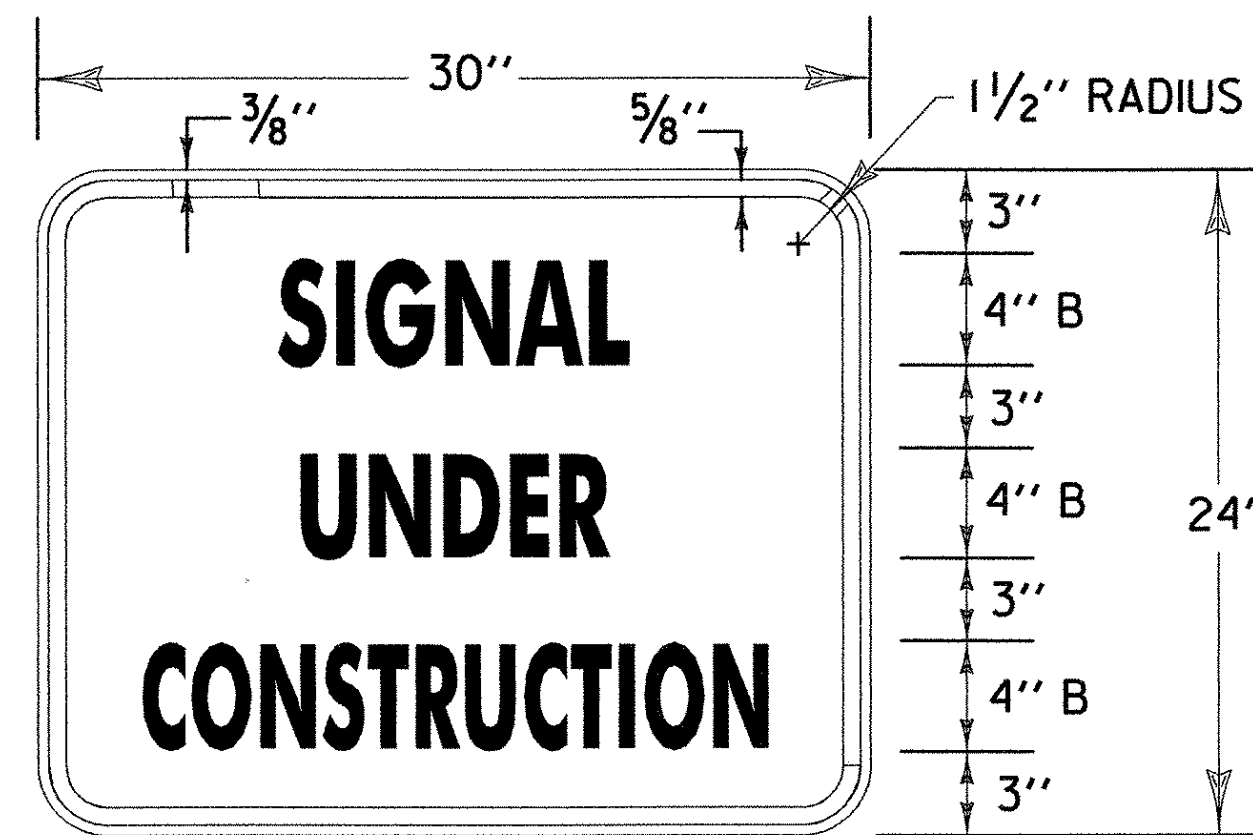


TRAFFIC SIGNAL NOTES

- A. NEW EQUIPMENT
 - 1. ALL SIGNALS MOUNTED ON CANTILEVERED MAST ARMS SHALL BE RIGIDLY MOUNTED. ALL SIGNAL HEADS SHALL BE POLYCARBONATE. ALL NEW TRAFFIC AND PEDESTRIAN SIGNAL LENSES SHALL BE LED TO BE OPTICALLY PROGRAMMED. ALL SIGNAL HEADS SHALL INCLUDE DISCONNECT HANGERS (WHERE NEEDED), AND BACKPLATES SHALL BE INCLUDED AS SPECIFIED ON THE PLANS.
 - 2. ALL CONTROLLERS SHALL BE ECONOLITE BRAND, MODEL ASC/2S-2100 (TS-2 TYPE 2). MASTER CONTROLLERS SHALL BE MODEL ASC/2M-1000, AND ALL GROUND MOUNTED CABINETS SHALL BE TYPE P.
 - 3. A DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R) LOCKED CABINET ON A STANCHION OR ON THE SIDE OF THE STRAIN POLE NEXT TO OR BELOW THE METER SOCKET (SEE STD E-175). WHEN A TELEPHONE DROP IS USED ON THE PROJECT, THE TELEPHONE FUSE BOX SHALL BE INSTALLED ON THE STANCHION, A SEPARATE CIRCUIT BREAKER SHALL BE INSTALLED FOR ROADWAY LIGHTING, IF APPLICABLE.
 - 4. PUSHBUTTONS AND PEDESTRIAN SIGNS SHALL BE PROVIDED WITH ALL PROPOSED PEDESTRIAN SIGNALS.
 - 5. SIDE MOUNTED PEDESTRIAN SIGNALS, PUSHBUTTONS, SIGNS, AND CONTROLLERS SHALL BE MOUNTED TO THE POLE ON THE SIDES SHOWN IN THE MAST ARM CROSS SECTION SHEETS.
 - 6. PEDESTRIAN PEDESTAL POSTS SHALL BE LOCATED 10 FEET BEHIND SIDEWALK UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 - 7. FOR THE SIGNAL AT THE SCHOOL ENTRANCE, THE CONTRACTOR SHALL PROVIDE A MALFUNCTION MANAGEMENT UNIT (MMU) TESTER, A LOOP DETECTOR TESTER AND A BUS INTERFACE UNIT (BIU) TESTER TO THE TOWN OF HARTFORD AS PART OF THIS PROJECT. COST TO BE INCLUDED UNDER ITEM 678J5 - TRAFFIC CONTROL SIGNAL SYSTEM - INTERSECTION (HIGHLAND & SCHOOL).
 - 8. ALL PEDESTRIAN PUSHBUTTONS SHALL COMPLY WITH ADA STANDARDS AND THE SPECIFICATIONS.
- B. SIGNAL OPERATION
 - 1. SWITCH-OVER FROM EXISTING TO REPLACEMENT SIGNALS SHALL NOT BE DONE DURING PEAK TRAFFIC PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING SWITCH-OVER.
- C. PULL BOXES AND JUNCTION BOXES
 - 1. PULL BOXES/JUNCTION BOXES ARE DETAILED ON STD E-173.
 - 2. THE LOGO ON THE PULL BOXES/JUNCTION BOXES SHALL BE "SIGNAL".
- D. TRAFFIC SIGNAL CONDUIT
 - 1. ALL TRAFFIC SIGNAL CONDUIT SHALL BE PVC UNLESS OTHERWISE SPECIFIED.
 - 2. MINIMUM CONDUIT SIZES SHALL BE:
 - A) 1 1/2" FOR INTERCONNECT CABLE AND LOOP WIRE.
 - B) 2" FOR SHIELDED LEAD-IN CABLE, SIGNAL CABLE, POWER CABLE AND ALL OTHERS, UNLESS SPECIFIED OTHERWISE ON THE PLANS. SEE CHART ON STD E-172 FOR DESIGN VALUES.
 - 3. WHEN CONDUIT IS PLACED BELOW THE ROADWAY OR ACROSS SIDE ROADS, IT SHALL BE PLACED IN A PVC ELECTRICAL CONDUIT SLEEVE, SIZE AS SHOWN ON THE PLANS.
 - 4. EXISTING CONDUIT MAY BE PRESENT AT THE INTERSECTION OF U.S. ROUTE 5, U.S. ROUTE 4 AND VT 14. INFORMATION ON SIZE AND LOCATION IS UNAVAILABLE AT THIS TIME. THE CONTRACTOR MAY UTILIZE EXISTING CONDUIT FOR WIRE RUNS IN LIEU OF INSTALLING NEW CONDUIT PROVIDED THE CONTRACTOR LOCATES THE EXISTING CONDUIT DURING CONSTRUCTION AND IT IS IN GOOD CONDITION AND OF ADEQUATE SIZE FOR THE REQUIRED WIRING. ALL EXISTING CONDUITS TO BE REUSED UNDER THIS PROJECT SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE INSTALLATION OF SIGNAL WIRING IN EXISTING CONDUIT SHALL BE PAID FOR UNDER ITEM 678.24 - ELECTRICAL WIRING.
- E. VEHICLE LOOP DETECTORS - SEE STD E-172.
 - 1. LOOPS SHALL EXTEND 5' AHEAD OF STOP BAR UNLESS OTHERWISE NOTED ON THE PLANS.
- F. REMOVAL OF EXISTING OR REUSE OF SALVAGED EQUIPMENT
 - 1. REMOVED AND NOT REUSED EQUIPMENT SHALL BE DELIVERED TO THE VTRANS DISTRICT GARAGE. UNWANTED EQUIPMENT MUST BE DISPOSED OF BY THE CONTRACTOR. REMOVAL OF EQUIPMENT SHALL INCLUDE REMOVAL OF CONCRETE BASES OR CUTTING BASES (FT BELOW GRADE, AND BACKFILL OF THE HOLES. ANY EQUIPMENT THAT IS DAMAGED OR LOST BY THE CONTRACTOR DURING REMOVAL SHALL BE REPAIRED OR REPLACED, TO THE SATISFACTION OF VTRANS AT THE CONTRACTOR'S EXPENSE.
 - 2. ALL SALVAGED OR REUSED EQUIPMENT SHALL BE THOROUGHLY CLEANED AND PAINTED AS REQUIRED, BEFORE REUSE.
 - 3. IT IS ASSUMED THAT ALL EXISTING LOOPS AND SIGNAL CABLE WHICH ARE TO BE USED IN THE PROPOSED SIGNAL DESIGN ARE IN GOOD CONDITION AND WORKING PROPERLY. ANY LOOPS OR CABLES FOUND NOT TO BE IN GOOD WORKING ORDER SHALL BE REPLACED BY THE CONTRACTOR. PAYMENT FOR THIS WORK SHALL BE PAID AT THE UNIT PRICE BID FOR THAT ITEM.
- G. GENERAL
 - 1. THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY LOCAL PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE SIGNAL AND STREET LIGHTING EQUIPMENT, IF APPLICABLE. THE ROUTING OF POWER TO THE INTERSECTION SHALL BE SUCH THAT VTRANS HAS FULL RESPONSIBILITY FROM THE TRANSFORMER THROUGH THE SIGNAL. NO INTERVENING OWNERSHIP/RESPONSIBILITY SHALL BE ALLOWED.
 - 2. A METAL PLAQUE LISTING OWNERSHIP AND EMERGENCY PHONE NUMBERS SHALL BE ATTACHED TO THE OUTSIDE OF THE CONTROLLER CABINET. CONTACT THE VTRANS DISTRICT OFFICE TO VERIFY APPROPRIATE PHONE NUMBERS.
- H. COORDINATION, ETC.
 - 1. A WIRELESS SPREAD SPECTRUM RADIO ASSEMBLY SHALL BE USED FOR THE SIGNAL COORDINATION BETWEEN THE INTERSECTION OF U.S. ROUTE 5, U.S. ROUTE 14 AND VT 14 AND THE INTERSECTION OF U.S. ROUTE 5, HIGHLAND AVENUE, AND WORCESTER AVENUE. UNDERGROUND INTERCONNECT CABLE SHALL BE USED FOR SIGNAL COORDINATION BETWEEN THE INTERSECTION OF U.S. ROUTE 5, HIGHLAND AVENUE, AND WORCESTER AVENUE AND THE INTERSECTION OF HIGHLAND AVENUE AND HIGH SCHOOL DRIVE.
 - 2. THE INTERCONNECT CABLE SHIELD MUST BE GROUNDED AT EACH LOCATION OR WHERE EVER THE OUTSIDE INSULATION IS BROKEN.
 - 3. THE CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE COMPANY TO PROVIDE PHONE DROPS AT EACH MASTER CONTROLLER LOCATION. COST OF PHONE DROP HOOKUP TO BE COVERED UNDER ITEM 678J5 FOR EACH INTERSECTION WITH A MASTER CONTROLLER.

TRAFFIC CONTROL NOTES

- 1. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, AT THE DISCRETION OF THE ENGINEER (OR OTHER DESIGNATED AGENCY REPRESENTATIVE), UNIFORMED TRAFFIC CONTROL OFFICERS OR TRAINED FLAGPERSONS SHALL DIRECT TRAFFIC, WHENEVER REQUIRED.
- 2. TRAFFIC CONTROL SIGNING AND CHANNELIZING DEVICES SHALL BE IN ACCORDANCE E-107, E-110, E-111.
- 3. AFTER SIGNAL INSTALLATION, ALL HEADS MUST BE COVERED (TURNING SHALL NOT BE ALLOWED) UNTIL TURN ON. THE METHOD OF COVERING SHALL BE AS FOLLOWS:
 - ALL NEW TRAFFIC AND PEDESTRIAN SIGNAL HEADS WHICH HAVE BEEN INSTALLED BUT NOT PLACED IN EITHER FLASHING OR FULL OPERATION SHALL BE COVERED. EXISTING SIGNAL HEADS WHICH ARE PLACED OUT OF SERVICE IN ORDER TO PERFORM WORK ON THE SIGNAL SYSTEM SHALL ALSO BE COVERED, EXCEPT WHEN SUCH WORK CAN BE COMPLETED IN A RELATIVELY SHORT PERIOD OF TIME (SEVERAL HOURS) AND TRAFFIC CONTROL HAS BEEN PROVIDED FOR.
 - THE SIGNAL COVERS SHALL CONSIST OF A ONE PIECE PLASTIC BAG HAVING A MINIMUM THICKNESS OF 4 MIL. THE BAG SHALL BE OPAQUE. THE COVER SHALL SLIP OVER THE ENTIRE SIGNAL HEAD AND SHALL BE SECURELY TIED AT THE OPENING WITH A ROPE OF SUFFICIENT SIZE AND STRENGTH TO SECURE THE COVER. AN INTERMEDIATE ROPE OF THE SAME MATERIAL SHALL BE DRAWN AROUND THE CENTER OF THE COVER TO PREVENT EXCESS FLAPPING IN THE WIND.
 - A DRAIN HOLE SHALL BE MADE AT THE BOTTOM OF THE BAG TO ALLOW THE ESCAPE OF MOISTURE. NO TAPE OR ADHESIVE WILL BE ALLOWED TO BE ATTACHED TO ANY SURFACE OF THE SIGNAL HOUSING OR LENSES. ALL COVERS SHALL BE PLACED IN A NEAT WORKMANLIKE MANNER. ANY COVER WHICH IS TORN OR MISSING SHALL BE IMMEDIATELY REPLACED. PAYMENT FOR THE COVERS, THEIR PLACEMENT, AND REMOVAL AND ALL INCIDENTALS FOR COMPLETION OF THE WORK SHALL BE CONSIDERED SUBSIDIARY TO THE INSTALLATION OF THE TRAFFIC SIGNAL.
- 4. WHERE TWO-WAY TRAFFIC IS MAINTAINED DURING CONSTRUCTION, THE SIGN PACKAGE SHOWN ON STD E-110 SHOULD BE USED. APPROACH CONSTRUCTION SIGNING SHALL REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PERIOD. OTHER SIGNING SHALL BE REMOVED OR COVERED WHEN NOT APPLICABLE.
- 5. VARIATIONS IN THE SIGNING PACKAGES MAY BE DICTATED BY UNIQUE GEOMETRY AND/OR TRAFFIC CONDITIONS.
- 6. THE CONTRACTOR SHALL NOT WORK WITHIN THE HIGHWAY ROW WITHOUT THE APPROPRIATE CONSTRUCTION SIGNING IN PLACE AS SHOWN ON STD E-100.
- 7. AT LOCATIONS WHERE SIGNALS CURRENTLY EXIST, A WORKING SIGNAL SYSTEM SHALL BE IN PLACE AT THE END OF EACH DAY. IF THE SIGNAL SYSTEM IS NOT WORKING AT THE END OF THE DAY, THE CONTRACTOR SHALL PROVIDE UNIFORMED TRAFFIC OFFICERS TO CONTROL TRAFFIC UNTIL SUCH TIME THAT THE EXISTING OR NEW SIGNAL IS IN OPERATION AT NO COST TO THE STATE.
- 8. SIGNAL UNDER CONSTRUCTION SIGN PANELS SHALL BE MOUNTED UNDER "ROAD CONSTRUCTION AHEAD" SIGNS ANYTIME SIGNAL SYSTEM WORK IS BEING PERFORMED (SEE SIGN DETAIL THIS SHEET).



MATERIALS: SEE STD. E-144M
 COLORS: TEXT & BORDER - BLACK
 BACKGROUND - ORANGE (REFL. ENCAPSULATED LENS)

CONSTRUCTION SIGN DETAIL

NOT TO SCALE

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

PROJECT: HARTFORD	PROJECT NO.: RS 0113(40)
DESIGN FILE NAME: z027bdr.DGN	PLOT DATE: 2/27/2007
IPARM FILE NAME:	SURVEY DATE: 1/87
SURVEYED BY: FANTONI	DRAWN BY: E. ATKINS
SQUAD LEADER: KEN UPMAL	SHEET: 173 OF 239