TRAFFIC SIGNAL NOTES

A. NEW TRAFFIC SIGNAL EQUIPMENT

1. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED. ALL LENSES SHALL BE LED UNLESS SPECIFIED ON THE PLANS TO BE OPTICALLY PROGRAMMED. ALL SIGNAL HEADS SHALL INCLUDE DISCONNECT HANGERS (WHERE NEEDED), AND BACKPLATES SHALL BE INCLUDED FOR ALL NEW SIGNALS .

2. THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS, INC. THE SIGNAL SYSTEM CONTROLLER SHALL BE AN ASC/3-2100 (TS 2 - TYPE 2) AND AN ASC/2M MASTER CONTROLLER MOUNTED IN CABINET P44 WITH BASE EXTENSION INSTALLED AT THE LOCATION SHOWN ON SHEET 48.

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). A SEPARATE CIRCUIT BREAKER SHALL BE INSTALLED FOR ROADWAY LIGHTING, IF APPLICABLE.

4. PUSH BUTTONS AND PEDESTRIAN SIGNS SHALL BE PROVIDED WITH ALL PROPOSED PEDESTRIAN SIGNALS.

5. PEDESTRIAN PEDESTAL POSTS SHALL BE LOCATED 1.0' BEHIND SIDEWALK UNLESS OTHERWISE SPECIFIED ON THE PLANS.

6. ALL PEDESTRIAN PUSH BUTTONS SHALL COMPLY WITH ADA STANDARDS AND THE SPECIFICATIONS.

7. ANY OTHER MISCELLANEOUS EQUIPMENT AND LABOR NECESSARY TO PROVIDE A FULLY FUNCTIONAL VIDEO DETECTION SYSTEM SHALL BE INCIDENTIAL TO ITEM * 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION.

8. VIDEO VEHICLE DETECTORS SHALL BE PLACED SO THAT OCCLUSION IS MINIMIZED AND PHASING IS NOT AFFECTED.

9. VIDEO VEHICLE DETECTION AREAS SHALL EXTEND 5 FT PAST THE STOP BAR.

10. VIDEO VEHICLE DETECTION SYSTEM SHALL BE ECONOLITE AUTOSCOPE SOLO TERRA OR ITERIS VERSICAM OR TRAFICON VIP SERIES OR APPROVED EQUAL.

11. ALL MAST ARMS, POLES, AND PEDESTAL POSTS SHALL BE PAINTED BLACK.

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. PULLBOXES AND JUNCTION BOXES FOR TRAFFIC SIGNALS

1. PULLBOXES/JUNCTION BOXES ARE DETAILED ON STD E-173.

2. THE LOGO ON THE PULLBOXES/JUNCTION BOXES SHALL BE "SIGNAL".

D. TRAFFIC SIGNAL CONDUIT

1. ALL TRAFFIC SIGNAL CONDUITS SHALL BE PVC UNLESS OTHERWISE SPECIFIED.

2. MINIMUM CONDUIT SIZES SHALL BE:
   A) 1 1/2 " FOR INTERCONNECT CABLE.
   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 AN ELECTRICAL CONDUIT SLEEVE (8") (PVC).

4. EXISTING CONDUIT MAY BE PRESENT AT THE INTERSECTION OF V.T. ROUTE 15 AND ROLAND COURT. 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. REMOVAL OF EXISTING OR REUSE OF SALVAGED TRAFFIC SIGNAL EQUIPMENT

1. AT THE DISCRETION OF THE CITY OF WINOOSKI, REMOVED AND NOT REUSED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE CITY OF WINOOSKI GARAGE. UNWANTED TRAFFIC SIGNAL EQUIPMENT MUST BE DISPOSED OF BY THE CONTRACTOR. REMOVAL OF TRAFFIC SIGNAL EQUIPMENT SHALL INCLUDE REMOVAL OF CONCRETE BASES OR CUTTING BASES ONE FOOT BELOW GRADE, AND BACKFILLING OF THE HOLES. ANY TRAFFIC SIGNAL EQUIPMENT THAT IS DAMAGED OR LOST BY THE CONTRACTOR DURING REMOVAL SHALL BE REPAIRED OR REPLACED, TO THE SATISFACTION OF VTRANS AND THE CITY OF WINOOSKI AT THE CONTRACTOR'S EXPENSE. THE CONTACT PERSON FOR THE CITY OF WINOOSKI SHALL BE STEVE PALMER, CITY ENGINEER, (802) 655-6423. THE REMOVAL, TRANSPORTING, SALVAGING, AND DISPOSAL OF EXISTING SIGNAL EQUIPMENT SHALL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (REMOVAL OF EXISTING TRAFFIC CONTROL SIGNAL SYSTEM).

2. ALL SALVAGED OR REUSED TRAFFIC SIGNAL EQUIPMENT SHALL BE THOROUGHLY CLEANED AND PAINTED AS REQUIRED, BEFORE REUSE.

F. 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 CITY ENGINEER IN THE CITY OF WINOOSKI TO VERIFY APPROPRIATE PHONE NUMBERS.

G. COORDINATION, ETC.

1. A 14 GUAGE NO.7 WIRE SHALL BE USED AS THE TELEMETRY INTERCONNECT CABLE BETWEEN THE EXIT 15 ON-RAMP AND OFF-RAMP FOR SIGNAL COORDINATION. THE TELEMETRY INTERCONNECT CABLE SHALL BE INSTALLED UNDERGROUND IN NEW CONDUIT BETWEEN JBI AND THE PROPOSED CONTROLLER AT THE ROUTE 15/OFF RAMP INTERSECTION AND IN EXISTING UNDERGROUND CONDUIT BETWEEN JBI AND THE SIGNAL CONTROLLER AT THE ROUTE 15/ON-RAMP INTERSECTION.

2. THE INTERCONNECT CABLE SHIELD SHALL BE GROUNDED AT EACH LOCATION OR WHERE EVER THE OUTSIDE INSULATION IS BROKEN.

TRAFFIC CONTROL NOTES FOR TRAFFIC SIGNAL WORK

1. THE FOLLOWING NOTES APPLY TO TRAFFIC CONTROL NECESSARY FOR THE INSTALLATION OR MODIFICATION OF THE TRAFFIC SIGNALS ONLY. FOR OVERALL PROJECT TRAFFIC CONTROL MANAGEMENT REQUIREMENTS REFER TO TRAFFIC MANAGEMENT PLANS AND SECTION 641.

2. DURING CONSTRUCTION, TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON VT ROUTE 15. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT NIGHT, ON WEEKENDS AND HOLIDAYS, DURING PEAK TRAFFIC AND DURING CONSTRUCTION. AT THE DISCRETION OF THE RESIDENT ENGINEER (OR OTHER DESIGNATED AGENCY REPRESENTATIVE), UNIFORMED TRAFFIC CONTROL OFFICERS OR TRAINED FLAG PERSONS SHALL DIRECT TRAFFIC, WHENEVER REQUIRED.

3. TRAFFIC CONTROL SIGNING AND CHANNELIZING DEVICES SHALL BE IN ACCORDANCE WITH THE APPROPRIATE STANDARD DRAWINGS (E-101, E-102, E-106, E-107, E-110, E-111) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES .

4. AFTER SIGNAL INSTALLATION, ALL HEADS MUST BE COVERED (TURNING SHALL NOT BE ALLOWED) UNTIL TURNED 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 INCIDENTAL TO THE INSTALLATION OF THE TRAFFIC SIGNAL.

5. 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.

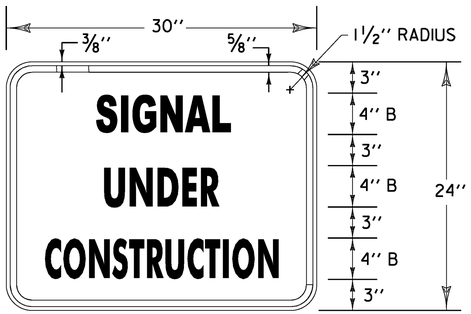
6. VARIATIONS IN THE SIGNING PACKAGES MAY BE DICTATED BY UNIQUE GEOMETRY AND/OR TRAFFIC CONDITIONS AND THE TRAFFIC MANAGEMENT PLANS.

7. THE CONTRACTOR SHALL NOT WORK WITHIN THE HIGHWAY ROW WITHOUT THE APPROPRIATE CONSTRUCTION SIGNING IN PLACE AS SHOWN ON STD E-100.

8. 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.

9. "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).

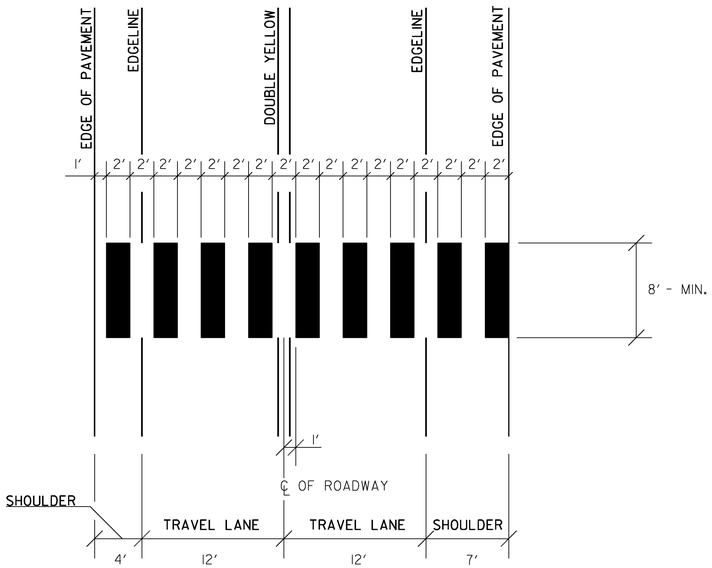
10. THE TYPE OF TEMPORARY TRAFFIC BARRIER USED ON THIS PROJECT SHALL COMPLY WITH NCHRP REPORT 350 TEST LEVEL THREE (TL-3). TEMPORARY TRAFFIC BARRIER MEETING THIS REQUIREMENT CAN BE FOUND AT THE FOLLOWING FHWA WEBSITE: http://safety.fhwa.dot.gov/.



MATERIALS: SEE STD. E-144
COLORS: TEXT & BORDER - BLACK
BACKGROUND - ORANGE (RETROREFLECTIVE SHEETING)

CONSTRUCTION SIGN DETAIL

NOT TO SCALE



ADJUST SPACING (1 - 2 FT) TO AVOID WHEEL PATHS

BLOCK TYPE CROSSWALK DETAIL

PROJECT NAME:	WINOOSKI
PROJECT NUMBER:	NH 089-3(65)
FILE NAME: z94d198trfbdr.dgn	PLOT DATE: 2/23/2010
PROJECT LEADER: KEN UPMAL	DRAWN BY: J.WILTSHIRE
DESIGNED BY: J.SOBEL	CHECKED BY: D.FLYNN
TRAFFIC SIGNAL DETAILS SHEET 1	SHEET 51 OF 67