



MONROE COUNTY
R O A D
COMMISSION

840 S. Telegraph Road • Monroe, Michigan 48161 • Phone: (734) 240-5102 • Fax: (734) 240-5101

PROPOSAL

FOR

INDIAN ACRES

SPECIAL ASSESSMENT DISTRICT

BEDFORD TOWNSHIP

MONROE COUNTY, MICHIGAN

BID OPENING:

Thursday, January 25, 2018 at 10:00 a.m.

BOARD OF COUNTY ROAD COMMISSIONERS
OF THE COUNTY OF MONROE

Paul Iacoangeli, Chairman
Dan Minton, Vice Chairman
Stephen J. Pace, Member
Charles A. Londo, Member
Greg W. Stewart, Member

MCRC Project # 494-002-189032

**MONROE COUNTY ROAD COMMISSION
INVITATION TO BID**

Sealed bids will be received by the Board of County Road Commissioners of the County of Monroe until **10:00 a.m.** local time on **Thursday, January 25, 2018** at their office located at 840 South Telegraph Road, Monroe, MI 48161 for the following projects in Bedford Township, Monroe County, Michigan.

- **Indian Acres Special Assessment District**

Significant bid items and approximate quantities include Excavation, Earth - 613 Cyd; HMA Base Crushing and Shaping - 16,049 Syd; HMA, 13A - 2,472 Ton; HMA, 5E1 - 1,456 Ton; Culv, 12 inch - 482 Ft; Sewer, 12 to 24 inch - 1,533 Ft; Drainage Structure - 13 Ea; and Slope Restoration, Type A - 8,365 Syd

- **Mohawk Trails Special Assessment District**

Significant bid items and approximate quantities include HMA Base Crushing and Shaping - 10,279 Syd; HMA, 13A - 1,388 Ton; HMA, 5E1 - 877 Ton; Culv, 12 inch - 540 Ft; Sewer, 12 to 18 inch - 720 Ft; Drainage Structure - 4 Ea; Ditch Cleanout - 21 Sta; and Slope Restoration, Type A - 5,300 Syd

Bids will be publicly opened and read aloud by the Bid Committee at 10:00 a.m. Proposals may be downloaded from the Road Commission's website at www.mcrc-mi.org/bids.html .

BOARD OF COUNTY ROAD COMMISSIONERS
OF THE COUNTY OF MONROE, MICHIGAN

**MONROE COUNTY ROAD COMMISSION
PROPOSAL
INDIAN ACRES SPECIAL ASSESSMENT DISTRICT**

TO: The Board of County Road Commissioners of the County of Monroe, Michigan

FOR: 1.59 miles of hot mix asphalt crushing, shaping and resurfacing, aggregate base and shoulders, storm sewer, drainage, and restoration on Indian Road, Apache Trail, Fir Drive, Seneca Drive and Navaho Drive in the Indian Acres Subdivision, Bedford Township, Monroe County, Michigan

Ladies and Gentlemen:

The undersigned bidder hereby affirms that:

1. The proposal is in all respects fair and without any collusion or fraud.
2. The undersigned have examined the site of the proposed project and have made a personal investigation and estimate of quantities.
3. The undersigned will contract to furnish all labor, equipment, tools, material and traffic control devices necessary at the unit prices stated on the attached bid forms and to complete the work in the time specified to the satisfaction of the Board of County Road Commissioners of the County of Monroe, Michigan.

Company: _____

Address: _____

City, State, ZIP: _____

Telephone: _____

By: _____

Title: _____

Date: _____

Notes:

1. If the bidder is a partnership, each member must sign the proposal.
2. Corporations must execute the proposal by duly authorized officers in accordance with the Articles of Incorporation.

INSTRUCTIONS TO BIDDERS
and
GENERAL CONDITIONS

The Michigan Department of Transportation 2012 Standard Specifications for Construction are incorporated as part of these bidding documents and shall govern except as provided in the Invitation to Bid, Instructions to Bidders and General Conditions, and Proposal. Reference to the Department or Commission in the Michigan Department of Transportation 2012 Standard Specifications for Construction shall for this project mean the Board of County Road Commissioners of the County of Monroe, hereinafter referred to as "Board", unless otherwise specified.

OWNER

The owner of the project is the Board of County Road Commissioners of the County of Monroe, also referred to as the "Board."

ENGINEER

The Engineer is the County Highway Engineer or the individual assigned by the County Highway Engineer to be in charge of the Contract. The person assigned as the Engineer may be an employee of the Board, a consultant or an outside contractor hired by the Board.

BIDDER

The Bidder is one who submits a signed bid with the required documentation directly to the Board at the time and place specified.

BID FORMS

Sealed proposals must be submitted on the bid forms furnished by the Board. The proposal shall be submitted in its entirety (pages 1 through 15) with no modifications or changes except as authorized by an addendum and with no pages removed. All proposals must be filled out in ink or typewritten and shall be legibly signed, giving the complete name and address of the Bidder.

All bids must be in a sealed envelope and clearly marked "**Indian Acres Special Assessment District.**"

BIDDER'S SURETY

The proposal must be accompanied by a cashier's check, certified check or a bid bond made payable to the Board of County Road Commissioners of Monroe County, Michigan in the sum of five percent (5%) of the amount of the bid. Upon awarding and signing of a contract, or in the event of bid rejection, such bid surety will be returned to the Bidder. Bids may be held for a period of forty (40) days.

INTERPRETATION AND ADDENDA

All questions about the meaning or intent of the Bidding Documents are to be directed to the Engineer. Interpretation or clarification considered necessary by the Engineer to such questions will be issued by Addenda delivered to all parties recorded by the Engineer as having received the Bidding Documents. Questions received less than seven days prior to the date for opening the bids may not be answered. Only questions answered by formal written Addenda are binding. Oral and other interpretations or clarifications will be without legal effect.

OPENING OF BIDS

Bids will be received by the Board at 840 S. Telegraph Road, Monroe, Michigan, 48161 until **10:00 a.m.** local time on **Thursday, January 25, 2018** at which time they will be publicly opened and read aloud.

REJECTION OF BIDS

The Board reserves the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, nonresponsive, unbalanced, or conditional bids and to reject the bid of any Bidder if the Board believes that it would not be in the best interest of the project to make an award to that Bidder, whether because the bid is not responsive or if the Bidder is unqualified or of doubtful financial ability or

fails to meet any pertinent standards or criteria established by the Board. The Board also reserves the right to waive all informalities in any bid should it be deemed in the best interest of the Road Commission to do so. Discrepancies between the multiplication of units of work and the unit prices will be resolved in favor of the unit price. Discrepancies between the indicated sum of any column of figures and the correct sum will be resolved in favor of the correct sum. Discrepancies between words and figure will be resolved in favor of words.

TITLE VI ASSURANCE

The Monroe County Road Commission, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC 2000d to 2000d-4) and Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, hereby notifies all bidders that it assures that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, gender, age, or disability in consideration for an award.

PROHIBITION OF DISCRIMINATION

In accordance with Act No. 453, Public Acts of 1976, the Contractor and subcontractors hereby 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 race, color, religion, national origin, age, sex, height, weight, or marital status. Further, in accordance with Act No. 220, Public Acts of 1976 as amended by Act No. 478, Public Acts of 1980, the Contractor and subcontractors hereby agree not to discriminate against an employee or applicant for employment tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. A breach of the above covenants shall be regarded as a material breach of this contract.

CONTRACT EXECUTION

The Bidder to whom the Contract is awarded shall, within ten (10) calendar days after notice of award, enter into a written contract with the Board and furnish proof of insurance as hereinafter specified. Failure to execute the contract or furnish satisfactory proof of insurance will be considered cause for annulment of award.

PERFORMANCE AND LIEN BONDS

The successful Bidder to whom the contract is awarded shall furnish two (2) surety bonds as follows:

Performance Bond - To the Board of County Road Commissioners of the County of Monroe, Michigan for the faithful fulfillment of the terms of the contract in the amount of one-hundred (100) percent of the contract amount

Lien Bond - To the Board of County Road Commissioners of the County of Monroe, Michigan for the payment of all labor and materials used in the work in the amount of one-hundred (100) percent of the contract amount

MAINTENANCE BOND

After the project is completed and accepted by the Board but prior to final payment, the Contractor shall secure a two (2) year Maintenance Bond in the amount of twenty-five (25) percent of the final construction cost rounded off to the nearest thousand dollars.

Subsequent to completion of construction, the Engineer will conduct a final inspection of the project to determine whether or not the improvements have been properly constructed. The two (2) year term of the bond will begin on the final inspection date provided that at that time, all improvements meet the required standard.

INCREASED OR DECREASED QUANTITIES

The Board reserves the right to increase or decrease quantities from those originally estimated and such changes will be paid for at the unit price bid so long as the total contract amount is not changed more than ten (10) percent. Changes in excess of that amount will be individually negotiated.

PROGRESS SCHEDULE

In no case shall any work be commenced prior to receipt of formal notice of award by the Board.

The low Bidder for the work covered by this proposal will be required to meet with the Board's representative to review the Contractor's proposed work schedule. The schedule for this meeting will be set within one (1) week after the low bidder is determined.

The Board's representative will arrange the time and place for the meeting.

TIME OF COMPLETION

All contract work shall be completed on or before **August 25, 2018**.

FAILURE TO COMPLETE ON TIME

Liquidated damages will be assessed in accordance with Section 108 of the Michigan Department of Transportation 2012 Standard Specifications for Construction, except that all references to seasonal limitations will not apply. Liquidated damages will continue to be assessed for each calendar day the work remains incomplete after the substantial completion date or contract completion date, even if those days extend beyond any seasonal limitations.

PAYMENTS TO CONTRACTOR

Payments will be made to the Contractor on a bi-weekly basis. The Board will make a partial payment to the Contractor on the basis of an estimate, prepared by the Engineer, of the work performed on the project during the preceding period less a five (5) percent retainer.

FINAL INSPECTION, ACCEPTANCE AND FINAL PAYMENT

The Engineer will make a final inspection of all work included in the contract and notify the Contractor of defects to be remedied prior to final acceptance. The Contractor is required to provide unconditional waivers of lien from all subcontractors and suppliers before preparing a final estimate. Upon satisfactory completion of the work by the Contractor, a final estimate will be prepared. Payment for all work completed and accepted, less previous payments, will be made within thirty (30) days of final acceptance.

DISPUTES

The County Highway Engineer's written decision on any question arising under the contract between the Board and Contractor shall be final and binding upon both the Board and the Contractor in the absence of fraud, bad faith, or abuse of discretion.

ARBITRATION

All claims, disputes and other matters in question between the Board and the Contractor arising out of, or relating to, the Contract Documents or the breach thereof (except for claims which have been waived by the making or acceptance of final payment) will be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining subject to the limitations of this section. This agreement so to arbitrate and any other agreement or consent to arbitrate entered into in accordance herewith will be specifically enforceable under the prevailing laws of any court having jurisdiction.

No demand for arbitration of any claim, dispute or other matter that is required to be referred to Engineer initially for decision will be made until the earlier of (a) the date on which Engineer has rendered a decision or (b) the tenth day after the parties have presented their evidence to Engineer if a written decision has not been rendered by Engineer before that date. No demand for arbitration of any such claim, dispute or other matter will be made later than thirty (30) days after the date on which Engineer has rendered a written decision in respect thereof; and the failure to demand arbitration within said thirty (30) days' period shall

result in Engineer's decision being final and binding upon Board and Contractor. If Engineer renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but will not supersede the arbitration proceedings, except where the decision is acceptable to the parties concerned. No demand for arbitration of any written decision of Engineer will be made later than ten (10) days after the party making such demand has delivered written notice of intention to appeal.

Notice of the demand for arbitration will be filed in writing with the other party to the Agreement and with the American Arbitration Association, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the thirty (30) day or ten (10) day period specified above as applicable, and in all other cases within a reasonable time after the claim, dispute or other matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.

No arbitration arising out of or relating to the Contract Documents shall include by consolidation, joinder or in any other manner any other person or entity who is not a party of this contract unless:

- a) the inclusion of such other person or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration;
- b) such other person or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings, and;
- c) the written consent of the other person or entity sought to be included and of Board and Contractor has been obtained for such inclusion, which consent shall make specific reference to this paragraph; but no such consent shall constitute consent to arbitration of any dispute not specifically described in such consent or to arbitration with any party not specifically identified in such consent.

Notwithstanding the above paragraph, if a claim, dispute or other matter in question between Board and Contractor involves the Work of a Subcontractor, either Board or Contractor may join such Subcontractor as a party to the arbitration between Board and Contractor hereunder. Contractor shall include in all subcontracts a specific provision whereby the Subcontractor consents to being joined in arbitration between Board and Contractor involving the Work of such Subcontractor. Nothing in this paragraph nor in the provision of such subcontract consenting to joinder shall create any claim, right or cause of action in favor of Subcontractor and against Board or Board's Consultants that does not otherwise exist.

The award rendered by the arbitrators will be final, judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal.

ASSIGNMENT CLAUSE

The contract between the Board and the Contractor may not be assigned to a third party without the written consent of the Board.

TAXES

The Contractor shall include, and will be deemed to have included, in its base bid and contract price all applicable Michigan Sales and Use taxes which have been enacted into law as of the date the bid is submitted.

BOARD RESPONSIBILITY

The Board shall not supervise, direct or have control or authority over, nor be responsible for, the Contractor's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with laws and regulations applicable to the furnishing or performance of the work unless otherwise specified in the Special

Provisions. The Board will not be responsible for the Contractor's failure to perform or furnish the work in accordance with the Contract Documents.

INDEMNIFICATION, DAMAGE LIABILITY AND INSURANCE

- A. Indemnification. The Contractor must hold harmless, indemnify, defend and represent the Board and its officers, agents and employees against any and all claims for bodily injury or property damage, or any other claim arising out of performance of the work on this contract. The Contractor will not be responsible for claims that result from the sole negligence or willful acts of said indemnitee.
- B. Workers' Compensation Insurance. The Contractor must carry the necessary Workers' Compensation Insurance and submit a certification that it carries Workers' Compensation to the Board.
- C. Bodily Injury and Property Damage. The Contractor must carry adequate insurance, satisfactory to the Board, to afford protection against all claims for damage to public or private property and injuries to persons arising out of performance of the work. Copies of completed certificates must be submitted to the Board.

- 1. General Liability, Bodily Injury and Property Damage. The Contractor must provide the following minimum limits of property damage and bodily injury liability:

Bodily Injury and Property Damage Liability:

Each Occurrence	\$1,000,000
Aggregate	\$2,000,000

- 2. Automobile Liability, Bodily Injury and Property Damage. The Contractor must provide the following minimum limits of property damage and bodily injury liability:

Bodily Injury Liability:

Each Person	\$500,000
Each Occurrence	\$1,000,000

Property Damage Liability:

Each Occurrence	\$1,000,000
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Combined Single Limit for Bodily Injury and Property Damage Liability:

Each Occurrence	\$2,000,000
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- 3. Umbrella Policy. The Contractor may meet the requirements of above minimum limits of bodily injury and property damage liability through an umbrella policy.

- D. Additional Insured. The Bodily Injury and Property Damage Policy must include the following endorsements, verbatim:

"Additional Insured: The Board of County Road Commissioners of the County of Monroe, the Monroe County Road Commission and its officers, agents and employees; Bedford Township and its officers, agents and employees; and The Mannik & Smith Group, Inc. and its officers, agents and employees."

"Provide written notice ten (10) days prior to cancellation, expiration, termination or reduction in coverage for nonpayment of the premium and written notice thirty (30) days prior to cancellation, expiration, termination or reduction in coverage for all other reasons."

- E. Per Project Aggregate. The Bodily Injury and Property Damage Policy must be endorsed with an endorsement that provides the General Aggregate Limit to each designated construction project.
- F. Notice. The Contractor must ensure that all insurance policies and binders include an endorsement by which the insurer agrees to notify the Department in writing at least 30 days before there is a cancellation or material change in coverage. The Contractor must stop operations if any insurance is canceled or reduced, and must not resume operations until new issuance is in force.
- G. Reports. The Contractor or insurance carrier shall report to the Board any claims received, inspections made and the disposition of claims. The Board will withhold final payment release until either the Contractor pays the claim or until final disposition of the claim by the Contractor's insurance company has been received by the Board.

MAINTENANCE OF TRAFFIC

See the Special Provision for Maintaining Traffic attached to the proposal.

SPECIFICATIONS

All work not otherwise specified shall be done in accordance with the Michigan Department of Transportation 2012 Standard Specifications for Construction. Within these specifications all references to the Michigan Department of Transportation shall mean the Board. The errata to the 2012 Standard Specifications can be found on the Michigan Department of Transportation website at www.michigan.gov/mdot.

MATERIALS

All materials shall be in accordance with the Michigan Department of Transportation 2012 Standard Specifications for Construction except as modified herein.

The Contractor shall submit a job mix formula for each HMA mixture used.

The air void content for all HMA mixtures shall be field regressed to 3.0 percent with liquid asphalt cement.

The virgin asphalt binder for all HMA mixtures shall be PG 58-28 unless otherwise specified.

QUALITY CONTROL

For each day's HMA production greater than 500 tons, the Contractor must perform a minimum of one quality control (QC) tester per day for gradation, AC content and air voids. A copy of the QC test results shall be provided to the Engineer.

SPECIAL PROVISIONS AND NOTICES TO BIDDERS

The following special provisions and notices to bidders are attached to this proposal:

1. Progress Clause
2. Maintaining Traffic
3. Utility Coordination (Notice to Bidders)
4. Subgrade Undercutting, Modified
5. Clearing, Special
6. Sewer, Schedule 40 PVC, 4 inch to 6 inch
7. Marshall Hot Mix Asphalt Mixture
8. HMA Application Estimate
9. Post Mailbox, Relocate
10. Slope Restoration, Non-Freeway

UTILITY COORDINATION

For the protection of underground utilities, the contractor shall notify "Miss Dig" at 1-800-482-7171 or 811, a minimum of three working days, excluding weekends or holidays prior to excavating and otherwise fully comply with the provisions of Act 174 of 2013 and as amended. Miss Dig members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be part of the Miss Dig system.

The Contractor shall conduct operations in such a manner as to ensure that those utilities not requiring relocation will not be disturbed.

COMMUNICATIONS

Any questions regarding this bid shall be directed to the person listed below:

Name: Michael Smith
Phone: 734-240-5103
Email: MSmith@mcrc-mi.org

**MONROE COUNTY ROAD COMMISSION
UNIT PRICE CONTRACT
INDIAN ACRES SPECIAL ASSESSMENT DISTRICT**

TO: Board of County Road Commissioners of Monroe County, Michigan

The undersigned, having full knowledge of the site, proposal, plans and specifications for the **Indian Acres Special Assessment District** project in Bedford Township, Monroe County, Michigan including Bidders' Addenda _____, and the conditions of these Contract Documents, hereby agrees to furnish all services, labor, materials, tools, equipment, transportation, and incidentals necessary to perform the entire Work; to complete the contract by the date specified in the Instructions to Bidders and General Provisions, according to the Proposal, Plans and Specifications; and to accept in full, compensation for all work necessary to complete the project at the unit prices named below:

UNIT PRICE WORK					
Item Code	Item Description	Approx. Quantity	Unit	Unit Price	Bid Amount
1500001	Mobilization, Max.\$60,000.00	1.00	LSUM	\$	\$
2030001	Culv, Rem, Less than 24 inch	17.00	Ea	\$	\$
2030011	Dr Structure, Rem	6.00	Ea	\$	\$
2030015	Sewer, Rem, Less than 24 inch	443.00	Ft	\$	\$
2040050	Pavt, Rem, Driveways	642.00	Syd	\$	\$
2040050	Pavt, Rem, Sterns Road	48.00	Syd	\$	\$
2050006	Ditch Cleanout	8.12	Sta	\$	\$
2050010	Embankment, CIP	40.00	Cyd	\$	\$
2050016	Excavation, Earth	613.00	Cyd	\$	\$
2057021	Subgrade Undercutting, Modified	30.00	Cyd	\$	\$
2057051	Clearing, Special	1.00	LSUM	\$	\$
2080020	Erosion Control, Inlet Protection, Fabric Drop	15.00	Ea	\$	\$
2080036	Erosion Control, Silt Fence	1,000.00	Ft	\$	\$
3020001	Aggregate Base, Driveways	78.00	Ton	\$	\$

3020026	Aggregate Base, 10 inch	2,791.00	Syd	\$	\$
3020030	Aggregate Base, 12 inch	48.00	Syd	\$	\$
3020050	Aggregate Base, Conditioning	2,502.00	Syd	\$	\$
3050002	HMA Base Crushing and Shaping	16,049.00	Syd	\$	\$
3070021	Approach, CI II	36.00	Ton	\$	\$
3070121	Shoulder, CI II	670.00	Ton	\$	\$
4010131	Culv, CI A, 12 inch	26.00	Ft	\$	\$
4010539	Culv, CI E, 12 inch	296.00	Ft	\$	\$
4010607	Culv, CI F, 12 inch	160.00	Ft	\$	\$
4020004	Sewer, CI A, 12 inch, Tr Det A	104.00	Ft	\$	\$
4020031	Sewer, CI A, 8 inch, Tr Det B	4.00	Ft	\$	\$
4020033	Sewer, CI A, 12 inch, Tr Det B	53.00	Ft	\$	\$
4020600	Sewer, CI E, 12 inch, Tr Det B	237.00	Ft	\$	\$
4020602	Sewer, CI E, 18 inch, Tr Det B	1,114.00	Ft	\$	\$
4020603	Sewer, CI E, 24 inch, Tr Det B	24.00	Ft	\$	\$
4021201	Sewer Tap, 6 inch	2.00	Ea	\$	\$
4027001	Sewer, Schedule 40 PVC, 4 inch to 6 inch	50.00	Ft	\$	\$
4030006	Dr Structure Cover, Adj, Case 2	1.00	Ea	\$	\$
4030010	Dr Structure Cover, Type B	6.00	Ea	\$	\$
4030040	Dr Structure Cover, Type G	5.00	Ea	\$	\$
4030050	Dr Structure Cover, Type K	2.00	Ea	\$	\$
4030200	Dr Structure, 24 inch dia	3.00	Ea	\$	\$

4030210	Dr Structure, 48 inch dia	9.00	Ea	\$	\$
4030220	Dr Structure, 60 inch dia	1.00	Ea	\$	\$
4030280	Dr Structure, Adj, Add Depth	1.00	Ft	\$	\$
4030306	Dr Structure Tap, 6 inch	2.00	Ea	\$	\$
4030318	Dr Structure Tap, 18 inch	1.00	Ea	\$	\$
4030324	Dr Structure Tap, 24 inch	1.00	Ea	\$	\$
5010008	HMA Surface, Rem, Driveways	1,862.00	Syd	\$	\$
5010005	HMA Surface, Rem, Roadway	2,272.00	Syd	\$	\$
5010009	Edge Trimming	202.00	Ft	\$	\$
5010025	Hand Patching	16.00	Ton	\$	\$
5010033	HMA, 13A	2,472.00	Ton	\$	\$
5010034	HMA, 36A	1,456.00	Ton	\$	\$
5010061	HMA Approach	322.00	Ton	\$	\$
8010005	Driveway, Nonreinf Conc, 6 inch	642.00	Syd	\$	\$
8020038	Curb and Gutter, Conc, Det F4	134.00	Ft	\$	\$
8077050	_Post, Mailbox, Relocate	100.00	Ea	\$	\$
8120012	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	9.00	Ea	\$	\$
8120013	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	9.00	Ea	\$	\$
8120030	Channelizing Device, 42 inch, Furn	40.00	Ea	\$	\$
8120031	Channelizing Device, 42 inch, Oper	40.00	Ea	\$	\$
8120170	Minor Traf Devices	1.00	LSUM	\$	\$
8120250	Plastic Drum, High Intensity, Furn	40.00	Ea	\$	\$

8120251	Plastic Drum, High Intensity, Oper	40.00	Ea	\$	\$
8120350	Sign, Type B, Temp, Prismatic, Furn	338.00	Sft	\$	\$
8120351	Sign, Type B, Temp, Prismatic, Furn	338.00	Sft	\$	\$
8120370	Traf Regulator Control	1.00	LSUM	\$	\$
8160100	Slope Restoration, Type A	8,365.00	Syd	\$	\$
Total Bid =					\$

Contractor Signature: _____

Printed Name and Title: _____

Quantities are not guaranteed. Final payment will be based on actual quantities.

Bidder agrees that the work will be completed and ready for final payment in accordance with the General Conditions. All work on the **Indian Acres Special Assessment District** project is to be completed by **August 25, 2018** as detailed in the Time of Completion section above.

Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work on time.

The following documents are attached to and made a condition of this Bid:

Required Bid Security in the form of either:

Certified Check or a Bidder's Bond in the amount of:

_____ Dollars (\$ _____)

Communications concerning this Bid shall be addressed to the Bidder's representative.

Name of Representative: _____

Address: _____

City, State, ZIP: _____

Telephone Number: _____

E-Mail Address: _____

The terms used in this Bid, which are defined in subsection 101.03 of the Michigan Department of Transportation 2012 Standard Specifications of the Construction, have the meanings assigned to them in the Standard Specifications for Construction.

SUBMITTED on: _____, 2018

If Bidder is:

An Individual

By: _____ (SEAL)
Individual's Name

Doing Business As: _____

Business Address: _____

Phone No: _____

A Partnership

By: _____ (SEAL)
Firm Name

General Partner

Business Address: _____

Phone No.: _____

A Corporation

By: _____ (Corporate SEAL)
Corporate Seal

State of Incorporation

By: _____
Name of Person Authorized to Sign

Title

Business Address: _____

Phone No.: _____

A Joint Venture

By: _____
Name

Business Address: _____

Phone No.: _____

By: _____
Name

Business Address: _____

Phone No.: _____

(Each joint venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

**INDIAN ACRES
SPECIAL ASSESSEMENT DISTRICT**

PROPOSAL ATTACHMENTS

1. Progress Clause
2. Maintaining Traffic
3. Utility Coordination (Notice to Bidders)
4. Subgrade Undercutting, Modified
5. Clearing, Special
6. Sewer, Schedule 40 PVC, 4 inch to 6 inch
7. Marshall Hot Mix Asphalt Mixture
8. HMA Application Estimate
9. Post Mailbox, Relocate
10. Slope Restoration, Non-Freeway

PROGRESS CLAUSE

MSG:SLB

1 of 1

11-13-2017

Start work within ten (10) days after receiving the Notice of Award or on a date agreed upon with the Engineer. In no case shall any work be commenced prior to the receipt of a formal notice of award from the Board of County Road Commissioners of the County of Monroe, Michigan.

All contract work shall be completed on or before August 25, 2018.

The low bidder(s) for the work covered by this proposal will be required to meet with Monroe County Road Commission Engineering Department representatives to work out a detailed Progress Schedule. The schedule for this meeting will be set after the low bidder is determined.

The named subcontractor(s) for Designated and/or Specialty Items, as shown in the proposal, are recommended to be at the scheduled meeting if such items materially affect the work schedule.

The Monroe County Road Commission Engineering Department will arrange the time and place for the meeting.

The Progress Schedule shall include, as a minimum, the controlling work items for the completion of the project and the planned dates (or work day for a work day project) that these work items will be controlling operations. When specified in the bidding proposal, the date the project is to be opened to traffic as well as the final project completion date shall also be included in the Progress Schedule. If the proposal specifies other controlling dates, these shall also be included in the Progress Schedule.

MONROE COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC

MSG:SLB

1 of 3

08-01-17

a. General. Maintain traffic in accordance with sections 104.07, 104.11, 812 and 922 of the Standard Specifications for Construction, the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) and any typicals or supplemental specifications in this proposal and project plans.

The Contractor shall be responsible for the protection of vehicular and pedestrian traffic, work in progress and construction workers in the Construction Influence Area through the implementation of procedures as described in this proposal, the MMUTCD, the Standard Specifications for Construction, and other applicable state and federal requirements.

The Contractor shall coordinate this work with any other contractors or maintenance agencies performing work within the Construction Influence Area or adjoining areas to avoid conflicts in the maintenance of traffic, construction signing, and the orderly progress of contract work.

b. Construction Influence Area. The Construction Influence Area (CIA) shall consist of the width of the existing right-of-way from the project point of beginning to point of ending. The CIA shall extend approximately 500 feet in each direction along any roads intersecting the work zone.

c. Traffic Restrictions. The traffic restrictions described in this special provision apply to all work within the CIA unless otherwise specified.

All work shall be conducted during normal daytime hours unless otherwise approved by the Engineer. Normal daytime hours are considered to be Monday through Saturday from 7 a.m. to 6 p.m.

Two-way traffic, with a minimum of one lane of traffic, shall be maintained at all times during Construction within the CIA of the Indiana Acres Subdivision, except as outlined below. Notify the Engineer and all affected residents a minimum of 48 hours prior to the start of work. All temporary traffic control devices shall be in-place prior to the start of construction.

During installation of the storm sewer on the southern portions of Apache Drive and Indian Road a complete roadway closure will be in-place. The contractor will be required to complete their operations in a manner so that all residential drives within the construction area shall have access from one direction at the end of each work day. Residential driveways that may become inaccessible during storm sewer installation shall be notified a minimum of 24 hours in advance of work activities and shall be provided a general timeframe during which their drive will be inaccessible.

Sterns Road crossing work and work adjacent to the traveled lanes shall be completed while maintaining two-way one lane traffic with traffic regulators. Lane restrictions will be allowed from the hours of 8:30 AM to 4:30 PM, weekdays only. Work shall be completed to allow the

placement of the Hand Patching prior to reopening lane to traffic. Due to heavy traffic volumes on Sterns Road the use of steel plates will not be allowed.

No work shall be performed or lane closures permitted from 3:00 p.m. on the day before until 8:00 a.m. the day after the following holidays as defined by the Engineer: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

Maintain access for emergency vehicles at all times. The Contractor will be required to assist emergency vehicles (fire, ambulance, police) in gaining access into, around, and through the work zone at all times without exception.

d. Traffic Control Devices. All traffic control devices shall conform to the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) 2011 Edition.

All signs shall be 4 feet x 4 feet with black legends on reflectorized orange background unless otherwise noted.

Minimum merging taper lengths, distance between traffic control devices, and length of longitudinal buffer space shall conform to standards as shown on Maintaining Traffic Typical M0020a. Field adjustment may be necessary as determined by the Engineer.

Signing for lane closures shall be in accordance with Michigan Department of Transportation Maintaining Traffic Typical M0040a and M0140a except that Speed Limit signs (R2-1), Injure/Kill a Worker signs (R5-18b), and To Protect Highway Workers (R5-18a) signs will not be required where shown.

Channelizing devices for lane closures shall be 28 inch traffic cones. Traffic cones will not be paid for separately, but shall be considered to be included in the unit price for Maintaining Traffic.

If signs are removed, they must be taken down and stored in accordance with MDOT standards. Signs damaged during removal, storage and placement must be replaced with identical new signs at the Contractor's expense.

The Contractor shall place signs as noted on the traffic control plan sheet.

All construction signing shall be covered or removed during the times they do not apply.

The Contractor shall relocate all traffic control devices including temporary signs and channelizing devices as work progresses. Relocation of traffic control devices is considered to be included in payment for **Minor Traf Devices**.

Following is an estimate of the type and number temporary traffic control devices needed for this project:

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>
Barricade, Type II, High Intensity, Double Sided, Lighted, Furn & Oper	9	Each
Channelizing Device, 42 inch, Furn & Oper	40	Each
Plastic Drum, High Intensity, Furn & Oper	40	Each
Sign, Type B, Temp, Prismatic, Furn & Oper	338	SFT

e. Measurement and Payment. The completed work for each item below will be paid at contract unit price for each item and includes all material, equipment and labor to complete each item.

Contract Item (Pay Item)	Pay Unit
Minor Traf Devices.....	Lump Sum
Traf Regulator Control.....	Lump Sum

The unit price for Minot Traf Devices includes the cost of the following:

1. Providing, installing, maintaining, relocating, and removing traffic cones and other traffic devices;
2. Providing, installing, maintaining, relocating, and removing temporary signs;
3. Temporary removal, relocation, and replacement of any permanent traffic control signage which needs to be relocated due to construction operations;
3. Providing personnel and equipment for traffic regulator control;
4. Maintaining local traffic.

NOTICE TO BIDDERS

UTILITY COORDINATION

MSG:SLB

1 of 2

05-13-17

The Contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in section 104.08 of the Standard Specifications for Construction. In addition, for the protection of underground utilities, the Contractor shall follow the requirements in section 107.12 of the Standard Specifications for Construction. Contractor delay claims, resulting from a utility, will be determined based upon section 108.09 of the Standard Specifications for Construction.

For protection of underground utilities and in conformance with Public Act 174 of 2013, the Contractor shall dial 1-800-482-7171 or 811 a minimum of three full working days, excluding Saturdays, Sundays, and Holidays, prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the "MISS DIG" alert system.

Public & Private Utilities

The following utilities have existing facilities known to be located within the Right-of-Way:

CABLEVISION

Buckeye Broadband
2700 Oregon Road
Northwood, OH 43619
Attn: Michael Sheahan
(419) 724-3713

ELECTRIC

Consumers Energy
1955 W. Parnell
Jackson, MI 49201
Attn: David Southward
(517) 788-2400

NATURAL GAS

Michigan Gas Utilities
899 South Telegraph Road
Monroe, MI 48161
Attn: Kristopher Kleinsmith
(734) 457-6125

WATER

South County Water System
9489 Lewis Avenue
Temperance, MI 48182
Attn: Bill Whittaker
(734) 847-0579

TELECOMMUNICATIONS

Frontier
340 S. Main Street
Adrian, MI 49221
Attn: Mark Spina
(517) 265-0648

SANITARY SEWER

Bedford Twp. Wastewater Treatment Plant
335 LaVoy Road
Erie, MI 48133
Attn: Edward Cousino
(734) 847-8360

COUNTY DRAINS

Monroe Co. Drain Commissioner
1005 South Raisinville Road
Monroe, MI 48161
Attn: Tim Csurgo
(734) 240-3110

The owners of existing service facilities that are within the grading limits will protect or move them to locations designated by the Engineer or will remove them entirely from the highway Right-of-Way. Owners of public utilities will not be required by the County to move additional poles or structures in order to facilitate the operation of construction equipment unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SUBGRADE UNDERCUTTING, MODIFIED

JAK:JD

1 of 1

C&T:APPR:DMG:JAR:06-07-11

a. Description. Perform subgrade undercutting in conformance with section 205 of the Standard Specifications for Construction except as modified herein.

b. Materials. Use 21AA dense-graded aggregate meeting the requirements of section 902 of the Standard Specifications for Construction for backfill.

c. Construction. Conform to subsection 205.03.E of the Standard Specifications for Construction.

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

Pay Item	Pay Unit
Subgrade Undercutting, Modified	Cubic Yard

Subgrade Undercutting, Modified will be paid for as detailed in subsection 205.04.E of the Standard Specifications for Construction for Subgrade Undercutting.

MONROE COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
CLEARING, SPECIAL

MSG:SLB

1 of 1

11-16-17

a. Description. This work consists of removing miscellaneous vegetation, landscaping items and irrigation systems within the construction limits as directed by the Engineer.

b. Materials. None specified.

c. Construction. Remove trees, stumps and vegetation in accordance with subsection 201.03 of the 2012 Michigan Department of Transportation Standard Specifications for Construction.

Relocate landscaping items within the construction limits such as boulders, landscape timbers, retaining wall blocks, edging materials, ornamental fencing and other miscellaneous materials to the right-of-way line.

Remove and salvage any sprinkler heads encountered within the construction limits. Place the salvaged sprinkler heads at the right-of-way line. Cut, remove and cap any irrigation lines within the construction limits. The property owner will be responsible for the restoration of their irrigation system.

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

Pay Item	Pay Unit
Clearing, Special.....	Lump Sum

The unit price for **Clearing, Special** includes the cost of the following:

1. Removing trees and stumps with a diameter less than 6 inches;
2. Removing brush, shrubs and miscellaneous vegetation;
3. Relocating landscaping items to the right-of-way line;
4. Removing and salvaging sprinkler heads; and
5. Cutting, removing and capping irrigation lines.

Removing trees and stumps 6 inches or greater in diameter will be paid for separately.

MONROE COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
SEWER, SCHEDULE 40 PVC, 4 INCH TO 6 INCH

MSG:AMN

1 of 2

06-17-15

A. **Description.** Extend existing drain outlet pipes to roadside ditches, storm sewers or drainage structures.

B. **Materials.** Provide materials meeting the following:

Sound Earth.....	205
Schedule 40 Polyvinyl Chloride Pipe.....	918

Sound earth consists of a natural material that can be compacted to the required density, contains no organic material, and has a maximum unit weight of at least 95 pounds per cubic foot.

Smooth-wall Schedule 40 polyvinyl chloride (PVC) pipe, fittings and accessories must be manufactured from polyvinyl chloride meeting ASTM D 1784. At the discretion of the Engineer, other materials may be substituted to make proper connections.

C. **Construction.** Excavate trenches as needed and shape the bottom of the trench so the pipe will be uniformly supported. Connect Schedule 40 PVC pipe to the existing drain outlet and extend the pipe to the roadside ditch, storm sewer or drainage structure. If necessary, make watertight connections to storm sewers or drainage structures. Backfill the pipe with sound earth only after the Engineer approves all connections and the line and grade of the pipe.

D. **Measurement and Payment.** The completed work as described will be paid for at the contract unit price for the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Sewer, Schedule 40 PVC, 4 inch to 6 inch.....	Foot

Sewer, Schedule 40 PVC, 4 inch to 6 inch will be measured along the centerline of the pipe placed.

The diameter range of 4 inch to 6 inch for the drain pipe is an estimate only. The extension of any diameter drain outlet pipe, whether smaller than 4 inch or larger than 6 inch, will be measured and paid for as **Sewer, Schedule 40 PVC, 4 inch to 6 inch** regardless of the diameter of the pipe.

The unit price for **Sewer, Schedule 40 PVC, 4 inch to 6 inch** includes the cost of the following:

1. Excavating;
2. Connecting the Schedule 40 PVC pipe to the existing drain outlet;
3. Installing Schedule 40 PVC pipe to the roadside ditch, storm sewer or drainage structure;
4. Installing bends and fittings as needed; and
5. Backfilling the pipe with sound earth.

If the new pipe is connected to a storm sewer or drainage structure, the tap will be measured and paid for separately as **Sewer Tap, 6 inch or Dr Structure, Tap, 6 inch** regardless of the diameter of the pipe.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MARSHALL HOT MIX ASPHALT MIXTURE

C&T:JWB

1 of 2

C&T:APPR:EHR:CJB:09-25-06
FHWA:APPR:06-06-11

a. Description. Furnish hot mix asphalt (HMA) mixture, designed using Marshall Mixture Design Methods, in accordance with the standard specifications except as modified by this special provision.

b. Mix Design. Submit the mix design for evaluation in accordance with the Department's HMA Production Manual. Use a 50 blow Marshall hammer when compacting mixtures for developing Marshall mix designs.

c. Recycled Mixtures. Substituting reclaimed asphalt pavement (RAP) for a portion of the new material required to produce HMA mixture is allowed provided that the mixture is designed and produced to meet all criteria specified herein, unless otherwise prohibited. RAP materials must be in accordance with the standard specifications.

d. Materials. Table 1 provides the mix design criteria and volumetric properties. Table 2 provides the required aggregate properties. Use aggregates of the highest quality available to meet the minimum specifications. Use the mixture designation number shown in the contract item name when determining mix design properties from Tables 1 and 2.

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

Pay Item	Pay Unit
HMA, (type)	Ton

Table 1: Mix Design Criteria and Volumetric Properties

	Mixture No.				
	2C	3C	4C	13A	36A
Target Air Void, % (a)	3.00	4.00	4.00	4.00	4.00
VMA (min) (b)	11.00	13.00	14.00	14.00	15.00
VFA	65-78	65-78	65-78	65-78	65-78
Fines to Binder Ratio (max) (c)	1.2	1.2	1.2	1.2	1.2
Flow (0.01 inch)	8 -16	8 -16	8 -16	8 -16	8 -16
Stability (min), lbs	1200	1200	1200	900	900

- a. Lower target air voids by 1.00% if used in a separate shoulder paving operation. Consider reducing air void targets to 3.00% for lower traffic volume roadways when designing 13A and 36A mixtures for local agency use.
- b. VMA calculated using Gsb of the combined aggregates.
- c. Ratio of the weight of aggregate passing the No. 200 sieve to total asphalt binder content by weight; including fines and binder contributed by RAP.

Table 2: Aggregate Properties

	Mixture No.				
	2C	3C	4C	13A	36A
	Percent Passing Indicated Sieve or Property Limit				
1 1/2 inch	100				
1 inch	91-100	100			
3/4 inch	90 max.	91-100	100	100	
1/2 inch	78 max.	90 max.	91-100	75-95	100
3/8 inch	70 max.	77 max.	90 max.	60-90	92-100
No. 4	52 max.	57 max.	67 max.	45-80	65-90
No. 8	15-40	15-45	15-52	30-65	55-75
No. 16	30 max.	33 max.	37 max.	20-50	
No. 30	22 max.	25 max.	27 max.	15-40	25-45
No. 50	17 max.	19 max.	20 max.	10-25	
No. 100	15 max.	15 max.	15 max.	5-15	
No. 200	3-6	3-6	3-6	3-6	3-10
Crushed (min), % (MTM 117)	90	90	90	25	60
Soft Particle (max), % (a)	12.0	12.0	8.0	8.0	8.0
Angularity Index (min) (b)	4.0	4.0	4.0	2.5	3.0
L.A. Abrasion (max), % loss (c)	40	40	40	40	40
Sand Ratio (max) (d)	-	-	-	50	50
<p>a. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 8.0 percent for aggregates used in top course. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 12.0 percent for aggregates used in base and leveling courses.</p> <p>b. The fine aggregate angularity of blended aggregates, determined by MTM 118, must meet the minimum requirement. In mixtures containing RAP, the required minimum fine aggregate angularity must be met by the virgin material. NAA fine aggregate angularity must be reported for information only and must include the fine material contributed by RAP if present in the mixture.</p> <p>c. Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50</p> <p>d. Sand ratio for 13A and 36A no more than 50% of the material passing the No. 4 sieve is allowed to pass the No. 30 Sieve.</p>					

MONROE COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
HMA APPLICATION ESTIMATE

MSG:SLB

1 of 1

05-13-17

a. Description. The hot mix asphalt (HMA) work shall be done in accordance with the requirements of Division 5 of the Standard Specifications for Construction and as herein specified.

b. Materials. The materials and application rates shall be as follows:

The leveling course mixture for all roads within the Indian Acres Subdivision shall be **HMA, 13A** with an estimated yield of 275 pounds per square yard. The target air voids for the leveling course mixture shall be 3.0%.

The top/wearing course mixture for all roads within the Indian Acres Subdivision shall be **HMA, 5E1** with an estimated yield of 165 pounds per square yard. The target air voids for the top/wearing course mixture shall be 3.0%.

The Performance Graded (PG) asphalt binder for the **HMA, 13A** and **HMA, 5E1** mixtures shall be PG 58-28.

The Aggregate Wear Index for the wearing course shall be 260 minimum.

The bond coat material shall be emulsified asphalt SS-1h conforming to the requirements in section 904 of the Standard Specifications for Construction. The uniform rate of application for the bond coat shall be 0.05 to 0.15 gallons per square yard.

c. Construction. None specified.

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

Pay Item	Pay Unit
HMA, 13A.....	Ton
HMA, 5E1.....	Ton

No separate payment will be made for the bond coat material.

MONROE COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
POST, MAILBOX, RELOCATE

MSG:AMN

1 of 1

05-19-15

a. Description. This work consists of moving the existing mailbox supports and mailboxes, maintaining serviceability during construction, and installing the mailbox post at the permanent location after construction is complete.

b. Materials. Use materials meeting the requirements of subsection 807.02 of the Standard Specifications for Construction.

c. Construction. Install the mailbox post in accordance with subsection 807.03 of the Standard Specifications for Construction and the following:

1. Newspaper boxes and supports, whether separate or attached to the existing mail box post, shall be reinstalled. This work is included in the payment for the property owner's associated mailbox.

2. When the mailboxes are required to be temporarily relocated, the mailboxes shall be accessible to post office vehicles from the pavement. Coordinate all mailbox relocations with the property owners and the local post office.

3. Set the mailbox post so that the bottom of the mailbox is located 42 to 44 inches above the edge of the road and the face of the mailbox is offset 6 to 8 inches from the edge of the shoulder.

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

Pay Item	Pay Unit
Post, Mailbox, Relocate	Each

The unit price for **Post, Mailbox, Relocate** includes the cost of the following:

1. Removing and relocating the existing post and mailbox post during construction activities;
2. Maintaining serviceability;
3. Installing the post and mailbox at the permanent location after construction activities are complete;
4. Removing and reinstalling newspaper boxes and supports; and
5. Replacing existing mailbox posts in poor condition with a new post.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SLOPE RESTORATION, NON-FREEWAY

C&T:DMG

1 of 3

C&T:APPR:TWK:DBP:04-25-12

a. Description. This work consists of preparing all lawns and slopes on non-freeway projects designated for slope restoration on the plans or as directed by the Engineer and applying topsoil, fertilizer, seed, mulch with mulch anchor, mulch blanket, high velocity mulch blanket and permanent turf reinforcement mat to those areas. Turf establishment must be in accordance with section 816 of the Standard Specifications for Construction and Standard Plan R-100 Series, except as modified herein or otherwise directed by the Engineer.

b. Materials. The materials and application rates specified in sections 816 and 917 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer. The following materials must be used on this project:

1. Seeding mixture as called for on the plans
2. Fertilizer, Chemical Nutrient, Class A
3. Topsoil Surface, Furnished or Salvaged, 4 inch. Remove any stones greater than 1/2 inch in diameter or other debris from all topsoil.
4. Mulch and Mulch Anchoring, Mulch Blanket and High Velocity Mulch Blanket
5. Permanent Turf Reinforcement Mat (TRM) must be 100 percent synthetic and consist of 100 percent ultraviolet (UV) stabilized polyolefin fibers sewn between two layers of black UV stabilized polypropylene netting with polyolefin thread. The TRM must meet the following "minimum average roll value" requirements:

Property	Test Method	Requirement
Mass/Unit Area	ASTM D 6566	10 oz/syd
Ultraviolet Stability @ 1000 hrs	ASTM D 4355	80 percent
Tensile Strength (MD)	ASTM D 6818	165 lbs/ft

Acceptance. Supply a Test Data Certification for the permanent TRM from one of the following manufacturers:

Recyclex - American Excelsior Co., Arlington, TX (800) 777-7645

P300 - North American Green, Poseyville, IN (800) 772-2040

Landlok 450 - Propex, Inc., Chattanooga, TN (800) 621-1273

PP5-10 - Western Excelsior, Mancos, CO (800) 833-8573

c. Construction. Construction methods must be in accordance with subsection 816.03 of the Standard Specifications for Construction. Begin this work as soon as possible after final grading of the areas designated for slope restoration but no later than the maximum time frames stated in

subsection 208.03 of the Standard Specifications for Construction. It may be necessary, as directed by the Engineer, to place materials by hand.

Shape, compact and assure all areas to be seeded are weed free prior to placing topsoil. Place topsoil to the minimum depth indicated above, to meet proposed finished grade. If the area being restored requires more than the minimum depth of topsoil to meet finished grade, this additional depth must be filled using topsoil or, at the Contractor's option, embankment. Furnishing and placing this additional material is included in this item of work.

Topsoil must be weed and weed seed free and friable prior to placing seed. Remove any stones greater than 1/2 inch in diameter or other debris. Apply seed mixture and fertilizer to prepared soil surface. Incorporate seed into top 1/2 inch of topsoil

Apply mulch at a rate of 2 tons per acre. Place Mulch Anchoring over the mulch at a rate specified in subsection 816.03.F of the Standard Specifications for Construction. Mulch Blanket and High Velocity Mulch Blanket must be placed in accordance with subsection 816.03.H of the Standard Specifications for Construction and as shown on Standard Plan R-100 Series.

Areas constructed with the TRM must be installed on prepared (seeded) grades as shown on the plans in strict accordance with the manufacturer's published installation guidelines. The top edge of the TRM must be anchored in a minimum 6 inch deep trench. Operation of equipment on the slope will not be allowed after placement of the TRM. No credit for splices, overlaps, tucks or wasted material will be made.

If an area washes out after this work has been properly completed and approved by the Engineer, make the required corrections to prevent future washouts and replace the topsoil, fertilizer, seed and mulch. This replacement will be paid for as additional work using the applicable contract items.

If an area washes out for reasons attributable to the Contractor's activity or failure to take proper precautions, replacement will be at the Contractor's expense.

The Engineer will inspect the seeded turf to ensure the end product is well established, weed free, in a vigorous growing condition, and contains the species called for in the seeding mixture.

If the seeded turf is not well established at the end of the first growing season, the Contractor is responsible to re-seed until the turf is well established and approved by the Engineer.

If weeds are determined by the Engineer to cover more than 10 percent of the total area of slope restoration, the Contractor must provide weed control in accordance with subsection 816.03.J of the Standard Specifications for Construction. Weed control will be at the Contractor's expense with no additional charges to the project.

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

Pay Item	Pay Unit
Slope Restoration, Type _____	Square Yard

1. Place **Slope Restoration, Type A** in all areas not described in the other types of slope restoration and will be measured by area in square yards in place. **Slope Restoration, Type A**

includes all labor, equipment and materials required to install Topsoil Surface, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and Mulch and Mulch Anchoring which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type A**.

2. Place **Slope Restoration, Type B** parallel (6 feet minimum) to the edge of the roadway, in areas that have a 1 on 3 slope and in any ditch with a grade less than 1.5 percent, or as directed by the Engineer. **Slope Restoration, Type B** will be measured by area in square yards in place. **Slope Restoration, Type B** includes all labor, equipment and materials required to install Topsoil Surface, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and Mulch Blanket which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type B**.

3. Place **Slope Restoration, Type C** in areas that have a 1 on 2 slope, any ditch with a grade of 1.5 percent to 3 percent or as directed by the Engineer. **Slope Restoration, Type C** will be measured by area in square yards in place. **Slope Restoration, Type C** includes all labor, equipment and materials required to install Topsoil, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and High Velocity Mulch Blanket which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type C**.

4. Place **Slope Restoration, Type D** in areas that have a slope steeper than 1 on 2, any ditch with a grade steeper than 3 percent or as directed by the Engineer. **Slope Restoration, Type D** will be measured by area in square yards in place. **Slope Restoration, Type D** includes all labor, equipment and materials required to install Topsoil, Furnished or Salvaged; Fertilizer, Chemical Nutrient, Class A; Seeding Mixture; and TRM which will not be paid for separately but is included in the contract unit price for **Slope Restoration, Type D**.