## PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 50 AND SAMUEL BOWEN BLVD/RIDDLE LN IN WORCESTER COUNTY. US 50 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION SHALL OPERATE IN A NEMA SIX PHASE, FULL-TRAFFIC-ACTUATED MODE WITH A EXCLUSIVE DOUBLE LEFT TURN LEAD PHASE FOR THE WESTBOUND US 50 APPROACH AND A SINGLE EXCLUSIVE LEFT TURN LAG PHASE FOR THE EASTBOUND APPROACH OF US 50. US 50 THRU MOVEMENTS WILL OPERATE CONCURRENTLY. SAMUEL BOWEN BLVD/RIDDLE LN THRU MOVEMENTS WILL OPERATE CONCURRENTLY.

AN EMERGENCY VEHICLE PRE-EMPTION PHASE WILL BE PROVIDED FOR THE EASTBOUND US 50 PHASES 1 AND 6.

## EQUIPMENT LIST FOR CONTRACT NO. XX6615185

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 9042 | 1 | EA | [UPDATED] CONTROLLER ASC III WITH TELEMETRY |
| 9044 | 1 | EA | [UPDATED] CONTROLLER CABINET, SIZE S |
| 9045 | 1 | EA | [UPDATED] CONTROLLER, MASTER ASC II WITH TELEMETRY (TO BE INSTALLED BY SHA FORCES) |
| 9087 | 1 | EA | [UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS |
| 9570 | 220 | SF | [UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN |
| | 2 | EA | M1-5(6) - (24" x 48") SHIELD ASSEMBLY |
| | 4 | EA | W16-14 - (24" x 24") |
| | 4 | EA | W3-3 - (48" x 48") |
| | 1 | EA | R6-1(R) - (54" x 18") |
| | 1 | EA | R6-1(L) - (54" x 18") |
| | 2 | EA | D-3(2) - (132" x 60" SIGNS TO BE INSTALLED BY SHA DISTRICT 1 FORCES) |
| 9571 | 108 | SF | [UPDATED] SHEET ALUMINUM MAST ARM /POLE MOUNTED SIGN |
| | 4 | EA | D-3(2) - (VAR. x 20") MAST ARM MOUNTED |
| | 2 | EA | M1-5(4) - (78" x 36") MAST ARM MOUNTED |
| | 2 | EA | R3-5(L) - (30" x 36") MAST ARM MOUNTED |

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 1001 | 3 | EA | MAINTENANCE OF TRAFFIC |
| 2002 | 1 | CY | TEST PIT EXCAVATION |
| 5002 | 950 | LF | 5" HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS |
| 5003 | 1000 | LF | REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS |
| 5005 | 105 | LF | 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES |
| 5006 | 192 | SF | WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS |
| 8001 | 36 | EA | 12 INCH LED SIGNAL HEAD SECTION |
| 8007 | 2 | EA | ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE |
| 8017 | 1 | EA | MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION |
| 8022 | 4 | EA | NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000' |
| 8023 | 1 | EA | REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT) |
| 8026 | 1 | EA | TWIN MAST ARM POLE & 50'/70' MAST ARMS ANY 'T' DIMENSION |
| 8028 | 6 | EA | VIDEO DETECTION CAMERA AND CABLE ANY LENGTH |
| 8031 | 2500 | LF | 12-PAIR COMMUNICATION CABLE, SELF- SUPPORTING, JELLY-FILLED/UNDERGROUND |
| 8032 | 515 | LF | 4 CONDUCTOR OPTICOM CABLE |
| 8034 | 800 | LF | ELECTRICAL CABLE - 2-CONDUCTOR (NO. 12 AWG) TYPE TC |
| 8036 | 160 | LF | UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED |
| 8038 | 2050 | LF | UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED |
| 8039 | 225 | LF | WOOD SIGN SUPPORTS UP TO 4" X 6" |
| 8040 | 218 | SF | INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE) |
| 8042 | 525 | LF | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE |
| 8045 | 35 | LF | ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN |
| 8046 | 10 | EA | FURNISH AND INSTALL ELECTRICAL HANDHOLE |
| 8047 | 1 | EA | DISCRIMINATOR MODULE, 4 CHANNEL, NO. 764 |
| 8049 | 1 | EA | OPTICOM NO. 721 DETECTOR EYE |
| 8055 | 120 | LF | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG) |
| 8056 | 2500 | LF | ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG) |
| 8062 | 1 | EA | INSTALL CONTROLLER AND CABINET - BASE MOUNT (ANY SIZE) |

## CONTACTS

The contact persons are:

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Worcester County, Director of Public Works
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Chief, Traffic Operations Division
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Mr. Edward Rodenhizer
Chief SHA Traffic Signal Shop
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Mr. Wayne Weichman
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Assistant District Engineer - Utility
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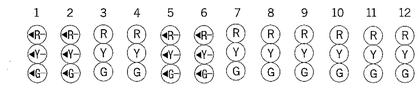
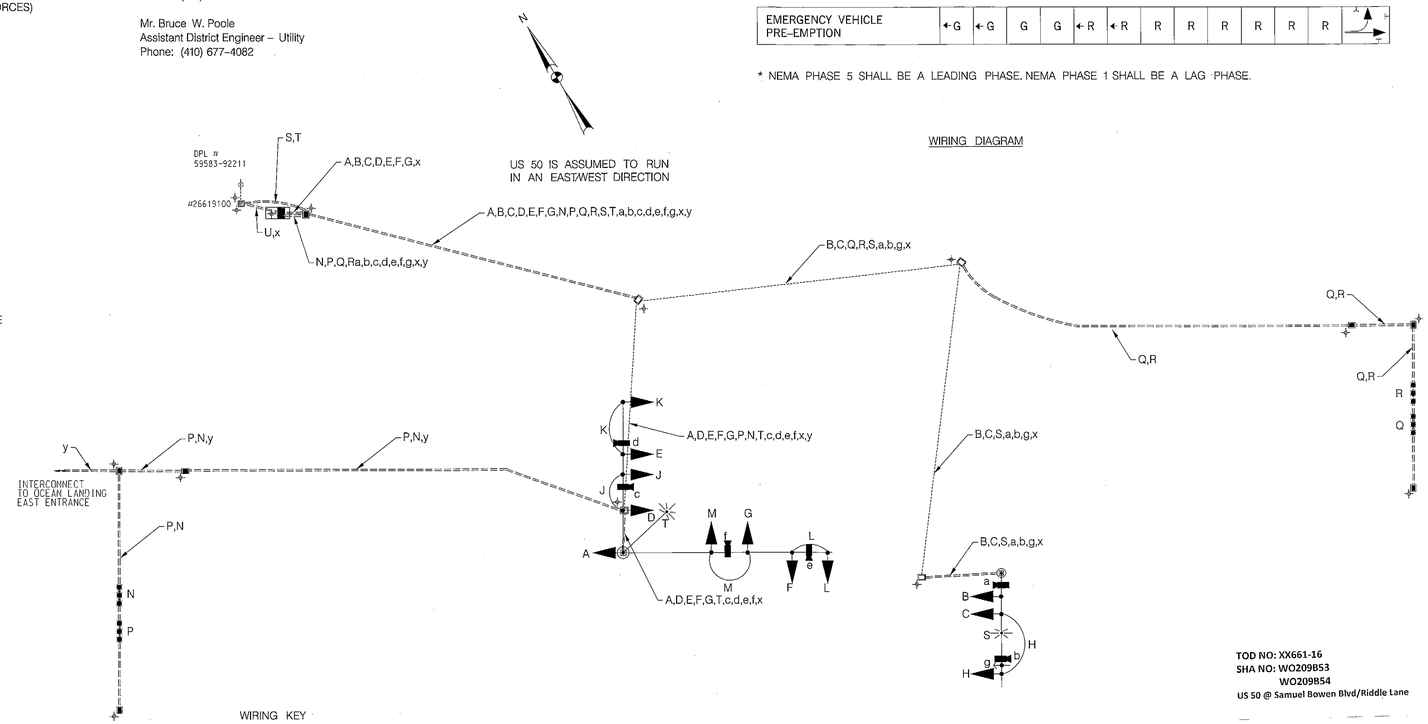
## PHASE CHART




| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * | PHASE 1 AND 6 LAG | ←G | ←G | G | G | ←R | ←R | R | R | R | R | R | R |
| | 1 AND 6 CHANGE | ←Y | ←Y | Y | Y | ←R | ←R | R | R | R | R | R | R |
| * | PHASE 2 AND 5 LEAD | ←R | ←R | R | R | ←G | ←G | G | G | R | R | R | R |
| | 2 AND 5 CHANGE | ←R | ←R | R | R | ←Y | ←Y | G | G | R | R | R | R |
| | PHASE 2 AND 6 | ←R | ←R | G | G | ←R | ←R | G | G | R | R | R | R |
| | 2 AND 6 CHANGE | ←R | ←R | Y | Y | ←R | ←R | Y | Y | R | R | R | R |
| | PHASE 4 AND 8 | ←R | ←R | R | R | ←R | ←R | R | R | G | G | G | G |
| | 4 AND 8 CHANGE | ←R | ←R | R | R | ←R | ←R | R | R | Y | Y | Y | Y |
| | FLASHING OPERATION | FL/←R | FL/←R | FL/Y | FL/Y | FL/←R | FL/←R | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R |
| | EMERGENCY VEHICLE PRE-EMPTION | ←G | ←G | G | G | ←R | ←R | R | R | R | R | R | R |

* NEMA PHASE 5 SHALL BE A LEADING PHASE. NEMA PHASE 1 SHALL BE A LAG PHASE.

## WIRING DIAGRAM




WIRING KEY

| | |
|---|---|
| A,B,C,D E,F,G | 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) |
| H,J,K,L,M | 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) |
| N,P,Q,R | NON INVASIVE DETECTOR LEAD-IN CABLE |
| S,T | 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) -TRAY CABLE |
| U | 2 WIRES, 1 CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG THHN/THWN) |
| a,b,c,d,e,f | VIDEO CAMERA CABLE |
| g | 4 CONDUCTOR OPTICOM CABLE |
| x | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE |
| y | 12 PAIR. INTERCONNECT CABLE (JELLY FILLED) |
| + | GROUND ROD |

NOTE:

A) CONNECT NEW STREET LIGHTING CABLES TO 20 AMP SINGLE POLE BREAKER IN EXISTING METER SERVICE PEDESTAL.
B) CONNECT NEW CONTROLLER CABINET SERVICE CABLE TO 30 AMP SINGLE POLE BREAKER IN EXISTING METER SERVICE PEDESTAL.

TOD NO: XX661-16
SHA NO: WO209B53
WO209B54
US 50 @ Samuel Bowen Blvd/Riddle Lane

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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
US 50 (OCEAN GATEWAY) AT
SAMUEL BOWEN BLVD/RIDDLE LN
BERLIN, MD

# GENERAL INFORMATION PLAN SHEET

SCALE NONE ADVERTISED DATE 11/2011 CONTRACT NO. XX6615185

DESIGNED BY DM COUNTY WORCESTER
DRAWN BY DM LOGMILE 23005010.46
CHECKED BY RM 11/11/11 TIMS NO. K921
F.A.P. NO. TOD NO.

TS NO. 4802 | DRAWING - OF | SHEET NO. 4 OF 4

PLOTTED: Wednesday, November 16, 2011 AT 01:16 PM
FILE: P:\09-002 TEDD\Task 77 US 50 @ Holly Grove Rd\Drawings\CADD\Working\pGG-P030_US50@HollyGroveRd.dgn

BY: davidma -