile Road. A 3-inch domestic lead and an 8-inch fire lead will be provided to serve the building, with additional fire hydrants provided as required on the site.

- Sanitary sewer service will be provided by a 6-inch sewer lead to the building from the existing 21-inch sanitary sewer main in Taft Road.
- Storm water will be collected by a single storm sewer collection system and detention provided on site.

PROJECT LOCATION:

The project is located on the south side of Twelve Mile Road and west of Taft Road in Section 16 of the City of Novi.

APPROVED PLAN SET: Latest Revision Date in Title Block: **June 16, 2017, Theresa Bridges approval stamp dated June 16, 2017.**

DEVELOPER'S REPRESENTATIVES:

Primary:

Project Manager

Theresa Bruce

General Development Company

Two Town Square, Suite 850

Southfield, MI 48076

Telephone: (248) 357-3777

Fax: (248) 357-1929

Cellular Phone: (248) 231-3615

E-Mail: teresab@gendev.com

Secondary Contact:

Site Superintendent

Jason Wiegand

General Development Company

Two Town Square, Suite 850

Southfield, MI 48076

Telephone: (248) 357-3777

Fax: (248) 357-1929

Cellular Phone: (248) 759-9613

E-Mail: jasonw@gendev.com

- **It was requested by the City of Novi that a site superintendent contact be provided so that anyone visiting the site will have contact information for the person managing the project on a day to day basis.**

The above named person(s) shall be responsible for all communications with the City and its Consultants during the duration of the entire project. It is the responsibility of the Developer's Representative to notify Sarah Marchioni and all Consultants if the representative will change from the person stated above during the course of the project.

The City and its Consultants will continue to direct all correspondence and notices to the original representative unless otherwise directed and will not be responsible for information that is not received by the Developer due to a change in the contact person.

PERMITS

The following permits are necessary for this portion of the project:

PERMIT	ISSUING AGENCY	Issue Date	PERMIT NUMBER
Soil Erosion and Sedimentation Control	City of Novi	6/16/17	PSE17-0016
Grading Permit	City of Novi	6/20/17	PGR17-0011
Right-of-Way Permit	City of Novi	6/16/17	PROW17-079
Right-of-Way Permit	RCOC	6/15/17	17-0142, 17-0141
Water Main	MDEQ		Pending, Hold Harmless
Sanitary Sewer	MDEQ		Not Required
Sanitary Sewer Tapping Permit	WRC		Not Required
NPDES	MDNRE		Pending
Woodlands	City of Novi	6/16/17	PWD17-0009
Wetlands	City of Novi	6/16/17	PWT17-0006
Wetlands	MDEQ	5/25/17	WRP00718 v.1
Flood Plain Permit	City of Novi		Not Required

- **Work may not begin on the water main until the permit is obtained.**
- **SDA must have a copy of the contractor's Certificate of Insurance naming the City of Novi, Spalding DeDecker and any of the city's agents as additional insured prior to any utility construction.**
- **SDA must have a digital copy of the civil engineering plans prior to any utility construction.**

FEES AND BONDS

All Inspection Fees and Financial Guarantees for the project that are necessary prior to starting clearing and grubbing have been paid. Refer to the City Treasurer's Office Checklist for more detail in regards to fees and financial guarantees.

BUILDING DEPARTMENT

- Call in for inspection when façade materials arrive to site.
- Call for Special Inspections – concrete and rebar.
- Reminded to use grounding electrode in footings.
- Be aware. the City has converted to an online scheduling system for inspections.
- If your project will require a fire suppression or fire alarm permit please make sure to apply as soon as possible. If it is for a new building or certain other criteria it must be sent for third party review before it can be submitted for the Fire Marshal's review.

You can find the applications online to find out more specifics.

- **Be sure to construct lighting per approved photometric plan.**
- Install bike racks per approved plan.
- Project is looking for a May/June 2018 TCO. TCO preparation meeting to be scheduled accordingly.

LANDSCAPING ITEMS

- Follow approved plans as closely as possible
- All proposed plantings shall be installed per City of Novi installation details.
- Staking will be required in areas of high winds or steep slopes, and is generally advised for all canopy, large evergreen and ornamental trees due to Novi's heavy soils.
- All street trees should be staked.
- Please consult the project's landscape designer concerning any substitutions before contacting the city. Multiple sources of plant material may be required to find certain plants but should be pursued before requesting substitutions.
- Any proposed substitutions of species must be approved in writing by the City of Novi Landscape Architect, Rick Meader, RLA, 248-735-5621, prior to installation.

CERTIFIED STORM WATER OPERATOR

The project was notified that a certified storm water operator will be required for the project and one must be in place prior to any grading or construction.

The designated certified storm water operator for the project is as follows:

Name: Don Sines
Certification No.: C-1731025 Expires: July 1, 2021
 D&R Earth Moving
 5840 Sterling Drive, Suite 420
 Howell, MI 48843
 Telephone: (517) 586-4033
 Fax: (517) 586-4034
 Cellular Phone: (248) 431-2263
 E-Mail: dsines@drearthmoving.com

The provided certified storm water operator shall be responsible for maintaining site information relative to the NPDES Permit. This information should be kept on site and may be checked periodically by the Consulting City Engineer (**SDA, Kim Danowski (248.762.7957)**) for conformance with the requirements of the permit.

ENVIRONMENTAL SITE ISSUES

This site contains wetlands, woodlands and soil erosion control requirements that must be maintained during construction operations. The following is a summary of each consultant's requirements.

HINO MOTORS– SITE PRECONSTRUCTION MEETING (JSP17-0002)

ENVIRONMENTAL SITE ISSUES (WETLAND & WOODLAND)

Wetlands – Environmental Consulting & Technology, Inc. (ECT)

Environmental Consulting & Technology, Inc. (ECT), the City's Wetland Consultant are the contacts for wetlands protection issues on the site.

Coordination must take place between the Developer and ECT as well as Spalding DeDecker (the City's Civil Engineering Consultant) prior to clearing or grubbing operations.

The following are general requirements for wetland protection:

1. The Developer must follow the requirements of the City of Novi Wetland and Watercourse Permit, the City of Novi Authorization to Encroach Upon the 25-Foot Natural Features Setback letter issued June 14, 2017, and the MDEQ Wetland Use Permit (WRP007108V.1) issued May 25, 2017.
2. All applicable wetland permits are to be kept on-site at all times in a location accessible to ECT and City of Novi staff.
3. Any proposed changes to the Site Plan with respect to wetland or wetland buffer impacts will require review by the City prior to implementation.
4. All silt fencing shall be installed per approved Plan in order to protect designated wetlands. It is the applicant's responsibility to ensure that all silt fencing remains standing and in good condition in all locations indicated on the approved plan.
5. Please contact Pete Hill , Matt Carmer, or Ryan Higuchi (ECT) to schedule a Silt Fence and Tree Protection Fence Staking Inspection **prior to silt fence installation** (Office: 734-769-3004, or Cell: 734-417-0343).
6. If applicable, the Contractor shall be allowed to clear a 10' path (maximum) for the installation of the silt (and tree protection, if applicable) fence on the "development" side of the limits of disturbance line.
7. Please contact Pete Hill, Matt Carmer, or Ryan Higuchi (ECT) to schedule a Silt Fence and Tree Protection Fence Installation Inspection **after the silt fence installation has been completed** (Office: 734-769-3004, or Cell: 734-417-0343).
8. Applicant shall obtain final approval of the silt fence installation (and Woodland Protection Fence installation, if applicable) from all applicable consultants (i.e., ECT and Spalding DeDecker) prior to clearing/grubbing and site grading. Final approval shall be from Spalding DeDecker, not ECT.
9. Any questions or comments related to wetlands issues should be brought to the attention of ECT and the City of Novi's Community Development Department.

10. A total wetland impact area of 0.04-acre (1,583 square feet and 117 cubic yards) has been authorized for this project for the purpose of constructing site parking. Authorized impact to on-site wetland areas is limited to Wetland D.
11. The wetland buffer impacts are for the purpose of constructing the proposed stormwater outlet from the proposed detention basin to Wetland A, a proposed retaining wall in the northern section of the site adjacent to Wetland B, and the construction of site parking in the area of existing Wetland D.

The following impacts are being proposed:

Temporary wetland buffer impacts: 128 square feet (0.003-acre) to Wetland B;

Permanent wetland buffer impacts: 480 square feet (0.01-acre) to Wetland A;
 41 square feet (0.0009-acre) to Wetland B;
 4,575 square feet (0.11-acre) to Wetland D.

12. All areas of temporary impact to the wetland and wetland buffer (if applicable) are to be restored with native seed mix. All temporary impacts to wetlands are to be restored using the seed mixes designated on the approved site plan. Sod or common grass seed is not acceptable in these areas.
13. A final site (Certificate of Occupancy) inspection will be required prior to acceptance of the site for Wetlands. This should be scheduled through Sarah Marchioni of the Building Department (248-347-0430).
14. Any concrete wash-out areas shall be established in greenbelts away from wetland, wetland setback and existing ditch or drain areas. Trucks shall use the specified location or wash out in a designated area off of the site.

Woodlands – Environmental Consulting & Technology, Inc. (ECT)

Environmental Consulting & Technology, Inc. (ECT), the City's Woodland Consultant, as well as the City of Novi's Landscape Architect (Rick Meader), are the contacts for woodlands protection issues on the site.

Coordination must take place between the Developer and Spalding DeDecker (the City's Civil Engineering Consultant) prior to clearing or grubbing operations.

The following are general requirements for woodland protection:

1. The Developer must follow the requirements of the City Woodlands Permit for the project.

2. The applicable woodland permit is to be kept on-site at all times in a location accessible to ECT and City of Novi staff.
3. All tree protection fencing shall be installed per approved Plan in order to protect designated woodlands.
4. Protective fencing is to be orange snow fencing with five (5) foot “T” posts spaced five (5) feet apart, unless sturdier fencing is required. Protective measures that are knocked down for any reason will be required to be re-installed immediately. If the permit holder or his/her representative does not respond within 24 hours of notification by the City, the Department of Public Services will install protective fencing at their overtime rates, plus a 10% administrative fee will be assessed. This will be deducted from the Replacement Performance Guarantee at the expense of the permit holder (Section 37-9(a)).
5. Protective construction fencing shall be repaired and/or reinstalled as necessary throughout the construction process due to any damage that may occur during construction operations. The Contractor shall monitor this on a daily basis. There shall be no intrusion into any regulated woodland area that is not intended to be impacted.
6. Any additional tree removal that may be required must be approved by ECT as well as the City of Novi’s Landscape Architect (Rick Meader) prior to removal.
7. The Woodland Permit authorizes the Applicant to remove **116** total Regulated trees.

To mitigate the tree loss, the Woodland Permit stipulates that **84** Woodland Replacement Credits will be replaced on site (i.e., 98 Woodland Replacement Trees; 55 deciduous trees at 1:1 replacement ratio and 43 coniferous trees at 1.5:1 replacement ratio).
8. A payment of \$42,800 (107 Woodland Replacement Credits x \$400/credit) of the remaining Woodland Replacement Credits to the City of Novi Tree Fund is required.
9. Applicant is responsible for updating the City of Novi’s Landscape Architect (Rick Meader) and the City’s Woodland Consultant (ECT) of any proposed changes to the tree removal or replacement plans. Any proposed changes to the Plan (including substitutes for replacement tree species) must be approved by the City of Novi and ECT.
10. The applicant shall submit an As-Built drawing to the City of Novi for review that indicates the location of Woodland Replacement Trees field-located, if the location of the Replacement trees differs significantly from the approved Plan’s Landscape Plan.
11. Replacement trees, if applicable, shall be inspected by the City Woodlands Consultant (ECT) after planting of the trees. This inspection shall be requested by the Developer through Sarah Marchioni of the Building Department (248-347-0430).

Soil Erosion and Sedimentation

Periodic inspections will be performed throughout the project as outlined in the City Ordinance, by the MDEQ and as per the approved soil erosion plans for the site. **Kim Danowski (248-762-7957) of SDA** is the SESC contact for the site. The Developer's representative will be contacted by SDA to correct any deficiencies that are noted during regular inspections of the site. If these items are not completed in a timely manner, an official Notice of Deficiency will be forwarded to the Developer's Representative and City outlining any corrective actions that must be taken to bring the site into conformance. Failure to correct deficiencies on the site will result in a recommendation to the City to schedule a Show Cause Hearing and may result in a stop work order and fines for the applicant. Minimum requirements for soil erosion and sedimentation control are as follows:

1. Twelve Mile Road mud mat must be installed at the same time the silt fence is installed, prior to mass grading operations. Ensure to place the stone on a geotextile fabric. Mud mat must be 75 feet by 20 feet. Maintain the mud mat. This may require the mat to have new stone replaced once a week.
 - It was made very clear that the project is to have subcontractors parked and deliveries made on site.
2. Silt fence stakes should be placed six (6) feet on center. The silt fence must also be trenched into the ground approximately 4 to 6 inches and completely backfilled. Verify location with SDA (Kim Danowski) representatives.
3. Silt fencing shall be repaired and/or reinstalled as necessary throughout the construction process due to damage that occurs during construction operations. This issue shall be monitored and repaired on a daily basis by the Contractor.
4. Additional soil erosion measures may be required at any time when it is determined that the weather conditions (early spring/late fall) may cause extreme erosion to the work site. Additional stone check dams may be necessary to filter water leaving the site.
5. Inlet protection filters (silt sacks or catch-alls) shall be installed on all existing catch basins in the street that front the proposed project per the approved soil erosion plans and at the discretion of SDA.
 - Silt Sacks or Catch-Alls to be installed in on-site catch basins as well.
6. Twelve Mile Road must be swept regularly and as often as necessary to keep the roads clean. This is a highly visible and well traveled road, be prepared to **sweep** the road more than once a day.
 - D&R will provide a broom for project.
7. A copy of the SESC permit shall be posted on the site.
8. If dust becomes an issue on the site, watering trucks will be required.
9. A final SESC inspection should be requested through Sarah Marchioni of the City Community Development Department once final landscaping is in. Do not remove SESC measures until the site has received final acceptance for SESC by SDA.

Recap of Environmental Contacts/Procedures

JB Erosion will install the soil erosion fence for the site. Once all fencing and mud mats are installed, SDA must be contacted for a follow up inspection and approval of the silt fence

prior to any clearing or grubbing operations.

FRANCHISED UTILITIES

The Developer was reminded to coordinate with the necessary consultants and City Engineering Division if environmental impacts or City Right of way impacts are associated with extending these services.

DEWATERING

A Dewatering Plan will be required if dewatering operations are found to be necessary for the project. Please contact Theresa Bridges with the City Engineering Department for dewatering plan requirements. Some additional requirements are as follows:

- Provide correspondence that the County Health Department approved the plan as well.
- Verify with MDEQ on whether they require a permit for discharging water.
- Provide a minimum of 48 hours notice prior to starting dewatering operations.

PUBLIC UTILITIES

Full time field observation for the installation of water main, storm sewer and the sanitary sewer to the monitoring manhole on the project shall be scheduled a minimum of 48 hours in advance with Ted Meadows of the Consulting City Engineer (SDA). All construction materials and methods shall be per the City of Novi Construction Details and Notes, City of Novi Design and Construction standards, and SDA review and approval. A list of minimum requirements for these utilities is as follows.

- **Note: It is the Developer's responsibility to verify all utility locations prior to the start of new underground utility construction. Neither the City of Novi, nor its agents are to be held responsible for exact location of said utilities.**
- **Material Certifications: Shop drawing submittals for all utility materials must be forwarded to SDA for review. A total of 1 set of shop drawings will be submitted to SDA. SDA will keep two sets of the drawings and return the other sets to the Contractor. Average turn-around time for shop drawing review is 7-10 days. All shop drawings must be approved prior to construction.**

Water Main

1. **Thrust blocks are not allowed as a method of pipe restraint.** Restrained joints for piping shall be per the shop drawing checklist and approval process. Thrust restraint design shall be per the Ductile Iron Pipe Research Association (DIPRA) Manual.
2. All piping shall be installed with 8 gauge copper stranded blue tracer wire.
 - Two lines must be pull with the bore and jack. Kilgore will be performing the bore and jack.
3. A licensed land surveyor in the State of Michigan is required for any construction staking on the project. N/P will be providing the staking for the project. Contact Pat

Williams at (248) 332-7931 regarding any questions for the staking.

- **2 cut sheets will be needed**
- **Stakes were requested to have the stationing and to be provided with 10ft centerline offsets and at structures 10ft and 15ft offsets.**

4. Water main staking with cut sheets are required before installation of the water main can take place. Stakes should be placed at 50-foot intervals with cuts to the top of pipe at an elevation per the approved construction plans. This cut must provide a minimum cover of 6 feet to the top of pipe from the proposed grade at the location.
5. The Contractor is required to clean all 8-inch water main pipes or larger with a poly-pig prior to testing operations.
6. ??? was notified for filling the water main a meter with a backflow preventor must be rented from the city. The fee can be paid and the meter can be picked up at the DPS on 11 Mile Road and Lee Begole Drive.
7. A pressure test shall be scheduled with Ted Meadows of SDA 48 hours in advance.
8. The contractor must contact SDA directly to schedule bacteriological sampling of the water. Written approval from the Oakland County Laboratory or an approved equal laboratory must be in the possession of SDA (Ted Meadows) prior to scheduling the final connection.
9. Final connection of the water main shall be scheduled with Ted Meadows of SDA and Scott Roselle (248) 735-5644 (Novi Water) 48 hours in advance.
10. All Water mains and fire hydrants are to be installed and be in service prior to construction above the footings per the Novi Fire Department.
11. The City of Novi will perform the 2-inch diameter or less water service tap for the development. Installation of copper water service leads that are under 2-inch diameter or less from a location 5 feet outside the building to inside the building should be scheduled with the City Plumbing Inspector. A permit will be required.
 - Following the preconstruction meeting Teresa Bruce emailed all parties that the domestic water service is now proposed to be 4" DIP. We discussed this potential change at the preconstruction meeting and the City Engineering Department had no issue with the revision.
 - The bore pits must be a minimum of 10' away from the 12 Mile Road pavement.

Sanitary and Storm Sewer

1. Sanitary and storm sewer staking shall be performed at 50-foot intervals. The contractor/surveyor shall provide cut sheets with rim and invert elevations to SDA.
2. For inspection of the proposed lead from the monitoring manhole to the building please visit the City of Novi website at www.cityofnovi.org to schedule the inspection through the portal. This inspection will require a permit to be requested by a certified plumber.
3. Sanitary sewer lead shall be 6-inch PVC SDR 23.5.

4. Storm sewer that is 12-inch and greater shall be Class IV or V RCP per the approved plan.
5. Storm sewer roof leads 8-inch in diameter shall be PVC SDR 26.
 - All 12-inch roof levels must be PVC SDR 26.
6. Installation of storm sewer leads from a location 5 feet outside of the building to inside the building shall be scheduled with the City Plumbing Inspector prior to installation. A permit will be required.
7. The catch basins should have a minimum of 10' finger drains or edge drain out of each structure in opposite directions. (Shown on plan and highly recommended)
8. SDA must be contacted 48 hours prior to placement of the concrete curbs. At this time SDA will review the location of the casting for each catch basin. Each catch basin must be centered over the storm structure and match the proposed back of curb. If the structure does not meet either of these requirements the structure will need to be relocated to the approved plan location. In addition, each storm structure must be completely sealed with brick/block and mortar. Any cracks will result in the casting being reset in a fresh bed of mortar. Pointing and tucking of the adjustment is prohibited. SDA will perform a preliminary walkthrough of all the remaining on site utilities at this time as well.
9. A walkthrough of the on site utilities, paving and grading will be performed after the base course pavement has been placed. Finally, prior to TCO recommendation, the city will perform a walkthrough upon completion of all proceeding punchlists.
10. This project will be responsible for updating any structures to the city's standards and details where the on site grading has resulted in the addition of adjustment to any structure.
11. Use EJIW 1040 frames with type M1 grates or type B covers for the storm sewer catch basins on site per the approved schedule in the plan.

Paving

1. Per the Novi City Code. concrete and bituminous paving will not be allowed between the first of November and the following first of May without special permission from the City Engineer and the Department of Public Services.
2. Per MDOT Special Provision for Crushed Concrete: the use of crushed concrete is prohibited on the project within 100 feet of any water course (stream, river, county drain, etc.) and lake, regardless of the application of location of the water course or lake relative to the project limits. Be prepared to use 21AA crushed limestone base for any pavement within 100 feet of a water course.
3. Once the subgrade has been prepared for the base material a Paving Preparation Preconstruction meeting must be scheduled with SD. Please contact Ted Meadows a minimum of 48 hours in advance to coordinate the meeting.
4. On site 4- inch asphalt pavement area shall meet the following cross-section per the approved plan: 8" of 21AA aggregate base, 2.5" MDOT 3C leveling, 1.5" of 36A wearing course.

5. Twelve Mile Road ROW typical asphalt shall meet the following cross-section per the approved plan: 12" of compacted CL II sand base, 6" of 21AA aggregate base, 4" of 2C leveling, 3" of 3C leveling and 2" of 4C wearing course. A Type M opening is required for the Twelve Mile entrance.
6. The 8-inch concrete shall meet the following cross-section per the approved plan: 8" of compacted CL II sand base, 8" of MDOT P1 3500 PSI Concrete.
7. The 15 feet wide Detention Basin Maintenance Access Drive shall meet the following cross-section per the approved plan: 6" of 21AA limestone base on a nonwoven geofabric cloth.
8. Concrete sidewalk in the City ROW shall meet the following cross-section: 6" compacted 21AA crushed limestone base and 4" of MDOT 4000 PSI Concrete, 6" concrete through the drives.
9. Concrete sidewalk on site shall meet the following cross-section: 4" of compacted CL II sand base and 4" of MDOT 3500 PSI Concrete.
10. Concrete sidewalk ramps in the City of Novi must be provided with EJIW or Armor Tile embedded type ADA detectable warning strips. If these are not installed as embedded type then they must be torn out and replaced with an embedded type ADA detectable warning strips. On site sidewalk ramps are recommended to follow the above mentioned detail.
11. Proof-rolls must be conducted prior to base stone placement for both curb and gutter and pavement area. SDA inspector must witness as well as the project's material testing company.
12. SDA must be contacted 48 hours prior to placement of the concrete curbs. At this time SDA will review the location of the casting for each catch basin. Each catch basin must be centered over the storm structure and match the proposed back of curb. If the structure does not meet either of these requirements the structure will need to be relocated to the approved plan location. In addition, each storm structure must be completely sealed with brick/block and mortar. Any cracks will result in the casting being reset in a fresh bed of mortar. Pointing and tucking of the adjustment is prohibited. SDA will perform a preliminary walkthrough of all the remaining on site utilities at this time as well.
13. The project must follow the traffic control plan for any construction of 12 Mile Road. In addition, 72 hours prior to starting construction on 12 Mile Road General Development must coordinate a meeting with RCOC, SDA, City of Novi Engineering and their contractors to review the plan and schedule.

MATERIAL TESTING

On-site

The Developer is responsible for hiring a materials testing agency for any fills and paving on the site. Test reports that are generated by the testing agency within the footprint of the building shall be forwarded to the project's appointed City of Novi Building Inspector. Any test reports generated for the site utilities and pavement cross section shall be forwarded to Ted Meadows of SDA.

Testing Agency: **McDowell**

SDA will provide QA/QC materials testing per the discretion of the Construction Manager. SDA will utilize the services of TEC.

FIRE AND SAFETY

The contact at the City Fire Department is Kevin Pierce. He can be reached at (248) 735-5674 for any non-emergency situations. In the case of an on-site injury or damage to gas and electric lines that may threaten life, the Contractor should call 911 and subsequently halt all operations on site. The City Fire Department will then contact all relevant jurisdictions and make a final determination of when the site operations may continue.

FINAL INSPECTIONS

All inspections of the site that pertain to reduction or release of a financial guarantee shall be performed upon request by the Developer to the City of Novi. Final Inspections or intermediate inspections for a reduction in a financial guarantee will not be performed unless they are specifically requested through Sarah Marchioni of the City Community Development Department at 248-347-0430. The following form must be provided to Sarah Marchioni when requesting a final inspection: <http://cityofnovi.org/Reference/Forms/ReqforPrivateDevInsp.aspx>. The initial silt staking inspection, fence installation inspection and the continuing soil erosion inspections do not fall under these criteria and should be coordinated directly with the Consultants.

PROJECT CLOSE-OUT

Procedures

The developer will be required to read and sign the "REQUIREMENTS FOR A SITE WALKTHROUGH & PROJECT COMPLETION" document for non-residential developments prior to construction. This document outlines all of the procedures for the project from the time of the pre-construction meeting to final acceptance by the city. This document will be presented to the Developer at the meeting and should be signed and returned to SDA as soon as possible.

All acceptance documents must be submitted as one complete package. The package must include the transmittal form, which can be found at <http://cityofnovi.org/Resources/Library/Forms/LegalReviewTransmittalForm.pdf>. This complete package and transmittal form should be submitted to the Community Development Department. Any documents submitted via email or without the transmittal form **will not** be routed for review and will be promptly rejected.

Summary of Items to be completed prior to Temp Certificate of Occupancy (TCO)

1. The amount of the incomplete site work performance guarantee for any outstanding site improvement items, limited to top course of pavement and other minor items, at 1.2 times the amount required to complete the site improvements as specified in the Performance Guarantee Ordinance.

2. All easements and agreements referenced in the June 2, 2017 City of Novi Plan Review Center Report, must be executed, notarized and approved by the City Attorney and City Engineer. These should be submitted to the Community Development Department.
3. A Bill of Sale for the utilities conveying the improvements to the City of Novi must be submitted to the Community Development Department. This document is available on our website.
4. Spalding DeDecker will prepare the record drawings for this development. The record drawings will be prepared in accordance with Article XII, Design and Construction Standards, Chapter 11 of the Novi Code of Ordinances.
5. Submit to the Engineering Department, Waivers of Lien from any parties involved with the installation of each utility as well as a Sworn Statement listing those parties and stating that all labor and material expenses incurred in connection with the subject construction improvements have been paid.
6. Submit a Maintenance Bond to the Engineering Department in the amount of TBD (equal to 25 percent of the cost of the construction of the utilities to be accepted). This bond must be for a period of two years from the date of formal acceptance by City Council. This document is available on our website.
7. Submit an up-to-date Title Policy (dated within 90 days of City Council consideration of acceptance) for the purpose of verifying that the parties signing the Easement documents have the legal authority to do so. Please be sure that all parties of interest shown on the title policy (including mortgage holders) either sign the easement documents themselves or a Subordination Agreement. Please be aware that the title policy may indicate that additional documentation is necessary to complete the acceptance process.
8. Please be aware the County is rejecting acceptance documents because all information must be written in black ink (except the signatures, those can be in blue or black) but again the entire document must otherwise be in black ink.

GENERAL

1. If there are any off site easements for the project they must be ready for recording or recorded. If they have not already, they must be submitted to the Community Development Department to be reviewed by Engineering and Legal for accuracy prior to being executed and recorded.
2. Working Hours are Monday through Saturday from 7:00 am to 7:00 pm per the Construction Work Hour Noise Ordinance. No Sunday or Holiday work will be permitted. Violation of these work hours may result in the issuance of a ticket by the City Police Department.
 - **For working in the county ROW the working hours are as follows:**
M – F: 9 AM – 3 PM
Sat – Sun: 7 AM – 7 PM

3. Any issues regarding oversize and overweight should be addressed with GeryLynn Garris from public safety. GeryLynn can be contacted at permits 248-347-0515.
4. Contact the City Building Department to inquire about permanent entrance walls or signs. A permit is required.
5. Temporary signs that are installed on the site for marketing purposes require a permit. Contact the Ordinance Division at **248-735-5678** for information regarding a permit. If a sign will not be installed in the near future that identifies the site, a temporary sign that identifies the site by name for emergency purposes must be installed at the entrance to the site (no permit required for this type of sign).
6. Temporary construction trailers that are to be kept on site require a Temporary Special Exceptions permit. Contact the Community Development Department with questions at 248-347-0415.
7. Loading and unloading of construction material must be performed within the construction site. This activity is not permitted within the Public Road Right-of-Way.
8. Staging of equipment, parking for the Contractor's employees and deliveries to the site shall be performed in a designated area on the construction site. These activities will not be allowed within the Public Road of Novi Right-of-Way.

SCHEDULE & ADDITIONAL QUESTIONS

Utility work will commence once all shop drawings have been approved. Utility construction is anticipated to begin September 5, 2017 and continue for approximately 2-3 weeks with 1 crew. Finish grading and parking lot construction is anticipated to begin November of 2017 and continue for approximately 2 weeks. The goal is to pave the base course this year if weather permits.

- **Note:** Previous inspections and approvals to the site utilities and streets will not preclude the development from being responsible for repairs to damaged utility structures or streets prior to final acceptance of the site.
- There was no asphalt contractor present at the preconstruction meeting today and Teresa Bruce of General Development will be assuming all responsibility for any future issues.

Meeting adjourned at 4:15 PM

Ted Meadows prepared meeting minutes. Any omissions, corrections, or deletions to these minutes should be brought to the attention of SDA within seven (7) days of receipt.

cc: Attendees
Kevin Pierce, City of Novi (e-mail)
Doug Necci, DRN & Associates (e-mail)



September 12, 2016

Ryan Doski
 Superior Excavating, Inc.
 2791 Auburn Road
 P.O. Box 4290
 Auburn Hills, MI 48321

Re: Daifuku
 Material Certifications
 SDA Job No.: NV16-223

Dear Mr. Doski,

We have reviewed the Material Certifications that were submitted on September 2, 2016. Please note that the Owner or Owner's Representative bears the sole responsibility to conform to the approved plans. We offer the following comments:

Item	Structure No.	Rim to Invert ht.	Approved Y/N	Comments
Contech 8" PVC Truss Pipe and Fittings	None	None	Yes	No Exception Taken
Contech 6" SDR 23.5 Pipe and Fittings	None	None	Yes	No Exception Taken
Kor-N-Seal	None	None	Yes	No Exception Taken
Mack Industries 48" Typical Sanitary Manhole	None	None	Yes	No Exception Taken
Mack Industries Grade Rings	None	None	Yes	No Exception Taken
WrapidSeal	None	None	Yes	No Exception Taken
Mack Industries 48" Sanitary Manhole	SAN-1	8.77'	Yes	No Exception Taken
Mack Industries 48" Sanitary Manhole	SAN-2	6.07'	Yes	No Exception Taken
Mack Industries 48" Sanitary Manhole	SAN-3	10.79'	Yes	No Exception Taken
EJ 1040AGS Cover Labeled "NOVI SANITARY"	None	None	Yes	No Exception Taken
EJ 1040Z Frame	None	None	Yes	No Exception Taken
Mack Industries Manhole Step	None	None	Yes	No Exception Taken
Northern Concrete 24" CL-IV RCP	None	None	Yes	No Exception Taken
ADS 12"-24" N-12 Pipe	None	None	Yes	No Exception Taken
North American 8" SDR 26 Pipe and Fittings	None	None	Yes	No Exception Taken
ADS Edge Drain with Geotextile Sock and Fittings	None	None	Yes	No Exception Taken
Mack Industries 48" Typical Storm Manhole	None	None	Yes	No Exception Taken
Mack Industries 60" Storm Catch Basin	CB-2	7.86'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-3	7.52'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-3A	4.59'	Yes	No Exception Taken



Mack Industries 48" Storm Catch Basin	CB-4	9.18'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-5	8.34'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-6	8.81'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-7	5.77'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-8	5.47'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-9	4.91'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-10	4.28'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-11	6.36'	Yes	No Exception Taken
Mack Industries 48" Storm Manhole	MH-12	6.32'	Yes	No Exception Taken
Mack Industries 48" Storm Manhole	MH-13	5.96'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-13A	4.17'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-14	4.29'	Yes	No Exception Taken
Mack Industries 48" Storm Catch Basin	CB-15	4.18'	Yes	No Exception Taken
Mack Industries Manhole Step	None	None	Yes	No Exception Taken
EJ 1040Z Frame	None	None	Yes	No Exception Taken
EJ 1040N Grate	None	None	Yes	No Exception Taken
EJ 1040B Cover	None	None	Yes	No Exception Taken
EJ 7045M1 Grate	None	None	Yes	No Exception Taken
EJ 7045z 7060T1 Assembly Frame	None	None	Yes	No Exception Taken
1565Z Cleanout Frame	None	None	Yes	No Exception Taken
EJ 1565A Cleanout Cover	None	None	Yes	No Exception Taken
US Pipe 6" & 8" Double Cement Lined Tyton Joint Pipe	None	None	Yes	No Exception Taken
EJ Resilient Wedge Gate Valve (MJ x MJ)	None	None	Yes	See Note 1
EJ Resilient Wedge Gate Valve (MJ x Tap)	None	None	Yes	See Note 1
Ford Stainless Steel Tapping Sleeve	None	None	Yes	See Note 2
EJ 5BR250 WaterMaster Fire Hydrant	None	None	Yes	See Note 1
Star Pipe MJ Fittings & Accessories	None	None	Yes	No Exception Taken
EBAA Iron Series 1100 Megalug	None	None	Yes	No Exception Taken
Sigma 6", 8", & 12" Accessories	None	None	Yes	No Exception Taken
Carlesimo 60" Gatewell	None	None	Yes	No Exception Taken
Carlesimo 96" Tapping Gatewell	None	None	Yes	No Exception Taken
EJ 1040A Cover Labeled "NOVI WATER"	None	None	Yes	No Exception Taken
EJ 8550 8560 6800 Valve Box	None	None	Yes	See Note 3
Pipeline Pigging Polypig	None	None	Yes	No Exception Taken
Copperhead 8 Gauge, Stranded, Blue Coated Tracer Wire	None	None	No	See Note 4

**Notes:**

1. Must open left per City of Novi Standards & Details
2. Must have stainless steel flange
3. Must have No. 6 Base
4. Tracer wire must be 8 gauge, stranded, blue coated, copper

Please submit the following Material Certification Drawings per City of Novi Standards:

1. Corporation Stop
2. 8 Gauge copper stranded, blue coated tracer wire

Any work not constructed in accordance with the approved plans will not be accepted by the City of Novi.

If you have any questions, please do not hesitate to contact us at our office.

Sincerely,

SPALDING DEDECKER ASSOCIATES, INC.

Alyssa Wambold

Alyssa Wambold, EIT
Engineer

Cc: Theresa Bridges, City of Novi – Engineering Department, Construction Engineer (e-mail)
SDA CE Job File



cityofnovi.org
City of Novi

Inspector's Daily Report

9/2/2017 11:49 AM

FieldManager 5.3a

Contract: _NV17-213, Huntley Manor JSP14-0056

IDR Date 8/30/2017	Day of Week Wednesday	Seq. No. 1	Import Date 9/3/2017	Project Engineer Theresa Bridges	Construction Engineer Ted Meadows
Inspector's Initials-Name RVR Russ Rambeau			Federal Project Number		Elec. Attachments None
Prime Contractor T. R. Pieprzak Co.					
Entered By RVR, Russ Rambeau		Revised By		Revision Date	Revision No.
Temperatures Low: 60 ° F High: 80 ° F			Weather Partly cloudy		
Comments Pieprzak Lowering Existing Watermain on Cherry Hill Road to allow Sanitary Sewer connection to Existing MH.					

Contractors

Contractor's Name	Personnel	No.	Hrs.	Equipment	No.	Hrs.
T. R. Pieprzak Co.	dozer (Dan 2)	1		Excavator Komatsu	1	
	Forman & Excav oper. (Dan)	1		300 loader Kom. 380	1	
	Laborer (Mark)	1				
	Loader (Bill)	1				
	Pipe layer & grade set (Travis)	1				
	top man(Jason)	1				

Item Postings

Item/Material Description	Item Code	Prop. Line	Project	Category	Quantity	Unit	Location	Brkdwn ID	Attn
_General Comments Contractor: T. R. Pieprzak Co.	_0081	0060	_NV17-213	00	0.000	Unit	site		
1) Ground Conditions Material Remarks: wet / muddy								0.00	
2) Soil Erosion Control Measures Material Remarks: perimeter silt fence								0.00	
Inspection Time Contractor: T. R. Pieprzak Co.	_0080	0065	_NV17-213	00	11.000	HRS	site		



cityofnovi.org
City of Novi

Inspector's Daily Report

9/2/2017 11:49 AM

FieldManager 5.3a

Item Postings

Item/Material Description	Item Code	Prop. Line	Project	Category	Quantity	Unit	Location	Brkdwn ID	Attn
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Water Main Pipe	_0002	0075	_NV17-213	00	17.250	LFT	Cherry Hill Road		
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Contractor: T. R. Pieprzak Co.

Item Remarks: lowering for sanitary sewer clearance.

Bedding & Backfill								0.00	
--------------------	--	--	--	--	--	--	--	------	--

Material Remarks: 6A A stone bedding and partial backfill

Bends, Tees, Fittings								0.00	
-----------------------	--	--	--	--	--	--	--	------	--

Material Remarks: 4 Tyler 45 deg. bends
2 Romac xr501 coupling sleeves
8 EBAA pipe restraints

Diameter / Manufacturer								0.00	
-------------------------	--	--	--	--	--	--	--	------	--

Material Remarks: 8" DI McWane

Manufacturer / Joint Type								0.00	
---------------------------	--	--	--	--	--	--	--	------	--

Material Remarks: Tyton/ gasket

z_ Attachments	_0077	0055	_NV17-213	00	0.000	Unit	site		
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Contractor: T. R. Pieprzak Co.

1) Sketches / Comps								0.00	
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Material Remarks: 1 sketch *

2) Contact Sheet								0.00	
------------------	--	--	--	--	--	--	--	------	--

Material Remarks: 2 contact sheets * *ck*

Reviewed By: *Ted McLaughlin*
(Signature)

9/5/17
(Date)



Cut off Existing 8" AC pipe



Connected assembly

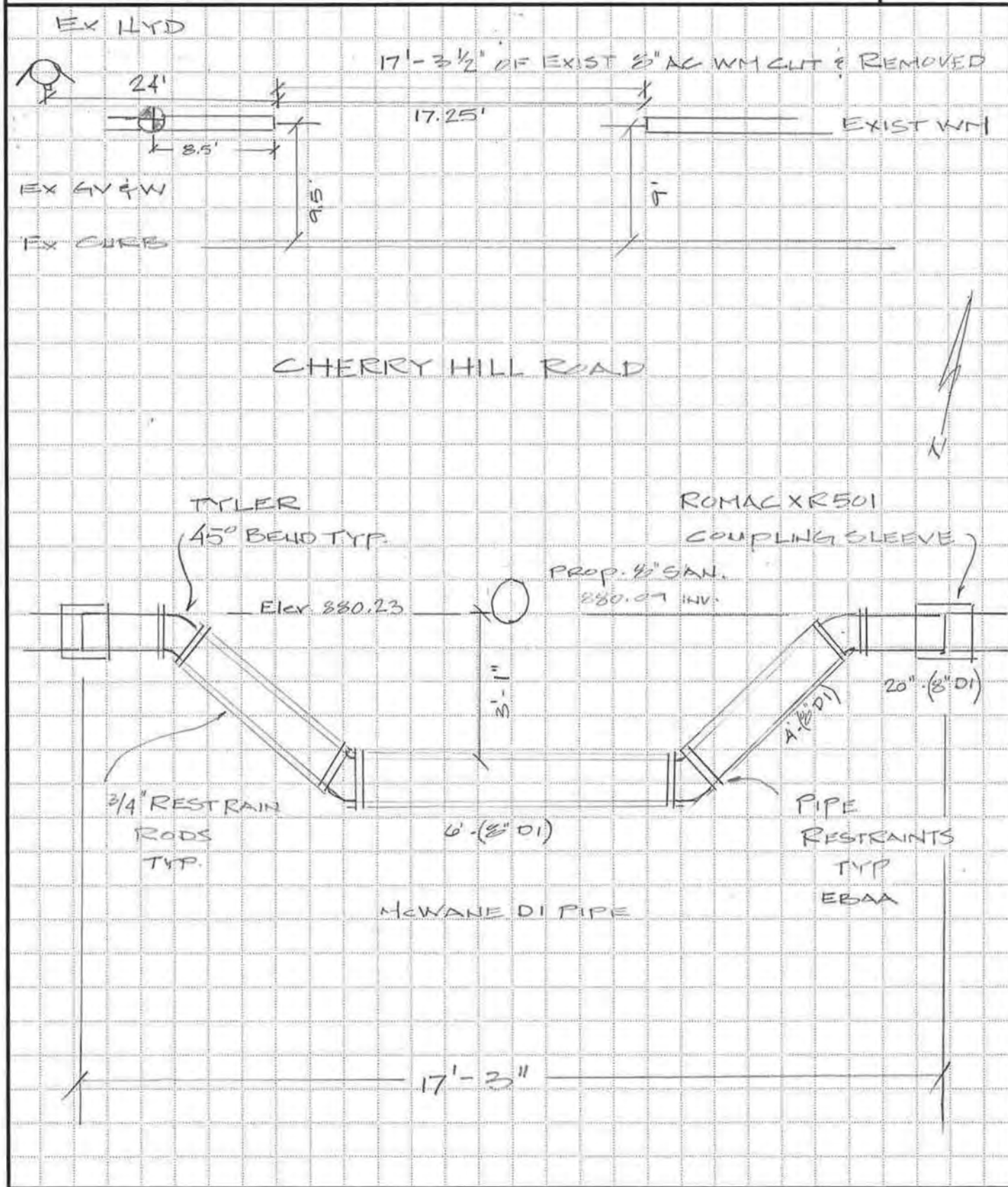


Assembled pipe, bends, restraints prior to attachment



Coupling sleeve

PROJECT HUNTLEY MANOR		JOB. NO. NV 17-213	
SUBJECT WATER MAIN	COMPUTED BY RVR DATE 8-30-17	CHECKED BY DATE	SHEET NO. OF
SPALDING DEDECKER			
905 SOUTH BOULEVARD EAST ROCHESTER HILLS, MI 48307 (248) 844-5400 Fax (248) 844-5404	400 RENAISSANCE CENTER, SUITE 2600 DETROIT, MI 48243 (313) 309-7051 Fax (313) 309-7101	39293 PLYMOUTH RD, SUITE 102 LIVONIA, MI 48150 (734) 293-5200 Fax (734) 293-5202	Engineering & Surveying Excellence Since 1954





October 11, 2017

Lindon Ivezaj
Edward Rose and Sons
38525 Woodward Avenue
Bloomfield Hills, Michigan 48303-2011

Re: Rose Senior Living at Providence Park - Acceptance Documents Review
Novi # JPS13-0081
SDA Job No. NV15-219
REVISIONS REQUIRED

Dear Mr. Ivezaj:

We have reviewed the Acceptance Document Package received by our office on September 26, 2017 against the Engineering Plans dated July 6, 2015 and against the inspection field records. We offer the following comments:

Final Acceptance Documents:

1. On-Site Water System Easement – (executed 7-28-15) Legal Description Approved.
2. On-Site Sanitary Sewer Easement – (executed 7-28-15) Legal Description Approved.
3. Storm Drainage Facility / Maintenance Easement Agreement – (executed 7-28-15) Legal Descriptions Approved.
4. Cross Access Easement – (executed 7-28-15) Legal Description Approved.
5. Pathway Easement – (executed 7-28-15) Legal Description Approved.
6. Warranty Deed for Beck Road Right-of-Way – Previously Recorded L.2628, P. 678, No Objection.
7. **Bills of Sale: Water Supply System and Sanitary Sewer – SUPPLIED – REVISIONS REQUIRED.** There should be a separate Bill of Sale for the sanitary sewer and for the water main. The exhibits that should be attached to the bills of sales are the approved water main easement and sanitary sewer easement exhibits. Both documents must be executed.
8. Full Unconditional Waiver of Lien from contractors installing public utilities – Provided 9/26/2017.
9. Sworn Statement - Provided 9/26/2017.

Note: Maintenance and Guarantee Bonds are being collected and reviewed directly by the City of Novi.

Unless otherwise stated above, the documents as submitted were found to be acceptable by our office pending review by the City Attorney. Legal review will not occur until a current title policy is submitted to the City. For those documents which require revisions, please forward those revised documents to the City for further review and approval.



The City Attorney's Office will retain the original documents in their files until such time as they are approved and ready (notarized and executed properly) for the Mayor's signature.

It should be noted that the Plan Review Center Report dated 05/26/2015 contains all documentation requirements necessary prior to construction and occupancy of the facility.

If you have any questions regarding this matter, please contact this office at your convenience.

Sincerely,

SPALDING DEDECKER

A handwritten signature in blue ink that reads 'Brittany Allen'.

Brittany Allen, EIT
Engineer

cc: George Melistas, City Engineering Senior Manager
Cortney Hanson, City Clerk
Beth Saarela, Johnson Rosati, Schultz, Joppich PC
Sarah Marchioni, City Building Project Coordinator
Ted Meadows, Spalding DeDecker
Taylor Reynolds, Spalding DeDecker
Theresa Bridges, City Construction Engineer
Darcy Rechtein, City Construction Engineer
Angie Pawlowski, City Community Development Bond Coordinator



October 7, 2017

Mrs. Theresa C. Bridges
Construction Engineer
Department of Public Services
Field Services Complex – Engineering Division
26300 Lee BeGole Drive
Novi, MI 48375

**Re: Dixon Meadows – Phase 1
Storm Water Detention System Inspection**
Novi SP No.: JSP14-0046
SDA Job No.: NV17-210

Dear Mrs. Bridges:

This letter serves to officially notify you that we have reviewed the status of the storm water detention systems including storm sewer piping, detention basin(s) and outlet control structure(s) for the above mentioned project. As a result of this review, we have determined the storm water detention system to be in general conformance with the approved construction plans and recommend a full release of this financial guarantee.

If you have any questions, please do not hesitate to contact us at our office.

Sincerely,

SPALDING DeDECKER

Ted Meadows
Senior Project Manager

cc: Sarah Marchioni, City of Novi – Building Project Coordinator (e-mail)
Cheryl McNamara, City of Novi – Bond Coordinator (e-mail)
Angela Pawlowski, City of Novi – Bond Coordinator (e-mail)
Scott Roselle, City of Novi – Water and Sewer Asset Manager (e-mail)
John Carson, Pulte Homes (e-mail)
Paul Schyck, Pulte Homes (e-mail)
SDA CE Job File



February 14, 2017

Mrs. Theresa C. Bridges
 Construction Engineer
 Department of Public Services
 Field Services Complex – Engineering Division
 26300 Lee BeGole Drive
 Novi, MI 48375

**Re: Autoneum
 Acceptable-for-Service Declaration**
 Novi SP No.: JSP14-0080
 SDA Job No.: NV16-210

Dear Mrs. Bridges:

Please be advised the site utilities and base course pavement for the above mentioned site have been constructed in accordance with the approved construction plans.

SDA provided inspection services for the sanitary sewer, water main, storm sewer and base course paving on site and produced punch-lists (generated by both SDA and City personnel on the walk-through conducted on January 25, 2017) that were satisfied in a timely fashion by the responsible parties (Superior Excavating) with the exception of the items noted below. In light of the facts delineated above, our firm considers the site utilities and pavement "Acceptable-for-Service".

Incomplete Site Work Bond Status

As a response to the aforementioned walk-through, there are some items that have yet to be addressed and are delineated below with corresponding dollar amounts:

1.	Place asphalt wearing course	\$88,000
2.	Jet and vacuum all storm structures; provide SDA with the disposal manifest.	\$2,000
3.	Place all curb and gutter and sidewalk per the approved plan	\$10,000
4.	Resolve drainage issue for area NE of the West Detention Basin	\$5,000
5.	Place the detention basin stone access roads for the East & West Detention Basins	\$2,000
6.	Restore eroded greenbelt area around Storm CB A, MH B, & ES F	\$500
7.	Clean and paint all hydrants	\$200

Total (Subtotal*1.2) \$129,240.00

As a consequence, SDA recommends the City withhold an amount of **\$129,240.00** for the incomplete site work.



The "Acceptable-for-Service" designation does not warrant any approvals toward issuance of a Temporary Certificate of Occupancy. This letter serves only as a notice to the applicant and the City of Novi that the respective utilities were tested and approved by the appropriate regulating agencies.

Please note that items related to the permits issued for this project are not addressed with this Acceptable for Service approval. The appropriate City staff or consultants will need to address these issues with the City of Novi.

If you have any questions, please do not hesitate to contact us at our office.

Sincerely,

SPALDING DEDECKER

A handwritten signature in blue ink that reads "Ted Meadows".

Ted Meadows
Senior Project Manager

TMM

cc: Sarah Marchioni, City of Novi – Building Project Coordinator (e-mail)
Angela Pawlowski, City of Novi – Bond Coordinator (e-mail)
Cheryl McNamara, City of Novi – Bond Coordinator (e-mail)
Scott Roselle, City of Novi – Water and Sewer Asset Manager (e-mail)
Glenn Jones, Dembs Development (e-mail)
Harris Katzman, Dembs Development (e-mail)
SDA Job File



August 23, 2017

Mrs. Theresa C. Bridges
Construction Engineer
Department of Public Services
Field Services Complex – Engineering Division
26300 Lee BeGole Drive
Novi, MI 48375

Re: Daifuku
Site Work Final Approval
Novi SP No.: JSP16-0023
SDA Job No.: NV16-223

Dear Mrs. Bridges:

Please be advised the site utilities, grading and paving for the above referenced project have been confirmed by SDA to have been completed in accordance with the approved construction plans. At this time, we recommend that the Incomplete Site Work/Utilities Financial Guarantee can be released.

Please note that we have not addressed any items related to landscaping, woodlands or wetlands because the appropriate City staff or consultants will need to address these issues.

If you have any questions, please do not hesitate to contact us at our office.

Sincerely,

SPALDING DEDECKER

A handwritten signature in blue ink that reads "Ted Meadows".

Ted Meadows
Senior Project Manager

TMM

cc: Sarah Marchioni, City of Novi – Building Project Coordinator (e-mail)
Angela Pawlowski, City of Novi – Bond Coordinator (e-mail)
Cheryl McNamara, City of Novi – Bond Coordinator (e-mail)
Scott Roselle, City of Novi – Water and Sewer Asset Manager (e-mail)
Brian Hughes, Northern Equities Group (e-mail)
Matt Sportel, Cunningham Limp (e-mail)
Joe Vasquez, Cunningham Limp (e-mail)
SDA Job File



September 19, 2017

Mrs. Theresa C. Bridges
Construction Engineer
Department of Public Services
Field Services Complex – Engineering Division
26300 Lee BeGole Drive
Novi, MI 48375

**Re: Dixon Meadows Phase I
Ready-for-Use**
Novi SP No.: JSP14-0046
SDA Job No.: NV17-210

Dear Mrs. Bridges:

Please be advised that the site utilities for the above mentioned site have been constructed in accordance with the approved construction plans. SDA considers the site utilities "Ready for Use".

If you have any questions, please do not hesitate to contact us at our office.

Sincerely,

SPALDING DEDECKER

Ted Meadows
Senior Project Manager

cc: Sarah Marchioni, City of Novi – Building Department Clerk (e-mail)
Cheryl McNamara, City of Novi – Interim Bond Coordinator (email)
Angie Pawlowski, City of Novi – Bond Coordinator (e-mail)
Scott Roselle, City of Novi – Water and Sewer Asset Manager (e-mail)
John Carson, Pulte Homes (e-mail)
City of Novi – Fire Marshall (e-mail)



October 7, 2017

Mrs. Theresa C. Bridges
 Construction Engineer
 Department of Public Services
 Field Services Complex – Engineering Division
 26300 Lee BeGole Drive
 Novi, MI 48375

**Re: Dixon Meadows – Phase 1
 Acceptable-for-Service Declaration**
 Novi SP No.: JSP14-0046
 SDA Job No.: NV17-210

Dear Mrs. Bridges:

Please be advised that the site utilities and pavement for this project have been constructed in accordance with the approved construction plans.

SDA provided inspection services for all water main, storm sewer, sanitary sewer and paving on the site and produced punch-lists (generated by both SDA and City personnel on the walk-through conducted on August 30, 2017) that were satisfied by the responsible parties (Pulte Homes and Superior Excavating). At this time, our firm considers the site utilities and pavement “Acceptable-for-Service”.

Pavement Financial Guarantee

As a response to the aforementioned walk-through, there are some items that have yet to be addressed and are delineated below with corresponding dollar amounts:

Pavement Items

- | | |
|---|----------|
| 1. Potential wearing course removal and replacement | \$65,850 |
| 2. Potential leveling course and base repairs | \$19,750 |
| 3. Potential curb repairs | \$26,400 |

Total (Subtotal*1.2) \$134,400

Upon the “Acknowledgement of Acceptance” being issued by the City of Novi Engineering Department, we recommend the Incomplete Site Work/Utilities Financial Guarantee be reduced to \$134,400. This amount is to be withheld for any pavement repairs and/or wearing course placement. The amount also includes the City of Novi 1.2 multiplier.

 **SPALDING DeDECKER**
Engineering & Surveying Excellence since 1954

The "Acceptable-for-Service" designation does not warrant any approvals toward issuance of a Temporary Certificate of Occupancy. This letter serves only as a notice to the applicant and the City of Novi that the respective utilities were tested and approved by the appropriate regulating agencies.

Please note that items related to the permits issued for this project are not addressed with this Acceptable for Service approval. The appropriate City staff or consultants will need to address these issues with the City of Novi.

If you have any questions, please do not hesitate to contact us at our office.

Sincerely,

SPALDING DeDECKER



Ted Meadows
Senior Project Manager

cc: Sarah Marchioni, City of Novi – Building Project Coordinator (e-mail)
Cheryl McNamara, City of Novi – Bond Coordinator (e-mail)
Angela Pawlowski, City of Novi – Bond Coordinator (e-mail)
Scott Roselle, City of Novi – Water and Sewer Asset Manager (e-mail)
John Carson, Pulte Homes (e-mail)
Paul Schyck, Pulte Homes (e-mail)
SDA CE Job File



June 27, 2017

Mrs. Theresa C. Bridges
Construction Engineer
Department of Public Services
Field Services Complex – Engineering Division
26300 Lee BeGole Drive
Novi, MI 48375

**Re: Andelina Ridge - Phase 2
Site Work Final Approval**
Novi SP No.: JSP14-0017
SDA Job No.: NV14-222

Dear Mrs. Bridges:

Please be advised that the public site utilities, grading, and pavement for the above referenced project have been confirmed by SDA to have been completed in accordance with the approved construction plans. At this time, we recommend that the Incomplete Site Work/Utilities Financial Guarantee can be released.

Please note that we have not addressed any items related to landscaping, woodlands or wetlands because the appropriate City staff or consultants will need to address these issues.

If you have any questions, please do not hesitate to contact us at our office.

Sincerely,

SPALDING DEDECKER

Ted Meadows
Senior Project Manager

TMM

cc: Sarah Marchioni, City of Novi – Building Project Coordinator (e-mail)
Cheryl McNamara, City of Novi – Interim Bond Coordinator (e-mail)
Angie Pawlowski, City of Novi – Bond Coordinator (e-mail)
Scott Roselle, City of Novi – Water and Sewer Asset Manager (e-mail)
Paul Hotvedt, Pinnacle Homes (e-mail)
Brad Botham, Pinnacle Homes (e-mail)
SDA Job File



RIGHT-OF-WAY INSPECTION REPORT

Inspection Date: 8/23/17 Permit No.: PROW15-128
 Project: Ridgeview Villas
 Requestor: John Poe

INSPECTION CHECKLIST:

(mark boxes below with an "X" if item is satisfactorily completed, or "NA" if not applicable)

X	Lawn is established, green and mowable and matches adjacent areas for density. If sodded, sod is established and rooted.	X	All hydrants, manholes, catch basins have been inspected, are free from damage and do not require adjustment.
	All debris has been removed from the ROW including silt fence, tree fence, construction materials, etc.	X	There are no non-standard objects in the right-of-way (brick mailboxes, brick pavers, stamped concrete, etc)
	All sidewalks, pathways, curbs, driveways, etc have been inspected and are free from damage.	N/A	Culverts are installed per plan and standards and have end sections and ditches are properly stabilized.
N/A	In the case of bores or directional drilling under the road, there is no visible physical damage to the road	X	If connections are made to the public utilities, the structures have been inspected for damage
N/A	Other more site-specific design specific items have been completed per the plan or permit conditions.	<p>**** Photos must be attached to depict the ROW conditions at the time of inspection. ****</p>	

INSPECTION RECOMMENDATION:

- APPROVED**
 REJECTED (attach list of deficiencies)

If rejected, attach a list of deficiencies that need to be addressed prior to reinspection. The consultant must contact the applicant to inform them of the specific deficiencies. Forward this form, photos and deficiency list to the City for the file.

If approved, please forward to the City for release of financial guarantee.

City Consultant: Spalding DeDecker Associates
 Name of Inspector: Heather Gendron

Forward this report along with photos and list of deficiencies (if applicable) to the Engineering Division, tbridges@cityofnovi.org, when completed.



SPALDING DEDECKER ASSOCIATES, INC.

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

CITY OF NOVI Site Amenities Punchlist Inspection

Project Name: Daifuku

SP #: JSP16-0023

SDA Project No.: NV16-223

Sidewalks, Bike Paths and Wood Chip Paths

YES required bike racks

N/A ADA facilities (warning plates, ramp locations)

N/A correctly positioned on site

Comments:

Dumpster Enclosure

YES correctly positioned on site.

YES correct height of walls and door.

YES correct materials for walls, door (visual inspection).

Comments:

Accessory Structures (<1,000 s.f. footprint)

N/A correct positioning on site.

N/A matches plan detail (visual inspection).

Comments:

Flag Poles

YES correct positioning on site.

Comments:



SPALDING DEDECKER ASSOCIATES, INC.

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

Outdoor Lighting

YES correct number provided and positioning on site.

Comments:

Streetscape / Open Space Amenities (Decorative Pavers)

N/A correct positioning on site.

Comments:

Streetscape / Open Space Amenities (benches, plaza parks, gazebos, recreational equipment, climbing walls, fountains, decorative water features)

N/A correct positioning on site.

N/A comments provided related to general deficiencies, if observed.

Comments:

Screening, Decorative and Retaining Walls

N/A correct positioning on site.

N/A correct height.

Comments:

Prepared By: Ted Meadows

Date: 8/23/17

 **SPALDING DeDECKER**
Engineering & Surveying Excellence since 1954

July 3, 2017

Mrs. Theresa C. Bridges
Construction Engineer
Department of Public Services
Field Services Complex – Engineering Division
26300 Lee BeGole Drive
Novi, MI 48375

**Re: American Tire
Utility Maintenance Bond Inspection Approval**
Novi SP No.: JSP14-0023
SDA Job No.: NV14-224

Dear Mrs. Bridges:

Please be advised SDA visited the above mentioned site on July 3, 2017 to review the status of the public site utilities. As a result, the public site utilities were found to be acceptable and are in accordance with the approved construction plans under the observation of SDA. At this time, we recommend the Maintenance Bond be released.

Please note that we have not addressed any items related to landscaping, woodlands or wetlands because the appropriate City staff or consultants will need to address these issues.

If you have any questions, please do not hesitate to contact us at our office.

Sincerely,

SPALDING DeDECKER ASSOCIATES, INC.



Ted Meadows
Senior Project Manager

cc: Sarah Marchioni, City of Novi – Building Project Coordinator (e-mail)
Cheryl McNamara, City of Novi – Bond Coordinator (e-mail)
Angela Pawlowski, City of Novi – Bond Coordinator (e-mail)
Scott Roselle, City of Novi – Water and Sewer Asset Manager (e-mail)
Eric Moore, BCCG (e-mail)
SDA CE Job File



October 10, 2017

Ms Sarah Marchioni
Building Permit Coordinator
City of Novi Community Development Department
45175 West Ten Mile Road
Novi, MI 48375

Re:

Novi Corporate Campus Parcel 2
Novi SESC Permit No: SE15-0031
Novi SP No: 14-0060
SDA Job No: NV15-446.0C

Dear Ms Marchioni,

The SESC permit for the Novi Corporate Campus Parcel 2 project may be released. I performed a final site inspection on October 4, 2017 and have no objection to the release of the SESC permit.

Should you have further questions, do not hesitate to contact our office.

Sincerely,

SPALDING DEDECKER

Kim Danowski
Construction Technician, CFM

Cc: Theresa Bridges, City of Novi – Engineering Department, Construction Engineer (e-mail)
Maureen Underhill, City of Novi – Code Compliance (e-mail)
Angela Pawlowski, City of Novi – Bond Coordinator (e-mail)
Glenn Jones, Dembs Development (e-mail)
Ted Meadows, SDA (e-mail)
SDA SESC File



cityofnovi.org

M.E.A. (MUNICIPAL ENFORCING AGENCY) SOIL EROSION AND SEDIMENTATION INSPECTION REPORT

PROJECT NAME: Montebello Estates SESC NV16-417
 SESC PERMIT NUMBER: PSE16-0020 DATE: 10-04-17 *EMA: [unclear] / 10.6.17*

PROJECT CONTRACTOR: Mirage Development NPDES # To follow
 STORMWATER OPERATOR: Mauro Petrucci PART 91 INSPECTOR: Kim Danowski

REASON FOR INSPECTION: Routine Inspection Post-Rain Event Inspection
 Weekly Inspection Pre-Construction Inspection
 Complaint Inspection Compliance Follow-up

CURRENT WEATHER CONDITIONS: Sunny Cloudy Partly Cloudy Windy
 Rain Snow Sleet Hail Temp. 70-75

OBSERVATIONS/CORRECTIVE ACTIONS:

The site is in general compliance with the SESC plan.

The large culvert for Miller Creek is closer to final approval by MDEQ. More stone was added in the stream. Final grading and vegetation can be completed this fall.

Keep an eye on the silt sacks in the catch basins near the construction. Others can be temporarily removed for the winter if they cause ponding issues.

Lot 11 – Spoil Piles/access silt fence NA

Lot 12 – Basement – silt fence ok **Add mud mat here or on Lot 11**

Lot 22 – Framing –rear yard silt fence is holding, mud mat.

Lot 23 – Brick – rear and front silt fence ok.

CITY OF NOVI – CODE COMPLIANCE FOLLOW-UP (Office Use Only): _____

Scheduled Follow-up Visit: No Attachments Yes No

Inspector's Signature: *KTOD* SE/C 00739 *Tomm 10/9/17* Date: 10-04-17

Cc: Original – Neighborhood Services; Copy – Engineering; Copy – Consultant File



Silt fence beefed up behind lot 22 along the woods and wetland.

More creek stone was added at the Miller Creek culvert.



October 4, 2017



MEMORANDUM

DATE: September 8, 2017

TO: Monica Raddatz, City of Novi

FROM: Heather Gendron, SDA

CC: Darcy Rechtien, City of Novi
Pinnacle Homes
Doug Necci, DRN Architects

RE: Lot 102 Andelina Ridge
50888 Sevilla Circle
PBR17-0623

JOB NO.: NV17-101

We have completed our review of the plot plan as received by our office on August 31, 2017 for the above referenced project. This plan is in general conformance with the City Ordinance and is **APPROVED**.

If wetland or woodland reviews are required, please see attached approval letter/s.

If future revisions affect the plot plan, the applicant should resubmit seven copies of the revised plot plan to the City of Novi Building Department for distribution. The specific revisions on the revised plot plan from the previously approved plan should be clearly noted by the applicant. If you have any questions, please do not hesitate to contact us.



November 19, 2014

Thomas Walsh
Building Official
City of Novi
45175 W 10 Mile Rd
Novi MI 48375

Re: Haggerty Corridor Corporate Park Phase 2
Floodplain Letter of Map Revision
Job No.: NV14303

Dear Mr. Walsh:

We have completed our review of the Letter of Map Revision (LOMR) application prepared by Professional Engineering Associates Inc., with regard to the modifications made on a portion of "Seeley Creek Tributary", approximately 170 feet from its confluence with Seeley Drain, to upstream of 13 mile road. Based on our understanding, the LOMR application has been prepared to be submitted to Federal Emergency Management Agency (FEMA) with an intent, to revise/update the current effective Flood Insurance Rate Map (FIRM) to account for the new construction and stream relocation within the study area.

A comprehensive checklist has been prepared as part of our review, and is attached to this document. Based on our review, we find that the application needs to address the following concerns before submitting it to FEMA for a LOMR approval. The items requiring attention, have been summarized below for your convenience. Additional comments and details are listed in the attached checklist.

Hydrologic Analysis:

1. Sub-basins are delineated using USGS topographic maps. Recent topographic data is freely available on the USGS website or other government sources, which, in many cases, may significantly improve the watershed delineation, and accuracy of the contributing drainage areas. Review the delineation against current data and adjust the boundaries as necessary.
2. Submit the Landuse data/maps, used for curve number computations.
3. Calculate the portions of the sub-basin which is impervious and update the hydrologic model with an appropriate percentage of imperviousness.
4. Lag times are handwritten on the input data sheet. Submit the WinTR-55 output pages, showing the lag-time results and computations.
5. The channel dimensions used for routing appear to be larger, and may account for additional storage. Consider updating the routing parameters to be equal or smaller than the main flowpath.



6. The report does not explain the reason for using Bulletin 17 which was prepared in 1992, as opposed to NOAA Atlas 14, which has more updated information. Update the hydrologic model with more recent information, or justify the use of alternate data.

Hydraulic Analysis:

1. The hydraulic model contains two plans. Remove files that are not relevant to this study. We also recommend adding in some details pertaining to this study in the HECRAS description window for future users.
2. Extend cross sections at 19.4 and 1.7, to fully contain the flow.
3. Modify cross sections placement and ineffective station assignments as per Bridge modeling approach which is explained in Chapter-5 of the HECRAS Reference Manual (Pages 5-1 to 5-8). Move or replace the two upstream and downstream cross sections of the culvert according to the guidance, and also make part of the cross sections "Ineffective" to appropriately model the contraction and expansion of flow through the culvert.

If you have any questions regarding this matter or would like to discuss further, please give me a call at your earliest convenience.

Sincerely,

SPALDING DEDECKER

David E. Richmond, P.E.
Project Manager

VK

Cc: SDA Job File
SDA Chrono
Mr. Matthew Sosin, Northern Equities Group
Mr. Kevin Nosek, PE, CFM, Professional Engineering Associates, Inc.



GENERAL INFORMATION	
<i>Study Stream</i>	<u>Seeley Creek Tributary / Seeley Ditch-Unnamed Trib</u>
<i>Originator/Firm/Agency</i>	<u>Professional Engineering Associates Inc (PEA)</u>
<i>Date Submitted</i>	<u>10/27/2014</u>
<i>Purpose of Study</i>	<u>FEMA LOMR Submittal</u>
<i>Type of Study</i>	<u>H&H</u>
<i>Software/Models used</i>	<u>HEC-HMS and HEC-RAS</u>
<i>Reviewer</i>	<u>Vamshi Konduru, Spalding DeDecker</u>
<i>Date Reviewed</i>	<u>11/19/2014</u>
<i>Purpose of Review</i>	<u>Requested by City of Novi, MI</u>
<i>Type of Review</i>	<u>Detailed H&H review</u>

TOPOGRAPHIC DATA																
<i>Type</i>	Field Survey															
<i>Source</i>	PEA															
<i>Source Date</i>	7/2/2014															
<i>Horizontal Accuracy</i>	-															
<i>Vertical Accuracy</i>	-															
<i>Coordinate System</i>	-															
<i>Horizontal Units</i>	FEET															
<i>Vertical Units</i>	FEET															
	<table border="1"> <thead> <tr> <th><i>Check</i></th> <th><i>Observation</i></th> <th><i>Additional Comments</i></th> </tr> </thead> <tbody> <tr> <td><i>Is this the most recent/most accurate topographic data?</i></td> <td>YES</td> <td></td> </tr> <tr> <td><i>Is topographic data certified?</i></td> <td>YES</td> <td></td> </tr> <tr> <td><i>Is the data reasonable for Hydrology?</i></td> <td>NO</td> <td>USGS Quadrangle used. Better topo may be available.</td> </tr> <tr> <td><i>Is the data reasonable for Hydraulics?</i></td> <td>YES</td> <td></td> </tr> </tbody> </table>	<i>Check</i>	<i>Observation</i>	<i>Additional Comments</i>	<i>Is this the most recent/most accurate topographic data?</i>	YES		<i>Is topographic data certified?</i>	YES		<i>Is the data reasonable for Hydrology?</i>	NO	USGS Quadrangle used. Better topo may be available.	<i>Is the data reasonable for Hydraulics?</i>	YES	
<i>Check</i>	<i>Observation</i>	<i>Additional Comments</i>														
<i>Is this the most recent/most accurate topographic data?</i>	YES															
<i>Is topographic data certified?</i>	YES															
<i>Is the data reasonable for Hydrology?</i>	NO	USGS Quadrangle used. Better topo may be available.														
<i>Is the data reasonable for Hydraulics?</i>	YES															

AERIAL IMAGERY	
<i>Source</i>	-
<i>Date</i>	-
<i>Coordinate System</i>	-



HYDROLOGY		
FEMA effective model	Approximate modeling	
Revised Model	Rainfall-Runoff (HEC-HMS)	
Model Version	Version 3.5	
Method	Check	Observation
	<i>Rainfall-Runoff (HEC-HMS) method/analysis is applicable to the study area?</i>	YES
	<i>Is the model running without errors?</i>	YES
	<i>Is the model developed in the latest version of the software?</i>	NO Model is developed in Ver 3.5. Ver 4.0 is available.
Watershed Delineation	Check	Observation
	<i>Contributing drainage area appropriately defined?</i>	NO Consider obtaining better topographic data to verify delineation
	<i>Agree with sub-basin delineations?</i>	YES North arrow is incorrect on drainage map
	<i>Sub-basins adequately divided?</i>	YES
	<i>Artificial ridges accounted for during delineation?</i>	YES
	<i>Correct values used for drainage area?</i>	YES
	<i>Correct units used?</i>	YES
	<i>Supporting data provided in digital format</i>	NO
	<i>Supporting data provided in hard-copy format</i>	YES
Runoff Loss Method	SCS Curve Number	
Parameter 1	Curve Number	
Parameter 2	% Impervious	
Additional Parameters	None	
SCS Curve Number	Check	Observation
	<i>SCS Curve Number is appropriate for the study area?</i>	YES
	<i>Supporting data provided for SCS Curve Number</i>	NO Landuse maps are not provided
	<i>Supporting calculations provided for SCS Curve Number</i>	NO Tables showing area-weighted-average composite curve numbers using soil type and land use combinations are not provided
	<i>Supporting data provided for % Impervious</i>	NO It is assumed that all the sub-basins are completely pervious, by using a value of 0.001%. However, aerial imagery suggests some impervious locations, and a value can be calculated for each sub-basin, to compute accurate run-off.
	<i>Supporting calculations provided for % Impervious</i>	NO Provide a table or map showing % impervious areas
	<i>Supporting data provided for Additional Parameters?</i>	N/A
	<i>Supporting calculations provided for Additional Parameters?</i>	N/A



HYDROLOGY (continued...)

Transform Method	SCS Unit Hydrograph		
Parameter 1	SCS Lag		
Parameter 2	None		
Additional Parameters	None		
SCS Unit Hydrograph	Check	Observation	Additional Comments
	SCS Unit Hydrograph method is appropriate to the study area?	YES	
	Supporting data provided for SCS Lag	YES	
	Supporting calculations provided for SCS Lag	NO	Values are hand-written on one of the exhibits
	Supporting data provided for Parameter 2	N/A	
	Supporting calculations provided for Parameter 2	N/A	
	Supporting data provided for Additional Parameters?	N/A	
	Supporting calculations provided for Additional Parameters?	N/A	
Reach Routing Method	Muskingam-Cunge		
Shape	Trapezoid		
Longitudinal Dimensions	Check	Observation	Additional Comments
	Is Length reasonable?	YES	
	Is Slope reasonable?	YES	
	Is Manning's "n" reasonable?	YES	
Section Dimensions	Check	Observation	Additional Comments
	Dimensions of a Trapezoid appropriately used?	NO	The downstream channel has a bottom width of 3 ft, with a side slope of 4 ft. Much larger numbers have been used for the upstream reaches.
Meteorological Model	SCS Storm		
Parameter 1	Type		
Parameter 2	Rainfall Depth		
Additional Parameters	None		
SCS Storm	Check	Observation	Additional Comments
	SCS Storm method is appropriate to the study area?	YES	
	Supporting data provided for Type	YES	
	Supporting calculations provided for Type	YES	
	Supporting data provided for Rainfall Depth	NO	NOAA Atlas 14 shows higher values than Bulletin 71. Justify the usage of lower values.
	Supporting calculations provided for Rainfall Depth	NO	Justify selecting Bulletin 71 over Atlas 14
	Supporting data provided for Additional Parameters?	N/A	
	Supporting calculations provided for Additional Parameters?	N/A	



HYDRAULICS			
<i>FEMA effective model</i>	<u>Approximate modeling (HEC-RAS)</u>		
<i>Model used for Revision</i>	<u>HEC-RAS Model (One Dimension)</u>		
<i>Model Version</i>	<u>Version 3.5</u>		
<i>GIS Data</i>	<u>Not Provided</u>		
<i>CAD Data</i>	<u>Not Provided</u>		
<i>Workmaps</i>	<u>Hard Copy and PDFs provided</u>		
<i>Flow Type</i>	<u>Steady State</u>		
<i>Flow Regime</i>	<u>Sub-Critical</u>		
<i>No. of Flow profiles</i>	<u>4 (10-, 50-, 100-, 500-yr)</u>		
<i>Boundary Condition</i>	<u>Normal Depth</u>		
<i>Geometry Source</i>	<u>Survey</u>		
<i>No. of Bridges</i>	<u>0</u>		
<i>No. of Culverts</i>	<u>1</u>		
<i>No. of Inline Structures</i>	<u>0</u>		
<i>No. of Lateral Structures</i>	<u>0</u>		
<i>Floodway run</i>	<u>None</u>		
<i>No. of Plans</i>	<u>2</u>		
<i>Plan</i>	Check	Observation	Additional Comments
	<i>All plans appropriately defined in the report?</i>	NO	Either provide explanation, or remove the second plan
	<i>No unknown or undeclared plans in the model?</i>	NO	Explain the purpose of the second plan
	<i>Froude # justifies flow-regime</i>	YES	
	<i>No encroachments are used for regular flow profiles</i>	YES	
<i>Flow</i>	Check	Observation	Additional Comments
	<i>Flows in the increasing order of flood frequency?</i>	YES	
	<i>Is normal depth justified?</i>	NO	Normal depth is showing a lower starting WSEL. It is "Ok" as starting WSELs are not available for all profiles
	<i>Known WSEL was not available?</i>	YES	
	<i>Flow is assigned to the correct stations?</i>	YES	
	<i>Additional flow locations are not required?</i>	YES	



HYDRAULICS (continued...)			
Geometry	Check	Observation	Additional Comments
	WSEs for all frequencies contained with-in the cross-sections?	NO	Cross Sections 19.4 and 1.7 are not fully contained
	There are no crossing profiles	YES	
	There are no hydraulic jumps or drawdowns in any of the profiles	NO	Slight drawdown at the culvert. Can be ignored.
	All cross sections are properly placed and oriented	NO	Consider re-orienting D/S XS, and adding "wings" to correctly define the area of conveyance.
	Manning's "n" (roughness coefficients) for the overbanks matches with aerial imagery	YES	
	Manning's "n" for the channel, matches with field observations, photos or previous studies?	Not Provided	Field photos are not provided for verification. Some n-values appear to be low
	Channel roughness is lower than overbank roughness	YES	
	Downstream reach lengths, LOB and ROB lengths are correctly measured and assigned	YES	They seem reasonable, but digital data could have been useful for verification
	The distance between cross sections is reasonable, and no additional sections are required	YES	
	Interpolated cross sections are not present in the model	YES	
	Channel banks are appropriately assigned	YES	
	Channel slope consistent with topo	YES	
	If minimum channel elevation is not with-in the banks, it is made ineffective?	YES	
	Contraction and Expansion coefficients are correctly assigned?	YES	
Structures	Check	Observation	Additional Comments
	Cross sections 1, 2, 3 and 4 appropriately added to account for flow contraction and expansion at all structures per HECRAS Reference Manual?	NO	Please follow guidelines from Chapter 5: Modeling Bridges, in HECRAS Reference Manual (Pages 5-1 to 5-8)
	Ineffective flow stations and elevations are appropriately added at cross sections 1, 2, 3 and 4 per guidance in HECRAS Reference Manual?	NO	Please follow guidelines from Chapter 5: Modeling Bridges, in HECRAS Reference Manual (Pages 5-1 to 5-8)
	Bridge or Culvert dimensions are correctly assigned?	Not Provided	Survey data/photos not provided for verification
	Chart # and Scale # are correctly assigned for all culverts	Not Provided	Survey data/photos not provided for verification
	Deck data matches with survey data?	Not Provided	Survey data/photos not provided for verification
	Distance to the upstream cross section and deck width are correctly assigned?	YES	




FLOODPLAIN MAPPING and FIS PRODUCTS

Mapping	<u>Hard Copy and PDFs provided</u>
Topo for Mapping	<u>Hard Copy and PDFs provided</u>
Profiles	<u>Not Provided</u>
BFEs	<u>Not Provided</u>
Firm	<u>Hard copies of a firmette and annotated firm provided</u>

FINAL COMMENTS

HYDROLOGY: The study will replace an approximate Zone A area. Although a quick hydrology calculation, such as USGS regression equations, would have been sufficient for this type of analysis; a more accurate rainfall-runoff model was developed. This approach would result in better results, however, if the model is developed using approximate/unverified input-parameters, it could significantly skew the results and induce large differences in the end result. It is imperative that all the parameters are accurately computed and verified with all supporting documentation, before adding them to the model.

HYDRAULICS: Guidance provided by the HECRAS reference manual may be followed to accurately model the contraction and expansion of water while entering and exiting a bridge/culvert. The guidance provides instructions for cross sections placements and ineffective flow assignments. Cross section orientation at the downstream areas, especially when it falls with-in another streams floodplain, must be carefully oriented to accurately reflect the appropriate conveyance area

Reviewer Signature and Date	Senior Reviewer Signature and Date
K.N. Vamshi 11/19/2014	

Print Name: VAMSHI KONDURU	Print Name: DAVID E. RICHMOND
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City of Novi

Project Manager

Ted Meadows (20) *

QA/QC

Cheryl Gregory, PE (30) * - Construction Engineering
Philip Rasor, Jr., PE (33) * - Engineering

* Resumes are included for Key Personnel

+ SESC Certified

Construction Engineering

Ted Meadows (20) *
*Senior Project Manager /
 Contract Administrator*

Gus Dahoui, PE (34) *
Contract Administrator

Paul Swartz (31) *
Sr. Construction Technician

Heather Gendron (4)
Ray Ryan (10)
Kevin Schroeder (2)
Mike Freckelton (3)
Construction Technicians

*8 additional construction
 technicians*

Clark French (19) *
Office Technician

Kim Danowski, CFM (25) + *
SESC / Construction Technician

Survey / Record Drawings

Mike DeDecker, PS (25) *
Senior Project Manager

Steve Brown, CST
Record Drawings

*4 additional Professional
 Surveyors*
*3 additional Survey CAD
 technicians*
13 survey crews

Engineering Design

David Richmond, PE (31) *
Senior Project Manager

Taylor Reynolds, PE (20) *
Sr. Project Engineer

Eric Kipp, PE (19)
Road Sr. Project Engineer

Engineering Plan Review

David Richmond, PE (31) *
Senior Project Manager

Taylor Reynolds, PE (20)
Review Engineer

Scott Isenberg, PE, CFM (6)
Floodplain Engineer

EDUCATION

BS, Environmental Science, University of Kansas, 1997

REGISTRATION / CERTIFICATIONS

MDOT Certified Density Technician

MDOT Certified Aggregate Technician

MDEQ Certificate of Training for Part 91 Soil Erosion and Sedimentation Control, Cert. No. C-10-0089, Exp. 3/5/15

USDOT HAZMAT Certified

MDEQ Stormwater Management, Construction Site A-1j, No. C-15125, Exp. 7/1/20

SPECIALIZED TRAINING

MDOT Concrete Paving Inspector

MDOT Bituminous Paving

Concrete Technician & Concrete Construction Inspector, Level I

Concrete Field Testing Technician, Level I

Project Management Boot Camp I

Radiation Safety Officer

HDPE Pipe Fusion Academy

Compliance Solutions – HAZWOPER

Ted Meadows

Project Manager

Ted has 20 years of quality experience in municipal construction engineering. In his role as Project 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 projects.

Currently Mr. Meadows is the construction operations supervisor for projects primarily within the City of Novi, Plymouth Township and Rochester Hills but for other municipal clients as well. 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

General Services

General Engineering and Construction Services, City of Novi, MI – Currently the Contract Administrator, supervising field and office construction technicians. Performs project quality control, construction contract administration, soil erosion and sedimentation control procedures, surveying, and observation of public utility construction, tunneling and paving operations. Oversees work done in multifamily, single family, commercial, retail and industrial developments throughout Oakland, Wayne and Washtenaw County.

General Engineering and Construction Services, Plymouth Township, MI

– Currently the Contract Administrator, supervising field and office construction technicians. Performs project quality control, construction contract administration, soil erosion and sedimentation control procedures, surveying, and observation of public utility construction, tunneling and paving operations. Oversees work done in multifamily, single family, commercial, retail and industrial developments within Plymouth Township.

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 utility construction, paving and tunneling operations. Oversaw work done in many multifamily and single family developments throughout Wayne County.

Wastewater

Drain Inspections, Macomb County Public Works Commission, Sterling Heights, MI

– Project Manager – Conducted investigation and provided services for Pipeline Assessment Certification Program and Manhole Assessment Certification Program (PACP/MACP) inspections to the eight drains, totaling approximately 68,400 linear feet.

15 Mile Sinkhole Repair, Macomb County Public Works Commission, Fraser, MI

– Project Manager – Sewer system rehabilitation.

City of Novi – 2012 Sanitary Sewer Rehabilitation Areas B, C1 & G - Contract Administrator for sanitary sewer rehabilitation project consisting of cleaning, television, and installing cured in place pipe lining for sanitary sewer repairs. Sewer pipes ranged in diameter from 6 to 15 inches totaling over 4 miles with a construction cost of over \$600,000. Coordinated and managed with the City of Novi and the contractor during the lining of the sewers. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

2010 Sanitary Pump Station Upgrades, City of Novi, MI – Contract Administrator for construction improvements to aging pump stations. The project consisted of site, structural, electrical, and mechanical upgrades to the Drakes Bay Sanitary Pump Station and to the Park Place Sanitary Pump Station. Coordinated and managed with the City of Novi and the contractor during the construction of the pump station improvements. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

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.

Sanitary Manhole Rehabilitation

West Bloomfield Sanitary Manhole Rehabilitation, West Bloomfield Township, MI - Senior Construction Technician responsible for rehabilitation of over 20 sanitary manholes within an existing subdivision. The manhole rehabilitation consisted of removal and replacement of leaking sanitary manhole adjustments and castings as well pressure grouting section joints and later cement lining the interior walls of the structures.

Water Main

Aberdeen, Arlington, Oakview, and Brookline Roads Water Main Replacement, Canton Township, MI – Construction Manager for replacement of 8-inch ductile iron water main for a total of 1 mile by pipe bursting methods with a pre-chlorinated HDPE water main. This project replaced high maintenance existing water mains on each street for the Township of Canton. Coordinated and managed with Canton Township and the contractor during the construction of the water main. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

City of Novi – 2012 SAD 176 Woodham Road Water Main Extension – Contract Administrator for water main project consisting of installing approximately 520 linear feet of 8” ductile iron water main, 2 hydrants, and 1 gate valve and well. Coordinated and managed with the City of Novi and the contractor during the construction of the water main. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

11 Mile Road / Delwal Drive Water Main, Novi, MI – Construction Manager for installation of 0.5 mile of new water main including a 170 LF directional drill of HDPE pipe under a stream. This project completed a water main loop for the City of Novi's Department of Public Works office. Coordinated and managed with the City of Novi and the contractor during the construction of the water main. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

2006 Northville Township Water Main Improvements, Northville Township, MI – Senior Construction Technician responsible for the replacement of one mile of existing watermain 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 watermain 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.

Stormwater Management

2011 Civic Center and Power Park Basin Rehabilitation, City of Novi, MI – Contract Administrator for construction improvements to poor access and aging infrastructure which included construction of grass paver and gravel drive, replacing inlet to the basin, and modifying the outlet control structure's bar grate to prevent clogging under high flow conditions. Coordinated and managed with the City of Novi and the contractor during the construction of the basin improvements. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

2009 West Oaks Regional Detention Basin Improvements, City of Novi, MI – Contract Administrator for construction improvements to aging infrastructure which included replacing two inlets to the basin, repairing eroded areas along the banks, repairing inlet structures, and modifying the outlet control structure's bar grate to prevent clogging under high flow conditions. Coordinated and managed with the City of Novi and the contractor during the construction of the basin improvements. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

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 hot-linking the respective photographs with inventory results.

Pavement

City of Novi Neighborhood Road Program, Novi, MI – Project Manager/Contract Administrator – SD responsible for providing preliminary planning services, including review and evaluation of existing pavement condition data (PASER ratings), field verification of project scope and limits for potential program candidates, construction cost estimates, and recommended list of potential roadway candidates for the program.

City of Novi 2012 Major Roads Capital Preventative Maintenance Program - Contract Administrator for HMA road rehabilitation project consisting of HMA pavement mill and overlay, with fabric interlayer on Wixom and 11 Mile Roads. Coordinated and managed with the City of Novi and the contractor during the construction of the roads. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

2011 Neighborhood Road Program – Concrete, City of Novi, MI – Contract Administrator for demolition and reconstruction of multiple concrete roads within the City of Novi. The project consisted of concrete pavement repairs, joint repairs, and drainage structure rehabilitation. Coordinated and managed with the City of Novi and the contractor during the construction of the roads. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

2011 Beck Road Rehabilitation, City of Novi, MI – Contract Administrator for demolition and reconstruction of a portion of Beck Road. This project consisted of 900' of full HMA pavement reconstruction, 1,100' of HMA mill and two-course overlay, culvert installation and grading. Coordinated and managed with the City of Novi and the contractor during the construction of the roads. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

2011 Neighborhood Road Program – Asphalt, City of Novi, MI – Contract Administrator for demolition and reconstruction of multiple asphalt roads within the City of Novi. This project consisted of asphalt pavement cold-milling and overlay, sections of full HMA reconstruction, ADA ramp upgrades, and drainage structure rehabilitation. Coordinated and managed with the City of Novi and the contractor during the construction of the roads. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

12 Mile Road Reconstruction, City of Novi, MI – Contract Administrator for demolition and reconstruction of 12 Mile Road east of Napier Road. The project consisted of milling and repaving an existing portion of 12 Mile Road as well as a complete reconstruction of a gravel portion. The project included a new bituminous asphalt road cross-section, installation of associated storm sewer improvements and ADA standard sidewalks. Mr. Meadows coordinated and managed with the City of Novi and the contractor during the construction of the road. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

Crowe / Ingersol Roads Reconstruction, City of Novi, MI – Contract Administrator 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. Coordinated and managed with the City of Novi and the contractor during the construction of the roads. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

2009 Pathway Construction, Novi, MI – Contract Administrator for the pathways along Eleven Mile Road, Ten Mile Road, and Haggerty Road. Over 2,800 linear feet of pathway was installed with the addition of pedestrian signal upgrades as well storm sewers to improve drainage. The pathway projects filled in gaps along existing pedestrian pathways to provide continuous pedestrian access within these popular corridors. Coordinated and managed with the City of Novi and the contractor during the construction of the pathways. Responsible for over-seeing inspection, contract documentation, and processing change orders and pay certifications.

Rochester Hills 2017 Asphalt Rehabilitation Program, Rochester Hills, MI – Contract Administrator – SD responsible for providing surveying services, including curb or edge of asphalt staking and sump line staking.

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.

EDUCATION

BS, Construction Engineering, 1988,
Lawrence Technological University,
Southfield, MI

REGISTRATION / CERTIFICATIONS

Professional Engineer, Michigan, 38185,
1992

Professional Engineer, Texas, 111249, 2012

Professional Engineer, Illinois, 062.065151,
2013

SPECIALIZED TRAINING

MDEQ Storm Water Management -
Construction Site, Certificate No. C-
00674. Expires 7/1/15.

The Modern Roundabout as a Traffic
Signal Alternative – ASCE Continuing
Education

Project Manager’s Bootcamp- Continuing
Education- PSMJ Professional Resources,
Inc.

Contract Review & Revision III: Additional
Clauses- XL Design Professional -
Continuing Education

Asbestos Awareness Training- 40 CFR
Part 763 Certificate – Continuing
Education

Geotextile Engineering – NHI Course
#13213

Avoidance and Handling of Construction
Contract Claims – NHI Course #13437

PROFESSIONAL AFFILIATIONS / AWARDS

Institute of Transportation Engineers

Women's Transportation Seminar

Chapter Honor Member, Chi Epsilon Civil
Engineering Honor Society

COMMUNITY INVOLVEMENT

Lawrence Technological University-Civil
Engineering Advisory Committee, Vice
Chair

Mentor / Judge for ESD’s Future City
Competition

Clinton River Watershed Council – Clinton
River Clean-up volunteer

Adopt a Highway/Road cleanup volunteer

Rouge Rescue, City of Troy, volunteer

Grace Centers of Hope volunteer

Cheryl L. Gregory, PE

Principal in Charge | Vice President | Transportation Project Manager

Cheryl L. Gregory, PE has more than 14 years with Spalding DeDecker and more than 30 years of experience in the industry. With a focus on customer service, Ms. Gregory will serve as the Principal in Charge and can address all contractual, accounting, or service-related issues the City may have. She will also lead the transportation design effort for our team, particularly for projects that receive state or federal funds.

Ms. Gregory’s experience with publicly-owned projects includes performing, managing and reviewing engineering designs and construction administration services on various projects for State, County, and Local jurisdictions. Her engineering experience encompasses road design, traffic safety, utility coordination, non-motorized paths, permitting processes, environmental assessments, aesthetic enhancement projects, preparing grant applications, and geotechnical investigations. Previously working for MDOT, Cheryl held positions as the MDOT Metro Region Design Engineer, MDOT Taylor TSC Manager, and the MDOT Port Huron TSC Manager. With nearly 15 years of prior experience working directly for MDOT, she is well-versed in State and Federal design standards, procedures, and policies, as well as the practical applications for local governments. Cheryl is knowledgeable in funding issues, including federal (STP, TIGER, CMAQ, TEDF, EDA, etc.), and state funding initiatives (SRF, SAW, DWRF). Her unique combination of construction, design and administrative experience enables her to effectively oversee the delivery of engineering services, with a thorough understanding of funding, bidding and contract administration processes required for a successful project.

RELEVANT EXPERIENCE

2017 Novi Neighborhood Road Programs – Asphalt and Concrete, Novi, MI – Project Manager and Account Manager for the preparation of design and construction specifications for asphalt and concrete road reconstruction and rehabilitation projects, including complete reconstruction of select asphalt roads. Projects were packaged together with City’s Concrete Panel Program to save bidding and administration costs. Project included evaluating sidewalk ramps for ADA compliance and design detailed construction plans for necessary replacements. Coordinate permits, bidding, and award.

Meadowbrook Road Rehabilitation, Novi, MI –Project Manager and Account Manager for the comprehensive rehabilitation of Meadowbrook Road from I-96 to 12 Mile Road, an MDOT LAP project. Project included widening shoulders, realigning ditches, drainage improvements, and asphalt pavement reconstruction.

Professional Engineering Services for Road and Bridge Design and Related Activities 2003-2014, Road Commission for Oakland County, MI – Account Manager and QA/QC Engineer – The as-needed services provided include: Roadway and Culvert Design; Bridge Design; Bridge Inspection; Preliminary and Construction Survey; Geotechnical Engineering Services; Construction Engineering, including testing; Right-of-Way Acquisition; Project Management; Traffic Signal Design, including Intelligent Traffic Systems (ITS) and SCATS (Sydney Coordinated Adaptive Traffic Signals); Advanced Traffic Management including design and evaluation of roundabouts; and Environmental Assessments and Impact Statements.

2014 Neighborhood Road Programs – Asphalt and Concrete, Novi, MI – QA/QC Engineer and Account Manager for the preparation of design and construction

specifications for asphalt and concrete road reconstruction and rehabilitation projects, including complete reconstruction of select asphalt roads. Evaluated sidewalk ramps for ADA compliance and design detailed construction plans for necessary replacements. Coordinate permits, bidding, and award.

Beck Road Rehabilitation, City of Novi, MI – QA/QC Engineer for the design for the rehabilitation of 2,200' of Beck Road from Nine Mile Road to Cheltenham Drive. Project included 550' of total reconstruction to place an equalizer culvert to alleviate flooding and stabilize roadway in an area of poor soils, mill and overlay, ADA ramp upgrades, and hydrant relocation.

Stark Road Rehabilitation and Reconstruction, Livonia, MI – Project Manager for approximately ¾ mile road rehabilitation project with the addition of bike lanes in support of the City's non-motorized master plan, ADA ramp improvements, and reconstruction of the approach lanes to the I-96 WB service drive (Schoolcraft Road). Administered through the MDOT LAP process.

Levan Road Rehabilitation and Reconstruction, Livonia, MI – QA/QC Engineer and Account Manager - Design for the rehabilitation and reconstruction of Levan Road in the City of Livonia. The project includes permanent non-freeway signing and pavement markings, two sections of reconstruction and a section of pavement repairs and a HMA overlay. Project is administered through the MDOT Local Agency Permits unit.

Avon Road Rehabilitation, City of Rochester Hills, MI (RCOC) – QA/QC Engineer, Account Manager for the aggressive rehabilitation of Avon Road from Adams Road to Livernois Road. Project includes addition of turn lanes, center turn lane extensions, ditching and storm sewer improvements, and a mill and overlay of the HMA pavement. MDOT LAP project.

City of Livonia Comprehensive Road Repair and Reconstruction Program, 2004-2007, Livonia, MI – Account Manager/QA/QC for the comprehensive road repair and reconstruction program including roadway evaluation and design for preventative maintenance, rehabilitation, or reconstruction of over 20 miles of roadway constructed over three years. Designs addressed geometric features such as cross slopes, ADA sidewalk upgrades, curb and gutter replacement, and minor drainage improvements.

Traffic Signal Upgrades, City of Livonia, Michigan – QA/QC for the replacement of signals and upgrades to ADA ramps at Haggerty and Six Mile, Farmington at Six Mile, and Farmington at Seven Mile. Coordination with another City consultant required with SDA leading the overall combining of projects and submittal to the LAP office.

Walnut Lake Road Preservation, West Bloomfield Township, MI (RCOC) – QA/QC Engineer and Account Manager - Design for the rehabilitation of 5.83 miles of Walnut Lake Road in Oakland County. The project includes pavement repairs, HMA overlay, and permanent pavement markings.

Avon/Livernois Road Intersection Improvements, Rochester Hills, MI – QA/QC, Account Manager – Responsible for preparing the Transportation Enhancement Grant application for the City of Rochester Hills' use in pursuing grant monies via MDOT to fund the proposed aesthetic improvements. Oversaw the preliminary site evaluation, conceptual plan preparation, budgetary cost estimating, and team coordination.

City of Troy, Road Reconstruction / Repair, Heide, Oliver, and Thunderbird Drives – QA/QC Engineer for reconstruction and joint repairs and patching of industrial roads in conjunction with a water main replacement project. Detailed maintaining traffic planning for truck access required.

Novi Pathway Construction, Novi, MI – Quality Assurance/Quality Control engineer for design of various pathway segments including ADA ramp and landings, some with pedestrian push button upgrades. Responsible for overall review of design, easement document preparation, and permit applications (RCOC).

City of Northville Pathway Master Plan, Northville, Michigan – Task Manager for planning and estimating the engineered elements for the City's master pathway plan. Engineering included alignments, ADA requirements, safety and geometric recommendations, and construction cost estimates.

Adams Road Bridge over Rouge River, Troy and West Bloomfield Township, MI (RCOC) – Department Manager/QA/QC Engineer – Responsible for review of all road and traffic elements of this bridge reconstruction project including superstructure replacement, substructure repair, and roadway approach work.

EDUCATION

MS, Civil Engineering, 1986, Ohio State University

BS, Civil Engineering, 1984, Ohio State University

REGISTRATION / CERTIFICATIONS

Professional Engineer, Michigan

Professional Engineer, Ohio

PROFESSIONAL AFFILIATIONS / AWARDS

American Society of Highway Engineers (past Board Director)

National Society of Professional Engineers (past Board Director, Michigan Chapter)

American Public Works Association

Ohio Water Environment Association

Michigan Water Environment Association

COMMUNITY INVOLVEMENT

Leadership Columbus – Class of 2004

Philip A. Razor, Jr., PE

QA/QC Manager | Bridge & Structural Engineering

Mr. Razor has served the full spectrum from Design Engineer to Project Principal for a variety of projects and agencies. His experience in the QA/QC Manager role, for many municipal and state funded infrastructure projects will serve him well as the QA/QC Manager for the City of Novi’s projects. Also, his continued involvement with the design and checking of structural engineering projects, especially bridges, retaining walls and sanitary structures will be an asset as well to our overall design team. A summary of relevant projects is presented below.

RELEVANT EXPERIENCE

QA/QC Manager

Wayne County Department of Public Services – Sibley Road Reconstruction, Brownstown Township, MI – QA/QC Manager – Survey and engineering design for infrastructure improvements, reconstructing road to a 3-lane concrete roadway with curb and gutter and enclosed drainage from the pavement change east of US-24 (Telegraph Rd.) to the pavement change east of Racho Road, as well as upgrading traffic signals at Racho Road to mast arms.

Wayne County Department of Public Services - Van Horn Road Rehabilitation, Brownstown Township, MI – QA/QC Manager – Survey and engineering design for infrastructure improvements along .76 miles of Van Horn Road.

General Engineering, Plymouth Township, MI – QA/QC Manager – Responsible for QA/QC Program for all general engineering services for Plymouth Township which include the review of planning, engineering, construction and permit documents for various residential, commercial and public utility projects.

Consultant Engineering, Architectural and Miscellaneous Services for the City of Lansing, MI – QA/QC Manager for this On-call Contract. – **Project Manager for all structural and bridge projects** and overall QA/QC Manager for all projects assigned to us on this as-needed contract. The projects include; Transportation System Analysis/Design, Wastewater System Analysis/Design, Parking System Analysis/Design, Storm Water System Analysis/Design and Structural Analysis/Design. Contract is currently on-going.

Professional and Technical Engineering Services for the City of Grand Rapids, MI – Project Manager and QA/QC Manager for this On-call Contract – **Project Manager for all structural and bridge projects** and overall QA/QC Manager for all projects assigned to us on this as-needed contract. The projects include; Transportation Road & Streets, Traffic Signal Systems, Wastewater Facilities-collection and modeling, Storm Water Systems, Pavement management; Water System Analysis/Design, Building Envelop and Roofing Analysis and Structural Analysis/Design. Contract is currently on-going.

I-196BL at 92nd Ave - Indirect Left Turns, MDOT Grand Region, Zeeland, MI – Project Manager – Road design services including geometric design and utility considerations for a new indirect left turn. Specific consideration given to maintenance of traffic considering the high traffic volumes in the vicinity of the work zone. Includes improvements to the 92nd Avenue and Maple Street intersection and the existing storm water drainage system.

Ambassador Bridge MIS and EA, Michigan Department of Transportation (MDOT) and Southeast Michigan Council of Governments (SEMCOG), Detroit, MI – Project Principal – Public involvement program and early preliminary engineering for a Major

Investment Study (MIS) and Environmental Assessment (EA) for this \$100 million upgrade of access improvements to this international border crossing. Currently, there is no direct connection between the Ambassador Bridge, which links the US and Canada in Detroit and Windsor respectively, and the Interstate System (I-75 & I-94). An act of congress is needed to connect a private toll facility and the public Interstate. Project involved the thoughtful consideration of a wide variety of stakeholder interests including those of the Michigan DOT, the City of Detroit, the Ambassador Bridge Company, the City of Windsor, Wayne County and the citizens of the Hubbell-Richard historic district of southwest Detroit. Extensive public involvement and detailed engineering at the early stages were required to alleviate citizen concerns this improvement would not destroy or degrade this historic district which was striving to improve its economic recovery. Project was completed on schedule.

Indefinite Delivery Contracts for A/E Services, US Army Corps of Engineers-Detroit District, Detroit, MI – Project Principal – Open-ended contract for architectural and engineering services for various civil and military projects located within the boundaries of the Detroit District. Designs were developed based on initial surveys, environmental assessments and other site visitations and meetings. Design analysis and conferences were provided for the bidding, construction and operating ability of each project. Due to nature of work requested, many assignments required specialized services offered by multi-office design team members located in the firms' Midwest region states. Coordination of design, QA/QC reviews, and specifications was necessary. Projects were varied from inspections of the Soo Locks at Sault Ste. Marie, Michigan, to Harbor Protection for various sites throughout the Great Lakes.

Advanced Measures Project, U.S. Army Corps of Engineers, Detroit District – St. Clair Shores, MI – Project Principal – Advanced measures project to protect the community of St. Clair Shores from periodic flooding due to rises in Great Lakes water levels and its impact on the community and its storm water systems. Designs of flood protection were based on alternatives that were developed from an initial 23-mile shoreline survey, review of existing utilities plans, and other assessments. Final analysis and calculations resulted in the development of construction drawings and specifications for implementation of the flood protection engineering solutions. Solutions included berms, sheet piling, flap-valves, and portable pump stations.

Indefinite Delivery Contracts for A/E Services at Selfridge Air National Guard Base, 127th Fighter Wing, Michigan Air National Guard, Mt. Clemens, MI – Project Principal – Open-ended contract for architectural and engineering services for various military projects located within the boundaries of the Air Base. Designs were developed based on initial surveys, previous engineering assessments, site visitations, and other meetings. Design analysis and conferences were provided for the bidding, construction, and operating ability of each project. Due to nature of work requested, many assignments required specialized services offered by multi-office design team members located in the firms' Midwest region states. Coordination of design, QA/QC reviews and specifications were necessary. Upgrade of the entire base's sanitary sewer system was designed. Types of projects included: parking lot rehabilitation, base roadway design, hangar upgrades including mechanical and power systems, and many architectural building rehabilitations.

CIP-736 Glendower Avenue/Llewellyn Avenue Storm water System Improvements, Department of Public Utilities, Division of Sewerage & Drainage, Columbus, OH – Project Director – Storm water improvement project for the Division of Sewerage & Drainage (DOSD). Frequent street and yard flooding within the area bounded by Glendower Avenue, Wager Street, and Llewellyn Avenue was the driving factor in developing storm water improvements for this area. Field survey and investigations were required to gather relevant data. Hydraulic and hydrologic analysis was performed to develop the appropriate design criteria. Detail design documents for the storm water and roadway improvements were developed.

General Engineering Services 2010-2012, Ohio Department of Transportation, District 9 – Chillicothe, OH – QA/QC Manager – As-needed services contract. Projects ranged from culvert replacements and roadway resurfacings, stream/waterway improvements, right-of-way plans, and property descriptions to **bridge plan reviews and inspection**.

BRIDGE & STRUCTURAL ENGINEER

I-69/USR 127 Interchange Project, Michigan Department of Transportation, MDOT East Lansing, MI – Design Engineer – Steel plate girder superstructure of three bridges conveying I-69 over US 127 at this new interchange in East Lansing, Michigan. This was part of the state's completion of Interstate 69 from Lansing to Flint. Responsible for the design of this medium-span structure's superstructure, four spans of 148'-132'-130'-150' spanning over USR 127. Plate girders were designed for composite action and were 72 inches deep. The bridge girders were also curved, so design included the effects of curvature on girder design. Additionally, performed preliminary bridge design for Webster Road and Chandler Road fly-over bridges over I-69. These were designed as two-span, composite-steel plate girders with spans of 132'-132', conveying these roads over the new I-69 interstate facility. Duties also included all shop drawing review of the structural steel for both the fly-over bridges and the three bridges at the interchange of I-69 and USR 127.

Southerly Wastewater Treatment Plant Improvements, Project 88, Department of Public Utilities, DOSD, Columbus, OH – Structural Design Engineer – 200-foot diameter clarifiers. Six new clarifiers were required as part of the overall improvements to the Southerly Wastewater Plant. Responsibilities included detail design and construction plan preparation, for these 200 foot diameter, 40 foot deep, steel reinforced cast-in-place concrete clarifiers for the plant. Additional responsibilities included on-site construction inspection of the clarifiers during construction.

Bridge General Engineering Services 2011-2013, Department of Public Service, Columbus, OH – QA/QC Manager – Review of a variety of project design calculations, inspections, plans and specifications on this task order contract. The projects included rehabilitation of a pedestrian bridge over a small, unnamed stream including replacing the superstructure, rehab to piers and abutments and widening for sidewalks enhancements; up to rehabilitation of railroad underpasses for CSXT including new bridge safety walks, painting of the steel superstructure and repairs to the substructure elements.

Edwin C. Moses Boulevard Bridge Replacement over Wolf Creek, Department of Public Works, Dayton, OH – QA/QC Manager – Responsible for the preliminary study of structure type, environmental documentation, and construction drawings for the development of bridge and aesthetic construction plans for the replacement of the Edwin C. Moses Boulevard Bridge over the mouth of Wolf Creek in downtown Dayton. Project length is 1,500 feet. Project involved detailed drainage design, bridge design, roadway widening plans, traffic control, lighting design, and right-of-way plans. Cost: \$5 million.

MOT-XWAY Dayton Express Bridge Reconstruction over CSXT Railroad and Keowee Street, Department of Public Works, City of Dayton, Ohio – QA/QC Engineer – Replacement of the existing superstructure on this twin structure, five-span steel Beam Bridge using chorded, variable-depth steel plate girders and a new reinforced concrete deck. Structure was also elevated to provide the CSXT requested vertical clearance of 23.5 feet over the original 21 feet of clearance.

FRA-40-12.26, Discovery Bridge (Broad Street over the Scioto River), Franklin County Engineer's Office, Columbus, OH – Lead Design Engineer – Substructure design elements for the signature bridge replacement of this 1920's era, seven-span, earth-filled barrel arch bridge over the Scioto River in downtown Columbus, Ohio. The new bridge, the first post-tensioned, concrete plate arch built in the US, and was a collaboration with internationally recognized bridge design firm, Leonhardt, Andrä und Partner from Stuttgart, Germany. Bridge was replaced with five-span, multi-arch concrete plate Girder Bridge that "simulated" the older bridge's look while being cutting-edge for the technology of the new bridge. As Lead Designer for the substructure, designed two abutments each supported by more than 200 HP 14X73 piles for the 100-foot-wide abutment and accompanying circular plaza and wing walls. All piles driven 65 feet into stiff glacial till. All concrete had architectural finishes and treatment designed into them. Also responsible for the design of four piers, over 100-feet-long and supported by three 10-foot diameter drilled shafts supporting the pier cap. Overall bridge deck was greater than 100-feet-wide, and bridge length was 660 feet.

Primrose Lane Bridge Replacement, West Carrollton, Montgomery County, OH – Project Manager – Replacement of the existing 16-foot-long concrete slab bridge over a tributary to Owl Creek. Due to hydraulic issues in the surrounding suburban neighborhood, bridge had to be designed, approved, and bid for construction in four short months and to reduce flooding which frequently occurred at a storm event as small as the 5-year storm. New structure was a 35-foot clear, single span, box-beam Bridge with asphaltic deck, supported on full-height concrete wall-type abutments. Design will clear 25-year event and with further channel improvements, will clear the 50-year storm event.

USR 50 – Carbide Overpass Bridge Replacement, West Virginia Department of Highways, South Charleston, WV – Bridge Engineer – Replacement of this 1,500-foot-long viaduct structure over several active rail lines entering into the Union Carbide Plant in South Charleston, West Virginia along the Kanawha River. The existing reinforced concrete beam and deck structure on pile supported piers and abutments were in need of total replacement. The proposed replacement structure selected was 382-foot-long, six-span twin superstructure, with steel beams working with a composite concrete deck spanning over the rail line area and entrance road to the plant. The remaining viaduct superstructure and ramps were replaced by mechanically stabilized earth approaches replacing the remaining 1,100+ feet of viaduct structure. Cost savings for this arrangement was \$2 million for the proposed bridge versus a similar replacement structure with 1,000-foot-long superstructure with the 240-foot and 260-foot ramps.

Porter Falls Bridge (CR 44) over Fishing Creek Bridge Replacement, West Virginia Department of Highways, Wetzel County, WV – Project Engineer – Replacement of the existing bridge over Fishing Creek destroyed by a 700-year flood event. The replacement structure was a three-span, steel beam superstructure designed to act compositely with the reinforced concrete deck. Spans were 69'-86'-69' overall. Bridge was designed in six weeks to accommodate early construction to provide access to residents who had to detour around the closed existing structure which was just west of the Town of Porter Falls. Also responsible for roadway approaches design including a graphical grade for two roadways combining right at the bridges western approach.

Honda Rail Spur Bridge, Ohio Department of Transportation, Division of Rail, East Liberty, OH – Bridge Engineer – Design of 110-foot-long Railroad Bridge over Flat Branch waterway, a tributary to Big Darby Creek. This bridge was part of the five-mile rail extension for Conrail from the existing Marysville Auto Plant to the East Liberty Plant of Honda. Structure was designed per American Railway Engineering Association Standards and included a ballasted, steel reinforced concrete deck supported by steel beams working compositely with the deck. Bridge length was determined by the Flat Branch waterway which was relocated to its current location by the construction of the Transportation Research Center and Track. The existing waterway is a small stream that floods out of its banks quickly during even a five-year event.

HOC-56-0452/0699 Bridge Replacement Ohio Department of Transportation, District 10, Hocking County, OH – Design Engineer – Replacement of two structures over Salt Creek near Laurelville, OH. The existing structures were replaced by three-span, steel beam bridges using composite steel beam design with the reinforced steel concrete decks. For the piers, drilled shaft socketed into bedrock were designed and abutments were supported on H-piles driven to the shallow bedrock. Span lengths were 72'-90'-72' and 65'-81'-65', respectively. Responsibilities included design of all substructure units (piers and abutments), and detail checking and review of all other bridge elements.

EDUCATION

BS Civil Engineering, 1983, Wayne State University, Detroit, MI

REGISTRATION / CERTIFICATIONS

Professional Engineer, Michigan, 1998, #43838

Gus Dahoui, PE

Project Manager

Gus Dahoui, PE has more than 34 years of experience working on Michigan Department of Transportation and Wayne County projects providing full construction engineering services. He has worked on many large-scale road and bridge construction projects including numerous Federal-aid projects. He is well versed in MDOT, AASHTO, and FHWA construction procedures, specifications, manuals and guides.

His responsibilities have included: general project administration, QA/QC, supervision of project team staff overseeing construction inspection, project record keeping and materials testing, primary point of contact with client, contractor and project stakeholders, reviewing contract documents, reviewing contractor submittals, facilitating and participating in project meetings, resolving project issues, mitigating and resolving contractor claims, and ensuring that the project is constructed on time, within budget, and according to specifications.

RELEVANT EXPERIENCE

Meadowbrook Road, I-96 to 12 Mile Road, City of Novi, MI - Project Manager - Oversaw construction inspection of 1-mile-long HMA removal and resurfacing project including curb and gutter, Drainage improvements, and restoration.

Novi Road, 12 Mile Road to 13 Mile Road, City of Novi, MI - Project Manager - Oversaw construction inspection of 1-mile-long HMA cold milling and resurfacing project including pavement repairs to existing HMA and concrete pavement, curb and gutter, sidewalk, ADA ramps, signing, and restoration.

Novi 2016 Pathway Program, City of Novi, MI - Project Manager - Oversaw construction inspection that included Concrete pavement, Concrete Pathway. Concrete ADA ramps, concrete curbing, drainage improvements, and restoration.

Meadowbrook Commons Parking Lot, City of Novi, MI - Project Manager - Oversaw construction inspection that included HMA removal and resurfacing, Concrete sidewalk. Concrete ADA ramps, concrete curbing, drainage improvements, restoration.

2017 NRP Concrete, City of Novi, MI - Project Manager - Oversaw construction inspection that included Concrete pavement. Concrete ADA ramps, concrete curbing, drainage improvements, restoration, and maintenance repairs

2017 NRP Asphalt, City of Novi, MI - Project Manager - Oversaw construction inspection that included HMA milling/removal and resurfacing. Concrete ADA ramps, concrete curbing, drainage improvements, restoration, and maintenance repairs.

Country Place Force main, City of Novi, MI - Project Manager - Oversaw construction inspection of installing a new Sanitary force main, Replacing pumps and updating electric panel at pump station, HMA pavement, sidewalk, and restoration.

Village Oaks/Village Wood Storm Water, City of Novi, MI Project Manager - Oversaw construction inspection of drainage improvements, televising a sewer run, and restoration.

9 Mile Road, Novi Road to Meadowbrook Road, City of Novi, MI - Project Manager - Oversaw construction inspection of 1-mile-long HMA micro-cold milling and resurfacing project including pavement repairs to existing HMA and concrete pavement, curb and gutter, sidewalk, ADA ramps, guardrail, and restoration.

14 Mile Rd, City of Novi, MI - Project Manager - Oversaw construction inspection that included Concrete Pathway. Concrete ADA ramps, water main, landscape wall, drainage improvements, restoration, and maintenance repairs.

8 Mile Rd, City of Novi, MI - Project Manager - Oversaw construction inspection that included Concrete Pathway. Concrete ADA ramps, concrete curbing, landscape wall, drainage improvements, restoration, and maintenance repairs.

White Pines Drive, City of Novi, MI - Project Manager - Oversaw construction inspection that included concrete road rehabilitation, concrete ADA ramps, new concrete curb medians, and structure rehabilitation.

Beck Road, City of Novi, MI - Project Manager - Oversaw construction inspection that included HMA milling and overlay, HMA full depth construction, installation of concrete pedestrian refuge island, and concrete walk including ADA improvements.

MDOT Crack Sealing, Wayne County, MI - Project Manager - Oversaw construction inspection of hot mix asphalt crack treatment on various trunkline routes in Wayne County.

Levan Rd Rehabilitation, I-96 to 5 Mile Rd, Livonia, MI - Project Manager - Oversaw construction inspection of 1-mile-long HMA resurfacing project including cold milling and pavement repairs to existing HMA and concrete pavement, curb capping, new ADA ramps, MOT plans, and driveway approach replacement.

Pennsylvania Rd, Middlebelt to Inkster, Wayne County, MI - Supervising Construction Engineer for 3.65 lane miles of mill and fill using asphalt reclamation. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Wayne Rd, Michigan Ave to Van Born, Wayne County, MI - Supervising Construction Engineer for 5.50 lane miles of mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Mack Ave, Cadieux to Moross, Wayne County, MI - Supervising Construction Engineer for 8.55 lane miles of mill and fill / boulevard. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Gibraltar Rd, Allen to Old Fort, Wayne County, MI - Supervising Construction Engineer for reconstruction of 2.10 lane miles of 5-lane concrete pavement / box culvert. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Various Roads in Sumpter, Wayne County, MI - Supervising Construction Engineer for 12.36 lane miles of mill and fill of 1.5" HMA. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Oakwood Rd, M-39 to I-94, Wayne County, MI - Supervising Construction Engineer for 2.34 lane miles of mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Wyoming Rd, Warren to Tireman, Wayne County, MI - Supervising Construction Engineer for 2.55 lane miles of mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Goddard Extension, Airport Service Rd to Merriman, Wayne County, MI - Supervising Construction Engineer for 1.42 miles of mill and fill / ditching. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Greenfield Rd, Ford to Warren, Wayne County, MI - Supervising Construction Engineer for 6.04 miles of mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and

site preparation.

North Line Rd, Inkster to 500' W. of Toledo, Wayne County, MI - Supervising Construction Engineer for concrete pavement repair. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Outer Drive, Mitchell to Mt. Elliot, Detroit, Wayne County, MI - Supervising Construction Engineer for 10.38 lane miles of mill and fill / boulevard. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Seven Mile & Hines Drive, Northville, Wayne County, MI - Supervising Construction Engineer for 2.30 lane miles of mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Seven Mile at Haggerty Intersection, Wayne County, MI - Supervising Construction Engineer for traffic signals. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Bascule Bridge Phase I, Jefferson Ave, Wayne County, MI - Supervising Construction Engineer for bridge foundation repair / underwater concrete. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Northfield Hills Golf Subdivisions, Wayne County, MI - Supervising Construction Engineer for mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Eureka Rd, Wahrman to Dingell, Wayne County, MI - Supervising Construction Engineer for 8.25 lane miles of concrete repair. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Outer Drive, Livonia Drain Culvert Replacement, Wayne County, MI - Supervising Construction Engineer for box culvert and concrete pavement. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Sheldon Rd, M-14 to Five Mile, Wayne County, MI - Supervising Construction Engineer for 4.55 lane miles of mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Outer Drive, Plymouth to Schoolcraft, Wayne County, MI - Supervising Construction Engineer for 3.36 lane miles of mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Wyoming Rd under Southern St, Wayne County, MI - Supervising Construction Engineer for reconstruction of 1.2 lane miles of 5-lane concrete pavement / underground / bridge piers repair. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Merriman Rd, Cherry Hill to Ford Rd, Wayne County, MI - Supervising Construction Engineer for 5.31 lane miles of mill and fill. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

Base Line at Center St Intersection and CSX to Meadowbrook, Wayne County, MI - Supervising Construction Engineer for reconstruction of 7.80 lane miles of intersection and concrete repair. Supervised field and office construction technicians. Oversaw project quality control, construction contract administration, surveying, and site preparation.

REGISTRATION / CERTIFICATIONS

MDEQ Certificate No. C-17509
Storm Water Management - Construction
Site, exp. 7/1/2020

MDOT / FSU – Density Technology – exp.
04/2020

MCA Concrete Field Testing Technician
Level 1 – exp. 04/2019

SPECIALIZED TRAINING

MDOT Concrete Paving Inspection

Materials Acceptance Process

MWEA Waste Water and Drinking Water
Basic People Skills

Non-Nuclear Technology – Pavement
Quality Indicator Operator

Michigan Aggregate Technician

Michigan Qualified Bituminous QC/QA
Technician

Nuclear Testing Equipment Training

ACI Field Testing Technician – Grade I

MCA – MDOT Bridge / Pavement

MCA – Concrete Fundamentals

Mix Design Procedures for Asphalt
Pavements

MDOT SuperPave HMA Mix Design

MERP SuperPave Mix Design

ADA Compliance Training 2014

Advanced Mix Design School

Purdue University SuperPave School

Blaw Knox Paving School

Ingersoll Rand Rolling School

Bituminous Mix Design School

APAM – Asphalt Pavement on Local Roads

Paul Swartz

Senior Construction Technician

Paul Swartz has more than 31 years of experience in bituminous asphalt construction quality assurance and quality control, as well as construction observation of concrete road reconstruction/rehabilitation and public utilities. He has performed as the HMA QA/QC Plan Administrator for numerous high impact MDOT projects. He has extensive knowledge of HMA mix designs, Job Mix Formula adjustments, density compaction, extraction/gradation, and MDOT performance specifications and testing requirements. He has supervised laboratory HMA testing including reviewing all test data to assure compliance with MDOT's testing requirements. He is knowledgeable in all aspects of road and bridge construction and proficient in FieldBook. He is well versed in MDOT, AASHTO, and FHWA construction procedures, specifications, manuals, and guides.

RELEVANT EXPERIENCE

General Engineering and Construction Services, City of Novi, MI – Senior Construction Technician – SD's scope of services includes construction contract administration, soil erosion and sedimentation control procedures, surveying, and observation of public utility construction, tunneling and paving operations for various projects throughout the City, including multifamily, single family, commercial, retail and industrial developments. Inspection of watermain, sanitary and storm sewer, subgrade and subbase, bituminous and concrete paving, sidewalks and ADA ramps, and concrete curb and gutter. Coordinate materials testing. Complete daily reports using FieldBook.

2017 Neighborhood Road Program Asphalt Contract 3, City of Novi, MI – Senior Construction Technician – Provided construction engineering services for work consisting of milling and overlay of asphalt roads within subdivisions, adjacent concrete ADA ramp improvements, and structure rehabilitation.

2014 Neighborhood Roads, Novi, MI – Senior Construction Technician – Asphalt reconstruction and rehabilitation of 22,284 SY of existing concrete and asphalt roads and mill and overlay of existing asphalt roads with local repairs and ADA ramp improvements. Also, rehabilitation of concrete roads consisting of 3770 SY of road repair, 6883 LF of joint repair 3319 SF of sidewalk and ADA ramp replacement, and rehabilitating 24 storm structures.

Town Center Reconstruction, Novi, MI – Senior Construction Technician – reconstruction of 2,200' of concrete road between Grand River Avenue and Crescent Boulevard. Services included complete construction engineering services consisting of construction inspection, contract administration, material testing coordination, and construction survey layout.

Lenox Park, Novi, MI – Senior Construction Technician – Observation and reporting for saw cutting, paving, backfilling, curb repair, milling, curb removal, grading, underdrain, and overband edge of metal crack filling.

Rochester Hills As-Needed Services, Rochester Hills, MI – Senior Construction Technician – Engineering consulting services for commercial and residential developments in the City.

Rochester Hills 2017 Asphalt Rehabilitation Program, Rochester Hills, MI – Senior Construction Technician – SD responsible for providing surveying services, including curb or edge of asphalt staking and sump line staking.

General Engineering, Plymouth Township, MI – Senior Construction Technician – Responsible for ongoing general engineering services for Plymouth Township which include the review of planning, engineering, construction and permit documents for various residential, commercial and public utility projects. Also consulted and assisted on various Township construction projects including the Township Park and economic development projects.

Hamlin Road Reconstruction, Rochester Hills, MI – Senior Construction Technician – Construction inspection of 2.88 miles of HMA removal, cold milling, crushing, shaping and resurfacing, concrete pavement, driveway, curb, gutter, spillway sidewalk and ADA ramps, aggregate base, sewer, drainage, watermain, traffic signal, and pavement markings on Hamlin Road.

City of Troy General Construction Engineering Services, Troy, MI – Senior Construction Technician – Road rehabilitation projects, directional bore observation, public utility inspection, site reviews, and emergency repairs observation.

M-97 (Goesbeck Highway) Resurfacing - Inspector - 3.55 miles of hot mix asphalt cold milling and resurfacing, pavement removal and repair, concrete curb, gutter, sidewalk and ramps, drainage, watermain, traffic signal, signing, and pavement markings on M-97 in Macomb County.

US-23 Reconstruction – Inspector for 3.97 miles of interchange concrete reconstruction including roundabouts, hot mix asphalt ramp milling, resurfacing, and widening, parking lot joint repairs, overlay, and signal modernization along northbound US-23 at the US-223 interchange, Monroe County.

I-94 Resurfacing – Inspector for 6.11 miles of hot mix asphalt cold milling and resurfacing, concrete paving, extension of acceleration lane, addition of right turn lane, drainage, guardrail, and slope restoration on I-94 from M-29 to County Line Road, Macomb County.

I-94 Crack Treatment – Inspector for 11.36 miles of hot mix asphalt crack treatment and pavement markings on I-94 from Masonic Road to M-29 in the cities of St. Clair Shores and Mount Clemens, Macomb County.

M-29 Microsurfacing – Inspector for 2.25 miles of microsurfacing, structure adjusts, concrete curb replacement and pavement markings on M-29 from Baker Road to County Line Road in the city of New Baltimore, Macomb County.

M-24 Sidewalks and Signals – Inspector for 5.93 miles of signal and sidewalk ramp upgrading and push button installation at 12 locations on M-24 from Brown Road/Dutton Road to Axford Road in the city of Auburn Hills and the village of Lake Orion, Oakland County.

US-24 (Telegraph Road) Reconstruct - Inspector for 7.06 miles of concrete inlay reconstruction, open graded drainage course, cold milling hot mix asphalt, pavement repairs, curb and gutter, drainage, sign and signal replacement and repairs, ADA ramp improvements, and bridge rehabilitation on US-24 in Oakland County.

M-24 Resurfacing – Inspector for 6.47 miles of hot mix asphalt cold milling, resurfacing, and sidewalk ramps on M-24 from the M-24 (Perry/Opdyke Road) split to north of Clarkston Road in the city of Auburn Hills, Oakland County.

I-75 Resurfacing – Inspector for 6.60 miles of concrete pavement repairs, hot mix asphalt cold milling and resurfacing, median barrier wall repairs, and shoulder repairs on I-75 including ramps in Oakland County.

QA/QC Manager (Ajax Paving Company) – Responsible for supervising numerous asphalt plants, scheduling technicians, understanding and complying with specifications, providing mix designs, preparing quality control manuals, bidding projects, verifying tonnage, generating random numbers, completing daily reports, performing cost analyses, coordinating suppliers, performing statistical analyses (PWL), and managing equipment. Involved in numerous MDOT and private projects.

EDUCATION

BS, Civil Engineering, 1998, Lawrence Technological University, Southfield, MI

SPECIALIZED TRAINING

MDOT Computerized Office Technician, 2014

MDOT FieldManager Training, 2014

MDOT FieldManager and Contract Manager User's Group, 2014

MDOT Prevailing Wage Compliance Training, 2014

ADA Compliance Workshop - Constructing Pedestrian Facilities for Accessibility, 2014

MDOT/FHWA Oversight Focus for 2014

Michigan Concrete Paving Association - Concrete Construction Inspector, 2006

MDOT Materials Acceptance Process, 2015

Clark French

Office Technician

Clark French is an MDOT Certified Office Technician and experienced Construction Technician with more than 19 years of experience. Clark is adept in many levels of construction engineering. He has knowledge of commonly-used concepts, practices, and procedures within the construction engineering field. Clark will perform the daily tasks necessary to document construction activities and ensure compliance with the required specifications.

RELEVANT EXPERIENCE

General Engineering and Construction Services, Novi, MI – Office Technician – Responsible for building contracts for various projects using FieldBuilder, maintaining project records, importing Inspector's Daily Field Reports (IDRs) in FieldManager and reviewing IDRs and associated documentation for accuracy and completeness.

General Engineering and Construction Services, Troy, MI – Construction Technician – Responsible for construction inspection of open cut utility installation, drainage, and paving operations for multi-family, single family, commercial, retail, and industrial developments and roads within the City of Troy.

Hamlin Road Reconstruction, Rochester Hills, MI – Office Technician – Responsible for maintaining project records, importing Inspector's Daily Reports (IDR's) in FieldManager, and reviewing IDR's and associated documentation for accuracy and completeness. Spalding DeDecker performed construction inspection of 2.88 miles of HMA removal, cold milling, crushing, shaping and resurfacing, concrete pavement, driveway, curb, gutter, spillway sidewalk and ADA ramps. Aggregate base, sewer, drainage, watermain, traffic signal, and pavement markings on Hamlin Road.

MDOT US-24 at the CN Railroad Structure Pump Station Rehabilitation, Flat Rock, MI – Office Technician – Responsible for maintaining project records, importing Inspector's Daily Reports (IDR's) in FieldManager, and reviewing IDR's and associated documentation for accuracy and completeness. Spalding DeDecker is responsible for project administration; inspection; quality assurance testing and reporting; measurement, computation, and documentation of quantities; reporting and record keeping; and finalizing all project documentation following MDOT's e-Construction procedures utilizing ProjectWise.

Levan Road Rehabilitation, Livonia, MI – Office Technician – Responsible for maintaining project records, importing Inspector's Daily Reports (IDR's) in FieldManager, and reviewing IDR's and associated documentation for accuracy and completeness. Spalding DeDecker performed construction inspection of concrete repairs on the existing roadway and placement of a 3.5" asphalt overlay.

MDOT Crack Sealing, Wayne County, MI – Office Technician – Responsible for maintaining project records, importing Inspector's Daily Reports (IDR's) in FieldManager, and reviewing IDR's and associated documentation for accuracy and completeness. Spalding DeDecker performed construction inspection of hot mix asphalt crack treatment on various trunkline routes in Wayne County.

Island Lakes Subdivision, City of Novi, MI – Construction Technician - Responsible for construction inspection associated with the subdivision development including installation of water main, sanitary sewer, storm sewer collection system, concrete and HMA paving, concrete sidewalk, ADA ramps and curb. Processed and maintained accurate and complete project documentation including Inspector's Daily Reports for ease of translation to contractor pay estimates.

Major Roads Capital Preventative Maintenance, City of Novi, MI – Construction Technician – Responsible for construction inspection of concrete road rehabilitation consisting of transverse joint, longitudinal joint, and slab concrete repairs. Also inspected replacement of approach pavement at two intersections with concrete. Processed and maintained accurate and complete project documentation including Inspector’s Daily Reports for ease of translation to contractor pay estimates.

Advanced Auto Parts, City of Novi, MI – Construction Technician - The project was located on the north side of Grand River Avenue and east of Town Center Drive in the City of Novi. Responsible for construction inspection of work associated with the proposed Advanced Auto Parts building including installation of water main, sanitary sewer, storm sewer collection system, concrete and HMA paving, concrete sidewalk and ADA ramps and concrete curb. Processed and maintained accurate and complete project documentation including Inspector’s Daily Reports for ease of translation to contractor pay estimates.

Civic Center Parking and Sidewalk Improvements, City of Novi, MI – Construction Technician - Responsible for construction inspection of parking lot expansion and removal and replacement of sidewalk and sidewalk ramps to achieve ADA compliance. Processed and maintained accurate and complete project documentation including Inspector’s Daily Reports for ease of translation to contractor pay estimates.

Blackwell Ford, Plymouth Township, MI - Construction Technician - Responsible for construction inspection of work associated with the expansion of the Blackwell Ford new and used car dealership buildings including installation of water main, sanitary sewer, storm sewer collection system, concrete and HMA paving, concrete sidewalk and ADA ramps and concrete curb. Processed and maintained accurate and complete project documentation including Inspector’s Daily Reports for ease of translation to contractor pay estimates.

Consumers Energy’s Ray Compressor Station #3, Armada, MI – Construction Technician - Responsible for construction inspection of work associated with the addition of a third gas compressor plant at Consumers Energy’s Ray Compressor Station, which is Consumers’ largest underground natural gas storage and compressor facility. The work included grading, utility excavation and backfill, underground and above ground piping, and HMA paving. Processed and maintained accurate and complete project documentation including Inspector’s Daily Reports for ease of translation to contractor pay estimates.

Kroger Fuel Facility, Novi, MI – Construction Technician - The project was located on the east side of Beck Road and south of Pontiac Trail in the City of Novi. Responsible for construction inspection of work associated with the proposed Kroger Fuel facility including installation of water main, sanitary sewer, storm sewer collection system, concrete and HMA paving, concrete sidewalk and ADA ramps and concrete curb. Processed and maintained accurate and complete project documentation including Inspector’s Daily Reports for ease of translation to contractor pay estimates.

Livonia Police Station, Livonia, MI – Construction Technician - Responsible for construction inspection of the demolition and construction of the new entrance to the police station. Work included removal of structural walls as deep as 16 feet, rebuilding the storm water drainage system from the foundation to the sewer, grading and landscaping, construction of a pump station, installation of electrical and fiber optic lines, concrete and HMA paving, concrete sidewalk and ADA ramps and concrete curb. Processed and maintained accurate and complete project documentation including Inspector’s Daily Reports for ease of translation to contractor pay estimates.

Tuscany Reserve Subdivision, Novi, MI - Construction Technician - Responsible for construction inspection associated with the subdivision development including installation of water main, sanitary sewer, storm sewer collection system, concrete and HMA paving, concrete sidewalk, ADA ramps and curb. Processed and maintained accurate and complete project documentation including Inspector’s Daily Reports for ease of translation to contractor pay estimates.

E & E Manufacturing, Plymouth Township, MI - Construction Technician - Responsible for construction inspection of the installation of Vitrified Clay Pipe (VCP) for collection and transmission of industrial waste. Work included bore and jack operation and construction of sanitary structures.

Various Construction Projects, Detroit, MI – Field Technician / Geotechnical Engineer – Provided site inspection, quality control, and material testing. Tested soils, concrete, and asphalt. Performed testing on a major project for Chrysler Engineering at the Jefferson Assembly Plant.

Lead Inspector for Washington Township, MI – Involved with many development and expansion design projects on numerous municipal and commercial properties. With an emphasis on construction engineering, site work, and field inspection demonstrating a proficiency in project planning, coordinating construction activities, surveying, and precise record keeping.

EDUCATION

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

SPECIALIZED TRAINING

ASFPM Certified Floodplain Manager (CFM), Expires 7/31/2018

MDEQ SESC Comprehensive Expires 2022 SE/C 00739

MDEQ Storm Water Management Construction Site Expires 2022 C-13490

MDOT Certified Aggregate Technician 102332-0416, 2012

MDOT Prevailing Wages, 2011

MDOT Office Technician, 2010

MDOT Materials Acceptance, 2012

MDOT Concrete Paving Inspection, 2007

Erosion Control Plan Workshop completed in January 2009

Green Solutions in Civil Site Construction January 2009

Bituminous Paving Operations completed in February 2009

Kimberly R. Danowski, CFM

SESC Construction Technician | Specialist

Kimberly Danowski, CFM has 11 years of experience with SD and more than 25 years in the construction industry. 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 inspections, reviewed 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 work includes the inspection of construction projects with water main, sanitary sewers and storm drain installation. This includes inspections of Concrete and Bituminous paving for rehabilitated roads and new construction, including parking lots.

Kim utilizes FieldBook and FieldManager software while working as a Construction Engineer and Office Technician. Microsoft Excel and Microsoft Project are also used to track and manage projects. She also performs Land Improvement reviews with the Municipal Department.

RELEVANT EXPERIENCE

Soil Erosion/Sedimentation Control Inspector, City of Troy and City of Novi, MI - Manages the required SESC inspections for Construction sites in the City of Novi and The City of Troy. Responsibilities include: conducting SESC inspections for the cities 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.

Certified Storm Water Operator Inspector - Conducts weekly inspections for the responsible contractor. She prepares detailed reports and required logs to ensure proper documentation to meet the MDEQ requirements for contractors and municipalities on job sites larger than one acre or within 500 feet of a body of water.

Land Improvement Plan Review and Approvals: Municipal Department - Responsibilities include: reviewing Residential LIP plans for proper compliance with overall grading and drainage plans in newer residential development for the city of Novi. Duties also include site investigation with footing and final grade inspections

Construction Observation and Inspection - Construction Inspection 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 including water main, Sanitary and Storm Sewer installation and Paving.

Office Technician - Contract Administration includes: Preparing pay estimates, change orders, and project close out; writing and organizing Technicians Daily Reports utilizing the FieldManager Software; reviewing and approving shop drawings and material certifications to ensure compliance with Municipality’s standards. Project documentation includes detailed record keeping for labor and material tracking to assist in keeping the project on track and within budget.

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



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



C. HEIDI GREYER
DIRECTOR

June 20, 2017

Kimberly R. Danowski
54301 Queens Row
Shelby Township, MI 48316

Your certificate of training for the Soil Erosion and Sedimentation (SESC) Plan Review and Design (PRD) has been renewed.

Congratulations on behalf of the Director of the Michigan Department of Environmental Quality.

Your certificate number is SE/C 00739 Please retain the certificate below as your record of training completion.

Please note that this certificate is valid until 7/1/2022.

If you have any questions about this renewal, please call Bruce Lack at (517) 284-5486.

STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY	
This is to certify that	
Kimberly R. Danowski	
is qualified under the statute governing Soil Erosion and Sedimentation Control Training to perform duties under the following classification:	
SESC PLAN REVIEW AND DESIGN	
CERTIFICATE NO. SE/C 00739	EXPIRES 7/1/2022
Issued by the Director of the Department of Environmental Quality Under Authority of Act 451 P.A. 1994, Part 91 as amended	

EDUCATION

BS, Surveying Engineering, 1994, Ferris State University, Big Rapids, MI

REGISTRATION / CERTIFICATIONS

Professional Surveyor:

Michigan, 44282, 1998

Alabama, 30341-S, 2009

Kentucky, 4088, 2014

Minnesota, 51361, 2013

North Dakota, LS-8832, 2013

Texas, 6546, 2014

Michigan Residential Builder License

SPECIALIZED TRAINING

Federal Aviation Administration (FAA) Integrated Distance Learning Environment (FAA IDLE) Level 3 Training for FAA Advisory Circulars:

AC 150/5300-16A

AC 150/5300-17B

AC 150/5300-18B

Certificate No. FAAIDLE20120224-220

Courses Civil Engineering, 1995, Wayne State University

Courses, 1992, Michigan State University

CAiCE Visual Survey

Confined Space Entry trained

Drug and Alcohol Testing, Reasonable Suspicion Training for Supervisors - United States Department of Transportation Federal Transit Administration

PROFESSIONAL AFFILIATIONS / AWARDS

Macomb County Peer Review Board 2015

Michigan Society of Professional Surveyors, Southeast Chapter (President, 2005; Chapter Rep. to State Board 2006)

American Congress on Surveying and Mapping (ACSM)

PUBLICATIONS

DeDecker, Michael F.H., "Industrial Pursuits," POB Magazine, December 2011, Cover Story, p. 12.

DeDecker, Michael F.H., "The Need for Speed, Surveyors play a key role in the APBA Gold Cup races in Detroit," POB Magazine, October 2009, p. 30.

DeDecker, Michael F.H., "In Review: VisionPlus by Geo-Plus," POB Magazine, February, 2010, p. 40.

Michael F. H. DeDecker, PS

Vice President | Project Manager

Michael F. H. DeDecker, PS has 25 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 and industrial surveying applications.

RELEVANT EXPERIENCE

City of Novi Record Drawings for Private Development Plans, Novi, MI – Survey Project Manager – Providing the City with as-built measurements and record drawings for their utilities in a consistent format for use during future maintenance or design work. SD performs field-measurements to obtain locations of all above ground structures, along with elevations for structure rims and pipe inverts. Measurements include obtaining state plane coordinates in relation to the 1986 adjustment of NAD83 using GPS equipment. In addition to the standard record drawings, data is supplied in state plane coordinates for importation into the City's GIS system.

City of Novi Neighborhood Road Program, Novi, MI – Project Manager responsible for providing preliminary planning services, including review and evaluation of existing pavement condition data (PASER ratings), field verification of project scope and limits for potential program candidates, construction cost estimates, and recommended list of potential roadway candidates for the program.

Meadowbrook Commons Senior Center – Detention Basin Rehabilitation, City of Novi, MI - Survey Project Manager - Responsible for the topographic survey used for the design of improvements.

Civic Center and Ella Mae Power Park Detention Basin Rehabilitation, City of Novi, MI - Survey Project Manager - Responsible for the topographic survey used for the design of the rehabilitation and upgrade of two City owned detention basins. Improvements to Civic Center Basin include a hydrologic/hydraulic evaluation of the outlet control structure to identify potential retrofits to better control bank full flows. Rehabilitation of the basins includes repair and replacement of associated storm drainage systems and outlet control structure overflow modifications. Project also includes 350' of grass pavers access drive and 640' of gravel access drive for maintenance.

West Oaks Regional Detention Basin Improvements, City of Novi, MI - Survey Project Manager - Responsible for the topographic survey used for the design of the rehabilitation and upgrade of the storm water detention basin. Improvements included routing the overland drainage through a water quality swale prior to discharging into the basin, sediment diversion baffles, outlet control structure modifications, a structural storm water BMP chamber, and the incorporation of

stump islands within the wet basin to further enhance the basin as suitable habitat for wildlife.

Novi Rd Rehabilitation, Novi, MI – Survey Project Manager – Design survey for the rehabilitation of Novi Rd from 12 Mile Road to 13 Mile Road in the City of Novi. The project includes adding an intermittent median island in the existing center left turn lane and milling and overlaying the remaining pavement. The project also includes ADA ramp upgrades, utility structure rehabilitation and pavement markings.

Livonia Hubbard Bike Lanes, Livonia, MI – Provided design assistance, including topographic survey, geotechnical investigation, and preliminary concept plans, to reconstruct narrow shoulders to create safer bike lanes.

15 Mile Sinkhole Repair, Macomb County Public Works Commission, Fraser, MI – Project Manager – Sewer system rehabilitation.

Rochester Hills 2017 Asphalt Rehabilitation Program, Rochester Hills, MI - Project Manager – provided surveying services, including curb or edge of asphalt staking and sump line staking.

Rochester Hills 2017 Concrete Roads Replacement Program, Rochester Hills, MI – Project Manager – provided surveying and limited construction observation.

Dearborn CSO-016 Caisson Abandonment, Dearborn, MI – Survey Project Manager - Currently performing construction layout and monitoring for the abandonment of a large-diameter caisson.

West Dearborn CSO – Contract No. 8, Dearborn, MI – Survey Project Manager – Performed construction layout and monitoring for a sinking caisson, along with site improvements.

Eastern Outfall CSO Program, Inkster, MI – Survey Project Manager – Performed a topographical survey and utility inventory for the large-scale infrastructure project.

Oakland County Water Resources Commissioner As-needed Surveying Services, Oakland County, MI - Survey Project Manager - Provided as-needed staking and general surveying services on a variety of projects.

Donohue Drain, Oakland County, MI - Survey Project Manager - Provided as-needed staking for the Oakland County Water Resources Commissioner for culvert replacements and stream-bank stabilization.

Alterman Residence Stream Bank Stabilization, Farmington Hills, MI - Survey Project Manager - Provided as-needed staking for the Oakland County Water Resources Commissioner for stream bank stabilization, including installation of weirs and retaining walls.

Jamian Drain Stream Improvement, West Bloomfield Twp., MI - Survey Project Manager - Performed topographical survey for stream bank stabilization, restoration of sediment basins, and reshaping of an existing meandering drain through a residential area.

Oakland Macomb Interceptor Drain Survey, Macomb County, MI - Survey Project Manager - Portions of the sewer exceed 100 ft in depth, with the only above-ground evidence of the improvement consisting of access manholes spaced over 2,000 ft apart. Based upon field-locating the access manholes and mathematically computing the tunnel locations according to the as-built plans, SDA was able to plot the location of the tunnel and overlay it on a digital orthophoto. Areas of detailed topographical surveying were needed to complete engineering design for proposed access shafts and stop-gates. The project also involved retracing the existing easements. Obtaining pipe invert elevations required confined space procedures utilizing supplied air due to high hydrogen sulfide readings.

Upper Straits Beach and Upper Long Lake Woods Low Pressure Sanitary Sewer SAD's, Charter Township of West Bloomfield, MI - Survey Project Manager for topographical survey and construction staking for the Upper Straits Beach and Upper Long Lake Woods Low Pressure sanitary sewer system extensions. These projects were constructed as Special Assessment Districts to bring sanitary sewers to lake areas where septic field leachate had become a concern for the residents. These projects involved the design and construction of over 8,000 linear feet of 2" and 3" and 6" HDPE low-pressure sewer directionally drilled to minimize disruption to the existing residents

Gloede Drain Crossing, Macomb Township, MI – Survey Project Manager – Hydrographic survey including cross-sections of the drain and the existing structures.

Gratiot Avenue Water Main Replacement Clinton Township, MI - Township Engineers for the Charter Township of Clinton serving as Project Surveyor for the design of the Gratiot Avenue water main replacement project to replace a 40-year-old water main system. The project involved water main design and contract document preparation, estimates of construction cost, permit/approval acquisition, project scheduling, bidding, construction layout, and construction contract administration.

South Boulevard Water Main and Sanitary Sewer Extension, Rochester Hills, MI - Project Manager overseeing topographical and ROW survey along South Boulevard and along M-59. Provided information to the City for the design of improvements. Project included mapping, right-of-way determination and control for almost one mile of roadway.

Walnut Lake Road Preservation, West Bloomfield Township, MI – Survey Project Manager – Design survey for the rehabilitation of 5.83 miles of Walnut Lake Road in Oakland County. The project includes pavement repairs, HMA overlay, and permanent pavement markings.

Lotz Road Reconstruction, Canton Township, MI – Survey Project Manager – Design survey and hydraulic survey for the reconstruction of Lotz Rd from Chery Hill Road to M-153/Ford Road in Canton Township, MI. The project includes widening the existing dirt road to a 3 lane concrete section, geometric improvements, proposed drainage, proposed water main, and permanent non-freeway signing and pavement markings.

Schoolcraft Road, Livonia, MI – Survey Project Manager – Topographic survey for the reconstruction of 0.30 miles of Schoolcraft Road from the I-96 overpass to west of Newburgh Road.

Van Horn Resurfacing, Trenton, MI – Survey Project Manager – Survey for 0.8-mile rehabilitation project including HMA overlay, minor drainage improvements, minor geometric improvements, and ADA ramp upgrades.

Avon Rd at Livernois Rd Aesthetic Improvements, Rochester Hills, MI – Survey Project Manager – Survey for this intersection enhancement project.

Avon Road Rehabilitation, Adams to Livernois, Rochester Hills, MI – Survey Project Manager – Survey for two-mile-long rehabilitation project including HMA overlay, minor drainage improvements, minor geometric improvements, and non-motorized pathway.

Levan Road Rehabilitation, Livonia, MI – Survey Project Manager – Survey for rehabilitation of Levan Road including concrete repairs, HMA overlay, and ADA ramp upgrades.

Design Survey for Nichols, Marion, Sloan, and Seymour Roads Rehabilitation, Saginaw County, MI - Survey Project Manager - Design Survey for Nichols Road Rehabilitation, Marion Road Rehabilitation, and Sloan and Seymour Road Rehabilitation.

Stephenson Highway, from 14 Mile Road to I-75, Troy, MI - Survey Project Manager - Survey Project Manager for design survey for 1.85 miles of pavement rehabilitation, HMA overlay, minor drainage improvements, signal upgrades, A.D.A. sidewalk ramps, and other safety improvements.

Lower Woodward Cross Streets Improvement Project, Detroit, MI - Survey Project Manager for improvements to sidewalk, curb area-way, lighting system for portions of Adams, Park, Witherell, Griswold, Library, Farmer, Grand River, John R/Clifford, State Street and 13 alleys in downtown Detroit. The project included the design of 147 ADA ramps to MDOT and the CED special provisions.

MDOT M-53 Rehabilitation, Cities of Warren and Center Line, Macomb County, MI - Survey Project Manager - Road design survey and right of way survey for the rehabilitation of 3.5 miles of M-53 (Van Dyke Avenue) from Helen Street to north of Chicago Road. Aggressive rehabilitation project includes replacement of all curb and gutter and drive approaches, upgrading all signals, ADA ramp upgrades, and mill and overlay of the seven lane section on this busy arterial. Project also includes the evaluation of existing “jug handle” and slip ramp turn movements at Chicago Road for potential of some or all non-standard movements. Extensive survey and traffic studies are being performed to develop the design. 2014 construction.

MDOT Safe Routes to Schools (SRTS) Program/Grant, Saginaw Schools, Saginaw, Saginaw County - Survey Project Manager - Performed design survey to be used for design of ADA-compliant ramps along a route to Stone, Jerome, and Kempton Elementary Schools in the City of Saginaw. Survey work performed through 2010 Bay City TSC As-Needed Surveying contract. Included approximately fifty (50) intersections.

EDUCATION

BS, Civil/Environmental Engineering, 1996,
Lawrence Technological University

BS, Industrial Technology, 1986
Central Michigan University

REGISTRATION / CERTIFICATIONS

Professional Engineer, Michigan (1998)

Professional Engineer, Texas (2014)

Professional Engineer, North Carolina
(2007) Previous Registration

Professional Engineer, Virginia (2010)
Previous Registration

SPECIALIZED TRAINING

Pipeline Assessment Certification Program
(PACP), NASSCO, 2014

Manhole Assessment Certification
Program (MACP), NASSCO, 2014

Lateral Assessment Certification Program
(LACP), NASSCO, 2014

Wetland Determination, Feb. 1998

Soil Erosion and Sedimentation Control,
May 2008

Urban Stormwater Techniques,
September 2011

Management Training, June 1999

HEC-RAS Open Channel Flow Basics,
December 2010

Project Management Bootcamp
April, 2016

PROFESSIONAL AFFILIATIONS / AWARDS

American Public Works Association

TECHNICAL CAPABILITIES

Other: Microsoft Word, Excel,
PowerPoint

David E. Richmond, PE**Project Manager**

David E. Richmond, PE is an accomplished project manager in municipal engineering services and private land development. With more than 30 years of experience, he is a recognized expert by his peers in stormwater, water distributions, and wastewater collection systems. Mr. Richmond has led the design and construction efforts for several local units of government in a variety of stormwater, water distribution and wastewater collection systems in Michigan and North Carolina. David possesses a proficient technical background, strong organizational abilities and is dedicated to the success of his projects.

As Project Manager of Spalding DeDecker's Municipal Engineering Services Group, Mr. Richmond is responsible for project and staff management on water/wastewater and water resources projects ranging from detailed drainage studies, watershed master plans, design of sanitary and storm sewer collection systems, design of water distribution systems and facilities, and natural stream channel design. He has also managed projects utilizing Green Infrastructure and Low Impact Development (LID) techniques, including bio-swales, and bio-engineered detention facilities.

David's primary focus is on the design and construction of wastewater collection systems (sanitary sewer systems) as well as combined and stormwater systems and water distribution networks. Mr. Richmond is also responsible for the management of municipal clients, including assisting staff with the review of permit applications sent to the municipality, preparation of design and construction plans for various infrastructure projects, assistance with permitting projects and providing general assistance with engineering related issues.

David has also managed several large-scale private land development projects in Michigan and North Carolina including multi-use residential developments, industrial subdivisions, commercial and industrial buildings and large scale computer data centers. Mr. Richmond has performed several floodplain/floodway studies to obtain Letters of Map Changes (LOMCs) from FEMA for small- and large-scale site developments.

Through these years and diverse projects, David has acquired significant knowledge and understanding of Michigan DOT, Michigan DEQ, U.S. Army Corps of Engineers, and FEMA permitting requirements and technical standards.

RELEVANT EXPERIENCE

Streambank Stabilization for Bishop and Ingersol Creeks, City of Novi, MI – Project Manager – Responsible for engineering design for streambank stabilization improvements for 4 locations along the Bishop Creek and 5 locations along the Ingersol Creek, including surveying and easement exhibit preparation services.

Beech Daly Re-Paving, Taylor, MI – Project Manager – MDOT LAP project for which SD prepared construction documents and performed construction engineering services for re-paving approximately 7,920' of 2 lane (24' wide) asphalt, over concrete base. The project also consisted of repairing the concrete base as needed, placing HMA overlay, installing new ADA ramps, repairing concrete curb and gutter, replacing and grading asphalt and aggregate shoulders and other miscellaneous work.

SPECIAL ASSESSMENT DISTRICT PROJECTS

Andes Hills Watermain SAD, City of Novi, MI – Prepared a cost estimate to be used for Special Assessment Districts (SAD) for the City of Novi. Completed construction

and bid documents for the installation of 655 LF of 8" water line to serve 11 residential units previously served by public well. The work included connecting to existing stub on the east side of Taft Road and placing the water line on the north side of the developments street.

Burton Drive Watermain SAD Cost Estimate, City of Novi, MI – Prepared a cost estimate to be used for a Special Assessment District (SAD) for the City of Novi. The SAD is for the installation of water main along Burton Drive, located west of Haggerty Road and south of Ten Mile Road to serve 14 residences. The proposed project entails the installation of 1,300 linear feet of 8" water main that will connect to an existing water main on Nilan Drive and extend along Burton Drive and connect to a main on Haggerty Road.

Powell Road Watermain and Sanitary Sewer SAD, Armada Township, MI – Assisted Armada Township in the development of a Special Assessment District (SAD) for the installation of water and sanitary sewer lines to service the industrial corridor along Powell Road between 32 Mile Road and 33 Mile Road. The sanitary sewer water can also be extend north of 33 Mile to service some residential areas as well. Prepared preliminary routes for the utilities, along with cost estimates and district maps.

General Engineering, Plymouth Township, MI – Client Representative / Project Manager – Responsible for ongoing general engineering services for Plymouth Township which include the review of planning, engineering, construction and permit documents for various residential, commercial and public utility projects. Also consulted and assisted on various Township construction projects including the Township Park and economic development projects.

WATER/WASTEWATER EXPERIENCE

Oakland County Water Resources Commission (OCWRC) As-Needed Services, Oakland County, MI – Project Manager – Engineering design and surveying services for the OCWRC on an as-needed basis.

Drain Inspections, Macomb County Public Works Commission, Sterling Heights, MI – Project Manager – Conducted investigation and provided services for Pipeline Assessment Certification Program and Manhole Assessment Certification Program (PACP/MACP) inspections to the eight drains, totaling approximately 68,400 linear feet.

Country Place Pump Station Forcemain Upgrades, City of Novi, Oakland Co., MI – Project Manager - Responsible for the design of 2,000 lf of 10" HDPE forcemain to replace an existing 10" brittle asbestos cement pipe which needs to stay in service during the installation of the new forcemain. The forcemain will be directionally drilled to limit the potential for breaking the existing line. New 15 HP pumps were added to improve pumping efficiency.

14 Mile Road Watermain and Pathway Extension, City of Novi, Oakland Co., MI – Project Manager - Responsible for the design of 840 lf of 12" water line along 14 Mile Rd to complete a water system loop. The project included 750 lf of concrete sidewalk to fill a gap and provide safe pedestrian movement.

2014 Sanitary Lift Station Upgrades, Novi, MI – Project Manager – The project consisted of designing, bidding and construction engineering of natural gas powered generators for existing lift stations. The existing lift stations were constructed with the connections for operation with portable generators that took valuable staff time when there was a power outage. The project bid came in under budget.

Novi Sanitary Manhole Rehabilitation, Novi, MI – Project Manager – The project consisted of inspecting existing sanitary sewer manholes for inflow and infiltration and general overall condition of the manholes. After the inspection, plans and bid documents were prepared to rehabilitate the manholes as needed. The work includes new covers, wrapping the exterior of the cones, re-pointing the structures and interior coating to control excessive inflow and infiltration.

Lotz Rd Water Main, Canton Township, MI – Project Manager – Responsible for the design and permitting of 4,000 linear of 12" ductile iron water main along Lotz Rd from Cherry Hill Rd to Ford Rd. The water main is being designed in conjunction with the paving of Lotz Rd and will allow the Township to loop a portion of the water system as well as provide community water to an area of the Township that is seeing increased development.

Dearborn Flow Monitoring 2014, Dearborn, MI – Project Manager – Responsible for monitoring and reporting of the sewage flow in 3 sanitary sewer lines in the City of Dearborn that provided the City with valuable information for future maintenance on the sewer. We provided data amount of flow and depth of flow to the City during normal flows and for periods of heavy flow due to rain events. We responded to the City's request in 2 hours to obtain data during a catastrophic rain event so that the City could respond to the needs of the citizens.

Burris Road Wastewater Pump Station, City of Newton, Catawba Co., NC – Project Manager – Responsible for the design and preparation of construction documents, permitting through the state of North Carolina Department of Water Quality, and bidding and contract documents for the construction of duplex pump station and 12,500 linear feet. The project was needed to eliminate overflows associated with an inadequate pump station and gravity sewer. Prepared the analysis of the existing pump station and infrastructure and developed the conceptual layout of the new system to eliminate the overflows into the surrounding streams during periods of peak flows. Managed the development of the hydraulic model and final layout of the system and assisted the community in securing financing from Clean Water Management Trust Fund and the State of North Carolina.

W. 18th to W. 15th Sanitary Sewer Replacement, City of Newton, Catawba Co., NC – Project Manager – Responsible for preparing construction documents and the construction of 2,300 linear feet of a failing gravity sanitary sewer line that ranged in depth from 8 feet to 24 feet and is adjacent to a stream and a shopping center. A portion of the sewer that is 24 feet deep is in a 50 foot wide corridor bounded by a shopping center on one side and a 24 foot high embankment down to the stream on the other side. Through upstream analysis, it was determined that the sewer could be elevated 2 feet allowing the new sewer line to be jack and bored adjacent to the building and avoid disturbing the building foundation and the stream. The remainder of the line was replaced adjacent to the existing line and the old line removed once the new line was tested and placed into service. Permits were required from North Carolina Department of Water Quality and North Carolina Department of Environment and Natural Resources.

Shannonbrook Water Line Replacement – Phases 1-3, City of Newton, Catawba Co., NC – Project Manager – Responsible for the preparation of construction and bid documents and oversee the construction for the replacement of 15,000 linear feet of 8” watermain. The project was completed in 3 phases, each consisting of approximately 5,000 linear feet. The project consisted of replacing an existing 8” pvc watermain with 8” ductile iron watermain and appurtenances, and replacing water meters within the subdivision without service disruption to the existing customers.

City of Newton Water System Model, City of Newton, Catawba Co., MI – Project Manager – Responsible for the development of a water system model and study for a portion of the City water system to determine areas of potential service and low pressure issues should there be a problem with one of the systems storage tanks and /or pumps. The study identified areas of concern due to an aging water system and previous improvements that were accomplished without the use of detailed hydraulic modeling. Upon completion of the study, options were discussed with the City’s staff to alleviate their concerns and through those discussions it was determined that the best course of action was to place a third distribution pump at the water treatment facility to provide the additional flow that may be needed and correct any areas of low pressure in the system. Managed the preparation of the construction plans and bid documents for the addition of the pump and associated line work at the water treatment facility. A permit was secured through the North Carolina Department of Environment and Natural Resources.

MUNICIPAL STORMWATER EXPERIENCE

MDOT I-94 WB Rehabilitation, Berrien County, MI – Lead Hydraulics Engineer – Managed the preparation of the hydraulic report submitted to Michigan Department of Transportation for the drainage culverts that cross under a stretch of West bound I-94 that is scheduled for rehabilitation. The report entailed determining the drainage areas for the culverts and determining the runoff for a 50 and 100 year storm events and determining if the culverts were adequately sized to convey the storm events without topping the roadway.

Harper Avenue Drainage Repair, City of Lenoir, Caldwell Co., NC – Project Manager – Responsible for the development of construction and bid documents to repair re-occurring sink holes in a major road into the downtown area of the city. The project consisted of replacing a failing corrugated metal pipe culvert with a concrete box culvert. To avoid closing a major access point to the city during normal business hours, the work was performed during daytime and nighttime hours over a weekend which required close coordination with the contractor and essential city departments.

Cambridge Court Subdivision Flooding, City of Lenoir, Caldwell Co., NC – Project Manager – Responsible for analyzing the cause of flooding of residences within the subdivision during times of heavy rainfall and provide recommendations to eliminate the flooding. The subdivision was developed with limited stormwater infrastructure and with the subsequent development of an adjacent subdivision, the existing system became overwhelmed and caused severe flooding of the road and residences. The contributing drainage area was modeled and plans were developed to provide additional storm drainage, which included the installation of new trunk line storm line to the outfall, provide additional catch basins and connect the adjacent subdivision to the system.

FLOODPLAIN MANAGEMENT/MODELING

Healey Brook Drain LOMC, Village of Romeo, Macomb Co., MI – Project Manager/Engineer – Responsible for the development of engineering calculations and FEMA documentation for a Letter of Map Change for the installation of culvert on the Healey Brook drain to access a self-storage facility.

McClin Creek LOMR, City of Newton, Catawba Co., NC – Project Manager – Responsible for the development of HEC-RAS model for the submittal of LOMR documentation to FEMA for approval of newly constructed roadway and culvert at the McClin Creek crossing. The project entailed obtaining survey cross sections of the new roadway/culvert, inserting the new cross sections into the previously developed model, prepare revised maps and documentation for approval through FEMA.

Kerner's Mill Greenway 'No-Rise' Certification, Town of Kernersville, Forsyth Co., NC – Project Manager – Responsible for the development of the flood plain modeling for the greenway trail along the Kerner's Mill Creek. The work for the project included the extension of a culvert at a road crossing to provide enough area for the placement of the greenway trail. A Hec-Ras model was developed utilizing the existing FIS model by creating a Duplicate Effective Model, Corrected Effective Model and the Proposed Conditions Model to show that the culvert extension did not cause a rise in the base flood elevation.

PARKS, GREENWAYS AND MULTI-USE TRAILS

Plymouth Township Park North Parking Lot Reconstruction, Plymouth Township, Wayne County, MI – Project Manager – Responsible for the preparation of construction documents and specifications for the construction of new 273 space concrete parking lot at the Township Park. The grading of the parking lot was accomplished to meet ADA accessibility standards while meeting the existing steep terrain. Connections were made to the existing pathway network as well as providing access to the newly constructed four seasons pavilion. The project received an award from the Michigan Concrete Association.

14 Mile Road Water Main and Pathway, Novi, MI – Project Manager – Oversaw the design of a new concrete 8'-wide multi-use pathway along existing residential properties. Analyzed existing sidewalks for ADA compliance and review detailed construction plans for necessary improvements. Provided quality assurance of inspection records through the completion of this project.

Cherry Hill Pathway – I-275 to Lotz Road, Charter Township of Canton, Wayne Co., MI – Project Manager – Oversaw pathway design for new pathway from I-275 pathway to Lotz Road along the south side of Cherry Hill Road. The pathway consisted of removing a portion of the existing asphalt pathway and reinstalling a new 8' wide asphalt pathway.

Eight Mile Road Pathway, Novi, MI – Project Manager – Oversaw the design of a new concrete 8'-wide multi-use pathway through undeveloped, wetland, and existing residential properties. Analyzed existing pedestrian routes at connection points for ADA compliance and reviewed detailed construction plans for necessary improvements. Provided quality assurance of inspection records and contract administration through the completion of this project.

Clinton River Trail TAP Grant Design, Rochester Hills, MI – Project Manager – Responsible for the preparation of plans and specifications for the placement of signs and other amenities along the Clinton River Trail in the cities of Auburn Hills, Rochester Hills and Rochester that will provide a uniform look along the trail. The project is funded with a grant from the Michigan Department of Transportation (MDOT) and funds from the communities. The project is being bid through MDOT local agency program and due to the nature of the project many special provisions were written for the bid items.

Grant Assistance Services, Rochester Hills, MI – Project Manager – Assisted the City of Rochester Hills with writing a grant for the use of recycled scrap tires. The grant was written to obtain money from the Michigan Department of Environmental Quality to utilize innovative green technology to use recycled scrap tires to re-pave a section of asphalt pathway in the city.

US HWY 17 Multi-Use Trail, Camden Co., NC – Project Manager – Responsible for preparing a 30% design study for 2.7 miles of multi-use trail along US Hwy 17 and the Dismal Canal from the Virginia state line to the Great Dismal Swamp Welcome Center. The trail will connect to the Chesapeake multi-use trail that is currently under construction in Virginia.

Kerners Mill Greenway Trail, Town of Kernersville, Forsythe Co., NC – Project Manager – Responsible for preparing construction documents for 3.1 miles of greenway trail along the Kerners Mill Creek. The trail included 2 crossings of the creek, parking lot with bio-retention area, and spur trails to adjacent neighborhoods. One of the creek crossings was accomplished with 110 foot long prefabricated bridge and the other crossing required the extension of culvert. A flood study was needed for the culvert crossing which resulted in a 'No-Rise' certification being issued for the project. Permits were required from North Carolina Department of Environment and Natural Resources, North Carolina Department of Water Quality and the U.S. Army Corps of Engineers.

EDUCATION

BS, Civil Engineering, 1996
University of Kansas

REGISTRATION / CERTIFICATIONS

Professional Engineering
Michigan, 2001, #47487

SPECIALIZED TRAINING

OSHA 30 Hour, 2012

MDOT Contract Management, 2017

MDOT Certified Office Technician, 2017

Field Manager, 2017

MDOT Prevailing Wage, 2016

MDOT Field Manager Users Update, 2016

MCA Decorative Concrete, 2016

FHWA/MDOT Constructing Pedestrian
Facilities for Accessibility,
2011, 2014, 2015, 2016, 2017

ADA Accessible Parking, 2016

ADA Accessible Vertical Access, 2016

ADA Accessible Pedestrian Signals, 2016

ADA Accessible Protruding Objects, 2016

ADA Accessible Trails, 2015

US Access Board Q&A, 2015

Federal Facilities ABA, 2015

ADA Accessible Construction
Management, 2015

ADA Accessible Retail Stores and Spaces,
2014

ADA Accessible Routes – Advanced
Session, 2014

ADA Basic Building Blocks, 2013

Effective Snow Removal for Pathways and
Transit Stops, 2013

AASHTO Bicycle Facility Design Training,
2011

Context Sensitive Solutions, 2011

Pedestrian Safety Plan, 2010

Accessible Transportation, 2010

APBP Designing Pedestrian Facilities for
Accessibility, 2010

FHWA ADA Workshop, 2009

PROFESSIONAL AFFILIATIONS

Orion Safety Path Advisory Committee
Chair 2012 – 2016
Member 2010 – Present

Oakland County Trails Water Land Alliance
Member 2010 - Present

Taylor E. Reynolds, PE

Senior Project Engineer

Ms. Reynolds has more than 21 years of experience in municipal engineering including the design of pathways, sanitary sewer, storm sewer, and water main. She is responsible for the day to day client communication required for complex and varied projects. Her varied projects have provided Ms. Reynolds with expansive opportunities in client and resident coordination. Ms. Reynolds' experience includes multiple years of pathway design, meeting the ever-changing ADA standards, while finding a balance between client needs and resident satisfaction. She pursues continued training from outside agencies to be a resource for ADA compliance concerns of our clients. Ms. Reynolds has managed numerous contracts for local, state, and federal construction projects and currently provides internal reviews of our construction administration documents. She continues to be a critical component in formalizing our field records.

RELEVANT EXPERIENCE

Eight Mile Road Pathway, Napier Road to Garfield Road, City of Novi, MI – Senior Project Engineer – Prepared construction documents and provided design assistance of a new concrete 8' wide multi-use pathway through undeveloped, wetland, and existing residential properties. Analyzed existing pedestrian routes at connection points for ADA compliance and reviewed detailed construction plans for necessary improvements. Provided quality assurance of inspection records and contract administration through the completion of this project.

2016 Pathway Program and ADA Improvements, City of Novi, MI – Senior Project Engineer – Prepared construction documents for the locally funded ADA ramp improvements and sidewalk gaps which include construction of a new mid-block pedestrian crossing. Reviewed existing pedestrian routes and proposed improvements for ADA compliance.

14 Mile Road Water Main and Pathway, City of Novi, MI – Senior Project Engineer – Prepared construction documents and assisted in the design of a new concrete 8' wide multi-use pathway along existing residential properties. Analyzed existing sidewalks for ADA compliance and review detailed construction plans for necessary improvements. Provided quality assurance of inspection records through the completion of this project.

Providence Park Connector Trail, City of Novi, MI – Senior Project Engineer – Prepared construction documents for this locally funded new 2200' long HMA pathway, which is designed for heavy sewer maintenance truck access. This project meanders along the north line of the Rose Senior Center development connecting Beck Road sidewalks west to the existing Medilodge pathway.

Eight Mile Road Pathway, Garfield Road to Beck Road, City of Novi, MI – Senior Project Engineer – Prepared construction documents and provided design assistance of a new concrete 8' wide multi-use pathway through undeveloped, wetland, and existing residential properties. Analyzed existing pedestrian routes at connection points for ADA compliance and reviewed detailed construction plans for necessary improvements. Provided quality assurance of inspection records and contract administration through the completion of this project.

Beck Road Pedestrian Crossing, City of Novi, MI – Senior Project Engineer – Prepared construction documents for the installation of a new crossing, including a pedestrian refuge island and associated changes to the existing road geometry. Road work included milling and overlay, as well as placement of new road cross section in

widening areas. Provided quality assurance of inspection records and contract administration through the completion of this project.

Heatherwood Subdivision Storm Sewer System, Heatherwood Subdivision Homeowners Association, Rochester Hills, MI – Senior Project Engineer – Consult with Homeowners Association, coordinate inspection of aged storm system throughout established subdivision, recommend repairs, and provide construction contract administration for improvements.

Clinton River Trail TAP Grant Design, Rochester Hills, MI – Senior Project Engineer – Preparation of contract documents for the placement of signs and other amenities along the Clinton River Trail in the cities of Auburn Hills, Rochester Hills and Rochester that will provide a uniform look along the trail. The project is funded with a grant from the Michigan Department of Transportation (MDOT) and funds from the communities. The project is being bid through MDOT local agency program and due to the nature of the project many special provisions were written for the bid items.

Grant Assistance Services, Rochester Hills, MI – Senior Project Engineer – Assisted the City of Rochester Hills with writing a grant for the use of recycled scrap tires. The grant was written to obtain money from the Michigan Department of Environmental Quality to utilize innovative green technology to use recycled scrap tires to re-pave a section of asphalt pathway in the city.

Regency Centre and Knightsbridge Gate Pump Station Upgrades, City of Novi, MI – Develop bidding documents for the placement of two permanent generators and associated appurtenances at existing pump station facilities.

2014 Sanitary Sewer Manhole Rehabilitation, City of Novi, MI – Coordinate inspections, analyze results, and compile recommended improvement into bidding documents for over 130 sanitary sewer structures throughout three existing subdivisions in the City of Novi. Coordinate permits, bidding, and award.

Town Center Drive Reconstruction, City of Novi, MI – Prepare construction specifications for concrete road rehabilitation and total reconstruction of a portion of the existing concrete commercial road. Analyze the ADA compliance of existing sidewalk ramps and design detailed construction plans for necessary rehabilitation. Coordinate permits, bidding, and award. Provided quality assurance of construction records, including inspection reports, pay applications and change orders through both phases, two construction contracts, of this design project.

2014 Neighborhood Road Program - Asphalt, City of Novi, MI – Prepare construction specifications for asphalt road reconstruction and rehabilitation projects, including complete reconstruction of select asphalt roads. Within the project geographic scope, analyze sidewalk ramps for ADA compliance and design detailed construction plans for necessary replacements. Coordinate permits, bidding, and award. Provided quality assurance of construction records, including inspection reports, pay applications and change orders through both phases, two construction contracts, of this design project.

2014 Neighborhood Road Program - Concrete, City of Novi, MI – Prepare construction specifications for asphalt and concrete road rehabilitation projects, including complete reconstruction of select streets. Within the project geographic scope, analyze sidewalk ramps for ADA compliance and design detailed construction plans for necessary replacements. Coordinate permits, bidding, and award. Provided quality assurance of construction records, including inspection reports, pay applications and change orders.

Monroe Township, MI – Served as Township Engineer, responsible for presenting at Board Meetings, plan reviews and development approvals. Coordinated construction engineering activities for private development projects within the community.

Macomb Street Bridge Water Main, City of Monroe, MI – Designed the suspended 12” water main for a bridge replacement project over the Raisin River.

2012 Pathway Gap Program and ADA Compliance, City of Novi, MI – Designed, prepared bidding documents, assisted in resident communication, and developed easement documents for this pathway project which closed gaps along Meadowbrook Road and Taft Road while also updating pedestrian ramps within the pedestrian pathway network for ADA compliance.

Northville Bennet Arboretum Pathway, Northville Township & City of Northville, MI – Grant Coordinator for the construction of 2,000 lineal feet of pathway in Hines Park to provide a connection between the Township and City of Northville. This project included large sections of “living wall” retaining walls which support plant growth and a 138’ bow-arch bridge over the Johnson Creek.

Aberdeen, Arlington, Oakview and Brookline Roads Water Main Replacement, Canton Township, MI – Design 4200 LF of water main pipe bursting to replace existing 8” water main in four local neighborhoods. The existing watermain was located between the sidewalk and the road, with storm sewer running adjacent to and crossing the water main.

2010 Pathway Gap Program, City of Novi, MI – Designed pathways along along Ten Mile Road and Willowbrook, including new pedestrian improvements at the Ten Mile and Nilan intersection. Prepared complete construction and easement documents for this pathway project which closed four gaps in the pedestrian pathway network.

2009 Pathway Construction, City of Novi, MI – Designed 6 pathway segments including ADA ramp and landings with pedestrian push button upgrades and accommodation of future access management via driveway consolidations.

2009 Non-Motorized Safety Pathway Program, West Bloomfield Township, MI – Designed four fragmented miles of non-motorized pedestrian pathways, including at grade paths and boardwalks to meet federal ADA guidelines with strict controls on longitudinal and cross slopes. This project provided completed gaps within the existing pathway network along local roads, as well as roads under the jurisdiction of the Road Commission for Oakland County. Work included both asphalt and concrete pathways, with some areas through severe topography requiring retaining walls, wooden boardwalk, drainage improvements and a great amount of resident coordination. These projects’ permit requirements include Road Commission for Oakland County, Oakland County Water Resources Commissioner, MDEQ and local permits through regulated wetland and woodlands. Extensive resident contacts for easement acquisition as well as construction coordination played an integral role in this high-profile Township millage project.

2008 Non-Motorized Safety Pathway Program, West Bloomfield Township, MI – Designed three miles of non-motorized pedestrian pathways, including at grade paths and boardwalks to meet federal ADA guidelines with strict controls on longitudinal and cross slopes. This project provided connection pieces within the existing pathway network along local roads as well as roads under the jurisdiction of the Road Commission for Oakland County. Work included both asphalt and concrete pathways with some areas through severe topography featuring retaining walls, wooden boardwalk, drainage improvements and a great amount of resident coordination. These projects’ permit requirements include Road Commission for Oakland County, Oakland County Water Resources Commissioner, MDEQ and local permits through regulated wetland and woodlands. Extensive resident contacts for easement acquisition as well as construction coordination played an integral role in these high-profile Township millage projects.

11 Mile Delwal Water Main Extension, City of Novi, MI – Project Engineer responsible for the design and construction engineering services for a 3,000 foot 8”, 12”, and 16” diameter water main to provide a master planned water main loop serving existing and future developments. This project required the design of a directionally-drilled HDPE pipe segment under a stream regulated by Oakland County and the MDEQ. Also responsible for the development of required specifications to provide connections between differing water main pipes for the project. Coordinate permits, bidding, and award.

Upper Straits Beach and Upper Long Lake Woods Low Pressure Sanitary Sewer SAD’s, Charter Township of West Bloomfield, MI - Project Engineer for the Upper Straits Beach and Upper Long Lake Woods Low Pressure sanitary sewer system extensions. These projects were constructed as Special Assessment Districts to bring sanitary sewers to lake areas where septic field leachate had become a concern for the residents. These projects involved the design and construction of over 8,000 linear feet of 2” and 3” and 6” HDPE low-pressure sewer directionally drilled to minimize disruption to the existing residents. This project made public sanitary sewers available to approximately 125 properties in established subdivisions previously served by private septic systems. Coordinate permits, bidding, and award.

Sanitary Sewer Engineering, Charter Township of White Lake, MI – Served as a municipal engineer for this fast growing community in northern Oakland County from 1999 to 2007. Responsibilities included maintenance of the Township Sanitary Sewer Master Plan, design and construction engineering coordination for trunkline sewer extensions. Responsible for sanitary sewer review of site plans and engineering plans for commercial, industrial, and residential developments throughout the Township. This included gravity mains, low pressure systems with grinder pumps, force mains, and pump stations. Additionally responsible for sanitary sewer designs for special assessment districts and developer funded projects. Responsible for permitting of all projects with Oakland County and the MDEQ, and coordination of sewer capacity with Commerce Township.

Pontiac Lake Sanitary Sewer Extension, Charter Township of White Lake, MI - Project Engineer responsible for coordinating the construction of a \$4.9 million sanitary sewer extension in the residential communities surrounding Pontiac Lake. This project included the directionally drilled installation of 29,000 feet of low-pressure sewer and associated grinder pump systems. The project required the abandonment of septic tanks and connection of grinder pumps for over 400 residences on lake property to improve lake quality. The project locations featured limited workspace and required coordination with contractors, residents and Township Officials. Ms. Reynolds was the primary resident contact for this complex project. This project featured SRF funding from the State of Michigan with extensive coordination required throughout its construction.

Spalding DeDecker References

Types of Projects Providing Services Since	Entity Name	Address	Contact Name	Phone Number	Key Personnel
Construction Engineering and Administration for Roads and Pathways 2011 - Present	City of Rochester Hills	1000 Rochester Hills Drive Rochester Hills, MI 48309	Allan Schneck, PE Public Services Director schnecka@rochesterhills.org	(248) 841-2497	Cheryl Gregory, PE David Richmond, PE
Construction Engineering and Administration for Utilities and Pathways 1976 - Present	Plymouth Township	9955 North Haggerty Road Plymouth, MI 48170	Patrick Fellrath, PE Director of Public Services pfellrath@plymouthtwp.org	(248) 453-3840	David Richmond, PE Ted Meadows
Construction Engineering and Administration for Roads 1992 - Present	City of Livonia	33000 Civic Center Drive Livonia, MI 48154	Todd Zilincik, PE City Engineer tzilincik@ci.livonia.mi.us	(313) 421-2000	Cheryl Gregory, PE Gus Dahoui, PE
Construction Engineering for Utilities 2013 - Present	Charter Township of Canton	1150 Canton Center S. Canton, MI 48188	Bill Serchak, PE Engineering Services Manager wserchak@canton-mi.org	(734) 394-5160	Cheryl Gregory, PE Ted Meadows David Richmond, PE
Construction Engineering and Administration for Roads, Utilities and Pathways 2015 - Present	City of Taylor	23555 Goddard Road Taylor, MI 48180	Greg Mayhew, PE Assistant City Engineer gmayhew@ci.taylor.mi.us	(734) 284-6550	David Richmond, PE Gus Dahoui, PE
Construction Engineering and Administration for Utilities 1960 - Present	Macomb County Public Works Commissioner	21777 Dunham Road Clinton Township, MI 48036	Keith Graboske, Engineer Keith.graboske@macombcountymi.gov	(586) 307-8241	David Richmond, PE
Construction Engineering and Administration for Roads, Utilities, and Pathways 2011 - Present	City of Northville	215 W. Main Street Northville, MI 48167	James Gallogly Public Works Director jgallogly@ci.northville.mi.us	(248) 349-1300	Cheryl Gregory, PE Ted Meadows

Spalding DeDecker References

Types of Projects	Entity Name	Address	Contact Name	Phone Number	Key Personnel
Providing Services Since Construction Engineering and Administration for Roads and Utilities 1984 - Present	MDOT Metro Region	800 Vanguard Drive Pontiac, MI 48341	Sandy Montes Oakland TSC Manager montess@michigan.gov	(248) 451-0001	Cheryl Gregory, PE Gus Dahoui, PE