

CONTRACT DOCUMENTS

FOR

**EAST AND WEST MICHIGAN AVENUES, SAGINAW,
WATER, AND ALBERT STREETS ROAD IMPROVEMENTS**

2026

**CITY OF AU GRES
ARENAC COUNTY**

PREPARED BY:
SURVEYING SOLUTIONS, INC. (SSI) FOR THE
CITY OF AU GRES



TABLE OF CONTENTS

TABLE OF CONTENTS	3
I. Invitation to Bid.....	7
II. Instruction to Bidders	8
II.1 Proposal	8
II.2 Form	8
II.3 Discrepancies	8
II.4 Modifications	8
II.5 Examination of Contract Documents and Visit to the Site	8
II.6 Delivery of Proposal.....	8
II.7 Withdrawal	8
II.8 Opening.....	8
II.9 Award or Rejection.....	8
II.10 Interpretation of Documents.....	9
II.11 Addenda	9
II.12 Proposal Guarantee.....	9
II.13 Performance and Maintenance Bond	9
II.14 Labor and Material Payment Bond.....	9
II.15 Affirmative Action	9
II.16 Safety Standards.....	9
II.17 Commission Authority.....	10
III. Proposal	11
IV. Statement of Qualifications	14
V. Anticipated Subcontracts	15
VI. Form of Proposal Guarantee.....	16
VII. Notice of Award.....	18
VIII. Notice to Proceed	19
IX. Contract Agreement	20
X. Performance and Maintenance Bond	22
XI. Payment Bond	23
XII. General Provisions	
XII.10 - SECTION 10 – Definition of Terms	
XII.10-1 AASHTO	24
XII.10-2 Advertisement	24
XII.10-3 ASTM	24
XII.10-4 Award	24
XII.10-5 Bidder	24
XII.10-6 Calendar Day	24
XII.10-7 Change Order	24
XII.10-8 Contract.....	24
XII.10-9 Contract Item (Pay Item)	24

XII.10-10 Contract Time.....	24
XII.10-11 Contractor.....	24
XII.10-12 Drainage System.....	25
XII.10-13 Engineer.....	25
XII.10-14 Equipment	25
XII.10-15 Extra Work.....	25
XII.10-16 Federal Specification	25
XII.10-17 Inspector	25
XII.10-18 Intention of Terms	25
XII.10-19 Laboratory.....	25
XII.10-20 Major and Minor Contract Item	25
XII.10-21 Materials	25
XII.10-22 Notice to Proceed	25
XII.10-23 Owner (Sponsor).....	26
XII.10-24 Pavement	26
XII.10-25 Payment Bond	26
XII.10-26 Performance Bond	26
XII.10-27 Plans.....	26
XII.10-28 Project.....	26
XII.10-29 Proposal	26
XII.10-30 Proposal Guarantee	26
XII.10-31 Specifications	26
XII.10-32 Structures	26
XII.10-33 Subgrade.....	26
XII.10-34 Superintendent.....	26
XII.10-35 Supplemental Agreement	26
XII.10-36 Surety	27
XII.10-37 Work	27
XII.10-38 Working Day.....	27

XII.20 - SECTION 20 – Proposal Requirements and Conditions

XII.20-1 Advertisement (Notice of Bidders).....	28
XII.20-2 Prequalification of Bidders	28
XII.20-3 Contents of Proposal Forms	28
XII.20-4 Issuance of Proposal Forms	28
XII.20-5 Interpretation of Est. Proposal Quantities.....	28
XII.20-6 Examination of Plans, Specifications and Site.....	28
XII.20-7 Preparation of Proposal.....	29
XII.20-8 Irregular Proposals	29
XII.20-9 Proposal Guarantee	29
XII.20-10 Delivery of Proposal	29
XII.20-11 Withdrawal or revision of Proposals.....	30
XII.20-12 Public Opening of Proposals.....	30
XII.20-13 Disqualification of Bidders	30

XII.30 - SECTION 30 – Award and Execution of Contract

XII.30-1 Consideration of Proposals.....	31
XII.30-2 Award of Contract.....	31
XII.30-3 Cancellation of Award	31
XII.30-4 Return of Proposal Guarantee	31
XII.30-5 Requirements of Contract Bond and Insurance	31
XII.30-6 Execution of Contract	32
XII.30-7 Approval of Contract	32
XII.30-8 Executed Contracts	32
XII.30-9 Failure to Execute Contract	32

XII.40 - SECTION 40 – Scope of Work

XII.40-1 Intent of Contract	33
XII.40-2 Alteration of Work and Quantities	33
XII.40-3 Omitted Items.....	33
XII.40-4 Extra Work.....	33
XII.40-5 Maintenance of Traffic	34
XII.40-6 Removal of Existing Structures	34
XII.40-7 Rights in and Use of Material	35
XII.40-8 Final Cleaning Up.....	35

II.50 - SECTION 50 – Control of Work

XII.50-1 Authority of the Engineer.....	36
XII.50-2 Conformity with Plans and Specifications.....	36
XII.50-3 Coordination of Contract, Plans & Specs	36
XII.50-4 Cooperation of Contractor.....	37
XII.50-5 Cooperation between Contractors.....	37
XII.50-6 Construction Layout and Stakes	37
XII.50-7 Automatically Controlled Equipment.....	37
XII.50-8 Authority and Duties of Inspectors.....	37
XII.50-9 Inspection of the Work.....	38
XII.50-10 Removal of Unacceptable & Unauthorized. Work	38
XII.50-11 Load Restrictions.....	38
XII.50-12 Maintenance during Construction.....	38
XII.50-13 Failure to Maintain the Work	39
XII.50-14 Final Acceptance	39
XII.50-15 Claims for Adjustment and Disputes	39

XII.60 - SECTION 60 – Control of Materials

XII.60-1 Source of Supply and Quality Requirements	40
XII.60-2 Samples, Test and Cited Specifications.....	40
XII.60-3 Certification of Compliance	40
XII.60-4 Plant Inspection.....	41
XII.60-5 Storage of Materials	41
XII.60-6 Unacceptable Materials.....	41
XII.60-7 Owner-Furnished Materials	42

XII.70 - SECTION 70 – Legal Relations and Responsibility to Public

XII.70-1 Laws to be Observed.....	43
XII.70-2 Permits, Licenses and Taxes	43
XII.70-3 Patented Devices, Materials and Processes	43
XII.70-4 Restoration of Surfaces Disturbed by Others	43
XII.70-5 Sanitary, Health and Safety Provisions.....	43
XII.70-6 Public Convenience and Safety.....	44
XII.70-7 Barricades, Warning Signs & Hazard Mark.....	44
XII.70-8 Protect. & Restoration of Prop. & Landscape.....	44
XII.70-9 Responsibility for Damage Claims	45
XII.70-10 Third Party Beneficiary Clause	45
XII.70-11 Opening Section of the Work to Traffic	45
XII.70-12 Contractor's Responsibility for Work	46
XII.70-13 Contractor's Responsibility for Utility Service	46
XII.70-14 Furnishing Right-of-Way.....	47
XII.70-15 Personal liability of Public Officials.....	47

XII.70-16 No Waiver of Legal Rights.....	47
XII.70-17 Environmental Protection.....	47
XII.70-18 Archaeological and Historical Findings	48
 XII.80 - SECTION 80 – Prosecution and Progress	
XII.80-1 Subletting of Contract.....	49
XII.80-2 Notice to Proceed	49
XII.80-3 Prosecution and Progress.....	49
XII.80-4 Limitation of Operations	49
XII.80-5 Character of Workers, Methods, & Equipment.....	49
XII.80-6 Temporary Suspension of the Work.....	50
XII.80-7 Determination and Extension of Contract Time	51
XII.80-8 Failure to Complete on Time	52
XII.80-9 Default and Termination of Contract	52
XII.80-10 Termination for National Emergencies	53
XII.80-11 Work area, Storage area & Sequence of Operation	54
 XII.90 - SECTION 90 – Measurement and Payment	
XII.90-1 Measurement of Quantities	55
XII.90-2 Scope of Payment	57
XII.90-3 Compensation for Altered Quantities.....	57
XII.90-4 Payment for Omitted Items	57
XII.90-5 Payment for Extra and Force Account Work	58
XII.90-6 Partial Payments	59
XII.90-7 Payment for Materials on Hand	60
XII.90-8 Payment of Withheld Funds	60
XII.90-9 Acceptance and Final Payment.....	61
 XIII. SPECIAL PROVISIONS, CLAUSES, NOTICE TO BIDDERS	 62+

**City of Au Gres
Arenac County, Michigan
124 West Huron Road, Au Gres, MI 48703**

**I. Invitation to Bid
For
EAST AND WEST MICHIGAN AVENUES, SAGINAW, WATER, AND ALBERT STREET ROAD
IMPROVEMENTS**

Notice is hereby given that sealed bids will be received and publicly opened at **1:00 p.m., Friday, April 24th, 2026** at the office of Surveying Solutions, Inc., 4471 M-61, Standish, MI, 48658), for the construction of city road system improvements on East and West Michigan Avenues, as well as Saginaw, Water, and Albert Streets.

Major items of work:

Cold Milling HMA Surface	24414 Syd
HMA, 13A	2588 Ton

The work is to include all labor, equipment and materials required to complete the project.

Bids must be returned in sealed envelopes clearly identified as **“Bid Proposal for City of Au Gres Improvements”**. Bid security in an amount equal to at least five percent (5%) of the bid made payable to the City of Au Gres must accompany each bid. The bid security must be either: (1) lawful moneys of the United States, or (2) a cashier's check, certified check, bank money order, or bank draft drawn and issued by a national banking association located in the State of Michigan, or (3) a bid bond or bonds executed by a surety corporation authorized to do business in the State of Michigan.

Each bidder is deemed to covenant that if he/she is awarded the contract he/she will, within ten (10) days from the written Notice of Award, enter the formal contract and execute the contract, and in the event that said bidder fails, neglects or refuses to enter into the contract the bid security accompanying their bid and the amount therein mentioned shall be declared to be forfeited to the City of Au Gres and shall be collected by it and paid into the general fund.

Plans, specifications, bidding and contract forms may be obtained by downloading them from Grand Rapids Builders Exchange (<https://home.grbx.com/>); Builders Exchange of Northwest Michigan (<https://bxtvc.com/>) or by emailing the Project Engineer at tbonzelet@ssi-mi.com.

The City Council of Au Gres, Michigan, hereby notifies all bidders that it will affirmatively insure that in any contract entered into resultant from this advertisement, minority business enterprises will be afforded full opportunity to submit bids and not be discriminated against on the grounds of race, color, sex, or national origin. All successful bidders must meet state and federal laws and rules with regard to equal opportunity employment.

Contractors will comply with all rules and regulations of the Michigan Department of Labor relative to minimum wages and such rules and regulations of the Fair Employment Practices Act, various departmental rules of the federal, state and local governments as may relate to minority hiring and employment.

The City Council of Au Gres reserves the right to reject any or all bids, to waive any technicalities, and to accept any bid which it deems advantageous to the County. No bid shall be withdrawn after the opening of bids without consent of the City Council for a period of thirty (30) days.

Dated: March 27th, 2026
City of Au Gres Council
Arenac County, Michigan

Dale Wiltse, City Manager

Lavonne Pritchard, Clerk

Lavonne Pritchard, Treasurer

II. INSTRUCTIONS TO BIDDERS

II.1 PROPOSAL

Proposals are requested for the construction of the project as described in "Advertisement for Bids" bound with these specifications in accordance with drawings, specifications and other contract documents prepared by Surveying Solutions, Inc for the City of Au Gres.

II.2 FORM

Each proposal shall be made on a form prepared herein by the Engineer and included as one of the contract documents and shall be submitted in a sealed envelope bearing the title of the work and the name of the bidder.

II.3 DISCREPANCIES

In case of a difference between the stipulated amount of the proposal written in words and stipulated amount written in figures, the stipulated amount stated in written words shall govern. If a discrepancy arises between unit bid price and the extended amount, the unit bid price shall govern.

II.4 MODIFICATIONS

Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless called for. Oral proposals or modifications will not be considered.

II.5 EXAMINATION OF CONTRACT DOCUMENTS & VISIT TO THE SITE

Before submitting a proposal, bidders shall carefully examine the drawings, read the specifications, and other contract documents, shall visit the site of work, and shall fully inform themselves as to all existing conditions and limitations, and shall include in the proposal a sum to cover the cost of all items included in the contract documents.

II.6 DELIVERY OF PROPOSALS

Proposals shall be delivered by the time and to the place stipulated in the advertisement. It is the sole responsibility of the bidder to see that their proposal is received in the proper time. Any proposal received after the scheduled closing time for the receipt of proposals shall be returned to the bidder unopened.

II.7 WITHDRAWAL

Any bidder may withdraw their proposal, either personally or by telegraphic or written request, at any time prior to the scheduled closing time for receipt of proposals.

II.8 OPENING

Proposals will be opened and publicly read aloud at the time and place set forth in the "Advertisement of Bids".

II.9 AWARD OR REJECTION

The contract will be awarded to the lowest and/or best qualified responsible bidder complying with these instructions and with the advertisement. The Owner reserves the right to reject any or all proposals or to waive any formality or technicality in any proposal in the interest of the Owner. No bidder may withdraw their proposal for a period of thirty (30) days after the date of the opening thereof. The City Council of Au Gres reserves the right to determine the responsibility of the Bidder from its knowledge of the Bidder or from other sources. If requested by the Council, the low Bidder, may be required to furnish the following information: A list of supervisory personnel, including the Superintendent; those who will be working on the project; and an authenticated financial statement, dated within 60 days prior to the bidding date. The contractor shall provide the requested information to the Board within 14 days of receipt of the written request.

II.10 INTERPRETATION OF DOCUMENTS

If any person contemplating submitting a proposal is in doubt as to the true meaning of any part of the drawings, specifications or other contract documents, or finds discrepancies in or omissions from the drawings or specifications, he/she may submit to the Engineer a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the documents will be made only by addendum, duly issued, and a copy of the addendum will be mailed or delivered to each person receiving a set of the contract documents. Neither the Owner nor the Engineer will be responsible for any other explanations or interpretations of the contract documents.

II.11 ADDENDA

Any addenda issued during the time of bidding or forming a part of the contract documents loaned to the bidder for preparation of their proposal, shall be covered in the proposal, and shall be made a part of the contract. Receipt of each addendum shall be acknowledged in the proposal.

II.12 PROPOSAL GUARANTEE

Each proposal shall be accompanied by bid security of the type and in the amount set forth in the "Advertisement for Bids," payable without condition to the Owner as a guarantee that the bidder, if awarded the contract, will promptly execute the agreement in accordance with the proposal and the other contract documents, and will furnish good and sufficient bond for the faithful performance of the same, and for the payment to all persons supplying labor and material for the work. The proposal guarantees of all bidders except the two lowest will be returned promptly after the canvas of proposals.

II.13 PERFORMANCE AND MAINTENANCE BOND

The successful bidder simultaneously with the execution of the contract, will be required to furnish a faithful performance and maintenance bond in an amount equal to one hundred percent (100%) of the contract amount. The maintenance bond guarantees the repair of all the defective work for a period of one year after the acceptance of the work by the owner.

II.14 LABOR AND MATERIAL PAYMENT BOND

A labor and material payment bond equal to 100% of the contract amount shall be secured from a surety company satisfactory to the owner. The forms of the bonds that the successful bidder will be required to execute are included in the contract documents.

II.15 AFFIRMATIVE ACTION

The City Council of Au Gres, Michigan, hereby notifies all bidders that it will affirmatively insure that in any contract entered into resultant from this advertisement, minority business enterprises will be afforded full opportunity to submit bids and not be discriminated against on the grounds of race, color, sex or national origin. All successful bidders must meet state and federal laws and rules with regard to equal opportunity employment. Contractors will comply with all rules and regulations of the Department of Labor relative to minimum wages and such rules and regulations of the Fair Employment Practices Act, various departmental rules of the Federal, State and Local Governments as may relate to minority hiring and employment.

II.16 SAFETY STANDARDS

The Contractor shall comply with all "Construction Safety Standards" as required under Act 154 of 1974 regulated by the Department of Consumer and Industry Services. The Contractor shall be responsible for any and all fines levied by the Department of Consumer and Industry Services as a result of failure to comply with these standards.

II.17 COMMISSION AUTHORITY

The successful bidder will operate under the direction of the authorized representative of the City Council of Au Gres and will refer all matters pertaining to the work to them. The Engineer in charge will have necessary authority to decide all questions regarding the quality and acceptability of materials and work and shall have authority to suspend operations wholly or in part as he/she may feel necessary for any reason deemed to be in the best interest of the public. Inspectors assigned to project are not authorized to change specifications or plans. However, they may temporarily suspend work operations until the issue can be referred to and decided by the Engineer in charge. The Contractor shall provide competent supervisory personnel at the project who shall be familiar with the work to be performed and capable of securing a workmanlike result. He/she shall provide sufficient employees so that all phases of the work will progress in a workmanlike manner.

It is understood by all parties concerned, that the construction of any project in this Proposal will be based on availability of funds from all necessary sources and that any project may be deleted up to the point of actual construction if funds are not available. Unless specific mention is made in Supplemental Specifications, this work, if it is to be done in the next construction season, will be re-advertised.

III. PROPOSAL FOR EAST AND WEST MICHIGAN AVENUES, SAGINAW, WATER, AND ALBERT STREET ROAD IMPROVEMENTS

TO: The City Council of Au Gres, Arenac County, Michigan

The undersigned bidder, having become familiar with the local conditions affecting the cost of the work and with the contract documents, the Invitation for Bids, Instruction to Bidders, Proposal Guarantee, Notice of Award, Notice to Proceed, Contract Provisions, Special Provisions and Technical Specifications prepared by Surveying Solutions, Inc. for the City of Au Gres, proposes and agrees to furnish all superintendence, labor, materials, tools, water, power, transportation and other means of construction necessary to complete in all respects the construction improvements for the City of Au Gres all in accordance with the Contract Documents at the prices stated.

The work includes the following estimated quantities and pay items:

<u>MDOT Code</u>	<u>Description</u>	<u>Units</u>	<u>Quantity</u>	<u>Ur</u>
1100001	Mobilization, Max	LSUM	1	
2040020	Curb and Gutter, Rem	Ft	46	
2040050	Pavt, Rem	Syd	8	
2050016	Excavation, Earth	Cyd	20	
2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	74	
2090001	Project Cleanup	LSUM	1	
3010002	Subbase, CIP	Cyd	17	
3020016	Aggregate Base, 6 inch	Syd	23	
4030005	Dr Structure Cover, Adj, Case 1	Ea	33	
4037001	Dr Structure, Reconst	Ft	18	
5010002	Cold Milling HMA Surface	Syd	24414	
5010008	Pavt for Butt Joints, Rem	Syd	212	
5010025	Hand Patching	Ton	3	
5010033	HMA, 13A	Ton	2588	
8020040	Curb and Gutter, Conc, Det F6	Ft	46	
8120012	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	4	
8120013	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	4	
8120035	Channelizing Device, 42 inch, Fluorescent, Furn	Ea	150	
8120036	Channelizing Device, 42 inch, Fluorescent, Oper	Ea	150	
8120140	Lighted Arrow, Type C, Furn	Ea	3	
8120141	Lighted Arrow, Type C, Oper	Ea	3	
8120170	Minor Traf Devices	LSUM	1	
8120350	Sign, Type B, Temp, Prismatic, Furn	Sft	624	
8120351	Sign, Type B, Temp, Prismatic, Oper	Sft	624	
8120370	Traf Regulator Control	LSUM	1	
8162002	Slope Restoration, Non-Freeway, Type B	Syd	501	

Note: Dr Structure, Reconst is for reconstructing drainage structures along Albert Street

TOTAL ESTIMATED COST (Numerical) \$ _____

TOTAL ESTIMATED COST (Written) _____

The undersigned understands that the quantities of work to be done are approximate only, and are intended principally to serve as a guide in evaluating the bids.

I (we) acknowledge receipt of the following Addendum: _____

The undersigned hereby agrees that if this proposal shall be accepted by the owner, he/she will begin construction within five (5) days after the notice to proceed is issued or on a date mutually agreed upon. All work on this project shall be completed by **October 2nd, 2026**. If the work is not completed in the designated time periods, the liquidated damages specified shall be deducted from any moneys due the contractor, except as outlined in the Progress Clause.

If this proposal is accepted, and the undersigned shall fail to enter into a contract and to give bonds in a satisfactory form within ten days from the date of mailing of a notice by the Owner according to the address herein given, that the contract is ready for signature, the Owner may, at their option, declare the undersigned has abandoned the contract; and thereupon this proposal and acceptance thereof is null and void, and the Contractor shall forfeit their proposal guarantee to the Owner.

Contractor: _____

Contact Person: _____

Signature: _____

Title: _____

Address: _____

Phone: _____

Fax: _____

Email: _____

PROPOSAL GUARANTEE

Proposal Guarantee in the sum of \$ _____ dollars (\$ _____) in the form of _____ is submitted herewith in accordance with the instructions to the Bidders.

The undersigned agrees that this proposal may not be withdrawn for a period of thirty (30) days from the opening thereof.

In submitting this proposal, it is understood that the right is reserved by the Owner to waive any informality in, or to reject any or all bids.

SIGNATURE OF BIDDER:

Firm Name: _____

Business Address: _____

City, State, Zip: _____

By: _____ Title: _____
(Authorized Officer)

Date:

CONTRACTOR TO TYPE OR PRINT THE FOLLOWING INFORMATION:

Firm Name: _____

Address: _____

City, State, Zip: _____

Check one:

Corporation _____ Individual _____ Partnership _____

Incorporated in the State of _____

(If partnership, give name and address of each partner; if corporation, give name, title and business address of President, Secretary and Treasurer.)

IV. STATEMENT OF QUALIFICATIONS

SIMILAR PROJECT COMPLETED:

Date: _____ Value: _____

NAME OF PROJECT, ADDRESS, TYPE OF IMPROVEMENT:

PROPOSED EQUIPMENT TO BE USED ON PROJECT:

BIDDER: _____

BY: _____

ADDRESS: _____

V. ANTICIPATED SUBCONTRACTS

TYPE OF WORK TO BE SUBLET:

APPROXIMATE DOLLAR AMOUNT OF SUBCONTRACT: \$ _____

PROBABLE SUBCONTRACTOR: _____

ADDRESS:

TYPE OF WORK TO BE SUBLET:

APPROXIMATE DOLLAR AMOUNT OF SUBCONTRACT: \$ _____

PROBABLE SUBCONTRACTOR: _____

ADDRESS:

Statement of qualifications: The Contractor shall submit a statement of the Subcontractor's qualifications and shall obtain written permission from the Owner prior to the subletting or assignment of any portion of the contract as per Section 80-01 of the General Provisions.

BIDDER: _____

BY: _____

TITLE: _____

VI. FORM of PROPOSAL GUARANTEE

CONSTRUCTION IMPROVEMENTS

For

**CITY OF AU GRES
ARENAC, MICHIGAN**

KNOW ALL MEN BY THESE PRESENT, that we, the undersigned, _____ as Principal and _____ as Surety, are hereby held and firmly bound unto the City of Au Gres, hereinafter called the "Owner" in the sum of _____ for payment of which sum, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the Owner a certain proposal, attached hereto and hereby made a part hereof, to enter into a contract in writing for construction improvements to the City of Au Gres road system.

NOW THEREFORE,

1. If said proposal shall be rejected, or in the alternate,
2. If said proposal shall be accepted and the Principal shall execute and deliver a contract in form of agreement attached hereto.

This obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all default of the Principal here-under shall be the amount of this obligation as herein stated.

The Surety for value received stipulates and agrees that the obligation of said Surety shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Proposal; and said Surety does hereby waive notice of any extension.

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals this _____ day of _____, 2026, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

PRINCIPAL

BY (SEAL)

SURETY

ATTORNEY-IN-FACT (SEAL)

Attest:

Attest:

VII. NOTICE OF AWARD

**TO: XXXX Contractor XXXX
XXXX
XXXX**

DATE: XXXXXX, 2026

The City of Au Gres, Arenac County, Michigan, having considered the Proposals submitted for construction improvements to the City of Au Gres road system, and it appearing that your proposal of **XXXX Cost XXXX (\$XXXX Cost XXXX)** is fair, equitable and to the best interest of the City of Au Gres, and having authorized the work to be performed, the said Proposal is hereby accepted at the bid prices contained herein.

In accordance with the terms of the Contract Documents, you are required to execute the formal Contract Agreement within five (5) consecutive calendar days from and including the date of this notice.

The Proposal Guarantee submitted with your Proposal will be returned upon execution of the Contract Agreement. In the event you should fail to execute the Contract Agreement, within the time specified, said Proposal Guarantee will be forfeited to the Owner.

BY: _____

Dale Wiltse
City Manager

VIII. NOTICE TO PROCEED

**TO: XXXX Contractor XXXX
XXXX
XXXX**

DATE: XXXXXX, 2026

You are hereby authorized to proceed on this date, _____, **2026** with the construction improvements to the City of Au Gres road system in accordance with the Contract Documents and your Proposal. The work shall begin no later than five (5) days after the date of this notice or on a date mutually agreed upon.

BY: _____

Dale Wiltse
City Manager

IX. CONTRACT AGREEMENT
for
CONSTRUCTION IMPROVEMENTS
to the
City of Au Gres ROAD SYSTEM

THIS AGREEMENT, made and entered into this **XXXXX** day of _____, 2026, by and between the City Council of Au Gres, Arenac County, Michigan, REFERRED TO AS THE "SPONSOR" and **XXXX Contractor XXXX.**, hereinafter referred to as the "CONTRACTOR".

WITNESSETH:

Article 1. STATEMENT OF THE WORK. The Contractor shall furnish all labor and materials and perform all work for road construction improvements to the City of Au Gres road system, in accordance with the plan specifications dated **XXX 2026** and approved by the Engineer. All work on this project shall be completed by **October 2nd, 2026**, except as noted herein.

Article 2. It is hereby further agreed, that, in consideration of the faithful performance of the work by the Contractor, the Owner shall pay the Contractor the compensation due him by reason of said faithful performance of the work, at the stated intervals and in the amount certified by the Engineer in accordance with the provisions of this contract.

Article 3. It is hereby further agreed, that at the completion of the work and its acceptance by the Owner, all sums due the Contractor by reason of their faithful completion of the work, taking into consideration additions to or deductions from the contract price by reason of "Force Account" work authorized under this contract in accordance with the provisions of this contract, will be paid the Contractor by the Owner after said completion and acceptance. Final acceptance cannot be made by the Owner until any and all proper legal advertisements have been made.

Article 4. It is hereby further agreed that any reference herein to the "Contractor" shall include all "Contract Documents" as the same are listed and described in the general provisions of these specifications, and said "Contract Documents" are hereby made a part of this agreement set out at length herein.

Article 5. The Contractor shall obtain the prior written consent of the City Council of Au Gres to any proposed assignment of any interest in or part of this contract.

Article 6. It is a condition of this contract, and shall be made a condition of each subcontract entered into pursuant to this contract, that the Contractor and any subcontractor shall not require any laborer or mechanic employed in performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to their health or safety, as determined under construction safety and health standards (Title 29 Code of Federal Regulations, Part 1518, (36 F.R. 7340) (promulgated by the United States Secretary of Labor, in accordance with Section 107 of the Contract Work House and Safety Standards Act, (82 Stat. 96)).

Article 7. The Contractor agrees to accept as their full and only compensation for the performance of all the work required under this contract such sums of money as may be proper in accordance with the price or prices set forth in the Contractor's proposal attached hereto and made a part hereof covering all of the items.

Article 8. The Contractor agrees to indemnify, defend and hold harmless the City Council of Au Gres and their employees or agents, from claims and damages to property which may arise both of and during operations under this contract, whether such operations be by the Contractor or by any subcontractor or anyone directly or indirectly employed by the Contractor or any other employee or person employed or

engaged on or about, or in connection with, the construction. The total estimated cost for construction to be **XXXX Cost XXXX (\$XXXX Cost XXXX)**.

IN WITNESS WHEREOF, the First Party and the Second Party, respectively have caused this agreement to be duly executed the day and year first herein written in four (4) copies, all of which to all intents and purposes shall be considered as the original.

SPONSOR, First Party
City Council of Au Gres
Approved – _____, 2026 Council Meeting

ATTEST

APPROVED AS TO FORM

_____, Second Party

By: _____

Date: _____

X. PERFORMANCE and MAINTENANCE BOND
CITY OF AU GRES

KNOW BY ALL MEN BY THESE PRESENTS:

That we, the undersigned, _____, as Principal and _____, a corporation and existing under and by virtue of the laws of the State of _____, and duly authorized to transact business in the State of Michigan, as Surety, are held and firmly bound unto the City of Au Gres, in the penal sum of: _____, lawful money of the United States of America, for the payment of which well are truly to be made the said Principal and the said Surety do hereby bind ourselves, our heirs, executors, administrators, successors, assigns, jointly and severally, firmly by these present, as follows:

The condition of the above obligation is such that:

WHEREAS, the said Principal has entered into a written contract with the City of Au Gres for construction improvements to the City of Au Gres road system in conformation with the drawings, plans, general conditions, and specifications are hereby referred to and made a part hereof, the same to all intents and purposes as if written at length herein, in which contract the said Principal has contracted to perform the work specified in said contract in accordance with the terms hereof;

NOW THEREFORE, THE CONDITIONS OF THIS OBLIGATION are such that is the above bonded Principal shall well, truly, and faithfully perform said contract and any alterations in and additions thereto and comply with all of the terms and provisions thereof except that no charge will be made which increases the total contract price by more than twenty-five (25%) percent in excess of the original contract price without notice to the Surety, then this obligation to be void, otherwise to remain in full force and virtue, and comply; and shall fully indemnify and save harmless the City of Au Gres, from all damages, claims, demands, expense and charge of every kind (including claims of patent infringement) arising from any act, omission, or neglect of the Principal, his agents, or employees with relation to said work; and shall fully reimburse and repay to the City of Au Gres all costs, damages, and expenses which they may incur in making good any default based upon the failure of the Principal to fulfill his obligation to furnish maintenance, repairs, or replacements for the full guarantee period provided in the specification contained herein then this obligation shall be null and void, otherwise it shall remain in full force and effect.

Further conditions of the foregoing obligations are such that the Principal and Surety will guarantee the work performed under this contract against defects in workmanship performed by the Principal and all defects in materials furnished by him which appear within a period of one calendar year after the final acceptance of the work by the Owner. Under this guarantee, the Principal and Surety shall repair or replace all defective workmanship and material provided by the Principal appearing within one year after the completion and acceptance of the work, at no cost to the City of Au Gres.

PROVIDED FURTHER that the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed hereunder, or the specifications accompanying the same shall in anywise affect it obligations of this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the work, or the specifications.

IN WITNESS WHEREOF, said Principal and Surety have set their hands and seals at _____, this _____ day of _____, 2026.

PRINCIPAL (Contractor) _____

By: _____

Attest: _____

Surety _____

By: _____

Attest: _____

(Seal)

(Accompany this bond with Attorney-in-fact's authority from the Surety to execute bond, certified to include the date of bond.)

XI. PAYMENT BOND

City of Au Gres

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned _____ as Principal, and _____, a corporation organized and existing under and by virtue of the laws of the State of _____, and duly authorized to transact business in the State of Michigan, as Surety, are held and firmly bound unto the City of Au Gres in the penal sum of _____ (100% of Contract Value), lawful money of the United States of America, for the payment of which well and truly to be made the said Principal and the said Surety do hereby bind ourselves, our heirs, executors, administrators, successors, assigns, jointly and severally, firmly by these presents, as follows:

The condition of the above obligation is such that:

WHEREAS, the said Principal has entered into a written contract with the City of Au Gres for construction improvements to the City of Au Gres road system in conformance with the drawings, plans, general conditions and specifications prepared by the Engineer, which contract, drawings, plans, general conditions, and specifications are hereby referred to and made a part hereof, the same to all intents and purposes as if written at length herein, in which contract the said Principal has contracted to perform the work specified in said contract in accordance with the terms hereof;

NOW THEREFORE, THE CONDITIONS OF THIS OBLIGATION are such that is the above bonded Principal shall well, truly, and faithfully perform said contract and any alterations in and additions thereto and comply with all of the terms and provisions thereof except that no charge will be made which increases the total contract price by more than twenty-five (25%) in excess of the original contract price without notice to the Surety, then this obligation to be void, otherwise to remain in full force and virtue, and comply; and shall fully indemnify and save harmless the City of Au Gres all costs, damages, and expenses which they may incur in making good any default based upon the failure of the Principal to fulfill his obligation to furnish maintenance, repairs, or replacements for the full guarantee period provided in the specification contained herein, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

PROVIDED FURTHER, that if the said Contractor fails to duly pay for any labor, materials, team hire, sustenance, provision, provender, gasoline, lubricating oils, fuel oils, grease, coal, or any other supplies or materials used or consumed by said Contractor or his subcontractors in performance of the work contracted to be done, the Surety will pay the same in any amount as provided by law.

PROVIDED FURTHER that the Surety, for value received, hereby stipulated and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed hereunder, or the specifications accompanying the same shall in anywise affect its obligations of this bond, and it does hereby waive notice of any such change, extension of time, alterations, or addition to the terms of the contract or to the work, or the specifications.

IN WITNESS WHEREOF, said Principal and Surety have set their hands and seals at _____, this _____ day of _____, 2026.

PRINCIPAL (Contractor)

By: _____

Attest: _____

Surety

By: _____

Attest: _____

(Seal)

(Accompany this bond with Attorney-in-fact's authority from the Surety to execute bond, certified to include the date of bond.)

XII. GENERAL PROVISIONS

XII. Section 10 - Definition of Terms

Whenever the following terms are used in these specifications, in the contract, in the documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-1 AASHTO

The American Association of State Highway and Transportation Officials, the successor to AASHTO.

10-2 Advertisement

A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-3 ASTM

The American Society for Testing and Materials.

10-4 Award

The acceptance by the owner, of the successful bidder's proposal.

10-5 Bidder

Any individual, partnership, form of corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-6 Calendar Day

Every day shown on the calendar.

10-7 Change Order

A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work covered by a change order shall be within the scope of the contract.

10-8 Contract

A written agreement covering the work to be performed. The awarded contract shall include, but not be limited to: The Advertisement; The Contract Form; The Proposal; The Performance Bond; The Plans; and any addenda issued to the bidders.

10-9 Contract Item (Pay Item)

A specific unit of work for which a price is provided in the contract.

10-10 Contract Time

The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar working days, the contract shall be completed by that date.

10-11 Contractor

The individual, partnership, form or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who act directly or through lawful agents or employees to complete the contract work.

10-12 Drainage System

The system of pipes, ditches and structures by which surface or subsurface waters are collected and conducted to an acceptable outlet.

10-13 Engineer

An individual, partnership, firm or corporation duly authorized by the Owner to be responsible for engineering supervision of the contract work and acting directly or through an authorized representative.

10-14 Equipment

All machinery, together with the necessary supplies for the upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-15 Extra Work

An extra item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-16 Federal Specification

The Federal Specifications and Standards, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government. They may be obtained from the Specifications Activity, Printed Materials Supply Division, Building 197, Naval Weapons Plant, Washington, D.C., 20407.

10-17 Inspector

An authorized representative of the Engineer assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-18 Intention of Terms

Whenever, in these specifications or on the plans, the word "directed", "required", "permitted", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the direction, requirements, permission, order, designation or prescription of the Engineer is intended; and similarly, the words "approved", "acceptable", "satisfactory", or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-19 Laboratory

The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer.

10-20 Major and Minor Contract Items

A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 10 percent (10%) of the total amount of the awarded contract. All other items shall be considered minor contract items.

10-21 Materials

Any substance specified for use in the construction of the contract work.

10-22 Notice to Proceed

A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-23 Owner (Sponsor)

The term owner shall mean the party of the first part or the contracting agency signatory to the contract.

10-24 Pavement

The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-25 Payment Bond

The approved form of security furnished by the Contractor and their surety as a guarantee that he/she will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-26 Performance Bond

The approved form of security furnished by the Contractor and their surety as a guarantee that the Contractor will complete the work in accordance with the terms of the contract.

10-27 Plans

The official drawings or exact reproductions, approved by the Engineer, which show the location, character, dimensions and details of the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.

10-28 Project

The agreed scope of work for accomplishing specific Public Works improvements as specified in the contract.

10-29 Proposal

The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-30 Proposal Guarantee

The security furnished with a proposal to guarantee that the bidder will enter into a contract if their proposal is accepted by the Owner.

10-31 Specifications

A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-32 Structures

Facilities such as bridges; culvert; catch basins; inlets; retaining walls; cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting, building; vaults; and other manmade features that may be encountered in the work and not otherwise classified herein.

10-33 Subgrade

The soil which forms the pavement foundation.

10-34 Superintendent

The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-35 Supplemental Agreement

A written agreement between the Contractor and the Owner covering:

1. work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25 percent (25%), such increased or decreased work being within the scope of the originally awarded contract, or
2. Work that is not within the scope of the originally awarded contract.

10-36 Surety

The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds which are furnished to the Owner by the Contractor.

10-37 Work

The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans and specifications.

10-38 Working Day

A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least 6 hours toward completion of the contract. Unless work is suspended for causes beyond the Contractor's control, Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work, requiring the presence of an inspector, or the Engineer, will be considered as working days.

XII. Section 20

Proposal Requirements and Conditions

20-1 Advertisement (Notice to Bidders)

20-2 Pre qualification of Bidders

Each bidder shall furnish the Owner satisfactory evidence of their competency to perform the proposed work. Such statements covering the bidder's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available.

20-3 Contents of Proposal Forms

The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached.

The plans, specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-4 Issuance of Proposal Forms

The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be in default for any of the following reasons:

1. Failure to comply with any pre qualification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.
2. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force (with the Owner) at the time the Owner issues the proposal to a prospective bidder.
3. Contractor default under previous contracts with the Owner.
4. Unsatisfactory work on previous contracts with the Owner.

20-5 Interpretation of Estimated Proposal Quantities

An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the Proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly or by implication agree that the actual quantities involved will correspond exactly therewith nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection title ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

20-6 Examination of Plans, Specifications and Site

The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. He/she shall satisfy himself as to the character, quality, quantities or work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

20-6 Examination of Plans, Specifications and Site (Cont.)

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which he/she may make or obtain from their examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-7 Preparation of Proposal

The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms must be correctly filled in where indicated, for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals for which he/she proposes to do each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall sign their proposal correctly and in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the State under the laws of which the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

20-8 Irregular Proposals

Proposals shall be considered irregular for the following reasons:

1. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.
2. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind which make the proposal incomplete, indefinite, or otherwise ambiguous.
3. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
4. If the proposal contains unit prices that are obviously unbalanced.
5. If the proposal is not accompanied by the proposal guarantee specified by the Owner.

20-9 Proposal Guarantee

Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner.

20-10 Delivery of Proposal

Each proposal submitted shall be placed in a sealed envelope plainly marked with the project name/number, location of the work, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement before the time for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-11 Withdrawal or Revision of Proposals

A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by telegram before the time specified for opening bids. Revised proposal must be received at the place specified in the advertisement before the time specified for opening bids.

20-12 Public Opening of Proposals

Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-13 Disqualification of Bidders

A bidder shall be considered disqualified for any of the following reasons:

1. Submitting more than one proposal from the same partnership, firm or corporation under the same or different name.
2. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.
3. If the bidder is considered to be in "default" for any reason specified in the subsection titled ISSUANCE OF PROPOSAL FORMS of this section.

XII. Section 30

Award and Execution of Contract

30-1 Consideration of Proposals

After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject any or all proposals; waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable State and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interest.

1. If the proposal is irregular as specified in the subsection titled IRREGULAR PROPOSALS of Section 20.
2. If the bidder is disqualified for any of the reasons specified in the subsection titled DISQUALIFICATION OF BIDDERS of Section 20.

30-2 Award of Contract

The award of a contract, if it is to be awarded, shall be made within 30 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the Owner to the lowest, qualified bidder whose proposal conforms to the cited requirements of the Owner.

30-3 Cancellation of Award

The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guarantee, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the sub-section titled APPROVAL OF CONTRACT of this section.

30-4 Return of Proposal Guarantee

All proposal guarantees, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as herein before specified in the subsection titled CONSIDERATION OF PROPOSALS of this section. Proposal guarantees of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guarantee will be returned. The successful bidder's proposal guarantee will be returned as soon as the Owner receives the contract bonds as specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section.

30-5 Requirements of Contract Bonds and Insurance

The bidder to whom the contract is awarded at the time of execution of the contract must deposit with the Owner a Performance and Payment Bond (sample form attached) in the sum equal to one hundred percent (100%) of the amount of the contract awarded, guaranteeing the faithful performance of the contract and the payment of all labor, materials, rentals, etc. The Surety shall be acceptable to the Sponsor. The Bonder shall be licensed to do business in the State of Michigan. A separate payment and performance bond will be required for each contract in excess of \$100,000.00. The Surety shall furnish a copy of their Power of Attorney in conjunction with the executed bonds.

The bidder to whom the contract is awarded shall furnish insurance in accordance with the Special Provision within the contract documents.

30-6 Execution of Contract

The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return such signed contract to the Owner, along with the fully executed surety bond or bonds, specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section, within 5 calendar days from the date mailed or otherwise delivered to the successful bidder. If the contract is mailed, special handling is recommended.

30-7 Approval of Contract

Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-8 Executed Contracts

Each contract shall be executed in four original counterparts of the Contractor's performance bond and payment bond in equal number to the executed original counterparts of the contract. Three copies of such executed documents will be retained by the Owner and one copy will be delivered to the Contractor. The cost of executing the bonds, and contract and insurance, including all notaries fees and incidental expenses, are to be paid by the Contractor to whom the contract is awarded.

30-9 Failure to Execute Contract

Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the 5 calendar day period specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section shall be just cause for cancellation of the award and forfeiture of the proposal guarantee, not as a penalty, but as liquidation of damages to the Owner.

XII. Section 40

Scope of Work

40-1 Intent of Contract

The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-2 Alteration of Work and Quantities

The Owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25 percent (total cost being based on the unit prices and estimated quantities in the awarded contract.) Alterations which do not exceed the 25 percent limitation shall not invalidate the contract nor release the surety, and the contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations which are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25 percent limitation herein before specified, such excess altered work shall be covered by supplemental agreement. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

All supplemental agreements shall require consent of the Contractor's surety and separate performance and payment bonds.

40-3 Omitted Items

The Engineer may, in the Owner's best interest, omit from the work any contract item, except major contract items. Major Contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection titled "PAYMENT OF OMITTED ITEMS" of Section 90.

40-4 Extra Work

Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called Extra Work. Extra work that is within the general scope of the contract shall be covered by written change order. Change orders for such extra work shall contain agreed unit prices for performing the change order in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the Engineer's opinion, is necessary for completion of such extra work.

40-4 Extra Work (Cont.)

When determined by the Engineer to be in the Owner's best interest, he/she may order the Contractor to proceed with extra work by force account as provided in the subsection title PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90.

Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as herein before defined in the subsection titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-5 Maintenance of Traffic

It is the explicit intention of the contract that the safety of the public, as well as the Contractor's equipment and personnel, is the most important consideration. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of vehicular and pedestrian traffic with respect to their own operations and the operations of all their subcontractors as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80.

With respect to their own operations and the operations of all their sub-contractors, the contractor shall provide marking, lighting, and other acceptable means of identifying: personnel; equipment; vehicles; storage area; and any work area or condition that may be hazardous to the operation of police, fire-rescue equipment, or ambulance on street right-of-ways.

When the contract required the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic unless otherwise specified. The Contractor shall furnish, erect and maintain barricades, warning signs, flagmen, and other traffic control devices in reasonable conformity with the Michigan Manual of Uniform Traffic Control Devices for Street and Highways (published by the Michigan Department of Transportation in conjunction with the United States Government Printing Office), unless otherwise specified herein. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

The Contractor shall make their own estimate of all labor, materials, equipment and incidentals necessary for providing the maintenance of vehicular traffic as specified in this subsection.

Contractor shall maintain traffic according to the Special Provisions.

40-6 Removal of Existing Structures

All existing structures encountered within the established lines, grades or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract. Except as provided in the subsection titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades or grading sections established for completion of the work) shall be utilized in the work as otherwise provided for in the contract and shall remain the property of the Owner when so utilized in the work.

40-7 Rights In and Use of Materials Found in the Work

Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, the CONTRACTOR may at their option either:

1. Use such material in another contract item, provided such use is approved by the Engineer and is in conformance with the contract specifications applicable to such use; or,
2. Remove such material from the site, upon written approval of the Engineer; or,
3. Use such material for their own temporary construction on site; or,
4. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option (1), (2), or (3), he/she shall request the Engineer's approval in advance of such use.

Should the Engineer approve the Contractor's request to exercise option (1), (2), or (3), the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in construction embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for their use of such material so used in the work or removed from the site.

Should the Engineer approve the Contractor's exercise of option (1), the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their exercise of option (1), (2), or (3).

The Contractor shall not excavate, remove or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans or specifications.

40-8 Final Cleaning Up

Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. He/she shall cut all brush and woods within the limits indicated and shall leave and site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property owner.

XII. Section 50

Control of Work

50-1 Authority of the Engineer

The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. He/she shall decide all questions which may arise as to the interpretation of the specifications or plans relating to the work, the fulfillment of the contract on the part of the contractor, and the rights of different Contractors on the project. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for under the contract.

50-2 Conformity with Plans and Specifications

All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

If the Engineer finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, he/she will advise the Owner of their determination that the affected work be accepted and remain in place. In this event, the Engineer will document their determination and recommend to the Owner a basis of acceptance which will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommend contract price adjustments will be based on good engineering judgment and such test or retests of the affected work as are, in their opinion, needed. Changes in the contract price shall be covered by contract modifications (change order or supplemental agreement) as applicable.

If the Engineer finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor, in accordance with the Engineer's written orders.

For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans and specifications. The term shall not be construed as waiving the Engineer's right to insist on strict compliance with the requirements of the contract, plans and specifications during the Contractor's prosecution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority to use good engineering judgment in their determinations as to acceptance of work that is not in strict conformity but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

50-3 Coordination of Contract, Plans, and Specifications

The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of a discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, and cited standards for materials or testing; contract general provisions shall govern over plans, and cited standards for materials or testing; plans shall govern over cited standards for materials or testing.

Coordination of Contract, Plans, and Specifications (Cont.)

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, he/she shall immediately call upon the Engineer for their interpretation and decision, and such decision shall be final.

50-4 Cooperation of Contractor

The Contractor will be supplied with three copies each of the plans and specifications. He/she shall have available on the work site at all times sufficient copies of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and he/she shall cooperate with the Engineer and their Inspectors and with other Contractors in every way possible. The Engineer shall allocate the work and designate the sequence of construction in case of controversy between Contractors. The Contractor shall have a competent superintendent on the work at all times who is fully capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the Engineer or their authorized representative.

50-5 Cooperation between Contractors

The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct their work so as not interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each contractor involved shall assume all liability, financial or otherwise, in connection with their contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced by him because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. He/she shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-6 Construction Layout and Stakes

Prior to construction, the Engineer will furnish the Contractor typical horizontal and vertical control at the various locations necessary to complete this project.

Restaking required as a result of The Contractors carelessness will be done at the expense of The Contractor.

50-7 Automatically Controlled Equipment

Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for period of 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-8 Authority and Duties of Inspectors

Inspectors employed by the Owner shall be authorized to inspect all work done and all material furnished. Such inspections may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors employed by the Owner are authorized to notify the Contractor or their representative of any failure of the work or materials to conform to the requirements of the contract, plans or specifications and to

reject such non-conforming materials in question until such issues can be referred to the Engineer for their decision.

50-9 Inspection of the Work

All materials and each part of detail of the work shall be subject to inspection by the Engineer. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Any work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed. Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the Owner, authorized representatives of the owners of such facilities shall have the right to inspect such work. Such inspections shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of Unacceptable and Unauthorized Work

All work which does not conform to the requirements of the contract, plans and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

No work shall be done without lines and grades having been given by the Engineer. Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as given, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

50-11 Load Restrictions

The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage which may result from the moving of material or equipment.

The operations of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by their hauling equipment and shall correct such damage at their own expense.

50-12 Maintenance during Construction

The Contractor shall maintain the work during construction and until the work is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to Maintain the Work

Should the Contractor at any time fail to maintain the work as provided in the subsection titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such non-compliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

50-14 Final Acceptance

Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and the Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be completed in accordance with the contract, plans and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance as of the date of final inspection.

50-15 Claims for Adjustment and Disputes

If for any reasons the Contractor deems that additional compensation is due him for work or materials not clearly provided for in the contract, plans or specifications or previously authorized as extra work, he/she shall notify the Engineer in writing of their intention to claim such additional compensation before he/she begins the work on which he/she bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual costs as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days submit their written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

XII. Section 60

Control of Materials

60-1 Source of Supply and Quality Requirements

The materials used on the work shall conform to the requirements of the contract, plans and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed.)

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition and manufacture of all materials to be used on the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is started. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

60-2 Samples, Test and Cited Specifications

All materials used in the work shall be inspected, tested and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for, and , if directed by the Engineer, shall be removed at the Contractor's expense. Unless otherwise designated, tests in accordance with the cited standard methods of AASHTO or ASTM which are current on the date of advertisement for bids will be made by and at the expense of the Owner. Samples will be taken by a qualified representative of the Owner. All materials being used are subject to inspection, test or rejection at any time prior to or during incarnation into the work. Copies of all tests will be furnished to the Contractor's representative at this request.

60-3 Certification of Compliance

The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

1. Conformance to the specified performance, testing, quality or dimensional requirements; and,
2. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, he/she shall furnish the manufacturer's certificates of compliance as herein before described for the specified brand name

60-3 Certification of Compliance (Cont.)

material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-4 Plant Inspection

The Engineer or their authorized representative may inspect, at its source, any specified material or assembly to be used in the source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for their acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

1. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom he/she has contracted for materials.
2. The Engineer shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.
3. If required by the Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material which has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans or specifications.

60-5 Storage of Materials

Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property owner's permission.

All storage sites on private or City/Township/Village/County/State property shall be restored to their original condition by the Contractor at their entire expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-6 Unacceptable Materials

Any material or assembly that does not conform to the requirements of the contract, plans or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work unless otherwise instructed by the Engineer.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of work until such time as the Engineer has approved its use in the work.

60-7 Owner-Furnished Materials

The Contractor shall furnish all materials required to complete the work, except those specified herein (if any) to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified herein.

All costs of handling, transportation from the specified location to the site of the work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss or other deficiencies which may occur during the Contractor's handling, storage or use of such Owner-furnished material. The Owner will deduct from any moneys due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage or use of Owner-furnished materials.

XII. Section 70

Legal Relations and Responsibility to Public

70-1 Laws to be Observed

The Contractor shall keep fully informed of all Federal and State laws, all local laws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. He/she shall at all times observe and comply with all such laws, ordinances, regulations, orders and decrees; and shall protect and indemnify the Owner and all their officers, agents or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by their self or their employees.

70-2 Permits, Licenses and Taxes

The Contractor shall procure all permits and licenses, pay all charges, fees and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work.

70-3 Patented Devices, Materials and Processes

If the Contractor is required or desires to use any design, device, material or process covered by letters of patent or copyright, he/she shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the surety shall indemnify and save harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses and damages which it may be obliged to pay by reason of an infringement, at any time during the prosecution or after the completion of the work.

70-4 Restoration of Surfaces Disturbed by Others

The Owner reserves the right to authorize the construction, reconstruction or maintenance of any public or private utility service, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction or maintenance has been coordinated with the Owner, such authorized work (by others) is indicated as follows:

OWNER

LOCATION

PERSON TO CONTACT

* See Specifications for Utility Coordination.

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Engineer.

Should the owner of public or private utility service, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such owners by arranging and performing the work in this contract so as to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damage due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-5 Sanitary, Health and Safety Provisions

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of their employees as may be necessary to comply with the requirements of the State and local Board of Health, or of other bodies or tribunals having jurisdiction.

Sanitary, Health and Safety Provisions (Cont.)

Attention is directed to Federal, State and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surrounding or under conditions which are unsanitary, hazardous or dangerous to their health or safety.

70-6 Public Convenience and Safety

The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of vehicular traffic with respect to their own operations and those of their subcontractors and all suppliers in accordance with the subsection titled MAINTENANCE OF TRAFFIC of Section 40 herein before specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80 herein after.

70-7 Barricades, Warning Signs and Hazard Markings

The Contractor shall furnish, erect and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work.

These barricades, warning signs, lights and other traffic control devices shall conform to the Michigan Manual of Uniform Traffic Control Devices for Street and Highways (published by the Michigan Department of Transportation in conjunction with the United States Government Printing Office),

When used during periods of darkness, such barricades, warning signs and hazard markings shall be suitably illuminated.

Barricades, warning signs and hazard markings for urban and sub-urban construction shall be suitably spaced for the intended purpose. Fifty (50) foot maximum spacing shall be used on straight-a-way areas and twenty-five (25) foot maximum spacing shall be used on corners, radii or fillets. The Engineer may vary these spacings by either lengthening or shortening the span as necessary. Spacing for special applications shall be as required by the Engineer.

The Contractor shall furnish, erect and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and their parked construction equipment that may be hazardous to the operation of police, emergency fire-rescue or ambulance.

The Contractor shall furnish and erect all barricades, warning signs and markings for hazards prior to commencing work which requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their dismantling is directed by the Engineer.

Open-flame type lights shall not be permitted within the City of Au Gres.

70-8 Protection and Restoration of Property and Landscape

The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property marks until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in their manner or method of executing work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work, or in consequence

Protection and Restoration of Property and Landscape (Cont.)

of the non-execution thereof by the Contractor, he/she shall restore, at their own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding or otherwise restoring as may be directed, or he/she shall make good such damage or injury in an acceptable manner.

70-9 Responsibility for Damage Claims

The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits, actions, or claims of any character brought because of any injuries or damage received or sustained by any person, persons or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; and through use of unacceptable materials in constructing the work; or because of any act of omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order or decree. Money due the Contractor under and by virtue of their contract as may be considered necessary by the Owner for such purpose, may be retained for the use of the Owner, or in case no money is due, their surety may be held until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid shall have been settled and suitable evidence to that effect furnished to the Owner, except the money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he/she is adequately protected by public liability and property damage insurance.

70-10 Third Party Beneficiary Clause

It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create the public or any member thereof a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-11 Opening Sections of the Work to Traffic

Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make their own estimate of the difficulties involved in arranging their work to permit such beneficial occupancy by the Owner as described below.

REQUIRED DATE OF
PHASE OWNERS OCCUPANCY

WORK SHOWN ON
PLAN SHEET

Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent opening are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimates of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract.

70-12 Contractor's Responsibility for Work

Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy, or of governmental authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seedings and soddings furnished under this contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-13 Contractor's Responsibility for Utility Service & Facilities of Others

As provided in the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the Owner of any public or private utility service, a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, or utility services of another agencies are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans. This information in no way relieves the Contractor from the responsibility of contacting the "MISS DIG" CALL CENTER 1-800-482-7161 or 811 72 hours prior to any excavation.

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility service's facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of their responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the owners of all utility services or other facilities of their plan of operations. Such notifications shall be in writing addressed to THE PERSON TO CONTACT as provided herein before in this subsection and the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification herein before provided, it shall be the responsibility of the Contractor to keep such individual owners advised of changes in their plan of operation that would affect such owners.

Prior to commencing the work in the general vicinity of an existing utility service of facility, the Contractor shall again notify each such owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a

70-13 Contractor's Responsibility for Utility Service & Facilities of Others (Cont.)

representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious mean to reach the utility owner's PERSON TO CONTACT no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Engineer.

The Contractor's failure to give the two days notice herein above provided shall be cause for the Engineer to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use excavation methods acceptable to the Engineer within 3 feet of such outside limits at such points as may be required to insure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, he/she shall immediately notify the proper authority and the Engineer and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the Engineer continuously until such damage has been repaired and service restored to the satisfaction on the utility or facility owner.

The Contractor shall bear all cost of damage and restoration of service to any utility service or facility due to their operations whether or not due to negligence or accident. The Contract Owner reserves the right to deduct such costs from any moneys due or which may become due the Contractor, or their surety.

70-14 Furnishing Right-of-Ways

The Owner will be responsible for furnishing all right-of-ways upon which the work is to be constructed in advance of the Contractor's operations.

70-15 Personal Liability of Public Officials

In carrying out any of the contract provisions or in exercising any power or authority granted to him by this contract, there shall be no liability upon the Engineer, their authorized representatives, or any official of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-16 No Waiver of Legal Rights

Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud of such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guarantee.

70-17 Environmental Protection

The Contractor shall comply with all Federal, State, and local laws and regulations controlling pollution of the environment. He/she shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-18 Archaeological and Historical Findings

Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not with any property, district or site, and does not contain any buildings, structure or object listed in the current National Register of Historic Places published by the United State Department of the Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure or object which is incongruous with its surroundings, he/she shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and will direct the Contractor to either resume their operations or to suspend operations as directed.

Should the Engineer order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract modification (change order or supplemental agreement) as provided in the subsection titled EXTRA WORK of Section 40 and the subsection titled PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT WORK of Section 90. If appropriate, the contract modification shall include an extension of contract time in accordance with the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

XII. Section 80

Prosecution and Progress

80-1 Subletting of Contract

The Owner will not recognize any sub-contractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

Should the Contractor elect to assign their contract, said assignment shall be concurred on by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner. In case of approval, the Contractor shall file copies of all subcontracts with the Engineer.

80-2 Notice to Proceed

The notice to proceed shall state the date on which it is issued. The Contractor shall begin the work to be performed under the contract within (5) days of the date set by the Engineer in the written notice to proceed or on a date mutually agreed upon, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin.

80-3 Prosecution and Progress

Unless otherwise specified, the Contractor shall submit their progress schedule for the Engineer's approval within 10 days after the effective date of the notice of award. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Engineer's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the prosecution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

80-4 Limitation of Operations

The Contractor shall control their operations and the operations of their subcontractors and all suppliers so as to provide for the free and unobstructed movement of pedestrian and vehicular traffic unless otherwise specified under Special Provisions.

The Contractor shall not commence new work that would be prejudicial to work already stated.

80-5 Character of Workers, Methods, and Equipment

The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who, in the opinion of the Engineer, does not perform their work in a proper and skillful manner or is intemperate or disorderly, shall, at the written request of the Engineer, be removed forthwith by the Contractor or sub-contractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer.

Character of Workers, Methods, and Equipment (cont.)

Should the Contractor fail to remove such person or persons or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, he/she may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in the basis of payment for the contract items involved, nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-6 Temporary Suspension of the Work

The Engineer shall have the authority to suspend the work wholly, or in part, for such period or periods as he/she may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the prosecution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Engineer, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with their claim information substantiating the amount shown on the claim. The Engineer will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provisions of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather, for suspensions made at the request of the Contractor, or for any other delay provided for in the contract, plans or specifications.

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. He/she shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for local traffic within the limits of the project.

80-7 Determination and Extension of Contract Time

The number of calendar or working days allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

- a. CONTRACT TIME based on WORKING DAYS shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of their weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK.)

The Engineer shall base their weekly statement of contract time charged on the following considerations:

1. No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least 6 hours with the normal work force employed on such principal item. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Engineer for reasons not the fault of the Contractor, shall not be charged against the contract time.
2. The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed or the actual day the Contractor begins, whichever is the earliest date.
3. The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed or on the day the Contractor begins, whichever is the earliest date.
4. The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection titled FINAL ACCEPTANCE of Section 50.
5. The Contractor will be allowed one week in which to file a written protest setting forth their objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the subsection titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

- b. CONTRACT TIME based on CALENDAR DAYS shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays and non-work days. All calendar days elapsing between the effective dates of the Engineer's order to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

80-7 Determination and Extension of Contract Time (cont.)

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either the cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

- c. CONTRACT TIME based on CALENDAR DAYS shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays and non-work days. All calendar days elapsing between the effective dates of the Engineer's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either the cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

- d. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially completed.

If the Contractor finds it impossible for reasons beyond their control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this subsection, he/she may, at any time prior to the expiration of the contract time as extended, make a written request to the Engineer for an extension of time setting forth the reasons which he/she believes will justify the granting of their request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, he/she may extend the time for completion in such amount as the conditions justify. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-8 Failure to Complete on Time

For each calendar day or working day, as specified in the contract that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified herein as liquidated damages will be deducted from any money due the Contractor or their surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in this contract.

LIQUIDATED DAMAGES

TIME

Per MDOT 2020 Standard Specifications for Construction

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract.

80-9 Default and Termination of Contract

The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the "Notice to Proceed," or

80-9 Default and Termination of Contract (Cont.)

- b. Fails to perform the work or fails to provide sufficient workers, equipment or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable or unsuitable, or
- d. Discontinues the prosecution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against him for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Engineer consider the Contractor in default of the contract for any reason herein before, he/she shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the prosecution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under the contract, will be deducted from any moneys due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for National Emergencies

The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the prosecution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination for National Emergencies (Cont.)

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work Area, Storage Area and Sequence of Operations

The Contractor shall plan and coordinate their work in such a manner as to insure safety and a minimum of hindrance to traffic.

XII. Section 90

Measurement and Payment

90-1 Measurement of Quantities

All work completed under the contract will be measured by the Engineer, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 8 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inches.

The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois. All materials which are measured or proportioned by weights shall be weighted on accurate, approved scales by competent, qualified personnel at locations designated by the Engineer. If material is shipped by rail, the care weight may be accepted provided that only the actual weight of material is paid for.

However, care weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard may be weighed and such weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Measurement of Quantities (Cont.)

Bituminous materials will be measured by the gallon or ton. When measured by volume, such volumes will be measured at 50° F., or will be corrected to the volume at 60° F., using ASTM D 1250 for asphalts or ASTM D 633 for tars.

Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton or hundred weight.

Timber will be measured by the thousand feet board measure (M.F.B.M.) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerance in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected and maintained by the Contractor, or be certified permanently installed commercial scales.

Scales shall be accurate within one-half percent of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of one percent of the nominal rated capacity of the scales, but not less than one pound. The use of spring balances will not be permitted.

Beams, dials, platforms and other scale equipment shall be so arranged that the operator and inspector can safely and conveniently view them.

Scale installations shall have available ten standard fifty-pound weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Measurement of Quantities (Cont.)

Scales "overweighing" (indicating more than correct weight) will not be permitted to operate and all materials received subsequent to the past previous correct weighting-accuracy-test will be reduced by the percentage of error in excess of one half of one percent.

In the event inspection reveals the scales have been "under weighting" (indicating less than correct weight) they shall be adjusted and no additional payment to the Contractor will be allowed for materials previously weighted and recorded.

All costs in connection with furnishing, installing, certifying, testing and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-2 Scope of Payment

The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof, subject to the provisions of the subsection titled NO WAIVER OF LEGAL RIGHTS OF Section 70.

When the "basis of payment" subsection of a technical specification, required that the contract price (price bid) included compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans or specifications.

90-3 Compensation for Altered Quantities

When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for actually completed and accepted. No allowance, except as provided for in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the contractor which results directly from such alterations or indirectly from their unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-4 Payment for Omitted Items

As specified in the subsection titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order non-performance) any contract item, except major contract items, in the best interest of the Owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

Payment for Omitted Items (Cont.)

In addition to the reimbursement herein before provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature and amount of such costs.

90-5 Payment for Extra and Force Account Work

Extra work, performed in accordance with the subsection titles EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work requires that it be done by force account, such force account shall be measured and paid for as follows:

- a. **Labor.** For all labor (skilled and unskilled) and foremen, in direct charge of a specific force account item, the Contractor shall receive the rate of wage (or scale) for every hour that such labor or foreman is actually engaged in the specified force account work. Such wage (or scale) shall be agreed upon in writing before beginning the work.

The Contractor shall receive the actual costs paid to, or in behalf of, workers by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits or other benefits, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work.

An amount equal to 15 percent of the sum of the above items will also be paid the Contractor.

- b. **Insurance and Taxes.** For property damage, liability and workmen's compensation insurance premiums, unemployment insurance contributions, and social security taxes on the force account work the Contractor shall receive the actual cost, to which cost (sum) 5 percent will be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such insurance and taxes.
- c. **Materials.** For materials accepted by the Engineer and used, the Contractor shall receive the actual cost of such materials delivered on the work, including transportation charges paid by him (exclusive of machinery rentals as herein after set forth) to which cost (sum) 15 percent will be added.
- d. **Equipment.** For any machinery or special equipment (other than small tools) including fuel and lubricants, plus transportation costs, the use of which has been authorized by the Engineer, the Contractor shall receive the rental rates agreed upon in writing before such work is begun for the actual time that such equipment is committed to the work, to which rental sum 15 percent will be added.
- e. **Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- f. **Comparison of Records.** The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and Engineer or their duly authorized representatives.
- g. **Statements.** No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:

- 1. Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.

Payment for Extra and Force Account Work (Cont.)

2. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
3. Quantities of materials, prices and extensions.
4. Transportation of materials.
5. Cost of property damage, liability and workmen's compensation insurance premiums, unemployment insurance contributions, and social security tax.

Statements shall be accompanied and supported by receipt invoice for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from their stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

The additional payment, based on the percentages specified above, shall constitute full compensation for all items of expense not specifically provided for the force account work. The total payment made as provided above shall constitute full compensation for such work.

90-6 Partial Payments

Partial payments will be made at least once each month as the work progresses. Said payments will be based upon estimates prepared by the Engineer of the value of the work performed and materials complete in place in accordance with the contract, plans and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the subsection titled PAYMENT FOR MATERIALS ON HAND of this section.

No partial payment will be made when the amount due the Contractor since the last estimate amounts to less than one hundred dollars.

From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the Owner until the final payment is made except, as may be provided (at the Contractor's option) in the subsection titled PAYMENT OF WITHHELD FUNDS of this section.

The balance (90 percent) of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise their option, as provided in the subsection titled PAYMENT OF WITHHELD FUNDS of this section, no such 10 percent retainage shall be deducted.

When not less than 95 percent of the work has been completed the Engineer may, at their discretion and with the consent of the surety, prepare an estimate from which will be retained an amount no less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection titled ACCEPTANCE AND FINAL PAYMENT of this section.

90-7 Payment for Materials on Hand

Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans and specifications and are delivered to an acceptable site on the project that is acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.
- b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.
- d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.
- e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-8 Payment of Withheld Funds

At the Contractor's option, he/she may request that the Owner accept (in lieu of the 10 percent retainage on partial payments described in the subsection titled PARTIAL PAYMENTS of this section) the Contractor's deposits in escrow under the following conditions:

- a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.
- b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than 10 percent retainage that would otherwise be withheld from partial payment.
- c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.
- d. The Contractor shall obtain the written consent of the surety to such agreement.

90-9 Acceptance and Final Payment

When the contract work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of their objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30 day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental, final estimate.

Release of Claims: Neither the final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a complete release of all claims against the Owner arising under and by virtue of this contract, including claims of all sub-contractors and suppliers of either materials or labor, other than such claims, if any, as may be specifically excepted by the Contractor.

Final Payment: After the final inspection and acceptance and having received from the Contractor the Release of Claims, the Owner shall pay to the Contractor the amount therein stated, less all prior payments advances whatsoever to or for the account of the Contractor. Final payment cannot be made by the Owner until any and all proper legal advertisements have been made. All prior estimates and payments including those relating to extra work shall be subject to correction by payment, which is throughout this Contract called Final Payment.

XIII

SPECIAL PROVISIONS

-

NOTICE TO BIDDERS

-

CLAUSES

PROGRESS CLAUSE

The Engineer anticipates that construction can begin no earlier than 10 calendar days after award or as directed by the Engineer.

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

Submit a complete, detailed, signed Progress Schedule. The Engineer for this project is as follows:

Todd Bonzelet, P.E.
Surveying Solutions, Inc.
4471 M-61
Standish, MI 48658
tbonzelet@ssi-mi.com

The entire project must be completely open to traffic by the open to traffic date of **October 2nd, 2026**.

Unless specific pay items are provided in the contract any extra costs incurred by the Contractor due to cold-weather projection and winter grading will not be paid for separately but will be included in the payment of other pay items in the contract.

After award and prior to the start of work, the Contractor must attend a preconstruction meeting with the Engineer. The Engineer will determine the day, time, and place for the preconstruction meeting. The meeting will be conducted after project award and may be rescheduled if there are delays in the award of the project.

The named subcontractor(s) for Designated and/or Specialty Items, as shown in the Proposal, should attend the preconstruction meeting if such items materially affect the work schedule.

Failure by the Contractor to meet interim completion, open to traffic, and/or final completion dates will result in the assessment of liquidated damages in accordance with subsections 108.10.C.1 and 108.10.C.2 of the Standard Specifications for Construction.

CITY OF AU GRES
SPECIAL PROVISION
FOR
HMA APPLICATION ESTIMATE

AU GRES: SSI

1 of 1

March 2026

a. Description. This work shall be done in accordance with the requirements of Section 501 of the Standard Specifications for Construction except as herein specified.

b. Materials. No Reclaimed Asphalt Pavement (RAP) shall be used in HMA, 13A, wedging or Hand Patching.

The HMA, 13A Top Course shall have a yield of 165 pounds per square yard as specified in the typical cross sections.

HMA through intersections will not be paid for separately, but will be included in HMA, 13A.

Hand Patching shall have a yield of 220, 220 and 165 pounds per square yard for the base, leveling and top courses, respectively as specified in the typical cross sections.

The Performance Grade asphalt binder range for the mixture shall be PG 58-28.

The bituminous bond coat material shall be per subsection 501.03 of the Standard Specifications for Construction. Apply bond coat at a uniform rate of 0.05 to 0.15 gallons per square yard. There will be no separate payment for the bond coat.

The Aggregate Wear Index shall be a minimum of 220 for the top course.

Wedging with HMA will be performed to remove irregularities in the existing road surface and correct the transition from edge of HMA to edge of curb.

c. Construction. This work shall be done in accordance with the requirements of Section 501 of the Standard Specifications for Construction.

d. Measurement and Payment. Measurement and Payment shall be at the contract unit price per ton.

CITY OF AU GRES
SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC

AU GRES: SSI

1 of 3

March 2026

Description

This special provision consists of requirements and restrictions to maintain traffic on East and West Michigan Avenues, Saginaw, Water, and Albert Streets in the City of Au Gres in Arenac County.

The contractor shall construct this project while maintaining two-way traffic.

This work shall consist of all labor, materials, and equipment required to maintain traffic as specified herein.

General

Maintain traffic throughout the project in accordance with the standard specifications, typicals, supplemental specifications in the contract and as described on the plans for this project.

The Contractor shall furnish and erect channelizing devices, lighted arrows, and temporary signs throughout the project limits as well as adjacent work areas as stated in this proposal. These channelizing devices, lighted arrows, and temporary signs shall be furnished, erected, and maintained in accordance with the requirements of section 812 of the Standard Specifications for Construction.

Access for emergency services, local fire department (s), school system, trash collection services, mail delivery, and other services shall be always maintained within the work zone. Local traffic shall be maintained at all times and property owners shall be allowed access to their properties.

WZD-125-E (Temporary Traffic Control Devices) will apply to this project.

Construction Influence Area (CIA)

The construction influence area (CIA) shall consist of the width of road right-of-way extending in all directions along each cross road to the limits of where advanced warning signs are placed, including along US-23.

Traffic Restrictions

A minimum of one lane of traffic shall be maintained at all times under flag control paid for as Traf Regulator Control.

At the end of each day both lanes shall be paved to the same point and the roadway shall be opened to traffic.

The maximum closure length is 1 mile.

Do not utilize more than 1 traffic regulator operation(s) at one time on each road segment. Only one road segment may be worked on at a time.

Only one lane closure is allowed on US-23 at a time.

Do not work, deliver material, or close lanes during the holiday periods defined below:

Memorial Day: (3:00 pm Thursday 05/21/2026 through 6:00 am Tuesday 05/26/2026)

Independence Day: (3:00 pm Thursday 07/02/2026 through 6:00 am Monday 07/06/2026)

Labor Day: (3:00 pm Thursday 09/03/2026 through 6:00 am Tuesday 09/08/2026)

All work shall be conducted during daytime hours only, unless otherwise approved by the Engineer. The MDOT permit does not allow Saturday work that requires a lane closure on US-23. Saturday work will only be allowed if approved by the Engineer. Sunday work will not be allowed.

Access to intersecting roads/streets and residential/commercial drives shall be maintained at all times.

Traffic Control Devices

All traffic control devices shall conform to the Michigan Manual on Uniform Traffic Control Devices (MMUTCD), current edition, as amended, and Special Detail WZD-125-E. Traffic control devices shall be maintained in accordance with the standard specifications.

Temporary signing shall be placed in accordance with the Maintaining Traffic Typical listed below:

- 100-GEN-KEY
- 101-GEN-SPACING-CHARTS
- 102-GEN-NOTES
- 103-GEN-SIGN
- 104-GEN-AB
- 107-GEN-SPEED
- 110-TR-NFW-2L
- 4123A-M-NFW-1LC-(R)
- WZD-100-A
- WZD-125-E

It shall be the Contractor's responsibility to supply, install, maintain, cover and remove all traffic control devices necessary for maintaining traffic within the CIA. Traffic control devices not paid for separately shall be included in payment for the item Minor Traf Devices.

Seven additional W20-1 (Road Work Ahead) signs are included for work along intersecting roadways. These signs should be placed approximately 500 feet in advance of the work area.

Two W8-11 (Uneven Lanes) signs are included for placement along the existing roadway centerline and construction lane to warn users of the elevation difference between lanes.

Measurement and Payment

1. Payment for temporary signs shall be made based on measurement of the total area of the maximum number of signs with dissimilar sign legends in use, at one time on the project.
2. The contractor shall move all maintaining traffic items (including those along US-23) from one segment to the next at no additional cost.
3. Any additional signing or maintaining traffic devices required to expedite the construction shall be at the Contractor's expense.

The completed work for Maintaining Traffic will be paid for at the contract unit prices.

CITY OF AU GRES
SPECIAL PROVISION
FOR
INSURANCE

AU GRES: SSI

1 of 2

March 2026

The Contractor, prior to execution of the contract shall file with the City of Au Gres a Certificate or Certificates of Insurance in form satisfactory to the City of Au Gres showing compliance with the insurance requirements as set forth below and in Section 107.10 of the 2020 edition of the Michigan Department of Transportation Standard Specifications for Construction.

107.10 Indemnification, Damage Liability and Insurance. The Contractor shall comply with the following:

a. Indemnification. The Contractor shall save harmless, indemnify and defend in litigation the State, the Commission, the City of Au Gres and its agents and employees, against all claims for damages to public or private property and for injuries to persons arising out of and during the progress and to completion of the work, except claims resulting from the sole negligence or willful acts or omissions of said indemnity.

b. Worker's Compensation Insurance. The Contractor shall certify before the execution of the contract that the Contractor carries Worker's Compensation Insurance.

c. Bodily Injury and Property Damage. The Contractor, before execution of the contract, shall file with the City of Au Gres copies of completed certificates of insurance, as evidence that the Contractor carries adequate insurance, satisfactory to the City of Au Gres, to afford protection against all claims for damages to public or private property, and injuries to persons, arising out of and during the progress of the work, and to its completion and, where specified in the proposal, similar insurance to protect the owner of premises on or near which construction operations are to be performed.

d. Additional Insured - The City of Au Gres and the Michigan Department of Transportation shall be listed as an additional insured on all insurance policies.

1. Bodily Injury and Property Damage Other Than Automobile. Unless otherwise specified in the contract documents, the minimum limits of property damage and bodily injury liability covering each contract shall be:

Bodily Injury and Property Damage Liability:	
Each Occurrence:.....	\$1,000,000
Aggregate:.....	\$2,000,000

The insurance shall include, but not be limited to, coverage for:

a. Underground damage to facilities due to drilling and excavating with mechanical equipment, and

b. Collapse or structural injury to structures due to blasting or explosion, excavation, tunneling, pile driving, cofferdam work, or building moving or demolition.

2. **Bodily Injury Liability and Property Damage Liability Automobile.** Unless otherwise specifically required by special provisions, the minimum limits of bodily injury liability and property damage liability shall be:

Bodily Injury Liability:

Each Person: \$500,000

Each Occurrence:\$1,000,000

Property Damage Liability:

Each Occurrence:\$1,000,000

Combined Single Limit for Bodily Injury and Property Damage Liability:

Each Occurrence:\$2,000,000

3. The requirements for 1 and 2 above, may be met through an umbrella policy.

4. **Owners Protective Liability*.** Bodily injury and property damage protection, including general supervision of work performed, shall be extended to the State, the City of Au Gres, and the Commission and all agents and employees thereof and, where indicated by the identity of the contracting parties, the protection shall be extended to all participating political subdivisions and public corporations. The minimum limit shall be \$1,000,000.

*In lieu of the owners protective liability policy, a Contractor may add a per project aggregate endorsement (ISO Form CG 25 03 or Equivalent) to the general liability policy. Under this scenario, the City of Au Gres and the Michigan Department of Transportation shall be listed as an additional insured on the general liability policy

D. **Notice.** All insurance policies and binders must also include endorsements by which the insurer shall agree to provide the City of Au Gres, in writing, the following:

1. A 30-day prior notice of any insurer initialed cancellation or reduction in coverage for reasons other than nonpayment of the premium.

2. A 10-day prior notice of any cancellation or reduction in coverage for nonpayment of the premium.

3. Immediate notice of Contractor’s cancellation or reduction of coverage.

The Contractor shall cease operations if any insurance is canceled or reduced and shall not resume operations until new insurance is in force.

SAMPLE INSURANCE FORM

ACORD™ CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YYYY)
PRODUCER Anytown Insurance Agency 4567 Elm Street Anytown, MI 48484 Phone: 111-222-3333 Fax: 111-222-3334	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
INSURED WXYZ Construction Co. 1234 First Street Anytown MI 48484	INSURERS AFFORDING COVERAGE	NAIC #
	INSURER A: Oak Street Insurance Co.	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR	ADD'L	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	X	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR	PKG1234567	10/01/07	10/01/08	EACH OCCURRENCE \$ 1,000,000
		GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC				DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 1,000,000
A		AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS	BA2345678	10/01/07	10/01/08	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000
						BODILY INJURY (Per person) \$
						BODILY INJURY (Per accident) \$
						PROPERTY DAMAGE (Per accident) \$
		GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$
A		EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$ 10,000	UM3456789	10/01/07	10/01/08	EACH OCCURRENCE \$ 2,000,000
						AGGREGATE \$ 2,000,000
A		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	WC4567890	10/01/07	10/01/08	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER
						E.L. EACH ACCIDENT \$ 100,000
						E.L. DISEASE - EA EMPLOYEE \$ 100,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
		OTHER				

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Reference: (insert MDOT contract number). The Michigan Department of Transportation, and (insert all agencies listed in contract requirements) are listed as Additional Insureds for General Liability per form (insert form number). The General Liability policy includes a Per Project Aggregate per form (insert form number). A 30-day prior notice (see following page)

CERTIFICATE HOLDER Michigan Department of Transportation Contract Services Division P.O. Box 30050 Lansing MI 48909	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL <u>30</u> DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE (Insert Authorized Signature Here)
--	--

SAMPLE INSURANCE FORM

NOTEPAD:

HOLDER CODE MICBDE2
INSURED'S NAME WXYZ Construction Co.

PAGE 2

Description of Operations (continued): of any insurer initiated cancellation or reduction in coverage for reasons other than nonpayment of premium is included or a 10-day prior notice of any cancellation or reduction in coverage for nonpayment of premium. Immediate notice of Contractor's cancellation or reduction of coverage is required.

CITY OF AU GRES
NOTICE TO BIDDERS
COORDINATION CLAUSE

AU GRES: SSI

1 of 1

March 2026

Other contracts may commence within the immediate area during the life of this contract.

The Contractor's attention is directed to the requirements for cooperation as covered in sections 101.03 and 104.08 of the Standard Specifications for Construction.

No claims for extra compensation or adjustments will be allowed on account of delay or failure of others to complete work as scheduled.

Other projects in the vicinity include:

There are currently no known scheduled projects in the vicinity, however the contractor will need to cooperate with adjacent projects if this changes.

CITY OF AU GRES
NOTICE TO BIDDERS
UTILITY COORDINATION

AU GRES: SSI

1 of 2

March 2026

The contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in subsection 104.08 of the Standard Specifications for Construction. In addition, for the protection of underground utilities, the contractor shall follow the requirements in subsection 107.12 of the Standard Specifications for Construction. Contractor delay claims resulting from a utility will be determined based upon subsections 108.06, 108.09, and 109.05 of the Standard Specifications for Construction.

For the protection of underground utilities and in conformance with Public Act 174 of 2013, the contractor shall dial 1-800-482-7171 a minimum of three (3) full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the contractor of the responsibility of notifying utility owners who may not be a part of the "Miss Dig" alert system.

Public Utilities

The following Public Utilities may have facilities located within the project:

Brightspeed (Telephone)
Phone: (866) 984-0334

Peninsula Fiber Network, LLC (Fiber Optic)
Attn: Robert Cheney
Phone: (906) 353-7964

Charter Communications (Cable TV)
Attn: Melissa W.
Email: agt_comm@irth.com

KEPS Technologies, Inc. DBA ACD.net (Fiber Optic)
Attn: Daryl
Phone: (517) 999-3254

M-R Ventures, LLC (Pipeline)
Attn: Tom McMillan
Phone: (972) 644-2581 ext. 235

Midland City (Water)
Attn: Tim Bell
Email: tbell@sagmid.com
Phone: (989) 233-8785

Consumers Energy (Electric)
Attn: Robert Lockman
Email: Robert.Lockman@cmsenergy.com

Consumers Energy (Gas)
Attn: Evan R. Huizenga
Email: Evan.Huizenga@cmsenergy.com
Phone: (810) 247-8227

Everstream (Fiber Optic)
Attn: Mike Huang
Email: mhuang@everstream.net
Phone: (414) 340-9110

Merit Network (Fiber Optic)
Attn: Carrie Allen
Email: CarrieA@westerntel-com.com
Phone: (989) 370-6559

CITY OF AU GRES
NOTICE TO BIDDERS
FOR
CLASSIFICATION REQUIREMENTS

AU GRES: SSI

1 of 1

March 2026

Outlined below are the classification requirements for this project:

% DBE PARTICIPATION REQUIRED – N/A

Net classification required for this project is

Comb/Jt. 400 Cb

The prime contractor must be prequalified in the Cb category.

CITY OF AU GRES
NOTICE TO BIDDERS
FOR
CONSTRUCTION ENGINEERING

AU GRES: SSI

1 of 1

March 2026

Construction inspection on this project will be done by representatives of the City of Au Gres.

The Contractor shall be required to notify the Project Engineer a minimum of 24 hours prior to any work being done on the project requiring onsite inspection, as determined by the Engineer. If 24-hour notice is not given, work performed without proper notification will not be considered for payment.

CITY OF AU GRES
NOTICE TO BIDDERS
FOR
2020 MDOT SPECIFICATIONS

AU GRES: SSI

1 of 1

March 2026

Note: Although the City of Au Gres Improvement project is being bid locally, it is essentially being treated like an MDOT style project. The MDOT 2020 Standard Specifications will govern, and all pay items are derived from the MDOT style contract.

The standard Frequently Used Special Provisions and Frequently Used Supplemental Specifications that are included in typical MDOT style projects will also be included in the proposal package.

CITY OF AU GRES
NOTICE TO BIDDERS
FOR
PREVAILING WAGE

AU GRES:SSI

1 of 1

March 2026

Note: Because State funds are involved, there are no specific prevailing wage requirements.

CITY OF AU GRES
NOTICE TO BIDDERS
FOR
SOIL EROSION AND SEDIMENTATION CONTROL

AU GRES: SSI

1 of 1

March 2026

Note: The City of Au Gres or their designated representatives will be overseeing the soil erosion and sedimentation control aspects of the project. This includes the site visits and reports required on a weekly basis or within 24 hours of a rain event.

Because the site will disturb less than 5 acres, an NPDES Notice of Coverage permit is not required.

CITY OF AU GRES

IN COOPERATION WITH

MICHIGAN DEPARTMENT OF TRANSPORTATION

EAST MICHIGAN & WEST MICHIGAN AVENUES, WATER, SAGINAW & ALBERT STREETS 2026 COLD MILL AND OVERLAY



COUNTY KEY

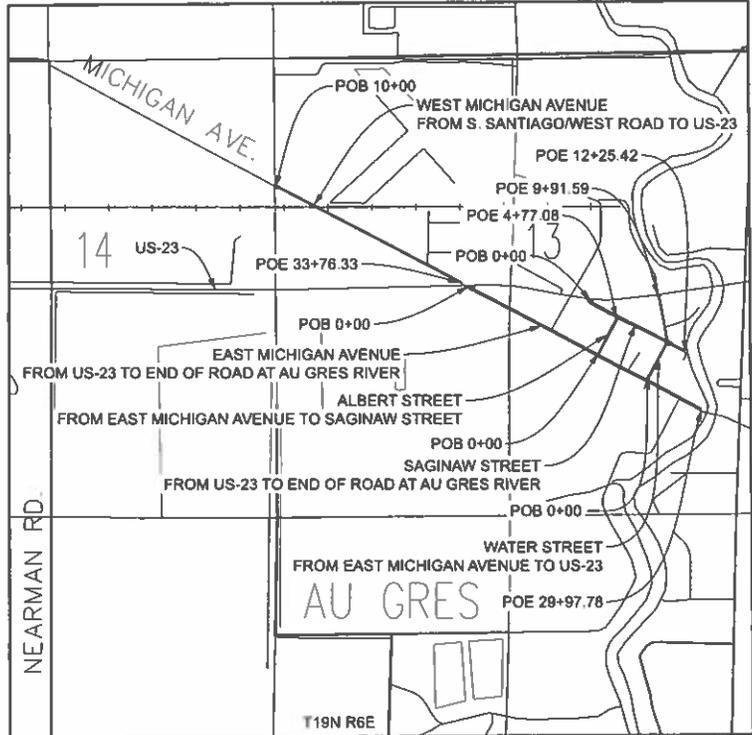
MDOT JOB NUMBER: 225634
MDOT CONTROL SECTION: 06000

CONTRACT FOR:

1.53 MILES OF COLD MILL AND RESURFACING TRAVEL LANES, SELECT HMA WEDGING, SPOT CURB AND GUTTER REPAIR, DRAINAGE STRUCTURE REPAIRS, AND SLOPE RESTORATION IN THE CITY OF AU GRES, ARENAC COUNTY INCLUDING ALBERT, SAGINAW, AND WATER STREETS & EAST AND WEST MICHIGAN AVENUES.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROGRAM GUIDELINES FOR GEOMETRICS, DATED JULY 24, 2017, PREVENTIVE MAINTENANCE (PM). PERMANENT PAVEMENT MARKINGS AND SIGNS, AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE 2025 EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).

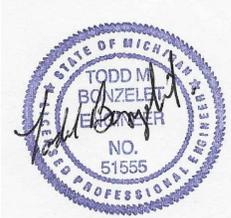
THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION.



PROJECT LOCATIONS

NOT TO SCALE

PREPARED UNDER SUPERVISION OF



REGISTERED PROFESSIONAL ENGINEER
TODD M. BONZELET (No. 51555)

SURVEYING SOLUTIONS, INC.
ORGANIZATION

4471 M-61, STANDISH, MI. 48658
ADDRESS

ROAD	SPEED DATA		LIMITS
	DESIGN	POSTED	
EAST MICHIGAN AVENUE	25	*25	US-23 TO END OF ROAD
WEST MICHIGAN AVENUE	25	*25	S. SANTIAGO/WEST STREET TO US-23
WATER STREET	25	*25	EAST MICHIGAN AVE TO US-23
SAGINAW STREET	25	*25	US-23 TO END OF ROAD
ALBERT STREET	25	*25	E. MICHIGAN AVE TO SAGINAW STREET

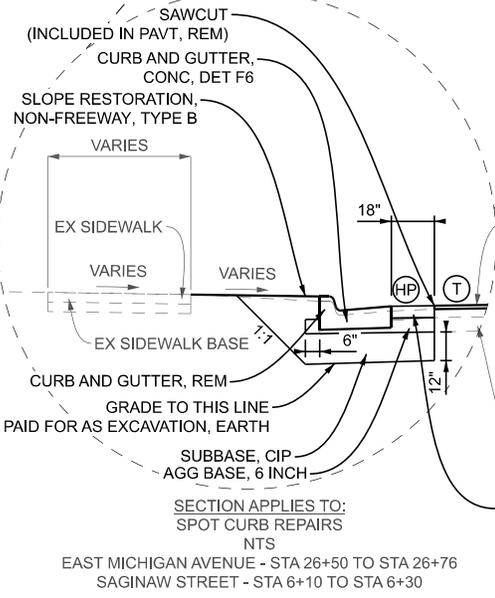
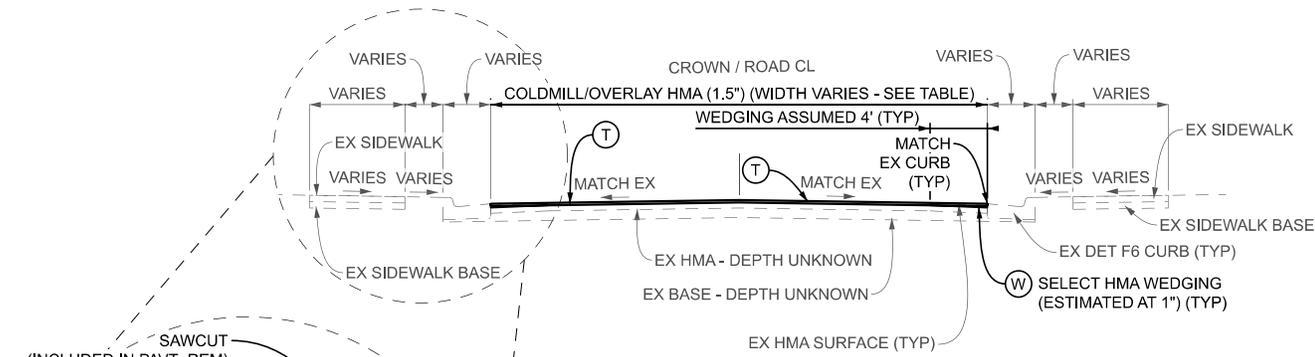
*PRIMA FACIE

CITY OF AU GRES APPROVAL

Dale Wiltse
DALE WILTSE
CITY MANAGER

3/26/26
DATE

 SURVEYING • ENGINEERING • CONSULTING 4471 M-61 Standish, Michigan 48658 Tel: 588-848-8881 Fax: 588-848-8887	DESIGN UNIT:	TSC:	DATE: 03/24/26
	CS: 06000	CITY OF AU GRES	
	JN: 225634	ROAD IMPROVEMENTS	
			DRAWING SHEET
			SECT

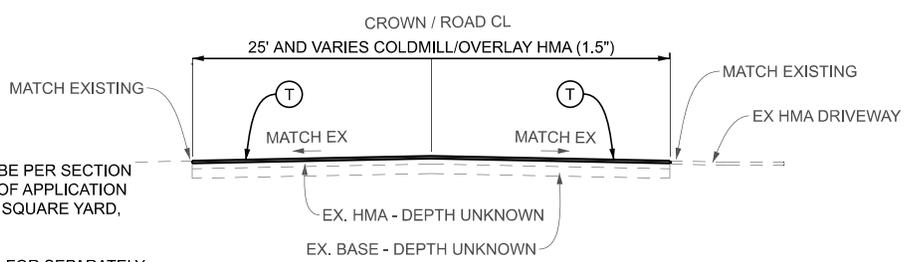


EXISTING & PROPOSED TYPICAL
 1" = 10'
 EAST MICHIGAN AVENUE - STA 0+00 (POB) TO STA 29+97.78 (POE)
 SAGINAW STREET - STA 0+00 (POB) TO STA 9+75
 WATER STREET - STA 0+00 (POB) TO STA 9+91.59 (POE)
 WEST MICHIGAN AVENUE - STA 10+00 (POB) TO STA 17+60 AND STA 21+30 TO STA 33+76.33 (POE)

COLDMILL/OVERLAY ROAD SUMMARY		
ROAD	COLDMILL/OVERLAY HMA WIDTH	STATIONING
EAST MICHIGAN AVENUE	33' (16.5' LT/RT)	0+00 TO 29+97.78
SAGINAW STREET	26.5' (13.25' LT/RT)	0+00 TO 9+75 (GAPPED FOR WATER STREET)
WATER STREET	25.0' (12.5' LT/RT)	10+25 TO 12+25.42 (GAPPED FOR WATER STREET)
WEST MICHIGAN AVENUE	26' (13' LT/RT)	0+00 TO 9+91.59
ALBERT STREET	27' (13.5' LT/RT)	10+00 TO 33+76.33
	*19' (9.5' LT/RT)	0+00 TO 4+77.08

* NO COLDMILLING WILL BE DONE, OVERLAY ONLY

SECTION APPLIES TO:
 SPOT CURB REPAIRS
 NTS
 EAST MICHIGAN AVENUE - STA 26+50 TO STA 26+76
 SAGINAW STREET - STA 6+10 TO STA 6+30



EXISTING & PROPOSED TYPICAL
 NTS
 SAGINAW STREET - STA 10+25 TO STA 12+25.42 (POE)

HMA APPLICATION ESTIMATE

NOTES:
 THE HMA BOND COAT MATERIAL SHALL BE PER SECTION 501.02 AND 501.03. THE UNIFORM RATE OF APPLICATION SHALL BE 0.05 AND 0.015 GALLONS PER SQUARE YARD, AS DIRECTED BY THE ENGINEER.

THE HMA BOND COAT WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED AS PART OF HMA, 13A, WEDGING AND HAND PATCHING.

THE REQUIRED AGGREGATE WEAR INDEX NUMBER (AWI) FOR THE TOP COURSE IS 220.

RECLAIMED ASPHALT PAVEMENT (RAP) WILL NOT BE ALLOWED.

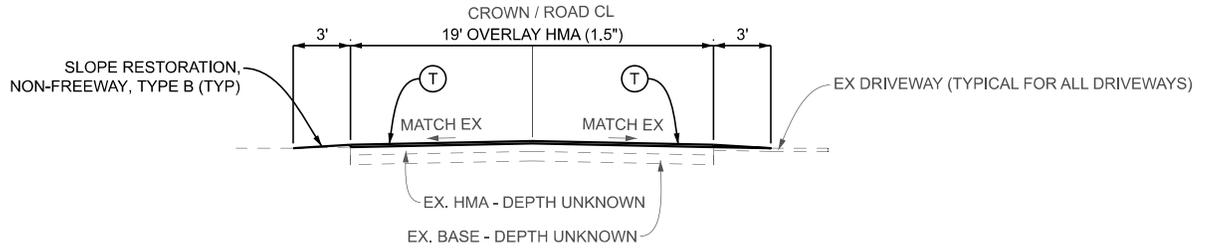
HMA APPLICATION TABLE					
IDENT.	ITEM	RATE OF APPLICATION (LB/SYD)	ESTIMATED THICKNESS	PERFORMANCE GRADE	REMARKS
T	HMA, 13A	165	1.5"	58-28	TOP COURSE
W	HMA, 13A	VARIES	VARIES	58-28	WEDGING
HP	HAND PATCHING	605	5.5"	58-28	13A: BASE 220 LB/SYD, LEVELING 220 LB/SYD, TOP 165 LB/SYD



DESIGN UNIT:
 CS: 06000
 JN: 225634

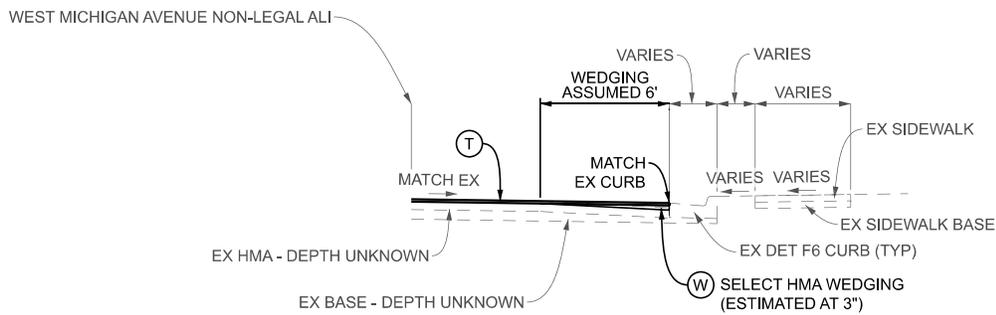
TSC:
 81
 CITY OF AU GRES - ROAD IMPROVEMENTS

DATE: 03/24/26
 DRAWING SHEET
 SECT

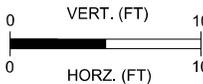


TRANSITION TO EXISTING AT POB AND POE OVER 50'
PAID FOR AS PAVT FOR BUTT JOINTS, REM

EXISTING & PROPOSED TYPICAL
NTS
ALBERT STREET - STA 0+00 (POB) TO STA 4+77.08 (POE)



EXISTING & PROPOSED PARTIAL TYPICAL
NTS
WEST MICHIGAN AVENUE - STA 17+60 TO STA 21+30



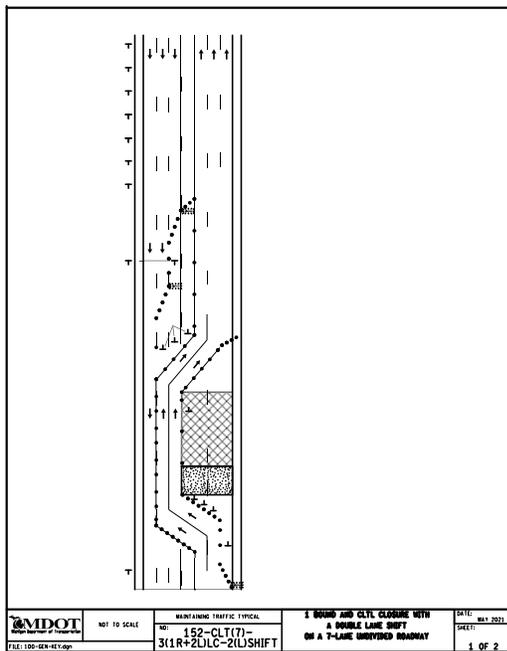
DESIGN UNIT:	TSC:
CS: 06000	82
JN: 225634	

TYPICAL CROSS SECTIONS		DATE: 03/24/26
CITY OF AU GRES - ROAD IMPROVEMENTS		DRAWING SHEET
		SECT

TYPICAL NUMBER KEY

CODES

AB = ARROW BOARD AW = ADVANCE WARNING C = CLOSURE CLT = CENTER LEFT TURN LANE CROSS = CROSSOVER CruSha = CRUSH AND SHAPE EM = EARLY MERGE EnR = ENTRANCE RAMP ExR = EXIT RAMP FW = FREEWAY GEN = GENERAL INFORMATION GORE = FREEWAY GORE AREA IN = INSIDE INT = INTERSECTION L = LANE (L) = LEFT LC = LANE CLOSURE LD = LONG DURATION	LO = LANE OPEN O = OUTSIDE (LANE CLOSURE) OUT = OUTSIDE OF SHOULDER MID = MIDDLE OF INTERSECTION OR ROAD NFW = NON-FREEWAY PARK = PARKING LANE PCMS = PORTABLE CHANGEABLE MESSAGE SIGN (R) = RIGHT ROLL = ROLLING ROADBLOCK RUM = RUMBLE STRIP SD = SHORT DURATION SHL = SHOULDER CLOSURE SIGN = SIGN SP = SPECIAL SPEED = SPEED STA = STOPPED TRAFFIC ADVISORY TR = TRAFFIC REGULATOR TS = TEMPORARY SIGNAL ZIP = ZIPPER MERGE
--	---



- 100 - GENERAL NOTES
- 110 - TRAFFIC REGULATORS
- 120 - NON-FREEWAY
- 130 - CENTER LEFT TURN (CLT) LANES
- 140 - PARKING LANES
- 150 - CLT 7 LANE SECTIONS
- 160 - SIGNAL WORK
- 200 - FREEWAY CLOSURES
- 210 - FREEWAY LANE SHIFTS
- 220 - FREEWAY ENTRANCE RAMPS
- 230 - FREEWAY EXIT RAMPS
- 300 - ADVANCE WARNINGS
- 310 - CROSSOVER CLOSURE
- 320 - CRUSH AND SHAPE
- 340 - MERGE SYSTEMS
- 350 - GORE LOCATIONS
- 360 - ROLLING ROADBLOCK
- 4000 - MAINTENANCE
- 5000 - SURVEY

EXAMPLE TYPICAL

CODE: 152-CTL(7)-3(1R+2L)LC-2(L)SHIFT

152 - TYPICAL NUMBER

CTL(7) = CENTER LEFT TURN LANE, 7 LANES TOTAL.

3(1R+2L)LC = 3 LANES CLOSED, (1 RIGHT LANE AND 2 LEFT LANES).

2(L)SHIFT = 2 LANES SHIFTED TO THE LEFT.

NOT TO SCALE

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	TYPICAL NUMBERING KEY	DATE: DECEMBER 2021
		NO: 100-GEN-KE 83		SHEET: 1 OF 1

FILE: 100-GEN-KEY.dgn

DISTANCE BETWEEN TRAFFIC SIGNS, "D"

"D" DISTANCES	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
	25	30	35	40	45	50	55	60	65	70	75
D (FEET)	250	300	350	400	450	500	550	600	650	700	750

GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE, "B"

"B" LENGTHS	SPEED*, MPH (PRIOR TO WORK AREA)											
	20	25	30	35	40	45	50	55	60	65	70	75
B (FEET)	33	50	83	132	181	230	279	329	411	476	542	625

* POSTED SPEED, OFF-PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED.

MINIMUM MERGING TAPER LENGTH, "L" (FEET)

OFFSET (FEET)	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
	25	30	35	40	45	50	55	60	65	70	75
1	11	15	21	27	45	50	55	60	65	70	75
2	21	30	41	54	90	100	110	120	130	140	150
3	32	45	62	80	135	150	165	180	195	210	225
4	42	60	82	107	180	200	220	240	260	280	300
5	53	75	103	134	225	250	275	300	325	350	375
6	63	90	123	160	270	300	330	360	390	420	450
7	73	105	143	187	315	350	385	420	455	490	525
8	84	120	164	214	360	400	440	480	520	560	600
9	94	135	184	240	405	450	495	540	585	630	675
10	105	150	205	267	450	500	550	600	650	700	750
11	115	165	225	294	495	550	605	660	715	770	825
12	125	180	245	320	540	600	660	720	780	840	900
13	136	195	266	347	585	650	715	780	845	910	975
14	146	210	286	374	630	700	770	840	910	980	1050
15	157	225	307	400	675	750	825	900	975	1050	1125

NOT TO SCALE

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	"B", "D" AND "L" TABLES CHANNELIZING DEVICE SPACING, SIGN BORDER KEY, AND ROLL-AHEAD SPACING	DATE: MAY 2021
		NO: 101-GEN-84 SPACING-CHARTS		SHEET: 1 OF 3

THE FORMULAS FOR THE MINIMUM LENGTH OF A MERGING TAPER IN DERIVING THE "L" VALUES SHOWN IN THE ABOVE TABLES ARE AS FOLLOWS:

"L" = $\frac{W \times S^2}{60}$ WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 40 MPH OR LESS

"L" = W X S WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 45 MPH OR GREATER

L = MINIMUM LENGTH OF MERGING TAPER
 S = POSTED SPEED LIMIT IN MPH PRIOR TO WORK AREA
 W = WIDTH OF OFFSET

TYPES OF TAPERS

UPSTREAM TAPERS

- MERGING TAPER
- SHIFTING TAPER
- SHOULDER TAPER
- 2 TO 1 LANE ROAD TAPER

TAPER LENGTH

- L - MINIMUM
- 1/2 L - MINIMUM
- 1/3 L - MINIMUM
- 100' - MAXIMUM

DOWNSTREAM TAPERS

(USE IS RECOMMENDED)

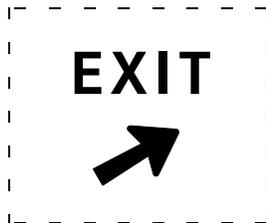
100' (PER LANE)

MAXIMUM SPACING FOR CHANNELIZING DEVICES

WORK ZONE SPEED LIMIT	DRUM AND 42" DEVICE SPACING (FT)		NIGHTTIME 42" DEVICE SPACING (FT)	
	TAPER	TANGENT	TAPER	TANGENT
< 45 MPH	1 x SPEED LIMIT	2 x SPEED LIMIT	25 FEET	50 FEET
≥ 45 MPH	50 FEET	100 FEET	25 FEET	50 FEET

SIGN OUTLINE KEY

DASHED OUTLINES INDICATE A SIGN THAT EXISTS ON SITE, AND NEEDS TO BE COVERED.



SOLID OUTLINES INDICATE A SIGN THAT IS TO BE PLACED ON THE PROJECT



NOT TO SCALE

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	"B", "D" AND "L" TABLES CHANNELIZING DEVICE SPACING SIGN BORDER KEY AND ROLL-AHEAD SPACING	DATE: MAY 2021
		NO: 101-GEN-85 SPACING-CHARTS		SHEET: 2 OF 3

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES – TEST LEVEL 2

WEIGHT OF TMA VEHICLE	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5.5 TONS (STATIONARY)	40 MPH OR LESS	25 FT

* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 4,410 POUND IMPACT VEHICLE WEIGHT.

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES – TEST LEVEL 3

WEIGHT OF TMA VEHICLE	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5 TONS (MOBILE)	45 MPH	100 FT
	50-55 MPH	150 FT
	60-75 MPH	175 FT
12 TONS (STATIONARY)	45 MPH	25 FT
	50-55 MPH	25 FT
	60-75 MPH	50 FT

* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 10,000 POUND IMPACT VEHICLE WEIGHT.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 101-GEN-86
SPACING-CHARTS

"B", "D" AND "L" TABLES
CHANNELIZING DEVICE SPACING
SIGN BORDER KEY AND ROLL AHEAD SPACING

DATE: MAY 2021

SHEET:

3 OF 3

THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL

GENERAL NOTES

- G1: SEE GEN-SPACING-CHARTS FOR COMMON VALUES INCLUDING:
 D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES
 L = MINIMUM LENGTH OF TAPER
 B = LENGTH OF LONGITUDINAL BUFFER
 ROLL AHEAD DISTANCE
- G2: DISTANCE BETWEEN SIGNS, "D", THE VALUES FOR WHICH ARE SHOWN IN TYPICAL GEN-KEY ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- G3: ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING MUST MEET NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350 (NCHRP 350) TEST LEVEL 3, OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) TL-3 AS WELL AS THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
- G4: DO NOT STORE EQUIPMENT, MATERIALS OR PERFORM WORK IN ESTABLISHED BUFFER AREAS.
- G5: ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR TRAFFIC PATTERNS FOR WORK LESS THAN THREE DAYS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.

SIGN NOTES

- S1: ALL NON-APPLICABLE SIGNING WITHIN THE CIA MUST BE MODIFIED TO FIT CONDITIONS, COVERED, OR REMOVED. FOR GUIDANCE SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, SECTIONS 6.01.09 AND 6.01.10.
- S2: R5-18b SIGNS ARE ONLY REQUIRED ON FREEWAY PROJECTS WITH A DURATION OF 15 DAYS OR LONGER OR NON-FREEWAY PROJECTS WITH A DURATION OF 90 DAYS OR LONGER. TO APPLY THIS TYPICAL WITHOUT R5-18b SIGNS, REMOVE THE SIGNS AND CONSOLIDATE THE SEQUENCE AS APPROPRIATE.
- S3: R5-18c IS ONLY REQUIRED IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. OMIT THIS SIGN IN SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE.
- S4: ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W20-5 SIGNS.
- S5: PLACE ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE WORK ZONE SPEED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK ZONE, OR AFTER EACH ENTRANCE RAMP THAT COMES ONTO THE FREEWAY WHERE THE REDUCED SPEED IS IN EFFECT. PLACE ADDITIONAL SPEED LIMIT SIGNS AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS ARE MORE THAN 2 MILES APART. WHEN REDUCED SPEED LIMITS ARE UTILIZED IN THE WORK AREA, PLACE ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED BEYOND THE LIMITS OF THE WORK AREA AS INDICATED. IF PERMANENT SIGNS DISPLAYING THE CORRECT SPEED LIMIT ARE POSTED, OMIT ALL W3-5b AND R2-1 SIGNS AND REDUCE SPACING ACCORDINGLY.
- S6: FABRICATE SPECIAL SIGNS IN ACCORDANCE WITH CURRENT SIGNING DESIGN STANDARDS.
- S7: PLACE ADDITIONAL R8-3 SIGNS AT A MAXIMUM 500' SPACING THROUGHOUT THE WORK ZONE.
- S8: WHEN SPEED LIMIT SIGNS CANNOT BE PLACED SIDE BY SIDE AS SHOWN, PLACE THEM "D" DISTANCE APART.
- S9: STOP SIGNS NOT REQUIRED IF SIGNALS ARE ON 4-WAY FLASHING RED. STOP AHEAD SIGNS ARE NOT REQUIRED IF THERE IS ADEQUATE VISIBILITY OF THE STOP SIGN OR IF SIGNALS ARE BEING USED TO CONTROL TRAFFIC.
- S10: PLACE REDUCED SPEED ZONE AHEAD SIGN (W3-5b) HERE WHEN USING A SPEED REDUCTION IN THIS DIRECTION.
- S11: THE NUMBER OF W1-6 SHIFT SIGNS TO PLACE FOR A SHIFT IS AS FOLLOWS:
 SHIFTS 4FT OR LESS, PLACE ONE W1-6(R)(L)
 SHIFTS 5FT TO 12FT, PLACE TWO W1-6(R)(L)
 SHIFTS MORE THAN 12FT, PLACE THREE OR MORE W1-6(R)(L) SIGNS DEPENDING UPON LENGTH OF SHIFT AND AS PER THE ENGINEER.
- S12: PLACE R2-1 SIGNS AS DETAILED IN NOTE S5 WHEN THERE IS A SPEED REDUCTION IN THIS DIRECTION

TRAFFIC REGULATOR NOTES

- TR1: TRAFFIC REGULATORS MUST FOLLOW ALL THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS, THE CURRENT VERSIONS OF THE TRAFFIC REGULATOR'S INSTRUCTION MANUAL AND THE VIDEO "HOW TO SAFELY REGULATE TRAFFIC IN MICHIGAN". THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS IS DETERMINED BY THE ROADWAY ADT, GEOMETRICS, AND AS DIRECTED BY THE ENGINEER.
- TR2: PROVIDE APPROPRIATE BALLOON LIGHTING TO SUFFICIENTLY ILLUMINATE TRAFFIC REGULATOR'S STATIONS WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS.
- TR3: PROVIDE EITHER A STOP/SLOW AFAD OR A RED/YELLOW LENS AFAD, MEETING THE REQUIREMENTS OF THE MMUTCD

TEMPORARY TRAFFIC CONTROL DEVICE NOTES

- TCD1: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD NOT EXCEED 1.0 TIMES THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 50 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TAPERS ARE NOT TO EXCEED 25 FEET AT NIGHT.
- TCD2: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TANGENT SHOULD NOT EXCEED TWICE THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 100 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TANGENTS ARE NOT TO EXCEED 50 FEET AT NIGHT.
- TCD3: TYPE III BARRICADES MUST BE LIGHTED FOR OVERNIGHT CLOSURES.
- TCD4: WHEN THE HAUL ROAD IS NOT IN USE, PLACE LIGHTED TYPE III BARRICADES WITH "ROAD CLOSED" EXTENDING COMPLETELY ACROSS THE HAUL ROAD.
- TCD5: USE OBJECT MARKER SIGNS IN LIEU OF THE TYPE B HIGH INTENSITY LIGHT SHOWN IN THE STANDARD PLAN FOR TEMPORARY CONCRETE BARRIER (R-53, AND R-126) WHEN USED WITH A TEMPORARY SIGNAL SYSTEM. THE OBJECT MARKERS MUST BE A MINIMUM OF 12 INCHES IN WIDTH AND 36 INCHES IN HEIGHT AND HAVE ORANGE AND WHITE RETROREFLECTIVE SHEETING. THE RETROREFLECTIVE SHEETING MUST HAVE ALTERNATING DIAGONAL ORANGE AND WHITE STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION VEHICULAR TRAFFIC IS TO PASS.
- TCD6: PLACE LIGHTED ARROW PANELS AS CLOSE TO THE BEGINNING OF TAPERS AS PRACTICAL, BUT NOT IN A MANNER THAT WILL OBSCURE OR CONFUSE APPROACHING MOTORISTS WHEN PHYSICAL LIMITATIONS RESTRICT PLACEMENT. IN CURBED SECTIONS, IF ARROW BOARD CANNOT BE PLACED BEHIND CURB, PLACE ARROW BOARD IN THE CLOSED LANE AS CLOSE TO THE BEGINNING OF TAPER AS POSSIBLE.
- TCD7: ADDITIONAL TYPE III BARRICADES MAY BE REQUIRED TO COMPLETELY CLOSE OFF ROAD FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.
- TCD8: WHERE THE SHIFTED SECTION IS SHORTER THAN 600 FEET, A DOUBLE REVERSE CURVE SIGN (W24-1) CAN BE USED INSTEAD OF THE FIRST REVERSE CURVE SIGN, AND THE SECOND REVERSE CURVE SIGN CAN BE OMITTED.
- TCD9: RUMBLE STRIPS ARE TO BE PLACED AS SPECIFIED IN THE CONTRACT. IF NOT SPECIFIED IN THE CONTRACT, PLACE RUMBLE STRIPS AS SHOWN, AND IN ACCORDANCE WITH THE RUMBLE STRIP MANUFACTURER'S RECOMMENDATIONS. AN ARRAY OF RUMBLE STRIPS CONTAINS THREE RUMBLE STRIPS. PLACE THE RUMBLE STRIPS IN THE ARRAY AT A CONSISTENT DISTANCE, BETWEEN 10' AND 20' APART.
- TCD10: SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, PORTABLE CHANGEABLE MESSAGE SIGN GUIDELINES FOR RECOMMENDED AND CORRECT PCMS MESSAGING. STAGGER PCMS THAT ARE ON OPPOSING SIDES OF THE ROAD 1000 FEET FROM EACH OTHER.

RAMP NOTES

- RMP1: WHEN CONDITIONS ALLOW, E5-1 SIGNS MUST BE REMOVED OR COVERED AND CHANNELIZING DEVICES MUST BE POSITIONED TO ENABLE RAMP TRAFFIC TO DIVERGE IN A FREE MANNER
- RMP2: STOP AND YIELD CONDITIONS SHOULD BE AVOIDED WHENEVER PRACTICAL. WHEN CONDITIONS WARRANT, R1-1 SIGNS MAY BE USED IN PLACE OF R1-2 SIGNS. WHEN R-1 SIGNS ARE USED, W3-1 SIGNS MUST BE USED IN PLACE OF W3-2 SIGNS. CONSIDERATION SHOULD BE GIVEN TO CLOSING THE RAMP TO COMPLETE WORK TO ALLOW AN ADEQUATE MERGE DISTANCE. WORK SHOULD BE EXPEDITED TO AVOID THE STOP AND/OR YIELD CONDITIONS.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 102-GEN-NOTES

TRAFFIC TYPICALS
NOTE SHEET

DATE: MAY 2022
SHEET:

1 OF 2

THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL

SIGNAL NOTES

- SIG1: EXISTING SIGNAL MUST BE EITHER 4-WAY FLASHING RED, BAGGED, OR TURNED OFF.
- SIG2: SIGNAL IS IN OPERATION.
- SIG3: DELINEATE THE WORK ZONE AREA WITH 28 INCH CONES FOR DAYTIME WORK, OR 42 INCH CHANNELIZING DEVICES FOR NIGHTTIME WORK.
- SIG4: THE CONTRACTOR MUST HAVE A DESIGNATED SPOTTER IF THE AERIAL BUCKET TRUCK IS LOCATED OVER ACTIVE TRAVEL LANES.
- SIG5: THE LOWEST POINT OF THE BUCKET MAY NOT TRAVEL BELOW 14 FOOT VERTICAL CLEARANCE. THE CONTRACTOR MUST UTILIZE AN ALTERNATE SET UP, OR PLACE THE INTERSECTION IN A 4 WAY STOP IF THE 14 FOOT VERTICAL CLEARANCE IS COMPROMIZED. USE TRAFFIC REGULATORS TO CONTROL TRAFFIC THROUGH THE INTERSECTION WHEN TRAFFIC IS PLACED IN A 4 WAY STOP.
- SIG6: DELINEATE THE TRUCK WITH CHANNELIZING DEVICES. THE POSITION OF THE TRUCK MAY BE MOVED TO FACILITATE WORK.

MAINTENANCE AND SURVEYING NOTES

- MS1: WHENEVER STOPPING SIGHT DISTANCE EXISTS TO THE REAR, THE SHADOW VEHICLES SHOULD MAINTAIN THE RECOMENDED DISTANCE FROM THE WORK AREA AND PROCEED AT THE SAME SPEED. THE SHADOW VEHICLE SHOULD SLOW DOWN AND TRAVEL AT A FARTHER DISTANCE TO PROVIDE ADEQUATE SIGHT DISTANCE IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES.
- MS2: WORKERS OUTSIDE OF VEHICLES SHOULD WORK WITHIN 150' OF WORK VEHICLES WITH AN ACTIVATED BEACON, BETWEEN THE "BEGIN WORK CONVOY" SIGN AND THE "END WORK CONVOY" SIGN, OR BETWEEN THE "WORK ZONE BEGINS" AND "END ROAD WORK" SIGN.
- MS3: WORK OR SHADOW VEHICLES WITH OR WITHOUT A TMA MAY BE USED TO SEPARATE THE WORK SPACE FROM TRAFFIC. IF USED, THE VEHICLES SHOULD BE PARKED ACCORDING TO THE ROLL AHEAD DISTANCE TABLES.
- MS4: WORK AND SHADOW VEHICLES SHALL BE APPROPRIATELY EQUIPPED WITH AN ACTIVATED AMBER BEACON.
- MS5: WHEN WORKERS ARE OUTSIDE THEIR VEHICLES IN AN EXISTING LANE WHILE A MOBILE OPERATION IS OCCURRING DURING THE NIGHTTIME HOURS, CHANNELIZING DEVICES TO DELINEATE OPEN OR CLOSED LANES AT 50 FT SPACING MUST BE USED. AN EXAMPLE OF AN OPERATION (BUT NOT LIMITED TO) IS THE LAYOUT OF CONCRETE PATCHES.
- MS6: W21-6 AND W20-1 SIGNS MAY BE SUBSTITUTED AS DETERMINED BY THE TYPE OF WORK TAKING PLACE AS PER THE ENGINEER.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 102-GEN-NOTES

TRAFFIC TYPICALS
NOTE SHEET

DATE: MAY 2022
SHEET:

2 OF 2

SIGN NUMBER KEY

 E5-1f 48" x 48" 60" x 48"	 E5-2 48" x 36"	 E5-2a 48" x 36"	 E5-3 48" x 36"	 E13-1P VAR x 24"	 E13-1aP 36" x 24"	 G20-1 60" x 24"	 G20-2 48" x 24"
 G20-4 36" x 18"	 I-6a 18" x 18" 24" x 24" 30" x 30"	 M1-1 18" x 18" 24" x 24" 36" x 36" 48" x 48"	 M1-1 22.5" x 18" 30" x 24" 45" x 36" 60" x 48"	 M1-2 18" x 18" 24" x 24" 36" x 36" 48" x 48"	 M1-2 22.5" x 18" 30" x 24" 45" x 36" 60" x 48"	 M1-3 18" x 18" 24" x 24" 36" x 36" 48" x 48"	 M1-3 22.5" x 18" 30" x 24" 45" x 36" 60" x 48"
 M1-4 18" x 18" 24" x 24" 36" x 36" 48" x 48"	 M1-4 22.5" x 18" 30" x 24" 45" x 36" 60" x 48"	 M1-5 18" x 18" 24" x 24" 30" x 30" 36" x 36"	 M1-5a 18" x 18" 24" x 24"	 M1-6 18" x 18" 24" x 24" 36" x 36"	 M1-6 22.5" x 18" 30" x 24" 45" x 36"	 M3-1 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M3-2 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"
 M3-3 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M3-4 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-1 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-1a 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-2 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-3 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-4 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-5 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"
 M4-6 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-7 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-7a 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"	 M4-8 12" x 6" 18" x 9" 24" x 12" 30" x 15"	 M4-8a 24" x 18"	 M4-8b 24" x 12"	 M4-9L 30" x 24" 48" x 36" 60" x 48"	 M4-9R 30" x 24" 48" x 36" 60" x 48"
 M4-9j 30" x 24" 48" x 36" 60" x 48"	 M4-9kL 30" x 24" 48" x 36" 60" x 48"	 M4-9kR 30" x 30" 48" x 42" 60" x 54"	 M4-9mL 30" x 30" 48" x 42" 60" x 54"	 M4-9mR 30" x 30" 48" x 42" 60" x 54"	 M4-9dL 12" x 18"	 M4-9dR 12" x 18"	 M4-9e 12" x 18"
 M4-9f 12" x 18"	 M4-9gL 12" x 18"	 M4-9gR 12" x 18"	 M4-9h 12" x 24"	 M4-9i 12" x 18"	 M4-10L 48" x 18"	 M4-10R 48" x 18"	 M4-11a 12" x 6" 18" x 9" 24" x 12" 30" x 15" 36" x 18"
 M5-1L 12" x 9" 21" x 15" 30" x 21"	 M5-1R 12" x 9" 21" x 15" 30" x 21"	 M5-2L 12" x 9" 21" x 15" 30" x 21"	 M5-2R 12" x 9" 21" x 15" 30" x 21"	 M5-3 12" x 9" 21" x 15" 30" x 21"	 M6-1L 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-1R 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-2L 12" x 9" 18" x 12" 21" x 15" 30" x 21"
 M6-2R 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-3 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-4 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-5 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-6L 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-6R 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-7L 12" x 9" 18" x 12" 21" x 15" 30" x 21"	 M6-7R 12" x 9" 18" x 12" 21" x 15" 30" x 21"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS

 NO SCALE	MAINTAINING TRAFFIC TYPICAL	STANDARD HIGHWAY SIGNS	DATE: 10/17/24
	CODE: 103-GEN-SIGN 89		SHEET: 1 OF 5

SIGN NUMBER KEY



M8-1gL
36" x 66"



M8-1gR
36" x 66"



M8-2d
60" x 48"



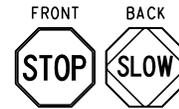
OM-3L
12" x 36"
24" x 48"
36" x 72"



OM-3R
12" x 36"
24" x 48"
36" x 72"



R1-1
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



R1-1a
18" x 18"
24" x 24"



R1-2
18"
24"
30"
36"
48"
60"



R1-2aP
24" x 18"
36" x 30"
48" x 36"



R2-1
18" x 24"
24" x 30"
30" x 36"
36" x 48"
48" x 60"



R2-1a
48" x 60"



R3-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



R3-2
24" x 24"
30" x 30"
36" x 36"
48" x 48"



R3-3
24" x 24"
36" x 36"
48" x 48"



R3-4
24" x 24"
30" x 30"
36" x 36"
48" x 48"



R3-5L
30" x 36"
36" x 48"



R3-5R
30" x 36"
36" x 48"



R3-5a
30" x 36"
36" x 48"



R3-6L
30" x 36"
42" x 48"



R3-6R
30" x 36"
42" x 48"



R3-7L
30" x 30"
36" x 36"



R3-7R
30" x 30"
36" x 36"



R3-8c
36" x 30"



R3-8d
36" x 30"



R4-1
12" x 18"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R4-2
12" x 18"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R4-7
18" x 18"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R4-8
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R4-9
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R5-1
30" x 30"
36" x 36"
48" x 48"



R5-1a
30" x 18"
36" x 24"
42" x 30"



R5-18b
48" x 60"



R5-18c
48" x 48"



R5-18d
78" x 12"



R5-18e
72" x 12"



R5-18f
48" x 60"



R5-18g
30" x 42"



R5-18h
48" x 60"



R6-1L
36" x 12"
54" x 18"



R6-1R
36" x 12"
54" x 18"



R6-2L
12" x 16"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



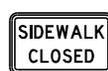
R6-2R
12" x 16"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



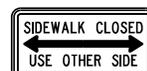
R8-3
12" x 12"
18" x 18"
24" x 24"
36" x 36"
48" x 48"



R9-8
36" x 18"



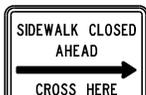
R9-9
24" x 12"
30" x 18"



R9-10
24" x 12"
48" x 24"



R9-11L
24" x 12"
48" x 36"



R9-11R
24" x 12"
48" x 36"



R9-11aL
24" x 12"
48" x 24"



R9-11aR
24" x 12"
48" x 24"



R10-6b
36" x 54"



R11-2
48" x 30"



R11-2a
48" x 30"



R11-2b
48" x 30"



R11-2c
60" x 30"



R11-3a
60" x 30"



R11-3b
60" x 30"



R11-4
60" x 30"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



MAINTAINING TRAFFIC TYPICAL

STANDARD HIGHWAY SIGNS

DATE:

10/17/24

CODE:

103-GEN-SIGN

90

SHEET:

2 OF 5

NO SCALE

SIGN NUMBER KEY



W1-1L
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-1R
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-2L
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-2R
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-2bL
36" x 36"
48" x 48"



W1-2bR
36" x 36"
48" x 48"



W1-3L
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-3R
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4L
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4R
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4bL
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4bR
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4cL
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4cR
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W24-1L
30" x 30"
36" x 36"
48" x 48"



W24-1cP
24" x 18"
30" x 24"



W24-1R
30" x 30"
36" x 36"
48" x 48"



W24-1aL
30" x 30"
36" x 36"
48" x 48"



W24-1aR
30" x 30"
36" x 36"
48" x 48"



W24-1bL
30" x 30"
36" x 36"
48" x 48"



W24-1bR
30" x 30"
36" x 36"
48" x 48"



W1-6L
24" x 12"
36" x 18"
48" x 24"
60" x 30"
96" x 48"



W1-6R
24" x 12"
36" x 18"
48" x 24"
60" x 30"
96" x 48"



W1-8L
12" x 18"
18" x 24"
24" x 30"
30" x 36"
36" x 48"



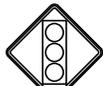
W1-8R
12" x 18"
18" x 24"
24" x 30"
30" x 36"
36" x 48"



W3-1
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W3-2
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W3-3
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W3-4
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W3-4b
30" x 30"
36" x 36"
48" x 48"



W3-5
36" x 36"
48" x 48"



W3-5a
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W3-5b
30" x 30"
36" x 36"
48" x 48"



W4-1L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-1R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-2L
30" x 30"
36" x 36"
48" x 48"



W4-2R
30" x 30"
36" x 36"
48" x 48"



W4-3L
30" x 30"
36" x 36"
48" x 48"



W4-3R
30" x 30"
36" x 36"
48" x 48"



W4-5L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-5R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-5P
18" x 24"
24" x 30"



W4-6L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-6R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-7L
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W4-7R
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W5-1
30" x 30"
36" x 36"
48" x 48"



W5-2
18" x 18"
30" x 30"
36" x 36"
48" x 48"



W5-3
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W5-4
30" x 30"
36" x 36"
48" x 48"



W6-1
30" x 30"
36" x 36"
48" x 48"



W6-2
30" x 30"
36" x 36"
48" x 48"



W6-3
30" x 30"
36" x 36"
48" x 48"



W6-4
12" x 18"



W7-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W7-1a
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-1
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



MAINTAINING TRAFFIC TYPICAL

STANDARD HIGHWAY SIGNS

DATE:
10/17/24

CODE:

103-GEN-SIGN

91

SHEET:
3 OF 5

NO SCALE

SIGN NUMBER KEY



W8-2
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-3
18" x 18"
30" x 30"
36" x 36"
48" x 48"



W8-4
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-5
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-5P
24" x 18"
30" x 24"
36" x 30"



W8-7
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-8
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-9
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-11
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-12
30" x 30"
36" x 36"
48" x 48"



W8-14
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-15
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-15P
24" x 18"
30" x 24"
36" x 30"



W8-17L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-17R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-17P
24" x 18"
30" x 24"
36" x 30"



W8-18
24" x 24"
36" x 36"
48" x 48"



W8-23
24" x 24"
36" x 36"
48" x 48"



W8-24
30" x 30"
36" x 36"
48" x 48"



W8-25
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-26
36" x 36"
48" x 48"



W9-1L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W9-1R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W9-2L
30" x 30"
36" x 36"
48" x 48"



W9-2R
30" x 30"
36" x 36"
48" x 48"



W9-3C
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W9-3L
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W9-3R
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W9-3a
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W9-3b
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W11-10
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-10a
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-24
36" x 36"
48" x 48"



W12-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W12-2
18" x 18"
30" x 30"
36" x 36"
48" x 48"



W13-1P
18" x 18"
24" x 24"
30" x 30"



W13-2
24" x 30"
36" x 48"
48" x 60"



W13-3
24" x 30"
36" x 48"
48" x 60"



W13-4P
24" x 24"
36" x 36"



W13-6
24" x 42"
36" x 60"
48" x 84"



W13-6a
24" x 42"
36" x 60"
48" x 84"



W13-7
24" x 42"
36" x 60"
48" x 84"



W13-7a
24" x 42"
36" x 60"
48" x 84"



W14-3
36" x 24"
40" x 30"
48" x 36"
64" x 48"



W16-2P
18" x 12"
24" x 18"
30" x 24"



W16-4aP
18" x 12"
24" x 18"
30" x 24"
36" x 30"



W16-12P
24" x 18"



W16-13P
24" x 18"
30" x 24"



W20-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-1a
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-1b
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-1c
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-1d
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-2
30" x 30"
36" x 36"
48" x 48"



W20-3
30" x 30"
36" x 36"
48" x 48"



W20-3a
30" x 30"
36" x 36"
48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



MAINTAINING TRAFFIC TYPICAL

STANDARD HIGHWAY SIGNS

DATE:

10/17/24

CODE:

103-GEN-SIGN

92

SHEET:

4 OF 5

NO SCALE

SIGN NUMBER KEY



W20-3b
30" x 30"
36" x 36"
48" x 48"



W20-4
30" x 30"
36" x 36"
48" x 48"



W20-4c
36" x 36"
48" x 48"



W20-5C
30" x 30"
36" x 36"
48" x 48"



W20-5L
30" x 30"
36" x 36"
48" x 48"



W20-5L1
30" x 30"
36" x 36"
48" x 48"



W20-5L2
30" x 30"
36" x 36"
48" x 48"



W20-5R
30" x 30"
36" x 36"
48" x 48"



W20-5R1
30" x 30"
36" x 36"
48" x 48"



W20-5R2
30" x 30"
36" x 36"
48" x 48"



W20-5aL2
30" x 30"
36" x 36"
48" x 48"



W20-5aL3
30" x 30"
36" x 36"
48" x 48"



W20-5aR2
30" x 30"
36" x 36"
48" x 48"



W20-5aR3
30" x 30"
36" x 36"
48" x 48"



W20-7a
30" x 30"
36" x 36"
48" x 48"



W20-8
24" x 18"



W20-9
54" x 48"



W20-10
48" x 24"
66" x 30"



W20-11
12" x 18"



W20-12P
VARIABLE x 12"



W20-13P
VARIABLE x 12"



W20-14L
36" x 36"
48" x 48"



W20-14R
36" x 36"
48" x 48"



W20-14aP
36" x 12"
48" x 12"



W20-14bP
36" x 12"
48" x 12"



W20-15
36" x 36"
48" x 48"



W20-16
36" x 36"
48" x 48"



W20-17
36" x 36"
48" x 48"



W20-18
48" x 54"



W20-18a
48" x 54"



W21-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-2
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-2
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-3
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-4
36" x 18"



W21-5
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-5aL
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W21-5aR
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W21-5bL
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W21-5bR
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W21-6
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-7
30" x 30"
36" x 36"
48" x 48"



W21-8
30" x 30"
36" x 36"
48" x 48"



W22-1
30" x 30"
36" x 36"
48" x 48"



W22-2
42" x 36"



W22-3
36" x 30"
42" x 36"



W23-1
48" x 24"



W23-2
36" x 36"
48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



MAINTAINING TRAFFIC TYPICAL

STANDARD HIGHWAY SIGNS

DATE:

10/17/24

CODE:

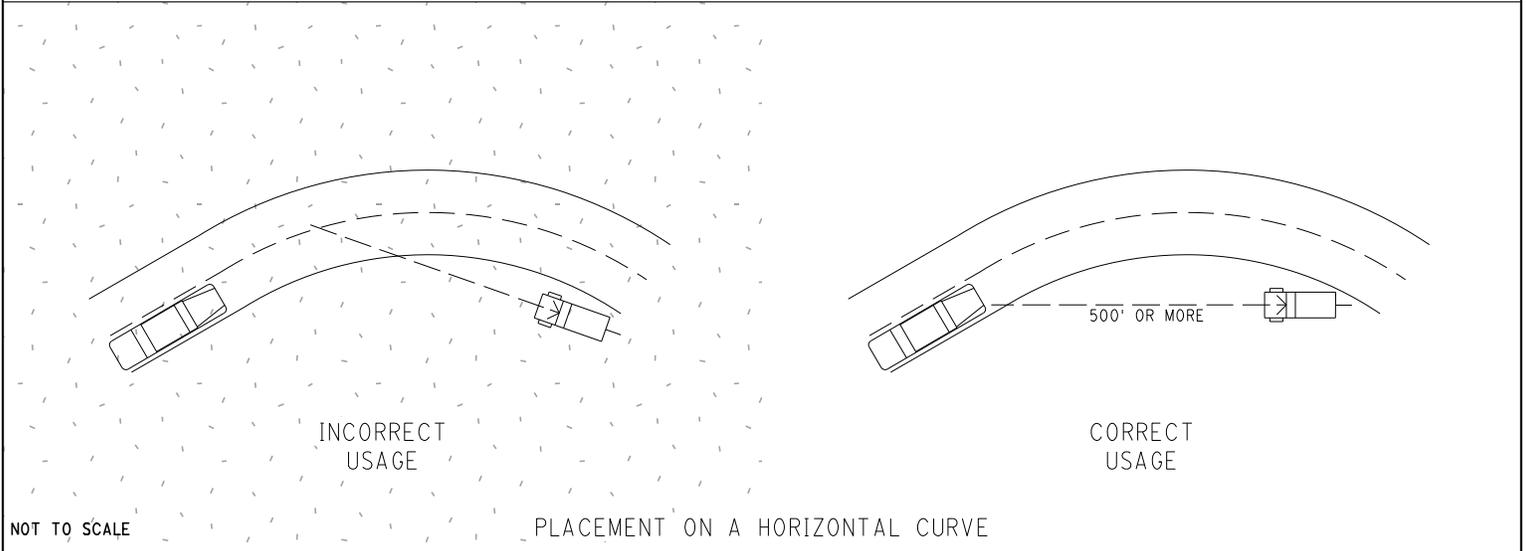
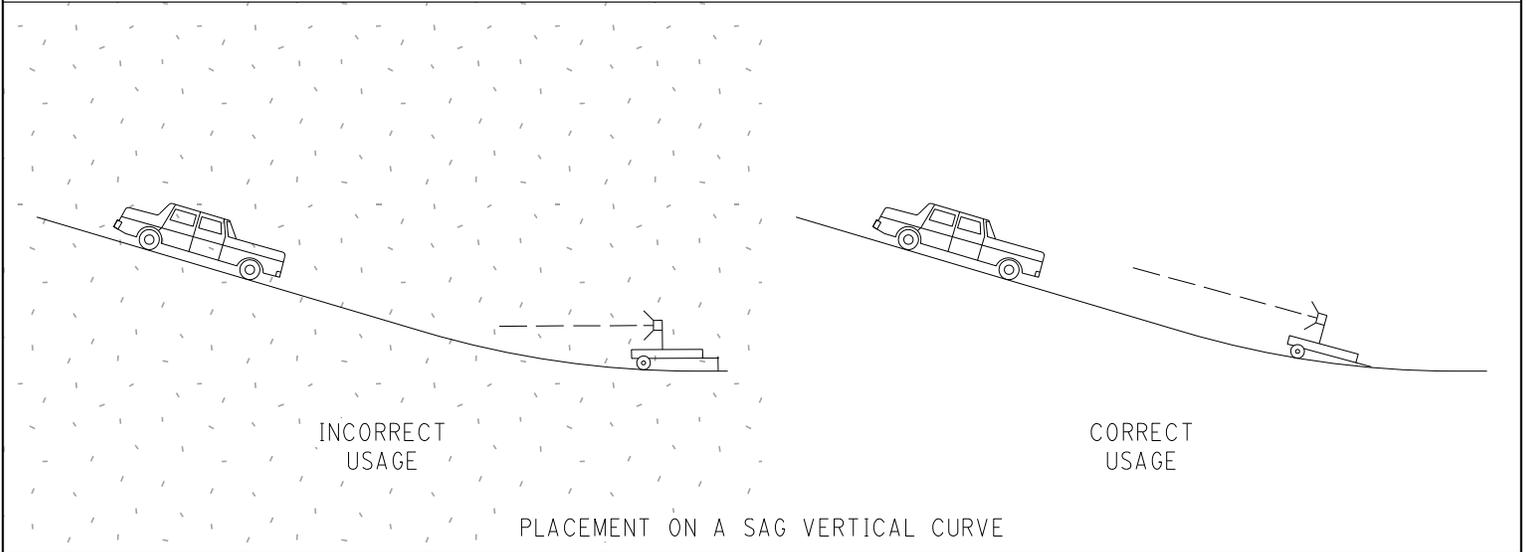
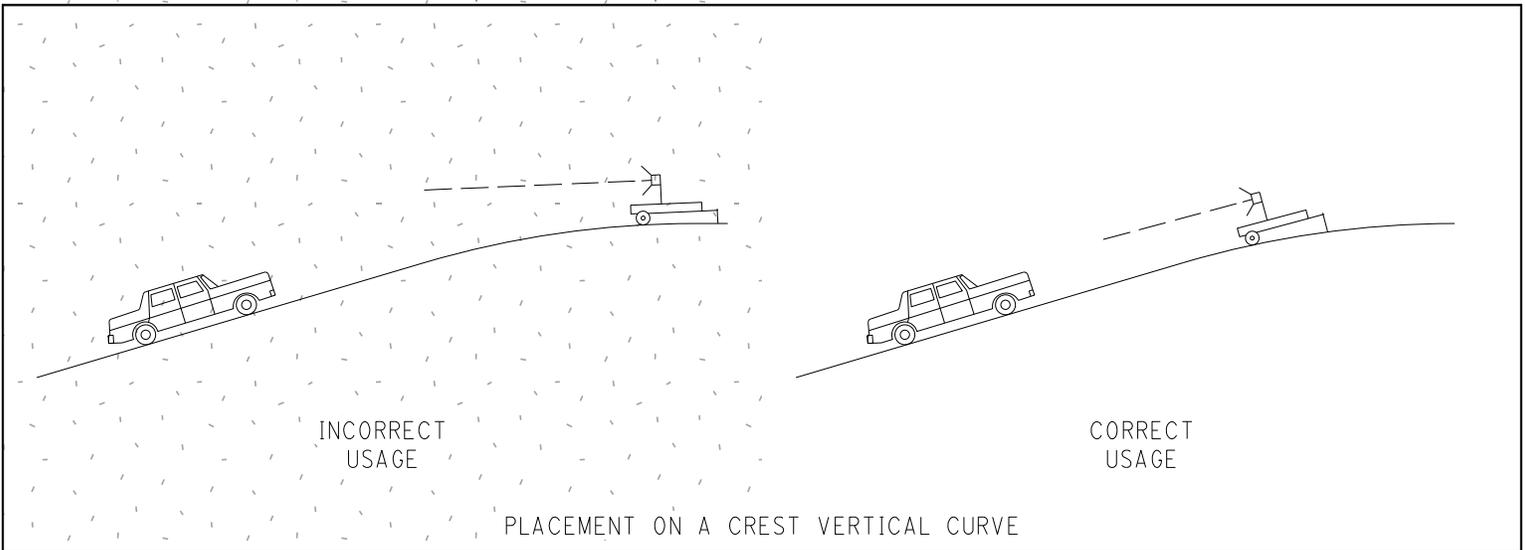
103-GEN-SIGN

93

SHEET:

5 OF 5

NO SCALE

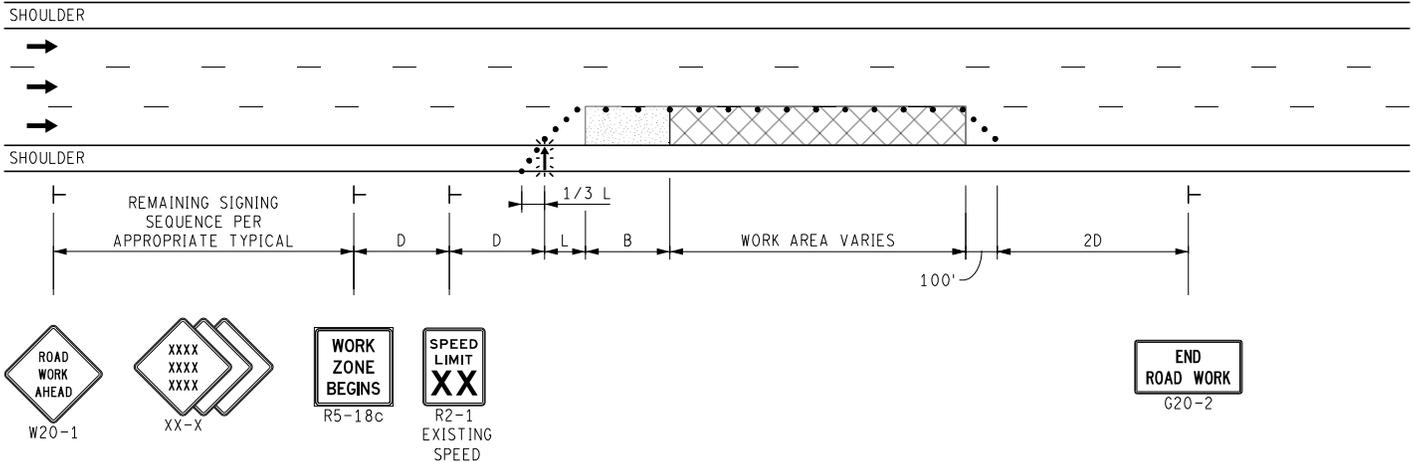


NOTE:

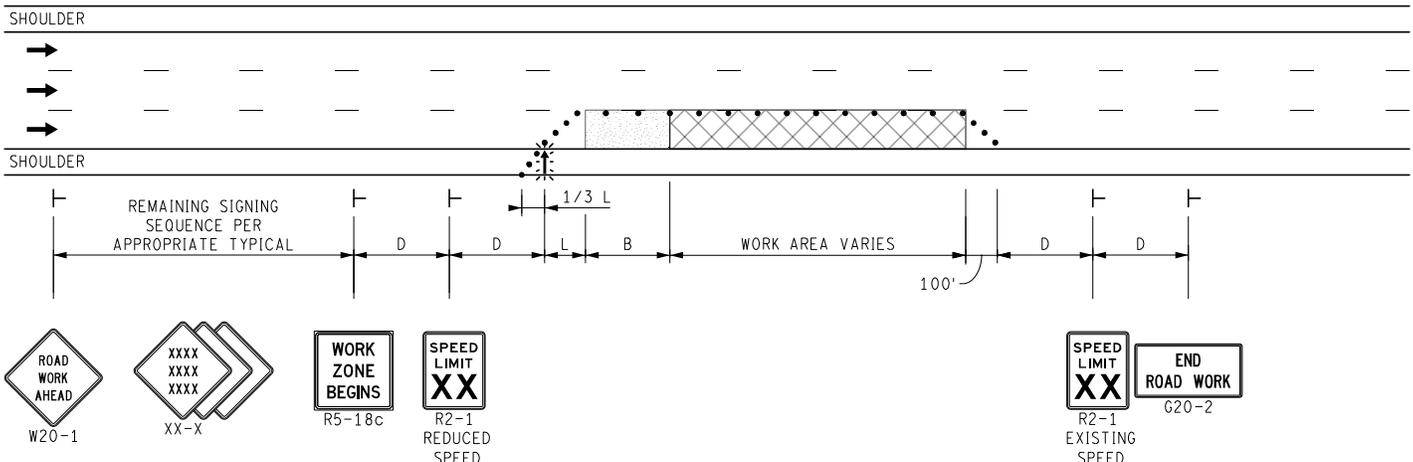
ENSURE THE ARROW REMAINS CLEARLY LEGIBLE AT DISTANCES FROM 2,500 FEET TO 200 FEET, FROM ALL TRAFFIC LANES AND ROADWAY ENTRANCES. DO NOT PLACE THE LIGHTED ARROW ON A HORIZONTAL OR VERTICAL CURVE THAT MIGHT INTERFERE WITH THIS LEGIBILITY REQUIREMENT.

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	USE OF ARROW BOARD ON HILL OR CURVE AND WORK ZONE LAYOUT	DATE: MAY 2021
		NO: 104-GEN-AB ⁹⁴		SHEET:
FILE: 104-GEN-AB.dgn				1 OF 1

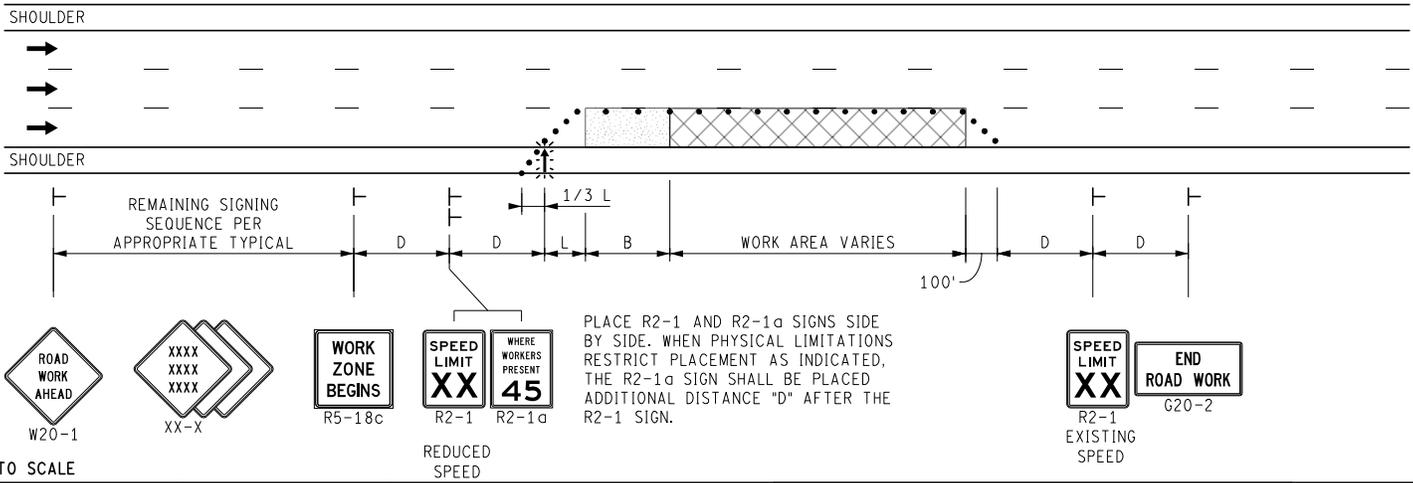
NO SPEED REDUCTION THROUGH WORK ZONE



REDUCED SPEED THROUGH WORK ZONE



REDUCED SPEED THROUGH WORK ZONE USING "WHERE WORKERS PRESENT"



NOT TO SCALE



NOT TO SCALE

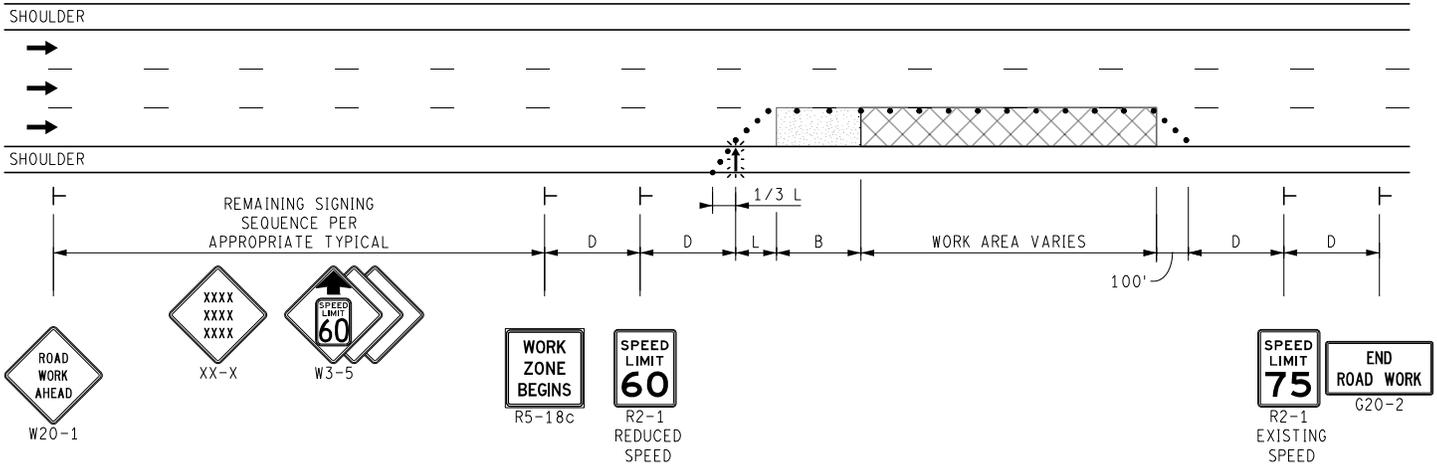
MAINTAINING TRAFFIC TYPICAL

NO: **107-GEN-SPEED**

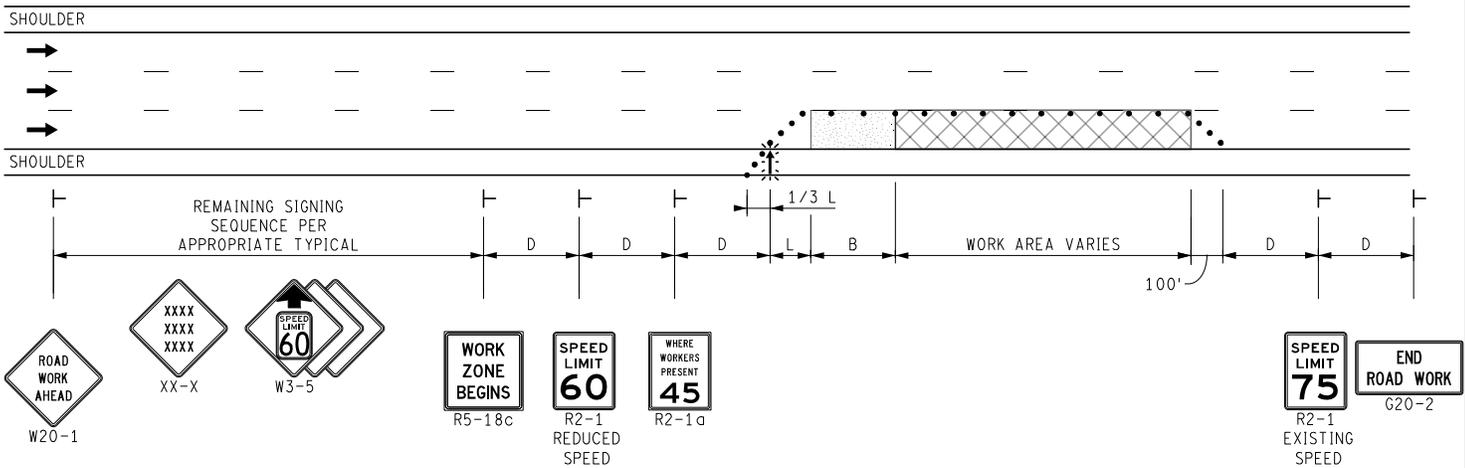
SPEED LIMIT LAYOUT

DATE: MAY 2021
SHEET: 1 OF 2

REDUCED SPEED FROM 75 TO 60 THROUGH WORK ZONE



REDUCED SPEED FROM 75 TO 45 WWP THROUGH WORK ZONE



NOT TO SCALE



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 107-GEN-SPEED

SPEED LIMIT LAYOUT

DATE: MAY 2021
SHEET:

FILE: 107-GEN-SPEED.dgn

2 OF 2

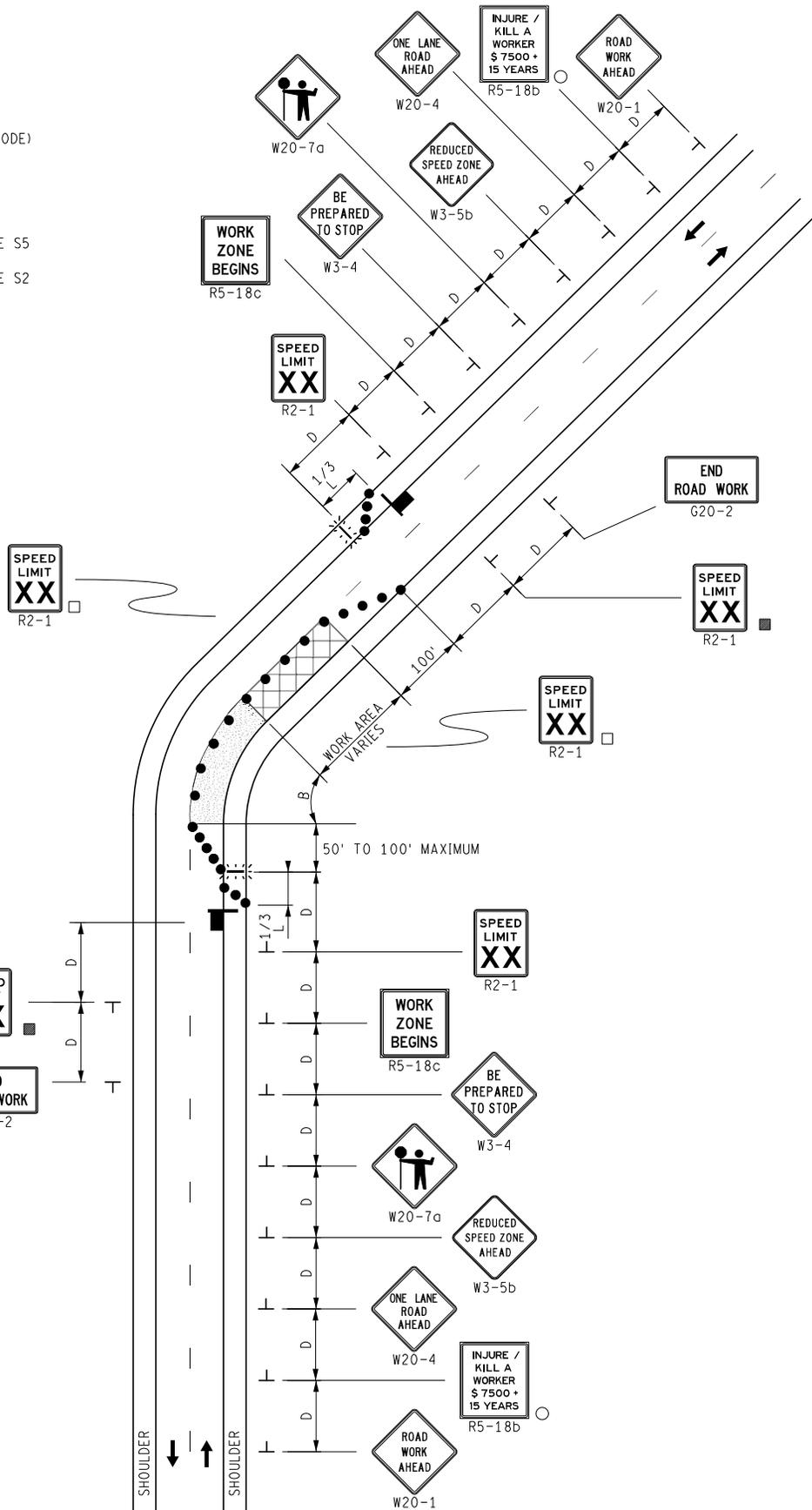
KEY

-  TRAFFIC REGULATOR
-  CHANNELIZING DEVICES
-  LIGHTED ARROW PANEL (CAUTION MODE)
-  TRAFFIC FLOW
-  REFLECTS EXISTING SPEED LIMIT
-  PLACE SIGN AS INDICATED IN NOTE S5
-  PLACE SIGN AS INDICATED IN NOTE S2

STANDARD NOTES

(SEE GEN-NOTES)

GENERAL: G1, G2, G3, G4
 SIGNING: S1, S2, S3, S4, S5
 TRAF REG: TR1, TR2
 DEVICES: TCD1, TCD2, TCD6



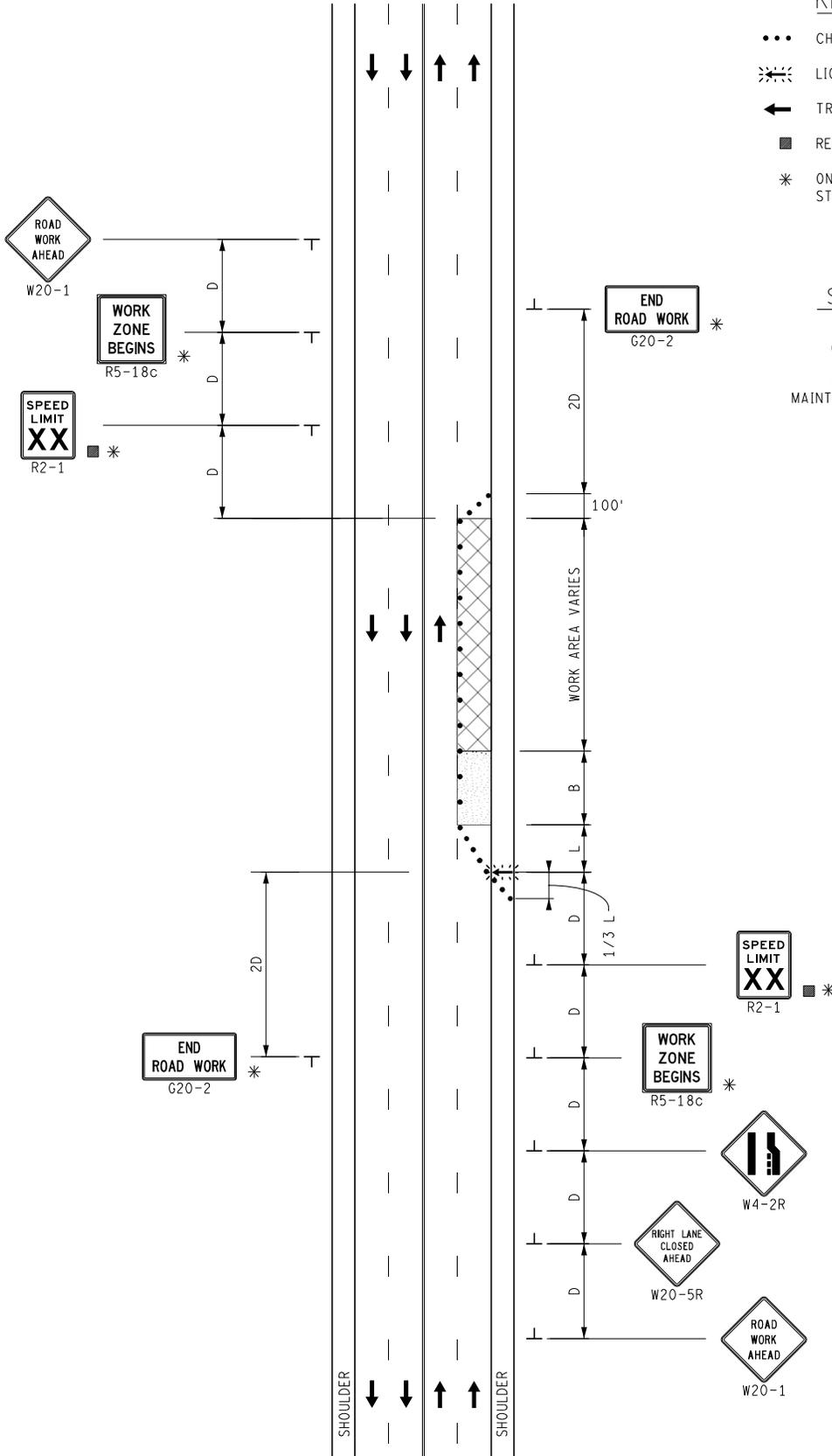
	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	LANE CLOSURE UTILIZING TRAFFIC REGULATORS ON A 2-LANE UNDIVIDED ROADWAY	DATE: MAY 2021
		NO: 110-TR-NFW-27		SHEET: 1 OF 1

KEY

- CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

STANDARD NOTES

(SEE 102-GEN-NOTES)
 GENERAL: G1, G2, G3, G4
 SIGNING: S1, S3
 DEVICES: TCD1, TCD2, TCD6
 MAINT & SURV MS2, MS3, MS4



NOT TO SCALE

	MAINTENANCE MAINTAINING TRAFFIC TYPICAL	DURATION: LONG-TERM STATIONARY INTERMEDIATE-TERM STATIONARY SHORT-TERM STATIONARY	RIGHT LANE CLOSURE ON AN UNDIVIDED MULTI-LANE ROADWAY, NO SPEED REDUCTION	DATE: MAY 2021
				NO: 4123A-M-NFW-1LC-(R)
FILE: 4123A-M-NFW-1LC-(R).dgn				SHEET: 1 OF 1

SIGN MATERIAL SELECTION TABLE

SIGN SIZE	SIGN MATERIAL TYPE		
	TYPE I	TYPE II	TYPE III
≤ 36" X 36"		X	X
>36" X 36" ≤ 96" TO WIDE		X	
> 96" WIDE TO 144" WIDE	X	X	
> 144" WIDE	X		

TYPE I ALUMINUM EXTRUSION
 TYPE II PLYWOOD
 TYPE III ALUMINUM SHEET

ROUNDING OF CORNERS IS NOT REQUIRED FOR TYPE I OR II SIGNS.
 VERTICAL JOINTS ARE NOT PERMITTED.
 HORIZONTAL JOINTS THROUGH SIGN LEGEND OR SYMBOLS ARE NOT PERMITTED.

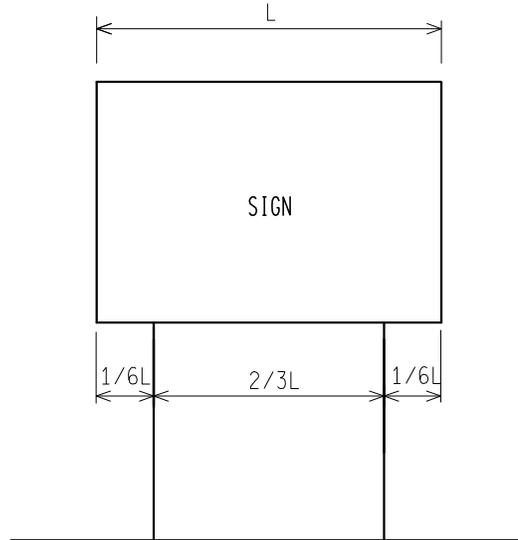
POST SIZE REQUIREMENTS TABLE

SIGN AREA (ft ²)	POST TYPE		
	U-CHANNEL STEEL	SQUARE TUBULAR STEEL	WOOD
≤ 9	1 - 3 lb/ft*	1 - 2" 12 or 14 GA*	N/A
9 ≤ 20	2 - 3 lb/ft	2 - 2" 12 or 14 GA	1 - 4" X 6"*
> 20 ≤ 30	N/A	N/A	2 - 4" X 6"
> 30 ≤ 60	N/A	N/A	2 - 6" X 8"
> 60 ≤ 84	N/A	N/A	3 - 6" X 8"

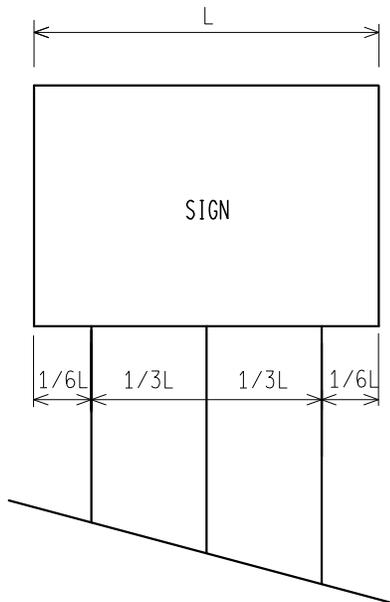
*SIGNS 4 FEET AND GREATER IN WIDTH REQUIRE 2 POSTS.
 SIGNS GREATER THAN 8 FEET IN WIDTH REQUIRE 2 OR 3 WOOD
 POSTS DEPENDING ON AREA OF SIGN.
 A MAXIMUM OF 2 POSTS WITHIN A 7' PATH IS PERMITTED.

 PREPARED BY DESIGN DIVISION	DEPARTMENT DIRECTOR Kirk T. Steudle APPROVED BY: _____ DIRECTOR, BUREAU OF FIELD SERVICES	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS		
	DRAWN BY: <u>CON/ECH</u> CHECKED BY: <u>AUG</u>	99 APPROVED BY: _____ DIRECTOR, BUREAU OF DEVELOPMENT	_____ F.H.W.A. APPROVAL	<u>11/2/2017</u> PLAN DATE

2 POST SIGN SUPPORT SPACING



3 POST SIGN SUPPORT SPACING



* FOR ALL 11' AND 12' LONG SIGNS ON 3 WOOD SUPPORTS, SPREAD POSTS SO AS TO HAVE A 8' MIN. TO 9' MAX. DISTANCE BETWEEN OUTSIDE POSTS.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

100

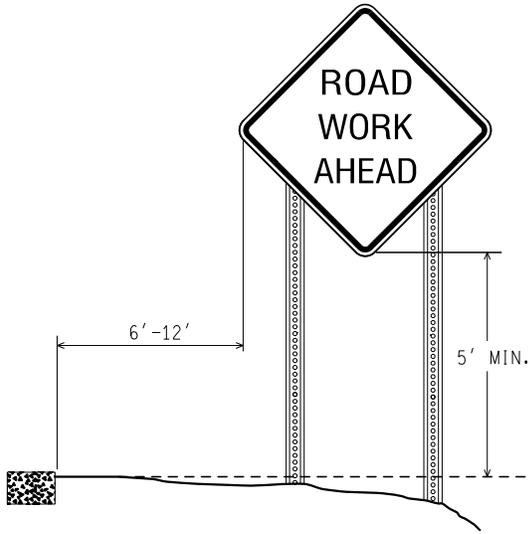
F.H.W.A. APPROVAL

11/2/2017
PLAN DATE

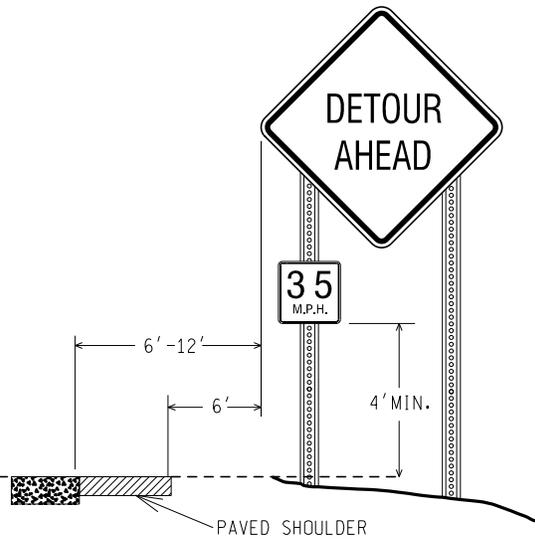
WZD-100-A

SHEET
2 OF 11

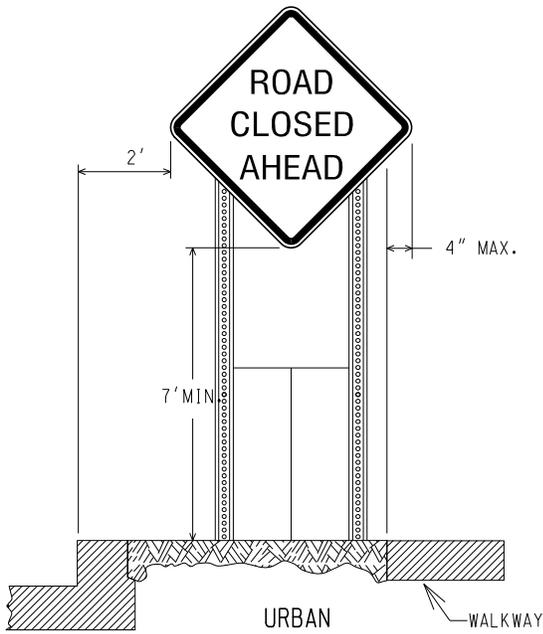
NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



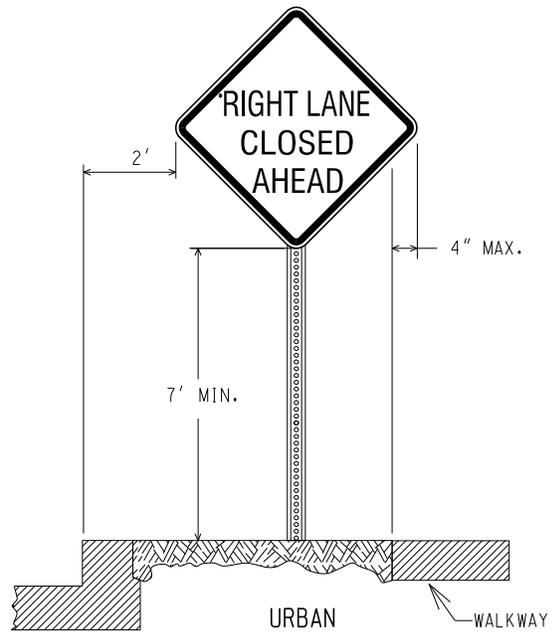
RURAL



RURAL WITH ADVISORY SPEED PLATE



(CURBED AREAS OR WHERE WALKWAYS ARE PRESENT)



(CURBED AREAS OR WHERE WALKWAYS ARE PRESENT)

BOTTOM HEIGHT AND OFFSET

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

101

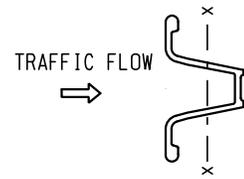
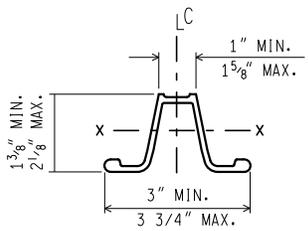
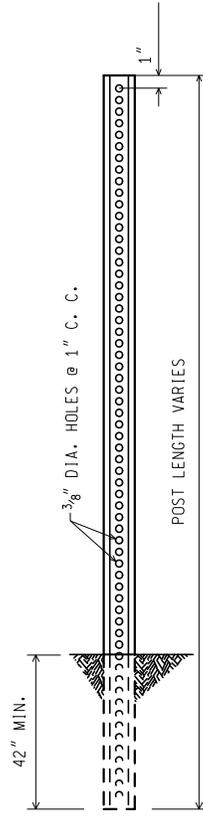
F.H.W.A. APPROVAL

11/2/2017
PLAN DATE

WZD-100-A

SHEET
3 OF 11

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



WEIGHT = 3 lbs/ft
 SECT. MOD. X.-X. = 0.31 CUBIC INCHES MIN.

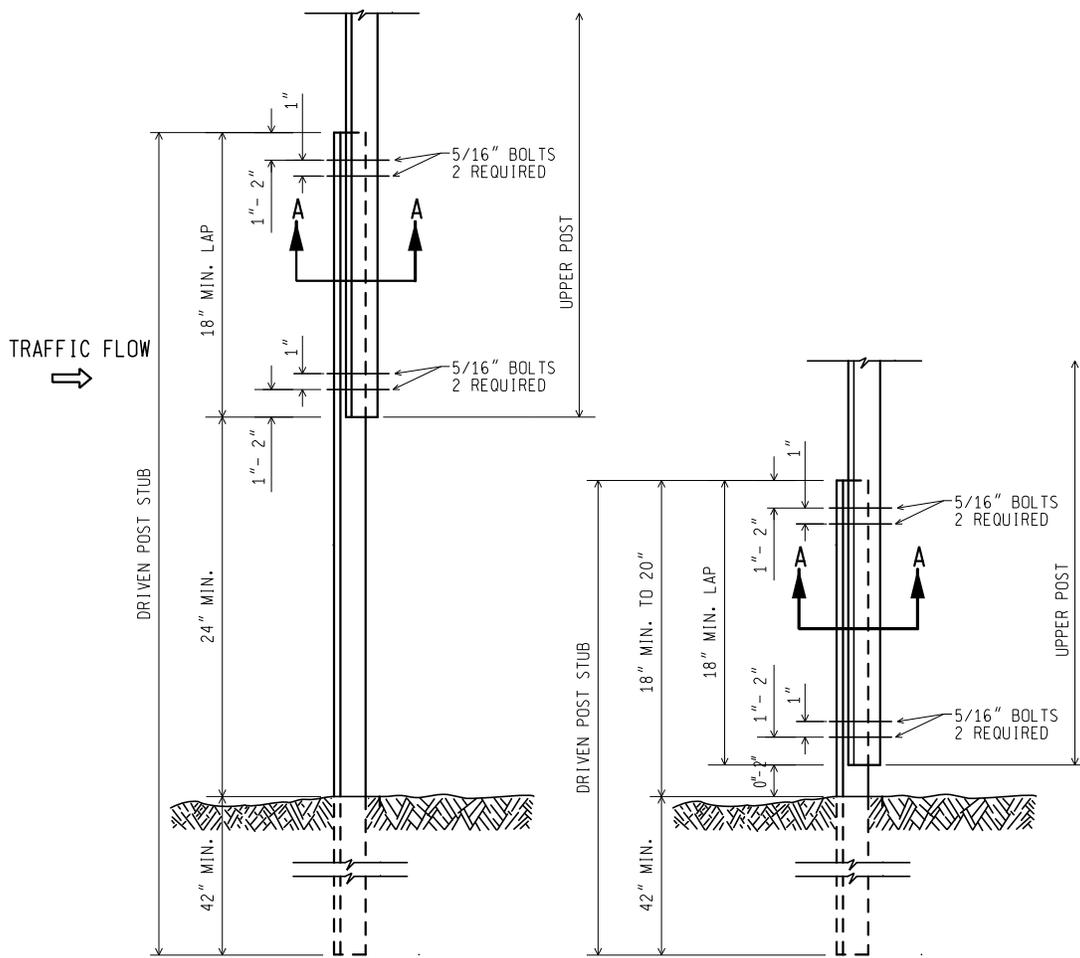
3 lb. U - CHANNEL STEEL POST
 (NO SPLICE)

MOUNT SIGN ON OPEN FACE OF
 U - CHANNEL STEEL POST

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	102	F.H.W.A. APPROVAL	11/2/2017 PLAN DATE	WZD-100-A	SHEET 4 OF 11
--	-----	-------------------	------------------------	-----------	------------------

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



3 lb. U - CHANNEL STEEL POST
(WITH SPLICE)

MOUNT SIGN ON OPEN FACE OF
UPPER U - CHANNEL STEEL POST

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

103

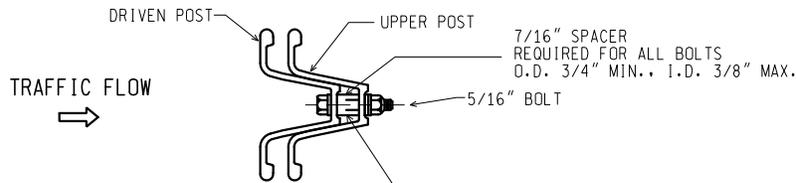
F.H.W.A. APPROVAL

11/2/2017
PLAN DATE

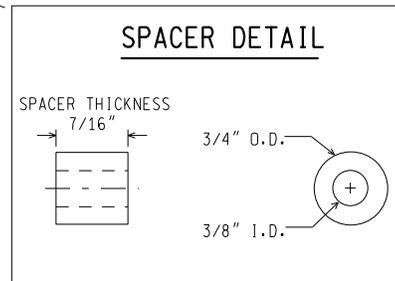
WZD-100-A

SHEET
5 OF 11

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



SECTION A-A



NOTES:

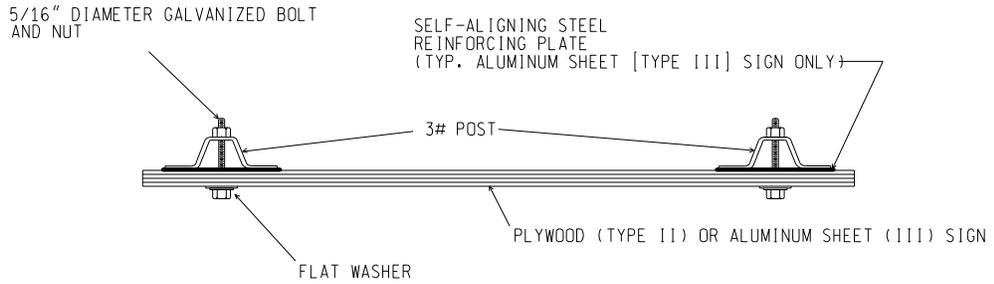
1. THE SPACER THICKNESS SHALL BE 1/16" LESS THAN THE GAP BETWEEN THE POST WHEN POSITIONED IN THE UNBOLTED CONFIGURATION.
2. THE EXTERIOR BOLT (CLOSEST TO LAP), SPACER, WASHER, AND NUT SHALL BE INSTALLED IN A PREPUNCHED HOLE 1" TO 2" FROM THE END OF THE LAP.
3. THE INTERIOR BOLT (FARTHEST FROM LAP), SPACER, WASHER, AND NUT SHALL BE INSTALLED IN THE NEXT PREPUNCHED HOLE.
4. THE DRIVEN POST SHALL ALWAYS BE MOUNTED IN FRONT OF THE UPPER POST WITH RESPECT TO THE ADJACENT ONCOMING TRAFFIC, REGARDLESS OF THE DIRECTION THE SIGN IS FACING.
5. THE SPLICE LAP SHALL BE FASTENED BY FOUR-5/16" DIA. GALVANIZED A449 BOLTS (SAE J429 GRADE 5) OR GALVANIZED A325 BOLTS.

3 lb. U - CHANNEL STEEL POST
(WITH SPLICE)

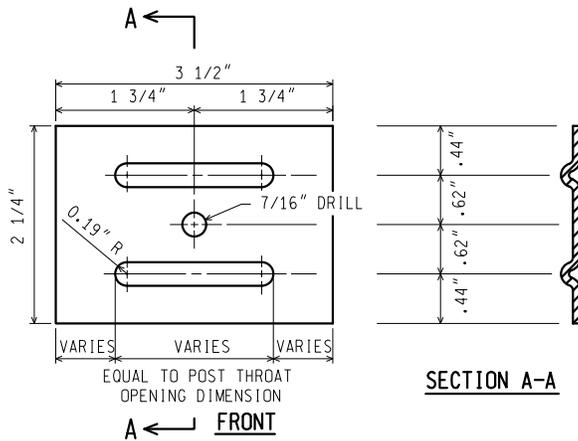
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	104	F.H.W.A. APPROVAL	11/2/2017 PLAN DATE	WZD-100-A	SHEET 6 OF 11
--	-----	-------------------	------------------------	-----------	------------------

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



SIGN TO 3 lb. POST CONNECTION



NOTES: (FOR STEEL SIGN REINF' PLATE)

1. MATERIAL: 12 GAUGE CARBON STEEL.
2. TOLERANCE ON ALL DIMENSIONS $\pm 0.0625"$
3. FINISH-AFTER STAMPING AND PUNCHING, GALVANIZE ACCORDING TO CURRENT SPECIFICATIONS FOR ZINC (HOT GALVANIZE) COATINGS ON PRODUCTS FABRICATED FROM PLATES OR STRIPS

STEEL SIGN REINFORCING PLATE
REQUIRED FOR TYPE III SIGNS ONLY

3 lb. U - CHANNEL STEEL POST SIGN CONNECTION

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

105

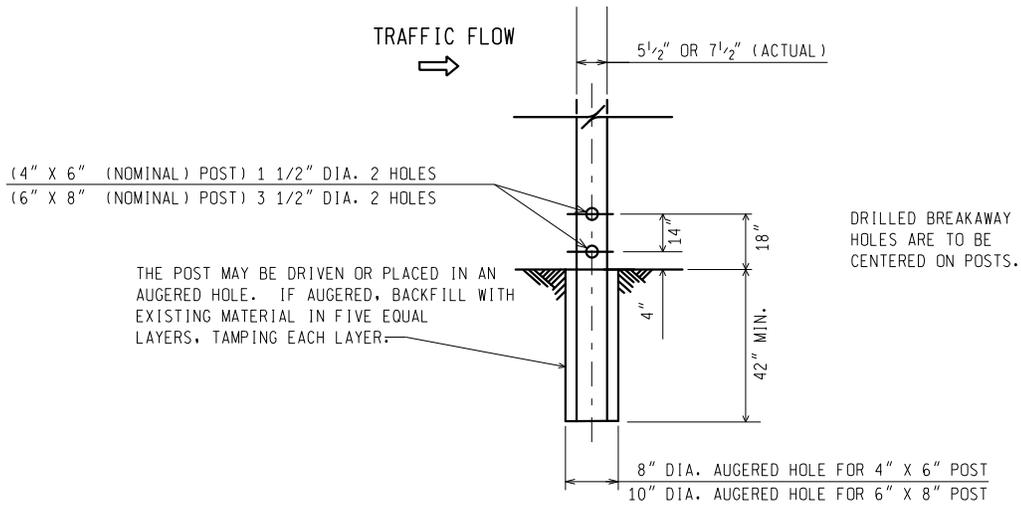
F.H.W.A. APPROVAL

11/2/2017
PLAN DATE

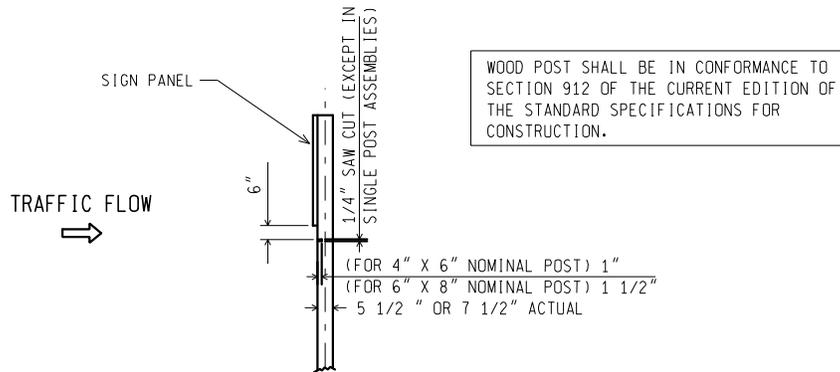
WZD-100-A

SHEET
7 OF 11

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



WOOD POST BREAKAWAY HOLES/
DIRECT EMBEDMENT DETAILS



SAW CUT DETAIL
(MULTIPLE POST INSTALLATIONS)

WOOD POST DETAILS

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

106

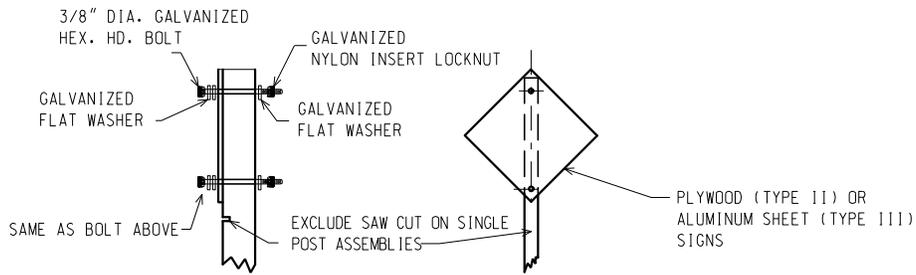
F.H.W.A. APPROVAL

11/2/2017
PLAN DATE

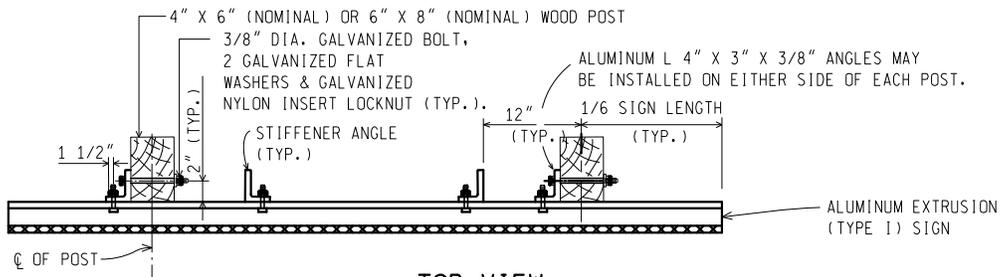
WZD-100-A

SHEET
8 OF 11

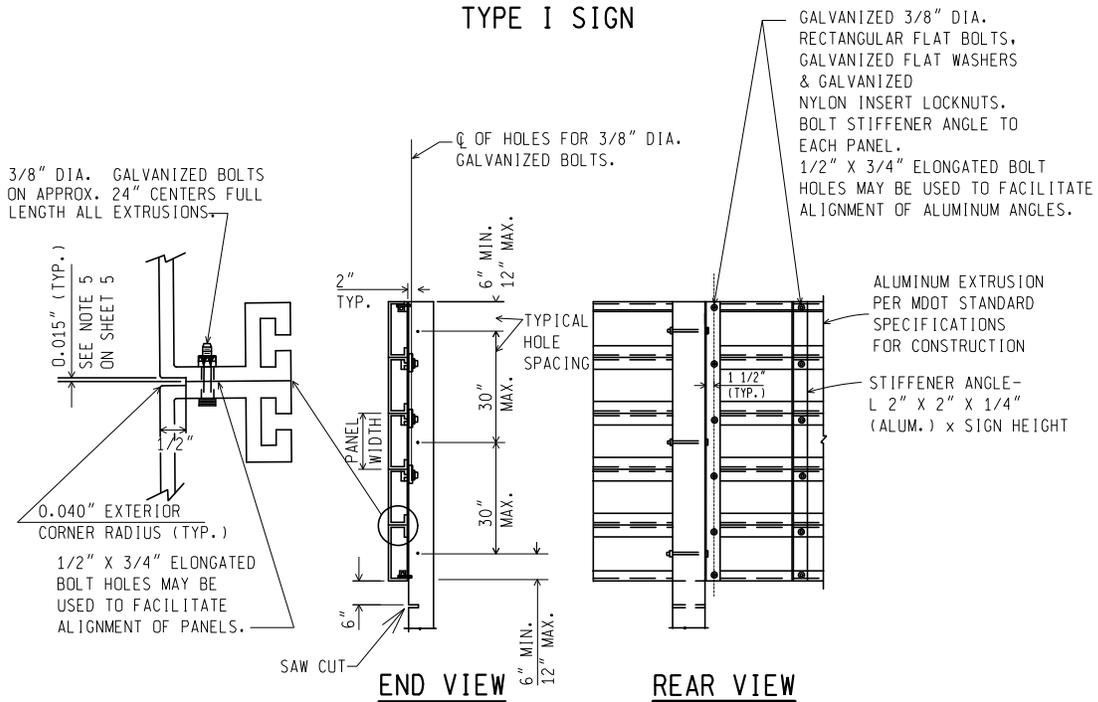
NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



TYPE II AND TYPE III SIGNS



**TOP VIEW
TYPE I SIGN**



TYPE I SIGN - ERECTION DETAILS

WOOD POST CONNECTIONS

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN

107

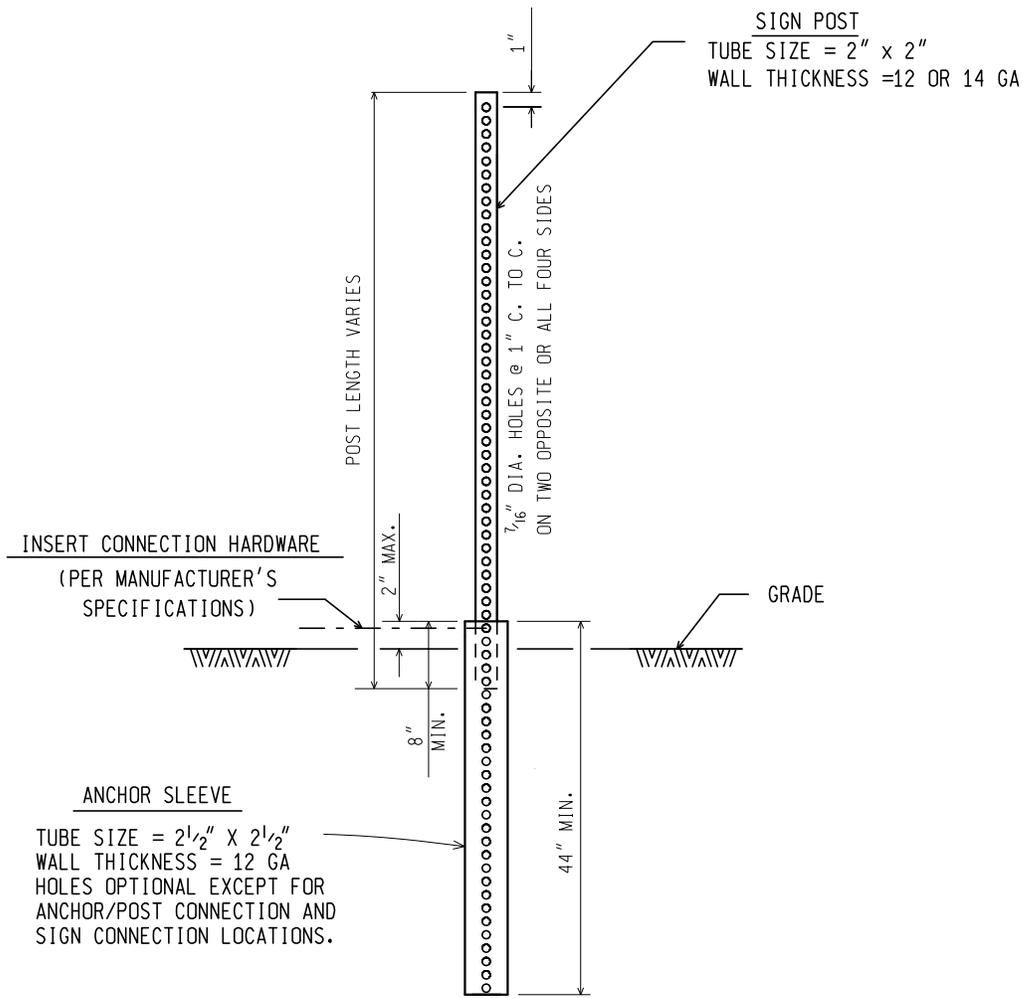
F.H.W.A. APPROVAL

11/2/2017
PLAN DATE

WZD-100-A

SHEET
9 OF 11

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



SQUARE TUBULAR STEEL POST

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF DEVELOPMENT STANDARD PLAN

108

F.H.W.A. APPROVAL

11/2/2017
 PLAN DATE

WZD-100-A

SHEET
 10 OF 11

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

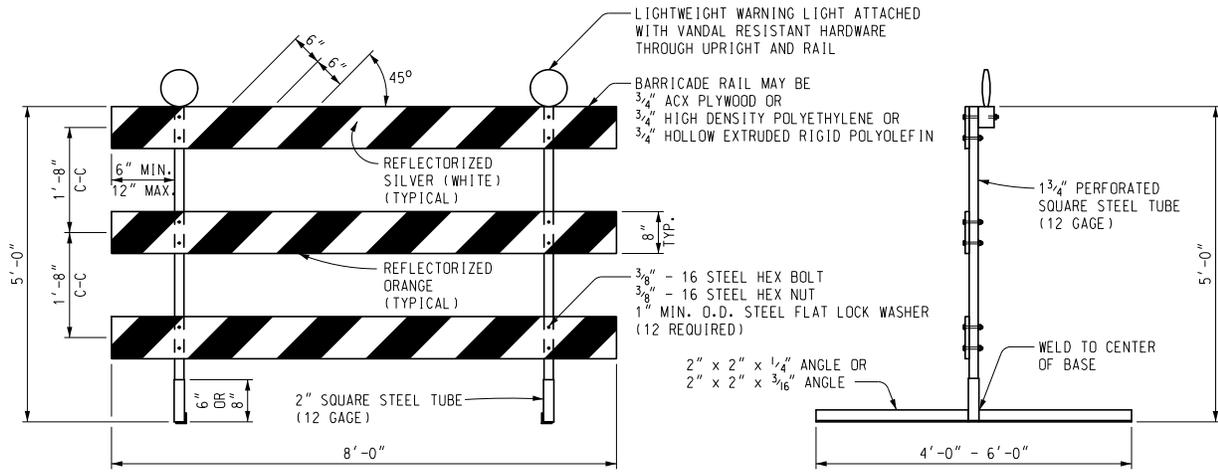
GENERAL NOTES:

1. A MAXIMUM OF TWO POSTS WITHIN A 7 FOOT PATH IS PERMITTED.
2. ALL SIGN POSTS SHALL COMPLY WITH NCHRP 350.
3. ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 42".
4. BRACING OF POST IS NOT PERMITTED.
5. SIGN SHALL BE LEVEL, AND UPRIGHT FOR THE DURATION OF INSTALLATION.
6. ERECT POSTS SO THE SIGN FACE AND SUPPORTS DO NOT VARY FROM PLUMB BY MORE THAN 3/16" IN 3'. PROVIDE A CENTER-TO-CENTER DISTANCE BETWEEN POSTS WITHIN 2 PERCENT OF PLAN DISTANCE.
7. NO MORE THAN ONE SPLICE PER POST, AS SHOWN, WILL BE PERMITTED.
8. POST TYPES SHALL NOT BE MIXED WITHIN A SIGN SUPPORT INSTALLATION.
9. NO VERTICAL JOINTS ARE PERMITTED IN SIGN. NO HORIZONTAL JOINTS THROUGH SIGN LEGEND OR SYMBOLS ARE PERMITTED IN SIGN
10. REMOVE SIGN POSTS AND/OR POST STUBS IN THEIR ENTIRETY WHEN NO LONGER REQUIRED.
11. ALL LABOR, MATERIALS, AND EQUIPMENT, INCLUDING TEMPORARY SUPPORTS REQUIRED TO INSTALL, MAINTAIN, RELOCATE, AND/OR REMOVE THE TEMPORARY SIGN, INCLUDING SUPPORTS, ARE CONSIDERED TO BE INCLUDED IN THE COST OF THE TEMPORARY SIGN.
12. SAW CUTS IN WOOD POSTS ARE TO BE PARALLEL TO THE BOTTOM OF THE SIGN.
13. POSTS SHALL NOT EXTEND MORE THAN 4" ABOVE TOP OF SIGN.
14. TEMPORARY WOOD SUPPORTS DO NOT REQUIRE PRESERVATIVE TREATMENT.

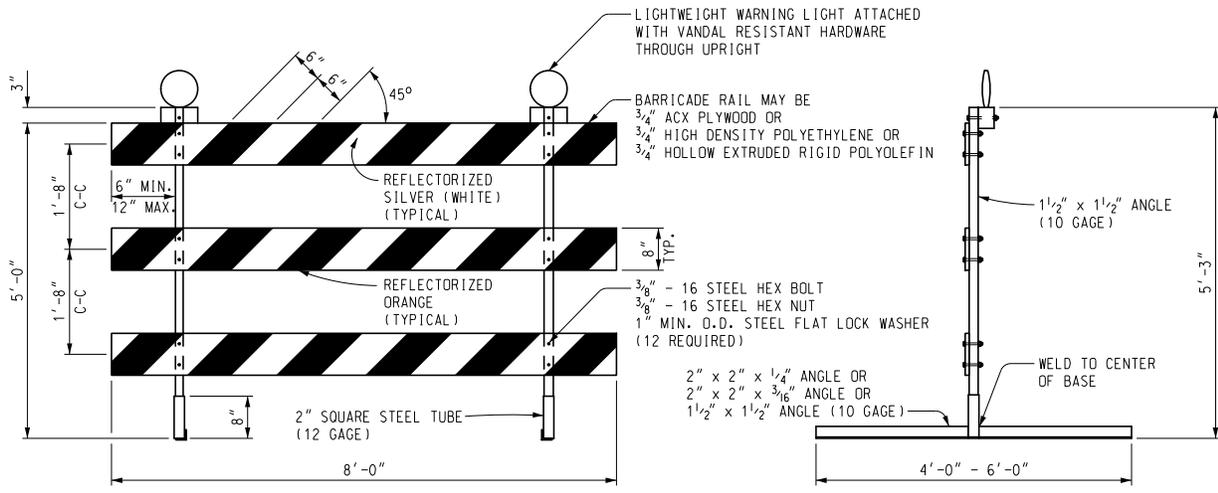
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	109	F.H.W.A. APPROVAL	11/2/2017 PLAN DATE	WZD-100-A	SHEET 11 OF 11
--	-----	-------------------	------------------------	-----------	-------------------

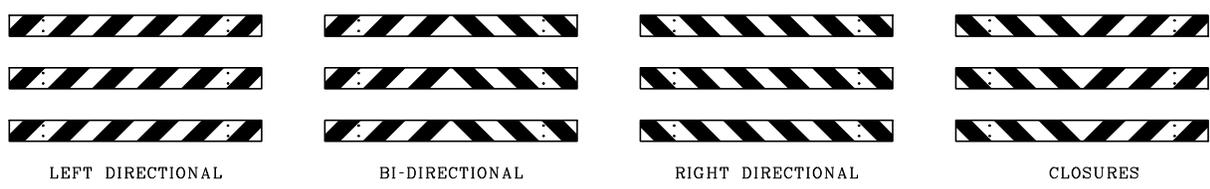
NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



FRONT ELEVATION SIDE VIEW
PERFORATED SQUARE STEEL TUBE OPTION



FRONT ELEVATION SIDE VIEW
ANGLE IRON OPTION



**BARRICADE RAIL SHEETING OPTIONS
 TYPE III BARRICADES**

Other Type III Barricades meeting current NCHRP crash worthy criteria can be found on the FHWA Safety website at http://safety.fhwa.dot.gov/roadway_dept/road_hardware/wzd.htm

MDOT
 Michigan Department of Transportation

PREPARED BY
 OPERATIONS
 FIELD SERVICES

DRAWN BY: ECH

CHECKED BY: MWB

DEPARTMENT DIRECTOR
 Paul C. Ajegba

APPROVED BY: _____
 DIRECTOR, BUREAU OF FIELD SERVICES

110

APPROVED BY: _____
 (SPECIAL DETAIL)
 DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT

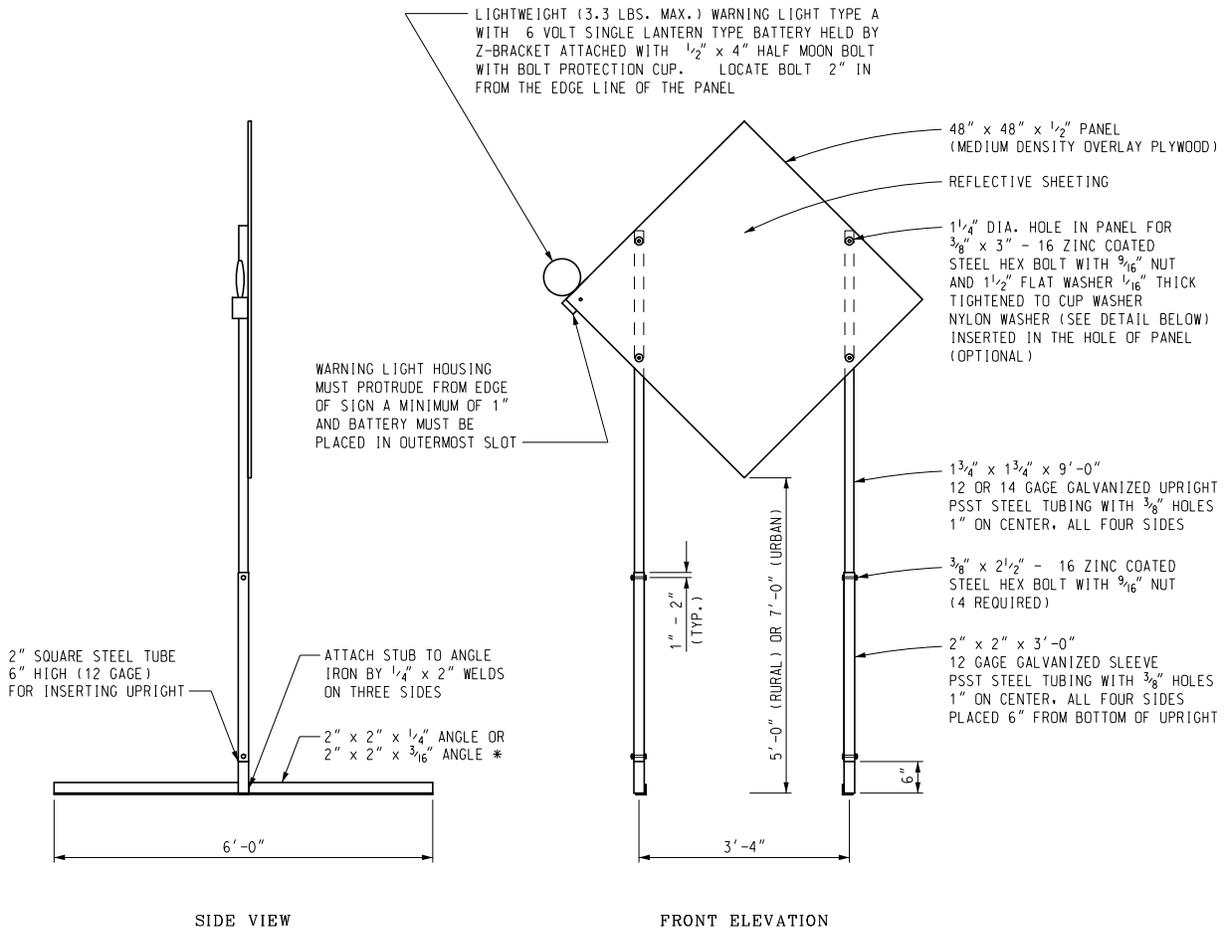
MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF FIELD SERVICES SPECIAL DETAIL FOR

Temporary
 Traffic Control Devices

6/16/22
 PLAN DATE

WZD-125-E

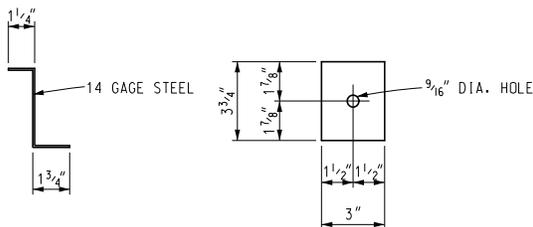
SHEET 1 OF 3



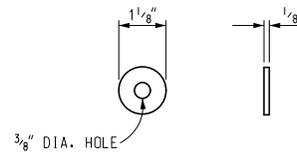
TEMPORARY SIGN SUPPORT

(WARNING LIGHT PLACED ON SIDE CLOSEST TO TRAFFIC)

* SIGN STAND IS BALLASTED WITH FOUR OR MORE 35 LB SANDBAGS. A MINIMUM OF ONE ON EACH END. UPRIGHTS SHALL NOT EXTEND ABOVE THE SIGN PANEL.



Z-BRACKET DETAIL



OPTIONAL NYLON WASHER

Other temporary sign supports meeting current NCHRP crash worthy criteria can be found on the FHWA Safety website at http://safety.fhwa.dot.gov/roadway_dept/road_hardware/wzd.htm

NOT TO SCALE

111

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF FIELD SERVICES SPECIAL DETAIL

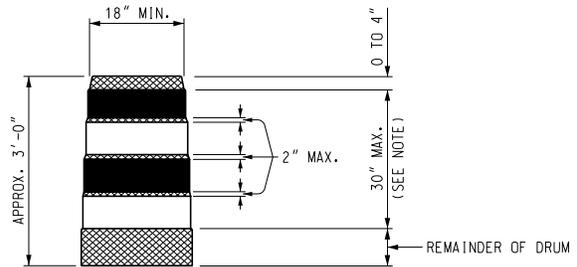
SPECIAL DETAIL
F.H.W.A. APPROVAL

6/16/22
PLAN DATE

WZD-125-E

SHEET
2 OF 3

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



- REFLECTORIZED ORANGE
- REFLECTORIZED WHITE
- NON REFLECTORIZED ORANGE

NOTE:
 DRUMS SHALL HAVE AT LEAST 4 HORIZONTAL REFLECTORIZED STRIPES (2 ORANGE AND 2 WHITE) OF 6" UNIFORM WIDTH, ALTERNATING IN COLOR WITH THE TOPMOST REFLECTORIZED STRIPE BEING ORANGE. NON REFLECTORIZED SPACES BETWEEN THE HORIZONTAL REFLECTORIZED ORANGE AND WHITE STRIPES SHALL BE ORANGE IN COLOR AND EQUAL IN WIDTH.

PLASTIC DRUM

NOTES:

2" PERFORATED SQUARE STEEL TUBES MAY BE USED TO FABRICATE THE HORIZONTAL BASE OF THE TYPE III BARRICADE.

WARNING LIGHTS SHALL BE PLACED ACCORDING TO THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND ALL OTHER PROVISIONS IN THE CONTRACT ON TYPE III BARRICADES.

SEE ROAD STANDARD PLANS R-113-SERIES FOR TEMPORARY CROSSOVERS FOR DIVIDED ROADWAY, AND R-126-SERIES FOR TYPICAL LOCATION AND SPACING OF PLASTIC DRUMS FOR PLACEMENT OF TEMPORARY CONCRETE BARRIER.

SIGNS, BARRICADES, AND PLASTIC DRUMS SHALL BE FACED WITH PRESSURE-SENSITIVE REFLECTIVE SHEETING ACCORDING TO THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

SANDBAGS SHALL BE USED WHEN SUPPLEMENTAL WEIGHTS ARE REQUIRED TO ACHIEVE STABILITY OF THE BARRICADE. THE SANDBAGS SHALL BE PLACED SO THEY WILL NOT COVER OR OBSTRUCT ANY REFLECTIVE PORTION OF THE TRAFFIC CONTROL DEVICE.

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF FIELD SERVICES SPECIAL DETAIL	(SPECIAL DETAIL) F.H.W.A. APPROVAL	6/16/22 PLAN DATE	WZD-125-E	SHEET 3 OF 3
--	---------------------------------------	----------------------	-----------	-----------------

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MIXING PORTLAND CEMENT CONCRETE

CFS:JFS

1 of 1

APPR:CPM:TEB:12-17-21
FHWA:APPR:12-20-21

Add the following paragraph to subsection 1001.03.E.1 of the Standard Specifications for Construction:

Weigh and batch each material into its respective weighing device within the tolerance from the individual batch weights or quantities documented in the approved JMF as follows:

- a. Cementitious Materials. Provide cementitious materials within -2.0 percent to +5.0 percent of the required weight.
- b. Aggregates. Provide aggregate within ± 3.0 percent of the required weight.
- c. Water. Provide net water to not exceed the required water quantity and the required maximum water/cementitious ratio (w/cm).
- d. Air Entraining Admixtures. Provide the necessary quantity or dosage rate per 100 pounds of cementitious material to achieve the required air content of fresh concrete.
- e. Other Admixtures. Provide water-reducing and other admixtures within ± 3.0 percent of the required quantity.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**ALKALI SILICA REACTIVITY OF FINE AGGREGATE USED IN PORTLAND
CEMENT CONCRETE**

CFS:CPM

1 of 2

APPR:TES:JFS:05-19-20
FHWA:APPR:05-27-20

a. Description. This special provision sets out the requirements for all fine aggregate used in Portland cement concrete (PCC) mixtures to be tested by an independent testing laboratory and determined to be resistant to the potential for deleterious expansion caused by alkali-silica reactivity (ASR). ASR testing is not required for concrete pavement repairs, temporary concrete pavements, and other items covered by the contract.

Except as explicitly modified by this special provision, all materials, test methods, and PCC mixture requirements of the standard specifications and the contract apply.

b. Definition. ASR is a chemical reaction which occurs over time within concrete between highly alkaline cement paste and reactive forms of silica found in some aggregates. In the presence of moisture, an expansive ASR gel is formed which can exert pressure within the concrete, causing random cracking and premature deterioration of the concrete.

c. Laboratory Requirements. The independent laboratory, including all associated testing equipment and staff performing ASR testing of aggregates, must be proficient in ASR testing in accordance with the applicable test methods and procedures. The laboratory must provide documentation to the Regions that they are qualified and proficient to conduct ASR testing in accordance with the required test procedures.

d. Laboratory Testing Requirements. Perform testing on fine aggregate proposed to be used in any PCC Job Mix Formula (JMF). The Contractor must ensure the testing is conducted in accordance with a designated standard test procedure described herein. Test results must conform to the specified criterion for one of the following standard test methods. The Rounding Method described in *ASTM E29* must be used when reporting expansion test results.

(1) Method 1. *ASTM C1293*. Concrete Prism Test. If the expansion of concrete prisms is not greater than 0.040 percent (rounded to the nearest 0.001 percent) after 1 year, the fine aggregate is considered non-deleterious to ASR and may be used in the JMF.

(2) Method 2. *ASTM C1567*. Mortar Bar Test. If no previous test data are available for the fine aggregate that shows it is resistant to ASR using Method 1, above, replace 25 to 40 percent of the Portland cement in the concrete mixture with a supplementary cementitious material (slag cement or fly ash). A blended cement meeting the requirements of *ASTM C595/C595M* containing the above Portland cement and supplementary cementitious material proportions may also be used.

Demonstrate the ability of the supplementary cementitious material to control the deleterious expansion caused by ASR by molding and testing mortar bars in accordance with the standard

test method described in *ASTM C1567* using the mix proportions and constituent sources for both the aggregates and the cementitious materials that will be used for the project. Make at least three test specimens for each cementitious materials-aggregate combination. If the average of three mortar bars for a given cementitious materials-aggregate combination produces an expansion less than 0.10 percent (rounded to the nearest 0.01 percent) at 14 days of immersion, the JMF associated with that combination will be considered non-deleterious to ASR. If the average expansion is 0.10 percent (rounded to the nearest 0.01 percent) or greater, the JMF associated with that combination will be considered not sufficient to control the deleterious expansion caused by ASR and the JMF will be rejected.

(3) Method 3. *ASTM C1260*. Mortar Bar Test. If the expansion of the mortar bars is less than 0.10 percent (rounded to the nearest 0.01 percent) at 14 days of immersion, the fine aggregate is considered non-deleterious to ASR and may be used in the concrete without the need for ASR mitigation.

The Engineer will not approve the use of the JMF if the expansion exceeds the threshold limits for the respective *ASTM* test method used. The test results and report are valid for 2 years from the completion of testing.

e. Submittals. A current ASR test report for the fine aggregate proposed to be used in the Job Mix Formula (JMF) must accompany each JMF. Ensure the ASR test report is accompanied by a certification stating which test procedure was followed and that all testing was conducted in accordance with the designated standard test procedure.

f. Measurement and Payment. All materials, labor, equipment, and laboratory facilities necessary to complete the work in accordance with this special provision is included in other contract pay items and no additional compensation will be permitted.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**QUALITY INDEX FOR PORTLAND CEMENT CONCRETE (FOR LOCAL AGENCY
PROJECTS ONLY)**

CFS:CPM

1 of 4

APPR:TES:JFS:05-28-20
FHWA:APPR:06-04-20

a. Description. This special provision establishes pay factor and price adjustments for Portland cement concrete (PCC) based on Quality Assurance (QA) testing of 28-day compressive strength and fresh concrete air content of PCC. Perform all work in accordance with the standard specifications and this special provision.

b. Materials. Mixture requirements will be in accordance with section 1004 of the Standard Specifications for Construction, unless otherwise specified in the contract.

c. Sampling. Sampling will be in accordance with subsections 1003.03.H and 1003.03.L of the Standard Specifications for Construction, except as modified herein. A sample is defined as a representative quantity of concrete taken during production which is used to measure the quality characteristics for the concrete. Compressive strength specimens for each sample consist of two cylinders, either 4-inch by 8-inch or 6-inch by 12-inch. A random number will be generated for each respective subplot. The sampling frequency for a production lot is one QA sample per subplot.

See subsection 1003.03.J in the Standard Specifications for Construction for reduced sampling and testing for small incidental quantities.

d. Quality Index Analysis. The Engineer's QA test results will be used to determine the pay factor (PF) and price adjustment (ADJ). The Contractor QC test results will be not used for PF and ADJ analysis. The Engineer will complete PF and ADJ analysis within 7 working days after completion of all 28-day compressive strength testing for the represented production lot or quantity of concrete. All values of PF and OLPF in these formulas are decimal, not percent. All values of PF and OLPF are rounded to two decimal places.

Table 1: Quality Index Parameter Specification Limits

Quality Characteristic	Specification Limits
Air Content of Fresh Concrete (percent)	5.5 – 8.5
Rejection Limit (percent)	<5.0 or >9.0
Conc. Temp. (deg. F)	45 - 90 at time of placement
Slump (max.) (inch)	See footnotes a through l in Table 1004-1 of the Standard Specifications for Construction
28-day Compressive Strength (psi)	For LSL see Table 2
Rejection Limit - 28-day Compressive Strength	See Table 2

Table 2: Quality Index Parameter Specification Limits for 28-Day Compressive Strength

Parameter	Grade of Concrete						
	3000	3500	3500HP	4000	4000HP	4500	4500HP
Lower Specification Limit (psi)	3000	3500	3500	4000	4000	4500	4500
Rejection Limit for an Individual Strength Sample Test Result (psi)	2500	3000	3000	3500	3500	4000	4000

1. Pay Factor for 28-Day Compressive Strength (PF_s). (not to exceed 1.00)

$$PF_s = (\text{QA Test Strength})/\text{LSL}$$

Where:

QA Test Strength = QA 28-day compressive strength sample test result.

LSL = Lower specification limit (see Table 2).

If the tested strength does not meet the rejection limit specified in Table 2, the Engineer will require additional evaluation as described in section e of this special provision.

2. Pay Factor for Air Content of Fresh Concrete (PF_{ac}). The pay factor for air content of fresh concrete (PF_{ac}) will be in accordance with Table 3.

Table 3: Air Content of Fresh Concrete Pay Factor (PF_{ac})

Air Content of Fresh Concrete (percent)	Pay Factor (PF_{ac})
5.5 – 8.5	1.00
5.0 – 5.4	0.50
Below 5.0	Rejection
8.6 – 9.0	0.75
Above 9.0	Rejection

If the air content of fresh concrete is below 5.0 or above 9.0 percent, the Engineer will elect to do one of the following:

A. Require removal and replacement of the entire quantity of concrete represented by the test with new testing conducted on the replacement concrete and repeat the evaluation procedure.

B. Allow submittal of a corrective action plan for the Engineer's approval. If the Engineer does not approve the plan for corrective action, subsection d.2.A. will be applied. All costs associated with plan submittal and corrective action under this subsection will be borne by the Contractor.

3. Overall Lot Pay Factor (OLPF). Use the following formula to determine the OLPF and ADJ. The OLPF will not exceed 1.00:

$$\text{OLPF} = (0.60 \times \text{PF}_s) + (0.40 \times \text{PF}_{ac})$$

Where:

PF_{ac} = Pay factor for Air Content (see Table 3)

4. Price Adjustment (ADJ). Use the following formula to determine the ADJ.

$$\text{ADJ} = (\text{OLPF} - 1)(\text{Price})$$

5. Price Adjustment for Small Incidental Quantities. Price adjustment for 28-day compressive strength deficiencies will be based on test results for the corresponding weekly QA test specimens and the pay factor (PF_s) calculated in accordance with the formula defined in subsection d.1. The price adjustment is calculated by the following equation:

$$(\text{ADJ}) = (\text{PF}_s - 1)(\text{Price})$$

Where:

ADJ = Price adjustment per pay unit to be applied to the quantity represented by the QA test.

PF_s = Pay Factor for 28-day compressive strength (not to exceed 1.00).

Price = Base price when established for the pay item or the Contractors unit price bid when concrete is included in another pay item without a base price.

e. Evaluation of Rejectable Concrete. The Engineer will require additional evaluation to decide what further action may be warranted. Acceptance for air content of fresh concrete will be based on QA test results reported at the time of concrete placement.

If the Engineer determines that non-destructive testing (NDT) is appropriate, this work will be done by the Contractor in the presence of the Engineer within 45 calendar days of concrete placement. All costs associated with this work will be borne by the Contractor. Ensure complete set of non-destructive tests is conducted (in accordance with the respective standard test method) at a minimum three randomly selected locations. If NDT is used to estimate the in-situ strength, a calibrated relationship between the project job mix formula (JMF) under evaluation and the NDT apparatus must have been established prior to NDT testing in accordance with its respective standard test method.

If the 28-day compressive strength QA test results show that the rejection limit (as specified in Table 2) has not been achieved, the quantity of concrete under evaluation will be rejected and the Engineer will require additional evaluation to decide what further action may be warranted.

Propose an evaluation plan and submit it to the Engineer for approval before proceeding. The results from NDT will be used only to decide what further action is required. This determination will be made by the Engineer, as follows:

1. For Non-structural Concrete. If no test result from non-destructive testing falls below the lower specification limit (LSL) 28-day compressive strength, the represented quantity of

concrete under evaluation will remain in place and a pay factor for 28-day compressive strength (PF_s) of 1.00 will be applied for overall lot pay factor (OLPF) and price adjustment (ADJ) determinations in accordance with section d of this special provision.

2. For Structural Concrete (including overhead sign foundations). If no test result from non-destructive testing falls below the lower specification limit (LSL), the represented quantity of concrete under evaluation will remain in place and a pay factor for 28-day compressive strength (PF_s) of 0.85 will be applied for overall lot pay factor (OLPF) and price adjustment (ADJ) determinations will be in accordance with section d of this special provision.

3. If one or more of the non-destructive test results fall below the lower specification limit (LSL) 28-day compressive strength, the Engineer may elect to do one of the following:

A. Require removal and replacement of the entire rejected quantity of concrete, including new initial tests for quality index analysis conducted in accordance with section d of this special provision.

B. Allow the Contractor to submit a plan for corrective action, for the Engineer's approval, to address the disposition of the rejected concrete. If the Engineer does not approve the plan for corrective action, subsection e.3.A of this special provision will be applied. All costs associated with plan submittal and corrective action under this subsection will be borne by the Contractor.

C. Allow the in-situ quantity of concrete under evaluation to remain in place and a pay factor (PF_s) of 0.50 will be applied for overall lot pay factor (OLPF) and price adjustment (ADJ) determinations will be in accordance with section d of this special provision.

f. Measurement and Payment. If a price adjustment is made for reasons included in this special provision, that adjustment will be made using the base price established for the specific item. If a contract unit price requires adjustment for other reasons not described in this special provision, the adjustments will be made using the original unit price and the adjustments will be cumulative.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONSTRUCTION MANAGEMENT

COS:DCB

1 of 2

APPR:JJG:LFS:04-19-23
FHWA:APPR:04-28-23

a. Description. This work consists of complying with the Department's construction management processes. The Department will manage this contract using the AASHTOWare Project Construction Materials (APCM) software. Ensure all change orders are approved using APCM. No paper documents, faxes, or other methods/media are permitted for change order approvals except as allowed by this special provision or specifically approved by the Engineer.

b. Terminology. Replace the following terms in all of the contract:

- Inspector's Daily Report (IDR) replaced with Daily Work Report (DWR)
- Contract Modification replaced with Change Order
- Construction Pay Estimate Report replaced with Pay Estimate for Contractor
- Contractor's Performance Evaluation replaced with Contractor Evaluation
- Site Times replaced with Contract Times

The new terms have the same definition as the term being replaced.

c. Contractor Access to APCM. APCM access is available at no cost to all contractors associated with the project. APCM user accounts and access is granted using the State of Michigan Identity, Credential and Access Management solution, MILogin. MILogin is a web based access portal at the following website:

<https://milogintp.michigan.gov>

Use MILogin to submit all APCM access requests.

d. Roles and Contract Authority. Roles restrict what data each user can view and the actions they can perform in the system. Roles will be assigned at user creation through the MILogin access request process. Read only and change order approver roles are available to the Contractor. The change order approval role requires written authorization from an authorized officer of the company.

Contract authority grants the user the ability to use one of the user's roles on a specific contract. Contract authority will be granted by the Engineer at the request of the Contractor. Provide the Engineer with a list of users and the user role for this contract at the time of the preconstruction meeting.

Notify the Engineer within 24 hours of any user access changes for this contract.

e. Training. Additional documentation and training for APCM processes, details of scheduled classes and methods for requesting training are available by emailing the MDOT

AASHTOWare Help Desk at MDOT-ConstructionSoftware@michigan.gov between the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday.

f. Technical Issue Resolution. Upon discovery of an APCM access issue the Contractor must immediately notify the Engineer and submit a notice to the e-mail resource at:

MDOT-ConstructionSoftware@michigan.gov.

g. Change Order Approvals. Ensure electronic review/approval of change orders are accomplished through APCM approval decisions and automated e-mail notifications. An approval decision is the system recorded decision entered by the user. When a change order is ready for approval, the user with authority to approve is notified by e-mail. Submit the approval decision by accessing APCM, reviewing the change order, and recording the approval decision within the system.

h. Data/File Retention. The electronic data and files stored within APCM are part of the official project documentation and will be retained per the current documentation retention schedule.

i. Measurement and Payment. The work included in this special provision will not be paid for separately and is considered to be included in other pay items of work in the contract.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DISSEMINATION OF PUBLIC RELATIONS INFORMATION

CFS:JJG

1 of 1

APPR:LFS:MRB:04-14-21
FHWA:APPR:04-14-21

a. Description. This special provision establishes the requirements for dissemination of any public relations communications and/or products intended for an external audience pertaining to this contract. Dissemination must not be made without prior written approval from the Department's Office of Communications, and then only in accordance with explicit instructions by the Department. This includes the use of the Michigan Department of Transportation (MDOT) logo.

A violation of this provision may be considered a default of contract and the Department may exercise its rights in accordance with subsection 108.11 of the Standard Specifications for Construction.

b. Public Relations Information. Examples of communications and/or products may include, but are not limited to: brochures, flyers, invitations, programs, postings on social media sites or web sites, new or updated video, digital versatile disk (DVD) productions, or video sharing productions, exhibits, presentations, or any other printed materials intended for an external audience.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
NON-COMPLIANCE WITH CONTRACT REQUIREMENTS

CFS:LLR

1 of 2

APPR:JJG:LFS:05-23-23
FHWA:APPR:06-15-23

Delete subsection 102.19, on page 1-31 of the Standard Specifications for Construction, in its entirety and replace with the following:

102.19. Contract Non-Compliance

The Engineer will issue non-compliance notices (form 1165) to the Contractor when contract requirements have not been met. Non-compliance notices may be issued at any time during the course of the contract. Notices of non-compliance may include, but are not limited to, the following criteria.

- A. Jobsite Safety
- B. Prevailing Wage
- C. Subcontract
- D. Prompt Payment
- E. Disadvantaged Business Enterprise
- F. Soil Erosion and Sedimentation Control
- G. Plans and Specifications
- H. Prosecution and Progress
- I. Submittals (material testing, certifications, shop drawings, etc.)
- J. Work Zone Safety and Mobility

Non-compliance notices may be used as a basis for modifying the prequalification ratings of the Contractor and any tier subcontractor. Any action to modify the Contractor's prequalification ratings will be taken in accordance with the duly promulgated administrative rules for prequalification.

If a Contractor and or any tier subcontractor fails to honor a request by the Engineer to submit a performance improvement plan or to meet to discuss the plan, or if a Contractor or subcontractor at any tier fails to carry out an approved performance improvement plan, that failure may be used as a basis for modifying the prequalification ratings of the Contractor or subcontractor at any tier as applicable. Any action to modify the

Contractor's prequalification ratings will be taken in accordance with the duly promulgated administrative rules for prequalification.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**SUBLETTING CONTRACT WORK TO DISADVANTAGED BUSINESS
ENTERPRISES**

CSD:LFS

1 of 2

APPR:KMF:LST:11-09-23

FHWA:APPR:11-13-23

Replace subsection 102.17 on page 1-30, of the Standard Specifications for Construction, in its entirety and replace with the following:

102.17. Subletting Contract Work to Disadvantaged Business Enterprises (DBEs)

The DBE participation goal specified in the notice of advertisement must be made available to certified DBEs. Compliance with the designated DBE participation goal must be met by using DBEs to perform commercially useful functions as required by 49 CFR 26.55.

- A. **Pre-Award.** All Bidders must provide the overall DBE percentage they have attained at time of bid within the DBE goal tab of the bid file on all projects with a DBE goal designation. All Bidders must submit MDOT Forms 2653 *Contractor Good Faith Efforts* and 2653D *Commitment Confirmation for DBE Subcontractors* within 5 calendar days of the bid letting. These forms must be submitted whether or not the Bidders have been able to meet the DBE participation goal. Submit these forms by e-mail to MDOT-DBESheets@Michigan.gov.

A Bidder who fails to meet the submittal requirements for DBE participation will be deemed ineligible for award of the contract. If a Bidder fails to achieve the DBE participation goal set for a contract, the Department will evaluate the efforts of all Bidders to determine eligibility for award.

- B. **Post Award.** If the Contractor determines during construction that the approved the DBE participation goal will not be met, the Contractor must submit updated MDOT Forms 2653 and 2653D to MDOT-GFE@michigan.gov within 7 calendar days in accordance with current Department DBE Program Procedures.

Prime Contractors may not terminate for convenience an approved DBE working on a federally assisted contract and then perform the work of the terminated DBE.

The Contractor must notify the Department immediately of a DBE's inability to perform any of its work and the Contractor's intent to obtain a substitute DBE by filling out MDOT Form 0196 (DBE Removal/Substitution Request).

- C. **Reconsideration.** Bidders whose Good Faith Efforts (GFE) have been found insufficient may have their GFE reconsidered in accordance with current Department DBE Program Procedures.

The Department reserves the right to modify any requirement or shorten any time period when the need to place the project under contract is such that the public interest warrants such action and would be impaired by further delay. If the Department waives any of these requirements, except the length of a time period, it will ensure that no Bidder is given a material competitive advantage by these actions.

- D. **Reports.** The Contractor is required to submit payments to subcontractors and all DBEs on the project in the MDOT 2124A Employment Reporting System (MERS) to the Engineer in accordance with the contract.
- E. **Penalties.** Failure to fulfill the DBE subcontracting requirement may be considered a breach of contract and may result in the Department's exercising the rights and remedies available in accordance with the provisions of the contract. Remedies may also include suspension, reduction, or removal of the Contractor's prequalification as stated in the Administrative Rules Governing the Prequalification of Construction Contractors.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
VALUE ENGINEERING CHANGE PROPOSAL

COS:MRB

1 of 4

APPR:CJB:JJG:04-30-20
FHWA:APPR:05-06-20

a. Description. A value engineering change proposal (VECP) modifying plans, specifications, or other contract requirements may be submitted for this project if the proposed change results in reduced construction cost, a higher quality product, improved safety, or a shorter contract time. The estimated cost savings must be quantifiable in relation to the contract cost. No work can begin before written authorization. The proposed change must not alter the essential functions or characteristics of the project or significantly delay the completion of the project. A VECP or conceptual VECP will only be considered after project award. Essential functions and characteristics include, but are not limited to, service life, operating costs, ease of maintenance, desired appearance, impact on utilities and right-of-way, mobility and safety of the motorist, bicyclist and pedestrian; safety of all onsite workers (construction, inspection, testing, etc.) in the progress of the work, design standards, and safety standards. This special provision does not restrict the Contractor from proposing improvements to the project that may not result in net cost savings. A conceptual VECP stating the basic concept and approximate cost savings may be submitted for preliminary consideration.

b. Submittal of Conceptual VECP. Submit a conceptual proposal for the preliminary evaluation. Upon review by the Engineer, one of the following actions will be taken:

- Conceptual approval and a request for the Contractor to submit a VECP.
- Request for additional information.
- Denial of the VECP.

Preliminary review of a conceptual proposal reduces the Contractor risk of subsequent denial and does not commit the Department to eventual approval. Submit the following information for each conceptual VECP using the Value Engineering Change Proposal Form (Form # 1962) marked Conceptual VECP.

1. A description of the difference between the existing pay items and the proposed changes, and expected benefits.
2. A set of conceptual plans and a description of proposed changes to the pay items.
3. An estimate of the anticipated cost savings or increase.
4. A date by which the Department must make a decision to avoid delays to the existing contract and obtain the cost savings. Also include information on the amount of time necessary to develop the full proposal and impacts to the progress schedule.
5. If impacting maintenance of traffic provisions, identify proposed changes and impacts to the Special Provision for Maintaining Traffic.

After approval of conceptual VECP, the Contractor must follow section c of this special provision for the final VECP.

c. Submittal of Final VECP. Submit the following information for each VECP using Value Engineering Change Proposal Form (Form # 1962) marked Final VECP.

1. A description of the difference between the existing contract and the proposed change, and the advantages and disadvantages of each, including effects on service life, operating costs, ease of maintenance, desired appearance, impact on utilities and right of way, mobility and safety of the motorist, bicyclist and pedestrian; design standards, and safety standards.

2. A complete set of plans, if necessary, and specifications showing the revisions relative to the original contract. This portion of the submittal must include design notes and construction details. If the proposal has plans, these must be signed and sealed by the Contractor's Professional Engineer licensed in the State of Michigan.

3. All costs and proposed unit prices must be documented by the Contractor and must include a cost comparison summarizing all the items the VECP replaces, reduces, eliminates, adds, or otherwise changes from the original contract on a spreadsheet.

4. A date by which the Department must make a decision to avoid delays to the existing contract and to obtain the proposed cost savings.

5. If impacting maintenance of traffic provisions, identify proposed changes and impacts to the Special Provision for Maintaining Traffic. If the submitted revisions to the maintaining traffic provision are approved and require any corrections, the Contractor is responsible for all additional costs related to corrective measures.

6. A statement detailing the affect the proposal will have on the time for completing the contract and impacts to the critical path and progress schedule.

7. A description of any known uses or testing of the proposed changes and the conditions and the results.

8. If the VECP submittal includes pay items associated with a warranty, include the latest version of the warranty specification.

d. Evaluation. By submitting the VECP, the Contractor agrees not to hold the Department liable for its decision or for any delays to the work attributable to the VECP. Decisions on VECP's are not subject to appeal. Work on the project will continue in accordance with the requirements of the contract until a work order is issued which incorporates the VECP changes. The Department has final authority of the acceptability of a VECP and of the estimated net savings attributable to the adoption of all or any part of the VECP. If, in the judgment of the Engineer, contract prices do not represent a fair measure of the value of work to be performed or to be deleted, the Engineer will use other means to determine the estimated net savings.

The Department may modify a VECP, with the concurrence of the Contractor, in order to make it acceptable. The Contractor's share of the savings will be based on the modified VECP.

If the VECP is accepted, in whole or in part, the written acceptance will be issued by a work order

and followed with a contract modification. The work order and contract modification will include the necessary changes in the plans and specifications and any conditions upon which the approval is based. Acceptance of the VECP will not extend the time of contract completion unless specifically provided for in the work order and contract modification.

A VECP will be evaluated in accordance with the following:

1. The Engineer will determine if a VECP qualifies for consideration and evaluation. The Engineer may deny any VECP that requires excessive time or costs for review, evaluation or investigation. The Engineer may deny any VECP that is not consistent with the Department's design policies and criteria for the project.

2. The Department will not accept a VECP that is similar to a change in the plans or specifications under consideration by the Department for the project at the time the proposal is submitted; nor will the Department accept a proposal based upon, or similar to, standard specifications, general use special provisions or standard drawings adopted by the Department after the advertisement for the contract. The Department reserves the right to make such changes without compensation to the Contractor under the provisions of subsection 103.02 of the Standard Specifications for Construction.

3. The Contractor will have no claim against the Department for additional costs or delays resulting from denial or untimely acceptance of a VECP. These costs include but are not limited to: development costs, loss of anticipated profits, increased material or labor costs, or untimely response.

4. A VECP will be denied if equivalent options are already provided in the contract.

5. A saving resulting solely from the elimination or reduction in quantity of a contract pay item will not be considered as a VECP. A saving resulting from the elimination or reduction in quantity of a pay item specified as part of a VECP may be considered.

6. In calculating the value of cost savings, the Department has the right to disregard the Contract bid prices, if such prices do not represent the value of the work to be performed or to be deleted, and has the right to calculate the savings based on reasonable cost for such work.

7. A VECP cannot be used to alter incentive and disincentive rates and maximum payments on A + B and/or lane rental projects.

8. A VECP will be denied if the design consultant for the contractor is also the design consultant for the Department or other apparent conflicts of interest exist.

9. A VECP may be denied if it was rejected as a Value Engineering alternative during the development phase.

e. Time Frame for VECP Evaluation. The Contractor will be notified of the Department's decision to approve or deny a conceptual or final VECP within 14 calendar days of receipt of the VECP. If a written acceptance has not been received within this time frame, and the date has not been extended by mutual agreement of both parties, the VECP is denied. The Department's decision is final and there is no appeal.

f. Future Use of VECP. The Department reserves the right to use all or any part of a VECP on other contracts without obligation or compensation to the Contractor. If the VECP is accepted, the Department may use or disclose any information necessary to incorporate the VECP on future projects.

g. Payment for Work under the VECP. The Engineer may reject all or any portion of work performed under an approved VECP if results are unsatisfactory. The Engineer will direct the removal of rejected work and construction will proceed under the original contract requirements. There will be no payment for work performed under the proposal, or for its removal.

No work related to a VECP will be performed under force account. Agreed prices must be reached for any new or modified contract pay items related to the VECP before the VECP is approved.

The changes will be incorporated into the Contract by changes in quantities of unit bid items, new agreed unit price items, lump sum or any combination, as appropriate, under the Contract. Unless there is a differing site condition as described in subsection 103.02 of the Standard Specifications for Construction, the Contractor will not receive additional compensation for quantity overruns, design errors, supplemental surveys, geotechnical investigations, additional items or other increases in cost that were not foreseen in the accepted VECP, unless otherwise approved by the Engineer.

The work order and authorization will include the price for performing all affected items of work and the estimated net savings in the cost of performing the work directly attributable to the VECP. VECP payments only involve direct savings or costs. Indirect savings or costs (time, user delay, contract delay, etc) are not included in VECP payment calculations. The calculations of VECP payments are independent from the payments or penalties for contract time related issues. The Contractor will be paid 50 percent of this net savings based on as constructed or plan quantities whichever is in the best interests of the Department. The amount specified in the work order and authorization constitutes full compensation to the Contractor for the VECP and the performance of that work.

$(\text{Cost of Deleted Work}) - (\text{Cost of Added Work}) = \text{Net Savings}$

$\text{Payment} = (\text{Net Savings})/2$

Note: Approved VECP's will be paid using the pay item code "1200000", item description of "Value Engineering" and a unique secondary descriptor differentiating each VECP with the pay unit of "Dollar" for the contract modification.

The Contractor's development costs for the proposed VECP, including all costs associated with design, are not reimbursable.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PREVAILING WAGE AND LABOR COMPLIANCE SYSTEM

COS:AS

1 of 2

APPR:RJC:MRB:03-24-20
FHWA:APPR:03-30-20

a. Description. This work consists of the required use of a prevailing wage and labor compliance (PWLC) system for all prevailing wage documentation as directed by the Engineer. Input all required certified payroll documentation into the PWLC system (LCPtracker) and update this documentation throughout the execution of the contract. Certified payroll information is to be submitted in the PWLC system per the time requirements in the 20SP-107D - Labor Compliance.

b. Contractor Responsibility. Coordinate all electronic document submittals including documentation supplied by other companies (e.g. subcontractors, suppliers, fabricators, etc.) as detailed in this special provision. All companies will directly submit their certified payroll information into the PWLC system.

c. General Requirements. Submit all certified payroll information as required in this special provision and the 20SP-107D - Labor Compliance. Provide employee zip codes as part of the certified payroll submission. This information will be redacted from any certified payroll reports to protect worker anonymity. Zip code information will be anonymized and used for federal, state, and legislative prevailing wage and labor reporting.

All data entry will be submitted through the following program and website:

Program: LCPtracker

Login Website: <http://www.lcptracker.net>

General Information website: www.lcptracker.com

A tutorial for this system can be found through the website provided.

d. Condition of Payment. Post all documents electronically into the PWLC system. Electronic posting and submittal of documents is a condition of payment for this contract. Documents submitted in any other manner, unless required otherwise in this special provision or directed by the Engineer, will not be accepted and will delay payment.

e. Digitally Encrypted Electronic Signatures. Ensure all documents that require signature authorizations are signed using a digitally encrypted electronic signature. Further information regarding how to obtain a digital signature can be found at the following website:

www.michigan.gov/mdot-esign

f. Contractor Preparation for Tracking Software:

1. Information about LCPtracker is available to the Contractor and other project companies (e.g. subcontractors, suppliers, etc.) at the following website:

www.lcptracker.com.

2. Access to the PWLC system is provided at no cost to the Contractor. The project office will setup the project in LCPtracker and assign the Contractor. The Contractor will setup other project companies to submit certified payrolls and prevailing wage/labor compliance documents. Once setup in the system the Contractor and other project companies may access the software at the following website:

www.lcptracker.net

3. Use Internet Explorer to access the PWLC system. The Department has tested and will support Internet Explorer versions 8, 9, 10 and 11.

g. Document Format. The Engineer reserves the right to electronically reject documents that are deemed to be unsuitable. This may include documents submitted that are illegible or unreadable or contain inappropriate information. The submitting company must re-submit the corrected documents into the PWLC system. Failure to do so will be considered noncompliance and may delay progress payments.

h. Training. LCPtracker offers biweekly contractor training sessions, user support manuals, quick start guides, e-Training videos, and a software support staff available Monday thru Friday 8 a.m. to 8 p.m. EST accessible through the online interface.

i. File/Document Retention. The electronic files submitted in the PWLC system are the official contract documents and must follow all Department document retention schedules.

j. Technical Issue Resolution. Upon discovery of an LCPtracker issue immediately notify the Engineer with a copy sent to the following e-mail resource:

MDOT-LCPtracker@Michigan.gov

k. Measurement and Payment. The work included in this special provision will not be paid for separately and is considered to be included in other items of work in the contract.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DOMESTIC MATERIALS

CFS:JGG

1 of 5

APPR:LLR:KAS:10-03-25
FHWA:APPR:10-03-25

Delete subsection 105.10, on page 1-60 of the Standard Specifications for Construction, in its entirety and replace with the following:

105.10. Domestic Materials

An article, material, or supply will only be classified as an iron or steel product, a construction material, a manufactured product, or other products. Except as otherwise provided an article, material, or supply will not be considered to fall into multiple categories. An article, material, or supply must fall under one of the above-listed categories. The classification of an article, material, or supply as falling into one of the categories listed in this subsection will be made based on its status at the time it is brought to the work site for incorporation into the project.

A. Source of Iron or Steel (Buy America Act). All references to iron and steel products means iron products, steel products, or any combination of both iron and steel.

Provide iron or steel products for permanent incorporation into the work that are produced only in the United States per Title 23 of the CFR Section 635.410, Buy America Requirements.

All iron and steel products and manufacturing processes of the iron and steel products, including but not limited to the following steps; smelting, melting, rolling, extruding, machining, bending, grinding, drilling, welding, galvanizing, and coating, must occur within the United States. Provide manufacturer and/or fabricator certifications that all iron and steel products and manufacturing processes of the iron and steel products are compliant with Buy America Act requirements unless noted otherwise in this special provision. Certifications are required prior to incorporation of the products into the project.

Manufactured products, as defined in 23 CFR 635.410, that are predominantly iron or steel or a combination of both are considered Steel and Iron products and must comply with this special provision.

Predominately of iron or steel or a combination of both means the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, sheet, etc.), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components.

The above requirements do not preclude minimal use of foreign iron and steel,

provided the total invoice cost of foreign iron and steel permanently incorporated into the project does not exceed 0.1 percent of the total contract amount or \$2,500 whichever is greater. The Department defines the total invoice cost as the total value of the foreign iron and steel products as delivered to the project. The Department defines the total contract amount to be the original contract amount at the time of award.

Coordinate any potential inclusion of foreign iron or steel in fabricated products with each fabricator. Department inspection of fabrication processes and products is not responsible for any foreign iron or steel product inclusion.

For each iron or steel product subject to meeting domestic materials requirements, that doesn't fully meet Buy America Act requirements, the following documentation must be provided by the Contractor to verify the foreign steel value. Ensure the threshold is not exceeded and place the documentation in the project files.

- Pay Item,
- Description of associated foreign iron or steel product, or component,
- Invoiced cost of associated foreign iron or steel product, or component, and
- Current cumulative list of all foreign iron or steel products with the total dollar amount of foreign products in relation to the total contract amount.

The minimal use of foreign iron or steel under the minimal usage threshold must be approved by the Engineer prior to incorporation into the project and any associated payment under the contract. The use of foreign iron or steel under the minimal usage threshold does not need to be approved by FHWA. This amount is not considered a waiver to the domestic materials requirements. The Contractor must ensure that the minimal usage amount is not exceeded.

- B. Source of Construction Materials (Build America, Buy America Act).** Provide construction materials for permanent incorporation into the work that are produced in the United States per Title 2 of the CFR Section 184, Buy America Preferences for Infrastructure projects.

The manufacturing processes for each construction material must occur within the United States. Each construction material is followed by a standard for the construction material to be considered Produced in the United States.

1. Non-ferrous metals. All manufacturing processes means from initial smelting or melting through final shaping, coating, and assembly;
2. Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables). All manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form;
3. Glass (including optic glass). All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting;
4. Lumber. All manufacturing processes, from initial debarking through treatment and planing;

5. Drywall. All manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels;
6. Fiber Optic Cable (including drop cable). All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing. All manufacturing processes also include the standards for glass and optical fiber, but not for nonferrous metals, plastic and polymer-based products, or any others;
7. Optical Fiber. All manufacturing processes, from the initial preform fabrication stage through the completion of the draw; and
8. Engineered Wood. All manufacturing processes, from the initial combination of constituent materials until the wood product is in its final form including from initial debarking through pressing, trimming, and sanding of glued sheets or boards.

Provide documented certification the applicable construction materials are produced and/or manufactured in the United States, meaning all manufacturing processes as noted above occurred in the United States.

- C. **Source of Manufactured Products.** Provide manufactured products for permanent incorporation into the work that are produced only in the United States per Title 23 of the CFR Section 635.410, Buy America Requirements.

Manufactured products means articles, materials, or supplies that have been processed into a specific form and shape, or combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. If an item is classified as an iron or steel product, an excluded material, or construction material, then it is not a manufactured product. An article, material, or supply classified as a manufactured product may include components that are iron or steel products, excluded materials, or construction materials. Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not a manufactured product.

Items that consist of two or more construction materials that have been combined together through a manufacturing process, and items that include at least one construction material combined with a material that is not a construction material (including steel/iron) through a manufacturing process are treated as manufactured products, rather than as construction materials.

Manufactured products that are predominantly iron or steel must comply with subsection 105.10.A of the Standard Specifications for Construction. Final assembly for all other manufactured products must occur in the United States for the manufactured product to be considered compliant with the Buy America Act.

Precast concrete products are classified as manufactured products and must meet the requirements of 23 CFR 635.410 and subsection 105.10.C of the Standard Specifications for Construction. Components of precast concrete products that consist wholly or predominantly of iron or steel or a combination of both must also meet the requirements of subsection 105.10.A of the Standard Specifications for Construction. The cost of such components may be included in the applicable calculation for

purposes of determining whether the precast concrete product is produced in the United States.

Intelligent transportation systems and other electronic hardware systems that are installed in the highway right of way or other real property are classified as manufactured products, the cabinets or other enclosures of such systems that consist wholly or predominantly of iron or steel or a combination of both must meet the requirements of subsection 105.10.A of the Standard Specifications for Construction. The cost of cabinets or other enclosures may be included in the applicable calculation for purposes of determining whether systems referred to in the preceding sentence are produced in the United States.

Provide documented certification that a manufactured product is Buy America Act compliant, meaning all manufacturing processes as noted above occurred in the United States.

D. **Other Materials.** Articles, materials or supplies that do not meet subsection 105.10.A or 105.10.B or 105.10.C of the Standard Specifications for Construction are classified as Other Materials and do not have any domestic materials requirements. This includes the following items that are specifically categorized as other (excluded) materials per Section 70917(c) of the Infrastructure Investment and Jobs Act of 2021.

1. Cement and cementitious materials, including asphalt cements
2. Aggregates such as stone, sand, or gravel
3. Aggregate binding agents or additives

These materials do not have any requirements for domestic manufacturing.

E. **De-Minimis Non-Compliant Construction Materials and Manufactured Products.**

The requirements for construction materials and manufactured products are waived for a de minimis amount defined as when the total value of the non-compliant items is no more than the lesser of \$1,000,000 or 5 percent of total applicable costs for the contract.

The total value of non-compliant items is the value of all construction materials and manufactured products that are not compliant with subsections 105.10.B and 105.10.C of the Standard Specifications for Construction that are permanently incorporated into the contract.

The total applicable contract costs include the costs of all iron, steel, construction materials, and manufactured products used on the contract.

The 5 percent threshold of total applicable contract costs is based on the following formula.

$$A / B$$

Where:

A = the total value of non-compliant construction materials and manufactured products used in the contract; and

B = the total applicable contract costs (iron, steel, construction materials, and manufactured products).

The 5 percent threshold is based on the actual invoiced cost of the iron, steel, construction materials, and manufactured products, not an anticipated cost of those items.

Ensure the value of the non-compliant items is no more than the lesser of \$1,000,000 or 5 percent of total applicable costs by tracking the non-compliant value and provide documentation to the Engineer as requested.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
E-VERIFY

CSD:LFS

1 of 1

APPR:JJG:RJC:10-19-23
FHWA:APPR:10-31-23

a. Description. E-Verify is an Internet-based system that allows an employer, using information reported on an employee's Form I-9, Employment Eligibility Verification, to determine the eligibility of that employee to work in the United States. There is no charge to employers to use E-Verify. The E-Verify system is operated by the Department of Homeland Security (DHS) in partnership with the Social Security Administration. E-Verify is available in Spanish.

The State of Michigan is requiring all Contractors, and Subcontractors, to verify that new employees are legally present and authorized to work in the United States, using the E-Verify System.

Information on registration for and use of the E-Verify program can be obtained via the Internet at the DHS Web site: <http://www.dhs.gov/E-Verify>.

It is the responsibility of the Contractor to include this specification in all tiers of subcontracts.

The required use of the E-Verify system will not be paid for separately as part of the contract but is considered included in the costs for other pay items in the contract.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
LABOR COMPLIANCE

COS:CR

1 of 3

APPR:KK:LLR:01-23-24
FHWA:APPR:01-25-24

a. Description. Ensure all levels of contracting (prime, sub, sub-sub, etc.) comply with all labor compliance requirements in this contract. The Contractor is responsible for subcontractors and lower tier subcontractor labor compliance. Job site poster requirements apply to state and federally funded projects. All Contractors must insert this special provision in each subcontract and further require its inclusion in lower tier subcontracts.

b. Requirements.

1. Jobsite Posters. All jobsite posters and employment notices required by State and Federal regulations and the contract are to be posted on the jobsite in a conspicuous area prior to the commencement of work. Ensure jobsite postings are accessible at all times.

2. Prevailing Wage Law.

A. Federal Prevailing Wage Projects. The Davis-Bacon Related Acts apply to all Contractors, and subcontractors (all tiers) performing work on federally funded or assisted construction contracts where the total construction contract price is in excess of \$2,000. Contractors and subcontractors are required to comply with *29 Code of Federal Regulations Parts 1, 3, and 5* and the revisions within the *2023 Final Rule: "Updating the Davis-Bacon and Related Acts Regulations"*.

B. State Prevailing Wage Projects. Michigan Prevailing Wage, P.A. 10 of 2023 applies to all contractors, and subcontractors (all tiers) performing work on contracts which are sponsored or financed in whole by the State of Michigan. On contracts involving two or more job numbers where the type of funding is mixed, and where one source of funding is federal, the Department inserts only the wage rates issued by the U.S. Department of Labor in the proposal and the federal requirements apply.

The Contractor must advise subcontractors of the requirement to pay the prevailing wage rates prior to commencement of work and that all employees must cooperate during wage rate interviews.

3. Certified Payroll Submittal Requirements. Contractors (all tiers) must submit their certified payrolls and any wage related documentation to the prime Contractor in accordance with the Special Provision for Prevailing Wage and Labor Compliance System 20SP-104D. Submitted payrolls must accurately and completely include all information required by the prevailing wage and labor compliance (PWLC) system. The first certified payroll is to be received by the Engineer within 3 weeks from the week ending in which work is performed. The 3 week period is to allow for the processing and review of the certified payrolls by the prime Contractor. Payroll submitted via the PWLC system must be entered into the system,

certified, and approved by the prime Contractor to be considered received by the Department.

Labor compliance issues must be resolved within 60 calendar days of receiving the Departments first documented notice. The 60-day requirement may be extended based on documented mutual agreement between the Department and the Contractor.

A. Fringe Benefit Statements. Contractors making payments or incurring cost to provide bona fide benefits must submit an hourly breakdown of fringe benefits paid each worker, or work classification where applicable, that must accompany the first certified payroll where fringe benefits are credited towards the prevailing wage. The Contractor must update these documents as necessary to ensure they are current throughout the working life of the contract. Failure to submit or maintain the required fringe benefit statement will constitute a payroll deficiency.

B. Delinquent Payroll. Certified payrolls not submitted per subsection b.3 of this special provision will be considered delinquent.

C. Deficient Payroll. Certified payrolls that are found to be incomplete, inaccurate, or inconsistent with other project records are considered deficient.

D. Non-compliance Damages. A Contractor found to be in non-compliance with the requirements of this special provision will be assessed non-compliance damages listed in Table 1, proportional to the value of their work on the contract (including subcontract, purchase order (P.O.) or invoice amount).

Table 1: Schedule of Non-Compliance Damages

Contract/Subcontract/P.O./Invoice Amount (a)	Non-compliance damages per calendar day
\$0 to 49,999	\$200
50,000 to 99,999	400
100,000 to 499,999	600
500,000 to 999,999	900
1,000,000 to 1,999,999	1,300
2,000,000 to 4,999,999	1,550
5,000,000 to 9,999,999	2,650
10,000,000 and above	3,000
Trucker	\$200
a. "Contract" amount if offending contractor is the prime contractor. "Subcontract/P.O./Invoice" amount if offending contractor is a subcontractor/vendor.	

4. Record Keeping. Maintain payrolls and basic records relating thereto (i.e. employee names, social security numbers, last known address, telephone numbers, email addresses, occupation and hours worked for each worker; W2s, canceled checks, bank statements, etc.) by all levels of contractors during the course of work and retain for a 3-year period from the date of final estimate for all employees working on the site of work. Make these records available for inspection, copying, or transcription by the Department or its representative.

5. Short Duration Projects. The following modifications apply if the project is less than 75 calendar days in duration.

A. Submittal Requirements. On short duration projects the first certified payroll is to be received by the Engineer within 2 weeks from the week ending in which work is performed. The 2-week period is to allow for the processing and review of the certified payrolls by the Contractor. The 2-week period allows the first estimate to be paid assuming the Contractor will submit certified payrolls in a timely manner. Ensure subsequent certified payroll submissions are made weekly. Payroll submissions failing to meet the above requirements will be considered delinquent.

Labor compliance issues are to be resolved within 30 days after receiving the Department's first documented notice. The 30-day requirement may be extended based on documented mutual agreement between the Department and the Contractor.

c. **Materials.** None specified.

d. **Construction.** None specified.

e. **Measurement and Payment.** Payment for compliance with this special provision will not be made separately. Payment will be considered as part of all other pay items in the contract.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PROMPT PAYMENT

CFS:JGG

1 of 4

APPR:LFS:DBP:03-27-20
FHWA:APPR:03-30-20

Add the following subsection to section 109, of the Standard Specifications for Construction:

109.08 Prompt Payment.

A. Definitions.

Lower-tier subcontract. An agreement between a subcontractor of any tier and any individual or legal entity to perform a part of the subcontract work.

Lower-tier subcontractor. The individual or legal entity that performs part of the subcontract work through a lower-tier subcontract with a subcontractor.

Supplier. The individual or legal entity that agrees to provide materials or services to the prime Contractor, a subcontractor, or a lower-tier subcontractor for the performance of their contract work.

Sworn Statement. A written verification under oath reflecting all persons or entities, which have furnished labor, equipment, services or materials to a subcontractor or lower-tier subcontractor for performance of work on the project. The written verification includes union fringe benefit funds, original contract amount, current amount due, amounts paid to date and balance to finish the work for each person or entity.

Waiver of Lien. A written release and waiver of any claim or right to payment for payments actually received for labor, equipment, services or materials furnished for performance of work on the project.

The sworn statement and waiver of lien documents are used by the prime Contractor and its subcontractors for verifying payments made to lower-tier subcontractors/suppliers and are not to be submitted to the Engineer unless requested as an aid in determining an alleged prompt payment violation. These documents can be found at the following website.

<https://mdotjboss.state.mi.us/webforms/WebFormsHome.htm>

B. Progress Payments. For the first payment, or for a one time payment, the prime Contractor agrees to pay each subcontractor for the work associated with their subcontract no later than 10 calendar days from the date the prime Contractor receives payment from the Department.

For the second and subsequent payments, the prime Contractor agrees to pay each

subcontractor for the work associated with their subcontract no later than 10 calendar days from the date the prime Contractor receives payment from the Department.

The Contractor is required to provide payment information for previous payments made to all first tier subcontractors and all DBE companies (sub-subcontractors, suppliers, truckers, etc.) at any tier before the Engineer will release the third and subsequent estimates. For all subsequent progress pay estimates if 1) the Engineer payment does not include any first tier subcontractors or any DBE company payments at any tier, and 2) the previously submitted payment reporting information remains unchanged, then payment reporting in the system is not required. Reporting is required when the prime Contractor makes payments to any first tier subcontractors and any DBE companies at any tier. The payment information is provided through submittal of the information via the 2124A reporting system (MERS). System information can be found at the following web link.

<https://milogin.michigan.gov/eai/login/authenticate?URL=/>

The prime Contractor must bring any concerns about the satisfactory completion of subcontractor or lower-tier subcontractor work items, to the Engineer's attention as soon as the concern is discovered. If the work meets the requirements of satisfactory completion and the prime Contractor has been paid for that work, the Engineer must determine whether:

1. The prime Contractor has demonstrated a valid reason for withholding payment from the subcontractor or supplier, or
2. The subcontractor has demonstrated a valid reason for withholding payment from the lower-tier subcontractor or supplier.

If the Engineer determines the reason for withholding payment is valid, the Engineer will process a negative estimate to withdraw the amount involved in the complaint. If payment has not been made for the work related to the complaint, the Engineer will not include those items of work on an estimate until the issue has been resolved.

The prime Contractor remains responsible to make prompt payments on this project to their subcontractors and suppliers except as noted in subsection 109.08.D of this special provision, even if the prime Contractor is in violation of other contractual obligations and the Department is withholding payment from the prime Contractor for those violations.

The prime Contractor must include language in all subcontracts that the Department prohibits prime Contractors from holding retainage from subcontractors. All provisions of this prompt payment subsection apply to all subcontracts, lower-tier subcontracts, and supplier agreements and must be included in each subcontract for the contract, including all lower-tier subcontracts and agreements.

This prompt payment provision is a requirement of 49 CFR 26.29 and does not confer third-party beneficiary rights or other direct rights to a subcontractor against the Department. This provision applies to both DBE and non-DBE subcontractors/suppliers at all tiers.

C. Satisfactory Completion. Progress and partial payments for contract work are issued based on the satisfactory completion of work. Satisfactory completion, for purposes of this prompt payment provision, is defined as:

1. Upon preliminary review, the Engineer finds the work completed in accordance with the contract, plans, and specifications; and,
2. Required documentation, including material certifications, payrolls, submission of 2124A, etc., has been received and reviewed and found to be acceptable by the Engineer; and,
3. Required subcontractor sworn statements and waivers of lien have been provided to the prime Contractor. The prime Contractor must provide notice to the Engineer if sworn statements and waivers of lien have not been received for completed work.

The Engineer will determine if the work meets the standards of satisfactory completion.

D. Less than full payment release. The Engineer may give written approval to:

1. Delay or postpone payment from the time frames specified herein,
2. Process partial payment from the prime Contractor to a subcontractor or supplier,
3. Process partial payment from a subcontractor to a lower-tier subcontractor or supplier.

The unpaid portion will be held by the Department.

The parties may initiate whatever dispute resolution procedure is specified in their agreement or is available under Michigan law. If dispute resolution or litigation is selected, the actions by both parties must proceed in a timely manner. The result of the dispute resolution proceeding or litigation must be provided to the Engineer promptly upon the conclusion of the proceeding. The Engineer will release the disputed payment being held by the Department in accordance with the outcome of the proceedings.

E. Non-Payment Claims. The prime Contractor, subcontractor, lower-tier subcontractor or supplier must notify the alleged offending party in writing of any prompt payment violations within 30 calendar days of the date the payment was to be received. Copies of the notifications must be provided to the Engineer and the prime Contractor (only if the prime Contractor is not the offending party).

The alleged offending party must respond in writing to the claimant within 10 calendar days of receipt of the notification of failure to meet prompt payment provisions. Provide copies of the response to the Engineer, the prime Contractor (only if the prime Contractor is not the offending party), and the Engineer of Construction Field Services. The prime Contractor, subcontractor, or supplier must also provide the required sworn statements and waivers of lien from the affected subcontractor or supplier to the Engineer within 10 days of receipt of the notification. The Department will consider the failure of the alleged offending party to respond to the notification from the claimant as an admission of the prompt pay violation which may result in sanctions.

The Engineer will review the written notice and response and will verify in writing if there is a valid prompt pay violation.

Independent of all procedures and requirements in this special provision the non-payment claimant has the additional option of submitting a lien claim to the MDOT Contract Services Division. MDOT will notify the project surety of the non-payment issue. It is the responsibility

of the surety to ensure that all legitimately due payments are made. The submission of a lien claim will not nullify or affect any other requirements, obligations or procedures in this special provision.

F. **Remedies.** When the Engineer verifies a prompt payment violation, the prime Contractor within 5 days must propose one or a combination of any of the following actions items for review and approval by the Engineer:

1. Issue payment to the subcontractor.
2. Issue payments to a subcontractor in the form of joint checks to the subcontractor and the subcontractor's lower-tier subcontractors and/or suppliers.
3. Issue payment directly to the subcontractor's lower-tier subcontractors or suppliers.
4. Request a negative estimate to withdraw the amount confirmed in the prompt payment violation.

If the prime Contractor fails to submit a timely remedy request or obtain an approved course of action within the 5 day time period, the Engineer will direct a course of action or issue a negative estimate to withdraw the amount confirmed in the prompt payment violation.

If the prime Contractor fails to fulfill the approved or directed course of action the Engineer will impose sanctions until such time as the approved or directed course of action is completed.

Any payments to a subcontractor's lower-tier subcontractor or supplier will be issued in the amounts reflected upon the subcontractor's sworn statements or in amounts independently verified by the Engineer as being due the subcontractor's lower-tier subcontractors and suppliers for work completed. Payments to a lower-tier subcontractor or supplier will be considered payment to the subcontractor directly so that payment for the same work cannot be claimed.

Any other use of joint checks must follow current Department procedures.

G. **Sanctions.** Failure to comply with any of the prompt payment requirements by the prime Contractor, subcontractor, lower-tier subcontractor, or supplier may result in sanctions against the offending party. These sanctions may include, but are not limited to: withholding of estimates on projects where prompt payment violations are confirmed; reduction or removal of prequalification; and/or suspension of bidding privileges.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TWELVE-INCH LAYER METHOD

CFS:LLR

1 of 1

APPR:DMG:KK:02-16-24
FHWA:APPR:02-20-24

Delete subsection 205.03.H.4.b, on page 2-26 of the Standard Specifications for Construction, in its entirety.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
EROSION CONTROL, INLET PROTECTION, FABRIC DROP

COS:DMG

1 of 2

APPR:TWK:CP:06-16-25
FHWA:APPR:06-17-25

a. Description. This work consists of furnishing and installing acceptable alternatives to inlet protection devices (devices) listed in the *Soil Erosion and Sedimentation Control Manual* when the pay item Erosion Control, Inlet Protection, Fabric Drop is included in the contract.

This work consists of furnishing, installing, maintaining, disposing of collected material and removing devices at the locations shown on the plans or as directed by the Engineer.

b. Materials. The following devices are approved for use as acceptable alternatives:

1. Siltsack Type B, Regular Flow, by ACF Environmental, Inc.
2. Inlet Pro Sediment Bag, Standard Flow, with optional foam deflector by Hanes Geo Components.
3. Dandy Curb Bag, Dandy Bag, Dandy Curb Sack, Dandy Sack, or Dandy Pop by Dandy Products, Inc.
4. Flexstorm Catch-It and Flexstorm Pure used with filter bag types FX, FX+, FXO, PC, PC+ or IL.
5. MKB Inlet Filter Bag by MKB Company

Ensure furnished devices are sized appropriately for the drainage structures in which they will be installed.

c. Construction. Install, maintain and remove the devices in accordance with the manufacturer's guidelines. Remove material collected by the devices in accordance with the manufacturer's guidelines or as directed by the Engineer.

Dispose of collected material in accordance with subsection 205.03.P of the Standard Specifications for Construction. Those devices that are no longer needed and have been removed may be reused elsewhere on the project as approved by the Engineer.

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

Pay Item	Pay Unit
Erosion Control, Inlet Protection, Fabric Drop.....	Each

Erosion Control, Inlet Protection, Fabric Drop will be paid for as one each for each time the alternate device listed herein is installed, maintained, and removed at a separate location within the project limits.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DRAINAGE STRUCTURE, RECONSTRUCT

ISH:JSK

1 of 1

APPR:DMG:DBP:03-03-21

a. Description. The work consists of reconstructing drainage structures in accordance with section 403 of the Standard Specifications for Construction and Standard Plan R-1 Series including excavation, backfill, material disposal and maintenance of flow.

b. Materials. Provide materials in accordance with subsection 403.02 of the Standard Specifications for Construction.

c. Construction. Remove the cover, excavate, break down the masonry to the elevation as directed by the Engineer, dispose of materials and backfill in accordance with subsections 204.03.C, 205.03.P and 206.03.A of the Standard Specifications for Construction. Maintain service of live sewers and underdrains. Reconstruct the drainage structures in accordance with subsection 403.03 of the Standard Specifications for Construction and Standard Plan R-1 Series.

Repair damage caused by the Contractor's operation at no cost to the contract.

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

Pay Item	Pay Unit
Dr Structure, Reconst	Foot

Dr Structure, Reconst will be measured in place vertically beginning 6 inches below the top of the existing drainage structure cover elevation down to the limit of the reconstructed depth.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SAMPLING ASPHALT BINDER ON LOCAL AGENCY PROJECTS

CFS:TRC

1 of 1

APPR:JWB:KPK:02-19-20
FHWA:APPR:02-19-20

a. Description. This work consists of the Contractor taking samples of the asphalt binder and delivering the samples to the Engineer prior to incorporation into the hot mix asphalt mixture.

b. Materials. For informational purposes, original samples of asphalt binder will be taken by the Contractor and delivered to the Engineer prior to incorporation into the mixture. The frequency of sampling will be determined by the Engineer.

The Contractor must certify in writing that the materials used in the HMA mixture are from the same source as the materials used in developing the HMA mixture design and the bond coat is from an approved supplier as stated in the *Material Quality Assurance Procedures Manual*.

c. Construction. None specified.

d. Measurement and Payment. The cost of obtaining and delivering the samples to the Engineer will be included in the hot mix asphalt (HMA) pay items in the contract.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MARSHALL HOT MIX ASPHALT MIXTURE

CFS:JWB

1 of 2

APPR:KPK:CJB:03-04-20
FHWA:APPR:03-13-20

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

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

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

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

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

Pay Item	Pay Unit
HMA, <u>(type)</u>	Ton

Table 1: Mix Design Criteria and Volumetric Properties

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

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

Table 2: Aggregate Properties

	Mixture No.				
	2C	3C	4C	13A	36A
	Percent Passing Indicated Sieve or Property Limit				
1½ inch	100				
1 inch	91-100	100			
¾ inch	90 max.	91-100	100	100	
½ inch	78 max.	90 max.	91-100	75-95	100
⅜ inch	70 max.	77 max.	90 max.	60-90	92-100
No. 4	52 max.	57 max.	67 max.	45-80	65-90
No. 8	15-40	15-45	15-52	30-65	55-75
No. 16	30 max.	33 max.	37 max.	20-50	
No. 30	22 max.	25 max.	27 max.	15-40	25-45
No. 50	17 max.	19 max.	20 max.	10-25	
No. 100	15 max.	15 max.	15 max.	5-15	
No. 200	3-6	3-6	3-6	3-6	3-10
Crushed (min), % (MTM 117)	90	90	90	25	60
Soft Particle (max), % (a)	12.0	12.0	8.0	8.0	8.0
Angularity Index (min) (b)	4.0	4.0	4.0	2.5	3.0
L.A. Abrasion (max), % loss (c)	40	40	40	40	40
Sand Ratio (max) (d)	-	-	-	50	50
<p>a. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 8.0 percent for aggregates used in top course. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 12.0 percent for aggregates used in base and leveling courses.</p> <p>b. The fine aggregate angularity of blended aggregates, determined by MTM 118, must meet the minimum requirement. In mixtures containing RAP, the required minimum fine aggregate angularity must be met by the virgin material. NAA fine aggregate angularity must be reported for information only and must include the fine material contributed by RAP if present in the mixture.</p> <p>c. Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50</p> <p>d. Sand ratio for 13A and 36A no more than 50% of the material passing the No. 4 sieve is allowed to pass the No. 30 Sieve.</p>					

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
ACCEPTANCE OF HOT MIX ASPHALT MIXTURE ON LOCAL AGENCY PROJECTS

CFS:KPK

1 of 7

APPR:CJB:JWB:02-26-20

FHWA:APPR:03-13-20

a. Description. This special provision provides sampling and testing requirements for local agency projects using the roller method and the nuclear density gauge testing. Provide the hot mix asphalt (HMA) mixture in accordance with the requirements of the standard specifications, except where modified herein.

b. Materials. Provide aggregates, mineral filler (if required), and asphalt binder to produce a mixture proportioned within the master gradation limits shown in the contract, and meeting the uniformity tolerance limits in Table 1.

Table 1: Uniformity Tolerance Limits for HMA Mixtures

Parameter		Top and Leveling Course		Base Course		
Number	Description	Range 1 (a)	Range 2	Range 1 (a)	Range 2	
1	% Binder Content	-0.30 to +0.40	±0.50	-0.30 to +0.40	±0.50	
2	% Passing	# 8 and Larger Sieves	±5.0	±8.0	±7.0	±9.0
		# 30 Sieve	±4.0	±6.0	±6.0	±9.0
		# 200 Sieve	±1.0	±2.0	±2.0	±3.0
3	Crushed Particle Content (b)	Below 10%	Below 15%	Below 10%	Below 15%	
a. This range allows for normal mixture and testing variations. The mixture must be proportioned to test as closely as possible to the Job-Mix-Formula (JMF).						
b. Deviation from JMF.						

Parameter number 2 as shown in Table 1 is aggregate gradation. Each sieve will be evaluated on one of the three gradation tolerance categories. If more than one sieve is exceeding Range 1 or Range 2 tolerances, only the one with the largest exceedance will be counted as the gradation parameter.

The master gradation should be maintained throughout production; however, price adjustments will be based on Table 1. Aggregates which are to be used in plant-mixed HMA mixtures must not contain topsoil, clay, or loam.

c. Construction. Submit a Mix Design and a JMF to the Engineer. Do not begin production and placement of the HMA until receipt of the Engineer's approval of the JMF. Maintain the binder content, aggregate gradation, and the crushed particle content of the HMA mixture within the Range 1 uniformity tolerance limits in Table 1. For mixtures meeting the definition of top or leveling course, field regress air void content to 3.5 percent with liquid asphalt cement unless specified otherwise on HMA application estimate. For mixtures meeting the definition of base course, field regress air void content to 3.0 percent with liquid asphalt cement unless specified

otherwise on HMA application estimate.

Ensure all persons performing Quality Control (QC) and Quality Assurance (QA) HMA field sampling are "Local Agency HMA Sampling Qualified" samplers. At the pre-production or preconstruction meeting, the Engineer will determine the method of sampling to be used. Ensure all sampling is done in accordance with *MTM 313 (Sampling HMA Paving Mixtures)* or *MTM 324 (Sampling HMA Paving Mixtures Behind the Paver)*. Samples are to be taken from separate hauling loads.

For production/mainline type paving, obtain a minimum of two samples, each being 20,000 grams, each day of production, for each mix type. The Engineer will sample and maintain possession of the sample. Sampling from the paver hopper is prohibited. Each sample will be divided into two 10,000 gram parts with one part being for initial testing and the other part being held for possible dispute resolution testing. Obtain a minimum of three samples for each mix type regardless of the number of days of production.

Obtain samples that are representative of the day's paving. Sample collection is to be spaced throughout the planned tonnage. One sample will be obtained in the first half of the tonnage and the second sample will be obtained in the second half of the tonnage. If planned paving is reduced or suspended, when paving resumes, the remaining sampling must be representative of the original intended sampling timing.

Ensure all persons performing testing are Bit Level One certified or Bit QA/QC Technician certified.

Ensure daily test samples are obtained, except, if the first test results show that the HMA mixture is in specification, the Engineer has the option of not testing additional samples from that day.

At the pre-production or preconstruction meeting, the Engineer and Contractor will collectively determine the test method for measuring asphalt content (AC) using *MTM 319 (Determination of Asphalt Content from Asphalt Paving Mixtures by the Ignition Method)* or *MTM 325 (Quantitative Extraction of Bitumen from HMA Paving Mixtures)*. Back calculation will not be allowed for determining asphalt content.

Ensure all labs performing local agency acceptance testing are qualified labs per the *HMA Production Manual and the Michigan Quality Assurance Procedures Manual*, and participate in the MDOT round robin process, or they must be *AASHTO Materials Reference Laboratory (AMRL)* accredited for *AASHTO T30* or *T27*, and *AASHTO T164* or *T308*. Ensure on non-National Highway System (NHS) routes, Contractor labs are made available, and may be used, but they must be qualified labs as previously stated. Contractor labs may not be used on NHS routes. Material acceptance testing will be completed by the Engineer within 14 calendar days, except holidays and Sundays, for projects with less than 5,000 tons (plan quantity) of HMA and within 7 calendar days, except holidays and Sundays, for projects with 5,000 tons (plan quantity) or more of HMA, after the Engineer has obtained the samples. QA test results will be provided to the Contractor after the Engineer receives the QC test results. Failure on the part of the Engineer or the laboratory to provide QA test results within the specified time frame does not relieve the Contractor of their responsibility to provide an asphalt mix within specifications.

The correlation procedure for ignition oven will be established as follows. Asphalt binder content based on ignition method from *MTM 319*. Gradation (*ASTM D5444*) and Crushed particle content (*MTM 117*) based on aggregate from *MTM 319*. The incineration temperature will be established

at the pre-production meeting. The Contractor will provide a laboratory mixture sample to the acceptance laboratory to establish the correction factor for each mix. Ensure this sample is provided to the Engineer a minimum of 14 calendar days prior to production.

For production/mainline type paving, the mixture may be accepted by visual inspection up to a quantity of 500 tons per mixture type, per project (not per day). For non-production type paving defined as driveways, approaches, and patching, visual inspection may be allowed regardless of the tonnage.

The mixture will be considered out-of-specification, as determined by the acceptance tests, if for any one mixture, two consecutive tests per parameter, (for Parameter 2, two consecutive aggregate gradations on one sieve) are outside Range 1 or Range 2 tolerance limits. If a parameter is outside of Range 1 tolerance limits and the second consecutive test shows that the parameter is outside of Range 2, then it will be considered to be a Range 1 out-of-specification. Consecutive refers to the production order and not necessarily the testing order. Out-of-specification mixtures are subject to a price adjustment per the Measurement and Payment section of this special provision.

Contractor operations will be suspended when the mixture is determined to be out-of-specification, but contract time will continue to run. The Engineer may issue a Notice of Non-Compliance with Contract Requirements (Form 1165), if the Contractor has not suspended operations and taken corrective action. Submit a revised JMF or proposed alterations to the plant and/or materials to achieve the JMF to the Engineer. Effects on the Aggregate Wear Index (AWI) and mix design properties will be taken into consideration. Production and placement cannot resume until receipt of the Engineer's approval to proceed.

Pavement in-place density will be measured using one of two approved methods. The method used for measuring in-place density will be agreed upon at a pre-production or preconstruction meeting.

Pavement in-place density tests will be completed by the Engineer during paving operations and prior to traffic staging changes. Pavement in-place density acceptance testing will be completed by the Engineer prior to paving of subsequent lifts and being open to traffic.

Option 1 - Direct Density Method

Use of a nuclear density gauge requires measuring the pavement density using the Gmm from the JMF for the density control target. The required in-place density of the HMA mixture must be 92.0 to 98.0 percent of the density control target. Nuclear density testing and frequency will be in accordance with the *MDOT Density Testing and Inspection Manual*.

Option 2 - Roller Method

The Engineer may use the Roller Method with a nuclear or non-nuclear density gauge to document achieving optimal density as discussed below.

Use of the density gauge requires establishing a rolling pattern that will achieve the required in-place density. The Engineer will measure pavement density with a density gauge using the Gmm from the JMF for the density control target.

Use of the Roller Method requires developing and establishing density frequency curves, and

meeting the requirements of Table 2. A density frequency curve is defined as the measurement and documentation of each pass of the finished roller until the in-place density results indicate a decrease in value. The previous recording will be deemed the optimal density. The Contractor is responsible for establishing and documenting an initial or QC rolling pattern that achieves the optimal in-place density. When the density frequency curve is used, the Engineer will run and document the density frequency curve for each half day of production to determine the number of passes to achieve the maximum density. Table 5, located at the end of this special provision, can be used as an aid in developing the density frequency curve. The Engineer will perform density tests using an approved nuclear or non-nuclear gauge per the manufacturer's recommended procedures.

Table 2: Minimum Number of Rollers Recommended Based on Placement Rate

Average Laydown Rate, Square Yards per Hour	Number of Rollers Required (a)	
	Compaction	Finish
Less than 600	1	1 (b)
601 - 1200	1	1
1201 - 2400	2	1
2401 - 3600	3	1
3601 and More	4	1
a. Number of rollers may increase based on density frequency curve.		
b. The compaction roller may be used as the finish roller also.		

After placement, roll the HMA mixture as soon after placement as the roller is able to bear without undue displacement or cracking. Start rolling longitudinally at the sides of the lanes and proceed toward the center of the pavement, overlapping on successive trips by at least half the width of the drum. Ensure each required roller is 8 tons minimum in weight unless otherwise approved by the Engineer.

Ensure the initial breakdown roller is capable of vibratory compaction and is a maximum of 500 feet behind the paving operations. The maximum allowable speed of each roller is 3 miles per hour (mph) or 4.5 feet per second. Ensure all compaction rollers complete a minimum of two complete rolling cycles prior to the mat temperature cooling to 180 degrees Fahrenheit (F). Continue finish rolling until all roller marks are eliminated and no further compaction is possible. The Engineer will verify and document that the roller pattern has been adhered to. The Engineer can stop production when the roller pattern is not adhered to.

d. Measurement and Payment. The completed work, as described, will be measured and paid for using applicable pay items as described in subsection 501.04 of the Standard Specifications for Construction, or the contract, except as modified below.

Base Price. Price established by the Department to be used in calculating incentives and adjustments to pay items and shown in the contract.

If acceptance tests, as described in section c. of this special provision, show that a Table 1 mixture parameter exceeds the Range 1, but not the Range 2, tolerance limits, that mixture parameter will be subject to a 10 percent penalty. The 10 percent penalty will be assessed based on the acceptance tests only unless the Contractor requests that the 10,000 gram sample part retained for possible dispute resolution testing be tested. The Contractor has 4 calendar days from receipt

of the acceptance test results to notify the Engineer, in writing, that dispute resolution testing is requested. The Contractor's QC test results for the corresponding QA test results must result in an overall payment greater than QA test results otherwise the QA tests will not be allowed to be disputed. The Engineer has 4 calendar days to send the dispute resolution sample to the lab once dispute resolution testing is requested. The dispute resolution sample will be sent to an independent lab selected by the Local Agency, and the resultant dispute test results will be used to determine the penalty per parameter, if any. Ensure the independent lab is a MDOT QA/QC qualified lab or an AMRL HMA qualified lab. The independent lab must not have conflicts of interest with the Contractor or Local Agency. If the dispute testing results show that the mixture parameter is out-of-specification, the Contractor will pay for the cost of the dispute resolution testing and the contract base price for the material will be adjusted, based on all test result parameters from the dispute tests, as shown in Table 3 and Table 4. If the dispute test results do not confirm the mixture parameter is out-of-specification, then the Local Agency will pay for the cost of the dispute resolution testing and no price adjustment is required.

If acceptance tests, as described in section c. of this special provision, show that a Table 1 mixture parameter exceeds the Range 2 tolerance limits, the 10,000 gram sample part retained for possible dispute resolution testing will be sent, within 4 calendar days, to the MDOT Central Laboratory for further testing. The MDOT Central Laboratory's test results will be used to determine the penalty per mixture parameter, if any. If the MDOT Central Laboratory's results do not confirm the mixture parameter is out-of-specification, then no price adjustment is required. If the MDOT Central Laboratory's results show that the mixture is out-of-specification and the Engineer approves leaving the out-of-specification mixture in place, the contract base price for the material will be adjusted, based on all parameters, as shown in Table 3 and Table 4.

In the case that the Contractor disputes the results of the test of the second sample obtained for a particular day of production, the test turn-around time frames given would apply to the second test and there would be no time frame on the first test.

The laboratory (MDOT Central Laboratory or independent lab) will complete all Dispute Resolution testing and return test results to the Engineer, who will provide them to the Contractor, within 13 calendar days upon receiving the Dispute Resolution samples.

In all cases, when penalties are assessed, the penalty applies to each parameter, up to two parameters, that is out of specification.

Table 3: Penalty Per Parameter

Mixture Parameter out-of-Specification per Acceptance Tests	Mixture Parameter out-of-Specification per Dispute Resolution Test Lab	Price Adjustment per Parameter
No	N/A	None
Yes	No	None
	Yes	Outside Range 1 but not Range 2: decrease by 10% Outside Range 2: decrease by 25%

The quantity of material receiving a price adjustment is defined as the material produced from the time the first out-of-specification sample was taken until the time the sample leading to the first in-specification test was taken.

Each parameter of Table 1 is evaluated with the total price adjustment applied to the contract base price based on a sum of the two parameter penalties resulting in the highest total price adjustment as per Table 4. For example, if three parameters are out-of-specification, with two parameters outside Range 1 of Table 1 tolerance limits, but within Range 2 of Table 1 limits and one parameter outside of Range 2 of Table 1 tolerance limits and the Engineer approves leaving the mixture in place, the total price adjustment for that quantity of material is 35 percent.

Table 4: Calculating Total Price Adjustment

Cost Adjustment as a Sum of the Two Highest Parameter Penalties		
Number of Parameters Out-of-Specification	Range(s) Outside of Tolerance Limits of Table 1 per Parameter	Total Price Adjustment
One	Range 1	10%
	Range 2	25%
Two	Range 1 and Range 1	20%
	Range 1 and Range 2	35%
	Range 2 and Range 2	50%
Three	Range 1, Range 1 and Range 1	20%
	Range 1, Range 1 and Range 2	35%
	Range 1, Range 2 and Range 2	50%
	Range 2, Range 2 and Range 2	50%

Table 5: Density Frequency Curve Development

Tested by: _____ Date/Time: _____

Route/Location:		Air Temp:
Control Section/Job Number:		Weather:
Mix Type:	Tonnage:	Gauge:
Producer:	Depth:	Gmm:

Roller #1 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Roller #2 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Roller #3 Type:

Pass No.	Density	Temperature	Comments
1			
2			
3			
4			
5			
6			
7			
8			
Optimum			

Summary: _____

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
BACKFILL FOR CONCRETE CURB, GUTTER, AND DIVIDERS

CFS:JYG

1 of 1

APPR:DMG:DBP:02-16-23
FHWA:APPR:02-21-23

Delete subsection 802.04.H, on page 8-7 of the Standard Specifications for Construction, in its entirety and replace with the following:

- H. **Backfill.** Unless the contract includes separate pay items for backfill, the unit price for other items of work will include the cost of backfill.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
INDUSTRIAL BY-PRODUCTS AND BENEFICIAL RE-USE

HYD:HLZ

1 of 1

APPR:JJG:JFS:04-02-20
FHWA:APPR:04-03-20

a. Description. For this project, regardless of the application, the use of industrial by-products covered in 2014 PA 178 is prohibited unless the use and application of a particular material is covered elsewhere in the contract.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PORTLAND CEMENT (TYPE IL)

CFS:JFS

1 of 2

APPR:TES:TEB:12-14-21
FHWA:APPR:12-16-21

a. Description. The Contractor may substitute Type IL Portland cement in lieu of Type I Portland cement for concrete mixtures and other applications where Type I Portland cement is specified, provided documentation showing specification compliance is provided as described herein.

The Contractor must provide the Engineer a minimum of 14 calendar days prior notification of their intent to substitute Type IL Portland cement in lieu of Type I Portland cement for the project.

b. Materials. Furnish Type IL Portland cement in accordance with section 901 of the Standard Specifications for Construction meeting the chemical and physical requirements specified in *ASTM C595/C595M, Standard Specifications for Blended Hydraulic Cements*. Ensure the Type IL Portland cement proposed for substitution is from the same Approved Manufacturer as the Type I Portland cement in the approved JMF.

c. Construction. At least 7 days prior to concrete production, the concrete producer must provide test data (specified below) generated from a four cubic yard (minimum) trial batch of concrete using Type IL Portland cement for the Engineer's review and approval. The trial batch must represent a current approved JMF for either a standard MDOT Grade 3500, Grade 3500HP, Grade 4500, or Grade 4500HP concrete mixture produced using Type I Portland cement, as described in section 1004 of the Standard Specifications for Construction. Ensure the materials and mixture proportions for the Type IL JMF are the same as those documented in the above mentioned JMF using Type I Portland cement. Minor adjustments to chemical admixture dosages are permitted in efforts to achieve the specified fresh concrete properties. Trial batch compliance for applications other than Portland cement concrete mixtures will be in accordance with the contract.

1. Fresh Concrete Properties.
 - A. Concrete temperature,
 - B. Air content of fresh concrete, and
 - C. Slump.
2. Hardened Concrete Properties.
 - A. 7-day compressive strength.

The Engineer will review the trial batch test data to determine if the fresh and hardened concrete properties of the Type IL JMF meet specification requirements for the respective MDOT Grade of

concrete represented by the trial batch. If the Engineer determines that the trial batch test data are in conformance with specification requirements, then the Type IL Portland cement will be permitted to be substituted in lieu of the Type I Portland cement for all approved concrete mixtures generated at the concrete production facility for the project. If the Engineer determines that the trial batch test data do not meet specification requirements for the respective MDOT Grade of concrete, the Contractor will not be permitted to substitute Type IL Portland cement in lieu of Type I Portland cement. Mix design and JMF documentation for concrete mixtures using Type IL Portland cement will then be required in accordance with subsection 1003.03.C of the Standard Specifications for Construction or the contract, where applicable.

Once Type IL Portland cement is approved for use on the project, reinstatement of Type I Portland cement into the JMF is not permitted. Substitution of other material types or sources, including admixtures, as documented in the initial Type I JMF is not permitted.

The Engineer will complete field sampling and testing for all production lots containing Type I Portland cement JMF prior to respective Type IL Portland cement substitution. Do not include concrete mixtures containing Type I and Type IL Portland cement types in the same production lot.

d. Acceptance. The Contractor may substitute Type IL Portland cement in lieu of Type I Portland cement for the project with no additional laboratory trial batch requirements, as described in subsection 1003.03.C.2.a of the Standard Specifications for Construction, provided the Engineer has reviewed the concrete producer's test data generated from a four cubic yard (minimum) trial batch of concrete, described above, and has determined that the fresh and hardened concrete properties of the Type IL JMF meet specification requirements for the respective MDOT Grade of concrete represented by the trial batch.

e. Measurement and Payment. The work included in this special provision will not be paid for separately and is included in other pay items in the contract.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
AGGREGATE, 46G

CFS:JJG

1 of 1

APPR:SAG:DMG:02-15-22
FHWA:APPR:02-16-22

Delete the last row of Table 902-2 in subsection 902 of the Standard Specifications for Construction in its entirety and replace with the following:

Open-graded aggregates	46G	80	45	—	—	—
------------------------	-----	----	----	---	---	---

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SILT FENCE

CFS:EJP

1 of 1

APPR:DMG:RWS:03-24-25
FHWA:APPR:03-24-25

Delete subsection 916.02, on page 9-129 of the Standard Specifications for Construction in its entirety and replace with the following:

916.02. Silt Fence

Geotextile for an erosion-control silt fence must meet the requirements of subsection 910.04.

Attach geotextile to machine-pointed, No. 2 common grade hardwood posts with at least five staples through wood lath at least $\frac{3}{8}$ inch thick and 2.0 feet long. Maximum post spacing is 6½ feet.

Furnish posts at least 36 inches long with a square cross section and a minimum nominal dimension of 1½ inches, as defined by *National Hardwood Lumber Association (NHLA) Rules for the Measurement and Inspection of Hardwood and Cyprus*.

Identify the fabricator with at least two permanent markings or affixed labels on each assembled roll of silt fence.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

NOTICE TO BIDDERS
FOR
MULTIPLE DAVIS-BACON WAGE DECISIONS

CSD:LFS

1 of 1

APPR:CT:03-24-22

This proposal may contain multiple Davis-Bacon Wage Decisions. In order to clarify the work covered by each decision, the following explanations are offered:

General Decision MIxxxx0001 covers all airport construction, bridge construction, highway construction, and sewer and water main work that are incidental to highway projects. The construction type indicated on this decision is "HIGHWAY (HIGHWAY, AIRPORT & BRIDGE xxxxx and SEWER/INCID. TO HWY.)". This wage decision is the most commonly used wage decision in MDOT's federally funded projects.

In accordance with the U.S. Department of Labor's (DOL) all agency memorandums No. 130, No 131 and No. 236, multiple wage decisions will be included in those projects in which a second category of work is substantial in relation to project cost – more than approximately 20 percent or \$2,500,000. Sewer and water main work is considered to fall under the heavy construction work classification by the DOL, therefore when that work type is more than 20 percent of the engineer's estimate or \$2,500,000, the wage decision with the construction type "HEAVY CONSTRUCTION PROJECTS" will also be included in the proposal and is to be used for the sewer and watermain work in the proposal. All other work performed on the project will be covered by the "HIGHWAY (HIGHWAY, AIRPORT & BRIDGE xxxxx and SEWER/INCID. TO HWY.)" wage decision.

Also, when the landscape work is more than 20 percent of the project cost or \$2,500,000, the "HEAVY CONSTRUCTION PROJECTS" wage decision will be included in the proposal to cover all landscape work. All other work performed on the project will be covered by the "HIGHWAY (HIGHWAY, AIRPORT & BRIDGE xxxxx and SEWER/INCID. TO HWY.)" wage decision. If the project is a total landscape project, only the "HEAVY CONSTRUCTION PROJECTS" wage decision will be in the proposal.

Rest area building projects will include the construction type "BUILDING" wage decision when the building portion of the work is more than 20 percent of the project cost or \$2,500,000. The other work performed on the project will be covered by the "HIGHWAY (HIGHWAY, AIRPORT & BRIDGE xxxxx and SEWER/INCID. TO HWY.)" wage decision and/or the "HEAVY CONSTRUCTION PROJECTS" wage decision (landscape and/or sewer and water main work) if either or both are greater than 20 percent or \$2,500,000.

Although there is only one wage decision for "HIGHWAY (HIGHWAY, AIRPORT & BRIDGE xxxxx and SEWER/INCID. TO HWY.)", work (MIxxxx0001), the "HEAVY CONSTRUCTION PROJECTS" and "BUILDING" wage decisions vary from county to county.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

NOTICE TO BIDDERS
FOR
BID RIGGING

CSD:LS

1 of 1

APPR:MAS:02-09-21

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially, and caller anonymity will be respected.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

NOTICE TO BIDDERS
FOR
FRAUD AND ABUSE HOTLINE

CSD:LS

1 of 1

APPR:MAS:02-09-21

The Michigan Department of Transportation (MDOT) has established a Fraud and Abuse Hotline for employees, contractors, consultants, and others to report suspected fraud or abuse, such as: prevailing wage non-compliance, theft, kickbacks, wrongful claims, contract fraud, use of materials that do not comply with specifications, unapproved substitution of materials, commodities, or test samples, or failure to follow contract procedures.

Anyone with knowledge of any activity involving the potential for fraud or abuse is requested to call the Hotline at (toll free) **1-866-460-6368** or **517-241-2256**.

MICHIGAN
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
FOR
ERRATA TO THE 2020 STANDARD SPECIFICATIONS

1 of 13

04-30-25

Page	Subsection	Errata
1-06	101.02	Delete the second abbreviation of the list on this page reading: “IES Illuminating Engineering Society
1-06	101.02	Add the abbreviation to the list on this page reading: “IESNA Illuminating Engineering Society of North America
1-07	101.02	Change the first abbreviation of the list on this page to read: MMUTCD..... Michigan Manual on Uniform Traffic Control Devices
1-83	108.05.A.2	In the first paragraph of this subsection change the language “MDOT Form 1130” to read “MDOT Form 1130A”.
1-88	108.08.D	Move the last paragraph of this subsection to the left one indent to align with the first paragraph of the subsection and not with the subsection 108.08.D.3.
2-29	205.03.P.1	Delete the first sentence of this subsection and replace with the following: “Do not dispose of material, temporarily or permanently, beyond the normal plan fill slope across wetlands or floodplains.”
2-30	205.03.P.2	Delete the first sentence of this subsection and replace with the following: “Do not dispose of material, temporarily or permanently, in wetlands or floodplains.”
2-30	205.03.P.3	Delete the second paragraph of this subsection and replace with the following: “Contact the appropriate regulatory agencies to determine whether an area is a regulated wetland or floodplain before disposing of surplus or unsuitable material in areas outside the right-of-way and not shown on the plans as disposal sites.”
2-30	205.03.P.3	Delete the first sentence of the third paragraph of this subsection and replace with the following: “Immediately move to an upland site any surplus or unsuitable material that was disposed of in portions of wetlands or floodplains not shown on the plans as disposal sites, at no additional cost to the Department.”

- 2-30 205.03.P.4 Delete the first sentence of this subsection and replace with the following:
“The Department will notify the applicable regulatory agencies if the Department becomes aware that the Contractor disposed of surplus or unsuitable material in portions of a wetland or floodplain not shown on the plans.”
- 3-31 308.04.D Change the subsection title from “D. **General.**” to read “A. **General.**”
- 4-5 401.03.A Delete the fourth sentence of the second paragraph on this page of this subsection and replace it with the following:
“Place the backfill up to 4 inches below the proposed bottom of the pipe and cover with geotextile separator.”
- 4-7 401.03.E Delete the third sentence of the second paragraph of this subsection and replace with the following:
“Use precast or cast-in-place footings for precast end sections as required.”
- 4-8 401.03.E Delete the first sentence of the fourth paragraph on this page of this subsection and replace with the following:
“When discharging stormwater directly to waters of the state, permanently label all end sections or other piped points of stormwater entry with “MDOT” or the local agency’s name in a conspicuous location that will remain visible after construction.”
- 4-11 401.04 Change the eighth pay item from the bottom of the list on this page to read as follows:
Culv End Sect __ inch, GrateEach
- 4-11 401.04.A.3 Delete this subsection in its entirety and replace it with the following:
“3. Providing and placing culvert bedding, culvert, and geotextile blanket;”
- 4-12 401.04.C.4 Change this subsection to read:
“The Engineer will measure Culv End Sect __ inch, Grate by each as shown on the plans for the size of grate required.”
- 4-16 402.03.A Delete the fourth sentence of the third paragraph on this page of this subsection and replace it with the following:
“Place the backfill up to 4 inches below the proposed bottom of the pipe and cover with geotextile separator.”
- 4-21 402.03 Add a new subsection to the end of subsection 402.03 on this page reading as follows:
“K. **Outfall Labeling.** Label all stormwater outfalls directly discharging to waters of the state in accordance with subsection 401.03.E.

- 4-21 402.04.A Delete the last sentence of this subsection and replace it with the following:
 “The unit price for **Sewer and Sewer, Reinf Conc, Ellip** includes the cost of excavation, bedding, backfill, geotextile blanket, and conducting mandrel testing if required.”
- 4-33 404.03.D.1 Delete this subsection in its entirety and replace it with the following:
 “1. **Foundation, Bank, Subbase and Subgrade Underdrains.**
 Backfill using granular material Class IIAA.”
- 4-39 406.02 Change the third line in the list of materials to read:
 Coarse Aggregate 6A, 6AA, 17A.....902
- 4-41 406.03.A.3 Delete the third paragraph of this subsection and replace with the following:
 “Design joints between adjacent box culvert sections in accordance with Section 9 of ASTM C1577 and to accommodate the joint sealing material in accordance with section 914 as applicable.”
- 4-50 406.03.G.3 Change the first sentence of the first paragraph to read:
 “Unless otherwise shown on the plans, construct culvert bedding for box culverts by placing a 9-inch-thick layer of 46G aggregate, covered with a 3-inch-thick layer of 34G, 34R aggregate, or approved equal.”
- 4-51 406.03.G.3 Add the following sentence to the end of the second paragraph of this subsection:
 “The cold applied joint sealer must completely cover the external rubber gasket with the placement limits matching the width of the geotextile blanket.”
- 4-52 406.04.B In the second paragraph of this subsection delete the first sentence and replace with the following:
 “The Department will pay separately for cast-in-place concrete, other than for culvert segments, headwalls, wingwalls, aprons, and curtain walls.”
- 5-26 502.02 Delete the first sentence of the subsection and the listed materials in this subsection.
- 5-26 502.02.A Add the following to the end of the first sentence in this subsection:
 “(914.04A)”
- 5-26 502.02.B Add the following to the end of the first sentence in this subsection:
 “(502.02B)”
- 5-35 503.04 Change the first paragraph to read:
 “The unit price for **Paver-Placed Surface Seal**, of the type required, includes the cost of preparing the surface, and placing a membrane and paver placed surface seal course for full-width coverage,

except that the Department will pay separately for removing pavement markings in accordance with subsection 812.04”

- 5-46 504.04.A Change the first paragraph to read:
“A. **General**. The unit prices for **Micro-Surface**, regardless of the type required, include cleaning existing pavement, applying a bond coat, stationing, corrective action, and traffic control to complete corrective action.”
- 6-20 602.04 Delete the fifteenth pay item of the list on this page reading:
“Shoulder, Reinf Conc.....Square Yard
- 6-20 602.04 Change the sixteenth thru the eighteenth pay items on this page to read as follows:
Shld, Nonreinf Conc.....Square Yard
Shld, Nonreinf Conc, High PerformanceSquare Yard
Shld, Freeway.....Square Yard
- 6-21 602.04.B.1 Delete this subsection and replace with the following:
“**Shld, Nonreinf Conc**; and **Shld, Nonreinf Conc, High Performance**. The Engineer will measure, and the Department will pay for, **Shld, Nonreinf Conc**; and **Shld, Nonreinf Conc, High Performance** by area, based on plan quantities in accordance with subsection 109.01.”
- 6-21 602.04.B.2 Delete this subsection and replace with the following:
“**Shld, Freeway**. The Engineer will measure, and the Department will pay for, **Shld, Freeway** based on plan quantities in accordance with subsection 109.01. If the Contractor uses concrete for the shoulder, the unit price for **Shld, Freeway** includes the cost of the transverse joints in the shoulder and the external longitudinal pavement joints.”
- 6-23 602.04.F Add the following sentence to the end of the first paragraph of this subsection:
Temporary concrete pavement, pavement within 4 feet of an obstruction, pavement areas less than 300 square yards, or pavement less than 3 feet wide will not be cored.
- 6-23 602.04.F Delete the following language from this subsection on this page:
“The Engineer will not core the following:

1. Temporary concrete pavement;

2. Pavement within 4 feet of an obstruction;

3. Pavement areas less than 300 square yards; or

4. Pavement less than 3 feet wide.”
- 6-24 602.04 Rename the following subsections as follows:

		<ol style="list-style-type: none"> “1. Initial Core. 2. Additional Cores. 3. Price Adjustment for Thickness. 4. Price Adjustments for Steel Locations within the Pavement. 5. Remove and Replace.”
6-24	602.04	
6-24	602.04	
6-25	602.04	
6-26	602.04	
6-29	603.02	<p>Change the first sentence in the last paragraph in this subsection to read: “Provide coarse aggregate with no greater than 2.5% absorption in accordance with AASHTO T85.”</p>
7-11	705.02	<p>Change the second sentence in the last paragraph in this subsection to read: “Provide natural aggregate and with no greater than 2.50% absorption as specified in AASHTO T85 for structure concrete.”</p>
7-29	706.02	<p>Change the first sentence in the seventh paragraph in this subsection to read: “Provide natural aggregate and with no greater than 2.50% absorption as specified in AASHTO T85 for structure concrete.”</p>
7-107	709.04	<p>Change the Pay Unit on the second pay item from the top of the list on this page to read as follows: Thousand Board Foot</p>
7-115	711.02	<p>Change the first sentence in the last paragraph in this subsection to read: “Provide natural aggregate with a maximum absorption of 2.50% in accordance with AASHTO T85.”</p>
7-120	712.02	<p>Change the first sentence in the sixth paragraph in this subsection to read: “Provide concrete containing natural aggregate with a maximum absorption of 2.50% in accordance with AASHTO T85.”</p>
7-185	718.02	<p>Change the first sentence in the last paragraph in this subsection to read: “Provide concrete with natural aggregate with a maximum absorption of 2.50% in accordance with AASHTO T85.”</p>
8-12	804.03.B.2	<p>Change the first sentence in this subsection to read: “Cast in place light standard and sign support foundations using fixed forms in accordance with the <i>MDOT Standard Plan R-50 series</i>.”</p>
8-27		<p>Change the last pay item at the bottom of this page to read as follows: Guardrail Anch, Bridge, Det __, Curved.....Each</p>
8-44	810.03.J.9	<p>Add a period to the end of the third sentence in this subsection.</p>

- 8-53 810.03.V Add a period to the end of the second sentence of the first paragraph of this subsection.
- 8-53 810.04 Change the fourth pay item from the top of the list on this page to read as follows:
Post, Steel, __ pound.....Foot
- 8-53 810.04 Change the last four pay items at the bottom of this page to read as follows:
Fdn, Truss Sign Structure Type __, __ inch dia, Cased.....Foot
Fdn, Truss Sign Structure Type __, __ inch dia, Uncased.....Foot
Fdn, Cantilever Sign Structure Type __, __ inch dia, CasedFoot
Fdn, Cantilever Sign Structure Type __, __ inch dia, Uncased.Foot
- 8-55 810.04.B.1 Delete the second paragraph of this subsection and replace with the following:
“The unit prices for **Fdn, Truss Sign Structure Type __, __ inch dia, Cased** and **Fdn, Cantilever Sign Structure Type __, __ inch dia, Cased** include the cost of concrete, slurry, steel reinforcement, permanent casings, anchor bolts, excavation, and disposal of excavated material.”
- 8-55 810.04.B.2 Delete this subsection and replace with the following:
“**Foundation, Truss Sign Structure, Uncased and Foundation, Cantilever Sign Structure, Uncased.** The unit prices for **Fdn, Truss Sign Structure Type __, __ inch dia, Uncased** and **Fdn, Cantilever Sign Structure Type __, __ inch dia, Uncased** include the cost of concrete, slurry, steel reinforcement, temporary casings, anchor bolts, excavation, and disposal of excavated material.”
- 8-57 810.04.I Delete the first paragraph of this subsection and replace with the following:
“The unit price for **Sign, Rem** of the type required includes the cost of removing signs from supports and stacking by shape and size.”
- 8-57 810.04.I Delete the second paragraph of this subsection and replace with the following:
“The unit prices for **Ground Mtd Sign Supports, Rem; Cantilever, Rem** and **Truss, Rem** include the cost of removing ground mounted sign supports, cantilever or truss supports.”
- 8-57 810.04.L Change this subsection to read:
“The unit price for Sign, Erect, Salv of the type required includes erecting the salvaged sign on a new sign support or existing sign support, as shown on the plans, and attaching devices, and hardware, including brackets.”
- 8-93 812.03.D.14 Add the following paragraph after the second paragraph in this subsection:
“If the temporary rumble strips lose their adhesion to the pavement during the life of the project, replace or re-adhere them, as directed

by the Engineer. Upon completion of the project, or as directed by the Engineer, entirely remove the temporary rumble strips using a method that does not permanently damage the pavement surface.”

- 8-95 812.03.D.14 Delete the third, fourth, fifth and sixth paragraphs of this subsection.
- 8-110 812.04 Change the fifth and sixth pay item from the top of the list on this page to read as follows:
Sign, Type B, Temp, Prismatic, Spec, Furn Square Foot
Sign, Type B, Temp, Prismatic, Spec, Oper Square Foot
- 8-141 815.04.C.1.b Delete this subsection in its entirety.
- 8-141 815.04.C.1.c Rename and change this subsection as follows:
“b. Removal and disposal of unacceptable plants including the root ball.
- 8-141 815.04.C.1.d Delete this subsection in its entirety.
- 8-142 815.04.C.2.d Change this subsection to read:
"During the first watering of the second growing season, remove and dispose of the guying material, identification tags, and inspection tags."
- 8-144 816.03.A Change the third sentence in this subsection to read:
“Use topsoil from within the project limits; or from off-site sources meeting the requirements in subsection 917.06.”
- 8-167 818.04 Add the pay item to the bottom of the list on this page as follows:
Power Company (Estimated Cost to Contractor)..... Dollar
- 8-170 818.04.G Delete this subsection in its entirety.
- 8-170 818.04 Rename the following subsections as follows:
“G. **Handholes (Hh).**
H. **Service Disconnect.**
I. **Metered Service.**
J. **Unmetered Service.**
K. **Wood Pole.**
L. **Concrete Pole, Fit Up.**
M. **Steel Pole, Fit Up.**
N. **Bracket Arm.**”
- 8-171 818.04.J Delete the second paragraph of this subsection and replace with the following:
“The pay item, **Power Company (Estimated Cost to Contractor)**, establishes a budgeted amount in the contract to cover the cost of reimbursing the Contractor for payments made to the power company for providing electrical power at the locations shown on the plans. The Department will estimate the reimbursement costs to the Contractor and establish a budgeted amount as shown on

the plans. The Department will pay the Contractor for power company invoices paid, as submitted to the Engineer.”

- 8-176 819.03.B.5.b In the second paragraph of this subsection delete the first sentence and replace with the following:
“Tighten bolts connecting the pole to the frangible base to a snug tight condition in accordance with subsection 707.03.E.6.c.”
- 8-185 820.01.B Add a period to the end of the first sentence of this subsection.
- 8-187 820.02 Change the first line in the list of materials on this page to read:
Conduit Material.....918
- 8-196 820.03.O In the fourth paragraph of this subsection delete the last sentence and replace with the following:
“Use smooth wall, Schedule 80, rigid PVC conduit, or coilable, Schedule 80 PE conduit in accordance with section 818.”
- 8-199 820.04 Add the pay item to the list on this page:
TS, (number) Way (type) Mtd (LED) Optic
- 8-200 820.04 Change the second pay item from the top of the list on this page to read as follows:
TS Head, TempEach
- 8-200 820.04 Change the eleventh pay item from the top of the list on this page to read as follows:
TS, Lens, Pedestrian Sym (LED)Each
- 8-200 820.04 Delete the following pay items from the list:
Strain Pole, Steel, 6 bolt, ___ foot.....Each
Mast Arm Pole, Cat.....Each
Mast Arm, ___Foot, Cat.....Each
- 8-200 820.04 Change the eleventh pay item from the bottom of the list on this page to read as follows:
Mast Arm, Rem.....Each
- 8-200 820.04 Delete the following pay item from the list:
Pushbutton, Pedestal, Alum.....Each
- 8-201 820.04 Delete the following pay item from the list:
Pushbutton, Pedestal, RemEach
- 8-201 820.04 Delete the following pay item from the list:
Power Co. (Est Cost to Contractor)..... Dollar
- 8-202 820.04 Add the following pay item to the list:
Bracket, Truss, Salv.....Each
- 8-204 820.04.C Delete the last paragraph of this subsection in its entirety.

- 8-204 820.04.D Delete the first paragraph of this subsection in its entirety.
- 8-205 820.04.E Delete the sixth paragraph of this subsection in its entirety.
- 8-205 820.04.E Delete the seventh paragraph of this subsection in its entirety.
- 8-205 820.04.E Change the eighth paragraph to read:
"The unit price for **Pedestal, Pushbutton, Alum** includes the cost of installing the aluminum pushbutton pedestal assembly, installing hardware, fittings, grounding, and ground rod."
- 8-205 820.04.E Change the ninth paragraph to read:
"The unit price for **Pedestal, Pushbutton, Rem** includes the cost of removing the pedestal assembly and hardware."
- 9-5 902.02 Delete the first line under the Material list and relace with the following:
"Wire Cloth and Sieves ASTM E11"
- 9-9 902.03.C.1.b Delete the first sentence in this subsection and replace with the following:
"The physical requirements for the coarse aggregate are as specified in Table 902-2 and as follows:"
- 9-14 Table 902-1 In the row that includes the information on the 34G material, under the column titled Item of Work by Section Number (Sequential) delete the reference to the section 404.
- 9-15 Table 902-2 Add the superscript (n) in the first row in the Dense-graded aggregates section of the table under the column titled Crushed Material, % min. (MTM 117).
- 9-16 Table 902-2 Add the superscript (n) in the first row in the Open-graded aggregates section of the table under the column titled Crushed Material, % min. (MTM 117).
- 9-16 Table 902-2 Delete the superscript footnote in the first through fourth rows under the header row that reads "(m)" in the column Loss, % max, LA Abrasion (MTM 102).
- 9-16 Table 902-2 Add the following row after the third row in the Open-graded aggregates section reading:
- | | | | | | |
|-----|----|----|----|----|----|
| 46R | -- | 45 | -- | -- | -- |
|-----|----|----|----|----|----|
- 9-16 Table 902-2 Add the superscript footnote in the header row that reads "(m)" in the column Loss, % max, LA Abrasion (MTM 102).
- 9-15 Table 902-2 Delete the footnote (d) in one location in the table.

9-17	Table 902-2	Delete the footnote (d) in one location in the table.
9-17	Table 902-2	Add the following footnote below the existing footnotes in this table. “(n) For recycled crushed concrete, if the source concrete uses primarily rounded river gravel aggregates, the minimum crushed particle content can be reduced to 90%.”
9-21	Table 902-6	Delete the footnote (b) in two locations in the table.
9-21	Table 902-6	Change the footnote (c) to read (b) in two locations in the table.
9-21	Table 902-6	Change the footnote (d) to read (c) in two locations in the table.
9-25	903.04	Delete the second sentence of the second paragraph of this subsection.
9-70	909.07.A	Delete the second sentence of this subsection.
9-70	909.05.D	Change the first sentence in this subsection to read: “Provide steel pipe for jacking in place meeting the requirements of ASTM A53/A53M for Type E or Type S, Grade B, or ASTM A139/A139M for Grade B.”
9-71	909.08.A	Change the first sentence in this subsection to read: “Provide bridge deck downspouts of PE pipe meeting the requirements of ASTM F714, PE 4710, DR 26 or Schedule 80 PVC.”
9-94	Table 910-01	Change the value in the fifth row under the header row in the Permittivity (min) (per second) column from 0.5 to read: “0.05”
9-94	Table 910-01	Change the value in the seventh row under the header row in the Permittivity (min.) (per second) column from 0.5 to read: “0.05”
9-95	Table 910-2	Change the second row under the Ultimate strength section to read: “CMD ^(c) 1950 lb/ft”
9-119	913.06	Change this subsection to read: Circular precast concrete units with circular reinforcement for adjusting rings, tops, risers, and sump bases for manholes, catch basins, and inlets must meet the requirements of AASHTO M199 and the following additions and exceptions:
9-133	917.03	Rename the four subsections following the first paragraph on this page as follows: D. Deciduous Shade Trees. E. Small Trees, Ornamentals, and Shrubs. F. Evergreen Trees. G. Vines, Ground Cover, and Herbaceous Ornamental Plants.

- 9-149 918.08 In the first paragraph of this subsection delete the second sentence and replace with the following:
“Provide light standards designed in accordance with AASHTO’s LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.”
- 9-150 918.10 In the first paragraph of this subsection delete the first sentence and replace with the following:
“Provide tower lighting units designed in accordance with AASHTO’s LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.”
- 9-164 919.04.B In the first paragraph of this subsection delete the first sentence and replace with the following:
“Provide square tubular steel sign supports meeting the chemical, mechanical, and geometric properties of material used in the crash tests referenced in AASHTO’s LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.”
- 9-170 920.02.C Change the reference to Table 920-2 to read Table 920-3 in two locations.
- 9-218 922.06 Add the following subsection after subsection 922.06.C:
“D. **Temporary Rumble Strips (Orange)**. The completed temporary rumble strip consists of one layer of the 0.25- by 4-inch material.
- Apply the primer to the surface of the pavement only if recommended by the manufacturer. Place the pre-adhesive surface of the rumble strip on the primer or directly on the pavement surface, as recommended by the manufacturer. Seat the rumble strips with a minimum of three passes of a 200-pound weighted roller.
- Provide temporary rumble strips that are composed of a polymer with pre-applied adhesive, orange, and a tensile strength of 250 psi. Provide primer in accordance with the manufacturer’s recommendations.”
- 9-222 922.10.A.3 Delete this subsection and replace with the following:
“Conform to the wind load requirements specified by AASHTO’s LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals with all equipment mounted without the need for additional ballast;”
- 10-5 1001.03.A.4.m Delete this subsection and replace it with the following:
“m. Contractor’s signature or initials when water is added on-site.”
- 10-15 1002.03.A.9 Delete this subsection and replace it with the following:
“9. AASHTO T177 - Standard Method of Test for Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)”

- 10-23 1003.03.B Delete the last sentence of this subsection and replace with the following:
“Aggregate sampling for concrete will be performed by an MCAT-certified Aggregate Technician Level II.”
- 10-42 Table 1006-01 Change footnote (a) to read:
“(a) Ensure that the coarse aggregate’s absorption does not exceed 2.5% in accordance with AASHTO T85.”
- 10-43 Table 1006-02 Replace Table 1006-02 with the Table 1006-02 below.
- 1A - 20A Pay Item Index Replace the Pay Item Index in its entirety.

**Table 1006-2:
Overlay Mixtures**

Mixture Type	Aggregate	Slump (inch)	Air Content	Admixture Required	Mixture Proportions lb/yd ³ , dry weight					
					Cement ^(a)	Dry Densified Silica Fume ^(b)	Net Mix Water	Fine Agg	Coarse Agg	Latex Admixture
SFMC	2NS and 26A ^(c)	4-6	6.5 ±1.5%	(d),(e),(f)	618	40	273 ^(g)	1273	1601	—
LMC	2NS and 26A ^(c)	(h)	4.5 ±1.5%	—	658	—	(h)	1490 ^{(i),(j)}	1300 ^{(i),(j)}	206

(a) Use only Type I or Type II Portland cement.

(b) For SFMC mixtures, the Contractor may use a blended silica fume Portland cement. However, if the silica fume content of the blended material is greater than 8% of the total cementitious material, submit to the Engineer modified mix proportions with Type I Portland cement added to the blended material to achieve the equivalent individual cementitious material mixture proportions.

(c) Provide coarse aggregate, 95% minimum crushed materials in accordance with Michigan Test Method (MTM) 117, with an absorption no greater than 2.5%, in accordance with AASHTO T85.

(d) Water-reducing high-range admixture or water-reducing high-range and retarding admixture.

(e) Virgin polypropylene collated fibers at 2 lb/yd³.

(f) Air-entraining admixture.

(g) Provide a net water to cementitious material ratio of 0.41 (cementitious material includes cement and silica fume).

(h) Add water in addition to water in the latex admixture to control slump to within 3 to 5 inches. Measure slump from 4 to 5 minutes after discharge from the mixer. During the waiting period, deposit concrete on the deck and do not disturb. If placing mixtures on sections within superelevated curves, the Contractor may need to use the lower allowable range of the slump requirement, as determined by the Engineer. Do not exceed water-cement ratio, by weight, of 0.30 including water contained in the latex emulsion.

(i) Aggregate proportions are approximate; due to gradation changes, the Contractor may increase proportions by no greater than 5% by weight of total aggregate if reducing coarse aggregate by an equivalent volume.

(j) Aggregate weights specified in the table are based on a dry bulk specific gravity of 2.65 for gravel and stone. Adjust the weights if the specific gravity of the materials used varies by more than 0.02 from the specified values.