# OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

## ADDENDUM NO. 2

## **CONTRACT NO. 43-14-05**

# BRIDGE DECK REPAIR AND REHABILITATION MADDOCK ROAD OVER OHIO TURNPIKE M.P. 149.8, STATE ROUTE 3 (RIDGE ROAD) OVER OHIO TURNPIKE M.P. 166.8, LORAIN AND CUYAHOGA COUNTIES, OHIO

OPENING DATE: EXTENDED TO 2:00 P.M. (E.D.T.), APRIL 28 MAY 5, 2014

# **ATTENTION OF BIDDERS IS DIRECTED TO:**

# ANSWERS TO QUESTIONS RECEIVED THROUGH 12:00 P.M. APRIL 25, 2014

## **MODIFICATIONS TO THE CONTRACT DOCUMENTS**

PLAN SHEETS 1 OF 12 AND 2 OF 12 Addition of ODOT standard drawing sheets Mt-96.11, MT-96.20, and MT-120.00 Addition of ODOT Supplemental Specification 961 and 1050

Issued by the Ohio Turnpike and Infrastructure Commission on April 25, 2014. Issuance authorized by Robin Carlin, Deputy Executive Director, and Tommie Jo Marsilio, Director, Contracts Administration.

llu (1/25/14 lin Date

Tommie Jo Marsilio

# OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION ADDENDUM NO. 2 CONTRACT NO. 43-14-05

# ANSWERS TO QUESTIONS RECEIVED THROUGH 12:00 P.M., APRIL 25, 2014

# Q#6 Concerning temporary signal noted on sheet 5 of 12 at the corner of Akins and Ridge Roads. Is the contractor responsible for this item?

A#6 Yes. Please reference SP 614, Part C – Measurement and Payment, the lump sum price bid for maintaining traffic shall include all temporary traffic control items as required by the Plans. "Maintaining traffic shall be measured as a unit and shall be paid for at the Contract lump sum price bid. Unless separately itemized, the lump sum price bid for maintaining traffic shall include the cost of maintaining the roadways in a safe condition for public use, providing flaggers and its equipment, furnishing, cleaning, maintaining in an acceptable condition and subsequently removing temporary traffic control signs, sign stands, drums, cones, sign covers, arrow boards, message boards (when needed), temporary lighting, Zone Person, Zone Vehicle(s), and other temporary traffic control items as required by the Plans, Specifications or Special Provisions. The price shall be payment in full for all materials, equipment, labor and incidentals necessary to complete the Work as specified."

# Q#7 If so are we just modifying lenses in the existing signals?

A#7 At the Contractor's option and subject to the approval of the maintaining agency, the lenses in the existing signals may be modified <u>OR</u> the Contractor may opt to provide temporary traffic signals.

# Q#8 If not are you requiring side mounted or overhead signals, and in what direction?

A#8 The type of signals may be either side-mounted <u>OR</u> overhead, <u>AND</u> shall be furnished, installed, and maintained in accordance with the ODOT Standard Drawings MT-96.11, MT-96.20, and MT-120.00, ODOT Supplemental Specifications 961 and 1050, and as noted in the plans. The signals are subject to approval by the maintaining agency and are required to be placed in all 4 directions.

# Q#9 If your are requiring temporary signals, what is the contractor's responsibility with the existing signals?

A#9 If the Contractor opts to provide temporary signals, the existing signals shall be covered in accordance with CMS 632.25.

# MODIFICATIONS VIA ADDENDUM NO. 2 TO THE CONTRACT DOCUMENTS FOR CONTRACT NO. 43-14-05

# The following changes were made to the Contract Documents for Contract No. 43-14-05:

# MODIFICATIONS TO PLAN SHEET 1 of 12 – TITLE SHEET

Revised list of Ohio Department of Transportation Standard Drawings to include ODOT Standard Drawings MT-96.11, MT-96.20, and MT-120.00

Revised list of Ohio Department of Transportation Supplement Specifications to include **SS 961** and **SS 1050**.

MODIFICATIONS TO PLAN SHEET 2 of 12 – GENERAL NOTES Added Plan Notes 15, 16, and 17.

# ADDITION OF ODOT STANDARD DRAWING SHEETS MT-96.11, MT-96.20, AND MT-120.00

# ADDITION OF ODOT SUPPLEMENTAL SPECIFICATION 961 and 1050

Addendum No. 2 to is hereby acknowledged: Contract No. 43-14-05

(Firm Name)

(Signature)

(Printed Name)

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

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

# SUPPLEMENTAL SPECIFICATION 961 PORTABLE TRAFFIC SIGNALS

# **OCTOBER 17, 2008**

# 961.01 Description 961.02 Prequalification 961.03 Requirements

**961.01 Description.** This Supplemental Specification sets forth the requirements for portable traffic signals. A portable traffic signal is a self-contained traffic signal mounted on a trailer.

**961.02 Prequalification.** Furnish portable traffic signals that are prequalified in accordance with Supplement 1050.

**961.03 Requirements.** Furnish portable traffic signals that conform to the following criteria:

1. The portable traffic signal conforms to all Ohio Manual of Uniform Traffic Control Devices requirements for traffic control signals including Section 4D.20 which in part states, "A temporary traffic control signal shall meet the physical and operational requirements of a conventional traffic control signal."

2. Each signal head has three 12 inch ( 300 mm ) vehicular indications (red, yellow, green) and their candlepower distributions are not less than specified for standard 12 inch ( 300 mm ) signals in the Institute of Transportation Engineers' Standard for Adjustable Face Traffic Signal Heads.

3. The portable traffic signals may be powered by engine driven generator, solar or stored battery charge system. Design the portable traffic signals to provide electrical energy which will maintain the above described candlepower distribution for at least 24 hours at full output.

4. The dimming of a portable traffic signal, in a yellow flashing operation at night, is permitted in accordance with the Ohio Manual of Uniform Traffic Control Devices. The unit may include a photocell and circuitry which will permit the yellow lens light output to be reduced by up to 50 percent during night hours. The amount of dimming and the choice of not dimming is operator selectable.

5. The signal unit generator battery and electronic controls are completely inaccessible to unauthorized access and protected by a sturdy lockable metal enclosure.

6. Signal supports consist of sturdy brackets attached to a trailer. Design the erected assembly to solidly support the roadside signals at the specified heights and to withstand wind loads of up to 80 mph (128 km/h). Signal head configurations for each approach shall be either one signal head post mounted on the right side of the road plus another signal head cantilever mounted over the right-hand traffic lane; or two signal heads post mounted, one on each side of the road. Mounting height to the bottom of the vehicle signal face shall be at 8 feet (2.4 m) for post-mounted heads and from 16 feet (4.9 m) minimum to 18 feet (5.5 m) maximum for cantilever-mounted signal heads. The lateral spacing between signal heads shall not be less than 8 feet (2.4 m).

7. The trailer and supports are orange.

8. The signal heads are yellow.

9. The controller portion of the portable traffic signal meets 633.07.

10. The portable traffic signal is capable of operating in manual, fixed time and traffic actuated modes.

11. The controllers for the portable traffic signal system electronically communicate to each other by cable, radio or other method approved by the Engineer.

12. It is not be possible even under manual control (1) to program the yellow clearance interval for less than 3 seconds or (2) for the green interval to be displayed for less than 5 seconds.

13. All timing intervals are capable of being set in increments of one second or less.

14. The controller provides a variable all red clearance interval from 0 to 600 seconds.

15. The portable traffic signal provides a method for insuring that the pairs of signal heads cannot display conflicting indications. This includes at least a system which will identify, as a conflict, the display of a green in one direction while (1) displaying green in the conflicting direction, (2) displaying a yellow in the conflicting direction or (3) displaying the all-red clearance interval for a conflicting approach. Further, a controller will be determined to be in conflict if a displayed green is less than 5 seconds or a displayed yellow is less than 3 seconds. Upon determination that a conflict exists, all signal heads must display flashing red as described in criteria 16.

16. The controller provides a red flash cycle that is flashed continuously at a rate of not less than 50 nor more than 60 times per minute. The illuminated period of each flash is not less than half nor more than two-thirds of the total flash cycle.

17. The controller has circuitry which will detect low voltage and prevent the occurrence of an unsafe signal indication. This "brown out" circuit will hold the signal safe until adequate voltage is resumed. If a microprocessor is utilized, appropriate circuitry is included that will reset the processor when needed while holding the signal in a safe all red condition. When the processor is removed from the circuitry, the signal will default to a safe condition or flashing all red.

18. If the portable traffic signal utilizes radio transmission equipment:

a. Furnish non-licensed transmitters that are an accepted FCC-type and do not exceed 1 watt output per FCC Part 90.17. Comply with all specific limitations noted in FCC Part 90.17.

b. Furnish portable traffic signals that will display flashing all red in case of radio interference or failure.

c. If an FCC license is required, the Contractor will keep a copy of the license on file and provide a copy to the Engineer.

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

# SUPPLEMENT 1050 PREQUALIFICATION PROCEDURE FOR PORTABLE TRAFFIC SIGNALS

# **JANUARY 17, 2003**

1050.01	Description
1050.02	Prequalification Procedure
1050.03	<b>Removal from the Prequalified List</b>
1050.04	Reapproval
1050.05	Modifications to Prequalified Portable Traffic Signals

**1050.01 Description.** This supplement describes the procedure by which the Department will maintain a List of Prequalified Portable Traffic Signals for use by and on contracts administered by the Department.

**1050.02 Prequalification Procedure.** Certified test data (no older than five years) from an independent laboratory shall be provided including detailed engineering information, drawings, test results and descriptions which describe how each requirement of 961.03 is satisfied.

**1050.03 Removal from the Prequalified List.** A portable traffic signal may be removed from the prequalified list if, in the Department's sole discretion, the portable traffic signal has substantially or recurrently failed to perform satisfactorily in the field.

**1050.04 Reapproval.** A portable traffic signal removed from the prequalified list due to unsatisfactory field performance shall not be returned to the list until the manufacturer identifies the reason for the failure and the problem has been corrected to the satisfaction of the Department. Experiences of other States or governmental agencies may be considered in this action.

**1050.05** Modifications to Prequalified Portable Traffic Signals. It is recognized that manufacturers will occasionally modify certain aspects of their products in an effort to enhance performance, improve durability, reduce costs or for other similar reasons. Portable traffic signal manufacturers shall notify the Department whenever modifications are made to products contained on the prequalified list. The Department will review the changes being made and, at its sole discretion, decide what action, if any, is appropriate. Appropriate action includes limitation of usage or removal from the prequalified list.



# OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION THE JAMES W. SHOCKNESSY OHIO TURNPIKE

# CONTRACT NO. 43-14-05 BRIDGE DECK REPAIR AND REHABILITATION

MADDOCK ROAD OVER OHIO TURNPIKE M.P. 149.8, STATE ROUTE 3 (RIDGE ROAD) OVER OHIO TURNPIKE M.P. 166.8, LORAIN AND CUYAHOGA COUNTIES, OHIO

### INDEX OF SHEETS

Ο

Ο

 $\mathbf{O}$ 

 $\cap$ 

TITLE SHEET
GENERAL NOTES2
ESTIMATED QUANTITIES
TRAFFIC CONTROL - MADDOCK ROAD
TRAFFIC CONTROL - STATE ROUTE 3
GENERAL PLAN AND ELEVATION M.P. 149.8 6
SUPERSTRUCTURE DETAILS M.P. 149.8
DECK OVERLAY DETAILS M.P. 149.8
GENERAL PLAN AND ELEVATION M.P. 166.8
SUPERSTRUCTURE DETAILS M.P. 166.8 1
DECK OVERLAY DETAILS M.P. 166.8
DECK JOINT DETAILS

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION STANDARD DRAWINGS

TCR-1TEMPORARY TRAFFIC CONTROL GENERAL NOTESTCR-2TEMPORARY TRAFFIC CONTROL DETAILS, LEGEND, NOTES, AND STANDARD SINGLE<br/>LANE CLOSURETCR-9TEMPORARY TRAFFIC CONTROL SHORT DURATION/SHORT TERM SHOULDER CLOSURETCR-12TEMPORARY TRAFFIC CONTROL SINGLE AND DOUBLE LANE SHIFT ZONESTCR-15TEMPORARY TRAFFIC CONTROL SIGNS FOR MAINTENANCE AND CONSTRUCTIONOHIO DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS

### TC-52.10 SIGN BI ANK DETAILS 10/18/13 TC-52.20 SIGN BLANK DETAILS 2-01/17/14 MT-101.60 ROAD CLOSURE USING TYPE 3 BARRIERS 07/19/13 TEMPORARY SIGN SUPPORT 19/1: SIGNALIZED CLOSING ONE LANE OF A 2-LANE HIGHWAY 1/17/14 MT-96.20 DETAILS FOR SIGNALIZED CLOSING ONE LANE OF A 2-LANE 07/19/13 MT-120.00 NEW SIGNAL ACTIVATION 07/19/13 OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS

	SS 821	ARROW BOARD	· 04/20/12	
	SS 921	ARROW BOARD	· 04/20/12	~
	SS 1021	ARROW BOARD PREQUALIFICATION PROCEDURES	04/20/12	$\sqrt{1}$
(	SS 961	PORTABLE TRAFFIC SIGNALS	. 10/17/08	$\checkmark$
(	SS 1050	PREQUALIFICATION PROCEDURE FOR PORTABLE TRAFFIC SIGNALS-	· 01/17/03	3
1	Sun		~~~~~	/



APPROVED FOR HIO TURNPIKE AND INFRASTRUCTURE COM BY CHILF ENGINEER 4/25/14 DATE	MISSION
UNDERGROUND UTILITIES CONTACT BOTH SERVICES CALL TWO WORKING DAYS REFERENCE NO	
CALL CALL CALL CALL CALL CALL CALL CALL	
OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988 OHIO TURNPIKE DMISION SUPERINTENDENT: (440) 234-2081 X 5700	

### STRUCTURE - GENERAL NOTES

### DESIGN SPECIFICATIONS

HIS PROJECT CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION FOR STATE HIGHWAY AND TRANSPORTATION OFFICIALS, AND THE ODOT BRIDGE DESIGN MANUAL, 2004 EDITION.

DESIGN DATA: DESIGN LOADING 2. SUPERSTRUCTURE: HS20-44, AND THE ALTERNATE MILITARY LOADING.

FUTURE WEARING SURFACE (FWS) OF 60 LBS/FT<sup>2</sup>

COMPRESSIVE STRENGTH 4.500 PSI CONCRETE CLASS S -(SUPERSTRUCTURE)

ASTM A615 OR A996 - GRADE 60, MINIMUM YIELD REINFORCING STEEL -STRENGTH 60,000 PSI

<u>CONSTRUCTION SPECIFICATIONS:</u> THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED JANUARY, 2010, AND THE SPECIAL PROVISIONS CONTAINED IN THE CONTRACT DOCUMENTS SHALL GOVERN THIS PROJECT.

 $\bigcirc$ 

 $\bigcirc$ 

<u>SCOPE OF WORK</u> SEE GENERAL PLAN AND ELEVATION SHEET FOR EACH STRUCTURE.

### PROTECTION OF TRAFFIC:

THE CONTRACTOR SHALL SUBMIT A PLAN TO PROTECT THE TRAVELING PUBLIC FROM ALL REMOVAL DEBRIS AND/OR CONSTRUCTION MATERIAL THAT MAY COME IN CONTACT OR POSE A DANGER TO THE TRAVELING PUBLIC. HYDRODEMOLITION WATER, SLURRY AND/OR WASTE SHALL NOT BE PERMITTED TO FLOW ONTO OPEN LANES OF TRAFFIC OR INTO STORM SEWERS. THE CONTRACTOR MAY PERFORM THE WORK DURING A WEEKEND. IN ACCORDANCE WITH SP 104. THE PLAN MUST BE SUBMITTED TO THE COMMISSION AND GOVERNING LOCAL AGENCIES PRIOR TO THE COMMENCEMENT OF ANY WORK.

### UTILITIES LINES

THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO PROTECT THE EXISTING UTILITY LINES IN THE VICINITY OF THE STRUCTURES WHILE PERFORMING ANY WORK. THE CONTRACTOR AND UTILITY COMPANY(IES) ARE REQUESTED TO COOPERATE BY ARRANGING WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER BE HELD TO A MINIMUM. ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY COMPANY(IES).

### EXISTING STRUCTURE VERIFICATION:

DETAILS, DIMENSIONS, AND ELEVATIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS, DIMENSIONS, ELEVATIONS, AND SKEW ANGLES WHICH HAVE BEEN FIELD VERIFIED BY THE CONTRACTOR

THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING STRUCTURES ARE AVAILABLE FOR REVIEW UPON REQUEST AT THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION OFFICE: 682 PROSPECT STREET BEREA. OHIO 44017

ANY ADDITIONAL COST RESULTING FROM VARIATIONS FROM PLAN DIMENSIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL PAYMENT OVER THE UNIT PRICE BID WILL BE AWARDED BY THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION.

### CONCRETE WEATHERPROOFING:

ITEM SP 536-CONCRETE WEATHERPROOFING SHALL BE APPLIED TO THE FOLLOWING EXPOSED CONCRETE SURFACES OF THE BRIDGE.

- THE TOPS OF THE ABUTMENT SLABS AND SUPERSTRUCTURE SLABS.

- ALL PARAPET SURFACES AND SLAB SIDE EDGES.
- THE BOTTOM SURFACE OF THE SUPERSTRUCTURE SLAB FROM THE SLAB SIDE EDGE TO THE EXTERIOR STRINGER FLANGE.
- SIDEWALK (STATE ROUTE 3 BRIDGE ONLY)
- ALL APPRÒACH SLABS (INCLUDING EXPOSED SURFACES OF CURBS).

CARE SHALL BE TAKEN NOT TO APPLY WEATHERPROOFING ON CONSTRUCTION JOINT SURFACES TO RECEIVE HMWM OR SURFACES TO RECEIVE JOINT SEALER.

<u>CONSTRUCTION JOINTS:</u> CONSTRUCTION JOINT SURFACES SHALL BE FREE FROM OIL, LAITANCE, FORM RELEASE AGENT, OR ANY OTHER MATERIAL THAT WOULD PREVENT BONDING TO THE CONCRETE SURFACE. ALL LAITANCE AND OTHER CONTAMINANTS SHALL BE REMOVED BY HIGH PRESSURE WATER BLASTING WITH A MINIMUM PRESSURE OF 5,000 P.S.I. HOWEVER, WATER BLASTING SHALL NOT BE REQUIRED WHERE EXISTING CONCRETE HAS BEEN ROUGHENED BY JACKHAMMERS DURING CONCRETE REMOVAL OPERATIONS. SURFACES SHALL BE THOROUGHLY DRENCHED WITH CLEAN WATER AND ALLOWED TO DRY TO A DAMP CONDITION FREE OF STANDING WATER BEFORE PLACING CONCRETE, PREPARATION OF CONSTRUCTION JOINT SURFACES SHALL NOT BE MEASURED FOR PAYMENT. THE COST THEREOF SHALL BE INCLUDED IN THE CONTRACT PRICE OF THE PERTINENT CONCRETE ITEMS.

### 10. CUTTING OR BENDING OF REINFORCING BARS

ANY CUTTING OR BENDING OF BARS NECESSARY TO ACCOMMODATE ANY ESSENTIAL ELEMENT OF WORK RELATED TO THE PROJECT SHALL BE CONSIDERED INCIDENTAL AND NO ADDITIONAL COMPENSATION WILL BE GRANTED.

# 11. <u>ITEM SP 509 - EPOXY COATED REINFORCING STEEL, GRADE 60:</u> THE CONTRACTOR SHALL REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE

DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE COMMISSION WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. A CONTINGENCY QUANTITY OF 100 POUNDS PER STRUCTURE HAS BEEN INCLUDED IN THE PLANS FOR THIS WORK.

THE CONTRACTOR SHALL REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE CHIEF ENGINEER TO BE MADE UNUSABLE DUE TO CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE

### 12. ITEM 513 - WELDED STUD SHEAR CONNECTORS, AS PER PLAN

THE CONTRACTOR SHALL REPLACE ALL EXISTING SHEAR STUDS DEEMED BY THE CHIEF ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE COMMISSION WILL MEASURE THE REPLACEMENT SHEAR STUDS BY THE NUMBER EACH ACCEPTED IN PLACE. A CONTINGENCY OF 10 EACH PER BRIDGE HAS BEEN INCLUDED IN THE PLANS FOR THIS WORK

THE CONTRACTOR SHALL REPLACE ALL EXISTING SHEAR STUDS WHICH ARE DEEMED BY THE CHIEF ENGINEER TO BE MADE UNUSABLE DUE TO CONCRETE REMOVAL OPERATIONS WITH NEW SHEAR STUDS OF THE SAME SIZE AT NO COST TO THE COMMISSION

13. <u>ITEM SP 614 - MAINTAINING TRAFFIC:</u> ALL TRAFFIC ON LOCAL ROADS AND STATE ROUTES SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AGENCY. APPROVAL SHALL BE OBTAINED FROM THE LOCAL GOVERNING AGENCY PRIOR TO THE COMMENCEMENT OF ANY WORK ON OR OVER THE LOCAL ROAD OR THE IMPLEMENTATION OF ANY MAINTENANCE OF TRAFFIC ZONE

THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS TO PERFORM THIS WORK WITH THESE REQUIREMENTS AND SHALL BE INCLUDED IN THE UMP SUM PRICE FOR ITEM SP 614-MAINTAINING TRAFFIC ON SHEET 3 OF 12.

### 14. ITEM 642 - EDGE LINE:

THE FOLLOWING PAVEMENT MARKING QUANTITIES ARE INCLUDED FOR THE BRIDGES AT THE FOLLOWING LOCATIONS:

### M.P. 149.8 - MADDOCK ROAD OVER OHIO TURNPIKE:

EDGE LINE (WHITE) FROM STA. 3+79.21 TO STA. 6+20.79 LT. = 241.58 FT. CENTER LINE (YELLOW) FROM STA. 3+79.21 TO STA. 6+20.79 = 241.58 FT. EDGE LINE (WHITE) FROM STA. 3+79.21 TO STA. 6+20.79 RT. = 241.58 FT.

TOTAL EDGE LINE. TYPE 1 = 2 X 241.58 FT. = 483.16 FT. = 0.09 MILE TOTAL CENTER LINE TYPE 1 = 241 58 FT = 0.05 MILE

M.P. 166.8 - STATE ROUTE 3 (RIDGE ROAD) OVER OHIO TURNPIKE. EDGE LINE (WHITE) FROM STA. 8+22.28 TO STA. 11+79.51 LT. = 357.23 FT. CENTER LINE (YELLOW) FROM STA. 8+22.28 TO STA. 11+79.51 = 357.23 FT. EDGE LINE (WHITE) FROM STA. 8+22.28 TO STA. 11+79.51 RT. = 357.23 FT.

TOTAL EDGE LINE, TYPE 1 = 2 X 357.23 FT. = 714.46 FT. = 0.14 MILE TOTAL CENTER LINE, TYPE 1 = 357.23 FT. = 0.07 MILE

### 15. RESTARTING EXISTING TRAFFIC SIGNAL(S)

THE CONTRACTOR SHALL REACTIVATE THE EXISTING TRAFFIC SIGNAL IN ACCORDANCE WITH ODOT STANDARD DRAWING MT-120.00 WITH THE FOLLOWING EXCEPTIONS:

- W23-H2a REPLACES THE W24-H2a - W16-15P ARE NOT REQUIRED.

ALL SIGNAGE SHALL BE IN PLACE 10 DAYS PROIR TO OPENING THE ROADWAYS TO TRAFFIC.

ALL COSTS FOR COMPLETING THIS SHALL BE CONSIDERED INCIDENTAL TO SP 614.

### 16. TEMPORARY TRAFFIC SIGNAL(S)

THE EXISTING TRAFFIC SIGNAL(S) SHALL BE COVERED IN ACCORDANCE WITH 632.25. TO REPLACE THE EXISTING TRAFFIC SIGNAL, THE CONTRACTOR SHALL PROVIDE TEMPORARY TRAFFIC SIGNAL(S) THAT ARE EITHER TEMPORARY POLE MOUNTED SIGNAL(S), TEMPORARY SIMPLE SPAN SIGNAL(S), OR PORTABLE SIGNAL(S) IN ACCORDANCE WITH APPLICABLE PORTIONS OF ODOT STANDARD DRAWING MT-96.11 AND MT-96.20. THE CONTRACTOR SHALL PROVIDE A PLAN. FOR APPROVAL BY THE CHIEF ENGINEER. FOR THE PLACEMENT OF THE TEMPORARY TRAFFIC SIGNAL(S). ALL COSTS FOR COMPLETING THIS WORK SHALL BE INCIDENTAL TO SP 614.

### 17. MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION FOLLOWING CONDITIONS

1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE CHIEF ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE CHIEF ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGED FOURPMENT EXCEPT POLES AND CONTROL FOURPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE CHIEF ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION

REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

OUTAGE.

FOR THE DAMAGE

THE CHIEF ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE REVISIONS TO THE SIGNAL SYSTEM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS.

DESCRIBED IN 632.25.

1. TIME OF NOTIFICATION OF MALFUNCTION;

- 2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALEUNCTION:

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE CHIEF ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR

614

/1\

/1

Ο

 $\bigcirc$ 

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE

2 NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES. INSTALLED BY THE CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE CHIEF ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE COMMISSION FOR POLICE SERVICES AND/OR MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM

ANY VEHICULAR TRAFFIC SIGNAL HEAD FITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

3 ACTIONS TAKEN TO CORRECT THE MAI FUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED

4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;

5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM PRICE BID FOR ITEM SP

$\wedge$	 $\wedge$	$\sim$	$\wedge$	$\wedge$	$\wedge$	$\mathcal{P}$

À	-		-	-							
/1 A	DDENDUM No. 2		JJS	4/25/14							
NO. REVISIONS BY DATE											
OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION											
GENERAL NOTES STRUCTURES M.P. 149.8 AND 166.8 LORAIN AND CUYAHOGA COUNTIES											
DESIGNED: CAC	CHECKED: CMM	DATE:	12/27/2	013							
DRAWN: CAC	IN CHARGE: ADY	SCALE:	N.T.S	<b>š</b> .							
CONTRACT 4	3-14-05 SHE	ET 2	OF	12							



TABLE I (SIGN SPACING)									
DISTANCE (FT)	A	В	С						
URBAN (≤40 MPH)	100	100	100						
URBAN (≥ 45 MPH)	350	350	350						
RURAL	500	500	500						

100	100	
350	350	
500	500	
		·
		L



LEGEND									
WORK AREA									
DRUMS/CONES 🛛 🕒 🗨									
PORTABLE BARRIER									
REMOVE EXISTING XXXXXX MARKINGS									
ATTENUATOR CXXXXXX									
TAPERED END									
TYPE III BARRICADE									
DIRECTION OF TRAVEL									

 $\bigcirc$ 

 $\bigcirc$ 



 $\bigcirc$ 

 $\bigcirc$ 

## NOTES:

### SIGNAL EQUIPMENT

- 1A. All traffic signal equipment used in this installation, such as signal cable, signal heads, or signal controller shall be in conformance with specifications CMS 632, 633, 732 and 733.
- IB. The performance test of CMS 632.28G, the working drawing requirements of 632.04 and 633.04, the wiring diagram and service manual requirement of 633.05 and the testing and pregualification requirement of 633.06 are waived.
- *IC.* Used equipment is acceptable.
- ID. Conflict monitors or Malfunction Management Units (MMUs) typical of traditional traffic control signal operation shall be used.
- IE. At least one and preferably both of the signal faces for the mainline through movement shall be located per Ohio Manual of Uniform Traffic Control Devices (OMUTCD) Figure 4D-2.
- IF. If side-mounted, signal heads shall be located across the highway from each other.
- 1G. For conventional signal mounting, see Standard Construction Drawing (SCD) MT-96.20.
- 1H. For portable signals, see Supplemental Specification 961 and Supplement 1050. Any portable traffic signals provided shall be chosen from the prequalified list 'maintained by the Office of Traffic Engineering, and available on the Office of Materials Management website.
- II. Portable traffic signals shall be located off of the pavement or behind drums or portable barrier or quardrail.

### SIGNAL OPERATION

- 2A. Signals shall be installed and operated in accordance with the requirements of Part 4 of the OMUTCD.
- 2B. Signal timing settings shall be as shown in the plans or provided to the Contractor by the Engineer prior to implementation of the signal control.
- 2C. If the signal fails or is changed to flashing operation. red shall be flashed to all approaches on all signal heads.

### SIGNING

- 3A. The spacing between work zone signs, as shown in Table I, are minimums. Maximum spacing should not be greater than 1.5 times the distances shown in Table I.
- 3B. Sign spacing should be adjusted to avoid conflict with existing signs. Minimum spacing to existing signs shall be 200' for speeds of 45 mph or less and a minimum of 400' for speeds of 50 mph or greater.
- 3C. The location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment.
- 3D. Overlapping of signing for adjacent projects should be avoided where the messages could be confusing. Any ROAD WORK AHEAD (W20-1) sign or END ROAD WORK (G20-2) sign which falls within the limits of another work zone shall be omitted or covered during the period when both projects are active.

- 3E. 36" warning signs may be used when the approach speed limit is 40 mph or less.
- 3F. Provide a NO TURN ON RED (R10-11b-24) sign on each side road and driveway approach located between the mainline stop bars, as shown on Sheet 2 of this drawing. Mounting shall be as follows:
- a) If the signal heads are side-mounted, the sign should be placed below the right-most signal head.
- b) If the signal heads are overhead mounted, the sign should be placed to the right of the right-most sianal head.
- 3G. END ROAD WORK (G20-2) signs are only required for lane closures of more than one day.
- 3H. All existing signs (STOP, STOP AHEAD, etc.) which conflict with the work zone traffic signals or other traffic control shall be covered or removed.
- 31. The STOP HERE ON RED (R10-6a) sign may be used in place of the R10-6 shown.

### TREE AND BRUSH TRIMMING

4. Tree or brush trimming to provide adequate sight distance to sign and signals shall be provided as determined by the Engineer. Payment for this work shall be included in the lump sum bid for CMS 614 -Maintainina Traffic.

### PAVEMENT MARKING AND RAISED PAVEMENT MARKERS (RPMs)

- 5A. If a lane closure of greater than 3 days is required, then the following shall be performed:
  - a) Existing conflicting pavement markings shall be removed or covered as per CMS 614.11G.
  - b) Existing conflicting RPMs shall be removed.
  - c) 12" work zone stop lines shall be provided.
  - d) Work Zone Center Lines, Double, Solid shall be provided when existing Center Line, Solid, Double 'is not in place.
  - e) Work Zone Edge Lines shall be provided.
- 5B. Work zone edge lines which would conflict with final traffic lanes shall be removable (CMS 740.06, Type I) tape unless the area will be resurfaced prior to completion of the project.
- 5C. After completion of the work, pavement markings other than CMS 740.06, Type I shall be removed in accordance with CMS 614.11. The original marking shall be restored at no additional cost.

5D. All work zone edge lines shall be white.

### PORTABLE BARRIER (PB)

- 6A. A tapered end section may be used at locations where the last full section of PB can be extended outside of the clear zone for approaching traffic. See Table II for clear zone width's.
- 6B. Where PB is located beyond the edge of the paved shoulder, the cross slope within the clear zone, including the surface on which the PB is placed, shall be graded to 10:1 or flatter. If the cross slope is steeper than 10:1, the PB shall be terminated on the paved shoulder. The PB shall be extended along the paved shoulder as necessary to satisfy the length of need, and then terminated using an impact attenuator.

- 6C. An impact attenuator shall be used where the last full section of PB will be located within the clear zone.
- 6D. When used, impact attenuators shall be installed parallel to traffic. Also, the last full section of PB. 'adjacent to the impact attenuator, shall be located parallel to traffic.
- 6E. For impact attenuator installation procedures, refer 'to manufacturer's installation instructions.
- 6F. If it is necessary to provide the Contractor with access to the work area behind the PB, an opening shall be provided behind the impact attenuator, with maximum width of 9' between the impact attenuator and the outside edge of the paved shoulder.
- 6G. The opening for the Contractor shall be kept closed by placing 3 drums side-by-side across the opening near the impact attenuator. The drums shall be out of position only during ingress and egress of work vehicles and supply vehicles.

### BARRIER DELINEATION

- 7A. PB shall be delineated as per SCD MT-101.70.
- 7B. Existing barrier between work zone stop lines shall be delineated with CMS 614 - Object Markers.

### DRUMS / CONES

- 8A. Drums may be used in lieu of PB only if called for in the plans.
- 8B. Drum spacing shall be as follows:
  - a) Spacing along the two-way traffic taper shall be 10' center-to-center.
  - b) Spacing along the closure shall be 40' center-to-center within the work area.

### 8C. Cones may be substituted for drums as follows:

- a) Cones used for daytime traffic control shall have a minimum height of 28".
- b) Cones used for nighttime traffic control shall have a minimum height of 42".
- c) Use of cones at night shall be prohibited along tapers.
- d) Where cones are substituted for drums in tangent sections, intermixing of channelizing devices within the same run will not be permitted. Either cones shall be used for the entire length of the tangent section, or drums shall be used for the entire run.
- 8D. Provisions shall be made to stabilize the cones and drums to prevent them from blowing over.
- 8E. A minimum of 2 drums shall be used to close the paved shoulder.

### FLASHING WARNING LIGHTS

9. Type A flashing warning lights shown on the ROAD WORK AHEAD (W20-1) signs and on the ONE LANE ROAD AHEAD (W20-4) signs are required whenever a night lane closure is necessary.

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

LIGHTING

- 10A. Lighting shall be provided when called for in the plans.
- 10B. If conventional type work zone lighting is provided, wattage shall be as called for in the plans.

EQUIPMENT / MATERIALS STORAGE

- 11. The following requirements shall apply if not located behind PB:
  - a) No equipment or material shall be located within the taper or buffer zone.
  - b) When work is being performed, all material and equipment shall be stored as per СМЅ 614.03.

3	SCD NUMBER	ZLALES MI-96.11 DATED 07-19-2013. STANDARD ROADWAY CONSTRUCTION DRAWING SLENATIZED CLOSING ONE LANE OF A	OFFICE OF	STDS. ENGINEER	STATE OF OHIO DEPARTMENT OF TRANSPORTATION
3	MT-96.11	2-LANE HIGHWAY	KUADWAY ENGINEERING	Stargell	Lugraldo Stangel 01-17-2014 ADMINISTRATOR J DATE



- 5. Where portable barrier (PB) is located beyond the edge of the paved shoulder, the cross slope within the clear zone, including the surface on which the PB is placed, shall be graded at 10:1 or flatter. If the cross slope is steeper than 10:1, the PB shall be terminated on the paved shoulder. The PB shall be extended along the paved shoulder as necessary to satisfy the length of need, and then terminated using an impact attenuator.

	ALL	RED		ALL RED				ALL RED				ALL RI		
	01G	017	02G	027	03G	03Y	04G	04Y	056	05Y	066	06Y	07G	071
			'	'						'	-('	'		
	$  \rightarrow  $	$\neg$						$\neg$						-
	TWO-PHASE ACTUATED PHASING								BULLETING FOR				500 AC	T114
									PHASING FOR .				FUR AL	TUA

 $\bigcirc$ 

 $\bigcirc$ 



 $\bigcirc$ 

 $\bigcirc$ 

ALL	RED			ALL	RED			ALL	RED			ALL
		<sup>02G</sup> ⊢	<sup>02Y</sup> ⊢ - <del>-</del>	<sup>036</sup> ⊢ ⊣	<sup>03</sup> ⊢	<sup>046</sup>	04Y	<sup>056</sup> ⊢ ⊣	<sup>05</sup> ⊢	066 	067-7-T	
		TWO DU	ACT ACT		LASING						DUACING	
		$I W O - \Gamma \Pi I$	AJE AUT	UAILU FI	NAJINU		_				LUNC LANG	FUR AL



	MINIMUM DISTANCE (FT)	
APPROACH SPEED	A	В
∠ 40 MPH	100	400
> 40 MPH	200	750

# NOTES:

### TRAFFIC SIGNAL

- 1A. After receiving approval from the Engineer to activate the signal, the Contractor shall notify the Engineer at least 10 days prior to placing the signal in stop-and-go mode to allow the Engineer time to notify local media and law enforcement of the scheduled signal activation.
- 1B. A permanent new signal or signal upgrade from a flasher shall operate in flash mode for 3 to 5 business days before being placed in a stop-and-go mode for the 10 day burn test, as determined by the Engineer.
- 1C. The signal shall not be activated to stop-and-go operation on a Friday, Saturday or Sunday, or the day preceding or during a national holiday (New Years, Memorial Day, Independence Day, Labor Day, Thanksgiving, or Christmas), except with written permission from the District Construction Engineer.

### SIGNS (GENERAL)

- 2A. The Contractor shall furnish, install, maintain and remove all signs, warning lights (when required) and flags as shown above, including supports and all necessary mounting hardware.
- 2B. Type B flashing warning lights shall be installed on ťhe thru approaches as shown above.
- 2C. Flags shall be erected as shown above. The flags shall be 18" x 18", made of orange vinyl material, and securely fastened to the sign or sign support.

### SIGNING DETAILS

- 3A. The Signal Ahead (W3-3) signs shall be orange unless yellow is specified in the plans. If the sign is orange, the dimensions shall be 48" x 48". If the sign is yellow, the dimensions shall be as specified in the plans.
- 3B. The NEW (W16-15P) plaque shall be provided below the BE PREPARED TO STOP (W3-4) and Signal Ahead (W3-3) signs along the thru approaches and below the W3-3 signs along the stop approaches.
- 3C. On multi-lane divided thru approaches, erect signs in median identical to those on the right to create dual installations, including supplemental signs, flags and flashing warning lights.
- 3D. For multi-way stop approaches, each approach controlled by a STOP sign shall be treated as shown above for the stop approach.
- 3E. The BE PREPARED TO STOP sign installation (including the W16-15P plaque and flags) on the thru approach shall be omitted when a permanent PREPARE TO STOP WHEN FLASHING (W3-H4a) sign is erected.

### SIGNING SCHEDULE

4A. The Contractor shall erect the W24-H2a-60 (with activation day, month, and date, e.g., MON AUG 12) signs equipped with orange flags as shown above on each approach to the intersection at the time the signal'is placed in flash mode. See Note 1B.

- 4B. Immediately before placing the new signal installation in stop-and-go mode, the Contractor shall remove or cover the W24-H2a-60 signs. At the same time, the Contractor shall install or uncover the W3-3 and W3-4 sign assemblies as shown above.
- 4C. Immediately after placing the new signal installation in stop-and-go mode, the Contractor shall remove or cover the STOP (R1-1) signs.
- 4D. The Contractor shall remove the flashing warning lights, flags and brackets, the orange W3-3 signs, the W3-4 signs and the W16-15P plaques 21-30 days after the signal is placed in stop-and-go mode.

### PAVEMENT MARKING

Θ

5. Proposed pavement marking shall be installed as shown in the plans.

### REMOVAL OF WORK VEHICLES

The Contractor shall remove all work vehicles from 6. the intersection prior to beginning the signal activation process.

### PAYMENT

7. Permanent supports and permanent signs (yellow W3-3) and their removal (R1-1) shall be paid for under separate pay items in the plans. Payment for all other labor, equipment and materials necessary to complete this work shall be included in the Lump Sum price bid for CMS 614 Maintaining Traffic.

 $\bigcirc$ 

