

INVITATION TO BID  
ITB-4267

ARBOR OAKS PARK RAIN GARDENS



Due Date: Wednesday, May 15, 2013  
By 10:00 a.m.

Issued by: City of Ann Arbor  
Procurement Unit  
301 E. Huron Street  
Ann Arbor, Michigan 48104

# TABLE OF CONTENTS

<u>Section</u>	<u>Pages</u>
Table of Contents .....	TC-1 to -2
Advertisement .....	AD-1
Notice of Pre-Bid Conference.....	NP-1
Instructions to Bidders .....	IB-1 to 5
Invitation to Bid .....	ITB-1 to 3
Bid Forms.....	BF-1 to BF-6
Contract.....	C-1 to 4
Bond Forms.....	B-1 to 2
General Conditions .....	GC-1 to 19
Supplemental Insurance Requirements.....	SI-1
Standard Specifications.....	SS-1
 <u>Detailed Specifications</u>	
Price and Payment Procedures.....	01 20 00-1 to -7
Administrative Requirements .....	01 30 00-1 to -7
Quality Requirements .....	01 41 00-1
Temporary Facilities and Controls.....	01 57 00-1
Site Preparation.....	31 10 00-1 to -3
Soil Erosion & Sedimentation Control .....	31 11 00-1 to -3
Earthwork.....	31 20 00-1 to -7
Stone Work .....	32 15 00-1 to -2
Fine Grading, Lawn Seeding & Site Stabilization.....	32 92 00-1 to -5
Fine Grading & Native Plug Planting.....	32 93 00-1 to -4
Planting .....	32 93 10-1 to -4
Plant Maintenance and Guarantee Period.....	32 93 20-1 to -4
Tree Spade Relocation and Planting.....	32 94 00-1 to -3
Storm Manholes .....	33 05 11-1 to -3
Utility Auger Placement .....	33 05 25-1 to -2
Storm Sewer Piping .....	33 41 13-1 to -2
 Appendix A – Labor Standards Provisions for Federally Assisted Projects .....	 AP-1
Appendix B – Davis-Bacon Act Labor Wage Decision .....	AP- 8

Appendix C – Certification Debarment .....	AP- 16
Appendix D – Disadvantaged Business Enterprises (DBE) .....	AP- 18
Appendix E – DBE – Good Faith Efforts Worksheet.....	AP- 25
Appendix F – Contract Compliance & Living Wage Forms .....	AP- 28

Drawings

Cover .....	L-0
Existing Conditions Topographical Survey .....	C-1
Site Preparation and Soil Erosion Control .....	L-1
Grading & Utilities .....	L-2
Planting & Site Stabilization.....	L-3
General Details.....	L-4
Details .....	C-2

**ADVERTISEMENT FOR  
ARBOR OAKS PARK RAIN GARDENS  
CITY OF ANN ARBOR, MICHIGAN**

Sealed Bids that include an original bid document and one additional proposal section copy will be received by the **Procurement Office, Finance Services, located on the 5th floor of the Guy Larcom Municipal Building, Ann Arbor, Michigan on or before Wednesday, May 15, 2013 by 10:00 a.m.** local time for renovations to **Arbor Oaks Park Rain Gardens** and all associated work as specified and detailed. Bids will be publicly opened and read aloud at this time. Prospective bidders are responsible for timely receipt of their proposal. Late proposals will not be considered.

Work to be done includes the **installation of multiple rain gardens at Arbor Oaks Park, located along Champagne Drive, Ann Arbor, MI,** and all related work.

A pre-bid meeting will be held on Thursday, April 25, 2013 at 10:00 AM at the Wheeler Service Center, 4251 Stone School Rd. Attendance is highly recommended.

Bid document and drawings are entirely downloadable on the Michigan Governmental Trade/BidNet (MITN) website at [www.mitn.info](http://www.mitn.info) and on the Purchasing page of the City of Ann Arbor's website at [www.a2gov.org/government/financeadminservices/procurement/Pages/OpenBidsandProposals.aspx](http://www.a2gov.org/government/financeadminservices/procurement/Pages/OpenBidsandProposals.aspx) on or after Thursday, April 18, 2013. Bidders should review the additional requirements listed in the Appendices in the bid documents. The successful bidder shall fully comply with all of these special provisions and shall be responsible to ensure compliance with same by all of its subcontractors. The City will not be distributing paper copies of the plan or specifications. It is a bidder's responsibility to verify they have obtained all information before submitting a bid.

Each proposal shall be accompanied by a certified check, or Bid Bond by a recognized surety, in the amount of 5% of the total of the bid price. A proposal, once submitted, becomes the property of the City. In the sole discretion of the City, the City reserves the right to allow a bidder to reclaim submitted documents provided the documents are requested and retrieved no later than 48 hours prior to the scheduled bid opening.

The successful Bidder will be required to furnish satisfactory performance and labor and material bonds in the amount of 100% of the bid price and satisfactory insurance coverage.

Precondition for entering into a contract with the City of Ann Arbor is compliance with Chapter 112 of Title IX of the Code of the City of Ann Arbor. The successful Bidder may also be required to comply with Chapter 23 of Title I of the Code of the City of Ann Arbor. Further information is outlined in the contract documents.

After the time of opening, no Bid may be withdrawn for a period of 45 days. The City reserves the right to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

Any further information on bid documents may be obtained from the Procurement Office, (734) 794-6500.

## **NOTICE OF PRE-BID CONFERENCE**

A pre-bid meeting will be held at Wheeler Service Center, 4251 Stone School Rd, Ann Arbor, MI 48108 on Thursday, April 25 at 10:00 a.m.

Attendance at this conference is optional, but **highly recommended**. Administrative and technical questions regarding this project will be answered at this time. The pre-bid meeting is for information only. Any answers furnished will not be official until verified in writing by the Financial Service Area, Procurement Unit. Answers that change or substantially clarify the bid will be affirmed in an addendum.

## **INSTRUCTIONS TO BIDDERS**

### **General**

Work to be done under this Contract is generally described through the detailed specifications and must be completed fully in accordance with the contract documents. All work to be done under this Contract is located in or near the City of Ann Arbor.

The City shall make available to all prospective Bidders, prior to receipt of the Bids, access to the area in which the work is to be performed. Advance notice should be given to the Administering Department in cases where access to the site must be arranged by the City.

Any bid which does not fully conform with these instructions may be rejected.

### **Preparation of Bids**

Bids should be prepared providing a straight-forward, concise description of the Bidder's ability to meet the requirements of the ITB. Bids shall be written in ink or typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed and dated in ink by the person signing the Bid.

Bidders must submit The Invitation to Bid Form and the "Bid Forms" provided with each blank properly filled in. If forms are not fully completed it may disqualify the bid.

Each person signing the Bid certifies that he/she is the person in the Bidder's firm/organization responsible for the decision as to the fees being offered in the Bid and has not and will not participated in any action contrary to the terms of this provision

### **Questions or Clarification on ITB Specifications**

All questions regarding this ITB shall be submitted via email. Emailed questions and inquires will be accepted from any and all prospective Bidders in accordance with the terms and conditions of the ITB.

All questions shall be due on or before Wednesday, May 8, 2013 by 12:00 pm and should be addressed as follows:

Specification/Scope of Work questions emailed to [nxwoodward@a2gov.org](mailto:nxwoodward@a2gov.org).

Bid Process and HR Compliance questions emailed to [KLancaster@a2gov.org](mailto:KLancaster@a2gov.org).

### **Addenda**

If it becomes necessary to revise any part of the ITB, notice of the Addendum will be posted to Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) and/or City of Ann Arbor web site [www.A2gov.org](http://www.A2gov.org) for all parties to download.

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received, but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof.

The City will not be bound by oral responses to inquiries or written responses other than written addenda.

### **Bid Submission**

All Bids are due and must be delivered to the City of Ann Arbor Procurement Unit on or before **Wednesday, May 15, 2013 by 10:00 AM**. Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

Each Bidder must submit one (1) original Bid and one (1) Bid copy in a sealed envelope clearly marked: **ITB 4267 – Arbor Oaks Park Rain Gardens**.

#### **Bids must be addressed and delivered to:**

City of Ann Arbor  
Procurement Unit, 5<sup>th</sup> Floor  
301 East Huron Street  
P.O. Box 8647  
Ann Arbor, MI 48107

All Bids received on or before the Due Date will be publicly opened and recorded immediately. No immediate decisions are rendered.

Hand delivered Bids should be date/time stamped/signed by the Procurement Unit at the address above in order to be considered. Normal business hours are 9:00 a.m. to 4:00 p.m. Monday through Friday, excepting holidays. The City will not be liable to any Bidder for any unforeseen circumstances, delivery or postal delays. Postmarking to the Due Date will not substitute for receipt of the Bid. Each Bidder is responsible for submission of their Bid.

Additional time will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines that circumstances warrant it.

### **Award**

The City intends to award a Contract(s) to the lowest responsible Bidder(s). On multi-divisional contracts, separate divisions may be awarded to separate Bidders. The City may also utilize discounts offered in the Bid Forms, if any, to determine the lowest responsible Bidder on each division, and award multiple divisions to a single Bidder, so that the lowest total cost is achieved for the City. For unit price bids, the contract will be awarded based upon the lump sum and unit prices stated by the bidder for the work items specified in the bid documents, with consideration given to any alternates selected by the City. If the City determines that the unit price for any item is materially different for the work item bid than either other bidders or the general market, the City, in its sole discretion, in addition to any other right it may have, may reject the bid as not responsible or non-conforming.

The acceptability of major subcontractors will be considered in determining if a Bidder is responsible. In comparing proposals, the City will give consideration to alternate proposals for items listed in the forms, or other alternates which the Bidder may wish to submit, but preference will be given to Base Bid Proposals.

The City reserves the right to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

### **Official Documents**

The City of Ann Arbor shall accept no alternates to the bid documents made by the Bidder unless those alternatives are set forth in the “Alternate” section of Bid form.

The City of Ann Arbor officially distributes bid documents from the Procurement Unit or through the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained from any other source are not Official copies. Addenda and other bid information will only be posted to these official distribution sites. . If you obtained City of Ann Arbor Bid documents from other sources, it is recommended that you register on [www.MITN.info](http://www.MITN.info) and obtain an official Bid.

### **Bid Security**

Each proposal must be accompanied by a certified check, or Bid Bond by a surety licensed and authorized to do business within the State of Michigan, in the amount of 5% of the total of the bid price.

### **Withdrawal of Bids**

After the time of opening, no Bid may be withdrawn for the period of days specified in the Advertisement.

### **Contract Time**

Time is of the essence in the performance of the work under this Contract. The available time for work under this Contract is indicated on page C-1, Article III of the Contract. If these time requirements cannot be met, the Bidder must stipulate on Bid Form Section 3 - Time Alternate its schedule for performance of the work. Consideration will be given to time in evaluating bids.

### **Liquidated Damages**

A liquidated damages clause, as given on page C-2, Article III of the Contract, provides that the Contractor shall pay the City as liquidated damages, and not as a penalty, a sum certain per day for each and every day that the Contractor may be in default of completion of the specified work, within the time(s) stated in the Contract, or written extensions.

Liquidated damages clauses, as given in the General Conditions, provide further that the City shall be entitled to impose and recover liquidated damages for breach of the obligations under Chapter 112 of the City Code.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.



## **Human Rights Information**

Section 5, beginning at page GC-3, outlines the requirements for fair employment practices under City of Ann Arbor Contracts. To establish compliance with this Ordinance, the Bidder must complete and return with its bid completed copies of the two pages of Human Rights Division Contract Compliance Forms (copy attached) or an acceptable equivalent. In the event Human Rights forms are not submitted with the bid, the bidder will have 24 hours to provide them once requested by the City.

## **Wage Requirements**

Section 4, beginning at page GC-1, outlines the requirements for payment of prevailing wages or of a living wage to employees providing service to the City under this contract. The successful bidder must comply with all applicable requirements and may be required to provide documentary proof of compliance when requested.

## **Major Subcontractors**

The Bidder shall identify each major subcontractor it expects to engage for this Contract if the work to be subcontracted is 15% or more of the bid sum or over \$50,000, whichever is less. The Bidder also shall identify the work to be subcontracted to each major subcontractor. The Bidder shall not change or replace a subcontractor without approval by the City.

## **Debarment**

Submission of a Bid in response to this ITB is certification that the Bidder is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

## **Disclosures**

After bids are opened, all information in a submitter's bid is subjected to disclosure under the provisions of Michigan Public Act No. 442 of 1976, as amended (MCL 15.231 et seq.) known as the "Freedom of Information Act." The Freedom of Information Act also provides for the complete disclosure of contracts and attachments thereto except where specifically exempted.

## **Bid Protest**

All Bid protests must be in writing and filed with the Purchasing Agent within five (5) business days of the award action. The vendor must clearly state the reasons for the protest. If a vendor contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the vendor to the Purchasing Agent. The Purchasing Agent will provide the vendor with the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee whose decision shall be final.

## **Reservation of Rights**

The City of Ann Arbor reserves the right to accept any bid or alternative bid proposed in whole

or in part, to reject any or all bids or alternatives bids in whole or in part and to waive irregularity and/or informalities in any bid and to make the award in any manner deemed in the best interest of the City.

## INVITATION TO BID

City of Ann Arbor  
Guy C. Larcom Municipal Building  
Ann Arbor, Michigan 48104

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including Advertisement, Human Rights Division Contract Compliance Forms, Notice of Pre-Bid Conference, Instructions to Bidders, Proposal, Bid Forms, Contract, Bond Forms, General Conditions, Standard Specifications, Detailed Specifications, all Addenda, and the Plans and understands them. The Bidder declares that it conducted a full investigation at the site and of the work proposed and is fully informed as to the nature of the work and the conditions relating to the work's performance. The Bidder also declares that it has extensive experience in successfully completing projects similar to this one.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

The undersigned proposes to perform all work shown on the plans or described in the bid documents, including any addenda issued, and to furnish all necessary machinery, tools, apparatus, and other means of construction to do all the work, furnish all the materials, and complete the work in strict accordance with all terms of the Contract of which this proposal is one part.

In accordance with these bid documents, and Addenda numbered \_\_\_\_\_, the undersigned, as Bidder, proposes to perform at the sites in and/or around Ann Arbor, Michigan, all the work included herein for the amounts set forth in the Bid Forms.

The Bidder declares that it has become fully familiar with the liquidated damage clauses for completion times and for compliance with City Code Chapter 112, understands and agrees that the liquidated damages are for the non-quantifiable aspects of non-compliance and do not cover actual damages that may be shown and agrees that if awarded the Contract, all liquidated damage clauses form part of the Contract.

The Bidder declares that it has become fully familiar with the provisions of Chapter 14, Section 1:319 (Prevailing wages) and Chapter 23 (Living Wage) of the Code of the City of Ann Arbor and that it understands and agrees to comply, to the extent applicable to employees providing services to the City under this Contract, with the wage and reporting requirements stated in the City Code provisions cited. Bidder further agrees that the cited provisions of Chapter 14 and Chapter 23 form a part of this Contract.

The Bidder encloses a certified check or Bid Bond in the amount of 5% of the total of the Bid Price. The Bidder agrees both to contract for the work and to furnish the necessary Bonds and insurance documentation within 10 days after being notified of the acceptance of the Bid.

If this Bid is accepted by the City and the Bidder fails to contract and furnish the required Bonds and insurance documentation within 10 days after being notified of the acceptance of this Bid, then the Bidder shall be considered to have abandoned the Contract and the certified check or Bid Bond accompanying this Bid shall become due and payable to the City.

If the Bidder enters into the Contract in accordance with this Bid, or if this Bid is rejected, then the accompanying check or Bid Bond shall be returned to the Bidder.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

SIGNED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 201\_.

\_\_\_\_\_  
Bidder's/Contractor Name

\_\_\_\_\_  
Authorized Signature of Bidder

\_\_\_\_\_  
Official Address

\_\_\_\_\_  
Printed Name of Authorized Signature

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Email Address for Bid Award Notice

LEGAL STATUS OF BIDDER

(The Bidder shall fill out the appropriate form and strike out the other two.)

Bidder declares that it is:

\* A corporation organized and doing business under the laws of the state of \_\_\_\_\_, for whom \_\_\_\_\_, bearing the office title of \_\_\_\_\_, whose signature is affixed to this proposal is authorized to execute contracts.

\* A partnership, list all members and the street and mailing address of each:

Also identify the County and State where partnership papers are filed:

County of \_\_\_\_\_, State of \_\_\_\_\_

\* An individual, whose signature with address, is affixed to this proposal: \_\_\_\_\_  
(initial here)

BID FORMS  
 ARBOR OAKS PARK RAIN GARDENS  
 ITB-4267

**Base Bid**

Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Unit Prices

<u>Item</u> <u>No.</u>	<u>Description</u>	<u>Lump Sum</u>
1	Mobilization	\$ _____
2	Audio-Video Documentation	\$ _____
3	Demolition	\$ _____
4	Soil Erosion Control	\$ _____
5	Earthwork	\$ _____
6	Utilities	\$ _____
7	Stonework	\$ _____
8	Planting	\$ _____
9	Lawn	\$ _____
10	Landscape Boulders	\$ _____
11	Maintenance and Guarantee	\$ _____
12	Permits	\$ _____
<b>Total Lump Sum</b>		<b>\$ _____</b>

The above contract prices are used as the Base Bid. The Base Bid is based on the quantities listed below for each site. Adjustments to quantities shall be based on the prices provided by the Bidder/Contractor below. The prices provided below must be consistent with the Base Bid or the Owner has the right to reject the Proposal.

Erosion Control, Inlet Filter	EA	\$ _____
Erosion Control, Silt Fence	LF	\$ _____
Erosion Control Blanket	SY	\$ _____
Erosion Control Seed	SY	\$ _____
Tree Protection Fence	LF	\$ _____
Anti-Tracking Mat	EA	\$ _____
Strip and Stockpile Topsoil	CY	\$ _____
Rough Grade	CY	\$ _____
Compost	CY	\$ _____
Rain Garden Mix Placement	CY	\$ _____
Removal of Excess Excavated Material	CY	\$ _____
Rain Garden Spillway	EA	\$ _____
Stone at Culvert End	TON	\$ _____
Tree Transplant	EA	\$ _____

Plugs, Trees, Shrubs Plantings (per item indicated)

Plugs (Native Plug)

Canada Anemone	EA	\$ _____
Swamp Milkweed	EA	\$ _____
Umbrella Sedge	EA	\$ _____
Brown Fox Sedge	EA	\$ _____
Joe-Pye Weed	EA	\$ _____
Boneset	EA	\$ _____
Wild Strawberry	EA	\$ _____
Blue Flag Iris	EA	\$ _____
Great Blue Lobelia	EA	\$ _____
Switch Grass	EA	\$ _____
Common Cinquefoil	EA	\$ _____
Mountain Mint	EA	\$ _____
Wild Senna	EA	\$ _____
Ironweed	EA	\$ _____

Shrubs

Red-twig Dogwood 1 gal. container	EA	\$ _____
Pussy Willow 1 gal. container	EA	\$ _____

Trees

Red Oak 2" caliper	EA	\$ _____
--------------------	----	----------

Decorative

Landscape Boulder	EA	\$ _____
-------------------	----	----------

Lawn

Lawn Seed	SY	\$ _____
-----------	----	----------

Maintenance & Guarantee

Plant Maintenance and Guarantee	Per Visit	\$ _____
---------------------------------	-----------	----------

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Proposals, and final payment for all Unit Price Proposal items will be based on actual quantities, determined as provided in the Contract Documents.

**BID FORMS**  
Section 2 - Material and Equipment Alternates

The Base Bid proposal price shall include materials and equipment selected from the designated items and manufacturers listed in the bidding documents. This is done to establish uniformity in bidding and to establish standards of quality for the items named.

If the Contractor wishes to quote alternate items for consideration by the City, it may do so under this Section. A complete description of the item and the proposed price differential must be provided. Unless approved at the time of award, substitutions where items are specifically named will be considered only as a negotiated change in Contract Sum.

<u>Item Number</u>	<u>Description</u>	<u>Add/Deduct Amount</u>
--------------------	--------------------	--------------------------

If the Bidder does not suggest any material or equipment alternate, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT propose any material or equipment alternate under the contract.

Signature of Authorized Representative of Bidder \_\_\_\_\_



BID FORM

Section 3 - Time Alternate

If the Bidder takes exception to the time stipulated in Article III of the Contract, Time of Completion, page C-1, it is requested to stipulate below its proposed time for performance of the work. Consideration will be given to time in evaluating bids.

If the Bidder does not suggest any time alternate, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT propose any time alternate under the contract.

Signature of Authorized Representative of Bidder \_\_\_\_\_

## BID FORM

### Section 4 - Major Subcontractors

For purposes of this contract, a Subcontractor is anyone (other than the Contractor) who performs work (other than or in addition to the furnishing of materials, plans or equipment) at or about the construction site, directly or indirectly for or on behalf of the Contractor (and whether or not in privity of contract with the Contractor), but shall not include any individual who furnishes merely the individual 's own personal labor or services.

For the work outlined in these documents the Bidder expects to engage the following major subcontractors to perform the work identified:

<u>Subcontractor (Name and Address)</u>	<u>Work</u>	<u>Amount</u>
---	-------------	---------------

If the Bidder does not expect to engage any major subcontractor, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT expect to engage any major subcontractor to perform work under the contract.

Signature of Authorized Representative of Bidder \_\_\_\_\_

BID FORM

Section 5 – References

List below a minimum of five (5) similar projects completed within the last five (5) years. Include the name of the project, the name of the project Owner, a telephone number or email address for the Owner and a brief description of the project work.

1. Project Name: \_\_\_\_\_

Project Owner: \_\_\_\_\_

Owner Contact Information: \_\_\_\_\_

Project Description: \_\_\_\_\_

2. Project Name: \_\_\_\_\_

Project Owner: \_\_\_\_\_

Owner Contact Information: \_\_\_\_\_

Project Description: \_\_\_\_\_

3. Project Name: \_\_\_\_\_

Project Owner: \_\_\_\_\_

Owner Contact Information: \_\_\_\_\_

Project Description: \_\_\_\_\_

4. Project Name: \_\_\_\_\_

Project Owner: \_\_\_\_\_

Owner Contact Information: \_\_\_\_\_

Project Description: \_\_\_\_\_

5. Project Name: \_\_\_\_\_

Project Owner: \_\_\_\_\_

Owner Contact Information: \_\_\_\_\_

Project Description: \_\_\_\_\_

## CONTRACT

THIS AGREEMENT is made on July 1, 2013, between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 301 E. Huron St., Ann Arbor, Michigan 48104 (“City”) and Renaissance \_\_\_\_\_ a Michigan Corporation located at \_\_\_\_\_ (“Contractor”).

Based upon the mutual promises below, the Contractor and the City agree as follows:

### ARTICLE I - Scope of Work

The Contractor agrees to furnish all of the materials, equipment and labor necessary; and to abide by all the duties and responsibilities applicable to it for the project titled “ARBOR OAKS PARK RAIN GARDENS” in accordance with the requirements and provisions of the following documents, including all written modifications incorporated into any of the documents, which are incorporated as part of this Contract:

Human Rights Division Contract	General Conditions
Compliance Forms	Standard Specifications
Living Wage Declaration of	Detailed Specifications
Compliance Forms	Plans
(if applicable)	Addenda
Bid Forms	
Proposal	
Contract and Exhibits	
Bonds	

### ARTICLE II - Definitions

Administering Service area means Public Services, Field Operations

Supervising Professional means Craig Hupy or other persons acting under the authorization of the Director of the Administering Department.

Project means **Arbor Oaks Park Rain Gardens – ITB-4267**

### ARTICLE III - Time of Completion

- (A) The work to be completed under this Contract shall begin immediately on the date specified in the Notice to Proceed issued by the City.
- (B) The entire work for this Contract shall be completed within **309** consecutive calendar days.
- (C) Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the Contractor to pay the City, as liquidated damages and not as a penalty, an amount equal to **\$100.00** for each calendar day of delay in the completion of all the work. If

any liquidated damages are unpaid by the Contractor, the City shall be entitled to deduct these unpaid liquidated damages from the monies due the Contractor.

As an independent requirement, where the Detailed Specifications identify certain portions of the work to be completed within a shorter period of time and the Contractor fails to complete each portion within the shorter period specified for each portion, including any extension granted in writing by the Project Supervisor, the City is entitled to deduct from the monies due the Contractor, as liquidated damages and not as a penalty, the amount identified in the Detailed Specifications for each portion of the work not timely completed for each calendar day of delay in completion of each portion of the work.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

Liquidated damages under this section are in addition to any liquidated damages due under Section 5 of the General Conditions.

#### ARTICLE IV - The Contract Sum

- (A) The City shall pay to the Contractor for the performance of the Contract, the unit prices as given in the Bid Forms for the estimated total of:

\_\_\_\_\_

Use words

\$

\_\_\_\_\_

Use numbers

- (B) The amount paid shall be equitably adjusted to cover changes in the work ordered by the Supervising Professional but not required by the contract documents.

#### ARTICLE V - Assignment

This Contract may not be assigned or subcontracted without the written consent of the City.

#### ARTICLE VI - Choice of Law

This Contract shall be construed, governed, and enforced in accordance with the laws of the State of Michigan. By executing this agreement, the Contractor and the City agree to venue in a court of appropriate jurisdiction sitting within Washtenaw County for purposes of any action arising under this Contract.

Whenever possible, each provision of the contract will be interpreted in a manner as to be effective and valid under applicable law. The prohibition or invalidity, under applicable law, of any provision will not invalidate the remainder of the contract.

#### ARTICLE VII - Relationship of the Parties

The parties of the Contract agree that it is not a contract of employment but is a contract to

accomplish a specific result. Contractor is an independent contractor performing services for the City. Nothing contained in this Contract shall be deemed to constitute any other relationship between the City and the Contractor.

Contractor certifies that it has no personal or financial interest in the project other than the compensation it is to receive under the Contract. Contractor certifies that it is not, and shall not become, overdue or in default to the City for any contract, debt, or any other obligation to the City including real or personal property taxes. City shall have the right to set off any such debt against compensation awarded for services under this agreement.

#### ARTICLE VIII - Notice

All notices given under this contract shall be in writing, and shall be by personal delivery or by certified mail with return receipt requested to the parties at their respective addresses as specified in the contract documents or other address the Contractor may specify in writing..

#### ARTICLE IX - Indemnification

To the fullest extent permitted by law, for any loss not covered by insurance under this contract, Contractor shall indemnify, defend and hold harmless the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses including attorney's fees resulting or alleged to result, in whole or in part, from any act or omission, which is in any way connected or associated with this contract, by the Contractor or anyone acting on the Contractor's behalf under this contract. Contractor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City's sole negligence.

#### ARTICLE X - Entire Agreement

This Contract represents the entire understanding between the City and the Contractor and it supersedes all prior representations or agreements whether written or oral. Neither party has relied on any prior representations in entering into this Contract. This Contract may be altered, amended or modified only by written amendment signed by the City and the Contractor.

**FOR CONTRACTOR**

By: \_\_\_\_\_

Its: President

**FOR THE CITY OF ANN ARBOR**

By \_\_\_\_\_  
John Hieftje, Mayor

By \_\_\_\_\_  
Jacqueline Beaudry, City Clerk

**Approved as to substance**

By \_\_\_\_\_  
Steven D. Powers, City Administrator

By \_\_\_\_\_  
Craig Hupy, Public Services Area  
Administrator

**Approved as to form and content**

\_\_\_\_\_  
Stephen K. Postema, City Attorney

PERFORMANCE BOND

- (1) \_\_\_\_\_ of \_\_\_\_\_ (referred to as "Principal"), and \_\_\_\_\_, a corporation duly authorized to do business in the State of Michigan (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for \$ \_\_\_\_\_, the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written contract with the City dated July 1, 2013, for: Arbor Oaks Park Rain Gardens, ITB-4267 and this bond is given for that contract in compliance with Act No. 213 of the Michigan Public Acts of 1963, as amended, being MCL 129.201 et seq.
- (3) Whenever the Principal is declared by the City to be in default under the contract, the Surety may promptly remedy the default or shall promptly:
- (a) complete the contract in accordance with its terms and conditions; or
  - (b) obtain a bid or bids for submission to the City for completing the contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, arrange for a contract between such bidder and the City, and make available, as work progresses, sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which Surety may be liable hereunder, the amount set forth in paragraph 1.
- (4) Surety shall have no obligation to the City if the Principal fully and promptly performs under the contract.
- (5) Surety agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder, or the specifications accompanying it shall in any way affect its obligations on this bond, and waives notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work, or to the specifications.

**SIGNED AND SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

\_\_\_\_\_  
(Name of Surety Company)

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

\_\_\_\_\_  
(Name of Principal)

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Approved as to form:

Name and address of agent:

\_\_\_\_\_  
Stephen K. Postema, City Attorney

\_\_\_\_\_  
\_\_\_\_\_



LABOR AND MATERIAL BOND

- (1) \_\_\_\_\_ of \_\_\_\_\_, (referred to as "Principal"), and \_\_\_\_\_, a corporation duly authorized to do business in the State of Michigan, (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for the use and benefit of claimants as defined in Act 213 of Michigan Public Acts of 1963, as amended, being MCL 129.201 et seq., in the amount of \$ \_\_\_\_\_, for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written contract with the City, dated July 1, 2013, for: Arbor Oaks Park Rain Gardens, ITB-4267; and this bond is given for that contract in compliance with Act No. 213 of the Michigan Public Acts of 1963 as amended;
- (3) If the Principal fails to promptly and fully repay claimants for labor and material reasonably required under the contract, the Surety shall pay those claimants.
- (4) Surety's obligations shall not exceed the amount stated in paragraph 1, and Surety shall have no obligation if the Principal promptly and fully pays the claimants.

**SIGNED AND SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

\_\_\_\_\_  
(Name of Surety Company)

\_\_\_\_\_  
(Name of Principal)

By \_\_\_\_\_  
(Signature)

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Its \_\_\_\_\_  
(Title of Office)

Approved as to form:

Name and address of agent:

\_\_\_\_\_  
Stephen K. Postema, City Attorney

\_\_\_\_\_  
\_\_\_\_\_

## **GENERAL CONDITIONS**

### **Section 1 - Execution, Correlation and Intent of Documents**

The contract documents shall be signed in 3 copies by the City and the Contractor.

The contract documents are complementary and what is called for by any one shall be binding. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work. Materials or work described in words which so applied have a well-known technical or trade meaning have the meaning of those recognized standards.

In case of a conflict among the contract documents listed below in any requirement(s), the requirement(s) of the document listed first shall prevail over any conflicting requirement(s) of a document listed later.

(1) Addenda in reverse chronological order; (2) Detailed Specifications; (3) Standard Specifications; (4) Drawings/Plans; (5) General Conditions; (6) Contract; (7) Bid Forms; (8) Bond Forms; (9) Proposal.

### **Section 2 - Order of Completion**

The Contractor shall submit with each invoice, and at other times reasonably requested by the Supervising Professional, schedules showing the order in which the Contractor proposes to carry on the work. They shall include the dates at which the Contractor will start the several parts of the work, the estimated dates of completion of the several parts, and important milestones within the several parts.

### **Section 3 - Familiarity with Work**

The Bidder or its representative shall make personal investigations of the site of the work and of existing structures and shall determine to its own satisfaction the conditions to be encountered, the nature of the ground, the difficulties involved, and all other factors affecting the work proposed under this Contract. The Bidder to whom this Contract is awarded will not be entitled to any additional compensation unless conditions are clearly different from those which could reasonably have been anticipated by a person making diligent and thorough investigation of the site.

The Bidder shall immediately notify the City upon discovery, and in every case prior to submitting its Bid, of every error or omission in the bidding documents that would be identified by a reasonably competent, diligent Bidder. In no case will a Bidder be allowed the benefit of extra compensation or time to complete the work under this Contract for extra expenses or time spent as a result of the error or omission.

## **Section 4 - Wage Requirements**

Under this Contract, the Contractor shall conform to Chapter 14 of Title I of the Code of the City of Ann Arbor as amended; which in part states "...that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor. At the request of the City, any contractor or subcontractor shall provide satisfactory proof of compliance with the contract provisions required by the Section."

Where the Contract and the Ann Arbor City Ordinance are silent as to definitions of terms required in determining contract compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used.

### **1:814. Applicability.**

- (1) This Chapter shall apply to any person that is a contractor/vendor or grantee as defined in Section 1:813 that employs or contracts with five (5) or more individuals; provided, however, that this Chapter shall not apply to a non-profit contractor/vendor or non-profit grantee unless it employs or contracts with ten (10) or more individuals.
- (2) This Chapter shall apply to any grant, contract, or subcontract or other form of financial assistance awarded to or entered into with a contractor/vendor or grantee after the effective date of this Chapter and to the extension or renewal after the effective date of this Chapter of any grant, contract, or subcontract or other form of financial assistance with a contractor/vendor or grantee.

### **1:815. Living Wages Required.**

- (1) Every contractor/vendor or grantee, as defined in Section 1:813, shall pay its covered employees a living wage as established in this Section.
  - (a) For a covered employer that provides employee health care to its employees, the living wage shall be \$11.83 an hour, or the adjusted amount hereafter established under Section 1:815(3).
  - (b) For a covered employer that does not provide health care to its employees, the living wage shall be \$13.19 a hour, or the adjusted amount hereafter established under Section 1:815(3).
- (2) In order to qualify to pay the living wage rate for covered employers providing employee health care under subsection 1:815(1)(a), a covered employer shall furnish proof of said health care coverage and payment therefor to the City Administrator or his/her designee.
- (3) The amount of the living wage established in this Section shall be adjusted upward no later than April 30, 2012, and every year thereafter by a percentage equal to the percentage increase, if any, in the federal poverty guidelines as published by the United States Department of Health and Human Services for the year 2012. Subsequent annual adjustments shall be based upon the percentage increase, if any, in the United States Department of Health and Human Services poverty guidelines when comparing the prior

calendar year's poverty guidelines to the present calendar year's guidelines. The applicable percentage amount will be converted to an amount in cents by multiplying the existing wage under Section 1.815(1)(b) by said percentage, rounding upward to the next cent, and adding this amount of cents to the existing living wage levels established under Sections 1:815(1)(a) and 1:815(1)(b). Prior to April 1 of each calendar year, the City will notify any covered employer of this adjustment by posting a written notice in a prominent place in City Hall, and, in the case of a covered employer that has provided an address of record to the City, by a written letter to each such covered employer.

### **Section 5 - Non-Discrimination**

The Contractor agrees to comply with the nondiscrimination provisions of Chapter 112 of the Ann Arbor City Code and to take affirmative action to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate any inequality based upon race, national origin or sex. The Contractor agrees to comply with the provisions of Section 9:161 of Chapter 112 of the Ann Arbor City Code and in particular the following excerpts:

#### 9:161 NONDISCRIMINATION BY CITY CONTRACTORS

- (1) All contractors proposing to do business with the City of Ann Arbor shall satisfy the nondiscrimination administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All contractors shall receive approval from the Director prior to entering into a contract with the City, unless specifically exempted by administrative policy. All City contractors shall take affirmative action to insure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon race, national origin or sex.
- (2) Each prospective contractor shall submit to the City data showing current total employment by occupational category, sex and minority group. If, after verifying this data, the Director concludes that it indicates total minority and female employment commensurate with their availability within the contractor's labor recruitment area, i.e., the area from which the contractor can reasonably be expected to recruit, said contractor shall be accepted by the Director as having fulfilled affirmative action requirements for a period of one year at which time the Director shall conduct another review. Other contractors shall develop an affirmative action program in conjunction with the Director. Said program shall include specific goals and timetables for the hiring and promotion of minorities and females. Said goals shall reflect the availability of minorities and females within the contractor's labor recruitment area. In the case of construction contractors, the Director shall use for employment verification the labor recruitment area of the Ann Arbor-Ypsilanti standard metropolitan statistical area. Construction contractors determined to be in compliance shall be accepted by the Director as having fulfilled affirmative action requirements for a period of six (6) months at which time the Director shall conduct another review.
- (3) In hiring for construction projects, contractors shall make good faith efforts to employ local persons, so as to enhance the local economy.
- (4) All contracts shall include provisions through which the contractor agrees, in addition to any other applicable Federal or State labor laws:

- (a) To set goals, in conference with the Human Resources Director, for each job category or division of the work force used in the completion of the City work;
  - (b) To provide periodic reports concerning the progress the contractor has made in meeting the affirmative action goals it has agreed to;
  - (c) To permit the Director access to all books, records and accounts pertaining to its employment practices for the purpose of determining compliance with the affirmative action requirements.
- (5) The Director shall monitor the compliance of each contractor with the nondiscrimination provisions of each contract. The Director shall develop procedures and regulations consistent with the administrative policy adopted by the City Administrator for notice and enforcement of non-compliance. Such procedures and regulations shall include a provision for the posting of contractors not in compliance.
- (6) All City contracts shall provide further that breach of the obligation not to discriminate shall be a material breach of the contract for which the City shall be entitled, at its option, to do any or all of the following:
- (a) To cancel, terminate, or suspend the contract in whole or part and/or refuse to make any required periodic payments under the contract;
  - (b) Declare the contractor ineligible for the award of any future contracts with the City for a specified length of time;
  - (c) To recover liquidated damages of a specified sum, said sum to be that percentage of the labor expenditure for the time period involved which would have accrued to minority group members had the affirmative action not been breached;
  - (d) Impose for each day of non-compliance, liquidated damages of a specified sum, based upon the following schedule:

<u>Contract Amount</u>	<u>Assessed Damages Per Day of Non-Compliance</u>
\$ 10,000 - 24,999	\$ 25.00
25,000 - 99,999	50.00
100,000 - 199,999	100.00
200,000 - 499,999	150.00
500,000 - 1,499,999	200.00
1,500,000 - 2,999,999	250.00
3,000,000 - 4,999,999	300.00
5,000,000 - and above	500.00

- (e) In addition the contractor shall be liable for any costs or expenses incurred by the City of Ann Arbor in obtaining from other sources the work and services to be rendered or performed or the goods or properties to be furnished or delivered to the City under this contract.

## **Section 6 - Materials, Appliances, Employees**

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary or used for the execution and completion of the work. Unless otherwise specified, all materials incorporated in the permanent work shall be new, and both workmanship and materials shall be of the highest quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall at all times enforce strict discipline and good order among its employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned.

Adequate sanitary facilities shall be provided by the Contractor.

## **Section 7 - Qualifications for Employment**

The Contractor shall employ competent laborers and mechanics for the work under this Contract. For work performed under this Contract, employment preference shall be given to qualified local residents.

## **Section 8 - Royalties and Patents**

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringements of any patent rights and shall hold the City harmless from loss on account of infringement except that the City shall be responsible for all infringement loss when a particular process or the product of a particular manufacturer or manufacturers is specified, unless the City has notified the Contractor prior to the signing of the Contract that the particular process or product is patented or is believed to be patented.

## **Section 9 - Permits and Regulations**

The Contractor must secure and pay for all permits, permit or plan review fees and licenses necessary for the prosecution of the work. These include but are not limited to City building permits, right-of-way permits, lane closure permits, right-of-way occupancy permits, and the like. The City shall secure and pay for easements shown on the plans unless otherwise specified.

The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the contract documents are at variance with those requirements, it shall promptly notify the Supervising Professional in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work.

## **Section 10 - Protection of the Public and of Work and Property**

The Contractor is responsible for the means, methods, sequences, techniques and procedures of construction and safety programs associated with the work contemplated by this contract. The Contractor, its agents or sub-contractors, shall comply with the "General Rules and Regulations for the Construction Industry" as published by the Construction Safety Commission of the State of Michigan and to all other local, State and National laws, ordinances, rules and regulations pertaining to safety of persons and property.

The Contractor shall take all necessary and reasonable precautions to protect the safety of the public. It shall continuously maintain adequate protection of all work from damage, and shall take all necessary and reasonable precautions to adequately protect all public and private property from injury or loss arising in connection with this Contract. It shall make good any damage, injury or loss to its work and to public and private property resulting from lack of reasonable protective precautions, except as may be due to errors in the contract documents, or caused by agents or employees of the City. The Contractor shall obtain and maintain sufficient insurance to cover damage to any City property at the site by any cause.

In an emergency affecting the safety of life, or the work, or of adjoining property, the Contractor is, without special instructions or authorization from the Supervising Professional, permitted to act at its discretion to prevent the threatened loss or injury. It shall also so act, without appeal, if authorized or instructed by the Supervising Professional.

Any compensation claimed by the Contractor for emergency work shall be determined by agreement or in accordance with the terms of Claims for Extra Cost - Section 15.

## **Section 11 - Inspection of Work**

The City shall provide sufficient competent personnel for the inspection of the work.

The Supervising Professional shall at all times have access to the work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for access and for inspection.

If the specifications, the Supervising Professional's instructions, laws, ordinances, or any public authority require any work to be specially tested or approved, the Contractor shall give the Supervising Professional timely notice of its readiness for inspection, and if the inspection is by an authority other than the Supervising Professional, of the date fixed for the inspection. Inspections by the Supervising Professional shall be made promptly, and where practicable at the source of supply. If any work should be covered up without approval or consent of the Supervising Professional, it must, if required by the Supervising Professional, be uncovered for examination and properly restored at the Contractor's expense.

Re-examination of any work may be ordered by the Supervising Professional, and, if so ordered, the work must be uncovered by the Contractor. If the work is found to be in accordance with the contract documents, the City shall pay the cost of re-examination and replacement. If the work is not in accordance with the contract documents, the Contractor shall pay the cost.

## **Section 12 - Superintendence**

The Contractor shall keep on the work site, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Supervising Professional. The superintendent will be responsible to perform all on-site project management for the Contractor. The superintendent shall be experienced in the work required for this Contract. The superintendent shall represent the Contractor and all direction given to the superintendent shall be binding as if given to the Contractor. Important directions shall immediately be confirmed in writing to the Contractor. Other directions will be confirmed on written request. The Contractor shall give efficient superintendence to the work, using its best skill and attention.

## **Section 13 - Changes in the Work**

The City may make changes to the quantities of work within the general scope of the Contract at any time by a written order and without notice to the sureties. If the changes add to or deduct from the extent of the work, the Contract Sum shall be adjusted accordingly. All the changes shall be executed under the conditions of the original Contract except that any claim for extension of time caused by the change shall be adjusted at the time of ordering the change.

In giving instructions, the Supervising Professional shall have authority to make minor changes in the work not involving extra cost and not inconsistent with the purposes of the work, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the Supervising Professional, and no claim for an addition to the Contract Sum shall be valid unless the additional work was ordered in writing.

The Contractor shall proceed with the work as changed and the value of the work shall be determined as provided in Claims for Extra Cost - Section 15.

## **Section 14 - Extension of Time**

Extension of time stipulated in the Contract for completion of the work will be made if and as the Supervising Professional may deem proper under any of the following circumstances:

- (1) When work under an extra work order is added to the work under this Contract;
- (2) When the work is suspended as provided in Section 20;
- (3) When the work of the Contractor is delayed on account of conditions which could not have been foreseen, or which were beyond the control of the Contractor, and which were not the result of its fault or negligence;
- (4) Delays in the progress of the work caused by any act or neglect of the City or of its employees or by other Contractors employed by the City;
- (5) Delay due to an act of Government;
- (6) Delay by the Supervising Professional in the furnishing of plans and necessary information;
- (7) Other cause which in the opinion of the Supervising Professional entitles the Contractor to an extension of time.



The Contractor shall notify the Supervising Professional within 7 days of an occurrence or conditions which, in the Contractor's opinion, entitle it to an extension of time. The notice shall be in writing and submitted in ample time to permit full investigation and evaluation of the Contractor's claim. The Supervising Professional shall acknowledge receipt of the Contractor's notice within 7 days of its receipt. Failure to timely provide the written notice shall constitute a waiver by the Contractor of any claim.

In situations where an extension of time in contract completion is appropriate under this or any other section of the contract, the Contractor understands and agrees that the only available adjustment for events that cause any delays in contract completion shall be extension of the required time for contract completion and that there shall be no adjustments in the money due the Contractor on account of the delay.

### **Section 15 - Claims for Extra Cost**

If the Contractor claims that any instructions by drawings or other media issued after the date of the Contract involved extra cost under this Contract, it shall give the Supervising Professional written notice within 7 days after the receipt of the instructions, and in any event before proceeding to execute the work, except in emergency endangering life or property. The procedure shall then be as provided for Changes in the Work-Section 13. No claim shall be valid unless so made.

If the Supervising Professional orders, in writing, the performance of any work not covered by the contract documents, and for which no item of work is provided in the Contract, and for which no unit price or lump sum basis can be agreed upon, then the extra work shall be done on a Cost-Plus-Percentage basis of payment as follows:

- (1) The Contractor shall be reimbursed for all reasonable costs incurred in doing the work, and shall receive an additional payment of 15% of all the reasonable costs to cover both its indirect overhead costs and profit;
- (2) The term "Cost" shall cover all payroll charges for employees and supervision required under the specific order, together with all worker's compensation, Social Security, pension and retirement allowances and social insurance, or other regular payroll charges on same; the cost of all material and supplies required of either temporary or permanent character; rental of all power-driven equipment at agreed upon rates, together with cost of fuel and supply charges for the equipment; and any costs incurred by the Contractor as a direct result of executing the order, if approved by the Supervising Professional;
- (3) If the extra is performed under subcontract, the subcontractor shall be allowed to compute its charges as described above. The Contractor shall be permitted to add an additional charge of 5% percent to that of the subcontractor for the Contractor's supervision and contractual responsibility;
- (4) The quantities and items of work done each day shall be submitted to the Supervising Professional in a satisfactory form on the succeeding day, and shall be approved by the Supervising Professional and the Contractor or adjusted at once;
- (5) Payments of all charges for work under this Section in any one month shall be made along with normal progress payments. Retainage shall be in accordance with Progress Payments-Section 16.

No additional compensation will be provided for additional equipment, materials, personnel, overtime or special charges required to perform the work within the time requirements of the Contract.

When extra work is required and no suitable price for machinery and equipment can be determined in accordance with this Section, the hourly rate paid shall be 1/40 of the basic weekly rate listed in the Rental Rate Blue Book published by Dataquest Incorporated and applicable to the time period the equipment was first used for the extra work. The hourly rate will be deemed to include all costs of operation such as bucket or blade, fuel, maintenance, "regional factors", insurance, taxes, and the like, but not the costs of the operator.

### **Section 16 - Progress Payments**

The Contractor shall submit each month, or at longer intervals, if it so desires, an invoice covering work performed for which it believes payment, under the Contract terms, is due. The submission shall be to the City's Finance Department - Accounting Division. The Supervising Professional will, within 10 days following submission of the invoice, prepare a certificate for payment for the work in an amount to be determined by the Supervising Professional as fairly representing the acceptable work performed during the period covered by the Contractor's invoice. To insure the proper performance of this Contract, the City will retain a percentage of the estimate in accordance with Act 524, Public Acts of 1980. The City will then, following the receipt of the Supervising Professional's Certificate, make payment to the Contractor as soon as feasible, which is anticipated will be within 15 days.

An allowance may be made in progress payments if substantial quantities of permanent material have been delivered to the site but not incorporated in the completed work if the Contractor, in the opinion of the Supervising Professional, is diligently pursuing the work under this Contract. Such materials shall be properly stored and adequately protected. Allowance in the estimate shall be at the invoice price value of the items. Notwithstanding any payment of any allowance, all risk of loss due to vandalism or any damages to the stored materials remains with the Contractor.

In the case of Contracts which include only the Furnishing and Delivering of Equipment, the payments shall be; 60% of the Contract Sum upon the delivery of all equipment to be furnished, or in the case of delivery of a usable portion of the equipment in advance of the total equipment delivery, 60% of the estimated value of the portion of the equipment may be paid upon its delivery in advance of the time of the remainder of the equipment to be furnished; 30% of the Contract Sum upon completion of erection of all equipment furnished, but not later than 60 days after the date of delivery of all of the equipment to be furnished; and payment of the final 10% on final completion of erection, testing and acceptance of all the equipment to be furnished; but not later than 180 days after the date of delivery of all of the equipment to be furnished, unless testing has been completed and shows the equipment to be unacceptable.

With each invoice for periodic payment, the Contractor shall enclose a Contractor's Declaration - Section 43, and an updated project schedule per Order of Completion - Section 2.

### **Section 17 - Deductions for Uncorrected Work**

If the Supervising Professional decides it is inexpedient to correct work that has been damaged or that was not done in accordance with the Contract, an equitable deduction from the Contract price shall be made.

## **Section 18 - Correction of Work Before Final Payment**

The Contractor shall promptly remove from the premises all materials condemned by the Supervising Professional as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute the work in accordance with the Contract and without expense to the City and shall bear the expense of making good all work of other contractors destroyed or damaged by the removal or replacement.

If the Contractor does not remove the condemned work and materials within 10 days after written notice, the City may remove them and, if the removed material has value, may store the material at the expense of the Contractor. If the Contractor does not pay the expense of the removal within 10 days thereafter, the City may, upon 10 days written notice, sell the removed materials at auction or private sale and shall pay to the Contractor the net proceeds, after deducting all costs and expenses that should have been borne by the Contractor. If the removed material has no value, the Contractor must pay the City the expenses for disposal within 10 days of invoice for the disposal costs.

The inspection or lack of inspection of any material or work pertaining to this Contract shall not relieve the Contractor of its obligation to fulfill this Contract and defective work shall be made good. Unsuitable materials may be rejected by the Supervising Professional notwithstanding that the work and materials have been previously overlooked by the Supervising Professional and accepted or estimated for payment or paid for. If the work or any part shall be found defective at any time before the final acceptance of the whole work, the Contractor shall forthwith make good the defect in a manner satisfactory to the Supervising Professional. The judgment and the decision of the Supervising Professional as to whether the materials supplied and the work done under this Contract comply with the requirements of the Contract shall be conclusive and final.

## **Section 19 - Acceptance and Final Payment**

Upon receipt of written notice that the work is ready for final inspection and acceptance, the Supervising Professional will promptly make the inspection. When the Supervising Professional finds the work acceptable under the Contract and the Contract fully performed, the Supervising Professional will promptly sign and issue a final certificate stating that the work required by this Contract has been completed and is accepted by the City under the terms and conditions of the Contract. The entire balance found to be due the Contractor, including the retained percentage, shall be paid to the Contractor by the City within 30 days after the date of the final certificate.

Before issuance of final certificates, the Contractor shall file with the City:

- (1) The consent of the surety to payment of the final estimate;
- (2) The Contractor's Affidavit in the form required by Section 44.

In case the Affidavit or consent is not furnished, the City may retain out of any amount due the Contractor, sums sufficient to cover all lienable claims.

The making and acceptance of the final payment shall constitute a waiver of all claims by the City except those arising from:

- (1) unsettled liens;
- (2) faulty work appearing within 12 months after final payment;

- (3) hidden defects in meeting the requirements of the plans and specifications;
- (4) manufacturer's guarantees.

It shall also constitute a waiver of all claims by the Contractor, except those previously made and still unsettled.

### **Section 20 - Suspension of Work**

The City may at any time suspend the work, or any part by giving 5 days notice to the Contractor in writing. The work shall be resumed by the Contractor within 10 days after the date fixed in the written notice from the City to the Contractor to do so. The City shall reimburse the Contractor for expense incurred by the Contractor in connection with the work under this Contract as a result of the suspension.

If the work, or any part, shall be stopped by the notice in writing, and if the City does not give notice in writing to the Contractor to resume work at a date within 90 days of the date fixed in the written notice to suspend, then the Contractor may abandon that portion of the work suspended and will be entitled to the estimates and payments for all work done on the portions abandoned, if any, plus 10% of the value of the work abandoned, to compensate for loss of overhead, plant expense, and anticipated profit.

### **Section 21 - Delays and The City's Right to Terminate Contract**

If the Contractor refuses or fails to prosecute the work, or any separate part of it, with the diligence required to insure completion, ready for operation, within the allowable number of consecutive calendar days specified plus extensions, or fails to complete the work within the required time, the City may, by written notice to the Contractor, terminate its right to proceed with the work or any part of the work as to which there has been delay. After providing the notice the City may take over the work and prosecute it to completion, by contract or otherwise, and the Contractor and its sureties shall be liable to the City for any excess cost to the City. If the Contractor's right to proceed is terminated, the City may take possession of and utilize in completing the work, any materials, appliances and plant as may be on the site of the work and useful for completing the work. The right of the Contractor to proceed shall not be terminated or the Contractor charged with liquidated damages where an extension of time is granted under Extension of Time - Section 14.

If the Contractor is adjudged a bankrupt, or if it makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of its insolvency, or if it persistently or repeatedly refuses or fails except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials, or if it fails to make prompt payments to subcontractors or for material or labor, or persistently disregards laws, ordinances or the instructions of the Supervising Professional, or otherwise is guilty of a substantial violation of any provision of the Contract, then the City, upon the certificate of the Supervising Professional that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor 3 days written notice, terminate this Contract. The City may then take possession of the premises and of all materials, tools and appliances thereon and without prejudice to any other remedy it may have, make good the deficiencies or finish the work by whatever method it may deem expedient, and deduct the cost from the payment due the Contractor. The Contractor shall not be entitled to receive any further payment until the work is finished. If the expense of finishing the work, including compensation for additional managerial and administrative services exceeds the unpaid balance of the Contract Sum, the Contractor and its surety are liable to the City for any excess cost incurred.

The expense incurred by the City, and the damage incurred through the Contractor's default, shall be certified by the Supervising Professional.

### **Section 22 - Contractor's Right to Terminate Contract**

If the work should be stopped under an order of any court, or other public authority, for a period of 3 months, through no act or fault of the Contractor or of anyone employed by it, then the Contractor may, upon 7 days written notice to the City, terminate this Contract and recover from the City payment for all acceptable work executed plus reasonable profit.

### **Section 23 - City's Right to Do Work**

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the City, 3 days after giving written notice to the Contractor and its surety may, without prejudice to any other remedy the City may have, make good the deficiencies and may deduct the cost from the payment due to the Contractor.

### **Section 24 - Removal of Equipment and Supplies**

In case of termination of this Contract before completion, from any or no cause, the Contractor, if notified to do so by the City, shall promptly remove any part or all of its equipment and supplies from the property of the City, failing which the City shall have the right to remove the equipment and supplies at the expense of the Contractor.

The removed equipment and supplies may be stored by the City and, if all costs of removal and storage are not paid by the Contractor within 10 days of invoicing, the City upon 10 days written notice may sell the equipment and supplies at auction or private sale, and shall pay the Contractor the net proceeds after deducting all costs and expenses that should have been borne by the Contractor and after deducting all amounts claimed due by any lien holder of the equipment or supplies.

### **Section 25 - Responsibility for Work and Warranties**

The Contractor assumes full responsibility for any and all materials and equipment used in the construction of the work and may not make claims against the City for damages to materials and equipment from any cause except negligence or willful act of the City. Until its final acceptance, the Contractor shall be responsible for damage to or destruction of the project (except for any part covered by Partial Completion and Acceptance - Section 26). The Contractor shall make good all work damaged or destroyed before acceptance. All risk of loss remains with the Contractor until final acceptance of the work (Section 19) or partial acceptance (Section 26). The Contractor is advised to investigate obtaining its own builders risk insurance.

The Contractor shall guarantee the quality of the work for a period of one year. The Contractor shall also unconditionally guarantee the quality of all equipment and materials that are furnished and installed under the contract for a period of one year. At the end of one year after the Contractor's receipt of final payment, the complete work, including equipment and materials furnished and installed under the contract, shall be inspected by the Contractor and the Supervising Professional. Any defects shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days. Any defects that are identified prior to the end of one year shall also be inspected by

the Contractor and the Supervising Professional and shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days.

The Contractor shall assign all manufacturer or material supplier warranties to the City prior to final payment. The assignment shall not relieve the Contractor of its obligations under this paragraph to correct defects.

### **Section 26 - Partial Completion and Acceptance**

If at any time prior to the issuance of the final certificate referred to in Acceptance and Final Payment - Section 19, any portion of the permanent construction has been satisfactorily completed, and if the Supervising Professional determines that portion of the permanent construction is not required for the operations of the Contractor but is needed by the City, the Supervising Professional shall issue to the Contractor a certificate of partial completion, and immediately the City may take over and use the portion of the permanent construction described in the certificate, and exclude the Contractor from that portion.

The issuance of a certificate of partial completion shall not constitute an extension of the Contractor's time to complete the portion of the permanent construction to which it relates if the Contractor has failed to complete it in accordance with the terms of this Contract. The issuance of the certificate shall not release the Contractor or its sureties from any obligations under this Contract including bonds.

If prior use increases the cost of, or delays the work, the Contractor shall be entitled to extra compensation, or extension of time, or both, as the Supervising Professional may determine.

### **Section 27 - Payments Withheld Prior to Final Acceptance of Work**

The City may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any certificate to the extent reasonably appropriate to protect the City from loss on account of:

- (1) Defective work not remedied;
- (2) Claims filed or reasonable evidence indicating probable filing of claims by other parties against the Contractor;
- (3) Failure of the Contractor to make payments properly to subcontractors or for material or labor;
- (4) Damage to another Contractor.

When the above grounds are removed or the Contractor provides a Surety Bond satisfactory to the City which will protect the City in the amount withheld, payment shall be made for amounts withheld under this section.

### **Section 28 - Contractor's Insurance**

- A. The Contractor shall procure and maintain during the life of this Contract, including the guarantee period and during any warranty work, such insurance policies, including those set

forth below, as will protect itself from all claims for bodily injuries, death or property damage which may arise under this Contract; whether the acts were made by the Contractor or by any subcontractor or anyone employed by them directly or indirectly. The following insurance policies are required:

1. Worker's Compensation Insurance in accordance with all applicable state and federal statutes. Further, Employers Liability Coverage shall be obtained in the following minimum amounts:

Bodily Injury by Accident - \$500,000 each accident

Bodily Injury by Disease - \$500,000 each employee

Bodily Injury by Disease - \$500,000 each policy limit

2. Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 07 98. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements including, but not limited to: Products and Completed Operations, Explosion, Collapse and Underground coverage or Pollution. Further, the following minimum limits of liability are required:

\$1,000,000 Each occurrence as respect Bodily Injury Liability or Property Damage Liability, or both combined.

\$2,000,000 Per Job General Aggregate

\$1,000,000 Personal and Advertising Injury

\$2,000,000 Products and Completed Operations Aggregate

3. Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 07 97. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. Further, the limits of liability shall be \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

4. Umbrella/Excess Liability Insurance shall be provided to apply excess of the Commercial General Liability, Employers Liability and the Motor Vehicle coverage enumerated above, for each occurrence and for aggregate in the amount of \$1,000,000.

B. Insurance required under Section A.2 and A.3 of this Contract shall be considered primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance. Further, the Contractor agrees to waive any right of recovery by its insurer against the City.

C. In the case of all Contracts involving on-site work, the Contractor shall provide to the City before the commencement of any work under this Contract documentation demonstrating it has obtained the above mentioned policies. Documentation must provide and demonstrate an unconditional 30 day written notice of cancellation in favor of the City of Ann Arbor.

Further, the documentation must explicitly state the following: (a) the policy number; name of insurance company; name and address of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions which shall be approved by the City, in its sole discretion; (c) that the policy conforms to the requirements specified. An original certificate of insurance may be provided as an initial indication of the required insurance, provided that no later than 21 calendar days after commencement of any work the Contractor supplies a copy of the endorsements required on the policies. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) to the City. If any of the above coverages expire by their terms during the term of this Contract, the Contractor shall deliver proof of renewal and/or new policies to the Administering Department at least ten days prior to the expiration date.

- D. Any Insurance provider of Contractor shall be admitted and authorized to do business in the State of Michigan and shall carry and maintain a minimum rating assigned by A.M. Best & Company 's Key Rating Guide of ' A ' Overall and a minimum Financial Size Category of ' V '. Insurance policies and certificates issued by non-admitted insurance companies are not acceptable unless approved in writing by the City.

### **Section 29 - Surety Bonds**

Bonds will be required from the successful bidder as follows:

- (1) A Performance Bond to the City of Ann Arbor for the amount of the bid(s) accepted;
- (2) A Labor and Material Bond to the City of Ann Arbor for the amount of the bid(s) accepted.

Bonds shall be executed on forms supplied by the City in a manner and by a Surety Company satisfactory to the City Attorney.

### **Section 30 - Damage Claims**

The Contractor shall be held responsible for all damages to property of the City or others, caused by or resulting from the negligence of the Contractor, its employees, or agents during the progress of or connected with the prosecution of the work, whether within the limits of the work or elsewhere. The Contractor must restore all property injured including sidewalks, curbing, sodding, pipes, conduit, sewers or other public or private property to not less than its original condition with new work.

### **Section 31 - Refusal to Obey Instructions**

If the Contractor refuses to obey the instructions of the Supervising Professional, the Supervising Professional shall withdraw inspection from the work, and no payments will be made for work performed thereafter nor may work be performed thereafter until the Supervising Professional shall have again authorized the work to proceed.

### **Section 32 - Assignment**

Neither party to the Contract shall assign the Contract without the written consent of the other. The Contractor may assign any monies due to it to a third party acceptable to the City.



### **Section 33 - Rights of Various Interests**

Whenever work being done by the City's forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Supervising Professional, to secure the completion of the various portions of the work in general harmony.

The Contractor is responsible to coordinate all aspects of the work, including coordination of, and with, utility companies and other contractors whose work impacts this project.

### **Section 34 - Subcontracts**

The Contractor shall not award any work to any subcontractor without prior written approval of the City. The approval will not be given until the Contractor submits to the City a written statement concerning the proposed award to the subcontractor. The statement shall contain all information the City may require.

The Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and all other contract documents applicable to the work of the subcontractors and to give the Contractor the same power to terminate any subcontract that the City may exercise over the Contractor under any provision of the contract documents.

Nothing contained in the contract documents shall create any contractual relation between any subcontractor and the City.

### **Section 35 - Supervising Professional's Status**

The Supervising Professional has the right to inspect any or all work. The Supervising Professional has authority to stop the work whenever stoppage may be appropriate to insure the proper execution of the Contract. The Supervising Professional has the authority to reject all work and materials which do not conform to the Contract and to decide questions which arise in the execution of the work.

The Supervising Professional shall make all measurements and determinations of quantities. Those measurements and determinations are final and conclusive between the parties.

### **Section 36 - Supervising Professional's Decisions**

The Supervising Professional shall, within a reasonable time after their presentation to the Supervising Professional, make decisions in writing on all claims of the City or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents.

### **Section 37 - Storing Materials and Supplies**

Materials and supplies may be stored at the site of the work at locations agreeable to the City unless specific exception is listed elsewhere in these documents. Ample way for foot traffic and drainage must be provided, and gutters must, at all times, be kept free from obstruction. Traffic on streets shall be interfered with as little as possible. The Contractor may not enter or occupy with agents, employees, tools, or material any private property without first obtaining written permission from its owner. A copy of the permission shall be furnished to the Supervising Professional.

### **Section 38 - Lands for Work**

The Contractor shall provide, at its own expense and without liability to the City, any additional land and access that may be required for temporary construction facilities or for storage of materials.

### **Section 39 - Cleaning Up**

The Contractor shall, as directed by the Supervising Professional, remove at its own expense from the City's property and from all public and private property all temporary structures, rubbish and waste materials resulting from its operations unless otherwise specifically approved, in writing, by the Supervising Professional.

### **Section 40 - Salvage**

The Supervising Professional may designate for salvage any materials from existing structures or underground services. Materials so designated remain City property and shall be transported or stored at a location as the Supervising Professional may direct.

### **Section 41 - Night, Saturday or Sunday Work**

No night or Sunday work (without prior written City approval) will be permitted except in the case of an emergency and then only to the extent absolutely necessary. The City may allow night work which, in the opinion of the Supervising Professional, can be satisfactorily performed at night. Night work is any work between 8:00 p.m. and 7:00 a.m. No Saturday work will be permitted unless the Contractor gives the Supervising Professional at least 48 hours but not more than 5 days notice of the Contractor's intention to work the upcoming Saturday.

### **Section 42 - Sales Taxes**

Under State law the City is exempt from the assessment of State Sales Tax on its direct purchases. Contractors who acquire materials, equipment, supplies, etc. for incorporation in City projects are not likewise exempt. State Law shall prevail. The Bidder shall familiarize itself with the State Law and prepare its Bid accordingly. No extra payment will be allowed under this Contract for failure of the Contractor to make proper allowance in this bid for taxes it must pay.

**Section 43**

**CONTRACTOR'S DECLARATION**

I hereby declare that I have not, during the period \_\_\_\_\_, 201\_\_\_\_, to  
\_\_\_\_\_, 20\_\_\_, performed any work, furnished any materials, sustained any loss, damage or  
delay, or otherwise done anything in addition to the regular items (or executed change orders) set  
forth \_\_\_\_\_ in \_\_\_\_\_ the \_\_\_\_\_ Contract \_\_\_\_\_ titled

\_\_\_\_\_,  
for which I shall ask, demand, sue for, or claim compensation or extension of time from the City,  
except as I hereby make claim for additional compensation or extension of time as set forth on the  
attached itemized statement. I further declare that I have paid all payroll obligations related to this  
Contract that have become due during the above period and that all invoices related to this Contract  
received more than 30 days prior to this declaration have been paid in full except as listed below.

There is/is not (Contractor please circle one and strike one as appropriate) an itemized statement  
attached regarding a request for additional compensation or extension of time.

\_\_\_\_\_  
Contractor \_\_\_\_\_ Date \_\_\_\_\_

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Past due invoices, if any, are listed below.

**Section 44**

**CONTRACTOR'S AFFIDAVIT**

The undersigned Contractor, \_\_\_\_\_, represents that on \_\_\_\_\_ 20\_\_, it was awarded a contract by the City of Ann Arbor, Michigan to \_\_\_\_\_ under the terms and conditions of a Contract titled \_\_\_\_\_.

The Contractor represents that all work has now been accomplished and the Contract is complete.

The Contractor warrants and certifies that all of its indebtedness arising by reason of the Contract has been fully paid or satisfactorily secured; and that all claims from subcontractors and others for labor and material used in accomplishing the project, as well as all other claims arising from the performance of the Contract, have been fully paid or satisfactorily settled. The Contractor agrees that, if any claim should hereafter arise, it shall assume responsibility for it immediately upon request to do so by the City of Ann Arbor.

The Contractor, for valuable consideration received, does further waive, release and relinquish any and all claims or right of lien which the Contractor now has or may acquire upon the subject premises for labor and material used in the project owned by the City of Ann Arbor.

This affidavit is freely and voluntarily given with full knowledge of the facts.

Contractor  
By  
    (Signature)  
Its  
    (Title of Office)

Subscribed and sworn to before me, on this \_\_\_\_\_ day of \_\_\_\_\_, 201\_\_  
\_\_\_\_\_, \_\_\_\_\_ County, Michigan

Notary Public  
My \_\_\_\_\_ commission expires \_\_\_\_\_ on:

## **Supplemental Insurance Requirements**

The following supplemental insurance requirements are in addition to those insurance requirements specified in “Section 28 - Contractor’s Insurance” of the General Conditions.

The Contractor shall name The Water Resources Commission of Washtenaw County and the Mallett’s Creek Drainage District as additionally insured.

## **STANDARD SPECIFICATIONS**

All work under this contract shall be performed in accordance with the Public Services Department Standard Specifications in effect at the date of availability of the contract documents stipulated in the Advertisement. All work under this Contract which is not included in these Standard Specifications, or which is performed using modifications to these Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents.

A copy of the Public Services Department Standard Specifications may be purchased from the Engineering Division, (Fourth Floor, City Hall, Ann Arbor, Michigan), for \$35.00 per copy. In addition, a copy of these Standard Specifications is available for public viewing at the Engineering Division office, for review Monday through Friday between the hours of 8:30 a.m. and 4:00 p.m. In addition, a copy of these Standard Specifications is available for public viewing on the City of Ann Arbor Website:  
[www.a2gov.org/government/publicservices/project\\_management/privatedev/Pages/Standardspecificationbook.aspx](http://www.a2gov.org/government/publicservices/project_management/privatedev/Pages/Standardspecificationbook.aspx)

01 21 00

## ALLOWANCES

01 21 00

This section includes requirements for processing and handling specific products and/or services.

## A. General:

Include in the Contract Sum all allowances stated in the Contract Documents. Designate in the construction schedules the delivery dates for Products specified under each allowance.

1. Related requirements include:
  - a. Specific Product / Service Specification.
  - b. Submittals Section 01 33 00.
2. Specific Allowances for this Project are:
  - a. **Permits;**
    - City of Ann Arbor Soil Erosion / Grading
    - City of Ann Arbor Right-of-Way Work Permit
    - City of Ann Arbor Lane Closure (Contractor's option)

## B. Definition:

1. Allowance for Products:
  - a. The amount of each allowance includes:
    - 1) The cost of the product to the Contractor, less any applicable trade discounts.
    - 2) Delivery to the Project site.
    - 3) Applicable taxes.
  - b. In addition to the amount of each allowance, include as incidental in the Contract Sum the Contractor's costs for:
    - 1) Handling at the Project site; including unloading, uncrating, and storage.
    - 2) Protection from the elements and from damage.
    - 3) Labor for installation and finishing.
    - 4) Other expenses required to complete the installation.
2. Allowance for Services:
  - a. The amount of each allowance includes:
    - 1) The cost of the services to the Contractor.
  - b. The Contractor's costs for processing and paying approved service provides invoices that are incidental to the Contract.

## C. Selection of Allowances:

1. The Engineer shall consult with the Contractor in consideration of Products/Services. Make selection in consultation with the Owner. Obtain Owner's written decision, designating, transmitting Owner's decision to the Contractor and prepare Change Orders as necessary.
2. The Contractor shall notify the Engineer of:
  - a. Any reasonable objection Contractor may have against any supplier or party under consideration for installation.
  - b. Any affect of the Construction Schedule anticipated by selections under consideration.

## D. Administration:

1. Contractor's responsibility for delivery and installation:
  - a. Arrange for and process Shop Drawings, Product Data and Samples, as required, and submit to Engineer.
  - b. Upon delivery of Products to Project site, promptly inspect Products for damage or defects.
  - c. Submit to Owner/Engineer claims for transportation damage.
  - d. Install and finish products in compliance with requirements of referenced Specifications sections.
2. Adjustment of costs:
  - a. Should the net costs be more or less than the specified amount of the allowances, the Contract Sum will be adjusted accordingly by Change Order.
  - b. At contract closeout, reflect all approved changes in contract amounts in the final statement of accounting.

01 22 00	UNIT PRICES	01 22 00
01 22 13	<u>Method of Measurement</u>	01 22 13

## A. General

Quantities of work completed under the contract will be measured by the Engineer according to United States standard measures unless otherwise noted.

Quantities of materials furnished and of work performed under the contract will be determined by methods of measurement and computations that are generally recognized as conforming to good engineering practice. Aggregates furnished and measured by weight will be paid including an allowance for moisture of up to six [6%] percent moisture. Where aggregate field tests indicate moisture content is greater than 6%, a payment adjustment shall be made. The excess weight above 6% moisture shall be deducted from the scale weights.

All items of work for this contract will be measured in units as indicated on the Proposal and as noted herein. CF, cubic feet; CY, cubic yard; EA, each; LS., lump sum; LF., linear feet; SY, square yard; SF., square feet; CF, cubic feet; Ton (2000 lb.); AC, acre 43,560 sf.

01 22 16	UNIT PRICE PAY ITEMS	01 22 16
----------	----------------------	----------

1 *Mobilization*

Payment for this item shall include project costs related to preparatory work, operations and General Requirements Division, 01 00 00 less sub articles amounts paid as separate items as related to the work at the Site designated above the item. The Lump Sum amount shall be paid in increments on a basis of work completed. Mobilization shall be limited to 5% of the Base Bid Amount.

2 *Audio-Video Documentation*

Construction video recording shall be done within the entire construction zone of influence. Payment for this item shall include all labor, equipment and materials required. The completed work shall be measured and paid for at the contract unit price as a lump sum (LS).

3 *Demolition*

Payment for this item shall include project costs related to Removal and Disposal or Salvage of materials including but not limited to Trees, and Shrubs, and abandonment of existing culverts. Measurement for this item will be made as a Lump Sum (LS) for all work described. Payment will be based on schedule of values and an agreed upon percentage of work complete.

4 *Soil Erosion Control*

Payment for this item shall include project costs related to installation and maintenance of an approved Soil Erosion Control System per jurisdictional and permit requirements. The Lump Sum (LS) amount shall be paid in increments on a basis of work 25% for Installation, 5% increments per month to 75%, and 25% for completion of removal.

5 *Earthwork (includes topsoil & rain garden mix)*

Payment for this item shall include project costs related to excavation and backfilling including but not limited to Strip and Stockpile Existing Topsoil, Earthwork Mass Grade (use cut for fill), Re-spread Topsoil (4" depth outside RG), Compost or rain garden mix, and Compost Integration. Soil Erosion Control and stockpile maintenance shall be included in this item. Measurement for this item will be made as a Lump Sum (LS) for all work described. Payment will be based on schedule of values and an agreed upon percentage of work complete. Silt fence placement and maintenance to secure stockpiles should be included here.



---

6                    *Utilities*

Payment for this item shall include all labor, material and equipment necessary for the installation of site utilities. These utilities include, but not limited to storm structure rim adjustments, culvert pipe field fabrication and installation, and all other site work not covered elsewhere for this site.

Measurement for this item will be made as a Lump Sum (LS) for all work described. Payment will be based on schedule of values and an agreed upon percentage of work complete.

7                    *Stonework*

Payment for this item shall include all labor, material and equipment necessary for the installation of all stone work specified for this site including stone at culvert ends.

Measurement for this item will be made as a Lump Sum (LS) for all work described. Payment will be based on schedule of values and an agreed upon percentage of work complete.

8                    *Planting*

Payment for this item shall include all labor, material and equipment necessary for the installation of all plantings specified for this site.

Measurement for this item will be made as a Lump Sum (LS) for all work described. Payment will be based on schedule of values and an agreed upon percentage of work complete.

9                    *Lawn*

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish and place the topsoil, seed, and mulch as called for on the plans and specifications. Watering seed until vigorous turf growth is established shall be considered as incidental to the lawn restoration work. The completed work shall be paid for at the contract unit price of Lump Sum (LS).

10                  *Landscape Boulder*

Payment for this item shall include all labor, material, and equipment to provide Landscape Boulder(s) as shown on the plans and details. This item shall include but not be limited to placing of the boulder, clean up, and all items necessary to complete the installation. The completed work shall be paid for at the contract unit price of Each (EA).

11                  *Maintenance and Guarantee*

Payment for this item shall include all labor, material and equipment necessary to provide site visits and maintain all plantings for the period designated.

Measurement for this item will be made as a Lump Sum (LS) for all work described. Payment will be made on a seasonal basis of 25% per quarter.

12                  *Permits*

An Allowance has been established for permits incurred in the project. Payment for this item shall include all direct fees and charges incurred by the Contractor related to permits. Actual costs shall be deducted from the allowance and a credit shall be given to the Owner for the difference.

The following items shall be used to adjust the Base Bid prices if adjustments in quantities are made:

*Erosion Control, Inlet Filter*

The contract unit price for EACH (EA) Erosion Control, Inlet Filter shall be payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain catch basin or inlet protection in accordance with the plan notes and details. Maintenance work will include removal and replacement of filters as directed by the Consultant and/or Owner. Removal and disposal of the protection devices and accumulated sediment upon final completion of the project shall be considered as included in the work. The work shall also include removal of accumulated sediment from the ground surface and from the drainage structure sumps.

*Erosion Control, Silt Fence*

The contract unit price for Lineal Feet (LF) shall be payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain the silt fence in accordance with the plans, details and specifications. Removal and disposal of the silt fence and accumulated sediment upon final completion of the project shall be considered included in the work. Placement and maintenance of stone outlet filters at low points along the silt fence line shall also be considered as included in the silt fence work. Maintenance work will include removal and replacement of silt fence and outlet filters as directed by the Engineer. Restoration of disrupted areas adjacent to silt fence shall be considered part of this item.

*Erosion Control Blanket*

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain the soil erosion blanket in accordance with the plans, details and specifications and jurisdictional requirements including maintaining adjacent flow distances. Removal and disposal of the blanket and accumulated sediment upon final completion of the project shall be considered included in the work. Maintenance work will include removal and replacement of blanket as directed by the Engineer. Restoration of disrupted areas adjacent to blanket shall be considered part of this item.

*Tree Protection Fence*

The contract unit price for Lineal Feet (LF) shall be payment in full for all labor, materials, and equipment necessary to install the fence in accordance with the plan details, and remove it upon completion of construction. Posts, bracing fence material and hardware shall all be considered as included in the fence construction work.

*Anti-tracking Pad*

The contract unit price for Lineal Feet (LF) shall be payment in full for all labor, materials, and equipment necessary to install the anti-tracking pad in accordance with the plans and details, and its removal upon completion of construction. Protection of the sidewalk crossings and restoration of lawn areas or damaged sidewalks are considered part of this item.

*Strip and Stockpile Topsoil*

Payment for this item shall include all labor, material and equipment to strip and stockpile topsoil. This includes grubbing of areas, removal of trees under 6" in diameter as well as logs, debris, brush and removal of sod, as well as any necessary erosion control practices to contain sediment as a result of stockpiling. The completed work shall be paid for at the contract unit price of Cubic Yard (CY).

*Rough Grade*

Payment for this item shall include all labor, material and equipment to rough grade the site to the subgrades defined in the specifications and details. The completed work shall be paid for at the contract unit price of Cubic Yard (CY).

*Compost*

Payment for this item shall include all labor, material, equipment, shipping, and scalehouse fees to transport compost to construction site and offload. The completed work shall be paid for at the contract unit price of Cubic Yard (CY).

*Rain Garden Mix Placement*

Payment for this item shall include all labor, material and equipment to mix the different soil/compost components, adequately scarify the subgrade, and place and integrate the Rain Garden Mix as defined in the specifications, plans and details. The completed work shall be paid for at the contract unit price of Cubic Yard (CY).

*Removal of Excess Excavated Material*

Payment for this item shall include all labor, material and equipment to remove excess soil from site and dispose of any unsuitable material. The completed work shall be paid for at the contract unit price of Cubic Yard (CY).

*Rain Garden Spillway*

Payment for this item shall include all labor, material and equipment to provide and install Rain Garden Spillway. Assembly as shown on the plans and details. This item shall include but not limited to excavation, bedding material, compaction, placement of geotextile fabric, support, placing and chocking of stone, fine grading around spillway, clean up and all items necessary to complete the installation. The completed work shall be paid for at the contract unit price of Each (EA).

*Stone at Culvert End*

Payment for this item shall include all labor, material and equipment to provide Stone at Culvert End as shown on the plans and details. This item shall include but not limited to placing and chocking of stone and clean up and all items necessary to complete the installation. The completed work shall be paid for at the contract unit price of Ton (Ton).

*Tree Transplant*

Payment for this item shall include all labor, material and equipment to transplant and install existing trees on site to staked, planting locations (within 100 yards). Installation to be as shown on the plans and details. This item shall include but not limited to pulling earthen plug, tree pick-up, tree transportation, and tree placement, mulch, watering, any necessary lawn restoration and all items necessary to complete the installation. The completed work shall be paid for at the contract unit price of EACH (EA).

*Plant Maintenance and Guarantee*

Payment for this item shall include all labor, material and equipment necessary to maintain and guarantee the planting for 1 period as defined in the specification. Payment for Plant Maintenance and Guarantee shall include the following: any necessary replacement, disease and insect control, pruning, fertilizer application, mulching, removal of plant support and tags (if any), watering, weeding, monthly reporting, communication and all other equipment necessary for a successful plant maintenance and guarantee period. The completed work shall be paid for at the contract unit price Per Visit.

*Tree Planting [for Item Indicated]*

Payment for this item shall include all labor, materials and equipment necessary to install the trees as shown on the plans, plan details and as described in the specifications. Payment for tree planting shall include the following (except such items for which separate prices are received on the bid form): tree, planting mix, mulch, staking, tree support, water, and all items necessary to complete the installation. The completed work shall be paid for at the contract unit price of EACH (EA).

*Native Plug, Perennial, and Shrub Planting [for Item Indicated]*

Payment for this item shall include all labor, material and equipment to provide and install native plugs, perennials and shrubs. The contract unit price shall be payment in full for all labor, materials and equipment necessary to install the native plugs, perennials, and shrubs as shown on the plans, plan details and as described in the specifications. Payment for native plugs, perennials and shrub planting shall include the following (except such items for which separate prices are received on the bid form): native plug, perennial or shrub, rain garden soil mix, mulch, water, and all items necessary to complete the installation.

01 29 00

## PAYMENT PROCEDURES

01 29 00

Payment Application shall be submitted on the “Contractor’s Application for Payment” form EJCDC- C-620 The Application shall list the ‘ Unit Prices’ or ‘ Schedule of Values’.

The sum of the extended ‘unit prices’ or the ‘ schedule of values’ shall equal the agreed “Contract Prices” (00520).

- A. ‘Unit Prices’ shall be the ‘unit prices’ and items listed in the Contract Proposal 00410
- B. Other Attachments to the “ Contractors Application for Payment” shall be as listed”
  - 1. Noted in the Supplementary Conditions art .SC- 6.00 ‘Contractors Responsibilities’ Required by Funding Agencies.
- C. Contractor shall submit an application for payment no more frequently than one per calendar month.

# Contractor's Application For Payment No. \_\_\_\_\_

To (Owner):  Project:  Owner's Contract No.:	Application Period: From (Contractor): Contract: Contractor's Project No.:
	Application Date: Via (Engineer)  Engineer's Project No.:

**APPLICATION FOR PAYMENT**

**Change Order Summary**

Approved Change Orders	Additions	Deductions
<b>TOTALS</b>		
<b>NET CHANGE BY</b>		
<b>CHANGE ORDERS</b>		

1. ORIGINAL CONTRACT PRICE..... \$ \_\_\_\_\_
2. Net change by Change Orders..... \$ \_\_\_\_\_
3. CURRENT CONTRACT PRICE (Line 1 ± 2)..... \$ \_\_\_\_\_
4. TOTAL COMPLETED AND STORED TO DATE  
(Column F on Progress Estimate) ..... \$ \_\_\_\_\_
5. RETAINAGE:
  - a. \_\_\_\_\_ % x \$ \_\_\_\_\_ Work Completed..... \$ \_\_\_\_\_
  - b. \_\_\_\_\_ % x \$ \_\_\_\_\_ Stored Material..... \$ \_\_\_\_\_
  - c. Total Retainage (Line 5a + Line 5b) ..... \$ \_\_\_\_\_
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c) ..... \$ \_\_\_\_\_
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application) ..... \$ \_\_\_\_\_
8. AMOUNT DUE THIS APPLICATION..... \$ \_\_\_\_\_
9. BALANCE TO FINISH, PLUS RETAINAGE  
(Column G on Progress Estimate + Line 5 above) ..... \$ \_\_\_\_\_

**CONTRACTOR'S CERTIFICATION**

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Payment of: \$ \_\_\_\_\_ (Line 8 or other - attach explanation of other amount)

is recommended by: \_\_\_\_\_ (Engineer) (Date) \_\_\_\_\_

Payment of: \$ \_\_\_\_\_ (Line 8 or other - attach explanation of other amount)

is approved by: \_\_\_\_\_ (Owner) (Date) \_\_\_\_\_

Approved by: \_\_\_\_\_ Funding Agency (if applicable) (Date) \_\_\_\_\_

01 31 00

**PROJECT MANAGEMENT AND COORDINATION**

01 31 00

## A. General

This Section discusses Contract requirements for project management.

1. Related Requirements
  - a. Submittal Procedure – 01 33 00
  - b. Specific specifications – where noted

## B. Project Coordination:

1. Coordinate scheduling, submittals, and Work of the various sections of the Contract Documents to ensure efficient and orderly sequence of installation of interdependent construction elements.
  - a. Coordinate space requirements, supports, and installation of mechanical and electrical Work which are indicated diagrammatically on Drawings. Follow routing shown for pipes as closely as practicable.
  - b. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion.

Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

Inside all buildings except as otherwise indicated, pipes, ducts, and wiring may be surface mounted. Coordinate locations of fixtures and outlets with finish elements.

2. After substantial completion, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

## C. Pre-Construction Meeting: Owner/Engineer are responsible for initiating this meeting.

1. Engineer will schedule a meeting after Notice of Award.
2. Attendance Required: Owner, Engineer and Contractor.
3. Agenda:
  - a. Distribution of Contract Documents.
  - b. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
  - c. Designation of personnel representing the parties in Contract and the Engineer.
  - d. Third Party interests; as appropriate
    - Third Party funding....required if Federal funding involved.
  - e. Procedures and processing of field decisions, submittals, and substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
  - f. Scheduling.
  - g. Use of premises by Owner and Contractor.
  - h. Owner's requirements.
  - i. Construction facilities and controls provided by Owner.
  - j. Survey and construction layout.
  - k. Security and housekeeping procedures.
  - l. Procedures for testing.
  - m. Procedures for maintaining record documents.
  - n. Inspection and acceptance of equipment put into service during construction period.
4. Engineer will record minutes and distribute copies within five days after meeting to participants, with copies to Engineer, Owner, participants, and those affected by decisions made.

## D. Progress Meetings: Contractors are responsible for initiating Progress Meetings:

1. Schedule and administer meetings throughout progress of the Work at monthly intervals. At request of Owner or Engineer, interval may be increased to bi-monthly.
2. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
3. Attendance Required: Job superintendent, major Subcontractors and suppliers, and Owner, and/or Engineer, as appropriate to agenda topics for each meeting.
4. Agenda:
  - a. Review minutes of previous meetings.
  - b. Review of Work progress.
  - c. Field observations, problems, and decisions.
  - d. Identification of problems which impede planned progress.
  - e. Review of submittals schedule and status of submittals.
  - f. Review of off-site fabrication and delivery schedules.
  - g. Maintenance of progress schedule and schedule changes.
  - h. Corrective measures to regain projected schedules.

Arbor Oaks Park Rain Gardens

April 11, 2013

File # 5504-03/17208

- i. Planned progress during succeeding work period.
  - j. Coordination of projected progress.
  - k. Maintenance of quality and work standards.
  - l. Effect of proposed changes on progress schedule and coordination.
  - m. Other business relating to Work.
  - n. Status of Federal requirements
5. Record minutes and distribute copies within five days after meeting to participants, with copies to Engineer, Owner, participants, and those affected by decisions made.

**01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION 01 32 00**

A. General

This Section includes preparation and submittal of documents regarding Construction Progress.

- 1. Related Requirements:
  - a. Submittals Section 01 33 00.
  - b. Audio-Video Section 01 32 33.

**01 32 16 CONSTRUCTION PROGRESS SCHEDULE 01 32 16**

- A. Prepare a “Bar Chart Schedule” with separate lines for each major portion of the Work operation as Work area identifying the first work day of each week.
  - 1. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
  - 2. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates.
- B. Submit Progress Schedule:
  - 1. Submit initial schedule in duplicate within 15 days after date established in Notice to Proceed.
  - 2. Submit revised schedules with each Application for Payment, identifying changes since previous version.

**01 32 17 PROPOSED PRODUCT LIST 01 32 17**

- A. Within 15 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

**01 32 23 SURVEY AND LAYOUT DATA 01 32 23**

- A. The Engineer will provide control lines/points and bench mark staking.
  - 1. All other lines and levels necessary to the location and construction of the work under the contract shall be established by the Contractor, unless otherwise stated in the Specifications
- B. The Contractor shall carefully compare all elevations given on the drawings with the information shown on the construction survey stakes and shall call the Owner’s attention to any discrepancies before proceeding with the work. When stakes are to be set, the Owner and Engineer must each be given 48 hours notice that stakes will be required.
  - 1. The Contractor shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, he shall be charged with the resulting expense, and also shall be responsible for delays and errors caused by their unnecessary loss or disturbance.
  - 2. Contractor shall review technical specifications and they may list specific cross slope and longitudinal slope criteria.

**01 32 33 AUDIO-VIDEO DOCUMENTATION 01 32 33**

1.01 SUMMARY

- A. This Section lists procedure equipment and submittals to document the surface features within the proposed construction zone of influence. The color photography shall take place on site:

Arbor Oaks Park Rain Gardens  
 April 11, 2013  
 File # 5504-03/17208



- 
- B. 1. Pre-construction Documentation prior to the placement of equipment and materials on the job site.  
Related Requirements:  
1. Submittals Section 01 33 00.

#### 1.02 REFERENCES

- A. Definitions:  
1. Construction Zone of Influence:  
a. The area within the permanent and temporary construction zone, and the areas adjacent to these areas which may be affected by routine construction operations.  
b. Road R.O.W. plus twenty feet beyond the R.O.W. line.  
c. As directed by the Owner/Engineer.  
2. Surface features shall include but not be limited to all visible roadways, pavements, curbs, driveways, pathways, sidewalks, culverts, headwalls, retaining walls, buildings, playground equipment, recreational fields, landscaping, trees, tree canopies, shrubbery and fences. Of particular concern shall be the existence of any faults, fractures, and or defects.

#### 1.03 ADMINISTRATIVE

- A. Scheduling: Contractor shall notify the Owner/Engineer prior to audio-video documentation.  
1. Scheduling shall determine:  
a. Special areas of documentation.  
b. Use of plan stationing vs GPS.  
c. Alternate methods of video location.

#### 1.04 SUBMITTALS

- A. Audio-Video Data:  
1. Submit three (3) sets of DVD discs in .wav format and "run sheet" logs. Distribute to Owner, Engineer/Inspector and Contractor.  
B. Submit one (1) "Audio-Video Viewer" to the Engineer/Inspector.

#### 1.05 QUALITY ASSURANCE

- A. The supplier/subcontractor shall have five (5) years experience as a known skilled firm providing color audio-video documentation.  
B. High quality color camcorders with ¼", 1/3", or ½" charged coupled device imaging systems must be used. Camera must have optical stabilization, electronic stabilization is not acceptable. Camera must be capable of 20x minimum optical magnification. Camera must be capable of producing NTSC 525 lines resolution√ 60 fields / 30 frames per second. Minimum illumination capabilities of at least 3-lux.  
C. Video must be mastered on high quality formats only. High quality master formats acceptable are DVD. Where video links are necessary Y/C (S-V) connections are to be used.

#### 1.06 SITE CONDITIONS

- A. All video taping shall be done during times of good visibility. No video taping shall be done when more than 10% of the ground is covered with snow, unless otherwise authorized by Owner/Engineer.  
B. Documentation shall occur prior to the placement of equipment and/or materials on the project site.



C. The following table classifies typical areas and sets the maximum average rates of travel in those areas:

<u>AREA TYPE</u>	<u>TYPICALLY CHARACTERIZED BY</u>	<u>AVG. FEET/MIN.</u>
High Density	Hard surface streets, curbs, drives & sidewalks 50 ft. lots; very few empty lots	48
Medium Density	Gravel roads, hard and soft surface drives No sidewalks, culverts and headwalls, 100' lots Few empty lots	60
Low Density	Gravel roads, small fields or woods, occasional Houses or buildings	90
Extra Low Density	Gravel roads, large fields, sparse number of houses	120

2.01 AUDIO-VIDEO DOCUMENTATION

- A. Audio-Video Documentation shall be in DVD format media.
  - 1. Disc shall be labeled with appropriate project information and shall be able to be cross-referenced with runsheets. Information on labels shall include disc number, Project title, Project location, date, particular set (if multiple copies), and a quick reference list of disk contents.
  - 2. Have a corresponding and simultaneously recorded audio track containing the commentary of the camera operator. The commentary shall assist in the maintenance of viewer orientation, identification of surface features, and objective description of the points of interest being shown on the video portion of the recording.
  - 3. Display
    - a. Time and date of recording.
    - b. Location of recording i.e. street name, and address or engineering stationing

3.00 AUDIO-VIDEO DOCUMENTATION

- A. Vehicle Coverage:
  - 1. Where conventional wheeled vehicles are used, camera is to be mounted securely to produce steady viewing. Camera lens is to be a minimum of 8 feet from ground of viewing area, or at a level to facilitate best perspective and line of sight.
  - 2. Vehicles used while performing documentation must be plainly marked with Company name and phone number. Caution signs, flags and strobes may be utilized on vehicle as necessary.

3.01 DOCUMENTATION

- A. Panning and zoom rates shall be electronically or manually controlled to provide clear viewing on playback.
- B. Location:
  - 1. Houses and buildings shall be identified visually by house number, when visible, in such a manner that structures of the proposed system can be located by reference. In all instances, location shall be identified by audio or visual means at intervals not to exceed 100 lineal feet.
  - 2. The engineering stationing must be continuous and accurate and reflect the stationing within the field of view. The engineering stationing must coincide with stationing on project plans and utilize standard engineering symbols i.e. 5+00. Global Positioning Satellites may be used with or in place of engineering stationing as directed by engineer.
  - 3. Condition of visible surface features, and street/structures should also be described.

**01 33 00 SUBMITTAL PROCEDURES****01 33 00**

## 1.01 GENERAL

## A. SUMMARY:

1. The Contractor shall submit to the Engineer full information indicating the source of materials and names of major suppliers which the Contractor proposes to use. This information shall be complete to the extent that the Engineer may judge if the proposed materials and supplies will meet the contract requirements. Prior to the Engineer's approval, any work done by the Contractor shall be at his own risk.
2. The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request, concerning work performed or to be performed under this contract.
3. The Engineer's approval of information, supplied by the Contractor, shall in no way release the Contractor from his responsibility for the proper installation and performance of any material, equipment or arrangement, or from his liability to replace same should it prove defective.

## B. Related Requirements:

1. General Requirement Sections:
  - a. Meeting Minutes 01 31 00
  - b. Schedules/Lists 01 32 16, and 17
  - c. Audio-Visual 01 32 33
  - d. Project Closure
2. Technical Specifications

## 1.02 PREPARATION OF SUBMITTALS BY CONTRACTOR

- A. Review submittal items for legibility, conformance to the Contract Documents, coordination between work items, and completeness according to submittal requirements of each specification section; certify review by signing transmittal form; and list the Contractor's comments.
- B. The transmittal form, attached herein, shall identify submittals, and provide information required in Contractor's portion of form, including:
  1. Date of submittal.
  2. Project Name, Contract No., and Location.
  3. Submittal No., in sequence, beginning with 1.
  4. Contractor's name, address, and contact person.
  5. Items within submittal, numbered in sequence.
  6. Specification sections no.
  7. Manufacturer/Designer/Supplier.
  8. Special Instructions (when response is needed, if there is a deviance, etc.).
  9. Signature certifying that the Contractor has reviewed the submittal.
- C. Cross-reference actual items in submittal by labeling them clearly by item number listed in transmittal, and provide them in the sequence listed.
- D. Provide six (6) copies of submittals to the Engineer. If the Contractor anticipates review will require markup and return of the actual submittal, rather than a separate comment sheet to be faxed, then he shall provide an additional copy for mark up and return to the Contractor. A legible fax may be accepted to initiate review, if followed by hard copy.

## 1.03 REVIEW BY ENGINEER

- A. Upon receipt, Engineer will log in submittals and review for conformance with the design intent.
  1. The Engineer will return submittal review forms and comments via fax or email. Review of items noted critical by the Contractor will be expedited.
  2. The Engineer will log out submittal upon faxing or email comments to the Contractor, and will further distribute submittal and comments to the Engineer's and Contractor's organization as required for orderly progression of the project. Submittal contents with Engineer review will be returned within 10 working days from date of received.
- B. Review is for general conformance with design concept for the project and general compliance with the information given in the Contract Documents. Review action are listed below.

Arbor Oaks Park Rain Gardens

April 11, 2013

File # 5504-03/17208

1. No Exceptions Taken: Fabrication and/or installation may proceed.
2. Make Corrections Noted: The Contractor shall make the changes noted, and then may proceed with fabrication or installation.
3. Amend and Resubmit: The Contractor shall make the changes noted, and resubmit for an additional review cycle.
4. Rejected – See Remarks: The Contractor shall make the changes noted, which may involve a complete new product submittal, and resubmit for an additional review cycle.

1.04 RESPONSIBILITIES OF THE CONTRACTOR

- A. The Contractor remains responsible for dimensions, job site correlation, fabrication processes, construction methods, and coordination of installation work, as well as manufacturers’ testing and operational requirements.
- B. Contractor shall promptly distribute submittal review actions and comments to its suppliers, and otherwise as required for orderly progression of the job, and shall modify or replace products to comply with comments.
- C. Products fabricated or installed before receiving Review (D1 or D2) shall be modified or replaced at the Contractor’s expense, to conform with the design intent, as directed by the Engineer.

1.05 RESUBMISSION

- A. Items receiving a Review (D1 or D2) do not require resubmission, unless the original product becomes unavailable, or changes in the project make the original product incompatible.
- B. The Contractor shall repeat the submittal process for items receiving Review [Amend & Resubmit] [Rejected – See Remarks]. The original submittal number shall be used with a letter code suffix appended in ascending order for each resubmission of the item.
- C. The Contractor shall relate item numbers in resubmissions to prior submittals of that series. For example, if original submittal No. 1 items 1, 4, and 6 require resubmission, they should be provided as [re]submittal No. 1A, items 1, 4, and 6.
- D. The resubmission coding systems described above are designed to expedite review processes and simplify filing and retrieval for the Project Manager, the Engineer, the Contractor, and the On-Site Representative. When additional cross-referencing is required for the sake of clarity, the Contractor shall provide explanatory notes.

**01 33 02 SPECIFIED SUBMITTALS**

**01 33 02**

When specified in the Technical Specification sections, submit the following to the Engineer for project records.

- A. Design Data
- B. Test Reports
- C. Manufacturers Instructions:
  1. Submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for Product Data.
  2. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- D. Manufacturers Field Reports:
  1. Submit report within 30 days of observation to Engineer for information.
  2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- E. Certificates:
  1. Submit certification by the manufacturer, installation/application Subcontractor, or the Contractor to Engineer, in quantities specified for Product Data.
  2. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
  3. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

<b>TRANSMITTAL FOR ACCEPTANCE OF SHOP AND VENDOR DRAWINGS</b> .....						<b>01 33 03</b>
Date	Project Name and Contract No.				Location	Submittal No.
Submittal Type: HC – Hard Copy <input type="checkbox"/> or Electronic <input type="checkbox"/>						
To:	InSite Design Studio, Inc.				From:	
	516 East Washington Street					
	Ann Arbor, MI 48104					
	Sgibb-randall@insite-studio.com					
Attn:					Contractor/Vendor Job No.	
No. Copies	Item No.	Description (Name, Type, Size, Capacity Use)	Spec. Sect. No.	Manufacturer/ Designer	J&A Action Code      Review	
Special Instructions by Contractor/Vendor			Johnson & Anderson Comments			
Checked by Contractor for Project Conformance:						
Signed:/Title:						
Acceptance Action Code:						
			<ul style="list-style-type: none"> <li>■ Installation shall proceed only when acceptance code is #1 or #2.</li> </ul>			
3. Amend and resubmit.			<ul style="list-style-type: none"> <li>■ Acceptance coded 3 or 4 shall be resubmitted unless otherwise noted.</li> </ul>		Date Returned by:	
4. Rejected – see remarks.						
Approval is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of constructions; and for coordination of the work of all trades.						
<b>IN-HOUSE SHOP DRAWING AND VENDOR DRAWING REVIEW</b>						
Seq.	Discipline	Individual	Initial	Date	Comments	
	Project Manager				Review Period _____ days	
	Civil					
	Structural/Arch.					
	Electrical/Instr.					
	Mechanical					
	Process					

**01 41 00**

**REGULATORY REQUIREMENTS**

**01 41 00**

- A. This Section includes requirements and procedures for local permits and related fees.
- B. Related Requirements: Work Area Section 01-14-00.
- C. Permit Responsibility – Owner:
  - 1. The Owner has obtained the following permit: None
- D. Permit Responsibility – Contractor:
  - 1. The Contractor shall obtain the permits: Pay application and inspection fee and other land inspection fees post bond and provide insurance. Contractor shall submit a copy to Owner prior to commencement of work.
    - a. Building Department: Contractor files, pays fees and obtains Pay application and inspection fee and other land inspection fees post bond and provide insurance. Contractor shall submit a copy to Owner prior to commencement of work.
  - 2. The Contractor shall also apply for, obtain and pay for all other permits to conduct/complete the work.
    - a. City/Township; Building Department: building permit;
    - b. R.O.W. work permit (assuming Contractor will enter R.O.W. to perform work).

**01 41 26**

**PERMITS**

- A. The following permits will be required for project construction. The Contractor is required to comply with all terms and conditions of the permit as incidental to the unit prices bid and no extra compensation will be allowed.
  - a. Soil Erosion and Sedimentation Control (SESC). Permitting Agency: The Office of Washtenaw County Water Resources Commissioner (WCWRC).  
  
 The WCWRC is the local enforcing agency for SESC permitting. The WCWRC will submit the required Notice of Coverage to the MDEQ for National Pollutant Discharge Elimination System (NPDES) Storm Water Discharges from Construction Activity.
  - b. Right of Way Work Permit: Permitting Agency: The City of Ann Arbor.  
  
 Contractor must secure this permit. Permit application is available through Customer Service, 1<sup>st</sup> Floor, City Hall. Contractor must comply with all terms and conditions of the permit.
  - c. Lane Closure Permit: Permitting Agency: The City of Ann Arbor.  
  
 Contractor must secure this permit. Permit application is available through Customer Service, 1<sup>st</sup> Floor, City Hall. Contractor must comply with all terms and conditions of the permit.
  - d. “No Parking” Signs Permit: Permitting Agency: The City of Ann Arbor.  
  
 Contractor must secure this permit. Permit application is available through Customer Service, 1<sup>st</sup> Floor, City Hall. Contractor must comply with all terms and conditions of the permit.

01 57 00

**TEMPORARY CONTROLS**

01 57 00

A. General:

1. This Section includes requirements for items of Work to be constructed and removed at the completion of the project.
2. Related Requirements: Permits 01-41-00 – Soil Erosion Permit.

B. Temporary Soil Erosion and Control (-13):

The intent of the Soil Erosion Control is to minimize the transfer and deposition of sediment to drains, streams, rivers and lakes. Devices and methods shall comply with the “Soil Erosion and Sedimentation Act” Act, 347,PA 1972, and “Inland Lakes and Streams Act” Act 346, PA 1972.

1. When the plans call for a specific erosion control structure or practice, the Contractor will be required to implement and maintain such practice or structures throughout the life of the project.
2. Soil Erosion devices shall be maintained weekly and after every major storm event.
3. Specific areas to control and to be corrected are when the plans call for a specific erosion control structure or practice, the Contractor will be required to implement and maintain such practice or structures throughout the life of the project. Specific areas to control and to be corrected are:
  - a. Mud or soil tracked on to existing streets and highways.
  - b. Erosion from pumping operations due to high velocities at the discharge.
  - c. Drain and stream crossings by open cut operations.
  - d. Existing drainage structures, such as catch basins, which intercept drainage running off the disturbed area.
  - e. Excavations ‘open’ more than 24 hours, require silt fencing.
  - f. Excavated/disturbed ground surfaces, not covered work occurring in any two week (14 day) cycle shall be seeded and mulched.
4. Pumped water from well points or dewatering wells installed to lower the water table to facilitate the proposed construction shall be conveyed by pipe, hose, or stabilized channel, to a settling basin or other suitable sedimentation control facility.
5. Existing ground surfaces disturbed [excavated and backfilled] by construction shall be seeded and mulched as follows:
  - a. Temporary Seed applied at a rate of 3lb./1000 sf.
    - i) See planting plan on drawing L-3.
  - b. Straw Mulch covering the disturbed surface.
    - i) Straw or marsh hay; air dried condition.

C. Temporary Storm Water Control (-23): If it is necessary in the execution of the work to interrupt existing surface drainage, temporary drainage facilities shall be provided until the existing drainage facilities are restored. The construction of all temporary drainage facilities shall be considered as incidental to the construction of the project. The flow in all existing drains and sanitary sewers which interfere with construction, whether shown on the drawings or not, shall be adequately maintained by the Contractor at is own expense.

1. Adequate pumping and drainage facilities shall be provided and all water from whatever sources entering the work during any stage of construction shall be promptly removed and disposed of. All pumping and drainage shall be done without damage to property or structures and without interference with the rights of the public, owners of private property, pedestrians, vehicular traffic, or the work of other contractors.
2. The overloading or obstructing of existing drainage facilities will not be permitted, and the CONTRACTOR shall be solely responsible for damage caused by his operations.
3. Both the dry weather and storm flows in all existing sewers, ditches, catch basins, gutters, streams, rivers and drains, which may in any way be affected by the new construction, shall be adequately maintained. Surface water inlets and drains which interfere with the CONTRACTOR’s operations may be temporarily altered or relocated by the CONTRACTOR as directed or approved by the ENGINEER.

D. Trench/Excavation Water Control: The CONTRACTOR shall determine to what extent, if any, variations in surface water levels and underground water levels may affect the work under this Contract. It is the intention of these Contract Documents that all work shall be performed in the dry, and that normal means and methods shall be employed to protect the work as necessary at no additional cost to the OWNER.

## SECTION 31 10 00 SITE PREPARATION

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. Scope: Prepare site as shown on the drawings and as specified herein.
- B. Extent of work shall include but not be limited to:
  - 1. Protection of persons and property
  - 2. Salvaging of existing elements to remain
  - 3. Protection of existing vegetation
  - 4. Utility Service
  - 5. Clearing and grubbing of existing vegetation
  - 6. Stripping and stockpiling of topsoil
  - 7. Demolition, Removal & Disposal of above and below grade improvements

#### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and the City of Ann Arbor Standard Specifications for Construction, which are hereby made part of this section.
- B. Related Sections:
  - 1. Soil Erosion and Sedimentation Control 31 10 00
  - 2. Earthwork 31 20 00
  - 3. Stone Work 32 15 00
  - 4. Fine Grading, Lawn Seeding and Site Stabilization 32 92 00
  - 5. Fine Grading, and Plug Planting 32 93 00
  - 6. Soil Erosion and Sedimentation Control Plans sheets L-1

#### 1.03 PERMITS

- A. The CONTRACTOR shall secure the necessary permits to work in the right-of-way

#### 1.04 REFERENCE SPECIFICATION

- A. Materials and Work covered under this Section shall be in accordance with MDOT (2012 edition), Washtenaw County, and City of Ann Arbor Standards Specifications for Construction unless otherwise indicated. If a conflict exists between specifications, the more rigorous shall govern.

#### 1.05 QUALITY ASSURANCE

- A. Use adequate numbers of skilled staff who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

#### 1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable county and state law for disposal of debris at locations outside of OWNER'S property.
- B. Coordinate clearing work with utility construction

### PART 2 - PRODUCTS

#### 2.01 CONSTRUCTION FENCE and TREE PROTECTION FENCE

- A. Fence shall be TENAX safety fence available through Construction Supply, 1.800.887.6767 or approved substitution.
- B. Line, corner, terminal, gate posts, and frames shall be steel. Tie wire shall be aluminum.

#### 2.02 TOPSOIL

- A. Topsoil shall be existing topsoil that has been stripped and stockpiled. Existing topsoil shall be the top layer of soil containing the most organic matter, depth of which shall be verified by the CONSULTANT. It shall be free of any



admixture of subsoil, stones larger than one (1) inch, clods of hard earth, plants or roots, sticks, concrete, asphalt, or other extraneous material. It shall contain no toxic materials.

- B. Quantity: The CONTRACTOR shall be responsible for estimating the quantity of topsoil stockpiled. The CONTRACTOR shall report any discrepancy between work on the Plans and in the Specifications to the CONSULTANT.

#### 2.04 TEMPORARY SEED and MULCH or EROSION CONTROL SEED MATRIX

- A. Seed and mulch for temporary cover shall be as described in the – FINE GRADING, LAWN SEEDING and SITE STABILIZATION SECTION (32 92 00) – of these specifications.

#### 2.05 PERMANENT EROSION CONTROL

- A. Seeding for permanent cover shall be as specified in as described in the – FINE GRADING, LAWN SEEDING and SITE STABILIZATION SECTION (32 92 00) and FINE GRADING, NATIVE PLUG PLANTING and SITE STABILIZATION SECTION (32 93 00) – of these specifications.
- B. All permanent erosion control measures shall be as specified in the – STONE WORK SECTION (32 15 00) – of these specifications.

### PART 3 - EXECUTION

#### 3.01 PROTECTION OF PERSONS AND PROPERTY

- A. Construction Fence shall be installed as indicated on the plans and in addition any area where the CONTRACTOR feels it is necessary to protect vegetation, structures, private properties, or secure construction and hazardous areas. Additional fence beyond what is indicated on the plans shall be done at the CONTRACTOR'S expense.
- B. Construction fence shall be installed per manufactures standards and specifications.
- C. Protect structures, trails, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by all construction operations.
- D. Use means necessary to protect persons and property as required by local and state governing authorities including traffic warning devices when working in Right-Of-Way.
- E. Provide safe visitor crossing as indicated on the plans. Meet with OWNER to coordinate needs, hours and location of traffic control measures and staffing.
- F. Maintain access to the site at all times. Protect Benchmarks from damage or displacement. Locate, identify and protect utilities that remain from damage. Protect trees, wetlands, plant growth and features designated to remain as final landscaping.

#### 3.02 PROTECTION OF EXISTING VEGETATION

- A. Prior to commencing work, arrange an on-site meeting with the CONSULTANT to review limits of grading and subsequent tree/vegetation protection or removal.
- B. Limits of grading are indicated on the plans and are to be established by the CONTRACTOR.
- C. Trees indicated for relocation shall be transplanted as specified in the – TREE SPADE RELOCATION AND PLANTING SECTION (32 94 00) – of these specifications.
- D. Trees not indicated to be removed or transplanted with or without tree protection should not be injured or defaced in any way. Any damage shall be replaced or repaired by a skilled tree surgeon approved by the CONSULTANT at no expense to the OWNER. Coordinate with OWNER to allow for aeration and gator bags for trees impacted by construction. Installation of construction fence shall serve as tree protection and shall not damage bark or root structure of tree.
- E. Storage of materials, parking vehicles, excess foot traffic, or stockpiling inside the drip line of trees to remain shall not be permitted.
- F. Owner shall be justly compensated for any damage to existing trees, whether repairable or not, at the rate of \$100.00 per inch of cross-section diameter 12" above grade (ex: 10" dia x \$100 = \$1000).

#### 3.03 UTILITY SERVICES

- A. Protect existing utilities indicated or made known.
- B. Coordinate with utility companies and agencies as required, arrange necessary shut off, and obtain written approval before interrupting existing utilities.
- C. Provide necessary bypass connections to maintain service to occupied areas or adjacent properties.



### 3.05 CLEARING AND GRUBBING

- A. As specified on the plans, the CONTRACTOR shall review all tree removals with the CONSULTANT prior to any operations.
- B. Completely remove all trees, herbaceous vegetation, woody shrubs and stumps from areas as noted on the drawings and as directed by the CONSULTANT. Remove without injury to trees to remain. Do any additional cutting or trimming only as necessary and as directed by the CONSULTANT in accordance with standard horticultural practice.
- C. Stumps shall be completely removed. The stump hole or other holes from which obstructions have been removed shall be backfilled to the adjacent grade in accordance with the – EARTH WORK SECTION (31 20 00) – of these Specifications.

### 3.06 STRIP AND STOCKPILE EXISTING TOPSOIL

- A. Extent of stripping shall be areas to be occupied by a new surface, or any area where grade is to be changed and as indicated on the plans.
- B. All topsoil shall be removed down to subsoil in such a manner as to prevent intermingling with subsoil. Grass or herbaceous material shall be removed from topsoil prior to stripping.
- C. Trees to remain shall not have topsoil stripped within the drip line unless there is grading within the drip line as shown on the plans.
- D. Ownership: the topsoil remains the property of the OWNER and shall not be removed from the site.
- E. Stockpile materials on site, review locations with OWNER; cover as required to prevent erosion and windblown dust.
- F. Stockpile in sufficient quantities to meet project schedule and requirements.
- G. All areas that are used for temporary stockpile of materials shall be restored at CONTRACTOR's expense to a condition equal to or better than prior to construction.
- H. Silt fence must be placed around stockpile.

### 3.07 DEMOLITION

- A. Remove and Dispose: completely remove and properly dispose of off-site all items referenced on the plans and miscellaneous debris, except salvageable material, indicated on the plans or by the OWNER. Backfill in accordance with the – EARTH WORK SECTION (31 20 00) – of these Specifications.
- B. Any damage to adjacent pavement, pavement base, sub base, or utility structures caused as a result of the removal of the bituminous or concrete surface is the complete responsibility of the CONTRACTOR and shall be corrected by the CONTRACTOR at his/her expense.
- C. Remove and Salvage: carefully remove, clean and salvage items referenced on the plans. Items shall be delivered and stored as directed by the OWNER and CONSULTANT. Items to be salvaged will remain the property of the OWNER. Review location of stockpile and storage areas with OWNER prior to demolition.
- D. Dispose of all materials from the site in a legal manner.
- E. Do not store or permit debris to accumulate on the job site.
- F. Burning is not permitted.

END OF SECTION

# SECTION 31 11 00 SOIL EROSION AND SEDIMENTATION CONTROL

## PART 1 - GENERAL

### 1.1 SUMMARY

- A. This Section includes conducting earthwork and earth change activity operations in a manner to protect Waters of the State (of Michigan), storm drains, and adjacent properties from soil erosion and sedimentation.

### 1.2 DEFINITIONS

- A. "Waters of the State" includes the Great Lakes and their connecting waters, lakes, ponds and streams which may or may not be serving as a County drain as defined by the drain code; or any other body of water that has definite banks, a bed and visible evidence of a continued flow or continued occurrence of water or wetlands regulated under Part 303 of Act 451 of Michigan compiled laws.

### 1.3 SUBMITTALS

- A. Submit product information for materials proposed for use.

### 1.4 QUALITY CONTROL

- A. Requirements of Regulatory Agencies: For earth changes, comply with the following:
  - 1. Part 91, Soil Erosion and Sedimentation Control (SESC) of the Natural Resource & Environmental Protection Act, 1994 PA 451, as amended (Part 91).

### 1.5 PERFORMANCE REQUIREMENTS

- A. Implement the soil erosion and sedimentation control plan including required maintenance during construction and final removal as directed in the plans, and as needed per site conditions, and as required by site inspections by City of Ann Arbor.
- B. Control runoff, soil erosion and sedimentation. No sediment should leave the site.
- C. Prevent wind erosion. No visible emissions (dust) should leave the site.
- D. Comply with Washtenaw County and City of Ann Arbor Sedimentation Control Procedures.

### 1.6 REFERENCES

- A. Guidebook of Best Management Practices for Michigan Watersheds  
[http://www.michigan.gov/deq/0,1607,7-135-3313\\_3682\\_3714-118554--,00.html](http://www.michigan.gov/deq/0,1607,7-135-3313_3682_3714-118554--,00.html)
- B. City of Ann Arbor Standard Specifications for Construction

## PART 2 - PRODUCTS

### 2.1 GENERAL

- A. Silt Fence shall meet MDOT Silt Fence Geotextile standards and specifications and is available through Price and Company, <http://priceandcompany.com/index.html>, 866-960-4300.
- B. Inlet filters shall be silt sack, Dandy Bag, or approved equal.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Where the following events result in the need for additional or modified soil erosion and sedimentation control installations to meet the objective of the referenced procedures, provide remedial installations on a timely basis.
  - 1. Unanticipated alterations to the construction schedule.
  - 2. Unanticipated site conditions except severe weather damage such as a tornado, flood or fire.
- B. Install temporary erosion and sedimentation control measures prior to or upon commencement to earthwork activities.
  - 1. Install silt fence with stakes on the side down gradient from the disturbed area. Toe in six inches of the fencing material. Excavated materials from toeing operation shall be placed on the upslope side of the silt fence.
  - 2. Place stockpiles and other spoil piles away from the drainage system to minimize sediment transport. Keep as few stockpiles as possible during the course of the project. Place silt fence around any soil pile prior to storage of material. If the stockpile and/or spoil pile must remain on-site overnight, or if the weather conditions indicate the chance for precipitation:
    - a. cover the pile with water repellent material to prevent erosion, or
    - b. install silt fencing around the base of the pile to prevent transport of sediment to the storm water system, and wet the pile as needed to prevent wind erosion, or
    - c. apply other control methods as appropriate to the site.
  - 3. Where runoff enters the existing storm water system, protect the storm system from sedimentation.
    - a. Temporary inlet protection must prevent the release of sediment and allow for proper drainage.
      - 1) Use of burlap is not acceptable as a SESC measure.
      - 2) If filter fabric is used on drains, ensure the filter fabric is placed over (not under) the storm grates to facilitate maintenance (cleaning) of the controls.
      - 3) If high storm water flows are expected, use silt sacks or Dandy Bags in lieu of filter fabric for drain protection. Based on site conditions select regular or high flow silt sacks as appropriate.
- C. Utilize a water truck as needed or as directed by CONSULTANT or OWNER for dust control.
- D. Utilize a sweeping machine to remove sediment tracked onto the pavement on a daily basis at minimum. Use sweeper more frequently as dictated by site conditions. Vacuum sweeper shall be used as directed by CONSULTANT or OWNER if sweeping machine is determined to be inadequate for removal of sediment from paved surfaces.
- E. Maintain erosion and sedimentation controls on a daily basis until the contract has been completed and accepted. Maintenance shall include:
  - 1. Repair of damaged installations.
  - 2. Replacement of lost soil erosion & sedimentation control measures.
  - 3. Periodic removal of collected silt and sedimentation as required or directed to maintain effectiveness of the silt traps, filters and basins.

- F. Correct non-conforming soil erosion and sedimentation control work on a timely basis within 24 hours, if Waters of the State are being impacted, or within 5 days if not impacting Waters of the State.
- G. Complete permanent soil erosion control measures for all slopes, channels, ditches or any disturbed land area within 5 calendar days after final grading or the final earth change has been completed. Maintain temporary control measures until permanent soil erosion control measures are in place and the area is stabilized.

**3.2 CLEAN UP**

- A. Remove temporary erosion control measures after permanent soil erosion measures are in place and the area is stabilized unless ordered by the Owner's Representative to remain in place. Care shall be taken during removal to prevent soil erosion and sedimentation.

**END OF SECTION**

# SECTION 31 20 00 EARTHWORK

## PART 1 - GENERAL

### 1.1 SUMMARY

- A. Excavate, backfill, compact and grade the site to the elevations shown on the drawings, as specified herein, and as necessary to meet the requirements of the construction shown in the contract documents.
- B. Work shall include but not be limited to
  - 1. Excavation, backfilling and compaction for stone wiers and landscape areas
  - 2. Removal of unsuitable material
  - 3. Removal of excess fill
  - 4. Grading

### 1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and the City of Ann Arbor Standard Specifications for Construction apply to the work of this section.
- B. Related Sections:
  - 1. Soil Erosion and Sedimentation Control 31 10 00
  - 2. Stone Work 32 15 00
  - 3. Fine Grading, Lawn Seeding and Site Stabilization 32 92 00
  - 4. Fine Grading, and Plug Planting 32 93 00

### 1.3 REFERENCE SPECIFICATION

All materials and work done under this section shall be in accordance with MDOT (2012 edition), Washtenaw County and City of Ann Arbor standards and specifications unless otherwise indicated. If a conflict exists between specifications, the more rigorous shall govern.

### 1.4 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

### 1.5 SUBMITTALS:

- A. The testing service shall submit the following reports directly to the CONSULTANT, with copies, to the OWNER and CONTRACTOR:
  - 1. Analysis and certification of soil materials, including materials acquired on or off site and including fill, backfill, and borrow materials.

### 1.6 DEFINITIONS

- A. Subgrade: the bottom of excavation or surface of fill immediately beneath the proposed site improvements or topsoil.
- B. Fill/Backfill: material used to bring existing or construction grades to proposed subgrade.

C. Finish Grade: final grade elevation indicated on the drawing. Where not specifically noted, a uniform slope between spot elevations except where vertical curves or rounding shall be provided at abrupt changes in slope.

D. Trench: an excavation where the width is approximately at least twice the depth, as soil type dictates.

E. Base: material placed over subgrade or subbase and under surface treatment.

F. Subbase: material placed over subgrade and under base.

G. Soil Materials:

1. Soils classifications shall conform to ASTM D 2487 Unified Soil Classification System
2. Satisfactory soil materials, include materials classified GW, GP, GM, GC, SW, SP, SM, SC, ML or CL Materials shall satisfy use and specification shown on plans, and as indicated within these specifications. Review with CONSULTANT.
3. Unsatisfactory soil materials include materials classified OL, MH, CH, OH, and PT.
4. Noncohesive soil materials include materials classified GW, GP, SW and SP, and GM and SM only when fines have a Plasticity Index (PI) of 0.
5. Cohesive materials include materials classified GC, SC, ML, CL, MH and CH.

H. Maximum Unit Weight (MUW) When used as a measure of compaction or density, Maximum unit weight shall be understood to mean the MUW per cubic foot as determined in accordance with ASTM D 1557 (Modified Proctor).

## **PART 2 – PRODUCTS**

### **2.1 GENERAL:**

A. Soil materials for backfill and fill at all locations shall be satisfactory site-excavation or borrow materials, unless otherwise indicated. If site-excavated material is unsatisfactory or insufficient to meet fill requirements, furnish approved borrow material at CONTRACTOR'S expense. Borrow material shall be obtained from approved off-site sources.

B. Fill material is subject to the approval of the CONSULTANT, and is that material removed from excavations or imported from off-site borrow areas, predominantly granular, non-expansive soils free from roots and other deleterious matter.

### **2.2 ORDINARY FILL / SITE EXCAVATED MATERIAL**

A. Composition: shall be natural inorganic soil, well graded and free from all frozen, organic, weak, expansive or compressive materials, and contain no stone larger than 2" inches.

B. Character of soil shall be such that it can be spread and compacted as specified. On-site material may be used as ordinary fill provided it meets these requirements and is approved by the CONSULTANT.

### **2.3 PLASTIC WARNING TAPE**

A. Acid and alkali-resistant polyethylene film specifically manufactured for marking and identifying underground utilities. Minimum 6" width, 4 mils thick, metallic core with protective jacket, detectable at 3' buried depth. Continuous printed inscription shall describe utility. Tape color:

1. 1. Electric: Red
2. 2. Gas: Yellow
3. 3. Telephone: Orange

## PART 3 – EXECUTION

### 3.1 BASIS OF CONTRACT

A. Extent of work shall be that necessary to obtain the cross-sections and elevations indicated on the plans.

### 3.2 GENERAL EXCAVATION

A. Method shall be open cut or tunneling/boring where desirable for the protection of neighboring surfaces, structures, plants, workmen and/or the public.

B. Extent shall be as required for the proposed structures allowing ample room for construction (form work, dewatering, etc.) and inspection.

C. Tolerance shall be within 0.10' of the proposed subgrade.

D. Subgrade Preparation: bottom of excavation for pavements, slabs, foundations, etc. shall be cleaned, trimmed and leveled as required for the installation immediately prior to placement of subbase, base or foundation.

E. Dewatering: The CONTRACTOR shall remove all water that accumulates in any excavation. The CONTRACTOR is responsible for any cost of dewatering, maintaining the dewatering until the structure can be placed, and any damage caused by the dewatering process. Groundwater and surface water which is free of contamination and sediment may be discharged to a storm drain. Drains must be protected from sediment by using filter fabric or silt sacks. However, if adequate filtration cannot be achieved at the storm drain, the water shall be discharged to the sanitary sewer after filtration.

F. Excess excavation or disturbed subgrade that requires excavation beyond the prescribed limits shall be replaced with granular backfill or 2,000 psi concrete at the discretion of the CONSULTANT. All replacement shall be at the CONTRACTOR'S expense.

G. Review of the subgrades by the CONSULTANT shall take place prior to placement of any base or structure. The CONTRACTOR shall provide proper advance notification.

H. Clean excess excavated material not used for earthwork operations shall be disposed of off-site at an approved facility as directed by CONSULTANT.

#### I. Hazardous Material

a. During Work activities if suspect contaminated soil, groundwater, or other unknown material is encountered contact City of Ann Arbor representative (phone no. 743-794-6410) immediately. Suspect contaminated soil may exhibit chemical or unusual odors, staining, unusual coloring, and/or contain man-made debris. Suspect contaminated groundwater may exhibit chemical or unusual odors, unusual coloring, and/or sheen.

b. Immediately cease all excavation, dewatering, transport, or disturbance of the suspect material until given direction by City of Ann Arbor Representative.

c. Fill unauthorized excavation under foundations by extending indicated bottom elevation of concrete foundation or footing to excavation bottom.

### 3.3 EXCAVATION FOR SEWERS AND WATER MAINS

A. Excavation shall conform to City of Ann Arbor Standard Specifications for Construction.

B. Exposed existing utilities shall be adequately supported during operations and given a permanent support meeting the utility OWNER'S or agency's Standards and such that they will not be damaged by later settlement. Any damage to existing

utilities shall be repaired at the CONTRACTOR'S expense to the requirements of the utility OWNER'S or agency's satisfaction.

### 3.4 EXCAVATION FOR STRUCTURES:

A. Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10' and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction, and for inspection.

B. In excavation for footings and foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive other work.

### 3.5 UNSUITABLE MATERIALS

A. Definition: material inside building lines, under exterior walls, steps, paved areas, foundations, structures, etc. of the following characteristics:

1. Topsoil and loam
2. Peat, organic soil, sod, wood, roots or other matter subject to decay.
3. Soft, spongy or compressible soil.

B. Removal of all unsuitable materials shall take place prior to construction. If unsuitable material is encountered at the required sub-grade elevation, the CONTRACTOR shall remove the unsuitable material and replace with granular fill. Excavation and backfill of unsuitable material shall be approved by the CONSULTANT. The CONTRACTOR will be paid on the basis of informative prices in the proposal form.

### 3.6 GENERAL FILLING AND BACKFILLING

A. General: Place satisfactory soil material in layers to required subgrade elevation.

1. Under Building Slabs: Use imported granular material or satisfactory site-excavated material to subgrade elevation of slab base course.
2. Under Trails and Pavements: use imported granular material or satisfactory site excavated or borrow material.
3. In excavations: Use satisfactory site-excavated material or borrow material.
4. Under unpaved areas. Use satisfactory site-excavated material or borrow material. Required subgrade of various garden areas are at a variety of depths below finished grades as indicated on drawings and in the following:
  - a. Rain Gardens: 12"
  - b. Lawn: 6"

B. Ground Surface Preparations:

1. Remove all form work, debris and other deleterious material unless otherwise specified. Plow, strip or break-up sloped surfaces steeper than 1-vertical to 4-horizontal so that fill material will bond with existing surface.
2. When existing ground surface has a density less than specified under "Compaction" for particular area classification, break up ground surface, pulverize, moisture-condition to optimum moisture content, and compact to required depth and percentage of maximum density.

C. Placement and Compaction:

1. Place backfill and fill materials in layers not more than 8" in loose depth for material compacted by heavy compaction equipment, and not more than 4" in loose depth for material compacted for material compacted by hand-operated tampers.
2. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content (-2% to +3%), or as recommended by testing laboratory. Compact each layer to required percentage of maximum unit weight for each area classification
3. No Filling shall take place in unfavorable weather as determined by the CONSULTANT.



4. Maintain subgrades at levels specified until scheduled for subsequent construction. Correct all settlement occurring after required rough grades are obtained and any later damage resulting therefrom.
- D. Backfill excavations as promptly as work permits, but not until completion of the following:
1. Acceptance of construction below finish grade including, where applicable, waterproofing, and perimeter insulation.
  2. Inspection, testing, approval and recording locations of underground utilities.
  3. Removal of concrete formwork
  4. Removal of shoring and bracing and backfilling of voids with satisfactory materials.
  5. Removal of trash and debris.
- E. Filling over rubble. It is the responsibility of the CONTRACTOR to completely choke all voids in such a manner as to stop all infiltration of fill placed above rubble, if approval to place fill over rubble is given by the CONSULTANT.
- F. The CONTRACTOR shall determine the quantities of site-excavated materials available, and quantities of material to be imported. No adjustments to the quantities will be made by the OWNER, except for backfill requirements for authorized additional excavation. The need for additional site excavated materials must be quantified and brought to the attention of the OWNER prior to construction.

### 3.7 BACKFILLING FOR SEWERS AND WATER MAINS

- A. All backfilling for sewers and watermains shall be per City of Ann Arbor Standard Specifications for Construction. Backfill only after pipes have been inspected, tested and locations of pipes and appurtenances have been recorded.
- B. Place bedding material to depth indicated under pipe. After pipe is installed and positioned, place remainder of bedding material in maximum 6" layers to the center of the pipe.
- C. Place by hand granular backfill to a depth of one foot above the pipe. Tamp firmly in layers not exceeding six inches, taking care not to disturb the pipe.
- D. Under Pavements, structures, etc. use granular backfill as described under General Filling and Backfilling of this Section.
- E. Other Areas use ordinary backfill as described under General Filling and Backfilling of this Section.

### 3.8 PLACE WARNING TAPE

- A. Place plastic warning tape directly above utilities, 18 inches below finished grade

### 3.9. COMPACTION

- A. General: Control soil compaction during construction providing minimum percentage of density specified for each area classification.
- B. Percentage of Maximum Unit Weight (MUW) Requirements: Compact soil to not less than the following percentages of MUW for soils which exhibit a well-defined moisture density relationship determined in accordance with ASTM D 1557 (Modified Proctor):
1. Structures and Building Slab: Compact top 12" of subgrade and each layer of backfill or fill/base material at 95% of MUW
  2. Unpaved Areas: Compact top 6" of subgrade and each layer of backfill or fill material at 90% MUW.
  3. Walks: Compact top 6 " of subgrade and each layer of backfill or fill/base material at 95 % of MUW
  4. Pavements: Compact top 12" of subgrade and each layer of backfill or fill /subbase/base material at 95% of MUW.

5. Utility Trench: Compact bedding layers to 95% of MUW. Compact granular backfill, 95% layers to 12" above pipe, compacted MUW. Remainder of trench to be backfilled at 95% of MUW under pavements and 90% of MUW under lawn or landscaped areas.

C. Fill in uniform horizontal layers not exceeding six inches in depth, measured prior to compaction.

### 3.10 GRADING

A. Extent shall be areas within limits of work indicated on the plans including any adjacent transition areas.

B. Tolerance within 0.10' of the proposed subgrade.

C. Degree of Finish shall be that which is ordinarily obtainable from a blade-grader or dozer back-blade operations.

D. Uniformity: CONTRACTOR shall finish all grading surfaces within specified tolerance providing uniform slopes between given elevations and rounding landforms as directed by CONSULTANT.

E. Review of subgrade landform contour by CONSULTANT is required prior to placement of topsoil or any structures.

F. Minor Changes as directed by CONSULTANT shall be at no extra cost to the OWNER.

G. Correction of subgrade is required wherever settlement, erosion or other grade changes have occurred.

### 3.11 FIELD QUALITY CONTROL

A. For each subgrade, fill and backfill material perform one moisture-density relationship test for each 1500 cubic yards or fraction thereof of material used. Tests and analysis of material will be performed in accordance with ANSI/ASTM D1557. Minimum of one test per excavated area.

B. In-place density testing will be performed in accordance with ANSI/ASTM D1557, D1556, D2167, D2922.

C. For areas under Slabs and Pavements:

1. Conduct not less than one in-place density test of subgrade and one in place density test of each compacted fill or backfill layer for every 1000 square feet of overlying paved area, but in no case less than 3 tests per lift.
2. After compaction of base, proofroll areas to receive pavement and slabs on grade in the presence of the testing laboratory representative. Proof roll using a four tire abreast, pneumatic tired vehicle. Each tire is to be loaded to 30,000 pounds and tires inflated to 150 psi. Provide coverage of the area to be proof rolled per the testing agencies direction. Maintain optimum moisture content during proof rolling.

D. For Trench Backfill : conduct not less than 2 in-place density tests per lift.

E. Foundation Wall backfill: conduct not less than 2 in-place density tests per lift.

F. If tests show pumping or indicate work does not meet specified requirements, remove work, replace and retest at no cost to the OWNER.

### 3.12 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off the OWNER'S property.
- B. Disposal: Remove and Dispose all excess soil off-site in an environmentally sensitive manner.

### 3.13 GUARANTEE

A. Settlement within a one-year period after final acceptance shall be brought to proper grade by the CONTRACTOR at no expense to the OWNER. Any surface features (i.e. pavements, structures, etc.) disturbed or damaged by settlement shall be repaired or replaced as determined by the CONSULTANT at no expense to the OWNER.

**END OF SECTION**

## SECTION 32 15 00 STONE WORK

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. Scope: Provide all labor and materials for exterior stone work where shown on the drawings as specified herein, and as needed for complete and proper installation.
- B. Extent of work shall include but not be limited to:
  - 1. Rain Garden Spillway
  - 2. Stone at Culvert End

#### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and the City of Ann Arbor Standard Specifications for Construction, which are hereby made part of this section.
- B. Related Sections:
  - 1. Earthwork 31 20 00

#### 1.03 REFERENCE SPECIFICATION

- A. Materials and work covered under this Section shall be in accordance with MDOT (2012 edition), Washtenaw County, and City of Ann Arbor Standard Specifications for Construction unless otherwise indicated. If a conflict exists between specifications, the more rigorous shall govern.

#### 1.04 SUBMITTALS

- A. CONTRACTOR to provide manufactures product data, including installation instructions, certifying that each material item complies with (or exceeds) specified requirements.
- B. The CONTRACTOR shall provide full scale samples of each stone type indicated, representative of all variations to be expected in the finished installation.

#### 1.05 QUALITY ASSURANCE

- A. Stone work shall be carried out by contractors and their employees who are thoroughly experienced and skilled in the necessary crafts, and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this section. The CONTRACTOR shall have a minimum of five (5) years documented experience in comparable work and must provide a list of five (5) jobs of similar size, type of stone, and scale with reference photos.
  - 1. Single Source Responsibility: Provide boulder stone from same source.
  - 2. The CONTRACTOR shall have a pre-construction conference with the CONSULTANT to review design intent and limits.

#### 1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials in a manner to prevent damage and deterioration to materials or existing site improvements.

### PART 2 – PRODUCTS

#### 2.01 ACCEPTABLE SOURCES:

- A. All materials used on the job shall be the source's highest quality product for each usage specified.
- B. Colors to be selected by CONSULTANT and/or OWNER.

#### 2.02 STONE

- A. Stone for **Rain Garden Spillways** to be MDOT plain native stone rip rap stone and shall be 4-8" in size and chocked with 2-4" stone.

- B. Stone for **Stone at Culvert End** to be MDOT plain native stone rip rap stone and shall be 2-6" in size and chocked with 1-2" stone.

### 2.03 GEOTEXTILE BLANKET

- A. Geotextile blanket for Rain Garden Spillway shall be 4-1/2oz.needlepunch polypropylene non-woven as supplied by Price and Co (1-866-960-4300) or approved substitution.

## PART 3 - EXECUTION

### 3.01 EXCAVATION, SUBGRADE AND BACKFILL FOR RAIN GARDEN SPILLWAYS and STONE AT CULVERT END

- A. Excavation, subgrade and backfill shall conform to the – EARTHWORK SECTION (31 20 00) – of these Specifications (unless otherwise noted).
- B. Strip vegetation and organic soil from base of spillway or stone at culvert end to expose suitable inorganic subgrade.
- C. Temporary excavated slopes should be no greater than a 1 horizontal to 1 vertical angle, or as required by OSHA guidelines.
- D. Do not excavate beyond excavation lines shown on plan unless directed by the CONSULTANT to remove unsuitable soil.
- E. Contractor shall ensure temporary excavations are stable and provide excavation support if needed.
- F. Contractor shall slope site grades to direct surface runoff away at end of each day to avoid water damage to the spillway or stone at culvert end while under construction.
- G. Any surface drainage features, finish grading, erosion control, or turf shall be installed immediately after spillway or stone at culvert end are completed.
- K. If site and soil conditions, rain garden spillway or stone at culvert end geometry, or loadings are different than in the drawings and the design parameters, the contractor must contact CONSULTANT prior to proceeding with the construction.

### 3.02 RAIN GARDEN SPILLWAYS

- A. All Rain Garden Spillways shall conform to design and details as shown on drawings (unless otherwise indicated).
- B. CONTRACTOR shall field verify and/or correct any dimensions shown on Drawings.
- C. Installation shall conform to MDOT section 813.03.E.1 Plain Riprap 2012 Standard Specifications for Construction and shown on the drawings.

### 3.04 GEOTEXTILE BLANKET

- A. Install per manufacturers standards and specifications

### 3.05 BACKFILLING AND CLEANING OPERATIONS

- A. Stone (and all other excess material) shall be removed and properly disposed of off the OWNER'S property.
- B. Backfill as described in the – EARTHWORK SECTION (31 20 00) – of these Specifications.

### 3.06 GUARANTEE

- A. Any movement (i.e. upheaval or settlement) within a one-year period after final acceptance shall be brought to proper grade by the CONTRACTOR at no expense to the OWNER.
- B. Any non-secure or disturbed stone shall be repaired or replaced as determined by the CONSULTANT at no expense to the OWNER.

END OF SECTION

# SECTION 32 92 00 FINE GRADING, LAWN SEEDING and SITE STABILIZATION

## PART 1 - GENERAL

### 1.01 SUMMARY

- A. Provide all fine grading and seeding where shown on drawings, as specified herein, and as necessary for a complete and proper installation.
- B. Work shall include, but not be limited to:
  - 1. Placing topsoil and fine grading for lawn areas and planting areas outside of rain garden ponding zones.
  - 2. Lawn seeding, fertilizing and establishment.
  - 3. Sodding

### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and the City of Ann Arbor Standard Specifications for Construction, which are hereby made part of this section.
- B. Related Sections:
  - 1. Site Preparation 31 10 00
  - 2. Soil Erosion and Sedimentation Control 31 11 00
  - 3. Earth Work 31 20 00
  - 4. Planting 32 93 10
  - 5. Plant Maintenance and Guarantee Period 32 93 20

### 1.03 REFERENCE SPECIFICATION

- A. **AOSA** -Association of Official Seed Analysis: Rules for testing Seeds, Journal of Seed Technology, 1991 Edition
- B. **TAPPI**-Technical Association of the Pulp and Paper Industry
- C. **AOAC** - Official Methods of Analysis, Association of Official Analytical Chemists.
- D. Materials and Work covered under this Section shall be in accordance with MDOT (2012 edition), Washtenaw County, and City of Ann Arbor Standard Specifications for Construction, unless otherwise indicated. If a conflict exists between specifications, the more rigorous shall govern.

### 1.04 QUALITY ASSURANCES

- A. Soil amendments: Copies of invoices shall be provided to the CONSULTANT. Samples must be provided if requested by the CONSULTANT.
- B. Seed: Provide the CONSULTANT with manufacturer's certification of compliance to the Specifications prior to seeding.
- C. The CONTRACTOR shall notify the CONSULTANT of seed sources 30 (thirty) days after the contract award.
- D. CONTRACTOR shall review seed sources with CONSULTANT prior to ordering and shall submit an invoice following purchase and delivery of the seed.
- E. Installation of seed shall be carried out by CONTRACTORS and their employees who are thoroughly experienced and skilled in the necessary crafts, and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this section. The CONTRACTOR shall have a minimum of five (5) years documented experience in comparable work.
- F. Grading and seeding layout shall be reviewed by the CONSULTANT prior to completion.

### 1.05 SUBMITTALS

- A. The CONTRACTOR shall submit to the CONSULTANT sources for seed 30 (thirty) days after contract award.
- B. The CONTRACTOR shall submit to the CONSULTANT a plan and schedule for seeding at least two weeks prior to the scheduled commencement of work.

#### 1.06 DELIVERY, STORAGE AND HANDLING

- A. Soil amendments shall be kept dry.
- B. Seed shall be delivered in original sealed containers, labeled in accordance with State Regulations and the US Department of Agriculture Rules and Regulations under the Federal Seed Act. Seed shall be stored in such a manner that it will be protected from damage by heat, moisture, rodents, or other causes.

#### 1.07 SCHEDULE

- A. Permanent Lawn seeding shall be done between May 1 and June 15 or between August 15 and October 15 or as otherwise approved by the CONSULTANT.
- B. Erosion Control Matrix can be seeded in the fall prior to the spring planting or within the same planting season, as conditions necessitate for erosion control and establishment of the permanent seed matrices.
- C. The CONTRACTOR shall complete all lawn seeding or necessary erosion control seeding by November 15, or be subject to Liquidated Damages as described below.

#### 1.08 LIQUIDATED DAMAGES

- A. Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the CONTRACTOR to pay the City, as liquidated damages and not as a penalty, an amount equal to \$100.00 for each calendar day of delay in the completion of all the work included in this specification section. If any liquidated damages are unpaid by the CONTRACTOR, the City shall be entitled to deduct these unpaid liquidated damages from the monies due the CONTRACTOR.

### PART 2 - PRODUCTS

#### 2.01 STARTER FERTILIZER

- A. Starter Fertilizer for lawn seed and sod: Starter fertilizer shall be Milorganite (6-2-0), available through Rhino Seed and Landscape Supply, Brighton, Michigan 1.800.482.3130, or approved substitute.

#### 2.02 PERMANENT LAWN SEED

- A. Apply lawn seed at a species rate of pounds per acre as indicated on the drawings.
- B. Seed Supplier: Seed is available through Rhino Seed and Landscape Supply, Brighton, Michigan 1.800.482.3130, or approved substitute.

#### 2.03 EROSION CONTROL/SEED MATRIX

- A. Apply erosion control seed matrix at a species rate of pounds per acre as indicated on the drawings.
- B. Seed sources for the erosion control seed matrix are available through Rhino Seed and Landscape Supply, Brighton, Michigan 1.800.482.3130.

#### 2.04 MULCH for LAWN SEED-DRY

- A. Material shall be straw. It shall be natural and suited for horticultural use and not contain lumps, roots or other foreign matter over one inch in diameter. It shall be free of noxious weeds. Mulch shall not contain more than 35% moisture by weight.

#### 2.05 MULCH for LAWN -HYDROSEED

- A. Material shall be RhinoTurf or AmTurf Green Star Plus, paper mulch with binder or approved substitution.

#### 2.06 HYDOSEED TURF SLURRY MIX

- A. Mix shall consist of:
  - 1. Fertilizer: 1300 lbs per acre
  - 2. Mulch: 2000 lbs per acre
  - 3. Seed: 12 lbs per 1,000 square feet or 523 lbs. per acre

#### 2.07 WATER

- A. Source: If not available on site, shall be provided by the CONTRACTOR. The CONTRACTOR may bulk-purchase water from the OWNER at the Field Operations Unit. The CONTRACTOR may rent a hydrant

meter from the OWNER'S Customer Service Unit, and must install backflow preventer on the meter assembly. Rent is \$1000 with the fee being applied to water use counted by the hydrant meter. Any unused portion of the rental fee returned to the CONTRACTOR at the time the CONTRACTOR returns the meter assembly to the OWNER. If the CONTRACTOR exceeds the rental amount at time of return, the CONTRACTOR shall pay Customer Service the difference.

- B. Quality: Water supplied by the CONTRACTOR shall be free of substances harmful to plant growth.

## 2.08 TOPSOIL

- A. Existing topsoil that has been stripped and stockpiled shall be re-spread on the finished sub grade. Topsoil shall be as described in the – SITE PREPARATION SECTION (31 10 00) – of these specifications.
- B. Quantity: The CONTRACTOR shall be responsible for estimating the quantity of topsoil stockpiled. The CONTRACTOR shall report any discrepancy between work on the Plans and in the Specifications to the CONSULTANT.

## 2.09 COMPOST

- A. Compost shall be used only from City of Ann Arbor, available from WeCare Organics 1.734.477.0334, or approved substitution.

## 2.10 EROSION CONTROL BLANKET

- A. Erosion control blanket shall be North American Green Straw Erosion Control Blanket S150 BN, 100% biodegradable, jute netted or approved substitution.
- B. Pegs shall be of sound wood and sized per MDOT Standard Specifications, latest edition.
- C. Erosion control blanket supplier: Erosion control blanket is available through Price and Company, Inc., Wyoming, Michigan, 1.616.530.8230.

## 2.11 SOD

- A. Sod shall meet MDOT standards and specifications for Class A Sod.
- B. Type: Kentucky Bluegrass Blend
- C. Quality:
  1. Dense, healthy, field-grown on mineral topsoil (less than 10% organic content) with the grass having been mowed at one-inch height before lifting from field.
  2. Dark green in color, relatively free of thatch, free from diseases, weeds and harmful insects.
  3. Reasonably free of objectionable grassy and broadleaf weeds. Sod will be considered weed free if no more than ten such weeds are found per hundred square feet of sod.
  4. Sod will be rejected if found to contain the following weeds: Bermuda grass, bent grass, perennial sorrel, and brome grass.
  5. Sod grown on peat will not be approved.

## 2.12 HERBICIDES

- A. Herbicide-A. Glyphosate, a nonselective herbicide shall be used to eradicate existing vegetation. It shall be used according to the manufacturer's label.

# PART 3 - EXECUTION

## 3.01 SUBGRADE PREPARATION

- A. In lawn areas: Upon completion of rough grading, the CONTRACTOR shall decompact subgrade, to a minimum depth of six (6) inches.

## 3.02 PLACING TOPSOIL and FINE GRADING

- A. Repair topsoil as directed by the CONSULTANT so that finish grades are met.
- B. For lawn areas, topsoil shall be placed to a minimum depth of four (4) inches for lawn areas, so that the finish surface is a fine seedbed, varying not more than one (1) inch in ten (10) feet.
- C. Final grades will be reviewed by the CONSULTANT prior to demobilization/completion.



### 3.03 HYDROSEEDING FOR LAWN

- A. Mixing:
  - 1. Mix Location: Perform slurry preparation at job site.
  - 2. Adding water: Add water to the tank when the engine is at half throttle. When the water level has reached the height of the agitator shaft, establish good re-circulation and add seed.
  - 3. Seed: Do not allow seed to remain more than 30 minutes in slurry.
  - 4. Fertilizer: Add fertilizer without mulch. Commence spraying immediately when the tank is full.
  - 5. Mulch: Apply mulch in a separate operation after seed and fertilizer have been applied.
- B. Application:
  - 1. Apply specified slurry mix in a sweeping motion to form a uniform mat at the specified rate.
  - 2. Keep hydroseeding within designated areas and keep from contact with other plant materials.
  - 3. Apply seed and mulch in two separate operations.

### 3.04 SEEDING AND FERTILIZING FOR LAWN

- A. Application:
  - 1. Sow the seed using a mechanical seeder such as a lawn maker or brillion. A cultipacker or approved similar equipment may be used to cover the seed and form the seedbed in one operation.
  - 2. Sow at the species rate of pounds per acre as indicated on the drawings.
  - 3. Lines of seed shall be perpendicular to slopes to reduce rapid surface water run-off. If this option is chosen fertilize prior to seeding operations.
- B. Fertilizing:
  - 1. Apply starter fertilizer with a mechanical spreader prior to seeding operation as necessary to promote optimal growth.
  - 2. Thoroughly incorporate fertilizer into topsoil to a depth of two (2) inches.
  - 3. Immediately before sowing lawn seed, Contractor shall rework the surface until it is fine, pulverized seed bed, varying not more than one (1) inch in ten (10) feet.

### 3.05 SODDING

- A. Sod shall be installed at locations indicated on plans. In addition an approved sod may be used in lieu of seed at the CONTRACTOR'S option and expense if he/she feels it is in the best interest of lawn establishment.
- B. Scarify subgrade, spread topsoil. Fertilize topsoil area to be sodded with starter fertilizer as necessary to promote optimal growth. Incorporate fertilizer into upper three to four inches of soil.
- C. Timing:
  - 1. Install sod within 24 hours of delivery
  - 2. Sod not transplanted within 24 hours of delivery will be rejected.
- D. Rolling Sod Bed: Roll amended soil with 200 pound water-ballast roller.
- E. Moistening Sod Bed: After all unevenness in the soil surface has been corrected, lightly moisten the soil immediately prior to laying the sod.
- F. Laying the Sod:
  - 1. Lay the first row of sod in a straight line, with subsequent rows parallel to and tightly against each other, with no spaces between strips.
  - 2. Stagger lateral joints.
  - 3. Sodded areas shall be flush with adjoining existing lawn or seeded areas.
  - 4. Do not stretch or overlap sod
  - 5. Butt all joints tightly to eliminate all voids.
  - 6. Use a sharp knife to cut sod to fit curves.
- G. Tamping and Rolling Sod:
  - 1. Thoroughly tamp and roll sod with a 200 pound water-ballast roller to make contact with sod bed.
  - 2. Roll each entire section of completed sod.
- H. Slopes of 3:1 or Greater
  - 1. Lay sod with staggered joints secure by pegs driven through sod into soil until pegs are flush with turf.
  - 2. Space pegs 18 inches on center.
  - 3. Pegs to be 1-inch square x 6-inch length of lath.
- I. Watering: Thoroughly water sod immediately after installation to wet the underside of the new sod pad and the soil immediately below to a depth of 6".

### 3.06 LAWN WEEDS

- A. Invasive grasses such as crabgrass, smooth brome, reed canary, quack grass or other invasive grasses and/or forbs shall be spot controlled beginning in May with Herbicide-A (or approved substitution) until the end of the first full growing season and/or before the plants set seed. Lawn herbiciding maintenance shall not threaten any adjacent native planting areas. Alert the CONSULTANT if a conflict between lawn maintenance and the health of the native planting areas exists.

### 3.07 EROSION CONTROL BLANKET INSTALLATION

- A. Install erosion control blanket per manufacturer's specifications in locations indicated on plans. In addition, erosion control blanket shall be installed where the CONTRACTOR feels it necessary to stabilize the site. Additional blanket beyond what is indicated on the plans shall be provided and installed at the expense of the CONTRACTOR.
- B. Begin at top of the slope by anchoring the blanket in a 6" deep x 6" wide trench. Backfill and compact the trench after staking.
- C. Roll the blankets down the slope in the direction of the water flow.
- D. The edges of parallel blankets must be staked with approximately 2" overlap. When blankets must be spliced down the slope, place blankets end over end (shingle style) with approximately 6" overlap. Stake through overlapped area, approximately 12" apart.
- E. In general, stake blanket approximately one (1) stake per one (1) square foot.

### 3.08 MULCHING

- A. Lawn seeded areas to be mulched shall be mulched per MDOT Specifications, latest edition.

### 3.09 ESTABLISHMENT AND ACCEPTANCE: LAWN

- A. Establishment of a dense stand of perennial lawn, free from mounds and depressions is the responsibility of the CONTRACTOR. Any part of the area that fails to show a uniform germination shall be re-seeded, and such re-seeding shall continue until a dense lawn is established.
- B. Watering: The CONTRACTOR shall keep seeded areas moist for optimum plant growth (1 1/2" of total water per week, including rainfall) until the grass is four (4) inches high, typical.
- C. Erosion shall be repaired by the CONTRACTOR.
- D. Bare spots over three (3) percent of the area or greater than one (1) square foot in size will not be allowed unless otherwise approved by the CONSULTANT.
- E. Protection from traffic and erosion in newly seeded areas is the responsibility of the CONTRACTOR. Safety fences and/or silt fence with appropriate signage may be used at the CONTRACTOR's expense until the lawn is fully established.
- F. Initial mowing of the lawn area shall take place when grass is four (4) inches high and shall be the responsibility of the CONTRACTOR. Cutting height shall be three (3) inches minimum. Do not cut more than 1/3 of grass blade height.
- G. An approved sod may be used at the CONTRACTOR'S option and expense if he/she feels it is in the best interest of lawn establishment.
  - 1. Fertilize topsoil area to be sodded with starter as necessary to promote optimal growth.
- H. Acceptance will be when all the above specifications have been met.

END OF SECTION

## SECTION 32 93 00 FINE GRADING and NATIVE PLUG PLANTING

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. Provide all fine grading where shown on drawings, as specified herein and as necessary for a complete and proper installation.
- B. Work shall include but not be limited to:
  - 1. Placing topsoil and fine grading for native planting.
  - 2. Placing and integrating compost and fine grading for native planting.
  - 3. Native Plant plugging and establishment.
- C. When the phrase "Native Planting" or "Native Plugging" is used in the specifications, it refers to areas plugged with Native Herbaceous plant material.

#### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, General Conditions and the City of Ann Arbor Standard Specifications for Construction, which are hereby made part of this section.
- B. Related Sections:
  - 1. Site Preparation 31 10 00
  - 2. Soil Erosion and Sedimentation Control 31 11 00
  - 3. Earth Work 31 20 00
  - 4. Planting 32 93 10
  - 5. Plant Maintenance and Guarantee Period 32 93 20

#### 1.03 REFERENCE SPECIFICATION

- A. AOSA -Association of Official Seed Analysis: Rules for testing Seeds, Journal of Seed Technology, 1991 Edition
- B. TAPPI-Technical Association of the Pulp and Paper Industry
- C. AOAC - Official Methods of Analysis, Association of Official Analytical Chemists.
- D. Materials and Work covered under this Section shall be in accordance with MDOT (2012 edition), Washtenaw County, and City of Ann Arbor standards and specifications unless otherwise indicated. If a conflict exists between specifications, the more rigorous shall govern.

#### 1.04 QUALITY ASSURANCES

- A. Soil amendments: Copies of invoices shall be provided to the CONSULTANT. Samples must be provided if requested by the CONSULTANT.
- B. The CONTRACTOR shall notify the CONSULTANT of plug sources 30(thirty) days after the contract award.
- C. CONTRACTOR shall review native plug sources with CONSULTANT prior to ordering, and shall submit an invoice following purchase and delivery of the plugs.
- D. Installation of plugs, including special native plugging, shall be carried out by CONTRACTORS and their employees who are thoroughly experienced and skilled in the necessary crafts, and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this section. The CONTRACTOR shall have a minimum of five (5) years documented experience in comparable work.
- E. Grading and plug layout shall be reviewed by the CONSULTANT prior to completion. Planting zone polygons may be laid out with spray paint prior to planting in order for CONSULTANT to review.

#### 1.05 SUBMITTALS

- A. The CONTRACTOR shall submit to the CONSULTANT sources for plugs 30 (thirty) days after contract award.
- B. The CONTRACTOR shall submit to the CONSULTANT a plan and schedule for seeding at least two weeks prior to the scheduled commencement of work.

#### 1.06 DELIVERY, STORAGE AND HANDLING

- A. Soil amendments shall be kept dry.

#### 1.07 SCHEDULE

- A. Plugging shall be done after May 15 or as otherwise approved by the CONSULTANT.
- B. The CONTRACTOR shall complete all planting by June 30, or be subject to Liquidated Damages as described below.

#### 1.06 LIQUIDATED DAMAGES

- A. Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the CONTRACTOR to pay the City, as liquidated damages and not as a penalty, an amount equal to \$500.00 for each calendar day of delay in the completion of all the work included in this specification section. If any liquidated damages are unpaid by the CONTRACTOR, the City shall be entitled to deduct these unpaid liquidated damages from the monies due the CONTRACTOR.

### PART 2 - PRODUCTS

#### 2.01 NATIVE PLUGS

- A. General. Plugs shall be of native plant material of genotypes from the north central states only (MI, IL, IN, WI, OH), and from a recognized nursery of this region. The CONTRACTOR shall make every effort to identify Michigan sources for plugs, before endeavoring to locate plugs from suppliers in other north central states.
- B. Plugs shall be installed in the proportion and pattern as indicated on the drawings.
- C. Plug sources for the native plugs are available through The Native Plant Nursery 1.734.677.3260, WildType Native Plant Nursery 1.517.244.1140, or approved substitution.

#### 2.02 EROSION CONTROL/SEED MATRIX

- A. Apply erosion control seed matrix at a species rate of pounds per acre as indicated on the drawings.
- B. Seed sources for the erosion control seed matrix for native seed mixes are available through Rhino Seed and Landscape Supply, Brighton, Michigan 1.800.482.3130; The Michigan Wildflower Farm, Portland, Michigan, 1.517.647.6010; LaFayette Home Nursery, LaFayette IL, 1.309.995.3311; Prairie Nursery, Westfield, WI 1.608.296.3679, or approved substitution:

#### 2.03 WATER

- A. Source: If not available on site, shall be provided by the CONTRACTOR.
- B. Quality: Water supplied by the CONTRACTOR shall be free of substances harmful to plant growth.

#### 2.04 TOPSOIL

- A. Follow requirements outlined in the – SITE PREPARATION SECTION (31 10 00) – of these specifications for information on existing topsoil.

#### 2.05 COMPOST

- A. Compost shall be used only from City of Ann Arbor, available from WeCare Organics 1.734.477.0334, or approved substitution.
- B. Quantity: The CONTRACTOR shall be responsible for estimating the quantity of compost necessary to obtain the specified depth of compost to be spread and integrated. The CONTRACTOR shall report any discrepancy between work on the Plans and in the Specifications to the CONSULTANT.

#### 2.06 RAIN GARDEN SOIL MIX

- A. Rain Garden Soil Mix shall be prepared on site by thoroughly mixing one (1) part existing topsoil, one (1) part compost. If there is not adequate existing topsoil, use existing soil on site.

## 2.07 EROSION CONTROL BLANKET

- A. Erosion control blanket shall be North American Green Straw Erosion Control Blanket S150 BN, 100% biodegradable, jute netted or approved substitution.
- B. Pegs shall be of sound wood and sized per MDOT Standard Specifications, latest edition.
- C. Erosion control blanket supplier: Erosion control blanket is available through Price and Company, Inc., Wyoming, Michigan, 1.616.530.8230.

## 2.08 HERBICIDES

- A. Herbicide-A. Glyphosate, a nonselective herbicide shall be used to eradicate existing vegetation. It shall be used according to the manufacturer's label.
- B. Herbicide-B. Sethoxydim, a selective herbicide shall be used to selectively remove invasive grass from prairie planting and wet meadow planting (if not adjacent to water). It shall be used according to the manufacturer's label.
- C. Herbicide-C. Rodeo, a non-selective herbicide shall be used to eradicate existing vegetation in wet meadow areas adjacent to open water. It shall be used according to the manufacturer's label.

## PART 3 – EXECUTION

### 3.01 SUBGRADE PREPARATION

- A. See the – EARTHWORK SECTION (31 20 00) – of these specifications for subgrade preparation of rain garden areas.

### 3.02 PLACING RAIN GARDEN SOIL MIX and FINE GRADING

- A. In Rain Garden planting areas, following soil ripping, topsoil shall be placed to a minimum depth of six (6) inches and incorporated into the top two (2) inches of the subgrade. Six (6) inches of compost shall then be integrated into the top six (6) inches of the topsoil.
- B. Though soils in Rain Garden areas have been 'roughed up', the CONTRACTOR shall maintain adequate slopes across this area to prevent ponding of storm water.
- C. Repair Rain Garden Soil grading as directed by the CONSULTANT so that finish grades are met.
- D. Final grades will be reviewed by the CONSULTANT prior to demobilization/completion.

### 3.03 NATIVE PLUG INSTALLATION

- A. Native Plug stock as per detail:
  - 1. Remove all containers and packaging material before planting and remove from site.
  - 2. Set plants plumb.
  - 3. Do not damage root structure.
  - 4. Thoroughly soak root matter with water.
  - 5. See Watering in the – PLANT MAINTENANCE AND GUARANTEE SECTION (32 93 20) – for watering during the establishing period.
- B. In areas where both plugs and erosion control blanket are present, plugs shall be planted through the blanket after its installation.
- C. The CONTRACTOR shall be responsible to keep the plugs adequately watered, as necessary, to ensure their survival.

### 3.04 AGGRESSIVE NON-NATIVE GRASSES and FORBS

- A. Invasive grasses such as crabgrass, smooth brome, reed canary or other invasive grass shall be spot controlled beginning in June with Herbicide-B until the end of the first full growing season and/or before the plants set seed.
- B. Invasive forbs such as purple knapweed, purple loosestrife, garlic mustard, Canada thistle, phragmites or other invasive forb shall be spot controlled beginning in June with Herbicide-A until the end of the first full growing season and/or before the plants set seed.
- C. Rain Garden Planting areas that contain invasive weeds shall be spot controlled beginning in June with Herbicide-C until the end of the first full growing season and/or before the plants set seed.

### **3.06 EROSION CONTROL BLANKET INSTALLATION**

- A. If erosion control blanket is indicated or needed in areas where plugs are present, install erosion control blanket prior to plugging.
- B. Install erosion control blanket per manufacturer's specifications in locations indicated on plans. In addition, erosion control blanket shall be installed where the CONTRACTOR feels it necessary to stabilize the site. Additional blanket beyond what is indicated on the plans shall be supplied and installed at the expense of the CONTRACTOR.
- C. Begin at top of the slope by anchoring the blanket in a 6" deep x 6" wide trench. Backfill and compact the trench after staking.
- D. Roll the blankets down the slope in the direction of the water flow.
- E. The edges of parallel blankets must be staked with approximately 2" overlap. When blankets must be spliced down the slope, place blankets end over end (shingle style) with approximately 6" overlap. Stake through overlapped area, approximately 12" apart.
- F. In general, stake blanket approximately one (1) stake per one (1) square foot.

### **3.07 MULCHING**

- A. For all rain garden planting areas: cover with undyed shredded hardwood bark mulch to a depth shown on the drawings.

### **3.8 ESTABLISHMENT AND ACCEPTANCE: RAIN GARDEN PLANTING AREAS**

- A. It may be necessary to pump standing water out of Rain Garden Planting Areas during the establishment period.
- B. Watering: The CONTRACTOR shall keep plugs moist for optimum plant growth (1" of total water per week, including rainfall).
- C. Erosion shall be repaired by the CONTRACTOR.
- D. Bare spots over three (3) percent of the area or greater than eight (8) square foot in size will not be allowed, unless otherwise approved by the CONSULTANT.
- E. Protection from traffic and erosion in newly planted areas is the responsibility of the CONTRACTOR. Safety fences and/or silt fence with appropriate signage may be used at the CONTRACTOR's expense until the grasses and flowers are fully established.
- F. Final Acceptance will be when all the above including subsequent Weed Control requirements and Guarantee of Materials as specified in the – PLANT MAINTENANCE AND GUARANTEE SECTION (32 93 20) – of these specifications have been met.

**END OF SECTION**

# SECTION 32 93 10 PLANTING

## PART 1 - GENERAL

### 1.01 SUMMARY

- A. Provide Planting where shown on drawings as specified herein, and as needed for a complete and proper installation.
- B. Work shall include:
  - 1. Tree and shrub planting
  - 2. Perennial planting
  - 3. Edging

### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and the City of Ann Arbor Standard Specifications for Construction, which are hereby made part of this section.
- B. Related Sections:
  - 1. Fine Grading, Lawn Seeding and Site Stabilization 32 92 00
  - 2. Fine Grading and Plug Planting 32 93 00
  - 3. Plant Maintenance and Guarantee Period 32 93 20

### 1.03 REFERENCE SPECIFICATIONS

- A. **AOSA** -Association of Official Seed Analysis: Rules for testing Seeds, Journal of Seed Technology, 1991 Edition
- B. **TAPPI**-Technical Association of the Pulp and Paper Industry
- C. **AOAC** - Official Methods of Analysis, Association of Official Analytical Chemists.
- D. Materials and Work covered under this Section shall be in accordance with MDOT (2012 edition), Washtenaw County, and City of Ann Arbor Standards Specifications for Construction unless otherwise indicated. If a conflict exists between specifications, the more rigorous shall govern.

### 1.04 QUALITY ASSURANCE

- A. CONTRACTOR shall provide CONSULTANT with a list specifying sources of plant material.
- B. Inspection: The CONSULTANT may inspect plants at place of growth or on site prior to planting. Rejected material shall be immediately removed from site. Material damaged during planting may be rejected after planting. Material approved at place of growth, but damaged during transportation may also be rejected.
- C. Installation of plants shall be carried out by CONTRACTORS and their employees who are thoroughly experienced and skilled in the necessary crafts, and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this section. The CONTRACTOR shall have a minimum of five (5) years documented experience in comparable work.

### 1.05 DELIVERY, STORAGE AND HANDLING

- A. Plant material delivery shall be the same day as planting. No plants shall be stored at the site without permission of the CONSULTANT. Plants shall be carefully loaded and unloaded so as not to damage branching or root mass. Dropping of material will not be allowed. Plants in full leaf shall be thoroughly wetted down and completely covered with a wet tarp during transportation.
- B. All plant roots must be kept in a moist condition.
- C. Digging and Handling Plant Material: Digging shall be during the dormant season, preferably between 1 October and 1 May. Plant material which is poorly packed, or which arrives with the roots in a dry condition, as a result of improper packing, delay in transit, or from any other cause, will not be accepted. Stock shall be handled in such a manner that the roots shall remain intact, the branches unbroken, and the bark intact and not loosened from the wood. Stock shall be protected from drying and from temperatures below 50°F and in excess of 90°F prior to planting.



- D. The CONTRACTOR shall complete all planting by June 30, or be subject to Liquidated Damages as described below.

#### 1.06 LIQUIDATED DAMAGES

- A. Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the CONTRACTOR to pay the City, as liquidated damages and not as a penalty, an amount equal to \$500.00 for each calendar day of delay in the completion of all the work included in this specification section. If any liquidated damages are unpaid by the CONTRACTOR, the City shall be entitled to deduct these unpaid liquidated damages from the monies due the CONTRACTOR.

#### 1.07 SUBMITTALS

- A. The CONTRACTOR shall submit to the CONSULTANT sources for all plant material 30 (thirty) days after contract award.

### PART 2 - PRODUCTS

#### 2.01 PLANTS

- A. Material shall be of the size, genus, species, variety, and any other special designation as shown and scheduled for on the drawings, on the attached Proposal Form or in these Specifications. No substitution of species, variety or size shall be accepted without written approval from the CONSULTANT and OWNER. Plant material shall be nursery grown under climatic conditions similar to those in the locality of the project.
- B. Quality: Plants shall comply with the recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock." Plants shall be healthy, vigorous stock grown in a recognized nursery in accordance with good horticultural practice, and free of disease, insects, eggs, larvae and defects such as knots, sunscald, injuries, abrasions, or disfigurement.
  - 1. Plants balled with plastic burlap will not be accepted.
- C. Labeling: All plants shall be labeled with securely-attached waterproof tab bearing legible designation of botanical and common name.
- D. Formal arrangements if/where shown on planting plan shall have trees selected for uniform height and spread.

#### 2.02 TOPSOIL

- A. Topsoil shall be as described in the – FINE GRADING, LAWN SEEDING, AND SITE STABILIZATION (32 92 00) and FINE GRADING AND PLUG PLANTING (32 93 00) SECTIONS – of these specifications.

#### 2.03 FERTILIZER

- A. Fertilizer shall be slow release, at minimum 50% derived from a natural, organic source, 12-0-6 or approved substitution.

#### 2.04 COMPOST

- A. Compost shall be used only from City of Ann Arbor, available from WeCare Organics 1.734.477.0334, or approved substitution.

#### 2.05 AMENDED SOIL for TREE PLANTING

- A. Amended soil shall be prepared on site by mixing four (4) parts topsoil, one (1) part compost and adding starter fertilizer for planting beds at the recommended rate as defined in the Topsoil section of the – FINE GRADING, LAWN SEEDING AND SITE STABILIZATION SECTION (32 92 00) – of these specifications.

#### 2.06 PLANTING MIX for TREE PLANTING

- A. Planting mix shall consist of 50% excavated material (from same stratification as removed); thoroughly mixed with 50% amended soil.

#### 2.07 RAIN GARDEN SOIL MIX for SHRUB PLANTING

- A. Rain Garden Soil shall be prepared on site by thoroughly mixing one (1) part topsoil, one (1) part compost. If there is not adequate existing topsoil, use existing soil on site.



## 2.08 PRE-PLANTING SUPPORT

- A. Material for support through transplanting shock shall be Bio-Plex Technical Transplant Concentrate and Plant Enhancer or approved substitution. This product is available through Bio-plex, Inc., 1.800.441.3573

## 2.09 WATER

- A. Source: If not available on site, water shall be provided by the CONTRACTOR
- B. Quality: Water supplied by the CONTRACTOR shall be free of substances harmful to plant growth.

## 2.10 MULCH

- A. Material around isolated trees and in planting bed areas shall be shredded hardwood bark free of weeds, soil, sticks or trash, and shall have a uniform appearance. A sample shall be approved by CONSULTANT prior to application.
  - 1. Colored or dyed mulch will not be accepted.

## 2.11 LOCATION STAKES

- A. Stakes for plant locations shall be 1" X 2" X 3' wood, and supplied by the CONTRACTOR.

## 2.12 TREE SUPPORT

- A. Stakes for tree support shall be 2" x 2" hardwood stakes or approved equal driven 6-8" outside of the rootball.
- B. Support shall be 2"-3" wide belt-like nylon or plastic straps. DO NOT USE rope or wire encased in a hose.

# PART 3 - EXECUTION

## 3.01 PLANTING SUPPORT

- A. If trees and/or shrubs are planted from May through August, or when there are drought conditions during September through April, the CONTRACTOR shall provide planting support to each balled and burlapped specimen with Bio-Plex Technical Transplant Concentrate and Plant Enhancer (per manufacturer's instructions on label) by means of:
  - 1. A foliar application (through spray) upon receipt of trees and shrubs
  - 2. A root application (through tree gators) upon planting of trees and shrubs

## 3.02 LAYOUT

- A. Locations of trees, shrubs, perennials and groundcover shall be established by the CONTRACTOR according to plans.
- B. Locations for trees and shrubs shall be identified with stakes. Different species shall be clearly labeled and marked with different color ribbon, paint or permanent marker on the stake.
- C. Perennials and ornamental grasses shall be laid out in their containers on top of the ground.
- D. Groundcover zones shall be laid out by paint.
- E. Review: The CONTRACTOR shall notify the CONSULTANT when staking and layout is completed and allow two working days for modifications and notice to proceed with planting.

## 3.03 TREE and SHRUB PLANTING

- A. Balled and/or container stock as per detail:
  - 1. Set plants plumb.
  - 2. **B&B STOCK:**
    - a. Remove all bindings and burlap from top one half of ball and remove from site.
    - b. Cut wires of basket and fold completely down into hole.
  - 3. **CONTAINER STOCK:**
    - a. Remove all containers and packaging material before planting and remove from site.
  - 4. Backfill with planting mix. Water and foot compact at intervals. Do not damage root structure.
  - 5. Mulch to a depth as shown on the details and soak the mulch with water. Thoroughly soak root ball with water. Mulch is not necessary for prairie shrubs.

6. Prune all dead wood at first live lateral bud in accordance with standard horticultural practices using sharp instruments cleaned frequently. If necessary, any additional pruning will be directed by the CONSULTANT. Do not prune terminal leader or branch tips. A plant's natural form shall not be compromised by any pruning activities. Promptly remove all pruned material from site.
7. STAKE all trees as follows:
  - a. Stakes shall be driven 6"-8" outside of the rootball.
  - b. Loosely stake tree to allow for trunk flexing.
  - c. Attach support straps around tree trunk just below first branch of tree (2 per tree on opposite sides of the tree).
  - d. Remove all tree support after one year.
8. Remove all nursery applied tree wrap, tape or string from trunk and crown. Remove any tags or labels and remove from site.

#### 3.04 PERENNIAL PLANTING

- A. Container stock as per detail:
  1. Remove all containers and packaging material before planting and remove from site.
  2. Set plants plumb.
  3. Backfill with planting mix. Do not damage root structure.
  4. Mulch to a depth as shown on the details and soak the mulch with water. Thoroughly soak root matter with water.

END OF SECTION

# SECTION 32 93 20 PLANT MAINTENANCE and GUARANTEE PERIOD

## PART 1 - GENERAL

### 1.01 SUMMARY

- A. The CONTRACTOR shall furnish all labor, materials, equipment, transportation, services and necessary appurtenant work as required to complete the work as shown on the Plans and/or as specified herein.
- B. Extent of work shall include but not be limited to:
  - 1. Weed Control
  - 2. Disease and insect control
  - 3. Pruning
  - 4. Fertilizer Application
  - 5. Mulching
  - 6. Removal of plant support and tags (if any)
  - 7. Watering
  - 8. Maintenance & Guarantee of Plant Material for 1 period
- C. When the phrase "Native Planting" is used in the specifications, it refers to areas seeded and/or plugged with Native Plant material.

### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and the City of Ann Arbor Standard Specifications for Construction, which are hereby made part of this section.
- B. Related Sections:
  - 1. Fine Grading, Lawn Seeding and Site Stabilization 32 92 00
  - 2. Fine Grading and Plug Planting 32 93 00
  - 3. Planting 32 93 10

### 1.03 REFERENCE SPECIFICATION

- A. Materials and Work covered under this Section shall be in accordance with MDOT (2012 edition), Washtenaw County, and City of Ann Arbor Standards Specifications for Construction unless otherwise indicated. If a conflict exists between specifications, the more rigorous shall govern.

### 1.04 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

### 1.05 DEFINITIONS

- A. Definition of Period for plant material: The First Maintenance and Guarantee Period begins upon written notification of provisional acceptance and continues for one year.

### 1.06 SCHEDULE

- A. Schedule: A minimum of one visit is required for each of the following time periods during the First and Second Maintenance and Guarantee periods. During each visit, CONTRACTOR shall complete all necessary tasks to comply with the requirements outlined in these specifications.
  - 1. 1 April to 15 April
  - 2. 1 May to 15 May
  - 3. 1 June to 15 June
  - 4. 1 July to 15 July
  - 5. 1 August to 15 August
  - 6. 1 September to 15 September
- B. Verification of visits, in the form or reports and certified payroll covering visits, shall be provided to the OWNER.

### 1.07 DELIVERY, STORAGE AND HANDLING

- A. Packaged materials shall be delivered in original containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and storage.

## PART 2 - PRODUCTS

### 2.01 PESTICIDES & HERBICIDES

- A. Materials shall comply with Local, State and Federal regulations.
- B. Common IPM (Integrative Pest Management) practices shall be followed. Pesticides and herbicides shall be used as a last resort.

### 2.02 FERTILIZER

- A. Materials shall conform to the standards of the Association of Agricultural Chemists and shall comply with State and Federal regulations.
- B. Fertilizer for woody plants shall be an organic, slow release with a ratio of 3-1-2 or 3-1-1 or approved substitution.
- C. Maintenance fertilizer for lawn shall contain no phosphorus, shall be derived from an organic product, and slow release with a ratio of 27-0-12 or approved substitution. Fertilizer available from Downtown Home and Garden, 734-662-8122.
- D. There shall be no fertilizer applied to native planting areas.

### 2.03 WATER

- A. Source: If not available on site, shall be provided by the CONTRACTOR.
- B. Quality: Water supplied by the CONTRACTOR shall be free of substances harmful to plant growth.

### 2.04 MULCH

- A. Material shall be shredded hardwood bark free of weeds, soil, sticks or trash, of a uniform appearance.
  - 1. Colored or dyed mulch will not be accepted.

## PART 3 - EXECUTION

### 3.01 DISEASE and INSECT CONTROL

- A. Monitoring for diseases and insects shall be the responsibility of the CONTRACTOR. The CONTRACTOR shall monitor all plants at all times for disease and insect problems.
- B. Treatment shall take place in accordance with common IPM practices.
- C. Pesticides shall only be used when and where necessary as approved by the OWNER. Manufacturer's directions and precautions must be followed rigorously. Applicators shall be licensed by the State of Michigan. Applicators shall be knowledgeable in the application of pesticides and appropriate equipment used. Excess pesticides shall be properly removed from the site.

### 3.02 PRUNING

- A. Prune all dead wood at first live lateral bud in accordance with standard horticulture practices using sharp instruments cleaned frequently. Pruning shall enhance plant development and ornamental qualities. Do not prune terminal leader or branch tips. A plant's natural form shall not be compromised by any pruning activities.
- B. Additional pruning may be required at the request of the OWNER in order to decrease public liability factors.
- C. Remove immediately after pruning all dead, broken and diseased growth and other pruning debris from the site, and dispose of in an environmentally sensitive manner.
- D. Plant material that is "topped" by the CONTRACTOR shall be replaced at the CONTRACTOR's expense.

### 3.03 MAINTENANCE FERTILIZER APPLICATION

- A. Application shall be according to manufacturer's directions.
- B. Woody Plants

1. Maintenance Fertilizer application for woody plants shall occur in November of the Second Maintenance and Guarantee Period
  2. Topdress at a rate of 1 pound of nitrogen per 1,000 square feet.
- C. Lawn
1. Maintenance Fertilizer application for lawn shall occur in May and October of the First and Second Maintenance and Guarantee Periods. For Spring seeding, commencement of maintenance fertilizer shall begin the subsequent fall. For Fall seeding, commencement of maintenance fertilizer shall begin the subsequent spring.
  2. For May fertilizing, topdress at a rate of half (.5) a pound of nitrogen per 1,000 square feet.
  3. For October fertilizing, topdress at a rate of one and a half (1.5) pounds of nitrogen per 1,000 square feet.

**3.04 WEEDING**

- A. Frequency shall be every visit.
- B. Methods: Weeds shall be removed by hand. Before application of any herbicide the CONTRACTOR shall receive approval of the OWNER. A selective herbicide shall be applied according to manufacturer's directions.

**3.05 MULCHING**

- A. Monitoring: All mulch beds shall be reviewed in June and September for each Maintenance and Guarantee Period. Any beds that do not meet the following conditions shall be replenished.
  1. Depth shall be three (3) inches typical shredded hardwood bark for individual trees.
  2. Depth shall be two (2) inches typical shredded hardwood bark for perennial areas.
  3. Do not allow mulch to be deeper than four (4) inches.
  4. Keep mulch four (4) inches away from root collar of trees.

**3.06 REMOVAL of TREE SUPPORT and TAGS**

- A. Repair all damaged guys and stakes during First Maintenance and Guarantee Period
- B. Remove all stakes, guys, labels and support material at the end of the First Maintenance and Guarantee Period and remove from site.

**3.07 WATERING**

- A. Monitor all plants during site visits for water stress.
- B. Water as required to keep all plants in optimum health—this may exceed the time windows outlined in the schedule. For all plantings, apply water in a slow trickle to allow water to penetrate down into root zone of plant.
- C. Native plugs in the deepest ponding area may require more watering than other planting areas.
- D. Adjust frequency and length of time for watering cycles according to changing soil and weather conditions. The CONTRACTOR is responsible for watering as necessary for plant survival at no additional cost to the OWNER.

**3.08 WEED CONTROL: ALL PLANTING AREAS**

- A. Weeding of all planting areas shall occur prior to invasive weed species (Sweet Clover, Burdock, Wild Carrot, Purple Knapweed, Purple Loosestrife, Phragmites, etc.) setting their seed or as determined by CONSULTANT.
- B. Post planting management procedures for rain garden planting area may consist of, but are not limited to the following:
  1. Pull invasive weed species to remove root.
  2. Spring or fall dormant seasons application of a non-selective herbicide to control invasive weeds. As directed by the OWNER. Follow City of Ann Arbor signage requirements following herbicide application.
  3. Summer application of a selective herbicide to control invasive weeds. As directed by the OWNER. Follow City of Ann Arbor signage requirements following herbicide application.

4. A late winter/early spring burn to encourage native plants, control invasive weeds and prevent excessive build-up of thatch. This may take place outside of outlined maintenance visit times if optimum burning conditions exist. Any burn plans must be coordinated with the OWNER.
- C. Acceptance will be when all the above requirements have been met.

### **3.09 SPRING CLEAN-UP**

- A. During the first spring maintenance visit at least 6 months after planting, the CONTRACTOR is responsible to cut all standing dead vegetation and remove it from the site.

### **3.10 GUARANTEE of MATERIAL**

- A. Responsibilities: The CONTRACTOR shall replace, at no cost to the OWNER, all dead woody and one gallon pot perennial vegetation during the Maintenance and Guarantee Period
- B. The CONTRACTOR shall guarantee 90% survival of native plug material. If areas equal or larger than 8 square feet are bare, the contractor shall replace the plant material in that area, even if the general planting is above the 90% survival threshold.
- C. Judgment of the plant's health will be the CONSULTANT'S or the OWNER'S.
- D. Planting methods shall be the same as specified herein and in the planting details unless directed by the CONSULTANT.
- E. Limits: Plants replaced during the Maintenance and Guarantee Period are only under guarantee during those periods.

**END OF SECTION**

# SECTION 32 94 00 TREE SPADE RELOCATION and PLANTING

## PART 1 - GENERAL

### 1.01 SUMMARY

- A. All tree spade work by the CONTRACTOR shall be in accordance with MDOT Standard Specifications for Construction and as revised herein, and with the following Tree Spade Specification.
- B. Extent of work shall include but not be limited to:
  1. Pulling earthen plug
  2. Tree Pick-Up
  3. Tree transportation
  4. Tree placement

### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and the City of Ann Arbor Standard Specifications for Construction, which are hereby made part of this section.
- B. Related Sections:
  1. Site Preparation 31 10 00
  2. Fine Grading, Lawn Seeding and Site Stabilization 32 92 00
  3. Planting 32 93 10
  4. Plant Maintenance and Guarantee Period 32 93 20

### 1.03 REFERENCE SPECIFICATION

- A. Materials and Work covered under this Section shall be in accordance with MDOT (2012 edition), Washtenaw County, and City of Ann Arbor Standards Specifications for Construction unless otherwise indicated. If a conflict exists between specifications, the more rigorous shall govern.

### 1.04 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section. The CONTRACTOR shall have a minimum of five (5) years documented experience in comparable work.

### 1.05 TREE SIZE TO SPADE SIZE RELATION

- A. The following tree size to spade size relations shall be adhered to by all CONTRACTORS.

#### Deciduous Trees

Caliper	Width of Plug	Depth of Plug
2"-3"	44"-50"	±4'
3.5"-5.5"	65"	±5'
6"-8"	78"	±6'
>8"	96"	±6'

#### Evergreen Trees

Height	Width of Plug	Depth of Plug
6'-9'	44"-50"	±4'
10'-11'	65"	±5'
12'-14'	78"	±6'
>14'	96"	±6'

## **PART 2 - PRODUCTS**

### **2.01 FERTILIZER**

- A. Fertilizer shall be a slow release 18-6-12 or approved substitution.

### **2.02 MULCH**

- A. Material around spaded trees shall be shredded hardwood bark free of weeds, soil, sticks or trash, of a uniform appearance in depths shown on details. A sample shall be approved by CONSULTANT prior to application.
  - 1. Colored or dyed mulch will not be accepted.

## **PART 3 - EXECUTION**

### **3.01 PULLING EARTHEN PLUG**

- A. Refer to the plan to locate the location of earth plugs to be removed. They shall be taken with the foot or base of the spade resting flush on the ground so as to take the largest size plug possible within the mechanical limits of the machine.
- B. It is not contemplated that planting shall be done where the depth of the soil over underground construction, obstructions, or rock, is insufficient to accommodate the roots or where the stone, boulders, or other obstructions cannot be broken and removed by hand methods. Should such a situation arise, the CONTRACTOR shall notify the CONSULTANT immediately for a variance in location for the spaded tree.
- C. Where unique situations make centering and flushness requirements impossible or illogical as determined by the CONSULTANT, they will be varied as designated by the CONSULTANT.
- D. All earth plugs taken from the site shall be removed from the site unless directed otherwise by the CONSULTANT.

### **3.02 TREE PICK-UP**

- A. The earth plug taken with each tree shall be centered on that tree. The base or foot of the spade shall be resting on the ground when the tree is spaded.
- B. Where unique situations make centering and flushness requirements impossible or illogical as determined by the CONSULTANT, they will be varied as designated by the CONSULTANT.
- C. In the process of spading, the CONTRACTOR shall apply a minimum of 25 gallons of water to the root ball to aid in root ball stability.

### **3.03 TRANSPORTING**

- A. The tree, once it has been spaded out of the ground, should be bound, as necessary, so branches do not dangerously overhang the trunk on any side.
- B. Non-dormant deciduous trees shall be wrapped in burlap blankets: the blankets shall be sprayed thoroughly with water and kept moist until the tree has reached its destination.
- C. The CONTRACTOR is responsible to operate vehicles within the posted speed limits while in transit, but below speeds which could cause damage to the trees being transported.
- D. All branches damaged during the transport and planting operations shall be properly removed or trimmed to eliminate the damaged portion of the tree. Pruning shall be in accordance with standard horticultural practice, with clean tools. Excessive damage as judged by the CONSULTANT will be grounds for on-site plant rejection and replacement at no cost to the OWNER.

### **3.04 TREE PLACEMENT**

- A. Spaded trees shall be placed and planted the same day that they are pulled.
- B. Set all plants plumb and straight. Set all plants so as to give best appearance. Set all plants to match existing grade at the edge of the earth plug. Should the plug not be a good fit, the CONTRACTOR is required to adjust the hole, not the tree plug to make it so; blending into the existing grades. Planting mix (per MDOT) shall be hand worked into spaces between the plug and hole, water applied, then repeat the process to fill any voids.
- C. When plants are marked to be planted on a slope with more than a mild pitch, they shall be set so that the base of the tree matches the grade across the slope, followed by adjusting the high and low sides of



the plug to match a sufficient degree to eliminate air pockets and to eliminate compaction caused by the mechanical operation of the tree spade.

- D. Fertilizer shall be raked into the surface of the plug.
- E. A minimum six (6) inch saucer of topsoil shall be formed around each plant at the edge of the earth plug. Each tree shall receive ten (10) gallons of water in each saucer. Allow seepage so that none of the water is lost from the saucer. Trees shall be watered at time of placement.
- F. Mulch saucer to a 3" depth keeping mulch 6" from base of tree trunk.
- G. Water tree thoroughly.

**END OF SECTION**

## UTILITIES

### STORM MANHOLES SECTION 33-05-11

#### PART 1 – GENERAL

##### 1.01 SUMMARY

- A. This Section includes specifications and methods for construction of Storm sewer manholes. Sizes and details further described on the drawings.
- B. Related Requirements: Earthwork 31-20-00

##### 1.02 REFERENCES

- A. Definitions:
  - 1. Chimney/Riser – The cylindrical variable height portion of the manhole structure used to support and adjust the finished grade of the manhole frame. The chimney extends from the bottom of the corbel or cone to the base of the manhole frame.
  - 2. Cone – That portion of the pre-cast manhole structure which slopes upward and inward from the barrel of the manhole to the required manhole diameter.
  - 3. Leveling Course refers to a section built of brick or block, precast rings mortared/rubber rings bolted in to place.
- B. Reference Standards:
  - 1. MDOT Michigan Department of Transportation “Standard Specifications for Construction”
  - 2. ASTM American Society of Testing Material – “Specific Volume/Article.”

##### 1.03 ACTION SUBMITTALS 01-33-00

- A. Submit product data sheets for the products specified.

#### PART 2 – PRODUCTS

##### 2.01 PRE-CAST UNITS & APPURTENANCES

- A. Pre-cast concrete section risers, sumps and cones shall be fabricated according to ASTM C-478.
  - 1. Pre-cast concrete units shall be circular with circular reinforcement.
    - a. Internal diameter of units shall conform to the dimensions shown on the drawings.
    - b. Openings for inlet or outlet pipes shall be pre-formed or by drilling out the opening with water cooled diamond bit.
    - c. Pre-cast unit joints shall be cast to receive “premium joint per ASTM C443.
  - 2. Cone units shall be eccentric for manhole 4’-0” and larger.
  - 3. Leveling riser rings shall be sized to match the casting frame and the outside diameter of the cone section. Thickness shall be one inch to 3 inch increments.
    - a. Materials shall be molded high density polyethylene (ASTM-D-4976) – Ladtech Inc., Lino Lakes, MN, 55038.
    - b. Materials shall be re-cycled rubber as furnished by “Infrariser” East Jordan Iron Works.
- B. Pre-cast Concrete Brick or Block:
  - 1. Brick shall conform to the requirements for concrete building brick of ASTM C55, Grade S-II.
    - a. Nominal size shall be 2-1/4’ x 3-1/2” x 8” in lengths ( $\pm 1/4$ ”).
  - 2. Concrete Block shall conform to ASTM C139, with the following exceptions,
    - a. The blocks must be solid curved blocks with the inside and outside surfaces curved to the required radii. The blocks must have a groove or other approved type of joint at the ends. Curved blocks must have the inside and outside surfaces parallel.
    - b. The nominal dimensions for length and height of the block will be selected by the producer. The

## UTILITIES

### STORM MANHOLES SECTION 33-05-11

nominal dimension for width (thickness) must be 6, 8, or 12 inches.

- C. Precast Concrete Manhole Base:
  - 1. Precast bases shall be of size and thickness shown on the drawing.
  - 2. Precast bases shall be reinforced and shall conform to ASTM C478.
- D. Plastic Coated Manhole Steps:
  - 1. Steps shall be injection molded of copolymer, polypropylene, encapsulating a ½ inch grade 60 steel reinforcing bar. Steps shall meet the performance test described in ASTM C-478, Paragraph II, and shall have an impact resistance of 300 ft.-lbs.
  - 2. Rungs shall be a minimum of 10" in clear length, designed to prevent the foot from slipping off the end.
  - 3. Supplier shall be M.A. Industries or equal.
- E. Manhole Joint Materials:
  - 1. Joint materials may be a full ring gasket per ASTM C443 or.

#### 2.02 MASONRY MORTAR

- A. Mortar for brick/block laying manhole frame bedding shall be MDOT type R-2, a Masonry Cement or Portland Cement and Hydraulic lime mixture.
  - 1. Masonry Cement conform to ASTM C-91 Type M.
  - 2. Portland Cement conform to ASTM C-150.
  - 3. Hydrated Lime conform to ASTM C-207 Type S.
- B. Masonry Sand shall conform to MDOT Masonry Sand 2MS.
- C. Concrete for flow channel shall be 3.5N.

#### 2.03 MANHOLE FRAME AND COVER

- A. Manhole frame and/or covers shall be cast-iron.
  - 1. Suppliers East Jordan Iron Works or approved equal.
  - 2. Cover/frame type as shown on the drawings

### PART 3 – EXECUTION

#### 3.01 INSTALLATION

- A. Pre-Cast Reinforced Concrete Units: Construct pre-cast reinforced concrete units according to Standard Details or as detailed on the project plans. Seal the joints with o-ring gasket. Use pre-cast concrete base. Support pre-cast concrete base on a 6-inch subbase of compacted granular material.
  - 1. Align eccentric cones for position with respect to manhole step in the riser section.
- B. Leveling Course shall be constructed of pre-cast concrete rings or brick and mortar as detailed on the drawings.
  - 1. Pre-cast rings shall be set on o-ring gaskets or mortar.
  - 2. Brick or block shall be placed as shown on the drawings.
    - a. Place the first set of bricks or blocks on a full bed of mortar. Lay brick or block in courses with uniform mortar joints ½ inch thick  $\pm 1/8$  inch. Break joints by half the length of the brick or block on adjoining courses. Place courses level except where otherwise required. Strike and point joints so that the exposed surface is true and smooth.
    - b. Do not place masonry with mortar when the temperature is 48 °F or less.
- C. Frame and Cover: Furnish and install new covers, including frames on new or existing structures according to the contract documents. Place castings on a full mortar bed.
- D. Flow Channel: Fillet concrete shall be placed in the manhole bottom to match the inverts of the pipe exterior and exiting the manhole. Flow channels shall be screeded and floated to a smooth uniform surface and traveled to a

## UTILITIES

### STORM MANHOLES SECTION 33-05-11

“hard surface” finish.

E. Pipe connection to manhole:

1. Annular space in the manhole wall and the exterior surface of the sewer pipe shall be filled complete with concrete brick and masonry mortar.
  - a. Exterior surface shall have a mortar coat.
  - b. Interior surface shall be flow channel concrete.

3.02 CLEAN-UP

- A. Maintain all manholes installed on the project. All installed manholes must be free of silt, debris, and other foreign matter at the time of final acceptance.

END OF SECTION

UTILITY AUGER PLACEMENT  
SECTION 33-05-25

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes methods and procedure for the placement of utility service piping by augering and/or push-ramming piping at locations shown on the drawings.
  - 1. Maximum carrier pipe size: 6" six inch diameter.
  - 2. Length of placement: 80 feet maximum.
- B. Related Requirements:
  - 1. None.

1.02 ACTION SUBMITTAL

- A. Definitions:
  - 1. Carrier Pipe: pipe or conduit placed/skidded in the Casing clear space.
  - 2. Augering: Prebore for carrier pipe.
  - 3. Push-ramming: Soil compression for pull back of carrier pipe.

1.03 ACTION SUBMITTAL

- A. Plans and Shop Drawings: Prior to beginning the Work, the Contractor shall prepare and submit to the Engineer detailed plans and shop drawings showing the limits of the proposed auger placement Work, the materials and methods of construction proposed for use; the connection of the carrier pipe to all other pipe; the location of shafts, pits and/or approach tunnels to be constructed.

1.04 QUALITY ASSURANCE

- A. Methods: The Contractor shall be responsible for the complete design of all methods used for directional boring including the implementation of all materials, tools, labor, and equipment proposed for use in the Work.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Carrier Pipe as specified in the utility sections and or as shown on the drawings.
  - 1. Pipe material shall be "heavy wall" if pipe is to be pushed or jacked.
    - a. PVC or steel pipe Sch 80 in lieu of Sch 40.

3.01 PREPARATION

- A. Field Layout:
  - 1. Site Conditions: Contractor shall examine the site(s) indicated. The limits of surface excavation are shown on the drawings. Contractor shall be responsible for locating the borehole and receiving hole sufficiently back from the limits of excavation to allow a connection to the horizontally drilled pipe.
  - 2. Existing Structures and Utilities: Prior to commencing pipe directional boring Work, the Contractor shall verify in the field the location of existing structures and utilities scheduled to remain and requiring protection from damage because of the Work. Notify the Engineer where such conditions directly affect the progress of the Work.

3.02 INSTALLATION

UTILITY AUGER PLACEMENT  
SECTION 33-05-25

- A. Placement:
1. Pilot Hole: The pilot hole shall establish the horizontal plane of the pipeline. A plot length versus elevation versus left/right variance will dictate the actual as-built plan and profile of the pipeline. Data feedback guidance systems and supplemental surface tracking systems shall be used to provide confirmation of position.  
Minimum depths are indicated on the Drawings. Pipe may be installed at greater depths to facilitate the installation if the proposed greater depth is reviewed and approved by the Engineer.
- B. Allowable Tolerances in Pipe Grade:
1. A variation from the horizontal plan or designated grade is sufficient reason for rejection of the pipe, and pipe shall be re-bored to proper grade if so directed by Engineer at no cost to Owner.
    - a. Allowable variation from designated grade for sanitary and storm sewers shall not exceed 1 inch.
    - b. Allowable variation from designated grade for water and forcemain systems shall not exceed 12 inches.
  2. Excess settlement greater than 1" one inch concrete or asphalt surfaces shall be corrected by contractor.

END OF SECTION

## UTILITIES - SEWERS

### STORM SEWER PIPING SECTION 33-41-13

#### PART 1 – GENERAL

##### 1.01 SUMMARY

- A. This section includes listing materials for the construction and appurtenances of storm sewer piping. Material type and class pipe diameter/corrugation are as shown on the drawings.
- B. Related Requirements:
  - 1. Earthwork 32-20-00.
  - 2. Storm Manholes - 33-05-11.

##### 1.02 REFERENCES

- A. Abbreviations:
  - 1. RCP – Reinforced Concrete Pipe.
  - 2. CPE – Corrugated Polyethylene Pipe (smooth lined).
  - 3. CSP – Corrugated Steel Pipe.
- B. Reference Standards:
  - 1. C76 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
  - 2. C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
  - 3. C361 – Standard Specification for Reinforced Concrete Low-Head Pressure Pipe.
  - 4. F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
  - 5. F2306 – Standard Specification for 12 to 60 in. Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications.
  - 6. F2487-06 – Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Corrugated High Density Polyethylene Pipelines.

##### 1.03 ACTION SUBMITTALS

- A. Product Data: Submit data sheets for all sewer pipe materials.

##### 1.04 DELIVERY STORAGE

- A. Site Conditions:
  - 1. Certification forms, together with a report of the test results shall be provided the construction inspector with pipe deliveries and copies shall be forwarded to the Engineer or Owner. Certification forms shall include project name, location, contractor and test lot number.
  - 2. The Contractor shall store and protect the pipe to minimize bowing. Nominal pipe lengths having deviations from straight greater than one (1) inch shall not be used.

#### PART 2 - PRODUCTS

##### 2.01 MATERIALS

- A. All pipe and fittings shall have the pipe class material type and date of manufacturer clearly marked on each piece. Sewer pipe shall be the material type noted on the Drawings.
- B. Corrugated Polyethylene Pipe (CPE) shall be smooth-lined interior and annular exterior corrugation.
  - 1. Pipe and fitting shall conform to ASTM F2306 and AASHTO M-299, Type S.  
Supplier: Hancor Sure Lok, Findlay, OH.
    - a. Pipe shall have a Manning's "n" value of 0.12 or less.
    - b. Joints shall be bell and spigot, or saddle gasket type.
  - 2. Joints shall be soil-tight with gaskets conforming to ASTM F477.

## UTILITIES - SEWERS

### STORM SEWER PIPING SECTION 33-41-13

#### 2.02 MIXES

##### A. Bedding:

1. Aggregate used for pipe bedding and encasement as shown on the drawings shall be:
  - a. Granular – Class II: 3” to #100 or:
  - b. Aggregate – 34R: ½” to #8.
2. Aggregate for pipe bedding in wet over excavated trenches shall be 4A: [2” to ¾”] or 6A: [1” to #4].

#### PART 3 - EXECUTION

#### 3.01 PREPARATION

- A. The location of the piping as shown on the Plans, has been determined to avoid, insofar as possible, interference with structures or fixtures aboveground and other underground mains, services, utilities, or structures.
- B. Whenever it is necessary to deflect pipe from a straight line in the horizontal only to avoid obstructions or where long radius curves are permitted, the amount of deflection allowed shall not exceed that required for satisfactory jointing and shall be approved by the Engineer. In no case shall deflection of joints exceed the manufacturer’s recommended maximum deflection.

#### 3.02 INSTALLATION – SEWER

##### A. Placement:

1. Proper and suitable tools and appliances for the safe and careful handling, conveying and laying of the pipe shall be used. Care shall be taken to prevent the pipe coating from being damaged. Laser equipment shall be used to maintain line and grade control.
2. All pipes shall be laid true to the required lines and grades. All trenches when pipe laying is in progress shall be kept dry; and all pipes and specials shall be uniformly supported on a properly trimmed excavation with holes at each joint to receive bells. The finished pipeline work shall be sighted through between manholes.

##### B. Construction:

1. Pipe joints fitting bells shall be wiped clean and sealing/lubricant applied in accordance with the supplier recommendations.
2. All cutting of the pipe shall be done in a neat workmanlike manner with the least amount of waste and without damage to existing or new lines. A fine tooth saw, tubing or pipe cutter, or similar tool shall be used to cut the pipe. Cut must be square and ragged edges removed with a cutting tool and/or file.
3. All excavation and backfill above pipes shall conform to specifications Trench Excavation. Pipes shall be laid on a compacted bedding 4 inches thick around and above the storm sewer pipe to a height of 12 inches above the pipe crown and shall consist of material suitable for supporting the pipe without excessive settlement or stress development. Frozen material is not accepted.
  - a. Bedding to springline: Aggregate 34R.
  - b. Springline to 12” above crown: 34R or sand, granular Class II compacted in 6” lifts.
4. CPE pipe bedding and backfill shall be aggregate 34R to a height 12” above the pipe crown.

##### C. Deflection Testing: (CPE only)

1. None.

END OF SECTION



# APPENDIX A

## LABOR STANDARDS PROVISIONS FOR FEDERALLY ASSISTED PROJECTS

## 29 CFR Part 5 – Labor Standards Provisions for Federally Assisted Projects

### § 5.5 Contract provisions and related matters.

(a) The Agency head shall cause or require the contracting officer to insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in Sec. 5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, *Provided*, That such modifications are first approved by the Department of Labor):

(1) *Minimum wages.* (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in Sec. 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) *Withholding.* The (write in name of Federal Agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of

1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) *Payrolls and basic records.* (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:



(1) That the payroll for the payroll period contains the information required to be provided under Sec. 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under Sec. 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) *Apprentices and trainees--(i) Apprentices.* Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its

program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) *Trainees.* Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) *Equal employment opportunity.* The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) *Compliance with Copeland Act requirements.* The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) *Contract termination: debarment.* A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) *Compliance with Davis-Bacon and Related Act requirements.* All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) *Disputes concerning labor standards.* Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) *Certification of eligibility.* (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) *Contract Work Hours and Safety Standards Act.* The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Sec. 5.5(a) or 4.6 of part 4 of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible there for shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) *Withholding for unpaid wages and liquidated damages.* The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in Sec. 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.



APPENDIX B

DAVIS-BACON ACT  
LABOR WAGE DECISION

## **Davis-Bacon/Prevailing Federal Wage Rates**

P.L. 111-88 requires compliance with the Davis Bacon Act and adherence to the current U.S. Department of Labor Wage Decision. Attention is called to the fact that not less than the minimum salaries and wages as set forth in the Contract Documents (see Wage Decision included herein) must be paid on this project. The Wage Decision, including modifications, must be posted by the Contractor on the job site. A copy of the Federal Labor Standards Provisions is included and is hereby a part of this contract.

General Decision Number: MI130074 01/04/2013 MI74

Superseded General Decision Number: MI20120074

State: Michigan

Construction Type: Heavy

County: Washtenaw County in Michigan.

HEAVY CONSTRUCTION PROJECTS

Modification Number Publication Date

0 01/04/2013

CARP0687-006 06/01/2012

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 29.19	22.77

-----  
ELEC0252-009 06/04/2012

	Rates	Fringes
ELECTRICIAN.....	\$ 38.98	20.18

-----  
ENGI0326-008 06/01/2012

	Rates	Fringes
OPERATOR: Power Equipment		
GROUP 1.....	\$ 38.59	20.30
GROUP 2.....	\$ 37.09	20.30
GROUP 3.....	\$ 35.59	20.30
GROUP 4.....	\$ 35.29	20.30
GROUP 5.....	\$ 34.47	20.30
GROUP 6.....	\$ 33.61	20.30
GROUP 7.....	\$ 32.64	20.30
GROUP 8.....	\$ 30.93	20.30
GROUP 9.....	\$ 22.59	20.30

FOOTNOTES: Tower cranes: to be paid the crane operator rate determined by the combined length of the mast and the boom.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Crane with boom & jib or leads 400' or longer

GROUP 2: Crane with boom & jib or leads 300' or longer

GROUP 3: Crane with boom & jib or leads 220' or longer

GROUP 4: Crane with boom & jib or leads 140' or longer

GROUP 5: Crane with boom & jib or leads 120' or longer

GROUP 6: Regular crane operator

GROUP 7: Backhoe/Excavator, Bobcat/Skid Loader, Boring Machine, Broom/Sweeper, Bulldozer, Grader/Blade, Loader, Roller, Scraper, Tractor, Trencher

GROUP 8: Forklift

GROUP 9: Oiler

-----  
IRON0025-006 06/04/2012

	Rates	Fringes
IRONWORKER		
Reinforcing.....	\$ 28.74	23.35
Structural.....	\$ 33.29	25.34

-----  
LABO0334-009 07/01/2012

	Rates	Fringes
Landscape Laborer		
GROUP 1.....	\$ 20.96	6.50
GROUP 2.....	\$ 16.74	6.50

LANDSCAPE LABORER CLASSIFICATIONS

GROUP 1: Landscape specialist, including air, gas and diesel equipment operator, lawn sprinkler installer and skidsteer (or equivalent)

GROUP 2: Landscape laborer: small power tool operator, material mover, truck driver and lawn sprinkler installer tender

-----  
\* LABO0499-020 08/01/2012

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 27.19	13.13
GROUP 2.....	\$ 27.39	13.13
GROUP 3.....	\$ 27.51	13.13

LABORER CLASSIFICATIONS

GROUP 1: Common or General; Grade Checker

GROUP 2: Mason Tender - Cement/Concrete

GROUP 3: Pipelayer

-----  
PAIN0022-005 07/01/2008

	Rates	Fringes
PAINTER		
Brush & Roller.....	\$ 25.06	14.75
Spray.....	\$ 25.86	14.75

-----  
PLAS0514-002 11/01/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 31.91	14.34

-----  
PLUM0190-010 06/01/2012

	Rates	Fringes
PLUMBER.....	\$ 37.44	19.92

-----  
SUMI2010-072 11/09/2010

	Rates	Fringes
TRUCK DRIVER: Off the Road		
Truck.....	\$ 20.82	3.69

-----  
TEAM0007-006 06/01/2012

	Rates	Fringes
TRUCK DRIVER		
Dump Truck under 8 cu. yds.; Tractor Haul Truck....	\$ 24.895	.50 + a+b
Dump Truck, 8 cu. yds. and over.....	\$ 24.995	.50 + a+b
Lowboy/Semi-Trailer Truck.....	\$ 25.145	.50 + a+b

FOOTNOTE:

- a. \$351.00 per week.
- b. \$49.90 daily.

-----  
WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====  
Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----  
The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union

classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

#### Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

---

#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION



APPENDIX C  
CERTIFICATION DEPARTMENT

**Certification Regarding  
Debarment, Suspension, and Other Responsibility Matters**

The prospective participant certifies, to the best of its knowledge and belief, that it and its principals:

- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in transactions under federal nonprocurement programs by any federal department or agency;
- (2) Have not, within the three year period preceding the proposal, had one or more public transactions (federal, state, or local) terminated for cause or default; and
- (3) Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) and have not, within the three year period preceding the proposal, been convicted of or had a civil judgment rendered against it:
  - (a) For the commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction (federal, state, or local) or a procurement contract under such a public transaction;
  - (b) For the violation of federal or state antitrust statutes, including those proscribing price fixing between competitors, the allocation of customers between competitors, or bid rigging; or
  - (c) For the commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

I understand that a false statement on this certification may be grounds for the rejection of this proposal or the termination of the award. In addition, under 18 U.S.C. §1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to five years, or both.

---

Name and Title of Authorized Representative

---

Name of Participant Agency or Firm

---

Signature of Authorized Representative

Date

I am unable to certify to the above statement. Attached is my explanation.

# APPENDIX D

## DISADVANTAGED BUSINESS ENTERPRISES (DBE)

## **Disadvantaged Business Enterprises (DBE)**

Prime contractors bidding on this project must follow, document, and maintain documentation of their Good Faith Efforts, as listed below, to ensure that Disadvantaged Business Enterprises (DBEs) have the opportunity to participate in the project by increasing DBE awareness of procurement efforts and outreach. Bidders must make the following Good Faith Efforts for any work that will be subcontracted.

1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities; including placing DBEs on solicitation lists and soliciting DBEs whenever they are potential sources.
2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitation for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
3. Consider in the contracting process whether firms competing for large contracts could be subcontracted with DBEs. This will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
4. Encourage contracting with a consortium of DBEs when a contract is too large for one DBE firm to handle individually.
5. Use the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce.

Subsequent to compliance with the Good Faith Efforts, the following conditions also apply under the DBE requirements. Completed Good Faith Efforts Worksheets (Attachment 1), along with the required supporting documentation outlined in the instructions, must be submitted with your bid proposal.

1. The prime contractor must pay its subcontractor for work that has been satisfactorily completed no more than 30 days from the prime contractor's receipt of payment from the owner.
2. The prime contractor must notify the owner in writing prior to the termination of any DBE subcontractor for convenience by the prime contractor.
3. If a DBE contractor fails to complete work under the subcontract for any reason, the prime contractor must employ the Good Faith Efforts if soliciting a replacement contractor.
4. The prime contractor must employ the Good Faith Efforts.

## **Disadvantaged Business Enterprise (DBE) Requirements Frequently Asked Questions Regarding Contractor Compliance**

- Q:** What is the Good Faith Efforts Worksheet form and how is it to be completed?
- A:** This form captures efforts by the prime contractor to solicit DBEs for each area of work type that will be subcontracted out. A separate Good Faith Efforts Worksheet must be provided by the prime contractor for each area of work type to be subcontracted out. There are specific instructions that accompany this form that prescribe minimum efforts which bidders must make in order to be in compliance with the DBE requirements.
- Q:** Can non-certified DBEs be used?
- A:** While non-certified DBEs can be used, only DBEs, MBEs, and WBEs that are certified by EPA, SBA, or MDOT (or by tribal, state and local governments, as long as their standards for certification meet or exceed the standards in EPA policy) can be counted toward the fair share goal. Proof of certification by one of these recognized and approved agencies should be sought from each DBE.
- Q:** How does a DBE get certified?
- A:** Applications for certification under MDOT can be found at <http://mdot270.state.mi.us:8080/UCP/FormsServlet>.
- Applications for certification under EPA can be found on EPA's Small Business Programs website at <http://www.epa.gov/osbp/grants.htm> under Certification Forms.
- Q:** If a bidder follows the MDOT DBE requirements, will the bidder be in compliance with the SRF/DWRF DBE requirements?
- A:** No. Federally funded highway projects utilize DBE goals, which require that a certain percentage of work be performed by DBE subcontractors. For SRF/DWRF projects, there is no financial goal. However, there is a solicitation effort goal. Bidders must use Good Faith Efforts for each and every area of work to be subcontracted out to obtain DBEs. The bidders are not required to use DBEs if the quotes are higher than non-DBE subcontractors. **There is no required DBE participation percentage contract goal for the SRF/DWRF.**
- Q:** Must the Good Faith Efforts Worksheet and supporting documentation be turned in with the bid proposals?
- A:** Yes. This is a requirement to document that the contractor has complied with the DBE requirements and the five Good Faith Efforts. These compliance efforts must be done during the bidding phase and not after-the-fact. It is highly recommended that the need for these efforts and the submittal of the forms with the bid proposals be emphasized at the pre-bid meetings. Failure to show that the five Good Faith Efforts were complied with during the bidding process can lead to a prime contractor being found non-responsive.

- Q:** What kinds of documentation should a contractor provide to document solicitation efforts?
- A:** Documentation can include fax confirmation sheets, copies of solicitation letters/e-mails, printouts of online solicitations, printouts of online search results, affidavits of publication in newspapers, etc.
- Q:** How much time will compliance with the Good Faith Efforts require in terms of structuring an adequate bidding period?
- A:** Due to the extent of the efforts required, a minimum of 30 calendar days is recommended between bid posting and bid opening to ensure adequate time for contractors to locate certified DBEs and solicit quotes.
- Q:** How does a contractor locate certified DBEs?
- A:** The Michigan Department of Transportation has a directory of all Michigan certified entities located at <http://mdot270.state.mi.us:8080/UCP/HomePageServlet>. Additionally, the Central Contractor Registration (CCR) database is another place to search and can be found at [www.ccr.gov](http://www.ccr.gov)
- Q:** If the bidder does not intend to subcontract any work, what forms, if any, must be provided with the bid proposal?
- A:** The bidder should complete the Good Faith Efforts Worksheet with a notation that no subcontracting will be done. However, if the bidder is awarded the contract and then decides to subcontract work at any point, then the Good Faith Efforts must be made to solicit DBEs.
- Q:** In the perfect world, the Good Faith Efforts Worksheet is required to be turned in with the proposal. What if no forms are turned in with the bid proposal or forms are blank or incomplete? Should this be cause to determine that the bidder is non-responsive?
- A:** While the Good Faith Efforts Worksheet is important, it is more critical to confirm that the contractor complied with the DBE requirements prior to bid opening. The owner should contact the bidder as soon as deficiencies are noted for a determination/documentation of efforts taken to comply with the DBE requirements. Immediate submittal of the completed forms will be acceptable provided the Good Faith Efforts were made and it is just a matter of transferring information to the forms.
- Q:** If the prime contractor is a DBE, does he have to solicit DBE subcontractors?
- A:** Yes, the DBE requirements still apply if the prime intends to subcontract work out. Good Faith Efforts must be used to solicit DBEs.
- Q:** If the area of work is one where there are less than three DBE contractors, how is the contractor to document this?
- A:** Copies of printouts from MDOT and CCR showing no DBEs and advertisements soliciting quotes for all subcontract areas, including the questionable areas, will be adequate.



Environmental  
Protection Agency

OMB Control No: 2090-0030  
Approved: 05/01/2008  
Approval Expires: 01/31/2011

**Disadvantaged Business Enterprise Program  
DBE Subcontractor Participation Form**

<b>NAME OF SUBCONTRACTOR</b>	<b>PROJECT NAME</b>
<b>ADDRESS</b>	<b>CONTRACT NO.</b>
<b>TELEPHONE NO.</b>	<b>EMAIL ADDRESS</b>
<b>PRIME CONTRACTOR NAME</b>	

Please use the space below to report any concerns regarding the above EPA-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

---



---



---



---

<b>CONTRACT ITEM NO.</b>	<b>ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM THE PRIME CONTRACTOR</b>	<b>AMOUNT SUBCONTRACTOR WAS PAID BY PRIME CONTRACTOR</b>

---

Subcontractor Signature \_\_\_\_\_ Title/Date \_\_\_\_\_

'Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



Environmental  
Protection Agency

OMB Control No: 2090-0030  
Approved: 05/01/2008  
Approval Expires: 01/31/2011

**Disadvantaged Business Enterprise Program  
DBE Subcontractor Performance Form**

<b>NAME OF SUBCONTRACTOR<sup>1</sup></b>		<b>PROJECT NAME</b>
<b>ADDRESS</b>		<b>BID/PROPOSAL NO.</b>
<b>TELEPHONE NO.</b>		<b>E-MAIL ADDRESS</b>
<b>PRIME CONTRACTOR NAME</b>		
<b>CONTRACT ITEM NO.</b>	<b>ITEM OF WORK OR DESCRIPTION OF SERVICES BID TO PRIME</b>	<b>PRICE OF WORK SUBMITTED TO PRIME CONTRACTOR</b>
Currently certified as an MBE or WBE under EPA's DBE Program? <input type="checkbox"/> Yes <input type="checkbox"/> No Signature of Prime Contractor _____ Date _____ Print Name _____ Title _____ _____ Signature of Subcontractor Date _____ _____ Print Name _____ Title _____		

<sup>1</sup>Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.





Environmental  
Protection Agency

OMB Control No: 2090-0030  
Approved: 05/01/2008  
Approval Expires: 01/31/2011

**Disadvantaged Business Enterprise Program  
DBE Subcontractor Utilization Form**

BID/PROPOSAL NO.	PROJECT NAME
NAME OF PRIME BIDDER/PROPOSER	E-MAIL ADDRESS
ADDRESS	
TELEPHONE NO.	FAX NO.

The following subcontractors <sup>1</sup> will be used on this project:			
COMPANY NAME, ADDRESS, PHONE NUMBER, AND E-MAIL ADDRESS	TYPE OF WORK TO BE PERFORMED	ESTIMATE D DOLLAR AMOUNT	CURRENTLY CERTIFIED AS AN MBE OR WBE?

I certify under penalty of perjury that the forgoing statements are true and correct. In the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c).

_____	_____
Signature of Prime Contractor	Date
_____	_____
Print Name	Title

<sup>1</sup>Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

# APPENDIX E

## DBE – GOOD FAITH EFFORTS WORKSHEET

**Michigan Department of Environmental Quality  
Resource Management Division – Revolving Loan Section  
Disadvantaged Business Enterprise (DBE) Utilization  
State Revolving Fund/Drinking Water Revolving Fund  
GOOD FAITH EFFORTS WORKSHEET**

Bidder: \_\_\_\_\_

Subcontract Area of Work: \_\_\_\_\_

Contract Goal: Solicit a minimum of three (3) DBEs via email/letters/fax.

List the DBEs contacted for the above area of work and complete the following information for each DBE.

Company Name	Type of Contact	Date of Contact	Price Quote Received	Accepted/ Rejected	Please Explain if Rejected
				<input type="checkbox"/> A <input type="checkbox"/> R	
				<input type="checkbox"/> A <input type="checkbox"/> R	
				<input type="checkbox"/> A <input type="checkbox"/> R	
				<input type="checkbox"/> A <input type="checkbox"/> R	
				<input type="checkbox"/> A <input type="checkbox"/> R	
				<input type="checkbox"/> A <input type="checkbox"/> R	
				<input type="checkbox"/> A <input type="checkbox"/> R	

Explanation for Not Achieving Minimum Contacts (attach extra sheets if necessary):

MITA DBE Posting Date (if applicable): \_\_\_\_\_  
(attach a copy of the DBE advertisement)

Other Efforts (attach extra sheets if necessary):

**Please include the completed worksheet and supporting documentation with the bid proposal.**

*Rev. 7-2012*

Rick Snyder, Governor



Dan Wyant, Director

**Michigan Department of Environmental Quality  
Resource Management Division – Revolving Loan Section  
Disadvantaged Business Enterprise (DBE) Utilization  
State Revolving Fund/Drinking Water Revolving Fund  
GOOD FAITH EFFORTS WORKSHEET**

**Instructions to Bidders for the Completion of the Good Faith Efforts Worksheet**

1. Separate worksheets must be provided for each area of work to be subcontracted out. This includes both major and minor subcontracts.
2. A minimum of three (3) DBEs must be contacted by a verifiable means of communication such as e-mail, letter, or fax for each area of work to be subcontracted out. Copies of the solicitation letters/e-mails and fax confirmation sheets must be provided with the worksheet.
3. If this minimum number cannot be achieved with local DBEs, then the solicitations must be sent to DBEs outside of the local area (i.e. statewide).
4. Posting solicitations for quotes/proposals from DBEs on the MITA website ([www.mitadbe.com](http://www.mitadbe.com)) is highly recommended to facilitate participation in the competitive process whenever possible. The solicitation needs to identify the project and the areas of work to be subcontracted out. A copy of the MITA DBE advertisement must be submitted with the worksheet, if used, or a printout of the resulting quotes posted to the MITA website can be submitted with this form as supporting documentation.
5. If the area of work is so specialized that no DBEs exist, then an explanation is required to support that conclusion.
6. The date of the DBE contact must be identified, as it is important to document that the DBE solicitation was made during the bidding period and that sufficient time was given for the DBE to return a quote.
7. Each DBE firm's price quote must be identified if one was received or N/A entered on the worksheet if a quote was not received. Copies of all quotes must be submitted with the worksheet.
8. If a quote was received, indicate if it was accepted or rejected. Justification for not accepting a quote and not using the DBE subcontractor must be provided.
9. Under Other Efforts, please indicate additional steps you have taken to obtain DBE contractors and provide the appropriate supporting documentation such as:
  - Follow-up e-mails, faxes, or letters.
  - Copies of announcements/postings in newspapers, trade publications, or minority media that target DBE firms.

*Rev. 7-2012*

Rick Snyder, Governor



Dan Wyant, Director

APPENDIX F  
CONTRACT COMPLIANCE &  
LIVING WAGE FORMS

**CITY OF ANN ARBOR PROCUREMENT OFFICE  
HUMAN RIGHTS CONTRACT COMPLIANCE FORM**  
*Entire Organization (Totals for All Locations where applicable)*

**Form #1**

Name of Company/Organization \_\_\_\_\_ Date Form Completed \_\_\_\_\_  
 Name and Title of Person Completing this Form \_\_\_\_\_ Name of President \_\_\_\_\_  
 Address (Street address) \_\_\_\_\_ (City) \_\_\_\_\_ (State) \_\_\_\_\_ (Zip) \_\_\_\_\_ County \_\_\_\_\_ Phone # \_\_\_\_\_ (Area Code) \_\_\_\_\_  
 Fax# \_\_\_\_\_ (Area Code) \_\_\_\_\_ Email Address \_\_\_\_\_

**EMPLOYMENT DATA**

Job Categories	Number of Employees (Report employees in only one category)												TOTAL COLUMNS A-L		
	Male						Female								
	White A	Black or African American B	Asian C	Hispanic or Latino D	Native Hawaiian or Other Pacific Islander E	American Indian or Alaska Native F	White G	Black or African American H	Asian I	Hispanic or Latino J	Native Hawaiian or Other Pacific Islander K	American Indian or Alaskan Native L			
Exec/Sr. Level Officials															
Supervisors															
Professionals															
Technicians															
Sales															
Admin. Support															
Craftspeople															
Operatives															
Service Workers															
Laborers/Helper															
Apprentices															
Other															
<b>TOTAL</b>															
<b>PREVIOUS YEAR TOTAL</b>															

**CITY OF ANN ARBOR PROCUREMENT OFFICE  
HUMAN RIGHTS CONTRACT COMPLIANCE FORM**

Local Office (Only those employees that will do local or on-site work, if applicable)

Name of Company/Organization \_\_\_\_\_ Date Form Completed \_\_\_\_\_

Name and Title of Person Completing this Form \_\_\_\_\_ Name of President \_\_\_\_\_

Address (Street address) \_\_\_\_\_ (City) \_\_\_\_\_ (State) \_\_\_\_\_ (Zip) \_\_\_\_\_  
County \_\_\_\_\_ Phone # \_\_\_\_\_ (Area Code) \_\_\_\_\_

Fax# \_\_\_\_\_ (Area Code) \_\_\_\_\_ Email Address \_\_\_\_\_

**EMPLOYMENT DATA**

Job Categories	Number of Employees (Report employees in only one category)												TOTAL COLUMNS A-L		
	Male						Female								
	White A	Black or African American B	Asian C	Hispanic or Latino D	Native Hawaiian or Other Pacific Islander E	American Indian or Alaska Native F	White G	Black or African American H	Asian I	Hispanic or Latino J	Native Hawaiian or Other Pacific Islander K	American Indian or Alaskan Native L			
Exec/Sr. Level Officials															
Supervisors															
Professionals															
Technicians															
Sales															
Admin. Support															
Craftspeople															
Operatives															
Service Workers															
Laborers/Helper															
Apprentices															
Other															
TOTAL															
PREVIOUS YEAR TOTAL															

Questions about this form? Call Procurement Office: (734) 794-6576

**City of Ann Arbor Procurement Office**

**INSTRUCTIONS FOR CONTRACTORS**

**For Completing CONTRACT COMPLIANCE FORM**

City Policy

The "non discrimination in contracts" provision of the City Code, (Chapter 112, Section 9:161) requires contractors/vendors/grantees doing business with the City not to discriminate on the basis of actual or perceived race, color, religion, national origin, sex, age, condition of pregnancy, marital status, physical or mental limitations, source of income, family responsibilities, educational association, sexual orientation, gender identity or HIV status against any of their employees, any City employee working with them, or any applicant for employment. It also requires that the contractors/vendors/grantees include a similar provision in all subcontracts that they execute for City work or programs.

This Ordinance further requires that each prospective contractor/vendor submit employment data to the City showing current total employee breakdown by occupation, race and gender. This allows the Human Rights Office to determine whether or not the contractor/vendor has a workforce that is reflective of the availability of women and under-represented minorities within the contractor's labor recruitment area (the area where they can reasonably be expected to recruit employees). ***This data is provided to the City on the Human Rights Contract Compliance Forms (attached).***

**To complete the form:**

**1) If a company has more than one location, then that company must complete 2 versions of the form.**

- **Form #1** should contain the employment data for the **entire corporation.**
- **Form #2** should contain the employment data for those employees:
  - who will be working on-site;
  - in the office responsible for completing the contract; or,
  - in the case of non-profit grantees, those employees working on the project funded by the City grant(s).

2) If the company has only one location, fill out Form #1 only.

3) Complete all data in the upper section of the form including the name of the person who completes the form and the name of the company/organization's president.

4) Complete the Employment Data in the remainder of the form. Please be sure to complete all columns including the Total Columns on the far right side of the form, and the Total row and Previous Year Total row at the bottom of the form.

5) Return the completed form(s) to your contact in the City Department for whom you will be conducting the work.

**For assistance in completing the form, contact:**  
Procurement Office of the City of Ann Arbor  
734/794-6576

If a contractor is determined to be out of compliance, the Procurement Office will work with them to assist them in coming into compliance.



**ATTACHMENT C  
CITY OF ANN ARBOR  
LIVING WAGE ORDINANCE  
DECLARATION OF COMPLIANCE**

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that employers providing services to the City or recipients of grants for financial assistance (in amounts greater than \$10,000 in a twelve-month period of time) pay their employees who are working on the City project or grant, a minimum level of compensation known as the **Living Wage**. This wage must be paid to the employees for the length of the contract/project.

*Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from the Ordinance. If this exemption applies to your firm, please check below:*

- \_\_\_\_\_ This **company** is exempt due to the fact that we employ or contract with fewer than 5 individuals.  
 \_\_\_\_\_ This **non-profit agency** is exempt due to the fact that we employ or contract with fewer than 10 employees.

The Ordinance requires that all contractors/vendors and/or grantees agree to the following terms:

- a) To pay each of its employees performing work on any covered contract or grant with the City, no less than the living wage, which is defined as \$12.52/hour when health care is provided, or no less than \$13.96/hour for those employers that do *not* provide health care. It is understood that the Living Wage will be adjusted each year on April 30, and covered employers will be required to pay the adjusted amount thereafter. The rates stated above include any adjustment for 2013.
- b) Please check the boxes below which apply to your workforce:
  - Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage without health benefits Yes \_\_\_\_\_ No \_\_\_\_\_
  - OR**
  - Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage with health benefits Yes \_\_\_\_\_ No \_\_\_\_\_
- c) To post a notice approved by the City regarding the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- d) To provide the City payroll records or other documentation as requested; and,
- e) To permit access to work sites to City representatives for the purposes of monitoring compliance, investigating complaints or non-compliance.

The undersigned authorized representative hereby obligates the contractor/vendor or grantee to the above stated conditions under penalty of perjury and violation of the Ordinance.

Company Name	Address, City, State, Zip
Signature of Authorized Representative	Phone (area code)
Type or Print Name and Title	Email address
Date signed	

**Questions about this form? Please contact:**  
 Procurement Office City of Ann Arbor  
 Phone: 734/794-6500

**CITY OF ANN ARBOR  
LIVING WAGE ORDINANCE**

**RATE EFFECTIVE APRIL 30, 2013 - ENDING APRIL 29, 2014**

**\$12.52 per hour**

If the employer provides health care benefits\*

**\$13.96 per hour**

If the employer does **NOT** provide health care benefits\*

Employers providing services to or for the City of Ann Arbor or recipients of grants or financial assistance from the City of Ann Arbor for a value of more than \$10,000 in a twelve-month period of time must pay those employees performing work on a City of Ann Arbor contract or grant, the above living wage.

**ENFORCEMENT**

The City of Ann Arbor may recover back wages either administratively or through court action for the employees that have been underpaid in violation of the law. Persons denied payment of the living wage have the right to bring a civil action for damages in addition to any action taken by the City.

Violation of this Ordinance is punishable by fines of not more than \$500/violation plus costs, with each day being considered a separate violation. Additionally, the City of Ann Arbor has the right to modify, terminate, cancel or suspend a contract in the event of a violation of the Ordinance.

\* Health Care benefits include those paid for by the employer or making an employer contribution toward the purchase of health care. The employee contribution must not exceed \$.50 an hour for an average work week; and the employer cost or contribution must equal no less than \$1/hr for the average work week.

**The Law Requires Employers to Display This Poster Where Employees Can Readily See It.**

**For Additional Information or to File a Complaint Contact  
Karen Lancaster at 734/794-6500 or [Klancaster@a2gov.org](mailto:Klancaster@a2gov.org)**