

PONTIAC CITY COUNCIL

Kermit Williams, District 7
President
Randy Carter, District 4
President Pro Tem



Patrice Waterman, District 1
Megan Shramski, District 2
Mary Pietila, District 3
Gloria Miller, District 5
Dr. Doris Taylor Burks, District 6

It is this Council's mission "To serve the citizens of Pontiac by committing to help provide an enhanced quality of life for its residents, fostering the vision of a family-friendly community that is a great place to live, work and play."

47450 Woodward Pontiac, MI 48342 Phone: (248) 758-3200
Website: <http://pontiaccityclerk.com/city-council-meetings>

Garland S. Doyle, M.P.A.
Interim City Clerk
Jo Lynn Williams
Assistant City Clerk

FORMAL MEETING
249th Session of the 10th Council
August 17, 2021 at 6:00 P.M.
Bowens Center 52 Bagley Pontiac, MI 48341

Call to order

Invocation

Pledge of Allegiance

Roll Call

Authorization to Excuse Councilmembers

Approval of the Agenda

Approval of the Minutes

1. August 10, 2021

Subcommittee Reports

2. Law/50th District Court- August 10, 2021
3. Public Safety- July 2021

Recognition Elected Officials

Agenda Address

Agenda Items

Resolutions

Department of Public Works (DPW)

4. Resolution to approve agreement between the City and Anglin Civil, LLC for \$620,373.38 for the 2021 Clinton River Trail Maintenance and Safety Improvements Project

5. Resolution to approve agreement between the City and Audia Concrete Construction, Inc. for \$473,760.00 for the Fiscally Distressed Cities, Villages and Townships Downtown Sidewalks Project
6. Resolution to approve a contract between the City and Catskill Remedial Contracting for \$287,020.30 for the Collier Road Landfill Stormwater Spillway Repairs project
7. Resolution to approve the City entering into an agreement with Amistee Air Duct Cleaning and Insulation to perform air duct cleaning services at all city-owned buildings not to exceed \$79,060.00

Mayor's Office

8. Resolution to approve Mayor's Appointment of Mark Holland as Deputy Mayor **(The City Council requested Mr. Holland's employment agreement at its meeting on August 5, 2021. The Mayor's Office has not provided the agreement.)**
9. Status Update on the Appointment of the Medical Marihuana Commission **(The City Council requested at its meeting on August 5, 2021 that the Mayor provide the names of the Commissioners and date and time of the first public Commission meeting. The Commission will need to establish and approve rules at its first meeting. After the Commission establishes its rules, the rules will have to be approved by City Council.)**

Public Comment

Mayor, Clerk and Council Closing Comments

Adjournment

Upcoming Special Presentation

August 24, 2021

Medical Marihuana Application Process Update

#1

MINUTES

August 10, 2021 Study

**Official Proceedings
Pontiac City Council
248th Session of the Tenth Council**

Call to order

A Study Session of the City Council of Pontiac, Michigan was called to order at the Bowens Senior Center, 52 Bagley Pontiac, MI 48342 on Thursday, August 5, 2021 at 6:00 p.m. by Council President Kermit Williams.

Roll Call

Members present – Carter, Pietila, Taylor-Burks and Williams

Mayor Waterman was present
Clerk announced a quorum

Excuse Councilmembers

21-238 **Motion to excuse Councilmembers Waterman, Miller and Shramski for personal reasons.** Moved by Councilperson Taylor-Burks and second by Pro-Tem Carter

Ayes: Pietila, Taylor-Burks, Williams and Carter
No: None
Motion Carried

Councilperson Megan Shramski arrived at 6:04 p.m.

Amendments to and Approval of the Agenda

21-239 **Motion to move agenda item #8 (Resolution to approve the Michigan Indigent Defense Commission Fiscal Year 2022 Grant Agreement) and #9 (Resolution to request for Actuarial Study an Extension of Supplemental Pension Payment for Certain Police and Fire Retirees) after item #1 (Approval of Minutes).** Moved by Taylor-Burks and second by Pietila.

Ayes: Pietila, Shramski, Taylor-Burks, Williams and Carter
No: None
Motion Carried

21-240 **Motion to approve the agenda as amended.** Moved by Councilperson Taylor-Burks and second by Pro-Tem Carter.

Ayes: Shramski, Taylor-Burks, Williams, Carter and Pietila
No: None
Motion Carried

Approval of the Minutes

21-241 **Motion to approve meeting minutes for August 5, 2021.** Moved by Councilperson Taylor-Burks and second by Councilperson Pietila.

Ayes: Taylor-Burks, Williams, Carter, Pietila and Shramski

August 10, 2021 Study

No: None

Motion Carried

Suspend the Rules

21-242 **Suspend the rules to vote on item #8 (Resolution to approve the Michigan Indigent Defense Commission Fiscal Year 2022 Grant Agreement)** Moved by Councilperson Pietila and second by Councilperson Taylor-Burks.

Ayes: Williams, Carter, Pietila, Shramski and Taylor-Burks

No: None

Motion Carried

Resolution

50th District Court

21-243 **Resolution to approve the Michigan Indigent Defense Commission Fiscal Year 2022 Grant Agreement.** Moved by Councilperson Pietila and second by Councilperson Taylor-Burks.

Whereas, The Michigan Indigent Defense Commission (MIDC) has the City of Pontiac grant funding in the amount of \$603,133.64 for the period of October 1, 2021 through September 30, 2022.

Whereas, The total program budget is \$620,980.26, which includes the required local share contribution by the City of Pontiac in the amount of \$17,846.62.

Whereas, The award provides funding to the 50th District Court for the purpose of continuing to bring indigent defense systems into compliance with the first four minimum indigent defense standards, MCL 780.993(6); and

Whereas, The Michigan Indigent Defense Commission Act (MIDC Act), MCL 780.981, et al., requires local funding units to take over the delivery of indigent defense systems, MCL 780.983(9) and MCL 780.993(10) as specified in standards 1 - 5.

Whereas, The City of Pontiac is the local funding unit for the 50th District Court.

Whereas, The MIDC Act requires the City of Pontiac to create an annual compliance plan and cost analysis required to deliver indigent defense services in compliance with the approved MIDC standards, MCL 780.993(3).

Whereas, The MIDC Act requires the MIDC to appropriate funds and provide grant monies to local funding units for the costs in excess of the local share to continue to provide indigent defense services that are in compliance with the minimum standards established by the MIDC, MCL 780.993(6).

Whereas, The grant award funds the following positions within 50th District Court: one (1) MIDC Executive position, one (1) Contract MIDC Attorney Coordinator position, and two (2) part time MIDC Court Officers.

Whereas, The grant agreement has completed the grant review process in accordance with the Pontiac City Council Procedures.

NOW THEREFORE, BE IT RESOLVED, The City Council approves the MIDC FY 2022 Grant Contract with an authorized total budget of \$620,980.26.

Ayes: Williams, Carter, Pietila, Shramski and Taylor-Burks

No: None

Resolution Passed

Suspend the Rules

21-244 **Suspend the rules to vote on item #9 (Resolution to request for Actuarial Study an Extension of Supplemental Pension Payment for Certain Police and Fire Retirees).** Moved by Councilperson Taylor-Burks and second by Councilperson Pietila.

August 10, 2021 Study

Ayes: Carter, Pietila, Shramski, Taylor-Burks and Williams

No: None

Motion Carried

Resolution

Finance

21-245 **Resolution to request for Actuarial Study an Extension of Supplemental Pension Payment for Certain Police and Fire Retirees.** Moved by Councilperson Pietila and second by Councilperson Taylor-Burks.

Whereas, certain Police & Fire ("P&F") retirees currently receive a \$400 supplemental pension payment ("Supplemental Payment") and this payment is set to expire on August 31, 2021. The City desires to determine the costs for extending the Supplemental Payment for a period to no longer than December 31, 2021;

Whereas, MCL §38.1 140h(5) requires that a supplemental actuarial analysis concerning the costs of extending the Supplemental Benefit be conducted by the P&F system's actuary prior to extension of the Supplemental Benefit;

Whereas, MCL §38.1 140h (5) requires that any supplemental actuarial analysis be paid for by the City (not the retirement system); and

Whereas, the City desires to have a supplemental actuarial analysis evaluating the financial viability of the extending the Supplemental Benefit be conducted and adopts the following resolutions:

RESOLVED, that the P&F Board of Trustees are directed to have the system's actuary conduct the supplemental actuarial analysis required by MCL §38.1140h(5) for purposes of extending the Supplemental Payment; and

FURTHER RESOLVED, that the City shall pay for the cost of the supplemental actuarial analysis.

Ayes: Pietila, Shramski, Taylor-Burks, Williams and Carter

No: None

Resolution Passed

Suspend the Rules

21- 246 **Motion to suspend the rules for item #3 (Adoption of an Ordinance to amend the City of Pontiac General Employees' Retirement System to Clarify Asset Distribution upon Termination)**

City Attorney. Moved by Councilperson Pietila and second by Councilperson Taylor-Burks.

Ayes: Pietila, Shramski, Taylor-Burks, Williams and Carter

No: None

Motion Carried

Ordinance

Ordinance 2384 **Adoption of an Ordinance to amend the City of Pontiac General Employees' Retirement System to Clarify Asset Distribution upon Termination.** Moved by Councilperson Pietila and second by Councilperson Taylor-Burks.

AN ORDINANCE TO AMEND THE CITY OF PONTIAC GENERAL EMPLOYEES' RETIREMENT SYSTEM TO CLARIFY ASSET DISTRIBUTION UPON TERMINATION.

The City of Pontiac ordains:

Section 1. Amendments.

August 10, 2021 Study

That the City of Pontiac General Employees' Retirement System ("GERS") is hereby amended as follows:

a. Paragraph (b) of Section 36A [92-46A] of the GERS is amended to read as follows:

(b) The Excess Assets resulting from erroneous actuarial computation shall be transferred as follows:

(i) \$8,000,000.00 shall be transferred to an account established by the City for the purpose of holding funds which shall be utilized to make the one-time payments described in and required by Section 11 of the Settlement Agreement.

(ii) The remaining Excess Assets shall be transferred to a voluntary employees' beneficiary association under Code §501(c)(9) (that has received a favorable determination letter as to the tax-exempt status of such trust under Code section 501(c)(9) established or to be established by the City to fund retiree health benefits for certain City retirees that are subject to the Settlement Agreement.

Section 2. Severability.

If any section, or provision of this Ordinance shall be declared to be unconstitutional, void, illegal, or ineffective by any Court of competent jurisdiction, such section, clause or provision declared to be unconstitutional, void or illegal shall thereby cease to be a part of this Ordinance, but the remainder of the Ordinance shall stand and be in full force and effect.

Section 3. Repealer.

All Ordinances or parts of Ordinances in conflict herewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4. Publication.

The Clerk shall publish this Ordinance in a newspaper of general circulation.

Section 5. Effective Date.

This Ordinance shall be effective 10 days after adoption by the City Council.

Ayes: Shramski, Taylor-Burks, Williams, Carter and Pietila

No: None

Ordinance Adopted

Public Comment

Eight (8) individuals addressed the body during public comment

Councilperson Gloria Miller arrived at 6:18 p.m.

Closed Session

21-247 **Motion to go into closed session.** Moved by Councilperson Pietila and second by Councilperson Carter.

Whereas, the Michigan Open Meetings Act allows a public body to go into closed session to discuss specific pending litigation; and

Whereas, the City Attorney and defense counsel wish to address the City Council on new activity in a pending matter;

Now, Therefore, Be It Resolved by the Pontiac City Council that it recess into closed session to discuss an attorney-client privileged memorandum pending litigation as permitted by the Open Meetings Act at MCL 15.268. The City Attorney and counsel of record request a closed session pursuant to MCL 15.268(e) to discuss a Workers' Compensation matter.

August 10, 2021 Study

Ayes: Taylor-Burks, Williams, Carter, Miller, Pietila and Shramski
No: None
Motion Carried

21-248 **Motion to come out of closed session.** Moved by Councilperson Carter and second by Taylor-Burks.

Ayes: Williams, Carter, Miller, Pietila, Shramski and Taylor-Burks
No: None
Motion Carried

Suspend the Rules

21-249 **Suspend the rules to vote on the settlement agreement discussed in closed session.** Moved by Councilperson Pietila and second by Pro-Tem Carter.

Ayes: Williams, Carter, Miller, Pietila, Shramski and Taylor-Burks
No: None
Motion Carried

21-250 **Resolution to approve the settlement agreement discussed in closed session.** Moved by Councilperson Pietila and second by Councilperson Taylor-Burks.

Whereas, defense counsel discussed a settlement agreement in closed session;
Now, Therefore, Be It Resolved, that the Pontiac City Council approves the settlement agreement discussed in closed session

Ayes: Carter, Miller, Pietila, Shramski, Taylor-Burks and Williams
No: None
Resolution Passed

21-251 **Suspend the Rules to vote on item #10 (Resolution to approve a Budget Amendment for Fiscal Year 2021-2022 to allocate an additional \$352,635 to account 101-301-818.069 Professional Services-Oakland County Sheriff Overtime) and item #11 (Resolution to approve a Budget Amendment for Fiscal Year 2021-2022 to allocate an additional \$30,000 to account 101-301-818-068 Professional Services- Oakland County Sheriff).** Moved by Councilperson Pietila and second by Councilperson Shramski.

Ayes: Miller, Pietila, Shramski, Taylor-Burks, Williams and Carter
No: None
Motion Carried

Resolutions

Finance

21-252 **Resolution to approve a Budget Amendment for Fiscal Year 2021-2022 to allocate an additional \$352,635 to account 101-301-818.069 Professional Services-Oakland County Sheriff Overtime.** Moved by Pietila and second by Councilperson Taylor-Burks.

Whereas, the City of Pontiac timely approved the 2021-2022 budget on June 24, 2021 and;
Whereas, the FY 2021-22 budget provided increased funding for public safety services from the Oakland County Sheriff; and

August 10, 2021 Study

Whereas, the FY 2021-22 budget had a decrease in the Overtime budget; and
Whereas, the City wants to implement the full increase in deputies and public safety services as planned;
NOW THEREFORE be resolved that the City Council hereby approves the amendment for the fiscal year 2021-2022 for account 101-301-818.069-Professional Services-Oakland County Sheriff OT in the amount of \$352,635.

Ayes: Pietila, Shramski, Taylor-Burks, Williams, Carter and Miller

No: None

Resolution Passed

21-253 **Resolution to approve a Budget Amendment for Fiscal Year 2021-2022 to allocate an additional \$30,000 to account 101-301-818-068 Professional Services- Oakland County Sheriff.**
Moved by Pietila and second by Councilperson Taylor-Burks.

Whereas, the City of Pontiac timely approved the 2021-2022 budget on June 24,2021 and;
Whereas, the FY 2021-22 budget provided increased funding for public safety services from the Oakland County Sheriff; and
Whereas, the City wants to add additional funding and services to the public safety budget in order to increase parking enforcement across the City;
NOW THEREFORE be resolved that the City Council hereby approves the amendment for the fiscal year 2021-2022 for account 101-301-818.068-Professional Services-Oakland County Sheriff in the amount of \$30,000.

Ayes: Shramski, Taylor-Burks, Williams, Carter, Miller and Pietila

No: None

Resolution Passed

Adjournment

Council President Kermit Williams adjourned the meeting at 7:29 p.m.

#2

**SUBCOMMITTEE
REPORT**

LAW/50TH DISTRICT SUB-COMMITTEE NOTES

August 10, 2021

In attendance:

Council members: Chairman Gloria Miller

Chief Judge 50th District Court: Cynthia Walker

Court Administrator: Lynette Ward

Managed Assigned Counsel Executive: Ashley Johnson

Start time: 4:10 a.m.

50th District Court

The outside of the court was cleaned-up recently.

A. Zoom hearings

The courtroom is still not open to the public, however, live streaming is available.

Still doing zoom. Supreme Court implemented orders to allow zoom. People have greater access to zoom and people don't have to take off for work.

Still handling in person cases when required. If attorneys demand in person hearings, arraignments or evidentiary hearings.

B. Heating and cooling

Still working on the heating and cooling situation in the court. Mr. Cooley was not involved in the initial process. The City opted not to purchase a control module initially. However, if the module is purchased, it would allow more control. The module was included in the bid, but the City rejected that portion. Not sure if the City has made a decision to add it.

Michigan Indigent Fund

FY 2022 budget decreased due to court officer. The hours went from 1300 hours to 500 hours due to pandemic. If the hours need to be increased, the Court can always present and make a request to the MIDC. The Court budgeted for the current situation based on COVID due to video hearings. In July 2021, there were approximately 308 attorney appointments. The transition has been seamless and the court has not skipped a beat. It has been amazing to see the court handling cases virtually. People have been great with interacting with the court. When people know they are going to be represented, they are much more comfortable.

The contract on Council's agenda has been approved by MIDC and is not time sensitive.

The compliance portion and amount are the only changes.

Tickets

The questions are how the Sheriff's Department writes tickets and can the revenue being brought into the City increase?

The City needs more officers. There are cases written under state law and cases written pursuant to ordinances. Domestic violence and super drunk cases, operating with a high blood alcohol level were taken by the EM and tickets are written under state law.

Distribution and Fines and Costs in District and Municipal Courts (handout provided by the Court Administrator and *see attached*)

Tickets are written under state statute or city ordinance.

Whole amount is under the ordinance. The money can be divided by a proportional share.

Certain offenses written under state statute may need to be changed like domestic violence and high blood alcohol level cases /drunk drivers.

Many judges max out the fines because drunk driving is an option offense.

However, anything you change has an impact on something else. If changed, the City attorneys would have to spend more time with the cases.

Domestic violence cases are up especially during the pandemic.

One thing that was discussed before, if the Sheriff's Department gets a grant to write tickets, they will write tickets under state law instead.

Could not find any parking tickets written in 2021 parking tickets, no civil infractions. If the tickets are not paid, then after a certain amount of time, it becomes a default. After a default, the person is responsible. They would have to do extraordinary collection efforts. More man power would be needed.

The Court's budget worked out perfectly.

Blight Cases

If code enforcement comes into court for blight issues, is there is a process?

The city attorney has in a few instances filed a motion to abate the nuisance requesting the court to give the City authorization to clean-up the nuisance and then charge the resident. The court can handle these types of cases. Primarily junk and debris.

Extraordinary abatement. There needs to be proof.

A. A Motion to Abate at a minimum should include:

1. Copies of any and all tickets that preceded and support the Motion to Abate.
2. Any and all letters/other communications sent to the defendant that preceded and support the Motion.
3. Pictures that represent the conditions sought to be abated which should be at a time in close proximity to the time of filing.
4. Wording for nuisance offenses that are violations of a Pontiac ordinance that has "adopted by reference" an external code that is not found in the ordinance book must be made available.

The gate at the Court is still a problem. The gate is high enough that someone can crawl underneath and the gate freezes.

Adjourned: 4:42 p.m.

Distribution of Fines and Costs in District and Municipal Courts

	Violation Type	Fine ¹	Cost ²
Statute	District Court: All Violations regardless of vehicle type	County Treasurer → Libraries	Treasurer of Court Funding Unit → Court Funding Unit
	Municipal Court: Commercial Vehicle, MCSA, serious safety defect	Treasurer of Court Funding Unit → Political Subdivision in Which Violation Occurred	Treasurer of Court Funding Unit → Court Funding Unit
	Municipal Court: All other violations regardless of vehicle type	County Treasurer → Libraries	County Treasurer → Court Funding Unit
Ordinance	District and Municipal Court: Non-Commercial Vehicle	Treasurer of Court Funding Unit → 1/3 Political Sub. Whose Ordinance was Violated 2/3 Court Funding Unit	Treasurer of Court Funding Unit → 1/3 Political Sub. 2/3 Court Funding Unit
			Cost to Compel Appearance ³ → 100% Governmental Unit Incurring the Cost
	District and Municipal Court: Commercial Vehicle ³	County Treasurer → 30% Libraries 70% Political Sub. in Which Citation was Issued ⁴	Treasurer of Court Funding Unit → 1/3 Political Sub. 2/3 Court Funding Unit
			Cost to Compel Appearance ³ → 100% Governmental Unit Incurring the Cost

Revised 02/13

¹See Michigan Constitution of 1963, Article 8, Section 9. Also, MCL 600.8379, 600.8831, 257.909(1).

²See MCL 600.8379, 257.907, 600.8727(3), 600.8827(3). In District Courts the minimum state cost is distributed to the state pursuant to MCL 600.8381.

³See MCL 257.729.

⁴Applicable to all civil infraction violations written to commercial motor vehicles and commercial vehicles for offenses corresponding to Chapter 479 of the Motor Carrier Act (MCA) [MCL 479.1, et. seq.], the Motor Carrier Safety Act¹ (MCSA) [MCL 480.11, et. seq.], and chapters VI and VIII of the Michigan Vehicle Code, (MVC) [MCL 257.601-750, and 257.901-923], including corresponding sections of the MVC adopted by reference. See also MCL 600.8379(e), 257.909(1).

#3

**SUBCOMMITTEE
REPORT**

July 2021, Public Safety Subcommittee was called to order at 9:00 a.m. In Attendance were representatives from Fire, Star and OCSD, Councilwoman Sharamski, and Councilwoman Pietila. Absent was ProTem Carter.

Reports were distributed, all departments verified they were working Road Kill nights Sgt was excused after giving the reports as they were finalizing their scheduling. There will be minimum cost to the City as DPU unit and SWAT will be assigned to Road Kill and Dream Cruise. Dodge is covering the additional cost of Star EMS with 9 members on site, one stationed at the First Aid tent at all times.

The Fire Department is in the middle of promotional testing, due to retirements. Currently there are two position vacancies anticipated, both being LTs.

Meeting adjourned at 9:30 a.m.



WATERFORD REGIONAL FIRE DEPARTMENT

2495 Crescent Lake Road • Waterford, MI 48329
Phone: 248.673.0405 • Fax: 248.674.4095
www.waterfordmi.gov

Matthew J. Covey, Fire Chief • Carl J. Wallace, Deputy Fire Chief • John R. Phebus, Fire Marshal

MONTHLY FIRE DEPARTMENT REPORT For the City of Pontiac July 2021

Total Pontiac Fire Station calls - month: **452** Average Response Time **6:38** min. per call
Total calls for Pontiac Stations - YTD: **2,753**
City Calls: Fires **31** EMS: **216** False Alarms: **38** Other: **167**
Pontiac YTD: Fires: **146** EMS: **1,594** False Alarms: **215** Other: **798**

<u>Month Count</u>	<u>Response Times</u>	<u>YTD</u>
FS-6: Fires – 06	6:10	023
EMS –48	5:33	312
FS-7: Fires –10	5:12	065
EMS –90	5:08	570
FS-8: Fires – 10	5:01	031
EMS –38	6:06	325
FS-9: Fires –3	5:08	023
EMS –40	4:44	277

NOTE: Totals per Station could reflect response out of the city limits.

Fire Injuries to personnel: Zero

Fire Injuries to civilian: Zero

Notable Event:

- Severe weather event.
- Lieutenant and Captain written exam was administered by HR and oral board exams are scheduled for August.
- RRT- Rapid Relief Team with the assistance of fire crews handed out food boxes for Pontiac residents at Station 7.

**Oakland County Sheriff's Office
Pontiac Substation
2021**

8/11/2021 8:40

Road Patrol/DB	January	February	March	April	May	June	July	August	Sept	October	November	December	Totals
Road Patrol Arrests:	293	293	355	308	306	257	315						1,812
Traffic Citations:	219	290	302	352	324	474	457						2,418
Detective Bureau Warrants:	111	115	143	132	120	121	130						872
Cases Assigned to Detectives:	404	325	403	396	432	403	430						2,793
Appearance Citations:	8	7	13	10	6	5	8						57
DNA Swabs	1	0	0	0	0	0	0						1

Domesic Violence Arrests

State Law Warrants:	38	34	44	47	41	40	36						280
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Directed Patrol Unit

Felony Arrests:	50	48	43	35	42	37	25						280
Misdemeanor Arrests in Custody:	9	14	7	8	6	7	2						53
Appearance Citations:	8	13	5	2	1	3	1						33
Traffic Citations:	0	0	0	0	0	0	0						0
Controlled Buys:	0	0	0	0	0	0	0						0
Handguns Seized:	8	13	14	7	12	8	10						72
Long Guns Seized:	0	0	0	0	0	0	0						0
Search Warrants Executed:	0	0	0	0	0	0	0						0

Violent Crimes Statistics

Armed Robberies	3	7	2	3	4	4	3						26
Homicides:	1	1	0	1	0	0	3						6
Discharged Firearm (Injuries):	6	0	3	3	8	8	2						30

	21-Jan	21-Feb	21-Mar
48340	5.1	4.9	5
48341	4.8	4.8	4.9
48342	4.9	4.9	4.9
Monthly	4.9	4.86	4.9
	June	july	
48340	5.6	5.3	
48341	5.4	5.6	
48342	5.3	5.5	
Monthly	5.43	5.4	

21-Apr	May
5.2	5.8
4.8	5.3
5	5
5	

DISPATCH	21-Jan	21-Feb	21-Mar	21-Apr	21-May	Jun-21	21-Jul
Abdominal Pain	29	24	31	18	34	21	22
airmedical transport			1		1		
ALLergies	3	4	4	7	2	6	3
ALTERED MENTAL STATUS	7	4	10	6	6	13	5
Animal bites	1		3	2	1		
Assault	27	26	12	20	27	23	30
Invalid assist	2	4	7	4	7	5	4
Pedestrian struck by Auto							
Back Pain	102	12	17	20	14	14	13
Breathing Problems		77	93	133	94	90	106
Boating Accident							
Burns				2	1	2	3
Cardiac Arrest	15	17	23	17	22	27	12
Chest pain	71	50	57	80	63	80	69
Choking	2	6	2	4	3	6	5
CO poisoning	1			1		1	
Seizures	44	40	43	39	49	46	42
Diabetic Issues	25	18	26	21	30	21	28
Drowning						1	
Unspecified EMS SERVICE					2	19	
Electrocution				1	1		
Eye issues		2			2	2	1
Fainting							
Fall Victim	57	54	45	58	60	51	53
Fever							
Fire							
Headache	1	5	2	5	9	2	5
Heart Problems	15	13	4	4	8	12	10
Heat/Cold Exposures	3	2	2	1			2
Hemorrhage from Laceration	16	13	14	13	13	19	22
Industrial Accident		1					
Medical alarms	5	9	1	5	8	16	5
MCI							

Ingested Poison							
Non Emergent requests			9		7		
Overdose	29	34	37	33	49	50	35
Pregnancy/Childbirth	9	4	2	6	7	3	6
Psychiatric Problems	37	33	36	35	31	36	35
Respiratory Arrest							
"Sick" Person	165	117	198	212	193	208	231
Standby					1		
stab/Gunshot Wound	5	5	5	2	12	4	4
Stroke/CVA	20	16	16	13	18	16	14
Traffic Accidents	21	33	38	35	39	43	38
Palliative care	29	28	28	31	28	23	30
Traumatic Injury	11	19+	11	16	17	16	14
Unconscious/unknown cause	29	34	28	22	48	46	28
UNKNOWN	9	12	4		1		18
"Person DOWN"	16	5	22	13	20	19	
Sexual Assault							
Well Person Ck	2	2	2	1	2	3	1
total	808	704	833	880	930	944	894

#4

RESOLUTION



CITY OF PONTIAC

OFFICIAL MEMORANDUM

Executive Branch

TO: Honorable Mayor, Council President and City Council Members

FROM: Abdul H. Siddiqui, City Engineer

DATE: August 17, 2021

RE: 2021 Clinton River Trail Maintenance and Safety Improvements – Anglin Civil, LLC

The City of Pontiac received and publicly opened bids for the referenced improvement project on Thursday, June 17, 2021. The project involves the grading and resurfacing of the existing Clinton River Trail through Pontiac and safety improvements including installation of a HAWK signal where the trail crosses Orchard Lake Rd. The project will be fully funded by the Friends of the Clinton River Trail.

A total of three (3) bids were received for the project in the amounts as follows:

1. Anglin Civil, LLC	\$620,373.38
2. WCI Contractors, Inc.	\$628,781.85
3. LJ Construction, Inc.	\$632,970.85

The Engineering Division has reviewed the proposals and references submitted by all contractors and based on the attached is recommending the award to the low bidder, Anglin Civil, LLC.

Construction is scheduled to start in early August with anticipated completion in spring of 2022.

Based upon the above information, it is recommendation of the Department of Public Works that the 2021 Clinton River Trail Maintenance and Safety Improvements project be awarded to Anglin Civil, LLC, in the amount of \$620,373.38.

WHEREAS, the City of Pontiac, through resolution 20-364, has shown its support for maintenance and safety improvements along the Clinton River Trail and has allocated \$10,000 in matching funds for a grant from the Ralph C. Wilson Jr. Trails Maintenance Fund; and

WHEREAS, the Friends of the Clinton River Trail (FCRT), a Michigan non-profit corporation, leveraged the \$10,000 Pontiac matching funds and worked with project partners including the City of Sylvan Lake, Community Foundation of Southeast Michigan, Pontiac Funders Collaborative, Community Foundation of Greater Rochester, Trinity Health-St. Joseph Mercy Oakland and Oakland County to secure the remainder of the funds necessary for this project; and

WHEREAS funds are being held in a non-endowed account at the Community Foundation of Greater Rochester, which will act in a fiduciary capacity for this project; and

WHEREAS, utilization of the Clinton River Trail has increased significantly as a consequence of the COVID-19 pandemic making it more urgent to complete the needed maintenance improvements; and

WHEREAS, FCRT worked with City staff to prepare an Invitation to Bid, and the City has solicited bids; and

WHEREAS, the City of Pontiac has advertised and received responses to a Request for Proposal for the 2021 Clinton River Trail Maintenance and Safety Improvements project on June 17, 2021, publicly opened bids, and a bid tabulation was prepared and reviewed; and

WHEREAS, the City identified the low bidder as Anglin Civil, LLC, and references of the low bidder were checked and found acceptable.

NOW, THEREFORE

BE IT RESOLVED, The Pontiac City Council authorizes the Mayor to enter into a contract with Anglin Civil, LLC for \$620,373.38 for the 2021 Clinton River Trail Maintenance and Safety Improvements Project.

BE IT FURTHER
RESOLVED,

as the project progresses, the Pontiac City Council requires the City Engineer to review and approve all invoices and forward all said invoices to FCRT for payment from their account at the Community Foundation of Greater Rochester. The City Engineer is further tasked to determine said invoices are disbursed in timely fashion by the Community Foundation of Greater Rochester and that sufficient funds are available to ensure the City of Pontiac is not obligated for funds beyond the \$10,000 allocated per resolution 20-364.

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20__, by and between the City of Pontiac, Oakland County, Michigan, party of the first part, hereafter called the City, and Anglin Civil, LLC, party of the second part, hereinafter called the Contractor:

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR shall commence and complete the construction of:

2021 Clinton River Trail Maintenance and Safety Improvements

in full conformance with the Contract Documents as enumerated in Article 6 of this Agreement.

2. The CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein, excepting those things which are specifically stipulated in the contract documents to be furnished or done by the City.

3. The CONTRACTOR shall commence the work required by the CONTRACT DOCUMENTS on or before the date stipulated in the NOTICE TO PROCEED and will complete the same on or before June 30, 2022. Time shall be considered to be of the essence of this Contract.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the contract price of:

\$ 620,373.38

unless the contract price is duly changed by the contract documents.

5. The CITY shall pay to the CONTRACTOR via the Community Foundation of Greater Rochester, the holder of the funds for this contract, in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

6. The term "CONTRACT DOCUMENTS" means and includes the following:

- A. AGREEMENT
- B. BID BOND
- C. PERFORMANCE BOND
- D. LABOR AND MATERIAL BOND

- E. MAINTENANCE BOND
- F. CHANGE ORDER (Pursuant to General Conditions, Section 9)
- G. ADDENDA:
 - No. _____, dated _____, 20 ____ .
 - No. _____, dated _____, 20 ____ .
 - No. _____, dated _____, 20 ____ .
- H. ADVERTISEMENT
- I. INSTRUCTIONS TO BIDDERS
- J. BIDDER'S PROPOSAL (Incl. final Compliance Plan as accepted by OWNER)
- K. GENERAL CONDITIONS (Incl. SUPPLEMENTAL GENERAL CONDITIONS and SPECIAL CONDITIONS (if any))
- L. SPECIFICATIONS (Incl. SUPPLEMENTAL SPECIFICATIONS and SPECIAL PROVISIONS (if any))
- M. PLANS (As listed in Schedule of Drawings)
- N. NOTICE OF AWARD
- O. NOTICE TO PROCEED

This agreement, together with other documents enumerated in this ARTICLE 6, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 6 shall govern, except as otherwise specifically stated.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in three (3) copies, each of which shall be deemed an original, on the date first above written.

**CONTRACT AGREEMENT BETWEEN THE CITY OF PONTIAC
AND CONTRACTOR**

2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS

CONTRACTOR: ANGLIN CIVIL, LLC

In witness whereof, the parties have executed this agreement the day and year last written below.

WITNESSES:

1) _____ By: _____
2) _____ Its: _____

CITY OF PONTIAC

WITNESSES:

DEPARTMENT OF PUBLIC WORKS

1) _____ By: _____
Allen Cooley Date
2) _____ Its: Acting Director

WITNESSES:

DEPARTMENT OF FINANCE

1) _____ By: _____
Darin Carrington Date
2) _____ Its: Finance Director

WITNESSES:

RISK MANAGEMENT DIVISION

1) _____ By: _____
Date
2) _____ Its: Risk Management Administrator

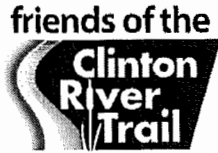
WITNESSES:

OFFICE OF THE MAYOR

1) _____ By: _____
Dierdre Waterman Date
2) _____ Its: Mayor

Approved as to form:

By: _____
_____, City Attorney



July 20, 2021

Hon. Mayor Deirdre Waterman
Mr. Kermit Williams, City Council President
City of Pontiac
47450 Woodward Avenue
Pontiac, Michigan 48342

Re: Maintenance & Safety Improvement Project-Clinton River Trail in Pontiac, MI

Dear Hon. Mayor Waterman and Council President Williams,

On July 28, 2020, the Pontiac City Council passed Resolution 20-364 approving a total local match of \$10,000 for the Clinton River Trail "Safety & Maintenance Improvements" project within Pontiac. This was the culmination of a multi-year joint effort between the Friends of the Clinton River Trail (FCRT) and City staff to document maintenance and improvements required. With the city's local match, FCRT was able to secure all funds, permits and approved construction plans necessary for this project. Since last July, the Design Engineering phase of the project has been completed. The Pontiac-based firm of Nowak & Fraus Engineering has been contracted with to coordinate the project and city staff have handled the project bidding process. The City received three competitive bids for the job and Anglin Civil has been identified as the lowest responsive qualified bidder.

FCRT now respectfully requests City Council takes the next step and awards the contract to Anglin Civil.

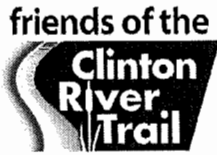
As you may know, FCRT is a citizen group committed to enhancing the safety and enjoyment of the Clinton River Trail for all users. The improvements that will be made to the Clinton River Trail include a pedestrian activated signal at Orchard Lake Road (near the entrance of Beaudette Park), upgrade all road crossings to be ADA compliant, new 10 foot wide crushed limestone surface for 1.75 miles, address maintenance needs adjacent to the Clinton River, replace wooden railings at two bridges over the Clinton River, and install bollards to prevent unauthorized motorized vehicles. Trail usage has increased dramatically with the COVID-19 pandemic making the need to enhance safety and correct these deficiencies even more relevant.

Friends of the Clinton River Trail – Board of Directors

Fred Phillips – Vice President
Richard Harrison – Director

Melinda Hill - President
John Zalewski – Treasurer
John Hensler – Director

Claudia Filler – Secretary
Debbie Parker – Director



PO Box 81971 • Rochester, MI • 48308-1971 • clintonrivertrail.org

The Clinton River Trail Maintenance & Safety Improvement project will improve the overall trail user's experience, make necessary safety enhancements at road crossings and bring this section of the trail up to current design standards. FCRT is committed to funding these improvements for the benefit of all users of the Clinton River Trail in Pontiac. This project is consistent with various draft and adopted plans within the City, and the committed funds can only be spent in support of the project. Additionally, this project is directly connected to other phases of development that have been proposed in the City to complete a notable gap in the regional and cross-state trail networks.

We look forward to continuing to work with the City and seeing construction begin as soon as all contract documents have been completed. Please do not hesitate to contact me with any questions that you may have.

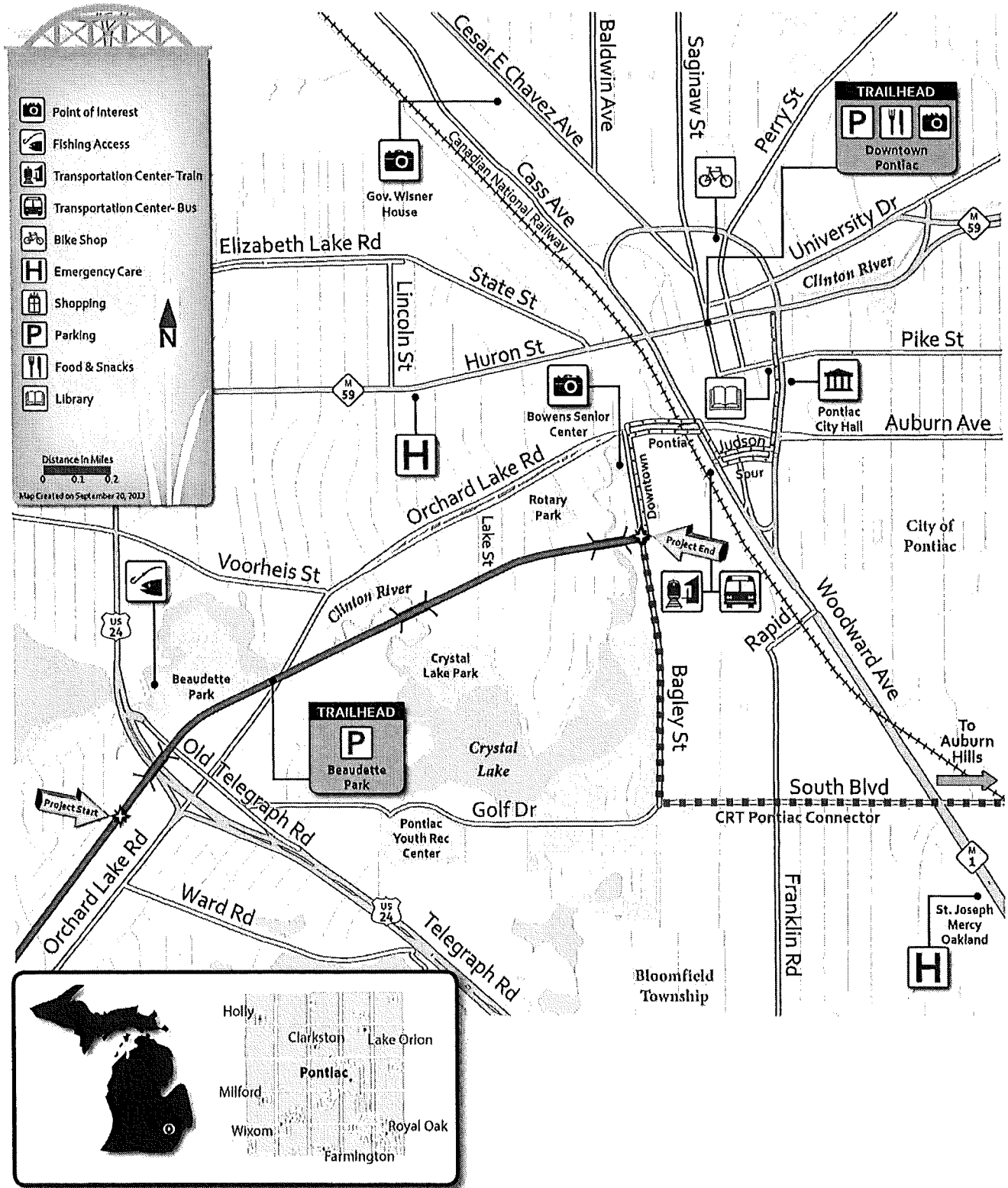
Regards,

Melinda Hill,
President – Friends of the Clinton River Trail

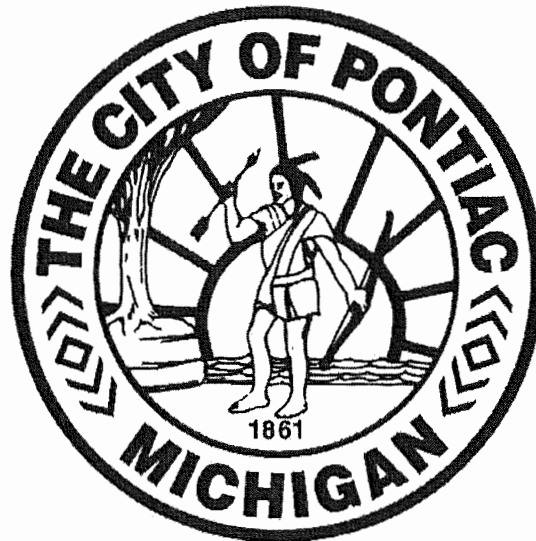
Cc:

Council President Pro Tem Randy Carter
Councilwoman Patrice Waterman
Councilwoman Megan Shramski
Councilwoman Mary E. Pietila
Councilwoman Gloria Miller
Councilwoman Dr. Doris Taylor Burks
Planning Manager, Vernon Gustafsson
City Engineer, Abdul Siddiqui
County Commissioner, Angela Powell

• **Project Location Map** •



**CITY OF PONTIAC
INVITATION TO BID**



**2021 CLINTON RIVER TRAIL
MAINTENANCE AND SAFETY IMPROVEMENTS**

Bids Due: June 10, 2021 at 1:00 PM

Location: City of Pontiac Clerk's Office
47450 Woodward Avenue, 1st Floor
Pontiac, MI 48342

Plainly marked with:

"2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS"

MANDATORY Online Pre-Bid Meeting: May 18, 2021 at 9:00 AM
Login information to be provided in addendum #1.

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ATTACHMENT E – RCOC TRAFFIC SIGNAL DETAILS

ATTACHMENT F – GEOTECHNICAL REPORT FOR ORCHARD LAKE ROAD HAWK BEACON FOUNDATION

ATTACHMENT G – STATION PLANS

**REQUEST TO SUBMIT BIDS FOR
2021 CLINTON RIVER TRAIL
MAINTENANCE AND SAFETY IMPROVEMENTS
FOR THE CITY OF PONTIAC**

The City of Pontiac, Michigan (The City) is requesting bids for improvements to the Clinton River Trail beginning at Pontiac Drive in Bloomfield Township and ending at Bagley Street in the City of Pontiac. Approximately 1.75 miles of a shared use path will be improved by resurfacing the existing aggregate surface with additional compacted limestone fines to be 10' wide with 2' shoulder areas in accordance with current AASHTO standards. The improvement of this trailway will be contingent on the final bids of the project. A complete bid must be provided for the project as described below:

Bid: The scope of work to be done under the Bid includes AASHTO compliant station grading and aggregate resurfacing along approximately 1.75 miles of existing trail from Pontiac Drive to Bagley Street. The project also includes striping and signage at all intersections, bollard removal and replacement, a High-Intensity Activated Crosswalk Beacon (HAWK) installation at the Orchard Lake Road crossing, wooden railing replacement at two existing bridges over the Clinton River, and ADA ramp improvements. Other items of work include soil erosion control, landscaping improvements, and maintenance of traffic.

The Bid will only allow complete closure of the Clinton River Trail segments with active construction, as needed, from Pontiac Drive to Bagley Street. It should be recognized that trail users will not respect closures where there is no visible activity. Motor vehicle access must be maintained on roadways that cross the Clinton River Trail as specified in the Maintenance of Traffic Special Provision and plans; temporary travel lane closures are permitted as needed.

Sealed bids will be received at the City of Pontiac Clerk's Office at 47450 Woodward Avenue, 1st Floor, Pontiac, MI 48342 plainly marked with "2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS" until **June 10, 2021 at 1:00 PM** at which time they will be publicly opened. It is the offeror's sole responsibility to ensure that their bid is physically deposited with the Clerk's Office prior to the time and date specified. Late bids will not be opened and will be rejected unopened regardless of the degree of lateness or the reason thereto, including causes beyond the control of the offeror ***(NOTE: Electronic or faxed submissions will not be accepted).***

A MANDATORY Pre-Bid Meeting will be held online, on **May 18, 2021 at 9:00 AM**, local time. Login information to be provided in addendum #1. The proposal and contract requirements will be discussed at said meeting. Attendance at the Pre-Bid Meeting is MANDATORY. Bids will NOT be accepted from prospective bidders that do NOT have a representative attending the Pre-Bid Meeting.

Please test your connections prior to the meeting. If you are having difficulty, please dial (248) 758-3615 for assistance no less than 15 minutes prior to the meeting. If for some reason you cannot join the online meeting or via phone, you must contact the Engineering Office no later than the close of business Tuesday, May 18, 2021.

Bids, including all City-provided forms that shall be completed and signed as indicated herein, are to be submitted in a sealed envelope plainly marked with the Bid's title. Two **(2) complete copies/sets** of the bid shall be submitted. An original copy so marked, shall be signed with the firm's name and bear its corporate seal or logo and the handwritten signature of an officer or employee having authority to bind the company to a contract by his or her signature.

The following work shall be performed by MDOT Prequalified firms: Grading, Drainage Structures and Aggregate Construction (Ea).

The City of Pontiac reserves the right to accept or reject any or all bids, either in part or in whole to waive any formalities and to accept the bid which it believes to be in the best interest of the City.

All prospective bidders need to send an e-mail response to Abdul Siddiqui (ASiddiqui@pontiac.mi.us) with the following information Firm Name, Project Name, Contact Person, Telephone Number and E-Mail Address.

Any interpretation, correction or change of this document will be made only by written addendum hereto. Any interpretation, correction or change made in any other manner will not be binding on the City and bidders shall not rely thereon. All inquiries are to be made in writing to **Abdul Siddiqui** and be received no later than **May 24, 2021 at 5:00 PM**. These may be hand-delivered, mailed, faxed to (248) 758-3197 or emailed to **ASiddiqui@pontiac.mi.us**. A written response, if provided, will be in the form of an addendum to the Bid and will be sent to all document holders on file with the Purchasing Office. Any addendums issued will be located on the City of Pontiac Purchasing Division website: <http://www.pontiac.mi.us/departments/finance/purchasing.php>. Its receipt must be duly acknowledged with any submission. Please refer to the website for any addenda that may be issued.

Bidders who submit bids before the deadline are advised to continue to monitor the website for any addenda that may be issued. Bid packages will also be available upon request through the Purchasing Office located at 47450 Woodward Avenue, 2nd Floor, Pontiac, MI 48342.

The selected firm shall agree to indemnify, defend and save harmless the City of Pontiac, Nowak and Fraus Engineers, City of Sylvan Lake, Road Commission for Oakland County, Friends of the Clinton River Trail and Oakland County, its officers, agents and employees from and against all claims, losses, costs or damages caused by his acts or those of his agents, or anyone for whom he may be responsible. The City disclaims any responsibility for injury to Bidders, their agents or to others while examining the work site or at any other time.

With regard to construction services, the successful bidder shall agree to indemnify and hold the City, Nowak and Fraus Engineers, City of Sylvan Lake, Road Commission for Oakland County, Friends of the Clinton River Trail and Oakland County, harmless from any and all claims whatsoever arising out of, or occurring during, the performance of the services and occasioned directly or indirectly by its error or omission, negligence or fault.

Prior to the City's entering into a contract, the successful Bidder shall produce evidence satisfactory to the City's Corporation of insurance coverage in types and amounts defined in Appendix B and naming the City of Pontiac, Michigan; Nowak and Fraus Engineers; City of Sylvan Lake; Road Commission for Oakland County; Friends of the Clinton River Trail; and Oakland County, as an additional insured thereon.

All work must comply with OSHA standards and with the MDOT 2012 Standard Specifications for Construction, City of Pontiac standards, Road Commission for Oakland County standards, and Oakland County Water Resources Commissioner Standards.

REQUEST FOR BID POSTED: May 11, 2021

MANDATORY PRE-BID MEETING: May 18, 2021, 9:00 AM

QUESTIONS DUE: May 24, 2021, 5:00 PM

RESPONSES POSTED: May 27, 2021, 5:00 PM

BIDS DUE: June 10, 2021 1:00 PM

NUMBER OF COPIES TO SUBMIT: TWO (2), one original and one copy

ATTACHMENT A – CONTRACT PLANS FOR THE BID

ATTACHMENT B – PROJECT SCHEDULE AND PROGRESS CLAUSE

ATTACHMENT C – DIVISION 30 SPECIFICATIONS

ATTACHMENT D – TYPICAL RCOC HAWK SPECIAL PROVISIONS

ATTACHMENT E – RCOC TRAFFIC SIGNAL DETAILS

ATTACHMENT F – GEOTECHNICAL REPORT FOR ORCHARD LAKE ROAD HAWK BEACON FOUNDATION

ATTACHMENT G – STATION PLANS

I. PURPOSE

To solicit bids from qualified individuals or firms to perform construction services for **2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS** for the City of Pontiac, on behalf of the City of Sylvan Lake and Friends of the Clinton River Trail (FCRT).

II. BACKGROUND

The City of Pontiac is collaborating with City of Sylvan Lake, FCRT and other stakeholders to make essential safety improvements and accessibility renovations to the Clinton River Trail in Pontiac, Sylvan Lake and Bloomfield Township. Since opening the trail in 2004, Pontiac has seen a significant reduction in their DPW/Park budget and staff, leaving their portion of the CRT in need of major maintenance, repairs and upgrades to meet current shared use path standards.

Generally, the trail ROW is a 50-foot-wide former railroad corridor that was originally surfaced with crushed aggregate fines. Within the City of Sylvan Lake, the Clinton River Trail is a 10-foot wide, multi-use path open for walking and biking with a direct connection on the west end to the West Bloomfield Trail. The City of Sylvan Lake owns and is responsible for maintaining slightly over 1-mile of trail, of which 320 feet is in Bloomfield Township. The portion of trail in Bloomfield Township intersects Pontiac Drive. Pontiac Drive is a county local paved roadway under the jurisdiction of the Road Commission for Oakland County (RCOC).

Likewise, within Pontiac city limits, the City of Pontiac owns and is responsible for maintaining the trail; however, in places has failed to do so for several years. Consequently, the original 10-foot-wide crushed aggregate fines surface has deteriorated to be a single or two-track path. All roadways that cross the trail are under the city's jurisdiction, however RCOC maintains the signal operations and Thomas Ln is a private drive.

The segment of trail involved in the Bid has seven at-grade road crossings; two of which are significantly non-compliant (Pontiac Drive and Orchard Lake Road). The crossing at Pontiac Drive sees high motor vehicle traffic volumes while failing to meet current pathway standards. The second is the Orchard Lake Road crossing near Beaudette Park, which has even greater traffic volumes, higher travel speeds, and has several known deficiencies.

All grant funding has been secured to make improvements to the Clinton River Trail beginning at Pontiac Drive in Bloomfield Township and ending at Bagley Street in the City of Pontiac. This project is funded by recreation-oriented sources, no State or Federal funding will be used for this project. Approximately 1.75 miles of a shared use path will be improved by augmenting the existing aggregate surface with additional compacted limestone fines to be 10' wide with 2' clear shoulders in accordance with current AASHTO standards. The improvement of this trailway will be contingent on the final bid of the project. A complete bid must be provided for the project as described below:

Bid: The scope of work to be done under the Bid includes AASHTO compliant station grading and aggregate resurfacing along approximately 1.75 miles of existing trail from Pontiac Drive to Bagley Street. The project also includes striping and signage at all intersections, bollard removal and replacement, a High-Intensity Activated Crosswalk Beacon (HAWK) installation at the Orchard Lake Road crossing, wooden railing replacement at two existing bridges over the Clinton River, and ADA ramp improvements. Other items of work include soil erosion control, landscaping improvements, and maintenance of traffic. Plans are available for this bid.

The Bid will only allow complete closure of the Clinton River Trail segments with active construction, as needed, from Pontiac Drive to Bagley Street. It should be recognized that trail users will not respect closures where there is no visible activity. Motor vehicle access must be maintained on roadways that cross the Clinton River Trail as specified in the Maintenance of Traffic Special Provision and plans; temporary travel lane closures are permitted as needed.

Project 'Ownership' & Funding Sources – As the qualifying entity, Friends of the Clinton River Trail, on behalf of the Cities of Pontiac and Sylvan Lake, applied for funding in April 2020 from the Community Foundation for Southeast Michigan's Ralph C. Wilson, Jr. Trails Maintenance Fund to redevelop the trail. FCRT was awarded grant funding to make the improvements listed above.

However, since the Pontiac Purchasing Division is advertising the construction project, the City of Pontiac will serve as 'Project Owner' and act on behalf of the City of Sylvan Lake and Friends of the Clinton River Trail. As stated, this project is being funded by all private, recreation-oriented, sources with the exception of limited matching funds being provided by the two cities that will benefit from the project.

No Federal or State funds are involved hence there is no requirement for Davis-Bacon/prevaling wages. The Community Foundation of Greater Rochester will process all invoices and will act as fiduciary for the project.

III. SCOPE OF WORK

Contractor will provide all labor, equipment, and materials for resurfacing the existing trailway surface with the following "Section IV. Request" and Scope of Work listed in the attached 2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS "Scope & Bid Sheet" in Appendix A.

All workmanship and materials shall be in accordance with the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, this document including Attachments, City of Pontiac, Road Commission for Oakland County, and Oakland County Water Resources Commissioner standards.

IV. REQUEST

In addition to the required form 2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS "Scope & Bid Sheet" provided here as Appendix A, all firms or individuals responding to this Bid must submit complete responses for the Bid to the information requested in this section, and must note any exceptions to any information contained in the Bid. Bids will be evaluated based upon the requested criteria and be awarded to the lowest responsible bidder. Bids should present information in a clear and concise manner, following the format indicated below. Responses to this section shall be in a font not smaller than 11 point and may be double or single sided on standard 8½" x 11" paper. There is no limit to pages submitted for complete response to this section:

MDOT Prequalification requirements: The Contractor or Sub-contractor performing the following work shall be MDOT Prequalified: Grading, Drainage Structures and Aggregate Construction (Ea)

Statement of Qualifications: Contractor shall supply all company contact information, Current License(s), Staffing, Certifications, Copy of Current Liability Insurance, along with Contractors qualifications and ability to successfully provide the services requested.

- a) Name, telephone number, address, e-mail and fax number of the individual designated to receive all official correspondence relating to the project.
- b) Describe the Contractor's qualifications and ability to successfully provide the services requested, including a description of prior experience.
- c) Provide copy of State of Michigan License for the corporation or company and an individual license.
- d) Provide certified copies of Articles of Incorporation or Articles of Organization of the firm (if applicable).
- e) Provide current Good Standing Certificate for the firm (if applicable).
- f) Provide organizational documents for the firm such as bylaws and operating agreement (if applicable),
- g) Provide a list of which staff members will be responsible for the project, include brief resumes and proof of appropriate training and relevant certificates and licenses for each.
- h) Provide a list of board of directors and officers of firm (if applicable).
- i) Provide Insurance as required in Appendix B.
- j) Provide contact names and telephone numbers for at least three (3) individuals, municipalities or companies for which you have contracted similar work for in the past 3 years.
- k) Provide a detailed description of any litigation resulting from use of the firm's services.

- l) Provide a statement on the notification time necessary to begin execution of the desired services.
- m) Provide Bid Bond as outlined in section "IX. BONDING REQUIREMENTS".

The City of Pontiac, Michigan reserves the right to validate Bidder's qualifications, capability to perform, availability, past performance record and to verify that the Bidder is current in its obligations to the City.

The City reserves the right to waive any informality in the bids, to accept any bid and to reject any and all bids, should it be deemed in the best interest of the City to do so.

The City reserves the right to request clarification of and/or solicit additional information of any Bidder, and/or to negotiate with any Bidder regarding any terms of their bid including, but not limited to; the cost and/or scope of services, with the intent to achieve the best bid that shall result in a contract that is deemed by the City to be in the City's best interests. Any such negotiations will use the selected bid as a basis to reach a final agreement, if possible.

The City reserves the right to include in the contract for services other terms and conditions not specifically set forth herein.

V. PROPOSED FEE

Provide a fee for the services requested in the Scope of Services of work in the attached 2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS "SCOPE & BID SHEET" in Appendix A. The City will select a contractor based on the value of the bids and available local funds.

VI. AGREEMENT

Contract work on behalf of the City of Pontiac will be awarded to the lowest responsible bidder. The City will enter into a contract with the Successful Bidder with a contract completion date of 30 days beyond the **Project Completion date** as defined in **Attachment B – Project Schedule and Progress Clause**. All services shall be performed according to the Agreement, as well as the submitted bid.

The Contractor shall begin work under this Contract within ten (10) calendar days of receipt of written Notice to Proceed and shall perform the work in such manner as to complete all work including final site restoration by the **Project Completion date**, except as such time limits may be advanced in accordance with the provisions herein. The time of beginning, rate of progress and date of completion are considered essential elements of the Contract.

The City will issue a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within fourteen (14) days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and ALL bonds and insurance documentation required to be delivered by

the Contract Documents) to City. Within seven (7) days thereafter, City shall deliver one fully executed counterpart of the Agreement to Successful Bidder.

The Agreement with the Contractor will detail the payment procedures and documentation needed for the services rendered. The billing submitted by the Contractor must provide a written description of the work completed and include any necessary justification as/if necessary.

After services have been rendered, billing will be required to have the following, including but not limited to:

- Pay item codes, pay item names, quantities, unit prices, and material certifications for the work performed;
- Invoice; and
- Waiver of Liens of all subcontractors.

VII. ADDITIONAL INFORMATION:

All workmanship and materials shall be in accordance with the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, Attachments A through G, Road Commission for Oakland County Standards, and the City of Pontiac Standards. The Contractor must adhere to the Standards, Specifications and Plans in order to receive monetary reimbursement. Please review the requirements listed below and state in your bid your ability to fulfill these requirements. If you have any questions regarding federal, state, city requirements, please contact the City of Pontiac Purchasing Agent at (248) 758-3120.

- If Contractor is not in possession of a Pontiac Business license, then Contractor shall procure said license once awarded.
- Debarment—Service provider has not been suspended from federal benefits as listed on www.sam.gov
- The selected service provider will not use funds for lobbying, and will disclose any lobbying activities
- Other Applicable State and Local Laws

VIII. SUBMISSIONS

All submissions (and original and one copy) must be hand delivered or mailed in a sealed envelope (**NOTE: Electronic or faxed submissions will not be accepted**) with "2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS" clearly marked on the front to by **June 10, 2021 at 1:00 PM** to the following:

City of Pontiac Clerk's Office, 47450 Woodward Avenue, 1st floor, Pontiac, MI 48342

The City of Pontiac reserves the right to accept or reject any or all bids, either in part or in whole to waive any formalities and to accept the Bid.

IX. BONDING REQUIREMENTS

A bid guarantee from each bidder equivalent to 5% of the bid price. The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified. Bid bond to be included with bid.

NOTE: If the Contract or Subcontracts exceed \$50,000.00 you will need b) & c) CONTRACTS OR SUBCONTRACTS EXCEEDING \$50,000.00.

- a. A Performance Bond shall be delivered to the City of Pontiac when the contract is executed on the part of the Contractor for 100% of the contract price. A "performance bond" is executed in connection with a contract to secure fulfillment of all the Contractor's obligations under such contract.
- b. A Payment Bond (labor & material bond) shall be delivered to the Agency when the contract is executed on the part of the Contractor for 100% of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.
- c. A Maintenance and Guarantee Bond shall be delivered to the Agency when the contract is executed for 100% of the full Contract Price. If, at any time during a one-year period from the date of payment of the final estimate, the need of any repair or replacement becomes apparent, the City will at once notify the Contractor in writing, either personally or by mail at the address given in the proposal; and if within one week after such notification the Contractor has not made the necessary repairs, the City may proceed to do the required work and to charge the cost thereof against the Contractor, excepting that in the case of a repair necessary to be made at once to protect life and property, then and in that case the City may take immediate steps to repair or barricade such defects without notice to the Contractor.

Following the performance of any such repair work by the City, and as soon as practicable thereafter, an itemized statement of the cost of such work will be sent to the Contractor by the City. In such accounting the City shall not be held to obtain the lowest figures for the doing of the work or any part thereof, but all sums actually paid therefor shall be charged to the Contractor.

X. INCOME TAXES

Contractor agrees to contact City of Pontiac Income Tax Division, Audit and Compliance Section, 47450 Woodward Avenue, Pontiac, Michigan 48342, telephone (248) 758-3043, to establish reporting and withholding obligations under the City of Pontiac Income Tax Ordinance. Contractor will require the same of all subcontractors employing labor under this contract for any work done within the municipal limits of the City of Pontiac.

Contractor is required to withhold City of Pontiac income tax from wages paid to:

- 1) Pontiac resident employees regardless of where they work for the employer; and
- 2) Nonresident employees for work performed in the City.
- 3) Contractor is also required to file Pontiac income tax returns reporting and paying income tax on the net profits earned in the City.

Web page URL: http://www.pontiac.mi.us/departments/income_tax/index.php

Tax forms URL: http://www.pontiac.mi.us/departments/income_tax/tax_forms.php

APPENDIX A – SCOPE & BID SHEET

2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS

PURCHASING OFFICE
47450 Woodward Avenue, 2nd Floor, Pontiac, MI 48342
Office: 248-758-3120 Fax: 248-758-3197

Bidding Contractor:

Company Name: _____

Representative: _____

Address: _____ City: _____ Zip: _____

Office #: _____ Fax #: _____

Cell#: _____ Email: _____

License#: _____

Job Duties Sheet / Scope of Work

Contractor will provide all labor and material for the following service work:

2021 CLINTON RIVER TRAIL MAINTENANCE AND SAFETY IMPROVEMENTS

- Perform all work in accordance with the Plans, MDOT 2012 Standard Specifications for Construction, MDOT Frequently Used Special Provisions listed below, City of Pontiac Standards, Road Commission for Oakland County standards, requirements listed in this "Request to Submit Bids".
- Provide material certification, and Quality Control (QC) and Quality Assurance (QA) testing in accordance with the MDOT specifications
- The Contractor shall adhere to all requirements from the Oakland County Water Resources Commissioner for Oakland County Soil Erosion & Sediment Control as indicated on the plans. An Affidavit for Soil Erosion Permit Exemption for the City of Pontiac has been issued.
- Perform all workmanship and materials for soil erosion, water and sanitary sewer covers and adjustments in accordance with the Oakland County Water Resource Commissioners Standards, Details, and Specifications.
- Maintain Traffic of roadway crossings in accordance with the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), plans and maintaining traffic special provision for the duration of project, including providing local traffic access for other work in the area.
- The Contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in Section 104.08 of the 2012 Michigan Department of Transportation (MDOT) Standard Specifications for Construction. In addition, for the protection of underground utilities, the Contractor shall follow the requirements in Section 107.12 of the 2012 MDOT Standard Specifications for Construction, and the Oakland County Water Resources Commissioner and the technical specifications included in these bid documents. Contractor delay claims, resulting from a utility, will be determined based upon Section 109.05E of the 2012 MDOT Standard Specifications for Construction.

The City of Pontiac is the governing agency and any reference to the Michigan Department of Transportation shall be interpreted as the City of Pontiac. Unit prices are required for all items in each part of the Bid Schedule.

BID

BID FOR RESURFACING 1.75-MILE OF EXISTING TRAILWAY SURFACE AS SHOWN IN ATTACHMENT A

ITEM NUMBER	MDOT ITEM CODE NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1	1000535	_RCOC Permit & Force Account	1	Ea	\$9,660.85	\$ _____
2	1500001	Bonds, Insurance and Mobilization (10% Max)	1	LS	\$ _____	\$ _____
3	2020002	Tree, Rem, 19 inch to 36 inch	1	Ea	\$ _____	\$ _____
4	2020004	Tree, Rem, 6 inch to 18 inch	19	Ea	\$ _____	\$ _____
5	2040020	Curb and Gutter, Rem	50	Ft	\$ _____	\$ _____
6	2040055	Sidewalk, Rem	148	Syd	\$ _____	\$ _____
7	2040070	Utility Pole, Rem	2	Ea	\$ _____	\$ _____
8	2047001	_Bridge Railing, Rem	272	Ft	\$ _____	\$ _____
9	2047050	_Bollard, Rem	40	Ea	\$ _____	\$ _____
10	2047050	_Boulder, Rem and Relocate	5	Ea	\$ _____	\$ _____
11	2047050	_Concrete Cylinder, Rem	1	Ea	\$ _____	\$ _____
12	2047050	_Fence Gate Post, Rem	6	Ea	\$ _____	\$ _____

ITEM NUMBER	MDOT ITEM CODE NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
13	2047050	_Fence Gate, 12 Foot, Rem	2	Ea	\$ _____	\$ _____
14	2050016	Excavation, Earth	10	Cyd	\$ _____	\$ _____
15	2080036	Erosion Control, Silt Fence	1,165	Ft	\$ _____	\$ _____
16	3020010	Aggregate Base, Limestone, 4 inch	65	Ton	\$ _____	\$ _____
17	3027002	_Aggregate Base, Conditioning	74	STA	\$ _____	\$ _____
18	4030005	Dr Structure Cover, Adj, Case 1	1	Ea	\$ _____	\$ _____
19	8027001	_Curb and Gutter, Conc	214	Ft	\$ _____	\$ _____
20	8030010	Detectable Warning Surface	76	Ft	\$ _____	\$ _____
21	8030036	Sidewalk Ramp, Conc, 6 inch	1,555	Sft	\$ _____	\$ _____
22	8030046	Sidewalk, Conc, 6 inch	2,566	Sft	\$ _____	\$ _____
23	8067001	_Shared Use Path, Grading, Special	688	Ft	\$ _____	\$ _____
24	8067031	_Shared use Path, Aggregate, Modified	1,503	Ton	\$ _____	\$ _____
25	8067031	_Shared use Path, Aggregate, Special	26	Ton	\$ _____	\$ _____
26	8077001	_Bridge Railing	272	Ft	\$ _____	\$ _____

ITEM NUMBER	MDOT ITEM CODE NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
27	8100010	_Band, Sign	1	Ea	\$ _____	\$ _____
28	8100371	Post, Steel, 3 Lb	525	Ft	\$ _____	\$ _____
29	8100403	Sign, Type III, Rem	11	Ea	\$ _____	\$ _____
30	8100404	Sign, Type IIIA	55	Sft	\$ _____	\$ _____
31	8100405	Sign, Type IIIB	289	Sft	\$ _____	\$ _____
32	8100411	Sign, Type IVB	13	Sft	\$ _____	\$ _____
33	8100512	Mast Arm Pole, Cat III	1	Ea	\$ _____	\$ _____
34	8100546	Mast Arm, 50 foot, Cat III	1	Ea	\$ _____	\$ _____
35	8107001	_Mast Arm Pole Fdn, RCOC	18	Ft	\$ _____	\$ _____
36	8107001	_Post, Steel, 3 Lb, Modified	264	Ft	\$ _____	\$ _____
37	8107050	_Fixed Bollard	12	Ea	\$ _____	\$ _____
38	8107050	_Removable Bollard	6	Ea	\$ _____	\$ _____
39	8107050	_Sign, Rem and Relocate	10	Ea	\$ _____	\$ _____
40	8107050	_Wayside, Rem and Reinstall	1	Ea	\$ _____	\$ _____

ITEM NUMBER	MDOT ITEM CODE NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
41	8110023	Pavt Mrkg, Ovly Cold Plastic, 4 inch, Yellow	77	Ft	\$ _____	\$ _____
42	8110204	Pavt Mrkg, Preformed Thermoplastic, Accessible Sym	1	Ea	\$ _____	\$ _____
43	8110293	Pavt Mrkg, Waterborne, for Rest Areas, Parks, & Lots, 4 inch, Blue	124	Ft	\$ _____	\$ _____
44	8110294	Pavt Mrkg, Waterborne, for Rest Areas, Parks, & Lots, 4 inch, White	195	Ft	\$ _____	\$ _____
45	8110343	Rem Spec Mrkg	315	Sft	\$ _____	\$ _____
46	8117001	_Pavt, Mrkg, Ovly Cold Plastic, 24 inch, White, Crosswalk	330	Ft	\$ _____	\$ _____
47	8117001	_Pavt, Mrkg, Waterborne, 24 inch, White, Stop Bar	166	Ft	\$ _____	\$ _____
48	8117050	_Map Box, Rem and Relocate	2	Ea	\$ _____	\$ _____
49	8127051	_Maintenance of Traffic	1	LS	\$ _____	\$ _____
50	8167050	_Washout Slope Restoration	5	Ea	\$ _____	\$ _____
51	8167051	_Restoration	1	LS	\$ _____	\$ _____
52	8190156	Conduit, Schedule 80 PVC, 1 1/2 inch	6	Ft	\$ _____	\$ _____
53	8190159	Conduit, Schedule 80 PVC, 3 inch	141	Ft	\$ _____	\$ _____
54	8190260	Hh, Round	1	Ea	\$ _____	\$ _____

ITEM NUMBER	MDOT ITEM CODE NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
55	8190496	Wood Pole, Fit Up, Sec Serv Pole	1	Ea	\$ _____	\$ _____
56	8197001	_Cable, Sec, 600V, 1, 2/C#4, #6 Ground, RCOC	150	Ft	\$ _____	\$ _____
57	8197001	_Conduit, Directional Bore, 2, 4 inch, RCOC	66	Ft	\$ _____	\$ _____
58	8197050	_Hh, Square, RCOC	2	Ea	\$ _____	\$ _____
59	8200045	Controller Fdn, Base Mount	1	Ea	\$ _____	\$ _____
60	8200105	Pedestal, Fdn	1	Ea	\$ _____	\$ _____
61	8200116	Power Co. (Est. Cost to Contractor)	3,500	Dlr	\$3,500.00	\$ _____
62	8200121	Pushbutton and Sign	2	Ea	\$ _____	\$ _____
63	8200135	Serv Disconnect	1	Ea	\$ _____	\$ _____
64	8200336	TS, Pedestrian, One Way Bracket Arm Mtd (LED) Countdown	1	Ea	\$ _____	\$ _____
65	8200345	TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	1	Ea	\$ _____	\$ _____
66	8200480	Casing	18	Ft	\$ _____	\$ _____
67	8207050	_Cabinet, ITS Type TS2, RCOC	1	Ea	\$ _____	\$ _____

ITEM NUMBER	MDOT ITEM CODE NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
68	8207050	_Cabinet, ITS Type, Delivered, RCOC	1	Ea	\$ _____	\$ _____
69	8207050	_Controller, Digital Type, Delivered, Modified, RCOC	1	Ea	\$ _____	\$ _____
70	8207050	_Pedestal, Alum, RCOC	1	Ea	\$ _____	\$ _____
71	8207050	_TS, One Way Mast Arm Mtd, Three Sect (LED), RCOC	4	Ea	\$ _____	\$ _____
					TOTAL BID AMOUNT	\$ _____

THE CITY OF PONTIAC RESERVES THE RIGHT TO INCREASE OR DECREASE ANY QUANTITY OR DELETE ANY ITEM(S) OF WORK AS IT DEEMS IN THE BEST INTEREST OF THE CITY. THERE WILL BE NO ADJUSTMENTS TO UNIT PRICES IN THE EVENT OF INCREASES, DECREASES OR DELETIONS.

THE SUCCESSFUL BIDDER WILL BE PAID AT THE AS BID UNIT PRICES FOR THE UNITS OF WORK COMPLETED AND ACCEPTED.

ADD ALTERNATE BIDS: THE SUCCESSFUL BIDDER AGREES TO HONOR THE AS BID UNIT PRICES FOR THE DURATION OF 2021 TO COMPLETE ADDITIONAL WORK ON ADJACENT SECTIONS OF TRAIL IN NEIGHBORING COMMUNITIES SHOULD ADDITIONAL PROJECTS ARISE.

(Please check a box below).

YES

NO

CITY OF PONTIAC – BID PROPOSAL

The Undersigned hereby declares that he/she or they are the only person(s), firm or corporation interested in this bid as principal, and that it is made without any connection with any other person(s), firm or corporation submitting a bid for the same.

The Undersigned hereby declares that they have read and understand all conditions are outlined in the Request for Bids and that the bid is made in accordance with same.

The Undersigned hereby declares that any person(s) employed by the City of Pontiac, Michigan who has direct or indirect personal or financial interest in this bid or in any portion of the profits that may be derived therefrom has been identified and the interest disclosed by separate attachment. (Please include in your disclosure any interest which you know of. An example of a direct interest would be a City employee who would be paid to perform services under this bid. An example of an indirect interest would be a City employee who is related to any officers, employees, principal or shareholders of your firm or to you. If in doubt as to status or interest, please disclose to the extent known).

The Bidder acknowledges the receipt of Addenda numbered _____

Note: Bids must bear the handwritten signature of a duly authorized member or employee of the organization submitting a bid.

I attest that the bid includes all information necessary for the City of Pontiac to accept the bid. Company

Name: _____

Address: _____

Representative Signature: _____

Print Name: _____

Title: _____

Office # _____ Cell # _____

FAX# _____ Federal Tax ID #: _____

EMAIL Address of Primary Contact: _____

Contractor Signature: _____ Date: _____

Contractor agrees to guarantee price for work for the completion and acceptance of this project.

APPENDIX B - INSURANCE

1. INSURANCE

The Contractor shall provide to protect all named insured as outlined below.

2. LIMITS OF INSURANCE (See also Section 1 of the General Conditions)

The Contractor, and any and all of their subcontractors, shall not commence work under this contract until they have obtained the insurance required under this paragraph. All coverage shall be with insurance companies licensed and admitted to do business in the State of Michigan. All coverages shall be with insurance carriers acceptable to City of Pontiac. The limits required below do not limit the liability of the Contractor. All deductibles and self-insured retentions (SIR) are the responsibility of the Contractor.

1. **Workers' Compensation Insurance** The Contractor shall procure and maintain during the life of this contract, Workers' Compensation Insurance, including Employers' Liability Coverage, in accordance with all applicable statutes of the State of Michigan with a minimum limit of \$ 100,000 each accident for any employee.
2. **Commercial General Liability Insurance** The Contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than \$2,000,000 per occurrence and aggregate for Personal Injury, Bodily Injury and Property Damage, coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent, if not already included ;
3. **Motor Vehicle Liability** The Contractor shall procure and maintain during the life of the this contract Michigan No-Fault Coverages, with limits of liability not less than \$2,000,000 per occurrence, combined single limit for Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.
4. **Professional Liability Insurance** The Contractor shall procure and maintain during the life of this contract, Professional Liability Insurance in an amount not less than \$1,000,000 per occurrence and aggregate. If this policy is claims made form, then the Contractor shall be required to keep the policy in force, or purchase "tail" coverage, for a minimum of 3 years after the termination of this contract.
5. **Additional Insured:** Commercial General Liability and Motor Vehicle Liability, as described above, shall include an endorsement stating that the following shall be **Additional Insureds:** The City of Pontiac, Nowak and Fraus Engineers, City of Sylvan Lake, Road Commission for Oakland County, Friends of the Clinton River Trail and Oakland County, all elected and appointed officials, all employees and volunteers, all boards, commissions, and/or authorities and board members, including employees and volunteers. It is understood and agreed by naming The City of Pontiac as additional

insured, coverage afforded is considered to be primary and any other insurance The City of Pontiac may have in effect shall be considered secondary and/or excess.

6. **Cancellation Notice:** All policies, as described above, shall include an endorsement stating that it is understood and agreed Thirty (30) days, Ten (10) days for non-payment of premium, Advance Written Notice of Cancellation, Non-Renewal, Reduction, and/or Material Change shall be sent to: City Engineer for the City of Pontiac.
7. **Proof of Insurance Coverage:** The Contractor shall provide the City of Pontiac at the time that the contracts are returned by him/her for execution, a Certificate of Insurance as well as the required endorsements. In lieu of required endorsements, if applicable, a copy of the policy sections where coverage is provided for additional insured and cancellation notice would be acceptable. Copies or certified copies of all policies mentioned above shall be furnished, if so requested.
8. **Expiration of Policies** If any of the above coverages expire during the term of this contract, the Contractor shall deliver renewal certificates and/or policies to City of Pontiac at least ten (10) days prior to the expiration date.

3. INDEMNIFICATION CLAUSE

To the extent permitted by law, the Contractor shall indemnify and save harmless the City of Pontiac and other explicitly named "additional insured" for and from all claims, demands, payments, suits, actions, recoveries, and judgments; of every name and description, brought or recovered against them or to property received or sustained by any person or persons whomsoever by reason of any action or omission of the said Contractor, his agents, servants, or his Contractors in the performance of said Work, or by or in consequence of any negligence or carelessness in connection with the same or on account of the death of or injuries to persons who shall be engaged in or about the work to be performed under this Contract; and on account of liability or obligation imposed directly or indirectly upon the City of Pontiac by reasons of any law of the State or the United States, now existing or which shall hereafter be enacted, imposing any liability or obligation, or providing for compensation to any person or persons on account of or arising from the death of, or injuries to employees. Said Contractor shall pay, settle, compromise and procure the discharge of any and all such claims and all such losses, damages, expenses, liabilities, and obligations, and shall defend at his own cost and expense any and all claims, demands, suits and actions made or brought against the City of Pontiac, and all Additional Named Assured, for or upon any such claim. In case the said Contractor shall fail, neglect, or refuse to comply with any of the provisions of this paragraph, the City of Pontiac may, in order to protect itself, and all Additional Named Assured, from liability, defend any such claim, demand, suits or action and pay, settle, compromise, and procure the discharge thereof, in which case the said Contractor shall repay the City of Pontiac any and all such loss, damage and expense, including attorney's fees paid, suffered or incurred by the City of Pontiac, and all Additional Named Assured, in so doing. So much of the monies due, or to become due, to said Contractor under this agreement as shall be deemed necessary by the City of Pontiac, shall or may be retained by the City of Pontiac until every and all such claims, demands, suits, actions, recoveries, judgments, liabilities and obligations have been settled and discharged and evidence to that effect furnished the City of Pontiac, or the City of Pontiac may collect the same in whole or in part in any lawful manner from said Contractor. The Contractor shall provide adequate insurance until his work is

completed, with a reasonable insurance company which meets with the approval of the City of Pontiac, covering liability to the public for loss resulting from injury to persons or damage to property arising out of or caused by his operations, acts, or omissions, or those of his subcontractors, agents, or employees in procuring work for the City of Pontiac. Such insurance coverage shall be in such amounts as are provided in public liability and property damage section herein, provided, however, that such insurance coverage shall include an endorsement providing that the contractual exclusion shall be removed or in the alternative, contractual insurance shall be afforded. If the former, such endorsement shall contain specific language as follows:

"It is hereby agreed that the contractual exclusion does not apply to the contract entered into between the insured and the City of Pontiac, and each Additional Named Assured as their interest may appear for the project work. Such insurance coverage shall also contain an endorsement guaranteeing that thirty (30) days' notice to the City of Pontiac and each Additional Named Assured, shall be given in writing prior to the cancellation of, or change in any such insurance."

4. EXTRAS

No claim for extra compensation because of either decrease or increase in quantities will be allowed. Contractor and Owner mutually agree that in the event the Contractor is to perform services beyond, or at variance with the Scope and total price of this Contract, such services must be mutually agreed to, in advance, in writing, with agreed upon price included. Accordingly, claims for the payment of Extra Services must be substantiated by the Contractor with a written order signed by Owner or his authorized agent.

5. EMERGENCY PHONE NUMBERS

The Contractor must submit Emergency (24 Hours) phone numbers on the company letterhead when submitting contracts.

6. INCLUDED WORK

All items of work noted on the Plans or in the Specifications that are not specifically noted in the bid, shall be considered as included with the contract and shall be completed at no extra cost to the Owner.

7. SUB-CONTRACTS

The Contractor shall not execute an Agreement with any Sub-Contractor or sub-subcontractor or permit any sub-subcontractor to perform any work included in this Contract without the prior written consent of Owner.

Certified By: _____

Title: _____

APPENDIX C – PROGRESS PAYMENTS AND RETAINAGE

Owner through the project fiduciary shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the first day of each month during performance of the Work, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

- A. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
 - a. Ninety (90) percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and
 - b. Zero (0) percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to ninety-five (95) percent of the Work completed, less such amounts set off by Owner pursuant, and less one hundred (100) percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

#5

RESOLUTION



CITY OF PONTIAC

OFFICIAL MEMORANDUM

Executive Branch

TO: Honorable Mayor, Council President and City Council Members

FROM: Abdul H. Siddiqui, City Engineer

DATE: August 17, 2021

RE: 2021 FDCVT Downtown Sidewalks Project – Audia Concrete Construction, Inc.

The City of Pontiac received and publicly opened bids for the referenced improvement project on Thursday, July 8, 2021. The project involves the repair of damaged sidewalks in Downtown Pontiac. The project will be partially funded by reimbursement through the State of Michigan's Fiscally Distressed Cities Villages and Townships (FDCVT) Grant.

A total of two (2) bids were received for the project in the amounts as follows:

1. Audia Concrete Construction, Inc. \$473,760.00
2. Great Lakes Contracting Solutions, LLC \$602,925.00

The Engineering Division has reviewed the proposals and references submitted by all contractors and based on the attached is recommending the award to the low bidder, Audia Concrete Construction, Inc.

Construction is scheduled to start in late August with anticipated completion within ninety (90) days.

Based upon the above information, it is recommendation of the Department of Public Works that the 2021 FDCVT Downtown Sidewalks Project be awarded to Audia Concrete Construction, Inc., in the amount of \$473,760.00 plus a contingency in the amount of \$76,240.00 for repair of vaults encountered during construction, for a total amount of \$550,000.00.

WHEREAS, the City of Pontiac has advertised and received responses to a Request For Proposal for the 2021 FDCVT Downtown Sidewalks Project on July 8, 2021, and publically opened bids; and

WHEREAS, a bid tabulation was prepared and reviewed, and;

WHEREAS, the City identified the low bidder as Audia Concrete Construction, Inc., and references of the low bidder checked and found acceptable.

NOW, THEREFORE,
BE IT RESOLVED, The Pontiac City Council authorizes the Mayor to enter into a contract with Audia Concrete Construction, Inc. for \$473,760.00 for

the 2021 FDCVT Downtown Sidewalks Project with an additional \$76,240.00 allocated as contingency for vaults encountered during construction.

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20__, by and between the City of Pontiac, Oakland County, Michigan, party of the first part, hereafter called the City, and **Audia Concrete Construction, Inc.**, party of the second part, hereinafter called the Contractor:

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR shall commence and complete the construction of:

2021 FDCVT Downtown Sidewalks Project

in full conformance with the Contract Documents as enumerated in Article 6 of this Agreement.

2. The CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein, excepting those things which are specifically stipulated in the contract documents to be furnished or done by the City.

3. The CONTRACTOR shall commence the work required by the CONTRACT DOCUMENTS on or before the date stipulated in the NOTICE TO PROCEED and will complete the same on or before November 15, 2021. Time shall be considered to be of the essence of this Contract.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the contract price of:

\$ 473,760.00

unless the contract price is duly changed by the contract documents.

5. The CITY shall pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

6. The term "CONTRACT DOCUMENTS" means and includes the following:

- A. AGREEMENT
- B. BID BOND
- C. PERFORMANCE BOND
- D. LABOR AND MATERIAL BOND

E. MAINTENANCE BOND

F. CHANGE ORDER (Pursuant to General Conditions, Section 9)

G. ADDENDA:

No. _____, dated _____, 20____.

No. _____, dated _____, 20____.

No. _____, dated _____, 20____.

H. ADVERTISEMENT

I. INSTRUCTIONS TO BIDDERS

J. BIDDER'S PROPOSAL (Incl. final Compliance Plan as accepted by OWNER)

K. GENERAL CONDITIONS (Incl. SUPPLEMENTAL GENERAL CONDITIONS and SPECIAL CONDITIONS (if any))

L. SPECIFICATIONS (Incl. SUPPLEMENTAL SPECIFICATIONS and SPECIAL PROVISIONS (if any))

M. PLANS (As listed in Schedule of Drawings)

N. NOTICE OF AWARD

O. NOTICE TO PROCEED

This agreement, together with other documents enumerated in this ARTICLE 6, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 6 shall govern, except as otherwise specifically stated.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in three (3) copies, each of which shall be deemed an original, on the date first above written.

**CONTRACT AGREEMENT BETWEEN THE CITY OF PONTIAC
AND CONTRACTOR**

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

CONTRACTOR: AUDIA CONCRETE CONSTRUCTION, INC.

In witness whereof, the parties have executed this agreement the day and year last written below.

WITNESSES:

1) _____ By: _____
2) _____ Its: _____

CITY OF PONTIAC

WITNESSES:

DEPARTMENT OF PUBLIC WORKS

1) _____ By: _____
Allen Cooley Date
2) _____ Its: Acting Director

WITNESSES:

DEPARTMENT OF FINANCE

1) _____ By: _____
Darin Carrington Date
2) _____ Its: Finance Director

WITNESSES:

RISK MANAGEMENT DIVISION

1) _____ By: _____
Date
2) _____ Its: Risk Management Administrator

WITNESSES:

OFFICE OF THE MAYOR

1) _____ By: _____
Dierdre Waterman Date
2) _____ Its: Mayor

Approved as to form:

By: _____
_____, City Attorney



ANDERSON, ECKSTEIN & WESTRICK, INC.
CIVIL ENGINEERS - SURVEYORS - ARCHITECTS

51301 Schoenherr Road, Shelby Township, MI 48315
586.726.1234 | www.aewinc.com

July, 30, 2021

Abdul Siddiqui, PE, City Engineer
City of Pontiac
47450 Woodward Avenue
Pontiac, Michigan 48342

Reference: Recommendation for Award
2021 FDCVT Downtown Sidewalks Project
AEW Project No. 0178-0008

Dear Mr. Siddiqui:

On Thursday, July 8, two (2) bids were received for the above referenced project. We have reviewed the bids and have included a summary for your use. The low bidder is Audia Concrete Construction, Inc. of Milford, Michigan with a total bid amount of \$473,760.00.

We have worked with Audia Concrete Construction on similar projects in nearby communities. The following is a list of similar projects that have been recently completed by Audia Concrete Construction, Inc.

1. 2015 Royal Oak Streetscape
2. 2020 Royal Oak Streetscape
3. Macomb Township Pathway Gaps
4. Shelby Township CDBG Sidewalks

We have followed up with the representatives of the Owner for the above referenced projects and Audia Concrete Construction, Inc. was determined to have performed satisfactorily.

Based on our past experience, project references, and the lowest bid submitted, we recommend the contract for the 2021 FDCVT Downtown Sidewalks Project be awarded to Audia Concrete Construction, Inc., 2985 Childs Lake Road, Milford, Michigan 48381 in the amount of \$473,760.00.



Abdul Siddiqui, PE, City Engineer
July 30, 2021
Page 2

The team is aware that some buildings in the downtown area were constructed with underground vaults that extend into the city Right-of-Way beneath the sidewalk. The vaults have not been inspected. If uncovered during the construction, it is expected that the cost to repair or abandon vaults will be significant. Therefore, we are recommending the City budget additional funds for construction contingency.

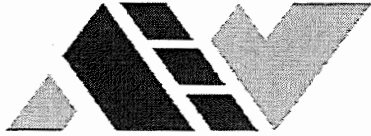
Sincerely,

Ross Wilberding, PE
Project Manager,

Enclosure: Bid Tab

cc: Jack Cady, Engineering Supervisor

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TABULATION OF BIDS

CITY OF PONTIAC

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

AEW PROJECT NO. 0178-0008

DATE: 7/8/2021

TIME: 2:00 PM

Prepared by: Anderson, Eckstein and Westrick, Inc.
51301 Schoenherr Road
Shelby Township, MI 48315

BIDDER RANKING

RANK	BIDDER'S NAME	TOTAL BID
1	Audia Concrete Construction, Inc.	\$ 473,760.00
2	Great Lakes Contracting Solutions, LLC	\$ 602,925.00



TABULATION OF BIDS
CITY OF PONTIAC
 2021 FDCVT DOWNTOWN SIDEWALKS PROJECT
 AEW PROJECT NO. 0178-0008

Audia Concrete Construction, Inc.
 2985 Childs Lake Road
 Milford, MI 48381

Great Lakes Contracting Solutions, LLC
 2300 Edinburgh
 Waterford, MI 48328

Item No.	Description	Estimated Quantity	Units	Audia Concrete Construction, Inc.		Great Lakes Contracting Solutions, LLC	
				Unit Price	Amount	Unit Price	Amount
1.	Mobilization, Max 3%	1	LSUM	13,500.00	13,500.00	17,000.00	17,000.00
2.	Audio-Visual Record of Construction Area	1	LSUM	8,500.00	8,500.00	20,000.00	20,000.00
3.	Traffic Control and Maintenance	1	LSUM	8,000.00	8,000.00	30,000.00	30,000.00
4.	Root Removal	15	Ea	100.00	1,500.00	200.00	3,000.00
5.	Trunk/Stump Removal	15	Ea	80.00	1,200.00	605.00	9,075.00
6.	Curb and Gutter, Rem	100	Ft	10.00	1,000.00	25.00	2,500.00
7.	Sidewalk, Rem	3,900	Syd	9.00	35,100.00	30.00	117,000.00
8.	Excavation, Earth	10	Cyd	40.00	400.00	45.00	450.00
9.	Subgrade Undercutting, Type II	100	Cyd	40.00	4,000.00	50.00	5,000.00
10.	Maintenance Gravel	200	Ton	18.00	3,600.00	30.00	6,000.00
11.	Dr Structure Cover, Adj, Case 1	15	Ea	600.00	9,000.00	750.00	11,250.00
12.	Hand Patching	20	Ton	350.00	7,000.00	425.00	8,500.00
13.	Curb and Gutter, Conc, Def F4	100	Ft	28.00	2,800.00	25.00	2,500.00
14.	Detectable Warning Surface	360	Ft	190.00	68,400.00	40.00	14,400.00
15.	Sidewalk Ramp, Conc, 4 inch	3,000	Sft	8.50	25,500.00	9.50	28,500.00
16.	Sidewalk, Conc, 4 inch	23,000	Sft	7.52	172,960.00	9.00	207,000.00
17.	Sidewalk, Conc, 6 inch	1,000	Sft	8.00	8,000.00	10.00	10,000.00
18.	Sidewalk, Conc, 8 inch	5,000	Sft	10.00	50,000.00	11.00	55,000.00
19.	Sidewalk Ramp, Conc, 8 inch	3,000	Sft	12.90	38,700.00	11.50	34,500.00
20.	Sign, Type II, Rem	10	Ea	200.00	2,000.00	25.00	250.00
21.	Pedestrian Type II Barricade, Temp	40	Ea	190.00	7,600.00	250.00	10,000.00
22.	Gate Box, Adj, Case 1	20	Ea	250.00	5,000.00	550.00	11,000.00
TOTAL AMOUNT BID				\$	473,760.00	\$	602,925.00



TABULATION OF BIDS
 CITY OF PONTIAC
 2021 FDCVT DOWNTOWN SIDEWALKS PROJECT
 AEW PROJECT NO. 0178-0008

Audia Concrete Construction, Inc.
 2985 Childs Lake Road
 Milford, MI 48381

Great Lakes Contracting Solutions, LLC
 2300 Edinburg
 Waterford, MI 48328

Item No.	Description	Estimated Quantity	Units	Unit Price	Amount	Unit Price	Amount
Unit Prices for Vault Related Work Items							
23.	False Decking	1	Sft	40.00	40.00	20.00	20.00
24.	CMU Wall	1	Sft	150.00	150.00	70.00	70.00
25.	Flowable Fill	1	Cyd	430.00	430.00	325.00	325.00
26.	Backfill, Structure, CIP	1	Cyd	430.00	430.00	225.00	225.00
27.	Reinforcement, Steel	1	Lb	6.00	6.00	30.00	30.00
28.	Structural Steel	1	Lb	8.00	8.00	50.00	50.00

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

CITY OF PONTIAC

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT



BIDS DUE:

Thursday, July 1, 2021
2:00 pm
City Clerk's Office
Pontiac City Hall
47450 Woodward Avenue
Pontiac, MI 48342

PRE-BID MEETING:

Tuesday, June 15, 2021
2:00 pm
Virtual Zoom Meeting
Link to be provided
in Addendum No. 1

ENGINEER

ANDERSON, ECKSTEIN & WESTRICK, INC.
51301 SCHOENHERR RD
SHELBY TOWNSHIP, MI 48315
(734) 726-1234

AEW Job No. 0178-0008

CONTRACT DOCUMENTS
2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

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**CITY OF PONTIAC
ADVERTISEMENT FOR BIDS**

Notice to Contractors

Sealed proposals will be received at the office of the City Clerk, City Hall, 47450 Woodward Avenue, Pontiac, Michigan 48342, until **2:00 p.m., local time, Thursday, July 1, 2021**, at which time the bids will be publicly opened and read by the Clerk and the amounts of the bids noted for the:

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

The estimated quantities involved in this work consist principally of the following:

Description

This project involves the removal and replacement of approximately 3,900 square yards of defective sidewalks and ADA ramps in downtown City of Pontiac including traffic control, cleanup, and restoration.

The plans and specifications for this work will be available on **Tuesday, June 8, 2021**, and must be obtained through www.bidnetdirect.com .

A mandatory pre-bid meeting will be held virtually via Zoom at **2:00 p.m., local time, Tuesday, June 15, 2021**. The zoom meeting details will be included in Addendum No. 1. Contract requirements and technical specifications will be discussed in said meeting and it is mandatory that all prospective bidders attend.

A certified check or a satisfactory surety bid bond for a sum not less than five (5) percent of the amount of the proposal will be required with each proposal as a guarantee of good faith and same to be subject to the conditions stipulated in the Instructions to Bidders.

Bids submitted electronically will not be accepted.

The bidder will be required to comply with Michigan statutory prohibitions against discrimination in employment and with employment opportunities for City of Pontiac residents.

No proposal once submitted may be withdrawn for at least 90 days after the actual opening of the bids.

The right to accept any proposal, to reject any or all proposals, and to waive defects in proposals, is reserved by the City.

BY THE ORDER OF:

**DIERDRE WATERMAN, MAYOR
CITY OF PONTIAC**

**ALLEN COOLEY, ACTING DIRECTOR DPW
CITY OF PONTIAC**

INSTRUCTIONS TO BIDDERS

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Article

1. Proposal to be Received
2. Location of the Work
3. Inspection of the Site
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5. Basis on which Proposals are Solicited
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21. Purchasing Ordinance
22. Non-Discrimination Provision

INSTRUCTION TO BIDDERS

1. PROPOSALS TO BE RECEIVED

Sealed Bids or proposals for the:

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

will be received at the office of the City Clerk of the City of Pontiac, Michigan until **2:00 p.m., local time, on Thursday, July 1, 2021**, and immediately thereafter will be publicly opened and read.

Each BID must be submitted in a sealed envelope, addressed to the City Clerk of the City of Pontiac. Each sealed envelope containing a BID must be plainly marked on the outside as:

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

and the envelope should bear on the outside the name of the BIDDER, his address, his license number (if applicable) and the name of the project for which the BID is submitted. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the City Clerk, City of Pontiac, 47450 Woodward Ave., Pontiac, MI 48342.

Bids will be received during regular business hours at the place and up to the time stated in the Advertisement or up to the time extended by official notification. Bids may be delivered in person or mailed, but their delivery is the bidder's entire responsibility. Any bid received after the stated hour, even through the mail, will be returned unopened to the bidder. Bids submitted electronically will not be accepted.

No bidder may withdraw a bid within 90 days after the actual date of the opening thereof. Should there be reason why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the City of Pontiac, herein after also referred to as the City, and the BIDDER.

2. LOCATION OF THE WORK

Downtown District north of Auburn Avenue and bounded by the Woodward Avenue loop
City of Pontiac, Oakland County, Michigan

3. INSPECTION OF THE SITE

It is expected that each bidder will make a personal examination of the entire site of the proposed work and of its surroundings. It will be assumed that each bidder, before offering his proposal, has obtained firsthand information concerning any probable interference and the available facilities for transporting, handling, and storing construction equipment and materials, and concerning other conditions which may affect his work.

4. CONFORMITY TO PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS

Proposals must be made in full conformity to all the conditions as set forth in the Plans, Specifications, and any Addendum for the work now on file in the office of the City Engineer. The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the City or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

5. BASIS ON WHICH PROPOSALS ARE SOLICITED

A. PROPOSAL SOLICITATION

Proposals may be solicited on the basis of unit prices, lump sum, or a combination of both. The proposal will clearly state which basis is used.

The lump sum price, when applied to the project, or the unit prices, when applied to the several demolition or salvage items, are to make up the total price for the entire work, exclusive of those things which are to be done or furnished by the City, finished and complete in every particular, according to the Plans and Specifications appertaining to such work, which have been approved by the City Council and are now on file in the office of the City Engineer.

Where Proposals are solicited on the basis of unit prices for certain construction units, which are clearly set forth in the Form of Proposal, the Bidder shall state a unit price for each and every item listed in the Proposal and such prices shall be extended and totaled. If during the review of the Proposals, the City finds any errors in any extension or total, the City will make the necessary corrections and award the Contract on the basis of such corrections, since the unit prices shall govern. Any proposal which does not contain a unit price for each item listed will be deemed incomplete and will not be considered in the award of the Contract.

The unit price for each of the several items in the Proposal shall be such that the whole of the unit prices will represent a balanced bid. Any Proposal, in which the unit prices bid for any of the several items are deemed by the City to be manifestly unbalanced, will be subject to instant rejection.

B. STATEMENT OF QUANTITIES

The quantities indicated in the proposal show the Engineer's estimate of the construction quantities involved in the job, and bids will be computed, tested, and compared by the quantities given in the proposal. Although estimated carefully and with as much accuracy as is practicable beforehand, these quantities are not to be taken as defining or limiting the amount of work to be done under the Contract, but rather as information furnished to bidders concerning the approximate extent of the several items and as a basis for comparing bids.

The City may increase or decrease the original contract price without renegotiation of the Unit Prices.

C. MATERIALS TO BE FURNISHED BY THE CITY

The City will furnish to the Contractor, delivered at the site: NONE. The Contractor will receive and be responsible for all these materials from the time of their delivery to him until the time when they are received back by the City as part of the completed and accepted structure.

D. EXTRA WORK

All extra work that may be required of the Contractor will be estimated and paid for under provisions of the General Conditions, contained within this document, which govern such work.

E. ALTERNATES

When the Proposal so provides, a price shall be stated for each listed alternate. Unsolicited alternates are not to be submitted and, if so, will not be considered in the award of the Contract and may cause the entire bid to be rejected.

Selection of whether to award the Contract on the basis of the Base Bid or utilizing one or more of the Alternates will be made on the basis of value engineering and the City's need to keep project costs within the project budget. The City reserves full right to make this selection. After making such selection, the award shall be made on the basis of the lowest responsive bid utilizing the Alternates selected, and evaluated in accordance with the provisions of the Purchasing Ordinance of the City, in accordance with Article 15 of the Instructions to Bidders.

F. LEGAL CONDITIONS

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the contract throughout.

G. PERMITS AND LICENSES

Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS.

H. UTILITIES

Unless otherwise provided in these Specifications, the Contractor shall make his own arrangements for electricity, gas, water and sewer services for use during the construction of the work and shall pay for all connections, extensions, and services.

6. FORM OF PROPOSALS (Pages 14 through 18)

All proposals must be made in the form attached hereto, and without removal from the bound pamphlet. Additional copies of this proposal form for the bidder's files may be obtained on request at the office of the City of Pontiac Department of Public Works.

All prices stated in the Proposal must be plainly expressed in figures only, and in the proper space or spaces provided. Prices shall be filled in, in ink or typewritten. Any corrections shall be initialed by the Bidder.

All information called for on the Proposal must be furnished to enable a fair comparison of the bids to be made. (Also see Instructions to Bidders, Section 10.)

The place of residence and phone number of each bidder, or the official address and phone number in the case of a firm or company, with County and State, must be given with the signature.

When bidder's drawings and/or specifications are required to be submitted, they shall be in sufficient detail to fully and distinctly show and describe the equipment which the bidder proposes to furnish, including the kind and quality of the material and workmanship that will be used in the various parts. If any general drawings, specifications, catalogs or any other literature are submitted which contain information or data not pertaining to the particular equipment proposed to be furnished, appropriate notations to that effect must be made.

Any stipulation or qualification contrary to the Contract requirements made by the bidder in or accompanying his proposal as a condition for the acceptance of the Contract will not be considered in the award of the Contract and may cause the rejection of the entire Proposal.

7. LEGAL STATUS OF BIDDER

The legal status of the bidder, that is, as a corporation, a partnership, or an individual, must be stated in the proposal. A corporation bidder must name the state in which its articles of incorporation are held, and must give the title of the official having authority under the by-laws to sign contracts. A partnership bidder must give the full names and addresses of all partners.

8. AGENCY

Anyone signing a proposal as agent of another or others must submit with the proposal legal evidence of his or her authority to do so.

9. BID DEPOSIT

When the Advertisement states that security is required with the Proposal to ensure the acceptance and execution of the Contract and Bonds, no bid will be considered complete unless so guaranteed.

Each proposal must be accompanied by a certified check of guaranty or a bid bond in an amount not less than five percent (5%) of the total price, drawn upon a solvent bank to the order of the City Treasurer of the City of Pontiac, or if a bond, executed by a surety company

acceptable to the City, as a guarantee of good faith on the part of the bidder and subject to the conditions stipulated in the proposal form.

A single certified check or guaranty (bidder's) bond may serve to cover two or more alternative proposals when such alternative proposals are submitted by the same bidder.

10. INTENTIONALLY LEFT BLANK

11. STATEMENT OF BIDDER'S QUALIFICATIONS

It is the intention of the City to award the Contract for this job to a Contractor whose construction skill and financial resources are fully equal to the task of prosecuting the work in a satisfactory manner and of bringing it to completion within the time limit specified. With this end in view, the Form of Proposal calls for a statement of bidder's experience and ability in this particular class of work, and for references concerning his/her business standing and capacity. Contractor shall list the names, addresses and phone numbers of references. The mere ability to offer bonds will not be taken as sufficient evidence of responsibility on the part of the bidder. If Contract is awarded to a foreign company, a certificate of authority to do business in this State must accompany the executed Contract.

The low BIDDER shall supply the names, addresses and phone numbers of major material SUPPLIERS and SUBCONTRACTORS when requested to do so by the CITY.

12. PAYMENTS

Partial payments will be made to the Contractor during the satisfactory progress of the work, calculated at the rate of ninety percent (90%) of the dollar amount of the work completed, until fifty percent (50%) of the established contract amount is in place. After fifty percent (50%) of the work is in place, additional retainage shall not be withheld unless the Contractor's progress is unsatisfactory, all in accordance with Article 13 of the General Conditions hereof and Act 524 of 1980.

13. TIME OF COMPLETION

This work to be done under the proposed Contract is to begin on or before the date stipulated in the Notice to Proceed and must be completed on or before November 15, 2021. Time shall be considered to be of the essence of this Contract.

14. RIGHT TO ACCEPT, TO REJECT, AND TO WAIVE DEFECTS

The City reserves the right to accept any proposal, to reject any or all proposals, and to waive any defect or irregularity in any proposal if it appears advantageous to the City to do so. In particular, any alteration, erasure, or interlineation in the Form of Contract in the Specifications which are attached hereto and made a part, specifically, of these Instructions, or of the Form of Proposal, shall render the accompanying proposal irregular and subject to rejection by the City. In case any explanations, additions or alterations are to be offered, they shall be indicated on separate sheets attached to the proposal and referred to therein. Proposals which are clearly unbalanced will also be considered as irregular, and will be subject to instant rejection by the City.

15. AWARD OF CONTRACT

The Contract will be awarded to the qualified Bidder submitting the lowest responsive Bid complying with the conditions of the Invitation for Bids and Pontiac Purchasing Ordinance. This Purchasing Ordinance provides a "benefit" for bids of Pontiac-based persons and is referred to as the "equalization percentage credit" (See Article 21 of the Instruction to Bidders). The Bidder's qualification and responsiveness shall be determined by the City of Pontiac. The Bidder to whom the award is made will be notified at the earliest possible date. The City reserves the right to reject all bids and not award the Contract, at its sole discretion.

16. OBLIGATION TO EXECUTE CONTRACT

The Bidder whose proposal is accepted will be required to execute the Contract, in the form attached hereto, and to furnish sureties as hereafter specified, within ten days (Sundays and legal holidays excepted), after receiving notice of acceptance of bid and preparation Contract forms is completed, and in case of the successful bidder's refusal or failure to do so, shall be considered to have abandoned all their rights and interests in the award, and their certified check or guaranty (bidder's) bond may be declared to be forfeited to the City as liquidated damages and not a penalty, and the Contract may be awarded to another.

17. BONDS

The successful bidder will be required to execute surety bonds, with sureties acceptable to the City. One such bond shall be a Performance Bond in the amount of 100 percent of the Contract Price on the form attached as pages 25 and 26 of the specifications. Another such bond shall be a Labor and Material Bond in the amount of 100 percent of the Contract Price on the form attached as pages 27 and 28 of the specifications. The Contractor shall also provide a Maintenance Bond in the amount of 100 percent of the Contract Price on the form attached as pages 29 and 30 of the specifications.

18. INDEMNIFICATION AND INSURANCE

To the fullest extent permitted by law, the successful bidder agrees to defend, pay on behalf of, indemnify, and hold harmless the CITY OF PONTIAC, its elected and appointed officials, employees and volunteers and others working on behalf of the CITY OF PONTIAC, against any and all claims, demands, suits, or loss, including all costs connected therewith, and for any damages which may be asserted, claimed or recovered against or from the CITY OF PONTIAC, its elected and appointed officials, employees, volunteers or others working on behalf of the CITY OF PONTIAC, by reason of personal injury, including bodily injury and death, and/or property damage, including loss of use thereof, which arises out of or is in any way connected or associated with this contract.

The successful bidder shall purchase and maintain in a company or companies licensed to do business in the State of Michigan, such insurance as will protect him from claims set forth below which may arise out of or result from the contractor's operations under the contract, whether such operations be by himself or any subcontractor or by anyone directly or indirectly employed by any of them, or by anyone whose acts are associated with the project by any of them, may be liable.

a. **Workers Compensation Insurance:** The contractor shall procure and maintain during the life of the contract, Workers Compensation Insurance, including Employer's Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

b. **Commercial General Liability Insurance:** The contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance on an "Occurrence Basis" with the limits of liability not less than **\$2,000,000**, per occurrence and/or aggregate combined single limit, Personal Injury, Bodily Injury and Property Damage. Coverage shall include the following extensions: (1) Contractual Liability; (2) Products and Completed Operations; (3) Independent Contractors Coverage; (4) Broad Form General Liability Extensions or equivalent; and (5) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.

c. **Motor Vehicle Liability:** The contractor shall procure and maintain during the life of the contract, Motor Vehicles Liability Insurance, including Michigan No-Fault coverage, with limits of not less than **\$1,000,000**, per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles.

d. Additional Insured: Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following shall be "**Additional Insured**". *"THE CITY OF PONTIAC, INCLUDING ALL ELECTED AND APPOINTED OFFICIALS, ALL EMPLOYEES AND VOLUNTEERS, ALL BOARDS, COMMISSIONS AND/OR AUTHORITIES AND THEIR BOARD MEMBERS, EMPLOYEES AND VOLUNTEERS" AND ANDERSON, ECKSTEIN AND WESTRICK, Inc., the project consultant.* (This coverage shall be primary to the Additional Insured, and not contributing with any other insurance or similar protection available to the Additional Insureds, whether said other available coverage be primary, contributing or excess.)

e. Cancellation Notice: Workers Compensation Insurance, Commercial General Liability Insurance, and Motor Vehicle Insurance, as described above, shall include an endorsement stating the following: *"IT IS UNDERSTOOD AND AGREED THAT THIRTY (30) DAYS ADVANCE WRITTEN NOTICE OF CANCELLATION, NON-RENEWAL, REDUCTION AND/OR MATERIAL CHANGE SHALL BE SENT TO: CITY OF PONTIAC, RISK MANAGEMENT DIVISION, 47450 WOODWARD AVE., PONTIAC, MICHIGAN, 48342"*.

f. Owner's and Contractor's Protective Liability: The contractor shall procure and maintain during the life of this contract, a separate Owner's and Contractor's Protective Liability insurance coverage of not less than **\$2,000,000**, per occurrence and/or aggregate, combined single limit, Personal Liability, Bodily Injury, and Property Damage. The City of Pontiac shall be "Named Insured" on said coverage. Thirty (30) days Notice of Cancellation shall apply to this policy.

The successful bidder shall not commence work until he has obtained the insurance required under this section, nor shall the successful bidder permit any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been obtained.

Certificates of Insurance, along with copies of original policies where applicable, acceptable to the City, shall be filed with the City of Pontiac, Risk Management Division, ten (10) days prior to commencement of the contract. A sample certificate is included on page 12 for reference.

19. CITY INCOME TAX

a. Contractor agrees to contact City of Pontiac Income Tax Division, Audit and Compliance Section, 47450 Woodward Avenue, Pontiac, Michigan, 48342, telephone (248) 758-3236, to establish reporting and withholding obligations under the City of Pontiac Income Tax Ordinance. Contractor will require the same of all subcontractors employing labor under this contract.

b. Normally, the Contractor will be required to withhold City of Pontiac income tax if either of the following applies:

- (1) Performance under this contract (together with any other contracts in the City during the calendar year) will last 13 weeks or more.

(2) Contractor employs one or more Pontiac residents for the performance of this contract.

c. Contractor agrees to pay any personal property taxes required by the City Assessor.

20. PRE-BID MEETING

A mandatory pre-bid meeting will be held virtually via zoom meeting at 2:00 p.m, local time, Tuesday, June 15, 2021.

21. CITY OF PONTIAC PURCHASING ORDINANCE (Chapter 2, Article VI, Division 2) Municipal Code, City of Pontiac, Michigan, adopted March 21, 1996 and effective March 31, 1996.

Bidders are advised of the following provisions of the Purchasing Ordinance:

a. PUBLIC BIDS - EQUALIZATION PERCENTAGE CREDIT

An "equalization percentage credit" will be allowed for bids of Pontiac-based bidders. This means that bids by Pontiac-based bidders will be compared as if they were two percent (2%) less than their actual amount. The equalization percentage credit will be one percent (1%) if the lowest bid is \$100,000 or above. Not applicable to emergency purchases. Successful Pontiac - based bidder awarded on this basis may not sublet to non-Pontiac-based business.

b. CONTRACTOR OR VENDOR IN DEFAULT OR INDEBTED TO THE CITY

No bid shall be accepted from or contract awarded to any contractor or vendor who is in arrears to the City upon debt or contract including payments of real property taxes or an income tax obligation of any kind, or who is in default as to security or otherwise upon an obligation to the City.

c. VIOLATIONS - MISREPRESENTATION

Any material misrepresentation to the City of Pontiac by a bidder or prospective bidder, contractor or vendor in any documentation or paperwork submitted in a bid or proposal or otherwise in connection with an attempt to obtain a contract or engage in a business transaction shall be a violation, and may be considered sufficient basis to disqualify the contractor or vendor from eligibility for the award of a City contract.

22. NON-DISCRIMINATION PROVISION

Pursuant to the requirements of 1976, P.A. 453 (Michigan Civil Rights Act) and 1976, P.A. 220 (Michigan Handicapped Rights Act), the bidder and any subcontractors agree not to discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, or due to a handicap that is unrelated to the person's ability to perform the duties of a particular job or position. The Bidder must include this provision in any subcontracts associated with the project work.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
11/03/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER FEDERATED MUTUAL INSURANCE COMPANY HOME OFFICE: P.O. BOX 320 OWATONNA, MN 55060	CONTACT NAME: CLIENT CONTACT CENTER PHONE (A/O, H/O, B/H): 800-333-4949 FAX (A/O, H/O): 607-448-4664 E-MAIL ADDRESS: CLIENTCONTACTCENTER@FEDINS.COM
INSURED 157-016-0	INSURER(A) AFFORDING COVERAGE INSURER(A) FEDERATED MUTUAL INSURANCE COMPANY INSURER(B) INSURER(C) INSURER(D) INSURER(E) INSURER(F)

COVERAGES CERTIFICATE NUMBER: 62 REVISION NUMBER: 0

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSURER	TYPE OF INSURANCE	APPL. (Y/N)	EXCL. (Y/N)	POLICY NUMBER	POLICY EFF. (MM/DD/YYYY)	POLICY EXP. (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L. AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-SECT <input type="checkbox"/> 100 <input type="checkbox"/> OTHER	Y	N	6069355	04/01/2018	04/01/2019	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (EX-CLUSIONS) \$100,000 MED EXP (Any one person) EXCLUDED PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMPIOP AGO \$2,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	N	N	6069355	04/01/2018	04/01/2019	COMBINED SINGLE LIMIT (EX-CLUSIONS) \$1,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION	N	N	6069357	04/01/2018	04/01/2019	EACH OCCURRENCE \$1,000,000 AGGREGATE \$1,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED (Mandatory in MI) If yes, describe under DESCRIPTION OF OPERATIONS below	Y	N	6069350	01/01/2010	04/01/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$500,000 E.L. DISEASE - EA EMPLOYEE \$500,000 E.L. DISEASE - POLICY LIMIT \$500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: ESO S SANFORD

THE CERTIFICATE HOLDER IS AN ADDITIONAL INSURED SUBJECT TO THE CONDITIONS OF THE ADDITIONAL INSURED - OWNERS, LESSEES OR CONTRACTORS - AUTOMATIC STATUS WHEN REQUIRED IN CONSTRUCTION AGREEMENT WITH YOU ENDORSEMENT FOR GENERAL LIABILITY.

CERTIFICATE HOLDER

157-016-0
CITY OF PONTIAC
47450 WOODWARD AVE
PONTIAC, MI 48342-5009

62 0

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1900-2016 ACORD CORPORATION. All rights reserved.

CONTRACTOR: _____

EMAIL ADDRESS _____

FORM OF PROPOSAL

Date: _____

To the Honorable Mayor / City Council
City of Pontiac, Michigan

Ladies and Gentlemen:

Having carefully examined the site of the proposed work, and being fully informed in regard to the conditions to be met in the prosecution and completion of the work, and having read and examined the Instructions to Bidders, Agreement, Bonds, General Conditions, Plans and Specifications pertaining to this work, and agreeing to be bound accordingly, the undersigned proposes to furnish all the materials, labor, tools, power, transportation and construction equipment necessary for the satisfactory and complete construction of the 2021 FDCVT DOWNTOWN SIDEWALKS PROJECT in full accordance with and conformity to the specifications for this work now on file in the office of the City Engineer at and for the following named prices, to wit:

Item No.	Description	Quantity	Unit	Unit Price	Bid Amount
1.	Mobilization, Max 3%	1.00	LSUM	\$ _____	\$ _____
2.	Audio-Visual Record of Construction Area	1.00	LSUM	\$ _____	\$ _____
3.	Traffic Control and Maintenance	1.00	LSUM	\$ _____	\$ _____
4.	Root Removal	15	Ea	\$ _____	\$ _____
5.	Trunk/Stump Removal	15	Ea	\$ _____	\$ _____
6.	Curb and Gutter, Rem	100	Ft	\$ _____	\$ _____
7.	Sidewalk, Rem	3,900	Syd	\$ _____	\$ _____
8.	Excavation, Earth	10	Cyd	\$ _____	\$ _____

9.	Subgrade Undercutting, Type II	100	Cyd	\$ _____	\$ _____
10.	Maintenance Gravel	200	Ton	\$ _____	\$ _____
11.	Dr Structure Cover, Adj, Case I	15	Ea	\$ _____	\$ _____
12.	Hand Patching	20	Ton	\$ _____	\$ _____
13.	Vault, Abandon	10,125	Cft	\$ _____	\$ _____
14.	Vault Repair	1,125	Sft	\$ _____	\$ _____
15.	Curb and Gutter, Conc, Det F4	100	Ft	\$ _____	\$ _____
16.	Detectable Warning Surface	360	Ft	\$ _____	\$ _____
17.	Sidewalk Ramp, Conc, 4 inch	3,000	Sft	\$ _____	\$ _____
18.	Sidewalk, Conc, 4 inch	23,000	Sft	\$ _____	\$ _____
19.	Sidewalk, Conc, 6 inch	1,000	Sft	\$ _____	\$ _____
20.	Sidewalk, Conc, 8 inch	5,000	Sft	\$ _____	\$ _____
21.	Sidewalk Ramp, Conc, 8 inch	3,000	Sft	\$ _____	\$ _____
22.	Sign, Type II, Rem	10	Ea	\$ _____	\$ _____
23.	Pedestrian Type II Barricade, Temp	40	Ea	\$ _____	\$ _____
24.	Gate Box, Adj, Case 1	20	Ea	\$ _____	\$ _____
TOTAL BID AMOUNT:					\$ _____

Contractor acknowledges receipt of the following Addendum(s):

Addendum No.: _____ Dated: _____
 Addendum No.: _____ Dated: _____
 Addendum No.: _____ Dated: _____

The Contractor acknowledges that he has not received nor relied upon any representations or warranties of any nature whatsoever from the City of Pontiac, its officers, employees or agents and that if he is awarded this contract, he shall enter into this Contract solely as the result of his own independent business judgment.

The undersigned acknowledges that he has made his own independent investigation and has satisfied himself as to the conditions of the work, including soil and subsurface conditions.

The undersigned agrees that, in case any additions or deductions in the amount of work contemplated are made, the above named unit prices for the various classes of work shall be used to allow for such additions or deductions.

The undersigned hereby agrees that if this Proposal shall be accepted by the said City, he will, within ten days after receiving notice of such acceptance and delivery of Contract forms thereof at the address given below (Sundays and legal holidays excepted), enter into contract, in the attached form, to construct the said work according to said plans and specifications and to furnish therefor all necessary equipment, tools and building appliances, materials, labor, power and transportation as aforesaid at and for the prices named in the foregoing paragraph; to furnish to the said City and to the State of Michigan such sureties for the faithful performance of such Contract and for the payment of all materials used therein and for all labor expended thereon as shall be approved and accepted by the said City; and to furnish to the said City of Pontiac a Maintenance Bond.

The undersigned attaches hereto a (certified check), (bidder's bond), in the sum of:

Dollars (\$ _____)

as required in the Instructions to Bidders. And the undersigned hereby agrees that, in case he shall fail to fulfill his obligations under the foregoing proposal and agreement, the said City may, at its option, determine that the undersigned has abandoned his rights and interests in such contract and that the certified check or bidder's bond accompanying this proposal has been forfeited to the said City as liquidated damages and not as a penalty; but, otherwise

The undersigned states that he currently owns or intends to rent the following equipment that will be used in work covered by this proposal:

List of Equipment Owned

List of Intended Rental Equipment

The undersigned states that he has done work similar in character to that covered by this proposal at the following named times and places, to wit:

The undersigned refers the said City to the following named parties for information concerning his experience, skill and business standing:

NAME, ADDRESS AND PHONE NUMBER:

Dated and signed at _____, MI on _____
(City) (Date)

Name of Bidder: _____

Address of Bidder: _____

Email Address: _____

By: _____

Title: _____

Telephone#: _____ Fax#: _____

Federal Tax I.D. Number (_____)

CERTIFICATIONS

IF A CORPORATION

I, _____, certify that I am the _____ of the corporation named as Contractor herein; that _____, who signed this Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Corporate Seal

Signature

IF A PARTNERSHIP

I, _____, certify that I am a partner in the partnership named as Contractor herein, and that I have authority to sign for and on behalf of this partnership consisting of the following partners:

NAME AND ADDRESS:

Signature

IF A SOLE PROPRIETORSHIP

I, _____, certify that I am the sole owner and proprietor.

Signature

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BIDDER'S PARTICIPATION PLAN (continued)

SUBCONTRACTING AND PROCUREMENT

The following is the bidder's analysis of all substantial subcontracting and procurement opportunities that are expected on the project (including major supply or rental items). Dollar estimates shown are approximate. Larger second tier items are also included.

(1)	(2)	(3)
Procurement or Subcontract Item (Type)	Dollar Estimate	Comment

Check here to acknowledge the requirement for a final Subcontractor/Supplier schedule to be executed by the bidder and accepted by the City prior to the execution of the contract for this project.

This plan for participation is part of the proposal submitted this date

Name of Bidder	Name of Signer	Signature	Date

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BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____
_____ as Principal,
and _____ as Surety, are
hereby held and firmly bound unto the City of Pontiac, Michigan, as OWNER in the
penal sum of:

_____ Dollars (\$) _____)

for the payment of which, well and truly to be made, we hereby jointly and severally bind
ourselves, successors and assigns. Signed, this _____ day of _____, 20 _____.

The Condition of the above obligation is such that whereas the Principal has
submitted to the City of Pontiac, Michigan, a certain BID, attached hereto and hereby
made a part hereof to enter into a contract in writing, for the

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a
contract in the Form of Contract attached hereto (properly completed in
accordance with said BID) and shall furnish a BOND for his faithful performance
of said contract, and for the payment of all persons performing labor or furnishing
materials in connection therewith, and shall in all respects perform the agreement
created by the acceptance of said BID, then this obligation shall be void,
otherwise the same shall remain in force and effect; it being expressly understood
and agreed that the liability of the Surety for any and all claims hereunder shall, in
no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal (L.S)

Surety (L.S.)

By: _____

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 540 as amended) and be authorized to transact business in the State of Michigan.

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20__, by and between the City of Pontiac, Oakland County, Michigan, party of the first part, hereafter called the City, and _____, Michigan, party of the second part, hereinafter called the Contractor:

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR shall commence and complete the construction of:

in full conformance with the Contract Documents as enumerated in Article 6 of this Agreement.

2. The CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein, excepting those things which are specifically stipulated in the contract documents to be furnished or done by the City.

3. The CONTRACTOR shall commence the work required by the CONTRACT DOCUMENTS on or before the date stipulated in the NOTICE TO PROCEED and will complete the same on or before November 15, 2021. Time shall be considered to be of the essence of this Contract.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the contract price of:

unless the contract price is duly changed by the contract documents.

5. The CITY shall pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

6. The term "CONTRACT DOCUMENTS" means and includes the following:

- A. AGREEMENT
- B. BID BOND
- C. PERFORMANCE BOND
- D. LABOR AND MATERIAL BOND

E. MAINTENANCE BOND

F. CHANGE ORDER (Pursuant to General Conditions, Section 9)

G. ADDENDA:

No. _____, dated _____, 20____.

No. _____, dated _____, 20____.

No. _____, dated _____, 20____.

H. ADVERTISEMENT

I. INSTRUCTIONS TO BIDDERS

J. BIDDER'S PROPOSAL (Incl. final Compliance Plan as accepted by OWNER)

K. GENERAL CONDITIONS (Incl. SUPPLEMENTAL GENERAL CONDITIONS and SPECIAL CONDITIONS (if any))

L. SPECIFICATIONS (Incl. SUPPLEMENTAL SPECIFICATIONS and SPECIAL PROVISIONS (if any))

M. PLANS (As listed in Schedule of Drawings)

N. NOTICE OF AWARD

O. NOTICE TO PROCEED

This agreement, together with other documents enumerated in this ARTICLE 6, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 6 shall govern, except as otherwise specifically stated.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in three (3) copies, each of which shall be deemed an original, on the date first above written.

**CONTRACT AGREEMENT BETWEEN THE CITY OF PONTIAC
AND CONTRACTOR**

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

CONTRACTOR: _____

In witness whereof, the parties have executed this agreement the day and year last written below.

WITNESSES:

1) _____ By: _____
2) _____ Its: _____

CITY OF PONTIAC

WITNESSES:

DEPARTMENT OF PUBLIC WORKS

1) _____ By: _____ Date
Allen Cooley
2) _____ Its: Acting Director

WITNESSES:

DEPARTMENT OF FINANCE

1) _____ By: _____ Date
Hughey P. Newsome
2) _____ Its: Interim Director

WITNESSES:

RISK MANAGEMENT DIVISION

1) _____ By: _____ Date
2) _____ Its: Risk Management Administrator

WITNESSES:

OFFICE OF THE MAYOR

1) _____ By: _____ Date
Dierdre Waterman
2) _____ Its: Mayor

Approved as to form:

By: _____
_____, City Attorney

CERTIFICATIONS

IF A CORPORATION

I, _____, certify that I am the _____ of the corporation named as Contractor herein; that _____, who signed this Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.*

Corporate Seal

Signature

* Attach copy of corporate resolution verifying authorization of individuals named above.

IF A PARTNERSHIP

I, _____, certify that I am a partner in the partnership named as Contractor herein, and that I have authority to sign for and on behalf of this partnership consisting of the following partners:

NAME AND ADDRESS:

Signature

IF A SOLE PROPRIETORSHIP

I, _____, certify that I am the sole owner and proprietor.

Signature

BOND FOR FAITHFUL PERFORMANCE

KNOW ALL MEN BY THESE PRESENTS, That _____

_____ as principal, and

_____, as surety, are held and

firmly bound unto the City of Pontiac, Michigan, a Municipal Corporation, in the sum of:

good and lawful money of the United States of America, to be paid to said City of Pontiac, its legal representatives and assigns, for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, and each and every one of them, jointly and severally, firmly by these presents.

Sealed with our Seals and dated this _____ day of _____ A.D. 20 _____.

WHEREAS, the above named principal has entered into a certain written contract with the City of Pontiac, dated this _____ day of _____ A.D. 20 _____, wherein the said principal covenanted and agreed as follows, to-wit:

TO COMMENCE AND COMPLETE the:

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS such that if the above named principal or their legal representatives or successors, shall in all things well and truly keep and perform the covenants, conditions, and agreements in the manner and form and at the time agreed upon to be kept and performed as provided by said contract, and plans, drawings, and specifications, referred to in said contract, and as may be required by the changes, alterations, and modifications thereof, as provided in said contract, then the above obligation shall be void; otherwise to remain in full force and effect.

This bond is given upon the express condition that any changes, alterations, or modifications that may be hereafter ordered or made in the construction and complete installation of the work herein referred to, or the placing of an inspector or superintendent thereon by the City of Pontiac shall not operate to discharge or release the surety or sureties thereon.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their respective authorized officers this _____ day of _____ A.D. 20 _____.

Signed, Sealed and Delivered in the Presence of:

_____	_____ (L.S.)
_____	_____ (L.S.)
_____	_____ (L.S.)

**LABOR AND MATERIAL BOND TO THE
CITY OF PONTIAC, MICHIGAN**

KNOW ALL MEN BY THESE PRESENTS, That _____
_____ as principal, and _____
_____, as surety, are
held and firm bound unto the City of Pontiac, Michigan, a Municipal Corporation, in the
sum of:

good and lawful money of the United States of America, pursuant to Michigan State
Public Act 213 of 1963, to be paid to the City of Pontiac, Michigan, for the use and
benefit of all subcontractors, and persons, firms and corporations who shall furnish
materials, supplies and perform labor entering into the work of:

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

for which payment well and truly to be made, we bind ourselves, our heirs, executors,
administrators, successors and assigns, and each and every one of them jointly and
severally, firmly by these presents.

Sealed with our Seals and dated this _____ day of _____ A.D. 20_____.

WHEREAS, the above named principal has entered into a certain written contract
with the City of Pontiac, dated this _____ day of _____ A.D. 20_____,
wherein the said principal covenanted and agreed as follows, to wit:

TO COMMENCE AND COMPLETE the: _____

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above named principal, legal representatives, or successors shall pay or cause to be paid to all subcontractors, persons, firms, and corporation, as the same may become due and payable, all indebtedness which may arise from said principal to a subcontractor or party performing labor or furnishing materials and supplies, or any subcontractor to any person, firm or corporation on account of any labor performed or materials and supplies furnished in connection with the contract, construction and work herein referred to, then this obligation shall be void; otherwise to remain in full force and effect.

This bond is given upon the express condition that any changes, alterations, or modifications that may be hereafter ordered or made in the construction and complete installation of the work herein referred to, or the placing of an inspector or superintendent thereon by the City of Pontiac shall not operate to discharge or release the surety or sureties thereon.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their respective authorized officers this _____ day of _____ A.D. 20 _____.

Signed, Sealed and Delivered in the Presence of:

_____	_____ (L.S.)
_____	_____ (L.S.)
_____	_____ (L.S.)

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS, That _____

_____ as principal, and _____

_____, as surety, are held

and firm bound unto the City of Pontiac, Michigan, a Municipal Corporation, in the sum of:

good and lawful money of the United States of America, pursuant to Michigan State Public Act 213 of 1963, to be paid to the City of Pontiac, Michigan, for the use and benefit of all subcontractors, and persons, firms and corporations who shall furnish materials, supplies and perform labor entering into the work of:

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, and each and every one of them jointly and severally, firmly by these presents.

Sealed with our Seals and dated this _____ day of _____ A.D. 20 _____.

WHEREAS, the above named principal has entered into a certain written contract with the City of Pontiac, dated this _____ day of _____ A.D. 20 _____, wherein the said principal covenanted and agreed as follows, to wit:

TO COMMENCE AND COMPLETE construction of:

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that by and under said contract, the above named principal has agreed with the City of Pontiac that for a period of ONE year(s) from the date of payment of Final Estimate, to keep in good order and repair all the work, done under said contract, excepting only such part or parts of said work as may have been disturbed without the consent or approval of the principal after the final acceptance of the work, and that whenever directed so to do by the City Engineer of the City of Pontiac by notice served in writing, either personally or by mail, on the principal at:

_____ or _____
legal representative, or successors, or on the surety at: _____

_____ WILL PROCEED at once to make such repairs as directed by said City Engineer; and in case of failure so to do within one week from the date of service of such notice, or within reasonable time not less than one week, as shall be fixed in said notice, then the City of Pontiac shall have the right to purchase such materials and employ such labor and equipment as may be necessary for the purpose, and to undertake, do and make such repairs, and charge the expense thereof to, and receive same from said principal or surety. If any repair is necessary to be made at once to protect life and property, then and in that case, the City may take immediate steps to repair or barricade such defects without notice to the contractor. In such accounting the City shall not be held to obtain the lowest figures for the doing of the work or any part thereof, but all sums actually paid therefore shall be charged to the principal or surety. In this connection the judgment of the City Engineer is final and conclusive. If the said principal for a period of ONE year(s) from the date of payment of Final Estimate, shall keep said work so constructed under said contract in good order and repair, excepting only such part or parts of said work which may have been disturbed without the consent or approval of said principal after the final acceptance of the same, and shall, whenever notice is given as hereinbefore specified, at once proceed to make repair as in said notice directed, or shall reimburse said City of Pontiac for any expense incurred by making such repairs, should the principal or their surety do so as hereinbefore specified, then the above obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their respective authorized officers this _____ day of _____ A.D. 20 _____.

Signed, Sealed and Delivered in the Presence of:

_____ (L.S.)

_____ (L.S.)

_____ (L.S.)

GENERAL CONDITIONS

The following general conditions are agreed to as defining certain relationships which shall be taken to exist between the parties hereto and as setting forth certain conditions under which the Contract is to be fulfilled.

INDEX

Article

1. Definitions
2. Plans and Specifications
3. Shop Drawings
4. Materials and Workmanship
5. Superintendence by Contractor
6. Engineering Supervision
7. City's Right to Complete, Suspension or Termination
8. Assignment of Contract
9. Extra Work and Modification
10. Disputed Claims for Extra Compensation
11. Extension of Time
12. Liquidated Damages
13. Payment to the Contractor
14. Warranty Maintenance
15. Michigan Non-Discrimination Statute
16. Labor Laws and Ordinances
17. Patents and Patent Rights
18. Work within Railroad, Private, State or County Rights-of-way
19. Protection and Safety
20. Cleaning Up
21. Progress Schedule

GENERAL CONDITIONS

Article 1 - DEFINITIONS

- 1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:
- 1.2 ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS by additions, deletions, clarifications or corrections.
- 1.3 BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed. (See 1.8)
- 1.4 BIDDER - Any person, firm or corporation submitting a BID for the WORK.
- 1.5 BONDS - Bid, Performance, Labor and Material, and Maintenance Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.
- 1.6 CHANGE ORDER - A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.
- 1.7 CITY - The City of Pontiac, Michigan, or its properly authorized representatives; and whenever the term "City Council", "Mayor", "City Clerk", "Director of Finance", "City Engineer", or "Engineer", is used, it shall be understood to mean the Council, Mayor, Clerk, Director of Finance, or Engineer of the said City.
- 1.8 PARTICIPATION PLAN - The participation document required to accompany each proposal, as finally accepted by the City, including any revisions up to the time of acceptance.
- 1.9 CONTRACT DOCUMENTS - The Contract, including ADVERTISEMENT, INSTRUCTIONS TO BIDDERS, FORM OF PROPOSAL, BID BOND, AGREEMENT, LABOR & MATERIAL BOND, PERFORMANCE BOND, MAINTENANCE BOND, GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, PLANS, SPECIFICATIONS, ADDENDA, and the PARTICIPATION PLAN, and any other documents specifically set forth in the Agreement.
- 1.10 CONTRACT PRICE - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

- 1.11 CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK on each street; or the number of calendar days from the date established in the NOTICE TO PROCEED to the DATE stated in the CONTRACT DOCUMENTS for the completion of all of the WORK of the TOTAL CONTRACT; or both.
- 1.12 CONTRACTOR - The person, firm or corporation with whom the CITY has executed the Agreement, or its legal representatives.
- 1.13 ENGINEER - The City Engineer and/or the person, firm or corporation named as such in the CONTRACT DOCUMENTS.
- 1.14 FIELD ORDER - A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.
- 1.15 NOTICE OF AWARD - The written notice of the acceptance of the BID from the CITY to the successful BIDDER.
- 1.16 NOTICE TO PROCEED - Written communication issued by the CITY to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.
- 1.17 OPEN TO TRAFFIC - That date as certified by the ENGINEER, when the WORK (PROJECT) or any section thereof is in a suitable condition for safe travel. The term "SUITABLE CONDITION FOR SAFE TRAVEL" shall be construed to mean that all work, INCLUDING the Leveling Course of Bituminous Material and all Concrete Work are complete. The PROJECT, or any portion thereof may be designated as "Accepted for Traffic" prior to completion of the whole project, and shall be opened to traffic as may be directed by the ENGINEER. In general, the term "OPEN TO TRAFFIC" shall be in accordance with Section 107.21 of the MDOT 2012 Standard Specifications for Construction.
- 1.18 PLANS - The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.
- 1.19 PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- 1.20 RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the CITY who is assigned to the PROJECT site or any part thereof.
- 1.21 SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other

data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

- 1.22 SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship (may include SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS).
- 1.23 SUBCONTRACTOR - An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.
- 1.24 SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.
- 1.25 WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.
- 1.26 WORK ORDER - A written order to the CONTRACTOR causing a change in WORK involving the authorization to undertake additional work at existing contract unit prices or at new contract unit prices for new items of work.
- 1.27 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

Article 2 - PLANS AND SPECIFICATIONS

The location of the structures and improvements which are to be built or made under this Contract, and the character, form and dimensions of their various parts, are shown in the accompanying drawings, specifications and details in the Contract Document entitled:

2021 FDCVT DOWNTOWN SIDEWALKS PROJECT

These drawings constitute the Plans according to which the work of this Contract is to be done. Additional drawings may be prepared by the City Engineer and supplied to the Contractor during the progress of the work, as he may deem to be necessary or expedient. All such additional drawings, made in elaboration or explanation of the original drawings, are to be considered as part and parcel of the Plans and shall be respected and followed as such by the Contractor.

The Plans are supplemented and explained by a set of technical specifications, which are appended hereto, and which describe and define the quality of materials and the character of workmanship which are to enter into the work of this Contract. These are the Specifications which are referred to in Article 1, and elsewhere in this Contract. Additional specifications in further elaboration or explanation of the work to be done may be prepared by the City Engineer and supplied to the Contractor during the progress of the work, as he may deem to be necessary or expedient. Such additional specifications are to be considered as part and parcel of the specifications under this Contract, and shall be respected and followed as such by the Contractor.

Both Plans and Specifications are considered as essential parts of this Contract, and are intended to be cooperative. They shall be construed as supplementary each to the other, and any work called for in the Plans and not particularly mentioned in the Specifications, or described in the Specifications and not specially shown on the Plans, is to be regarded as included under this Contract the same as if fully set forth in the Specifications and exhibited on the Plans. Wherever figures or definite dimensions are given on the Plans or in the Specifications, these shall have precedence over dimensions taken by scaling.

In case any inconsistency, omission, or conflict shall be discovered in the Specifications or Plans, or if in any place the meaning of either or both shall be obscure or uncertain or in dispute, the City Engineer shall decide as to the true intent and his decision shall be final and binding. Any such inconsistencies, omissions, or conflict noted should be called to the attention of the Engineer, and a decision on the same obtained in advance.

Article 3 - SHOP DRAWINGS

- 3.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER's approval of any SHOP DRAWINGS shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.
- 3.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.
- 3.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

Article 4 - MATERIALS AND WORKMANSHIP

It is mutually understood that all materials and workmanship furnished under this Contract shall be of the highest quality, to the end that a good and substantial and workmanlike job may be produced. The Contractor shall bring only first class materials to the work, and he shall furnish suitable tools and equipment and shall employ competent labor to perform the work to be done. Any materials or labor or tools or equipment that shall not, in the judgment of the Engineer, be suitable or competent to produce the desired result, may be ordered from the work by the Engineer, and such materials or labor or tools or equipment shall be promptly substituted therefor by the Contractor as will meet with the approval of the Engineer. Wherever a brand or name is given, it is for the purpose of defining or establishing a type or quality of material only.

4.1 Defective Materials

Any materials or fabricated articles furnished by the Contractor to be used in this work which shall not, in the judgment of the Engineer, be equal to the requirements of the Plans and Specifications, may be rejected by the Engineer; and such rejected materials or articles shall not be used, but shall be immediately removed by the Contractor from the site of the work.

4.2 Stored Materials

Materials and equipment distributed, stored or placed upon or near the site of the work shall be at all times so disposed as not to interfere with work being prosecuted directly by the City or by other Contractors in the City's employ or with access thereto, and not to hinder any more than may be necessary the ordinary pedestrian and vehicular traffic of the streets.

4.3 Property Rights in Surplus Materials

All excess materials excavated during the progress of the work and not required for backfilling, all timber except tree stumps cut from the right-of-way, and all other materials which have been encountered and handled during construction operations, and which constitute a disposable surplus at the end of the construction period, shall be the property of the Contractor, unless otherwise directed by the City or its Engineer. Such materials shall be hauled and neatly piled, or hauled and dumped at the places designated by the Engineer, at no extra compensation.

4.4 Water Supply

Water for construction purposes may be taken from the City mains subject to the rules of the Oakland County Water Resources Commissioner's office.

Article 5 - SUPERINTENDENCE BY CONTRACTOR

- 5.1 Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the City and the Engineer, on the work at all times during working hours with full authority to act for the Contractor. Any orders by the Engineer given to and received by said superintendent shall be deemed to have been given to and received by the Contractor. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work. The Contractor shall maintain a complete set of plans and specifications at the site.
- 5.2 The Contractor may set up and establish an office on or near the site. On certain large projects, the Engineer may direct the Contractor to set up an office.
- 5.3 The Contractor shall lay out his own work and he shall be responsible for all work executed by him under the Contract. He shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

5.4 Disorderly Employees

Disorderly, intemperate, or incompetent persons must not be employed, retained, or allowed upon the work site. Any foreman or workman who refuses or neglects to comply with the directions of the Engineer in the matter of personal conduct shall, at the request of the Engineer, be promptly discharged and shall not thereafter be re-employed without the consent of the Engineer.

5.5 Relation to Other Contractors

The Contractor shall so conduct his operations as not to interfere with or injure the work of other Contractors or workmen employed by the City on adjoining or related work, and he shall promptly make good any injury or damage which may be done to such work by him or his employees or agents. Should a contract for adjoining work be awarded to another Contractor, and should the work on any one of these contracts interfere with that of the other, the Engineer shall decide which Contractor shall cease work for the time being and which shall continue or whether the work on both contracts shall continue at the same time and in what manner. In case the territory of one contract should be the necessary means of access to another contract, the Engineer shall have power to grant reasonable privileges with respect to the transportation or movement of men, animals, appliances or materials as he may adjudge to be necessary or expedient and in the best interests of the City. Any decision which the Engineer may make as to the method and time of conducting work or the use of territory shall not be made the basis of any claim for damages, but an extension of time may be claimed, if justified by the circumstances, the same as in the case of other delays caused by the acts of the

City. Any difference of opinion or conflict of interest which may arise between this Contractor and other Contractors or workmen of the City in regard to adjoining work shall be determined and adjusted by the Engineer.

5.6 Time and Sequence of Work

In general, it is the intention and understanding that the Contractor shall have control over the sequence or order of execution of the several parts of the work to be done under this Contract, and over the methods of accomplishing the required results, except as some particular sequence or method may be distinctly demanded by the Plans and Specifications or by the express provisions of this Contract; the Engineer may, however, make such reasonable requirements as may, in his judgement, be necessary for the proper and effective protection of work partially or wholly completed, and to these requirements, the Contractor shall strictly conform.

5.7 Sunday and Night Work

No Sunday work shall be done except in case of emergency or to protect from damage or injury any work that has already been done, and then only with the written consent of the Engineer, and only to such an extent as he may judge to be necessary.

Ordinarily, no night work shall be carried on which will require the presence of the Engineer or an inspector, except with the written permission of the Engineer. Night work is permissible in an emergency to the extent required to meet the emergency, but the Contractor shall notify the Engineer, as far as possible in advance, of his intentions to carry on such emergency work and of the time and place of doing it.

Article 6 - ENGINEERING SUPERVISION

The work covered by this Contract will be executed under the engineering supervision of the City Engineer, who shall have authority to inspect all materials and workmanship entering into the work, to furnish all instructions and information regarding the Plans and Specifications that may be necessary, to supply supplementary or additional plans or specifications as he may deem expedient, and to point out to the Contractor any disregard of any of the provisions of the Contract; but the right of final acceptance or condemnation of the work will not be waived at any time during its progress.

The Engineer will set suitable stakes and marks showing the locations and elevations of various parts of the work and the Contractor shall provide such labor and assistance as the said Engineer may require in setting the same. The Contractor shall take due and proper precautions for the preservation of these stakes and marks, and shall see to it that the work at all times proceeds in accordance therewith. The Engineer may provide for the inspection of any or all materials or workmanship used or intended to be used under this Contract, by assistants under his direction or otherwise, as he may deem to be advisable or expedient; but no inspection shall relieve the Contractor of his fundamental obligation to fully respect all the requirements of his Contract. Such inspection may cover any or all parts of the work, and may extend to and include the preparation or manufacture of any materials or fabricated articles intended to be

incorporated in the work. The Contractor shall furnish, upon request therefor by the Engineer, such samples for examination or testing as the Engineer may prescribe. The Contractor shall furnish such labor and assistance as may be necessary for the proper handling of materials in all inspections and tests that may be required.

The Engineer and his duly authorized agents and employees may, at any time and for any purpose, enter upon the work and upon the premises occupied by the Contractor, and the Contractor shall provide proper and safe facilities by which the Engineer may have access to such parts of the work as may be required.

Article 7 - CITY'S RIGHT TO COMPLETE; SUSPENSION OR TERMINATION

It is agreed that the City has the right, when it shall become satisfied that the work provided for in this Contract will not be completed within the time limit, to furnish additional labor and material if necessary and render such other assistance as it may deem advisable, for the completion of said Contract, at the expense of the Contractor, and may retain the same out of the Contract price, or recover the same by legal proceedings.

It is agreed that the Mayor has the right to determine finally all questions as to proper performance of this Contract, or any part or portion thereof, and in case of improper, dilatory or imperfect performance thereof, to suspend the work at any time and to order the partial or entire reconstruction of the same, and if at any time the said Contractor shall abandon the work of this Contract or become habitually negligent of his obligations under it, or shall fail to prosecute the work with reasonable diligence, so that the time of final completion of the work shall be unnecessarily and intolerably delayed, or if he shall violate any of the provisions of the Contract, then and in such case the Mayor may declare this Contract forfeited and may, at address given in the proposal, notify him to discontinue all work under this Contract, or any part thereof, and thereupon he shall discontinue such work, or such part thereof, and shall cease to have any right to the possession of the ground; and the City shall thereupon have the right to complete the work or any part thereof by Contract or otherwise, as it may elect, and for that purpose to take possession and make use of such materials, tools, building appliances, and equipment as may be found upon the work, and to charge the expense thereof to the Contractor. Power is hereby given the Mayor to determine all such questions under this Contract, according to the true intent and meaning thereof.

All expenses charged under this provision shall be deducted and paid by the City of Pontiac out of any monies then due to the Contractor under this Contract, or any part thereof, and in such accounting the City of Pontiac shall not be held to obtain the lowest figures for the work of completing the contract, or any part thereof, or for insuring its proper completion, but all sums actually paid therefor shall be charged to the Contractor. In case the expenses to be charged are less than the sum which would have been payable under this contract if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference; and in case such expenses shall exceed the said sums, the Contractor shall pay the amount of the excess to the City of Pontiac.

Article 8 - ASSIGNMENT OF CONTRACT

It is agreed that the Contractor shall not assign or transfer this Contract, or subcontract any part of the work embraced in it, except with the written consent of the Mayor to do so.

It is further agreed that all parts of the work which may be performed by a subcontractor shall conform to the Plans and Specifications and be subject to all provisions of this Contract exactly as if performed by the Contractor and his immediate employees and workmen. No such letting of the work shall, in any way, diminish or weaken the responsibility of the Contractor for all parts of the work or lessen his obligation under this Contract.

It is likewise agreed that the Contractor shall not assign, either legally or equitably, any of the monies payable to him under this Contract, or his claim thereto, except with the written consent of the Mayor.

Article 9 - EXTRA WORK AND MODIFICATION

It is agreed that the said Contractor shall do such incidental or extra work in connection with this Contract as the Mayor may especially order in writing. If such extra work or any part thereof be of such character that it may be definitely covered by construction items for which unit prices are named in the proposal of this Contract, then and in that case the City will pay, and the Contractor will accept as full compensation for such extra work, or such part thereof, the amount computed by applying the unit prices to the quantities of extra work falling under the several items. Also, such extra work may be paid for at prices mutually agreed upon at the time by the City and the Contractor. But if such extra work, or any part thereof, be of a kind which may not be definitely covered by the regular pay items of this contract, and if no price therefor has been mutually agreed upon in advance, or if the work is of such a nature that it cannot be estimated with fair exactness in advance, then the City will pay, and the Contractor will accept as full compensation for such, an amount equal to the actual and necessary net cost in money to the Contractor for labor and materials actually used therein or expended thereon, plus fifteen percent (15%) of such net cost for superintendence, power, the use of tools, and plant, liability insurance, and all overhead and incidental expenses.

During the progress of any extra work which is to be paid for on the basis of net cost plus fifteen percent (15%), the Contractor will furnish to the City Engineer, at the end of each day, suitable time slips showing the name of and the number of hours worked by each workman employed thereon, the nature of work performed by him, and his rate of pay, together with suitable and adequate memoranda of the materials used therein, showing the character and amount of each such material, the source from which it was purchased, and the price paid or to be paid therefor.

The City may, at its discretion, furnish to the Contractor any materials or supplies or transportation required for extra work, and the Contractor shall not be entitled to any allowance or percentage on account of materials or supplies or transportation so furnished.

It is agreed that all extra work that may be ordered and performed under the provisions of this article shall be done by the Contractor in an effective and workmanlike manner, and shall be subject to the same restrictions and liabilities as those which apply to the general work of this Contract; and the Contractor will be responsible for the maintenance and protection of such extra work until the time of the final acceptance of the entire job by the City.

And it is further agreed that no claim against the City on account of extra work shall be valid unless such extra work has been previously ordered in writing by the Mayor, and unless such claim has been presented for payment as soon as practicable after the completion of such extra work and before the making up of the final estimate.

When it becomes necessary in the prosecution of any work or improvement under contract to make minor alterations or modifications of such contract or the plans and specifications thereof, such alterations, changes or modifications shall be made only on the written order of the Mayor.

No such order shall be made until the price to be paid for the work or material or both and the credits, if any, to be allowed by the City under the altered and modified Contract shall have been agreed upon in writing and signed by the Contractor and by the Mayor.

Article 10 - DISPUTED CLAIMS FOR EXTRA COMPENSATION

If any inconsistency, omission, or conflict is discovered in either the plans or the specifications, or if in any place the meaning of either the plans or the specifications, or both, is obscure, or uncertain, or in dispute, the Engineer will decide as to the true intent.

In case the Contractor deems extra compensation is due for work or materials not clearly covered in the contract, or not ordered by the Engineer as extra work, or due to changed or altered conditions, the Contractor shall notify the Engineer in writing of the Contractor's intention to make claim for such extra compensation before beginning work on which the Contractor intends to base a claim and shall afford the Engineer every facility for keeping actual cost of the work. The Contractor and the Engineer shall compare records and bring them into agreement at the end of each day. Failure on the part of the Contractor to give such notification or to afford the Engineer proper facilities for keeping strict account of actual cost will constitute a waiver of the claim for such extra compensation except that consideration will be given to claims to the extent that they are substantiated by City records. The determination of extra compensation made by the City, where the Contractor has failed to give proper notice of his claim for extra compensation as provided herein or has failed to afford the Engineer proper facilities for keeping strict account of actual costs, shall be final and binding on the Contractor. The filing of such notice by the Contractor and the monitoring of cost by the Engineer for said notice of claim, shall not in any way be construed to establish the validity of the claim. When the extra work in question has been completed, the Contractor shall file the claim for extra compensation with the Engineer.

Such claims shall be filed with the Engineer in a timely manner but no later than 10 days after the contract is completed. A written decision will be given to the Contractor in a timely manner, regarding the approval, partial approval, or disapproval of the Contractor's claim for extra compensation. The City will determine procedures for reviewing the Contractor's claim.

Article 11 - EXTENSION OF TIME

It is agreed that if the Contractor shall be unavoidably delayed in beginning or fulfilling this Contract by reason of excessive storms or floods, or by acts of Providence, or by general strikes, or by court injunction, or by stopping of the work by the City because of any emergency or public necessity, or by reason of extra work ordered by the City Engineer, or by any act, neglect, delay, or default on the part of

the City, the Contractor shall have no valid claim for damages on account of any such cause or delay, but he shall be, in such case, entitled to such extensions or advancement of the time period specified in the Agreement as the City Engineer shall adjudge to be just and reasonable; provided, however, that formal claim for such extension shall be made in writing by the Contractor within a week after the date upon which such alleged cause of delay shall have occurred. The closing down of the work during the winter season on account of cold weather shall not be taken as entitling the Contractor to any extension of time within the meaning of this Article.

In case the Contractor shall be delayed in the fulfillment of his obligations under this Contract, from any cause whatsoever, and in case the City shall acquiesce in the Contractor's prosecution and completion of the work, or any part of it, after the date at which it should have been finished, such acquiescence shall not operate as a waiver of any of the City's rights under this Contract, nor shall it invalidate or in any way weaken the Contractor's bonds.

Article 12 - LIQUIDATED DAMAGES

It is expressly covenanted and agreed by and between the parties hereto that time is and shall be considered as of the essence of the Contract, and in the event that said Contractor shall fail in the due performance of the entire work to be performed under this Contract, by and at the time herein mentioned and referred to in the Agreement, or within some other certain date subsequent to this to which the time limit for completion of the work may have been advanced under provisions of Article 11, the said Contractor shall pay unto the City as and for liquidated damages, and not as a penalty, the sum of **Seven Hundred Dollars (\$ 700.00)** for each and every calendar day that the said Contractor shall be in default.

Said sum of **Seven Hundred Dollars (\$ 700.00)** per day, in view of the difficulty of estimating such damages with exactness, is agreed upon as the damages which will be suffered by the City by reason of such default. It is also understood and agreed by the parties to this Contract that the liquidated damages hereinbefore mentioned are in lieu of the actual damages arising from such breach of this Contract; which said sum the City shall have the right to deduct from any monies in its possession, otherwise due, or to become due to said Contractor, or to sue for and recover compensation for damages for non-performance of this Contract at the time stipulated herein and provided for. (See also any Special Provisions for Liquidated Damages.)

Said liquidated damages are in addition to any actual damages which the City may recover under the provisions of the contract.

Article 13 - PAYMENTS TO THE CONTRACTOR

13.1 Contractor's Obligation Prior to Payment

It is agreed that before the Contractor shall demand partial or final estimates or payments, the City may require him to furnish the City satisfactory evidence that all persons that have supplied labor or materials for the work embraced under this Contract have been fully paid for the same; and that in case such evidence be not furnished as aforesaid, such sums as the City may deem necessary to meet the lawful claims of the persons aforesaid be retained by the City from any monies that may be due or become due to him under this Contract until such liabilities shall be

fully discharged and evidence thereof be furnished to the City. The Contractor agrees to make prompt settlement for all repair expenses made by the City as a result of the Contractor's work. Consent of the Contractor's surety will be required prior to final payment.

13.2 City's Obligation to Pay

It is agreed that, in consideration of the faithful and entire performance by the Contractor of his obligations under this Contract, the City shall pay to him, at the times and in the manner stipulated, the total sum as determined by calculations from the unit prices in the proposal, but diminished by such amount as the City may lawfully retain as liquidated damages under the provisions of Article 12 herein; and the Contractor shall accept the payment of such sum as full compensation for his work under this Contract.

13.3 Progress Estimates and Payments

Progress payments shall comply with Act No. 524 Public Acts of 1980. At about the first of each month, during which satisfactory progress has been made toward the final completion of the work, the Engineer will make up an estimate of the amount and value of the work which has been done under this Contract since the date of the last preceding estimate, and will report such estimate in writing to the City Director of Finance. Such estimates shall not be required to be made by strict measurements, or with exactness, but may be made either wholly or in part by appraisalment or estimation or by a consideration of accounts for labor and materials, and it shall be sufficient if it is approximate only. Any error or inaccuracy which may occur in any progress estimate may be allowed for or corrected in any subsequent estimate.

Following the rendering of such estimate by the Engineer, and as soon as practicable thereafter, the City will pay to the Contractor on account a sum equal to ninety percent (90%) of the Contract price of such work. The remaining ten percent (10%) will be retained until work is fifty percent (50%) in place. After the work is fifty percent (50%) in place, additional retainage shall not be withheld unless the City determines that the Contractor is not making satisfactory progress, or for other specific cause relating to the Contractor's performance under the Contract. If the City so determines, the City may retain not more than ten percent (10%) of the dollar value of work more than fifty percent (50%) in place.

The Director of Finance may require the Contractor, before the payment of any estimate, to file an affidavit showing the unpaid bills for materials or supplies of any kind furnished for this work.

Any time after 94% of the work is in place, the Contractor may request release of all of the retainage. The City shall be required to release the retainage plus interest to the Contractor in such case only if the Contractor provides to the City an irrevocable letter of credit in the amount of the retainage plus interest, issued by a bank authorized to do business in this State, and containing terms mutually acceptable to the Contractor and the City.

The progress estimates and payments thus provided for will include all extra work which may be done under the provisions of this Contract on the same basis as other work is included, all such extra work being regarded herein as essentially a part of this Contract, and not merely supplementary to it.

Disputes under this provision may be submitted to the decision of an agent, at the option of the City, pursuant to Section 4 of Act 524 of 1980. (MCLA 125.1564).

13.4 Measurement

Due and proper measurements will be taken by the Engineer during the progress of the work, and his estimates, based upon such measurements, shall be final and conclusive evidence of the amount of work performed under this Contract.

13.5 Final Estimate and Payment

As soon as practicable after the satisfactory completion of all the work included under this Contract, the Engineer will make final inspection of all the work and will make up a final estimate of the amount due to the Contractor under the terms of this Contract. At this time the Contractor shall file with the Director of Finance an affidavit stating that all bills have been paid in full for all materials, supplies and labor of every kind that have been furnished for this work, or stating the balance due for such materials, supplies and labor (See sample on Page 52). The Contractor shall file with the City Engineer the Contractor's Declaration found on Page 51, stating that all claims for extra payments have been satisfactorily settled and there will be no further claims. A final certificate relative to compliance of Affirmative Action Plan also will be required as a condition of payment. Consent of the Contractor's surety shall also be filed. The Engineer will then certify this estimate to the City Director of Finance and the Contractor will be paid the amount of said estimate, less the amounts previously paid; excepting that the City may, at its option, reserve such amount as it may deem necessary to meet the undischarged obligations of the Contractor for materials or labor expended upon this work until such obligation shall have been paid.

Article 14 - WARRANTY MAINTENANCE

If, at any time during a one-year period from the date of payment of the final estimate, the need of any repair or replacement becomes apparent, the City will at once notify the Contractor in writing, either personally or by mail at the address given in the proposal; and if within one week after such notification the Contractor has not made the necessary repairs, the City may proceed to do the required work and to charge the cost thereof against the Contractor, excepting that in the case of a repair necessary to be made at once to protect life and property, then and in that case the City may take immediate steps to repair or barricade such defects without notice to the Contractor.

Following the performance of any such repair work by the City, and as soon as practicable thereafter, an itemized statement of the cost of such work will be sent to the Contractor by the City. In such accounting the City shall not be held to obtain the lowest figures for the doing of the work or any part thereof, but all sums actually paid therefor shall be charged to the Contractor.

Article 15 - MICHIGAN NON-DISCRIMINATION STATUTE

It is agreed that the Contractor and his subcontractors will not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, or marital status; or because of a handicap that is unrelated to the individual's ability to perform the duties of a particular job or position. Breach of this covenant may be regarded as a material breach of the Contract.

Article 16 - LABOR LAWS AND ORDINANCES

The Contractor shall obey and abide by all laws of the State of Michigan relating to the employment of labor on public work, and all the charter provisions and ordinances of the City of Pontiac regulating or in respect to public improvements.

Article 17 - PATENTS, PATENT RIGHTS, AND TRADEMARKS

The Contractor shall indemnify, protect, defend and save the City of Pontiac, including all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and their board members, employees, volunteers and others working on behalf of the City, harmless against all claims or actions brought against the City by reason of any actual or alleged infringement upon patent, trademark or service mark right in any article, material, process, machine or appliance used by him in this work.

Article 18 - WORK WITHIN RAILROAD, PRIVATE, STATE OR COUNTY RIGHTS-OF-WAY

All construction work within railroad, private, State or County highway rights-of-way shall be performed by the Contractor in accordance with the requirements of the rights-of-way agreement and of the railroad or highway department having jurisdiction; including procedures of excavating, backfilling, removing and replacing pavement, maintaining and safeguarding traffic, inspection procedures of jacking pipes and encasing pipes under railroads and highways, etc. All required construction permits and surety bonds shall be furnished by the Contractor before commencing work. At the conclusion of the work, the Contractor shall furnish a written statement from the railroads and highway departments that work in rights-of-way under their jurisdiction has been completed to their satisfaction.

Article 19 - PROTECTION AND SAFETY

19.1 Protection Against Accident

The Contractor shall put up and shall maintain during the continuance of the work such barriers, lights and other protective devices and watchmen, when necessary, as will effectively prevent any accident in consequence of his work, and he shall be liable for all accidents and damages occasioned in any way by his acts or neglect, or by the acts or neglect of his agents, employees, or workmen.

19.2 Responsibility for Damage to Work

The Contractor shall assume full responsibility for loss or damage to the work during the entire construction period resulting from caving earth and from storms, floods, frosts, and other adverse weather conditions, and from all other causes whatsoever not directly due to the acts or neglect of the City, and shall turn the finished work over to the City in good condition and repair at the time of the final estimate. This responsibility of the Contractor shall cover all these elements included as extra work under this Contract in exactly the same manner as the regular work is covered.

19.3 Responsibility for Adjoining Structures

The Contractor shall have full responsibility for the protection of all property, driveways, buildings, fences, and other structures, and their foundations, along (or near) the line of the work, and shall indemnify, defend and save harmless the City of Pontiac, including all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and their board members, employees, volunteers and others working on behalf of the City, against all damages or alleged damages to any such structure arising out of his work.

No driveway shall be entirely closed to travel, even temporarily, except with the written consent of the Engineer, previously obtained. Highways must be suitably posted during the period in which construction work is in progress in them, and the Contractor shall be responsible for this precaution. Suitable bridges must be built across trenches at highway crossings to facilitate travel, and this same requirement shall apply likewise to private roadways.

19.4 Responsibility for Water Courses

The Contractor shall maintain in continuous and effective service all drains and water courses touched during the progress of the work. If it should become necessary, temporarily, to divert or obstruct the flow of any such water course or drain, written consent must first be obtained from the Engineer, and the Contractor shall assume full responsibility for the consequences.

19.5 Responsibility for Utilities

Certain underground structures and utilities have been shown as an aid to the Contractor, but the City does not guarantee their location or that other underground structures or utilities may not be encountered. It shall be the responsibility of the Contractor to make all arrangements with the owners of the respective utilities for the establishment of their location, prior to beginning the construction.

The Contractor shall assume full responsibility for the protection of all utilities, water, sewer, gas, telephone, or any other, either public or private, along or near the line of work, and will be held responsible for any damages to such utilities arising from his operations. If for the Contractor's convenience he desires that any portion of the utilities be moved to facilitate his operations, he shall make all necessary arrangements with the owner of the respective utilities, and pay all costs resulting from this work.

In cases where utilities, water, sewer, gas, telephone or any other, either public or private, are directly in the line of the structures being constructed, such as those being within the permissible limits of a sewer excavation or pavement excavation, and the City deems it necessary that the said utility be moved, the said company or companies, agents or superintendents will be notified by the City Engineer to remove the same within a specified time. The Contractor shall not interfere with said utility or any portion thereof until the expiration of the time specified in said notice. The Contractor will not be held responsible for any costs resulting from this work.

In all cases where there is a dispute between the Contractor and the owner of the respective utility as to necessity of moving or repairing same within City-owned right of way, the City Engineer shall make the final decision in the matter, which decision shall be binding on the respective parties, and order the respective parties to proceed accordingly.

19.6 Protection of Trees and Shrubbery

The Contractor shall take ample precautions to protect all trees and ornamental shrubbery from injury by workmen, teams, or other agencies connected with his work. Such trees or shrubbery shall be surrounded by protective posts or fencing before construction work begins if, in the judgment of the Engineer, such precautions are necessary.

19.7 Protection of Reference Points

The Contractor shall carefully preserve monuments, bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

19.8 Removal of Water

The Contractor shall provide all necessary pumps, pipes, drains, ditches, dikes, and other means for adequately protecting the work from damage by water, and he shall so protect it during the entire construction period. No direct payment will be made to the Contractor for removing or pumping water, or for any of the means employed in protecting the work against damage by water, but compensation therefor shall be considered as being included in the unit prices fixed in this Contract for the several structures.

Water pumped or delivered from trenches and excavations shall be disposed of in such manner as will not injure the public health, nor damage public or private property, nor injure any work complete or in progress.

19.9 Dust Control

The Contractor shall apply water or dust palliative, or both, for the alleviation or prevention of dust nuisance caused by his operations. Dust control operations shall be performed by the Contractor at the time ordered by the Engineer, but failure of the Engineer to issue such order will not relieve the Contractor of his responsibility.

Such dust control materials shall be applied as often as is necessary to control the dust. The use of road oils and waste oils to control dust is prohibited unless authorized by the Engineer.

No direct payment will be made for any such work performed or material used to control dust under this Contract.

19.10 Control of Noise

The Contractor shall eliminate noise to as great an extent as possible at all times. Air compressors shall be equipped with silencers, and the exhaust of all gasoline motors and other power equipment shall be provided with mufflers. In the vicinity of hospitals, libraries and schools, special precautions shall be taken to avoid noise and other nuisance, and the Contractor shall require strict observances of all pertinent ordinances and regulations. Any blasting permitted in such locations shall be done with reduced charges.

19.11 Erosion Control

The Contractor shall comply with the Soil Erosion and Sedimentation Control Act, Act 347 of 1972, as amended by Act 197, Public Acts of 1974 and local City or County soil erosion control programs. Also, should the local agency determine that the construction operation is in violation of the act and cites the City, the Contractor shall take immediate action, as directed by the City, to insure compliance with the Act.

19.12 First Aid

The Contractor shall at all times provide a satisfactory first aid kit at the job site. Emergency phone numbers for police, doctors, and emergency vehicles shall also be kept in the first aid kit.

19.13 Ventilation and Safety in Gas

Positive and approved means shall be provided by the Contractor for the detection of gas in existing sewers. If gas is encountered and cannot be removed by natural ventilation, then ventilating equipment of sufficient capacity and suitable type to adequately and quickly dilute the gas shall be promptly installed and operated. In all work where gas is present, no flame or other open light shall be used on the work. The Contractor shall be required to enforce a "no smoking" ban on all workmen present.

19.14 Sanitary Regulations

The Contractor shall provide for his employees an abundant and convenient supply of drinking water, taken from the City mains or from some other safe and wholesome source, and shall give orders against the use for drinking purposes of any other water in the neighborhood known to be prejudicial to the health of the workers.

The Contractor shall provide at convenient points, properly secluded from observation, a sufficient number of sanitary conveniences, and shall maintain them strictly without nuisance and without offense to the public or to residents in the vicinity of the work. The number, location, character and conditions of maintenance of these utilities must at all times be such as will meet the approval of the Engineer.

Article 20 - CLEANING UP

Upon completion of the actual work of construction, the Contractor shall clean up and leave in neat condition all the premises which he has occupied during the construction period. Before the time of the final estimate, the Contractor shall remove from the premises all surplus excavation, debris, and rubbish, and all unused materials, together with all tools and equipment, or shall deposit them at such points and in such manner as the Engineer may require.

Before leaving the grounds, he shall replace or put in good repair all fences, telephone poles and lines, roadways, and other property that may have been damaged by him during the progress of the work. Damage to crops within the limits of the right-of-way or street will be paid by the City, but the Contractor must assume responsibility for all damages outside of this right-of-way.

Article 21 - PROGRESS SCHEDULE

The CONTRACTOR shall submit a Progress Schedule to the City for review and approval within ten (10) days of receipt of the "NOTICE OF AWARD".

CONTRACTOR'S DECLARATION

I hereby declare that I have not, during the period of _____
to _____ A.D., 20 _____, performed any work, furnished any
material, sustained any loss, damage or delay for any reason, including soil conditions encountered or
created, or otherwise done anything for which I shall ask, demand, sue for, or claim compensation from
the City of Pontiac or his agents, in addition to the regular items set forth in the contract named or
numbered **2021 FDCVT DOWNTOWN SIDEWALKS PROJECT** and dated _____
_____ A.D., 20 _____, for _____

executed between myself and the City of Pontiac, and in the Change Orders for work issued by the City in
writing as provided thereunder, except as I hereby make claim for additional compensation and/or
extension of time as set forth on the itemized statement attached hereto.

There (is) (is not) an itemized statement attached.

Date: _____

By: _____

Title: _____

CONTRACTOR'S AFFIDAVIT

STATE OF MICHIGAN)
)SS
COUNTY OF)

The undersigned _____, hereby represents that on _____, he (it) was awarded a contract by the City of Pontiac, hereinafter called the Owner, to _____ in accordance with the terms and conditions of Contract **2021 FDCVT DOWNTOWN SIDEWALKS PROJECT** and the undersigned further represents that the subject work has now been accomplished and the said contract has now been completed.

The undersigned hereby warrants and certifies that all of his (its) indebtedness arising by reason of the said contract has been fully paid or satisfactorily secured; and that all claims from subcontractors and others for labor and material used in accomplishing the said project, as well as all other claims arising from the performance of the said contract, have been fully paid or satisfactorily settled. The undersigned further agrees that, if any such claim should hereafter arise he (it) shall assume responsibility for the same immediately upon request to do so by the Owner.

The undersigned, for a valuable consideration, the receipt of which is hereby acknowledged, does further hereby waive, release and relinquish any and all claims or right of lien which the undersigned now has or may hereafter acquire upon the subject premises for labor and material used in accomplishing said project owned by the Owner.

This affidavit is freely and voluntarily given with full knowledge of the facts, on this _____ day of _____ A.D. 20 _____.

Contractor: _____

By: _____

Title: _____

Subscribed and sworn and to before me, a Notary Public in and for _____ County, Michigan, on this ____ day of _____ A.D. 20 _____.

Notary Public
My Commission expires: _____

**NOTICES TO BIDDERS,
SPECIFICATIONS
AND
SPECIAL PROVISIONS**

CITY OF PONTIAC
NOTICE TO BIDDERS
GENERAL REQUIREMENTS

AEW / rtw

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All work shall be done in accordance with the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, the latest revisions to the MDOT standard plans and the latest revisions to the MDOT standard details, unless modified herein.

PROJECT SCOPE

2021 FDCVT DOWNTOWN SIDEWALK PROJECT

Work under this contract shall consist of removing and replacing defective sidewalks and ADA ramps as directed by the City. Each flag of sidewalk designated for removal will be marked using a color and marking specified at the preconstruction meeting. The amount of sidewalk to be removed and replaced varies by location. The general area of work is as listed in these documents and shown in the maps included. Upon award of the Contract and prior to work commencing, the Contractor shall coordinate with the City and Engineer indicating where and when the work shall commence. All sidewalk identified by the specified paint mark shall be removed and replaced.

WORK RESTRICTIONS

Weather permitting sidewalk concrete shall be poured within 48 hours of removal. If for any reason, the concrete cannot be replaced within the same day, the affected area shall be safely and properly barricaded.

All sidewalk or pavement shall be sawcut full depth prior to removal. Sawcutting operations shall be performed such that slurry, dust or other debris are not affecting buildings, vehicles or other site features. All slurry, dust or other debris created by sawcutting operations must be cleaned by the end of the work day.

The finish of newly replaced sidewalk shall match the finish of the nearby sidewalk.

Detectable warning surfaces shall match the current city standards.

All signs within the influence of the work that are designated to remain shall be protected by the Contractor. Signs that are damaged by the work or that must be removed to facilitate construction shall be replaced at the Contractor's expense.

All work shall be performed such that buildings are not damaged. If certain sections of sidewalk removal are expected to damage any part of the building, it should be brought to the attention of the Engineer prior to the start of removal operations.

CITY OF PONTIAC
NOTICE TO BIDDERS
GENERAL REQUIREMENTS

AEW / rtw

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0178-0008

UNDERGROUND VAULTS

Various buildings within the project area were built with underground vaults connecting to the basement of the building. The underground vaults vary in size and extend into the public right-of-way beneath sidewalks. It is expected that during the construction, underground vaults will be exposed upon sidewalk removal. The Contractor shall repair or abandon the vault as directed by the Engineer. Special Provisions for vault repair and vault abandon are included herein. Based on historical record maps, the approximate average square footage of the vaults is 72 square feet, and the approximate average depth is 9 feet.

CITY OF PONTIAC
NOTICE TO BIDDERS
PROGRESS CLAUSE

AEW / rtw

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0178-0008

The Contractor shall begin work within ten (10) calendar days after receiving the "Notice to Proceed". The completion date for this project is November 15, 2021.

There shall be no work within the commercial areas of the city during designated events. Work during designated events shall be restricted to the residential areas. The designated events and the corresponding dates are as follows:

Roadkill Nights	August 13-15
Dream Cruise	August 19-21
Motor Bella	September 21-26

Additional events may be specified by the Owner. Any opened sidewalk that has been removed in the commercial areas must be replaced prior to the designated events.

Failure by the Contractor to meet the above requirements and dates will result in the Contractor being assessed liquidated damages in accordance with the MDOT 2012 Standard Specifications for Construction.

The low bidder for the work covered by this proposal will be required to attend a preconstruction meeting and to submit a detailed progress schedule for approval by the Engineer. The progress schedule shall be submitted prior to the preconstruction meeting. The progress schedule shall include, as a minimum, the starting and completion dates of all items of work, as well as the date the project is to be completed. The Contractor shall schedule their work such that no more than three (3) business days will elapse between major items of work. It is the intent of this provision that a continuous flow of operations will be maintained from start to finish.

CITY OF PONTIAC
NOTICE TO BIDDERS
UTILITY COORDINATION

AEW / rtw

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0178-0008

The Contractor shall cooperate and coordinate construction activities with the owners of utilities and follow the requirements for protection of underground utilities as specified in the MDOT 2012 Standard Specifications for Construction.

The following public utilities have facilities located within the right-of-way:

Electric – Distribution:

DTE Energy
1530 Trombly Street
Detroit, MI 48211
Contact: Laura Toporowski 630-336-2020

Telephone:

AT&T
54 N. Mill Street
Pontiac, MI 48342
Contact: Matt Silwa 248-877-0762

Gas:

Consumers Energy
4600 Coolidge Highway
Royal Oak, MI 48073
Contact: Ernie Martyniuk 248-433-5868

Cable Television:

Comcast Cable
25626 Telegraph Road
Southfield, MI 48033
Contact: Michael Marlow 248-809-2765

Water Main & Sanitary Sewer:

Oakland County W.R.C
1 Public Works Dr
Waterford, MI 48328
Sanitary: Rick DeVisch 248-858-4939
Water: Amy Ploof 248-452-2271

Electric – Community Lighting:

DTE Energy
15600 19 Mile Road
Clinton Township, MI 48038
Contact: Reggie Brown 586-412-3207

Storm Sewer & Street Lighting:

City of Pontiac
47450 Woodward Avenue
Pontiac, MI 48342
Contact: Abdul Siddiqui 248-758-3600

Existing service facilities, which are located within grading or structure limits, will be moved or adjusted by the owners to locations or elevations designated by the Engineer or will be removed entirely from the right of way. Owners of public utilities will not be required by the City to move additional poles or structures in order to facilitate the operation of construction equipment unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.

CITY OF PONTIAC
NOTICE TO BIDDERS
JOBSITE SAFETY

AEW / rtw

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0178-0008

Neither the professional activities of the Engineer, nor the presence of the Engineer or its employees and consultants, shall relieve the Contractor or any other entity of their obligations, duties and responsibilities including, but not limited to, construction means methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the work of construction in accordance with the Contract Documents and any health or safety precautions required by any regulatory agencies. The Engineer and its personnel have no authority to exercise any control over any construction or other entity or their employees in connection with their work or any health or safety precautions. The Contractor agrees that the Contractor is solely responsible for jobsite safety. The Contractor also agrees, to the extent permitted by law, that the Owner, Engineer and Engineer's consultants shall be indemnified by the Contractor for all claims, demands, damages, judgements, losses, interest, attorney fees, litigation costs and expenses of any kind at any time for bodily injury and/or property damage, arising out of, or in any way connected to Contractor's work or acts related to the Project. The Contractor also agrees that the Owner, Engineer and Engineer's consultants shall be made additional insureds under the Contractor's general liability insurance policy.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
USE OF CITY WATER

AEW / rtw

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0178-0008

a. Description. Water from the City of Pontiac water system is available for use by the Contractor. The Contractor MUST apply for and have a permit for water use in the possession of the individual taking the water from the City system. Unauthorized use will not be permitted. The City Police Department has been instructed to halt unauthorized use of City water.

As a part of this permit, a meter will be provided by the Oakland County Water Resources Commissioner to measure the volume used. Backflow prevention must be maintained at all times. A permit fee will be due upon issuance of the permit. A usage fee will be due upon the return of the provided meter.

The Contractor is advised to contact Amy Ploof at 248-452-2271 or ploofa@oakgov.com to ascertain the procedures for obtaining a permit and for paying the required fees for such use.

d. Measurement and Payment. The cost of the permit and the cost of the metered use of the City's water supply shall be the responsibility of the Contractor and shall be considered incidental to the project.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
TRAFFIC CONTROL AND MAINTENANCE

AEW / rtw

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0178-0008

Signs and traffic control devices shall conform to the current Michigan Manual of Uniform Traffic Control Devices.

The Contractor shall furnish, erect, maintain, and remove all traffic control devices, including lights, signs, plastic drums, channelizing devices, lighted arrow boards, and barricades required to protect the construction area and the public.

In order to provide notice to the affected properties, the contractor must provide a minimum of 5-day notice prior to work beginning on a specific street.

During the progress of the work, the Contractor shall accommodate both vehicular and pedestrian traffic. Where sidewalk removal may affect pedestrian access to buildings, the contractor shall maintain access over removed sidewalk or excavated areas with temporary plywood or approved equal. Access to fire hydrants, water and gas valves shall be maintained.

Payment for this item of work shall be measured and paid for at the lump sum contract unit price.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
ROOT REMOVAL AND STUMP REMOVAL

AEW / rtw

1 of 1

0178-0008

a. Description. Work shall be performed in accordance with the MDOT 2012 Standard Specifications for Construction except as modified herein. The Contractor shall remove all tree roots, and stumps/trunks, which conflict with the proposed line and grade of replacement sidewalk, as directed by the Engineer.

b. Materials. None.

c. Construction. After existing sidewalk is removed to provide for the construction of new sidewalk the Contractor shall identify all tree roots and stumps/trunks which conflict with the proposed sidewalk construction.

The existing tree roots which interfere with the correct line and grade of replacement sidewalk shall be removed with sharp tools designed for tree root removal. The contractor shall cleanly and accurately remove tree roots to the conflict limits identified by the Engineer based on individual site conditions. The Contractor shall remove roots. Root removal which can be achieved by the use of hand shovel or pruning sheers will not be considered for payment. The Contractor shall be responsible for the disposal of all material generate from this work.

The existing tree stumps/trunks which interfere with the correct line and grade of replacement sidewalk shall be removed with sharp tools designed for tree stump/trunk removal. The Contractor shall cleanly and accurately remove stumps/trunks to the conflict limits identified by the Engineer based on individual site conditions. It is not the intent of this work to completely remove stumps/trunks but only the portion which conflicts with the proposed work. The Contractor shall remove stumps/trunks by machine sawcutting or grinding which are not exceedingly destructive to the tree or its root system. The Contractor shall be responsible for the disposal of all material generated from this work.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Root Removal.....	Each
Trunk/Stump Removal.....	Each

CITY OF PONTIAC
SPECIAL PROVISION
FOR
VAULT, ABANDON

AEW / rtw

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0178-0008

a. Description. This work consists of removing portions of existing underground building vaults beneath sidewalk, providing materials, and all earthwork required to construct the proposed sidewalk or as stated in this special provision. Where vaults access the existing basements of adjacent buildings, any existing access doors, panels or gates must be removed and closed with masonry construction to provide a smooth interior wall. The minimum thickness of the proposed masonry wall is equal to the thickness of the existing wall. The exterior of newly constructed portions of basement walls must be waterproofed prior to backfill. The remainder of the vault structure must be filled with compacted granular material to the grade line. Do not damage existing building fascia, basement walls, and foundations during removal and construction operations. Any damage to the existing building by the Contractor's operation must be repaired at the Contractor's expense.

b. Materials. Materials must meet the requirements in the following sections of the MDOT 2012 Standard Specifications for Construction:

Mortar	702
Epoxy Anchored Ties	905
Masonry Units.....	913
Waterproofing Material	914

Supply non-structural flowable fill consisting of a mixture of portland cement, fly ash, sand (2NS) and water. Use materials conforming to the MDOT 2012 Standard Specifications for Construction except as modified herein. All non-structural flowable fill is intended to be removable using conventional mechanical excavation methods. Use either Type I or IA portland cement conforming to section 901 of the MDOT 2012 Standard Specifications for Construction and Class F or C fly ash as specified by ASTM C 618 except that there is no limit on loss on ignition.

Produce a mix of cement, fly ash, sand and water in the following proportions:

Portland Cement.....	50 lb/cyd
Fly Ash	500 lb/cyd
Sand	2,850 lb/cyd
Water	(approx.) 376 lb/cyd (sufficient to produce desired flowability)

CITY OF PONTIAC
SPECIAL PROVISION
FOR
VAULT, ABANDON

AEW / rtw

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c. Construction. Complete all work in accordance with applicable sections of the MDOT 2012 Standard Specifications for Construction or as directed by the Engineer. Perform removal and construction operations in a manner that minimizes damage to the existing building fascia, basement walls, and foundations. Work includes, but is not limited to, the following:

1. Remove the vault walls to a depth that will accommodate the proposed cross section and all proposed utilities and conduits as shown in the plans.
2. Remove existing access doors, panels and gates at building basement walls.
3. Construct masonry wall to close off existing basement from the vault providing a smooth interior surface flush with the existing wall. Anchor the proposed masonry wall to the existing basement wall utilizing epoxy anchored ties.
4. Waterproof exterior portions of newly constructed basement walls.
5. Break up any concrete floor existing outside the basement wall to allow for drainage.
6. Fill the remaining portions of the existing vault to the grade line with flowable fill. Place flowable fill in lifts no greater than 18 inches thick. Allow each lift to fully set prior to placing the next lift. In no case will more than 2 lifts be placed in a 24-hour period. Produce and deliver the non-structural flowable fill at a minimum temperature of 50 degrees Fahrenheit. Transport mixture to the point of placement in a revolving drum mixer or agitator.
7. Obtain access to basement and the vault from the owner.
8. Dispose of all removed materials.
9. Repair any damage to the existing building caused by the construction operation at no additional cost to the City.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
VAULT, ABANDON

AEW / rtw

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0178-0008

d. Measurement and Payment. The completed work as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Vault, Abandon.....	Cubic Feet

Vault, Abandon includes all labor, equipment and materials necessary to complete the work as described including removal operations and masonry work to close existing basement walls.

The Engineer will measure the quantity for Vault, Abandon by cubic feet. The length and width shall be measured along the interior face of the vault wall. The depth shall be measured from the interior vault floor to the elevation of the bottom of the proposed sidewalk.

Removal of existing sidewalks and construction of proposed sidewalk over the abandoned vaults will be paid for separately.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
VAULT, REPAIR

AEW / rtw

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0178-0008

a. Description. This work consists of installing metal decking over existing, underground building vaults to facilitate the construction of new sidewalk.

b. Materials. Materials must meet the requirements in the following sections of the MDOT 2012 Standard Specifications for Construction:

Mortar	702
Metal Decking.....	706.03.D.04
Granular Material, Class II.....	902
Epoxy Anchored Ties	905
Masonry Units.....	913
Waterproofing Material	914

Support columns shall be adjustable steel columns in conformance with local building codes.

c. Construction. Complete all work in accordance with applicable sections of the MDOT 2012 Standard Specifications for Construction or as directed by the Engineer. Perform removal and construction operations in a manner that minimizes damage to the existing building fascia, vault walls, basement walls, and foundations. Work includes, but is not limited to, the following:

1. Remove the vault walls to a depth that will accommodate the proposed cross section and all proposed utilities and conduits as shown in the plans.
2. Rebuild the top of the existing vault walls flush to the elevation of the bottom of the sidewalk less the thickness of the metal decking. Anchor the proposed masonry wall to the existing vault wall utilizing epoxy anchored ties.
3. Fasten 6x4x1/2 LLH steel angle to the basement wall at the elevation accounting for the metal decking along the entire length of the vault.
4. Depending on the size of the existing vaults, support columns on concrete footings may be required to break up the span of the vaults. Span spacing will be determined by the engineer upon inspection of the vault.
5. Metal Decking should be bearing over no less than half the wall thickness. Anchor the metal decking to the steel angle and vault walls with 1/4" bolts at 18" spacing on center.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
VAULT, REPAIR

AEW / rtw

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6. Waterproof the joint of the metal decking and mortar. Waterproof the joint of the metal decking and steel angle. Seal the joint between the steel angle and foundation wall with silicon-based caulk or approved equal.
7. Backfill the exterior of the vault with granular material compacted in place.
8. Dispose of all removed materials.
9. Repair any damage to the existing building caused by the construction operation at no additional cost to the City.

d. Measurement and Payment. The completed work as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Vault, Repair.....	Square Feet

Vault, Repair includes all labor, equipment and materials necessary to complete the work as described including removal operations and masonry work to close existing vaults.

The Engineer will measure the quantity for Vault, Repair by square foot of steel plate installed.

Removal of existing sidewalks and construction of proposed sidewalk over the repaired vaults will be paid for separately.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
RESTORATION

AEW / rtw

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0178-0008

a. Description. This work shall be done in accordance with the MDOT 2012 Standard Specifications for Construction, unless otherwise modified herein.

Restoration shall consist of, but not be limited to, providing all labor, materials, and equipment necessary for the preparation of the foundation for seeding, fertilizing and mulching all areas to be restored and the placement of topsoil, seed, fertilizer, mulch and watering as required.

c. Construction. The Contractor shall scarify and loosen the existing foundation to a depth of 3 to 4 inches, rototill the soil to a granular condition, rake the entire area to a smooth condition, remove debris and rocks over 1" in diameter brought to the surface by rototilling and raking, and cultipack the entire area to provide for a smooth seed bed. Place screened topsoil (2" depth), seed, fertilizer, and mulch at designated rates. Thoroughly water entire area upon initial placement. A minimum of two additional waterings as directed by the Engineer shall be required.

In general, restoration will be required in all landscape areas disturbed by the Contractor's operations. In those areas where restoration is required, the following rates of application will apply.

Topsoil.....	Screened.....	2 inches
Seed.....	Class A Seed Mixture.....	220 #/Ac
Fertilizer.....	Chemical Fertilizer Nutrient, Class A.....	228 #/Ac
Mulch.....	Mulch.....	2 Ton/Ac

d. Measurement and Payment. The work of restoring disturbed areas shall not be paid for separately, but shall be considered incidental to the appropriate construction item as shown in the plans or as directed by the Engineer.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TEMPORARY PEDESTRIAN TYPE II BARRICADE

OFS:RAL

1 of 2

APPR:CAL:CT:08-02-16

a. Description. This work consists of furnishing, installing, maintaining, relocating, and removing a temporary pedestrian Type II barricade section as identified in the proposal or on the plans. Use temporary pedestrian Type II barricades to close non-motorized facilities including sidewalks, bicycle paths, pedestrian paths, and shared use paths that are not part of the roadway. One pedestrian Type II barricade is defined as a barricade section at least 43 inches wide, including all supports, ballast, and hardware.

b. Materials. Provide a temporary pedestrian Type II barricade that meets the requirements of *National Cooperative Highway Research Program Report 350 (NCHRP 350)* or *Manual for Assessing Safety Hardware (MASH)*, in addition to meeting the following requirements:

1. Provide barricade sections at least 43 inches wide, designed to interconnect to ensure a continuous *Americans with Disabilities Act (ADA)* compliant tactile barrier. Ensure the connection includes provisions to accommodate non-linear alignment as well as variations in elevation at the installation area.

2. Ensure the top surface of the barricade is designed to function as a hand-trailing edge, and has a height between 32 and 38 inches. Ensure the lower edge of the barricade is no more than 2 inches above the surface of the non-motorized facility. Ensure the top edge of the bottom rail of the barricade is a minimum of 8 inches above the surface of the non-motorized facility. The barricade may have a solid continuous face. Finally, all features on the front face of the barricade (the face in contact with pedestrians) must share a common vertical plane.

3. Equip both sides of the barricade with bands of alternating 6-inch wide orange and white vertical stripes of reflective sheeting. Two bands of sheeting 6 inches tall and a minimum of 36 inches long containing at least two orange and two white stripes each are required. One band placed near the top and one near the bottom if the barricade section has a solid face. If the barricade consists of two rails, affix one band of sheeting to each rail. Ensure the stripes of reflective sheeting are aligned vertically. Ensure this sheeting meets or exceeds the requirements of *ASTM D 4956* Type IV sheeting.

c. Construction. Construct the temporary pedestrian Type II barricade in accordance with the manufacturer's recommendations, Michigan Manual on Uniform Traffic Control Devices (MMUTCD), the plans, and the following requirements:

1. Install the barricade as shown on the plans and as directed by the Engineer. Interconnect all barricade sections using hinge components if necessary to ensure a continuous detectable edge for the entire installation. Ensure the barricade is ballasted according to the manufacturer's recommendations to ensure stability during wind events and contact with pedestrians.

2. When the barricade is installed near motor vehicle traffic, ensure reflective sheeting is visible to motorists.

3. When pedestrian Type II barricades are used to close a non-motorized facility, ensure a sufficient number of barricade sections are used to block the entire width of the facility. The barricade may extend outside the edge of the non-motorized facility but must not be less than the full width of the facility.

4. If sections of multiple colored barriers are used (i.e. safety orange and white) install the sections such that the colors alternate to increase conspicuity.

5. Ensure pedestrian Type II barricades are not used to close a motor vehicle facility. Ensure these barricades are not used to guide pedestrian traffic on a motor vehicle facility in the presence of active traffic. This prohibition includes bicycle/shared use lanes or shoulders in the presence of active traffic.

d. **Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Pedestrian Type II Barricade, Temp	Each

Pedestrian Type II Barricade, Temp, includes all labor, equipment, and materials to furnish, install, maintain, relocate, and remove one barricade section that is at least 43 inches wide. Additional payment will not be made if wider sections are provided. This includes all rails, supports, ballast, hinge points, reflective sheeting, and miscellaneous hardware needed to install and maintain a barricade section.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
AUDIO-VISUAL RECORD OF CONSTRUCTION AREA

AEW / mav

1 of 5

0178-0008

a. Description. The Contractor shall furnish the Engineer a complete, color, audio-visual record in accordance with these specifications.

b. Qualifications. The audio-visual record of construction area shall be performed by a responsible commercial firm known to be qualified and regularly engaged in the business of color audio-visual construction documentation. The firm shall furnish such information as the Engineer deems necessary to determine ability to produce professional quality video in accordance with this specification.

c. Scheduling. The audio-visual recording shall be performed within a two (2) week period prior to staging of equipment or materials in the construction area. Deliverables shall be furnished to the Engineer a minimum of one (1) week prior to construction starting. No equipment or material shall be placed or delivered to the construction area prior to Engineer review of the audio-visual record.

The audio-visual recording shall be done during a time of good visibility. No recording shall be done during periods of visible precipitation or when more than ten percent (10%) of the ground area is covered with snow, unless authorized in writing by the Engineer.

The Contractor shall notify the Engineer seventy two (72) hours prior to any scheduled recording on private property. The Engineer shall notify affected property owners of scheduled recording and request permission. If permission is denied, Contractor shall ONLY perform recording from public Right-of-Ways (ROWs). The audio-visual record log shall note where permission for entry onto private property was requested and not obtained thereby limiting access to public ROWs only.

d. Coverage. The audio-visual coverage shall include all surface features located within the construction zone of influence. The construction zone of influence shall be defined as follows:

1. the area within any permanent and temporary easements and the areas adjacent to these easements which may be affected by routine construction operations;
2. the area within all road ROWs and the areas adjacent to these ROWs which may be affected by routine construction operations; and
3. as directed by Engineer.

The surface features within the construction zone of influence shall include, but not be limited to, all visible existing pavement, roadways, driveways, sidewalks, curbs, ditches, culverts, utility structures (manholes, gate wells, hydrants, catch basins, cleanouts, curb stop valves, etc.), landscaping, trees, shrubbery, fences, headwalls, retaining walls, and buildings.

CITY OF PONTIAC
SPECIAL PROVISION
FOR
AUDIO-VISUAL RECORD OF CONSTRUCTION AREA

AEW / mav

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0178-0008

Of particular concern shall be the existence and location of any faults, fractures, and defects.

Houses and buildings shall be identified visually by address, when visible, in such a manner that structures of the proposed system (i.e., manholes on a sewer system & gate wells and hydrants on a water system) can be located by reference. In all instances, however, location shall be identified by audio and visual means at intervals not to exceed 100 linear feet in the general direction of travel.

Areas which lie within the construction zone of influence and which are accessible by conventional wheeled vehicles shall be recorded on both sides of the ROW, easement or street.

The Engineer shall have the authority to designate areas to be added or omitted from audio-visual coverage.

e. Performance. All video shall be mastered in a high resolution digital format. Recording on VHS and transferring to DVD is not permitted.

To preclude the possibility of tampering or editing in any manner, all video must continuously display transparent digital information germane to the current video image. This information must be electronically incorporated through the original recording device.

The date and time of recording shall be continuously displayed in the upper left corner of the video. The time information shall consist of real time hours and minutes, separated by colons (i.e. 10:38 a.m.). The date information will include the month, day and year and be placed directly below the time information (i.e. 10/5/07).

Global Positioning System (GPS) location by Differential GPS Satellites shall be displayed in the bottom center of the video. GPS location shall update once per second at five (5) meter or less positional accuracy. GPS location display will be at one tenth (1/10) arcsecond longitude and one tenth (1/10) arcsecond latitude (i.e. N41o40'52.9" W83o17'30.2").

Information to assist the viewer's orientation will appear directly below the GPS location display. This information should be limited to one (1) line of text and be sufficient to allow a viewer to quickly identify the general location within the project area (i.e. "Esmt between First and Second", "Main St. – North ROW", "54321 Lincoln Ave", etc.).

Accompanying the video recording shall be a corresponding and simultaneously

CITY OF PONTIAC
SPECIAL PROVISION
FOR
AUDIO-VISUAL RECORD OF CONSTRUCTION AREA

AEW / mav

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0178-0008

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 image. Of particular concern shall be the existence and location of any faults, fractures, and defects.

When conventional wheeled vehicles are used, the distance from the camera lens to the ground shall be between eight (8) and ten (10) feet to ensure proper perspective. Vehicles used to perform the audio audio-visual record shall be plainly marked with Contractor name and phone number. Contractor is responsible for traffic maintenance and control.

The rate of speed in the general direction of the conveyance used during recording shall not exceed forty eight (48) feet per minute. Panning and zoom rates shall be electronically or manually controlled to provide clear viewing during playback.

In some instances, audio-visual coverage will be required in areas not accessible by conventional wheeled vehicles. Such coverage shall be obtained by walking or special conveyance approved by the Engineer.

f. Deliverables. The Contractor shall furnish to the Engineer two (2) copies of the complete audio-visual record of the construction area. The complete audio-visual record of the construction area shall consist of the audio-visual record logs, the audio-visual recording of the construction area, and an edited set of the construction drawings.

The audio-visual record log shall accurately catalog the contents of each DVD. A separate log shall be created for each DVD. Each log shall include the following information in the title/header section: Owner, Engineer, Project name, AEW project number, date of recording and unique DVD number. Additionally, each log shall include the following information for each individual segment:

1. Reference construction drawing sheet number;
2. Street name, easement description, or address;
3. Travel direction;
4. Real time code indexing for each individual segment, indicating hours, minutes and seconds to cross reference with playback equipment to locate specific points of interest on the project;
5. Camera viewing direction
6. Starting location – description, GPS location and approximate engineering stationing;

CITY OF PONTIAC
SPECIAL PROVISION
FOR
AUDIO-VISUAL RECORD OF CONSTRUCTION AREA

AEW / mav

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7. Ending location – description, GPS location and approximate engineering stationing.

Each individual segment must be intuitively delineated using intersections, addresses, landmarks, or in the absence of more distinguishing features, GPS location display. Examples of acceptable segment delineation include:

- North Main Street ROW from Seventh Ave to Eighth Ave;
- East Oak Street ROW from DTE Corridor to County Drain;
- South Lincoln Ave ROW from 54001 Lincoln to 54999 Lincoln;
- Water Main Easement from Washington Elementary to Second Street.

If GPS location display is used to delineate segments, each segment shall include no more than 500 linear feet.

The audio-visual recording of the construction area shall be furnished on new, premium quality, single sided DVD(s) in individual DVD case(s). If multiple DVDs are required to furnish the audio-visual recording of the construction area, each DVD will be assigned a unique number. DVD(s) must be of an "authored" format which can be played and viewed in a consumer available DVD player and personal computer (DVD-R, MPEG-2, uncompressed). Video shall be NTSC-525 format with 525 horizontal lines per frame, 60 fields per second and 30 frames per second (fps).

The DVD(s) shall have chapters, or tracks, set at five (5) minute intervals to facilitate viewer navigation.

The DVD(s) must not contain any copy protection. The Engineer must be able to make copies of the recording from the DVD to VHS, Video-CD, or additional DVDs.

All DVD(s) and DVD cases shall be labeled with applicable project information and be cross referenced to audio-visual record logs. Information on the label shall include:

1. Unique DVD number
2. Owner/Engineer
3. Project name
4. AEW project number
5. Date of recording
6. "Owner's copy" or "Engineer's copy", as applicable.

An edited set of the construction drawings shall include the complete engineering plan

CITY OF PONTIAC
SPECIAL PROVISION
FOR
AUDIO-VISUAL RECORD OF CONSTRUCTION AREA

AEW / mav

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0178-0008

set edited by the Contractor. Edits shall consist of delineating the points of beginning and ending of each individual segment, notation of unique DVD number of each individual segment, and an arrow indicating direction of travel for each individual segment. Edits shall be legibly written in red ink.

g. Acceptance. The Engineer shall have the authority to reject all or any portion of the audio-visual record not conforming to this specification.

h. Measurement and Payment. The completed work as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Audio-Visual Record of Construction Area.....	Lump Sum

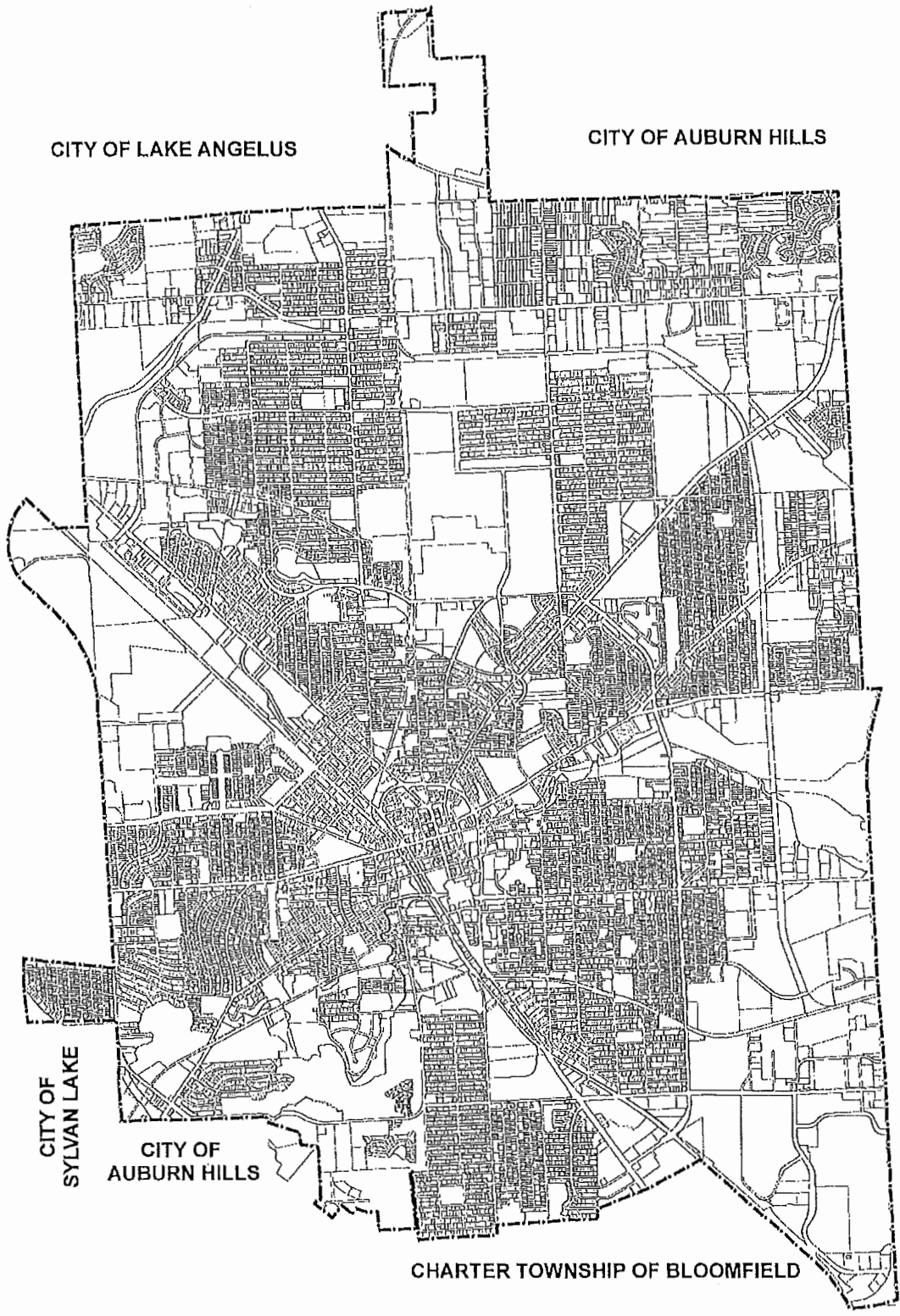


CITY OF LAKE ANGELUS

CITY OF AUBURN HILLS

CHARTER TOWNSHIP OF WATERFORD

CITY OF AUBURN HILLS



CITY OF SYLVAN LAKE

CITY OF AUBURN HILLS

CHARTER TOWNSHIP OF BLOOMFIELD

ANDERSON ECKSTEIN AND RYSTRICK, INC. ENGINEERS AND ARCHITECTS 12000 W. 130th St. Overland Park, KS 66204-3018	
PROJECT #	11117
DATE	8/21/2011
BY	SK
CHECKED BY	SK



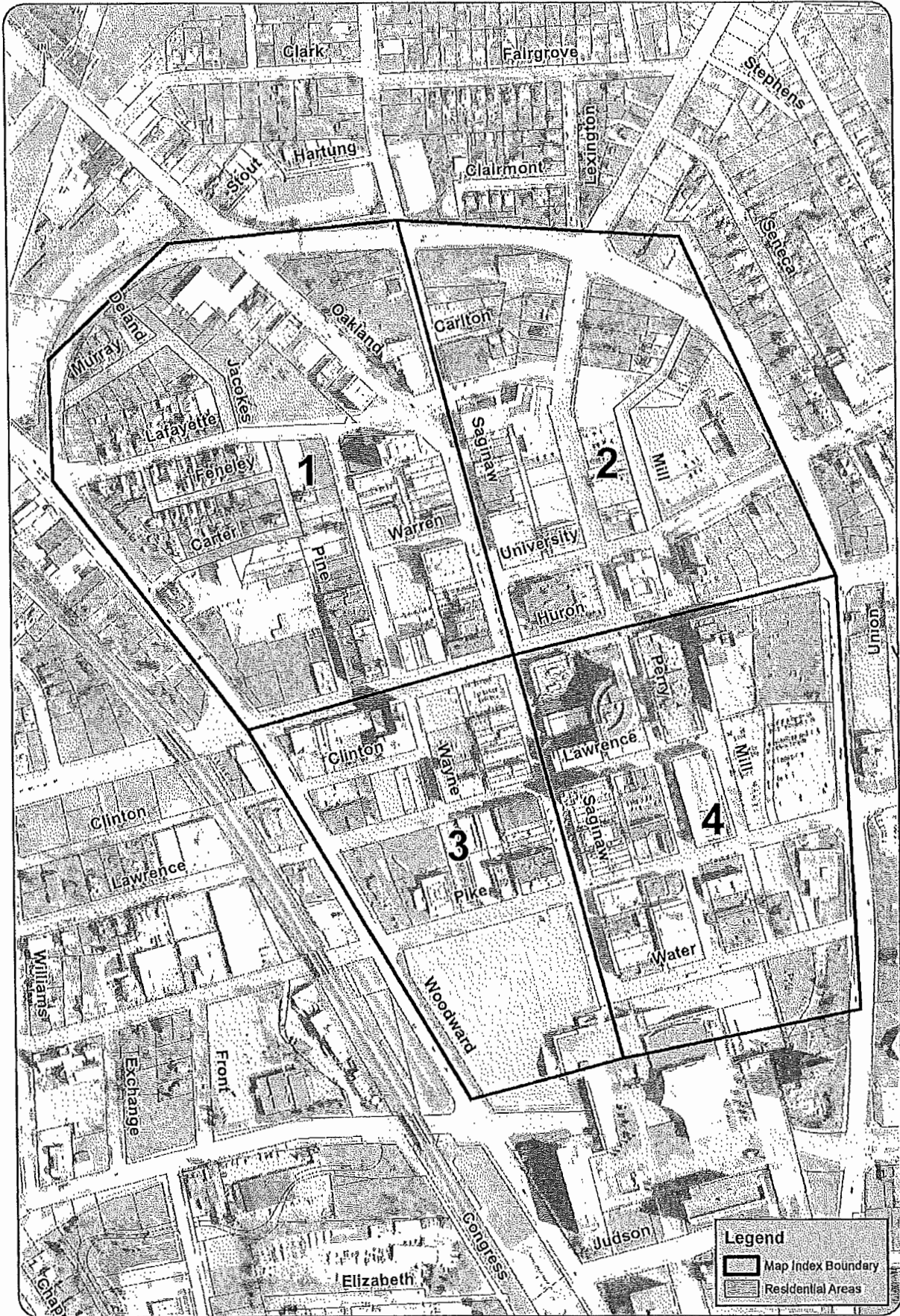
City of Pontiac


2021 FDCVT Downtown Sidewalks Project

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COVER





 ANDERSON, ECKSTEIN AND WESTRICK, INC. CIVIL ENGINEERS, SURVEYORS AND ARCHITECTS 10000 W. 12th Street, Suite 200 Detroit, MI 48227 (313) 963-1200			
OWNER	DATE	PROJECT	DATE
CITY OF PONTIAC	01/2021	2021 FDCVT DOWNTOWN SIDEWALKS PROJECT	01/2021
PROJECT NO.	DATE	PROJECT NO.	DATE
11117	01/2021	11117	01/2021
PROJECT	DATE	PROJECT	DATE
6338	01/2021	6338	01/2021



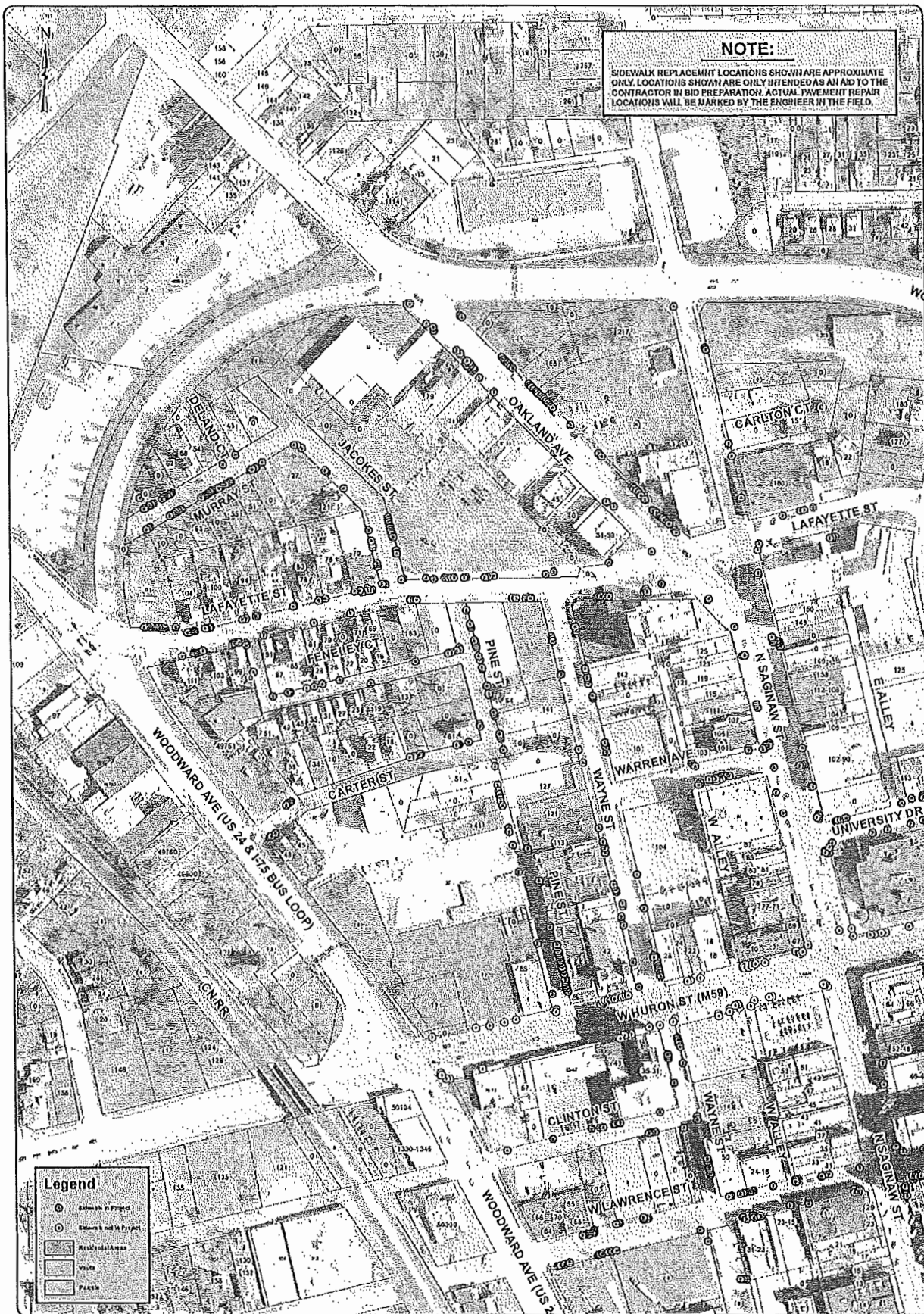
City of Pontiac

2021 FDCVT Downtown Sidewalks Project

Legend

-  Map Index Boundary
-  Residential Areas

ANDERSON, ECKSTEIN AND WESTRICK, INC. CIVIL ENGINEERS, SURVEYORS AND ARCHITECTS 10000 W. 12th Street, Suite 200 Detroit, MI 48227 (313) 963-1200	REFERENCE INDEX
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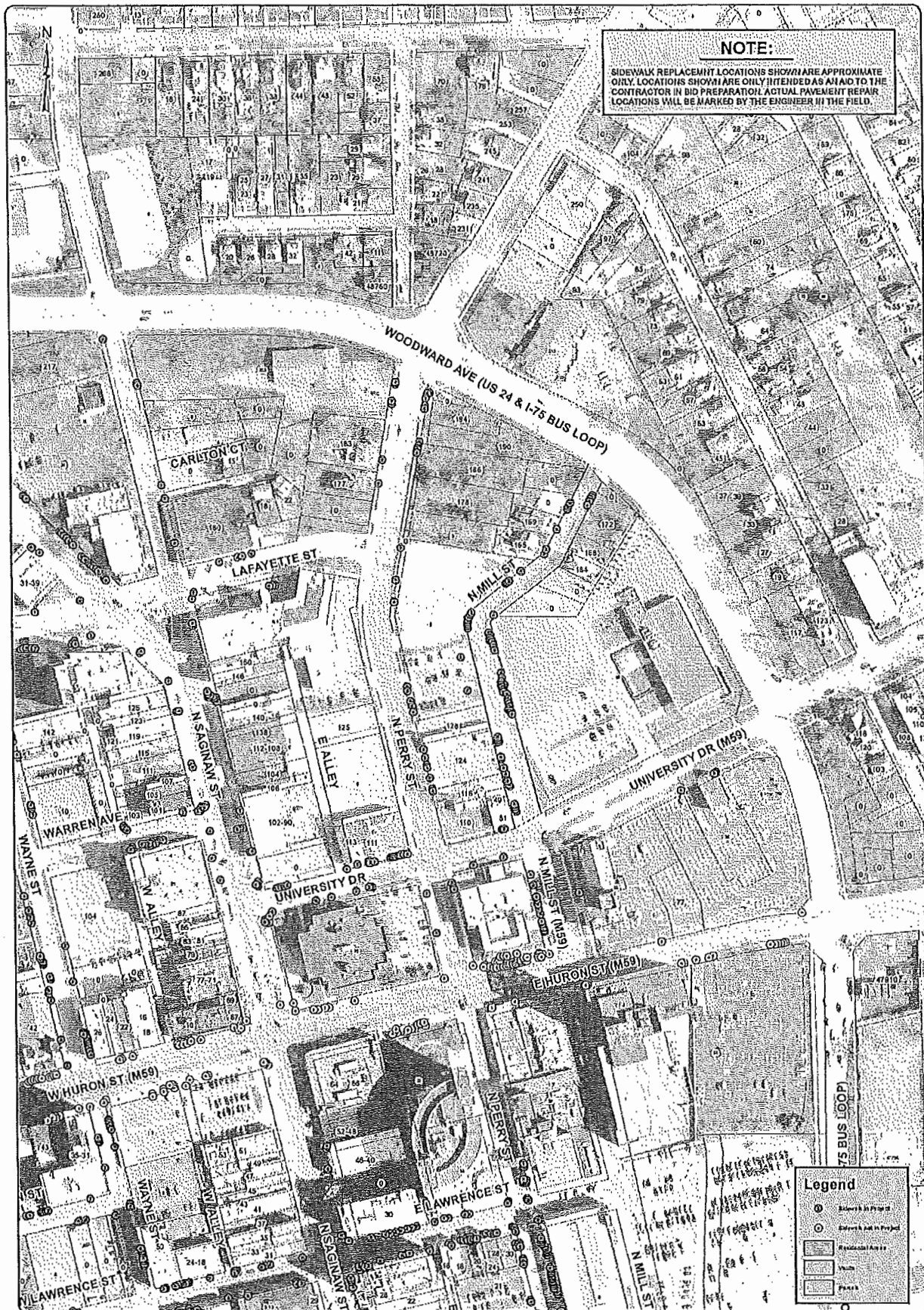


ANDERSON, ECKSTEIN AND WESTRICK, INC. CIVIL ENGINEERING SURVEYING AND DESIGN 1700 W. WOODWARD AVE. PONTIAC, MI 48130	
PROJECT NO. 474/2021 DRAWING NO. 318 DATE 01/11/21	PROJECT NO. 474/2021 DRAWING NO. 318 DATE 01/11/21
PROJECT NO. 474/2021 DRAWING NO. 318 DATE 01/11/21	PROJECT NO. 474/2021 DRAWING NO. 318 DATE 01/11/21
PROJECT NO. 474/2021 DRAWING NO. 318 DATE 01/11/21	PROJECT NO. 474/2021 DRAWING NO. 318 DATE 01/11/21



City of Pontiac
 2021 FDCVT Downtown Sidewalks Project

0 SUPPLEMENTAL MATERIAL 1 CITY OF PONTIAC 2 PONTIAC, MICHIGAN 3 PONTIAC, MICHIGAN	REFERENCE SHEET NO. 1
CAUTION THIS DRAWING IS THE PROPERTY OF ANDERSON, ECKSTEIN AND WESTRICK, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF ANDERSON, ECKSTEIN AND WESTRICK, INC.	

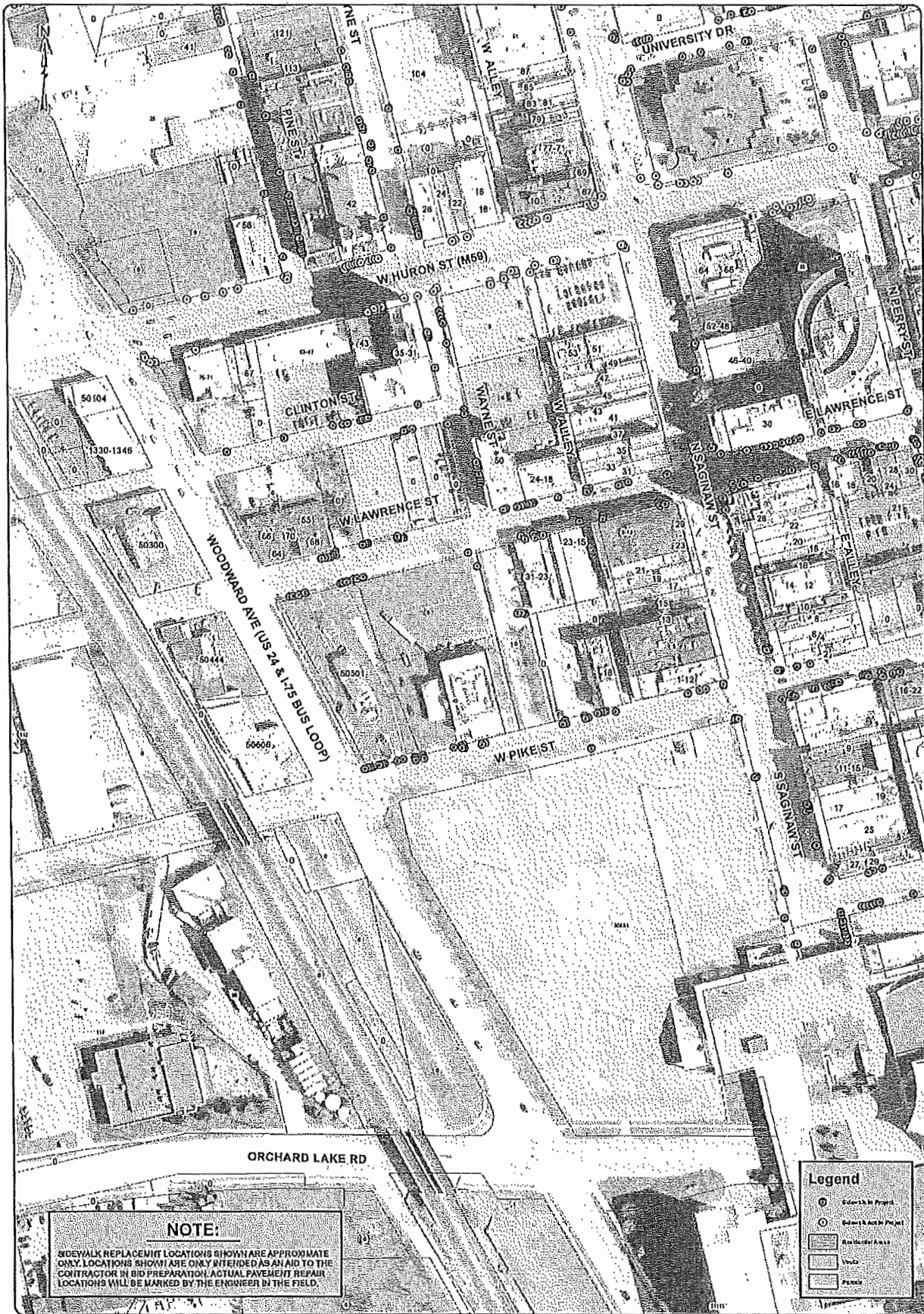


A&W		ANDERSON, FOLSTEIN AND WESTRICK, INC.	
600 BENTLEY ST. P.O. BOX 100		7725 E. 27th St. P.O. BOX 100	
PONTIAC, MICHIGAN 48106		PONTIAC, MICHIGAN 48106	
DATE: 07/13/10	PROJECT: 2021 FDCVT	DATE: 07/13/10	PROJECT: 2021 FDCVT
DRAWN BY: [blank]	SCALE: [blank]	CHECKED BY: [blank]	SCALE: [blank]
DATE: [blank]	BY: [blank]	DATE: [blank]	BY: [blank]



City of Pontiac
 2021 FDCVT Downtown Sidewalks Project

DESIGNED BY: [blank]	DATE: [blank]	PROJECT: [blank]
CHECKED BY: [blank]	DATE: [blank]	PROJECT: [blank]
DATE: [blank]	BY: [blank]	DATE: [blank]
DATE: [blank]	BY: [blank]	DATE: [blank]
LEGEND		
<p>○ Sidewalk in Progress</p> <p>● Sidewalk Not in Project</p> <p>▨ Proposed Area's</p> <p>▨ Vegetation</p> <p>▨ Pavement</p>		
CUSTOM		
<p>FOR MORE INFORMATION, CONTACT THE ENGINEER AT THE ADDRESS LISTED OR VISIT THE CITY OF PONTIAC WEBSITE AT www.cityofpontiac.org.</p>		
<p>2</p>		

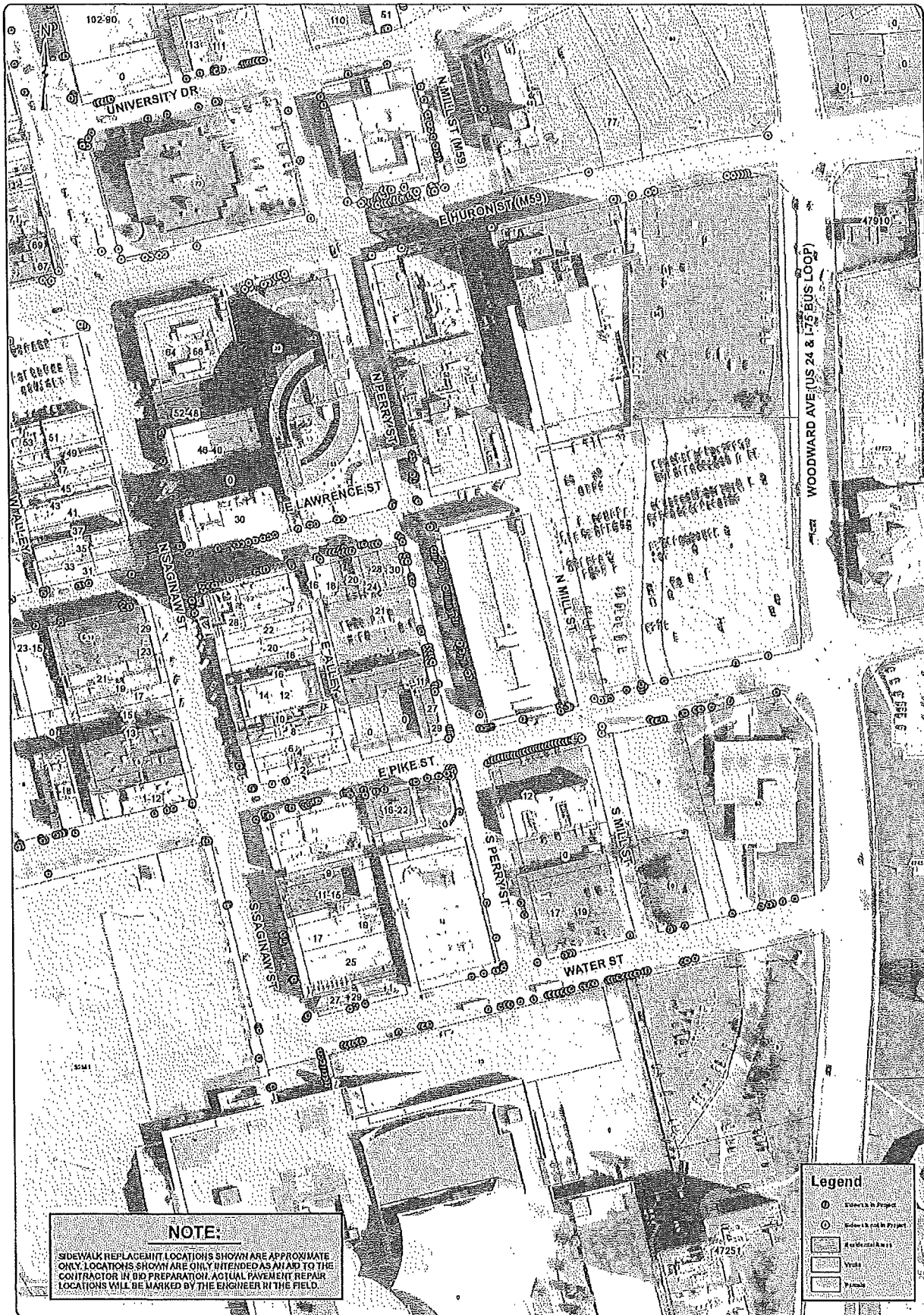


ANDERSON, FRESTIN AND WESTRICK, INC. DEVELOPMENT & ENGINEERING 1400 W. WOODWARD AVE. PONTIAC, MI 48134	
PROJECT NO. 2021-001 SHEET NO. 101 DATE 08/2021	DRAWN BY: J. WESTRICK CHECKED BY: J. WESTRICK DATE: 08/2021



City of Pontiac
 2021 FDCVT Downtown Sidewalks Project

PREPARED BY: J. WESTRICK CHECKED BY: J. WESTRICK DATE: 08/2021	SHEET NUMBER 3
CLIENT THE CITY OF PONTIAC, MICHIGAN 1400 W. WOODWARD AVE. PONTIAC, MI 48134	



ANDERSON, ECKSTEIN AND WESTRICK, INC. ENGINEERS & ARCHITECTS 1000 W. WASHINGTON ST. SUITE 200 PONTIAC, MI 48134	
PROJECT NO.	2021-001
DATE	08/11/2021
PROJECT NAME	2021 FDCVT DOWNTOWN SIDEWALKS PROJECT
SCALE	AS SHOWN



City of Pontiac
 2021 FDCVT Downtown Sidewalks Project

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. DATE OF DECLASSIFICATION: N/A.	REFERENCE SHEET NUMBER 4
REVISIONS NO. DATE BY DESCRIPTION	

#6

RESOLUTION



CITY OF PONTIAC

OFFICIAL MEMORANDUM

Executive Branch

TO: Honorable Mayor, Council President and City Council Members

FROM: Abdul H. Siddiqui, City Engineer

DATE: July 27, 2021

RE: Collier Road Landfill Stormwater Spillway Repairs – Catskill Remedial Contracting

The City of Pontiac received and publicly opened bids for the referenced improvement project on Thursday, July 15, 2021. The project involves the repair of damaged stormwater spillways at the Collier Road Landfill in Pontiac. These repairs are mandated by the State of Michigan's Department of Environment, Great Lakes, and Energy (EGLE).

A total of five (5) bids were received for the project in the amounts as follows:

1. Catskill Remedial Contracting	\$287,020.30
2. L. D'Agostini & Sons	\$382,940.00
3. D&R Earthmoving	\$511,960.60
4. Blaze Contracting, Inc.	\$614,901.50
5. Z Contractors, Inc.	\$774,850.00

The Engineering Division has reviewed the proposals and references submitted by all contractors and based on the attached is recommending the award to the low bidder, Catskill Remedial Contracting.

Construction is scheduled to start in early August with anticipated completion within ninety (90) days.

Funding for the project is identified in FY 21-22 Sanitation Fund.

Based upon the above information, it is recommendation of the Department of Public Works that the Collier Road Landfill Stormwater Spillway Repairs project be awarded to Catskill Remedial Contracting, in the amount of \$287,020.30.

WHEREAS, the City of Pontiac has advertised and received responses to a Request For Proposal for the Collier Road Landfill Stormwater Spillway Repairs project on July 15, 2021, and publically opened bids; and

WHEREAS, a bid tabulation was prepared and reviewed, and;

WHEREAS, the City identified the low bidder as Catskill Remedial Contracting, and references of the low bidder checked and found acceptable.

NOW, THEREFORE,

BE IT RESOLVED, The Pontiac City Council authorizes the Mayor to enter into a contract with Catskill Remedial Contracting for \$287,020.30 for the Collier Road Landfill Stormwater Spillway Repairs project.

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20__, by and between the City of Pontiac, Oakland County, Michigan, party of the first part, hereafter called the City, and Catskill Remedial Contracting _____, party of the second part, hereinafter called the Contractor:

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR shall commence and complete the construction of:

Collier Road Landfill Stormwater Spillway Repairs

in full conformance with the Contract Documents as enumerated in Article 6 of this Agreement.

2. The CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein, excepting those things which are specifically stipulated in the contract documents to be furnished or done by the City.

3. The CONTRACTOR shall commence the work required by the CONTRACT DOCUMENTS on or before the date stipulated in the NOTICE TO PROCEED and will complete the same on or before November 15, 2021. Time shall be considered to be of the essence of this Contract.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the contract price of:

\$ 287,020.30

unless the contract price is duly changed by the contract documents.

5. The CITY shall pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

6. The term "CONTRACT DOCUMENTS" means and includes the following:

- A. AGREEMENT
- B. BID BOND
- C. PERFORMANCE BOND
- D. LABOR AND MATERIAL BOND

E. MAINTENANCE BOND

F. CHANGE ORDER (Pursuant to General Conditions, Section 9)

G. ADDENDA:

No. _____, dated _____, 20____.

No. _____, dated _____, 20____.

No. _____, dated _____, 20____.

H. ADVERTISEMENT

I. INSTRUCTIONS TO BIDDERS

J. BIDDER'S PROPOSAL (Incl. final Compliance Plan as accepted by OWNER)

K. GENERAL CONDITIONS (Incl. SUPPLEMENTAL GENERAL CONDITIONS and SPECIAL CONDITIONS (if any))

L. SPECIFICATIONS (Incl. SUPPLEMENTAL SPECIFICATIONS and SPECIAL PROVISIONS (if any))

M. PLANS (As listed in Schedule of Drawings)

N. NOTICE OF AWARD

O. NOTICE TO PROCEED

This agreement, together with other documents enumerated in this ARTICLE 6, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 6 shall govern, except as otherwise specifically stated.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in three (3) copies, each of which shall be deemed an original, on the date first above written.

**CONTRACT AGREEMENT BETWEEN THE CITY OF PONTIAC
AND CONTRACTOR**

COLLIER ROAD LANDFILL STORMWATER SPILLWAY REPAIRS

CONTRACTOR: CATSKILL REMEDIAL CONTRACTING

In witness whereof, the parties have executed this agreement the day and year last written below.

WITNESSES:

1) _____ By: _____
2) _____ Its: _____

CITY OF PONTIAC

WITNESSES:

DEPARTMENT OF PUBLIC WORKS

1) _____ By: _____ Date
Allen Cooley
2) _____ Its: Acting Director

WITNESSES:

DEPARTMENT OF FINANCE

1) _____ By: _____ Date
Darin Carrington
2) _____ Its: Finance Director

WITNESSES:

RISK MANAGEMENT DIVISION

1) _____ By: _____ Date
2) _____ Its: Risk Management Administrator

WITNESSES:

OFFICE OF THE MAYOR

1) _____ By: _____ Date
Dierdre Waterman
2) _____ Its: Mayor

Approved as to form:

By: _____
_____, City Attorney



Memorandum

To: Abdul Siddiqui, P.E.
City of Pontiac

NTH Project No. 62-200245

From: David Lutz, P.E – NTH Consultants, Ltd. DocuSigned by:
David R. Lutz
2BF41F0D0F4749B...

Date: July 20, 2021 *(Revised August 3, 2021)*

Re: Collier Road Landfill Stormwater Spillway Repairs: Proposal Evaluation

On July 16, 2021, five contractors submitted proposals for the Collier Road Landfill Stormwater Spillway Repairs Project. The submitted pricing is as follows:

Base Bid – Spillway Repairs

<u>Contractor</u>	<u>Price Proposal (Compacted Clay Cap)</u>	<u>Price Proposal (GCL)</u>
Blaze Contracting Inc.	\$168,461.00	\$180,581.00
D&R Earthmoving	\$255,693.15	\$266,953.15
Z Contractors Inc.	\$295,700.00	\$298,700.00
Catskill Remedial Contracting	\$124,407.90	\$126,296.70
L. D'Agostini & Sons	\$141,430.00	\$135,830.00

Alternate Bid – Spillway Replacement

<u>Contractor</u>	<u>Price Proposal (Compacted Clay Cap)</u>	<u>Price Proposal (GCL)</u>
Blaze Contracting Inc.	\$602,781.50	\$614,901.50
D&R Earthmoving	\$500,700.60	\$511,960.60
Z Contractors Inc.	\$771,850.00	\$774,850.00
Catskill Remedial Contracting	\$283,745.10	\$287,020.30
L. D'Agostini & Sons	\$388,540.00	\$382,940.00

The bid tabulation is attached to this Memo as Figure No. 1.

PROPOSAL REVIEW

The proposals were reviewed for conformance with the Contract Documents. In addition, we reviewed the experience and references, verifying the Contractors familiarity with similar work. A tabulation of our Bid package checklist is also included in Figure No. 1.

Catskill Remedial Contracting, the low bidder, had previously submitted references for similar landfill projects in Ottawa County, Kent County, Washtenaw County, Oakland County, and Clinton County. NTH has confirmed the following past projects involving Catskill Remedial as a contractor on the following projects:

- Ottawa County Farms Landfill Overliner Cell Installation – Ottawa County
 - Installation of 7 acres of overliner cell
 - Project still ongoing
 - Currently on budget and on time

July 20, 2021, Rev. August 3, 2021

O:\Active PROJ\62-200245 Collier Rd. Downslope Channel Repair\720 - Letters\002-0720-LTR-REV.docx



- South Kent Landfill Berm Construction Project – Kent County
 - Construction of liner system berm around perimeter of landfill
 - Prime Contractor
 - Project completed with minor extension of time

DISCUSSION AND RECOMMENDATION

Based on our review of the proposal documents, Catskill Remedial Contracting appears to have the necessary experience and resources to perform the required work as described below:

- The appropriate financial, material, equipment, facilities, and personnel resources and expertise necessary to meet all contractual requirements.
- A satisfactory record of performance.
- A satisfactory record of integrity.

While Catskill did provide a mobilization fee outside of the 3% max allowed in the bid, the contractor did acknowledge this in the submittal and the City reserves the right to accept, reject or waive any defects in the proposals.

NTH has prior experience with Catskill Remedial Contracting in similar landfill-related construction. As their price proposal is the lowest responsive and responsible bid, we recommend consideration of Catskill Remedial Contracting for the Award of this Contract.

cc: Jack Cady – City of Pontiac
Samantha Grant - NTH
Duggan Dolowy - NTH

File
Attachment

**COLLIER ROAD LANDFILL
STORMWATER SPILLWAY REPAIRS**

Table 1 - Summary of Bids

Item	Bid Item Description	Unit	Quantity	Blaze Contracting Inc.		D&R Earthmoving		Z Contractors Inc.		Catakill Remedial		L. D'Agostini & Sons		Average Unit Price
				Unit Price	Extended Price	Unit Price	Extended Price	Unit Price	Extended Price	Unit Price	Extended Price	Unit Price	Extended Price	
1	Mobilization/Demobilization (3% Max)	LS	1	\$3,110.00	\$3,110.00	\$7,670.00	\$7,670.00	\$9,000.00	\$9,000.00	\$19,342.00	\$19,342.00	\$3,690.00	\$3,690.00	\$8,542.40
2	Silt Fence	LF	310	\$4.90	\$1,519.00	\$14.09	\$4,367.90	\$5.00	\$1,550.00	\$10.04	\$3,112.40	\$10.00	\$3,100.00	\$6.81
3	Riprap	CY	10	\$341.00	\$17,050.00	\$228.51	\$11,425.50	\$185.00	\$7,750.00	\$148.18	\$7,409.00	\$92.00	\$4,600.00	\$192.94
4	Reno Mattress	SF	1,800	\$20.75	\$37,350.00	\$14.00	\$25,200.00	\$65.00	\$117,000.00	\$14.97	\$26,946.00	\$14.00	\$25,200.00	\$28.74
5	Concrete Filled Geoweb	SY	90	\$235.00	\$21,150.00	\$280.78	\$25,270.20	\$300.00	\$27,000.00	\$173.99	\$15,659.10	\$100.00	\$9,000.00	\$217.95
6	Geotextile	SY	470	\$3.85	\$1,809.50	\$6.24	\$2,932.80	\$5.00	\$2,350.00	\$2.36	\$1,109.20	\$10.00	\$4,700.00	\$5.49
7	Compacted Clay Cap	CY	80	\$106.00	\$8,480.00	\$175.50	\$14,040.00	\$200.00	\$16,000.00	\$94.09	\$7,527.20	\$120.00	\$9,600.00	\$139.12
8	Geosynthetic Clay Liner (Alt. to Clay Cap)	SY	200	\$103.00	\$20,600.00	\$128.50	\$25,700.00	\$95.00	\$19,000.00	\$47.08	\$9,416.00	\$20.00	\$4,000.00	\$78.32
9	Flowable Fill (Allowance)	CY	100	\$348.00	\$34,800.00	\$310.00	\$31,000.00	\$225.00	\$22,500.00	\$226.83	\$22,683.00	\$340.00	\$34,000.00	\$289.97
10	Removal of Vegetation with Herbicide	SY	1,650	\$3.55	\$5,857.50	\$4.88	\$8,012.00	\$7.00	\$11,550.00	\$0.68	\$1,134.00	\$10.00	\$16,500.00	\$5.24
11	Man Gate and Fencing Restoration	LS	1	\$4,580.00	\$4,580.00	\$3,150.00	\$3,150.00	\$10,000.00	\$10,000.00	\$1,218.00	\$1,218.00	\$3,600.00	\$3,600.00	\$4,500.00
12	West Spillway Fence Protection	LS	1	\$4,030.00	\$4,030.00	\$2,515.00	\$2,515.00	\$5,000.00	\$5,000.00	\$2,425.00	\$2,425.00	\$1,810.00	\$1,810.00	\$3,156.00
13	Disposal of Existing Waste (Allowance)	CY	100	\$99.25	\$9,925.00	\$167.85	\$16,785.00	\$100.00	\$10,000.00	\$73.14	\$7,314.00	\$90.00	\$9,000.00	\$100.05
14	Site Restoration	LS	1	\$21,800.00	\$21,800.00	\$103,119.75	\$103,119.75	\$20,000.00	\$20,000.00	\$8,574.00	\$8,574.00	\$16,730.00	\$16,730.00	\$34,044.75
TOTAL (Compacted Clay Cap)				\$168,481.00		\$255,693.16		\$295,700.00		\$124,407.90		\$141,430.00		\$197,136.41
TOTAL (GCL)				\$160,561.00		\$266,953.16		\$296,700.00		\$126,296.70		\$135,830.00		\$201,872.17
ADD/DEDUCT UNIT PRICE ITEM														
9a	Flowable Fill Unit Price	CY	N/A	\$348.00	N/A	\$310.00	N/A	\$225.00	N/A	\$227.45	N/A	\$340.00	N/A	\$290.09
13a	Disposal of Existing Waste	CY	N/A	\$99.25	N/A	\$167.85	N/A	\$100.00	N/A	\$73.14	N/A	\$90.00	N/A	\$100.05

Correction made to submitted bid due to calculation

**COLLIER ROAD LANDFILL
STORMWATER SPILLWAY REPAIRS**

Table 2 - Bidders' Assumptions and Contingencies

Item	Blaze Contracting Inc.	D&R Earthmoving	Z Contractors	Catskill	L. D'Agostini & Sons
NTH Comments	References provided, but no similar projects listed	References Provided. Reputable, known Waste entities.	References provided, but no similar projects listed	References Provided. Reputable, known Waste entities. Most equipment rented. Mob Fee exceeds 3% Max.	References provided, but no similar projects listed. Better project listing of similar work nature than Blaze and Z Contractors.
Work Week	N/A	N/A	N/A	N/A	N/A
Subcontractor Work	Nationwide Construction Group, \$3200 for Gate	Several listed	N/A	Equipment and Materials. General in nature. Not specific	Reno Mattress Installation
Schedule	N/A	N/A	N/A	N/A	N/A
Additional Assumptions and Contingencies	None	<p>1. All work will be performed in Level D PPE.</p> <p>2. D&R Earthmoving, LLC will complete the project within 120 days of Notice to Proceed, however, our price does not include work in winter conditions or frozen ground.</p> <p>3. Bid is based on \$2.75 per gallon of Off-Road Diesel.</p> <p>4. All Waste & Vegetation to be loaded into containers, manifested and transported to a licensed waste facility. Price is based on all waste being non-hazardous, passing the Michigan 10 Metals and T-Clip testing.</p> <p>5. ALT Bid - All existing Concrete/Geoweb material will be removed, loaded into Michigan Trains and disposed of in a licensed waste facility. Price is based on all material being non-hazardous, passing the Michigan 10 Metals and T-Clip testing.</p> <p>6. Reno Mattress between Base Bid and Alternate Bid. Our Base Bid includes 6" thick reno mattress, filled with 6" thickness of 3"x5" Rip Rap. Alternate Bid includes 9" thick reno mattress, filled with 9" thickness of 4"x8" Rip Rap.</p> <p>7. Site Restoration includes improving the North haul road with approx. 12' of Asphalt Millings 25' wide by 2,000 LF long to allow access to the work site.</p>	None	<p>1. Bid does not include supply of topsoil</p> <p>2. Catskill proposes CETCO's Bentonite DN Geosynthetic Clay Liner (GCL) for the project.</p> <p>3. Catskill's bid does not include CGA, surveying, or material testing.</p> <p>4. Catskill recognizes that the Mobilization/Demobilization line item exceeds the 3% maximum of the entire bid total. This overage is due to the bid bond and material/equipment delivery fees.</p> <p>5. Catskill's bid assumes a standard concrete MDOT P1 mix design with 6AA coarse aggregate.</p> <p>6. Catskill's bid assumes a flowable fill mix contains Class C Fly Ash.</p> <p>7. See attached Fuel Clause. Assumes Diesel price of \$3.25/gallon. Clause stipulates adjustment if price goes up or down.</p>	None
Bid Submittals					
Bid Form	X	X	X	X	X
Bid Bond	X	X	X	X	X
Schedule of Prices	X	X	X	X	X
Equipment Listing	X	X	X	X	X
Schedule of Additional Labor Rates	N/A	N/A	N/A	N/A	N/A
Schedule of Additional Equipment Rates	N/A	N/A	N/A	N/A	N/A
Bidders References	Yes. See NTH Comments	X	Yes. See NTH Comments	X	Yes. See NTH Comments
Lists of Material Suppliers and Borrow Sources	?	X	?	?	?

**COLLIER ROAD LANDFILL
STORMWATER SPILLWAY REPAIRS**

Table 1 - Summary of Bids

Item	Bid Item Description	Unit	Quantity	Blaze Contracting Inc.		DAR Earthmoving		Z Contractors Inc.		Catakill Remedial		L. D'Agostini & Sons		Average Unit Price
				Unit Price	Extended Price	Unit Price	Extended Price	Unit Price	Extended Price	Unit Price	Extended Price	Unit Price	Extended Price	
1	Mobilization/Demobilization (3% Max)	LS	1	\$3,110.00	\$3,110.00	\$15,000.00	\$15,000.00	\$20,000.00	\$20,000.00	\$18,656.00	\$18,656.00	\$10,770.00	\$10,770.00	\$13,507.20
2	Silt Fence	LF	310	\$4.90	\$1,519.00	\$18.15	\$5,628.50	\$5.00	\$1,550.00	\$10.02	\$3,106.20	\$10.00	\$3,100.00	\$9.81
3	Riprap	CY	530	\$341.00	\$180,730.00	\$167.16	\$88,594.80	\$90.00	\$47,700.00	\$136.07	\$72,117.10	\$92.00	\$48,760.00	\$165.25
4	Demolish Existing Concrete Channels	LF	1,090	\$42.75	\$46,597.50	\$30.87	\$33,648.30	\$40.00	\$43,600.00	\$21.70	\$23,653.00	\$19.00	\$20,710.00	\$30.86
5	Reno Mattress	SF	18,300	\$15.25	\$282,125.00	\$9.29	\$171,865.00	\$30.00	\$555,000.00	\$5.63	\$104,185.00	\$11.00	\$203,600.00	\$14.23
6	Geotextile	SY	2,100	\$3.85	\$8,085.00	\$4.32	\$9,072.00	\$5.00	\$10,500.00	\$1.96	\$4,116.00	\$10.00	\$21,000.00	\$5.03
7	Compacted Clay Cap	CY	80	\$106.00	\$8,480.00	\$176.50	\$14,040.00	\$200.00	\$16,000.00	\$96.31	\$6,904.80	\$120.00	\$9,600.00	\$137.56
8	Geosynthetic Clay Liner (AIL to Clay Cap)	SY	200	\$103.00	\$20,600.00	\$129.50	\$25,900.00	\$95.00	\$19,000.00	\$50.90	\$10,180.00	\$20.00	\$4,000.00	\$79.06
9	Flowable Fill (Allowance)	CY	100	\$348.00	\$34,800.00	\$310.00	\$31,000.00	\$225.00	\$22,500.00	\$227.45	\$22,745.00	\$340.00	\$34,000.00	\$290.00
10	Man Gate and Fencing Restoration	LS	1	\$4,580.00	\$4,580.00	\$3,150.00	\$3,150.00	\$10,000.00	\$10,000.00	\$1,218.00	\$1,218.00	\$3,600.00	\$3,600.00	\$4,009.60
11	West Spillway Fence Protection	LS	1	\$4,030.00	\$4,030.00	\$2,515.00	\$2,515.00	\$5,000.00	\$5,000.00	\$2,425.00	\$2,425.00	\$1,810.00	\$1,810.00	\$3,156.00
12	Disposal of Existing Waste (Allowance)	CY	100	\$69.25	\$6,925.00	\$167.85	\$16,785.00	\$100.00	\$10,000.00	\$73.14	\$7,314.00	\$90.00	\$9,000.00	\$100.05
13	Site Restoration	LS	1	\$21,800.00	\$21,800.00	\$109,404.00	\$109,404.00	\$30,000.00	\$30,000.00	\$17,335.00	\$17,335.00	\$22,690.00	\$22,690.00	\$40,245.80
TOTAL (Compacted Clay Cap)					\$602,781.50		\$600,700.60		\$771,850.00		\$283,745.10		\$388,540.00	\$509,523.44
TOTAL (GCL)					\$614,801.50		\$611,960.60		\$774,850.00		\$287,020.30		\$392,940.00	\$514,334.48
ADDEDUCT UNIT PRICE ITEM														
9a	Flowable Fill Unit Price	CY	N/A	\$348.00	N/A	\$310.00	N/A	\$225.00	N/A	\$227.45	N/A	\$340.00	N/A	\$290.00
12a	Disposal of Existing Waste	CY	N/A	\$69.25	N/A	\$167.85	N/A	\$100.00	N/A	\$73.14	N/A	\$90.00	N/A	\$100.05

Correction made to submitted bid due to calculation

**COLLIER ROAD LANDFILL
STORMWATER SPILLWAY REPAIRS**

Table 2 - Bidders' Assumptions and Contingencies

Item	Blaze Contracting Inc.	D&R Earthmoving	Z Contractors	Catskill	L D'Agostini & Sons
NTH Comments	References provided, but no similar projects listed	References Provided. Reputable, known Waste entities.	References provided, but no similar projects listed	References Provided. Reputable, known Waste entities. Most equipment rented. Mob Fee exceeds 3% Max.	References provided, but no similar projects listed. Better project listing of similar work nature than Blaze and Z Contractors.
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Subcontractor Work	Nationwide Construction Group, \$3200 for Gate	Several listed	N/A	Equipment and Materials. General in nature. Not specific	Reno Mattress Installation
Schedule	N/A	N/A	N/A	N/A	N/A
Additional Assumptions and Contingencies	None	<p>1. All work will be performed in Level D PPE.</p> <p>2. D&R Earthmoving, LLC will complete the project within 120 days of Notice to Proceed, however, our price does not include work in winter conditions or frozen ground.</p> <p>3. Bid is based on \$2.75 per gallon of Off-Road Diesel.</p> <p>4. All Waste & Vegetation to be loaded into containers, manifested and transported to a licensed waste facility. Price is based on all waste being non-hazardous, passing the Michigan ID Metals and T-Clip testing.</p> <p>5. ALT Bid - All existing Concrete/Geotext material will be removed, loaded into Michigan Trains and disposed of in a licensed waste facility. Price is based on all material being non-hazardous, passing the Michigan ID Metals and T-Clip testing.</p> <p>6. Reno Mattress between Base Bid and Alternate Bid. Our Base Bid includes 6" thick reno mattress, filled with 6" thickness of 3"x5" Rip Rap. Alternate Bid includes 9" thick reno mattress, filled with 9" thickness of 4"x8" Rip Rap.</p> <p>7. Site Restoration includes improving the North haul road with approx. 12" of Asphalt Millings 25' wide by 2,000 LF long to allow access to the work site.</p>	None	<p>1. Bid does not include supply of lpspsol</p> <p>2. Catskill proposes CETCO's Bentomat DN Geosynthetic Clay Liner (GCL) for the project.</p> <p>3. Catskill's bid does not include CQA, surveying, or material testing.</p> <p>4. Catskill recognizes that the Mobilization/Demobilization line item exceeds the 3% maximum of the entire bid total. This overage is due to the bid bond and material/equipment delivery fees.</p> <p>5. Catskill's bid assumes a standard concrete MDOT P1 mix design with 6A coarse aggregate.</p> <p>6. Catskill's bid assumes a flowable fill mix contains Class C Fly Ash.</p> <p>7. See attached Fuel Clause. Assumes Diesel price of \$3.25/gallon. Clause stipulates adjustment if price goes up or down.</p>	None
Bid Submittals					
Bid Form	X	X	X	X	X
Bid Bond	X	X	X	X	X
Schedule of Prices	X	X	X	X	X
Equipment Listing	X	X	X	X	X
Schedule of Additional Labor Rates	N/A	N/A	N/A	N/A	N/A
Schedule of Additional Equipment Rates	N/A	N/A	N/A	N/A	N/A
Bidders References	Yes. See NTH Comments	X	Yes. See NTH Comments	X	Yes. See NTH Comments
Lists of Material Suppliers and Borrow Sources	?	X	?	?	?

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

CITY OF PONTIAC

**DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION**

**COLLIER ROAD LANDFILL
STORMWATER SPILLWAY REPAIRS
575 COLLIER ROAD
PONTIAC, MICHIGAN 48340**



BIDS DUE:

Thursday, July 15, 2021

2:00 pm

City Clerk's Office

Pontiac City Hall

47450 Woodward Avenue

Pontiac, MI 48342

PRE-BID MEETING:

Tuesday, June 29, 2021

10 am

Virtual Meeting

Link to be provided

in Addendum No. 1

ENGINEER

NTH Consultants, Ltd.
41780 Six Mile Rd., Suite 200
Northville, MI 48168
(248) 553-6300

NTH Job No.62-200245

CONTRACT DOCUMENTS
COLLIER ROAD LANDFILL STORMWATER SPILLWAY REPAIRS

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**CITY OF PONTIAC
ADVERTISEMENT FOR BIDS**

Notice to Contractors

Sealed proposals will be received at the office of the City Clerk, City Hall, 47450 Woodward Avenue, Pontiac, Michigan 48342, until **2:00 p.m., local time, Thursday, July 15, 2021**, at which time the bids will be publicly opened and read by the Clerk and the amounts of the bids noted for the:

Collier Road Landfill Stormwater Spillway Repairs

The scope of work consists principally of the following:

Base Bid Description

This project involves the repairs of the benches of two existing hard-armored spillways on the north side of Collier Road Landfill. The benches will be widened, reno mattresses will be placed over them, and riprap will be added around the perimeters of the benches. The project also requires the contractor to fill the voids under the undermined spillway benches with flowable fill and to make repairs as required per Part 115 rules to the 2' compacted clay cap, replacing it with either 2' of compacted clay or with a geosynthetic clay liner.

Bid Alternate Description

The bid alternate project scope involves the replacement of two existing hard-armored spillways on the north side of Collier Road Landfill. The existing hard-armored channels will be replaced with reno mattresses filled with riprap, the benches will be widened, and riprap will be added around the perimeters of the benches. The project also requires the contractor to fill the voids under the undermined spillway benches with flowable fill and to make repairs as required per Part 115 rules to the 2' compacted clay cap, replacing it with either 2' of compacted clay or with a geosynthetic clay liner.

The plans and specifications for this work will be available on **Tuesday, June 22, 2021** and must be obtained through www.bidnetdirect.com or the City's Purchasing webpage.

A mandatory pre-bid meeting will be held virtually **at 10 a.m. local time, Tuesday, June 29, 2021**. The meeting details will be included in Addendum No. 1. Contract requirements and technical specifications will be discussed in said meeting and it is mandatory that all prospective bidders attend.

Questions on the advertisement will be received until **5:00pm local time, July 6, 2021**. All questions should be directed in writing to the Engineer (David Lutz, P.E.; dlutz@nthconsultants.com) and the City (Abdul Siddiqui, P.E.; ASiddiqui@pontiac.mi.us). Responses will be distributed to all bidders.

A certified check or a satisfactory surety bid bond for a sum not less than five (5) percent of the amount of the proposal will be required with each proposal as a guarantee of good faith and same to be subject to the conditions stipulated in the Instructions to Bidders.

Bids submitted electronically will not be accepted.

The bidder will be required to comply with Michigan statutory prohibitions against discrimination in employment and with employment opportunities for City of Pontiac residents.

No proposal once submitted may be withdrawn for at least 90 days after the actual opening of the bids.

The right to accept any proposal, to reject any or all proposals, and to waive defects in proposals, is reserved by the City.

BY THE ORDER OF:

**DIERDRE WATERMAN, MAYOR
CITY OF PONTIAC**

**ALLEN COOLEY, ACTING DIRECTOR DPW
CITY OF PONTIAC**

INSTRUCTIONS TO BIDDERS

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Article

1. Proposal to be Received
2. Location of the Work
3. Inspection of the Site
4. Conformity to Plans, Specifications and Other Contract Documents
5. Basis on which Proposals are Solicited
6. Form of Proposal
7. Legal Status of Bidder
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INSTRUCTION TO BIDDERS

1. PROPOSALS TO BE RECEIVED

Sealed Bids or proposals for the:

COLLIER ROAD STORMWATER SPILLWAY REPAIRS

will be received at the office of the City Clerk of the City of Pontiac, Michigan until **2:00 p.m., local time, on Thursday, July 15, 2021**, and immediately thereafter will be publicly opened and read.

Each BID must be submitted in a sealed envelope, addressed to the City Clerk of the City of Pontiac. Each sealed envelope containing a BID must be plainly marked on the outside as:

COLLIER ROAD STORMWATER SPILLWAY REPAIRS

and the envelope should bear on the outside the name of the BIDDER, his address, his license number (if applicable) and the name of the project for which the BID is submitted. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the City Clerk, City of Pontiac, 47450 Woodward Ave., Pontiac, MI 48342.

Bids will be received during regular business hours at the place and up to the time stated in the Advertisement or up to the time extended by official notification. Bids may be delivered in person or mailed, but their delivery is the bidder's entire responsibility. Any bid received after the stated hour, even through the mail, will be returned unopened to the bidder. Bids submitted electronically will not be accepted.

No bidder may withdraw a bid within 90 days after the actual date of the opening thereof. Should there be reason why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the City of Pontiac, herein after also referred to as the City, and the BIDDER.

2. LOCATION OF THE WORK

COLLIER ROAD LANDFILL
575 COLLIER ROAD
PONTIAC, MICHIGAN, 48340

3. INSPECTION OF THE SITE

It is expected that each bidder will make a personal examination of the entire site of the proposed work and of its surroundings. It will be assumed that each bidder, before offering his proposal, has obtained firsthand information concerning any probable interference and the available facilities for transporting, handling, and storing construction equipment and materials, and concerning other conditions which may affect his work.

4. CONFORMITY TO PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS

Proposals must be made in full conformity to all the conditions as set forth in the Plans, Specifications, and any Addendum for the work now on file in the office of the City Engineer. The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the City or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

5. BASIS ON WHICH PROPOSALS ARE SOLICITED

A. PROPOSAL SOLICITATION

Proposals may be solicited on the basis of unit prices, lump sum, or a combination of both. The proposal will clearly state which basis is used.

The lump sum price, when applied to the project, or the unit prices, when applied to the several demolition or salvage items, are to make up the total price for the entire work, exclusive of those things which are to be done or furnished by the City, finished and complete in every particular, according to the Plans and Specifications appertaining to such work, which have been approved by the City Council and are now on file in the office of the City Engineer.

Where Proposals are solicited on the basis of unit prices for certain construction units, which are clearly set forth in the Form of Proposal, the Bidder shall state a unit price for each and every item listed in the Proposal and such prices shall be extended and totaled. If during the review of the Proposals, the City finds any errors in any extension or total, the City will make the necessary corrections and award the Contract on the basis of such corrections, since the unit prices shall govern. Any proposal which does not contain a unit price for each item listed will be deemed incomplete and will not be considered in the award of the Contract.

The unit price for each of the several items in the Proposal shall be such that the whole of the unit prices will represent a balanced bid. Any Proposal, in which the unit prices bid for any of the several items are deemed by the City to be manifestly unbalanced, will be subject to instant rejection.

B. STATEMENT OF QUANTITIES

The quantities indicated in the proposal show the Engineer's estimate of the construction quantities involved in the job, and bids will be computed, tested, and compared by the quantities given in the proposal. Although estimated carefully and with as much accuracy as is practicable beforehand, these quantities are not to be taken as defining or limiting the amount of work to be done under the Contract, but rather as information furnished to bidders concerning the approximate extent of the several items and as a basis for comparing bids.

The City may increase or decrease the original contract price without renegotiation of the Unit Prices.

C. MATERIALS TO BE FURNISHED BY THE CITY

The City will furnish to the Contractor, delivered at the site: **NONE**. The Contractor will receive and be responsible for all these materials from the time of their delivery to him until the time when they are received back by the City as part of the completed and accepted structure.

D. EXTRA WORK

All extra work that may be required of the Contractor will be estimated and paid for under provisions of the General Conditions, contained within this document, which govern such work.

E. ALTERNATES

When the Proposal so provides, a price shall be stated for each listed alternate. Unsolicited alternates are not to be submitted and, if so, will not be considered in the award of the Contract and may cause the entire bid to be rejected.

Selection of whether to award the Contract on the basis of the Base Bid or utilizing one or more of the Alternates will be made on the basis of value engineering and the City's need to keep project costs within the project budget. The City reserves full right to make this selection. After making such selection, the award shall be made on the basis of the lowest responsive bid utilizing the Alternates selected, and evaluated in accordance with the provisions of the Purchasing Ordinance of the City, in accordance with Article 15 of the Instructions to Bidders.

F. LEGAL CONDITIONS

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the contract throughout.

G. PERMITS AND LICENSES

Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS.

H. UTILITIES

Unless otherwise provided in these Specifications, the Contractor shall make his own arrangements for electricity, gas, water and sewer services for use during the construction of the work and shall pay for all connections, extensions, and services.

6. FORM OF PROPOSALS (Pages 13 through 18)

All proposals must be made in the form attached hereto, and without removal from the bound pamphlet. Additional copies of this proposal form for the bidder's files may be obtained on request at the office of the City of Pontiac Department of Public Works

All prices stated in the Proposal must be plainly expressed in figures only, and in the proper space or spaces provided. Prices shall be filled in, in ink or typewritten. Any corrections shall be initialed by the Bidder.

All information called for on the Proposal must be furnished to enable a fair comparison of the bids to be made. (Also see Instructions to Bidders, Section 10.)

The place of residence and phone number of each bidder, or the official address and phone number in the case of a firm or company, with County and State, must be given with the signature.

When bidder's drawings and/or specifications are required to be submitted, they shall be in sufficient detail to fully and distinctly show and describe the equipment which the bidder proposes to furnish, including the kind and quality of the material and workmanship that will be used in the various parts. If any general drawings, specifications, catalogs or any other literature are submitted which contain information or data not pertaining to the particular equipment proposed to be furnished, appropriate notations to that effect must be made.

Any stipulation or qualification contrary to the Contract requirements made by the bidder in or accompanying his proposal as a condition for the acceptance of the Contract will not be considered in the award of the Contract and may cause the rejection of the entire Proposal.

7. LEGAL STATUS OF BIDDER

The legal status of the bidder, that is, as a corporation, a partnership, or an individual, must be stated in the proposal. A corporation bidder must name the state in which its articles of incorporation are held, and must give the title of the official having authority under the by-laws to sign contracts. A partnership bidder must give the full names and addresses of all partners.

8. AGENCY

Anyone signing a proposal as agent of another or others must submit with the proposal legal evidence of his or her authority to do so.

9. BID DEPOSIT

When the Advertisement states that security is required with the Proposal to ensure the acceptance and execution of the Contract and Bonds, no bid will be considered complete unless so guaranteed.

Each proposal must be accompanied by a certified check of guaranty or a bid bond in an amount not less than five percent (5%) of the total price, drawn upon a solvent bank to the order of the City Treasurer of the City of Pontiac, or if a bond, executed by a surety company

acceptable to the City, as a guarantee of good faith on the part of the bidder and subject to the conditions stipulated in the proposal form.

A single certified check or guaranty (bidder's) bond may serve to cover two or more alternative proposals when such alternative proposals are submitted by the same bidder.

10. INTENTIONALLY LEFT BLANK

11. STATEMENT OF BIDDER'S QUALIFICATIONS

It is the intention of the City to award the Contract for this job to a Contractor whose construction skill and financial resources are fully equal to the task of prosecuting the work in a satisfactory manner and of bringing it to completion within the time limit specified. With this end in view, the Form of Proposal calls for a statement of bidder's experience and ability in this particular class of work, and for references concerning his/her business standing and capacity. Contractor shall list the names, addresses and phone numbers of references. The mere ability to offer bonds will not be taken as sufficient evidence of responsibility on the part of the bidder. If Contract is awarded to a foreign company, a certificate of authority to do business in this State must accompany the executed Contract.

The low BIDDER shall supply the names, addresses and phone numbers of major material SUPPLIERS and SUBCONTRACTORS when requested to do so by the CITY.

12. PAYMENTS

Partial payments will be made to the Contractor during the satisfactory progress of the work, calculated at the rate of ninety percent (90%) of the dollar amount of the work completed, until fifty percent (50%) of the established contract amount is in place. After fifty percent (50%) of the work is in place, additional retainage shall not be withheld unless the Contractor's progress is unsatisfactory, all in accordance with Article 13 of the General Conditions hereof and Act 524 of 1980.

13. TIME OF COMPLETION

This work to be done under the proposed Contract is to begin on or before the date stipulated in the Notice to Proceed and must be completed within **120 calendar days**, unless the date for completion is extended by the Contract Documents. Time shall be considered to be of the essence of this Contract.

14. RIGHT TO ACCEPT, TO REJECT, AND TO WAIVE DEFECTS

The City reserves the right to accept any proposal, to reject any or all proposals, and to waive any defect or irregularity in any proposal if it appears advantageous to the City to do so. In particular, any alteration, erasure, or interlineation in the Form of Contract in the Specifications which are attached hereto and made a part, specifically, of these Instructions, or of the Form of Proposal, shall render the accompanying proposal irregular and subject to rejection by the City. In case any explanations, additions or alterations are to be offered, they shall be indicated on separate sheets attached to the proposal and referred to therein. Proposals which are clearly unbalanced will also be considered as irregular, and will be subject to instant rejection by the City.

15. AWARD OF CONTRACT

The Contract will be awarded to the qualified Bidder submitting the lowest responsive Bid complying with the conditions of the Invitation for Bids and Pontiac Purchasing Ordinance. This Purchasing Ordinance provides a "benefit" for bids of Pontiac-based persons and is referred to as the "equalization percentage credit" (See Article 21 of the Instruction to Bidders). The Bidder's qualification and responsiveness shall be determined by the City of Pontiac. The Bidder to whom the award is made will be notified at the earliest possible date. The City reserves the right to reject all bids and not award the Contract, at its sole discretion.

16. OBLIGATION TO EXECUTE CONTRACT

The Bidder whose proposal is accepted will be required to execute the Contract, in the form attached hereto, and to furnish sureties as hereafter specified, within ten days (Sundays and legal holidays excepted), after receiving notice of acceptance of bid and preparation Contract forms is completed, and in case of the successful bidder's refusal or failure to do so, shall be considered to have abandoned all their rights and interests in the award, and their certified check or guaranty (bidder's) bond may be declared to be forfeited to the City as liquidated damages and not a penalty, and the Contract may be awarded to another.

17. BONDS

The successful bidder will be required to execute surety bonds, with sureties acceptable to the City. One such bond shall be a Performance Bond in the amount of 100 percent of the Contract Price on the form attached as pages 25 and 26 of the specifications. Another such bond shall be a Labor and Material Bond in the amount of 100 percent of the Contract Price on the form attached as pages 27 and 28 of the specifications. The Contractor shall also provide a Maintenance Bond in the amount of 100 percent of the Contract Price on the form attached as pages 29 and 30 of the specifications.

18. INDEMNIFICATION AND INSURANCE

To the fullest extent permitted by law, the successful bidder agrees to defend, pay on behalf of, indemnify, and hold harmless the CITY OF PONTIAC, its elected and appointed officials, employees and volunteers and others working on behalf of the CITY OF PONTIAC, against any and all claims, demands, suits, or loss, including all costs connected therewith, and for any damages which may be asserted, claimed or recovered against or from the CITY OF PONTIAC, its elected and appointed officials, employees, volunteers or others working on behalf of the CITY OF PONTIAC, by reason of personal injury, including bodily injury and death, and/or property damage, including loss of use thereof, which arises out of or is in any way connected or associated with this contract.

The successful bidder shall purchase and maintain in a company or companies licensed to do business in the State of Michigan, such insurance as will protect him from claims set forth below which may arise out of or result from the contractor's operations under the contract, whether such operations be by himself or any subcontractor or by anyone directly or

indirectly employed by any of them, or by anyone whose acts are associated with the project by any of them, may be liable.

a. Workers Compensation Insurance: The contractor shall procure and maintain during the life of the contract, Workers Compensation Insurance, including Employer's Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

b. Commercial General Liability Insurance: The contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance on an "Occurrence Basis" with the limits of liability not less than **\$2,000,000**, per occurrence and/or aggregate combined single limit, Personal Injury, Bodily Injury and Property Damage. Coverage shall include the following extensions: (1) Contractual Liability; (2) Products and Completed Operations; (3) Independent Contractors Coverage; (4) Broad Form General Liability Extensions or equivalent; and (5) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.

c. Motor Vehicle Liability: The contractor shall procure and maintain during the life of the contract, Motor Vehicles Liability Insurance, including Michigan No-Fault coverage, with limits of not less than **\$1,000,000**, per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles.

d. Additional Insured: Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following shall be **"Additional Insured"**. *"THE CITY OF PONTIAC, INCLUDING ALL ELECTED AND APPOINTED OFFICIALS, ALL EMPLOYEES AND VOLUNTEERS, ALL BOARDS, COMMISSIONS AND/OR AUTHORITIES AND THEIR BOARD MEMBERS, EMPLOYEES AND VOLUNTEERS" AND NTH CONSULTANTS, the project consultant.* (This coverage shall be primary to the Additional Insured, and not contributing with any other insurance or similar protection available to the Additional Insureds, whether said other available coverage be primary, contributing or excess.)

e. Cancellation Notice: Workers Compensation Insurance, Commercial General Liability Insurance, and Motor Vehicle Insurance, as described above, shall include an endorsement stating the following: ***"IT IS UNDERSTOOD AND AGREED THAT THIRTY (30) DAYS ADVANCE WRITTEN NOTICE OF CANCELLATION, NON-RENEWAL, REDUCTION AND/OR MATERIAL CHANGE SHALL BE SENT TO: CITY OF PONTIAC, RISK MANAGEMENT DIVISION, 47450 WOODWARD AVE., PONTIAC, MICHIGAN, 48342"***.

f. Owner's and Contractor's Protective Liability: The contractor shall procure and maintain during the life of this contract, a separate Owner's and Contractor's Protective Liability insurance coverage of not less than **\$2,000,000**, per occurrence and/or aggregate, combined single limit, Personal Liability, Bodily Injury, and Property Damage. The City of Pontiac shall be "Named Insured" on said coverage. Thirty (30) days Notice of Cancellation shall apply to this policy.

The successful bidder shall not commence work until he has obtained the insurance required under this section, nor shall the successful bidder permit any subcontractor to

commence work on his subcontract until the insurance required of the subcontractor has been obtained.

Certificates of Insurance, along with copies of original policies where applicable, acceptable to the City, shall be filed with the City of Pontiac, Risk Management Division, ten (10) days prior to commencement of the contract. A sample certificate is included on page **12a** for reference.

19. CITY INCOME TAX

a. Contractor agrees to contact City of Pontiac Income Tax Division, Audit and Compliance Section, 47450 Woodward Avenue, Pontiac, Michigan, 48342, telephone (248) 758-3236, to establish reporting and withholding obligations under the City of Pontiac Income Tax Ordinance. Contractor will require the same of all subcontractors employing labor under this contract.

b. Normally, the Contractor will be required to withhold City of Pontiac income tax if either of the following applies:

- (1) Performance under this contract (together with any other contracts in the City during the calendar year) will last 13 weeks or more.
- (2) Contractor employs one or more Pontiac residents for the performance of this contract.

c. Contractor agrees to pay any personal property taxes required by the City Assessor.

20. PRE-BID MEETING

A mandatory pre-bid meeting will be held virtually via zoom meeting on **Tuesday, June 29, 2021 at 10 a.m. local time.**

21. CITY OF PONTIAC PURCHASING ORDINANCE (Chapter 2, Article VI, Division 2) Municipal Code, City of Pontiac, Michigan, adopted March 21, 1996 and effective March 31, 1996.

Bidders are advised of the following provisions of the Purchasing Ordinance:

a. PUBLIC BIDS - EQUALIZATION PERCENTAGE CREDIT

An "equalization percentage credit" will be allowed for bids of Pontiac-based bidders. This means that bids by Pontiac-based bidders will be compared as if they were two percent (2%) less than their actual amount. The equalization percentage credit will be one percent (1%) if the lowest bid is \$100,000 or above. Not applicable to emergency purchases. Successful Pontiac - based bidder awarded on this basis may not sublet to non-Pontiac-based business.

b. CONTRACTOR OR VENDOR IN DEFAULT OR INDEBTED TO THE CITY

No bid shall be accepted from or contract awarded to any contractor or vendor who is in arrears to the City upon debt or contract including payments of real property taxes or an

income tax obligation of any kind, or who is in default as to security or otherwise upon an obligation to the City.

c. VIOLATIONS - MISREPRESENTATION

Any material misrepresentation to the City of Pontiac by a bidder or prospective bidder, contractor or vendor in any documentation or paperwork submitted in a bid or proposal or otherwise in connection with an attempt to obtain a contract or engage in a business transaction shall be a violation, and may be considered sufficient basis to disqualify the contractor or vendor from eligibility for the award of a City contract.

22. NON-DISCRIMINATION PROVISION

Pursuant to the requirements of 1976, P.A. 453 (Michigan Civil Rights Act) and 1976, P.A. 220 (Michigan Handicapped Rights Act), the bidder and any subcontractors agree not to discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, or due to a handicap that is unrelated to the person's ability to perform the duties of a particular job or position. The Bidder must include this provision in any subcontracts associated with the project work.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
11/03/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER FEDERATED MUTUAL INSURANCE COMPANY HOME OFFICE: P.O. BOX 320 OWATONNA, MN 55060	CONTACT NAME: CLIENT CONTACT CENTER	
	PHONE (A/O, No, Ext): 888-333-4949	FAX (A/O, No): 607-446-4684
E-MAIL ADDRESS: CLIENTCONTACTCENTER@FEDINS.COM		
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A: FEDERATED MUTUAL INSURANCE COMPANY	13935	
INSURER B:		
INSURER C:		
INSURER D:		
INSURER E:		
INSURER F:		

COVERAGES CERTIFICATE NUMBER: 62 REVISION NUMBER: 0

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	N	6069365	04/01/2018	04/01/2019	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) EXCLUDED PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGO \$2,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	N	N	6069365	04/01/2018	04/01/2019	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION	N	N	6069367	04/01/2018	04/01/2019	EACH OCCURRENCE \$1,000,000 AGGREGATE \$1,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	H/A	6069368	04/01/2018	04/01/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$500,000 E.L. DISEASE - EA EMPLOYEE \$500,000 E.L. DISEASE - POLICY LIMIT \$500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: 350 S SANFORD
THE CERTIFICATE HOLDER IS AN ADDITIONAL INSURED SUBJECT TO THE CONDITIONS OF THE ADDITIONAL INSURED - OWNERS, LESSEES OR CONTRACTORS - AUTOMATIC STATUS WHEN REQUIRED IN CONSTRUCTION AGREEMENT WITH YOU ENDORSEMENT FOR GENERAL LIABILITY.

CERTIFICATE HOLDER 157-815-6 CITY OF PONTIAC 47450 WOODWARD AVE PONTIAC, MI 48342-5009	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Michael G Kern</i>
--	--

CONTRACTOR: _____

EMAIL ADDRESS _____

FORM OF PROPOSAL

Date: _____

To the Honorable Mayor / City Council
City of Pontiac, Michigan

Ladies and Gentlemen:

Having carefully examined the site of the proposed work, and being fully informed in regard to the conditions to be met in the prosecution and completion of the work, and having read and examined the Instructions to Bidders, Agreement, Bonds, General Conditions, Plans and Specifications pertaining to this work, and agreeing to be bound accordingly, the undersigned proposes to furnish all the materials, labor, tools, power, transportation and construction equipment necessary for the satisfactory and complete construction of the **COLLIER ROAD STORMWATER SPILLWAY REPAIRS** in full accordance with and conformity to the specifications for this work now on file in the office of the City Engineer at and for the following named prices, to wit:

BASE BID PRICING TABLE

<u>Item No.</u>	<u>Description</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Bid Amount</u>
1.	Mobilization/Demobilization (3% Max)	1	LS	\$ _____	\$ _____
2.	Silt Fence	310	LF	\$ _____	\$ _____
3.	Riprap	50	CY	\$ _____	\$ _____
4.	Reno Mattress	1,800	SF	\$ _____	\$ _____
5.	Concrete Filled Geoweb	90	SY	\$ _____	\$ _____
6.	Geotextile	470	SY	\$ _____	\$ _____

7.	Compacted Clay Cap	80	CY	\$ _____	\$ _____
8.	Geosynthetic Clay Liner (Alt. to Clay Cap)	200	SY	\$ _____	\$ _____
9.	Flowable Fill (Allowance)	100	CY	\$ _____	\$ _____
10.	Site Restoration	1	LS	\$ _____	\$ _____

TOTAL BID AMOUNT: \$ _____

9a. Flowable Fill Unit Price (Add/Deduct) Per CY \$ _____

BID ALTERNATE PRICING TABLE

Item No.	Bid Alternate Description	Qty	Unit	Unit Price	Bid Amount
1.	Mobilization /Demobilization (3% Max.)	1	LS	\$ _____	\$ _____
2.	Silt Fence	310	LF	\$ _____	\$ _____
3.	Riprap	530	CY	\$ _____	\$ _____
4.	Demolish Existing Concrete Channels	1,090	LF	\$ _____	\$ _____
5.	Reno Mattress	18,500	SF	\$ _____	\$ _____
6.	Geotextile	2,100	SY	\$ _____	\$ _____
7.	Compacted Clay Cap	80	CY	\$ _____	\$ _____
8.	Geosynthetic Clay Liner (Alt. to Clay Cap)	200	SY	\$ _____	\$ _____
9.	Flowable Fill (Allowance)	100	CY	\$ _____	\$ _____
10.	Site Restoration	1	LS	\$ _____	\$ _____

TOTAL BID ALTERNATE AMOUNT: \$ _____

9a. Flowable Fill Unit Price (Add/Deduct) Per CY \$ _____

Contractor acknowledges receipt of the following Addendum(s):

Addendum No.: _____ Dated: _____
Addendum No.: _____ Dated: _____
Addendum No.: _____ Dated: _____

The Contractor acknowledges that he has not received nor relied upon any representations or warranties of any nature whatsoever from the City of Pontiac, its officers, employees or agents and that if he is awarded this contract, he shall enter into this Contract solely as the result of his own independent business judgment.

The undersigned acknowledges that he has made his own independent investigation and has satisfied himself as to the conditions of the work, including soil and subsurface conditions.

The undersigned agrees that, in case any additions or deductions in the amount of work contemplated are made, the above named unit prices for the various classes of work shall be used to allow for such additions or deductions.

The undersigned hereby agrees that if this Proposal shall be accepted by the said City, he will, within ten days after receiving notice of such acceptance and delivery of Contract forms thereof at the address given below (Sundays and legal holidays excepted), enter into contract, in the attached form, to construct the said work according to said plans and specifications and to furnish therefor all necessary equipment, tools and building appliances, materials, labor, power and transportation as aforesaid at and for the prices named in the foregoing paragraph; to furnish to the said City and to the State of Michigan such sureties for the faithful performance of such Contract and for the payment of all materials used therein and for all labor expended thereon as shall be approved and accepted by the said City; and to furnish to the said City of Pontiac a Maintenance Bond.

The undersigned attaches hereto a (certified check), (bidder's bond), in the sum of:

Dollars (\$ _____)

as required in the Instructions to Bidders. And the undersigned hereby agrees that, in case he shall fail to fulfill his obligations under the foregoing proposal and agreement, the said City may, at its option, determine that the undersigned has abandoned his rights and interests in such contract and that the certified check or bidder's bond accompanying this proposal has been forfeited to the said City as liquidated damages and not as a penalty; but, otherwise

The undersigned states that he currently owns or intends to rent the following equipment that will be used in work covered by this proposal:

List of Equipment Owned

List of Intended Rental Equipment

The undersigned states that he has done work similar in character to that covered by this proposal at the following named times and places, to wit:

The undersigned refers the said City to the following named parties for information concerning his experience, skill and business standing:

NAME, ADDRESS AND PHONE NUMBER:

Dated and signed at _____, MI on _____
(City) (Date)

Name of Bidder: _____

Address of Bidder: _____

Email Address: _____

By: _____

Title: _____

Telephone#: _____ Fax#: _____

Federal Tax I.D. Number (_____)

CERTIFICATIONS

IF A CORPORATION

I, _____, certify that I am the _____ of the corporation named as Contractor herein; that _____, who signed this Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Corporate Seal

Signature

IF A PARTNERSHIP

I, _____, certify that I am a partner in the partnership named as Contractor herein, and that I have authority to sign for and on behalf of this partnership consisting of the following partners:

NAME AND ADDRESS:

Signature

IF A SOLE PROPRIETORSHIP

I, _____, certify that I am the sole owner and proprietor.

Signature

BIDDER'S PARTICIPATION PLAN (continued)

SUBCONTRACTING AND PROCUREMENT

The following is the bidder's analysis of **all** substantial subcontracting and procurement opportunities that are expected on the project (including major supply or rental items). Dollar estimates shown are approximate. Larger second tier items are also included.

(1)	(2)	(3)
Procurement or Subcontract Item (Type)	Dollar Estimate	Comment

Check here to acknowledge the requirement for a final Subcontractor/Supplier schedule to be executed by the bidder and accepted by the City prior to the execution of the contract for this project.

This plan for participation is part of the proposal submitted this date

Name of Bidder	Name of Signer	Signature	Date
-----------------------	-----------------------	------------------	-------------

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____
_____ as Principal,
and _____ as Surety, are
hereby held and firmly bound unto the City of Pontiac, Michigan, as OWNER in the
penal sum of:

_____ Dollars (\$ _____)

for the payment of which, well and truly to be made, we hereby jointly and severally bind
ourselves, successors and assigns. Signed, this _____ day of _____, 20 _____.

The Condition of the above obligation is such that whereas the Principal has
submitted to the City of Pontiac, Michigan, a certain BID, attached hereto and hereby
made a part hereof to enter into a contract in writing, for the

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a
contract in the Form of Contract attached hereto (properly completed in
accordance with said BID) and shall furnish a BOND for his faithful performance
of said contract, and for the payment of all persons performing labor or furnishing
materials in connection therewith, and shall in all respects perform the agreement
created by the acceptance of said BID, then this obligation shall be void,
otherwise the same shall remain in force and effect; it being expressly understood
and agreed that the liability of the Surety for any and all claims hereunder shall, in
no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal (L.S)

Surety (L.S.)

By: _____

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 540 as amended) and be authorized to transact business in the State of Michigan.

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20__, by and between the City of Pontiac, Oakland County, Michigan, party of the first part, hereafter called the City, and _____, Michigan, party of the second part, hereinafter called the Contractor:

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR shall commence and complete the construction of:

in full conformance with the Contract Documents as enumerated in Article 6 of this Agreement.

2. The CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein, excepting those things which are specifically stipulated in the contract documents to be furnished or done by the City.

3. The CONTRACTOR shall commence the work required by the CONTRACT DOCUMENTS on or before the date stipulated in the NOTICE TO PROCEED and will complete the same within **120 calendar days**, unless the date for completion is extended otherwise by the CONTRACT DOCUMENTS. Time shall be considered to be of the essence of this Contract.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the contract price of:

unless the contract price is duly changed by the contract documents.

5. The CITY shall pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

6. The term "CONTRACT DOCUMENTS" means and includes the following:

- A. AGREEMENT
- B. BID BOND
- C. PERFORMANCE BOND
- D. LABOR AND MATERIAL BOND

- E. MAINTENANCE BOND
- F. CHANGE ORDER (Pursuant to General Conditions, Section 9)
- G. ADDENDA:
 - No. _____, dated _____, 20____ .
 - No. _____, dated _____, 20____ .
 - No. _____, dated _____, 20____ .
- H. ADVERTISEMENT
- I. INSTRUCTIONS TO BIDDERS
- J. BIDDER'S PROPOSAL (Incl. final Compliance Plan as accepted by OWNER)
- K. GENERAL CONDITIONS (Incl. SUPPLEMENTAL GENERAL CONDITIONS and SPECIAL CONDITIONS (if any))
- L. SPECIFICATIONS (Incl. SUPPLEMENTAL SPECIFICATIONS and SPECIAL PROVISIONS (if any))
- M. PLANS (As listed in Schedule of Drawings)
- N. NOTICE OF AWARD
- O. NOTICE TO PROCEED

This agreement, together with other documents enumerated in this ARTICLE 6, which said other documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that any provision in any component part of this Contract conflicts with any provision of any other component part, the provision of the component part first enumerated in this ARTICLE 6 shall govern, except as otherwise specifically stated.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in three (3) copies, each of which shall be deemed an original, on the date first above written.

**CONTRACT AGREEMENT BETWEEN THE CITY OF PONTIAC
AND CONTRACTOR**

COLLIER ROAD STORMWATER SPILLWAY REPAIRS

CONTRACTOR: _____

In witness whereof, the parties have executed this agreement the day and year last written below.

WITNESSES:

1) _____ By: _____
2) _____ Its: _____

CITY OF PONTIAC

WITNESSES:

DEPARTMENT OF PUBLIC WORKS

1) _____ By: _____
Allen Cooley Date
2) _____ Its: Acting Director

WITNESSES:

DEPARTMENT OF FINANCE

1) _____ By: _____
Hughey P. Newsome Date
2) _____ Its: Interim Director

WITNESSES:

RISK MANAGEMENT DIVISION

1) _____ By: _____
_____ Date
2) _____ Its: Risk Management Administrator

WITNESSES:

OFFICE OF THE MAYOR

1) _____ By: _____
Dierdre Waterman Date
2) _____ Its: Mayor

Approved as to form:

By: _____
_____, City Attorney

CERTIFICATIONS

IF A CORPORATION

I, _____, certify that I am the _____ of the corporation named as Contractor herein; that _____, who signed this Agreement on behalf of the Contractor, was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.*

Corporate Seal

Signature

* Attach copy of corporate resolution verifying authorization of individuals named above.

IF A PARTNERSHIP

I, _____, certify that I am a partner in the partnership named as Contractor herein, and that I have authority to sign for and on behalf of this partnership consisting of the following partners:

NAME AND ADDRESS:

Signature

IF A SOLE PROPRIETORSHIP

I, _____, certify that I am the sole owner and proprietor.

Signature

BOND FOR FAITHFUL PERFORMANCE

KNOW ALL MEN BY THESE PRESENTS, That _____
_____ as principal, and

_____, as surety, are held and
firmly bound unto the City of Pontiac, Michigan, a Municipal Corporation, in the sum of:

good and lawful money of the United States of America, to be paid to said City of Pontiac, its legal representatives and assigns, for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, and each and every one of them, jointly and severally, firmly by these presents.

Sealed with our Seals and dated this _____ day of _____ A.D. 20 _____.

WHEREAS, the above named principal has entered into a certain written contract with the City of Pontiac, dated this _____ day of _____ A.D. 20 _____, wherein the said principal covenanted and agreed as follows, to-wit:

TO COMMENCE AND COMPLETE the:

COLLIER ROAD STORMWATER SPILLWAY REPAIRS

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS such that if the above named principal or their legal representatives or successors, shall in all things well and truly keep and perform the covenants, conditions, and agreements in the manner and form and at the time agreed upon to be kept and performed as provided by said contract, and plans, drawings, and specifications, referred to in said contract, and as may be required by the changes, alterations, and modifications thereof, as provided in said contract, then the above obligation shall be void; otherwise to remain in full force and effect.

This bond is given upon the express condition that any changes, alterations, or modifications that may be hereafter ordered or made in the construction and complete installation of the work herein referred to, or the placing of an inspector or superintendent thereon by the City of Pontiac shall not operate to discharge or release the surety or sureties thereon.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their respective authorized officers this _____ day of _____ A.D. 20 _____.

Signed, Sealed and Delivered in the Presence of:

_____	_____ (L.S.)
_____	_____ (L.S.)
_____	_____ (L.S.)

**LABOR AND MATERIAL BOND TO THE
CITY OF PONTIAC, MICHIGAN**

KNOW ALL MEN BY THESE PRESENTS, That _____

_____ as principal, and _____

_____, as surety, are

held and firm bound unto the City of Pontiac, Michigan, a Municipal Corporation, in the sum of:

good and lawful money of the United States of America, pursuant to Michigan State Public Act 213 of 1963, to be paid to the City of Pontiac, Michigan, for the use and benefit of all subcontractors, and persons, firms and corporations who shall furnish materials, supplies and perform labor entering into the work of:

COLLIER ROAD STORMWATER SPILLWAY REPAIRS

for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, and each and every one of them jointly and severally, firmly by these presents.

Sealed with our Seals and dated this _____ day of _____ A.D. 20_____.

WHEREAS, the above named principal has entered into a certain written contract with the City of Pontiac, dated this _____ day of _____ A.D. 20_____, wherein the said principal covenanted and agreed as follows, to wit:

TO COMMENCE AND COMPLETE the: _____

COLLIER ROAD STORMWATER SPILLWAY REPAIRS

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above named principal, legal representatives, or successors shall pay or cause to be paid to all subcontractors, persons, firms, and corporation, as the same may become due and payable, all indebtedness which may arise from said principal to a subcontractor or party performing labor or furnishing materials and supplies, or any subcontractor to any person, firm or corporation on account of any labor performed or materials and supplies furnished in connection with the contract, construction and work herein referred to, then this obligation shall be void; otherwise to remain in full force and effect.

This bond is given upon the express condition that any changes, alterations, or modifications that may be hereafter ordered or made in the construction and complete installation of the work herein referred to, or the placing of an inspector or superintendent thereon by the City of Pontiac shall not operate to discharge or release the surety or sureties thereon.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their respective authorized officers this _____ day of _____ A.D. 20 _____.

Signed, Sealed and Delivered in the Presence of:

_____	_____ (L.S.)
_____	_____ (L.S.)
_____	_____ (L.S.)

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS, That _____

_____ as principal, and _____

_____, as surety, are held

and firm bound unto the City of Pontiac, Michigan, a Municipal Corporation, in the sum of:

_____ good and lawful money of the United States of America, pursuant to Michigan State Public Act 213 of 1963, to be paid to the City of Pontiac, Michigan, for the use and benefit of all subcontractors, and persons, firms and corporations who shall furnish materials, supplies and perform labor entering into the work of:

COLLIER ROAD STORMWATER SPILLWAY REPAIRS

for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, and each and every one of them jointly and severally, firmly by these presents.

Sealed with our Seals and dated this _____ day of _____ A.D. 20 _____.

WHEREAS, the above named principal has entered into a certain written contract with the City of Pontiac, dated this _____ day of _____ A.D. 20 _____, wherein the said principal covenanted and agreed as follows, to wit:

TO COMMENCE AND COMPLETE construction of:

COLLIER ROAD STORMWATER SPILLWAY REPAIRS

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that by and under said contract, the above named principal has agreed with the City of Pontiac that for a period of ONE year(s) from the date of payment of Final Estimate, to keep in good order and repair all the work, done under said contract, excepting only such part or parts of said work as may have been disturbed without the consent or approval of the principal after the final acceptance of the work, and that whenever directed so to do by the City Engineer of the City of Pontiac by notice served in writing, either personally or by mail, on the principal at:

_____ or _____

legal representative, or successors, or on the surety at: _____

_____ WILL PROCEED at once to make such

repairs as directed by said City Engineer; and in case of failure so to do within one week from the date of service of such notice, or within reasonable time not less than one week, as shall be fixed in said notice, then the City of Pontiac shall have the right to purchase such materials and employ such labor and equipment as may be necessary for the purpose, and to undertake, do and make such repairs, and charge the expense thereof to, and receive same from said principal or surety. If any repair is necessary to be made at once to protect life and property, then and in that case, the City may take immediate steps to repair or barricade such defects without notice to the contractor. In such accounting the City shall not be held to obtain the lowest figures for the doing of the work or any part thereof, but all sums actually paid therefore shall be charged to the principal or surety. In this connection the judgment of the City Engineer is final and conclusive. If the said principal for a period of ONE year(s) from the date of payment of Final Estimate, shall keep said work so constructed under said contract in good order and repair, excepting only such part or parts of said work which may have been disturbed without the consent or approval of said principal after the final acceptance of the same, and shall, whenever notice is given as hereinbefore specified, at once proceed to make repair as in said notice directed, or shall reimburse said City of Pontiac for any expense incurred by making such repairs, should the principal or their surety do so as hereinbefore specified, then the above obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be

executed by their respective authorized officers this _____ day of _____ A.D.

20 _____.

Signed, Sealed and Delivered in the Presence of:

_____ (L.S.)

_____ (L.S.)

_____ (L.S.)

GENERAL CONDITIONS

The following general conditions are agreed to as defining certain relationships which shall be taken to exist between the parties hereto and as setting forth certain conditions under which the Contract is to be fulfilled.

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Article

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2. Plans and Specifications
3. Shop Drawings
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GENERAL CONDITIONS

Article 1 - DEFINITIONS

- 1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:
- 1.2 ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS by additions, deletions, clarifications or corrections.
- 1.3 BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed. (See 1.8)
- 1.4 BIDDER - Any person, firm or corporation submitting a BID for the WORK.
- 1.5 BONDS - Bid, Performance, Labor and Material, and Maintenance Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.
- 1.6 CHANGE ORDER - A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.
- 1.7 CITY - The City of Pontiac, Michigan, or its properly authorized representatives; and whenever the term "City Council", "Mayor", "City Clerk", "Director of Finance", "City Engineer", or "Engineer", is used, it shall be understood to mean the Council, Mayor, Clerk, Director of Finance, or Engineer of the said City.
- 1.8 PARTICIPATION PLAN - The participation document required to accompany each proposal, as finally accepted by the City, including any revisions up to the time of acceptance.
- 1.9 CONTRACT DOCUMENTS - The Contract, including ADVERTISEMENT, INSTRUCTIONS TO BIDDERS, FORM OF PROPOSAL, BID BOND, AGREEMENT, LABOR & MATERIAL BOND, PERFORMANCE BOND, MAINTENANCE BOND, GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, PLANS, SPECIFICATIONS, ADDENDA, and the PARTICIPATION PLAN, and any other documents specifically set forth in the Agreement.
- 1.10 CONTRACT PRICE - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

- 1.11 CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK on each street; or the number of calendar days from the date established in the NOTICE TO PROCEED to the DATE stated in the CONTRACT DOCUMENTS for the completion of all of the WORK of the TOTAL CONTRACT; or both.
- 1.12 CONTRACTOR - The person, firm or corporation with whom the CITY has executed the Agreement, or its legal representatives.
- 1.13 ENGINEER - The City Engineer and/or the person, firm or corporation named as such in the CONTRACT DOCUMENTS.
- 1.14 FIELD ORDER - A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.
- 1.15 NOTICE OF AWARD - The written notice of the acceptance of the BID from the CITY to the successful BIDDER.
- 1.16 NOTICE TO PROCEED - Written communication issued by the CITY to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.
- 1.17 OPEN TO TRAFFIC - That date as certified by the ENGINEER, when the WORK (PROJECT) or any section thereof is in a suitable condition for safe travel. The term "SUITABLE CONDITION FOR SAFE TRAVEL" shall be construed to mean that all work, INCLUDING the Leveling Course of Bituminous Material and all Concrete Work are complete. The PROJECT, or any portion thereof may be designated as "Accepted for Traffic" prior to completion of the whole project, and shall be opened to traffic as may be directed by the ENGINEER. In general, the term "OPEN TO TRAFFIC" shall be in accordance with Section 107.21 of the MDOT 2012 Standard Specifications for Construction.
- 1.18 PLANS - The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.
- 1.19 PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- 1.20 RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the CITY who is assigned to the PROJECT site or any part thereof.
- 1.21 SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other

data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

- 1.22 SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship (may include SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS).
- 1.23 SUBCONTRACTOR - An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.
- 1.24 SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.
- 1.25 WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.
- 1.26 WORK ORDER - A written order to the CONTRACTOR causing a change in WORK involving the authorization to undertake additional work at existing contract unit prices or at new contract unit prices for new items of work.
- 1.27 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

Article 2 - PLANS AND SPECIFICATIONS

The location of the structures and improvements which are to be built or made under this Contract, and the character, form and dimensions of their various parts, are shown in the accompanying drawings, specifications and details in the Contract Document entitled:

Collier Road Stormwater Spillway Repairs

These drawings constitute the Plans according to which the work of this Contract is to be done. Additional drawings may be prepared by the City Engineer and supplied to the Contractor during the progress of the work, as he may deem to be necessary or expedient. All such additional drawings, made in elaboration or explanation of the original drawings, are to be considered as part and parcel of the Plans and shall be respected and followed as such by the Contractor.

The Plans are supplemented and explained by a set of technical specifications, which are appended hereto, and which describe and define the quality of materials and the character of workmanship which are to enter into the work of this Contract. These are the Specifications which are referred to in Article 1, and elsewhere in this Contract. Additional specifications in further elaboration or explanation of the work to be done may be prepared by the City Engineer and supplied to the Contractor during the progress of the work, as he may deem to be necessary or expedient. Such additional specifications are to be considered as part and parcel of the specifications under this Contract, and shall be respected and followed as such by the Contractor.

Both Plans and Specifications are considered as essential parts of this Contract, and are intended to be cooperative. They shall be construed as supplementary each to the other, and any work called for in the Plans and not particularly mentioned in the Specifications, or described in the Specifications and not specially shown on the Plans, is to be regarded as included under this Contract the same as if fully set forth in the Specifications and exhibited on the Plans. Wherever figures or definite dimensions are given on the Plans or in the Specifications, these shall have precedence over dimensions taken by scaling.

In case any inconsistency, omission, or conflict shall be discovered in the Specifications or Plans, or if in any place the meaning of either or both shall be obscure or uncertain or in dispute, the City Engineer shall decide as to the true intent and his decision shall be final and binding. Any such inconsistencies, omissions, or conflict noted should be called to the attention of the Engineer, and a decision on the same obtained in advance.

Article 3 - SHOP DRAWINGS

- 3.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER's approval of any SHOP DRAWINGS shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.
- 3.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.
- 3.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

Article 4 - MATERIALS AND WORKMANSHIP

It is mutually understood that all materials and workmanship furnished under this Contract shall be of the highest quality, to the end that a good and substantial and workmanlike job may be produced. The Contractor shall bring only first class materials to the work, and he shall furnish suitable tools and equipment and shall employ competent labor to perform the work to be done. Any materials or labor or tools or equipment that shall not, in the judgment of the Engineer, be suitable or competent to produce the desired result, may be ordered from the work by the Engineer, and such materials or labor or tools or equipment shall be promptly substituted therefor by the Contractor as will meet with the approval of the Engineer. Wherever a brand or name is given, it is for the purpose of defining or establishing a type or quality of material only.

4.1 Defective Materials

Any materials or fabricated articles furnished by the Contractor to be used in this work which shall not, in the judgment of the Engineer, be equal to the requirements of the Plans and Specifications, may be rejected by the Engineer; and such rejected materials or articles shall not be used, but shall be immediately removed by the Contractor from the site of the work.

4.2 Stored Materials

Materials and equipment distributed, stored or placed upon or near the site of the work shall be at all times so disposed as not to interfere with work being prosecuted directly by the City or by other Contractors in the City's employ or with access thereto, and not to hinder any more than may be necessary the ordinary pedestrian and vehicular traffic of the streets.

4.3 Property Rights in Surplus Materials

All excess materials excavated during the progress of the work and not required for backfilling, all timber except tree stumps cut from the right-of-way, and all other materials which have been encountered and handled during construction operations, and which constitute a disposable surplus at the end of the construction period, shall be the property of the Contractor, unless otherwise directed by the City or its Engineer. Such materials shall be hauled and neatly piled, or hauled and dumped at the places designated by the Engineer, at no extra compensation.

4.4 Water Supply

Water for construction purposes may be taken from the City mains subject to the rules of the Oakland County Water Resources Commissioner's office.

Article 5 - SUPERINTENDENCE BY CONTRACTOR

- 5.1 Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the City and the Engineer, on the work at all times during working hours with full authority to act for the Contractor. Any orders by the Engineer given to and received by said superintendent shall be deemed to have been given to and received by the Contractor. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work. The Contractor shall maintain a complete set of plans and specifications at the site.
- 5.2 The Contractor may set up and establish an office on or near the site. On certain large projects, the Engineer may direct the Contractor to set up an office.
- 5.3 The Contractor shall lay out his own work and he shall be responsible for all work executed by him under the Contract. He shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

5.4 Disorderly Employees

Disorderly, intemperate, or incompetent persons must not be employed, retained, or allowed upon the work site. Any foreman or workman who refuses or neglects to comply with the directions of the Engineer in the matter of personal conduct shall, at the request of the Engineer, be promptly discharged and shall not thereafter be re-employed without the consent of the Engineer.

5.5 Relation to Other Contractors

The Contractor shall so conduct his operations as not to interfere with or injure the work of other Contractors or workmen employed by the City on adjoining or related work, and he shall promptly make good any injury or damage which may be done to such work by him or his employees or agents. Should a contract for adjoining work be awarded to another Contractor, and should the work on any one of these contracts interfere with that of the other, the Engineer shall decide which Contractor shall cease work for the time being and which shall continue or whether the work on both contracts shall continue at the same time and in what manner. In case the territory of one contract should be the necessary means of access to another contract, the Engineer shall have power to grant reasonable privileges with respect to the transportation or movement of men, animals, appliances or materials as he may adjudge to be necessary or expedient and in the best interests of the City. Any decision which the Engineer may make as to the method and time of conducting work or the use of territory shall not be made the basis of any claim for damages, but an extension of time may be claimed, if justified by the circumstances, the same as in the case of other delays caused by the acts of the

City. Any difference of opinion or conflict of interest which may arise between this Contractor and other Contractors or workmen of the City in regard to adjoining work shall be determined and adjusted by the Engineer.

5.6 Time and Sequence of Work

In general, it is the intention and understanding that the Contractor shall have control over the sequence or order of execution of the several parts of the work to be done under this Contract, and over the methods of accomplishing the required results, except as some particular sequence or method may be distinctly demanded by the Plans and Specifications or by the express provisions of this Contract; the Engineer may, however, make such reasonable requirements as may, in his judgement, be necessary for the proper and effective protection of work partially or wholly completed, and to these requirements, the Contractor shall strictly conform.

5.7 Sunday and Night Work

No Sunday work shall be done except in case of emergency or to protect from damage or injury any work that has already been done, and then only with the written consent of the Engineer, and only to such an extent as he may judge to be necessary.

Ordinarily, no night work shall be carried on which will require the presence of the Engineer or an inspector, except with the written permission of the Engineer. Night work is permissible in an emergency to the extent required to meet the emergency, but the Contractor shall notify the Engineer, as far as possible in advance, of his intentions to carry on such emergency work and of the time and place of doing it.

Article 6 - ENGINEERING SUPERVISION¹

The work covered by this Contract will be executed under the engineering supervision of the City Engineer, who shall have authority to inspect all materials and workmanship entering into the work, to furnish all instructions and information regarding the Plans and Specifications that may be necessary, to supply supplementary or additional plans or specifications as he may deem expedient, and to point out to the Contractor any disregard of any of the provisions of the Contract; but the right of final acceptance or condemnation of the work will not be waived at any time during its progress.

The Engineer will set suitable stakes and marks showing the locations and elevations of various parts of the work and the Contractor shall provide such labor and assistance as the said Engineer may require in setting the same. The Contractor shall take due and proper precautions for the preservation of these stakes and marks, and shall see to it that the work at all times proceeds in accordance therewith. The Engineer may provide for the inspection of any or all materials or workmanship used or intended to be used under this Contract, by assistants under his direction or otherwise, as he may deem to be advisable or expedient; but no inspection shall relieve the Contractor of his fundamental obligation to fully respect all the requirements of his Contract. Such inspection may cover any or all parts of the work, and may extend to and include the preparation or manufacture of any materials or fabricated articles intended to be incorporated in the work. The Contractor shall furnish, upon request therefor by the Engineer, such

samples for examination or testing as the Engineer may prescribe. The Contractor shall furnish such labor and assistance as may be necessary for the proper handling of materials in all inspections and tests that may be required.

The Engineer and his duly authorized agents and employees may, at any time and for any purpose, enter upon the work and upon the premises occupied by the Contractor, and the Contractor shall provide proper and safe facilities by which the Engineer may have access to such parts of the work as may be required.

Article 7 - CITY'S RIGHT TO COMPLETE; SUSPENSION OR TERMINATION

It is agreed that the City has the right, when it shall become satisfied that the work provided for in this Contract will not be completed within the time limit, to furnish additional labor and material if necessary and render such other assistance as it may deem advisable, for the completion of said Contract, at the expense of the Contractor, and may retain the same out of the Contract price, or recover the same by legal proceedings.

It is agreed that the Mayor has the right to determine finally all questions as to proper performance of this Contract, or any part or portion thereof, and in case of improper, dilatory or imperfect performance thereof, to suspend the work at any time and to order the partial or entire reconstruction of the same, and if at any time the said Contractor shall abandon the work of this Contract or become habitually negligent of his obligations under it, or shall fail to prosecute the work with reasonable diligence, so that the time of final completion of the work shall be unnecessarily and intolerably delayed, or if he shall violate any of the provisions of the Contract, then and in such case the Mayor may declare this Contract forfeited and may, at address given in the proposal, notify him to discontinue all work under this Contract, or any part thereof, and thereupon he shall discontinue such work, or such part thereof, and shall cease to have any right to the possession of the ground; and the City shall thereupon have the right to complete the work or any part thereof by Contract or otherwise, as it may elect, and for that purpose to take possession and make use of such materials, tools, building appliances, and equipment as may be found upon the work, and to charge the expense thereof to the Contractor. Power is hereby given the Mayor to determine all such questions under this Contract, according to the true intent and meaning thereof.

All expenses charged under this provision shall be deducted and paid by the City of Pontiac out of any monies then due to the Contractor under this Contract, or any part thereof, and in such accounting the City of Pontiac shall not be held to obtain the lowest figures for the work of completing the contract, or any part thereof, or for insuring its proper completion, but all sums actually paid therefor shall be charged to the Contractor. In case the expenses to be charged are less than the sum which would have been payable under this contract if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference; and in case such expenses shall exceed the said sums, the Contractor shall pay the amount of the excess to the City of Pontiac.

Article 8 - ASSIGNMENT OF CONTRACT

It is agreed that the Contractor shall not assign or transfer this Contract, or subcontract any part of the work embraced in it, except with the written consent of the Mayor to do so.

It is further agreed that all parts of the work which may be performed by a subcontractor shall conform to the Plans and Specifications and be subject to all provisions of this Contract exactly as if performed by the Contractor and his immediate employees and workmen. No such letting of the work shall, in any way, diminish or weaken the responsibility of the Contractor for all parts of the work or lessen his obligation under this Contract.

It is likewise agreed that the Contractor shall not assign, either legally or equitably, any of the monies payable to him under this Contract, or his claim thereto, except with the written consent of the Mayor.

Article 9 - EXTRA WORK AND MODIFICATION

It is agreed that the said Contractor shall do such incidental or extra work in connection with this Contract as the Mayor may especially order in writing. If such extra work or any part thereof be of such character that it may be definitely covered by construction items for which unit prices are named in the proposal of this Contract, then and in that case the City will pay, and the Contractor will accept as full compensation for such extra work, or such part thereof, the amount computed by applying the unit prices to the quantities of extra work falling under the several items. Also, such extra work may be paid for at prices mutually agreed upon at the time by the City and the Contractor. But if such extra work, or any part thereof, be of a kind which may not be definitely covered by the regular pay items of this contract, and if no price therefor has been mutually agreed upon in advance, or if the work is of such a nature that it cannot be estimated with fair exactness in advance, then the City will pay, and the Contractor will accept as full compensation for such, an amount equal to the actual and necessary net cost in money to the Contractor for labor and materials actually used therein or expended thereon, plus fifteen percent (15%) of such net cost for superintendence, power, the use of tools, and plant, liability insurance, and all overhead and incidental expenses.

During the progress of any extra work which is to be paid for on the basis of net cost plus fifteen percent (15%), the Contractor will furnish to the City Engineer, at the end of each day, suitable time slips showing the name of and the number of hours worked by each workman employed thereon, the nature of work performed by him, and his rate of pay, together with suitable and adequate memoranda of the materials used therein, showing the character and amount of each such material, the source from which it was purchased, and the price paid or to be paid therefor.

The City may, at its discretion, furnish to the Contractor any materials or supplies or transportation required for extra work, and the Contractor shall not be entitled to any allowance or percentage on account of materials or supplies or transportation so furnished.

It is agreed that all extra work that may be ordered and performed under the provisions of this article shall be done by the Contractor in an effective and workmanlike manner, and shall be subject to the same restrictions and liabilities as those which apply to the general work of this Contract; and the Contractor will be responsible for the maintenance and protection of such extra work until the time of the final acceptance of the entire job by the City.

And it is further agreed that no claim against the City on account of extra work shall be valid unless such extra work has been previously ordered in writing by the Mayor, and unless such claim has been presented for payment as soon as practicable after the completion of such extra work and before the making up of the final estimate.

When it becomes necessary in the prosecution of any work or improvement under contract to make minor alterations or modifications of such contract or the plans and specifications thereof, such alterations, changes or modifications shall be made only on the written order of the Mayor.

No such order shall be made until the price to be paid for the work or material or both and the credits, if any, to be allowed by the City under the altered and modified Contract shall have been agreed upon in writing and signed by the Contractor and by the Mayor.

Article 10 - DISPUTED CLAIMS FOR EXTRA COMPENSATION

If any inconsistency, omission, or conflict is discovered in either the plans or the specifications, or if in any place the meaning of either the plans or the specifications, or both, is obscure, or uncertain, or in dispute, the Engineer will decide as to the true intent.

In case the Contractor deems extra compensation is due for work or materials not clearly covered in the contract, or not ordered by the Engineer as extra work, or due to changed or altered conditions, the Contractor shall notify the Engineer in writing of the Contractor's intention to make claim for such extra compensation before beginning work on which the Contractor intends to base a claim and shall afford the Engineer every facility for keeping actual cost of the work. The Contractor and the Engineer shall compare records and bring them into agreement at the end of each day. Failure on the part of the Contractor to give such notification or to afford the Engineer proper facilities for keeping strict account of actual cost will constitute a waiver of the claim for such extra compensation except that consideration will be given to claims to the extent that they are substantiated by City records. The determination of extra compensation made by the City, where the Contractor has failed to give proper notice of his claim for extra compensation as provided herein or has failed to afford the Engineer proper facilities for keeping strict account of actual costs, shall be final and binding on the Contractor. The filing of such notice by the Contractor and the monitoring of cost by the Engineer for said notice of claim, shall not in any way be construed to establish the validity of the claim. When the extra work in question has been completed, the Contractor shall file the claim for extra compensation with the Engineer.

Such claims shall be filed with the Engineer in a timely manner but no later than 10 days after the contract is completed. A written decision will be given to the Contractor in a timely manner, regarding the approval, partial approval, or disapproval of the Contractor's claim for extra compensation. The City will determine procedures for reviewing the Contractor's claim.

Article 11 - EXTENSION OF TIME

It is agreed that if the Contractor shall be unavoidably delayed in beginning or fulfilling this Contract by reason of excessive storms or floods, or by acts of Providence, or by general strikes, or by court injunction, or by stopping of the work by the City because of any emergency or public necessity, or by reason of extra work ordered by the City Engineer, or by any act, neglect, delay, or default on the part of

the City, the Contractor shall have no valid claim for damages on account of any such cause or delay, but he shall be, in such case, entitled to such extensions or advancement of the time period specified in the Agreement as the City Engineer shall adjudge to be just and reasonable; provided, however, that formal claim for such extension shall be made in writing by the Contractor within a week after the date upon which such alleged cause of delay shall have occurred. The closing down of the work during the winter season on account of cold weather shall not be taken as entitling the Contractor to any extension of time within the meaning of this Article.

In case the Contractor shall be delayed in the fulfillment of his obligations under this Contract, from any cause whatsoever, and in case the City shall acquiesce in the Contractor's prosecution and completion of the work, or any part of it, after the date at which it should have been finished, such acquiescence shall not operate as a waiver of any of the City's rights under this Contract, nor shall it invalidate or in any way weaken the Contractor's bonds.

Article 12 - LIQUIDATED DAMAGES

It is expressly covenanted and agreed by and between the parties hereto that time is and shall be considered as of the essence of the Contract, and in the event that said Contractor shall fail in the due performance of the entire work to be performed under this Contract, by and at the time herein mentioned and referred to in the Agreement, or within some other certain date subsequent to this to which the time limit for completion of the work may have been advanced under provisions of Article 11, the said Contractor shall pay unto the City as and for liquidated damages, and not as a penalty, the sum of **Seven Hundred Dollars (\$ 700.00)** for each and every calendar day that the said Contractor shall be in default.

Said sum of **Seven Hundred Dollars (\$ 700.00)** per day, in view of the difficulty of estimating such damages with exactness, is agreed upon as the damages which will be suffered by the City by reason of such default. It is also understood and agreed by the parties to this Contract that the liquidated damages hereinbefore mentioned are in lieu of the actual damages arising from such breach of this Contract; which said sum the City shall have the right to deduct from any monies in its possession, otherwise due, or to become due to said Contractor, or to sue for and recover compensation for damages for non-performance of this Contract at the time stipulated herein and provided for. (See also any Special Provisions for Liquidated Damages.)

Said liquidated damages are in addition to any actual damages which the City may recover under the provisions of the contract.

Article 13 - PAYMENTS TO THE CONTRACTOR

13.1 Contractor's Obligation Prior to Payment

It is agreed that before the Contractor shall demand partial or final estimates or payments, the City may require him to furnish the City satisfactory evidence that all persons that have supplied labor or materials for the work embraced under this Contract have been fully paid for the same; and that in case such evidence be not furnished as aforesaid, such sums as the City may deem necessary to meet the lawful claims of the persons aforesaid be retained by the City from any monies that may be due or become due to him under this Contract until such liabilities shall be fully discharged and evidence thereof be furnished to the City. The

Contractor agrees to make prompt settlement for all repair expenses made by the City as a result of the Contractor's work. Consent of the Contractor's surety will be required prior to final payment.

13.2 City's Obligation to Pay

It is agreed that, in consideration of the faithful and entire performance by the Contractor of his obligations under this Contract, the City shall pay to him, at the times and in the manner stipulated, the total sum as determined by calculations from the unit prices in the proposal, but diminished by such amount as the City may lawfully retain as liquidated damages under the provisions of Article 12 herein; and the Contractor shall accept the payment of such sum as full compensation for his work under this Contract.

13.3 Progress Estimates and Payments

Progress payments shall comply with Act No. 524 Public Acts of 1980. At about the first of each month, during which satisfactory progress has been made toward the final completion of the work, the Engineer will make up an estimate of the amount and value of the work which has been done under this Contract since the date of the last preceding estimate, and will report such estimate in writing to the City Director of Finance. Such estimates shall not be required to be made by strict measurements, or with exactness, but may be made either wholly or in part by appraisalment or estimation or by a consideration of accounts for labor and materials, and it shall be sufficient if it is approximate only. Any error or inaccuracy which may occur in any progress estimate may be allowed for or corrected in any subsequent estimate.

Following the rendering of such estimate by the Engineer, and as soon as practicable thereafter, the City will pay to the Contractor on account a sum equal to ninety percent (90%) of the Contract price of such work. The remaining ten percent (10%) will be retained until work is fifty percent (50%) in place. After the work is fifty percent (50%) in place, additional retainage shall not be withheld unless the City determines that the Contractor is not making satisfactory progress, or for other specific cause relating to the Contractor's performance under the Contract. If the City so determines, the City may retain not more than ten percent (10%) of the dollar value of work more than fifty percent (50%) in place.

The Director of Finance may require the Contractor, before the payment of any estimate, to file an affidavit showing the unpaid bills for materials or supplies of any kind furnished for this work.

Any time after 94% of the work is in place, the Contractor may request release of all of the retainage. The City shall be required to release the retainage plus interest to the Contractor in such case only if the Contractor provides to the City an irrevocable letter of credit in the amount of the retainage plus interest, issued by a bank authorized to do business in this State, and containing terms mutually acceptable to the Contractor and the City.

The progress estimates and payments thus provided for will include all extra work which may be done under the provisions of this Contract on the same basis as other work is included, all such extra work being regarded herein as essentially a part of this Contract, and not merely supplementary to it.

Disputes under this provision may be submitted to the decision of an agent, at the option of the City, pursuant to Section 4 of Act 524 of 1980. (MCLA 125.1564).

13.4 Measurement

Due and proper measurements will be taken by the Engineer during the progress of the work, and his estimates, based upon such measurements, shall be final and conclusive evidence of the amount of work performed under this Contract.

13.5 Final Estimate and Payment

As soon as practicable after the satisfactory completion of all the work included under this Contract, the Engineer will make final inspection of all the work and will make up a final estimate of the amount due to the Contractor under the terms of this Contract. At this time the Contractor shall file with the Director of Finance an affidavit stating that all bills have been paid in full for all materials, supplies and labor of every kind that have been furnished for this work, or stating the balance due for such materials, supplies and labor (See sample on Page 52). The Contractor shall file with the City Engineer the Contractor's Declaration found on Page 51, stating that all claims for extra payments have been satisfactorily settled and there will be no further claims. A final certificate relative to compliance of Affirmative Action Plan also will be required as a condition of payment. Consent of the Contractor's surety shall also be filed. The Engineer will then certify this estimate to the City Director of Finance and the Contractor will be paid the amount of said estimate, less the amounts previously paid; excepting that the City may, at its option, reserve such amount as it may deem necessary to meet the undischarged obligations of the Contractor for materials or labor expended upon this work until such obligation shall have been paid.

Article 14 - WARRANTY MAINTENANCE

If, at any time during a one-year period from the date of payment of the final estimate, the need of any repair or replacement becomes apparent, the City will at once notify the Contractor in writing, either personally or by mail at the address given in the proposal; and if within one week after such notification the Contractor has not made the necessary repairs, the City may proceed to do the required work and to charge the cost thereof against the Contractor, excepting that in the case of a repair necessary to be made at once to protect life and property, then and in that case the City may take immediate steps to repair or barricade such defects without notice to the Contractor.

Following the performance of any such repair work by the City, and as soon as practicable thereafter, an itemized statement of the cost of such work will be sent to the Contractor by the City. In such accounting the City shall not be held to obtain the lowest figures for the doing of the work or any part thereof, but all sums actually paid therefor shall be charged to the Contractor.

Article 15 - MICHIGAN NON-DISCRIMINATION STATUTE

It is agreed that the Contractor and his subcontractors will not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, or marital status; or because of a handicap that is unrelated to the individual's ability to perform the duties of a particular job or position. Breach of this covenant may be regarded as a material breach of the Contract.

Article 16 - LABOR LAWS AND ORDINANCES

The Contractor shall obey and abide by all laws of the State of Michigan relating to the employment of labor on public work, and all the charter provisions and ordinances of the City of Pontiac regulating or in respect to public improvements.

Article 17 - PATENTS, PATENT RIGHTS, AND TRADEMARKS

The Contractor shall indemnify, protect, defend and save the City of Pontiac, including all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and their board members, employees, volunteers and others working on behalf of the City, harmless against all claims or actions brought against the City by reason of any actual or alleged infringement upon patent, trademark or service mark right in any article, material, process, machine or appliance used by him in this work.

Article 18 - WORK WITHIN RAILROAD, PRIVATE, STATE OR COUNTY RIGHTS-OF-WAY

All construction work within railroad, private, State or County highway rights-of-way shall be performed by the Contractor in accordance with the requirements of the rights-of-way agreement and of the railroad or highway department having jurisdiction; including procedures of excavating, backfilling, removing and replacing pavement, maintaining and safeguarding traffic, inspection procedures of jacking pipes and encasing pipes under railroads and highways, etc. All required construction permits and surety bonds shall be furnished by the Contractor before commencing work. At the conclusion of the work, the Contractor shall furnish a written statement from the railroads and highway departments that work in rights-of-way under their jurisdiction has been completed to their satisfaction.

Article 19 - PROTECTION AND SAFETY

19.1 Protection Against Accident

The Contractor shall put up and shall maintain during the continuance of the work such barriers, lights and other protective devices and watchmen, when necessary, as will effectively prevent any accident in consequence of his work, and he shall be liable for all accidents and damages occasioned in any way by his acts or neglect, or by the acts or neglect of his agents, employees, or workmen.

19.2 Responsibility for Damage to Work

The Contractor shall assume full responsibility for loss or damage to the work during the entire construction period resulting from caving earth and from storms, floods, frosts, and other adverse weather conditions, and from all other causes whatsoever not directly due to the acts or neglect of the City, and shall turn the finished work over to the City in good condition and repair at the time of the final estimate. This responsibility of the Contractor shall cover all these elements included as extra work under this Contract in exactly the same manner as the regular work is covered.

19.3 Responsibility for Adjoining Structures

The Contractor shall have full responsibility for the protection of all property, driveways, buildings, fences, and other structures, and their foundations, along (or near) the line of the work, and shall indemnify, defend and save harmless the City of Pontiac, including all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and their board members, employees, volunteers and others working on behalf of the City, against all damages or alleged damages to any such structure arising out of his work.

No driveway shall be entirely closed to travel, even temporarily, except with the written consent of the Engineer, previously obtained. Highways must be suitably posted during the period in which construction work is in progress in them, and the Contractor shall be responsible for this precaution. Suitable bridges must be built across trenches at highway crossings to facilitate travel, and this same requirement shall apply likewise to private roadways.

19.4 Responsibility for Water Courses

The Contractor shall maintain in continuous and effective service all drains and water courses touched during the progress of the work. If it should become necessary, temporarily, to divert or obstruct the flow of any such water course or drain, written consent must first be obtained from the Engineer, and the Contractor shall assume full responsibility for the consequences.

19.5 Responsibility for Utilities

Certain underground structures and utilities have been shown as an aid to the Contractor, but the City does not guarantee their location or that other underground structures or utilities may not be encountered. It shall be the responsibility of the Contractor to make all arrangements with the owners of the respective utilities for the establishment of their location, prior to beginning the construction.

The Contractor shall assume full responsibility for the protection of all utilities, water, sewer, gas, telephone, or any other, either public or private, along or near the line of work, and will be held responsible for any damages to such utilities arising from his operations. If for the Contractor's convenience he desires that any portion of the utilities be moved to facilitate his operations, he shall make all necessary arrangements with the owner of the respective utilities, and pay all costs resulting from this work.

In cases where utilities, water, sewer, gas, telephone or any other, either public or private, are directly in the line of the structures being constructed, such as those being within the permissible limits of a sewer excavation or pavement excavation, and the City deems it necessary that the said utility be moved, the said company or companies, agents or superintendents will be notified by the City Engineer to remove the same within a specified time. The Contractor shall not interfere with said utility or any portion thereof until the expiration of the time specified in said notice. The Contractor will not be held responsible for any costs resulting from this work.

In all cases where there is a dispute between the Contractor and the owner of the respective utility as to necessity of moving or repairing same within City-owned right of way, the City Engineer shall make the final decision in the matter, which decision shall be binding on the respective parties, and order the respective parties to proceed accordingly.

19.6 Protection of Trees and Shrubbery

The Contractor shall take ample precautions to protect all trees and ornamental shrubbery from injury by workmen, teams, or other agencies connected with his work. Such trees or shrubbery shall be surrounded by protective posts or fencing before construction work begins if, in the judgment of the Engineer, such precautions are necessary.

19.7 Protection of Reference Points

The Contractor shall carefully preserve monuments, bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

19.8 Removal of Water

The Contractor shall provide all necessary pumps, pipes, drains, ditches, dikes, and other means for adequately protecting the work from damage by water, and he shall so protect it during the entire construction period. No direct payment will be made to the Contractor for removing or pumping water, or for any of the means employed in protecting the work against damage by water, but compensation therefor shall be considered as being included in the unit prices fixed in this Contract for the several structures.

Water pumped or delivered from trenches and excavations shall be disposed of in such manner as will not injure the public health, nor damage public or private property, nor injure any work complete or in progress.

19.9 Dust Control

The Contractor shall apply water or dust palliative, or both, for the alleviation or prevention of dust nuisance caused by his operations. Dust control operations shall be performed by the Contractor at the time ordered by the Engineer, but failure of the Engineer to issue such order will not relieve the Contractor of his responsibility.

Such dust control materials shall be applied as often as is necessary to control the dust. The use of road oils and waste oils to control dust is prohibited unless authorized by the Engineer.

No direct payment will be made for any such work performed or material used to control dust under this Contract.

19.10 Control of Noise

The Contractor shall eliminate noise to as great an extent as possible at all times. Air compressors shall be equipped with silencers, and the exhaust of all gasoline motors and other power equipment shall be provided with mufflers. In the vicinity of hospitals, libraries and schools, special precautions shall be taken to avoid noise and other nuisance, and the Contractor shall require strict observances of all pertinent ordinances and regulations. Any blasting permitted in such locations shall be done with reduced charges.

19.11 Erosion Control

The Contractor shall comply with the Soil Erosion and Sedimentation Control Act, Act 347 of 1972, as amended by Act 197, Public Acts of 1974 and local City or County soil erosion control programs. Also, should the local agency determine that the construction operation is in violation of the act and cites the City, the Contractor shall take immediate action, as directed by the City, to insure compliance with the Act.

19.12 First Aid

The Contractor shall at all times provide a satisfactory first aid kit at the job site. Emergency phone numbers for police, doctors, and emergency vehicles shall also be kept in the first aid kit.

19.13 Ventilation and Safety in Gas

Positive and approved means shall be provided by the Contractor for the detection of gas in existing sewers and at the landfill. If gas is encountered and cannot be removed by natural ventilation, then ventilating equipment of sufficient capacity and suitable type to adequately and quickly dilute the gas shall be promptly installed and operated. In all work where gas is present, no flame or other open light shall be used on the work. The Contractor shall be required to enforce a "no smoking" ban on all workmen present.

19.14 Sanitary Regulations

The Contractor shall provide for his employees an abundant and convenient supply of drinking water, taken from the City mains or from some other safe and wholesome source, and shall give orders against the use for drinking purposes of any other water in the neighborhood known to be prejudicial to the health of the workers.

The Contractor shall provide at convenient points, properly secluded from observation, a sufficient number of sanitary conveniences, and shall maintain them strictly without nuisance and without offense to the public or to residents in the vicinity of the work. The number, location, character and conditions of maintenance of these utilities must at all times be such as will meet the approval of the Engineer.

Article 20 - CLEANING UP

Upon completion of the actual work of construction, the Contractor shall clean up and leave in neat condition all the premises which he has occupied during the construction period. Before the time of the final estimate, the Contractor shall remove from the premises all surplus excavation, debris, and rubbish, and all unused materials, together with all tools and equipment, or shall deposit them at such points and in such manner as the Engineer may require.

Before leaving the grounds, he shall replace or put in good repair all fences, telephone poles and lines, roadways, and other property that may have been damaged by him during the progress of the work. Damage to crops within the limits of the right-of-way or street will be paid by the City, but the Contractor must assume responsibility for all damages outside of this right-of-way.

Article 21 - PROGRESS SCHEDULE

The CONTRACTOR shall submit a Progress Schedule to the City for review and approval within ten (10) days of receipt of the "NOTICE OF AWARD". The Contractor shall address the following items in the proposed schedule.

- 21.1 Start date and completion date for **Mobilization**
- 21.2 Start date and completion date for **Demolition and Removal**
- 21.3 Start date and completion date for **Spillway Repairs**
- 21.4 Final completion date.

CONTRACTOR'S DECLARATION

I hereby declare that I have not, during the period of _____
to _____ A.D., 20 ____, performed any work, furnished any
material, sustained any loss, damage or delay for any reason, including soil conditions encountered or
created, or otherwise done anything for which I shall ask, demand, sue for, or claim compensation from
the City of Pontiac or his agents, in addition to the regular items set forth in the contract named or
numbered **Collier Road Stormwater Spillway Repairs** and dated _____ A.D.,
20 ____, for _____

executed between myself and the City of Pontiac, and in the Change Orders for work issued by the City
in writing as provided thereunder, except as I hereby make claim for additional compensation and/or
extension of time as set forth on the itemized statement attached hereto.

There (is) (is not) an itemized statement attached.

Date: _____

By: _____

Title: _____

CONTRACTOR'S AFFIDAVIT

STATE OF MICHIGAN)
)SS
COUNTY OF)

The undersigned _____, hereby represents that on _____, he (it) was awarded a contract by the City of Pontiac, hereinafter called the Owner, to _____

in accordance with the terms and conditions of Contract **Collier Road Stormwater Spillway Repairs** and the undersigned further represents that the subject work has now been accomplished and the said contract has now been completed.

The undersigned hereby warrants and certifies that all of his (its) indebtedness arising by reason of the said contract has been fully paid or satisfactorily secured; and that all claims from subcontractors and others for labor and material used in accomplishing the said project, as well as all other claims arising from the performance of the said contract, have been fully paid or satisfactorily settled. The undersigned further agrees that, if any such claim should hereafter arise he (it) shall assume responsibility for the same immediately upon request to do so by the Owner.

The undersigned, for a valuable consideration, the receipt of which is hereby acknowledged, does further hereby waive, release and relinquish any and all claims or right of lien which the undersigned now has or may hereafter acquire upon the subject premises for labor and material used in accomplishing said project owned by the Owner.

This affidavit is freely and voluntarily given with full knowledge of the facts, on this _____ day of _____ A.D. 20 _____.

Contractor: _____

By: _____

Title: _____

Subscribed and sworn and to before me, a Notary Public in and for _____ County, Michigan, on this ___ day of _____ A.D. 20 _____.

Notary Public
My Commission expires: _____

**NOTICES TO BIDDERS,
SPECIFICATIONS
AND
SPECIAL PROVISIONS**

CITY OF PONTIAC

NOTICE TO BIDDERS

GENERAL REQUIREMENTS

1 of 1

NTH: DRL

06/16/21

All work shall be done in accordance with the City of Pontiac Standard Details and the Michigan Department of Transportation 2012 Standard Specifications for Construction and the latest revisions to the Standard Details as published by MDOT except as specifically modified in the Contract Documents. Contractors are advised that the Work is at a closed, Municipal Solid Waste Landfill. All work shall comply with Part 115 regulations of P.A. 451 of 1994, as amended.

CITY OF PONTIAC

NOTICE TO BIDDERS

JOB SITE SAFETY

1 of 1

NTH: DRL

06/16/2021

Neither the professional activities of the Engineer, nor the presence of the Engineer or its employees and consultants at, shall relieve the Contractor and any other entity of their obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the work of construction in accordance with the Contract Documents and any health or safety precautions required by any regulatory agencies. The Engineer and its personnel have no authority to exercise any control over any construction Contractor or other entity or their employees in connection with their work or any health or safety precautions. The Contractor agrees that the Contractor is solely responsible for job site safety. The Contractor also agrees, to the extent permitted by law, that the Owner, Engineer and Engineer's consultants shall be indemnified by the Contractor for claims, demands, damages, judgments, losses, interest, attorney's fees, litigation costs and expenses of any kind, at any time, for bodily injury and or property damage, arising out of or in any way connected to the Contractor's work or acts related to the Project. The Contractor also agrees that the Owner, Engineer and Engineer's consultants shall be made additional insureds under the Contractor's general liability insurance policy.

CITY OF PONTIAC
NOTICE TO BIDDERS

SITE VISITATION
1 of 1

NTH: DRL

06/16/2021

The Bidder is advised that it is expected that prior to submitting a proposal, each bidder will make a personal examination of the entire site of the proposed work. Following the scheduled pre-bid meeting, bidders may examine the work area. Due to existing onsite security, additional site visits will be allowed by appointment. Bidders shall coordinate appointments through the following person:

Mr. Allen Cooley
City of Pontiac DPW
47450 Woodward Avenue
Pontiac, MI 48341

Phone: (248) 758-360

TAB B
Specifications



SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 PROJECT DESCRIPTION

- A. The Contractor's scope of work consists of furnishing all labor, materials, supervision, equipment, and services necessary to complete repairs of the downslope spillways at the Collier Road Landfill as presented in these specifications and drawings. The Contractor will also be responsible for the construction, maintenance, and, at the Owner's option, removal of all access roads suitable for the traffic anticipated, and any safety equipment, such as barricades, flashers, and signage. The Contractor will be responsible for maintenance and protection of the work, including stormwater management and controls.

The scope of work includes the site preparation activities, excavation, access road improvements, stormwater management controls, structural fill placement, geoweb repair, reno mattress installation and all other activities required to complete the work shown on the drawings and included in the specifications.

The scope of work for the alternate bid includes the site preparation activities, excavation, access road improvements, stormwater management controls, structural fill placement, reno mattress installation and all other activities required to complete the work shown on the drawings and included in the specifications.

The Work for this project will be completed at a closed solid waste disposal facility. It is the responsibility of the Contractor to develop and implement a health and safety plan that meets all applicable federal, state and local regulations. Refer to Owner for additional requirements.

Any deviations from the Drawings or Specifications require prior approval of the Owner and must be documented by "as-built" revisions to the Drawings. During all phases of the construction, the work will be tested, inspected, and evaluated by the Owner or its representative prior to approval.

The Owner will provide the required survey controls for layout of the project. The Contractor is responsible for the initial layout and final as-built survey of each component. Controls lost through carelessness of the Contractor or his Subcontractors will be replaced by the Contractor with no additional cost to the Owner. Any additional controls which may be required during the course of the Work will be the responsibility of the Contractor. The Contractor will be



responsible for all temporary construction staking needed to control the Work, which will be referenced to the survey controls provided by the Owner.

- B. Major items of Work specifically included in this Contract includes the following:
1. Section 31 1000 – Site Preparation
 2. Section 31 2200 – Grading
 3. Section 31 2316 – Excavation
 4. Section 31 2323 – Fill
 5. Section 31 2323.33 – Flowable Fill
 6. Section 31 2500 – Erosion and Sedimentation Controls
 7. Section 31 2526.13 – Clay Containment Barriers
 8. Section 31 3200 – Soil Stabilization System
 9. Section 31 3526.14 – Geosynthetic Clay Liner
 10. Section 31 3526.18 – Geotextile
 11. Section 31 3619 – Gabion Mattresses
 12. Section 31 3700 - Riprap
 13. Section 32 1313 – Portland Cement Concrete
 14. Section 32 9000 – Site Restoration

All other work items described in these project specifications are considered incidental to the project and included in the unit prices.

1.02 FORM OF SPECIFICATIONS

- A. Some Work described in these Specifications use systems approach to identify systems of structure or facility. System components are either specified in system specification or by reference to another section.
- B. Term "provide" or "provided" means "furnish and install in-place."

1.03 CONTRACTS

- A. Perform Work under unit price Contract with Owner to be full compensation for labor, equipment, materials, personnel, and other items (not specifically mentioned) required to complete each bid item of the work as shown on the Plans and Specifications.

1.04 WORK SEQUENCE

- A. Coordinate construction schedule and operations with Owner.
- B. Observe that the Owner reserves the right to do other work in connection with the project or adjacent thereto by contract or otherwise, and at all times, conduct



work so as to impose no hardship on the Owner or others engaged in the work, nor cause any unreasonable delay or hindrance thereto.

1.05 CONTRACTOR'S USE OF PREMISES

- A. Satisfy himself by personal examination of the site as to all local conditions affecting the performance of this contract. The Contractor is deemed to accept such conditions as found to exist.
- B. Confine operations to areas within Contract limits indicated. Portions of site beyond areas in which construction operations are indicated are not to be disturbed.
- C. Owner will occupy site and existing buildings during entire period of construction for conduct of normal operations. Cooperate with Owner during construction operations to minimize conflict and facilitate Owner's operations. Construction traffic must yield right-of-way to refuse disposal vehicles and public, unless approved otherwise by Owner. Contractor may utilize flagman personnel at Contractor's expense to control traffic as necessary to cross on-site traffic without delaying Owner's traffic. Contractor to address traffic control within Contractor's health and safety plan.
- D. At all times, conduct operations to ensure least inconvenience to Owner, Owner's Subcontractor, and operation of existing waste disposal facilities.
- E. Coordinate use of premises under direction of Owner.
- F. Assume full responsibility for protection and safekeeping of materials and equipment under this Contract.
- G. Protection and repair of existing facilities and utilities: Perform operations carefully and in such a manner as to protect existing facilities and utilities. Utility locations shown on drawings are approximate. Ensure charted utilities are properly marked, prior to commencing work. The Contractor is advised that the exact location and type of existing underground utilities are not known and employing an underground utility locator is recommended and is the responsibility of the Contractor. Expose obstructions which may exist and are not shown on the Drawings, without damage. Damage to existing facilities and utilities resulting from Contractor's operations, are the responsibility of the Contractor and are to be repaired or replaced under the Owner's direction. Protect existing groundwater monitoring wells during construction.

1.06 SAFETY PRECAUTIONS AND PROGRAMS

- A. Initiate, maintain, and supervise all safety precautions and programs in connection with the performance of the Contract.



- B. Take reasonable precautions for safety of, and provide reasonable protection to prevent damage, injury or loss to:
 - 1. Employees on the Work and other persons who may be affected thereby;
 - 2. The Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-contractors; and
 - 3. Other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- C. Give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- D. Erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

PART 2 – PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION



SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes descriptions of the measurement and payment methods for each bid item including directing the Contractor which work items has their prices merged and which are considered incidental to the project.

1.02 RELATED SECTIONS

- Section 01 1100 – Summary of Work
- Section 01 2000 – Price and Payment Procedures
- Section 01 3119 – Project Meetings
- Section 01 3300 – Administrative Requirements
- Section 01 4000 – Quality Requirements
- Section 01 5000 – Temporary Facilities and Controls
- Section 01 5719 – Temporary Environmental Controls
- Section 01 7000 – Execution and Closeout Requirements
- Section 01 7419 – Construction Waste Management and Disposal
- Section 31 1000 – Site Preparation
- Section 31 2200 – Grading
- Section 31 2316 – Excavation
- Section 31 2323 – Fill
- Section 31 2323.33 – Flowable Fill
- Section 31 2500 – Erosion and Sedimentation Controls
- Section 31 2526.13 – Clay Containment Barriers
- Section 31 3200 – Soil Stabilization System
- Section 31 3526.14 – Geosynthetic Clay Liner
- Section 31 3526.18 – Geotextile
- Section 31 3619 – Gabion Mattresses
- Section 31 3700 – Riprap
- Section 32 1313 – Portland Cement Concrete
- Section 32 9000 – Site Restoration



1.03 MEASUREMENT AND PAYMENT

A. General

1. Work under the following specification sections is considered incidental to the project and no further compensation will be made.

Section 01 1100 – Summary of Work

Section 01 3119 – Project Meetings

Section 01 3300 – Administrative Requirements

Section 01 4000 – Quality Requirements

Section 01 5000 – Temporary Facilities and Controls

Section 01 5719 – Temporary Environmental Controls

Section 01 7000 – Execution and Closeout Requirements

Section 31 2500 – Erosion and Sedimentation Controls

2. Measurement and payment criteria applicable to portions of the work performed.
3. Include a sworn statement with all payment requests that each Subcontractor, supplier, and laborer with whom the Contractor subcontracts for performance of work under this Contract is paid in full.
4. Payment will not be made for defective or rejected work until such work is made satisfactory to the Owner.
5. Unit Quantities Specified.
 - a. Quantities and measurements indicated in the Bid Form are for bidding and contract purposes. It is the contractor's responsibility to verify all quantities prior to bid. No adjustment in price will be made for quantity adjustments during construction, without prior approval from the Owner.
 - b. A Change Order may be submitted if the scope of work changes. Change Order approval will be required from the Owner prior to execution of work outside of the contract scope.



6. Measurement of Quantities

- a. Measurement of quantities expressed as volume are based upon a neat plan line projection to the work limits as determined on the Bid Form for each item with no additional allowances for shrinkage, swelling or creep.
 - i. In computing volumes of excavation and fill, the average end area method or other methods, is used.
- b. Base measurement of quantities expressed as area upon square dimensions using mean length and width or radius with no additional allowance for scrap, overlap, or wastage.
- c. Base measurement of quantities expressed as linear foot on the length projected in plan view based on survey points (i.e., slopes projected flat) with no additional allowance for scrap, overlap, or wastage.

7. Payment

- a. Payment for each unit price item stated in the itemized bill constitutes full compensation for all required labor, products, tools, equipment, plant, transportation, services, and incidentals: erections, application or installation of an item of the work required to complete all work specified under that particular item including cleanup, and all costs for doing related work as set forth in these specifications and/or on the Drawings or implied in carrying out their intent. Include an allowance in the price bid sum stated in the itemized bid for overhead and profit.
- b. Make requests for payment in accordance with the Construction Services Contact using American Institute of Architect (AIA) form.
- c. Installation of items that have not been tested and approved will not receive partial payments.
- d. Material delivered to the site and stored will not receive partial payments until installation.

8. Defect Assessment

- a. Replace the work, or portions of the work, not conforming to specified requirements.
- b. If, in the opinion of Owner, it is not practical to remove and replace the work, Owner will direct one of the following remedies:



- i. The defective work may remain, but the unit/price will be adjusted to a new sum/price at the discretion of Owner.
 - ii. The defective work will be partially repaired to the instructions of Owner, and the unit/sum price will be adjusted to a new sum/price at the discretion of the Owner.
 - c. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
 - d. The authority of Owner to assess the defect and identify payment adjustment, is final.
9. Non-Payment for Rejected Products
- a. Payment will not be made for any of the following:
 - i. Products wasted or disposed of in a manner that is not acceptable.
 - ii. Products determined as unacceptable before or after placement.
 - iii. Products placed beyond the lines and levels of the required work.
 - iv. Products remaining on hand after completion of the work.
 - v. Loading, hauling, and disposing of rejected products.

END OF SECTION



SECTION 01 31 19

PROJECT MEETINGS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for meetings, including pre-construction, weekly progress, and problem meetings.

PART 2 - PRODUCTS- NOT USED

PART 3 - EXECUTION

3.01 PRE-CONSTRUCTION MEETING

- A. Prior to the start of construction, a pre-construction meeting will be held by the Owner or Owner's Representative. In this meeting, the attendees will review the plans and specifications. In particular, the parties will review the areas of responsibility of each, lines of authority and procedures for dealing with problems or rejected work. The inspection frequency, distribution of inspection results and criteria for acceptance or rejection of work will also be discussed. The Owner or Owner's Representative will document each pre-construction meeting and distribute minutes of the meeting.

3.02 DAILY TAILGATE SAFETY AND ANTICIPATED WORK MEETING

- A. Prior to starting work each day, a tailgate meeting will be held by the Contractor and their staff. The Owner or Owner's Representative may also be present at the meeting. In this meeting, the attendees will discuss the proposed work activities for the day and review the existing conditions plan to identify any utilities in the proposed work area. The attendees will also discuss how the proposed activities will interact with site operations.

3.03 WEEKLY PROGRESS MEETINGS

- A. Each workweek, the Owner or Owner's Representative will conduct a meeting with all contractors to review the work since the last progress meeting and to discuss the upcoming scheduled work. Any coordination or workmanship problems as well as potential problems will be discussed at that time, along with possible solutions. Review of new test data as well as documentation data requirements will also take place at the meetings. The Owner or Owner's Representative will document the meetings and distribute minutes to other parties, if requested to do so.



3.04 PROBLEM RESOLUTION MEETINGS

- A. These meetings will be held in the field as necessary when the immediate nature of a construction problem precludes discussion at the next progress meeting. At such a meeting, the problem will be defined and discussed by all concerned parties. Possible solutions will be considered with one being selected by the Owner or Owner's Representative. Implementation of the chosen solution will also be discussed and agreed upon. The Owner or Owner's Representative will document the meeting and distribute minutes to those parties in attendance, as necessary.

3.05 SAFETY MEETING

- A. All workers, including subcontractors, will be required to attend a safety meeting on the site prior to the start of the Work, and as required by the Owner's health and safety plan.

3.06 MEETING ATTENDEES

- A. Owner or Owner's representative
- B. Contractor Project Manager, or Contractor's Project Manager's Representatives who are authorized to make decisions during meetings.
- C. Subcontractor Project Manager or Subcontractor Project Manager's Representatives who are authorized to make decisions during meetings.
- D. Any other personnel as deemed necessary by above meeting attendees.

END OF SECTION



SECTION 01 33 00

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes requirements for work related submittals including Construction Progress Schedules, shop drawings, product data, samples, and other miscellaneous work-related submittals.

1.02 PROJECT COORDINATION

- A. Project Coordinator: Owner's Designated Representative
- B. Cooperate with the Owner in allocation of mobilization areas of site; for field offices and sheds, for vehicular and pedestrian access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Owner.
- D. Comply with Owner's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Owner for use of temporary utilities and construction facilities.
- F. Coordinate field engineering and layout work with the Owner's Designated Representative
- G. Make the following types of submittals to Engineer and/or Owner's Designated Representative:
 - 1. Requests for interpretation.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.



5. Applications for payment and change order requests.
6. Progress schedules.
7. Coordination drawings.
8. Closeout submittals.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 CONSTRUCTION PROGRESS SCHEDULES

- A. Prepare and submit Construction Progress Schedule to Owner with bid.
 1. Prepare schedules in form of horizontal bar chart.
 - a. Provide separate horizontal bar for each operation.
 - b. Horizontal Time Scale: Identify first Workday of each week.
 - c. Scale and spacings to allow space for notations and future revisions.
 - d. Arrange listings in order of start of each item of Work.
 2. Construction Progress Schedule:
 - a. Show complete sequence of construction by activity.
 - b. Show dates for beginning and completion of each major element of construction and installation dates for major items. Elements include, but are not limited to the following:
 - i. Start of work for each major activity and assumed daily production rate.
 - ii. Performance tests and supervisory services activity.
 - iii. Subcontractor's items of Work.
 - iv. Restoration.
 - v. Final cleanup.
 - vi. Allowance for inclement weather.



- B. No Work is to be done between 9:00 p.m. and 6:00 a.m., nor on Sundays or legal holidays without written permission of Owner. Emergency work may be done without prior permission.
- C. Night work may be established by Contractor as regular procedure with written permission of Owner. Such permission may be revoked at any time by Owner.
- D. Schedule Revisions (presented at weekly construction meetings):
 - 1. Every 7 days to reflect changes in progress of Work.
 - 2. Indicate progress of each activity at date of submittal.
 - 3. Show changes occurring since previous submittal of schedule.
 - 4. Show projected percentage of completion for each item as of first day of week.
 - 5. Show projected percentage of quantity placement to date as of initial construction progress schedule quantity placement.
 - 6. Provide narrative report as needed to define following:
 - a. Problem areas, anticipated delays, and impact on schedule.
 - b. Corrective action recommended and its effect.
 - c. Effect of changes on schedules of other Contractors.

3.02 WORK PLANS/PRE-TASK ANALYSIS

- A. Submit detailed written work plans describing methodologies for performing all Work-related tasks.
- B. Submit work plans for Owner's review prior to initiating work in the field.
- C. Perform pre-task analysis to identify all safety-related issues associated with each work activity.

3.03 TEST RESULTS AND CERTIFICATIONS

- A. Submit tests results and certifications required in specification sections.
- B. Submit tests results upon completion of test or submittal of results from testing laboratory.
- C. Test results and certifications are submitted for review of conformance with specified requirements and information.



3.04 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections or the engineering plans, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
- B. Submit to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7000.

3.05 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Other types indicated.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. As-built record drawings.



5. Other types as indicated.

3.07 NUMBER OF COPIES OF SUBMITTALS

- A. Documents for Review:
 1. Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Engineer, and one copy for the Owner.
- B. Documents for Information: Submit two copies.
- C. Documents for Project Closeout: Make one reproduction of submittal originally reviewed. Submit one extra of submittals for information.
- D. Or as indicated in specific sections of these specifications.

3.08 SUBMITTAL PROCEDURES

- A. Transmit each submittal with a submittal form to the Engineer and Owner.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Deliver submittals to Engineer at business address.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 5 business days excluding delivery time to and from the Contractor.



- H. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- I. Provide space for Contractor and Engineer review stamps.
- J. When revised for resubmission, identify all changes made since previous submission.
- K. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

3.09 SUBMITTAL REQUIREMENTS

- A. Submittals by the Contractor after successful bid award:
 - a. Insurance Coverage – Instructions to Bidders (1 copy)
 - b. Progress Schedule – General Conditions (1 copy)
 - c. Soil Erosion and Sedimentation Control Plan – Section 01 5719 (1 copy)
 - d. Dust Control Plan – Section 01 5719 (1 copy)
 - e. Site Plan and Health and Safety Plan – Section 31 1000 (1 copy)
 - f. SESC Permit (as required) – Section 312500 (1 copy)
- B. Submittals by the Contractor during construction activities:
 - a. Weekly Construction Project Schedule, including weekly quantity evaluation – Section 01 3300 (2 copies)
 - b. Work Plans / Pre-Task Analysis – Section 01 3300 (2 copies)
 - c. Test Results and Certifications – Section 01 4000 (2 copies)
 - d. Fueling Operations Plan – Section 01 50 00 (1 copy)
 - e. Contract Close Out Certification – Section 01 7000 (1 copy)
 - f. Excavation and Stockpiling Plan – Section 31 2316 (1 Copy)
 - g. Product Submittals – Sections 31 2323.33, 31 3200, 31 3526.13, 31 3526.14, 31 3526.18, 31 3700, 32 1313, 32 9000 (2 copies)
 - h. Site Restoration Work Plan – Section 32 9000 (1 copy)
 - i. Shop Drawing Submittals – General Conditions (2 copies)
 - j. Project Record Documents – Section 01 7000 (2 copies)
 - k. Material Laboratory Test Results – Section 31 2323 (1 copy for each material and source)
 - l. Compaction equipment product data – Section 312323 (1 copy)
 - m. Manufacturer's Qualifications – Section 313200 (1 copy)
 - n. Manufacturer's Certificate of Analysis – Section 313200 (1 copy)
 - o. Installation Submittals – Section 313526.14 (1 copy)
 - p. Project Completion Submittals – Section 313526.14 (1 copy)



q. Reno Mattress Installation Procedure – Section 313619 (1 copy)

END OF SECTION



SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section specifies administrative and procedural requirements for quality control services, including inspections and tests and related actions including reports performed by the independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Owner.
- B. Requirements of this section relate to customized fabrication and installation procedures, not production of standard products. Specific quality control requirements for individual construction activities are specified in the Sections related those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.
- C. Quality Assurance/Quality Control to be governed by the site-specific Construction Quality Assurance plan, latest revision, Part 115, PA 451 of 1994 regulations, and these specifications.

1.02 TESTING AGENCY

- A. The Owner will, at his expense, employ a testing agency to conduct various on-site tests on delivered and installed materials. Copies of the test results will be furnished to the Contractor and Owner as soon as they are prepared for release.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work and tests in accordance with requirements of Contract Documents and are not intended to limit the quality control procedures employed by the Contractor.

1.03 SUBMITTALS

- A. Test Reports: After each test/inspection, test reports will be completed and assembled. At a minimum, these reports should include:
 - a. Date issued.



- b. Project title and number.
 - c. Name, address and telephone number of testing agency.
 - d. Name of inspector.
 - e. Date, time, and weather conditions of sampling or inspection.
 - f. Identification of product and specifications section.
 - g. Location in the Project.
 - h. Type of test/inspection.
 - i. Date of test/inspection.
 - j. Results of test/inspection.
 - k. Conformance with Contract Documents.
 - l. When requested by Engineer, provide interpretation of results.
 - m. Name and signature of laboratory inspector
 - n. Recommendation on retesting, if required
- 1. Include reports prepared by representatives of suppliers and manufacturers who have performed field services.
- B. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Engineer.
- 1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

1.04 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in these specifications, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes or this



specification.

- B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- F. Do not alter either the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Engineer from the Contract Documents by mention or inference otherwise in any reference document.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Observe quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step-in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have Work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.



- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TOLERANCES

- A. Observe fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances and the tolerances specified in these Contract Documents. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.03 TESTING AND INSPECTION

- A. Testing/Inspection Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Engineer and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards and these specifications.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or products.
 - 5. Perform additional tests and inspections required by Engineer.
 - 6. Attend pre-construction meetings and progress meetings.
 - 7. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.



3. Agency may not assume any duties of Contractor. Agency is not responsible for Contractors means, methods, techniques, or safety.
 4. Agency has no authority to stop the Work.
- C. Contractor Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel and provide access to the Work and to manufacturers' facilities.
 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 4. Schedule and coordinate sequence of activities and tests to accommodate required tests with minimal delay. Avoid unnecessary removing and replacing construction to accommodate inspections and tests.
 5. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- D. Re-testing required because of non-conformance to specified requirements are to be performed by the same agency on instructions by Engineer.
- E. Re-testing required because of non-conformance to specified requirements or revised/replaced Work are to be paid for by the Contractor, regardless of whether the original test was the Contractor's responsibility.
- F. Scope: Comply with all the applicable governing standards, codes and authorities for required testing and inspections. Additional testing and inspections may be required for this project, as specified in these



specifications and the site- specific Construction Quality Assurance (CQA) plan, if applicable.

3.04 DEFECT ASSESSMENT

- A. Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finish to eliminate deficiencies, including deficiencies in visual qualities of exposed finish.
- B. Replace and protect Work or portions of the Work not conforming to specified requirements.
- C. If, in the opinion of Owner, it is not practical to remove and replace the Work, submit an appropriate remedy and/or offer a price adjustment to the Owner for approval.
- D. Expedite correction and replacement of Work found to be not-in-compliance to meet interim, substantial, and final completion dates.

END OF SECTION



SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes the requirements for temporary facilities and security control.
- B. Stage equipment in Owner designated location.

1.02 TEMPORARY UTILITIES

- A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
- B. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization. Locations of portable toilet facilities will need to be approved by owner. All must be secured properly so they will not blow over. Service contractor to be approved by owner.
- B. Maintain daily in clean and sanitary condition.
- C. At end of construction, return facilities to same or better condition as originally found.

1.04 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to allow for owner's use of site and to protect existing facilities from damage from construction operations and demolition.
- B. Provide protection for plants designated to remain. Replace damaged plants.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.



1.05 SECURITY

- A. Coordinate with Owner's security program.

1.06 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before leaving site.
- D. Designated existing on-site roads may be used for construction traffic.
- E. Construction personnel to park in designated areas only.
- F. Coordinate with Owner to maintain site traffic during construction.

1.07 VEHICLE FUELING

- A. Fueling Operations Plan must be submitted to the Owner for approval. Plan shall include use of fuel truck, storage tanks, spill protection, spill controls, spill clean-up procedures, and any other pertinent information regarding equipment re-fueling operations.

1.08 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

1.09 PROJECT IDENTIFICATION

- A. No signs are allowed without Owner permission except those required by law.

1.10 FIELD OFFICES

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling



equipment, and equipped with sturdy furniture, drawing rack and drawing display table.

- B. Coordinate with Owner if Contractor elects to use a Field office for this Project.

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition.
- D. Prior to demobilization, the requirements of Section 01 7000 are to be met.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION



SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1- GENERAL

1.01 SUMMARY

- A. Section includes Contractor responsibility in protecting the environment. Maintain work areas on-site and off-site in accordance with all applicable federal, state, or local regulations.

1.02 REFERENCES

- A. "Guidance for Erosion and Sedimentation Control Planning and Implementation," Manual EPA-R2-72-015.
- B. "Processes, Procedures, and Methods to Control Pollution Resulting from all Construction Activity," Manual EPA 43019-73-007.
- C. Guidebook of Best Management Practices for Michigan Watersheds, Reprinted October 1998, Michigan Department of Natural Resources, Surface Water Quality Division.

1.03 PROTECTION OF WATERWAYS AND WETLANDS

- A. Observed rules and regulations of State of Michigan, Oakland County, and agencies of U.S. government prohibiting pollution of any lake, stream, river or wetland by dumping of refuse, rubbish, dredge material, or debris therein.
- B. Contractor specifically cautioned that disposal of materials into waters of state must conform to requirements of U.S. Army Corps. of Engineers.
- C. Provide holding ponds or approved method which will divert flows, including storm flows and flows created by construction activity, to prevent excessive silting of waterways or flooding damage to property.
- D. Comply with procedures outlined in U.S. EPA manuals entitled, "Guidelines for Erosion and Sedimentation Control Planning and Implementation," Manual EPA-72-015 and "Processes, Procedures, and Methods to Control Pollution Resulting from All Construction Activity," Manual EPA 43019-73-007 and Guidebook of Best Management Practices for Michigan Watersheds,



Reprinted October, 1998, Michigan Department of Natural Resources, Surface Water Quality Division.

1.04 EROSION AND SEDIMENT CONTROL

- A. Provide erosion and sedimentation control, as specified in Section 31 2500.

1.05 DISPOSAL OF EXCESS WASTE AND OTHER WASTE MATERIALS.

- A. Excess excavated soil material not required or suitable for backfill will become the property of the Contractor and will be removed from the project site at no additional cost to the Owner, unless noted otherwise on the Drawings or in these specifications.
 - 1. Unacceptable disposal sites include but are not limited to: sites within wetland or critical habitat and sites where disposal will have detrimental effect on surface water or groundwater quality.
 - 2. Make arrangements for excess waste disposal subject to submission of proof that Owner(s) of proposed site(s) have valid landfill permit issued by appropriate governmental agency and submission of haul route plan including map of proposed route(s).
 - 3. Provide watertight conveyance for liquid, semi-liquid, or saturated solids which tend to bleed during transport. Liquid loss from transported materials is not permitted, whether being delivered to construction site or hauled away for disposal. Fluid materials hauled for disposal must be specifically acceptable at selected disposal site.
 - 4. Report any and all fuel or oil spills immediately to Owner. Contractor shall remediate fuel or oil spills due to the construction activities for this project. Remove all contaminated soils from the site at Contractor's expense and comply with applicable State and Federal regulations.

1.06 PROTECTION OF AIR QUALITY

- A. Minimize air pollution by requiring use of properly operating combustion emission control devices on construction vehicles and equipment used by Contractors and encouraging shutdown of motorized equipment not actually in use.
- B. Trash burning not permitted on construction site.



- C. Temporary heating devices necessary for protection of Work, cannot cause air pollution.

1.07 NOISE CONTROL

- A. Conduct operations to cause least annoyance to residents in vicinity of Work and comply with applicable local ordinances.
- B. Equip compressors, hoists, and other apparatus with mechanical devices necessary to minimize noise and dust. Equip compressors with silencers on intake lines.
- C. Equip gasoline or oil-operated equipment with silencers or mufflers on intake and exhaust lines.
- D. Line storage bins and hoppers with material that will deaden sounds.
- E. Conduct operation of dumping rock and of carrying rock away in trucks so as to cause minimum of noise and dust.

1.08 DUST CONTROL

- A. Due to close geographic location of Project to other off-site facilities, and the daily traffic load into and out of the existing landfill, take special care in providing and maintaining temporary roadways, Owner's existing roads, and public roads used for construction operations in clean, dust-free conditions during construction operations.
- B. Comply with local environmental regulations for dust control and direction of the Owner. If Contractor's dust control measures are considered inadequate, the Owner will require Contractor to take additional dust control measures at Contractor's expense.
- C. Use Owner-approved dust suppressant.

PART 2 – PRODUCTS-NOT USED

PART 3 - EXECUTION-NOT USED

END OF SECTION



SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes examination, preparation, and general installation procedures, surveying for laying out the work, cleaning and protection and closeout procedures, except payment procedures.

1.02 SUBMITTALS

- A. Layout Survey work: Submit name, address, and telephone number of Surveyor before starting layout survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Coordinate with Site Surveyor for the project record survey.
- B. Project Record Documents: Maintain on site, one set of the following record documents; record actual revisions to the Work:
 - 1. Contract Documents
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other Modifications to the Contract
 - 5. Reviewed product data, and samples
 - 6. Store Record Documentation separate from documents used for construction
 - 7. Record information concurrent with construction progress
 - 8. Specifications: Legibly mark and record at each Product section description of actual products installed, including the following:



- a. Manufacturer's name and product model and number
- b. Product substitutions or alternates utilized
- c. Changes made by Addenda and Modifications
- d. Submit documents to Owner with claim for final Application for Payment identifying total adjusted contract sum, previous payments, and sum remaining due.

1.03 QUALIFICATIONS

- A. For survey work, employ a land surveyor registered in Michigan and acceptable to Engineer and Owner. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

1.04 PROJECT CONDITIONS

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion. Do not stockpile material so as to restrict surface drainage
- C. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
 1. Minimize amount of bare soil exposed at one time.
 2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
 3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
 4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures at no additional cost to the Owner.
- D. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.



1.05 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Specifications to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new 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.
- D. Coordinate space requirements with the site to ensure continued existing site operations at all times during construction.
- E. Coordinate completion and clean-up of work of separate sections.
- F. After Owner occupancy, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Comply with individual specifications for each work item.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.



- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Removal or Excavation: Examine existing conditions prior to commencing work, including elements subject to damage or movement during removal or excavation. After uncovering existing work, assess conditions affecting performance of work. Contractor is responsible to use appropriate construction methods and take necessary measures to prevent damage to structures or pavement to remain.

3.02 PREPARATION

- A. Comply with individual specifications for each work item.

3.03 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Engineer of any discrepancies discovered.
- C. Locate and protect survey control and reference points. Establish necessary survey control points prior to starting work.
- D. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- E. Promptly report to Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- F. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.
- G. Utilize recognized engineering survey practices.
- H. Establish a minimum of two permanent benchmarks on-site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.



- I. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
 - 2. Grid or axis for structures.
- J. Periodically verify layouts by same means.
- K. Maintain a complete and accurate log of control and survey work as it progresses.

3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown.
 - 2. Report discrepancies to Engineer before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.



- B. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove/ Relocate items indicated on drawings.
- C. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Repair adjacent construction damaged during removal work.
- D. Comply with all other applicable requirements of this section.

3.06 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.07 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Prohibit traffic from landscaped areas.

3.08 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean site; sweep paved areas, rake clean landscaped surfaces.
- C. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.



3.09 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities. Provide copies to Engineer and Owner.
- B. Accompany Engineer on preliminary inspection to determine items to be listed for completion or correction in Contractor's Notice of Substantial Completion.
- C. Notify Engineer when work is considered ready for Substantial Completion.
- D. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Engineer's review.
- E. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
- F. Notify Engineer when work is considered finally complete.
- G. Complete items of work determined by Engineer's final inspection.

END OF SECTION



SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 – GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, incineration, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.
- E. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
- E. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, State and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.



- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.



- B. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
 2. Submit Report on a form acceptable to Owner.
 3. Landfill Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
 - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 4. Incinerator Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards, of trash/waste material from the project delivered to incinerators.
 - c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 5. Recycled and Salvaged Materials: Include the following information for each:
 - a. Identification of material, including those retrieved by installer for use on other projects.
 - b. Amount, in tons or cubic yards, date removed from the project site, and receiving party.
 - c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - e. Certification by receiving party that, materials will not be disposed of in landfills or by incineration.
 6. Material Reused on Project: Include the following information for each:
 - a. Identification of material and how it was used in the project.
 - b. Amount, in tons or cubic yards.
 - c. Include weight tickets as evidence of quantity.



7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

PART 2 - PRODUCTS

NOT USED

PART 3 – EXECUTION

3.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 01 7000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

3.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Engineer.
- C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. Meetings: Discuss trash/waste management goals and issues at project meetings.
 1. Pre-bid meeting.
 2. Pre-construction meeting.
 3. Regular job-site meetings.
- E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
 1. Provide containers as required.
 2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
 3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.



- F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION



SECTION 31 10 00

SITE PREPARATION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes requirements for site preparation activities as shown on the drawings including clearing/ grubbing and protection of vegetation, and removal of existing debris.

1.02 REFERENCES

- A. Michigan Department of Transportation (MDOT), Standard Specifications for Construction; 2012.

1.03 SUBMITTALS

- A. Site Plan: Showing:
 - 1. Areas for temporary construction and field offices.
- B. Written permission to use disposal and borrow sites.
- C. Written evidence that proper arrangements have been made with the Owner of the utility line, structure or pole that must be disturbed in order to accomplish the contracted Work that is not owned by the Owner.
- D. Site Specific Health and Safety Plan developed by the Contractor.

1.04 QUALITY ASSURANCE

- A. Secure all permits and post all bonds and deposits required to comply with this Contract.
- B. Develop and implement a site-specific Health and Safety Plan that meets all applicable federal, state, and local regulations. Describe the potential hazards associated with completion of this project, including potential contact with waste. Consult Owner's site health and safety plan during development and implementation.



1.05 PROJECT CONDITIONS

- A. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- B. Protect trees, shrubs, and other vegetation that are outside the limits of the Work and those that are within the limits of the Work but not designated to be removed. Repair or replace trees, shrubs, and vegetation that are designated to be protected but are damaged by Contractor operations at no cost to Owner.
- C. Protect existing culverts, sewers, drainage structures, manholes, water gate wells, hydrants, water mains, utility poles, overhead lines, underground conduits, underground cables, pavement and other improvements that are outside the limits of the Work and those that are within the limits of the Work but are not designated to be removed. Repair or replace, to the satisfaction of the Owner, structures and improvements that are designated to be protected but are damaged by Contractor operations.
- D. Maintain existing open drains, field and roadway ditches, drainage tile, sewers, enclosed drains, natural and artificial watercourses, surface drainage and other types of drainage within the limits of the Work free to discharge during excavating, backfilling and compacting operations. Immediately repair, replace, or clear drainage facilities that are not designated to be abandoned but are damaged or whose drainage function is impaired by Contractor operations.
- E. Available information regarding underground and overhead utilities is shown on the Drawings. Contractor bears sole responsibility for damage to any underground and overhead utilities, or any associated damages and claims caused as a result of damaging utilities. The Contractor will be responsible for repair and bear all costs, if damage is caused to on-site utilities.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Fill Material: As specified in Section 31 22 00 – Grading and Section 31 23 23-Fill.



PART 3 - EXECUTION

3.01 PREPARATION

- A. When required to permit the Work to be performed in a dry condition, provide construction dewatering, as necessary.

3.02 EXISTING STOCKPILES ON-SITE

- A. Existing vegetative growth layer may be pushed back and preserved for use in restoration following completion of the Project. Stockpile preserved vegetative growth layer separately from other stockpiles as indicated on the drawings. Protect stockpiles from soil erosion and sedimentation loss with silt fence or other appropriate means and provide permanent soil erosion protection measures for stockpiles to remain on site at completion of construction.

3.03 EXISTING UTILITIES AND BUILT ELEMENTS

- A. Locations of existing utilities shown on the Drawings are approximate; coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits. Ensure the utilities have been marked prior to commencement of construction.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction. Unless otherwise indicated, maintain flow in existing utilities by diversion, pumping, fluming, relocation, or by other methods. At the conclusion of construction, return and reinstall diverted and relocated utilities to their original condition.
- D. Protect existing structures and other elements that are not to be removed.
- E. Remove existing signs, posts, fences, and utility structures as designated by construction documents, as noted. Store these items on the site, where designated by Owner, in reusable condition.
- F. Expose utility lines prior to excavation to determine if conflicts with the proposed improvements exist. Be responsible for the cost of relocating items as required to resolve conflicts. Contact the Owner of the utility for relocation.
- G. Protect existing buildings and structures within the limits of construction. If it becomes necessary to move an existing building or structure in order to proceed with construction, perform the move without damaging the building or structure. Assume that existing structures that must be moved have a 6-inch thick base.



Limit the distance of the move to the minimum that will allow for construction of the improvement.

- H. Unless otherwise indicated, remove abandoned culvert, pipe, sewer, structure or part of a structure that is to be replaced or that will be rendered useless by the new construction.
 - 1. Unless otherwise indicated, break down structures being removed to twelve inches below the subgrade. Plug pipes connected to the structure with a masonry or concrete bulkhead as approved by the Engineer. Backfill in accordance with Section 31 22 00 and Section 31 23 23.
 - 2. If a structure is removed from a system that is to remain in service, provide and maintain an Engineer-approved bypass system for the duration of the rebuilding.
 - 3. Salvaged materials are the property of the Contractor. Promptly and properly dispose of these materials.
- I. If uncharted utilities are encountered during excavation, notify Owner's designated representative and await instructions before proceeding. Repair, at Contractor's expense, damage to utilities encountered when work is continued without notifying Owner's designated representative.

3.04 VEGETATION

- A. Remove trees, shrubs, brush, and stumps in work areas as indicated on the construction plans and specifications. Protect trees and vegetation that are scheduled to remain.
- B. Do not begin clearing until vegetation to be relocated has been removed.
- C. Do not remove or damage vegetation beyond the construction limits.
- D. Install fences to prevent inadvertent damage to vegetation to remain:
- E. In areas where vegetation must be removed but no construction will occur, remove vegetation with minimum disturbance of the subsoil.
- F. In areas where cutting of minor trees is permitted by the Drawings, exercise care to avoid damage to adjacent trees to remain.
- G. Chip, grind, crush, or shred vegetation for mulching, composting, or other purposes; preference should be given to on-site uses.
- H. Remove stumps and roots to depth of 18 inches.



- I. Fill holes left by removal of stumps and roots, using suitable fill material, with top surface neat in appearance and smooth enough not to constitute a hazard to pedestrians.
- J. Restoration: If vegetation outside removal limits or within specified protective fences is damaged or destroyed due to subsequent construction operations, replace at no cost to Owner. Prune tree limbs, branches and roots that exhibit minor damage caused by Contractor operations to the satisfaction of the Engineer.

3.05 RESTORATION IN GRASS AREAS

- A. Restore grass areas, not paved or aggregate-surfaced, with vegetative growth layer, seed and mulch in compliance with Section 32 90 00, unless indicated otherwise on the Drawings.
- B. Properly dispose of excess material from the restoration operation.
- C. Furnish, place, and compact additional fill, in compliance with Section 31 23 23, as needed to restore the disturbed areas to the cross sections called for on the Drawings or as determined by the Engineer.

3.06 DEBRIS AND CLEAN-UP

- A. Remove debris, junk, and trash from site.
- B. Fill holes due to removal of earth in accordance with Section 31 22 00 and Section 31 23 23.
- C. Leave site in clean condition, ready for subsequent work.
- D. Clean up spillage and wind-blown debris.

END OF SECTION



SECTION 31 22 00

GRADING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes removal and salvage of vegetative growth layer, rough grading the site and finish grading.

1.02 SUBMITTALS

- A. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with the Michigan Department of Transportation "Standard Specifications for Construction". Maintain one copy on site.

1.04 PROJECT CONDITIONS

- A. Protect above- and below-grade utilities that remain.
- B. Protect plants, lawns, rock outcroppings, and other features to remain as a portion of final landscaping.
- C. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs, designated to remain, from grading equipment and vehicular traffic.
- D. Provide temporary erosion and sediment control in compliance with Section 31 25 00.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Vegetative Growth Layer: See Section 31 23 23.
- B. Other Fill Materials: See Sections 31 23 23 and 31 35 26.13.
- C. Waste: In-place, compacted solid waste.



PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench mark and intended elevations for the Work are as indicated.

3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Stake and flag locations of known utilities prior to commencing work.
- C. Locate, identify, and protect utilities that remain, from damage.
- D. Remove and dispose of vegetation, brush, stones, rocks and other objectionable litter and foreign material before the ground is broken for vegetative growth layer removal.

3.03 ROUGH GRADING

- A. Remove vegetative growth layer from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
 - 1. Do not strip vegetative growth layer if weather conditions are unsuitable.
 - 2. If approved by Engineer, salvage vegetative growth layer for reuse.
 - 3. Dispose of salvaged vegetative growth layer in excess of that required for the project.
- B. Remove and dispose of material detrimental to site improvement in accordance with Section 31 10 00.
- C. Do not remove vegetative growth layer when wet.
- D. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded. Remove subsoil parallel to proposed finished grades and to elevations that allow for thickness of topsoil and installation of site improvements. Do not over-excavate.
- E. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.



- F. When excavating through roots, perform work by hand and cut roots with sharp axe.
- G. See Section 31 23 23 and 31 35 26.13 for filling procedures.
- H. Stability: Replace damaged, displaced, and/or unstable subsoil to same requirements as for specified fill.

3.04 SOIL REMOVAL

- A. Stockpile vegetative growth layer to be re-used on site; stockpile or remove remainder from site. Locate stockpiles at locations designated on the drawings or as directed by the Owner.
- B. Stockpiles: Use areas designated by Owner; pile depth not to exceed 10 feet; protect from erosion; avoid diversion of storm water runoff, creating standing water, and interference of controlled irrigation.
 - 1. Do not stockpile around trunks and roots of trees to be preserved.
 - 2. Maintain stockpiled vegetative growth layer separate from stockpiled subsoil.
 - 3. Locate and retain soil materials at least 100 feet away from edge of excavations and at least 50 feet from the top of the slope of a shoreline.
 - 4. Maintain soil erosion and sediment control measures to prevent erosion of materials off site or into drainage structures or waterways.

3.05 FINISH GRADING

- A. Before Finish Grading:
 - 1. Verify backfilling has been inspected.
 - 2. Verify subgrade has been contoured to grades and elevations shown on the Drawings and has been compacted.
- B. Remove debris, roots, branches, stones, in excess of 1/2 inch in size. Remove soil contaminated with petroleum products in an environmental appropriate manner. Coordinate removal with Owner.
- C. Perform finished grading when the ground is frost-free and weather is favorable.



- D. Where vegetative growth layer is to be placed, scarify surface to depth of 3 inches.
- E. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 3 inches.
- F. Fine grade vegetative growth layer to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
- G. Proof-roll exposed subgrade and undercut unsuitable areas to a depth of 12" or deeper as needed. Proof-rolling to be observed by the Engineer.
- H. Grade areas adjacent to structures to drain away and to prevent ponding. Finish surfaces free from irregularities.
- I. Lightly compact placed vegetative growth layer.

3.06 TOLERANCES

- A. Grade to tolerances as indicated in these specifications.

3.07 FIELD QUALITY CONTROL

- A. See specific sections of these specifications for compaction density testing.

3.08 CLEANING AND PROTECTION

- A. Remove unused stockpiled vegetative growth layer and subsoil. Grade stockpile and borrow pit areas to prevent standing water.
- B. Leave site clean and raked, ready to receive landscaping.

END OF SECTION



SECTION 31 23 16

EXCAVATION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes excavating for subbase elevations, structures, utilities and installation and maintenance of temporary haul roads to facilitate the Work of this section and to maintain access to existing facilities on the site.

1.02 SUBMITTALS

- A. Excavation Plan: Prior to the start of excavation work, submit written plan that demonstrates compliance with the Quality Control/Quality Assurance Plan, Contract Documents, and OSHA Standard 29 CFR Part 1926.650. As a minimum, include:
 - 1. Name of competent person responsible for excavation operations.
 - 2. Excavation method(s) and protective system(s) to be used.
 - 3. Manufacturer's data if proprietary protective system(s) are designed on the basis of such data.
- B. Stockpiling/ Excavation Plan: Prior to the start of excavation work, submit temporary soil stockpiling plan. Include provisions for maintaining stockpiles/ excavations during the Work, dewatering of borrow pit areas, stockpiling/ excavation erosion control measures, and removal/ restoration of stockpiles upon completion of the Work.

1.03 QUALITY ASSURANCE

- A. Obtain necessary permits as required by local, state and federal agencies for discharging water from excavations.
- B. Perform Work in compliance with applicable requirements of governing authorities having jurisdiction, including the City of Pontiac, the County of Oakland and the State of Michigan.
- C. Comply with OSHA Standard, Title 29, Code of Federal Regulations, Part 1926, Section 650 (Subpart P - Excavations).



- D. Comply with the site-specific Quality Control/ Quality Assurance Plan for excavation.

1.04 PROJECT CONDITIONS

- A. Verify that survey bench mark and intended elevations for the Work are as indicated.
- B. Protect plants, lawns, rock outcroppings, and other features to remain.
- C. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- D. Existing Structures
 1. Surface structures and underground structures shown on the Drawings are based on existing records and limited investigation. This information is provided for the convenience of the Contractor and is not guaranteed to be complete or correct.
 2. Explore ahead of the required excavation to determine exact locations of structures.
 3. Support and protect existing structures from damage. Immediately restore damaged and broken structures at no cost to Owner.
- E. Existing Utilities
 1. Locate existing underground utilities in the areas of Work. If utilities are to remain in place, provide adequate means of protection. The Contractor should, at all times, have a copy of the construction drawings with the construction personnel for use identifying charted utilities in the work area.
 2. If uncharted or incorrectly charted piping or other utilities are encountered during excavation, consult Owner and Engineer immediately for direction. Cooperate with Owner in keeping services and facilities in operation. Repair damaged utilities to satisfaction Owner at Contractor's expense.
 3. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, except when permitted in writing by Owner and then only after acceptable temporary utility services have been provided. Notify corporations, companies, individuals, or authorities owning above or below ground utilities running to property that may or will be encountered during excavation.



4. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shut-off of services if lines are active.
- F. Protection of Persons and Property
1. Barricade open excavations occurring as part of the Work.
 2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
- G. Dust Control: Conduct operations and maintain areas of activity to minimize creation and dispersion of dust, including sweeping and sprinkling of roadways. Use only Owner approved dust control measures to control serious or prolonged dust problems.
- H. Temporary Fencing: Furnish and install temporary fencing surrounding excavations, as necessary and determined by the Owner. Limit fence openings to vehicular, equipment and worker access points.

1.05 REFERENCES

- A. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2006.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Clear trees, brush, roots, stumps, logs, vegetation, sod, topsoil, organic matter, wood and other materials and debris from areas to be occupied by permanent construction or embankments or excavations.
 1. Promptly remove waste materials from the site.
 2. Properly dispose of waste materials. Burning is not permitted.



- C. Test pits
 - 1. No compensation will be made for test pits made by the Contractor for his own use.
- D. Schedule excavation with the Owner to ensure all utilities within excavation limits are abandoned, lengthened or relocated prior to construction.
- E. Obtain acceptable independent stockpile locations for vegetative growth layer, cohesive soils, granular soils, and other materials for this construction and for long-term storage from the Owner. Clear and grub areas for stockpiling prior to placement of stockpile materials as described in Section 31 10 00.
- F. Install, prior to construction, silt fencing or other controls approved by Owner in areas where sediment from this construction or operation may impact wetlands, or reach off-site drainage ways whether or not they are incorporated into Owner's Erosion and Sediment Control Plan.
- G. Excavation may require exposing waste. Contact the Owner in advance of excavation activities. Contractor and/or his subcontractors will follow site and Owner specific health and safety guidelines during all waste grading activities. The contractor should address waste grading activities in the site-specific health and safety plan prepared for this job.

3.02 SHEETING, SHORING AND BRACING

- A. Furnish, place and maintain sheeting, shoring, and bracing of the excavation to ensure safety of people in and around the excavation, as necessary or in order to meet applicable OSHA regulations. Protect the new Work, existing construction, and pedestrian and vehicular traffic.
- B. Be responsible for the design of sheeting, shoring, and bracing. Design to provide strength, quality, dimension and spacing of sheeting, shoring and bracing of existing soil conditions so as to prevent caving, loss of ground, and squeezing within the lines of the excavation and effectively restrain movement of the adjacent soil.
 - 1. Design in conformance with current federal, state, and local regulations for safety.
 - 2. Do not permit sheeting, shoring, and bracing to come into contact with pipes. Install sheeting, shoring and bracing to prevent concentrated loads and horizontal thrusts from being transmitted to the pipe.
- C. Where necessary in the Work, leave sheeting, shoring, and bracing in place.



- D. Provide supports for pipes, conduits and similar construction that crosses the excavation. If required, leave such supports in place.
- E. Do not remove earth material below the bottom of a shield beyond the limits established by ordinances, codes, laws and regulations.
- F. When using a shield for installation of structures, do not permit the bottom of the shield to extend below the top of the bedding for the structure.
- G. When removing or moving a shield ahead, take care to prevent movement of pipe or structures and avoid disturbing the bedding for pipes and structures. Remove and reinstall pipes and structures that are disturbed.

3.03 EXCAVATING

- A. Excavate to the limits of the work area to accommodate construction operations. Excavation is unclassified, and may include contaminated and uncontaminated waste/earth, sand, clay, gravel, hardpan, boulders not requiring drilling and blasting for removal, concrete debris, decomposed rock, rubbish and other materials within the excavation limits.
- B. Notify Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- C. Regardless of excavation depth, install and maintain protection system(s) in compliance with all MIOSHA regulations.
- D. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume.
- E. Correct areas that are over-excavated and load-bearing surfaces that are disturbed.
- F. Provide subgrade that is firm, dense, and thoroughly compacted and consolidated; free from mud, muck, and other soft or unsuitable materials; and firm and intact.
- G. Grade top perimeter of excavation to prevent surface water from draining into excavation. Maintain excavation side slope free of erosion gullies and desiccation cracks greater than 6-inch depth, which may pose slope stability hazard.
- H. Continue excavation as required to meet base grades.
- I. Perform additional excavation (undercut) as directed by the Owner's designated representative to remove anomalies (refuse, debris, unsuitable material, etc.) at the base of the excavation. Stockpile or legally dispose of excavated materials as directed by Owner's designated representative. Waste spoils shall be containerized immediately after excavation for proper off-site disposal.



- J. Remove excess excavated material or material that is unsuitable for re-use from the work area and stockpile on-site or legally dispose, as directed by Owner.
- K. Stockpile excavated material to be re-used in area designated by the Owner. Grade stockpiled material for proper drainage and control sediment runoff with erosion control measures.
- L. Do not excavate below the bottom elevations depicted on the Drawings without prior approval by the Owner, unless directed as specified above.
- M. Dispose of materials removed for the site in compliance with ordinances, codes, laws and regulations of authorities having jurisdiction.

3.04 DRAINAGE AND DEWATERING

- A. Prevent surface and subsurface water from flowing into excavations and from flooding adjacent areas.
- B. Remove water from excavation as fast as it collects. Direct stormwater discharge through an erosion control structure (basin, etc.) unless approved otherwise by the Owner. All water that comes in contact with waste shall be managed as leachate, not stormwater. All leachate must be collected and disposed of in a legal manner, as directed by the Owner.
- C. Maintain the ground water level below the bottom of the excavation to provide a stable surface for construction operations, a stable subgrade for permanent work, and to prevent damage to the Work. All water that comes in contact with waste shall be managed as leachate, not stormwater. All leachate must be collected and disposed of in a legal manner, as directed by the Owner.
- D. Perform dewatering to convey water away from excavations. Coordinate with Owner as excavation dewatering becomes necessary to complete the Work.

3.05 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.
- B. Excavate and grade to the following tolerances from plan grade:

- Top of waste within work limits: Minus 0.2 foot to plus 0.0 foot;

Stockpile excavated soils on-site as to type of material, i.e., vegetative growth layer, clay, sand or non-descriptive, etc., as directed by Owner's designated representative or further by soil classification type in accordance with ASTM



D2487. Waste spoils shall be containerized immediately after excavation for proper off-site disposal.

3.06 PROTECTION

- A. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

END OF SECTION



SECTION 31 23 23

FILL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes filling, backfilling, and compacting for excavations generated as a result of removal (demolition) operations.
- B. Contractor will provide all equipment, labor, and supplies required to perform the work in accordance with the Contract and Drawings.
- C. The Owner will provide certification testing through designated CQA Officer.
- D. Unsuitable materials include topsoil, peat, roots, organic soils, and materials containing slag, cinders, foundry sand, debris, rubble or frozen soils, and materials not meeting requirements of the Specification.

1.02 REFERENCES

- A. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2006.
- B. ASTM D422 - Standard Test Method for Particle-Size Analysis of Soils; 2007
- C. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN m/m³)); 2002
- D. ASTM D2434 - Standard Test Method for Permeability of Granular Soils (Constant Head); 2006
- E. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2006
- F. ASTM D2922 – Standard Test Method for Density of Soil and Soil-Aggregate in place by Nuclear Methods (Shallow Depth); 2007
- G. ASTM D3017 – Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2007
- H. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2010



- I. ASTM D5084 - Standard Test Method for Measurement of Hydraulic Conductivity of Saturates Porous Materials Using a Flexible Wall Permeameter; 2010

1.03 DEFINITIONS

- A. Finish Grade Elevations: Indicated on drawings. Match existing surrounding grades. Meet minimum thickness of fill material as specified.

1.04 SUBMITTALS

- A. Results of laboratory tests on materials to be used in construction as required in these specifications.
- B. Product data for equipment proposed to be used for compaction.

1.05 PROJECT CONDITIONS

- A. Provide sufficient quantities of fill to meet project schedule and requirements. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where indicated.
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.
- C. Verify that survey bench marks and intended elevations for the Work are as indicated.

PART 2 - PRODUCTS

2.01 FILL MATERIALS

- A. Inert/General Fill: On-site stockpiled soil or soil designated by the Contractor and permitted by the Owner.
 - 1. Free of lumps larger than 3 inches, rocks larger than 2 inches, and debris; free of rubble, wood and other organic matter.
 - 2. Offsite material confirmed acceptable based on environmental testing as required by the Owner.
- B. Compacted Clay Fill: See Section 31 35 26.13.



- C. Vegetative Growth Layer: See Section 32 90 00.

2.02 SOURCE QUALITY CONTROL

- A. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery or installation.
- B. If tests indicate materials do not meet specified requirements, change material and retest.
- C. Provide materials of each type from same source throughout the Work where on-site material is not available.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Identify required lines, levels, contours, and datum locations.
- B. See Section 31 22 00 for additional requirements.
- C. Verify that subgrade surface is dry and firm and approved by the Engineer.

3.02 PREPARATION

- A. Perform proof-roll of subgrade soils using a loaded rubber-tired front-end loader or dump truck. Undercut unstable subgrade soil and backfill subsequent fill material.
- B. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.
- C. Notify Engineer in advance of filling operations to permit Engineer to examine areas and conditions.
- D. Do not proceed with filling operations until unsatisfactory conditions have been corrected.

3.03 FILLING - GENERAL

- A. Do not place fill material when free water is on the surface of the area to be filled.



- B. Fill to contours and elevations indicated using unfrozen materials. Do not place fill when temperatures are below freezing.
- C. Employ a placement method that does not disturb or damage other work.
- D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Remove fill containing organic materials or other unacceptable material and replace with approved fill material.
- F. Maintain optimum moisture content of fill materials to attain required compaction density.
- G. Compaction Density Unless Otherwise Specified or Indicated:
 - 1. Under structures, paving, slabs-on-grade, and similar construction: 95 percent Modified Proctor density or greater, as determined by ASTM D1557.
 - 2. Elsewhere: 90 percent Modified Proctor density or greater, as determined by ASTM D1557.
 - 3. During placement, control the water content of fill material within the range necessary to obtain the specified compaction.
 - 4. Do not compact fill materials when there is free water on any portion of the fill to be compacted.
 - 5. If field and laboratory tests indicate unsatisfactory compaction, perform additional compaction at no additional cost to Owner until specified compaction is achieved.
- H. Compact each layer of fill before placing the next lift.
- I. Correct areas that are over-excavated. Use structural fill, flush to required elevation.
- J. Use compaction equipment that is suitable for the type of material placed and that is capable of providing the densities required.
- K. Perform compaction by conducting at least two passes of all portions of the surface of each lift. One pass is defined as the condition obtained when all portions of the fill material surface have been subjected to the direct contact of the compactor.



1. Test the effectiveness of the compaction equipment at the beginning of construction on a section of fill within the area where fill is to be placed.
2. If tests show that the specified compaction is not obtained, increase the number of coverages, decrease the lift thickness, or use a different type of compactor.
3. The effort required to achieve the specified compaction and the equipment used to achieve that compaction is the sole responsibility of the Contractor.

3.04 FILLING – COMPACTED CLAY

- A. See Section 31 35 26.13

3.05 TOLERANCES

- A. Top Surface of General Filling: Plus or minus 0.20 foot from required elevations.
- B. Top of Compacted Clay: See 31 35 26.13

3.06 FIELD QUALITY CONTROL

- A. Perform field density testing on compacted fill in accordance with ASTM D2922/D3017.
- B. If tests indicate work does not meet specified requirements, rework fill and retest.

3.07 CLEAN-UP AND FINISHING

- A. Leave unused materials in a neat, compact stockpile.
- B. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- C. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

END OF SECTION



SECTION 31 23 23.33

FLOWABLE FILL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes operations necessary to complete backfilling operations with flowable fill materials indicated on the drawings and as specified herein.

1.02 RELATED REQUIREMENTS

- A. Section 31 22 00: Grading
- B. Section 31 23 16: Excavation
- C. Section 31 23 23: Fill
- D. Section 31 25 26.13: Clay Containment Barrier
- E. Section 31 32 00: Soil Stabilization System
- F. Section 32 13 13: Portland Cement Concrete
- G. Other sections of the specifications also apply to the extent required for proper performance of this work.

1.03 REFERENCE STANDARDS

- A. ASTM (ASTM International)
 - 1. ASTM C138 Standard Test Method for Density (Unit Weight) Yield, and Air Content (Galvometric) of Concrete
 - 2. ASTM C143 Standard Test Method for Slump of Hydraulic-Cement Concrete
 - 3. ASTM C150 Standard Specification for Portland Cement
 - 4. ASTM C618 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
 - 5. ASTM C989 Standard Specification for Slag Cement for Use in Concrete and Mortars



6. ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

1.04 SUBMITTALS

- A. Submittal 31 23 23.33-01: Submit proposed flowable fill mix design to Engineer for approval.

PART 2 - MATERIALS

2.01 CEMENT

- A. Use cement conforming to ASTM C150, Type I or ASTM C150 Type I with ground granulated blast furnace slag.

2.02 FLY ASH

- A. Use Class F fly ash that meets the requirements of ASTM C-618 with no limits on the loss on ignition, fineness, or detailed requirements of the specification.
- B. The Manufacturer will certify, in writing that the material supplied is non-contaminated in accordance with the current Environmental Protection Agency (EPA) requirements.
- C. Do not use type C fly ash without the written authorization of the Engineer.
- D. Do not use flowable fill material manufactured with Type C fly ash in any areas that will require excavation as a part of the project.

2.03 GROUND GRANULATED BLAST FURNACE SLAG

- A. Use ground granulated blast furnace slag grade 100 or higher, ASTM C989, unless otherwise approved by the Engineer.

2.04 WATER

- A. Use potable water or approved equivalent.

2.05 ADMIXTURE

- A. DaraFill Control Low Strength Material Additive, or an Engineer approved equivalent, may be used at the option of the Contractor in the preparation of a flowable fill mix design.
- B. DaraFill CLSM Additive is manufactured by Grace Construction Products, Cambridge, MA.



2.06 MEASURING AND MIXING

A. Stabilized Fly Ash Mixture

1. Provide mixtures containing 5% of Portland cement based on the dry weight of the fly ash. Occasional batches of the mixture with a cement content of as low as 4% will be allowed provided immediate action is taken to restore the cement content to the specified range.
2. Measure slump at the point of placement.
 - a. The mixture used for general backfill in trenches, against structures etc., will normally have a slump ranging between 7 and 10 inches.
 - b. The mixture used for backfill that is required to stand and not flow laterally, or that which is to be used in water, will normally have a slump ranging between 4 and 6 inches.
3. Mix with temperatures below 50 degrees Fahrenheit, measured at the point of placement, will not be accepted.

B. Controlled Low Strength Mixture

1. Provide mixtures containing a maximum of 100 pounds of Portland cement per cubic yard or incorporate up to a maximum of 50% substitution of ground granulated blast furnace slag for cement.
2. Prepare the mixture design in accordance with the recommendations of the CLSM Additive's manufacturer.

C. Strength Requirement

1. The mixture generally will have a specified unconfined compressive cube strength of 100 psi minimum at 28 days of age and will not exceed a maximum of 250 psi at 365 days of age (excluding Class C Fly ash)
2. In the event that the laboratory strength does not reach the required 28-day strength, the backfill material supplier must demonstrate that the required strength has been met. This may be done by the use of penetrometer, CBR laboratory test adapted to the field, or an appropriate plate load test.

PART 3 - EXECUTION

3.01 MEASURING OF MATERIALS

- A. Submit the method used to measure fly ash and cement for acceptance if a cement stabilized fly ash mixture is used.



- B. Base cement content on the dry weight of the fly ash in the mix or as specified for the CLSM mixture.
- C. Correct the batched weight of fly ash, if used, for its moisture content and measured in such a way that compliments the type of batch plant being utilized, thus assuring that the percentage of cement based on the dry weight of fly ash is being satisfactorily controlled.
- D. Measure water, although its control will be a function of consistency (slump and workability of the mix).
- E. A standard unit weight can be determined by use of a standard bucket using ASTM C138 as a guide with the exception that the material not be rodded. When weights of materials are established, the unit weight bucket along with delivery weights can be used as a basis of payment.

3.02 BATCHING AND MIXING

- A. The stabilized fly ash can be mixed by a pug mill, central concrete mixer, ready-mix truck, turbine mixer, or other acceptable equipment or method.
- B. Central batch the CLSM and add the CLSM Additive at the site.
- C. Record the actual batch weights, mixing time, and mix temperature for each slump test and set of test specimens made.
- D. Foreign material may be acceptable providing it has no deleterious effect on the mixer, placing procedure or mixture properties. Generally, occasional lumps of solid material limited to a maximum of 2 inches in diameter can be permitted.

3.03 PLACEMENT

- A. Place the material by end or side dumping, chutes, conveyors, or other suitable method. Pumping, if used, must be demonstrated prior to using this method on the project site.
- B. Lines and grades will be as shown on the design drawings.
- C. Monitor structures for signs of uplift during the placement of the flowable fill material. If any movement is noted, immediately stop the placement of the flowable fill. Allow the flowable fill to sit for a minimum of 24-hours before resuming the placement of the flowable fill material.
- D. Protect flowable fill mixtures from freezing temperatures for the initial 24 hours after placement. Protection may consist of earth cover, straw, or a sacrificial layer of the stabilized fly ash mix. Strength gain from the Portland cement will be slow with temperatures of 50 degrees Fahrenheit and lower.



3.04 TESTING AND INSPECTION

- A. Use the moisture content as measured by D2216 in the mixing process to provide for the moisture correction required for control of production.
- B. Perform slump tests in accordance with ASTM C143. Test as required to establish slump for a new application and as a control of continuing usage.
- C. Prepare a set of four 3-inch by 6-inch cylinders of CLSM or stabilized fly ash. Provide moisture cure for cylinders

END OF SECTION



SECTION 31 25 00

EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes construction and maintenance of soil erosion and sediment control barriers during construction.

1.02 REFERENCES

- A. Guidebook of Best Management Practices for Michigan Watersheds, Reprinted October 1998, Michigan Department of Natural Resources, Surface Water Quality Division.

1.03 SUBMITTALS

- A. Section 01 33 00 – Administrative Requirements: Requirements for submittals.
- B. Contractor is responsible for abiding by the conditions of the site-specific Soil Erosion Sedimentation Control Permit. The Contractor will obtain the site-specific Soil Erosion Sedimentation Control Permit. Contractor to work with Owner on placement of all SESC controls.

1.04 QUALITY ASSURANCE

- A. Perform work of this section in accordance with state and local erosion and sediment control guidelines.
- B. All work shall be in accordance with Part 91 of PA 451 of 1994, as amended.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials from physical damage or contact with other conditions or substances which may degrade the product.

1.06 SEQUENCING AND SCHEDULING

- A. Temporary erosion control measures will be in place and functional prior to initiation of earth work activities. Contractor shall obtain all required permits from the authority having jurisdiction prior to construction.



PART 2 - PRODUCTS

2.01 STRAW BALE

- A. Wire-bound or single-tied.
- B. Securely anchored by at least 2 stakes or rebars driven through the bale 12 to 18 inches into the ground.
- C. Chinked (filled by wedging) with straw to prevent water from escaping between the bales.

2.02 SILT FENCE

- A. An assembled, ready to install unit consisting of geotextile attached to drivable posts.
- B. Geotextile: Uniform in texture and appearance and having no defects, flaws, or tears that would affect its physical properties. Contains sufficient ultraviolet ray inhibitor and stabilizers to provide a minimum 2-year service life from outdoor exposure.
- C. Net Backing: Consist of an industrial polypropylene mesh which is joined to the geotextile at both top and bottom with double stitching of heavy-duty cord. Width of netting: minimum of 2½ feet.
- D. Posts: Sharpened wood approximately 2 inches square and protruding below the bottom of geotextile to allow a minimum of 1.0-foot embedment. Post spacing not to exceed 6 feet. Securely fasten each post to the geotextile and new backing by staples suitable for such purpose.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Submit detailed written work plans describing methodologies for performing all work-related items.



3.02 PREPARATION

- A. Preserve salient natural features, keep cut-fill operations to a minimum, and ensure conformity with topography so as to create the least erosion and to adequately handle the volume and velocity of surface water runoff.
- B. Whenever feasible, retain, protect, and supplement natural vegetation.
- C. Do not damage, degrade, or in any way cause harm to any existing above-ground structure or appurtenance, below-ground utility, pipe, conduit, cable, conductor, or structure.
- D. Performance of temporary erosion control work does not relieve Contractor of his responsibility for preventing or minimizing the potential for erosion or siltation.
- E. Protect off-site areas from erosion due to on-site construction activities. Prevent off-site sediment transport.
- F. Minimize impacts to on-site areas not involved in construction activities.

3.03 INSTALLATION

- A. Construct temporary erosion control barriers as required by Soil Erosion and Sedimentation Control Plan. Actual alignment and/or location of the various items are as directed by the Project Owner.
- B. Place straw bales in swales and ditches as necessary.
- C. Install temporary silt fencing by securing bottom edge of fence fabric in trench.
- D. Do not construct straw barriers and silt fences in flowing streams or in swales where there is the possibility of a washout.
- E. The Owner will check weekly, and after each rainfall, erosion and sediment control measures. Accompany the Owner, as requested, to evaluate the condition, and any corrective measures required, to the erosion and sediment control measures.
- F. Straw bales and/or silt fence may be removed at the beginning of the workday, but replace at the end of the workday when approved by Owner.
- G. Whenever sedimentation is caused by stripping vegetation, re-grading, or other development, remove it from adjoining surfaces, drainage systems, and watercourses, and repair any damage as quickly as possible.



- H. Prior to or during construction, the Owner may require the installation or construction of improvements to prevent or correct temporary conditions on site. Improvements may include berms, mulching, sediment traps, detention and retention basins, grading, planting, retaining walls, culverts, pipes, guardrails, temporary roads, and other measures appropriate to the specific condition. Keep temporary improvements in place and in operation until otherwise directed by the Owner.
- I. Pay close attention to the repair of damaged bales, end runs, and undercutting beneath bales.
- J. Unless otherwise specified on drawings, or directed by the Owner, remove and dispose of temporary erosion control barrier items upon completion of Work; all to the satisfaction of Engineer. All materials once removed become the property of the Contractor.

3.04 FIELD QUALITY CONTROL

- A. Section 01 40 00 – Quality Requirements: Field inspection.
- B. The Owner or Owner’s Representative will inspect temporary erosion control items for proper placement and maintenance.

3.05 CLEANING

- A. Section 01 70 00 – Execution and Closeout Requirements: Requirements for cleaning installed work.
- B. Clean filters of excessive silt accumulation when necessary.
- C. Remove and dispose of sediment deposits when the level of deposition reaches approximately one-half the height of the barrier.
- D. Submit detailed written work plans describing methodologies for performing all work-related items.

END OF SECTION



SECTION 31 35 26.13

CLAY CONTAINMENT BARRIERS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes requirements for pre-construction testing, placement and compaction of clay cap and its maintenance.
- B. The Contractor will provide all equipment, labor, and supplies required to perform the work in accordance with the Contract Drawings and Specifications.
- C. The Owner will provide record testing through designated CQA Officer.
- D. Unsuitable materials include topsoil, peat, roots, organic soils, and materials containing slag, cinders, foundry sand, debris, rubble or frozen soils, and materials not meeting requirements of the Specification.

1.02 DEFINITIONS

- A. Lift: Constructed segment of layer comprised of like materials spread over contiguous area prior to compaction.
- B. Layer: Contiguous (compacted) stratum of material. Where comprised of several lifts, free of construction joints or lamination between lifts.
- C. Compacted Clay Fill/Cap/Liner, Infiltration Layer: Low permeability compacted clay.

1.03 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 - 1. ASTM C88 – Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
 - 2. ASTM C131– Standard test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
 - 3. ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils.



4. ASTM D698 – Test Method for Labor Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbs/ft).
5. ASTM D1140 – Standard Test Method for Amount of Material is Soils Finer than the No. 200 (75 Micrometer) Sieve
6. ASTM D1557 – Standard Test Method for Laboratory Compaction Characteristics for Soil Using Modified Effort (56,000 ft-lbs) (2700 kN-m/m)
7. ASTM D1587 – Standard Practice for Thin-Walled Tube Sampling of Soils
8. ASTM D2216 – Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and rock
9. ASTM D2434 – Standard Test Method for Permeability of Granular Soils (Constant Head)
10. ASTM D2435 – Standard Test Method for One-Dimensional Consolidation Properties of Soils
11. ASTM D2487 – Standard Classification for soils for Engineering Purposes (Unified Soil Classification System)
12. ASTM D2922 – Standard Test Method for Density of Soil and Soil-Aggregate in place by Nuclear Methods (Shallow Depth)
13. ASTM D3017 – Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
14. ASTM D3042 – Standard Test Method for Insoluble Residue in Carbonate Aggregates
15. ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
16. ASTM D5084 – Standard Test Method for Measurement of Hydraulic Conductivity of Saturates Porous Materials Using a Flexible Wall Permeameter
17. ASTM D2850 – Standard Test Method for Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression.
18. ADTM D3080 – Standard Method for Direct Shear Test of Soils Under Consolidated Drained Conditions.



1.04 QUALITY ASSURANCE

- A. Quality assurance and quality control will be performed in accordance with the Site-Specific Quality Assurance Plan prepared by Owner's designated representative, EGLE construction permit, and these Specifications.

1.05 PROJECT/SITE CONDITIONS

- A. Do not block or obstruct roads, streets or pavements with excavated materials, except as authorized by Owner. Maintain soil stockpiles only within areas authorized by Owner.
- B. Schedule work in coordinated effort with Owner and Owner's designated representatives, including, but not limited to, engineering inspection and certification.

1.06 CLAY FILL PRE-CONSTRUCTION TESTING REQUIREMENTS

A. Contractor requirements:

1. Provide Owner's designated representative with a written method statement describing the soil liner installation procedures.
2. Request notice requirements for Owner's Construction Quality Assurance (CQA) Officer regarding necessary timeframe to schedule mobilization of staff to provide required support, as directed by Owner's designated representative, prior to soil cap construction. Contractor to provide test samples from off-site borrow locations as required by and for Owner's designated representative to perform pre-construction testing (geotechnical and environmental testing.), and to allow Owner's representative time to schedule availability of soil labs for testing.

B. Requirements of Owner's designated representative:

1. Notify Contractor in pre-construction meeting of minimum timeframe required to provide necessary pre-construction testing to prevent construction delays.
2. Schedule and confirm reserved times with Owner-approved testing laboratories, providing laboratory with estimated quantities of tests and probable schedule for sample deliveries, based upon Contractor's construction schedule.



3. Notify Contractor and Owner immediately if delays are anticipated, and of test failures.
4. Notify Contractor of material suitability/unsuitability for work.

PART 2 - PRODUCTS

2.01 LINER QUALITY SOIL

- A. Soil Classification: ML, SC, CH or CL (or combination), by Unified Soil Classification System in accordance with ASTM D2487.
- B. Permeability: 1.0×10^{-7} cm/sec or less (in-place) by ASTM D5084 with EGLE modifications.
- C. Compaction: 90% modified Proctor density or greater, as determined by ASTM D1557 and as necessary to meet specified permeability.
- D. Moisture: Compacted-in-place moisture content 0% to 5%.
- E. Environmental: Satisfactorily meet environmental criteria as stipulated by the Owner.

PART 3 - EXECUTION

3.01 SUBGRADE PREPARATION

- A. Proof-roll subgrade surfaces to provide smooth surfaces prior to placement of soil liner.
- B. Submit detailed written work plans describing methodologies for performing all work-related items.

3.02 PLACEMENT OF LINER QUALITY SOIL

- A. Do not place soil liner material that has not been pre-qualified.
- B. Place soil in accordance with the following:
 1. Leave roughened or scarify each preceding lift to a typical depth of 1 inch to not more than 3 inches prior to successive lift placement.



2. Maximum Loose Lift Thickness: 9 inches, including scarified or roughened depth of previous lift, or as necessary for a 6-inch maximum compacted lift thickness.
 3. Maximum Compacted Lift Thickness: 6 inches or depth of foot or tooth on compactor used, whichever is less.
 4. Minimum Completed Soil Liner Thickness: 2 feet.
 5. Maximum Rock Size: 3 inches.
 6. Maximum Soil Clod Size Prior to Compaction: 4 inches.
 7. Allowable Soil Moisture Content Range: 0% to 5% wet of optimum.
 8. Minimum Soil Compaction: 90% of maximum dry density as determined by the modified Proctor ASTM D1557 as necessary to meet specified permeability.
 9. Maximum Soil Permeability: 1.0×10^{-7} cm/sec (in place), as determined by ASTM D5084.
- C. Material distribution and gradation throughout soil liner to remain free from lenses, pockets, streaks, or sections of material differing substantially in texture or gradation from pre-qualified liner material for which prior source testing has been performed. Separate tests are required for each material type as determined by Owner's designated representative.
- D. Place lifts of soil to form one continuous monolithic layer of material. Ensure previous lift is moist and scarify surface of previously placed lifts with disc or other piece of machinery capable of penetrating into previous lift to minimum 1 inch depth or leave previous lift roughened to provide proper bonding between subsequent lifts of soil liner. Place soils on slopes in a downslope to upslope fashion.
- E. Do not place soil below ambient air temperature of 32°F, unless approved by Owner's designated representative. Inspect material to ensure that it is free of ice, snow, or frozen material when weather conditions warrant.
- F. Control lift thickness using laser-guided equipment or other method approved prior to construction by Owner's designated representative to ensure requirements of the Specifications are met. Owner prefers the use of laser-guided equipment for this construction. No stakes or hubs are to remain in the soil liner. Contractor should reiterate the removal of damaged stakes to work crew during daily assignments, if Contractor utilizes grade stakes.



- G. Minimum soil layer thickness will be verified and documented by Owner's designated representative. Rework or remove and replace portions of soil layer not meeting Specification requirements. Slope must be maintained between any two points of measurement.
- H. Break down soil clods larger than specified maximum in any direction to less than or equivalent to specified maximum prior to lift compaction.
- I. Compact each lift with sheepsfoot roller, or similar kneading-type compactor with minimum 8-inch protruding pads, with a minimum of three (3) passes per acre per lift. Fill footed rollers towed behind a dozer with liquid to ensure sufficient compactive effort is exerted to liner (minimum static load of 45,000 pounds). Fill sheepsfoot indentations for top lift of compacted clay with additional clay and compact with heavy dozers, or similar equipment. No pumping or excessive rutting of any lift surface is permitted. Any material which, in the opinion of the Owner's designated representative, exhibits pumping or excessive rutting will be removed, or reworked and replaced.
- J. Avoid creating construction joints in soil liner. Where construction joints are necessary (such as tie-in with existing clay soils), keying segments of soil liner together with "stair-step" techniques is required unless otherwise indicated on the Drawings. Method of keying to be approved by Owner's designated representative prior to keying efforts.
- K. Minimize damage to soil liner due to rainfall. Precautions include, but are not limited to, grading surface to promote runoff, back-blading with dozer, sealing surface with smooth drum roller or other means. Take precautions each night prior to anticipated rainfall event, but are generally recommended each night. Augment precautions by placing pump(s) in area(s) likely to collect water. Provide, maintain, and operate pumps; coordinate access to site with Owner's designated representative or Owner.
- L. Remove ice and snow during cold weather construction prior to placing lift. Do not use frozen soil in soil liner.
- M. Re-compact or rework and retest soil that fails field testing or has been impacted by freeze-thaw cycles during construction activity. Re-compact or rework soil area following a failed test to boundaries of passing test results.
- N. The compacted soil liner construction will be field verified by the Owner's designated representative by performing the following quality control tests in accordance with the site-specific CQA Plan:



1. The field density/ moisture of the liner immediately after compaction, as specified by ASTM D2922/D3017, at a minimum frequency of one (1) test per acre per lift of construction, but not less than three (3) tests per day. Stagger and rotate the location of the tests with each lift (a minimum of 5 feet horizontal spacing) to maximize the coverage of tests. Backfill test penetrations with granular bentonite.
 2. The following testing will be performed at a frequency of one (1) test per 5,000 cubic yards of liner placed or change in borrow source to verify the consistency of the material source: Modified Proctor Density, Atterberg Limits, and Soil Classification/ Grain Size Distribution.
 3. The undisturbed hydraulic conductivity of a soil sample, for every 10,000 cubic yards of liner placed or a minimum of three (3) tests per construction project in accordance with ASTM D5084 with EGLE modifications. Backfill test penetrations with granular bentonite.
- O. Maintain soil liner surface until final acceptance by the Owner. Includes reworking or removing and replacing portions of soil liner softened or tracked by runoff due to rainfall or otherwise determined to be unfit for vegetative growth installation.
- P. Submit detailed written work plans describing methodologies for performing all work-related items.

3.03 MOISTURE CONTENT OF COMPACTED CLAY LINER MATERIALS

- A. Uniformly distribute moisture content of soil material prior to and during compaction throughout each lift of material as necessary to meet moisture requirements. Adjust soil/clay liner material determined by Owner's designated representative to contain moisture outside specified range to provide material within specified range. Adjustment includes, but is not limited to, drying materials containing moisture in excess of specified range and adding water to materials containing moisture less than specified range. Contractor must use a disk, or other equipment approved by Owner, to evenly distribute moisture throughout the soil lift, and provide proper bonding between soil lifts. Additional payment will not be made to Contractor for adjusting moisture content of materials for use in soil liner.
- B. Maintain moisture content of soil/clay liner materials in previously placed lifts within specified range. Avoid excessive drying and desiccation cracking of materials. Maintenance includes, but is not limited to, wetting surface of previously placed lifts to avoid excessive drying and desiccation cracking of material. Prior to placement and compaction of subsequent lifts of soil material, Owner's designated representative will verify moisture content of scarified material of previously placed lift is within specified limits. Adjust previously placed materials determined to possess moisture content outside specified limits, as previously specified, and recheck before subsequent lift placed.



- C. After soil layer or portion thereof is complete, continue to maintain soil liner surface in moist condition, free of desiccation cracks until accepted for vegetative growth placement.
- D. Submit detailed written work plans describing methodologies for performing all work-related items.

3.04 FIELD QUALITY CONTROL

- A. Notify Owner's designated representative when portions of clay liner are ready for testing.
- B. Provide Owner's designated representative with construction equipment, and labor necessary for completion of field testing. (Example: blading of areas for density test or pushing Shelby tubes for permeability testing in re-compacted soil liner.)
- C. Place clay liner soils to elevations as shown on the plan to within minus 0.0 foot to plus 0.2 foot from required elevations. The clay liner soils thickness must meet the minimum 2-foot thickness as indicated on the plan.

END OF SECTION



SECTION 31 32 00

SOIL STABILIZATION SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

- A. Work Included: This section includes providing all material, labor, tools and equipment for installation of Cellular Confinement System as shown in the Contract Documents and as specified in this section.
- B. The Cellular Confinement System shall be used for slope protection.

1.02 RELATED SECTIONS AND DIVISIONS

- A. The applicable provisions of the General Conditions shall govern the work in this Section.
- B. Section 0130000 – Administrative Requirements
- C. Section 311000 – Site Preparation
- D. Section 312200– Grading
- E. Section 312316 – Excavation
- F. Section 312323 – Fill
- G. Section 312526.13 – Clay Containment Barrier
- H. Section 313526.14 – Geosynthetic Clay Liner
- I. Section 313526.18 - Geotextile
- J. Section 312500 - Erosion and Sedimentation Control
- K. Section 321313 – Portland Cement Concrete

1.03 REFERENCES

- A. American Association of State Highway and Transportation Officials (AASHTO)
 - 1. AASHTO M 218 - Steel Sheet, Zinc-Coated (Galvanized) for Corrugated Steel Pipe.
 - 2. AASHTO M 288 - Geotextile Specification for Highway Applications
- B. American Society of Testing and Materials (ASTM)
 - 1. ASTM D 1505 - Density of Plastics by the Density-Gradient Technique.
 - 2. ASTM D 1603 – Standard Test for Carbon Black in Olefin Plastics



3. ASTM D 1693 – Environmental Stress-Cracking of Ethylene Plastics.
4. ASTM D 5199 – Measuring Nominal Thickness of Geotextiles and Geomembranes.
5. ASTM E 41 – Terminology Relating to Conditioning.

1.04 SUBMITTALS

- A. Submit manufacturer's shop drawings in accordance with Section 01 3000, submittals including Manufacturer's product data, samples and section layout.
- B. Manufacturer's Certificate of Analysis: Manufacturer shall supply certificate of analysis containing the following test results for the cellular confinement material used for project: Base Resin Lot Number(s), Resin Density per ASTM-1505, Production Lot Number(s), Material Thickness, Short Term Seam Peel Strength, and percentage of Carbon Black. Submit qualifications certifying the installer is experienced in the installation of the specified products.
- C. Submit qualifications of Manufacturer's field representative certifying the field representative is experienced in the installation of the specified products.
- D. No material will be considered as an equivalent to the geocell material specified herein unless it meets all requirements of this specification, without exception. Manufacturers seeking to supply what they represent as equivalent material must submit records, data, independent test results, samples, certifications, and documentation deemed necessary by the Engineer to prove equivalency. The Engineer shall approve or disapprove other Manufacturers' materials in accordance with the General Conditions after all information is submitted and reviewed. Any substitute materials submitted shall be subject to independent lab testing at the contractor's expense.

1.05 QUALITY ASSURANCE AND CONTROL

- A. The cellular confinement system material shall be provided from a single Manufacturer for the entire project.
- B. The Manufacturer's Quality Management System shall be certified and in accordance with ISO 9001:2015 and CE certification. Any substitute materials submitted shall provide a certification that their cellular confinement manufacturing process is part of an ISO program and a certification will be required specifically stating that their testing facility is certified and in accordance with ISO. An ISO certification for the substitute material will not be acceptable unless it is proven it pertains specifically to the geocell manufacturing operations.
- C. The Manufacturer shall provide certification of compliance to all applicable testing procedures and related specifications upon the Owner's written request. Request for certification shall be submitted no later than the date of order placement. The Manufacturer shall have a minimum of 20 years experience



producing cellular confinement systems.

- D. Pre-Installation Meeting: Prior to installation of any materials, conduct a pre-installation meeting to discuss the scope of work and review installation requirements. The pre-installation meeting shall be attended by all parties involved in the installation of the cellular confinement system.
- E. Manufacturer's Field Representative Qualifications:
 - 1. Manufacturer shall provide a qualified field representative on site at the start of construction to ensure the system is installed in accordance with the Contract Documents.
 - 2. Manufacturer's field representative shall have a minimum 5 years' installation experience with the specified products in the specified application.
 - 3. Manufacturer of any substitute materials to be used shall certify that a representative can meet the above criteria and will be on site for initial construction start up. Manufacturers other than Presto will be required to provide proof the representative meets these qualifications.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in Manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and Manufacturer.
- B. The materials shall be stored in accordance with Manufacturer's instructions. The materials shall be protected from damage and away from direct sunlight.
- C. The materials shall be delivered, unloaded and installed in a manner to prevent and minimize damage.

1.07 WARRANTY

- A. The Manufacturer shall warrant each section that it ships to be free from defects in materials and workmanship at the time of manufacture. The Manufacturer's exclusive liability under this warranty or otherwise will be to furnish without charge to the original f.o.b. point a replacement for any section which proves to be defective under normal use and service during the 10-year period which begins on the date of shipment. The Manufacturer reserves the right to inspect any allegedly defective section in order to verify the defect and ascertain its cause.
- B. This warranty shall not cover defects attributable to causes or occurrences beyond the Manufacturer's control and unrelated to the manufacturing process, including, but not limited to, abuse, misuse, mishandling, neglect, improper storage, improper installation, improper alteration or improper application.



PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

- A. Presto Geosystems, PO Box 2399, Appleton, Wisconsin 54912-2399.
Toll Free: (800) 548-3424. Phone: (920) 738-1328. Fax: (920) 738-1222.
E-Mail: info@prestogeo.com. Website: www.prestogeo.com.

2.02 GEOWEB CELLULAR CONFINEMENT SYSTEM

- A. Manufacturing Certification
 - 1. The Manufacturer shall have earned a certificate of registration, which demonstrates that its quality-management system for its Geoweb cellular confinement system is currently registered to the ISO 9001:2008 and CE quality standards.
- B. Base Materials
 - 1. Polyethylene Stabilized with Carbon Black
 - a. Density shall be 58.4 to 60.2 pound/ft³ (0.935 to 0.965 g/cm³) in accordance with ASTM D 1505.
 - b. Environmental Stress Crack Resistance (ESCR) shall be 5000 hours in accordance with ASTM D 1693.
 - c. Ultra-Violet light stabilization with carbon black.
 - d. Carbon Black content shall be 1.5 to 2 percent by weight, through addition of a carrier with certified carbon black content.
 - e. Carbon black shall be homogeneously distributed throughout material.
 - f. The manufacturer must have an in-place quality control to prevent irregularities in strip material.
- C. Cell Properties
 - 1. Individual cells shall be uniform in shape and size when expanded.
 - 2. Individual cell dimensions (nominal) shall be dimensions $\pm 10\%$.
 - 3. GW30V4
 - a. Length shall be 11.3 inches (287 mm).
 - b. Width shall be 12.6 inches (320 mm).
 - c. Nominal area shall be 71.3 in² (460 cm²) plus or minus 1%.
 - d. Nominal depth shall be 4 inches (100 mm).



D. Strip Properties and Assembly

1. Perforated Textured Strip/Cell

- a. Strip sheet thickness shall be 50 mil (1.27 mm), minus 5 percent, plus 10 percent in accordance with ASTM D 5199. Determine thickness flat, before surface disruption.
- b. Polyethylene strips shall be textured surface with a multitude of rhomboidal (diamond shape) indentations.
- c. Textured sheet thickness shall be 60 mil plus or minus 6 mil (1.52 mm plus or minus 0.15 mm).
- d. Indentation surface density shall be 140 to 200 per in² (22 to 31 per cm²).
- e. Perforated with horizontal rows of 0.4 inch (10 mm) diameter holes.
- f. Perforations within each row shall be 0.75 inches (19 mm) on center.
- g. Horizontal rows shall be staggered and separated 0.50 inches (12 mm) relative to hole centers.
- h. Edge of strip to nearest edge of perforation shall be a minimum of 0.3 inches (8 mm).
- i. Centerline of spot weld to nearest edge of perforation shall be a minimum of 0.7 inches (18 mm).
- j. A slot with a dimension of 3/8 inch x 1-3/8 inch (10 mm x 35 mm) is standard in the center of the non-perforated areas and at the center of each weld.

2. Assembly of Cell Sections

- a. Fabricate using strips of sheet polyethylene each with a length of 142 inches (3.61 m) and a width equal to cell depth.
- b. Connect strips using full depth ultrasonic spot-welds aligned perpendicular to the longitudinal axis of strip.
- c. Ultrasonic weld melt-pool width shall be 1.0 inch (25 mm) maximum.
- d. Weld spacing for GW30V-cell sections shall be 17.5 inches plus or minus 0.10 inch (445 mm plus or minus 2.5 mm).

E. Cell Seam Strength Tests

1. Minimum seam strengths are required by design and shall be reported in test results. Materials submitted with average or typical values will not be accepted. Written certification of minimum strengths must be supplied to the engineer at the time of submittals.
2. Short-Term Seam Peel-Strength Test



- a. Cell seam strength shall be uniform over full depth of cell.
 - b. Minimum seam peel strength shall be 320 lbf (1,420 N) for 4 inch (100 mm) depth.
3. Long-Term Seam Peel-Strength Test
- a. Conditions: Minimum of 7 days in a temperature-controlled environment that undergoes change on a 1-hour cycle from room temperature to 130 °F (54 °C).
 - b. Room temperature shall be in accordance with ASTM E41.
 - c. Test samples shall consist of two, four-inch (100 mm) wide strips welded together.
 - d. Test sample consisting of two carbon black stabilized strips shall support a 160 pound (72.5 kg) load for test period.
4. 10,000-hour Seam Peel Strength Certification

Presto Geosystems shall provide data showing that the high-density polyethylene resin used to produce the Geoweb sections has been tested using an appropriate number of seam samples and varying loads to generate data indicating that the seam peel strength shall survive a loading of at least 209 lbf (95 kg) for a minimum of 10,000 hours.

2.03 INTEGRAL COMPONENTS

A. ATRA® Stake Clip

1. The ATRA Stake Clip is a molded, high-strength polyethylene device available in standard (0.5 inch) and metric (10–12 mm) versions.
2. ATRA Stake Clips can be installed as an end cap on standard (0.5 inch) and metric (10–12 mm) steel reinforcing rods to form ATRA Anchors.

B. ATRA® Key

1. ATRA keys shall be constructed of polyethylene and provide a high strength connection with minimum pull-through of 275 lbs (125 kg).
2. ATRA keys shall be used to connect sections together at each interleaf and end to end connection.
3. Metal staples or zip ties are not allowed.

2.04 STAKE ANCHORAGE

A. ATRA® Anchors

1. ATRA Anchors shall consist of standard (0.5 inch) or metric (10–12 mm) steel reinforcing rod with an ATRA® Stake Clip attached as an end cap.
2. ATRA anchors shall be assembled by inserting the ATRA Stake Clip onto the reinforcing rod so that the end is flush with the top of the ATRA



Stake Clip. Prior to attaching the ATRA Stake Clip, the reinforcing rod shall be beveled and free from all burrs.

3. The anchor length and placement shall be as shown in the Contract Documents.

2.05 CELL INFILL MATERIALS

- A. Cell infill material shall be concrete with a minimum strength of 3000 psi and air content of 4% in accordance with ACI and ASTM standards. Refer to Section 32 1313 for more information.
- B. Infill material shall be free of any foreign material.
- C. Clays and silts are not acceptable infill material.
- D. Infill material shall be free-flowing and not frozen when placed in the Geoweb panels.

2.06 ADDITIONAL COMPONENTS

- A. Geotextile
 1. The geotextile separation layer shall be as specified in the Contract Documents. See Section 31 3526.18 for more information.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify site conditions are as indicated on the drawings. Notify the Engineer if site conditions are not acceptable. Do not begin preparation or installation until unacceptable conditions have been corrected.
- B. Verify layout of structure is as indicated on the drawings. Notify the Engineer if layout of structure is not acceptable. Do not begin preparation or installation until unacceptable conditions have been corrected.

3.02 INSTALLATION OF THE CHANNEL PROTECTION SYSTEM

- A. Prepare sub grade and install protection system in accordance with Manufacturer's recommendations.
- B. On-site time for installation assistance by the Manufacturer's field representative shall be 1 day with one trip. All travel and expense costs for Manufacturer's field representative installation assistance shall be included in the Contractor's base bid price.
- C. Sub Grade Preparation:
 1. Excavate or fill foundation soils so top of installed section is flush with



or slightly lower than adjacent terrain or final grade as indicated on the drawings or as directed by the Engineer.

2. Install geotextile separation layer on prepared surfaces ensuring required overlaps are maintained and outer edges of geotextile are buried in accordance with the Manufacturer's recommendations.

D. Section Anchorage

1. Anchorage requirements for the sections shall be as shown on the Contract Documents and as directed by the Engineer.
2. Anchorage with ATRA Anchors
 - a. Position collapsed sections at the crest of the slope.
 - b. If required, excavate the anchor trench at the top of the slope to the depth as shown on the Contract Documents.
 - c. Drive ATRA anchors at the crest of the slope to secure the sections in place and allow expansion of the sections into position.
 - d. After the sections are expanded as desired, drive ATRA Anchors so the arm of the ATRA Stake Clip engages with the top of the cell wall.
 - e. Anchorage pattern and stake length shall be as indicated on the Contract Documents.
 - f. Fill the anchorage trench with the specified material and compact as required by the Contract Documents.

E. Section Placement and Connection

1. Verify all sections are expanded uniformly to required dimensions and that outer cells of each section are correctly aligned. Interleaf or overlap edges of adjacent sections. Ensure upper surfaces of adjoining sections are flush at joint and adjoining cells are fully aligned at the cell wall slot.
2. Connect the sections with ATRA keys at each interleaf and end to end connection. Insert the ATRA key through the cell wall I-slot before inserting through the adjacent cell. Turn the ATRA key 90 degrees to lock the sections together.

F. Concrete Infill Placement – See Section 32 1313 for additional requirements.

1. Concrete shall be placed, finished and cured in accordance with the Contract Documents.
2. Once placing operation commences, it shall be carried out as a continuous operation until a designated section is completed or as approved by the Engineer.
3. Limit the drop height of concrete to 3 feet (1 meter) to prevent panel distortion. Elephant trunks and/or tremies shall be used to prevent free fall of concrete.



4. Where concrete chutes are used, the end of the chute shall be baffled to prevent segregation of the concrete.
5. The concrete shall be thoroughly compacted by means of an approved vibrator. The period of vibration shall not be less than 2 seconds nor more than 5 seconds at any one point.
6. Concrete shall be flush with the top of the walls.
7. Apply specified finish.



**Appendix A
Short-Term Seam Strength Test Procedure**

Frequency of Test

The short-term seam peel strength test (referred to as the ‘test’ in this section) shall be performed on a geocell section randomly taken directly from the production line each two hours.

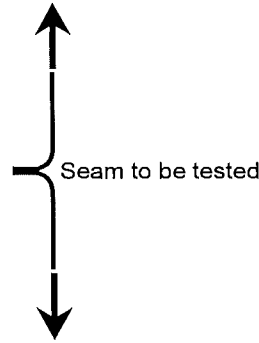


Figure A1

Test Sample Preparation

Randomly choose 10 welds within the selected section and cut those welds from the section such that 10 cm (4 in) of material exist on each side of the weld. The test sample shall have a general appearance as illustrated in Figure A1. Prior to testing, the test samples shall have air cool for a minimum of 30 minutes from the time the selected geocell section was manufactured.

Short-term Seam Peel Strength Test

The apparatus used for testing the short-term seam peel strength shall be of such configuration that the jaws of the clamp shall not over stress the sample during the test period. Load shall be applied at a rate of 12 in (300 mm) per minute and be applied for adequate time to determine the maximum load. The date, time and load shall be recorded.

Short-term seam peel strength shall be defined as the maximum load applied to the test sample. Minimum required short-term seam peel strength shall be:

- 640 lbf (2840 N) for the 8 in (200 mm) depth cell
- 480 lbf (2130 N) for the 6 in (150 mm) depth cell
- 320 lbf (1420 N) for the 4 in (100 mm) depth cell
- 240 lbf (1060 N) for the 3 in (75 mm) depth cell.

Definition of Pass / Failure

Two methods shall be used to determine acceptability of the manufactured geocell sections. The successful passing of the short-term seam peel test shall not be used to determine acceptable of the polyethylene for use in manufacturing of the geocell sections. Acceptability of the polyethylene shall be determined through tests conducted in Appendix B.

The Tested Value

If more than one of the tested seam samples fails to meet the minimum peel strength, all sections manufactured after the previously successful test shall be rejected.

If all tested seam samples meet the minimum peel strength, all geocell sections manufactured since the last successful test shall be considered to have passed the test.

When one of the tested seam samples fails to meet the minimum peel strength, another 10 samples shall be randomly selected and cut from the previously selected section. If more than one of these samples fails, all sections manufactured after the previously successful test shall be rejected. Otherwise, all geocell sections manufactured since the last successful test shall be considered to have passed the test.



Visual Failure Mode

After each sample is tested, the seam shall be examined to determine the failure mode. Two failure modes are possible.

- Material failure within and adjacent to the weld indicated by material strain and
- Weld failure resulting in complete separation of the seam and shows little or no material strain.

Upon examination, when the failure mode results in complete separation of the seam and indicates little or no material strain, product manufactured shall be rejected.



**Appendix B
Long-Term Seam-Strength Test Procedure**

Frequency of Test

The long-term seam peel strength test (referred to as the ‘test’ in this section) shall be performed:

1. on each new resin lot number if the geocell manufacturer extrudes the sheet or strip used to produce the geocell material.
2. on each new order of sheet and/or strip if the geocell manufacturer does not extrude the sheet and/or strip used to produce the geocell material.

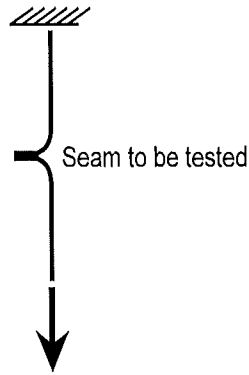


Figure B1

Test Sample Preparation

A test sample shall be made using two sets of two strips meeting all aspects of the material portion of this specification. Testing shall be done on non-perforated samples to obtain the true seam strength of the bond. One set of two strips are to be welded in welder position “A” and the other set of two strips are to be welded in welder position “B” producing two 1-cell long sections of geocell product. Welding should be done using a warm welder. The welded samples shall be labeled “A” and “B” and the weld seams of each sample shall be numbered consecutively from left to right starting with the number 1 (one) and corresponding to the welding head number.

The samples shall air cool for a minimum of 30 minutes. Randomly choose 10 welds from

samples “A” and “B” and cut those welds from the geocell samples such that 4 in (10 cm) of material exist on each side of the weld. These samples shall be cut to a width of 4 in (10 cm). Properly identify each weld using the sample letter and weld seam number.

These samples are now ready to be tested.

Long-term Seam Peel Strength Test

The long-term seam peel strength test shall take place within an environmentally controlled chamber that undergoes temperature change on a 1-hour cycle from room temperature to 130°F (54°C). Room temperature shall be defined per ASTM E41.

Within the environmentally controlled chamber, one of the ends of the samples (10 samples in total) shall be secured to a stationary upper clamp. The jaws of the clamp shall be of such configuration that the grip does not over stress the sample during the test period. The sample shall be secured so that its axis is vertical and the welds being tested are horizontal as the sample hangs within the environmentally controlled chamber.

A weight of 160 lb (72.5 kg) shall be lifted via a hoist or lift platform and attached to the free lower end, of the sample. The weight shall be lowered in a way so that no impact load occurs on the sample being tested. The weight shall be sufficient distance from the floor of the chamber so that the weight will not touch the floor of the chamber as the sample undergoes creep during the test period. The date and hour the weight is applied shall be recorded.

The temperature cycle shall commence immediately within the environmentally controlled chamber. The test period for the applied load shall be 168 hours.

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Definition of Pass / Failure

If any of the 10 seams fail prior to the end of the 168-hour (7-day) period, the date and hour of the failure shall be recorded and the polyethylene

resin and strip material shall be considered unsuitable for geocell manufacturing.

END OF SECTION



SECTION 31 35 26.14

GEOSYNTHETIC CLAY LINER

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes supply of all supervision, labor, materials and equipment, and performance of all Work necessary for the manufacturing, delivery, installation, and testing of the geosynthetic clay liner, including installation as herein specified and as shown on the Drawings.

1.02 REFERENCES

- A. ASTM D5084 Standard Test Method for Measurement of Hydraulic Conductivity Saturated Porous Materials Using a Flexible Wall Permeameter
- B. ASTM D4643 Method for Determination of Water (Moisture Content of Soil by the Microwave Method
- C. ASTM D3776 Test Methods for Mass per Unit Area (Weight) of Woven Fabric.
- D. ASTM D1776 Practice for Conditioning Textiles for Testing
- E. ASTM E946 Test Method for Water Absorption of Bentonites by Porous Plate Method
- F. API RP 13B1 Fluid Loss of Bentonite Clays
- G. USP-NF-XYII Swell Index Test
- H. GRI GCL-3 Test Methods, Required Properties, and Testing Frequencies of Geosynthetic Clay Liners (GCLs)

1.03 DEFINITIONS

- A. Installer – The Installer is the Contractor to install the GCL (and if applicable other geosynthetic components).



- B. GCL Manufacturer: A supplier of the Contractor who furnishes the GCL material to be incorporated in the Work by Contractor or Subcontractor. All submittals and materials required by GCL manufacturer are the responsibility of the Contractor and should be provided in accordance with the Contract Documents.
- C. "Reclaimed" or "Recycled": Materials which have been shipped from the manufacturing facility, rejected, and returned for reuse, or material which has actually seen some type of field service and has been returned to be remanufactured in to GCL.
- D. Quality Assurance Contractor (QAC): Party, independent from Manufacturer or Installer that is responsible for observing and documenting activities related to the quality assurance program during the geosynthetic installation.

1.04 PRECONSTRUCTION SUBMITTALS

- A. Submit the following information to the Owner and Engineer not less than ten (10) calendar days prior to use of the material on the project site.
 - 1. Submit a copy of the bentonite clay raw material Quality Control Certificates issued by the Bentonite Clay Supplier for the specific material and to manufacture the GCL rolls provided for the project.
 - 2. The Owner reserves the right to refuse use of any GCL material supplied without the proper bentonite clay quality control and quality assurance documentation.
 - 3. Submit a copy of the GCL roll Quality Control Certificates.
- B. It is ultimately the responsibility of the Contractor to ensure that all of the documentation required from the GCL Manufacturer has been submitted to the Owner. No GCL installation procedures will be approved prior to receipt of all necessary information. If the Contractor proceeds with the installation without proper authorization, it will be at his own risk and expense, and the material may be subject to removal and replacement, at the Owner's discretion.

1.05 INSTALLATION SUBMITTALS

- A. If the GCL is to be installed onto a soil subgrade, a signed Soil Subgrade Surface Acceptance Certificate is to be submitted prior to deployment. The criterion for subgrade surface acceptance is to be based upon the potential impact of the subgrade condition on the performance of the geosynthetic materials, particularly a geotextile or geomembrane to be installed above the GCL. The assessment of this impact is to be performed by the QAC and the Contractor prior to the installation of the GCL.



Subgrade surface acceptance procedures and acceptance criteria are detailed in subsection 3.1 of this Section.

1.06 PROJECT COMPLETION SUBMITTALS

- A. At the completion of the project, supply the following to the Owner and Owner's Representative: certification that the GCL was installed in accordance with the project specifications, and GCL Installation Quality Control Procedures Manual, a warranty for the GCL installation workmanship, and a warranty for the GCL materials.

1.07 QUALITY ASSURANCE

- A. Quality assurance will be provided by an independent testing company contracted and paid for by the Owner. Quality assurance testing and documentation will be performed in accordance with the Specifications.

1.08 TRANSPORTATION AND HANDLING

- A. Deliver material to the site only after the QAC's approval of the submittals.
- B. The Contractor is responsible for all damages to the materials incurred prior to and during transportation to the project site. This includes, but is not limited to, physical damage to the material resulting from improper handling, exposure to the elements, and loss of or illegible labeling. Inform the Owner of shipment, a minimum of twenty-four (24) hours in advance of its arrival on Site.
- C. The handling of the GCL is the responsibility of the Contractor until the time the completed installation is accepted by the Owner. Perform the handling of the GCL material in accordance with the Contractor's Installation Quality Control Procedures Manual.
- D. Handle rolls of GCL in a competent manner such that damage does not occur to the product. The Contractor is responsible for all damages incurred to the material during handling. This includes, but is not limited to, physical damage to the material resulting directly from equipment during off-loading, site transport, and deployment processes, or indirectly from the leakage or spillage of any fluids associated with the Contractor's activities.
- E. Damaged rolls, as determined by the Owner or Owner's Representative, may be rejected and, if so, will be required to be removed from the Site and replaced by Contractor at no expense to the Owner. Remove any materials, or portion thereof, exposed to leaking hydrocarbon fluids, from the Site and/or disposed of and replaced at no expense to the Owner.



1.09 ON-SITE STORAGE

- A. The storage of GCL at the Site is the responsibility of the Contractor. Store the materials within the materials staging area, as agreed to by the Contractor and the Owner during the Pre-construction Meeting.
- B. The Contractor is responsible for protection of the materials from the elements. Protect the rolls from moisture, dirt, mud, dust, and damage at all times prior to deployment. The Contractor is responsible for any damages to the material resulting from improper storage techniques. Do not stack the GCL rolls more than three rolls high or an amount that the Contractor deems is adequate, to protect against damaging while being removed from the stockpile and stability of the stacked GCL rolls. Also, stack the rolls in such a way that access for roll identification and conformance testing is possible. Maintain the integrity and legibility of roll labels during storage.
- C. Store the GCL in accordance with the Contractor's Installation Quality Control Procedures Manual and the GCL Manufacturer's recommendations. If site-specific conditions warrant, the material may require the application and maintenance of a proper cover, which is the responsibility of the Contractor.
- D. Damage to the GCL due to the improper transportation, storage, or handling of the material is sufficient reason for the rejection of the roll, or portion of a roll, by the Owner or Owner's Representative.

PART 2 - PRODUCTS

2.01 GCL BENTONITE CLAY MATERIAL

- A. The GCL is to be manufactured using high quality bentonite clay specifically produced for the use in the type of GCL to be supplied for this project. High quality bentonite clay is defined as naturally occurring material which contains at least 80 percent (80%) of high swelling montmorillonite. "Recycled" bentonite clay is not to be used. Recycled bentonite clay is defined as material used in the manufacturing which, through the process, has been displaced from or not included in the final product.
- B. The bentonite clay used to manufacture the GCL material supplied to the project is to, at a minimum, meet the specifications of GRI-GCL 3. GCL material manufactured from bentonite clay which does not meet these Specifications will be rejected and removed from the project site and replaced at no expense to the Owner.



2.02 GCL PRODUCT

- A. The GCL is to be made of high-quality bentonite clay material sandwiched between non-woven geotextiles with needle-punched bonding. The GCL material is to have consistent appearance and properties and is to be free of foreign matter. The GCL provided is to, at a minimum, meet the properties and test methods detailed in GRI-GCL 3. The maximum hydraulic conductivity results in liquid migration that has a saturated vertical hydraulic conductivity equal to 1×10^{-7} cm/sec. Provide, in writing, a statement that the properties of the GCL material being applied to the project meet or exceed the values specified. GCL material which does not meet these specifications will be rejected and removed from the project site and replaced by the Contractor at no expense to the Owner.
- B. Each GCL roll is to be clearly labeled. Each label is to include, at a minimum, the manufacturer's name, product identification name/number, roll number, weight by roll, and the dimensions of the roll. If the GCL is intended to be installed with a specific side against an adjacent material, then the GCL is to be clearly marked to indicate the proper orientation. Any roll delivered to the site without the proper labeling, as determined by the Owner, will be rejected and removed from the site by and at the expense of the Contractor.
- C. The Owner reserves the right to visit and inspect the GCL Manufacturer's facility and materials at any time.
- D. The GCL exhibits the following shear strength:
 - 1. A peak internal shear strength equivalent to at least 500 psf in accordance with ASTM D6243.
- E. Acceptable Product: CETCO Bentomat DN, GSE Environmental Inc. Bentoliner NWL Geosynthetic Clay Liner, or Engineer approved equivalent.

PART 3 - EXECUTION

3.01 SOIL SUBGRADE SURFACE PREPARATION

- A. The prepared soil subgrade surface on which the GCL is to be placed shall be free of stones, garbage, debris, roots, water, or desiccation cracks which jeopardize the GCL integrity. The Owner's Representative will determine the limiting conditions (in particular, the maximum stone size, shape and frequency) to a smooth grade consistent with these specifications, as well as the Installation Quality Control Procedures Manual and CQA Plan.



- B. Fine grade the subgrade surface to the top of liner elevations. Roll and compact the soil surface to be covered and ensure it is free of irregularities, protrusions, loose soil, and abrupt changes in grade. Repair, or remove and replace, areas which are not in compliance with these Specifications at the expense of the Contractor.
- C. Submit to the Owner, prior to commencement of installation procedures, a written certification that the surface on which the GCL will be installed is acceptable.
- D. The surface on which the GCL is placed must exhibit adequate strength, as required by the Owner in the project design, prior to deployment. In general, do not place the GCL over frozen subgrade unless otherwise determined by and authorized in advance by the Owner. If desiccation, swelling, heaving or shrinkage of the subgrade occurs at any time prior to acceptance by the Owner, the rework or replace the unacceptable area, as determined by the Owner's Representative. Notify the Earthwork contractor if the surface is found to be unsuitable for deployment, so the surface can be re-finished. Repair any damage to the subgrade caused by installation activities at the Contractor's expense.

3.02 GCL DEPLOYMENT/PLACEMENT

- A. Do not attempt the deployment of GCL during precipitation events or on areas with frost or precipitation accumulation.
- B. Place GCL panels in a controlled manner such that they are not damaged, and the deployment does not damage any other materials. Repair, at the expense of the Contractor, any such damage.
- C. Personnel working on the GCL are not to smoke, wear damaging shoes, or engage in other activities which could damage the material. Minimize traffic on the GCL panels. **No motorized vehicular traffic of any type is allowed on the GCL.** Provide protection to the GCL from any equipment or concentrated personnel traffic associated with construction. Repair any such damage to the GCL or other geosynthetic layer resulting from such activities at the expense of the Contractor. The Installation Quality Control Procedures Manual is to address the safety precautions to be taken and the safety equipment to be used while deploying GCL.
- D. Deploy GCL panels in such a manner as to be in contact with the material directly beneath it, precluding folds and wrinkles which may become folds and bridging. Remove any wrinkle, fold, or bridging that may manifest itself into other geosynthetic or soil layers or any bridging through realignment of the GCL panel or cutting and repairing the panel. Panel overlap shall be in accordance with the CQA Plan.
- E. **No end-to-end overlaps (cross seams) along the slope length of GCL panels or on slopes greater than ten percent (10%) are permitted unless otherwise approved by the Owner or Owner's Representative.** Extend GCL panels to the limits shown on the Drawings. Refer to the CQA Plan for additional information.



- F. Prevent the GCL from contact with water or any other fluids which may cause hydration of the bentonite clay of the GCL. Premature hydration of the bentonite clay component of the GCL will be cause for removal of the hydrated material at no expense to the Owner. Prematurely hydrated material includes material hydrated prior to placement of overlying fill material.
- G. Reduce the risk of water infiltration into the bentonite clay portion of the GCL during placement of the GCL. To this end, cover the GCL with a geomembrane and/or soil material as required by the project design, as soon as practicable, to provide maximum protection against the elements.
- H. Do not install more GCL panels than can reasonably be covered with geomembrane and/or soil materials that same day. Limit the installation of GCL panels during periods of impending bad weather such that only one panel is uncovered at any given time.
- I. Cut the GCL with a device approved by the Owner. Unshielded razor knives are generally not acceptable when other geosynthetic material is directly beneath the GCL.
- J. Clean the work area daily by removing scrap material and other debris associated with GCL installation activities and disposing of it in proper receptacles.

3.03 INSPECTION OF GCL

- A. Following installation of all GCL material, conduct an examination of the entire surface with the Owner's Representative to detect potentially harmful foreign objects, defective material, and insufficient overlap. Remove any such foreign objects found from beneath or above the GCL or the panel, as determined by the Owner's Representative, at no expense to the Owner. Repair defective GCL material or joining.
- B. GCL panels placed in sumps and other critical locations will, at the Owner's discretion, be documented by the Contractor and/or QAC. This documentation includes GCL roll numbers and a record drawing representative of the configuration. Such documentation will be agreed upon by all parties in attendance at the Pre-construction Meeting.

3.04 TEMPORARY LOADING

- A. The Contractor is responsible for the temporary loading of the GCL during installation. Use sandbags or other means to restrain the GCL without damage and to prevent the material from being pulled out of proper position until the designed permanent anchoring system is employed. Damaged or pullout caused by improper or insufficient temporary loading is to, as determined by the Owner, must be repaired, removed, or disposed of and replaced by the Contractor, at no cost to the Owner.



3.05 PERMANENT ANCHORING

- A. Install permanent anchorage in accordance with the Drawings as soon as practicable following repairs and the installation of overlying layers.

3.06 SEAMS AND OVERLAPS

- A. Overlap each adjoining GCL panel a minimum of eight (8) inches on each side and a minimum end-to-end overlap of 12 inches, or greater if required by the Installation Quality Control Procedures Manual or CQA Plan. The minimum overlap is to be indicated by a line on the exposed surface of the GCL. The overlap area is to be free of dirt, gravel, and debris. Maintain the overlap to prevent seam openings during the installation and covering process. The Contractor is responsible for assuring that the GCL panels remain overlapped throughout the installation process and until the overlying material is placed. **Apply bentonite clay powder or other supplement between the GCL layers in the overlap area, as required by the GCL Manufacturer's specifications and the Installation Quality Control Procedures Manual.** In any event, the Contractor is responsible for maintaining the design configuration of the GCL. If movement is realized, such that insufficient overlap exists, the necessary repairs will be made at the Contractor's expense.
- B. **No cross seams (end-to-end) overlaps are permitted on GCL panels placed on slopes greater than or equal to ten percent (10%).** Orient GCL seams on sideslopes greater than 5% parallel to the fall of the slope, unless approved by the Engineer. The GCL Manufacturer may need to manufacture special roll lengths if the minimum allowable panel length on a slope exceeds the typical manufactured roll length. GCL panels placed on slopes less than ten percent (10%) are to have continuous GCL panels installed immediately adjacent to cross seam locations on both sides, unless otherwise approved by the Owner. Place panels such that the upslope panels overlie those downslope.

3.07 REPAIRS

- A. Repair holes or tears in, and damage to the GCL, by placing a patch extending a minimum of six (6) inches in all directions beyond the edges of the defect. Apply bentonite clay powder or other supplement between the GCL and the patch as required by the GCL Manufacturer's specifications and the Contractor's Installation Quality Control Procedures Manual. No patches and repairs are permitted on slopes greater than or equal to ten percent (10%). Patches are to be of the same material meeting the Specifications detailed in subsection 2.0 of this Section.
- B. Remove and replace, or cover by a single patch or panel, GCL panels with holes or tears extending more than twenty-five percent (25%) across the panel width, at no expense to the Owner.



- C. Remove and replace, or repair with a single patch or panel, GCL panels or portions of the panels which contain excessive patching, as determined by the Owner at the recommendation of the Owner's Representative, in accordance with these Specifications.
- D. The location of holes, tears, and other damage in the GCL requiring repair may, at the Owner's discretion, be documented by the Contractor QAC. The documentation includes, at a minimum, the approximate location, nature of the defect, and size or extent of the repair. Such documentation is to be addressed and agreed upon by all parties in the Pre-construction Meeting.

3.08 PIPE PENETRATIONS

- A. Review pipe penetration details in the design and supply recommendations or alternatives. Provide all equipment and materials required for fabrication for connection of the GCL at the penetration location.

3.09 COVER MATERIAL PLACEMENT (If applicable)

- A. The placement of cover materials on the GCL is to be discussed and agreed upon by the appropriate parties in attendance at the Pre-construction Meeting. Overlay all GCL immediately to prevent detrimental climatic effects to the lining material.
- B. Follow the recommendations provided by the Engineer regarding the type (including maximum particle size) and thickness of cover materials over the GCL. In the event that no such recommendations are provided, place the cover material in accordance with the Geosynthetics Installation Quality Control Procedure Manual, the GCL Manufacturer's recommendations, the Specifications, and the following provisions:
 - 1. Place cover material the same day the GCL is installed. To this end, install only the amount of GCL which can be covered the same day.
 - 2. The lower-most lift of soil placed as cover material is to be free of angular particles (as classified in accordance with ASTM D2488) which may be potentially damaging to the GCL.
 - 3. The placement of cover material is to be the depth required by the project design. Unless otherwise specified, place the cover material in a single lift, minimum 2.5 feet thick if placed by construction equipment.
 - 4. Do not perform placement of cover material in adverse weather conditions that could impair the quality of the GCL.
 - 5. Do not operate equipment directly on the GCL. The use of equipment over the GCL is to be evaluated by the Engineer on a project-specific basis. This evaluation includes the type (maximum soil particle size) and thickness of



cover materials used, and the type (track-mounted, rubber-tired, etc.), and contact pressure of the equipment used. This issue will be presented to the appropriate parties in attendance at the Pre-construction Meeting. Low ground contact pressure construction equipment is required for material placement within 3 feet of the GCL.

6. All equipment used to place the cover material is to proceed in a manner such as to avoid sudden starts, stops, and change in direction. Travel speeds on cover material are to be as slow as possible.
 7. Perform the placement of cover material so as not to induce excessive stresses, damage, or slippage of the GCL.
- C. Unless otherwise specified by the Owner, the Owner's Representative is to be present during the placement of the initial lift of cover materials to document that the above conditions are met.
- D. In the event that the GCL is damaged, do not place cover materials in the immediate vicinity, as to not allow the area to be investigated by the Owner. Repair any areas, at no cost to the Owner.

END OF SECTION



SECTION 31 35 26.18

GEOTEXTILE

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes furnishing and installation of geotextile as a filter/separation layer.

1.02 SUBMITTALS

- A. Submit geotextile samples and list of minimum property values. Materials properties are to be in conformance with those defined in Part 2.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver only approved geotextile rolls to the project site. Label, ship, store, and handle all geotextile in accordance with ASTM D4873. No hooks, tongs, or other sharp instruments are to be used for handling geotextile.

PART 2 - PRODUCTS

2.01 GEOTEXTILE

- A. The geotextile is to be comprised of polyester or polypropylene. Provide 8 oz/ sq. yard nonwoven needle-punched geotextile meeting the requirements listed in MDOT 910.03B for Heavy Geotextile Liner.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Handling of all geotextiles by the Installer in such a manner as to ensure it is not damaged in any way.
- B. At the time of installation, reject the geotextile if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacture, transportation, or storage.
- C. Place the geotextile with the machine direction parallel to direction of water flow centerline and lay smooth, free of tension, stress, folds, wrinkles, or creases.



- D. The geotextile is to be placed to provide a minimum width of 12 inches of overlap between adjoining panels.
- E. Temporarily secure the geotextile in place until the backfill/ riprap is placed.
- F. Move or remove sandbags, stones, or other securing devices as the backfill/ riprap is placed to relieve high tensile stress which may occur during placement of material on the geotextile.
- G. Protect the geotextile from damage prior to and during the placement of backfill/ riprap.
- H. Perform trimming in such a manner that the geotextile is not damaged in any way.
- I. Protect the geotextile at all times from contamination with sediment; any geotextile so contaminated is to be removed and replaced with uncontaminated geotextile.
- J. Geotextile damaged during installation or during placement of backfill/ riprap is to be replaced by the Contractor at no additional cost to the Owner.
- K. Schedule the work so that covering of the geotextile with backfill/ riprap is accomplished within one (1) calendar day after placement of the geotextile. Failure to comply will require replacement of the geotextile.
- L. Before placement of the backfill/ riprap, demonstrate that the placement technique will not cause damage to the geotextile.
- M. In no case will any type of equipment be allowed directly on the unprotected geotextile.
- N. The overlap seam of the geotextile is to be overlapped or heat bonded.

END OF SECTION



SECTION 31 36 19

GABION MATTRESSES

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes furnishing and installing gabion/Reno mattresses at the locations shown on the Drawings.

1.02 SUBMITTALS

- A. Submit Reno mattress installation procedure prior to construction.

PART 2 - PRODUCTS

2.01 RENO MATTRESS

- A. A mattress shaped container, incorporating internal diaphragm cells to prevent rock migration, manufactured from heavily galvanized wire mesh woven into a double twisted hexagonal pattern in accordance with ASTM A975-97. The mesh opening shall be hexagonal in shape and uniform in size measuring 2 1/2 inches by 3 1/4 inches. All wire used in the fabrication of the Reno mattress and in the lacing operations conforms to Federal Specification QQ-W-461H, Class 3, Finish 5, soft, and have an average tensile strength in accordance with the current ASTM A641, Table 2, measured before fabrication of the netting. The nominal diameter of the wire used in the fabrication of the netting is 0.0866 inches minimum, subject to diameter tolerance in accordance with the current ASTM A641, Table 3.
- B. All wire used in fabrication and construction of the Reno mattress is to be galvanized in accordance with ASTM A641, Table 1.
- C. All edges of the Reno mattress, including end panels and the diaphragms, shall be mechanically connected in such a way as to prevent unraveling of the mesh and to develop the full strength of the mesh. The wire used for the selvedge shall have a diameter greater than that of the wire used to form the mesh. Sufficient lacing and connecting wire shall be supplied with the mattress for all wiring operations. The nominal diameter of lacing wire shall be 0.0866 inches minimum.
- D. Supplier – Terra Aqua Inc., or engineer approved equal.



2.02 ACCESSORIES

- A. Mattress Fasteners: Tiger-Tite KH11G40 galvanized fasteners conforming to ASTM A641-92 for zinc coatings, ASTM A764-93 for chemical and mechanical specifications, and ASTM E8/MPT 2004 for tensile strength requirements.
- B. Stiffeners: Tact Ties complying with or exceeding Federal Specification QQ-W-461H, possessing a maximum tensile strength of 70 ksi with a Finish 5, Class 3, zinc coating, measured in accordance with the current ASTM A641 (A 90).
- C. Geotextile: See Section 31 2526.18.
- D. Riprap: See Section 31 3700.

PART 3 - EXECUTION

3.01 PLACEMENT

- A. Prepare slope/excavation in accordance with the engineering drawings and project specifications.
- B. Install geotextile underlayment in accordance with the project specifications.
- C. Place Reno mattress on the base of the channel such that the length dimension of the unit is laid parallel to the water flow with the internal diaphragms running perpendicular to the water flow. For placement on the side slope or banks, install the Reno mattress such that the length dimension of the unit is laid perpendicular to the water flow so that the internal diaphragms are running parallel with the water flow
- D. Install Reno mattress in accordance with manufacturer's specifications and instructions.

END OF SECTION



SECTION 31 37 00

RIPRAP

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes furnishing and placing riprap in the locations shown on the Drawings.

PART 2 - PRODUCTS

2.01 RIPRAP

- A. Use sound, durable and hard stone meeting the specifications of MDOT 916.01 A or C, as shown on the plans and ASTM C127 and ASTM C131. Use stone free from lamination, cleavages, and weathering, and stone that will not disintegrate from the action of air or water, or from handling and placement.
- B. Use angular stone. Rounded stone or broken concrete is not acceptable.
- C. Use stone gradation diameter and thickness as specified in MDOT 916 or as shown on the drawings.

PART 3 - EXECUTION

3.01 PLACEMENT

- A. Grade the surface upon which the riprap is to be placed and remove debris to provide a smooth, fairly level graded surface. Place geotextile loosely on graded surface, with machine direction parallel to direction of water flow. Overlap seams so the upstream portion of the fabric is on top. A minimum overlap of 12 inches is required. See 31 3526.18 for additional information.
- B. Begin riprap placement at the toe of the slope and proceed upslope.
- C. The height of drop of stone onto the geotextile is to be one (1) foot or less. If a greater height is required, perform field trials at a location other than the project site to determine the maximum height that stone can be dropped without damaging the geotextile. The Owner's representative will be present at the field trial approve the final height of drop.



- D. If grading of slope after stone placement is necessary, perform manually in a manner that does not result in movement of stone on the geotextile.

END OF SECTION



SECTION 32 13 13

PORTLAND CEMENT CONCRETE PAVEMENT

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Provide all labor, equipment, materials, supervision, and incidentals necessary to complete the construction of Portland Cement concrete pavement for downslope spillway.
- B. Furnish all materials, including dowels, tie bars and joint materials; and furnish all equipment, tools, labor and work incidental to placing, curing, and protection of the concrete; and construct the pavement complete.

1.02 RELATED SECTIONS

- A. Section 31 2200 - Grading
- B. Section 31 3200 – Soil Stabilization System

1.03 REFERENCES

- A. ASTM International:
 - 1. ASTM C31, “Practice for Making and Curing Concrete Test Specimens in the Field”
 - 2. ASTM C33, “Standard Specification for Concrete Aggregates”
ASTM C39, “Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens”
 - 3. ASTM C94, “Standard Specification for Ready-Mixed Concrete”
 - 4. ASTM C109, “Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)”
 - 5. ASTM C114, “Standard Test Method for Chemical Analysis of Hydraulic Cement”
 - 6. ASTM C138, “Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete”
 - 7. ASTM C143, “Standard Test Method for Slump of Hydraulic-Cement Concrete”
 - 8. ASTM C150, “Standard Specification for Portland Cement”
 - 9. ASTM C172, “Standard Method of Sampling Freshly Mixed Concrete”
 - 10. ASTM C173, “Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method”



11. ASTM C231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method"
12. ASTM C260, "Standard Specification for Air-Entraining Admixtures for Concrete"
13. ASTM C309, "Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete"
14. ASTM C311, "Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete"
15. ASTM C457, "Standard Test Method for Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete"
16. ASTM C494, "Standard Specification for Chemical Admixtures for Concrete"
17. ASTM C595, "Standard Specification for Blended Hydraulic Cements"
18. ASTM C618, "Standard Specification for Coal Fly Ash or Calcined Natural Pozzolan for Use in Concrete"
19. ASTM C685, "Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing"
ASTM C823, "Standard Practice for Examination and Sampling of Hardened Concrete in Construction"
20. ASTM C856, "Standard Practice for Petrographic Examination of Hardened Concrete"
21. ASTM C989, "Standard Specification for Slag Cement in Use in Concrete and Mortars"
22. ASTM C1077, "Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation"
23. ASTM Standard C1116, "Standard Specification for Fiber-Reinforced Concrete"
24. ASTM C1157, "Standard Performance Specification for Hydraulic Cement"
25. ASTM C1222, "Standard Practice for Evaluation of Laboratories Testing Hydraulic Cement"
26. ASTM C1240, "Standard Specification for Silica Fume Used in Cementitious Mixtures"
27. ASTM C1260, "Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)"
28. ASTM C1293, "Standard Test Method for Determination of Length Change of Concrete Due to Alkali-Silica Reaction"



- 29. ASTM C1567, “Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Test)?
 - 30. ASTM D98, “Standard Specification for Calcium Chloride”
 - 31. ASTM D994, “Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type)”
 - 32. ASTM D1751, “Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types)”
 - 33. ASTM D5249, “Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints”
 - 34. ASTM D6690, “Standard Specification for Joint and Crack Sealants, Hot-Applied, for Concrete and Asphalt Pavements”
- B. Michigan Department of Transportation (MDOT): Standard Specifications for Construction
- C. American Concrete Institute (ACI):
- 1. ACI 201, “Guide to Durable Concrete”
 - 2. ACI 211.1, “Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete”
 - 3. ACI 301, “Specifications for Structural Concrete”
 - 4. ACI 304R, “Guide for Measuring, Mixing, Transporting, and Placing Concrete”
 - 5. ACI 305R, “Guide to Hot Weather Concreting”
 - 6. ACI 306R, “Guide to Cold Weather Concreting”
- D. Metric Conversions:

Inch-pound unit	Factor	SI unit
in.	x 25.4	= mm
lb/yd ³	x 0.5933	= Kg/m ³
psi	x 0.006895	= Mpa
temperature, °F	(°F - 32)/1.8	= °C

1.04 SUBMITTALS

- A. Provide the following information in initial submittals: Whenever material sources or relevant properties of the materials change, provide a re-submittal of



the relevant information, demonstrating compliance with the applicable provisions.

1. List of sources for materials.
 2. Material certifications for each material.
 3. Product data for curing compound, including installation instructions, joint filler, and admixtures.
 4. Proposed concrete mix design in accordance with ACI 301.
 5. Contractor's quality control plan.
- B. Submit the concrete mix design to the Engineer TWO WEEKS prior to placing concrete. Develop proportions for normal weight concrete mixtures in accordance with ACI 211.1 to meet the requirements of ACI 201. Include the following information for each concrete mix design:
1. Grading of fine and coarse aggregates
 2. Proportions of all ingredients including admixtures added either at the time of batching or at the job site
 3. Water/cement ratio
 4. Slump
 5. Air content of freshly mixed concrete by the pressure method
 6. Unit weight of concrete
 7. Strength at 7 and 28 days
 8. Chloride content
 9. Total alkali content of the cementitious materials
 10. Test results, not more than 1 year old that verify the selected materials and relative proportions are adequate to mitigate the risk of alkali-silica reactivity, as required by Article 2.02 G.
- C. Laboratory Qualifications: For each laboratory that supplies test reports or data required by this specification, provide evidence that the laboratory is properly equipped and qualified, in accordance with ASTM C 1077 and C 1222, to perform the tests method(s) on which they are reporting.
- D. Samples: Submit representative samples of the following products and materials:
1. Fine aggregate
 2. Coarse aggregate
 3. Expansion joint filler
 4. Contraction joint filler
 5. Hot-poured joint sealant
 6. Backer rod



- E. If work will be performed during cold weather conditions, submit detailed procedures for production, transportation, placement, protection, curing, and temperature monitoring of concrete during cold weather. In the submittal, include procedures to be implemented upon abrupt changes in weather conditions or equipment failures.
- F. If work will be performed during hot weather conditions, submit detailed procedures for production, transportation, placement, protection, curing, and temperature monitoring of concrete during hot weather. In the submittal, include procedures to be implemented upon abrupt changes in weather conditions or equipment failures.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with ACI 301.
- B. Provide Owner's quality control testing agency with access to stockpiles, quarries, bulk storage bins, ready-mix facility, etc. for the purpose of obtaining samples of materials used in the concrete mix.
 - 1. Furnish labor to assist testing agency in obtaining and handling samples at the job site.
 - 2. Advise testing agency in advance (minimum of 48 hours) of operations to allow for the assignment of testing personnel and testing.
 - 3. Provide and maintain adequate facilities for the use of the testing agency for proper curing of concrete test specimens on the project site in accordance with "Standard Method of Making and Curing Concrete Test Specimens in the Field," ASTM C31.
- C. Materials and operations will be tested and inspected as work progresses. Failure to detect defective work shall not prevent rejection when defect is discovered, nor shall it obligate the Owner for final acceptance.
- D. The following testing services will be performed by a testing agency, designated and compensated by the Owner:
 - 1. For each mix design, make one strength test for each 100 cubic yards or fraction thereof of concrete placed in any one day.
 - 2. Secure composite samples in accordance with "Standard Method of Sampling Freshly Mixed Concrete", ASTM C172.
 - 3. For each required strength test, mold and cure six specimens in accordance with "Standard Method of Making and Curing Concrete Test Specimens in the Field", ASTM C31.
 - 4. Test specimens in accordance with "Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens", ASTM C39. Two specimens will be tested at 28 days for acceptance, one tested at 3 and 7 days for information and two retained as spares.



5. For each strength test, determine slump of concrete sample in accordance with "Standard Test Method for Slump of Portland Cement Concrete", ASTM C143.
 6. For each strength test, determine total air content of concrete sample in accordance with "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method", ASTM D231.
 7. For each strength test, determine temperature, unit weight, yield and air content (gravimetric) of concrete sample in compliance with ASTM C138, "Standard Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete".
- E. If test results indicate deficient compressive strength, a negative pay adjustment in the unit price of concrete pavement shall be made in accordance with Article 1.01.C.
- F. Delivered concrete may be rejected at the job site prior to placement due to any of the following:
1. Concrete fails to conform to submitted and approved concrete mix design.
 2. Failure of concrete samples obtained from the first or middle portion of the delivered concrete load to meet required concrete qualities outlined in Article 2.02.
 3. Placement of the delivered concrete load did not begin within 45 minutes from ready-mix concrete plant batch time.
 4. More than 90 minutes have elapsed between ready-mix concrete plant batch time and concrete placement.

1.06 PROJECT CONDITIONS

A. Environmental Requirements

1. Cold Weather Concreting: Comply with ACI 306R and the following:
 - a. Do not use admixtures or accelerators unless approved in advance by the Engineer.
 - b. Protect the subgrade from freezing by a layer of 12 inches to 24 inches of hay, straw, or insulating blankets covered with waterproof canvas or sheeting.
 - c. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.
 - d. Concrete Temperature As-Mixed: Provide as-mixed concrete temperature that is not less than the following, depending upon the ambient temperature:
 - i. 60 degrees F when the ambient temperature is above 30 degrees F;



- ii. 65 degrees F when the ambient temperature is between 0 and 30 degrees F; and
 - iii. 70 degrees F when the ambient temperature is below 0 degrees F.
- e. Placement: Do not place concrete that is less than 60 degrees F nor more than 90 degrees F.
- f. Protection: Unless otherwise specified, maintain the minimum temperature of concrete at 60 degrees F. Temperatures specified to be maintained during the protection period are those measured at the concrete surface, whether the surface is in contact with formwork, insulation, or air. Measure the temperature with a surface temperature measuring device having an accuracy of +/- 2 degrees F. Measure the temperature of concrete in each placement at regular time intervals.
- g. Protection against freezing: Cure and protect concrete against damage from freezing for a minimum period of 3 days, unless otherwise specified. Maintain the minimum specified surface temperature of the concrete during that period.
- h. The protection period may be reduced to 2 days if one or more of the following is used to alter the concrete mixture and is approved by the Engineer:
 - i. Type III portland cement, meeting the requirements of ASTM C150, is substituted for the Type I portland cement.
 - ii. A strength accelerating admixture, meeting the requirements of ASTM C494, is added.
- i. After Termination of Protection: Do not permit the surface temperature of the concrete to decrease in temperature more than 50 degrees F in a 24 hours period.
- j. During periods not defined as cold weather, but when freezing temperatures may occur, protect concrete surfaces against freezing for the first 24 hours after placing.
- k. Protection Deficiency: If the temperature requirements during the specified protection period are not met, but the concrete was prevented from freezing, continue protection until twice the deficiency of protection in degree-hours is made up. Deficient degree-hours may be determined by multiplying the average deficiency in temperature by the number of hours the temperature was below 60 degrees F.
- l. Curing of Concrete: Prevent concrete from drying during the required curing period.



2. Hot Weather Concreting: Comply with ACI 305R and the following:
 - a. Provide temperature of concrete, (as placed), that is not so high as to cause difficulty from loss of slump, flash set, or cold joints, and does not exceed 90 degrees F. When the temperature of concrete exceeds 90 degrees F, undertake precautionary measures approved by the Engineer. When the temperature of steel forms is greater than 120 degrees F, spray the forms with water just prior to placing concrete.
 - b. Cool concrete ingredients before mixing. Flake ice, or well-crushed ice of size that will melt completely during mixing, may be substituted for all or part of the mixing water if low slump, flash set or cold joints are encountered due to high temperature.

B. Protection against Rain

1. Protect new concrete from the effects of rain until the concrete has sufficiently hardened.
2. Use burlap or 6-mil polyethylene to cover and protect one day's work.
3. After rain has stopped, remove the covering and burlap-drag the surface. Apply curing compound where the previously applied compound has been disturbed or washed away.

1.07 PAY ITEMS

- A. Concrete pay items, both critical and non-critical as defined by MDOT, are subject to Quality Control testing by the Owner, unless otherwise noted.
- B. No concrete pay items are eligible for or subject to positive pay adjustments. All concrete pay items are subject to negative pay adjustments, in accordance with Table 1 and Table 2.

Table 1: Concrete Thickness

Amount Less Than Required Thickness	Percent of Reduction in Unit Price
0" to 1/4" (0 to 5 mm)	None
more than 1/4", but not exceeding 1/2" (56 mm to 10 mm)	20
more than 1/2", but not exceeding 1" (03 mm to 25 mm)	50
more than 1" (greater than 25 mm)	Remove and replace



Table 2: Concrete Compressive Strength

Under Required Compressive Strength	Percent of Reduction in Unit Price
0 to 150 psi (0 to 1 MPa)	None
more than 150 psi, but not exceeding 300 psi (1 MPa to 2 MPa)	20
more than 300 psi, but not exceeding 500 psi (2 MPa to 3.5 MPa)	50
more than 500 psi (greater than 3.5 MPa)	Remove and replace

- C. Reductions in the unit price are additive; that is, if an area of concrete is deficient by 3/8 inch (9 mm) and is under strength by 200 psi (1.4 MPa), the total reduction is 20% plus 20% for a total reduction of 40%.
- D. The deficient area of concrete identified by a core shall be confirmed by drilling and testing two additional cores, one on each side of the deficient core and 20 feet (6 m) from it, when possible. This extra core drilling and testing shall be at the Contractor's expense.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Aggregates: Conform to the requirements of ASTM C 33, MDOT 902.09, and this specification.
 - 1. Fine Aggregates:
 - a. Clean, hard, durable, uncoated particles of natural sand, free from lumps of clay, soft or flaky material and, at the time of use, free from crusts of hard or frozen material.
 - b. Natural Sand 2NS consisting of fine granular material resulting from the natural disintegration of rock; free from organic impurities (when measured by subjecting to the sodium hydroxide colorimetric test, produced color shall not be darker than light brown).
 - c. The following gradation represents the extreme limits of suitability for use from all sources of supply (MDOT "2NS", Table 902-4):



<u>SIEVE ANALYSIS</u> <u>(MTM 109)</u>	<u>TOTAL % PASSING</u> <u>BY WEIGHT</u>
3/8 in	100
No. 4	95-100
No. 8	65-95
No. 16	35-75
No. 30	20-55
No. 50	10-30
No. 100	0-10
Loss by Washing (No. 200)*	0-3

* Michigan Test Method, MTM 108

- d. Provide fine aggregate with reasonably uniform gradation from any one source and not exhibiting the extreme percentage of gradation specified above. Fine aggregate from any one source having a variation in fineness modulus greater than 0.20 more than or less than the fineness modulus of the representative sample will be rejected.
2. Coarse Aggregate:
- a. Hard, strong, durable, pebbles, crushed natural stone, free from adherent coatings, clay lumps, coal and lignite and other foreign matters. Chert (excluding sound gravels) or other nondurable particles shall not exceed 3% by weight.
 - b. Coarse aggregate derived from crushed concrete is not permitted.
 - c. Uniformly graded within the following limits (MDOT "17A", Table 902-1):



SIEVE ANALYSIS (MTM 109)	TOTAL % PASSING BY WEIGHT
1 in	100
3/4 in	90-100
1/2 in	50-75
No. 4	0-8
Loss by Washing (No. 200)*	1.0 Max**

* Michigan Test Method, MTM 108

** Loss by washing of 2.0 percent for material produced entirely by crushing rock, boulders, cobbles or concrete.

B. Cementitious Materials:

1. Portland cement, ASTM C150, Type I , Type II, or Type III
2. Slag cement, MDOT 901.06 and ASTM C 989 Grade 100 or Grade 120
3. Fly ash, MDOT 901.07 and ASTM C 618, Class F
4. Blended hydraulic cement, ASTM C 595 or ASTM C 1157
5. Silica fume, MDOT 901.08 and ASTM C1240

C. Water: MDOT 911; Clean, potable, low-alkali content (maximum 80 parts per million), and free amounts of oils, acids, alkalis, salts, organic materials, or other substances that are deleterious to concrete or metal in the concrete.

D. Admixtures: Conform to the following:

1. Air Entrainment: MDOT 903.01 and ASTM C 260
2. Water Reducing: MDOT 903.02 and ASTM C 494, Type A.
3. Accelerators: MDOT 903.04 and ASTM C 494, Type C
4. Calcium Chloride: Not permitted

E. Polypropylene Fibers: Fiber Reinforced Concrete shall consist of a blend of high-performance co-polymer macro fibers and polypropylene microfibers. The macros shall be made of 100% virgin co-polymers containing no reprocessed olefin materials, 2” in length with a denier of 4500 and a minimum tensile strength of 75 ksi. The micro portion shall be multi-length with “1/2 and 3/4” virgin polypropylene fibers and both types shall meet the requirements of ASTM C-1116 Type III.



F. Curing Materials:

1. White pigmented, impervious membrane curing compound: MDOT 903.06A and ASTM C 309, Type 2, Class B Vehicle, with the following additions:
 - a. Base tests for moisture retention, reflectance, and drying time on curing compound application rate of 200 square feet per gallon (5 square meters per liter).
 - b. Allow three weeks from the time of sampling before reporting results.
 - c. Store the compound in clean containers.
2. Insulating Blankets: MDOT 903.07C and Federal Specifications HH-1-521e, minimum 2 inches thick, minimum R-Value of 7.0 ($^{\circ}\text{F}\cdot\text{hr}\cdot\text{ft}^2/\text{Btu}$) per inch, and enveloping membranes.

G. Smooth Dowel Bars for Transverse Expansion and Contraction Joints: MDOT 914.07.

H. Devices for Transverse End-of-Pour Joints: MDOT 914.08.

2.02 CONCRETE MIX

A. Mix concrete in accordance with ASTM C94.

B. Proportion concrete by weighing and in conformance to the following table, unless otherwise directed by the Engineer:

1. Compressive Strength: 3,000 psi at 28 days
2. Maximum water/cementitious ratio: 0.45
3. Air content: 6% plus or minus 1.5%
4. Slump: 3 inches plus or minus 1 inch
5. Minimum Cementitious Content: 564 lbs./cy
6. Maximum size of aggregate: 3/4 inch
7. Maximum water-soluble chloride ion : 0.15
content in hardened concrete of percent by weight of concrete.
8. Polypropylene Fiber Content: 0.5% (by Volume) /cy of concrete
macro / microfibers

C. Add air entrainment agent to produce a total air content of 6% +/- 1.5% at the point of placement and an air void system with the following characteristics when evaluated in accordance with ASTM C457:

1. Spacing factor less than 0.008 inch.



2. Specific surface: at least 600 square inch per cubic inch of air void volume.
 3. Voids per linear inch at least 1-1/2 to 2 times greater than the air content percentage.
- D. Provide slump not more than 4 inches or less than 2 inches, when tested in accordance with ASTM C143, unless otherwise directed by the Engineer, and except for hand placement. Slump not more than 4 inches for concrete that is hand-placed.
- E. Add mixing water at the batch plant only. Do not add water at the job site unless authorized by the Engineer. When authorized to add water at the job site, do not add water more than one time. Adding water and the result on concrete is the responsibility of the Contractor.
- F. Slag cement, fly ash, silica fume, and/or blended cement may be used as a partial replacement for Portland cement provided that testing confirms that the as-designed mixture, using the specific materials and sources contemplated for the project, complies with the requirements of this Article 2.02, including the requirement for adequate mitigation of risk of alkali-silica reactivity.
1. The maximum permitted replacement of Portland cement with slag cement is 40% by weight of the total cementitious material (portland cement plus slag cement). Slag must not be from open hearth furnace.
 2. The maximum permitted replacement of Portland cement with fly ash is 25% by weight of the total cementitious material (portland cement plus fly ash).
 3. The maximum permitted replacement of Portland cement with supplementary cementitious materials is 40% by weight of the total cementitious material.
 4. The total alkali content of the cementitious materials shall not exceed 3.5 pounds per cubic yard, when evaluated in accordance with ASTM C114 and ASTM C311.
- G. Perform preconstruction testing or provide current testing of similar mix to be utilized for this job to verify that the proposed combination of aggregates and cementitious materials will be adequate to mitigate the risk of alkali-silica reactivity (ASR).
1. Evaluate fine and coarse aggregate by a minimum of two tests each in accordance with ASTM C1260.
 - a. Aggregate sources that exhibit ASTM C1260 mean mortar bar expansion less than 0.10% at 16 days will be considered acceptable and no further testing for ASR mitigation will be required.



- b. Aggregate sources that exhibit ASTM C1260 mean mortar bar expansion equal to or greater than 0.10% at 16 days will be considered potentially reactive and unacceptable.
2. If the aggregate is reactive, evaluate the effectiveness of the proposed pozzolans and ground granulated blast-furnace slag to control deleterious ASR by conducting a minimum of two tests in accordance with ASTM C1567.
 - a. If the ASTM C1567 mean mortar bar expansion is less than 0.10% at 16 days, the tested combination of cement replacements and aggregate will be considered acceptable and no further testing for ASR mitigation will be required.
 - b. If the ASTM C1567 mean mortar bar expansion is equal to or greater than 0.10% at 16 days, the tested combination of cement replacements and aggregate will be considered indicative of potentially deleterious expansion and unacceptable.
 - c. Acceptable test results in accordance with ASTM C1567 will be accepted in lieu of testing in accordance with ASTM C1260.

2.03 EQUIPMENT

- A. Finishing Machine: Power driven and of an approved type that will strike-off and compact the concrete with a screening and troweling action.
- B. Forms: Metal, of an approved section that will ensure their rigidity under the impact, thrust, and weight of the heaviest machine carried on them.
 1. Minimum length of 10 feet and a depth not less than the edge thickness of the work prescribed; width of the base in direct bearing on the soil not less than 8 inches; at least three stake pockets for each 10-foot section of form.
 2. Straight, free from distortion and showing no vertical variation greater than 1/8-inch in 10-foot lengths from the true plan surface on the top of the form when tested with a 10-foot straight edge.
 3. Connect form sections with a locked joint that is free from vertical movement in excess of 1/8-inch and free from horizontal movement in excess of one-quarter of an inch under the impact, thrust and weight of the heaviest machine carried on forms.
 4. Provide sufficient forms so that it will not be necessary to remove them in less than 12 hours, or longer if required, after the concrete has been placed.
- C. Water Supply: Provide pumps and pipelines with sufficient capacity and nature to ensure an ample supply and adequate pressure of water, simultaneously, for all the requirements of machinery, mixing, curing,



sprinkling, subgrade and all other requirements of the work. Water may be supplied in approved tank wagons.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Smooth, trim and compact the subgrade to the required line, grade and cross-section. Thoroughly compact the subgrade, between lines at least 12 inches outside of each edge of the proposed pavement, by rolling with a roller of an approved type weighing not less than 5 tons.
- B. Ensure that the subgrade is moist at the time of placing concrete. If the subgrade becomes dry before the concrete is placed, sprinkle the subgrade with water using a method of sprinkling that does not permit pools of water to form on the subgrade. Do not place the concrete on muddy, soft or frozen subgrade.
- C. Restore and thoroughly compact rutting and other displacement caused by material hauling equipment or by the paver, for a distance of at least 100 feet ahead of the subgrade planer. Maintain the remainder of the prepared subgrade in its compacted state and true to the required grade and cross-section.
- D. Place the concrete forms in advance of placing concrete. Substantially bring the foundation on which the forms are to be placed to the proper grade. Do not place forms on dikes or mounds. Where feasible, bring the subgrade to the approximate required cross-section by means of a subgrade machine.
- E. Check forms for line and grade in advance of placing concrete. Adequately stake and brace forms to resist the pressure of the concrete and the thrust of any equipment traveling on them. Provide uniform bearing on the subgrade throughout the forms' entire length and width. Finish the entire width of the subgrade and thoroughly compact it for a sufficient distance outside the area required for the pavement in order to adequately support the forms. Place forms in direct contact with the subgrade. After the forms have been set to grade, thoroughly compacted, both inside and outside, by use of an approved mechanical form tamper. Joint all forms neatly and tightly, securely stake by at least three stakes per form, and thoroughly clean and oil forms before concrete is placed against them.
- F. After the forms are set in place, check their top surface for grade and trueness with a straight edge not less than 10 feet long. Reset or move any forms showing a variance greater than 1/8 inch in 10 feet.
- G. Coat the surfaces of manhole frames with oil to prevent bond with concrete pavement.



3.02 CONSTRUCTION

- A. Except as modified herein, comply with MDOT Sections 601.03 and 602.03 and ACI 304R.
- B. Mixing:
 - 1. On the project site, mix in drum type batch mixer, complying with ASTM C685. Mix each batch not less than 1-1/2 minutes and not more than 5 minutes.
 - 2. Transit mixers: Comply with ASTM C94.
- C. Placing Concrete:
 - 1. Do not proceed with concrete placement until the conditions of the subgrade/subbase are approved by the Engineer.
 - 2. Distributed or spread the concrete as soon as placed. Deposit concrete on the subgrade so as to require as little handling as possible and to avoid segregation and separation of the materials. Distribute concrete to such depth and sufficiently above grade so that when consolidated and finished, the surface conforms to the required finished grade. Consolidate the concrete along the faces of the forms and adjacent to joints. Consolidate concrete with an approved vibrator to fill all voids and finish to ensure a dense smooth surface.
 - 3. Deposit and spread concrete continuously, as far as possible between transverse joints. In the case of a temporary shutdown, cover the concrete at the unfinished end of the slab with wet burlap. In the event of an unavoidable interruption of the work continuing more than 30 minutes, place a construction joint, provided the section is 10 feet or more in length between joints. Remove sections less than 10 feet in length at no expense to Owner.
- D. Finishing: After the placement of the concrete, test surface with straight edge and finish with burlap drag and perform final finishing on slabs at catch basins with broom.
- E. Surface Requirements: On the day following placement of the concrete, the pavement will be straight edged by the Engineer. A 10-foot straight edge will be placed parallel to the centerline so as to bridge any depressions and touch high spots. High spots indicated by a variation exceeding 1/8 inch from the straight edge will be plainly marked. Remove high spots or reduce by rubbing with a carborundum brick and water. If these methods are inadequate to remove the high spots, use an approved surface-grinding machine.



F. Removal of Forms:

1. Do not remove forms from freshly placed concrete until it has set for at least 12 hours. Carefully remove forms so that no damage is done to the edge of the pavement.
2. After the forms have been removed, clean the ends of joints and point honeycombed areas.
3. Cover the sides of the pavement with curing material except where honeycombed areas are to be pointed. Cover areas to be pointed with wet burlap until the pointing is complete, and then cure as specified in Article 3.02 I.

G. Curing:

1. Immediately after finishing operations have been completed and free water has left the surface, completely coat and seal the surface of the slab and curb with a uniform layer of curing compound. Apply the compound in one or two applications, as required by manufacturer instructions. When the compound is applied in two increments, follow the first application with the second application within 30 minutes.
2. Thoroughly agitate the compound to a uniform consistency, with the pigment uniformly suspended, before transferring the compound between containers and before use.
3. Apply the compound in a continuous uniform film by means of mechanical pressure sprayer equipment at the rate stipulated by the compound manufacturer but not less than one gallon per 200 square feet of surface. Use equipment that provides adequate stirring of the compound during application. Hand spray equipment will be permitted for application of the curing compound over the sides of the slab.
4. Provide uniformly painted, solid white surface after application of curing compound. If appearance is blotchy and non-uniform, apply another layer of curing compound.
5. If rain falls on the newly coated pavement before the film has dried sufficiently to resist damage, or if the film is damaged in any other way, apply a new coat of material to the affected areas equal to that originally applied.
6. Protect the treated surface from injury for a minimum period of seven days. All traffic will be considered injurious to the film of applied compound. A minimum of foot traffic will be permitted on the dried film as necessary to properly carry on the work, provided that any damage to the film is immediately repaired by the application of another coat of the compound.



7. Provide sufficient burlap, cotton, or polyethylene sheet coverings to protect the pavement in case of rain or breakdown of the spray equipment. If any hair checking develops before the curing compound can be applied, perform preliminary curing with wetted burlap or cotton coverings before the curing compound is applied.
8. Cold Weather Curing: Comply with Article 1.06.A.1.

H. Cleanup:

1. After the concrete has gained sufficient strength, but no sooner than twelve hours, remove fixed forms and immediately backfill the spaces on both sides with sound earth of topsoil quality.
2. Compact and level backfill, providing a neat, workmanlike condition.

3.03 FIELD QUALITY CONTROL

A. Delivery Tickets: With each load of concrete delivered to the jobsite, provide ready-mix concrete producer's delivery tickets in triplicate, one for Contractor, one for Engineer, and one for Owner. Provide the following information on delivery tickets:

1. Date and serial number of ticket.
2. Name of ready-mixed concrete plant, operator and job location.
3. Types of cementitious materials, brand names, and proportions.
4. Types of admixtures, brand names, and dosages.
5. Aggregate sizes, proportions, and sources.
6. Specified cement content in bags per cubic yards of concrete or mix number.
7. Truck number and time dispatched
8. Amount of concrete in load, and in cubic yards delivered
9. Slump of concrete ordered
10. Amount of water added before the truck left the plant
11. Water added at the jobsite, if any and if authorized by Engineer, and corresponding slump of concrete. Adding water at the jobsite without authorization by the Engineer is grounds for rejection.

B. Quality assurance testing, defined in Articles 1.04 C and 1.04 D, will be performed by a testing agency retained by the Owner. This testing is in addition to the quality control program required to be performed by the Contractor.



3.04 PROTECTION

- A. Protect newly laid pavement that is threatened with damage by rain with a covering of burlap or cotton fabric or by other suitable means.
- B. Comply with the hot and cold weather construction requirements in Part 1 of this specification.
- C. The Contractor shall be responsible for the quality and strength of the concrete laid during cold weather. Remove and replace concrete injured by frost action at no expense to the Owner.
- D. Do not drive equipment on concrete spillway.

END OF SECTION



SECTION 32 90 00
SITE RESTORATION

PART 1 - GENERAL

1.01 SUMMARY:

- A. Section includes
 - 1. Spreading and grading vegetative growth layer.
 - 2. Provisions for seed, mulch and fertilizer in work area.
 - 3. Restoring site to pre-construction condition in areas disturbed by Contractor's operations.
- B. Submit detailed written work plans describing methodologies for performing all work-related items.

PART 2 - PRODUCTS

2.01 VEGETATIVE GROWTH LAYER

- A. Provide earthen material capable of supporting vegetative growth meeting the following requirements:
 - Organic Content: 3% Minimum
 - pH: 6.5-7.5 (Range)
 - Sieve:
 - 100 percent passing 1-inch Screen
 - 95-100 percent passing ½-inch Screen
 - Minimum 40 percent passing No. 100 Screen
- B. Contractor to provide a minimum of one (1) test result prior to placement to confirm vegetative growth layer meets the requirements of these specifications.

2.02 SEED

- A. Meet the following mixture for seed:
 - 50% Kentucky Bluegrass
 - 30% Perennial Ryegrass
 - 20% Tall Fescue



- Certified 98% purity and 85% minimum germination.
- Or Engineer approved equal.

2.03 MULCH

- A. Meet the requirements of MDOT 816 for mulch.

2.04 FERTILIZER

- A. Meet the requirements of MDOT 816 Class A for fertilizer.

2.05 WATER

- A. Clean, fresh water, free of substances that could prevent germination/growth of grass seed.

PART 3 - EXECUTION

3.01 VEGETATIVE GROWTH LAYER PLACEMENT

- A. Screen topsoil as necessary to remove sticks, stones greater than 1-1/2 inches in diameter, paper, plants and roots, and other extraneous matter.
- B. Place soil and restore previous grades.
- C. Do not place soil in a frozen condition, or on frozen subgrade.
- D. Place material to a uniform depth of 6 inches (minimum).

3.02 SEEDING

- A. Perform seeding and mulching as specified in MDOT 816.03.C.
- B. Apply seed mix at a rate of 200 pounds per acre.
- C. Perform seeding after May 1 and before October 10 unless approved by the Owner's Representative.
- D. Drive tracked vehicle up and/or down slope to leave track imprints across slope. Track imprints will help hold seed in place and minimize soil erosion prior to seed germination and maturation.
- E. Apply seed by mechanical seeder such as Brillion, Lawn Maker or equal, to obtain an even overall distribution.



- F. No seeding shall be permitted within 2 hours after rainfall, when thunderstorms are predicted within 24 hours, or when wind exceeds 10 miles per hour. Roll immediately after seeding to insure compaction of the seed into the seedbed.
- G. Seeding shall not be permitted in periods of excessive heat, dryness or on wet ground.
- H. Place seed to provide a continuous stand of grass. The Owner or Owner's representative will determine compliance with this requirement.

3.03 FERTILIZING

- A. Apply fertilizer at a rate of 5 pounds per 1,000 square feet.
- B. Apply fertilizer by mechanical means and lightly work into the surface, taking care to insure even distribution.

3.04 MULCHING

- A. Apply mulch at a rate of 2 tons per acre within one day after seeding.
- B. Roll mulched area, immediately following mulching.

3.05 WATERING

- A. Apply water immediately after each area has been seeded and saturate soil to a minimum depth of 4 inches.
- B. Provide sufficient watering by means of frequent light watering during seed germination when rainfall is insufficient. At a minimum, apply supplemental water to all seeded areas, daily during germination period so vegetative growth layer remains moist to a minimum depth of 2 inches.

3.06 CLEAN-UP

- A. Remove and properly dispose of excess and waste material off site. Clean adjacent paved areas, and remove materials from gutters, curbs, roadways, and catch basins.

3.07 INCLEMENT WEATHER

- A. Site restoration that cannot be complete due to adverse weather conditions will be completed once the weather improves.



3.08 MAINTENANCE

- A. Provide care and maintenance of vegetation, including any barriers needed to prevent access by pedestrians and vehicles, until vegetation is established and accepted by Project Owner.
- B. Repair vegetative growth and re-seed areas of erosion or poor grass germination as directed by Owner or Owner's representative. Contractor will be responsible for repairing vegetative growth layer and re-seeding areas of erosion or poor grass germination up to one year after construction completion, as originally specified, at no additional cost to the Owner.

END OF SECTION

#7

RESOLUTION



CITY OF PONTIAC

OFFICIAL MEMORANDUM

Executive Branch

TO: Honorable Mayor, Council President and City Council Members

FROM: Al Cooley III, Deputy Director of Public Works

DATE: July 29, 2021

RE: **Resolution to approve Amistee Air Duct Cleaning & Insulation to perform Air Duct Cleaning Services at all City Buildings not to exceed in the amount of \$79,060**

The City of Pontiac obtained quotes for Air Duct cleaning services for all 5 city owned buildings. Amistee Air Duct Cleaning & Insulation had met the requirements for this work.

The following Safety measures will be in effect during cleaning.

Amistee Air Duct Cleaning & Insulation. will perform their work in strict accordance with the National Air Duct Cleaners Association standard ACR-2013, and all other accredited standards and codes.

A NADCA certified ASCS (Air System Cleaning Specialist), CVI (Commercial Ventilation Inspector), or VSMR (Ventilation System Mold Remediator) will be onsite throughout the entire job as the Project Manager. At minimum, the Project Manager, also has been trained for Confined Space Training (CST), Personal Protection Equipment (PPE), and Hazard Communications. The Contractor will provide all training and equipment necessary to meet or exceed these guidelines.

WHEREAS,

The Department of Public Works has reviewed quotes and have determined that Amistee Air Duct Cleaning & Insulation is the best firm to provide the Air Duct Cleaning services requested by the city according pricing, safety and timeline.

**NOW, THEREFORE, BE
IT RESOLVED,**

The Pontiac City Council authorized the Mayor to enter into an agreement with Amistee Air Duct Cleaning & Insulation for the amount of \$79,060 to provide air duct cleaning services for all city owned buildings according to the quote dated July 26, 2021

ac

Attachments.



47087 GRAND RIVER AVE.
NOVI, MI 48374

PHONE: (248) 349-8877
FAX: (248) 349-8894

KEVIN@AMISTEE.COM
WWW.AMISTEE.COM



Date: Monday July 26, 2021

Project: City of Pontiac Michigan

Bowens:

- ❖ Proposal for cleaning 2 Rooftop Units (RTU's), 3 Furnaces, associated ductwork, and associated diffusers/vents.

50th District:

- ❖ Proposal for cleaning 9 AHU's/Rooftop Units (RTU's), associated ductwork, and associated diffusers/vents.

City Hall:

- ❖ Proposal for cleaning 5-8 AHU's/Rooftop Units (RTU's), associated ductwork, and associated diffusers/vents.

*bid for main and upper and bid for basement, main, and upper floor

Sheriff Department:

- ❖ Proposal for cleaning 1 Rooftop Unit (RTU), 14 Individual Self Contained Units, associated ductwork, and associated diffusers/vents. Nothing with gun range.

Ruth Peterson:

- ❖ Proposal for cleaning 4 Rooftop Units (RTU's), associated ductwork, and associated diffusers/vents.

Cleaning for all bathroom exhaust vents and ductwork for the above properties are included in cleaning costs/time

SCOPE OF WORK – HVAC REMEDIATION

- 1.) Removal of all visible surface contaminants of the entire airside of the HVAC unit. In this proposal that shall mean:
 - Supply ductwork
 - Return air ductwork
 - Bathroom exhaust ductwork
 - Diffusers and/or vents
 - Dampers, turning vanes, and components inside ductwork
 - Coils, blowers, and air components of RTU's/AHU's/Furnaces/Units
- 2.) Collection equipment to be used will be a large vacuum truck with a minimum of 15,000 cfm's and portable HEPA vacuums.
- 3.) Various access ports will be opened in ductwork as needed for cleaning.
- 4.) High-pressure air and different agitation devices will be inserted into ductwork for cleaning.
- 5.) Reassemble with access doors where openings were cut.



- 6.) Follow up report provided to appropriate parties, including before and after pictures of the areas to be cleaned as well as any finds and/or suggestions.

I. GENERAL PROVISIONS

- A. In as much as the work to be performed under this contract is to be accomplished in occupied areas, Amistee, Inc. and Management will coordinate the work, whereby both management and Amistee, Inc. may continue their operations with the least possible interference and inconvenience. Amistee, Inc. shall notify Management approximately 24 hours before commencing work in order that Management may arrange a schedule of clearance in the buildings where the work is to be performed and set out the actual hours during which Amistee, Inc. may perform their duties. All tools, labor, and materials shall be at the site prior to the beginning of service in order to insure a minimum loss of time.
- B. Amistee, Inc. shall use drop cloths, shields, and other protective devices to prevent damage to mechanical equipment and/or to areas adjacent to units being decontaminated.
- C. All lint, dust, dirt, mold, and other combustible contaminants removed from any areas shall be gathered. Contained, and removed from each site by Amistee, Inc. and disposed of as directed by Management under strict standards of safety.
- D. Amistee, Inc. will comply with all regulations, security and otherwise, imposed by Management governing the conduct of outside personnel and will be held strictly responsible for the conduct of their employees.
- E. Amistee, Inc. shall employ only skilled mechanics and technicians and experienced supervisors. The work specified by the Contract shall be performed in the best and most workmanlike manner in strict accordance with specifications.
- F. All duct cleaning shall consist of the removal of all possible dirt, dust, mold, and other contaminants by the use of manual or pneumatic means.
- G. Amistee, Inc. shall, after the final completion of the source removal of dirt, dust, mold, and other contaminants from duct interiors, be required to apply a certified solution of a bactericide and fungicide product which shall effectively deter accumulation of mold, mildew, and disease-causing bacteria. Conventional high production spray equipment will be used to apply this solution. This solution will be **EPA registered**. Amistee, Inc. assumes no responsibility for anyone in the building with chemical allergies. Management must take responsibility for allowing Amistee, Inc. to use certified solution of bactericide and fungicide.
- H. Amistee, Inc. will provide insurance certificate upon request.
- I. Management will make available, at no cost to Amistee, Inc., all electricity necessary for Amistee, Inc. to operate their electrically powered equipment such as blowers, compressors, industrial vacuuming equipment, explosion-proof and conventional drop lights and all other electrical equipment necessary to the performance of the work.
- J. Management will designate areas in which Amistee, Inc. shall be permitted to park their trucks, utility trailers, trailer supply room, and other automotive equipment necessary while performing the work specified under this contract.
- K. Management will inspect for acceptance and so certify all work completed by Amistee, Inc. within a 24-hour period after being advised by Amistee, Inc. that work has been completed.



- L. Amistee, Inc., at their own expense, will repair any damage to property or equipment of management, which can be attributed to Amistee, Inc.

II. AFFILIATIONS AND SAFETY

- A. Affiliations: Amistee, Inc. will perform their work in strict accordance with the National Air Duct Cleaners Association standard ACR-2013, and all other accredited standards and codes.
- B. NADCA: A NADCA certified ASCS (Air System Cleaning Specialist), CVI (Commercial Ventilation Inspector), or VSMR (Ventilation System Mold Remediator) will be onsite throughout the entire job as the Project Manager.
- C. Safety Procedures: At minimum, the Project Manager, has been trained for Confined Space Training (CST), Personal Protection Equipment (PPE), and Hazard Communications. The Contractor will provide all training and equipment necessary to meet or exceed these guidelines.

III. SPECIAL CONDITIONS

- A. Measure of Payment: Upon the submission of properly certified invoices and vouchers, the amounts stipulated below as compensation for services rendered shall become **due and payable NET 30**. This is an estimate, price below subject to change between parties.
- B. Duct Smoke Detectors: We do ask that the duct smoke detectors be placed in test mode during cleaning hours.
- C. Lined/Insulated Ductwork: For all of these properties that have lined/insulated ductwork; if these areas show signs of deterioration, water damage, microbial, etc., we will recommend these areas be encapsulated and/or recommend replacement. We can provide a change order/new scope of work for encapsulation but not replacement.
- D. Inaccessible Ductwork: For the duct areas that are inaccessible, we will note these areas during cleaning and do our best professionally to clean. Not all ductwork for these buildings have complete duct access.
- E. Amistee Services: **to the extent this project relates to the Coronavirus (COVID-19), the air duct cleaning performed in accordance with the most up to date available guidance from the Centers for Disease Control, the World Health Organization and the Environmental Protection Agency. However, as the disease and its prevention are not fully understood, even adherence to those guidelines cannot and does not guarantee the eradication of all contagions and/or all contaminants. By executing this authorization, Customer hereby agrees to hold harmless, defend and indemnify Amistee (and its Affiliates), of and from any and all manner of claims, in law and/or in equity, made by any person or entity for injury to property and/or for personal injury, result from, arising out of or in any way related to the COVID 19 services to be performed by Amistee.**

- A. DESCRIPTION
 - 1. Supply Ductwork
 - 2. Return Air Ductwork
 - 3. Bathroom Exhaust Ductwork
 - 4. Diffusers and/or Vents
 - 5. Dampers, Turning Vanes, and Components inside ductwork
 - 6. Coils, Blowers, and Air Components of RTU's/AHU's/Furnaces/Units
 - 7. Antimicrobial/Deodorizing Applications (Benefect Decon 30/Metal Ductwork Only)
 - 8. Coil Cleaner Applications (RTU's/AHU's)



Bowens:

Price: \$7,980

*Cleaning will take 1-2 days to complete

50th District:

Price: \$29,740

*Cleaning will take 3-5 days to complete

City Hall:

Price: \$18,940 (basement, main, and upper floor – we have not cleaned the basement in the past)

*Cleaning will take 3-4 days to complete

Sheriff Department:

Price: \$14,950

*Cleaning will take 2-3 days to complete

Ruth Peterson:

Price: \$7,450

*Cleaning will take 1-2 days to complete

Respectfully submitted,

Kevin Van Tiem, ASCS, CVI, VSMR
Amistee Air Duct Cleaning & Insulation

Accepted: _____ Date: _____

P.O. #: _____

#8

RESOLUTION



CITY OF PONTIAC

OFFICIAL MEMORANDUM

Executive Branch

TO: Honorable City Council President Williams and City Council Members

FROM: Mayor Deirdre Waterman

DATE: July 22, 2021

RE: Resolution to Approve Mayor's Appointment of Mark Holland as Deputy Mayor

In accordance with Article 4.103 of the City Charter, it is my honor and privilege to submit the below resolution to approve the appointment of Mr. Mark Holland to the position of Deputy Mayor.

As you know, Mr. Holland is a life-long resident of Pontiac and brings years of valuable experience to this position. Mr. Holland served on the City Council for four years having been elected by the citizens of District 5. Mr. Holland has continued to serve this City as a strong advocate for a number of important issues including youth and recreation. Additionally, Mr. Holland brings years of valuable work experience from the private sector.

Pending no objection, the following resolution is presented for your consideration:

WHEREAS, pursuant to City Charter Section 4.106 the Mayor has the authority to appoint a Deputy Mayor; and

WHEREAS, the Deputy Mayor position is currently not filled; and

WHEREAS, the Mayor has introduced the appointment of Mr. Holland as Deputy Mayor; and

WHEREAS, Mr. Holland is imminently qualified to fulfill the position of Deputy Mayor;

NOW THEREFORE, BE IT RESOLVED the City Council hereby approves of the appointment of Mr. Mark Holland as the Deputy Mayor for the City of Pontiac

Attachment



MARK E. HOLLAND

OBJECTIVE

I want to contribute to an organization that can use an experienced problem-solver and decision-maker who offers strong communication and organizational skills along with a proven ability to motivate, persuade, and inspire others.

EXPERIENCE

City of Pontiac 2014-2018

Councilman of District 5, regularly and thoroughly prepares for each City Council meeting, acts like a liaison between the City and general public, reviews and approves an annual budget, reviews Capital improvement programs for the City, Served on the T.I.F.A and Brownfield Board, Finance Committee, Chair of Real Estate Sub Committee and Law Sub Committee.

Dean Transportation 2014-2018

Transportation Consultant duties include maintain accurate transportation scheduling for Walled Lake School District.

Hollandmark Service Group 2012- 2018

Responsible for landscaping, billing, payroll, managing employees, maintaining vehicles, creating and maintaining clientele as well as advertising

Comerica bank 1995- 2012

Assistant manager of Data Center Operations Print Division, managing over 15 employees, charge with managing customer savings and checking accounts

LesMark Transport 2002-2010

Transporting children to and from school of choice, managing over 20 employees, creating and scheduling pick up and drop offs routes, managing billing, payroll, purchasing and maintaining vehicles and scheduling employees training.

EDUCATION

Pontiac Northern High School Diploma- General Courses.
Oakland Community College- General Courses
America Institute of Banking- Banking Courses
University of Phoenix- Banking Administration

SUMMARY OF QUALIFICATIONS

Proficient with popular software programs including Microsoft Word, Excel, Access and PowerPoint, Jes 2 command, CA-7, 4100 IBM Printer, 3900 IBM Computer and Printer, Certified CDL and DOT Endorsement, CDL Endorsement License, Budget Specialist and Spreadsheet Analyst.