

ADDENDUM NO. 1
TO
CONTRACT DOCUMENTS
FOR
THE CITY OF IRONWOOD
COUNTRY CLUB ROAD 2019 WATERMAIN REPLACEMENT PROJECT
IRONWOOD, MICHIGAN
April 12, 2019

Contractor shall list all addenda by number on the bid form to ensure conformity in the bid.

The Contract Documents shall be herein amended, expanded and/or modified, as hereinafter described, and become a part of the Contract Documents with the same force and effect as if incorporated, therein, originally. Any contrary provisions contained, or referred to, in Drawings and/or Specifications, shall remain applicable unless overridden by this Addendum. Revised or contrary provisions herein shall not affect any other part of the Contract Documents and any deletions, additions, substitutions and/or revisions mentioned, shall include all labor, materials, methods, modifications, etc. required for complete performance of the work.

This Addendum No. 1 consists of one (1) page with twenty four (24) pages of attachments.

CONTRACT DOCUMENT MODIFICATIONS

- The Bid Form has been modified to include the revised pay item quantities for Rock Excavation and adding the pay item and quantity in for Geotextile, Stabilization. A revised **Bid Form** (6 pages) has been attached to this Addendum.
- The asphalt section on sheet 2 has been modified as follows:
 - Both lifts of asphalt are to be 5E1 (or approved WisDOT equal)
 - A 52-34 oil shall be used for all HMA.
 - A “geotextile, stabilization” shall be used under the sand for the Elk and Hound water service trench.

A revised **Measurement and Payment** section (11 pages) has been attached to this Addendum.

A revised **Restoration** section (6 pages) has been attached to this Addendum.

A revised **Sheet 2** (1 page of the plans) has been attached to this Addendum.

BID FORM
CITY OF IRONWOOD
COUNTRY CLUB ROAD 2019 WATERMAIN REPLACEMENT PROJECT

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:
Mr. Scott Erickson, City Manager
City of Ironwood
213 S. Marquette Street
Ironwood, Michigan 49938

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:
A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
# 1	April 12, 2019

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance

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of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

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

	Item Description	Unit	Quantity	Unit Price	Amount
1	Mobilization	LS	1		
2	Contractor Staking	LS	1		
3	6-inch Watermain	Ft	30		
4	8-inch Watermain	Ft	965		
5	8-inch Gate Valve & Box	Ea	4		
6	8" x 8" x 6" Tee	Ea	1		
7	8" x 8" x 8" Tee	Ea	1		
8	8" x 6" Reducer	Ea	2		
9	10" x 8" Reducer	Ea	1		
10	6-inch 45° Bend	Ea	4		
11	8-Inch 22.5° Bend	Ea	1		
12	8-inch 45° Bend	Ea	2		
13	1-inch Corporation Stop	Ea	3		
14	1-inch Curb Stop & Box	Ea	3		
15	1-inch Type K Copper Service	Ft	200		
16	1-1/2-inch Corporation Stop	Ea	1		
17	1-1/2-inch Curb Stop & Box	Ea	1		
18	1-1/2-inch Type K Copper Service	Ft	125		
19	Interior Meter Assembly	LS	1		
20	6-inch Ductile Iron Hydrant Lead	Ft	5		
21	Fire Hydrant Assembly	Ea	1		
22	Connect to Existing 6-inch Watermain	Ea	2		
23	Connect to Existing 10-inch Watermain	Ea	1		
24	Insulation	Sft	400		
25	Earth Excavation	Cyd	510		
26	Rock Excavation	Cyd	178		
27	Utility Exploration	Ea	4		
28	Slope Restoration, Type A	Syd	2540		
29	Slope Restoration, Type B	Syd	444		
30	Sidewalk Concrete, 4-inch	Sft	135		
31	HMA Approach	Ton	138		
32	Aggregate Base, 9-inch	Syd	873		
33	Subbase, CIP	Cyd	158		
34	Shoulder, Class II, 4-inch	Syd	35		
35	Erosion Control, Silt Fence	Ft	50		
36	Tree Removal, 12" +	Ea	2		
37	Geotextile, Stabilization	Syd	70		

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Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Total Base Bid Amount (numerical & in words) \$ _____

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- ~~C. List of Proposed Suppliers;~~
- ~~D. List of Project References;~~
- ~~E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;~~
- ~~F. Contractor's License No.: _____ [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;~~
- ~~G. Required Bidder Qualification Statement with supporting data.~~

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By: _____
[Signature]

_____ *[Printed name]*

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____
(where applicable)

**SECTION 01025
MEASUREMENT AND PAYMENT**

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Measurement and payment criteria applicable to the Work performed under a unit price payment method.
- B. Defect assessment and non-payment for rejected work.
- C. Work item descriptions.

1.02 AUTHORITY

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. The Engineer and Owner will verify measurements and quantities.

1.03 UNIT QUANTITIES SPECIFIED

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Actual quantities and measurements supplied or placed in the Work and verified by the Engineer will determine payment.
- B. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted.
- C. Any work not listed in the proposal but shown on the plans or reasonably expected for provision of a functional system shall be considered to be incidental to the work items.

1.04 MEASUREMENT OF QUANTITIES

- A. Measurement by Weight: Measured by the pound or ton determined from delivery tickets from approved scales.

- B. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness, compacted in place (CIP) or as noted on bid schedule.
- C. Measurement by Area: Measured by square dimension using mean length and width or radius.
- D. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord, from center to center of appurtenance.
- E. Stipulated Sum/Price per each Measurement: Items measured by per each as appropriate, as a completed item or unit of the Work.

1.05 PAYMENT

- A. Payment Includes: Full compensation to furnish all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.
- B. Final payment and final contract amount for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Architect/Engineer multiplied by the unit sum/price for Work which is incorporated in or made necessary by the Work.
- C. Dewatering of the work area shall be incidental to the individual work items requiring dewatering work.
- D. Saw cutting of existing bituminous or concrete pavements will be considered incidental to the associated work item.
- E. Mobilization shall be incidental to the individual work items, unless otherwise noted.
- F. Payment for water required as part of the project shall be incidental to the individual work items, unless otherwise noted.
- G. Payment for Traffic Control is considered incidental to the associated work items unless otherwise noted.

1.06 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.

- B. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Engineer will direct one of the following remedies:
1. The defective Work may remain, but the unit price will be adjusted to a new price at the discretion of the Engineer and approval of the Owner.
 2. The defective Work will be partially repaired to the instructions of the Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of the Engineer and approval of the Owner.
- C. The authority of the Engineer and Owner to assess the defect and identify payment adjustment is final.

1.07 BID ITEMS

A. Bid Item Descriptions

1. Mobilization
 - a. All work shall be in accordance with section 150 of the 2012 MDOT Standard Specifications for Construction.
 - b. Measurement and Payment shall be in accordance with section 150 of the 2012 MDOT Standard Specifications for Construction.
2. Contractor Staking
 - a. Measurement will be made by the Lump Sum for all work completed as shown on the plans or specified herein.
 - b. Payment will include compensation in full for all labor, equipment and materials as necessary to perform all required Contractor Staking.
- 3-4. ___ -inch Watermain
 - a. Measurement will be by the linear foot as measured horizontally over the centerline of the watermain with no deductions in length for valves and fittings and air relief structures.
 - b. Payment includes all excavation including rock that does not require blasting for removal by conventional methods and boulders less than one (1) cubic yard in size, pipe bedding; removal and disposal of existing piping, valves, valve boxes, fittings, unsuitable or excess material as needed to prepare roads and yards for restoration; construction, operation and removal of a temporary water system; dewatering; separating, removal, and disposal of rocks not suitable for use in backfill (stones larger than six inches in diameter); trench backfill; clearing and grubbing; temporary removal and replacement of obstacles; testing and disinfection;

compaction; bulkheading of existing pipe leaving the trench; tracing wire, thawing conductor, warning tape and insulation as required for PVC watermain; furnishing and installing the pipe; temporary surface water control; temporary sheeting and bracing and protection of existing facilities; and provision of record drawings (as-built's). Special Backfill and Stone Refill is not included in this pay item.

5. 8-inch Gate Valve and Box

- a. Measurement will be by the unit each, properly installed and counted in place.
- b. Payment will include installation in accordance with details shown on the plan sheets, all required appurtenances, including and not limited to Gate Valve adapters, incidental stone refill and geotextile fabric, and final adjustment of valve box to finish grade, including two each adjusting rings. All valve boxes shall be installed upon the valve with the use of a Gate Valve Adaptor. Gate valves for hydrants are included in payment for Fire Hydrant Assembly.

6-12. Tees, Caps, Reducers, Crosses and Bends

- c. Measurement will be by the unit each properly installed and counted in place.
- d. Payment will include compensation in full for providing and installing fittings as specified (except those fittings required for the Connect to Existing Watermain, Gate Valves, Butterfly Valves and Hydrant Assemblies pay items) and will include joint restraint as required on the plans.

13. 1-inch Corporation Stop

- a. Measurement will be by the unit each properly installed and counted in place.
- b. Payment will include compensation in full for providing and installing corporation stops of the size required and at the locations shown on the plans or at locations indicated by the Engineer. The price shall also include tapping saddles (for PVC Watermain only) as required by the specifications.

14. 1-inch Curb Stop and Box

- a. Measurement will be by the unit each properly installed and counted in place.
- b. Payment will include locating and connecting the new water service to the existing water service at the property line, removal of the existing curb stop and box and all necessary fittings pipe bedding and appurtenances required for a complete installation.

15. 1-inch Type K Copper Water Service
 - a. Measurement will be by the linear foot, as measured horizontally over the water service pipe from the center of the watermain to the center of the curb box.
 - b. Payment includes all excavation including rock that does not require blasting for removal by conventional methods and boulders less than one (1) cubic yard in size, pipe bedding; removal and disposal of existing piping, valves, valve boxes, fittings, unsuitable or excess material; separating, removal, and disposal of rocks not suitable for use in backfill (stones larger than six (6) inches in diameter); trench backfill; pipe bedding; clearing and grubbing; temporary removal and replacement of obstacles; testing and disinfection; compaction; dewatering; bulkheading of existing pipe leaving the trench; tracing wire, thawing conductor, warning tape as required for PVC watermain; furnishing and installing the pipe; temporary surface water control; temporary sheeting and bracing and protection of existing facilities; and provision of record drawings (as-builts). Special Backfill is not included in this pay item.
16. 1½ -inch Corporation Stop
 - a. Measurement will be by the unit each properly installed and counted in place.
 - b. Payment will include compensation in full for providing and installing corporation stops of the size required and at the locations shown on the plans or at locations indicated by the Engineer. The price shall also include tapping saddles as required by the specifications.
17. 1½ -inch Curb Stop and Box
 - a. Measurement will be by the unit each properly installed and counted in place.
 - b. Payment will include locating and connecting the new water service to the existing water service at the property line, removal of the existing curb stop and box and all necessary fittings pipe bedding and appurtenances required for a complete installation.
18. 1½ -inch Type K Copper Water Service
 - a. Measurement will be by the linear foot, as measured horizontally over the water service pipe from the center of the watermain to the center of the curb box.
 - b. Payment includes all excavation including rock that does not require blasting for removal by conventional methods and boulders less than one

(1) cubic yard in size, pipe bedding; removal and disposal of existing piping, valves, valve boxes, fittings, unsuitable or excess material; separating, removal, and disposal of rocks not suitable for use in backfill (stones larger than six (6) inches in diameter); trench backfill; pipe bedding; clearing and grubbing; temporary removal and replacement of obstacles; testing and disinfection; compaction; dewatering; bulkheading of existing pipe leaving the trench; tracing wire, thawing conductor, warning tape as required for PVC watermain; furnishing and installing the pipe; temporary surface water control; temporary sheeting and bracing and protection of existing facilities; and provision of record drawings (as-builts). Special Backfill is not included in this pay item.

19. Interior Meter Assembly

- a. Measurement & Payment will be made by the Lump Sum for all work completed as shown on the plans or specified herein.
- b. Payment for the Interior Meter Assembly will include all piping from a point of five (5) feet outside of the buildings wall; removal and disposal of existing piping; installing piping through the wall/floor; removing and repairing concrete floor; tapping through the wall/floor; all appurtenances, ball valves, atmospheric vacuum breaker, fittings associated with making the connection to the existing water service; permit fees and/or inspection fees related to the work; temporary removal of obstacles; salvaging the existing meter to the City of Ironwood. New meters will be supplied by Ironwood Township.

20. 6-inch Ductile Iron Hydrant Lead

- a. Measurement will be by the linear foot, as measured horizontally over the watermain as installed from the center of the watermain tee or bend to the center of the hydrant valve, with no deductions for fittings and valves.
- b. Payment includes all excavation including rock that does not require blasting for removal by conventional methods and boulders less than one (1) cubic yard in size, pipe bedding; removal and disposal of existing piping, valves, valve boxes, fittings, unsuitable or excess material; separating, removal, and disposal of rocks not suitable for use in backfill (stones larger than six inches in diameter); trench backfill; clearing and grubbing; temporary removal and replacement of obstacles; testing and disinfection; dewatering; compaction; bulkheading of existing pipe leaving the trench; tracing wire, thawing conductor, warning tape as required for PVC watermain; furnishing and installing the pipe; temporary surface water control; temporary sheeting and bracing and protection of existing facilities; and provision of record drawings (as-builts). Special Backfill is not included in this pay item.

21. Fire Hydrant Assembly
 - a. Measurement will be by the unit each, of the type specified, properly installed and counted in place.
 - b. Payment will include the hydrant assembly, pipe, stone, concrete, hydrant marker and flag, "pump after use" sign, auxiliary gate valve, gate valve adaptor and box and all required blocking and backfill as specified herein and indicated on the details provided on the plans.
- 22-23. Connect to Existing _ -inch Watermain
 - a. Measurement will be by the unit each for the size of the existing watermain connected to.
 - b. Payment will include excavation, cut-in sleeve and all necessary fittings, joint restraint and appurtenances, and coordination with the utility as required for a complete connection to an existing in-service watermain.
24. Insulation
 - a. Measurement will be by the unit square foot of 2-inch rigid insulation installed.
 - b. Payment will include all materials, labor, and equipment required for installation of rigid insulation in accordance with the plans and specifications.
25. Earth Excavation
 - a. All work shall be in accordance with section 205 of the 2012 MDOT Standard Specifications for Construction, except all existing HMA removal shall be included in the Quantity.
 - b. Measurement and Payment shall be in accordance with section 205 of the 2012 MDOT Standard Specifications for Construction, with the following modification to the measurement of this item:
 - i. The quantity to be paid for as Earth Excavation will be as computed by the method of average end areas and set forth in the contract plans without actual measurement thereof. Any modifications to the contract quantity caused by corrections or revisions of the original contract plan as directed by the Engineer will be measured in accordance with the applicable section of the MDOT Standard Specifications, and the contract quantity will be adjusted accordingly to determine the final pay quantity.
 - ii. If the Contractor determines the Earth Excavation quantity is not correct, the Contractor, at his/her sole expense, may secure the services of a licensed Land Surveyor to determine the before and

after elevations of the excavation. The volume shall be calculated by the average end area method. If this calculated quantity and the plan quantity differ by more than 7%, the quantity shall be adjusted to the surveyed volume and the Contractor will be reimbursed for the actual cost of the survey only, without markup. If the bid quantity is within said tolerance, the Contractor shall not be reimbursed for any expenses associated with verifying the quantity. The actual Earth Excavation quantity cannot be determined after excavation has begun. Therefore, but the commencement of any work on the project shall constitute an acceptance by the contractor of the plan quantity.

- iii. All Common Excavation quantities are determined as compacted in place, without any allowance for shrink or swell.

26. Rock Excavation

- a. Measurement will be by the unit cubic yard. The measurement of the “pay quantity” of rock excavated shall be based on the average end area method. The length of the rock trench shall be measured along the centerline of the pipe. The depth of the rock trench shall be measured from the surface of the rock, in its original position prior to blasting, to six (6) inches below the underside of the pipe barrel. The width of the rock trench shall be an assumed three (3) foot “neat line” measurement regardless of the actual “as excavated” width. Measurements of length and depth shall be taken as frequently as needed to accurately determine the pay quantity at a minimum of once every 25 feet. Boulders exceeding one (1) cubic yard in volume shall be considered rock excavation and will be paid for according to their measured volume.
- b. Payment will include preparing the trench for rock removal and providing all materials, labor, and equipment required for rock breaking, blasting (if necessary), removal and disposal of broken rock, blasting insurance, pre- and post-blasting inventory of adjacent structures, and seismic monitoring during blasting operations. Payment shall also include furnishing geotextile fabric, meeting the requirements of Section 910.01 of the Michigan 2003 Standard Specifications, over all disturbed bedrock, which includes the sidewalls and bottom surface of the trench. Placing and anchoring of the geotextile fabric and appurtenances shall be included in this item. Providing and installing bedding and backfill material to replace the excavated rock shall be considered incidental to this pay item.

27. Utility Exploration

- a. Measurement will be by the unit each for each utility exploration occurrence which exceeds thirty (30) minutes in duration, except in the

case where so designated on the plans then utility exploration shall be measured as one (1) each regardless of duration. Measurement will begin after the initial thirty (30) minute time period has elapsed, the excavation has ended and utility representatives, materials, and equipment are present. Utility Exploration shall only be measured and paid for when specifically authorized by the Engineer.

- b. Payment at the unit price shall be compensation in full for all labor, tools, equipment and materials necessary for locating and identifying buried utilities. Payment will be made for each thirty (30) minute time interval after the initial thirty (30) minutes has elapsed in accordance with the following schedule:

Suspension of Work Duration	Compensation for Utility Exploration Units
0-30 minutes	0
31-60 minutes	1 each
61-90 minutes	2 each
91-120 minutes	3 each

28-29. Slope Restoration, Type ____

- a. All work shall be in accordance with the MDOT Special Provision for Slope Restoration, Non-Freeway or as modified herein.
- b. Measurement and Payment shall be by the square yard in accordance with MDOT Special Provision for Slope Restoration, Non-Freeway.
- c. Partial payments for this item shall be based on the area deemed complete when grass is being mowed.

30. Sidewalk Concrete, 4-inch

- a. All work shall be in accordance with section 803 of the 2012 MDOT Standard Specifications for Construction.
- b. Measurement and Payment shall be in accordance with section 803 of the 2012 MDOT Standard Specifications for Construction and will include the removal of existing sidewalk and the placement of 4 inches of MDOT Class II sand bedding.

31. HMA Approach

- a. All work shall be in accordance with section 501 of the 2012 MDOT Standard Specifications for Construction.
- b. Measurement and Payment shall be in accordance with section 501 of the 2012 MDOT Standard Specifications for Construction.

32. Aggregate Base, 9-inch
 - a. All work shall be in accordance with section 302 of the 2012 MDOT Standard Specifications for Construction.
 - b. Measurement and Payment shall be in accordance with section 302 of the 2012 MDOT Standard Specifications for Construction.
33. Subbase, CIP
 - a. All work shall be in accordance with section 301 of the 2012 MDOT Standard Specifications for Construction.
 - b. Measurement and Payment shall be in accordance with section 301 of the 2012 MDOT Standard Specifications for Construction.
34. Shoulder, Class II, 4-inch
 - a. All work shall be in accordance with section 307 of the 2012 MDOT Standard Specifications for Construction.
 - b. Measurement and Payment shall be in accordance with section 307 of the 2012 MDOT Standard Specifications for Construction.
35. Erosion Control, Silt Fence
 - a. All work shall be in accordance with section 208 of the 2012 MDOT Standard Specifications for Construction. Straw Wattles can be used as an acceptable alternative in place of Silt Fence.
 - b. Measurement and Payment shall be in accordance with section 208 of the 2012 MDOT Standard Specifications for Construction.
36. Tree Removal, 12" +
 - a. All work shall be in accordance with section 202 of the 2012 MDOT Standard Specifications for Construction.
 - b. Measurement and Payment shall be in accordance with section 202 of the 2012 MDOT Standard Specifications for Construction.
37. Geotextile, Stabilization
 - a. All work shall be in accordance with section 308 of the 2012 MDOT Standard Specifications for Construction.
 - b. Measurement and Payment shall be in accordance with section 202 of the 2012 MDOT Standard Specifications for Construction.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

SECTION 02951

RESTORATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Surface restoration of areas disturbed by the trenching.
- B. Surface restoration of area disturbed by the contractor outside of the pay limits.
- C. Topsoil restoration.

1.02 REFERENCES

- A. MDOT - "2012 Standard Specifications for Construction".

1.03 SUBMITTALS

- A. Samples: Laboratory gradation of topsoil.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Topsoil: As specified in MDOT 2012 Standard Specifications for Construction Section 917.07 and as modified herein.
- B. Seed:
 - 1. Lawns: MDOT Type THM seed @ 330 lbs per acre
 - 2. Other Areas: MDOT Type THV seed @ 330 lbs per acre
- C. Fertilizer: Class A chemical nutrient fertilizer as specified, and as indicated by soil tests per Section 917.10 of the MDOT 2012 Standard Specifications for Construction.
- D. Mulch: In accordance with MDOT 2012 Standard Specifications for Construction Section 917.15.
- E. Mulch Blanket: Mulch Blanket and High Velocity Mulch Blanket shall be installed and utilized in accordance with MDOT 2012 Standard Specifications for Construction.
- F. Water: As specified in MDOT 2012 Standard Specifications for Construction Section 816.03.
- G. HMA Materials shall be as specified in Division 5 of the MDOT Specifications and as modified herein:

Materials. Provide a mixture of aggregates, mineral filler (if required), and asphalt binder (PG 58-34) proportioned to be within the master gradation limits shown in the project documents, and meeting the uniformity tolerances listed in

Table 1. The master gradation range is to be used for establishing mix design only. Topsoil, clay, or loam cannot be added to aggregates which are to be used in plant mixed HMA mixtures.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that the base or subbase has been compacted, is uniformly sloping, free of ruts or high spots and at the required elevation and grade.

3.02 CLEAN-UP

- A. The Contractor shall maintain the site in a condition which is conducive to good workmanship and which mitigates as much as possible, the aesthetically unpleasing appearance of construction to the local residents. The Contractor shall keep the premises free from accumulation of waste materials, rubbish, and other debris resulting from the work. No burning or burial of construction rubbish or debris will be allowed. All costs related to disposal of waste will be the Contractor's responsibility.

As the work, or any parts thereof, approaches completion, the Contractor shall systematically and thoroughly clean and make any needed repairs. Cleaning and repairing shall be arranged, insofar as practical, to be completed upon finishing the construction work. At the termination of this Contract, before acceptance of the work by the Engineer, the Contractor shall remove from the Owner's property, and from all public and/or private property, all temporary structures, all rubbish and waste materials resulting from his/her operations or caused by his/her employees, all surplus materials, and all of his/her equipment, tools and supplies, leaving all properties smooth, clean and true to line and grade. Should the Contractor fail to remove such rubbish, debris, waste material, equipment, tools and supplies, the Owner shall have the right to remove them at the expense of the Contractor.

Note - All surplus or leftover materials which the Contractor would otherwise discard, but which are desired by the Owner, shall be carefully stockpiled for the Owner in an approved location within the project limits.

- B. **TIME REQUIREMENT**

Temporary access for homeowners, fire, ambulance, mail and garbage shall be reasonably provided during the removal and installation of work under this contract. Active construction activities may preclude access for periods of two or three hours, but at the end of each day access will be afforded to all residents in a manner appropriate for the vehicle(s) of the homeowner.

Utility installation work shall move forward in a manner to progress constantly until complete. While it is understood that that work will suspend during watermain disinfection, otherwise work on a block will continue until complete. Water Service, sewer lateral and storm sewer will immediately follow the testing. Work on a block will continue even though the time requirement for deflection testing of sewer main has not been completed. Subgrade preparation and Aggregate Base Placement will continue on a block until good access is provided to the residents.

This contract will provide for concrete items and asphaltic pavement not less than three times per year. Before the end of July, all blocks completed, even if it has not been tested for sewer deflection, shall have all restoration items installed including concrete work, HMA and yard reestablishment. This shall again be performed in the middle of September and at the end of the construction season.

The above requirements shall be met. In the event the contractor continues with pipe work and previously disturbed blocks lay idle, the pipe work shall cease and work will move to idle blocks. In the event the contractor continues to work on new areas, the work will not be paid for.

C. SWEEPING REQUIREMENT

As a part of the clean-up operation, all pavements, sidewalks, curb and gutter, and other similar surfaces which are covered with tracked, washed, spilled, or blown dirt during construction, shall be swept with hand-held and/or power brooming equipment using appropriate dust control measures.

3.03 TOPSOIL, SEEDING, FERTILIZING, MULCHING, AND WATER

- A. Shall conform to MDOT – 2012 Standard Specifications for Construction and as modified herein.
- B. Topsoil:
 - 1. Lower 2” can be salvaged topsoil
 - 2. Top 2” shall be imported topsoil
 - 3. All topsoil shall 100% pass a 1” sieve and 90% must pass the #10 Sieve.Topsoil shall be selected natural topsoil encountered on the project and properly preserved, or as secured elsewhere for this purpose. Topsoil for lawn areas shall consist of natural loam, sandy loam, silty loam or clay loam humus-bearing soils adapted to the sustenance of plant life. Topsoil must be neither excessively acidic nor excessively alkaline. It must be of mineral origin, exclusive of any peat or muck.

All other areas disturbed by construction shall be graded in accordance with the Contract Documents. The natural topsoil encountered in these areas shall be

preserved and placed to the thickness shown on the Plans, or when not shown on the Plans, to a minimum thickness of four (4) inches.

Following placement, the topsoil shall be broken down by means of harrows, discs, or other appropriate equipment to provide a uniformly textured soil. Stones, sticks, and other debris shall be removed therefrom.

4. The contractor is to perform a minimum of one (or as directed by the Engineer) soil test per source of topsoil including salvaged topsoil encountered on the project. Payment for these tests are included in the Slope Restoration pay items.

C. Water shall:

1. Be as specified in Section 816.03 of the MDOT 2012 Standard Specifications for Construction and as required by the Engineer based on season and weather conditions.

2. Be obtained from the Owner at no expense to the Contractor. The Contractor shall coordinate with the City of Ironwood Water Department for hydrant access locations.

3. Haul and apply water using vehicles equipped with watertight tanks. Equip the tanks with a suitable pressure-type distributor device that allows uniform application over the specified area. Use tanks with a minimum capacity of 1000 gallons and equipped with positive shut-off valves controlled while the vehicle is in motion.

Uniformly apply the water and incorporate in the manner and amounts, at the times, locations, and purposes that the engineer orders or allows. Load and unload the tank and operate the equipment in a way that does not waterlog or damage the subgrade or base.

3.04 HMA MIXTURE AND TESTING

A. Construction: After the job-mix-formula (JMF) is established, the aggregate gradation and the binder content of the HMA mixture furnished for the work must be maintained within the Range 1 uniformity tolerance limits permitted for the JMF specified in Table 1. However, if deviations are predominantly either below or above the JMF, the Engineer may order alterations in the plant to bring the mixture to the JMF. If two consecutive aggregate gradations on one sieve, or binder contents as determined by the field tests, are outside Range 1 but within Range 2 tolerance limits, the Contractor must suspend all operations. Contract time will continue during these times when the plant is down. Before resuming any production, the Contractor must propose, for the Engineer's approval, all necessary alterations to the materials or plant so that the JMF can be maintained. The Engineer will evaluate the alterations for their effects on AWI and mix design properties and will approve or disapprove the alterations.

The Engineer will perform acceptance sampling and testing. Each day of production, a minimum of two samples will be obtained for each mix type. Acceptance testing

will be performed at the frequency specified by the Engineer. No less than three samples will be obtained for each mix type. Quality control measures to insure job control are the responsibility of the Contractor.

The crushed particle content of the aggregate used in the HMA mixture must not be more than 10 percentage points above or below the crushed particle content used in the JMF nor less than the minimum specified for the aggregate in the contract.

Establish a rolling pattern that will achieve the required in place density. The Engineer will measure pavement density with a Nuclear Density Gauge using the Gmm from the JMF for the density control target. The required in place density of the HMA mixture must be 92.0 to 96.0 percent of the density control target.

PARAMETER	TOP & LEVELING COURSE		BASE COURSE	
	Range 1(a)	Range 2	Range 1(a)	Range 2
Binder Content	± 0.40	± 0.50	± 0.40	± 0.50
% Passing # 8 and Larger Sieves	± 5.0	± 8.0	± 7.0	± 9.0
% Passing # 30 Sieve	± 4.0	± 6.0	± 6.0	± 9.0
% Passing # 200 Sieve	± 1.0	± 2.0	± 2.0	± 3.0
a. This range allows for normal mixture and testing variations. The mixture must be proportioned to test as closely as possible to the Job-Mix-Formula.				

Table 1: Uniformity Tolerance Limits for HMA Mixtures

- B. Rejected Mixtures. If for any one mixture, two consecutive aggregate gradations on one sieve or binder contents as determined by field tests exceed the uniformity tolerance of Range 2 under Table 1, or do not meet the minimum requirements for crushed particle content specified in the project documents, the mixture will be rejected. If such mixtures are placed in a pavement, the remaining portions of the failing field samples (split sample) will be sent to the MDOT Central Laboratory to confirm the field test results. If the Laboratory's results do not confirm the field test results and there are no price adjustments required due to test failures on the asphalt binder, then no price adjustments will be made for the mixture involved. If the Laboratory's results confirm the field test results and if, in the Engineer's judgment, the defective mixture can remain in place and there are no price adjustments required due to test failures on the asphalt binder, the contract unit price for the defective mixture involved, as determined from field tests, will be decreased on the following basis:

The contract unit price for material outside of Range 2 or with a crushed particle content below that specified in the project documents will be decreased 25 percent.

If three consecutive aggregate gradations on one sieve, or bitumen contents as determined by field tests are outside Range 1 but within Range 2 tolerance limits, the mixture produced from the time the third sample was taken until the gradation, or bitumen content is corrected back into Range 1 will be decreased in contract unit price by 10 percent. Field tests indicating that mixtures are subject to the 10 percent penalty will be confirmed in the same manner as mixtures subject to the 25 percent penalty as described herein.

PART 4 – MEASUREMENT AND PAYMENT

In accordance with Section 01025- Measurement and Payment.

ADDENDUM NO. 1
DATE: 4/12/19

NOTE: CONTRACTOR IS ADVISED THAT THERE WILL BE A PAVING PROJECT OF COUNTRY CLUB ROAD SOMETIME DURING THE 2019 CONSTRUCTION SEASON. CONTRACTOR SHALL COORDINATE ALL WORK WITH THAT PROJECT AT NO ADDITIONAL COST TO THIS PROJECT.



MDOT STANDARD PLANS		
Description	Number	Accepted For Use Date
Soil Erosion and Sedimentation Control Measures	R-96-E	9/10/2010
Seeding and Tree Planting	R-100-H	9/30/2014

UTILITY CONTACTS

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED ON OUR SURVEYS DATED NOVEMBER 11TH, 2010.

THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

CITY OF IRONWOOD
213 S. MARQUETTE STREET
IRONWOOD, MI
(906) 932-5050 CONTACT: BOB TERVONEN

XCEL ENERGY
1751 LIBERTY STREET
IRONWOOD, MI
(715) 737-3302 CONTACT: STACEY WESTEEN

CHARTER COMMUNICATIONS
359 US-41 EAST
NEGAUNEE, MI
(906) 475-0107 EXT.1039 CONTACT: BRIAN KOSKI

AT&T
211 E. B STREET
IRON MOUNTAIN, MI 49801
(906) 779-2744 CONTACT: KURT BABCOCK

MERIT (FIBER-OPTIC)
1000 OAKBROOK DRIVE, SUITE 200
ANN ARBOR, MI 48104-6794
(906) 474-1222 CONTACT: JIM LUNDBERG

GOGEBIC COUNTY ROAD COMMISSION
200 N. MOORE STREET
COURTHOUSE ANNEX
BESSEMER, MI 49911
(906) 667-0233 CONTACT: BARRY BOLICH

CHARTER TOWNSHIP OF IRONWOOD
N10892 LAKE ROAD
IRONWOOD, MI 49938
(906) 932-5800 CONTACT: STEVEN BOYD



NOTE: ALL UTILITIES SHOWN ARE APPROXIMATE AND MAY BE INCOMPLETE. FOR PROTECTION OF UNDERGROUND UTILITIES, AND IN CONFORMANCE WITH PUBLIC ACT 174, 2014, THE CONTRACTOR SHALL CALL TOLL FREE 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, BUT NO MORE THAN 14 CALENDAR DAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. ALL "MISS DIG" PARTICIPATING MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR FROM NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM.

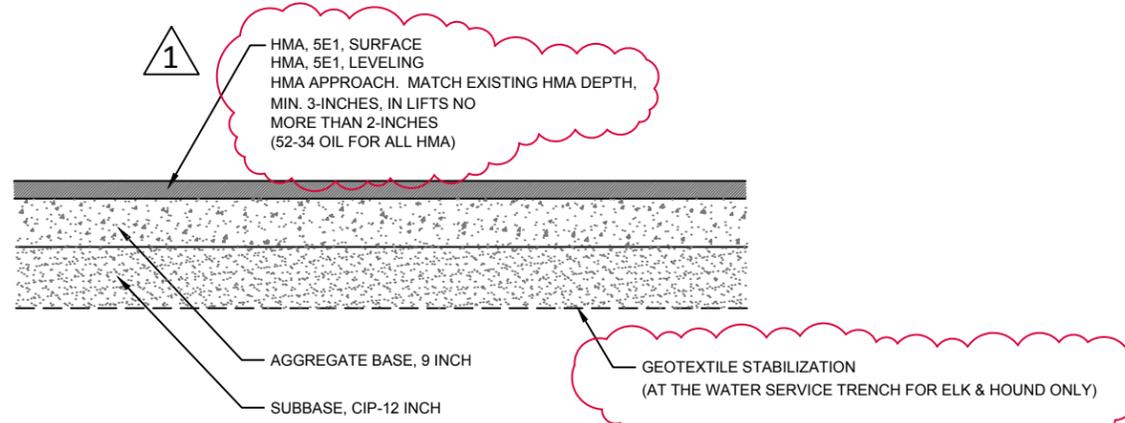
COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE • IRON MOUNTAIN, MI 49801 • PHONE: 906-774-3440
200 EAST AVENUE STREET • IRONWOOD, MI 49938 • PHONE: 906-932-9048
120 US HWY 41 E., STE. B • NEGAUNEE, MI 49866 • PHONE: 906-475-7889



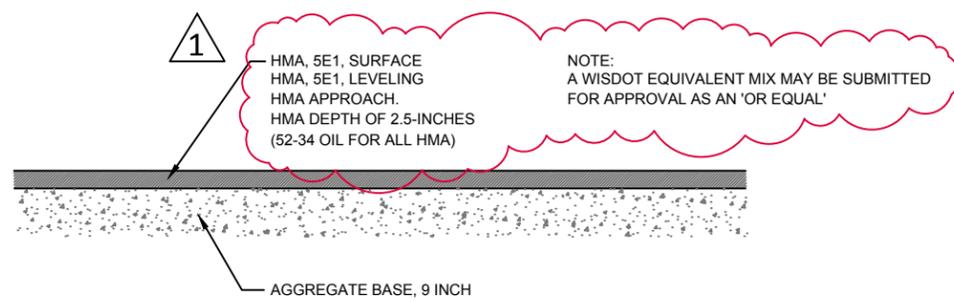
SHEET NAME:
UTILITIES

PROJECT:
CITY OF IRONWOOD
WATERMAIN PROJECT - COUNTRY CLUB ROAD

DRAWN BY: Mark Surprenant
CHECKED BY: PCA
DATE: 3/26/19
DRAWING NO. 2



HMA APPROACH SECTION 1



HMA APPROACH SECTION 2

STANDARD SYMBOLS

	EXISTING SANITARY MANHOLE		EXISTING FIRE HYDRANT
	PROPOSED SANITARY MANHOLE		EXISTING WATER VALVE
	EXISTING DRAINAGE STRUCTURE		EXISTING WATER SHUT-OFF
	EXISTING STORM CATCH BASIN		EXISTING POWER POLE OR PP W/LIGHT
	EXISTING SANITARY SEWER		UTILITY POLE GUY
	PROPOSED SANITARY SEWER		EXISTING ROAD SIGN
	EXISTING STORM SEWER		EXISTING LIGHT POLE OR POLE W/ARM
	PROPOSED STORM SEWER		EXISTING FLAG POLE
	EXISTING WATER MAIN		EXISTING GAS LINE
	PROPOSED WATER MAIN		EXISTING ROAD CENTERLINE
	PROPOSED WATER VALVE		EXISTING FENCE
	PROPOSED HYDRANT ASSAMBLY		EXISTING UNDERGROUND TELEPHONE
	PROPOSED CORPORATION STOP		EXISTING UNDERGROUND ELECTRIC
	PROPOSED CURB STOP AND BOX		EXISTING UNDERGROUND FIBER OPTIC
	PROPOSED 90° ELBOW		EXISTING UTILITY PEDESTAL
	PROPOSED BEND (ANGLE AS NOTED)		EXISTING ELECTRICAL MANHOLE
	PROPOSED CROSS		EXISTING TELEPHONE POLE
	PROPOSED END CAP		EXISTING GAS MANHOLE
	SURVEY CONTROL POINT		EXISTING GAS VALVE
	EXISTING IRON PIN		EXISTING MAILBOX
	TREE DECIDUOUS OR CONIFEROUS		EXISTING TREE LINE
	SIDEWALK TO BE REPLACED FOR UTILITY LATERAL		REMOVE
	EXISTING FORCE MAIN		ADJUST
	ROW		ABANDONED GAS LINE
	SOIL BORING		EASEMENT
			PROPOSED MARKER POST