

CITY OF ANN ARBOR
INVITATION TO BID



Nichols Arboretum
Sanitary Sewer Lining

ITB No. 4686

Due Date: August 10, 2021 at 2:00 PM (Local Time)

Public Service/Engineering

Issued By:

City of Ann Arbor
Procurement Unit
301 E. Huron Street
Ann Arbor, MI 48104

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ATTACHMENTS

- City of Ann Arbor Prevailing Wage Declaration Form*
- City of Ann Arbor Living Wage Forms*
- City of Ann Arbor Vendor Conflict of Interest Disclosure Form*
- City of Ann Arbor Non-Discrimination Ordinance Declaration Form and Notice*

NOTICE OF PRE-BID CONFERENCE

A pre-bid conference for this project will be held on **Tuesday, July 20, 2021 at 10:00 AM**. The meeting will be held at the Nichols Arboretum Amphitheater. Prospective bidders will need to enter the Arboretum through Nichols Drive. A site walk will take place immediately following the meeting.

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

INSTRUCTIONS TO BIDDERS

General

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

Any Bid which does not conform fully to these instructions may be rejected.

Preparation of Bids

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

Bids must be submitted on the "Bid Forms" provided with each blank properly filled in. If forms are not fully completed it may disqualify the bid. No alternative bid will be considered unless alternative bids are specifically requested. If alternatives are requested, any deviation from the specification must be fully described, in detail on the "Alternate" section of Bid form.

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

Questions or Clarifications / Designated City Contacts

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

All questions shall be due on or before **July 23, 2021 at 5:00 PM** and should be addressed as follows:

Specification/Scope of Work questions emailed to IKotlyar@a2gov.org.
Bid Process and Compliance questions emailed to cspencer@a2gov.org.

Any error, omissions or discrepancies in the specification discovered by a prospective contractor and/or service provider shall be brought to the attention of Igor V. Kotlyar, PE at IKotlyar@a2gov.org after discovery as possible. Further, the contractor and/or service provide shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

Addenda

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

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received; but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall

not relieve the Bidder of the responsibility for complying with the terms thereof.

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

Bid Submission

All Bids are due and must be delivered to the City of Ann Arbor Procurement Unit on or before **August 10, 2021 at 2:00 PM (local time)**. Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

Each Bidder must submit one (1) original Bid and one (1) Bid copies in a sealed envelope clearly marked: **ITB No. 4686 - Nichols Arboretum Sewer Lining**.

Bids must be addressed and delivered to:

City of Ann Arbor
Procurement Unit,
c/o Customer Services, 1st Floor
301 East Huron Street
Ann Arbor, MI 48104

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

The following forms provided within this ITB Document should be included in submitted bids.

- **City of Ann Arbor Prevailing Wage Declaration of Compliance**
- **City of Ann Arbor Living Wage Ordinance Declaration of Compliance**
- **Vendor Conflict of Interest Disclosure Form**
- **City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance**

Bids that fail to provide these forms listed above upon bid opening may be rejected as non-responsive and may not be considered for award.

Hand delivered bids may be dropped off in the Purchasing drop box located in the Ann Street (north) vestibule/entrance of City Hall which is accessible to the public at all hours. The City will not be liable to any Bidder for any unforeseen circumstances, delivery or postal delays. Postmarking to the Due Date will not substitute for receipt of the Bid. Each Bidder is responsible for submission of their Bid.

Additional time for submission of bids past the stated due date and time will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines in its sole discretion that circumstances warrant it.

Award

The City intends to award a Contract(s) to the lowest responsible Bidder(s). On multi-divisional contracts, separate divisions may be awarded to separate Bidders. The City may also utilize alternatives offered in the Bid Forms, if any, to determine the lowest responsible Bidder on each division, and award multiple divisions to a single Bidder, so that the lowest total cost is achieved for the City. For unit price bids, the Contract will be awarded based upon the unit prices and the

lump sum prices stated by the bidder for the work items specified in the bid documents, with consideration given to any alternates selected by the City. If the City determines that the unit price for any item is materially different for the work item bid than either other bidders or the general market, the City, in its sole discretion, in addition to any other right it may have, may reject the bid as not responsible or non-conforming.

The acceptability of major subcontractors will be considered in determining if a Bidder is responsible. In comparing Bids, the City will give consideration to alternate Bids for items listed in the bid forms. All key staff and subcontractors are subject to the approval by the City.

Official Documents

The City of Ann Arbor officially distributes bid documents from the Procurement Unit or through the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained from any other source are not Official copies. Addenda and other bid information will only be posted to these official distribution sites. If you obtained City of Ann Arbor Bid documents from other sources, it is recommended that you register on www.MITN.info and obtain an official Bid. Bidders do not need to be shown on the plan holders list provided by MITN to be considered an official plan holder.

Bid Security

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

Withdrawal of Bids

After the time of opening, no Bid may be withdrawn for the period of ninety (90) days.

Contract Time

Time is of the essence in the performance of the work under this Contract. The available time for work under this Contract is indicated on page C-2, Article III of the Contract. If these time requirements cannot be met, the Bidder must stipulate on Bid Form Section 3 - Time Alternate its schedule for performance of the work. Consideration will be given to time in evaluating bids.

Liquidated Damages

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

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

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

Human Rights Information

All contractors proposing to do business with the City shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate as outlined in Section 5, beginning at page GC-2 shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

Wage Requirements

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

Pursuant to Resolution R-16-469 all public improvement contractors are subject to prevailing wage and will be required to provide to the City payroll records sufficient to demonstrate compliance with the prevailing wage requirements. Use of the Sample Certified Payroll form provided in the Appendix section or a City-approved equivalent will be required along with wage rate interviews.

For laborers whose wage level are subject to federal, state and/or local prevailing wage law the appropriate Davis-Bacon wage rate classification is identified based upon the work including within this contract. **The wage determination(s) current on the date 10 days before bids are due shall apply to this contract.** The U.S. Department of Labor (DOL) has provided explanations to assist with classification in the following resource link: beta.SAM.gov.

For the purposes of this ITB the Construction Type of Highway will apply.

Conflict Of Interest Disclosure

The City of Ann Arbor Purchasing Policy requires that prospective Vendors complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected Vendor unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may awarded on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the award is in the best interest of the City. A copy of the Vendor Conflict of Interest Disclosure Form is attached.

Major Subcontractors

The Bidder shall identify on Bid Form Section 4 each major subcontractor it expects to engage for this Contract if the work to be subcontracted is 15% or more of the bid sum or over \$50,000, whichever is less. The Bidder also shall identify the work to be subcontracted to each major subcontractor. The Bidder shall not change or replace a subcontractor without approval by the City.

Debarment

Submission of a Bid in response to this ITB is certification that the Bidder is not currently debarred,

suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

Disclosures

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

Bid Protest

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

Any inquiries or requests regarding this procurement should be only submitted in writing to the Designated City Contacts provided herein. Attempts by any prospective bidder to initiate contact with anyone other than the Designated City Contacts provided herein that the bidder believes can influence the procurement decision, e.g., Elected Officials, City Administrator, Selection Committee Members, Appointed Committee Members, etc., may lead to immediate elimination from further consideration.

Cost Liability

The City of Ann Arbor assumes no responsibility or liability for costs incurred by the Bidder prior to the execution of a contract with the City. By submitting a bid, a bidder agrees to bear all costs incurred or related to the preparation, submission and selection process for the bid.

Reservation of Rights

The City of Ann Arbor reserves the right to accept any bid or alternative bid proposed in whole or in part, to reject any or all bids or alternatives bids in whole or in part and to waive irregularity and/or informalities in any bid and to make the award in any manner deemed in the best interest of the City.

Idlefree Ordinance

The City of Ann Arbor adopted an idling reduction Ordinance that went into effect July 1, 2017. The full text of the ordinance (including exemptions) can be found at: www.a2gov.org/idlefree.

Under the ordinance, No Operator of a Commercial Vehicle shall cause or permit the Commercial Vehicle to Idle:

- (a) For any period of time while the Commercial Vehicle is unoccupied; or
- (b) For more than 5 minutes in any 60-minute period while the Commercial Vehicle is occupied.

In addition, generators and other internal combustion engines are covered

- (1) Excluding Motor Vehicle engines, no internal combustion engine shall be operated except

when it is providing power or electrical energy to equipment or a tool that is actively in use.

Environmental Commitment

The City of Ann Arbor recognizes its responsibility to minimize negative impacts on human health and the environment while supporting a vibrant community and economy. The City further recognizes that the products and services the City buys have inherent environmental and economic impacts and that the City should make procurement decisions that embody, promote, and encourage the City's commitment to the environment.

The City encourages potential vendors to bring forward emerging and progressive products and services that are best suited to the City's environmental principles.

BID BOND

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

Hartford, Connecticut 06183

KNOWN ALL BY THESE PRESENTS, That we, Granite Inliner, LLC, as Principal, and Travelers Casualty and Surety Company of America, as Surety, are held and firmly bound unto City of Ann Arbor, as Obligee, in the sum of Five Percent (5%) of Bid Amount Dollars (\$5% of Bid Amount) for the payment of which we bind ourselves, and our successors and assigns, jointly and severally, as provided herein.

WHEREAS, Principal has submitted or is about to submit a bid to the Obligee on a contract for ITB No. 4686 - Nichols Arboretum Sewer Lining("Project").

NOW, THEREFORE, the condition of this bond is that if Obligee accepts Principal's bid, and Principal enters into a contract with Obligee in conformance with the terms of the bid and provides such bond or bonds as may be specified in the bidding or contract documents, then this obligation shall be void; otherwise Principal and Surety will pay to Obligee the difference between the amount of Principal's bid and the amount for which Obligee shall in good faith contract with another person or entity to perform the work covered by Principal's bid, but in no event shall Surety's and Principal's liability exceed the penal sum of this bond.

Signed this 2nd day of August, 2021.

Granite Inliner, LLC

(Principal)

By: _____



Travelers Casualty and Surety Company of America

By: _____



Isabel Barron, Attorney-in-Fact



A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

ACKNOWLEDGMENT

State of California
County of Santa Cruz)

On August 2, 2021 before me, Maria Gomez, Notary Public
(insert name and title of the officer)

personally appeared Isabel Barron,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.



Signature *Maria Gomez*
Maria Gomez, Notary Public

(Seal)



**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

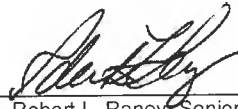
KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Isabel Barron** of **WATSONVILLE**, California, their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st day of April, 2021**.



State of Connecticut

City of Hartford ss.

By: 
Robert L. Raney, Senior Vice President

On this the **21st** day of **April, 2021**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2026**




Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

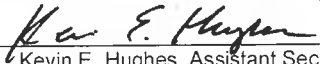
FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

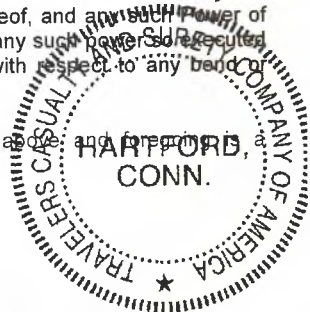
FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or undertaking to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **August 2, 2021**




Kevin E. Hughes, Assistant Secretary



**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.**

INVITATION TO BID

City of Ann Arbor
Guy C. Larcom Municipal Building
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

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

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

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

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

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

The Bidder declares that it has become fully familiar with the provisions of Chapter 14, Section 1:320 (Prevailing wages) and Chapter 23 (Living Wage) of the Code of the City of Ann Arbor and that it understands and agrees to comply, to the extent applicable to employees providing services to the City under this Contract, with the wage and reporting requirements stated in the City Code provisions cited. Bidder certifies that the statements contained in the City Prevailing Wage and Living Wage Declaration of Compliance Forms are true and correct. Bidder further agrees that the cited provisions of Chapter 14 and Chapter 23 form a part of this Contract.

The Bidder declares that it has become familiar with the City Conflict of Interest Disclosure Form and certifies that the statement contained therein is true and correct.

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

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

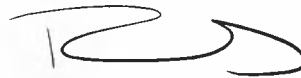
If the Bidder enters into the Contract in accordance with this Bid, or if this Bid is rejected, then the accompanying check or Bid Bond shall be returned to the Bidder.

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

SIGNED THIS 9th DAY OF August, 2021.

Granite Inliner LLC

Bidder's Name



Authorized Signature of Bidder

28529 Goddard Rd Ste 106, Romulus MI 48174

Official Address

Dale Newby

(Print Name of Signer Above)

734 955-2508

Telephone Number

John.Thompson@gcinc.com

Email Address for Award Notice

LEGAL STATUS OF BIDDER

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

Bidder declares that it is:

* A corporation organized and doing business under the laws of the State of _____, for whom _____, bearing the office title of _____, whose signature is affixed to this Bid, is authorized to execute contracts.

NOTE: If not incorporated in Michigan, please attach the corporation's Certificate of Authority

• A limited liability company doing business under the laws of the State of Indiana, whom Dale Newby bearing the title of Area Manager whose signature is affixed to this proposal, is authorized to execute contract on behalf of the LLC.

* A partnership, organized under the laws of the state of _____ and filed in the county of _____, whose members are (list all members and the street and mailing address of each) (attach separate sheet if necessary):

* An individual, whose signature with address, is affixed to this Bid: _____ (initial here)

Authorized Official

 _____ **Date** August 9, 2021

(Print) Name Dale Newby Title Area Manager

Company: Granite Inliner LLC

Address: 28529 Goddard Rd Ste 106 Romulus MI 48174

Contact Phone () 734 955-2508 Fax () 734 955-2504

Email John.Thompson@gcinc.com

BID FORM

Section 1 - Schedule of Prices

Project: Nichols Arboretum Sewer Lining
 File # 2021-015 Bid # 4686

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
GENERAL CONTRACT ITEMS					
10	General Conditions, Max \$60,000	LS	1	\$ <u>60,000.00</u>	\$ <u>60,000.00</u>
20	Audiovisual Recording	LS	1	\$ <u>2,000.00</u>	\$ <u>2,000.00</u>
30	Construction Notification Signs	EA	4	\$ <u>1,500.00</u>	\$ <u>6,000.00</u>
40	Contingency – Tree, Rem, 6-inch to 18-inch	EA	1	\$ <u>4,000.00</u>	\$ <u>4,000.00</u>
50	Erosion Control, Silt Fence	LF	970	\$ <u>7.50</u>	\$ <u>7,275.00</u>
60	Public Notification Signage	EA	4	\$ <u>1,500.00</u>	\$ <u>6,000.00</u>
70	Seeding, Fescue Lawn Mixture	LB	625	\$ <u>75.00</u>	\$ <u>46,875.00</u>
80	Minor Traffic Devices, Modified	LS	1	\$ <u>1,000.00</u>	\$ <u>1,000.00</u>
90	Removal and Disposal of Sludge and Debris Material	Ton	120	\$ <u>150.00</u>	\$ <u>18,000.00</u>
100	Project Clean-up and Restoration	LS	1	\$ <u>220,000.00</u>	\$ <u>220,000.00</u>
110	Certified Payroll Compliance and Reporting	LS	1	\$ <u>500.00</u>	\$ <u>500.00</u>
Subtotal General Contract Items (10 - 100)					\$ <u>371,650.00</u>

BID FORM

Section 1 - Schedule of Prices

Project: Nichols Arboretum Sewer Lining
 File # 2021-015 Bid # 4686

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
SEGMENT 1					
1010	Sewer Segment 1 - Protective Fencing	LF	1000	\$ 11.00	\$ 11,000.00
1020	Sewer Segment 1 MOT - Sign, Type B, Temp, Prismatic, Furn	SF	124	\$ 12.00	\$ 1,488.00
1030	Sewer Segment 1 MOT - Sign, Type B, Temp, Prismatic, Oper	SF	124	\$ 1.00	\$ 124.00
1040	Sewer Segment 1 MOT – Sign Cover	EA	7	\$ 25.00	\$ 175.00
1050	Sewer Segment 1 MOT - Barricade, Type II, High Intensity, Lighted, Furn	EA	1	\$ 150.00	\$ 150.00
1060	Sewer Segment 1 MOT - Barricade, Type II, High Intensity, Lighted, Oper	EA	1	\$ 1.00	\$ 1.00
1070	Sewer Segment 1 MOT - Barricade, Type III, High Intensity, Lighted, Furn	EA	2	\$ 150.00	\$ 300.00
1080	Sewer Segment 1 MOT - Barricade, Type III, High Intensity, Lighted, Oper	EA	2	\$ 1.00	\$ 2.00
1090	Sewer Segment 1 MOT – Channelizing Device, 42-inch, Furn	EA	75	\$ 25.00	\$ 1,875.00
1100	Sewer Segment 1 MOT – Channelizing Device, 42-inch, Oper	EA	75	\$ 1.00	\$ 75.00
1110	Sewer Segment 1 MOT – Lighted Arrow, Type C, Furn	EA	1	\$ 750.00	\$ 750.00
1120	Sewer Segment 1 MOT – Lighted Arrow, Type C, Oper	EA	1	\$ 1.00	\$ 1.00
1130	Fence – Remove and Replace, 6-ft tall chain link, Segment 1 – Washington Heights	LF	10	\$ 250.00	\$ 2,500.00
1140	Fence – Remove and Replace, 4-ft tall chain link, Segment 1 – Washington Heights	LF	10	\$ 250.00	\$ 2,500.00
1150	Level 2 MACP Inspect Manhole	EA	5	\$ 500.00	\$ 2,500.00
1160	Clean 10-inch Dia. San. Sewer (Segment 1 – Washington Heights, MH 71-69220 to MH 71-69271)	LF	904	\$ 20.00	\$ 18,080.00
1170	PACP Televis 10-inch Dia. San. Sewer (Segment 1 – Washington Heights, MH 71-69220 to MH 71-69271)	LF	904	\$ 5.00	\$ 4,520.00
1180	Manhole/Riser Remove and Replace (in Pavement, including restoration) Segment 1 – Washington Heights	EA	1	\$ 17,000.00	\$ 17,000.00
1190	Sewer Flow Control (Segment 1 – Washington Heights)	LS	1	\$ 7,500.00	\$ 7,500.00
1410	CIPP Line 10-inch Dia. San. Sewer (Segment 1 – Washington Heights, MH 71-69220 to MH 71-69271,)	LF	904	\$ 120.00	\$ 108,480.00
	Subtotal, Segment 1, (Items 1010 - 1190, and 1410)				\$ 179,021.00

BID FORM

Section 1 - Schedule of Prices

Project: Nichols Arboretum Sewer Lining
 File # 2021-015 Bid # 4686

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
SEGMENTS 2 & 3					
2010	Sewer Segments 2 & 3 – Protective Fencing	LF	832	\$ 11.00	\$ 9,152.00
2020	Sewer Segments 2 & 3 MOT - Sign, Type B, Temp, Prismatic, Furn	SF	287	\$ 12.00	\$ 3,440.00
2030	Sewer Segments 2 & 3 MOT - Sign, Type B, Temp, Prismatic, Oper	SF	287	\$ 1.00	\$ 287.00
2040	Sewer Segments 2 & 3 – Sign Cover	EA	24	\$ 25.00	\$ 600.00
2050	Sewer Segments 2 & 3 MOT - Barricade, Type III, High Intensity, Lighted, Furn	EA	7	\$ 150.00	\$ 1,050.00
2060	Sewer Segments 2 & 3 MOT - Barricade, Type III, High Intensity, Lighted, Oper	EA	7	\$ 1.00	\$ 7.00
2070	Sewer Segments 2 & 3 MOT – Channelizing Device, 42-inch, Furn	EA	51	\$ 25.00	\$ 1,275.00
2080	Sewer Segments 2 & 3 MOT – Channelizing Device, 42-inch, Oper	EA	51	\$ 1.00	\$ 51.00
2090	Level 2 MACP Inspect Manhole	EA	14	\$ 500.00	\$ 7,000.00
2100	Clean 8-inch Dia. San. Sewer (Segment 2 – Geddes Heights, MH 71- 69198 to MH 71-70032)	LF	1049	\$ 20.00	\$ 20,980.00
2110	Clean 8-inch Dia. San. Sewer (Segment 2 – Harvard PL., MH 71- 70027 to MH 71-70032)	LF	402	\$ 20.00	\$ 8,040.00
2120	Clean 8-inch Dia. San. Sewer (Segment 3 – W. Ridgeway St., MH 71-70020 to MH 71-70038)	LF	519	\$ 20.00	\$ 10,380.00
2130	Clean 8-inch Dia. San. Sewer (Segment 3 – E. Ridgeway St., MH 71- 70023 to MH 71-70039)	LF	437	\$ 20.00	\$ 8,740.00
2140	PACP Televis 8-inch Dia. San. Sewer (Segment 2 – Geddes Heights, MH 71- 69198 to MH 71-70032)	LF	1049	\$ 5.00	\$ 5,245.00
2150	PACP Televis 8-inch Dia. San. Sewer (Segment 2 – Harvard PL., MH 71- 70027 to MH 71-70032)	LF	402	\$ 5.00	\$ 2,010.00
2160	PACP Televis 8-inch Dia. San. Sewer (Segment 3 – W. Ridgeway St., MH 71-70020 to MH 71-70038)	LF	519	\$ 5.00	\$ 2,595.00
2170	PACP Televis 8-inch Dia. San. Sewer (Segment 3 – E. Ridgeway St., MH 71- 70023 to MH 71-70039)	LF	437	\$ 5.00	\$ 2,185.00
2180	Contingency Manhole/Riser Remove and Replace (in Pavement, including restoration) Segment 2 – Geddes Heights	EA	1	\$ 16,900.00	\$ 16,900.00
2190	Contingency Manhole/Riser Remove and Replace (in Grass, including restoration) Segment 2 – Harvard Place	EA	1	\$ 10,500.00	\$ 10,500.00
2200	Contingency Manhole/Riser Remove and Replace (in Pavement, including restoration) Segment 3 – W. Ridgeway Street	EA	1	\$ 16,900.00	\$ 16,900.00
2210	Contingency Manhole/Riser Remove and Replace (in Pavement, including restoration) Segment 3 – E. Ridgeway Street	EA	1	\$ 16,900.00	\$ 16,900.00
2220	Sewer Flow Control (Segments 2 & 3 – Geddes Heights, E. & W. Ridgeway St. and Harvard Pl.)	LS	1	\$ 35,000.00	\$ 35,000.00
2410	CIPP Line 8-inch Dia. San. Sewer (Segment 2 – Geddes Heights, MH 71- 69198 to MH 71-70032)	LF	1049	\$ 100.00	\$ 104,900.00
2420	CIPP Line 8-inch Dia. San. Sewer (Segment 2 – Harvard PL., MH 71- 70027 to MH 71-70032)	LF	402	\$ 100.00	\$ 40,200.00
2430	CIPP Line 8-inch Dia. San. Sewer (Segment 3 – W. Ridgeway St., MH 71- 70020 to MH 71-70038)	LF	519	\$ 100.00	\$ 51,900.00
2440	CIPP Line 8-inch Dia. San. Sewer (Segment 3 – E. Ridgeway St., MH 71- 70023 to MH 71-70039)	LF	437	\$ 100.00	\$ 43,700.00
Subtotal, Segments 2 & 3, (Items 2010 - 2220, and 2410 - 2440)					\$ 419,941.00

BID FORM

Section 1 - Schedule of Prices

Project: Nichols Arboretum Sewer Lining
 File # 2021-015 Bid # 4686

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
SEGMENT 4					
4010	Sewer Segment 4 - Protective Fencing	LF	2404	\$ <u>11.00</u>	\$ <u>26,444.00</u>
4020	Sewer Segment 4 MOT - Sign, Type B, Temp, Prismatic, Furn	SF	130	\$ <u>12.00</u>	\$ <u>1,560.00</u>
4030	Sewer Segment 4 MOT - Sign, Type B, Temp, Prismatic, Oper	SF	130	\$ <u>1.00</u>	\$ <u>130.00</u>
4040	Sewer Segment 4 MOT - Sign Cover	EA	15	\$ <u>25.00</u>	\$ <u>375.00</u>
4050	Sewer Segment 4 MOT - Barricade, Type III, High Intensity, Lighted, Furn	EA	9	\$ <u>150.00</u>	\$ <u>1,350.00</u>
4060	Sewer Segment 4 MOT - Barricade, Type III, High Intensity, Lighted, Oper	EA	9	\$ <u>1.00</u>	\$ <u>9.00</u>
4070	Level 2 MACP Inspect Manhole	EA	7	\$ <u>500.00</u>	\$ <u>3,500.00</u>
4080	Clean 8-inch Dia. San. Sewer (Segment 4 - Arboretum Main Valley, MH 71-70032 to MH 71-70046)	LF	1387	\$ <u>20.00</u>	\$ <u>27,740.00</u>
4090	PACP Televis 8-inch Dia. San. Sewer (Segment 4 - Arboretum Main Valley, MH 71-70032 to MH 71-70046)	LF	1387	\$ <u>5.00</u>	\$ <u>6,935.00</u>
4100	Sewer Flow Control (Segment 4 - Arboretum Main Valley)	LS	1	\$ <u>35,000.00</u>	\$ <u>35,000.00</u>
4410	CIPP Line 8-inch Dia. San. Sewer (Segment 4 - Arboretum Main Valley, MH 71-70032 to MH 71-70046)	LF	1387	\$ <u>100.00</u>	\$ <u>138,700.00</u>
Subtotal, Segment 4, (Items 4010 - 5160, and 4410)					\$ <u>241,743.00</u>

BID FORM

Section 1 - Schedule of Prices

Project: Nichols Arboretum Sewer Lining
 File # 2021-015 Bid # 4686

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
SEGMENT 5					
5010	Sewer Segment 5 – Protective Fencing	LF	1091	\$ 11.00	\$ 12,001.00
5020	Sewer Segment 5 MOT - Sign, Type B, Temp, Prismatic, Furn	SF	283	\$ 12.00	\$ 3,396.00
5030	Sewer Segment 5 MOT - Sign, Type B, Temp, Prismatic, Oper	SF	283	\$ 1.00	\$ 283.00
5040	Sewer Segment 5 MOT – Sign Cover	EA	23	\$ 25.00	\$ 575.00
5050	Sewer Segment 5 MOT - Barricade, Type III, High Intensity, Lighted, Furn	EA	7	\$ 150.00	\$ 1,050.00
5060	Sewer Segment 5 MOT - Barricade, Type III, High Intensity, Lighted, Oper	EA	7	\$ 1.00	\$ 7.00
5070	Sewer Segment 5 MOT - Channelizing Device, 42-inch, Furn	EA	25	\$ 25.00	\$ 625.00
5080	Sewer Segment 5 MOT - Channelizing Device, 42-inch, Oper	EA	25	\$ 1.00	\$ 25.00
5090	Fence – Remove and Replace, 6-ft tall chain link, Segment 5 – Regent Dr.	LF	80	\$ 350.00	\$ 28,000.00
5100	Level 2 MACP Inspect Manhole	EA	7	\$ 500.00	\$ 3,500.00
5110	Clean 8-inch Dia. San. Sewer (Segment 5 – Regent Dr., MH 71- 69945 to MH 71-70046)	LF	923	\$ 20.00	\$ 18,460.00
5120	PACP Televis 8-inch Dia. San. Sewer (Segment 5 – Regent Dr., MH 71- 69945 to MH 71-70046)	LF	923	\$ 5.00	\$ 4,615.00
5130	Contingency Manhole/Riser Remove and Replace (in Pavement, including restoration) Segment 5 – Regent Drive	EA	1	\$ 16,900.00	\$ 16,900.00
5140	Sewer Flow Control (Segment 5 – Regent Dr.)	LS	1	\$ 35,000.00	\$ 35,000.00
5150	Manhole – Adjust to Grade MH 71- 69944	EA	1	\$ 10,000.00	\$ 10,000.00
5160	Manhole – Drop Connection Removal (2) MH 71-69944	EA	1	\$ 7,500.00	\$ 7,500.00
5410	CIPP Line 8-inch Dia. San. Sewer (Segment 5 – Regent Dr., MH 71- 69945 to MH 71-70046)	LF	923	\$ 100.00	\$ 92,300.00
Subtotal, Segment 5, (Items 5010 - 5160, and 5410)					\$ 243,237.00

BID FORM

Section 1 - Schedule of Prices

Project: Nichols Arboretum Sewer Lining
 File # 2021-015 Bid # 4686

<u>Item</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
SEGMENT 6					
6010	Sewer Segment 6 – Protective Fencing	LF	2075	\$ 11.00	\$ 22,825.00
6020	Sewer Segment 6 MOT - Sign, Type B, Temp, Prismatic, Furn	SF	199	\$ 12.00	\$ 2,388.00
6030	Sewer Segment 6 MOT - Sign, Type B, Temp, Prismatic, Oper	SF	199	\$ 1.00	\$ 199.00
6040	Sewer Segment 6 – Sign Cover	EA	17	\$ 100.00	\$ 1,700.00
6050	Sewer Segment 6 MOT - Barricade, Type III, High Intensity, Lighted, Furn	EA	6	\$ 150.00	\$ 900.00
6060	Sewer Segment 6 MOT - Barricade, Type III, High Intensity, Lighted, Oper	EA	6	\$ 1.00	\$ 6.00
6070	Sewer Segment 6 MOT - Channelizing Device, 42-inch, Furn	EA	58	\$ 25.00	\$ 1,450.00
6080	Sewer Segment 6 MOT - Channelizing Device, 42-inch, Oper	EA	58	\$ 1.00	\$ 58.00
6090	Aggregate Maintenance Pad, MH 71- 69899	EA	1	\$ 7,500.00	\$ 7,500.00
6100	Aggregate Maintenance Pad, MH 71- 69900	EA	1	\$ 7,500.00	\$ 7,500.00
6110	Level 2 MACP Inspect Manhole	EA	4	\$ 500.00	\$ 2,000.00
6120	Clean 8-inch Dia. San. Sewer (Segment 6 – Arboretum, MH 71-70046 to MH 71-69895)	LF	894	\$ 20.00	\$ 17,880.00
6130	PACP Televis 8-inch Dia. San. Sewer (Segment 6 – Arboretum, MH 71-70046 to MH 71-69895)	LF	894	\$ 5.00	\$ 4,470.00
6140	Contingency Sewer Location Services (Between MH 71-70046 and MH 71-69899)	LS	1	\$ 375.00	\$ 375.00
6150	Contingency Exploratory Excavation (Between MH 71-70046 and MH 71-69899)	EA	1	\$ 6,100.00	\$ 6,100.00
6160	Contingency Manhole Installation (Between MH 71-70046 and MH 71-69899)	EA	1	\$ 25,000.00	\$ 25,000.00
6170	Contingency Sewer Location Services (Between MH 71-69899 and MH 71-69894)	LS	1	\$ 375.00	\$ 375.00
6180	Contingency Exploratory Excavation (Between MH 71-69899 and MH 71-69894)	EA	1	\$ 6,100.00	\$ 6,100.00
6190	Contingency Manhole Installation (Between MH 71-69899 and MH 71-69894)	EA	1	\$ 25,000.00	\$ 25,000.00
6200	Contingency Sewer Location Services (Between MH 71-69894 and MH 71-69900)	LS	1	\$ 375.00	\$ 375.00
6210	Contingency Exploratory Excavation (Between MH 71-69894 and MH 71-69900)	EA	1	\$ 6,100.00	\$ 6,100.00
6220	Contingency Manhole Installation (Between MH 71-69894 and MH 71-69900)	EA	1	\$ 25,000.00	\$ 25,000.00
6230	Sewer Flow Control (Segment 6 – Arboretum)	LS	1	\$ 30,000.00	\$ 30,000.00
6240	Contingency Aggregate Maintenance Pad, MH 71-69896	EA	1	\$ 5,000.00	\$ 5,000.00
6410	CIPP Line 8-inch Dia. San. Sewer (Segment 6 – Arboretum, MH 71-70046 to MH 71-69895)	LF	894	\$ 100.00	\$ 89,400.00
	Subtotal, Segment 6, (Items 6010 - 6230, and 6410)				\$ 287,701.00
	Total Based Bid				\$ 1,734,293.00

BID FORM

Section 2 – Material, Equipment and Environmental Alternates

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


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

If an environmental alternative is bid the City strongly encourages bidders to provide recent examples of product testing and previous successful use for the City to properly evaluate the environmental alternative. Testing data from independent accredited organizations are strongly preferred.

<u>Item Number</u>	<u>Description</u>	<u>Add/Deduct Amount</u>
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If the Bidder does not suggest any material or equipment alternate, the Bidder **MUST** complete the following statement:

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

Signature of Authorized Representative of Bidder  Date 08/09/2021

BID FORM

Section 3 - Time Alternate

If the Bidder takes exception to the time stipulated in Article III of the Contract, Time of Completion, page C-2, it is requested to stipulate below its proposed time for performance of the work. Consideration will be given to time in evaluating bids.

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

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

Signature of Authorized Representative of Bidder



Date 08/09/2021

BID FORM

Section 4 - Major Subcontractors

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


Contractor agrees that all subcontracts entered into by the Contractor shall contain similar wage provision to Section 4 of the General Conditions covering subcontractor's employees who perform work on this contract.

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

<u>Subcontractor (Name and Address)</u>	<u>Work</u>	<u>Amount</u>
RJ&J Enterprises	Excavation / Earthwork	

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

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

Signature of Authorized Representative of Bidder  Date 08/09/2021

BID FORM

Section 5 – References

Include a minimum of 3 references from similar projects completed within the past 7 years.

[Refer also to Instructions to Bidders for additional requirements, if any]

- | | | | |
|----|---|-----------------------|-----------------------|
| 1) | <u>Section 34, City of Livonia</u> | <u>\$1,100,000.00</u> | <u>2018</u> |
| | Project Name | Cost | Date Constructed |
| | <u>Mr. Don Rohraff, Director of Public Works</u> | | <u>734 466-2607</u> |
| | Contact Name | | Phone Number |
| 2) | <u>Water St Sewer Rehab., City of Bay City</u> | <u>\$385,000.00</u> | <u>2019</u> |
| | Project Name | Cost | Date Constructed |
| | <u>Mr. Terry Kilburn, Sewer Superintendend</u> | | <u>989 245-8598</u> |
| | Contact Name | | Phone Number |
| 3) | <u>Sewer Lining Program, Genesee
Cty Water & Waste Services</u> | <u>\$2,825,000.00</u> | <u>2016 thru 2017</u> |
| | Project Name | Cost | Date Constructed |
| | <u>Mr. Tim Davidek, Assist. Director</u> | | <u>810 732-7870</u> |
| | Contact Name | | Phone Number |

BID FORM

Section 6 – Contractor Information and Responsible Contractor Criteria

Backup documentation may be requested at the sole discretion of the City to validate all of the responses provided herein by bidders. False statements by bidders to any of the criteria provided herein will result in the bid being considered non-responsive and will not be considered for award.

Failure to provide responses to all questions may result in being deemed non-responsive.

Attach additional pages as needed if space below is insufficient.

Pursuant to Sec 1:312(20) of the City Code which sets forth requirements of a responsible bidder, Bidder is required to submit the following:

1. Organization Name: Granite Inliner LLC

Social Security or Federal Employer I.D. #: 01-0684682

Address: 28529 Goddard Rd Ste 106

City: Romulus State: MI Zip: 48174

Type of Organization (circle one below):

Individual Partnership Corporation Joint Venture **Other**

If "Other" please provide details on the organization:

Limited Liability Company

Year organization established: 2002

2. Current owners/principals/members/managing members/partners of the organization:

See Attached

3. Assumed Names, "doing business as" d/b/a, and/or former organization names(s), if applicable: _____

Explanation of any business name changes:

4. If applicable, please provide a list of all bidder's litigation and arbitrations currently pending and within the past five years, including an explanation of each (parties, court/forum, legal claims, damages sought, and resolution).

See Attached

5. Qualifications of management and supervisory personnel to be assigned by the bidder:

6. List the state and local licenses and license numbers held by the bidder:

See Attached

7. Will all subcontractors, employees and other individuals working on the construction project maintain current applicable licenses required by law for all licensed occupations and professions?

Yes

No

8. Will contractors, subcontractors, employees, and other individuals working on the construction project be misclassified by bidder as independent contractors in violation of state or federal law?

Yes

No

9. Submit a statement as to what percentage of your work force resides within the City of Ann Arbor, and what percentage resides in Washtenaw County, Michigan, and the same information for any major subcontractors.

Granite Inliner, Michigan operations has approximately 5% of our workforce that resides within Washtenaw County

10. Submit documentation as to bidder's employee pay rates (e.g., certified payroll without SSN or personal identifying information, or chart of job titles and pay rates, or other evidence).

11. State whether bidder provides health insurance, pension or other retirement benefits, paid leave (vacation, personal time, sick leave, etc), or other benefits to its employees, and if so, state whether each benefit is provided directly to employees, by payments or contributions to a third-party administered plan, in cash (e.g., fringe benefit portion of prevailing wages), or other manner.

All Granite Inliner employees have a full health insurance

12. State whether bidder is an equal opportunity employer and does not discriminate in its hiring on the basis of race, sex, pregnancy, age, religion, national origin, marital status, sexual orientation or gender identity, height, weight, or disability.

Yes

No

13. State whether bidder has Equal Employment Opportunity Programs for minorities, women, veterans, returning citizens, and small businesses, and if so, submit supporting documentation or other evidence of such program(s).

Yes

14. Has bidder had any violations of state, federal, or local laws or regulations, including OSHA or MIOSHA violations, state or federal prevailing wage laws, wage and hour laws, worker's compensation or unemployment compensation laws, rules or regulations, issued to or against the bidder within the past five years?

Yes

No

If you answered "yes" to the question above, for each violation provide an explanation of the nature of the violation, the agency involved, a violation or reference number, any other individual(s) or party(ies) involved, and the status or outcome and resolution.

15. Does bidder have an existing Fitness for Duty Program (drugs and alcohol testing) of each employee working on the proposed jobsite?

Yes

No

If you answered "Yes", please submit documentation of the Fitness for Duty Program and what it entails.

16. Submit documents or evidence of any debarment by any federal, state or local governmental unit and/or findings of non-responsibility or non-compliance with respect to any public or private construction project performed by the bidder. None

17. Proof of insurance, including certificates of insurance, confirming existence and amount of coverage for liability, property damage, workers compensation, and any other insurances required by the proposed contract documents.

18. Does bidder have an on-going MIOSHA-approved safety-training program for employees to be used on the proposed job site?

Yes

No

If bidder answered "yes" to the question above, submit documentation of your safety-training program.

19. Does bidder have evidence of worker's compensation Experience Modification Rating ("EMR")?

Yes

No

EMR = 0.74

20. Will bidder use masters, journeypersons and apprentices on the project?

Yes

No

If bidder answered "yes" to the question above, provide the ratio of masters and journeypersons to apprentices for this project.

Ratio: _____

If bidder answered "no" to the question above, submit documentation regarding the qualifications of each worker who may or will be assigned on the project.

If, yes, Ratio = _____

21. Can bidder provide documentation that it participates in a Registered Apprenticeship Program (RAP) that is registered with the United States Department of Labor Office of Apprenticeship or by a State Apprenticeship Agency recognized by the Office of Apprenticeship?

Yes

No

If bidder answered "yes" to the question above, please submit a copy of the program document(s) and evidence of its registration.

If bidder answered "no" to the question above, please provide details on how you assess the skills and qualifications of any employees who do not have master or journeyperson certification or status, or are not participants in a Registered Apprenticeship Program.

All Operations Team Members are trained via an internal On Boarding and Mentorship program.

22. Will bidder comply with all applicable state and federal laws and visa requirements

regarding the hiring of non-US citizens, and disclosure of any work visas sought or obtained by the bidder, any of the bidder's subcontractors, or any of the bidder's employees or independent contractors, in order to perform any portion of the project?

Yes

No

23. Submit evidence that bidder has financial resources to start up and follow through on the project and to respond to damages in case of default as shown by written verification of bonding capacity equal to or exceeding the amount of the bidders scope of work on the project. The written verification must be submitted by a licensed surety company rated B+ or better in the current A.M. Best Guide and qualified to do business within the State of Michigan, and the same audited financial information for any subcontractor estimated to be paid more than \$100,000 related to any portion of the project.

See Attached

24. Submit evidence of a quality assurance program used by the bidder and the results of same on the bidder's previous projects.

Policy Statement

Our objective is to maintain a drug and alcohol free workplace by prohibiting the possession, use or being under the influence of Controlled Substances and/or Alcohol in the work environment (for example, project sites, plant facilities and any Company offices).

Purpose

The purpose of this Policy is to communicate to applicants and employees our commitment to a drug and alcohol free work environment, identify what conduct is prohibited, identify the methods that will be used to ensure compliance and the consequences of Policy violations.

Applicability

This Policy is applicable to all operations within the scope of and personnel subject to the requirements of GMS. Joint Venture projects where Granite is not the managing partner are not covered within the scope of this Policy; however, those projects may voluntarily adopt and implement this Policy.

This Policy applies to applicants for all positions, including any applicant for any position who was formerly employed by the Company and all Company employees including, but not limited to, employees in managerial or supervisory positions.

This Policy does not have final jurisdiction over employees who are employed as Commercial Motor Vehicle drivers that are subject to the Controlled Substances and Alcohol testing requirements of the U.S. DOT, Federal Motor Carrier Safety Administration. (Those employees are subject to a separate Controlled Substances and Alcohol testing requirements S-P-006 Commercial Motor Vehicle Controlled Substance and Alcohol Policy).

Responsibilities

The **Department Manager** with direct authority for the management of the Business Unit and/or Operational Manager shall ensure this Policy is implemented in accordance with S-SOP-014 Substance Abuse Management Procedure.

The **Responsible Manager** may designate a local Policy Administrator to oversee the implementation of this Policy.

Safety Professionals are responsible to assist the Department and Operational Managers in the implementation of this Policy. When directed by the Department Manager, the Safety Professional will administer the Policy in accordance with S-SOP-014 Substance Abuse Management Procedure.

Operational Managers and their subordinates are responsible for ensuring that this Policy is implemented, and clearly communicated to all employees. They must also respond quickly to address violations and hold those accountable who do not to comply with this Policy.

Supervisors are responsible for ensuring that employees understand this Policy and that apparent or suspected violations are properly reported.

1. Prohibited Conduct

- 1.1. Engaging in the unlawful or unauthorized manufacture, distribution, dispensation, solicitation, sale, purchase, transfer or possession of Controlled Substances, drug paraphernalia or Alcohol while on Company-paid time, on Company premises, in Company vehicles, or while otherwise engaged in activities for or on behalf of the Company.

- 1.2. Reporting for work, remaining on duty or driving Company vehicles or personal vehicles on Company business after the employee has consumed Alcohol in any amount that may affect the employee's job performance.
- 1.3. Except as noted 1.3.1, consuming Alcohol during an employee's normal course of work, workday or normal business hours. This includes, but is not limited to, while an employee is on or off the premises of the Company.
 - 1.3.1. This prohibition does not include the reasonable consumption of Alcohol by employees of legal drinking age, under the following guidelines:
 - 1.3.1.1. After normal business hours while traveling on Company business PRO-SOP-008 Travel Procedure.
 - 1.3.1.2. While at offsite functions or activities sponsored by the Company; or
 - 1.3.1.3. While attending client or industry association functions with the prior approval of their Regional/Divisional Vice President.
 - 1.3.1.4. The consumption of Alcohol is specifically prohibited if the employee is or will be driving a Company vehicle.
- 1.4. Engaging in any illegal or unauthorized use of Controlled Substances at any time while on or off-duty. This includes, but is not limited to, while an employee is on or off the premises of the Company, as well as during the employee's meal and other break periods.
 - 1.4.1. Marijuana is a federally banned Controlled Substance in the United States. Employees found to have Marijuana in their system above acceptable threshold levels will be considered positive regardless of state level legalization of recreational or medical prescription use.
 - 1.4.2. This prohibition does not apply to non-Marijuana based prescription or over-the-counter medications taken by employees with safety sensitive assignments which:
 - 1.4.2.1. Have been lawfully prescribed to, or obtained by, the employee;
 - 1.4.2.2. Are being used by the employee in accordance with the instructions provided with the prescription or over-the-counter medication;
 - 1.4.2.3. Before reporting to work after taking such medication, the employee has inquired whether the manufacturer of the medication or the employee's physician warns against driving, operating machinery or performing other work-related safety sensitive tasks.
 - 1.4.2.4. If such warnings exist, the employee taking the medication must inform his or her supervisor or the Human Resources Department of such restrictions before reporting to work under the influence of such substances. When informing his or her supervisor(s) or the Human Resources Department of such restrictions, the employee should not identify the medication(s) being used or the reason for its use. The supervisor or Human Resources representative must notify the local Safety Manager immediately.
 - 1.4.2.5. Any employee reporting to work in a safety-sensitive position without first advising the Company about warnings accompanying lawfully prescribed or obtained medications will be subject to disciplinary action up to and including possible termination of employment. An employee's lack of knowledge concerning such warnings will not excuse a violation of this rule where an employee has failed to make a reasonable inquiry.
 - 1.4.2.6.
- 1.5. Failing to stay in contact with the Company or its medical review officer while awaiting the results of a Controlled Substances test.

- 1.6. Testing positive on any Controlled Substances or Alcohol test.
- 1.7. Refusal to Test (aka refusal to submit) to a test required under this Policy.
- 1.8. Refusing to cooperate in an inspection of Company property.
- 1.9. Failing to report a conviction for a Controlled Substances-related crime that occurred during working hours at a Company work location to the Responsible Manager within five (5) days of the conviction.

2. Methods Used to Ensure Compliance

- 2.1. Testing - To enforce this Policy against the use of Controlled Substances and the use of Alcohol in the workplace, the Company will use a system of testing for Controlled Substances and/or Alcohol and inspections. Controlled Substance and/or Alcohol testing and inspections shall only be conducted in accordance with applicable laws rules and regulations. Where any provision of this Policy conflicts with the provisions of a collective bargaining agreement between the Company and a union representing its employees, the provisions of the collective bargaining agreement shall control:
 - 2.1.1. Pre-Employment Controlled Substances Testing of Applicants. All applicants to whom the Company has given a conditional offer of employment are required to submit to a pre-employment Controlled Substances test and must receive a negative result as a condition of employment.
 - 2.1.2. Reasonable Suspicion Controlled Substances and Alcohol Testing of Employees. An employee must submit to a Controlled Substances test, and/or an Alcohol test, whenever there is reasonable suspicion that the employee has or may have used Controlled Substances or Alcohol in violation of this Policy.
 - 2.1.3. Post-Incident Controlled Substances and Alcohol Testing of Employees. An employee must submit to a Controlled Substances test, and/or an Alcohol test, whenever it appears there is Reasonable Suspicion that an employee has caused or contributed to a Work Related Incident.
 - 2.1.4. Random Controlled Substances Testing of Employees with Safety Sensitive Assignments. Employees with safety sensitive assignments shall be required to submit to a Random Controlled Substances test.
 - 2.1.5. Other Testing for Controlled Substances and Alcohol Testing.
 - 2.1.5.1. Employees shall be required to submit to a Controlled Substances test where, as a contractual condition of performing work for a client, the Company must certify that employees are participating in a Controlled Substances testing program or must have passed a pre-assignment or pre-access test within a prescribed period.
 - 2.1.5.2. Employees who have entered into a Voluntary Rehabilitation Agreement (S-F-057) shall be required to submit to Controlled Substances and Alcohol testing under the agreed to terms and conditions.
 - 2.1.5.3. Where required by law as a condition of performing their job duties (e.g., DOT testing).
- 2.2. Inspections
 - 2.2.1. The Company may at any time and without cause conduct unannounced inspections for the presence of illegal Controlled Substances or unauthorized Alcohol on Company facilities and property, such as (but not limited to) Company-issued vehicles, desks, file cabinets, and lockers.
 - 2.2.2. The Company may, when there is reasonable suspicion to believe that an individual may have or has violated the Controlled Substances or Alcohol prohibitions contained in this Policy, conduct inspections of employees and their personal property, such as (but not limited to) vehicles, clothing, packages, purses, brief cases, lunch boxes, or other containers brought onto or being taken off of Company premises.

3. Consequences for Policy Violations

- 3.1. Applicants who violate this Policy are subject to the following consequences:

- 3.1.1. Applicants who refuse to submit to a test when requested shall be ineligible for employment or if employed conditionally (e.g., while waiting for test results) terminated from employment.
 - 3.1.2. Applicants who receive a verified confirmed positive Controlled Substances test result shall be ineligible for employment with the Company.
 - 3.1.3. Applicants who were not hired because of a verified confirmed positive test result may not reapply for employment until thirty (30) days after their previous application. They must provide proof of completion of, or continuing participation in, a rehabilitation program satisfactory to the Company.
- 3.2. Discipline for violations of this Policy will be administered in accordance with the Company's Discipline Policy (HROC-P-003), but the minimum consequences for an employee engaging in prohibited conduct as described in this Policy will consist of:
- 3.2.1.1. The minimum discipline for returning a Positive Test Result will consist of suspension of employment without pay, pending enrollment in an applicable accredited rehabilitation program, evaluation and approval of a Substance Abuse Professional (SAP) to return to duty; and ongoing participation and ultimate completion of the rehabilitation program. The employee must also agree to the terms of and sign the S-F-057 Voluntary Rehabilitation Agreement Form.
 - 3.2.2. The minimum discipline for refusing to submit to a test or failing to report a conviction for a Controlled Substances-related crime that occurred during working hours at a Company work location to the Responsible Manager within five (5) days of the conviction will result in immediate termination of employment.
- 3.3. Employees who were terminated for failing to comply with the requirements of this Policy (i.e., a verified confirmed positive test, refusal to test, et. al.) may not reapply for employment until thirty (30) days after their termination and shall provide proof of completion of or continuing participation in a rehabilitation program that is satisfactory to the Company. A new pre-employment drug screen must be completed, returning a verified negative result, prior to allowing the employee to return to duty.

Related Policies

- [HROC-P-003 Discipline](#)
[S-P-005S Substance Abuse \(Spanish\)](#)
[S-P-006 Commercial Motor Vehicle Controlled Substance and Alcohol](#)

Implemented Procedures and Forms

- [PRO-SOP-008 Travel Procedure](#)
[S-F-057 Voluntary Rehabilitation Agreement Form](#)
[S-SOP-014 Substance Abuse Management Procedure](#)

Appendix

Appendix A: Substance Abuse Policy Definitions

Appendix A: Substance Abuse Policy Definitions

Alcohol	The intoxicating agent in beverage alcohol, ethyl alcohol, or other low molecular weight alcohols including methyl and isopropyl alcohol. In the event of an alcohol test result over 0.02 but less than 0.04, an employee shall not be permitted to perform safety sensitive functions for not less than 24 hours.
Alcohol Use	The consumption of any beverage, mixture or preparation, including medication, containing Alcohol.
Applicant	A person who applies for employment with the Company and has not been previously employed by the Company during the preceding thirty (30) calendar days.
Business Unit	Any uniquely identified organizational unit of the Company, such as Group, Division, Region, Area, Project, or Department.
Company Work Location/Company Premises	All property, facilities, land, offices, living quarters, buildings, structures, fixtures, installations, trailers, equipment, boats, vessels, barges, aircraft, automobiles, trucks, all other vehicles, and parking areas, whether owned, leased, used or under the control of the Company. This may also include other work locations, including the job site of a customer, or to and from those locations while in the course and scope of employment with the Company.
Controlled Substances	Those Controlled Substances or other substances defined by the Controlled Substances Act and included in schedules I, II, III, IV or V of 21 CFR 1803.11 through 1308.15, including but not limited to amphetamines, barbiturates, benzodiazepines, buprenorphine, cannabinoids (marijuana), cocaine, methadone, methaqualone, opioids, phencyclidine and propoxyphene.
Department Manager	The highest-ranking manager of each Department or Business Unit.
Employee	Every individual employed by Granite Construction Incorporated, or any of its wholly owned subsidiaries.
Incident	An unplanned event that occurs with the potential for, or resulting in, harm to persons, damage to a vehicle, equipment, or property, or that otherwise cause a loss to a third party.
Marijuana	Any part of the plant Cannabis whether growing or not; the seeds thereof; the resin extracted from any part of the plant, including hashish and hash oil; any compound, manufacture, salt, derivative, mixture, or preparation of the plant, its seeds or resin.
Near Miss	An event, though it did not cause a significant loss, that under slightly different circumstances could have resulted in an Incident.
Operational Manager	The person with the authority/responsibility for the execution of the work and daily administration of the Company's Policies and Procedures (e.g., Construction Managers, Plant Managers, Superintendents, Engineers).
Random Testing	A selection process where affected employees are selected for unannounced controlled substances testing using a scientifically-valid random selection process that ensures that each employee has an equal chance of being selected for testing.

Reasonable Suspicion

In this Policy, the term "reasonable suspicion" means a belief that an individual is using or has used controlled substances or alcohol in violation of the Company's Policy drawn from specific objective and articulable facts and reasonable inferences drawn from those facts in light of the Company's experience. The belief may be based upon, among other things, the following:

- Observable phenomena such as the physical symptoms or manifestations of being under the influence of a controlled substance or alcohol while at work or on duty or the direct observation of controlled substance or alcohol use while at work or on duty.
- A report of controlled substance or alcohol use while at work or on duty, provided by reliable and credible sources and which has been independently corroborated.
- Evidence that an individual has tampered with a controlled substance or alcohol test during the individual's employment with the Company.
- Evidence that an individual is involved in the use, possession, sale, solicitation or transfer of controlled substances while on duty or while on the Company's premises or operating a Company vehicle, machinery or equipment.

Refusal to Test

A refusal to test would include any of the following situations:

- Failing to appear for any test when directed to do so.
- Failing to remain at the testing site until the testing process is completed.
- Failure to provide a breath sample, saliva sample or urine sample as directed.
- Failure to permit, if the situation requires, the observation of providing a urine specimen.
- Failure to provide a urine, breath or saliva specimen within required time frames may be considered a refusal. If a participant cannot provide a sufficient quantity of urine or breath, he/she will be directed to be evaluated by a physician (MRO must approve the choice of physician). If the physician cannot find a legitimate medical explanation for the inability to provide a specimen (either breath or urine), it will be considered a refusal to test.
- Failure or decline to take an additional drug test the employer or collector has directed you to take.
- Failure to undergo a medical examination or evaluation, as directed by the MRO as part of the verification process, or as part of a "shy bladder" or "insufficient breath" situation.
- Failure to cooperate with any part of the testing process and/or conduct that would obstruct the proper administration of a test. (e.g., refusing to empty pockets when so directed by the collector, behave in a confrontational way that disrupts the collection process)
- For an observed collection, failure to follow the observer's instruction to raise and lower their clothing to permit the observer to determine if the employee has a prosthetic or other device that could be used to interfere with the collection process.
- Possess or wear a prosthetic, device, or material that could be used to interfere with the collection process.

- Admission by the participant that he/she adulterated or substituted the specimen or declines to take a required test.
- A report from the MRO that the participant has a verified adulterated or substituted test result.

Note that a refusal to submit to a drug and/or an alcohol tests will have the same consequences as a Positive Test Result.

Reportable Injury or Illness (MSHA)

An incident that we know or should know results in the death of an individual at a mine, injury of an individual at a mine that has a reasonable potential to cause death, entrapment of an individual at a mine that has a reasonable potential to cause death or any other mine accident.

Reportable Injury or Illness (OSHA)

An incident that results in the death, amputation, permanent disfigurement, loss of and eye or inpatient hospitalization of an employee. Note: Some state agencies (e.g., California, Kentucky, and Utah) have more extensive definitions of injuries that are reportable.

Responsible Manager

The highest ranking person at the project level or location that is responsible for field or plant operations (i.e., Project Manager, Superintendent, Project Engineer, or Business Unit Manager).

Safety Sensitive Assignments

Assignments that by their nature could pose a significant risk of causing or contributing to a Work Related Incident, especially those assignments where an employee has the responsibility for his/her own safety or other people's safety. These assignments include managing or supervising employees, the operation of motor vehicles, construction, mining, milling or manufacturing equipment, or being exposed to the hazards associated with construction, mining, milling or manufacturing operations. The job titles frequently associated with these assignments include, but are not limited to, Carpenters, Cement Finishers, Equipment Operators, Truck Drivers, Foremen/Supervisors, Helpers, Iron Workers, Laborers, Mechanics, Miners, Operational Managers, Superintendents, and Surveyors. The Company reserves the right to determine which assignments are safety sensitive.

Significant Safety Incidents

Incidents that because of their potential severity must be reported to the Company's senior managers/executives. These kinds of incidents include:

- Fatality; or
- Reportable Injury or Illness (MSHA); or
- Reportable Injury or Illness (OSHA); or
- An injury to an employee that requires the employee to see a doctor, go to a clinic or receive medical treatment that is more than job site first aid; or
- Damage to company equipment (with estimated cost greater than \$2,500.00). *This does not include thefts, vandalism or vehicle incidents that are not attributable to an employee (e.g., incidents caused by a third party); or*
- Damage that is the result of backing equipment or a vehicle regardless of the cost; or
- Damage that is the result of the operation of a crane or equipment used for hoisting (e.g., excavators, backhoes); or
- Utility strikes (overhead or underground) involving electrical equipment, gas, petroleum products or fiber-optic communication.

Supervisor	A person who supervises workers or the work done by others. An employee with management authority over a workplace and other employees. This includes managers, superintendents, foremen and lead men (if they have been authorized to enforce Company Policies and Procedures).
Work Related Incident	Any Incident that occurs at a Company work location/Company premises, or off-site while engaged in activities (including operating a vehicle) for or on behalf of the Company with the potential for, or resulting in, harm to persons, damage to a vehicle, equipment, or property, or that otherwise cause a loss to a third party resulting in one or more of the following: <ul style="list-style-type: none">• A Significant Safety Incident; or• Near Miss.



1 Tower Square, Hartford, CT 06183

August 2, 2021

City of Ann Arbor

RE: ITB No. 4686 - Nichols Arboretum Sewer Lining.

To Whom It May Concern:

The undersigned surety companies are pleased to execute contract bonds for Granite Construction Incorporated and its subsidiaries, including **Granite Inliner, LLC**. The Principal has been provided with performance, payment, and warranty bonds since 1926. During that time, individual bonds have been underwritten in excess of \$600,000,000, while an aggregate work program well above that amount has been supported. Additionally, participation in joint venture projects has exceeded \$1 billion.

The aggregate bonding capacity is \$5,000,000,000; current available bonding capacity as of **August 2, 2021** is approximately \$2,000,000,000. It is the current intent of the sureties to provide 100% performance and payment bonds, subject to acceptable contract terms and conditions and underwriting conditions at the time the bonds are requested by **Granite Inliner, LLC**. Our consideration and issuance of bonds is a matter solely between **Granite Inliner, LLC** ourselves, and we assume no liability to third parties or to you by the issuance of this letter.

We have the utmost confidence in the integrity and ability of **Granite Inliner, LLC** and consider them to be one of the premier construction companies in the United States. We are pleased to give them our highest recommendation.

Sincerely,

TRAVELERS CASUALTY and SURETY COMPANY of AMERICA, A.M. Best Rating: A++ XV
FEDERAL INSURANCE COMPANY, A.M. Best Rating: A++ XV
THE CONTINENTAL INSURANCE COMPANY, A.M. Best Rating: A XV

Isabel Barron
Attorney in Fact



A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

ACKNOWLEDGMENT

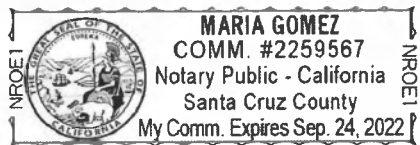
State of California
County of Santa Cruz)

On August 2, 2021 before me, Maria Gomez, Notary Public
(insert name and title of the officer)

personally appeared Isabel Barron,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature *Maria Gomez* (Seal)
Maria Gomez, Notary Public



**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

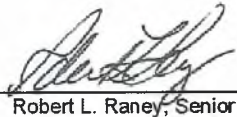
KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Isabel Barron** of **WATSONVILLE**, **California**, their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April**, 2021.



State of Connecticut

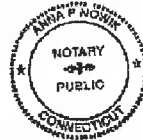
City of Hartford ss.

By: 
Robert L. Raney, Senior Vice President

On this the **21st** day of **April**, 2021, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2026




Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

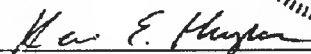
FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is


FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **August 2**, 2021




Kevin E. Hughes, Assistant Secretary



**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.**

Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company

Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Isabel Barron, Jigisha Desai, John D. Gilliland, Maria Gomez, Roberto J. Rivera-Rodriguez, Mariela Rubio, Ashley Stinson and Tobi Stonich Telesco of Watsonville, California

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business on behalf of GRANITE CONSTRUCTION INCORPORATED and all Subsidiaries alone or in joint venture as principal, in connection with bids, proposals or contracts to or with the United States of America, any State or political subdivision thereof or any person, firm or corporation. And the execution of such bond or obligation by such Attorney-in-Fact in the Company's name and on its behalf as surety thereon or otherwise, under its corporate seal, in pursuance of the authority hereby conferred shall, upon delivery thereof, be valid and binding upon the Company.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY have each executed and attested these presents and affixed their corporate seals on this 10th day of December, 2020.

Dawn M. Chloros

Dawn M. Chloros, Assistant Secretary

Stephen M. Haney

Stephen M. Haney, Vice President



STATE OF NEW JERSEY

County of Hunterdon

SS.

On this 10th day of December, 2020 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros and Stephen M. Haney, to me known to be Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros and Stephen M. Haney, being by me duly sworn, severally and each for herself and himself did depose and say that they are Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2316685
Commission Expires July 16, 2024

Katherine J. Adelaar

Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016; WESTCHESTER FIRE INSURANCE COMPANY on December 11, 2006; and ACE AMERICAN INSURANCE COMPANY on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
(2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
(3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
(ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this August 2, 2021



Dawn M. Chloros

Dawn M. Chloros, Assistant Secretary



IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:

Telephone (908) 903- 3493

Fax (908) 903- 3656

e-mail: surety@chubb.com

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

John D Gilliland, Jigisha Desai, Ashley Stinson, Tobi Stonich Telesco, Isabel Barron, Roberto J Rivera-Rodriguez, Maria Gomez, Mariela Rubio, Individually

of Watsonville, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Board of Directors of the insurance company.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 22nd day of June, 2021.



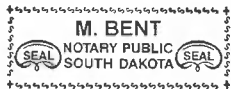
The Continental Insurance Company

Paul T. Bruflat

Paul T. Bruflat Vice President

State of South Dakota, County of Minnehaha, ss:

On this 22nd day of June, 2021, before me personally came Paul T. Bruflat to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.



My Commission Expires March 2, 2026

M. Bent

M. Bent Notary Public

CERTIFICATE

I, D. Johnson, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance company printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this August 2, 2021



The Continental Insurance Company

D. Johnson

D. Johnson Assistant Secretary

Form F6850-4/2012

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

“RESOLVED: That any Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Group Vice President to the Secretary of the Company prior to such execution becoming effective.

This Power of Attorney is signed by Paul T. Bruflat, Vice President, who has been authorized pursuant to the above resolution to execution power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012.

“Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the “Authorized Officers”) to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, “Electronic Signatures”), Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company.”





Granite Inliner, LLC
Contractor's Licenses

State	License Number	Expiration Date	Qualifier	Classification	Name on License
Alabama	37074	8/31/21	None Req.	General Contractor	Granite Inliner, LLC
Arkansas	197170521	5/31/22	None Req.	Commerical Contractors License	Granite Inliner, LLC
California			None Req.		Granite Inliner, LLC
Colorado			None Req.		Granite Inliner, LLC
Delaware	2014600378	12/31/23	None Req.	Business License	Granite Inliner, LLC
Florida	CUC1224477	8/31/22	Mark Harris	Construction Industry Licene	Granite Inliner, LLC
Georgia	UM000978 UF202145 UC301235	4/23/23	KenThompson Tommy Robertson Larry Purlee	Utility Utility Foreman Utility Contractor	Granite Inliner, LLC
Indiana			None Req.		Granite Inliner, LLC
Iowa	C119639	5/16/21	None Req.	Contractors License	Granite Inliner, LLC
Kansas			None Req.		Granite Inliner, LLC
Kentucky			None Req.		Granite Inliner, LLC
Louisiana	40086	12/17/21	Ken Thompson	Contractors License	Granite Inliner, LLC
Maine			None Req.		Granite Inliner, LLC
Maryland	13715673	4/30/22	None Req.	Construction Firm License	Granite Inliner, LLC
Massachusetts			None Req.		Granite Inliner, LLC
Minnesota			None Req.		Granite Inliner, LLC
Mississippi	13717-MC	8/1/21	Ken Thompson	Contractors License	Granite Inliner, LLC
Montana	202790	5/27/23	None Req.	Construction Contractor	Granite Inliner, LLC
Nebraska			None Req.		Granite Inliner, LLC
Nevada			None Req.		Granite Inliner, LLC
New Hampshire			None Req.		Granite Inliner, LLC
New Jersey	656668	4/1/22	None Req.	Public Works Contractor	Granite Inliner, LLC
New York			None Req.		Granite Inliner, LLC
North Carolina	51977	12/31/21	Ken Thompson	General Contractor	Granite Inliner, LLC
North Dakota	000041834	3/1/22	Class A	Class A Contractor License	
Ohio			None Req.		Granite Inliner, LLC
Oklahoma			None Req.		Granite Inliner, LLC
Pennsylvania			None Req.		Granite Inliner, LLC
Rhode Island			None Req.		Granite Inliner, LLC
South Carolina	G107212	10/31/22	Ken Thompson	Contractors License	Granite Inliner, LLC
South Dakota	1029-2850-ET		None Req.	Contractors Excise Tax	Granite Inliner, LLC
Tennessee	49715	11/30/21	Ken Thompson	Contractors License	Granite Inliner, LLC
Texas			None Req.		Granite Inliner, LLC
Utah	8095385-5501	11/30/21	Joseph Moya	Contractors License	Granite Inliner, LLC
Vermont			None Req.		Granite Inliner, LLC
Virginia	2705115461	6/30/23	Lou Krch	Class A Contractor	Granite Inliner, LLC
Washington	UBI #602723432	7/21/19	None Req.	Construction Contractor	Granite Inliner, LLC
West Virginia	WV058093	12/21/21	Lou Krch	Contractors License	Granite Inliner, LLC
Wisconsin			None Req.		Granite Inliner, LLC
Wyoming			None Req.		Granite Inliner, LLC



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
09/24/2020

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 LIC #0C36861 Alliant Insurance Services, Inc. 100 Pine Street, 11th Floor San Francisco, CA 94111	1-415-403-1491	CONTACT NAME: Kimberly Leikam
		PHONE (A/C, No, Ext): 415-403-1491 FAX (A/C, No): 415-874-4818
		E-MAIL ADDRESS: kleikam@alliant.com
		INSURER(S) AFFORDING COVERAGE
		INSURER A: VALLEY FORGE INS CO NAIC # 20508
		INSURER B: CONTINENTAL CAS CO 20443
		INSURER C: TRANSPORTATION INS CO 20494
		INSURER D: WESTCHESTER FIRE INS CO 21121
		INSURER E:
		INSURER F:


COVERAGES CERTIFICATE NUMBER: 60319054 REVISION NUMBER:

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 SUBR INSD 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 type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input checked="" type="checkbox"/> LOC <input type="checkbox"/> OTHER:		GL2074978689	10/01/20	10/01/23	EACH OCCURRENCE	\$ 2,000,000
						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 2,000,000
						MED EXP (Any one person)	\$ Nil
						PERSONAL & ADV INJURY	\$ 2,000,000
						GENERAL AGGREGATE	\$ 10,000,000
						PRODUCTS - COMP/OP AGG	\$ 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 NON-OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/>		BUA2074978692	10/01/20	10/01/23	COMBINED SINGLE LIMIT (Ea accident)	\$ 2,000,000
						BODILY INJURY (Per person)	\$
						BODILY INJURY (Per accident)	\$
						PROPERTY DAMAGE (Per accident)	\$
							\$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$		CUE2068209453	10/01/20	10/01/21	EACH OCCURRENCE	\$ 8,000,000
						AGGREGATE	\$ 8,000,000
							\$
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY <input type="checkbox"/> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> If yes, describe under DESCRIPTION OF OPERATIONS below <input type="checkbox"/> Excess Liability	Y/N N	WC274978630 (CA) WC274978644 (AOS/StopGap) WC274978658 (NY) WC274978661 (MT,WI,HI)	10/01/20	10/01/21	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	\$ 2,000,000 \$ 2,000,000 \$ 2,000,000
D			G22009126016	10/01/20	10/01/21	Limit Excess \$8M	5,000,000
						Pol. #: CUE206820945	

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

EVIDENCE OF INSURANCE FOR BIDDING, PRE-QUALIFICATION AND COMPLIANCE PURPOSES GL Per ISO Form CG 0001 10/01; AL Per ISO Form CA0001 10/13

CERTIFICATE HOLDER FOR INFORMATION ONLY 585 West Beach Street Watsonville, CA 95076 USA	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 

SUPPLEMENT TO CERTIFICATE OF INSURANCE

DATE
09/24/2020

NAME OF INSURED: Granite Inliner, LLC

The named insured reserves its rights to provide any additional coverages under the policies above to only those expressly negotiated for by contract.

Granite Inliner, LLC

Consolidated Financial Statements

As of and for the Year Ended December 31, 2020

Index

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Report of Independent Auditors

To the Board of Directors of Granite Inliner, LLC

We have audited the accompanying consolidated financial statements of Granite Inliner, LLC and its subsidiaries, which comprise the consolidated statement of financial position as of December 31, 2020, and the related consolidated statements of operations and of cash flows for the year then ended.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Granite Inliner, LLC and its subsidiaries as of December 31, 2020, and the results of their operations and their cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.



Emphasis of Matter

As discussed in Note 1 to the consolidated financial statements, the Company has restated its 2019 financial statements to correct misstatements. Our opinion is not modified with respect to this matter.

PricewaterhouseCoopers LLP

San Francisco, California
April 26, 2021

I, Jaime Jones, the undersigned, do affirm that I am an independent certified public accountant, holding unrevoked certificate number 115361 in the State of California. I have signed the Granite Inliner, LLC audit opinion as a member of the firm of:

PricewaterhouseCoopers LLP
San Francisco, California

Jaime Jones

Jaime Jones

GRANITE INLINER, LLC
CONSOLIDATED STATEMENT OF FINANCIAL POSITION
(In thousands, except share and per share data)

December 31,	2020
Assets	
Current assets	
Cash	\$ 20,693
Receivables, net	56,504
Contract assets	11,557
Inventories	8,502
Other current assets	1,665
Total current assets	98,921
Property and equipment, net	31,894
Goodwill	40,927
Intercompany receivable from Layne and affiliates	17,143
Right of use assets	2,683
Other noncurrent assets	17,582
Total assets	\$ 209,150
Liabilities and Equity	
Current liabilities	
Accounts payable	21,399
Contract liabilities	3,431
Accrued expenses and other current liabilities	15,408
Total current liabilities	40,238
Long-term lease liabilities	1,696
Other long-term liabilities	134
Commitments and contingencies (Notes 1 and 10)	
Member's equity	
Contributed capital	257,849
Additional paid-in-capital	16,861
Retained earnings	(107,628)
Total member's equity	167,082
Total liabilities and equity	\$ 209,150

The accompanying notes are an integral part of these consolidated financial statements.

GRANITE INLINER, LLC
CONSOLIDATED STATEMENT OF OPERATIONS
(In thousands)

Year Ended December 31,	2020
Revenue	\$ 217,565
Cost of revenue	191,591
Gross profit	25,974
Selling, general and administrative expenses	35,828
Non-cash impairment charges (See Note 6)	94,441
Gain on sales of property and equipment	(427)
Operating loss	(103,868)
Other income, net	(125)
Net loss	\$ (103,743)

The accompanying notes are an integral part of these consolidated financial statements.

GRANITE INLINER, LLC
CONSOLIDATED STATEMENT OF CASH FLOWS
(In thousands)

Year Ended December 31,	2020
Operating activities	
Net loss	\$ (103,743)
Adjustments to reconcile net loss to net cash used in operating activities:	
Depreciation and amortization	16,543
Gain on sales of property and equipment	(427)
Deferred income taxes	(894)
Non-cash impairment charges (See Note 6)	94,441
Changes in assets and liabilities, net of acquisition:	
Receivables	850
Contract assets, net	2,576
Inventories	(216)
Other assets, net	7,596
Accounts payable	(22,637)
Accrued expenses and other liabilities, net	(3,907)
Net cash used in operating activities	(9,818)
Investing activities	
Purchases of property and equipment	(8,130)
Proceeds from sales of property and equipment	1,901
Change in intercompany receivable from Layne and affiliates	27,793
Net cash provided by investing activities	21,564
Increase in cash	11,746
Cash and cash equivalents at beginning of year	8,947
Cash and cash equivalents at end of year	\$ 20,693

The accompanying notes are an integral part of these consolidated financial statements.

1. Summary of Significant Accounting Policies

Description of Business: Granite Inliner, LLC (“Inliner”, “Company”, “our”, “we” or “us”) is owned by a subsidiary (“Member”) of Layne Christensen Company (“Layne”) who is ultimately owned by Granite Construction Incorporated (the “Ultimate Parent”).

We are an infrastructure solutions provider offering a wide range of rehabilitation techniques and services for wastewater, storm water and process sewer pipeline networks primarily using proprietary cured-in-place pipe products (“CIPP”).

Limitation of Layne: Layne cannot allocate expenses in excess of the Company’s retained earnings balance at the end of the fiscal year.

Subsequent Events: In preparing these consolidated financial statements, we have evaluated events and transactions for potential recognition or disclosure through April 26, 2021, the date the consolidated financial statements were available to be issued.

Principles of Consolidation: The consolidated financial statements include the accounts of Granite Inliner, LLC and its wholly owned and consolidated subsidiaries. All material inter-company transactions and accounts have been eliminated.

Restatement: We have restated our consolidated financial statements as of and for the year ended December 31, 2019, not presented herein, to correct a material error that was identified subsequent to the issuance of our 2019 consolidated financial statements. The error was related to an inter-company elimination adjustment not reflected in the consolidated statement of operations. As a result, revenue and cost of revenue as reported of \$218.4 million and \$195.1 million, respectively, were overstated by \$17.9 million. As restated, revenue and cost of revenue are \$200.5 million and \$177.2 million, respectively.

Use of Estimates in the Preparation of Financial Statements: The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). The preparation of these financial statements requires management to make estimates that affect the reported amounts of assets and liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. Our estimates and related judgments and assumptions are continually evaluated based on available information and experiences; however, actual amounts could differ from those estimates.

Revenue Recognition: Our revenue is primarily derived from construction contracts and from sales of construction related materials. We recognize revenue in accordance with ASC Topic 606, *Revenue from Contracts with Customers*, and subsequently issued additional related Accounting Standards Update (“ASU”)s (“Topic 606”). Topic 606 provides for a five-step model for recognizing revenue from contracts with customers as follows:

1. Identify the contract
2. Identify performance obligations
3. Determine the transaction price
4. Allocate the transaction price
5. Recognize revenue

Generally, our contracts contain one performance obligation. Contracts with customers in our materials business are typically defined by our customary business practices and are valued at the contractual selling price per unit. Our customary business practices are for the delivery of a separately identifiable good at a point in time which is typically when delivery to the customer occurs. All of our remaining contracts may contain multiple distinct promises or multiple contracts within a master agreement (e.g. contracts that cross multiple locations/geographies and task orders), which we review at contract inception to determine if they represent multiple performance obligations or multiple separate contracts. This review consists of determining if promises or groups of promises are distinct within the context of the contract, including whether contracts are physically contiguous, contain task orders, purchase or sales orders and/or termination clauses.

The transaction price is the amount of consideration to which we expect to be entitled in exchange for transferring goods and services to the customer. The contractual consideration from our customers may include both fixed amounts and variable amounts (e.g. bonuses/incentives or penalties/liquidated damages) to the extent that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved (i.e., probable and estimable). When a contract has a single performance obligation, the entire transaction price is attributed to that performance

obligation. When a contract has more than one performance obligation, the transaction price is allocated to each performance obligation based on estimated relative standalone selling prices of the goods or services at the inception of the contract, which typically is determined using cost plus an appropriate margin.

Subsequent to the inception of a contract, the transaction price could change for various reasons, including executed or unapproved change orders. Changes that are accounted for as an adjustment to existing performance obligations are allocated on the same basis at contract inception. Otherwise, changes are accounted for as separate performance obligation(s) and the separate transaction price is allocated as discussed above.

Changes are made to the transaction price from unapproved change orders to the extent the amount can be reasonably estimated and recovery is probable.

Certain construction contracts include retention provisions to provide assurance to our customers that we will perform in accordance with the contract terms and are not considered a financing benefit. The balances billed but not paid by customers pursuant to these provisions generally become due upon completion and acceptance of the project work or products by the customer. We have determined there are no significant financing components in our contracts during the year ended December 31, 2020.

Typically, performance obligations related to our construction contracts are satisfied over time because our performance typically creates or enhances an asset that the customer controls as the asset is created or enhanced. We recognize revenue as performance obligations are satisfied and control of the promised good and/or service is transferred to the customer. Revenue is ordinarily recognized over time as control is transferred to the customers by measuring the progress toward complete satisfaction of the performance obligation(s) using an input (i.e., "cost to cost") method. Under the cost to cost method, costs incurred to-date are generally the best depiction of transfer of control. Revenue related to our materials business is recognized when delivery occurs which is when the control of the goods is transferred to the customer. Revenue from contracts related to our materials business was \$33.2 million during the year ended December 31, 2020 and all remaining revenue was related to our construction business.

All contract costs are recorded as incurred and revisions to estimated total costs are reflected as soon as the obligation to perform is determined. Contract costs consist of direct costs on contracts, including labor and materials, amounts payable to subcontractors, direct overhead costs and equipment expense (primarily depreciation, fuel, maintenance and repairs).

The accuracy of our revenue and profit recognition in a given period depends on the accuracy of our estimates of the forecasted revenue and cost to complete each project. Cost estimates for all of our significant projects use a detailed "bottom up" approach. There are a number of factors that can contribute to changes in estimates of contract cost and profitability. The most significant of these include:

- changes in costs of labor and/or materials;
- subcontractor costs, availability and/or performance issues;
- extended overhead and other costs due to owner, weather and other delays;
- changes in productivity expectations;
- changes from original design on design-build projects;
- our ability to fully and promptly recover on affirmative claims and back charges for additional contract costs;
- a change in the availability and proximity of equipment and materials;
- complexity in original design;
- length of time to complete the project;
- the availability and skill level of workers in the geographic location of the project;
- site conditions that differ from those assumed in the original bid;
- costs associated with scope changes; and
- the customer's ability to properly administer the contract.

All state and federal government contracts and many of our other contracts provide for termination of the contract at the convenience of the party contracting with us, with provisions to pay us for work performed through the date of termination including demobilization cost.

Costs to obtain our contracts ("pre-bid costs") that are not expected to be recovered from the customer are expensed as incurred and included in selling, general and administrative expenses on our consolidated statement of operations. Although unusual, pre-bid costs that are explicitly chargeable to the customer even if

the contract is not obtained are included in accounts receivable on our consolidated statement of financial position when we are notified that we are not the low bidder with a corresponding reduction to selling, general and administrative expenses on our consolidated statement of operations.

Statement of Financial Position Classifications: Prepaid expenses and amounts receivable and payable under construction contracts (principally retentions) that may exist over the duration of the contract and could extend beyond one year are included in current assets and liabilities. A one-year time period is used as the basis for classifying all other current assets and liabilities.

Contract Assets: Our contract assets include costs and estimated earnings in excess of billings as well as amounts due under contractual retention provisions. As of December 31, 2020, the amounts due under contractual retention provisions were \$8.7 million and costs and estimated earnings in excess of billings were \$2.9 million.

Costs and estimated earnings in excess of billings represent amounts earned and reimbursable under contracts, and have a conditional right for billing and payment such as achievement of milestones or completion of the project. Generally, such unbilled amounts will become billable according to the contract terms and generally will be billed and collected over the next twelve months. Based on our historical experience, we generally consider the collection risk related to billable amounts to be low. When events or conditions indicate that it is probable that the amounts outstanding become unbillable, the transaction price and associated contract asset is reduced.

Allowance for Credit Losses: Financial assets, which potentially subject us to credit losses, consist primarily of short and long-term marketable securities, receivables, contract assets and long-term notes receivables included in other noncurrent assets in our consolidated statement of financial position. We measure expected credit losses of financial assets based on historical loss and other information available to management using a loss rate method applied to asset groups with categorically similar risk characteristics. These expected credit losses are recorded to an allowance for credit losses valuation account that is deducted from receivables and contract assets to present the net amount expected to be collected on the financial asset on the consolidated statement of financial position.

Concentrations of Credit Risk and Other Risks: Financial instruments, which potentially subject us to concentrations of credit risk, consist primarily of cash, accounts receivable and contract assets. Layne maintains cash with several financial institutions. Layne, by policy, limits the amount of credit exposure to any one financial institution.

During 2020, our largest volume customer was the County of Dekalb. Revenue recognized from contracts with the County of Dekalb represented \$24.4 million (11.2% of our total revenue) in 2020. Our receivables are from customers concentrated in the United States, and we have no material receivables from foreign operations as of December 31, 2020. As of December 31, 2020, the City of Chicago had a \$6.0 million receivable balance and no other customer had a receivable balance in excess of 10% of our total net receivables. The balances billed but not paid by customers pursuant to retention provisions generally become due upon completion and acceptance of the project work or products by the owners. As of December 31, 2020, County of Dekalb had \$2.4 million of contract retention receivable outstanding and no other contract retention receivable individually exceeded 10% of total contract assets. As of December 31, 2020, the majority of the contract retention balance is expected to be collected within one year.

We perform ongoing credit evaluations of our customers and generally do not require collateral, although the law provides us the ability to file mechanics' liens on real property improved for private customers in the event of non-payment by such customers. We regularly review our accounts receivable, including past due amounts, to determine their probability of collection. If it is probable that an amount is uncollectible, it is charged to bad debt expense and a corresponding reserve is established in allowance for doubtful accounts. We maintain an allowance for doubtful accounts which has historically been within management's estimates.

Inventories: Inventories consist primarily of CIPP valued at the lower of average cost or market. We had no inventory write downs in 2020.

Property and Equipment: Property and equipment are stated at cost. Depreciation for equipment and vehicles, building and leasehold improvements and it is primarily provided using accelerated methods over lives ranging from eighteen months to seven years, and the straight-line method over lives from three to twenty years for the remaining depreciable assets. We believe that accelerated methods best approximate the service provided by the construction and other equipment. We frequently sell property and equipment that has reached the end of its useful life or no longer meets our needs. At the time that an asset or an asset group meets the held-for-sale criteria as defined by ASC Topic 360, *Property, Plant, and Equipment*, we write it down to fair value less cost to sell, if the fair value is below the carrying value. Fair value is estimated by a variety of factors including, but not limited to, market comparative data, historical sales prices, broker quotes and third party valuations. If material, such property is separately disclosed in statement of financial position, otherwise it is held in property and equipment until sold. The cost and accumulated depreciation or depletion of property sold or retired is removed from the statement of financial position and the resulting gains or losses, if any, are reflected in operating income for the period. In the case that we abandon an asset, an amount equal to the carrying amount of the asset, less salvage value, if any, will be recognized as expense in the period that the asset was abandoned. Repairs and maintenance are expensed as incurred.

Long-lived Assets: We review property and equipment, amortizable intangible asset and right of use assets for impairment at an asset group level whenever events or changes in circumstances indicate the net book value of an asset group may not be recoverable. Recoverability of these asset groups is measured by comparison of their net book values to the future undiscounted cash flows the asset groups are expected to generate. If the asset groups are considered to be impaired, an impairment charge will be recognized equal to the amount by which the net book value of the asset group exceeds fair value. We group construction and plant equipment assets at Layne's divisional level, which represents the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets. When an individual asset or group of assets is determined to no longer contribute to its vertically integrated asset group, it is assessed for impairment independently.

As of December 31, 2020, amortizable intangible assets, which include customer relationships, backlog, favorable contracts, and trademarks and developed technologies, are being amortized on a straight-line basis over remaining terms from one to seven years, with the exception of backlog and favorable contracts which will be amortized as the associated projects progress and customer relationships which will be amortized on an accelerated basis. As of December 31, 2020, amortizable intangible liabilities, which include unfavorable contracts, are being amortized over remaining terms of one year, with the exception of unfavorable contracts which will be amortized as the associated projects progress.

Goodwill:

As of December 2020, we had two reporting units in which goodwill was recorded as follows:

- Water and Mineral Services Group Water
- Water and Mineral Services Group Materials

We perform our goodwill impairment tests annually as of November 1 and more frequently when events and circumstances occur that indicate a possible impairment of goodwill. Examples of such events or circumstances include, but are not limited to, the following:

- a significant adverse change in legal factors or in the business climate;
- an adverse action or assessment by a regulator;
- a more likely than not expectation that a segment or a significant portion thereof will be sold; or
- the testing for recoverability of a significant asset group within the segment.

In accordance with U.S. GAAP, we can elect to perform a qualitative assessment to test a reporting unit's goodwill for impairment or perform a quantitative impairment test. Based on a qualitative assessment, if we determine that the fair value of a reporting unit is more likely than not to be less than its carrying amount, the quantitative impairment test will be performed.

In performing the quantitative goodwill impairment tests, we calculate the estimated fair value of the reporting unit in which the goodwill is recorded using the discounted cash flows and market multiple methods. Judgments inherent in these methods include the determination of appropriate discount rates, the amount and timing of expected future cash flows, revenue and margin growth rates, and appropriate benchmark companies. The cash flows used in our 2020 discounted cash flow model were based on five-year financial

forecasts developed internally by management adjusted for market participant-based assumptions. Our discount rate assumptions are based on an assessment of the equity cost of capital and appropriate capital structure for reporting units. To assess for reasonableness we compare the estimated fair values of the reporting units to our current market capitalization.

The estimated fair value is compared to the net book value of the reporting unit, including goodwill. If the fair value of the reporting unit exceeds its net book value, goodwill of the reporting unit is considered not impaired. If the fair value of the reporting unit is less than its net book value, goodwill is impaired and the excess of the reporting unit's net book value over the fair value is recognized as non-cash impairment charge.

During 2020, we performed two interim tests both of which resulted in impairment charges (See Note 6). For our 2020 annual goodwill impairment test, we conducted quantitative impairment tests and concluded that no additional impairment charge was required.

Right of use Assets ("ROU") and Lease Liabilities: A lease contract conveys the right to use an underlying asset for a period of time in exchange for consideration. At inception, we determine whether a contract contains a lease by determining if there is an identified asset and if the contract conveys the right to control the use of the identified asset in exchange for consideration over a period of time.

At lease commencement, we measure and record a lease liability equal to the present value of the remaining lease payments, generally discounted using the borrowing rate on our secured debt as the implicit rate is not readily determinable on many of our leases. We use a quarterly maturity discount rate if it is not materially different than the discount rates applied to each of the leases in the portfolio.

On the lease commencement date, the amount of the ROU assets consist of the following:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, minus any lease incentives received; and
- any initial direct costs incurred.

On a periodic basis, we determine if subcontractor, vendor or service provider agreements contain embedded leases by assessing if an asset is explicitly or implicitly specified in the agreement and the counterparty has the right to substitute the asset.

Most of our lease contracts do not have the option to extend or renew. We assess the option for individual leases, and we generally consider the base term to be the term of lease contracts. Lease contracts *may* contain nonlease components for which we elected to include both the lease and nonlease components as a single component and account for it as a lease.

Contract Liabilities: Our contract liabilities consist of billings in excess of costs and estimated earnings, net of the related contract retention and provisions for losses. Billings in excess of costs and estimated earnings are billings to customers on contracts in advance of work performed, including advance payments negotiated as a contract condition. Generally, unearned project-related costs will be earned over the next twelve months. Provisions for losses are recognized in the consolidated statements of operations at the uncompleted performance obligation level for the amount of total estimated losses in the period that evidence indicates that the estimated total cost of a performance obligation exceeds its estimated total revenue. As of December 31, 2020, billings in excess of costs and estimated earnings were \$3.2 million and provisions for losses were \$0.2 million.

Accrued Insurance Costs: The Ultimate Parent and Layne carry insurance policies to cover various risks, primarily general liability, automobile liability, workers compensation, and employee medical expenses under which they are liable to reimburse the insurance company for a portion of each claim paid. The amounts for which the Ultimate Parent are liable for general liability and workers compensation generally range from the first \$0.5 million to \$1.0 million per occurrence. The Ultimate Parent accrues for probable losses, both reported and unreported, that are reasonably estimable using actuarial methods based on historic trends modified, if necessary, by recent events. Changes in the Ultimate Parent's loss assumptions caused by changes in actual experience would affect its assessment of the ultimate liability and could have an effect on our operating results and financial position up to \$1.0 million per occurrence for general liability and workers compensation or \$0.3 million for medical insurance.

Warranties: Many of our construction contracts contain warranty provisions covering defects in equipment, materials, design or workmanship that generally run from six months to one year after our customer accepts the contract. Because of the nature of our projects, including contract owner inspections of the work both during

construction and prior to acceptance, we have not experienced material warranty costs for these short-term warranties and, therefore, do not believe an accrual for these costs is necessary.

Contingencies: Loss contingency provisions are recorded if the potential loss from any asserted or un-asserted claim or legal proceeding is considered probable and the amount can be reasonably estimated. If a potential loss is considered probable but only a range of loss can be determined, the low-end of the range is recorded. These accruals represent management's best estimate of probable loss. Disclosure is also provided when it is reasonably possible and estimable that a loss will be incurred or when it is reasonably possible that the amount of a loss will exceed the amount recorded. Significant judgment is required in both the determination of probability of loss and the determination as to whether an exposure is reasonably estimable. Because of uncertainties related to these matters, accruals are based only on the best information available at the time. As additional information becomes available, we reassess the potential liability related to claims and litigation and may revise our estimates. We expense associated legal costs as they are incurred. See Note 10 for additional information.

Income Taxes: The Company operates in the U.S. as a single member limited liability company that is treated as a disregarded entity ("DRE") for tax purposes. The Company is not subject to U.S. federal income taxes and state income taxes as those taxes are assessed at the member level. The Company is not severally liable for the current and deferred income taxes of its Member, there is no tax-sharing arrangement between the Company and its Member and there have been no dividends paid by the Company to its Member for tax reimbursements. Therefore, the Company does not provide for income taxes under ASC Topic 740, *Income Taxes*, in the Company's standalone financial statements.

As of December 31, 2020, there are no unrecognized tax benefits. The Ultimate Parent files income tax returns on behalf of the consolidated group in the U.S. and the Ultimate Parent and the Member file returns on the Company's behalf in various state and local jurisdictions. With few exceptions, as of December 31, 2020, the Ultimate Parent and the Member's tax returns are no longer subject to state examinations by taxing authorities for years before 2012. The Ultimate Parent is no longer subject to U.S. federal examinations by tax authorities for years before 2013. The Ultimate Parent does not anticipate a significant increase or decrease in our recognized tax benefits that will impact our effective tax rate in 2020.

Merger Agreement and Change in Basis of Presentation

Effective January 1, 2020, Granite Inliner, LLC, Western Slope Utilities LLC and Liquiforce LLC, a wholly owned subsidiary of the Ultimate Parent, entered into a merger agreement where each share of outstanding common stock of Liquiforce USA was cancelled and Granite Inliner, LLC was named as the surviving corporation (the "Merger"). As the transaction constituted the combination of businesses under common control, the Merger was accounted for as a change in the reporting entity as of the earliest period presented, and the results of operations of Granite Inliner, LLC, Western Slope Utilities LLC and Liquiforce LLC have been retrospectively combined in accordance with ASC 250, *Accounting Changes and Error Corrections*. The impact to the December 31, 2019 equity balances were \$0.2 million increase in member's equity, \$16.9 million increase in additional paid-in-capital and a \$6.9 million decrease to retained earnings.

Recently Adopted Accounting Pronouncements:

In June 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* and in May 2019 issued ASU No. 2019-05, *Credit Losses (Topic 326): Targeted Transition Relief* (collectively referred to as "Topic 326"). Topic 326 requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. We elected to early adopt Topic 326 consistent with the Ultimate Parent effective January 1, 2020, which resulted in an immaterial impact to retained earnings.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, which modifies the disclosure requirements on fair value measurements. We elected to early adopt this ASU consistent with the Ultimate Parent effective January 1, 2020 and it did not have a material impact on our financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which is expected to reduce cost and complexity related to the accounting for income taxes. We elected to early adopt this ASU consistent with the Ultimate Parent effective January 1, 2020 and it did not have a material impact on our financial statements.

2. Revisions in Estimates

Our profit recognition related to construction contracts is based on estimates of transaction price and costs to complete each project. These estimates can vary significantly in the normal course of business as projects progress, circumstances develop and evolve, and uncertainties are resolved. Changes in estimates of transaction price and costs to complete may result in the reversal of previously recognized revenue if the current estimate adversely differs from the previous estimate. When we experience significant changes in our estimates, we undergo a process that includes reviewing the nature of the changes to ensure that there are no material amounts that should have been recorded in a prior period rather than as revisions in estimates for the current year. For revisions in estimates, generally we use the cumulative catch-up method for changes to the transaction price that are part of a single performance obligation. Under this method, revisions in estimates are accounted for in their entirety in the year of change. Significant changes in revenue and cost estimates, particularly in our larger, more complex, multi-year projects have had, and can in future periods have, a significant effect on our profitability.

There can be no assurance that we will not experience further changes in circumstances or otherwise be required to revise our estimates in the future. In our review of these changes for the year ended December 31, 2020, we did not identify any material amounts that should have been recorded in a prior period.

In the normal course of business, we have revisions in estimates, including estimated costs some of which are associated with unresolved affirmative claims and back charges. The estimated or actual recovery related to these estimated costs may be recorded in future periods or may be at values below the associated cost, which can cause fluctuations in the gross profit impact from revisions in estimates.

There were no increases from revisions in estimates, which individually had an impact of \$1.0 million or more on gross profit, for the year ended December 31, 2020.

We had two projects with a decrease from revisions in estimates, which had an impact of \$1.9 million and \$1.4 million on gross profit for the year ended December 31, 2020. The decrease was primarily due to increased project completion costs, schedule delays and lower productivity than originally anticipated.

3. Related Party Transactions

As described in more detail below, intercompany transactions with Ultimate Parent, Layne and affiliates are related to:

- Amounts allocated to us from the Ultimate Parent and Layne (“allocations”)
- Transactions between us and the Ultimate Parent, Layne and affiliates (“transactions”)

Allocations

Allocations represent Layne’s transactions and balances that are allocated to us as they either support or are related to our business and include:

- Corporate overhead charges
- Cash
- Balances related to, and gains or losses on, Company-owned life insurance asset and Non-Qualified Deferred Compensation Plan (“NQDC Plan”) liability
- Income tax provision and deferred taxes
- Insurance premium and settlement payments
- Prepaid assets

In accordance with intercompany agreements between us and the Ultimate Parent and between us and Layne, the allocations have been determined on bases considered to be reasonable reflections of the utilization of services provided or the benefit received. However, these allocations are not necessarily indicative of the amounts that would have been recorded by us on a stand-alone basis.

Corporate overhead charges are generally allocated to us and other operating entities of the Ultimate Parent based on a percentage of cost of revenue. Total corporate overhead charges allocated from the Ultimate Parent were \$6.3 million for the year ended December 31, 2020 and are included in selling, general and administrative expenses in the statement of operations. The most significant items included in corporate overhead charges were expenses related to salaries, fees and services, travel and entertainment, and restricted stock unit amortization.

Cash is allocated based on calculated percentages resulting in an intercompany receivable from Layne and affiliates. Based on agreements between Layne and us, cash is then allocated to us at period-end based upon our uses and receipts of cash and are included on the consolidated statement of financial position.

The Ultimate Parent offers an NQDC Plan to a select group of its highly- compensated employees. The NQDC Plan provides participants the opportunity to defer payment of certain compensation as defined in the NQDC Plan. In October 2008, a Rabbi Trust was established to fund its NQDC Plan obligation and was fully funded as of December 31, 2020. The assets held by the Rabbi Trust at December 31, 2020 are substantially in the form of Ultimate Parent's Company-owned life insurance, of which \$0.1 million was allocated to us as of December 31, 2020 and is included in other noncurrent assets on the consolidated statement of financial position. The Ultimate Parent's Company-owned life insurance assets are allocated to us based on our NQDC Plan obligation relative to Ultimate Parent's NQDC Plan obligation. Our NQDC Plan obligations were \$0.1 million as of December 31, 2020. The gains and losses associated with Company-owned life insurance asset are also allocated to us from the Ultimate Parent and were immaterial as of December 31, 2020.

We join in the consolidated federal and state tax returns filed by the Ultimate Parent and the Member as the Company operates in the U.S. as a single member limited liability company that is treated as a disregarded entity ("DRE") for tax purposes. The Company is not subject to U.S. federal income taxes and state income taxes as those taxes are assessed at the member level. The Company is not severally liable for the current and deferred income taxes of its Member, there is no tax-sharing arrangement between the Company and its Member and there have been no dividends paid by the Company to its Member for tax reimbursements. As such, no current federal and state income taxes, income tax benefits, as well as deferred federal and state income taxes and income tax benefits, are allocated to us which approximate amounts that would be determined on a separate return basis. All cash payments for federal and state tax returns are made by the Ultimate Parent and the Member.

As of December 31, 2020, our insurance liability was \$6.8 million and was included in accrued and other current liabilities on the consolidated statement of financial position. This balance is comprised of estimated insurance liabilities that we incurred during 2020, primarily project-related, partially offset by insurance premium and settlement payments made by Layne and allocated to us based on payroll information specifically related to us.

Prepaid assets allocated from the Ultimate Parent were \$0.5 million as of December 31, 2020 and are related to insurance premiums that were allocated to us on the same basis as the insurance liabilities.

Intercompany receivable from Layne and affiliates associated with these allocations and transactions were \$17.1 million at December 31, 2020. There is no contractual due date for the intercompany receivable from Layne and affiliates and it will not be repaid during fiscal year 2021.

Transactions

Intercompany transactions with Layne and subsidiaries as well as with the Ultimate Parent and subsidiaries in the normal course of business include:

- Cash management fees
- Equipment rental charges
- Sales

The fee for managing the cash, cash equivalent and short-term investment portfolio charged to us by Layne was immaterial for the year ended December 31, 2020.

We earned \$8.2 million in revenue during the year ended December 31, 2020 from sales to Layne and subsidiaries as well as with the Ultimate Parent and subsidiaries.

There was no intercompany receivable or payable associated with these transactions from Layne and subsidiaries as well as with the Ultimate Parent and subsidiaries at December 31, 2020.

4. Receivables:

Receivables include billed and unbilled amounts for services provided to clients for which we have an unconditional right to payment as of the end of the applicable period and do not bear interest. The following table presents major categories of receivables (in thousands):

December 31,	2020
Contracts completed and in progress:	
Billed	\$ 31,501
Unbilled	22,051
Total contracts completed and in progress	53,552
Construction material sales	2,924
Other	90
Total gross receivables	56,566
Less: allowance for credit losses	62
Total net receivables	\$ 56,504

5. Property and Equipment, net (in thousands):

December 31,	2020
Equipment and vehicles	\$ 26,738
Buildings and leasehold improvements	14,948
Land and land improvements	3,563
Office furniture and equipment	471
Property and equipment	45,720
Less: accumulated depreciation	13,826
Property and equipment, net	\$ 31,894

Depreciation expense primarily included in cost of revenue in our consolidated statement of operations for the year ended December 31, 2020 was \$7.6 million.

6. Intangible Assets

Indefinite-lived Intangible Assets

The only indefinite-lived intangible asset was goodwill of \$40.9 million as of December 31, 2020. During 2020, we performed interim goodwill impairment tests on both of our reporting units which resulted in impairment charges.

We performed the first interim impairment test as of March 31, 2020 on our Water and Mineral Services (“WMS”) Group Materials reporting unit due to an adverse change in the business climate for this reporting unit, including a modified relationship with a business partner, increased competition and market consolidation, exasperated by economic disruption and market conditions associated with the COVID-19 pandemic. These factors led to reductions in the revenue and margin growth rates used in our quantitative goodwill tests. The goodwill impairment test resulted in a \$14.8 million impairment charge associated with our WMS Materials reporting unit.

We performed the second interim goodwill impairment test as of September 30, 2020 on our WMS Water and WMS Materials reporting units due to the continued impact from an adverse change in the business climate, including reduced market share due to loss of strategic personnel. These factors led to reductions in the revenue and margin growth rates, and delays in the timing of future cash flows used in our quantitative goodwill tests. The goodwill impairment test resulted in impairment charges of an additional \$65.2 million and \$14.4 million associated with our WMS Water and WMS Materials reporting units, respectively.

For our 2020 annual goodwill impairment test, we conducted quantitative impairment tests for all of our reporting units and concluded that no additional impairment charge was required since the estimated fair value for each of the reporting units exceeded their respective net book values. The annual goodwill assessment for the WMS Water and WMS Materials indicated that their estimated fair values exceeded their net book value, but not by a significant amount, as the estimated fair values align with the second interim goodwill impairment test as of September 30, 2020.

Amortized Intangible Assets and Liabilities

The following is the breakdown of our net amortized intangible assets and liabilities that are included in other noncurrent assets and accrued expenses and other current liabilities in the consolidated statement of financial position (in thousands):

December 31, 2020	Gross Value	Accumulated Amortization	Net Value
Assets			
Customer relationships	\$ 33,629	\$ (19,216)	\$ 14,413
Backlog	8,400	(8,381)	19
Favorable contracts	1,315	(1,296)	19
Trademarks	3,800	(2,418)	1,382
Developed technology	4,400	(2,800)	1,600
Intangible assets	\$ 51,544	\$ (34,111)	\$ 17,433
Liabilities			
Unfavorable contracts	\$ (5,600)	\$ 5,562	\$ (38)
Intangible liabilities	\$ (5,600)	\$ 5,562	\$ (38)
Total net amortized intangible assets	\$ 45,944	\$ (28,549)	\$ 17,395

Amortization expense related to intangible assets for the year ended December 31, 2020 was \$9.0 million and was primarily included in selling, general and administrative expenses in our consolidated statement of operations. Based on the amortized intangible assets balance at December 31, 2020, amortization expense expected to be recorded in the future is as follows: \$6.2 million in 2021, \$4.0 million in 2022, \$3.0 million in 2023, \$2.9 million in 2024 and \$1.3 million in 2025.

7. **Accrued Expenses and Other Current Liabilities** (in thousands):

December 31,	2020
Accrued insurance	\$ 6,798
Payroll and related employee benefits	6,494
Lease liability – Short term	1,030
Other	1,086
Total	\$ 15,408

Other includes taxes and other miscellaneous accruals, none of which are greater than 2% of total current liabilities.

8. **Equity**

	Member's Equity	Additional Paid-in- Capital	Retained Earnings	Total Member's Equity
Balances, December 31, 2019	\$ 257,849	\$ 16,861	\$ (3,844)	\$ 270,866
Net loss	—	—	(103,743)	(103,743)
Effect of adopting ASC Topic 326	—	—	(41)	(41)
Balances, December 31, 2020	\$ 257,849	\$ 16,861	\$ (107,628)	\$ 167,082

9. Leases

We have leases for office and shop space, as well as for equipment primarily utilized in our construction projects. As of December 31, 2020, our lease contracts were classified as operating leases and had terms ranging from month-to-month to 18 years.

As of December 31, 2020, ROU assets and long term lease liabilities were separately presented and short-term lease liabilities of \$1.0 million were included in accrued expenses and other current liabilities on our statement of financial position. As of December 31, 2020, we had no lease contracts that had not yet commenced but created significant rights and obligations. Lease expense was \$1.5 million for the year ended December 31, 2020. Cash paid for operating leases was \$1.6 million for the year ended December 31, 2020. ROU assets obtained in exchange for lease obligations was \$0.3 million for the year ended December 31, 2020.

As of December 31, 2020, our weighted-average remaining lease term was 3.7 years and the weighted-average discount rate was 3.9%.

As of December 31, 2020, the lease liability is equal to the present value of the remaining lease payments, discounted using the incremental borrowing rate on the Ultimate Parent's secured debt using one maturity discount rate that is updated quarterly, as it is not materially different than the discount rates applied to each of the leases in the portfolio.

The following table summarizes our undiscounted lease liabilities outstanding as of December 31, 2020 (in thousands):

2021	\$	1,139
2022		690
2023		522
2024		381
2025		212
2026 through 2035		15
Total future minimum lease payments		2,959
Less: imputed interest		(232)
Total		\$ 2,727

10. Contingencies - Legal Proceedings

In the ordinary course of business, we and our affiliates are involved in various legal proceedings alleging, among other things, liability issues or breach of contract or tortious conduct in connection with the performance of services and/or materials provided, the various outcomes of which cannot be predicted with certainty. We and our affiliates are also subject to government inquiries in the ordinary course of business seeking information concerning our compliance with government construction contracting requirements and various laws and regulations, the outcomes of which cannot be predicted with certainty.

Some of the matters in which we or our affiliates are involved may involve compensatory, punitive, or other claims or sanctions that, if granted, could require us to pay damages or make other expenditures in amounts that are not probable to be incurred or cannot currently be reasonably estimated. In addition, in some circumstances our government contracts could be terminated, we could be suspended, debarred or incur other administrative penalties or sanctions, or payment of our costs could be disallowed. While any of our pending legal proceedings may be subject to early resolution as a result of our ongoing efforts to resolve the proceedings, whether or when any legal proceeding will be resolved is neither predictable nor guaranteed.

Accordingly, it is possible that future developments in such proceedings and inquiries could require us to (i) adjust existing accruals, or (ii) record new accruals that we did not originally believe to be probable or that could not be reasonably estimated. Such changes could be material to our financial condition, results of operations and/or cash flows in any particular reporting period. In addition to matters that are considered probable for which the loss can be reasonably estimated, disclosure is also provided when it is reasonably possible and estimable that a loss will be incurred or when it is reasonably possible that the amount of a loss will exceed the amount recorded.

Liabilities relating to legal proceedings and government inquiries, to the extent that we have concluded such liabilities are probable and the amounts of such liabilities are reasonably estimable, are recorded in the consolidated statement of financial position. There was no aggregate liability recorded as of December 31, 2020 related to these matters. There was no aggregate range of possible loss related to (i) matters considered

reasonably possible, and (ii) reasonably possible amounts in excess of accrued losses recorded for probable loss contingencies as of December 31, 2020. Our estimates related to such matters could change in future periods.



Granite Management System

Introduction

Granite's integrated management system, the Granite Management System (GMS), includes the plan and collective policies, procedures, practices and supporting infrastructure used by Granite to fulfill its Safety and Health, Environmental and Quality (SHEQ) requirements with the goals to satisfy specifications, standards, regulations, and customer expectations in the most effective and efficient manner. It also affords the opportunity to set clear expectations and accountability.

The GMS is based on the GMP, which was developed in conformance with the following International Organization for Standardization (ISO) and Occupational Health and Safety Assessment Series (OHSAS) standards:

- OHSAS 18001:2007, Occupational Health and Safety Management Systems
- ISO 14001:2004, Environmental Management Systems
- ISO 9001:2008, Quality Management Systems

The Granite Vision, Code of Conduct, and Core Values are summarized below as background prior to introducing Granite's integrated Safety and Health, Environmental and Quality (SHEQ) GMS Policy (GMS-P-002), as all three significantly influence the Policy and the objectives stated therein. This provides clarity for understanding the tie between the GMS Policy and how basic ISO management principles are used to achieve operational excellence at Granite.

Granite Vision

As one of America's leading infrastructure firms, GRANITE MUST...

- *Continue to strengthen our existing businesses, both construction and construction materials;*
- *Leverage our heavy civil construction skills to expand into new markets;*
- *Be nimble, creative and innovative, while preserving our Core Values; and*
- *Responsibly manage risk.*

Granite Code of Conduct

Ethics define a company's culture and the expected moral behavior of its employees. Since 1922, Granite has adhered to its Code of Conduct when interacting with customers, suppliers and internal and external partners. As originally stated by the Company's first President, Walter Wilkinson, Granite's Code of Conduct can be distilled to, "Boldly contending for that which is right and firmly rejecting that which is wrong". The Code of Conduct incorporates Core Values, as well as a compliance program, guidelines and procedures that each employee is trained in and commits to upon hire. As a result of the Code of Conduct and employee adherence to it, Granite has been recognized in 2010, 2011, 2012 and 2013 as one of the World's Most Ethical Companies by Ethisphere, a think-tank dedicated to the creation, advancement and sharing of best practices in business ethics, corporate social responsibility, anti-corruption and sustainability.

Granite Core Values

Granite's Core Values represent who Granite is and provide, without question, the standard of behavior by which Granite conducts business. The following eight Core Values are the cornerstone of the Granite Code of Conduct:

- **Safety** – People are our most valuable asset and their safety is our greatest responsibility.
- **Honesty** – Be truthful, accurate and straightforward.
- **Integrity** – Maintain consistency between your beliefs and your behavior – walk your talk!
- **Fairness** – Endeavor to be reasonable, open-minded, impartial, even-handed and non-discriminatory in all your dealings.
- **Accountability** – Accept responsibility for your own actions or inactions and for those whom you supervise.
- **Consideration of Others** – Practice the principles of the Golden Rule.
- **Pursuit of Excellence** – Consistently apply diligence, perseverance, attention to detail, and good work habits to ensure quality projects, products and excellent customer service.
- **Reliability** – Only make realistic commitments and follow through on the commitments you make.
- **Citizenship** – Comply with all governmental laws, rules and regulations.

Granite Management System Policy

Granite's integrated Safety and Health, Environmental and Quality (SHEQ) GMS (management system) Policy is stated in [GMS-P-002](#).

Granite is committed to:

1. Prevention of injury and ill health, and continual improvement of Safety performance by adoption of the Granite Management System (GMS) and Safety and Health Management System (SHMS) which:
 - 1.1. Provides accident prevention performance requirements for all operations, including construction projects, shops, mines and plants;
 - 1.2. Assigns responsibilities and establishes minimum safety standards for managers, supervisory personnel and employees; and
 - 1.3. Establishes standard procedures that encourage compliance and uniform disciplinary procedures.
2. Meeting or exceeding the requirements of applicable Safety and Environmental laws, regulations, and other requirements, including contractual related to the Company's Safety and Environmental aspects, to which we subscribe.
3. Conserving natural resources through the selection of construction methods and materials, utilization of recycled materials and good land stewardship.
4. Incorporating best practices of pollution prevention and waste minimization.
5. Understanding our customer's quality requirements and satisfying them.
6. Maintaining internal capabilities and management systems to meet our Safety and Health, Environmental and Quality commitments, including Company objectives.
7. Continually reviewing, improving and communicating the way in which we manage our Safety and Health, Environmental and Quality responsibilities.

These commitments reflect Granite's Core Values and Code of Conduct, and support our Safety, Environmental and Quality vision. All employees are governed by this Policy and compliance with this Policy is governed by Granite's Discipline Policy.

ISO Management Principles

Even before formal adoption of ISO and OHSAS standards, the eight basic management principles defined in ISO 9000:2005, ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 were integral to Granite's company culture. A brief description of how the requirements of the standards and the eight management principles are addressed by Granite to improve business performance follows:

Customer Focus – The Company's existence depends on the satisfaction of current and future customers. Therefore, Granite continually strives to meet or exceed its customer's needs (requirements and expectations) in delivering products and services from pre-bid to project completion. At one extreme (pre-award), this is evident from responsiveness to an array of contracting methods, from low bid to design-build to construction management at risk and even to public-private partnerships. At the other extreme (post-completion), it is evidenced by owner acceptance of projects and products, in some cases with bonuses and/or awards.

Leadership – Granite management is committed to creating and maintaining an environment that allows its people to become involved in achieving the Company's objectives. Senior management communicates the goals and objectives of the Company on a regular basis via multiple media outlets (conferences, webinars, email, intranet site and recorded messages). All employees are encouraged to actively participate in achieving the goals and objectives.

Involvement of People – Granite management encourages and supports continual development of staff throughout the Company so they can contribute to generating new innovations or ideas and resolve challenges. Formal and informal employee development opportunities are provided for employees at all levels of the Company as part of the Granite Performance Management and Development (PMD) process. The Employee News and Granite Innovations email publications are used to acknowledge individuals, innovations and resolutions to challenges. This encourages employee ownership (about 10% of the Company stock is employee owned) and others to participate in innovation.

Process Approach – Recognizing that efficiency is achieved when activities and related resources are managed as a process is one of the items that led Granite to adopting the ISO 9001:2008 standard. The actual formal documentation of processes was initiated with development of the Granite Administrative Procedures Manual in the 1990's, subsequently followed by development of functional department management systems. It has also driven periodic review of processes and procedures to assure the most efficient use of resources geographically, as well as establishment of shared services at different levels in the Company.

System Approach to Management – Effectiveness and efficiency in achieving the Company's objectives is optimized by identifying, understanding and managing interrelated processes as a system. Improved efficiency of a single process cannot be allowed to compromise the overall efficiency of multiple interrelated processes. Recognition of this is one reason for a senior management team of functional experts managed by a single Vice President to improve strategy and risk management, while assuring operational service and support. It is also a

central theme of Granite's Star Performance Process (SPP) that relies on the Plan-Do-Check-Act (PDCA) methodology in striving for operational excellence.

Continual Improvement – Continual improvement of Granite's overall performance is inherent in the Corporate Strategic Plan that is reviewed and revised periodically. Alignment with the Plan in individual business units and functional support departments leads to continual improvement in the business units and functional departments. A personal reward system is available to managers to encourage and compensate individuals for incremental operational improvements that improve company performance.

Factual Approach to Decision Making – Different sources of data are available at Granite to use as the basis for factual decision making. Examples include financial, production, department performance, safety, and compliance records and reports. Multiple databases and corporate network software are used and upgraded to better integrate and improve efficiency and performance.

Mutually Beneficial Supplier Relationships – Strong relationships based on performance history and earned trust are leveraged to satisfy customer needs and provide benefits for all involved in a supply chain. Use of subcontractor and supplier qualifications/requirements helps Granite businesses with initial selection of suppliers and subcontractors. The Granite National Procurement Department is leveraged in the process.

Achieving Operational Excellence

Operational excellence is achieved at Granite by leveraging the enterprise direction and processes set in the [Granite Management Plan \(GMP\)](#) and in Granite's [Safety and Health Management System \(SHMS\) Procedure](#) in an every day practice referred to as the "Star Performance Process" (SPP). All of these rely on the basic Plan-Do-Check-Act (PDCA) Cycle common to ISO management system standards as illustrated in Figure 1.

- **PLAN** – Establish objectives and make plans by analyzing the Company's situation, establishing overall objectives and setting interim targets and plans to achieve them.
- **DO** – Implement the plans by doing what was planned.
- **CHECK** – Measure the results of implementing the plan by measuring/monitoring how closely actual achievements meet planned objectives.
- **ACT** – Correct and improve plans and how they are put into practice.



Figure 1. Plan-Do-Check-Act (PDCA) Cycle.

The key to the SPP is that it continually promotes operational excellence at the field level by placing daily attention on the five key operational focus areas: Safety, Productivity, Environment, Quality and Code of Conduct, as illustrated in Figure 2. Note that Code of Conduct is the foundation of the Star. Before the start of each shift, crew Foremen review their project or production Work Plans, giving consideration to each of the five key focus areas. They then hold a crew meeting referred to as a “Take 5” to discuss specific goals and activities (“Plan” in PDCA Cycle). The work is performed (“Do” in PDCA Cycle). Observation of work documented in daily inspections and subsequent Take 5 meetings represent the “Check” and “Act” in the PDCA Cycle, providing conformance checking and identification of opportunities for improvement that can be used the next time the activity is performed.



Figure 2. Granite Star Performance Logo.

This process is aligned with and supports the Granite Construction [Sustainability Plan](#), which can be viewed by clicking this link or found on our website at www.graniteconstruction.com.

The Sustainability Plan is intentionally not integrated into the Granite Management Plan (GMP) because the collective outcome of operational and functional department management in accordance with the GMP leads to achievement of the goals and objectives of the Sustainability Plan.

Addressing ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 Requirements

The GMS is the overarching integrated management system at Granite, developed in conformance with the International Organization for Standardization (ISO) and Occupational Health and Safety Assessment Series (OHSAS) standards:

- OHSAS 18001:2007, Occupational Health and Safety Management Systems
- ISO 14001:2004, Environmental Management Systems, and
- ISO 9001:2008, Quality Management Systems

The requirements of all three of these standards are integrated in the GMP. The ISO and OHSAS standards are used to define the requirements for Granite to develop system(s) needed to demonstrate its ability to consistently fulfill its Safety and Health, Environmental and Quality (SHEQ) responsibilities. Additionally, it guides

the Company to provide products and services meeting its customer’s needs and legal requirements in a safe and environmentally responsible manner. The standards are also used to define requirements for Granite to enhance customer satisfaction and to continually improve the GMP and its effectiveness. At the operational level, individual department policies and procedures provide additional and specific details as necessary. The GMP describes how Granite will establish, document and implement systems, policies and procedures, and continually improve their effectiveness. Hierarchy of GMS documentation is illustrated in Figure 3.

The GMP was initially developed and approved by senior management in 2010-2011 and implementation began immediately. Priority is being placed on departments which significantly influence operational efficiency, risk and compliance (i.e., Safety and Health, Environmental and Quality). When a department is identified for inclusion, the development of processes needed and their application throughout the Company become the responsibility of the Senior Department Manager. Implementation of systems, policies and procedures in all departments across the Company is the cooperative responsibility of all department and business unit management, consistent with the matrix organizational structure of the Company.

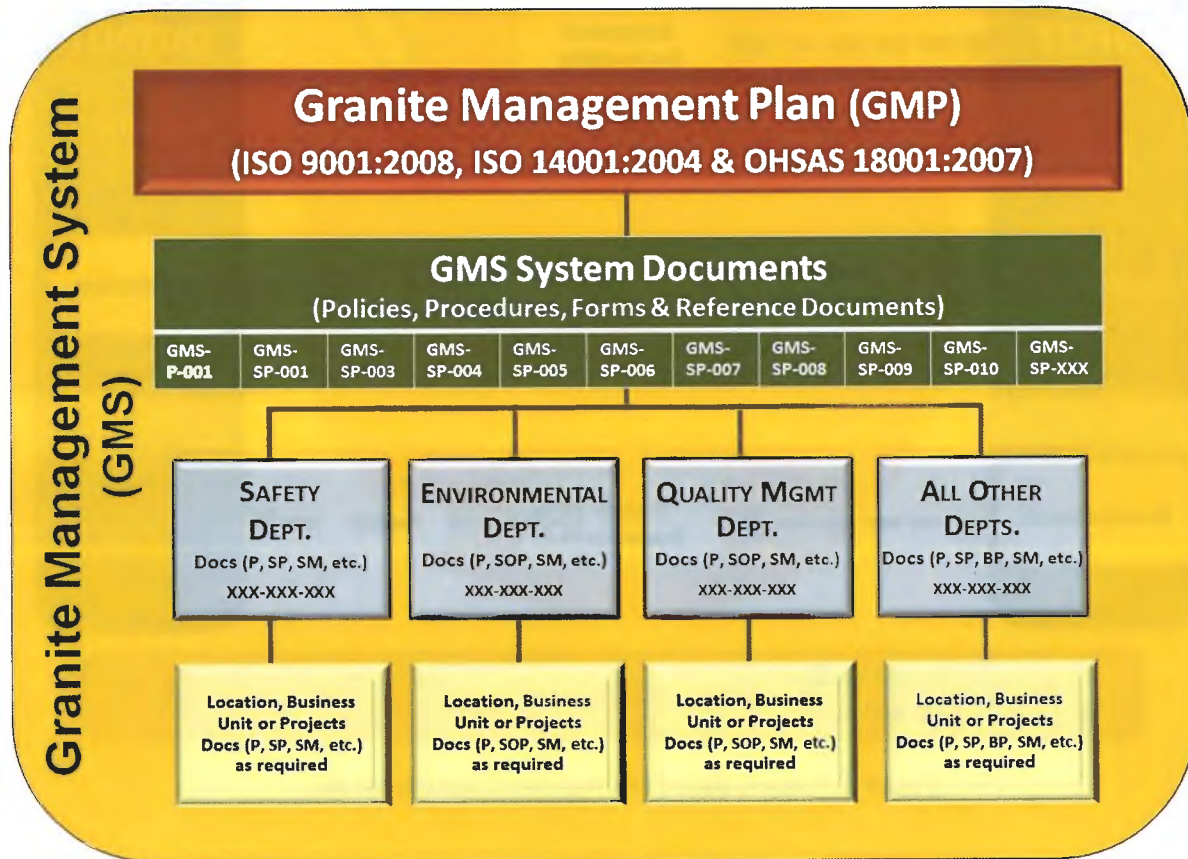


Figure 3. Granite Management System Documentation Hierarchy.

In summary, the GMS relies on methodologies as illustrated in Figures 1 and 4. Figure 4 shows the Process Approach to management. Using this approach recognizes that effective management systems rely on the use of multiple processes that are interrelated and emphasizes the importance of:

- Understanding and meeting the requirements of customers;
- The necessity to give consideration of processes in a management system relative to value they add;
- Assessing the performance and effectiveness of interrelated processes; and
- Continually improving processes based on objective measure of them.

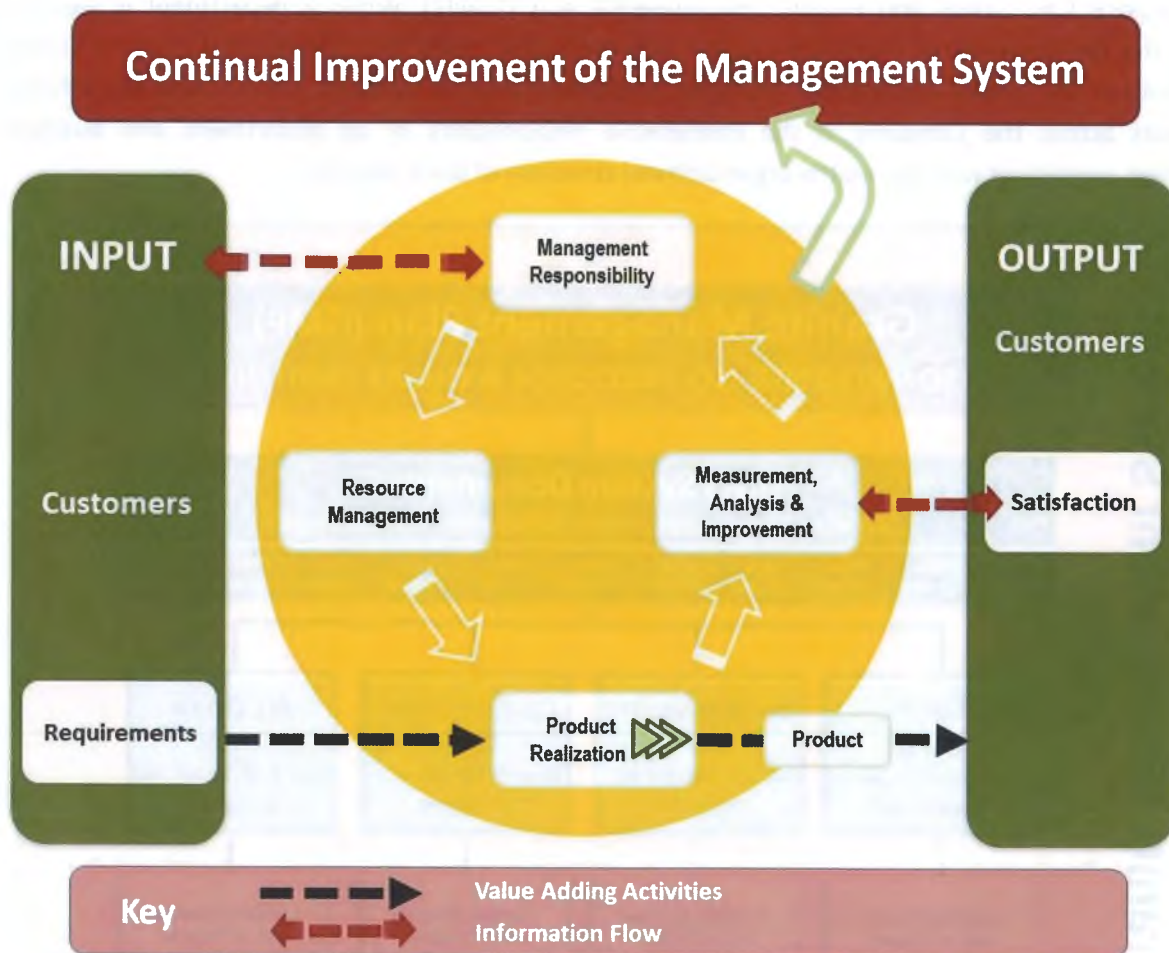


Figure 4. Process Based Management System Model.



EMPLOYMENT LAW POLICIES

Equal Employment Opportunity | Sexual Harassment Prevention | Family and Medical Leave Act

To: Employees of Granite Construction Incorporated and its subsidiary companies

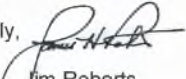
January 1, 2020

This pamphlet is provided as a reminder to existing employees and as an introduction for new employees regarding their rights and obligations under the company's EEO and Sexual Harassment prevention policies and the Family and Medical Leave Act.

The Company provides equal employment opportunity to all, without regard to age, ancestry, color, religious creed, denial of family and medical care leave, disability, marital status, medical condition, genetic information, military and veteran status, national origin, race, sex, gender, gender identity, gender expression or sexual orientation. The Company is unequivocally committed to preventing sexual harassment. Whether in the guise of a tasteless joke or a careless comment, sexual harassment has no place in the work place and will not be tolerated at Granite. I am asking all of you to be proactive in preventing sexual harassment. You and your co-workers make up one of the most respected work forces in the construction industry. It is important that we remind ourselves of our responsibility to each other to create a work environment that is free from harassment or discrimination in any form: an environment that brings out the best in each of us.

Also included in this pamphlet is information on the Family and Medical Leave Act, which provides eligible employees unpaid time off.

It is important that you carefully read the following policies. They are all important and offer guidelines that will make our company a more productive place to work. Requests for copies of these policies and comments, questions or suggestions in regard to these policies should be directed to your local HR Manager or the Corporate EEO Officer at the corporate office in Watsonville.

Sincerely,

Jim Roberts
CEO & President

Equal Employment Opportunity Policy

I. It is the Company's policy to ensure equal employment opportunity to all persons. Applicants are employed and existing employees are treated equally without regard to age, ancestry, color, religious creed, denial of family and medical care leave, disability, marital status, medical condition, genetic information, military and veteran status, national origin, race, sex, gender, gender identity, gender expression or sexual orientation.

II. Under Executive Order 11246 and implementing regulations issued by the Department of Labor (41 CFR 60.4), the Company is obligated to take affirmative action which includes, but is not limited to, employment, recruitment, advertising, upgrading, promotion, demotion, transfer, layoff, termination, rates of pay (or other forms of compensation), and selection for training.

III. The Company will take affirmative action to employ and advance in employment qualified women, minorities, individuals with disabilities, and protected veterans as defined in our Affirmative Action Program. The regulations include goals for employment of minorities, women, individuals with disabilities and protected veterans as defined in our Affirmative Action Program. The Company will use its best efforts to comply with or exceed these established goals.

IV. All personnel who are authorized to hire, promote, discharge, or who recommend or are otherwise involved in such actions are made aware of this policy and required to implement it.

V. The Company makes this policy known to all employees, prospective employees, potential sources of employees, as well as vendors and subcontractors, by placing notices, holding meetings, distributing literature, and other suitable means.

VI. All Employees are urged to refer women, minorities, protected veterans and individuals with disabilities for possible employment when hiring opportunities exist.

VII. The Company requires subcontractor compliance with equal employment opportunity and affirmative action regulations.

VIII. The Company keeps such records as are necessary to comply with federal and state laws and submits reports concerning its EEO program as required. The Company monitors all jobs and departments to assure compliance with Company policy and with all laws.

IX. Where applicable the Company, either individually or as a member of an

association, will use its best efforts to secure the cooperation of the various unions to increase employment of women, minorities, protected veterans and individuals with disabilities.

X. The Company attempts to utilize minority and female subcontractors and suppliers and will maintain records of solicitations of such firms.

XI. It is the Company's policy to provide to all employees a work place free of harassment, intimidation and coercion based on any protected class or any characteristic that is personal and/or private in nature. Any employee who subjects another to such harassment will be disciplined. Supervisory personnel, in dealing with their employees and in handling the concerns of co-workers, must be sensitive to their responsibility in carrying out this policy.

XII. It is the Company's policy to prohibit intentional and unintentional harassment of any individual by another person on the basis of any statutorily protected classification including, but not limited to age, ancestry, color, religious creed, denial of family and medical care leave, disability, marital status, medical condition, genetic information, military and veteran status, national origin, race, sex, gender, gender identity, gender expression or sexual orientation. The purpose of this policy is to ensure that no one harasses another individual in the workplace.

XIII. Any employee who feels that he or she has been subjected to harassment, or that he or she has observed anyone else being harassed, should immediately report the matter to Phil DeCocco, the Corporate Equal Employment Opportunity Officer, the site's Compliance Officer, Equal Opportunity Officer, Regional Human Resources Manager, or to the Company's Compliance Helpline. If you have not received a satisfactory response within five (5) business days after reporting any incident of what you perceive to be harassment, please contact the Corporate EEO Officer, Phil DeCocco, at Granite Construction Incorporated, Box 50085, Watsonville, California 95077-5085, (831) 724-1011. All complaints will be kept confidential to the extent possible, but confidentiality cannot be guaranteed. Every report of perceived harassment will be investigated, and corrective action will be taken where appropriate. Employees are encouraged to cooperate in all investigations. Violations of this policy may result in disciplinary action, up to and including discharge.

XIV. In addition, the Company will not allow any form of retaliation against individuals who report unwelcome conduct to the above designated individuals in good faith, or who cooperate in the investigation of such reports in accordance with this policy.

Any Company employee not subject to a Collective Bargaining Agreement who believes he or she has experienced discrimination or harassment of any kind should refer to the GCI Employee Dispute Resolution Program (EDRP) booklet. The first step in resolving any work related concern is to approach your immediate supervisor on an informal basis. If you feel that your situation would make it impossible or extremely uncomfortable to approach your immediate supervisor, you should then go to your next level supervisor or Human Resources Manager. The Employee Dispute Resolution Program booklet gives specific procedures for addressing any work related problem you might have. You may also access the Compliance Helpline, at (800) 211-4226 or www.granite.alertline.com, any time you need assistance in dealing with a work related problem.

Any employee covered by a Collective Bargaining Agreement who believes that he or she has experienced discrimination or harassment of any kind should first contact his or her immediate supervisor. If your immediate supervisor is the problem or not responsive to your concern, contact your local senior-level manager, project manager, Human Resources Manager or EEO Officer.

Sexual Harassment Prevention Policy

Policy

It is the Company's policy to provide a work environment that is free of discrimination and harassment. This includes a work place free of harassment that is sexual in nature whether it is intentional or unintentional.

Definition

Sexual harassment is defined as harassment based on sex or of a sexual nature; gender harassment; and harassment based on pregnancy, childbirth, or related medical conditions. The definition of sexual harassment includes many forms of offensive behavior, including harassment of a person of the same gender as the harasser. The following is a partial list of types of sexual harassment:

- Unwanted sexual advances
- Offering employment benefits in exchange for sexual favors
- Actual or threatened retaliation
- Leering; making sexual gestures; or displaying sexually suggestive objects, pictures, cartoons, or posters
- Making or using derogatory comments, epithets, slurs, or jokes
- Sexual comments including graphic comments about an individual's body; sexually degrading words used to describe an individual; or suggestive or obscene letters, notes or invitations
- Physical touching or assault, as well as impeding or blocking movements

Responsibility

Each Manager, Supervisor and Department Head has an affirmative duty to maintain his or her work environment free from sexual harassment. This duty includes discussing this policy with all employees and assuring them that insulting, degrading or exploitative sexual harassment is strictly forbidden.

All employees must conduct themselves in such a manner that their actions are not considered sexually harassing, demeaning or intimidating in any way.

- All complaints or allegations will be taken seriously and handled in a timely manner. The company is committed to thoroughly investigate each complaint and, if necessary, take corrective action.
- There will be no retaliatory measures taken against any employee who makes a complaint of sexual harassment either internally, with the DFEH*, or with any federal, state or local agency.
- We trust that all employees will act responsibly in maintaining a professional and pleasant working environment free of harassment of any kind.

Employees who feel that their complaint, regardless of the nature of the complaint, is not being handled in an appropriate or satisfactory manner should contact the Corporate EEO Officer, at Granite Construction Incorporated, Box 50085, Watsonville, California 95077-5085, (831) 724-1011, or contact the Compliance Helpline at (800) 211-4226 or www.granite.alertline.com.

*Employees in California may contact the California Department of Fair Employment and Housing (DFEH) by calling the DFEH at 1 (800) 884-1684. If you are calling from outside of California, you can call (916) 478-7200 to receive instructions on how to file a complaint. The telephone number for your local EEOC office may be found in the white pages of your local telephone directory under "United States Government Offices," Equal Employment Opportunity Commission.



Your Rights and Responsibilities Under The Family & Medical Leave Act

It is Granite's policy to grant up to 12 weeks of family and medical leave during any 12-month period to eligible employees in accordance with the FMLA of 1993, and up to 26 weeks of leave in any 12-month period in compliance with the expansion of FMLA under The Support for Injured Servicemembers Act of 2007 and the National Defense Authorization Act for Fiscal Year 2010. Employees are eligible when they have worked for Granite for 12 months or 52 weeks (not necessarily consecutively) and have worked at least 1,250 hours during the 12-months immediately preceding the date the leave will commence.

The maximum sum of all types of FMLA leave in a 12-month period is 26 weeks. The 12-month period is a rolling 12-month period measured backward from the date an employee uses FMLA leave. The leave may be paid, unpaid or a combination of paid and unpaid leave, depending on the circumstances of the leave and as specified by Granite's policy. The Company will provide individual notice of rights and responsibilities to each employee requesting leave within five business days or as soon as practicable.

Reasons For Taking Leave:

Leave must be granted for any of the following reasons:

- to care for the employee's child after birth or placement for adoption or foster care. Leave must be completed within one year of the child's birth, placement for adoption or foster care;
- to care for the employee's spouse, child, or parent, who has a serious health condition;
- for a serious health condition that makes the employee unable to perform his or her job;
- for any qualifying exigency out of a spouse, son, daughter, or parent who is a military member on covered active duty or call to covered active duty status; or
- to care for an injured or ill servicemember or veteran. This leave may extend up to 26 weeks in a 12-month period for an employee whose spouse, son, daughter, parent or next-of-kin is injured or recovering from an injury suffered while on covered active military duty. Next-of-kin is defined as the closest blood relative of the injured or recovering service member or veteran.

A serious health condition is defined as: (1) a condition that requires inpatient care at a hospital, hospice or residential medical care facility; (2) a condition that requires continuing care by a licensed health care provider OR an illness of a serious and long-term nature, resulting in recurring or lengthy absences of more than three days of incapacity. An employee may take FMLA leave in 12 consecutive weeks, may use the leave intermittently as needed or, under certain circumstances, may use the leave to work a reduced schedule.

Employees with questions about the detailed provisions available and covered under this FMLA policy are encouraged to consult with their Human Resources Manager and the Benefits Department.

Advance Notice and Medical Certification:

The employee may be required to provide advance leave notice and medical certification. Taking leave may be denied if requirements are not met. Employees should notify their manager and their local Human Resources Manager or the Benefits Department (831-768-4343) as soon as they have knowledge of their need for leave.

As soon as an employee has knowledge they are in need of a Leave of Absence, as defined above, the employee must notify Granite at least 30 days before leave is to begin, or as soon as practicable if 30 days is not possible. "Leave Request" forms are available on Granite Insiders.

- For an employee's own serious health condition or to care for the employee's spouse, child, or parent, Granite will require medical certification to support a request for leave. Granite may require second or third opinions (at the employer's expense) and a fitness for duty report to return to work for continuous leave taken for the eligible employee's own serious health condition. Medical certification forms are available on Granite Insiders.
- Employees requesting FMLA leave due to a covered family member's covered active duty or call to covered active duty in the Armed Forces must provide verbal notice with an explanation of the reason(s) for the needed leave to their immediate supervisor, who will advise their local HR Manager and the Benefits Department. Leave may commence as soon as the covered family member receives the call-up notice; if the leave is foreseeable, advance notification as described above is required, as well as proof of the qualifying member's call-up or covered active military service before leave is granted.
- Employees requesting FMLA leave for the purpose of caring for an injured or ill servicemember or veteran must provide certification of the family member or next-of-kin's injury, recovery or need for care. This certification may be a copy of the military medical information, orders for treatment, or other official Armed Forces communication pertaining to the service member or veteran's injury or illness incurred on covered active military duty for up to five years after a veteran leaves service if he or she develops a service-related injury or illness that was incurred or aggravated while on covered active duty. This certification is not tied to a serious health condition the same as other types of FMLA leave.

Job Benefits and Protection:

- For the duration of FMLA leave, Granite must maintain the employee's health coverage under any "group health plan."
- Upon return from FMLA leave, most employees must be restored to their original or equivalent positions with equivalent pay, benefits, and other employment terms.
- The use of FMLA leave cannot result in the loss of any employment benefit that accrued prior to the start of an employee's leave.

Unlawful Acts By Employers:

FMLA makes it unlawful for any employer to:

- interfere with, restrain, or deny the exercise of any right provided under FMLA.
- discharge or discriminate against any person for opposing any practice made unlawful by FMLA or for involvement in any proceeding under or relating to FMLA.

Enforcement:

- The U.S. Department of Labor is authorized to investigate and resolve complaints of violations.
- An eligible employee may bring a civil action against an employer for violations.

FMLA does not affect any Federal or State law prohibiting discrimination or supersede any State or local law or collective bargaining agreement, which provides greater family or medical leave rights.

For Additional Information:

Contact your local Human Resources Manager or the nearest office of the Wage and Hour Division, listed in most telephone directories under U.S. Government, Department of Labor.



Appendix A1

The table below provides information regarding arbitration/litigation by or against Granite Inliner, LLC (fka Inliner) started within the past five years on a construction project.

Date	Case Name	Description	Resolution	Date
2016-01-08	Town of Littleton v. LHC, Layne Inliner, LLC, and Mack Gay Associates, P.A.	Allegations of Project was completed in 2008. In 2016, Littleton filed suit against Layne for negligence; unfair/deceptive trade practices; breach of contract; breach of warranty; fraud; and negligent misrepresentation. Littleton claimed that lateral line work was not performed or improperly performed on the sewer rehabilitation project. Annie's construction, a subcontractor, rehabilitated the lateral lines. Mack Gay & Assoc., the engineering firm, hired a town resident, Don Willis, to oversee and inspect Annie's work. Layne filed a motion for summary judgment and the court dismissed all Littleton's claims against Layne in June 2017. Plaintiff appealed to the North Carolina Court of Appeals.	Dismissed	Aug-18
2017-05-04	Layne Inliner, LLC v. Silver River Solutions, LLC	Action against subcontractor for breach of contract and indemnification (Silver's sewer bypass plug failed causing property damage). Amount of damages unspecified but in excess of \$150,000.	Settled	Feb-19
2019-02-04	Rey-Mar Construction v. Reytech Services, LLC, et al. (Layne Inliner)	Allegations of Breach of contract; non-payment	Pending	
2019-02-26	Precision Trenchless v. Saertex Multicom LP and Granite Inliner, LLC	Allegations of Products liability, indemnification and negligence as to CIPP	Pending	
2020-04-02	Stevens v. Inliner - Nuisance Claim (WWHGD)	Nuisance Torts/Liability	Pending	

- Work/payment issues over \$50,000.00 only



Appendix D1

The table below provides information regarding arbitration/litigation by or against Granite Inliner, LLC (fka Inliner) started within the past five years on a construction project.

Date	Case Name	Description	Resolution
2020-06-29	Smundin v. Layne Inliner (OSHA 8-0740-20-102)	On or about April 20, 2020, Jeremiah Smundin filed a complaint with OSHA alleging discriminatory employment practices in violation of 29 USC 660(c). More specifically, Smundin claims to have been fired for raising concerns about possible exposure to coronavirus because a co-worker had returned to work after contracting the virus. OSHA requested a position statement within 20 days.	Pending

- Work/payment issues over \$50,000.00 only

Monday, August 9, 2021

CONTRACTOR QUALIFICATIONS

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS

Fishbeck:DD

6 of 11

6/30/2021

2. Sewer CIPP Lining References

(Must be completed and submitted with Bid for consideration)

List sewer CIPP lining projects of sewers equal to or greater than 12 inches in diameter that total (together) over 10,000 lineal feet in northern states and/or Canada in the past 7 years and over 1,000,000 feet of lining in general over the past 7 years, and provide references. Also, provide safety record for the past 7 years as an attachment.

Firm's Name: Granite Inliner LLC

Role on Project: Prime Contractor

2.1. Client's Name: City of Livonia, MI

Address: 12973 Farmington Rd. Livonia MI

Contact Name: Mr. Don Rohraff Contact Phone: 734 466-2607

Type of Work: 16,000ft of 12" thru 36" manhole to manhole CIPP

Year Work Performed: 2018 Work Amount (\$): \$1,100,000.00

2.2. Client's Name: City of Ann Arbor, MI

Address:

Contact Name: Ron Hoeft Contact Phone: 734 794-6350

Type of Work: 2,000ft of 10" & 24" storm and sanitary sewer CIPP manhole to manhole lining

Year Work Performed: 2021 Work Amount (\$): \$200,000.00

CONTRACTOR QUALIFICATIONS

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS

Fishbeck:DD

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6/30/2021

2.3. Client's Name: City of Ann Arbor, MI

Address: _____

Contact Name: Mike Nearing Contact Phone: 734 794-6410

Type of Work: 1,900ft of 36" manhole to manhole CIPP installed in the Nichols Arboretum

Year Work Performed: 2017 Work Amount (\$): 1,200,000.00

2.4. Client's Name: City of Bay City, MI

Address: 2905 N. Water St., Bay City MI

Contact Name: Terry Kilburn Contact Phone: 989 245-8598

Type of Work: Installed 20,000ft of manhole to manhole CIPP in diameters of 8" thru 42" as part of
their annual sewer rehabilitation program.

Year Work Performed: 2020 / 2021 Work Amount (\$): \$1,600,000.00

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS

Fishbeck:DD

8 of 11

6/30/2021

3. Onsite Superintendent/Foreman

(Must be completed and submitted with Bid for consideration)

List name of onsite superintendent/foreman and list a minimum of 3 projects of similar complexity totaling 10,000 lineal feet of CIPP lining in sanitary sewers greater than 12 inches in diameter that they have supervised in the past 7 years and provide references.

Superintendent/Foreman Name: _____ Don Rupp and/or Ron Gaedke _____

3.1. Client's Name: _____ City of Livonia _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____ See details above _____

Year Work Performed: _____ Work Amount (\$): _____

3.2. Client's Name: _____ City of Ann Arbor, MI _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____ See details above _____

Year Work Performed: _____ Work Amount (\$): _____

CONTRACTOR QUALIFICATIONS

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS**

Fishbeck:DD

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6/30/2021

3.3. Client's Name: _____ City of Ann Arbor, MI _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____ See details above _____

Year Work Performed: _____ Work Amount (\$): _____

3.4. Client's Name: _____ City of Bay City, MI _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____ See details above _____

Year Work Performed: _____ Work Amount (\$): _____

CONTRACT

THIS CONTRACT is between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 301 East Huron Street, Ann Arbor, Michigan 48104 ("City") and Granite Inliner LLC("Contractor"), an Indiana Limited Liability Company, 28529 Goddard Rd, Ste 106, Romulus, MI 48174

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

ARTICLE I - Scope of Work

The Contractor agrees to furnish all of the materials, equipment and labor necessary; and to abide by all the duties and responsibilities applicable to it for the project titled **Nichols Arboretum Sewer Lining, ITB No. 4686** in accordance with the requirements and provisions of the following documents, including all written modifications incorporated into any of the documents, all of which are incorporated as part of this Contract:

Non-discrimination and Living Wage Declaration of Compliance Forms (if applicable)	General Conditions
Vendor Conflict of Interest Form	Standard Specifications
Prevailing Wage Declaration of Compliance Form (if applicable)	Detailed Specifications
Bid Forms	Plans
Contract and Exhibits	Addenda
Bonds	

ARTICLE II - Definitions

Administering Service Area/Unit means Public Services/Engineering.

Project means **ITB No. 4686 - Nichols Arboretum Sewer Lining**.

Supervising Professional means the person acting under the authorization of the manager of the Administering Service Area/Unit. At the time this Contract is executed, the Supervising Professional is: Nicholas S. Hutchinson, PE whose job title is City Engineer. If there is any question concerning who the Supervising Professional is, Contractor shall confirm with the manager of the Administering Service Area/Unit.

Contractor's Representative means _____ whose job title is _____ .

ARTICLE III - Time of Completion

- (A) The work to be completed under this Contract shall begin immediately on the date specified in the Notice to Proceed issued by the City.
- (B) The entire work for this Contract shall be completed within two hundred fifty-five

(255) consecutive calendar days.

- (C) Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the Contractor to pay the City, as liquidated damages and not as a penalty, an amount equal to \$1,200 for each calendar day of delay in the completion of all the work. If any liquidated damages are unpaid by the Contractor, the City shall be entitled to deduct these unpaid liquidated damages from the monies due the Contractor.

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

ARTICLE IV - The Contract Sum

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

One Million Seven Hundred Thirty Four Thousand Two Hundred Ninety Three and 00/100 Dollars (\$1,734.293.00)

- (B) The amount paid shall be equitably adjusted to cover changes in the work ordered by the Supervising Professional but not required by the Contract Documents. Increases or decreases shall be determined only by written agreement between the City and Contractor.

ARTICLE V - Assignment

This Contract may not be assigned or subcontracted any portion of any right or obligation under this contract without the written consent of the City. Notwithstanding any consent by the City to any assignment, Contractor shall at all times remain bound to all warranties, certifications, indemnifications, promises and performances, however described, as are required of it under this contract unless specifically released from the requirement, in writing, by the City.

ARTICLE VI - Choice of Law

This Contract shall be construed, governed, and enforced in accordance with the laws of the State of Michigan. By executing this Contract, the Contractor and the City agree to venue in a court of appropriate jurisdiction sitting within Washtenaw County for purposes of any action arising under this Contract. The parties stipulate that the venue referenced in this Contract is for convenience and waive any claim of non-convenience.

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

ARTICLE VII - Relationship of the Parties

The parties of the Contract agree that it is not a Contract of employment but is a Contract to accomplish a specific result. Contractor is an independent Contractor performing services for the

City. Nothing contained in this Contract shall be deemed to constitute any other relationship between the City and the Contractor.

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

ARTICLE VIII - Notice

All notices given under this Contract shall be in writing, and shall be by personal delivery or by certified mail with return receipt requested to the parties at their respective addresses as specified in the Contract Documents or other address the Contractor may specify in writing. Notice will be deemed given on the date when one of the following first occur: (1) the date of actual receipt; or (2) three days after mailing certified U.S. mail.

ARTICLE IX - Indemnification

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

ARTICLE X - Entire Agreement

This Contract represents the entire understanding between the City and the Contractor and it supersedes all prior representations, negotiations, agreements, or understandings whether written or oral. Neither party has relied on any prior representations in entering into this Contract. No terms or conditions of either party's invoice, purchase order or other administrative document shall modify the terms and conditions of this Contract, regardless of the other party's failure to object to such form. This Contract shall be binding on and shall inure to the benefit of the parties to this Contract and their permitted successors and permitted assigns and nothing in this Contract, express or implied, is intended to or shall confer on any other person or entity any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of this Contract. This Contract may be altered, amended or modified only by written amendment signed by the City and the Contractor.

ARTICLE XI – Electronic Transactions

The City and Contractor agree that signatures on this Contract may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this Contract. This Contract may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

FOR CONTRACTOR

By _____

Its: _____

FOR THE CITY OF ANN ARBOR

By _____
Christopher Taylor, Mayor

By _____
Jacqueline Beaudry, City Clerk

Approved as to substance

By _____
John Fournier, Interim City Administrator

By _____ 2
Craig Hupy, Public
Services Area Administrator

Approved as to form and content

Stephen K. Postema, City Attorney

PERFORMANCE BOND

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

SIGNED AND SEALED this _____ day of _____, 202_.

(Name of Surety Company)
By _____
(Signature)
Its _____
(Title of Office)

(Name of Principal)
By _____
(Signature)
Its _____
(Title of Office)

Approved as to form:

Name and address of agent:

Stephen K. Postema, City Attorney

LABOR AND MATERIAL BOND

- (1) _____
of _____ (referred to as "Principal"), and _____, a corporation duly authorized to do business in the State of Michigan, (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for the use and benefit of claimants as defined in Act 213 of Michigan Public Acts of 1963, as amended, being MCL 129.201 et seq., in the amount of \$ _____, for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written Contract with the City entitled _____

_____, for ITB No. _____; and this bond is given for that Contract in compliance with Act No. 213 of the Michigan Public Acts of 1963 as amended;
- (3) If the Principal fails to promptly and fully repay claimants for labor and material reasonably required under the Contract, the Surety shall pay those claimants.
- (4) Surety's obligations shall not exceed the amount stated in paragraph 1, and Surety shall have no obligation if the Principal promptly and fully pays the claimants.
- (5) Principal, Surety, and the City agree that signatures on this bond may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this bond. This bond may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

SIGNED AND SEALED this _____ day of _____, 202_

(Name of Surety Company)

By _____
(Signature)

Its _____
(Title of Office)

Approved as to form:

Stephen K. Postema, City Attorney

(Name of Principal)

By _____
(Signature)

Its _____
(Title of Office)

Name and address of agent:

GENERAL CONDITIONS

Section 1 - Execution, Correlation and Intent of Documents

The contract documents shall be signed in 2 copies by the City and the Contractor.

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

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

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

Section 2 - Order of Completion

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

Section 3 - Familiarity with Work

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

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

Section 4 - Wage Requirements

Under this Contract, the Contractor shall conform to Chapter 14 of Title I of the Code of the City of Ann Arbor as amended; which in part states "...that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of

subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor. At the request of the City, any contractor or subcontractor shall provide satisfactory proof of compliance with the contract provisions required by the Section.

Pursuant to Resolution R-16-469 all public improvement contractors are subject to prevailing wage and will be required to provide to the City payroll records sufficient to demonstrate compliance with the prevailing wage requirements. A sample Prevailing Wage Form is provided in the Appendix herein for reference as to what will be expected from contractors. Use of the Prevailing Wage Form provided in the Appendix section or a City-approved equivalent will be required along with wage rate interviews.

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

If the Contractor is a "covered employer" as defined in Chapter 23 of the Ann Arbor City Code, the Contractor agrees to comply with the living wage provisions of Chapter 23 of the Ann Arbor City Code. The Contractor agrees to pay those employees providing Services to the City under this Contract a "living wage," as defined in Section 1:815 of the Ann Arbor City Code, as adjusted in accordance with Section 1:815(3); to post a notice approved by the City of the applicability of Chapter 23 in every location in which regular or contract employees providing services under this Contract are working; to maintain records of compliance; if requested by the City, to provide documentation to verify compliance; to take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee or person contracted for employment in order to pay the living wage required by Section 1:815; and otherwise to comply with the requirements of Chapter 23.

Contractor agrees that all subcontracts entered into by the Contractor shall contain similar wage provision covering subcontractor's employees who perform work on this contract.

Section 5 - Non-Discrimination

The Contractor agrees to comply, and to require its subcontractor(s) to comply, with the nondiscrimination provisions of MCL 37.2209. The Contractor further agrees to comply with the provisions of Section 9:158 of Chapter 112 of Title IX of the Ann Arbor City Code, and to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity.

Section 6 - Materials, Appliances, Employees

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

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

Adequate sanitary facilities shall be provided by the Contractor.

Section 7 - Qualifications for Employment

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

Section 8 - Royalties and Patents

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

Section 9 - Permits and Regulations

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

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

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

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

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

In an emergency affecting the safety of life, or the work, or of adjoining property, the Contractor

is, without special instructions or authorization from the Supervising Professional, permitted to act at its discretion to prevent the threatened loss or injury. It shall also so act, without appeal, if authorized or instructed by the Supervising Professional.

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

Section 11 - Inspection of Work

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

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

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

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

Section 12 - Superintendence

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

Section 13 - Changes in the Work

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

In giving instructions, the Supervising Professional shall have authority to make minor changes in the work not involving extra cost and not inconsistent with the purposes of the work, but otherwise,

except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the Supervising Professional, and no claim for an addition to the Contract Sum shall be valid unless the additional work was ordered in writing.

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

Section 14 - Extension of Time

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

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

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

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

Section 15 - Claims for Extra Cost

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

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

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

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

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

Section 16 - Progress Payments

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

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

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

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

Section 17 - Deductions for Uncorrected Work

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

Section 18 - Correction of Work Before Final Payment

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

If the Contractor does not remove the condemned work and materials within 10 days after written notice, the City may remove them and, if the removed material has value, may store the material

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

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

Section 19 - Acceptance and Final Payment

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

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

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

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

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

- (1) unsettled liens;
- (2) faulty work appearing within 12 months after final payment;
- (3) hidden defects in meeting the requirements of the plans and specifications;
- (4) manufacturer's guarantees.

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

Section 20 - Suspension of Work

The City may at any time suspend the work, or any part by giving 5 days notice to the Contractor in writing. The work shall be resumed by the Contractor within 10 days after the date fixed in the

written notice from the City to the Contractor to do so. The City shall reimburse the Contractor for expense incurred by the Contractor in connection with the work under this Contract as a result of the suspension.

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

Section 21 - Delays and the City's Right to Terminate Contract

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

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

Section 22 - Contractor's Right to Terminate Contract

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

Section 23 - City's Right To Do Work

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

Section 24 - Removal of Equipment and Supplies

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

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

Section 25 - Responsibility for Work and Warranties

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

The Contractor shall guarantee the quality of the work for a period of one year. The Contractor shall also unconditionally guarantee the quality of all equipment and materials that are furnished and installed under the contract for a period of one year. At the end of one year after the Contractor's receipt of final payment, the complete work, including equipment and materials furnished and installed under the contract, shall be inspected by the Contractor and the Supervising Professional. Any defects shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days. Any defects that are identified prior to the end of one year shall also be inspected by the Contractor and the Supervising Professional and shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days. The Contractor shall assign all manufacturer or material supplier warranties to the City prior to final payment. The assignment shall not relieve the Contractor of its obligations under this paragraph to correct defects.

Section 26 - Partial Completion and Acceptance

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

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

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

Section 27 - Payments Withheld Prior to Final Acceptance of Work

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

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

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

Section 28 - Contractor's Insurance

- (1) The Contractor shall procure and maintain during the life of this Contract, including the guarantee period and during any warranty work, such insurance policies, including those set forth below, as will protect itself and the City from all claims for bodily injuries, death or property damage that may arise under this Contract; whether the act(s) or omission(s) giving rise to the claim were made by the Contractor, any subcontractor, or anyone employed by them directly or indirectly. Prior to commencement of any work under this contract, Contractor shall provide to the City documentation satisfactory to the City, through City-approved means (currently myCOI), demonstrating it has obtained the required policies and endorsements. The certificates of insurance endorsements and/or copies of

policy language shall document that the Contractor satisfies the following minimum requirements. Contractor shall add registration@mycoitracking.com to its safe sender's list so that it will receive necessary communication from myCOI. When requested, Contractor shall provide the same documentation for its subcontractor(s) (if any).

Required insurance policies include:

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

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

- (b) Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 04 13 or current equivalent. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements specifically for the following coverages: Products and Completed Operations, Explosion, Collapse and Underground coverage or Pollution. Further there shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. The following minimum limits of liability are required:

- \$1,000,000 Each occurrence as respect Bodily Injury Liability or Property Damage Liability, or both combined.
- \$2,000,000 Per Project General Aggregate
- \$1,000,000 Personal and Advertising Injury
- \$2,000,000 Products and Completed Operations Aggregate, which, notwithstanding anything to the contrary herein, shall be maintained for three years from the date the Project is completed.

- (c) Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 10 13 or current equivalent. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. Further, the limits of liability shall be \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

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

- (2) Insurance required under subsection (1)(b) and (1)(c) above shall be considered primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance. Further, the Contractor agrees to waive any right of recovery by its insurer against the City for any insurance listed herein.

- (3) Insurance companies and policy forms are subject to approval of the City Attorney, which approval shall not be unreasonably withheld. Documentation must provide and demonstrate an unconditional and un-qualified 30-day written notice of cancellation in favor of the City of Ann Arbor. Further, the documentation must explicitly state the following: (a) the policy number(s); name of insurance company(s); name and address of the agent(s) or authorized representative(s); name(s), email address(es), and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions which may be approved by the City, in its sole discretion; (c) that the policy conforms to the requirements specified Contractor shall furnish the City with satisfactory certificates of insurance and endorsements prior to commencement of any work. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) and all required endorsements to the City. If any of the above coverages expire by their terms during the term of this Contract, the Contractor shall deliver proof of renewal and/or new policies and endorsements to the Administering Service Area/Unit at least ten days prior to the expiration date.
- (4) Any Insurance provider of Contractor shall be authorized to do business in the State of Michigan and shall carry and maintain a minimum rating assigned by A.M. Best & Company's Key Rating Guide of "A-" Overall and a minimum Financial Size Category of "V". Insurance policies and certificates issued by non-authorized insurance companies are not acceptable unless approved in writing by the City.
- (5) City reserves the right to require additional coverage and/or coverage amounts as may be included from time to time in the Detailed Specifications for the Project.
- (6) The provisions of General Condition 28 shall survive the expiration or earlier termination of this contract for any reason.

Section 29 - Surety Bonds

Bonds will be required from the successful bidder as follows:

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

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

Section 30 - Damage Claims

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

Section 31 - Refusal to Obey Instructions

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

Section 32 - Assignment

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

Section 33 - Rights of Various Interests

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

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

Section 34 - Subcontracts

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

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

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

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

Section 35 - Supervising Professional's Status

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

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

Section 36 - Supervising Professional's Decisions

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

Section 37 - Storing Materials and Supplies

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

Section 38 - Lands for Work

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

Section 39 - Cleaning Up

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

Section 40 - Salvage

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

Section 41 - Night, Saturday or Sunday Work

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

Section 42 - Sales Taxes

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

Section 43

CONTRACTOR'S DECLARATION

I hereby declare that I have not, during the period _____, 20____, to _____, 20____, performed any work, furnished any materials, sustained any loss, damage or delay, or otherwise done anything in addition to the regular items (or executed change orders) set forth in the Contract titled _____, for which I shall ask, demand, sue for, or claim compensation or extension of time from the City, except as I hereby make claim for additional compensation or extension of time as set forth on the attached itemized statement. I further declare that I have paid all payroll obligations related to this Contract that have become due during the above period and that all invoices related to this Contract received more than 30 days prior to this declaration have been paid in full except as listed below.

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

Contractor

Date

By _____
(Signature)

Its _____
(Title of Office)

Past due invoices, if any, are listed below.

Section 44

CONTRACTOR'S AFFIDAVIT

The undersigned Contractor, _____, represents that on _____, 20___, it was awarded a contract by the City of Ann Arbor, Michigan to _____ under the terms and conditions of a Contract titled _____. The Contractor represents that all work has now been accomplished and the Contract is complete.

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

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

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

Contractor

Date

By _____
(Signature)

Its _____
(Title of Office)

Subscribed and sworn to before me, on this _____ day of _____, 20___
_____, _____ County, Michigan

Notary Public

_____ County, MI

My commission expires on:

STANDARD SPECIFICATIONS

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

Standard Specifications are available online:

<http://www.a2gov.org/departments/engineering/Pages/Engineering-and-Contractor-Resources.aspx>

DETAILED SPECIFICATIONS

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS

Fishbeck:DD

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6/30/2021

a. General.- As detailed elsewhere in the Contract Documents and Drawings the work of this project is to be performed in a sensitive, valuable, natural area within the City of Ann Arbor (City), the University of Michigan (U of M) Campus and Hospital Complex, and residential areas abutting the arboretum. This Detailed Specification sets forth criteria that will be used by the City in determining if the Contractor has the necessary personnel, equipment, and experience to perform the work of this project.

b. Documentation to be provided.- The Contractor Qualifications detailed in this specification apply to the following items:

- Sewer Televising and Cleaning
- Cured-In-Place Pipe (CIPP) Lining
- Onsite Superintendent/Foreman

Contractor to complete the attached Reference Form and submit it as part of the bid submittal. **Not filling out the form or failing to provide past experience may result in disqualification of the bid.** If subcontractors are to be used for any of the above items, they are to fill out a separate form.

The projects and total footage claimed to have been performed by the Contractor shall be supported by owner references. The Contractor shall submit information to document their experience.

1. Sewer Televising and Cleaning.- The Contractor performing the sewer televising and cleaning shall be fully qualified, experienced, and equipped to complete this work as shown on the Drawings and as indicated in the specifications. The Contractor shall have cleaned and televised a minimum of 100,000 lineal feet of sanitary sewers equal to or greater than 12 inches in diameter with lengths of the individual segments over 1,000 feet each in the past 7 years. The Contractor shall have also worked a minimum of three projects in similar environmentally sensitive areas in the past 7 years. The Contractor shall provide detailed description of these environmentally sensitive projects and methods used to mitigate the work upon request of the Engineer.

CONTRACTOR QUALIFICATIONS

CITY OF ANN ARBOR DETAILED SPECIFICATION FOR CONTRACTOR QUALIFICATIONS

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6/30/2021

2. **Sewer CIPP Lining.**- The Contractor performing the CIPP lining work shall be fully qualified, experienced, and equipped to complete this work expeditiously and in a satisfactory manner and shall be certified and/or licensed as an installer by the CIPP manufacturer. The Contractor shall have installed a minimum of 10,000 lineal feet of CIPP in sanitary sewers equal to or greater than 12 inches in diameter in the past 7 years and over 1,000,000 feet of lining in general over the past 7 years. Installations must have been in northern states and/or Canada. Contractor must also provide safety record for the past 7 years. Contractor must indicate any project(s) completed that required lining through vertical and horizontal deflections.

3. **Onsite Superintendent/Foreman.**- The full-time, onsite superintendent/foreman shall be responsible for supervising all the work onsite, including but not limited to, the diversion of sanitary flow, bypass pumping, sewer televising and cleaning, and sewer CIPP lining, shall have supervised a minimum of 3 projects of this complexity in the past 7 years and shall have installed a minimum of 10,000 lineal feet of CIPP in sanitary sewers greater than 12 inches in diameter in the past 7 years.

4. **Sewer Flow Control.**- The Contractor performing the sewer flow control work shall be fully qualified, experienced, and equipped to complete this work. The Contractor must disclose any sanitary sewer overflows that have occurred on past projects. Contractor shall have performed sewer flow control on a minimum of 3 projects of this complexity in the past 7 years. Contractor shall identify any project(s) that required secondary sound attenuation, large diameter bypass pumping (12 inches or larger), sewer level monitoring, and pump and haul operations. Contractor shall state if equipment is owned or rented.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS

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6/30/2021

1. Sewer Televising and Cleaning References
(Must be completed and submitted with Bid for consideration)

List sewer cleaning and televising projects of sewers equal to or greater than 12 inches in size that total (together) over 100,000 lineal feet with the lengths of the individual segments over 1,000 feet in the past 7 years and provide references. The Contractor shall have also worked a minimum of three projects in similar environmentally sensitive areas in the past 7 years.

Firm's Name: _____

Role on Project: _____

1.1. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

1.2. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

CONTRACTOR QUALIFICATIONS

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
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Year Work Performed: _____ Work Amount (\$): _____

1.3. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

1.4. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

1.5. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

CONTRACTOR QUALIFICATIONS

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS**

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Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

1.6. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

1.7. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS

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6/30/2021

2. Sewer CIPP Lining References

(Must be completed and submitted with Bid for consideration)

List sewer CIPP lining projects of sewers equal to or greater than 12 inches in diameter that total (together) over 10,000 lineal feet in northern states and/or Canada in the past 7 years and over 1,000,000 feet of lining in general over the past 7 years, and provide references. Also, provide safety record for the past 7 years as an attachment.

Firm's Name: _____

Role on Project: _____

2.1. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

2.2. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

CONTRACTOR QUALIFICATIONS

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS**

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2.3. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

2.4. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS

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6/30/2021

3. Onsite Superintendent/Foreman

(Must be completed and submitted with Bid for consideration)

List name of onsite superintendent/foreman and list a minimum of 3 projects of similar complexity totaling 10,000 lineal feet of CIPP lining in sanitary sewers greater than 12 inches in diameter that they have supervised in the past 7 years and provide references.

Superintendent/Foreman Name: _____

3.1. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

3.2. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

CONTRACTOR QUALIFICATIONS

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS**

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3.3. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

3.4. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS

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4. Sewer Flow Control References

(Must be completed and submitted with Bid for consideration)

List sewer flow control projects for sanitary sewers greater than 12 inches in diameter that you have performed in the past 7 years and provide references. Identify any project(s) that required secondary sound attenuation, large diameter bypass pumping (12 inches or larger), sewer level monitoring, and pump and haul operations. State if equipment is owned or rented.

Firm's Name: _____

Role on Project: _____

4.1. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

4.2. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

CONTRACTOR QUALIFICATIONS

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
CONTRACTOR QUALIFICATIONS**

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4.3. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

4.4. Client's Name: _____

Address: _____

Contact Name: _____ Contact Phone: _____

Type of Work: _____

Year Work Performed: _____ Work Amount (\$): _____

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
GENERAL CONDITIONS, MAX. \$60,000

Fishbeck:DD

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7/1/2021

a. General.- This item shall include all work described and required by the Drawings and specifications for which the item of work "General Conditions" is listed, as well as items of work not listed in the Bid Form including, but not limited to:

1. Scheduling and organization of all work, subcontractors, suppliers, testing, inspection, surveying, and staking;
2. Coordination of, and cooperation with, other contractors, appropriate City of Ann Arbor and University of Michigan agencies/departments, and utilities;
3. Protection and maintenance of utilities, including support, protection, capping, repair, replacement, connection or reconnection of existing pipelines, and utilities damaged by the Contractor's operations;
4. Protection of the features within Nichols Arboretum as described in Detailed Specification "Protection of Arboretum;"
5. Protection of wetlands as described in Detailed Specification "Protection of Wetlands," water courses and drainage ditches, and/or channels;
6. Dewatering and drainage of excavations as required to maintain a stable, open hole;
7. Disposing of excess excavated materials and debris (excluding debris material removed cleaning operations);
8. Maintaining drainage;
9. Maintaining trail and drive openings, sidewalks, bike paths, trails, road ramps for bypass piping, and pedestrian access to and within Nichols Arboretum. This includes the placement and maintenance of gravel in drive and trail openings as directed by the Engineer;
10. Storing all materials and equipment off lawn areas in locations indicated on the Drawings;
11. Temporary removal/relocation, storage, and re-installation/re-setting of miscellaneous features within Nichols Arboretum (benches, boulders, tables, etc.) which conflict with the proposed construction;

CITY OF ANN ARBOR
DETAILED SPECIFICATION
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GENERAL CONDITIONS, MAX. \$60,000

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12. Temporary removal/relocation, storage, and re-installation/re-setting of existing street name, guide, and regulatory signs, mailboxes, etc. which conflict with the proposed construction, including all fasteners, hardware, and materials required for re-installation/re-setting;

13. Furnishing and operating vacuum-type street cleaning equipment a minimum of once per week or as frequently as directed by the Engineer in order to remove mud, soil, rocks, debris, or any other deleterious materials from paved areas;

14. Noise and dust control;

15. Mobilization(s) and demobilization(s);

16. Furnishing submittals and certifications for all materials and supplies;

17. Removal of shrubs, brush, and trees less than 6 inches in diameter as directed by the Engineer;

18. Furnish and install temporary cover(s) to seal and secure sanitary manholes, during non-work hours, capable of withstanding the weight of a human/deer at a minimum;

19. All miscellaneous and incidental items such as overhead, insurance, and permits;

20. Meeting all requirements relating to Debarment Certification, Davis Bacon Act, and Disadvantaged Business Enterprise, and providing the necessary documentation.

b. Measurement and Payment.- This item of work will be paid for on a pro rata basis at the time of each progress payment. Measurement will be based on the ratio between work completed during the payment period and the total contract amount. When all of the work of this Contract has been completed, the measurement of this item shall be one Lump Sum, minus any deductions incurred for inadequate performance as described herein. This amount will not be increased for any reason, including extensions of time, extras, and/or additional work.

GENERAL CONDITIONS, MAX. \$60,000

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
GENERAL CONDITIONS, MAX. \$60,000**

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The completed work as measured for this item of work will be paid for at the contract unit price for the following contract pay item:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
General Conditions, Max. \$60,000	Lump Sum

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Contract Documents and as included in this Detailed Specification.

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROJECT SCOPE**

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The scope of this project includes cleaning, televising, and lining of 8-inch residential sanitary sewers and 10-inch industrial (medical) sanitary sewer in accordance with the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP), cured-in-place pipe (CIPP) sewer lining and inspection of all remaining manholes in accordance with NASSCO Level 2 Manhole Assessment and Certification Program (MACP). To complete this work, diversion of sanitary flows and bypass pumping will be required.

The limits of the project fall within the Nichols Arboretum (Arboretum), University of Michigan Medical Center, and the residential streets abutting the Arboretum. The Arboretum is jointly owned by the City of Ann Arbor and the University of Michigan. The Arboretum is comprised of various natural features, including botanical areas, significant trees and plants, steep slopes, as well as 6 regulated wetlands as indicated on the Drawings. Contractor shall be sensitive to the environment, the patrons of the Arboretum, and the individual requirements of all property owners.

The major elements of the work covered by the Contract Documents under this Contract scope of work is as outlined below:

1. Clean and PACP televise sanitary sewers as shown on the plans.

2. Locate buried fittings between MHs 71-0046 and 71-69899, 71-69899 and 71-69894, and 71-69894 and 71-69900 by televising those portions of 8-inch sanitary sewer.

3. Sanitary flows from the 36-inch sanitary sewer will be diverted to the Northside Interceptor by City personnel at the existing diversion chamber to facilitate work between MHs 71-69900 and 71-69895.

4. Bypass pump remaining sanitary flow from sewers entering upstream of the individual sections being cleaned, televised, and lined to manholes downstream of the work area.

5. Perform MACP Level 2 inspection of all other sanitary manholes.

6. CIPP line sanitary sewers as shown on the plans.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROJECT SCHEDULE

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The entire work under this Contract shall be completed in accordance with, and subject to, the scheduling requirements as outlined below, in the milestone schedule, and all other requirements of the Contract Documents.

1. The Contractor is required to comply with and sign the Access Agreement established between the City of Ann Arbor and the University of Michigan. The Contractor's detailed Project Schedule must be completed and approved before the Access Agreement can be finalized. No work can proceed until the Access Agreement is completed.

2. The Contractor shall not begin the work of this project until receipt of the fully executed Contract and Notice-to-Proceed, which is not anticipated to be provided prior to October 1, 2021.

3. The entire work under this Contract including, but not limited to; sanitary sewer inspection, cleaning, televising, and rehabilitation (cured-in-place pipe [CIPP] lining); the removal of any and all traffic control devices; and the installation/maintenance of the needed temporary soil erosion and sedimentation control devices, shall be completed by the Substantial Completion date of February 11, 2022.

4. All major construction equipment, materials and debris must be removed from the project site by the Substantial Completion date. Due to anticipated weather conditions during that time of year, the start of final restoration may be delayed. Final restoration shall begin no later than April 11, 2022.

5. Final restoration within the project limits and any other disturbed areas shall be completed by the Final Completion date, as described in Detailed Specification "Project Clean-Up and Restoration, Special," and as indicated on the Drawings.

Failure to complete the work as required herein, including approved time extensions granted thereto, as determined by the Engineer, shall entitle the City to deduct from the monies due to the Contractor, "Liquidated Damages", and not as a penalty, an amount, as provided for by the Contract in Subsection C, Article III, Page C-1 of the Contract Documents and defined herein.

The Contractor shall be furnished with 2 copies of the Contract, for their execution, on or about August 27, 2021. The Contractor shall properly execute both copies of the Contract and return them, with the required Bonds and Insurance Certificates, to the City within 21 calendar days. The Contractor shall not begin the work before the

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROJECT SCHEDULE**

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applicable date(s) as described herein without approval from the Engineer, and in no case before receipt of the fully executed Contract. City Council approval is expected on or about September 20, 2021.

Time is of the essence in the performance of the work of this contract. The Contractor is expected to mobilize sufficient personnel and equipment and work throughout all authorized hours to complete the project within the specified time/date of this Contract. Should the Contractor demonstrate that work must occur on Sundays in order to maintain the project schedule, they may do so between the hours of 9:00 a.m. and 5:00 p.m. with prior approval from the Engineer. The Contractor will submit authorization requests for any Sunday work a minimum of 3 working days in advance of the day of the proposed work. There will be no additional compensation due to the Contractor for work performed on Sundays.

Prior to the start of any construction, including mobilization and staging, the Contractor shall submit a detailed progress schedule of work for the Engineer's review and approval. Work shall not start until a schedule is approved in writing by the Engineer. The proposed schedule must fully comply with the scheduling requirements contained herein, and in other Detailed Specifications. The Contractor shall update the approved work schedule upon changes and upon request by the Engineer and present it to the Engineer within 7 days of said request or change.

The primary access to the site for the Contractor shall be along Nichols Drive from East Medical Center Drive through Lot M29 in accordance with the requirements and restrictions as described in Detailed Specification "Construction Sequencing." During work on Sewer Segment 2 the Contractor shall be permitted to access the site through the Geddes Avenue entrance to the Nichols Arboretum. At no time shall the Contractor use the Washington Heights entrance to Nichols Arboretum for construction traffic entering or exiting the site.

The Engineer may delay or stop the work due to threatening weather conditions. The Contractor shall not be compensated for unused materials or downtime due to rain, snow or the threat of rain or snow beyond what is outlined in Detailed Specification "Working in the Rain." The Contractor is solely responsible for repairing all damages to the work and to the site, including steep slopes, road infrastructures, road subgrades, and any adjacent properties, which are caused as a result of working in the rain.

The Contractor shall not work in the dark except as approved by the Engineer and only when lighting for night work is provided as detailed elsewhere in this contract. The

CITY OF ANN ARBOR
 DETAILED SPECIFICATION
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PROJECT SCHEDULE

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Engineer may stop the work or may require the Contractor to defer certain work to another day, if, in the Engineer's opinion, the work cannot be completed within the remaining daylight hours, or if inadequate daylight is present to either properly perform or inspect the work. The Contractor will not be compensated for unused materials or downtime, when delays or work stoppages are directed by the Engineer for darkness and/or inadequate remaining daylight reasons. The Contractor is solely responsible for repairing all damages to the work and to the site, including steep slopes, road infrastructures, road subgrades, and any adjacent properties, which are caused as a result of working in the dark.

No work shall be performed, or lane closures permitted, during Christmas Eve and Day, and New Years Eve and Day holiday periods, as defined by the Engineer.

The milestone schedule below indicates dates of intermediate and major project milestones based on an anticipated Notice to Proceed date of October 1, 2021.

Milestone Schedule	
<u>Milestone</u>	<u>Date</u>
Contractor Staging and Mobilization	October 11, 2021
Substantial Completion of Sewer Work	February 11, 2022
Must Begin Restoration	April 11, 2022
Final Completion	June 13, 2022

Failure to substantially complete all work as specified herein within the times specified herein, including time extensions granted thereto as determined by the Engineer, shall entitle the City to deduct from the payments due the Contractor, **\$1,200.00** in Liquidated Damages, and not as a penalty, for delays in the completion of the work for each and every calendar day beyond the Substantial Completion date as defined in this Detailed Specification.

If the Contractor fails to complete the work such that Final Completion cannot be granted by the date specified herein, including time extensions granted thereto as determined by the Engineer, it shall entitle the City to deduct from the payments due the Contractor, **\$1,200.00** in Liquidated Damages, and not as a penalty, for delays in the Final Completion of the work for each and every calendar day beyond the Final Completion date defined in this Detailed Specification.

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
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PROJECT SCHEDULE**

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Liquidated Damages will be assessed until the required work is completed in the current construction season. If, with the Engineer's approval, work is extended beyond seasonal limitations, the assessment of Liquidated Damages will be discontinued until the work is resumed in the following construction season.

If the work required by this construction contract is not completed by the specified date(s) including any extensions of time granted thereto, at the sole discretion of the City of Ann Arbor, this Contract may be terminated with no additional compensation due to the Contractor, and the Contractor may be forbidden to bid on future City of Ann Arbor projects for a period of at least 3 years. If the Engineer elects to terminate the Contract, contract pay items paid for on a Lump Sum basis shall be paid up to a maximum percentage equal to the percentage of the contract work that has been completed.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
UTILITIES COORDINATION

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The Contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in Article 104.08 of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction. In addition, for the protection of underground utilities, the Contractor shall follow the requirements in Article 107.12 of the 2012 edition of the MDOT Standard Specifications for Construction.

The following utility owners have facilities located within the rights-of-way surrounding the project or within Nichols Arboretum:

<u>Utility</u>	<u>Type of Service</u>
City of Ann Arbor W.R. Wheeler Center 4251 Stone School Road Ann Arbor, MI 48108 (734) 794-6350	Sanitary Sewer – Travis Conley Water – Daniel Wooden Storm Sewer – Kevin Snyder
City of Ann Arbor W.R. Wheeler Center 4251 Stone School Road Ann Arbor, MI 48108 (734) 794-6361	Signs/Signals/Street Lighting Chuck Fojtik
AT&T 550 South Maple, 2 nd Floor Ann Arbor, MI 48103 (734) 996-2135	Telephone/Fiber Optic
DTE Energy Contact: Julie Gottardi Western Wayne Service Center 8001 Haggerty Road Belleville, MI 48111 (734) 397-4303	Electric

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
UTILITIES COORDINATION

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DTE Energy (Michcon)
Contact: Laurie Forrester
3150 East Michigan Avenue
Ypsilanti Twp, MI 48198
(313) 389-7261

Gas

For protection of underground utilities, the Contractor shall call "MISS DIG" toll free at 1-800-482-7171 or call 811 a minimum of 3 working days prior to excavation within the project limits. The Contractor must also notify utility owners who may not be part of the "MISS DIG" system.

The Contractor shall also contact and notify the University of Michigan to locate and mark their utilities that may exist within the project limits.

The Contractor shall notify the City of Ann Arbor a minimum of 3 days prior to beginning construction.

The owners of public or private utilities which will not interfere with the completed project and which do not present a hazard to the public or an extraordinary hazard to the Contractor's operations will not be required to move their facilities on or from the street right-of-way or project limits.

Work By Others.- During the life of this contract, other public authorities and utility companies may be performing work within or adjacent to the project limits, including, but not limited to; construction of adjacent projects, underground utility work, permanent signing and traffic signals work, traffic control improvements, street maintenance and snow removal, etc. The Contractor shall cooperate and coordinate construction activities with these agencies in accordance with Article 104.08 of the 2012 edition of the MDOT Standard Specifications for Construction.

The Schoolgirls Glen Culvert Replacement Project construction schedule may require closure of Nichols Drive during this project. Actual dates and duration have not yet been determined. Contractor shall coordinate with the City for alternate access or employee parking during this period.

The Southside Interceptor Sewer Lining Phase V Project construction may begin prior to the completion of this project. Actual dates and duration have not yet been determined. In the event that both projects are being performed concurrently, both Contractors will be required to coordinate bypassing pumping operations.

Nichols Arboretum Sanitary Sewer Lining
City of Ann Arbor File No. 2021-01

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
UTILITIES COORDINATION

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The Probility Ann Arbor Marathon will take place on Sunday, October 24, 2021. The marathon route will pass through Nichols Arboretum. The Contractor shall coordinate with race officials regarding the exact route. All equipment, barricades and materials shall be cleared to 100 feet from the marathon course by Friday, October 22, 2021. The contact for the race is Eva Solomon/Epic Races, 600 South Wagner, Ann Arbor, MI. 734-585-7101 or 734-678-5045.

Existing Utilities, Site Features, and Investigations.- The existing utilities structures, features, and site conditions above and underground are indicated on the Drawings from the best available information. These include, but are not limited to; pipelines, conduits, and the like.

It is the Contractor's sole responsibility to perform their own site investigations and research and to incorporate in their bid sufficient amounts for all utilities coordination work.

If any utilities, structures, features, and/or site conditions are discovered or suspected by the Contractor to be different than indicated on the Drawings, the Contractor is obligated to notify the Engineer immediately in writing so an addendum may be issued and/or the bid date may be revised.

Agreements, permits, reports, and other investigations and information utilized in the development of the project are available for review by prospective bidders prior to submittal of their bid. Making this information available for review does not relieve the Contractor from the responsibility of performing their own site investigations, and the Contractor is responsible for any and all conclusions that are drawn from this data.

Electronic copies of the full versions of the available project documents can be obtained by contacting:

City of Ann Arbor
Public Services Area - Project Management Services Unit
301 East Huron Street; P.O. Box 8647
Ann Arbor, MI 48107-8647

Igor Kotlyar, PE
Project Manager
(734) 794-6410 ext. 43634

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
UTILITIES COORDINATION

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ikotlyar@a2gov.org

8:00 a.m. to 5:00 p.m. (only)

The Contractor's submittal of a bid shall be considered prima facie evidence that they have reviewed all available information and performed all needed investigations and that their bid contains the needed resources to complete the project for the lump sum and unit prices contained herein.

Reference the Detailed Specification for "Extension of Time, Additional Compensation" for provisions regarding delays.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PERMITS

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a. General.- The Contractor shall secure all permits required by the agency having jurisdiction, shall abide by all rules and regulations of each, and shall pay all costs in connection with the permits. The Contractor shall pay for all permit and inspection fees as the agencies may charge to ensure compliance with their requirements, unless stated otherwise herein. The Contractor shall not be reimbursed for permit, inspection fees, retainage, bonds, or any other associated permit costs. These amounts shall be included in the item of work for "General Conditions." City of Ann Arbor (City) Lane Closure permits, "No Parking" signs permits, and Right-of-Way permits shall be secured as required under Section 9 of "General Conditions."

The Contractor shall be aware that permits must be submitted with the name of the Prime Contractor as the Designated Agent. The City will waive the fees for City issued permits. The Contractor shall coordinate with and complete all necessary paperwork for the respective City Units for the procurement of the needed permits.

All costs associated with coordinating with the City to obtain the permits will not be paid for separately.

b. City of Ann Arbor Grading/Soil Erosion and Sedimentation Control (SESC) Permit.- The Contractor shall obtain a City of Ann Arbor Grading/SESC Permit prior to beginning any work on this project. A copy of the permit application is included for the Contractor's information and to complete and submit along with the SESC plans in the Drawings.

c. City of Ann Arbor Traffic Control Permit.- The Contractor shall obtain a City of Ann Arbor Lane Closure Permit prior to beginning any work on the project. The permit process is completed online via the City's website: <https://etrakit.a2gov.org/etrakit3/>

d. City of Ann Arbor Right-of-Way Permit.- The Contractor shall obtain a City of Ann Arbor Right-of-Way Permit prior to beginning any work on the project. A copy of the permit application is included for the Contractor's information and to complete and submit along with the Drawings.

e. University of Michigan Access Agreement.- University of Michigan permits for OSEH storm water and soil erosion are not required for this project. The Access Agreement established between U of M and the City delegates all responsibility for these items to the City, as well as other constraints. A copy of the agreement from the last project performed in the Arboretum is attached to the end of this section as an example. The Contractor must submit the approved construction schedule to U of M via the City in order to finalize the agreement. The Contractor is required to sign and comply with the finalized agreement.



City of Ann Arbor
PLANNING & DEVELOPMENT SERVICES — BUILDING DIVISION

301 East Huron Street | P.O. Box 8647 | Ann Arbor, Michigan 48107-8647
 p. 734.794.6263 | f. 734.994.8460 | pstephens@a2gov.org

**GRADING/SOIL EROSION AND SEDIMENTATION
 CONTROL PERMIT APPLICATION**

Part 91 of Act No. 451 of Public Acts of 1994 as amended, being Section 324.9101 - 324.9123
 of Michigan Compiled Laws and Title V, Chapter 63, City of Ann Arbor Ordinance Code

Permission is requested by the Property Owner and designated agent to perform work as
 described below and on the reverse side, and as shown on the attached plans.

YOU *MUST* FILL IN ALL FIELDS

PROPERTY	Address	Tax ID No.	Lot #
	Between	And	
PROPERTY OWNER	Name	Ph	Fax
	Address		
CONTRACTOR/ DESIGNATED AGENT	Last Name/Business	Ph	Fax
	Address	City	License No. Exp.
ARCHITECT/ ENGINEER	Name	Ph	Fax
	Address	License No.	
PROJECT INFORMATION/NAME:			
TYPE OF WORK			
<input type="checkbox"/> Build/Finish <input type="checkbox"/> Addition(s) to <input type="checkbox"/> Alteration(s) to <input type="checkbox"/> Demolition/Cleaning <input type="checkbox"/> Move <input type="checkbox"/> Repair(s) to <input type="checkbox"/> Replacement of <input type="checkbox"/> Other _____	<input type="checkbox"/> New <input type="checkbox"/> Existing <input type="checkbox"/> Portion(s) of existing <input type="checkbox"/> Foundation only <input type="checkbox"/> Other _____ _____ _____	<input type="checkbox"/> Single Family Residence <input type="checkbox"/> Garage <input type="checkbox"/> Driveway <input type="checkbox"/> Multiple Structure Development <input type="checkbox"/> Commercial <input type="checkbox"/> Utility <input type="checkbox"/> Public Facility <input type="checkbox"/> Other _____	

You ***MUST*** submit ***TWO (2)*** copies of plans.

FLOODPLAIN/WETLAND

Name of and distance to nearest lake, stream or drain: _____

Does project require MDEQ Permit? Yes No DEQ Permit # _____

DESCRIPTION OF WORK _____

ON-SITE CONTACT:

NAME: _____ Company Name _____

ADDRESS: _____ PHONE: (_____) _____

Total Area of Parcel (In Acres): _____ E-MAIL: _____

Total Area of Proposed Earth Disruption (Nearest 1/10th of an acre): _____

2 COPIES OF THE GRADING PLAN MUST ACCOMPANY THIS APPLICATION.
Please verify that all of the following information required is included on the grading plan:

For Projects on One Single Family Parcel or Lot:

- The scale of the grading plan. (Not to exceed 1"= 50'.)
- A description of the soil types of the exposed land area contemplated for the earth change.
- All natural features (landmark trees, wetlands, floodplains, woodlands, steep slopes, etc.) within 50 feet of proposed disturbance; and watercourses or lakes within 500 feet of the proposed disturbance.
- All existing and proposed structures are shown on the plan (differentiate between the two).
The physical limits of each proposed earth change including any areas that will be disturbed.
- Existing and proposed grade changes (differentiate between the two) using contour lines or **accurate** slope descriptions.
- Arrows indicating existing and proposed (differentiate between the two) water runoff patterns.
- A description and the location of all proposed temporary and permanent soil erosion and sediment control measures necessary to prevent offsite sedimentation.

FOR NEW HOUSE CONSTRUCTION ONLY, the following relative spot elevations are shown:

- First floor elevation.
- Lowest floor (basement) elevation for a walkout.
- A spot elevation of the street in front of the structure.
- High and low spot elevations on the lot (existing and proposed)

Proposed Construction Sequence (month/year)*:

- Project start date: _____ / _____
- Gravel drive or mud mat installed: _____ / _____
- Erosion control measures installed (**erosion control inspection**): _____ / _____
- Land clearing: _____ / _____
- Excavation started: _____ / _____
- Stormwater Management Sys. installed: _____ / _____
- Utilities constructed: _____ / _____
- Roads constructed: _____ / _____
- Pre-footing inspection:** _____ / _____
- Install foundation: _____ / _____
- Final grading/ seeding: _____ / _____
- Permanent erosion controls installed: _____ / _____
- Temporary erosion controls removed¹ : _____ / _____
- Project complete (**final inspection**)² : _____ / _____

* Please note that all of the items may not applicable to all jobs. If this is the case, simply indicate N/A.

¹ Temporary erosion controls cannot be removed until the site is stabilized.

² Site must be stabilized with permanent measures prior to scheduling of the final inspection.

NOTE:

1. Earth disruption may not commence prior to issuance of Grading/Soil Erosion and Sedimentation Control permit.
2. If project involves work within a floodplain, wetland, or cross section of a lake or stream, you must obtain an MDEQ permit prior to issuance of this permit.
3. Permittee is cautioned that grade changes resulting in the impoundment of water or increased runoff onto adjacent property is subject to civil damage litigation.

The Property Owner's signature is required either as the sole permit holder or to authorize the contractor to be the designated agent.

Permit holder will be:

- Property Owner
- Contractor / Designated Agent

(NOTE: Contractor is NOT allowed to act as a designated agent if Contractor is in non-compliance status on other permits.)

I (we) affirm that the above information is accurate and that I (we) will conduct the above described earth change in accordance with Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, Chapter 63 of the Ann Arbor Ordinance Code, the documents accompanying this application, and with all terms and conditions of the permit as it may be issued, and agree to pay all fees and costs that may come due as a result of any activity under the permit.

Property Owner's Signature

Print Name

Date

I (we), the Property Owner, authorize the Contractor identified on this application to be my Designated Agent and to secure a grading permit on my behalf.

Property Owner's Signature

Print Name

Date

I (we) affirm that the above information is accurate and that I (we) will conduct the above described earth change in accordance with Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, Chapter 63 of the Ann Arbor Ordinance Code, the documents accompanying this application, and with all terms and conditions of the permit as it may be issued, and agree to pay all fees and costs that may come due as a result of any activity under the permit.

Designated Agent's Signature

Print Name

Date

OR

OFFICE USE ONLY

GRADING NOTES: _____

Approved By: _____ Approval Date: _____

FEEES

Grading Permit \$ _____

Cash Bond: \$ _____

Inspection Escrow:

(Months of construction) x (\$100/ Month)

_____ X _____ = \$ _____

- Escrow must be collected at issuance of permit
- Designated agent is responsible for contacting city, for release of outstanding escrow, at completion of project



City of Ann Arbor Customer Service

301 E. Huron | P.O. Box 8647 | Ann Arbor, Michigan 48107-8647
p. 734.794.6320 | f. 734.994.8991 | customerservice@a2gov.org

PERMIT No. ROW _____ - _____

RIGHT-OF-WAY APPLICATION

Permission is requested by the Contractor to perform work as described below and as shown on the attached plans, within the City of Ann Arbor's right-of-way. A copy of the permit shall be at the work site at all times.

ADDRESS OF PROPOSED WORK/ACTIVITY: _____

PROPOSED DATES OF WORK/ACTIVITY: START _____ COMPLETION _____

TYPE OF WORK & ROW IMPACTS (Check and complete **ALL** that apply):

- Underground Utility:** Water (size ____") Sewer Gas Electric Telecomm Other _____
- Service Lead: [Under Street and/or Behind Curb] ; [Trenched and/or Bore]; Total Length in Feet _____
- or
- Utility Main Line: [Under Street and/or Behind Curb] ; [Trenched and/or Bore]; Total Length in Feet _____
- Lane Closure Needed (Impacting Flow of Traffic) – (Application to be filed with Project Mgmt)**
- Drive Approach:** New or Remove/Replace; Residential or Commercial; No. of Approaches _____
- NOTE: Width: 10'-24' (Single- or Two-Family); 24'-30' (All Other). Turning Radius: 5'-15'. Curb Cut Max: 60'
- Sidewalk or Bikepath:** Area _____ S.F. (Remove/Replace Sidewalk or Bikepath)
- Utility Poles:** Remove/Replace (Same Location) Remove New; Total No. of Poles Impacted _____
- Cable (Aerial or Through Existing Conduit):** Length in Feet _____
- Soil Borings:** No. of Borings _____ **Monitoring Wells:** No. of Well Heads _____
- Earth Retention System** Total Length in Feet _____ **Tree Impacts – Forestry Permit Required**

DESCRIPTION OF WORK: _____

Contractor, acting through the undersigned, agrees to comply with all terms and conditions of permit as it may be issued and agree to pay all fees and costs that may come due as a result of any activity under the permit.

SIGNATURE: x _____

Print Name of Signature and Title: _____

Company Name : _____

Address: _____

Phone: _____

Email: _____

OFFICE USE ONLY:

Date of Application Submittal: _____

Contractor's Insurance Expiration Date: _____

3 Sets of Plans Attached

Special Permit Conditions Attached

Street-cut Moratorium List Checked?

Reviewing Dept. / Div.	Approved By	Date
Project Management		
Planning & Development		
Other:		
FEE: \$		

Updated: 11/10/15 CF

**RIGHT-OF-WAY PERMIT
TERMS, CONDITIONS AND REQUIREMENTS**

1. The Contractor shall perform all its work and activities in accordance with the **City of Ann Arbor Public Services Standard Specifications (STANDARD SPECIFICATIONS)**. Contractors shall acquaint themselves with the STANDARD SPECIFICATIONS prior to undertaking any work or activities within the right-of-way.
2. The Contractor shall **schedule the inspection** of each work activity with the applicable department(s) / service area(s), a minimum of 72 hours or as otherwise required prior to the time of inspection.
3. The Contractor shall submit its request for the times/dates of any **Lane Closure Permits** to the Public Services – Project Management Unit for review and approval a minimum of 72 hours prior to the work being performed. Project Management must approve all lane closures in advance of the work being completed.
4. The Contractor shall submit its valid, current **certificate of insurance** to Customer Service for review and approval prior to permit approval. Contractor's insurance shall comply with City Code Chapter 47, and shall remain in effect throughout the work. City Code is available at City Clerk's Office or at <http://www.a2gov.org>.
5. The Contractor shall satisfy the requirements of the State of Michigan **MISS-Dig Law** as set forth in MCL 460.701 through MCL 460.718, Public Act 248.
6. The Contractor shall place a **hard surface over all disturbed pavement areas** at the end of each day, in accordance with STANDARD SPECIFICATIONS, or as otherwise directed by the Public Services Area.
7. The Contractor shall install and maintain all **detours, lane closures, signing, traffic control devices, etc.**, in conformance with the Michigan Manual of Uniform Traffic Control Devices, and in accordance with City Code Chapter 47, Section 4:23, and as directed by the Public Services Area.
8. The Contractor shall take, provide and maintain all **necessary precautions to prevent injury or damage** to persons and property, from operations covered by this permit, and shall satisfy the requirements of the State of Michigan Department of Labor Construction Safety Standards, particularly Parts 1, 9 and 21.
9. The Contractor shall submit **three sets of construction plans** with any permit application for proposed utility main-line construction.
10. When required by the City, the Contractor shall **submit detailed construction plans** of all proposed work.
11. The Contractor shall submit a permit application for **emergency utility work** no later than the business day following the start of the work. Project Management shall be notified at 734 794-6410 prior to beginning any work.
12. The Contractor shall coordinate all **tree (and/or root) trimming and/or removal** within the right-of-way with the City Field Operations at 734 794-6350, as required by City Code Section 3:12. A Forestry Permit may be required.
13. The **Contractor and Owner shall indemnify and reimburse the City** for any and all restorative costs resulting from the Contractor's work not complying with the terms and conditions of the permit as it may be issued.
14. The Contractor shall obtain an **MDOT permit** for all proposed work/activity on **State Trunklines**, prior to and in addition to, obtaining City of Ann Arbor Right-Of-Way and Lane Closure permits.
15. The Contractor shall maintain a **copy of all City and State required permits at the work site**.

PROPERTY ACCESS AGREEMENT

**BETWEEN THE REGENTS OF THE UNIVERSITY OF MICHIGAN
AND THE CITY OF ANN ARBOR
FOR INSTALLATION OF AN ACCESS ROAD AND A TEMPORARY SANITARY
SEWER BYPASS SYSTEM**

THIS PROPERTY ACCESS AGREEMENT ("Agreement") is made and entered into this 15th day of November, 2016, by and between THE REGENTS OF THE UNIVERSITY OF MICHIGAN, a Michigan constitutional corporation, with an address of 326 E. Hoover, AEC - Real Estate Office, Ann Arbor, MI 48109-1002 ("University") and the CITY OF ANN ARBOR, A Michigan municipal corporation, 301 E. Huron Street, Ann Arbor, Michigan 48104 ("City").

BACKGROUND

A. The University is the owner of certain real estate in the areas known as the University Hospital and Nichols Arboretum, in the City of Ann Arbor, Michigan including the two parcels identified on **Exhibit A** as "Parcel A" and "Parcel B" (collectively "University Property").

B. The City has sanitary sewers and appurtenances that cross portions of the University Property, including a siphon, that require periodic inspection and maintenance. The City has an easement for the portion of the sanitary sewer on Parcel A set forth in the Right of Way for Sewers, between the University and the City, dated January 25, 1933.

C. The City has requested permission from University to access the University Property to inspect, line, and repair these sanitary sewers and use a portion of the University Property to install a temporary sanitary sewer bypass system for the City which consists of a 12" above ground pipeline, hydraulic pumps, a generator, monitoring equipment, signage, and a crane; and also to install a gravel road with a gate and a gravel pad to access the siphon (collectively, the "the Permitted Facilities") in the areas depicted on the attached **Exhibit B** (the "Access Area").

D. The University is willing to grant the City permission to enter the University Property and use a portion of the University Property for the purpose of inspecting, lining, and repairing sanitary sewers and installing, maintaining, removing and monitoring the Permitted Facilities in the Access Area. The installation of the temporary sanitary sewer bypass system will begin at manhole number 71-69254 east of the University's helipad and continue along the sanitary sewer pipeline to manhole number 71-69893. The pipeline will be installed along Nichols Drive and under the Caretakers Field Office Road so as not to restrict service or safety vehicles.

E. The University and the City will execute an Easement Agreement for the gravel road, gate and gravel pad to remain on the University Property after the expiration of this Agreement.

NOW, THEREFORE, in consideration of the foregoing, certain valuable non-monetary consideration, and of agreements hereafter contained, the University hereby grants to the City the right to access the University Property and the right to use a portion of the University Property subject to terms and conditions set forth herein.

1. Access Areas and Use.

(a) Area. University grants to City a license for City to access the University Property and use the Access Area (the "License") 24 hours a day, seven days a week (except as set forth in Section 5, below) solely for the purpose(s) of performing inspection, lining, and repair of sanitary sewers and installing, maintaining, and monitoring the Permitted Facilities and also to remove the Permitted Facilities from the Access Area (except the gravel road, gate and pad), as further described in paragraphs C and D, above. The License applies only to the Access Area and not to any other portion of the University's Property except as may be necessary to gain access to the Access Area, including ingress and egress over East Medical Center Drive and Nichols Drive as more specifically detailed in Section 5, below.

(b) Use. No person who is not an employee, contractor, subcontractor, agent or invitee of City shall be permitted on the Access Area. City is strictly prohibited from making any alterations, additions, improvements, modifications or changes to the Access Area except as authorized by this Agreement. City is prohibited from making waste to the Access Area. City is further strictly prohibited from causing any disturbance, including noise or odor, which may unreasonably disturb other occupants of the University Property or users of the Access Area or its environs. City shall keep and maintain the Access Area in good, clean, orderly and safe condition.

2. Term. The term of this Access Agreement ("Term") shall commence upon the date of execution of this Agreement and shall expire on June 1, 2017.

3. City's Responsibilities. The City shall be responsible for all costs associated with the Permitted Facilities and shall leave the University Property in the condition in which the City, or City's contractors, agents or representatives, found it. The City shall not permit any liens to attach to the Property by reason of the exercise of the City's rights hereunder. All tools, equipment, temporary improvements, and other personal property taken upon or placed upon the University Property by the City shall remain the property of the City and must be removed by the City prior to the expiration of this Agreement.

4. Siphon Access Road, Gate and Pad.

The City may construct a gravel access road and gravel pad to access the sanitary sewer and siphon as shown on **Exhibit C**. The City may remove vegetation, including trees, only as necessary to construct the access road and pad as shown on **Exhibit C**. The City shall install a lockable gate across the access road to prevent unauthorized vehicle access and City shall provide a copy of the key to the University.

5. Access over E. Medical Center Drive, Nichols' Drive and University Parking Lot M29. The City may access the Access Area via the University-owned roads E. Medical Center Drive (paved) and Nichols' Drive (gravel) and the University Parking Lot M29 ("Lot M29") as shown on **Exhibit D** (the "Access Route"); with the following terms and conditions:

(a) There shall be no obstruction of, parking on, or staging of trucks on Nichols Drive, E. Medical Center Drive and Lot M29. At no time will vehicular access be blocked along the Access Route and to the caretaker cottage located on the University Property;

(b) The City and the Contractor shall not use Lot M29 for staging of construction,

(c) Contractor may only drive large trucks along the Access Route from 8:00pm to 8:00am on each Monday – Friday. Contractor may drive large trucks along the Access Route from 4:00pm each Saturday through 8:00am each Monday; provided that if this use of the Access Route causes congestion for University staff and patients using the Access Route the University may adjust the access hours in the section to mitigate the congestion while preserving the ability of the City to complete the project within the term of this Agreement. The City shall provide traffic controls along the Access Route, as needed;

(d) If the Contractor elects to truck water along the Access Route, this work will be limited to 60-hour consecutive periods from 8:00pm Friday through 8:00am Monday; provided that such activity must be coordinated and approved in advance with University. During these periods, the Contractor shall remain in radio contact or communicate via other means with water tanker truck drivers to coordinate use of the Access Route to mitigate congestion and other impacts along the Access Route:

(e) The City will install, at the City's expense, signs along the Access Route indicating that parking is prohibited during the hours set forth above and warning that cars parking during those hours may be towed. The City may have a contractor tow cars that are parking along the Access Routes during the City's access hours.

6. The Slope. There is a slope down from E. Medical Center Drive to the railroad right-of-way below Nichols Drive (the "Slope"), as shown on **Exhibit D**. The

University is concerned that the Work may cause that slope to erode. The University acknowledges that the Slope is experiencing documented sliding/sloughing that began prior to the commencement of this work. The University will engage, at the City's expense, a company to monitor the Slope during the Term. The City will reimburse the University for the third-party monitoring costs up to \$5,000.00 and shall pay the University within 30 days of receipt of an invoice from the University. The University shall provide copies of all Slope monitoring reports to the City.

7. Compliance with Law. The City shall perform all work related to the Permitted Facilities (the "Work") at the City's expense and in compliance with all applicable laws, ordinances and regulations and obtain at City's own expense all permits, licenses, certificates and approvals required to perform the work.

8. Crane. Any crane used by City or City's contractor to perform the Work, will not exceed any height limits imposed for University's hospital helicopter use and Federal Aviation Administration regulations and when using any crane shall at all times comply with any applicable local, state and federal regulations.

9. Construction and Access Schedule. Within 5 business days after execution of this Agreement, the City shall provide the University with notice of the commencement, and shall include a description of their construction activities and a schedule for accessing the University Property and the Access Route and an estimated completion date. City shall also provide plans for traffic control sequencing, signage and staging. Any change to the schedule for access of the University Property must be approved in advance with the University. Any requests for changes to the schedule for access of the University Property should be emailed to Mary Krasny at mlkrasny@umich.edu and Judy Kirkdorffer at jkirkdorf@umich.edu at least 5 business days in advance of the effective date any requested change.

10. Security of Property. The City shall include reasonable security measures, to minimize the risk of property damage or bodily injury at or in the vicinity of the University Property as the result of the Work.

11. Restoration. The City shall repair, or cause to be repaired, any damage to University-owned real or personal property (including the Access Route and the Slope), third-party owned real or personal property and the University Property caused by performing the Work and shall leave the University Property in substantially the same condition as existed as of the date of commencement of the work. When restoring the area around the new access road and pad, the City shall use woodland seed. The City shall not remove any trees from the University Property, except as permitted for the access road, pad, and gate.

12. Insurance. City's contractors and any and all subcontractors (hereinafter contractors) shall obtain at their own cost and expense, and keep in full force and effect, during the term of their access upon the University Property, a comprehensive general liability insurance policy in an amount not less than One

Million Dollars (\$1,000,000.00) combined single limit for bodily injury, death and property damage arising out of any one occurrence, protecting the University against any and all claims for bodily injury, death or property damage arising directly or indirectly from the contractor's use of the Site. Such policy or policies shall name the University as an additional insured. The policy or policies required hereunder shall be issued by insurance companies qualified to do business in the state and such policy or policies shall provide at least twenty (20) days' notice to the Owner before cancellation or material modification. The City's contractors shall deliver to the University certificates of such insurance evidencing the coverage in force as of the commencement date of this Agreement, as well as any replacement certificates issued during the Term of this Agreement.

13. Default. If the City fails to observe or perform any of its obligations under this Agreement, then the City shall be in default under this Agreement, and University may, at its option, exercise one or more of the following remedies:

(a) After meeting and conferring with the City to resolve the nonperformance, to declare this Agreement terminated;

(b) Obtain specific performance of the covenants and obligations of the City under this Agreement; or

(c) Perform the obligation on behalf of the City in which event the costs and expenses paid or incurred by the University in performing the City's obligations shall be immediately due and payable to the University following receipt of the University's invoice.

14. Nature of License. No legal title, easement or other possessory interest in real estate, including any leasehold interest in the Access Area, or any appurtenances to it, shall be created or deemed or construed to have been created or vested in the City by anything contained in this Access Agreement. This grant of License is personal and not transferable or assignable in whole or in part.

15. Supervision. The City shall be responsible during the term of this Agreement for the supervision of the activities of all of the City's agents, employees, contractors, subcontractors, licensees and invitees in connection with access to and use of the Access Area. The University may remove any person on the Access Area that in any manner violates any aspect of conduct allowed in or around the Access Area. Any interference or delay caused by the City or any of its agents, employees, contractors, subcontractors, licensees and invitees in the University's efforts to remove a person shall be deemed a material breach of this Agreement.

16. Termination. The access and use rights granted pursuant to this Agreement may be terminated by the University or City by providing written notice to the other party. Upon any such termination, the City shall have continued access to the Property for a reasonable and sufficient period of time to permit the City to complete any necessary repairs as set forth in Paragraphs 3 and 11 of this Agreement.

17. Notices. Any notice permitted or required to be given under this Agreement shall be in writing and shall be deemed to be duly given when delivered certified mail, return receipt requested, to the party entitled to such notice at their address set forth hereinabove, with a copy to:

For the City: City of Ann Arbor
Public Services Area
Project Management Services Unit
301 E. Huron Street
Ann Arbor, Michigan 48104

For the University: The Regents of the University of Michigan
AEC - Real Estate Manager
326 E. Hoover, Mail Stop B
Ann Arbor, MI 48109-1002

18. Third Parties. The access and use rights granted to the City under this Agreement is a personal privilege of the City and shall not be transferred or assigned except as provided in Paragraph 1 hereof. Nothing in this Agreement, whether express or implied, is intended to relieve or discharge the obligation or liability of any third persons to either party to this Agreement, nor will any provision give any third persons any right of subrogation or action over or against either party to this Agreement.

19. Governing Law and Venue. All matters arising out of or related to this Agreement shall be governed by and construed under the laws of the State of Michigan without regard for principles of choice of law and shall be brought in a court of subject matter jurisdiction within the state of Michigan. The Parties and their successors and assigns consent to the jurisdiction of the courts of or within the state of Michigan with respect to any other claims arising under this Agreement.

20. Entire Agreement. This Agreement together with all its Exhibits constitutes the entire agreement between the parties to the Agreement regarding the subject matter of this Agreement and cannot be amended or modified except by a writing signed by all of the parties to this Agreement. The exhibits attached to this Agreement is incorporated into the Agreement and made a part of this Agreement for all purposes.

21. City Contractors and Indemnification by City Contractors.

(a) City shall provide University with a list of all of its contractors and any and all subcontractors who shall access the University Property (hereinafter "City Contractors") pursuant to this Agreement.

(b) All City Contractors shall indemnify and hold University harmless from

and against any and all damage to property or injury or death to persons, and from and against any and all costs, claims, damages, causes of action, liabilities and expenses of any nature whatsoever (including reasonable attorney's fees) arising out of or in connection with the Work. Before any City Contractor accesses the University Property, City shall cause them to execute the attached "Acknowledgment of Access Agreement". City shall promptly provide copies of each signed acknowledgement to University.

22. Environmental.

(a) The Permitted Facilities include a generator. City will take appropriate measures to avoid fuel spills and contain any potential fuel spills.

(b) City will comply with all applicable federal, state, and local environmental laws and regulations in all activities undertaken pursuant to this Agreement, including the operation of any generator or diesel tanks on the University Property. City is solely responsible for the prompt, lawful and proper disposal of any and all waste materials and contamination to the University Property, if any, generated by City's activities and the activities of anyone acting on its behalf (including employees, contractors, vehicles or equipment). If any contamination is released onto the University Property, City shall immediately clean up any such releases and shall ensure no contamination shall be released into any storm drains in the area during the clean-up procedure. If a release occurs that requires a corrective action plan, City shall as soon as possible notify University. If City fails to promptly clean up a release, University may perform such clean up on behalf of City in which event the costs and expenses paid or incurred by University in performing City's obligations shall be immediately due and payable by City to University following City's receipt of invoice with backup documentation of all such costs and expenses.

23. Counterparts. This Agreement may be executed in counterparts, and it shall not be necessary that the signatures of all parties hereto be contained on any one counterpart hereof; each counterpart shall be deemed an original, but all of which together shall constitute one and the same instrument.

24. Third Party Beneficiaries. Nothing in this City Agreement, express or implied, is intended to or will be construed to confer upon any person or party, other than the University and City, any right, remedy, or claim under or with regard to the Agreement.

25. Severability. Whenever possible, each provision of this Agreement will be interpreted in a manner so as to be enforceable, valid, and legal under applicable law. If any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable, invalid, or illegal in any respect under applicable law, the unenforceability, invalidity, or illegality will not affect any other provision of this Agreement and this Agreement will be construed as if the unenforceable, invalid, or

illegal provision had never been contained in this Agreement.

26. No Waiver. No delay or failure on the part of the University in the exercise of any right granted under this Agreement or otherwise available by Agreement, at law, or in equity, shall impair any right, to be construed as a waiver of any default or any acquiescence.

27. Relationship of The Parties. Nothing contained in this Agreement shall be deemed or construed by the parties or by a third party to create the relationship of principal and agent or of a partnership or of a joint venture or of any association whatsoever between the University and the City.

28. Exhibits. The following exhibits are attached to this Agreement and incorporated into this Agreement:

- (a) Exhibit A: University Property
- (b) Exhibit B: Access Area
- (c) Exhibit C: Gravel Access Road, Gate and Pad
- (d) Exhibit D: Access Route

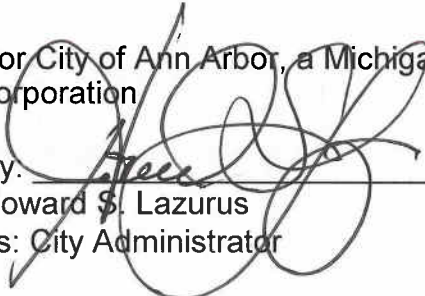
IN WITNESS WHEREOF, the parties have executed this Agreement on the date first above written.

UNIVERSITY: The Regents of the University of Michigan, a Michigan constitutional corporation

By: Mary Krasny
 Name: Mary Krasny
 Its: Associate Director Real Estate & Leasing-AEC
 Date: 11.7.16

[SIGNATURES CONTINUE ON THE FOLLOWING PAGE]

For City of Ann Arbor, a Michigan municipal corporation

By:  10/15/16
Howard S. Lazurus
Its: City Administrator

Approved as to substance:

By: 
Craig Hupy
Its: Public Services Area Administrator

Approved as to form:

CF By: 
Stephen K. Postema
Its: City Attorney

ACKNOWLEDGMENT OF ACCESS AGREEMENT

I, John Thompson, confirm that I have read the Property Access Agreement (the "Agreement") entered into by THE REGENTS OF THE UNIVERSITY OF MICHIGAN and the CITY OF ANN ARBOR, dated _____, 2016. I understand the terms of the Agreement and agree to comply with the terms of the Agreement, including the terms regarding indemnification and insurance as if I were an original party to the Agreement.

RECEIPT AND ACCEPTANCE ACKNOWLEDGED

LiquiForce Services (USA) Inc (Name of Contractor)

By: [Signature]

Title: Technical Representative

Date: 11/14/2016

EXHIBIT A
UNIVERSITY PROPERTY

PARCEL A

09-09-28-101-007 (1433 WASHINGTON HEIGHTS)

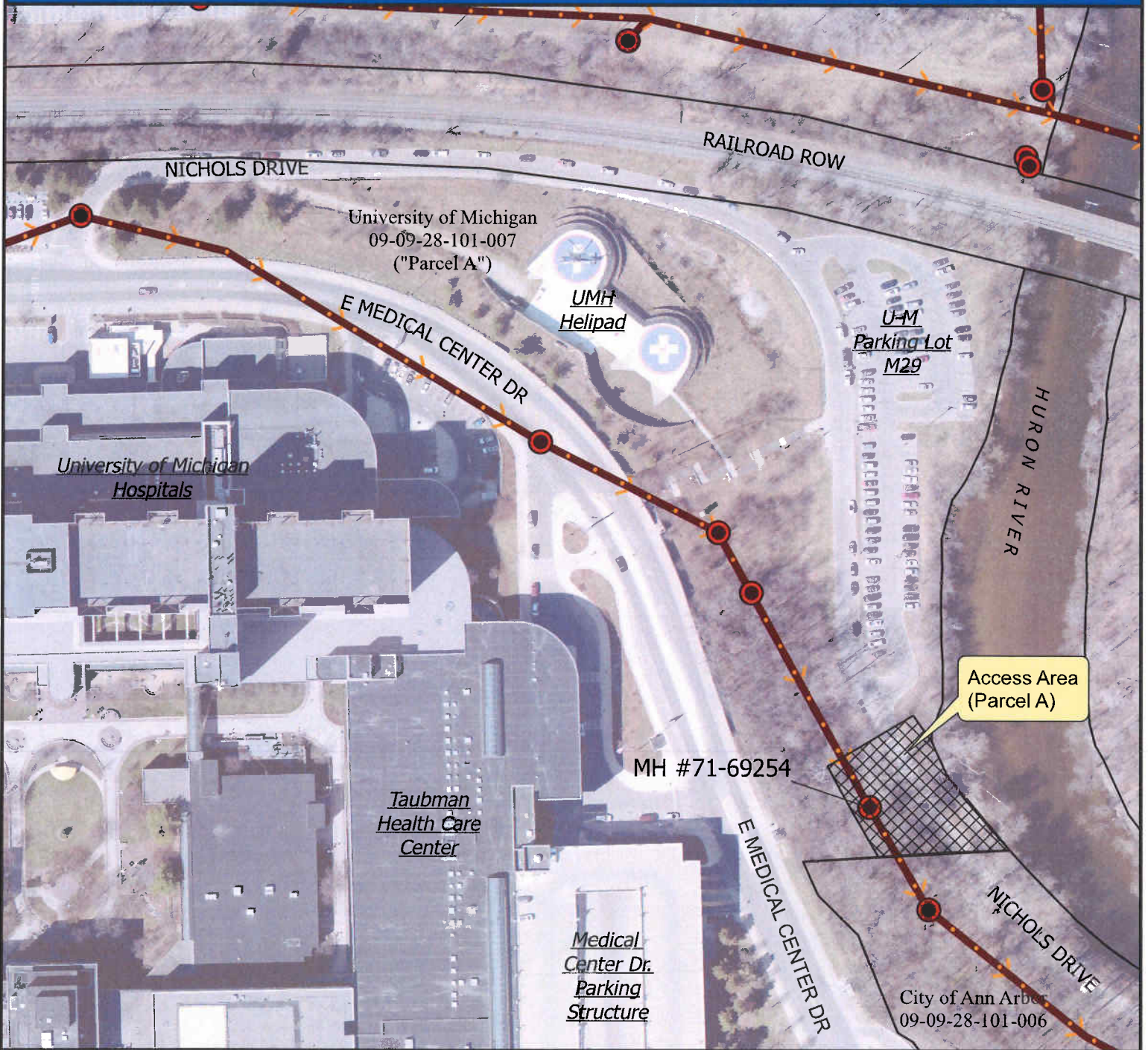
PRT NE 1/4 SEC 28 T2S R6E BD N BY NYC RR R/W & HURON RIVER E BY CITY OWNED PROPERTY
(09-28-101-006) S BY WASHINGTON HTS NL FOREST HILL CEMETERY W BY N & SL SEC 28 & EL
FOREST HILL CEMETERY EXC THAT PORTION OWNED BY THE CITY SPLIT ON 02/15/2007 FROM 09-
09-28-101-001

PARCEL B




PARCEL 09-09-27-201-001 (FULLER RD VACANT)

PRT W 1/2 SEC 27 T2S R6E BEG CENT SEC 27 TH S 87 DEG 48 MIN 20 SEC W 2179.83 FT TH S 1 DEG
43 MIN E 753.43 FT TH N 88 DEG 43 MIN 30 SEC W 157.38 FT TH N 87 DEG 18 MIN 30 DEX W
153.4 FT TH S 89 DEG 47 MIN 40 SEC W 154.79 FT TH N 0 DEG 56 MIN W 725.03 FT TH N 0 DEG 53
MIN 20 SEC W 1195.28 FT TO NL HURON R TH NE E & SE ALG NL RIV TO N & S 1/4 L SEC 27 TH S 1
DEG 16 MIN 20 SEC E 805.33 FT TO POB EXC HURON RIVER



Exhibit B ACCESS AREA (PARCEL A)




Legend

-  Access Area
-  Existing City of Ann Arbor easement area
-  City of Ann Arbor Tax Parcel

Sanitary Sewer

-  Sanitary Manhole (Non UM-Owned)
-  Sanitary Main (Non UM-Owned)



0 75 150 300
Feet

Michigan State Plane Coordinate System, South Zone
Map Units: International Survey Feet
Horizontal Datum: NAD 1983
Digital orthophoto images based on 2014 aerial photography

Notes:

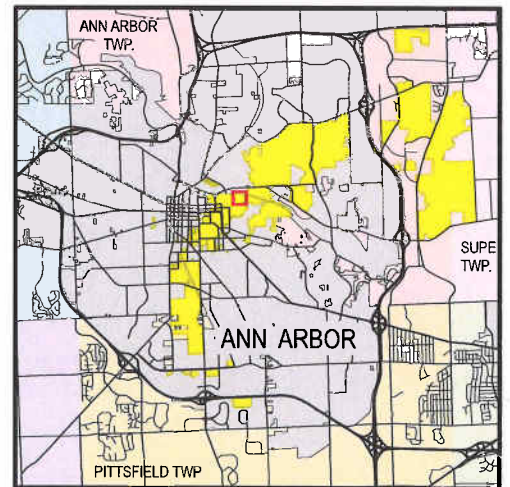
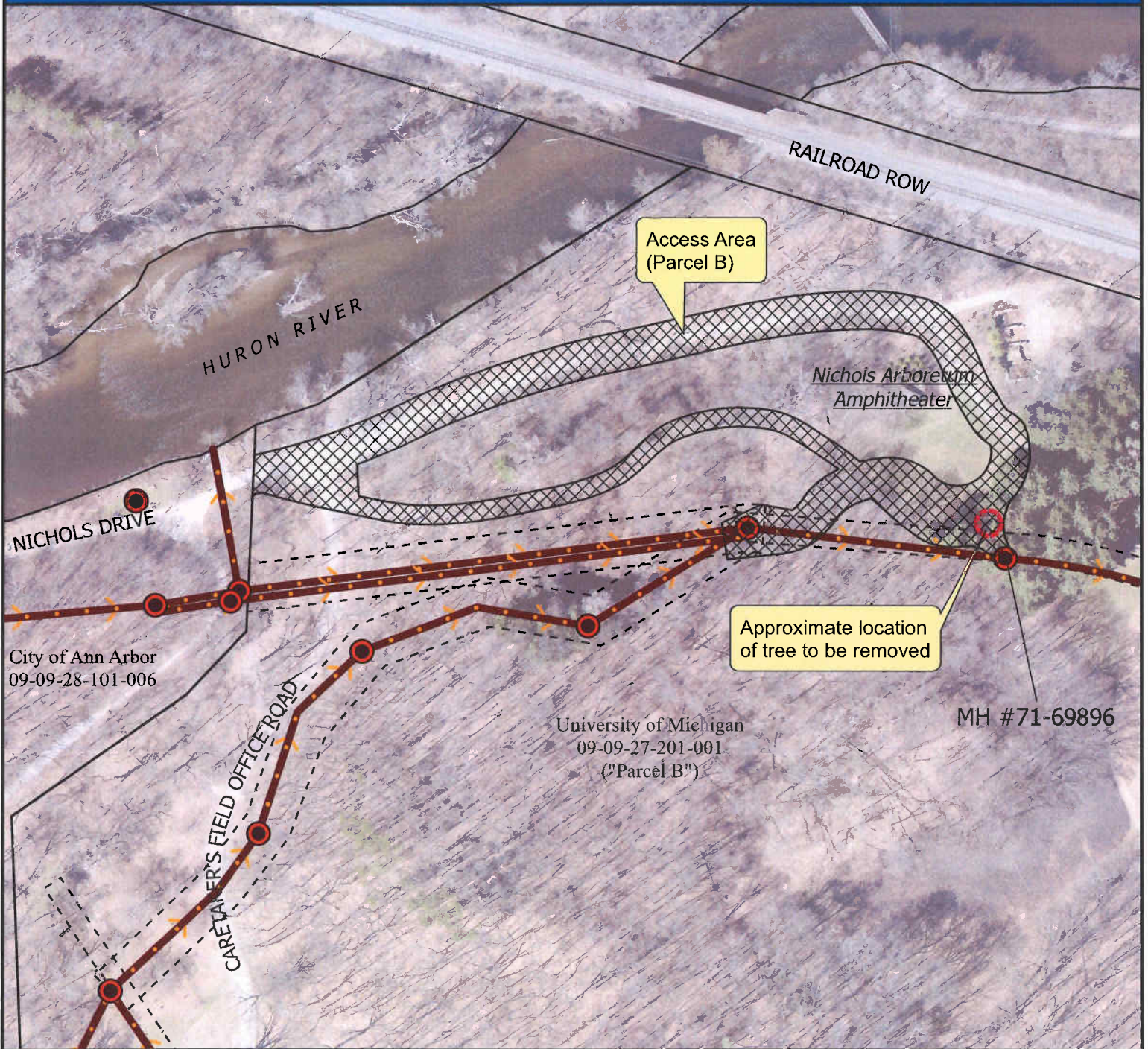


Exhibit B ACCESS AREA (PARCEL B)



Legend

- Access Area
- Existing City of Ann Arbor easement area
- City of Ann Arbor Tax Parcel

Sanitary Sewer

- Sanitary Manhole (Non UM-Owned)
- Sanitary Main (Non UM-Owned)

0 75 150 300 Feet

Michigan State Plane Coordinate System, South Zone
Map Units: International Survey Feet
Horizontal Datum: NAD 1983
Digital orthophoto images based on 2014 aerial photography

Notes:

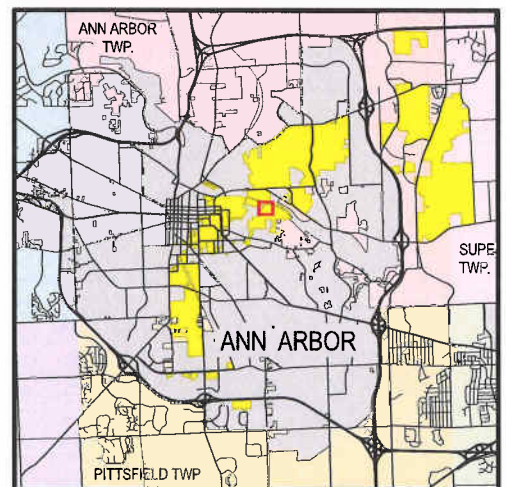
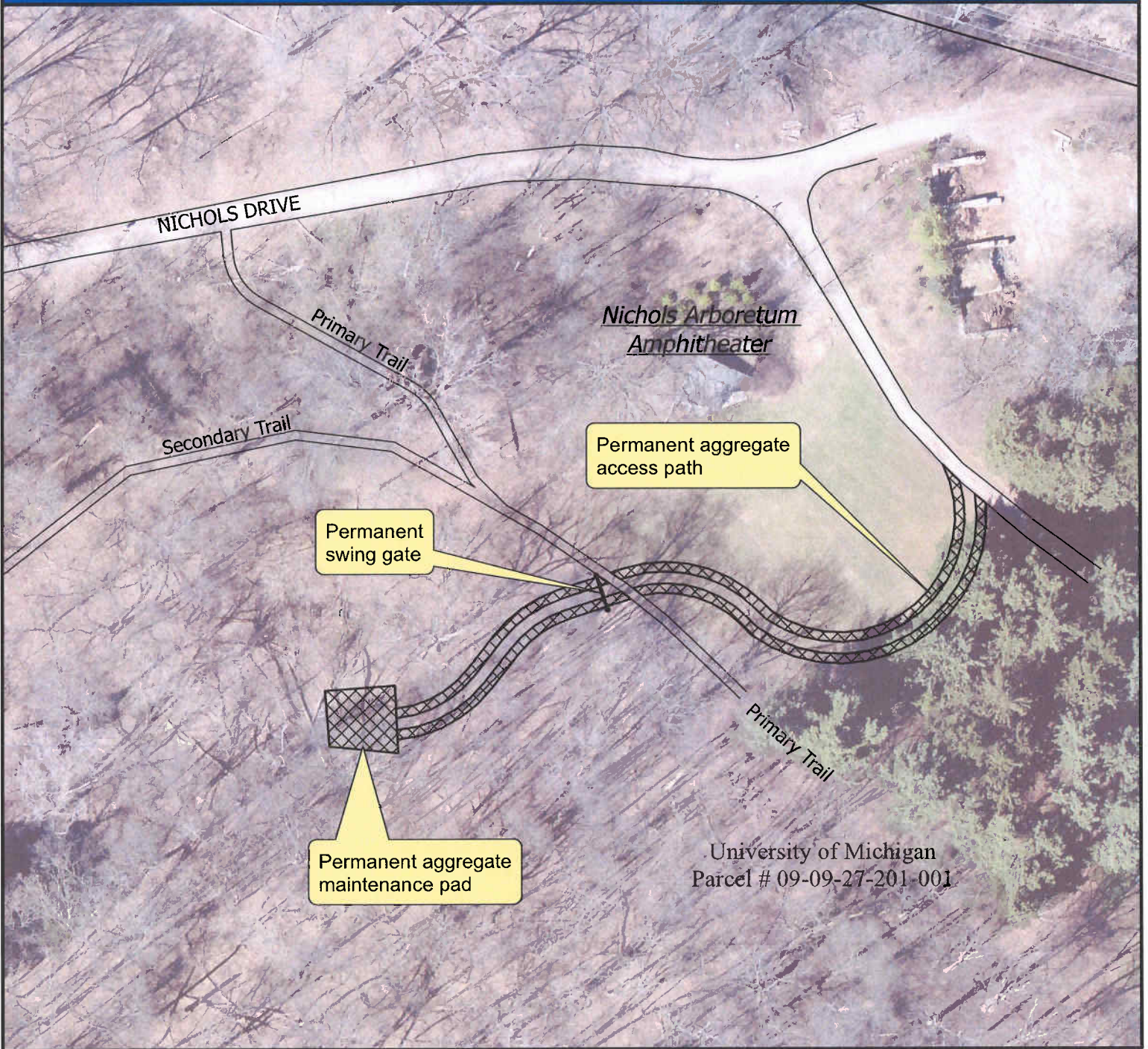


Exhibit C Gravel Access Road, Gate and Pad



Legend

- Aggregate access path and maintenance pad
- Swing gate
- Existing gravel drive/walking path



Michigan State Plane Coordinate System, South Zone
 Map Units: International Survey Feet
 Horizontal Datum: NAD 1983
 Digital orthophoto images based on 2014 aerial photography

Notes:

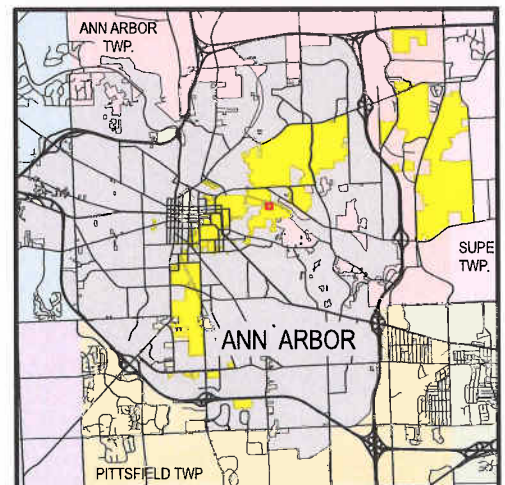
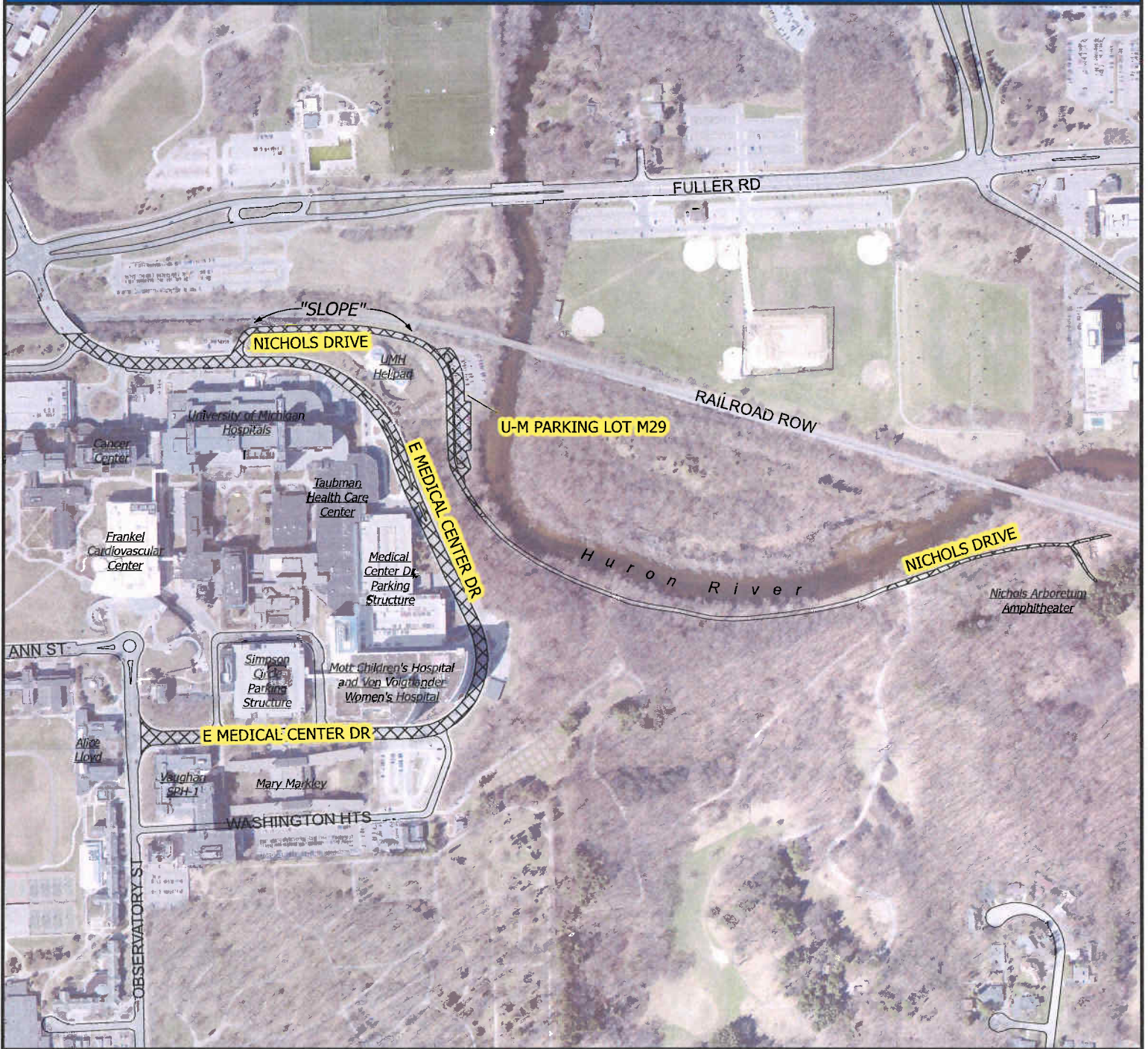


Exhibit D ACCESS ROUTE



Legend

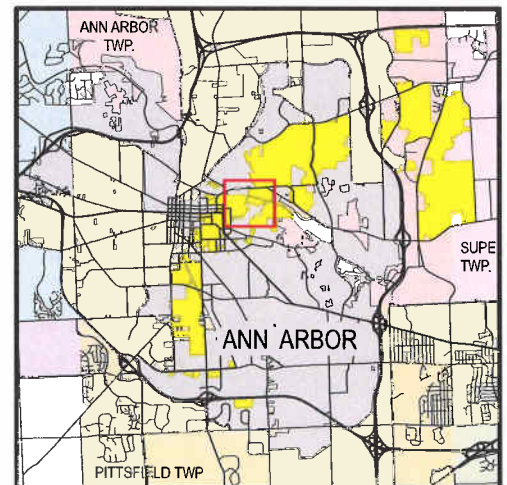
Access Route



0 275 550 1,100 Feet

Michigan State Plane Coordinate System, South Zone
 Map Units: International Survey Feet
 Horizontal Datum: NAD 1983
 Digital orthophoto images based on 2014 aerial photography

Notes:



ACKNOWLEDGMENT OF ACCESS AGREEMENT

I, John Thompson, confirm that I have read the Property Access Agreement (the "Agreement") entered into by THE REGENTS OF THE UNIVERSITY OF MICHIGAN and the CITY OF ANN ARBOR, dated _____, 2016. I understand the terms of the Agreement and agree to comply with the terms of the Agreement, including the terms regarding indemnification and insurance as if I were an original party to the Agreement.

RECEIPT AND ACCEPTANCE ACKNOWLEDGED

LiquiForce Services (USA) Inc (Name of Contractor)

By:  _____

Title: Technical Representative

Date: 11/14/2016

COORDINATION AND COOPERATION WITH OTHERS AND WORK BY OTHERS

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
COORDINATION AND COOPERATION WITH OTHERS AND WORK BY OTHERS**

Fishbeck:DD

1 of 2

6/30/2021

a. General.- The Contractor is reminded of, and shall comply with, the requirements of Section 104.08 of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction, "Cooperation by the Contractor."

The Contractor shall directly coordinate their work with individual City of Ann Arbor (City) Departments/Divisions/Units and appropriate University of Michigan (U of M) Departments.

No additional compensation will be paid to the Contractor, and no adjustments to contract unit prices will be made, due to delays and/or the failure of others in the performance of their work, nor for delays due to the encountering of existing utilities that are, or are not, shown on the Drawings.

Contractor shall coordinate with Utility Owners, in accordance with Detailed Specification "Utilities Coordination."

b. Owner/University of Michigan Occupancy During Construction.- The U of M Matthaei Botanical Gardens and Nichols Arboretum (MBGNA) Director and field staff will occupy and/or utilize the project site during the life of this contract for conducting normal maintenance and operations. Residents of the MBGNA Caretaker's House will utilize Nichols Drive for access.

The University of Michigan Hospital Complex will continue the use of Nichols Drive and Lot M29 for valet and permit parking as described in the Maintenance of Traffic (MOT) plans and elsewhere in the specifications.

The Contractor shall cooperate with the U of M departments to minimize conflict between their work operations and the day-to-day activities within Nichols Arboretum, the U of M Hospital Complex, and the surrounding area.

c. Access Agreement/Private Easements.- The City has obtained the necessary easements and access agreements required for construction within property owned by U of M and private residences. The Contractor shall conduct their operations in these areas in such a manner as to comply with the conditions set forth in said easement agreements. The Contractor shall limit their operations to the time of year, time of week, or time of day required on certain easements, as noted in the easements, agreements, and Contract Documents. Electronic copies of easements and access agreements are on file with the City and can be obtained by contacting:

COORDINATION AND COOPERATION WITH OTHERS AND WORK BY OTHERS

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
COORDINATION AND COOPERATION WITH OTHERS AND WORK BY OTHERS**

Fishbeck:DD

2 of 2

6/30/2021

City of Ann Arbor
Public Services Area - Project Management Services Unit
301 East Huron Street; P.O. Box 8647
Ann Arbor, Michigan 48107-8647

Igor Kotlyar, PE
Project Manager
(734) 794-6410 ext. 43634
ikotlyar@a2gov.org

8:00 a.m. to 5:00 p.m. (only)

Costs for complying with the requirements of this Detailed Specification, including the Contractor accomplishing all conditions noted in the easement and access agreements, will not be paid for separately, but shall be included in the bid price of the contract pay item "General Conditions."

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
MAINTENANCE OF TRAFFIC

Fishbeck:DD

1 of 5

7/1/2021

a. Description.- This work shall consist of protecting and maintaining vehicular and pedestrian traffic in accordance with Sections 104.11, 812, and 922 of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction; Part 6 of the 2011 edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD); and the City of Ann Arbor (City) Public Services Department Standard Specifications, except as modified herein.

The Contractor shall furnish, erect, maintain, and upon completion of the work, remove all traffic control devices within the project and around the perimeter of the project for the safety and protection of all traffic. This includes, but is not limited to; temporary advance, regulatory, and warning signs; barricades and channelizing devices at intersections, streets, and trails/pathways where traffic is to be maintained; barricades at the ends of the project, on trails/pathways, and at right-of-way lines of intersecting streets; and moving traffic control devices for construction operations.

b. Materials.- The materials and equipment shall meet the requirements specified in the sections designated above of the 2012 edition of the MDOT Standard Specifications for Construction, the 2011 MMUTCD, and all specification requirements contained in these Contract Documents.

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights, or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the City.

The Contractor shall furnish and operate Lighted Plastic Drums; Type III Barricades; and Type B Temporary Signs as directed by the Engineer.

Type III Barricades shall have standard orange-and-white stripes on both sides of the barricade.

"Utility Work Ahead" warning signs shall be placed, as indicated on the Drawings or as directed by the Engineer, prior to the start of work, regardless of the nature, magnitude, or duration of the work.

c. Maintenance of Traffic - General.- The Contractor shall maintain traffic such that no vehicle or pedestrian shall be able to enter active work zones or staging areas.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
MAINTENANCE OF TRAFFIC

Fishbeck:DD

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The Contractor will be permitted to close one lane on Washington Heights while performing working on Sewer Segment 1. Two-week notice is required prior to beginning work. All work on Sewer Segment 1 shall be performed at night. The Contractor will be permitted to stage traffic control devices during daytime working hours; however, lane closures shall not occur until the beginning of the designated night work hours as defined in Detailed Specification "Hours of Work." The lane shall be reopened to traffic at the end of the working hours. Traffic control devices may remain staged as approved by the Engineer for use the following evening. All traffic control devices must be removed upon completion of the work.

Two weeks prior to the start of any work the Contractor shall post Construction Notification signs at each of the four entrances to Nichols Arboretum. Two of the entrances will be made available to the Contractor during the various stages of the work. The Washington Heights and Riverview Court entrances to Nichols Arboretum shall not be used by the Contractor at any time for any reason.

Public notification signage shall meet the following minimum requirements:

1. Signs shall be constructed of $\frac{3}{4}$ marine grade plywood.
2. Freestanding without the use of postholes.
3. Size shall vary based upon entrance location. For bidding purposes use 4 feet x 8 feet at all four locations (signs will not exceed this size).
4. A drawing of each sign shall be submitted to the Engineer for approval. Minimum information on each sign shall include but not be limited to the following:
 - A. Project Name.
 - B. Project Owner (City of Ann Arbor).
 - C. Contractor Name.
 - D. Emergency Contact Phone Number.
 - E. Start Date.
 - F. Estimated Completion Date.
 - G. Special instructions/access restrictions at the specific entrance

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5. In addition to the signs, the Contractor shall provide 11-inch x 17-inch laminated copies of the information on each sign for placement in informational kiosks.

The Contractor will be permitted to use the Geddes Avenue entrance when performing work on Sewer Segment 2. Two-week advance notice is required for use of this entrance.

Access to Nichols Arboretum through the prairie area of the Arboretum from Riverview Court is not permitted.

For work in the main valley of the Arboretum the only available access is from Caretaker Drive. This is for Sewer Segments 4 and 6 and the downstream sections of Sewer Segments 2, 3, and 5. Caretaker Drive is the only route for emergency vehicles to access the Caretaker's House. As such, it cannot be blocked by the Contractor's operations.

Caretaker Drive can only be accessed from Nichols Drive. Nichols Drive is used for valet parking, Arboretum guest parking, and access to Lot M29. Lot M29 shall remain open for the public, including U of M valet, and permit parking along Nichols Drive. The Contractor shall always maintain safe local vehicular and pedestrian access to Lot M29. Contractor's workers shall not use Nichols Drive or Lot M29 for parking personal vehicles. The City will provide personal vehicle parking for the Contractor's workforce at the Fuller Park parking lot. The Contractor will be required to shuttle personnel back and forth between the parking lot and the work site.

The Contractor shall limit use of the premises and maintain access to the public, the U of M Matthaei Botanical Gardens and Nichols Arboretum Director/Grounds Department, and emergency vehicles to the Caretaker's House, as described in Detailed Specification "Working Space."

Two weeks prior to beginning work inside the Arboretum, the Contractor shall place temporary construction fencing to establish the work zone. The work zone shall be reviewed by the Engineer and Arboretum staff. Any required revisions to the work zone based upon Engineer or Arboretum staff comments must be completed prior to the start of work. Work zones inside the Arboretum must be removed upon completion the work.

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For lane closures on residential streets: Geddes Heights Drive, East & West Ridgeway Streets, and Harvard Place, traffic control devices shall not be staged more than 48 hours in advance of the work. All traffic control devices shall be removed upon completion of the work.

Temporary road closure is permitted for installation, maintenance, and removal of flow diversion devices. This work, and subsequent lane closures and obstructions, shall be coordinated with the City and U of M, providing a minimum of 7 days advance notice. The Contractor shall coordinate with the City to obtain lane closure permits as required. Lane closure permits shall be obtained by the Contractor from the Project Management Services Unit at least 48 hours in advance of any proposed lane closing. The Contractor shall temporarily cover conflicting traffic and/or parking signs when directed by the Engineer with covers meeting the requirements of Section 812.03.D.2 of the 2012 edition of the MDOT Standard Specifications for Construction. All temporary traffic control devices associated with this closure shall be installed after 9:00 a.m. and removed before 3:30 p.m. of the same day.

The cost of the lane closure, including obtaining the permit, temporarily covering existing signs as directed, maintaining pedestrian traffic, and maintaining and relocating traffic control devices will not be paid for separately, but shall be deemed to be included in the cost of the item of work "Minor Traf Devices, Modified."

The Contractor shall coordinate their operations with all utilities, Contractors, and/or subcontractors performing work on this and other projects within, or adjacent to, the project site.

The hours of work shall be as defined in Detailed Specifications "Hours of Work," "Construction Sequencing," and "Project Schedule."

The Contractor shall use quantities of dust palliative and maintenance aggregate for use as temporary base, surfacing, and dust control at utility crossings, side roads, and driveways (wherever required to maintain traffic), and where directed by the Engineer to maintain local and emergency access. The cost for the use of dust palliative and maintenance aggregate, as required and directed by the Engineer for maintenance of traffic and local access, shall be included in contract pay item "General Conditions," and will not be paid for separately.

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All traffic control devices shall be in place prior to beginning the work. The Contractor shall furnish, erect, maintain, and upon completion of the work, remove any and all traffic control devices utilized on the project prior to final inspection and acceptance as described in Detailed Specification “Final Acceptance.”

d. Measurement and Payment.- The completed work as measured for these items of work will be paid for at the contract unit price for the following contract pay items:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Minor Traf Devices, Modified.....	Lump Sum
Sewer Segment _ MOT - Sign, Type B, Temp, Prismatic, Furn	SF
Sewer Segment _ MOT - Sign, Type B, Temp, Prismatic, Oper	SF
Sewer Segment _ MOT – Sign Cover	Each
Sewer Segment _ MOT - Barricade, Type II, High Intensity, Lighted, Furn	Each
Sewer Segment _ MOT - Barricade, Type II, High Intensity, Lighted, Oper	Each
Sewer Segment _ MOT - Barricade, Type III, High Intensity, Lighted, Furn	Each
Sewer Segment _ MOT - Barricade, Type III, High Intensity, Lighted, Oper	Each
Sewer Segment _ MOT – Channelizing Device, 42-inch, Furn	Each
Sewer Segment _ MOT – Channelizing Device, 42-inch, Oper	Each
Sewer Segment _ MOT – Lighted Arrow, Type C, Furn.....	Each
Sewer Segment _ MOT – Lighted Arrow, Type C, Oper	Each
Public Notification Signage.....	Each
Construction Notification Signs.....	Each

The unit price as bid for these items of work shall include all labor, material, and equipment costs to furnish, operate, and remove the items from the site when no longer needed as detailed herein.

The estimated quantities for maintaining traffic are based on the maintenance of traffic (MOT) plans. Any additional signing, traffic control devices, or the like, required to expedite the construction, or required given Contractor’s change in staging, beyond that which is specified, shall be at the Contractor's sole expense.

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a. General.- This Detailed Specification does not describe the full range of materials and processes needed to complete the work under this Contract. It is intended to indicate major project requirements and assist the Contractor in developing, for the review and approval of the Engineer, the Progress Schedule for the project. It is the Contractor's responsibility to review this sequence and all other supporting Drawings and Detailed Specifications to determine, on their own, prior to bid submittal, a detailed construction process that follows this sequence. If the Contractor determines they cannot perform the work in this sequence, as indicated in the Drawings and all other requirements indicated in the Contract Documents, they shall immediately present an alternative construction sequence and approach to the Engineer as part of their bid submittal. The alternative construction sequence will be subject to review and approval by the Engineer. No additional payment shall be provided to the Contractor due to changes to the construction sequence.

The Contractor is required to comply with and sign the Access Agreement established between the City of Ann Arbor and the University of Michigan. The Contractor's detailed Progress Schedule must be submitted to and approved by the Engineer and U of M before the agreement can be finalized. The agreement must be in place prior to the Preconstruction Meeting. The Engineer will review the Progress Schedule and ask for any needed revisions in order to bring the Progress Schedule into conformance with the Contract Documents. Unless an alternative sequence is requested by the Contractor, and approved in writing by the Engineer, the work shall be performed in the order as indicated on the Progress Schedule.

b. Sequence of Construction.- Unless an alternative sequence is requested in writing by the Contractor, and approved by the Engineer, the work shall be performed in the order described below. This sequence of construction is intended to maximize work progress while minimizing damage in, on, and around the working areas of the project.

Some of the work tasks listed below may be performed concurrently, at the discretion of the Contractor, and as approved by the Engineer. Additional sequencing requirements may be specified elsewhere within the Contract Documents and/or Drawings. The work to be performed includes, but is not limited to, the following:

1. Audiovisual recording of the entire project site as well as East Medical Center Drive, Geddes Heights Drive, Nichols Drive, Ridgeway Street, Regent Drive, the entire length of Nichols Drive and the parking lot (Lot M29), Fuller Park, the route from the work site to the hydrant at Fuller Park and back, and the intersection of

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Glen Court and Fuller Street, in accordance with Detailed Specification "Audiovisual Recording" and elsewhere in the Contract Documents.

2. Implementation of the required temporary traffic control devices and trail closures in accordance with the Drawings, as detailed in the specifications, and as directed by the Engineer.

3. Implementation of soil erosion and sedimentation control (SESC) measures as indicated on the Drawings, as detailed in the specifications, and as directed by the Engineer. The Contractor shall install only those devices necessary to perform the work of the particular stage or to meet the appropriate federal, state, or local regulations.

4. Install the tree and wetland protection fencing and other construction fencing as indicated in the Drawings.

5. Perform sewer cleaning, televising and CIPP lining per the following recommended sequence:

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Sewer Segment 2 – Part 1 (Plan Sheet C-10)

1. Two-week notice is required for closing any trail. All bypass pump piping that crosses trails must be buried.
 2. Clean and televise 8-inch sanitary sewer from MH 71-69198 (Geddes Heights Drive) to MH 71-70032 (Arboretum Main Valley).
 3. Verify lateral locations based upon sewer video recordings and field investigations. Determine the bypass pumping location that will minimize disruption of service.
 4. Coordinate water use restrictions with residents on Geddes Heights Drive.
 5. Pump and haul flows entering MH 71-69198.
 - a. If necessary, flows can be bypass pumped from MH 71-69198 to MH 71-70031. Manhole casting and cone removal may be necessary to provide adequate working area.
 6. CIPP line 8-inch sanitary sewer from MH 71-69198 to MH 71-70034.
 7. CIPP line 8-inch sanitary sewer from MH 71-70035 to MH 71-70034.
 8. CIPP line 8-inch sanitary sewer from MH 71-70035 to MH 71-70038.
- Note: There are two sanitary laterals that enter MH 71-70035.

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9. Clean and televise 8-inch sanitary sewer from MH 71-70027 (Harvard Place) to MH 71-70032 (Arboretum Main Valley).
10. Verify lateral connections based upon sewer video recordings and field investigations. Determine the bypass pumping location that will minimize disruption of service.
11. Coordinate water use restrictions with residents on Harvard Place.
12. Pump and haul flows entering MH 71-70026 to MH 71-70031 and flows entering MH 71-70028 to MH 71-70031.
 - a. Based upon lateral locations the Contractor may be required to bypass pump flows from MH 71-7027 to MH 71-70032. Manhole casting and cone removal may be necessary to provide adequate working area.
13. CIPP line 8-inch sanitary sewer from MH 71-70027 through MH 71-70042 to MH 71-70039.

Sewer Segment 3 (Plan Sheet C-10)

1. Clean and televise 8-inch sanitary sewer from MH 71-70020 (West Ridgeway Street) to MH 71-70038 (Arboretum Main Valley).
2. Verify lateral connections based upon sewer video recordings and field investigations. Determine the bypass pumping location that will minimize disruption of service.
3. Coordinate water use restrictions with residents on West Ridgeway Street.
4. Pump and haul flows entering MH 71-70021 and MH 71-70020.
 - a. Based upon lateral locations the Contractor may be required to bypass flow from MH 71-7020 to MH 71-70032. Manhole casting and cone removal may be necessary to provide adequate working area.
5. CIPP line 8-inch sanitary sewer from MH 71-70020 to MH 71-70038.
 - a. Contractor shall review the existing sewer slope, access restrictions, and sewer deflections to determine the direction of lining and lining segment lengths.
6. Clean and televise 8-inch sanitary sewer from MH 71-70023 (East Ridgeway Street) to MH 71-70039 (Arboretum Main Valley).
7. Verify lateral connections based upon sewer video recordings and field investigations. Determine the bypass pumping location that will minimize disruption of service.
8. Coordinate water use restrictions with residents on East Ridgeway Street.
9. Pump and haul flows entering MH 71-70057 and MH 71-70023.
 - a. Based upon lateral locations the Contractor may be required to bypass flow from MH 71-7023 to MH 71-70032. Manhole casting and cone removal may be necessary to provide adequate working area.

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10. CIPP line 8-inch sanitary sewer from MH 71-70023 to MH 71-70039.
 - a. Contractor shall review the existing sewer slope, access restrictions, and sewer deflections to determine the direction of lining and lining segment lengths.

Sewer Segment 2 – Part 2 (Plan Sheet C-11)

1. Re-clean from MH 71-70038 to MH 71-70032 and MH 71-70039 to MH 71-70032 as necessary to facilitate lining operations.
2. Re-establish bypass flow operations used for Sewer Segments 2 and 3.
3. CIPP line 8-inch sanitary sewer from MH 71-70032 to MH 71-70038.
4. CIPP line 8-inch sanitary sewer from MH 71-70032 to MH 71-70039.

Sewer Segment 5 – Part 1 (Plan Sheet C-18)

1. Coordinate with property owner and Arboretum staff to develop the least invasive means to access MH 71-69943 with the minimal equipment required to perform the work.
2. Clean and televise 8-inch sanitary sewer from MH 71-69945 (Regent Drive) to MH 71-70046 (Arboretum Main Valley).
3. Verify lateral connections based upon sewer video recordings and field investigations. Determine the bypass pumping location that will minimize disruption of service.
4. Coordinate water use restrictions with residents on Regent Drive.
5. Bypass flows entering MH 71-69946 to MH 71-70046.
 - a. Based upon lateral locations the Contractor may be required to bypass flow from MH 71-69945 to MH 71-70046. Manhole casting and cone removal may be necessary to provide adequate working area.
6. CIPP line 8-inch sanitary sewer from MH 71-69945 to MH 71-69944 to MH 71-69943.

Note: MH 71-69944 is a drop connection.
7. CIPP line 8-inch sanitary sewer from MH 71-69943 to MH 71-69944.
8. CIPP line 8-inch sanitary sewer from MH 71-69942 to MH 71-69943.
9. CIPP line 8-inch sanitary sewer from MH 71-69942 to MH 71-70015.
10. CIPP line 8-inch sanitary sewer from MH 71-69898 to MH 71-70015.
11. CIPP line 8-inch sanitary sewer from MH 71-69898 to MH 71-70063.

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1. Clean and televise 8-inch sanitary sewer from MH 71-70032 to MH 71-70046.
2. Bypass flows entering MH 71-70038 and MH 71-70039 to MH 71-70029 (Phase I).
3. CIPP line 8-inch sanitary sewer from MH 71-70032 to MH 71-70031. (Phase I)
4. Bypass flows entering MH 71-70032 to MH 71-70046 (Phase II).
5. CIPP line 8-inch sanitary sewer from MH 71-70031 to MH 71-70045 (Phase II).
 - a. Note: The Contractor may CIPP line individual MH to MH segments or multiple MH through MH segments. The Contractor is not required to line from MH 71-70031 to MH 71-70045 in one set-up. However, the entire work zone must be established and maintained until all work is completed.

Sewer Segment 4 – Part 2, Sewer Segment 5 – Part 2 & Sewer Segment 6 – Part 1 (Plan Sheet C-19)

1. Construct MH access pad at MH 71-69899.
2. Clean and televise 8-inch sanitary sewer from MH 71-70046 to MH 71-69899. Re-clean from MH 71-70045 to MH 71-70046 and from MH 71-70063 to MH 71-70046 as necessary to facilitate lining operations.
3. Bypass flows entering MH 71-69898 to MH 71-69894.
4. Bypass flows entering MH 71-70044 to MH 71-69894.
 Note: MH 71-69894 cannot be accessed with a vehicle. Contractor is permitted to bypass to MH 71-69899 if there is sufficient working space to do so during lining operations.
5. CIPP line 8-inch sanitary sewer from MH 71-70046 to MH 71-70045.
6. CIPP line 8-inch sanitary sewer from MH 71-70046 to MH 71-70063.
7. CIPP line 8-inch sanitary sewer from MH 71-70046 to MH 71-69899.

Sewer Segment 6 – Part 2 (Plan Sheet C-20)

1. Construct MH access pad at MH 71-69900.
2. Establish interceptor bypass.
3. Clean and televise 8-inch sanitary sewer from MH 71-69899 to MH 71-69895.

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4. Notify Engineer of findings regarding buried fittings in sewer segments.
5. Bypass flows entering MH 71-70046 to MH 71-69896.
6. Bypass flows entering MH 71-69893 to MH 71-69896.
7. CIPP line 8-inch sanitary sewer from MH 71-69899 to MH 71-69894.
8. CIPP line 8-inch sanitary sewer from MH 7169900 to MH 71-69894.
9. CIPP line 8-inch sanitary sewer from MH 71-69900 to MH 69895.
Note: MH 71-69894 cannot be accessed with a vehicle.

Sewer Segment 1 (Plan Sheet C-6)

1. Protect pedestrian traffic from tripping hazards. Night work shall be required due to heavy pedestrian traffic. Two-week notice is required prior to starting work.
 2. Clean and televise 10-inch sanitary sewer from MH 71-69220 to MH 71-69271.
 3. Verify lateral locations based upon sewer video recordings.
 4. Coordinate water use restrictions/timing of work with Ronald McDonald House and U of M.
 5. Bypass flows entering MH 71-69222 and MH 71-69221 to MH 71-69242 (Phase I).
 - a. If required due to coordination with Ronald McDonald House, the Contractor may be required to bypass flows from MH 71-69220 to MH 71-69242. Manhole casting and cone removal may be necessary to provide adequate working area.
 6. CIPP line 10-inch sanitary sewer from MH 71-69220 to MH 71-69243.
 7. Bypass flows entering MH 71-69219 and MH 71-69252 to MH 71-70050 (Phase II).
 8. CIPP line 10-inch sanitary sewer from MH 71-69243 to MH 71-69271.
6. Perform clean-up and required restoration of the project site in accordance with the Drawings, as detailed in the specifications, and as directed by the Engineer.
7. Upon completion of the work, remove all temporary traffic control devices and SESC measures.

c. Work Restrictions.- The Contractor shall plan their work in accordance with the requirements and restrictions herein, as described in other relevant Detailed Specifications, as indicated on the Drawings, and as directed by the Engineer.

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1. The primary Contractor access to the site shall be the site from East Medical Center Drive through Nichols Drive, and based on the following requirements:

A. The hours of work shall be as described in Detailed Specification “Hours of Work.”

B. The Contractor shall note that one side of Nichols Drive is used for valet and permit parking, and Lot M29 is used for permit parking, by the U of M Hospital Complex. U of M intends to maintain use of these parking spaces during construction. The Contractor shall limit the size of their trucks to those that can access Nichols Drive safely and not damage the parked vehicles. The cost of any damage to vehicles along Nichols Drive shall be the Contractor’s sole responsibility.

C. Should the Contractor or subcontractor work efforts require large trucks (intermediate or interstate semitrailers) which, in turn, would require the loss of the valet and permit parking spaces along Nichols Drive, the Contractor shall submit a request for clearing of the parking spaces to the Engineer and U of M, providing a minimum of 7 days advance notice. The approved clearing of the parking spaces along Nichols Drive shall be limited to the evening/overnight hours of 5:00 p.m. to 8:00 a.m. Monday through Sunday only. The request for parking space clearing shall be submitted as part of original progress schedule.

D. At no time shall the Contractor be allowed to use the parking spaces in Lot M29.

E. Contractor will be provided parking spaces for workers in the Fuller Park parking lot. Contractor’s workers shall not park along Nichols Drive. Contractor is required to shuttle personnel from the Fuller Park parking lot to the work areas.

F. Any changes to the Contractor’s progress schedule resulting in revisions to previously approved dates for access along Nichols Drive shall be submitted to the Engineer and provide a minimum of 5 working days’ notice for re-approval from the Engineer and U of M.

2. The Contractor shall maintain public pedestrian and vehicular access within the Arboretum in accordance with Detailed Specifications “Working Space” and “Maintenance of Traffic,” as indicated on the Drawings, and as directed by the

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Engineer. All trails and drives indicated to remain open to pedestrian traffic shall be maintained to allow access at all times.

3. The Contractor shall maintain emergency vehicular access along Nichols Drive and to the Caretaker's House at all times. In the event that work operations entirely block Nichols Drive, the Contractor shall be expected to cease or alter operations as required to accommodate emergency vehicular access to the Caretaker's House within 10 minutes of being notified of said emergency.

4. Work zones on public streets shall not be set more than 24 hours in advance of the work. Barricades must be cleared, including removal of temporary traffic control devices, within 24 hours of completion of the work.

5. Work zones within the Nichols Arboretum shall be set up 2 weeks in advance of the work. Work zones shall be erected using temporary fencing (Standard 4-foot tall orange plastic safety fence or Engineer approved equal) and approved by the Engineer and Arboretum staff. Once established, work zones shall not be modified without Engineer approval. Work zones must be removed as directed by the Engineer upon completion of the work.

6. The Contractor shall at no time obstruct any part of East Medical Center Drive, unless as approved by the Engineer and U of M.

d. Lighting Requirements for Sewer Lining Work.- Where sewer lining work at night is required and approved in advance by the Engineer, the night work shall be lighted to an average intensity of 10 foot-candles minimum. Sufficient light sources shall be provided to achieve this illumination requirement. The lighting shall allow the inspector to clearly see and inspect all work and operations. Lighting systems may be fixed, portable, or equipment mounted. A power source shall be supplied by the Contractor with sufficient capacity to operate the lighting system. The Engineer shall suspend all night work except for traffic control if lighting is inadequate on any nighttime work operation.

The lighting system should be directed at the work site only, shall be turned off when not needed, and shall not be left on overnight un-manned.

e. Measurement and Payment.- All costs for complying with the requirements of this Detailed Specification will not be paid for separately, but shall be included in the bid price of the affected items of work.

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a. Description.- This work shall include providing a recording of the physical, structural, and aesthetic conditions of the construction site and adjacent areas as provided herein.

The audiovisual recording shall be:

1. Of professional quality, providing a clear and accurate audio and visual record of existing conditions.
2. Prepared during the 3-week period immediately prior to the Preconstruction Meeting.
3. Furnished to the Engineer a minimum of 2 weeks prior to bringing any materials or equipment within the areas described in this Detailed Specification.
4. Furnished to the Engineer either at, or prior to, the Preconstruction Meeting.
5. Carried out under the supervision of the Engineer.

The Contractor shall furnish 2 copies of the completed recording to the Engineer at, or prior to, the Preconstruction Meeting. An index of the recording, which will enable any area of the project to be easily found on the recording, shall be included. The Contractor shall retain a third copy of the recording for their own use.

Any portion of the recording determined by the Engineer to be unacceptable for the documentation of existing conditions shall be recorded again, at the Contractor's sole expense, and submitted to the Engineer prior to mobilizing onto the site.

b. Production.- The audiovisual recording shall be completed in accordance with the following minimum requirements:

1. **DVD Format/No Editing.-** The audiovisual recording shall be performed using equipment that allows audio and visual information to be recorded simultaneously and in color. The recording shall be provided on compact discs in DVD format. The quality of the recording shall be equal to or better than the standard in the industry. The recording shall not be edited.

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2. **Perspective/Speed/Pan/Zoom.**- To ensure proper perspective, the distance from the ground to the camera lens shall not be less than 12 feet and the recording must proceed in the general direction of travel at a speed not to exceed 30 feet per minute (0.34 miles per hour). Pan and zoom rates shall be controlled sufficiently so that playback will ensure quality of the object viewed.

3. **Display.**- The recording equipment shall have transparent time and date stamp and digital annotation capabilities. The final copies of the recording shall continuously and simultaneously display the time (hours:minutes:seconds) and the date (month/date/year) in the upper left-hand corner of the frame. Accurate project stationing shall be included in the lower half of the frame in standard station format (i.e. 1+00). Below the stationing, periodic information is to be shown, including project name, name of area shown, direction of travel, viewing direction, etc.

On streets or in areas where there is no project stationing, assumed stationing shall be used, starting with 0+00 and progressing from west to east or from north to south.

4. **Audio Commentary/Visual Features.**- Locations relative to project limits and landmarks must be identified by both audio and video means at intervals no longer than 100 feet along the recording route. Additional audio commentary shall be provided as necessary during the recording to describe streets, buildings, landmarks, and other details, which will enhance the record of existing conditions.

5. **Visibility/Ground Cover.**- The recording shall be performed during a time of good visibility. The recording shall not be performed during periods of precipitation or when snow, leaves, or other natural debris obstruct the area being recorded.

c. Coverage.- The audiovisual recording coverage shall include the following:

1. **General Criteria.**- This general criteria shall apply to all recording and shall include all areas where construction activities will take place or where construction vehicles or equipment will be operated or parked, and/or where materials will be stored or through which they will be transported. The recording shall extend an additional 50 feet outside of all areas. The recording shall include all significant, existing man-made and natural features such as driveways, sidewalks, utility covers, utility markers, utility poles, other utility features, traffic signal structures and features, public signs, private signs, fences, landscaping, trees, shrubs, other vegetation, and other similar or significant features.

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2. **Private Property.**- Record all private property that may be utilized by the Contractor in conjunction with this project. These project areas must be disclosed by the Contractor prior to using them for the work of this project.

3. **Road Construction Area.**- The recording coverage shall:

A. Extend to 50 feet outside of the right-of-way and easements area as indicated on the Drawings.

B. Extend 50 feet outside the construction limits on all streets, including side streets.

C. Both sides of each street shall be recorded

4. **Offsite Water Source Route/Fuller Street/Glen Court Route.**- The entire route to/from the offsite water source at Fuller Park and to/from the Fuller Street/Glen Court intersection shall be recorded as indicated in this Detailed Specification, except as modified below:

A. The recording must proceed in the general direction of travel at a speed not exceeding 30 feet per minute (0.34 miles per hour).

B. The coverage area shall include the street and not go beyond the curb except in areas where there is a fair possibility that the detoured or construction traffic will drive over the curb, such as at intersections.

C. The recording shall focus in particular at sidewalk ramps and other features likely to have been damaged or likely to be damaged as a result of existing traffic, temporary detoured traffic, and/or construction traffic. In these areas, recording may need to proceed much more slowly.

Only the side of street with the detoured traffic must be recorded. However, the Contractor is advised that portions of the detour routes may operate in opposite directions at different times. In these cases, both sides of the street shall be recorded separately.

5. **Private Property Bordering the Project Limits or Work Areas.**- Record all areas bordering the project where work is scheduled to occur or where construction

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traffic could damage the private property, including along E. Medical Center Drive, the entire length of Nichols Drive, Lot M29, Fuller Street/Glen Court intersection, Fuller Park, and the route to and from the project site to the Fuller Street/Glen Court intersection and Fuller Park. This is to include buildings, hydrants, pavements, curbs, driveways, decks, landscaping, trees, and all other similar features.

6. **Other Areas.-** The Contractor shall record, at their sole expense, other areas where, in their opinion, the establishment of a record of existing conditions is warranted. The Contractor shall notify the Engineer in writing of such areas.

The Engineer may direct the recording of other minor areas not specified herein at the Contractor's sole expense.

d. Measurement and Payment.- The completed work shall be paid for at the contract unit price for the following contract pay item:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Audiovisual Recording	Lump Sum

Audiovisual Recording shall include all labor, equipment, and materials required to perform the recording and to provide the finished recording the Engineer.

Payment will be made for Audiovisual Recording following the review and acceptance of the recording by the Engineer. Within 21 days following the receipt of the recording, the Engineer will either accept it and authorize payment, or require that any discrepancies in the recording be addressed prior to making payment.

LAND MONUMENTS, PROPERTY CORNERS, AND MARKERS 107B

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
LAND MONUMENTS, PROPERTY CORNERS, AND MARKERS**

AA:MGN

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It shall be the Contractor's responsibility to take all necessary precautions not to disturb, move, or destroy any land monuments, property corners, or markers delineating the boundaries of property along or near the work.

The Contractor shall notify the Engineer of any land monuments, property corners, or markers that will be affected by the construction in sufficient time so they may be properly protected or witnessed for later replacement by the Engineer.

Land monuments, property corners, or markers unnecessarily disturbed, moved, or destroyed by the Contractor shall be replaced by the City of Ann Arbor (City), in accordance with the requirements of the appropriate agency and Public Act. All costs associated with this replacement shall be charged to the Contractor.

The Contractor shall be aware that there are section corners and other City geodetic control points within or near the project boundaries. The re-setting of these points, if disturbed, will require significant cost and work to restore them to their current level of accuracy. Consequently, if they are disturbed or damaged, in the sole opinion of the Engineer, the City will re-set them to a condition equal to, or better than, that which currently exists. The Contractor will be backcharged for all costs incurred in re-establishing these points including, but not limited to, time charged to coordinate the work amongst all involved parties, expenses associated with "blue-booking" the points, and all other related costs.

WORKER SAFETY AND SITE SECURITY

CITY OF ANN ARBOR DETAILED SPECIFICATION FOR WORKER SAFETY AND SITE SECURITY

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a. General.- The Contractor shall carry out their operations and secure the site in strict accordance with the requirements of Section 104.07 of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction, "Contractor Obligations," all pertinent regulatory agencies, including, but not limited to, Occupational Safety and Health Administration (OSHA), Michigan Occupational Safety and Health Administration (MIOSHA), as well as all applicable manufacturer's safety requirements. The Contractor shall be aware that while all safety requirements are important, additional emphasis shall be placed upon the requirements for entering confined spaces and with the equipment being utilized for cured-in-place pipe (CIPP) installation.

The Contractor hereby guarantees to the City of Ann Arbor (City) that all materials, supplies, and equipment as listed in the Contract Documents meet the requirements, specifications, and standards as provided for under the Michigan Occupational Safety and Health Act of 1976, as from time to time amended, and in force at the time of bidding this project, and all other applicable federal, state, and local ordinances, statutes, and laws.

The Contractor shall perform all work in accordance with the Construction Safety Standards as adopted by the Michigan Department of Labor Construction Safety Standards for Occupational Health adopted by reference and cross reference under authority of Sections 19 and 21 Act No. 154 of the Public Act of 1974, as amended, being 408.1021 of the Michigan Compiled Laws.

b. Safety Plan.- At the Preconstruction Meeting and prior to beginning any work, the Contractor shall submit a proposed Safety Plan to the Engineer detailing their safety plan and procedures and identifying all competent persons. The plan shall include a description of a daily safety program for the job site, their safety program for confined space entry in accordance with current OSHA and MIOSHA requirements, and all emergency procedures to be implemented in the event of a safety incident. All work shall be performed in accordance with the Contractor's submitted Safety Plan.

Prior to entry into any confined space, the Contractor shall submit to the Engineer a copy of their "daily" entry permit in accordance with current OSHA and MIOSHA requirements.

WORKER SAFETY AND SITE SECURITY

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
WORKER SAFETY AND SITE SECURITY**

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c. Safety Representative.- The Contractor shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

d. Confined Space.- The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work including, but not limited to, confined space entry. The Contractor, including subcontractors, shall comply with all applicable laws and regulations and the City's safety programs, if any, relating to safety.

e. Trenches, Excavations, and Sanitary Structures.- During non-working hours, the Contractor shall properly secure any open trench, excavation, or sanitary structure with protective fencing and temporary cover(s). Temporary covers over sanitary chambers shall be capable of withstanding the weight of a human and other wildlife such as deer.

f. Measurement and Payment.- All costs associated with meeting the requirements of this Detailed Specification will not be paid for separately but shall be included in the bid prices for the affected items of work as indicated on the bid form and in the Contract Documents.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
HOURS OF WORK

Fishbeck:DD

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6/30/2021

a. General Restrictions.- Hours of work shall be as stated in the Ann Arbor City Code Title IX, Chapter 119, Page 9.363, Monday through Saturday, between the hours of 7:00 a.m. and 8:00 p.m.

b. Exceptions.- During installation of the cured-in-place pipe (CIPP) lining, the Contractor may choose, in some cases, to perform nighttime work to facilitate construction during the inversion and curing processes. Additional requirements regarding this work are contained in Detailed Specification "CIPP Sewer Lining" and elsewhere in the Contract Documents. The Contractor shall include this work in their progress schedule, notify, and submit a request to the Engineer for permission to perform the nighttime CIPP work a minimum of 5 working days prior to beginning the work.

Maintenance of the sewer flow control may also require working outside the allowable hours of work ("off-hour" work). The Contractor shall provide anticipated off-hour work as part of their Sewer Flow Control Plan submittal(s) as contained in the Detailed Specification for "Sewer Flow Control."

Additional work restrictions are contained in the Detailed Specifications for "Project Schedule," "Maintenance of Traffic," "Working Space," "Construction Sequencing," and elsewhere in the Contract Documents. These work restrictions shall take precedence over the General Restrictions and Exceptions listed above.

The Contractor shall only perform work at night or on Sundays as required by the Contract Documents, unless there is a special need and the work is approved by the Engineer. All requests to work during off-hours shall be included in the Contractor's progress schedule and submitted to the Engineer for approval a minimum of 5 working days prior to beginning the work.

c. Required Night Work.- Due to heavy pedestrian traffic during daylight hours, the sewer cleaning, televising, and CIPP lining of the 10-inch sanitary sewer (Segment 1) from MH 71-69220 to MH 71-69243 shall be performed at night. Working hours shall be from 10:00 PM to 7:00 AM. Noise levels during this period shall be reduced to 61 (dBA) per U of M regulations.

d. Noise Control.- All noise generated by construction activities shall not exceed 71 decibels (dBA) beyond the property line of the property on which the work is being conducted between 7:00 a.m. and 8:00 p.m., Monday through Saturday. The Contractor shall provide both primary and secondary screening, noise absorption, and level II sound attenuation as required on equipment to meet the noise limitations set herein. Any "off-

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
HOURS OF WORK

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hour” work will require a temporary exemption from both the City of Ann Arbor City Administrator and the University of Michigan Executive Vice President and Chief Financial Officer or the Executive Vice President’s written designee. A temporary exemption may be granted in accordance with each respective entities’ code of ordinance.

e. Method of Payment.- The costs of night work, whether required by the Contract Documents or requested by the Contractor, shall not be paid for separately, but shall be considered included in the cost of the affected contract pay items.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
WORKING SPACE

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6/30/2021

a. General.- The Contractor is reminded of, and shall comply with, the requirements of Section 104.08 of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction, "Cooperation by the Contractor."

b. Access Agreement.- The City of Ann Arbor has established a draft Access Agreement with the University of Michigan. The agreement must be finalized before any work may proceed. The Contractor's Construction Sequence and Project Schedule must be submitted and approved before the agreement can be finalized. The Contractor must sign and comply with all of the requirements of the Access Agreement.

c. Contractor Use of Premises.- The Contractor shall limit construction traffic and access to areas indicated on the Maintenance of Traffic (MOT) Drawings, as specified in Detailed Specification "Maintenance of Traffic," as specified herein, and as directed by the Engineer.

The Contractor shall limit use of premises to allow the University of Michigan (U of M) Matthaei Botanical Gardens and Nichols Arboretum (MBGNA) Director and field staff the full use of Nichols Arboretum (Arboretum) and not obstruct access to the surrounding U of M Hospital Complex facilities or perform their work activities in such a manner as to impact existing vehicular parking along Nichols Drive or Lot M29. The Contractor shall limit use of premises to maintain public access in accordance with Detailed Specifications "Construction Sequencing," "Maintenance of Traffic," the MOT Drawings, as directed by the Engineer, and as described below:

1. Public Access

A. The Contractor shall maintain public pedestrian access along the stairs from East Medical Center Drive to Lot M29, to Caretaker's Drive, and other trails within the Arboretum at all times as indicated on the MOT Drawings.

B. The Contractor shall maintain vehicular access along Nichols Drive from East Medical Center Drive, throughout Lot M29, and along Nichols Drive from Lot M29 into and throughout the Arboretum at all times as indicated on the MOT Drawings.

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
WORKING SPACE**

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2. U of M

A. The Contractor shall maintain pedestrian and vehicular access along Nichols Drive from East Medical Center Drive through the Arboretum and to Caretaker's Drive at all times as indicated on the MOT Drawings.

B. The Contractor shall maintain pedestrian and vehicular access to the Caretaker's House via Caretaker's Drive at all times.

3. Emergency Vehicles to the Caretaker's House:

A. The Contractor shall maintain sufficient access for emergency vehicles along Nichols Drive and Caretaker's Drive to the Caretaker's House at all times.

B. The Contractor shall cooperate with the snow removal efforts of U of M in maintaining Nichols Drive and Caretaker's Drive. If necessary, the Contractor shall coordinate their work with that of snow removal crews to ensure that snow removal occurs as scheduled.

C. During periods of work that may entirely block Nichols Drive, the Contractor shall be prepared to cease, or alter, operations as required to accommodate emergency vehicular access to the Caretaker's House within 10 minutes, or less, of being notified of said emergency.

4. The Contractor shall at no time obstruct any part of East Medical Center Drive, unless as approved by U of M.

5. The Contractor shall always maintain vehicular and pedestrian access to the Ronald McDonald House building and parking lot.

6. The Contractor shall maintain one entrance to the M29 parking lot and provide advance warning signs for closure of the second entrance.

7. The Contractor shall always maintain ingress and egress to the existing residences located at the Geddes Heights Drive cul-de-sac.

8. The Contractor shall not completely close both sides of Ridgeway Street (east and west) at the same time.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
WORKING SPACE

Fishbeck:DD

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9. The Contractor shall always maintain ingress and egress to the existing residences located at the Regent Drive cul-de-sac.

10. Limit work zones, staging areas, and parking for construction vehicles to areas as indicated on the Drawings.

11. Where the Contract Documents identify certain site elements within the construction limits, such as sidewalks, drives, and trails that must be kept open for the public or the City's use during construction, the Contractor shall be responsible for protection and maintenance of such elements as well.

d. Contractor Staging.- The Contractor shall stage equipment in the work areas within the Arboretum as indicated on the Drawings. Additional areas within the Arboretum may be considered for Contractor staging upon written request to, and approval from, the Engineer. The Contractor shall be aware that lands to be used as a construction staging area within the project site are in short supply and, most probably, are not available. The Contractor shall be prepared to perform the work of this project without an owner-supplied, dedicated, construction staging area, or be prepared to obtain their own offsite construction staging area if necessary. The Contractor shall maintain pedestrian and emergency vehicle access through all work/staging areas as indicated on the Drawings and as described herein.

e. Materials Storage.- The Contractor may store materials in the work areas within the Arboretum as indicated on the Drawings. The Contractor shall store materials in an orderly arrangement allowing maximum access and unimpeded drainage and traffic. Material storage shall at no time impede pedestrian or emergency vehicle access along Nichols Drive or Caretaker's Drive. The storage of hazardous materials onsite shall not occur without the express approval of the Engineer.

f. Work Zones/Areas.- The Contractor shall confine work areas to those indicated on the Drawings and as described herein.

1. The following areas are available for Contractor sewer cleaning and televising operations:

A. Along the roadway and path areas that are isolated from pedestrian traffic by temporary fencing as shown on the Maintenance of Traffic Plans.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
WORKING SPACE

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2. Use of the following areas is STRICTLY PROHIBITED:

- A. Amphitheater lawn area.
- B. Main Valley (outside of the temporary fencing).
- C. Prairie.

D. The Contractor shall not move or relocate temporary fencing without approval of the Engineer.

3. Manholes/chambers:

A. Due to existing grades, specific manholes cannot be accessed with construction vehicles. These manholes are accessible for the following use by personnel with hand tools to perform the tasks listed:

MH 71-70033
MH 71-70034
MH 71-70036
MH 71-70040
MH 71-70041
MH 71-70042
MH 71-69944
MH 71-69894
MH 71-69271

(1) Manhole Assessment and Certification Program (MACP) Level 2 manhole inspection.

(2) Cutting out the liner from inside the manhole after CIPP lining.

B. MH 71-69943 is located behind 19 Regent Drive on private property within a City easement. This manhole must be accessed in order to clean, televise, and CIPP line from MH 71-69943 to MH 71-69944. The Contractor shall work with the property owner and Arboretum staff to develop the least invasive method to access the manhole with the minimal equipment necessary to complete the work.

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
WORKING SPACE**

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C. All other manholes/chambers are available for cleaning, sewer televising, CIPP lining, and inspection.

D. The Contractor shall protect all manholes and surrounding areas and shall not damage or remove any trees.

E. The Contractor shall avoid wetlands when accessing manholes. At no time is the Contractor allowed to remove the frame and cover or any other portion of manholes located in wetlands.

g. Protection and Restoration.-

1. Protect trees and shrubs in the staging and storage areas as indicated on the Drawings.

2. The Contractor shall take care and protect, to the extent possible, sloped areas within work areas to manholes used for cleaning, televising, and/or lining operations.

3. Restore areas as described in Detailed Specification "Project Clean-Up and Restoration, Special."

4. Take all necessary measures to prevent spillage of fuel, oil, chemicals, and hazardous materials.

5. Provide secondary containment for diesel generators, equipment containing oil or grease, and storage of hazardous materials, in accordance with governing authorities or agencies.

6. In the case of any fuel, oil, chemical, or hazardous material spill, the Contractor shall notify the Engineer, U of M, and the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Pollution Emergency Alerting System (PEAS) at (800) 292-4706. The Contractor shall be responsible for cleaning up the spill and remediating the site in accordance with EGLE requirements and as approved by the Engineer at no additional cost to the project.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
WORKING SPACE

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7. Keep storage and work areas clean.

8. Do not allow accumulation of scrap, debris, waste material, and other items required for construction of the work.

h. Site.- The Contractor shall maintain the site in a neat and orderly condition, including keeping paved surfaces clean, meeting the approval of the Engineer and U of M representatives at all times.

The Contractor shall inspect the site daily, and more often if necessary, to ensure the site is maintained in a neat and orderly condition. The Contractor shall also inspect storage areas weekly, and more often if necessary, to ensure the storage areas are maintained in a neat and orderly condition.

If the Contractor fails to correct unsatisfactory conditions within 24 hours after due notification, the Engineer may arrange for such work to be performed by other means at the Contractor's expense.

i. Measurement and Payment. - Except for the following items, the costs for this work will not be paid for separately but shall be included in the bid price of the contract pay item "General Conditions."

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Sewer Segment_ - Protective Fencing	LF
Fence - Remove and Replace, 6-ft tall chain link, Segment 1 Washington Heights	LF
Fence - Remove and Replace, 4-ft tall chain link, Segment 1 – Washington Heights ...	LF
Fence - Remove and Replace, 6-ft tall chain link, Segment 5 – Regent Drive.....	LF

The unit price as bid for these items of work shall include all labor, material, and equipment costs to furnish, operate, and remove the items from the site when no longer needed as detailed herein.

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
WORKING IN THE RAIN**

Fishbeck:DD

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6/30/2021

Portions of the work to be performed under this contract are weather sensitive. Contractor shall be responsible for coordinating and scheduling their work in anticipation of the weather.

Sewer flow control must cease during wet weather conditions. Wet weather conditions are as defined in Detailed Specification "Sewer Flow Control."

The Contractor shall not be compensated for the time and/or effort spent removing the temporary flow diversion plugs and the lateral bypass pumping system or for unused materials or downtime caused as a result of a wet weather event. The Contractor is solely responsible for repairing all damage to the work and to the site, including road infrastructure, road subgrades, underground utilities, any adjacent properties, and the like, which are damaged as a result of working in the rain or working in areas that are wet from recent precipitation.

The only exception to the above is as indicated in Detailed Specification "Extension of Time, Additional Compensation."

The costs of complying with this requirement shall not be paid for separately, but shall be considered included in the cost of the affected contract pay items.

EXTENSION OF TIME, ADDITIONAL COMPENSATION 108A

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
EXTENSION OF TIME, ADDITIONAL COMPENSATION**

Fishbeck:DD

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6/30/2021

The Contractor shall notify the Engineer of their intent to submit a claim for additional compensation or an extension of time in accordance with the requirements of Section 104.10 of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction. Failure to do so may be a basis for not approving the request for additional compensation or extension of time. The notification will allow the Engineer an opportunity to influence, keep records, and monitor the work.

Extensions of time will not be authorized due to delays caused by, or stemming from, the weather for the period between November 14th and April 16th unless any of the following conditions are present:

1. Air temperature (as measured from a thermometer provided, maintained, and installed by the Contractor in a location on the worksite, as mutually agreed upon between the Contractor and the Engineer) is below 15°F for a period of time longer than 48 consecutive hours.
2. Accumulations of snow in excess of 12 inches occur in any 24-hour period.
3. Freezing rain in excess of 1/4-inch occur in any 24-hour period.
4. Wet weather event, as defined in Detailed Specification "Sewer Flow Control" requiring the temporary removal of flow diversion plugs and lateral bypass pumping system.

Should the abovementioned weather conditions occur, and the Contractor requests an extension of contract time, the time extension shall only be for the realized delay to the controlling work operation.

The above weather delays shall not be considered as a basis for additional compensation on this project. The only exception shall be that if the temporary removal of the flow diversion plugs and lateral bypass pumping system occurred after the sewers had been cleaned, televised, prepped for lining, and approved by the Engineer for lining before the sewers were lined. In such an event, the Contractor may request compensation for the re-cleaning and re-televising of the affected pipes only. The re-cleaning must first be approved by the Engineer prior to the work beginning. No compensation shall be provided for the removal and re-installation of the plugs.

EXTENSION OF TIME, ADDITIONAL COMPENSATION 108A

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
EXTENSION OF TIME, ADDITIONAL COMPENSATION**

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6/30/2021

In addition, if delays resulting from air temperature, snow accumulation, and/or freezing rain occur and the Contractor has their bypass pumping system in place and operational, the Contractor shall still be responsible to continuously protect and maintain in operation the complete sewer flow control system. Expenses related to maintaining the bypass pumping system shall not be considered to be additional costs or extra expenses during an authorized extension of time due to these weather-related time extensions.

The Contractor shall anticipate underground utility complications arising from the proposed utility work, unknown and/or fragile utilities, and utilities requiring investigation and or relocation. These utilities may be shown on the Drawings, correctly or incorrectly, or not at all, and may delay a controlling operation.

Additional compensation is defined as additional work, extra work, upward unit price adjustments, payments for down time, and the like.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
TREE REMOVAL

Fishbeck:DD

1 of 2

6/30/2021

a. Description.- This work shall consist of removal of designated trees required to complete the work. Except as otherwise specified herein, all work shall be performed in accordance with the City of Ann Arbor (City) Public Services Area Standard Specifications, and as directed by the Engineer.

Tree removal on the University of Michigan (U of M) property shall be performed by U of M. Tree removal within the Nichols Arboretum shall be performed by Arboretum staff. The Contractor is strictly prohibited from removing any trees in either of these locations. Trees identified for removal that are indicated on the Drawings have been approved by the City, U of M, and/or Nichols Arboretum for removal. No additional trees shall be removed as part of this project without the written permission of both the Engineer and U of M. The Contractor shall be aware that the removal of additional trees to facilitate the work may not be allowed. Additionally, granting permission to remove additional trees may require substantial additional time for review of the request and/or the permission may not be granted. If the Contractor requests removal of additional trees and the permission is not granted, the Contractor shall perform the work without the removal of the trees at no additional cost to the project. Further, an extension of contract time will not be granted for the period of time from when the request was made until such time the request was either granted or denied.

Tree removal on private property within existing easements shall be performed by the Contractor. The limits of tree removal shall be as directed by the Engineer. The Contractor must clearly mark the trees for removal at least 1 week prior to the date of their intended removal.

The removal and disposal of trees greater than 6 inches in diameter shall be paid for as indicated below. The cutting, removal, and disposal of trees less than 6 inches in diameter, bushes, brush, or the trimming of trees will not be paid for separately and shall be included in the item of work "General Conditions."

b. Construction Methods.-

1. Removal.- Cut and fell trees in a manner so as not to damage surrounding areas, fences, features, and adjacent trees designated to remain. Grub and remove stumps and roots. Backfill all resulting holes or excavations with Engineer approved material and dispose of all debris before ending the day's work.

Burning of any removed materials is strictly prohibited.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
TREE REMOVAL

Fishbeck:DD

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6/30/2021

All trees removed as part of the work completed for this project shall be removed from the property unless otherwise requested by the City, U of M, Nichols Arboretum, or private property owner. All wood requested by the City or the respective property owner shall be cut into logs approximately 10 feet in length and placed at a location onsite as designated by the Engineer.

c. Measurement and Payment.- The completed work as measured will be paid for at the contract unit prices for the following contract pay items:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Contingency - Tree, Rem, 6 inch to 18 inch	Each

The items of work listed above shall be paid for by the number of trees actually removed. The unit price for these items of work shall include all labor, material, and equipment costs to perform the work as detailed herein. It is the intent of this project that completion of the work be performed without any tree removal. This item is included for contingency use only.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROTECTION OF UTILITIES

Fishbeck:DD

1 of 1

6/30/2021

a. General.- Damages to utilities by the Contractor's operations shall be repaired by the utility owner at the Contractor's expense.

Delays to the work due to utility repairs are the sole responsibility of the Contractor.

The Contractor shall keep construction debris out of utilities at all times. The Contractor shall be backcharged an amount of \$50.00 per day for each manhole/inlet/utility pipe that contains construction debris caused as a result of the Contractor's (including their subcontractor[s] and supplier[s]) work.

The Contractor is solely responsible for any damages to the utilities or abutting properties due to their work operations or construction debris.

Television inspection of the sanitary sewers will take place before and after cured-in-place pipe (CIPP) lining operations. The City of Ann Arbor (City) may also choose to televise utility line(s) during or after the work of this project to inspect them for damages and/or construction debris. If post CIPP lining televising and/or subsequent City inspection shows damage and/or debris, all costs of such inspection, cleaning, repairs, etc., shall be the Contractor's sole responsibility. If such inspection is negative, the City will be responsible for the costs of such inspection.

The costs for complying with the requirements of the Detailed Specification will not be paid for separately, but shall be included in the bid price of the contract pay item "General Conditions."

CITY OF ANN ARBOR
 DETAILED SPECIFICATION
 FOR
PROTECTION OF ARBORETUM

Fishbeck:DD

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6/30/2021

a. Description.- This work shall consist of staging, gaining access to the site, and performing the work associated with the Contract while minimizing the impact on the existing environment and features within the Nichols Arboretum. Except as otherwise specified herein, all work shall be performed in accordance with the City of Ann Arbor (City) Public Services Area Standard Specifications, and as directed by the Engineer.

b. General.- Damage to the Nichols Arboretum by the Contractor’s operation(s) or the operation(s) of the Contractor’s subcontractor(s) or supplier(s) shall be repaired under the direction of the University of Michigan (U of M) and the City of Ann Arbor Natural Area Preservation Department. The required repairs may be performed by the U of M Matthaei Botanical Gardens and Nichols Arboretum (MBGNA) Grounds Department with all associated costs being charged directly to the Contractor. Payment of these charges is the Contractor’s responsibility and shall not be paid for separately.

The Contractor's personnel or equipment shall not damage the existing vegetation along Nichols Drive, existing trails, or slopes. The Contractor will not be allowed to clear trees or brush to perform their work operations unless specifically indicated on the Drawings or approved by the U of M and the Engineer.

c. Protection of Trees.- Unless indicated for removal, all trees shall be preserved and protected. Any damage to trees or tree limbs, which is caused by the Contractor (or their designee[s]), regardless of height, shall be the Contractor’s responsibility. The Contractor therefore assumes the condition of the trees and tree limbs in an “as-is” condition once the project begins.

The Contractor shall not trim or remove any trees without the approval of the U of M and the Engineer. This includes any trimming required for inversion towers or for access to inversion sites. All costs shall be the responsibility of the Contractor.

Arboretum staff have developed the following list of tree protection measures and locations. This list is intended to represent the minimum level of effort required. Additional protection measures and locations may be required based upon Contractor operations.

Segment	Sheet No.	Manhole Number	Mgt Zone Location	Notes
1	C-5	71-69219	SGG	Fence removal (Contractor)
	C-5	71-69242	SGG	Fence removal (Contractor)

CITY OF ANN ARBOR
 DETAILED SPECIFICATION
 FOR
PROTECTION OF ARBORETUM

Fishbeck:DD

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6/30/2021

Segment	Sheet No.	Manhole Number	Mgt Zone Location	Notes
	C-5	71-69271	SGG	Not shown as access point in updated plans. Clearing TBD.
2	C-8	71-70039	Harvard Drain	Necessary clearing TBD after contractor hired
3	C-9	71-70039	Harvard Drain	See Segment 2
5	C-14	71-0046	Magnolia Glade/Oak-Hickory Woods	Root protection: Birches, Magnolias
		71-69942	Magnolia Glade/Oak-Hickory Woods	Clearing completed 3/2020. Necessary additional work TBD after contractor hired.
		71-69943	Magnolia Glade/Oak-Hickory Woods	See notes for 71-69942.
6	C-15	71-70044	Magnolia Glade	Not shown as access point on updated plans. Root protection needed if accessed.
		71-70045	Magnolia Glade	Root zone protection: Cottonwood
		71-70046	Magnolia Glade	Root zone protection: Birch, Magnolias
		71-69899	Magnolia Glade	Clearing completed 3/2020
		71-69900	Warbler's Way	Clearing completed 3/2020

d. Protection of Drives, Trails, and Slopes.- The Contractor is permitted to use the locations within Nichols Arboretum and other work areas as indicated on the Drawings and as described in Detailed Specification “Working Space.” Other existing trails may also be used for foot traffic, depending on the specific operations being performed, and as approved by the Engineer.

Rubber tracked equipment up to 6 feet wide (i.e.: bobcat, mini excavator, etc.) and equipment up to 10 feet wide (i.e. compactor/mini excavator, loader, etc.) will be permitted on Nichols Drive, and in the areas designated as work or staging areas on the Drawings to be used for chamber and access path construction, cleaning operations, and cured-in-place pipe (CIPP) lining operations.

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Any portion of Nichols Drive damaged by construction activities, including rutting from trucks, temporary pipe trenches, etc., shall be repaired in accordance with the aggregate drive detail on the Drawings and as approved by the Engineer.

Particular attention is directed to the north side of Nichols Drive, immediately north of the intersection of Nichols Drive and East Medical Center Drive. This location, referred to as "the Slope," is of great concern to U of M. As such, the contractor shall, to the extent practical, avoid driving construction vehicles on that section of road. The Contractor shall utilize flaggers as necessary to control traffic while utilizing the south side of the road.

The Contractor shall protect slopes and open areas within the Arboretum during construction operations to the extent possible. If, in the opinion of the Engineer, the existing slopes are too soft and construction equipment is causing rutting, the Contractor will be required to protect the slope from construction equipment with protection materials, or other means necessary, as approved by the Engineer. The Contractor will be required to maintain this protective material, including replacing defective, worn or broken materials, until the Engineer determines it is no longer needed and can be removed from the project. It is the Contractor's responsibility to remove and properly dispose of this material when it is no longer needed. It is the Contractor's responsibility to restore the trail to the satisfaction of the Engineer.

e. Protection of Arboretum.- Protect existing site features within the Arboretum. Any damage to features within the Arboretum, including, but not limited to, treated lumber and gravel pedestrian steps, benches, tables, monuments, boulders, lamp posts, stone bridge abutments, call boxes, amphitheater, etc., which is caused by the Contractor (or their designee[s]), shall be the Contractor's responsibility to restore or replace damaged features to a condition that is equal to, or better than, original condition as determined by the Engineer and/or parties having jurisdiction. The Contractor therefore assumes the condition of such features in an "as-is" condition once the project begins.

f. Material.- Slope and trail protection materials shall be temporary materials such as flotation mats, plates, planks, 3/4-inch plywood, or other similar materials as approved by the Engineer. The Contractor will not be allowed to place aggregate materials on the path to stabilize it.

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g. Measurement and Payment.- All costs for complying with the requirements of this Detailed Specification will not be paid for separately but shall be included in the bid price of the contract pay item “General Conditions.”

CITY OF ANN ARBOR
 DETAILED SPECIFICATION
 FOR
PROTECTION OF WETLANDS

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a. Description.- This work shall consist of protecting the wetlands located within Nichols Arboretum in accordance with Part 303 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and Chapter 60 of the City of Ann Arbor (City) Code of Ordinances: Wetlands Preservation Ordinance.

Any damage to wetlands, which is caused by the Contractor (or their designee[s]), shall be the Contractor’s responsibility. The Contractor therefore assumes the condition of the wetlands in an “as-is” condition once the project begins. Damage to the wetlands by the Contractor’s operation(s) or the operation(s) of the Contractor’s subcontractor(s) or supplier(s) shall be repaired under the direction of the University of Michigan (U of M) and City. The required repairs may be performed by the U of M Matthaei Botanical Gardens and Nichols Arboretum (MBGNA) Grounds Department with all associated costs being charged directly to the Contractor. Payment of these charges is the Contractor’s responsibility and shall not be paid for separately.

Wetlands shall be protected from erosion, turbidity, siltation, and contamination. Contractor shall not perform any of the following actions within wetland limits without a permit from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or without the approval of the City and U of M:

1. Deposit or permit the placing of fill material.
2. Excavate or remove soil or vegetation.
3. Construct, operate, or maintain any use or development.
4. Drain surface water, such as diverting water to another area via ditch, pump, or drain.
5. Direct water from an upland activity into a wetland.

All costs shall be the responsibility of the Contractor.

b. Delineation – A wetland delineation has not been performed for the project area. It is intention of this project to complete the work without impact to any wetland area. City of Ann Arbor GIS information indicates a wetland area near MH 71-69896. Should the Contractor determine that any of the actions outlined in Item a above must be performed near MH 71-69896 the Engineer shall be notified immediately.

The Contractor may, at no cost to the Owner, arrange to have a wetland delineation performed. The delineation must be conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the Regional Supplements to the Corps of Engineers Wetland Delineation Manual. Data collected on the vegetation, soils, and

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hydrologic characteristics of the identified wetland area should be summarized on U.S. Army Corps of Engineers Wetland Determination Data Forms.

If the delineation determines that MH 71-69896 is not located within a wetland area, the Contractor may proceed with the required work. If the delineation determines the manhole is located within a wetland area, the Contractor must obtain an EGLE/Army Corps of Engineers joint permit prior to performing the work within the delineated area.

c. Material.- Wetlands shall be protected as indicated on the Drawings using protective construction fence, silt fence, snow fence, or other similar materials as approved by the Engineer.

d. Measurement and Payment.- All costs for complying with the requirements of this Detailed Specification will not be paid for separately but shall be included in the bid price of the contract pay item "General Conditions."

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
AGGREGATE MAINTENANCE PAD

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a. Description.- This work shall consist of constructing a temporary two-track wood access path from designated roads and paths through the woods, to gain access to sanitary MH 71-69899 and MH 71-69900 (access to MH 71-69896 is included as a contingency item), as well as constructing an aggregate maintenance pad adjacent to the manholes as indicated on the Drawings. Except as otherwise specified herein, all work shall be performed in accordance with the City of Ann Arbor (City) Public Services Area Standard Specifications, Sections 306 and 902 of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction, as indicated on the Drawings, and as directed by the Engineer.

b. Construction.- The route of the pathway and area for the maintenance pad as indicated on the Drawings shall be considered fixed and shall not be altered unless approved by the City and the University of Michigan (U of M). The path through the woods shall be graded to promote positive drainage and follow the existing topography to the extent possible. Excavation and embankment will be required.

All clearing required for construction of the access path and pad shall be performed by the Nichols Arboretum staff. The Contractor shall remove the existing topsoil and stockpile at a location designated by Arboretum staff.

The Contractor's personnel or equipment shall not damage the area surrounding the proposed path and maintenance pad, including vegetation along the existing trail and sloped areas. The Contractor shall not be allowed to clear trees or brush to perform their work operations unless specifically shown on the Drawings or approved by the Engineer and U of M.

Upon completion of the work the Contractor shall remove the aggregate maintenance pad, regrade as necessary, and replace stockpiled topsoil. No outside topsoil shall be permitted. Arboretum staff shall complete the restoration.

All materials are to be delivered to the site through the access points indicated on the Drawings. It will be the Contractor's responsibility to move materials with equipment meeting the requirements above to the site of the work.

c. Material.- The wooden tire track shall be constructed of minimum $\frac{3}{4}$ -inch plywood or equivalent based upon the weight of the vehicles being used. The aggregate access pad shall be constructed of crushed limestone aggregate. Aggregate materials shall be provided in accordance with the 2012 edition of the MDOT Standard Specifications for

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Construction, as indicated on the Drawings, and as approved by the Engineer. Material shall be subject to the approval of the Engineer.

d. Measurement and Payment.- The completed work as measured for this item of work will be paid for at the contract unit price for the following contract pay items:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Aggregate Maintenance Pad, MH 71-69899	Each
Aggregate Maintenance Pad, MH 71-69900	Each
Contingency Aggregate Maintenance Pad, MH 71-69896	Each
Erosion Control, Silt Fence.....	LF

The contract pay items listed herein shall be payment in full for all labor, material, and equipment necessary to furnish and install the items of work listed above, and shall include, but is not limited to, excavation, backfill compaction, moving materials to and throughout the installation location, disposal, and all other items necessary to complete the work, whether specifically mentioned or implied.

CITY OF ANN ARBOR
 DETAILED SPECIFICATION
 FOR
PRECAST MANHOLES

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a. Description.- This work shall consist of providing all labor, materials, and equipment required to complete the installation of precast sanitary manholes onto the existing sanitary sewers. Where necessary to facilitate other work, this shall include exploratory excavation and/or sewer locating services to identify the required manhole installation location, and providing all labor, materials, and equipment required to remove and replace existing manhole casting and cone sections. Except as otherwise specified herein, all work shall be performed in accordance with the City of Ann Arbor (City) Public Services Area Standard Specifications, and as directed by the Engineer.

b. Materials of Construction.- All materials of construction shall be in accordance with the City standard specifications as outlined herein.

1. All sanitary sewer manholes shall be constructed of precast reinforced concrete sections. Precast reinforced concrete bases, bottom sections, manhole risers, grade adjustment rings, concentric cones, eccentric cones, and flat slab tops shall conform to the requirements of ASTM C 478. Joints on precast manholes used on all sanitary sewers shall meet ASTM C 443, rubber O-ring gasket.

2. Cast iron frames and covers for manholes shall conform to the requirements for grey iron castings, ASTM A 48, Class No. 30. Specific, approved castings are listed in the Casting Schedule in the Standard Details.

3. Plastic coated manhole steps shall be injection molded of copolymer, polypropylene, encapsulating a 1/2-inch grade 60 steel reinforcing bar. Plastic-coated manhole steps shall meet the performance test described in ASTM C-478, Paragraph 11, and shall have an impact resistance of 300 ft-lbs., with only minor deflection and no cracking or breaking. The steps shall resist pull out forces of 1,500 lbs.

4. Manhole connection to sewer pipe shall be made through a “dog-house” opening sealed with non-shrink grout.

c. Construction Methods, New Manholes.- All construction methods shall be in accordance with the City standards as modified herein.

1. The Contractor shall utilize the information collected from the sewer televising work to locate the sewer deflection fitting and stake the approximate location from both the upstream and downstream manholes. If the location cannot be determined

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with confidence, the Contractor shall engage the services of a subcontractor specializing in the use of locating sonders or equivalent technology.

2. All required clearing shall be performed by others.
3. Exploratory excavation shall only be performed in the presence of and directed by the Engineer.
4. Temporary fencing and erosion control measures (silt fencing) shall be placed at the limits of the cleared area.
5. Excavation for manhole installation shall be carried to the depth and width required to permit the construction of the required base. The excavation width shall be greater than the base. The excavation shall be shored. The bottom of the excavation shall be trimmed to a uniform horizontal bed and be completely dewatered before any concrete is placed therein. Concrete shall be Class A. Precast manhole bases and precast bottom sections are allowed.
6. Circular precast sections shall be constructed in accordance with the Standard Detail Drawings. Manhole stack units shall be constructed on level poured-in-place bases, precast concrete bases, or precast bottom sections.
7. Precast cone sections shall be constructed in accordance with the Standard Details. These shall be eccentric for all manholes. All structures shall be topped with a minimum of one and a maximum of three brick or precast adjustment ring courses.
8. Manholes shall be constructed within 2-1/2 inches of plumb.
9. Frames and cover castings shall be set in full mortar beds and pointed on the structure interior to a smooth, brushed finish. The covers shall be set flush with sidewalk, roadway pavement, or ground surfaces.
10. Sewer pipes shall extend into structures a minimum of 1/2-inch and a maximum of 3 inches.
11. Flow channels for sewer structures shall be finished in accordance with the Standard Details. All flow channels shall be screeded and floated to a smooth, uniform surface and trowled to a hard surface finish. In vitrified clay sewers, the

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manhole may be constructed around the pipe, then the top half of the pipe broken out with concrete fillets provided to fill in between the pipe and manhole.

12. As soon as practicable after a precast structure has been set or a cast-in-place structure has been poured, forms and debris have been removed, the surfaces of the concrete have been pointed up, and the structure has been inspected and approved, the excavated area around the structure shall be backfilled up to the specified grade with Class II granular material. No boulders, rocks, stones, masonry, lumber, or debris shall be placed as backfill.

13. Restoration per Detailed Specification for Project Clean-up and Restoration, Special.

d. Construction Methods, Existing Manholes.- All construction methods shall be in accordance with the City standards as modified herein.

1. Erosion control devices (silt fence) shall be installed around the site of the excavation.
2. Excavation for manhole cone section removal shall be carried only to the depth and width required to permit the removal of the cone.
3. Precast cone sections shall be stored for reuse.
4. Castings shall be stored for reuse.
5. Manholes shall be reset upon completion of the work.
6. Manholes within woodland/prairie areas of the Arboretum shall be restored by Arboretum staff. Otherwise they shall be restored by the Contractor.

e. Measurement and Payment.- The completed work as measured will be paid for at the contract unit prices for the following contract pay items:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Contingency Sewer Location Services (8-inch Sewer between MH 71-70046 and MH 71-69899).....	LS
Contingency Exploratory Excavation (8-inch Sewer between MH 71-70046 and MH 71-69899).....	Each
Contingency Precast Sanitary Manhole	

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(8-inch Sewer between MH 71-70046 and MH 71-69899).....	Each
Contingency Sewer Location Services	
(8-inch Sewer between MH 71-69899 and MH 71-69894).....	LS
Contingency Exploratory Excavation	
(8-inch Sewer between MH 71-69899 and MH 71-69894).....	Each
Contingency Precast Sanitary Manhole	
(8-inch Sewer between MH 71-69899 and MH 71-69894).....	Each
Contingency Sewer Location Services	
(8-inch Sewer between MH 71-69894 and MH 71-69900).....	LS
Contingency Exploratory Excavation	
(Between MH 71-69894 and MH 71-69900).....	Each
Contingency Precast Sanitary Manhole	
(Between MH 71-69894 and MH 71-69900).....	Each
Contingency Manhole/Riser Remove and Replace	
(in Pavement, including restoration) Segment 2 – Geddes Heights.....	Each
Contingency Manhole/Riser Remove and Replace	
(in Grass, including restoration) Segment 2 – Harvard Place	Each
Contingency Manhole/Riser Remove and Replace	
(in Pavement, including restoration) Segment 3 – W. Ridgeway Street.....	Each
Contingency Manhole/Riser Remove and Replace	
(in Pavement, including restoration) Segment 3 – E. Ridgeway Street.....	Each
Contingency Manhole/Riser Remove and Replace	
(in Pavement, including restoration) Segment 5 – Regent Drive.....	Each
Manhole/Riser Remove and Replace	
(in Pavement, including restoration) Segment 1 – Washington Heights	Each
Manhole – Adjust to Grade MH 71-69944	EA
Manhole – Drop Connection Removal (2) MH 71-69944	EA

The items of work listed above are contingency items to be used only as directed by the Engineer and shall be paid for by the work actually performed. The unit price for these items of work shall include all labor, material, and equipment costs to perform the work as detailed herein.

The lump sum price bid for Sewer Locating Services shall be based upon an 8-hour, onsite workday. The time required for mobilization and demobilization is not included in the 8-hour workday, but the costs thereof are included in the price bid.

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The Each price for Exploratory Excavation includes mobilization of equipment, installation of soil erosion and sediment control measures, temporary sheeting, bracing and shoring, excavation to the average depth the sewer segment in question (up to 10 feet), stockpiling of excavated materials, and backfill of the excavation and compaction. Exploratory excavations shall not be allowed to remain open overnight.

Manholes for 8-inch diameter sewers shall be 4-foot diameter.

There are two drop connections in MH 71-69944. The quantity bid is 1 Each to remove both drop connections.

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FOR
WATER SOURCE

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a. General.- This work shall consist of furnishing a source of water for performing sanitary sewer cleaning and cured-in-place pipe (CIPP) lining operations including, but not limited to labor, materials, and equipment required to obtain and transport water from source.

b. City Water Source.- The Contractor may elect to use water from the City-approved fire hydrants on each residential street where work is being performed, the hydrant on Washington Heights Drive, and the hydrant located in the main valley of the Arboretum. Additional hydrants may only be used with prior approval of the Engineer.

Use of an approved double check backflow assembly shall be required. Contractor shall obtain backflow assembly, hydrant meter, and vandal-resistant hydrant meter cage from the City of Ann Arbor Customer Services Unit, and coordinate installation of equipment. Contractor shall pay current market price for all water usage. Obtaining and transporting "City Water" for use on the project will not be paid for separately, but will be included in the cost of other items.

The Contractor shall protect fire hydrants and backflow preventer from freezing and damage. The hydrant used by the Contractor shall be pumped down by the Contractor to prevent freezing. If a fire hydrant becomes frozen, or is not properly closed or pumped down, or otherwise damaged by the Contractor, it shall be repaired by the Contractor at no additional cost to the project. These costs are deemed to include the removal and replacement of sidewalk and any other items that are required to be removed and replaced in order to properly replace the fire hydrant.

If using the hydrant for a water supply, the Contractor shall coordinate their activities requiring the water source to occur within the time limitations and constraints as described in Detailed Specification "Construction Sequencing." Should it be necessary for the Contractor to transport water into the Arboretum the City will designate a hydrant for tanker filling.

No additional payment shall be provided for delays encountered by the Contractor in providing water to the site.

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c. Measurement and Payment.- All work required to provide the water source for sewer cleaning and CIPP operations as described in this Detailed Specification including, but not limited to, accessing, operating, maintaining, and protecting the City fire hydrant in a useable condition will not be paid for separately, but shall be included in the related items of work.

CLEANING AND TELEVISIONING SEWERS AND MANHOLES

**CITY OF ANN ARBOR
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a. Description.- This work shall consist of the cleaning and video inspection of sewers and manholes, and providing the required documentation as described herein. All work shall be performed in accordance with the City of Ann Arbor (City) Standard Specifications, except as modified herein, and as directed by the Engineer.

The Contractor is responsible for video recording and cleaning the pipe before lining, and video recording after lining. Pipeline inspection and videotaping shall be in accordance with National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) requirements.

The Contractor is responsible for inspecting all manholes as indicated on the Drawings in accordance with NASSCO Manhole Assessment and Certification Program (MACP) Level 2 requirements.

b. Submittals.- The Contractor shall provide a detailed sewer cleaning and televising plan to the Engineer for review and acceptance prior to beginning the work. This plan must include descriptions outlining all provisions and precautions to be taken by the Contractor regarding the handling of existing flow. The cleaning and televising plan must be specific, including such items as schedules, locations, type of equipment, details on water source, plans for disposal, and all other incidental items necessary and/or required to ensure proper protection of the facilities and surroundings, including protection of the access locations from damage, and compliance with the requirements and permit conditions specified in these Contract Documents.

The cleaning and televising plan shall be submitted to the Engineer for review and approval in accordance with Section 104.02 of the 2012 edition of the Michigan Department of Transportation Standard Specifications for Construction. No work shall begin until all provisions and requirements have been reviewed and accepted by the Engineer.

For each submittal and re-submittal, the Contractor shall allow at least 14 calendar days from the date of the submittal to receive the Engineer's acceptance or request for revisions. The Engineer's comments shall be incorporated into the re-submitted plans, calculations, and descriptions. The Engineer's acceptance of the plan is required before beginning the work. Re-submittals shall be reviewed and returned to the Contractor within 14 calendar days. Required revisions will not be a basis of payment for additional compensation, extra work, or an extension of contract time. The Contractor shall include time for this entire review process in their schedule.

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Sewer cleaning and televising plan and submittals shall include at a minimum:

1. Copy of PACP/MACP Certifications for sewer televising personnel and manhole inspection personnel;
2. Proof of PACP/MACP certified software;
3. Safety program for confined space entry;
4. Information on equipment, trucks, tanks, etc., including, but not limited to, dimensions, required turning radius, fuel type, any special requirements, etc.;
5. Staging areas for equipment, trucks, tankers, etc.;
6. Schedule for cleaning and televising of pipelines and manholes. Planned hours of operation, including equipment idling, etc.;
7. Number, size, material, and location of hose/piping;
8. Information on cleaning equipment;
9. Sludge and debris dewatering, transportation, and disposal procedure and location;
10. Environment protection including equipment and pipe containment, leak detection, and/or remediation plan; and,
11. Method of noise control for all equipment.

c. Construction.- The Contractor shall carry out their operations in strict accordance with all Occupational Safety and Health Administration (OSHA), Michigan Occupational Safety and Health Administration (MIOSHA), and manufacturer's safety requirements.

1. **Safety.-** The Contractor shall be solely responsible for safety of all those involved with the work during the performance of all work. The Contractor shall not enter into any sewer segment where hazardous conditions may exist until such time as the source of those conditions is identified and eliminated by the Contractor. The Contractor shall perform all work in accordance with the latest OSHA confined space

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entry regulations. The Contractor shall coordinate their work with local fire, police, and emergency rescue unit.

The Contractor shall be responsible for any damage to public or private property resulting from their televising and cleaning activities and shall repair or otherwise make whole such damage at no cost to City and owner of the property.

2. Flow Diversion/Lateral Bypass Pumping.- The Contractor shall provide for the transfer of main line flow around the section or sections of pipe that are to be cleaned and televised, as required to complete cleaning, televising, and inspection work. The diverting and lateral bypass pumping work shall be performed in accordance with Detailed Specification "Sewer Flow Control" and as directed by the Engineer.

If the Contractor chooses to only divert part of the flow during their sewer cleaning operations, the Contractor must indicate that in their submittal, including which plugs would be installed. Contractor to note that all plugs, level sensors, and lateral bypass pumping system shall be in operation for the sewer televising, manhole inspections, and the chamber inspections.

3. Sewer Cleaning.- Each sewer section shall be cleaned to a degree sufficient to allow video inspection and cured-in-place pipe (CIPP) lining to be completed in accordance with this specification and Detailed Specification "CIPP Sewer Lining." The Contractor shall take precautions to protect the sewer lines from damage. The existing sewer has not been cleaned or inspected in decades. The Contractor shall assume the sewer will require heavy cleaning with unlimited passes to achieve a clean sewer and that rodding and root cutting shall be required and are included in the contract pay item.

The Contractor must adhere to the requirements of ASTM F1216 or ASTM F1606 for the following types of cleaning: hydraulic cleaning, high velocity hydro-cleaning, and mechanical cleaning.

Remove dirt, grease, rocks, sand, roots, and other solid or semisolid materials and obstructions from the sewer line and manholes. Cleaning shall be of the entire reach between manholes and/or chambers.

It shall be the responsibility of the Contractor to clear the line of obstructions such as solids, dropped joints, debris from collapsed pipe, sediment deposits, mineral

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deposits, stalactites, and all major blockages that would prevent sewer rehabilitation work to be performed at no additional cost to the project.

The sewers shall be cleaned by using a high-pressure water cleaning machine with minimum capability of 5,000 pounds per square inch (psi) at 80 gallons per minute (gpm). A high-pressure hose with a jet nozzle shall be introduced into the sewer so that a spray shall scour and clean the sewer line without applying internal pressure and damaging the pipe. This will require an unlimited number of passes of the jet nozzle, or other cleaning measures to remove all debris. The hose shall be self-propelled by a minimum water pressure of 1,000 psi. Cleaning pressures to 5,000 psi may be required to remove heavy tuberculation and adhered debris from the pipe interior. The jet nozzle hose, upon withdrawal, will scour the pipe (invert, walls, and crown), flushing all materials into the downstream manhole for removal.

Due to the sensitive nature of the project work site, the Contractor shall only be allowed to occupy the manholes as shown on the Drawings for the performance of the cleaning operations. For major blockages where cleaning cannot be completed, the Contractor shall notify the Engineer for review and approval before proceeding.

Material removal shall be performed at the identified-for-access manholes for the cleaning operation. At no time during cleaning shall material be allowed to enter or flow in the sewer past the downstream access manhole. Passing material from manhole section to manhole section shall not be permitted. All debris and waste material shall be completely removed from the sanitary sewer system and shall be disposed of by the Contractor in accordance with Detailed Specification "Removal and Disposal of Sludge and Debris Material."

Mechanical root cutting shall be performed with powered equipment. The Contractor shall furnish suitable power machinery which shall be used to remove tree roots and deposits remaining after jet cleaning that prevent passage of television inspection equipment or prevent the lining of the sewer.

The Contractor shall provide digital video on DVD, flash drive, or hard drive that verify that the sewer is clean and free of sediment and debris to the satisfaction of the Engineer. If any sewer is not satisfactorily cleaned, it shall be promptly cleaned and re-inspected by closed-circuit television camera and video provided to the Engineer for review and approval.

CLEANING AND TELEVISIONING SEWERS AND MANHOLES

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If the sewer has material and debris that prevents the proper installation of the CIPP, prohibits video inspection, or is not cleaned to the satisfaction of the Engineer, the sewer shall be re-cleaned and re-televised at the Contractor's sole expense.

The sewer shall not be lined until such time as the cleaning operations have been approved in writing by the Engineer. Field Inspection personnel shall not be allowed to authorize the Contractor to begin installation of the CIPP sewer liner.

Extensions of contract time will not be granted for delays associated with re-cleaning and re-televising the sewer except as outlined under Detailed Specification "Extension of Time, Additional Compensation."

All water necessary for the cleaning and lining operations shall be furnished in accordance with Detailed Specification "Water Source."

The cleaning and removal of the material out of the sewer system shall be paid for as part of the individual sewer cleaning contract pay items. All other work necessary for the final disposal of the material shall be paid for as part of the "Removal and Disposal of Sludge and Debris Materials" contract pay item.

4. Manhole Cleaning.- All sanitary manholes shall be cleaned to a degree sufficient to perform the Level 2 MACP manhole inspection and as acceptable to the Engineer. The manhole structures shall be cleaned below their invert elevations with a power vacuum, or other Engineer-approved method, to remove all sediment to allow for the inspection of the bottom of the structures.

The Contractor shall assume the manholes require heavy cleaning with multiple passes to achieve a clean manhole. Manhole and chamber cleaning shall be incidental to the sewer cleaning and no additional payment shall be provided.

5. Sewer Television Inspection.- The initial "pre-rehabilitation" television inspection of the sewers and siphon pipes shall be conducted within a week of the cleaning of each segment as long as the flow diversion and lateral bypass pumping system has remained in operation. Should the flow diversion have been temporarily suspended between the cleaning and the televising, or between the initial televising and the lining, then both the cleaning and televising shall be repeated at no additional cost to the project except as described in Detailed Specification "Extension of Time, Additional Compensation."

CLEANING AND TELEVISIONING SEWERS AND MANHOLES

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The camera must be operative in 100% relative humidity conditions. The live image obtained by the camera shall be transmitted to a color monitor of not less than 19 inches. The camera and monitor shall have a minimum 500-line resolution. The monitor shall be located inside the mobile recording studio.

Lighting for the camera shall be adequate to allow a clear picture of the entire periphery of the sewer and shall be varied as required to be effective for all pipe diameters inspected. Remote control of lighting brilliance, camera focus, and camera movement shall be from a control panel inside the mobile recording studio. Cables and equipment used to propel the camera shall not obstruct the camera view or interfere with the documentation of the sewer conditions.

The camera shall be moved through the sewer line at a uniform rate, maximum 30 feet per minute. Whenever possible, the camera shall move in an upstream direction. The camera shall be stopped for no less than 10 seconds at the manhole entrances, each service lateral, exit manholes, and at all points where the sewer is damaged or deficient. The camera shall pan and tilt to provide full view of each service lateral, and at all points where the sewer is damaged or deficient.

If the camera fails to pass through a pipe section, the Contractor shall re-set the equipment and attempt to perform the inspection coming back from the next upstream, identified-for-access, manhole. If the inspection cannot be completed from the next manhole, the inspection shall be considered complete and the Engineer will provide written instructions to the Contractor describing how to proceed with the work in that reach of sewer.

Video recording of the sewer televising of the portions of the sanitary sewer between MHs 71-70046 and 71-69899, 71-69899 and 71-69894, and 71-69894 and 71-69900, must provide a 360° view of the buried fittings, and location of buried fittings as measured from the downstream manhole.

The initial television inspection shall be paid for under contract pay items. The post rehabilitation television inspection shall be performed once the liner has been installed and cured. No payment shall be provided for post rehabilitation television inspection.

6. Manhole Inspection.- All sanitary manholes shall be Level 2 MACP inspected. The Level 2 MACP inspections shall gather detailed information to fully document all defects, determine condition of the manhole, and provide specific

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information needed to recommend corrective action. Level 2 MACP inspection shall use the established defect coding system found in the PACP to the extent possible.

7. Line Obstructions/Repairs.- If the pre-rehabilitation video inspection reveals areas that require excavation and removal of a section of pipe, and/or spot repair, the Contractor shall submit in writing a request for authorization to perform the excavation, removal, and spot repairs, along with sufficient proof that these repairs are indeed necessary. Such requests shall include method of spot repair, type and manufacturer of repair pipe, method of connection, etc., and shall be submitted prior to commencement of the rehabilitation process. If removal and replacement of pipe, spot repairs, or other measures are required to allow the sewer pipe to be properly rehabilitated, this will be paid for as Extra Work at a price as agreed upon between the Contractor and the Engineer.

d. Documentation.- The Contractor shall use the City's manhole numbering system on all project documentation. The City will provide the Contractor with utility maps or Drawings showing the manhole numbers.

The Contractor shall provide to the City inspection logs listing the location in relation to adjacent manholes of each infiltration point, service leads, unusual conditions, roots, sewer connections, collapsed sections, presence of scale and corrosion, cracked pipe, wide joints, and other discernible features. The logs shall indicate size and type of pipe material, length of line from manhole, and direction of sewage flow, if present. The logs shall also indicate the time and date of recording. Each log shall be named with the pipe inspections from starting manhole to terminus manhole for each stretch of sewer. All logs shall be in accordance with NASSCO PACP and MACP standards, Version 7.0.

The Contractor shall provide color photographs of sewer laterals and all problem areas.

A color DVD and suitable log with voice and/or computer generated description for both pre- and post-rehabilitation inspection shall be made by the Contractor and kept for later reference by the Engineer.

The Contractor shall supply the Engineer with two electronic copies of the entire and final televised program, including PACP database, MACP database, video pipe recordings, reports on two separate flash drives or portable hard drives. Each drive shall contain the entire package of information. The data shall be provided within 15 working days of completion of field work. The information for individual databases,

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sewer segments, and recordings shall not be split into several drives. The flash drives or portable hard drives and information within it shall become the property of the City.

e. Measurement and Payment.- The completed work as measured for these items of work will be paid for at the contract unit prices for the following contract pay item:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Clean _-inch Dia. Sanitary Sewer (Segment _)	Lineal Foot
PACP Televiser _-inch Dia. Sanitary Sewer (Segment _)	Lineal Foot
Level 2 MACP Inspect Manhole or Chamber (Segment _)	Each

Payment shall be made on a lineal foot basis for the cleaning and televising of sanitary sewer. Measurements shall be from manhole to manhole, and shall take place with both the Engineer and the Contractor (or their agents) present. Measurements shall be recorded and logged on a daily basis.

The unit prices for these items of work shall include all labor, material, and equipment costs to perform all the work specified herein.

REMOVAL AND DISPOSAL OF SLUDGE AND DEBRIS MATERIAL

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a. General.- This work shall consist of removal and disposal of sludge and debris material as a result of the sanitary sewer, manhole, and chamber cleaning operations.

b. Sanitary Sewer Material.- The material removed from cleaning the sanitary sewers and manholes shall be removed from the system as described in Detailed Specification, "Cleaning and Televising Sewers and Manholes" and hauled offsite for legal disposal.

The removal of the material out of the sewer system shall be paid for as part of the sewer or chamber cleaning contract pay item. All other work necessary for the final disposal of the material shall be paid for as part of the "Removal and Disposal of Sludge and Debris Material" contract pay item.

Debris encountered in the sewers can be expected to be reflective of the tributary areas providing flow to the sewers. These include both residential and hospital flows.

c. Disposal.- The Contractor shall remove the wet sludge, sediment, debris, and other material from the sewer system and dewater the material at an offsite location, in vacuor trucks onsite, or by other means as required for legal disposal and as approved by the Engineer. No material shall be accumulated onsite unless approved by the Engineer. When removing waste, the material shall be decanted to remove as much of the free liquid as possible. If dewatering onsite, the Contractor may discharge the free liquid (supernatant) back into the sanitary sewer at a downstream manhole. The Contractor shall submit to the Engineer for approval the spill containment measures to be employed at each decant location. The hauled off solids/sludge/material shall be transported in sealed transport trucks. Supernatant shall not be allowed to leak out of the transport trucks onto the roads.

The Contractor shall be responsible for all fees, including all testing fees, material transport, dewatering, drying, and disposal at an approved landfill facility. The Contractor shall provide certified manifests from the landfill, indicating in and out weights of all transport vehicles containing wastes absent of free liquids, to the Engineer.

d. Solids Material Testing.- Solid waste material holding free liquids are prohibited from disposal at municipal solid waste landfills. The Contractor shall demonstrate the absence or presence of free liquids in accordance with Method 9095B (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste,

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Physical/Chemical Methods,” EPA Publication SW-846. Material passing the Paint Filter Liquids Test shall be considered “dry.”

The City of Ann Arbor (City) believes the sludge is not hazardous and can be disposed of in a Type II landfill. The landfill may require the Contractor to provide proof that the materials are non-hazardous prior to disposal. The Contractor shall be responsible for collecting a sample of the sludge and testing it prior to the start of the sewer cleaning.

The Contractor shall provide copies of the sampling results to the Engineer. If required by the landfill, the Contractor is responsible to re-test the material and verify there are no hazardous materials in the sludge and/or debris prior to shipping it to the landfill. No additional payment shall be made for testing or re-testing and verifying the material content.

e. Measurement and Payment.- The completed work shall include all labor, material, fees, tests, and equipment costs to perform all the work specified in the Detailed Specifications and as modified herein to properly dispose of the sediment, debris, sludge, and all other inert material removed from the sewer system.

The complete work as measured for these items of work will be paid for at the contract unit prices for the following contract pay items:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Removal and Disposal of Sludge and Debris Material	Tons

The item “Removal and Disposal of Sludge and Debris Material” shall be a paid for in tonnage of “dry” material absent of free liquids based on the landfill manifests and shall be payment in full for all materials, equipment, and labor necessary to complete this item, including drying the material to the point where it will pass the paint filter test as required by the disposal facility and transporting it to the landfill for disposal.

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a. Description.- The work covered by this Detailed Specification shall consist of furnishing all labor, supervision, tools, equipment, appliances, materials, incidental items, and the installation, operation, and maintenance needed to perform all operations in connection with the diversion of flow and bypass pumping of sanitary sewage for cleaning and inspecting of sewers and manholes, and sewer rehabilitation procedures. The purpose of which is to provide un-interrupted sewerage service at all times and to prevent sewage overflows.

The flows from the various laterals to the smaller diameter sewers connected to the 36-inch sanitary sewer in the work zone shall be bypass pumped to a manhole either upstream of the plugs or downstream of the work zone. The design, installation, and operation of the temporary sewer flow control system shall be the Contractor's sole responsibility. When required for work between MHs 71-699 and 71-69895, the City of Ann Arbor (City) will divert dry weather flow upstream of the 36-inch sanitary sewer.

When working inside manholes or sewer, the Contractor shall exercise caution and comply with Occupational Safety and Health Administration (OSHA) and City requirements for working in confined spaces.

The Contractor shall manage, plan, and execute their operations such that there will be no backups, leaks, or unauthorized discharges of sewerage. The Contractor shall be completely responsible for the proper clean-up and any environmental remediation as may be required by the City, the University of Michigan (U of M), or the Michigan Department of Environment, Great Lakes, and Energy (EGLE) for any backup, leak, spill, or sanitary sewerage overflow.

b. Submittals.- The Contractor shall provide a detailed Sewer Flow Control Plan to the Engineer for review and acceptance prior to the start of any flow control work. This plan must include descriptions outlining all provisions and precautions to be taken by the Contractor regarding the handling of existing flow. The Sewer Flow Control Plan must be specific, including such items as schedules, locations, elevations, capacities of the equipment, materials, and all other incidental items necessary and/or required to ensure proper protection of the facilities, including protection of existing structures and pipes, and compliance with the requirements and conditions specified in these Contract Documents. The flow control plan shall be submitted to the Engineer for review and approval in accordance with Section 104.02 of the 2012 edition of the Michigan Department of Transportation Standard Specifications for Construction. No construction shall begin until all provisions and requirements have been reviewed and accepted by the Engineer.

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For each submittal and re-submittal, the Contractor shall allow at least 14 calendar days from the date of the submittal to receive the Engineer's acceptance or request for revisions. The Engineer's comments shall be incorporated into the re-submitted plans, calculations, and descriptions. The Engineer's acceptance of the plan is required before beginning the work. Re-submittals shall be reviewed and returned to the Contractor within 14 calendar days. Required revisions will not be a basis of payment for additional compensation, extra work, or an extension of contract time. The Contractor shall include time for this entire review process in their schedule.

Sewer Flow Control Plan submittal shall include at a minimum:

1. Overall flow control plan and sequence of construction;
2. Flow control schedule including times when the flow control system shall be temporarily shut down and flow allowed to return to normal operations;
3. Overall plan for removal of flow control system during wet weather events and/or emergency situations;
4. Plan for providing redundancy for all aspects of the system especially the plugs;
5. Plan for providing noise control of pumping and power generation equipment;
6. Safety Program for confined space entry and procedure for entering manholes and installing plugs under live flow conditions;
7. Emergency clean-up plan should a spill occur or backups in the system occur. The plan should include contact names and 24-hour phone numbers;
8. Procedure for continuous (24-hour) monitoring of system, including verifying that plugs are sealed and lateral bypass pumping system is operating. The plan is to include type and location of level sensors, method of installation, set elevations of sensors, and continuous monitoring system. Monitoring of the system shall be performed and documented at each installation. Records of the system monitoring shall be submitted to the Engineer;
9. Maintenance of traffic plan for plug installation and removal in public roadways;

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10. Sewer plug types, method of installation and removal, anchors and restraints, and hydraulic head limits;

11. Lateral bypass pump sizes, capacities, power requirements, and number of each size to be provided at each manhole including redundancy;

12. Calculations giving flow capacity provided by each pump given the system's Total Dynamic Head (TDH), including the calculations that are used to derive the system TDH. This data should also include the calculations determining what the Net Positive Suction Head available is in comparison to the Net Positive Suction Head required by each pump. Pump curves shall be submitted;

13. Number, size, material, and location of lateral bypass pumping suction and discharge piping, procedure for protecting lines, and location of bypass pumping discharge manhole;

14. Lateral bypass pumping system flushing and drainage plan;

15. Buried bypass pipe locations and details;

16. Environment protection including pump containment and leak detection;

17. Method of protecting discharge manholes or structures from erosion and damage;

18. Method of noise control for each pump and generator;

19. Secondary noise control barrier (mandatory); and,

20. Design plans for access to bypass pumping locations indicated on the Drawings.

c. Flow Diversion Equipment.- Provide materials and equipment suitable for, and known to be reliable to meet, the flow diversion requirements as shown on the Drawings and as needed for the Contractor's operations.

The plug shall be a temporary plug that allows for quick removal in case of emergency or wet weather situation and re-installation after wet weather event has passed. Plugs shall be capable of withstanding minimum static head pressure of 15 feet. Plugs shall include form or bracing, anchoring, or restraint to keep plugs

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properly installed. Plugs should be of the type capable of being installed under live flow conditions and in depths exceeding 35 feet as shown on the Drawings. Plugs should be able to be installed in either the incoming or outgoing pipe in a manhole and allow for quick removal under surcharged conditions.

Pressure gages shall be installed with the plugs to continuously monitor the plugs and adjust the air pressure as needed to maintain full blockage of flow.

Ultrasonic level sensors shall be installed, at a minimum, at each bypass pumping location. The Contractor may elect to install sensors in other locations at their expense if they so choose. The Contractor shall be responsible for the installation and maintenance of the sensors. The level sensors shall provide continuous level readings that the Contractor shall be able to review remotely to monitor the level in the system during flow diversion. The level sensors shall provide notifications and alarms to allow the Contractor time to remove the plugs should an emergency or a wet weather event occur.

d. Sewer Bypass Pumping Equipment.- Provide materials and equipment suitable for, and known to be reliable to meet, the bypass pumping requirements.

The pumps must be capable of passing a minimum of a 3-inch solid. All pumps must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of effluent flows.

Equipment used for bypass pumping shall be sufficient to handle anticipated average and peak flows from each sewer. The Contractor shall maintain sanitary sewer flows within their bypass pumping system, including all wet weather flows.

The locations and approximate flow rates for each of the sewer segments is as follows:

	MH ID	Location	Bypass Pump from	Pump & Haul	Dry Weather Flow (CFS)
Sewer Segment 1	71-69222	Washington Hts	Y	-	0.087
	71-69221	By the Reader Center	Y	-	
	71-69252	Parking lot of U of M (By the temp Trailer)	y	-	0.0002

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	71-69254	U/S from Segment 1 interceptor connection	-	-	
	Segment Total				
Sewer Segments 2 & 3	71-70021	Ridgeway St	-	y	
	71-70023	Ridgeway St	-	y	
	71-70026	Harward Place	-	Y	
	71-70028	28 Harvard Pl	-	y	
	71-70040	22 Harvard PL	-	y	
	71-70042	26 Harvard PL	-	y	
	71-70035	Arb	-	y	
	71-70057	Ridgeway St	-	y	
	Segment Total				11.98
Sewer Segments 4, 5 & 6	71-70038	Arb	y	-	
	71-70039	Arb	y	-	
	71-70032	Arb	y	-	
	71-70044	Arb	y	-	
	71-69946	Regent Dr	y	-	
	71-69898	Arb	y	-	
	71-69893	Arb	y	-	
	71-70046	Arb	y	-	
	Segment Total				14.58
Interceptor Downstream from Diversion Chamber	71-69895	Arb	y	-	
	71-70012	Arb	y	-	
	71-69897	Arb	y	-	
	71-70074	Riverview Ct	y	-	
	71-69919	Pineview CT	y	-	16.15
	71-69254	Hospital connection to interceptor	n/a	n/a	
	71-70050	Segment 1 connection to interceptor	n/a	n/a	0.0192
	71-68799	u/s MH from 21" connection to interceptor	n/a	n/a	
	Segment Total				

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The Contractor shall take into account seasonal variations and include a safety factor above the indicated peak flow values in sizing pumping equipment.

For sanitary sewerage, bypass piping shall be PVC Schedule 80, or equivalent, with solvent welded joints; or HDPE with butt fused joints. The Contractor shall perform hydrostatic testing of bypass pump discharge pipes in accordance with ASTM F2164 for HDPE or ASTM F2261 for PVC pipe, prior to operating bypass pumping system to ensure structural integrity of pipeline. Any defects or leaks found during testing shall be repaired and the pipeline shall be re-tested until results are satisfactory in accordance with the ASTM standard, and as acceptable to the Engineer.

1. Redundant Equipment.- The Contractor shall have redundant flow diversion equipment including, but not limited to, plugs and level sensors, available for immediate use at the job site at all times in the event of a failure.

Any damage to the Contractor's equipment, sewer system, or delays to the Contractor's operations due to equipment or plug failure/leakage shall be the Contractor's sole responsibility and no additional payment shall be made for these occurrences. The Contractor shall take all necessary precautions to verify that the plugs and flow diversion plan is operational prior to performing the work.

The Contractor shall have redundant lateral bypass pumping equipment installed and ready for immediate operation and use in the event of an emergency or primary system breakdown or failure. The standby system shall be capable of pumping dry weather and peak flow. The standby pump(s) shall not be considered as any part of the primary system as designed for peak flow. The Contractor shall also furnish and have available onsite, and ready for operation, redundant pumping ancillary equipment in case of any failure of the pumping system including piping, electrical equipment, pipe appurtenances, etc. Redundant pumping facilities shall also include having a backup power generator in case the primary power source fails.

The Contractor shall not obstruct flows in the sewer unless the primary and redundant equipment is onsite and in operable condition and authorization has been granted by the Engineer.

e. Residential Flow Diversion.- Residential sewer lateral location data for the project area is limited. The Contractor shall verify and document the sewer lateral locations as part of the sewer cleaning and televising process. The Contractor should assume each residence within the project area is connected to a sanitary sewer and

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must account for each residence abutting the respective sewer segments. With the exception of the Caretakers Residence, there are no known sanitary sewer laterals located within the Arboretum.

The Owner will permit water use restrictions to be used to reduce bypassed flows. Use restrictions proposed by the Contractor shall be reviewed and approved by the Owner.

The Contractor shall develop a flow diversion plan that permits the work to be completed with the least disruption of service to the residents.

Plans reflect collecting sanitary flows and hauling them to a remote, Owner approved location for disposal. This is a recommendation only; the Contractor is not required to use this bypass method. Contingency bid items for removing manhole casting and cone sections are included for use if it is determined that pumping and lining operations need to be performed from the same manhole.

Bypass pumping from manholes on Geddes Heights, East Ridgeway Street, West Ridgeway Street, and Harvard Place to manholes on Geddes Avenue is not prohibited but subject to many restrictions. Including but not limited to the following:

1. Two-way traffic must be maintained at all times.
2. The manholes on Geddes Avenue are located in the approximate center of the road. Manholes shall not be permitted to remain uncovered. The Contractor shall be required to fabricate a manhole covering that allows for connection of the bypass piping.
3. All bypass piping crossing roads or driveways shall be placed in a traffic load rated crossing ramp or Owner approved equal.
4. Crossing ramps shall not be permitted during winter months when plowing of Geddes Avenue is required. Actual dates to be determined by the Owner based upon the Contractor's schedule and weather forecasts.
5. Excavating Geddes Avenue to install temporary piping shall not be permitted.

Bypass pumping from the Regent Drive cul-de-sac to manholes on Highland Road shall be subject to the same restrictions outlined above.

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f. Washington Heights Flow Diversion.- The exact location of the sanitary lateral servicing Ronald McDonald House (RMH) is unknown. It is presumed to be located between MH 71-69222 and MH 71-69220. RMH provides 31 rooms for families ranging in size from 4 to 5 persons. This includes 12 guest rooms on the lower level. All guest rooms have restroom facilities. The facility is usually full, operating on a waiting list basis. Due to excessive pedestrian traffic, the work on Washington Heights must be performed at night. Therefore, noise control is of great concern. All bypass pumping and power generating equipment shall have primary and secondary sound attenuation in place before the start of any work.

Plans indicate bypass pumping from MH 71-69221. The only known sanitary contributions to this manhole are from the Nichols Arboretum Reader Center. The Reader Center is closed during evening hours. If the Contractor can verify that there is no contributing flow at this manhole then bypass pumping will not be required. The Contractor shall bid based upon providing the pumping.

Two options are available for bypass pumping from MH 71-69219 and MH 71-69252. The Contractor may route pump discharge piping down the slope to MH 71-70050. Alternately, the Contractor may also route pump discharge piping to MH 71-69236. If the Contractor elects to use the alternate discharge location the following restrictions shall apply:

1. Contractor shall not close any portion on East Medical Center Drive.
2. Bypass pump discharge piping shall be routed behind the sidewalk west of the tree line. Piping shall not be placed in the road or on the sidewalk. The sidewalk shall remain open.
3. Temporary fencing shall be placed between the sidewalk and the piping.

g. Interceptor Flow Diversion.- Flows enter the 36-inch Southside Interceptor Sanitary Sewer flowing through Nichols Arboretum through four sewers. The first is the 42-inch reach of the Southside Interceptor Sewer located in Fuller Street that reduces to the 36-inch Nichols Drive Sewer. The second sewer is a 21-inch sewer that collects flows from the U of M Hospital Complex and connects to the 36-inch Southside Interceptor in the Nichols Arboretum through a buried manhole. The third is a 10-inch sewer connecting to the interceptor at MH 71-69254. The fourth sewer is the 10-inch

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sewer located along Washington Heights/East Medical Center Drive (Sewer Segment 1) at MH 71-70050.

Interceptor flow diversion shall be performed by the City.

The Contractor is responsible for obtaining any approvals and permits for lane closures and placement of temporary equipment within public ways from the Agency having jurisdiction. The Contractor shall provide the City a minimum of 7 days advance notice for flow diversions/installation of plugs and consequent lane closures. Work within the Fuller Street/Glen Court intersection shall be limited to the hours of 9:00 a.m. to 3:30 p.m. Due to the location of MH 71-68799, the Contractor shall be required to coordinate access to this manhole with the U of M Hospital Complex staff and shall avoid unnecessary traffic obstructions; this will require the work needed to perform the installation(s) be completed by early morning (prior to 7:00 a.m.) or shall not begin until late night (after 7:00 p.m.) and shall be as approved by U of M. Should a wet weather event occur, the Contractor will be allowed to enter East Medical Center Drive after providing notice to the Engineer.

The Contractor shall install temporary traffic control measures as indicated on the maintenance of traffic plans and as approved by the Engineer.

Copies of the record drawings from the U of M Hospital Replacement Project and the associated utility work have been included with the set of Drawings for the Contractor's reference. The City has video inspection of MH 71-68799 available to the Contractor upon request.

The Contractor shall install plugs and level sensors as shown on the Drawings and test the system for a minimum of 48 hours prior to the start of any other work onsite. The Contractor, City, and Engineer shall review the flow diversion during the testing period, including flow levels in the manholes. The Contractor shall not start any other work onsite until acceptance of the diversion test.

h. Lateral Bypass Pumping.- At no time shall plugging and/or blocking of flow from the U of M Hospital Complex service connections be permitted.

The Contractor shall construct and maintain bypass pumping facilities as needed that will pump the flow rates as specified elsewhere herein. The Contractor shall provide the City and U of M with a minimum of 7 days advance notice prior to initiating the sanitary sewer bypass pumping system.

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The Contractor is responsible for obtaining any approvals for placement of the temporary equipment and/or piping within public ways from the Agency having jurisdiction.

The Contractor shall provide an adequate labor force and have designated personnel onsite for maintenance and operation, and emergency back-up service, of the bypass pumping facility 24 hours per day 7 days per week during bypass operations.

Anytime bypass pumping operations cease as required due to weather conditions described in Detailed Specification "Extension of Time, Additional Compensation" or as required by the Engineer, the Contractor shall drain the bypass pump discharge line back into the sanitary system as described in the Sewer Flow Control Plan and as directed by the Engineer to avoid freezing of the pipeline. Under no circumstances shall sanitary sewage within the bypass discharge line be drained to the Huron River.

The Contractor is to arrange for and provide all necessary temporary power, electrical service, board switches, etc. as required by DTE Energy and the National Electrical Code (NEC) current edition to provide temporary bypass pumping.

All bypass pumping discharge pipes shall be protected from the pipe header to the discharge structure. The discharge pipe shall be routed along the west/south (non-river) side of Nichols Drive and shall be routed to avoid adversely impacting all wetlands. The Contractor shall provide necessary fittings or deflection in pipe to route pipe as necessary to minimize environmental impact and conflict with pedestrian, construction, and emergency vehicle traffic. When the bypass pipeline crosses drives or trails, or when pipeline is within any Contractor work zone/staging area, the Contractor shall place the bypass pipeline in a casing pipe and bury in temporary trenches with compacted backfill as indicated on the Drawings, as required for the Contractor's operations, and as approved by the Engineer. All work associated with temporary bypass discharge pipe trench, including piping, fittings, deflections, casing, spacers, trenching, and backfill shall be included in the contract pay item "Sewer Flow Control."

i. Noise Control.- All noise generated by the bypass pumping operation shall not exceed the sound limits and shall follow necessary procedures as required for temporary exemptions, as defined in Detailed Specification "Hours of Work." The Contractor shall provide a secondary sound barrier for both the primary and back-up pumps and any power generating equipment.

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j. Flow Diversion and Bypass Pumping Completion.- At the end of the flow control operation, and after receipt of written permission from the Engineer, the Contractor shall remove all flow diversion and bypass pumping equipment, including level control system, temporary power equipment, and suction/discharge piping in a manner that permits the sewage flow to return to normal without overflowing to the environment, surcharging, or causing other major disturbances downstream. The Contractor shall restore all disturbed areas and structures, and restore all pavement in accordance with Detailed Specification, "Project Clean-Up and Restoration, Special" and as directed by the Engineer.

The duration of the bypass pumping shall be determined by the Contractor as needed to perform the work under this contract while maintaining un-interrupted sewage service.

k. Flow Control Precautions.- When flow in a sewer line is bypassed or plugged, sufficient precautions must be taken to protect the sewer liner and the Contractor's operations from damage that might result from sewer surcharging. Further, precautions must be taken to ensure that sewer flow control operations do not cause flooding or damage to public or private property being served by the sewers involved. At no time shall sewage be pumped in or allowed to flow into a catch basin, storm sewer, or open watercourse.

l. Measurement and Payment.- The completed work shall be paid for at the contract unit price for the following contract pay item:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Sewer Flow Control (Segment _)	Lump Sum

The contract unit price for this item shall include all labor, supervision, tools, permits, shop drawing submittals, materials, equipment, operation, any incidental items, and all other work as noted on the Drawings and as specified herein to allow the Contractor to perform the work of diverting and bypass pumping flows as detailed herein.

The cost for the sewer flow control shall be paid for as a Lump Sum item regardless of the duration, number of, and/or duration of the wet weather events encountered, flow encountered, weather conditions, or number of times flow control system is temporarily removed and re-installed.

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25% of the lump sum shall be paid for Sewer Flow Control following the initial installation, 48-hour test, and acceptance of the system by the Engineer. 50% of the lump sum shall be paid upon returning the sewer back into service. The remainder of the cost shall be paid for after the removal of all equipment from the site.

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a. Description.- This work shall consist of rehabilitating pipelines by the insertion of a resin impregnated flexible lining and cured-in-place to form a pipe. The cured-in-place pipe (CIPP) shall be saturated with a thermosetting resin and inserted into the existing pipeline. Curing shall be accomplished by circulating hot water only to harden the resin into a hard, impermeable pipe. When cured, the hardened CIPP shall be a tight-fitting watertight pipe within a pipe. The CIPP shall be continuous from manhole to manhole with no circumferential joints or seams. Except as otherwise specified herein, all work shall be performed in accordance with the City of Ann Arbor (City) Public Services Area Standard Specifications, and as directed by the Engineer.

For a CIPP system to be considered acceptable, the CIPP system must have at least two million lineal feet of successful, documented installations, a minimum of 250,000 lineal feet of which shall have been in Midwestern United States or Canada.

When requested by the Engineer, the Contractor shall submit test results from previous field installations of the same resin system and tube materials as proposed for this installation. The test results must verify that the CIPP physical properties specified in this Detailed Specification have been achieved in the field.

The lining operation shall not begin until the sewer has been cleaned and video inspected in accordance with the Detailed Specification "Cleaning and Televising Sewers and Manholes" and authorization to begin by the Engineer has been granted.

b. Design Considerations.- The required structural CIPP wall thickness shall be based, at a minimum, on the physical properties of the cured composite and per the design of the Professional Engineer. The finished liner shall be designed per ASTM F1216 Appendix X1 for the following condition:

- Condition.....Fully deteriorated gravity pipe
- Safety Factor2
- OvalityAs measured by Contractor during sewer inspection, assume 2% for bidding purposes
- Soil Density130 pounds per cubic foot (lbs/cft)
- Soil Modulus700 pounds per square inch (psi) for pipe inverts up to and including 15 feet deep, 1,000 psi for pipe inverts greater than 15 feet deep
- Groundwater Depth:.....As field verified
- Surcharge Loading.....HS-20 (Highway) when any part of the sewer is under any major street, county road, or state highway; E-80 (Railroad) when under any railroad.

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The acceptable resin system values to be incorporated into the formula for liner thickness shall not be greater than the following:

Table 1

	Polyester	Enhanced Polyester	Vinyl Ester	Epoxy
Short Term Flexural Modulus (psi)	300,000	400,000	250,000	300,000
Long Term Flexural Modulus (psi)	150,000	200,000	125,000	150,000
Creep Retention Factor	50%	50%	50%	50%
Flexural Strength (psi)	4,500	4,500	4,500	5,000

Where the requirements of this specification conflict with ASTM F 1216 or ASTM D5813 this Detailed Specification shall govern.

The Contractor shall determine the liner thickness and resin quantity for this project per ASTM F1216, Appendix X1. Liner thickness, resin, and resin quantity shall be furnished to the Engineer for review and approval prior to beginning work. The design calculations for wall thickness shall be completed by a Professional Engineer proficient in the design of pipeline systems, licensed in the State of Michigan, with design calculations signed and sealed. The CIPP design shall assume no bonding to the original pipe wall.

The Contractor shall submit, prior to installation of the lining materials, certification of compliance with these specifications. Certified material test results shall be included that confirm that all materials conform to these specifications. Materials not complying with these requirements will be rejected.

For each submittal and re-submittal, the Contractor shall allow at least 14 calendar days from the date of the submittal to receive the Engineer's acceptance or request for revisions. The Engineer's comments shall be incorporated into the re-submitted plans, calculations, and descriptions. The Engineer's acceptance of the submittal is required before beginning the work. Re-submittals shall be reviewed and returned to the General Contractor within 14 calendar days. Required revisions will not be a basis of payment for additional compensation, extra work, or an extension of contract time. The Contractor shall include time for this entire review process in their schedule.

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c. Material.- All materials shipped to the project site shall be accompanied by test reports certifying that the material conforms to the ASTM standards listed herein. Materials shall be shipped, stored, and handled in a manner consistent with written recommendations of the CIPP system manufacturer to avoid damage. Onsite storage locations shall be as indicated on the Drawings and approved by the Engineer.

1. **Preliner Tube.-** The preliner shall be a polyethylene material compatible with the lining system, and shall be utilized where necessary to accommodate infiltration, damaged, or missing pipe.

2. **Felt Liner Tube.-** The tube shall consist of one or more layers of absorbent, flexible, non-woven felt material. The tube shall be capable of carrying the specified resin, constructed to be able to withstand installation pressures and curing temperatures, have sufficient strength to bridge missing pipe and stretch to fit irregular pipe sections at all pipe locations, and be compatible with the resin used.

The outer tube coating shall consist of an impermeable, flexible membrane that contains the resin and allows for visual inspection and verification of proper resin impregnation (“wet-out”) procedure. The coating shall hold the resin inside the tube without leakage, accommodate installation, and stretch to the size and shape of the existing sewer, and shall not delaminate before, during, or after curing.

The tube shall have a uniform thickness that when compressed at installation pressures will meet, or exceed, the design thickness. The thickness of the tube shall be calculated based upon the resin system values given in this Detailed Specification.

The CIPP wall thickness shall be calculated from the equation in ASTM F1216, Appendix X1, based upon the parameters given in this Detailed Specification. The minimum CIPP wall thickness shall be not less than the value calculated by that equation. Any layers of tube that are not saturated with resin and capable of being cured shall not be deemed to have been included in the calculated CIPP wall thickness.

The tube shall be fabricated to a size and length that when installed will fit sufficiently tight within the existing pipe so as to not leak at manholes, at service connections, or through the wall of the installed pipe. The tube shall be properly sized to the diameter of the existing pipe and the length to be rehabilitated and be able to stretch to fit irregular pipe sections and negotiate bends. The Contractor

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shall determine the minimum tube length necessary to effectively span the designated run between manholes. The Contractor shall verify the lengths in the field prior to impregnation of the tube with resin, to ensure that the tube will have sufficient length to extend the entire length of the run. The Contractor shall also measure the inside diameter of the existing pipelines in the field prior to ordering liner so the liner can be installed in a tight-fitted condition. Allowance for circumferential stretching of the tube during insertion shall be made as per manufacturer's recommendations. Overlapped layers of felt in the longitudinal seam that cause lumps in the final product shall not be utilized.

The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

The wall color of the interior pipe surface of the CIPP after installation shall be a light reflective color so that a clear detail examination with closed circuit television inspection equipment may be made. The hue shall be dark enough to distinguish a contrast between the fully resin saturated felt fabric and dry or resin lean areas.

Seams in the tube shall be stronger than the unseamed felt and shall meet the requirements of ASTM D5813. Where the length of the tube to be installed requires joining along the circumference of the tube, the sewn joint shall not be perpendicular to the long axis but spirally formed and sewn.

The outside of the tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 feet. Such markings shall include the manufacturers name or identifying symbol. The tubes must be manufactured in the USA.

The length of the tube shall be that deemed necessary by the Contractor to effectively carry out the insertion and seal the pipe at the inlet and outlet points, plus that amount required to run-in and run-out for the installation process. The Contractor shall verify the lengths in the field before cutting the tube to length. Lengths of sewer shall be lined over one or more access points as shown on the Drawings.

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3. **Resin.-** Resin shall be a polyester, enhanced polyester, vinyl ester, or epoxy system including all required catalysts, initiators, or hardeners that when cured within the tube creates a composite that satisfies the requirements of ASTM F1216 and ASTM F1743, the physical properties herein, and those which are to be utilized in the design of the CIPP for this project. Resin selected shall be resistant to the chemical composition of the sewage and comply with the structural requirements of this specification.

The resin shall be thermosetting resin that is compatible with the lining process and shall meet the requirements of ASTM F1216 except as otherwise specified in this Detailed Specification. The resin shall be able to cure in water with an initiation temperature for cure as required by the liner manufacturer, but not greater than maximum temperatures required under ASTM F1216. The cured resin/felt system shall be suitable for the expected conditions within the existing sanitary sewer.

The Contractor is responsible for choosing a resin system that is capable of meeting the physical and cured-in-place properties and performance requirements as detailed in this specification.

For this project, non-styrene based liner resin is required.

4. **Field Cured Line.-** The completed liner as installed and fully cured-in-place shall meet the minimum physical properties for short term flexural modulus and flexural strength as shown in Table 1.

5. **Remote Temperature Sensing Devices.-** Fiber optic probes shall be installed to monitor the average temperature along the entire length of the tube as it cures. Devices shall be provided by VeriCure or an Engineer-approved equal.

d. Construction.- The Contractor shall carry out their operations in strict accordance with all Occupational Safety and Health Administration (OSHA), Michigan Occupational Safety and Health Administration (MIOSHA), and manufacturer's safety requirements. The Contractor shall be solely responsible for safety during the performance of all work. The Contractor shall not enter into any sewer segment where hazardous conditions may exist until such time as the source of those conditions is identified and eliminated by the Contractor and/or the City. The Contractor shall coordinate their work with local fire, police, and emergency rescue unit.

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The Contractor shall be responsible for any damage to public or private property resulting from their sewer lining or televising activities and shall repair or otherwise make whole such damage at no cost to the City.

1. Cleaning of Pipelines.- Prior to rehabilitation of any sewer, it shall be the responsibility of the Contractor to remove all internal deposits from the pipeline. This shall include dirt, debris, mud, bricks, grease or oils, mineral deposits, root masses, pieces of broken pipe, etc. Cleaning of sewer shall be in accordance with the City of Ann Arbor Public Services Area Standard Specifications, Detailed Specification "Cleaning and Televising Sewers and Manholes," and as directed by the Engineer.

2. Pre-Rehabilitation Inspection of Pipelines.- Inspection of pipelines shall be performed after the pipe has been cleaned, by experienced personnel trained in locating breaks, obstacles, and service connections by closed circuit television.

The interior of the pipeline shall be carefully inspected to determine the location and extent of any structural failures. The location of any conditions which may prevent proper installation of lining materials into the pipelines shall be noted so these conditions can be corrected as specified in this Detailed Specification and Detailed Specification "Cleaning and Televising Sewers and Manholes."

3. Diverting/Bypassing Flow.- The Contractor shall provide for the transfer of main line and/or lateral flow around the section or sections of pipe that are to be cleaned, televised, and rehabilitated. The work shall consist of diverting, pumping, and bypassing flow in the existing sewers in accordance with Detailed Specification "Sewer Flow Control" and as directed by the Engineer.

4. Line Obstructions.- It shall be the responsibility of the Contractor to clear the line of obstructions such as solids, dropped joints, root masses, protruding branch connections, or broken pipe that will prevent proper insertion of the liner in accordance with Detailed Specification "Cleaning and Televising Sewers and Manholes" and as directed by the Engineer.

5. Installation of Resin Impregnated Tube.- Due to the sensitive nature of the project work site, the Contractor shall only be allowed to use manholes shown on the Drawings for the installation point of the liner into the existing sewer to be lined.

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The Contractor shall designate a location where the uncured resin in the original containers and the unimpregnated liner will be resin impregnated prior to installation. The Contractor shall allow the Engineer to inspect the materials and procedure. A resin and catalyst system compatible with the requirements of this Detailed Specification shall be used. The quantities of the liquid thermosetting materials shall be provided in accordance with manufacturer's standards to provide the cured liner properties specified. Sufficient resin shall be used to fill the volume of air voids in the liner with additional allowance for polymerization, shrinkage, and loss of resin through cracks and irregularities in host pipe wall. The Contractor shall ensure the proper amount of resin is uniformly distributed throughout the entire length of the tube.

The wetting out, installation, and curing of the resin impregnated tube shall be in accordance with ASTM F1216 and per manufacturer's specifications. The tube shall be inserted through existing manholes by means of an inversion process, the application of a hydrostatic head sufficient to fully extend the liner to the next designated access point, or other means as approved by the Engineer.

The process will be adjusted as necessary to ensure a complete lining without over-stressing or tearing the lining, with sufficient pressure to hold the liner snug to the pipe wall, and to produce dimples at side connections and flared ends at the entrance and exit access points. The use of a lubricant is recommended and if used, such lubricant shall be compatible with the rehabilitation process.

The manufacturer's standards shall be closely followed during the elevated curing temperature so as not to over-stress the felt fiber and cause damage or failure of the liner prior to cure.

6. Curing.- Hot water or steam is required for full length liners. After installation of the resin impregnated liner is completed, the Contractor shall supply a suitable heat source and water recirculation or steam generation equipment as necessary to cure the liner. The equipment shall be capable of delivering hot water or steam to the far end of the liner through a hose, which has been perforated per manufacturer's recommendations, to uniformly raise the water temperature in the entire pipe above the temperature required to affect a cure of the resin. This temperature shall be determined by the resin/catalyst system employed.

All water necessary for CIPP lining operations shall be furnished in accordance with Detailed Specification "Water Source."

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For quality control during the CIPP lining operation, the Contractor shall utilize remote temperature sensing devices placed between the host pipe and the liner to continuously monitor the liner cure incrementally every 18 inches or less to verify that an exothermic reaction has occurred and that a full cure has taken place along the full length of the CIPP liner. **Measuring temperatures at the liner endpoints only will not be permitted.** The cure information must be taken from the bottom third of the pipe liner. Cure parameter information shall be provided by the resin manufacturer.

Liner and/or host pipe interface temperature shall be monitored and logged during curing of the liner. The monitoring system must have the ability to be remotely viewed live by the Engineer. Data collected shall be provided to the Engineer in Excel spreadsheet and graphical viewer formats at the same time as the post-lining inspection videos are provided.

Initial cure shall be deemed to be completed when the remote sensing devices reflect that the cure temperature, as recommended by the resin/catalyst system manufacturer, have been achieved. The cure period shall be of a duration recommended by the resin manufacturer, as modified for site-specific conditions, during which time the recirculation of the water and cycling of the heat exchanger to maintain the temperature in the liner continues.

Where directed by the Engineer, the Contractor shall provide masking agents to compensate for noxious odors generated during the curing process.

7. Cool-Down.- The Contractor shall cool the CIPP in accordance with the CIPP manufacturer's recommendations, to a temperature below 100°F before relieving the static head in the liner. Temperatures and curing data shall be monitored and recorded by the Contractor throughout the installation process to ensure that each phase of the process is achieved in accordance with the CIPP manufacturer's recommendations. Cool-down may be accomplished by the introduction of cool water into the liner to replace water being drained from the downstream end. Care shall be taken in the release of the static head such that a vacuum will not be developed that could damage the newly installed liner. The cooled water shall be released to the existing sanitary sewer at a rate that is approved by the Engineer and the City of Ann Arbor's Waste Water Treatment Plant (WWTP) superintendent.

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8. **Finish.**- The cured liner shall be continuous over the entire length of an insertion run and be as free as commercially practicable from visual defects such as foreign inclusions, dry spots, pinholes, and delamination. The lining shall be impervious and free of any leakage.

Any defects which will affect the integrity of the liner, or any deficiencies in required strengths or thicknesses, shall be repaired or removed and replaced at the Contractor's expense, in a manner acceptable to the Engineer.

9. **Service Lead Connections.**- Work shall be scheduled to minimize the interruption of service to homeowners within the lined sections. Sewer service shall not be interrupted overnight. Owner shall notify Contractor in writing when a service lead is not to be reconnected. Leads not being lined shall be reconnected by cutting liner from the inside after the liner has been fully cured and cooled. Cutting shall produce a smooth edge and there shall not be an annular space between liner and service lead. If the service reinstatement results in an opening greater than 100 percent, the Contractor shall install a CIPP type repair sufficient in size to cover the over-cut service connection. No additional compensation will be paid for the repair. If identified, install a clean-out on the lateral near the property right-of-way line. Lateral liner connection to sewer main shall overlap the entire circumference of the sewer main to prevent a gap for roots and infiltration to penetrate.

10. **Sealing Liner at the Ends.**- A seal, consisting of a hydrophilic sealing gasket compatible with the installed CIPP, shall be installed at each manhole/pipe wall interface. The seal shall be a seamless molded tubular design that swells in the presence of water. The seal shall be secured in place by a retaining ring.

11. **Post-Rehabilitation Television Inspection.**- The completed sewer shall be television inspected and color videotaped, by the Contractor, in accordance with Detailed Specification "Cleaning and Televising Sewers and Manholes." No payment shall be provided for post rehabilitation television inspection. All costs associated with post-rehabilitation television inspection shall be included in the price bid for lining the respective sewer segment.

12. **Acceptance Tests.**- The Engineer shall perform Acceptance Testing in accordance with ASTM F1216 (including appendices) and ASTM D5813.

The Contractor shall prepare plate test samples to be cured with the CIPP operation. The Contractor shall capture and prepare 10 sample specimens of the

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liner for the Acceptance Testing to be performed by the Engineer for each section of sewer lined in accordance with Section 8 of ASTM F1216 for testing flexural strength and delamination. The Contractor shall prepare the samples for shipment to the laboratory, including cutting samples to proper length and width as described in the applicable ASTM test procedures. Samples shall be labeled for date, diameter, section of sewer, and delivered to the Engineer for testing. The cost of the sample postage, shipping, and testing will be paid for by the City. When tested, each sample shall meet the physical properties for flexural modulus and flexural strength used in the design calculations.

Air testing on isolated sections of sewer (minimum of 2 to 3 feet in length) shall be required if post-rehabilitation inspection indicates leaks in the liner. Air testing shall be performed on longer sections or multiple sections of sewer as required to identify the location(s) and full extent of defects. Such testing shall be performed by the Contractor at no additional expense to the project.

CIPP wall thickness shall be verified in accordance with Section 8.6 of ASTM F1216 and using test methods consistent with Section 8.1.2 of ASTM D5813.

The Engineer will have all flexural and delamination testing performed by an independent, ASTM-certified testing laboratory. The testing laboratory shall submit all test results directly back to the Engineer within 14 calendar days. The Engineer will provide a written copy of the test results to the Contractor within 3 business days of receiving them from the laboratory. The Contractor may elect to restore flow in the mainline sanitary sewer during this period of time. However, if the test results indicate that the liner fails to meet the project requirements and that remedial work is required to be performed, the Contractor shall perform any required cleaning in order to allow the remedial work to be performed at no additional cost to the project.

Should the test results indicate that the liner fails to meet the required physical properties as specified herein, the work shall be rejected. The Contractor shall have up to 10 calendar days to propose a repair/replacement plan consistent with the requirements of Section d.16 of this Detailed Specification for the Engineer's review and acceptance.

While repair/replacement work is performed, the Contractor shall continue to be responsible for maintaining flows in the mainline and lateral sanitary sewers in accordance with the requirements of the Detailed Specification "Sewer Flow Control." The unit price for the item of work "Sewer Flow Control" shall not be

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adjusted for any increase in contract time or required work due to the repair or replacement of defective materials or faulty workmanship.

The Contractor shall remove and replace or repair any defects in the installed liner to the satisfaction of the Engineer at no additional cost to the project. Contract time will continue during the period of time from the receipt of failing test results to the completion of the repairs.

13. Clean-Up.- Upon completion of the installation work and after required testing indicates the linings are acceptable, the Contractor shall restore the project area affected by their operation in accordance with Detailed Specification "Project Clean-Up and Restoration, Special."

14. Traffic Control.- During the entire rehabilitation process, the Contractor shall provide all necessary barricades, signs, traffic regulators (flaggers), minor traffic devices, etc., to maintain both vehicular and pedestrian traffic in accordance with the Michigan Manual of Uniform Traffic Control Devices, as shown on the Drawings, and in accordance with Detailed Specification "Maintenance of Traffic."

15. Warranty.- The materials used for the project shall be certified by the manufacturer for the specified purpose. The Contractor shall warrant the liner material and installation for a period of 2 years. During the Contractor warranty period, any defect which may materially affect the integrity, strength, function, and/or operation of the pipe, shall be repaired at the Contractor's expense in accordance with procedures described in this Detailed Specification, Part d, Item 16, "Liner Repair/Replacement," and as recommended by the manufacturer.

The Contractor shall conduct warranty CCTV inspection of sewers which were lined. This work shall be completed at the Contractor's expense, no sooner than 2 months prior to the expiration of the original warranty period. The televising shall be performed in the presence of the Engineer. Television inspection that is not performed within the presence of the Engineer will not be accepted and shall be performed again at the Contractor's sole expense. Any areas that do not meet the requirements of this Detailed Specification will be repaired or re-lined at no additional cost to the City.

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16. Liner Repair/Replacement.- The Contractor shall submit their Liner Repair/Replacement Plan and all design calculations to the Engineer for review and acceptance. The plan shall include:

A. The Contractor shall outline specific repair or replacement procedures for potential defects that may occur in the installed liner, in accordance with recommendations by the liner system manufacturer.

B. The manufacturer shall provide a detailed step by step repair procedure, resulting in a finished product meeting the estimated life cycle of the component and requirements of these Detailed Specifications. For the purposes of this project, the life-cycle of this rehabilitation shall be considered to be 50 years.

C. Should a potential issue be un-repairable, in the opinion of the Engineer, the Contractor, together with the manufacturer, shall define the best recommended procedure for the total removal and replacement of the system.

D. The Contractor shall receive no additional compensation for the repair or replacement of systems deemed non-conforming to the requirements of these Contract Documents and unacceptable by the City.

e. Measurement and Payment.- The completed work as measured for this item of work will be paid for at the contract unit prices for the following contract pay item:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
CIPP Line _-inch Dia. Sanitary Sewer (Segment _)	Lineal Foot

Rehabilitation of sanitary sewer will be paid for at the contract unit price per lineal foot. The contract unit price paid shall be payment in full for all labor, material, and equipment required for rehabilitation of existing sanitary sewers by insertion of a CIPP liner and shall include, but is not limited to; furnishing, transporting, preparing, and installing the structural pipe liner and CIPP end seals; furnishing and installing remote temperature sensing devices used during the liner curing process; reconnecting existing sewers or leads; performing any needed liner repairs; gaining access to work site; removal and replacement of site improvements; post-lining sewer televising; all required warranty work; and all other work and items necessary to complete the work as detailed within this Detailed Specification.

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The lengths listed represent center of manhole to center of manhole distance that shall be used for payment. No additional length will be calculated due to discrepancies between measurements.

PROJECT CLEAN-UP AND RESTORATION, SPECIAL

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a. Description.- This work consists of performing on-going clean-up, removing, and disposing of debris; including soil erosion control fences, protective fences, fallen timber, logs, brush, rocks, boulders, and any other rubbish generated from the Contractor's operations within the project limits or areas impacted by their operations. The Contractor shall perform final restoration and establish the planting areas as described in this Detailed Specification, as indicated on the Drawings, and as directed by the Engineer.

The related work of salvaging the existing topsoil, stockpiling the existing topsoil, preparing the earth bed, re-spreading the topsoil, furnishing the seed mixtures, sowing the seed, furnishing, placing, and anchoring the mulch blanket shall conform to the requirements of this Detailed Specification and Section 816, Turf Establishment, of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

b. Materials.- The materials shall meet the requirements specified in the 2012 edition of the MDOT Standard Specifications for Construction, except as specified herein:

1. Nichols Arboretum Woodland Areas.- All disturbed woodland areas within the Nichols Arboretum shall be restored by the Arboretum staff. The Contractor shall remove all materials imported to the site and prep the site for restoration as directed by Arboretum personnel (including but not limited to grading, transporting, and spreading stockpiled topsoil).

2. Nichols Arboretum Lawn Areas.- The disturbed lawn areas in the Nichols Arboretum shall be seeded with a low maintenance, drought resistant mixture. Use a seeding mixture that is composed of four or more species of perennial grass. Use only species and their cultivars or varieties which are guaranteed hardy for Michigan. Do not select grass species considered noxious or objectionable, such as Quack Grass, Smooth Brome, Orchard Grass, Reed Canary Grass, and others. Seed mixture must be approved by Arboretum staff.

A suggested formulation and suggested mix are indicated below:

Typical Formulation:

Hard fescue (<i>Festuca brevipila</i>)	25%
Sheep fescue (<i>Festuca ovina</i>)	25%
Chewings fescue (<i>Festuca rubra</i> var. <i>fallax</i>)	25%

Nichols Arboretum Sanitary Sewer Lining
City of Ann Arbor File No. 2021-01

PROJECT CLEAN-UP AND RESTORATION, SPECIAL

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Creeping red fescue (*Festuca rubra* var. *rubra*) 25%

Or, Eco-Turf Low Maintenance Fescue Mix, 5 pounds (Lb)/1,000 square foot (SF) seeding rate, prepared by:

Michigan Wildflower Farms
11770 Cutler Road
Portland, MI 48875
(517) 647-6010

3. **Mulch.-** Mulch seeded areas with the appropriate materials for the site conditions to promote germination and growth of seed and to mitigate soil erosion and sedimentation. Mulch blankets shall be high velocity straw mulch blankets as specified in the 2012 edition of the MDOT Standard Specifications for Construction, Section 917.15.B.1.b.

c. Construction.- Provide project cleanup as an ongoing operation. Perform project cleanup within the right-of-way, Nichols Arboretum, and any other areas impacted by the project work operations.

Fill all holes and ruts resulting from the work operations with Engineer-approved material. Compact and level all backfill materials and restore ruts and holes to the surrounding contour as directed by the Engineer. Restore areas of Nichols Drive and trails damaged by temporary pipe trenches to their original depth in accordance with the aggregate drive detail on the Drawings and as approved by the Engineer at no additional cost to the project.

Any paved roadways damaged by the Contractor's operations shall be repaired by the Contractor at no additional cost to the project. Contractor shall submit proposed pavement repair details for review and approval by the Engineer.

Grade, re-spread existing topsoil, removing rocks over 2 inches in diameter, place additional topsoil (as needed), place permanent seeding and furnish, place, and anchor erosion control straw mulch blanket in all areas disturbed by the Contractor's operations. The Contractor shall be responsible for performing the permanent restoration of the roadways, stairs, and other areas as part of the work of this Detailed Specification.

Topsoil placement shall occur at the locations called for on the Drawings or as

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directed by the Engineer. Minimum topsoil thickness in restoration areas shall be 4 inches. The Contractor is not permitted to truck in additional topsoil. Only native topsoil shall be used within Nichols Arboretum.

Damage to seeded areas resulting from erosion shall be repaired by the Contractor at the Contractor's expense. Scattered bare spots in seeded areas will not be allowed over 3 percent of the area nor greater than 6- by 6-inch in size.

Clean existing culverts, ditches, depressions, or other areas that contain sediment or debris from the work operations.

Neatly fill any ruts or depressions resulting from removal of soil erosion control materials with existing materials after their removal. Maintenance of silt fencing and other soil erosion control materials until such time as they are no longer needed, then removal and proper disposal of them from the site, shall be included in the bid price for the related soil erosion control device.

The project site shall be left in a condition that is clean and free of all project-generated debris, in accordance with Detailed Specification "Final Acceptance" and to the satisfaction of the Engineer.

d. Maintenance and Acceptance.- In the lawn areas, it is the responsibility of the Contractor to establish a dense, vigorous, weed free lawn of permanent grasses, free from mounds and depressions, prior to final acceptance and payment of this project. Any portion of this seeded area that fails to show a uniform germination, shall be re-seeded. Such re-seeding shall be at the Contractor's expense and shall continue until a dense, vigorous, and weed free lawn is established as determined by the Arboretum staff.

PROJECT CLEAN-UP AND RESTORATION, SPECIAL

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROJECT CLEAN-UP AND RESTORATION, SPECIAL

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The Contractor shall maintain lawn areas until they have been accepted by the Engineer. Lawn maintenance shall begin immediately after the grass seed is in place, and shall continue until final acceptance with the following requirements:

1. Lawn shall be protected and maintained by watering, mowing, and re-seeding as necessary, until the period of time when the final acceptance and payment is made. The maintenance includes, but is not limited to, watering, fertilizing, mowing, deposition of additional topsoil, re-seeding, and any other work as required to correct all settlement, erosion, germination, and establishment issues until the date of final acceptance of the lawn area by the Engineer.

2. Damage to seeded areas resulting from erosion shall be repaired by the Contractor at the Contractor's expense. Scattered bare spots in seeded areas will not be allowed over 3 percent of the area, nor greater than 6 inches by 6 inches in size.

When the above requirements have been fulfilled, the Engineer will accept the lawn.

e. Measurement and Payment.- The completed work as measured shall be paid at the contract unit price for the following contract pay items:

<u>Contract Pay Item</u>	<u>Pay Unit</u>
Project Clean-Up and Restoration, Sewer Segment _ Special.....	Lump Sum
Seeding, Fescue Lawn Mixture.....	Lb

"Seeding, Fescue Lawn Mixture" will be measured in Lb based on seeding rate as indicated herein. This item will be paid for at the contract unit prices which shall be payment in full for all labor, materials, and equipment needed to accomplish this work as detailed herein.

After initial placement of the topsoil and seed mixture(s), 50 percent of the total quantity placed for each item will be certified for payment. The remaining 50 percent of the total quantities will be held by the Engineer until such time as all lawn areas have been established and accepted by the Engineer.

PROJECT CLEAN-UP AND RESTORATION, SPECIAL

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
PROJECT CLEAN-UP AND RESTORATION, SPECIAL**

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The lump sum price “Project Clean-up and Restoration Special” shall include the grading of the area to receive the topsoil, preparing the earth bed, and stockpiling, spreading, and raking the topsoil to provide a uniform surface free of large clods, lumps, rocks, brush, roots, or other deleterious materials, as determined by the Engineer, in order to ready the area(s) to receive the specified seed mixtures.

The lump sum price for “Project Clean-Up and Restoration, Special” shall include all remaining project clean-up and restoration work, including all labor, material, and equipment costs required to complete the work as specified herein.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
FINAL ACCEPTANCE

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a. General.- The Contractor shall conform to the requirements of Sections 104.07 and 109.07 of the 2012 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction, “Contractor Obligations” and “Final Inspection, Acceptance, and Final Payment,” respectively.

b. Partial Acceptance.- Upon completion of a portion of the work, the Contractor may request, in writing, partial acceptance of that portion of the work. Within 7 days of the Contractor’s written request, the Engineer will conduct an inspection to determine if the Contractor has satisfactorily completed that portion of the work in accordance with the contract.

Within 7 days of the inspection, the Engineer will provide written notice of either partial acceptance for that portion of the work, or an explanation for rejecting the Contractor’s request for partial acceptance. If the Engineer grants the partial acceptance, the Engineer will designate in writing what portion of the work is partially accepted and the effective date of the partial acceptance.

Should the Engineer consider that the portion of the work is not complete, the Engineer shall notify the Contractor in writing stating the reasons. The Contractor shall complete the work and send a second written notice to Engineer certifying the project, or designated portion of the project, is partially complete. The Engineer and City of Ann Arbor (City) will re-inspect the work.

Partial acceptance will relieve the Contractor of maintenance responsibility and third-party damage liability for the designated portion of the work. By relieving the Contractor of maintenance and third-party damage claims, the City does not relieve the Contractor of responsibility for defective work or damages caused by the Contractor’s operations. The Contractor shall not construe partial acceptance to be final inspection, final acceptance of any part of the work, or waiver of any legal rights specified under Section 107 of the 2012 edition of the MDOT Standard Specifications for Construction.

c. Delayed Acceptance.- Upon completion of contract work items designated for delayed acceptance, the Contractor must notify the Engineer, in writing, of the completion of the designated work. Within 7 days of the Contractor’s written request, the Engineer will conduct an inspection to determine if the Contractor has satisfactorily completed the designated portion of the work in accordance with the contract. Within 7 days of the inspection, the Engineer will notify the Contractor, in writing, of the date the delayed acceptance period begins.

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
FINAL ACCEPTANCE**

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Delayed acceptance will relieve the Contractor of maintenance responsibility and third-party damage liability for the designated portion of the work. By relieving the Contractor of maintenance and third-party damage claims, the City does not relieve the Contractor of responsibility for defective work or damages caused by the Contractor's operations. The Contractor shall not construe delayed acceptance to be final inspection, final acceptance of any part of the work, or waiver of any legal rights specified under Section 107 of the 2012 edition of the MDOT Standard Specifications for Construction.

d. Final Clean-Up.- Unless otherwise required in the Contract Documents, the cost of final clean-up is included in the contact unit price for the related items of work (contract pay items).

Before final acceptance, the Contractor must complete all of the following:

1. Remove the following from the project limits, unless otherwise required in the Contract Documents or directed by the Engineer:

- A. Unused and/or unneeded materials;
- B. Temporary aggregates;
- C. Temporary soil erosion and sedimentation control devices;
- D. Rubbish;
- E. Protective fencing;
- F. Temporary pipe and supports;
- G. Equipment;
- H. Temporary traffic control devices; and
- I. All other temporary construction items, equipment, and debris not specifically listed above.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
FINAL ACCEPTANCE

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2. Restore areas occupied during the project in accordance with Detailed Specification "Project Clean-Up and Restoration, Special," and as determined by the Engineer.

3. Replace or repair damaged features.

4. Provide the Engineer with written certification that all property that was used or damaged during performance of the work, including property outside of the project limits, has been restored in accordance with the Contract Documents, and applicable local, state, and federal requirements.

5. Provide written certification that the project has been inspected in compliance with the Contract Documents, the work has been completed in accordance with the Contract Documents, including applicable testing in the presence of the Engineer.

6. Clean paved areas, including portions of Lot M29 and public sidewalks directly adjacent to the site within 5 working days before opening the pavement surface to traffic taking precautions so as not to produce airborne dust when cleaning pavement.

7. Rake clean other surfaces of the grounds.

e. Final Inspection.- The Engineer will conduct the final inspection within 7 days of receiving the Contractor's written notification that the work has been completed. The Contractor must attend the final inspection.

Within 7 days of the final inspection, the Engineer will provide written notice to the Contractor of a satisfactory final inspection or will provide a list of specific defects to be remedied in order to achieve a satisfactory final inspection.

Should the Engineer consider the work not complete and ready for final payment, the Engineer shall notify the Contractor in writing, stating the reasons. The Contractor shall take immediate steps to remedy the stated deficiencies and send a second written notice to the Engineer certifying that the work is complete. The Engineer will re-inspect the work.

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
FINAL ACCEPTANCE**

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Should the Engineer be required to perform additional re-inspections because of failure of the work to comply with the original certifications of the Contractor, the Engineer will deduct the cost of the re-inspections from the final amount to be paid to the Contractor.

After achieving satisfactory final inspection, the Contractor is relieved of the duty of maintaining and protecting the project. In addition, the Contractor is relieved of their responsibility for third-party damage claims, and for damage to the work that may occur after satisfactory final inspection.

f. Final Acceptance.- Within 7 days of satisfactory final inspection and submission of all required project and materials testing documentation by the Contractor, the Engineer will give the Contractor written notification of final acceptance.

The Contractor, without prejudice to the terms of the contract, is liable to the City at any time, both before and after final acceptance, for latent defects, fraud, such gross mistakes as may amount to fraud, or actions affecting the City's rights under any warranty or guarantee.

g. Final Payment.- The Contractor shall submit a final Application for Payment in accordance with the requirements of the Contract Documents.

Within 30 calendar days after final acceptance, the Engineer will prepare a final estimate of work performed. The Contractor will have 30 calendar days from the issuance of the final estimate to file a claim or objections to the quantities within the final estimate. If no claim or objections are filed within 30 calendar days, the City will process the final estimate for approval and final payment. At that time, the Contractor will be furnished a copy of the approved final estimate.

1. The final payment will be made when the Contractor has provided the following:

- A. All reports or documents required by the Engineer.
- B. The Consent of Surety for payment of the final estimate.
- C. Signed Contractor's Declaration (see Section 43 of the "General Conditions").

**CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
FINAL ACCEPTANCE**

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D. Satisfactory evidence by signed Contractor's Affidavit (see Section 44 of the "General Conditions") that all the indebtedness due to the contract has been fully paid or satisfactorily secured.

The City can recover all overpayments from the Contractor in the final estimate.

**DETAILED SPECIFICATION
FOR
CERTIFIED PAYROLL COMPLIANCE AND REPORTING**

1 of 2

DESCRIPTION

This specification covers all administrative requirements, payroll reporting procedures to be followed by Contractors performing work on City-sponsored public improvements projects, and all other miscellaneous and incidental costs associated with complying with the applicable sections of the City of Ann Arbor Code of Ordinances with regard to payment of prevailing wages and its Prevailing Wage Compliance policy.

This specification is not intended to include the actual labor costs associated with the payment of prevailing wages as required. Those costs should be properly incorporated in all other items of work bid.

GENERAL

The Contractor is expected to comply with all applicable sections of Federal and State prevailing wage laws, duly promulgated regulations, the City of Ann Arbor Code of Ordinances, and its Prevailing Wage Compliance Policy as defined within the contract documents. The Contractor shall provide the required certified payrolls, city-required declarations, and reports requested elsewhere in the contract documents within the timeline(s) stipulated therein.

The Contractor shall also provide corrected copies of any submitted documents that are found to contain errors, omissions, inconsistencies, or other defects that render the report invalid. The corrected copies shall be provided when requested by the Supervising Professional.

The Contractor shall also attend any required meetings as needed to fully discuss and ensure compliance with the contract requirements regarding prevailing wage compliance. The Contractor shall require all employees engaged in on-site work to participate in, provide the requested information to the extent practicable, and cooperate in the interview process. The City of Ann Arbor will provide the needed language interpreters in order to perform wage rate interviews or other field investigations as needed.

Certified Payrolls may be submitted on City-provided forms or forms used by the Contractor, as long as the Contractor's forms contain all required payroll information. If the Contractor elects to provide their own forms, the forms shall be approved by the Supervising Professional prior to the beginning of on-site work.

UNBALANCED BIDDING

The City of Ann Arbor will examine the submitted cost for this item of work prior to contract award. If the City determines, in its sole discretion, that the costs bid by the Contractor for complying with the contract requirements are not reasonable, accurately reported, or may contain discrepancies, the City reserves the right to request additional documentation that fully supports and justifies the price as bid. Should the submitted information not be determined to be reasonable or justify the costs, the City reserves the right to pursue award of the contract to the second low bidder without penalty or prejudice to any other remedies that it may have or may elect to exercise with respect to the original low-bidder.

The Contract Completion date will not be extended as a result of the City's investigation of the as-bid amount for this item of work, even if the anticipated contract award date must be adjusted. The only exception will be if the Contractor adequately demonstrates that their costs were appropriate and justifiable. If so, the City will adjust the contract completion date by the number of calendar days commensurate with the length of the investigation, if the published Notice to Proceed date of the work cannot be met. The contract unit prices for all other items of work will not be adjusted regardless of an adjustment of the contract completion date being made.

**DETAILED SPECIFICATION
FOR
CERTIFIED PAYROLL COMPLIANCE AND REPORTING**

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MEASUREMENT AND PAYMENT

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

PAY ITEM

PAY UNIT

Certified Payroll Compliance and Reporting

Lump Sum

The unit price for this item of work shall include all supervisory, accounting, administrative, and equipment costs needed to monitor and perform all work related to maintaining compliance with the tasks specified in this Detailed Specification, the City of Ann Arbor Code of Ordinances, its Prevailing Wage Compliance policy and the applicable Federal and State laws.

Payment for this work will be made with each progress payment, on a pro-rata basis, based on the percentage of construction completed. When all of the work of this contract has been completed, the measurement of this item shall be 1.0 times the Lump Sum bid amount. This amount will not be increased for any reason, including extensions of time, extra work, and/or adjustments to existing items of work.

APPENDIX

CITY OF ANN ARBOR
LIVING WAGE ORDINANCE DECLARATION OF COMPLIANCE

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that an employer who is (a) a contractor providing services to or for the City for a value greater than \$10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than \$10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than \$10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from compliance with the Living Wage Ordinance. If this exemption applies to your company/non-profit agency please check here No. of employees__

The Contractor or Grantee agrees:

- (a) To pay each of its employees whose wage level is not required to comply with federal, state or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as \$14.05/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than \$15.66/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance with Section 1:815(3).

Check the applicable box below which applies to your workforce

Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage without health benefits

Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

- (b) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- (c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.
- (d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.
- (e) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services or agrees to accept financial assistance in accordance with the terms of the Living Wage Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Living Wage Ordinance, obligates the Employer/Grantee to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract or grant of financial assistance.

Granite Inliner LLC	28529 Goddard Rd Ste 106
<div style="display: flex; justify-content: space-between;"> Company Name [Signature] </div>	Street Address
08/09/2021	Romulus MI 48174
Signature of Authorized Representative	City, State, Zip
Date	734 231-6691, John.Thompson@gcinc.com
John Thompson, Bus Development Manager	Phone/Email address
Print Name and Title	



Vendor Conflict of Interest Disclosure Form

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor's conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee's immediate family member has an ownership interest in vendor's company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor's Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

Conflict of Interest Disclosure*	
Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.	<input type="checkbox"/> Relationship to employee <hr/> <input type="checkbox"/> Interest in vendor's company <input type="checkbox"/> Other (please describe in box below)
None	

*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:		
Granite Inliner LLC	734 955-2508	
Vendor Name	Vendor Phone Number	
	08/09/2021	John Thompson
Signature of Vendor Authorized Representative	Date	Printed Name of Vendor Authorized Representative

**CITY OF ANN ARBOR
DECLARATION OF COMPLIANCE**

Non-Discrimination Ordinance

The “non discrimination by city contractors” provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.

In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

- (a) To comply with the terms of the City of Ann Arbor’s Non-Discrimination Ordinance and contract compliance administrative policy, including but not limited to an acceptable affirmative action program if applicable.
- (b) To post the City of Ann Arbor’s Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.
- (c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.
- (d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

Granite Inliner LLC

 Company Name

08/09/2021

 Date

John Thompson, Bus. Development Manager

 Signature of Authorized Representative

Print Name and Title
28529 Goddard Ste 106, Romulus MI 48174

 Address, City, State, Zip

734 231-6691, John.Thompson@gcinc.com

 Phone/Email Address

Questions about the Notice or the City Administrative Policy, Please contact:
 Procurement Office of the City of Ann Arbor
 (734) 794-6500

**CITY OF ANN ARBOR
PREVAILING WAGE DECLARATION OF COMPLIANCE**

The "wage and employment requirements" of Section 1:320 of Chapter 14 of Title I of the Ann Arbor City Code mandates that the city not enter any contract, understanding or other arrangement for a public improvement for or on behalf of the city unless the contract provides that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor. Where the contract and the Ann Arbor City Code are silent as to definitions of terms required in determining contract compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used. Further, to the extent that any employees of the contractor providing services under this contract are not part of the class of craftsmen, mechanics and laborers who receive a prevailing wage in conformance with section 1:320 of Chapter 14 of Title I of the Code of the City of Ann Arbor, employees shall be paid a prescribed minimum level of compensation (i.e. Living Wage) for the time those employees perform work on the contract in conformance with section 1:815 of Chapter 23 of Title I of the Code of the City of Ann Arbor.

At the request of the city, any contractor or subcontractor shall provide satisfactory proof of compliance with this provision.

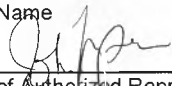
The Contractor agrees:

- (a) To pay each of its employees whose wage level is required to comply with federal, state or local prevailing wage law, for work covered or funded by this contract with the City,
- (b) To require each subcontractor performing work covered or funded by this contract with the City to pay each of its employees the applicable prescribed wage level under the conditions stated in subsection (a) or (b) above.
- (c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.
- (d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the wage and employment provisions of the Chapter 14 of the Ann Arbor City Code. The undersigned certifies that he/she has read and is familiar with the terms of Section 1:320 of Chapter 14 of the Ann Arbor City Code and by executing this Declaration of Compliance obligates his/her employer and any subcontractor employed by it to perform work on the contract to the wage and employment requirements stated herein. The undersigned further acknowledges and agrees that if it is found to be in violation of the wage and employment requirements of Section 1:320 of the Chapter 14 of the Ann Arbor City Code it shall have been deemed a material breach of the terms of the contract and grounds for termination of same by the City.

Granite Inliner LLC

Company Name



08/09/2021

Signature of Authorized Representative

Date

John Thompson, Bus. Development Manager

Print Name and Title

28529 Goddard Rd Ste 106, Romulus MI 48174

Address, City, State, Zip

734 23-6691, John.Thompson@gcinc.com

Phone/Email address

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500

CITY OF ANN ARBOR LIVING WAGE ORDINANCE

RATE EFFECTIVE APRIL 30, 2021 - ENDING APRIL 29, 2022

\$14.05 per hour

If the employer provides health care benefits*

\$15.66 per hour

If the employer does **NOT** provide health care benefits*

Employers providing services to or for the City of Ann Arbor or recipients of grants or financial assistance from the City of Ann Arbor for a value of more than \$10,000 in a twelve-month period of time must pay those employees performing work on a City of Ann Arbor contract or grant, the above living wage.

ENFORCEMENT

The City of Ann Arbor may recover back wages either administratively or through court action for the employees that have been underpaid in violation of the law. Persons denied payment of the living wage have the right to bring a civil action for damages in addition to any action taken by the City.

Violation of this Ordinance is punishable by fines of not more than \$500/violation plus costs, with each day being considered a separate violation. Additionally, the City of Ann Arbor has the right to modify, terminate, cancel or suspend a contract in the event of a violation of the Ordinance.

* Health Care benefits include those paid for by the employer or making an employer contribution toward the purchase of health care. The employee contribution must not exceed \$.50 an hour for an average work week; and the employer cost or contribution must equal no less than \$1/hr for the average work week.

The Law Requires Employers to Display This Poster Where Employees Can Readily See It.

**For Additional Information or to File a Complaint contact
Colin Spencer at 734/794-6500 or cspencer@a2gov.org**

CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below. You can review the entire ordinance at www.a2gov.org/humanrights.

Intent: It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

Discriminatory Employment Practices: No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

Discriminatory Effects: No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

Nondiscrimination by City Contractors: All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to 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 any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor's Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

Complaint Procedure: If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City's Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at www.a2gov.org/humanrights. Then submit it to the Human Rights Commission by e-mail (hrc@a2gov.org), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk's Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at hrc@a2gov.org.

Private Actions For Damages or Injunctive Relief: To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.

THIS IS AN OFFICIAL GOVERNMENT NOTICE AND
MUST BE DISPLAYED WHERE EMPLOYEES CAN READILY SEE IT.

MICHIGAN DEPARTMENT OF TRANSPORTATION CERTIFIED PAYROLL

COMPLETION OF CERTIFIED PAYROLL FORM FULFILLS THE MINIMUM MDOT PREVAILING WAGE REQUIREMENTS

(1) NAME OF CONTRACTOR / SUBCONTRACTOR (CIRCLE ONE) (2) ADDRESS

(3) PAYROLL NO. (4) FOR WEEK ENDING (5) PROJECT AND LOCATION (6) CONTRACT ID

(a) EMPLOYEE INFORMATION	(b) WORK CLASSIFICATION	(c) Hour Type	(d) DAY AND DATE							(e) TOTAL HOURS ON PROJECT	(f) PROJECT RATE OF PAY	(g) PROJECT RATE OF FRINGE PAY	(h)		(i) TOTAL WEEKLY HOURS WORKED ALL JOBS	(j) DEDUCTIONS					(k) TOTAL WEEKLY WAGES PAID FOR ALL JOBS			
			MON	TUE	WED	THU	FRI	SAT	SUN				GROSS PROJECT EARNED	GROSS WEEKLY EARNED		FICA	FEDERAL	STATE	OTHER	TOTAL DEDUCT				
NAME:									0				\$0.00										\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0				\$0.00										\$0.00	\$0.00
NAME:									0				\$0.00										\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0				\$0.00										\$0.00	\$0.00
NAME:									0				\$0.00										\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0				\$0.00										\$0.00	\$0.00
NAME:									0				\$0.00										\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0				\$0.00										\$0.00	\$0.00
NAME:									0				\$0.00										\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0				\$0.00										\$0.00	\$0.00
NAME:									0				\$0.00										\$0.00	\$0.00
ETH#GEN: ID #:	GROUP/CLASS #:	S							0				\$0.00										\$0.00	\$0.00
NAME:									0				\$0.00										\$0.00	\$0.00

Date _____

I, _____ (Name of Signatory Party) _____ (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the _____
 (Contractor or Subcontractor); that during the payroll period commencing on the _____
 (Building or Work) _____ day of _____, _____, and ending the _____ day of _____, _____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ from the full _____
 (Contractor or Subcontractor) weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

— in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

— Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.