MDOT Michigan Department of Transportation

MDOT ENGLISH

☑ Warranty
☐ Preventative Maintenance

MDOT Oversight
NHS: N
☑ DBE/Percent

ITEM NUMBER
0909 013

STATE OF MICHIGAN DEPARTMENT OF TRANSPORTATION

PROPOSAL

0.28 mi of hot mix asphalt non-motorized path, rehabilitation of a two-span historic steel truss bridge, substructure replacement, and installation of site furnishings and lighting, Saginaw County. This project includes a 2 year bridge painting warranty.

BIDS WILL BE ELECTRONICALLY DOWNLOADED AT 10:30 A.M. **LOCAL TIME, ON** 9/3/2009

AT: VANWAGONER BLDG, 1ST FLR ONE WEST CONF, 425 W. OTTAWA ST., LANSING, MI 48933

CONTRACT ID	CONTROL SECTION	PROJECT	FEDERAL NO.	FED. ITEM
73999-101875	STE 73999	101875A	STP 0973(040)	YY0398

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

The bidder hereby proposes to furnish all necessary machinery, tools, apparatus, and other means of construction, do all the work, furnish all the materials except as otherwise specified and, for each unit price, lump sum, or one each named in the itemized bid, to complete the work in strict conformity with the plans therefore and the entire proposal which is incorporated by reference in these pages, and in strict conformity with the requirements of the 2003 Standard Specifications for Construction, Michigan Department of Transportation and such other special provisions and supplemental specifications as may be a part of the proposal for this project.

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

The bidder hereby certifies that if it is not prequalified in all classifications required by the advertisement for this project, it has taken such preparatory steps as may be necessary and will within the time specified in Subsection 102.15 of the 2003 Standard Specifications for Construction, designate subcontractor(s) that are fully prequalified in the classification(s) to perform the work.

THE BIDDER UNDERSTANDS AND AGREES THAT THE DEPARTMENT RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS AND NO CONTRACTUAL RELATIONSHIP SHALL EXIST BETWEEN THE BIDDER AND THE DEPARTMENT FOR THE WORK DESCRIBED HEREIN UNTIL SUCH TIME AS A CONTRACT DOCUMENT (FORM 1001) HAS BEEN FORMALLY EXECUTED BY BOTH THE BIDDER AND THE DEPARTMENT.

The bidder agrees upon submitting this bid that its agents, officers or employees have not directly or indirectly entered into any agreements, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal for the above project.

Unless the bidder gives MDOT advance written notice, MDOT may correspond directly with the insurance agencies concerning questions and problems with the insurance certificates, bonds and related materials. It is the obligation of the bidder to monitor the filing of the insurance certificates, bond, and related materials with MDOT and the bidder is responsible for any failure to provide MDOT with the required materials, on a timely basis and in proper form.

Subject to Subsection 102.17 of the 2003 Standard Specifications for Construction, the bidder agrees to pay to the Michigan Department of Transportation the proposal guaranty sum of $50,000.00 if the bidder fails to provide the required materials and/or execute the contract in accordance with Subsection 102.15 of the 2003 Standard Specifications for Construction within twenty-eight (28) days after being furnished with the necessary contract and bond forms. The Department may, upon request by the bidder based on valid considerations and made prior to expiration of the twenty-eight (28) day period, extend said period of time as the Department may deem appropriate. A written request for return, or cancellation, of the proposal guaranty under Subsection 102.17 of the 2003 Standard Specifications for Construction must be filed with the Department within fifteen (15) days after mailing by the Department of notice that the proposal guaranty is being forfeited. Upon an adverse decision by the Committee or failure to file a timely request for return, or cancellation, of the proposal guaranty, payment shall be made within 20 days after the mailing by the Department of a Final Demand for Payment. If payment is not made within 20 days, the bidder hereby authorizes the Department to withhold said sum from any money which may now, or hereafter, become due and owing by the Department to the bidder.

Bay City TSC

BIDDER INFORMATION

Electronic Bid – consists of Schedule of Items folder and Miscellaneous Data folder. Miscellaneous Data folder contains information regarding the Schedule of Items, Proposal Guaranty, and Designated and Specialty Items.

All Unit Price or LUMP (sum) entries made in the Schedule of Items by the Bidder in the "Unit Price" column must be prepared in accordance with the Special Provision for Electronic Bidding, which is a part of the proposal.

Refer to paragraph eight on the front cover of the proposal, or to the Miscellaneous Data folder in the electronic bid, for the language explaining the proposal guaranty.

Completed bids must be submitted electronically by the 10:30 a.m. deadline on the morning of the letting. Bids cannot be submitted after the 10:30 a.m. letting day deadline.

NOTE: *Any financial or propriety information submitted in response to the bid will become a public record subject to disclosure under the Freedom of Information Act. THE INFORMATION WILL NOT BE TREATED AS CONFIDENTIAL.*

The bid of the apparent low bidder will be reviewed for discrepancies until a bid meeting all requirements is found.

THE RIGHT IS RESERVED TO REJECT ANY OR ALL BIDS

Revised 1/13/06

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
LETTING : 090903
CALL : 013

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 Road Work					
0010	1000001 Mobilization, Max. _____ $190000.00	LUMP	LUMP			.
0020	2010001 Clearing	0.500 Acre		.		.
0030	2020003 Tree, Rem, 37 inch or larger	1.000 Ea		.		.
0040	2030016 Sewer, Rem, 24 inch to 48 inch	72.000 Ft		.		.
0050	2040006 Curb and Gutter, Rem	132.000 Ft		.		.
0060	2040008 Guardrail, Rem	12.000 Ft		.		.

IMPORTANT NOTICE:
If the proposal establishes a maximum price for any of the following work items, and if you bid a price higher than that maximum price, your bid will be considered to have quoted the maximum price and your bid total will be adjusted to reflect that maximum price.

If the proposal provides a specified price for any of the following work items, and if you bid a price higher or lower than that specified price, your bid will be considered to have quoted the specified price and your bid total will be be adjusted to reflect that specified price.

If your bid is the lowest accepted bid, and if you refuse to accept the award of the contract due to the change in what you quoted as a maximum or specified price, you will forfeit your bid guaranty.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
LETTING : 090903
CALL : 013

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0070	2040009 Fence, Rem	78.000 Ft		.		.
0080	2040011 Pavt, Rem	34.000 Syd		.		.
0090	2040013 Sidewalk, Rem	268.000 Syd		.		.
0100	2047050 _ Bollard, Rem	14.000 Ea		.		.
0110	2047050 _ Gate, Rem	1.000 Ea		.		.
0120	2047050 _ Planter, Conc, Rem	3.000 Ea		.		.
0130	2050010 Embankment, CIP	46.000 Cyd		.		.
0140	2050016 Excavation, Earth	826.000 Cyd		.		.
0150	2050050 Non Haz Contaminated Material Handling and Disposal, LM	100.000 Cyd		.		.
0160	2080006 Erosion Control, Inlet Protection, Fabric Drop	5.000 Ea		.		.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0170	2080025 Erosion Control, Silt Fence	4,000.000 Ft		.		.
0180	3010002 Subbase, CIP	65.000 Cyd		.		.
0190	3020001 Aggregate Base	7.000 Ton		.		.
0200	3027011 _ Aggregate Base, 6 inch, Modified	1,915.000 Syd		.		.
0210	4010835 Culv End Sect, 24 inch	1.000 Ea		.		.
0220	4020007 Sewer, Cl A, 24 inch, Tr Det A	54.000 Ft		.		.
0230	4021275 Video Taping Sewer and Culv Pipe	54.000 Ft		.		.
0240	4030051 Dr Structure Cover	2,330.000 Lb		.		.
0250	4030053 Dr Structure Cover, Adj, Case 2	6.000 Ea		.		.
0260	4030067 Dr Structure, Tap, 24 inch	1.000 Ea		.		.
0270	5020025 Hand Patching	4.000 Ton		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0280	5020061 HMA Approach	246.000 Ton		.		.
0290	6020208 Joint, Expansion, E3	20.000 Ft		.		.
0300	6050100 Conc Quality Assurance	100.000 Cyd		.		.
0310	7060002 Conc, Grade S2	1.000 Cyd		.		.
0320	7060036 Reinforcement, Steel, Culv and Headwall	6.000 Lb		.		.
0330	8020023 Curb and Gutter, Conc, Det C4	95.000 Ft		.		.
0340	8030003 Sidewalk, Conc, 6 inch	2,805.000 Sft		.		.
0350	8030010 Sidewalk Ramp	87.000 Sft		.		.
0360	8030011 Sidewalk Ramp, ADA	120.000 Sft		.		.
0370	8100156 Post, Steel, 3 lb	30.000 Ft		.		.
0380	8100181 Sign, Type IIIB	13.000 Sft		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0390	8110035 Pavt Mrkg, Ovly Cold Plastic, 6 inch, Crosswalk	74.000 Ft		.		.
0400	8110036 Pavt Mrkg, Ovly Cold Plastic, 12 inch, Crosswalk	96.000 Ft		.		.
0410	8120007 Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	8.000 Ea		.		.
0420	8120008 Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	8.000 Ea		.		.
0430	8120030 Flag Control	LUMP	LUMP			.
0440	8120042 Lighted Arrow, Type C, Furn	2.000 Ea		.		.
0450	8120043 Lighted Arrow, Type C, Oper	2.000 Ea		.		.
0460	8120050 Minor Traf Devices	LUMP	LUMP			.
0470	8120102 Plastic Drum, High Intensity, Lighted, Furn	25.000 Ea		.		.
0480	8120103 Plastic Drum, High Intensity, Lighted, Oper	25.000 Ea		.		.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0490	8120120 Sign, Type B, Temp, Furn	300.000 Sft		.		.
0500	8120121 Sign, Type B, Temp, Oper	300.000 Sft		.		.
0510	8150001 Site Preparation, Max. ___ $8200.00	LUMP	LUMP			.
0520	8150002 Watering and Cultivating, First Season, Min. ___ $4000.00	LUMP	LUMP			.
0530	8150003 Watering and Cultivating, Second Season, Min. ___ $3000.00	LUMP	LUMP			.
0540	8157050 _ Malus 'Prairiefire', 1 1/2 inch	12.000 Ea		.		.
0550	8157050 _ Pennisetum Alopecuroides 'Japonicum', Two Gallon Container	22.000 Ea		.		.
0560	8157050 _ Physocarpus Opulifolius 'Seward', Three Gallon Container	14.000 Ea		.		.
0570	8157050 _ Salvia Nemorosa 'May Night', One Gallon Container	58.000 Ea		.		.
0580	8157050 _ Sedum 'Autumn Joy' Stonecrop, One Gallon Container	39.000 Ea		.		.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0590	8160013 Compost Surface, Furn, LM	30.000 Cyd		.		.
0600	8167011 _ Turf Establishment, Performance	1,800.000 Syd		.		.
0610	8190155 Conduit, Schedule 80 PVC, 1 inch	320.000 Ft		.		.
0620	8190212 DB Cable, in Conduit, 600V, 1/C#8	320.000 Ft		.		.
0630	8190250 Hh, Polymer Conc	7.000 Ea		.		.
0640	8197001 _ DB Cable, in Conduit, 600V, 1/C#12	755.000 Ft		.		.
0650	8197050 _ Flood Luminaire	2.000 Ea		.		.
0660	8197050 _ Lighting Control Panel with Rack	1.000 Ea		.		.
0670	8197050 _ Luminaire and Post	6.000 Ea		.		.
0680	8197050 _ Post Fdn	6.000 Ea		.		.
0690	8197060 _ Utility Work	20,000.000 Dlr	1.00000		20000.00	

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0700	8507001 _ Decorative Fence	66.000 Ft		.		.
0710	8507021 _ Shredded Bark Mulch	30.000 Cyd		.		.
0720	8507050 _ Bollard	4.000 Ea		.		.
0730	8507050 _ Decorative Bench	4.000 Ea		.		.
0740	8507050 _ Decorative Stone Column	9.000 Ea		.		.
0750	8507050 _ Decorative Trash Receptacle	2.000 Ea		.		.
0760	8507050 _ Removable Bollard	2.000 Ea		.		.
	SECTION 0001 TOTAL					.

SECTION 0002 Structure Work

0770	2050015 Excavation, Channel	327.000 Cyd		.		.
0780	2060002 Backfill, Structure, CIP	1,082.000 Cyd		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0790	2060010 Excavation, Fdn	1,671.000 Cyd		.		.
0800	2080004 Erosion Control, Gravel Filter Berm	150.000 Ft		.		.
0810	2080011 Erosion Control, Filter Bag	4.000 Ea		.		.
0820	2087001 _ Turbidity Curtain (Deep)	200.000 Ft		.		.
0830	4040031 Underdrain, Fdn, 4 inch	140.000 Ft		.		.
0840	4040111 Underdrain, Outlet Ending, 4 inch	2.000 Ea		.		.
0850	6050101 Conc Quality Initiative	700.000 Dlr	1.00000		700.00	
0860	7040002 Steel Sheet Piling, Temp	1,197.000 Sft		.		.
0870	7040009 Cofferdams, Left in Place (P01 of 73999)	LUMP	LUMP			.
0880	7057001 _ Pile, Steel, Furn and Driven, 14 inch, LRFD	2,380.000 Ft		.		.
0890	7057050 _ Pile Point, Steel, LRFD	43.000 Ea		.		.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0900	7057050 _ Test Pile, Steel, 14 inch, LRFD	3.000 Ea		.		.
0910	7057051 _ Pile Driving Equipment, Furn, LRFD (P01 of 73999)	LUMP	LUMP			.
0920	7060004 Conc, Grade T	320.000 Cyd		.		.
0930	7060008 Conc Quality Assurance, Structure	406.000 Cyd		.		.
0940	7060010 Substructure Conc	406.000 Cyd		.		.
0950	7060032 False Decking	5,190.000 Sft		.		.
0960	7060035 Reinforcement, Steel, Epoxy Coated	41,186.000 Lb		.		.
0970	7060040 Water Repellent Treatment, Penetrating	390.000 Syd		.		.
0980	7070001 Structural Steel, Rolled Shape, Furn and Fab	38,500.000 Lb		.		.
0990	7070002 Structural Steel, Rolled Shape, Erect	60,900.000 Lb		.		.
1000	7070013 Structural Steel, Mixed, Furn and Fab	10,350.000 Lb		.		.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
LETTING : 090903
CALL : 013

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1010	7070014 Structural Steel, Mixed, Erect	10,350.000 Lb		.		.
1020	7070065 Bearing, Elastomeric, 1 inch	25.000 Sft		.		.
1030	7070071 Bearing, Elastomeric, 2 1/2 inch	11.000 Sft		.		.
1040	7077030 _ Structural Steel, Furnish and Fab, Special	16,000.000 Lb		.		.
1050	7077050 _ Structural Steel, Truss Pin, 2 1/2 inch dia	36.000 Ea		.		.
1060	7077051 _ Structural Steel, Restoration and Erect	LUMP	LUMP			.
1070	7090003 Timber and Lumber, Treated, Furn and Place	4.000 MBM		.		.
1080	7100001 Joint Waterproofing	170.000 Sft		.		.
1090	7117001 _ Railing, Pedestrian	720.000 Ft		.		.
1100	7120034 Adhesive Anchoring of Vertical Bar, 3/4 inch	52.000 Ea		.		.
1110	7127051 _ Structures, Rehabilitation, Rem Portions, Special	LUMP	LUMP			.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
LETTING : 090903
CALL : 013

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1120	7150045 Steel Structure, Cleaning, Type 4 (P01 of 73999)	LUMP	LUMP			.
1130	7150046 Steel Structure, Coating, Type 4 (P01 of 73999)	LUMP	LUMP			.
1140	7160001 Field Repr of Damaged Coating (P01 of 73999)	LUMP	LUMP			.
1150	8080013 Fence, Chain Link, 72 inch	884.000 Ft		.		.
1160	8080063 Fence Gate, 16 foot, for 72 inch Chain Link Fence	1.000 Ea		.		.
1170	8080120 Fence, Moving	190.000 Ft		.		.
1180	8137011 _ Riprap, Heavy, Modified	815.000 Syd		.		.
1190	8507010 _ Wood Deck	3,457.000 Sft		.		.
1200	8507051 _ Existing Truss, Rem and Transport	LUMP	LUMP			.
1210	8507051 _ Existing Truss, Transport and Install	LUMP	LUMP			.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
LETTING : 090903
CALL : 013

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0002 TOTAL					.
	TOTAL BID					.

CONTRACT ID: 73999-101875 PROJECT(S): 101875A
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LIST ITEMS ON THIS PAGE BY AMENDMENT

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
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	TOTAL BID			.		.

CONTENTS

TYPE OF WORK AND PROJECT LOCATION

CONTROL SECTION	JOB NUMBER	MICHIGAN PROJECT
STE 73999	101875A	STP 0973(040)

LOCATION

Located in Saginaw County

TYPE OF WORK

0.28 miles of hot mix asphalt surfacing, rehabilitation of historic truss bridge, installation of site furnishings and lighting.

DESCRIPTION

State Street Historic Truss Bridge over the Cass River

AGREEMENT(S) ☐ NO ☑ YES, Agreement Numbers are listed below:

08-5346 Bridgeport Township

OVERSIGHT ☐ FHWA ☑ MDOT

Letting of: September 03, 2009

Notice of Advertisement

10:30 A.M. , Local Time VANWAGONER BLDG, 1ST FLR ONE WEST CONF
425 W. OTTAWA ST., LANSING, MI 48933

ITEM NO	CONTRACT ID	CONTROL SEC.	JOB NO.	FEDERAL NO.	FED ITEM
0909 013	73999-101875	STE 73999	101875A	STP 0973(040)	YY0398

0.28 mi of hot mix asphalt non-motorized path, rehabilitation of a two-span historic steel truss bridge, substructure replacement, and installation of site furnishings and lighting, Saginaw County. This project includes a 2 year bridge painting warranty.

3.00 % DBE PARTICIPATION REQUIRED

Net classification required for this project is
1977 Fa

A mandatory pre-bid meeting will be held at 1:00 p.m. on Monday, August 17, 2009, at the Bridgeport Township Hall located at 6206 Dixie Highway, Bridgeport, MI. All prospective bidders must attend in order to be considered eligible to bid.

Estimated pages for plans: 49

See proposal for bidder guaranty information. Completion date is 09/19/12

Proposal and plans, if applicable, are available for examination online at http://mdotwas1.mdot.state.mi.us/public/eprop/login/

Dated: 07/30/09

A. 26.5 What Do The Terms Used In This Part Mean? **(Replaces 23.5 and 23.62)*

Insert the following portions:

Disadvantaged Business Enterprise or DBE means a for-profit small business concern–

(1) That is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; and

(2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

Small Business Concern means, with respect to firms seeking to participate as DBEs in DOT-assisted contracts, a small business concern as defined pursuant to section 3 of the Small Business Act and Small Business Administration regulations implementing it (13 CFR part 121) that also does not exceed the cap on average annual gross receipts specified in Sec. 26.65(b).

Socially and economically disadvantaged individual means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is-

(1) Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis.

(2) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:

(i) "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;

(ii) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;

(iii) "Native Americans," which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;

(iv) "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands, Macao, Fiji, Tonga, Kirbati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;

(v) "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;

(vi) Women;

(vii) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

Tribally-owned concern means any concern at least 51 percent owned by an Indian tribe as defined in this section.

You refers to a recipient, unless a statement in the text of this part or the context requires otherwise (i.e., 'You must do XYZ' means that recipients must do XYZ).

B. 26.1 What are the Objectives of this Part? **(Replaces 23.43)*

This part seeks to achieve several objectives:

(a) To ensure nondiscrimination in the award and administration of DOT-assisted contracts in the Department's highway, transit, and airport financial assistance programs;

(b) To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;

(c) To ensure that the Department's DBE program is narrowly tailored in accordance with applicable law;

(d) To ensure that only firms that fully meet this part's eligibility standards are permitted to participate as DBEs;

(e) To help remove barriers to the participation of DBEs in DOT- assisted contracts;

(f) To assist the development of firms that can compete successfully in the marketplace outside the DBE program; and

(g) To provide appropriate flexibility to recipients of Federal financial assistance in establishing and providing opportunities for DBEs.

26.3 To Whom Does this Part Apply? **(Replaces 23.43)*

(a) If you are a recipient of any of the following types of funds, this part applies to you:

(1) Federal-aid highway funds authorized under Titles I (other than Part B) and V of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Pub. L. 102-240, 105 Stat. 1914, or Titles I, III, and V of the Transportation Equity Act for the 21st Century (TEA-21), Pub. L. 105-178, 112 Stat. 107.

(2) Federal transit funds authorized by Titles I, III, V and VI of ISTEA, Pub. L. 102-240 or by Federal transit laws in Title 49, U.S. Code, or Titles I, III, and V of the TEA-21, Pub. L. 105-178.

(3) Airport funds authorized by 49 U.S.C. 47101, et seq.

(b) [Reserved]

(c) If you are letting a contract, and that contract is to be performed entirely outside the United States, its territories and possessions, Puerto Rico, Guam, or the Northern Marianas Islands, this part does not apply to the contract.

(d) If you are letting a contract in which DOT financial assistance does not participate, this part does not apply to the contract.

26.13 What Assurances Must Recipients and Contractors Make? **(Replaces 23.43)*

(a) Each financial assistance agreement you sign with a DOT operating administration (or a primary recipient) must include the following assurance:

> The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

(b) Each contract you sign with a contractor (and each subcontract the prime contractor signs with a subcontractor) must include the following assurance:

> The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT- assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

C. 26.55 How is DBE Participation Counted Toward Goals? *(Replaces 23.47)

(a) When a DBE participates in a contract, you count only the value of the work actually performed by the DBE toward DBE goals.

(1) Count the entire amount of that portion of a construction contract (or other contract not covered by paragraph (a)(2) of this section) that is performed by the DBE's own forces. Include the cost of supplies and materials obtained by the DBE for the work of the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate).

(2) Count the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, toward DBE goals, provided you determine the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services.

(3) When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

(b) When a DBE performs as a participant in a joint venture, count a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces toward DBE goals.

(c) Count expenditures to a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract.

(1) A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, you must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

(2) A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, you must examine similar transactions, particularly those in which DBEs do not participate.

(3) If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, you must presume that it is not performing a commercially useful function.

(4) When a DBE is presumed not to be performing a commercially useful function as provided in paragraph (c)(3) of this section, the DBE may present evidence to rebut this presumption. You may determine that the firm is performing a commercially useful function given the type of work involved and normal industry practices.

(5) Your decisions on commercially useful function matters are subject to review by the concerned operating administration, but are not administratively appealable to DOT.

(d) Use the following factors in determining whether a DBE trucking company is performing a commercially useful function:

(1) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

(2) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

(3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.

(4) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

(5) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE.

(6) For purposes of this paragraph (d), a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

(e) Count expenditures with DBEs for materials or supplies toward DBE goals as provided in the following:

(1)(i) If the materials or supplies are obtained from a DBE manufacturer, count 100 percent of the cost of the materials or supplies toward DBE goals.

(ii) For purposes of this paragraph (e)(1), a manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

(2)(i) If the materials or supplies are purchased from a DBE regular dealer, count 60 percent of the cost of the materials or supplies toward DBE goals.

(ii) For purposes of this section, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

(A) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

(B) A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided in this paragraph (e)(2)(ii) if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

(C) Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph (e)(2).

(3) With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided you determine the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. Do not count any portion of the cost of the materials and supplies themselves toward DBE goals, however.

(f) If a firm is not currently certified as a DBE in accordance with the standards of subpart D of this part at the time of the execution of the contract, do not count the firm's participation toward any DBE goals, except as provided for in Sec. 26.87(i)).

(g) Do not count the dollar value of work performed under a contract with a firm after it has ceased to be certified toward your overall goal.

(h) Do not count the participation of a DBE subcontractor toward the prime contractor's DBE achievements or your overall goal until the amount being counted toward the goal has been paid to the DBE.

Michigan Department
of Transportation
0164 (04/07)

PRIME CONTRACTOR STATEMENT OF DBE SUBCONTRACTOR PAYMENTS

Information required in accordance with 49 CFR part 26.37 (as detailed in the prompt payment provisions) to monitor the progress of the prime contractor in meeting contractual DBE obligations.

SEE INSTRUCTIONS ON REVERSE

PRIME CONTRACTOR	LETTING DATE	LETTING ITEM #	CONTRACT ID

PERIOD COVERED:

☐ 1st Quarter (October 1 - December 31, 20 _____)
☐ 2nd Quarter (January 1 - March 31, 20 _____)
☐ 3rd Quarter (April 1 - June 30, 20 _____)
☐ 4th Quarter (July 1 - September 30, 20 _____)
☐ PROJECT COMPLETION
☐ FINAL ESTIMATE

CERTIFIED DBE SUBCONTRACTOR	SERVICES/WORK CLASSIFICATION	TOTAL CONTRACT AMOUNT	CUMULATIVE DOLLAR VALUE OF SERVICES COMPLETED	DEDUCTIONS	ACTUAL AMOUNT PAID TO DATE	DBE AUTHORIZED SIGNATURE	DATE

As the authorized representative of the above prime contractor, I state that, to the best of my knowledge, this information is true and accurate.

CONTRACTORS AUTHORIZED REPRESENTATIVE (Signature)	TITLE	DATE

FOR MICHIGAN DEPARTMENT OF TRANSPORTATION USE ONLY

COMMENTS:

RESIDENT/PROJECT ENGINEER (Signature)	DATE

Clear Form

MDOT 0164 (04/07)

INSTRUCTIONS

PRIME CONTRACTOR or AUTHORIZED REPRESENTATIVE:

This statement reports the actual dollar amounts of the project cost earned by and paid to the DBE subcontractor. Complete and submit to the Resident/Project Engineer within 20 days of the end of the quarter, 60 days after project completion, and 20 days after the engineer's submission of the final payment estimate.

For *"Letting Date", "Letting Item #", and "Contract ID",* use the numbers assigned by MDOT.

For *"Services/Work Classification",* report services performed by the subcontractor, listed by code, as described in Rule 51 of the Administrative Rule governing prequalifications of Bidders for Highway and Transportation Construction Work.

For *"Contract Amount"*, report total amount of the contract between the prime contractor and the DBE subcontractor, trucker, or supplier.

For *"Deductions"*, report deductions made by the prime contractor to the subcontractor's Cumulative Dollar Value of Services Completed for retainage, bond or other fees, materials, services or equipment provided to the subcontractor according to mutual, prior agreement (documentation of such agreement may be required by MDOT).

For *"Actual Amount Paid to Date"*, report cumulative actual payments made to the subcontactor for services completed.

Provide *"DBE Authorized Signature"* for project completion reports only.

Be sure to sign, title and date this statement.

MDOT RESIDENT/PROJECT ENGINEER:

Please complete the *"Comments"* area, sign, date and forward within 7 days of receipt from the prime contractor to:

MDOT Office of Business Development
P.O. Box 30050
Lansing, Michigan 48909

Questions about this form? call Toll-free, 1-866-DBE-1264

STATE OF MICHIGAN

APPROVED
11-15-2005
Michigan State
Administrative Board

ADMINISTRATIVE BOARD RESOLUTION (2005-2)

OF

MAY 1, 1979

(As amended on December 2, 1980; April 7, 1981;
August 18, 1981; May 15, 1984; April 7, 1987;
December 15, 1987; January 5, 1988; May 2, 1989;
September 13, 1996; July 3, 2001; January 18, 2005 and **November 15, 2005**)

DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MAINTENANCE CONTRACTS

WHEREAS, pursuant to MCL 17.3 and MCL 250.62, the State Administrative Board adopted a resolution on May 1, 1979 to establish certain procedures to be followed in connection with contracts of the Michigan Department of Transportation (Department) for railroad projects and for the construction, improvement, and maintenance of state trunk line highways; and

WHEREAS, that resolution has been modified several times, the last revision having been made by the State Administrative Board January 18, 2005; and

WHEREAS, it is in the public interest to again modify the resolution to eliminate the mandate for retention funds, allowing the Department to use retention funds or other contractual controls at its discretion; and, to make additional revisions and editorial clarifications;

THEREFORE, BE IT RESOLVED by the State Administrative Board of the State of Michigan (Board) as follows:

1. The Department, without obtaining the approval of this Board, in connection with any construction, improvement, or maintenance contract, may contract for extra work or labor, or both, not exceeding $48,000.00 per contract for contracts having a value of $800,000.00 or less and not exceeding 6% per contract for contracts having a value over $800,000.00 under a contract with a private agency authorized by law, and for an amount not exceeding $800,000.00 under a contract with Boards of County Road Commissioners, Township Boards, and Municipalities of this State, except that each job for extra or additional work or labor, or both, in excess of $100,000.00 shall require approval of the State Administrative Board.

2. Pursuant to applicable Public Acts, the Department, without obtaining the approval of this Board, is authorized to contract for an amount not exceeding $25,000.00 for each contract for toilet vault cleaning, use of licensed sanitary landfills, pickup and disposal of refuse, pavement surfacing and patching, rental of equipment for emergency repairs and maintenance operations, curb replacement, maintenance of office equipment, installation of utility services and installation of traffic control devices and, without such approval, may authorize Boards of County Road Commissioners, Township Boards, and Municipalities, under contracts for the maintenance of trunkline highways, to subcontract in amounts not to exceed $25,000.00 for each subcontract;

3. All agreements by the Department to pay for extra work on either a negotiated price or force account basis in excess of the amounts shown in paragraph 1 must be approved by the Board, after having been approved by the Attorney General as being in compliance with all legal requirements.

4. No extra work which may cause an increase in the contract price in excess of the amount shown in paragraph 1 may be authorized by the Department without prior approval of the Attorney General, and Board, unless extra work costing not more than $25,000.00 is authorized as necessary to avoid construction delays or increased costs.

5. Department authorizations for extra work, requiring Board approval, given prior to Board approval shall be presented to the Board for subsequent approval or disapproval as quickly as possible, but in no case more than 60 days after the extra work has been authorized by the Department.

6. The Department shall not pay nor agree to pay any disputed claim for extra compensation for work already commenced or completed without approval of the Board.

7. No payments for extra work requiring Board approval shall be made until such Board approval has been obtained.

8. The Department is authorized to balance budgets for extra work recommendations or authorizations previously approved by the Board, by decreasing, in any amount, or increasing, not in excess of 15 percent, the original estimated amount without additional approval by this Board.

9. No payments for increased contract quantities shall be made by the Department unless and until the Board has given prior approval for such payments, except that payments for overruns may be made without Board approval if such payments do not exceed the following per cent of the original contract price: 10 percent on contracts of $50,000.00 or more; 15 percent on contracts of $25,000.00 to $49,999.99; and 25 percent on contracts of less than $25,000.00.

10. The Department shall assess damages against any contractor who fails to have the job open to traffic or completed by the dates specified in the contract unless the contractor has been excused for such failure by the Department. The Department may, without approval of the Board, extend the time for opening to traffic or completion of the contract because of delays from unforeseen causes beyond the control and without the fault or negligence of the contractor, including and restricted to: acts of God; acts of public enemy; acts of Government, acts of the State or any political subdivision thereof; fires; floods; epidemics; strikes; or extraordinary delays in delivery of materials.

    No excusal or waiver of damages, except as above provided, shall be final and binding upon the State unless and until approved by the Board.

11. This resolution shall be made an express part of all construction, improvement, and maintenance contracts entered into by the Department, and the Department's standard and supplemental specifications shall be amended to reflect these requirements.

12. This resolution supercedes all prior versions of this resolution, effective January 1, 2006.

SPECIAL NOTICE
INSURANCE

The Contractor, prior to execution of the contract, shall file with the Department a Certificate or Certificates of Insurance in form satisfactory to the Department, showing that he has complied with the insurance requirements set forth in Section 107.10 of the "Standard Specifications Construction", ie., Michigan Department of Transportation, 1304A, annexed hereto.

Michigan Department
of Transportation
1304A (05/06)

CERTIFICATE OF INSURANCE FOR CONSTRUCTION AND RECONSTRUCTION OF MICHIGAN DEPARTMENT OF TRANSPORTATION HIGHWAY/AERONAUTICS PROJECTS

Information required by the Federal specifications for Highway construction andlor Act 327, P.A. of 1945 to verify insurance.

INSTRUCTIONS: Complete and return to MDOT, Contract Services Division, P.O. Box 30050, Lansing, MI 48909.
All information must be submitted on Form 1304A. Any other form is invalid.

The subscribing insurance company certifies that insurance of the types and for limits of liability covering the work under contract with MDOT or airport owner has been obtained by the contractor named below.

Such insurance, here certified, is written in accordance with the company's regular policies and endorsements subject to the company's applicable manuals of rules and□
damage exclusions.

The insurer shall agree to provide the Department, in writing, the following:

1. A 30-d□
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.

NAME OF INSURED			
ADDRESS	CITY	STATE	ZIP CODE
TELEPHONE NO.	FAX NO.		

ALL WORK PERFORMED FOR THE MICHIGAN DEPARTMENT OF TRANSPORTATION OR AIRPORT OWNER AS A PRIME OR SUBCONTRACTOR

TYPE OF INSURANCE	POLICY NUMBER & NAME OF INSURANCE COMPANY (If more than one)	POLICY DATES (MM/DD/YY) EFFECTIVE	POLICY DATES (MM/DD/YY) EXPIRATION	LIMITS: Each Occurrence: $1,000,000 Aggregate: $2,000,000 BODILY INJURY AND PROPERTY DAMAGE LIABILITY	
General Liability				General Aggregate	$
Commercial General Liability				Prods. comp/ops Aggregate	$
Claims Made Occurrence				Personal & Advertising Inj.	$
$_____P.D. Deductible				Each Occurrence	$
XCU Exclusion				Fire Damage (any one fire)	$
Contractual Exclusion				Medical Exp. (any one person)	$
AUTOMOTIVE LIABILITY				Combined Single Limit (Minimum $2,000,000.00)	$
Any Auto					
All Owned Autos				Bodily Injury (per person) (Minimum $500,000.00)	$
Scheduled Autos					
Hired Autos				Bodily Injury (per accident) (Minimum $1,000,000.00)	$
Non-Owned Autos					
Garage Liability				Property Damage (Minimum $1,000,000.00)	$
Umbrella				Each Occurrence	$
				Aggregate	$
Excess Liability Other Than Umbrella				Each Occurrence	$
				Aggregate	$
WORKERS COMPENSATION AND EMPLOYERS LIABILITY				**STATUTORY**	
				$	(Each Accident)
				$	(Disease - Policy LImit)
				$	(Disease - Each Emply.)
Other					

NAME OF AGENCY	NAME OF INSURANCE COMPANY (If only one for all policies)		
ADDRESS	CITY	STATE	ZIP CODE
TELEPHONE NO.	FAX NO.		
AUTHORIZED REPRESENTATIVE SIGNATURE (Required)			DATE

SPECIAL
BONDING PROVISION

In addition to the security required by 1905 PA 187, MCLA 570.101 et seq.; MSA 26.321 et seq.; and section 102.16 of the Michigan Department of Transportation "2003 Standard Specifications for Construction" the successful bidder on the project shall furnish a satisfactory lien bond written by the same surety as the standard statutory performance bond, in an amount not less than the total contract price, which additional bond shall secure the payment of all claims:

(1) Lienable under the terms of said statute.

(2) Notice of which is not given by subcontractors within the statutory period, but

(a) Notice of which is given by subcontractors within sixty (60) days after notice of the payment of the final estimate or post final estimate having been made by the Department of Transportation; or

(b) In the case of a supplier to the contractor or a subcontractor, within 120 days after the materials are last furnished.

Said additional bond shall conform with the terms of 1905 Pa 187, supra, in all respects except the time within which the notice of lien claims must be given, as provided herein.

12/03

SPECIAL PROVISION
FOR
TAXES

01/03/96

The contractor shall include, and will be deemed to have included, in its bid and contract price all applicable Michigan Sales and Use Taxes which have been enacted into law as of the date the bid is submitted, including the 2 percent increase in sales and use tax enacted pursuant to ballot Proposal A. To the extent of any conflict, this Special Provision controls over Section 107.01 of the 2003 "Standard Specifications for Construction".

PROGRESS CLAUSE: Start work **October 5, 2009** or within ten (10) days after receiving Notice of Award of Contract. Work may also be started on or before the date designated as the starting date in the Detailed Progress Schedule. In no case, shall any work be commenced prior to receipt of formal notice of award by the department.

The following restrictions apply to the project:

1. All work to prepare plans detailing truss removal and transportation, and completion of the rigging, removal, transporting and placement of truss on temporary supports at the staging site, as well as staging site protection shall be completed by **December 18, 2009**.
2. All remaining project work, except for watering and cultivating, shall be completed on or before **September 17, 2010.** After **September 17, 2010**, the contractor will be charged liquidated damages according to the 2003 Standard Specifications.
3. All work impacting the Cass River shall be scheduled and coordinated around the fisheries dates listed in the proposal.

Due to seasonal watering and cultivating items extended through two growing seasons, the contract completion date shall be **September 19, 2012**.

The low bidder(s) for the work covered by this proposal will be required to meet with the Department representatives to work out a detailed progress schedule. The schedule for this meeting will be set after the low bidder is determined.

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

The Region Engineer will arrange time and place for the meeting.

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

Failure on the part of the Contractor to carry out the provisions of the Progress Schedule, as established, may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.

The low bidder(s) for the work covered by this proposal maybe required to meet with department representatives for a post-construction review meeting. The TSC Manager, Delivery Engineer, or designated representative, will set the schedule for the meeting.

CS 73999
JN 101875A

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC

BCY: KAZ 1 of 3 06/12/09

a. Description. Traffic shall be maintained according to Sections 103.05, 103.06, and 812 of the 2003 Standard Specifications for Construction, Michigan Manual of Uniform Traffic Control Devices (MMUTCD), as revised, any supplemental specifications, and as specified herein.

The Contractor shall furnish, erect, and maintain all barricades, signs, and lights within the project limits, transport route, and around the perimeter of the project. Traffic regulators, where required are included as part of the contract item Flag Control.

The Contractor shall notify the Engineer a minimum of five (5) business days prior to the implementation of any closures. The Contractor shall coordinate his operations with Utilities and Contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA) to avoid conflicts in maintenance of traffic, construction signing, and to provide for the orderly progress of work.

The Contractor shall be responsible for all permits and fees related to the truss transportation. See special provisions for Utility Work, Existing Truss, Remove and Transport and Existing Truss, Transport and Install.

b. Construction Influence Area (C.I.A.). The construction influence area (CIA) shall consist of the width of the project right-of-way from the project point of beginning to the point of ending and extend before and after the project to the nearest intersections. The CIA shall also include the route from the project site to the staging area designated on the plans.

c. Traffic Restrictions. No work shall be performed or lane closures allowed on the holiday for Labor Day, on Monday, September 7, 2009, and for the holiday for Thanksgiving on Thursday, November 26, 2009, and the holiday for Christmas on Friday, December 25, 2009.

No work shall be performed or lane closures allowed on the holiday for New Year's Day, Friday, January 1, 2010, the holiday for Easter on Sunday, April 4, 2010, the holiday for Memorial Day on Monday, May 31, 2010, the holiday for Independence Day on Sunday, July 4, 2010 and the holiday for Labor Day on Monday, September 6, 2010.

All work shall be conducted during daytime hours only. No work shall be performed between the hours of 10:00 PM and 6:00 AM in accordance with the local noise ordinance. No deviations from these restrictions will be allowed unless otherwise approved by the Engineer.

One single closure in accordance with Typical No M0040 and M0140 shall be permitted on Williamson Street. Once work is initiated that includes any lane restrictions, that work shall be continuous until completed. A lack of work activity for more than two (2) days, with the exception

of holidays, will require the removal and replacement of lane restrictions at the contractor's expense. All lanes shall be open to traffic unless work is in progress which prohibits opening of lanes due to safety or other reasons approved by the Engineer.

d. Traffic Control Devices. All traffic control devices and their usage shall conform to the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), 2005 edition as amended, and as specified herein.

No overlays to alter sign legends will be allowed on this project. Where applicable, all contradictory speed limit signs shall be covered as specified in the standard specifications.

Where signs are no longer applicable, they shall be removed or have their legends completely covered with a sign cover. Bolts, nails, plastic, burlap, and duct tape are not to be used.

All diamond-shaped warning signs shall be 48" x 48" with black legends on reflectorized orange background unless otherwise noted. All signs shall have a minimum bottom height of 7 feet. Where signs are no longer applicable, they shall be removed or have their legends completely covered with plywood or an approved equal.

All temporary signs shall be constructed with legends and symbols flush to the sign face and not extending beyond the sign borders or edges.

All temporary signs that are to remain in place 30 days or more shall be installed on driven posts according to WZD-100-A. All other temporary signs may be installed on portable supports.

Distances shown between construction, warning, regulatory and guide signs shown on the typicals are approximate and may require field adjustment, as directed by the Engineer. The Contractor shall place W20-1 (Road Work Ahead) signs on all intersections or adjacent roads where construction activities may be encountered.

The Contractor shall routinely maintain the traffic control devices. Routine maintenance includes, but is not limited to, maintaining proper placement, weighting with sand bags, and replacing damaged devices.

All existing traffic control devices damaged or lost by the Contractor shall be replaced at the Contractor's expense.

For a single closure with no speed reduction utilizing traffic regulators, signs and channelizing devices shall be placed in accordance with Typical No M0140.

See Special Provisions for Utility Work, Existing Truss, Remove and Transport and Existing Truss, Transport and Install for additional information.

d. Measurement and Payment. The estimate of quantities for maintaining traffic is based on the maximum number of traffic control devices needed at one time.

Payment for traffic control devices shall be made in accordance with the special provision except for temporary sign quantities. Payment for temporary signs shall be made on the maximum square foot of dissimilar sign legends in use at any one time during the project. Any

additional signing or maintaining traffic devices required to expedite the construction shall be at the contractor’s expense.

MINIMUM MERGING TAPER LENGTH "L" (FEET)

OFFSET	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
FEET	25	30	35	40	45	50	55	60	65	70	
1	10	15	20	27	45	50	55	60	65	70	TAPER LENGTH "L" IN FEET
2	21	30	41	53	90	100	110	120	130	140	
3	31	45	61	80	135	150	165	180	195	210	
4	42	60	82	107	180	200	220	240	260	280	
5	52	75	102	133	225	250	275	300	325	350	
6	63	90	123	160	270	300	330	360	390	420	
7	73	105	143	187	315	350	385	420	455	490	
8	83	120	163	213	360	400	440	480	520	560	
9	94	135	184	240	405	450	495	540	585	630	
10	104	150	204	267	450	500	550	600	650	700	
11	115	165	225	293	495	550	605	660	715	770	
12	125	180	245	320	540	600	660	720	780	840	
13	135	195	266	347	585	650	715	780	845	910	
14	146	210	286	374	630	700	770	840	910	980	
15	157	225	307	400	675	750	825	900	975	1050	

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" = S x W 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	TAPER LENGTH
UPSTREAM TAPERS	
MERGING TAPER	L - MINIMUM
SHIFTING TAPER	1/2 L - MINIMUM
SHOULDER TAPER	1/3 L - MINIMUM
TWO-WAY TRAFFIC TAPER	100 ' - MAXIMUM
DOWNSTREAM TAPERS (USE IS OPTIONAL)	100 ' - MINIMUM (PER LANE)

MDOT Michigan Department of Transportation
TRAFFIC AND SAFETY
MAINTAINING TRAFFIC TYPICAL

TABLES FOR "L", "D" AND "B" VALUES

DRAWN BY: CON:AE:djf	JUNE 2006	M0020a	SHEET 1 OF 2
CHECKED BY: BMM	PLAN DATE:		
FILE: K:/DGN/TSR/STDS/ENGLISH/MNTTRF/M0020a.dgn	REV. 08/21/2006		

DISTANCE BETWEEN TRAFFIC CONTROL DEVICES "D" AND LENGTH OF LONGITUDINAL BUFFER SPACE ON "WHERE WORKERS PRESENT" SEQUENCES

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

GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE "B"

SPEED* MPH	LENGTH FEET
20	33
25	50
30	83
35	132
40	181
45	230
50	279
55	329
60	411
65	476
70	542

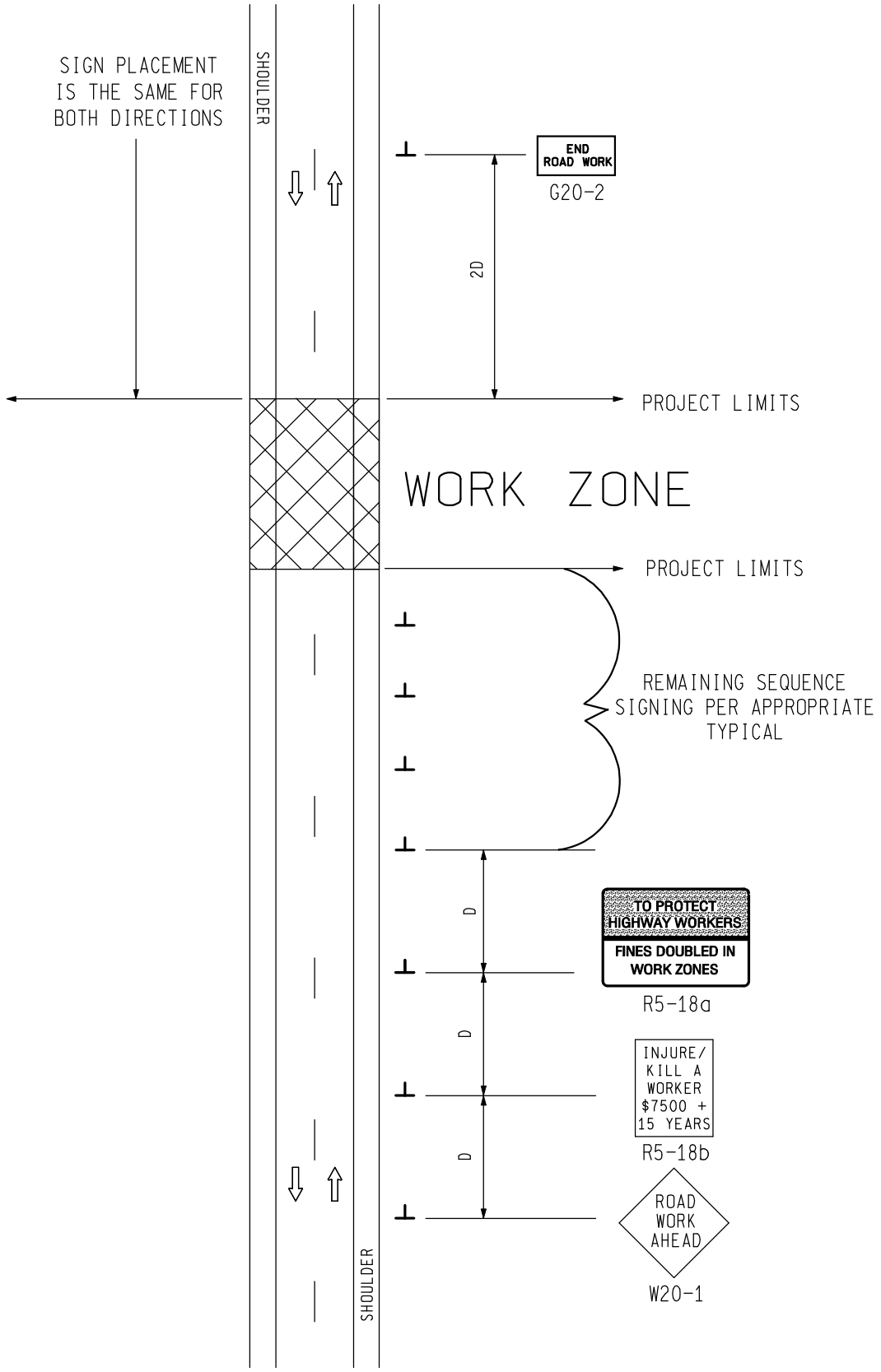
* POSTED SPEED, OFF PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

1 BASED UPON AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) BRAKING DISTANCE PORTION OF STOPPING SIGHT DISTANCE FOR WET AND LEVEL PAVEMENTS (A POLICY ON GEOMETRIC DESIGN OF HIGHWAY AND STREETS), AASHTO. THIS AASHTO DOCUMENT ALSO RECOMMENDS ADJUSTMENTS FOR THE EFFECT OF GRADE ON STOPPING AND VARIATION FOR TRUCKS.

MDOT Michigan Department of Transportation
TRAFFIC AND SAFETY
MAINTAINING TRAFFIC TYPICAL

TABLES FOR "L", "D" AND "B" VALUES

DRAWN BY: CON:AE:djf
CHECKED BY: BMM
JUNE 2006
PLAN DATE:
M0020a
SHEET 2 OF 2
FILE: K:/DGN/TSR/STDS/ENGLISH/MNTTRF/M0020a.dgn
REV. 08/21/2006



SIGN = 68 ft2 - TYPE B
FOR ONE DIRECTION OF TRAFFIC
W20-1 QUANTITY INCLUDED
WITH APPROPRIATE TYPICAL
FOR SEQUENCE SIGNING

NOT TO SCALE

MDOT Michigan Department of Transportation
TRAFFIC AND SAFETY
MAINTAINING TRAFFIC TYPICAL

TYPICAL ADVANCE SIGNING TREATMENT FOR LONG, INTERMEDIATE AND SHORT TERM STATIONARY WORK ZONE OPERATIONS OF LESS THAN TWO MILES IN LENGTH WHERE TRAFFIC CONTROL DEVICES MAY REMAIN AT END OF WORK DAY ON AN UNDIVIDED TWO-WAY ROADWAY

DRAWN BY: CON:AE:djf	JUNE 2006	M0040a	SHEET 1 OF 2
CHECKED BY: BMM	PLAN DATE:		

FILE: PW:R0/TS/Typicals/Signs/MT NON FWY/M0040a.dgn REV. 08/15/2007

NOTES

30. THE APPROPRIATE ADVANCE SIGNING SEQUENCE(S), (M0030a THROUGH M0080a) SHALL BE USED ON ALL PROJECTS.

32. THESE SIGNS SHALL BE LEFT IN PLACE AT THEIR PRESCRIBED LOCATIONS FOR THE DURATION OF THE PROJECT AND UNTIL ALL TEMPORARY TRAFFIC CONTROL HAS BEEN REMOVED.

35. THESE SIGNS ARE INTENDED TO BE USED WITHIN THE LIMITS OF THE TEMPORARY SEQUENCE SIGNING AS IS SHOWN ON 1 OF 2. THESE SIGNS ARE NOT TO BE INTERMINGLED WITH ANY OTHER TEMPORARY SEQUENCE SIGNING EXCEPT AS SHOWN.

SIGN SIZES

G20-2	-	48″ x 24″
R5-18a	-	96″ x 60″
R5-18b	-	48″ x 60″
W20-1	-	48″ x 48″

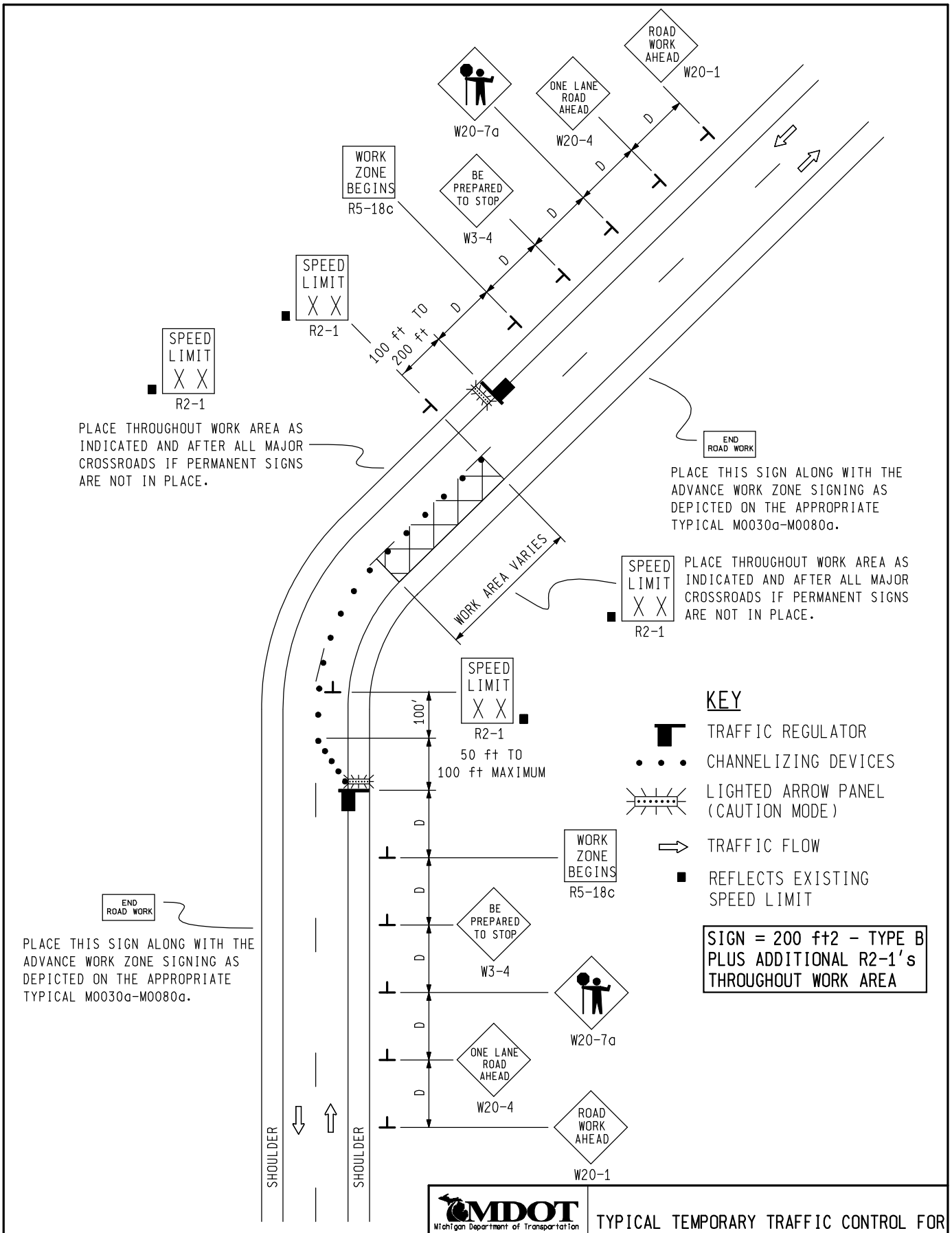
NOT TO SCALE

MDOT Michigan Department of Transportation
TRAFFIC AND SAFETY
MAINTAINING TRAFFIC TYPICAL

TYPICAL ADVANCE SIGNING TREATMENT FOR LONG, INTERMEDIATE AND SHORT TERM STATIONARY WORK ZONE OPERATIONS OF LESS THAN TWO MILES IN LENGTH WHERE TRAFFIC CONTROL DEVICES MAY REMAIN AT END OF WORK DAY ON AN UNDIVIDED TWO-WAY ROADWAY

DRAWN BY: CON:AE:djf	JUNE 2006	M0040a	SHEET 2 OF 2
CHECKED BY: BMM	PLAN DATE:		

FILE: PW_RD/TS/Typicals/Signs/MT NON FWY/M0040a.dgn REV. 08/15/2007



NOT TO SCALE

MDOT Michigan Department of Transportation

TRAFFIC AND SAFETY

MAINTAINING TRAFFIC TYPICAL

TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING TRAFFIC REGULATORS, NO SPEED REDUCTION

DRAWN BY: CON:AE:djf	JUNE 2006	M0140a	SHEET 1 OF 2
CHECKED BY: BMM	PLAN DATE:		

FILE: PW_RD/TS/Typicals/Signs/MT NON FWY/M0140a.dgn REV. 08/17/2007

NOTES

1H. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES
AND LENGTH OF LONGITUDINAL BUFFERS
SEE **M0020a** FOR "D" VALUES.

2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.

3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.

3A. THE "WORK ZONE BEGINS" (R5-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.

4A. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES IN THE TAPER AREA(S) SHOULD BE 15 FEET AND SHOULD BE EQUAL IN FEET TO TWICE THE POSTED SPEED IN MILES PER HOUR IN THE PARALLEL AREA(S).

5. FOR OVERNIGHT CLOSURES, CHANNELIZING DEVICES SHALL BE LIGHTED PLASTIC DRUMS.

6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.

7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHLY REQUIREMENTS STIPULATED IN THE 2005 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.

9. ALL TRAFFIC REGULATORS SHALL BE PROPERLY TRAINED AND SUPERVISED.

9A. IN ANY OPERATION INVOLVING MORE THAN ONE TRAFFIC REGULATOR, ONE PERSON SHOULD BE DESIGNATED AS HEAD TRAFFIC REGULATOR.

10. ALL TRAFFIC REGULATORS' CONDUCT, THEIR EQUIPMENT, AND TRAFFIC REGULATING PROCEDURES SHALL CONFORM TO THE CURRENT EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CURRENT EDITION OF THE MDOT HANDBOOK ENTITLED "TRAFFIC REGULATORS INSTRUCTION MANUAL."

11. WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS, APPROPRIATE LIGHTING SHALL BE PROVIDED TO SUFFICIENTLY ILLUMINATE THE TRAFFIC REGULATOR'S STATIONS.

12E. THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS SHALL BE NO MORE THAN 2 MILES IN LENGTH UNLESS RESTRICTED FURTHER IN THE SPECIAL PROVISIONS FOR MAINTAINING TRAFFIC. ALL SEQUENCES OF MORE THAN 2 MILES IN LENGTH WILL REQUIRE WRITTEN PERMISSION FROM THE ENGINEER BEFORE PROCEEDING.

13. WHEN INTERSECTING ROADS OR SIGNIFICANT TRAFFIC GENERATORS (SHOPPING CENTERS, MOBILE HOME PARKS, ETC.) OCCUR WITHIN THE ONE-LANE TWO-WAY OPERATION, INTERMEDIATE TRAFFIC REGULATORS AND APPROPRIATE SIGNING SHALL BE PLACED AT THESE LOCATIONS.

14. ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W3-4 SIGNS.

15. THE HAND HELD (PADDLE) SIGNS REQUIRED BY THE MMUTCD TO CONTROL TRAFFIC WILL BE PAID FOR AS PART OF FLAG CONTROL.

28E. THE TRAFFIC REGULATORS SHOULD BE POSITIONED AT OR NEAR THE SIDE OF THE ROAD SO THAT THEY ARE SEEN CLEARLY AT A MINIMUM DISTANCE OF 500 FEET. THIS MAY REQUIRE EXTENDING THE BEGINNING OF THE LANE CLOSURE TO OVERCOME VIEWING PROBLEMS CAUSED BY HILLS AND CURVES.

SIGN SIZES

DIAMOND WARNING - 48" x 48"
R2-1 REGULATORY - 48" x 60"
R5-18c REGULATORY - 48" x 48"

NOT TO SCALE

MDOT Michigan Department of Transportation TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING TRAFFIC REGULATORS, NO SPEED REDUCTION		
DRAWN BY: CON:AE:djf CHECKED BY: BMM	JUNE 2006 PLAN DATE:	M0140a	SHEET 2 OF 2
FILE: PW RD/TS/Typicals/Signs/MT NON FWY/M0140a.dgn REV. 08/17/2007			

SIGN MATERIAL SELECTION TABLE

	SIGN MATERIAL TYPE		
SIGN SIZE	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 IOR IISIGNS.
VERTICAL JOINTS ARE NOT PERMITTED.
HORIZONTIAL JOINTS THROUGH SIGN LEGEND OR SYMBOLS ARE NOT PERMITTED.

POST SIZE REQUIREMENTS TABLE

	POST TYPE		
SIGN AREA (ft^2)	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.

NOT TO SCALE

File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH

MDOT Michigan Department of Transportation

PREPARED BY TRAFFIC AND SAFETY SUPPORT AREA

DRAWN BY: CON/ECH

CHECKED BY: AUG

ENGINEER OF DELIVERY

ENGINEER OF DEVELOPMENT

PENDING
FHWA APPROVAL DATE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR

GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS

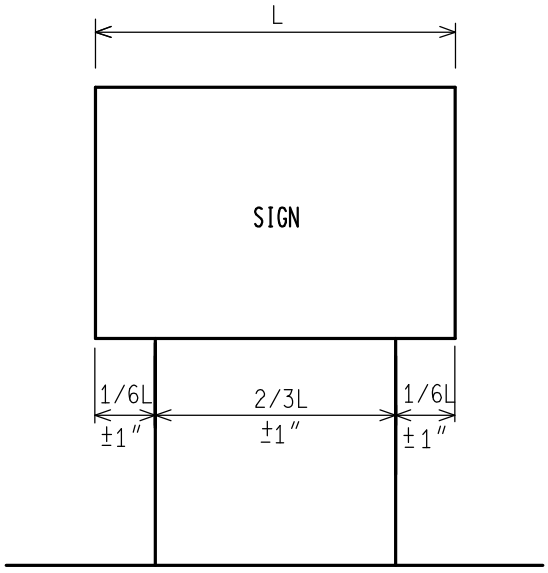
8/2006
PLAN DATE

WZD-100-A

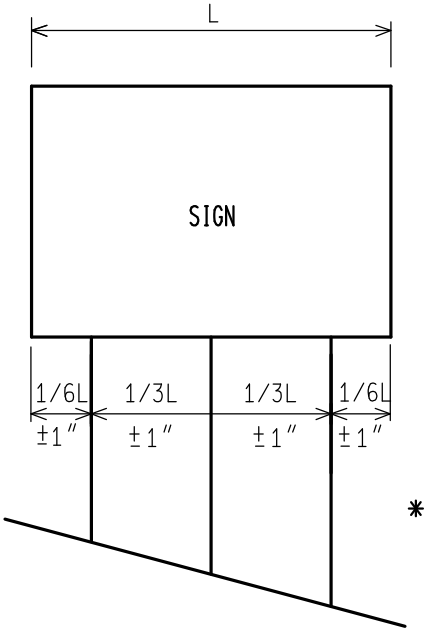
SHEET 1 of11

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

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 HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 2 of11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				

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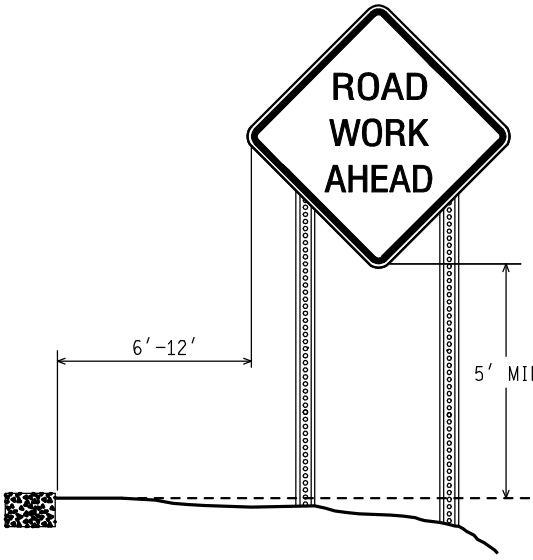
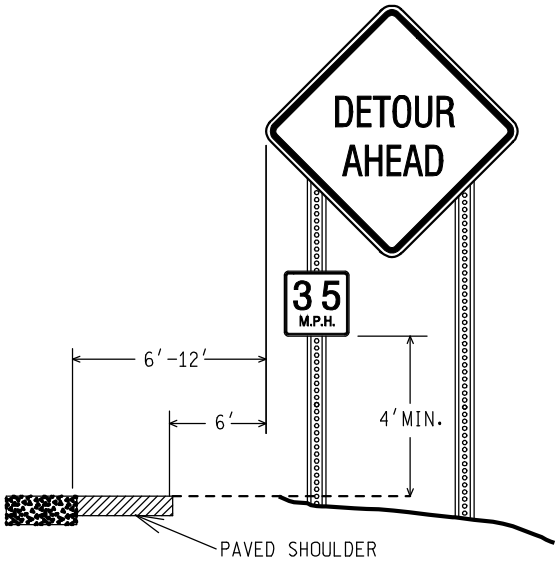
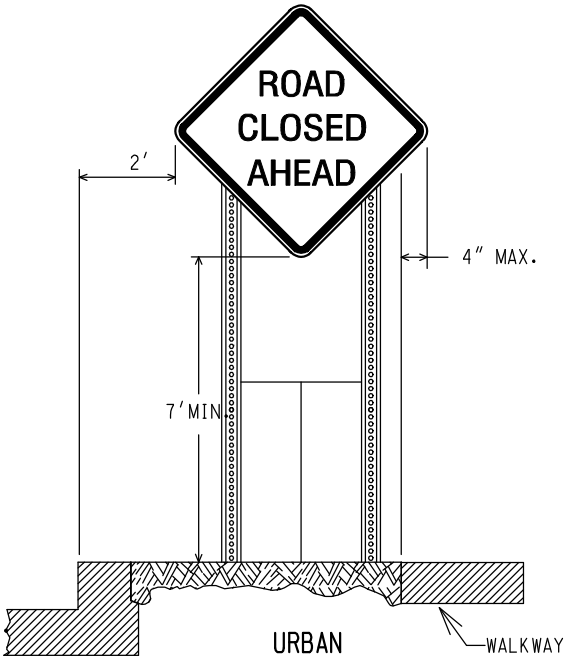


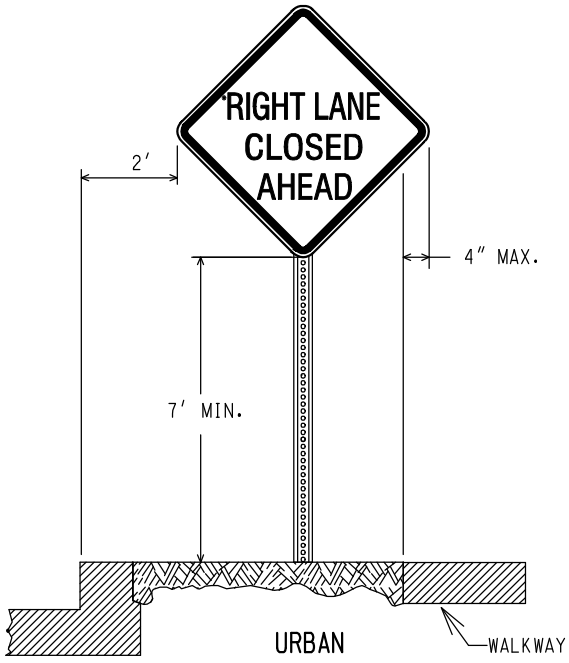
RURAL



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 HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 3 of11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				

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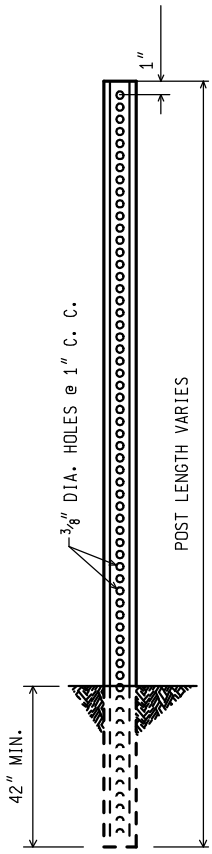

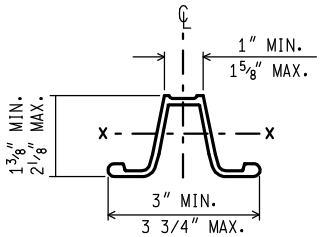

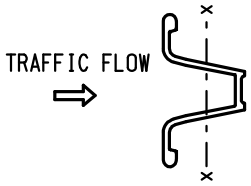

WEIGHT = 3 lbs/ft
SECT. MOD. X.-X. = 0.31 CUBIC INCHES MIN.

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 HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 4 of11
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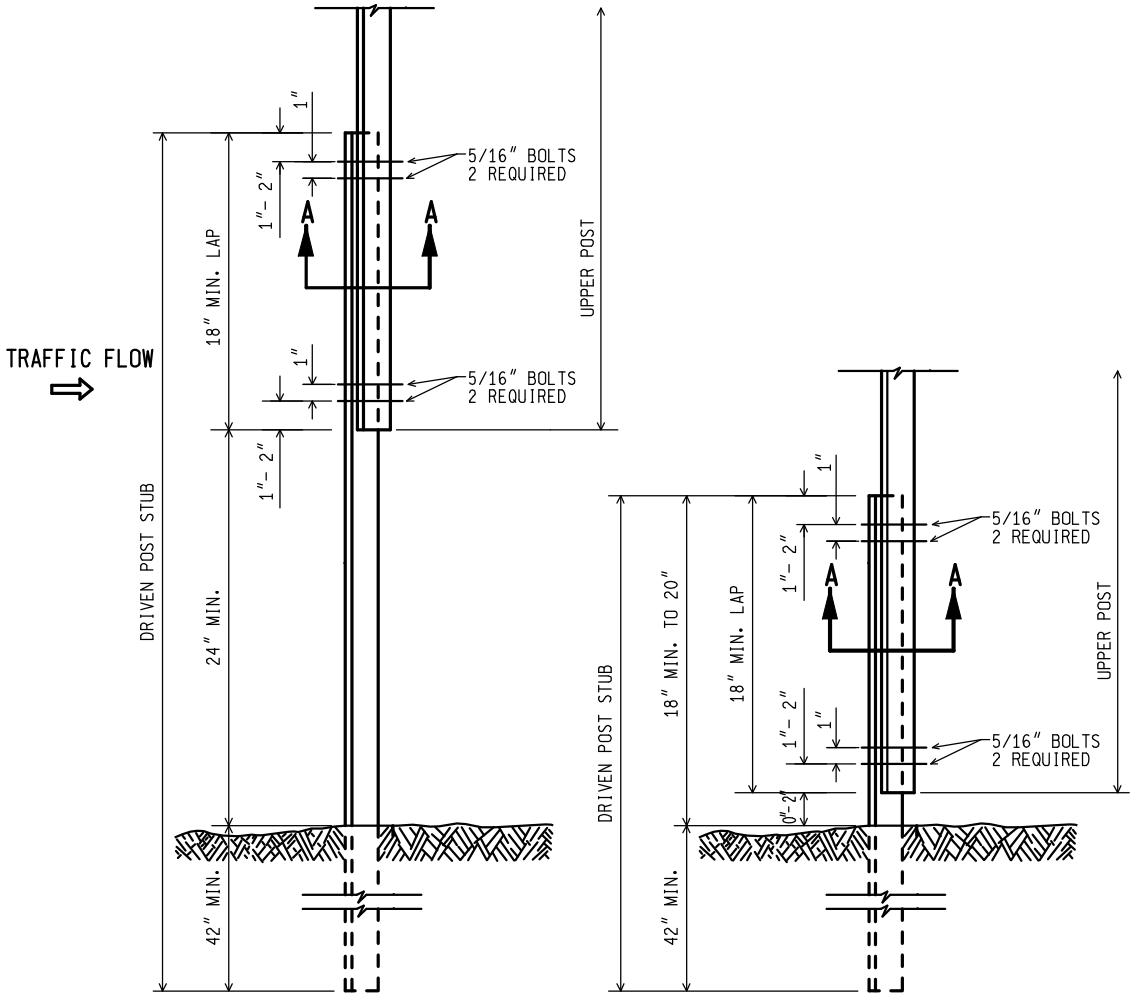

UPPER SPLICE

LOWER SPLICE

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 HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 5 of11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				

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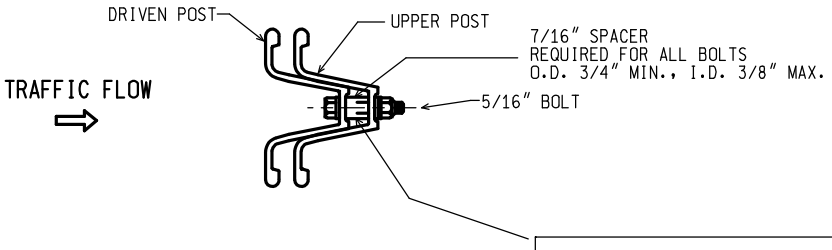
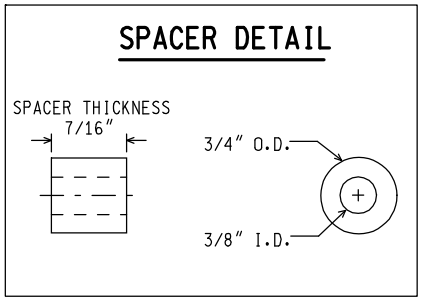


SECTION A-A



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.

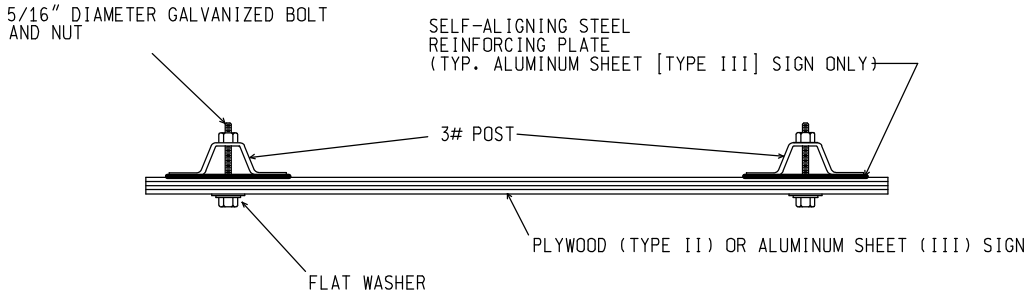
4. THE DRIVEN POST SHALL ALWAYS BE MOUNTED IN FRONT OF THE UPPER POST WITH RESPECT TO THE ADJACENT ONCOMING TRAFFIC, REGARDLESS OF THE DIRECTION THE SIGN IS FACING.

5. THE SPLICE LAP SHALL BE FASTENED BY FOUR-5/16" DIA. GALVANIZED A449 BOLTS (SAE J429 GRADE 5) OR GALVANIZED A325 BOLTS.

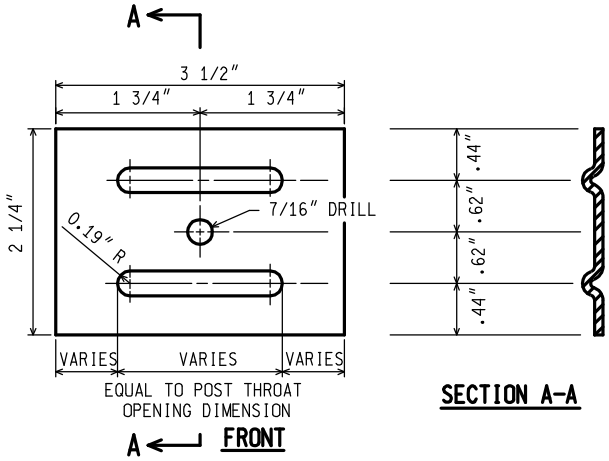
3 lb. U - CHANNEL STEEL POST
(WITH SPLICE)

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 6 of11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				



SIGN TO 3 lb. POST CONNECTION



SECTION A-A

NOTES: (FOR STEEL SIGN REINF' PLATE)

1. MATERIAL: 12 GAUGE CARBON STEEL.
2. TOLERANCE ON ALL DIMENSIONS ± 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 HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 7 of11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				

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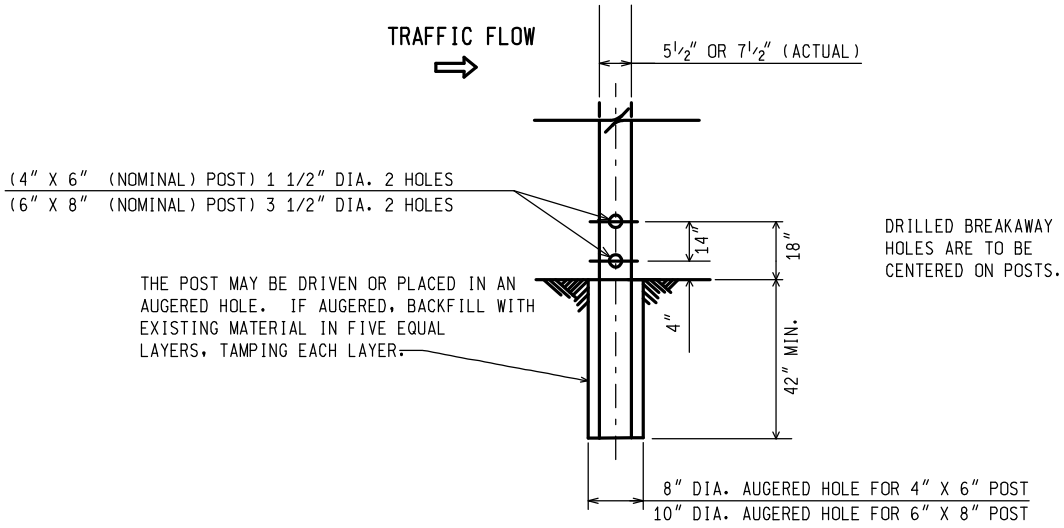
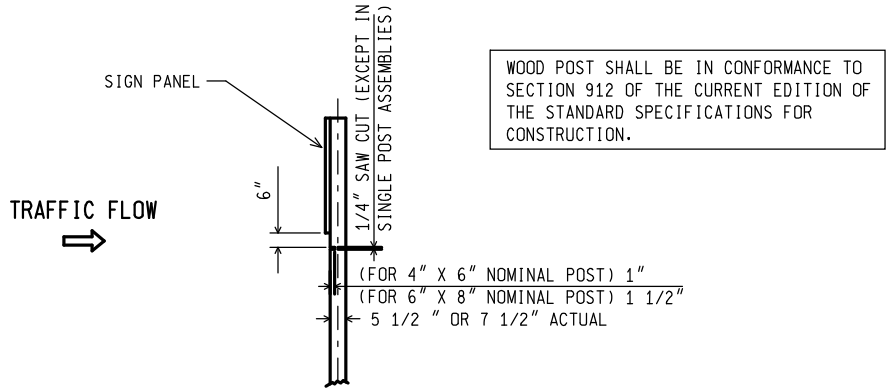


WOOD POST BREAKAWAY HOLES/ DIRECT EMBEDMENT DETAILS

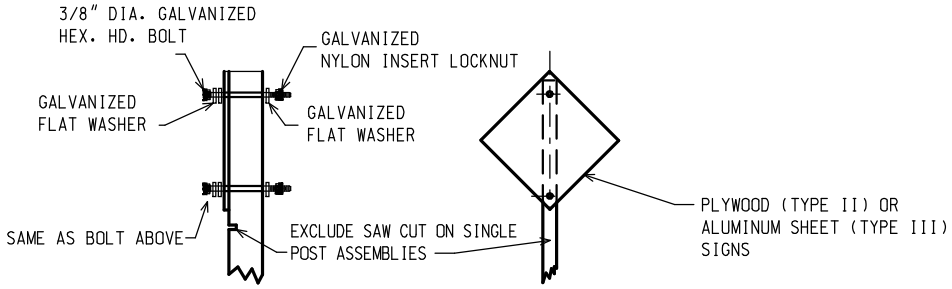


SAW CUT DETAIL (MULTIPLE POST INSTALLATIONS)

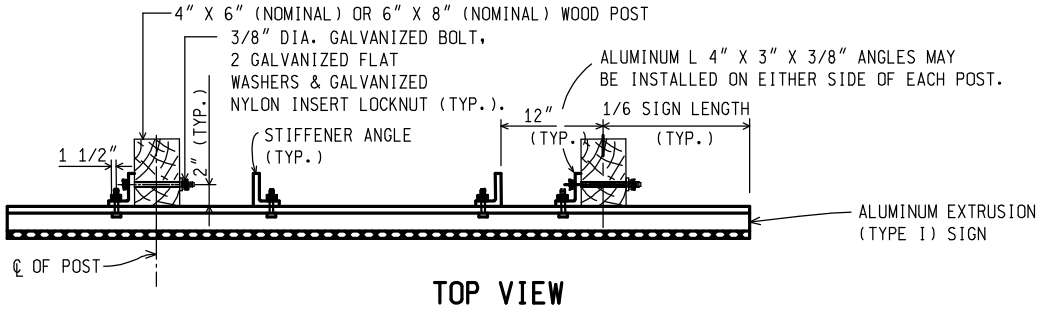
WOOD POST DETAILS

NOT TO SCALE

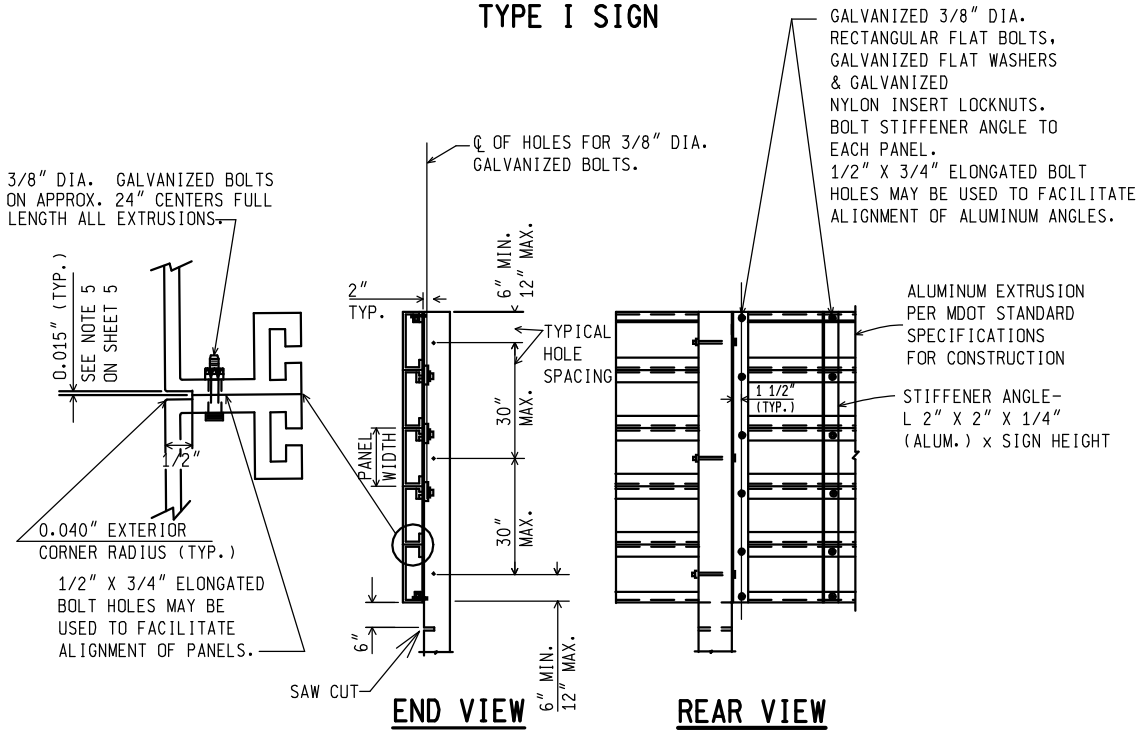
MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 8 of11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				



TYPE II AND TYPE III SIGNS



TOP VIEW
TYPE I SIGN



END VIEW
REAR VIEW

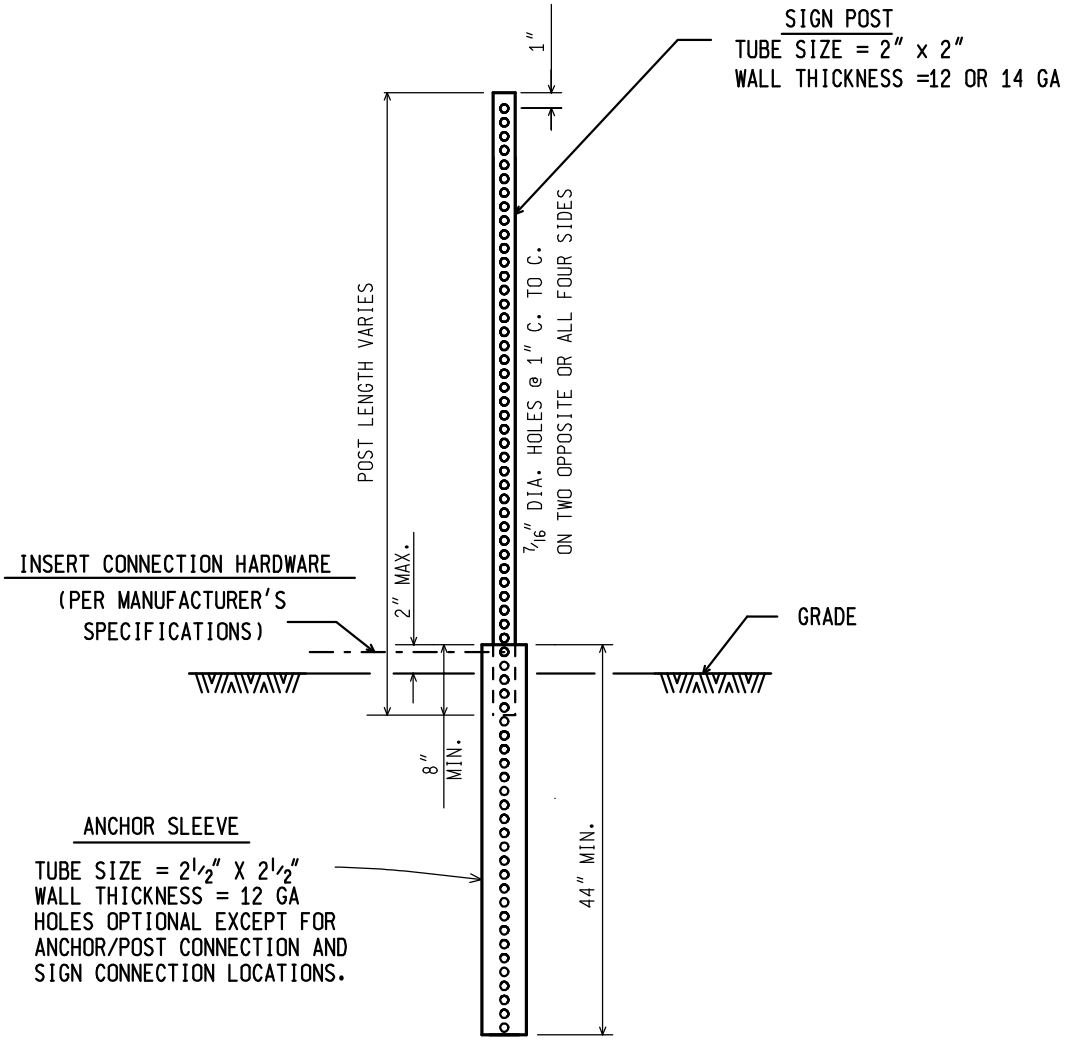
TYPE I SIGN - ERECTION DETAILS

WOOD POST CONNECTIONS

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 9 of11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				

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 HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 10 of 11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				

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 HORIZONTIAL 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, COVER, 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.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 11 of 11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMIT

ISSUED TO:

Michigan Dept. of Transportation
55 East Morley Drive
Saginaw, Michigan 48601

Permit No.	08-73-0010-P
Issued	May 16, 2008
Extended	
Revised	
Expires	May 16, 2013

This permit is being issued by the Michigan Department of Environmental Quality (MDEQ) under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) and specifically:

- ☒ **Part 301 Inland Lakes and Streams**
- ☐ **Part 315 Dam Safety**
- ☐ **Part 325 Great Lakes Submerged Lands**
- ☐ **Part 323 Shorelands Protection and Management**
- ☐ **Part 303 Wetlands Protection**
- ☐ **Part 353 Sand Dune Protection and Management**
- ☒ **Part 31 Floodplain/Water Resources Protection**

Permission is hereby granted, based on permittee assurance of adherence to State requirements and permit conditions to:

Permitted Activity:

To restore the existing structure at the State Street crossing of Cass River; restore truss spans and replace abutments and pier increase rise to 22.3; and place road fill and riprap slope protection.

Water Course Affected: Cass River
Property Location: Saginaw **County,** Bridgeport Township, **Section** 16
Subdivision, Lot **Town/Range** 11N, 5E **Property Tax No.**

Authority granted by this permit is subject to the following limitations:

A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31, Water Resources Protection, of the NREPA.
C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project, or until its date of expiration.
D. All work shall be completed in accordance with the plans and the specifications submitted with the application and/or plans and specifications attached hereto.
E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved herein.
F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that act.
G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his/her rights.
I. Permittee shall notify the MDEQ within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office addressed thereon.
J. This permit shall not be assigned or transferred without the written approval of the MDEQ.
K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
L. Work to be done under authority of this permit is further subject to the following special instructions and specifications:

1) This permit is being issued for the maximum time allowed under Part 301, Inland Lakes and Streams and Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended, including all permit extensions allowed under the administrative rules R 281.813 and R 281.923. Therefore, no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by the MDEQ, will be for a five-year period beginning at the date of issuance.

2) All work shall be completed in accordance with plans dated received March 17, 2008; kept on file at the MDEQ's Land and Water Management Division.

3) In issuing this permit, the MDEQ has relied on the information and data which the permittee has provided in connection with the permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete, or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.

4) The permittee is responsible for acquiring all necessary easements or rights-of-way before commencing any work authorized by this permit. All construction operations relating to or part of this project shall be confined to the existing right-of-way limits or other acquired easements.

5) The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state or federal approval, or authorizations necessary to conduct the activity.

6) Noncompliance with these terms and conditions, and/or the initiation of other regulated activities not specifically authorized by this permit shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, the MDEQ may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.

7) If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity and/or mitigation plan from the MDEQ. Such revision requests shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.

8) This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to accept transfer of the permit. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties which includes all the above information may be provided to the MDEQ. The MDEQ will review the request and if approved, will provide written notification to the new owner.

9) Authority granted by this permit does not waive compliance requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA. Any discharge of sediment into waters of the state and/or off the road right-of-way is a violation of this permit, Part 91, and Part 31, Water Resources Protection, of the NREPA. A violation of these parts subjects the permittee to potential fines and penalties.

10) Temporary soil erosion and sedimentation control measures shall be installed before commencement of the earth change and shall be maintained daily. Temporary soil erosion and sedimentation control measures shall be maintained until permanent soil erosion and sedimentation control measures are in place and the area is stabilized. Permanent soil erosion and sedimentation control measures for all slopes, channels, ditches, or any disturbed area shall be installed within five (5) calendar days after final grading or the final earth change has been completed.

11) All raw areas resulting from the permitted construction activity shall be promptly and effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner so as to prevent erosion and any potential siltation to surface waters or wetlands.

12) All raw earth within 100 feet of a lake, stream, or wetland that is not brought to final stabilization by the end of the active growing season shall be temporarily stabilized with mulch blankets in accordance with the following dates: September 20th for the Upper Peninsula, October 1st for the Lower Peninsula north of US-10, and October 10th for the Lower Peninsula south of US-10.

13) All dredge/excavated spoils including organic and inorganic soils, vegetation, and other material removed shall be placed on upland (non-wetland, non-floodplain or non-bottomland), prepared for stabilization, and stabilized with sod and/or seed and mulch in such a manner so as to prevent and ensure against erosion of any material into any waterbody, wetland, or floodplain.

14) All fill/backfill shall consist of clean inert material which will not cause siltation nor contain soluble chemicals, organic matter, pollutants, or contaminants. All fill shall be CONTAINED in such a manner so as not to erode into any surface water, floodplain, or wetland. All raw areas associated with the permitted activity shall be STABILIZED with sod and/or seed and mulch, riprap, or other technically effective methods as necessary to prevent erosion.

15) Graded riprap consisting of clean stone or cut rock shall be placed in sufficient quantity over geotextile fabric so all voids are filled to provide adequate erosion protection. The use of broken concrete or asphalt is not authorized at this site.

16) Prior to the removal of the existing structures located in the water or wetland; cofferdams of steel sheet piling shall be installed to isolate all construction activities from the water. The cofferdam shall be maintained in good working order throughout the duration of the project. Upon project completion, the accumulated materials shall be removed and disposed of at an appropriate upland site. The top 12 inches of fill into the cofferdam shall consist of clean washed aggregate. The cofferdam shall then be removed in its entirety.

17) Any change to the road grade elevations other than that shown by the plans will require prior approval by the MDEQ's Land and Water Management Division.

18) All spoils excavated from the uplands and river dredging including organic and inorganic soils, vegetation, and debris shall be placed on-site above the ordinary high water mark, leveled, covered with six (6) inches of clean topsoil obtained from off-site, and stabilized with sod, seed and mulch, or paved over in such a manner as not to erode into any waterbody or wetland. This shall be done as soon as feasible upon completion of spoils placement or within a time not greater than three (3) months after spoils placement. Side slopes of cover material shall be no steeper than 3:1 (horizontal:vertical).

19) Use or placement of the spoils shall be done in such a manner to prevent nuisance conditions and control the release of fugitive dust or visible emissions as required by Part 55, Air Pollution Control, of the NREPA, or the rules promulgated under this Act. .

20) The spoils shall not be mixed with other waste or materials that are not inert as defined in Part 115, Solid Waste Management, of the NREPA.

21) The provisions of this permit do not preclude the permittee from disposal of the spoils in accordance with Part 115 at a properly licensed Type II solid waste disposal facility or at an out-of-state facility in accordance with the State's solid waste disposal regulations.

22) Within three (3) months after final placement of spoils, the permittee shall obtain a boundary survey of the area used as a disposal site, including the cover and side slopes thereof. The permittee shall enter said description on the enclosed Restrictive Covenant, have the Restrictive Covenant signed by the proper corporate officers, have the signatures properly witnessed and notarized, and record the Restrictive Covenant with the appropriate County Register of Deeds. A copy of the recorded document shall be submitted to the MDEQ, P.O. Box 30028, Lansing, MI 48909, Attention: Duane Roskoskey, within four (4) months after final placement of spoils.

23) In issuing this permit, the MDEQ has relied on the information and data, which the permittee has provided in connection with the permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, or additional information demonstrates that the spoils are causing environmental contamination or that new State or Federal regulations are promulgated which cause this disposal to be inappropriate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.

24) A licensed professional engineer of the permittee's choice shall certify to the MDEQ that the excavation and covering of contaminated soils was completed per MDEQ permit requirements. The permittee is responsible to insure the project is constructed in accordance with all drawings and specifications contained in this permit. Certification shall be provided no later than three (3) months after the spoils are placed on-site and covered.

25) The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representatives of the permittee, undertaken in connection with this permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.

Steven E. Chester, Director
Department of Environmental Quality

By _____
Gerald W. Fulcher, Jr. P.E. Chief
Transportation and Flood Hazard Management Unit
Land and Water Management Division

cc: Bridgeport Township Clerk
Saginaw County Drain Commission
Saginaw County Public Health
Jim Baker, MDNR
Tim Reis, MDNR
Jon Bloemker, MDEQ
Cathy Sleight, MDEQ
Brenda Brouillet, MDEQ

Notice of Authorization

Permit Number 08-73-0010-P

Issued: 05/16/2008
Expiration Date: 05/16/2013

The State of Michigan, Department of Environmental Quality, Land and Water Management Division, P. O. Box 30458, Lansing, Michigan 48909-7958, 517-335-3183, under provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and specifically:

- ☒ Part 31 Floodplain/Water Resources Protection.
- ☒ Part 301 Inland Lakes and Streams.
- ☐ Part 303 Wetland Protection.
- ☐ Part 315 Dam Safety.
- ☐ Part 325 Great Lakes Submerged Lands.
- ☐ Part 323 Shorelands Protection and Management.
- ☐ Part 353 Sand Dune Protection and Management.

Authorized activity:

To restore the existing structure at the State Street crossing of Cass River; restore truss spans and replace abutments and pier increase rise to 22.3; and place road fill and riprap slope protection.

To be conducted at property located: Saginaw County, Waterbody: Cass River
Section 16, Town 11N, Range 5E, Bridgeport Township

Permittee: Michigan Dept. of Transportation
55 East Morley Drive
Saginaw, MI 48601

Steven E. Chester, Director
Department of Environmental Quality

Holly Vickers
District Representative

This notice must be displayed at the site of work.
Laminating this notice or utilizing sheet protectors is recommended.

Please refer to the above Permit Number with any questions or concerns.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MISCELLANEOUS REMOVALS

BCY:KAZ 1 of 1 C&T:APPR:DMG:DBP: 09-08-08

a. Description. Furnish all labor, materials and equipment required to remove various planters, gates and bollards as noted on the plans. Backfill and restore all disturbed areas according to the Standard Specifications for Construction and as directed by the Engineer.

Complete all removals according to the Standard Specifications for Construction and this special provision. Dispose of all materials off-site according to subsection 204.03.B of the Standard Specifications for Construction.

b. Materials. Backfill excavated areas with granular material or native soils. Restore disturbed areas in kind including topsoil, seed, fertilizer and mulch as directed by the Engineer.

c. Construction. Completely remove bollards, gates and planters including footings, foundations and all incidental attachments.

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

Contract Item (Pay Item)	**Pay Unit**
Bollard, Rem	Each
Planter, Conc, Rem	Each
Gate, Rem	Each

Bollard, Rem; **Planter, Conc, Rem** and **Gate, Rem** includes all labor, equipment, materials and disposal necessary to complete the worked as described.

Off-site disposal of all removed materials shall be according to the standard specifications. Grading and restoration of the disturbed areas will be included in the associated removal item and will not be paid for separately.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TURBIDITY CURTAIN

a. Description. This work shall consist of furnishing and placing a geosynthetic barrier totally enclosing construction activities within watercourses to confine sedimentation within the construction area. Provide a floating or staked turbidity curtain, not silt fence, for water depths as shown on the details attached. The turbidity curtain shall be a pre-assembled system, including the geotextile/geomembrane, connection and securing mechanisms, flotation devices, stakes, and ballast chain. The Contractor shall provide a system which meets this specification, appropriate for the site conditions such as depth (shown on plans), current, and wind or waves. Construct a turbidity curtain according to the Standard Specifications for Construction, this special provision, and the details as shown on the plans.

b. Materials.

Geosynthetic. The geosynthetic shall meet the minimum physical requirements for *Stabilization Geotextile*, except the permittivity (ASTM D 4491) requirement shall be 0.2 sec^{1} maximum and the trapezoidal tear strength requirement shall be 50 pounds minimum. Geosynthetics may be polymer impregnated to negate permittivity and opening size requirements. Hemmed pockets shall be sewn or heat bonded to accommodate flotation devices and bottom weights. Panel ends shall have metal grommets placed through a reinforced hem. Connections between panels shall be tightly tied with synthetic or wire rope to prevent flow through the joint.

Flotation. Flotation devices shall be closed-cell polystyrene. The buoyancy (volume) required will depend upon site conditions; however, sufficient freeboard shall be provided to prevent overtopping.

Stakes. Stakes, when used to assist in maintaining alignment of the curtain, shall be hardwood or steel with sufficient length and cross-section to support the curtain. External supports may be used; however, embedment depth shall not be less than 1.5 feet. Stake spacing shall not exceed 6.5 feet.

Hardware. All hardware such as stakes, ballast chain, connection bolts, reinforcement plates, and tension cables shall be galvanized, stainless steel, aluminum, or otherwise corrosion resistant. The ballast chain shall have sufficient mass to maintain the geosynthetic in a vertical position, but shall not be less than 0.7 pounds/foot.

c. Construction. The turbidity curtain shall be placed according to locations shown on the plans, details, and according to the manufacturer's published installation guidelines or as directed by the Engineer. In streams, the turbidity curtain shall be placed parallel to flow. The turbidity curtain system shall be selected to handle site-specific drainage or flow patterns. The Contractor shall be responsible to provide and maintain sufficient anchors, tie-downs, or other mechanisms to insure proper position and performance of the turbidity curtain.

In situations with extreme flow, the turbidity curtain may require a redirectional barrier on the upstream end such as concrete barrier wall to enhance performance. Any visible plume of cloudy water outside the protected construction area shall constitute inadequate performance of the turbidity curtain.

The Contractor shall immediately modify, adjust or repair any portion of turbidity curtain to correct inadequate performance and eliminate any sediment plume.

Turbidity curtains shall maintain continuous contact with the bottom throughout the entire construction area. Excess curtain shall lay without wrinkles on the bottom, turned towards the construction activity. The turbidity curtain shall be situated at the appropriate distance from the construction activity to avoid interference resulting in sediment discharge to the unprotected area.

The Contractor shall maintain the turbidity curtain until the construction activity within the watercourse is complete and the turbidity is reduced to acceptable levels as approved by the Engineer. Maintaining shall include keeping a tight alignment around the work area or shoreline and sediment removal as necessary.

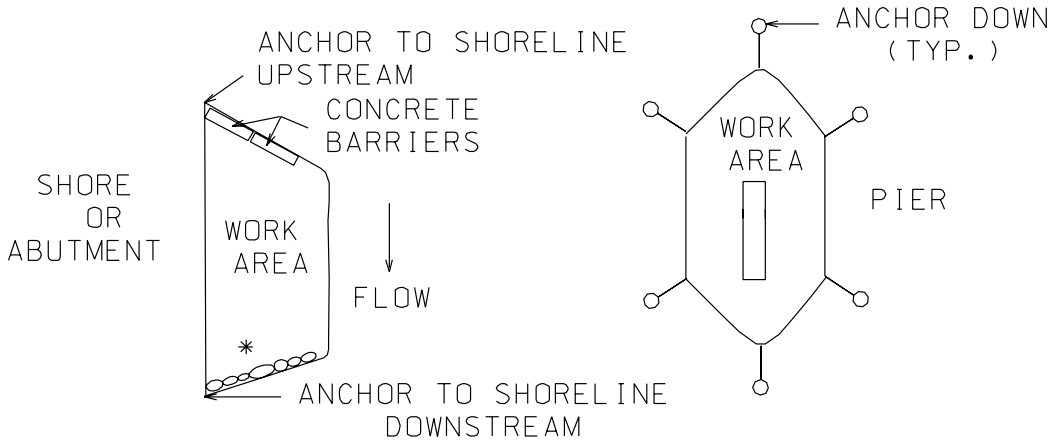
d. Measurement and Payment. The completed work as described shall be paid for at the contract unit price for the following contract items (pay items):

Contract Item (Pay Item)	**Pay Unit**
~~Turbidity Curtain (Shallow)~~	~~Foot~~
Turbidity Curtain (Deep)	Foot

The item **Turbidity Curtain (Shallow)** or **(Deep)** will be measured from the plan quantities and will be paid for by length in feet, measured linearly across the top of the curtain. Payment for **Turbidity Curtain (Shallow)** or **(Deep)** includes furnishing all material, labor, and equipment necessary to furnish, place and stake the Turbidity curtain (Shallow) or (Deep), maintain proper alignment, remove and dispose of sediment, remove the **Turbidity Curtain (Shallow)** or **(Deep)** and all appurtenances upon completion of the project.

Install **Turbidity Curtain (Shallow)** when water depths are 2 feet or less, and install **Turbidity Curtain (Deep)** when water depths are greater than 2 feet.

3 of 4

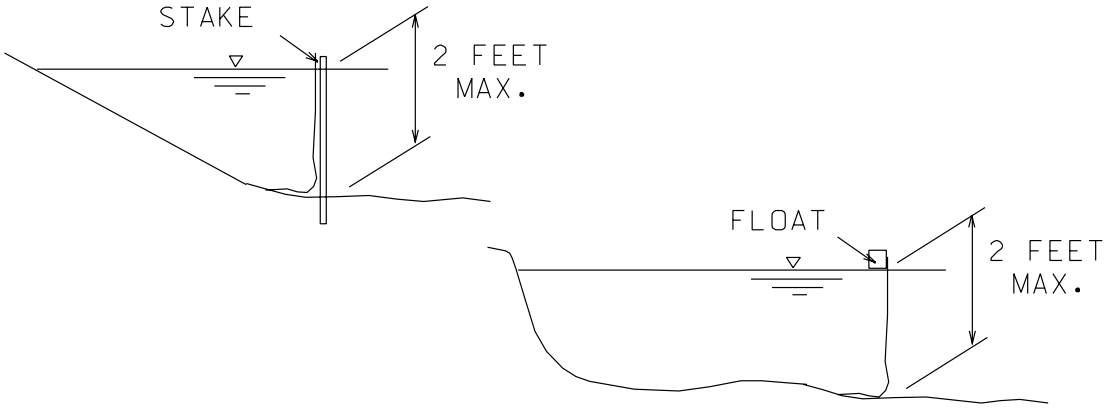


SHORELINE CONSTRUCTION

* PLACE ADDITIONAL WEIGHTS (AS NEEDED) ON DOWNSTREAM SIDE OF INSIDE BOTTOM FACE OF CURTAIN.

IN-STREAM CONSTRUCTION

ANCHOR CURTAIN TO MAINTAIN STATIONARY LOCATION.



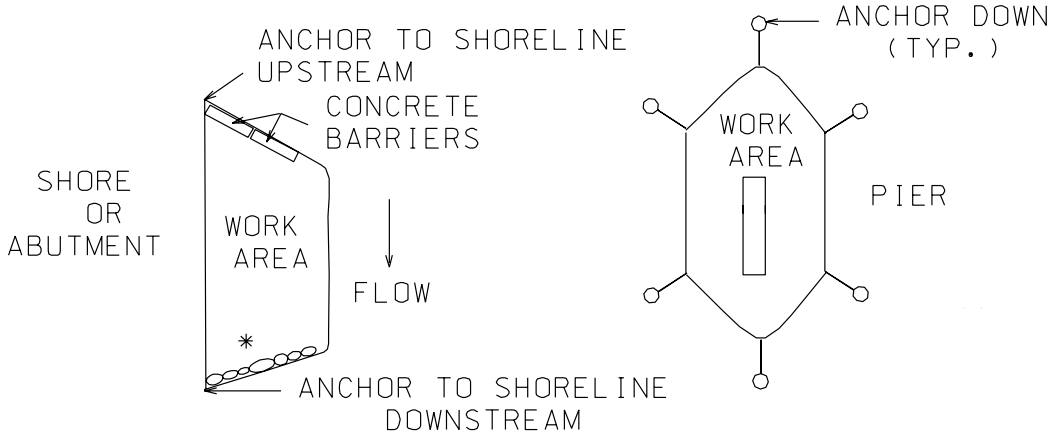
TURBIDITY CURTAIN (SHALLOW) SECTIONS

IN WATERCOURSE AREAS WHERE WATER IS 2 FEET DEEP OR LESS, TURBIDITY CURTAIN (SHALLOW) WILL BE USED. ANCHOR THE CURTAIN UPSTREAM AND DOWNSTREAM AS NEEDED TO SECURE IN PLACE.

FILE NAME: turbcurt.dgn

DATE 6/9/06 TURBIDITY CURTAIN (SHALLOW)

4 of 4

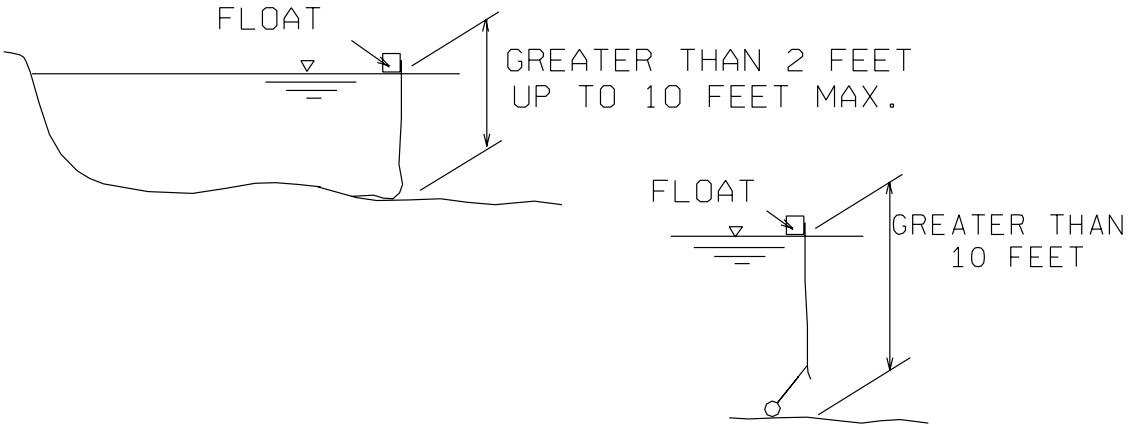


SHORELINE CONSTRUCTION

* PLACE ADDITIONAL WEIGHTS (AS NEEDED) ON DOWNSTREAM SIDE OF INSIDE BOTTOM FACE OF CURTAIN.

IN-STREAM CONSTRUCTION

ANCHOR CURTAIN TO MAINTAIN STATIONARY LOCATION.



TURBIDITY CURTAIN (DEEP) SECTIONS

IN WATERCOURSE AREAS WHERE WATER IS GREATER THAN 2 FEET DEEP, TURBIDITY CURTAIN (DEEP) WILL BE USED. ANCHOR THE CURTAIN UPSTREAM AND DOWNSTREAM AS NEEDED TO SECURE IN PLACE.

FILE NAME: turbcurt.dgn

DATE 6/9/06 TURBIDITY CURTAIN (DEEP)

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
AGGREGATE BASE, MODIFIED

DAV:KLT 1 of 1 C&T:APPR:ACR:CJB:11-04-05

a. Description. Furnish and construct an aggregate base course according to Section 302 of the Standard Specifications for Construction except as modified herein.

b. Materials. Aggregate will be a minimum of 95% crushed limestone, meeting MDOT specifications for 22A gradation.

c. Construction. All work will comply with the Standard Specifications for Construction.

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

Contract Item (Pay Item)	**Pay Unit**
Aggregate Base, __ inch, Modified	Square Yard

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
FOUNDATION PILING, LRFD

C&T: SJW 1 of 17 C&T:APPR:RBE:EMB:03-25-08

a. Description. Delete section 705 of the Standard Specifications for Construction. Furnish and drive foundation piles of the type and dimensions designated in the contract documents, including cutting off or building up of foundation piles when required. Perform this work as specified herein; at the location; and to the elevation, penetration, and the required nominal pile driving resistance (R_{ndr}) shown in the contract documents or as directed by the Engineer.

The following definitions apply when used herein and on the plans:

1. **Absolute Refusal.** A nominal pile driving resistance value of 150 percent of the nominal pile driving resistance shown on the plans. However, when dynamic pile testing is specified the absolute refusal shall be determined by the Testing Firm subject to the Engineer's approval in accordance with section c.4.C. and Table 1 herein.

2. **CIP.** The abbreviation for cast-in-place.

3. **Design Pile Length.** The predetermined pile length specified on the plans for piles.

4. **Design Pile Tip Elevation.** The predetermined pile tip elevation when the design pile length is specified.

5. **Dynamic Formula.** Empirical formula used to estimate R_{ndr} during pile driving. The FHWA Gates formula is specified.

6. **Dynamic Testing.** High strain dynamic testing during pile driving to estimate R_{ndr} using appropriate instrumentation and signal matching computer software.

7. **Estimated Pile Length.** The length shown on the plans to be used as a guide for estimating the work and ordering test piles in cases where the nominal pile driving resistance is specified.

8. **Estimated Pile Tip Elevation.** The elevation shown on the plans at which the bottom of piles are estimated to develop the nominal pile driving resistance of the piles shown on the plans.

9. **Manufacturer.** The company that manufactures the pile driving equipment including, but not limited to the hammer and appurtenances.

10. **Minimum Pile Length.** The length between pile cutoff elevation and minimum pile penetration elevation shown on the plans.

11. **Minimum Pile Penetration Elevation.** The elevation shown on the plans at which the bottom of piles must be driven to or below.

12. **Nominal Pile Driving Resistance (R_{ndr}).** Nominal pile driving resistance measured during pile driving with either dynamic formula or dynamic testing methods in kips as specified in the plans.

13. **Ordered Pile Length.** The length determined from test pile results. For timber piles, the Engineer will determine the ordered length. For cast-in-place concrete piles and steel piles, the Contractor will determine the ordered length.

14. **Practical Refusal.** A nominal pile driving resistance value of 110 percent of the nominal pile driving resistance shown on the plans.

15. **Prebore Elevation.** The elevation at which preboring is to be stopped as shown on the plans.

16. **Production Piles.** Piles other than test piles.

17. **Test Pile.** A pile driven at a location shown on the plans to determine pile driving characteristics. Nominal Pile Resistance of a test pile shall be certified using a static load test, dynamic formula, or dynamic testing methods as defined in section c.4 and the contract documents.

18. **Testing Firm.** Consultant hired by the Contractor to provide dynamic testing and analysis services.

When test piles are required, the pile lengths shown in the contract documents are for estimating purposes only. Furnish actual pile lengths necessary to achieve the required nominal pile driving resistance and minimum pile length. When test piles are not required, furnish the piles in accordance with the design pile length as shown in the contract documents.

b. Materials. Use materials that conform to the following sections of the Standard Specifications for Construction:

Concrete, Grade S1	701
Granular Material, Class II	902
Steel Reinforcement	905
Foundation Piles	906
Water	911
Treated Timber Piles	912
Pile Points (including Shoes and End Plates)	906

Use either new or used steel piles in good condition consisting of the rolled structural steel shapes and yield strength provided on the plans or by authorization. Use new steel shells for CIP Concrete Piles.

Use steel reinforcement of the yield strength shown on the plans.

Use full length treated timber piles.

c. Construction.

1. Storage and Handling of Piles. Store piles off the ground with sufficient cribbing to prevent bending or distortion of the piles.

Store and handle piles to prevent dirt, water, or other foreign material from entering steel shells for CIP concrete piles.

Handle timber piles according to subsection 709.03 of the Standard Specifications for Construction.

2. Equipment. Size pile driving equipment in such a way that the production and test piles can be driven with reasonable effort without damage, refer to Formula 1 & 2 herein. Do not use driving equipment that damages the piling. Obtain advanced approval from the Engineer for all pile driving equipment, including the pile driving hammer, hammer cushion, helmet, pile cushion, and other appurtenances to be furnished by the Contractor. Pursuant to obtaining this approval, submit a description of pile driving equipment to the Engineer and the Testing Firm when dynamic testing is specified at least 30 calendar days before pile driving is to begin. The Engineer will evaluate the proposed driving system by dynamic formula and/or wave equation analysis unless dynamic testing is specified. If dynamic testing is specified, the Testing Firm shall perform the wave equation analysis and submit the results to the Engineer for approval as outlined in section c.4.C.

In addition to the other requirements contained herein, the criterion that the Engineer will use to evaluate the pile driving equipment will consist of both the required number of hammer blows per inch, and the pile driving stresses over the entire driving process.

Select pile driving equipment which installs the piles at a rate between 2 and 10 blows per inch at the required nominal pile driving resistance. For preliminary hammer selection purposes, the minimum and maximum hammer energy necessary may be estimated as follows:

$$E_d \geq 0.082(R_{ndr} + 100)^2 \qquad \text{Formula 1}$$

$$E_d \leq 0.193(R_{ndr} + 100)^2 \qquad \text{Formula 2}$$

Where:

R_{ndr} = Nominal pile driving resistance measured during pile driving in kips.
E_d = Energy developed by the hammer per blow in foot-pounds.

For pile stresses determined by wave equation analysis, do not exceed the maximum pile driving stresses given in Table 1 for the entire driving operation.

Table 1 Maximum Pile Driving Stress

Pile Material	Maximum Pile Driving Stress
Steel	90 percent of the yield strength
Timber	3.1 ksi (F_{co} = 0.9)

The Engineer will predict pile stresses for vertical piles by wave equation analysis using the hammer efficiencies given in Table 2. However, when dynamic testing is specified, the Testing Firm shall use the wave equation with the specified efficiencies given in Table 2 for preliminary analysis to estimate pile stresses. Refined analysis after dynamic testing shall use the actual hammer efficiency to conduct additional wave equation analyses as outlined in section c.4.C.

Table 2 Hammer Efficiencies

Hammer Type	Efficiency (percent)
Drop	25 to 40
Single Acting Air	67
Double Acting Air	50
Diesel	80
Hydraulic or Diesel with Built in Energy Measurement	95

The Engineer (or the Testing Firm when dynamic testing is specified) will adjust hammer efficiencies for driving battered piles.

The Contractor will be notified of the acceptance or rejection of the driving system within 14 calendar days of the Engineer's receipt of the Pile and Driving Equipment Data Form and required reports (when dynamic testing is specified). If rejected, modify or replace the proposed methods or equipment, at no cost to the Department.

Only use the approved system during pile driving operations. Any change in the driving system will only be considered after the Contractor has submitted revised pile driving equipment data and revised reports from the Testing Firm (if applicable) to the Engineer for review. The Contractor will be notified of the acceptance or rejection of the driving system changes within five working days of the Engineer's receipt of the requested change. The time required for submission, review, and approval of a revised driving system will not constitute the basis for a contract time extension for the Contractor.

Approval of pile driving equipment will not relieve the Contractor of responsibility to drive piles free of damage to the required nominal pile driving resistance and, if specified, to the minimum pile penetration elevation shown in the contract documents.

A. Hammers. Piles may be driven with air, diesel, or hydraulic hammers. Only use drop hammers to drive timber piles, if specifically permitted in the contract documents.

(1) Drop Impact Hammers. Do not use drop hammers for piles where the required nominal pile driving resistance exceeds 200 kips. When drop hammers are permitted, the ram shall have a weight not less than 2.0 kips and the height of drop shall not exceed 12 feet. Do not use a ram weight less than the combined weight of the helmet and the pile. Equip all drop hammers with hammer guides and a helmet to ensure concentric impact.

(2) Air Impact Hammers. Operate air hammers within the manufacturer’s specified ranges. Provide the Engineer with the hammer specifications so that the energy developed by the hammer with each blow may be determined. Use striking parts with a weight of at least 2.75 kips and not less than one-third the combined weight of pile and helmet. Furnish the power plant and equipment for air hammers

with sufficient capacity to maintain, under working conditions, the volume and pressure at the hammer, specified by the manufacturer. Equip the power plant and equipment with accurate pressure gauges which are easily accessible to the Engineer. Connect the compressor to the hammer with a hose of at least the minimum size recommended by the manufacturer.

Hammer performance will be evaluated at the end of driving by measuring blows per minute and comparing with the manufacturer's recommendations. Measure the blow rate with a device that makes the measurement automatically.

(3) Diesel Impact Hammers.

(a) Open End (Single Acting). Provide the Engineer with a chart from the hammer manufacturer equating stroke and blows per minute. Average hammer stroke at the end of drive will be determined from the blow rate, using a device that makes the measurement automatically. In addition, equip open end diesel hammers with a device such as rings on the ram to permit the Engineer to visually determine hammer stroke at all times during pile driving operations.

(b) Closed End (Double Acting). Equip closed end hammers with a bounce chamber pressure gauge, in good working order, mounted near ground level so as to be easily read by the Engineer. Provide a correlation chart of bounce chamber pressure and potential energy. Average hammer stroke at the end of drive will be determined from bounce chamber pressure.

(4) Hydraulic Impact Hammers. Operate hydraulic hammers within the manufacturer's specified ranges. Furnish the power plant for hydraulic hammers of sufficient capacity to maintain the volume and pressure specified by the manufacturer. Equip the power plant with accurate pressure gauges which are easily accessible to the Engineer. Equip hydraulic hammers with an energy readout device. Furnish wave equation analysis to aid in the determination of the adequacy of the hammer, and indicate the nominal pile driving resistance of the pile. Do not use Formulas 1 through 5 for these calculations.

(5) Non-Impact Hammers. Do not use non-impact hammers such as vibratory hammers, or driving aids such as jets, followers and prebored holes unless either specifically permitted in writing by the Engineer or stated in the contract documents.

(6) Additional Equipments or Methods. If the minimum pile penetration elevation is not obtained by the use of a hammer complying with the minimum requirements described herein, the Contractor may be required to provide a hammer of greater energy or, when permitted, resort to supplemental methods such as preboring. Additional wave equation analyses for the new hammers shall be conducted by the Engineer (or Testing Firm when dynamic testing is specified) to assess predriving pile stresses as outlined in sections c.2 and c.4.C.

B. Driving Appurtenances.

(1) Hammer Cushion. Equip all impact pile driving equipment, except drop hammers, with a hammer cushion of suitable thickness to prevent damage to the

hammer or pile. Hammers designed such that a hammer cushion is not required, are excluded from this requirement.

Fabricate hammer cushions of durable manufactured materials that will retain uniform properties during driving. Do not use wood, wire rope, or asbestos hammer cushions. Place a striker plate on the hammer cushion to ensure uniform compression of the cushion material. Remove the hammer cushion from the helmet and inspect in the presence of the Engineer when beginning pile driving at each structure or after each 100 hours of pile driving, whichever is less. Replace the hammer cushion whenever there is a reduction of hammer cushion thickness exceeding 25 percent of the original thickness before driving is continued.

(2) Helmet. Fit piles with a helmet to distribute the hammer blow uniformly and concentrically to the pile top. Ensure that the helmet surface in contact with the pile is plane and smooth and align it parallel with the hammer base and the pile top. Guide the helmet with leads and do not allow it to be free-swinging. Fit the helmet to the pile top in such a manner as to maintain concentric alignment of hammer and pile.

For timber piles, do not exceed the pile top diameter by more than two inches of the least inside horizontal dimension of the helmet or hammer base. Trim the pile top to the fit the helmet if the timber pile diameter slightly exceeds the least helmet or hammer base horizontal dimension. Trimming of the pile top will only be allowed above the cutoff elevation.

(3) Pile Cushion. When CIP concrete piles must be redriven after concrete has been placed and cured inside the steel shells, protect pile tops with a pile cushion. Proportion the pile cushion to distribute the blow of the hammer throughout the cross-section of the pile.

(4) Leads. Use pile driving leads that align the pile and the hammer in proper positions throughout the driving operation. Use leads that are constructed in a manner that affords freedom of movement of the hammer while maintaining alignment of the hammer and the pile to ensure concentric impact for each blow. Use leads designed to permit proper alignment of battered piles when applicable. Do not allow the pile section being driven to extend above the leads. Leads may be either fixed or swinging type. Fit swinging leads, when used, with a pile gate at the bottom of the leads. Use leads that are adequately embedded in the ground or constrain the pile in a structural frame such as a template to maintain alignment. Use leads of sufficient length to make the use of a follower unnecessary.

(5) Followers. Only use followers when approved in writing by the Engineer or when specified in the contract documents. If a wave equation analysis is not performed, use a follower with impedance between 50 percent and 200 percent of the pile impedance. Maintain the follower and pile in proper alignment during driving. Drive the first pile in each bent, and every tenth pile driven thereafter, full length without a follower to determine that adequate pile penetration is being attained to develop the required nominal pile driving resistance. Use a follower of such material and dimensions to permit the piles to be driven to the penetration depth determined necessary from the driving of the full length piles. Verify that the final position and alignment of the first two piles installed with followers in each substructure unit are in

accordance with the location tolerances in subsection c.3.B(5) herein before additional piles are installed.

(6) Spud. A short strong driven member which is removed to make a hole for inserting a pile. The use of spuds will not be permitted in lieu of preboring.

3. Driving Methods.

A. Preparation for Driving. Prior to driving, cut pile tops square with the axis of the pile. Use collars, bands, or other devices to protect timber piles against splitting and brooming.

(1) Excavation and Fill. Do not drive piles (or redrive piles) until excavation and/or fill is complete unless otherwise specified in the contract documents. Where piles are to be driven (or redriven) through fills, compact the embankment to the bottom of the concrete substructure unit before driving piles. Remove any material forced up between the piles to the correct elevation before concrete for the foundation is placed.

(2) Pile Preboring to Facilitate Driving. When specified, prebore holes to the prebore elevation shown on the plans. Provide a finished hole with a diameter equal to or slightly greater than the diameter of the pile.

Maintain a stable open hole until the pile has been installed and advanced to the bottom of the bore. Do not begin final drive for bearing until the pile reaches the prebore elevation shown on the plans. Control caving or unstable soil layers by using temporary casing or non-toxic and non-hazardous drilling slurry. Handle and dispose of drilling slurry according to the Sedimentation and Erosion Control Act, Act 347 of 1972 as amended either on the site or at an off site location where existing or proposed structures will not be affected. Obtain approval from the Engineer for on site disposal.

Remove or clear boulders, cobbles, or other obstructions. Provide rock chisels, extractors, core barrels, or other equipment necessary to clear obstructions. The removal of obstructions that require this special equipment will be paid for as extra work.

To the extent possible, complete all preboring within a foundation unit and advance all piles to the prebore elevation, before beginning the final drive. When preboring occurs within 20 feet of a completed pile, recheck the pile capacity by restriking the pile. The Engineer will select the piles for restrike. Restrike with the same driving equipment used in the initial installation. If any reduction in capacity occurs, redrive all piles to R_{ndr}. Restrike due to preboring is included in the pay item **Pile, Furn and Driven, LRFD**.

Backfill all voids remaining after the final drive with granular material Class II or approved equal.

Prebore pile holes with a variation of not more than 1/4 inch per foot from the vertical or from the batter line shown on the plans. Upon completion, the center of the hole at cutoff elevation must be within six inches of the position shown on the plans.

The use of spuds will not be permitted in lieu of preboring.

Unless otherwise directed on the plans, when piles are to be driven through compacted fill of a depth greater than five feet, drive piles in holes prebored to natural ground in accordance with the above requirements.

B. Driving. During driving, maintain pile tops square with the axis of the pile.

(1) Obstructions. If an impenetrable obstruction is encountered when driving a pile, choose either of the following courses of action:

(a) Remove the pile, and if reusable according to the Engineer, adjust it laterally (side to side), and redrive. Redrive according to subsection c.3.B(5) herein except for this lateral adjustment. The total length of pile driven, including the length of pile embedded in the ground and removed, will be measured for payment.

(b) Cut off the pile at the lowest practical elevation and drive another pile adjusted laterally (side to side). Drive according to subsection c.3.B(5) herein except for this lateral adjustment. The total length of pile driven, including the length of pile that was cut off and left in the ground, will be measured for payment.

If unable to bypass the impenetrable obstruction using either course of action, remove or otherwise clear the obstruction. Provide rock chisels, extractors, core barrels, or other equipment necessary to clear obstructions. The removal of obstructions that require this special equipment will be paid for as extra work.

(2) Penetration.

(a) Design Pile Length. When the plans specify the design pile tip elevation, install piles to the design pile tip elevation unless the Maximum Pile Driving Stress in Table 1 is reached at a higher elevation.

(b) Estimate Pile Length. When the plans specify the estimated pile length, install piles to a penetration that satisfies all of the following:

(i) The nominal pile driving resistance is not less than the required nominal pile driving resistance shown on the plans.

(ii) The bottom of the pile is at or below the minimum pile penetration elevation shown on the plans. Piles shall not be driven past absolute refusal unless Dynamic Testing is specified. When Dynamic Testing is specified, the pile stresses shall not exceed those outlined in Table 1, as determined by the Dynamic Testing outlined in section c.4.C as applicable.

(3) Test Piles. Test piles are required when the plans show estimated pile lengths. Complete the excavation or embankment to within two feet of the proposed grade at the test pile locations. Install test piles at locations shown in the plans with approved impact hammer equipment. Drive the test piles to the minimum pile length

or to practical refusal, whichever penetration is greater. The Engineer may stop the driving of any test pile at tip penetrations exceeding 10 feet below the estimated pile tip elevation to check for pile setup according to subsection c.3.B(2)(b) herein. Payment for initial restrike is included in pay item **Test Pile, LRFD and Test Pile, Dynamic Analysis, LRFD.** Subsequent restrikes, if necessary, will be paid for as extra work.

When piles fail to achieve the required R_{ndr} after driving 10 feet below the estimated pile tip elevation, but are greater than 85 percent of the required R_{ndr}, leave piles in place for a minimum waiting period of 48 hours to allow for soil setup unless otherwise directed by the Engineer. After the waiting period has passed, restrike the pile to check the R_{ndr}. The R_{ndr}, after soil setup, will be based on the number of restrike blows necessary to drive the pile an additional three inches using a hammer that has been warmed up by applying at least 20 blows to another pile, which is at least 25 feet from the restrike pile, or as approved by the Engineer. The restrike piles will be accepted if they exhibit an actual R_{ndr} greater than the required R_{ndr}. Pile restrike required for production piles shall be paid for as extra work.

After any restriking, recommence test pile driving, providing piling, splices, and any restrikes until the nominal pile driving resistance measured during driving reaches practical refusal or until the Engineer stops the driving due to having sufficient data. A record of driving of the test pile will be prepared by the Engineer (or Testing Firm when dynamic testing is specified), including, but not limited to, the number of hammer blows per foot for the entire driven length, the as-driven length of the test pile, cutoff elevation, penetration in ground, and any other pertinent information.

When dynamic testing is specified, the Testing Firm shall be responsible for instrumenting the test piles, overseeing the test pile driving operations, analyzing and reporting the required information as outlined in section c.4.C.

Cut off test piles driven in production pile locations that are incorporated into the structure as permanent piles. Cut off or pull test piles not driven in a production pile location, as directed by the Engineer.

Determine the ordered pile lengths of steel H-piles and CIP concrete piles from the test pile results. Furnish CIP pile shells and steel piles of sufficient lengths to obtain the required nominal pile driving resistance and penetration.

The Engineer will evaluate test pile results and determine the ordered pile lengths for timber piles.

Test piles are not required when the plans show a design pile length.

(4) Splicing. Do not splice timber piles. Furnish steel piles in full length Sections or splice them according to the method shown on the plans or approved by the Engineer. Piling may be furnished in any length and field spliced as necessary to provide sufficient length to obtain required nominal pile driving resistance and penetration. Weld according to subsections 707.03.D.8.b, c, and d employing only welders certified by agencies approved by the Department with the following temperature exceptions. Do not perform field welding of piling when the ambient temperature is below 0 degrees F. When the pile metal temperature is below 32

degrees F, preheat the pile metal in the area of the weld to a minimum temperature of 70 degrees F and maintain at the temperature during the weld.

(5) Accuracy. Drive piles for foundation work with a variation of not more than 1/4 inch per foot from the vertical or from the batter line shown on the plans. After driving, the position of each pile at cutoff elevation must be within six inches of the position shown on the plans. However, the distance between the edge of all piles and the outline of the superimposed concrete should be not less than nine inches. Drive pile bents so that the piles can be adjusted to the positions and elevations shown on the plans without damaging or overstressing the piles. Pulling laterally on piles to correct misalignment, or splicing a properly aligned section on a misaligned section will not be permitted.

Drive timber piles so they can be adjusted to the true position shown on the plans at the elevation of cap or wale without damaging or overstressing the piles. Draw and hold piles to be capped in proper position before cutoff. When the pile cutoff diameter is greater than the width of the cap, trim the pile to eliminate all horizontal projections outside the cap. Do not drive timber piles to the exact grade but cut them off below the tapered head so that the bearing will be on the unfractured, full cross section of the pile.

Any increase in pile cap dimensions or reinforcing caused by out-of-position piles will be at the Contractor's expense.

(6) Redriving of Heaved Piles. Level readings to measure pile heave after driving shall be made by the Engineer at the start of pile driving operations and shall continue until the Engineer determines that such checking is no longer required. If piles are heaved up during driving of adjacent piles, redrive them to the required bearing capacity or penetration. Adjust upheaval or settlement of material between the piles to the correct elevation before placing concrete for the foundation.

If pile heave is detected for CIP concrete pile shells which have been filled with concrete, redrive the piles to original position after the concrete has obtained sufficient strength using a proper pile cushion system, satisfactory to the Engineer.

Redriving of heaved piles will be paid for as extra work.

4. Determination of Nominal Pile Resistance.

A. Static Load Test. Perform load tests when specified by the contract documents. Refer to contract documents for load testing details.

B. Dynamic Formula. For production piles with a required R_{ndr}, not more than 600 kips, install using the FHWA Gates Formula (Formula 3). Do not use the dynamic formula to install production piles with a specified R_{ndr} greater than 600 kips or if dynamic testing is specified by the contract documents. R_{ndr} for test piles will be determined by the same method specified for production piles.

$$R_{ndr} = 1.75\sqrt{E_d}\log_{10}(10N_b) - 100 \qquad \text{Formula 3}$$

Where:

N_b = Number of hammer blows per inch of pile penetration.
E_d = Energy developed by the hammer per blow in foot-pounds.
R_{ndr} = Nominal pile driving resistance measured during pile driving in kips.

For piles driven on a batter, the value of "E_d" will be multiplied by the hammer energy reduction coefficient "U" as follows:

$$U = Sin(\alpha) * 0.975 \qquad \text{Formula 4}$$

$$\alpha = Tan^{-1}(m) \qquad \text{Formula 5}$$

Where:

U = Hammer energy reduction coefficient, less than unity.
α = Angle of batter from horizontal (always less then 90 degrees for battered piles)
m = Vertical component of batter (i.e. m = 3 for a 1H:3V batter, horizontal kept at a value of 1)

The Engineer will determine the value of "E_d". For drop, single acting air hammers, and open type diesel hammers, the kinetic energy will be used by measuring ram velocity. When measuring ram velocity is not possible, it may be approximated by the potential energy calculated by multiplying the weight of hammer striking parts by the observed fall or stroke height. For double acting air hammers and closed type diesel hammers, the energy will be calculated by using ram weight and bounce chamber pressure. Submit hammer literature and correlation charts to the Engineer to aid in determining hammer energy of each blow. In either case, the calculated value of "E_d" for battered piles will be further reduced by the hammer energy reduction coefficient "U" prior to being used in the formula to calculate "R_{ndr}".

The preceding formulas (Formulas 3, 4 and 5) for piles driven with a drop hammer are applicable only when:

(1) the hammer has an unrestricted free fall; and

(2) the pile top is not broomed, crushed or splintered; and

(3) there is no appreciable bounce of the hammer after striking the pile; and

(4) the penetration is at a uniform or uniformly decreasing rate.

When specified in the contract or when a hydraulic hammer is used, the nominal pile driving resistance of the piles will be determined by the results of a wave equation analysis performed by the Engineer. The analysis will take into account the hammer driving system, site specific subsurface data, and project pile geometry to develop driving criteria which will not overstress the pile and correctly indicate its nominal pile driving resistance.

C. Dynamic Testing and Analysis. For production and test piles as directed by the design plans and/or with a required R_{ndr} greater than 600 kips or when specified by the contract documents, install instrumented piles monitored using dynamic testing with signal matching

Dynamic testing consists of instrumenting and monitoring piles during. The dynamic testing work shall be in accordance with the current version of the AASHTO LRFD bridge construction specification unless modified herein. The dynamic pile testing shall be performed on the initial driving and/or restrike of the test piles as directed by the Engineer. Signal matching analysis utilizing the case method is required to determine R_{ndr} and absolute refusal criteria for production piles.

The Contractor shall engage an independent dynamic pile testing consultant (Testing Firm) and qualified personnel in accordance with section (2) below. Prior to testing, the Engineer will review and approve the proposed independent Testing Firm's experience and qualifications of assigned personnel, details of the method of testing, a list of equipment, and the method of analysis of test results. The Contractor shall provide the Testing Firm all available details of the subsurface conditions, pile dimensions and properties, and pile driving systems.

(1) Equipment. The equipment shall conform to the requirements of ASTM D 4945, Standard Test Method for High Strain Dynamic Testing of Piles. All equipment necessary for the dynamic monitoring such as strain gages, accelerometers, cable, installation tools, etc., shall be furnished by the Testing Firm.

(2) Personnel. The Testing Firm shall perform dynamic pile testing and analysis utilizing qualified personnel. An engineer with a minimum of 2 years dynamic pile testing and analysis experience or who has achieved advanced or better certification under the High-Strain Dynamic Pile Testing Examination and Certification process of the Pile Driving Contractors Association and Foundation QA, shall be in charge of dynamic testing operation and of the signal matching analysis either onsite or by remote connection. The engineer in charge of dynamic testing operation and signal matching analysis shall be an engineer licensed in the State of Michigan. All analysis and submittals shall be sealed by the licensed engineer in charge.

(3) Pile Driving Modeling. The Testing Firm shall perform preconstruction pile driving modeling utilizing the GRL Wave Equation Analyses Program (GRLWEAP) and prepare a summary report of the results. The summary report shall be submitted to the Engineer a minimum of 14 days prior to driving the test piles for approval. The wave equation analyses shall be used to assess the ability of all proposed pile driving systems to install piles to R_{ndr} and the minimum penetration depth within allowable driving stresses. The report shall include a drivability graph relating R_{ndr}, blow count and driving stresses to depth. The report shall also include a bearing graph relating R_{ndr} with blow count versus capacity and stroke. An inspector's chart should also be included to assist the Engineer in determining the required driving resistance at other field observed hammer strokes. Acceptability of the wave equation report and the adequacy of analyses will be determined by the Engineer.

Approval by the Engineer of the proposed pile driving system will be based upon the wave equation analyses indicating that the proposed system can develop the

specified R_{ndr} outlined in section c.2, and within allowable driving stresses outlined in Table 1. The Testing Firm shall provide pile driving criteria based on wave equation analyses and any anticipated capacity changes after driving, setup or relaxation, subject to revision based upon dynamic pile testing field measurements.

If any changes or modifications are made to the approved pile driving system, additional wave equation analyses in accordance with this section shall be required at no additional cost to the Department.

(4) Dynamic Pile Testing. Dynamic pile testing involves monitoring the response of a pile subjected to heavy impact applied by the pile hammer at the pile head. The Testing Firm shall provide information on the driving stresses, R_{ndr}, structural integrity and hammer efficiency. All field testing and measurements shall be made in the presence of the Engineer and/or Engineer's representative.

The Testing Firm shall install two sets of strain transducers and accelerometers near the top of each pile to be tested, and shall use a compatible measuring and recording system to record the data during driving. The equipment required to be attached to the pile shall be appropriately positioned and fixed to the approval of the Engineer. If the level of the gages reaches one foot above ground surface, water surface, or a pile template, driving shall be halted to remove the gages from the pile. If additional driving is required, the pile shall be spliced and the gages shall be reattached to the head of the next pile segment prior to resuming pile driving.

The Testing Firm shall monitor pile stresses during driving to prevent pile damage and ensure pile integrity and capacity. If the testing equipment indicates overstressing (defined in Table 1) or damage to the pile, the Contractor and/or Testing Firm shall immediately discontinue driving and notify the Engineer.

If the testing equipment determines that pile stresses during driving exceed acceptable levels, a new pile driving system, modifications to existing system or new pile installation procedures shall be proposed by the Contractor. Approval by the Engineer of any proposed changes to the pile driving system or pile installation procedures will be based upon the results of additional wave equation analyses as previously outlined at no additional cost to the Department.

(5) Dynamic Measurement and Analysis. Monitoring of pile driving shall commence when pile driving begins and continues until the minimum pile length or practical refusal is reached, whichever penetration is greater unless the Testing Firm determines additional driving will damage the pile. The data shall be recorded and processed immediately in the field. For each pile tested, pile driving analysis using signal matching software shall be performed for a selected blow at the end of driving to determine the R_{ndr} and relative capacity from end bearing and skin friction along the pile.

If the R_{ndr} determined at the end of initial driving is less than required, a restrike test shall be performed on the pile. The time interval between end of initial driving and beginning of restrike shall be determined by the Engineer. During restrike, the pile shall be instrumented and monitored similar to during initial driving. For each restrike test, pile driving analysis using signal matching software shall be performed for a

selected blow from the beginning of restrike to determine the R_{ndr} and relative capacities from end bearing and skin friction along the pile.

The restrike test shall be performed with a warmed up pile hammer, as defined in section c.3.B.(2), and shall consist of striking the pile for a number of blows determined by the Testing Firm unless the dynamic testing indicates overstressing or damage to the pile. If such overstressing or damage to the pile is indicated, the Contractor shall immediately discontinue driving and notify the Engineer. In the event initial restrike testing indicates a pile resistance below the nominal specified value, additional driving may be required as directed by the Engineer.

The Engineer may request use of pile driving monitoring equipment and software on additional piles if inconclusive results are obtained or unusual driving conditions are encountered. Claims by the contractor for delays or costs associated with additional testing will not be allowed.

(6) Results. The Testing Firm shall prepare a preliminary and final report for each pile tested for review by the Engineer.

(a) The preliminary report shall include the following:

(i) GRLWEAP bearing graph and inspection chart showing blow count-versus-pile resistance and stroke-versus-blow count that will be used for determining the R_{ndr} of the production piles. The graph/chart shall be developed based on the results of the dynamic testing and signal matching data. Both the maximum force and maximum transferred energy calculated by GRLWEAP shall match within 10 percent of those calculated by the signal matching. The bearing graphs shall be delivered to the Engineer for approval within 2 working days after completion of driving the test piles at any single substructure unit. This information shall also be documented in the appropriate reports listed below.

(ii) A summary of the dynamic testing and signal matching results from the test piles. In addition, the Testing Firm shall supply a CD containing all data for the piles tested for that substructure. These reports shall be sent to the Engineer no later than 3 working days after dynamic pile tests have been completed at any given substructure unit.

(b) A final report shall be submitted within 2 weeks of completing the dynamic testing for the project. The report shall include the following at a minimum:

(i) A summary of the findings from the dynamic testing and the associated signal matching computer program and the developed GRLWEAP bearing graphs. The data shall consist of blow counts, stresses in the pile, R_{ndr}, hammer energies and hammer strokes for each one-foot depth increment. The Testing Firm shall supply a CD containing a copy of the final report and all associated documentation.

5. Defective Piles. Do not subject piles to excessive and undue abuse producing injurious splitting, splintering and brooming of the wood or excessive deformation of the steel. Manipulation of piles to force them into proper position, considered by the Engineer to

be excessive, will not be permitted. For any pile damaged by reason of internal defects, by improper driving, driven out of its proper location, or driven below the cutoff elevation specified in the contract documents or determined by the Engineer, correct by one of the following methods approved by the Engineer for the pile in question:

A. Withdraw the pile and replace by a new and, if necessary, longer pile.

B. Drive a second pile adjacent to the defective or low pile.

C. Splice or build up the pile as otherwise provided herein or extend a sufficient portion of the footing to properly embed the pile.

All costs associated with the corrective actions will be borne by the Contractor.

6. Placing Concrete in Cast-in-Place Concrete Piles. Prior to the placing of concrete, inspect the pile to confirm the full pile length and dry bottom condition. Provide a mirror or suitable light for inspection. Do not place concrete in any pile until all pile shells within a radius of 20 feet have been driven, redriven (if necessary), cleaned of water or debris and accepted by the Engineer. Place the concrete in the pile shells to the cutoff elevation as soon after driving as permissible.

Place concrete according to subsection 706.03.H of the Standard Specifications for Construction, except the concrete may free fall more than five feet. Vibrate the concrete in the upper one third of the pile shell during placement, without causing segregation, but not to exceed 25 feet.

7. Protective Coating for Steel Piles and CIP Concrete Piles. When shown in the contract documents, galvanize steel H-piles and steel shells that will be exposed to air or water in the finished structure according to ASTM A 123. Do not use corrosive embankment material within 30 feet of piles. Repair damages to galvanization in accordance with subsection 716.03.E of the Standard Specifications for Construction. All costs associated with repairs will be borne by the Contractor.

8. Cleaning Steel Piles and Steel Pile Shells. Where steel piles or pile shells are to be embedded one foot or more in structural concrete, exclusive of tremie concrete, clean all dirt and loose scale from the portion to be embedded.

9. Pile Cutoff. Cut off piles in a true plane normal to the longitudinal axis of the pile and within one inch of the elevation specified and anchored to the structure as shown in the contract documents.

All cutoff lengths of piling will remain the property of the Contractor. Dispose of cutoff lengths in accordance with local, state and federal regulations.

The timber length of pile above the cutoff elevation shall be sufficient to permit the complete removal of all material injured by driving.

Treat field cuts in timber piles according to subsection 709.03.C.5 of the Standard Specifications for Construction.

d. Measurement and Payment. The completed work as described will be measured and paid for using the following contract items (pay items):

Contract Item (Pay Item)	Pay Unit
~~Pile, Treated Timber, Furn, LRFD~~	~~Foot~~
~~Pile, Treated Timber, Driven, LRFD~~	~~Foot~~
~~Pile, CIP Conc, Furn and Driven, __ inch, LRFD~~	~~Foot~~
Pile, Steel, Furn and Driven, __ inch, LRFD	Foot
~~Pile, Galv, LRFD (Structure No.)~~	~~Lump Sum~~
~~Test Pile, Treated Timber, LRFD~~	~~Each~~
~~Test Pile, CIP Conc, __ inch, LRFD~~	~~Each~~
Test Pile, Steel, __ inch, LRFD	Each
~~Pile Point, CIP Conc, LRFD~~	~~Each~~
Pile Point, Steel, LRFD	Each
~~Prebore, Fdn Piling, LRFD~~	~~Foot~~
Pile Driving Equipment, Furn, LRFD (Structure No.)	Lump Sum
~~Test Pile, Furnishing Dynamic Analysis Equipment, LRFD~~	~~Each~~
~~Test Pile, Dynamic Analysis, LRFD~~	~~Each~~

Pile, Treated Timber, Furn, LRFD will be paid for at the ordered pile length. **Pile, Treated Timber, Driven, LRFD** will be measured by length of piling left in place below cutoff. Cutoff of piles will not be paid for separately. Cutoff material will remain the property of the Contractor.

Pile, CIP Conc, Furn and Driven, LRFD, **Pile, Steel, Furn and Driven, LRFD** will be measured by length of all piling left in place below cutoff. This length will include the length of pile that was embedded in the ground, and then removed, in attempting to bypass an impenetrable obstruction. Cast-in-place concrete piles and steel piles will not include the length of the pile point extending beyond the pile. Piling may be furnished in any desired length and field spliced as necessary to provide sufficient length to obtain required bearing or penetration.

Pile, Galv, LRFD will include only the cost associated with galvanizing the required length of pile as detailed on the plans. The cost of furnishing the ungalvanized pile shells or steel piles, and the cost of driving the galvanized pile length will be included in the pay item **Pile, CIP Conc, Furn and Driven, LRFD** or **Pile, Steel, Furn and Driven, LRFD**.

Furnishing and removing equipment for driving piles will be included in the pay item **Pile Driving Equipment, Furn, LRFD**. Equipment operating costs for driving piles will be include in the bid item for length of pile driven. **Pile Driving Equipment, Furn, LRFD** will be measured as a unit for each structure.

The length of **Prebore, Fdn Piling, LRFD** will be measured from the bottom of the foundation to the prebore elevation shown on the plans. This item includes boring of pile holes, disposal of excavated material, backfill of any void space, installation and removal of temporary casings, furnishing and disposal of drilling slurry, restriking of completed piles within a radius of 25 feet and operating costs for equipment. When **Prebore, Fdn Piling, LRFD** is a bid item on the plans, furnishing equipment for prebore shall be included in the bid item **Pile Driving Equipment, Furn, LRFD**. Preboring not shown on the plans, but authorized by the Engineer in writing, will be paid for as extra work.

Splices will be included in payment for the pile furnished and driven.

Pile Points, LRFD will not be paid for separately unless they are a contract item. Payment for such work is included in the contract unit prices bid for other contract items.

The contract unit price for **Test Pile, LRFD** will be in addition to the contract unit price(s) for piles furnished and driven. Payment for initial restrike is included in pay item **Test Pile, LRFD**. Subsequent restrikes, if necessary, will be paid for as extra work.

Test Pile, Furnishing Dynamic Analysis Equipment, LRFD will be measured and paid for each mobilization of the Testing Firm's equipment and personnel from the Testing Firm's office to the project site. Approval from the Engineer is required prior to any mobilization.

Test Pile, Dynamic Analysis, LRFD will be measured and paid for each pile designated in the plans or by the Engineer as a test pile when dynamic testing is specified. Payment for **Test Pile, Dynamic Analysis, LRFD** includes all materials, tools, labor, engineering analysis and documentation necessary to determine the test pile bearing capacity and driving stress according to this specification. The contract unit price for **Test Pile, Dynamic Analysis, LRFD** will be in addition to the contract unit price(s) for piles furnished and driven.

Payment for initial restrike is included in pay item **Test Pile, Dynamic Analysis, LRFD**. Subsequent restrikes, if necessary, will be paid for as extra work.

No additional compensation will be granted for the following items due to the provisions of this specification: out-of-sequence moves of pile driving equipment; delays, down-time, idle equipment and labor, or additional splices for production piles.

No unit price adjustment will be made in the event of increased or decreased contract quantities for Dynamic Analysis.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
STRUCTURAL STEEL, SPECIAL

BCY:KAZ 1 of 6 C&T:APPR:JSW:EMB:08-27-08

a. Description. This work consists of disassembling, restoring, fabrication and erection of an existing structural steel truss for a pedestrian bridge. The restoration of the bridge shall be in a way that retains as much of the original material as possible. In addition, whenever possible, the restoration techniques will be similar to those used in the original manufacture of the bridge (known as “in-kind” restoration). Rivets will be purchased new and will comply with the Industrial Fastener Institute standards. This work shall be done as specified herein and according to section 707 of the Standard Specifications for Construction and the plans.

b. Materials. Structural steel required for restoration work shall be AASHTO approved material as specified in section 906 of the Standard Specifications for Construction and of the grade shown on the plans.

Rivet Type and Material. Rivets shall be new, hot-driven round button head. All rivets shall conform to the material requirements of ASTM A 502. All rivets shall conform to the dimensional requirements of ANSI Standard B18.1.2. Rivets shall be approximately hemispherical in shape and shall be of uniform size throughout the bridge for the same rivets.

c. Construction.

1. Fabrication. Welding required for restoration and repair of the structural steel members shall be according to AWS D1.5 - Bridge Welding Code and according to the Special Provision for Structural Steel and Aluminum Construction. Contact the Structural Fabrication Engineer at MDOT’s Construction & Technology Division (517-322-1235) two weeks prior to commencing work.

All welds used to join new replacement steel to existing steel members shall be ground flush. Welds shall be ground parallel with the axis of the member and shall be free of gouges and nicks. After cleaning and coating of the steel, the repair weld shall be undetectable.

2. Riveting. Unless otherwise specified, truss connectors shall be replaced in kind. Where bolts were used previously, they shall be replaced with A-325 Button Head Tension Control Bolts.

A. Removal. A pneumatic rivet buster shall be used to remove rivet heads. Chisels and/or punches shall be placed in the rivet buster to punch out rivets after the rivet heads are removed. If a rivet can not be removed with a rivet buster, an electric or pneumatic hand grinder shall be used. Do not damage steel material to remain.

B. Quality Control. The Contractor shall submit documentation to the Engineer of his proposed rivet removal and installation method and quality control procedures prior to construction.

C. New Rivet holes. Rivet holes for new structural steel plates and members shall be either drilled or punched.

(1) Drilled. Steel angles or plates having a thickness equal to or greater than 3/4 inch for grade A36 and 5/8 inch for grade 50 shall be drilled. All holes shall be drilled at 90 degrees to the working surface. Extreme pressure shall not be applied to the drilling device as to punch through the material. When drilling through more than one member, the members shall be secured tightly to prevent misalignment of holes due to shifting or separation of the members.

(2) Punched. If holes are punched they shall be punched to a diameter 1/8 inch less the required size and reamed to the correct size as specified above. After reaming, the holes shall be inspected for radial cracking. If radial cracking is present or holes are misaligned, the holes shall be reamed to the next larger rivet size.

All holes shall be 1/32 inch to 1/16 inch greater than the rivet shank diameter. Holes deemed to be out of tolerance shall be welded shut and re-drilled or reamed to allow for the next larger size rivet.

(3) Oversized Holes. Where riveting new steel to existing steel, the new holes shall match the existing holes in diameter and alignment within the tolerances specified above. If the existing steel has deformed holes due to elongation, advanced corrosion or other mechanical damage, it shall be reamed to accommodate the next larger size rivet. The minimum required row spacing, pitch and edge clearances shall be maintained when enlarging existing rivet holes. The enlarging of existing rivet holes shall be limited to 20 percent of the rivets or 10 rivets in a single pattern, which ever is less. Exceptions to these requirements may be approved as field conditions necessitate, but shall be reviewed by the Engineer prior to performing the work. The Contractor shall notify the Engineer when encountering such field conditions.

D. Preparation. Before members are riveted together all chips, burrs and foreign material resulting from drilling, punching or corrosion shall be removed from the surfaces to be joined. If burrs are removed by chamfering, the depth shall not exceed 1/32 inch. Members to be riveted together shall be temporarily pinned or bolted and rigidly clamped together while riveting. Drifting of parts during assembly shall not distort or enlarge the holes. The Contractor shall determine the number and pattern of temporary pins or bolts necessary to bring surfaces into adequate contact for riveting. Such pattern shall be approved by the Engineer. Temporary pins or bolts shall be successively removed as rivets are installed. Rivet grip lengths will very depending on location. The length of undriven rivets shall be sized to provide minimum head dimensions as specified in ANSI B18.1.2. (see AISC, manual of Steel Construction, Sixth Edition, 4-83 for guidance).

E. Installation. The rivets shall be heated in an electric, gas or kerosene furnace and shall be driven within the range of 1500-1950 degrees F. The maximum heating temperature will make the rivets a light yellow in color. Avoid continual heating of rivets in furnace after they have reached driving temperature (excessive “soaking”). Direct flame impingement on the rivets shall be avoided during heating. The rivet shall then be positioned into the hole. Prior to working the rivet, the diameter, the length, temperature and fit shall be evaluated and if all is not correct, the rivet shall be rejected and corrective actions shall be taken. Any slag formed on the rivets shall be knocked clear prior to riveting.

The hot rivet shall be driven into the holes. Rivets shall be driven using a Boyer field-riveting hammer (or approved equal). The driven rivets shall be tight and in uniform contact with the surfaces of the joined members. The surfaces of angles or plates to be riveted shall not be scared from the process of driving the rivets.

Approved sources for either used or rebuilt riveting equipment include:

Michigan Pneumatic Tool, Inc., Detroit, MI (313-933-5890)
Robert Authur, Vice President

Mankel Backsmith Shop, Cannonsburg, MI (616-874-6955)

Jay-Cee Sales and Rivets, Farmington, MI (800-521-6777)

Champion Rivet Company, Cleveland, OH (800-348-1660)

F. Workmanship. Installation of rivets shall be accomplished in a workmanlike manner. Rivet assemblies shall be of uniform quality and free from cracks, gaps, sharp edges, burrs, loose parts or other defects which might render the assemblies unsuitable for its intended purpose.

G. Quality Control. The Contractor shall be responsible for all riveting quality control. All rivets shall be inspected immediately upon completion of driving and forming to ensure the rivet heads are seated against the plate or angle surface and are not cracked. The Contractor shall visually inspect each rivet for the conformance with ANSI standard B18.1.2. Sound each rivet to ensure it is clamped tightly in place. Loose rivets or button head dimensions out of specification shall be rejected and replaced at no additional cost.

The following is a list of qualified persons that rivet bridge structural steel. These are the only riveters that may be used unless otherwise approved by the Engineer.

(1) Terry Jagielski: JAG Maintenance & Riveting (517)567-2215

(2) Doug Lockhart: The Maker of Hand Forged Iron (740) 385-7192

(3) Nels Raynor: Bach Ornamental & Structural Steel (517)694-4311

3. Truss Pin Replacement. Lower chord truss pins are to be removed, replicated, and replacements installed. Secure vertical members prior to pin removal.

Clean Bridge pin threads by heating with an oxy fuel torch and clean with a wire brush. Heat recessed nuts with an oxy fuel torch and remove with an impact wrench. Clean and salvage recessed nuts. All recessed nuts shall be non-Destructive tested (NDT) using magnetic particle process to determine if any cracks have occurred. Salvaged nuts shall be galvanized prior to final installation.

Remove the batten plate using the methods described in this special provision for rivet removal. Remove bridge pins without damaging the eye bars or the floor beam connection plate. Bridge pins are not to be saved. Machine new bridge pins with threaded ends machined to match the threads of the historic recessed nut.

At each pin replacement location, the vertical member shall be repaired by fabricating and splicing a new section as shown on the plans. Before cutting the vertical channel, reference dimensions shall be taken in order to accurately locate the replicated channel splice sections.

Splice sections shall be fabricated 3 inches longer to match cut during the fit up and welding operation.

All welding shall conform to AWS standards for full penetration welds with E7018 low hydrogen electrodes at the splice connections.

4. Forged Eyebar Repairs. Bent Eyebars are to be straightened by heating the bent section. The temperature for heat straightening shall not exceed 1200 degrees F. All Eyebar heads shall be non-Destructive (NDT) tested using liquid Dye Penetrant (PT) to determine if any cracks have occurred in the forge welds or head of the Eyebars. If any cracks are detected, they must be repaired. The Inspector performing PT on the Eyebar Heads shall be an ASNT Level II Inspector.

A written repair procedure for any cracks detected shall be submitted to the Engineer for approval. Note that the Eyebars are made of older steel having high levels of phosphorus and sulfur. Welding procedures will require the use of low welding currents and fast travel speeds for welding steel with high phosphorus, and the use of low hydrogen electrodes for welding steels with high sulfur. Refer to: “Metals and How to Weld Them,” published by the James F. Lincoln Arc Welding Foundation.

The following is required for welding repairs:

Purchase 3/32 inch diameter Low Hydrogen E7018 electrodes in hermetically sealed containers and store in a holding oven at 250 degrees F (AWS).

Determine with dye penetrant the depth of discontinuities in the forge welds, then grind a groove and prepare for welding.

Any repair to existing steel shall have a minimum preheat of 300 degrees F.

Once the weld is cool, grind and inspect with Dye Penetrant for possible signs of hot cracking.

The following is a list of qualified persons that heat straighten bridge structural steel. These are the only persons that may be used unless otherwise approved by the Engineer.

A. Bruce Keiser
Civil Construction, Inc.
10310 SR 161 E
Plain City, OH 43064
(614)873-8196 FAX (614)873-3648

B. Dan Dalton
Dan R. Dalton, Inc.
912 W. Calispell Rd.
Usk, Washington 99180
(509)447-3528

C. Darryl Thomas
Flame On
4415 Tom Marks Rd.
Snohomish, WA 98290

D. Dan Holt
International Straightening
P.O. Box 6125
Bismark, ND 58506-6125

(425)397-7039
FAX (701)223-1154

(701)223-5972 or (701)223-6043

E. Jeffrey W. Post
J.W. Post & Assoc.
19627 Firesign Drive
Humble, TX 77346
(281)852-3745
FAX (517)347-3577
Pete Garijo (810)367-7060
FAX (517)367-7483

F. Pete Garijo or Dan Garijo
National Bridge Co.
4556 Arrowhead Rd.
Okemos, MI 48864
Dan Garijo (517)347-6167

G. Orrin Branscome or John Naypaver
Post Construction Co.
2 Layafette St.
P.O. Box 2298
New Castle, PA 16102
(724)658-1631
(724)658-8814

5. Heating and Hammering. Heating and Hammering shall be used to remove pack rust from seams along built-up steel members. It shall also be used to correct buckling deformation caused by the pack rust between rivets. The "Heating and Hammering" technique shall be used where indicated on the plans.

The following procedure shall be used:

The area to be treated shall be heated to a maximum of 800 degrees F with a Rose Bud type torch.

A 1/4 inch thick steel plate (with an attached handle) shall be held between the rivet hammer and the area to be treated to avoid scarring and case hardening of the steel member.

The area shall be hammered with the riveting hammer until pack rust is driven out of the seam and all buckling deformation is corrected. The sequence of heating shall be scattered along the length of the member to avoid concentrating too much heat in one area.

After completing the Heating and Hammering of the entire member it shall be straightened as required.

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

Contract Item (Pay Item)	**Pay Unit**
Structures, Rehabilitation, Rem Portions, Special	Lump Sum
Structural Steel, Furn and Fab, Special	Pound

Structural Steel, Restoration and Erect.....Lump Sum
Structural Steel, Truss Pin, 2-1/2 inch dia.....Each

Structures, Rehabilitation, Rem Portions, Special includes all labor, equipment and material for removal of portions of the existing structure as identified on the plans, including removal and salvaging of the existing pin nuts.

Structural Steel, Furn and Fab, Special includes furnishing and fabrication of new structural steel required for restoration repairs, new rivets and cleaning and coating of the new structural steel.

Structural Steel, Restoration and Erect includes all labor and material for, restoration repairs, straightening of existing members and heating and hammering and erection of the bridge. Cleaning and coating of existing structural steel members shall be paid for separately.

Structural Steel, Truss Pin, 2-1/2 inch dia includes furnishing and fabrication of new pins.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR

RAILING, PEDESTRIAN

BCY:KAZ 1 of 1 C&T:APPR:JSW:EMB:08-26-08

a. Description. This item shall consist of all work and materials to furnish and place pedestrian railing and shall be constructed in accordance with sections 707, 709 and 711 of the Standard Specifications for Construction and as shown on the plans. This work includes all fasteners, anchors and mounting hardware necessary for a complete installation.

b. Materials. Use material meeting the following:

Structural Steel.....906
Miscellaneous Metal Products 908
Timber and Lumber.....912

All railing components shall be coated semi-gloss black according to section 716 of the Standard Specifications for Construction and meeting Federal Standard 595B color number 27038.

c. Construction. Construct railing in accordance with sections 707, 709 and 711 of the Standard Specifications for Construction

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

Contract Item (Pay Item)	**Pay Unit**
Railing, Pedestrian	Foot

Railing, Pedestrian includes all labor, equipment, and materials required and will be paid for by the foot based on plan quantities.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
WOOD DECK

BCY:KAZ 1 of 1 C&T:APPR:SCK:EMB: 08-27-08

a. Description. This work shall consist of furnishing all labor and material in order to install the wood bridge decking as shown on the plans.

b. Materials. Wood decking shall be clear White Oak, free of defects, with the exception of pin knots less than 1/2 inch in diameter will be acceptable. Decking shall have a maximum moisture content of 19 percent.

Planks shall be full sawn 3 inch x 8 inch S4S (surfaced 4 sides), E4E (eased 4 edges) lumber.

Naturally durable hardwood shall provide design values equal to or exceeding the following:

1200 psi Allowable Bending, Fb
$1.1x10^6$ psi Modulus of elasticity, E

Preservation Treatment: The White Oak shall be untreated.

c. Construction. Construction shall be in accordance with section 709 of the Standard Specifications for Construction except as modified herein.

Protection in Transit: A coat of end sealer shall be applied to ends of all members as soon as practicable after end trimming. Members shall be protected until installed.

Field Storage and Handling: If stored temporarily at the job site after arrival, members shall be placed on blocking, well off the ground and be separated by wood blocking so air can circulate around each member. Place water resistance paper over the top but do not use opaque polyethylene.

Butt Joints, if used, must be placed over supports and must be staggered a minimum of 3 feet apart for adjacent planks.

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

Contract Item (Pay Item)	**Pay Unit**
Wood Deck	Square Foot

Wood Deck includes all labor and material for furnishing and installing the wood deck including all hardware and fasteners as shown on the plans.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
EXISTING TRUSS, REMOVE AND TRANSPORT

BCY:KAZ 1 of 2 C&T:APPR:JSW:EMB:08-27-08

a. Description. This work consists of rigging, removing and transporting the two span Pratt through truss bridge on State Street at its crossing of the Cass River in Bridgeport Township to the staging area designated on the plans. This structure is listed on the National Register of Historic Places.

The work shall also include preparation of the staging area as required to provide a level and stable surface and placement of the truss structures on temporary supports at the staging location. Note that an existing electrical service line and power pole is located on the staging area site. Temporary relocation of electrical service and power pole if necessary is included with this pay item. The staging location is approximately 700 feet (0.13 miles) from the present location.

b. Materials. Material as noted on the plans shall be in accordance with applicable section of the Standard Specifications for Construction, as shown on the plans and as specified herein.

Do not use material intended for use in the finished structure for temporary purposes.

c. Construction. Construction shall be in accordance with applicable sections of the Standard Specifications for Construction, as shown on the plans and as specified herein.

At least six weeks before beginning removal work and transportation of the truss spans, the Contractor shall deliver plans showing his procedure to the Engineer for review. These plans shall be sealed by a Professional Engineer licensed in the State of Michigan and shall provide details of rigging, removal, transporting, and placement of the truss spans on temporary supports at the staging site. The procedure shown on the plans is for information only.

The truss spans shall be removed from the existing substructures and transported in such a manner as not to damage work or material which will be salvaged. The two truss spans shall be lifted and transported using procedures which do not cause compression in the tension members. Temporary bracing of members shall be installed as necessary during handling and transporting to prevent damage to all parts of the existing bridge.

The Contractor is responsible for rigging and stabilizing the truss during transport. The Contractor shall ensure that axle loads are legal loads or the Contractor shall obtain special use permits for transporting along the roads.

The Contractor shall contact and coordinate with the Road Commission and utility companies and compensate utility owners for all expenses to temporarily move the utilities along the transport route as described in the Special Provision for Utility Work.

d. Measurement and Payment. The completed work as described will be measured as a lump sum and paid at the contract price using the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Existing Truss, Rem and Transport	Lump Sum

Existing Truss, Rem and Transport includes staging area preparation, rigging, removal, transport and temporary support in the staging location.

Compensation to utility owners for all expenses to temporarily move the traffic signals and overhead utilities along the transport route will be paid separately as described in the Special Provision for Utility Work.

Traffic Control during truss transport will be paid for separately.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
EXISTING TRUSS, TRANSPORT AND INSTALL

BCY:KAZ 1 of 2 C&T:APPR:JSW:EMB:08-27-08

a. Description. This work consists of rigging, transporting the rehabilitated two span Pratt through truss bridge from the staging location designated on the plans and installing on new substructures at the State Street crossing of the Cass River in Bridgeport Township. This structure is listed on the National Register of Historic Places.

The work shall also include restoration of the staging area to its original condition.

b. Materials. Material as noted on the plans shall be in accordance with applicable section of the Standard Specifications for Construction.

Do not use material intended for use in the finished structure for temporary purposes.

c. Construction. Construction shall be in accordance with applicable sections of the Standard Specifications for Construction, as shown on the plans and as specified herein.

At least six weeks before transport of the rehabilitated truss spans, the Contractor shall deliver plans showing his procedure to the Engineer for review. These plans shall be sealed by a Professional Engineer licensed in the State of Michigan and shall provide details of rigging, transporting, and installation of the truss spans on the new substructures.

The truss spans shall be transported and installed in such a manner as not to damage any work or material which is a part of the final structure. The two truss spans shall be lifted and transported using procedures which do not cause compression in the tension members. Temporary bracing of members shall be installed as necessary during handling and transporting to prevent damage to all parts of the existing bridge.

The Contractor is responsible for rigging and stabilizing the truss during transport. The Contractor shall ensure that axle loads are legal loads or the Contractor shall obtain special use permits for transporting along the roads. The Contractor shall be responsible for traffic control during bridge relocation.

The Contractor shall contact and coordinate with the Road Commission and utility companies and compensate utility owners for all expenses to temporarily move the utilities along the transport route. See Special Provision for Utility Work for further information.

d. Measurement and Payment. The completed work as described and measured as a lump sum will be paid at the contract price using the following contract item (pay item):

Contract Item (Pay Item)	**Pay Unit**
Existing Truss, Transport and Install	Lump Sum

Existing Truss, Transport and Install includes all labor , equipment and materials required to rig, transport and install the truss on the new substructure as shown on the plans.

Compensation to utility owners for all expenses to temporarily move the utilities along the transport route will be paid separately as described in the Special Provision for Utility Work.

Traffic Control during truss transport will be paid for separately.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
BOLLARDS

DBY:SP 1 of 2 C&T:APPR:EMB:SJC:10-09-06

a. Description. This Special Provision covers the requirement for bollard items as called for on the plans or as directed by Engineer. The work shall consist of providing and placing Bollard, Removable Bollard and foundation as described below. Bollards shall be placed in accordance with the Standard Specifications for Construction with the following exceptions and additions.

b. Materials. The bollard materials will be supplied by the Contractor as selected and as approved by the Engineer. The materials will include the bollards, concrete, steel bars and padlocks. The bollards shall be embedded in the ground with concrete foundations according to the manufacturer's instructions.

Acceptable manufacturers and styles of bollard are as follows:

1. Dumor, Inc., Bollard Model 400-42 - 4" diameter, - 42" height - Powder Coated Steel - Michigan Playground & Recreation Equipment, Inc., 2313 Beechwood, Royal Oak, MI 48073, (888) 418-8300.

2. Dawn Enterprises, Steel Bollard – 3.5"/4" diameter- 36"/42" height - round capped top - Dawn Enterprises, www.godawn.com, (800) 262-3296.

3. Creative Pipe, Steel Bollard – round steel 3.5"/4" diameter pipe – 36"/42" height – domed top – embedded mount– polyester powder coated – no eyelets. Creative Pipe, Inc., P.O. Box 2458, Rancho Mirage, California 92270, (800) 644-8467.

Removable bollards shall meet the required specifications from the following approved manufacturer:

1. Dumor, Inc., Removable Bollard Model 400-42/S-1SL – 4" diameter – 42" height – Powder Coated Steel. Michigan Playground & Recreation Equipment, Inc., 2313 Beechwood, Royal Oak, MI 48703, (888) 418-8300.

2. TrafficGuard, Round Post Lock – 3.5" diameter – 36" height – TrafficGuard Direct LLC, P.O. Box 201, Geneva IL 60134-9946. Contact Mike Schram, (877) 727-7347.

3. Creative Pipe, Steel Removable Bollard – round steel 3.5"/4" diameter pipe – 36"/42" height – domed top – embedded removable mount– polyester powder coated – no eyelets. Creative Pipe, Inc., P.O. Box 2458, Rancho Mirage, California 92270, (800) 644-8467.

Removable Bollards shall be equipped with padlocks cored for a standard park lock setting. Four coordinating keys shall be supplied to the Engineer.

Bollard and Removable Bollard shall be chosen in a manner so that they are the same height, diameter and color to give a consistent appearance once installed.

c. Construction. Bollards and foundations shall be installed per the manufacturer guidelines and as directed by the Engineer.

The Contractor shall repair or replace, at the Engineer's option, any bollard element damaged, defaced, or discolored, during transportation, storage, or installation/erection.

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

Contract Item (Pay Item)	**Pay Unit**
Bollard	Each
Removable Bollard	Each

Payment for **Bollard** includes all labor, equipment and materials necessary to furnish and install the item as described.

Payment for **Removable Bollard** includes all labor, equipment, and materials necessary to furnish and install the item as described.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DECORATIVE BENCH

BCY:KAZ 1 of 1 C&T:APPR:LML:DBP:09-04-08

a. Description. This work shall consist of furnishing and installing benches at the locations on the plans. This shall include any necessary excavation, backfilling, anchoring, and disposal of unsuitable materials required for a complete installation.

b. Materials. The bench materials shall be supplied by the Contractor, as selected and approved by the Engineer. The materials will include the bench, anchors, leveling washers, and fasteners in accordance with the details included in the plans. The bench shall be anchored per to the proposed stamped concrete sidewalk per manufacturer's recommendations.

Manufacturer and style of the bench are as follows, or Engineer approved equal:

Heritage Mission Arch-Back Bench, 6 foot, surface mounted, model HR305M, color: black
Wabash Valley Manufacturing Inc.
1-800-253-8619

Fasteners and anchor bolts shall be stainless steel.

Submit bench specifications, color samples, and three sets of shop drawings to the Engineer for review and approval prior to ordering items.

c. Construction. Install bench and anchoring mechanism in the concrete sidewalk according to the manufacturer's recommendations. The bench must be level and square in a true, flat plane to prevent rocking.

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

Contract Item (Pay Item)	**Pay Unit**
Decorative Bench	Each

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DECORATIVE STONE COLUMN

BCY:KAZ 1 of 2 C&T:APPR:EMB:TES:10-09-08

a. Description. This work consists of furnishing and installing decorative stone columns at locations as indicated on the plans. This includes any excavation, aggregate base, backfilling, formwork, concrete curing, reinforcing steel, cast in place concrete, masonry blocks, limestone, stone veneer, and hardware, as directed by the Engineer. All work must be done according to the Standard Specifications for Construction except as modified herein.

Each column must be approximately 20 inches by 20 inches square with a beveled flagstone pier cap with approximately 2 inch overhang secured on the top. The concrete base of the column must extend a minimum of 42 inches below grade, constructed on an aggregate base. Total height of column above grade, including the limestone cap, must be between 42 and 46 inches tall.

b. Materials.

1. Aggregate must conform to the requirements for 6A aggregate as specified in section 902 of the Standard Specifications for Construction. Crushed concrete will not be allowed.

2. Reinforcing steel must conform to the requirements specified in section 905 of the Standard Specifications for Construction.

3. Concrete must conform to the requirements of Grade S2, Concrete as specified in section 701 of the Standard Specification for Construction.

4. Masonry units must conform to the requirements of section 913 of the Standard Specifications for Construction. Clay brick and mortar must be approved by the Engineer.

5. Stone veneer must be 1 to 2-5/8 inches thick, vary in size from 1/2 to 6 inches in height and 4 to 20 inches in length with 1/2 inch mortar joints. Cultured stone must be Aspen Southern Ledgestone (CSV-430778 by Owens Corning Cultured Stone LLC) manufactured by:

A. Dixie Distribution: An Old Castle Company
5917 Dixie Hwy. Saginaw, MI 48601
800-968-8282

B. Lincoln Brick & Stone – Saginaw
5452 Garfield Rd. Saginaw, MI 48603
989-692-7425

C. Genesee Cut Stone & Marble Co.
5276 S. Saginaw flint, MI 48507
810-743-1800

Submit samples of cultured stone showing color, pattern and texture to the Engineer for

approval prior to construction.

6. The pier cap must be Cultured Stone 24 inches x 24 inches Flagstone Pier Cap in Gray by Owens Corning Cultured Stone LLC manufactured by:

A. Dixie Distribution: An Old Castle Company
5917 Dixie Hwy. Saginaw, MI 48601
800-968-8282

B. Lincoln Brick & Stone – Saginaw
5452 Garfield Rd. Saginaw, MI 48603
989-692-7425

C. Genesee Cut Stone & Marble Co.
5276 S. Saginaw flint, MI 48507
810-743-1800

Submit samples of flagstone pier cap to the Engineer for approval prior to construction.

Submit shop drawings to the Engineer for approval prior to construction.

c. Construction. Construct each stone column on a minimum 6 inch compacted 6A aggregate base. Place and compact backfill in accordance with section 206 of the Standard Specifications for Construction. Construct formwork in accordance with section 706 of the Standard Specifications for Construction or as approved by the Engineer. Earth forms will not be allowed.

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

Contract Item (Pay Item)	**Pay Unit**
Decorative Stone Column	Each

Decorative Stone Column includes all labor, materials, and equipment necessary to construct the columns as described herein.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DECORATIVE TRASH RECEPTACLE

BCY:KAZ 1 of 1 C&T:APPR:LML:DBP:09-04-08

a. Description. This work shall consist of furnishing and installing decorative trash receptacles at the locations shown on the plans.

b. Materials. The trash receptacle materials will be supplied by the Contractor and approved by the Engineer. The materials will include the trash receptacle, chains, anchors, leveling washers, and fasteners in accordance with the details included in the plans.

Manufacturer and style of the trash receptacle are as follows or Engineer approved equal:

Heritage Mission Receptacle, 32 gallon plastic liner, surface mounted, model HR200M, color: black,
Wabash Valley Manufacturing Inc
1-800-253-8619

The anchors shall be stainless steel.

Submit receptacle specifications, color samples, and three sets of shop drawings to the Engineer for review and approval prior to start of installation.

c. Construction. The decorative trash receptacle shall be installed on the proposed concrete and attached with stainless steel anchors as approved by the Engineer. The trash receptacles shall be installed per the manufacturer's specifications.

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

Contract Item (Pay Item)	**Pay Unit**
Decorative Trash Receptacle	Each

Decorative Trash Receptacle includes furnishing and installing decorative trash receptacles and providing specifications, color samples and shop drawings, to the Engineer for approval.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DECORATIVE FENCE

BCY:KAZ 1 of 2 C&T:APPR:DMG:LML:10-07-08

a. Description. This work shall consist of all labor, materials and equipment required to furnish and install decorative fence at locations as indicated on the plans. This shall include any excavation, backfilling and disposal of unsuitable materials required for installation. All work shall be according to section 808 of the Standard Specifications for Construction and this Special Provision.

b. Materials. Decorative fence shall be commercial grade, ornamental picket style fence with a continuous top rail as shown on the plans. Fence material shall be steel or other approved material with a powder coat paint system finish. Vinyl or wood fence will not be allowed. Exposed sharp points shall not project from any part of the fence. The fence height shall be a minimum of 36 inches and a maximum of 42 inches above finish grade. The fence shall be mounted to line posts which are separate from the adjacent columns. An intermediate line post is required. Posts shall be encased into a concrete footing which shall extend a minimum of 42 inches below grade. There shall be a minimum 1 inch and maximum 4 inch clearance between the fence and adjacent columns. All fence hardware shall be stainless steel.

The powder coat process shall include a six-stage pretreatment/wash (with zinc phosphate), an electrostatic spray application of an epoxy base, and a separate electrostatic spray application of a polyester finish. The base coat shall be a thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils. The topcoat shall be a “no-mar” TGIC polyester powder coat finish with a minimum thickness of 2 mils. The color shall be semi-gloss black. The painting system shall have a ten year warranty.

Concrete for footing shall be Grade P2 or P1 in accordance with section 601 of the Standard Specifications for Construction.

Shop drawings shall be submitted to the Engineer for approval a minimum of 14 days prior to ordering any materials.

c. Construction. Install fence plumb and level with respect to the adjacent columns. Fence shall be located as indicated on the plans. Erect fence as recommended by the manufacturer and in accordance with section 808 of the Standard Specifications for Construction.

Manufacturer of fence system shall provide on-site technical assistance as necessary during initial installation.

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

Contract Item (Pay Item)	**Pay Unit**
Decorative Fence	Foot

Decorative Fence includes all labor, materials and equipment required to install the fence as described herein.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SHREDDED BARK MULCH

DES:JB 1 of 1 C&T:APPR:JAR:DMG:01-27-04

a. Description. This work will consist of furnishing and placing a thickness of 6 inches of Shredded Bark Mulch at the locations shown on the plans or as directed by the Engineer.

b. Materials. The Shredded Bark Mulch will be as specified in subsection 917.14.A of the 2003 Standard Specifications for Construction. No woodchips will be permitted on this project.

c. Measurement and Payment. Shredded Bark Mulch at 6 inch thickness will be measured by area in square yards, and will be converted to cubic yards for payment at the contract unit price which includes furnishing and placing.

Contract Item (Pay Item)	**Pay Unit**
Shredded Bark Mulch	Cubic Yard

MICHIGAN DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
RIPRAP, HEAVY, MODIFIED

BCY:KAZ 1 of 2 C&T:APPR:EMB:DBP:08-27-08

a. Description. This work consists of diverting stream flow, preparing channel grades, installing geotextile liner, and furnishing and placing well-graded riprap on channel bottoms and side slopes. All work will be done according to the plans and the Standard Specifications for Construction as herein modified.

b. Materials. Stone used for riprap shall be well graded natural stone, free from shale, spoil, and organic material. Broken concrete will not be allowed. The ratio of greatest to least dimension shall not exceed 3:1 for any individual stone.

The gradation shall meet the requirements specified in **Table 1 Gradation Requirements for Riprap-Special, Individual Stones**. Acceptance of the gradation will be based on visual inspection of riprap in-place by the Engineer. Sampling for laboratory testing will be at the discretion of the Engineer.

Geotextile liner must meet the requirements of section 910 of the Standard Specifications for Construction.

c. Construction. The construction methods shall be in accordance with section 813 of the Standard Specifications for Construction. Riprap shall be placed on prepared grades to the elevations, thickness, and lateral limits shown on the plans. Areas to be protected by riprap shall be cleared of brush, trees, stumps and debris. All grades shall be shaped and compacted to the required cross section, including excavation for toe and header plan details. Geotextile Liner shall be placed on the prepared grades according to the *Soil Erosion and Sedimentation Control Manual*. The riprap installation shall not damage the Geotextile Liner.

Careful placement of riprap with a clam bucket or other approved method will be required to assure that there is no damage to structure footings and no material loss around or under structure foundations. Any structure damage shall be repaired by the Contractor as directed by the Engineer, at no cost to the Department.

On slopes, placement of riprap stone shall start at the toe and proceed up the slope, with each stone firmly bedded into the slope and against the adjoining stones. The riprap shall be constructed to minimize voids by select placement of optimum stone sizes from the gradation specified. If placed riprap contains large voids, the Engineer may direct the contractor to place additional stones of the smaller gradation sizes to fill the voids. The finished surface of the riprap shall present a tight, even surface.

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

Contract Item (Pay Item)	**Pay Unit**
Riprap, Heavy, Modified	Square Yard

Riprap, Heavy, Modified will be measured in place in square yards of top surface area after all layers are in place. Payment for **Riprap, Heavy, Modified** includes furnishing all materials, equipment, and labor to divert stream flow, clear and prepare grades, furnish and place Geotextile Liner, and to place the riprap stone, including headers, according to this specification.

TABLE 1 Gradation Requirements for Riprap-Special, Individual Stones

Least Dimension, Inches	Percent Smaller Than
41	100
34	85
28	50
15	15

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TURF ESTABLISHMENT, PERFORMANCE

DES:JLB 1 of 5 C&T:APPR:DMG:DBP:10-25-07

a. Description. Section 816 of the Standard Specifications for Construction is deleted and replaced by this special provision. The Contractor shall be responsible for the performance and quality of turf growth in the areas indicated on the plans and as identified by the Engineer. The Contractor shall comply with all local, state and federal laws completing this work.

The Contractor shall establish a durable, permanent, weed-free, mature, perennial turf. The work consists of fundamental turf work, including but not limited to topsoiling, seeding, mulching, erosion control, maintenance, watering and repair of turf as described herein during the life of the contract and during the life of any supplemental performance bond which may ensue.

The Contractor shall choose and implement proven turf establishment industry practices; provide all necessary labor and equipment; select and provide all turf establishment materials; and control erosion and any subsequent sedimentation at all times.

The Contractor shall be responsible for a site analysis and its interpretation for their own use to ensure compliance with this specification. The site analysis will take into consideration topsoil needs, fertilizer and pH requirements, seed mix, existing and future soil moisture levels, slopes and grades, required erosion control items and devices, maintenance requirements, local highway snow deicing practices, and any other characteristics that influence and affect turf establishment.

Subsection 107.11 of the Standard Specifications for Construction is revised relative to the Contractor's responsibility for the repair of turf establishment work as follows. The Contractor shall be responsible, at no additional cost to the contract, for the repair of turf establishment work occasioned by storm events up to 3 inches of rain in a 24 hour period as documented by local meteorological data submitted to the Engineer for review and approval. All other portions of Subsection 107.11 remain unchanged.

1. **Contractor Turf Establishment Experience Requirements.** The Contractor shall possess a valid Michigan Department of Agriculture commercial pesticide applicator's certificate for Rights of Way category.

All herbicide applications shall be made by a commercial applicator licensed in the State of Michigan. All individuals applying pesticides shall possess a valid Michigan Department of Agriculture commercial pesticide applicator's certificate for the appropriate category. All application procedures and materials shall meet all federal, state and local regulations.

At least 10 days prior to start of turf establishment, the Contractor performing the turf establishment work shall provide the Engineer with documentation that they will meet one or both of the following requirements.

A. At least one person employed by the Contractor and assigned to the job site shall have a degree or certificate in Turf Management, Horticulture 1or related field.

B. At least one person employed by the Contractor and assigned to the job site shall have at least 5 years of experience in roadside turf establishment.

b. Materials. The Contractor shall use topsoil, seed, mulch, pesticide, herbicide and/or mulch blankets and any other unique erosion control materials as necessary to fulfill this specification, as detailed in the plans and as indicated in the work plan. The Contractor may use additional materials as necessary to meet the standards set forth for turf establishment in this special provision. The use of any sod on the project requires the prior approval of the Engineer and if approved, may be used at limited site locations only.

Selection of all materials is the responsibility of the Contractor with the following minimum conditions.

1. **Soil.** The Contractor shall provide furnished or salvaged topsoil which may be blended compost that will support vigorous growth. It shall be humus bearing and of not less than 4 inches in depth. It shall be free of stones larger than 1 inch in diameter and other debris. The finished slope shall be trimmed and graded according to subsection 205.03.N of the standard specifications.

2. **Seed.** The Contractor shall use a seeding mixture that is composed of a blend of four or more species of perennial grass. All species and their cultivars or varieties shall be guaranteed hardy for Michigan.

The following is a list of recommended species of perennial grasses: Kentucky Bluegrass, Perennial Ryegrass, Hard Fescue, Creeping Red Fescue, Chewings Fescue, Turf-type Tall Fescue, Buffalo grass, and Alkaligrass-Fults Puccinellia distans. The cultivars or varieties of grasses selected shall be disease and insect resistant and good color. No one species in the blend shall be more than 25 percent of the mixture by weight. No one species in the blend shall be less than five percent of the mixture by weight. No grass species selected shall be considered noxious or objectionable, such as Quack Grass, Smooth Brome, Orchard Grass, Reed Canary Grass, and others.

A. The seed shall be legally saleable in Michigan. The seed product shall not contain more than 10 percent inert materials. The seed source shall be from an MDOT approved certified vender.

B. The species and varieties of seed shall be adapted to all site conditions, to the site use, and to the soils, moisture, and local climate. Site use may include but is not limited to detention pond, wildlife habitat, playground, wetlands, forested wetland, rural roadside, urban roadside and highly maintained front yard.

C. At least two of the species in the mixture proposed to be planted within 15 feet behind the curb or the shoulder shall be salt tolerant.

3. **Mulch.** Seeded areas shall be mulched with the appropriate materials for the site conditions, shall promote germination and growth of seed and to mitigate soil erosion and sedimentation.

4. **Herbicides.** The Contractor shall comply with all federal, state and local laws as noted in the standard specifications, Section 107. A weed control application will require the Contractor to make proper notifications and/or postings as per label and MDA requirements for all locations that will be sprayed. The Contractor will also notify selected MDOT staff 48 hours prior to any applications being made. The Contractor shall furnish and apply herbicide(s) as

needed. It shall be the Contractor's responsibility to select the herbicide(s) and the rate at which it will be used. The work and herbicide(s) shall be approved by the Engineer prior to the application of the material. A spray log will be required to be completed and submitted to the project office, each day an application is made.

No water shall be drawn from any waterway (i.e. river, ditch, creek, lake etc.) that is located on any state, county or municipal right-of-way, for mixing with herbicides.

5. **Fertilizers.** The Contractor shall furnish and apply fertilizer(s) as needed. It shall be the Contractor's responsibility to select the fertilizer(s) and the rate at which it will be used. The work and fertilizer(s) shall be approved by the Engineer prior to the application of the material.

6. **Water.** The Contractor shall furnish and apply water from an approved source as specified in the work plan at a rate to promote healthy growth.

c. Construction. The Contractor shall be responsible for all work and all construction methods used in completing this work. Any part of MDOT standard specifications or standard plans chosen to be implemented by the Contractor shall not imply responsibility on the part of MDOT for acceptability of the Contractor's construction methods or for the quality of the Contractor's work outcome at any time.

1. **Inspection of the work.** The Contractor shall be responsible for all inspection of turf establishment work.

The Contractor shall use a Contractor's Daily Report approved by the Engineer to report inspections made and to document turf establishment work performed on this project. The Contractor's Daily Report shall be completed and submitted to the Engineer when any work performed under this special provision is in progress.

The Contractor's Daily Report shall be accompanied by all necessary materials documentation including tests slips, certifications, etc.

The Engineer shall determine the acceptability of these reports in terms of their completeness and accuracy. The Engineer reserves the right to verify all submitted measurements and computations. Failure by the Contractor to submit acceptable and timely reports to the Engineer may result in withholding of progress pay estimates on turf-related items until such time as reports are submitted in an acceptable and timely fashion.

The Engineer reserves the right to inspect the project for any reason in accordance with subsection 104.01 of the standard specifications, including the fulfillment of other inspection requirements such as Soil Erosion And Sedimentation Control, NPDES, etc. These inspections made by the Engineer shall not relieve the Contractor of the inspections required by this special provision or the Contractor's responsibilities for erosion control and turf establishment.

2. **Erosion Control.** Erosion shall be controlled at all times according to Section 208 of the standard specifications. Control of soil erosion is the responsibility of the Contractor. However, sedimentation controls shall be placed as indicated on the plans or as directed by the Engineer. The site shall be continuously monitored by the Contractor for needed erosion repair from any cause as addressed in the contract documents. All eroded areas shall be returned to original grade as detailed in the contract documents.

If sedimentation occurs in drainage structures or any watercourse or water containment area, corrective action shall be taken immediately and all disturbed areas contributing to this

sedimentation shall be restored within 24 hours of erosion occurrence. Sediment deposited as a result of the Contractor's inability to control the soil erosion shall be removed at the Contractor's expense.

The Contractor shall reimburse the Department for any costs levied against the Department, such as fines, environmental costs, costs for remedies required, or any other costs as a result of the Contractor's failure to comply with this specification and with all federal, state and local laws.

3. **Erosion Repair.** The Contractor is responsible for all repair and liable for all consequences (legal, monetary, or other) associated with erosion or sedimentation damage to finished or unfinished work.

All erosion occurrences and the repairs made by the Contractor shall be reported to the Engineer in the format and at the frequency required by the Engineer. Any erosion, displacement or disturbance to ongoing or completed work by any cause shall be repaired by the Contractor at no additional cost to the contract unless otherwise noted herein.

The Contractor shall be responsible and liable for all traffic control and safety measures required to repair and protect damaged turf areas. Any eroded area that may affect the support of the roadbed or safety of the public shall be repaired within 24 hours of the erosion occurrence.

Protection devices such as barriers, directional signs/signals, temporary fence, or any other safety measures shall be placed by the Contractor immediately after any erosion damage occurs that has the potential of endangering the public. In these instances, the Contractor shall, within 24 hours of the occurrence of the damage, provide the Engineer with a written summary of the immediate action taken and describing the repairs made and the safety measures taken.

4. **Final Acceptance and Supplemental Performance Bond.**

A. **Final Acceptance Parameters.** Before final acceptance of the turf establishment work, all of the following minimum parameters shall be met throughout all exposed areas of the project designated on the plans or identified by the Engineer as turf establishment areas. There shall be no exposed bare soil and the turf shall be fully germinated, erosion free, weed free, disease free, dark green in color and in a vigorous growing condition.

The Engineer will notify the Contractor of the dates and times of all acceptance inspections. The Contractor may accompany the Engineer while these inspections are being made. If the Contractor does not agree with the decision made by the Engineer, the Contractor can request an inspection by a mutually agreed upon third party (Michigan State University Extension service or other). A joint inspection, including the Engineer, the Contractor, and the third party, will be scheduled. All expert fees and expenses charged by the third party will be paid by the Contractor.

Any and all claims for extra compensation shall be according to subsection 104.09 of the Standard Specifications.

B. **Supplemental Performance Bond.** In the event that all contract items of work are completed, including the placement of all turf establishment items of work, and the final acceptance of the project is delayed because the final acceptance parameters for the turf establishment work have not been fully met, the Contractor may propose to the Engineer the use of a supplemental performance bond.

The bond serves to secure the successful completion of turf establishment work and fulfillment of all final acceptance parameters for the turf establishment work. The supplemental performance bond must be in all respects satisfactory and acceptable to MDOT and executed by a surety company authorized to do business with the State of Michigan.

The bond shall be in an amount equal to 50 percent of the turf establishment work contract items covered by this special provision. The bond shall remain in place for two growing seasons. At the discretion of the Engineer, the bond may be reduced on a prorated basis as portions of the areas designated for turf establishment on the project meet the final acceptance parameters.

Prior to commencement of any work during the bonded period necessary to meet the acceptance parameters, the Contractor shall apply for a permit to work within MDOT right-of-way using Form 2205. The permit fee and an individual permit performance bond shall not be required. The permit insurance requirements, however, shall apply.

d. Measurement and Payment. The completed work as described will be measured and paid for using the following contract item (pay item):

Contract Item (Pay Item)	**Pay Unit**
Turf Establishment, Performance	Square Yard

1. **Turf Establishment, Performance** shall be measured in place by area in square yards. All materials, labor and equipment required or selected by the Contractor to install, maintain, inspect, repair and meet the acceptance parameters for turf establishment specified in this special provision, including preparation, updating and submittal of the Contractor's Daily Reports, will not be paid separately but will be considered included in the contract unit price bid for **Turf Establishment, Performance**.

Repairs made to damaged turf establishment areas as a result of a documented storm by local meteorological data resulting in rainfall amounts of more than 3 inches in a 24 hour period will be paid for as an increase to original quantities as described in subsection 109.07 of the Standard Specifications.

The following schedule of payment applies to work performed according to this special provision. Upon completion of topsoil surfacing stage, 50 percent of the authorized amount for **Turf Establishment, Performance** will be paid to the Contractor. The remaining authorized amount will be paid upon completion of all other work necessary to comply with this special provision and to meet all final acceptance parameters for **Turf Establishment, Performance** or at such time as the supplemental performance bond is accepted by the Department, 50 percent of the bid price for **Turf Establishment, Performance** will be paid.

The supplemental performance bond and all costs associated with turf establishment work performed during the bonded period mutually agreed upon with the Engineer, will not be paid for separately. These costs which may include, but are not limited to, mobilization, traffic control devices, and the required permit insurance are considered to be included in the unit price bid for **Turf Establishment, Performance.**

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DEFINITION CHANGES

FIN:JDM 1 of 2 C&T:APPR:KB:DBP:10-02-08
FHWA:APPR:10-16-08

The following additions and changes are made to sections 101, 102, 104, 105, and 150 of the Standard Specifications for Construction. These revisions are due to replacing the words "Proposal Form" with "Proposal", and replacing the word "Proposal" with "Bid" to reflect how the terms are used in current business processes.

Delete the word "proposals" in subsection 101.01, in the second paragraph on page 1 of the Standard Specifications for Construction and replace with the word "bids."

Delete the following definitions in subsection 101.03, on pages 2, 3, 5, and 9 of the Standard Specifications for Construction, in their entirety and replace with the following:

Addendum. Revisions to the proposal and/or plans issued by the Department after the advertisement but before the opening of bids.

Advertisement. The public announcement of a proposal, inviting Contractors to submit bids for work to be performed and/or materials to be furnished.

Bid. Completed schedule of items submitted as an offer to perform work at quoted prices.

Bidder. The individual or legal entity submitting a bid.

Determined Low Bidder. The bidder who is determined to have the lowest total bid on a project that meets all necessary requirements.

Proposal. A document containing information regarding the project being advertised for bids. The information includes the location and description of work, schedule of items, progress clause, bid guaranty amount, date and time for electronic submission and downloading of bids, special provisions, supplemental specifications or other requirements that may vary from or are not contained in the standard specifications or plans, and the applicable wage rates to be paid by the bidder.

Add the following definitions to subsection 101.03, on page 3 of the Standard Specifications for Construction:

Bid Appeal Committee. A MDOT committee that performs the administrative review of appeals of low bid rejections.

Bid Guaranty. An amount the bidder agrees to pay to MDOT, at the time of bid submission, if the bidder fails to execute the contract form and file satisfactory bonds and other required documents necessary for award of the contract within the 28 day period provided or within

Department approved extensions.

Bid Review Committee. A MDOT committee that reviews irregular bids for adherence to standard bid procedures.

Delete the following definitions in subsection 101.03, on page 9 of the Standard Specifications for Construction.

Proposal Appeal Committee. The committee that performs the final administrative review of appeals of low proposal rejections except for contracts that require approval by the Commission.

Proposal Form. The prescribed document on which the bidder's written offer to perform stated work at the quoted prices must be submitted.

Proposal Guaranty. The security furnished by the Bidder as a guaranty of good faith to enter into the Contract for the work proposed.

Proposal Review Committee. The committee that reviews all proposals for adherence to bidding procedures.

Delete the word "proposal(s)" where it appears without the word "form" following it (proposal form) throughout section 102 of the Standard Specifications for Construction and replace with the word "bid(s)" with the exception of the following two occurrences where it shall remain as proposal:

Subsection 102.01, page 13, the third sentence of the paragraph; and

Subsection 102.14, page 19, the first sentence of the third paragraph.

Delete the word "form" where it appears after the word "proposal" (proposal form) throughout section 102 of the Standard Specifications for Construction.

Delete the word "proposal" in subsection 104.08.J, in the first sentence of the fifth paragraph on page 49 (bid proposal) of the Standard Specifications for Construction.

Delete the word "proposal" in subsection 104.08.J, in the second sentence of the fifth paragraph on page 49 (proposal guaranty) of the Standard Specifications for Construction and replace with the word "bid."

Delete the word "proposals" in subsection 105.05, in the second paragraph on page 59 of the Standard Specifications for Construction and replace with the word "bids."

Delete the word "proposal" in subsection 150.02, in the second paragraph on page 112 of the Standard Specifications for Construction and replace with the word "bid."

Delete the words "request for" in subsection 150.02, in the second paragraph on page 113 of the Standard Specifications for Construction.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTRACTOR PERFORMANCE EVALUATIONS

a. Description. Project management staff will evaluate the Contractor's performance on this project and the evaluation may be used as a basis for modifying the prequalification ratings of the Contractor. An evaluation may be issued during the course of a project (interim) and will be issued after completion of a project (final). The criteria described in the Contractor Performance Evaluation Form (Form 1182) will be applied to make the evaluation. This form is available through the Michigan Department of Transportation (MDOT) Contractor's Service Center web site at www.mdot.state.mi.us/contractors/ or by contacting the Engineering Print Unit at 517- 322-1676. Any action to modify the Contractor's prequalification ratings will be taken in accordance with the duly promulgated prequalification rules.

If an interim contractor performance evaluation is issued and regardless of whether the Contractor requests a meeting to discuss a Contractor Performance Evaluation, project management staff may require the Contractor to submit a performance improvement plan to address needs identified in the Contractor Performance Evaluation and to attend a meeting to discuss the improvement plan. After the meeting is held, the project management staff may approve the plan or require changes to the plan. The Contractor shall resubmit the plan if changes are required. The Contractor shall be required to immediately implement approved performance improvement plans. If the Contractor does not implement the plan immediately, MDOT will consider the contractor to be in non-compliance and will take action as described under Section c of this special provision.

Within 21 days of the receipt of a final Contractor Performance Evaluation, the Contractor may make a written request to meet with project management staff to review the evaluation. After a requested meeting is held, the Department shall give the Contractor written notice of any revisions to the final Contractor Performance Evaluation or if the evaluation will remain unchanged. If the meeting is not requested within the 21 days of receipt, the final Contractor Performance Evaluation will not be subject to later contest or appeal.

b. Appeals.

1. Appeal of Evaluation- Within 14 days after the date that a Contractor receives the written notice as described above, a Contractor may file a written appeal of any rating of 7 or below, to the Engineer. The written appeal shall contain documentation supporting the Contractor's position that the rating is not warranted. The Contractor may request to appear before a Performance Evaluation Appeal Panel. If a timely written appeal is not filed, the evaluation will not be subject to later contest or appeal. Interim Contractor Performance Evaluations cannot be appealed.

2. Appeal of Performance Improvement Plan- Within 14 days after the date that a performance improvement plan is approved and sent to the Contractor, the Contractor may file a written appeal of that plan to the Engineer and request to appear before a Performance Evaluation Appeal Panel. Documentation must include the reasons for the appeal. If a timely written appeal is not filed, the performance improvement plan becomes final and will not be subject to later contest or appeal.

   An appeal filed by a Contractor shall be considered by a Contractor Performance Evaluation Appeal Panel. The panel shall be composed of three licensed professional Engineers from the Department (following the format of a Central Office Review Panel) who were not directly involved in the management of the project. This panel will review appeals on all Contractor Performance Evaluations for this project. The Contractor and the Engineer will be required to submit supporting documentation relevant to the appeal and will attend a formal appeal hearing. Upon concluding its review, the panel will confirm or modify the Contractor Performance Evaluation. The panel will, within 30 days, send the Contractor and Engineer written notice of its decision along with a copy of the modified Contractor Performance Evaluation if applicable. The original or modified Contractor Performance Evaluation is final and constitutes the Department's decision; it is not subject to further contest or appeal.

c. Non-Compliance. If a Contractor fails to honor a request by project management staff to submit a performance improvement plan or to meet to discuss it, or if a Contractor 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. Any action to modify the Contractor's prequalification ratings will be taken in accordance with the duly promulgated prequalification rules.

d. Subcontractors. For purposes of this Special Provision, the word "Contractor" includes subcontractors. Project management staff will evaluate the performance of subcontractors in accordance with this Special Provision.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
ELECTRONIC BIDDING

FIN:JDM 1 of 3 C&T:APPR:KB:DBP:10-02-08
FHWA:APPR:10-16-08

The following deletions and additions are made to sections 101 and 102 of the Standard Specifications for Construction.

Add the following definitions to subsection 101.03 of the Standard Specifications for Construction:

Trns*Port Expedite. AASHTOWare software used for the electronic preparation and submission of bid documents.

Bid_Express. On-line information service for transportation bidding allowing on-line, secure bid submission.

Computer-Generated Bid Documents. An electronic bid document prepared using Trns*Port Expedite software for secure transfer through Bid_Express to MDOT which includes the Schedule of Items and Designated and Specialty Items, if applicable.

Schedule of Items. A section of the computer-generated electronic bid document in which items of work, pay units, and estimated quantities are identified by MDOT. Bidders provide the unit price for items of work in this section.

Designated and Specialty Items. A section of the computer-generated electronic bid document in which the bidder may use to identify a designated company(ies) for either subcontract work or specialty work, as required for the project.

Delete subsection 102.02.F, on page 13 of the Standard Specifications for Construction, in its entirety and replace with the following:

Date, time and place for the electronic submittal and downloading of bids; and

Delete subsection 102.05, on page 14 of the Standard Specifications for Construction, in its entirety and replace with the following:

The bid shall be prepared using Trns*Port Expedite software. The Bidder shall specify a unit price for each item, except where a lump sum is called for. Prices for lump sum items shall be entered only in the bid amount column.

The bid shall be submitted by an authorized representative of the Bidder through Trns*Port Expedite for secure transfer through Bid_Express to MDOT. Authorized representatives of the Bidder are those individuals designated under “Persons Authorized to Execute Contracts” on the MDOT *Prequalification Application* form. This form must be properly

completed and submitted in accordance with the Bureau of Finance and Administration's *Classification and Rating of Bidders* procedures. The bidder shall create and obtain a timely approval of a digital ID from Bid Express and MDOT.

Delete subsections 102.06.A.2, 102.06.A.3 and 102.06.A.4, on page 15 of the Standard Specifications for Construction, in their entirety and replace with the following:

2. All addenda issued for the project have not been incorporated into the bid as submitted.

3. The bid is not electronically submitted by an authorized representative of the Bidder who has been designated in writing in accordance with subsection 102.05.

4. The Bidder, except as otherwise provided in this subsection, is not prequalified or has insufficient prequalification for the category(ies) of work specified as necessary for purposes of submitting a bid.

Delete subsection 102.06.B.1, on page 15 of the Standard Specifications for Construction.

Delete subsection 102.07, on page 16 of the Standard Specifications for Construction, in its entirety and replace with the following:

The bid shall be submitted by the Bidder through Trns*Port Expedite for secure transfer through Bid_Express to MDOT. All proposals must be submitted through Trns*Port Expedite for transfer through Bid_Express to MDOT prior to the time specified in the advertisement.

Delete subsection 102.08, on page 16 of the Standard Specifications for Construction, in its entirety and replace with the following:

A bid may be withdrawn or revised prior to the time specified in the advertisement. The last bid submitted, identified by date and time, will be the only bid considered.

Delete subsection 102.09, on page 17 of the Standard Specifications for Construction, in its entirety and replace with the following:

Downloading of Bids. Bids will be downloaded and the total amount of each bid will be displayed on MDOT's website as "As Submitted" bid results. In the event a bid submitted through Bid_Express is not received by MDOT, and the bidder has a system-generated receipt of bid submission, the bid may be accepted after the deadline established for bid submission, in accordance with the procedure established by the Department and pending an investigation of the cause of submission failure. These situations will be handled on a case-by-case basis.

Delete the word "written" in the second sentence of the first paragraph of subsection 102.13, on page 19 of the Standard Specifications for Construction and replace with the word "entered."

Delete the first sentence of subsection 102.15, on page 20 of the Standard Specifications for Construction and replace with the following:

The Department will provide the contract and bond forms to the determined lowest Bidder, at the address on file with the Department.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
UNBALANCED BIDDING

CSD:JDM 1 of 1 C&T:APPR:DS:DBP:03-19-09
FHWA:APPR:03-26-09

Add the following definitions to subsection 101.03, on page 7 of the Standard Specifications for Construction:

Materially unbalanced bid. A bid that generates a reasonable doubt that award to the bidder submitting the mathematically unbalanced bid will result in the lowest ultimate cost to the Department.

Mathematically unbalanced bid. A bid containing lump sum or unit price bid items that do not reflect reasonable actual costs of labor, equipment, materials, plus a reasonable proportionate share of the bidder's anticipated profit, overhead costs and other indirect costs.

Delete subsection 102.04, on page 14 of the Standard Specifications for Construction, in its entirety and replace with the following:

Bidders shall carefully examine the proposal, plans, specifications and the work site until the Bidder is satisfied as to all local conditions affecting the contract and the detailed requirements of construction. If any uncertainty, inconsistency, error, omission, or conflict is discovered in the plans and/or proposal, the Bidder shall notify the contact person identified in the proposal using the Department approved procedures. The submission of a bid shall be considered prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and requirements of the contract. Bidders shall familiarize themselves with all requirements of Federal, State, and local laws, ordinances, and permits that may directly or indirectly affect the prosecution of work and furnishing of necessary materials.

The Bidder shall not take advantage of any error or omission in the plans and/or proposal that could make the bid mathematically or materially unbalanced. Failure on the part of the Bidder to notify the Department may result in the rejection of the bid, action taken against the Bidder's prequalification, or both. If an error or omission is found after award of the contract that makes the bid mathematically and materially unbalanced, the Department shall have the right to eliminate the work item(s) without compensation to the Bidder.

Add the following to subsection 102.06 B., on page 16, of the Standard Specifications for Construction:

8. The bid is mathematically unbalanced as defined in subsection 101.03. The Department will perform further analysis to determine whether the bid is also materially unbalanced as defined in subsection 101.03. Decisions to accept or reject a materially unbalanced bid will be made in accordance with Department procedures and the best public interest.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DEBRIS OR MATERIALS IN TRAFFIC LANES

C&T:BRZ 1 of 1 C&T:APPR:EMB:DAJ:01-10-08
FHWA:APPR:01-29-08

Insert the following paragraph following the between the fifth and last paragraphs of Subsection 103.06 on page 30 of the Standard Specifications for Construction with the following:

The Contractor shall be responsible, at the Contractor's expense, to provide the necessary materials and equipment to prevent construction related debris or materials from entering the open lanes of traffic.

Replace the first sentence in the last paragraph of Subsection 103.06 on page 30 of the Standard Specifications for Construction with the following:

This includes protection of traffic controls, removal of spilled project materials or debris from the roadbed or drainage courses, and prompt repair of all damaged facilities that are necessary for public travel and safety.

Replace the second sentence in Subsection 104.10.B on page 52 of the Standard Specifications for Construction with the following:

This program shall also include provisions for meeting the requirements in Subsection 812.03 and details for the materials and equipment that will be used to prevent construction related debris or materials from entering the open lanes of traffic and what actions, including traffic control measures, will be taken to immediately and safely remove the debris or material from the roadway.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SUBCONTRACTS

FIN:CRR 1 of 1 C&T:APPR:GCT:JAR:07-28-05
FHWA:APPR:08-01-05

The following deletions and additions are made to Sections 104, 108, and 109 of the Standard Specifications for Construction.

Delete the word “approved” in the second sentence of the fourth paragraph of subsection 104.01.B, on page 32 of the Standard Specifications for Construction.

Delete the third, fourth, and fifth paragraphs of subsection 108.01, on page 80 of the Standard Specifications for Construction, in their entirety and replace with the following:

> The Contractor shall not subcontract any portion of the contract, other than the furnishing of necessary materials, except as provided for in the Department’s procedures for subcontracting. Subcontracting any portion of the work shall not relieve the Contractor of full responsibility for the performance of the contract. The Contractor shall not sell or assign any portion of the contract without the written consent of the Michigan Department of Transportation.
>
> Any bonds furnished by the Subcontractor shall not reduce the Contractor’s bonding requirements.
>
> No subcontract will be issued unless the Subcontractor is prequalified by the Department to perform the classification of work proposed, when applicable. The Contractor shall submit the subcontract cover page and line items to the Transportation Service Center responsible for the administration of the contract, prior to the start of the work associated with the subcontract. It is understood and agreed that the Department’s prequalification of the Subcontractor is for the benefit of the Department and is not for the benefit of the Contractor or any other person. The Department’s prequalification is not a guarantee or warranty of the Subcontractor’s ability to perform or complete the work subcontracted. The prime Contractor shall certify, on MDOT Form 1386, prior to MDOT acceptance of the project, that all subcontracting requirements have been met. The Contractor shall itemize the name of each Subcontractor, dollar amount of each subcontract, as well as the actual amount paid for each subcontract.

Delete the words “an approved” in the last sentence of the last paragraph of subsection 108.01, on page 81 of the Standard Specifications for Construction and replace with the word “a”.

Delete the word “approved” in the first sentence of subsection 109.07.G, on page 109 of the Standard Specifications for Construction.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SCALE INSPECTIONS

C&T:JFS 1 of 2 C&T:APPR:DMG:DBP:06-12-07
FHWA:APPR:06-29-07

Delete subsection 104.01.E, on pages 33 and 34 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following.

E. Authority to Inspect Scales. The Department maintains the right to inspect or verify all scale systems, private scale inspectors, and inspection agencies. Any failure to conform to requirements set forth in this specification shall be corrected immediately.

The private scale inspector and inspection agency must be currently registered under the Department of Agriculture's Voluntary Serviceperson Registration Program in Michigan.

For portable scales supplying materials solely to Department projects, the Engineer may give tentative interim approval. The approval would be based on verification truckloads weighed on other scales that bear an official seal placed in the current calendar year. The Contractor shall secure a scale inspection from a private scale inspector or inspection agency, at the Contractor's own expense, within a period of time, as approved by the Engineer.

Scale systems, other than as described in subsection 601.03, shall be inspected according to the *Weights and Measures Act of 1964 (Act No. 283, Public Acts of 1964, as amended).* Scale systems described in subsection 601.03 shall be inspected according to the current edition of the National Ready Mixed Concrete Association (NRMCA) *Certification of Ready Mixed Concrete Production Facilities Quality Control Manual.*

Permanent scale systems are defined as weighing devices that have not been moved from a given location within the past six months. Portable scales that remain in one location for more than six months are considered permanent installations. The owner of any permanent scale system shall be responsible for the scheduling of inspection, calibration, and working order of the weighing system.

For permanent scale systems, the Department will consider scale inspections conducted by a private scale inspection agency or the Department of Agriculture valid for one year, except for concrete plants which will be according to subsections 601.03.A and B certification, of the Standard Specifications of Construction. If the Department of Agriculture has not reinspected the scale, the scale owner shall be required to obtain a scale inspection through a private scale inspection agency. The scale owner shall provide to the Engineer written verification that the scale system has been inspected, according to this specification, prior to providing material to state and federally funded

projects. The scale owner shall furnish a copy of the current scale inspection certification report to the Region Materials Supervisor.
All costs incurred in the inspection of scale systems shall be the responsibility of the Contractor and no additional compensation shall be allowed. Claims by the Contractor for delays and inconveniences due to these operations will not be considered.

Delete subsection 109.01.G, on pages 97 and 98 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following.

G. Measuring Weight on Scales. Platform, belt conveyor, and surge bin scales shall conform to the requirements of the *Weights and Measures Act of 1964 (Act No. 283, Public Acts of 1964, as amended).*

When a printout system is employed on a platform or a surge bin scale, it shall be equipped with a printer that shall print and identify all of the following information on a triplicate ticket for each truckload:

1. Project number;
2. Contractor's name;
3. Type of material being weighed;
4. Time;
5. Date;
6. Sequential ticket number (may be preprinted on a ticket);
7. Gross weight;
8. Tare weight
9. Net weight;
10. Net accumulated jobs daily total.

The information shall be labeled so that each ticket can be readily understood. The system shall be interlocked to allow printing only when the scale has come to a complete rest.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CLAIM REVIEW PROCESS

SUP:RRV 1 of 4 C&T:APPR:KB:DBP:11-28-07
FHWA:APPR:12-03-07

a. Description. This Special Provision makes modifications to subsections 104.09, 108.10 and 109.09 of the 2003 Standard Specifications for Construction to provide new language describing the claim review process.

Beginning with the second paragraph titled "A. Notice of Claim" delete the remaining portions of subsection 104.09, on pages 50and 51 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following.

A. **Notice of Claim.** All notices of intent to file a claim for extra compensation shall be signed by the Contractor. The written notice shall include a concise description of the claim, identifying the contract requirement in dispute. If the Contractor intends to seek extra compensation for any reason not specifically covered elsewhere in the contract, the time requirements for notification shall be as follows.

1. The Contractor shall notify the Engineer in writing before beginning the work or upon encountering a circumstance on which the Contractor intends to base a claim.

2. The Contractor shall notify the Engineer in writing within two business days after the commencement of a delay, for which the Contractor intends to seek compensation.

Failure of the Contractor to give written notification will constitute a waiver of the claim for extra compensation except to the extent that claims are both substantiated by records created by the Department as to liability and amount, and are for extra costs that were unforeseeable. The determination of extra compensation made by the Department's claims process, where the Contractor has failed to give proper written notice of its claim for extra compensation as provided herein or has failed to afford the Engineer proper facilities for keeping strict account of actual costs, shall be final and binding on the Contractor.

Neither the refusal of the Contractor to sign a written contract modification or work order nor the Contractor's signing a contract modification or work order under protest shall constitute the notice required.

B. **Keeping Records.** If a Contractor files a notice of intent to file a claim, the Contractor shall keep accurate records of all costs of the work or delay and shall afford the Engineer every facility for keeping costs of the work or delay that is the subject matter of the claim. The Contractor and Engineer shall compare records and bring them into agreement at the end of each day.

C. **Validity of Claim.** The validity of a claim shall not be established either by the filing of a

notice of intent to file a claim by a Contractor or the keeping of the cost records by the Engineer.

D. **Timing for Filing of Claim.** In addition to filing a timely notice of intent to file a claim, the Contractor shall file with the Engineer every claim for extra compensation within the following time frames (whichever comes first):

1. No later than 60 days after the work involved in the claim is completed, or the delay, loss of efficiency, loss of productivity, or similar event is terminated; or

2. No later than 60 days after the final acceptance of all contract work.

Extensions of the above time frames may be granted pursuant to the Department's written claim procedures in effect at the time the claims are filed.

E. **Claim Content and Certification.**

1. The Contractor shall submit a completed Claim Content and Certification form including the following information, as applicable:

a. A detailed factual statement of the claim providing all necessary dates, locations, and items of work affected and included in each claim.

b. The date or dates on which actions resulting in the claim occurred or conditions resulting in the claim became evident.

c. Identification of all pertinent documents.

d. Identification of the provisions of the Contract which support the claim and a statement of the reasons why such provisions support the claim.

e. A detailed compilation of the amount of additional compensation sought and a breakdown of the amount sought as follows:

(1) documented additional job site labor expenses;

(2) documented additional cost of materials and supplies;

(3) a list of additional equipment costs claimed, including each piece of equipment and the rental rate claimed for each;

(4) any other additional direct costs or damages and the documents in support thereof.

f. For a claim related to an extension of time, a detailed compilation of the specific dates and the exact number of calendar days sought for the time extension, the basis for entitlement to time for each day, all documentation of the delay, and all impacts of the delay to the progress schedule/critical path.

2. Subcontractors shall document and certify their claim(s) as described in Subsection 104.09.E.1. If the Contractor has a claim item related to a Subcontractor's claim, the Contractor shall document and certify their claim as described in Subsection 104.09.E.1.

F. **Consistency of Claim and Exhaustion of Administrative Remedies.** If the Contractor's claim in any administrative proceeding or in the Court of Claims seeks relief greater than the amount sought at a prior level, or if the claim is based on different facts or theories than it was based upon at a prior level, then the Contractor has failed to exhaust its administrative remedies. If the Contractor has failed to exhaust its administrative remedies, the claim must be returned to the preceding level for a new hearing and decision. The Department, in its sole discretion, will determine whether the Contractor has exhausted its administrative remedy at any level. The Department's decision is final and binding and not subject to further review or consideration. Nothing in this paragraph precludes the Contractor from withdrawing any portion of its claim or reducing the amount sought at any time.

The Contractor's written acceptance of an administrative proceeding panel's decision on a claim item(s) constitutes a settlement of the claim item(s) and bars the Contractor from pursuing further legal remedies against the Department on the settled claim item(s).

After the third paragraph of subsection 108.10, on page 87 of the 2003 Standard Specifications for Construction, add the following paragraph.

The Engineer will review filed claims for extension of time pursuant to the Department's written claim procedures in effect at the time the claims are filed.

Delete subsection 109.09, on page 111 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following.

109.09 Final Inspection, Acceptance, and Final Payment.

A. **Final Inspection.** The Engineer shall make a final inspection within ten days after receiving written notification by the Contractor that the work is completed. The Contractor shall be in attendance at the final inspection. If work is not acceptable to the Engineer at the time of inspection, the Contractor will be advised in writing of specific defects to be remedied before final acceptance.

B. **Final Acceptance.** After the work is accepted, the Engineer will prepare a final estimate of work performed. The Contractor shall have 30 days of issuance of the final estimate to file a claim or objections to the quantities within the final estimate. If no claim or objections are filed within 30 days, the Department will process the final estimate for approval and final payment. At that time, the Contractor will be furnished by certified mail, a copy of the approved final estimate.

C. **Final Payment.** The final payment will be made when the Contractor has provided the following:

1. All reports or documents required by the Department and the Federal Highway Administration;

2. The consent of the Surety for payment of the final estimate; and

3. Satisfactory evidence by affidavit, or other means that all the indebtedness due to the contract has been fully paid or satisfactorily secured. If the evidence is not furnished, the

Department may retain out of any amount due the Contractor sufficient sums to cover all lienable claims unpaid.

D. The Department can recover from the Contractor in the final estimate all overpayments. However, no recovery for overpayment will be made if both of the following conditions exist:

1. The final estimate is issued more than six months after the acceptance of the project; and

2. The overpayment was paid to a Subcontractor not in existence at the time of the final estimate.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
HIGH VISIBILITY CLOTHING

SSA:JDG 1 of 1 C&T:APPR:JAJ:BRZ:01-23-09
FHWA:APPR:02-10-09

Add the following, to the end, of subsection 104.10, Safety and Health Requirements, of the Standard Specification for Construction:

D. **Worker Visibility.** Effective November 24, 2008, all workers within the right-of-way who are exposed to traffic or to construction equipment within the work area, shall wear high visibility clothing.

High visibility clothing or high visibility safety apparel is personal protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage. High Visibility safety apparel shall meet the Performance Class 2 or 3 requirements of the American National Standards Institute/International Safety Equipment Association (ANSI/ISEA) 107-2004 for High-Visibility Safety Apparel and subsequent revisions thereof.

Costs incurred to comply with this requirement shall be the responsibility of the contractor.

This Special Provision shall remain in place until the 2009 Federal Manual on Uniform Traffic Control Devices, Part 6, has been adopted by the State of Michigan (planned for 2011).

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
OBTAINING REQUIRED NPDES PERMITS FOR STORAGE AREAS, DISPOSAL AREAS AND BORROW AREAS

a. Description. The Contractor shall be responsible to ensure a National Pollutant Discharge Elimination System (NPDES) Permit for storage areas, disposal areas and borrow areas as well as other earth disturbance activities located outside of the Michigan Department of Transportation's right-of-way is obtained in accordance with the Clean Water Act of 1972 (CWA) prior to commencing any activities regulated by the CWA.

In accordance with the CWA, construction activities disturbing 5 acres or more, with a point source discharge to the waters of the state are required to have a Notice of Coverage (NOC) submitted to the Michigan Department of Environmental Quality (MDEQ) to obtain NPDES coverage under R 323.2190 (Permit by Rule). Prior to submitting the NOC, a Soil Erosion and Sedimentation Control (SESC) Permit must be obtained from the county or municipal enforcing agency in accordance with Part 91, Soil Erosion and Sedimentation Control, of PA 451 of 1994, the Natural Resources and Environmental Protection Act (NREPA). Once the SESC Permit has been obtained, the landowner or recorded easement holder must submit a completed NOC form to the MDEQ along with the required attachments (location map, a copy of the SESC Permit and $400.00 fee) to the address on the NOC form. Copies of the NOC form are available from the Water Bureau of the MDEQ.

Under Permit by Rule, the construction permittee is defined as "A person who is deemed to have a national permit pursuant to the provisions of R 323.2190 and who **owns or holds a recorded easement on the property where a construction activity is located**, is constructing in Public Right of Way in accordance with sections 13, 14, 15, and 16 of Act 368 of the Public Acts of 1925, as amended, being §§247.183, 247.184, 247.185, and 247.186 of the Michigan Compiled laws, or is the Authorized Public Agency if a construction activity is carried out by the Authorized Public Agency." If the Contractor does not own or hold a recorded easement on the property, the property owner must apply for coverage. If the owner of the property is applying on behalf of the Contractor, a copy of the property owner consent agreement shall be included with the NOC form and can be substituted for the easement document. The consent agreement must contain verbiage describing the party responsible for restoration of the areas upon vacating by the Contractor.

The Contractor shall submit a site plan, a copy of the recorded easement document or deed if owned and the NPDES permit to the Engineer for review a minimum of seven days prior to mobilization of storage areas, the expected date of excavation of a borrow area or expected date of disposal. This review by the Engineer does not relieve the Contractor of any responsibilities required by law. The Contractor shall not commence activities which require NPDES permits until they have received written approval from the Engineer.

Submittal of the NOC is not required for regulated construction activities that disturb 1 to 5 acres. These sites have automatic coverage under Permit by Rule if they have obtained coverage (SESC Permit) in accordance with Part 91, Soil Erosion and Sedimentation Control, of NREPA. Although there are no application requirements, the landowner or easement holder still must comply with the requirements of Permit by Rule.

The Contractor must maintain proper soil erosion and sedimentation control measures associated with those areas, including ingress and egress from the Department's right-of-way and shall be responsible for any fines or penalties occurring from the failure to maintain and operate those controls.

Contractor storage areas, disposal areas, borrow areas, and haul roads located within MDOT's right of way will be considered included in the Department's permit application. Site plans for storage areas, disposal areas, and borrow areas within the right-of-way must be submitted to the Engineer for review and approval a minimum of seven days prior to expected use. Although covered under the Department's permit, the Contractor shall be responsible for all costs to install and maintain required soil erosion and sedimentation control measures. Any fines or penalties resulting from the Contractor's failure to maintain and operate those controls are the full responsibility of the Contractor.

The Contractor shall be aware that the NOC within MDOT's right-of-way is intended for **storm water only** and does not allow the discharge of process water. An example of process water is that used in cleaning equipment. All process water from Contractor activities within MDOT's right-of-way must be contained as to not discharge and mix with the storm water runoff. The process water shall, as a minimum, be contained in a lined storage area. The liner shall consist of a two-foot minimum clay liner or a 40 mil non-permeable synthetic liner. The storage area shall be a two-celled system. The first cell will allow any particulates to settle while the second cell will receive the overflow of effluent from the first. It may be required to pump and haul the effluent to a licensed wastewater treatment facility. Complete chemical and biological testing results must be taken of the effluent and submitted to the MDEQ if the Contractor intends to discharge to the ground water. Discharges will not be allowed until a copy of a ground water discharge exemption is granted from the MDEQ and is provided to the Engineer. The storage area shall be constructed such that all surface water runoff is diverted away from the storage area. If the processed water is not contained in a lined storage area, a ground water discharge permit may be required prior to commencing plant operations.

b. Measurement and Payment. All work necessary to obtain required NPDES permits for storage areas, disposal areas and borrow areas, including but not limited to, excavation, embankment, permit fees, liners, testing and all other labor and materials, is considered to be included in payment for Mobilization of the project.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MIGRATORY BIRD PROTECTION

PLN:HH 1 of 2 C&T:APPR:JAR:DMG 12-18-02
FHWA:APPR 01-10-03

a. Description. This special provision addresses the actions necessary by the Contractor to protect bird species as required by the Migratory Bird Treaty Act. Bridge sites such as those in this project are often attractive places for nesting birds such as swallows and phoebes. Taking of migratory birds or nests with eggs and chicks without a Federal permit is prohibited by the Migratory Bird Treaty Act (16 U.S.C. 703-712). This Federal law protects migratory birds, their nests and young and provides enforcement authority to the U.S. Fish and Wildlife Service and severe penalties for violations.

b. Requirements.

1. Bridge work to be done entirely on the deck:

   No special actions are necessary provided that the bridge work is done entirely on the deck. It is presumed that access will not be required to areas where birds are nesting and contract work will not result in the taking of nesting adults, eggs, or young in this situation.

2. For all other bridge work completed between September 1 to May 15 (Winter):

   During this time, birds are not actively nesting; therefore, no special actions are necessary.

3. For all other bridge work between May 15 and September 1 (Summer)

   This is the anticipated active nesting period of the migratory birds. Prior to commencing work in this anticipated time-frame and in this situation where bridge work is not done entirely on the deck, determine the status of the migratory birds, their nests, and young and take any and all special actions as required below and to meet the requirements of the Migratory Bird Act Treaty.

   A. **If no nests have been built yet:** Build barriers (deterrents) before the nesting season to prevent nest establishment. Netting, canvas, or burlap may be used. Different techniques may be employed, depending on the design of the bridge, providing that reasonable access is maintained for river traffic. Netting can be Adiapered@ around all ledges and overhangs to insure all access or any possible nesting site is obstructed. Other bridge

designs may lend themselves to hanging netting, canvas, or burlap over the side of the bridge. Some device, such as a wooden beam shall be employed to secure the bottom edge of the netting, canvas, or burlap, close to the water=s surface. All gaps shall be sealed against entry by birds. Reposition, within 8 hours, any netting, burlap, or canvas that becomes displaced.

B. **If birds penetrate the barrier or nest building has already commenced:** If birds slip past the deterrents, determine how birds are entering the underside of the bridge and adjust and/or repair the barrier to prevent further access. If nest replacement has begun, but no eggs or chicks are present within the nests, knock down or hose down nests with water on a daily basis until completion of the bridge work or until the end of the active nesting season.

C. **If nests with eggs and chicks are accidentally knocked down:** Taking of migratory birds or nests with eggs and/or chicks is prohibited by law without a Federal Permit. If, in spite of efforts made not to cause a take of eggs and/or chicks, eggs or chicks are accidentally dislodged due to work being performed on the bridge, deliver retrieved eggs and chicks to a licensed wildlife rehabilitation facility willing and able to accept them. If this occurs, contact MDOT staff immediately (phone 517-335-2633).

b. Measurement and Payment. The Contractor will be responsible for all costs associated with placing deterrents; special actions; removing nests; retrieving accidentally fallen eggs and chicks and delivering them to a licensed wildlife rehabilitator, including costs of rehabilitation; and any and all costs associated with conducting work within the parameters of the Migratory Bird Treaty Act and/or as stated herein. This work will not be paid for separately but will be considered to have been included with other items of work.

In addition, the Contractor is liable to the Department for any penalties for violations to the Migratory Bird Treaty Act because of the Contractor=s failure to comply with this Act.

MICHIGAN DEPARTMENT
OF
TRANSPORTATION

SPECIAL PROVISION
FOR
INDEMNIFICATION, DAMAGE LIABILITY AND INSURANCE

FIN:JDM 1 of 1 C&T:APPR:KB:DBP:07-18-07
FHWA:APPR:07-25-07

Add the following, after the first paragraph, to subsection 107.10.C.4 of the Standard Specifications for Construction:

In lieu of the Owners Protective Liability, the Contractor shall add to their Bodily Injury and Property Damage Policy:

a. Additional Insured:
The Bodily Injury and Property Damage Policy shall name as additional insured the State, the Department, 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.

b. Per Project Aggregate
The Bodily Injury and Property Damage Policy shall be endorsed with an endorsement that provides the General Aggregate Limit to each designated construction project.

c. Umbrella Policy
An umbrella policy with a $2,000,000 limit shall be provided.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PROMPT PAYMENT

FIN:SEA 1 of 2 C&T:APPR:KB:DBP:11-18-08
FHWA:APPR:11-18-08

Add the following subsection to Section 109, on page 111, of the Standard Specifications for Construction:

109.10 Prompt 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 said work. Release of payment from the Department for any work is confirmation that the Department has determined the work to have met the standards of satisfactory completion as defined below. If the prime Contractor has concerns about the satisfactory completion of subcontractor work items, this must be brought to the Engineers attention in advance of payment to the prime Contractor. This notice may give the prime Contractor the option to not release all subcontractor funds within the 10 calendar days specified. This requirement is also applicable to all sub-tier subcontractors and suppliers, and shall be made a part of all subcontracts and agreements.

This prompt payment provision is a requirement of 49 CFR 26.29 and does not confer third-party beneficiary right or other direct right to a subcontractor against the Department. This provision applies to both DBE and non-DBE subcontractors.

A. **Satisfactory Completion.** Progress and Partial payments for contract work are made based on this assessment; and satisfactory completion is defined for purposes of this prompt payment provision as:

1. Upon preliminary review, the Engineer finds the work completed in accordance with the contract, plans and specifications; and

2. Required paperwork, for Progress and Partial payments, including material certifications, payrolls, etc., has been received and reviewed by the Engineer.

The determination of whether work meets the standards of satisfactory completion is the responsibility of the Engineer and not the prime Contractor.

B. **Less than full payment release.** Any delay or postponement of payment from this time frame, or partial payment to a subcontractor, may occur only upon receipt of written approval from the Engineer.

C. **Non-Payment Claims.** All notifications of failure to meet prompt payment provisions shall be referred by the subcontractor to the prime Contractor and must be made in writing, with a copy to the project engineer. All notifications should be sent within 30 calendar days of the date the payment was to be received. The prime Contractor must respond in writing to the subcontractor, with a copy to the project engineer and the Engineer of Construction and

Technology, within 7 calendar days of receipt of the notification of failure to meet prompt payment provisions. Failure of the prime contractor to respond may result in sanctions. The subcontractor has the option of submitting a lien claim to the MDOT Contract Services Division in order to notify the project Surety of the non-payment issue. It is the responsibility of the Surety to ensure that all legitimate payments are made.

The prime Contractor must include in all subcontract agreements notice to subcontractors of their right to prompt payment, and of the Department's prohibiting prime Contractors from holding retainage from subcontractors under 49 CFR 26.29.

The prime Contractor must include in all subcontracts, language providing that the prime Contractor and Subcontractor will use an approved alternative dispute resolution process to resolve prompt payment differences. The arbitration of the dispute will be handled through a member of the American Arbitration Association, 1 Town Square, Southfield, Michigan (248-352-5500), or another third party agreed to by both the prime Contractor and the Subcontractor. The parties must agree on a mediator or arbitrator within 25 calendar days after a written complaint has been sent by the subcontractor. The cost of mediation or arbitration will be borne by the parties as determined by the mediator. Qualified costs of mediation, for certified DBE's, will be paid by the Department based on current procedures. The DBE must contact the Office of Business Development for information on current procedures and to receive reimbursement. Outcomes of the alternative dispute resolution will be provided to the Engineer within 10 days of the decision.

Copies of all documents related to prompt payment claims will be provided to the Engineer by the prime Contractor for inclusion in the project files.

Failure of the prime Contractor to comply with prompt payment provisions may result in sanctions. Sanctions may include, but are not limited to: withholding of estimates on projects where prompt payment violations are confirmed; reduction of prequalification ratings; and/or withdrawal of bidding privileges.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
RETAINAGE

FIN:CRR 1 of 1 C&T:APPR:GCT:DBP:11-14-05
FHWA:APPR:11-18-05

The following deletion is made to Section 109 of the Standard Specifications for Construction.

Delete from subsection 109.06.A, on pages 102 and 103 of the Standard Specifications for Construction, all of subsections 109.06.A.2, 109.06.A.3, and 109.06.A.4, leaving the last paragraph following 109.06.A.4.f.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
ON-THE-JOB TRAINING PROGRAM

SBL:LST 1 of 1 C&T:APPR:DBP:GCT:08-30-05
FHWA:APPR:09-08-05

a. Description. Michigan Department of Transportation's (MDOT's) program to meet the requirements of the Federal-Aid Highway Act of 1970 and 23 CFR (Code of Federal Regulations) Part 230, Subpart A. The objective is to develop skill improvement programs to provide opportunities for unskilled workers, particularly minorities, women, and disadvantaged persons, to acquire training in the skilled construction trades.

b. Trainee Assignment. MDOT's Small Business Liaison Section will allocate training assignments to prequalified Contractors based on the past contract volume of federal-aid work performed with MDOT. MDOT will notify each Contractor who has met the volume of work threshold at the beginning of each calendar year and advise them of the number of trainees they are expected to support.

c. Program Requirements. Contractors found to have reached the level(s), as identified in the MDOT On-The-Job Training (OJT) program document, are required to fulfill all of the requirements of the OJT program at no additional cost to the Department.

The Contractors are required to pay the trainees in accordance with the following schedule:

- 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period
- 75 percent for the third quarter of the training period
- 90 percent for the last quarter of the training period
- Full fringe benefits will be paid during the entire training period

The OJT program document is available through the MDOT Contractor's Service Center website at www.michigan.gov/mdot/0,1607,7-151-9625_21539,00.html, Disadvantaged Business Enterprise Section.

Contractors should notify the Project Engineer at the preconstruction meeting if they intend to utilize trainees on the project.

d. Non-Compliance. Failure to comply with the OJT program provisions or complete a training assignment may result in the Contractor being found in non-compliance. Failure to resolve the non-compliance may be used as a basis for modifying the prequalification ratings of the Contractor. Any action to modify the Contractor's prequalification ratings will be taken in accordance with the duly promulgated prequalification rules.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
NON-HAZARDOUS CONTAMINATED MATERIAL HANDLING AND DISPOSAL

a. Description. This work shall consist of all labor, equipment, and materials necessary to handle, transport, and dispose of the non-hazardous contaminated material and shall include any and all laboratory testing required for the proper disposal of the material. This special provision shall not be employed without authorization by the Engineer. The laboratory testing will be used to solicit landfill approval and is not intended to determine whether or not the material is contaminated. Soil delineated on the plans and classified as non-hazardous contaminated shall not be used elsewhere on the project regardless of the laboratory test results unless otherwise directed by the Engineer.

b. Materials. None specified.

c. Construction. This work shall be in accordance with Sections 204 and 205 of the Standard Specifications for Construction, except as modified herein or as directed by the Engineer.

1. Excavation of Non-hazardous Contaminated Material

Non-hazardous contaminated material shall be excavated as shown on the plans or as directed by the Engineer.

2. Temporary Storage of Non-hazardous Contaminated Material

Excavated non-hazardous contaminated material which is to be temporarily stockpiled shall be placed on plastic sheeting or tarps having a minimum thickness of 6 mils or in trucks, roll off boxes, or other containers, such that no liquid may escape from the containment. At the end of each work day, the non-hazardous contaminated material shall be covered securely with plastic sheeting of 6 mils thickness or greater.

Excavated non-hazardous material shall be disposed of as soon as approval is received from the disposal site. In no case shall this material be stockpiled for longer than 30 days prior to disposal.

3. Sampling and Analysis of Non-hazardous Contaminated Material

The Contractor shall be responsible for all sampling and analysis required for disposal of non-hazardous contaminated material. The analysis required shall be dictated by the

Type II disposal facility to be utilized for disposal. Should the results of the analysis show the material to be hazardous, as defined by Part 111, of the Natural Resources and Environmental Protection Act, Act 451 of 1994, the Engineer shall be notified immediately. The material shall then be disposed of as directed by the Engineer.

4. Disposal of Non-hazardous Contaminated Material

Disposal of non-hazardous contaminated material shall be at a licensed Type II sanitary landfill. The Contractor shall submit at the preconstruction meeting the name of the Type II landfill to be used for disposal, the sampling and analysis requirements of that landfill, and verification that use of the proposed landfill will meet the requirements of the county solid waste plan.

The proposed landfill must be acceptable to the Michigan Department of Transportation and therefore approval must be obtained from the Engineer prior to commencing disposal operations. Prior to obtaining approval for disposal from MDOT, the Contractor shall provide a copy of the laboratory analysis to the Engineer. Following disposal and prior to approval for payment the Contractor shall provide to the Engineer landfill receipts for all non-hazardous contaminated material disposed of.

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

Contract Item (Pay Item)	**Pay Unit**
Non Haz Contaminated Material Handling and Disposal, LM	Cubic Yard

Non Haz Contaminated Material Handling and Disposal will be measured by volume in cubic yards, LM. Prior to payment the Engineer shall be given receipts from the disposal facility for the number of cubic yards disposed of at that facility. Payment shall include all costs for materials, labor and equipment needed for storage, loading, transportation, testing, and disposal of the non-hazardous contaminated material. Disposal costs shall include all documentation required by the landfill.

Payment for excavation of non-hazardous contaminated materials shall be included with the related items of work.

Delays in testing and disposal of non-hazardous contaminated materials that are not the fault of the contractor may be considered valid reasons for extension of time. However, these delays and the resultant extensions of time will not be considered valid reasons for additional payment.

Should the material test hazardous, payment for disposal of hazardous material shall be measured and paid for as extra work. Hauling shall be by a licensed hazardous waste hauler and disposal shall be at an appropriate licensed disposal facility. Prequalification is waived.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CRUSHED CONCRETE

C&T:JFS 1 of 3 C&T:APPR:TES:DMG:06-19-08
FHWA:APPR:08-14-08

Make the following changes to sections 204, 205 and 902 of the 2003 Standard Specifications for Construction.

Delete the second paragraph from subsection 204.03.B, on page 126 of the Standard Specifications for Construction that reads:

> Dispose of broken concrete matted together by steel reinforcement outside the right-of-way.

Add the following paragraph after the third paragraph in subsection 204.04.A, on page 127 of the Standard Specifications for Construction:

> Dispose of broken concrete according to subsection 205.03.P.

Delete the first paragraph from subsection 205.03.A.2, on page 131 and 132 of the Standard Specification for Construction, in its entirety and replace with the following:

> Remove existing gravel, crushed stone, or selected excavated materials. These materials may be salvaged. The Engineer may approve the use of salvage material as earth shoulders, approaches, temporary roadway surfacing, or other items. Crushed concrete may be salvaged and used as specified in section 902. Salvaged material may not include foreign or undesirable material. Temporarily stockpile salvaged material outside the grading limits and within the right-of-way limits as approved. Excess salvaged material is the property of the Contractor and must be removed before project completion. Trim excess salvaged material stockpiles to a neat appearance when approved to remain on the project.

Delete the first paragraph from subsection 205.03.H.4, on page 137 of the Standard Specifications for Construction, in its entirety and replace with the following:

> 4. **Placing and Compacting Embankment.** After the ground area has been prepared, construct embankments with sound earth or a mixture of sound earth and stones, broken rock, concrete, or masonry except as provided for in the disposal of peat excavation material and as restricted for the top 3 feet of embankment, as approved by the Engineer. Do not place frost heave textured materials in the top 3 feet of embankment below subgrade surface. Crushed concrete material may be placed if it is graded, mixed, or blended with natural sound earth to create a uniformly textured material that is not susceptible to frost heave. Construct the top 3 feet of embankment to a uniformly stable condition using a uniformly textured material. Provide a minimum 50-foot longitudinal

transition between two different textured materials.

Delete subsection 205.03.P.4, on page 143 of the Standard Specifications for Construction, in its entirety and replace with the following:

4. **Contractor Responsibility.** Contact the appropriate regulatory agencies for a determination of what a regulated wetland or floodplain is, before disposing of surplus or unsuitable material in areas outside the right-of-way that are not shown on the plans as disposal sites. Any surplus or unsuitable material disposed of in any portion of a wetland or floodplain not provided for on the plans must immediately be moved to an upland site, at the Contractor's expense. Restore the vacated area as required by the regulatory agencies, at the Contractor's expense. Any surplus concrete pavement disposed or stock piled outside the Department right-of-way must be placed at an upland site, at the Contractor's expense. The Contractor must obtain and file with the Department written permission from the owner of the property, and must obtain and file with the Department a letter certifying that the material will be processed for recycling along with associated processing timeframes. The Engineer will not allow requests for extensions of contract time, without assessment of liquidated damages.

Delete subsection 902.06.B, on page 695 of the Standard Specifications for Construction, in its entirety and replace with the following:

B. Class 21AA, 21A and 22A dense-graded aggregate produced from crushing Portland cement concrete may be allowed to construct either an aggregate base or aggregate separation layer when any of the following conditions apply:

1. When a pavement layer is not graded to drain directly to an underdrain or when there is a minimum 12 inches of non-cementitious granular material between the crushed concrete and the underdrain.

2. When the material is coated with asphalt or emulsified material.

3. When there is a geotextile liner or blocking membrane that will be a barrier to leachate.

Delete subsection 902.07, on page 695 of the Standard Specifications for Construction, in its entirety and replace with the following:

902.07 Open-Graded Aggregates for Earthwork, Open-Graded Drainage Courses and Underdrains. Use Michigan Class 2G, 3G, 4G, 34G, and 34R open-graded aggregates obtained from natural aggregate, crushed concrete, iron blast furnace slag, or reverberatory furnace slag. These aggregates must conform to the grading requirements in Table 902-1, and the physical requirements in Table 902-2, and the following:

A. Class 2G, 3G, and 4G open-graded aggregate produced from crushing Portland cement concrete may be allowed to construct either open-graded aggregates for earthwork or open-graded drainage courses when any of the following conditions

apply:

1. When a pavement layer is not graded to drain directly to an underdrain or when there is a minimum 12 inches of non-cementitious granular material between the crushed concrete and the underdrain.

2. When the material is coated with asphalt or emulsified material.

3. When there is a geotextile liner or blocking membrane that will be a barrier to leachate.

Delete the first paragraph from subsection 902.08, on page 700 of the Standard Specifications for Construction, in its entirety and replace with the following:

902.08 Granular Materials for Fill and Subbase. Use granular materials for fill, trench backfill, and subbase that consists of sand, crushed concrete, gravel, crushed stone, iron blast furnace slag, reverberatory furnace slag or a blend of aggregates conforming to the grading requirements of Table 902-3 and this subsection.

Delete the third paragraph from subsection 902.08, on page 700 of the Standard Specifications for Construction, in its entirety and replace with the following:

Material with cementitious properties, crushed concrete, or material with permeability characteristics that do not meet design parameters may be used for fill or subbase only if the material is placed below the lowest underdrain, or there is a minimum 12 inches of non-cementitious granular material between the material and the underdrain.

Delete the fifth paragraph from subsection 902.08, on page 700 of the Standard Specifications for Construction, in its entirety and replace with the following:

Granular material produced by crushing Portland cement concrete is an acceptable material for embankment (below the pavement underdrain) and as trench backfill for non-metallic culvert and sewer pipes without associated underdrains.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
NON-COMPLIANCE WITH SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS

a. Description. This special provision establishes negative adjustments related to the failure to properly install and maintain soil erosion and sedimentation control (SESC) measures and the conditions under which these adjustments will be determined and applied. Nothing in this special provision modifies section 107 of the Standard Specifications for Construction,

Delays to the project as a result of the Contractor conducting corrective actions for SESC do not constitute a valid reason for an extension of time.

Deficiencies with SESC measures must be corrected in the time frame stated herein. For those deficiencies not corrected within the stated time frame, the Engineer will make a negative adjustment to the contract as stated herein.

b. Construction. The Contractor must install all temporary erosion control measures identified on the plans and as directed by the Engineer for an impacted area of the project prior to the start of any earth disturbance including, but not limited to, clearing, grading and excavation in that area. The Engineer will inspect these measures every seven days and within 24 hours of precipitation events which result in off-site runoff. Deficiencies will be documented on the National Pollutant Discharge Elimination System (NPDES) Inspection Report (Form 1126).

If at any time during the project, including the time during the seasonal suspension, the Engineer documents deficient SESC measures, the Engineer will provide written notification with instructions for corrective action to the Contractor. The time frame for completion of these corrective actions will be specified in the notification and will be discussed with the Contractor as necessary.

Deficiencies are defined as one or more of the following:

1. failure to install or construct SESC measures shown on the plans or as directed by the Engineer;
2. failure to maintain the measures;
3. failure to conduct earth change activities in a manner consistent with all applicable environmental permit requirements;
4. failure to comply with the time limitations or the area limitations stated in subsections 208.03.B and 208.03.C, respectively, of the Standard Specifications for Construction.

SESC deficiencies are either emergency or non-emergency and the time frame for corrective action is determined accordingly. Sedimentation of a drainage structure or waters of the state or loss of support of the roadbed impacting public safety constitutes an emergency and corrective

actions must be completed within 24 hours of notification. Non-emergency deficiencies must be corrected within five calendar days of notification.

For those emergency corrective actions not completed within 24 hours of notification, the Contractor will be assessed $100.00 per hour for every hour the deficiency remains uncorrected after the initial 24 hours of notification. For those non-emergency corrective actions not completed within five calendar days, the Contractor will be assessed $500.00 per day for every day the deficiency remains uncorrected after the initial five days of notification.

If it is not practicable to complete the non-emergency corrective actions within five calendar days, the Contractor must document the reasons and propose a corrective action plan to the Engineer within five days of notification. The corrective action plan must contain the Contractor's course of action and a time frame for completion. If the reasons and the corrective action plan are acceptable to the Engineer, the Contractor will be allowed to proceed with the plan as proposed without incurring a negative adjustment. If the approved corrective action plan is not completed as proposed, the Contractor will be assessed $1000.00 per calendar day for every day the deficiency remains uncorrected after the time frame is exceeded in the approved corrective action plan.

The Contractor is required to correct, in the timeframe stated herein, all other emergency or non-emergency SESC deficiencies documented anywhere else on the project during completion of the approved corrective action plan.

c. Measurement and Payment. The Engineer will make the necessary monetary adjustment to the contract amount based on the length of time the Contractor allows the deficiencies to remain uncorrected after the time allowance stated herein and as described to cover any costs incurred by the department as a result of SESC violations.

All costs associated with corrective actions required due to the Contractor's failure to properly install or maintain soil erosion and sedimentation control measures on this project will be borne by the Contractor.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
BACKFILL FOR UTILITY TRENCH, CULVERT, SEWER, AND DRAINAGE STRUCTURES

C&T:ACR 1 of 1 C&T:APPR:DMG:LDT:02-01-08
FHWA:APPR:02-05-08

a. Description. Furnish, place and compact utility trench, culvert, sewer and drainage structure backfill according to the details shown on the plans and Section 401 of the Standard Specifications for Construction except as modified by this special provision. This special provision modifies the construction requirements when any of the listed alternate materials, which meet Granular Material specification, are substituted for Granular Material Class I, II, or III and placed within the limits of the right of way.

b. Materials. Acceptable alternate listed materials will meet the requirements in the Standard Specifications for Construction.

Coarse Aggregate 4AA, 6AAA, 6AA, 6A, 17A, 25A, 26A & 29A 902
Open-Graded Aggregate 2G, 3G, 4G, 4G Mod, 34R & 34G 902
Geotextile Blanket 910

c. Construction. Backfill with Granular Material Class IIIA a minimum of 6 inches below to 12 inches above those utility conduits made of HDPE, PVC, ductile iron, vitrified clay or other potentially damage prone material.

Completely encapsulate any of the listed backfill materials with geotextile blanket to eliminate intermixing with surrounding soil or aggregates. Place in layers not more than 10 inches thick and compact each layer using a minimum of three passes with a vibratory plate compactor or approved equivalent. After final placement and compaction, either shingle lap a minimum of two feet or seam all joints in the geotextile.

The elevation of the encapsulated backfill material will be flush with the bottom of the proposed topsoil layer if the top limit of the alternate material extends up to the final grade and the trench is not located below pavement, sidewalk or curb and gutter.

d. Measurement and Payment. Measure and pay for completed work according to subsections 401.04 and 402.04 of the Standard Specifications for Construction. Payment for geotextile blanket will be included in the pay item for the approved alternate material.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
POLYMER COATED STEEL PIPE

DES:MVPF 1 of 2 C&T:APPR:RDT:DBP:12-26-07
FHWA:APPR:01-10-08

a. Description. This specification revises the requirements for polymer-precoated and dual wall corrugated steel pipe in the Standard Specifications for Construction as follows.

Polymer-precoated corrugated and spiral ribbed steel pipe may be used with wall thicknesses according to Table 909-6 revised herein.

Delete the first paragraph of subsection 909.05.A, on page 748 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following paragraph.

A. **Corrugated Steel Pipe.** Circular and pipe arch corrugated steel pipe shall conform to AASHTO M 36 when metallic coated pipe is specified, or AASHTO M 245 using an ethylene acrylic acid film selected from the Qualified Products List when polymer-precoated pipe is specified, with the following exceptions and additions.

Delete the second paragraph of subsection 909.05.A, on page 748 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following paragraph.

Type IA (circular) and Type IIA (arch) dual wall polymer-precoated galvanized corrugated steel pipe may be used with wall thicknesses according to Table 909-6 revised herein.

Delete the second paragraph of subsection 909.05.A.1, on page 748 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following paragraph.

For polymer-precoated corrugated steel pipe, ethylene acrylic acid film selected from the Qualified Products list meeting AASHTO M 246 Grade 250/250 polymer on zinc coated steel sheet shall be used. Only lock seam pipe are allowed. Riveted pipe is not permitted.

Delete Table 909-6, on page 750 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following Table 909-6.

Table 909-6 References for Spiral Ribbed and Corrugated Metal Pipes

Minimum wall thickness (in inches) to meet structural and durability requirements

Pipe Material Type	Driveway Culverts and Downspouts	Culverts	Sewers
	Minimum Design Life		
	25 years	50 years	70 years
Galvanized Spiral Ribbed Metal Pipe	Table 909-8	0.109	0.168
Aluminized Type 2 Spiral Ribbed Metal Pipe	Table 909-8	Table 909-11	0.138
Polymer-Precoated Spiral Ribbed Metal Pipe	Table 909-8	Table 909-8	Table 909-8
Galvanized Corrugated Metal Pipe	Table 909-7	Table 909-9	0.168 (a)
Aluminized Type 2 Corrugated Metal Pipe	Table 909-7	Table 909-10	0.138(a)
Polymer-Precoated Galvanized Corrugated Metal Pipe	Table 909-7	Table 909-7	Table 909-7(a)
Aluminum Pipe	Table 909-12	Table 909-13	Table 909-14
Aluminum Spiral Ribbed Pipe	Table 909-15	Table 909-16	Table 909-17
Dual Wall Polymer-Precoated Galvanized Corrugated Steel Pipe	Table 909-20	Table 909-20	Table 909-20

Numbers represent the minimum durability thickness requirements for the specific pipe material.

a. Permitted for 12 to 18 inch diameter 2-2/3 x 1 /2 inch helically corrugated pipe only.

Add Table 909-20 to subsection 909.05.

Table 909-20 Dual Wall Polymer-Precoated Galvanized Corrugated Steel Pipe Wall Thickness Requirements in inches Based on Diameter and Size of Corrugation

Diameter of Pipe, in.	Corrugation Size, in.		Corrugation Size, in.	
	2 2/3 x 1/2		3 x 1	
	Shell	Liner	Shell	Liner
36-48	0.064	0.052	0.064	0.052
54	0.079	0.052	0.064	0.052
60	0.109	0.052	0.064	0.052
66-72	0.138	0.052	0.064	0.052
78-84	0.168	0.052	0.064	0.052
90-102	-	-	0.079	0.052
108-120	-	-	0.109	0.052
126-136	-	-	0.138	0.052
144	-	-	0.168	0.052

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
VIDEO TAPING SEWER AND CULVERT PIPE

DES:PGF 1 of 1 C&T:APPR:RDT:DBP:01-26-06
FHWA:APPR:02-07-06

Delete the last sentence in the paragraph of subsection 401.03.O, Video Inspection, on page 191 of the Standard Specifications for Construction and replace with the following:

Video inspection is not required for driveway culverts; culvert extensions less than 50 feet; new culverts less than 50 feet; or the extension of existing catch basin leads less than 20 feet.

Delete the last sentence in the first paragraph of subsection 402.03.K, Video Inspection of Sewer Pipe, on page 199 of the Standard Specifications for Construction and replace with the following:

Video inspection is not required for the extension of existing catch basin leads less than 20 feet.

Delete the pay item "Video Taping Sewer and Culv Pipe, ___ inch" in subsection 402.04, on page 202 of the Standard Specifications for Construction and replace with the following:

Contract Item (Pay Item)	**Pay Unit**
Video Taping Sewer and Culv Pipe	Foot

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
STORM SEWER CLASSES TABLE 402-1

DES:PGF 1 of 1 C&T:APPR:RDT:DBP:02-22-06
FHWA:APPR:03-01-06

Delete Table 402-1, Pipe Alternates for Storm Sewer Classes, on page 196 of the Standard Specifications for Construction, and replace with the following:

Table 402-1 Pipe Alternates for Storm Sewer Classes

Type of Pipe Depth of Cover in feet (a)	Class A Sewer 0 to 10 (l)	Class B Sewer >10 to 16	Class C Sewer >16 to 23	Class D Sewer >23 to 33 (m)	Class E Sewer 0 to 3 (b)
Reinforced Concrete Pipe (c)	II	III	IV	V	IV
Nonreinforced Concrete Pipe (d)	1	3	No	No	No
Corrugated and Spiral Ribbed Al-Alloy Pipe (e)	Yes	Yes	Yes	Yes	No
Corrugated and Spiral Ribbed Steel Pipe (f) (k)	Yes	Yes	Yes	Yes	No
Smooth-Lined Corrugated Plastic Pipe (CPE) (g)	Yes (h)	Yes (i)	No	No	No
Corrugated Polyvinyl Chloride Pipe (CPV) (j)	Yes (h)	Yes (i)	No	No	No

a. Cover, including the pavement structure is defined as the height of fill above the top of the pipe.
b. Class E sewer applies when the sewer is beneath the influence of proposed pavement and the depth of cover is 3 feet or less (measured from top of pipe to final grade).
c. Roman numerals refer to class of reinforced concrete pipe, AASHTO M 170.
d. Arabic numerals refer to the class of nonreinforced concrete pipe, AASHTO M 86.
e. Permitted for 12 to 66-inch spiral ribbed and 12 to 18-inch helically corrugated 2⅔ x ½-inch aluminum alloy pipe only. Minimum cover 3 feet (measured from top of pipe to final grade).
f. Permitted for 12 to 84-inch spiral ribbed and 12 to 18-inch helically corrugated 2⅔ x ½-inch steel pipe only. Minimum cover 3 feet (measured from top of pipe to final grade).
g. CPE must conform to AASHTO M 294, Type S polyethylene pipe.
h. Permitted only for 36-inch diameter pipe and under for CPE and CPV pipes. Minimum cover 3 feet (measured from top of pipe to final grade).
i. Permitted only for 12 to 24-inch diameter CPE and CPV pipes. Refer to the Class B Plastic Pipe Qualified Products List for approved manufacturers and products.
j. CPV must conform to AASHTO M 304.
k. Refer to Frequently Used Special Provision 03SP402(A).
l. Class A sewer applies when the sewer is outside the influence of proposed pavement or is beneath the influence of proposed pavement and the depth of cover is greater than 3 feet but less than or equal to 10 feet.
m. Special design is required for depths of cover greater than 33 feet.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PRICE ADJUSTMENTS ON ASPHALT BINDER

Original samples of asphalt binders will be taken daily prior to incorporation into the mixture. The original samples will be used for Asphalt Binder Certification Verification.

When two or more certification verification samples of a specific PG binder grade, taken on consecutive days of production, fall within the ranges shown below, the contract unit price for the HMA mixture containing the out of specification binder shall be reduced by the percentage shown for the days of production represented by the samples.

When multiple tests on a binder sample are out of specification, the price reductions will not be cumulative. The greatest price reduction on any test will apply. If the price reduction is 50 percent, the days of production will be evaluated by the Engineer. If the Engineer determines that removal is warranted, the Contractor shall remove and replace the pavement at no additional cost to MDOT.

On MDOT projects that have only one day of HMA mix production and paving, two certification verification samples will be taken and tested to determine if there are any price adjustments. The standard check tests will be performed if the potential for price adjustments exist.

If any of the following three situations occur:

- The asphalt binder supplier is not on the approved certifier's list.
- Less than the minimum grade of binder, as specified by the contract, is used in the mix.
- A daily binder sample is not taken, or the specified one pint sample tin is less than three quarters full.

The Engineer will evaluate the days of production and require the Contractor to remove and replace the pavement at no additional cost to MDOT, or if the pavement is not removed, a 50 percent reduction in the contract unit price shall be imposed on the HMA mixture containing the non-specification binder:

Dynamic Shear Rheometer
Original Material

% Reduction	Spec. Range (kPa)
2.5	0.98 - <1.00
5	0.93 - <0.98
10	0.88 - <0.93
15	0.83 - <0.88
20	0.78 - <0.83
30	0.73 - <0.78
40	0.68 - <0.73
50	less than 0.68

Dynamic Shear Rheometer
RTFO Material

% Reduction	Spec. Range (kPa)
2.5	2.08 - <2.20
5	1.98 - <2.08
10	1.88 - <1.98
15	1.78 - <1.88
20	1.68 - <1.78
30	1.58 - <1.68
40	1.48 - <1.58
50	less than 1.48

Dynamic Shear Rheometer
PAV Material

% Reduction	Spec. Range (kPa)
2.5	>5000 - 5350
5	>5350 - 5600
10	>5600 - 5850
15	>5850 - 6100
20	>6100 - 6350
30	>6350 - 6600
40	>6600 - 6850
50	greater than 6850

Bending Beam Rheometer
Stiffness

% Reduction	Spec. Range (MPa)
2.5	>300 - 309
5	>309 - 324
10	>324 - 339
15	>339 - 351
20	>351 - 369
30	>369 - 384
40	>384 - 399
50	greater than 399

Bending Beam Rheometer
M-Value

% Reduction	Spec. Range
2.5	0.292 - <0.300
5	0.285 - <0.292
10	0.270 - <0.285
15	0.255 - <0.270
20	0.240 - <0.255
30	0.225 - <0.240
40	0.210 - <0.225
50	less than 0.210

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SUPERPAVE HMA MIXTURES

C&T:CJB 1 of 5 C&T:APPR:SJP:DBP:10-03-07
FHWA:APPR:10-05-07

a. Description. This work shall consist of furnishing a HMA mixture using Superpave Mixture Design Methods. The HMA mixture will be provided according to the requirements of the standard specifications except where modified herein.

b. Mix Design. The HMA mixture design will be provided by the Contractor. The design will be submitted and evaluated according to the HMA Production Manual, Procedures for HMA Mix Design Processing.

c. Recycled Mixtures. The Contractor may substitute Reclaimed Asphalt Pavement (RAP) for a portion of the new materials required to produce HMA mixture. The mixture will be designed and produced to meet all of the criteria herein.

d. Materials. The mixture will consist of aggregates of the highest quality available to meet the minimum specifications herein. Tables 1-6 and 10 provide the required aggregate properties, Tables 7-8 provide the Mix Design Criteria and Volumetric Properties and Table 9 provides the Superpave Gyratory Compactor (SGC) compaction criteria. Criteria specified below apply to the combined aggregate blend. For mixture design purposes, top and leveling courses are defined as the mixture layers within 4 inches of the surface; the base course is defined as all layers below 4 inches of the surface. For mixture layers which fall within the 4 inch threshold, the following rule should apply: If less than 25 percent of a mixture layer is within 4 inches of the surface, the mixture layer should be considered to be a base course. For projects that specify a mix type E03, the Contractor may choose to use a mix type LVSP according to the requirements specified herein.

e. Measurement and Payment.

Contract Items (Pay Item)	**Pay Unit**
HMA, 5 E _	Ton
HMA, 4 E _	Ton
HMA, 3 E _	Ton
HMA, 2 E _	Ton
HMA, LVSP	Ton

The mixture designation, E _, is determined by the ESALs (million) on the design lane over the design life. This number is to be used when determining Mix Design Properties from Tables 1 thru 6, and Tables 8 and 9.

Table 1: Crush Minimum Criteria

Estimated Traffic (million ESAL)	Mix Type	Top & Leveling Courses	Base Course
< 0.3	LVSP	55/-	-
< 0.3	E03	55/-	-
< 1.0	E1	65/-	-
< 3.0	E3	75/-	50/-
< 10	E10	85/80	60/-
< 30	E30	95/90	80/75
<100	E50	100/100	95/90
Note: "85/80" denotes that 85 percent of the coarse aggregate has one fractured face and 80 percent has two fractured faces.			

Table 2: Fine Aggregate Angularity Minimum Criteria

Estimated Traffic (million ESAL)	Mix Type	Top & Leveling Courses	Base Course
< 0.3	LVSP	-	-
< 0.3	E03	-	-
< 1.0	E1	40	-
< 3.0	E3	40(a)	40(a)
< 10	E10	45	40
< 30	E30	45	40
<100	E50	45	45
a. For an E3 mixture type that enters the restricted zone as defined in Table 10, the minimum criteria shall be 43.			

Table 3: Sand Equivalent Minimum Criteria

Estimated Traffic (million ESAL)	Mix Type	Top & Leveling Courses	Base Course
< 0.3	LVSP	40	40
< 0.3	E03	40	40
< 1.0	E1	40	40
< 3.0	E3	40	40
< 10	E10	45	45
< 30	E30	45	45
<100	E50	50	50

Table 4: L.A. Abrasion Maximum Criteria

Estimated Traffic (million ESAL)	Mix Type	Top & Leveling Courses	Base Course
< 0.3	LVSP	45	45
< 0.3	E03	45	45
< 1.0	E1	40	45
<3.0	E3	35	40
< 10	E10	35	40
< 30	E30	35	35
<100	E50	35	35

Table 5: Soft Particles Maximum Criteria

Estimated Traffic (million ESAL)	Mix Type	Top & Leveling Courses	Base Course
< 0.3	LVSP	10	10
< 0.3	E03	10	10
< 1.0	E1	10	10
< 3.0	E3	5	5
< 10	E10	5	5
< 30	E30	3	4.5
<100	E50	3	4.5
Note: "Soft Particles Maximum" is the sum of the shale, siltstone, ochre, coal, clay-ironstone and particles which are structurally weak or are found to be non-durable in service.			

Table 6: Flat and Elongated Particles Maximum Criteria

Estimated Traffic (million ESAL)	Mix Type	Top & Leveling Courses	Base Course
< 0.3	LVSP	-	-
< 0.3	E03	-	-
< 1.0	E1	-	-
< 3.0	E3	10	10
< 10	E10	10	10
< 30	E30	10	10
<100	E50	10	10
Note: Maximum 10 percent by weight with a 1 to 5 aspect ratio.			

Table 7: Superpave Mix Design Criteria

Design Parameter	Mixture Number				
	5	4	3	2	LVSP
Percent of Maximum Specific Gravity (%G_{mm}) at the design number of gyrations, (N_d) (See Note)	96.0 % (a)				96.0% (a)
%G_{mm} at the initial number of gyrations, (N_i)	See Table 9				
%G_{mm} at the maximum number of gyrations, (N_m)	98.0%				
VMA min % at N_d (based on aggregate bulk specific gravity, (G_{sb}))	15.00	14.00	13.00	12.00	14.00
VFA at N_d	See Table 8 (b)				
Fines to effective asphalt binder ratio (P_{No200}/P_{be})	0.6 - 1.2				
Tensile strength ratio (TSR)	80 % min				

a. For mixtures meeting the definition for base course: Mixtures shall be designed to 96.0% of Maximum Specific Gravity (%G_{mm}) at the design number of gyrations, (N_d). During field production Percent of Maximum Specific Gravity (%G_{mm}) at the design number of gyrations, (N_d) may be increased to 97.0%.

b. For base course or regressed shoulder mixtures the maximum criteria limits do not apply.

Note: Target Air Voids will be lowered by 1.0 percent if used in a separate shoulder paving operation unless noted otherwise on the plans.

Table 8: VFA Minimum and Maximum Criteria

Estimated Traffic (million ESAL)	Mix Type	Top & Leveling Courses	Base Course
< 0.3	LVSP	70-80	70-80
< 0.3	E03	70-80	70-80
< 1.0	E1	65-78	65-78
< 3.0	E3	65-78	65-78
< 10	E10	65-78(a)	65-75
< 30	E30	65-78(a)	65-75
<100	E50	65-78(a)	65-75

a. For mixture Number 5, the specified VFA range shall be 73% - 76%.

Table 9: Superpave Gyratory Compactor (SGC) Compaction Criteria

Estimated Traffic (million ESAL)	Mix Type	%G_{mm} at (N_i)	Number of Gyrations		
			N_i	N_d	N_m
< 0.3	LVSP	91.5%	6	45	70
< 0.3	E03	91.5%	7	50	75
< 1.0	E1	90.5%	7	76	117
< 3.0	E3	90.5%	7	86	134
< 10	E10	89.0%	8	96	152
< 30	E30	89.0%	8	109	174

<100	E50	89.0%	9	126	204
Note: Compact all mixture specimens fabricated in the SGC to N_d. Use height data provided by the SGC to calculate volumetric properties at N_i. Compact specimens at optimum P_b to verify N_m.					

Table 10: Aggregate Gradation Requirements

Standard Sieve	Percent Passing Criteria (control points)				
	Mixture Number				
	5	**4**	**3**	**2**	**LVSP**
1 1/2 inch				100	
1 inch			100	90 - 100	
3/4 inch		100	90 - 100	90 max	100
1/2 inch	100	90 - 100	90 max		75 - 95
3/8 inch	90 - 100	90 max			60 - 90
No. 4	90 max				45 - 80
No. 8	32 - 67	28 - 58	23 - 49	19 - 45	30 - 65
No. 16					20 - 50
No. 30					15 - 40
No. 50					10 - 25
No. 100					5 - 15
No. 200	2.0 - 10.0	2.0 - 10.0	2.0 - 8.0	1.0 - 7.0	3 - 6
Sieve	**Restricted Zone** (see notes)				
No. 4				39.5	-
No. 8	47.2	39.1	34.6	26.8 - 30.8	-
No. 16	31.6 - 37.6	25.6 - 31.6	22.3 - 28.3	18.1 - 24.1	-
No. 30	23.5 - 27.5	19.1 - 23.1	16.7 - 20.7	13.6 - 17.6	-
No. 50	18.7	15.5	13.7	11.4	-

Note: The final gradation blend must pass between the control points established. The following conditions must be satisfied in order for the final gradation blend to enter the restricted zone (restricted zone does not apply to LVSP):

1. Mixture types E03, E1, E10, E30 and E50 may enter the restricted zone provided the final gradation blend enters from above the maximum density line.

2. Mixture type E3 may enter the restricted zone provided the final gradation blend enters from above the maximum density line and the fine aggregate angularity of the final blend is a minimum of 43.

If these criteria are satisfied, acceptance criteria and associated incentive/disincentive or pay adjustment tied to this gradation restricted zone requirement which may be included in other contract documents, do not apply. Otherwise, final gradation blend has to be outside of the area bounded by the limits set for the restricted zone.

Note: Sand Ratio for LVSP – no more than 50 percent of the material passing the No. 4 sieve shall pass the No. 30 sieve.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
RECYCLED HOT MIX ASPHALT MIXTURE

C&T:GMM 1 of 1 C&T:APPR:JAR:MF:12-19-01
FHWA:APPR:08-06-02

Add the following subsection to Section 501.02.A.2 of the standard specifications.

c. **Reclaimed Asphalt Pavement (RAP) Percentages and Binder Grade Selection**. The method for determining the binder grade in hot mix asphalt (HMA) mixtures incorporating RAP is divided into three categories designated Tier 1, Tier 2 and Tier 3. Each tier has a range of percentages that represent the contribution of the RAP binder toward the total binder, by weight. The tiers identified below apply to both Superpave and Marshall mixtures with the following exception: **Superpave mixture types E3, E3 High Stress and E10 used as leveling or top course shall be limited to a maximum of 17% RAP binder by weight of the total binder in the mixture. Superpave Mixture types E10 High Stress, and all E30 and E50 mixtures used as leveling or top course shall be limited to a maximum of 14% RAP binder by weight of the total binder in the mixture.**

Tier 1 (0% to 17% RAP binder by weight of the total binder in the mixture)

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

Tier 2 (18% to 27% RAP binder by weight of the total binder in the mixture)

The selected binder grade for the asphalt binder is one grade lower for the high temperature than the binder grade required for the specified project mixture type. For example, if the specified binder grade for the mixture type is PG58-28, the required grade for the binder in the recycled mixture would be a PG52-28.

The asphalt binder grade can also be selected using a blending chart for high and low temperatures. The Contractor shall supply the blending chart and the RAP test data used in determining the binder selection.

Tier 3 ($\geq$ 28% RAP binder by weight of the total binder in the mixture)

The binder grade for the asphalt binder is selected using a blending chart for high and low temperatures. The Contractor shall supply the blending chart and the RAP test data used in determining the binder selection.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PAVEMENT ACCEPTANCE FOR HOT MIX ASPHALT

a. Description. This specification defines the requirements for pavement acceptance that are in addition to those specified in Section 502 of the standard specifications.

b. Definitions. For purposes of this special provision, the following definitions will apply:

Broken Aggregate - Visually cracked aggregate resulting from excessive compaction effort.

Crack - A visible fissure of varying length and orientation in the HMA that occurs partially or completely through one or more courses.

Flushing - A shiny or reflective condition that appears on the HMA surface when asphalt binder collects in the voids that can be tacky, when touched, at high pavement temperatures.

Pavement - The completed HMA courses including all driving lanes and shoulders.

Pavement Edge - The extremity boundaries of the pavement.

Rutting - A depression or displacement of the HMA surface that occurs either in a longitudinal direction or over a localized area.

Segregation - A HMA surface that exhibits a non-uniform distribution of coarse or fine aggregate in the mixture.

Roller Cracking -High density surface map-cracking that appears immediately after rolling.

c. Acceptance Criteria. The Department will inspect the base and leveling courses within twelve hours of placement or prior to placement of a subsequent course whichever occurs sooner. Inspection of the top course will occur within twenty-four hours of placement. The pavement will be accepted within these time frames unless corrective action is required. In the event that corrective action is necessary, pavement acceptance will only occur after the Contractor has taken corrective action and the Engineer has determined that the pavement is in conformance with the contract plans and specifications.

d. Corrective Action. Appropriate corrective action, as described in Table 1, may consist of: 1) remedial treatment such as crack or surface sealing or 2) replacement in kind. A contract payment adjustment of up to one hundred percent of the bid price may also be considered for corrective action if mutually agreed to by the Engineer and the Contractor. The Engineer may consult with department technical staff in the Construction and Technology Division to implement the corrective actions described in Table 1.

Table 1: Acceptance Factors and Corrective Action

Acceptance Factors (a)	Length	Extent (b)	Severity	Corrective Action (c)
Segregation	n/a	>215 ft^2/ 328 ft LL	High (d)	Replace
Rutting	n/a	>32 ft long	> 1/4 inch average depth over the length of occurrence	Replace
Broken Aggregate	n/a	>215 ft^2/ 328 ft LL	> 100 stones/11 ft^2	Not eligible for density incentive
Flushing	n/a	>108 ft^2/ 328 ft LL	high (e)	Replace
Edge of Paved Shoulder	> 33 ft	visible ledges	> 3 inches	Trim
Crack (f)	any	any	all	Seal (g)

n/a = not applicable
LL = lane length

(a) Acceptance factors apply to all courses except for Broken Aggregate and Flushing which apply to the top course only.
(b) Extent is calculated by summing all locations within the length specified.
(c) The appropriate corrective action is dependent on the factor's extent and severity and most importantly on the pavement's intended service life.
(d) Segregation severity will be determined using department procedures that include photographs.
(e) Flushing must be severe enough to significantly effect surface friction (Friction Number < 35).
(f) Roller cracking is not subject to corrective action.
(g) Other corrective action may be required as crack frequency increases.

e. Measurement and Payment. All costs for the work required to repair or replace any defects in construction quality, when caused by the Contractor, are the responsibility of the Contractor. No time extensions will be granted to the Contractor for any required repair work to meet the requirements of this special provision. Any incentive payments will only apply to original work item quantities. Quantities required for corrective action will not be eligible for incentive payments.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTROLLING UNIFORMITY IN HOT MIX ASPHALT PAVEMENT DURING PAVING OPERATIONS

a. Description. All work shall be done according to the standard specifications, except as modified herein. This special provision shall be used to help assist the Contractor and Engineer in identifying segregation and taking corrective action to eliminate segregation when it is present in the hot mix asphalt pavements. This special provision requires the use of a nuclear density gauge and the MDOT MBITSEG2 computer program to assist in locating segregated areas.

b. Terminology Used.

Segregation - Areas of Hot Mix Asphalt Pavement exhibiting non-uniform distribution of coarse and fine aggregate particles that are visually identifiable or can be identified by other methods.

Heavy Segregation - An area showing stone against stone, with little or no matrix visible.

Medium Segregation - An area showing significantly more stone than surrounding pavement with a lack of matrix.

c. Equipment. Nuclear Density Gauge provided by the Contractor.

MBITSEG2 Excel or Quattro Pro computer program provided by the Department.

d. Quality Control of Contractors Construction Process. Hot Mix Asphalt Pavement materials shall be produced, transported, placed and compacted with the proper construction processes to provide uniform volumetric properties throughout the entire cross section of pavement. When heavy segregation is identified visually in the pavement by the Contractor or the Engineer, a set of six to fifteen one minute nuclear density measurements shall be taken by the Contractor in the segregated area, a similar set of readings shall also be taken in an adjacent non segregated area. The mean value of the density of the two areas shall be compared using MDOT's MBITSEG2 computer program. When it is determined that corrective action is needed, the Contractor shall implement corrective actions immediately and report them to the Engineer before the next day's paving begins. The Contractor shall also provide, in writing, the actions that will be taken to eliminate segregation. The Contractor, with the Engineer, shall closely monitor the in-place pavement when paving resumes. If, once paving resumes, heavy segregation is identified, the Contractor shall stop production and a complete evaluation of the manufacturing and paving process shall be completed. This evaluation shall follow the troubleshooting guide and suggested changes according to the equipment manufacturer's recommendations or the guide manual *AASHTO Segregation Causes and Cures For Hot Mix Asphalt*.

The Engineer reserves the right to independently monitor the uniformity in hot mix asphalt pavement and require that the Contractor take corrective action if segregation is identified.

e. **Measurement & Payment.** No additional compensation will be made for corrective action required or operational changes to prevent segregation. This work will be considered as included in other contract items.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SUPERPAVE HOT MIX ASPHALT PERCENT WITHIN LIMITS (PWL)

C&T:SJP 1 of 24 C&T:APPR:CJB:DBP:10-16-07
FHWA:APPR:10-17-07

a. Description. This special provision sets forth the quality control and quality assurance procedures that will be followed for acceptance of and payment for Superpave Hot Mix Asphalt (HMA). Except as explicitly modified by this special provision, all materials and HMA mixture requirements of the MDOT Standard Specifications for Construction and the contract documents apply.

1. **Terminology.**

A. Quality Control (QC) - All activities dealing with process control to ensure quality, including but not limited to training, materials sampling, testing, project oversight and documentation. The Contractor's HMA Quality Control Procedures are contained in the HMA-QC Plan.

B. Quality Assurance (QA) - All activities dealing with acceptance of the product, including but not limited to materials sampling, testing, construction inspection, and review of Contractor quality control documentation. The Engineer's HMA Quality Assurance Procedures are contained in various MDOT procedures manuals and in the HMA-QA Plan.

C. HMA Design - The selection and proportioning of aggregate(s), mineral filler (if required), reclaimed asphalt pavement (RAP), and asphalt binder to meet mixture design criteria.

D. Job Mix Formula (JMF) - An HMA Design for a specific project. This may include adjustments to the mix design to optimize the field application.

E. Target Value - A JMF parameter value which may be adjusted, if approved by the Engineer, to account for changes in the physical properties of the mixture.

F. Binder Content – The percent by weight of asphalt cement in the total mixture.

G. Voids in Mineral Aggregate (VMA) - The volume of void space between the aggregate particles of a compacted paving mixture that includes the air voids and the asphalt binder not absorbed into the aggregate, expressed as a percent of the total volume of mixture.

H. Effective Specific Gravity (Gse) - The ratio of the oven dry weight in air of a unit volume of an aggregate (excluding voids permeable to asphalt) at a stated temperature to the weight of an equal volume of water at a stated temperature.

I. Bulk Specific Gravity of Aggregate (Gsb) - The ratio of the oven dry weight in air of a unit volume of an aggregate at a stated temperature to the weight of an equal volume of water at a stated temperature.

J. Maximum Specific Gravity of Mixture (Gmm) - The ratio of the weight in air of a unit volume of an un-compacted HMA at a stated temperature to the weight of an equal volume of water at a stated temperature.

K. Rounding of Numbers and Significant Figures - Rounding of numerical data will follow the Rounding Method as described in the *HMA Production Manual* and the associated MTMs.

L. Percent Within Limits (PWL) - The percentage of material within the specification limits or tolerance for a given quality index parameter.

M. QC Action Limits (Table 4 Col. II) - A range of values established by the Contractor in the HMA-QC Plan or specified in Table 4 that, if exceeded on two consecutive QC tests, requires that the Contractor take corrective action to bring the mixture produced into conformance with the specifications.

N. QC Suspension Limits (Table 4 Col. III) - A range of values established by the Contractor in the HMA-QC Plan or specified in Table 4 that, if exceeded on a single QC test, requires that the Contractor suspend operations and determine, document and correct the cause before continuing production.

O. QA Suspension Limits (Table 4 Col. IV) - A range of values defined in Table 4 that, if exceeded on two consecutive QA tests may result in the Engineer issuing a Notice of Non-Compliance with Contract Requirements (Form 1165).

P. QA Sublot Rejectable Quality Limits (RQL) (Table 4 Col. V) - A range of values defined in Table 4 that, if exceeded on a single QA test may result in the Engineer issuing a Notice of Non-Compliance with Contract Requirements (Form 1165).

Q. QA Lot Acceptable Quality Limits (AQL) (Table 4 Col. VI) - PWL value for an individual quality index parameter that will still result in a Pay Factor (PF) of 100.00 for that quality index parameter. Acceptable Quality Limits are specified in Table 4.

R. QA Lot Rejectable Quality Limits (RQL) (Table 4 Col. VII) - PWL value for an individual quality index parameter that will result in either PF = 50.00; remove and replace or corrective action plan. Rejectable Quality Limits are specified in Table 4.

S. Outlier - Test result that appears to deviate markedly from test results for other samples from the same lot. An apparent outlier will be evaluated by the Engineer to determine if the results will be retained in the associated PF calculation.

T. Quality Characteristic (Table 4 Col. I) - The material and mixture characteristics of HMA that are deemed to have direct bearing on the quality and performance of the HMA pavement and for which specification limits have been established.

U. Quality Index Parameter - The HMA quality characteristics that are evaluated under the Department's Quality Assurance Acceptance Program and on which payment for HMA material is based. The Quality Index Parameters for this project are VMA, Air Voids, Binder Content, and In-Place Density.

V. Lot - A lot is made up of a discrete tonnage of one mixture. Each lot is typically made up of five sublots.

W. Sublot – A portion of a lot represented by a complete set of quality assurance tests. Sublots will be approximately equal size of 1000 tons. The Contractor and the Engineer may agree to reduce the typical 1000 ton sublots based on project staging or other project conditions.

X. Small Tonnage - If the total tonnage of a specific mixture does not exceed 5000 tons, the mixture will be tested according to the Small Tonnage Acceptance Criteria in subsection (f.9) of this special provision.

Y. Small Tonnage Testing – If the total tonnage of a specific mixture does not exceed 5000 tons, the mixture will be considered a single small tonnage production lot - consisting of a minimum of three and maximum of seven equal small tonnage production sublots (maximum of 1000 ton sublots) and will be tested and approved in accordance with the Small Tonnage Acceptance Criteria in subsection (f.9) of this special provision. The Initial Production Lot requirements of Section (e) of this special provision will not apply to small tonnage mixtures. For quantities of 500 tons or less, Visual Inspection (Materials Quality Assurance Procedures Manual Section A.9) may be used in lieu of Small Tonnage Testing.

Z. Alternate PWL Acceptance – For the following construction processes:
- Hand Patching
- Joint Repair
- Driveways
- Scratch Course
- Widening/Tapers/Gores of less than 3 feet

Alternate PWL Acceptance consisting of a minimum of three approximately equal sublots (maximum of 1000 ton sublots) will be tested and approved in accordance with the Small Tonnage Acceptance Criteria in subsection (f.9) of this special provision.

Density Acceptance will be in accordance with subsection (f.5) Alternate Acceptance In-Place Density Method.

Sampling will be in accordance with MTM 313.

The Initial Production Lot requirements of Section (e) of this special provision will not apply to Alternative Acceptance Procedure.

Scratch Course density is not measured.

AA. Initial HMA Production – A process used in which HMA Production for specific HMA mixtures and HMA plants are limited to 800 to 1000 tons per day for a

maximum of 3 (consecutive or separate) days and 750 tons for the fourth and subsequent days until it is determined that HMA Production has met the requirements in Section (e) prior to moving into Unlimited Daily HMA Production.

AB. Unlimited Daily HMA Production – Unrestricted daily HMA production tonnage.

2. **Partnering Sessions.** The Engineer will schedule a pre-production meeting. The pre-production meeting will be held a minimum of 7 calendar days prior to the start of production. The Engineer will provide written notification to all parties a minimum of 14 calendar days prior to the meeting.

At the pre-production meeting the HMA-QC Plan will be discussed, the HMA-QA Plan will be reviewed, and the roles and responsibilities of all parties involved in the work covered by this special provision will be discussed. A discussion of the elected binder content procedure will occur at the pre-production meeting. The Contractor will notify the Engineer in writing at the pre-production meeting which method, binder content back calculated or vacuum extraction, they elect to use for Binder Content acceptance per mix design. For each mix, the method chosen will be used exclusively throughout the project for QA acceptance, including Dispute Resolution.

Department personnel attending the meetings will include the following:

- MDOT Project or Resident Engineer
- Field inspector for the project
- All Traveling Mix Inspectors [TMI(s)] with responsibility for this project
- Any consultant involved in any part of the HMA sampling or testing on this project

Contractor personnel attending the partnering meetings will include the following:

- Project Superintendent
- HMA-QC Plan Administrator
- Any subcontractor involved in any part of the HMA quality control sampling or testing on this project

b. Contractor Quality Control. Be responsible for the quality of the HMA produced and placed on this project and perform quality control sampling and testing, provide inspection, and exercise management control to ensure that work conforms to the contract requirements. Perform all testing in accordance with the accepted HMA-QC Plan. Provide the Engineer the opportunity to observe sampling and testing. Sample, test, and evaluate all HMA mixtures in accordance with the requirements of this special provision.

Establish and follow an HMA-QC Plan for HMA production and placement as required by Section 503 of the Standard Specifications for Construction. Utilize personnel and testing equipment capable of providing a product that conforms to contract requirements. Do not start work on the subject items without an accepted HMA-QC Plan.

Perform quality control sampling, testing, and inspection during all phases of the work at the minimum guidelines specified for that item or at an increased frequency sufficient to ensure that the work conforms to the contract requirements. Continual production of non conforming

material at a reduced price in lieu of making adjustments to bring material into conformance will not be allowed.

The Engineer will not sample or test for quality control or assist in controlling the HMA production and placement operations. The results of department QA testing may not be available for use in quality control activities and should not be included in the HMA-QC Plan discussion.

1. **HMA-Quality Control Plan.** Develop and follow an HMA-QC Plan that addresses personnel; sampling and testing equipment and calibration records; supplies and facilities for obtaining samples, performing tests, and documenting results; and other activities to control the quality of the product to meet contract requirements. Include methodology for addressing material that appears to be inconsistent with similar material being sampled. Perform all QC sampling and testing according to the *HMA Production Manual* unless specifically documented in the HMA-QC Plan and discussed at the pre-production meeting.

A. Plan Submittal. Submit the HMA-QC Plan to the Engineer for review and acceptance a minimum of 14 calendar days prior to the pre-production meeting.

B. Plan Acceptance. Revisions to the HMA-QC Plan may be required by the Engineer prior to its acceptance. The Engineer will request plan revisions in writing on or before the day of the pre-production meeting. If revisions are required by the Engineer, these revisions must be made and the HMA-QC Plan accepted before HMA production or placement commences.

Acceptance of the HMA-QC Plan does not imply any warranty by the Engineer that the HMA-QC Plan will result in production of HMA that complies with all contract requirements. It remains the responsibility of the Contractor to demonstrate such compliance.

C. Plan Modification. The HMA-QC Plan may be refined or modified as work progresses. Such refinements or modifications are subject to review and acceptance by the Engineer.

2. **HMA-Quality Control Plan Contents.** Include the following specific items in the HMA-QC Plan.

A. Quality Control Organization. Include an organization chart showing key personnel involved in production, placement, compaction, and quality control for this project. Provide the names of the HMA-QC Plan Administrator and Quality Control Technician(s) [QCT(s)]. Clearly identify all subcontractor personnel involved in HMA quality control.

Maintain consistency in the Quality Control Organization throughout the life of the project to the extent practicable. Substitution of qualified personnel is allowed provided that the names are forwarded to the Engineer prior to the substitution.

B. Quality Control Personnel Qualifications and Responsibilities. Provide the qualifications of each individual or position listed on the organization chart and a brief narrative of their area of responsibilities. Describe the coordination of the activities of

the Plan Administrator and the QCT(s).

(1) Plan Administrator. This individual will be responsible for administering the HMA-QC Plan and will institute any actions necessary to successfully implement the HMA-QC Plan.

(2) Quality Control Technicians (Plant). All equipment calibration; quality control sampling and testing; and quality control documentation must be performed by qualified technicians. Document the certification of all QCT(s) through the Michigan Bituminous QC/QA Technician Certification Program or other approved program.

(3) Placement Personnel. Identify the personnel that will be responsible for inspecting all transport, lay down and compaction equipment to ensure it is operating properly and for verifying that all lay down and compaction conforms to the contract requirements.

C. Mix Design. Provide the approval status and a copy of the mix design for all HMA mixtures to be produced for this contract and the plant location for production of each mixture.

D. Quality Control Sampling and Testing. Complete and include the schedule of QC testing for the quality characteristics shown in Table 1. For each quality characteristic listed, define test method; minimum sampling and testing frequency; when the sampling and testing will be performed in relationship to production; and sampling location. Describe the random sampling method used.

Minimum QC sampling locations must be determined independently from QA sampling locations. In addition to the minimum QC sampling required by Table 1, additional non-random QC testing may be included in the HMA-QC Plan, except as otherwise specified.

E. Quality Control Laboratory Facilities. Provide the location of the testing facilities and include a copy of the plant certification. All laboratories that prepare mix designs or perform quality control testing of HMA materials must demonstrate that they are equipped, staffed, and managed so as to be capable of mixing and testing HMA in accordance with the applicable test methods.

F. Corrective Action. Tables 2 and 4 specify the action limits and/or list the quality characteristics for which action limits must be defined in the HMA-QC Plan. Complete and include Tables 2 and 4 with the QC Action Limits defined as indicated. Describe the procedures that will be followed to ensure that test results are properly reviewed and that corrective action, based on the test results, is taken and documented when necessary to control HMA quality.

G. Suspension of Production. Table 4 specifies the QC Suspension Limits. Discuss the steps to be taken when any suspension criteria is met. Steps must include notifying the Engineer and making all necessary corrections whenever production is suspended. Include discussion of the following suspension criteria, as a minimum.

(1) QC Suspension limits specified in Table 4 Col. III for any of the quality characteristics are exceeded.

(2) The PWL for VMA, Air Voids, Binder Content, or In-Place Density is below 50 for any lot.

(3) The HMA-QC Plan is not followed.

(4) Visible pavement distress occurs such as segregation or flushing.

(5) Additional QC suspension criteria may be included.

H. Control Charts. Discuss the use of control charts for all quality characteristics listed in Table 1. Include examples of the control charts to be used. As a minimum, the control charts must identify the project number, the contract item (pay item) code, the test number, test parameter, the specification limits, the action limits, suspension limits, and the test results. Keep the control charts current and available in an accessible location at the laboratory facility.

I. Plant Reports. At the request of the Engineer, the Contractor will provide copies of plant certification and electronic daily cumulative project tonnage report.

c. Quality Control Sampling and Testing During Production.

1. Fifteen cores approximately 6 inches in diameter will be allowed per lot of material for quality control of In-Place Density.

2. At the time any QA or QC cores are taken, remove free standing water from the core hole; fill with hot mixture, and compact. Obtain and document approval for the method of filling holes and for obtaining compaction at the pre-production meeting.

3. At the time any QA or QC sample is collected from behind the paver, provide and place loose mixture according to MTM 324 or as directed by the Engineer.

4. In addition to maintaining test reports and control charts, enter all QC data into the PWL Program that can be downloaded from the Construction and Technology web site, provide the results to the Engineer as they become available.

5. Sample and test the plant produced material in accordance with the approved HMA--QC Plan.

d. HMA-Quality Assurance Plan. The Engineer will develop and follow an HMA-QA Plan. The Engineer will submit the HMA-QA Plan to the HMA-QC Plan Administrator a minimum of 7 calendar days prior to the pre-production meeting. The HMA-QA Plan will be reviewed at the pre-production meeting and any proposed changes will be documented.

All QA sampling and testing will be performed according to the *HMA Production Manual* unless specifically documented in the HMA-QA Plan and discussed at the pre-production meeting. The Engineer will provide the Contractor the opportunity to observe QA sampling and testing. The following specific items will be included in the HMA-QA Plan.

1. **Quality Assurance Organization.** Key personnel involved in sampling, testing,

construction inspection, review of quality control, and quality assurance management will be identified. The names of the Engineer, support staff, and Quality Assurance Technician(s) [QAT(s)] involved in HMA quality assurance for this project will be included along with phone numbers, fax numbers, and e-mail addresses. The Engineer will notify the HMA-QC Plan Administrator of any deletions or additions to the HMA quality assurance team.

2. **Quality Assurance Personnel Qualifications and Responsibilities.** The HMA-QA Plan will include a brief narrative of the area of responsibilities of each HMA quality assurance team member and will describe the coordination of the activities of the Engineer, support staff and the QAT(s).

A. HMA-Quality Assurance Plan Administrator. The Engineer will be responsible for administering the HMA-QA Plan and will institute any actions necessary to successfully implement the HMA-QA Plan.

B. Quality Assurance Technicians. All equipment calibration and maintenance; quality assurance sampling and testing; and quality assurance documentation will be performed by qualified technicians. All QAT(s) will be certified through the Michigan Bituminous QC/QA Technician Certification Program or other approved program. Certifications required for QAT(s) will be included in the project files.

C. Construction Personnel. The personnel responsible for field inspection and for obtaining QA samples will be identified. Certifications/qualifications required for individuals collecting QA samples will be included in the project files.

D. Laboratory Facilities. The testing facilities with responsibility for QA testing on this project will be identified. All laboratories that perform quality assurance testing of HMA materials must demonstrate that they are equipped, staffed, and managed so as to be capable of testing HMA in accordance with the applicable test methods.

e. Initial Production Lot Procedure. The purpose of the Initial Production Lot is:

- To verify that the produced mixture is within specification limits.
- To verify test results, procedures, and equipment used are capable of generating QC test results that agree with QA results to within allowable tolerances.
- To establish roller patterns that will achieve the desired compaction results.

Prior to proceeding with unlimited daily HMA production; successfully produce, place, and test a minimum of one Initial Production Lot constructed, per plant, with each of the specific HMA mixture types to be used on this project. The Initial Production Lots will be placed in a similar manner as full production on the jobsite.

The In-Place Density QC Suspension Limits (Table 4 Col. III) do not apply to initial production lots.

1. **JMF Adjustment Requests.** JMF adjustments may be requested prior to the Initial Production Lot run based on test data submitted from previous use of the approved mix designs. The previous usage may be on commercial, local agency, or state construction projects. JMF adjustments may also be requested based on the Initial Production Lot(s) results.

2. **Initial Production Lot.** An Initial Production Lot will consist of one day of HMA Production ranging from 800 tons to 1000 tons. Each Initial Production Lot will be evaluated as a single lot. The Contractor will be allowed to construct three Initial Production Lots for a given mixture. The mixture will be subject to pay adjustments and/or removal based on test results for a complete Initial Production Lot.

3. **Initial Production Lot Sampling and Testing.** Each Initial Production Lot will consist of four approximately equal sublots.

A. The Engineer will:

(1) Collect one 45,000 gram Initial Production Lot split sample per sublot, and provide the Contractor with splits of all sublot samples, for testing of all quality characteristics listed in Table 1. These split sample test results will be evaluated using the current lab correlation procedure found in the *HMA Production Manual*. The Department's split portion will be used as the QA acceptance test.

(2) Collect one independent 20,000 gram sample per sublot using the same random number as the 45,000 gram sample for possible dispute resolution of the Initial Production Lot results.

(3) Locate and mark four random core locations per sublot, take possession of the cores when extracted by the Contractor and test the In-Place Density.

(4) Complete all tests and report all results to the Contractor within 48 hours of the time of sampling.

B. The Contractor must:

(1) Conduct tests on the Initial Production Lot split sample collected by the Engineer for all QC quality characteristics listed in Table 1.

(2) Complete all tests and report all results to the Engineer within 48 hours of the time of sampling.

(3) Continue with production only when all of the conditions in subsections (e.3.C) and (e.3.D) of this special provision are met.

(4) Construct additional Initial Production Lots as required in subsection (e.3D).

C. The current lab Correlation Procedure in the *HMA Production Manual* will be used to evaluate the Contractor's and the Engineer's test results for Initial Production Lot split samples which must correlate.

If the Initial Production Lot split sublot sample test results do not correlate, the Contractor and the Engineer will jointly review the results, check equipment and review the test procedures for all testing laboratories to determine if there is an identifiable cause for the discrepancy; recalibrate equipment; and arrange for independent assurance sampling and testing reviews for the QAT(s) and QCT(s), if necessary, before

continuing with production or conducting tests on a subsequent Initial Production Lot. If the vacuum extraction process is used to determine the binder content, the Engineer and Contractor will communicate the number of washes used.

If mutually agreed upon by the Engineer and Contractor, split sampling frequency during the Initial Production Lots can be modified or waived.

D. The Contractor will be allowed to construct up to three Initial Production Lots for a given mixture on three separate days. After the third Initial Production Lot is constructed, paving will be suspended unless the requirements for moving into Unlimited Daily Production have been achieved as outlined below.

Prior to proceeding with full HMA production, the PWL value for each measured QA property (In-Place Density, Air Voids, Binder Content & VMA) for an Initial Production Lot must be equal to or greater than 80.

If the first Initial Production Lot does not achieve a PWL value equal to or greater than 80 for each measured QA property, the acceptance and payment for the tonnage of material for the first Initial Production Lot will be adjusted as described in Sections (k) and (l) of this special provision.

If the second Initial Production Lot for the mixture does not achieve a PWL value equal to or greater than 80 for each measured QA property, the acceptance and payment for the tonnage of material for the second Initial Production Lot will be adjusted as described in Sections (k) and (l) of this special provision.

If the third Initial Production Lot does not achieve a PWL value equal to or greater than 80 for each measured QA property, the acceptance and payment for tonnage of material for the third Initial Production Lot will be adjusted as described in Sections (k) and (l) of this special provision.

The Contractor will produce a fourth Initial Production Lot that will be approximately 750 tons and will consist of four approximately equal sublots. If the fourth or any subsequent Initial Production Lot does not achieve a PWL value equal to or greater than 80 for each measured QA property then it will be removed and another Initial Production Lot will be attempted.

All costs associated with this removal and replacement will be borne by the Contractor.

MDOT will complete all Initial Production Lot tests and report all results to the Contractor within 48 hours of the time of sampling.

E. The Initial Production Lots can be waived and the Contractor allowed to go to Unlimited Daily Production if all of the following criteria are met:

(1) The mix design must have passed Initial Production Lot requirements on another project from the current or prior season. If a waiver was used on the prior season then the Initial Production Lot will not be waived for the current season.

(2) On the previous project, an overall PWL value of 85 for each QA value must have been achieved for the last two full (or last full production lot if there were fewer than 2 full production lots) lots of production.

(3) The mix must be produced from the same plant and location that was used on the previous project.

f. Quality Assurance Sampling and Testing. Acceptance of HMA is the responsibility of the Engineer and will be accomplished by conducting QA sampling and testing, monitoring the Contractor's adherence to the HMA-QC Plan, and inspection of field placed material (see Section 104 Standard Specifications for Construction). The Engineer will notify the Contractor prior to conducting QA sampling. This notification shall be done in a manner that allows the contractor to witness the sampling but does not provide for the opportunity for the contractor to alter their production in anticipation of a sample being taken.

1. **Random Sampling.** Except as modified herein, QA sample locations will be determined as outlined in Section A-12 of the *Materials Quality Assurance Procedures Manual*.

A. Prior to the pre-production meeting, the Engineer will generate three columns of random numbers using a computer spreadsheet program or a calculator. The random numbers will be used for the longitudinal and the transverse measurement for determining the core location.

For HMA mixture sample location, use the random number from the third column, then multiply it by sublot tonnage. An excess amount of random numbers will be generated to take into account overruns or any situation where another random number is required.

B. At the pre-production meeting, each page that lists random numbers, with the numbers covered by a separate sheet of paper, will be presented to be signed by the HMA-QC Plan Administrator and the Engineer.

C. The original signed list will be placed in the project file and a copy will be provided to the field inspector for the project.

D. When the project is completed, a copy of the list of random numbers will be provided to the Contractor upon request.

2. **Production Lot size.** The Engineer will test HMA material for Air Voids, VMA, Binder Content, and In-Place Density on a lot-by-lot basis. Each lot will be divided into sublots of approximately equal size and not be greater than 1000 tons.

If only one or two sublots remain at the end of production of a mixture, the test results for these sublots will be combined with the previous lot for evaluation of PWL and PF.

3. **Plant Produced Material (Mixture) Quality Assurance Sampling.** Location of QA sample sites within each sublot will be by a random process managed by the Engineer. Immediately after the Engineer acquires the samples, fill the voids with HMA in accordance with MTM 324.

The Engineer will sample the mixture in accordance with MTM 324, collecting two separate 20,000 gram samples at each sample site. These are the QA and dispute resolution samples. The Engineer will assign an identifier to each sample consisting of contract ID, mixture, lot and sublot and deliver the samples to the testing facility identified in the HMA-QA Plan where one will be tested and the other retained for possible appeal testing.

Sampling for wedging operations will be in accordance with MTM 313.

4. **Plant Produced Material (Mixture) Quality Assurance Testing.** Plant produced material acceptance testing will be completed by the Engineer within four calendar days after the Engineer has taken the samples from the project site. The Engineer will conduct the following tests.

A. Maximum Specific Gravity, Gmm (MTM 314)

B. Bulk Compacted Density, Nmax (AASHTO TP 4-97)

C. Air Voids, Nini*, Ndes, Nmax*, (AASHTO PP28-97) (* for information only)

D. Voids in Mineral Aggregate, VMA (AASHTO PP28-97)

E. Voids Filled with Asphalt, VFA* (AASHTO PP28-97) (* for information only)

F. Ratio of Fines to Effective Asphalt Binder, P#200/Pbe

G. Composition of the Mixture –

Method 1 – Asphalt binder content based on calculated value using sublot maximum specific gravity (Gmm) and current JMF effective specific gravity (Gse); Gradation (ASTM C 136, C117) and Crushed particle content (MTM 117) from extracted (AASHTO T 164) or incinerated (MTM 319) aggregate.

Method 2 – Asphalt binder content based on vacuum extraction by MTM 325 and the “Checklist for HMA Mixture Analysis Vacuum Extraction”, of the *HMA Production Manual*. Gradation (ASTM C 136, C117) and Crushed particle content (MTM 117) based on extracted (AASHTO T 164) aggregate.

Method 1 or 2 will be selected by the contractor for each mix at the pre-production meeting. The method selected cannot be changed during mix production without submitting a new mix design to the MDOT C&T Central Laboratory for verification.

5. **In-Place Density Quality Assurance Sampling.** The Engineer will locate and mark all QA core locations. All QA coring operations will be completed by the Contractor including dispute resolution and sublot retest coring. The Engineer will test all QA cores. If, for any reason, a core is damaged or determined not to be representative at the time of coring, the Engineer will evaluate and document the problem and determine if re-coring is necessary.

Core sample locations will be marked after final rolling. Core sample locations will be marked at the completion of a sublot, prior to traffic staging changes, or at another time that is independent of paving operations. The Engineer will identify four core sample locations for each sublot based on longitudinal and transverse measurements. The Contractor will provide and pay for traffic control as required in the special provision for maintaining traffic for all coring procedures including dispute resolution and sublot retest coring.

The Engineer will mark each core location with a 2 inch diameter paint dot, which represents the center of the core. When sampling behind the paver, cores will not be taken from 5 feet before the sampling area through 5 feet after the sampling area. If the random core location falls within these areas, new longitudinal and transverse random numbers will be selected and the core sample site moved to the new location. If the center of the core is less than 5 inches from either edge of pavement, another transverse random number will be selected and the core sample site moved to the new location.

Notify the Engineer in advance of coring to ensure that MDOT has a representative to witness the coring operation and take immediate possession of the cores. Drill a core sample approximately 6 inches in diameter at each core location. Do not damage cores during removal from the roadway. Measure cores at the time they are extracted from pavement.

Any core disqualified based on the minimum thickness criteria will be discarded and a new core location will be selected by the Engineer. If more than 50 percent of the cores in a lot are disqualified, production shall stop. Production will not be allowed to continue until the Engineer has confirmed that the paving operation is meeting the contract application rate. All previous pavement, base aggregate or bond coat material will be sawed off the bottom of the core samples by the Engineer.

The minimum core thickness for each mixture type is:

Hot Mix Asphalt Mixture No.	**Minimum Core Thickness**
2	3 inch
3	2 1/4 inch
4	1 1/2 inch
5	1 1/8 inch
LVSP	1 1/4 inch

A. Alternate Acceptance In-Place Density Method

Density acceptance for Hand Patching, Joint Repairs, Driveways, Scratch Course, and Widening/Tapers/Gores of less than 3 feet will be as follows. Density acceptance for these processes will be by density gauge. The Contractor will establish the compaction effort for each pavement layer to achieve the required in place density values. After the final rolling, the Engineer will use a density gauge using the Gmm from the job mix formula (JMF) for acceptance. A minimum of six random locations per sublot will be tested for density. If the average of the density values is equal to or greater than 92.00 percent of the Gmm, the pavement density will be accepted. If the average of the sublot

density tests are less than 92.00 percent of the Gmm, the Contractor will take corrective action to achieve a minimum average of 92.00 of the Gmm.

Sampling will be in accordance with MTM 313.

6. **In-Place Density Quality Assurance Testing.** Pavement In-Place Density acceptance testing will be completed by the Engineer within 4 calendar days after the Engineer has taken possession of the cores at the project site. Testing will be in accordance with MTM 315. The Engineer's test results on the compacted HMA will be used as a basis of acceptance and payment.

At the completion of lot testing all individual tests for In-Place Density will be checked for apparent outliers in accordance with ASTM E 178 Standard Practice for Dealing with Outlier Observations at a significance level of 5 percent (following the example in subsection 6.2 of that standard). If a test result is determined to be an apparent outlier the doubtful value will be investigated.

This investigation will include, but may not be limited to, visual and physical examination of the core (i.e. short core, core damaged during transport or during laboratory handling); and a careful review of the sampling and testing procedure including data entry and calculations (i.e. was raw data transposed or incorrectly entered into test calculations). If no documentable reason is found for the apparent outlier, the value will remain as part of the In-Place Density PF calculations. If a documentable reason is found for the apparent outlier, the value will be discarded and the remaining test results will be used to calculate the In-Place Density PF.

7. **Quality Assurance Stop Production Criteria.** The Engineer will issue a Notice of Non-Compliance with Contract Requirements (Form 1165) and HMA production must stop when any one or more of the following criteria are met or exceeded:

A. One or more of the QA Suspension Quality Limits in Table 4 Col. IV is exceeded for consecutive QA tests.

B. One or more of the QA Sublot Rejectable Quality Limits in Table 4 Col. V is exceeded for a single QA test.

C. The PWL for VMA, Air Voids, Binder Content or In-Place Density is below 50 when calculated according to Section (k) of this special provision.

D. The HMA-QC Plan is not followed.

E. Visible pavement distress occurs such as segregation or flushing.

Resume production only after making all necessary adjustments to bring the mixture into conformance with all applicable specifications; documenting these adjustments as discussed in the HMA-QC Plan; and receiving a Notice to Resume Work (Form 1165) from the Engineer.

8. **Sublot Removal and Replacement Criteria.** Exceeding one or more of the QA Sublot Rejectable Quality Limits in Table 4 Col. V may result in removal and replacement of

the associated sublot of material.

9. **Small Tonnage Acceptance Criteria.** If the total tonnage of a specific mixture does not exceed 5000 tons, the total quantity of that mixture will be considered as a lot and will be divided into a minimum of 3 approximately equal sublots (maximum of 1000 ton sublots) up to a maximum of 7 sublots for testing and acceptance. The sublot size shall be approved by the Engineer prior to production of small tonnage mixtures.

Sampling will be in accordance with the provisions stated herein or MTM 313 where applicable.

All quality assurance sampling and testing procedures and acceptance criteria described in this special provision will apply.

g. Daily Asphalt Binder Certification Verification Samples. Obtain the asphalt binder sample, correctly label the sample container, and complete a Sample Identification (Bituminous Material) (Form 1923B). The form must be filled out correctly and completely, and signed before the sample is given to the Engineer. The daily asphalt binder sample must be taken from a sampling spigot located on the pipeline supplying asphalt binder to the plant, in a position between the asphalt binder pump and the point where the asphalt binder enters the mixture. Personnel safety is critical in selecting the position of the sampling spigot. Give the binder sample and completed Form 1923B to the Engineer.

Collect the daily asphalt binder sample in a 1 pint (16 ounce), slip top, seamless ointment tin. The tin must be at least three quarters full. Three 1 pint containers must be obtained if the binder being sampled has the “P” designation (e.g., PG 70-28P). One of these three containers must be marked with the letter “R”, designating it as a referee sample. This is described in the Special Provision for Polymer Modified Performance Grade Binders included in the contract documents. All containers must be labeled in a legible format with the following information.

- MDOT control section and job number
- Binder grade
- Binder supplier certifier number
- Supplier name, city and state
- Date sampled
- Mix type

The Engineer may request to witness the sampling of the asphalt binder upon any visit to the HMA plant. The Engineer will complete the 1923B form for the witness sample. The witness sample will become the daily asphalt binder sample of record. Any other binder sample taken that same day will be discarded.

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

h. Dispute Resolution Process for Plant Produced Material (Mixture).

1. **Lot Dispute Resolution.**

A. Lot Dispute Resolution Criteria. The QA results for a lot, including an initial production lot, may be eligible for Dispute Resolution only if the PF for Air Voids, Binder Content, or VMA based on the QC test results is larger than the corresponding PF for Air Voids, Binder Content, or VMA based on the QA test results. Only independent random QC test results from the corresponding sublots in the lot under Dispute Resolution will be used by the Engineer when processing the Dispute Resolution request. The QC testing and sampling used for Dispute Resolution must be conducted in the same manner as the QA testing. The PF for Air Voids, Binder Content, and VMA will be recomputed based on the Dispute Resolution sample test results.

B. Dispute Resolution Schedule.

(1) Request for Dispute Resolution testing must be submitted in writing within 2 working days of receipt of the results of the quality index analysis, including the PF for Air Voids, Binder Content, VMA and In-Place Density, for the lot.

(2) The request for Dispute Resolution must include the QC test results for the lot. A signed statement certifying that the QC test results are true and accurate must accompany the request for Dispute Resolution.

(3) The Engineer will document receipt of the request for Dispute Resolution and will deliver the Dispute Resolution samples to the MDOT C&T Central Laboratory within 1 working day of the receipt of the request.

(4) The MDOT C&T Central Laboratory will complete all Dispute Resolution testing and return test results to the Engineer within 14 calendar days upon receiving the Dispute Resolution samples.

C. Dispute Resolution Testing Process.

(1) All sublot dispute resolution samples will be tested. Binder Content will be determined using the method specified by the Contractor for the specific mix. VMA will be recalculated using the new Binder Content values from the existing specimens if they are not in dispute.

(2) All dispute resolution results will replace original QA test results.

(3) The Overall Lot Pay Factor and the lot pay adjustment for the lot under Dispute Resolution will be recalculated.

(4) If the recalculated Overall Lot Pay Factor is less than or equal to the original QA Overall Lot Pay Factor, all costs associated with completing the Dispute Resolution sample testing will be borne by the Contractor.

(5) If the recalculated Overall Lot Pay Factor is greater than the original QA Overall Lot Pay Factor, all costs associated with completing the Dispute Resolution sample testing will be borne by the Department.

2. **Sublot Retest.** If any one or more QA sublot RQL (Table 4 Column V) is exceeded, the Engineer will direct the corresponding sublot Dispute Resolution sample to be tested and the results will be substituted for the QA results for Air Voids, Binder Content and VMA. The PFs for Air Voids, VMA, Binder Content and Density will be recomputed. All costs associated with completing the Sublot Retest testing will be borne by the Department.

i. Dispute Resolution Process for In-Place Density

1. **Lot Dispute Resolution.**

A. Lot Dispute Resolution Criteria. The QA In-Place Density results for a lot, including an initial production lot, may be eligible for Dispute Resolution if the lot PF for In-Place Density based on the QC test results is larger than the corresponding PF based on the QA test results. Only independent random QC test results (minimum of two random sublot cores from each sublot) from the corresponding lot under Dispute Resolution will be used by the Engineer when processing the Dispute Resolution request. The lot PF for In-Place Density will be recomputed based on the Dispute Resolution sample test results.

B. Dispute Resolution Schedule

(1) Request for In-Place Density Dispute Resolution testing must be submitted in writing within 2 working days of receipt of the lot In-Place Density test results.

(2) The request for Dispute Resolution must include the QC test results for the lot. A signed statement certifying that the QC test results are true and accurate must accompany the request for Dispute Resolution.

(3) The Engineer will document receipt of the request for Dispute Resolution.

(4) The Engineer will check the lot In-Place Density test results for data entry and mathematical errors. If there are errors, the lot PF for In-Place Density will be recomputed on the recalculated test results.

(5) If it is determined that the test discrepancy has not been resolved, Dispute Resolution coring will be completed within 5 calendar days of the receipt of the request for Dispute Resolution. The Gmm from the original QA test results will be used to calculate the new In-Place Density values. If either Air Voids, Binder Content, or VMA are in Dispute Resolution for the same lot, the new Gmm value will be used only to calculate the new Dispute Resolution In-Place Density values. The Dispute Resolution cores will be delivered to the MDOT C&T Central Laboratory within 1 work day after completion of the re-coring procedure.

(6) The MDOT C&T Central Laboratory will complete all Dispute Resolution testing and return test results to the Engineer within 7 calendar days upon receiving the Dispute Resolution samples. If there is a Dispute Resolution in process for Air Voids, Binder Content, or VMA, MDOT C&T Central Laboratory will complete all Dispute Resolution testing and return test results within 14 calendar days upon receiving the Dispute Resolution samples.

C. Dispute Resolution Testing Process

(1) The Engineer will check the lot In-Place Density test results for data entry and mathematical errors. If there are errors, the lot PF for In-Place Density will be recomputed on the recalculated test results.

(2) If it is determined that the test discrepancy has not been resolved, the Engineer will locate and mark the Dispute Resolution core locations by adding 1.0 foot longitudinally to all of the original QA cores tested using the same transverse offset. The Engineer will take possession of the cores when cut and extracted by the Contractor and submit them to MDOT C&T Central Laboratory for testing. The Dispute Resolution density cores will be tested in accordance with MTM 315. The Gmm from the original QA test results will be used to calculate the new In-Place Density values. If Air Voids, Binder Content, or VMA are in Dispute Resolution for the same lot, the new Gmm value will be used only to calculate the new Dispute Resolution In-Place Density values.

(3) All lot Dispute Resolution core samples will be tested.

(4) All lot Dispute Resolution core results will replace original QA test results.

(5) The Overall Lot Pay Factor and the lot pay adjustment for the lot under Dispute Resolution will be recalculated.

(6) If the recalculated Overall Lot Pay Factor is less than or equal to the original QA Overall Lot Pay Factor, all costs associated with completing the Dispute Resolution sample testing will be borne by the Contractor.

(7) If the recalculated Overall Lot Pay Factor is greater than the original QA Overall Lot Pay Factor, all costs associated with completing the Dispute Resolution sample testing will be borne by the Department.

2. **Sublot Retest.** If any one or more QA Density sublot RQL (Table 4 Column V) is exceeded, the Engineer will direct the corresponding sublot Dispute Resolution cores to be sampled and tested and the results will be substituted for the QA results. The PF for Density will be recomputed. All costs associated with completing the Sublot Retest testing will be borne by the Department.

j. Documentation. The following documentation must be current and available for review as stated herein. All required documentation will be reviewed at the post-production meeting.

1. **Quality Control Records.** Maintain a complete record of all quality control tests and inspections. Make these records available at the laboratory facility at all times for the Engineer to review. Update all records within 24 hours of test completion. Failure to keep the required documentation updated constitutes a violation of the HMA-QC Plan. Furnish copies of individual records to the Engineer upon request and all records within 7 working days of completion of the project. Report all sampling and testing on MDOT approved forms. The records must contain, as a minimum, the accepted HMA-QC Plan, signed originals of all QC test results and raw data, random numbers used and resulting calculations made for QC sampling locations if applicable, control charts, and summaries of

all test results.

2. **Quality Assurance Records.** The Engineer will maintain a complete record of all quality assurance tests and inspections. Records will be updated within 1 working day of test completion. Copies of individual records will be furnished upon request. The records will contain, as a minimum, the HMA-QA Plan, signed originals of all QA test results and raw data, random numbers used and resulting calculations made for QA sampling locations if applicable, and summaries of all test results.

k. Quality Index Analysis. The Engineer's QA test results for plant produced material (mixture) and In-Place Density will be evaluated according to the MDOT PWL Worksheet. The upper and lower specification limits used in the quality index analysis are shown in Table 3. The Engineer will calculate PWL, PF and payment for all HMA material covered by this special provision using the MDOT PWL Worksheet. All values of PWL and PF in these formulae are percents not decimals. All values of PWL are carried to whole numbers and PF are carried to two decimal places as shown in the MDOT PWL Worksheet.

1. **Pay Factor for Air Voids (PF_{AV}).**

A. If PWL for Air Voids (PWL_{AV}) is between 100 and 70, use the following formula to determine PF_{AV}. Round the value of PF_{AV} two decimal places.

$$PF_{AV} = 55+(0.5xPWL)$$

B. If PWL for Air Voids is between 70 and 50 inclusive, use the following equation to determine PF_{AV}. Round the value of PF_{AV} two decimal places.

$$PF_{AV} =37.5+(0.75xPWL)$$

C. If PWL for Air Voids is less than 50, the Engineer may elect to do one of the following:

(1) Require removal and replacement of the entire lot with new QA sampling and testing and repeat the evaluation procedure.

(2) Allow the lot to remain in place and apply an Overall Lot Pay Factor of 50.00.

(3) Allow submittal of a corrective action plan for the Engineer's approval. The corrective action plan may include removal and replacement of one or more sublots. If one or more sublots are replaced, the sublot(s) will be retested and the Overall Lot Pay Factor will be recalculated according to this special provision. If the Engineer does not approve the plan for corrective action, subsections (1) or (2) above will be applied.

2. **Pay Factor for Binder Content (PF_{BINDER})**

A. If PWL for Binder Content (PF_{BINDER}) is between 100 and 70, use the following formula to determine PF_{BINDER}. Round the value of PF_{BINDER} two decimal places.

$$PF_{BINDER} = 55+(0.5xPWL)$$

B. If PWL for Binder Content is between 70 and 50 inclusive, use the following equation to determine PF_{BINDER}. Round the value of PF_{BINDER} two decimal places.

$$PF_{BINDER}=37.5+(0.75xPWL)$$

C. If PWL for Binder Content is less than 50, the Engineer may elect to take one of the actions specified in subsection (k.1.C) above.

3. **Pay Factor for VMA (PF_{VMA}).**

A. If PWL for VMA (PWL_{VMA}) is between 100 and 70, use the following formula to determine PF_{VMA}. Round the value of PF_{VMA} two decimal places.

$$PF_{VMA} = 55+(0.5xPWL)$$

B. If PWL for VMA is between 70 and 50 inclusive, use the following equation to determine PF_{VMA}. Round the value of PF_{VMA} two decimal places.

$$PF_{VMA}=37.5+(0.75xPWL)$$

C. If PWL for VMA is less than 50, the Engineer may elect to take one of the actions specified in subsection (k.1.C) above.

4. **Pay Factor for In-Place Density (PF_D).**

A. If PWL for In-Place Density (PWL_D) is between 100 and 70, use the following formula to determine PF_D. Round the value of PF_D two decimal places.

$$PF_D = 55+(0.5xPWL)$$

B. If PWL for In-Place Density is between 70 and 50 inclusive, use the following equation to determine PF_D. Round the value of PF_D two decimal places.

$$PF_D=37.5+(0.75xPWL)$$

C. If PWL for In-Place Density is less than 50; the Engineer may elect to take one of the actions specified in subsection (k.1.C) above.

5. **Overall Lot Pay Factor (OLPF)**

$$OLPF = (0.40 \times PF_D)+ (0.30 \times PF_{AV}) + (0.15 \times PF_{BINDER}) + (0.15 \times PF_{VMA})$$

l. Measurement and Payment. Separate payment will not be made for providing and maintaining an effective HMA quality control program as specified by this special provision. All costs associated with the work described in this special provision will be included in the applicable unit prices for the related HMA mixtures. HMA, (type) will be measured as specified in subsection 502.04 of the Standard Specification for Construction and the contract documents. If HMA Quality Initiative is not included in the contract as a pay item, there will be no payment

for this item of work.

Payment for HMA pay items will be based on the contract prices for the completed items of work as adjusted according to this special provision. Adjusted payment for HMA, (type) will be calculated on a lot-by-lot basis.

The Overall Lot Pay Factor (OLPF) will be used to determine the lot pay adjustment as follows:

Lot Payment Adjustment = (OLPF-100)/100 x (Contract Unit Price) x (Lot Quantity).

Contract Item (Pay Item)	**Pay Unit**
HMA Quality Initiative	Dollar

Table 1: Minimum Quality Control Sampling and Testing Requirements

Quality Characteristic	Test Method	Minimum Test Frequency	Sampling Location	Sampling Method
Aggregate Gradation (optional)	As defined in HMA-QC Plan	As defined in HMA-QC Plan	As defined in HMA-QC Plan	Random AASHTO T 2
Aggregate Moisture	As defined in HMA-QC Plan	As defined in HMA-QC Plan		
PG Binder Content	As defined in HMA-QC Plan	1 per day	As defined in HMA-QC Plan	Random AASHTO T 168
Combined Mixture Gradation	As defined in HMA-QC Plan	1 per day	As defined in HMA-QC Plan	Random AASHTO T 168
Maximum Theoretical Specific Gravity	MTM 314	1 per day	As defined in HMA-QC Plan	Random MTM 313
Bulk Specific Gravity	As defined in HMA-QC Plan	1 per day	As defined in HMA-QC Plan	Random AASHTO T 168
Volumetrics: Air Voids	As defined in HMA-QC Plan	1 per day	As defined in HMA-QC Plan	Random AASHTO T 168
Volumetrics: VMA	As defined in HMA-QC Plan	1 per day	As defined in HMA-QC Plan	Random AASHTO T 168
Fines to Effective Binder	As defined in HMA-QC Plan	1 per day	As defined in HMA-QC Plan	Random AASHTO T 168
In-Place Density(a)	As defined in HMA-QC Plan	1 per day	From compacted HMA	Random AASHTO T 168

a. A maximum of 15 cores per lot of material will be allowed.

Table 2: Action and Suspension Limits for Combined Gradation (from JMF)

	HMA Mixture									
	5		4		3		2		LVSP	
Sieve Size	QC Action	QC Sus-pension	QC Action	QC Sus-pension	QC Action	QC Sus-pension	QC Action	QC Sus-pension	QC Action	QC Sus-pension
3/4 inch	Defined		Defined		Defined	± 10	Defined	± 10	Defined	
1/2 inch	In the		In the	± 10	In the	± 10	In the	± 10	In the	± 10
3/8 inch	HMA-QC	± 10	HMA-QC	± 10	HMA-QC	± 10	HMA-QC	± 10	HMA-QC	± 10
No. 4	Plan	± 8	Plan	± 8	Plan	± 8	Plan	± 8	Plan	± 8
No. 8		± 8		± 8		± 8		± 8		± 8
No. 30		± 6		± 6		± 6		± 6		± 6
No. 200		± 2		± 2		± 2		± 2		± 2

Table 3: HMA Quality Index Parameter Specification Limits

Quality Index Parameter	Specification Limits	
	Lower	Upper
Air Voids, (%@ Ndes) leveling and top course	3.00	5.00
Air voids base/shoulders	2.00	4.00
VMA		
LVSP	14.00	16.00
2	12.00	14.00
3	13.00	15.00
4	14.00	16.00
5	15.00	17.00
GGSP (Gap SMA)	17.00	19.00
Binder Content	JMF ± 0.40	
Mat Density, %Gmm	92.00%	None Specified

The Binder Content used as the target will be the value in the approved JMF.

Table 4: Quality Control and Quality Assurance Limits

Col. I - Quality Characteristic	Col. II - QC Action Limits (a)	Col. III - QC Suspension Limits (b)	Col. IV - QA Suspension Limits Form 1165 (a)	Col. V - Sublot RQL Form 1165 (c)	Col. VI - Lot AQL (d)	Col. VII - Lot RQL (d)
Aggregate Gradation (optional)						
Aggregate Moisture						
Binder Content	± 0.50 JMF	± 1.00 JMF			PWL_{BINDER} ≥ 90 For any lot	PWL_{BINDER} < 50 For any lot
Combined Mixture Gradation	Defined in the HMA-QC Plan	Refer to Table 2				
Maximum Theoretical Specific Gravity	± 0.013 JMF	± 0.020 JMF				
Bulk Specific Gravity						
Volumetrics: Air Voids	Defined In the HMA-QC Plan	- 1.00 or + 1.00 of Spec Limits in Table 3		- 1.00 or + 1.00 of Spec Limits in Table 3	PWL_{AV} ≥ 90 For any lot	PWL_{AV} < 50 For any lot
Volumetrics: VMA	Defined In the HMA-QC Plan	- 1.00 or + 3.00 of Spec Limits in Table 3		- 1.00 or + 3.00 of Spec Limits in Table 3	PWL_{VMA} ≥ 90 For any lot	PWL_{VMA} < 50 For any lot
Fines to Effective Binder	Defined In the HMA-QC Plan	0.60 – 1.40 (a)	0.60 – 1.40			
In-Place Density	Defined in the HMA-QC Plan	Defined in the HMA-QC Plan		Average Sublot Value < 90.00%	PWL_D ≥ 90 For any lot	PWL_D < 50 For any lot

a. Limits apply to two consecutive QC or QA tests.
b. Limits apply to single QC tests.
c. Specified. Limits apply to a single QA sublot Air Void or VMA test or on the sublot average In-Place Density.
d. Specified. Limits apply on a lot-by-lot basis. Based on QA results for the lot.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONCRETE QUALITY ASSURANCE PAY FACTOR

C&T:JAR 1 of 1 C&T:APPR:JFS:TS:08-02-04
FHWA: APPR 08-20-04

a. Description. The following information is added to subsection 605.03.D of the standard specifications

2. Calculate the pay factor for each lot, in decimal form, as follows:

   $PF = (0.20(PWL) - 18) \div 100$

   where :
   PF = Pay factor used in determining the pay adjustment (decimal form).
   PWL = Percent within limits determined by the procedure in Section 106

3. Apply the pay factor to each contract item in the lot to determine the pay adjustment for each item as follows:

   ADJ = PF (quantity) (price)

   where:
   ADJ = Lot pay adjustment for the contract item
   quantity = Quantity of item placed in the lot
   price = Contract unit price bid for the contract item

4. If a lot is comprised of more than one critical concrete QA item or is comprised of critical and non-critical concrete QA items, calculate the pay adjustment for each item in the lot separately as follows:

   a. Critical concrete QA items - Use the pay factor, the contract unit price for the item and the quantity of the item included in the lot.

   b. Non-critical concrete QA items - Use either the pay factor or zero, whichever is less, the contract unit price for the item, and the quantity of the non-critical concrete QA item included in the lot.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
STEEL SHEET PILING, TEMP AND STEEL SHEET PILING, TEMP, LEFT IN PLACE

C&T:EMB 1 of 1 C&T:APPR:RBE:RDT:07-31-03
FHWA:APPR:08-18-03

Add the following sentence as the fourth sentence to the first paragraph to subsection 704.04.A.2, Measurement and Payment, page 375 of the 2003 Standard Specifications for Construction.

When earth is retained on both sides of the same steel sheet piling during different construction stages, the quantity will be computed from the stage requiring the largest area of earth retention and not the sum of the area of required earth retention for each stage.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
FOUNDATION PILING SPLICES

C&T:EMB 1 of 1 C&T:APPR:SJC:DBP:07-27-07
FHWA:APPR:08-07-07

Delete the first sentence of the last paragraph to subsection 705.03.E.4, on page 381 of the 2003 Standard Specifications for Construction and replace it with the following.

Weld according to subsections 707.03.D.8.b, c, and d employing only welders certified by agencies approved by the Department with the following temperature exceptions. Do not perform field welding of piling when the ambient temperature is below 0 degrees F. When the pile metal temperature is below 32 degrees F, preheat the pile metal in the area of the weld to a minimum temperature of 70 degrees F and maintain at the temperature during the weld.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
STRUCTURAL STEEL AND ALUMINUM CONSTRUCTION

a. Description. This specification covers the fabrication of structural steel and aluminum, modifying the standard specifications and the referenced AWS Codes. In case of conflict between the MDOT Specifications and AWS Specifications, the MDOT Specifications shall govern.

PART I - BRIDGE WELDING

b. Fabricating Structural Steel (AWS D1.5M/D1.5:2002). The fabrication of structural steel bridge members shall be performed according to the Bridge Welding Code, AASHTO/AWS D1.5M/D1.5:2002. All references to AWS D1.5 shall include AWS D1.5M/D1.5:2002 and the AWS D1.5 Interim 2005 specifications.

The welding requirements of steel structures where the loads are carried by tubular members shall conform to the requirements of AWS D1.1/D1.1M:2002 and Part II of this specification. This includes Tubular Fracture Critical Members.

The following items are applicable for the entire code. Any reference to these items within the code shall be as modified herein.

AWS SECTION 2. DESIGN OF WELDED CONNECTIONS

AWS 2.8.1.8 Add the following sentence to the paragraph:

Welds on opposite sides of a common plane shall be continuous, as shown on the contract drawings, and corners ground to eliminate notches greater than 0.01 inch. Provide a smooth transition to the weld metal after grinding.

AWS 2.9.1.1 Delete the paragraph and replace with the following sentence:

Qualification tests will be required for all plug and slot welds.

AWS 2.9.3 Add the following:

The maximum center-to-center spacing of plug welds shall be equal to the minimum plus 1/2 inch.

AWS SECTION 3. WORKMANSHIP

AWS 3.1.3 Change "...when the ambient temperature is lower than 0 °F..." to read "...when the ambient temperature is lower than 40 °F...".

AWS 3.2.1 Change "... from the surface on which web-to-flange welds are to be made..." to read "... from the surface on which web-to-flange, stiffener-to-web, stiffener-to-flange and cover plate-to-flange welds are to be made...".

AWS 3.3.8 Delete and replace with the following:

> Temporary or fit-up welds shall be subject to the same welding procedure requirements as final welds. They shall be removed unless otherwise permitted by the Engineer. Any Temporary or fit-up welding must be clearly shown on the shop plans and approved by the Engineer. A procedure for removal of all temporary or fit-up welds must be submitted, in writing, to the Engineer for approval. If removed, they shall be ground flush with the original surface to a surface finish of less than 125 microinches-rms, finished parallel to the direction of primary stress. Removal of temporary welds shall conform to the requirements of AWS 3.3.7.3 and AWS 3.3.7.4. If temporary welding is approved, non-destructive testing of the temporary weld areas may be required by the Engineer and performed at the Fabricator's expense to ensure that no cracks or flaws have been produced in the base metal.

AWS 3.13.3, 3.13.3.1, 3.13.3.2 Delete these paragraphs and replace with the following:

> Steel backing on welds shall be removed and the joint shall be ground smooth, unless otherwise directed by the Engineer.

AWS 3.13.6 Copper backing shall not be used. In the first sentence of the first paragraph after "or similar materials" add "as approved by the Engineer.".

AWS SECTION 4. TECHNIQUE

AWS 4.2 All references to an ambient temperature of 0 °F shall be changed to an ambient temperature of 40 °F.

Add the following sentence to the paragraph:

> The maximum interpass temperature for butt welding on M270 Grade 36, 50 and 50W steel shall not exceed 650 °F.

AWS 4.7.6 Add the following sentence to the paragraph:

> Any use of backing materials or sealing by welding is subject to the approval of the Engineer and may be qualified by procedure qualification tests as directed by the Engineer.

AWS SECTION 5. QUALIFICATION

AWS 5.2.4 Delete and replace with the following:

Testing as specified by the standard specifications, AWS D1.5, MDOT Supplemental Specifications, Special Provisions, and Contract Documents are included in the "BID UPON" price for fabricating and furnishing structural steel and therefore payment for such testing is at the Contractor's/Fabricator's expense. This includes additional testing required by the Engineer for welders, welding operators, or welding procedures.

AWS 5.4.1 Change the word "should" in the note at the bottom of the table to "shall".

AWS Table 5.7 Delete fillet weld option 2 and accompanying Figure 5.22.

AWS 5.13 Nonstandard joints, as determined by the Engineer, shall be "mocked-up" to duplicate joints used in production.

AWS Figure 5.17, 5.18, 5.19, and 5.20 Change the 6 inches minimum dimension to 8 inches minimum.

AWS 5.20 Additional test specimens will not be cut from the same procedure qualification test plate. Any references to this within this code shall be deleted.

AWS 5.21.4 In the first sentence, change "...remaining in effect indefinitely..." to read "...remaining in effect for three (3) years...".

AWS 5.23.1.5 Delete and replace with the following:

Plug Weld Qualification Tests for Plug Welds Only. The joint shall consist of a diameter hole the same size as that used in production in a plate the same thickness as that being welded. Backing shall be of the same thickness and material as that to be used in production. In addition, Ultrasonic Testing (UT) shall be required for plug weld qualification and shall meet the requirements shown in Table 9.1. Conduct macroetch test according to AWS 5.27.6.

AWS 5.23.2.4(b) Delete option 2 and accompanying Figure 5.27.

AWS 5.27.1 Add the following requirements for visual inspection to the paragraph:

No discontinuities exceeding 1/8 inch measured in any direction on the surface.

No discontinuities exceed 3/8 inch - Sum of the greatest dimensions of all discontinuities exceeding 1/32 inch but less than or equal to 1/8 inch.

AWS 5.27.6.1 Add the following requirements to the paragraph:

(7) No discontinuities exceeding 1/8 inch measured in any directions on the surface.

(8) No discontinuities exceeding 3/8 inch - Sum of the greatest dimensions of all discontinuities exceeding 1/32 inch but less than or equal to 1/8 inch.

AWS 5.27.6.2 (3) Change "...in excess of 1/4 inch..." to read "... in excess of 1/8 inch...".

AWS SECTION 6. INSPECTION

AWS 6.3.1 Add the following sentence to the paragraph:

Approved weld procedures are to be posted where work and welding are being performed.

AWS 6.4.3 Add the following at the end of the paragraph:

...or the contract documents.

AWS 6.4.4 The "Inspector" is interpreted as being MDOT's quality assurance inspector or representative.

AWS 6.6.5 Delete and replace with the following:

If nondestructive testing (NDT), not specified in the original contract agreement, is subsequently requested by the owner, the Contractor shall perform any requested testing or shall permit any requested testing to be performed. Any cost related to subsequent testing requests shall be paid for by the owner. However, if such testing should disclose any deficiencies which require repair work, all cost for the repair and any NDT required on the repair shall be paid for by the Contractor/Fabricator.

AWS 6.26.1.5 Add the following to the paragraph:

"Cross frames and diaphragms attached to connection plates or stiffeners of horizontally curved girders are considered primary members. Fillet welds attaching connection plates or stiffeners to the web of horizontally curved girders that carry loads from cross frames or diaphragms are considered part of the primary member".

AWS 6.26.2.1 In the first sentence, change "For welds subject to tensile stress under any condition of loading..." to read "For all welds under any condition of loading...".

AWS 6.26.2.2 and AWS Figure 6.9 Delete paragraph 6.26.2.2 and Figure 6.9. Refer to AWS 6.26.2.1 and AWS Figure 6.8.

AWS 6.26.3.1 (1) Change "Welds subject to tensile stress..." to read "Welds under any condition of loading...".

AWS 6.26.3.1 (2) and AWS Table 6.4 Delete sentence (2) and Table 6.4. Refer to AWS 6.26.3.1 (1) and to AWS Table 6.3.

AWS 6.26.3.3 Change reference from Table 6.4 to Table 6.3.

PART II - STEEL

c. Fabricating Structural Steel (AWS D1.1/D1.1M:2002).-Shop fabrication of steel sign support structures, tower lighting units, CCTV towers, traffic signal mast arms and poles, drainage components, expansion dams, modular expansion joints, curb plates, bearings, railings and other miscellaneous structural steel members as determined by the Engineer shall be according to the Structural Welding Code - Steel, AWS D1.1/D1.1M:2002. Fabricators may qualify under the provision of AWS D1.5 if approved by the Engineer.

Any reference to prequalified joints in AWS D1.1 shall be deleted. See AWS Section 4.1.1 as modified herein.

AWS SECTION 2. DESIGN OF WELDED CONNECTIONS

AWS 2.5.5 Delete and replace with Section 2.8.1.1 of AWS D1.5 and as modified in Part I herein.

AWS SECTION 3. PREQUALIFICATION OF WPS's

Any reference to prequalified joints in this section shall be deleted. All joints require procedure qualification testing, see Section 4.1.1 herein.

AWS Table 3.2 Add the following general note to Table 3.2:

The ambient air temperature in the vicinity of the weld shall not be less than 40 °F.

AWS 3.2.1 Delete 3.2.1 but note requirements herein under modifications to AWS Section 4.

AWS 3.5.2 Delete this paragraph and eliminate all future references within AWS D1.1 to alternate methods for establishing minimum preheat and interpass temperatures.

AWS 3.6 Replace 3.6 with the following provisions:

All welding procedure specifications to be used shall be prepared by the Manufacturer, Fabricator, or Contractor as written procedure specifications, and submitted to the Department. A suggested form showing the information required in the procedure specification is given in Annex E.

AWS 3.6.1 Delete this paragraph and refer to 4.1.1 and 3.6.

AWS 3.7.1 Replace the first sentence of 3.7.1 with the following sentence:

The progression for all passes in vertical position welding shall be upward, including repair of undercuts. Delete all reference to welding vertically down.

AWS 3.9.3 Add the following sentence:

Qualification tests shall be required for all skewed T-Joints.

AWS 3.12 Add the following sentence:

Qualification tests shall be required for all partial joint penetration groove welds.

AWS SECTION 4. QUALIFICATION

AWS 4.1.1 Replace 4.1.1 with the following provisions:

Welding procedures shall be qualified prior to use, by tests as prescribed in Part B of this Section. No welding shall be done on any project until shop welded procedure qualification tests described in Part B of Section 4 demonstrate the performance of the wire-flux combination when welding with shop equipment using the shop welding procedure specification and representative samples of the wire, flux, and plates or shapes to be used in production. The type of procedure qualification test(s) run by the fabricator shall be determined by the Engineer. Welds for procedure qualification shall be made according to the shop welding procedure specification, including observance of preheat and interpass temperatures, using representative samples of the electrodes, flux, and base metal to be used in production. The Department will maintain records of procedures qualified by each shop, so that it will not be necessary to requalify for each new contract, as long as the qualified procedure remains controlled within the limitation of variables specified in Part B of Section 4, and provided that the welding machines, type of steel, and range of thickness are not changed. As an alternate to plate thickness procedure qualification, the Engineer may require tests run for procedures using actual joints used in production. Procedures are good for three (3) years. The Engineer may require a retest of welding procedures whenever the Engineer feels it is warranted.

AWS 4.1.1.3 Delete and add the following paragraph:

Charpy impact tests and all weld metal tensile tests are required for all groove weld procedure test plates. Additional plate lengths are required for these tests. This requirement is for all plate thicknesses, except that for less than _ inch plates all weld metal tensile test is not required; however, root and face bend tests are. Specimens tested for impact values shall have a minimum value of 20 ft-L at 0 °F. All weld tensile specimens shall have values not less than those shown in Table 3.1 with elongation in 2 inch gage length not less than 22 percent.

AWS 4.1.3.1 In the first sentence, change "...remaining in effect indefinitely..." to read "... remaining in effect for three (3) years...".

AWS 4.1.3.2 In the first sentence, change "...to perform tack welding indefinitely..." to read "...to perform tack welding for three (3) years...".

AWS 4.8.5 Additional test specimens will not be cut from the same procedure qualification test plate. Any reference to this within this code shall be deleted.

AWS Table 4.10 Delete fillet weld option 2 and accompanying Figure 4.32.

AWS 4.11.3 Delete all reference to prequalified consumables. All consumables for fillet welds shall be tested.

Add the following to the paragraph:

The deposited weld metal shall be tested by the Charpy impact test and shall produce a minimum of 20 ft-L at 0 °F.

AWS 4.12.4.1 (3)(f) Change "1/4 inch" to "1/8 inch" in the first sentence.

AWS 4.12.4.1 (3) Add the following requirements to the paragraph:

(g) No discontinuities exceeding 1/8 inch measured in any direction on the surface.

(h) No discontinuities exceeding 3/8 inch - Sum of the greatest dimensions of all discontinuities exceeding 1/32 inch but less than or equal to 1/8 inch.

AWS Figure 4.21, 4.29, 4.30, and 4.31 Change the 6 inch minimum dimension to 8 inch minimum.

AWS 4.29 Delete and replace with Section 5.23.1.5 of AWS D1.5 and as modified in Part I herein.

AWS 4.30.2.1 (1) & (2) Use AWS 4.29 as modified herein.

AWS 4.30.2.3 Add the following requirements:

(5) No discontinuities exceeding 1/8 inch measured in any direction on the surface.

(6) No discontinuities exceeding 3/8 inch - Sum of the greatest dimensions of all discontinuities exceeding 1/32 inch but less than or equal to 1/8 inch...".

AWS 4.30.2.3 (4)(c) Change "... in excess of 1/4 inch..." to read "... in excess of 1/8 inch...".

AWS Figure 4.37 Change the note for L_2 to read....."5 inch min. (welder),....."

AWS SECTION 5. FABRICATION

AWS Table 5.1 Delete and replace with Table 4.7 of AWS D1.5.

AWS 5.2.2.1 and AWS 5.2.2.2 Delete and replace with:

Base metal for weld tabs, backing, and spacers shall be the same steel as that to be welded.

AWS 5.3.2.2 Delete "Electrodes exposed to the atmosphere...the electrodes maybe reissued." and replace with Section 4.5.2.2 of AWS D1.5.

AWS 5.3.2.3 Delete and replace with Section 4.5.2.1 of AWS D1.5.
AWS Table 5.8 Delete and replace with Section 707 of the standard specification.

AWS 5.12.2 (1) Change "...when the ambient temperature is lower than 0 °F..." to read "...when the ambient temperature is lower than 40 °F...".

AWS 5.14 Delete and replace with Section 707 of the standard specifications.

AWS 5.18.1 Delete and replace with Section 3.3.8 of AWS D1.5 and as modified in Part I herein.

AWS 5.26 Add the following sentences to the paragraph:

Written weld repair procedures shall be approved by the Engineer prior to any weld repairs. For weld repairs, preheat is mandatory as specified in Table 3.2 as modified herein.

AWS SECTION 6. INSPECTION

AWS 6.1 Delete and replace with Section 6.1 of AWS D1.5.

AWS 6.3.1 Add the following sentence to the paragraph:

Approved weld procedures are to be posted where work and welding are being performed.

AWS 6.6.5 Delete and replace with Section 6.6.5 of AWS D1.5 and as modified in Part I herein.

AWS 6.9 Add the following requirements for visual inspection to the paragraph:

No discontinuities exceeding 1/8 inch measured in any direction on the surface.

No discontinuities exceeding 3/8 inch - Sum of the greatest dimensions of all discontinuities exceeding 1/32 inch but less than or equal to 1/8 inch.

AWS 6.12.2.1 In the first sentence, change "For welds subject to tensile stress under any condition of loading..." to read "For all welds under any condition of loading...".

AWS 6.12.2.2 and AWS Figure 6.5 Delete paragraph 6.12.2.2 and Figure 6.5. Refer to AWS 6.12.2.1 and to AWS Figure 6.4.

AWS 6.13.2 (1) Change "Welds subject to tensile stress..." to read "All welds under any condition of loading...".

AWS 6.13.2 (2) and AWS Table 6.2 Delete sentence (2) and Table 6.2. Refer to AWS 6.13.2 (1) and Table 6.3.

AWS 6.20.2 In the third sentence of the paragraph, replace the word “painted” with the word “coated”.

AWS 6.26.3 Replace the word “paint” with “coatings”.

PART III - ALUMINUM

d. Fabricating Structural Aluminum (AWS D1.2-97). Shop fabricating of structural aluminum shall be according to AWS D1.2 Structural Welding Code - Aluminum.

AWS SECTION 4. TECHNIQUE

AWS 3.1.8 Add the following sentence to the paragraph:

Where preheat is needed, the temperature of preheat shall not exceed 500 °F for non-heat-treated alloys. The use of preheat shall be an integral part of the procedure specification which shall be tested to qualify the welding procedure.

AWS SECTION 5. QUALIFICATION

AWS 4.3.1 Add the following sentence to the paragraph:

The Engineer may designate additional types of weld tests to be used in qualifying welders, welding operators, and tackers.

AWS 4.5.3 Delete and replace with the following:

Radiographic examination may not be used in lieu of the bend test performance requirements.

AWS 4.6.3 Add the following sentence to the paragraph:

(8) No discontinuities exceeding 1/8 inch measured in any direction on the surface.

(9) No discontinuities exceeding 3/8 inch - Sum of the greatest dimensions of all discontinuities exceeding 1/32 inch but less than or equal to 1/8 inch.

AWS 4.11 Delete and refer to 4.5.3 above.

AWS 4.15.3 Add the following to this Section:

Additional test specimens may be designated to qualify a welding procedure when deemed necessary by the Engineer. These additional tests will normally relate to the actual joint or structural detail being welded.

AWS 4.16 Additional test specimens will not be cut from the same procedure qualification test plate. Any references to this within this code shall be deleted.

AWS 4.20.1, 4.21.1 and 4.22.1 Delete the paragraph and replace with:

Welders, tack welders and welding operations shall qualify on aluminum alloy the same as that to be used in production work.

AWS 4.23.6.3 Delete and replace with the following:

Radiographic examination may not be used in lieu of the bend test for qualification testing of welders or welding operators.

AWS 4.3.2 In the first sentence, change "...remaining in effect indefinitely..." to read "...remaining in effect for three (3) years...".

AWS SECTION 6. INSPECTION

AWS 5.6.5 Delete and replace with Section 6.6.5 of AWS D1.5 and as modified in Part I herein.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
FRACTURE CRITICAL MEMBERS

a. Description. This work consists of furnishing and fabricating structural steel according to the Fracture Control Plan (FCP) in the American Welding Society (AWS) AASHTO/AWS D1.5M/D1.5:2002 Bridge Welding Code and as stated herein. The FCP applies to steel for the flanges and webs of main load carrying members and other members as designated on the plans as Fracture Critical Members (FCM). This specification does not apply to fracture critical pins and hangers. All material requirements for pins and hangers shall be according to the standard specifications. In general, all work shall be done according to Division 707 of the standard specifications, AWS D1.5:2002 Bridge Welding Code, and the Special Provision for Structural Steel and Aluminum Construction. The requirements of this FCP shall supersede and are in addition to requirements specified elsewhere for structural steel.

b. Fabricating Fracture Critical Members (FCM). AWS Section 12. AASHTO/AWS Fracture Control Plan (FCP) for Nonredundant Members.

AWS 12.4.5 Add the following to the paragraph:

The supplementary requirements of AASHTO M270 (ASTM A709) for fracture critical impact tests are required for zone 2. The Charpy test pieces shall be coded with respect to heat/plate number and that code shall be recorded on the mill-test report of the steel supplier with the test result. If requested by the Engineer, the broken pieces from each test (three specimens, six halves) shall be packaged and forwarded to the Michigan Department of Transportation, Construction and Technology Division.

AWS 12.6.5.1 Add the following to the paragraph:

Electrodes for Shielded Metal Arc Welding shall be E7018.

AWS 12.7.5 Delete this section.

AWS 12.8.2 Add the following to the paragraph:

The Engineer shall witness all welding and test plates shall be submitted to the Department for machining and testing. Any reference to requalification on an annual basis shall be deleted.

AWS 12.14 Add the following to the paragraph:

The maximum interpass temperature for butt welding on fracture critical members shall not exceed 550 °F and for all other types of welding shall not exceed 650 °F. This includes all repair welding.

AWS Table 12.2 Delete Note 2. GMAW shall not be used on FCM's.

AWS 12.15.2.2 Add the following to the paragraph:

The minimum post heat time for production and repair welds shall be one hour.

AWS 12.17.1.3 Add the following to the paragraph:

Repair drawings shall contain two lines for the Inspector's signature. Signature on the first line shall indicate the Inspector has examined the discontinuity(s) and agrees that the repair drawings accurately describe the discontinuity(s). When repairs are completed, signature on the second line shall indicate acceptance of the completed repair and the specified nondestructive tests. Discontinuities shall be drawn as they appear from visual inspection and NDT.

AWS 12.17.6 Add the following to the section:

The repair procedures shall include the welding procedure specification. Procedures qualified by test for the fabrication need not be qualified by test for the specific method of repair unless otherwise ordered by the Engineer.

(14) If stress relief heat treatment is required, it shall be completely described. Tests shall be performed to determine the effect of the heat treatment on both weld and base metal properties before the procedure is approved. Final acceptance NDT shall be performed after stress relief is complete.

(15) Repairs in tension butt welds shall be examined by ultrasonic (UT) and radiographic (RT) test methods. Repairs to all other groove welds shall be examined by UT. Fillet weld repairs shall be examined by MT. RT shall conform to Section 6 and may be performed as soon as the weldment has cooled to ambient temperature. UT shall also conform to Section 6 and MT shall conform to ASTM E709. Final acceptance testing by MT and UT shall not be performed until the steel weldments have been cooled to ambient temperature for at least the elapsed time indicated as follows:

Thickness	**Minimum Time**
2 inches or less	24 hours
over 2 inches	48 hours

All repair welding and nondestructive testing shall be performed as described in the approved repair procedure.

Approved critical repair procedures shall be retained as part of the project records.

AWS 12.17.6 (3) Add the following to the paragraph:

All air carbon-arc gouged and oxygen-cut surfaces that form a boundary for a repair weld shall be ground to form a smooth, bright surface. Oxygen gouging shall not be permitted in the repair of FCM's.

AWS 12.18 Add this section to the code:

The Owner reserves the right to perform random nondestructive QA tests of welds, whether or not previously found acceptable by QC. Such testing will generally be by UT. If a weld is found to contain rejectable indications in QA then the following NDT shall be performed by and at the expense of the Fabricator: Two consecutive welds of the same type preceding the defective weld shall be tested. If any two consecutive welds are found by QC to contain rejectable indications, four consecutive welds made to the same welding requirements shall be tested by QC. All such testing shall be witnessed and verified by QA. All rejectable indications disclosed shall be repaired and reinspected by UT at the Fabricator's expense.

The QA witnessing and verification of QC testing will be carried out in a timely manner, so as not to interfere with production.

The Fabricator/Erector shall maintain documentation of all visual and nondestructive inspection for timely review and confirmation by the Engineer. Two copies of all documentation shall be submitted to the Engineer upon completion of the project.

AWS 12.19 Add this section to the code:

For welding procedure qualification, the test plate shall be according to the AASHTO Guide Specifications for Fracture Critical Steel Bridge Members with the following applying to the notes for Figure 1:

Delete notes 1, 3, 4 and 7 in the AASHTO guide specifications and replace them with the following:

1. "T" is equal to the maximum thickness to be welded, except as provided herein. When the thickness to welded exceeds 2 inches, "T" shall be the maximum depth of bevel, or 2 inches, whichever is the greater amount. The minimum thickness test plate shall be 1 inch in the event that the maximum thickness to be welded is less than 1 inch.

3. The minimum preheat and interpass temperature shall be according to AWS D1.5:2002, Table 12.4.

4. Welding procedure test plates shall be witnessed by the Engineer. Test plates shall be sent to the Department for machining and testing.

7. The reduced section tension specimen shall be according to Figure 5.10 of AWS D1.5:2002 except that "T" is equal to the test plate thickness.

c. Measurement and Payment. The completed work as measured for FRACTURE CRITICAL MEMBERS will be paid for according to the Standard Specification pay item **Structural Steel, Furnishing and Fabricating.**

Payment for **Structural Steel, Furnished and Fabricating** includes all costs associated with furnishing and fabricating structural steel according to the requirements stated herein, the plans, and other specifications.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
HEAT STRAIGHTENING DAMAGED STRUCTURAL STEEL

C&T:SJC 1 of 2 C&T:APPR:EMB:DAJ:07-09-07
FHWA:APPR:07-19-07

a. Description. This work shall consist of heat straightening, field welding damaged portions of structural steel and nondestructive testing of welds, connections, webs and flanges suspect to damage as shown on the plans and as directed by the Engineer. This includes beams, girders, cross frames, diaphragms, gussets, and other steel attachments comprising the structure. The work shall be done according to subsections 713.03.G and 707.03.D.8 of the standard specifications and as specified herein.

b. Construction Methods. A list of approved specialized structural steel heating straightening persons is included below. Any person not on this list must submit documentation to the Department for approval.

If the Contractor chooses a person/company not on the above approved list, they must submit documentation showing that the person/company, and the person(s) who will directly supervise the work, have been involved in the business of heat straightening bridge structural steel on a continuous basis for the past three years. The documentation for each project listed should include, the year the heat straightening work was completed, pictures before and after repairs, a brief description of the repair made, the name of the heat straightening supervisor on the project, and the name of the owner of the structure repaired. The documentation shall be submitted **prior to bid** for approval to:

Attn: Mr. Jeff Weiler
Michigan Department of Transportation
Construction and Technology Division
P.O. Box 30049
Lansing, MI 48909
Phone: (517) 322-1235
Fax: (517) 322-5664

THE FOLLOWING LIST INDICATES PERSONS THAT ARE CURRENTLY APPROVED TO HEAT STRAIGHTEN BRIDGE STRUCTURAL STEEL:

1. **Bruce Keiser**
   Civil Construction, Inc.
   10310 SR 161
   Plain City, OH 43064
   (614) 873-8196
   FAX (614) 873-3648

2. **Dan Dalton**
   Dan R. Dalton, Inc.
   912 West Calispell Rd.
   Usk, Washington 99180
   (509) 447-3528

3. **Darryl Thomas**
   Flame On
   4415 Tom Marks Rd.
   Snohomish, WA 98290
   (425) 397-7039

4. **Dan Holt**
   International Straightening
   PO Box 6125
   Bismark, ND 58506-6125
   (701) 223-5972 or (701) 223-6043
   FAX (701) 223-1154

5. **Pete Garijo or Dan Garijo**
   National Bridge Co.
   4556 Arrowhead Rd.
   Okemos, MI 48864
   Dan Garijo (517) 347-6167
   Fax (517) 347-3577
   Pete Garijo (810) 367-7060
   Fax (517) 367-7483

6. **Orrin Branscome or John Naypaver**
   Post Construction Co.
   2 Lafayette St.
   PO Box 2298
   New Castle, PA 16102
   (724) 658-1631
   (724) 658-8814

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
WARRANTY ON BRIDGE COATING

a. Performance Warranty. The Contractor unconditionally warrants to the Michigan Department of Transportation (MDOT) the coating system applied to each bridge required to be coated by this contract will be free of defects, as hereinafter defined and determined by visual inspection and coating thickness measurements, for a period of two years from the date of initial acceptance for the bridge by the Engineer. The warranty bond called for shall be on a form furnished by MDOT, a copy of which is attached. This warranty bond shall be submitted to the MDOT Contract Services Division prior to the award of the contract.

The coating system will be considered defective if any of the following conditions are discovered within the two-year warranty period:

1. The occurrence of visible rust or rust breakthrough, coating blistering, peeling, scaling, or unremoved slivers.

2. Coating applied over dirt, debris, blasting debris, or rust products not removed during blast cleaning.

3. Incomplete coating or coating thicknesses less than the minimums specified in the coating specifications.

4. Damage to the coating system caused by the Contractor while removing scaffolding or performing other work.

b. Warranty Evaluation. During the month before the end of the two-year warranty period(s), or earlier (as determined by the Engineer), the Engineer will inspect the bridge for the coating system defects listed. **This inspection will be done by MDOT personnel using equipment provided by the Contractor. The inspection equipment must be MIOSHA approved, vehicle-mounted, and provide access to all areas of the structure. Traffic control and signing is the Contractor's responsibility**. The Contractor may accompany the Engineer during this inspection. The Engineer will determine if there are defective areas present as defined above.

Acceptance by the Engineer of any portion of the work during the original contract cleaning and coating will not relieve the Contractor of the requirements of this warranty.

c. Corrective Work. All defective areas identified by the Engineer shall be repaired by the Contractor, in accordance with the coating specifications. The repair procedures and Progress Schedule shall be submitted in writing to the Engineer for review and approval prior to any work.

All coating repair work will be done the same season as the inspection, unless the seasonal limitations stated in the coating specifications prevents the completion that season. In this case, the corrective work will be completed the following season. The Engineer shall be given at least two weeks notification before the Contractor begins the corrective work and shall be allowed full inspection of all operations and provided safe access to the areas being repaired.

The Contractor shall follow a Department approved maintaining traffic plan when performing warranty work.

d. Special Supplemental Performance and Lien Bonds. The Contractor shall furnish, in addition to the regular performance and lien bonds for the contract, a supplemental performance bond to MDOT. The bond shall be in the sum of **25 percent** of the original total contract amount for "Steel Structure, Cleaning, Type 4, (Structure Number)" & "Steel Structure, Coating Type 4, (Structure Number)." The bond is to secure the performance by the Contractor of corrective work on any coating system defects that it is directed by MDOT to perform and shall be in force for the period covering the two-year warranty and the time required to perform any corrective work covered by the warranty. The Contractor shall use the bond form provided by MDOT, a copy of which is attached, and executed in accordance with the requirements of this special provision. If corrective work is required the Contractor shall provide a supplemental lien bond (form provided by MDOT) that is in effect for the duration of the corrective work. The supplemental bonds must be in all respects satisfactory and acceptable to MDOT and executed by a surety company authorized to do business in the State of Michigan.

Upon completion of the work and initial acceptance of the bridge, the supplemental performance bond shall become effective and shall continue in full force and effect until such time as MDOT will, in accordance with the Coating Quality Warranty, advise the Contractor that there are either no coating system defects, or, if the Contractor has been notified that there are coating system defects, said coating system defects have been repaired by the Contractor to the satisfaction of the MDOT as specified under the Coating Quality Warranty. The Engineer shall withhold in reserve an amount equal to 25 percent of the total contract amount for "Steel Structure, Cleaning, Type 4, (Structure Number)" & "Steel Structure, Coating Type 4, (Structure Number)" until the Supplemental Performance Bond has been received.

e. Permit. If corrective work is required, the Contractor shall apply to the Transportation Service Center (TSC) Utility-Permits Engineer for a permit to work within MDOT right-of-way (Form 2205). The permit fee and an individual permit performance bond shall not be required. The permit insurance requirements however, shall apply.

f. Measurement and Payment. All costs associated with performance of the corrective work, the required maintaining traffic, the required supplemental performance and lien bonds, and the required permit insurance will not be paid for separately but will be considered to be included in the Contractor's overhead and administrative costs.

MICHIGAN DEPARTMENT OF TRANSPORTATION
INITIAL ACCEPTANCE FOR BRIDGE COATING WARRANTY

CONTRACT ID: _____

CONTRACT SECTION: _____ **JOB NUMBER:** _____

SURETY NAME: _____

SURETY ADDRESS: _____

CONTRACTOR NAME: _____

CONTRACTOR ADDRESS: _____

IDENTIFY EACH STRUCTURE NUMBER AND STRUCTURE LOCATION SEPARATELY

Control Section	Job Number	Structure Number	Structure Description	Initial Acceptance Date	Delivery Engineer

INITIAL ACCEPTANCE OF WARRANTY WORK APPROVAL

CONTRACTOR' SIGNATURE: _____

ENGINEER'S SIGNATURE: _____

ACCEPTANCE DATE: _____

cc: Surety Company, Contract Services – Payments

MICHIGAN DEPARTMENT OF TRANSPORTATION
BRIDGE COATING SUPPLEMENTAL WARRANTY BOND

Bond Number _____

KNOWN ALL MEN BY THESE PRESENTS:
That we,_____(hereinafter called the "Principal"), and _____ a corporation duly organized under the laws of the State of _____ and duly licensed to transact business in the State of Michigan (hereinafter called "Surety"), are held and firmly bound unto the Michigan Department of Transportation (hereinafter called the "Obligee"), in the sum of _____ Dollars ($), for the payment of which sum well and truly to be made, we, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns , jointly and severally, firmly by these presents.

WHEREAS, the said Principal has heretofore entered into a contract with the Michigan Department of Transportation dated _____under Contract ID _____ and;

WHEREAS, the said Principal is required to guarantee the _____ installed under said contract, against defects which may develop during the period(s) of **2** years beginning the date(s) of the Acceptance Date of Warranted Work by the Obligee.

In no event shall losses paid under this bond aggregate more than the amount of the bond.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Principal shall faithfully carry out and perform the said guarantee, and shall, on due notice, repair and make good at its own expense any and all defects in the said work which may develop during the period specified above or shall pay over, make good and reimburse to the said Obligee all loss and damage which said Obligee may sustain by reason of failure or default of said Principal so to do, then this obligation shall be null and void; otherwise shall remain in full force and effect.

PROVIDED HOWEVER, that in the event of any default on the part of said Principal, a written statement of the particular facts showing such default and the date thereof shall be delivered to the Surety by registered mail, within thirty (30) days after the Obligee or his representative shall learn of such default and that no claim, suit or action by reason of any default of the Principal shall be brought hereunder after the expiration of thirty (30) days from the end of the warranty period as herein set forth.

Signed this _____ day of _____, _____.

Contractor_____

By _____

Surety _____

By _____

Attorney-In-Fact

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PROVIDING EXPOSURE ASSESSMENTS, EXPOSURE MONITORING, EQUIPMENT, HYGIENE FACILITIES, AND TRAINING

a. Description. The Contractor shall provide exposure assessments, exposure monitoring, equipment, hygiene facilities, and training as required by Part 603 Lead Exposure in Construction of the Michigan Occupational Safety and Health Administration (MIOSHA) , to all of the Contractor's employees, Federal Highway Administration (FHWA) employees, Michigan Department of Transportation (MDOT) employees, and to employees of Local Agencies who are acting as inspectors or project managers on any bridge painting projects or on any bridge repair or removal projects where welding, burning, or abrasive blasting of structural steel is being performed. This also applies to all construction work where an employee may be occupationally exposed to lead. The Contractor shall be responsible for requiring their employees to wear equipment and to use facilities provided by the Contractor; and for providing exposure assessments, exposure monitoring, equipment, hygiene facilities, and training in accordance with Part 603 Lead Exposure in Construction.

b. Equipment and Facilities. The Contractor shall provide the employee(s) protective clothing and equipment, change areas, showers, eating facilities, and hand and face washing facilities as required by MIOSHA's Part 603 Lead Exposure in Construction. The equipment and facilities must be on site and fully functional prior to beginning any blast cleaning. Until the Contractor performs an employee exposure assessment and determines actual employee exposure for each job classification, the Contractor shall provide to employee all items listed above plus respiratory protection, which shall include the respirator, respirator training and fit testing, and a respirator program. Depending on the tasks, the contractor shall provide the appropriate respiratory protection until such time that exposure assessments results are complete. For manual operations, the respirator protection provided to the employee(s) shall be based on anticipated (presumed) exposure levels greater than the Permissible Exposure Limit (PEL) (50 $\mu g/m^3$), but less than 10 times the PEL (500 $\mu g/m^3$). At a minimum, the employer shall provide the employee(s) with a half mask air purifying respirator with high efficiency particulate (HEPA) filters, which provides a respiratory protection factor of 10. For tasks such as rivet busting, or power tool cleaning without dust collection systems, the anticipated (or presumed) exposure assessment shall be between 10 to no more than 50 times the PEL which requires a higher level of respiratory protection. For tasks such as abrasive blasting or torch cutting, the anticipated exposure assessment shall be more than 50 times the PEL. If, through employee exposure assessment, the Contractor determines the actual employee exposure level, then the appropriate respiratory protection shall be provided. For removal of non lead containing coatings, provide the employee(s) with protective clothing and equipment, change areas, and hand and face washing facilities as required by MIOSHA's Part 1, General Rules or other relevant safety standards.

c. Exposure Assessment. At a minimum, the Contractor shall collect personal samples representative of a full shift including at least one sample for each job classification in each work area either for each shift or for the shift with the highest exposure level. Conduct the initial

exposure assessment and any additional exposure assessments, and report the results in accordance with Part 603.

The results of the employee exposure assessment(s) shall be fully documented on the attached 'Lead Exposure Record' or another Contractor supplied form that reports the exact same pieces of data. The results of the employee exposure assessment(s) shall be determined and reported in periods consistent with Part 603. Conduct an exposure assessment of a MDOT Employee designated by the Engineer. Forward MDOT Employee exposure assessment results directly to:

MDOT
Safety and Security Administration/Confidential
Van Wagoner Building
P.O. Box 30050
Lansing, MI 48909

d. Training. The Contractor shall train all their employees who are subject to exposure to lead and shall train two employees as designated by FHWA, MDOT, or the Local Agency. The Contractor shall provide the following information at the preconstruction meeting:

1. Name and qualifications of the trainer,
2. Location and time of the training, and
3. An outline of the training to be provided.

Provide each employee with a certificate of training and a wallet card. Present a copy of the certificate or wallet card upon request.

Conduct training within the MDOT Region where the project is located. The training shall occur between the hours of 7:00 a.m. and 5:00 p.m. on Tuesday, Wednesday, or Thursday.

e. Measurement and Payment. The completed work for Providing Exposure Assessments, Exposure Monitoring, Equipment, Hygiene Facilities, and Training will be considered included in the pay item **Steel Structure, Cleaning, Partial, Type 4** or **Steel Structure, Cleaning, Type 4** or in any associated structural removal pay items with steel beams.

LEAD EXPOSURE RECORD

LOCATION	DATE	ACTIVITY

NAME / SOCIAL SECURITY NUMBER	JOB CLASSIFICATION	TIME		ELAPSED TIME	ASSUMED UG/M3	MEASURE DUG/M3/ 8 HRS.	TYPE OF RESPIRATOR WORN	P. F.	Task Performed
		START	END						
(SAMPLE) ROBERT SMITH 375-09-8820	PAINTER	9 AM	2:30 PM	5-1/2 HRS	SEE LEAD EXPOSURE COMPLIANC E PROGRAM	*	HALF FACE WITH HEPA FILTER	25	CHIPPING
**									

SAMPLING/ANALYTICAL PROCEDURE USED:

* TO BE ENTERED LATER WHEN AND IF RESULTS ARE RECEIVED FROM YOUR SAMPLES

** LIST ALL EMPLOYEES EXPOSED TO LEAD ON THIS FORM who's EXPOSURES ARE REPRESENTED BY ANOTHER INDIVIDUAL THAT IS ACTUALLY MONITORED

Comments:

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SOLVENT USED FOR COATING EXISTING STRUCTURAL STEEL

C&T:EMB 1 of 3 C&T:APPR:JAR:DBP:01-10-07
FHWA:APPR:01-18-07

Add the following to subsection 715.03.D, on page 516 of the Standard Specifications for Construction.

6. Solvents.

a. **Solvent Reuse Determination Procedures.** Prepare a written Solvent Reuse Determination Procedure that complies with Act 451, PA 1994, Part 111 Hazardous Waste Management, and Rule R299.9202, Rule 202. Provide a copy of this procedure to the Engineer prior to performing any field coating. Solvent Reuse Determination Procedures must include, as a minimum, the following:

Determination Procedures

- Method used to determine whether the solvent is reusable.
- Applications for use of the reusable solvent.
- Statement of effectiveness of the reusable solvent in each application cited.

Documentation must include certification that the Contractor agrees to:

- Maintain records regarding solvent reuse on the “Solvent Tracking log”.
- Handle the solvent in a manner consistent with the status of the product.
- Reuse the solvent within one year from the initial use.
- No reclamation of the solvent prior to reuse.

b. **General.** Determine in performance of the work and prior to leaving the work site, whether solvents used for cleaning and Coating equipment are reusable or not reusable and considered waste. Make and document this determination in accordance with written Solvent Reuse Determination Procedures and the applicable federal, state, and local laws and regulations. Provide a copy of the written determination documentation to the Engineer before removing any solvents (reusable or waste) from the work site.

Manage, label, contain, store, and ship solvent determined to be reusable in accordance with the applicable federal, state, and local laws and regulations. Provide certification for reusable solvent transported from the bridge site (shipping paper). Manage, label, store, contain, ship, and dispose solvent characterized to be waste in accordance with Part 111, Hazardous Waste Management, Michigan Compiled Laws (MCL) 324.11101 et seq. of Michigan’s Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); subtitle C of the Federal Resource Conversation and Recovery Act of 1976, as amended (RCRA); Part 121, Liquid Industrial Waste (MCL) 324.12101 et seq; Part 115, Solid Waste Management (MCL) 324.11501 et seq, the administrative

rules or regulations promulgated pursuant to these acts, and all other applicable federal, state, and local laws and regulations.

Dispose of the non-reusable waste solvent associated with the project.

Add the following paragraph to subsection 715.04.G, on page 518 of the Standard Specifications for Construction.

All costs associated with the management, characterization, and disposal of waste solvent will be included in the applicable unit prices for the coating pay items.

SOLVENT TRACKING LOG

Control Section and Project Number _____

Painting Contractor_____

Delivery Engineer _____

Project Location and Description_____

Structure Number _____

Structure Location _____

Date solvent shipped to project	Quantity of solvent shipped (gallons)	Date solvent used on project	Quantity used on project (gallons)	Date solvent shipped off site	Quantity shipped off site for reuse (gallons)	Date shipped Offsite for disposal	Quantity of solvent disposed offsite (gallons)	Contractor's Signature

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CLEANING AND COATING EXISTING STRUCTURAL STEEL

C&T:EMB 1 of 1 C&T:APPR:DMG:JCW:05-10-05
FHWA:APPR:08-12-05

Delete the first and second paragraphs in subsection 715.03.A.9, pages 510 and 511 of the Standard Specifications for Construction.

Insert the following two paragraphs in subsection 715.03.A.9, pages 510 and 511of the Standard Specifications for Construction.

Sample and test separately spent material collected and stored in waste containers, dust collected from bag house filters, and shower water, and solvents according to the Environmental Protection Agency, Toxicity Characteristic Leaching Procedure (TCLP). Prepare a chain of custody form for each sample. Conduct sampling by a MDEQ certified laboratory as witnessed by the Engineer. Conduct testing by a MDEQ certified laboratory. Include the chain of custody form with the sample and return the form with the test results to the Engineer. Use the test results to characterize the spent material, bag house dust, and shower water for disposal. The Engineer may sample and test the spent material, bag house dust, and shower water at anytime during the life of the project.

Dispose of the spent material and bag house dust either as a hazardous waste at a licensed hazardous waste disposal facility or as nonhazardous waste at an approved Type II landfill (Public Act 451, of 1994, Part 115, Solid Waste Management). Dispose of the shower water as a hazardous waste at a licensed hazardous waste disposal facility or as a liquid industrial waste at an approved licensed liquid industrial waste disposal facility (Public Act 451, of 1994, Part 121, Liquid Industrial Wastes). Furnish copies of waste manifests and disposal receipts to the Engineer.

Delete the third sentence of the first paragraph in subsection 715.04.A, page 519 of the Standard Specifications for Construction.

Insert the following to the third sentence of the first paragraph in subsection 715.04.A, page 519 of the Standard Specifications for Construction.

The cost for handling, storage, testing, transporting, and disposal of spent materials, bag house dust, and shower water, regardless of hazardous or nonhazardous, is included in the pay item **Steel Structure, Cleaning, Type 4** or **Steel Structure, Cleaning, Partial, Type 4**.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SHOP CLEANING AND COATING STRUCTURAL STEEL
(GALVANIZING OPTION)

a. Description. Galvanizing of structural steel shall be according to section 707 and work for shop cleaning and coating structural steel shall be according to section 716 of the Standard Specifications for Construction and the following.

b. Materials. The coating used for faying surfaces of the slip critical connections shall be an organic zinc-rich primer. The primer shall meet Class “B” (0.5 or greater) slip coefficient requirements of the Research Council on Structural Connections’ Specification for Structural Joints Using ASTM A325 or A490 Bolts. The slip coefficient shall be verified by testing according to the Testing Method to Determine the Slip Coefficient for Coatings Used in Bolted Joints contained in Research Council on Structural Connections’ Specification for Structural Joints Using ASTM A325 or A490 Bolts, Appendix A, from an independent laboratory. Before coating, the Fabricator shall furnish the Engineer with the certification of testing showing the variables for the primer to meet Class “B” slip coefficient. This coating shall be from the same manufacturer as selected for coating the remainder of the structure.

c. Construction. All structural steel members may be hot-dipped galvanized according to ASTM A 123 as a substitute for the zinc rich primer, except only a zinc-rich primer shall be applied to all surfaces internal to slip critical connections and all surfaces of filler plates shall be cleaned and coated only with the zinc-rich primer at a minimum dry film thickness of 1 mil and a maximum dry film thickness as determined by the slip coefficient test results. All other variables required for the primer to meet the requirements of Class “B” shall be as specified herein. The faying surface shall be masked during subsequent coating operations. The subsequent coats shall be applied according to subsection 715.03.D of the standard specifications. Repair damaged galvanized surface according to ASTM A780.

Galvanizing shall be done by the "dry process" and the galvanized components shall not be quenched following galvanizing. A chromate surface passivation shall not be applied to galvanized components which are to be top coated. The minimum galvanizing thickness shall be 3.9 mils (2.3 oz/ft^2).

Areas of field connections must have a uniform, galvanized coating thickness free of local excessive roughness which would prevent splice plates, bearings or other field connections from making intimate contact.

Faying surfaces other than slip critical connections must be roughened in the shop after galvanizing by hand wire brushing. Power wire brushing is not permitted. All field splice bolt holes must be free of zinc build up and each hole must be checked in the shop after galvanizing to verify the hole's ability to receive a drift/barrel pin with a diameter of 1.6mm plus the diameter of the bolt.

After galvanizing, structural steel must be placed in a second shop assembly according to Subsection 707.03.C.6.c of the standard specifications to check alignment of holes, sweep and camber against the fabricator's original recorded lay down dimensions. This shop assembly may be performed at the galvanizer's facility by the Fabricator's personnel if approved by the Engineer. The second lay down may be waived by the Engineer, if the Fabricator records individual beam or girder cambers and sweeps during the first lay down and compares dimensions after galvanizing to the first within the following tolerances:

Bearing points after galvanizing must be plus or minus 1/8 inch from the first lay down.

Camber points after galvanizing must be + 1/4 inch or - 0 inch from the first lay down.

Sweep points after galvanizing must be plus or minus 3/8 inch from the first Lay down.

Individual beams or girders that exceed the listed tolerances must be placed with at least two adjacent beams or girders in lay down for checking against the recorded shop assembly records according to subsection 707.03.C.6.c of the standard specifications. Documentation of the second lay down or individual member cambers must be recorded by the Fabricator and witnessed by the Engineer.

Stenciling shall be according to subsection 715.03.D.4 except the coating type shall be designated 4GS.

d. Measurement and Payment. Galvanizing, the shop application of coating system, and shop repairing the complete shop applied coating system, including stenciling and approved sealant, will be included in the pay item **Structural Steel, Furn and Fab** (of the type specified).

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SIDEWALK RAMPS AND DETECTABLE WARNING SURFACES

C&T:DBP 1 of 2 C&T:APPR:MSB:BRZ:07-16-07
FHWA:APPR:07-25-07

a. Description. This special provision covers either or both of the following:

1. Construct sidewalk ramp(s) with detectable warning surface at the specified location(s).

2. Retrofit existing sidewalk(s) or sidewalk ramp(s) with detectable warning surface at the specified location(s).

Complete this work according to the Standard Specifications for Construction, Standard Plan R-28 Series and this Special Provision.

b. Materials. Provide detectable warning surfaces for tactile and visual warning that contrast visually with adjacent walking surfaces, either light-on-dark or dark-on-light. Use cast in place or grouted detectable warning products on newly cast concrete. Surface applied products may be used as a retrofit on existing concrete. Do not construct detectable warnings by forming or stamping in newly cast concrete.

c. Construction. Construct sidewalk ramp according to section 803 of the Standard Specifications for Construction and Standard Plan R-28 Series.

Install detectable warning surfaces, (new or retrofit) according to the manufacturer's instructions and Standard Plan R-28 Series.

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

Contract Item (Pay Item)	**Pay Unit**
Sidewalk Ramp, ADA	Square Foot
Detectable Warning, Retrofit	Square Foot

Sidewalk Ramp, ADA will be measured by the area of the ramp, in place. Ramped sidewalk includes sidewalk sloped greater than the normal continuous sidewalk grades to meet the elevation of the curb opening or an intermediate landing. Payment includes all labor, materials, and equipment required to construct the sidewalk ramp pavement as shown on the plans, including landings and monolithic rolled curbs or side flares along the longitudinal edges of the ramp or landing. Payment also includes all labor, materials, and equipment necessary to install detectable warning surface.

Replacement of all sidewalk, curb, or curb and gutter outside the area measured for **Sidewalk Ramp, ADA** will be paid for separately. The curb and gutter opening will be paid for as curb, or

curb and gutter. Rolled curb adjacent to the non-traffic edge of parallel or combination ramps and landings will be paid for separately if the required height exceeds 18 inches along a continuous run.

Detectable Warning Retrofit will be measured by area of the detectable warning surface installed on existing sidewalks, existing sidewalk ramps or new sidewalks at specified location(s). Payment includes all labor, materials, and equipment to install detectable warning surface. If the Contractor elects to remove the existing concrete sidewalk or sidewalk ramp in conjunction with retrofitting the detectable warning device, the items of removal of sidewalk, sidewalk ramp and restoration is included in the item of **Detectable Warning, Retrofit**.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DELAYED ACCEPTANCE OF PERMANENT PAVEMENT MARKINGS

T&S:JGM 1 of 1 C&T:APPR:JKG:EMB:03-22-04
FHWA:APPR:09-01-04

Delete subsection 811.04.A.1, on page 589 of the Standard Specifications for Construction, in its entirety and replace with the following.

1. **Delayed Acceptance of Pavement Markings.** Final acceptance of completed pavement marking work will be delayed 60 days. During this 60-day delayed acceptance period, the markings will be inspected at the Department's discretion. Markings with less than 90 percent of the original markings in place will be considered failed and must be replaced immediately. Pavement markings that have been damaged by snowplow operations will not be considered as having failed.

   In order for the project to be accepted for final payment prior to the end of the 60-day delayed acceptance period, the Contractor must furnish the Department with a maintenance bond equal in value to 90 percent of the value of the pavement marking work performed. This bond must be established when the balance of the contract work has been satisfactorily completed.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
EQUIPMENT CERTIFICATION

T&S:JGM 1 of 1 C&T:APPR:JKG:DBP:03-27-07
FHWA:APPR:5-21-07

Delete subsection 811.03.A, paragraph 4 on page 579 of the Standard Specifications for Construction, in its entirety and replace with the following.

A. **Equipment.**

All self-propelled equipment must be certified by the Department. Certification is in effect for a period of two years. The certificate, showing the maximum operating speed of the equipment and signed by the Traffic and Safety Division, must be attached to the equipment. Markings will not be paid for if placed by equipment operated at speeds higher than the certified speed. If a striper is found to be operating above the certified working speed, the Engineer will assume that the entire day's work was done at that speed.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTRACTOR LAYOUT OF PERMANENT PAVEMENT MARKINGS

T&S:JGM 1 of 1 C&T:APPR:MSB:BRZ:08-20-07
FHWA:APP:08-29-07

Delete the first sentence in subsection 811.03.B, on page 580 of the Standard Specifications for Construction and replace it with the following:

B. **General.** The Contractor shall layout the work and contact the Engineer for review prior to the application of permanent pavement markings. The Engineer will review the Contractor's layout work. All costs associated with the layout of permanent pavement markings will be included in the contract unit price for the associated pay items in subsection 811.04.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MOBILE ATTENUATOR

METRO:JKG 1 of 4 C&T:APPR:CT:BRZ:09-12-08
FHWA:APPR:09-18-08

a. Description. Mobile attenuators will be used to protect workers or work equipment from vehicular traffic according to the following guidelines. Throughout this provision, mobile attenuators refer to truck mounted attenuators (TMA) and trailer mounted attenuators.

Mobile attenuators will be used for projects to protect personnel or equipment when one or more of the following conditions are met.

- The vehicle is designated as a protective vehicle (shadow vehicle or barrier vehicle) as part of the maintenance of traffic typicals, maintenance of traffic plans, or other contract documents.

- Aerial work is being performed on scaffolding, lifts, hoists, bucket trucks, etc., where workers using this equipment are in an occupied lane or shoulder and not protected by temporary concrete barrier.

- Mobile/short duration operations such as pavement marking convoys, grinding in rumble strips, permanent sign installations, luminescent installations, etc.

Mobile attenuators shall not be mounted on the vehicle or equipment used by personnel to complete aerial work. Mobile attenuators shall not be used as a temporary/permanent barrier ending except during replacement of damaged temporary/permanent barrier ending. In the event that a mobile attenuator is used as a temporary safety measure for a damaged temporary/permanent barrier ending, the maximum length of time that it shall be used for this purpose shall be 48 hours or as approved by the Engineer.

1. Stationary and Mobile Operation. This work shall consist of furnishing a vehicle with the required gross vehicle weight as shown in the tables below and furnishing, installing and operating a mobile attenuator according to the manufacturer's recommendations, the plans/proposal, and/or as directed by the Engineer. The attenuator placement shall be located as detailed in the applicable maintaining traffic typical, maintenance of traffic plans or other contract documents.

Material loaded onto the vehicle to obtain the required gross weight, for transport or during work operations shall be securely attached to the vehicle. Hazardous materials will not be allowed on this vehicle. Materials that will be off loaded and incorporated into the construction activities shall not be considered part of the vehicle gross weight.

b. Materials and Design. All Mobile attenuators used shall meet or exceed the requirements of NCHRP 350 test level 2 or test level 3 as described below for work zone traffic

control devices.

1. A mobile attenuator rated for NCHRP 350, Test Level 2 may be used on non-freeway roadways with a normal posted speed of 40 mph or less. Test Level 2 mobile attenuators shall be prohibited for use on all freeways, non-freeway roadways, and work zones with posted speed limits of 45 mph or greater.

2. A mobile attenuator rated for NCHRP 350, Test Level 3 shall be utilized on freeways, non-freeway roadways and work zones with posted speed limits of 45 mph or greater. Test Level 3 mobile attenuators may be used on all roadways and work zones regardless of the posted speed limit.

The mobile attenuator shall have an acceptance letter from the Federal Highway Administration (FHWA) stating the mobile attenuator meets the appropriate NCHRP 350 test level specified in the above stated criteria. In addition, the Contractor shall supply a letter stating the mobile attenuator system has been installed and maintained according to manufacturer's specifications. Copies of these two letters must be furnished to the Engineer.

The face of the mobile attenuator, visible to approaching traffic shall have reflectorized alternating yellow and black stripes, sloping downwards in both directions from the center of the attenuator.

c. Operating Details and Utilization. The mobile attenuator shall be operated as per manufacturer's recommendation, the plans/proposal, and/or as directed by the Engineer. This includes, but is not limited to, the following:

- The height from the bottom of the mobile attenuator to the roadway surface shall be 12 inches (+/- 2.5 inch) and within manufacturer's specifications.
- The mobile attenuator shall be parallel (level) with the roadway surface.
- A shoulder harness and headrest shall be provided for the mobile attenuator vehicle's operator.

For stationary operations, when operating the vehicle with the attenuator installed, the vehicle shall be in second gear if it has a standard transmission (park if an automatic transmission), with the parking brakes set and steering wheels turned away from the work area and traffic, if possible. The mobile attenuator shall be placed according to roll-ahead distance tables 1 or 2.

If the mobile attenuator is involved in a crash, forward pictures of the crash scene and the damage of the mobile attenuator to the Engineer within 3 days of the incident.

d. Measurement and Payment. Mobile attenuators will be furnished and operated at no cost to the Department for all contract items associated with pavement marking operations.

The cost for the equipment, mobilization and labor to furnish and operate this equipment shall be included in other contract items. The Department will pay for repair or replacement of a mobile attenuator called for as part of the pavement marking operations if damaged by something other than the Contractor's own equipment, during contract operations as described below. Measurement and Payment for the use of Mobile attenuators on all other contract items

will be as described below.

Contract Item (Pay Item)	**Pay Unit**
Mobile Attenuator	Each

Payment for **Mobile Attenuator** on a project will be the maximum number of mobile attenuators deployed per the maintenance of traffic typicals, maintenance of traffic plans or other contract documents and in use at any one time during the life of the project or as approved by the Engineer. If the Contractor uses alternative construction operations or methods that require additional mobile attenuators that exceed the amount specified in the contract, the additional mobile attenuators will be provided at the Contractor's expense. The Department will pay for repair or replacement of a mobile attenuator called for as part of the contract if damaged by something other than the Contractor's own equipment, during contract operations by contract modification with the name of the extra pay item to be defined as **Mobile Attenuator, Repair** or **Mobile Attenuator, Replace** if the following criteria are met:

1. The damaged or destroyed attenuator must meet all of the manufacturing and operating criteria of this special provision.

2. The Contractor shall have the repaired/replaced attenuators inspected by the Manufacturer/Supplier to insure that the units are in good working order. Documentation of the inspection is to be provided to the Engineer prior implementing the mobile attenuators for use.

3. The Contractor shall be required to provide a crash report from the enforcement agency involved in the accident investigation.

4. Pictures of the accident scene and damage to the mobile attenuator are forwarded to the Engineer.

5. The attenuator repair or replacement will be for the actual unit as required by this special provision. The cost to perform the repairs or replace the attenuator including installation will be paid for by the Contractor. A detailed invoice from the Supplier showing material costs for replacement or repair shall be provided to the Engineer for payment. The repair or replacement cost will not exceed the Suppliers invoice cost for a new attenuator.

6. The Department will not pay for any costs that are required to replace or repair the attenuator vehicle and any other items which were used to operate the attenuator.

7. Attenuators that have been repaired or replaced as part of the contract are not eligible for additional payment using the **Mobile Attenuator** pay item once the attenuator is put back into service.

Table 1 Guidelines For Roll-Ahead Distance For Mobile Attenuator Vehicles Test Level 2

Weight of Mobile Attenuator Vehicle (Minimum)	**Posted Speed (mph)** (Posted Speed Prior to Work Zone)	**Roll Ahead Distance(a)** (Distance from front of Mobile Attenuator Vehicle to Work Area)
5.5 Tons (Stationary Operation)	40 or Less	25 feet
a. Roll ahead distances are calculated using a 4,410 pound impact vehicle weight.		

Table 2 Guidelines For Roll-Ahead Distance For Mobile Attenuator Vehicles Test Level 3

Weight of Mobile Attenuator Vehicle (Minimum)	**Posted Speed (mph)** (Posted Speed Prior to Work Zone)	**Roll-Ahead Distance(a)** (Distance from front of MOBILE ATTENUATOR Vehicle to Work Area)
5 Tons (Mobile Operation)	60-70 50-55 45	175 feet 150 feet 100 feet
12 Tons (Stationary Operation)	60-70 50-55 45	50 feet 25 feet 25 feet
a. Roll ahead distances are calculated using a 10,000 pound impact vehicle weight.		

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TEMPORARY SIGNS

Delete subsection 812.03.F.1.a., on page 594 of the Standard Specifications for Construction in its entirety and replace with the following:

a. Mount sign substrates of 20 square feet or less on portable or ground driven sign supports. Mount all other size substrate on ground driven supports. Place ground driven sign systems as described in the Maintaining Traffic Typical, WZD-100-A, "Ground Driven Sign Supports for Temporary Signs", or other NCHRP-350 accepted design.

Delete subsection 812.03.F.1.d., on page 594 of the Standard Specifications for Construction in its entirety and replace with the following:

d. If a secondary sign is required below the ground driven primary sign, mount it with a bottom height 1 foot less than the 5 foot or 7 foot height specified. If a secondary sign is required below the portable primary sign, mount it on its own supports with a bottom height at the 5 foot or 7 foot bottom height specified. Portable sign clusters are allowed where the substrates area measures up to 16 square feet.

Delete the last paragraph in subsection 812.03.F.1., on page 594 of the Standard Specifications for Construction in its entirety and replace with the following:

Place one operating Type A warning light, equipped with a one-way lens, on all portable construction 4 foot x 4 foot diamond warning signs and all other diamond warning signs with non-prismatic sheeting. Refer to FHWA Work Zone Acceptance letter for additional requirements for placement and use of Type A lights on portable signs.

Delete the last two sentences in subsection 812.04.D., on pages 617 and 618 of the Standard Specifications for Construction in its entirety and replace with the following:

Payment for **Sign Type __, Temp, Furn** and **Sign Type __, Temp, Prismatic, Furn**, also includes installation of one Type A light on each 4 foot x 4 foot diamond warning signs. A furnished item is eligible for payment only when it has been placed into operation; and only once per project, unless a price adjustment for an authorized extension of time is approved. Projects with lump sum traffic control, measurement and payment for all sign systems as described above is included in the item of **Traffic Control.**

Delete the first sentence of subsection 919.02.A.2., on page 837 of the Standard Specifications for Construction in its entirety and replace with the following:

2. **Plywood.** Plywood sign panels must have a black or natural color overlay on both sides and a minimum thickness of ½ inch.

Delete subsection 922.02A., on page 868 of the Standard Specifications for Construction in its entirety and replace with the following:

A. **Sign Panel and Supports.** All sign systems must be approved by the FHWA and MDOT as meeting NCHRP-350 crashworthy requirements. Construct any portable sign system, with a sign substrate totaling 16 square feet or less, with the materials and design features specified in Standard Plan R-125 or approved equal. Bases for portable signs using only one rigid leg shall be in an "X" or "H" configuration.

1. To be an approved equal, 5 feet minimum bottom height sign systems must conform to the requirements of NCHRP 350 and have one or two rigid legs. Designs for an acceptable temporary portable sign system that meet the NCHRP criteria and the requirements of this special provision can be found on http://safety.fhwa.dot.gov/roadway_dept/road_hardware/cat2.htm.

   From the dropdown or keyword menu, parameters of substrate and sign height can be used to find a sign system. For acceptance letters up to and including letter WZ-222, the following meet the above criteria for a 4 foot x 4 foot and smaller sign:

   WZ-74 with substrate made of ½ inch thick plywood
   WZ-149 (MDOT's design)
   WZ-134
   WZ-187
   WZ-208

   For acceptance letters up to and including letter WZ-222, the following meet the above criteria for a 4 foot x 5 foot sign:

   WZ-74 with a substrate made of ½ inch thick plywood
   WZ-134
   WZ-187
   WZ-222

   Additional sign designs will be added to the website as they become available.

   Construct the temporary ground driven sign system as described in the Maintaining Traffic Typical WZD-100-A, "Ground Driven Sign Supports for Temporary Signs", or other NCHRP-350 accepted design.

2. The sign substrates must conform to the materials requirements of Section 919 of the Standard Specifications for Construction and the following:

   a. Rigid Sign panels 3 feet by 3 feet or smaller may be aluminum sheet (Type III) or plywood (Type II).

b. Rigid sign panels larger than 3 feet by 3 feet and up to and including 8 feet in width must be plywood (Type II).

c. Rigid panels wider than 8 feet up to and including 12 feet wide may be plywood (Type II) or extruded aluminum (Type I).

d. Rigid panels wider than 12 feet in width must be extruded aluminum (Type I).

Vertical joints in sign substrates are not allowed. Horizontal splices through legends or symbols are not permitted.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TRAFFIC CONTROL QUALITY AND COMPLIANCE

C&T:BRZ 1 of 1 C&T:APPR:MSB:DBP:06-14-07
FHWA:APPR:06-29-07

Delete the last paragraph of subsection 103.05, Traffic Control on page 29 of the Standard Specifications for Construction in its entirety, and replace with the following.

A. **Traffic Control Quality and Compliance**

1. **Traffic Control not Anticipated in Design.** If at any time during the project, including the time during the seasonal suspension, the Engineer documents that the traffic control requires improvements beyond the scope of the Traffic Control Plan, the Engineer will provide written instructions to the Contractor and traffic control supplier what improvements are required. The Contractor shall develop and submit to the Engineer for approval, a written implementation schedule for improvements. If the schedule is not approved, or if the schedule is approved but is not followed, the Department will adjust the contract according to subsection 812.03.E.3. If the implementation schedule is not followed, the Engineer will notify the Contractor and traffic control supplier in writing that they are in violation of this subsection. The work of making traffic control improvements directed by the Engineer that are beyond the scope of the Traffic Control Plan will be paid for as extra work.

2. **As Designed Traffic Control.** If at any time during the project, including the time during the seasonal suspension, the Engineer documents that the traffic control is deficient, inadequate or improperly placed, the Engineer will provide written notification with instructions for corrective action to the Contractor and traffic control supplier. Upon receipt of the notification of corrective action, the Contractor has four hours to correct the traffic control. If the traffic control cannot be corrected within the four hour time period, the Contractor will develop a written implementation schedule for the corrective action and submit the schedule to the Engineer for approval within one hour of receiving the written notification. If the schedule is not approved, or if the schedule is approved but is not followed, the Department will adjust the contract according to subsection 812.03.E.3. If the implementation schedule is not followed, the Engineer will notify the Contractor and traffic control supplier in writing that they are in violation of this subsection.

Add the following paragraph to subsection 812.03.E, on page 593 of the Standard Specifications for Construction.

3. A contract price adjustment will be made in the amount of $100 per hour for every hour the improvements or corrective action remains incomplete as described in subsection 103.05.A. If improvements or corrections have not been made to the satisfaction of the Department, the contract will be adjusted until the traffic control is acceptable.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TEMPORARY REMOVAL OF PORTABLE SIGNS

C&T:BRZ 1 of 1 C&T:APPR:JKG:DBP:01-10-06
FHWA:APPR:02-06-06

a. Description.

Add the following immediately after the fourth paragraph of subsection 812.03.F, on page 594 of the Standard Specifications for Construction:

Temporary signs on portable supports that are temporarily removed, but remain on the project site, where shoulders without barrier wall exist, must have the sign stands removed from the uprights, with the sign laid flat and off the shoulder. Place the uprights so they face downstream from traffic. Remove all support stands and ballasts from the shoulder.

Temporary signs on portable supports that are temporarily removed, but remain on the project site, where shoulders with barrier wall exist, must have the sign stands removed from the uprights, and placed against the barrier wall. Place the uprights so they face downstream from traffic. Place all support stands and ballasts close to the barrier wall.

Temporary signs on portable supports that straddle barrier wall and are required to remain on the project site while not in use must be covered. Remove from the project site or store sign covers against the barrier wall when not in use.

Temporary signs on portable supports that are temporarily removed, but remain on the project site, where guardrail exists, must have the sign stands removed from the uprights, with the sign laid against the guardrail. Place all support stands and ballasts close to the guardrail.

Temporary signs on portable supports that are temporarily removed must not be stored to obstruct or interfere with any type of attenuation device.

b. Measurement and Payment. This work will not be paid for separately, but is included in the bid unit price for **Sign, Type __, Temp, Oper**; **Sign, Type __**, **Temp, Prismatic, Oper**, or in the price of Lump Sum Traffic Control.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MINOR TRAF DEVICES AND FLAG CONTROL DURING AN APPROVED EXTENSION OF TIME

C&T:JJG 1 of 1 C&T:APPR:MSB:JKG:11-17-06
FHWA:APPR:11-20-06

Delete the first sentence in subsection 812.04.T, Price Adjustments for Authorized Extensions of Time, page 623 of the Standard Specifications for Construction and replace with the following.

No price adjustments will be made for temporary traffic control devices, Minor Traf Devices, and Flag Control during authorized extensions of time when liquidated damages are assessed.

Delete the second sentence in the third paragraph of subsection 812.04.T, Price Adjustments for Authorized Extensions of Time, on page 623 of the Standard Specifications for Construction and replace with the following.

The formula shown below will be used to calculate the adjustments except for pay items Minor Traf Devices and Flag Control.

Add the following paragraphs before the last paragraph in subsection 812.04.T, Price Adjustments for Authorized Extensions of Time, page 623 of the Standard Specifications for Construction.

Minor Traf Devices when used as required by the Engineer, on the project during an approved extension of time and when liquidated damages are not assessed will be compensated at $900.00 per calendar day.

Flag Control when used as required by the Engineer, on the project during an approved extension of time and when liquidated damages are not assessed will be compensated at $650.00 per calendar day.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
LIGHTS ON TRAFFIC CONTROL DEVICES

C&T:BRZ 1 of 2 C&T:APPR:JKG:DBP:05-18-07
FHWA:APPR:06-21-07

Replace the second sentence of Section 812.03.F.5.b, Channelizing Devices, on page 596 with the following.

Provide one Type D warning light on each plastic drum used during hours of darkness.

Delete the Section 812.03.I.6, Maintaining Lights, on page 605 of the Standard Specifications for Construction and replace with the following.

6. Maintaining Lights. Position and maintain Type A, Type C and Type D lights to be visible on a clear night from a distance of 3000 feet. Maintain Type B high intensity lights to be visible on a sunny day from a distance of 1000 feet when viewed without the sun directly on or behind the light. Replace the power source when lights do not meet these requirements. Provide and maintain Type C and Type D LED lights that meet or exceed all requirements in the MMUTCD. Maintain the intensity requirement of 2 candela in the field. This requirement does not preclude the Engineer from determining that a power source change is necessary.

Intermixing of different light styles or designs in a project will not be allowed.

All lights are required to work at the time of deployment to the roadway, and at all stage changes during the project. During the project, inspect and maintain each light to ensure a minimum of 95 percent of the total working. A maximum of 3 non-operational lights adjacent to each other is permitted at any time.

Delete the sentence in item 5 of Section 812.04.A.5, Damage Compensation, on page 616 of the Standard Specifications for Construction in its entirety, and replace with the following.

Replace damaged or non-functioning Type D lights at the Contractor's expense.

Add the following paragraph at the beginning of section 812.04.C, Maintaining Lights on High Intensity Plastic Drums, and Type III High Intensity Barricades on page 617 of the Standard Specifications for Construction.

The Contractor is required to maintain all lights on plastic drums in working order at all times without direction from the Engineer.

Replace the first sentence of section 812.04.C, Maintaining Lights on High Intensity Plastic Drums, and Type III High Intensity Barricades on page 617 of the Standard Specifications for Construction with the following.

If notice is given by the Engineer that maintenance is necessary on more than ten percent of the Type C LED lights in service on Type III, high intensity barricades and these lights are not maintained according to subsection 812.03.I.6 within 72 hours, a five percent reduction in the unit price bid will be applied for **Barricade, Type III, High Intensity, Lighted, Furn; Barricade, Type III, High Intensity, Lighted, Oper; Barricade, Type III, High Intensity, Double Sided, Lighted, Furn;** and **Barricade, Type III, High Intensity, Double Sided, Lighted, Oper.**

Add the following to the end of Section 922.05.B, Warning Lights, on page 874 of the Standard Specifications for Construction.

4. Type D – 360 degree steady burn warning light, yellow lens, battery operated.

The lens for the Type D lights on plastic drums shall be visible for 360 degrees. The LED light source shall emit light equally for 360 degrees and be capable of sustaining constant brightness evenly distributed throughout the lens until no longer able to maintain the intensity requirements detailed in section 812.03.I.6.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
QUALITY GUIDELINES FOR WORK ZONE TRAFFIC CONTROL DEVICES

OPR:BRZ 1 of 1 C&T:APPR:JAJ:DBP:03-17-09
FHWA:APPR:03-30-09

Delete the first paragraph of subsection 812.03.F, on page 593 of the Standard Specifications for Construction and replace with the following:

F. Placing Traffic Control Devices. Provide traffic control devices meeting the quality requirements in the current edition of the *Quality Guidelines for Work Zone Traffic Control Devices* published by the American Traffic Safety Services Association (ATSSA).

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
LANDSCAPING

DES:LML 1 of 1 C&T:APPR:KB:DBP:01-25-08
FHWA:APPR:01-29-08

Make the following changes to section 815 of the Standard Specifications for Construction:

Delete from subsection 815.03.L, on page 637 of the Standard Specifications for Construction, the following last sentence,

"The Engineer will deduct this amount from the retainage specified in subsection 109.06, before final payment."

Delete the first paragraph from subsection 815.04.C, on page 637 of the Standard Specifications for Construction, and replace it with the following paragraph:

C. Twenty percent of the applicable lump sum price for **Watering and Cultivating, First Season** will be paid at the completion of each of the five watering and cultivating operations specified. The **Watering and Cultivating, Second Season** lump sum will be paid only at the completion of the second growing season and will include payment for the five specified watering and cultivating operations, removal and disposal of unacceptable plants and all guying materials identified by the Engineer at the end of the second growing season. The Engineer will make a 50 percent reduction of the contract unit price for each unacceptable plant identified. The Engineer will deduct this amount from the Contract Item (Pay Item), **Watering and Cultivating, Second Season**.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
GRANULAR MATERIALS

C&T:ACR 1 of 1 C&T:APPR:WRE:DBP:10-13-06
FHWA:APPR:10-17-06

a. Materials. Bottom Ash may be used for granular material for the pay items Subbase, LM; Subbase, CIP; Embankment, LM and Embankment, CIP. Bottom Ash may not be used for any other contract items, unless approved by the Engineer.

The only approved source for furnishing bottom ash as granular material for Subbase, LM; Subbase, CIP; Embankment, LM and Embankment, CIP is the DTE power plant at Monroe.

The Contractor shall provide written documentation to the Engineer that the bottom ash came from DTE's Monroe plant. All specification requirements for granular materials will remain the same.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
DETERMINATION OF AWI FOR HMA TOP COURSE MIXTURES

C&T:JAR 1 of 1 C&T:APPR:ACR:GMM 06-11-03
FHWA:APPR:06-20-03

a. Description. Aggregate Wear Index (AWI) for aggregates used in producing HMA top course mixtures for this project will be determined by the method described in MTM 112-01 Michigan Test Method for Determining an Aggregate Wear Index (AWI) from Sample Petrographic Composition and Wear Track AWI Factors with the following modification.

In Section 9.3 of MTM 112-01, calculate the AWI for the blend using the cumulative percent retained on the No. 16 sieve for each of the individual aggregates and their AWI values determined as follows:

Quarried Stone, Mine Rock, and Slag Sources - Use the AWI number established by MDOT=s circular wear track testing.

Natural Aggregate Sand and Gravel Sources with Established Nomographs and More than 80 Percent Passing the No 4. Sieve - Run MTM 118 Michigan Test Method for Measuring Fine Aggregate Angularity. Use the Angularity Index (AI) determined by MTM 118 and the following table to find the percent crushed for use in determining the AWI value from the established nomographs.

Angularity Index (AI)	Percent Crushed
AI $\leq$ 3.0	30
3.0< AI $\leq$ 4.0	70
AI > 4.0	95

Natural Aggregate Sand and Gravel Sources with an Established Nomograph and Less than or Equal to 80 Percent Passing the No. 4 Sieve - Determine the percent crushed of the material retained on the No. 4 sieve. Use this percent crushed to determine the AWI value from the established nomograph.

Natural Aggregate Sand and Gravel Sources Without an Established Nomograph - Follow the Procedures Manual for Mix Design Processing for submitting aggregate samples, except include approximately 200 grams each of the No. 8 and No. 16 fractions. MDOT will conduct the necessary tests and report the results to the aggregate supplier.

MICHIGAN
DEPARTEMNT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TIMBER AND LUMBER

C&T:SW 1 of 3 C&T:APPR:SCK:DBP:06-14-07
FHWA:APPR:07-09-07

In Subsection 908.12.B on page 737 of the Standard Specifications for Construction, add "Use stainless steel bolts, nuts, and washers with ACQ-B preservative treated wood.**"**

In Subsection 912.01 on page 766 of the Standard Specifications for Construction, add "Subsection 912.10 covers preservative treatment for sawn timber and lumber that will be used where human contact will occur, such as decks, walkways, handrails, tables, and benches.**"**

In Subsection 912.03.D on page 767 of the Standard Specifications for Construction, delete the phrase "ASTM D 1760 and**".**

In Subsection 912.04.B on page 768 of the Standard Specifications for Construction, delete "AWPA Standard P8**" and replace with "**AWPA Standard M4**".**

Delete Subsection 912.06.B on page 772 of the Standard Specifications for Construction, in its entirety and replace with the following:

B. **Species.** Only use species specifically included in AWPA Standard U1, Section 5, Table UCS-U1, for UCS listing UC4C.

Delete Subsection 912.06.C on page 772 of the Standard Specifications for Construction, in its entirety and replace with the following:

C. **Preservative Treatment.** Condition and treat structural timber and lumber according to AWPA Standard U1, Section 6, Commodity specification A, use category 4C (UC4C).

In Subsection 912.06.D on page 772 of the Standard Specifications for Construction, delete the phrase "ASTM D 1760 and**".**

Delete Subsection 912.07.A on page 772 of the Standard Specifications for Construction, in its entirety and replace with the following:

A. **Physical Characteristics and Species.** Prior to preservative treatment, timber piles must meet the requirements of ASTM D 25, Standard Specifications for Round Timber Piles, except as modified in this subsection. Timber piles must be southern pine, red pine, jack pine, ponderosa pine, douglas fir, western larch, lodgepole pine or red oak.

Delete Subsection 912.07.H on page 773 of the Standard Specifications for Construction, in its entirety and replace with the following:

H. **Preservative Treatment.** Perform preservative treatment of timber piling in accordance with AASHTO M 133. Submit certification by treating plant stating type, pressure process used, net amount of preservative retained, and compliance with applicable standards.

Perform pressure treatment in accordance with the American Wood Preservers Association (AWPA) Use Category Standard UC4C for Foundation and Land and Fresh Water Exposure.

Preservatives and retentions shall be in accordance with Table 912-1a.

Table 912-1a Retention Requirements

Wood Species	Required Retention, pounds per cubic foot (pcf)				
	Creosote	Pentachloro-phenol Types A and C	Copper Naphthenate (CuN)	Chromated Copper Arsenate, Types A and C (CCA)	Alkaline Copper Quat Type C (ACQ-C)
Southern Pine	12.0	0.60	0.10	0.80	0.80
Red Pine	12.0	0.60	NR	0.80	NR
Jack Pine	12.0	0.60	NR	0.80	NR
Ponderosa Pine	12.0	0.60	NR	0.80	NR
Douglas Fir	17.0	0.85	NR	NR	NR
Western Larch	17.0	0.85	NR	1.00	NR
Lodgepole Pine	17.0	0.85	NR	1.00	NR
Red Oak	6.0	0.30	NR	NR	NR

NR = Not Recommended

Delete Subsection 912.08.J on page 775 of the Standard Specifications for Construction, in its entirety and replace with the following:

J. **Preservative Treatment.** Condition and treat all round posts, except northern white cedar, according to AWPA Standard U1, Section 6, Commodity specification B, use category 4B (UC4B). Treat sawn posts according to 912.06.C.

Delete Subsection 912.09.F on page 780 of the Standard Specifications for Construction, in its entirety and replace with the following:

F. **Preservative Treatment.** Treat wood for guardrail blocks according to AWPA Standard U1, Section 6, Commodity specification A, use category 4A (UC4A). Treat wood for guardrail posts and sign posts according to AWPA Standard U1, Section 6, Commodity specification A, use category 4B (UC4B).

Delete the title for subsection 912.10 on page 785 of the Standard Specifications for Construction, and replace with the following:

912.10 Lumber and Timber for Rustic Construction.

Delete the first sentence of subsection 912.10.A on page 785 of the Standard Specification for Construction, in its entirety and replace it with the following:

Furnish sound unfinished eastern white pine (northern white pine), red pine, ponderosa pine, douglas-fir, northern white cedar, southern pine for all logs, posts, timbers, lumber and split rails designated for rustic construction.

Delete Subsection 912.10.C on page 785 of the Standard Specifications for Construction, in its entirety and replace with the following:

C. **Preservative Treatment.** Condition and pressure treat wood used in rustic construction, except northern white cedar, according to AWPA Standard U1, Section 6, Commodity specification B, use category 4B (UC4B).

Delete Subsection 912.10.D on page 785 of the Standard Specifications for Construction, in its entirety and replace with the following:

D. **Preservatives.** Sawn timber and lumber that will be used where human contact will occur shall be treated with Ammoniacal Copper Quat type B (ACQ-B), in accordance with AWPA Standard U1-04. The ACQ-B preservative must meet requirements in AWPA Standard P5. Do not use Chromium Copper Arsenate (CCA), or other type of arsenic based preservative.

The sawn lumber and timber must meet the minimum preservative retention and penetration requirements listed in AWPA Standard U1-04, Tables 3.0 and 4.0, for use categories UC4A (above ground) and UC4B (ground contact). Any wood species cited in Table 3.0 with NR (Not Recommended) for ACQ-B preservative shall not be used. The following minimum retentions shall be used:

Wood Use Category	**Min. Retention (pcf)**
UC4A (above ground)	0.40
UC4B (ground contact)	0.60

Testing for preservative penetration and retention shall be determined by chemical assay according to AWPA Standard A11. Processing and treatment of wood must be according to AWPA Standard T1-04. The maximum preservative temperature during the entire pressure period shall not exceed 150 degrees F.

In Subsection 912.10.E on page 785 of the Standard Specifications for Construction, delete the phrase "ASTM D 1760 and**".**

Add subsection 912.10.F on page 785 of the Standard Specifications for Construction, as follows:

F. **Construction.** Use stainless steel fasteners with ACQ-B preservative.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
RETROREFLECTIVE SHEETING FOR YELLOW WARNING SIGNS

T&S:MWB 1 of 1 C&T:APPR:JKG:BRZ:03-29-05
FHWA:APPR:07-29-05

a. Description. This Special Provision identifies the retroreflective sheeting material to be used on permanent Yellow Warning (W series, OM-1, OM-2, OM-3, and D3-2a) signs installed on this project.

b. Materials. All Yellow Warning (W series, OM-1, OM-2, OM-3, and D3-2a) signs used on this project shall be Fluorescent Yellow. The Fluorescent Yellow sheeting shall meet ASTM D 4956 specifications for Type IX retroreflective sheeting.

c. General Requirements. The Contractor shall provide the Engineer with a written certification that the reflective sheeting on the furnished signs meets the following requirements:

1. Sheeting materials used on each sign are approved products obtained from the same sheeting manufacturer and applied according to the manufacturer's recommendations.

2. All signs were manufactured in strict compliance with the sheeting manufacturer's requirements.

3. The certification shall also include all lot numbers, run numbers, shipping date, invoice number, stock number, and quantities of all materials used for each sign shipment.

d. Measurement and Payment. The completed work as described will be paid for in accordance with subsection 810.04 of the Standard Specifications for Construction.

NOTICE TO BIDDERS

REPORT FORMS

Form Number:

1366 – "Contractor's Affidavit of Indebtedness"

1367 – "Consent of Surety to Payment to Contractor"

The above listed forms will originate with the Construction Contract Section (Payment Unit of the Contract Services Division). They are sent out to the Contractor upon receipt of a final estimate.

The Contractor must execute form 1366 and forward along with form 1367 to their surety company for the surety's consent. Both of these forms are then returned to Michigan Department of Transportation's Contract Services Division. These forms must be submitted to Agreements/Payments/Purchasing Section before a final estimate is paid.

1120 – "Final Inspection/Acceptance and Certification Report"

This form will be initiated and submitted by the Region Engineer

1199 – "Employment Report"

Employment Report form 1199 is to be submitted by the Contractor annually when work is performed the last week of July. Send form 1199 directly to the MDOT Business Development Division website. A shorter alternative to this report may be completed electronically through the Business Development Division website at the following address: http://mdotwas1.mdot.state.mi.us/public/sblar/. If the website is used, the paper form need not be completed.

0125 – "Monthly OJT Program Report and Training Log"

Form 0125 shall be submitted by the Contractor to MDOT, Small Business Liaison Office, and a copy to the Engineer when reporting the training record for the on-the-job training.

Biweekly progress payments for work completed by the Prime Contractor and/or Subcontractor may be withheld, upon written notice from the Engineer, for failure to comply with the contract prevailing wage requirements (Davis-Bacon and/or Michigan Prevailing Wage Rate Schedule) and for failure to submit weekly certified payrolls.

These requirements are supplemental to other required contract provisions contained within this proposal.

07/13/07

Notice to Bidders

Insurance

The Contractor shall provide for and in behalf of the State, the Commission, the Department and its officials, agents and employees, and all agencies and their employees, specifically named below, or as stated on the Insurance Requirements (Form 1304, dated 01/2006)**, an Owner's Protective Public Liability Insurance or the alternative option described in the FUSP 107(G), Indemnification, Damage Liability and Insurance.**

The agencies are the: (list all agencies below, following the Michigan Department of Transportation, that are involved including counties, county road commissions, villages, cities)

Michigan Department of Transportation,

Bridgeport Township
Saginaw County Road Commission
Saginaw County Drain Commission

Notice to Bidders
Joint/Two-Party Checks

03NB07
01/2008

Participants in a joint/two-party check arrangement must submit an *Application to Use Joint Checks* (MDOT Form 0183)

An acceptable joint check arrangement must include the following:

1. The prime contractor/payor can not require the subcontractor to use a specific supplier or the prime contractor's negotiated unit price.
2. The subcontractor is more than an extra participant in releasing the check to the material supplier;
3. The subcontractor (not the prime/payor) negotiates the quantities, price and delivery of materials;
4. The prime contractor/payor issuing the check acts solely as guarantor;
5. The subcontractor releases the check to the supplier;
6. The arrangement is short term (no more than two seasons) with the purpose being the subcontractor's establishment or increase of a credit line with the material supplier.
7. The subcontractor is responsible to both furnish and install the material/work item.

Copies of canceled joint checks must be provided to MDOT personnel for review and approval upon request.

The Michigan Department of Transportation (MDOT) may review this project for compliance with subcontract requirements in general, including Disadvantaged Business Enterprise (DBE) requirements.

Michigan Department
of Transportation
0183 (10/07)

APPLICATION TO USE JOINT CHECKS

Return to MDOT's Office of Business Development two weeks prior to joint check transactions. MDOT Office of Business Development, P.O. Box 30050, Lansing, MI 48909, FAX (517) 335-0945 Email: MDOT-DBE@michigan.gov.

A joint check is a two-party check between a subcontractor, a prime contractor, and a materials supplier. Joint checks are used to guarantee payment to the supplier for materials used by the subcontractor. Typically, the prime contractor/payor issues a check as payor to the subcontractor and the materials supplier jointly to guarantee payment to the supplier for the materials/supplies used by the subcontractor. The use of joint checks in payment of materials/supplies is acceptable when the following conditions are met:

1. The joint check arrangement must be approved by the Michigan Department of Transportation;
2. The second party/payor (typically the prime contractor) acts solely as a guarantor;
3. The subcontractor must release the check to the supplier;
4. Use of joint checks is a commonly recognized business practice in the industry;
5. Copies of cancelled checks must be available for review by MDOT upon request.

CONTRACT ID			CONTRACT LOCATION
PAYOR	Prime	Subcontractor	TELEPHONE
FAX			EMAIL
SUBCONTRACTOR	DBE	Non-DBE	TELEPHONE
FAX			EMAIL

PLEASE STATE THE REASON FOR USING JOINT CHECKS

MATERIALS SUPPLIER NAME	DESCRIBE MATERIAL(S) AND QUANTITIES TO BE SUPPLIED	
ADDRESS		
CITY	STATE	ZIP CODE
MATERIALS SUPPLIER NAME	DESCRIBE MATERIAL(S) AND QUANTITIES TO BE SUPPLIED	
ADDRESS		
CITY	STATE	ZIP CODE
MATERIALS SUPPLIER NAME	DESCRIBE MATERIAL(S) AND QUANTITIES TO BE SUPPLIED	
ADDRESS		
CITY	STATE	ZIP CODE

(Attach additional pages as needed for materials suppliers)

By signing this application, we certify that information provided is true and accurate

SUBCONTRACTOR AUTHORIZED SIGNATURE	TITLE	DATE
PRIME CONTRACTOR AUTHORIZED SIGNATURE	TITLE	DATE
MDOT AUTHORIZED SIGNATURE		DATE

NOTICE TO BIDDERS

CERTIFIED PAYROLLS

Federal Prevailing Wage

Certified payrolls covering the contractor's and subcontractor's work forces shall be submitted to the engineer on federally funded projects as set forth in Title 29 of the Code of Federal Regulations, Part 3 (29 CFR 3), except these requirements shall not apply to any contract of $2,000 or less, local force account projects, projects located on roadways classified as local or rural minor collectors, or projects located off the federal-aid highway system. Certified payrolls may be submitted in any form desired provided that all information requested on form WH-347 is included, and the statement of compliance has an original signature. The department has adopted a policy that requires only the last four digits of the employee's social security number to be reported on the certified payroll. Form WH-347 is available on the MDOT forms website.

State Prevailing Wage

Certified payrolls covering the contractor's and subcontractor's work forces shall be submitted to the engineer on all state funded projects as set forth in the Michigan Prevailing Wage Law, Public Act 166 of 1965, except on contracts involving two or more projects and job numbers where the type of funding is mixed, and where one source of funding is federal, the department puts only the wage rates issued by the U.S. Department of Labor in the proposal and the federal requirements apply to all work. The same payroll information is required on state funded projects as is required on federally funded projects, except only the last four digits of the employee's social security number are required to be reported.

Certified Payroll Submittal Requirements – Federal and State Prevailing Wage

Subcontractors and all lower tier subcontractors shall submit their certified payrolls to the prime contractor. The prime contractor will review all certified payrolls prior to submission to the engineer. The review will ensure the certified payroll complies with submittal requirements as set forth in the current written MDOT procedure for prevailing wage compliance oversight. The prime contractor will complete the Contractor Certified Payroll Report Form 1955 and submit to the engineer along with the certified payrolls on a weekly basis. Form 1955 is available on the MDOT forms website.

NOTICE TO BIDDERS

Multiple Wage Decisions

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 MI0_0007 covers all airport construction, bridge construction, highway construction, and sewer and watermain work that are incidental to highway projects. The construction type indicated on this decision is "AIRPORT & BRIDGE, HIGHWAY, 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 All Agency Memorandums No. 130 and No. 131, 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% (or $1,000,000). Sewer and watermain work (MDOT prequalification classification K) is considered to fall under the Heavy Construction work classification by the DOL, therefore when that work type is more than 20% of the engineer's estimate or $1,000,000, the wage decision with the construction type "HEAVY" 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 "AIRPORT & BRIDGE, HIGHWAY, SEWER/INCID. TO HWY" wage decision.

Also, when the landscape work (MDOT prequalification classification H) is more than 20% of the project cost or $1,000,000, the "Heavy" 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 "AIRPORT & BRIDGE, HIGHWAY, SEWER/INCID. TO HWY" wage decision. If the project is a total landscape project, only the "HEAVY" 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% of the project cost or $1,000,000. The other work performed on the project will be covered by the "AIRPORT & BRIDGE, HIGHWAY, SEWER/INCID. TO HWY" wage decision and/or the "HEAVY" wage decision (landscape and/or sewer and watermain work) if either or both are greater than 20% or $1,000,000.

Although there is only one wage decision for "AIRPORT & BRIDGE, HIGHWAY, SEWER/INCID. TO HWY" work (MI0_0007), the "HEAVY" and "BUILDING" wage decisions vary from county to county.

NOTICE TO BIDDERS
LABOR COMPLIANCE

Each prime contractor and all tiers of subcontractors shall comply with all labor compliance provisions in the contract and as specified in the current written MDOT procedure for prevailing wage compliance oversight. The prime contractor shall take responsibility for subcontractor and lower tier subcontractor labor compliance.

Prime contractors and all tiers of subcontractors are required to pay no less than the wage rates and fringe benefits required by federal or state law, as applicable. The rates of wages and fringe benefits to be paid to each class of construction laborers and mechanics (each employee covered by the prevailing wage requirements) by the prime contractor and by all tiers of subcontractors, shall not be less than the total combination of the wage and fringe benefit rates in the attached wage schedule(s) for the locality in which the work is to be performed. This notice shall be included in every subcontract and every subcontractor shall require that this notice be included in each succeeding tier of subcontracts.

Every prime contractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates included in the contract.

The prime contractor and every subcontractor shall actively pursue resolution of contract labor compliance issues and attend all contract labor compliance meetings and hearings. The prime contractor and subcontractor shall submit all department requested documentation within the time frame the department specifies in the written notice. All labor compliance issues are to be resolved within 60 days after receiving the department's first written notice. The department and the contractor can mutually agree in writing to extend this 60 day requirement.

The prime contractor and every subcontractor shall keep an accurate record indicating the name and classification and the actual wages and benefits paid to each employee in connection with the contract. This record shall be available for inspection by the department or its representative. The prime contractor and subcontractor must permit the department or its representative to interview employees during working hours on the project and they must advise employees that they must cooperate with department representatives during wage rate interviews.

The prime contractor is responsible for advising all subcontractors of the requirement to pay the prevailing rate prior to commencement of work and that all employees must cooperate during wage rate interviews.

Each subcontractor is liable for the payment of the prevailing rates to its employees.

The prime contractor is liable for the payment of the prevailing rates to its employees. The prime contractor is also liable for payment of prevailing rates that are not paid by their subcontractors.

A violation of state and/or federal prevailing wage laws may result in the debarment of a contractor from being awarded a contract or subcontract for the provision of goods and services to the State of Michigan for a period of up to eight (8) years. Furthermore, other actions, including, but not limited to reconciliation of records, and restitution of employees, included in state and federal laws, may be required of the contractor/subcontractor.

NOTICE TO BIDDERS

BID RIGGING

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.

NOTICE TO CONTRACTORS/CONSULTANTS

Fraud and Abuse Hotline

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**.

Every prime contractor shall keep posted on the construction site, in a conspicuous place, a copy of this Notice.

MICHIGAN DEPARTMENT OF TRANSPORTATION

NOTICE TO BIDDERS

ROAD CONSTRUCTION APPRENTICESHIP READINESS (RCAR) PROGRAM

All bidders are advised of Section 1920(b) of SAFETEA-LU, which states:

> "It is the sense of Congress that Federal transportation projects should facilitate and encourage the collaboration between interested persons, including Federal, State, and local governments, community colleges, apprentice programs, local high schools, and other community-based organizations that have an interest in improving the job skills of low-income individuals, to help leverage scarce training and community resources and to help ensure local participation in the building of transportation projects."

In an effort to improve the job skills of women, minorities and low-income individuals and to help ensure local participation in the building of transportation projects, MDOT and the Department of Labor & Economic Growth in cooperation with local Michigan Works! Agencies have implemented a Road Construction Apprenticeship Readiness (RCAR) program.

The RCAR program, launched in April 2008, is a new and ambitious program designed to equip a diverse pool of Michigan residents with skills for sustainable employment in the road construction industry. The RCAR program includes a rigorous training component designed to teach and prepare individuals for road construction apprenticeships. This construction season over 150 RCAR graduates will be available for hire for work on federal-aid projects.

All bidders are hereby informed that a pool of RCAR graduates are available from which to draw potential employees for work on this federal-aid project. RCAR graduates are prescreened, ready to work and can be used to fill MDOT assigned On-the-Job Training slots.

For information regarding RCAR graduates, contact:

METRO DETROIT

Clarence Burton
Michigan Works!One Stop
455 W. Fort St.
Detroit, MI 48226
(313) 962-9675 Ext. 527
(313) 962-4884 FAX
cburton@detroitmi.gov

Cheryl Sanford
Michigan HRDI
13700 Woodward, Highland Park.
(313) 826-0299.
(313) 866-1601 FAX
csanford@semca.org

Robert E. Shimkoski Jr.
Detroit Workforce Development Department, a Michigan Works! Agency
707 W. Milwaukee Detroit, MI 48202
(313) 876-0584 Ext. 217
(313) 876-0585 FAX
Rshimkoski@detroitmi.gov

Margaret Kelly
Joblink Service Center
1847 North Perry
Pontiac, MI 48340
(248) 276-1756
(248) 276-1778 FAX
Margaret.kelly@oakland.k12.mi.us

SOUTHWEST MICHIGAN

Lanre Ajayi/Eric Rodgers
Berrien-Cass-Van Buren Michigan Works!
499 West Main Street
Benton Harbor, MI 49022
Phone (269) 927-1799 ext 1176/1131
Fax (269)927-1399

Cincy Sullivan/Fred Harvey/Curt Mastos
Kalamazoo-St. Joseph Michigan Works! Service Center
1601 S. Burdick St.
Kalamazoo MI 49001
(269) 383-2536 Ext. 117/112/132
(269) 383-3785 FAX
csulliva@kresanet.org

BAY AREA

Kristen Wenzel
Saginaw Midland Bay Michigan Works!
Northpointe Plaza
4061 North Euclid
Bay City, MI 48706
(989) 667-0500
(989) 684-7920 FAX
wenzelk@bst.michiganworks.com

Nathan Kammer
Director of Workforce Training
Career Alliance, Inc.
711 N. Saginaw St, Suite 300
Flint, MI 48503
(810) 233-5974
(810) 233-4234 FAX
nkammer@careeralliance.org

NOTICE TO BIDDERS

LANDSCAPE PLANTS

The successful Contractor will be required to submit a list to the Department that identifies each plant by plant species, size and quantity specified on the project and the landscape nursery where he intends to purchase that plant from. The Contractor shall provide this list to the Delivery Engineer for review at the Pre-Construction Meeting. Specific requests for plant substitutions must be submitted by the Contractor for review by the Delivery Engineer at the pre-construction meeting and must be reviewed and approved by the Landscape Architect.

NOTICE TO BIDDERS

Pass-Through Warranty Bonds

The prime contractor may assign responsibility for the warranty obligations and the posting of a warranty bond to a subcontractor(s) (hereafter warranty contractor) in accordance with the terms of this Notice to Bidders. No second tier subcontractor assignments will be permitted.

The following conditions must be met:

1. The assignment must be made to the subcontractor (the warranty contractor) that will perform the work covered by the warranty. If for any reason after signing the Warranty Contract and posting the warranty bond, the warranty contractor does not perform the work, the warranty contractor will remain obligated for the warranty obligations and the warranty bond obligations shall remain in effect unless the Department consents in writing to substituting a different contractor to assume those warranty obligations and accepts a substitute warranty bond.

2. To become a warranty contractor responsible for the warranty obligations of the Contract, and the posting of a warranty bond, the warranty contractor shall complete and submit to the Department a Warranty Contract and a warranty bond for each warranty it will be responsible for. The Warranty Contract shall be signed by an authorized signer of the warranty contractor, as identified in its prequalification application.

3. **The assignment of the warranty work must be designated with and at the time of electronic bid submittal, and must provide all required information. MDOT will not accept assignments of warranty work after the final bid submittal by the Bidder.**

4. The Warranty Contract and warranty bond must be submitted to MDOT prior to award of the prime contract for the work to which the warranty applies.

5. The warranty contractor must be prequalified in the work classification for the type of work to be warranted.

6. The warranty bond shall guarantee performance of all the warranty obligations for the covered work, in accordance with the Warranty Contract.

7. All provisions of the prime contract shall be applicable to the warranty contractor in regards to the warranty work, except as otherwise expressly provided in the Warranty Contract.

8. Under no circumstances shall the assignment of the warranty work and the execution of a Warranty Contract create any obligation to the Department beyond the obligations undertaken in the prime contract. The purpose of the Department accepting the assignment of warranty obligations is to allow a warranty contractor to stand in place of the prime contractor for purposes of the warranty work without increasing any obligation or liability that the Department would have had if the prime contractor had not assigned the warranty work.

NOTICE TO BIDDER
C.S. 73999 - J.N. 101875A
State Street Historic Bridge over Cass River
Bridgeport Township
Saginaw County

Fishery Restrictions

Fisheries restriction dates include:

The State Street historic bridge over the Cass River

The restriction dates are: March 1, 2010 to May 31, 2010

No work in the stream between these dates. This does not include work inside coffer dams when the dams are installed prior to the fisheries dates. Only includes work done in the stream itself is prohibited. Removal of the bridge deck and superstructure can be done during the restriction dates.

NOTICE TO BIDDER
C.S. 73999 - J.N. 101875A
State Street Historic Bridge over Cass River
Bridgeport Township
Saginaw County

Mandatory Pre-Bid Meeting

A mandatory pre-bid meeting will be held at the following location, date and time.

Location: **Bridgeport Township Hall**
6206 Dixie Highway
Bridgeport, Michigan 48722

Date: **Monday, August 17, 2009**

Time: **1:00 p.m.**

A representative of the prime contractor planning to bid on this project is required to attend. Only bids from attending prime contractors will be accepted.

NOTICE TO BIDDER
C.S. 73999 - J.N. 101875A
State Street Historic Bridge over Cass River
Bridgeport Township
Saginaw County

SUPERPAVE HOT MIX ASPHALT PERCENT WITHIN LIMITS (PWL)

In accordance with the Special Provision for Superpave Hot Mix Asphalt Percent Within Limits (PWL) 03SP504(C), the hot mixed asphalt will be visually inspected and HMA Quality Initiative will not be paid for in this project.

NOTICE TO BIDDERS

Required Contract Provisions Federal-Aid Construction Contracts Form FHWA- 1273

Effective January 18, 2009, the following temporary changes will be made to Form FHWA-1273 until the form is officially revised by FHWA:

Replace the first sentence of Form FHWA – 1273, section V, paragraph 2b with:

b. The payroll records shall contain the name and an individually identifying number (i.e. the last 4 digits of the employee's social security number); his or her correct classification; hourly rates of wages paid (including rates of contributions or cost anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b) (2) (B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid.

Replace the first sentence of Form FHWA – 1273, section V, paragraph 2g with:

g. The contractor or subcontractor shall maintain complete social security numbers and home addresses for employees and shall make the records, and those required under paragraph 2b of Section V, available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job.

07/15/09

MICHIGAN
DEPARTMENT OF TRANSPORTATION

COORDINATION CLAUSE FOR OTHER CONTRACTS WITHIN THE VICINITY

Bay City:kaz 1 of 1 07/01/09

The contractor shall coordinate his operations with contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA) as described below. These projects include, but are not limited to:

Michigan Department of Transportation Projects:

C.S. 73101 - J.N. 84019A, 84706A, 84707A, 84833A, 85115A, 87995A, 87629A, 85615A, 102691A: I-675 Corridor from south I-75 junction to the north I-75 junction, Buena Vista, Saginaw, Zilwaukee, Kochville Townships, City of Saginaw, Saginaw County – Road and Bridge Rehabilitation.

Saginaw County Road Projects:

Fort Road Bridge: Removal and replacement of the Fort Road Bridge over the Cass River, Bridgeport Township, Saginaw County.

The Contractor's attention is called to the requirements of cooperation with others as covered in Article 104.07 of the 2003 Standard Specification for Construction. Other contracts or maintenance operations may occur during the life of this project.

No claim for extra compensation or adjustment in contract unit prices will be allowed on account of delay or failure of others to complete work units scheduled.

Michigan Department
of Transportation
2286 (11/06)

UTILITIES STATUS REPORT

CONTROL SECTION(S)	JOB NUMBER(S)
73051, 73999	101875

UTILITY	FACILITY TYPE	RELOCATION WORK IDENTIFIED		UTILITY TO RELOCATE PRIOR TO START DATE		COORDINATION INFORMATION IN NOTICE TO BIDDERS		UTILITY WORK INCLUDED IN CONTRACT	
		YES	**NO**	**YES**	**NO**	**YES**	**NO**	**YES**	**NO**
AT&T	Telecom		✔		✔		✔		✔
CenturyTel (Local Telephone Company)	Telecom		✔		✔		✔		✔
Charter Communications	Cable		✔		✔		✔		✔
City of Saginaw	Other		✔		✔		✔		✔
Consumers Energy	Electric	✔		✔		✔		✔	
Consumers Energy	Gas		✔		✔		✔		✔
LightCore	Telecom		✔		✔		✔		✔
METC	Electric		✔		✔		✔		✔
Saginaw County Drain Commissioner	County Drain		✔		✔		✔		✔
Spaulding Township	Other		✔		✔		✔		✔

ONE OF THE FOLLOWING SHALL BE CHECKED:

☑ The above is a list of utilities which have indicated they have facilities in the project area. Coordination arrangements, if necessary, have been made and are noted in the Notice to Bidders - Utility Coordination document.

☐ The above is a list of utilities which have indicated they have facilities in the project area. There are no known utility adjustments required by this project.

☐ There are utilities within the project area. However based upon the project's limited scope of work, no utility impacts are anticipated. Utility information has not been solicited for this project and does not need to be listed above.

NAME Phillips Travis

DATE 11-Dec-2008

OFFICE Bay City TSC

NOTICE TO BIDDERS

UTILITY COORDINATION

11-Dec-2008

Job Number(s): 101875
Control Section(s): 73051, 73999

The Contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in Section 104.07 of the 2003 MDOT Standard Specifications for Construction. In addition, for the protection of underground utilities, the Contractor shall follow the requirements in Section 107.12 of the 2003 MDOT Standard Specifications for Construction. Contractor delay claims, resulting from a utility, will be determined based upon Section 109.03 of the 2003 MDOT Standard Specifications for Construction.

Consumers Energy Electric has exsisting facilities in conflict with the proposed steel truss bridge movement. The Contractor is reminded to follow the special provision for Utility Work. Consumers Energy will need a submitted permit and suficent time to coordinate the proposed truss move.

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The proposed lighting will also require coordination with Consumers to allow powering of the lighting. The Contractor is reminded to include Consumers in thier plan for completing these items.

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Saginaw County Road Commission shall be contacted per the special provision for Utility Work. Coordination and permitting with this office is required to complete the proposed truss move.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION
FOR
ERRATA TO THE 2003 STANDARD SPECIFICATIONS

Page	Subsection	Errata
iii		Add *Soil Erosion and Sedimentation Control Manual* to the list of MDOT publications included by reference.
vii		Change the title of Section 605 to read “Concrete Quality Assurance”
27	103.03.A.1	Reference should read 109.07.B and C.
27	103.03.C	Reference should read 109.07.E.
38	104.08.A.3	Change “right of way” to “right-of-way” in this subsection.
38	104.08.A.5	Change “right of way” to “right-of-way” in five instances in this subsection.
42	104.08.B.11	Change “the Engineerwill” to “the Engineer will” in the first sentence of this subsection.
43	104.08.B.15	The first sentence of this subsection should read “Final measurement for payment for all earthwork, undercuts, muck excavation, swamp backfill, sand subbase, and topsoil stripping will be the responsibility of the Contractor and must include detailed measurements, sketches and computations.”
50	104.09.A.1	Delete the second instance of the word “or” in this subsection.
63	106.03.D	Formula 106-2 should read $S = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n-1}}$
67	107.02	Change “National Pollution Discharge Elimination System” to “National Pollutant Discharge Elimination System” in the second sentence of the third paragraph of this subsection.
71	107.10.D	Delete the first sentence of this subsection and replace with the following: “All insurance policies and binders must also include endorsements by which the insurer shall agree to provide the Department, in writing, items 1 and 2 below. All insurance policies and binders issued in the name of the contractor must also include the additional endorsement, to be provided in writing, in item 3 below.”

Page	Subsection	Errata
71	107.10.D.1	Change “initialed” to “initiated.”
76	107.15.A.2	Delete the last paragraph of this subsection.
105	109.07	The first sentence of this subsection should read “...prices for extra work, the extra work...”
122	203.03.C.2	Reference in the first sentence of this subsection should read 402.03.E.
122	203.04	Delete the following Contract Items (Pay Items) Culv, Rem, More than 24 inch.....Each Culv, End, Rem, More than 24 inch .....Each Sewer, Rem, More than 24 inch.....Foot Add the following Contract Items (Pay Items) Culv, Rem, Over 48 inch .....Each Culv, End, Rem, Over 48 inch.....Each Sewer, Rem, Over 48 inch .....Foot
142	205.03.P	Change “soley” to “solely” in the last sentence of this subsection.
158	208.03.D.13	Change “22A” to “21AA” in the first sentence of this subsection.
162	209.01	Change “Removel” to “Remove” in the first sentence of this subsection.
171	304.03.B.5	This subsection should read as follows. 5. Loose joint materials and loose patching materials may be removed prior to rubblizing; do not fill the resulting voids prior to rubblizing.
174	305.03.A	Delete the second instance of “reduction” in the first sentence of the first paragraph in this subsection.
180 *	307.04	Change the last pay item in this list to read as follows: Approach, Cl ___, ___ inch.
192	401.04	Change the fourth pay item from the end of this list to read as follows: Steel Casing Pipe, ___ inch, Tr Det ___.
197	402.03.C.1	Replace “CPE” with “CPE and CPV” in three instances in this subsection.
202 *	402.04	Change the first pay item in this list to read as follows: Sewer, Cl ___, ___ inch, Tr Det ___.
206	403.03.A.6	Delete the fourth sentence of this subsection beginning with

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Page	Subsection	Errata
		"Wrap the connection…"
206	403.03.A.8	Change the last sentence of this subsection to read as follows: "Place and compact the HMA according to Section 502."
210	Table 403-1	Change "350" to "315" for the Weight, lbs for Cover B in this table.
210	Table 403-1	Change "350" to "318" for the Weight, lbs for Cover Q in this table.
240	502.03.I	Change "point" to "print" in the first sentence of this subsection.
240	502.03.I	Delete the word "a" in the last sentence of this subsection.
242	502.04.C	Change the first sentence of this subsection to read as follows: "...material, and cleaning the cold milled pavement."
242	502.04.C	Change "placment" to "placement" in the second sentence of this subsection.
266	507.03.G.3	The time period for placing mixture in the Upper Peninsula should read: • June 1 - September 15
287	601.03.F	The first sentence of this subsection should read "Concrete must be between 45 °F and 90 °F, inclusive, at the time it is placed."
288	601.03.G	This subsection should read as follows: "G. **Concrete Mixture Requirements.** The Contractor is responsible for quality control for concrete on all projects according to Section 604."
289	601.03.G	Re-index subheadings in this subsection, beginning with the second instance of 601.03.G.3, as follows: 4. **Air Content.** 5. **Water-Reducing Admixtures.** 6. **Slump.** 7. **Strength of Concrete.**
290*	601.03.G.7.b	Delete the paragraph with the heading **Non Concrete QA Projects**, in its entirety, and replace with the following: b. **Non Concrete QA Projects.** The Engineer will perform strength testing for acceptance and payment, according to Department procedures, for all projects not covered by the Department's concrete quality assurance program.
314	602.04.C.1	Change "faction" to "fraction" in the second sentence of this subsection.

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Page	Subsection	Errata
324*	603.03.B	Change “6 feet” to “4 feet” in the first sentence of the second paragraph of this subsection.
327	603.03.B.3	The last sentence in this subsection should read as follows: 4. **Placing Reinforcement.** Position and support reinforcement according to the standard plans.
328	603.03.B.8	The third sentence, in the third paragraph of this subsection should read “...correct all high or low spots exceeding 1/8 inch.”
330	603.03.B.13	Change “3/4” to “5/8” in the third paragraph of this subsection.
333	603.03.D.3	Reference in the first sentence of this subsection should read 602.03.R.
333	603.03.D.4	The last sentence of this subsection should read “...flush to 1/8 inch (after cooling) below the surface...”
333	603.03.E.3	The last sentence of the first paragraph of this subsection should read “...flush to 1/8 inch below the surface...”
338	604.01	Delete the first sentence of the first paragraph of this subsection and replace with the following: **604.01 Description.** Provide quality control for all concrete production and placement on the project adequate to produce work of acceptable quality.
339	604.03.C	Change “assurance” to “control” in the first sentence of the first paragraph of this subsection.
348	605.03.C.1	Change “*Materials Quality Assurance Manual*” to “*Materials Quality Assurance Procedures Manual*” in the first sentence of this subsection.
350	Table 605-2	Change “10” to “90” for the Rejection Limit (percent) for all grades of concrete shown in this table.
350	605.03.D.1.a	The first sentence of this subsection should read “…retest strength from Table 605-2 for the class…”
352	605.03.E.3.c	Delete the second instance of the word “a” in the first sentence of this subsection.
353	605.04	Change the lettering for the subheadings from “A., D. & E.” to “A., B. & C.”
360	701.03.D	The first sentence of this subsection should read “Concrete must be between 45 °F and 90 °F, inclusive, at the time it is placed.”

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Page	Subsection	Errata
363	701.03.G.2	Delete the first four paragraphs of this subsection and replace with the following: 2. **Non Quality Assurance.** The Engineer will perform strength testing for acceptance and payment, according to Department procedures, for all concrete not covered by the Department's concrete quality assurance program. Test specimens will be made according to AASHTO T 23 and cured according to section 9.2 or 9.3 of T 23.
382	705.03.F	Formula 705-1b should read $C = \frac{Wr + k^2 Wp}{Wr + Wp}$
407	706.03.M.3	Change "Grove" to "Groove" in the first sentence of the first paragraph of this subsection.
416	706.04.B	Move the entire paragraph beginning with "Concrete placed by the pumping method…" from subsection 706.04.C to the end of subsection 706.04.B.
416	706.04.C	Change the first sentence of this subsection to read as follows. "C. **False Decking** will be measured for the total area protected, including the width of the beams."
423	Table 707-1	Change the Minimum Size of Fillet Weld from "3/4" inch to "1/4" inch when Base Metal Thickness of Thicker Part Joined is less than or equal to 3/4 inch.
427	707.03.C.8	Change the first sentence of this subsection to read as follows: "…must be qualified according to AWS D1.5, *Bridge Welding Code*, …"
435	707.03.D.3	Change the first sentence of this subsection to read as follows. "3. **Falsework.** Build and remove falsework according to subsections 706.03.C and 706.03.O."
449	708.03.A.13.e	Change reference to AASHTO M 111.
475	712.03.A.3	Change "**Equipment for Constructing Latex Modified Concrete Surfaces.**" to "**Equipment for Constructing Concrete Overlay Surfaces.**" in the heading of this subsection.
483	712.03.L.3	Change the fourth sentence of this subsection to read as follows: "…two test splices on the largest bar sizes that are to be spliced."
488*	712.03.Q	The first sentence of the last paragraph of this subsection should read "Maintain wet cure for no less than seven days

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Page	Subsection	Errata
		following concrete placement."
489*	712.03.T	The last sentence of the fifth paragraph of this subsection should read "Allow heavy equipment on the deck overlay only after the overlay concrete has reached an age of at least seven days."
491	712.03.W.1	The last sentence of this subsection should read "Clean and coat as required according to Section 715."
497	713.02	Change "Grade 400" to "Grade 60" for the Steel Reinforcement.
500	713.03.C.2	Reference in the first paragraph of this subsection should read 204.03.A.5
535	804.02	Change Type H-2 to Type H-1 for Mortar and Grout material.
548	807.04	Change the Pay Unit for Guardrail, Type ___ to "Foot".
558	809.04.A	Delete the first sentence of the first paragraph in this subsection and replace with the following: A. **Field Office, Cl __** includes set up, providing access, grading, maintaining, plowing snow, utility hook up charges and monthly water and sanitary service fees.
562	810.03.J	Change "sigh" to "sign" in the last sentence of this subsection.
571	810.03.P	Delete the phrase "and the traffic signal contract typical construction plans" from the end of the first sentence of this subsection.
577	810.04.D	This subsection should read "…all work, including construction of the foundations, necessary for the installation of…".
583	811.03.D.2	The last sentence of this subsection should read "Place regular dry paint between October 1 and May 1, inclusive."
588	811.04	Change the third pay item in this list to read as follows "Pavt Mrkg, Waterborne, for Rest Areas, Parks, & Lots, ___ inch, (color)".
588	811.04	Change the nineteenth pay item in this list to read as follows "Rem Curing Compound, for Longit Mrkg".
602	812.03.G	Delete the word "of" in the second sentence of the second paragraph of this subsection.

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Page	Subsection	Errata
610*	812.03.K.6	Change “W8-11 (UNEVEN LANES)” to “W8-9b (UNEVEN LANES)” in two places.
616	812.04	Change the eighth pay item from the end of this list to read as follows “Pavt Mrkg, Longit, 6 inch or Less Width, Rem”.
621	812.04.M.3	The second sentence of the first paragraph of this subsection should read “…applies for both existing longitudinal permanent markings and temporary Type NR markings…”.
623	812.04.T.3	Delete this subsection and replace with the following: 3. Items measured as lump sum if they are used or required on the worksite during the authorized extension of time, except that **Minor Traffic Control Devices** will not be adjusted when conspicuity tape is the only minor traffic control device in service or required during the authorized extension of time.
639	816.01	Change “National Pollution Discharge Elimination System” to “National Pollutant Discharge Elimination System” in the last sentence of this subsection.
640	816.03.A	Delete the last sentence of this subsection beginning with “Supply compost from…”
643	Table 816-2	Under Mixture for Upland Areas, in the row for ES (Environmental Seeding), in the Seeding Rate column, change “110 lb/acre” to “Table 917-1”.
646	816.03.H	Reference in the second paragraph of this subsection should read 917.15.D.2.
661	819.03E.3	The second sentence of the third paragraph of this subsection should read “…so that they are not displaced during concrete placement.”
665	819.03.H	Add the following sentence at the beginning of this subsection: “Construct tower lighting unit foundations according to subsections 810.03.J and K.”
667	819.04	Change the fifth pay item in this list to read as follows “Conduit, Fiberglass, ___ inch, Structure”.
679	820.03.H	Delete the word “lineal” in the first sentence of the sixth paragraph of this subsection.
680	820.04	Change the first pay item of this list to read as follows “TS, (number) Way (type) Mtd”.

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Page	Subsection	Errata
694	902.03.B	Change “...retained on the-inch sieve...” to “retained on the 3/8-inch sieve...” in the second paragraph of this subsection.
696	Table 902-1	Delete section reference “503” in three places in the Item of Work by Section Number column. Delete the reference to “502 Temporary Patching with HMA Mixture” in footnote (a).
705	903.06.A	Change the first sentence of the first paragraph of this subsection to read “...ASTM C 309, Type 2 compounds, except that the requirements for reflectance and drying time do not apply.”
719	905.03	Change “A 616” to “A 616-96a” and change “A 617” to “A 617-96a” in the first paragraph of this subsection.
719	905.03	Change “A 617” to “A 617-96a” in the second paragraph of this subsection.
719	905.03	Delete the third paragraph of this subsection and replace with the following: Bar reinforcement for prestressed concrete beams must meet ASTM A 616-96a for Grade 60 steel bars, except that bar reinforcement meeting ASTM A 615 or A 617-96a for Grade 40 steel bars will be permitted for stirrups in prestressed concrete beams.
720	905.03.C	Change the first sentence of this subsection to read “… must be coated according to AASHTO M 284, with the following exceptions and additions:”
720	905.03.C.3	Change this subsection to read “…and tested according to AASHTO M 284.”
720	905.03.C.4	Reference in the last sentence of this subsection should read subsection 706.03.E.8.
720	905.05	Change “A 616” to “A 616-96a” and change “A 617” to “A 617-96a” in the first paragraph of this subsection.
723	906.04.B	Change “40 °F” to “30 °F” in the last sentence of this subsection.
729	907.03.D.2.b	Change “1æ” to “1½” in the second sentence of the first paragraph of this subsection.
734	908.04	Change the second sentence of the first paragraph of this subsection to read “…requirements for carbon steel castings

Page	Subsection	Errata
		of ASTM A 148 Grade 60/90, as specified on the plans."
761	910.03.B	Change the last sentence of this subsection to read, "Furnish a non-woven geotextile meeting the strength requirements in Table 910-1 for Geotextile Liner **Heavy** when heavy riprap is specified."
774	Table 912-2	Replace Table 912-2 with new Table 912-2 shown below.
789*	914.04.A	Change the first sentence of this subsection to read "Conform to ASTM D 6690, Type II with the following exceptions:"
795	914.08	Reference in the second paragraph of this subsection should read subsection 914.09.C.
795	914.08	Change "A 616" to "A 616-96a" and change "A 617" to "A 617-96a" in the first sentence of the third paragraph of this subsection.
795	914.09.A	Change "A 616" to "A 616-96a" and change "A 617" to "A 617-96a" in the first sentence of this subsection.
797	912.12	Change "A 570" to "A 1011" in the first sentence of the second paragraph in this subsection.
800	916.01.B	Change "**Coarse Gravel 3x1.**" to "**Coarse Aggregate 3x1.**" in the heading of this subsection.
801	916.01.D.1	The last sentence of this subsection should read "…3 to 12 inches for ditch grades 2 percent or greater."
801	916.02	Delete the sixth sentence of this subsection beginning with "Silt fence fabric…"
805	917.08	Delete the first sentence of this subsection beginning with "Furnish compost from…"
839*	919.02.C	Delete the second and third paragraphs of this subsection and replace with the following. Bolts, nuts, washers, U-bolts and straps must be stainless steel. The stainless steel alloy for bolts, washers, U-bolts, and straps must conform to ASTM A 320, Class 1, Grade B8. Nuts must be self-locking nylon insert type conforming to ASTM A 320 and A 194 for Grade 8F. If U-bolts are formed from straight bar stock, forming must be by cold working.
846*	919.10.A	Delete the last two paragraphs of this subsection and replace with the following. Bolts, nuts, washers, U-bolts and straps must be stainless steel. The stainless steel alloy for bolts, washers, U-bolts,

Page	Subsection	Errata
		and straps must conform to ASTM A 320, Class 1, Grade B8. Nuts must be self-locking nylon insert type conforming to ASTM A 320 and A 194 for Grade 8F. If U-bolts are formed from straight bar stock, forming must be by cold working.
847	919.11.A.1	This subsection should read as follows: 1. **Wood Posts.** Concrete for wood post foundations, when required, must be Grade P2 as specified in section 601.
847	919.11.A.2	This subsection should read as follows: 2. **Breakaway Columns.** Concrete for breakaway column foundations must be Grade P2 as specified in section 601.
868	922.02.D	Change “3200 square feet” to “32 square feet” in the last sentence of this subsection.
869	922.03.C	Delete this subsection and replace with the following. C. **Drums with Lights.** Drums with warning lights attached must meet NCHRP 350 crashworthy criteria. Provide certification, according to subsection 922.01, when requested.
869	922.03.D	Change “crash worthy” to “crashworthy” in the last sentence of this subsection.
871	922.03.E.2	Change “1/2 inch” to “1/2 –inch” in the second sentence of the third paragraph of this subsection.
883	Pay Item Index	Change the page number reference for Calcium Chloride to 322.
883	Pay Item Index	Delete the reference for Conc, Grade __ and add the following references. Conc, Grade __ (for pavements).....313 602 Conc, Grade __ (for structures) 414 706
886	Pay Item Index	Change “Fertilizer, Chemical Nutrient, Class ___” to “Fertilizer, Chemical Nutrient, Cl ___”.
899	General Index	Change the page number reference for Concrete: Barrier, Bridge to 469.
906	General Index	Change “Carrier Bills, Required for Partial Payments” to “Freight Carrier Bills, Required for Partial Payments”.
920	General Index	Delete the material page reference, in boldface type, for Sleeves Placed in Structures.

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Page	Subsection	Errata
922	General Index	Change “Structure: Rehabilitation: Remove Portions” to “Structure: Rehabilitation, Remove Portions”.

Table 912-2 Species and Grading Requirements for Posts

Species	Round Posts Grade	Sawn Posts Agency (a)
Hardwoods		
Red Oak (Northern Red, Black, Pin Laurel, Cherry-Bark, Scarlet, Water and Willow Oaks) (b) Hard Maple (Black and Sugar) and Red Maple White Ash White-Heartwood Beech Yellow Birch	ASTM D 245	MDOT
Softwoods		
Northern White Cedar, Red Pine and Eastern White Pine (Northern White Pine)	No. 1 or better	NHPMA
Douglas-Fir	No. 2 or better	WCLIB, WWPA
Southern Pine Species	No. 2 or better	SPIB
a. NHPMA (Northern Hardwood and Pine Manufacturers Assoc.); WWPA (Western Wood Products Assoc.); WCLIB (West Coast Lumber Inspection Bureau) and SPIB (Southern Pine Inspection Bureau). b. Southern Red Oak is not permitted.		

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION
FOR
VALUE ENGINEERING CHANGE PROPOSAL (VECP)

104(1a) 1 of 2 07-24-03

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 proposed change must not alter the essential functions or characteristics of the project or significantly delay the completion of the project. 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, and design and safety standards. This 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 and Evaluation of VECP. Only VECPs that will not significantly delay completion of the project and that do not delete work without a related enhancement to the project will be considered. The Department may reject, or require the Contractor to share in the cost of the evaluation, any VECP that requires excessive time or cost for full evaluation. The Contractor=s written acceptance of this cost sharing condition will constitute full authority for the Department to deduct amounts payable from any monies due or that may become due to the Contractor under the contract.

The following information must be included in the VECP submittal. Five copies of all VECP documentation must be submitted to the Engineer.

1. A description of the contract requirements for the work and the proposed changes.

2. An itemization of the contract changes if the proposal is adopted.

3. A detailed cost comparison of completing the work as contracted and with the proposed changes. This estimate must show changes in quantities for all contract items (pay items) affected by the proposed changes.

4. A written request for the return of information submitted with a VECP if the proposal is rejected.

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. Work on the project will continue in accordance with the requirements of the contract until a work order and authorization have been approved which incorporate the VECP changes.

The Department is the sole judge 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, only construction costs will be considered in determining 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 acceptance will be by a work order and authorization. The work order and authorization will include the necessary changes in the plans and specifications and any conditions upon which the approval is based. Acceptance of the VECP shall not extend the time of contract completion unless specifically provided for in the work order and authorization.

c. Time Frame for VECP Evaluation. The Contractor will be notified of the Department=s decision to approve or reject a conceptual or final VECP within 14 (fourteen) calendar days of receipt of the VECP. If a work order and authorization have not been approved within this Time frame, and the date has not been extended by mutual agreement of both parties, the VECP is rejected. The Department's decision is final and there is no appeal.

d. 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.

e. 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.

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. The Contractor will be paid 50 percent of this net savings. The amount specified in the work order and authorization constitutes full compensation to the Contractor for the VECP and the performance of that work. The Contractor=s development costs for the proposed VECP, including all cost associated with design, are not reimbursable.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION
FOR
NPDES REQUIREMENTS FOR PORTABLE PLANT OPERATIONS

a. General Information. This specification applies to portable plants on and off MDOT right of way. It does not apply to mobile units used to produce latex-modified or other deck overlay concrete mixes. Portable plant with no off-site storm water discharge are not regulated by the National Pollutant Discharge Elimination System (NPDES).

A minimum of seven days before mobilization of a portable plant, submit documentation to the Engineer that application has been made to the Michigan Department of Environmental Quality (MDEQ) for a permit under the National Pollutant Discharge Elimination System according to part 21 of the Michigan Water Resources Commission Rules. This will be either an individual permit application or notice of intent under a general permit. Provide a copy of the Pollution Prevention Plan for the site and any other appropriate documents to the Engineer.

Do not mobilize the portable plant until the Engineer provides written authorization to proceed. Authorization to proceed does not relieve the Contractor of any responsibilities required by law.

b. Contractor Responsibilities. Comply with all requirements of the regulations including maintaining soil erosion and sedimentation control measures following the Pollution Prevention Plan filed with the MDEQ. All compliance costs incurred and any fines or penalties resulting from failure to comply with the Pollution Prevention Plan are the Contractor's responsibility.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION
FOR
ASBESTOS NOTIFICATION

Failure to comply with these requirements will result in assessment of $27,500.00 per day per violation by the Michigan Department of Transportation. Payment of liquidated damages will not alter or modify the obligation to comply with these requirements.

A minimum of ten (10) working days before the start date for demolition and/or renovation of any building or structure, provide notice to the agencies listed herein that the proposed work will or may involve asbestos disturbance or removal. The start date is the date work is to begin on either the removal of friable asbestos containing materials or the demolition of a structure or building.

- Air Quality Division of the Michigan Department of Environmental Quality (MDEQ)
- (for projects in Wayne County) NESHAP Asbestos Program, Detroit Field Office, MDEQ, AQD, Cadillac Place, Suite 2-300, 3058 West Grand Boulevard, Detroit, MI 58202, Ph. (313) 456-4686
- U.S. Environmental Protection Agency (EPA)

Complete a separate Notification of Intent to Renovate/Demolish (form EQP 5661) for each building or structure, sign as owner/operator and submit to the regulatory agencies specified on the form. Mailing addresses are included on the notification form. If conditions other than those included on the original notice are discovered during work on the project, submit a revised notification to the MDEQ as soon as feasible. Provide copies of all original and revised notification forms to the Engineer.

This specification provides general information and does not ensure compliance with environmental laws. Refer questions concerning these requirements to the DEQ, Air Quality Division, (517) 373-7064; NESHAP Asbestos Program, Detroit Field Office, MDEQ, AQD, (313) 456-4686 (for projects in Wayne County); or the Michigan Department of Labor and Economic Growth (MDLEG), Construction Safety and Health Division, Asbestos Program, (517) 322-1320. Environmental laws pertaining to asbestos notification include, but may not be limited to, the following.

- Michigan Air Pollution Act 1965, P.A. 348, as amended
- MCL 336.11, etc., seq. MSA 14.58(a), etc., seq.
- Federal Clean Air Act
- National Emissions Standards for Hazardous Air Pollutants (NESHAP), Subpart M
- Asbestos Standards of 40 CFR 61.140 through 61.156

A copy of the National Emission Standards for Hazardous Air Pollutants (NESHAP) Asbestos Regulations, 40 CFR Part 61, Subpart M can be obtained by written request to NESHAP Asbestos Coordinator, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION
FOR
CULVERT SLOPED END SECTIONS

401(1) 1 of 1 03-26-04

Delete the second paragraph of subsection 401.03.G, on page 189 of the 2003 Standard Specifications for Construction, in its entirety and replace with the following.

Use precast concrete end sections on concrete culverts according to Standard Plan R-86 Series. When sloped end sections are called for on concrete culverts, use either metal or concrete sloped end sections according to Standard Plan R-95 Series. When footings are required for precast end sections or precast sloped end sections, use either precast or cast in place footings. Form or place them at the locations and to the elevations shown on the plans.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
UTILITY WORK

BCY:KAZ 1 of 1 C&T:APPR:KB:DBP:09-04-08

a. Description. This item shall consist of reimbursement of payment the Contractor has made to the utilities. This includes reimbursement of payment to the power company for furnishing power at the location(s) shown in the plans and moving overhead power lines as required for truss transport. This also includes reimbursement of payment to the Road Commission for moving overhead signals as required for truss transport. The Contractor shall be reimbursed for actual paid permit fees and invoices to the utilities by submitting copies of the invoices to the Engineer, prior to making final payment, for this item, the Engineer may request documentation indicating that the invoices have been paid.

b. Materials. None Specified.

c. Construction. The contractor shall make application to the Utility Company listed below. The Engineer shall sign all application forms for the department.

Utility Company: Mr. Greg Squanda
Consumers Energy
(989) 791-5353

Mr. Adam Ball
Saginaw County Road Commission
(989) 752-6140

As soon as the contract is awarded, the contractor shall make his application to the utilities in order to have the above items completed within the required schedule. All final details and costs of the electrical power feed require approval of the engineer and will be paid for at invoice cost. No additional payment shall be allowed the contractor because of any delay caused by the power feed not being completed or the overhead utilities not moved.

d. Measurement and Payment. Reimbursement of payment to the power company for furnishing power at the location(s) shown in the plans and moving overhead power lines as required for truss transport, as well as payment to the Road Commission for moving overhead signals as required for truss transport will be made from the following contract item (pay item):

Contract Item (Pay Item)	**Pay Unit**
Utility Work	Dollar

Utility Work payment will be an amount reflecting the actual paid invoices to the utility as specified in this special provision and on the plans.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
FLOOD LUMINAIRE

BCY:KAZ 1 of 1 C&T:APPR:RJZ:LML:09-04-08

a. Description. This item shall consist of furnishing materials and labor required to install luminaries and posts as shown on the plans. All work shall be in accordance with the National Electrical Code (NEC).

b. Materials. The following materials shall be provided to make up a complete flood luminaire unit.

1. Luminaire. Lithonia: Model KFL2 70M with mounting plate and enhanced corrosion resistance.

2. Voltage. All fixtures to be 120 volt with each unit fused separately.

3. Lenses. Lenses shall be clear, beam shall be trapezoid type.

c. Construction. Installation shall be per manufacturers specifications. Install fixtures as indicated on plan details. All wiring and grounding is to comply with N.E.C. requirements.

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

Contract Item (Pay Item)	**Pay Unit**
Flood Luminaire	Each

Flood Luminaire includes all materials, equipment and labor required for a complete and operational installation. The contractor shall refer to the contract drawings for the quantities. No additional payment will be provided for any accessories or fittings required for proper operation of these units.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
LIGHTING CONTROL PANEL WITH RACK

BCY:KAZ 1 of 2 C&T: APPR:RJZ:DBP:08-28-08

a. Description. This item shall consist of furnishing materials and labor as called for by the plans to make a complete operating Lighting Control Panel with Rack unit to provide electrical operation of the lighting fixtures. All work shall be in accordance with the National Electrical Code (NEC).

b. Materials. The following materials shall be provided to make up a complete control panel.

1. Rack (Support Structure). The Rack shall be constructed of galvanized unistrut. The rack shall include concrete footings, 2 inch by 2 inch by 1/4 inch square steel posts, and all necessary mounting hardware.

2. Control Panel. The panel shall be rated NEMA type 4X (stainless steel) and the enclosure shall be equipped with a hasp to padlock. The hasp shall be of a size to accommodate a No. 2 Master Lock shank. The control panel shall be equipped with a swing out panel to mount the main disconnect handle, selector switches and pilot lights. The main disconnect, circuit breakers, lighting contactors and other devices shall be accessible through the swing out panel separated after the power is disconnected by the Main Disconnect. The unit shall be Hoffman, Rittal, Saginaw Engineering or approved equal.

3. Lighting Contactor. The lighting contactors shall be two-wire, 600 volt rating, single phase, 25 ampere, two-pole and shall be actuated by a photo-electrical control. The lighting contactor shall be controlled by the hand-off-automatic switch and circuit breaker. Supply the required number of contactors to support the required branch circuits. The unit shall be Square D, Allen-Bradley, General Electric or approved equal.

4. Circuit Breakers. Provide circuit breakers for panel power and each individual lighting circuit for Lighting Control. The circuit breakers shall be thermal magnetic molded case type with an AIC rating of 1 QKVA. The circuit breakers shall be 240 VAC, 2-pole and 120 VAC 1-pole as required. The circuit breakers shall be UL listed. The unit shall be Square D, Siemens, General Electric or approved equal.

5. Selector Switch. Shall be used for manual operator interface with the system. The switches shall include a legend plate and have the same NEMA rating as the enclosure they are to be mounted on. Contact arrangements shall be as required (minimum 1 NO and 1 NC) with each contact rated for 10 amps at 120 VAC. Selector switches shall be 2, 3, or 4 position as required by the application. Colors shall be as selected by the Engineer to meet the Owners standards. Selector switches shall be Allen-Bradley 800T, Square D Class 9001, General Electric, Bulletin CR1 04P, or approved equal.

6. Photo-electrical control. The photo-electrical control shall be set to properly operate

the lighting contactor between the hours of dusk and dawn. The entire system shall be so selected and adjusted that there shall be no “cycling” of the streetscape lighting due to the photo-electrical control.

c. Construction. The lighting control panel shall be mounted as shown on the contract drawings as called for by the Engineer. Utilize rust proof unistrut and tubing for construction of control panel rack. All components are to be mounted to the control panel rack as shown on plan details utilizing rust proof mounting hardware. All wiring and grounding is to comply with N.E.C. requirements.

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

Contract Item (Pay Item)	**Pay Unit**
Lighting Control Panel with Rack	Each

Lighting Control Panel with Rack includes all materials, equipment and labor required for a complete and operational control panel. This includes designing, fabricating, wiring, mounting and installation of the panel and supporting rack as well as terminating of the incoming power line and outgoing wires to the lighting system.

All incidental items required for a finished and complete installation shall be included even though such items are not specified herein. The work shall include, but not be limited to, furnishing and installing the following items: Circuit breakers, fused safety switch with fuses, Panel Light, Convenience Outlet, Lighting contactor(s), Wire Block terminal, Wire Terminals, Wireway, Ground Bar, Photo-electric cell, Ground Bar, Ground rod and ground wire, Support steel & unistrut, General-1/C#12, Selector Switch, Under voltage relay, The Control Panel including the swing panel kit and subplates, 2 inch square tubing, Galvanized Unistrut, Concrete footings and Mounting hardware.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
LUMINAIRE AND POST

BCY:KAZ 1 of 1 C&T:APPR:RJZ:DBP:08-28-08

a. Description. This item shall consist of furnishing materials and labor required to install the complete luminarie and post as shown on the plans and as specified herein. Luminaire and post shall include the pole base, shaft, luminaire and all internal wiring from the connection at the supply conductors. All work shall be in accordance with the National Electrical Code (NEC).

b. Materials. The following materials shall be provided to make up a complete luminaire and pole unit.

1. Luminaire and Post. Eurotique Fixture: 175M MED-PCS-R_5-120-ANDB-2DS^3
   Arm: EAH4/1 ANDB
   Post: CMT Legacy Colophon, smooth pole, black, anchor base type.

2. Voltage. All fixtures to be 120 volt with each pole fused separately.

3. Lenses. Lenses shall be Polycarb, Clear Smooth, type IV distribution for MH lamps.

4. Ballast. MH ballast to be High Power Factor Reactor Type.

c. Construction. Installation shall be per manufacturers specifications. Install fixtures as indicated on plan details. All wiring and grounding must comply with N.E.C. requirements.

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

Contract Item (Pay Item)	**Pay Unit**
Luminaire and Post	Each

Luminaire and Post will be paid for at the contract unit price each, which shall be payment in full for furnishing all materials, equipment and labor required for a complete and operational installation. The contractor shall refer to the contract drawings for the quantities. No additional payment will be provided for any accessories or fittings required for proper operation of these units.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS
FOR
LIGHT POST FOUNDATION

BCY:KAZ 1 of 1 C&T:APPR:RJZ:SJW:10-10-08

a. Description. Furnish all labor, equipment and materials necessary to install the complete decorative lighting unit foundation as shown on the plans and as specified herein. Foundation shall include concrete, steel reinforcement, anchor bolts, bolt circle templates, conduit sleeves, nuts, ground rods, grounding conductor and all miscellaneous hardware required to complete the foundation.

b. Materials. Concrete, steel reinforcement, anchor bolts, templates conduits, nuts, washers, ground rods and ground conductors shall meet the requirements as specified or referenced in section 918 of the Standard Specification for Construction.

c. Construction. Foundations shall be installed per detail plans and shall meet the requirements as specified or referenced in section 918 of the Standard Specification for Construction. Foundation construction methods shall also meet the requirements of subsection 810.03.K of the Standard Specification for Construction. The Contractor shall be responsible for installing anchor bolts per bolt pattern as shown in the plans and as specified in the special provision for Luminaire and Post.

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

Contract Item (Pay Item)	**Pay Unit**
Post Fdn	Each

MICHIGAN DEPARTMENT OF TRANSPORTATION

QUANTITY SHEET SUMMARY

73999-101875 - 03 Spec Year

Sec Num	Item Num	Description	Unit	Brkd Id	Quantity
0001	1000001	Mobilization, Max. ____$190000.00	LS	004	1.00
				Item Total	**1.00**
0001	2010001	Clearing	Acre	004	0.50
				Item Total	**0.50**
0001	2020003	Tree, Rem, 37 inch or larger	Ea	010	1.00
				Item Total	**1.00**
0001	2030016	Sewer, Rem, 24 inch to 48 inch	Ft	010	72.00
				Item Total	**72.00**
0001	2040006	Curb and Gutter, Rem	Ft	010	132.00
				Item Total	**132.00**
0001	2040008	Guardrail, Rem	Ft	007	12.00
				Item Total	**12.00**
0001	2040009	Fence, Rem	Ft	010	78.00
				Item Total	**78.00**
0001	2040011	Pavt, Rem	Syd	010	34.00
				Item Total	**34.00**
0001	2040013	Sidewalk, Rem	Syd	010	268.00
				Item Total	**268.00**
0001	2047050	_Bollard, Rem	Ea	010	14.00
				Item Total	**14.00**
0001	2047050	_Gate, Rem	Ea	007	1.00
				Item Total	**1.00**
0001	2047050	_Planter, Conc, Rem	Ea	010	3.00
				Item Total	**3.00**
0001	2050010	Embankment, CIP	Cyd	009	45.00
				012	1.00
				Item Total	**46.00**
0001	2050016	Excavation, Earth	Cyd	009	370.00
				012	90.00
				014	50.00
				022	316.00
				Item Total	**826.00**
0001	2050050	Non Haz Contaminated Material Handling and Disposal, LM	Cyd	004	100.00
				Item Total	**100.00**
0001	2080006	Erosion Control, Inlet Protection, Fabric Drop	Ea	011	5.00
				Item Total	**5.00**
0001	2080025	Erosion Control, Silt Fence	Ft	008	2,000.00
				011	2,000.00
				Item Total	**4,000.00**
0001	3010002	Subbase, CIP	Cyd	012	65.00
				Item Total	**65.00**
0001	3020001	Aggregate Base	Ton	013	7.00
				Item Total	**7.00**
0001	3027011	_Aggregate Base, 6 inch, Modified	Syd	008	1,480.00
				011	435.00
				Item Total	**1,915.00**

0001	4010835	Culv End Sect, 24 inch	Ea	011	1.00
				Item Total	**1.00**
0001	4020007	Sewer, Cl A, 24 inch, Tr Det A	Ft	011	54.00
				Item Total	**54.00**
0001	4021275	Video Taping Sewer and Culv Pipe	Ft	004	54.00
				Item Total	**54.00**
0001	4030051	Dr Structure Cover	Lb	011	2,330.00
				Item Total	**2,330.00**
0001	4030053	Dr Structure Cover, Adj, Case 2	Ea	011	6.00
				Item Total	**6.00**
0001	4030067	Dr Structure, Tap, 24 inch	Ea	011	1.00
				Item Total	**1.00**
0001	5020025	Hand Patching	Ton	013	4.00
				Item Total	**4.00**
0001	5020061	HMA Approach	Ton	008	190.00
				011	56.00
				Item Total	**246.00**
0001	6020208	Joint, Expansion, E3	Ft	011	20.00
				Item Total	**20.00**
0001	6050100	Conc Quality Assurance	Cyd	004	100.00
				Item Total	**100.00**
0001	7060002	Conc, Grade S2	Cyd	011	1.00
				Item Total	**1.00**
0001	7060036	Reinforcement, Steel, Culv and Headwall	Lb	011	6.00
				Item Total	**6.00**
0001	8020023	Curb and Gutter, Conc, Det C4	Ft	013	95.00
				Item Total	**95.00**
0001	8030003	Sidewalk, Conc, 6 inch	Sft	011	2,805.00
				Item Total	**2,805.00**
0001	8030010	Sidewalk Ramp	Sft	013	87.00
				Item Total	**87.00**
0001	8030011	Sidewalk Ramp, ADA	Sft	013	120.00
				Item Total	**120.00**
0001	8100156	Post, Steel, 3 lb	Ft	013	30.00
				Item Total	**30.00**
0001	8100181	Sign, Type IIIB	Sft	013	13.00
				Item Total	**13.00**
0001	8110035	Pavt Mrkg, Ovly Cold Plastic, 6 inch, Crosswalk	Ft	013	74.00
				Item Total	**74.00**
0001	8110036	Pavt Mrkg, Ovly Cold Plastic, 12 inch, Crosswalk	Ft	013	96.00
				Item Total	**96.00**
0001	8120007	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	004	8.00
				Item Total	**8.00**
0001	8120008	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	004	8.00
				Item Total	**8.00**
0001	8120030	Flag Control	LS	004	1.00
				Item Total	**1.00**
0001	8120042	Lighted Arrow, Type C, Furn	Ea	004	2.00
				Item Total	**2.00**
0001	8120043	Lighted Arrow, Type C, Oper	Ea	004	2.00
				Item Total	**2.00**
0001	8120050	Minor Traf Devices	LS	004	1.00
				Item Total	**1.00**
0001	8120102	Plastic Drum, High Intensity, Lighted, Furn	Ea	004	25.00
				Item Total	**25.00**
0001	8120103	Plastic Drum, High Intensity, Lighted, Oper	Ea	004	25.00
				Item Total	**25.00**
0001	8120120	Sign, Type B, Temp, Furn	Sft	004	300.00
				Item Total	**300.00**

0001	8120121	Sign, Type B, Temp, Oper	Sft	004	300.00
				Item Total	**300.00**
0001	8150001	Site Preparation, Max. ___$8200.00	LS	014	1.00
				Item Total	**1.00**
0001	8150002	Watering and Cultivating, First Season, Min. ___$4000.00	LS	014	1.00
				Item Total	**1.00**
0001	8150003	Watering and Cultivating, Second Season, Min. ___$3000.00	LS	014	1.00
				Item Total	**1.00**
0001	8157050	_Malus 'Prairiefire', 1 1/2 inch	Ea	014	12.00
				Item Total	**12.00**
0001	8157050	_Pennisetum Alopecuroides 'Japonicum', Two Gallon Container	Ea	014	22.00
				Item Total	**22.00**
0001	8157050	_Physocarpus Opulifolius 'Seward', Three Gallon Container	Ea	014	14.00
				Item Total	**14.00**
0001	8157050	_Salvia Nemorosa 'May Night', One Gallon Container	Ea	014	58.00
				Item Total	**58.00**
0001	8157050	_Sedum 'Autumn Joy' Stonecrop, One Gallon Container	Ea	014	39.00
				Item Total	**39.00**
0001	8160013	Compost Surface, Furn, LM	Cyd	014	30.00
				Item Total	**30.00**
0001	8167011	_Turf Establishment, Performance	Syd	004	1,800.00
				Item Total	**1,800.00**
0001	8190155	Conduit, Schedule 80 PVC, 1 inch	Ft	015	320.00
				Item Total	**320.00**
0001	8190212	DB Cable, in Conduit, 600V, 1/C#8	Ft	015	320.00
				Item Total	**320.00**
0001	8190250	Hh, Polymer Conc	Ea	015	7.00
				Item Total	**7.00**
0001	8197001	_DB Cable, in Conduit, 600V, 1/C#12	Ft	015	755.00
				Item Total	**755.00**
0001	8197050	_Flood Luminaire	Ea	015	2.00
				Item Total	**2.00**
0001	8197050	_Lighting Control Panel with Rack	Ea	015	1.00
				Item Total	**1.00**
0001	8197050	_Luminaire and Post	Ea	015	6.00
				Item Total	**6.00**
0001	8197050	_Post Fdn	Ea	015	6.00
				Item Total	**6.00**
0001	8197060	_Utility Work	Dlr	004	20,000.00
				Item Total	**20,000.00**
0001	8507001	_Decorative Fence	Ft	014	66.00
				Item Total	**66.00**
0001	8507021	_Shredded Bark Mulch	Cyd	014	30.00
				Item Total	**30.00**
0001	8507050	_Bollard	Ea	011	4.00
				Item Total	**4.00**
0001	8507050	_Decorative Bench	Ea	014	4.00
				Item Total	**4.00**
0001	8507050	_Decorative Stone Column	Ea	014	9.00
				Item Total	**9.00**
0001	8507050	_Decorative Trash Receptacle	Ea	014	2.00
				Item Total	**2.00**
0001	8507050	_Removable Bollard	Ea	011	2.00
				Item Total	**2.00**
0002	2050015	Excavation, Channel	Cyd	022	327.00
				Item Total	**327.00**
0002	2060002	Backfill, Structure, CIP	Cyd	022	1,082.00
				Item Total	**1,082.00**
0002	2060010	Excavation, Fdn	Cyd	022	1,671.00

				Item Total	**1,671.00**
0002	2080004	Erosion Control, Gravel Filter Berm	Ft	020	150.00
				Item Total	**150.00**
0002	2080011	Erosion Control, Filter Bag	Ea	020	4.00
				Item Total	**4.00**
0002	2087001	_Turbidity Curtain (Deep)	Ft	020	200.00
				Item Total	**200.00**
0002	4040031	Underdrain, Fdn, 4 inch	Ft	022	140.00
				Item Total	**140.00**
0002	4040111	Underdrain, Outlet Ending, 4 inch	Ea	022	2.00
				Item Total	**2.00**
0002	6050101	Conc Quality Initiative	Dlr	031	700.00
				Item Total	**700.00**
0002	7040002	Steel Sheet Piling, Temp	Sft	022	1,197.00
				Item Total	**1,197.00**
0002	7040009	Cofferdams, Left in Place(P01 of 73999)	LS	022	1.00
				Item Total	**1.00**
0002	7057001	_Pile, Steel, Furn and Driven, 14 inch, LRFD	Ft	026	2,380.00
				Item Total	**2,380.00**
0002	7057050	_Pile Point, Steel, LRFD	Ea	026	43.00
				Item Total	**43.00**
0002	7057050	_Test Pile, Steel, 14 inch, LRFD	Ea	026	3.00
				Item Total	**3.00**
0002	7057051	_Pile Driving Equipment, Furn, LRFD (P01 of 73999)	LS	026	1.00
				Item Total	**1.00**
0002	7060004	Conc, Grade T	Cyd	031	320.00
				Item Total	**320.00**
0002	7060008	Conc Quality Assurance, Structure	Cyd	031	406.00
				Item Total	**406.00**
0002	7060010	Substructure Conc	Cyd	031	406.00
				Item Total	**406.00**
0002	7060032	False Decking	Sft	022	5,190.00
				Item Total	**5,190.00**
0002	7060035	Reinforcement, Steel, Epoxy Coated	Lb	044	41,186.00
				Item Total	**41,186.00**
0002	7060040	Water Repellent Treatment, Penetrating	Syd	031	390.00
				Item Total	**390.00**
0002	7070001	Structural Steel, Rolled Shape, Furn and Fab	Lb	041	38,500.00
				Item Total	**38,500.00**
0002	7070002	Structural Steel, Rolled Shape, Erect	Lb	041	60,900.00
				Item Total	**60,900.00**
0002	7070013	Structural Steel, Mixed, Furn and Fab	Lb	031	3,050.00
				041	7,300.00
				Item Total	**10,350.00**
0002	7070014	Structural Steel, Mixed, Erect	Lb	031	3,050.00
				041	7,300.00
				Item Total	**10,350.00**
0002	7070065	Bearing, Elastomeric, 1 inch	Sft	041	25.00
				Item Total	**25.00**
0002	7070071	Bearing, Elastomeric, 2 1/2 inch	Sft	041	11.00
				Item Total	**11.00**
0002	7077030	_Structural Steel, Furnish and Fab, Special	Lb	040	16,000.00
				Item Total	**16,000.00**
0002	7077050	_Structural Steel, Truss Pin, 2 1/2 inch dia	Ea	040	36.00
				Item Total	**36.00**
0002	7077051	_Structural Steel, Restoration and Erect	LS	040	1.00
				Item Total	**1.00**
0002	7090003	Timber and Lumber, Treated, Furn and Place	MBM	043	4.00
				Item Total	**4.00**

0002	7100001	Joint Waterproofing	Sft	031	170.00
				Item Total	**170.00**
0002	7117001	_Railing, Pedestrian	Ft	043	720.00
				Item Total	**720.00**
0002	7120034	Adhesive Anchoring of Vertical Bar, 3/4 inch	Ea	031	52.00
				Item Total	**52.00**
0002	7127051	_Structures, Rehabilitation, Rem Portions, Special	LS	022	1.00
				Item Total	**1.00**
0002	7150045	Steel Structure, Cleaning, Type 4(P01 of 73999)	LS	040	1.00
				Item Total	**1.00**
0002	7150046	Steel Structure, Coating, Type 4(P01 of 73999)	LS	040	1.00
				Item Total	**1.00**
0002	7160001	Field Repr of Damaged Coating(P01 of 73999)	LS	041	1.00
				Item Total	**1.00**
0002	8080013	Fence, Chain Link, 72 inch	Ft	018	884.00
				Item Total	**884.00**
0002	8080063	Fence Gate, 16 foot, for 72 inch Chain Link Fence	Ea	018	1.00
				Item Total	**1.00**
0002	8080120	Fence, Moving	Ft	018	190.00
				Item Total	**190.00**
0002	8137011	_Riprap, Heavy, Modified	Syd	004	100.00
				020	715.00
				Item Total	**815.00**
0002	8507010	_Wood Deck	Sft	043	3,457.00
				Item Total	**3,457.00**
0002	8507051	_Existing Truss, Rem and Transport	LS	018	1.00
				Item Total	**1.00**
0002	8507051	_Existing Truss, Transport and Install	LS	018	1.00
				Item Total	**1.00**

Overall Total: 236,178.50

NOTICE TO BIDDERS - INQUIRY

All inquiries concerning the plans and proposal for this project are to be directed to:

Kimberly Zimmer, P.E.
Name

Cost & Scheduling Engineer
Title

zimmerk@michigan.gov
E-mail Address

(989) 671-1555
Phone

All inquiries must be made by E-mail through the electronic proposal system at MDOT's e-Proposal website – www.michigan.gov/mdot-eprop . Telephone inquiries will not be answered. To be able to process and distribute an addendum, if required, all inquiries shall be made at least seven (7) calendar days before the letting. Inquiries made after this date will be considered by MDOT, but will not require a response.

Inquiries made by E-mail must include the following information:

- Proposal Item Number
- Contract ID
- Name of Inquiring Person
- Company Name
- Phone and E-mail address
- Detailed question(s) with reference to proposal page and plan sheet number

Other employees of MDOT have been instructed to direct all inquiries to the person mentioned above.

2/11/2009

APPENDIX A
PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS

In connection with the performance of work under this contract; the contractor agrees as follows:

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

2. The contractor hereby agrees that any and all subcontractors to this contract, whereby a portion of the work set forth in this contract is to be performed, shall contain a covenant the same as in herein before set forth in section 1 of this Appendix.

3. The contractor will take affirmative action to insure that applicants for employment and employees are treated without regard to their race, color, religion, national origin sex, height, weight, marital status or disability that is unrelated to the individual's ability to perform the duties of a particular job or position. Such action shall include, but not b limited to the following; employment, upgrading, demotion or transfer, recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

4. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, sex, height, marital status or disability that is unrelated to the individuals ability to perform the duties of a particular job or position.

5. The contractor or his collective bargaining representative will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representative of the contractor's commitments under this appendix.

6. The contractor will comply with relevant published rules, regulations, directives, and orders of the Michigan Civil Rights Commission which may be in effect prior to the taking of bids for any individual state project.

7. The contractor will furnish and file compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission, said forms may also elicit information as to the practices, policies, program and employment statistics of each subcontractor as well as the contractor himself, and said contractor will permit access to his books, records, and accounts by the Michigan Civil Rights Commission, and/or its agent, for purposes of investigation to ascertain compliance with this contract and relevant with rules, regulations, and orders of the Michigan Civil Rights Commission.

8. In the event that the Civil Rights Commission finds, after a hearing held pursuant to its rules, that a contractor has not complied with the contractual obligations under this agreement, the Civil Rights Commission may, as a part of its order based upon such findings, certify said findings to the Administrative Board of the State of Michigan, which Administrative Board may order the cancellation of the contract found to have been violated, and/or declare the contractor ineligible for future contracts with the state and its political and civil subdivisions, departments, and officers, and including the governing boards of institutions of higher education, until the contractor complies with all of the persons with whom the contractor is declared ineligible to contract as a contracting party in future contracts. In any case before the Civil Rights Commission in which cancellation of an exiting contract is a possibility, the contracting agency shall be notified of such possible remedy and shall be given the option by the Civil Rights Commission to participate in such proceedings.

9. The contractor will include, or incorporate by reference, the provisions of the forgoing paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Michigan Civil Rights Commission, and will provide in every subcontract or purchase order that said provisions will be binding upon each subcontractor or seller.

**The Civil Rights Commission referred to as the Michigan Civil Rights Commission*

March, 1990

APPENDIX B
CERTIFICATION FOR FEDERAL-AID CONTRACTS

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

TITLE VI ASSURANCE

APPENDIX C

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation, Title 49, code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

2. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulation, including employment practices when the contractor covers a program set forth in Appendix B of the Regulations.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under the contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the State Highway department of the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the State highway department, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the State highway department shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

    (a) withholding of payments to the contractor under the contract until the contractor complies, and/or

    (b) cancellation, termination or suspension of the contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the State highway department or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the State highway department to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. **The offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Employment Specifications" set forth herein.**

2. **The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:**

Timetables:

Goals for Minority participation for each trade:	14.3	**%**
Goals for female participation in each trade:	6.9	**%**

These goals are applicable to all the contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligation required by the specifications set forth in 41 CFR 60-4.3 (a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60.4. Compliance with the goals will be measured against the total work hours performed.

CONTRACTOR SHALL COMPLY

3. **The Contractor shall provide written notification to the *DIRECTOR OF THE OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS within ten (10) working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.**

   * **Notification shall be forwarded to the OFCCP office for the county in which the project is located. See page 6 for the proper address.**

4. **As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is: State**

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

(i) Black (all person having origins in any of the Black African racial groups not of Hispanic origin); and

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture of origin, regardless of race); and

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, South East Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitation from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60.4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such

Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. **The Contractor shall implement the specific affirmative action standards provided in paragraph 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal of federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals is each craft during the period specified.**

5. **Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.**

6. **In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.**

7. **The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:**

a. **Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.**

b. **Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.**

c. **Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a**

union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. **Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.**

e. **Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.**

f. **Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction is performed.**

g. **Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.**

h. **Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.**

I. **Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.**

j. **Encourage present minority and female employees to recruit other minority persons**

and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60.3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetable, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. **The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.**

12. **The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.**

13. **The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.**

14. **The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.**

15. **Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g. those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).**

Detroit Area Office

Christopher Edwards, Area Office Director
U.S. DOL/ESA/OFCCP
Detroit Area Office
211 West Fort Street
Detroit, Michigan 48226
Phone: 313/226-3728

Michigan Counties:

Alcona	**Benzie**	**Clare**	**Grand Traverse**	**Isabella**	**Lenawee**
Allegan	**Berrien**	**Clinton**	**Gratiot**	**Kalamazoo**	**Livingston**
Alpena	**Branch**	**Crawford**	**Hillsdale**	**Kalkaska**	**Macomb**
Antrim	**Calhoun**	**Eaton**	**Huron**	**Kent**	**Manistee**
Arenac	**Cass**	**Emmet**	**Ingham**	**Lake**	**Mason**
Barry	**Charlevoix**	**Genesee**	**Ionia**	**Lapeer**	**Mecosta**
Bay	**Cheboygan**	**Gladwin**	**Iosco**	**Leelanau**	**Midland**

Michigan Counties:

Missaukee	**Oceana**	**Roscommon**	**Van Buren**
Monroe	**Ogemaw**	**St. Clair**	**Washtenaw**
Montcalm	**Osceola**	**St. Joseph**	**Wayne**
Montmorency	**Oscoda**	**Saginaw**	**Wexford**
Muskegon	**Otsego**	**Sanilac**	
Newaygo	**Ottawa**	**Shiawassee**	
Oakland	**Presque Isle**	**Tuscola**	

Milwaukee Area Office

Mr. Robert Potter
U.S. DOL/ESA/OFCCP
Milwaukee Area Office
Reuss Federal Bldg., Room 1115
310 West Wisconsin
Milwaukee, Wisconsin 53203
Phone: 414/291-3822

Michigan Counties:

Alger	**Delta**	**Houghton**	**Luce**	**Menominee**
Baraga	**Dickinson**	**Iron**	**Mackinac**	**Ontonagon**
Chippewa	**Gogebic**	**Keweenaw**	**Marquette**	**Schoolcraft**

SPECIAL PROVISIONS

23 CFR CH.1 P 4.230, SUBPT..a, APP. A

Specific Equal Employment Opportunity Responsibilities

1. General

   a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form PR-1273 or 1316, as appropriate) and these Special Provisions that are imposed pursuant to Section 140 of Title 23, U.S.C. as established by Section 22 of the Federal Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.

   b. The contractor will work with the State highway agencies and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

   c. The contractors and all his/her subcontractors holding subcontracts not including material suppliers, of $10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as Contractors and Subcontractors.) The Contractor will include these requirements in every subcontract of $10,000 or more with such modification of language as is necessary to make them binding on the Subcontractor.

2. Equal Employment Opportunity Policy

   The contractor will accept as operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

   It is the policy of this Company to assure that applicants are employed and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

3. Equal Employment Opportunity Officer

   The contractor will designate and make known to the State highway agency contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy

   a. All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

      (1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

      (2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.

      (3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the contractor's procedures for locating and hiring minority group employees.

   b. In order to make the contractor's equal employment opportunity policy known to all employees, prospective employees, and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will take the following actions:

      (1) Notice and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment, and potential employees.

      (2) The contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment

a. When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including but not limited to, State employment agencies, schools, colleges, and minority group organizations. To meet this requirement, the contractor will, through his EEO Officer, identify sources of potential minority group employees, and establish with such identified sources of procedures whereby minority group applicants may be referred to the Contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourag his present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

6. Personnel Actions

Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all avenues of appeal.

7. Training and Promotion

a. The contractor will assist in locating, qualifying, and increasing the skill of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the Contractor shall make full use of training programs i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event the Training Special Provision is provided under this contract, this subparagraph will be superseded as indicated in Attachment 2.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. Unions

If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use their best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such

information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the State highway department and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, or national origin, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the State highway agency.

9. Subcontracting

a. The contractor will use his best efforts to solicit bids from and to utilize minority group subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from State highway agency personnel.

b. The contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. Records and Reports

a. The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate:

(1) the number of minority and non-minority group members and women employed in each work classification on the project:

(2) the progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force),

(3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and the progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State highway agency and the Federal Highway Administration.

c. The contractor will submit to the State highway agency a monthly report for the first three months after construction begins and every month of July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR-1391. If on-the-job training is being required by "Training Special Provision," the contractor will be required to furnish Form FHWA 1409.

General Decision Number: MI080007 07/24/2009 MI7

Superseded General Decision Number: MI20070007

State: Michigan

Construction Types: Highway (Highway, Airport & Bridge xxxxx
and Sewer/Incid. to Hwy.)

Counties: Michigan Statewide.

Modification Number	Publication Date
0	02/08/2008
1	03/07/2008
2	03/21/2008
3	04/11/2008
4	05/02/2008
5	06/06/2008
6	06/13/2008
7	06/20/2008
8	07/11/2008
9	07/18/2008
10	07/25/2008
11	09/05/2008
12	10/17/2008
13	11/07/2008
14	11/28/2008
15	12/19/2008
16	01/16/2009
17	01/23/2009
18	02/20/2009
19	03/06/2009
20	03/20/2009
21	04/03/2009
22	04/10/2009
23	04/24/2009
24	05/01/2009
25	06/05/2009
26	06/12/2009
27	06/19/2009
28	07/03/2009
29	07/24/2009

CARP0004-004 06/01/2007

LIVINGSTON COUNTY (Townships of Brighton, Deerfield, Genoa,
Hartland, Osceola and Tyrone); MACOMB, MONROE, OAKLAND,
SANILAC, ST. CLAIR AND WAYNE COUNTIES:

	Rates	Fringes
CARPENTER (Piledriver).....	$ 28.88	15.48

CARP0004-005 06/01/2007

DOES NOT INCLUDE LIVINGSTON COUNTY (Townships of Brighton, Deerfield, Genoa, Hartland, Osceola and Tyrone); MACOMB, MONROE, OAKLAND, SANILAC, ST. CLAIR AND WAYNE COUNTIES:

	Rates	Fringes
CARPENTER (Piledriver)	$ 26.42	10.20

FOOTNOTE:

DIVER: to be paid one and one-half (1-1/2) times the regular journeyperson rate.

ELEC0017-005 06/02/2008

HURON COUNTY; INGHAM COUNTY (Townships of Leroy, Locke, Wheatfield, White Oak and Williamson); LAPEER COUNTY; LENAWEE COUNTY (Townships of Clinton and Macon); LIVINGSTON COUNTY (Townships of Brighton, Conway, Genoa, Green Oak, Hamburg, Handy, Hartland, Howell, Iosco, Marion, Oceola and Putnam); MACOMB COUNTY; MONROE COUNTY (Townships of Ash, Berlin, Dundee, Exeter, Frenchtown, Ida, London, Milan, Monroe, Raisinville and Summerfield); OAKLAND, ST. CLAIR, SANILAC AND TUSCOLA COUNTIES; WASHTENAW COUNTY (Townships of Ann Arbor, Augusta, Bridgewater, Dexter, Freedom, Lima, Lodi, Northfield, Pittsfield, Salem, Saline, Scio, Superior, Webster, York and Ypsilanti); AND WAYNE COUNTY:

	Rates	Fringes
Line Construction		
Groundman/Driver	$ 24.51	4.80+25.75%
Journeyman Signal Tech	$ 33.31	4.80+25.75%
Journeyman Specialist	$ 38.31	4.80+25.75%
Operator A	$ 28.20	4.80+25.75%
Operator B	$ 26.34	4.80+25.75%

Classifications

Journeyman Specialist: Refers to a crew of only one person working alone.
Operator A: Shall be proficient in operating all power equipment including: Backhoe, Excavator, Directional Bore and Boom/Digger truck.
Operator B: Shall be proficient in operating any 2 of the above mentioned pieces of equipment listed under Operator A.

ELEC0876-001 06/02/2008

	Rates	Fringes
LINE CONSTRUCTION		
Cable splicer	$ 33.85	4.75+23.75%
Light equipment		

operator/groundman/truck driver/groundman (winch, A frame, diggers when used for distribution line truck and used for distribution work, distribution truck driver, 5th wheel type trucks, bucket trucks, ladder trucks and all live boom trucks, all equipment 85 hp or under).....$ 21.42 4.75+23.75%
Line technician.....$ 32.51 4.75+23.75%
Operator/groundman (digger, tractor and setting rig with tracks or rough terrain vehicle, large bombardier, backhoe over 85 hp, hydraulic crane 10 ton or over).....$ 24.45 4.75+23.75%
Truck driver/groundman(trucks with winch or boom or dump, other than distribution work).....$ 20.39 4.75+23.75%

FOOTNOTE: Operators of 5/8 yard, rated capacity, backhoe or over; and operators of 25 ton, rated capacity, crane or over; and operators of heavy duty tension or pulling machinery on 345 KV and above: to receive the journeyman line technician rate of pay.

ENGI0324-003 06/01/2009

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LENAWEE, LIVINGSTON, MACOMB, MIDLAND, MONROE, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLAIR, SANILAC, SHIAWASSEE, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Steel Ereection)		
GROUP 1	$ 42.47	18.35
GROUP 2	$ 43.47	18.35
GROUP 3	$ 40.97	18.35
GROUP 4	$ 41.97	18.35
GROUP 5	$ 39.47	18.35
GROUP 6	$ 40.47	18.35
GROUP 7	$ 39.20	18.35
GROUP 8	$ 40.20	18.35
GROUP 9	$ 38.75	18.35
GROUP 10	$ 39.75	18.35
GROUP 11	$ 38.02	18.35

GROUP 12	$ 39.02	18.35
GROUP 13	$ 37.66	18.35
GROUP 14	$ 38.66	18.35
GROUP 15	$ 37.02	18.35
GROUP 16	$ 30.21	18.35
GROUP 17	$ 28.80	18.35
GROUP 18	$ 35.57	18.35

FOOTNOTE:

Paid Holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Engineer when operating combination of boom and jib 400' or longer

GROUP 2: Engineer when operating combination of boom and jib 400' or longer on a crane that requires an oiler

GROUP 3: Engineer when operating combination of boom and jib 300' or longer

GROUP 4: Engineer when operating combination of boom and jib 300' or longer on a crane that requires an oiler

GROUP 5: Engineer when operating combination of boom and jib 220' or longer

GROUP 6: Engineer when operating combination of boom and jib 220' or longer on a crane that requires an oiler

GROUP 7: Engineer when operating combination of boom and jib 140' or longer

GROUP 8: Engineer when operating combination of boom and jib 140' or longer on a crane that requires an oiler

GROUP 9: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level)

GROUP 10: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level) on a crane that requires an oiler

GROUP 11: Engineer when operating combination of boom and jib 120' or longer

GROUP 12: Engineer when operating combination of boom and jib 120' or longer on a crane that requires an oiler

GROUP 13: Crane operator; job mechanic and 3 drum hoist and excavator

GROUP 14: Crane operator on a crane that requires an oiler

GROUP 15: Hoisting operator; 2 drum hoist and rubber tired backhoe

GROUP 16: Compressor or welder operator

GROUP 17: Oiler

GROUP 18: Forklift and 1 drum hoist

ENGI0324-004 05/01/2008

AREA 1: ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, EATON, HILLSDALE, IONIA, KALAMAZOO, KENT, LAKE, MANISTEE, MASON, MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH, VAN BUREN

AREA 2: ANTRIM, BENZIE, CHARLEVOIX, EMMET, GRAND TRAVERSE, KALKASKA, LEELANAU, MISSAUKEE AND WEXFORD COUNTIES:

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Steel Erection)		
AREA 1		
GROUP 1	$ 28.74	16.75
GROUP 2	$ 28.49	16.75
GROUP 3	$ 27.99	16.75
GROUP 4	$ 22.89	16.75
GROUP 5	$ 21.24	16.75
GROUP 6	$ 18.64	16.75
AREA 2		
GROUP 1	$ 28.74	16.75
GROUP 2	$ 28.49	16.75
GROUP 3	$ 27.49	16.75
GROUP 4	$ 22.59	16.75
GROUP 5	$ 20.94	16.75
GROUP 6	$ 18.14	16.75

FOOTNOTES:

Crane operator with main boom and jib 300' or longer: $1.50 additional to the group 1 rate. Crane operator with main boom and jib 400' or longer: $3.00 additional to the group 1 rate.

Certified Crane Operator Premiums:

a) Swing Boom Truck Operator over 12 tons-$.50 per hour

b) Hydraulic Crane Operator 75 tons and under-$.75 per hour
c) Hydraulic Crane Operator over 75 tons-$1.00 per hour
d) Lattiee Boom Crane Operator-$1.50 per hour

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

GROUP 1: Crane Operator with main boom & jib 400', 300', or 220' or longer. Tower Crane Operator with CCO certification for combined length of mast and boom 220' or longer.

GROUP 2: Crane Operator with main boom & jib 140' or longer, Tower Crane(Operators without CCO certification, or less than 220' length) Gantry Crane; Whirley Derrick.

GROUP 3: Regular Equipment Operator, Crane, Dozer, Loader, Hoist, Straddle Wagon, Mechanic, Grader and Hydro Excavator.

GROUP 4: Air Tugger (single drum), Material Hoist Pump 6" or over, Elevators, Brokk Concrete Breaker.

GROUP 5: Air Compressor, Welder, Generators, Conveyors

GROUP 6: Oiler and fire tender

ENGI0324-005 09/01/2008

AREA 1: ALCONA, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, EATON, EMMET, GLADWIN, GRAND TRAVERSE, GRATIOT, HILLSDALE, HURON, INGHAM, IONIA, IOSCO, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, LAKE, LEELANAU, LENAWEE, MANISTEE, MASON, MECOSTA, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LAPEER, LIVINGSTON, MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Undrground construction (including sewer)		
AREA 1:		
GROUP 1	$ 27.47	16.80
GROUP 2	$ 22.58	16.80
GROUP 3	$ 22.08	16.80
GROUP 4	$ 21.80	16.80
AREA 2:		
GROUP 1	$ 29.18	16.80
GROUP 2	$ 24.45	16.80
GROUP 3	$ 23.72	16.80
GROUP 4	$ 23.15	16.80

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Backfiller tamper; Backhoe; Batch plant operator (concrete); Clamshell; Concrete paver (2 drums or larger); Conveyor loader (Euclid type); Crane (crawler, truck type

or pile driving); Dozer; Dragline; Elevating grader; Endloader; Gradall (and similar type machine); Grader; Mechanic; Power shovel; Roller (asphalt); Scraper (self-propelled or tractor drawn); Side boom tractor (type D-4 or equivalent and larger); Slip form paver; Slope paver; Trencher (over 8 ft. digging capacity); Well drilling rig; Concrete pump with boom operator; Hydro Excavator

GROUP 2: Boom truck (power swing type boom); Crusher; Hoist; Pump (1 or more - 6-in. discharge or larger - gas or diesel- powered or powered by generator of 300 amperes or more - inclusive of generator); Side boom tractor (smaller than type D-4 or equivalent); Tractor (pneu-tired, other than backhoe or front end loader); Trencher (8-ft. digging capacity and smaller);Vac Truck

GROUP 3: Air compressors (600 cfm or larger); Air compressors (2 or more-less than 600 cfm); Boom truck (non-swinging, non- powered type boom); Concrete breaker (self-propelled or truck mounted - includes compressor); Concrete paver (1 drum-l/2 yd. or larger); Elevator (other than passenger); Maintenance person; Pump (2 or more-4-in. up to 6-in. discharge-gas or diesel powered - excluding submersible pumps); Pumpcrete machine (and similar equipment); Wagon drill (multiple); Welding machine or generator (2 or more-300 amp. or larger - gas or diesel powered)

GROUP 4: Boiler; Concrete saw (40 hp or over); Curing machine (self-propelled); Farm tractor (with attachment); Finishing machine (concrete); Fire person; Hydraulic pipe pushing machine; Mulching equipment; Oiler; Pumps (2 or more up to 4-in. discharge, if used 3 hours or more a day, gas or diesel powered - excluding submersible pumps); Roller (other than asphalt); Stump remover; Trencher (service); Vibrating compaction equipment, self-propelled (6 ft. wide or over); End dump operator; Sweeper (Wayne type); Water wagon and Extend-a boom forklift

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ENGI0324-006 06/01/2009

AREA 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES
AREA 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

	Rates	Fringes
Power equipment operators: (AIRPORT, BRIDGE & HIGHWAY CONSTRUCTION)		
AREA 1		
GROUP 1	$ 27.91	17.85
GROUP 2	$ 21.18	17.85
GROUP 3	$ 22.48	17.85
GROUP 4	$ 20.62	17.85
GROUP 5	$ 20.45	17.85
AREA 2		
GROUP 1	$ 27.91	17.85
GROUP 2	$ 21.03	17.85
GROUP 3	$ 22.33	17.85
GROUP 4	$ 20.47	17.85
GROUP 5	$ 20.15	17.85

FOOTNOTE:

Crane premiums: Swing boom truck operator over 12 tons: $.50 per hour additional. Hydraulic crane operator 75 tons and under: $.75 per hour additional. Hydraulic crane operator over 75 tons: $1.00 per hour additional. Lattice boom crane operator: $1.50 per hour additional.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Asphalt plant operator; Crane operator (does not include work on bridge construction projects when the crane operator is erecting structural components); Dragline operator; Shovel operator; Locomotive operator; Paver operator (5 bags or more); Elevating grader operator; Pile driving operator; Roller operator (asphalt); Blade grader operator; Trenching machine operator (ladder or wheel type); Auto-grader; Slip form paver; Self-propelled or tractor-drawn scraper; Conveyor loader operator (Euclid type); Endloader operator (1 yd. capacity and over); Bulldozer; Hoisting engineer; Tractor operator; Finishing machine operator (asphalt); Mechanic; Pump operator (6-in. discharge or over, gas, diesel powered or generator of 300 amp. or larger); Shouldering or gravel distributing machine operator (self- propelled); Backhoe (with over 3/8 yd. bucket); Side boom tractor (type D-4 or equivalent or larger); Tube finisher (slip form paving); Gradall (and similar type machine); Asphalt paver (self- propelled); Asphalt planer (self-propelled); Batch plant (concrete-central mix); Slurry machine (asphalt); Concrete pump (3 in. and over); Roto-mill; Swinging boom truck (over 12 ton capacity); Hydro demolisher (water blaster); Farm-type tractor with attached pan

GROUP 2: Screening plant operator; Washing plant operator; Crusher operator; Backhoe (with 3/8 yd. bucket or less); Side boom tractor (smaller than D-4 type or equivalent); Sweeper (Wayne type and similar equipment); Vacuum truck operator; Batch plant (concrete dry batch)

GROUP 3: Grease Truck

GROUP 4: Air compressor operator (600 cu. ft. per min or more); Air compressor operator (two or more, less than 600 cfm); Wagon drill operator; Concrete breaker; Tractor operator (farm type with attachment)

GROUP 5: Boiler fire tender; Oiler; Fire tender; Trencher (service); Flexplane operator; Cleftplane operator; Grader operator (self-propelled fine-grade or form (concrete)); Finishing machine operator (concrete); Boom or winch hoist truck operator; Endloader operator (under 1 yd. capacity); Roller operator (other than asphalt); Curing equipment operator (self-propelled); Concrete saw operator (40 h.p. or over); Power bin operator; Plant drier operator (asphalt); Vibratory compaction equipment operator (6 ft. wide or over); Guard post driver operator (power driven); All mulching equipment; Stump remover; Concrete pump (under 3-in.); Mesh installer (self- propelled); Tractor operator (farm type); End dump; Skid steer

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ENGI0324-007 05/01/2009

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Steel Erection)		
Compressor, welder and forklift	$ 24.53	17.55
Crane operator, main boom & jib 120' or longer	$ 28.28	17.55
Crane operator, main boom & jib 140' or longer	$ 28.53	17.55
Crane operator, main boom & jib 220' or longer	$ 28.78	17.55
Mechanic with truck and tools	$ 29.28	17.55
Oiler and fireman	$ 23.23	17.55
Regular operator	$ 27.78	17.55

PREMIUM RATES:

A. Swing boom truck operator over 15 tons-$.50 per hour.
B. Hydraulic crane operator 75 tons and under-$.75 per hour.
C. Hydraulic crane operator over 75 tons-$1.00 per hour.
D. Lattice boom crane operator-$1.50 per hour.

ENGI0324-008 10/01/2008

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX,

CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MONROE, MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Sewer Relining)		
GROUP 1	$ 27.82	11.35
GROUP 2	$ 26.29	11.35

SEWER RELINING CLASSIFICATIONS

GROUP 1: Operation of audio-visual closed circuit TV system, including remote in-ground cutter and other equipment used in connection with the CCTV system

GROUP 2: Operation of hot water heaters and circulation systems, water jetters and vacuum and mechanical debris removal systems

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ENGI0325-010 05/01/2009

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Underground Construction)		
Crane operator, main boom & jib 120' or longer	$ 27.88	17.55
Crane operator, main boom & jib 140' or longer	$ 28.13	17.55
Crane operator, main boom & jib 220' or longer	$ 28.38	17.55
GROUP 1	$ 27.38	17.55
GROUP 2	$ 24.13	17.55
GROUP 3	$ 23.55	17.55
GROUP 4	$ 22.61	17.55
Mechanic with truck and tools	$ 28.88	17.55

FOOTNOTES: Swing boom truck operator over 15 tons: $.50 per hour additional. Hydraulic crane operator 75 tons and under: $.75 per hour additional. Hydraulic crane operator

over 75 tons: $1.00 per hour additional. Lattice boom crane operator: $1.50 per hour additional. Crusher pit, shafts and tunnel workers: $2.00 per hour additional.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Regular equipment operator, crane, dozer, front end loader, job mechanic, pumpcrete and squeezecrete, concrete pump, excavator, milling and pulverizing machines, scraper (self-propelled and tractor drawn), welder

GROUP 2: Air track drill, boom truck (non-swing), concrete mixer, material hoist and tugger, pump 6" and over, beltcrete, sweeping machine, trencher, winches, well points and freeze systems

GROUP 3: Air compressor, conveyor, concrete saw, farm tractor (without attachments), fork truck, generator, guard post driver, mulching machine, pumps under 6-in., welding machine and grease person

GROUP 4: Oiler, fire tender, heater operator, brock concrete breaker, elevators (other than passenger), end dumps and skid steer

Crane Operator with main boom and jib 300' or longer shall be paid an additional one dollar and fifty cents ($1.50) per hour above the 220' of boom and jib wage rate.

Crane Operator with main boom and jib 400' or longer shall be paid an additional one dollar and fifty cents ($1.50) per hour above the 300 foot of boom wage rate ($3.00)

ENGI0325-011 10/01/2008

AREA 1: GENESEE, LAPEER, LIVINGSTON, MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

	Rates	Fringes
Power equipment operators - hazardous waste removal:		

(AREA 1)

AREA 1: LEVEL A		
Engineer when operating crane with boom and jib or leads 140' or longer....	$ 34.38	16.75
Engineer when operating crane with boom and jib or leads 220' or longer....	$ 34.68	16.75
GROUP 1.....	$ 31.73	16.75
GROUP 2.....	$ 27.50	16.75
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator.....	$ 32.70	16.75
AREA 1: LEVEL B AND C		
Engineer when operating crane with boom and jib or leads 140' or longer....	$ 33.43	16.75
Engineer when operating crane with boom and jib or leads 220' or longer....	$ 33.73	16.75
GROUP 1.....	$ 30.78	16.75
GROUP 2.....	$ 26.55	16.75
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, pwer shovel operator.....	$ 31.75	16.75
AREA 1: LEVEL D WHEN CAPPING LANDFILL		
Engineer when operating crane with boom and jib or leads 140' or longer....	$ 31.88	16.75
Engineer when operating crane with boom and jib or leads 220' or longer....	$ 32.18	16.75
GROUP 1.....	$ 29.23	16.75
GROUP 2.....	$ 25.00	16.75
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator.....	$ 29.58	16.75
AREA 1: LEVEL D		
Engineer when operating crane with boom and jib or leads 140' or longer....	$ 32.13	16.75
Engineer when operating crane with boom and jib or leads 220' or longer....	$ 32.43	16.75
GROUP 1.....	$ 29.48	16.75
GROUP 2.....	$ 25.25	16.75
Regular crane operator,		

mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator......	$ 30.45	16.75
Power equipment operators - hazardous waste removal: (AREA 2)		
AREA 2: LEVELS B AND C		
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator......	$ 30.04	16.75
AREA 2: LEVEL A		
Engineer when operating crane with boom and jib or leads 140' or longer....	$ 32.67	16.75
Engineer when operating crane with boom and jib or leads 220' or longer....	$ 32.97	16.75
GROUP 1.....	$ 30.02	16.75
GROUP 2.....	$ 25.62	16.75
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator......	$ 30.99	16.75
AREA 2: LEVEL D WHEN CAPPING LANDFILL		
Engineer when operating crane with boom and jib or leads 140' or longer....	$ 30.17	16.75
Engineer when operating crane with boom and jib or leads 220' or longer....	$ 30.47	16.75
GROUP 1.....	$ 27.52	16.75
GROUP 2.....	$ 23.13	16.75
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator......	$ 28.49	16.75
AREA 2: LEVEL D		
Engineer when operating crane with boom and jib or leads 140' or longer....	$ 30.42	16.75
Engineer when operating crane with boom and jib or leads 220' or longer....	$ 30.72	16.75
GROUP 1.....	$ 27.77	16.75
GROUP 2.....	$ 23.38	16.75
Regular crane operator, mechanic, dragline		

operator, boom truck
operator and concrete
pump with boom operator,
power shovel operator.....$ 28.74 16.75
AREA 2: LEVELS B AND C
Engineer when operating
crane with boom and jib
or leads 140' or longer....$ 31.61 16.75
Engineer when operating
crane with boom and jib
or leads 220' or longer....$ 31.93 16.75
GROUP 1.....$ 29.07 16.75
GROUP 2.....$ 24.68 16.75

HAZARDOUS WASTE REMOVAL CLASSIFICATIONS
Group 1: Backhoe, batch plant operator, clamshell, concrete breaker when attached to hoe, concrete cleaning decontamination machine operator, concrete pump, concrete paver, crusher, dozer, elevating grader, endloader, farm tractor (90 h.p. and higher), gradall, grader,heavy equipment robotics operator, loader, pug mill, pumpcrete machines, pump trucks, roller, scraper (self- propelled or tractor drawn), side boom tractor, slip form paver, slope paver, trencher, ultra high pressure waterjet cutting tool system, vactors, vacuum blasting machine operator, vertical lifting hoist, vibrating compaction equipment (self-propelled), well drilling rig and hydro excavator

GROUP 2: Air compressor, concrete breaker when not attached to hoe, elevator, end dumps, equipment decontamination operator, farm tractor (less than 90 h.p.), forklift, generator, heater, mulcher, pigs (portable reagent storage tanks), power screens, pumps (water), stationary compressed air plant, sweeper, welding machine and water wagon

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ENGI0325-012 05/01/2009

AREA 1: MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

	Rates	Fringes
Power equipment operators -		

gas distribution and duct
installation work:

AREA 1		
GROUP 1	$ 25.98	17.80
GROUP 2	$ 25.85	17.80
GROUP 3	$ 24.72	17.80
GROUP 4	$ 24.15	17.80
AREA 2		
GROUP 1	$ 25.07	17.80
GROUP 2-A	$ 24.97	17.80
GROUP 2-B	$ 24.75	17.80
GROUP 3	$ 23.97	17.80
GROUP 4	$ 23.47	17.80

SCOPE OF WORK: The construction, installation, treating and reconditioning of pipelines transporting gas vapors within cities, towns, subdivisions, suburban areas, or within private property boundaries, up to and including private meter settings of private industrial, governmental or other premises, more commonly referred to as "distribution work," starting from the first metering station, connection, similar or related facility, of the main or cross country pipeline and including duct installation.

AREA 1:

GROUP 1: Backhoe, crane, grader, mechanic, dozer (D-6 equivalent or larger), side boom (D-4 equivalent or larger), trencher(except service), endloader (2 yd. capacity or greater).
GROUP 2: Dozer (less than D-6 equivalent), endloader (under 2 yd. capacity), side boom (under D-4 capacity), backfiller, pumps (1 or 2 of 6-inch discharge or greater), boom truck (with powered boom), tractor (wheel type other than backhoe or front endloader).

GROUP 3: Tamper (self-propelled), boom truck (with non-powered boom), concrete saw (20 hp or larger), pumps (2 to 4 under 6-inch discharge), compressor (2 or more or when one is used continuously into the second day) and trencher(service).

GROUP 4: Oiler, hydraulic pipe pushing machine, grease person and hydrostatic testing operator.

AREA 2:

GROUP 1: Mechanic, crane (over 1/2 yd. capacity), backhoe (over 1/2 yd. capacity), grader (Caterpillar 12 equivalent or larger)

GROUP 2-A: Trencher(except service), backhoe (1/2 yd. capacity or less)

GROUP 2-B: Crane (1/2 yd. capacity or less), compressor (2 or more), dozer (D-4 equivalent or larger), endloader (1 yd.

capacity or larger), pump (1 or 2 six-inch or larger), side boom (D-4 equivalent or larger)

GROUP 3: Backfiller, boom truck (powered), concrete saw (20 hp or larger), dozer (less than D-4 equivalent), endloader (under 1 yd. capacity), farm tractor (with attachments), pump (2 - 4 under six-inch capacity), side boom tractor(less than D-4 equivalent), tamper (self-propelled), trencher service and grader maintenance

GROUP 4: Oiler, grease person and hydrostatic testing operator

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IRON0008-007 06/01/2008

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
IRONWORKER (Metal Building Erection)	$ 22.70	6.60
IRONWORKER (Reinforcing and Structural)		
General contracts $10,000,000 or greater	$ 26.13	18.72
General contracts less than $10,000,000	$ 23.69	18.72

IRON0008-011 06/01/2008

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
IRONWORKER (Metal Building Erection)	$ 22.70	6.60
IRONWORKER (Reinforcing and Structural)		
Contracts $10,000,000 or more	$ 26.13	18.72
Contracts less than $10,000,000	$ 23.69	18.72

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* IRON0025-002 06/01/2009

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LIVINGSTON, MACOMB, MIDLAND, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

	Rates	Fringes
IRONWORKER		
Decking	$ 24.39	24.32
Fence erector	$ 21.73	21.20
Machinery Movers, Riggers, Machinery Erectors	$ 27.97	28.86
Ornamental, structural, precast erector	$ 29.26	27.62
Reinforced	$ 26.83	24.26
Siding	$ 21.51	20.22

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* IRON0025-024 06/01/2009

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LIVINGSTON, MACOMB, MIDLAND, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

	Rates	Fringes
IRONWORKER		
Machinery mover, rigger and machinery erector	$ 27.97	28.86

IRON0055-005 06/01/2008

LENAWEE AND MONROE COUNTIES:

	Rates	Fringes
IRONWORKER		
Metal fences and guardrails	$ 19.75	16.97
Pre-engineered metal buildings, siding and decking	$ 23.28	18.00
All other work	$ 28.00	18.00

FOOTNOTES:

Work in tunnels and caissons under pressure: $.50 per hour additional. Work on furnaces, kilns or similar type units with a temperature of 125 degrees F. or over: $1.00 per hour additional.

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* IRON0292-003 06/01/2009

BERRIEN AND CASS COUNTIES:

	Rates	Fringes
IRONWORKER		
Cad Welder	$ 25.10	16.76

Ironworker	$ 24.35	16.76

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* IRON0340-001 06/01/2009

ALLEGAN, ANTRIM, BARRY, BENZIE, BRANCH, CALHOUN, CHARLEVOIX, EATON, EMMET, GRAND TRAVERSE, HILLSDALE, IONIA, KALAMAZOO, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH, VAN BUREN AND WEXFORD COUNTIES:

	Rates	Fringes
IRONWORKER		
Reinforcing and structural..	$ 24.00	15.52

LABO0005-006 10/01/2008

	Rates	Fringes
Laborers - hazardous waste abatement: (ALCONA, ALPENA, ANTRIM, BENZIE, CHARLEVOIX, CHEBOYGAN, CRAWFORD, EMMET, GRAND TRAVERSE, IOSCO, KALKASKA, LEELANAU, MISSAUKEE, MONTMORENCY, OSCODA, OTSEGO, PRESQUE ISLE AND WEXFORD COUNTIES:)		
Levels A, B or C	$ 19.01	9.60
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 18.01	9.60
Laborers - hazardous waste abatement: (ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:)		
Work performed inside the building and up to and including 5 ft. outside the building:		
Levels A, B or C	$ 22.18	10.35
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 21.18	10.35
Work performed over 5 ft. outside the building:		

Levels A, B or C.....$ 20.44 9.80
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;
Also, Level D.....$ 19.44 9.80

Laborers - hazardous waste abatement: (ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, IONIA COUNTY (except the city of Portland); KALAMAZOO, KENT, LAKE, MANISTEE, MASON, MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH AND VAN BUREN COUNTIES:)
Levels A, B or C.....$ 20.57 9.88
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;
Also, Level D.....$ 19.57 9.88

Laborers - hazardous waste abatement: (ARENAC, BAY, CLARE, GLADWIN, GRATIOT, HURON, ISABELLA, MIDLAND, OGEMAW, ROSCOMMON, SAGINAW AND TUSCOLA COUNTIES:)
Levels A, B or C.....$ 21.86 9.75
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;
Also, Level D.....$ 20.86 9.75

Laborers - hazardous waste abatement: (CLINTON, EATON AND INGHAM COUNTIES; IONIA COUNTY (City of Portland); LIVINGSTON COUNTY (west of M-151 (Oak Grove Rd.), including the City of Howell):)
All work performed
Levels A, B or C.....$ 21.70 9.80
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;
Also, Level D.....$ 20.70 9.80

Laborers - hazardous waste abatement: (GENESEE, LAPEER AND SHIAWASSEE COUNTIES:)

Levels A, B or C	$ 22.28	9.88
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 21.88	9.88
Laborers - hazardous waste abatement: (HILLSDALE, JACKSON AND LENAWEE COUNTIES:)		
Work performed inside the building and up to and including 5 ft. outside the building:		
Levels A, B or C	$ 22.36	9.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 21.36	9.90
Work performed over 5 ft. outside the building:		
Levels A, B or C	$ 22.96	9.80
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 21.96	9.80
Laborers - hazardous waste abatement: (LIVINGSTON COUNTY (east of M-151 (Oak Grove Rd.) and south of M-59, excluding the city of Howell); AND WASHTENAW COUNTY:)		
Work performed inside the building and up to and including 5 ft. outside the building:		
Levels A, B or C	$ 27.21	11.34
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 26.21	11.34
Work performed over 5 ft. outside the building:		
Levels A, B or C	$ 23.02	9.74
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 22.02	9.74

Laborers - hazardous waste abatement: (MACOMB AND WAYNE COUNTIES:)		
Work performed inside the building and up to and including 5 ft. outside the building:		
Levels A, B or C	$ 27.44	12.13
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 26.44	12.13
Work performed over 5 ft. outside the building:		
Levels A, B or C	$ 22.96	12.51
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 21.96	12.51
Laborers - hazardous waste abatement: (MONROE COUNTY:)		
Work performed inside the building and up to and including 5 ft. outside the building:		
Levels A, B or C	$ 27.28	11.92
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 26.28	11.92
Work performed over 5 ft. outside the building line:		
Levels A, B or C	$ 22.96	9.80
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D	$ 21.96	9.80
Laborers - hazardous waste abatement: (Oakland County and the North East portion of Livingston County bordered by M-151 (Oak Grove Road) on the West and M-59 on the South.)		
Level A, B, C	$ 27.44	12.13
Level D	$ 26.44	12.13
Laborers - hazardous waste abatement: (SANILAC AND ST. CLAIR COUNTIES:)		
All work performed 5 feet		

outside the building		
Levels A, B or C	$ 21.30	9.80
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	$ 20.30	9.80
Work performed inside the building and up to and including 5 ft. outside the building:		
Levels A, B or C	$ 25.83	11.38
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D	$ 24.83	11.38

LABO0259-001 09/01/2008

AREA 1: MACOMB, OAKLAND AND WAYNE COUNTIES
AREA 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONROE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW AND WEXFORD COUNTIES

	Rates	Fringes
Laborers - tunnel, shaft and caisson:		
AREA 1		
GROUP 1	$ 21.81	12.51
GROUP 2	$ 21.92	12.51
GROUP 3	$ 21.98	12.51
GROUP 4	$ 22.16	12.51
GROUP 5	$ 22.41	12.51
GROUP 6	$ 22.74	12.51
GROUP 7	$ 16.02	12.51
AREA 2		
GROUP 1	$ 22.32	9.80
GROUP 2	$ 22.41	9.80
GROUP 3	$ 22.51	9.80
GROUP 4	$ 22.67	9.80
GROUP 5	$ 22.93	9.80
GROUP 6	$ 23.24	9.80

GROUP 7.....$ 15.51 9.80

SCOPE OF WORK: Tunnel, shaft and caisson work of every type and description and all operations incidental thereto, including, but not limited to, shafts and tunnels for sewers, water, subways, transportation, diversion, sewerage, caverns, shelters, aquafers, reservoirs, missile silos and steel sheeting for underground construction.

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Tunnel, shaft and caisson laborer, dump, shanty, hog house tender, testing (on gas) and watchman

GROUP 2: Manhole, headwall, catch basin builder, bricklayer tender, mortar machine, material mixer, fence erector and guard rail builder

GROUP 3: Air tool operator (jackhammer, bush hammer and grinder), first bottom, second bottom, cage tender, car pusher, carrier, concrete, concrete form, concrete repair, cement invert laborer, cement finisher, concrete shoveler, conveyor, floor, gasoline and electric tool operator, gunite, grout operator, welder, heading dinky person, inside lock tender, pea gravel operator, pump, outside lock tender, scaffold, top signal person, switch person, track, tugger, utility person, vibrator, winch operator, pipe jacking, wagon drill and air track operator and concrete saw operator (under 40 h.p.)

GROUP 4: Tunnel, shaft and caisson mucker, bracer, liner plate, long haul dinky driver and well point

GROUP 5: Tunnel, shaft and caisson miner, drill runner, key board operator, power knife operator, reinforced steel or mesh (e.g. wire mesh, steel mats, dowel bars, etc.)

GROUP 6: Dynamite and powder

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter boxes, flagstones, etc.

LABO0334-001 09/01/2008

	Rates	Fringes
Laborers - open cut:		
ALCONA, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, GRATIOT AND HURON		

COUNTIES; IONIA COUNTY
(EXCEPT THE CITY OF
PORTLAND); IOSCO,
ISABELLA, KALAMAZOO,
KALKASKA, KENT,
LAKE,LEELANAU, MANISTEE,
MASON, MECOSTA, MIDLAND,
MISSAUKEE, MONTCALM,
MONTMORENCY, MUSKEGON,
NEWAYGO, OCEANA, OGEMAW,
OSCEOLA, OSCODA, OSTEGO,
OTTAWA, PRESQUE ISLE,
ROSCOMMON, SAGINAW, ST.
JOSEPH, TUSCOLA, VAN BUREN
AND WEXFORD COUNTIES:
 GROUP 3.....$ 19.41 9.80
ALCONA, ALLEGAN, ALPENA,
ANTRIM, ARENAC, BARRY,
BAY, BENZIE, BERRIEN,
BRANCH, CALHOUN, CASS,
CHARLEVOIX, CHEBOYGAN,
CLARE, CRAWFORD, EMMET,
GLADWIN, GRAND TRAVERSE,
GRATIOT AND HURON
COUNTIES; IONIA COUNTY
(EXCEPT THE CITY OF
PORTLAND); IOSCO,
ISABELLA, KALAMAZOO,
KALKASKA, KENT,
LAKE,LEELANAU, MANISTEE,
MASON, MECOSTA, MIDLAND,
MISSAUKEE, MONTCALM,
MONTMORENCY, MUSKEGON,
NEWAYGO, OCEANA, OGEMAW,
OSCEOLA, OSCODA, OSTEGO,
OTTAWA, PRESQUE ISLE,
ROSCOMMON, SAGINAW, ST.
JOSEPH, TUSCOLA, VAN BUREN
AND WEXFORD COUNTIES:
 GROUP 1.....$ 19.17 9.80
 GROUP 2.....$ 19.30 9.80
 GROUP 4.....$ 19.48 9.80
 GROUP 5.....$ 19.60 9.80
 GROUP 6.....$ 16.82 9.80
 GROUP 7.....$ 15.16 9.80
ALGER, BARAGA, CHIPPEWA,
DELTA, DICKINSON, GOGEBIC,
HOUGHTON, IRON,
KEWEENAW, LUCE, MACKINAC,
MARQUETTE, MENOMINEE,
ONTONAGON AND SCHOOLCRAFT
COUNTIES:
 GROUP 1.....$ 19.40 9.80
 GROUP 2.....$ 19.54 9.80
 GROUP 3.....$ 19.67 9.80
 GROUP 4.....$ 19.72 9.80
 GROUP 5.....$ 19.77 9.80

GROUP 6	$ 17.15	9.80
GROUP 7	$ 15.26	9.80
CLINTON, EATON, GENESEE, HILLSDALE AND INGHAM COUNTIES; IONIA COUNTY (City of Portland); JACKSON, LAPEER AND LENAWEE COUNTIES; LIVINGSTON COUNTY (west of M-151 Oak Grove Rd.); SANILAC, ST. CLAIR AND SHIAWASSEE COUNTIES:		
GROUP 1	$ 20.26	9.80
GROUP 2	$ 20.40	9.80
GROUP 3	$ 20.52	9.80
GROUP 4	$ 20.57	9.80
GROUP 5	$ 20.71	9.80
GROUP 6	$ 18.01	9.80
GROUP 7	$ 15.16	9.80
LIVINGSTON COUNTY (east of M-151 (Oak Grove Rd.)); MONROE AND WASHTENAW COUNTIES:		
GROUP 1	$ 21.73	10.14
GROUP 2	$ 21.84	10.14
GROUP 3	$ 21.96	10.14
GROUP 4	$ 22.03	10.14
GROUP 5	$ 22.18	10.14
GROUP 6	$ 19.48	10.14
GROUP 7	$ 16.12	10.14
MACOMB, OAKLAND AND WAYNE COUNTIES:		
GROUP 1	$ 21.66	12.51
GROUP 2	$ 21.77	12.51
GROUP 3	$ 21.82	12.51
GROUP 4	$ 21.90	12.51
GROUP 5	$ 21.96	12.51
GROUP 6	$ 19.41	12.51
GROUP 7	$ 16.03	12.51

SCOPE OF WORK:

Open cut construction work shall be construed to mean work which requires the excavation of earth including industrial, commercial and residential building site excavation and preparation, land balancing, demolition and removal of concrete and underground appurtenances, grading, paving, sewers, utilities and improvements; retention, oxidation, flocculation and irrigation facilities, and also including but not limited to underground piping, conduits, steel sheeting for underground construction, and all work incidental thereto, and general excavation. For all areas except the Upper Peninsula, open cut construction work shall also be construed to mean waterfront work, piers, docks, seawalls, breakwalls, marinas and all incidental work. Open cut constructon work shall not include any structural modifications, alterations, additions and

repairs to buildings, or highway work, including roads, streets, bridge construction and parking lots or steel erection work and excavation for the building itself and back filling inside of and within 5 ft. of the building and foundations, footings and piers for the building. Open cut construction work shall not include any work covered under Tunnel, Shaft and Caisson work.

OPEN CUT LABORER CLASSIFICATIONS

GROUP 1: Construction laborer

GROUP 2: Mortar and material mixer, concrete form person, signal person, well point person, manhole, headwall and catch basin builder, guard rail builder, headwall, seawall, breakwall, dock builder and fence erector

GROUP 3: Air, gasoline and electric tool operator, vibrator operator, driller, pump person, tar kettle operator, bracer, rodder, reinforced steel or mesh person (e.g., wire mesh, steel mats, dowel bars, etc.), welder, pipe jacking and boring person, wagon drill and air track operator and concrete saw operator (under 40 h.p.), windlass and tugger person and directional boring person

GROUP 4: Trench or excavating grade person

GROUP 5: Pipe layer (including crock, metal pipe, multi-plate or other conduits)

GROUP 6: Grouting person, audio-visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter boxes, flagstones, etc.

LABO0465-001 06/01/2009

LABORER: Highway, Bridge and Airport Construction

AREA 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALLEGAN, BARRY, BAY, BERRIEN, BRANCH, CALHOUN, CASS, CLINTON, EATON, GRATIOT, HILLSDALE, HURON, INGHAM, JACKSON, KALAMAZOO, LAPEER, LENAWEE, LIVINGSTON, MIDLAND, MUSKEGON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, ST. JOSEPH, TUSCOLA AND VAN BUREN COUNTIES

AREA 3: ALCONA, ALPENA, ANTRIM, ARENAC, BENZIE, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, IONIA, IOSCO, ISABELLA, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MONTMORENCY, NEWAYGO, OCEANA, OGEMAW, OSCEOLA, OSCODA, OTSEGO, OTTAWA,

PRESQUE ISLE, ROSCOMMON AND WEXFORD COUNTIES

AREA 4: ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES

	Rates	Fringes
LABORER (AREA 1)		
GROUP 1	$ 23.32	10.95
GROUP 2	$ 23.45	10.95
GROUP 3	$ 23.63	10.95
GROUP 4	$ 23.71	10.95
GROUP 5	$ 23.92	10.95
GROUP 6	$ 24.22	10.95
LABORER (AREA 2)		
GROUP 1	$ 21.42	10.95
GROUP 2	$ 21.62	10.95
GROUP 3	$ 21.86	10.95
GROUP 4	$ 22.21	10.95
GROUP 5	$ 22.08	10.95
GROUP 6	$ 22.42	10.95
LABORER (AREA 3)		
GROUP 1	$ 20.67	10.95
GROUP 2	$ 20.88	10.95
GROUP 3	$ 21.17	10.95
GROUP 4	$ 21.61	10.95
GROUP 5	$ 21.23	10.95
GROUP 6	$ 21.66	10.95
LABORER (AREA 4)		
GROUP 1	$ 20.67	10.95
GROUP 2	$ 20.88	10.95
GROUP 3	$ 21.17	10.95
GROUP 4	$ 21.61	10.95
GROUP 5	$ 21.23	10.95
GROUP 6	$ 21.66	10.95

LABORER CLASSIFICATIONS

GROUP 1: Asphalt shoveler or loader; asphalt plant misc.; burlap person; yard person; dumper (wagon, truck, etc.); joint filling laborer; miscellaneous laborer; unskilled laborer; sprinkler laborer; form setting laborer; form stripper; pavement reinforcing; handling and placing (e.g., wire mesh, steel mats, dowel bars); mason's tender or bricklayer's tender on manholes; manhole builder; headwalls, etc.; waterproofing,(other than buildings) seal coating and slurry mix, shoring, underpinning; pressure grouting; bridge pin and hanger removal; material recycling laborer; horizontal paver laborer (brick, concrete, clay, stone and asphalt); ground stabilization and modification laborer; grouting; waterblasting; top person; railroad track and trestle laborer; carpenters' tender; guard rail builders' tender; earth retention barrier and wall and M.S.E. wall installer's tender; highway and median installer's tender(including sound, retaining, and crash

barriers); fence erector's tender; asphalt raker tender; sign installer; remote control operated equipment.

GROUP 2: Mixer operator (less than 5 sacks); air or electric tool operator (jackhammer, etc.); spreader; boxperson (asphalt, stone, gravel); concrete paddler; power chain saw operator; paving batch truck dumper; tunnel mucker (highway work only); concrete saw (under 40 h.p.) and dry pack machine; roto-mill grounds person.

GROUP 3: Tunnel miner (highway work only); finishers tenders; guard rail builders; highway and median barrier installer; earth retention barrier and wall and M.S.E. wall installer's (including sound, retaining and crash barriers); fence erector; bottom person; powder person; wagon drill and air track operator; diamond and core drills; grade checker; certified welders;curb and side rail setter's tender.

GROUP 4: Asphalt raker

GROUP 5: Pipe layers, oxy-gun

GROUP 6: Line-form setter for curb or pavement; asphalt screed checker/screw man on asphalt paving machines.

LABO1076-006 04/01/2009

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MONROE, MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

	Rates	Fringes
LABORER (Distribution rates)		
Telephone Work (Zone 1)	$ 17.79	10.95
Telephone Work (Zone 2)	$ 16.41	10.95
Telephone Work: (Zone 3)	$ 12.49	10.95
Telephone Work: (Zone 4)	$ 12.86	10.95
Telephone Work: (Zone 5)	$ 12.16	10.95
Zone 1: All other work	$ 17.79	10.95
Zone 2: All other work	$ 16.41	10.95
Zone 3: All other work	$ 14.69	10.95
Zone 4: All other work	$ 14.06	10.95
Zone 5: All other work	$ 14.06	10.95

SCOPE OF WORK:

Construction, installation, treating and reconditioning of distribution pipelines transporting coal, oil, gas, or other similar materials, vapors or liquids, including portions of such pipelines within private property boundaries, up to and including the meter settings on residential, commercial, industrial, institutional, private and public structures. All work covering pumping stations and tank farms not covered under another rate. Distribution work also includes all other distribution lines for public utilities except sewer, water and cable television, but including telephone lines and duct.

Duct Work Pay: $.40 per hour above the base pay rate.

Zones:

Zone 1-Macomb,Oakland and Wayne
Zone 2-Monroe and Washtenaw
Zone 3-Bay, Genesee, Lapeer, Midland, Saginaw, Sanilac, Shiawassee and St. Clair
Zone 4-Alger, Baraga, Chippewa, Delta, Dickinson,Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinaw, Marquette, Menominee, Ontonagon and Schoolcraft
Zone 5-Remaining counties in Michigan

PAIN0022-002 07/01/2008

HILLSDALE, JACKSON AND LENAWEE COUNTIES; LIVINGSTON COUNTY (east of the eastern city limits of Howell, not including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES:

	Rates	Fringes
PAINTER	$ 25.06	14.75

FOOTNOTES: For all spray work and journeyman rigging for spray work, also blowing off, $0.80 per hour additional (applies only to workers doing rigging for spray work on off the floor work. Does not include setting up or moving rigging on floor surfaces, nor does it apply to workers engaged in covering up or tending spray equipment. For all sandblasting and spray work performed on highway bridges, overpasses, tanks or steel, $0.80 per hour additional. For all brushing, cleaning and other preparatory work (other than spraying or steeplejack work) at scaffold heights of fifty (50) feet from the ground or higher, $0.50 per hour additional. For all preparatorial work and painting performed on open steel under forty (40) feet when no scaffolding is involved, $0.50 per hour additional. For all swing stage work-window jacks and window belts-exterior and interior, $0.50 per hour additional. For all spray work and sandblaster work to a scaffold height of forty (40) feet

above the floor level, $0.80 per hour additional. For all preparatorial work and painting on all highway bridges or overpasses up to forty (40) feet in height, $0.50 per hour additional. For all steeplejack work performed where the elevation is forty (40) feet or more, $1.25 per hour additional.

PAIN0312-001 06/01/2008

EXCLUDES: ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland); INCLUDES: Barry, Berrian, Branch, Calhoun, Cass, Hillsdale, Kalamazoo, St. Joseph, Van Buren

	Rates	Fringes
PAINTER		
Brush and roller	$ 20.80	10.25
Spray, Sandblast, Sign Painting	$ 22.00	10.25

PAIN0845-003 05/10/2008

CLINTON COUNTY; EATON COUNTY (does not include the townships of Bellevue and Olivet); INGHAM COUNTIES; IONIA COUNTY (east of Hwy. M 66); LIVINGSTON COUNTY (west of the eastern city limits of Howell, including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); AND SHIAWASSEE COUNTY (Townships of Bennington, Laingsbury and Perry):

	Rates	Fringes
PAINTER	$ 23.88	9.77

FOOTNOTES: Work on vinyl, spray, blow-off, blast-all blasting including water blasting, lead, all epoxy, and high rate: $.85 per hour additional.

PAIN0845-015 05/10/2008

MUSKEGON COUNTY; NEWAYGO COUNTY (except the Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, Monroe, Norwich and Wilcox); OCEANA COUNTY; OTTAWA COUNTY (except the townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):

	Rates	Fringes
PAINTER	$ 23.88	9.77

PAIN0845-018 05/10/2008

ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland); IONIA COUNTY (west of Hwy. M-66); KENT, MECOSTA AND MONTCALM COUNTIES; NEWAYGO COUNTY (Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, Monroe, Norwich and Wilcox); OSCEOLA COUNTY (south of Hwy. #10); OTTAWA COUNTY (Townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):

	Rates	Fringes
PAINTER	$ 23.88	9.77

FOOTNOTES: Lead abatement work: $1.00 per hour additional.

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* PAIN1011-003 06/01/2009

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
PAINTER	$ 23.40	8.25

FOOTNOTES: High pay (bridges, overpasses, watertower): 30 to 80 ft.: $.65 per hour additional. 80 ft. and over: $1.30 per hour additional.

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* PAIN1474-002 06/01/2009

HURON COUNTY; LAPEER COUNTY (east of Hwy. M-53); ST. CLAIR, SANILAC AND TUSCOLA COUNTIES:

	Rates	Fringes
PAINTER	$ 24.00	11.51

FOOTNOTES: Lead abatement work: $1.00 per hour additional. Work with any hazardous material: $1.00 per hour additional. Sandblasting, steam cleaning and acid cleaning: $1.00 per hour additional. Ladder work at or above 40 ft., scaffold work at or above 40 ft., swing stage, boatswain chair, window jacks and all work performed over a falling height of 40 ft.: $1.00 per hour additional. Spray gun work, pick pullers and those handling needles, blowing off by air pressure, and any person rigging (setting up and moving off the ground): $1.00 per hour additional. Steeplejack, tanks, gas holders, stacks, flag poles, radio towers and beacons, power line towers, bridges, etc.: $1.00 per hour additional, paid from the ground up.

PAIN1803-003 06/01/2008

ALCONA, ALPENA, ANTRIM, ARENAC, BAY, BENZIE, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, GRATIOT, IOSCO, ISABELLA, KALKASKA, LAKE, LEELANAU, MANISTEE, MASON, MIDLAND, MISSAUKEE, MONTMORENCY AND OGEMAW COUNTIES; OSCEOLA COUNTY (north of Hwy. #10); OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW AND WEXFORD COUNTIES:

	Rates	Fringes
PAINTER		
Work performed on water, bridges over water or moving traffic, radio and powerline towers, elevated tanks, steeples, smoke stacks over 40 ft. of falling heights, recovery of lead-based paints and any work associated with industrial plants, except maintenance of industrial plants	$ 23.20	10.75
All other work, including maintenance of industrial plant	$ 21.78	10.75

FOOTNOTES: Spray painting, sandblasting, blowdown associated with spraying and blasting, water blasting and work involving a swing stage, boatswain chair or spider: $1.00 per hour additional. All work performed inside tanks, vessels, tank trailers, railroad cars, sewers, smoke stacks, boilers or other spaces having limited egress not including buildings, opentop tanks, pits, etc.: $1.25 per hour additional.

PLAS0016-016 06/01/2007

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGO, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OSTEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SANILAC, SCHOOLCRAFT, SHIAWASEE, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, SAGINAW, WASHTENAW AND WAYNE COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
AREA 1	$ 25.18	9.30
AREA 2	$ 26.68	9.30

PLUM0190-003 05/01/2008

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MONROE, MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

	Rates	Fringes
Plumber/Pipefitter - gas distribution pipeline:		
Welding in conjunction with gas distribution pipeline work	$ 27.63	15.64
All other work:	$ 20.26	9.90

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* SUMI2002-001 05/01/2002

	Rates	Fringes
Flag Person	$ 7.25	
LINE PROTECTOR (ZONE 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE)	$ 18.98	9.57
LINE PROTECTOR (ZONE 2: STATEWIDE (EXCLUDING GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE)	$ 17.14	10.02
Pavement Marking Machine (ZONE 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES)		
Group 1	$ 23.72	9.57
Pavement Marking Machine (ZONE 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW		

AND WAYNE)
Group 2.....$ 21.35 9.57

Pavement Marking Machine
(ZONE 2: STATEWIDE (EXCLUDING
GENESEE, MACOMB, MONROE,
OAKLAND, WASHTENAW AND WAYNE
COUNTIES)
Group 1.....$ 21.42 10.02

Pavement Marking Machine
(ZONE 2: STATEWIDE (EXCLUDING
GENESEE, MACOMB, MONROE,
OAKLAND, WASHTENAW AND WAYNE)
Group 2.....$ 19.28 10.02

WORK CLASSIFICATIONS:

PAVEMENT MARKER GROUP 1: Drives or operates a truck mounted striper, grinder, blaster, groover, or thermoplastic melter for the placement or removal of temporary or permanent pavement markings or markers.

PAVEMENT MARKER GROUP 2: Performs all functions involved for the placement or removal of temporary or permanent pavement markings or markers not covered by the classification of Pavement Marker Group 1 or Line Protector.

LINE PROTECTOR: Performs all operations for the protection or removal of temporary or permanent pavement markings or markers in a moving convoy operation not performed by the classification of Pavement Marker Group 1. A moving convoy operation is comprised of only Pavement Markers Group 1 and Line Protectors.

TEAM0007-004 06/01/2004

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGO, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OSTEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SCHOOLCRAFT, SHIAWASEE, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

	Rates	Fringes
TRUCK DRIVER		

AREA 1		
Euclids, double bottoms and lowboys	$ 23.545	.50 + a+b
Trucks under 8 cu. yds	$ 23.295	.50 + a+b
Trucks, 8 cu. yds. and over	$ 23.395	.50 + a+b
AREA 2		
Euclids, double bottomms and lowboys	$ 23.645	.50 + a+b
Trucks under 8 cu. yds	$ 23.395	.50 + a+b
Trucks, 8 cu. yds. and over	$ 23.495	.50 + a+b

Footnote: a. $265.90 per week
b. $28.00 daily

TEAM0247-004 06/01/2004

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGO, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OSTEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SANILAC, SCHOOLCRAFT, SHIAWASEE, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

	Rates	Fringes
Sign Installer		
AREA 1		
GROUP 1	$ 20.18	.15 + a
GROUP 2	$ 19.93	.15 + a
AREA 2		
GROUP 1	$ 21.73	.15 + a
GROUP 2	$ 21.48	.15 + a

FOOTNOTE:

a. $132.70 per week, plus $17.80 per day.

SIGN INSTALLER CLASSIFICATION:S

GROUP 1: performs all necessary labor and uses all tools required to construct and set concrete forms required in the installation of highway and street signs

GROUP 2: performs all miscellaneous labor, uses all hand and

power tools, and operates all other equipment, mobile or otherwise, required for the installation of highway and street signs

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TEAM0247-010 06/01/2008

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGO, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OSTEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SCHOOLCRAFT, SHIAWASEE, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

	Rates	Fringes
TRUCK DRIVER (Underground construction)		
AREA 1		
GROUP 1	$ 24.19	5278.55/wk+36.70day
GROUP 2	$ 24.29	5278.55/wk+36.70/day
GROUP 3	$ 24.44	5278.55/wk+36.70/day
AREA 2		
GROUP 1	$ 24.29	5278.55/wk+36.70/day
GROUP 2	$ 24.39	5278.55/wk+36.70/day
GROUP 3	$ 24.54	5278.55/wk+36.70/day

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

SCOPE OF WORK: Excavation, site preparation, land balancing, grading, sewers, utilities and improvements; also including but not limited to, tunnels, underground piping, retention, oxidation, flocculation facilities, conduits, general excavation and steel sheeting for underground construction.Underground construction work shall not include any structural modifications, alterations, additions and repairs to buildings or highway work, including roads, streets, bridge construction and parking lots or steel erection.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Truck driver on all trucks (EXCEPT dump trucks of 8 cubic yards capacity or over, pole trailers, semis, low boys, Euclid, double bottom and fuel trucks)

GROUP 2: Truck driver on dump trucks of 8 cubic yards

capacity or over, pole trailers, semis and fuel trucks

GROUP 3: Truck driver on low boy, Euclid and double bottom

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation. 1

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the--job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's

procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. **Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined

in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the - job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. **General:**

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively

made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. **Classification:**

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. **Payment of Fringe Benefits:**

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. **Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:**

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination
for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. **Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. **Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. **Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. **Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. **Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. **Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. **Payrolls and Payroll Records:**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 21, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more that $10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section

308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. **Instructions for Certification - Primary Covered Transactions:**

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

I. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. **Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowl
edge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

I. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.