

**South Cadillac Drive – Phase II and
Brookfield Avenue Storm Sewer Improvements**

ABC Water and Stormwater District

February 2022



Mark Delisio P.E.

210697

ABC WATER AND STORMWATER DISTRICT OFFICIALS

DISTRICT BOARD

Jason Loree, Board Member

Keith Rogers, Board Member

Michael Dockry, Board Member

ADMINISTRATION

Stephanie Landers, Administrative Assistant

George Platton, Fiscal Agent

John Albers, Legal Counsel

ADVERTISEMENT FOR BIDS/PUBLIC NOTICE TO BIDDERS

Sealed bids will be received at the ABC Water and Stormwater District Office, 8299 Market Street, Building C (Roads Dept. Office), Boardman, Ohio 44512 until 1:30 p.m. on February 24, 2022 and will be opened and read immediately thereafter for the

**SOUTH CADILLAC DRIVE – PHASE II AND
BROOKFIELD AVENUE STORM SEWER IMPROVEMENTS**

OPINION OF PROBABLE CONSTRUCTION COST: \$235,000.00

COMPLETION DATES:

**SOUTH CADILLAC DRIVE – PHASE II – MAY 28, 2022
BROOKFIELD AVENUE STORM SEWER IMPROVEMENTS – JULY 31, 2022**

The bid specifications, drawings, plan holders list, addenda, and other bid information (**but not the bid forms**) may be viewed and/or downloaded for free via the internet at <https://bids.ctconsultants.com> . The bidder shall be responsible to check for Addenda and obtain same from the web site.

Bids must be in accordance with drawings and specifications and on forms available from CT Consultants, Inc. at a non-refundable cost of One Hundred Twenty-Five Dollars (\$125.00). Documents may be ordered by registering and paying online at <https://bids.ctconsultants.com>. Please contact planroom@ctconsultants.com or call (440) 530-2395 if you encounter any problems viewing, registering or paying for the documents.

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SECTION 1
BID DOCUMENTS

INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

- 1.1 Sealed bids shall be received by the Owner at the location specified and until the time and date specified in the Advertisement for Bids/Public Notice to Bidders.
- 1.2 Each bid shall contain the full name and address of each person or company interested in said bid. If no other person be so interested, the Bidder shall distinctly so state the fact.
- 1.3 Bid forms must be completed in ink or by typewriter. Any corrections to the bid forms prior to submission must be initialed by the person signing the bid. Failure to submit any bid form(s) or other required document(s) may be cause for rejection of the bidder's bid at the sole discretion of the Owner.
- 1.4 Bids by Corporations must be executed in the corporate name by the President, Vice President, or other officer accompanied by evidence of authority to sign and the corporate seal must be affixed and attested by the Secretary on the Corporate Resolution form.
- 1.5 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature.
- 1.6 All names must be typed or printed below the signature.
- 1.7 The bid shall contain an acknowledgment of receipt of all Addenda.
- 1.8 If a Bidder wishes to withdraw their bid prior to the opening of bids, they shall state their purpose in writing to the Owner before the time fixed for the opening, and when reached it shall be handed to them unread.
- 1.9 After the opening of bids, no Bidder may withdraw their bid for a period of 60 days.

PART 2 EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- 2.1 Before submitting a bid, each Bidder must
 - A. Examine the Contract Documents thoroughly.
 - B. Visit the site to familiarize themselves with local conditions that may in any manner affect cost, progress, or performance of the work.
 - C. Familiarize themselves with Federal, State, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress, or performance of the work.
 - D. Study and carefully correlate Bidder's observations with the Contract Documents.

- 2.2 Reference is made to the Specific Project Requirements for the identification of any reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the work which have been relied upon by the Engineer in preparing the drawings and specifications. Owner will make copies of such reports available to any Bidder requesting them if not made available with the bid documents. These reports are not guaranteed as to accuracy or completeness; nor are they part of the Contract Documents. Before submitting their bid each Bidder will, at their own expense, make such additional investigations and tests as the Bidder may deem necessary to determine their bid for performance of the work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 2.3 Upon request, the Owner will provide each Bidder access to the site to conduct such reasonable investigations and tests as each Bidder deems necessary for submission for their bid.
- 2.4 The lands upon which the work is to be performed, rights-of-way for access thereto, and other lands designated for use by Bidder in performing the work are identified on the Drawings.
- 2.5 The submission of a bid will constitute an incontrovertible representation by the Bidder that they have complied with every requirement of this section and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the work.

PART 3 ESTIMATED QUANTITIES

- 3.1 In Unit Price Contracts, the quantities of the work itemized in the bid are approximate only and the bidders are hereby notified that the estimated quantities made by the Engineer are merely for the guidance of the Owner in comparing on a uniform basis all bids received for the work.
- 3.2 The contract quantities, where itemized, are based on plan horizontal and vertical dimensions unless otherwise specified. It is the Contractor's responsibility to verify and determine actual quantities of materials such as pipe, pavement, subgrade, etc. in their ordering materials.
- 3.3 Payments, except for lump sum contracts and except for lump sum items in unit price contracts, will be made to the Contractor only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications.
- 3.4 The successful Bidder will be required to furnish the Owner with a complete breakdown of the lump sum bid items, to the satisfaction of the Engineer/Architect, before signing the Contract documents.

PART 4 CONTRACTOR'S QUALIFICATION

- 4.1 Bidder shall provide detailed information relating to similar projects completed within the past 5 years which demonstrates the bidder's capability, responsibility, experience, skill, and financial standing to undertake this type of project and shall include a list of all projects currently under construction including status and contact person.
- 4.2 Bidder shall own, have rental or lease agreements for, or otherwise have readily available any and all equipment and tools necessary for proper execution of the work. The Owner reserves the right to request lists of equipment or tools available for the project including sources.
- 4.3 Bidder shall provide pertinent information to the Owner relative to any pending suits or outstanding liens. If no information is provided by the Bidder, the Owner shall assume that any such suits or liens do not exist.
- 4.4 The Owner may require similar information on any or all subcontractors proposed by the Bidder.
- 4.5 Bids of corporations not chartered in the state in which the work will take place must be accompanied by proper certification that the corporation is authorized to do business in that state.

PART 5 SUBCONTRACTORS

- 5.1 The Bidder shall state on the appropriate bid form the names of all Subcontractors proposed and the items of work they are to be assigned. All work not assigned to a Subcontractor shall be assumed by the Owner to be performed by the Bidder.
- 5.2 The Owner reserves the right to approve all subcontractors proposed by the Bidder. If the Owner, after due investigation, rejects the use of a proposed subcontractor, the apparent successful Bidder may either submit an acceptable substitution without increase in bid price or decline substitution and withdraw their bid without sacrificing their bid security. Any listed subcontractor to whom the Owner does not make written objection prior to award of contract, shall be deemed acceptable to the Owner.
- 5.3 Requests for changes of Subcontractor by the Bidder after the award shall be subject to the Owner's approval and shall not change the contract bid prices.
- 5.4 No contractor shall be required to employ any Subcontractor, person or organization against whom they have reasonable objection.

PART 6 BID REVIEW BY OWNER

- 6.1 The Owner reserves the right to reject any and all bids, to waive as an informality any and all irregularities, and to disregard all nonconforming, nonresponsive or conditional bids.

- 6.2 All extensions and totals of unit prices and quantities submitted as part of the bid shall be considered informal until verified by the Owner. All bids must be made on the forms contained herein and the bid prices must be written therein, in figures only. Unit prices shall be separately written for "Unit Price Labor," "Unit Price Material," and "Total Unit Price" for each item listed. Should an error in addition and/or multiplication be determined while checking the Contractor's math and verifying their total bid, the "Unit Price Labor" and the "Unit Price Material" figures shall govern in determining the correct "Total Unit Price" and the correct "Item Total."
- 6.3 Each bidder must bid on all Items, Alternates, Deductions, and Additions contained in the Bidding Forms. All bids not in conformity with this notice may be considered non-responsive and may be rejected.
- 6.4 More than one bid for the same work from an individual or entity under the same of different names will not be considered. Reasonable grounds for believing that that any bidder has an interest in more than one bid for the work may be cause for disqualification of that bidder and the rejection of all bids in which the bidder has an interest. A subcontractor or supplier is not a bidder, and may submit prices to multiple bidders.
- 6.5 In evaluating bids, the Owner may consider:
- A. The qualifications and experience of the Bidder, proposed subcontractors, and principal material suppliers as outlined in the plans and specifications.
 - B. Financial ability and soundness of the Bidder and proposed subcontractors.
 - C. Completeness of all bid forms and bid requirements.
 - D. Alternates and unit prices requested in the Bid Forms.
 - E. Unit prices or schedules of values that are or appear to be unbalanced.
 - F. Previous contractual experience with the Owner.
 - G. Whether or not the bid package complies with the prescribed requirements.
 - H. The proposed completion date, if applicable.
 - I. Any other matter allowed by law or local ordinance or resolution.
- 6.5 Owner may conduct further investigations as they deem necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications, and financial ability of the Bidder, proposed Subcontractors, and other persons and organizations to do the work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.
- 6.6 Owner reserves the right to reject the bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.

- 6.7 The Contract award shall be based on the lowest and best bid or lowest responsive and responsible bid (as applicable for the public contracting agency receiving bids) for the base bid and selected alternate items (if any) for this project.

PART 7 BID SECURITY

- 7.1 Each bid must be accompanied by a certified or cashier's check in the amount of 10% of the amount bid, an irrevocable letter of credit in the amount of 10% of the amount bid or an original bond in the amount of 100% of the amount bid per ORC 153.54 and 153.571. The certified or cashier's check, or irrevocable letter of credit shall be from a financial institution authorized to transact business in the State of Ohio and acceptable to the Owner. The bond shall be underwritten by a Surety Company authorized to transact business in the State of Ohio having an Ohio agent and listed on the most current Department of the Treasury Circular 570, "Surety Companies Acceptable on Federal Bonds." The bond shall be a "Bid Guarantee and Contract Bond" ("rollover bond") per O.R.C. sections 153.54 and 153.571 submitted for the full amount of the bid **including all alternates**, if any.

If bid security is made by bond, the Bidder and their Surety shall sign the Supplemental Bond Acknowledgement form and submit with their bid.

- 7.2 The certified or cashier's check, irrevocable letter of credit, or bond shall be made payable to the Owner and shall serve as a guarantee that in the event the bid is accepted and a contract is awarded to the successful Bidder, the contract will be executed by the bidder including any certifications, certificates or additional bonds required by the contract.
- 7.3 Failure on the part of the successful Bidder to execute the contract documents will cause the certified or cashier's check, irrevocable letter of credit, or bond to be forfeited to the Owner as damages.
- A. If the Owner awards the contract without rebidding, the Bidder (and the Surety on their bond if a bond was submitted) shall be liable to the Owner for a penal sum not to exceed the difference between the low bid and the next lowest bidder or 10% of the amount of the bid, whichever is less.
- B. If the Owner does not award the Contract to the next lowest Bidder, but resubmits the project for bidding; the Bidder (and the Surety on their bond if a bond was submitted) shall be liable to the Owner for a penal sum not to exceed the costs in connection with the resubmission of bids or 10% of the amount of the bid, whichever is less.
- 7.4 Checks or letters of credit for bid security of all bidders will be returned in the manner and timeframe stipulated in the Ohio Revised Code.

PART 8 CONTRACT BOND

- 8.1 As security for faithful performance and payment of all obligations under the Contract, the Owner shall require and the successful Bidder shall furnish either:
- A. *If submitted as Bid Security at time of bid:* "Bid Guarantee and Contract Bond" (AKA "rollover bond") per O.R.C. sections 153.54 and 153.571.
 - B. *If a cashier's check or irrevocable letter of credit is submitted as Bid Security at time of bid:* Contract Bond per Ohio Revised Code Sections 153.54 and 153.57, in the amount of 100% of the Contract Price. The Contractor and their Surety shall sign the Supplemental Bond Acknowledgement form and submit with the Contract forms
- 8.2 The bond shall be underwritten by a Surety Company authorized to transact business in the State of Ohio having an Ohio agent and listed on the most current Department of the Treasury Circular 570, "Surety Companies Acceptable on Federal Bonds."
- 8.3 The contract bond shall cover correction of the work for the period stated in the specifications and the correction period shall start upon Final Acceptance of the entire project and final payment by the Owner.
- 8.4 Nothing in the performance of the Engineer's service to the Owner in connection with this project shall in any way imply any undertaking for the benefit of the successful Bidder, its subcontractor(s), or the surety of any of them.

PART 9 AWARD AND EXECUTION OF CONTRACT

- 9.1 After the Owner's legislative body awards the project, the successful bidder will receive the unsigned contract documents. Within 10 days after their receipt, the successful Bidder shall sign and deliver to the Owner said contract documents including any certifications, certificates, or additional bonds required by the contract.
- 9.2 The Owner shall execute the Contract within 60 days after the day of the bid opening. When necessary and by mutual consent between the Owner and the Successful Bidder, this 60-day period may be extended.
- 9.3 The date of the Owner's signature on the Contract Agreement shall be the effective contract date.
- 9.4 The Owner shall execute and deliver to the successful Bidder one set of fully executed contract documents.

PART 10 INSURANCE

- 10.1 Verification of limits for public liability, property damage, automobile, Worker's Compensation, or any other insurance required by the provisions of this Contract must be submitted to the Owner prior to execution of the Contract.

- 10.2 All insurance shall be endorsed so that it cannot be cancelled for non-payment of premium for 10 days or cancelled or non-renewed for any other reason in less than 30 days after a written notice of such proposed action by the insurer is given to the Owner. The cancellation clause on the Certificate(s) of Insurance shall read as specified in the Supplementary Conditions and failure to submit an insurance certificate and/or policy endorsement verifying same shall be reason for the Owner to consider the Contractor non-responsive in complying with the requirements for contract execution and may be cause for forfeiture of the Bid Security to Owner.
- 10.3 The Contractor's Liability Insurance policy(s) shall be endorsed such that limits are on a Per Project basis.
- 10.4 The Contractor shall also provide an Owner's and Contractor's Protective Policy.

PART 11 NON-COLLUSION AFFIDAVIT

- 11.1 Collusion between bidders will be cause for rejection of affected bids and may be cause for rejection of all bids. Multiple bids submitted by one bidder under the same name or different names, whether as an individual, firm, partnership, corporation, profit or non-profit, affiliate, or association will be cause for rejection of bids. A subcontractor is not a bidder, and may submit prices to multiple bidders.
- 11.2 All bidders shall submit an affidavit that their bid is genuine and not collusive or sham; that such bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham bid, or that such other bidder or person shall refrain from bidding; that such bidder has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person or persons interested in the proposed contract; that such bidder is the only party (or parties) who has an interest with the bidder in the profits of any contract which may result from the herein contained proposal; that no individual affiliated with the Owner, including but not limited to the head of any department, any employee, or any other official or officer of the Owner, is or will be directly or indirectly interested in this bid, and/or the profits from this bid if successful; that no individual affiliated with the Owner, including but not limited to the head of any department, any employee, or any other official or officer of the Owner, has or will receive anything of value as a result of the submission of this bid or its award; that no individual affiliated with the Owner, including but not limited to the head of any department, any employee, or any other official or officer of the Owner, has been solicited to provide assistance and/or provided assistance to the bidder which might give the bidder a competitive advantage or circumvent the competitive bidding process; and that all statements contained in said proposal are true; and further, that such bidder has not, directly or indirectly submitted this bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof.
- 11.3 Each bid must be accompanied by a completed Noncollusion Affidavit provided within the contract documents.

11.4 Where there is reason to believe collusion or combination among bidders exists, the Owner reserves the right to reject the bid of those concerned.

PART 12 DELINQUENT PERSONAL PROPERTY STATEMENT

12.1 Included with the contract documents is a Delinquent Personal Property Statement to be filled out by the successful Bidder.

12.2 The statement shall be sent to both the County Auditor and the County Treasurer. A signed copy shall remain in the contract documents as well.

PART 13 ORIGINAL DOCUMENTS

13.1 All bid forms, contract forms, bonds and any other bid documents or contract documents requiring signatures shall be submitted with original signatures. No photo copies or faxed copies of signed documents shall be accepted.

PART 14 ADDENDA

14.1 The bidder shall be responsible to obtain Addenda from the web at <https://bids.ctconsultants.com>.

END OF SECTION 08/2020

PRICES TO INCLUDE

PART 1 - GENERAL

Any work shown on the plans or required in the specifications but not paid for separately as a bid item shall be included in the cost of other bid items. The amount bid for each Bid Item shall include the following:

- 1.1 All labor, materials, tools, equipment, and transportation necessary for the proper execution of the work in accordance with the Contract Documents.
- 1.2 All assistance required by the Engineer to verify compliance with the Contract Documents, including measuring for final pay quantities.
- 1.3 Project coordination and scheduling.
- 1.4 Detailed breakdown of lump sum bid items as requested by the Engineer.
- 1.5 All provisions necessary to protect workmen, the general public, and property along the work in accordance with the Contract Documents.
- 1.6 Protection and/or replacement of existing property corner monuments.
- 1.7 Record drawings of the installed location of all underground electrical conduit, sewers, tees, wyes, laterals, etc.
- 1.8 Materials testing.
- 1.9 Reimbursement to Owner for costs of re-inspection or re-testing of any work not installed in compliance with the Contract Documents.
- 1.10 Pre-construction video recording and documentation of the existing conditions for the basement foundation for the residence of 22 Brookfield Avenue (immediately west of project improvements).

PART 2 - ITEMS

2.1 BONDS AND INSURANCES, AS PER PLAN

Basis of Payment

A "Bonds and Insurances" item (including "Owner/Contractor Protective Policy," "All Risk Builder's Risk Insurance," and/or "Installation Floater Insurance", and/or endorsements to fully comply with all contract requirements) has been included in the bid proposal.

2.2 REMOVAL, MISC.: CREEK & CULVERT REMOVALS

Basis of Payment

The Lump Sum price shall be in accordance with ODOT Item 202 and shall include clearing the creek bottom inside the culvert by removing a boulder near the outlet end and removing any cobbles; saw cutting the existing asphalt at two places on the east approach (transversely, full-width and full-depth); removing the asphalt pavement between saw cuts; removing any other items needed to completed the work as described and as directed by the Engineer; and, the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.3 EXCAVATION, AS PER PLAN

Method of Measurement

Measurement shall be in accordance with ODOT Item 203.

Basis of Payment

The unit price shall be made in accordance with ODOT Item 203 and shall also include providing, installing, and removing steel road plates, and the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.4 GRANULAR MATERIAL TYPE B, AS PER PLAN

Method of Measurement

The quantity to be paid shall be the number of cubic yards installed per the plans and specifications measured and calculated for actual excavated areas filled within the pay limits. The pay limits include, but are not limited to: the excavation under the South Cadillac Drive's East approach pavement to the culvert. The pay limits are further described and bounded by: the culvert; the pavement edges; a 1.5:1 cut slope under the roadway; and, the 304 base course. On-site material, slag (from any source), and recycled materials are prohibited. The Contractor shall submit copies of all delivery tickets to the Engineer to verify quantities.

Basis of Payment

The unit price shall be in accordance with ODOT Item 203 except that the compacted material shall be #57 crushed limestone; and the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.5 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

Method of Measurement

Measurement shall be in accordance with ODOT Item 503 with the following exceptions/requirements: An engineered drawing submittal is optional. At a minimum, sketch on the plans the proposed excavation bracing scheme with notes to clarify installation and removal procedures, submit to the Engineer for approval. Consider using trench boxes, hardwood lagging with walers and adjustable struts or other methods besides driven sheet piling. Bracing can be supported by the existing concrete culvert. Submit a written plan for controlling creek water during concrete plug placement and within the twenty-four (24) hour period thereafter. If bypass pumping is used, a functional back-up pump shall be on-site prior to commencing concrete plug placement. The Contractor shall assign a competent worker to continually tend the bypass pump during concrete placement. This worker shall be capable of installing the back-up pump if needed to prevent damage to the curing concrete and flooding the upstream houses. The bypass pump generator shall be critically silenced and sound attenuated so that the nearby residents are not disturbed by the pumping operation.

Basis of Payment

Payment shall be made in accordance with ODOT Item 503 and shall also include bypass pumping; stream flow control measures; water control plan development; and, the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.6 CONCRETE, MISC.: FILL CONCRETE AS DIRECTED BY THE ENGINEER

Method of Measurement

Measurement shall be per actual cubic yard installed, completed, and accepted by the Engineer and in accordance with ODOT Item 511 and with the following exceptions/requirements: Contractor shall place concrete fill inside the culvert between the creek bottom and the top of the existing footings, fill the scour holes under both culvert footings with monolithic concrete, and plug the outside bottom corner (heel) of the west footing under the roadway with concrete. Concrete shall be ODOT Class QC1 (compressive strength 4,000 psi) with superplasticizer added to the mix at the batch plant. Reinforcing steel and base material are not required. Do not place the concrete under water. Contractor shall pump out the culvert and control the creek water using "Item 503 - Cofferdams and Excavation Bracing, As Per Plan" for payment. Contractor shall use a vibrator to make the concrete flow under the footings. Concrete shall be placed inside the culvert first, followed by the outside work. Contractor shall pour concrete when the forecasted weather is not calling for precipitation within the next 24 hours. Contractor to plan work based on forecasted weather so that the proposed work is not affected by inclement weather. The Contractor shall screed the concrete so the finished surface is 12" below the top of the footings. A rough textured broom finish is required. No finishing is needed on the outside plug concrete. Contractor shall place burlap on the finished surface, keep it wet with potable water for twenty four (24) hours, keep the burlap in place for an additional six (6) days while being wetted by creek water, use membrane curing on the outside concrete plug, and allow 24 hours before backfilling.

Basis of Payment

The unit price shall include the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.7 ROCK CHANNEL PROTECTION, TYPE B WITHOUT FILTER, AS PER PLAN

Method of Measurement

Measurement shall be per actual cubic yard of material procured and installed per the plans and specifications and in accordance with ODOT Item 601 with the following inclusions/exceptions: Rocks shall be hand-placed and installed as detailed and shown in the plans; and, a concrete slurry pad shall be installed in which to embed the rocks. The concrete slurry pad shall be 6" thick and 20 linear feet from the face of the proposed outlet headwall and extending along the existing stream, the width shall match and conform to the outlet headwall. Water shall be controlled to not affect placement and curing of concrete pad.

Basis of Payment

The unit price shall be made in accordance with ODOT Item 601 and include hand placement; excavation; backfill material; subgrade preparation; dewatering; temporary flow control measures; concrete slurry mix; concrete form work, if required; restoration and re-grading of surrounding streambed and/or streambanks to blend naturally to the apron and conform to surrounding existing conditions; and, the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.8 HEADWALL, HALF-HEIGHT FOR CORRUGATED METAL PIPE & PLASTIC PIPE, AS PER PLAN

Method of Measurement

Measurement shall be in accordance with ODOT Item 602 with the following inclusions/exceptions: Re-grading surrounding existing non-paved areas shall be performed such that the finished grades blend naturally into surrounding grades and the finished surface is at a 2:1 slope conforming to the details contained in the ODOT standard drawing HW-2.1; no 6" extension is required; no cutoff wall is required; no concrete slab at the outlet structure is required.

Basis of Payment

The unit price shall be made in accordance with ODOT Item 602 and include precast concrete structure; excavation; backfill material; subgrade preparation; dewatering; temporary flow control measures; restoration and re-grading of surrounding non-paved areas to blend naturally to the apron and conform to surrounding existing conditions; grout; and, the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.9 FENCE, CHAIN LINK, GALVANIZED, AS PER PLAN

Method of Measurement

Measurement shall be per actual linear foot of material procured and installed per the plans and specifications and in accordance with ODOT Item 607 with the following inclusions/exceptions: Fence height and style (if applicable) shall conform and match the existing fence structure, in-kind, that this item is intended to replace. Replaced fencing shall tie-in to the existing, surrounding fence appropriately (if applicable).

Basis of Payment

The unit price shall be made in accordance with ODOT Item 607 and include the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.10 FENCE, WOOD, AS PER PLAN

Method of Measurement

Measurement shall be per actual linear foot of material procured and installed per the plans and specifications and in accordance with ODOT Item 607 with the following inclusions/exceptions: Fence height and style (if applicable) shall conform and match the existing fence structure, in-kind, that this item is intended to replace. Replaced fencing shall tie-in to the existing, surrounding fence appropriately (if applicable).

Basis of Payment

The unit price shall be made in accordance with ODOT Item 607 and include the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

- 2.11 12" CONDUIT TYPE B, AS PER PLAN
- 15" CONDUIT TYPE B, AS PER PLAN
- 24" CONDUIT TYPE B, AS PER PLAN
- 36" CONDUIT TYPE B, AS PER PLAN
- 36" CONDUIT TYPE C, AS PER PLAN

Method of Measurement

Measurement shall be in accordance with ODOT Item 611 with the following exceptions: pipe materials to be utilized and installed shall be ODOT 706.02, 707.33, or 707.65, and approved by the Engineer.

Basis of Payment

Payment shall be made in accordance with ODOT Item 611 and the unit price shall be irrespective of the depth of pipe and include removal and disposal of undesirable and/or excess material; excavation; bedding; backfill; haunching; compaction; embedment; trenching; trench supports; protection of existing structures; field measurement and/or surveying required to install pipes at locations and slopes in conformance with the plans; compaction testing; material testing; geotextile fabric; verification and/or replacement of all existing utilities if damaged by the Contractor; joining of the pipe to drainage structures and other appurtenances as required, temporary or permanent; any necessary grading to create localized and/or linear positive drainage to surface inlets and inhibit ponding of water; furnishing and installing temporary stone trench toppings for paved areas; removal and replacement of poles, posts, signs, mailboxes, paper boxes, landscaping, and other encountered appurtenances; and, the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.12 CONDUIT, MISC.: CONNECTION TO EXISTING PIPE

Method of Measurement

Measurement shall be in accordance with ODOT Item 611 with the following exceptions: flexible coupling utilized shall be appropriate for connecting pipes of proposed/encountered materials.

Basis of Payment

Payment shall be made in accordance with ODOT Item 611 and the unit price shall be irrespective of the depth of pipe and include removal and disposal of undesirable and/or excess material; and, include the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.13 CONDUIT, MISC.: CONNECTION OF CONDUIT TO EXISTING DRAINAGE STRUCTURE

Method of Measurement

Measurement shall be in accordance with ODOT Item 611 with the following exceptions: connection of proposed pipe shall be made to the existing structure utilizing an approved flexible connection or connecting the pipe directly; the pipe shall be cut to be flush with the interior wall of the structure; the connection and any voids shall be grouted inside and outside with non-shrink, watertight grout.

Basis of Payment

Payment shall be made in accordance with ODOT Item 611 and the unit price shall be irrespective of the depth of pipe and include, removal and disposal of undesirable and/or excess material; excavation; backfill; grout; and, the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.14 CONDUIT MISC.: CONCRETE ENCASEMENT - SINGLE CONDUIT

Method of Measurement

Measurement shall be in accordance with ODOT Item 611 with the following exceptions: concrete mix utilized shall be free of slag and/or recycled materials (from any source) and be a minimum compressive strength of 2,000 PSI. Concrete encasement shall conform to the details and be installed at the locations specified and shown in the plans.

Basis of Payment

Payment shall be made in accordance with ODOT Item 611 and the unit price shall be irrespective of the depth of pipe and include removal and disposal of undesirable and/or excess material; concrete procurement and pouring/installation; and, include the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.15 INLET, YARD DRAIN, AS PER PLAN

Method of Measurement

Measurement shall be per item procured and installed per the plans and specifications and in accordance with ODOT Item 611 with the following inclusions/exceptions: Yard drain shall be an Inserta-Tee connection, or approved substitute. Yard drain shall be placed in a localized depression to encourage positive drainage into the inlet.

Basis of Payment

The unit price shall be made in accordance with ODOT Item 611 and include the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.16 MAINTAINING TRAFFIC, AS PER PLAN

Method of Measurement

Measurement shall be in accordance with ODOT Item 614 and with the following instructions.

For the South Cadillac Drive project site: South Cadillac Drive will be closed at the culvert during construction. Maintain driveway access at all times. Place barricades across South Cadillac Drive on both approaches. Provide and install "Road Closed Ahead" signs at South Cadillac intersections with Jackson Street and Glenwood Avenue. Detour traffic to North Cadillac using a "Detour" sign and a turn arrow sign. Provide the same signage at North Cadillac Drive intersections. Detour route traffic shall also be maintained.

For the Brookfield Avenue project site: Brookfield Avenue will be closed approximately 100' from the intersection with Market Street. Local traffic shall be detoured to Marlindale Avenue and thru traffic shall be detoured to Ewing Road. All necessary signs and appurtenances shall be supplied and installed. All traffic shall be maintained.

Basis of Payment

Payment shall be made in accordance with ODOT Item 614, or as otherwise approved by the Engineer, and, shall include the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.17 SEEDING AND MULCHING, AS PER PLAN

Method of Measurement

The quantity to be paid shall be the number of square yards installed per the plans and specifications measured and calculated for actual disturbed areas restored within the pay limits prescribed (for South Cadillac Drive site) as being along the replacement pavement and laterally 15 linear feet outside of the pavement edge, and the pay limits being disturbed non-paved areas (for Brookfield Avenue site).

Basis of Payment

The unit price shall include furnishing and placement of Class 1 seeding and mulching, topsoil, additional topsoil to fill depressions, testing of topsoil, finish grading, seed, fertilizers, lime, two applications of 4,000 gallons of water to promote growth of all seeded areas, maintenance, mowing, and all else necessary to establish a good stand of grass turf with uniform color and density, and to the satisfaction of the Engineer, over all disturbed areas to be grassed, and the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.

2.18 EROSION CONTROL, AS PER PLAN

Method of Measurement

Measurement shall be Lump Sum and in accordance with ODOT Item 832 and with the following inclusions/exceptions: Contractor shall install perimeter filter fabric fence, as directed by the Engineer, and downstream of the South Cadillac Drive culvert outlet. No Stormwater Pollution Prevention Plan is required. Erosion control measures shall be utilized, installed, and maintained, as necessary and appropriate, and in accordance with ODOT Item 832 and local and State regulations/requirements.

Basis of Payment

The Lump Sum price shall be made in accordance with ODOT Item 832 and the furnishing of all labor, materials, tools, and appurtenances necessary to complete the work as specified or as shown.