



MDOT ENGLISH

- Warranty Exempt: Y
- Preventative Maintenance NHS: N
- DBE/Percent

ITEM NUMBER
0707 031

**STATE OF MICHIGAN DEPARTMENT OF TRANSPORTATION
PROPOSAL**

Bridge removal and replacement along with related approach work on Antietam Avenue over Dequindre Cut in the city of Detroit, Wayne County.

BIDS WILL BE ELECTRONICALLY DOWNLOADED AT 10:30 A.M. **LOCAL TIME, ON** 7/6/2007

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

<u>CONTRACT ID</u>	<u>CONTROL SECTION</u>	<u>PROJECT</u>	<u>FEDERAL NO.</u>	<u>FED. ITEM</u>
82022-83945	BRO 82022	83945A	BRO 0782(068)	RR5680

The bidder has examined the plans, specifications, special provisions, addenda, and related materials in the proposal, as well as the location of the work described in the proposal for this project and is fully informed as to the nature of the work and 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 begins.

NOT FOR BIDDING

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.

BIDDING

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 HERE UNLESS SUCH MEANS A CONTRACT DOCUMENT FORM 1091 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.

PURPOSES

Unless the bidder gives MDOT advance written notice MDOT may correspond directly with the insurance agencies concerning questions and problems with 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.

Detroit 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

SCHEDULE OF ITEMS

CONTRACT ID: 82022-83945
 LETTING : 070706
 CALL : 031

PROJECT(S) : 83945A

CONTRACTOR : _____

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

SECTION 0001 Road Work

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 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 proposal guaranty.

0010	1000001 Mobilization, Max. _____ \$200000.00	LUMP		LUMP		
0020	2010001 Clearing	Acre	0.100			
0030	2020004 Tree, Rem, 6 inch to 18 inch	Ea	1.000			
0040	2027050 _ Trim Tree	Ea	1.000			
0050	2030011 Dr Structure, Rem	Ea	3.000			
0060	2030015 Sewer, Rem, Less than 24 inch	Ft	53.000			

SCHEDULE OF ITEMS

CONTRACT ID: 82022-83945
 LETTING : 070706
 CALL : 031

PROJECT(S) : 83945A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0070	2030016 Sewer, Rem, 24 inch to 48 inch	75.000 Ft	.		.	
0080	2037001 Water Main, DI, Cl 56, 12 inch	242.000 Ft	.		.	
0090	2037001 Water Main, Rem	220.000 Ft	.		.	
0100	2040006 Curb and Gutter, Rem	259.000 Ft	.		.	
0110	2040009 Fence, Rem	220.000 Ft	.		.	
0120	2040013 Sidewalk, Rem	190.000 Syd	.		.	
0130	2047011 Pavt, Rem, Modified	544.000 Syd	.		.	
0140	2080006 Erosion Control, Inlet Protection, Fabric Drop	4.000 Ea	.		.	
0150	2080007 Erosion Control, Inlet Protection, Geotextile and Stone	4.000 Ea	.		.	
0160	2080025 Erosion Control, Silt Fence	100.000 Ft	.		.	
0170	3017021 Granular Material, Cl II, Modified	550.000 Cyd	.		.	

SCHEDULE OF ITEMS

CONTRACT ID: 82022-83945
 LETTING : 070706
 CALL : 031

PROJECT(S) : 83945A

CONTRACTOR :

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
0180	3020010 Aggregate Base, 4 inch	Syd 779.000	.		.	
0190	4021200 Sewer Tap, 4 inch	Ea 1.000	.		.	
0200	4021202 Sewer Tap, 8 inch	Ea 1.000	.		.	
0210	4021204 Sewer Tap, 12 inch	Ea 1.000	.		.	
0220	4021275 Video Taping Sewer and Culv Pipe	Ft 80.000	.		.	
0230	4027001 Sewer, Cl C 76 IV, 12 inch, Tr Det B, Modified	Ft 53.000	.		.	
0240	4027001 Sewer, Cl C 76 IV, 36 inch, Tr Det B, Modified	Ft 80.000	.		.	
0250	4037001 Sewer Cleanout, Modified	Ft 50.000	.		.	
0260	4037050 Catch Basin A, Modified	Ea 1.000	.		.	
0270	4037050 Catch Basin B with Trap, Modified	Ea 1.000	.		.	
0280	4037050 Dr Structure Cleaning, Modified	Ea 1.000	.		.	

SCHEDULE OF ITEMS

CONTRACT ID: 82022-83945

PROJECT(S): 83945A

LETTING : 070706

CALL : 031

CONTRACTOR :

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
0290	4037050 Dr Structure Cover, Adj, Case 2, Modified	Ea 3.000	.		.	
0300	4037050 Manhole, 4 Foot, Standard, Modified	Ea 4.000	.		.	
0310	4037050 Vactor Out Manhole	Ea 2.000	.		.	
0320	4037050 Water Shutoff, Adj, Modified	Ea 2.000	.		.	
0330	6020200 Joint, Contraction, Cp	Ft 128.000	.		.	
0340	6020207 Joint, Expansion, E2	Ft 120.000	.		.	
0350	6020211 Joint, Plane-of-Weakness, D1	Ft 20.000	.		.	
0360	6027011 Conc Pavt with Integral Curb, Reinf, 9 Inch, Modified	Syd 779.000	.		.	
0370	6027011 Conc Pavt, Misc, Nonreinf, 6 inch, Modified	Syd 369.000	.		.	
0380	8027001 Curb and Gutter, Type IIIIR	Ft 354.000	.		.	
0390	8037010 Sidewalk Ramp, ADA, Modified	Sft 841.000	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 82022-83945
 LETTING : 070706
 CALL : 031

PROJECT(S) : 83945A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
0400	8037010 Sidewalk, Conc, 4 inch, Modified	Sft 3,310.000	.	.	.	.
0410	8037010 Sidewalk, Conc, 6 inch, Modified	Sft 116.000	.	.	.	.
0420	8080011 Fence, Chain Link, 48 inch	Ft 161.000	.	.	.	.
0430	8100001 Band, Sign	Ea 5.000	.	.	.	.
0440	8100156 Post, Steel, 3 lb	Ft 572.000	.	.	.	.
0450	8100177 Sign, Type IIIA	Sft 251.000	.	.	.	.
0460	8100180 Sign, Type IIB	Sft 30.000	.	.	.	.
0470	8100181 Sign, Type IIIB	Sft 92.000	.	.	.	.
0480	8100202 Sign, Type III, Rem	Ea 43.000	.	.	.	.
0490	8110039 Pavt Mrkg, Ovly Cold Plastic, 18 inch, Stop Bar	Ft 240.000
0500	8110045 Pavt Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym	Ea 2.000

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PROJECT(S) : 83945A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0510	8110050 Pavt Mrkg, Ovly Cold Plastic, Only	Ea 4.000	.		.	
0520	8110052 Pavt Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym	Ea 2.000	.		.	
0530	8110059 Pavt Mrkg, Ovly Cold Plastic, Thru and Rt Turn Arrow Sym	Ea 1.000	.		.	
0540	8110095 Pavt Mrkg, Thermopl, 4 inch, White	Ft 725.000	.		.	
0550	8110096 Pavt Mrkg, Thermopl, 4 inch, Yellow	Ft 1,140.000	.		.	
0560	8110104 Pavt Mrkg, Thermopl, 12 inch, Crosswalk	Ft 460.000	.		.	
0570	8120005 Barricade, Type III, High Intensity, Lighted, Furn	Ea 9.000	.		.	
0580	8120006 Barricade, Type III, High Intensity, Lighted, Oper	Ea 9.000	.		.	
0590	8120016 Conc Barrier, Temp, Furn	Ft 300.000	.		.	
0600	8120017 Conc Barrier, Temp, Oper	Ft 300.000	.		.	
0610	8120042 Lighted Arrow, Type C, Furn	Ea 5.000	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 82022-83945

PROJECT(S) : 83945A

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
0620	8120043 Lighted Arrow, Type C, Oper	Ea 5.000	.		.	
0630	8120050 Minor Traf Devices	LUMP	LUMP		.	
0640	8120090 Pavt Mrkg, Type R, 4 inch, White, Temp	Ft 680.000	.		.	
0650	8120102 Plastic Drum, High Intensity, Lighted, Furn	Ea 75.000	.		.	
0660	8120103 Plastic Drum, High Intensity, Lighted, Oper	Ea 75.000	.		.	
0670	8120135 Sign, Type B, Temp, Prismatic, Furn	Sft 1,478.000	.		.	
0680	8120136 Sign, Type B, Temp, Prismatic, Oper	Sft 1,478.000	.		.	
0690	8127050 Temp Conc Barrier Ending, Detail 2, Furn	Ea 1.000	.		.	
0700	8127050 Temp Conc Barrier Ending, Detail 2, Oper	Ea 1.000	.		.	
0710	8160027 Mulch Blanket	Syd 200.000	.		.	
0720	8160050 Slope Restoration	Syd 200.000	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 82022-83945
 LETTING : 070706
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PROJECT(S) : 83945A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
0730	8160071 Topsoil Surface, Furn, LM	1.000 Cyd	.		.	
0740	8197001 Cable, 15KV, 2-1/C #2 U.R.D./P.J.	100.000 Ft	.		.	
0750	8197001 Cable, 15KV., 3-1/C #350KCM, U.R.D./P. J.	100.000 Ft	.		.	
0760	8197001 Cable, 7KV., 1-3/C #350KCM, P.I.L.C.P. J.	200.000 Ft	.		.	
0770	8197001 Cable, St. Ltg., 2KV, 1/C #2 RHH & RHW (Color-Coded)	100.000 Ft	.		.	
0780	8197001 Cable, St. Ltg., 2KV, 2-1/C #2 RHH & RHW (Color-Coded)	50.000 Ft	.		.	
0790	8197001 Cable, St. Ltg., 2KV, 3-1/C #2 RHH & RHW (Color-Coded)	200.000 Ft	.		.	
0800	8197001 Cable, St. Ltg., 7.5KV, 2-1/C #8 L. C.	200.000 Ft	.		.	
0810	8197001 Conduit, DB 80, TC2 3-4"	50.000 Ft	.		.	
0820	8197001 Conduit, Encased, EB20 TC6 1-3"	300.000 Ft	.		.	
0830	8197001 Conduit, Encased, EB20 TC6 6-5"	200.000 Ft	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 82022-83945
 LETTING : 070706
 CALL : 031

PROJECT(S) : 83945A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
0840	8197001 Remove Cable and Duct Bank	300.000 Ft	.		.	
0850	8197050 45 Ft. Cl2 Wood Pole (Fit Up as Prim. & Sec. C.P.)	2.000 Ea	.		.	
0860	8197050 Code 009-00 St. Ltg. Standard & Foundation	2.000 Ea	.		.	
0870	8197050 H.H. (OR M.H.) , Remove	2.000 Ea	.		.	
0880	8197050 Luminaire, 250 S.V. Cobra Head	2.000 Ea	.		.	
0890	8197050 Make Cable Splice	30.000 Ea	.		.	
0900	8197050 PLD Handhole (30 in. Round) W/Frame & Cover	2.000 Ea	.		.	
0910	8197050 Remove & Salvage O.P., Luminaire, Coil	4.000 Ea	.		.	
0920	8197050 Remove Foundation	4.000 Ea	.		.	
0930	8197050 Remove O.H. Lines installed for Temp.	6.000 Ea	.		.	
0940	8197050 Wood Pole, Remove	2.000 Ea	.		.	

SCHEDULE OF ITEMS

CONTRACT ID: 82022-83945
 LETTING : 070706
 CALL : 031

PROJECT(S) : 83945A

CONTRACTOR :

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
0950	8207001 _ 2-#6 O.H. Line	200.000 Ft	.		.	
0960	8207001 _ 3-#2/0 O.H. Line	200.000 Ft	.		.	
0970	8207001 _ Conduit Repair	50.000 Ft	.		.	
0980	8207001 _ Triplex, #2 O. H. Line	200.000 Ft	.		.	
0990	8207050 _ 6 Ft. Clamp-On Bracket Arm (36" Rise)	2.000 Ea	.		.	
1000	8207050 _ Manhole, 2-Way	2.000 Ea	.		.	
	SECTION 0001 TOTAL				.	

SECTION 0002 Structure Work

1010	2040020 Structures, Rem	LUMP	LUMP		.	
1020	2050016 Excavation, Earth	200.000 Cyd	.		.	
1030	2057021 _ Non Haz Contaminated Material Handling and Disposal	2,000.000 Cyd	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 82022-83945
 LETTING : 070706
 CALL : 031

PROJECT(S) : 83945A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
1040	2060002 Backfill, Structure, CIP	4,190.000 Cyd	.	.	.	.
1050	4017001 Culv, Precast Three-Sided or Arch, 42 foot by 13 foot, Modified	100.000 Ft	.	.	.	.
1060	4040031 Underdrain, Fdn, 4 inch	86.000 Ft	.	.	.	.
1070	7050002 Pile Driving Equipment, Furn	LUMP	LUMP	.	.	.
1080	7050034 Pile, Steel, Furn and Driven, 14 inch	9,870.000 Ft	.	.	.	.
1090	7050035 Test Pile, Steel, 14 inch	3.000 Ea	.	.	.	.
1100	7050039 Pile Point, Steel	82.000 Ea	.	.	.	.
1110	7060001 Conc, Grade D	5.000 Cyd	.	.	.	.
1120	7060010 Substructure Conc	423.000 Cyd	.	.	.	.
1130	7060035 Reinforcement, Steel, Epoxy Coated	27,922.000 Lb	.	.	.	.
1140	7067010 Retaining Wall Reconstuction	400.000 Sft	.	.	.	.

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 82022-83945
 LETTING : 070706
 CALL : 031

PROJECT(S) : 83945A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CT
1150	7067010 Wingwall, Precast	1,228.000 Sft	.		.	
1160	7100001 Joint Waterproofing	32.000 Sft	.		.	
1170	7110005 Bridge Railing, Aesthetic Parapet Tube	282.000 Ft	.		.	
	SECTION 0002 TOTAL				.	
	TOTAL BID				.	

SCHEDULE OF ITEMS

CONTRACT ID: 82022-83945
LETTING : 070706
CALL : 031

PROJECT(S) : 83945A

LIST ITEMS ON THIS PAGE BY AMENDMENT

CONTRACTOR : _____

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

DESIGNATED and SPECIALTY ITEMS

DESIGNATED ITEMS:

**COMPANY NAME AND ADDRESS OF
PREQUALIFIED SUBCONTRACTOR
DOING WORK:**

(Ea) Grading, Drainage Structures, and
Aggregate Construction

(COMPANY NAME)

(COMPANY ADDRESS)

(COMPANY NAME)

(COMPANY ADDRESS)

(COMPANY NAME)

(COMPANY ADDRESS)

(COMPANY NAME)

(COMPANY ADDRESS)

(COMPANY NAME)

SPECIALTY ITEMS:

(COMPANY ADDRESS)

(L) Electrical Construction

(COMPANY NAME)

(COMPANY ADDRESS)

**SEE NEXT PAGE FOR INFORMATION ON
COMPLETING THIS PAGE**

INFORMATION ON COMPLETION OF DESIGNATED AND SPECIALTY ITEMS PAGE

The contractor may sublet the item(s) of work stipulated on the DESIGNATED and SPECIALTY ITEMS page in this proposal in accordance with Section 1.08.01 of the 2003 Standard Specifications, Section VII of the required provisions for Federal-Aid Contracts (with the exception noted in the following paragraph), and the following instructions.

The percentage of contract work performed by a contractor's own organization shall comply with Section 1.08.01 of the 2003 Standard Specifications, rather than the lower percentage allowed by Section VII of FHA required contract provisions (form FHWA 1273). Section 108.01 of the 2003 Standard Specifications requires forty percent (40%) performance by a contractor's own organization.

If the contractor **IS NOT** prequalified in EITHER the DESIGNATED or SPECIALTY ITEMS noted in this proposal, the contractor MUST, prior to contract award, indicate the company name and address of a prequalified subcontractor in the space provided. If such company name is provided, the contractor MUST sublet the appropriate items to the prequalified subcontractor named, **unless the subcontractor is not prequalified at the time the work is to be performed, or the subletting of the item to another prequalified subcontractor is agreed to in writing by both the contractor and the named subcontractor.**

If the contractor **IS** prequalified in EITHER the DESIGNATED or SPECIALTY ITEMS noted in this proposal and does not intend to do the work with its own forces, the contractor may indicate the company name and address of a prequalified subcontractor in the space provided. If such company name is provided, the contractor MUST sublet the appropriate items to the prequalified subcontractor named, **unless the subcontractor is not prequalified at the time the work is to be performed, or the subletting of the item to another prequalified subcontractor is agreed to in writing by both the contractor and the named subcontractor.**

If the contractor **IS** prequalified in the DESIGNATED or SPECIALTY ITEMS noted and NO subcontractor is named, any later decision to subcontract said items of work is subject to the sixty percent (60%) limitation of subcontracting.

At the time that a subcontractor is named in a bid to perform any of the DESIGNATED or SPECIALTY ITEMS, that subcontractor must be prequalified for the classification which includes the work it is to perform. In selecting a subcontractor, the prime contractor shall assure itself that the prospective subcontractor has sufficient equipment, working force, and supervision to complete the designated or specialty items to be subcontracted within the specified time limit.

It is understood and agreed that the prequalification of the subcontractor by the Department pursuant to 1933 P.A. 170 is not a guarantee or warranty of the subcontractor's ability to perform or complete the work contained herein.

Rev. (08/05)

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<u>CONTROL SECTION</u>	<u>PROJECT</u>	<u>SECTION</u>	<u>FEDERAL NO.</u>	<u>FEDERAL ITEM NO.</u>
BRO 82022	83945A	1 & 2	BRO 0782(068)	RR 5680

BRIDGE NUMBER: S02 of 82-22-97

TYPE OF WORK:

Bridge removal and replacement along with related approach work.

LOCATION:

Antietam Avenue over Dequindre Cut, City of Detroit

OWNER:

City of Detroit

This project is exempt from federal-aid oversight procedures.

Letting of: July 06, 2007

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
0707	031 82022-83945	BRO	82022	83945A	BRO 0782(068)	RR5680

Bridge removal and replacement along with related approach work on Antietam Avenue over Dequindre Cut in the city of Detroit, Wayne County.

5.00 % DBE PARTICIPATION REQUIRED

Net classification required for this project is
2332 Fa

In addition to the above minimum prequalification requirement for prime contractors, this project includes subclassifications of Ea and L. If the prime contractor is not prequalified in those subclassifications, it must use prequalified subcontractors. Those subcontractors must be designated prior to award of the contract to the confirmed low bidder.

Estimated pages for plans: 48

See proposal for bidder guaranty information. Completion date is 11/15/07

Plans will be available for examination at the MDOT Office in Detroit (313-965-6350) a week after the appearance of this advertisement.

Dated: 05/24/07

GENERAL REQUIREMENTS FOR RECIPIENTS

Excerpts from USDOT Regulation 49 CFR, Part 26

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, Kiribati, 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.

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	PROJECT NO.	CONTROL SECTION	JOB NO.
<input type="checkbox"/> 1st Quarter (September 1 - November 30, 20____)		<input type="checkbox"/> 3rd Quarter (March 1 - May 31, 20____)	
<input type="checkbox"/> 2nd Quarter (December 1 - February 28/29, 20____)		<input type="checkbox"/> 4th Quarter (June 1 - August 31, 20____)	
<input type="checkbox"/> PROJECT COMPLETION		<input type="checkbox"/> FINAL ESTIMATE	

PERIOD COVERED:	SERVICES/WORK CLASSIFICATION	TOTAL CONTRACT AMOUNT	CUMULATIVE DOLLAR VALUE OF SERVICES COMPLETED	DEDUCTIONS	ACTUAL AMOUNT PAID TO DATE	DBE AUTHORIZED SIGNATURE	DATE
<input type="checkbox"/> CERTIFIED DBE SUBCONTRACTOR							

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)	DATE
TITLE	DATE

FOR MICHIGAN DEPARTMENT OF TRANSPORTATION USE ONLY

COMMENTS:

RESIDENT/PROJECT ENGINEER (Signature)	DATE
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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 "Project No.," "Control Section", and "Job No.," 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 subcontractor.

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 subcontractor 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 to Office of Equal Opportunity within 7 days of receipt from prime contractor.

ADMINISTRATIVE BOARD RESOLUTION (2005-2)

Michigan State
Administrative Board

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.

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

Information required by the Federal specifications for Highway construction and/or 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 rates, except (1) the insurance shall not be subject to the usual "x" - explosion, "c" - collapse or "u" - underground property damage exclusions.

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

1. A 30-day prior notice of any insurer-initiated cancellation or reduction in coverage for reasons other than nonpayment of the premium.
2. A 10-day prior notice of any cancellation or reduction in coverage for nonpayment of the premium.
3. Immediate notice of Contractor's cancellation or reduction of coverage.

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

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)		LIMITS: Each Occurrence: \$1,000,000 Aggregate: \$2,000,000 BODILY INJURY AND PROPERTY DAMAGE LIABILITY	
		EFFECTIVE	EXPIRATION		
<input type="checkbox"/> General Liability				General Aggregate	\$
<input type="checkbox"/> Commercial General Liability				Prods. comp/ops Aggregate	\$
<input type="checkbox"/> Claims Made <input type="checkbox"/> Occurrence				Personal & Advertising Inj.	\$
<input type="checkbox"/> \$ _____ P.D. Deductible				Each Occurrence	\$
<input type="checkbox"/> XCU Exclusion				Fire Damage (any one fire)	\$
<input type="checkbox"/> Contractual Exclusion				Medical Exp. (any one person)	\$
AUTOMOTIVE LIABILITY					
<input type="checkbox"/> Any Auto				Combined Single Limit (Minimum \$2,000,000.00)	\$
<input type="checkbox"/> All Owned Autos				Bodily Injury (per person) (Minimum \$500,000.00)	\$
<input type="checkbox"/> Scheduled Autos				Bodily Injury (per accident) (Minimum \$1,000,000.00)	\$
<input type="checkbox"/> Hired Autos				Property Damage (Minimum \$1,000,000.00)	\$
<input type="checkbox"/> Non-Owned Autos					
<input type="checkbox"/> Garage Liability					
<input type="checkbox"/> Umbrella				Each Occurrence	\$
				Aggregate	\$
<input type="checkbox"/> Excess Liability Other Than Umbrella				Each Occurrence	\$
				Aggregate	\$
WORKERS COMPENSATION AND EMPLOYERS LIABILITY					
				STATUTORY	
				\$	(Each Accident)
				\$	(Disease - Policy Limit)
				\$	(Disease - Each Empl.)
<input type="checkbox"/> 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: Antietam Avenue over the Dequindre Cut Greenway

The Contractor shall start work within 10 days of award or on a date agreed upon with the Engineer. In no case, shall any work be commenced prior to receipt of formal notice of award by the Department.

The entire project shall be completed and open to traffic on or before November 15, 2007. Payment for Slope Restoration shall be withheld until the seed has taken hold and begun to grow.

No extensions of time will be allowed for increases in contract quantities or extra work unless it can be shown that such increases or extras affect the critical item of work.

No extension of time will be granted for labor disputes unless it can be shown that such disputes are industry wide, and that the delay affects the critical item of work.

No extension of time will be granted as a result of work stoppages ordered by the Department for Contractor non-compliance.

No extensions of time or additional payment will be granted for delays as a result of electrical wiring.

No extensions of time will be granted for delays in delivery of critical materials unless the delay can be shown to be industry wide and the delay affects the critical item of work.

The approved low bidder(s) for the work covered by this proposal will be required to participate in a Pre-Construction Meeting with City of Detroit representatives to work out a detailed Progress Schedule. The meeting will be scheduled after the approved low bidder is determined at a date mutually acceptable to the City of Detroit and the Contractor.

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 work schedule.

The City of Detroit will arrange the 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. As specified in the bidding proposal, the date the project is to be completed shall also be included in the Project Schedule.

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

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.

CITY OF DETROIT
**SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC**

CON:BMW

1 of 2

06-16-06

a. Description. This work shall consist of all labor, materials and equipment required to maintain traffic as specified herein for the construction of this project.

b. General. The bridge reconstruction will be closed to through traffic. Traffic will be maintained during the construction of proposed traffic improvements. A detour route and construction staging has been provided in the plans and shall be signed and maintained by the Contractor according to Sections 103, and 812 of the Michigan Department of Transportation 2003 Standard Specifications for Construction, and pertinent Supplemental Specifications and Special Provisions contained in this proposal. The Contractor shall, for the safety and protection of through and local traffic, furnish, erect and maintain traffic control devices as shown on the plans and as directed by the Engineer. The Contractor shall remove the traffic control devices in a prompt, safe and orderly manner upon completion of the work or when directed by the Engineer.

The Contractor shall maintain vehicle and pedestrian access to all properties, public and private, within the project limits at all times for local traffic and emergency vehicles, as described herein.

The Contractor shall, for the safety and protection of through and local traffic, furnish erect and maintain traffic control devices as required by the Michigan Manual of Uniform Traffic Control Devices 2005 Edition. This includes advanced warning signs, barricades and channeling devices at the intersecting street on which traffic is to be maintained. The Contractor shall also remove the traffic control devices in a prompt, safe and orderly manner when directed by the Engineer.

c. Construction Influence Area (CIA). The Construction Influence Area (CIA) shall consist of the width of the proposed right-of-way (and any easements) from the project point of beginning to the project point of ending and a sufficient distance beyond the beginning and end of the project to warn motorists of the construction ahead.

d. Traffic Restrictions. No work shall be performed or lane closures allowed during the Memorial Day, July 4th, or Labor Day holiday periods, as defined by the Engineer. The Contractor shall notify the Project Engineer a minimum of 72 hours prior to the implementation of any lane closure and or major traffic shifts. The Contractor shall notify the Engineer at least 24 hours in advance of erection or removal of overlays on existing signs.

All work shall be conducted during day time hours. Night work may be permitted, at the discretion of the Engineer. However, any additional cost for maintaining traffic shall be borne by the Contractor.

The Contractor shall provide reasonable access for local traffic and emergency vehicles to driveways and intersections adjacent to the bridge approaches at all times.

e. Traffic Control Devices. All signs, barricades, and other traffic control devices shall be erected, maintained, and operated in accordance with the Michigan Manual of Uniform Traffic Control Devices, 2005 edition, and as specified herein.

All temporary signs shall be faced with prismatic retroreflective sheeting.

All signs shall be ground driven as shown on the attached detail WZ-100-A or as directed by the Engineer. The Contractor shall contact Miss Dig (1-800-482-7171) a minimum of three (3) working days prior to driving the sign supports. All Miss Dig Participating Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be part of the Miss Dig alert system.

The Contractor shall cover any permanent traffic control devices that are in conflict with the devices detailed in the detour plan.

f. Measurement and Payment. The work covered by this Special Provision is considered to be included in other items of work in this contract and no additional payment will be made, except where specific items of work are provided for on the plans and paid for in accordance with the units and unit prices set forth in the contract.

Contract Item (Pay Item)	Pay Unit
Barricade, Type III, High Intensity, Lighted, Furn	Each
Barricade, Type III, High Intensity, Lighted, Oper.....	Each
Sign, Type B, Temp, Prismatic, Furn	Square Foot
Sign, Type B, Temp, Prismatic, Oper.....	Square Foot
Pavt Mrkg, Type R, 4 inch, White, Temp.....	Foot
Conc Barrier, Temp, Furn	Foot
Conc Barrier, Temp, Oper	Foot
Plastic Drum, High Intensity, Lighted, Furn	Each
Plastic Drum, High Intensity, Lighted, Oper	Each
Lighted Arrow, Type C, Furn.....	Each
Lighted Arrow, Type C, Oper	Each
Minor Traf Devices	Lump Sum

Any additional signing or maintaining traffic devices required to expedite the construction shall be at the Contractor's expense.

Any labor or materials required for the placement of pavement markings shall be included in the pay item **Minor Traf Devices**. No additional payment will be made.

MINIMUM MERGING TAPER LENGTH "L" (FEET)

OFFSET FEET	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										TAPER LENGTH "L" IN FEET
	25	30	35	40	45	50	55	60	65	70	
1	10	15	20	27	45	50	55	60	65	70	
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

UPSTREAM TAPERS

- MERGING TAPER
- SHIFTING TAPER
- SHOULDER TAPER
- TWO-WAY TRAFFIC TAPER

DOWNSTREAM TAPERS

(USE IS OPTIONAL)

TAPER LENGTH

- L - MINIMUM
- 1/2 L - MINIMUM
- 1/3 L - MINIMUM
- 100' - MAXIMUM
- 100' - MINIMUM (PER LANE)



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

DRAWN BY: CON:AE:djf	JUNE 2006	M0020a	SHEET
CHECKED BY: BMM	PLAN DATE:		1 OF 2
FILE: R:/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"

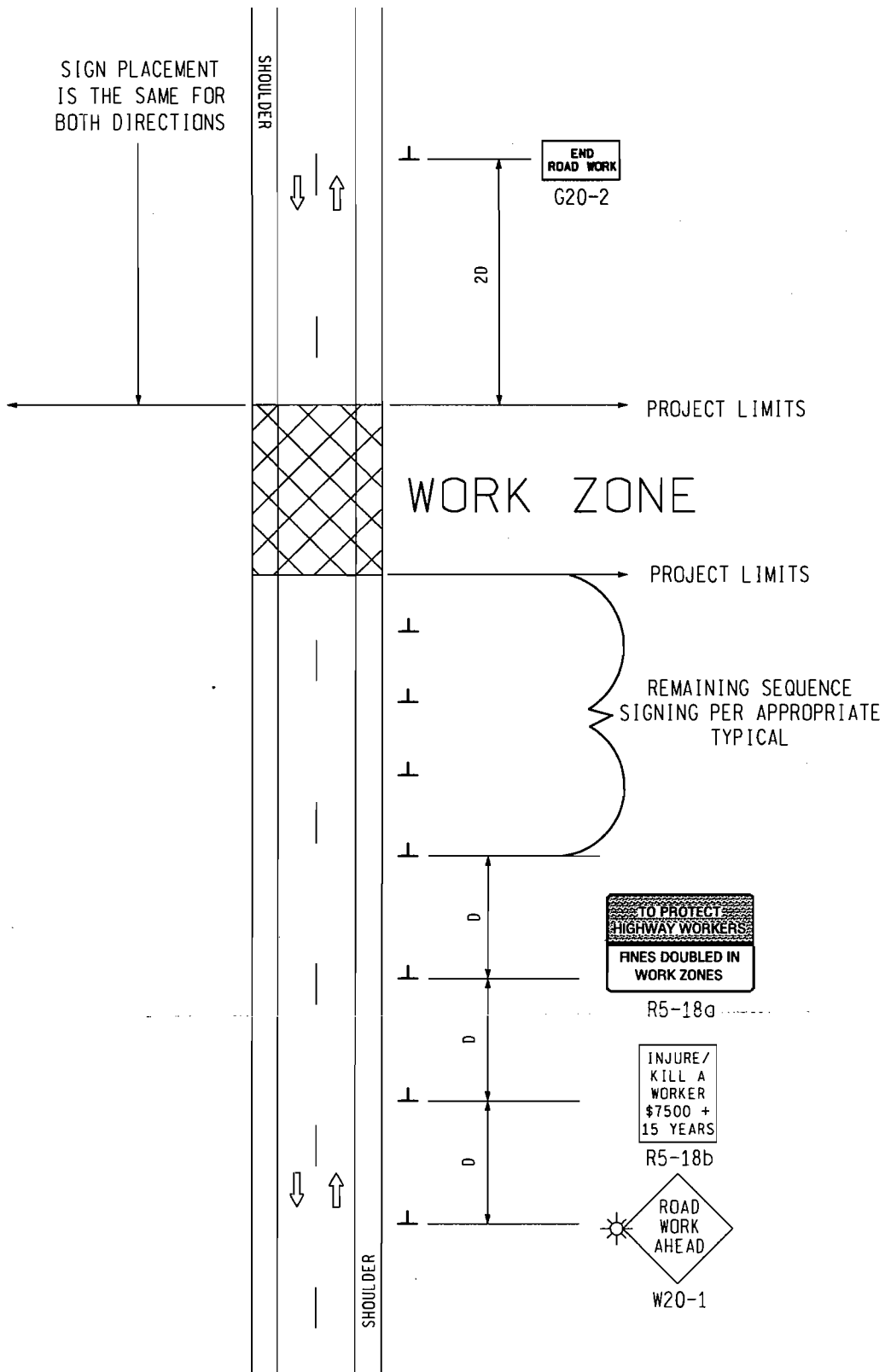
SPEED* MPH	LENGTH FEET
20	33
25	50
30	83
35	132
40	181
45	230
50	279
55	329
60	411
65	476
70	542

* 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.

 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: R:/DGN/TSR/STDS/ENGLISH/MNTTRF/M0020a.dgn		REV.	08/21/2006

SIGN PLACEMENT IS THE SAME FOR BOTH DIRECTIONS



SIGN = 136 ft2 - TYPE B
FOR BOTH DIRECTIONS OF TRAFFIC
W20-1 QUANTITY INCLUDED
WITH APPROPRIATE TYPICAL
FOR SEQUENCE SIGNING

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
CHECKED BY: BMM

JUNE 2006
PLAN DATE:

M0040a

SHEET
1 OF 2

NOT TO SCALE

FILE: 38-06N-TSR-STDS-ENCL ISH-MNTTRF-W0040a.dgn

REV. 05/04/2006

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"



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
 CHECKED BY: BMM

JUNE 2006
 PLAN DATE:

M0040a

SHEET
 2 OF 2

NOT TO SCALE

FILE: R:\DGN-TSR-STD5-ENGLISH-MNTTRF-M0040a.dgn

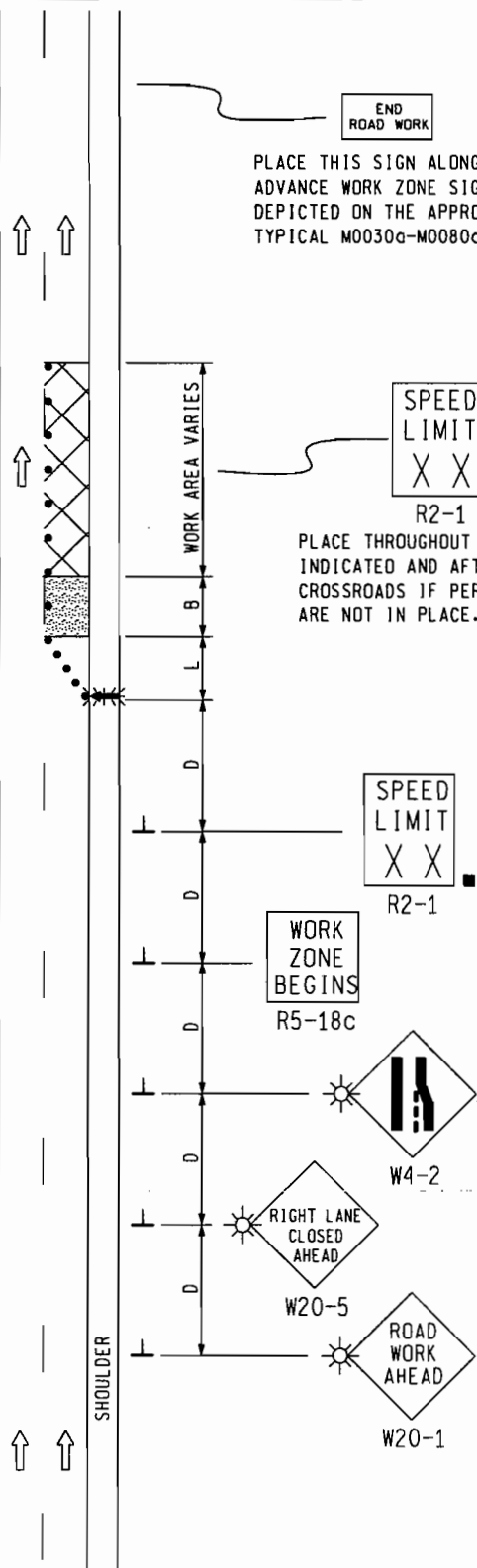
REV. 05/04/2006

END ROAD WORK

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

END ROAD WORK

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.



SPEED LIMIT
XX

R2-1

PLACE THROUGHOUT WORK AREA AS INDICATED AND AFTER ALL MAJOR CROSSROADS IF PERMANENT SIGNS ARE NOT IN PLACE.

SPEED LIMIT
XX

R2-1

WORK ZONE BEGINS
R5-18c



W4-2



W20-5

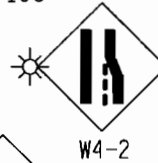


W20-1

SPEED LIMIT
XX

R2-1

WORK ZONE BEGINS
R5-18c



W4-2



W20-5



W20-1

KEY

- CHANNELIZING DEVICES
- ← LIGHTED ARROW PANEL
- ☀ TYPE A WARNING FLASHER (REQUIRED)
- TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT

SIGN = 168 ft± - TYPE B PLUS ADDITIONAL R2-1's THROUGHOUT WORK AREA

NOT TO SCALE



TRAFFIC AND SAFETY
MAINTAINING TRAFFIC
TYPICAL

TYPICAL TEMPORARY TRAFFIC CONTROL FOR A ONE-LANE CLOSURE ON A DIVIDED ROADWAY, NO SPEED REDUCTION

DRAWN BY: CON:AE:djf
CHECKED BY: BMM

JUNE 2006
PLAN DATE:

M0730a

SHEET
1 OF 2

FILE: R1-DGN-TSR-STDS-ENGLISH-MNTTRF-M0730a.dgn


REV. 08/29/2006

NOTES

- 1B. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES
 L = MINIMUM LENGTH OF TAPER
 B = LENGTH OF LONGITUDINAL BUFFER
 SEE **M0020a** FOR "D," "L," AND "B" 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.
- 4E. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES SHOULD BE EQUAL IN FEET TO THE POSTED SPEED IN MILES PER HOUR ON TAPER(S) AND TWICE THE POSTED SPEED IN THE PARALLEL AREA(S).
5. FOR OVERNIGHT CLOSURES, CHANNELIZING DEVICES SHALL BE LIGHTED PLASTIC DRUMS.
6. 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.
8. WHEN BUFFER AREAS ARE ESTABLISHED, THERE SHALL BE NO EQUIPMENT OR MATERIALS STORED OR WORK CONDUCTED IN THE BUFFER AREA.
21. ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS, SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR DAYTIME-ONLY TRAFFIC PATTERNS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.
26. THE LIGHTED ARROW PANEL SHALL BE LOCATED AT THE BEGINNING OF THE TAPER AS SHOWN. WHEN PHYSICAL LIMITATIONS RESTRICT ITS PLACEMENT AS INDICATED, THEN IT SHALL BE PLACED AS CLOSE TO THE BEGINNING OF THE TAPER AS POSSIBLE.

SIGN SIZES

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

 TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A ONE-LANE CLOSURE ON A DIVIDED ROADWAY, NO SPEED REDUCTION		
DRAWN BY: CDN:AE:djf	JUNE 2006	M0730a	SHEET 2 OF 2
CHECKED BY: BMM	PLAN DATE:		
FILE: K:\DGN-TSR-STDS-ENGLISH-MNTTRF-M0730a.dgn REV. 08/25/2006			

NOT TO SCALE

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

END ROAD WORK

SPEED LIMIT
XX
R2-1 *

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

END ROAD WORK

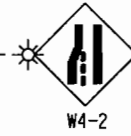
SPEED LIMIT
XX
R2-1 *

SPEED LIMIT
XX
R2-1

PLACE THROUGHOUT WORK AREA AS INDICATED IN THE NOTES.



W4-2



W4-2

SPEED LIMIT
XX
R2-1

SPEED LIMIT
XX
R2-1

WORK ZONE BEGINS
R5-18c

WORK ZONE BEGINS
R5-18c



W4-2



W4-2

REDUCED SPEED ZONE AHEAD
W3-5b

REDUCED SPEED ZONE AHEAD
W3-5b

LEFT TWO LANES CLOSED AHEAD
W20-5a

LEFT TWO LANES CLOSED AHEAD
W20-5a

ROAD WORK AHEAD
W20-1

ROAD WORK AHEAD
W20-1

KEY

- CHANNELIZING DEVICES
- ← LIGHTED ARROW PANEL
- ☀ TYPE A WARNING FLASHER (REQUIRED)
- TRAFFIC FLOW
- * LEGEND REFLECTS SPEED LIMIT BEYOND WORK AREA

SIGN = 272 ft2 - TYPE B PLUS ADDITIONAL R2-1's THROUGHOUT WORK AREA

SHOULDER

SHOULDER

MDOT
Michigan Department of Transportation
TRAFFIC AND SAFETY
MAINTAINING TRAFFIC
TYPICAL

TYPICAL TEMPORARY TRAFFIC CONTROL
FOR A TWO-LANE CLOSURE ON A DIVIDED
ROADWAY USING A SINGLE STEP
DOWN IN SPEED LIMIT

DRAWN BY: CON:AE:djf
CHECKED BY: BMM

JUNE 2006
PLAN DATE:

M0830a

SHEET
1 OF 2

NOT TO SCALE

FILE: K:\DGN-TSR-STD5-ENGL ISH-MNTTRF-M0830c.dgn

REV. 08/29/2006


NOTES

- 1B. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES
 L = MINIMUM LENGTH OF TAPER
 B = LENGTH OF LONGITUDINAL BUFFER
 SEE **M0020a** FOR "D," "L," AND "B" 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.
 - 4E. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES SHOULD BE EQUAL IN FEET TO THE POSTED SPEED IN MILES PER HOUR ON TAPER(S) AND TWICE THE POSTED SPEED IN THE PARALLEL AREA(S).
 5. FOR OVERNIGHT CLOSURES, CHANNELIZING DEVICES SHALL BE LIGHTED PLASTIC DRUMS.
 6. 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 CRASHWORTHY 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.
 8. WHEN BUFFER AREAS ARE ESTABLISHED, THERE SHALL BE NO EQUIPMENT OR MATERIALS STORED OR WORK CONDUCTED IN THE BUFFER AREA.
 - 16A. ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE REDUCED SPEED SHALL BE PLACED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK AREA WHERE THE REDUCED SPEED IS IN EFFECT, AND AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS REFLECTING THE REDUCED SPEED ARE MORE THAN TWO MILES APART.
 - 16B. WHEN REDUCED SPEED LIMITS ARE UTILIZED IN THE WORK AREA, ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED SHALL BE PLACED BEYOND THE LIMITS OF THE REDUCED SPEED AS INDICATED.
 - 16E. WHEN EXISTING SPEED LIMITS ARE REDUCED MORE THAN 10 MPH, THE SPEED LIMIT SHALL BE STEPPED DOWN IN NO MORE THAN 10 MPH INCREMENTS.
 21. ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS, SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR DAYTIME-ONLY TRAFFIC PATTERNS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.
 26. THE LIGHTED ARROW PANEL SHALL BE LOCATED AT THE BEGINNING OF THE TAPER AS SHOWN. WHEN PHYSICAL LIMITATIONS RESTRICT ITS PLACEMENT AS INDICATED, THEN IT SHALL BE PLACED AS CLOSE TO THE BEGINNING OF THE TAPER AS POSSIBLE.

SIGN SIZES

DIAMOND WARNING - 48" x 48"
 RECTANGULAR REGULATORY - 48" x 60"
 R5-18c REGULATORY - 48" x 48"

NOT TO SCALE

 TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE CLOSURE ON A DIVIDED ROADWAY USING A SINGLE STEP DOWN IN SPEED LIMIT		
DRAWN BY: CON:AE:djf	JUNE 2006	M0830a	SHEET 2 OF 2
CHECKED BY: BMM	PLAN DATE:		
FILE: K:\DGN-TSR-STDS-ENGLISH-MNTTRF-M0830a.dgn REV. 08/29/2006			

SIGN MATERIAL SELECTION TABLE

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

TYPE I ALUMINUM EXTRUSION
 TYPE II PLYWOOD
 TYPE III ALUMINUM SHEET

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

POST SIZE REQUIREMENTS TABLE

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

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

NOT TO SCALE

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



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

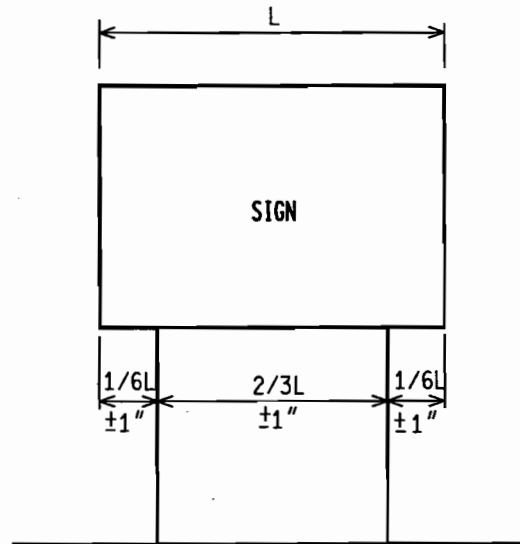
GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS

8/2006
 PLAN DATE

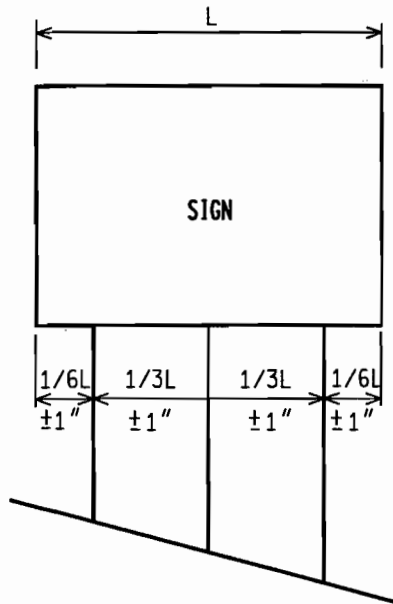
WZD-100-A

SHEET
 1 of 11

2 POST SIGN SUPPORT SPACING



3 POST SIGN SUPPORT SPACING

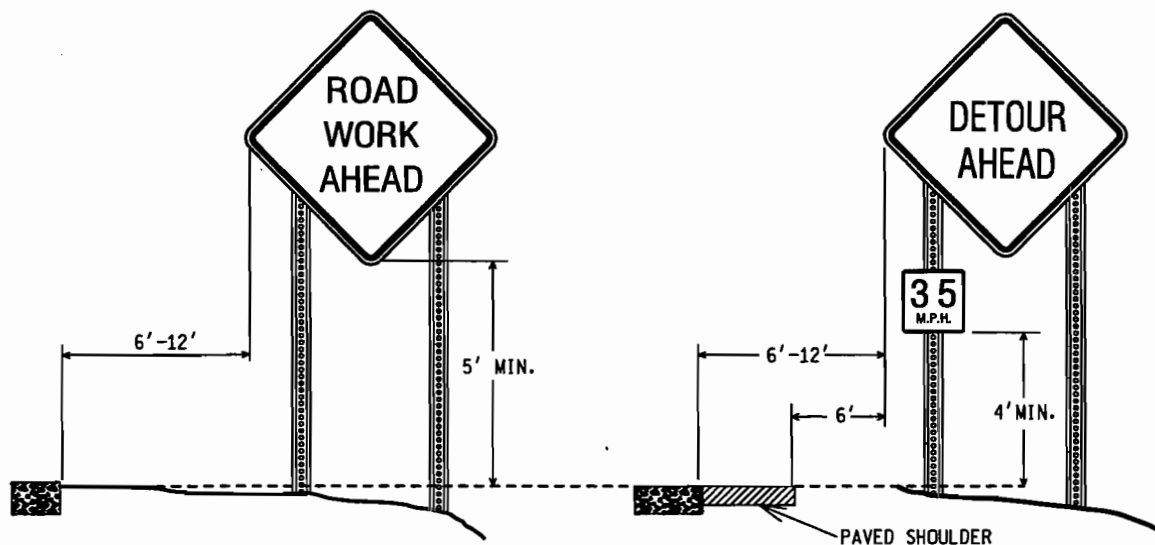


* FOR ALL 11' AND 12' LONG SIGNS ON 3 WOOD SUPPORTS, SPREAD POSTS SO AS TO HAVE A 8' MIN. TO 9' MAX. DISTANCE BETWEEN OUTSIDE POSTS.

NOT TO SCALE

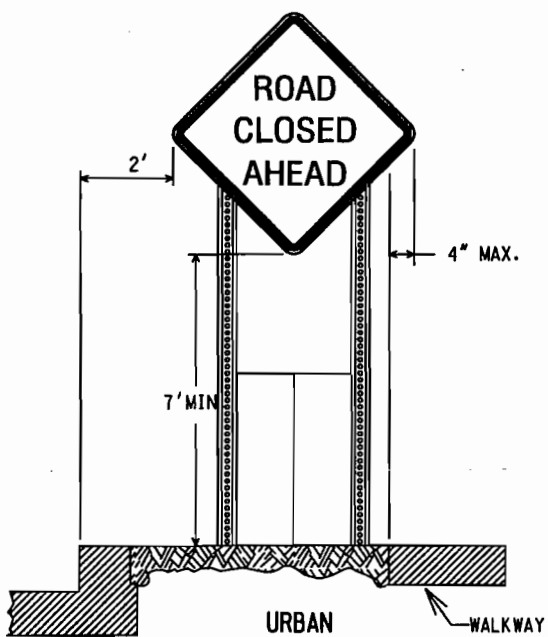
MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006 PLAN DATE	WZD-100-A	SHEET 2 of 11
File: PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH				

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

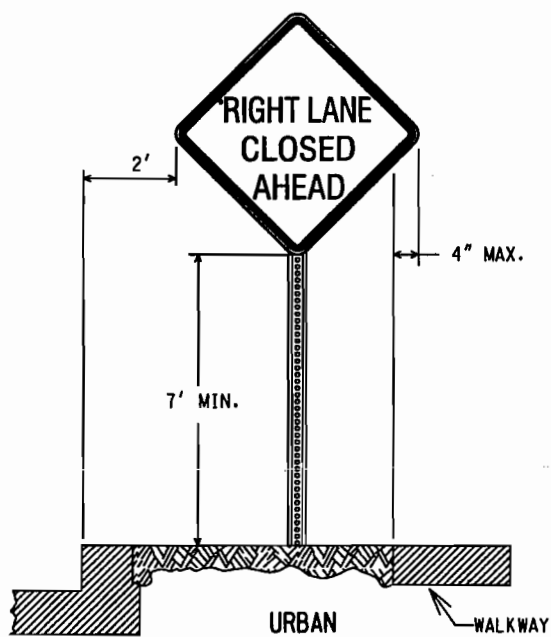


RURAL

RURAL WITH ADVISORY SPEED PLATE



(CURBED AREAS OR WHERE WALKWAYS ARE PRESENT)



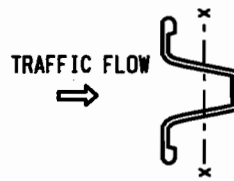
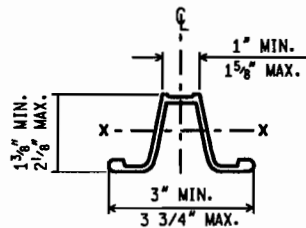
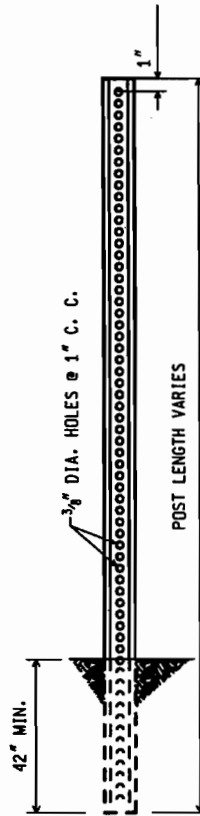
(CURBED AREAS OR WHERE WALKWAYS ARE PRESENT)

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 of 11
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NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



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

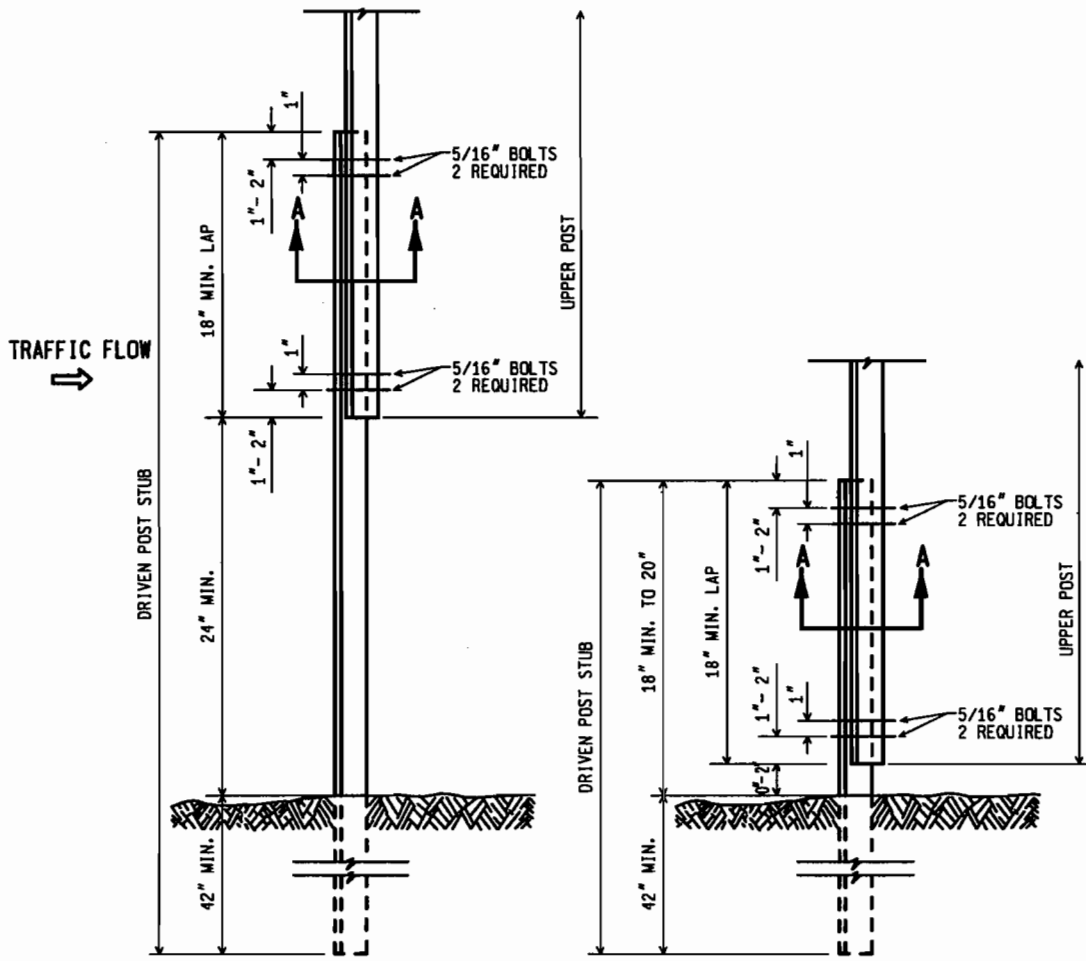
**3 lb. U - CHANNEL STEEL POST
 (NO SPLICE)**

MOUNT SIGN ON OPEN FACE OF
 U - CHANNEL STEEL POST

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006	WZD-100-A	SHEET 4 of 11
File#W/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH		PLAN DATE		

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



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

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

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

PENDING
FHWA APPROVAL DATE

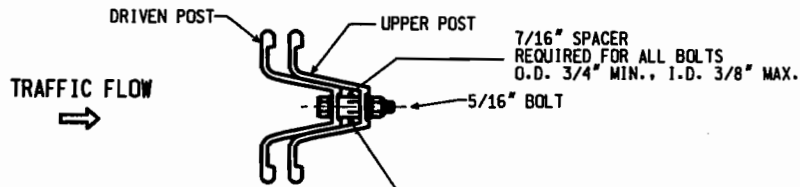
8/2006
PLAN DATE

WZD-100-A

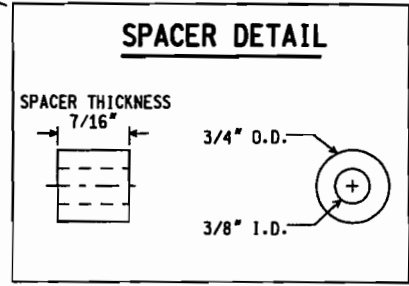
SHEET
5 of 11

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SECTION A-A



NOTES:

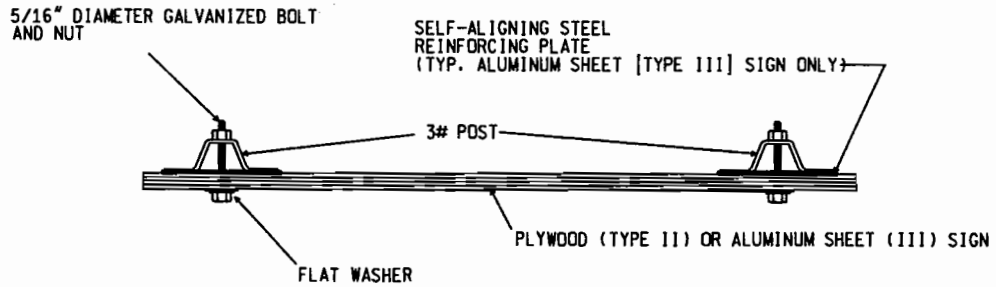
1. THE SPACER THICKNESS SHALL BE 1/16" LESS THAN THE GAP BETWEEN THE POST WHEN POSITIONED IN THE UNBOLTED CONFIGURATION.
2. THE EXTERIOR BOLT (CLOSEST TO LAP), SPACER, WASHER, AND NUT SHALL BE INSTALLED IN A PREPUNCHED HOLE 1" TO 2" FROM THE END OF THE LAP.
3. THE INTERIOR BOLT (FARTHEST FROM LAP), SPACER, 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)

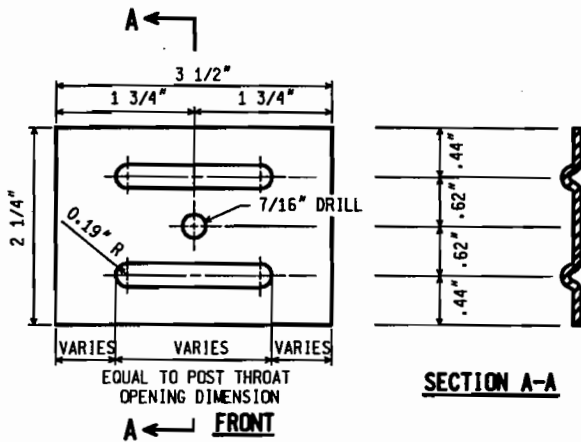
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006	WZD-100-A	SHEET 6 of 11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH	PLAN DATE			

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SIGN TO 3 lb. POST CONNECTION



NOTES: (FOR STEEL SIGN REINF' PLATE)

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

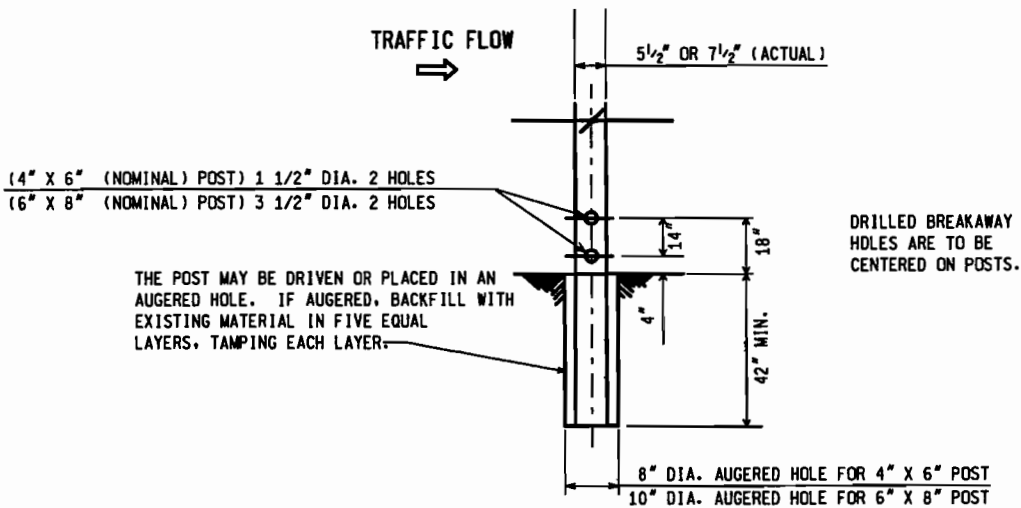
STEEL SIGN REINFORCING PLATE
REQUIRED FOR TYPE III SIGNS ONLY

3 lb. U - CHANNEL STEEL POST SIGN CONNECTION

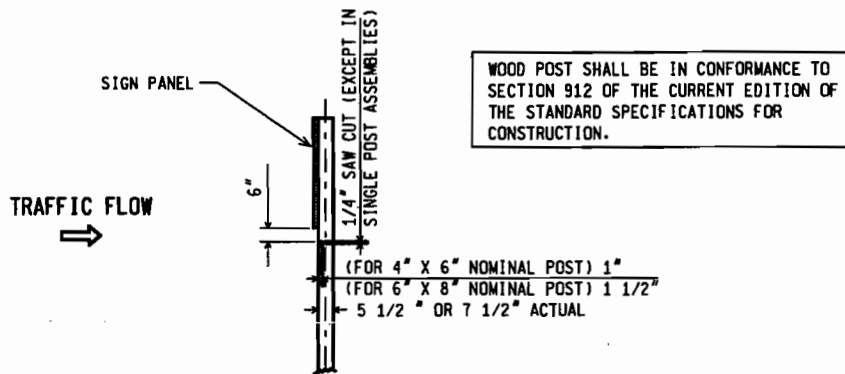
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	PENDING FHWA APPROVAL DATE	8/2006	WZD-100-A	SHEET 7 of 11
File:PW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH		PLAN DATE		

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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

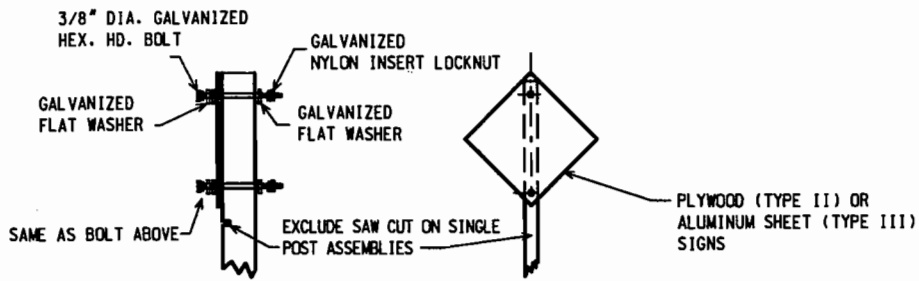
WZD-100-A

SHEET
8 of 11

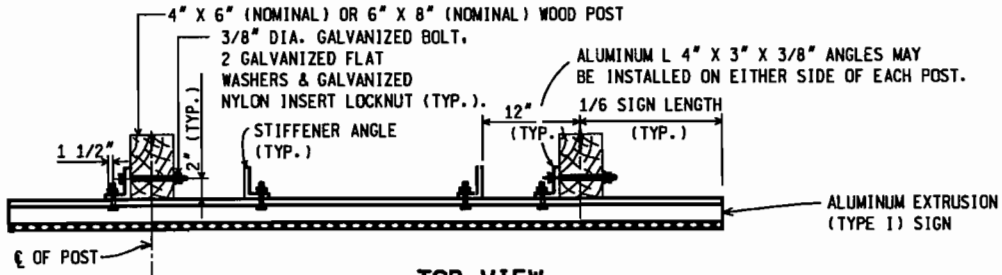
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PLAN DATE

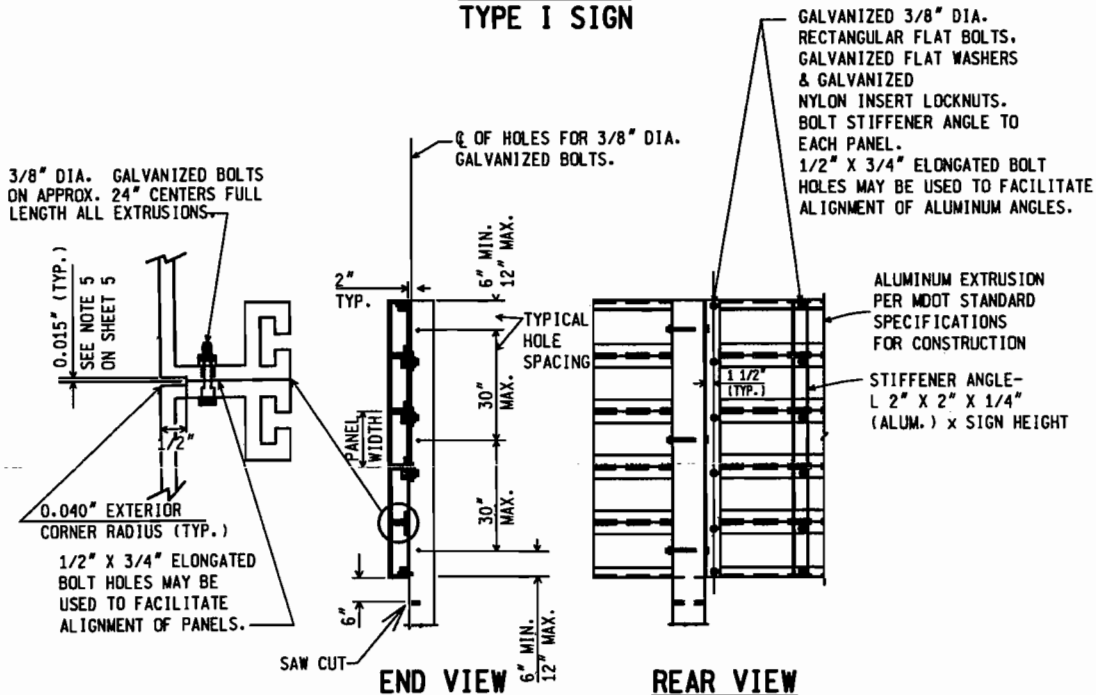
NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



TYPE II AND TYPE III SIGNS



**TOP VIEW
TYPE I SIGN**



TYPE I SIGN - ERECTION DETAILS

WOOD POST CONNECTIONS

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

PENDING
FHWA APPROVAL DATE

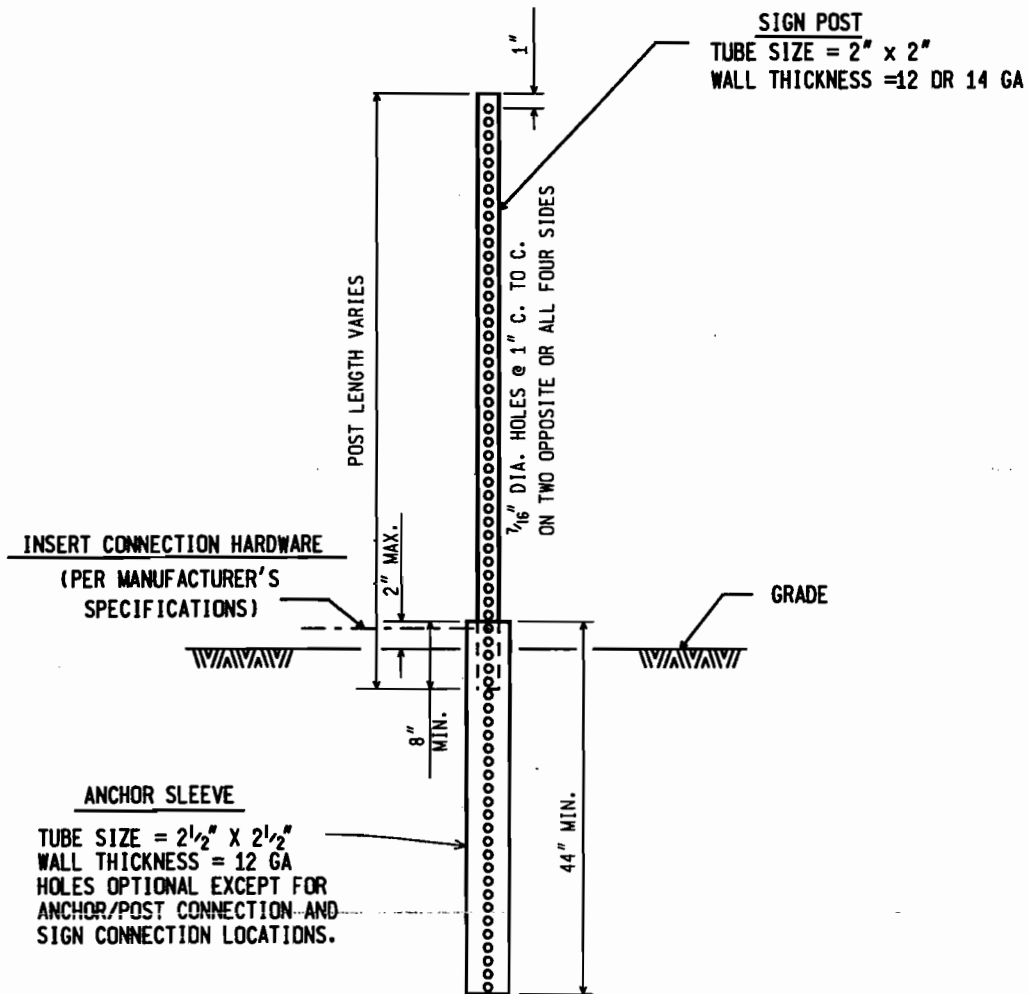
8/2006
PLAN DATE

WZD-100-A

SHEET
9 of 11

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

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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				

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GENERAL NOTES:

1. A MAXIMUM OF TWO POSTS WITHIN A 7 FOOT PATH IS PERMITTED.
2. ALL SIGN POSTS SHALL COMPLY WITH NCHRP 350.
3. ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 42".
4. BRACING OF POST IS NOT PERMITTED.
5. SIGN SHALL BE LEVEL, AND UPRIGHT FOR THE DURATION OF INSTALLATION.
6. ERECT POSTS SO THE SIGN FACE AND SUPPORTS DO NOT VARY FROM PLUMB BY MORE THAN 3/16" IN 3'. PROVIDE A CENTER-TO-CENTER DISTANCE BETWEEN POSTS WITHIN 2 PERCENT OF PLAN DISTANCE.
7. NO MORE THAN ONE SPLICE PER POST, AS SHOWN, WILL BE PERMITTED.
8. POST TYPES SHALL NOT BE MIXED WITHIN A SIGN SUPPORT INSTALLATION.
9. NO VERTICAL JOINTS ARE PERMITTED IN SIGN. NO HORIZONTAL JOINTS THROUGH SIGN LEGEND OR SYMBOLS ARE PERMITTED IN SIGN
10. REMOVE SIGN POSTS AND/OR POST STUBS IN THEIR ENTIRETY WHEN NO LONGER REQUIRED.
11. ALL LABOR, MATERIALS, AND EQUIPMENT, INCLUDING TEMPORARY SUPPORTS REQUIRED TO INSTALL, MAINTAIN, RELOCATE, 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	WZD-100-A	SHEET 11 of 11
FilePW/Doc/RD/T&S/Typ/Dev/Sign MainTraf D/WZD-100-A Rev. 8/21/06 ECH		PLAN DATE		

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MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PROMPT PAYMENT

FIN:CRR

1 of 2

C&T:APPR:JAR:DBP:12-27-05

The following is added to Section 109 of the Standard Specifications for Construction.

109.10 Prompt Payment. The prime Contractor agrees to pay each subcontractor for the satisfactory completion of work associated with the subcontract no later than ten (10) calendar days from the receipt of each payment the prime Contractor receives from the Department. Any delay or postponement of payment from this time frame may occur only upon receipt of written approval from the Engineer. This requirement is also applicable to all sub-tier subcontractors and shall be made a part of all subcontract 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.** Satisfactory completion is defined for the purpose of this prompt payment provision as when:
1. the Engineer finds the work completed in accordance with the contract, plans and specifications;
 2. all required paperwork, including material certifications, payrolls, etc., has been received and approved by the Engineer; and,
 3. the Engineer has inspected and approved the work and has determined the final quantities.
- B. **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 within thirty (30) calendar days of the date the payment was to be received. **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 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 twenty five (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 involved or 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 Small Business Liaison Section for information on current procedures and to receive reimbursement.

Copies of all documents related to prompt payment claims will be provided to the Engineer to be included in the project files.

Continued failure of the prime Contractor to comply with prompt payment provisions may result in sanctions, which shall be applied progressively. Sanctions may include, but are not limited to: a review of the firm by representatives of the Department as appropriate for the type of work performed by the prime Contractor; reduction of prequalification ratings; and/or withdrawal of bidding privileges.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MATERIAL APPROVAL ON LOCAL AGENCY PROJECTS

DES:CGY

1 of 1

C&T:APPR:DBP:ACR:12-05-06

Delete the first sentence of the second paragraph in subsection 105.05, on page 59 of the Standard Specifications for Construction in its entirety and replace it with the following:

Materials will be sampled by a representative of the Engineer and tested for conformance with the contract requirements.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TEMPORARY CONCRETE BARRIER ENDING, DETAIL

T&S:CT

1 of 5

C&T:APPR:JKG:JFS:05-09-05

a. Description. This work shall consist of furnishing, installing, operating, maintaining, repairing, and removing Temporary Concrete Barrier Ending, Detail 1 - 5 as indicated on the plans, proposal, and/or as directed by the Engineer. The type of Temporary Concrete Barrier Ending shall be as detailed in Standard Plan R-126 Series, Placement of Temporary Concrete Barrier.

b. Materials. The concrete end sections detailed in Standard Plan R-52 Series, Temporary Concrete Barrier, shall conform to the applicable specifications and requirements for Temporary Concrete Barrier as stated in Section 812 of the 2003 Standard Specifications for Construction.

Construct concrete attenuator base pads, foundations, anchor blocks, or backup units using Grade P2 concrete unless otherwise directed by the Engineer.

The following attenuation systems are approved for use on a temporary basis:

1. Sand Module Attenuator (shall be NCHRP 350 approved)
2. Quad Guard
3. Quad Guard Elite
4. Quad Guard LMC
5. REACT 350
6. TAU-II
7. Absorb 350
8. TRACC
9. SCI 100 GM
10. Triton CET

Other attenuation systems which meet NCHRP 350, Test Level 3 (TL-3) criteria and have FHWA approval may be used as determined by the Engineer.

Sand module attenuators shall be as manufactured for Energy Absorption Systems or Traffix. Other sand module attenuators which meet NCHRP 350, TL-3 requirements and have FHWA approval may be acceptable as determined by the Engineer. All modules in any one installation shall be from the same manufacturer. Mixing of different types of modules will not be permitted.

The sand used for filling sand module attenuators shall conform to the gradation and moisture content specified by the manufacturer.

All impact attenuator devices must be constructed of materials specified by the manufacturer. Applicable criteria from Standard Plan Series R-49, R-52, R-54, and R-126 shall apply.

c. Design Information. The design speed for all details (Standard Plan R-126 Series) is equal to the posted work zone speed. Detail 5 shall only be used on 2-way, 2-lane roadways with stop or signal control.

d. Construction. The Temporary Concrete Barrier Ending shall be placed according to the Standard Plan R-126 Series:

1. Detail 1 - The Contractor shall place the sloped Temporary Concrete Barrier Ending Section the same as indicated for Temporary Concrete Barrier Placement.

2. Detail 2 - Impact attenuation systems shall be installed according to the manufacturer's specifications and requirements. If the lateral offset from the edge of the approaching traffic lane to the toe (near edge) of the Temporary Concrete Barrier is 6 feet - 6 inches or more, it is acceptable to use a sand module attenuator.

If the lateral offset is less than 6 feet - 6 inches, a narrow crash cushion attenuation system shall be used. The width of the crash cushion attenuator system shall be as narrow as possible while still shielding the blunt end of the Temporary Concrete Barrier.

Each sand module in the sand module attenuation system shall be:

1. Assembled according to the manufacturer's specifications.
2. Filled with sand to the nominal weight specified by the manufacturer to ensure the attenuation system meets NCHRP 350, TL-3 requirements.
3. Placed in the appropriate location specified by the manufacturer to ensure the attenuation system meets NCHRP 350, TL-3 requirements.
4. Installed according to manufacturer's specifications.

Attenuation systems shall be placed on a concrete, HMA, or compacted aggregate surface according to manufacturer's specifications. If necessary, construct the appropriate base pad, foundation, anchor block, and backup unit per manufacturer's specifications.

Attenuation systems shall be installed according to manufacturer's specifications.

Install the unit and connect the unit to the backup and to the front anchoring system as required for proper installation of the system.

Attachments to the attenuator (appurtenances) approved by the attenuator manufacturer may be installed per manufacturer's specifications. Do not attach unapproved appurtenances to the attenuator.

Attach an object marker, with alternating black and yellow stripes, to the nose of the attenuator according to manufacturer's specifications. The three-inch stripes on the object marker must slope downward at an angle of 45 degrees toward the roadway.

At the time the attenuator is installed, an employee trained by the manufacturer in the proper installation of the impact attenuator system supplied for the project must be present. The Contractor shall also provide written certification that the attenuator was installed according to manufacturer's specifications.

If temporary anchors are used in new pavement or existing pavement (which will remain in place), these anchors must be removed to a minimum of 1 inch below final pavement grade and backfilled with an epoxy material approved by the Engineer. Temporary anchors in temporary pavement may be removed flush with the paved surface.

Concrete pads may contain steel reinforcement. The Contractor is required to use equipment which can drill or core through steel reinforcement to obtain the proper depth for the concrete anchors used to attach the attenuator to the concrete surface.

Cable anchorages and backups shall be placed for proper attenuator alignment.

The Contractor shall be required to respond within 24 hours of notification by the Engineer concerning replacement, repair, or realignment of the attenuator. If the Contractor fails to respond or the necessary work is not completed within 48 hours, the Engineer may have the work completed by others and charged to the Contractor.

3. Detail 3 - The Temporary Concrete Barrier sections which extend through and make contact with the guardrail must be standard, full height sections. Sloped Temporary Concrete Barrier sections shall not be used.
4. Detail 4 - The Temporary Concrete Barrier connection sections shall be pre-cast.
5. Detail 5 - Impact attenuation systems shall be installed according to the manufacturer's specifications and requirements.

Each sand module in the sand module attenuation system shall be:

- a. Assembled according to the manufacturer's specifications.
- b. Filled with sand to the nominal weight specified by the manufacturer to ensure the attenuation system meets NCHRP 350, TL-3 requirements.
- c. Placed in the appropriate location specified by the manufacturer to ensure the attenuation system meets NCHRP 350, TL-3 requirements.
- d. Installed according to manufacturer's specifications.

Attenuation systems shall be placed on a concrete, HMA, or compacted aggregate surface according to manufacturer's specifications. If necessary, construct the appropriate base pad, foundation, anchor block, and backup unit per manufacturer's specifications.

Attenuation systems shall be installed according to manufacturer's specifications.

Install the unit and connect the unit to the backup and to the front anchoring system as required for proper installation of the system.

Attachments to the attenuator (appurtenances) approved by the attenuator manufacturer may be installed per manufacturer's specifications. Do not attach unapproved appurtenances to the attenuator.

Attach an object marker, with alternating black and yellow stripes, to the nose of the attenuator according to manufacturer's specifications. The three-inch stripes on the object marker must slope downward at an angle of 45 degrees toward the roadway.

At the time the attenuator is installed, an employee trained by the manufacturer in the proper installation of the impact attenuator system supplied for the project must be present. The Contractor shall also provide written certification that the attenuator was installed according to manufacturer's specifications.

If temporary anchors are used in new pavement or existing pavement (which will remain in place), these anchors must be removed to a minimum of 1 inch below final pavement grade and backfilled with an epoxy material approved by the Engineer. Temporary anchors in temporary pavement may be removed flush with the paved surface.

Concrete pads may contain steel reinforcement. The Contractor is required to use equipment which can drill or core through steel reinforcement to obtain the proper depth for the concrete anchors used to attach the attenuator to the concrete surface.

Cable anchorages and backups shall be placed for proper attenuator alignment.

The Contractor shall be required to respond within 24 hours of notification by the Engineer concerning replacement, repair, or realignment of the attenuator. If the Contractor fails to respond or the necessary work is not completed within 48 hours, the Engineer may have the work completed by others and charged to the Contractor.

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

1. Temporary Concrete Barrier Ending, Details 1, 3, and 4 will be paid for the same as "Temporary Concrete Barrier" as detailed in subsection 812.04 of the 2003 Standard Specifications for Construction.
2. Additional payment will not be provided for removing and replacing guardrail panels and posts as specified in Temporary Concrete Barrier Ending, Detail 3.
3. Damage compensation will be paid for as detailed in subsection 812.04 of the 2003 Standard Specifications for Construction.
4. Temporary Concrete Barrier Ending, Details 2 and 5 will be measured and paid for using the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Temp Conc Barrier Ending, Detail 2, Furn.....	Each
Temp Conc Barrier Ending, Detail 2, Oper.....	Each
Temp Conc Barrier Ending, Detail 5, Furn.....	Each
Temp Conc Barrier Ending, Detail 5, Oper.....	Each

Payment for **Temp Conc Barrier Ending, Detail 2, Furn** and **Temp Conc Barrier Ending, Detail 5, Furn** includes:

All materials, labor, and equipment required to:

- A. Deliver the attenuator to the job site.
- B. Construct attenuator base pads, foundations, anchor blocks, and backup units as necessary.
- C. Install the attenuator (including all hardware and appurtenances).
- D. Connect the unit to the backup and to the front anchoring system as required.
- E. Provide a trained installer on site during installation.

Payment for **Temp Conc Barrier Ending, Detail 2, Oper** and **Temp Conc Barrier Ending, Detail 5, Oper** includes:

All materials, labor, and equipment required to:

- A. Realign and/or repair the attenuator as required during construction.
- B. Relocate the attenuator as required during construction. This includes:

- i. Removing the attenuator from its existing location.
 - ii. Removing any attenuator base pads, foundations, anchor blocks and backups units from the existing location as determined by the Engineer.
 - iii. Constructing new attenuator base pads, foundations, anchor blocks, and backups as necessary at the new location.
 - iv. Transporting and reinstalling the attenuator per manufacturer's specifications at the new location.
- C. Remove the attenuator when no longer required or as directed by the Engineer.
 - D. Remove and dispose of attenuator base pads, foundations, anchor blocks, backups, and associated hardware as necessary.

Sand module attenuator arrays for the appropriate design speed will be paid as "Each" quantity, regardless of the number of modules used.

All damage to Temporary Concrete Barrier Endings as a result of Contractor's equipment and/or operations shall be repaired or replaced at Contractor's expense.

CITY OF DETROIT
SPECIAL PROVISIONS

1 of 3

DET: NH

Revised:02-19-07

WORK APPROVALS

Acceptance by the Michigan Department of Transportation of any or all Utility work under this contract will be conditioned upon approval by the appropriate Department of the City of Detroit.

UTILITY ACCESS

The contractor shall contact the utility owners, including the Detroit Fire and Police Departments regarding their facilities prior to starting the work. All utilities outlets and control fixtures shall be maintained in an accessible condition at all times.

ADJACENT UTILITIES

When proposed utilities cross or lay parallel to an existing or proposed utility, a vertical clearance of 12 inches and horizontal clearance of 42 inches shall be provided between the outside limits of their construction and the outside limits of the PLD or DWSD facility. PLD facilities include electrical conduits, communication conduits, and related structures. DWSD facilities include sewers, water mains, and related structures. If for any reason this clearance cannot be provided, the contractor shall notify the project engineer and proceed under his direction in an approved manner.

RECLAIMING SALVAGABLE MATERIAL

All salvagable material within the limits of this project and belonging to either privately or municipally owned utilities, which are to be reclaimed by its owner, will be indicated on the plans or in the proposal. The removal of such material shall be done by the owner and at their own expense and at such time as will cause no delay to the Contractor. If after due notice the owner does not remove the material, the Engineer shall advise the Contractor to remove the material and this material shall become the property of the Contractor. The work of removing the material is included in the construction of the project and will not be paid for separately

HYDRANTS AND WATER

The Contractor shall pump out at the end of each day throughout the year, regardless of the season, any fire hydrant used to obtain water.

The Contractor shall secure the required permit from the Detroit Water and Sewerage Department, and shall bear all the expense for such permit and for the water used. If connections are made to hydrants, the Contractor shall also obtain permission for such connections from the Detroit Fire Department. Fire Department's standard hydrant wrench shall be used for the operation of the hydrant.

CITY OF DETROIT
SPECIAL PROVISIONS

2 of 3

DET: NH

Revised: 08-2003

SHOP DRAWINGS

The Contractor shall furnish shop drawings showing complete details of the structural steel, reinforcing steel, water mains and appurtenances, electrical components and any other items called for on the Plans or Specifications.

In each instance, the Contractor shall submit eight (8) sets of prints to the Project Engineer to obtain approvals from the City of Detroit or its Consultant(s). The Contractor shall furnish ten (10) sets of prints, as finally approved by the City of Detroit or its Consultant(s), to the Project Engineer for distribution.

Tracings of shop drawings shall be turned over to the Department as provided under Subsection 707.03.C.1 of the 2003 MDOT Standard Specifications for Construction. In addition, one set of transparent reproductions of all shop tracings shall be provided by the Contractor for the City of Detroit.

**USE OF BALL TYPE PAVEMENT BREAKER FOR
REMOVAL OF MISCELLANEOUS STRUCTURES**

The use of a crane and ball type pavement breaker for the removal of miscellaneous structures referred to in Section 204 of the 2003 Standard Specifications and the removal of other items called for in these Supplemental Specification will **NOT** be permitted at any time for work under this Contract, except when specifically authorized by the Engineer.

PUMPING AND DRAINAGE

The Contractor will be required to furnish all equipment and supplies and perform all labor necessary to keep all excavated areas dewatered during the period of his contract.

The work will include the disposal of all drainage water flowing into the excavation. The drainage of the entire project shall be disposed of in a manner that will not interfere with or delay the work of others. This work shall be performed as directed by the Engineer.

The City will permit, subject to its approval, drainage water from the excavations for the project to enter existing operating sewers without reimbursement. No claims for damages, however, will be allowed the Contractor because of the inadequacy of the City sewers to accommodate the water from the excavations.

All sewers and drainage structures shall be kept thoroughly cleaned of silt, debris and foreign matter, and shall be free from such accumulation at the time of final inspection.

CITY OF DETROIT
SPECIAL PROVISION

3 of 3

DET: NH

Revised: 08-2003

PUMPING AND DRAINAGE, (cont'd.):

The work of pumping and cleaning the structures specified will be considered included to the construction of the project and no additional payment will be made therefor.

PROPERTY AND SURVEY MONUMENTS

Before any monuments or stakes marking the boundaries of property along or near the work are removed or disturbed, the Contractor shall notify the Engineer in sufficient time so that they can be properly located and reset.

All precautions shall be taken to avoid disturbance of permanent survey monuments of any City, County or State authority, and when any of these are disturbed or destroyed, the Contractor shall restore them to the satisfaction of such authority and shall pay all costs incurred by such authority in connection therewith.

CLEANLINESS OF THE WORK

The Contractor shall at all times keep the street pavement and right-of-way and any public or private premises temporarily occupied by him for purposes of work under this contract free from accumulations of waste material or rubbish caused by his employees or the work. The requirement shall apply to any streets in vicinity of the work which are affected by the Contractor's construction or hauling operations, as well as to streets in which the work is located. If the Contractor shall fail to keep any street cleaned of debris resulting from his operations, and therefore shall create any public nuisance, he shall be notified in writing by the Engineer to clean the street and remove the nuisance immediately. If, within 24 hours after the receipt of such notice, the contractor shall fail to clean such street satisfactorily, the Engineer shall order the street cleaned by the Department of Public Works or such other agency as he shall designate and all costs of such cleaning shall be paid by the Contractor.

Materials and equipment not in current use shall not be stored on any city streets. Storage of materials on private property shall require a written agreement with the owner. The Contractor shall provide the Engineer a copy of the agreement.

CITY OF DETROIT
SPECIAL PROVISION
FOR
CONCRETE PAVEMENT
AND CONCRETE BASE PAVEMENT, MODIFIED

1 of 2

DET: NH, AA

Revised: 08-21-06

DESCRIPTION:

This work shall consist of constructing a concrete pavement or a concrete base pavement, with or without reinforcement and with or without an integral curb on a prepared subgrade. All joints shall be included in the item of work. Neoprene joints shall not be required. The work shall be as shown on the plans and as specified in Sections 601, 602, 701 and 802 of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for Construction and as herein specified.

COARSE AGGREGATES:

Concrete shall be made using grade 6AA gravel, slag or stone aggregates meeting the grading and physical requirements as required by the 2003 MDOT Standard Specifications for Construction.

TEXTURING CONCRETE PAVEMENT:

When the water sheen has practically disappeared, the pavement surface shall be textured by use of an approved broom or brush. The texturing operations shall produce uniform corrugations approximately 1/16 inch in depth and approximately at right angles to the centerline of the pavement. Texturing shall be completed before the concrete is in such condition that the surface will be torn or unduly roughened by the operation. The finished surface shall be free from rough or porous areas, irregularities and depressions resulting from texturing operations and shall meet the approval of the Engineer.

INTEGRAL CURB:

Integral curbs shall be constructed monolithic with the pavement slab. The curb material shall be placed before the pavement has started its initial set and shall be of the same mix and conform in all respects to the requirements for concrete in the pavement.

Immediately following the final floating of the pavement, the area where the curb material is to be placed shall be roughened so as to secure a good bond between the pavement and the curb. Face and back forms will be required when constructing curb. The curb concrete shall be spaded sufficiently to eliminate all voids and tamped to bring the mortar to the surface, after which it shall be given a final finish to match the texture of pavement.

Immediately after removal of the forms, any visible areas of honeycomb or minor defects shall be filled with mortar, composed of one part Portland cement and two parts of fine aggregate from the same source as used in the pavement, applied with a wooden float. Immediate steps shall be taken by the Contractor to correct the conditions contributing to these defects.

CITY OF DETROIT
SPECIAL PROVISION
FOR
CONCRETE PAVEMENT
AND CONCRETE BASE PAVEMENT, MODIFIED

2 of 2

DET: NH,AA

Revised: 08-21-06

PAVING JOINTS:

Joints in concrete pavement shall be placed as required in Section 602 of the 2003 MDOT Standard Specifications for Construction and shall conform to the details and position shown on the plans. All transverse joints in the concrete pavement shall extend entirely through the integral curb. The edges of all transverse joints in the integral curb shall be rounded with an approved finishing tool having a radius of 1/4 inch. Longitudinal bulkhead joints shall be sealed with hot poured concrete joint sealer as specified in Subsection 602.035 of the 2003 MDOT Standard Specifications for construction. Longitudinal lane tie joints shall be as specified on 2003 MDOT Standard Plan R-44-E Series and shall be sealed with hot poured concrete joint sealer or cold applied concrete joint sealer. All expansion joints shall be sealed with hot poured concrete joint sealer as specified in Subsection 602.03 of the 2003 MDOT Standard Specifications for construction. Plane of weakness joints shall be placed in plain concrete pavements only and shall be constructed immediately after the finishing operation has been complete. A groove shall be formed in the plastic concrete with a metal forming bar to the depth shown on the plans. A premolded HMA filler strip shall be placed in the groove formed by the metal bar from a bridge operating on the pavement forms. The concrete shall then be floated against the sides of the filler and the joint edged to a 1/8 inch radius. As an option, plane of weakness joints may be sawed and sealed with hot or cold applied joint sealer.

QUALITY CONTROL/QUALITY ASSURANCE:

Sections 604 and 605 of the 2003 MDOT Standard Specifications for Construction are hereby deleted from this contract.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

“Conc Pavement”, “Conc Base Pavement”, “Conc Pavement with integral curb”, “Conc Pavement” and Conc Pavement Misc” of the thickness specified, with or without reinforcement and with and without Integral Curb will be measured by area in square yards, including the area occupied by the curbs.

Pay Item

Conc Base Pavt, with Integral Curb, Reinf, 9 inch, Modified
Conc Pavt, Misc, Nonreinf, 6 inch, Modified
Driveway, Nonreinf, 8 inch, Modified
Pavt, Repr, Rem, Modified
Pavt Repr, Nonreinf, 10 inch, Modified

Pay Unit

Square Yard
Square Yard
Square Yard
Square Yard
Square Yard

CITY OF DETROIT
SPECIAL PROVISION
FOR
DRAINAGE STRUCTURES, MODIFIED

1 of 8

DET: MCS

Revised: 03-12-07

DESCRIPTION:

This work consists of constructing all manholes, and catch basins to the size, type, special design, and type of backfill as shown on the plans. Manholes and catch basins shall be constructed to the line and elevation of final grade or as otherwise shown on the plans. The work includes maintenance of sewer service where manholes are built over existing sewers and shall be in accordance with Section 403 of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for Construction except as otherwise specified.

MATERIALS:

Manhole Frames and Covers - Round:

Round manhole frames and covers shall conform to the Detroit Water and Sewerage Department (DWSD) standard unit, as detailed on the project Drawings. Both the frame and cover shall be castings conforming to the requirements of A.S.T.M. Specification, "Gray Iron Castings," A48, Class 30B. The castings shall have the following weights:

Frame	262 pounds
Cover-Perforated	147 pounds
Cover-Blank	157 pounds
AD 1	409 pounds
AD 2	419 pounds

Perforated covers shall be used unless otherwise indicated on the project Drawings.

Castings shall be sound, true to form and thickness, clean and neatly finished. The seating face on the cover and the corresponding seat on the frame shall be machine finished so that there will be even bearing at all points with no rocking or tilting.

When a sufficient supply is available, the frames and covers may be purchased from the Sewer Maintenance and Construction Division of the Detroit Water and Sewerage Department.

Catch Basin Frames and Covers

The physical requirements for Catch Basin Frame and Covers will be in accordance with the requirements for manhole frames and covers. The castings for Catch Basin A and B shall be as follows.

Cover	115 pounds
Frame	Neenah Catalog No. R-3448-C, East Jordan Catalog No. 5080 or Equal by Bibby Saint Croix or approved equal

CITY OF DETROIT
SPECIAL PROVISION
FOR
DRAINAGE STRUCTURES, MODIFIED

2 of 8

DET: MCS

Revised: 03-12-07

Shop drawings for the Catch Basin Frames and covers detailing all dimensions shall be submitted to the Engineer for approval. No frames except those manufactured in conformance with the approved shop plans will be permitted to be used on the project.

Frames and covers for all other catch basins shall be in accordance with details shown on the plans.

Manhole Steps:

Manhole steps shall be of aluminum alloy conforming to the requirements for "Aluminum Alloy Extruded Bars, Rods, Shapes and Tubes," A.S.T.M. B221, alloy 6061, and temper T6. The shape and dimensions of each step shall conform to the details shown on the drawings at the end of this section.

A certificate by the manufacturer shall be submitted to the Engineer prior to installation of any step, that the materials meets the requirement of the A.S.T.M. Specification.

Brick:

All brick shall be rectangular in shape with reasonably sharp corners and edges. The standard size shall be 2¼ inches to 2½ inches by 3¾ inches by 8 inches. The dimensions of the brick shall not vary over 1/8 inch in either transverse dimensions and ¼ inch in length. All brick shall be frogged or cored, unless otherwise approved.

Brick shall be free from cracks and flaws and otherwise conform to current ASTM Specifications for "Sewer and Manhole Brick," C32 or "Concrete Building Brick," C55 as is applicable.

Brick shall be sampled and tested in accordance with applicable ASTM Specification for "Sampling and Testing Brick," C67 or "Concrete Masonry Units, Sampling and Testing" C140.

MAXIMUM
ABSORPTION

(By Weight)

Clay or Shale Brick:	
5 Hour Boiling Test	
Average of 5 Brick	16%
Individual Brick	18%
Concrete Brick:	
24 Hour Immersion	
Average of 5 Brick	8%
Individual Brick	10%

CITY OF DETROIT
SPECIAL PROVISION
FOR
DRAINAGE STRUCTURES, MODIFIED

3 of 8

DET: MCS

Revised: 03-12-07

COMPRESSION
STRENGTH

All brick shall meet the same compressive strength requirements:

Average of 5 Brick	3,500 p.s.i..
Individual Brick	3,000 p.s.i.

The use of lime, in any form, as a major constituent of brick shall not be permitted.

Concrete Block:

Concrete block, for use in manhole construction, shall conform to the requirements of A.S.T.M. Specification for "Concrete Masonry Units for Construction of Catch Basins and Manhole," C139. The size and shape of the block shall be in accordance with the details on the Drawings.

Precast Concrete Manhole Sections:

Precast reinforced concrete sections for 4 ft. diameter manhole construction shall conform to the requirements of A.S.T.M. Specification, "Precast Reinforced Concrete Manhole Sections," C478 with the following exceptions and additions:

The required manhole steps shall be cast in place with the required spacing and alignment. The top or dome section shall be an eccentric cone with a minimum height of 32 inches. The smaller upper opening shall be designed to accommodate the manhole frame. Where a watertight frame is to be provided, the anchor bolts or stud inserts for the frame shall be cast in place with the required spacing and alignment.

The minimum shell thickness shall be one-twelfth of the internal diameter in inches of the riser or largest cone diameter plus one (1) inch.

No holes for inlet or outlet pipes shall be made in precast units at the site of the work. All necessary openings shall be formed into the precast manhole section as part of the casting operation.

Precast Manhole Bases:

Precast manhole bases for 48-inch diameter manholes shall be reinforced concrete using 3,000 pound concrete. The minimum diameter of the base shall be equivalent to the outside diameter of the manhole. The slab shall be a minimum of 8 inches thick and reinforced two ways with a minimum of 0.14 square inches of steel reinforcing per foot of diameter in each direction placed in the center of the precast circumference of a 48-inch diameter circle shall be provided.

Where the bottom section of the manhole is cast integrally with the base, the base portion shall conform to the requirements stated above.

CITY OF DETROIT
SPECIAL PROVISION
FOR
DRAINAGE STRUCTURES, MODIFIED

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DET: MCS

Revised: 03-12-07

Mortar:

Mortar for brick or masonry work shall be mixed by volume in the proportions of one part Portland cement to two parts sand. Mortar shall be highly plastic with high water retentivity. A bag of cement 94 pounds shall be considered one cubic foot.

The cement and sand shall first be mixed dry to a uniform color in a batch mixer or a tight mortar box, and then mixed thoroughly with water which shall be added gradually until the required consistency is obtained. Mortar shall be mixed in batches of such sizes as will be used immediately and any mortar which has set sufficiently to require retempering shall not be used.

Catch Basins A, Modified and Catch Basins B with Trap

Catch Basins A, Modified and Catch Basins B with Trap shall be constructed in accordance with details shown on the Plans and/or as directed by the Engineer. The materials for Catch Basins shall be in accordance with the materials for "Manholes."

CONSTRUCTION METHODS:

Manholes

Manholes may be constructed of brick, block or precast reinforced concrete manhole sections, in accordance with the respective details shown on the Drawings, unless a specific type is called for on the Drawings.

Brick or blocks used in manhole construction shall be laid with full mortar joints. All available bearing areas shall be covered with mortar spread in an even layer without splitting or furrowing, and all vertical and interior joints solidly filled with mortar. The courses shall be laid even except where otherwise required. Manholes shall be constructed to be as plumb as is practical.

CITY OF DETROIT
SPECIAL PROVISION
FOR
DRAINAGE STRUCTURES, MODIFIED

5 of 8

DET: MCS

Revised: 03-12-07

Brick, where used, shall be laid radially from the inner circumference of the manhole, with the interior joints not more than 5/8 inch wide. Whole brick only shall be used except to effect closures and to fill the outer portion of the radial joints. Each seventh course shall be laid as stretchers with intervening courses laid as headers. Vertical joints in adjacent courses shall be staggered. The upper portion of the manhole as detailed on the Drawings, shall be "domed" by drawing the brick courses equally and evenly to the diameter of the opening at the top required to fit the manhole frame opening. All interior mortar joints shall be finished flush. A 1/2 inch thick plaster coat shall be applied to the outer surface of the manhole.

Concrete block, where used, shall be laid in courses of whole blocks only by using units of the proper size. The joints between individual blocks and between courses shall be uniform. Vertical joints in adjacent courses shall be staggered. The upper portion of the manhole shall be "domed" in the manner specified above for a brick manhole. Such doming may be by blocks, provided whole units of such sizes are used to evenly effect the doming. Otherwise, brick, as above specified, shall be used for such sections. All interior mortar joints shall be finished flush. A 1/2 inch thick mortar coat shall be applied to the outer surface of the manhole.

Precast reinforced concrete manhole sections, where used, shall be placed in accordance with the details shown on the Drawings. Such manhole sections shall rest on an integral bottom section and base or brick or concrete block masonry laid up from the manhole base slab. Bottom section or masonry units shall be installed to such a height that when whole manhole sections are used, including the upper dome section, the top of the manhole will be at the proper elevation to accommodate the manhole frame and cover at the required finished grade. When the alternate manhole bottom construction is used, the length of the risers and the dome section shall be adjusted so that the top of the manhole will be at proper elevation to accommodate the manhole frame and cover at the required finished grade.

The joints between the pipe sections in the field shall be synthetic rubber gaskets as specified under "Sewers".

Where precast manhole bases or integral bottom sections are used, they shall be placed on a 3-inch layer of sand. After placing the sand, it shall be leveled to provide a uniform bearing surface for the slab and a level foundation on which to start construction of the manhole.

A manhole built over a brick or pipe sewer shall be thoroughly bonded to the sewer barrel and all connections made without projections or voids. Manholes, when completed, shall be cleared of all scaffolds and thoroughly cleaned of surplus mortar, building materials and all foreign matter.

Where a connection of an existing sewer to a proposed manhole is indicated on the plans, the portion of the sewer removed shall be replaced, beyond the limits of the manhole, with an equivalent size of circular pipe and of the strength approved by the Engineer. This work shall be considered as included in the construction of the manhole and will not be paid for separately.

CITY OF DETROIT
SPECIAL PROVISION
FOR
DRAINAGE STRUCTURES, MODIFIED

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DET: MCS

Revised: 03-12-07

Manhole Steps:

Manhole steps shall be firmly embedded in the manhole wall or structure in true vertical alignment, spaced as shown on the Drawings, and shall project uniformly 6½ inches from the face of the wall to the outside edge of the step.

The portion of the step to be embedded in concrete manhole sections or concrete structures shall be wire brushed or otherwise roughened and then covered with one coat of "Bitumastic Super Service Black", as manufactured by Koppers Company, Tnemcol No. 450 heavy, as manufactured by Tnemco Co., or "Bitumastic Super Service Black", as manufactured by Somay Products Inc.. The coating shall be applied and allowed to dry in accordance with the manufacturer's recommendations.

The coating shall extend beyond the embedment at least one inch.

The steps shall not be 'muddied-in' pipe sections, but shall be inserted in the 'green' concrete prior to initial set of the concrete.

Steps to be placed in existing concrete shall be placed in drilled holes and the void space packed with non-shrink grout, using "Embeco", "Groutex", "Ferrolith-G", or approved equal. The mixing and installation of the non-shrink grout shall follow the procedure recommended by the manufacturer of the grout

Manhole Frame and Cover:

The standard round manhole frame shall be set in a full bed of mortar on the top of the manhole wall at such elevation that when the manhole cover is set in place the complete unit of frame and cover will be at the required finish or final surface grade. The cover shall so fit the frame that no rattling occurs under traffic loadings. If rattling does occur, the frame and/or cover shall be machined so as to eliminate the rattling.

Backfilling Around Manholes:

Backfilling adjacent to manhole walls shall be done in such a manner as to simultaneously raise the level of the fill uniformly on all sides of the manhole, compacted as noted below.

No backfilling shall be done around manhole walls within less than 48 hours after the plaster coat has been applied to the outside of the manhole walls.

During the operation of backfilling of an excavation that is sheeted and braced, earth supports shall not be removed in such a manner as to permit earth bank or adjacent streets to give way. Sheeting and bracing may be left in place during backfilling and pulled when backfilling is completed. Sheeting and bracing impossible to remove may be left in place, provided it is cut off 5 feet below ground surface.

CITY OF DETROIT
SPECIAL PROVISION
FOR
DRAINAGE STRUCTURES, MODIFIED

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DET: MCS

Revised: 03-12-07

Pipes entering a manhole above the bottom of the structure shall be supported with Grade "X" concrete or a masonry pier down to undisturbed earth as indicated on the plans. Grade "X" concrete shall consist of three sacks of cement per cubic yard of concrete and shall be included in the construction of the Manholes.

The backfilling shall be placed and compacted as specified under the City of Detroit Special Provision for Sewers.

Bulkheads:

Brick bulkheads, as required, shall be built of common brick. The surface of contact of the sewer wall with the bulkhead shall be cleaned and then roughened by bush-hammering or chiseling just prior to the bulkhead construction. Such bulkheads shall be vertical, of the thickness shown on the Drawings with alternate header and stretcher courses laid in mortar in the manner specified for "Manholes." The joints shall be 5/8 inch thick and finished flush.

Removal of bulkheads shall be done in a careful manner that will avoid damage to the sewer. The surface of contact of the sewer wall with the bulkhead shall be cleaned of all brick and mortar and the wall surface left as smooth as possible without mortar patching. The materials from the removed bulkhead shall be promptly removed from the sewer and not left to accumulate.

Unless otherwise specified, the building or removing of bulkheads are included in manhole or sewer construction and will not be paid for separately.

Separate payment will be made only for bulkhead built in 18-inch diameter sewers and larger, or the equivalent size in an egg shape sewer.

Catch Basins A, Modified and Catch Basins B with Trap

Catch Basins A, Modified and Catch Basins B with Trap shall be constructed in accordance with details shown on the Plans and/or as directed by the Engineer. The constructions methods for Catch Basins A and B shall be in accordance with the construction methods for "Manholes."

CITY OF DETROIT
SPECIAL PROVISION
FOR
DRAINAGE STRUCTURES, MODIFIED

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DET: MCS

Revised: 03-12-07

METHOD OF MEASUREMENT

"Manholes" of the size, type and special design called for will be measured as units.

Catch Basins, as detailed on the Plans, will be measured as units, regardless of the depth of the structure.

BASIS OF PAYMENT

Manhole of the size, type and special design called for will be paid for at the contract unit price each, which shall be payment in full for furnishing the material including required covers and fittings and constructing the structure complete. The contract unit price shall include the cost of maintaining existing sewer service. Excavation, all backfill and disposal of waste excavated material are included in the manhole items without separate payment therefor.

Pavement, curb, and sidewalk removal and replacement will be paid for separately.

Catch Basin A, Catch Basin B, Catch Basin B with Trap, and Catch Basin "L" will be paid for at the contract unit price each, which shall be payment in full for furnishing the materials including required frames, covers, fittings, traps and constructing the structure complete. The contract unit price shall include the cost of maintaining existing sewer service. Excavation, all backfill and disposal of waste excavated material are included in the catch basin items without separate payment.

Pavement, curb, sidewalk removal and replacement will be paid for separately.

Pay Item

Pay Unit

Catch Basin A, Modified

Each

Catch Basin B with Trap, Modified
Manhole, 4 foot, Standard, Modified

Each

Each

CITY OF DETROIT
SPECIAL PROVISION
FOR
DR STRUCTURE COVER, ADJUSTMENT, MODIFIED

1 of 2

DET: NH, MCS

Revised:08-01-05

DESCRIPTION:

Drainage Structure Cover, Adjustments shall include all Public Lighting Department handholes and manholes, all water gate valve manholes, sewer manholes and catch basins whose covers are raised or lowered to meet the required elevations. Water Shutoff Adjustments shall consist of water shutoff boxes or stop boxes being raised or lowered to meet required elevations. The work under these items shall include repairs to the structure as required to make the elevation adjustment.

A joint inspection by the Engineer and the Contractor of the interior condition of each structure is required before proceeding with work operations. The Engineer will determine whether the structure will be adjusted or reconstructed. Access to structures will be provided by the Contractor.

This work shall also consist of the removing of any debris in the structures as a result of the contractor's operation.

Where called for on the plans or authorized by the Engineer, existing structures shall be adjusted to the proper elevation by removing adjacent pavement, curb or sidewalk to remove the castings. An opening at least 5 feet x 5 feet shall be removed in conjunction with adjusting the casting. To maintain the integrity of adjacent pavement, the full depth of the pavement shall be saw cut prior to the removal of the opening. The covers shall be raised to the proper elevation by supporting them on brick masonry, so constructed as to hold them firmly in place, or lowered to the proper elevation and reset on full mortar bed. Where the structure is in need of repair, as determined by the Engineer, within the limits provided for under this item, it shall be broken down and rebuilt with new materials to the required elevation. Any portion of the structure damaged beyond the limits of repair, as herein provided for, shall be removed and replaced at the contractor's expense. The adjacent pavement and curb shall be replaced in kind to the required elevation with High-Early Strength Concrete containing 854 lb of cement per cubic yard as specified under subsections 703.03 and 703.03D of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

Equipment will not be permitted to operate over adjusted structures any sooner than 24 hours after their completion, unless otherwise approved by the Engineer.

CITY OF DETROIT
SPECIAL PROVISION
FOR
DR STRUCTURE COVER, ADJUSTMENT, MODIFIED

2 of 2

DET: NH, MCS

Revised:08-01-05

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

"Dr Structure Cover, Adj, Case 2, Modified" and "Water Shutoff, Adj, Modified" will be measured as units and will be paid for at the contract unit price each, which price shall be payment in full for furnishing all materials and fittings, for all pavement, curb or sidewalk removal and replacement, excavation, backfilling, disposal of surplus material, removal of all debris and foreign material from the structure (including the sump), and adjusting the structure to the required elevation, as herein before specified, with the existing or new cover, and access to all structures for inspection, as directed by the Engineer.

Structure damage due to work operations will be repaired at the Contractors expense.

Pay Item

Pay Unit

Dr Structure Cover, Adj, Case 2, Modified
Water Shutoff, Adj, Modified

Each
Each

CITY OF DETROIT
SPECIAL PROVISION
FOR
DR STRUCTURE CLEANING, MODIFIED AND SEWER CLEANOUT, MODIFIED

1 of 1

DET: NH

Revised 05-10-05

Description.-The work of Dr Structure Cleaning, Modified consists of cleaning existing catch basin and manhole in the area of the project where directed by the Engineer. The work of sewer cleanout consists of cleaning cross-pipes between catch basins or manholes.

Some of the catch basins, manholes and sewers may be completely filled. The Engineer shall determine actual condition and necessity for cleaning prior to cleanout. Cleaning shall restore 90% of the pipe's carrying capacity.

Construction Methods.-When necessary and as directed by the Engineer, the catch basin nearest the trunk sewer shall be cleaned first and a temporary bulkhead placed in order that the trunk sewer not be infiltrated. Upstream catch basins or manholes and cross-pipes may then be cleaned.

Cleaning shall be by high velocity hydro-cleaning (jetting). Mechanical cleaning shall only be used when authorized by the Engineer. Contractor shall take precautions to protect the sewer lines from damage.

No debris shall be accumulated on site except in totally enclosed containers approved by the Engineer. All material deposits shall be removed from site and disposed of at an approved location.

Method of Measurement.- Catch basins or manholes to be cleaned shall be measured as "Dr Structure Cleaning, Modified" each. Sewer to be cleaned is considered to consist of sewer between catch basins or between catch basins and manholes and shall be measured as linear feet of "Sewer Cleanout, Modified".

Basis of Payment.- The completed work measured as "Dr Structure Cleaning, Modified" will be paid for at the contract unit price each, which price includes all equipment and labor to clean each catch basin or manhole.

The completed work measured as "Sewer Cleanout, Modified" will be paid for at the contract unit price per foot which price includes payment for furnishing all equipment and labor to clean sewers. Temporary bulkhead is included in the cost of "Sewer Cleanout, Modified".

<u>Pay Item</u>	<u>Pay Unit</u>
Dr Structure Cleaning, Modified	Each
Sewer Cleanout, Modified	Foot

CITY OF DETROIT
SPECIAL PROVISION
FOR
GRANULAR MATERIAL, CL II, MODIFIED

1 of 1

Revised:08-03

DESCRIPTION

This work shall include the furnishing, placing and compacting of Granular Material Class II under the concrete roadway and sidewalk where shown on the plans. Granular Material Class II shall meet the requirements of Subsection 902.08 of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications. Compaction shall meet the requirements of Section 205.03 of the 2003 MDOT Standard Specifications for construction.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

"Granular Material, Class II, Modified " will be measured and paid for at the contract unit price per cubic yard compacted in place. The unit price shall be payment in full for furnishing all labor, equipment and material to furnish, place and compact the fill as shown on the plans or as directed by the Engineer.

Pay Item

Granular Material, Cl II, Modified

Pay Unit

Cubic Yard

**CITY OF DETROIT
SPECIAL PROVISION
FOR
NON HAZ CONTAMINATED MATERIAL HANDLING AND DISPOSAL**

Page 1 of 3

Revised: 09-01-05 From MDOT 03SP205(A)

Revised 11-29-06

Revised 12-06-06

DET: MCS

- 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. 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.

Material levels at concentrations exceeding state criteria for non-hazardous contaminated material were found within the reconstruction and resurfacing limits of the project. If, in addition to the contaminated material noted above, known or suspected contaminated material is encountered, the material must be sampled to determine if it is part of a site of environmental contamination as defined by the Michigan Department of Environmental Quality. If the contamination meets the criteria for hazardous contaminated material, then the Hazardous Waste Operations and Emergency Response (HAZWOPER) and any other applicable local, state, and federal rules and regulations and per the provisions of Section 107 of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for Construction shall be implemented.

The Contractor shall provide to the Department, at the pre-construction meeting, sufficient documentation stating the qualifications of Contractor personnel who would be performing the sampling and handling work. In addition, the Contractor shall provide a Safety and Health program as required by the MIOSHA Standard.

Unless not required by the Engineer, the Contractor shall provide sufficient training for such sampling and handling for up to two designated employees as described in the MIOSHA standard. At least one of the designated employees shall receive the 40-hour offsite training or the 24-hour offsite training, depending on needs determined by the Engineer.

The Contractor shall provide sufficient personal protection equipment (as required by the MIOSHA) for two designated employees with the exception of air purifying respirators (APRs). The designated employees will provide their own fit tested APRs.

- b. **Materials:** None specified.

**CITY OF DETROIT
SPECIAL PROVISION
FOR
NON HAZ CONTAMINATED MATERIAL HANDLING AND DISPOSAL**

Page 2 of 3

Revised: 09-01-05 From MDOT 03SP205(A)

Revised 11-29-06

Revised 12-06-06

DET: MCS

c. Construction: This work shall be in accordance with the 2003 MDOT 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 design plans or as directed by the Engineer or representative.

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 workday, 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 pre-construction 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. If this is not done at the pre-construction meeting, it may delay the award of the project. It will not be grounds for an extension of time.

**CITY OF DETROIT
SPECIAL PROVISION
FOR
NON HAZ CONTAMINATED MATERIAL HANDLING AND DISPOSAL**

Page 3 of 3

Revised: 09-01-05 From MDOT 03SP205(A)
Revised 11-29-06
Revised 12-06-06

DET: MCS

c. Construction (cont'd)

The proposed landfill must be acceptable to the City of Detroit, Department of Public Works, City Engineering Division (CED) and therefore approval must be obtained from the Engineer prior to commencing disposal operations. Prior to obtaining approval for disposal from the CED, 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	Cubic Yard

Non Haz Contaminated Material Handling and Disposal will be measured by volume in cubic yards, in place. 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.

Should the material test hazardous, payment for disposal of hazardous material shall be as per section 109.7 Force Account Work, of the MDOT Standard Specifications for Construction. Hauling shall be by a licensed hazardous waste hauler and disposal shall be at an appropriate licensed disposal facility. Prequalification is waived.

CITY OF DETROIT
SPECIAL PROVISION
FOR
PAVEMENT MARKING FOR TRAFFIC CONTROL

1 of 1

DET: NH, MCS

Revised: 06-07-06

Pavement Markings for Traffic Control shall be in accordance with Section 811 of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for Construction except that:

1. The Detroit Department of Public Works Field Marking Standards shall be used.
2. City of Detroit Special Provision for Delayed Acceptance of Pavement Markings for Traffic Control shall apply.
3. The preformed markings film shall mold itself to pavement contours by the action of traffic. Pavement markings shall be capable of applications of all surface. After application, the markings shall be immediately ready for traffic.

The bidder, when bidding, shall identify proper contact cement or adhesive (when necessary) to be applied at the time of application, all equipment necessary for proper applications, and recommendations for applications that will assure the materials shall be suitable for use for one year after the date of receipt.

CITY OF DETROIT
SPECIAL PROVISION
FOR
PAVT, REM, MODIFIED

1 of 1

DET:NH,MCS

Revised: 07-29-05

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Pavt, Rem, Modified shall be performed in accordance with the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for Construction for Pavement, Remove except that additional payment for multiple layers of pavement or thickness of HMA surfacing greater than 5 inches will not be paid separately, but will be included in the pay item Pavt, Rem, Modified.

All other provisions of 2003 MDOT Standard Specifications for Construction shall apply.

Pay Item

Pavt, Rem, Modified

Pay Unit

Square Yard

CITY OF DETROIT
SPECIAL PROVISION
FOR
SEWERS, MODIFIED

1 of 7

DET: MCS

Revised: 03-12-07

DESCRIPTION:

All new sewers, including catch basin drains, unless otherwise indicated herein or on the plans, located in Service Roads, existing streets, or easements are City of Detroit sewers and as such shall be built in accordance with current City of Detroit Standard Plans provided in the project documents. Also, the last run of catch basin drain from a catch basin which connects to a City of Detroit sewer shall be built in accordance with City of Detroit, Department of Public Works, City Engineering Division Standard Plans dated 1998 and revised December 2002 provided in the project documents.

The above is in addition to those sewers shown on Plans prepared by the Detroit Water and Sewerage Department. The sewers shown on these plans shall likewise be built in accordance with current City of Detroit Standard Plans provided in the project documents.

This work consists of constructing sewers and encased sewers of sizes and types specified, and includes making all necessary connections to new manholes, catch basins, and inlets and installing bulkheads and making connections of services or laterals as required. Sewer items are identified by Trench Detail number shown on the plans. The work shall be in accordance with Section 402 of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for construction, except as otherwise specified or shown on the plans.

Any drains from occupied buildings, with outlets to sewers to be abandoned, shall be connected to the new sewers and such work will be considered included with sewer construction.

All sewers of record have been shown on the plans. Should any additional live sewers be encountered, they shall be connected to the new sewer if feasible. If such is not practical, the matter shall be referred to the Sewer Design Office of the Detroit Water and Sewerage Department. All such work not bid on or otherwise covered shall be paid for in accordance with the 2003 MDOT Specifications for extra work.

CITY OF DETROIT
SPECIAL PROVISION
FOR
SEWERS, MODIFIED

2 of 7

DET: MCS

Revised: 03-12-07

MATERIALS:

Concrete for encasement shall be Grade A.

Sewer pipe shall be of the type and class indicated on the Drawings for a specific use or location, except that other pipe of equal or greater strength may be substituted when approved by the Engineer. Pipe of a specific kind shall conform to the current requirements of the respective A.S.T.M., N.C.P.I., or A.W.W.A. Specifications.

Clay Pipe - "Standard Strength Clay Sewer Pipe" or "Extra Strength Clay Pipe", A.S.T.M. C-700, Tentative.

Vitrified Clay - "Standard and Extra Strength Vitrified Clay Pipe," N.C.P.I. ER-4.

Concrete Pipe - "Concrete Sewer, Storm Drain, and Culvert Pipe," A.S.T.M. C-14, standard or extra strength. As designated on the Drawings, C-14 shall mean standard strength or C-14 ES shall mean extra strength.

Reinforced Concrete Pipe - "Reinforced Concrete Culvert, Storm Drain and Sewer Pipe," A.S.T.M. C76. When specific reinforcement information is not tabulated in the current A.S.T.M. C76 tables for various sizes and classes of pipe, the requirements of section 909 of the 2003 M.D.O.T Standard Specifications for Highway Construction shall apply with regard to the required reinforcing and pipe construction.

Where two circular cage reinforcement is used, the required reinforcing steel in each cage (both longitudinal and circumferential) shall extend respectively into both the bell and spigot of the pipe. The steel shall extend to within 1 inch to 1 - ½ inch of the end of the pipe.

Where a combination of elliptical cage and inner circular cage reinforcement is used, the required reinforcing steel for the inner circular cage shall extend into the spigot as specified above. An equivalent area of reinforcement as used in the spigot shall be placed in the bell for its full circumference. The bell reinforcement shall extend to within 1 inch to 1 - ½ inch of the end of the pipe and at least 9 inch beyond the shoulder of the bell into the barrel of the pipe. Other acceptable means of placing reinforcing in both the bell and spigot will be considered for approval. When steel joint rings are specified, the above requirement of extending the reinforcement into the bell and spigot will not be required providing the longitudinal reinforcement is securely welded to the steel joint rings.

CITY OF DETROIT
SPECIAL PROVISION
FOR
SEWERS, MODIFIED

3 of 7

DET: MCS

Revised: 03-12-07

Reinforced Concrete Pipe (cont.)

Pipe for jacking shall be Class III using 5,000 p.s.i concrete, or the class as specified on the Drawings. All pipe intended for jacking shall be of jacking quality with two circular rings of reinforcement required.

The use of quadrant, elliptical, and stirrup reinforcement as an alternate to full inner and outer circular cages required for the class of pipe specified, will not be permitted in pipe intended for jacking, unless the stirrups are placed around the entire circumference of the pipe. When the tables specify stirrups, an alternate design for jacked pipe of the class of pipe specified will be acceptable in accordance with the provisions for modified or special designs under the A.S.T.M. C76 specifications.

Reinforced Concrete Elliptical Pipe - "Reinforced concrete Elliptical Culvert, Storm Drain, and Sewer pipe," A.S.T.M. C507.

Single cage reinforcement will not be permitted.

Pressure Pipe - "Reinforced Concrete Water Pipe - Steel Cylinder Type, Not Prestressed," A.W.W.A. C300.

"Reinforced Concrete Water Pipe-Steel Cylinder type, Prestressed," A.W.W.A. C301. Jacking of C301 pipe with mortar coating will not be permitted. Jacking of C301 pipe with cast concrete coating with modified joints for jacking will be allowed, with the approval of the engineer. The mortar coating will be allowed if the Contractor can thoroughly demonstrate and guarantee that the method of installation will not adversely damage the coating from serving its intended purpose.

"Reinforced Concrete Water Pipe - Non Cylinder Type, Not Prestressed," A.W.W.A. C302.

"Reinforced Concrete Low-Head Pressure Pipe," A.S.T.M. C361.

Pipe lifting holes will not be permitted in any pressure pipe.

All pressure pipe shall have rubber and steel joints, and shall be designed for 3,000 pounds external load per foot of diameter per lineal foot of pipe. A.W.W.A. C300, C301, and C302 shall be designed for not less than 50 pounds per square inch internal pressure and A.S.T.M.

CITY OF DETROIT
SPECIAL PROVISION
FOR
SEWERS, MODIFIED

4 of 7

DET: MCS

Revised: 03-12-07

Pressure Pipe (cont.)

C361 shall be designed for not less than 100 feet internal hydrostatic head.

Prior to pipe fabrication, the Contractor shall furnish pipe design calculation and pertinent design information for the Engineer's approval.

SEWER SIZE:

The Contractor, if he elects, may place sewers of adequate strength in sizes larger than specified when and as authorized by the Engineer. No increase in the contract unit price will be allowed if the Contractor is authorized to place sewer sizes larger than specified. All items of work in excess of that required to place the sewer of sizes specified on the plans, will be at the Contractor's expense.

CONSTRUCTION METHODS:

Trench excavation limits shall be as specified in the Standard Specifications or as shown on the plans.

Minimum bracing for small tunnel sewers, five feet in diameter or less, shall consist of on 2-inch by 12-inch crown plank for each foot of finished tunnel diameter, adequately supported by timber sets or steel ribs, or as directed the Engineer. Structural steel sections for ribs, wall beams, liner plates and similar use shall conform to the current A.S.T.M. A36 for Structural Steel, or a higher strength structural steel meeting the applicable requirements of the current A.S.T.M. standard.

The cost of the method of supporting the excavation and any subsequent strengthening of the system required, will not be paid for separately but shall be included in the total project cost.

Dry weather and storm flow in existing sewer, including catch basin drains, shall be maintained at all times by building a flume, by pumping, by-passing, siphoning, or by other means approved by the Engineer.

Where sewer trenches are excavated adjacent to existing utilities, hand excavation will be required.

All abandoned sewers and other drains which are cut in the excavation of trenches shall be bulkheaded at the limits of the trench excavation with a 12-inch thick concrete or brick bulkhead as directed by the Engineer unless otherwise specified in the contract documents.

CITY OF DETROIT
SPECIAL PROVISION
FOR
SEWERS, MODIFIED

5 of 7

DET: MCS

Revised: 03-12-07

JOINT MATERIALS:

All joint materials shall be approved by the Engineer prior to use. Only one type and brand shall be used throughout the work for similar conditions, unless a change is specifically authorized by or directed to be made by the Engineer.

A. Synthetic Rubber Type Gasket: The gasket shall be "The Circular 'O' Ring Type" of the "Flat Rubber Type." The gasket shall be so designed and arranged that when the joint is completed, all of the synthetic rubber will be under compression. The synthetic rubber shall be ductile and capable of standing all deformation stresses during and after the pipe laying. The gasket shall consist of a solid ring which is slipped over the tongue of the pipe into a recess (unless previously cemented in the recess) just before being inserted into the groove of the adjoining pipe and which is compressed as the joint is completed. The size, shape and type of synthetic rubber gaskets shall be approved by the Engineer prior to their use.

All gaskets shall be composed of a synthetic type rubber compound (such as neoprene or approved equal), resistant to alkali, acids, oils, sewage and waste petroleum products. The gaskets shall comply with the applicable requirements of A.S.T.M. C361.

B. Cement Mortar: Cement mortar shall consist of one part Portland cement and two parts mortar sand, mixed with sufficient water to consistency that permits the annular space of the pipe joint to be completely filled.

Cement shall be "Portland Cement" conforming to the current A.S.T.M. Specification C150, Type I.

Unless otherwise approved, fine aggregate for mortar shall conform to the current Standard Specification for "Aggregate for Masonry Mortar", A.S.T.M. Designation: C144.

Tap water or approved equal shall be used for mixing mortar and at the time of use shall be clean and free from oil, alkalies, organic matter.

C. Jute Packing: Jute packing shall conform to the requirements of Federal Specification, "Packing, Jute, Twisted", HH-P-117, November 5, 1940, Type III, Oiled.

CITY OF DETROIT
SPECIAL PROVISION
FOR
SEWERS, MODIFIED

6 of 7

DET: MCS

Revised: 03-12-07

PIPE JOINTS:

Proper jointing material and care shall be used to produce durable, watertight joints. The full interior of joints of all 36 - inch pipe and larger shall be thoroughly filled with a nonshrink cement mortar and made flush with the interior of the pipe.

Following is a tabulation of the various types of pipe allowed and the jointing material permitted for each:

1. Clay Pipe
Synthetic Rubber
Cement Mortar - when pipe is encased with concrete

2. Concrete Pipe (non-pressure type)
 - a) Bell and Spigot
Synthetic Rubber
Cement Mortar - when pipe is encased with concrete

 - b) Tongue and Groove
Synthetic Rubber

3. Concrete Pressure Pipe
Rubber and steel joint in accordance with the respective A.W.W.A. Specification for the pressure pipe used with modified joint detail where required for jacking.

Each of the previously mentioned joints shall be installed as follows:

1. Synthetic Rubber Gasket: The synthetic rubber gasket shall be made in accordance with the gasket manufacturer's printed instructions. If the field-installed type is used, the synthetic rubber ring shall be slipped over the tongue of the pipe. The pipes shall be shoved tightly together, compressing the gasket uniformly around the entire circumference.

2. Cement Mortar: With bell-and-spigot pipe, a single piece of jute packing, of sufficient length to completely surround the pipe and lap at the top, shall be used as a gasket. The jute shall be solidly and uniformly rammed into the annular space between the pipe against the bell so as to provide mortar-tight gasket and form a joint of uniform thickness. The remaining annular space in the joint shall then be filled with cement mortar. The inside of the joint shall be wiped clean and smooth.

CITY OF DETROIT
SPECIAL PROVISION
FOR
SEWERS, MODIFIED

7 of 7

DET: MCS

Revised: 03-12-07

BACKFILL:

Trenches shall be backfilled in accordance with typical trench sections shown on 2003 MDOT Standard Drawing R-83-B.

Except for Granular Material Class II, granular material and excavated material used as backfill for sewers shall be placed and compacted as specified in section 206 of the 2003 MDOT Standard Specifications for Construction. Granular Material Class II shall be placed and compacted as specified in section 402 of the 2003 MDOT Standard Specifications for Construction. All backfilling will be included in the work of sewer construction. Flooding and water jetting will not be permitted.

City of Detroit pipe sewers shall be backfilled to an elevation of 1 foot above the outside barrel of the sewer pipe with Granular Material Class II which shall be placed in 12" layers and each layer compacted by machine tamping.

Where sewers are constructed under pavement by tunneling, the entire space around the pipe in tunnel shall be filled with a mixture of sand or gravel and cement in the proportions of one bag of cement, 94 pounds net, to not over 20 cubic feet of sand or gravel. The mixture shall be of a consistency that will hold together when formed in to a ball in the hands. The tunnel shall be completely filled with this material, thoroughly rammed into place. Where City of Detroit sewers are tunneled under existing utilities, backfill material shall be sand and cement as called for on the plans.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

Sewers and encased sewers of the types and sizes specified will be measured and paid for, in accordance with section 402 of the 2003 MDOT Standard Specifications for Construction. The contract unit price shall include: the cost of removal and disposal of existing masonry and concrete sewers and appurtenances; all bracing and sheeting required in the work, together with the cost of maintaining existing sewer service; installing plugs and making connections to new structures; and connecting building drains, as specified. Encased Sewer shall include the concrete encasement and steel reinforcement in addition to the above listed requirements.

No extra payment will be made for alternate jacked in place construction of sewers.

Pay Item

Pay Unit

Sewer, CI C 76 IV, 12 inch, Tr Det B, Modified
Sewer, CI C 76 IV, 36 inch, Tr Det B, Modified

Foot
Foot

CITY OF DETROIT
SPECIAL PROVISION
FOR
CURB AND GUTTER, TYPE IIIR

CON:TNB

1 of 1

4-10-07

a. Description. This work shall consist of construction of a Curb and Gutter, Type IIIR in accordance with details shown on the plans or as directed by the Engineer, and shall conform to this requirement of Section 802 of the Michigan Department of Transportation (MDOT) 2003 Standard Specifications for Construction except as modified herein and the City of Detroit Standard Plan C-4380.

b. Materials. The work shall include all labor, material, and equipment necessary to construct the Curb and Gutter, Type IIIR. Earth excavation, backfill with granular material, an expansion joint, and other items, which may be required, shall be considered included in the construction of the Curb and Gutter, Type IIIR. Removal of the existing curb and sidewalk will be paid separately. Removal of the existing Curb and Gutter, Type IIIR will be paid separately per linear foot.

c. Construction Methods. The curb width of the Curb and Gutter, Type IIIR will vary depending upon the field conditions and shall be constructed as directed by the Engineer.

d. Measurement and Payment. The completed work for Curb and Gutter, Type IIIR will be measured in place and paid for at the contract unit price for the following contract item (pay item).

Contract Item (Pay Item)
Curb and Gutter, Type IIIR

Pay Unit
Foot

CITY OF DETROIT
SPECIAL PROVISION
FOR
SIDEWALK, CONC, __ INCH, MODIFIED

1 of 1

DET: NH, MS

Revised : 10-03-06

DESCRIPTION:

Concrete sidewalk of the thickness specified shall be constructed in accordance with Section 803 of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for Construction. Sidewalk cross slopes shall be 2% sloping down towards the street. Concrete Sidewalk shall normally be constructed to a 4-inch thickness. Use of 6-inch thick concrete sidewalk shall be as follows:

The first flag of concrete sidewalk adjacent to commercial driveways and alley pavement shall be 6 inches in thickness.

At street returns adjacent to the right side of a turning movement, concrete sidewalk constructed within 3 feet of the face of curb shall be 6-inch thickness. The Engineer will determine the limit of this item so that unusual jointing with the adjacent 4-inch thick sidewalk will not occur.

Where the Engineer determines that sidewalk shall be removed to facilitate the reconstruction of a residential driveway, the concrete sidewalk within the driveway limits shall be 6 inches in thickness.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

“ Sidewalk, Conc, __inch, Modified” of the thickness specified shall be measured and paid for as specified in Subsection 803.04 of the 2003 MDOT Standard Specifications for construction. Any excavation or granular backfill 4 inches or less required to construct the walk shall be included in this item of work and will not be paid for separately.

Item

Pay Unit

Sidewalk, Conc, 4 inch, Modified
Sidewalk, Conc, 6 inch, Modified

Square Foot
Square Foot

CITY OF DETROIT
SPECIAL PROVISION
FOR
DELAYED ACCEPTANCE
FOR
PAVEMENT MARKING FOR TRAFFIC CONTROL

1 of 1

DET: NH

Revised- 01-05

Delayed acceptance is that period of time when the Contractor must replace all markings that have failed. Final acceptance of completed pavement markings work will be delayed until May 1 of the following year. During this time inspection of the markings will be conducted at the City's discretion. If failure occurs on any installation, the contractor shall replace the marking at the contractors expense.

Markings replaced during the calendar year of initial application shall be subject to a delayed acceptance date of May 1 in the following year. Markings replaced the year following initial application must be installed by June 15 and will be subject to a 90 day delayed acceptance period.

If the Contractor wishes to have the project accepted for final payment prior to the delayed acceptance procedure described above, he must, when the balance of the contract work have been satisfactorily completed, furnish the City/County with a maintenance bond equal in value to 90% of the value of the pavement marking work performed.

CITY OF DETROIT
SPECIAL PROVISION
FOR
SIDEWALK RAMP, ADA, MODIFIED

DET:JJ

1 of 8

02-07-07
Rev. 04-12-07

a. Description. Construct Concrete Sidewalk Ramp(s) with Detectable Warning Tiles, at the specified location(s). Furnish and install Vitrified Polymer Composite (VPC) Cast in Place Tiles where indicated and in accordance with the details shown on the plans and/or as directed by the Engineer. Complete the work in accordance with Section 803 of the 2003 Michigan Department of Transportation (MDOT) Standard Specifications for Construction and as detailed in the MDOT Special Detail R-28-F and as specified in this City of Detroit special provision for "Sidewalk Ramp, ADA, Modified".

Where Sidewalk Ramp(s) are located in the area specified for a 6-inch thick sidewalk, they shall be constructed 6 inches in thickness. Any additional earth excavation or granular material backfill required to construct sidewalk ramps shall be included in the contract item and will not be paid for separately.

Furnishing and installing of Detectable Warning Surface Tiles in construction of concrete sidewalk ramps will not be paid for separately and will be included in the contract pay item, "Sidewalk Ramp, ADA, Modified".

Prior to placing concrete for ramps the Contractor shall notify the Engineer to receive layout approval. The Composite Cast in Place Tiles specified in this special provision, approved by the Engineer, must be used to achieve the Detectable Warning Surface for the sidewalk ramp(s).

The Contractor will stamp all concrete with a legible stamp bearing the name of the company and the year constructed. No construction will commence without a Contractor's stamp on site.

VPC Cast in Place Tiles for Detectable Warning Surface shall be installed by an experienced installer certified in writing by Cast in Place Detectable Warning Surface Tile manufacturer as qualified for installation, who has successfully completed installations similar in material, design, and extent to that indicated for Project.

Provide written certification to the Engineer that the VPC Cast in Place Tiles for Detectable Warning Surfaces for Sidewalk Ramps comply with all requirements of the Americans with Disabilities Act Access Guidelines (ADAAG) Draft, Section 1108.

b. Materials. The materials for Concrete Sidewalk Ramp Construction shall be as per Section 803.02 of the 2003 MDOT Standard Specifications for Construction. The Detectable Warning Surface shall be Vitrified Polymer Composite (VPC) Cast in Place Tiles, an epoxy polymer composition with an ultra violet stabilized coating employing aluminum oxide particles in the truncated domes as specified in this special provision section – Quality Assurance – and is based on "Armor-Tile" as manufactured by

Engineered Plastics Inc. or approved equal. Tile color shall be of Brick Red conforming to Federal Color No. 22144. The color shall be homogeneous throughout the tile.

c. Submittals.

1. Product Data: Submit manufacturer's literature describing products, installation procedures and routine maintenance.
2. Samples for Verification Purposes: Submit two (2) tile samples minimum 6"x6" of the kind proposed for use.
3. Shop drawings are required for products specified showing fabrication details, composite structural system, tile surface profile, sound on cane contact amplification feature, plans of tile placement including joints, and material to be used as well as outlining installation materials and procedure.
4. Material Test Reports: Submit complete test reports from qualified accredited independent testing laboratories to verify that materials proposed for use are in compliance with requirements and meet or exceed the properties indicated on the specifications. All tests shall be conducted on a Cast in Place Detectable Warning Surface Tile system as certified by a qualified independent testing laboratory and be current within a 24-month period.
5. Maintenance Instructions: Submit copies of manufacturer's specified installation and maintenance practices for each type of Detectable Warning Surface Tile and accessory as required.

d. Quality Assurance.

1. Provide Cast in Place Detectable Warning Surface Tiles and accessories as produced by a single manufacturer with a minimum of three (3) years experience in the manufacturing of Cast in Place Detectable/Tactile Warning Surface Tiles.
2. Americans with Disabilities Act (ADA): Provide Surface Applied Detectable Warning Surface Tiles which comply with the detectable warnings on walking surfaces section of the Americans with Disabilities Act (Title III Regulations, 28 CFR Part 36 ADA standards for accessible design, appendix a, section 4.29.2 detectable warnings on walking surfaces).
3. Vitrified Polymer Composite (VPC) Cast in Place Detectable Warning Surface Tiles shall be an epoxy polymer composition with an ultra violet stabilized coating employing aluminum oxide particles in the truncated domes. The tile shall incorporate an in-line pattern of truncated domes measuring nominal 0.2" height, 0.9" base diameter, and 0.45" top diameter, spaced center-to-center 2.35" as measured on a diagonal and 1.67" as measured side-by-side. For wheelchair safety, the field area shall consist of a non-slip surface with a minimum of 40° - 90° raised points 0.045" high, per square inch, and "Armor-Tile" as manufactured by Engineered Plastics Inc., or approved equal.

- a. Dimensions: Cast in Place Detectable Warning Surface Tiles shall be held within the following dimensions and tolerances:
 - Length and Width: 24"x60" and 36"x60" nominal
 - Depth: 1.375" (1-3/8") (+/-) 5% maximum
 - Face Thickness: 0.1875" (3/16") (+/-) 5% maximum
 - Warpage of Edge: 0.5% maximum
 - Embedment Flange Spacing: shall be no greater than 3.1"
- b. Water Absorption of Tile when tested by ASTM D 570-98 not to exceed 0.05%.
- c. Slip Resistance of Tile when tested by ASTM C 1028-96 the combined Wet and Dry Static Co-Efficient of Friction not to be less than 0.80 on top of domes and field area.
- d. Compressive Strength of Tile when tested by ASTM D 695-02a not to be less than 28,000 psi.
- e. Tensile Strength of Tile when tested by ASTM D 638-03 not to be less than 19,000 psi.
- f. Flexural Strength of Tile when tested by ASTM D 790-03 not to be less than 25,000 psi.
- g. Chemical Stain Resistance of Tile when tested by ASTM D 543-95 (re-approved 2001) to withstand without discoloration or staining – 10% hydrochloric acid, urine, saturated calcium chloride, black stamp pad ink, chewing gum, red aerosol paint, 10% ammonium hydroxide, 1% soap solution, turpentine, Urea 5%, diesel fuel, and motor oil.
- h. Abrasive Wear of Tile when tested by BYK – Gardner Tester ASTM D 2486-00 with reciprocating linear motion of 37 +/- cycles per minute over a 10" travel. The abrasive medium, a 40-grit Norton Metallite sand paper, to be fixed and leveled to a holder. The combined mass of the sled weight and wood block is to be 3.2 lb. Average wear depth shall not exceed 0.060 after 1,000 abrasion cycles when measured on the top surface of the dome representing the average of three measurement locations per sample.
- i. Fire Resistance of Tile when tested to ASTM E 84-05 flame spread shall be less than 15.
- j. Gardner Impact to Geometry "GE" of the standard when tested by ASTM D 5420-04 to have a mean failure energy expressed as a function of specimen thickness of not less than 550 in lbf/in. A failure is noted when a crack is visible on either surface or when any brittle splitting is observed on the bottom plaque in the specimen.

- k. Accelerated Weathering of Tile when tested by ASTM G 155-05a for 3,000 hours shall exhibit the following result: E < 4.5, as well as no deterioration, fading or chalking of surface of tile color No. 33538.
- l. Accelerated Aging and Freeze Thaw Test of Tile and Adhesive System when tested to ASTM D 1037-99 shall show no evidence of cracking, delamination, warpage, checking, blistering, color change, loosening of tiles or other detrimental defects.
- m. Salt and Spray Performance of Tile when tested to ASTM B 117-03 not to show any deterioration or other defects after 200 hours of exposure.
- n. AASHTO HB-17 single wheel HS20-44 loading "Standard Specifications for Highways and Bridges". The Cast in Place Tile shall be mounted on a concrete platform with a 1/2" airspace at the underside of the tile top plate then subjected to the specified maximum load of 10,400 lbs., corresponding to an 8,000 lb. individual wheel load and a 30% impact factor. The tile shall exhibit no visible damage at the maximum load of 10,400 lbs.
- o. Embedment flange spacing shall be no greater than 3.1" center-to-center spacing as illustrated on the product Cast in Place drawing.

e. Delivery, Storage and Handling. Cast in Place Detectable Warning Surface Tiles shall be suitably packaged or crated to prevent damage in shipment or handling. Finished surfaces shall be protected by sturdy plastic wrappings to protect tile from concrete residue during installation and tile type shall be identified by part number.

Cast in Place Detectable Warning Surface Tiles shall be delivered to Contractor for storage prior to installation.

f. Site Conditions. Environmental Conditions and Protection: Maintain minimum temperature of 40° F in spaces to receive Cast in Place Detectable Warning Surface Tiles for at least 24 hours prior to installation, during installation, and for not less than 24 hours after installation.

The use of water for work, cleaning or dust control, etc. shall be contained and controlled and shall not be allowed to come into contact with the general public. Provide barricades or screens to protect the general public.

g. Warranty. Cast in Place Detectable Warning Surface Tiles shall be guaranteed in writing for a period of five (5) years from date of final completion. The guarantee includes defective work, breakage, deformation, fading and loosening of tiles.

h. Manufacturers. The Vitrified Polymer Composite (VPC) Cast in Place Detectable Warning Surface Tile specified is based on Armor-Tile manufactured by Engineered Plastics Inc. Existing engineered and field tested products, which have been in successful service for a period of three (3) years are subject to compliance with

requirements, may be incorporated in the work and shall meet or exceed the specified test criteria and characteristics.

Color of the tile shall be of Brick Red conforming to Federal Color No. 22144. Color shall be homogeneous throughout the tile.

i. Installation.

1. During Cast in Place Detectable Warning Surface Tile installation procedures ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.
2. Prior to placement of the Cast in Place Detectable Warning Surface Tile system, review manufacturer and contract drawings with the Contractor prior to the construction and refer any and all discrepancies to the Engineer.
3. The specifications of the structural embedment flange system and related materials shall be in strict accordance with the contract documents and the guidelines set by their respective manufacturers.
4. The physical characteristics of the concrete shall be consistent with the contract specifications while maintaining a slump range of 3 – 5 to permit solid placement of the Cast in Place Detectable Warning Surface Tile system. An overly wet mix will cause the tile to float. Under these conditions, suitable weights such as two (2) concrete blocks or sandbags (25 lb.) shall be placed on each tile.
5. The concrete pouring and finishing operations require typical mason's tools. However, a 4' long level with electronic slope readout, 25 lb. weights, and a large non-marring rubber mallet are specific to the installation of the Cast in Place Detectable/Tactile Warning Surface Tile system. A vibrating mechanism can be employed, if desired. The vibrating unit should be fixed to a soft base such as wood, at least one square foot.
6. The factory-installed plastic sheeting must remain in place during the entire installation process to prevent the splashing of concrete onto the finished surface of the tile.
7. When preparing to set the tile, it is important that no concrete be removed in the area to accept the tile. It is imperative that the installation technique eliminates any air voids under the tile. Holes in the tile perimeter allow air to escape during the installation process. Concrete will flow through the large holes in each embedment flange on the underside of the tile. This will lock the tile solidly into the cured concrete.
8. The concrete shall be poured and finished true and smooth to the required dimensions and slope prior to the tile placement. Immediately after finishing concrete, the electronic level should be used to check that the required slope is achieved. The tile shall be placed true and square to the curb edge in accordance with the contract drawings. The Cast in Place Detectable

Warning Surface Tiles shall be tamped (or vibrated) into the fresh concrete to ensure that the field level of the tile is flush to the adjacent concrete surface. The embedment process should not be accomplished by stepping on the tile as this may cause uneven setting, which can result in air voids under the tile surface. The contract drawings indicate that the tile field level (base of truncated dome) is flush to adjacent surfaces to permit proper water drainage and eliminate tripping hazards between adjacent finishes.

9. Immediately after placement, the tile elevation is to be checked to adjacent concrete. The elevation and slope should be set consistent with contract drawings to permit water drainage to curb as the design dictates. Ensure that the field surface of the tile is flush with the surrounding concrete and back of curb so that no ponding is possible on the tile at the backside of curb.
10. While concrete is workable, a 3/8" radius edging tool shall be used to create a finished edge of concrete, then a steel trowel shall be used to finish the concrete around the tile's perimeter, flush to the field level of the tile.
11. During and after the tile installation and the concrete curing stage, it is imperative that there is no walking, leaning or external forces placed on the tile that may rock the tile causing a void between the underside of tile and concrete.
12. Following tile placement, review installation tolerances to contract drawings and adjust tile before the concrete sets. Two suitable weights of 25 lbs. each may be required to be placed on each tile as necessary to ensure solid contact of the underside of tile to concrete.
13. Following the concrete curing stage, protective plastic wrap is to be removed from the tile surface by cutting the plastic with a sharp knife, tight to the concrete/tile interface. If concrete bled under the plastic, a soft brass wire brush will clean the residue without damage to the tile surface.
14. If desired, individual tiles can be bolted together using 1/4" or equivalent hardware. This can help to ensure that adjacent tiles are flush to each other during the installation process. Tape or caulking can be placed on the underside of the bolted butt joint to ensure that concrete does not rise up between the tiles during installation. Any protective plastic wrap, which was peeled back to facilitate bolting or cutting, should be replaced and taped to ensure that the tile surface remains free of concrete during the installation process.
15. Tiles can be cut to custom sizes or to make a radius using a continuous rim diamond blade in a circular saw or mini-grinder. Use of a straight edge to guide the cut is advisable where appropriate.
16. Any sound-amplifying plates on the underside of the tile, which are dislodged during handling or cutting, should be replaced and secured with construction adhesive. The air gap created between these plates and the bottom of the tile is important in preserving the sound on cane audible properties of the Armor-Tile system as required in various jurisdictions.

j. Cleaning, Protecting and Maintenance.

1. Protect tiles against damage during construction period to comply with Tactile Tile manufacturer's specification.
2. Protect tiles against damage from rolling loads following installation by covering with plywood or hardwood.
3. Comply with manufacturer's maintenance manual for cleaning and maintaining tile surface.

k. Method of Measurement and Basis of Payment (Pay Item). The completed work will be measured and paid for at the contract unit price for the following contract item:

Pay Item

Pay Unit

Sidewalk Ramp, ADA, ModifiedSquare Foot

Construction of Concrete Sidewalk Ramp will be measured by the area in square foot of the sidewalk ramp in place and will be paid for as "Sidewalk Ramp, ADA, Modified". Payment includes all labor, materials and equipment required to construct the concrete sidewalk ramp pavement as shown on the plans and in the MDOT Special Detail R-28-F, including the tiles for the Detectable Warning Surface, monolithic rolled curbs along the longitudinal edges of the ramp, the curb opening or the curb integral with the pavement at the opening. Payment will also include furnishing and placing all materials, cutting of tiles, if required, installing of tiles, tools, equipment, all labor and incidentals necessary to complete the work. Any additional earth excavation or granular material backfill required to construct sidewalk ramps shall be included in the pay item "Sidewalk, Ramp, ADA, Modified" and will not be paid for separately. No separate measurement or payment will be made for the Detectable Warning Tiles.

Replacement of sidewalk, curb, curb and gutter, curb integral with the pavement integral curb and sidewalk, ____ feet, outside the area measured for "Sidewalk Ramp, ADA, Modified" will be paid for separately for the respective contract items involved. Any earth excavation or granular material backfill 4 inches or less required outside the ramp area to construct the sidewalk ramps for ADA compliance shall be included in the contract item "Sidewalk, Conc, ____ Inch, Modified" and will not be paid for separately.

Replacement of Hot Mix Asphalt (HMA) surface for the construction of the sidewalk ramp for ADA compliance will be paid for separately for the respective contract items involved.

Adjustments and/or reconstruction of Drainage Structures for the construction of the sidewalk ramp for ADA compliance will be paid for separately for the respective contract items involved.

Placement of pavement markings for aligning with the constructed sidewalk ramps for ADA compliance will be paid for separately for the respective contract items involved. Removal of the existing pavement markings will be included with the contract cost and will not be paid for separately.

It is the responsibility of the Contractor to be familiar with the MDOT Special Detail R-28-F for "Sidewalk Ramp Details" reflecting ADA accessibility requirements and the current MDOT standard specifications for construction and the City of Detroit Special Provision for "Sidewalk Ramp, ADA, Modified". It is also the Contractor's responsibility to incorporate any changes made to the ADA accessibility requirements that may take effect prior to the start date of actual construction. If the Contractor determines that any changes significantly alter the original bid cost, the Contractor may submit a written request to the Engineer or his representative for approval and compensation. The request shall include a cost comparison between the original bid cost and the cost of the ADA required changes.

Any constructed concrete sidewalk ramps that do not meet the MDOT Special Detail R-28-F and the 2003 MDOT Standard Specifications for Construction, and this special provision and the latest ADA accessibility requirements shall be removed and replaced by the Contractor, as directed by the Engineer or his representative at no additional cost to the City of Detroit.

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

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 812.03.1.6 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 812.03.1.6.

CITY OF DETROIT
SPECIAL PROVISION
FOR
SLOPE RESTORATION

CON:TNB

1 of 1

11-30-06

a. Description. This work shall consist of the salvaging and placing of topsoil, seed, fertilizer, mulch and mulch anchoring materials in accordance with Section 816 of the Michigan Department of Transportation (MDOT) 2003 Standard Specifications for Construction except as modified herein.

b. Materials. The materials for Slope Restoration shall meet the following requirements.

1. Topsoil will be friable loam consisting of a dark, organic, natural surface soil. Peat and mulch are not to be considered topsoil. Stripped topsoil from the project site may be used, if accepted by the Engineer.
2. Seed shall be Turf seed mixture, TDS at a rate of 220 pounds per acre. Refer to Table 816-1 of the MDOT 2003 Standard Specifications for Construction.
3. Fertilizer shall be Class A per the MDOT 2003 Standard Specifications for Construction (Subsection 917.10.B1b) at a rate of 228 pounds of nutrient per acre. Each container of packaged fertilizer shall include the guaranteed analysis of the contents showing minimum percentage of nitrogen, available phosphoric acid and soluble potash.

c. Construction Methods. Topsoil shall be spread to a depth of not less than 3 inches on all areas directed by the Engineer. After spreading, any large clods and lumps shall be pulverized and all stones and rocks over 2 inches in diameter, roots, litter and all foreign matter shall be raked up and disposed of by the Contractor off site according to Section 205.03.A of the MDOT 2003 Standard Specifications for Construction.

Seed and fertilizer shall be mixed together and spread on all topsoiled.

The Contractor shall protect all traffic, signs, structures and other objects from being marked or disfigured by the tackifier material.

d. Measurement and Payment. The completed work for Slope Restoration will be measured in place and paid for at the contract unit price for the following contract item (pay item).

Contract Item (Pay Item)
Slope Restoration

Pay Unit
Square Yard

The work for Slope Restoration shall include all labor, equipment, and materials necessary to accomplish the work of fine grading, placing topsoil, seeding, fertilizing, watering per seed manufacturer's recommendation, and tree trimming. Separate payment will not be made for these items of work.

CITY OF DETROIT
SPECIAL PROVISION
FOR
PRECAST THREE-SIDED OR ARCH CULVERT, MODIFIED

CON:BMW

1 of 7

10-12-05

a. Description. Design, manufacture, and install three-sided or arch precast culvert elements as shown on the plans. The culvert must have a minimum rise, minimum span, minimum waterway area, and skew angle as shown on the plans.

Select one of the four listed designs produced by the following manufacturer(s):

1. Con/Span	<u>Lower Peninsula</u> Premarc Corporation 7505 Highway M-71 Durand, MI 48429 Ph. (800) 968-2662	<u>Upper Peninsula</u> Upper Peninsula Concrete P.O. Box 313 Escanaba, MI 49829 Ph. (800) 233-7473
2. Hy/Span	Northern Concrete Pipe Inc. 410 Kelton St. Bay City, MI 48706 Ph. (800) 222-9918	
3. Ad/Span	Advance Concrete Products Co. 975 Milford Road P.O. Box 548 Highland, MI 48357 Ph. (800) 824-8351	

b. Design. Certify that the precast three-sided culvert was designed according to AASHTO Standard Specifications for Highway Bridges. Base the design on the AASHTO Equivalent Highway Loads as shown on the plans. Include with the certification the horizontal and vertical reactions at the base of the culvert wall, along with design calculations. Headwalls shall be designed based on a minimum equivalent fluid pressure of 40 psf and appropriate live load surcharge. Headwalls and the anchorage of the headwall to the structure shall be designed for AASHTO traffic railing loadings. Anchor studs for the bridge railing shall be cast into the headwall. Embedment, spacing and locations shall be per MDOT Standard Plan B-21 Series. The certification must be sealed by a licensed professional engineer registered in the State of Michigan.

c. Shop Drawings. Furnish the Engineer with fabrication drawings of the precast sections and insert details for approval. Include in the shop drawings the details of the concrete mix design, physical dimensions, methods of manufacture, footing dimensions (width, depth and keyway size), concrete compressive strength for the footing, method of joining adjacent culvert elements, recommended installation procedure, design assumptions, design loads, and design calculations. Submit the shop drawings to the Engineer for review at least 30 calendar days prior to fabrication. Do not begin

fabrication until written approval of the shop drawings has been received from the Engineer.

d. Materials. Use materials meeting the requirements of the standard specifications and the following additional requirements.

1. Cement - Use Portland cement conforming to the requirements of ASTM C 150 Type I or Type III.
2. Fine Aggregates - Use Number 2NS conforming to subsection 902.02 of the standard specifications.
3. Coarse Aggregate - Use coarse aggregate originating geologically only from natural sources and meeting the following criteria:
 - A. Gradation must meet Michigan Series 6AA or 17A, physical requirements of 6AA, and must not exceed the size requirements described below (ACI 3.3.2).
 - B. The nominal maximum size of coarse aggregate must not be larger than:
 - 1/5 the narrowest dimension between sides of forms, nor
 - 1/3 the depth of slabs
 - 3/4 the minimum clear spacing between individual reinforcing bars or wires, bundles of bars, or prestressing tendons or ducts.
 - C. Freeze-Thaw Dilation, percent per 100 cycles max., must not exceed 0.030 percent.
4. Inserts - Use Dayton Superior 3/4 inch diameter, Richmond 3/4 inch diameter, or approved equal, for the precast culvert section inserts.
5. Geotextiles - Use Geotextile Blanket conforming to subsection 910.03 of the standard specifications.
6. Steel Reinforcement - Use welded wire fabric conforming to subsection 905.06 of the standard specifications or deformed bars conforming to subsection 905.03 of the standard specifications.
7. Joint Material - Use culvert joint sealer conforming to subsection 909.03 of the standard specifications.
8. Mortar - Use Type R-2 mortar meeting requirements of section 702 of the standard specifications.
9. Protective Coating for Structures - Use protective coatings conforming to subsection 706.03.S of the standard specifications.
10. Admixtures - Use admixtures conforming to section 601 of the standard specifications.
11. Shims - Use shims of a material that is not susceptible to corrosion. The strength of the shims shall be such to maintain the elevation of the culvert until the mortar surrounding the shim is fully cured.

e. Manufacture.

1. Placement of Reinforcement - Take the minimum concrete cover for welded wire fabric reinforcement as three times the wire diameter, but not less than one inch, except for the reinforcement in the top of the top slab of structures covered by less than 2 feet of fill in which case the minimum cover must be taken as 2 inches. Assemble reinforcement using a single layer or multiple (three maximum) layers of welded wire fabric. A single layer of deformed steel bars may be used in lieu of welded wire fabric. If deformed steel bars are used, take the minimum concrete cover as 2 inches. The ends of the longitudinal reinforcement must not be more than 2 inches from the ends of the culvert section. The exposure of the ends of longitudinal reinforcement or spacers used to position the reinforcement will not be cause for rejection.
2. Reinforcement Development Length, Splices and Spacing - Fully develop exterior corner reinforcement in accordance with the AASHTO Standard Specifications for Highway Bridges. Splice circumferential reinforcement in accordance with AASHTO Standard Specifications for Highway Bridges. Space the circumferential wires in a fabric not less than 2 inches nor more than 4 inches, center to center. Where circumferential reinforcement is composed of bars, crack control criteria must meet AASHTO 17.8.5.7. A licensed professional engineer registered in the State of Michigan must perform and submit calculations to the Department verifying that the proposed bar spacings meet crack control criteria.
3. Drainage -Provide a minimum transverse grade of 1.5% on the top exterior surface of the culvert, after installation, to provide drainage.
4. Placement of Protective Sealant Coating - Place the protective sealant coating on the exterior top surface for those precast units as specified in the plans or proposal.
5. Joints - Provide a one inch by one inch beveled edge on the external surface of the joint formed between the culvert units. The joint width must not exceed one inch.
6. Concrete - Use concrete with a compressive strength of at least 5000 psi. Unless otherwise specified on the plans or in the proposal, the concrete mix design is the responsibility of the precast culvert manufacturer, and the concrete must meet the following requirements:

Proportion and mix cement, aggregate, admixtures, and water in a batch mixture producing a homogeneous concrete, meeting the stated strength requirements. Use a minimum cement content of six sacks (564 pounds) per cubic yard. The concrete must contain 6.5 ± 1.5 percent entrained air.
7. Forms - Use forms that are sufficiently rigid and accurate to maintain the culvert and headwall dimensions within the Department's permissible variations. All the forming surfaces must be of a smooth material.
8. Curing - Cure the culvert and headwall sections for a sufficient length of time so that the concrete will develop 5000 psi compressive strength in 28 days or less.

Use any one of the following methods of curing or a combination thereof for the culvert sections:

- A. Steam Curing -Low pressure, steam-cure the culvert sections in accordance with subsection 708.03 of the standard specifications.
 - B. Water Curing - Water cure the culvert sections by any method that will keep the sections continually moist for a minimum of 7 days.
 - C. Forms Left in Place - Accelerate the overnight cure through the use of an external heat course, provided moisture loss from exposed surfaces is minimized. Apply the initial heating two hours after the final placement of concrete to allow the initial set to take place.
 - D. Membrane Curing -Apply a sealing membrane conforming to the requirements of ASTM C 309 and leave intact until the required concrete compressive strength is attained.
9. Handling -Handle the culverts by a method approved by the manufacturer and Engineer. Do not drill holes in the precast unit for handling. Cast holes must be tapered. Fill holes with Type R-2 mortar before backfill is placed. Tapered holes may be filled with concrete plugs and secured with Type R-2 mortar or other approved adhesives. Seal the top surface of the hole in an approved manner.
10. Product Marking -Clearly mark the following information on the interior of each precast unit by indentation, waterproof paint, or other approved means.
- A. Span and Rise.
 - B. Date of manufacture.
 - C. Name or trademark of the manufacturer.
 - D. Design earth cover.

f. Tolerances: All precast elements must meet the tolerances specified by the Designer in addition to the tolerances listed below.

1. Internal Dimensions - Manufacture such that the internal dimensions do not vary more than 2 inches from the design dimensions. For culverts with haunches, the haunch dimensions must not vary more than $\frac{3}{4}$ inch from the dimensions shown on the shop drawings.
2. Slab and Wall Thickness - Manufacture such that the slab and wall thicknesses are not more than $\frac{3}{4}$ inch less than the dimensions shown on the shop drawings. A thickness greater than required will not be cause for rejection, unless, in the opinion of the Engineer, it prevents proper sealing of the joints.
3. Length of Opposite Surfaces -Manufacture such that variations in laying lengths of two opposite surfaces of the culvert sections are not more than one inch.
4. Length of Section - Manufacture such that the underrun in length is not more than 2 inch in any culvert section.

5. Position of Reinforcement - Manufacture such that the maximum variation in the position of the reinforcement is +/- $\frac{3}{8}$ inch. When the earth cover over the external surface is less than 36 inches, the concrete cover over the top slab reinforcement must not be less than 2 inches.

g. Testing and Inspection.

1. Testing -Test the concrete in accordance with Section 10 of ASTM C 789 *Standard Specification for Precast Reinforced Concrete Box Sections*.
2. Workmanship, Finish and Appearance - Provide a smooth finish free of any fractures, on all the culvert surfaces. The ends must be normal to the walls and centerline within the limits of variations given above, except when the culvert is designed for a skewed crossing.
3. Repairs -Repair culverts, as approved by the Engineer, due to imperfections in manufacture, handling damage, or construction. Repair at no additional payment according to section 712 of the standard specifications.
4. Repairs must be sound, properly finished and cured, and the repaired section must conform to this special provision.
5. Causes for rejection include, but are not limited to, the following:
 - A. Fractures or cracks in the slab or wall.
 - B. Defects that indicate imperfect proportioning, mixing, and/or forming.
 - C. Honeycombed or open textured surfaces.
 - D. Damaged ends where such damages would prevent making a satisfactory joint.
 - E. Insufficient compressive strength of concrete.
 - F. Out of tolerance dimensions.
 - G. Low/high air content.
 - H. Exposed reinforcing steel.

h. Construction. Construct the culvert according to sections 206 and 706 of the standard specifications, as shown on plans, and as specified herein.

Construct the footing from cast-in-place concrete as per the culvert manufacturer's requirements. Level the footing keyway sufficiently so that the height of the shims used for leveling the precast sections are minimized.

The following procedure for setting the culvert sections is an approved method. Alternate procedures that provide a uniform bed of Type R-2 Mortar under the culvert sections are also acceptable if approved by the Engineer.

Prior to placing the culvert sections into the footing, survey the surface of the keyway and locate the high spot. Use the high spot as the control elevation for the bottom of the culvert sections. Add one inch to this high spot and set all shims to this elevation. Set the shims 12 inches in from each corner of the unit. When installing the culvert sections on a sloping grade, shoot elevation control points at approximately 50-foot increments and run a string line between these elevations to set other shims. Once the culvert sections are placed, completely grout underneath the culvert leg sections and to the tops of the sides of the keyway with Type R-2 Mortar. Perform grouting by mounding the mortar on one side of the leg and vibrating it until it passes through to the other side of the leg. After completing this process on one side, if the mortar has not completely passed through to the other side, repeat the process on the other side.

Construct end joints according to subsection 909.03 of the standard specifications and cover with a 24 inch wide strip of geotextile blanket centered over the joint. Construct cast-in-place headwalls or wingwalls according to the plans for cast-in-place construction with a positive connection to the adjoining precast section using $\frac{3}{4}$ -inch diameter bars threaded into the inserts spaced to prevent separation. Attach precast headwalls or wingwalls as shown on the shop drawings.

Prior to sealing adjacent joints, provide a smooth and debris free surface for the concrete affected by the sealing procedure. If cast-in-place headwalls or wingwalls are used, seal the joints between the culvert elements and headwalls, along with the joints between headwalls and return walls (wingwalls), water tight with Type R-2 mortar. If precast headwalls or wingwalls are used, seal the joints between the culvert elements and headwalls, along with the joints between headwalls and return walls (wingwalls), water tight in the same manner as the joints between adjacent culvert sections.

Provide joints between the adjacent precast culvert units consisting of a $\frac{7}{8}$ -inch by $1\frac{3}{8}$ - inch butyl rope conforming to the requirements of ASTM C 990 placed between the units in the bevel. Cover the butyl rope with an 11 inch (minimum) wide external type rubber gasket, conforming to the requirements of ASTM C 877, centered over the joint. Use a primer compatible with the rubber gasket to secure the gasket (if applicable). Install the gasket according to the manufacturer's recommendations (some external rubber gaskets must be stretched 10%). Then cover the joint with a 24-inch wide strip of geotextile blanket centered over the joint. When completed, the joint must be watertight.

The joint is considered water tight if no visible signs of moisture appear around the joints during the duration of the contract. If the joint is not water tight, the Contractor is responsible for creating a watertight seal at no additional cost to the Department.

Place backfill according to subsection 206.03 and subsection 401.03 of the standard specifications. Place and compact backfill on opposite sides of the culvert at the same time, such that the difference in backfill levels on opposite sides does not exceed two feet, in order to equalize horizontal loadings. Hand compact backfill within one foot of the structure. Use of vibratory roller-compactors must meet the culvert manufacturer's specifications.

Submit to the Engineer the minimum fill depth required for construction traffic over the culvert. The Contractor is responsible for any construction traffic on the culvert. Construction traffic loads must not exceed the specified design loads. Replace damaged units at no additional cost to the Department.

i. Measurement and Payment. The completed work as measured for precast three-sided culverts will be paid for at the contract unit price for the following contract item (pay item).

Contract Item (Pay Item)	Pay Unit
Culv, Precast Three-Sided or Arch, (span) foot by (rise) foot, Modified.....	Foot

Payment for a precast three-sided culvert shall be based on the length of the culvert measured perpendicular to the centerline of the proposed roadway, and shall include all labor, equipment, and material necessary to design, manufacture, and install the precast elements, along with all modifications to the contract plans (design, plan quantities, and pay items) to accommodate the selected precast unit. This work includes furnishing and placing shims required to level the precast elements, Type R-2 mortar, joint sealer, inserts, and required geotextile blankets. Payment is limited to the quantity shown on the plans, or as approved by the Engineer.

Payment for a precast three-sided culvert shall also include precast headwalls constructed on the exterior culvert elements to the elevations shown on the plans. Payment shall also include the additional reinforcement required for the bridge railing and shown on the plans.

This work does not include cast-in-place concrete, excavation, protective coating, furnishing and placing backfill material, nor the pumping and/or diversion of water, which is paid for separately.

CITY OF DETROIT
SPECIAL PROVISION
FOR
Wingwall, Precast

CON:BMW

1 of 6

06-20-06

a. Description. Design, manufacture, and install precast wingwall as shown on the plans. The wingwall must have the minimum elevations as shown on the plans.

Select one of the four listed designs produced by the following manufacturer(s):

1. Con/Span	<u>Lower Peninsula</u> Premarc Corporation 7505 Highway M-71 Durand, MI 48429 Ph. (800) 968-2662	<u>Upper Peninsula</u> Upper Peninsula Concrete P.O. Box 313 Escanaba, MI 49829 Ph. (800) 233-7473
2. Hy/Span	Northern Concrete Pipe Inc. 410 Kelton St. Bay City, MI 48706 Ph. (800) 222-9918	
3. Ad/Span	Advance Concrete Products Co. 975 Milford Road P.O. Box 548 Highland, MI 48357 Ph. (800) 824-8351	

b. Design. Certify that the precast wingwall was designed according to AASHTO Standard Specifications for Highway Bridges. Base the design on the AASHTO Equivalent Highway Loads as shown on the plans. Include with the certification the horizontal and vertical reactions at the base of the wingwall, along with design calculations. Wingwalls shall be designed based on a minimum equivalent fluid pressure of 40 psf and appropriate live load surcharge. The certification must be sealed by a licensed professional engineer registered in the State of Michigan.

c. Shop Drawings. Furnish the Engineer with fabrication drawings of the precast sections and insert details for approval. Include in the shop drawings the details of the concrete mix design, physical dimensions, methods of manufacture, footing dimensions (width, depth and keyway size), concrete compressive strength for the footing, method of joining to adjacent culvert elements, recommended installation procedure, design assumptions, design loads, and design calculations. Submit the shop drawings to the Engineer for review at least 30 calendar days prior to fabrication. Do not begin fabrication until written approval of the shop drawings has been received from the Engineer.

d. Materials. Use materials meeting the requirements of the standard specifications

and the following additional requirements.

1. Cement - Use Portland cement conforming to the requirements of ASTM C 150 Type I or Type III.
2. Fine Aggregates - Use Number 2NS conforming to subsection 902.02 of the standard specifications.
3. Coarse Aggregate - Use coarse aggregate originating geologically only from natural sources and meeting the following criteria:
 - A. Gradation must meet Michigan Series 6AA or 17A, physical requirements of 6AA, and must not exceed the size requirements described below (ACI 3.3.2).
 - B. The nominal maximum size of coarse aggregate must not be larger than:
 - 1/5 the narrowest dimension between sides of forms, nor
 - 1/3 the depth of slabs
 - 3/4 the minimum clear spacing between individual reinforcing bars or wires, bundles of bars, or prestressing tendons or ducts.
 - C. Freeze-Thaw Dilation, percent per 100 cycles max., must not exceed 0.030 percent.
4. Inserts - Use Dayton Superior 3/4-inch diameter, Richmond 3/4-inch diameter, or approved equal, for the precast culvert section inserts.
5. Geotextiles - Use Geotextile Blanket conforming to subsection 910.03 of the standard specifications.
6. Steel Reinforcement - Use welded wire fabric conforming to subsection 905.06 of the standard specifications or deformed bars conforming to subsection 905.03 of the standard specifications.
7. Joint Material - Use culvert joint sealer conforming to subsection 909.03 of the standard specifications.
8. Mortar - Use Type R-2 mortar meeting requirements of section 702 of the standard specifications.
9. Protective Coating for Structures - Use protective coatings conforming to subsection 706.03.S of the standard specifications.
10. Admixtures - Use admixtures conforming to section 601 of the standard specifications.
11. Shims - Use shims of a material that is not susceptible to corrosion. The strength of the shims shall be such to maintain the elevation of the culvert until the mortar surrounding the shim is fully cured.

e. Manufacture.

1. Placement of Reinforcement - Take the minimum concrete cover for welded wire

fabric reinforcement as three times the wire diameter, but not less than two inch. Assemble reinforcement using a single layer or multiple (three maximum) layers of welded wire fabric. A single layer of deformed steel bars may be used in lieu of welded wire fabric. If deformed steel bars are used, take the minimum concrete cover as 2 inches. The ends of the longitudinal reinforcement must not be more than 2 inches from the ends of the wingwall. The exposure of the ends of longitudinal reinforcement or spacers used to position the reinforcement will not be cause for rejection.

2. Reinforcement Development Length, Splices and Spacing - Fully develop exterior corner reinforcement in accordance with the AASHTO Standard Specifications for Highway Bridges. Splice circumferential reinforcement in accordance with AASHTO Standard Specifications for Highway Bridges. Space the circumferential wires in a fabric not less than 2 inches nor more than 4 inches, center to center. Where circumferential reinforcement is composed of bars, crack control criteria must meet AASHTO 17.8.5.7. A licensed professional engineer registered in the State of Michigan must perform and submit calculations to the Department verifying that the proposed bar spacings meet crack control criteria.
5. Concrete - Use concrete with a compressive strength of at least 5000 psi. Unless otherwise specified on the plans or in the proposal, the concrete mix design is the responsibility of the precast culvert manufacturer, and the concrete must meet the following requirements:

Proportion and mix cement, aggregate, admixtures, and water in a batch mixture producing a homogeneous concrete, meeting the stated strength requirements. Use a minimum cement content of six sacks (564 pounds) per cubic yard. The concrete must contain 6.5 ± 1.5 percent entrained air.

6. Forms - Use forms that are sufficiently rigid and accurate to maintain the culvert and headwall dimensions within the Department's permissible variations. All the forming surfaces must be of a smooth material.
7. Curing - Cure the wingwall sections for a sufficient length of time so that the concrete will develop 5000 psi compressive strength in 28 days or less. Use any one of the following methods of curing or a combination thereof for the wingwall sections:
 - A. Steam Curing -Low pressure, steam-cure the wingwall sections in accordance with subsection 708.03 of the standard specifications.
 - B. Water Curing - Water cure the wingwall sections by any method that will keep the sections continually moist for a minimum of 7 days.
 - C. Forms Left in Place - Accelerate the overnight cure through the use of an external heat course, provided moisture loss from exposed surfaces is minimized. Apply the initial heating two hours after the final placement of concrete to allow the initial set to take place.
 - D. Membrane Curing -Apply a sealing membrane conforming to the requirements of ASTM C 309 and leave intact until the required concrete compressive

strength is attained.

8. Handling - Handle the wingwall by a method approved by the manufacturer and Engineer. Do not drill holes in the precast unit for handling. Cast holes must be tapered. Fill holes with Type R-2 mortar before backfill is placed. Tapered holes may be filled with concrete plugs and secured with Type R-2 mortar or other approved adhesives. Seal the top surface of the hole in an approved manner.

f. Tolerances. All precast elements must meet the tolerances specified by the Designer in addition to the tolerances listed below.

1. Internal Dimensions - Manufacture such that the internal dimensions do not vary more than 2 inches from the design dimensions.
2. Wingwall Thickness - Manufacture such that the wingwall thicknesses are no more than $\frac{3}{4}$ " less than the dimensions shown on the shop drawings. A thickness greater than required will not be cause for rejection, unless, in the opinion of the Engineer, it prevents proper sealing of the joints.
3. Position of Reinforcement - Manufacture such that the maximum variation in the position of the reinforcement is $\pm \frac{3}{8}$ inch. When the earth cover over the external surface is less than 36 inches, the concrete cover over the top slab reinforcement must not be less than 2 inches.

g. Testing and Inspection.

1. Testing -Test the concrete in accordance with Section 10 of ASTM C 789 *Standard Specification for Precast Reinforced Concrete Box Sections*.
2. Workmanship, Finish and Appearance - Provide a smooth finish free of any fractures, on all the wingwall surfaces. The ends must be normal to the walls and centerline within the limits of variations given above, except when the culvert is designed for a skewed crossing.
3. Repairs -Repair wingwalls, as approved by the Engineer, due to imperfections in manufacture, handling damage, or construction. Repair at no additional payment according to section 712 of the standard specifications.
4. Repairs must be sound, properly finished and cured, and the repaired section must conform to this special provision.
5. Causes for rejection include, but are not limited to, the following:
 - A. Fractures or cracks in the wingwall.
 - B. Defects that indicate imperfect proportioning, mixing, and/or forming.
 - C. Honeycombed or open textured surfaces.
 - D. Damaged ends where such damages would prevent making a satisfactory joint.

E. Insufficient compressive strength of concrete.

F. Out of tolerance dimensions.

G. Low/high air content.

H. Exposed reinforcing steel.

h. Construction. Construct the wingwall according to sections 206 and 706 of the standard specifications, as shown on plans, and as specified herein.

Construct the footing from cast-in-place concrete as per the wingwall manufacturer's requirements. Level the footing keyway sufficiently so that the height of the shims used for leveling the precast sections are minimized.

The following procedure for setting the wingwall is an approved method. Alternate procedures that provide a uniform bed of Type R-2 Mortar under the wingwalls are also acceptable if approved by the Engineer.

Prior to placing the wingwall sections into the footing, survey the surface of the keyway and locate the high spot. Use the high spot as the control elevation for the bottom of the wingwall sections. Add one inch to this high spot and set all shims to this elevation. Set the shims 12 inches in from each corner of the unit. Once the wingwall sections are placed, completely grout underneath the wingwall sections and to the tops of the sides of the keyway with Type R-2 Mortar. Perform grouting by mounding the mortar on one side of the wingwall and vibrating it until it passes through to the other side of the leg. After completing this process on one side, if the mortar has not completely passed through to the other side, repeat the process on the other side.

Construct end joints according to subsection 909.03 of the standard specifications and cover with a 24 inch wide strip of geotextile blanket centered over the joint. Attach to precast culvert and precast headwall as shown on the shop drawings.

Prior to sealing adjacent joints, provide a smooth and debris free surface for the concrete affected by the sealing procedure. Seal the joints between the culvert elements and wingwall, along with the joints between headwalls and wingwalls, water tight in the same manner as described below.

Provide joints between the adjacent precast units consisting of a $\frac{7}{8}$ -inch by $1\frac{3}{8}$ - inch butyl rope conforming to the requirements of ASTM C 990 placed between the units in the bevel. Cover the butyl rope with an 11 inch (minimum) wide external type rubber gasket, conforming to the requirements of ASTM C 877, centered over the joint. Use a primer compatible with the rubber gasket to secure the gasket (if applicable). Install the gasket according to the manufacturer's recommendations (some external rubber gaskets must be stretched 10%). Then cover the joint with a 24-inch wide strip of geotextile blanket centered over the joint. When completed, the joint must be watertight.

The joint is considered water tight if no visible signs of moisture appear around the joints during the duration of the contract. If the joint is not water tight, the Contractor is responsible for creating a watertight seal at no additional cost to the Department.

Place backfill according to subsection 206.03 and subsection 401.03 of the standard specifications. Hand compact backfill within one foot of the structure. Use of vibratory roller-compactors must meet the wingwall manufacturer's specifications.

i. Measurement and Payment. The completed work as measured for precast wingwalls will be paid for at the contract unit price for the following contract item (pay item).

Contract Item (Pay Item)	Pay Unit
Wingwall, Precast.....	Square Foot

Payment for a precast wingwall includes all labor, equipment, and material necessary to design, manufacture, and install the precast elements, along with all modifications to the contract plans (design, plan quantities, and pay items) to accommodate the selected precast unit. This work includes furnishing and placing shims required to level the precast elements, Type R-2 mortar, joint sealer, inserts, and required geotextile blankets. Payment is limited to the quantity shown on the plans, or as approved by the Engineer.

This work does not include cast-in-place concrete, excavation, protective coating, furnishing and placing backfill material, nor the pumping and/or diversion of water, which is paid for separately.

CITY OF DETROIT
**SPECIAL PROVISION
FOR
RETAINING WALL RECONSTRUCTION**

1 of 2

CON: BMW

07-13-06

a. Description. At either side of each abutment, pre-cast concrete retaining walls exist along the Dequindre Cut Greenway. The heights of the walls vary, and in various locations, wall segments have collapsed or partly collapsed for a variety of reasons. These walls will require partial removal as detailed on the plans to facilitate demolition of the existing bridge and construction of the new bridge.

The purpose of this Special Provision is to describe procedures for the reconstruction of these walls. Work under this Special Provision will include: inventory, removal of walls within the excavation limits detailed on the plans, and replacement of an undetermined quantity of wall segments as determined by the Engineer.

As the Contractor conducts their work, every precaution must be taken to prevent damage to existing walls.

Prior to the start of work under this Special Provision, the Contractor and Engineer shall conduct an inventory of all pre-cast concrete walls within the excavation limits and identify square footage of pre-cast walls that require removal and reconstruction.

Following the completion of the wall inventory, the Contractor shall submit, for Engineer approval, detailed wall reconstruction shop drawings showing wall reconstruction materials specified in this Special Provision and assembly of these materials.

b. Materials. Pre-cast wall segments for reuse shall be existing segments salvaged from unassembled sections or from wall sections that require removal and reconstruction from other sections of the Dequindre Cut Greenway as directed by the Engineer. The Engineer will advise the Contractor where to obtain existing segments. No new segments from off-site sources will be required.

Wall segment connectors are existing pre-cast units used to connect wall segments together. It is uncertain as to the quantity available for reuse and will be determined during the inventory phase of this work. No new connectors will be required from off-site sources.

Anchor rods are steel bars used to anchor the wall segments and wall segment connectors in place. All anchor rods shall be new, steel rebar of the length and diameter of existing discarded anchor rods.

Granular Materials, Class II..... Section 902

c. Construction. Following the completion of the wall inventory described under this special provision, the Engineer shall provide direction to the Contractor to disassemble and reconstruct wall sections that within the limits of the proposed excavation.

Assembly of wall segments shall match original wall assembly details.

Backfill all walls with granular material to within 6-inches of the top of wall.

Restore all slopes behind repaired or removed walls to match existing adjacent grades and slopes and as detailed on the plans.

Install off-site topsoil minimum 4-inches deep over granular backfill.

d. Measurement and Payment.

Retaining Wall Reconstruction..... Square Foot

Retaining Wall Reconstruction shall include all labor, equipment, and materials for coordinating, removing, salvaging, and reconstructing existing pre-cast retaining walls within the excavation limits as shown on the plans and as directed by the Engineer.

Backfilling operations shall be included with the unit price for **Backfill, Structure, CIP.**

Topsoil operations shall be included with the unit price for **Slope Restoration.**

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTRACTOR PERFORMANCE EVALUATIONS

C&T:JJG

1 of 2

C&T:APPR:BJO:RRV:10-02-06
FHWA:APPR:10-03-06

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

CSD:CRR

1 of 3

C&T:APPR:DBP:JGG:02-03-06
FHWA:APPR:02-03-06

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

Delete the word “written” in the definition for proposal of subsection 101.03, on page 9 of the Standard Specifications for Construction and replace with “electronically submitted.”

Delete the word “written” in the definition for proposal form of subsection 101.03, on page 9 of the Standard Specifications for Construction and replace with “electronically submitted.”

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 and replace with the following:

Date, time and place for the electronic submittal and downloading of proposals; and

Delete subsection 102.05, on page 14 of the Standard Specifications for Construction, in its entirety and replace with the following:

The proposal 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 proposal 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 subsection 102.06.A.2, A.3, and A.4, on page 15 of the Standard Specifications for Construction. Replace subsection 102.06.A.3 and 102.06.A.4, on page 15 of the Standard Specifications for Construction with the following:

3. The proposal 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 and replace with the following:

The proposal 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 and replace with the following:

A proposal may be withdrawn or revised prior to the time specified in the advertisement. The last proposal submitted, identified by date and time, will be the only proposal considered.

Delete subsection 102.09, on page 17 of the Standard Specifications for Construction and replace with the following:

Downloading of Proposals. Proposals will be downloaded and the total amount of each proposal 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
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
ANTI-DISCRIMINATION CLAUSE FOR CITY OF DETROIT CONTRACTS

C&T:DBP

1 of 1

C&T:APPR:JJG:GCT:08-28-06
FHWA:APPR:09-18-06

a. All Contractors, prospective and otherwise, doing business with the city, shall take affirmative action to achieve reasonable representation of minority groups and women, on their work force. Such affirmative action shall include but not be limited to the following; employment, promotion, demotion or transfer, recruiting or recruitment, advertising, layoff or termination; rates of pay or other forms of compensation, and selection for training or education, including apprenticeships. Breach of the covenant shall be regarded as a material breach of the contract.

b. All contracting agencies of the city or any department thereof shall include in all contracts hereafter negotiated or renegotiated by them a covenant obligating the Contractor to take affirmative action as outlined above to achieve reasonable representation of minority groups and women on their work force. City Contractors shall be required to include a similar provision in all subcontracts.

c. All contracting agencies of the city or any department thereof shall include in all contracts hereafter negotiated or renegotiated by them a covenant obligating the Contractor not to discriminate against any employee or applicant for employment, training, education, or apprenticeship connected directly or indirectly with the performance of the contract, with respect to his or her hire, promotion, job assignment, tenure, terms, conditions or privileges of employment because of race, color, creed, national origin, age, marital status, handicap, sex, or sexual orientation. Breach of this covenant shall be deemed a material breach of the contract. This section shall not apply if it is determined by the human rights department that such requirements are bona fide occupational qualifications reasonably necessary to performance of the duties required for employment. The burden of proof that the occupational qualifications are bona fide is upon the employer.

Section 27-3-2

DETROIT CITY CODE

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SWEEPING

C&T:DBP

1 of 1

C&T:APPR:JKG:GCT:03-10-06
FHWA:APPR:03-24-06

a. Description. This work shall consist of sweeping pavements in the construction area, including service roads and cross streets, as directed by the Engineer.

b. Equipment. The sweeper shall be a self-propelled or towed street sweeper equipped with pickup attachments and curb brushes.

c. Sweeping. Paved surfaces shall be swept as often as necessary as directed by the Engineer.

Paved roadbeds shall be given a final cleaning within five (5) working days prior to opening the pavement surface to traffic or notification by the Contractor that the work is completed, which ever occurs first.

d. Measurement and Payment. The work of sweeping will not be paid for separately, but payment will be considered as having been included in other contract items.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**OBTAINING REQUIRED NPDES PERMITS FOR
STORAGE AREAS, DISPOSAL AREAS AND BORROW AREAS**

C&T:DMG

1 of 2

C&T:APPR:TWK:JAR:07-24-06
FHWA:APPR:08-10-06

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
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

C&T:JCW

1 of 2

C&T:APPR:DMG:JAR:07-26-06
FHWA:APPR:08-15-06

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
**NON-COMPLIANCE WITH SOIL EROSION AND SEDIMENTATION CONTROL
REQUIREMENTS**

C&T:DMG

1 of 2

C&T:APPR:JAR:TWK:08-02-06
FHWA:APPR:08-11-06

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
PRECAST THREE-SIDED OR ARCH CULVERT

C&T:POJ

1 of 8

C&T:APPR:RDT:JFS:07-27-06
FHWA:APPR:08-22-06

a. Description. Design, manufacture and install three-sided or arch precast culvert elements as shown on the plans. The culvert must have the rise, span, waterway area, and skew angle as shown on the plans. Larger spans, rises, or waterway areas must be approved by the Engineer.

Do not manufacture the three-sided or arch culvert segments on the jobsite; select one of the four listed designs and manufacture at a commercial precast concrete plant listed on the Department's Approved Manufacturers List, Section 909.04.G.

1. Con/Span
2. Hy/Span
3. Ad/Span
4. BEBO Arch
(Experimental basis)

When the span is greater than 40 feet, the appropriate BEBO arch culvert will be detailed on the plans along with the Conspan three-sided culvert. The BEBO arch culvert has been analyzed by the department's Hydraulics Unit for the equivalent hydraulic span and rise for that location.

Use of the BEBO Arch is restricted to models E42/0-3 and E48/0-1, and is only permitted when detailed on the plans. Use has been approved on an experimental basis and will require evaluation during fabrication and construction, and for a period of several years after construction has been completed. The Engineer must contact the following person to coordinate the evaluation process.

Peter Jansson
Construction and Technology Division
Michigan Department of Transportation
8885 Ricks Rd., Lansing, MI 48909
Phone: 517-322-1979

b. Design. Certify that the precast three-sided or arch culvert was designed and manufactured according to AASHTO Standard Specifications for Highway Bridges Section 17.8 and ASTM C 1504. Base the design on the AASHTO Equivalent Highway Loads as shown on the plans. Include with the certification the horizontal and vertical reactions at the base of the culvert wall, along with design calculations. Identify the method used to resist the horizontal forces at the base of the BEBO Arch in the design calculations.

When thrie beam guardrail is attached to the headwall, design headwalls to develop an ultimate moment capacity (about the horizontal axis) to resist a horizontal load of 24 k distributed over 3.5

feet applied 32 inches above top of pavement, and to develop an ultimate moment capacity (about the vertical axis) of 16.7 kft, per foot of headwall height. Design headwall connection to deck and/or other precast units to resist these loads. Space blockouts for thrie beam guardrail at a distance of 10 feet, 7-3/4 inches or less, center to center, along headwall.

The design and certification must be sealed by a licensed professional Engineer registered in the State of Michigan.

c. Shop Drawings. Furnish the Department with fabrication drawings of the precast sections and insert details for approval. Include in the shop drawings the details of the concrete mix design, physical dimensions, methods of manufacture, footing dimensions (width, depth and keyway size), concrete compressive strength for the footing, method of joining adjacent culvert elements, recommended installation procedure, design assumptions, design loads, and design calculations. Submit the shop drawings to the Department for review at least 30 calendar days prior to fabrication. Do not begin fabrication until written approval of the shop drawings has been received from the Department.

d. Materials. Use materials meeting the requirements of the Standard Specifications for Construction and the following additional requirements.

1. Cement - Use Portland cement conforming to the requirements of ASTM C 150 Type I or Type III.
2. Fine Aggregates - Use Number 2NS conforming to subsection 902.02 of the Standard Specifications for Construction.
3. Coarse Aggregate - Use coarse aggregate originating geologically only from natural sources and meeting the following criteria:
 - A. Gradation must meet Michigan Series 6AA or 17A, physical requirements of 6AA, and must not exceed the size requirements described below (ACI 3.3.2).
 - B. The nominal maximum size of coarse aggregate must not be larger than:
 - 1/5 the narrowest dimension between sides of forms, nor
 - 1/3 the depth of slabs
 - 3/4 the minimum clear spacing between individual reinforcing bars or wires, bundles of bars, or prestressing tendons or ducts.
 - C. Freeze-Thaw Dilation, percent per 100 cycles max., must not exceed 0.030 percent.
4. Inserts - Use Dayton Superior 3/4 inch diameter, Richmond 3/4 inch diameter, or approved equal, for the precast culvert section inserts.
5. Rubber Gaskets - Use external type rubber gaskets conforming to the requirements of ASTM C 877 for covering plugs for lifting holes when using neoprene plugs and for joints.

- Use a primer compatible with the rubber gasket to secure the gasket (if applicable). Install the gasket according to the manufacturer's recommendations.
6. Geotextiles - Use Geotextile Blanket conforming to subsection 910.03 of the Standard Specifications for Construction.
 7. Steel Reinforcement - Use welded wire fabric conforming to subsection 905.06 of the Standard Specifications for Construction or deformed bars conforming to subsection 905.03 of the Standard Specifications for Construction. Use steel with a minimum yield strength of 65,000 psi for welded wire mesh and 60,000 psi for deformed billet-steel bars.
 8. Joint Material - Use culvert joint sealer conforming to subsection 909.03 of the Standard Specifications for Construction.
 9. Mortar - Use Type R-2 mortar meeting requirements of Section 702 of the Standard Specifications for Construction.
 10. Protective Coating for Structures - Use protective coatings conforming to subsection 706.03.S of the Standard Specifications for Construction.
 11. Admixtures - Use admixtures conforming to Section 601 of the Standard Specifications for Construction.
 12. Shims - Use shims of a material that is not susceptible to corrosion. The strength of the shims shall be such to maintain the elevation of the culvert until the mortar surrounding the shim is fully cured.
 13. Plugs for lifting holes - Use concrete plugs, or Sur-Seal Neoprene plugs, Style SCE-42B, or approved equal.

e. Manufacture.

1. Placement of Reinforcement - Take the minimum concrete cover for welded wire fabric reinforcement as three times the wire diameter, but not less than 1 inch, except for the reinforcement in the top of the top slab of structures covered by less than 2 feet of fill in which case the minimum cover must be taken as 2 inches. Assemble reinforcement using a single layer or multiple (three maximum) layers of welded wire fabric. A single layer of deformed steel bars may be used in lieu of welded wire fabric. If deformed steel bars are used, take the minimum concrete cover as 2 inches. The ends of the longitudinal reinforcement must not be more than 2 inches from the ends of the culvert section. The exposure of the ends of longitudinal reinforcement or spacers used to position the reinforcement will not be cause for rejection.
2. Reinforcement Development Length, Splices and Spacing - Fully develop exterior corner reinforcement in accordance with the AASHTO Standard Specifications for Highway Bridges. Splice circumferential reinforcement in accordance with AASHTO Standard Specifications for Highway Bridges. Space the circumferential wires in a fabric not less than 2 inches nor more than 4 inches, center to center. Where circumferential reinforcement is composed of bars, crack control criteria must meet AASHTO 17.8.5.7. A licensed

professional Engineer registered in the State of Michigan must perform and submit calculations to the Department verifying that the proposed bar spacings meet crack control criteria.

3. Drainage - Provide a minimum transverse grade of 1.5 percent on the top exterior surface of the culvert, after installation, to provide drainage.
4. Placement of Protective Sealant Coating - Place the protective sealant coating on the exterior top surface for those precast units as specified in the plans or proposal.
5. Joints - Provide a 1 inch by 1 inch beveled edge on the external surface of the joint formed between the culvert units. The joint width must not exceed 1 inch.
6. Concrete - Use concrete with a compressive strength of at least 5000 psi. Unless otherwise specified on the plans or in the proposal, the concrete mix design is the responsibility of the precast culvert manufacturer, and the concrete must meet the following requirements:

Proportion and mix cement, aggregate, admixtures, and water in a batch mixture producing a homogeneous concrete, meeting the stated strength requirements. Use a minimum cement content of 6 sacks (564 pounds) per cubic yard. The concrete must contain 6.5 ± 1.5 percent entrained air.
7. Forms - Use forms that are sufficiently rigid and accurate to maintain the culvert dimensions within the Department's permissible variations. All the forming surfaces must be of a smooth material.
8. Curing - Cure the culvert sections for a sufficient length of time so that the concrete will develop 5000 psi compressive strength in 28 days or less. Use any one of the following methods of curing or a combination thereof for the culvert sections:
 - A. Steam Curing - Low pressure, steam-cure the culvert sections in accordance with subsection 708.03 of the Standard Specifications for Construction.
 - B. Water Curing - Water cure the culvert sections by any method that will keep the sections continually moist for a minimum of 7 days.
 - C. Forms Left in Place - Accelerate the overnight cure through the use of an external heat source, provided moisture loss from exposed surfaces is minimized. Apply the initial heating two hours after the final placement of concrete to allow the initial set to take place.
 - D. Membrane Curing - Apply a sealing membrane conforming to the requirements of ASTM C 309 and leave intact until the required concrete compressive strength is attained.
9. Handling - Handle the culverts by a method approved by the manufacturer and Engineer. Do not drill holes in the precast unit for handling. Cast holes must be tapered. Fill holes with Type R-2 mortar before backfill is placed. Tapered holes may be filled with concrete

plugs and secured with Type R-2 mortar or other approved adhesives. Seal the top surface of the hole in an approved manner. If Neoprene plugs are used, wedge the plugs tightly in the hole to eliminate any annular space and securely affix a rubber gasket and piece of geotextile fabric to the culvert segment centered over the plug and installed per the manufacturer's directions. The rubber gasket must be 11 inches by 11 inches and the geotextile must be 24 inches by 24 inches.

10. Product Marking - Clearly mark the following information on the interior of each precast unit by indentation, waterproof paint, or other approved means.

- A. Span and Rise.
- B. Date of manufacture.
- C. Name or trademark of the manufacturer.
- D. Design earth cover.

f. Tolerances. All precast elements must meet the tolerances specified by the Designer in addition to the tolerances listed below.

1. Internal Dimensions - Manufacture such that the internal dimensions do not vary more than 2 inches from the design dimensions. For culverts with haunches, the haunch dimensions must not vary more than $\frac{3}{4}$ inch from the dimensions shown on the shop drawings.
2. Slab and Wall Thickness - Manufacture such that the slab and wall thicknesses are not less than $\frac{3}{4}$ inch from the dimensions shown on the shop drawings. A thickness greater than required will not be cause for rejection, unless, in the opinion of the Engineer, it prevents proper sealing of the joints.
3. Length of Opposite Surfaces - Manufacture such that variations in laying lengths of two opposite surfaces of the culvert sections are not more than one inch.
4. Length of Section - Manufacture such that the underrun in length is not more than $\frac{1}{2}$ inch in any culvert section.
5. Position of Reinforcement - Manufacture such that the maximum variation in the position of the reinforcement is $\pm \frac{3}{8}$ inch. When the earth cover over the external surface is less than 36 inches, the concrete cover over the top slab reinforcement must not be less than 2 inches.

g. Testing and Inspection.

1. Testing - Test the concrete for determining compressive strength in accordance with Section 10 of ASTM C 1504 *Standard Specification for Precast Reinforced Concrete Three Sided Structures for Culverts and Storm Drains*.
2. Workmanship, Finish and Appearance - Provide a smooth finish free of any fractures, on all the culvert surfaces. The ends must be normal to the walls and centerline within the limits of variations given above, except when the culvert is designed for a skewed crossing.

3. Repairs - Repair culverts, as approved by the Engineer, due to imperfections in manufacture, handling damage, or construction. Repair at no additional payment according to Section 712 of the Standard Specifications for Construction.
4. Repairs must be sound, properly finished and cured, and the repaired section must conform to this special provision.
5. Causes for rejection include, but are not limited to, the following:
 - A. Fractures or cracks in the slab or wall.
 - B. Defects that indicate imperfect proportioning, mixing, and/or forming.
 - C. Honeycombed or open textured surfaces.
 - D. Damaged ends where such damages would prevent making a satisfactory joint.
 - E. Insufficient compressive strength of concrete.
 - F. Out of tolerance dimensions.
 - G. Low/high air content.
 - H. Exposed reinforcing steel.
6. Quality Assurance - For culvert spans over 20 feet, provide access for the Department for quality assurance inspection. Notify the Engineer a minimum of 2 weeks prior to start of fabrication. This inspection is not considered a substitute for the manufacturer's quality control requirements as stated herein.

h. Construction. Construct the culvert according to Sections 206 and 706 of the Standard Specifications for Construction, as shown on plans, and as specified herein.

Construct the footing from cast-in-place concrete as per the culvert manufacturer's requirements. Level the footing keyway sufficiently so that the height of the shims used for leveling the precast sections are minimized.

The following procedure for setting the culvert sections is an approved method. Alternate procedures that provide a uniform bed of Type R-2 Mortar under the culvert sections are also acceptable if approved by the Engineer.

Prior to placing the culvert sections into the footing, survey the surface of the keyway and locate the high spot. Use the high spot as the control elevation for the bottom of the culvert sections. Add 1 inch to this high spot and set all shims to this elevation. Set the shims 12 inches in from each corner of the unit. When installing the culvert sections on a sloping grade, shoot elevation control points at approximately 50-foot increments and run a string line between these elevations to set other shims. Once the culvert sections are placed, completely grout underneath the culvert leg sections and to the tops of the sides of the keyway with Type R-2 Mortar. Perform grouting by mounding the mortar on one side of the leg and vibrating it until it passes through to the other side of the leg. After completing this process on one side, if the mortar has not completely passed through to the other side, repeat the process on the other side.

Construct end joints according to subsection 909.03 of the Standard Specifications for Construction and cover with a 24 inch wide strip of geotextile blanket centered over the joint. Construct cast-in-place headwalls or wingwalls according to the plans for cast-in-place construction

with a positive connection to the adjoining precast section using ¾ inch diameter bars threaded into the inserts spaced to prevent separation. Attach precast headwalls or wingwalls as shown on the shop drawings.

Prior to sealing adjacent joints, provide a smooth and debris free surface for the concrete affected by the sealing procedure. If cast-in-place headwalls or wingwalls are used, seal the joints between the culvert elements and headwalls, along with the joints between headwalls and return walls (wingwalls), water tight with Type R-2 mortar. If precast headwalls or wingwalls are used, seal the joints between the culvert elements and headwalls, along with the joints between headwalls and return walls (wingwalls), water tight in the same manner as the joints between adjacent culvert sections.

Provide joints between the adjacent precast culvert units consisting of a 7/8 inch by 1 3/8 inch butyl rope conforming to the requirements of ASTM C 990 placed between the units in the bevel. Cover the butyl rope with an 11 inch (minimum) wide external type rubber gasket, conforming to the requirements of ASTM C 877, centered over the joint. Use a primer compatible with the rubber gasket to secure the gasket (if applicable). Install the gasket according to the manufacturer's recommendations (some external rubber gaskets must be stretched 10 percent). Then cover the joint with a 24 inch wide strip of geotextile blanket centered over the joint. When completed, the joint must be watertight.

The joint is considered water tight if no visible signs of moisture appear around the joints during the duration of the contract. If the joint is not water tight, the Contractor is responsible for creating a watertight seal at no additional cost to the Department.

Place backfill according to subsection 206.03 and subsection 401.03 of the Standard Specifications for Construction. Place and compact backfill on opposite sides of the culvert at the same time, such that the difference in backfill levels on opposite sides does not exceed 2 feet, in order to equalize horizontal loadings. Hand compact backfill within 1 foot of the structure. Use of vibratory compactors must meet the culvert manufacturer's specifications.

Submit to the Engineer the minimum fill depth required for construction traffic over the culvert. The Contractor is responsible for any construction traffic on the culvert. Construction traffic loads must not exceed the specified design loads. Replace damaged units at no additional cost to the Department.

i. 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
Culv, Precast Three-Sided or Arch, (span) foot by (rise) foot	Foot

Payment for a three-sided or arch culvert will be made according to the span-rise combination listed in the contract plans. When the culvert span is over 40 feet, payment will be made according to the span-rise combination for the Conspan option listed in the contract plans. Pay unit quantity will be the distance along the centerline of the structure, from fascia to fascia. Payment includes all labor, equipment, and material necessary to design, manufacture, and install the precast elements.

Payment includes headwalls and wingwalls whether precast or cast-in-place. This work includes furnishing and placing shims required to level the precast elements, Type R-2 mortar, joint sealer, inserts, required geotextile blankets, and the pumping and/or diversion of water. Payment is limited to the quantity shown on the contract plans, or as approved by the Engineer.

Cast-in-place concrete, excavation, protective coating, and furnishing and placing backfill material, are paid for separately at the quantities shown on the contract plans, or as approved by the Engineer. All modifications to the contract plans (design, plan quantities, and pay items) to accommodate the selected precast unit are included in the payment for a precast three-sided or arch culvert.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
POLYMER COATED STEEL PIPE

C&T:RDT

1 of 2

C&T:APPR:JAR:GC:05-30-02
FHWA:APPR:06-12-02

a. Description. This specification revises the requirements for polymer coated steel pipe in the Standard Specifications for Construction as follows.

Add footnote (k) to Table 402-1 applicable to Corrugated and Spiral Ribbed Steel Pipe only.

(k) Polymer coated corrugated and spiral ribbed steel pipe with wall thicknesses according to Table 909-6 revised herein are allowed for all installations.

Delete the first paragraph of subsection 909.05.A of the Standard Specifications for Construction and replace with the following paragraph.

Corrugated Steel Pipe. Circular and pipe arch corrugated steel pipe shall conform to the 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 coated pipe is specified, with the following exceptions and additions.

Delete the second paragraph of subsection 909.05.A.1 of the Standard Specifications for Construction and replace with the following paragraph.

For polymer coated 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 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 for various metal pipes to meet the design life.)

Pipe Material Type	Driveway Culverts	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
Polymeric Coated 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)
Polymeric Coated Corrugated Galvanized 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

Numbers represent the minimum durability gage requirements for the specific pipe material.

Table 909-7 represents the minimum structural gage thickness requirements for corrugated steel pipe.

Table 909-8 represents the minimum structural gage thickness requirements for spiral ribbed steel pipe.

(a) Permitted for 12 to 18 inch diameter 2-2/3 x 1/2 inch helically corrugated pipe only.

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 2 $\frac{3}{8}$ x $\frac{1}{2}$ -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 2 $\frac{3}{8}$ x $\frac{1}{2}$ -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
**PAVEMENT ACCEPTANCE FOR
JOINTED PLAIN CONCRETE PAVEMENT**

C&T:CB

1 of 2

C&T:APPR:JAR:KPK:07-29-03
FHWA:APPR:08-12-03

a. Description. This specification defines the requirements for pavement acceptance that are: 1) in addition to those specified in Section 602 of the standard specifications, and 2) when applicable, stipulates the condition when initial acceptance of the pavement can occur according to the Materials and Workmanship Warranty.

The Engineer will inspect the completed pavement for any visible indication of cracking any time prior to initial acceptance. If cracking is found, an examination will be made of its extent and severity to determine an appropriate corrective action. Corrective action shall consist of: 1) crack repair, 2) pavement slab replacement in kind, or 3) a contract payment adjustment of up to one hundred percent of the bid price. The smallest pavement unit area to be replaced or receiving a payment adjustment shall be one slab length by one lane width.

The following table describes appropriate corrective actions for the more common distress circumstances. Decisions regarding corrective actions for circumstances not covered by the table will be made jointly by the Engineer and the Pavement Research Unit, Construction & Technology Support Area.

All costs for the work required to repair or replace any unacceptable pavement 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 specification.

For purposes of this special provision, a crack is defined as a fissure of varying length and orientation in the pavement that extends to some measurable depth. A crack may be a single entity or found in groups or clusters with possible associated distress features.

Table 1: Corrective Action for Common JPCP Distresses

Crack Type	Length	Extent	Severity	Corrective Action (a)
LC (random)	any	multiple	all	Replace slab
LC	$\geq \frac{1}{2}$ PL	single	all	Replace slab
LC - ALJ	any	single	all	repair (b)
LC - not ALJ	$< 1/10$ PL	single/multiple	all	pay adjustment
TC - ≥ 1.5 ft. from TJ	$> \frac{1}{2}$ PW	single/multiple	width < 0.024 in.	repair (b)
TC - ≥ 1.5 ft. from TJ	$> \frac{1}{2}$ PW	single/multiple	width ≥ 0.024 in.	Replace slab
TC - ≥ 0.75 ft. to < 1.5 ft. from TJ	any	single/multiple	all	replace joint
TC - < 0.75 ft. from TJ	any	single/multiple	all	repair (c)
<p>LC = longitudinal crack TC = transverse crack ALJ = associated w/ longitudinal joint</p> <p>TJ = transverse joint PL = panel length PW = panel width</p> <p>a. The appropriate corrective treatment (ie: repair or pay adjustment) is dependent on the specific crack's characteristics and it's affect on the pavement's intended service life. b. Repair must establish acceptable load transfer efficiency: $>90\%$ transverse or $>60\%$ longitudinal c. Depending on crack depth and proximity to a joint, treat as partial depth repair or as spall repair. Full depth cracks will require joint replacement.</p>				

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SIDEWALK RAMP – DETECTABLE WARNING SURFACE

C&T:DBP

1 of 2

C&T:APPR:CAL:BRZ:07-27-06
FHWA:APPR:08-15-06

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 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 that contrast visually with adjacent walking surfaces, either light-on-dark or dark-on-light.

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 measured will be paid for at the contract unit price for the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Sidewalk Ramp, ADA.....	Square Foot
Sidewalk Ramp, Detectable Warning, Retrofit.....	Square Foot

Sidewalk Ramp, ADA will be measured by the area of the ramp, in place. Payment includes all labor, materials, and equipment required to construct the sidewalk ramp pavement as shown on the plans, including monolithic rolled curbs or side flares along the longitudinal edges of the ramp. 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.

Sidewalk Ramp, Detectable Warning Retrofit will be measured by area of the detectable warning surface installed on existing sidewalk ramps 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 ramp and replace with the detectable warning device as retrofit, the items of removal of sidewalk, proposed sidewalk ramp and restoration is included in the item of **Sidewalk Ramp, 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
TRUCK MOUNTED ATTENUATOR

LAN:PJS

1 of 4

C&T:APPR:JKG:DBP:08-18-06
FHWA:APPR:08-22-06

a. Description. Truck-mounted attenuators (TMA's) will be used to protect workers or work equipment from vehicular traffic according to the following guidelines.

TMA's 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.

TMA's shall not be mounted on the vehicle or equipment used by personnel to complete aerial work. TMA's shall not be used as a temporary/permanent barrier ending except during replacement of damaged temporary/permanent barrier ending. In the event that a TMA is used as a temporary safety measure for a damaged temporary/permanent barrier ending, the maximum length of time that a TMA shall be used for this purpose shall be 48 hours or as approved by the Engineer.

1. **Stationary 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 truck mounted attenuator (TMA) 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 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.

2. **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 truck mounted attenuator (TMA) 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 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 TMA's 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.

A TMA 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 TMA's shall be prohibited for use on all freeways, non-freeway roadways, and work zones with posted speed limits of 45 mph or greater.

A TMA 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 TMA's may be used on all roadways and work zones regardless of the posted speed limit.

The TMA shall have an acceptance letter from the Federal Highway Administration (FHWA) stating the TMA meets the appropriate NCHRP 350 test level specified in the above stated criteria. In addition, the Contractor shall supply a letter stating the TMA 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 TMA, 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 TMA 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 TMA to the roadway surface shall be 12 inches (\pm 1 inch).
- The TMA shall be parallel (level) with the roadway surface.
- The manufacturers of the approved TMA's recommend a shoulder harness and headrest be provided for the TMA vehicle's operator.

For stationary operations, when operating the vehicle with the attenuator installed, the vehicle shall be in gear if it has a standard transmission (park if an automatic transmission), with the brakes set and steering wheels turned away from the work area and traffic, if possible, the TMA shall be placed according the roll ahead distance tables 1 or 2.

d. Measurement and payment. Truck Mounted 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 TMA 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 Truck Mounted Attenuators on all other contract items will be as described below.

Contract Item (Pay Item)	Pay Unit
Truck Mounted Attenuator.....	Each

Payment for **Truck Mounted Attenuator** on a project will be the maximum number of TMA's 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 TMA's that exceed the amount specified in the contract, the additional TMA's will be provided at the Contractor's expense. The Department will pay for repair or replacement of a TMA 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 **Truck Mounted Attenuator, Repair or 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 TMAs for use.
3. The Contractor shall be required to provide a crash report from the enforcement agency involved in the accident investigation.
4. 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.
5. 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.

- 6. Attenuators that have been repaired or replaced as part of the contract are not eligible for additional payment using the **Truck Mounted Attenuator** pay item once the attenuator is put back into service.

Table 1: GUIDELINES FOR ROLL-AHEAD DISTANCE FOR TMA VEHICLES TEST LEVEL 2

Weight of TMA Vehicle (Minimum)	Posted Speed (mph) (Posted Speed Prior to Work Zone)	Roll Ahead Distance* (Distance from front of TMA Vehicle to Work Area)
5.5 Tons (Stationary)	40 or Less	25 feet

*Roll ahead distances are calculated using a 4,410 pound impact vehicle weight.

Table 2: GUIDELINES FOR ROLL-AHEAD DISTANCE FOR TMA VEHICLES TEST LEVEL 3

Weight of TMA Vehicle (Minimum)	Posted Speed (mph) (Posted Speed Prior to Work Zone)	Roll-Ahead Distance* (Distance from front of TMA Vehicle to Work Area)
5 Tons (Mobile)	60-70	175 feet
	50-55	150 feet
	45	100 feet
12 Tons (Stationary)	60-70	50 feet
	50-55	25 feet
	45	25 feet

*Roll ahead distances are calculated using a 10,000 pound impact vehicle weight.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TEMPORARY CONCRETE BARRIER

C&T:JKG

1 of 3

C&T:APPR:MSB:RDT:06-22-06
FHWA:APPR:06-30-06

a. Description. Temporary concrete barrier (TCB) sections meeting NCHRP 350 crashworthy criteria and parameters as described below are allowed for use. Previously built TCB sections that meet the requirements of Standard Plan R-52 Series and subsection 922.03.E of the Standard Specifications for Construction will be allowed until December 31, 2011, **with the following exception: Temporary concrete barrier in 10 foot segments with 1/2 inch diameter galvanized wire centered steel cable end attachment either of original or retrofit installation is PROHIBITED.** TCB in 10 foot segments with 1/2 inch diameter steel cable end attachment may be used if an additional 5/8 inch diameter cable is retrofitted.

All new TCB fabricated after September 1, 2006 must meet NCHRP 350 crashworthy criteria and the parameters below.

At the preconstruction meeting, provide information for all temporary concrete barrier that does not meet the requirements of Standard Plan R-52 including the wall type, a full set of plans showing the wall and the connection as they were crash tested, a copy of the FHWA letter of NCHRP 350 compliance, and written certification that the barrier sections provided meet NCHRP 350 requirements as well as the requirements below.

b. Materials. Cable used in the aforementioned retrofit shall be 5/8 -inch, galvanized, 6 x 19 IWRC wire centered, steel cable meeting ASTM A1023. Minimum breaking strength of the 5/8 -inch diameter steel cable must be 31,860 lb.

Bonding material used must be selected from the Qualified Products List.

Except as noted above, furnish and operate temporary concrete barrier (TCB) and connection details that conform to the requirements of NCHRP 350 and the following:

1. Tested maximum deflection must not exceed 6 ½ feet.
2. Bottom width must not exceed 28 inches.
3. Top must be at least 6 inches wide and must be flat.
4. All TCB section lengths furnished and operated must be as tested for NCHRP 350 or as accepted by the FHWA.
5. If Grade S3 concrete is not used to construct the barrier sections, as specified by subsection 922.03.E of the Standard Specifications for Construction, provide

documentation that the concrete used is equivalent to or exceeds the requirements of that used in the crash tested sections.

c. Construction. NCHRP 350 accepted temporary concrete barrier designs can be found on the FHWA web site at:

http://safety.fhwa.dot.gov/roadway_dept/road hardware/longbarriers.htm

Follow the attachment and tensioning details for the specific temporary concrete barrier section selected regardless of date furnished.

To retrofit the 10 foot segments with ½ inch diameter galvanized, wire centered, steel cable; add a 5/8 inch diameter galvanized, wire centered, steel cable in the approximate middle of the temporary concrete barrier end section. The 5/8 inch diameter cable must withstand a pull-out force of 45,000 lb. when tested according to MTM 716.

Use the method described in subsection 922.03.E.2 of the Standard Specifications for Construction, to retrofit the 5/8 inch diameter cable with the following exceptions:

Delete the last sentence of the first paragraph of subsection 922.03.E.2, on page 871 of the Standard Specifications for Construction in its entirety and replace with the following:

Two ¾-inch diameter holes must be drilled a minimum of 15 inches deep at each attachment location. The center of the holes shall be 3 ¾ inches apart, +/- ½ inch.

Delete the first two sentences of the third paragraph of subsection 922.03.E.2, on page 871 of the Standard Specifications for Construction in its entirety and replace with the following:

A 5/8 inch diameter, galvanized, wire centered, steel cable must be used for all connections placed in the middle of the temporary concrete barrier end sections that are to be retrofitted. Minimum breaking strength of the 5/8 inch steel cable shall be 31,860 lb.

Delete the first sentence of the fourth paragraph of subsection 922.03.E.2, on page 871 of the Standard Specifications for Construction in its entirety and replace with the following:

Each end of the galvanized steel cable must be inserted a minimum of 15 inches into one of the ¾-inch diameter holes to form a loop. The inside of the loop must protrude from the concrete the same amount as the existing cable loops.

Delete the fifth sentence of the fourth paragraph of subsection 922.03.E.2, on page 871 of the Standard Specifications for Construction in its entirety and replace with the following:

The 45,000 lb sustained pull-out requirement is the governing criterion for acceptability regardless of the bonding material used.

d. Measurement and Payment. Furnishing and operating temporary concrete barriers will be measured and paid for according to subsection 812.04 of the Standard Specifications for Construction regardless of whether barrier sections meet the requirements of NCHRP 350 or the Standard Plan R-52 Series as retrofitted. Labor and materials required to connect the temporary concrete barrier to existing permanent concrete barrier or vertical wall will not be paid for separately.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TEMPORARY SIGNS

C&T:JKG

1 of 3

C&T:APPR:MSB:BRZ:10-10-06
FHWA:APPR:10-17-06

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
WORK ZONE SIGNING ON LOCAL AGENCY PROJECTS

T&S:MWB

1 of 3

C&T:APPR:MSBJKG:09-25-06
FHWA:APPR:10-02-06

a. Description. In addition to all other maintaining traffic signs required on this project, place work zone signing in accordance to the Michigan Department of Transportation (MDOT) Traffic and Safety *Maintaining Traffic Typical(s)* contained in the proposal, except as modified herein.

On all "Advance Signing Treatment..." *Maintaining Traffic Typicals* (M0030 - M0080):

Replace the R5-18b sign "INJURE/KILL A WORKER \$7500 + 15 YEARS" sign with the R5-18bLA "INJURE/KILL A WORKER // FINE - \$ 7500 // JAIL - 15 YRS" sign, as detailed in the attached graphics.

Delete the R5-18 "TRAFFIC FINES DOUBLED IN WORK ZONES" sign or the R5-18a "TO PROTECT HIGHWAY WORKERS FINES DOUBLED IN WORK ZONES" sign, along with the prescribed 'D' spacing distance.

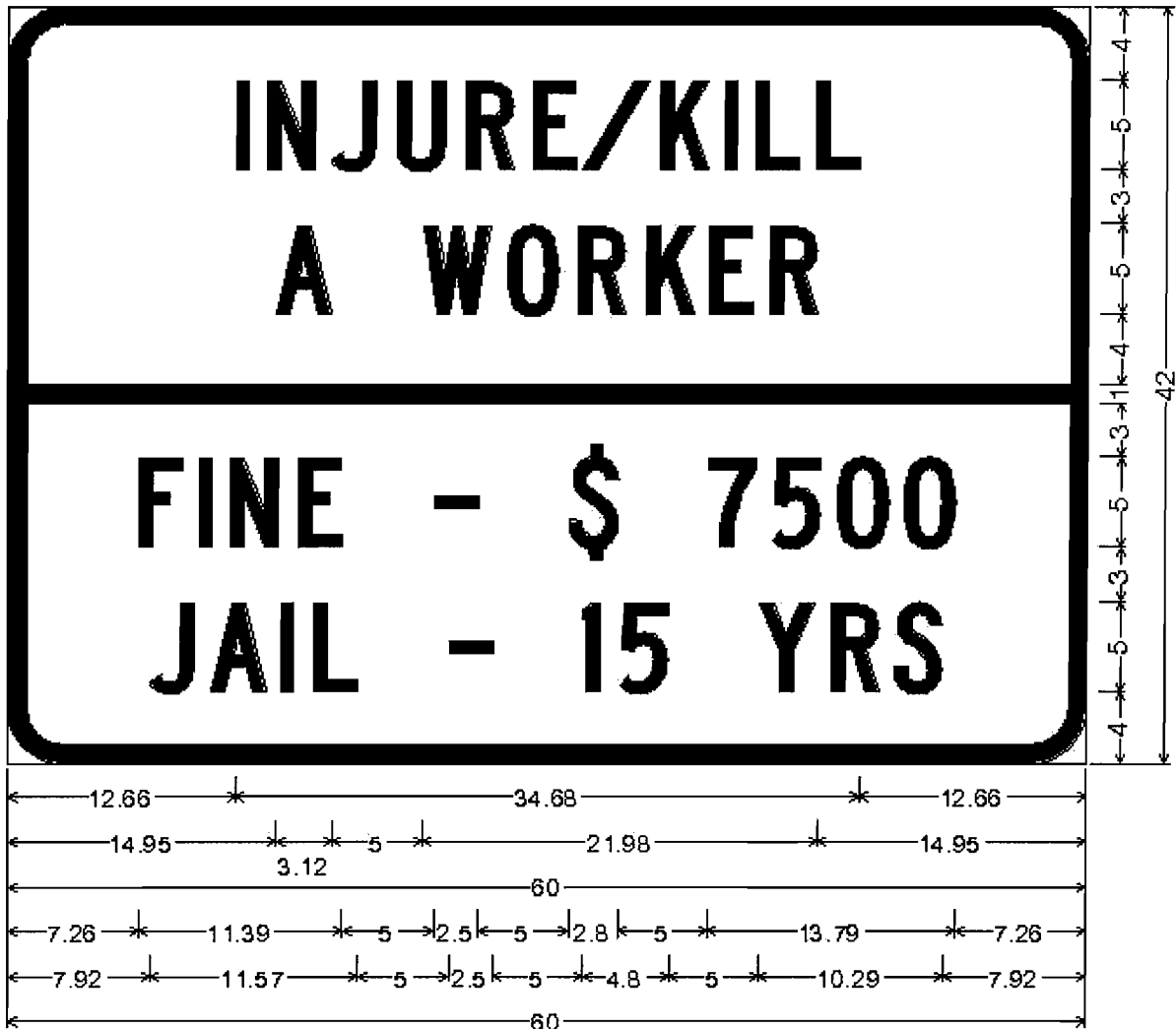
On all other "Typical Temporary Traffic Control..." *Maintaining Traffic Typicals* (M0110 et. al.):

Replace the R5-18c "WORK ZONE BEGINS" sign with the R5-18cLA "WORK ZONE BEGINS // TRAFFIC FINES DOUBLED" sign, as detailed in the attached graphics.

Place the G20-1 "ROAD WORK NEXT _____ MILES" sign and the G20-2 "END ROAD WORK" sign in accordance to the appropriate MDOT Traffic and Safety *Maintaining Traffic Typical*.

Place all other work zone signing in accordance to the project plans and specifications, including the appropriate MDOT Traffic and Safety *Maintaining Traffic Typicals*. Place all work zone signing in accordance to the Standard Specifications for Construction.

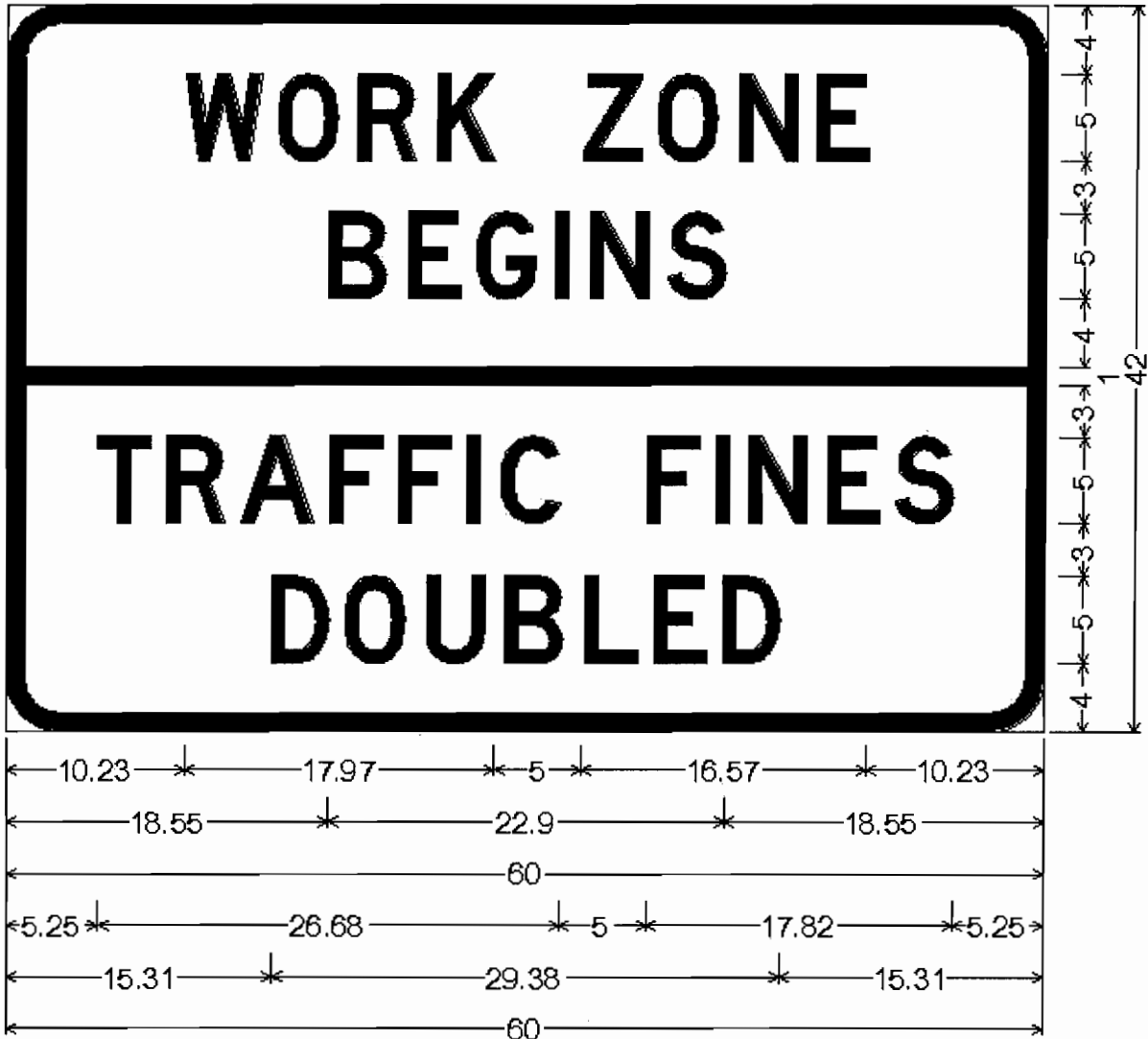
b. Measurement and Payment. Quantities for Local Agency work zone signs will be included in the plan quantities for the pay items **Sign, Type B, Temp, Furn** and **Sign, Type B, Temp, Oper** or **Sign, Type B, Temp, Prismatic, Furn** and **Sign, Type B, Temp, Prismatic, Oper**. Payment for the signs will be made at the contract unit prices.



3.00" Radius, 1.00" Border, Black on White;
 "INJURE/KILL" C; "A WORKER" C; "FINE - \$ 7500" C; "JAIL - 15 YRS" C;

- All dimensions in inches.
- Not to Scale.

R5-18bLA



3.00" Radius, 1.00" Border, Black on White;
"WORK ZONE" D; "BEGINS" D; "TRAFFIC FINES" D; "DOUBLED" D;

- All dimensions in inches
- Not to scale

R5-18cLA

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TRAFFIC CONTROL QUALITY AND COMPLIANCE

C&T:BRZ

1 of 1

C&T:APPR:JAR:DBP:08-05-05
FHWA:APPR:08-12-05

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 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 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. 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 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
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.

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.

FHWA-47 – “Statement of Materials and Labor Used by Contractors on Highway Construction Involving Federal Funds”

This form (submitted by the contractor) is required before final payment for federal projects over \$1,000,000 on the National Highway System (NHS).

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 is to be submitted by the contractor to MDOT, Small Business Liaison Office, and a copy to the delivery/project 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.

Notice to Bidders

Insurance

1/04/2007

The contractor shall provide for and in behalf of the State, the Commission, the Department and its official, agents and employees, and all agencies and their employees, specifically named below **or as stated on the Insurance Requirements (Form 1304, dated 01/2006) Package provided to the contractor with the contracts for the project**, owner's protective public liability insurance. The minimum limit shall be \$1,000,000 for bodily injury and property damage liability.

The agencies are the: Michigan Department of Transportation, the City of Detroit, Wayne County and the Wayne County Department of Public Services.

NOTICE TO BIDDERS

CERTIFIED PAYROLLS

- A. Certified weekly payrolls covering the contractor's and subcontractor's work forces shall be submitted to the delivery/project engineer on all federally funded projects in accordance with CFR, Part 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 payroll information may be submitted in any format provided that all information requested on form WH-347 is included. Form WH-347 is available on the MDOT forms website.
- B. Certified weekly payrolls covering the contractor's and subcontractor's work forces shall be submitted to the delivery/project engineer on all state funded projects of \$10,000 or more and employing three or more people. The same payroll information is required on state funded projects as is required on federally funded projects.
- C. On contracts involving two or more projects and job numbers and the type of funding is mixed, the department puts only the wage rates issued by the U.S. Department of Labor in the proposal. Federal requirements apply.
- D. For projects where certified payrolls are required, 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. A shorter alternative to this report may be completed electronically through the Business Development Division's 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.

All payrolls submitted shall identify minority and female employees by preceding the name with an ethnic code notation. Ethnic code groups are (B) Black, (H) Hispanic, (N/A) American Indian, or Alaskan Eskimo, and (A) Asian or Pacific Islander. Use (F) for female.

All Payrolls shall also identify each employee's work classification, including level; i.e., Labor Group 1, 2, etc., Operating Engineer Group 1, 2, etc., Truck Driver Group 1, 2, etc.

Payrolls on state and federally funded projects are used for determining compliance with federal wage standard provisions and with Michigan Public Act 166 of 1965 - Prevailing Wages on State Funded Projects.

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

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**.

NOTICE TO BIDDERS

ASBESTOS - METRO REGION ONLY

The contractor is hereby notified of and shall comply with the "Stipulation for Entry of Final Order by Consent, AQD No. 16-2003" dated June 20, 2003 between Michigan Department of Transportation (MDOT) and the Michigan Department of Environmental Quality, Air Quality Division. A copy of the consent order is available for review at the MDOT Metro Region Office, located at 18101 W. Nine Mile Road in Southfield, MI and at MDOT's Metro Region Transportation Service Centers. Contact Sharon Ferman, Region Resource Specialist at 248-483-5100 for more information about the consent order. If the contractor fails to fully comply with "Stipulation for Entry of Final Order by Consent, AQD No. 16-2003", for example to fully comply with the asbestos NESHAP and 2000 MR 18, R 336.1942 (Rule 942) relating to adequately wetting Regulated Asbestos Containing Material (RACM) and any and all related requirements during and after demolition activities, and up to the time of disposal, then the contractor shall be liable to MDOT for all fines and interest that may be imposed against MDOT under this consent order and shall indemnify MDOT for all costs that MDOT may incur as a consequence of the contractor's violations.

CITY OF DETROIT
NOTICE TO BIDDERS
LIMITATIONS OF OPERATIONS
AND
ANTI-NOISE CONTROL

1 of 1

DET:NH:PG

Revised:05-18-2006

First and second paragraphs in subsection 108.03 Limitation of Operation of the 2003 MDOT Standard Specifications for Construction shall be deleted and replaced by the following:

Overtime shall be limited to the work days submitted on the progress schedule for the project. The work days used to develop the progress schedule shall be Monday through Saturday and shall not include Sundays or City Holidays. Overtime work on Sundays and City Holidays shall be limited to emergency work necessary to safeguard the health and safety of the public.

The following are the current City Holidays: New Year's Day, Martin Luther King Jr.'s Birthday, Good Friday (four hours), Memorial Day, Independence Day, Labor Day, Election Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, Christmas Day, New Year's Eve. The Contractor shall be responsible for confirming with the City Engineering Division, 9th Floor, Cadillac Tower Building any amendments to this list of calendar dates designated as paid holiday's for City of Detroit employees.

The engineer may require the contractor to cease construction operations during times as may be determined to be in the interest of the public.

From a construction standpoint alone, the Contractor may normally prosecute the work during the entire twenty-four (24) hours of any work day stated above, provided that he so conducts his operations as not to create a public nuisance nor disturb the peace. However, operations outside normal working hours must be conducted in accordance with Local Ordinances, as outlined in Subsection 107.01 of the 2003 MDOT Standard Specifications for Construction.

CITY OF DETROIT

NOTICE TO BIDDERS

WORKING AREA AND PROJECT CLEANUP

1 of 1

Revised: 3-22-2006

All the work under this Contract shall be in City streets, alleys, easements, or rights-of-way, and the space allowed for the Contractor's operations shall be in City streets and alleys adjacent to his work. Construction equipment, storage of materials, and the construction operations shall normally be restricted to such areas. Should additional working or storage space be desired, the Contractor may be permitted to utilize adjacent private property provided he makes all arrangements with the owners, bears all expense in connection with its use, and in no way involves or obligates the City or State by such use.

Materials delivered on the street shall be neatly and compactly piled in such manner as to cause the least inconvenience to adjacent property owners and the general public.

Working areas shall be promptly restored to their original condition as soon as the required construction work has been completed at the particular location, and shall not be used as a storage area for unneeded material or construction equipment.

The work and all property used in connection with the work shall be kept in a neat and orderly condition at all times. Waste material and refuse from the Contractor's operations may be temporarily piled behind the curb in a manner not to interfere with pedestrians. Waste materials, rubbish, and debris shall not be allowed to accumulate and shall be removed daily, as directed by the Engineer. Construction equipment and excess materials shall be promptly removed from the site as they become no longer needed for the progress of the work.

All cost relating to maintaining a neat working area and providing the required cleanup will not be paid for separately but shall be included in the total project cost.

CITY OF DETROIT
NOTICE TO BIDDERS

CON:TNB

1 of 1

11-13-06

The Contractor shall obtain a permit from the City of Detroit, Traffic Engineering, DPW to place the maintaining traffic items.

City of Detroit
Traffic Engineering, DPW
2633 Michigan Avenue
Detroit, MI 48207
Manilal Patel (313) 628-5601
Fax: (313) 628-1307

The Contractor shall obtain a permit from the City of Detroit, Detroit Water and Sewerage Department to place the watermain items.

City of Detroit
Detroit Water and Sewerage Department
J Madison Bldg.
1420 Washington Blvd., Suite 100
Detroit, MI 48226
Bharat Doshi (313) 224-4735

CITY OF DETROIT

COORDINATION CLAUSE

CON:TNB

1 of 1

11-21-06

The Contractor shall maintain a path through the construction area for construction vehicles with the exception of times that may be agreed upon by the City of Detroit and Detroit Economic Growth Corporation, if necessary.

The Contractor shall make safety provisions for pedestrian traffic passing below the structure during the bridge reconstruction.

No payment will be made to the Contractor due to delays caused by the project.

NOTICE TO BIDDERS

UTILITY COORDINATION

CON:BMW

1 of 4

06-16-06

The existing utilities listed below and shown on the plans represent the best information available as obtained on our surveys.

This information does not relieve the Contractor of the responsibility to satisfy himself as to its accuracy, or of his responsibility in case utilities have been constructed or removed since the most recent surveys.

Utility companies will require utility relocations and adjustments within the project limits during the life of the project. This shall be done according to Section 107.12 of the Michigan Department of Transportation (MDOT) 2003 Standard Specifications for Construction. The Contractor shall cooperate and coordinate construction activities with these utility companies as stated in Sections 104.07 of the MDOT 2003 Standard Specifications for Construction and as modified herein. Specific utility information and contact people are listed below.

CITY OF DETROIT PUBLIC LIGHTING DEPARTMENT

The Public Lighting Department has underground power cables and street lights within the construction limits. The Contractor shall verify the actual locations of the facilities prior to starting construction and shall take appropriate action to prevent damage to these facilities.

A 2,400 Volt electrical transmission line crosses the existing bridge. Prior to beginning demolition of the existing bridge, this transmission line shall be relocated to a temporary location and supported as shown in the plans and proposal, and incorporated into construction of the new bridge.

Four streetlights are located within the bridge limits. These lights shall be replaced according to the plans and proposal and as directed by the Engineer.

This work shall be included in the MDOT contract, plans and proposal and the Contractor shall coordinate his work with the City of Detroit as directed in the contract, plans and proposal. Switching of power after relocation shall be undertaken by the Public Lighting Department. The Contractor shall coordinate his work closely with the Department to ensure no interruption of power supply during this period.

AT&T & SPRINT

AT&T has an underground fiber optic line located in the Dequindre Cut near the west abutment. This cable is expected to be relocated by the utility company prior to construction. Care shall be taken when excavating in this area. The Contractor shall verify the actual locations of the facilities prior to starting construction and shall take appropriate action to prevent damage to these facilities.

DETROIT WATER AND SEWERAGE DEPARTMENT

The City of Detroit Water and Sewerage Department (DWSD) has a 12" water main within the limits of the project. Provisions have been included for replacement of this water main due to conflicts with proposed construction. Portions of the existing water main that do not interfere with proposed construction may be capped and abandoned in place. Portions to remain in place are subject to approval by the Engineer.

DWSD has a manhole located on St. Aubin Street, south of Antietam Avenue in the area of median adjustments. The Contractor is responsible for adjusting the cover to match the proposed grades.

DTE ENERGY (MICHIGAN CONSOLIDATED GAS CO)

Michcon has facilities that are indicated as "abandoned" within the construction zone. The Contractor shall contact Michcon to verify the current status of these lines, and to determine actions required when excavating near the location of these lines.

NAME AND ADDRESS OF OWNER**KIND OF UTILITY**

Miss Dig

All Underground Utilities

Call three (3) Days before you dig
1-800-482-7171

City of Detroit

Lighting, Electric

Public Lighting Department

9449 Grinnell

Detroit, MI 48213

Stan Topolewski (313) 267-7228

Fax: (313) 267-6986

City of Detroit

Water, Sewer

Detroit Water and Sewerage Department

J Madison Bldg.

1420 Washington Blvd., Suite 100

Detroit, MI 48226

Michael Kubian (313) 967-1508

Fax: (313) 964-9560

Open/Close Valves:

Clarence Dishman (313) 267-1202

Construction:

Terry King (313) 833-8593

City of Detroit

Pavement Markings, Signs & Traffic Signals

Traffic Engineering, DPW

2633 Michigan Avenue

Detroit, MI 48207

Manilal Patel (313) 628-5601

Fax: (313) 628-1307

City of Detroit
 Detroit Fire Department
 250 W. Larned
 Detroit, MI 48226
 Chief Derek Segars (313) 224-1311
 (313) 224-1908

Fire Call Boxes and Fire Hydrants

City of Detroit
 Detroit Police Department
 1300 Beaubien
 Detroit, MI 48226
 (313) 224-4400

Police Call Boxes

Detroit Thermal, LLC
 3575 E. Palmer Street
 Detroit, MI 48201
 Ed LaRosa (313) 921-1922
 Fax (313) 921-1972

Steam Lines

SBC
 Right of Way – Metro
 31100 Plymouth Road, Room 301
 Livonia, MI 48105
 Greg Giannetti (734) 523-6883
 Fax: (734) 523-0802

Telephone

SBC
 100 S. Main St, Suite 314
 Mt. Clemens, MI 48043-2374
 Jeff Collard (586) 466-1024

Telephone

DTE Energy
 Michigan Consolidated Gas Company
 Main Replacement Team, 2nd Floor
 3200 Hobson
 Detroit, MI 48201
 Paul Hartman (313) 577-7236
 Fax: (313) 577-7061

Gas

AT&T
 1316 Ann Arbor Road
 Plymouth, MI 48170
 Ruthie Sudduth (734) 451-3064
 Fax: (734) 451-3068

Comcast Cablevision
 12775 Lyndon
 Detroit, MI 48227
 Bene Cummings (313) 934-2600 x 213
 Fax: (313) 934-4824

Contact Helen Lee of DTE at (313) 235-9043 ten (10) working days prior to the construction start date to coordinate adjustments for Detroit Edison manholes.

No additional compensation will be paid to the Contractor for the delays due to material shortages or other reasons beyond the control of the City or the parties performing the work, or for delays to the construction due to the encountering of existing utilities that are or are not shown n the plans.

Work stoppages by employees of utility companies which results in a delay of utility revisions on any portion of this project may be considered the basis for claim for an extension of time for the project completion, but will not be considered the basis for a claim for extra compensation or an adjustment in contract unit prices.

MICHIGAN
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION
FOR
ERRATA TO THE 2003 STANDARD SPECIFICATIONS

03SS001(2h)

1 of 11

02-07-07

Page	Subsection	Errata
iii		Add <i>Soil Erosion and Sedimentation Control Manual</i> 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."

An asterisk (*) indicates an entry which has been revised from an earlier version of this Supplemental Specification.

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

An asterisk (*) indicates an entry which has been revised from an earlier version of this Supplemental Specification.

Page	Subsection	Errata
206	403.03.A.8	“Wrap the connection...” 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.

An asterisk (*) indicates an entry which has been revised from an earlier version of this Supplemental Specification.

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 " <i>Materials Quality Assurance Manual</i> " to " <i>Materials Quality Assurance Procedures Manual</i> " 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	<p>Delete the first four paragraphs of this subsection and replace with the following:</p> <p>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.</p> <p>Test specimens will be made according to AASHTO T 23 and cured according to section 9.2 or 9.3 of T 23.</p>
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, <i>Bridge Welding Code</i> , ..."
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, CI __ 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, 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, <u>(number)</u> Way <u>(type)</u> 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

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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,

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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

107(1)

1 of 1

08-21-01

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

204(1a)

1 of 1

09-22-03

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.

CITY OF DETROIT
SPECIAL PROVISION
FOR
WATERMAIN

CON:TNB

1 of 2

11-09-06

a. Description. The Contractor will complete all the watermain work according to the current "Master Specifications and Standard Drawings", which is available on the City of Detroit Water and Sewerage Department (DWSD) website at <http://www.dwsd.org>.

This work shall consist of the installation of a new 12" ductile iron, Class 56 water main system to replace the existing 8" and 12" water main system, including field restraints and appurtenances. The new water main system is to be placed as shown on the plans. The Contractor shall provide all labor, equipment and materials required for the removal, installation, flushing, pressure testing, disinfection, and reconnection of the water system. A portion of the replaced watermain located under the proposed structure, between proposed piling. Any excavation and backfilling required in areas of underground installation will be completed in accordance with the Master Specification Section 02221. The reconnections to the existing watermain shall occur outside of the structure in the approaches.

b. Materials. The Contractor shall furnish all pipe materials required for the installation. All materials shall meet the requirements of the AWWA, MDOT, and the DWSD as applicable. All materials shall be new.

The ductile iron pipe will be manufactured in accordance with current AWWA Specifications and Master Specification Section 15061, 2.3.01. The pipe located under the bridge will be placed in 20" steel casing with a minimum thickness of ¼".

c. Construction Methods. Construction Contractors performing work on watermain facilities must be

1. Construction Sequence:

- a. Isolate work area by having DWSD close existing gate valves, and disconnect existing water main paid for as **Water Main, Rem**. If existing gate valves are not able to isolate the area, DWSD will provide a way to gain control of the main, and cap it behind the fire hydrant to the west, and as far out from the construction influence area as possible to the east.
- b. Demolish the existing structure and foundations.
- c. Plug and bypass the existing 36" storm sewer located under the pier. This work should be performed under dry weather.
- d. Prior to placement of foundation piles, the Contractor shall excavate and place 20" diameter casing for the proposed 12" water main. The Contractor shall verify existing sewer grades to ensure 18" clearance between proposed water main and the existing sewer.
- e. Construct the re-routed 36" storm sewer around the proposed pier.
- f. Drive piles and begin construction of substructure units.

- g. Excavate and construct the proposed water main with DWSD vertical and horizontal thrust blocking as required (DWSD Standard Drawings 02620-18,21-22,24-27).
- h. Construct new gates and wells on the old and new water main (DWSD Standard Drawings 02620-12,13).

2. General Requirements. The Contractor shall install all materials according to AWWA Standards, MDOT Standards, and DWSD, as applicable. The Contractor is responsible for providing watermain as-built plans to the DWSD. The Contractor will comply with all requirements of the MDEQ. The Contractor shall be responsible for providing temporary supports, if necessary, during the erection of the watermain. This shall also include protection of the watermain from damage by whatever means is necessary.

2. Pipe Trenching. Water main trenching, bedding, and backfill are covered in Master Specification Section 02221.

3. Installing the Pipe. The pipe joint system shall be installed according to the manufacturer's recommendations. Joint deflection limits will not be exceeded. Tools or other objects shall not be stored or left in the pipe.

4. Pressure and Water testing. The water testing is required for the new water main and will be in accordance with the AWWA Standards. The Contractor shall test in accordance with the Master Specification Section 02620, 3.5.

Before applying test pressure, all air shall be expelled from the pipe.

All visible leaks shall be corrected regardless of the amount of leakage. Each joint in the section of main being tested shall be carefully examined while the main is subjected to the full test pressure and any joint showing visible leakage shall be repaired as necessary to produce a tight joint. Any faulty pipe, fittings, gate valves or other accessories disclosed by testing shall be replaced by the Contractor with sound material and the test shall be repeated until specified requirements have been met.

d. Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Water Main, DI, CI 56, 12 inch.....	Foot
Water Main, Rem	Foot

The required work to install new watermain as described in this special provision shall be included in the pay item **Water Main, DI, CI 56, 12 inch**. The required work for the removal of the existing watermain shall be included in the pay item **Water Main, Rem**.

CITY OF DETROIT
SPECIAL PROVISION
FOR
ELECTRICAL

CON:TNB

1 of 5

02/15/07

- a. **Description.** This work includes furnishing all labor, equipment, and materials in connection with providing a fully functioning electrical and street lighting system. Materials and work shall be in accordance with the referenced standards and sections of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction 2003 with the modifications and additions included in this special provision.

The Contractor shall coordinate all electrical work with the City of Detroit's Public Lighting Department (PLD).

- b. **Materials and Construction Methods.** The Contractor shall perform the following work using the below stated materials.

- A. Overhead lines, such as **Triplex, #2 O.H. Line, 3-#2/0 O.H. Line and 2-#6 O.H. Line Wire**, will be measured per linear foot from contacted pole to contacted pole of the type, number and size of conductors installed. The contract unit price per linear foot shall be payment in full for furnishing and installing wire, crossarms, pins, insulators, guys, anchors and pole line hardware, and making all circuit cuts and connections. No allowances for sag or trainers will be made. The relocation of existing PLD and foreign contacts, where required for right-of-way preparation, shall be incidental to this item and will not be paid for separately. This item does not include wire which is trained on a pole.
- B. **H.H. (OR M.H.), Remove** will be measured as a unit. The contract unit price represents payment in full for removing the frame and cover, breaking down completely the existing structure, and for any other work necessary to accommodate the new manhole or handhole. Excavation, backfill, disposal of waste excavated material, and any require sod, pavement, sidewalk, or curb removal and replacement is included.
- C. **Wood Pole, Remove** will be measured as a unit. The contract unit price per each shall be payment in full for removing the pole, backfilling the hole with grade A material and repairing the surface in kind. Disposal of the waste excavated material and any required sod, pavement, sidewalk, or curb removal and replacement is included. The removal or transfer of existing contacts, if required, shall be incidental to this item and will not be paid for separately.
- D. **Remove O.H. Lines installed for Temp.** will be measured per linear foot from contacted pole to contacted pole of the type, number and size of conductors removed. The contract unit price per linear foot shall be payment in full for removing the overhead wire and, where required, removing associated crossarms, insulators, guys and line hardware. Dead-ending, the installation of

guys and crossarms, circuit cutting and reconnecting, and any other work to leave the effected circuit structurally and electrically sound and in safe and operating conditional shall be incidental and will not be paid separately. No allowance for sag or trainers will be made. This item does not include the removal of #8 twin wire which is trained on a pole.

- E. **Conduit Repair** will be measured as a unit. The contract unit price each shall be payment in full for locating a blockage or breakdown in an existing conduit run through which cable is to be pulled, excavating and exposing the conduit run at the point so located, chipping away the concrete encasement and repairing all ducts which are affected, whether vacant or occupied by existing cables, repairing the encasement, and for backfilling the excavation and restoring the surface to its original condition. This includes furnishing all labor, materials and equipment.
- F. **45 Ft. C12 Wood Pole (Fit up as Prim. & Sec. C.P.)** of the size and class specified will be measured as a unit. The contract unit price per each shall be payment in full for furnishing and installing the wood pole and for guying or making the pole self-supporting where required by the plans. Excavation, backfill, disposal of waste excavated material and any required sod, pavement, sidewalk, or curb removal and replacement is included. Transfer of existing contacts from old pole to new pole and the installation of any required crossarms and pole line hardware shall be incidental to this item and will not be paid for separately.
- Fit-up wood pole as a cable pole includes payment in full for furnishing and installing the potheads, risers, cutouts, fuses, lighting arresters, ground rod, molding, crossarms, insulators, wire and hardware, and for making all connections. The relocation of existing contacts to provide clearance on the pole shall be incidental to this item and will not be paid for separately.
- G. **6 Ft. Clamp-On Bracket Arm (36" Rise)** will be measured as a unit. The contract unit price each shall be payment in full for furnishing and installing the clamp type bracket arm, including painting the bracket arm and cutting a wire entrance hole in the standard.
- H. Encased Conduit such as **Conduit, Encased, EB20 TC6 1-3"** and **Conduit, Encased, EB20 TC6 6-5"** of the number and diameter of ducts specified, will be measured by the length in lineal feet in place, from the inside walls of manholes and the centers of handholes, post foundations and cable poles. The contract price per lineal foot shall be payment in full for furnishing all labor, materials, and equipment for installing the conduit and encasement complete. Excavation, backfill, disposal of waste excavated material and any required sod, pavement, sidewalk, or curb removal and replacement is included. Pumping and cleaning manholes and handholes, and swabbing conduits after installation shall be incidental to this item and will not be paid for separately.
- I. **Conduit, DB 80, TC2 3-4"** will be measured per lineal foot of installed conduit as necessary for construction of the specific temporary re-routed circuit as shown on the contract plans. The contract price per lineal foot shall be payment

in full for furnishing all labor, materials, and equipment for installing the conduit.

- J. Underground Cables, such as **Cable, St. Ltg., 7.5KV, 2-1/C #8 L.C.**; **Cable, St. Ltg., 2KV, 3-1/C #2 RHH & RHW (Color-Coded)**; **Cable, St. Ltg., 2KV, 2-1/C #2 RHH & RHW (Color-Coded)**; **Cable, St. Ltg., 2KV, 1/C #2 RHH & RHW (Color-Coded)**; **Cable, 15KV., 3-1/C #350KCM, U.R.D./P.J.**; **Cable, 15KV, 2-1/C #2 U.R.D./P.J.**; and **Cable, 7KV., 1-3/C #350KCM, P.I.L.C.P.J.**, of the type, number and size specified, will be measured in lineal feet, in place, of cable(s) installed. The contract price per lineal foot shall be payment in full for furnishing and installing the cable(s) in conduit or trench, racking the cable(s) in manholes and handholes, bonding, tagging, fireproofing and making all required cuts and splices. Where the cable is installed in a trench, this item also includes excavation, backfill, and any required sod, pavement, sidewalk or curb removal and replacement.
- K. Underground FED Street Lighting Standard on New Foundation, such as **Code 009-00 St. Ltg. Standard & Foundation**, will be measured as a unit. The contract unit price each shall be payment in full for building a new foundation and for furnishing and installing the lighting standard, transformer base, ground rod and ground wire, and for painting and stenciling the standard. Excavation, backfill, disposal of waste excavated material and any required sod, pavement, sidewalk or curb removal and replacement is included.
- L. **Luminaire, 250 S.V. Cobra Head** will be measured as a unit. The contract unit price per each shall be payment in full for furnishing and installing the luminaire, lamp, and where required, the series ballast; furnishing and installing secondary wiring and fusing; making all connections to ballast, series cutout and luminaire; and for leveling the luminaire and adjusting the socket position to provide the type of light distribution specified.
- M. **Remove & Salvage O.P., Luminaire, Coil** will be measured as a unit. The contract unit price each shall be payment in full for removing the luminaire, crain, wood shaft, shroud and base attaching plate and returning them in useable condition to the PLD Grinnell warehouse. All incidental items such as the ornamental pole base doors and the "bowling pin" pole top are to be included in the salvage operation.
- N. **Manhole, 2-Way** and **PLD Handhole (30 in. Round) W/Frame & Cover** of the type specified will be measured as a unit. The contract unit price each shall be payment in full for furnishing and installing all materials required to build the complete structure as shown on the drawings and as specified herein. Excavation, backfill, disposal of waste excavated material, and any required sod, pavement, sidewalk, or curb removal and replacement is included. Where manholes or handholes are built on existing conduit runs, the breaking away of existing encasement and conduit, the temporary support of all existing cables during construction, and splicing additional lengths into existing cables to permit proper racking on manhole or handhole walls shall be incidental to this item and will not be paid for separately.
- O. **Remove Foundation** will be measured as a unit. The contract unit price shall

be payment in full for removing the entire foundation to the depth required and backfilling the hole with granular material and repairing the surface in kind. Disposal of waste excavated material and any required sod, pavement, sidewalk, or curb removal and replacement is included.

- P. **Remove Cable and Duct Bank** will be measured per linear foot for the removal of encased conduit bank and the cable contained in it. Removal shall consist of the excavation to the cable and duct bank, the physical removal of the duct bank and cable and backfill of the excavation with grade A sand. Compaction and surface restoration are incidental to this item.
 - Q. **Trim Tree** will be measured as a unit. The contract unit price per tree shall be payment in full for trimming the tree for line clearance or pole setting per accepted industry specifications.
 - R. **Make Cable Splice** will be measured as a unit. The contract unit price each shall be payment in full for providing all PLD approved splicing material and creating a warranted, PLD specification cable splice for such cables as PILC Primary distribution lead wipe, series street lighting lead wipe, secondary lighting, and primary and secondary cable pole terminations.
 - S. **Vector Out Manhole** shall be measured as a unit. The contract unit price each shall be payment in full for removing all debris from the structure with a vacuum apparatus, facilitated with adjustable jet, compressed water. This item shall include entering the structure physically, manually breaking deposits of cement and mineral salts, the shoveling and collecting of this material, the shoveling of debris out of structure corners and the manual spraying-down of the structure and the cables contained within it. Leaving sumps clean, drain openings unobstructed, along with spraying the structure chimney clean and disposal of the collected "spoils" are incidental to this item.
- c. **Measurement and Payment.** The completed work as described will be paid for at the contract unit price for the following pay items and includes all material, equipment, and labor to complete these items.

Contract Item (Pay Item)	Pay Unit
Triplex, #2 O.H. Line	Foot
3-#2/0 O.H. Line	Foot
2-#6 O.H. Line	Foot
H.H. (OR M.H.), Remove.....	Each
Wood Pole, Remove	Each
Remove O.H. Lines installed for Temp.	Each
Conduit Repair	Foot
45 Ft. Cl2 Wood Pole (Fit up as Prim. & Sec. C.P.).....	Each
6 Ft. Clamp-On Bracket Arm (36" Rise).....	Each
Conduit, Encased, EB20 TC6 1-3"	Foot
Conduit, Encased, EB20 TC6 6-5"	Foot
Conduit, DB 80, TC2 3-4"	Foot

Contract Item (Pay Item)	Pay Unit
Cable, St. Ltg., 7.5KV, 2-1/C #8 L.C.....	Foot
Cable, St. Ltg., 2KV, 3-1/C #2 RHH & RHW (Color-Coded)	Foot
Cable, St. Ltg., 2KV, 2-1/C #2 RHH & RHW (Color-Coded)	Foot
Cable, St. Ltg., 2KV, 1/C #2 RHH & RHW (Color-Coded)	Foot
Cable, 15KV., 3-1/C #350KCM, U.R.D./P.J.	Foot
Cable, 15KV, 2-1/C #2 U.R.D./P.J.....	Foot
Cable, 7KV., 1-3/C #350KCM, P.I.L.C.P.J.....	Foot
Code 009-00 St. Ltg. Standard & Foundation	Each
Luminaire, 250 S.V. Cobra Head.....	Each
Remove & Salvage O.P., Luminaire, Coil	Each
Manhole, 2-Way	Each
PLD Handhole (30 in. Round) W/Frame & Cover	Each
Remove Foundation	Each
Remove Cable and Duct Bank	Foot
Trim Tree.....	Each
Make Cable Splice.....	Each
Vactor Out Manhole.....	Each

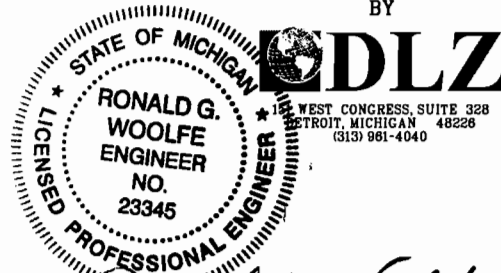
CITY OF DETROIT
 IN COOPERATION WITH
MICHIGAN DEPARTMENT OF TRANSPORTATION
 AND
FEDERAL HIGHWAY ADMINISTRATION

PLAN AND PROFILE OF PROPOSED
 REPLACEMENT OF THE
ANTIETAM AVENUE BRIDGE
 OVER THE
DEQUINDRE CUT GREENWAY

STATE BRIDGE NO.: 502 of 82-22-97
 JOB NO.: 83945A
 CONTROL SECTION NO.: BRO 82022
 FEDERAL PROJECT NO.: BRO 0782 (068)
 FEDERAL ITEM NO.: RR 5680

CONTRACT FOR: STRUCTURE REPLACEMENT, RELATED APPROACH
 WORK, AND TRAFFIC IMPROVEMENTS FOR ANTIETAM AVENUE OVER
 THE DEQUINDRE CUT GREENWAY

BRIDGE PLANS WERE PREPARED FOR THE CITY OF DETROIT
 CITY ENGINEERING DEPARTMENT
 BY



Ronald G. Woolfe
 LICENSED PROFESSIONAL ENGINEER

5/15/07
 DATE

LOCAL AUTHORITY APPROVAL
CITY OF DETROIT
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS



APPROVED BY _____ HEAD ENGINEER _____ DATE _____
 APPROVED BY *George Jacob* CITY ENGINEER *5/17/07* DATE _____

PREPARED UNDER THE SUPERVISION OF

 LICENSED PROFESSIONAL ENGINEER _____ DATE _____

THE IMPROVEMENTS COVERED BY THESE
 PLANS SHALL BE DONE IN ACCORDANCE
 WITH THE MICHIGAN DEPARTMENT OF
 TRANSPORTATION 2003 STANDARD
 SPECIFICATIONS FOR CONSTRUCTION



CITY OF DETROIT
 PROJECT
 LOCATION
 S02 of 82-22-97

CITY OF DETROIT STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY
 ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN
 BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED AS
 INCLUDED IN THE PROPOSAL.

- STANDARD CURB DETAILS C-4380
- DETAIL OF ALLEY RETURN AND DRIVE APPROACH C-4384
- STANDARD SEWER AND DRDP MANHOLES C-4387
- MANHOLE FRAME AND COVER C-4391
- FLAT TYPE GRATE AND FRAME C-4392
- DOMED GRATE AND FRAME C-4394
- STANDARD CATCH BASINS "A" AND "B" AND FLAT GRATE AND FRAME C-5028

MDOT STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY
 ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN
 BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

- DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS R-29-D
- INTEGRAL CURB AND INTEGRAL CURB & GUTTER R-31-C
- TEMPORARY CONCRETE BARRIER R-52-E
- CHAIN LINK FENCE (USING TENSION WIRE) R-98-B
- MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT
- ASSEMBLY AND NAME PLATE DETAILS 8-103-D

MDOT SPECIAL DETAILS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY
 ARE TO BE CONSTRUCTED ACCORDING TO THE SPECIAL DETAIL GIVEN
 BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

- SIDEWALK RAMP DETAILS R-28-F
- SOIL EROSION & SEDIMENTATION CONTROL MEASURES R-96-D
- PLACEMENT OF TEMPORARY CONCRETE BARRIER R-126-F
- BRIDGE RAILING, AESTHETIC PARAPET TUBE B-25-E

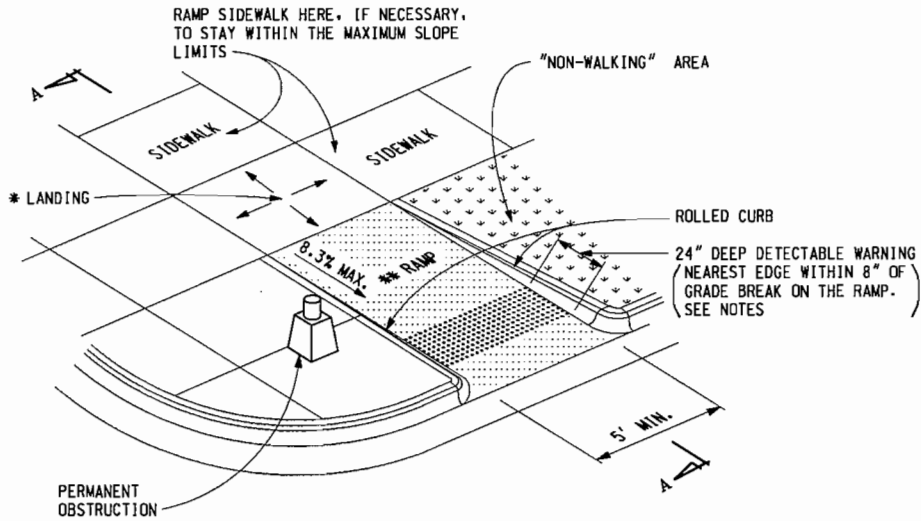
*SEE WZD-125-0 FOR TEMPORARY TRAFFIC CONTROL DEVICE DETAILS.



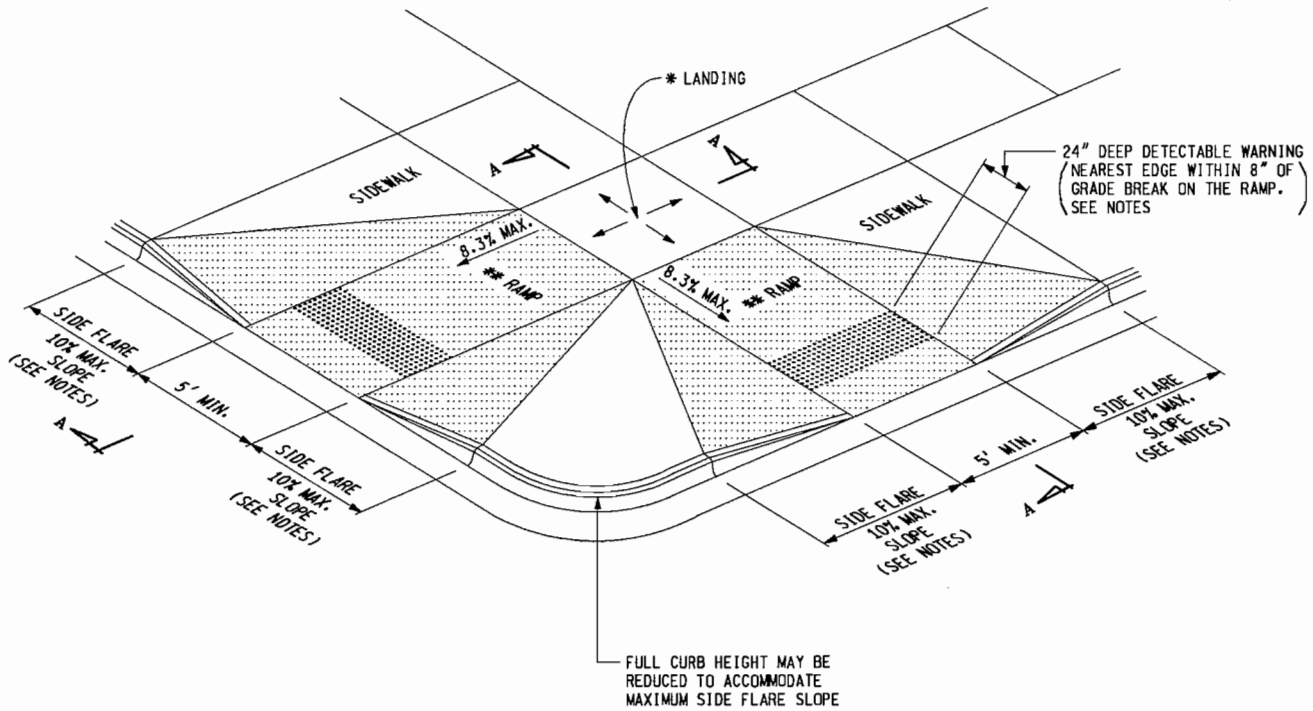
CONTROL SECTION	JOB NUMBER	FEDERAL NUMBERS		SHEET NO.
		PROJECT	ITEM	
BRO 82022	83945A	BRO 0782 (068)	RR 5680	1

* MAXIMUM LANDING SLOPE IN ANY DIRECTION IS 2%.
 MINIMUM LANDING DIMENSIONS 5' x 5'.

** MAXIMUM CROSS SLOPE ON RAMP IS THE SAME AS
 THAT FOR SIDEWALK (2%).



SIDEWALK RAMP TYPE R
 (ROLLED SIDES)



SIDEWALK RAMP TYPE F
 (FLARED SIDES, TWO RAMPS SHOWN)



PREPARED BY
 DESIGN DIVISION

DRAWN BY: B.L.T.

CHECKED BY: W.K.P.

DEPARTMENT DIRECTOR
 Kirk T. Stoudie

APPROVED BY: _____
 ENGINEER OF DELIVERY

APPROVED BY: _____
 ENGINEER OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP DETAILS

F.H.W.A. APPROVAL

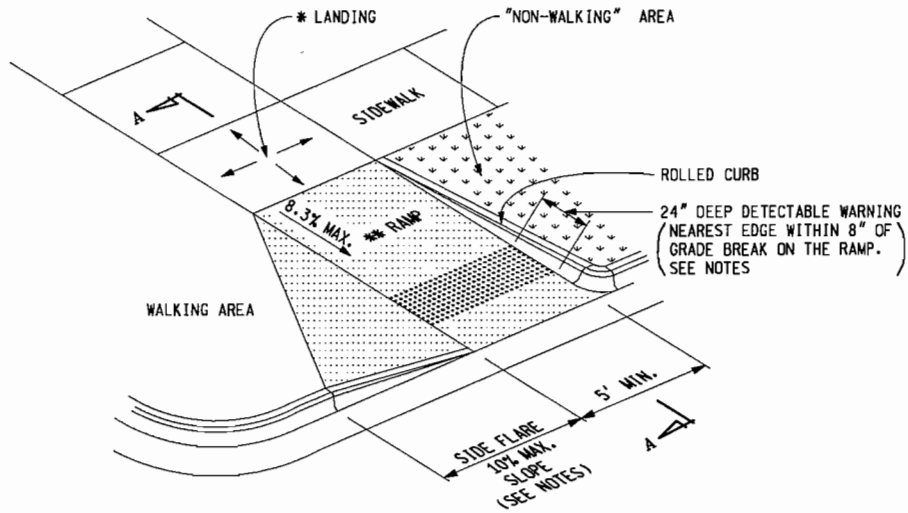
2-20-2007
 PLAN DATE

R-28-F

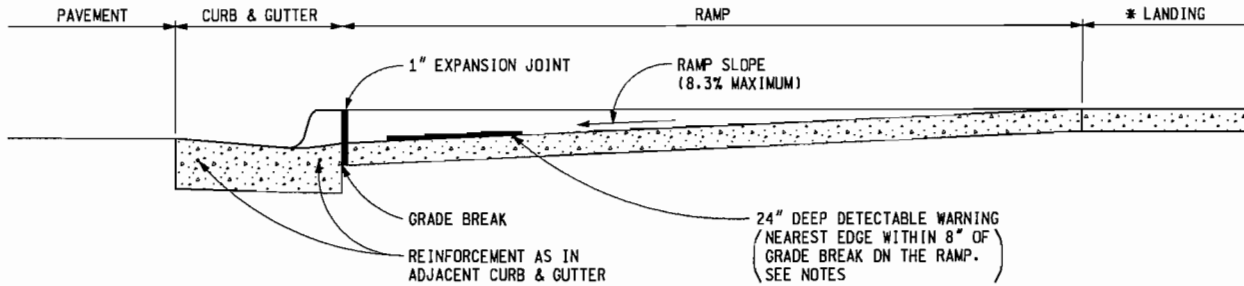
SHEET
 1 OF 6

* MAXIMUM LANDING SLOPE IN ANY DIRECTION IS 2%.
MINIMUM LANDING DIMENSIONS 5' x 5'.

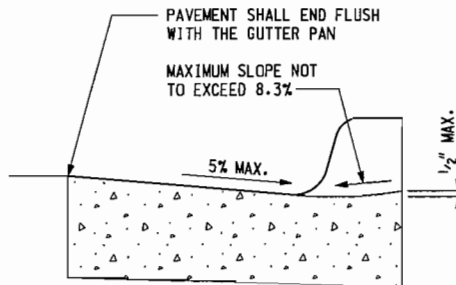
** MAXIMUM CROSS SLOPE ON RAMP IS THE SAME AS
THAT FOR SIDEWALK (2%).



SIDEWALK RAMP TYPE RF
(ROLLED / FLARED SIDES)



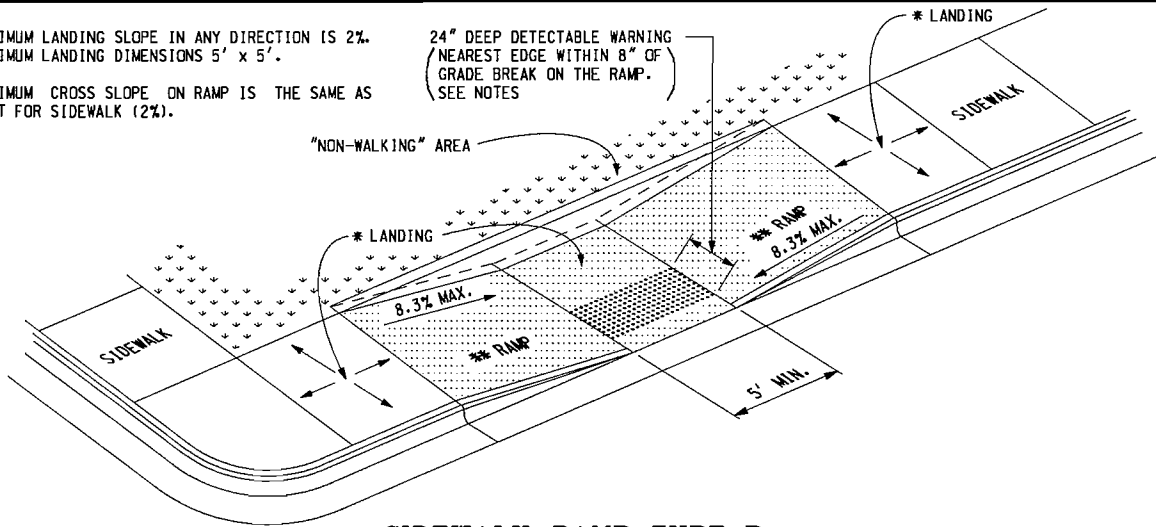
SECTION A-A
(TYPICAL ALL RAMP DETAILS)



SECTION THROUGH CURB CUT
(TYPICAL ALL RAMP TYPES)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR SIDEWALK RAMP DETAILS			
F.H.W.A. APPROVAL	2-20-2007 PLAN DATE	R-28-F	SHEET 2 OF 6

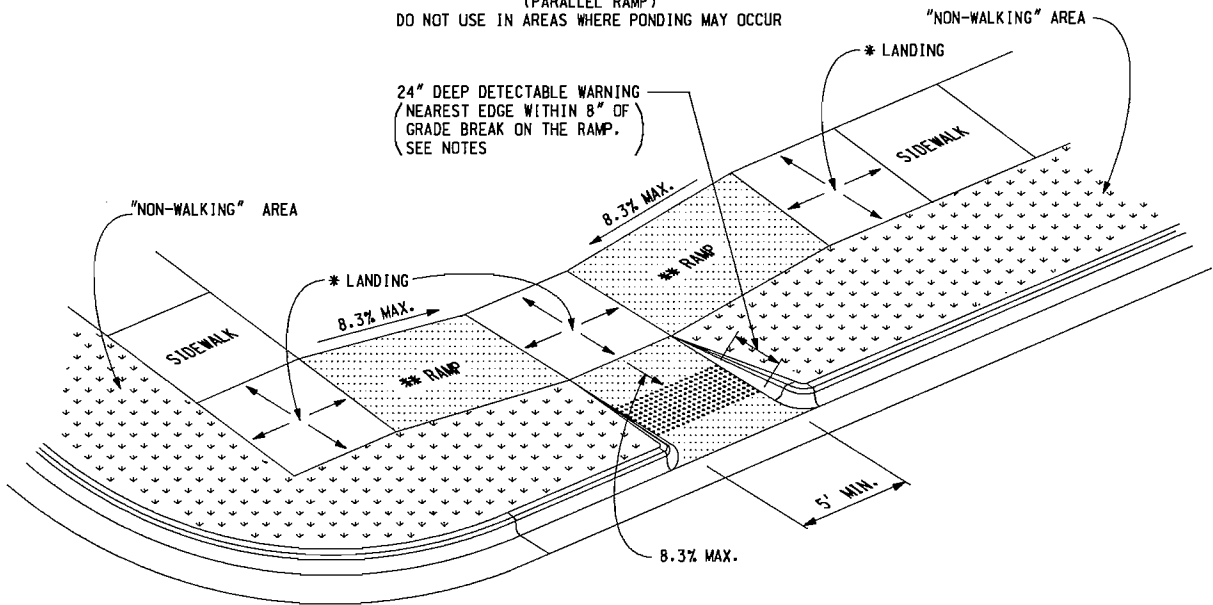
* MAXIMUM LANDING SLOPE IN ANY DIRECTION IS 2%.
MINIMUM LANDING DIMENSIONS 5' x 5'.
** MAXIMUM CROSS SLOPE ON RAMP IS THE SAME AS
THAT FOR SIDEWALK (2%).



SIDEWALK RAMP TYPE P

(PARALLEL RAMP)

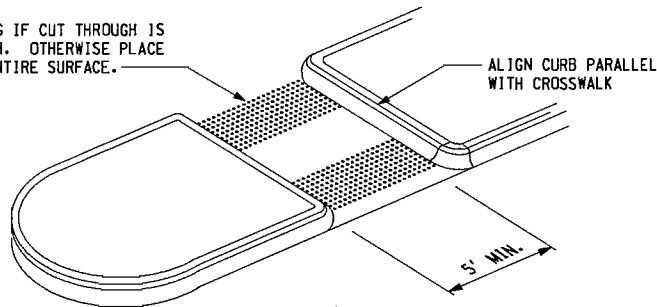
DO NOT USE IN AREAS WHERE PONDING MAY OCCUR



SIDEWALK RAMP TYPE C

(COMBINATION RAMP)

24" DEEP DETECTABLE WARNING IF CUT THROUGH IS
GREATER THAN 4'-0" IN LENGTH. OTHERWISE PLACE
DETECTABLE WARNING ON THE ENTIRE SURFACE.



SIDEWALK RAMP TYPE M

(MEDIAN ISLAND)

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP DETAILS

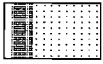
F.H.W.A. APPROVAL

2-20-2007
PLAN DATE

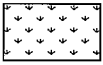
R-28-F

SHEET
3 OF 6

LEGEND



SIDEWALK RAMP



"NON-WALKING" AREA



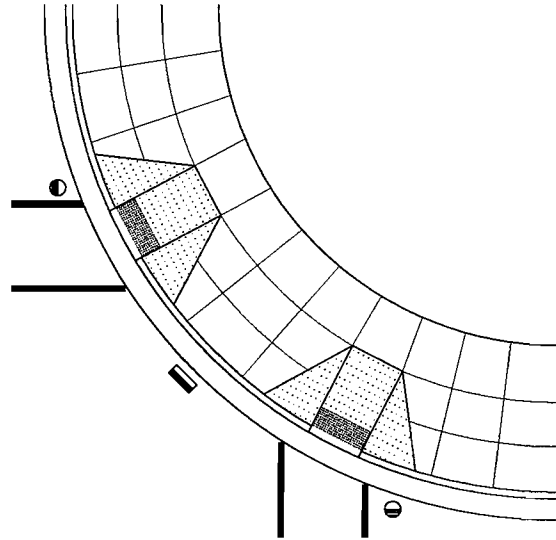
CROSSWALK MARKING



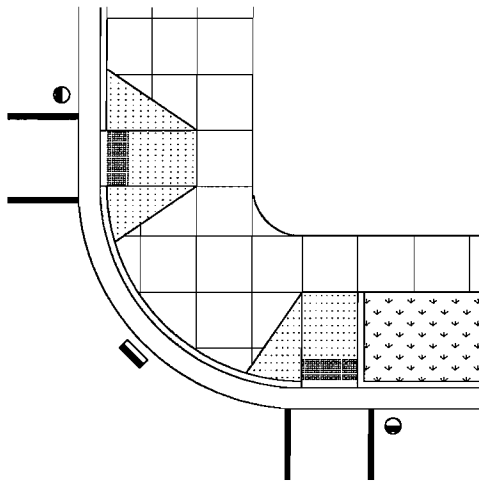
PREFERRED LOCATION OF DRAINAGE INLET (TYP.)



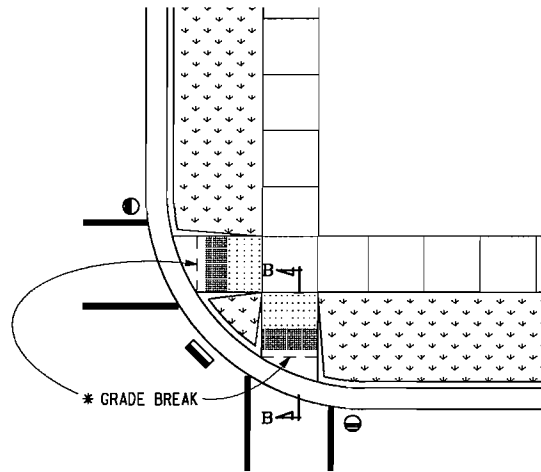
ALTERNATE LOCATION OF DRAINAGE INLET (TYP.)



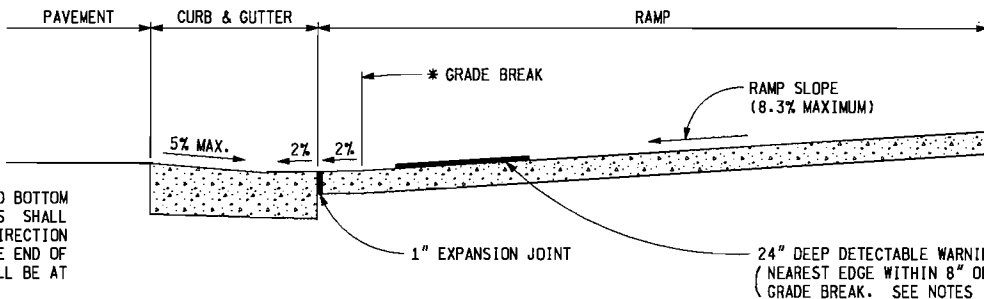
SIDEWALK RAMP PERPENDICULAR TO RADIAL CURB
(TYPE F SHOWN)



SIDEWALK RAMP PERPENDICULAR TO TANGENT CURB
(TYPE F AND TYPE RF SHOWN)



SIDEWALK RAMP LOCATED IN RADIUS, WITH ORIENTATION
AS DESCRIBED IN SECTION B-B (TYPE R SHOWN)

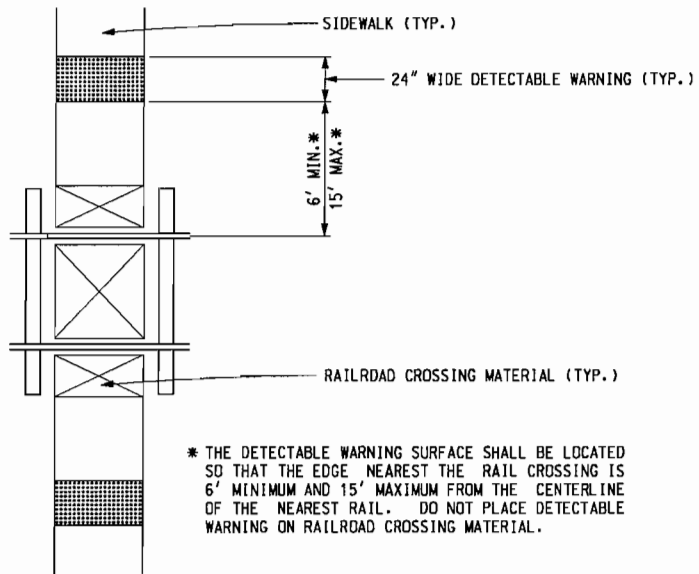


* GRADE BREAKS AT THE TOP AND BOTTOM OF PERPENDICULAR CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN. AT LEAST ONE END OF THE BOTTOM GRADE BREAK SHALL BE AT THE BACK OF CURB.

SECTION B-B

SIDEWALK RAMP ORIENTATION

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP DETAILS			
	2-20-2007 PLAN DATE	R-28-F	SHEET 4 OF 6
F.H.W.A. APPROVAL			

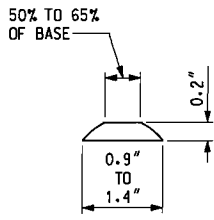


DETECTABLE WARNING DETAIL
AT RAILROAD CROSSING

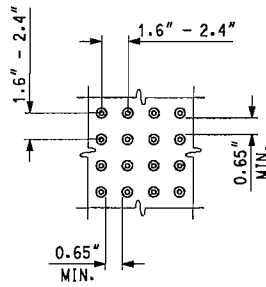
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP DETAILS

F.H.W.A. APPROVAL	2-20-2007 PLAN DATE	R-28-F	SHEET 5 OF 6
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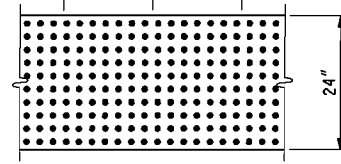


DOME SECTION

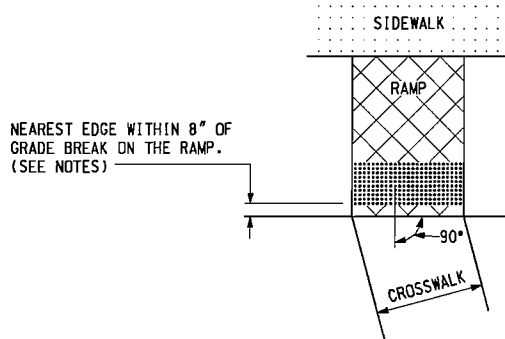


DOME SPACING

ALIGNED IN DIRECTION OF TRAVEL AND PERPENDICULAR (OR RADIAL) TO GRADE BREAK



DOME ALIGNMENT



DETECTABLE WARNING DETAILS

NOTES:

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS BY ALL PUBLIC AGENCIES AND BY ALL PRIVATE ORGANIZATIONS CONSTRUCTING FACILITIES FOR PUBLIC USE.

SIDEWALK RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT WALK LOCATIONS IN MID-BLOCK IN THE VICINITIES OF HOSPITALS, MEDICAL CENTERS, AND LARGE ATHLETIC FACILITIES.

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE SLOPE OF RAMP.

SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND SHORT GRADE CHANGES. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

IF POSSIBLE, DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION, LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURE.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. THEY SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DETECTABLE WARNING IS WITHIN 8" OF THE GRADE BREAK ON THE RAMP.

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE CURB LINE, SHALL BE PROVIDED WHERE A CIRCULATION PATH CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE EDGES OF A SIDEWALK RAMP ARE PROTECTED BY LANDSCAPING OR OTHER BARRIERS TO TRAVEL BY WHEELCHAIR USERS OR PEDESTRIANS ACROSS THE EDGE OF THE SIDEWALK RAMP.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP DETAILS

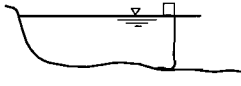




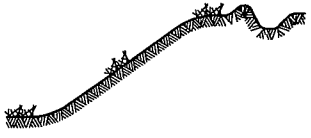
F.H.W.A. APPROVAL	2-20-2007 PLAN DATE	R-28-F	SHEET 6 OF 6
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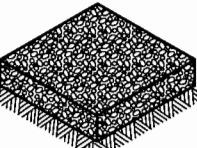


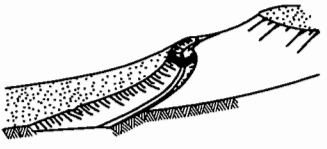



APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

(COMPREHENSIVE DETAILS ARE LOCATED IN SECTION 7 OF)
 (THE SOIL EROSION & SEDIMENTATION CONTROL MANUAL)

- A = SLOPES
- B = STREAMS AND WATERWAYS
- C = SURFACE DRAINAGEWAYS
- D = ENCLOSED DRAINAGE (INLET & OUTFALL CONTROL)
- E = LARGE FLAT SURFACE AREAS
- F = BORROW AND STOCKPILE AREAS
- G = MDEQ PERMIT MAY BE REQUIRED

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
1	 TURBIDITY CURTAIN	A Turbidity Curtain is used when slack water area is necessary to isolate construction activities from the watercourse. The still water area contains the sediments within the construction limits.		•					
2	 GRUBBING OMITTED	Retains existing root mat which assists in stabilizing slopes. Assists in the revegetation process by providing sprout growth. Reduces sheet flow velocities preventing rilling and gulying. Discourages off-road vehicle use.		•			•		
3	 PERMANENT/TEMPORARY SEEDING	Inexpensive but effective erosion control measure to stabilize flat areas and mild slopes. Permits runoff to infiltrate soil, reducing runoff volumes. Proper preparation of the seed bed, fertilizing, mulching and watering is critical to its success.		•	•		•	•	
4	 DUST CONTROL	Dust control can be accomplished by watering, and/or applying calcium chloride. The disturbed areas should be kept to a minimum. PERMANENT/TEMPORARY SEEDING (KEY 3) should be applied as soon as possible.		•			•	•	
5	 SODDING	Provides immediate vegetative cover such as at spillways and ditch bottoms. Proper preparation of the topsoil, placement of the sod, and watering is critical to its success.		•			•	•	
6	 VEGETATED BUFFER STRIPS	Reduces sheet flow velocities preventing rilling and gulying. Assists in the collection of sediments by filtering runoff. Assists in the establishment of a permanent vegetative cover.		•			•		

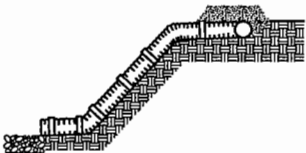

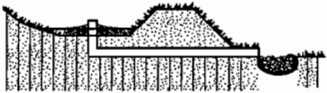
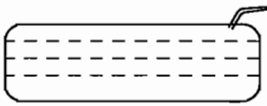




 Michigan Department of Transportation	DEPARTMENT DIRECTOR Kirk T. Steudle	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR		
PREPARED BY DESIGN SUPPORT AREA	APPROVED BY: _____ ENGINEER OF DELIVERY	SOIL EROSION & SEDIMENTATION CONTROL MEASURES		
DRAWN BY: <u>B.L.T.</u>	APPROVED BY: _____ ENGINEER OF DEVELOPMENT	_____ F.H.W.A. APPROVAL	7-5-2005 PLAN DATE	R-96-D
CHECKED BY: <u>W.K.P.</u>				SHEET 1 OF 6

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
7	 <p>RIPRAP</p>	Used where vegetation cannot be established. Very effective in protecting against high velocity flows. Should be placed over a geotextile liner.		•	•	•	•		•
8	 <p>AGGREGATE COVER</p>	Can be used in any area where a stable condition is needed for construction operations, equipment storage or in heavy traffic areas. Reduces potential soil erosion and fugitive dust by stabilizing raw areas.	•					•	•
9	 <p>BENCHES</p>	Reduces sheet flow velocities preventing rilling and gulying. Assists in the collection and filtering of sediments. Provides access for stabilizing slopes.	•						•
10	 <p>DIVERSION DIKE</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying. Collects and diverts runoff to properly stabilized drainage ways. Works well with INTERCEPTING DITCH (KEY 11)	•					•	•
11	 <p>INTERCEPTING DITCH</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying. Works well with DIVERSION DIKE (KEY 10)	•					•	•
12	 <p>INTERCEPTING DITCH AND DIVERSION DIKE</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying.	•					•	•
13	 <p>GRAVEL FILTER BERM</p>	Useful in filtering flow prior to its reentry into a lake, stream or wetland. Works well with SEDIMENT TRAP (KEY 20) and TEMPORARY BYPASS CHANNEL (KEY 35). Not to be used in lieu of a CHECK DAM (KEY 37) in a ditch.	•		•				•
14	 <p>GRAVEL ACCESS APPROACH</p>	Provides a stable access to roadways minimizing fugitive dust and tracking of materials onto public streets and highways.						•	•

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SOIL EROSION & SEDIMENTATION
CONTROL MEASURES**

F.H.W.A. APPROVAL	7-5-2005 PLAN DATE	R-96-D	SHEET 2 OF 6
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KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
15	 SLOPE DRAIN SURFACE	Excellent device for carrying water down slopes without creating an erosive condition. Generally used in conjunction with DIVERSION DIKE (KEY 10), INTERCEPTING DITCH (KEY 11) and INTERCEPTING DITCH AND DIVERSION DIKE (KEY 12) to direct flow to a stable discharge area or SEDIMENT TRAP (KEY 20).	•		•				
16	 TREES, SHRUBS AND PERENNIALS	Trees, shrubs and perennials can provide low maintenance long term erosion protection. These plants may be particularly useful where site aesthetics are important along the roadside slopes.	•				•		
17	 PIPE DROP	Effective way to allow water to drop in elevation very rapidly without causing an erosive condition. Also works as a sediment collector device. May be left in place as a permanent erosion control device.	•		•				
18	 DEWATERING WITH FILTER BAG	It may be necessary to dewater from behind a cofferdam or construction dam to create a dry work site. Discharged water must be pumped to a filter bag. A GRAVEL FILTER BERM (KEY 13) may be placed downslope of the filter bag to provide additional filtration prior to entering any stream or wetland.			•				•
19	 ENERGY DISSIPATORS	A device to prevent the erosive force of water from eroding soils. Used at outlets of culverts, drainage pipes or other conduits to reduce the velocity of the water. Prevents structure scouring and undermining.	•	•	•	•			
20	 SEDIMENT TRAP	Used to intercept concentrated flows and prevent sediments from being transported off site or into a watercourse or wetland. The size of a Sediment Trap is 5 cubic yards or less. Works well when used with CHECK DAM (KEY 37).	•		•	•			
21	 SEDIMENT BASIN	A Sediment Basin is used to trap sediments from an upstream construction site. Requires periodic inspections, repairs, and maintenance. Where practical, sediments should be contained on site. A Sediment Basin should be the last choice of sediment control. The size of a Sediment Basin is greater than 5 cubic yards.			•				•
22	 VEGETATIVE BUFFER AT WATERCOURSE	This practice is used to maintain a vegetative buffer adjacent to a watercourse. When utilized with SILT FENCE (KEY 26) it will, under normal circumstances, prevent sediment from leaving the construction site.	•	•	•		•	•	

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR



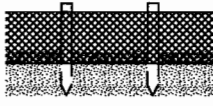


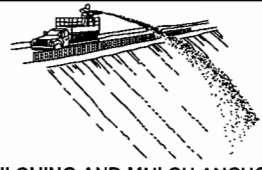

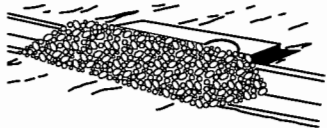
**SOIL EROSION & SEDIMENTATION
CONTROL MEASURES**

F.H.W.A. APPROVAL

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KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
23	 STREAM RELOCATION	A detail depicting the proper procedures for stream relocation. Maintains same width, depth, and flow velocity as the natural stream. Revegetate banks with PERMANENT/TEMPORARY SEEDING (KEY 3), MULCHING AND MULCH ANCHORING (KEY 28), MULCH BLANKETS AND HIGH VELOCITY MULCH BLANKETS (KEY 33) and woody plants to shade the stream.		•					•
24	 SAND AND STONE BAGS	Sand and stone bags are a useful tool in the prevention of erosion. Can be used to divert water around a construction site by creating a DIVERSION DIKE (KEY 10). Works well for creating a CONSTRUCTION DAM (KEY 36) and temporary culvert end fill.	•	•	•	•	•	•	•
25	 SAND FENCE AND DUNE STABILIZATION	A Sand Fence traps blowing sand by reducing wind velocities. Can be used to prevent sand from blowing onto roads. Must be maintained until sand source is stabilized.	•				•	•	
26	 SILT FENCE	A permeable barrier erected below disturbed areas to capture sediments from sheet flow. Can be used to divert small volumes of water to stable outlets. Ineffective as a filter and should never be placed across streams or ditches where flow is concentrated.	•				•	•	
27	 PLASTIC SHEETS OR GEOTEXTILE COVER	Plastic Sheets can be used to create a liner in temporary channels. Can also be used to create a temporary cover to prevent erosion of stockpiled materials.	•	•	•			•	
28	 MULCHING AND MULCH ANCHORING	Anchored mulch provides erosion protection against rain and wind. Mulch must be used on seeded areas to promote water retention and growth. Should be inspected after every rainstorm and repaired as necessary until vegetation is well established.	•		•		•	•	
29	 INLET PROTECTION FABRIC DROP	Provides settling and filtering of silt laden water prior to its entry into the drainage system. Can be used in median and side ditches where vegetation will be disturbed. Allows for early use of drainage systems prior to project completion.			•		•		
30	 INLET PROTECTION GEOTEXTILE AND STONE	Provides settling and filtering of silt laden water prior to its entry into the drainage system. Should be used in paved areas where drainage structures are existing or proposed. Allows for early use of drainage systems prior to project completion.			•		•		

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

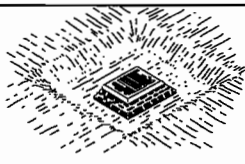

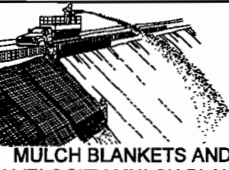
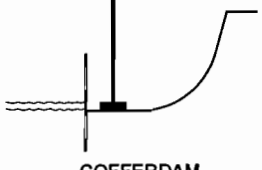



**SOIL EROSION & SEDIMENTATION
CONTROL MEASURES**

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KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
31	 INLET PROTECTION SEDIMENT TRAP	An Inlet Protection Sediment Trap is a temporary device that can be used in areas where medium flows are anticipated. Effective in trapping small quantities of sediments prior to water entering the drainage system. Can be used in areas such as median and side ditches.			•		•		
32	 SLOPE ROUGHENING AND SCARIFICATION	A simple and economical way to reduce soil erosion by wind and water. Can be accomplished by harrowing with a disk, back blading, or tracking with a dozer perpendicular to the slope.	•				•	•	
33	 MULCH BLANKETS AND HIGH VELOCITY MULCH BLANKETS	Mulch blankets provide an immediate and effective cover over raw erodible slopes affording excellent protection against rain and wind erosion. High velocity mulch blankets work well for stabilizing the bottom of ditches in waterways.	•		•		•	•	
34	 COFFERDAM	Used to create a dry construction area and protect the stream from raw erodible areas. Must be pumped dry or dewatered according to DEWATERING WITH FILTER BAG (KEY 18).		•					•
35	 TEMPORARY BYPASS CHANNEL	Utilized when a dry construction area is needed. Isolates stream flows from raw erodible areas minimizing erosion and subsequent siltation. Can incorporate SEDIMENT BASIN (KEY 21), CHECK DAM (KEY 37), and GRAVEL FILTER BERM (KEY 13) to remove sediments from water. Construction sequence of events may be necessary.		•					•
36	 CONSTRUCTION DAM	Used to create a dry or slack water area for construction. Isolates the stream from raw erodible areas. Can be created out of any non-erodible materials such as SAND AND STONE BAGS (KEY 24), a gravel dike with clay core or plastic liner, steel plates or plywood.		•					•
37	 CHECK DAM	Can be constructed across ditches or any area of concentrated flow. Protects vegetation in early stages of growth. A Check Dam is intended to reduce water velocities and capture sediment. A Check Dam is not a filtering device.	•		•			•	

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR SOIL EROSION & SEDIMENTATION CONTROL MEASURES			
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NOTES:

THIS STANDARD PLAN WILL SERVE AS A KEY IN THE SELECTION OF THE APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL DETAILS. THIS PLAN ALSO PROVIDES THE KEY TO THE NUMBERED EROSION CONTROL ITEMS SPECIFIED ON THE CONSTRUCTION PLANS. REFER TO THE MDOT SOIL EROSION & SEDIMENTATION CONTROL MANUAL, SECTION 6 FOR SPECIFIC DETAILS, CONTRACT ITEMS (PAY ITEMS), AND PAY UNITS.

COLLECTED SILT AND SEDIMENT SHALL BE REMOVED PERIODICALLY TO MAINTAIN THE EFFECTIVENESS OF THE SEDIMENT TRAP, SEDIMENT BASIN, AND SILT FENCE. AGGREGATES PLACED IN STREAMS SHOULD CONTAIN A MINIMUM OF FINES.

TEMPORARY EROSION AND SEDIMENTATION CONTROL PROVISIONS SHALL BE COORDINATED WITH THE PERMANENT CONTROL MEASURES TO ASSURE EFFECTIVE CONTROL OF SEDIMENTS DURING CONSTRUCTION OF THE PROJECT.

ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AFTER VEGETATION ESTABLISHMENT OR AT THE DISCRETION OF THE ENGINEER. CARE SHALL BE TAKEN DURING REMOVAL TO MINIMIZE SILTATION IN NEARBY DRAINAGE COURSES.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

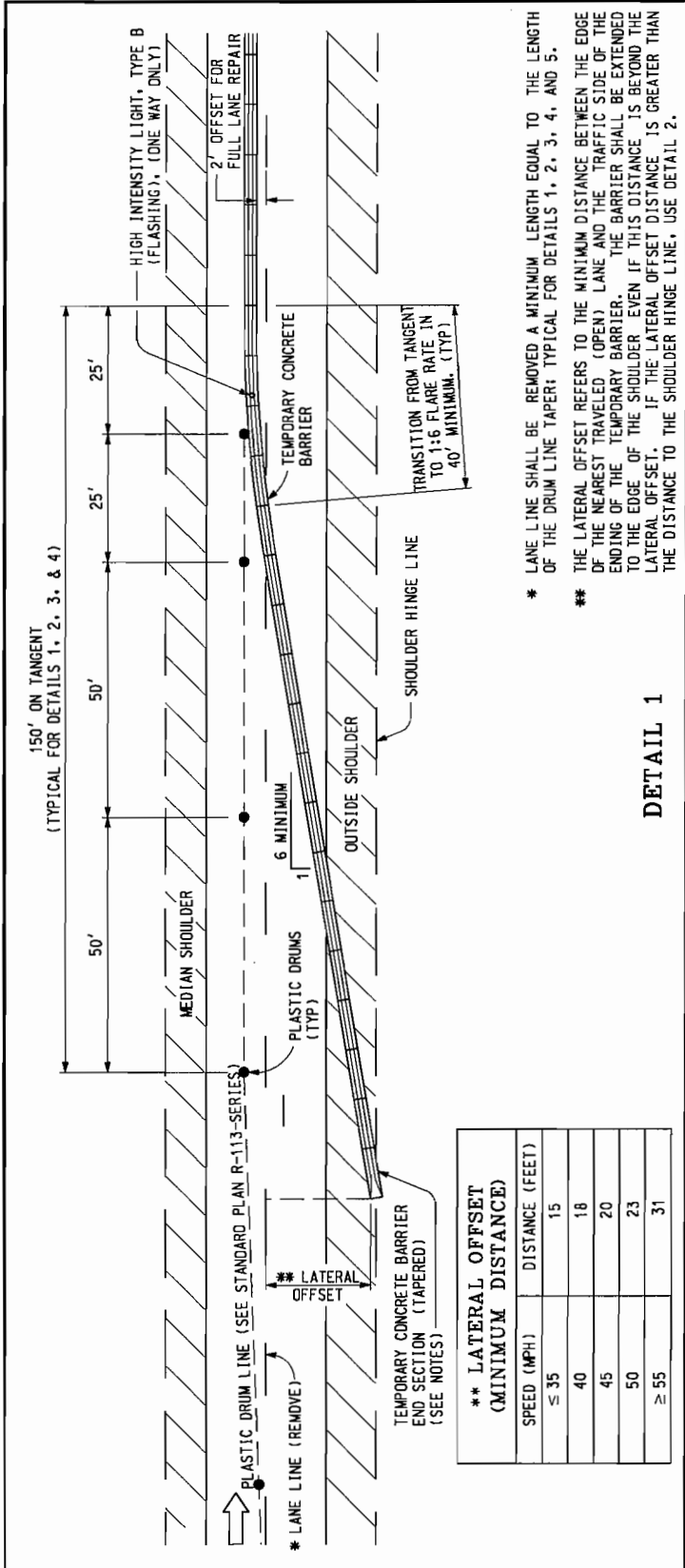
**SOIL EROSION & SEDIMENTATION
CONTROL MEASURES**

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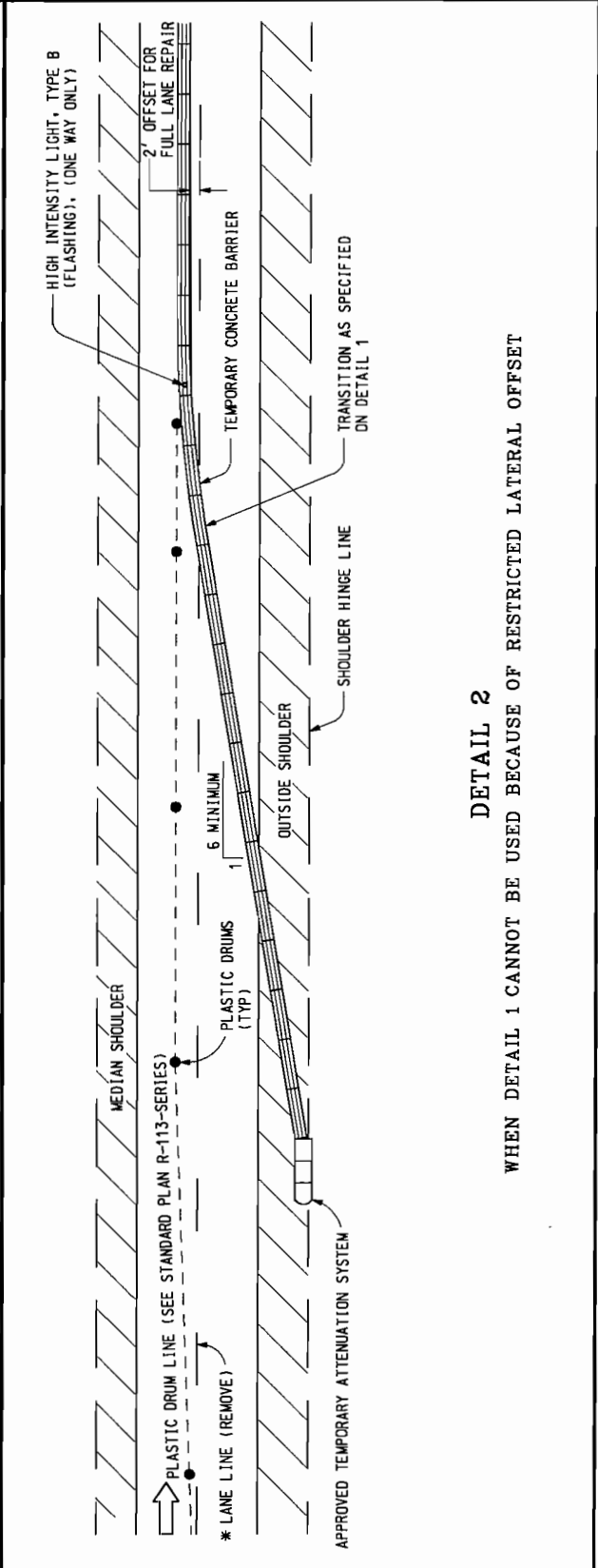
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- * LANE LINE SHALL BE REMOVED A MINIMUM LENGTH EQUAL TO THE LENGTH OF THE DRUM LINE TAPER; TYPICAL FOR DETAILS 1, 2, 3, 4, AND 5.
- ** THE LATERAL OFFSET REFERS TO THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE NEAREST TRAVELED (OPEN) LANE AND THE TRAFFIC SIDE OF THE ENDING OF THE TEMPORARY BARRIER. THE BARRIER SHALL BE EXTENDED TO THE EDGE OF THE SHOULDER EVEN IF THIS DISTANCE IS BEYOND THE LATERAL OFFSET. IF THE LATERAL OFFSET DISTANCE IS GREATER THAN THE DISTANCE TO THE SHOULDER HINGE LINE, USE DETAIL 2.

DETAIL 1

** LATERAL OFFSET (MINIMUM DISTANCE)	
SPEED (MPH)	DISTANCE (FEET)
≤ 35	15
40	18
45	20
50	23
≥ 55	31



DETAIL 2

WHEN DETAIL 1 CANNOT BE USED BECAUSE OF RESTRICTED LATERAL OFFSET

MDOT
Michigan Department of Transportation

PREPARED BY
DESIGN DIVISION

DRAWN BY: B.L.T.

CHECKED BY: W.K.P.

DEPARTMENT DIRECTOR
Kirk T. Stuedle

APPROVED BY: _____
ENGINEER OF DELIVERY

APPROVED BY: _____
ENGINEER OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT SPECIAL DETAIL FOR

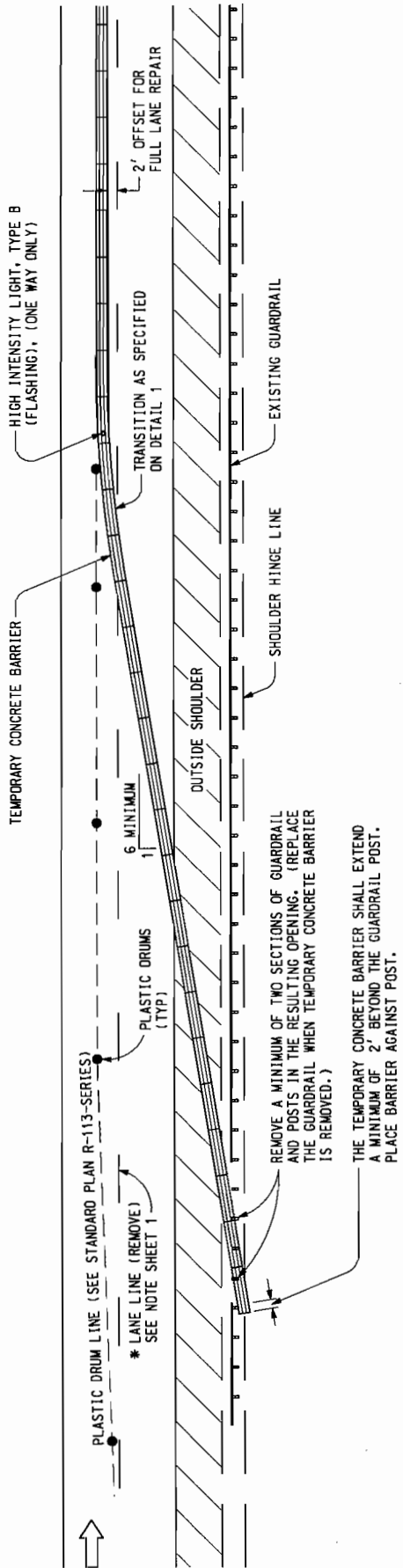
**PLACEMENT OF
TEMPORARY CONCRETE BARRIER**

F.H.W.A. APPROVAL _____

2-7-2007
PLAN DATE

R-126-F

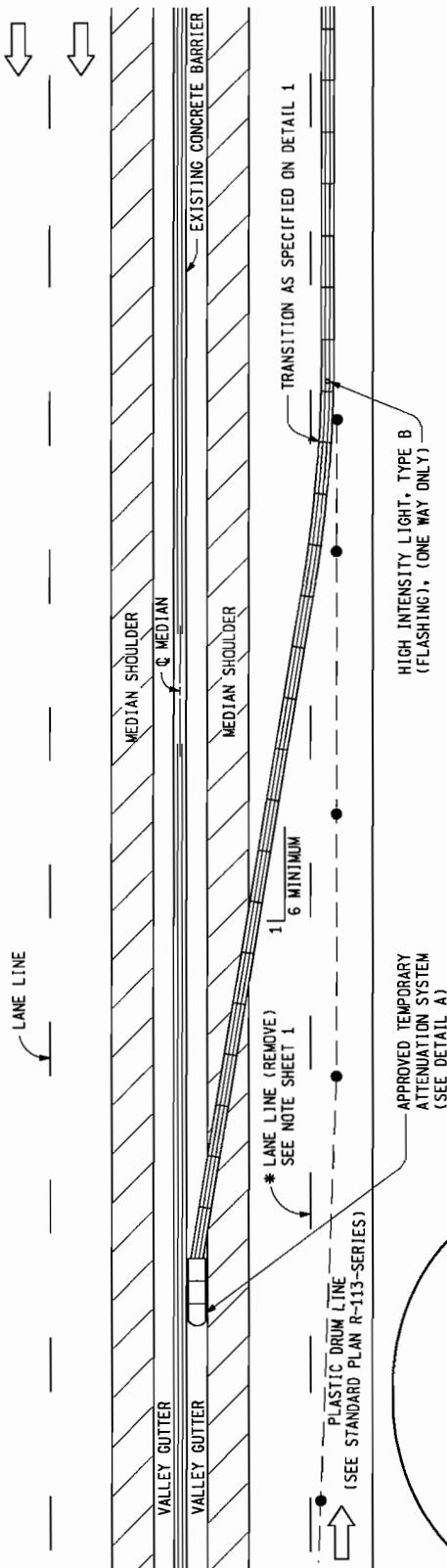
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REMOVE A MINIMUM OF TWO SECTIONS OF GUARDRAIL AND POSTS IN THE RESULTING OPENING. (REPLACE THE GUARDRAIL WHEN TEMPORARY CONCRETE BARRIER IS REMOVED.)

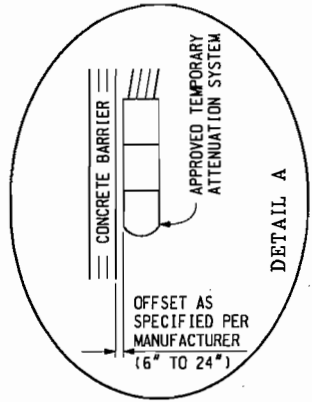
THE TEMPORARY CONCRETE BARRIER SHALL EXTEND A MINIMUM OF 2' BEYOND THE GUARDRAIL POST. PLACE BARRIER AGAINST POST.

DETAIL 3
(TEMPORARY CONCRETE BARRIER IN GUARDRAIL AREA)



NOTE: VALLEY GUTTER MAY BE ADJACENT TO PAVEMENT.

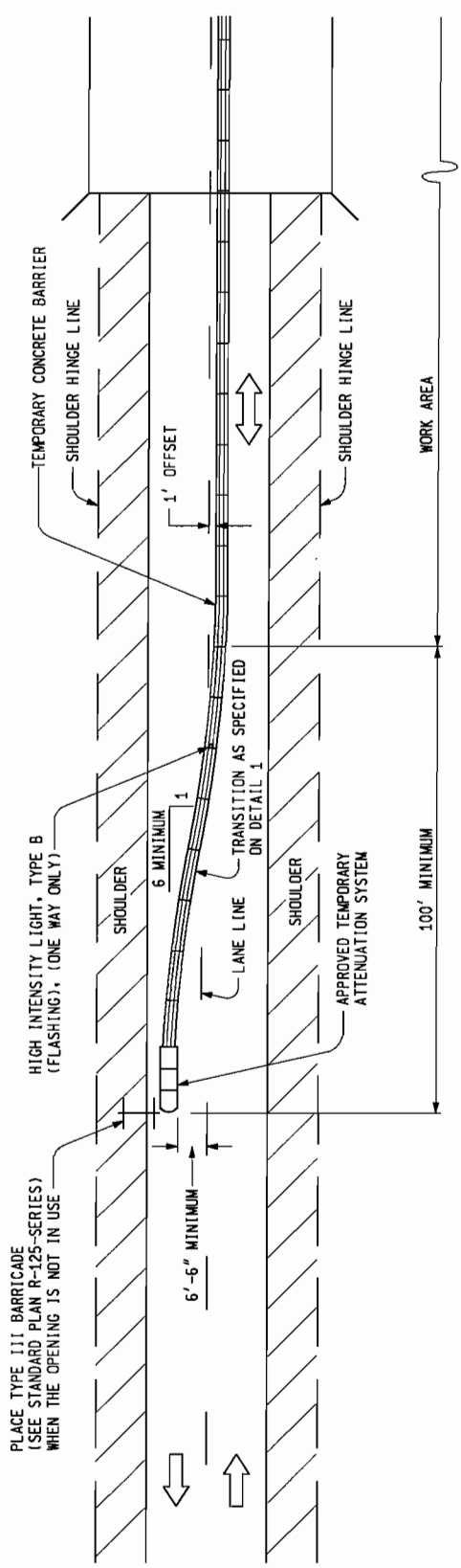
DETAIL 4
(TEMPORARY CONCRETE BARRIER IN CONCRETE MEDIAN BARRIER AREA)
NOTE: SIMILAR TREATMENT MAY BE USED ON SINGLE FACE BARRIER ON OUTSIDE SHOULDER.



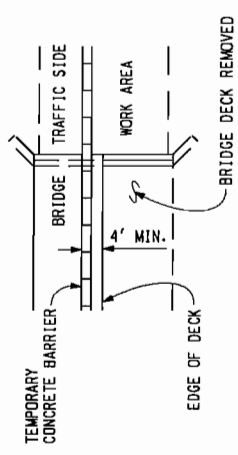
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT SPECIAL DETAIL FOR

PLACEMENT OF TEMPORARY CONCRETE BARRIER

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DETAIL 5
 (TRAILING END OF TEMPORARY CONCRETE BARRIER ON TWO-WAY ROADWAY)



TEMPORARY CONCRETE BARRIER ON BRIDGE
 (BRIDGE DECK REPLACEMENT - PART WIDTH)

- BARRIER ON BRIDGE NOTES:**
- IT IS RECOMMENDED THAT ONE OF THE FOLLOWING METHODS, WHICH ARE LISTED IN ORDER OF PREFERENCE, BE USED WHEN THERE IS LESS THAN 4'-0" Laterally BETWEEN THE TOE OF THE BARRIER ON THE TRAFFIC SIDE AND THE DROP-OFF.
 - CONSTRUCT A SLIP-FORMED CONTINUOUSLY STEEL REINFORCED CONCRETE BARRIER.
 - IF THE BARRIER IS TO BE PLACED ON AN EXISTING CONCRETE DECK THAT WILL EVENTUALLY BE REMOVED ANYWAY, DRILL TWO HOLES LARGE ENOUGH FOR #8 STEEL DOWELS, OR PEGS TO BE INSERTED INTO THE LOWER SLOPING PORTION OF EACH BARRIER SECTION NEAR EACH END OF THE TRAFFIC SIDE OF THE BARRIER AND CONTINUING INTO THE CONCRETE BELOW THESE DOWELS SHOULD EXTEND 6" IN THE DECK, AND AT LEAST 6" INTO THE BARRIER, (BUT NOT PROTRUDE ABOVE THE BARRIER SURFACE) AND BE GROUTED, TO PREVENT BOTH SLIDING AND OVERTURNING OF THE BARRIER SECTION.
 - IF BARRIER IS PLACED ON A NEWLY CONSTRUCTED SURFACE, DEVICES FOR ANCHORING THE TEMPORARY CONCRETE BARRIER COULD BE USED, PROVIDED THE ANCHORING DEVICES CAN BE REMOVED FLUSH WITH THE ROADWAY SURFACE WHEN THE BARRIER IS REMOVED.

DETAIL 5 NOTES:

WHERE CONTROLLED BI-DIRECTIONAL TRAFFIC IS MAINTAINED ON A SINGLE LANE. THE PLACING OF TEMPORARY CONCRETE BARRIER ON THE APPROACHING END OF A LANE CLOSURE SHALL BE THE SAME AS SPECIFIED ON DETAIL 1, 2 OR 3. THE TRAILING END OF THE LANE CLOSURE SHALL BE AS SPECIFIED ON DETAIL 5. THE PLASTIC DRUM LINE TAPER WILL BE ACCORDING TO THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OR WITH THE MAINTAINING TRAFFIC PROVISIONS IN THE PLANS OR PROPOSAL. THE TEMPORARY CONCRETE BARRIER END SECTION ON THE TRAILING END OF THE TEMPORARY CONCRETE BARRIER SHALL BE PARALLEL WITH THE TRAFFIC.

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR			
PLACEMENT OF TEMPORARY CONCRETE BARRIER			
F.H.W.A. APPROVAL	2-7-2007 PLAN DATE	R-126-F	SHEET 3 OF 4

NOTES:

THE SEQUENCE OF BARRIER PLACEMENT SHALL BE IN THE DIRECTION OF TRAFFIC FLOW. BARRIER REMOVAL SHALL BE IN THE DIRECTION OPPOSITE TO TRAFFIC FLOW. ALL ADJACENT BARRIER SECTIONS SHALL BE CONNECTED AS SPECIFIED ON STANDARD PLAN R-52-SERIES.

TEMPORARY CONCRETE BARRIER END SECTION SHALL BE USED TO TERMINATE BARRIER ENDS SUBJECT TO APPROACH TRAFFIC, EXCEPT WHEN THE BARRIER IS OTHERWISE ATTENUATED OR TERMINATED BEHIND GUARDRAIL.

DETAIL 2 WILL BE USED WHEN THERE IS NO EXISTING GUARDRAIL OR CONCRETE BARRIER AVAILABLE AS SPECIFIED IN DETAILS 3 OR 4.

THE LOCATION OF THE HIGH INTENSITY LIGHT, TYPE B (FLASHING) SPECIFIED IN DETAIL 1, SHALL APPLY TO DETAILS 2, 3, 4, AND 5. ALSO THE HIGH INTENSITY LIGHT, TYPE B SHALL BE FASTENED ON THE TOP OF THE BARRIER.

THE BARRIER FLARE RATE SHALL BE AT LEAST 6' OF RUN FOR EVERY FOOT OF OFFSET.

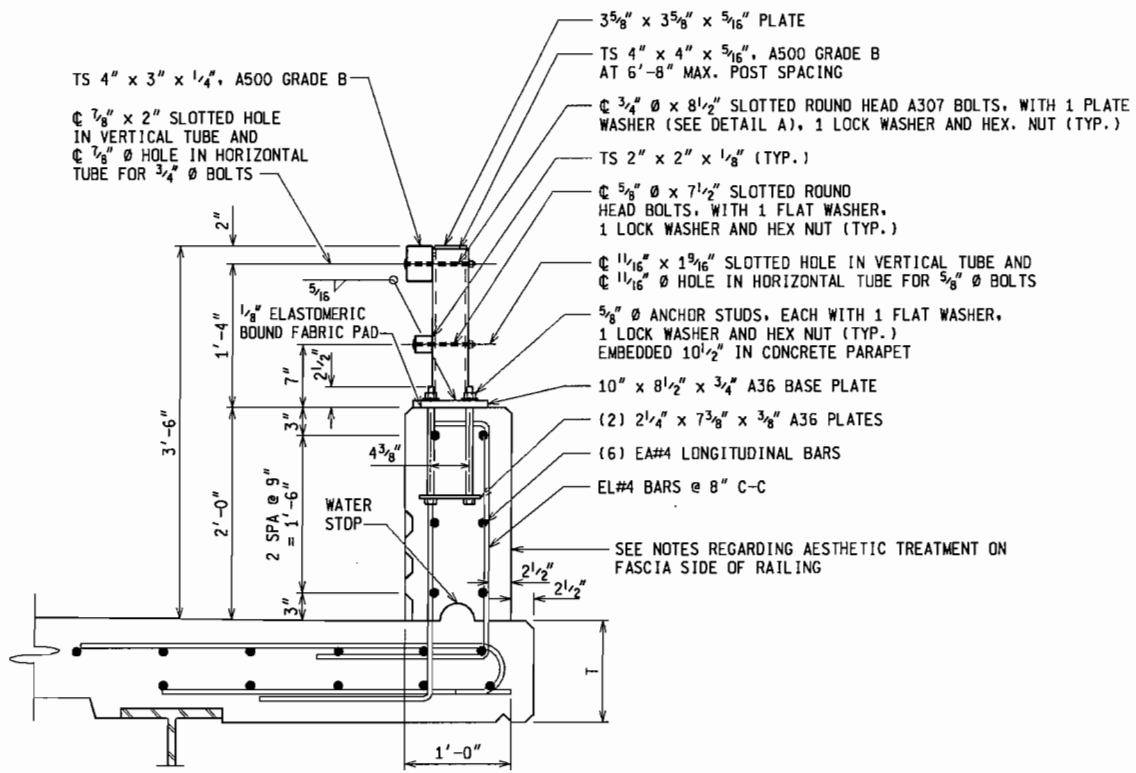
EXACT LATERAL PLACEMENT OF BARRIER MUST BE SPECIFIED ON THE PLANS OR IN THE PROPOSAL. BARRIER POSITION SPECIFIED IS DESIRABLE WHEN WORK AREA INVOLVES THE FULL WIDTH OF THE CLOSED LANE. WHEN PARTIAL LANE WORK IS INVOLVED, OR SHOULDER WORK ONLY, BARRIER SHOULD BE SET INSIDE CLOSED LANE, AS ALLOWED BY WORK AREA, WITH 2' OR MORE OFFSET DESIRABLE TO LANE LINE.

IN DETAIL 3, EXISTING GUARDRAIL POSTS ARE REMOVED TO FACILITATE PLACING OF CONCRETE BARRIER BEHIND THE GUARDRAIL. THE DEGREE OF THE BARRIER DEPARTURE ANGLE WILL DETERMINE THE AMOUNT OF BEAM GUARDRAIL AND THE NUMBER OF POSTS TO BE REMOVED.

FOR DETAIL 2, IF THE LATERAL OFFSET FROM THE EDGE OF THE APPROACHING TRAFFIC LANE TO THE TOE OF THE TEMPORARY CONCRETE BARRIER IS 6'-6" OR MORE, SAND FILLED BARREL ATTENUATORS SHALL BE USED. IF THE LATERAL OFFSET DISTANCE IS LESS THAN 6'-6" A NARROW HAZARD SYSTEM WILL BE REQUIRED (SEE THE GEOMETRIC DESIGN UNIT OF THE TRAFFIC & SAFETY SUPPORT AREA).

THE HIGH INTENSITY LIGHT, TYPE B SHALL BE OMITTED WHERE TWO-WAY TRAFFIC IS MAINTAINED ON ONE LANE AND IS CONTROLLED BY TRAFFIC SIGNALS.

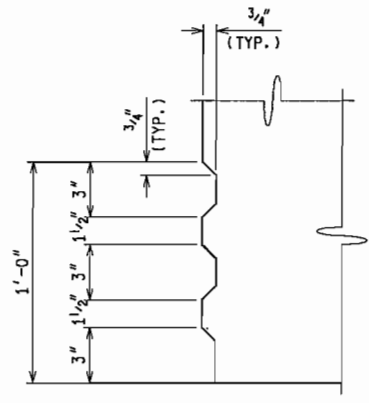
MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR			
PLACEMENT OF TEMPORARY CONCRETE BARRIER			
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FLUSH MOUNT BRIDGE RAILING

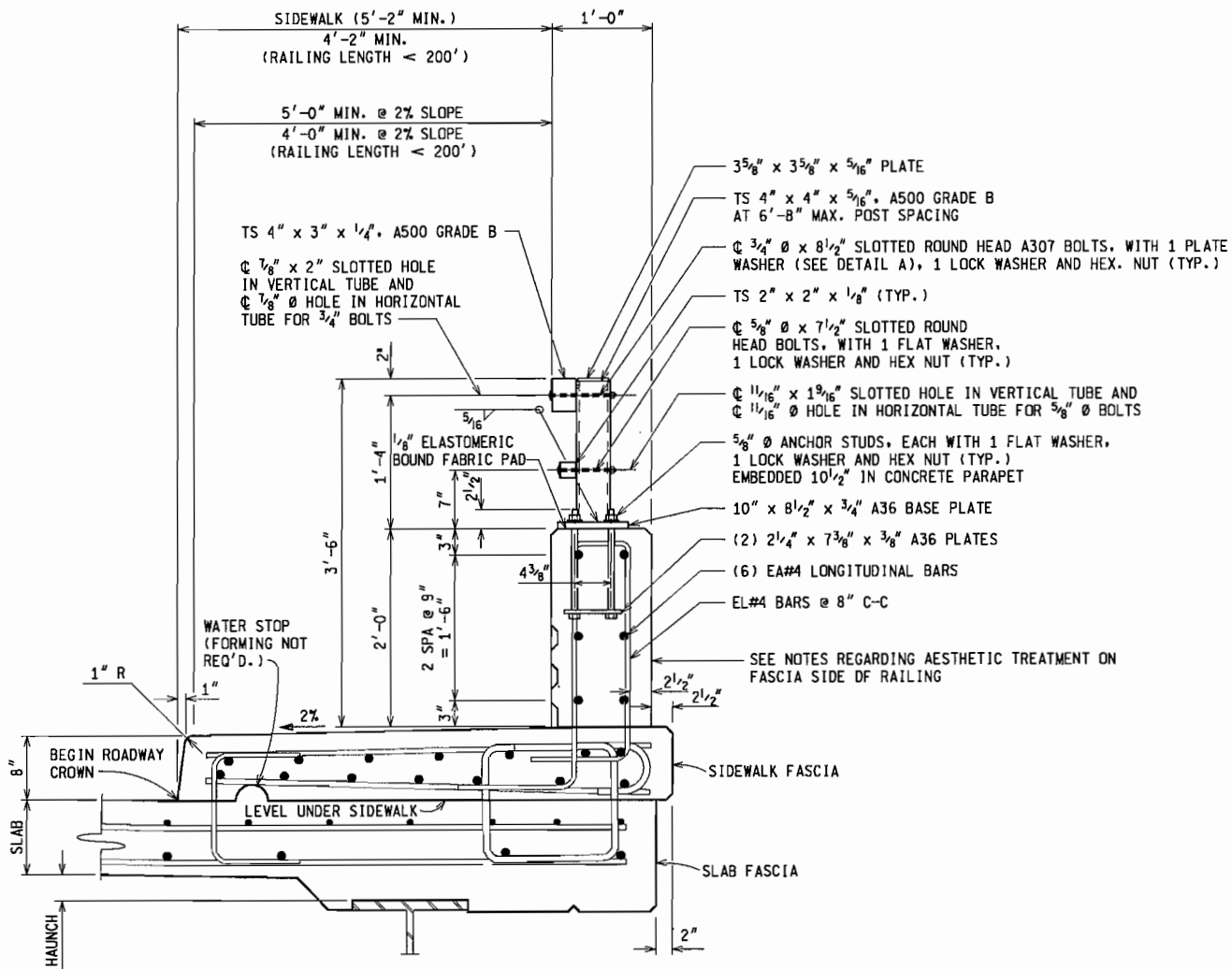
NOTES:

- ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- DETAILS SHOWN ARE IN ACCORDANCE WITH CURRENT AASHTO SPECIFICATIONS.
- BRIDGE RAILING USED WITH SIDEWALK SHALL BE USED ONLY WITH THE SIDEWALK CONFIGURATION (PROFILE) SHOWN ON THIS STANDARD PLAN.
- NO SLIP FORMING OF "BRIDGE RAILING, AESTHETIC PARAPET TUBE" SHALL BE ALLOWED. RAILING SHALL BE CAST IN PLACE.
- THE LIGHT STANDARD ANCHOR BOLT ASSEMBLY IS INCLUDED IN THE BID ITEM "BRIDGE RAILING, AESTHETIC PARAPET TUBE". SEE STANDARD PLAN B-103-SERIES.
- FOR LIGHT STANDARD ANCHOR BOLT ASSEMBLY DETAILS, IF BRIDGE RAILING, AESTHETIC PARAPET TUBE IS PLACED FLUSH ON THE BRIDGE DECK (WITHOUT SIDEWALK), THE LIGHTING CONDUIT SHALL NOT BE PLACED IN THE RAILING.
- ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE TS 2" X 2" X 1/8" RAIL SHALL BE INCLUDED IN THE BID ITEM "BRIDGE RAILING, AESTHETIC PARAPET TUBE".
- A RUBBED FINISH ON THE VERTICAL AND TOP CONCRETE SURFACES OF THE PARAPET RAILING IS REQUIRED.
- AESTHETIC TREATMENT AS DETAILED ON THIS SHEET SHALL BE ADDED TO THE FASCIA SIDE OF RAILING IF NO AESTHETIC TREATMENT IS DETAILED ON THE PLAN SHEETS AND SHALL BE INCLUDED IN THE BID ITEM "BRIDGE RAILING, AESTHETIC PARAPET TUBE". AESTHETIC TREATMENT DETAILED ON THE PLAN SHEETS MAY BE UP TO 1" IN CONCRETE DEPTH WITHOUT MODIFICATION TO THE RAILING WIDTH AND SHALL BE PAID FOR SEPARATELY.



AESTHETIC TREATMENT DETAIL

	DEPARTMENT DIRECTOR Kirk T. Steudle	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR	
PREPARED BY DESIGN DIVISION	APPROVED BY: _____ ENGINEER OF DELIVERY	BRIDGE RAILING, AESTHETIC PARAPET TUBE	
DRAWN BY: B.L.T.	APPROVED BY: _____ ENGINEER OF DEVELOPMENT	3-14-2007 PLAN DATE	B-25-E
CHECKED BY: V.Z.	227	F.H.W.A. APPROVAL	SHEET 1 OF 6

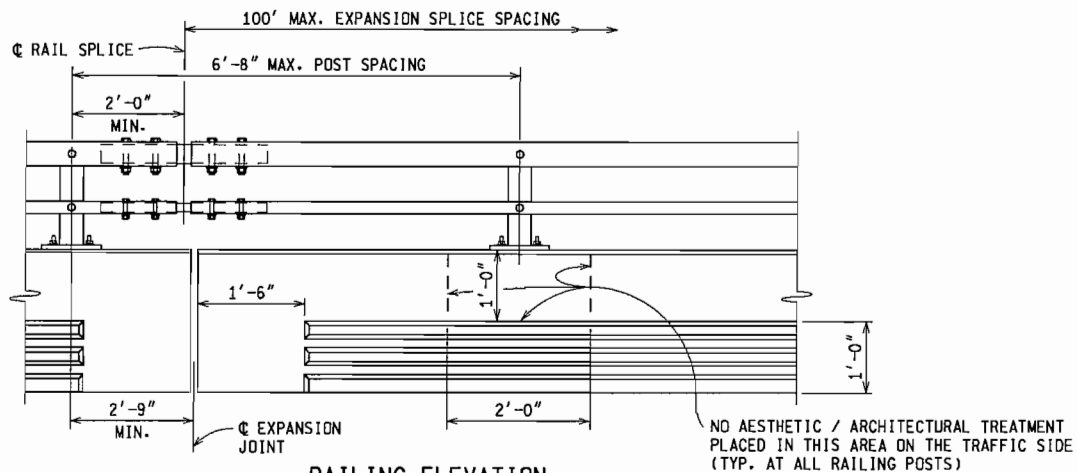


BRIDGE RAILING WITH SIDEWALK

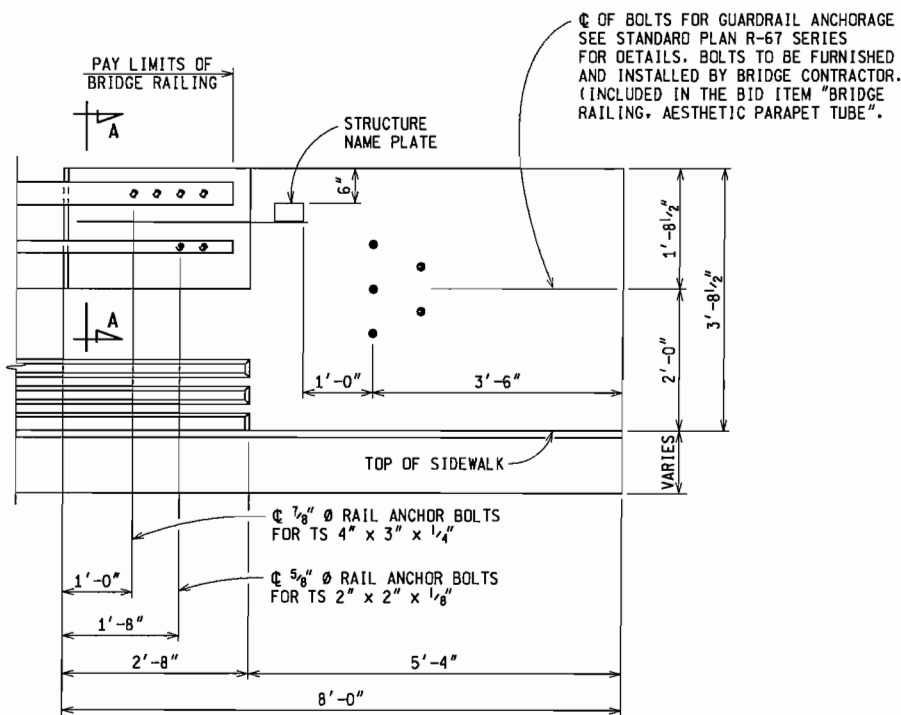
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**BRIDGE RAILING,
AESTHETIC PARAPET TUBE**

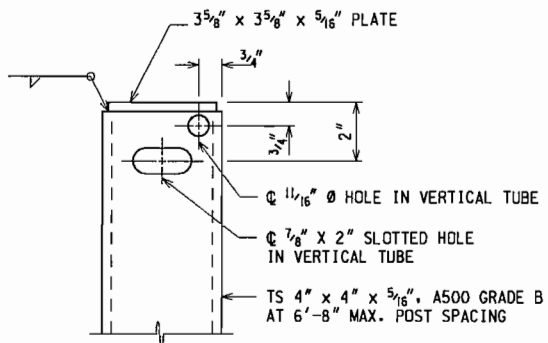
F.H.W.A. APPROVAL	3-14-2007 PLAN DATE	B-25-E	SHEET 2 OF 6
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RAILING ELEVATION

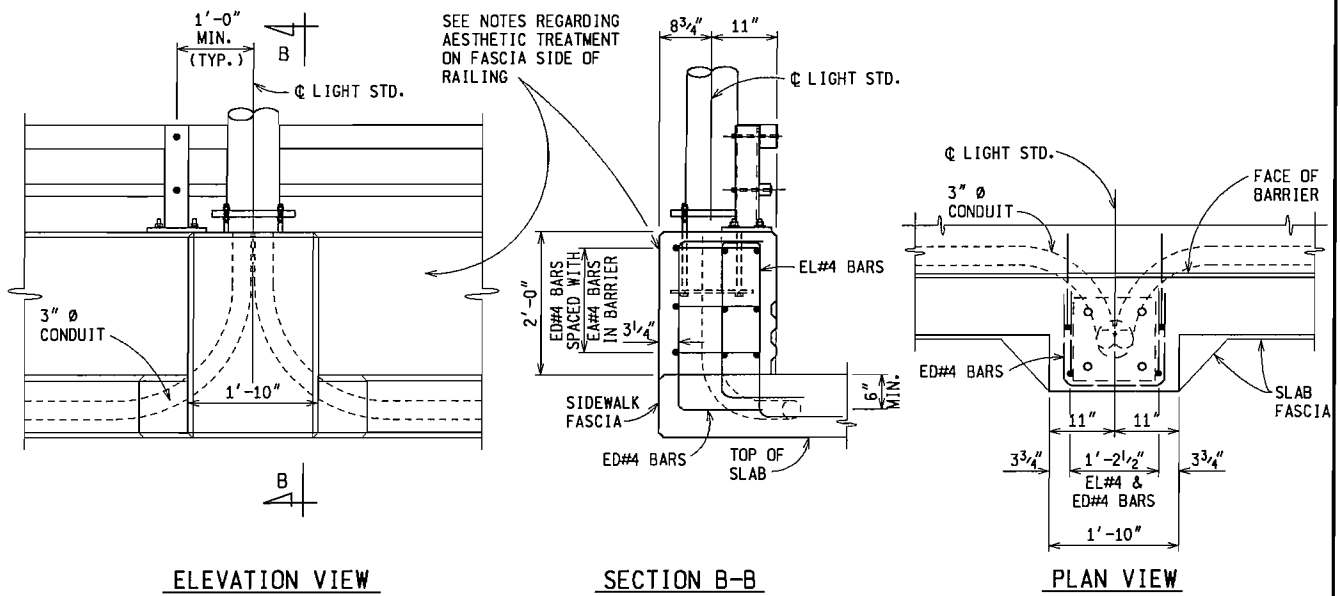


END WALL ELEVATION



VERTICAL TUBE DETAIL
FRONT VIEW

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT SPECIAL DETAIL FOR			
BRIDGE RAILING, AESTHETIC PARAPET TUBE			
	3-14-2007 PLAN DATE	B-25-E	SHEET 3 OF 6
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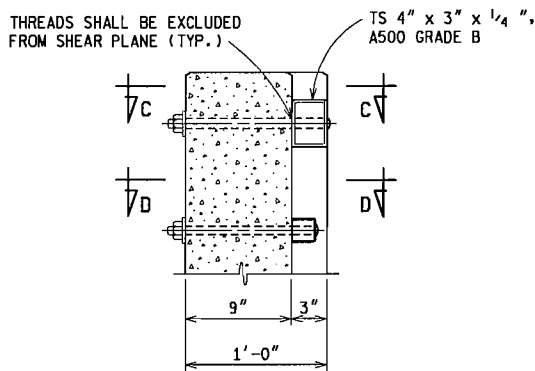


ELEVATION VIEW

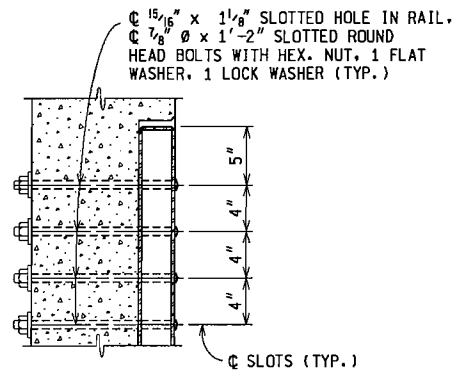
SECTION B-B

PLAN VIEW

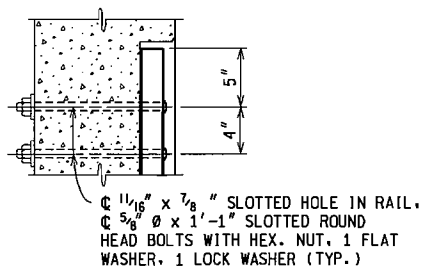
LIGHT STANDARD DETAILS



SECTION A-A

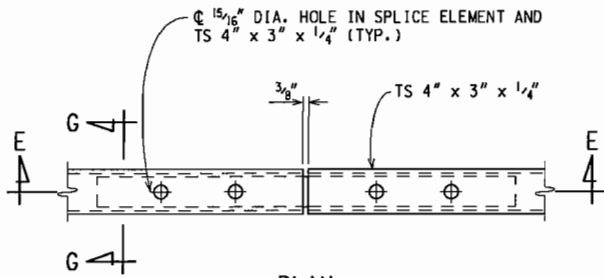


SECTION C-C

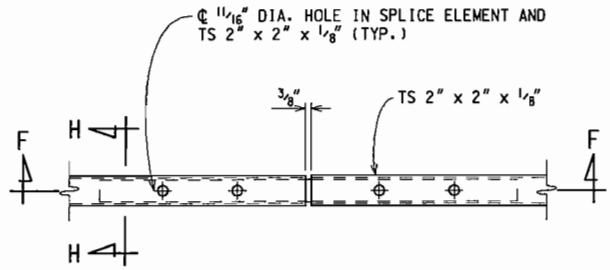


SECTION D-D

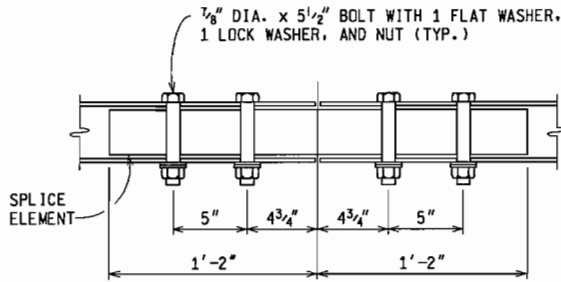
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<p>BRIDGE RAILING, AESTHETIC PARAPET TUBE</p>			
<p>F.H.W.A. APPROVAL</p>	<p>3-14-2007 PLAN DATE</p>	<p>B-25-E</p>	<p>SHEET 4 OF 6</p>



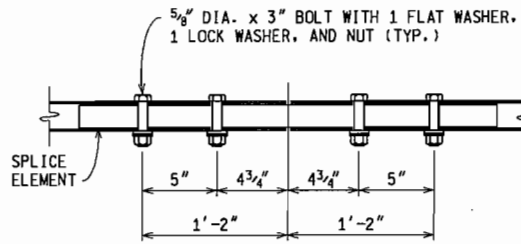
PLAN
TS 4" x 3" x 1/4"



PLAN
TS 2" x 2" x 1/8"

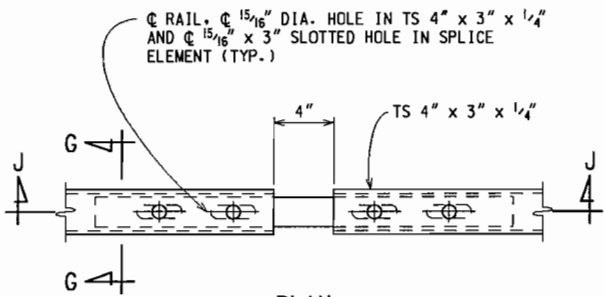


SECTION E-E
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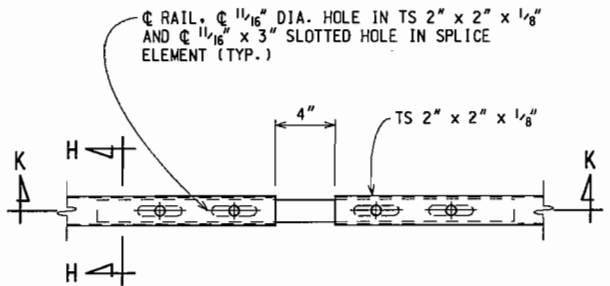


SECTION F-F
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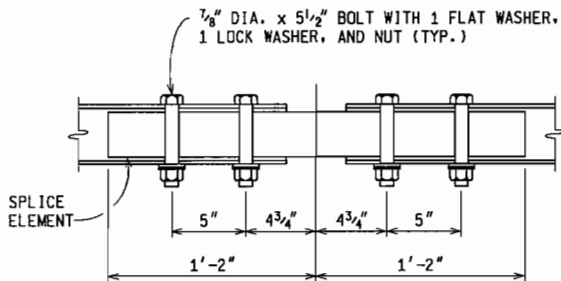
FIXED SPLICE DETAILS



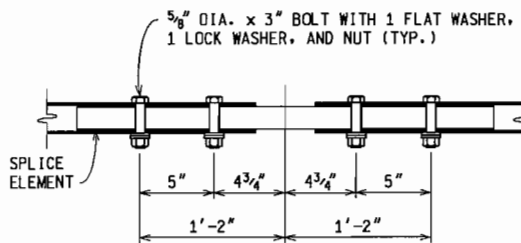
PLAN
TS 4" x 3" x 1/4"



PLAN
TS 2" x 2" x 1/8"



SECTION J-J
TS 4" x 3" x 1/4"



SECTION K-K
TS 2" x 2" x 1/8"

EXPANSION SPLICE DETAILS

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT SPECIAL DETAIL FOR

**BRIDGE RAILING,
AESTHETIC PARAPET TUBE**

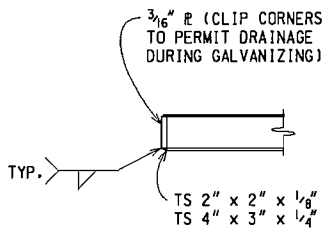
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3-14-2007

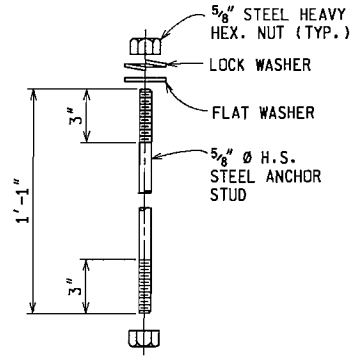
PLAN DATE

B-25-E

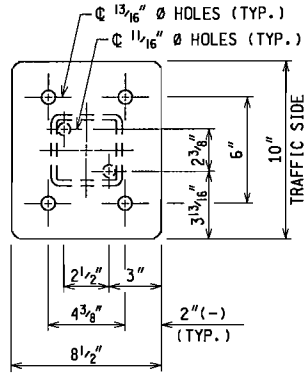
SHEET
5 OF 6



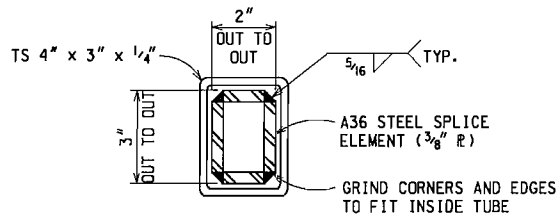
END OF RAIL



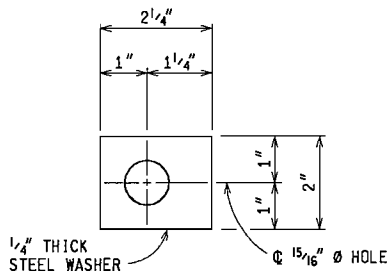
ANCHOR STUD DETAIL



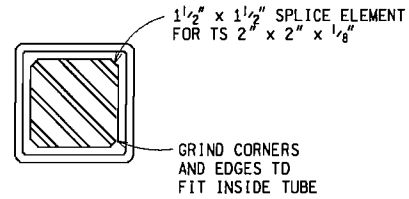
EXTERIOR BASE PLATE



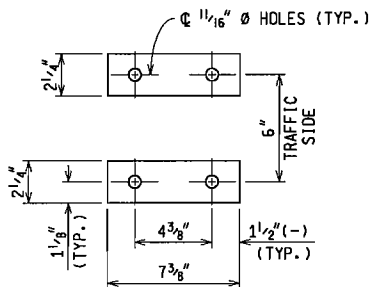
SECTION G-G



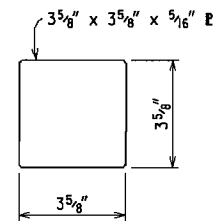
DETAIL A



SECTION H-H



EMBEDDED ANCHOR STUD PLATES



POST COVER PLATE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT SPECIAL DETAIL FOR

BRIDGE RAILING,
AESTHETIC PARAPET TUBE

F.H.W.A. APPROVAL

3-14-2007
PLAN DATE

B-25-E

SHEET
6 OF 6

NOTICE TO BIDDERS

All inquiries concerning the plans and proposal for this project are to be directed to:

Chris Tennes, P.E.

Name

Bridge Staff Engineer

Title

(517) 335-3234

Fax Number

tennesc@michigan.gov

E-mail Address

517-335-2844

Phone

The above contact person is available Monday through Friday, 7:00 a.m. to 11:45 a.m. / 12:15 p.m. to 3:30 p.m. All inquiries must be made by Fax or E-mail. 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 calendar days** before the letting. Inquiries made after this date will be considered by MDOT, but will not require a response.

Inquiries made by fax or E-mail must include the following information:

Proposal Item Number

Contract ID

Name of Inquiring Person

Company Name

Phone #, Fax #, and/or 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.

10/15/02

Job(s): 83945A

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*

**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: 17.7 %

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 or 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 in 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 compiled 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 encourage 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.

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 mechanics (each employee covered by the prevailing wage requirements) by the contractor and by all tiers of subcontracts, shall not be less than the wage and fringe benefit rates in the attached schedule of occupational classifications for the locality in which the work is to be performed. This clause shall be included in every subcontract and every subcontractor shall require that this clause be included in each succeeding tier of subcontracts.

Superseded General Decision Number: MI20030007

State: Michigan

Construction Types: Highway (Highway, Airport & Bridge xxxxx and Sewer/Incid. to Hwy.)

Counties: Michigan Statewide.

Modification Number	Publication Date
0	02/09/2007
1	02/16/2007
2	02/23/2007
3	03/30/2007
4	04/06/2007
5	04/13/2007
6	04/20/2007

* CARP0004-004 10/01/2006

LIVINGSTON COUNTY (Townships of Brighton, Deerfield, Genoa, Hartland, Osceola and Tyrone); MACOMB, MONROE, OAKLAND, SANILAC, ST. CLAIR AND WAYNE COUNTIES:

	Rates	Fringes
Carpenter; piledriver.....	\$ 30.511	14.893

* CARP0004-005 10/01/2006

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.....	\$ 30.511	14.893

FOOTNOTE:

DIVER: to be paid one and one-half (1-1/2) times the regular journey person rate.

ELEC0017-005 06/06/2005

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, Oceaola 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: WASHTEAW COUNTY (Townships of Ann Arbor, Augusta, Bridgewater, Dexter, Freedom, Lima, Lodi, Northfield, Pittsfield, Salem, Saline, Scio, Superior, Webster, York and Ypsilanti); AND WAYNE COUNTY:

Line Construction		
Cable splicer; Line technician when helio-arc welding.....	\$ 35.86	23.75%+4.80
Combination driver/groundman.....	\$ 25.13	23.75%+4.80
Combination equipment operator and groundman.....	\$ 26.64	23.75%+4.80
Groundman.....	\$ 23.10	23.75%+4.80
Line technician.....	\$ 34.42	23.75%+4.80
Technician (Commercial)		
ALL COMMERCIAL WORK EXCEPT LINE CONSTRUCTION:.....	\$ 34.42	23.75%+4.80

ENGI0324-003 06/01/2006

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 Operators - Steel Erection:		
GROUP 1.....	\$ 41.02	14.90
GROUP 2.....	\$ 42.02	14.90
GROUP 3.....	\$ 39.52	14.90
GROUP 4.....	\$ 40.52	14.90
GROUP 5.....	\$ 38.02	14.90
GROUP 6.....	\$ 39.02	14.90
GROUP 7.....	\$ 37.75	14.90
GROUP 8.....	\$ 38.75	14.90
GROUP 9.....	\$ 37.30	14.90
GROUP 10.....	\$ 38.30	14.90
GROUP 11.....	\$ 36.57	14.90
GROUP 12.....	\$ 37.57	14.90
GROUP 13.....	\$ 36.21	14.90
GROUP 14.....	\$ 37.21	14.90
GROUP 15.....	\$ 35.57	14.90
GROUP 16.....	\$ 28.76	14.90
GROUP 17.....	\$ 27.35	14.90

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 and job mechanic

GROUP 14: Crane operator on a crane that requires an oiler

GROUP 15: Hoisting operator

GROUP 16: Compressor or welder operator

GROUP 17: Oiler

ENGI0324-004 05/01/2006

Rates Fringes

Power Equipment Operators -
Steel Erection:

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

GROUP 1.....	\$ 28.26	14.85
GROUP 2.....	\$ 28.01	14.85
GROUP 3.....	\$ 27.51	14.85
GROUP 4.....	\$ 22.41	14.85
GROUP 5.....	\$ 20.76	14.85
GROUP 6.....	\$ 18.16	14.85

ANTRIM, BENZIE,
CHARLEVOIX, EMMET, GRAND
TRAVERSE, KALKASKA,
LEELANAU, MISSAUKEE AND
WEXFORD COUNTIES:

GROUP 1.....	\$ 28.26	14.85
GROUP 2.....	\$ 28.01	14.85
GROUP 3.....	\$ 27.01	14.85
GROUP 4.....	\$ 22.11	14.85
GROUP 5.....	\$ 20.46	14.85

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.

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 220' or longer

GROUP 2: Crane operator, with main boom & jib 140' or longer; Tower crane; Gantry crane; Whirley derrick

GROUP 3: Regular equipment operator, crane, dozer, loader, hoist, straddle wagon, mechanic, Grader

GROUP 4: Air tugger (single drum), material hoist, pump 6" or over, elevators

GROUP 5: Air compressor, welder, generators, conveyors

GROUP 6: Oiler and fire tender

 ENGI0324-005 09/01/2006

Rates Fringes

Power equipment operators -
 underground construction
 (includes sewer):

ALCONA, ALLEGAN, ALPENA,
 ANTRIM, ARENAC, BARRY,
 BENZIE, BERRIEN, BRANCH,
 CALHOUN, CASS, CHARLEVOIX,
 CHEBOYGAN, CLARE, CLINTON,
 CRAWFORD, EATON, EMMET,
 GLADWIN, GRAND TRAVERSE,
 GRATIOT, HILLSDALE, IONIA,
 IOSCO, ISABELLA,
 KALAMAZOO, KALKASKA, KENT,
 LAKE, LEELANAU, MANISTEE,
 MASON, MECOSTA, MISSAUKEE,
 MONTCALM, MONTMORENCY,
 MUSKEGON, NEWAYGO, OCEANA,
 OGEMAW, OSCEOLA, OSCODA,
 OTSEGO, OTTAWA, PRESQUE
 ISLE, ROSCOMMON, ST.
 JOSEPH, VAN BUREN AND
 WEXFORD COUNTIES:

GROUP 1.....	\$ 27.07	14.90
GROUP 2.....	\$ 22.18	14.90
GROUP 3.....	\$ 21.68	14.90
GROUP 4.....	\$ 21.40	14.90

BAY, GENESEE, HURON,
 INGHAM, JACKSON, LAPEER,
 LENAWEE, LIVINGSTON,
 MACOMB, MIDLAND, MONROE,
 OAKLAND, SAGINAW, SANILAC,
 SHIAWASSEE, ST. CLAIR,

TUSCOLA, WASHTENAW AND

WAYNE COUNTIES:

GROUP 1.....	\$ 28.78	14.90
GROUP 2.....	\$ 24.05	14.90
GROUP 3.....	\$ 23.32	14.90
GROUP 4.....	\$ 22.75	14.90

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

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); Sweeper (Wayne type and similar equipment); Tractor (pneu-tired, other than backhoe or front end loader); Trencher (8-ft. digging capacity and smaller)

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-1/2 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

ENGI0324-006 06/01/2006

Rates Fringes

Power equipment operators:
(AIRPORT, BRIDGE & HIGHWAY
CONSTRUCTION)

GENESEE, MACOMB, MONROE,
OAKLAND, WASHTENAW AND
WAYNE COUNTIES:

GROUP 1.....	\$ 27.23	14.80
GROUP 2.....	\$ 20.80	14.80
GROUP 3.....	\$ 21.80	14.80
GROUP 4.....	\$ 20.24	14.80

GENESEE, MACOMB,
MONROE, OAKLAND, WASHTENAW

and WAYNE COUNTIES:		
GROUP 5.....	\$ 20.07	14.80
STATEWIDE (Excluding Genesee, Macomb, Monroe, Oakland, Washtenaw and Wayne Counties):		
GROUP 1.....	\$ 27.23	14.80
GROUP 2.....	\$ 20.65	14.80
GROUP 3.....	\$ 21.65	14.80
GROUP 4.....	\$ 20.09	14.80
GROUP 5.....	\$ 19.77	14.80

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

 ENGI0324-007 05/01/2006

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
Power Equipment Operators - Steel Erection:		
Compressor; forklift; welder.....	\$ 23.04	14.60
Crane operator, main boom & jib 120' or longer.....	\$ 26.79	14.60
Crane operator, main boom & jib 140' or longer.....	\$ 27.04	14.60
Crane operator, main boom & jib 220' or longer.....	\$ 27.29	14.60
Mechanic with truck and tools.....	\$ 27.79	14.60
Oiler and fire tender.....	\$ 21.74	14.60
Regular operator.....	\$ 26.29	14.60

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)

 ENGI0324-008 10/01/2006

	Rates	Fringes
Power equipment operators - sewer relining:		
GROUP 1.....	\$ 26.27	10.66
GROUP 2.....	\$ 24.74	10.66

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 jettors and vacuum and mechanical debris removal systems

 ENGI0325-010 05/01/2006

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

Power equipment operators -
underground construction:

Crane operator, main boom & jib 120' or longer.....	\$ 26.39	14.60
Crane operator, main boom & jib 140' or longer.....	\$ 26.64	14.60
Crane operator, main boom & jib 220' or longer.....	\$ 26.89	14.60
GROUP 1.....	\$ 25.89	14.60
GROUP 2.....	\$ 22.64	14.60
GROUP 3.....	\$ 22.06	14.60
GROUP 4.....	\$ 21.12	14.60
Mechanic with truck and tools.....	\$ 27.39	14.60

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 beam 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 10/01/2006

Rates Fringes

Power equipment operators -
hazardous waste removal:
(BAY, GENESEE, HURON, INGHAM,
JACKSON, LAPEER, LENAWEE,
LIVINGSTON, MACOMB, MIDLAND,
MONROE, OAKLAND, SAGINAW,
SANILAC, SHIAWASSEE, ST.
CLAIR, TUSCOLA, WASHTENAW AND
WAYNE COUNTIES:)

LEVEL A:

Engineer when operating crane with boom and jib or leads 140' or longer....\$ 33.98	14.85
Engineer when operating crane with boom and jib or leads 220' or longer....\$ 34.28	14.85
GROUP 1.....\$ 31.33	14.85
GROUP 2.....\$ 27.10	14.85
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator.....\$ 32.30	14.85

LEVEL B AND C:

Engineer when operating crane with boom and jib or leads 140' or longer....\$ 33.03	14.85
Engineer when operating crane with boom and jib or leads 220' or longer....\$ 33.33	14.85
GROUP 1.....\$ 30.38	14.85
GROUP 2.....\$ 26.15	14.85
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator.....\$ 31.35	14.85

LEVEL D WHEN CAPPING

LANDFILL:

Engineer when operating crane with boom and jib or leads 140' or longer....\$ 31.48	14.85
Engineer when operating crane with boom and jib or leads 220' or longer....\$ 31.78	14.85
GROUP 1.....\$ 28.83	14.85
GROUP 2.....\$ 24.60	14.85
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator.....\$ 29.18	14.85

LEVEL D:

Engineer when operating crane with boom and jib or leads 140' or longer....\$ 31.73	14.85
Engineer when operating crane with boom and jib or leads 220' or longer....\$ 32.03	14.85
GROUP 1.....\$ 29.08	14.85
GROUP 2.....\$ 24.85	14.85
Regular crane operator, mechanic, dragline operator, boom truck operator and concrete pump with boom operator, power shovel operator.....\$ 30.05	14.85

Power equipment operators - hazardous waste removal:

(REMAINDER OF STATE:)

LEVEL A:

Engineer when operating

crane with boom and jib or leads 140' or longer.....\$ 32.27	14.85
Engineer when operating crane with boom and jib or leads 220' or longer.....\$ 32.57	14.85
GROUP 1.....\$ 29.62	14.85
GROUP 2.....\$ 25.22	14.85

Regular crane operator,
mechanic, dragline
operator, boom truck
operator and concrete
pump with boom operator,
power shovel operator.....\$ 30.59

14.85

LEVEL D WHEN CAPPING

LANDFILL:

Engineer when operating crane with boom and jib or leads 140' or longer.....\$ 29.77	14.85
Engineer when operating crane with boom and jib or leads 220' or longer.....\$ 30.07	14.85
GROUP 1.....\$ 27.12	14.85
GROUP 2.....\$ 22.73	14.85

Regular crane operator,
mechanic, dragline
operator, boom truck
operator and concrete
pump with boom operator,
power shovel operator.....\$ 28.09

14.85

LEVEL D:

Engineer when operating crane with boom and jib or leads 140' or longer.....\$ 30.02	14.85
Engineer when operating crane with boom and jib or leads 220' or longer.....\$ 30.32	14.85
GROUP 1.....\$ 27.37	14.85
GROUP 2.....\$ 22.98	14.85

Regular crane operator,
mechanic, dragline
operator, boom truck
operator and concrete
pump with boom operator,
power shovel operator.....\$ 28.34

14.85

LEVELS B AND C:

Engineer when operating crane with boom and jib or leads 140' or longer.....\$ 31.21	14.85
Engineer when operating crane with boom and jib or leads 220' or longer.....\$ 31.54	14.85
GROUP 1.....\$ 28.67	14.85
GROUP 2.....\$ 24.28	14.85

Regular crane operator,
mechanic, dragline
operator, boom truck
operator and concrete
pump with boom operator,
power shovel operator.....\$ 29.64

14.85

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, grader²⁵heavy

equipment robotics operator, loader, pug mill, pumpcrete machines, pump trucks, roller, scraper (self-propelled or tractor drawn), side boom tractor, slip form paver, slop paver, trencher, ultra high pressure waterjet cutting tool system, vactors, vacuum blasting machine operator, vertical lifting hoist, vibrating compaction equipment (self-propelled), and well drilling rig

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, and welding machine

ENGI0325-012 05/01/2006

Rates Fringes

Power equipment operators -
gas distribution and duct
installation work:

MACOMB, MONROE, OAKLAND,
ST. CLAIR, WASHTENAW AND
WAYNE COUNTIES:

GROUP 1.....	\$ 25.40	14.85
GROUP 2.....	\$ 25.27	14.85
GROUP 3.....	\$ 24.14	14.85
GROUP 4.....	\$ 23.57	14.85

STATEWIDE (does not
include Macomb, Monroe,
Oakland, St. Clair,
Washtenaw and Wayne
Counties):

GROUP 1.....	\$ 24.49	14.85
GROUP 2-A.....	\$ 24.39	14.85
GROUP 2-B.....	\$ 24.17	14.85
GROUP 3.....	\$ 23.39	14.85
GROUP 4.....	\$ 22.89	14.85

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.

DEFINITION OF GROUPS: MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES:

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.

STATEWIDE (does not include Macomb, Monroe, Oakland, St.
Clair, Washtenaw and Wayne Counties):

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, tamper
(self-propelled), trencher service

GROUP 4: Oiler, grease person and hydrostatic testing operator

IRON0008-007 05/01/2006

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON,
IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON
AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
Ironworkers:		
General contracts		
\$10,000,000 or greater.....	\$ 25.12	16.69
General contracts less		
than \$10,000,000.....	\$ 22.33	16.69

IRON0008-011 05/01/2006

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON,
IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON
AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
Ironworker		
Contracts \$10,000,000 or		
more.....	\$ 25.12	16.69
Contracts less than		
\$10,000,000.....	\$ 22.33	16.69

IRON0025-002 06/01/2006

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
Ironworkers:		
Fence erector.....	\$ 21.22	18.45
Ornamental, structural, precast erector.....	\$ 28.25	24.16
Siding & decking.....	\$ 23.54	21.36

IRON0025-024 06/01/2006

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
Ironworkers:		
Machinery mover, rigger and machinery erector.....	\$ 27.20	20.62

IRON0026-014 06/01/2001

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
Ironworkers:		
Reinforcing.....	\$ 23.50	15.51
Wire mesh.....	\$ 19.87	14.24

IRON0055-005 10/01/2006

LENAWEE AND MONROE COUNTIES:

	Rates	Fringes
Ironworkers:		
Metal fences and guardrails..	\$ 18.93	15.89
Pre-engineered metal buildings, siding and decking.....	\$ 21.28	16.08
All other work.....	\$ 26.00	16.08

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.

IRON0292-003 06/01/2006

BERRIEN AND CASS COUNTIES:

Rates Fringes

Ironworkers:

Cad welder.....	\$ 22.85	14.71
Ironworker.....	\$ 22.35	14.71

IRON0340-001 01/01/2007

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

Ironworkers:

Reinforcing and structural..	\$ 24.00	11.59
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LABO0005-006 10/01/2006

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.....	\$ 18.84	8.32
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Work performed in
conjunction with site
preparation not requiring
the use of personal
protective equipment;

Also, Level D.....	\$ 17.84	8.32
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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.....	\$ 21.46	9.07
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Work performed in
conjunction with site
preparation not requiring
the use of personal
protective equipment;

Also, Level D.....	\$ 20.46	9.07
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Work performed over 5 ft.
outside the building:

Levels A, B or C.....	\$ 20.15	8.42
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Work performed in
conjunction with site
preparation not requiring

the use of personal protective equipment;		
Also, Level D.....	\$ 19.15	8.42
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.....	\$ 20.15	8.55
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 19.15	8.55
Laborers - hazardous waste abatement: (ARENAC, BAY, CLARE, GLADWIN, GRATIOT, HURON, ISABELLA, MIDLAND, OGEMAW, ROSCOMMON, SAGINAW AND TUSCOLA COUNTIES:)		
Levels A, B or C.....	\$ 21.54	8.42
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 20.54	8.42
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.....	\$ 21.23	8.52
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 20.23	8.52
Laborers - hazardous waste abatement: (GENESEE, LAPEER AND SHIAWASSEE COUNTIES:)		
Levels A, B or C.....	\$ 21.94	8.47
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....	\$ 20.94	8.47
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.....\$ 21.88		8.62
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....\$ 20.88		8.62
Work performed over 5 ft. outside the building:		
Levels A, B or C.....\$ 22.67		8.42
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....\$ 21.67		8.42
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.....\$ 26.41		10.02
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....\$ 25.41		10.02
Work performed over 5 ft. outside the building:		
Levels A, B or C.....\$ 22.67		8.42
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....\$ 21.67		8.42
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.....\$ 25.68		11.65
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		
Also, Level D.....\$ 24.68		11.65
Work performed over 5 ft. outside the building:		
Levels A, B or C.....\$ 22.64		10.97
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;		

Also, Level D.....\$ 21.64	10.97
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.....\$ 26.56	10.41
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 25.56	10.41
Work performed over 5 ft. outside the building line:	
Levels A, B or C.....\$ 22.67	8.42
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 21.67	8.42
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.....\$ 25.68	11.65
Level D.....\$ 24.68	11.65
Laborers - hazardous waste abatement: (SANILAC AND ST. CLAIR COUNTIES:)	
All work performed 5 feet outside the building	
Levels A, B or C.....\$ 21.01	8.42
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 20.01	8.42
Work performed inside the building and up to and including 5 ft. outside the building:	
Levels A, B or C.....\$ 25.49	9.77
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 24.49	9.77

LABO0259-001 09/01/2006

Rates Fringes

Laborers - tunnel, shaft and
caisson:

MACOMB, OAKLAND AND WAYNE
COUNTIES:

GROUP 1.....\$ 21.34	11.03
GROUP 2.....\$ 21.45	11.03
GROUP 3.....\$ 21.51	264 11.03

GROUP 4.....	\$ 21.69	11.03
GROUP 5.....	\$ 21.94	11.03
GROUP 6.....	\$ 22.27	11.03
GROUP 7.....	\$ 15.55	11.03
STATEWIDE (Except Macomb, Oakland and Wayne Counties):		
GROUP 1.....	\$ 21.92	8.48
GROUP 2.....	\$ 22.01	8.48
GROUP 3.....	\$ 22.11	8.48
GROUP 4.....	\$ 22.27	8.48
GROUP 5.....	\$ 22.53	8.48
GROUP 6.....	\$ 22.84	8.48
GROUP 7.....	\$ 15.11	8.48

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, aquifers, 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 09/01/2006

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 1.....	\$ 18.77	8.48
GROUP 2.....	\$ 18.90	8.48
GROUP 3.....	\$ 19.01	8.48
GROUP 4.....	\$ 19.08	8.48
GROUP 5.....	\$ 19.20	8.48
GROUP 6.....	\$ 16.42	8.48
GROUP 7.....	\$ 14.76	8.48

ALGER, BARAGA, CHIPPEWA,
 DELTA, DICKINSON,
 GOGEBIC, HOUGHTON, IRON,
 KEWEENAW, LUCE, MACKINAC,
 MARQUETTE, MENOMINEE,
 ONTONAGON AND SCHOOLCRAFT
 COUNTIES:

GROUP 1.....	\$ 19.00	8.48
GROUP 2.....	\$ 19.14	8.48
GROUP 3.....	\$ 19.27	8.48
GROUP 4.....	\$ 19.32	8.48
GROUP 5.....	\$ 19.37	8.48
GROUP 6.....	\$ 16.75	8.48
GROUP 7.....	\$ 14.86	8.48

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.....	\$ 19.86	8.48
GROUP 2.....	\$ 20.00	8.48
GROUP 3.....	\$ 20.12	8.48
GROUP 4.....	\$ 20.17	8.48
GROUP 5.....	\$ 20.31	8.48
GROUP 6.....	\$ 17.61	8.48
GROUP 7.....	\$ 14.76	8.48

LIVINGSTON COUNTY (east of
 M-151 (Oak Grove Rd.));
 MONROE AND WASHTENAW
 COUNTIES:

GROUP 1.....	\$ 21.26	8.66
GROUP 2.....	\$ 21.37	8.66
GROUP 3.....	\$ 21.49	8.66
GROUP 4.....	\$ 21.56	8.66
GROUP 5.....	\$ 21.71	8.66

GROUP 6.....	\$ 19.01	8.66
GROUP 7.....	\$ 15.65	8.66
MACOMB, OAKLAND AND WAYNE COUNTIES:		
GROUP 1.....	\$ 21.19	11.03
GROUP 2.....	\$ 21.30	11.03
GROUP 3.....	\$ 21.35	11.03
GROUP 4.....	\$ 21.43	11.03
GROUP 5.....	\$ 21.49	11.03
GROUP 6.....	\$ 18.94	11.03
GROUP 7.....	\$ 15.56	11.03

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 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 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,

Rates Fringes

Laborers: (does not include hazardous waste abatement; tunnel, shaft & caisson; or open cut construction)

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, OSTEGO,
 OTTAWA, PRESQUE ISLE,
 ROSCOMMON AND WEXFORD

GROUP 1.....	\$ 20.14	8.70
GROUP 2.....	\$ 20.35	8.70
GROUP 3.....	\$ 20.64	8.70
GROUP 4.....	\$ 21.08	8.70
GROUP 5.....	\$ 20.70	8.70
GROUP 6.....	\$ 21.13	8.70

ALL COUNTIES IN THE UPPER PENINSULA OF MICHIGAN

GROUP 1.....	\$ 20.14	8.70
GROUP 2.....	\$ 20.35	8.70
GROUP 3.....	\$ 20.64	8.70
GROUP 4.....	\$ 21.08	8.70
GROUP 5.....	\$ 20.70	8.70
GROUP 6.....	\$ 21.13	8.70

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:

GROUP 1.....	\$ 20.89	8.70
GROUP 2.....	\$ 21.09	8.70
GROUP 3.....	\$ 21.33	8.70
GROUP 4.....	\$ 21.68	8.70
GROUP 5.....	\$ 21.55	8.70
GROUP 6.....	\$ 21.89	8.70

GENESEE, MACOMB, MONROE,
 OAKLAND, WASHTENAW AND

WAYNE COUNTIES:

GROUP 1.....	\$ 22.59	8.75
GROUP 2.....	\$ 22.72	8.75
GROUP 3.....	\$ 22.90	8.75
GROUP 4.....	\$ 22.98	8.75
GROUP 5.....	\$ 23.19	8.75
GROUP 6.....	\$ 23.49	8.75

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.

 PAIN0022-002 06/01/2006

HILLSDALE, JACKSON AND LENAWEЕ 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.....	\$ 24.46	13.50

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 06/01/2003

ALLEGAN COUNTY (does not include the townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland)); BARRY, BRANCH AND CALHOUN COUNTIES; CASS COUNTY (east of an imaginary line running north and south through the town of Cassopolis); EATON COUNTY (Townships of Bellevue and Olivet); KALAMAZOO AND ST. JOSEPH COUNTIES; VAN BUREN COUNTY (east of an imaginary line running north and south through the town of Lawrence):

	Rates	Fringes
Painters:		
Brush and roller; sign painting.....	\$ 18.70	8.05
Mechanical roller.....	\$ 19.40	8.05
Spray and sandblast.....	\$ 19.90	8.05
Swing stage, structural steel, steeplejack, boatswain chair and confined space.....	\$ 19.50	8.05

 PAIN0845-003 05/10/2003

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.....	\$ 20.83	7.37

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 06/01/1998

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, Port

Sheldon, Tallmadge, Wright and Zeeland):

	Rates	Fringes
Painters:		
Brush (falling distance which exceeds 30').....	\$ 17.45	2.31
Brush and roller.....	\$ 16.95	2.31
Spray (falling distance which exceeds 30'); Sandblasting (falling distance which exceeds 30'); High work (all preparatorial work, sand blasting, and painting from a falling height exceeding 30 ft. on the following named structures: radio towers, exterior cranes but not including work performed from scaffolding or a platform or basket suspended from a crane or hoist).....	\$ 18.20	2.31
Spray; Sandblasting; Hydroblast (handheld lance 5,000 PSI and over); Power grinders (7" disc or over).....	\$ 17.70	2.31
Work performed in confined spaces.....	\$ 18.45	2.31

PAIN0845-018 05/11/2000

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
Painters:		
Bridges over highways and railroads:		
Brush.....	\$ 15.41	5.66
Spray.....	\$ 16.41	5.66
Water - sandblast.....	\$ 16.91	5.66
Brush, swing stage; window jacks and belts.....	\$ 15.66	5.66
Brush.....	\$ 15.16	5.66
Electric substations.....	\$ 16.66	5.66
Fireproofing work.....	\$ 16.16	5.66
Interior high work:		
Brush.....	\$ 16.66	5.66
Spray.....	\$ 17.66	5.66
Interior pipes closed vessels and closed tanks:		
Brush.....	\$ 15.66	5.66

Spray.....	\$ 16.66	5.66
Spray or sandblast, swing stage; steeplejack.....	\$ 16.66	5.66
Spray.....	\$ 16.16	5.66
Steamclean.....	\$ 16.16	5.66
Waterblast; sandblast.....	\$ 16.91	5.66

FOOTNOTES: Lead abatement work: \$1.00 per hour additional.

PAIN1011-003 06/01/2006

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

	Rates	Fringes
Painter.....	\$ 21.50	7.10

FOOTNOTES: High pay (bridges, overpasses, watertower): 30 to 80 ft.: \$.65 per hour additional. 80 ft. and over: \$1.30 per hour additional.

PAIN1474-002 06/01/2006

HURON COUNTY; LAPEER COUNTY (east of Hwy. M-53); ST. CLAIR, SANILAC AND TUSCOLA COUNTIES:

	Rates	Fringes
Painters:.....	\$ 24.00	10.70

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 08/01/2005

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
Painters: Work performed on water, bridges over water or moving traffic, radio and powerline towers, elevated tanks, steeples, smoke		

stacks over 40 ft. or falling heights, recovery of lead-based paints and any work associated with industrial plants, except maintenance of industrial

plants.....	\$ 21.40	10.00
All other work, including maintenance of industrial plant.....	\$ 19.98	10.00

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 06/01/2001

	Rates	Fringes
Cement Mason GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, SAGINAW, WASHTENAW AND WAYNE COUNTIES.....	\$ 23.79	6.45
STATEWIDE (Does not include Genesee, Livingston, Macomb, Monroe, Oakland, Saginaw, Washtenaw and Wayne Counties).....	\$ 22.53	6.45

PLUM0190-003 05/01/2006

	Rates	Fringes
Plumber/Pipefitter - gas distribution pipeline: Welding in conjunction with gas distribution pipeline work.....	\$ 26.63	13.73
All other work:.....	\$ 18.28	8.60

SUMI2002-001 05/01/2002

	Rates	Fringes
Flag Person.....	\$ 7.22	
Pavement Marking Machine (line protector) (GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE).....	\$ 17.39	7.55
Pavement Marking Machine (line protector) (STATEWIDE (EXCLUDING GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE).....	\$ 16.11	7.50

Pavement Marking Machine
 (STATEWIDE EXCEPT GENESEE,
 MACOMB, MONROE, OAKLAND,
 WASHTENAW and WAYNE)).....\$ 20.14 7.50

Pavement Marking Machine
 GENESEE, MACOMB, MONROE,
 OAKLAND, WASHTENAW AND
 WAYNE COUNTIES:.....\$ 21.74 7.55

PAVEMENT MARKER AND LINE PROTECTOR CLASSIFICATIONS PAVEMENT
 MARKER: Performs all operations, including use of all tools
 and equipment for the placement or removal of pavement
 marking or markers.

LINE PROTECTOR: Performs all operations for the protection of
 fresh markings or markers in a striping convoy operation.

 TEAM0007-004 06/01/2004

	Rates	Fringes
Truck drivers:		
GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES:		
Euclids, double bottomms and lowboys.....	\$ 23.645	.50 + a+b
Trucks under 8 cu. yds.....	\$ 23.395	.50 + a+b
GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNECOUNTIES:		
Trucks, 8 cu. yds. and over.....	\$ 23.495	.50 + a+b
STATEWIDE (Does not include Genesee, Livingston, Macomb, Monroe, Oakland, Washtenaw and Wayne Counties):		
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

Footnote: a. \$265.90 per week
 b. \$28.00 daily

 TEAM0247-004 06/01/2004

	Rates	Fringes
Sign Installer		
GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES:		
GROUP 1.....	\$ 21.73	.15 + a
GROUP 2.....	\$ 21.48	.15 + a
STATEWIDE (Does not include Genesee, Macomb, Monroe, Oakland, Washtenaw and Wayne Counties:		
GROUP 1.....	\$ 20.18	.15 + a
GROUP 2.....	\$ 19.93	274 .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

TEAM0247-010 04/01/2004

Rates Fringes

Truck drivers - underground construction:

GENESEE, MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE

GROUP 1.....	\$ 20.92	172.80/wk	+34.0
GROUP 2.....	\$ 21.06	172.80/wk.	+34.0
GROUP 3.....	\$ 21.25	172.80/wk.	+34.0

LAPEER AND SHIAWASSEE

COUNTIES:

GROUP 1.....	\$ 20.72	172.80/wk.	+34.0
GROUP 2.....	\$ 20.81	172.80/wk.	+34.0
GROUP 3.....	\$ 21.02	172.80/wk.	+34.0

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

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**

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ATTACHMENTS

**A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)**

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 an 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 than the applicable wage rate and fringe benefits or cash equivalent for the classification of work 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 than \$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 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.

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.