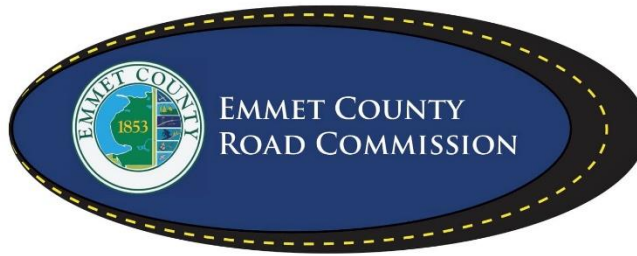


Frank Zulski – Chair
Mark W. Hoffman – Vice Chair
Wade Williams – Member
Brent Shank, PE
Engineer-Manager
Lisa Kleeman
Finance Director



2265 E. Hathaway Road
Harbor Springs, MI 49740
Office: (231) 347-8142
Fax: (231) 347-5787
www.emmetcrc.org

PROPOSAL

Project: A459.4138 – Robinson Road

2.46 Miles Of Culverts, Guardrail, Trenching, HMA Base Crushing and Shaping, Aggregate Base, Concrete Curbing, HMA Paving, Shoulder Gravel, Pavement Markings, and Slope Restoration.

The Emmet County Road Commission will accept Bids until **9:00 a.m.** local time on **December 17, 2024** at: 2265 E. Hathaway Road, Harbor Springs, MI 49740. Bid packages are available at the Emmet County Road Commission Office or on Emmet County Road Commission website at www.emmetcrc.org.

ALL BIDS WILL BE SEALED AND PLAINLY MARKED AS TO THE PROJECT AND PROJECT NUMBER. MAILED BIDS MUST BE RECEIVED BY 3:30 P.M. THE PREVIOUS EMMET COUNTY ROAD COMMISSION BUSINESS DAY PRIOR TO BID OPENING.

The bidder has examined the plans, specification, special provisions and related materials in the proposal, as well as the location of the work described in the proposal for this project, and is fully informed as to the nature of the work and conditions relating to its performance and understands that the quantities shown are approximate only and are subject to either increase or decrease.

The bidder hereby proposes to furnish all necessary machinery, tools, apparatus and other means of construction, do all the work, furnish all the materials except as otherwise specified and, or each unit price, lump sum, or one each named in the itemized bid, to complete the work in strict conformity with the plans therefore and the entire proposal which is incorporated by reference in these pages, and in strict conformity with the requirements of the 2020 Standard Specifications for Construction, Michigan Department of Transportation and such other special provisions and supplemental specifications as may be part of the proposal for this project.

The bidder further proposes to do such extra work as may be authorized by the Emmet County Road Commission, prices for which are not included in the itemized bid. Compensation shall be made on the basis agreed upon before such extra work is begun.

THE BIDDER UNDERSTANDS AND AGREES THAT THE EMMET COUNTY ROAD COMMISSION RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS; TO WAIVE IRREGULARITIES OR INFORMALITIES; AND NO CONTRACTUAL RELATIONSHIP SHALL EXIST BETWEEN THE BIDDER AND THE EMMET COUNTY ROAD COMMISSION FOR THE WORK DESCRIBED HEREIN UNTIL SUCH TIME AS THE CONTRACT HAS BEEN FORMALLY EXECUTED BY BOTH THE BIDDER AND THE EMMET COUNTY ROAD COMMISSION.

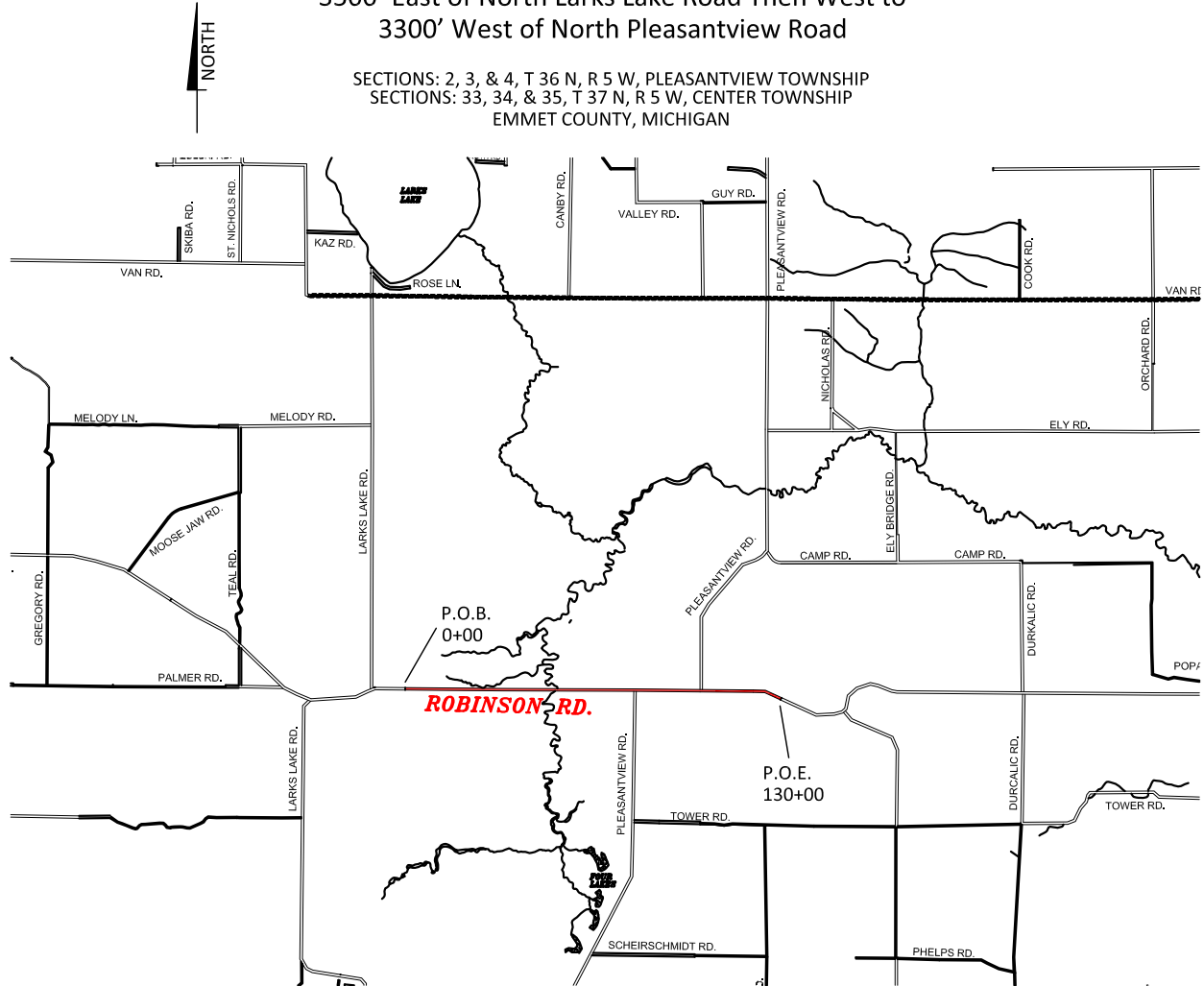
The Emmet County Road Commission, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contact 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, or national origin in consideration for an award.

EMMET COUNTY ROAD COMMISSION
 IN COOPERATION WITH
THE LITTLE TRAVERSE BAY BANDS OF ODAWA INDIANS
 THROUGH THE
FEDERAL HIGHWAY ADMINISTRATION BUREAU OF INDIAN AFFAIRS
 PLANS OF PROPOSED ROAD IMPROVEMENTS

ROBINSON ROAD

3500' East of North Larks Lake Road Then West to
 3300' West of North Pleasantview Road

SECTIONS: 2, 3, & 4, T 36 N, R 5 W, PLEASANTVIEW TOWNSHIP
 SECTIONS: 33, 34, & 35, T 37 N, R 5 W, CENTER TOWNSHIP
 EMMET COUNTY, MICHIGAN



800-482-7171

TRAFFIC DATA:

	2024	2044
ADT	1166	2111
COMM. %	7%	7%
DESIGN SPEED	60 MPH	
STATUTORY SPEED	55MPH	

CONTRACT FOR:
 2.46 MILES OF CULVERTS, GUARDRAIL, TRENCHING, HMA BASE CRUSHING AND SHAPING, AGGREGATE BASE, CONCRETE CURBING, HMA PAVING, SHOULDER GRAVEL, PAVEMENT MARKINGS, AND SLOPE RESTORATION.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGEN2017 EDITION.

EXCEPT WHERE OTHERWISE NOTED IN THESE PLANS, PROPOSAL, SUPPLEMENTAL SPECIFICATIONS OR SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

DESCRIPTION OF WORK

2.46 miles of culverts, guardrail, trenching, HMA base crushing and shaping, aggregate base, concrete curbing, HMA paving, gravel shoulders, pavement markings and slope restoration.

SPECIFICATIONS

The improvements covered by these plans shall be done in accordance with the Michigan Department of Transportation 2020 Standard Specifications for Construction as amended by Supplemental Specifications and Special Provisions.

The proposed improvements covered by these plans have been prepared in accordance with the Michigan Department of Transportation Local Agency Program Guidelines for Geometrics (3R), dated 2017. Exceptions are noted in the project file.

PROJECT DATES

Project Start Date: 10 Days after all Contracts are executed.
Project Completion Date: June 30, 2025 (All Project Items)

The project shall be completed within Fifty (50) days of the starting date.

BIA FUND SOURCE**Project Scope**

This project is funded by the Little Traverse Bay Bands of Odawa Indians through the FHWA Bureau of Indian Affairs and Emmet County Road Commission. All federal-aid project rules are in effect for the project.

Pre-Construction Meeting

A Pre-Construction meeting will be scheduled prior to the start of work at the Road Commission office. The Contractor is expected to attend and provide sub-contractor documentation needed for a typical federal-aid project.

Indian Preference

The Contractor agrees to give preference to American Indians who can perform the work required, and to the extent feasible consistent with training opportunities, regardless of age (subject to existing laws and regulation), sex, religion, or tribal affiliation, for training and employment opportunities under this contract. The Contractor also agrees to give preference to Indian organizations, and Indian-owned economic enterprises in the awarding of any subcontracts consistent with the efficient performance of this contract. The Contractor shall maintain and provide to Bureau's Contracting Officer, such records as are necessary to indicate compliance with this paragraph, if requested.

Contractor Payment

The Contractor shall make bi-weekly payment requests after the project starts. The Road Commission will forward the Contractor payment request to the Little Traverse Bay Bands of Odawa Indians (LTBB) for processing. Once the LTBB has forwarded the payment to the Emmet County Road Commission, the Emmet County Road Commission will reimburse the Contractor after the Board approves the payment at the next Road Commission Board meeting after receiving the funding from the BIA.

Additional Instruction

This project is funded through the FHWA Bureau of Indian Affairs (BIA). The Contractor must assure prevailing wage rates are in effect. Typical federal-aid submittals are to be sent to Project Engineer for submittal to the Bureau of Indian Affairs. The Contractor shall submit certified payrolls using current MDOT forms for all contractors on the project.

BUILD AMERICA, BUY AMERICA ACT

This project is subject to The Build America, Buy America Act requires that all of the iron, steel, manufactured products, and construction materials used in infrastructure projects are produced in the United States.

FIXED COST, VARIABLE SCOPE

It is anticipated that the road will be constructed from 0+00 to 130+00 (2.46 miles). The Road Commission reserves the right to extend or reduce the project length based on the total bid amount based on available funding for the project.

PROJECT SUBMITTALS

The following shall be submitted to the Road Commission Engineer for approval prior to project start:

1. Material Source List (MDOT Form 501)
2. Progress Schedule (must be submitted within 5 days of Contract award)
3. See the Special Provision for Acceptance of HMA Mixtures on Township Projects for submittal requirements (must be submitted prior to paving)
4. Damage Claim Program
5. Traffic Control Plan

Upon project completion, the Contractor shall submit a written "Notice of Completion" to the Engineer. After the Engineer receives the Notice of Completion, the Engineer will inspect the project. The Engineer will provide a list of any deficient items (Punch List) to the Contractor. Final acceptance will only be issued when any deficient items are addressed to the satisfaction of the Engineer. Final acceptance will be provided to the Contractor in writing.

TECHNICAL SPECIFICATION ORDER OF PREFERENCE

The technical specifications for the project shall be in accordance with the 2020 Standard Specifications for Construction of the Michigan Department of Transportation, as amended, hereinafter referred to as the "Standard Specifications".

In case of a conflict in the contract, the following establishes the or of precedence:

1. ECRC Proposal and Project Specifications
2. Special Provisions
3. MDOT Supplemental Specifications
4. ECRC Project Plans and Drawings
5. MDOT Standard Plans
6. MDOT Standard Specifications

The Engineer has the right to increase or decrease quantities based on unit prices bid. Final quantities will be based on the unit price bid per estimated quantities and can be adjusted by the Engineer without adjustment in unit price bid by Contractor.

STANDARD PLANS & SPECIAL DETAILS

The following items shall be constructed in accordance with the referenced Standard Plan or Special Detail (* included in Proposal) listed below unless otherwise specified.

Road Standard Plans

R-11-E	Monument Boxes
R-30-G	Concrete Curb and Concrete Curb & Gutter
R-74-G	Bumper & Parking Rails and Misc. Wood Posts
R-82-D	Bedding and Filling around Pipe Culverts
R-96E	Soil Erosion & Sedimentation Control Measures

Pavement Marking Standards

PAVE-905-E	Longitudinal Line Types and Placement
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Traffic & Safety Work Zone Special Details

WZD-100-A*	Ground Driven Sign Supports for Temp Signs
WZD-125-E*	Temporary Traffic Control Devices

STATIONING

Station	Notes
0+00	P.O.B. (3500' east of N. Larks Lake Road centerline)
0+25	Paving Joint
10+20	Cross Culvert Culv, Rem, Less than 24 inch (1 Ea) Culv, Cl A, 24 inch (60 Ft) Aggregate, 6A (10 Ton) Aggregate Base (10 Ton)
17+64	Monument Boxes, 6' left of centerline Monument Preservation (2 Ea) Monument Box (2 Ea)
21+46	Cross Culvert Culv, Rem, Less than 24 inch (1 Ea) Culv, Cl A, 24 inch (60 Ft) Aggregate, 6A (10 Ton) Aggregate Base (10 Ton)
39+05	Maple River
42+37	Monument Boxes, 6' left of centerline Monument Preservation (2 Ea) Monument Box (2 Ea)
54+85	Cross Culvert Culv, Rem, Less than 24 inch (1 Ea) Culv, Cl A, 24 inch (60 Ft)

	Aggregate, 6A (10 Ton) Aggregate Base (10 Ton)
70+69 R	Centerline of S. Pleasantview Road Excavation, Earth (25 Cyd) HMA Base Crushing and Shaping (400 Syd) Approach, Cl I (100 Ton) HMA Approach (85 Ton) Curb and Gutter, Conc, Det B2 (134 Ft) Embankment, LM (50 Cyd) Pavt Mrkg, Ovly Cold Plastic, 18 inch, Stop Bar (25 Ft) Shld, Cl II (20 Ton) Monument Preservation (2 Ea) Monument Box (2 Ea) Paved Ditch, HMA (20 Syd) Riprap, Plain (20 Syd)
77+61 L	Gravel Driveway HMA, 4E1 (1 Ton)
81+67 R	Gravel Driveway HMA, 4E1 (1 Ton)
84+22 R	Gravel Driveway HMA, 4E1 (1 Ton)
89+34 R	Gravel Driveway with mailbox taper HMA, 4E1 (3.0 Ton) Post, Mailbox (1 Ea)
90+61 L	Gravel Driveway HMA, 4E1 (1 Ton)
90+61 R	Mailbox taper HMA, 4E1 (1 Ton) Post, Mailbox (1 Ea)
97+08 L	Centerline of N. Pleasantview Road Excavation, Earth (25 Cyd) HMA Base Crushing and Shaping (400 Syd) Approach, Cl I (100 Ton) HMA Approach (85 Ton) Curb and Gutter, Conc, Det B2 (134 Ft) Embankment, LM (25 Cyd) Pavt Mrkg, Ovly Cold Plastic, 18 inch, Stop Bar (25 Ft) Shld, Cl II (20 Ton) Monument Preservation (2 Ea) Monument Box (2 Ea) Paved Ditch, HMA (20 Syd) Riprap, Plain (20 Syd)
98+76 L	Paved Driveway, Jurek Store HMA Surface, Rem (210 Syd) HMA Approach (45 Ton)
99+75 R	Gravel Driveway, 15' Paved Apron Approach, Cl I (20 Ton)

	HMA Approach (20 Ton)
100+28 L	Gravel Driveway, 15' Paved Apron Approach, Cl I (10 Ton) HMA Approach (15 Ton)
108+04 L	Gravel Driveway, 15' Paved Apron Approach, Cl I (20 Ton) HMA Approach (20 Ton)
121+17 to 125+32	Curve Number 1 PC: 121+17 PT: 125+32 Radius: 525 Ft. E: 6.7% Design Speed: 40 mph
130+00	P.O.E.

MAINTAINING TRAFFIC

Maintain traffic using traffic regulators in accordance with MDOT Maintaining Traffic Typical 110-TR-NFW-2L. Traffic shall be maintained during the project through the use of lane closures, two way traffic shall be open during non-working hours. The Contractor shall coordinate operations with contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA).

Detour for Culvert replacements only:

Culvert locations to be used at 10+20, 21+46 & 54+85.

Detour shall be used for Culvert replacement operations only. The detour will be limited to a maximum of 5 Calendar Days. The Contractor shall notify Central Dispatch (phone number (231) 439-3500) of the work area location daily to ensure proper Emergency Vehicle routing. The road is to be open to two-way traffic during non-working hours. The detour route shall start at Robinson Road then along N. Pleasantview to Van Road to N. Larks Lake Road to Robinson Road. Payment for all traffic control, signing and traffic control items used for the detour route shall be paid for as **Traffic Control, Detour Route, Max \$6500 (1 LSUM)**.

The Construction Influence Area for this project shall consist of the width of the project right of way, and the width of the right of way on intersecting roads, from a point where advance construction warning signing begins to a point where it ends.

At no time may Traffic Control Stop and Hold traffic, including loaded & unloaded asphalt trucks on the new HMA surface.

Advanced Warning signs shall be in place before any work begins.

Item	Quantity	Unit
Channelizing Device, 42 inch, Fluorescent, Furn	304	Ea
Channelizing Device, 42 inch, Fluorescent, Oper	304	Ea
Lighted Arrow, Type C, Furn	4	Ea
Lighted Arrow, Type C, Oper	4	Ea
Minor Traf Devices	1	LSUM
Sign, Type B, Temp, Prismatic, Furn	448	Sft
Sign, Type B, Temp, Prismatic, Furn	448	Sft
Traf Regulator Control	1	LSUM
Traffic Control, Detour Route, Max \$6500	1	LSUM

PROPOSED IMPROVEMENTS

Culverts

Culvert Lengths are Installed Length (no "C" Dimensions). If a Culvert End Section is required by plans or as directed by Engineer, Place end section on Installed Length of Culvert.

Culverts are to be backfilled with existing excavated material unless otherwise directed by the engineer.

The Contractor shall keep culverts free and clean of sediment during the project.

Trenching

Trench existing shoulder material, 4" (+/-) deep x 4' – 6' (+/-) wide, see typical sections, roll out for shoulder gravel or restoration material (paid as part of trenching). Roads shall be trenched for a total width of 30.0 – 34.0 feet, see typical sections for details.

Aggregate Base

Aggregate base shall use aggregate 22A or 21AA, unless otherwise specified.

Aggregate Base Application Rate:

Station	Location	Application Rate
0+00 to 37+52	Robinson Road	50.00 Tons/Sta (1876 Ton)
37+53 to 40+58	Robinson Road	60.00 Tons/Sta (184 Ton)
40+58 to 108+00	Robinson Road	50.00 Tons/Sta (3371 Ton)
108+00 to 130+00	Robinson Road	60.00 Tons/Sta (1320 Ton)
10+20, 21+46 & 54+85	Culvert Replacement	10 Ton/Ea (30 Ton)
0+00 to 130+00	Provisional	(600 Ton)
121+17 to 125+32	Super Correction	(500 Ton)

HMA Base Crushing and Shaping

HMA Base Crushing shall crush to a depth of 2" to 4" below the existing HMA surface or to a depth that matches the trench depth, whichever is greater. Pay limits for HMA Base Crushing and Shaping are specified on the Typical Sections. Any loose gravel and washboard will be maintained to keep a smooth and even surface. The Contractor is to always provide positive drainage, included as part of HMA Base Crushing and Shaping.

Place Aggregate Base, prior to HMA Base Crushing and Shaping, according to the typical sections or as directed by the Engineer.

It is anticipated that to construct the proposed cross slope the contractor will need to laterally move crushed material and imported aggregate base. The movement of such material either laterally or longitudinally to construct the proposed cross section shall be included in the HMA Base Crushing and Shaping pay item and no additional payment for this work will be made. The HMA Base Crushing and Shaping is based on the proposed typical cross section and be paid for on a square yard basis. The final aggregate base depth shall be a minimum of 6 inches thick. Crushing and shaping in excess of the minimum required, shall be included in the HMA Base Crushing and Shaping pay item without additional compensation. No existing pavement shall remain below the crushed and shaped areas.

Any saw cuts to the existing pavement shall be included as part of HMA Base Crushing and Shaping.

Unless otherwise approved by the Engineer, The HMA Paving Contractor shall be required to provide fine grading of the Aggregate Base prior to paving.

HMA Paving

The Contractor shall start placing HMA Leveling (L) course material within 5 calendar days of completion final shaping. HMA Leveling (L) course shall be completed within 3 calendar days of start of paving leveling course.

Where applicable, or as directed by the Engineer, an acceptable form of grade control (automation) shall be used with the paver at all times.

Tip-Up HMA Curb Locations:

108+68 R to 124+00 R,
Slp Curb, HMA (1532 Ft)
108+68 L to 120+00 L
Slp Curb, HMA (1132 Ft)

HMA Spillways with Riprap Locations:

108+68 R & L
Paved Ditch, HMA (16 Syd)
Riprap, Plain (16 Syd)
112+00 R & L
Paved Ditch, HMA (16 Syd)
Riprap, Plain (16 Syd)
116+00 R & L
Paved Ditch, HMA (16 Syd)
Riprap, Plain (16 Syd)
124+00 R
Paved Ditch, HMA (8 Syd)
Riprap, Plain (8 Syd)

Shoulders

The Contractor shall place Shld, Cl II material 2.5 feet wide or as specified by the engineer. When placing shoulder aggregate, material shall be placed directly on the shoulder. Shoulder material may not be placed on the asphalt. The Contractor shall schedule shoulder material placement in a timely manner to reduce the time that an edge drop off exists.

Intersection and Driveway Improvements

Intersections and driveways shall be improved as shown on the Detail sheets. All approaches shall be treated on a case-by-case basis, and the limits of work may be adjusted, as directed by the Engineer.

HMA surfaced driveways shall be saw cut 30 feet from centerline.

Gravel driveway approaches shall be graded with additional Class II aggregate. The additional material shall be feathered out 10 feet to match the existing surface, or within length as directed by the Engineer.

All excess material generated during driveway and intersection work shall become the property of the Contractor and shall be disposed of in accordance with subsection 205.03 of the Standard Specifications for Construction at the Contractor's expense.

Guardrail

All salvaged Guardrail shall become the property of the Emmet County Road Commission. Salvaged Guardrail is to be removed and stacked in an orderly fashion for the E.C.R.C. staff to pickup and remove from the site.

37+52 to 40+58 R & L (Maple River Crossing)

Guardrail, Salv (250 Ft)

Guardrail Approach Terminal, Type 2M (4 Ea)

Guardrail, Type MGS-8, 108 inch Post (200 Ft)

Guardrail, Long Span, Det MGS-3 (2 Ea)

Guardrail Reflector (16 Ea)

109+33 to 128+84 L

Guardrail, Salv (750 Ft)

Guardrail Approach Terminal, Type 2M (2 Ea)

Guardrail, Type MGS-8, 108 inch Post (1850 Ft)

Guardrail Reflector (74 Ea)

114+61 to 119+79 R

Guardrail Approach Terminal, Type 2M (2 Ea)

Guardrail, Type MGS-8, 108 inch Post (413 Ft)

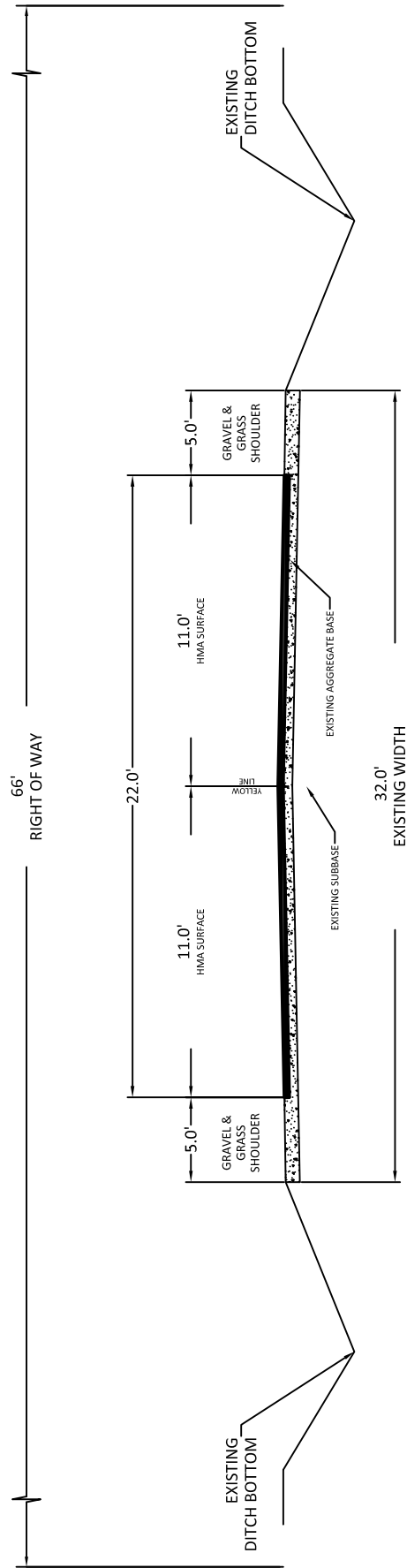
Guardrail Reflector (16 Ea)

Slope Restoration

Place Slope Restoration as shown in the Typical Section. Match the outside edge of restoration to the existing slope as to not create a secondary front slope.

Seeding mixture shall be TDS.

Item	Quantity	Unit
Culv, Rem, Less than 24 inch	3	Ea
Guardrail, Salv	1000	Ft
Embankment, LM	75	Cyd
Excavation, Earth	50	Cyd
Aggregate Base	7881	Ton
Aggregate, 6A	30	Cyd
HMA Base Crushing and Shaping	45265	Syd
Approach, Cl I	250	Ton
Shld, Cl II	1409	Ton
Trenching	260	Sta
Culv, Cl A, 24 inch	180	Ft
HMA Surface, Rem	210	Syd
HMA Approach	300	Ton
HMA, 4EL	7130	Ton
Curb and Gutter, Conc, Det B2	268	Ft
Curb Slp, HMA	2644	Ft
Guardrail Approach Terminal, Type 2M	8	Ea
Guardrail Reflector	106	Ea
Guardrail, Long Span, Det MGS-3	2	Ea
Guardrail, Type MGS-8, 108 inch Post	2463	Ft
Riprap, Plain	96	Syd
Paved Ditch, HMA	96	Syd
Slope Restoration, Non Freeway, Type A	12060	Syd



EXISTING SECTION

STATION 0+00 TO 130+00

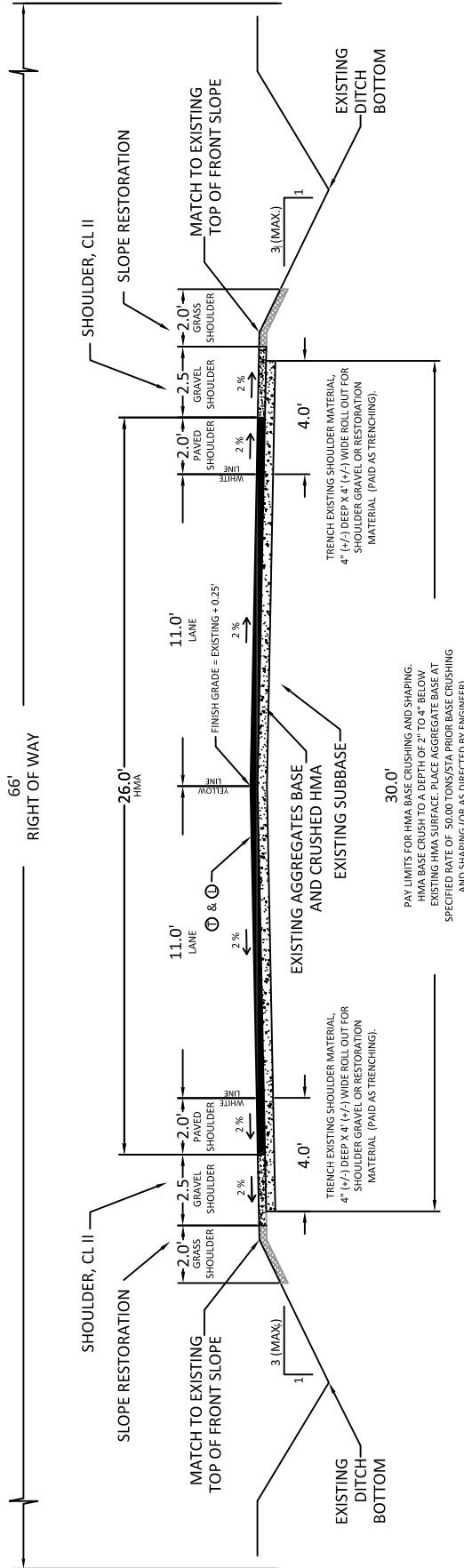
NO SCALE

TYPICAL SECTION

ROBINSON ROAD

DATE:
10/25/24

EMMET COUNTY ROAD COMMISSION
2265 E HATHAWAY ROAD · HARBOR SPRINGS, MI 49740 · (231) 347-8142



NOTE: IT IS ANTICIPATED THAT IN ORDER TO CONSTRUCT THE PROPOSED CROSS SLOPE THE CONTRACTOR WILL NEED TO LATERALLY MOVE CRUSHED MATERIAL AND IMPORTED AGGREGATE BASE. THE MOVEMENT OF SUCH MATERIAL EITHER LATERALLY OR LONGITUDINALLY TO CONSTRUCT THE PROPOSED CROSS SECTION SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM AND NO ADDITIONAL PAYMENT FOR THIS WORK WILL BE MADE. THE HMA BASE CRUSHING AND SHAPING IS BASED ON THE PROPOSED TYPICAL CROSS SECTION AND BE PAID FOR ON A SQUARE YARD BASIS. THE FINAL AGGREGATE BASE DEPTH SHALL BE A MINIMUM OF 6 INCHES THICK. CRUSH AND SHAPING IN EXCESS OF THE MINIMUM REQUIRED, SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM WITHOUT ADDITIONAL COMPENSATION. NO EXISTING PAVEMENT SHALL REMAIN BELOW AND CRUSHED AND SHAPED AREAS.

HMA APPLICATION TABLE

LABEL	MIX	RATE (lbs/Syd)	PERFORMANCE GRADE	COMMENTS	PAY ITEM
T	HMA, 4EL	165	58-28	TOP COURSE	
L	HMA, 4EL	165	58-28	LEVELING COURSE	
AT	HMA, 4EL	165	58-28	APPROACH TOP	HMA APPROACH
AL	HMA, 4EL	165	58-28	APPROACH LEVELING	HMA APPROACH

AWI = 220 FOR ALL HMA, 4EL
 APPLY HMA BOND COAT AT 0.10 GALLONS PER SQUARE YARD BETWEEN PAVING COURSES
 OR AS DIRECTED BY THE ENGINEER (PAID FOR AS PART OF HMA ITEMS), FOR INFORMATION ONLY.

PROPOSED SECTION

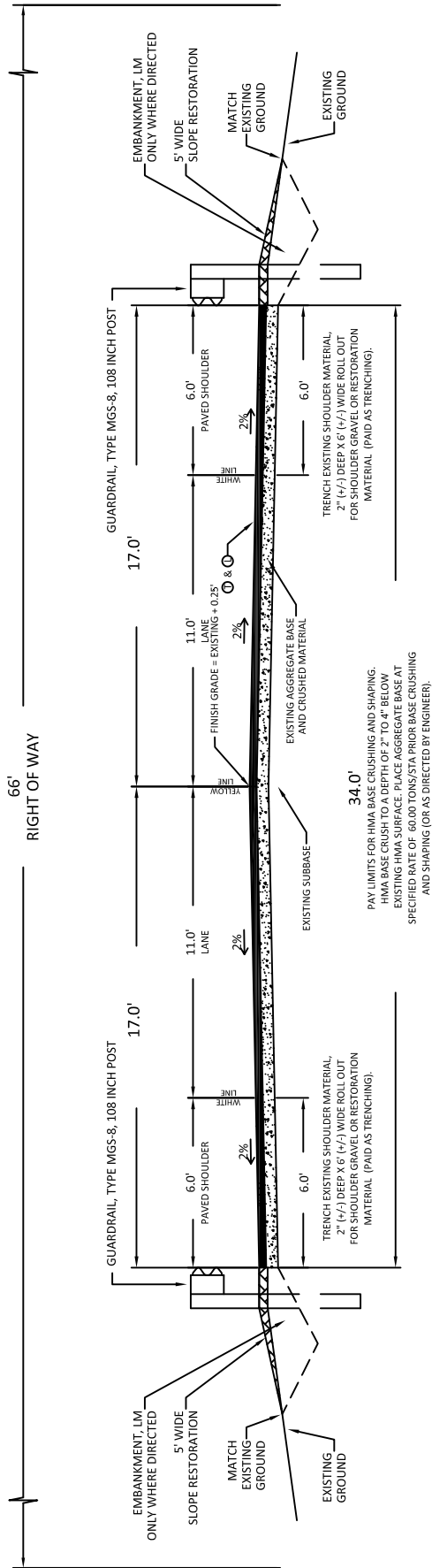
STATION: 0+00 TO 37+52 & 40+53 TO 108+00

NO SCALE

TYPICAL SECTION

ROBINSON ROAD

DATE:
10/25/24



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PROPOSED SECTION

STATION 37+53 TO 40+58

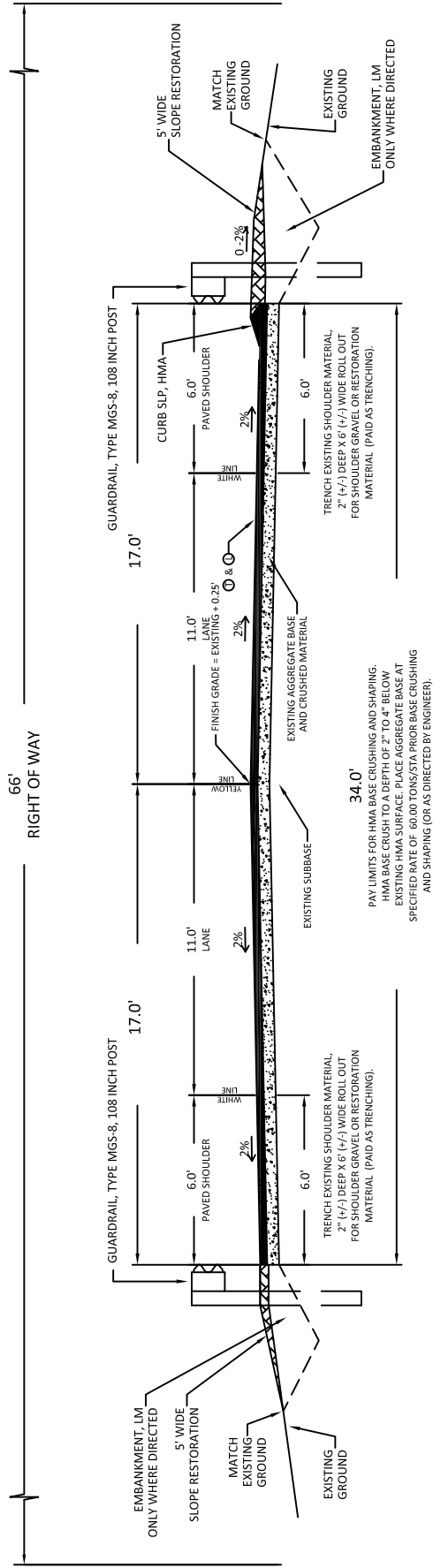
NO SCALE

ROBINSON ROAD

TYPICAL SECTION

DATE:
10/25/24

EMMET COUNTY ROAD COMMISSION
2265 E HATHAWAY ROAD · HARBOR SPRINGS, MI 49740 · (231) 347-8142



NOTE: IT IS ANTICIPATED THAT IN ORDER TO CONSTRUCT THE PROPOSED CROSS SLOPE THE CONTRACTOR WILL NEED TO LATEROALLY MOVE CRUSHED MATERIAL AND IMPORTED AGGREGATE BASE. THE MOVEMENT OF SUCH MATERIAL EITHER LATEROALLY OR LONGITUDINALLY TO CONSTRUCT THE PROPOSED CROSS SECTION SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM AND NO ADDITIONAL PAYMENT FOR THIS WORK WILL BE MADE. THE HMA BASE CRUSHING AND SHAPING IS BASED ON THE PROPOSED TYPICAL CROSS SECTION AND BE PAID FOR ON A SQUARE YARD BASIS. THE FINAL AGGREGATE BASE DEPTH SHALL BE A MINIMUM OF 6 INCHES THICK. CRUSH AND SHAPING IN EXCESS OF THE MINIMUM REQUIRED, SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM WITHOUT ADDITIONAL COMPENSATION. NO EXISTING PAVEMENT SHALL REMAIN BELOW AND CRUSHED AND SHAPED AREAS.

PROPOSED SECTION

STATION 108+00 TO 121+17 & 125+32 TO 130+00

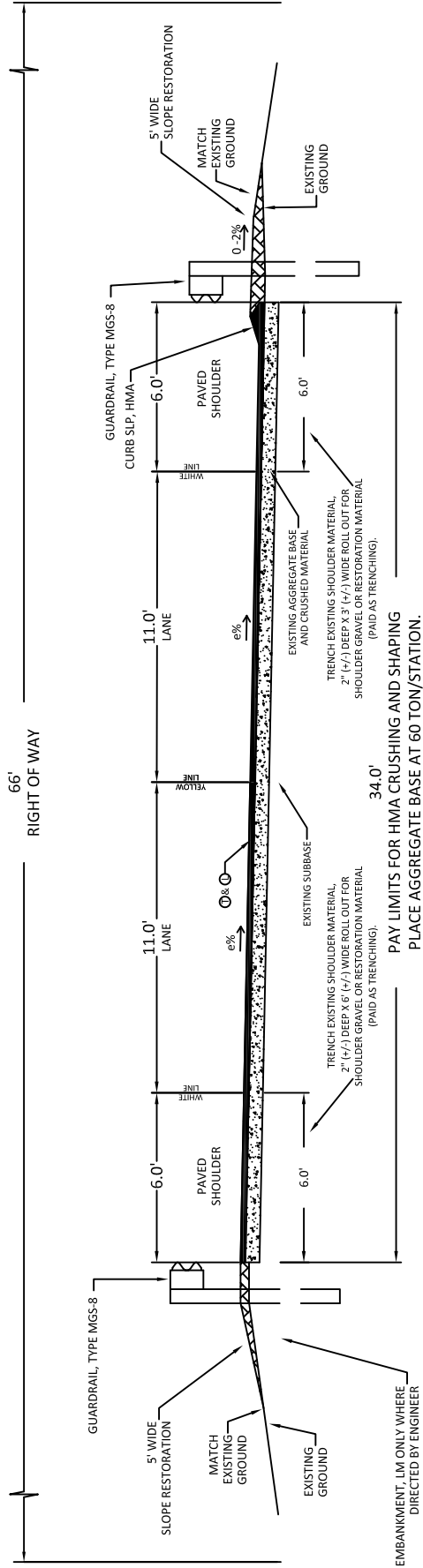
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ROBINSON ROAD

TYPICAL SECTION

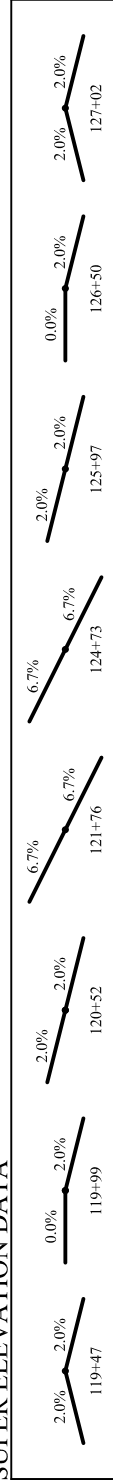
DATE:
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EMMET COUNTY ROAD COMMISSION
2265 E HATHAWAY ROAD · HARBOR SPRINGS, MI 49740 · (231) 347-8142



NOTE: IT IS ANTICIPATED THAT IN ORDER TO CONSTRUCT THE PROPOSED CROSS SLOPE THE CONTRACTOR WILL NEED TO LATEROALLY MOVE CRUSHED MATERIAL AND IMPORTED AGGREGATE BASE. THE MOVEMENT OF SUCH MATERIAL EITHER LATEROALLY OR LONGITUDINALLY TO CONSTRUCT THE PROPOSED CROSS SECTION SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM AND NO ADDITIONAL PAYMENT FOR THIS WORK WILL BE MADE. THE HMA BASE CRUSHING AND SHAPING IS BASED ON THE PROPOSED TYPICAL CROSS SECTION AND BE PAID FOR ON A SQUARE YARD BASIS. THE FINAL AGGREGATE BASE DEPTH SHALL BE A MINIMUM OF 6 INCHES THICK. CRUSH AND SHAPING IN EXCESS OF THE MINIMUM REQUIRED, SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM WITHOUT ADDITIONAL COMPENSATION. NO EXISTING PAVEMENT SHALL REMAIN BELOW AND CRUSHED AND SHAPED AREAS.

SUPER ELEVATION DATA



PROPOSED SECTION

STATION 121+17 TO 125+32

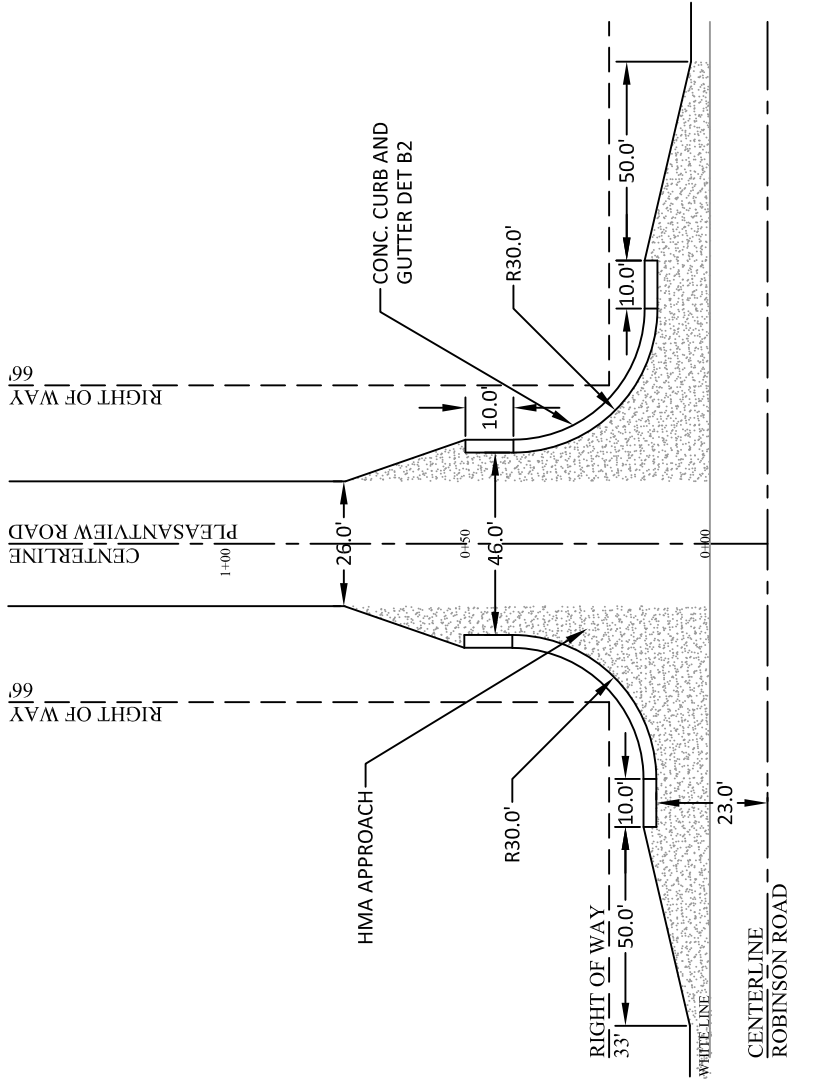
NO SCALE

DATE:
10/25/24

ROBINSON ROAD

TYPICAL SECTION

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NORTH & SOUTH PLEASANTVIEW ROAD INTERSECTION

NO SCALE

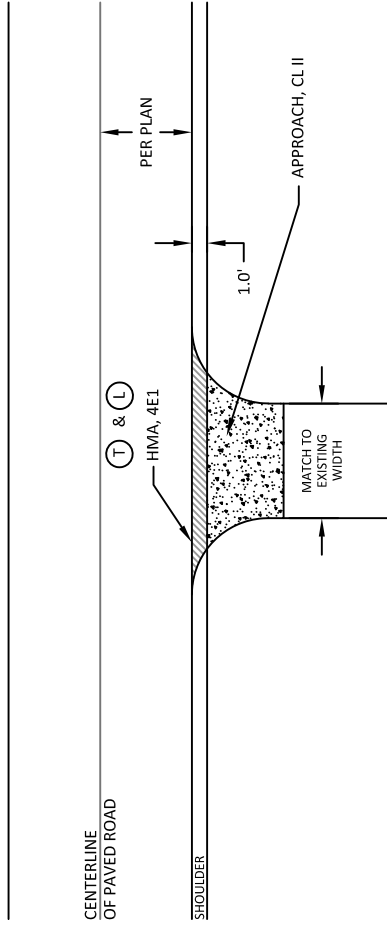
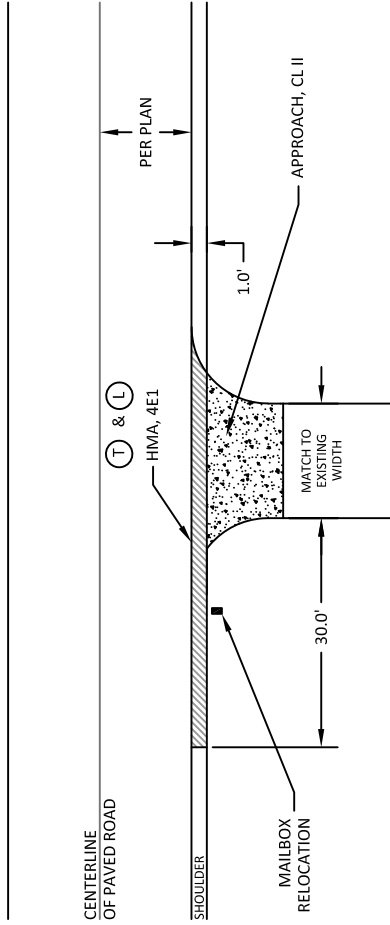
STATION: 70+69 R & 97+08 L

INTERSECTION DETAIL

ROBINSON ROAD

DATE:
10/25/24

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DRIVEWAY DETAILS

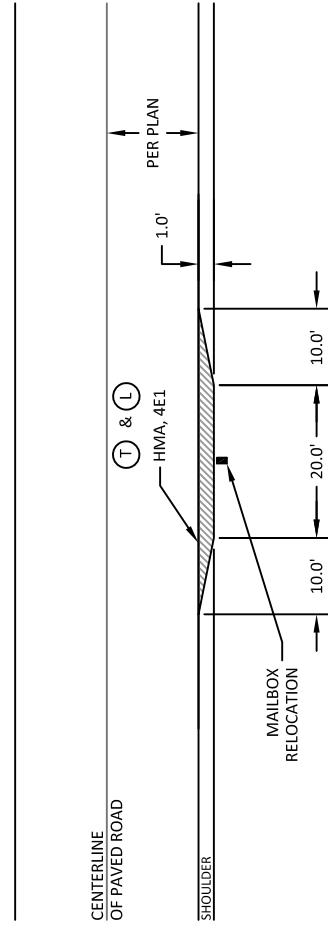
NO SCALE

DRIVEWAY DETAILS

ROBINSON ROAD

DATE:
10/25/24

EMMET COUNTY ROAD COMMISSION
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DRIVEWAY DETAILS

NO SCALE

ROBINSON ROAD

MAILBOX TAPER DETAIL

DATE:
10/25/24

EMMET COUNTY ROAD COMMISSION
2265 E HATHAWAY ROAD · HARBOR SPRINGS, MI 49740 · (231) 347-8142

PAVEMENT MARKINGS

The Contractor shall install temporary pavement markings at centerline following each day of paving, in accordance with Section 812 of the Standard Specifications for Construction.

Traffic will be maintained by the Contractor during construction, in accordance with the contract Special Provisions and the 2011 Michigan Manual of Uniform Traffic Control Devices, as revised.

All pavement markings, shapes and dimensions shall conform with the Michigan Department of Transportation Pavement Marking Typical PAVE-905-SERIES, unless otherwise indicated. Pavement Markings shall be placed in accordance with the 2011 Michigan Manual of Uniform Traffic Control Devices. All zoning shall be the responsibility of the contractor. Payment for zoning shall be included in the items for pavement markings.

EXISTING PAVEMENT MARKINGS – For informational purposes only.					
Station	Double Yellow	Lt. Barrier/Skip	Skip/Rt. Barrier	Skip	White
0+00 to 79+90				X	
79+90 to 90+25			X		
90+25 to 91+75				X	
91+75 to 100+20		X			
100+20 to 104+80				X	
104+80 to 115+00			X		
115+00 to 130+00	X				

Item	Quantity	Unit
Pavt Mrkg, Ovly Cold Plastic, 18 inch, Stop Bar	50	Ft
Pavt Mrkg, Waterborne, 4 inch, White	23410	Ft
Pavt Mrkg, Waterborne, 4 inch, Yellow	17000	Ft

MISCELLANEOUS ITEMS OF WORK

Mailboxes

Relocate all mailboxes so that the face of the mailbox is 15.0' – 15.5' from the road centerline. The Contractor is responsible to install the mailboxes at the appropriate height. Position 41" to 45" from the road surface to the bottom of mailbox or point of mail entry. Minimum post embedment is 2.0 feet. All posts must meet MDOT requirements for mailbox posts (see Special Detail R-74-SERIES). All mailbox posts shall be replaced with a new post unless directed by the Engineer. Costs for relocation of mailboxes, replacement posts, replacement mailboxes and disposal of old posts and mailboxes will be included in the pay item **Post, Mailbox**.

Monument Preservation

All government corners on the project shall be preserved, whether shown or not. It may be necessary to place or adjust monument boxes, as required.

The following items shall be used as they apply throughout the entire project.

Item	Quantity	Unit
Mobilization, Max \$137,000	1	LSUM
Post, Mailbox	2	Ea
Monument Box	8	Ea
Monument Preservation	8	Ea

GENERAL NOTES

All work being performed will be conducted in the safest manner possible and appropriate PPE shall be used at all times. All work shall be done in accordance with the Michigan Department of Transportation 2020 Standard Specification for Construction. Contractor assumes all responsibilities for Quality Control (QC) to assure the plans and specifications are met per the contract and to provide professional craftsmanship in each task being performed. Any errors in plans or discrepancies found in the field shall be brought to the engineer's attention immediately. All materials shall meet the requirements of the Michigan Department of Transportation Materials Source Guide.

The Emmet County Road Commission, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contact 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, or national origin in consideration for an award.

MISS DIG / Underground Utility Notification

For the protection of underground utilities and in compliance with MCL 460.171 et seq, the Contractor shall contact MISS DIG System, Inc. by phone at 811 or 800-482-7171 or via the web at either elocate.missdig.org for single addresses or rte.missdig.org, a minimum of 3 working days prior to excavating, excluding weekends and holidays.

AT&T

Jeff Collard
(231) 347-8010

DTE

Matt Logan
(231) 258-3785

CENTURY LINK

Lance Gow
(231) 548-9930

GREAT LAKES ENERGY

William LaTourneau
(231) 487-1339

TRUE STREAM

Jeff Wilhelm
(231) 487-1356

CHARTER COMMUNICATIONS

Construction Coordinator
(616) 402-2700

CONSUMERS ENERGY

Dale Jacobs
(989) 370-6570

Dust Control

The Contractor shall be responsible for controlling the dust on this project. Payment for Dust Control shall be paid for in other items. Dust shall be continuously controlled to the satisfaction of the Engineer.

Soil Erosion Measures

The Contractor shall implement and maintain the soil erosion control measures as shown on the plans before and at all times during construction of this project. All SESC measures shall conform to current MDOT standards, manufacture guidelines and established best practices.

Daily inspections shall be made by the Contractor; periodic inspections shall be made by the Engineer to determine the effectiveness of the SESC measures. Any required corrections shall be made without delay.

All permanent erosion control measures shall be permanently maintained by the Emmet County Road Commission.

Site Cleanup

The Contractor shall keep the work site clean of trash and other debris. At the end of each day, the project shall be inspected, and all trash removed. No payment shall be made for this work.

Bonding Requirements

The successful Contractor shall furnish a performance bond equal to the contract price as assurance for faithful contract performance.

The Contractor shall also furnish a separate **surety bond** equal to the contract price as security for payment to all persons performing labor and furnishing materials in connection with this contract. The Contractor shall pay the premium for all bonds.

The bonds must meet the requirements of Michigan Law.

Bonds shall be submitted and approved before contract execution.

Insurance Requirements

The Contractor shall furnish proof of general liability insurance in amounts not less than \$2,000,000 each occurrence and general aggregate, proof of automobile liability in amounts not less than \$2,000,000 combined single limit for each accident, bodily injury per accident, and property damage per accident, and in amount not less than \$1,000,000 for bodily injury per person. Such proof of insurance shall include a valid certificate of insurance demonstrating that the Emmet County Road Commission is additional insured party on the policy. Such insurance shall cover a period not less than the term of the project and shall provide that it cannot be cancelled without 30 days advanced written notice to the Emmet County Road Commission, by certified mail, first class, return receipt requested. The Contract/Project Agreement will be invalid if insurance expires during the authorized period of work described.

In addition to any liability or obligation by the Contractor that may otherwise exist, Contractor shall, to the fullest extent permitted by law, indemnify and hold harmless the Emmet County Road

Commission and its commissioners, officers, agents and employees from and against any and all claims, actions, proceedings, liabilities, losses, and damages thereof, and any and all costs and expenses, including legal fees, associated therewith which the Emmet County Road Commission may sustain by reason of claims for or allegations of negligence or violation of the terms and conditions of the Contract/Project Agreement, arising out of the work which is subject of the Contract.

Liquidated Damages

Liquidated damages will be assessed for failure to complete this project by the specified date, or by the allowed number of days specified once work begins, due to lack of effort, poor organization or ability to perform on the Contractor's part. Liquidated Damages may be waived by the Project Engineer. Liquidated damages will be assessed according to the table below:

Project Award Amount	Liquidated Damages
\$0 - \$150,000	\$500 per Calendar Day
\$150,001 - \$500,000	\$750 per Calendar Day
Over \$500,000	\$1,000 per Calendar Day

BID SHEET

Board of Emmet County Road Commissioners
 2265 East Hathaway Road
 Harbor Springs, MI 49740

Gentlemen:

The undersigned proposes to furnish any and all materials, labor, and equipment necessary for the reconstruction of Robinson Road as spelled out in the "Invitation to Bid" for the prices below.

The Emmet County Road Commission reserves the right to reject any and/or all bids based on what is in the best interest of Emmet County.

Contractor Name: _____

Project:

A459.4138 - Robinson Road

Item	Quantity	Unit	Unit Price	Total
Mobilization, Max \$137000	1	LSUM		
Culv, Rem, Less than 24 inch	3	Ea		
Guardrail, Salv	1000	Ft		
Embankment, LM	75	Cyd		
Excavation, Earth	50	Cyd		
Aggregate Base	7881	Ton		
Aggregate, 6A	30	Ton		
HMA Base Crushing and Shaping	45265	Syd		
Approach, Cl I	250	Ton		
Shld, Cl II	1409	Ton		
Trenching	260	Sta		
Culv, Cl A, 24 inch	180	Ft		
HMA Surface, Rem	210	Syd		
HMA Approach	300	Ton		
HMA, 4EL	7130	Ton		
Curb and Gutter, Conc, Det B2	268	Ft		

Curb Slp, HMA	2644	Ft		
Guardrail Approach Terminal, Type 2M	8	Ea		
Guardrail Reflector	106	Ea		
Post, Mailbox	2	Ea		
Guardrail, Long Span, Det MGS-3	2	Ea		
Guardrail, Type MGS-8, 108 inch Post	2463	Ft		
Pavt Mrkg, Ovly Cold Plastic, 18 inch, Stop Bar	50	Ft		
Pavt Mrkg, Waterborne, 4 inch, White	23410	Ft		
Pavt Mrkg, Waterborne, 4 inch, Yellow	17000	Ft		
Channelizing Device, 42 inch, Fluorescent, Furn	304	Ea		
Channelizing Device, 42 inch, Fluorescent, Oper	304	Ea		
Lighted Arrow, Type C, Furn	4	Ea		
Lighted Arrow, Type C, Oper	4	Ea		
Minor Traf Devices	1	LSUM		
Sign, Type B, Temp, Prismatic, Furn	448	Sft		
Sign, Type B, Temp, Prismatic, Oper	448	Sft		
Traf Regulator Control	1	LSUM		
Traffic Control, Detour Route, Max \$6500	1	LSUM		
Riprap, Plain	96	Syd		
Paved Ditch, HMA	96	Syd		
Slope Restoration, Non-Freeway, Type A	12060	Syd		
Monument Box	8	Ea		
Monument Preservation	8	Ea		
TOTAL PROJECT COST ESTIMATE =				

Bidder: _____

Address: _____

Signature: _____

Phone No.: _____

Printed Name: _____

Date: _____

Title: _____

Email: _____

Emmet County Road Commission
Special Provision
For
HMA Mixture Acceptance

ECRC: RBS
01/03/22

a) **Description**

This Special Provision provides acceptance-testing requirements for use on this project. The HMA mixture shall be provided to meet the requirements of the standard specifications for construction except where modified herein. The HMA mixture quality assurance and acceptance shall conform to Section 501 of the 2020 Michigan Department of Transportation Standard Specifications for Construction except where modified herein. The MDOT HMA Production Manual, current edition, applies to this work.

b) **Submittals**

The contractor shall submit the following:

1. Job Mix Formula (MDOT Form 1911 or equivalent) for the project for review and approval by the Engineer. The Contractor shall not place any HMA without an approved JMF. Below are specific values that are required on the JMF (in addition to the normal requirements).
 - a. Fine Aggregate Angularity
 - b. RAP Tiering based on JMF values
 - c. Fines to Asphalt Ratio (based on Effective Asphalt Content)
 - d. Soft Particle Percentage of each JMF Aggregate Type
2. Quality Control Plan.
3. A copy of all Contractor Quality Control Tests submitted within 7 working days of projection completion.
4. A copy of the Bill of Lading or Delivery Ticket for the Asphalt Binder for the project. The Bill of Lading must include the type of material that was previously hauled in the delivery tank.

c) **Materials**

Aggregates, mineral filler (if required), and asphalt binder shall be combined as necessary to produce a mixture proportioned within the master gradation limits and meeting the uniformity tolerances listed Table 1 and the quality assurance testing tolerances in Table 2 of this special provision. The master gradation range is to be used for establishing mix design only. Topsoil, clay or loam shall not be added to aggregates used in plant produced HMA mixtures.

The Maximum Percentage of Soft Particles for any given HMA mixture shall be 5%.
The Minimum Fine Aggregate Angularity for any given HMA mixture shall be 40.0.
The Minimum Crush Percentage for 4EL and 5EL HMA mixtures shall be 65%.

Table A: HMA Mixture Targets and Parameters

HMA Mix Type	VMA Minimum on any given Test (a,c)	VMA Target (c)	Asphalt Binder Content Minimum on JMF	Asphalt Binder Content Minimum on any given Test (a)	Fines to Asphalt Ratio Maximum on JMF (b)
4EL	14.0	Based on mix design parameter, the contractor shall establish & state their VMA Target on their mix design JMF, and shall adhere to the VMA Min. requirements	5.80	5.50	1.10
5EL	15.0		6.10	5.80	1.10
Ultra-Thin	15.5		6.00	5.70	1.20
<p>a. The HMA parameter minimum is per any given QC/QA test, regardless of Tolerances listed in Table 2 of this Special Provision.</p> <p>b. Value based on Pbe (Effective Asphalt Percent) for each given mix and JMF.</p> <p>c. VMA values are based on the Gsb (Bulk Specific Gravity) of the given HMA mixture not the Gse (Effective Specific Gravity).</p>					

Table B: HMA Mixture Targets and Parameters Cont'd (Ultra-Thin)

Superpave Air Voids (%)	4.5
Superpave Gyrations	35
Fine Aggregate Angularity (Min.)	40.0
Percent Crush (Min. %)	50.0
Aggregate Wear Index (AWI)	220
Sieve Size	Total % Passing
1/2 inch	100
3/8 inch	99-100
No. 4	75-95
No. 8	55-75
No.30	25-45
No. 200	3-8

d) Asphalt Binder

Liquid Asphalt Binder shall be a Performance Graded (PG) binder as specified in the bid HMA Application Table in the bid specifications and/or as included on the plans. If not specified, then the following apply:

Table C: Asphalt Binder Selection

4EL	PG 58-28
5EL	PG 58-28
Ultra-Thin	PG 58-28

e) **Air Voids**

Design Air Voids shall be 4.0% and shall be regressed to 3.0% in production **by the addition of virgin liquid asphalt (4EL and 5EL).**

f) **Recycled Asphalt Materials**

Recycled Asphalt Shingles (RAS) will not be allowed in the HMA Mixtures.

Recycled Asphalt Pavement (RAP) is allowed in the HMA mixtures subject to the following requirements. Binder replacement will be determined by weight. ***The use of Reclaimed Asphalt Pavement (RAP) shall be limited to Tier 1 (0% to 17%) RAP binder by weight of the total binder in the mixture, for all mixes (4EL, 5EL, and Ultra-Thin).***

Tier 1 – 0.0% to 17.0% RAP binder by weight of the total binder in the mixture

No binder grade adjustment is required to compensate for the stiffness of the asphalt binder in the RAP.

g) **Construction**

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

The crushed particle content of the aggregate used in the HMA mixture shall not be more than 10 percentage points below the crushed particle content used in the job-mix-formula nor less than the minimum specified for the aggregate in the project documents.

Random Liquid Asphalt Binder samples will be witnessed by the Engineer or Consulting Firm. The Engineer reserves the right to test any or all samples taken.

Quality Assurance and Acceptance testing will be as follows:

1. Asphalt Mixture Sampling

Acceptance sampling and testing will be performed by the Engineer using the sampling method and testing option agreed upon by the Engineer and Contractor. Each day of production, random samples will be obtained for each mix type. Acceptance testing will be performed at a frequency specified by the Engineer.

For each given day of production, if the daily mix tonnage per HMA mix type is under 500 tons, the Engineer reserves the right to test one sample and obtain a second sample for future testing if necessary. If the daily mix tonnage per HMA mix type is over 500 tons, the Engineer reserves the right to test one sample. If the first sample meets the Range 1 tolerances in Table 1 and Table 2, the Engineer can obtain a second sample and perform any of the following actions:

- a. Perform Full Quality Assurance testing
- b. Perform Volumetric Testing Only (Ignition, Extracted, or Calculated AC/Gmm, Air Voids, VMA)
- c. Retain custody of the sample for future testing if necessary

2. Asphalt Binder Sampling

The Contractor shall obtain the asphalt binder sample, correctly label the sample container and complete a Sample Identification (Bituminous Material Form 1923B). The form must be filled out correctly, completely, and signed before the sample is given to the Engineer. The daily asphalt binder sample must be taken from a sampling spigot located on the pipeline supplying asphalt binder to the plant, in a position between the asphalt binder pump and the point where the asphalt binder is introduced to the aggregate mixture. Personnel safety is critical when collecting the sample from the sampling spigot. Give the binder sample and completed Form 1923B to the Engineer.

Daily Asphalt Binder Sample are to be in 1 pint (16 ounce), slip top, seamless ointment tins. The tin must be at least three quarters full. All containers must be labeled in a legible format with the following information provided:

- a. Project Name
- b. Binder Grade
- c. Binder Supplier Certification Number
- d. Supplier Name, City, and State
- e. Date Sampled
- f. Mixture Type

The Engineer may request to witness the sampling of the asphalt binder upon visit to the HMA Plant. The Engineer will complete the 1923B Form for the witness sample. The witness sample will be recorded as the daily asphalt binder sample. Any other asphalt binder samples from that same day will be discarded.

The Engineer may request a copy of the MDOT Binder Certification Documents. These copies must be presented to the Engineer when the respective daily binder samples and the 1923B Forms are picked up at the plant. The Engineer will review these documents and communicate any problems that may arise.

3. Mixture Testing

Mixture samples will be tested to verify gradation, binder content, and volumetric properties per Table 1 and Table 2 listed below.

If the Engineer elects not to perform Quality Assurance testing on a given day or a given project. The Contractor is required to still perform testing in accordance with Table 1 and Table 2 below. The Contractor's Quality Control test results shall be sent to the Engineer within 2 working days of each day's productions for a given HMA mixture.

Table 1: Quality Assurance/Control Tolerance Limits for HMA Mixtures

Parameter	Action Limits (Range 1)	Suspension Limits (Range 2)
% Passing the #8 and Larger Sieves	+/- 5.0%	+/- 8.0%
% Passing the #30 Sieve	+/- 4.0%	+/- 6.0%
% Passing #200 Sieve	+/- 1.0%	+/- 2.0%

Table 2: Quality Assurance/Control Testing Tolerance (+/-) from JMF or Target Values

Parameter	Action Limits (Range 1)	Suspension Limits (Range 2)
Binder Content (a)	0.30% (a)	0.50% (a)
Maximum Specific Gravity (Gmm)	0.013	0.020
Voids in Mineral Aggregate VMA (a,b)	0.75% (a,b)	0.80% (a,b)
Air Voids (c)	0.60%	0.90%
Fines to Effective Asphalt Ratio	0.65-1.20	0.60-1.25
a. Refer to minimum parameters in Table A of this special provision. b. These given limits are (+/-) from given targets in Table A of this special provision. c. Limits are (+/-) from JMF/Target Values listed in Section e. and Table B of this special provision.		

4. Density

Pavement density will be measured by the Engineer, with a Nuclear Density Gauge, using the Gmm from the JMF for the density control target. The in-place density of the HMA mixture shall be at least 92.0% of the density control target. In-place density will be calculated by averaging four QA density test locations. Test locations will not be taken within 12 inches of any pavement edges or pavement joints.

h) Rejected Materials

1. Gradation

Action Limits - Range of values established in Table 1 – Quality Assurance/Control Tolerance Limits for HMA Mixtures. If exceeded on two consecutive tests, Contractor is required to take corrective action to bring the mixture produced into conformance with the specifications.

Suspension Limits – Range of values established in Table 1 – Quality Assurance/Control Tolerance Limits for HMA Mixtures. If exceeded on a single test, Contractor is required to suspend operations and determine, document, and correct the cause before resuming production. Prior to resuming production, the Engineer must be notified of the findings and approve correction action prior to resuming production.

2. Asphalt Binder

If a liquid asphalt binder sample does not meet the required specification, the mix produced from the point of the last liquid asphalt binder sample meeting specification to the failed sample shall be considered defective and shall be replaced at the sole expense of the Contractor.

3. Volumetric Properties

The acceptable tolerance for Binder Content, Gmm, VMA, Air Voids, and Fines to Pbe are listed in Table 2 above. Any HMA Mixture produced outside of these tolerances or any HMA Mixture that does not meet the requirements listed in the sub notes of Table 2 above will be subject to a negative adjustment or rejected. The resulting penalty will be a negative adjustment of 10% to 50% or remove/replace, to be determined by the Engineer.

4. Pavement Density

A negative 10% adjustment in the HMA Mixture contract price will be imposed if the pavement density (average of all gauge readings) is less than 92%, but equal to or greater than 91%; or if 2 or more readings are less than 91%.

A negative 25% adjustment in the HMA Mixture contract price will be imposed if the pavement density (average of all gauge readings) is less than 91%, but equal to or greater than 90%; or if 2 or more readings are less than 90%.

If the average density is less than 90% (for all gauge readings), the Contractor shall remove and replace the pavement at no cost to the Owner.