



## **PREVENTATIVE MAINTENANCE CONTRACT 2026**

**MERIDIAN TOWNSHIP**  
**DEPARTMENT OF PUBLIC WORKS**  
**ENGINEERING OFFICE**

**INGHAM COUNTY, MICHIGAN**

**PREVENTATIVE MAINTENANCE CONTRACT 2026**

FOR  
MERIDIAN TOWNSHIP

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**PREVENTATIVE MAINTENANCE CONTRACT 2026**  
FOR  
MERIDIAN TOWNSHIP

**ADVERTISEMENT FOR BIDS**

Sealed proposals will be received by Meridian Township, Ingham County, Michigan, at the Meridian Township Clerk's Office, Municipal Building, 5151 Marsh Road, Okemos, Michigan, 48864-1198, Phone (517) 853-4440, up to 10:30 a.m., local time on Thursday, November 6, 2025 for hot mix asphalt crack and surface treatment on various local roads, parks, and facilities in Meridian Township, after which time proposals will be opened and read aloud.

Bids are solicited on a unit price basis. The work involves the following major bid item(s), for approximately 20.50 miles of local roads, 5.39 miles of off-road trails and nine (9) parks and facilities:

- Approximately 10.75 Centerline Miles of HMA Crack Treatment, With Previous Crack Treatment
- Approximately 2.90 Centerline Miles of HMA Crack Treatment, Without Previous Crack Treatment
- Approximately 6.85 Centerline Miles of HMA Crack Treatment, 2023 Overlay Roads
- Approximately 0.49 Centerline Miles of HMA Crack Treatment, Towner Road Park Trails
- Approximately 4.90 Centerline Miles of HMA Crack Treatment, Pathways and Off-Road Trails
- Approximately 23,700 Syd of HMA Crack Treatment, Park Facilities
- Approximately 30,050 Syd of HMA Crack Treatment, General Fund Facilities

Proposals shall include the furnishing of all labor, material, and equipment necessary to complete the project.

Work shall commence in Spring of 2026. All crack treatment and surface treatments shall occur in 2026, within the specified date and temperature ranges, and be completed by August 1, 2026.

Each proposal shall be accompanied by a certified check or a bid bond by a recognized surety company similar to a U.S. Government Standard form bid bond, in the amount of five percent (5%) of the bid, payable to the Meridian Township, Ingham County, Michigan as security for the acceptance of the Contract.

Insurance and bonds are required from the successful bidder for this project; please see pages G-2 and G-3 for those requirements. *Please note Owner/Contractors Protective Liability is required for all of our contracts.*

The contract documents may be examined at the following locations:

- Meridian Township, Dept of Public Works, 5151 Marsh Road, Okemos, MI 48864
- Builders Exchange of Lansing & Central MI, 1240 E. Saginaw St., Lansing, MI 48906-5522
- Construction Assoc of MI, 43636 Woodward, Bloomfield Hills, MI 48302
- Dodge Data & Analytics, 2521 E. Michigan Avenue, Lansing, MI 48912-4010

Copies of the contract documents for the work may be obtained from the Department of Public Works & Engineering at 5151 Marsh Road, Okemos, Michigan, for a non-refundable fee of ten dollars (\$10). There is a five dollar (\$5.00) fee for mailing contract documents. Contract documents may be obtained via email free of charge. Questions regarding this contract may be addressed to Meridian Township Department of Public Works & Engineering by phone at (517) 853-4440, or by email at [DPW@meridian.mi.us](mailto:DPW@meridian.mi.us).

In submitting this bid, it is understood that the right is reserved by the Owner to reject any or all bids, to award the Contract to other than the low bidder, to award separate contracts for each project and/or phase, to waive irregularities and/or formalities, and in general, to make award in any manner deemed by it, in its sole discretion, to be in the best interest of the Owner.

## **INSTRUCTIONS TO BIDDERS**

### **1. PROPOSALS**

Proposals must be made upon the forms provided, without modifications or changes, and all other data submitted as required.

The proposal must be enclosed in a sealed envelope marked "**Bid Proposal – Preventative Maintenance Contract 2026**" clearly indicating the name and address of the bidder and filed at the place and by the time specified in the Advertisement.

### **2. BASIS OF PROPOSALS**

Proposals may be submitted for any one or all of the projects or phases as may be applicable.

Proposals are solicited on the basis of unit prices for the entire work of the contract.

The right is reserved by the Owner to reject any and all bids, to award the Contract to other than the low bidder, to award separate Contracts for each project and/or phase, to waive irregularities and/or formalities, and in general, to make award in any manner deemed by it, in its sole discretion, to be in the best interest of the Owner.

### **3. BID DEPOSITS**

Each proposal shall be accompanied by a certified check, or bid bond from a recognized surety company, in the amount of five percent (5%) of the total amount of the bid, payable to the order of the Owner, to be forfeited to the Owner in case of failure on the part of the successful bidder to enter into the attached form of Contract to do the work covered by such Proposal at the price and within the time stated therein. The bid deposit of all except the successful bidder will be returned within four weeks after opening of bids. The bid deposit of the successful bidder will be returned within 48 hours after the executed Contract has been finally approved by the Owner.

### **4. QUALIFICATION OF BIDDERS**

It is the intention of the Owner to award the Contract(s) to contractor(s) fully capable, both financially and as regards experience to perform and complete all work in a satisfactory manner. Evidence of such competency must be furnished, including a listing of similar projects which the bidder has satisfactorily undertaken and completed.

### **5. INTERPRETATION OF DOCUMENTS**

If the bidder is in doubt as to the true meaning of any part of the plans, specifications or Contract Documents, he may submit to the Engineer a written request for an interpretation thereof. Any interpretation made in response to such query will be mailed or duly delivered to each prospective bidder. The Owner will not be responsible for any other explanation or interpretation of the Contract Documents.

### **6. REQUIREMENT OF SIGNING BIDS**

Bids which are not signed by the individual making them shall have attached thereto a power of attorney evidencing authority to sign the bid in the name of the person for whom it is signed.

Bids, which are signed by a partnership, shall be signed by all of the partners or by an attorney-in-fact. If signed by an attorney-in-fact, there shall be attached to the bid a power of attorney evidencing authority to sign the bid, executed by the partners.

## **INSTRUCTIONS TO BIDDERS**

### **6. REQUIREMENT OF SIGNING BIDS (Cont'd.)**

Bids which are signed for a corporation shall have the correct corporate name thereof and the signature of the president or other authorized officers of the corporation manually written below the corporate name following the word "By". If such a bid is manually signed by an officer other than the president of the corporation, a certified copy of a resolution of the board of directors evidencing the authority of such official to sign the bid shall be attached to it. Such a bid shall also bear the attested signature of the secretary of the corporation and the impression of the corporate seal.

### **7. EXECUTION OF AGREEMENT**

The bidder to whom an award is made will be required to enter into the written contract included herein, within ten (10) calendar days after being notified of the acceptance of his bid and receipt by him of the copies of the documents to be executed. In case of failure to comply with this requirement, he may be considered to have abandoned all his rights and interests in the award and his certified check or amount of bidder's bond may be declared to be forfeited to the Owner and the Contract may be awarded to another bidder.

### **8. INSURANCE (Ref. General Conditions - GC.2)**

The contractor will be required to carry Worker's Compensation Insurance, Bodily Injury and Property Damage, Builder's Risk Insurance and Owner's Protective Liability in the amounts specified in the General Conditions. Certificates of such insurance must be attached to each copy of the executed Contract Documents.

### **9. BONDS (Ref. General Conditions - GC.1)**

The successful bidder will be required to furnish for each set of executed Contract Documents and conformed copies thereof an original completed Performance Bond, and Labor and Material Bond with surety acceptable to the Owner as set forth in the General Conditions.

### **10. BIDDER'S RESPONSIBILITY FOR EXAMINING PLANS AND SITE**

At the time of opening bids, each bidder will be presumed to have made a personal investigation of the site of the work and of existing structures, and to have read and be thoroughly familiar with the plans, specifications and Contract Documents (including all addenda). Contractors shall drive the drive the local roads and review the off-road trails, parks, and facilities to accurately determine the existing condition, size and density of existing cracks, and work required to complete repairs. He shall determine to his own satisfaction the conditions to be encountered, the nature of the ground, difficulties involved in completing the Contract and all factors affecting the work proposed under this Contract.

The bidder to whom this contract is awarded will not be entitled to any additional compensation by reason of his failure to fully acquaint himself with the conditions at the site or by his failure to fully examine the plans, specifications and Contract Documents.

### **11. NON-DISCRIMINATION IN EMPLOYMENT**

The Contractor shall adhere to all applicable Federal, State and local laws, ordinances, rules and regulations prohibiting discrimination with regards to employees and applicants for employment. The contractor and his/her subcontractors shall not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, including a benefit plan or system or a matter directly or indirectly related to employment, because of race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, marital status, physical or mental limitation, disability, source of income, familial status, educational association, sexual orientation, gender identity or expression, or HIV status. Breach of this section shall be regarded as a material breach of this Contract.

**PROPOSAL**

**TO:** Meridian Township  
5151 Marsh Road  
Okemos, MI 48864

**RE: PREVENTATIVE MAINTENANCE CONTRACT 2026**

Board of Trustees:

The undersigned, as a bidder, hereby declares that these bids are made in good faith, without fraud or collusion with any person or persons bidding on the same Contract, that he has read and examined the Advertisement, Instruction to Bidders, Proposal, Contract, General Conditions, Specifications, Special Provisions and Plans and understands all of the same; that he or his representative has made personal investigation at the site and has informed himself fully with regard to the conditions to be met in the execution of the Contract.

In submitting this bid, it is understood that the right is reserved by the Owner to reject any or all bids, to award the Contract to other than the low bidder, to award separate contracts for each project and/or phase, to waive irregularities and/or formalities, and in general, to make award in any manner deemed by it, in its sole discretion, to be in the best interest of the Owner.

It is further understood and agreed by the undersigned that any qualifying statement or conditions made to this proposal as originally published, as well as any interlineation, erasures, omissions or entered wording obscure as to its meaning, may cause the bid to be declared irregular and may be cause for rejection of the bid.

The undersigned agrees to start work within ten (10) days of issuance of the Notice to Proceed. The undersigned further agrees to complete all work covered by this Proposal to the point of use of the project by the Owner by the completion date stated in the Advertisement or within the number of calendar days stated in the Advertisement; and that for all days thereafter until final acceptance, there will be charged, as liquidated damages, the sum of \$1,000.00 per calendar day per project for each and every day thereafter until final acceptance.

The undersigned hereby proposes to perform everything required to be performed and to furnish all labor, materials, tools, equipment and all utility and transportation services necessary to complete in a workmanlike manner all the work to be done under this Contract, including addenda thereto, for the sums set forth in the following Bidding Schedule:

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<b><u>PROPOSAL</u></b>					
<b><u>ITEM #</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>QTY</u></b>	<b><u>UNIT</u></b>	<b><u>UNIT PRICE</u></b>	<b><u>AMOUNT</u></b>
1500001	Mobilization, Max \$30,000	1	LSum	\$ _____	\$ _____
5027003	<i>HMA Crack Treatment:</i>				
	With Previous Crack Treatment	10.75	CL Mi	\$ _____	\$ _____
	Without Previous Crack Treatment	2.90	CL Mi	\$ _____	\$ _____
	2023 Overlay Roads (Not Previously crack filled. These roads were overlaid with 1.5" of 36A HMA in 2023)	6.85	CL Mi	\$ _____	\$ _____
	Towner Road Park Trails (Green trails on page A-2)	1	LSum	\$ _____	\$ _____
	Pathways and Off-Road Trails (Red trails on page A-2)	1	LSum	\$ _____	\$ _____
	Park Facilities (refer to the green stars on page A-2)	1	LSum	\$ _____	\$ _____

General Fund Facilities (refer to the red stars on page A-2)	1	LSum	\$ _____	\$ _____
8127051 Traffic Control	1	LSum	\$ _____	\$ _____
			<b>TOTAL BID:\$ _____</b>	

Give the name of the Owners and dates of other projects which the Bidder has constructed or has had responsible charge of construction:

**NAME**

**DATE**

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The Bidder is hereby reminded that the Pay Items listed under the Bidding Schedule are the only items for which he will receive payment under this Contract. In the event that lesser or greater quantities of specific Pay Items are required to complete the work and place the system in operation, the total amount bid for the specific item will be adjusted by the unit price bid to the actual quantities utilized. In the event that an error is made in extending the unit prices, the Bidder is hereby notified that the unit prices as bid, will govern in determining the Total Base Bid. It is expressly understood and agreed that the Total Base Bid is the basis for establishing the amount of Bid Security on this Proposal and for comparison of bids only and is not to be constructed as a lump sum Proposal.

The undersigned attaches hereto a certified check or bidder's bond in the sum of not less than five percent (5%) of the Total Base Bid as required by the Advertisement and Instructions to Bidders and the undersigned agrees that in case he shall fail to fulfill his obligations under this Proposal and/or shall fail to furnish bonds, as specified, the Owner may, at its option determine that the certified check or amount of said certified check or bidder's bond accompanying this Proposal has been forfeited to the Owner, but otherwise the said certified check or bidder's bond shall be returned to the undersigned upon the execution of the Contract and acceptance of the bond.

The undersigned further agrees that this proposal shall be effective for a period of sixty (60) days from the date established for opening of all bids.

Date \_\_\_\_\_ Company Name \_\_\_\_\_

By \_\_\_\_\_ Address \_\_\_\_\_  
Signature

Printed Name \_\_\_\_\_

Title \_\_\_\_\_ Phone Number \_\_\_\_\_

Email Address \_\_\_\_\_

## **CONTRACT**

**THIS CONTRACT**, dated \_\_\_\_\_, 2025, by and between \_\_\_\_\_, hereinafter called the "CONTRACTOR", and Meridian Township, 5151 Marsh Road, Okemos, MI 48864, hereinafter called the "OWNER".

**WITNESSETH**, that the CONTRACTOR and the OWNER for the consideration herein agree as follows:

### **ARTICLE I. SCOPE OF WORK.**

The CONTRACTOR shall perform everything required to be performed and shall provide and furnish all labor, materials, necessary tools, expendable equipment and all utility and transportation services required to perform and complete in a workmanlike manner all the work required for constructing the project as described in the Advertisement and Proposal and for performing all related work for the OWNER, required by and in strict accordance with the plans and specifications, including any and all addenda, and other Contract Documents mentioned and made a part hereof.

### **ARTICLE II. THE CONTRACT PRICE.**

The OWNER shall pay for constructing the project complete with all labor, materials, equipment, appurtenances, surface restoration and related work in strict accord with the Plans and Specifications, ready for use, the unit prices as listed in the Proposal and herein made a part of this Contract. Payment shall be made to the CONTRACTOR in accordance with and subject to the conditions specified under General Conditions.

### **ARTICLE III. TIME.**

Time is of the essence in the performance of this contract. The CONTRACTOR agrees to start work within ten (10) days of issuance of the Notice to Proceed and to fully complete the work so as to permit use of the project by the OWNER by the completion date stated in the Advertisement or within the number of calendar days listed in the Advertisement.

### **ARTICLE IV. DELAYS AND DAMAGES.**

If the CONTRACTOR refuses or fails to prosecute the work, or any separate part thereof, with such diligence as will insure its substantial completion, ready for use by the OWNER by the completion date stated in the Advertisement or within the number of consecutive calendar days stated in the Advertisement, or any extension thereof, or fails to complete said work within such time, the OWNER may, by written notice to the CONTRACTOR, terminate the CONTRACTOR's right to proceed with the work or such part of the work as to which there has been delay. In such event, the OWNER may take over the work and prosecute the same to completion by contract or otherwise, and the CONTRACTOR and his sureties shall be liable to the OWNER for any excess cost occasioned thereby. If the CONTRACTOR's right to proceed is so terminated, the OWNER will take possession of and utilize in completing work such materials, appliances, and plant as may be on the site of the work and necessary therefore.

## **CONTRACT**

### **ARTICLE IV. DELAYS AND DAMAGES. (Cont'd.)**

If the OWNER does not terminate the right of the CONTRACTOR to proceed, the CONTRACTOR shall continue to work, in which event the actual damages for the delay will be impossible to determine and in lieu thereof the CONTRACTOR shall pay the OWNER the sum of one thousand dollars (\$1,000.00) per day as fixed, agreed, and liquidated damages for each calendar day of delay until the work is substantially completed, ready for operation and the CONTRACTOR and his sureties shall be liable for the amount thereof. However, the right of the CONTRACTOR to proceed shall not be terminated or the CONTRACTOR charged with liquidated damages because of any delays in the completion of the work due to unforeseeable causes beyond control and without the fault or negligence of the CONTRACTOR, including, but not restricted to acts of God, or of the public enemy, acts of the OWNER, fires, floods, epidemics, quarantine restrictions, delays of subcontractors due to such causes, if the CONTRACTOR shall, within ten (10) days from the beginning of any such delay (unless the OWNER shall grant a further period of time prior to the date of final settlement of the Contract) notify the OWNER in writing of the cause of delay and extend the time for completing the work when, in OWNER's judgement, the finding of fact justify such an extension and OWNER's findings of fact thereon shall be final and conclusive on the parties thereto. In no event shall bankruptcy or labor disputes, or the like, either of CONTRACTOR or any of its subcontractors or suppliers, be considered as an unforeseeable cause beyond the control and without the fault or negligence of the CONTRACTOR.

### **ARTICLE V. COMPONENT PARTS OF THIS CONTRACT.**

This Contract consists of the following component parts, all of which are as fully a part of the Contract as if herein set out verbatim, or, if not attached:

- |                            |   |
|----------------------------|---|
| 1. Advertisement           | 8. General Specifications                       |
| 2. Instructions to Bidders | 9. Ingham County Road Commission Specifications |
| 3. Proposal                | 10. Standard Specifications                     |
| 4. Addenda                 | 11. Special Provisions                          |
| 5. Contract                | 12. Plans                                       |
| 6. Bonds and Insurance     | 13. Notice of Award                             |
| 7. General Conditions      | 14. Notice to Proceed                           |

**CONTRACT**

**IN WITNESS WHEREOF**, the parties hereto have caused this instrument to be executed in three (3) original counterparts the day and year first above written.

\_\_\_\_\_  
**CONTRACTOR**

**WITNESS:**

By: \_\_\_\_\_

\_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
**MERIDIAN TOWNSHIP  
OWNER**

**WITNESS:**

BY: \_\_\_\_\_

\_\_\_\_\_

Dan Opsommer

TITLE: Deputy Township Manager  
Director of Public Works & Engineering

DATE: \_\_\_\_\_

**NOTICE OF AWARD**

**Dated: Month ##, 2025**

**TO:**            Person, Position  
                  Company Name

**ADDRESS:**   Company Street Address  
                  City, State, Zip Code

**CONTRACT:    PREVENTATIVE MAINTENANCE CONTRACT 2026**

You are notified that your Bid dated **November 6, 2025** for the above Contract has been considered. You are the apparent Successful Bidder and have been awarded a Contract for **Preventative Maintenance Contract 2026.**

The Contract Price of your Contract is: **\$ ###,###.##.**

**Three** copies of each of the proposed Contract Documents accompany this Notice of Award.

You must comply with the following conditions within 10 days of the date you receive this Notice of Award.

1. Deliver to the OWNER **three** fully executed counterparts of the Contract Documents. (Each of the Contract Documents must bear your signature on page C-3.)
2. Deliver with the executed Contract Documents the Contract security (Bonds and Insurance) as specified in General Conditions (GC).

Failure to comply with these conditions within the time specified will entitle OWNER to consider your Bid in default, to annul this Notice to Award and to declare your Bid security forfeited.

Within ten days after you comply with the above conditions, OWNER will return to you one fully executed counterpart of the Contract Documents.

MERIDIAN TOWNSHIP

By: \_\_\_\_\_  
Dan Opsommer  
Deputy Township Manager  
Director of Public Works & Engineering

**NOTICE TO PROCEED**

Dated: \_\_\_\_\_, **2025**

**TO:** \_\_\_\_\_  
\_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**CONTRACT:            PREVENTATIVE MAINTENANCE CONTRACT 2026**

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You are notified that the Contract Times under the above Contract will commence to run on \_\_\_\_\_, **2025**. Work may commence in the Spring of 2026, after this Notice to Proceed is issued, in accordance with the weather limitations set forth in the Special Provisions. All work on the project must be completed by August 1, 2026.

Deliver to **OWNER** an acknowledged copy of this Notice to Proceed.

**MERIDIAN TOWNSHIP**

By: \_\_\_\_\_  
Younes Ishraidi, P.E.  
Chief Engineer

**ACKNOWLEDGEMENT OF ACCEPTANCE OF NOTICE TO PROCEED**

**CONTRACTOR** acknowledges acceptance of this Notice to Proceed this \_\_\_\_\_ day of \_\_\_\_\_, 2025.

By: \_\_\_\_\_  
Name  
Title

## **GENERAL CONDITIONS**

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**GENERAL CONDITIONS**

**GC.1 CONTRACT SECURITY**

The Contractor shall furnish a surety bond, by a duly authorized surety company satisfactory to the Owner, in an amount equal to 100 percent (100%) of the Contract price as security for the faithful performance of this Contract. The Contractor shall also furnish a separate surety bond, by a duly authorized surety company satisfactory to the Owner, in an amount equal to 100 percent (100%) of the Contract price as security for the payment of all persons performing labor and/or furnishing materials.

The surety company writing the bid, performance, labor and material, and maintenance bond shall be: 1) acceptable to the Owner, 2) be listed in the Federal Register as published by the U.S. Department of Treasury under most recently revised Circular 570; 3) have an A.M. Best Company's Insurance reporting rating of no less than A- (Excellent); and 4) authorized to do business in the State of Michigan by the Michigan Department of Licensing & Regulatory Affairs Office of Financial and Insurance Regulations. Upon request, the Contractor shall submit evidence of such insurance.

**GC.2 CONTRACTORS' AND SUBCONTRACTORS' INSURANCE**

The Contractor shall not commence work under this Contract until he/she has obtained all the insurance required under this section and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his/her subcontract until all similar insurance required of the subcontractor has been so obtained and approved. Contractors and subcontractors are required to file with the Owner completed certificates of insurance, as evidence that they carry adequate insurance to comply with the requirement of this section. New Certificates of Insurance shall be furnished to the Owner at the renewal date of all policies named on these certificates.

**A. Policies, Coverages, and Endorsements**

The Contractor agrees to maintain, or to cause its personnel providing services under this Contract to maintain, at its sole cost and expense or the cost and expense of his personnel, the following insurance policies, with the specified coverages and limits, to protect and insure the Owner and Contractor against any claim for damages arising in connection with Contractors responsibilities or the responsibilities of Contractors personnel under this Contract and all extensions and amendments thereto.

**1. Commercial General Liability**

- |    |                   |             |
|----|-------------------|-------------|
| a. | General Aggregate | \$2,000,000 |
| b. | Each Occurrence   | \$1,000,000 |

Such insurance shall include, but not be limited to, coverage for:  
Comprehensive form, Premises-operations, Explosion and collapse hazard, Underground hazard, Products/completed operations hazard, Contractual insurance, Broad form property damage, Independent contractor, Personal injury

**2. Workers' Compensation & Employer' Liability (if applicable)**

- |    |                           |                         |
|----|---------------------------|-------------------------|
| a. | Medical & Indemnity       | Statutory Requirements  |
| b. | Bodily Injury by Accident | \$500,000 Each Accident |
| c. | Bodily Injury by Disease  | \$500,000 Each Employee |
| d. | Bodily Injury by Disease  | \$500,000 Policy Limit  |
| e. | Employers Liability       | \$500,000               |

**3. Automobile Liability**

Including hired and non-owned Automobiles \$1,000,000 (Combined Single Limit)  
Such insurance shall include, but not be limited to, coverage for:  
Comprehensive form, Owned vehicles, Hired vehicles, Non-owned vehicles

## GENERAL CONDITIONS

### **GC.2 CONTRACTORS' AND SUBCONTRACTORS' INSURANCE (Cont'd.)**

#### **B. Owner's Protective Liability**

The Contractor shall procure and shall maintain during the life of this Contract Owner's/Contractor's Protective Liability Insurance, listing the Owner as the named insured. The minimum limit of liability shall be not less than \$1,000,000.00 per occurrence/aggregate.

#### **C. Insured Parties**

All policies shall contain a provision naming the Owner (and its officers, agents, and employees) as Additional Insured parties on the original policy and all renewals or replacements during the term of this Contract.

#### **D. Acceptable Insurance Companies**

All insurance companies required by this section shall be: 1) acceptable to the Owner; 2) authorized to do business in the State of Michigan by the Michigan Department of Licensing & Regulatory Affairs Office of Financial and Insurance Regulations, and 3) have an A.M. Best Company's Insurance reporting rating of no less than A- (Excellent). Upon request, the Contractor shall submit evidence of such insurance.

#### **E. Indemnification and Hold Harmless**

The Contractor shall, at its own expense, protect, defend, indemnify and hold harmless the Owner and its elected and appointed officers, employees, and agents from all claims, damages, costs, lawsuits and expenses, including, but not limited to, all costs for administrative proceedings, court costs and attorney fees that they may incur as a result of any acts, omissions, or negligence of the Contractor, its subcontractors, sub-subcontractors or any of their officers, employees, or agents. This includes but is not limited to injury or death to any person or persons, including the contractor's employees, and damage to property. The furnishing by the Contractor of any insurance required by this Contract, or the acceptance or approval thereof by the Owner as provided in this Contract, or otherwise, shall not diminish the Contractor's obligation to fully indemnify the Owner, its elected and appointed officers, employees, and agents as required in this section.

The Contractor shall not cancel or reduce the coverage of any insurance required by this section without providing 30-day prior written notice to the Owner. All such insurance must include an endorsement whereby the insurer shall agree to notify the Owner immediately of any reduction by the Contractor. The Contractor shall cease operations on the occurrence of any such cancellation or reduction, and shall not resume operations until new insurance is in force.

### **GC.3 QUALIFICATION FOR EMPLOYMENT**

The Contractor shall employ competent laborers and mechanics for the work under this Contract, and shall comply with all applicable regulations of the United States Department of Labor and any other agencies having jurisdiction.

### **GC.4 PROGRESS SCHEDULE**

The Contractor will be required to submit a Progress Schedule to the Engineer within five (5) calendar days of confirmation of the low bid. A detailed Progress Schedule shall then be provided by February 1, 2026. The Progress Schedule shall indicate the dates for the starting and completion of the various stages of construction and an estimated progress schedule for the work in relation to the entire project.

If the Contractor chooses to work overtime, they will be backcharged for inspection. Overtime is any Township recognized holiday and/or any time other than 8:00 a.m. to 5:00 p.m., local time, Monday through Friday. No work will be allowed at the site prior to 7:00 a.m. or after 7:00 p.m., or dusk, of any working day. No work will be allowed on public roadways or off-road trails on Sundays with the exception of work necessitated by an emergency.

## GENERAL CONDITIONS

### **GC.4 PROGRESS SCHEDULE (Cont'd.)**

Construction work within the parking lots must occur on weekends, including both Saturday and Sunday. The dates must be worked out with the Township to avoid conflict with public events and public safety operations. Specific dates and schedule requirements for the parking lot and cemetery work can be found in the Progress Clause, starting on page PC-1.

### **GC.5 ACCIDENT PREVENTION**

Precaution shall be exercised at all times for the protection of persons (including employees) and property, and hazardous conditions shall be guarded against or eliminated. The Contractor is entirely responsible for all aspects of job safety and shall execute the work under this Contract in strictest conformance with all state and local safety codes, rules and regulations.

### **GC.6 CONTRACT PRICE SCHEDULE**

The Contractor, if requested by the Owner, shall submit to the Owner a cost breakdown for the various items of the work. The schedule shall be prepared in a manner acceptable to the Owner as to both form and completeness and supported by data as necessary to substantiate its correctness.

### **GC.7 PAYMENT TO CONTRACTOR**

The Contractor shall submit semi-monthly, or at longer intervals, if he so desires, an invoice covering work previously performed for which he believes payment, under the Contract terms, is due, and shall deliver said invoice to the Owner. Each request for payment shall be accompanied by a statement certifying that all bills for labor and materials have been paid up for all previous pay requests.

Each progress payment request shall be paid within one of the following time periods, whichever is later:

- A. Thirty (30) days after the Owner has certified that the work is in place in the portion of the facility covered by the applicable request for payment in accordance with the documents.
- B. Fifteen (15) days after the Owner has received the funds with which to make the progress payment from a department or agency of the federal or state government, if any funds for the facility are to come from either of these sources.

To assure proper performance of the Contract by the Contractor, the Owner shall retain ten percent (10%) of the dollar value of all work in place.

Any funds retained by the Owner shall not exceed the prorated share of the Owner's matching requirement if the project is funded, in part, with federal or state funds. Any retained funds shall not be commingled with other funds of the Owner and shall be deposited in an interest-bearing account in a regulated financial institution.

At any time after ninety-four percent (94%) of the work under the Contract is in place and at the request of the Contractor, the Owner shall release the retainage plus interest, only if the Contractor provides to the Owner an irrevocable letter of credit in the amount of the retainage plus interest, issued by a bank authorized to do business in the State of Michigan, containing terms mutually acceptable to the Contractor and Owner.

Retainage shall be released to the Contractor together with the final progress payment.

Owner and Contractor agree that disputes concerning retainage, at the option of the Owner, shall be submitted to the decision of the agent as provided in Section 4 of Act 524 of the Michigan Public Acts of 1980 (MCLA 125.1564; MSA 5.2949 (104)) and that interest earned on retainage shall be released to the Contractor together with the final progress payment except as provided in said Section 4 of 1980 PA 524.

## GENERAL CONDITIONS

### **GC.7 PAYMENT TO CONTRACTOR (Cont'd.)**

The final progress payment request by the Contractor shall include:

- A. A final invoice in a form satisfactory to the Owner.
- B. A sworn statement certifying that all bills for labor and materials have been paid by the Contractor.
- C. A sworn statement waiving any further claims (other than the final payment, retainage and interest, if any) by the Contractor against the Owner.
- D. A certificate from Contractor's bonding company approving issuance of final payment.

All payments shall take due account of additions to or deductions from the Contract price as herein provided.

The acceptance by the Contractor of payment on the final progress payment request shall be conclusive evidence of Contractor's acceptance and approval of estimates, accounting and deductions, and of full payment by the Owner for all work, labor, materials and services done or furnished hereunder, and a full satisfaction, discharge, release and waiver of all claims and demands of or on behalf of the Contractor, its agents or employees against the Owner arising out of this agreement.

### **GC.8 SUBCONTRACTING**

The Contractor shall not award any work to any subcontractor, supplier, manufacturer or fabricator without prior written approval of the Owner, which approval will not be given until the Contractor submits a written statement to the Owner concerning the proposed award to the subcontractor. Said statement shall contain such information as the Owner may require.

The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other Contract documents insofar as applicable to the work of the subcontractors, and to give the Contractor the same power of terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract documents.

Nothing contained in this Contract shall create any contractual relation between any subcontractor and the Owner.

### **GC.9 ASSIGNMENTS**

The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior liens of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this Contract.

### **GC.10 EXTRAS**

Except as otherwise herein provided, no charge for any extra work or materials will be allowed unless the same has been ordered in writing by the Owner and the price stated in such order.

### **GC.11 CHANGES IN WORK/PAYMENT ADJUSTMENTS**

Adjustments, if any, in the amounts to be paid by the Contractor by reason of changes in, additions to, or deductions from the work to be performed or the materials to be furnished under this Contract, shall be made on the basis of the acceptable unit prices or lump sums submitted by the Contractor covering such changes, additions or deductions.

## GENERAL CONDITIONS

### **GC.11 CHANGES IN WORK/PAYMENT ADJUSTMENTS (Cont'd.)**

Failing an acceptable lump sum or unit price basis for extra work caused by changes or additions, the Contractor may be directed to proceed with extra work on the basis of actual total cost of:

- A. Labor, including foremen (including fringe benefits);
- B. Materials entering permanently into the work;
- C. The ownership or rental cost of construction plant and equipment during the time of use on the extra work at a rate not to exceed AGC rates;
- D. Power and consumable supplies for the operation of power equipment;
- E. Insurance;
- F. Social Security and unemployment contributions.

To the cost of the six items above, there shall be added a fixed fee, to be agreed upon but not to exceed fifteen percent (15%) of the actual cost of the work. The single fee shall be compensation to both the Contractor and/or subcontractor to cover the cost of supervision, overhead, bond, profit and any other general expenses.

Failing an acceptable lump sum or unit price basis for adjustment for any decrease in work caused by changes or deductions, the amount of such adjustment may be determined on a similar basis to that described for extra work, with the Contractor furnishing all pertinent cost data from his/her books and records that may be available and necessary for determination of the amount of adjustment.

All changes in, additions to, or deductions from the work specified shall be made only by written order by the Owner or by an authorized representative of the Owner. No claim for extra work will be allowed, unless ordered in writing as above stated, and the claim therefore presented in writing by the Contractor on or before the fifth (5th) day of the month following that in which the work was done.

### **GC.12 TIME OF MAKING CLAIMS**

If the Contractor shall claim compensation or extension of time for any losses, damages, or delays sustained by reason of the acts of the Owner or its agents or other causes, he/she shall make a written statement of the nature of the loss, damage, or delay sustained to the Owner, within ten (10) days after the sustaining of such loss, damage, or delay. At the time of delivery and as a part of the Contractor's Declaration as hereinafter provided, the Contractor shall file with the Owner an itemized statement of the details and amounts of the loss, damage, or delay, and unless the statement shall be made as thus required, the Contractor's claim for compensation or extension of time shall be forfeited and invalidated, and he/she shall not be entitled to payment or extension of time on account of any such loss, damage or delay.

### **GC.13 MATERIALS, SERVICES, AND FACILITIES**

It is understood that except as otherwise specifically stated in the Contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature and all construction facilities whatsoever necessary to execute, complete, and deliver the work within the specified time.

Any work necessary to be performed after regular working hours, or Sundays and legal holidays, shall be performed without additional expense to the Owner.

### **GC.14 TERMINATION FOR BREACH**

In the event that any of the provisions of this Contract are violated by the Contractor or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the Contract, such notice to contain the reasons for terminating the Contract, and unless within ten (10) days after the serving of such notice upon the Contractor, the violation shall cease and satisfactory arrangements for correction be made, the Contract shall cease and terminate. In the event of a termination of the Contract, the Owner shall immediately serve notice thereof upon the Surety and the Contractor, and the Surety shall have the right to take over and perform the Contract.

## GENERAL CONDITIONS

### **GC.14 TERMINATION FOR BREACH (Cont'd.)**

However, if the Surety does not commence performance thereof within 30 days from the date of mailing said Notice of Termination to such Surety, the Owner may take over the work and prosecute the same to completion by contract for the account and at the expense of the Contractor. The Contractor and his Surety shall be liable to the Owner for any excess cost incurred by the Owner in completing the work, and Owner may take possession of and utilize in completing the work, all materials, appliances and plants as may be on the site of the work and necessary therefore.

### **GC.15 OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF**

The Owner may withhold a sufficient amount of any payment otherwise due to the Contractor to cover:

- A. Payments that may be past due and payable for just claims for labor, materials, or equipment furnished in and about the performance of the work on the project under this Contract.
- B. For defective work not remedied.
- C. For failure of the Contractor to make proper payments to his subcontractors.

The Owner shall disburse and shall have the right to act as agent for the Contractor in disbursing such funds as have been withheld pursuant to this paragraph to the party or parties who are entitled to payment therefrom. Any payment so made by the Owner shall be considered as a payment made under the Contract by the Owner to the Contractor. The Owner will render to the Contractor a proper accounting of all funds disbursed in behalf of the Contractor.

### **GC.16 SUPERINTENDENCE**

The Contractor shall give his/her personal superintendence to the work or have a competent foreman or superintendent, satisfactory to the Owner, on the worksite at all times during work progress, with authority to act for the Contractor.

### **GC.17 NOTICE AND SERVICE THEREOF**

Where in any of the Contract documents there is any provision in respect to the giving of any notice, such notice shall be deemed to have been given; as to the Owner, when written notice shall be delivered to the Owner, or shall have been placed in United States mails with first-class postage pre-paid addressed to the chief executive officer of the Owner at the place where the bids or proposals for the Contract were opened; as to the Contractor, when a written notice shall be delivered to the chief representative of the Contractor, at the site of the project or by mailing such written notice in the United States mails with first-class postage pre-paid addressed to the Contractor at the place stated in the papers prepared by him to accompany his proposal as to the address of his permanent place of businesses; as to the Surety, when a written notice is placed in the United States mails with first-class postage pre-paid addressed to the Surety at the home office of such Surety or to its agent or agents who executed bonds in behalf of such surety.

### **GC.18 COMPLIANCE WITH LAW, APPLICABLE LAW, AND VENUE**

The Contractor shall comply with all applicable Federal, State, County, and Municipal laws, ordinances, rules and regulations.

This contract shall be construed according to the laws of the State of Michigan.

The venue for the bringing of any legal or equitable action under this contract shall be the County of Ingham, of the State of Michigan. In the event that any action is brought under this Contract in Federal Court, the venue for such action shall be the Federal Judicial District of Michigan, Western District, Southern Division.

### **GC.19 PERMITS**

The Township will secure and pay for the Building Permit from the Meridian Township Building Department. All other permits or licenses which may be needed for prosecution of the work are to be obtained by the Contractor at the Contractor's expense.

## GENERAL CONDITIONS

### **GC.20 ROYALTIES AND PATENTS**

The Contractor shall pay for all royalties and patents, and defend all suits or claims for infringement on any patent right, and shall save and hold harmless the Owner from loss on account thereof.

### **GC.21 INSPECTIONS**

The Owner and its representative shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide facilities for such access and for inspection.

The Owner and/or its representative shall have the right to reject materials and workmanship which are defective, or require their correction. Work on the project may be ordered terminated until correction is made. Rejected workmanship shall be satisfactorily corrected, and rejected materials shall be removed from the premises without charge to the Owner. If the Contractor does not correct condemned work and remove rejected materials within a reasonable time, fixed by written notice, the Owner may remove them and charge the expense to the Contractor.

Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall on request promptly furnish all necessary facilities, labor, and materials. If the work is found to be defective in any material respect, due to fault of the Contractor or their subcontractors, they shall defray all the expenses of examination and satisfactory reconstruction. If, however, the work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus 15 percent (15%) shall be allowed the Contractor.

### **GC.22 CORRECTION OF WORK AFTER FINAL PAYMENT**

Neither the final payment nor any provision in the Contract documents nor partial or entire occupancy of the premises by the Owner shall relieve the Contractor of the responsibility for negligence or faulty materials or workmanship within the extent and period provided by law, and, upon written notice, he/she shall repair any defects due thereto and pay for any damage due to other work resulting therefrom, which shall appear within **one year** after date of completion and acceptance.

### **GC.23 PROTECTION OF WORK**

The Contractor shall continuously maintain adequate protection of all his/her work from damage and shall protect the Owner's and adjacent property from injury arising in connection with this Contract, and shall be responsible for all damage and/or injury caused by or arising out of his operations.

### **GC.24 USE OF JOB SITE**

The Contractor shall confine his/her equipment apparatus, the storage of materials and operations of his/her workmen to limits indicated by law, ordinances, permits or directions of the Owner and shall not encumber the premises with his materials.

### **GC.25 "OR EQUAL" CLAUSE**

Whenever in any of the Contract documents an article, material or equipment is defined by describing a proprietary product, or by using the name of a manufacturer or vendor, the term "or equal" if not inserted, shall be implied. The specific article, material or equipment mentioned shall be understood as indicating the type, function, minimum standard of design, efficiency, and quality desired and shall not be construed in a manner so as to exclude manufacturer's products of comparable quality, design and efficiency. The Contractor shall comply with the requirement of the Contract documents relative to the Owner's approval of materials and equipment before they are incorporated in the project.

## GENERAL CONDITIONS

### **GC.26 PLANS AND SPECIFICATIONS**

The Contractor shall keep on the worksite a copy of the drawings and specifications and shall at all times give the Owner access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like affect as if shown or mentioned in both. In case of difference between drawings and specifications the specifications shall govern. In any case of discrepancy in the figures, drawings or specifications, the matter shall be immediately submitted to the Owner, without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his/her own risk and expense.

The Owner shall furnish from time to time such detail drawings and other information as he/she may consider necessary, unless otherwise provided. The Contractor shall keep such drawings at the site of the work.

### **GC.27 OWNER'S RIGHT TO DO WORK**

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the Owner three (3) days after given written notice to the Contractor and his/her Surety may, without prejudice to any other remedy the Owner may have, make good such deficiencies and may deduct the cost thereof from the payment due to the Contractor.

### **GC.28 CLEANING UP**

The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by his/her employees or work, and at the completion of the work he/she shall remove all his/her rubbish from and about the work and all his/her tools, equipment, scaffolding and surplus materials and shall leave his/her work clean and ready for use. In case of dispute, the Owner may remove the rubbish and surplus materials and charge the cost to the several Contractors in proportion to the amounts as shall be determined to be just.

### **GC.29 REPORTS, RECORDS AND DATA**

The Contractor and each of his/her subcontractors shall submit to the Owner such schedules of quantities, costs, progress schedules, payrolls, reports, estimates, records, and other data as the Owner may request concerning work performed or to be performed under this Contract.

### **GC.30 NON-DISCRIMINATION IN EMPLOYMENT**

The Contractor shall adhere to all applicable Federal, State and local laws, ordinances, rules and regulations prohibiting discrimination with regards to employees and applicants for employment. The Contractor, as required by law, shall not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight, marital status, or handicap that is unrelated to the individual's ability to perform the duties of a particular job or position. Breach of this section shall be regarded as a material breach of this Contract.

## GENERAL CONDITIONS

### **GC.31 DEFINITIONS**

The following terms as used in these Contract documents are respectively defined as follows:

- (a) "Contractor" The person, firm or corporation to whom the within Contract is awarded by the Owner and who is subject to the terms hereof.
- (b) "Subcontractor" A person, firm or corporation other than a Contractor, supplying labor and materials or labor for work at the site of the project.
- (c) "Project" The total construction proposed by the Owner to be constructed in part or in whole pursuant to the within Contract.
- (d) "Work on the Project" Work to be performed, including work normally done, at the location of the project.
- (e) "Surety" Any person, firm or corporation that has executed, as surety, the Contractor's performance and/or labor and material bonds securing the attached Contract.
- (f) "Owner" The public body or authority for whom the work is to be performed and as identified in the advertisement and proposal.
- (g) "Engineer" The Director of Public Works and Engineering for the Meridian Township or their authorized representative.

## **GENERAL SPECIFICATIONS**

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## **GENERAL SPECIFICATIONS**

### **GS.1 DEFINITION**

The Contractor shall furnish all materials specified herein, shown on the plans, and required to be incorporated in the work of the Contract. They shall furnish all labor, construction equipment, tools, supplies and facilities required to construct the elements designated by the Contract documents and shall construct all of the designated elements complete and in full conformance with the requirements of these documents. They shall comply with all regulatory provisions of the Contract, General Conditions and the Specifications.

### **GS.2 ELEVATIONS**

All the elevations shown on the plans or referred to herein are in feet above mean sea level datum as established by the United States Geological Survey, unless otherwise noted. The Contractor shall verify all the existing structure locations and elevations at points of connection or possible interference between their work and the existing structures and shall report at once to the Engineer any interferences or discrepancies discovered.

### **GS.3 QUALITY OF MATERIALS AND EQUIPMENT FURNISHED**

All materials and equipment furnished by the Contractor hereunder shall be new and conform to specifications herein.

Materials, supplies, and equipment, whether furnished by the Contractor or the Owner, shall be stored at the site of the work in such manner as not to interfere with traffic, convenience to public or other Contractors on the site or in the vicinity. The Contractor shall be responsible for any damage caused to new or existing structures by reason of such storage or handling of materials, supplies, or equipment.

Flammable materials in portable containers are not to be stored overnight on the site. This includes, but is not limited to, gasoline and diesel fuel for use in construction machinery. Portable containers suitably protected, will be allowed overnight at the site, if confined to permanent tanks which are a normal part of the construction machinery.

### **GS.3 QUALITY OF MATERIALS AND EQUIPMENT FURNISHED (Cont'd.)**

Where the Contractor is required to do work within rights of way under the jurisdiction of governmental bodies, they shall meet the requirements of said governmental bodies for work and storage within their jurisdiction. Such requirements must be met as a minimum requirement, and if the specifications given herein impose further limitation on the work, they shall also be met as the required work standard.

The Contractor's attention is directed to the Ingham County Road Department permit specifications, Section 5. Restoration and Maintenance of Right-Of-Way (e.), for dust control requirements.

### **GS.4 CARE OF EXISTING STRUCTURES**

The Contractor shall be solely responsible for any damage to any existing underground services or structures, or to structures and roadway above ground caused by their operations or those of their subcontractors and suppliers.

### **GS.5 CARE OF NEW STRUCTURES**

The Contractor shall use every reasonable precaution to prevent injury to the new structures being constructed hereunder. They shall be responsible to correct all injury or damage resulting from their operations and/or occurring while the work is under their supervisory control. They shall furnish and install such guards, coverings and other protection as may be needed to ensure that the structures remain undamaged prior to completion of the entire work.

In the event damage does occur to the finished portions of the work, or to the work in progress, the Contractor shall take such corrective action and measures as may be necessary to repair the damage to the satisfaction of the Engineer.

## **GENERAL SPECIFICATIONS**

### **GS.6 EXISTING PUBLIC UTILITIES**

Existing public utilities and underground structures such as pipelines, electric conduits and sewers are shown on the drawings from available information. The Contractor shall, through Miss Dig and any other reasonable measures, verify the exact location of underground utilities for themselves.

The Contractor shall conduct their operations so as not to damage any existing utility whether or not shown on the plans. The Contractor shall correct, at their own expense, any damage or injury that may be caused by them during their operations or damage or injury caused during the operations of their subcontractors or suppliers.

The Contractor shall be responsible for coordinating relocation or repair of existing public and private utilities with the appropriate utility or owner. No extra payment will be allowed for repairs.

If the Contractor desires, or is required by the utility companies, to relocate any power or telephone poles to facilitate their work, any expense encountered from such relocation shall be borne by the Contractor.

### **GS.7 PROTECTION OF TREES AND SHRUBS**

All trees and shrubs encountered along the route of the project shall be protected from damage by the Contractor and saved from harm resulting from any of their operations or operations of their subcontractors and suppliers. Only those trees and shrubs marked for removal on the plans shall be removed. All others will be saved from damage by tunneling or by slightly adjusting the alignment of the project as directed by the Engineer.

### **GS.8 SAFETY PRECAUTIONS**

During the progress of the work, the Contractor shall maintain adequate facilities for the protection and safety of all persons and property. The Contractor and all their subcontractors and suppliers shall comply with the "Construction Safety and Health Standards" as published by the Michigan Occupational Safety and Health Administration, and to all other local, state and federal laws, ordinances, rules and regulations pertaining to safety of persons or property.

### **GS.9 SANITARY REQUIREMENTS**

The Contractor shall provide adequate sanitary facilities for all persons employed on this Project. The sanitary facilities shall conform in every way to the requirements of the "Construction Health and Safety Standards" as published by the Construction Safety Standards Commission of the State of Michigan.

### **GS.10 UTILITIES**

The Contractor shall make all necessary arrangements for the provision of all utility services required to prosecute the work under this Contract. The Contractor shall pay the costs for such connections and service. Where the Owner has utility service at the site, the Contractor may obtain service by connection to the Owner's service, subject to reasonable regulation of its use and satisfactory agreement as to charges. In the event that the Contractor's use of any or all of the Owner's utility services causes the Owner to have an inadequate supply of such service, the Contractor shall disconnect said service and provide their own separate supply at no cost to the Owner.

All utility services shall be inspected by and meet the requirements of the applicable local codes and governmental bodies.

## GENERAL SPECIFICATIONS

### **GS.11 PUMPING AND DRAINAGE**

Adequate pumping and drainage facilities shall be provided and water from whatever sources entering the work during any stage of construction shall be removed promptly and disposed of. All pumping and drainage shall be done with no damage to property or structures and without interference with the right of the public, owners of private property, pedestrians, vehicular traffic, or the work of other contractors. Dewatering shall be done in such a manner that the soil under or adjacent to existing structures shall not be disturbed, removed or displaced.

The overloading or obstructing of existing drainage facilities shall not be permitted, and the Contractor shall be solely responsible for damages caused to such existing drainage facilities by their operations. Additionally, sufficient measures shall be utilized to prevent migration of soil from the site due to any pumping or drainage activities.

### **GS.12 WINTER CONSTRUCTION**

The Engineer has authority over approving the prosecution of work which is proposed to be done during the winter months. The Contractor shall provide adequate weather protection, temporary heating and take any other measures which are necessary to ensure that work performed during the winter months is properly installed and protected against damage from freezing.

Reference is made in Division 4 of the Technical Specifications to the requirements for performing concrete construction and masonry construction in cold weather.

### **GS.13 USE OF FACILITIES BEFORE FINAL COMPLETION**

The Owner shall have the right to make use of, during construction, such portions of completed and acceptably tested facilities as it finds practicable. Such use by the Owner shall not relieve the Contractor from responsibility for any defective work which may be subsequently discovered.

### **GS.14 TEST OF MATERIALS**

All laboratory tests, except as otherwise noted, are to be made at the expense of the Contractor as specified in the Technical Specifications. The Contractor shall furnish satisfactory containers for taking and shipping samples. The name of the laboratory making the test must be submitted by the Contractor to the Engineer for approval.

In all cases "laboratory" refers to an independent laboratory of recognized standing. Acceptance of materials tested shall be based upon compliance with the specifications hereinafter stated for the various items. Where no particular tests are specified, the tests shall be those normally made for determination of the fitness of the particular material. Certificates of tests shall be furnished by the testing laboratory or producer, in triplicate, to the Engineer.

The Owner may require, at its own option and expense, additional mill and/or shop inspection by competent parties. The Owner may require, at its own option and expense, additional field inspection by a qualified inspector.

All materials failing to meet the requirements of the specifications, as determined by test or otherwise, shall be rejected and not used in the work. The cost of testing materials which fail to meet requirements shall be paid by the Contractor. All follow-up testing required shall also be paid by the Contractor. Materials, if rejected at the site, shall be immediately removed therefrom and shall not be used in the work.

## **GENERAL SPECIFICATIONS**

### **GS.15 OTHER WORK**

The Contractor shall cooperate with other Contractors on the site or adjoining work to the end that the entire Project may proceed with the utmost harmony and with a minimum of delay.

Where the work under this Contract is to involve work completed under other contracts or existing facilities or structures, the Contractor shall investigate the condition of such other work or facility to determine its suitability for incorporation into the work of this Contract. Any defect or discrepancy in other work of facility making it unsuitable for proper execution of this Contract shall be immediately reported to the Owner who shall order such adjustments in the work of the project as necessary for proper completion, and unless such defect or discrepancy is reported promptly, the Contractor shall be solely responsible for any adjustments in the work as shall be found necessary to properly complete the work on this project.

### **GS.16 LINES AND GRADES**

General control lines and grades will be established by the Owner. The Contractor shall notify the Engineer no less than 48 hours prior to requiring such control. The Contractor shall furnish all stakes and labor for driving them and rodmen to assist the Owner in this work. The Contractor shall carefully preserve the general control lines and grades established by the Engineer. The cost of replacement of stakes which are damaged or lost shall be borne by the Contractor.

Construction lines and grade shall be transferred and set by the Contractor from the control lines and grades established by the Engineer, and the Contractor shall furnish necessary instruments and competent personnel for performing such work, and they shall be responsible for the accuracy of the transferred line and grade. The Owner will check the work at intervals, as it deems necessary, and the Contractor shall make correction of error, if any, at their own expense, as may be required for the proper function and performance of the structure and installed equipment.

### **GS.17 COMPLETE WORK REQUIRED**

It is the intent of the Contract documents to provide that the Project to be constructed under this Contract will be complete and ready for use. Any minor items not specifically called for on the plans or specifications, but which are clearly necessary, are to be included.

### **GS.18 PROPERTY MARKERS**

The Contractor shall take precautions not to move or destroy any monuments or stakes marking the boundaries of property along or near the work. A licensed surveyor shall reestablish property irons in the proper location if disturbed. Buried property irons shall be extended 1/2" diameter rods. The Contractor shall pay for reestablishment.

### **GS.19 RECORDS AND MEASUREMENTS**

The Contractor shall keep careful records showing measured overall length of underground facilities installed and distances of such from any available line as may be designated by the Engineer. Such records shall be turned over to the Engineer as the work progresses and the records must be accurate and complete.

### **GS.20 GUARANTEE**

The Contractor shall guarantee and shall secure from the manufacturer of each item of manufactured equipment used in the project a written guarantee that all materials and equipment furnished by them shall be first class and free from defects, and the guarantor agrees that they will, upon notice and without delay, make good or repair without expense to the Owner the whole or any part of the equipment furnished by them hereunder, which within a year from date of acceptance of that portion of completed work incorporating such equipment shall fail or develop unfitness for the purpose for which it is intended as a result of any defect in design, material, workmanship, erection or construction.

## PROGRESS CLAUSE

After receiving Notice of Award, start work within 10 days, or on or before the date designated as the starting date in the approved Detailed Progress Schedule. In no case shall any work be commenced prior to receipt of formal notice of award by the Engineer.

All crack treatment and all surface treatments shall occur in 2026, within the specified date and temperature ranges, and be completed by August 1, 2026.

The low bidder for the work covered by this proposal will be required to submit a Progress Schedule to the Engineer within five (5) calendar days of confirmation of the low bid. A detailed Progress Schedule shall then be provided by February 1, 2026.

The approved low bidder(s) for the work covered by this proposal will be required to participate in a pre-construction meeting with Meridian Township and Ingham County Road Department representatives to work out a detailed progress schedule. The meeting will be scheduled after the approved low bidder is determined, at a date mutually acceptable to all parties.

The Engineer will arrange the time and place for the meeting. The named subcontractor(s) for designated and/or specialty Items included in the proposal shall be included with the Progress Schedule if such items materially affect the work schedule.

The Contractor shall be expected to mobilize sufficient labor and equipment to complete the project within the specified time frames. This includes concurrent crews working at different locations as-needed based on the Contractor's progress and schedule.

Liquidated Damages will be assessed according to Section 108.10 of the MDOT 2020 Standard Specifications for Construction. Extension(s) of time will not be granted for:

1. Increases in contract quantities or extra work, unless it can be shown that such increases or extras affect the critical item(s) of work.
2. Labor disputes, unless it can be shown that such disputes are industry wide, and that the delay affects the critical item(s) of work.
3. Delays resulting from work stoppages ordered by the Department for Contractor noncompliance.
4. Delays in delivery of critical materials unless the delay can be shown to be industry wide and the delay affects the critical item(s) of work.

The Progress Schedule shall include, as a minimum, the controlling work items for the completion of the project and the planned dates (or work day for a work day project) that these work items will be controlling operations. As specified in the bidding proposal, the date the project is to be completed shall also be included in the Project Schedule.

If the Bidding Proposal specifies other controlling dates, these shall also be included in the Progress Schedule.

Construction work within the parking lots may occur on weekends, including both Saturday and Sunday. The dates must be worked out with the Township to avoid conflict with public events and public safety operations. A detailed list of dates of scheduling constraints for any work proposed in 2026 is included on page PC-2.

Protect all utility structures (manholes, catch basins, valve boxes, etc.) during all construction operations. Ensure that chip and fog seals are not applied to utility covers; immediately clean any covers that are compromised during construction. Remove any chip seal material that enters a catch basin within seven (7) days of construction, or before the next rain event, whichever is sooner.

**PROGRESS CLAUSE**

**SCHEDULING CONSTRAINTS**

The Township shall be given at least 4 days' notice before each parking lot and cemetery will be treated:

**Municipal Complex**

Available dates to schedule work includes Monday-Friday after 6 p.m. and all day on Saturday and Sunday.

Specific exclusions include:

Recurring Events for 2025

9/17, 10/15, and 11/19	6:30 p.m.-8:30 p.m.	Zoning Board of Appeals Meetings
9/08, 9/22, 10/13, 10/27, and 11/17	6:30 p.m.-8:30 p.m.	Planning Commission Meetings
9/02, 9/16, 10/7, 10/21, 11/6, and 11/18	6 p.m.-8 p.m.	Township Board Meetings
9/03, 10/1, and 11/5	7 p.m.-9 p.m.	Environmental Commission Meetings
9/9, 10/14, and 11/11	5:30 p.m.-7 p.m.	Lake Lansing Advisory Committee Meetings
9/10, 10/8, and 11/12	6 p.m.-8 p.m.	Community Resources Commission Meetings
9/9 and 11/18	4:30 p.m.-5:30 p.m.	Park Commission Meetings

One-Time Events for 2025

9/24	All Day	Communications Commission Meeting
10/4	All Day	Heritage Festival

**Service Center**

Available dates to schedule work includes Monday-Friday after 6 p.m. and all day on Saturday and Sunday.

Specific exclusions include:

Recurring Events for 2025

9/10, 10/8, and 11/12	6 p.m.-8 p.m.	Land Preservation Advisory Board Meeting
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One-Time Events for 2025

10/14	4:30 p.m.-5:30 p.m.	Park Commission Meeting
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**Okemos Library**

Work may take place on Sundays between 6 a.m. and 11 a.m. The library opens at Noon on Sundays. Therefore, any products that are applied need to cure before 11:45 a.m.

**Glendale Cemetery**

Work shall NOT take place on Mondays. The Owner and Contractor will schedule one day when the Cemetery will be closed for this work to occur.

**Central Fire Station**

Available dates to schedule work includes Monday-Friday after 6 p.m. and all day on Saturday and Sunday.

Specific exclusions include:

Recurring Events for 2025

9/17 and 10/15	6 p.m.-8 p.m.	Corridor Improvement Authority Meeting
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**North and South Fire Stations**

Available dates to schedule work includes Monday-Friday after 6 p.m. and all day on Saturday and Sunday.

**INGHAM COUNTY ROAD DEPARTMENT  
SUPPLEMENTARY PERMIT SPECIFICATIONS  
FOR UTILITY INSTALLATIONS**

As referred to herein:

“Board” shall denote the Board of Ingham County Road Commissioners or its duly appointed agents.

“Utility” shall denote any cable, conduit, pipe, structure, or similar facility installed within the road right-of-way.

“Contractor” shall denote an individual or legal entity contracted to perform a proposed utility’s installation.

1. GENERAL

- a. All proposed utility installations within county road right-of-way shall be reviewed and approved by means of a permit issued by the Board, regardless of the type, size, location, or installation method. The Board shall have absolute authority over any work to be performed within the county road right-of-way and shall exercise said authority at its discretion. The Board reserves the right to impose, at its discretion, cash bond requirements for any permit granted. The cash bond may be used to reimburse the Board for work not performed by the Contractor, restoration of roadways caused by Contractor activities, costs associated with detour signing, and other reasonable expenses incurred by the road commission.
- b. The Board shall have the authority to direct any work or stop any work, permitted or not permitted, that in its opinion is not being performed to the Board’s satisfaction. All costs for corrective work or work stoppages shall be the responsibility of the Contractor.
- c. To issue a utility installation permit, the applicant must provide drawings that illustrate all the work to be performed, the method of installation, and materials to be used. If road or lane closures are proposed, along with the information required below, the approximate start and completion date shall be provided on the permit application.

2. ROAD CROSSINGS

- a. All proposed utility crossings of county roads shall be performed using methods other than open cut methods unless otherwise permitted by the Board. The following are general specifications or provisions to be followed when installing utilities using methods other than open cut methods.
  1. The methods of utility installation described in this section include, but are not limited to, tunneling, bore and jacking, and directional boring. These methods represent preferred installation methods and are employed to allow installation of utility road crossings without closing the road to through traffic or damaging the existing road pavement. The Board, at its discretion, may require that a particular installation method be employed by the Contractor.
  2. When a utility is to be installed by tunneling methods, the tunnel shall be adequately sheeted and shored to prevent the tunnel walls from collapsing and the road pavement from settling or cracking.
  3. When a utility is to be installed by bore and jacking methods, a casing pipe will be required with the utility to be installed inside the casing pipe. The annular space between the utility and the casing pipe shall be filled and sealed using pressure grouting or other approved methods.
  4. All shafts or pits not sheeted and shored shall be located, at least, 10 feet off the edge of road pavement in rural sections and 6 feet behind the back of curb in urban sections.

5. If any settlement or other changes in grade occur in the vicinity of the utility crossing within one year of the work, upon notification the road shall be immediately reconstructed to the proper grade at the Contractor's expense. In addition, damage to the roadway embankment, shoulder, and pavement shall also be immediately repaired to the Board's satisfaction.
  6. Unless otherwise approved by the Board, all utilities shall have a minimum cover of 4 feet below the road surface. Where approved construction plans indicate cover greater than 4 feet, the plan depth shall govern.
  7. All costs for maintaining traffic, including flagging operations, shall be the responsibility of the permitted party. Traffic control shall be erected in accordance with the current edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) or as directed by the Board. Modifications to traffic control measures may be ordered by the Board, at its discretion, and the cost of any modifications shall be the responsibility of the Contractor. Once work is completed for the day, traffic control signs which are not appropriate shall be covered or removed so that the motoring public is made aware of the road's condition and how to safely traverse through the work zone.
  8. If, in the opinion of the Board, traffic conditions warrant suspension of utility installation operations and restoration of a road's full capacity, the Contractor shall comply immediately. All costs associated with such an action shall be borne by the Contractor.
- b. If the Board permits a proposed utility crossing of a county road using open cut methods, the following general specifications or provisions shall be followed:
1. Large projects that involve many utility crossings and or may extend for several months shall be completed in "sections". The intent being, that once a particular crossing, of many, is completed or a 1/4 mile "section" of a multi-mile utility has been installed, the Contractor shall restore the road and right-of-way to the satisfaction of the Board before moving on to the next crossing or section of utility installation.
  2. In general, open cut utility crossings will not be allowed during winter months.
  3. Open cut utility crossings shall be performed during off-peak traffic hours unless specifically permitted by the Board. Off-peak hours vary, but they are typically between the hours of 9:00 am to 3:00 pm.
  4. Unless otherwise approved by the Board, all utilities shall have a minimum cover of 4 feet between the utility and the road surface. Where approved construction plans indicate cover greater than 4 feet, the plan depth shall govern.
  5. All costs for maintaining traffic, including flagging operations, shall be the responsibility of the permitted party. For road closures intended to last one or two days, the contractor will submit a deposit with the permit application, the Ingham County Road Department will set up, maintain, and dismantle the road closure, the actual costs incurred will be subtracted from the deposit and the remainder returned to the contractor. If incurred costs exceed the deposit, the contractor will be billed for the overage. For road closures intended to last an extended period of time, the Contractor shall set up, maintain, and dismantle the closure per the approved detour plan. Regardless, traffic control shall be erected in accordance with the current edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) or as directed by the Board. All traffic control schemes are to be approved prior to the beginning of work. Modifications to traffic control measures may be ordered by the Board, at its sole discretion, and the cost of any modifications shall be the responsibility of the Contractor.

6. If a proposed road closure is not permitted, at least one lane of traffic shall be maintained with proper flagging operations in effect throughout the work day. Road cuts shall be backfilled, flush with the driving surface at the end of each working day, appropriately signed, and opened for overnight traffic. Depending on traffic volumes and other conditions, the Board may require the permit applicant to provide by-pass lanes (either paved or unpaved) to maintain traffic.
7. Maintenance of open cut work zones is the responsibility of the Contractor and shall be in effect 24 hours a day for the duration of the work.

### 3. PAVEMENT AND GRAVEL SURFACE REMOVAL AND REPLACEMENT

- a. All proposed open cut utility installations or existing utility installations needing corrective reconstruction shall conform to the following specifications or provisions:
  1. All pavement to be removed shall be saw cut, full depth, to its removal limit and carefully removed as to not damage the saw cut edge. All damaged edges shall be subsequently saw cut and removed back to sound pavement. The pavement removal limit shall extend, at least, 1 foot beyond both sides of the open cut trench.
  2. Both bituminous and concrete pavement removal shall have a minimum width of 6 feet, be perpendicular to the centerline of the road, and extend the full width of existing lanes. Diagonal pavement removal and replacements will not be allowed unless approved by the Board.
  3. Concrete pavement removal limits are to utilize existing joints whenever possible. The minimum distance between a concrete replacement slab and an existing pavement joint shall be 5.5 feet unless approved by the Board. The Contractor shall verify concrete pavement removal limits with the Board prior to pavement replacement.
- b. Pavement replacement and gravel road surface restoration shall conform to the following specifications or provisions:
  1. Aggregate base material under pavement shall be a minimum of 8-inches thick and meet MDOT 21AA or 22A aggregate specifications, as determined by the Board. The proposed aggregate base material shall conform to the characteristics of the insitu aggregate base material as much as possible. Bituminous pavement replacement shall either match the existing pavement thickness or be 5-inches thick, whichever is greater, and utilize hot mix asphalt materials that meet or exceed MDOT 13A bituminous mix specifications. Concrete pavement replacement shall either match the existing pavement thickness or be 7-inches thick, whichever is greater, and utilize 4500 psi strength concrete that meets or exceeds MDOT specifications. Concrete pavement patch size and geometry shall be determined by the Board and shall be doweled into adjacent concrete pavement. Aggregate surfaced roads and shoulder material shall be a minimum of 6-inches thick and meet MDOT 22A or 23A aggregate specifications. Aggregate base shall be compacted to 95% of its maximum density, hot mix asphalt is to be compacted to 97% of its maximum density, and aggregate shoulder material shall be sufficiently graded and compacted to prevent standing water and erosion problems.
  2. The finished driving surface shall be installed to conform to the vertical profile of the existing roadway and not exhibit “dips” or “humps” that are noticeable to the motoring public. “Mounding” over excavations to allow for future settlement will not be permitted. If settling or upheavals occur at pavement replacement locations, the Contractor may be required to remedy the situation. Failure to do so may result in a stoppage of subsequent work or denial of subsequent permits.

3. Bituminous pavements shall not be replaced using lifts that exceed 250 lbs/syd (2 1/4 inches thick). A tack coat emulsion shall be applied between successive lifts of bituminous paving.
4. Replacement concrete pavement shall be doweled into adjacent pavement using 18-inch long by #9 and #5 epoxy coated deformed bars. The dowels shall be drilled, inserted 9-inches, and grouted in accordance with current MDOT specifications. Dowels installed along the pavement edge, parallel to the lane lines (#9), shall be spaced at 18-inches on center. Dowels installed along the pavement edge, perpendicular to the lane lines (#5), shall be spaced at 24-inches on center.
5. Composite pavements, such as asphalt overlaying concrete pavement shall be replaced to match the existing pavement structure using the same provisions described above. If approved by the Board, composite pavements may be replaced with full depth asphalt equal in thickness to the existing pavement structure.

4. BACKFILLING AND COMPACTION

- a. All utility trenches, holes, bore pits, and other excavations within the county road right-of-way shall be backfilled with granular material that meets or exceeds MDOT class II material. Excavation backfill shall be placed and compacted to 95% of its maximum density in successive layers that are no more than 12-inches thick. In-place backfill density shall be verified and reported to the Board by an independent testing laboratory. The cost of said verification and reporting shall be the responsibility of the Contractor. The above backfilling and compaction provisions shall apply to that portion of the subgrade that is within the influence of the roadway pavement structure, including the shoulder. Refer to MDOT Trench Detail "B". Failure to meet said backfill and compaction requirements may result in a stoppage of subsequent work, replacement of deficient backfill, and denial of subsequent permits.
- b. All under drain systems and similar facilities destroyed or disturbed due to the utility installation shall be rebuilt using similar materials and in a manner that completely restores their function.

5. RESTORATION AND MAINTENANCE OF RIGHT-OF-WAY

- a. All drainage courses shall be restored with topsoil, seed, and mulch immediately after completion of utility installations. The Contractor shall employ and maintain soil erosion and sedimentation measures to stabilize all disturbed grounds per the Ingham County Drain Commissioner's (ICDC) standards. Disturbed drainage courses or backslopes that have steep grades, as determined by the Board, shall be stabilized with mulch blanket, rock check dams, or both. The Contractor shall follow ICDC and Michigan Department of Environmental Quality (MDEQ) Best Management Practices (BMS) for soil erosion and sedimentation control.
- b. All existing storm sewer, drainage structures, culverts, and similar facilities shall be protected during utility installation. If permitted by the Board and the structure owner, the Contractor may remove and replace said facilities if needed for utility installation. All replacement facilities shall be in accordance with current agency (owner) requirements for materials and construction standards, regardless of existing condition. Any damaged facilities left in place during utility installation shall be fully repaired to the satisfaction of the Board, or be replaced in accordance with current agency (owner) requirements. It is the responsibility of the contractor to research and obtain permission from the appropriate "owner" for the proposed work.
- c. All traffic signs requiring replacement or that need to be relocated due to utility installation shall be replaced or relocated by Ingham County Road Department personnel and their costs reimbursed by the Contractor.

- d. Encroachments (private installations) within the road right-of-way, such as fences, mailboxes, and hedges that must be removed due to utility installation may be replaced or re-installed, within the right-of-way, upon approval of the Board. In general, removed objects, other than mailboxes, cannot be re-installed within the road right-of-way. Please be aware that the Ingham County Road Department will not become involved with negotiations between the utility owner and property owners relative to encroachment removal and replacement, but the Board will ultimately approve or disapprove whether replacements are allowed, and their subsequent locations.
- e. The Contractor shall maintain a safe work area, free from dust and free from dirt and mud being tracked onto the adjacent roadway. The Contractor shall make arrangements to have paved roads swept and gravel roads treated with dust palliative for the duration of installation activities. If requested by the Board, the Contractor shall sweep roads or apply dust palliative within 4 hours of the request. Failure to do so may result in a stoppage of work.

6. MANHOLE CASTING, VALVE, AND FIRE HYDRANT LOCATIONS

- a. Permitted utility manhole structures and vaults shall conform to the following specifications or provisions:
  - 1. In general, proposed manhole castings and valve boxes shall be located outside the paved road surface and somewhere other than in the roadside ditch. If approved by the Board, manhole castings and valve boxes installed within a paved surface or parkway shall be located flush with the existing surface, manhole castings and valve boxes installed within the traveled portion of a gravel road shall be located 6-inches below the road's surface, and manhole castings and valve boxes installed in a ditch bottom shall be located, at least 12-inches below the ditch bottom. The contractor may be required to re-route the ditch around manhole castings and valve boxes, at the discretion of the Board.
  - 2. Manhole castings and valve boxes shall not protrude from the backslope of the road or above the normal ground contour by more than 6-inches. The contractor may be required to adjust a manhole casting or regrade the area, to the Board's satisfaction, at their expense.
  - 3. Proposed manhole casting and valve box type shall be approved by the Board prior to the start of installation. If at any future time it is determined that the type of casting or valve box must be changed due to road reconstruction, widening, resurfacing, etc., the utility owner agrees, by performing under permit, to bear all costs for the change
  - 4. Proposed fire hydrant installations shall be approved by the Board prior to the start of installation. If at any future time it is determined that the fire hydrant must be moved due to road reconstruction, widening, resurfacing, etc., the utility owner agrees, by performing under permit, to bear all costs for moving the fire hydrant.

7. TREE REMOVAL, TRIMMING, AND TUNNELING

- a. All tree removals, trimming, and tunneling within county road right-of-way shall be reviewed and approved by means of permit by the Board of Ingham County Road Commissioners. Any trees, regardless of their location, that cannot be protected due to utility installation or are in eminent danger of dying as a result of utility installation shall be removed by the Contractor. All stumps shall either be removed or ground flush with the average ground surface in the vicinity of the stump.
- b. Proposed tree removals, trimming, and tunneling shall be sufficiently illustrated on construction plans along with the tree's species and size so that a proper review and site visit can be performed.
- c. Trees that are located close to proposed utility installations, in the county road right-of-way, and reside within maintained lawn areas shall be protected from above ground and below ground

damage. Any trees, as described above, that are to be removed due to utility installation, shall only be removed after the Contractor has given notice to the adjacent property of the intent to remove the tree(s) and offered replacement trees. In general, the Board will require the Contractor to replace “lawn” trees removed due to utility installation. Replacement trees shall be planted outside the road right-of-way or at locations approved by the Board.

- d. All stumps, logs, limbs, and litter shall become the property of the utility installation contractor and be properly disposed of. The adjacent property owners have the right of ownership of wood felled within the right-of-way, therefore the Contractor shall offer to leave the felled wood for the property owners use. Wood requested by the property owner shall be left outside of the county road right-of-way.

## 8. CONDUCT OF OPERATIONS

- a. The Contractor shall control and ensure that trucking operations related to utility installations adhere to the current Michigan Vehicle Code and restrictions imposed by the Board, including spring weight restrictions. Failure to do so will result in the truck operator being ticketed and may also result in a stoppage of work.
- b. Contractors, permitted or not permitted, who conduct utility installation operations in a manner detrimental to the Board’s statutory obligation to maintain county roads reasonably safe for the public will be required to cease utility installation activities and correct all detrimental conditions immediately. If deemed necessary by the Board, cash deposits to cover the cost of a full-time ICRD inspector to ensure proper operations may have to be submitted to the Board before utility installation continues.
- d. Dewatering water disposed of by the Contractor within the county road right-of-way must be approved by the Board in advance of any discharge and conform to Michigan Department of Environmental Quality (MDEQ) Best Management Practices (BMS) for soil erosion and sedimentation control. In general, discharge of water into roadside ditches for more than a couple of hours will not be allowed. If the Board deems it necessary that dewatering activities be modified or discontinued altogether, the Contractor shall comply and devise another method to complete their work. The Contractor, by performing under permit, accepts the responsibility of restoring the road right-of-way and affected drainage system to the satisfaction of the Board and the Ingham County Drain Commissioner after dewatering system removal.
- e. The Contractor shall store construction materials as far off the road so that the materials do not pose a hazard nor block the vision of the traveling public and those seeking egress and ingress to private property. Only materials to be installed immediately can be stored within the right-of-way. All other materials and equipment shall be stored outside of the right-of-way.
- e. For location of underground utilities, the Contractor shall call Miss Dig at 1-800-482-7171 a minimum of three working days prior to utility installation.

Rev. 01-06



## INGHAM COUNTY ROAD COMMISSION RIGHT-OF-WAY APPLICATION

Reset Form

Print Form

Application Number \_\_\_\_\_

Receipt Number \_\_\_\_\_

Upon approval by the Board of County Road Commissioners of Ingham County, Michigan, this permit allows the applicant to construct, operate, maintain, use and/or remove within a county road right-of-way. If the applicant hires a contractor to perform the work, BOTH must complete this form and BOTH assume responsibility for the provisions of this Application and Permit.

APPLICANT	CONTRACTOR
NAME: _____	NAME: _____
MAILING ADDRESS: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	MAILING ADDRESS: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>
TELEPHONE NO.: _____ FAX NO.: _____	TELEPHONE NO.: _____ FAX NO.: _____
SIGNATURE: _____	SIGNATURE: _____
TITLE: _____	TITLE: _____

FINANCIAL REQUIREMENTS	ATTACHMENTS REQUIRED		
PERMIT FEE: _____	PLANS & SPECIFICATIONS:	<input type="checkbox"/> YES	<input type="checkbox"/> NO
OTHER: _____	PROOF OF INSURANCE:	<input type="checkbox"/> YES	<input type="checkbox"/> NO
CASH BOND: _____	PROOF OF INSURANCE:	<input type="checkbox"/> YES	<input type="checkbox"/> NO
DEPOSIT: _____	AMOUNT OF CASH BOND: _____		
TO BE BILLED: _____	OTHER: _____		
DATED: _____			

### APPLICATION

Applicant and/or contractor request a Permit and agrees to the terms of this Permit for the purpose indicated on the attached plans and specifications at the following location:

NAME OF ROAD \_\_\_\_\_ between \_\_\_\_\_ ROAD and \_\_\_\_\_ ROAD

SECTION(S) \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ INGHAM COUNTY, MICHIGAN

For a period beginning \_\_\_\_\_ and ending \_\_\_\_\_

REMARKS/ROUTING:

INGHAM COUNTY ROAD COMMISSION  
301 Bush Street, P.O. Box 38, Mason, Michigan 48854  
Phone: (517) 676-9722 Fax: (517) 676-5914  
Website: <http://www.inghamcrc.org>

RECOMMENDED FOR ISSUANCE:

\_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

RIGHT-OF-WAY PERMIT RULES AND REGULATIONS

- 1. SPECIFICATIONS: All work performed under this permit must be in accordance with the approved plans, specifications, maps, and statements filed with the Road Commission. The work must comply with the Road Commission's current requirements and specifications and applicable MDOT specifications.
- 2. FEES & COSTS: The permit applicant shall be responsible for all fees and costs incurred by the Road Commission in connection with this permit and shall deposit estimated fees and costs, as determined by the Road Commission, at the time the permit is issued.
- 3. CASH BOND: The permit applicant shall provide a cash deposit, certified check, cashier's check, money order, or irrevocable letter of credit drawn on a solvent bank for an amount acceptable to the Road Commission at the time the permit is issued.
- 4. INSURANCE: The permit applicant shall furnish proof of liability and property damage insurance in the amount stated below naming the Road Commission as an insured:

General liability - each occurrence .....	\$500,000.00
Automobile liability - each accident .....	\$1,000,000.00
Property Damage liability - each accident .....	\$1,000,000.00
Single Limit policy .....	\$1,000,000.00

Said insurance shall be effect for a period not less than the term of this permit and shall provide evidence that it cannot be cancelled without ten (10) days advanced written notice by certified mail with return receipt required to the Road Commission.

- 5. INDEMNIFICATION: The Permit Holder shall hold harmless and indemnify, and keep indemnified, the Road Commission, its officers and employees from all claims, suits, and judgments to which the Road Commission, its officers and employees may be subject. The Permit Holder shall also hold harmless and indemnify, and keep indemnified, the Road Commission, it officers and employees for all costs and actual attorney fees which may be incurred on account of injury to persons or damage to property, including property of the Road Commission, whether due to negligence of the Permit Holder or the joint negligence of the Permit Holder and the Road Commission, arising out of the work under this permit, or in connection with the work not authorized by this permit, or resulting from failure to comply with the terms of this permit, or arising out of the continued existence of the work product which is the subject of this permit.
- 6. MISS DIG: The Permit Holder must comply with the requirements of Act 53 of Public Acts of 1974, as amended. CALL MISS DIG AT (800) 482- 7171 AT LEAST TWO (2) FULL WORKING DAYS, BUT NOT MORE THAN TWENTY ONE (21) CALENDAR DAYS BEFORE THE START OF WORK. The Permit Holder assumes all responsibility for damages to or interruption of underground utilities.
- 7. NOTIFICATION OF START OF WORK AND COMPLETION OF WORK: The Permit Holder must notify the Road Commission at least 48 hours before starting work and must notify the Road Commission when work is completed.
- 8. TIME RESTRICTIONS: All permitted work must be performed Mondays through Fridays between 8:00 AM and 5:00 PM unless written approval is obtained from the Road Commission to work outside of those hours. The permitted work shall be performed during the period of time described on the permit unless an extension is granted by the Road Commission. Additional permit fees may be required to consider a time extension.
- 9. SAFETY: The Permit Holder agrees to work under this permit in a safe manner and to keep the road right-of-way affected by this permitted activity in a safe condition until the work is completed and accepted by the Road Commission. All work zone signing and flagging operations shall comply with the Michigan Manual of Uniform Traffic Control Devices and Road Commission standards.
- 10. RESTORATION AND REPAIR OF ROAD: The Permit Holder agrees to restore the road and right-of-way to a condition equal to or better, as determined by the Road Commission, than its condition before the work began. The Permit Holder further agrees to repair any subsequent damage, as determined by the Road Commission, to the road and right-of-way which is caused by the facility, or its maintenance, installed under this permit.
- 11. LIMITATION OF PERMIT: This permit does not relieve the Permit Holder from complying with regulations of other agencies or applicable laws. The Permit Holder is responsible for obtaining additional permits or releases which may be required in connection with this work from governmental agencies, public utilities, corporations, and individuals, including property owners. Permission may be required from adjoining property owners.
- 12. VIOLATION AND REVOCATION OF PERMIT: Permits are automatically invalidated by the violation of any of the conditions specified by the terms of the permit or by false information given on the application. Failure to comply with the conditions of this permit may be just cause for the immediate suspension or revocation of any or all permits and cause for the Road Commission to use bond money to restore the road and right-of-way to its satisfaction. This permit may be suspended or revoked at will. The Road Commission may require the Permit Holder to surrender this permit and alter or relocate its facilities within the right-of-way, or remove its facilities from the road right-of-way, at the permit holder's expense. The Road Commission reserves the right to remove facilities from the road right-of-way and recoup its costs from the Permit Holder.
- 13. ASSIGNABILITY: This permit may not be assigned without the prior written approval of the Road Commission. If approval is granted, the assignor shall remain liable and the assignee shall be bound by all the terms and conditions of the permit.
- 14. This permit is subject to supplemental specifications, on file with the Road Commission, and Act 200 of Public Acts of 1969, as amended.

**Section 150. MOBILIZATION**

**150.01. Description.** This work consists of preparatory work and operations including, but not limited to, the following:

- A. The movement of personnel, equipment, supplies, and incidentals to the project site;
- B. The establishment of the Contractor's offices, buildings, and other facilities to support work on the project including associated job site posters;
- C. Other work and operations the Contractor must perform;
- D. Expenses incurred, before beginning work on pay items at the project site; and
- E. Pre-construction costs, exclusive of bidding costs, that are necessary direct costs to the project rather than directly attributable to other pay items under the contract.

**150.02. Materials.** None specified.

**150.03. Construction.** None specified.

**150.04. Measurement and Payment.**

<b>Pay Item</b>	<b>Pay Unit</b>
Mobilization, Max __ .....	Lump Sum

The Department will specify the maximum bid amount for **Mobilization, Max \_\_** in the proposal. If the Contractor submits a bid amount for **Mobilization, Max \_\_** that exceeds the maximum bid amount, the Department will use the maximum bid amount as the Contractor's lump sum bid amount and will correct the total bid amount to reflect this maximum bid amount.

The Department will pay the Contractor for **Mobilization, Max \_\_** in accordance with Table 150-1. The percent of the original contract amount earned is exclusive of the **Mobilization, Max \_\_** pay item.

150.04

<b>Percent of Original Contract Amount Earned</b>	<b>Percent of Bid Amount for Mobilization, Max ___</b>
5	50
10	75
25	100

When the percentage of the original contract amount earned is less than 5% on the partial payment schedule, the Department will pay the Contractor for costs of project specific bonding, insurances, and permits when proof of payment is received and accepted by the Engineer. The Engineer will then subtract these costs from the bid amount for **Mobilization, Max \_\_\_**.

The total sum of all payments for this item will not exceed the bid amount for **Mobilization, Max \_\_\_**, regardless of the following conditions:

- A. The Contractor shut down the work on the project for any reason;
- B. The Contractor moved equipment away from the project and then back again; or
- C. The Department added additional quantities or items of work to the contract.

If the contract does not contain a **Mobilization, Max \_\_\_** pay item, the unit prices for other items of work will include the costs of mobilization.

MERIDIAN TOWNSHIP

SPECIAL PROVISION  
FOR  
**TRAFFIC CONTROL**

MSG:ASML

1 of 1

08-07-2024

**a. Description.** Except as otherwise specified herein, maintain full traffic at all times on all adjacent public roads, and to all private establishments in accordance with Sections 104 and 812 of the MDOT 2020 Standard Specifications for Construction, and the relevant MMUTCD Typical Applications (see Appendix C).

**b. Materials.** Furnish and place traffic control devices as shown in the following **MMUTCD Typical Applications** and as modified herein:

- 6H-13 Temporary Road Closure
- 6H-17 Mobile Operations on Two-Lane Road
- 6H-18 Lane Closure on Minor Street
- 6H-28 Sidewalk Detour or Diversion

Distances between construction warning, regulatory, and guide signs (D) shown on the Typical Applications are approximate and may require field adjustment.

Use Applications 6H-17 and 6H-18 for construction operations on roadways. Use Application 6H-13 for construction operations along non-motorized trails.

**c. Construction.** Execute sealing work on each road one lane at a time. The Contractor is responsible for maintaining local traffic throughout the duration of the project, including directing vehicles within the work zone at road approaches and residential driveways.

If the Application 6H-13 is insufficient to prevent disruption of the sealing operation or provide for the safety of trail users, install Type III barricades at each end of the trail with "Sidewalk Closed" and "Detour" signs to guide users around the construction area, as shown in Application 6H-28.

Use flagging and signage as required to safely maintain traffic in and around parking lots during sealing operations.

**d. Measurement and Payment.** Payment for ***Traffic Control*** will be made at the contract unit price on the following schedule: 25% after first use of traffic control measures; 50%, once 50% of the original contract price is completed; 75%, once 75% of the original contract price is completed; 100%, once 100% of the original contract price, or the project scope, is completed.

<b>Pay Item</b>	<b>Pay Unit</b>
Traffic Control.....	LSum

MERIDIAN TOWNSHIP

SPECIAL PROVISION  
FOR  
**CRACK TREATMENT**

MSG:ASML

08-07-2024

**a. Description.** This work consists of cleaning, sealing, and leveling longitudinal construction joints, transverse joints, longitudinal and transverse cracks, and spalls in Hot Mix Asphalt (HMA) pavement, including maintaining traffic, on local roads in accordance with Sections 150 and 502 of the MDOT 2020 Standard Specifications for Construction (SSC), and as described herein.

Additionally, all work performed in the public road right-of-way in Meridian Township is done under review and approval of the Ingham County Road Department (ICRD). The Contractor is responsible for obtaining any ICRD permits.

**b. Materials.**

**Hot-Poured Sealant.** Provide material listed in the following Table 914-1, meeting the requirements of *ASTM D 6690, Type IV*, or an approved equal, as determined by the Engineer:

<b>Table 914-1 Hot-Poured Sealant</b>	
<b>Product Name</b>	<b>Manufacturer</b>
MACSEAL 6690-4 MOD	McAsphalt, Ind.
Roadsaver 522	Crafco
Deery 101 ELT	Crafco
Elastoflex 72	Maxwell Products
Dura-Fill 3725	P & T Products
3405-M Michigan	W.R. Meadows

Legibly mark material containers with a non-fading, weather-resistant ink or paint. Include the manufacturer's name or trade name, batch number, recommended pouring temperature, and the maximum safe heating temperature on the label.

Where necessary, use a backer rod meeting the requirements of *ASTM D 5249, Type 1*. Individual locations for use to be approved by the Engineer.

**Asphalt Repair Mastic.** Provide a hot applied, pre-packaged, pourable, aggregate filled, polymer modified asphalt repair mastic for HMA pavement repairs. Provide material listed in the following table, or an approved equal, as determined by the Engineer:

<b>Asphalt Repair Mastic</b>	
<b>Product Name</b>	<b>Manufacturer</b>
Deery Level & Go Repair Mastic	Crafco
Mastic One	Crafco
SAMIscreed	FPT Infrastructure

Use traffic control devices as described in the Michigan Manual of Uniform Traffic Control Devices (MMUTCD, see **Appendix C**). There is no fee or bond associated with the ICRD permits. However, ICRD must be named as an additionally insured on the Contractor's insurance policies.

## CRACK TREATMENT

### c. Construction.

**A. Equipment.** Provide equipment, in accordance with Section 107 and this subsection, capable of meeting the requirements of this subsection.

#### **(1) Crack Preparation.**

**(a) Compressed Air System.** Provide and use a compressed air system that produces a continuous, high-volume, high-pressure stream of clean, dry air to prepare cracks. Equip the air compressor with a moisture separator to remove oil and water from the air supply. Provide a compressor capable of producing at least 100 psi at a continuous air flow of 150 cfm.

#### **(2) Hot-Poured Sealant.**

**(a) Melter Applicator.** Provide a melter applicator consisting of a boiler kettle equipped with pressure pump, hose, and applicator wand. Equip the unit with the following:

- i)* Shutoff control on the applicator hose;
- ii)* Mechanical full-sweep agitator in the kettle to provide continuous blending;
- iii)* Thermometers to monitor the material temperature and the heating oil temperature; and
- iv)* Thermostatic controls that allow the operator to regulate material temperature up to 425°F.

**(b) Applicator Wand.** Apply the material using either a wand followed by a V-shaped or U-shaped squeegee or a round application head with concave underside.

#### **(3) Asphalt Repair Mastic.**

**(b) Mastic Mixer.** Heat the asphalt repair mastic in a thermostatically controlled hot oil jacketed mastic mixer equipped with a full sweep horizontal agitator that is able to maintain a uniformly mixed product. The mixer must have an effective means of dispensing the thoroughly mixed mastic material.

**B. Pre-Production Meeting.** Before beginning work, conduct an onsite pre-production meeting with the Engineer to discuss the following:

- i)* Contractor's detailed work schedule;
- ii)* Traffic Control plan;
- iii)* Required project documentation;
- iv)* Inspection of the condition of equipment;
- v)* The Contractor's Quality Control (QC) Plan; and
- vi)* The Contractor's designated Authorized Representative.

**C. Surface Preparation and Installation.** Clean and dry cracks using clean, dry, oil free compressed air at 90 pounds per square inch (psi) minimum and other tools to remove loose dirt, vegetation, and deleterious material. Clean cracks no more than 10 minutes before filling. Ensure the surfaces of the pavement are completely dry and clean at the time of application.

Artificial heat may be used to warm the substrate surface provided it does not apply a direct flame to the substrate surface. Do not overheat the pavement surfaces. If warming the pavement area, place and finish asphalt repair mastic within 10 minutes.

**D. Weather Limitations.** Place material at air temperatures from 45°F to 85°F. Do not place material if moisture is present in the crack.

### **E. Crack Treatment Methods.**

**(1) Hot-Poured Sealant.** Apply sealant material to clean, dry cracks and joints using the overband method. Apply overband three (3) inches wide, no greater than 1/8" thick. Fill visible cracks and joints less than 1-1/4" wide.

## CRACK TREATMENT

**Hot-Poured Sealant.** (cont'd.) In addition to cracks in the HMA pavement, seal the joints between the pavement and all utility cuts and utility structures, including, but not limited to, all drainage structure covers, valve boxes, and utility vaults. Further, on streets with curb, seal the joint between the pavement and the gutter.

**(2) Asphalt Repair Mastic.** Apply the mastic to the joint, crack, or spall from the bottom up in lifts appropriate to the specific application. Mastic should be applied to cracks and joints that are greater than or equal to 1- $\frac{1}{4}$ " wide. If multiple lifts are required, product shall be installed in layers less than or equal to 2- $\frac{1}{2}$ ", with cooling to 200 degrees F maximum before applying the next layer. Fill the uppermost  $\frac{1}{2}$ " to 1" with the final lift.

Ensure the Contractor is trained and approved by the mastic manufacturer.

Heat and uniformly mix the asphalt repair mastic to the appropriate installation temperature using a mastic mixer. The product application temperature range is 350-400 degrees F, verify with specific manufacturer's requirements. At application temperature, material is a thick, grainy appearing mastic.

Place the mastic onto the properly prepared pavement surface in accordance with the mastic manufacturer's recommendations.

Use a heated ironing wand and or shoe box to level and smooth the mastic until the material has formed a durable, well-bonded, level repair as directed by the Engineer.

Place temporary pavement marking if permanent markings are more than fifty percent covered before opening the road to traffic.

**F. Cure Time and Repair.** Allow the material to cool before opening the lane to traffic. Apply de-tackifying solution, if required, to protect the uncured crack treatment material from tracking. Do not use blotting materials, including sand, aggregate, sawdust, or paper. Repair treated pavement areas damaged by traffic at no additional cost to the Owner.

**G. Quality Control (QC).** Provide and follow a QC plan for production and construction processes. Provide the Engineer a copy of the QC plan for review and approval, prior to the pre-production meeting. Maintain QC measures until the Engineer accepts the work.

Comply with the approved QC plan throughout the project and allow the Engineer access to work in progress for assurance review and testing. If the Engineer identifies a condition causing unsatisfactory crack treatment, immediately stop production and correct the work at no additional cost to the Owner.

Ensure the QC plan addresses at least the following:

- i)* The sealant or mastic material and equipment used to heat, handle, and apply sealant or mastic material in accordance with the manufacturer's specifications. Provide the material manufacturer's specifications to the Engineer prior to commencing operation.
- ii)* Procedures for crack cleaning.
- iii)* Controls implemented to ensure flying dust and debris is not directed toward adjacent traveled lanes, pedestrians, parked vehicles, or buildings.
- iv)* An action plan for adjusting crack sealing operations to address actual environmental conditions if adverse environmental conditions occur.
- v)* Proposed procedure for monitoring the work to ensure acceptance requirements are met.

**H. Acceptance.** Upon completion of work, schedule an inspection with the Engineer. The Engineer will note deficiencies, including areas exhibiting adhesion failure, cohesion failure, missed cracks, or other factors the Engineer determines unacceptable. Correct work the Engineer identifies as unacceptable. Notify the Engineer upon completion of corrective work.

**CRACK TREATMENT**

d. **Measurement and Payment.** The Engineer will measure and pay for **HMA Crack Treatment** by the centerline miles of roadway where hot-poured sealant or asphalt repair mastic is applied and by lump sum for the off-road trails and parks and facilities where hot-poured sealant or asphalt repair mastic is applied.

<b>Pay Item</b>	<b>Pay Unit</b>
HMA Crack Treatment, With Previous Crack Treatment.....	Centerline Miles
HMA Crack Treatment, Without Previous Crack Treatment.....	Centerline Miles
HMA Crack Treatment, 2023 Overlay Roads.....	Centerline Miles
HMA Crack Treatment, Towner Road Park Trails .....	LSum
HMA Crack Treatment, Pathway Off-Road Trails.....	LSum
HMA Crack Treatment, Park Facilities.....	LSum
HMA Crack Treatment, General Fund Facilities.....	LSum

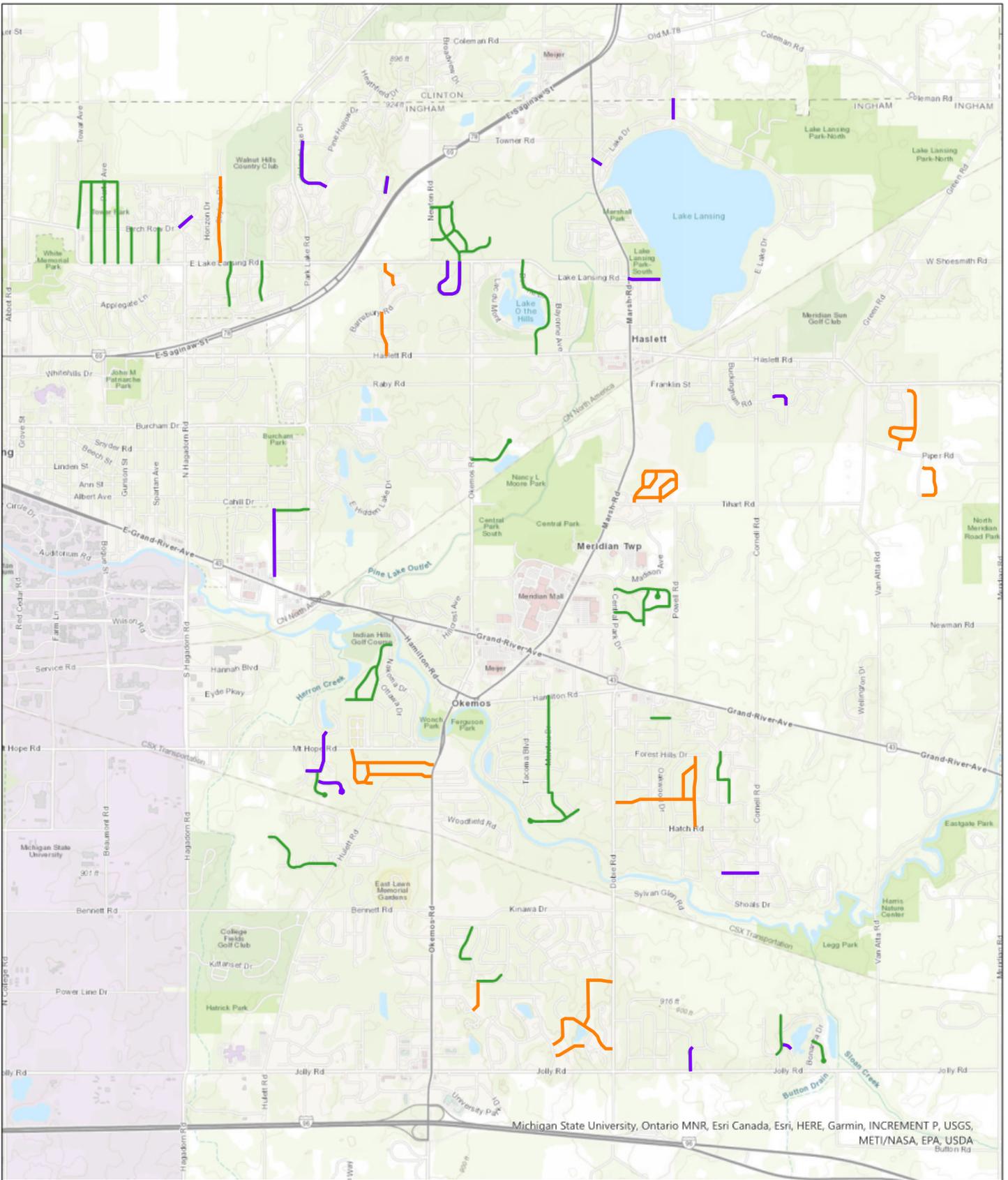
**HMA Crack Treatment** will be measured in centerline miles for roadways and as a lump sum for off-road trails and parks and facilities. Payment includes all surface preparation, temporary pavement markings, furnishing, hauling, placing, and finishing of all materials, and removal and disposal of all debris.

All work completed under this contract is warranted by the Contractor for a period of one (1) year from the date of acceptance by the Owner. Any work that fails during the warranty period shall be corrected by the Contractor at no additional cost to the Owner.

The unit prices for **HMA Crack Treatment** includes the cost of preparing and sealing the cracks, all necessary documentation, any corrective action, and any warranty work for each repair category. Payment will be made based on the verified quantity of centerline miles or completed areas of hot-poured sealant and/or asphalt repair mastic applied. The Engineer will verify the quantity by driving the repaired roads and documenting the hot-poured sealant and/or asphalt repair mastic applied. **It is incumbent upon the Contractor to notify the Engineer of the completed roads, off-road trails, parks and facilities to ensure payment.**

# MERIDIAN TOWNSHIP

## 2026 Mobilization Map (Crack Treatment)



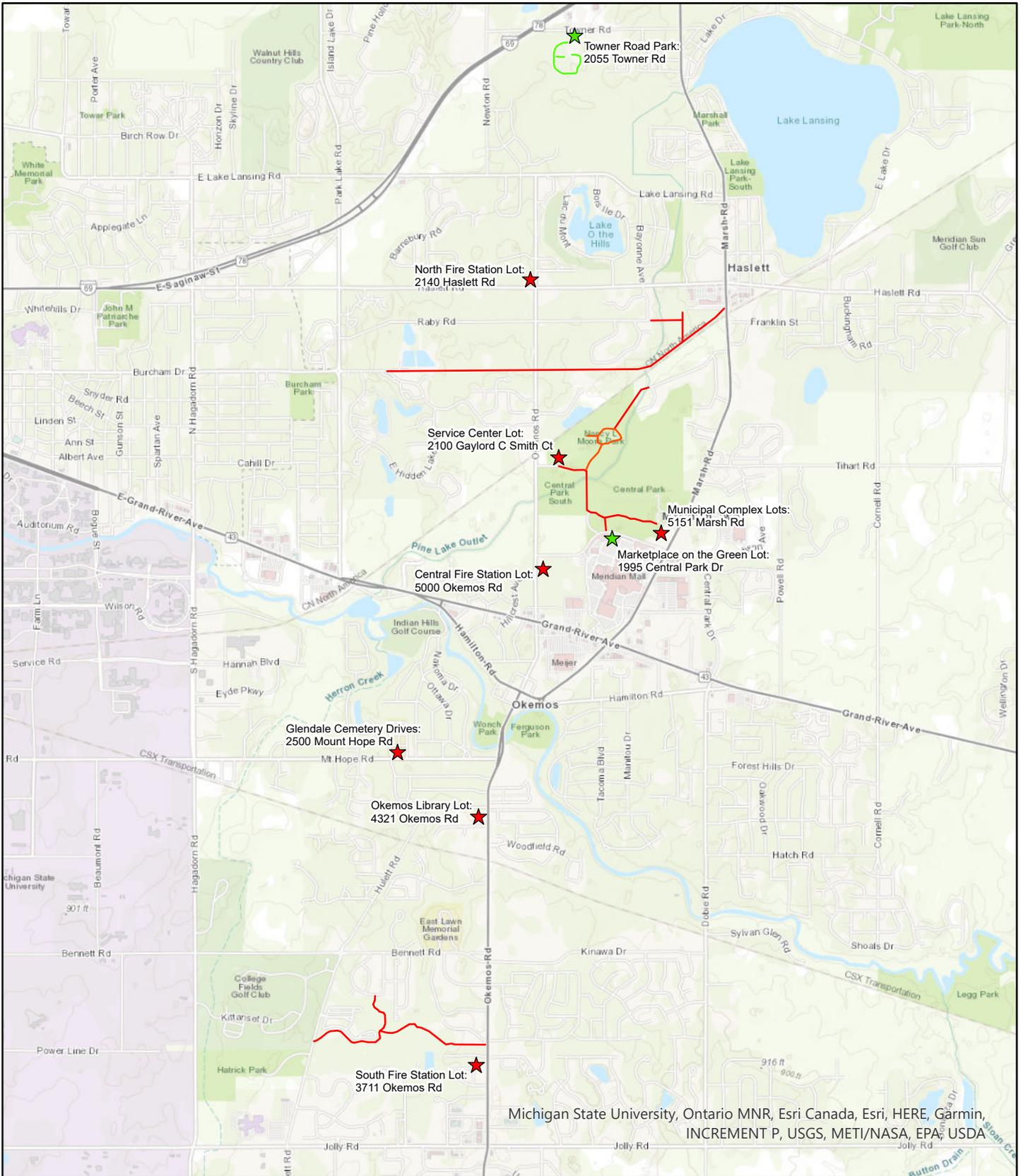
### Legend



- HMA Crack Treatment, With Previous Crack Treatment (10.75 Miles)
- HMA Crack Treatment, Without Previous Crack Treatment (2.90 Miles)
- HMA Crack Treatment, 2023 Overlay Roads (6.85 Miles)

# MERIDIAN TOWNSHIP

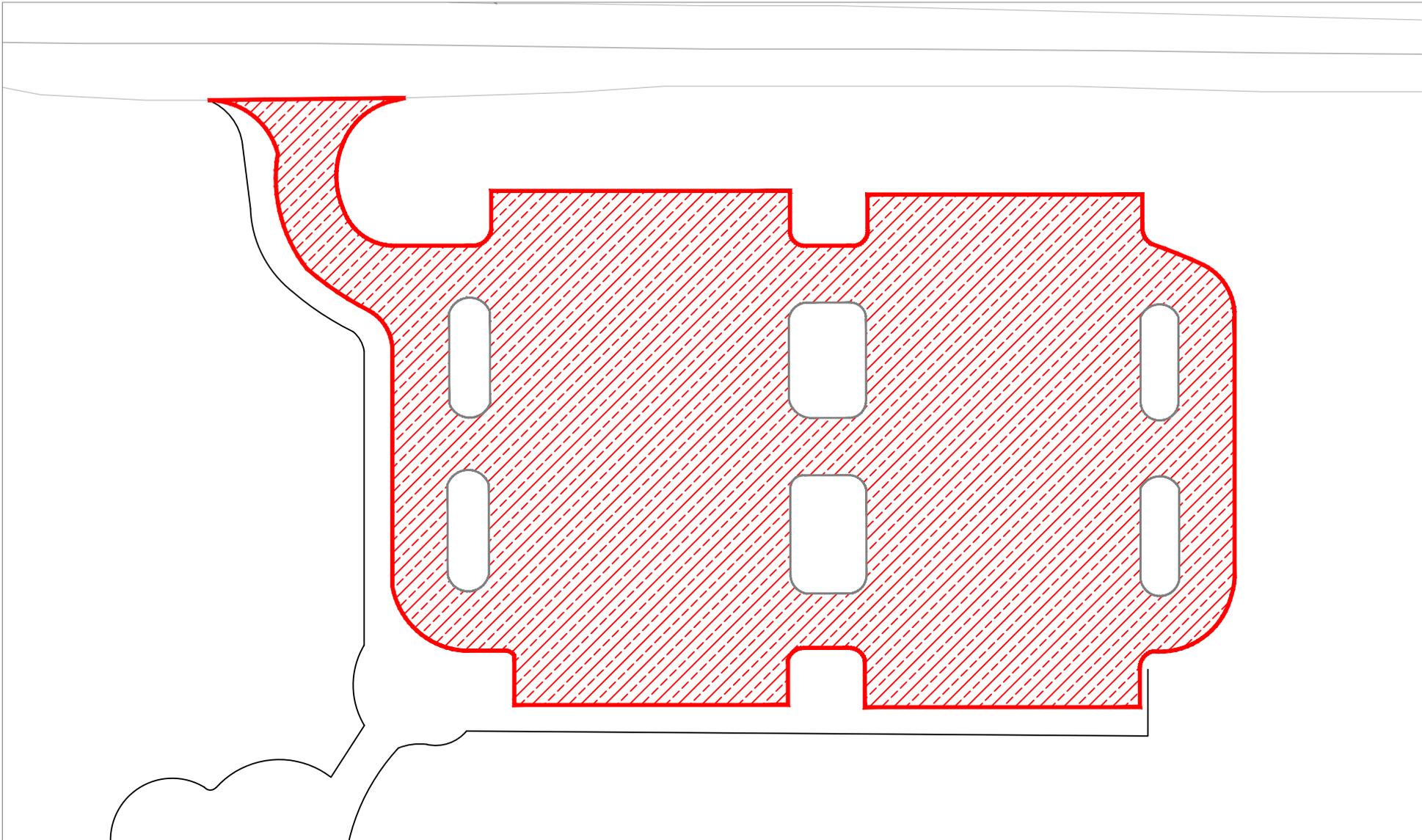
## 2026 Mobilization Map (Crack Fill)



### Legend

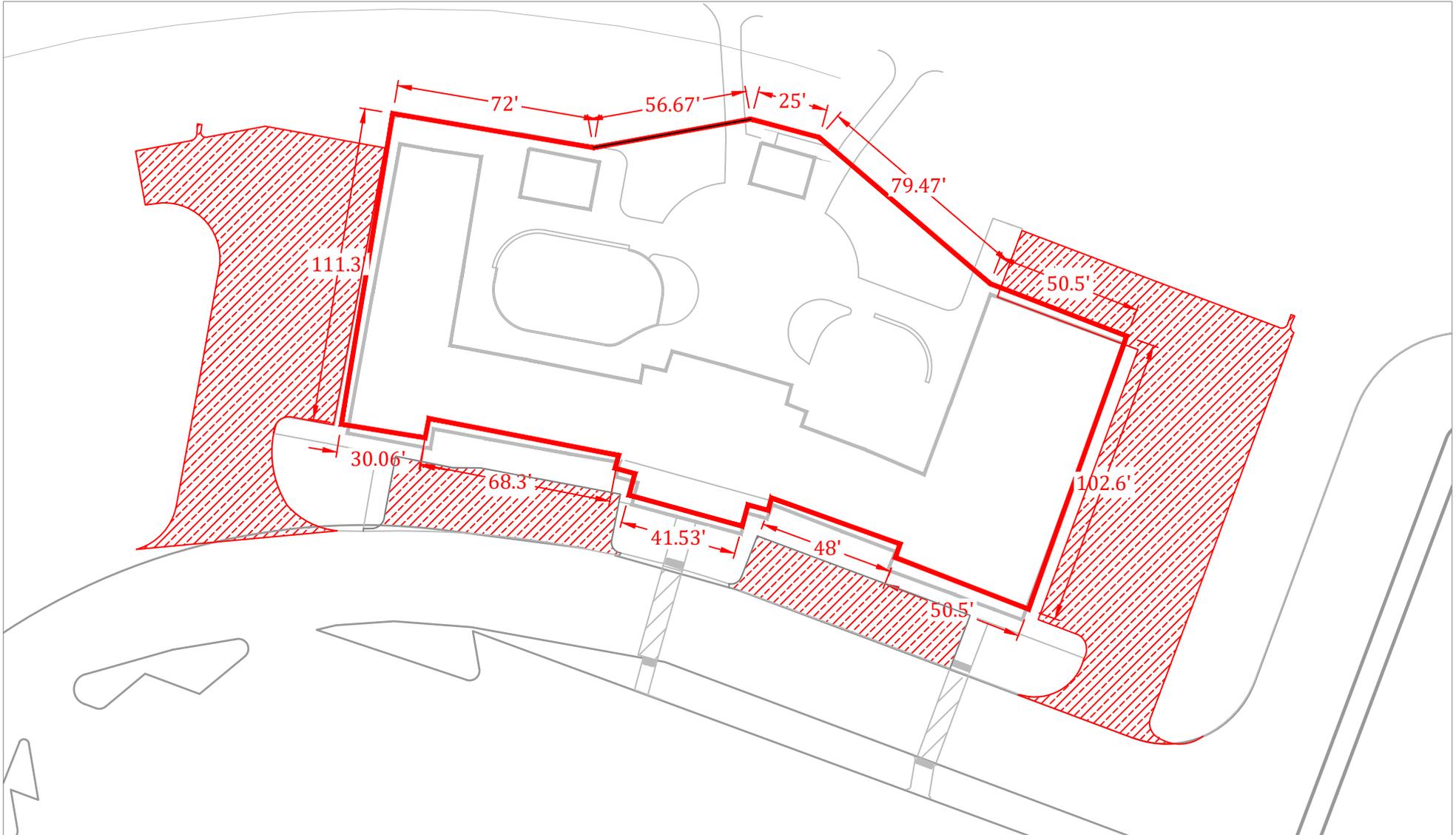


- ★ General Fund Facilities (30,050 Syd)
- ★ Park Facilities (23,700 Syd)
- Pathways and Off-Road Trails (10' wide, 4.9 miles)
- Towner Road Park Trails (10' wide, 0.49 miles)



CRACK SEAL ~17,000 SYD

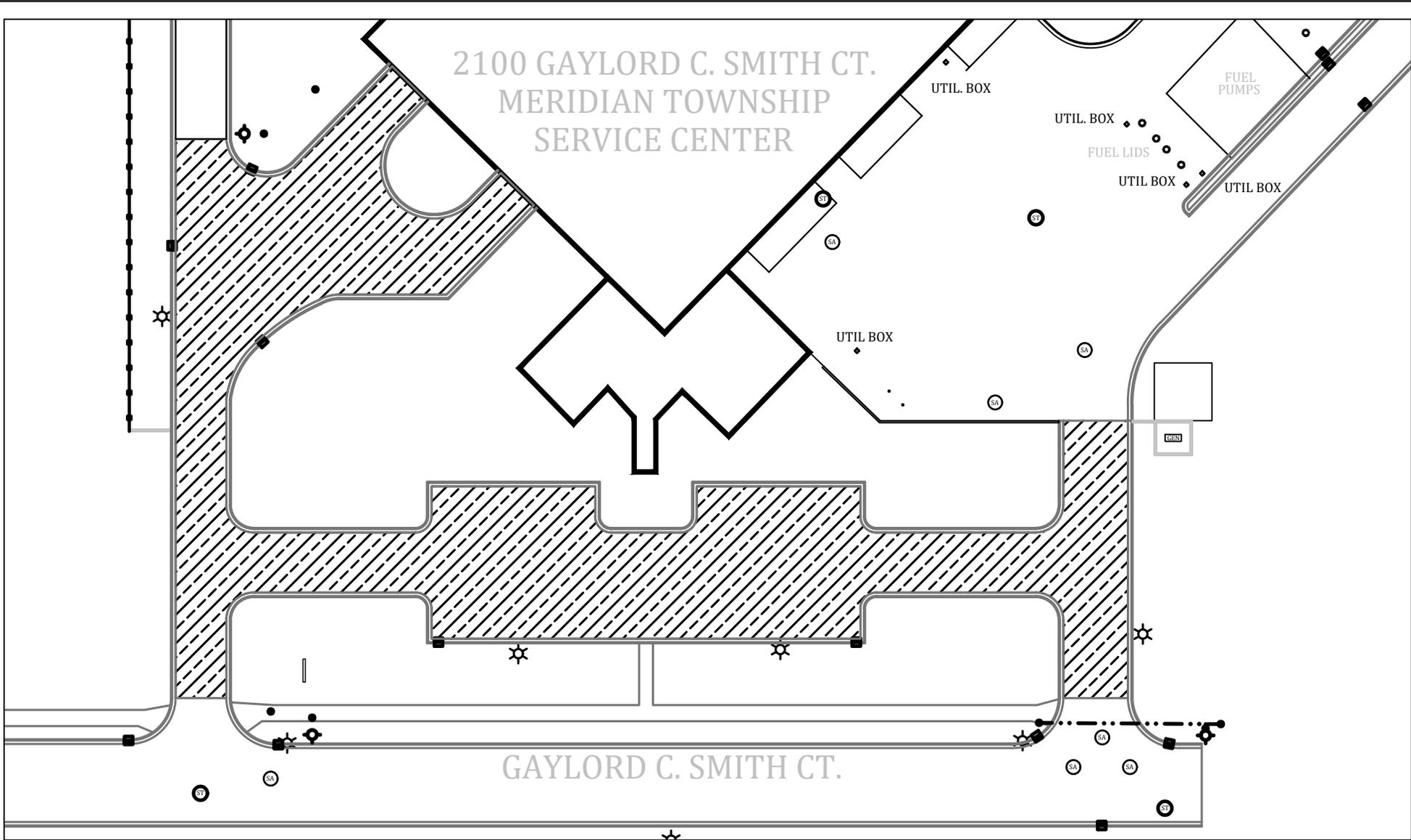
<b>Meridian Charter Township</b> Ingham County, Michigan Parking Lot		REVISIONS:		
		DATE:	BY:	COMMENTS:
<b>Towner Road Park</b> Crack Fill Layout				
DRAWN BY: Shane Williams		CHECKED BY:	SCALE: 1'=50'	PAGE: A-3
				FILE: 2024 Crack Fill.dwg



CRACK SEAL ~6,700 SYD

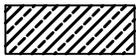
<b>Meridian Charter Township</b> Ingham County, Michigan Parking Lot			REVISIONS:		
			DATE:	BY:	COMMENTS:
<b>Marketplace on the Green</b> Crack Fill Layout					
DRAWN BY: Shane Williams      CHECKED BY:			SCALE:	PAGE:	FILE:
			1"=50'	A-4	2024 Crack Fill.dwg





2100 GAYLORD C. SMITH CT.  
 MERIDIAN TOWNSHIP  
 SERVICE CENTER

GAYLORD C. SMITH CT.

 CRACK SEAL ~3,600 SYD

- CRACK SEAL NOTES:**
- ROUT-AND-SEAL ALL CRACKS GREATER THAN ONE-QUARTER OF AN INCH ( $>\frac{1}{4}$ ");
  - SEALANT TO BE RUBBERIZED ASPHALT IN ACCORDANCE WITH ASTM D6690.

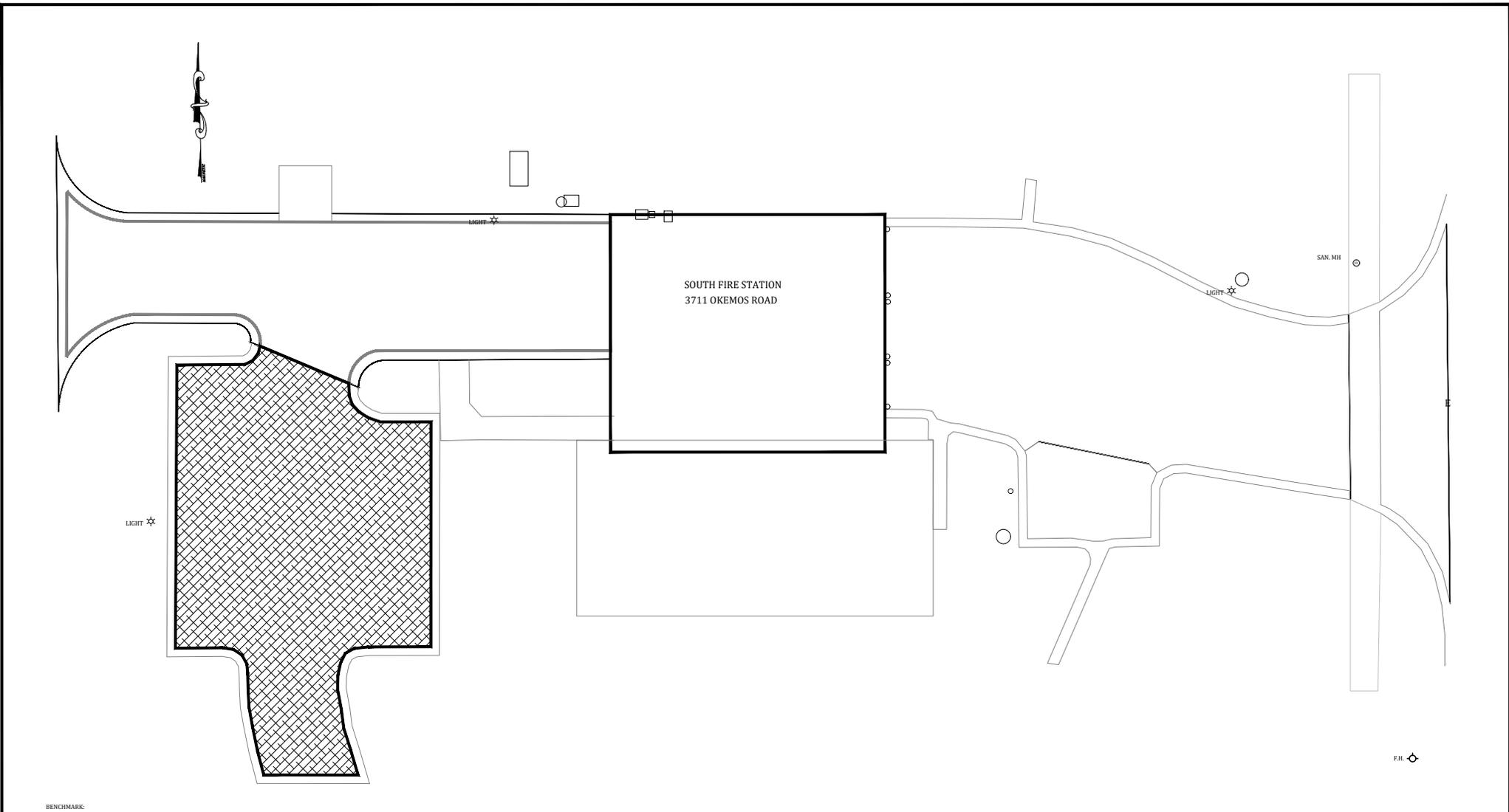
Meridian Charter Township Ingham County, Michigan Parking Lot			REVISIONS:		
			DATE:	BY:	COMMENTS:
Service Center Sealing Plan			07/18/23	SW	Plan for Quotes
SCALE: 1"=60'			PAGE:	FILE:	
			A-6		
DRAWN BY:	CHECKED BY:				











BENCHMARK

- CRACK SEAL NOTES:**
- ROUT-AND-SEAL ALL CRACKS GREATER THAN ONE-QUARTER OF AN INCH (>¼");
  - SEALANT TO BE RUBBERIZED ASPHALT IN ACCORDANCE WITH ASTM D6690.

 CRACK SEAL ~480 SYD

<b>Meridian Charter Township</b> Ingham County, Michigan Parking Lot			REVISIONS:		
			DATE:	BY:	COMMENTS:
<b>South Fire Station</b> Sealing Plan			07/18/23	SW	Plan for Quotes
DRAWN BY:                      CHECKED BY:			SCALE:	PAGE:	FILE:
			1"=10'	A-11	

**LOG OF PROJECT**

**SCOPE OF WORK**

The work includes, filling all cracks and joints and providing a surface seal on approximately 14 miles of local roads, 5 miles of off-road trails and nine (9) park and facility parking lots in Meridian Township. Work items include overband crack filling for narrow crack and joints and asphalt repair mastic for wider cracks. Work items for each location are as listed below.

**ITEMS OF WORK**

HMA Crack Treatment, With Previous Crack Treatment ( <i>Case 1</i> ) .....	10.75 Centerline Miles
HMA Crack Treatment, Without Previous Crack Treatment ( <i>Case 2</i> ) .....	2.90 Centerline Miles
HMA Crack Treatment, 2023 Overlay Roads (Not previously crack filled. These roads were overlaid with 1.5" of 36A HMA in 2023) .....	6.85 Centerline Miles
Towner Road Park Trails (Green trails on page A-2) .....	1 LSum
Pathway Off-Road Trails (Red trails on page A-2).....	1 LSum
Park Facilities (refer to the green stars on page A-2) .....	1 LSum
General Fund Facilities (refer to the red stars on page A-2).....	1 LSum

*\*Quantities herein are estimated. Payment will be made by actual constructed amount.*

**MAINTENANCE OF TRAFFIC**

Traffic Control.....	1 LSum
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**MISCELLANEOUS**

Mobilization, Max \$30,000 .....	1 LSum
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**WITH PREVIOUS CRACK TREATMENT AND WITHOUT PREVIOUS CRACK TREATMENT**

**AREA 1**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 2.44 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.09 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
1575	23	Towar Ave	Lake Lansing Rd/ Birch Row Dr	Biber St	0.30	
1186	22	Biber St	Towar Ave	Pollard Ave	0.22	
2643	21	Rutherford Ave	Lake Lansing Rd	Biber St	0.50	
2660	21	Porter Ave	Lake Lansing Rd	Biber St	0.50	
2646	22	Pollard Ave	Lake Lansing Rd	Biber St	0.50	
1120	21	Gibson Ave	Lake Lansing Rd	Birch Row Dr	0.21	
1120	21	Hart St	Lake Lansing Rd	Birch Row Dr	0.21	
468	32	Birch Row Dr	Hagadorn Rd	Briarwick Dr		0.09

**AREA 2**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.64 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.00 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
2116	30	Highgate Ave	Lake Lansing Rd	Southwood Dr	0.40	
1245	32	Patriots Way	Lake Lansing Rd	Still Valley Dr	0.24	

**AREA 3**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.00 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.46 Centerline Miles*

**LOG OF PROJECT**

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
1994	27	Island Lake Dr	Whitehills Lake Dr	Meadow Woods Dr		0.38
431	27	Fenwick Ct	Pine Hollow Dr	Cul-de-Sac		0.08

**AREA 4**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment – 1.22 Centerline Miles;  
Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.51 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
1632	27	Sacramento Way	Newton Rd	Fresno Ln	0.31	
1940	27	Sleepy Hollow Ln	Fresno Ln	Lake Lansing Rd	0.37	
782	27	Fresno Ln	Newton Rd	100 ft N of 6107 Fresno Ln	0.15	
859	27	Marietta Way	Sacramento Way	Isaac Ln	0.16	
1238	27	Isaac Ln	Sleepy Hollow Ln	Cul-de-Sac	0.23	
1700	22	W Sleepy Hollow Ln	Lake Lansing Rd	E Sleepy Hollow Ln		0.32
1010	22	E Sleepy Hollow Ln	Lake Lansing Rd	W Sleepy Hollow Ln		0.19

**AREA 5**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment – 0.70 Centerline Miles;  
Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.00 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
3712	27	Bois Ile Dr	Lake Lansing Rd	Haslett Rd	0.70	

**AREA 6**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment – 0.00 Centerline Miles;  
Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.34 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
590	25	Perry Rd	Lake Dr	Township/Ingham County Boundary		0.11
238	16	Roe St	Marsh Rd	Lake Dr		0.05
958	23	Lake Lansing Rd	Marsh Rd	Shaw St		0.18

**AREA 7**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment – 0.00 Centerline Miles;  
Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.12 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
613	27	Buckingham Rd	Teakwood Cir	Ventura Pl		0.12

**AREA 8**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment – 0.33 Centerline Miles;  
Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.00 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
1750	23	Cameron Oaks Dr	Okemos Rd	Cul-de-Sac	0.33	

**AREA 9**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment – 1.11 Centerline Miles;  
Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.00 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
2248	27	Belvedere Ave	Central Park Dr	Maiden Ln	0.43	
1000	27	Columbus Ave	Central Park Dr	Nassau St	0.19	

**LOG OF PROJECT**

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
1250	27	Nassau St	Belvedere Ave	Cul-de-Sac	0.24	
833	27	Maiden Ln	Nassau St	Belvedere Ave	0.16	
454	27	Olmstead Ct	Belvedere Ave	Cul-de-Sac	0.09	

**AREA 10**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.00 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.39 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
1101	22	Heather Dr	Park Lake Rd	Wardcliff Dr	0.21	
2060	24	Wardcliff Dr	Heather Dr	Cul-de-Sac		0.39

**AREA 11**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.80 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.00 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
1397	22	Ottawa Dr	Nakoma Dr	Chippewa Dr/Huron Hill Dr	0.26	
708	20	Chippewa Dr	Ottawa Dr/Huron Hill Dr	Arrowhead Rd	0.13	
817	20	Arrowhead Rd	Chippewa Dr	Cul-de-Sac	0.15	
1364	20	Woodcraft Rd	Arrowhead Rd	Ottawa Dr	0.26	

**AREA 12**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.22 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.56 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
479	27	Comanche Dr	Mount Hope Rd	Sequoia Trail		0.09
1250	32	Comanche Dr	Mount Hope Rd	Copperhill Dr		0.24
1155	27	Heartwood Rd	Comanche Dr	Cul-de-Sac	0.22	
1220	27	Dustin Rd	Heartwood Rd	Cul-de-Sac		0.23

**AREA 13**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.55 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.00 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
2900	27	Sophiea Pkwy	Hulett Rd	W of Rain Forest Cir	0.55	

**AREA 14**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 1.13 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.00 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
4200	27	Manitou Dr	Hamilton Rd	Birchwood Dr	0.80	
1725	27	Birchwood Dr	Tacoma Blvd	End	0.33	

**AREA 15**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.50 Centerline Miles;*

*Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.21 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
601	21	Hillside Dr	Northview Dr	Oakwood Dr	0.11	
892	27	Satinwood Dr	Ivywood Dr	Silkwood Dr	0.17	
360	33	Silkwood Dr	Satinwood Dr	Alderwood Dr	0.07	

**LOG OF PROJECT**

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
754	32	Alderwood Dr	Silkwood Dr	Silverwood Dr	0.14	
1100	28	Starboard Dr	Cornell Rd	Shoals Dr		0.21

**AREA 16**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.43 Centerline Miles;  
Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.00 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
1444	27	Raleigh Dr	Belding Ct	Sandlewood Dr	0.27	
853	27	Tamarack Dr	Cavalier Dr	Cimarron Dr	0.16	

**AREA 17**

*Case 1 - HMA Crack Treatment, with Previous Crack Treatment - 0.46 Centerline Miles;  
Case 2 - HMA Crack Treatment, without Previous Crack Treatment - 0.22 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
698	27	Ambassador Dr	Jolly Rd	Otsego Dr		0.13
1350	22	Ponderosa Dr	Stagecoach Dr	Cul-de-Sac	0.26	
492	16	Scenic Lake Dr	Ponderosa Dr	Cul-de-Sac		0.09
1045	23	Trails End	Bonanza Dr	Cul-de-Sac	0.20	

**2023 OVERLAY ROADS**

**Area 18**

*HMA Crack Fill, 2023 Overlay Roads - 0.54 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Crack Fill, 2023 Overlay Roads (CL Mi)</b>
2827	21	Skyline Dr	E Lake Lansing Rd	Margate Ln	0.54

**Area 19**

*HMA Crack Fill, 2023 Overlay Roads - 0.44 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Crack Fill, 2023 Overlay Roads (CL Mi)</b>
877	32	Everett Ln	E Lake Lansing Rd	Westminster Way	0.17
1439	32	Westminster Way	Haslett Rd	Barnsbury Rd	0.27

**Area 20**

*HMA Crack Fill, 2023 Overlay Roads - 0.90 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Crack Fill, 2023 Overlay Roads (CL Mi)</b>
1127	27	Haversham Dr	Tihart Rd	Picadilly Dr	0.21
1693	27	Downing St	Haversham Dr	Thames Dr / Picadilly Dr	0.32
1123	27	Thames Dr	Tihart Rd	Picadilly Dr / Downing St	0.21
814	27	Chantilly Ln	Haversham Dr	Picadilly Dr	0.15

**Area 21**

*HMA Crack Fill, 2023 Overlay Roads - 1.04 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Crack Fill, 2023 Overlay Roads (CL Mi)</b>
1614	27	Blueberry Ln	Conrad Dr	Conrad Dr	0.31

**LOG OF PROJECT**

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Case 1 (CL Mi)</b>	<b>Case 2 (CL Mi)</b>
2492	27	Earliglow Ln	Piper Rd	Bird Farm Ln	0.47	
1403	27	Emily Ln	Earliglow Ln	Earliglow Ln	0.27	

**Area 22**

*HMA Crack Fill, 2023 Overlay Roads – 1.19 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Crack Fill, 2023 Overlay Roads (CL Mi)</b>
2589	27	Birchwood Dr	Dobie Rd	Arbor Dr	0.49
1302	21	Elmwood Dr	Birchwood Dr	Arbor Dr	0.25
2401	22	Arbor Dr	Hatch Rd	Forest Hills Dr	0.45

**Area 23**

*HMA Crack Fill, 2023 Overlay Roads – 1.30 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Crack Fill, 2023 Overlay Roads (CL Mi)</b>
2586	21	Shawnee Tr	Okemos Rd	Maumee Dr	0.49
2109	21	Kewanee Way	Okemos Rd	Apache Dr	0.40
624	21	Apache Dr	Maumee Dr	Shawnee Tr	0.12
1559	21	Maumee Dr	Mt. Hope Rd	End	0.30

**Area 24**

*HMA Crack Fill, 2023 Overlay Roads – 1.44 Centerline Miles*

<b>Length (CL FT)</b>	<b>Width (FT)</b>	<b>Road</b>	<b>Starting Limit</b>	<b>Ending Limit</b>	<b>Crack Fill, 2023 Overlay Roads (CL Mi)</b>
856	27	Sashabaw Dr	Dobie Rd	Viceroy Dr	0.16
1465	27	Viceroy Dr	Sashabaw Dr	Spring Lake Dr	0.28
2091	27	Spring Lake Dr	Dobie Rd	Beech Tree Ln	0.40
993	27	Beech Tree Ln	Fairhills Dr	Spring Lake Dr	0.19
1064	27	Elk Ln	Fairhills Dr	Breezy Point Dr	0.20
1121	32	Cavalier Dr	Fox Hollow Dr	Tamarack Dr	0.21

**OFF-ROAD TRAILS**

*HMA Crack Fill, Off-Road Trails – 1 LSum*

<b>Width (FT)</b>	<b>Length (FT)</b>	<b>Length (Mi)</b>	<b>Trail Name</b>	<b># Ln</b>	<b>Crack Fill, Off-Road Trails (CL Mi)</b>
10	2570	0.49	Towner Road Park Trails	1	0.49
12	9636	1.83	Interurban Pathway	1	1.83
12	8770	1.66	Nancy Moore Trails	1	1.66
10	6539	1.24	Hartwick Okemos Trail	1	1.24

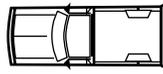
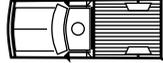
**PARKS & FACILITIES**

*HMA Crack Fill, Parks and Facilities – 1 LSum*

<b>Pvmt Area (Syd)</b>	<b>Facility Name</b>	<b>Pvmt Area (Syd)</b>	<b>Facility Name</b>
17,000	Towner Road Park	1,700	Central Fire Station
860	North Fire Station	5,100	Glendale Cemetery
3,600	Service Center Lot	3,430	Okemos Library
15,000	Municipal Complex	480	South Fire Station
6,700	Marketplace on the Green		



**Table 6H-2. Meaning of Symbols on Typical Application Diagrams**

	Arrow board		Shadow vehicle
	Arrow board support or trailer (shown facing down)		Sign (shown facing left)
	Changeable message sign or support trailer		Surveyor
	Channelizing device		Temporary barrier
	Crash cushion		Temporary barrier with warning light
	Direction of temporary traffic detour		Traffic or pedestrian signal
	Direction of traffic		Truck-mounted attenuator
	Traffic Regulator		Type 3 barricade
	High-level warning device (Flag tree)		Warning light
	Longitudinal channelizing device		Work space
	Luminaire		Work vehicle
	Pavement markings that should be removed for a long-term project		

**Table 6H-3. Meaning of Letter Codes on Typical Application Diagrams**

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1,000 feet	1,500 feet	2,640 feet

\* Speed category to be determined by highway agency

\*\* The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

**Table 6H-4. Formulas for Determining Taper Length**

Speed (S)	Taper Length (L) in feet
40 mph or less	$L = \frac{WS^2}{60}$
45 mph or more	$L = WS$

Where: L = taper length in feet  
 W = width of offset in feet  
 S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

### Notes for Figure 6H-13—Typical Application 13 Temporary Road Closure

**Support:**

1. Conditions represented are a planned closure not exceeding 20 minutes during the daytime.

**Standard:**

2. A **traffic regulator** or uniformed law enforcement officer shall be used for this application. The **traffic regulator**, if used for this application, shall follow the procedures provided in Sections 6E.07 and 6E.08.

*Guidance:*

3. *The uniformed law enforcement officer, if used for this application, should follow the procedures provided in Sections 6E.07 and 6E.08.*

**Option:**

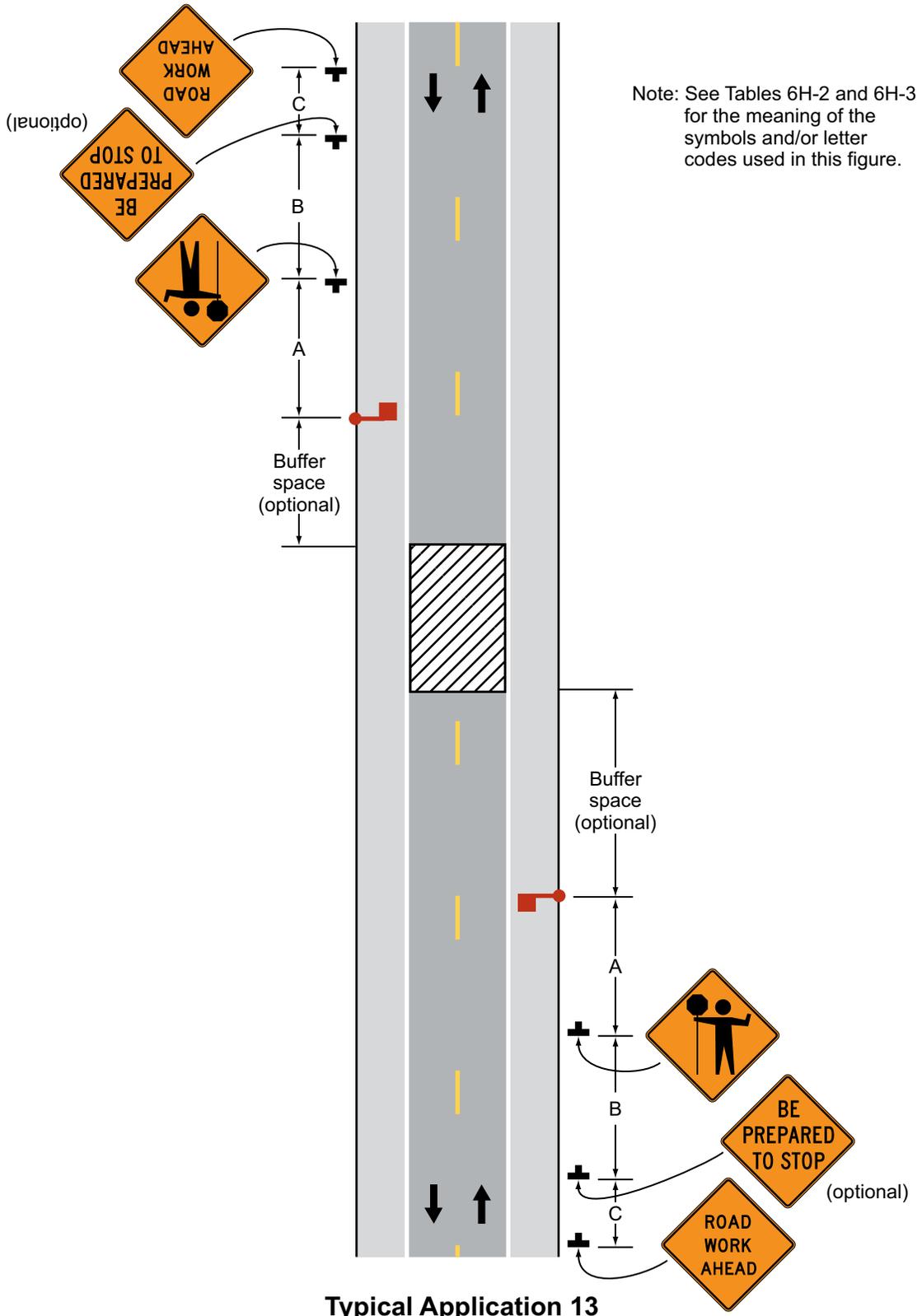
4. A BE PREPARED TO STOP sign may be added to the sign series.

*Guidance:*

5. *When used, the BE PREPARED TO STOP sign should be located before the **Traffic Regulator** symbol sign.*



Figure 6H-13. Temporary Road Closure (TA-13)



Typical Application 13

**Notes for Figure 6H-17—Typical Application 17**  
**Mobile Operations on a Two-Lane Road**

**Standard:**

1. **Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.**
2. **Shadow and work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights.**
3. **If an arrow board is used, it shall be used in the caution mode.**

*Guidance:*

4. *Where practical and when needed, the work and shadow vehicles should pull over periodically to allow vehicular traffic to pass.*
5. *Whenever adequate stopping sight distance exists to the rear, the shadow vehicle should maintain the minimum distance from the work vehicle and proceed at the same speed. The shadow vehicle should slow down in advance of vertical or horizontal curves that restrict sight distance.*
6. *The shadow vehicles should also be equipped with two high-intensity flashing lights mounted on the rear, adjacent to the sign.*

**Option:**

7. The distance between the work and shadow vehicles may vary according to terrain, paint drying time, and other factors.
8. Additional shadow vehicles to warn and reduce the speed of oncoming or opposing vehicular traffic may be used. Law enforcement vehicles may be used for this purpose.
9. A truck-mounted attenuator may be used on the shadow vehicle or on the work vehicle.
10. If the work and shadow vehicles cannot pull over to allow vehicular traffic to pass frequently, a DO NOT PASS sign may be placed on the rear of the vehicle blocking the lane.

**Support:**

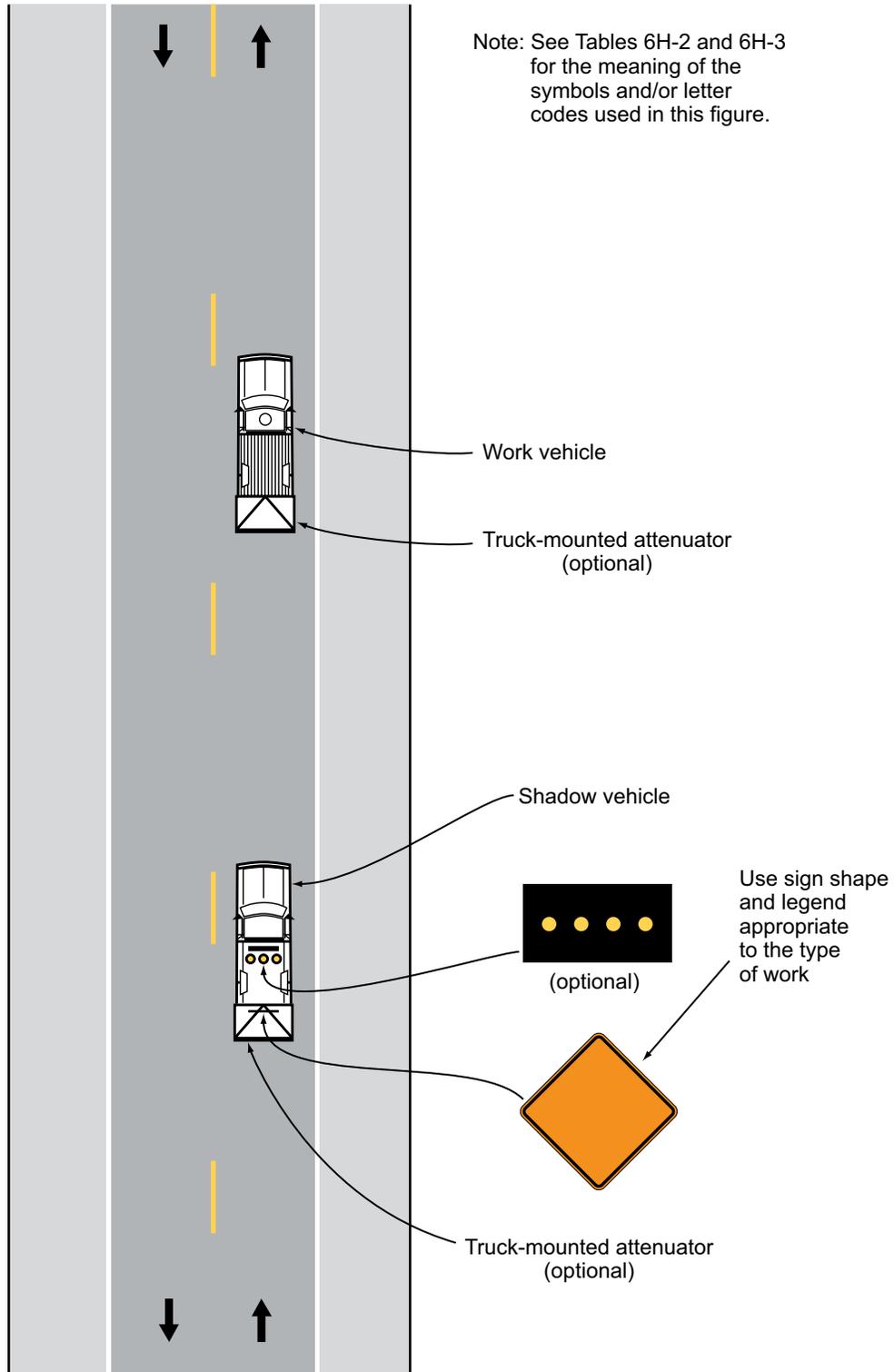
11. Shadow vehicles are used to warn motor vehicle traffic of the operation ahead.

**Standard:**

12. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.**



**Figure 6H-17. Mobile Operations on a Two-Lane Road (TA-17)**



**Typical Application 17**

## Notes for Figure 6H-18—Typical Application 18 Lane Closure on a Minor Street

### Standard:

1. This TTC shall be used only for low-speed facilities having low traffic volumes.

### Option:

2. Where the work space is short, where road users can see the roadway beyond, and where volume is low, vehicular traffic may be self-regulating.

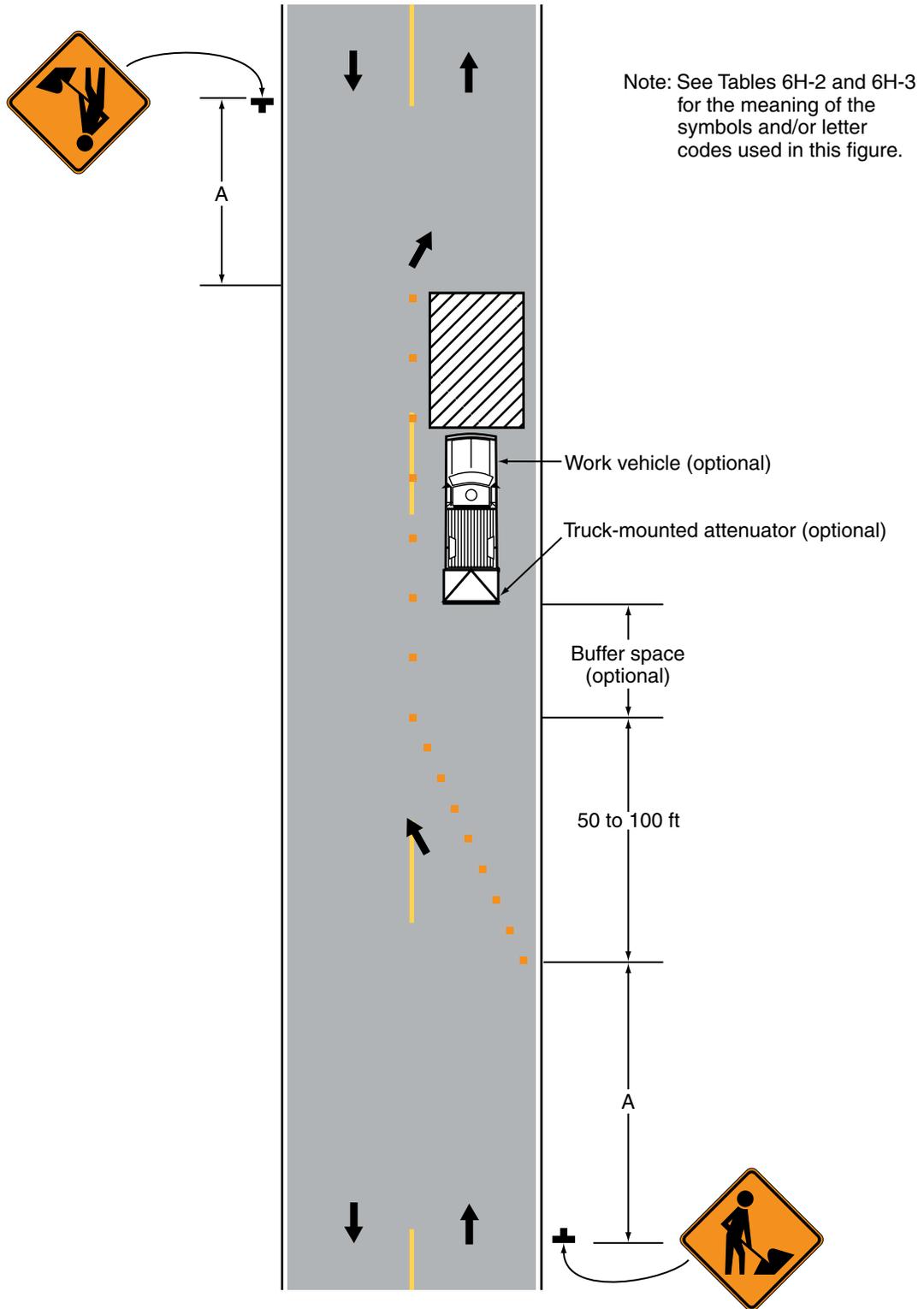
### Standard:

3. Where vehicular traffic cannot effectively self-regulate, one or two **traffic regulators** shall be used as illustrated in Figure 6H-10.

### Option:

4. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
5. A truck-mounted attenuator may be used on the work vehicle and the shadow vehicle.

Figure 6H-18. Lane Closure on a Minor Street (TA-18)



Typical Application 18

## Notes for Figure 6H-28—Typical Application 28 Sidewalk Detour or Diversion

### Standard:

1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

### Guidance:

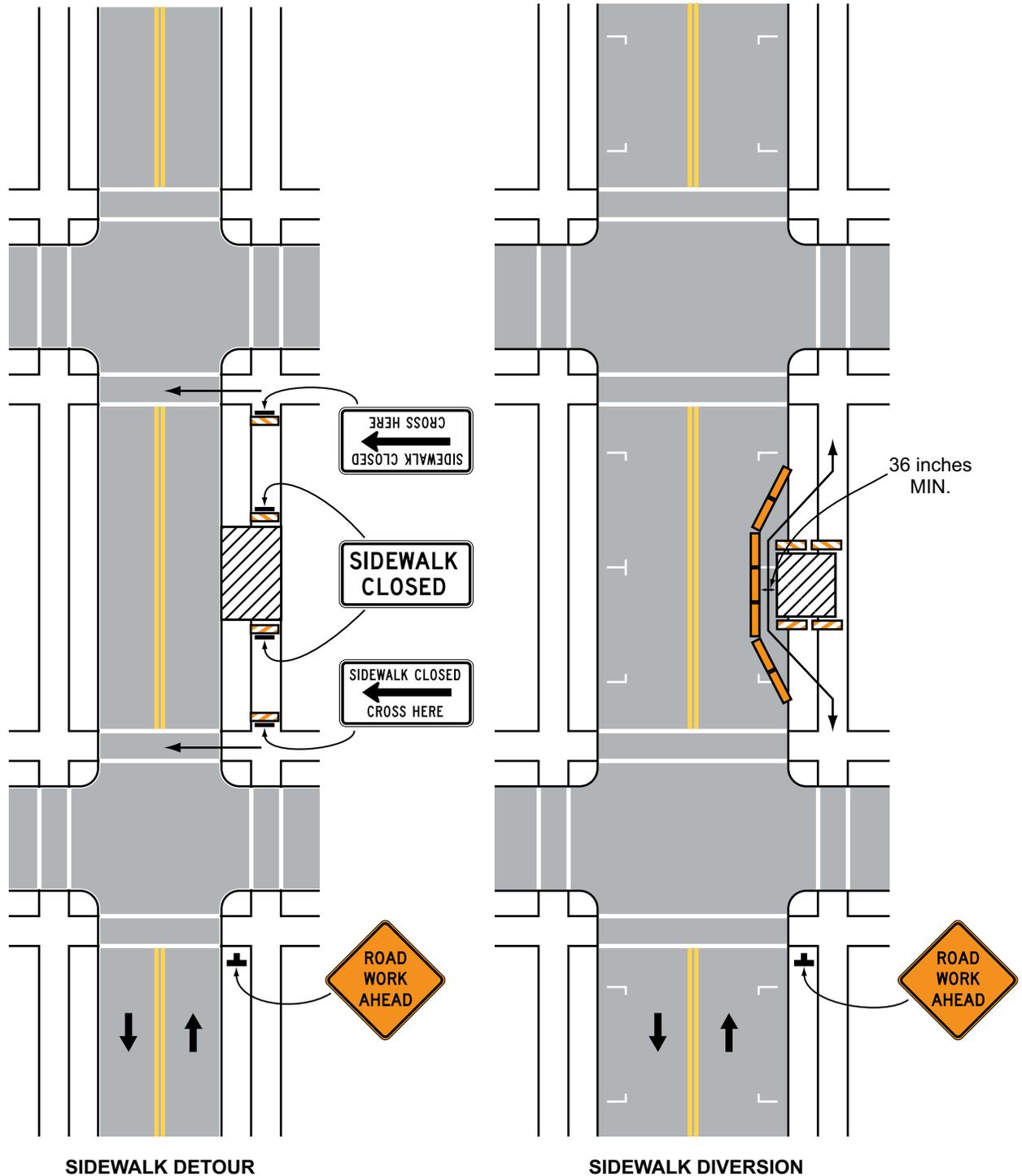
2. *Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.*
3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*

### Option:

4. Street lighting may be considered.
5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7. Type C Steady-Burn or Type D 360-degree Steady-Burn warning lights may be used on channelizing devices separating the temporary sidewalks from vehicular traffic flow.
8. Signs, such as KEEP RIGHT (LEFT), may be placed along a temporary sidewalk to guide or direct pedestrians.



Figure 6H-28. Sidewalk Detour or Diversion (TA-28)



Typical Application 28

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.