GRAND TRAVERSE COUNTY ROAD COMMISSION

"Our mission is to upgrade and maintain a safe and efficient road system"

ADDENDUM #1

PAGE #: 1

DATE: January 5th, 2018

TO: All Bidders and Plan/Document Holders

FROM: Joseph H. Slonecki, P.E.
Assistant County Highway Engineer
Grand Traverse County Road Commission

RE: 2018 General Fund Projects Bid package

Documents issued with this Addendum
- Addendum – 1 through 54 pages
- Issued Specification – No
- Issued Drawings – No
- Reissued Specification Sections – No
- Sketches – No
- Bid Forms – Yes

The following are revisions or clarifications to the original construction documents. This form is required to be submitted with the bid form. Note that all project logs and bid forms have been revised and resubmitted as part of this addendum. The following is a summary of attached documents:

	Sheets
• Addendum No. 1 write up	3
• Chip Seal Projects Log	20
• East Arbutus Lake Road Project Log	10
• Fall Road Project Log	9
• East Duck Lake Road Project Log	7
• Contractor Inquiries	4

Instructions to Bidders:

Under Article 5 – Pre-Bid Conference, the mandatory pre-bid conference requirement is no longer required.

(231) 922-4848 ph · (231) 929-1836 fx · www.gtcrc.org
1881 LaFranier Road · Traverse City, Michigan 49696-8911

Project #18E002 – Chip Seal Project:

- For Project #18E002 (Chip Seal Project) Section 108.01 of the MDOT 2012 Standard Specifications the following language is removed from the contract:

  "The Contractor must use its own organization to perform work amounting to at least 40 percent of the original contract amount. The phrase "its own organization" includes only workers employed and paid directly, inclusive of employees who are employed by a lease agreement acceptable to the Department, and equipment owned or rented with or without operators; and does not include employees or equipment of a subcontractor, assignee, or agent of the Contractor. All items identified as Designated or as Specialty Classifications may be performed by subcontract. The amount of Specialty Classification work performed may be deducted from the original total contract price before computing the amount of work required to be performed by the Contractor's own organization. The 60 percent available for subcontracting must include work identified in the contract as designated classifications and all other work, except specialty classifications.

  The Department will determine the value of subcontracted work by multiplying the number of units of a subcontracted pay item by the contract unit price for that pay item. If any portion of a pay item is subcontracted, only that portion of the work to be performed by a subcontractor will be used for determining the percentage of the total work subcontracted. The Department will determine if the subdivision of the subcontracted pay item and the unit price is reasonable."

- Updated bid form for Hammond Rd

Project #18E001 – East Arbutus Lake Rd:

- Updated bid form, Removed chip seal items and Aggregate base item
- Approximate locations for proposed culverts, this list may be modified at the discretion of the Grand Traverse County Road Commission. The intent is to promote drainage of roadside ditches.

Station	Alignment	Approx. Depth*
9+25	Cross Culvert	3'
17+75	Cross Culvert	3'
51+50	Cross Culvert	3'
73+25	Cross Culvert	3'
80+50	Cross Culvert	3'
87+75	Cross Culvert	3'
95+50	Cross Culvert	3'
120+25	Cross Culvert	3'
13+200	Side Road Cross Culvert	3'

* Depth of cover may vary to accommodate site conditions.

Project #17E006 – Fall Rd:

- Updated bid from, Removed chip seal items

Project #17E005 – East Duck Lake Rd:

- Updated bid form, Removed chip seal items

Confirmation of receipt _____
(Contractor signature)

END OF ADDENDUM #1

GRAND TRAVERSE COUNTY ROAD COMMISSION
LOG OF PROJECT
FOR
PROJECT #18E002
Chip Seal Projects

Project Locations (Approximate Limits):

W Silver Lake Road, Silver Lake Road – US-31 to Division
E Silver Lake Road – Rennie School Road to W Silver Lake Road
Hammond Road – Four Mile to High Lake
N Long Lake Road – Gilbert Park to High School Entrance
N Long Lake Road – Barnes Road to Cedar Run Road
W Long Lake Road – Theil road to Preservation Drive
W Long Lake Road – Lakewood Road to Preservation Drive
Peninsula Drive – Peninsula Hill to Gray Road
Cass Road – West of Bridge to Hartman Road
Elk Lake Road – M-72 to Angell Road
3 Mile Road – Smith Road to Hammond Road
Four Mile – N Arbutus to Potter
Potter – 3 Mile to 4 Mile

History of Projects:

Project listed above has variable conditions included but not limited to; roadway width and cross slope, drainage and tree cover. The Contractor shall understand based on these conditions, field adjustments could be performed (as directed by the Engineer) on a regular basis and therefore the Contractor shall consider this when establishing their unit price. The Contractor shall not be compensated for additional time or equipment expense required for field adjustments.

Description of Work:

Except as otherwise set forth in the Contract Documents, the Contractor shall follow the 2012 MDOT Standard Specifications for Construction, Current Manual of Uniform Traffic Control Devices along with current Grand Traverse County Road Commission Right Of Way Permitting and Public Road Standards Rules, Specifications and Guidelines. If there are questions about differing standards between these two manuals the Engineer shall make the decision as to which standard takes precedence.

At any time the Road Commission may elect to delete quantity, add quantity or perform work on part of or in full of any pay item.

The intent of work is to wedge certain areas of the roadway system (as directed by the Engineer) to provide positive drainage or to provide additional structural integrity to the HMA surface. Wedging maybe used for super elevation correction as needed. Chip Seal to be performed for the roadway section from Edge of Asphalt to Edge of Asphalt or as directed by the Engineer.

Shoulders are intended to be proposed to assist with drainage and driver safety at select locations as directed by the Engineer.

General Log Notes:

HMA related items (Possible Wedging/ Approaches/ Overlays)

- The intent of Wedging is for correction of the existing typical cross slope to 1.5% (percent cross slope may vary per direction of the Engineer), super correction as defined in the field or to provide additional structural integrity to the HMA surface. The Engineer may allow a cross slope in a normal section between 1% and 3% based on site conditions but could require a minimum longitudinal length between the varying slopes. This condition will be determined prior and during paving by the Engineer. Based on preliminary findings, wedging will be variable and may be performed from the existing quarter crown to the centerline, from the existing quarter crown to the edge of asphalt and/or a full wedge over the entire roadway system. The Engineer may elect on a case by case basis to vary from this requirement due to site conditions. All work required to perform this task shall be included within the pay item HMA, _____ (Wedge). Wedging may be spot specific.
- All HMA, approach work required for transitioning into existing HMA driveways and intersections, as directed by the Engineer, shall be paid for under the pay item HMA, ____ (Wedge). The intent of this operation is to feather the proposed HMA into the existing HMA unless site conditions require different direction. There may be times where the HMA will need to be taken back beyond a normal feather due to elevation differences which the Engineer shall give the direction as to the scope and limits. All work associated with this direction shall be included within the pay item HMA, ____ (Wedge).
- All HMA, approach work when performed shall not hold water (ponding). Contractor shall use all means necessary to establish positive surface slopes as not to hold water. If ponding exist after the proposed approach work the Contractor shall be responsible for a corrective measure as approved by the Engineer. This corrective measure will not be an additional cost to the project.
- All HMA curbing and Spillways shall be paid for under the pay item HMA, _____ (Wedge).
- If the HMA leveling course exceeds the maximum application rate of the specified mix the Engineer may require the Contractor to place the HMA in multiple lifts. Wedging is assumed to be a leveling course application.
- All approach paving shall be paid for as HMA, ____ (Wedge).
- All mainline paving prep through a mill operation to be paid for as HMA, ____ (Overlay).

Chip Seal:

- Placement of a Seal, Single Chip, extending over the entire width of the existing HMA. Note that in certain areas the Engineer may elect to have the contractor perform a bar Chip, spot Chip or a Seal, Double Chip due to existing roadway conditions. This work will be paid at the unit price of Seal, Single Chip. For clarification, if in a given area the Contractor is directed to perform a bar Chip for a 4 foot width and then a full lane width Seal, Single Chip. The Contractor shall be paid for the SYD of the bar Chip and the SYD of the Seal, Single Chip at the

Seal, Single Chip unit price.

- A fog seal shall be applied to all Chip Seals unless otherwise directed by the Engineer.
- Contractor shall place Raised Pavt Marker, Temp, Type 1, Yellow, Bidirectional along the centerline of Chip Sealed roadways sections as directed by the Engineer. The cost for this item shall be included in the pay item Seal, Single Chip.
- If excess stone if left by the Chip Sealing operation that will cause future drainage concerns or is a safety issue the Contractor shall remove the excess stone. Contractor is required to removal all excess stone on curb lines (bituminous or concrete) and approaches including driveways.

Gravel related items: (gravel shoulders/driveways):

- Gravel that is required to be placed in order to transition from the Edge of Asphalt to an existing gravel drive shall be paid for under Shoulder, Cl II.
- When gravel shoulders are required to be placed the shoulder width and slope shall be defined by the Engineer prior to the start of work. Typically the slope will be 4 to 6 percent in normal sections.

Restoration:

- Contractor shall restore all proposed ditching areas and all disturbed areas or any other area as directed by the Engineer. Mulch Blanket, High Velocity shall be used in locations per direction from the Engineer.

Ditching:

- Ditching locations as directed by the Engineer. Depending on location the ditch depth may vary. Typically the ditch depth is expected to be 1 to 2 feet (after restoration is performed) with 1 on 4 side slopes.

Log Plans:

- Log sketches provided are for reference only and are not a part of the Contract. The intent of the sketches is to provide general guidance and allow for a visual reference (stationing related to physical features identified on the aerial) for location of items of Work. The Contractor shall understand that the Road Commission at any time may vary from the sketches. The Contractor understands that changes to or deviation from the sketches by the Road Commission shall not be a basis for an increase in Contract Time or Contract Price. The accuracy of the sketches provided is not guaranteed (aerials and scalable features may not be accurate).

Spillways:

- At a minimum the Contractor shall follow the Road Commissions standard detail for construction of a spillway. The Road Commission shall mark the location of the spillway and the contractor shall be responsible for all means to construct. It is the Contractor's responsibility to ensure all discharge water is adequately handled and during rain events no washouts are encountered. If the spillway fails the Contractor shall (based on the direction of the Engineer)

remove and replace or repair as needed at no additional cost to the project.

General:

- Tree removal and clearing as directed by the Engineer.
- If Riprap, Plain is used it shall have a minimum stone size of 8 inches.
- The Road Commission at any time may perform work within or around the project limits. The Contractor shall coordinate their efforts with the Road Commission to ensure the Road Commission does not waste effort in their performance of said work. This work and effort by the Contractor shall not be an additional cost to the project.
- Prior to paving the Contractor shall ensure all utility castings are adjusted and approved by the GTCRC.

Miscellaneous Quantities:

The following items of work shall be done as they apply throughout the project or as directed by the Engineer. These items are not detailed in the log.

Items of work	Estimated Quantity
Mobilization	1 LS
Traffic Control	1 LS

Additional items incidental to the cost of the project:

- Removal and replacement of all mailbox's based on required project operations shall be included in the scope of the project. All mailbox's shall be set to postal height requirements and offset requirements as defined by the Postal Service and the Road Commission. If there is questioning on which mailboxes required replacement the Engineer shall have the final say.
- During the removal of trees if less than 6 inch diameter tree trunks are within a 20 foot radius of a pay item tree the removal of these trees shall be incidental to the cost of the project.
- All manhole and valve box adjustments.
- All required temporary tape for marking drive lanes for the project.
- All work required under Pavt for Butt Joints, Rem for the project.
- Embankment required for guardrail approach terminals.
- Any required work to perform Earth Excavation to be included in pay item Ditching.
- All additional project items required to complete the project per the direction of the Engineer are incidental to the cost of the project.

Understanding of Testing requirements:

Except as otherwise set forth in the Contract Documents, all testing requirement will follow the MDOT 2012 Standard Specifications for Construction or as directed by the Engineer.

Understanding of Workmanship:

When paving driveways, by way of complete installation or when feathering to match existing, the Contractor shall understanding that any ponding on the surface is not acceptable and the GTCRC will require corrective measures which may require removal and replacement as determined by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

When wedging, the Contractor understands that a positive cross – slope towards the shoulder or to an inlet catchment is required. The paver shall not pave a deflection in slope, quarter break unless otherwise approved by the Engineer. The Contractor shall not invert the roadway or create ridges that will hold water on the roadway. If ponding water is found on the roadway surface within the wedge treatment area a corrective measure will be required and the corrective measure will be determined by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

When conducting an overlay the Contractor shall not create a cross-sloped roadway or an inverted roadway. An Engineer directed constant cross-slope from the centerline to the edge of HMA shall be produced. If the Contractor produces an inverted section, quarter crown break (unless otherwise approved) or other condition that is not an industry standard, then a corrective measure may be required as directed by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

At any time the Contractor shall not create an unsafe condition such as incorrect traffic control setup or drop offs along the shoulder edge. If an unsafe condition exist the Contractor shall use all necessary means to correct the issue immediately at no cost to the contract.

When placing gravel shoulders, the Contractor shall not place the material higher than the edge of pavement, creating a high ridge, which will trap water. If material is placed in this manner than the GTCRC will require the shoulders to be reworked to allow for positive drainage from the HMA surface. Cost associated with the corrective measures will be incidental to the cost of the project.

When paving to an existing HMA edge within a drive lane (transverse joint) the Contractor shall ensure a smooth transition. If an unacceptable bump or dip (joint) exist the Contractor shall provide a corrective measure as defined by the Engineer. The corrective measure may include milling and resurfacing, diamond gridding or other measures as approved by the Engineer. Cost associated with the corrective measure will be incidental to the cost of the project.

Soil erosion measures shall be completed throughout the duration of the project. Once soils are disturbed they should be restored within a reasonable period of time as determined by the Engineer. If the Contractor fails to complete restoration measures within a reasonable period of time the Road Commission may elect to back charge the Contractor all time associated with correction, assisting in correcting or hiring out the required work.

Clarification on Scheduling:

When Overband Crack Fill is placed the Contractor shall wait a minimum of 7 days before placement of a Chip Seal.

When Overband Crack Fill is placed the Contractor shall wait a minimum of 14 days before placement of HMA. Prior to placement of HMA or Overband Crack Fill the Contractor must receive approval from the Engineer.

When HMA is placed the Contractor shall wait a minimum of 7 days before placement of a Chip Seal. The Engineer may require a fog seal to be placed over the HMA prior to a Chip Seal. If a fog seal is required payment shall be made through Fog Seal, Modified.

Bid Clarification:

Listed estimated quantities shall be verified by the contractor prior to bidding.

PROJECT: Chip Seal
Bid Form
(W. Silver Lake Road, Silver Lake Road: US- 31 to Division)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	9	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	51	_____	_____
Tree, Rem, 37 inch and Larger	Ea.	1	_____	_____
Berm Grading	Sta.	90	_____	_____
Ditching	Sta.	66	_____	_____
Shoulder, Cl II	Ton	870	_____	_____
Trenching	Sta.	5	_____	_____
Cold Milling HMA Surface	Syd	1800	_____	_____
HMA, 4E3 (Overlay)	Ton	225	_____	_____
HMA, 4E3 (Wedge)	Ton	300	_____	_____
Overband Crack Fill, Lane	Lnmi.	7.5	_____	_____
Seal, Single Chip, Modified	Syd.	175,000	_____	_____
Fog Seal, Modified	Syd.	175,000	_____	_____
Pavt Mrkg, Polyurea, 24 inch Stop Bar	Ft.	1,160	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	81,500	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	81,500	_____	_____
Pavt Mrkg, Polyurea, Lt Turn Arrow Sym.	Ea.	13	_____	_____
Pavt Mrkg, Polyurea, Rt Turn Arrow Sym.	Ea.	6	_____	_____
Pavt Mrkg, Polyurea, Thru Arrow Sym	Ea.	8	_____	_____
Pavt Mrkg, Polyurea, Only Sym	Ea.	13	_____	_____
Pavt Mrkg, Polyurea, School Sym	Ea.	3	_____	_____

Slope Restoration, Type C, Modified	Syd.	11,000	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(E. Silver Lake Road: US-31 to W. Silver Lake Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	14	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	57	_____	_____
Tree, Rem, 37 inch and Larger	Ea.	1	_____	_____
Ditching	Sta.	14	_____	_____
Shoulder, Cl II	Ton	675	_____	_____
Seal, Single Chip, Modified	Syd.	70,000	_____	_____
Fog Seal, Modified	Syd.	70,000	_____	_____
Pavt Mrkg, Polyurea, 24 inch Stop Bar	Ft.	38	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	40,000	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	40,000	_____	_____
Pavt Mrkg, Polyurea, Lt Turn Arrow Sym.	Ea.	3	_____	_____
Pavt Mrkg, Polyurea, Rt Turn Arrow Sym.	Ea.	3	_____	_____
Pavt Mrkg, Polyurea, Only Sym	Ea.	4	_____	_____
Traffic Control	LS	1	_____	_____
Slope Restoration, Type C, Modified	Syd.	1,800	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numeral

PROJECT: Chip Seal
Bid Form
(Hammond Road: 3 Mile to High Lake Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Berm Grading	Sta.	15	_____	_____
HMA, LVSP (Wedge)	Ton	200	_____	_____
Shoulder, Cl II	Ton	400	_____	_____
Overband Crack Fill, Lane	Lnmi.	4.8	_____	_____
Seal, Single Chip, Modified	Syd.	41,500	_____	_____
Fog Seal, Modified	Syd.	41,500	_____	_____
Pavt Mrkg, Polyurea, 24 inch Stop Bar	Ft.	175	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	21,200	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	20,500	_____	_____
Pavt Mrkg, Polyurea, Lt Turn Arrow Sym.	Ea.	7	_____	_____
Pavt Mrkg, Polyurea, Rt Turn Arrow Sym.	Ea.	4	_____	_____
Pavt Mrkg, Polyurea, Only Sym	Ea.	6	_____	_____
Pavt Mrkg, Polyurea, School Sym	Ea.	2	_____	_____
Traffic Control	LS	1	_____	_____
Slope Restoration, Type C, Modified	Syd.	5,000	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(N. Long Lake Road: Gilbert Park to Herkner Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	23	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	144	_____	_____
Tree, Rem, 37 inch and larger	Ea.	2	_____	_____
Ditching	Sta.	58	_____	_____
Berm Grading	Sta.	81	_____	_____
Shoulder, Cl II	Ton	950	_____	_____
Overband Crack Fill, Lane	Lnmi.	10.0	_____	_____
Seal, Single Chip, Modified	Syd.	92,000	_____	_____
Fog Seal, Modified	Syd.	92,000	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	52,500	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	52,500	_____	_____
Pavt Mrkg, Polyurea, Lt Turn Arrow Sym.	Ea.	1	_____	_____
Pavt Mrkg, Polyurea, School Sym	Ea.	3	_____	_____
Traffic Control	LS	1	_____	_____
Slope Restoration, Type C, Modified	Syd.	23,000	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(N. Long Lake Road: Barnes Road to Cedar Run Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	4	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	40	_____	_____
Shoulder, Cl II	Ton	220	_____	_____
Overband Crack Fill, Lane	Lnmi.	3.8	_____	_____
Seal, Single Chip, Modified	Syd.	33,600	_____	_____
Fog Seal, Modified	Syd.	33,600	_____	_____
Pavt Mrkg, Polyurea, 24 inch Stop Bar	Ft.	60	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	18,000	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	18,000	_____	_____
Pavt Mrkg, Polyurea, Lt Turn Arrow Sym.	Ea.	4	_____	_____
Pavt Mrkg, Polyurea, Rt Turn Arrow Sym.	Ea.	2	_____	_____
Pavt Mrkg, Polyurea, Only Sym	Ea.	6	_____	_____
Slope Restoration, Type C, Modified	Syd.	200	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(W. Long Lake Road: Theil Road to N. Long Lake Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	5	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	56	_____	_____
Stump, Rem, 19 inch to 36 inch	Ea.	2	_____	_____
Stump, Rem, 37 inch and larger	Ea.	6	_____	_____
Ditching	Sta.	27	_____	_____
Berm Grading	Sta.	13	_____	_____
Shoulder, Cl II	Ton	300	_____	_____
Overband Crack Fill, Lane	Lnmi.	2.0	_____	_____
Seal, Single Chip, Modified	Syd.	14,500	_____	_____
Fog Seal, Modified	Syd.	14,500	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	11,200	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	11,200	_____	_____
Pavt Mrkg, Polyurea, Lt Turn Arrow Sym.	Ea.	1	_____	_____
Pavt Mrkg, Polyurea, Only Sym	Ea.	1	_____	_____
Slope Restoration, Type C, Modified	Syd.	5,000	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(W. Long Lake Road: E)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	21	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	185	_____	_____
Ditching	Sta.	66	_____	_____
Berm Grading	Sta.	7	_____	_____
Shoulder, Cl II	Ton	400	_____	_____
Overband Crack Fill, Lane	Lnmi.	2.75	_____	_____
Seal, Single Chip, Modified	Syd.	19,000	_____	_____
Fog Seal, Modified	Syd.	19,000	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	14,500	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	14,500	_____	_____
Slope Restoration, Type C, Modified	Syd.	12,000	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(Elk Lake Road: M-72 to Angell Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	39	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	76	_____	_____
Tree, Rem, 37 inch, or Larger	Ea.	6	_____	_____
Ditching	Sta.	15	_____	_____
Berm Grading	Sta.	10	_____	_____
Shoulder, Cl II	Ton	1,100	_____	_____
HMA, LVSP (Wedge)	Ton	200	_____	_____
HMA, Hand Patching	Ton	2	_____	_____
Overband Crack Fill, Lane	Lnmi.	8.5	_____	_____
Seal, Single Chip, Modified	Syd.	58,000	_____	_____
Fog Seal, Modified	Syd.	58,000	_____	_____
Pavt Mrkg, Polyurea, 24 inch Stop Bar	Ft.	22	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	45,000	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	45,000	_____	_____
Slope Restoration, Type C, Modified	Syd.	5,000	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(3 Mile Road: Smith Road to Hammond Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	18	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	4	_____	_____
Berm Grading	Sta.	1.5	_____	_____
Ditching	Sta.	5.5	_____	_____
Shoulder, Cl II	Ton	200	_____	_____
HMA, Hand Patching	Ton	1	_____	_____
Overband Crack Fill, Lane	Lnmi.	3.1	_____	_____
Seal, Single Chip, Modified	Syd.	32,000	_____	_____
Fog Seal, Modified	Syd.	32,000	_____	_____
Pavt Mrkg, Polyurea, 24 inch Stop Bar	Ft.	40	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	17,700	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	17,700	_____	_____
Pavt Mrkg, Polyurea, Lt Turn Arrow Sym.	Ea.	1	_____	_____
Pavt Mrkg, Polyurea, Rt Turn Arrow Sym.	Ea.	1	_____	_____
Pavt Mrkg, Polyurea, Only Sym	Ea.	2	_____	_____
Pavt Mrkg, Polyurea, School Sym	Ea.	3	_____	_____
Slope Restoration, Type C, Modified	Syd.	4,300	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(Cass Road: Joint west of bridge to Hartman Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	8	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	1	_____	_____
Berm Grading	Sta.	18	_____	_____
Ditching	Sta.	16	_____	_____
Shoulder, Cl II	Ton	200	_____	_____
HMA, Hand Patching	Ton	1	_____	_____
Overband Crack Fill, Lane	Lnmi.	2.4	_____	_____
Seal, Single Chip, Modified	Syd.	18,000	_____	_____
Fog Seal, Modified	Syd.	18,000	_____	_____
Pavt Mrkg, Polyurea, 24 inch Stop Bar	Ft.	75	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	12,500	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	12,500	_____	_____
Pavt Mrkg, Polyurea, Railroad Sym	Ea.	2	_____	_____
Slope Restoration, Type C, Modified	Syd.	4,700	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(Peninsula Drive: Peninsula Hills Drive to Gray Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Clearing	Acre	.5	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	21	_____	_____
Tree, Rem, 37 inch or Larger	Ea.	3	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	39	_____	_____
Culv. Rem. Less than 24”	Ea.	2	_____	_____
Pav,t Rem.	Syd.	80	_____	_____
Culv, Cl A, 15 inch	Ft.	80	_____	_____
Berm Grading	Sta.	4	_____	_____
Ditching	Sta.	46	_____	_____
Aggregate Base, 6”	Syd.	75	_____	_____
HMA, LVSP (Wedge)	Ton	500	_____	_____
Shoulder, Cl II	Ton	750	_____	_____
Overband Crack Fill, Lane	Lnmi.	5.0	_____	_____
Seal, Single Chip, Modified	Syd.	34,500	_____	_____
Fog Seal, Modified	Syd.	34,500	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	27,000	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	27,000	_____	_____
Slope Restoration, Type C, Modified	Syd.	25,000	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(4 Mile Road: N. Arbutus Lake Road to Potter Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Shoulder, Cl II	Ton	125	_____	_____
Seal, Single Chip, Modified	Syd.	9,200	_____	_____
Fog Seal, Modified	Syd.	9,200	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	6,000	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	6,000	_____	_____
Traffic Control	LS	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Chip Seal
Bid Form
(Potter Road: 3 Mile Road to 4 Mile Road)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	2	_____	_____
Tree, Rem, 37 inch or larger	Ea.	1	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	11	_____	_____
Embankment, CIP	Cyd.	3,200	_____	_____
Excavation, Earth	Cyd.	800	_____	_____
Berm Grading	Sta.	15	_____	_____
Ditching	Sta.	3	_____	_____
HMA, LVSP (Wedge)	Ton	300	_____	_____
Shoulder, Cl II	Ton	550	_____	_____
Overband Crack Fill, Lane	Lnmi.	2.0	_____	_____
Seal, Single Chip, Modified	Syd.	15,000	_____	_____
Fog Seal, Modified	Syd.	15,000	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	10,600	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	10,600	_____	_____
Traffic Control	LS	1	_____	_____
Slope Restoration, Type A, Modified	Syd.	1,400	_____	_____
Slope Restoration, Type C, Modified	Syd.	4,800	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL: _____**
(words) (numerals)

TOTAL OF ALL CHIP SEAL PROJECTS _____TOTAL:_____
(words) (numeral)

GRAND TRAVERSE COUNTY ROAD COMMISSION
LOG OF PROJECT
FOR
PROJECT #18E001
E Arbutus Lake Road

Project Locations:

Approximate limits from Hobbs Hwy to High Lake Rd.

History of Projects:

Project listed above has variable conditions included but not limited to; roadway width and cross slope, drainage and tree cover. The Contractor shall understand based on these conditions, field adjustments could be performed (as directed by the Engineer) on a regular basis and therefore the Contractor shall consider this when establishing their unit price. The Contractor shall not be compensated for additional time or equipment expense required for field adjustments.

Description of Work:

Except as otherwise set forth in the Contract Documents, the Contractor shall follow the 2012 MDOT Standard Specifications for Construction, Current Manual of Uniform Traffic Control Devices along with current Grand Traverse County Road Commission Right Of Way Permitting and Public Road Standards Rules, Specifications and Guidelines. If there are questions about differing standards between these two manuals the Engineer shall make the decision as to which standard takes precedence.

At any time the Road Commission may elect to delete quantity, add quantity or perform work on part of or in full of any pay item.

The intent of work is to wedge certain areas of the roadway system (as directed by the Engineer) to provide positive drainage or to provide additional structural integrity to the HMA surface. Wedging maybe used for super elevation correction as needed. Chip Seal to be performed for the roadway section from Edge of Asphalt to Edge of Asphalt or as directed by the Engineer. Shoulders are intended to be proposed to assist with drainage and driver safety at select locations as directed by the Engineer.

General Log Notes:

HMA related items (Possible Wedging/ Approaches/ Overlays)

- The intent of Wedging is for correction of the existing typical cross slope to 1.5% (percent cross slope may vary per direction of the Engineer), super correction as defined in the field or to provide additional structural integrity to the HMA surface. The Engineer may allow a cross slope in a normal section between 1% and 3% based on site conditions but could require a minimum longitudinal length between the varying slopes. This condition will be determined prior and during paving by the Engineer. Based on preliminary findings, wedging will be variable and may be performed from the existing quarter crown to the centerline, from the existing quarter crown to the edge of asphalt and/or a full wedge over the entire roadway system. The Engineer may elect on a case by case basis to vary from this requirement due to site conditions. All work required to perform this task shall be included within the pay item HMA, LVSP (Wedge). Wedging may be spot specific.
- All HMA, approach work required for transitioning into existing HMA driveways and intersections, as directed by the Engineer, shall be paid for under the pay item HMA, LVSP (Wedge). The intent of this operation is to feather the proposed HMA into the existing HMA unless site conditions require different direction. There may be times where the HMA will need to be taken back beyond a normal feather due to elevation differences which the Engineer shall give the direction as to the scope and limits. All work associated with this direction shall be included within the pay item HMA, LVSP (Wedge).
- All HMA, approach work when performed shall not hold water (ponding). Contractor shall use all means necessary to establish positive surface slopes as not to hold water. If ponding exist after the proposed approach work the Contractor shall be responsible for a corrective measure as approved by the Engineer. This corrective measure will not be an additional cost to the project.
- All HMA curbing and Spillways shall be paid for under the pay item HMA, LVSP (Wedge).
- If the HMA leveling course exceeds the maximum application rate of the specified mix the Engineer may require the Contractor to place the HMA in multiple lifts. Wedging is assumed to be a leveling course application.

Chip Seal:

- Placement of a Seal, Single Chip, extending over the entire width of the existing HMA. Note that in certain areas the Engineer may elect to have the contractor perform a bar Chip, spot Chip or a Seal, Double Chip due to existing roadway conditions. This work will be paid at the unit price of Seal, Single Chip. For clarification, if in a given area the Contractor is directed to perform a bar Chip for a 4 foot width and then a full lane width Seal, Single Chip. The Contractor shall be paid for the SYD of the bar Chip and the SYD of the Seal, Single Chip at the Seal, Single Chip unit price.
- A fog seal shall be applied to all Chip Seals unless otherwise directed by the Engineer.
- Contractor shall place Raised Pavt Marker, Temp, Type 1, Yellow, Bidirectional along the centerline of Chip Sealed roadways sections as directed by the Engineer. The cost for this item shall be included in the pay item Seal, Single Chip.

- If excess stone if left by the Chip Sealing operation that will cause future drainage concerns or is a safety issue the Contractor shall remove the excess stone. Contractor is required to removal all excess stone on curb lines (bituminous or concrete) and approaches including driveways.

Gravel related items: (gravel shoulders/driveways):

- Gravel that is required to be placed in order to transition from the Edge of Asphalt to an existing gravel drive shall be paid for under Shoulder, Cl II.
- When gravel shoulders are required to be placed the shoulder width and slope shall be defined by the Engineer prior to the start of work. Typically the slope will be 4 to 6 percent in normal sections.

Restoration:

- Contractor shall restore all proposed ditching areas and all disturbed areas or any other area as directed by the Engineer. Mulch Blanket, High Velocity shall be used in locations per direction from the Engineer.

Ditching:

- Ditching locations as directed by the Engineer. Depending on location the ditch depth may vary. Typically the ditch depth is expected to be 1 to 2 feet (after restoration is performed) with 1 on 4 side slopes.

Log Plans:

- Log sketches provided are for reference only and are not a part of the Contract. The intent of the sketches is to provide general guidance and allow for a visual reference (stationing related to physical features identified on the aerial) for location of items of Work. The Contractor shall understand that the Road Commission at any time may vary from the sketches. The Contractor understands that changes to or deviation from the sketches by the Road Commission shall not be a basis for an increase in Contract Time or Contract Price. The accuracy of the sketches provided is not guaranteed (aerials and scalable features may not be accurate).

Spillways:

- At a minimum the Contractor shall follow the Road Commissions standard detail for construction of a spillway. The Road Commission shall mark the location of the spillway and the contractor shall be responsible for all means to construct. It is the Contractor's responsibility to ensure all discharge water is adequately handled and during rain events no washouts are encountered. If the spillway fails the Contractor shall (based on the direction of the Engineer) remove and replace or repair as needed at no additional cost to the project.

General:

- Tree removal and clearing as directed by the Engineer.
- If Riprap, Plain is used it shall have a minimum stone size of 8 inches.
- The Road Commission at any time may perform work within or around the project limits. The Contractor shall coordinate their efforts with the Road Commission to ensure the Road Commission does not waste effort in their performance of said work. This work and effort by the Contractor shall not be an additional cost to the project.
- Prior to paving the Contractor shall ensure all utility castings are adjusted and approved by the GTCRC.

Miscellaneous Quantities:

The following items of work shall be done as they apply throughout the project or as directed by the Engineer. These items are not detailed in the log.

Items of work	Estimated Quantity
Mobilization	1 LS
Traffic Control	1 LS

Additional items incidental to the cost of the project:

- Removal and replacement of all mailbox's based on required project operations shall be included in the scope of the project. All mailbox's shall be set to postal height requirements and offset requirements as defined by the Postal Service and the Road Commission. If there is questioning on which mailboxes required replacement the Engineer shall have the final say.
- During the removal of trees if less than 6 inch diameter tree trunks are within a 20 foot radius of a pay item tree the removal of these trees shall be incidental to the cost of the project.
- All manhole and valve box adjustments.
- All required temporary tape for marking drive lanes for the project.
- All work required under Pavt for Butt Joints, Rem for the project.
- Embankment required for guardrail approach terminals.
- Any required work to perform Earth Excavation to be included in pay item Ditching.
- All additional project items required to complete the project per the direction of the Engineer are incidental to the cost of the project.

Understanding of Testing requirements:

Except as otherwise set forth in the Contract Documents, all testing requirement will follow the MDOT 2012 Standard Specifications for Construction or as directed by the Engineer.

Understanding of Workmanship:

When paving driveways, by way of complete installation or when feathering to match existing, the Contractor shall understanding that any ponding on the surface is not acceptable and the GTCRC will require corrective measures which may require removal and replacement as determined by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

When wedging, the Contractor understands that a positive cross – slope towards the shoulder or to an inlet catchment is required. The paver shall not pave a deflection in slope, quarter break unless otherwise approved by the Engineer. The Contractor shall not invert the roadway or create ridges that will hold water on the roadway. If ponding water is found on the roadway surface within the wedge treatment area a corrective measure will be required and the corrective measure will be determined by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

When conducting an overlay the Contractor shall not create a cross-sloped roadway or an inverted roadway. An Engineer directed constant cross-slope from the centerline to the edge of HMA shall be produced. If the Contractor produces an inverted section, quarter crown break (unless otherwise approved) or other condition that is not an industry standard, then a corrective measure may be required as directed by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

At any time the Contractor shall not create an unsafe condition such as incorrect traffic control setup or drop offs along the shoulder edge. If an unsafe condition exist the Contractor shall use all necessary means to correct the issue immediately at no cost to the contract.

When placing gravel shoulders, the Contractor shall not place the material higher than the edge of pavement, creating a high ridge, which will trap water. If material is placed in this manner than the GTCRC will require the shoulders to be reworked to allow for positive drainage from the HMA surface. Cost associated with the corrective measures will be incidental to the cost of the project.

When paving to an existing HMA edge within a drive lane (transverse joint) the Contractor shall ensure a smooth transition. If an unacceptable bump or dip (joint) exist the Contractor shall provide a corrective measure as defined by the Engineer. The corrective measure may include milling and resurfacing, diamond gridding or other measures as approved by the Engineer. Cost associated with the corrective measure will be incidental to the cost of the project.

Soil erosion measures shall be completed throughout the duration of the project. Once soils are disturbed they should be restored within a reasonable period of time as determined by the Engineer. If the Contractor fails to complete restoration measures within a reasonable period of time the Road Commission may elect to back charge the Contractor all time associated with correction, assisting in correcting or hiring out the required work.

Clarification on Scheduling:

When Overband Crack Fill is placed the Contractor shall wait a minimum of 7 days before placement of a Chip Seal.

When Overband Crack Fill is placed the Contractor shall wait a minimum of 14 days before placement of HMA. Prior to placement of HMA or Overband Crack Fill the Contractor must receive approval from the Engineer.

When HMA is placed the Contractor shall wait a minimum of 7 days before placement of a Chip Seal. The Engineer may require a fog seal to be placed over the HMA prior to a Chip Seal. If a fog seal is required payment shall be made through Fog Seal, Modified.

Bid Clarification:

Listed estimated quantities shall be verified by the contractor prior to bidding.

PROJECT: E Arbutus Lake Road
Bid Form
(Base Bid – Prep for Chip Seal)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS.	1	_____	_____
Clearing	Acre	1.0	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	13	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	388	_____	_____
Culv, Rem, Less than 24 inch	Ea.	5	_____	_____
Embankment, LM	Ton	20	_____	_____
Excavation, Earth	Cyd.	1,200	_____	_____
Subgrade Undercutting, Type II	Cyd.	1,000	_____	_____
Berm Grading	Sta.	20	_____	_____
Ditching	Sta.	30	_____	_____
Aggregate Base	Ton	2,650	_____	_____
Aggregate Base, 4 inch	Syd	11,500	_____	_____
Shoulder, Cl II	Ton	800	_____	_____
Trenching	Sta.	150	_____	_____
Culv End Sect, 15 inch	Ea.	22	_____	_____
Culv, Cl B, 15 inch	Ft.	800	_____	_____
Dr Structure Cover, Type E	Ea.	3	_____	_____
Dr Structure, 24 inch dia	Ea.	3	_____	_____
HMA Surface, Rem	Syd.	550	_____	_____
HMA, LVSP (Wedge)	Ton	5,275	_____	_____
Overband Crack Fill, Lane	Lnmi.	5.2	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	27,600	_____	_____

Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	27,600	_____	_____
Traffic Control	LS.	1	_____	_____
Riprap, Plain	Syd.	500	_____	_____
Slope Restoration, Type C, Modified	Syd.	19,000	_____	_____
Monument Box	Ea.	1	_____	_____
Monument Box Adjust	Ea.	1	_____	_____
Monument Preservation	Ea.	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: E Arbutus Lake Road
Bid Form
(Alternate #1- Wedge and Ultra-thin Overlay)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS.	1	_____	_____
Clearing	Acre	1.0	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	14	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	388	_____	_____
Culv, Rem, Less than 24 inch	Ea.	5	_____	_____
Embankment, LM	Ton	20	_____	_____
Excavation, Earth	Cyd.	1,200	_____	_____
Subgrade Undercutting, Type II	Cyd.	1,000	_____	_____
Berm Grading	Sta.	20	_____	_____
Ditching	Sta.	30	_____	_____
Aggregate Base	Ton	2,650	_____	_____
Aggregate Base, 4 inch	Syd	11,500	_____	_____
Shoulder, Cl II	Ton	800	_____	_____
Trenching	Sta.	150	_____	_____
Culv End Sect, 15 inch	Ea.	22	_____	_____
Culv, Cl B, 15 inch	Ft.	800	_____	_____
Dr Structure Cover, Type E	Ea.	3	_____	_____
Dr Structure, 24 inch dia	Ea.	3	_____	_____
HMA Surface, Rem	Syd.	550	_____	_____
HMA, LVSP (Wedge)	Ton	5,275	_____	_____
HMA, Ultra-Thin, Medium Volume	Ton	2,150	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	27,600	_____	_____
Pavt Mrkg, Waterborne, 4 inch	Ft.	27,600	_____	_____

Yellow

Traffic Control	LS.	1	_____	_____
Riprap, Plain	Syd.	500	_____	_____
Slope Restoration, Type C, Modified	Syd.	19,000	_____	_____
Monument Box	Ea.	1	_____	_____
Monument Box Adjust	Ea.	1	_____	_____
Monument Preservation	Ea.	1	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

GRAND TRAVERSE COUNTY ROAD COMMISSION
LOG OF PROJECT
FOR
PROJECT #17E006
Fall Road

Project Locations:

Approximate limits from East Duck Lake Rd to CR 633.

History of Projects:

Project listed above has variable conditions included but not limited to; roadway width and cross slope, drainage and tree cover. The Contractor shall understand based on these conditions, field adjustments could be performed (as directed by the Engineer) on a regular basis and therefore the Contractor shall consider this when establishing their unit price. The Contractor shall not be compensated for additional time or equipment expense required for field adjustments.

Description of Work:

Except as otherwise set forth in the Contract Documents, the Contractor shall follow the 2012 MDOT Standard Specifications for Construction, Current Manual of Uniform Traffic Control Devices along with current Grand Traverse County Road Commission Right Of Way Permitting and Public Road Standards Rules, Specifications and Guidelines. If there are questions about differing standards between these two manuals the Engineer shall make the decision as to which standard takes precedence.

At any time the Road Commission may elect to delete quantity, add quantity or perform work on part of or in full of any pay item.

The intent of work is to wedge certain areas of the roadway system (as directed by the Engineer) to provide positive drainage or to provide additional structural integrity to the HMA surface. Wedging maybe used for super elevation correction as needed. Chip Seal to be performed for the roadway section from Edge of Asphalt to Edge of Asphalt or as directed by the Engineer.

General Log Notes:

HMA related items (Possible Wedging/ Approaches/ Overlays)

- The intent of Wedging is for correction of the existing typical cross slope to 1.5% (percent cross slope may vary per direction of the Engineer), super correction as defined in the field or to provide additional structural integrity to the HMA surface. The Engineer may allow a cross slope in a normal section between 1% and 3% based on site conditions but could require a minimum longitudinal length between the varying slopes. This condition will be determined prior and during paving by the Engineer. Based on preliminary findings, wedging will be variable and may be performed from the existing quarter crown to the centerline, from the existing quarter crown to the edge of asphalt and/or a full wedge over the entire roadway system. The Engineer may elect on a case by case basis to vary from this requirement due to site conditions. All work required to perform this task shall be included within the pay item HMA, LVSP (Wedge). Wedging may be spot specific.
- All HMA, approach work required for transitioning into existing HMA driveways and intersections, as directed by the Engineer, shall be paid for under the pay item HMA, LVSP (Wedge). The intent of this operation is to feather the proposed HMA into the existing HMA unless site conditions require different direction. There may be times where the HMA will need to be taken back beyond a normal feather due to elevation differences which the Engineer shall give the direction as to the scope and limits. All work associated with this direction shall be included within the pay item HMA, LVSP (Wedge).
- All HMA, approach work when performed shall not hold water (ponding). Contractor shall use all means necessary to establish positive surface slopes as not to hold water. If ponding exist after the proposed approach work the Contractor shall be responsible for a corrective measure as approved by the Engineer. This corrective measure will not be an additional cost to the project.
- All HMA curbing and Spillways shall be paid for under the pay item HMA, LVSP (Wedge).
- If the HMA leveling course exceeds the maximum application rate of the specified mix the Engineer may require the Contractor to place the HMA in multiple lifts. Wedging is assumed to be a leveling course application.

Chip Seal:

- Placement of a Seal, Single Chip, extending over the entire width of the existing HMA. Note that in certain areas the Engineer may elect to have the contractor perform a bar Chip, spot Chip or a Seal, Double Chip due to existing roadway conditions. This work will be paid at the unit price of Seal, Single Chip. For clarification, if in a given area the Contractor is directed to perform a bar Chip for a 4 foot width and then a full lane width Seal, Single Chip. The Contractor shall be paid for the SYD of the bar Chip and the SYD of the Seal, Single Chip at the Seal, Single Chip unit price.
- A fog seal shall be applied to all Chip Seals unless otherwise directed by the Engineer.
- Contractor shall place Raised Pavt Marker, Temp, Type 1, Yellow, Bidirectional along the centerline of Chip Sealed roadways sections as directed by the Engineer. The cost for this item shall be included in the pay item Seal, Single Chip.

- If excess stone if left by the Chip Sealing operation that will cause future drainage concerns or is a safety issue the Contractor shall remove the excess stone. Contractor is required to removal all excess stone on curb lines (bituminous or concrete) and approaches including driveways.

Gravel related items: (gravel shoulders/driveways):

- Gravel that is required to be placed in order to transition from the Edge of Asphalt to an existing gravel drive shall be paid for under Shoulder, Cl II.
- When gravel shoulders are required to be placed the shoulder width and slope shall be defined by the Engineer prior to the start of work. Typically the slope will be 4 to 6 percent in normal sections.

Restoration:

- Contractor shall restore all proposed ditching areas and all disturbed areas or any other area as directed by the Engineer. Mulch Blanket, High Velocity shall be used in locations per direction from the Engineer.

Ditching:

- Ditching locations as directed by the Engineer. Depending on location the ditch depth may vary. Typically the ditch depth is expected to be 1 to 2 feet (after restoration is performed) with 1 on 4 side slopes.

Log Plans:

- Log sketches provided are for reference only and are not a part of the Contract. The intent of the sketches is to provide general guidance and allow for a visual reference (stationing related to physical features identified on the aerial) for location of items of Work. The Contractor shall understand that the Road Commission at any time may vary from the sketches. The Contractor understands that changes to or deviation from the sketches by the Road Commission shall not be a basis for an increase in Contract Time or Contract Price. The accuracy of the sketches provided is not guaranteed (aerials and scalable features may not be accurate).

Spillways:

- At a minimum the Contractor shall follow the Road Commissions standard detail for construction of a spillway. The Road Commission shall mark the location of the spillway and the contractor shall be responsible for all means to construct. It is the Contractor's responsibility to ensure all discharge water is adequately handled and during rain events no washouts are encountered. If the spillway fails the Contractor shall (based on the direction of the Engineer) remove and replace or repair as needed at no additional cost to the project.

General:

- Tree removal and clearing as directed by the Engineer.
- If Riprap, Plain is used it shall have a minimum stone size of 8 inches.
- The Road Commission at any time may perform work within or around the project limits. The Contractor shall coordinate their efforts with the Road Commission to ensure the Road Commission does not waste effort in their performance of said work. This work and effort by the Contractor shall not be an additional cost to the project.
- Prior to paving the Contractor shall ensure all utility castings are adjusted and approved by the GTCRC.

Miscellaneous Quantities:

The following items of work shall be done as they apply throughout the project or as directed by the Engineer. These items are not detailed in the log.

Items of work	Estimated Quantity
Mobilization	1 LS
Traffic Control	1 LS

Additional items incidental to the cost of the project:

- Removal and replacement of all mailbox's based on required project operations shall be included in the scope of the project. All mailbox's shall be set to postal height requirements and offset requirements as defined by the Postal Service and the Road Commission. If there is questioning on which mailboxes required replacement the Engineer shall have the final say.
- During the removal of trees if less than 6 inch diameter tree trunks are within a 20 foot radius of a pay item tree the removal of these trees shall be incidental to the cost of the project.
- All manhole and valve box adjustments.
- All required temporary tape for marking drive lanes for the project.
- All work required under Pavt for Butt Joints, Rem for the project.
- Embankment required for guardrail approach terminals.
- Any required work to perform Earth Excavation to be included in pay item Ditching.
- All additional project items required to complete the project per the direction of the Engineer are incidental to the cost of the project.

Understanding of Testing requirements:

Except as otherwise set forth in the Contract Documents, all testing requirement will follow the MDOT 2012 Standard Specifications for Construction or as directed by the Engineer.

Understanding of Workmanship:

When paving driveways, by way of complete installation or when feathering to match existing, the Contractor shall understanding that any ponding on the surface is not acceptable and the GTCRC will require corrective measures which may require removal and replacement as determined by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

When wedging, the Contractor understands that a positive cross – slope towards the shoulder or to an inlet catchment is required. The paver shall not pave a deflection in slope, quarter break unless otherwise approved by the Engineer. The Contractor shall not invert the roadway or create ridges that will hold water on the roadway. If ponding water is found on the roadway surface within the wedge treatment area a corrective measure will be required and the corrective measure will be determined by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

When conducting an overlay the Contractor shall not create a cross-sloped roadway or an inverted roadway. An Engineer directed constant cross-slope from the centerline to the edge of HMA shall be produced. If the Contractor produces an inverted section, quarter crown break (unless otherwise approved) or other condition that is not an industry standard, then a corrective measure may be required as directed by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

At any time the Contractor shall not create an unsafe condition such as incorrect traffic control setup or drop offs along the shoulder edge. If an unsafe condition exist the Contractor shall use all necessary means to correct the issue immediately at no cost to the contract.

When placing gravel shoulders, the Contractor shall not place the material higher than the edge of pavement, creating a high ridge, which will trap water. If material is placed in this manner than the GTCRC will require the shoulders to be reworked to allow for positive drainage from the HMA surface. Cost associated with the corrective measures will be incidental to the cost of the project.

When paving to an existing HMA edge within a drive lane (transverse joint) the Contractor shall ensure a smooth transition. If an unacceptable bump or dip (joint) exist the Contractor shall provide a corrective measure as defined by the Engineer. The corrective measure may include milling and resurfacing, diamond gridding or other measures as approved by the Engineer. Cost associated with the corrective measure will be incidental to the cost of the project.

Soil erosion measures shall be completed throughout the duration of the project. Once soils are disturbed they should be restored within a reasonable period of time as determined by the Engineer. If the Contractor fails to complete restoration measures within a reasonable period of

time the Road Commission may elect to back charge the Contractor all time associated with correction, assisting in correcting or hiring out the required work.

Clarification on Scheduling:

When Overband Crack Fill is placed the Contractor shall wait a minimum of 7 days before placement of a Chip Seal.

When Overband Crack Fill is placed the Contractor shall wait a minimum of 14 days before placement of HMA. Prior to placement of HMA or Overband Crack Fill the Contractor must receive approval from the Engineer.

When HMA is placed the Contractor shall wait a minimum of 7 days before placement of a Chip Seal. The Engineer may require a fog seal to be placed over the HMA prior to a Chip Seal. If a fog seal is required payment shall be made through Fog Seal, Modified.

Bid Clarification:

Listed estimated quantities shall be verified by the contractor prior to bidding.

PROJECT: Fall Road Bid Form
(Base Bid- Prep for Chip Seal)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS.	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	5	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	11	_____	_____
Berm Grading	Sta.	10	_____	_____
Ditching	Sta.	2	_____	_____
Shoulder, Cl II	Ton	1,300	_____	_____
HMA, LVSP (Wedge)	Ton	500	_____	_____
Overband Crack Fill, Lane	Lnmi.	2.0	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	10,560	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	5,000	_____	_____
Traffic Control	LS.	1	_____	_____
Slope Restoration, Type C, Modified	Syd.	1,200	_____	_____
Monument Box	Ea.	2	_____	_____
Monument Box Adjust	Ea.	2	_____	_____
Monument Preservation	Ea.	2	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Fall Road
Bid Form
(Alternate #1- 1 ½" Overlay)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS.	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	5	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	11	_____	_____
Berm Grading	Sta.	10	_____	_____
Ditching	Sta.	2	_____	_____
Shoulder, Cl II	Ton	1,300	_____	_____
HMA, LVSP (Overlay)	Ton	1,750	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	10,560	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	5,000	_____	_____
Traffic Control	LS.	1	_____	_____
Slope Restoration, Type C, Modified	Syd.	1,200	_____	_____
Monument Box	Ea.	2	_____	_____
Monument Box Adjust	Ea.	2	_____	_____
Monument Preservation	Ea.	2	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

PROJECT: Fall Road
Bid Form
(Alternate #2- Wedge and Ultra-Thin)

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS.	1	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	5	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	11	_____	_____
Berm Grading	Sta.	10	_____	_____
Ditching	Sta.	2	_____	_____
Shoulder, Cl II	Ton	1,300	_____	_____
HMA, LVSP (Wedge)	Ton	500	_____	_____
HMA, Ultra-Thin, Med. Volume	Ton	750	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	10,560	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	5,000	_____	_____
Traffic Control	LS.	1	_____	_____
Slope Restoration, Type C , Modified	Syd.	1,200	_____	_____
Monument Box	Ea.	2	_____	_____
Monument Box Adjust	Ea.	2	_____	_____
Monument Preservation	Ea.	2	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

GRAND TRAVERSE COUNTY ROAD COMMISSION
LOG OF PROJECT
FOR
PROJECT #17E005
East Duck Lake Road

Project Locations:

Approximate limits from CR 633 to US-31.

History of Projects:

Project listed above has variable conditions included but not limited to; roadway width and cross slope, drainage and tree cover. The Contractor shall understand based on these conditions, field adjustments could be performed (as directed by the Engineer) on a regular basis and therefore the Contractor shall consider this when establishing their unit price. The Contractor shall not be compensated for additional time or equipment expense required for field adjustments.

Description of Work:

Except as otherwise set forth in the Contract Documents, the Contractor shall follow the 2012 MDOT Standard Specifications for Construction, Current Manual of Uniform Traffic Control Devices along with current Grand Traverse County Road Commission Right Of Way Permitting and Public Road Standards Rules, Specifications and Guidelines. If there are questions about differing standards between these two manuals the Engineer shall make the decision as to which standard takes precedence.

At any time the Road Commission may elect to delete quantity, add quantity or perform work on part of or in full of any pay item.

The intent of work is to wedge certain areas of the roadway system (as directed by the Engineer) to provide positive drainage or to provide additional structural integrity to the HMA surface. Wedging maybe used for super elevation correction as needed. Chip Seal to be performed for the roadway section from Edge of Asphalt to Edge of Asphalt or as directed by the Engineer.

General Log Notes:

HMA related items (Possible Wedging/ Approaches/ Overlays)

- The intent of Wedging is for correction of the existing typical cross slope to 1.5% (percent cross slope may vary per direction of the Engineer), super correction as defined in the field or to provide additional structural integrity to the HMA surface. The Engineer may allow a cross slope in a normal section between 1% and 3% based on site conditions but could require a minimum longitudinal length between the varying slopes. This condition will be determined prior and during paving by the Engineer. Based on preliminary findings, wedging will be variable and may be performed from the existing quarter crown to the centerline, from the existing quarter crown to the edge of asphalt and/or a full wedge over the entire roadway system. The Engineer may elect on a case by case basis to vary from this requirement due to site conditions. All work required to perform this task shall be included within the pay item HMA, LVSP (Wedge). Wedging may be spot specific.
- All HMA, approach work required for transitioning into existing HMA driveways and intersections, as directed by the Engineer, shall be paid for under the pay item HMA, LVSP (Wedge). The intent of this operation is to feather the proposed HMA into the existing HMA unless site conditions require different direction. There may be times where the HMA will need to be taken back beyond a normal feather due to elevation differences which the Engineer shall give the direction as to the scope and limits. All work associated with this direction shall be included within the pay item HMA, LVSP (Wedge).
- All HMA, approach work when performed shall not hold water (ponding). Contractor shall use all means necessary to establish positive surface slopes as not to hold water. If ponding exist after the proposed approach work the Contractor shall be responsible for a corrective measure as approved by the Engineer. This corrective measure will not be an additional cost to the project.
- All HMA curbing and Spillways shall be paid for under the pay item HMA, LVSP (Wedge).
- If the HMA leveling course exceeds the maximum application rate of the specified mix the Engineer may require the Contractor to place the HMA in multiple lifts. Wedging is assumed to be a leveling course application.

Chip Seal:

- Placement of a Seal, Single Chip, extending over the entire width of the existing HMA. Note that in certain areas the Engineer may elect to have the contractor perform a bar Chip, spot Chip or a Seal, Double Chip due to existing roadway conditions. This work will be paid at the unit price of Seal, Single Chip. For clarification, if in a given area the Contractor is directed to perform a bar Chip for a 4 foot width and then a full lane width Seal, Single Chip. The Contractor shall be paid for the SYD of the bar Chip and the SYD of the Seal, Single Chip at the Seal, Single Chip unit price.
- A fog seal shall be applied to all Chip Seals unless otherwise directed by the Engineer.
- Contractor shall place Raised Pavt Marker, Temp, Type 1, Yellow, Bidirectional along the centerline of Chip Sealed roadways sections as directed by the Engineer. The cost for this item shall be included in the pay item Seal, Single Chip.

- If excess stone if left by the Chip Sealing operation that will cause future drainage concerns or is a safety issue the Contractor shall remove the excess stone. Contractor is required to removal all excess stone on curb lines (bituminous or concrete) and approaches including driveways.

Gravel related items: (gravel shoulders/driveways):

- Gravel that is required to be placed in order to transition from the Edge of Asphalt to an existing gravel drive shall be paid for under Shoulder, Cl II.
- When gravel shoulders are required to be placed the shoulder width and slope shall be defined by the Engineer prior to the start of work. Typically the slope will be 4 to 6 percent in normal sections.

Restoration:

- Contractor shall restore all proposed ditching areas and all disturbed areas or any other area as directed by the Engineer. Mulch Blanket, High Velocity shall be used in locations per direction from the Engineer.

Ditching:

- Ditching locations as directed by the Engineer. Depending on location the ditch depth may vary. Typically the ditch depth is expected to be 1 to 2 feet (after restoration is performed) with 1 on 4 side slopes.

Log Plans:

- Log sketches provided are for reference only and are not a part of the Contract. The intent of the sketches is to provide general guidance and allow for a visual reference (stationing related to physical features identified on the aerial) for location of items of Work. The Contractor shall understand that the Road Commission at any time may vary from the sketches. The Contractor understands that changes to or deviation from the sketches by the Road Commission shall not be a basis for an increase in Contract Time or Contract Price. The accuracy of the sketches provided is not guaranteed (aerials and scalable features may not be accurate).

Spillways:

- At a minimum the Contractor shall follow the Road Commissions standard detail for construction of a spillway. The Road Commission shall mark the location of the spillway and the contractor shall be responsible for all means to construct. It is the Contractor's responsibility to ensure all discharge water is adequately handled and during rain events no washouts are encountered. If the spillway fails the Contractor shall (based on the direction of the Engineer) remove and replace or repair as needed at no additional cost to the project.

General:

- Tree removal and clearing as directed by the Engineer.
- If Riprap, Plain is used it shall have a minimum stone size of 8 inches.
- The Road Commission at any time may perform work within or around the project limits. The Contractor shall coordinate their efforts with the Road Commission to ensure the Road Commission does not waste effort in their performance of said work. This work and effort by the Contractor shall not be an additional cost to the project.
- Prior to paving the Contractor shall ensure all utility castings are adjusted and approved by the GTCRC.

Miscellaneous Quantities:

The following items of work shall be done as they apply throughout the project or as directed by the Engineer. These items are not detailed in the log.

Items of work	Estimated Quantity
Mobilization	1 LS
Traffic Control	1 LS

Additional items incidental to the cost of the project:

- Removal and replacement of all mailbox's based on required project operations shall be included in the scope of the project. All mailbox's shall be set to postal height requirements and offset requirements as defined by the Postal Service and the Road Commission. If there is questioning on which mailboxes required replacement the Engineer shall have the final say.
- During the removal of trees if less than 6 inch diameter tree trunks are within a 20 foot radius of a pay item tree the removal of these trees shall be incidental to the cost of the project.
- All manhole and valve box adjustments.
- All required temporary tape for marking drive lanes for the project.
- All work required under Pavt for Butt Joints, Rem for the project.
- Embankment required for guardrail approach terminals.
- Any required work to perform Earth Excavation to be included in pay item Ditching.
- All additional project items required to complete the project per the direction of the Engineer are incidental to the cost of the project.

Understanding of Testing requirements:

Except as otherwise set forth in the Contract Documents, all testing requirement will follow the MDOT 2012 Standard Specifications for Construction or as directed by the Engineer.

Understanding of Workmanship:

When paving driveways, by way of complete installation or when feathering to match existing, the Contractor shall understanding that any ponding on the surface is not acceptable and the GTCRC will require corrective measures which may require removal and replacement as determined by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

When wedging, the Contractor understands that a positive cross – slope towards the shoulder or to an inlet catchment is required. The paver shall not pave a deflection in slope, quarter break unless otherwise approved by the Engineer. The Contractor shall not invert the roadway or create ridges that will hold water on the roadway. If ponding water is found on the roadway surface within the wedge treatment area a corrective measure will be required and the corrective measure will be determined by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

When conducting an overlay the Contractor shall not create a cross-sloped roadway or an inverted roadway. An Engineer directed constant cross-slope from the centerline to the edge of HMA shall be produced. If the Contractor produces an inverted section, quarter crown break (unless otherwise approved) or other condition that is not an industry standard, then a corrective measure may be required as directed by the Engineer. Cost associated with the corrective measures will be incidental to the cost of the project.

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When paving to an existing HMA edge within a drive lane (transverse joint) the Contractor shall ensure a smooth transition. If an unacceptable bump or dip (joint) exist the Contractor shall provide a corrective measure as defined by the Engineer. The corrective measure may include milling and resurfacing, diamond gridding or other measures as approved by the Engineer. Cost associated with the corrective measure will be incidental to the cost of the project.

Soil erosion measures shall be completed throughout the duration of the project. Once soils are disturbed they should be restored within a reasonable period of time as determined by the Engineer. If the Contractor fails to complete restoration measures within a reasonable period of time the Road Commission may elect to back charge the Contractor all time associated with

correction, assisting in correcting or hiring out the required work.

Clarification on Scheduling:

When Overband Crack Fill is placed the Contractor shall wait a minimum of 7 days before placement of a Chip Seal.

When Overband Crack Fill is placed the Contractor shall wait a minimum of 14 days before placement of HMA. Prior to placement of HMA or Overband Crack Fill the Contractor must receive approval from the Engineer.

When HMA is placed the Contractor shall wait a minimum of 7 days before placement of a Chip Seal. The Engineer may require a fog seal to be placed over the HMA prior to a Chip Seal. If a fog seal is required payment shall be made through Fog Seal, Modified.

Bid Clarification:

Listed estimated quantities shall be verified by the contractor prior to bidding

PROJECT: E Duck Lake Road
Bid Form – Prep for Chip Seal

ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
Mobilization	LS.	1	_____	_____
Clearing	Acre	3.0	_____	_____
Tree, Rem, 19 inch to 36 inch	Ea.	18	_____	_____
Tree, Rem, 37 inch or Larger	Ea.	2	_____	_____
Tree, Rem, 6 inch to 18 inch	Ea.	238	_____	_____
Berm Grading	Sta.	80	_____	_____
Ditching	Sta.	45	_____	_____
Shoulder, Cl II	Ton	3,000	_____	_____
HMA, LVSP (Overlay)	Ton	220	_____	_____
HMA, LVSP (Wedge)	Ton	4500	_____	_____
Overband Crack Fill, Lane	Lnmi.	10.66	_____	_____
Pavt Mrkg, Waterborne, 4 inch White	Ft.	56,300	_____	_____
Pavt Mrkg, Waterborne, 4 inch Yellow	Ft.	56,300	_____	_____
Traffic Control	LS.	1	_____	_____
Slope Restoration, Type C, Modified	Syd.	27,600	_____	_____
Monument Box	Ea.	6	_____	_____
Monument Box Adjust	Ea.	6	_____	_____
Monument Preservation	Ea.	6	_____	_____

TOTAL OF ALL ESTIMATED PRICES _____ **TOTAL:** _____
(words) (numerals)

Joe Slonecki

From: /O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=40FFC30FC1564CC6BCF7DC45157DB33F-JSLONECKI
Sent: Friday, January 05, 2018 5:01 PM
To: Ryan Wurtz
Cc: Jim Johnson
Subject: RE: 2018 GT General Funds RFI

Ryan,

This item was intended to be used for areas of trenching and HMA shoulders. This item will be addressed in an addendum.

Joe Slonecki, P.E.
Assistant County Highway Engineer
Grand Traverse County Road Commission
1881 LaFranier Road
Traverse City MI 49696
231-922-4848, ext 209
231-929-1836 FAX
www.gtcrc.org
Find us on Facebook

From: Ryan Wurtz [mailto:rwurtz@teamelmers.com]
Sent: Tuesday, January 02, 2018 2:04 PM
To: Joe Slonecki <JSlonecki@gtcrc.org>
Cc: Jim Johnson <jjohnson@GTCRC.ORG>
Subject: 2018 GT General Funds RFI

Hi Joe –

Regarding Hammond Rd. chip seal project, what is the **Aggregate Base, 4 inch** intended for?

Thank you,

Ryan Wurtz

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3600 Rennie School Road • Traverse City, MI 49685
P: (231) 943.3443 • C: (231) 631.0816

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Joe Slonecki

From: /O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=40FFC30FC1564CC6BCF7DC45157DB33F-JSLONECKI
Sent: Friday, January 05, 2018 5:01 PM
To: Ryan Wurtz
Cc: Jim Johnson
Subject: RE: 2018 GT General Funds RFI 2

Ryan,

The intent is to set the culverts at the ditch bottoms to promote drainage.

Joe Slonecki, P.E.
Assistant County Highway Engineer
Grand Traverse County Road Commission
1881 LaFranier Road
Traverse City MI 49696
231-922-4848, ext 209
231-929-1836 FAX
www.gtcrc.org
Find us on Facebook

From: Ryan Wurtz [mailto:rwurtz@teamelmers.com]
Sent: Tuesday, January 02, 2018 2:35 PM
To: Joe Slonecki <JSlonecki@gtcrc.org>
Cc: Jim Johnson <jjohnson@GTCRC.ORG>
Subject: 2018 GT General Funds RFI 2

Hi Joe –

Regarding Penn Dr. chip seal project, what is the approximate depth for each of the Cl A culverts ?

Thank you,

Ryan Wurtz

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3600 Rennie School Road • Traverse City, MI 49685
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Joe Slonecki

From: /O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=40FFC30FC1564CC6BCF7DC45157DB33F-JSLONECKI
Sent: Friday, January 05, 2018 5:01 PM
To: Ryan Wurtz
Cc: Jim Johnson
Subject: RE: RFI

Ryan,

1) There are 4 proposed locations as follows:
    a. North and South side of Potter near 3 Mile Rd, and North and South side of Potter Rd at approximately Sta 18+00. The slope flattening may be dependent of the GTCRC obtaining Grading License's from adjacent property owners.
2) The Excavation, Earth item is for stripping of topsoil for the proposed slope flatten areas.
3) This will be addressed in an addendum. It appears that the quantity for the Aggregate Base, 4 inch is also in the Aggregate Base item. The Aggregate Base , 4 inch will be removed from the bid tab.
4) The intent of the Rip Rap on East Arbutus Lake Rd is for spillways and culvert starts/endings.

Joe Slonecki, P.E.
Assistant County Highway Engineer
Grand Traverse County Road Commission
1881 LaFranier Road
Traverse City MI 49696
231-922-4848, ext 209
231-929-1836 FAX
www.gtcrc.org
Find us on Facebook

From: Ryan Wurtz [mailto:rwurtz@teamelmers.com]
Sent: Wednesday, January 03, 2018 3:26 PM
To: Joe Slonecki <JSlonecki@gtcrc.org>
Subject: RFI

Hi Joe –

A couple more questions for clarification:

1. What is the intent for the 3200 Cyd of embankment on Potter Rd. Is this slope flattening? Number of locations? Is the toe of slope to the ROW?
2. What is the intent for the Excavation, Earth item on Potter Rd.? Location?
3. What is the intent for the 2,650 Tons of aggregate base on E. Arbutis Lake Rd.? (There is only 550 Syd of HMA Surface Rem. for hill cut)
4. What is the intent for the Rip Rap on E Arbutis Lake Rd.? Are there any locations beyond culvert ends and spillways?

Thank you,

Ryan Wurtz

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