



SCHULTZ

February 3, 2015

State of Vermont Agency of Transportation
Southwest Regional Construction Office
61 Valley View
Mendon, VT 05701

Attn: Chris Williams, R.E.

**Re: *Town of Castleton, VT Route 30
BRF 015-2(10) – BR 93
Traffic Control Plan***

Dear Mr. Williams:

During the course of construction for Bridge 93 on Route 30 traffic control will be necessary. W.M. Schultz Construction Inc. (WMSCI) intends to limit our impact on the traveling public as much as possible.

To help with this WMSCI will utilize daily temporary single lane traffic setups with the help of flaggers before and after the allowed contract bridge closure period. At a minimum traffic will remain open to alternating one lane traffic in each direction on route 30. When physical work begins we will have one lane alternating traffic controlled with the proper traffic control devices as needed directing each side when to proceed.

The detour installation in VT will be completed with sheriffs deployed with the crew and for the section in NYS a short duration closure will be implemented. Proper permits will be filled accordingly before with NYS. Once the contract allowed bridge closure period has begun the contract planned detour will be implemented. Much of the traffic control devices for the detour will already be in place. If any adjustments or changes must be completed, such as message board text, or barricades moved into place, they will be addressed just prior to the shutdown.

While construction activities related to the railroad are ongoing all activities will be coordinated with the railroad and railroad protective personnel will be utilized as required.

Traffic setups will comply with the contract plans, specifications, VTRANS section 641 and the MUTCD.

- Attached are drawings of our proposed traffic setups, along with applicable standards & plan sheets.
- We plan to deploy message boards at least 2 weeks prior to the detour and road closure.
- Sign location, layout and setup will occur prior to initiation of the detour; signs will remain covered until the detour is initiated.
- Driveways will be maintained or have alternative access provided.
- Flaggers will be used as needed and communicate with 2 way radios.
- All traffic control devices such as signs, signals, message boards, arrow boards, cones, barricades, drums and barrier will comply with VTRANS standard sheets and the MUTCD.
- Initially temporary lane closures will be utilized until the contract allowed bridge closure period.
- During the bridge closure period the plan detour traffic control setup will be utilized.
- After the bridge closure period it may be necessary to use single lane traffic to continue to finish some minor work items.

PHASE 1 – Daily Closures, Single Lane Alternating Traffic with Flaggers

- Initial job mobilization will use temporary daily single lane closures to unload equipment and materials.
- Initial site access and staging will require daily single lane closures.
- Pre setup of signs and detour closure items.

PHASE 2 – Initiate Detour, Bridge Closure Period

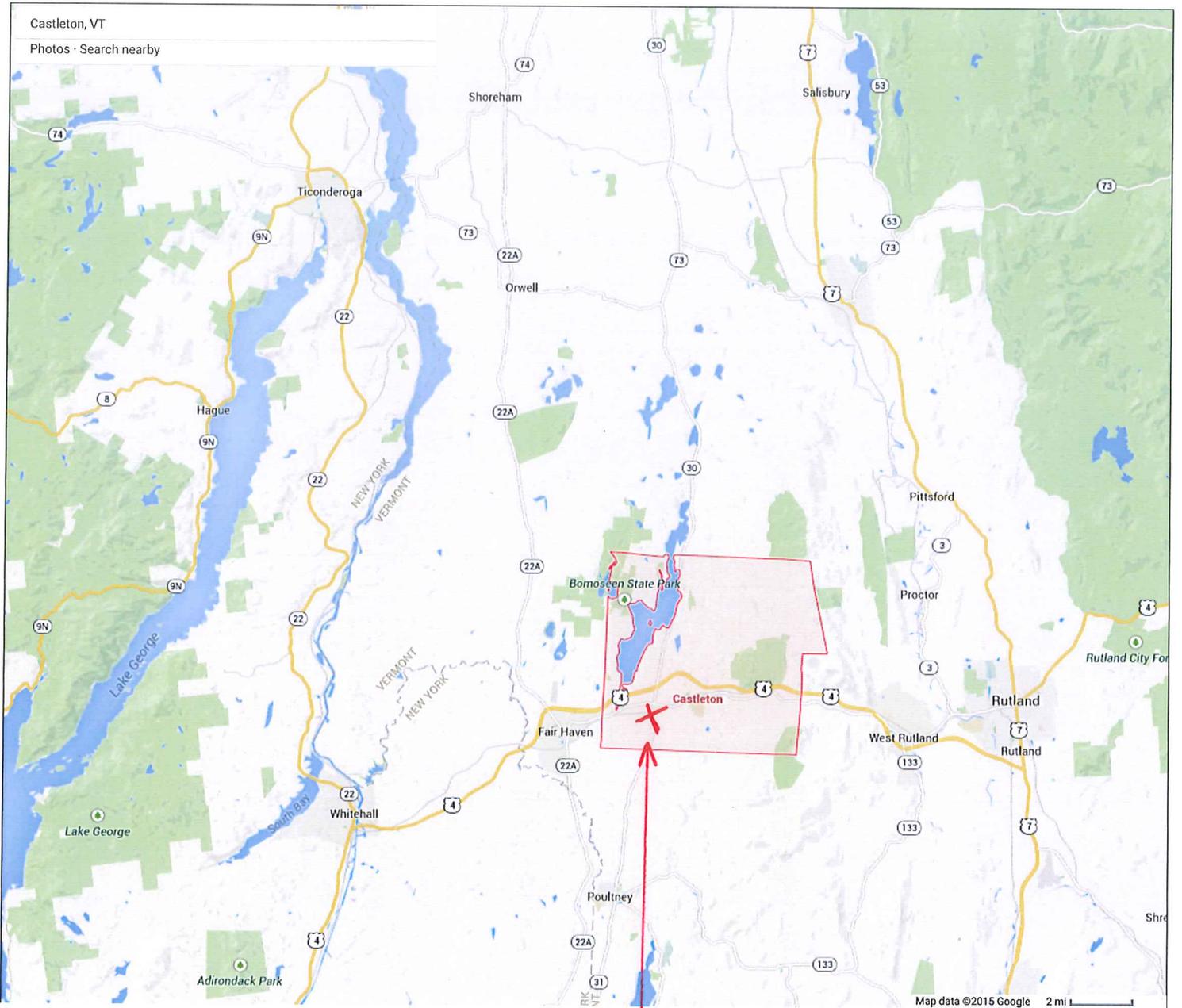
- Implement use of traffic control devices for detour around bridge site.
- Dismantle and removal of existing bridge structure and components
- Complete new bridge installation and all major critical items.
- Utilize railroad protective personnel

PHASE 3 – Daily Closures, Single Lane Alternating Traffic with Flaggers

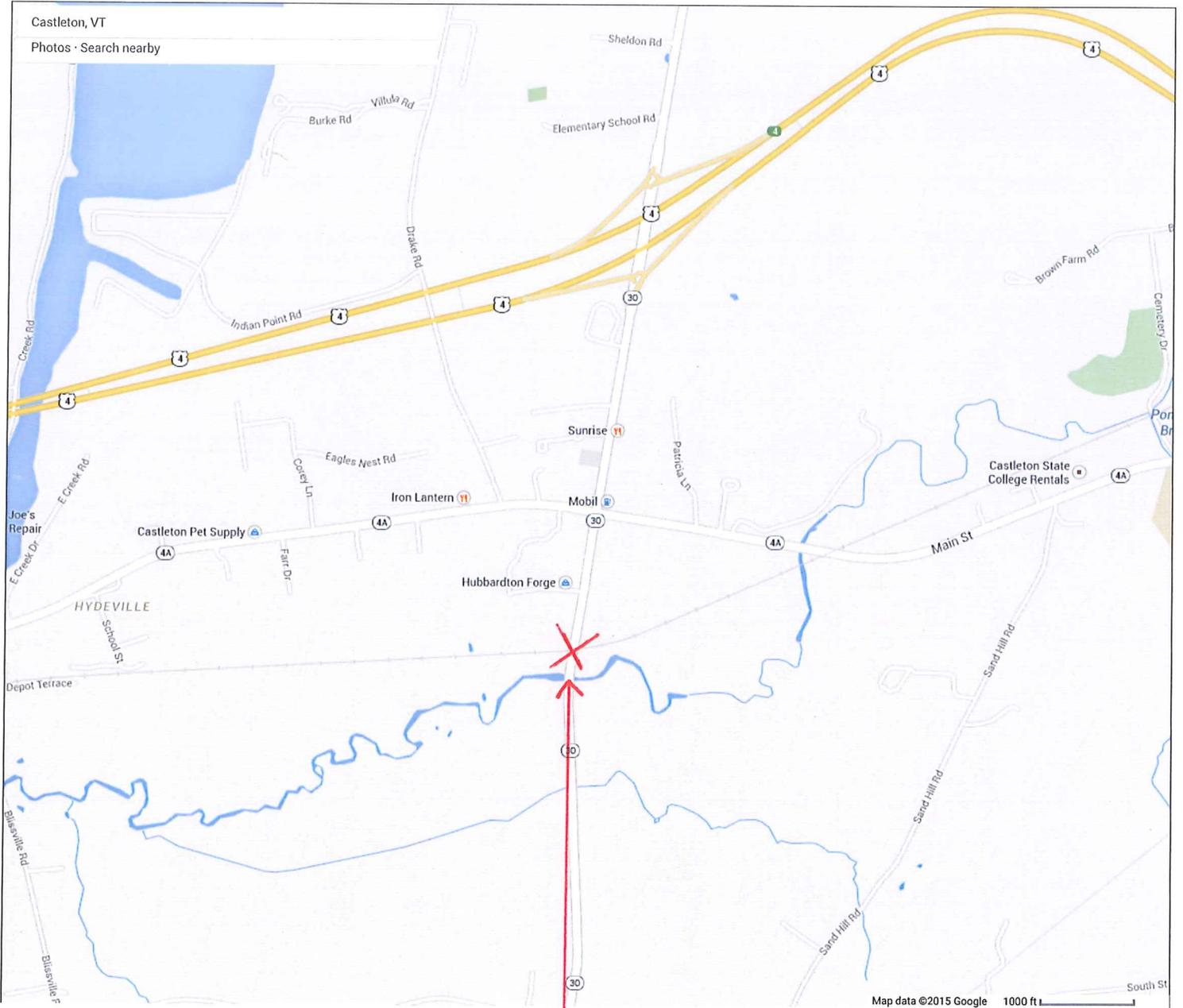
- Complete any remaining minor items of work.
- Site cleanup and de – mobilization.

Sincerely,
WM Schultz Construction, Inc.

Michael D Garn
Asst. Project Manager



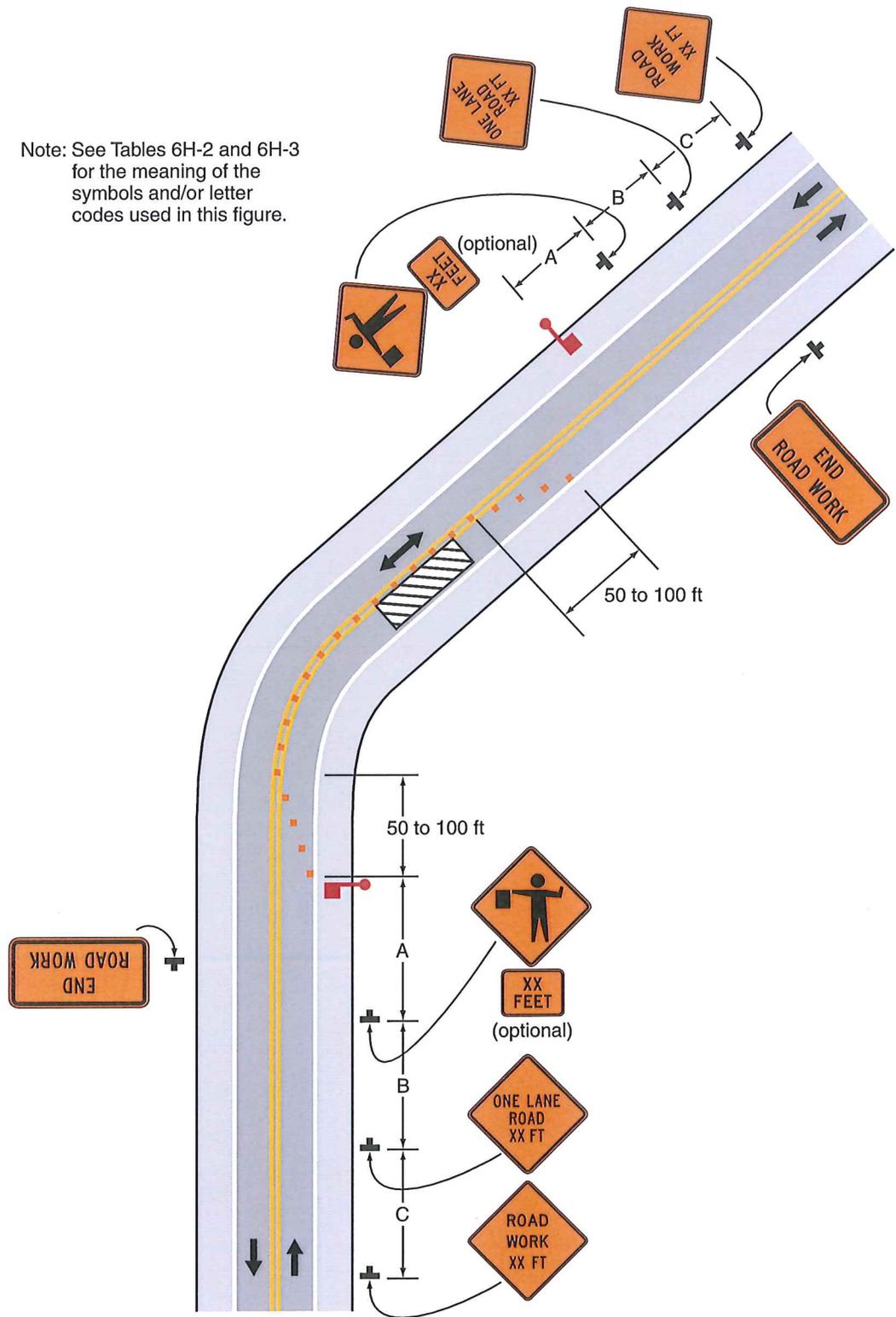
Approx. Site Location



Approx. Site Location

Figure 6H-10. Lane Closure on a Two-Lane Road Using Flaggers (TA-10)

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

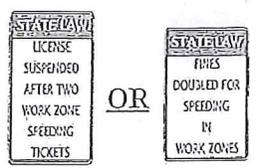


Typical Application 10

RURAL HIGHWAY

TAST-C7

Speed Limit (mph)	Buffer Space (feet)	Taper Lengths (L) based on 12 ft lane shifts (feet)	Shoulder Taper (L/3) (feet)
30	200	180	60
35	250	245	80
40	305	320	110
45	360	540	180
50	425	600	200
55	495	660	220

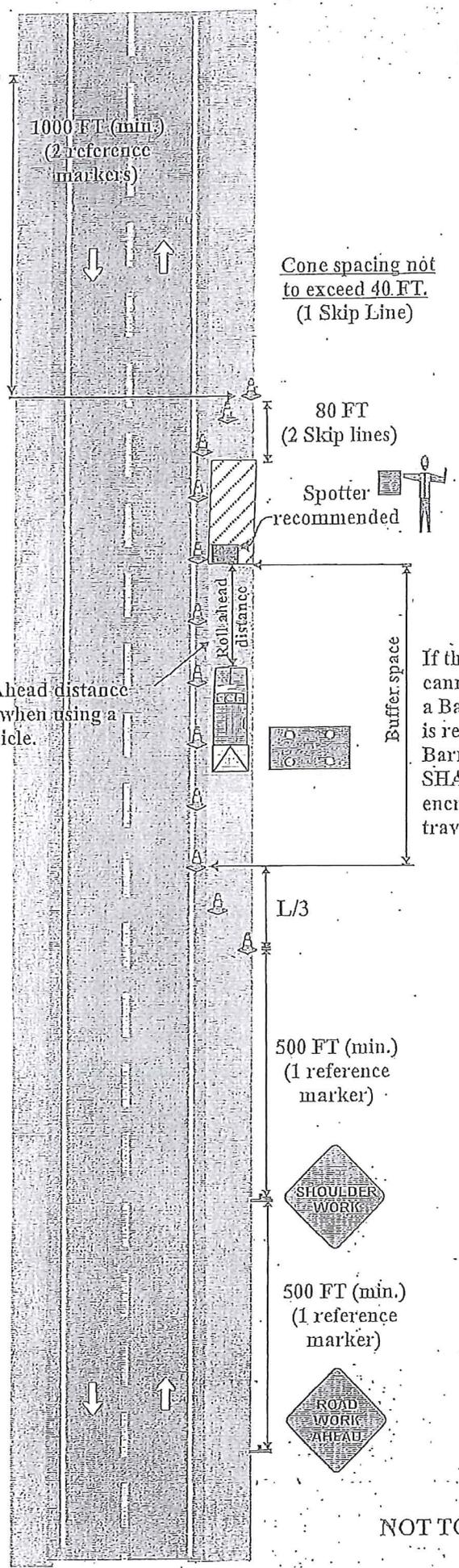


NYR9-11 24x42in. OR NYR9-12 24x36in.

State Law sign to be placed 300 to 500 FT in advance of initial warning sign.

- W21-5 36x36in.
- W20-1 36x36in.
- Work area
- Arrow panel (caution mode)
- Warning flags- optional (minimum 18x18)
- Barrier vehicle with attenuator

NYSDOT
WORK ZONE TRAFFIC CONTROL
 FOR
 SHORT-TERM STATIONARY
 OPERATION INVOLVING
 SHOULDER CLOSURE
 ON
 RURAL
 TWO-LANE CONVENTIONAL
 HIGHWAY
 MARCH 2008 TAST-C7



Cone spacing not to exceed 40 FT. (1 Skip Line)

80 FT (2 Skip lines)

Spotter recommended

80 ft. Roll Ahead distance is required when using a Barrier vehicle.

If the Buffer space cannot be obtained, a Barrier vehicle is required. Barrier vehicle SHALL NOT encroach into travel lane.

L/3

500 FT (min.) (1 reference marker)

500 FT (min.) (1 reference marker)

NOT TO SCALE

Prior to receiving approval from the Engineer and the Town of Poultney Representative to perform the work, the Contractor shall provide the Engineer with an itemized invoice for the work to be completed and all supporting documentation used by the Contractor in determining the cost of the work, including material, labor, and equipment costs. Once the work is completed and accepted by the Engineer and the Town of Poultney Representative, the Contractor will be reimbursed for the work at the previously agreed upon price shown on the itemized invoice.

- (b) The lump unit will be adjusted to the actual amount paid to the Contractor for maintaining the designated detour streets in the pre-closure survey condition during the BCP.

No additional payment will be made under this Contract item. All costs for performing the pre- and post-closure surveys, providing written surveys, and a DVD as required, to the Engineer and Town of Poultney Representative, and other coordination required for reviewing roadway conditions will be considered incidental to all Contract items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Local Roadway Maintenance) (N.A.B.I.)	Lump Unit

MAINTENANCE OF RAILROAD TRAFFIC

- 84. DESCRIPTION. This work shall consist of maintaining railroad traffic and coordinating with the Agency and the Railroad for inspection and review of the Contractor's work in conjunction with construction operations to be performed within the Railroad right-of-way, in accordance with the Contract Documents and as directed by the Engineer.
- 85. GENERAL REQUIREMENTS. When, as stipulated in the Contract Documents, or in the opinion of the Engineer and the Chief Engineering Officer of the Railroad, the construction work would cause hazard to the safe operation of trains and other facilities of the Railroad, including signal and communication lines, the Railroad will furnish the necessary qualified employees to protect their trains and other facilities.

Protection services will be required whenever the Contractor is performing work over, under, or adjacent to the railroad tracks or right-of-way such as excavation, sheeting, shoring, erection, or removal of forms; handling material; using equipment which by swinging or by failure could foul the track; and when any other type of work being performed, in the opinion of the Railroad, requires such service.

The Contractor is advised that although the cost for protective services will be paid for on a lump sum basis by the Agency, the Contractor shall be required to plan, coordinate, and organize the work effort in a way that shall absolutely minimize the use and number of railroad protective personnel required. The Agency and a Railroad representative will review and approve all Contractor work schedules prior to the commencement of work and prior to the assignment of protective personnel. Misuse of these protective services by the Contractor due to inadequate work procedures will not be allowed and shall be sufficient cause for the Agency to require the Contractor to bear all inappropriate costs.

Railroad train crews necessary for the operation of Contractor scheduled work trains or Contractor owned or leased locomotive equipment shall not be paid by the Agency under this Section; all such costs will be considered incidental to the Contractor's work and therefore shall be entirely borne by the Contractor.

All existing signs, markers, and other informational indicators associated with the operations of the Agency or the Railroad that are removed by the Contractor in the performance of this work shall be preserved and reinstalled as soon as possible. Reinstallation shall precede any train operation at the same locations as they are removed. Any sign, marker, or other information indicator that is damaged by the Contractor's operations shall be considered a charge against the Contractor and shall be paid for by the Contractor or deducted from any monies due or that may become due the Contractor under this Contract.

Railroad traffic shall be maintained at all times with safety and continuity, and the Contractor shall conduct all operations on or over the railroad right-of-way fully within the rules, regulations, and requirements of the Agency and the Railroad. The Contractor shall be responsible for becoming acquainted with such requirements as the Railroad and/or Agency demands.

Existing train operations may include, but are not limited to, the following:

- (a) Regularly scheduled passenger trains.
- (b) Regularly scheduled freight trains.
- (c) Other unscheduled trains or equipment being moved by the various Railroads.

86. SUBMITTALS.

- (a) At the preconstruction meeting, the Contractor shall submit for approval by the Agency a detailed description of proposed methods for accomplishing the construction work required under the Contract, to include methods for protecting Railroad traffic. Approval by the Agency shall not serve in any way to relieve the Contractor of complete responsibility for the adequacy and safety of the proposed methods.
- (b) Prior to beginning work, the Contractor shall submit for the approval of the Engineer a detailed description of the procedure(s) for work to be performed over, under, within, or adjacent to the Railroad right-of-way. Work shall not proceed until the proposed procedure(s) have been approved by the Agency.

87. CONSTRUCTION REQUIREMENTS. The Contractor shall obtain verification of the time and schedule of track occupancy from the Railroad before proceeding with any construction or demolition work over, under, within, or adjacent to the Railroad right-of-way.

All work to be done under, upon, or over the Railroad right-of-way shall be performed by the Contractor in a manner satisfactory to the Engineer and shall be performed at such times and in such manner as to not interfere with the movement of trains or traffic upon the tracks. The Contractor shall use all necessary care and precaution to avoid accidents, delay, or interference with the trains or other property.

The Contractor shall give notice to the Railroad at least fifteen (15) days prior to the commencement of any work, or any portion of the work, over or adjacent to the Railroad right-of-way, so that necessary arrangements can be made promptly by the Railroad to protect railroad traffic.

The Contractor shall conduct the work and handle equipment and materials so that no part of any equipment should foul an operated track or wire line without the written permission of the Railroad. When it is noted that the work will foul an operating track, the Contractor shall give the Railroad written notice fifteen (15) days in advance so that, if approved, arrangements can be made for proper protection of the railroad.

Cranes, shovels, or any other equipment shall be considered to be fouling the track when located in such position that failure of same, with or without load, brings the equipment within the fouling limit.

Equipment of the Contractor to be used adjacent to the tracks shall be in first-class condition so as to fully prevent failures of defective equipment that might cause delay in the operation of trains or damage to Railroad facilities. The Contractor's equipment shall not be placed or put into operation adjacent to tracks without first obtaining permission from the Railroad. Under no circumstance shall any equipment or materials be placed or stored within 25 feet from the centerline of the track, unless otherwise directed.

Materials and equipment belonging to the Contractor shall not be stored adjacent to tracks without first obtaining permission from the Railroad. The Agency and/or Railroad will not be liable for damage to such materials and equipment from any cause. The Contractor shall keep the tracks adjacent to the site clear of all refuse and debris and shall leave the property in the condition existing before the start of construction operations.

The Contractor shall consult with the Railroad to determine the type of protection required to ensure safety and continuity of Railroad traffic incidental to the particular methods of operation and equipment to be used in the work. Any Construction Inspectors, track foremen or track watchmen, signalmen, or other employees deemed necessary for protective services by the Railroad, or its duly authorized representative to ensure the safety of trains contingent upon the Contractor's operations, shall be obtained from the Railroad by the Contractor.

The providing of such watchmen and other precautionary measures shall not, however, relieve the Contractor from liability for payment of damages caused by the Contractor's operations.

88. FLAGGING AND PROTECTIVE SERVICES. The Contractor shall make all arrangements with the Agency and the Railroad, as applicable, for railroad employees required for flagging and protective services.

Railroad flaggers shall be furnished in accordance with Section 630.

89. METHOD OF MEASUREMENT. The quantity of Special Provision (Maintenance of Railroad Traffic) (N.A.B.I.) to be measured for payment will be on a lump unit basis for the specified railroad flagging and protective services provided.

90. BASIS OF PAYMENT. Payment for Special Provision (Maintenance of Railroad Traffic) (N.A.B.I.) will be as follows:

- (a) A lump unit of forty thousand dollars (\$40,000) has been included in the bid proposal for flagging and protective services. Payment will be for reimbursing the Contractor for the actual invoice amounts paid to the Railroad by the Contractor for flagging and protective services. The Contractor shall submit four copies of paid receipted itemized bills from the Railroad for the flagging and protective services charges to the Agency for review and approval. The Contractor's overhead will not be reimbursed.
- (b) The lump unit will be adjusted to the actual amount paid to the Railroad for flagging and protective services, after review and approval of paid invoices.

No additional payment will be made under this Contract item. All other costs for coordination and maintenance of rail traffic in accordance with these provisions will be considered incidental to Special Provision (Maintenance of Railroad Traffic) (N.A.B.I.).

If the Contract is not completed within the specified time limit for completion of the Contract (or authorized extended time), no payment will be made for any costs incurred beyond the specified time of completion.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Maintenance of Railroad Traffic) (N.A.B.I.)	Lump Unit

BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY

91. DESCRIPTION. This work shall consist of constructing one or more courses of bituminous mixture on a prepared foundation in accordance with these specifications and the specific requirements of the type of surface being placed, and in reasonably close conformity with the lines, grades, thicknesses, and typical cross sections shown on the Plans or established by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and the appropriate provisions of Section 406 or Section 490 of the Standard Specifications.

92. MATERIALS. Materials shall meet the requirements of the following Subsections:

Performance-Graded Asphalt Binder.....	702.02
Emulsified Asphalt, RS-1H or CRS-1H.....	702.04
Aggregate for Marshall Bituminous Concrete Pavement...	704.10(a)
Aggregate for Superpave Bituminous Concrete Pavement..	704.10(b)

Aggregate shall meet requirements relating to Section 406 or 490, where so specified.

RT 30 & 4A

(N) 228 Vermont 30
Poultney, VT 05764

(S) 320 Vermont 30
Poultney, VT 05764

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

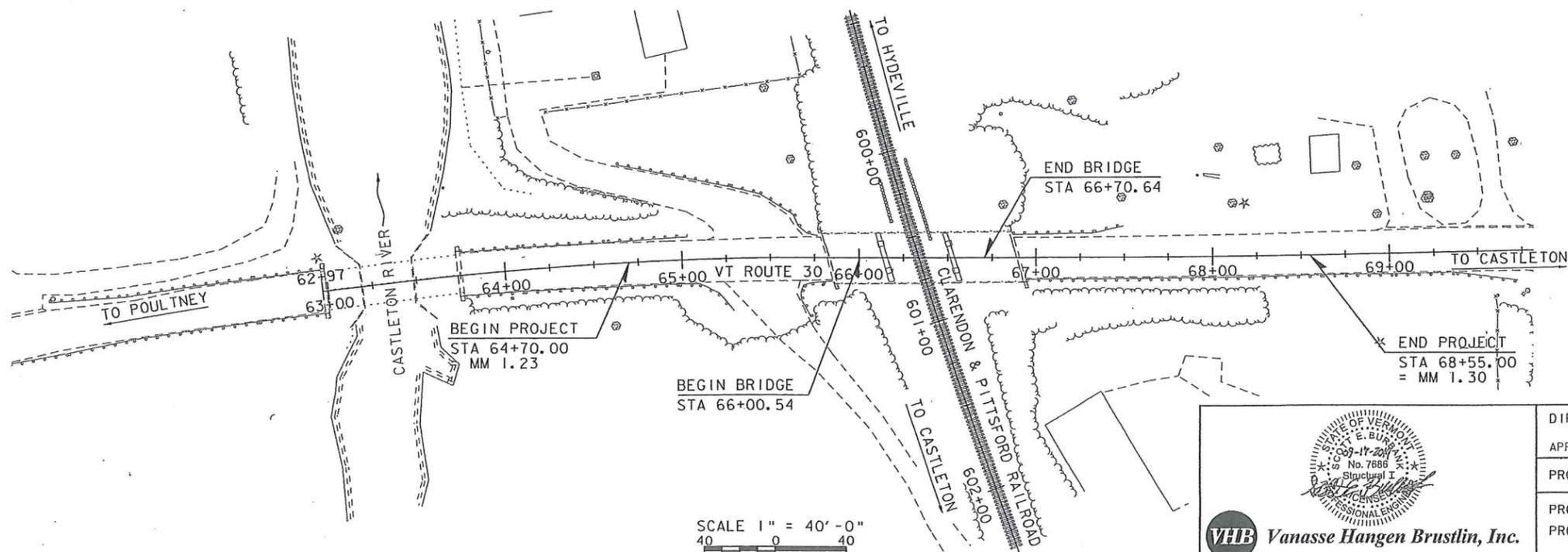
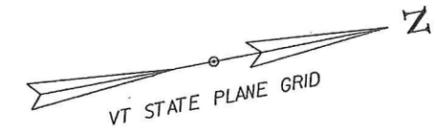
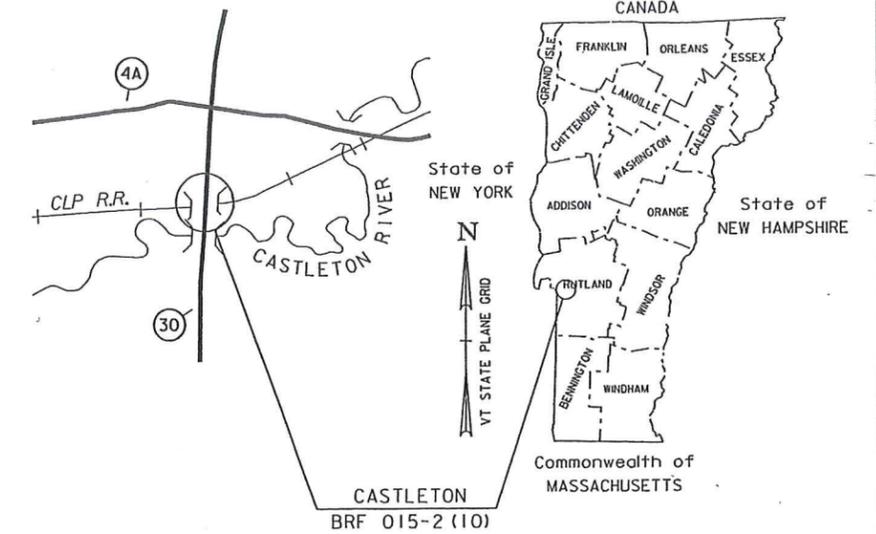
TOWN OF CASTLETON
COUNTY OF RUTLAND
VT ROUTE 30 (RURAL MINOR ARTERIAL), BRIDGE NO 93

PROJECT LOCATION: LOCATED IN THE COUNTY OF RUTLAND, TOWN OF CASTLETON, ON VT ROUTE 30; BRIDGE NO. 93 OVER THE CLARENDON AND PITTSFORD RAILROAD; APPROXIMATELY 0.3 MILES SOUTH OF INTERSECTION OF VT ROUTE 30 AND VT ROUTE 4A.

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF BRIDGE NO. 93 ON THE EXISTING ALIGNMENT, WITH ASSOCIATED ROADWAY AND RAIL WORK.

LENGTH OF STRUCTURE: 70.10 FEET
LENGTH OF ROADWAY: 314.90 FEET
LENGTH OF PROJECT: 385.00 FEET

LENGTH OF RAIL WORK: 1126.00 FEET



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	L. ORVIS
SURVEYED DATE :	03-28-2012
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD83 (1992)

SCALE 1" = 40'-0"
40 0 40

VHB Vanasse Hangen Brustlin, Inc.

DIRECTOR OF PROJECT DELIVERY	
APPROVED	<i>[Signature]</i> DATE 9/18/2014
PROJECT MANAGER :	JENNIFER M.V. FITCH, P.E.
PROJECT NAME :	CASTLETON
PROJECT NUMBER :	BRF 015-2 (10)
SHEET 1 OF 81 SHEETS	

PROJECT NOTES

TRAFFIC CONTROL

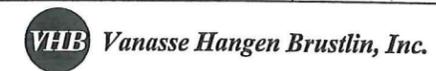
- 13. THE CONTRACTOR SHALL IMPLEMENT THE ROAD CLOSURE, TRAFFIC CONTROL, AND DETOUR AS SHOWN ON THE PLANS.
- 14. THE CONTRACTOR SHALL NOTIFY THE TOWN A MINIMUM OF SIX (6) WEEKS PRIOR TO CLOSING VT ROUTE 30. THE CONTRACTOR SHALL NOTIFY THE VT STATE POLICE DISPATCHER AT 802-468-5355, EXT 212; AND NEW YORK STATE WASHINGTON COUNTY DISPATCHER'S OFFICE AT 518-747-3325 A MINIMUM OF TWO (2) WEEKS PRIOR TO CLOSING VT ROUTE 30, IMMEDIATELY ONCE VT ROUTE 30 IS CLOSED AND AGAIN WHEN IT IS OPENED.
- 15. FULL ACCESS TO ALL DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
- 16. UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS OR NOTED OTHERWISE, ALL COSTS FOR WORK SHOWN ON THE TRAFFIC CONTROL SHEETS AND FOR TEMPORARY TRAFFIC CONTROL DEVICES WILL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR ITEM 641.10, "TRAFFIC CONTROL". THIS INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS:

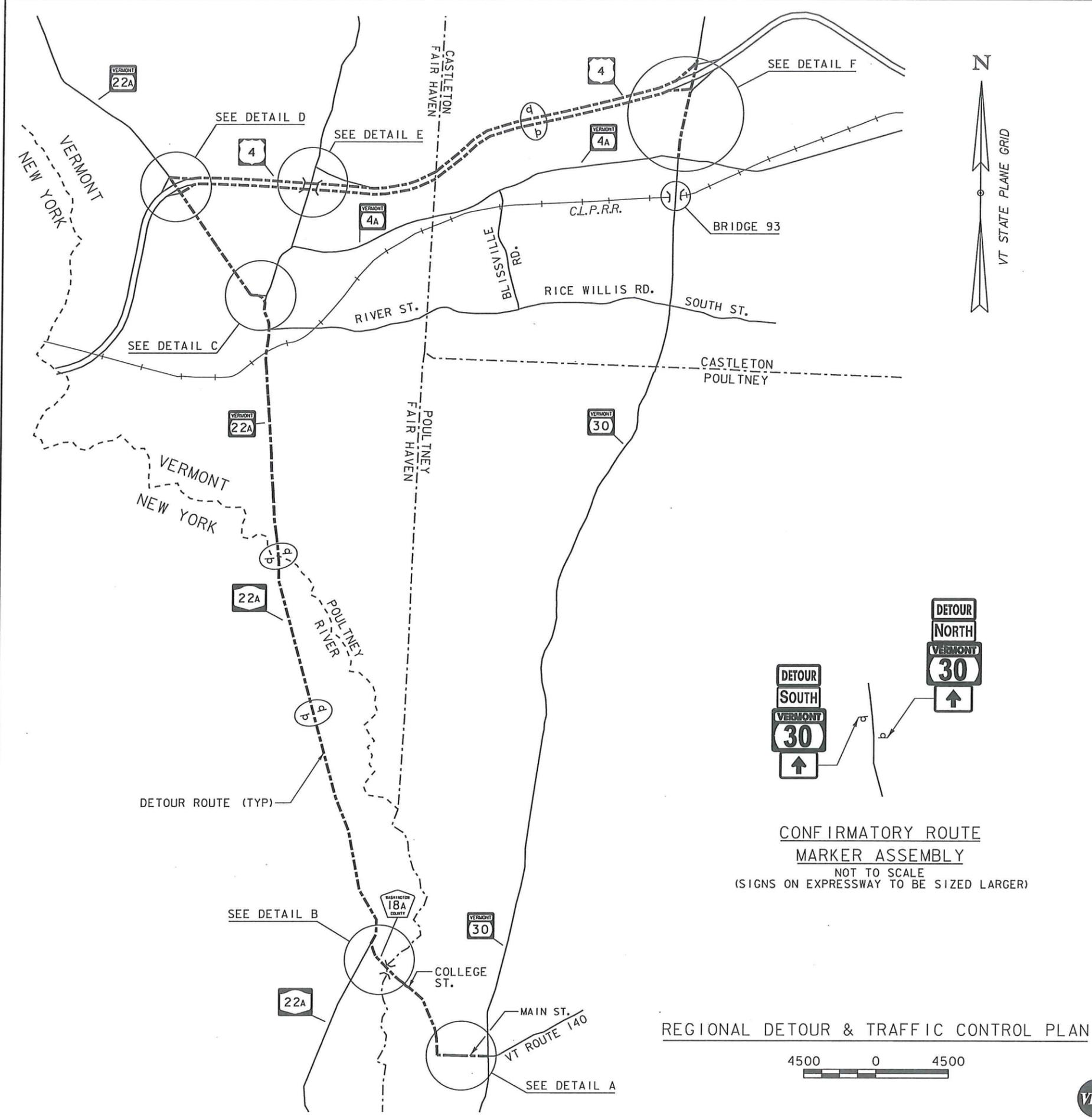
TEMPORARY TRAFFIC BARRIERS
 RETROREFLECTIVE DRUMS & CONES
 SIGNS
 SIGN POSTS
 INSTALLATION OF SIGNS AND SIGN POSTS

TEMPORARY TRAFFIC BARRIER SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 621.

- 17. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

REV.	DESCRIPTION	DATE	PROJECT NAME: CASTLETON	
△	CONTRACTOR-FABRICATED PRECAST	12/01/2014	PROJECT NUMBER: BRF 015-2(10)	
			FILE NAME: z12b138pn.dgn	PLOT DATE: 12/1/2014
			PROJECT LEADER: S.E. BURBANK	DRAWN BY: M.C. SCOTT
			DESIGNED BY: E.A. FIALA	CHECKED BY: S.E. BURBANK
			PROJECT NOTES (1 OF 2)	SHEET 7 OF 82





TRAFFIC CONTROL NOTES:

1. INSTALL CONFIRMATORY ROUTE MARKERS ALONG THE DETOUR ROUTE AT THE INTERSECTIONS AND MILE MARKERS AS INDICATED ON THIS PLAN.
2. WHEN EXISTING ROUTE MARKER ASSEMBLIES ARE LOCATED AT THE INTERSECTIONS OR ALONG THE DETOUR ROUTE THE DETOUR ROUTE MARKER ASSEMBLIES SHALL BE INSTALLED ADJACENT TO THE EXISTING ROUTE MARKER ASSEMBLIES.
3. SEE TCP (2 OF 6) AND TCP (3 OF 6) FOR DETAILS A THROUGH F.
4. THE REGIONAL DETOUR FOR THIS PROJECT EXTENDS INTO NEW YORK STATE AND UTILIZES WASHINGTON COUNTY ROUTE 18A AND NEW YORK STATE ROUTE 22A. VTRANS HAS COORDINATED WITH THE WASHINGTON COUNTY DEPARTMENT OF PUBLIC WORKS AND THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSOT) AND HAVE BEEN AUTHORIZED TO DETOUR TRAFFIC FROM VERMONT ONTO THESE ROUTES. IN ORDER TO PERFORM ANY WORK (INSTALLATION OF THE DETOUR SIGNS, ETC.) ON THESE ROADWAYS, THE CONTRACTOR WILL NEED AUTHORIZATION FROM BOTH THE WASHINGTON COUNTY DEPARTMENT OF PUBLIC WORKS AND NYSOT. THE CONTRACTOR SHALL SUBMIT THE FOLLOWING FORMS:

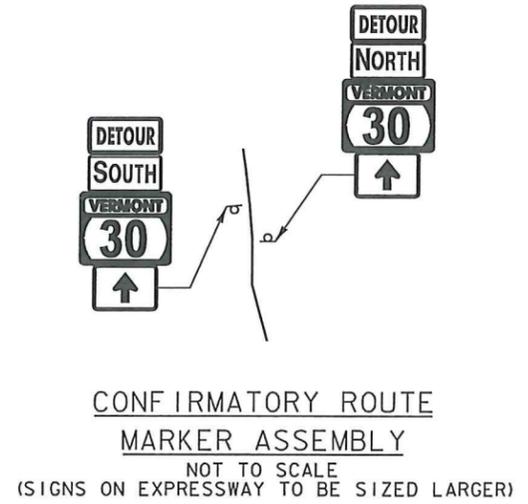
WASHINGTON COUNTY DEPARTMENT OF PUBLIC WORKS PERMIT. POINT OF CONTACT SHOULD BE SCOTT TRACY, DEPUTY SUPERINTENDENT OF THE DEPARTMENT OF PUBLIC WORKS. PHONE NUMBER IS 518-746-2440.

NYSOT HIGHWAY WORK PERMIT APPLICATION FOR NON-UTILITY WORK (FORM PERM 33) AND NYSOT CERTIFICATE OF INSURANCE FOR HIGHWAY WORK PERMIT (PERM 17). POINT OF CONTACT SHOULD BE JOE THOMPSON, NYSOT ASSISTANT RESIDENT ENGINEER IN WASHINGTON COUNTY. PHONE NUMBER IS 518-747-4724.

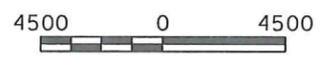
THE ABOVE LISTED FORMS ARE INCLUDED IN THE PROPOSAL DOCUMENTS AND SHALL BE SUBMITTED A MINIMUM OF FOUR (4) WEEKS PRIOR TO THE ANTICIPATED DATE WORK (INSTALLATION OF SIGNS) SHALL START AND A MINIMUM OF SIX (6) WEEKS PRIOR TO THE BRIDGE CLOSURE PERIOD. THE CONTRACTOR SHALL PERFORM THE SHOULDER CLOSURE FOR THE INSTALLATION AND REMOVAL OF THE DETOUR SIGNS ON NY STATE ROUTE 22A IN ACCORDANCE WITH THE TAST-C7 DOCUMENT INCLUDED IN THE PROPOSAL DOCUMENTS. THIS DOCUMENT SHOULD BE INCLUDED IN THE HIGHWAY WORK PERMIT APPLICATION TO NYSOT.

LEGEND

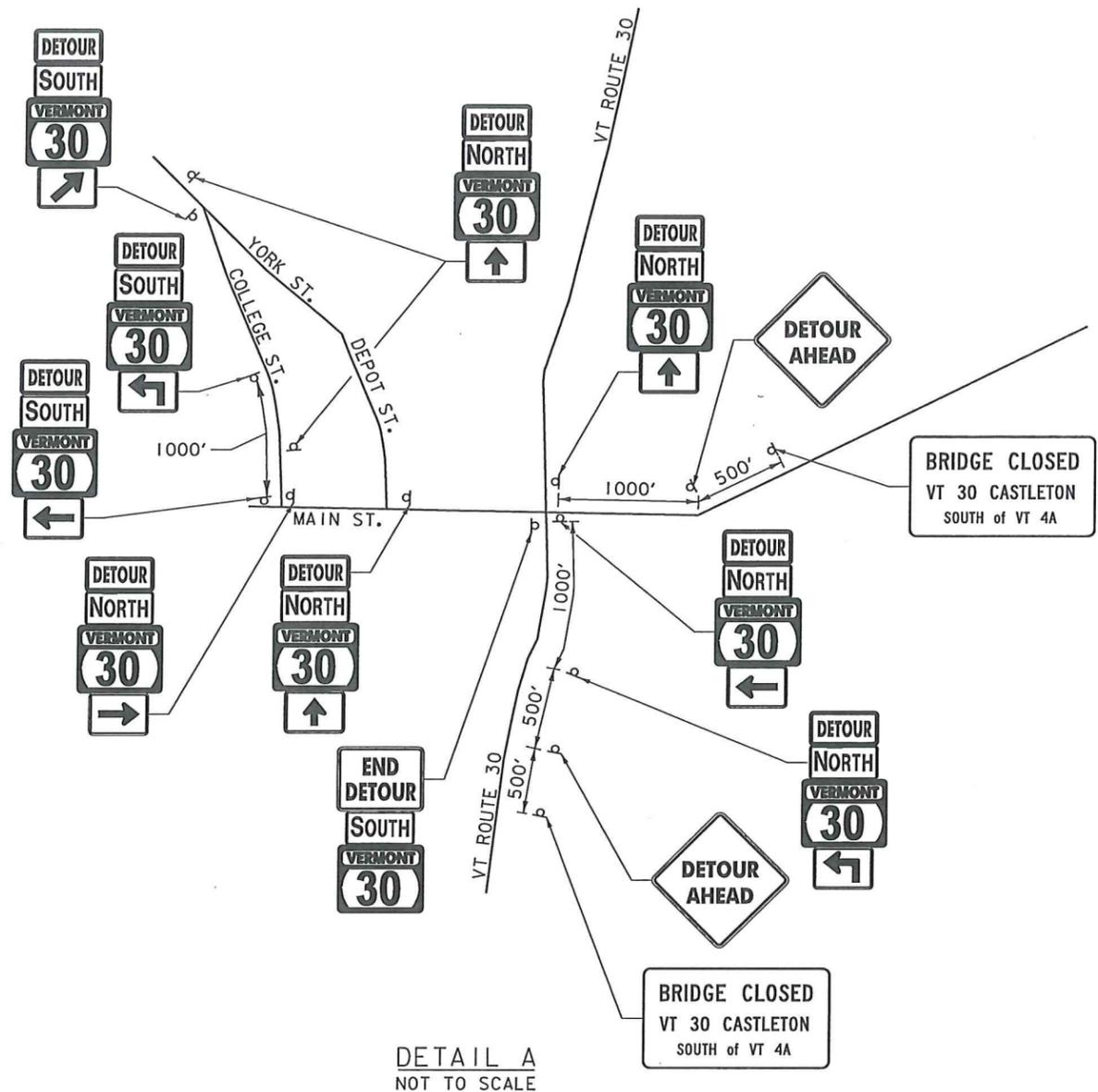
CONFIRMATORY ROUTE MARKER ASSEMBLY (SEE NOTES 1 & 2 ABOVE)



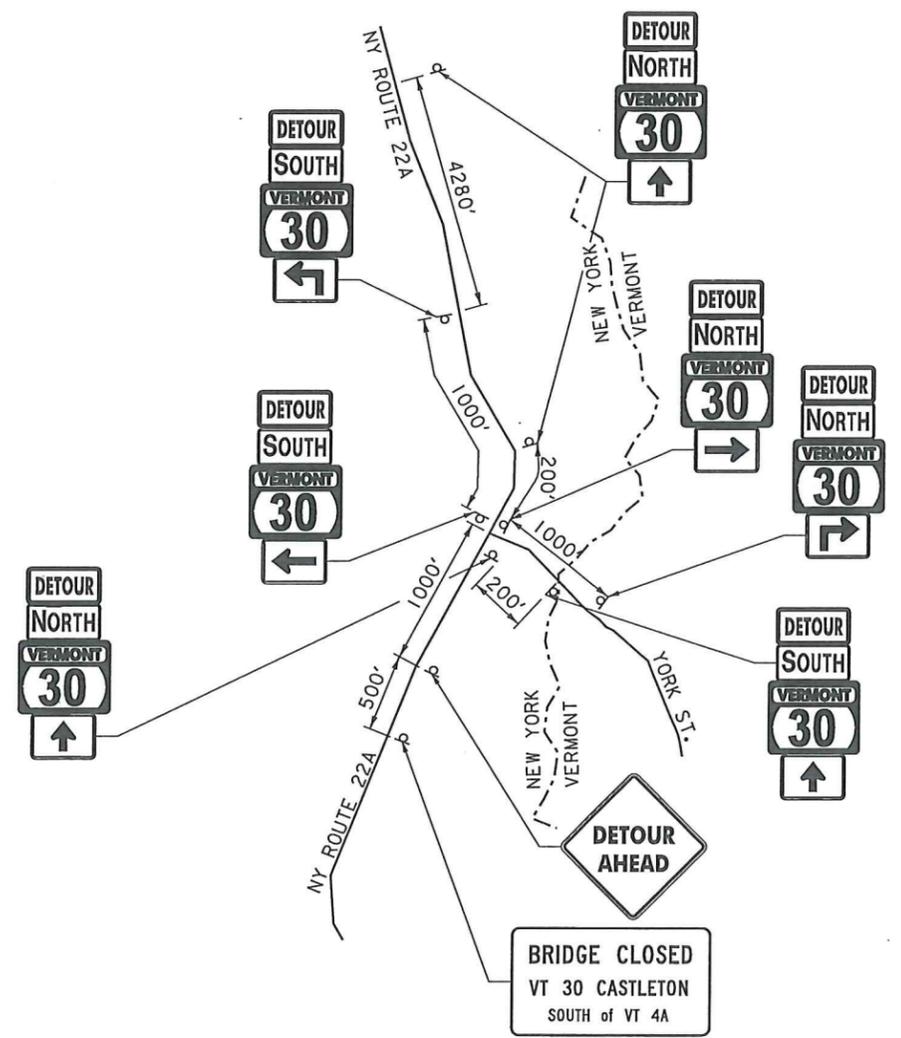
REGIONAL DETOUR & TRAFFIC CONTROL PLAN



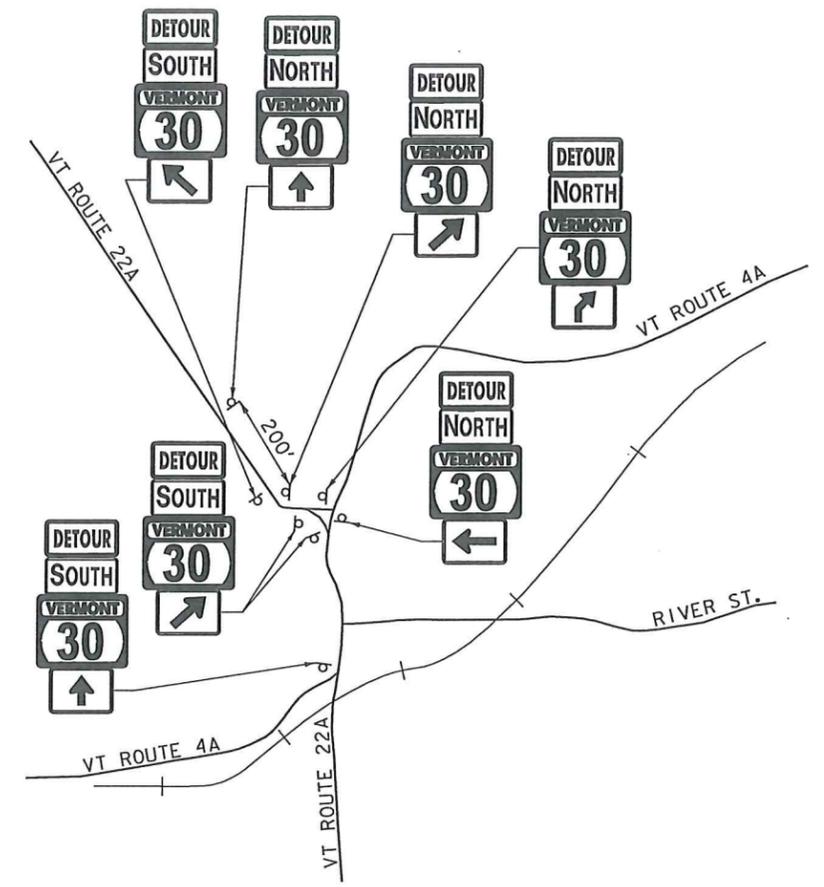
PROJECT NAME: CASTLETON	PLOT DATE: 10/29/2014
PROJECT NUMBER: BRF 015-2(10)	DRAWN BY: D.A. GINGRAS
FILE NAME: z12b38+cp.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 25 OF 82
DESIGNED BY: VTRANS	
TRAFFIC CONTROL PLAN (1 OF 6)	



DETAIL A
NOT TO SCALE



DETAIL B
NOT TO SCALE

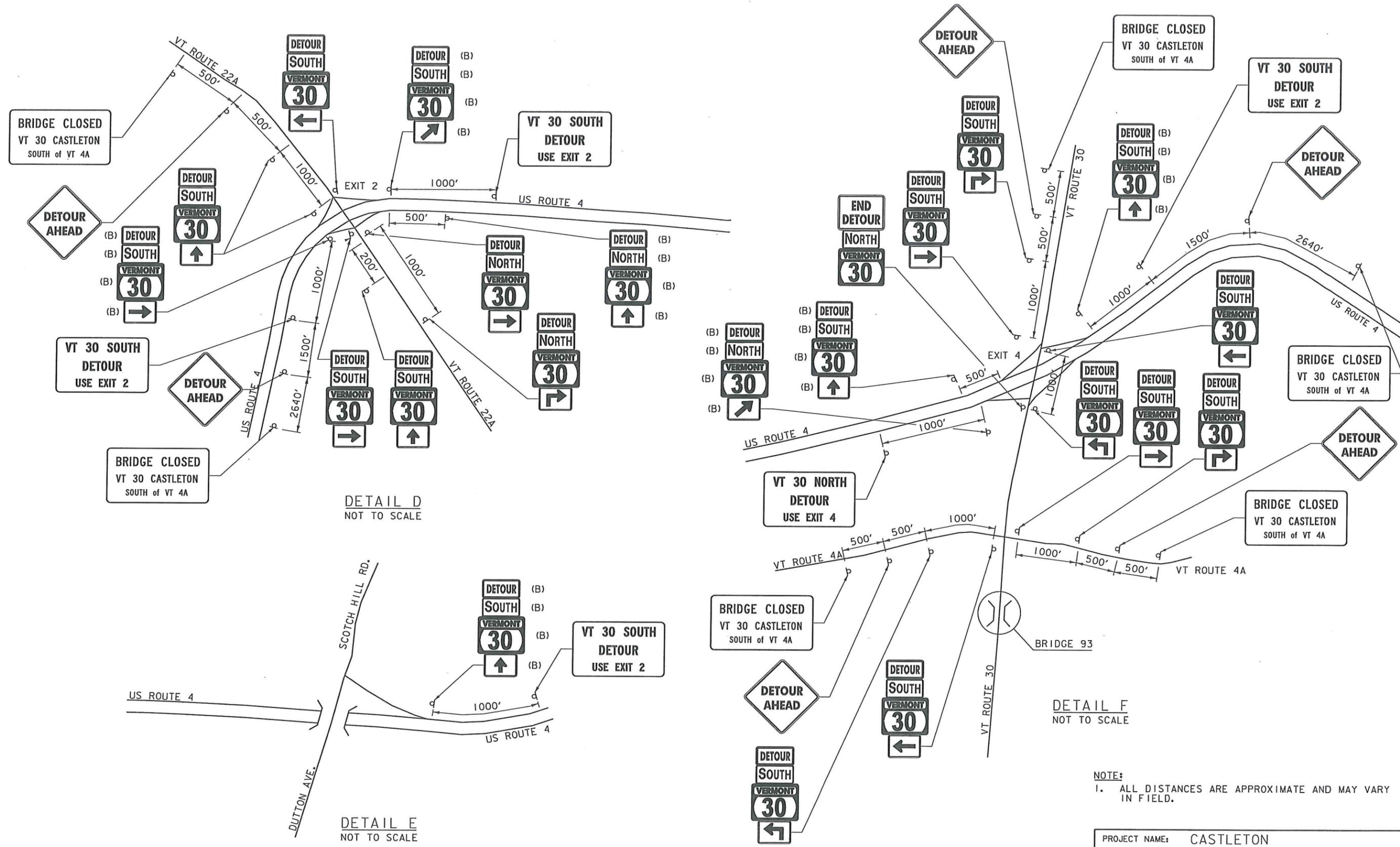


DETAIL C
NOT TO SCALE

NOTE:
1. ALL DISTANCES ARE APPROXIMATE AND MAY VARY IN FIELD.

PROJECT NAME: CASTLETON	
PROJECT NUMBER: BRF 015-2(10)	
FILE NAME: z12bl38+cp.dgn	PLOT DATE: 9/19/2014
PROJECT LEADER: S.E. BURBANK	DRAWN BY: D.A. GINGRAS
DESIGNED BY: D.A. GINGRAS	CHECKED BY: S.E. BURBANK
TRAFFIC CONTROL PLAN (2 OF 6)	SHEET 26 OF 82





DETAIL D
NOT TO SCALE

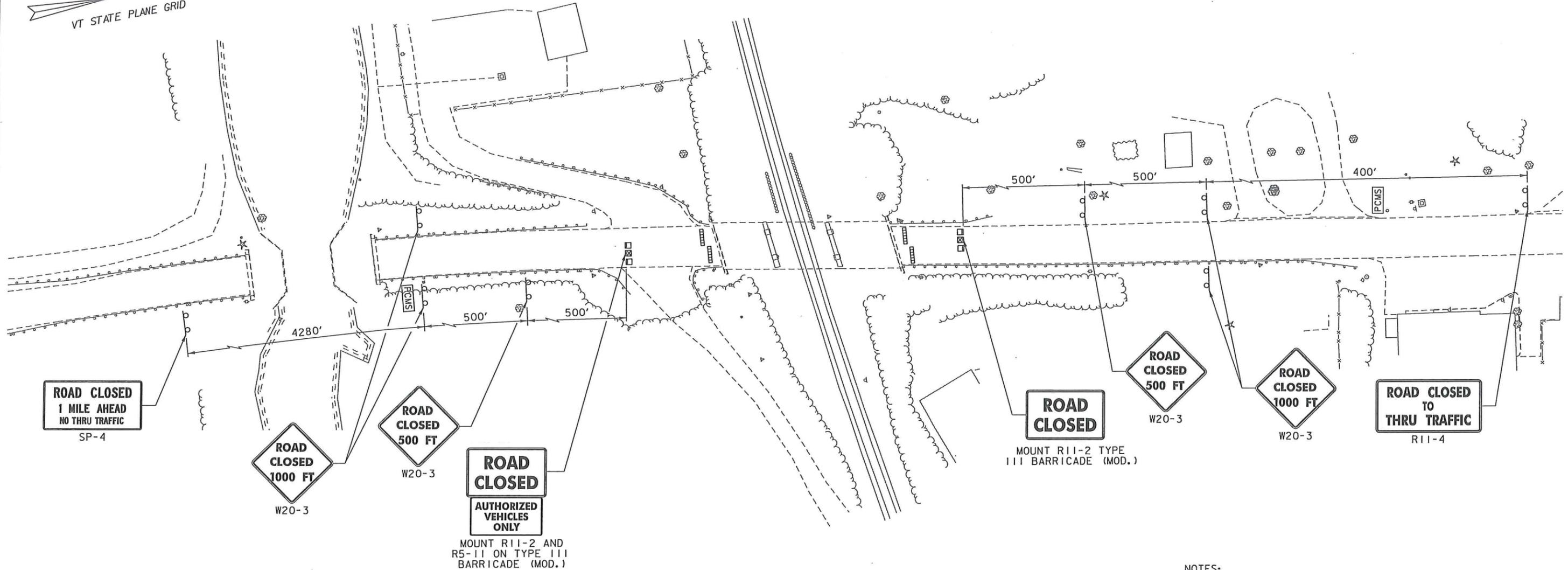
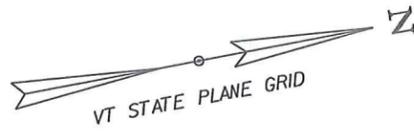
DETAIL E
NOT TO SCALE

DETAIL F
NOT TO SCALE

NOTE:
1. ALL DISTANCES ARE APPROXIMATE AND MAY VARY IN FIELD.

PROJECT NAME: CASTLETON	
PROJECT NUMBER: BRF 015-2(10)	
FILE NAME: z12b138+cp.dgn	PLOT DATE: 9/19/2014
PROJECT LEADER: S.E. BURBANK	DRAWN BY: D.A. GINGRAS
DESIGNED BY: D.A. GINGRAS	CHECKED BY: S.E. BURBANK
TRAFFIC CONTROL PLAN (3 OF 6)	SHEET 27 OF 82





LOCAL TRAFFIC CONTROL PLAN
NOT TO SCALE

LEGEND

- TYPE III BARRICADE
- ⊗ TYPE III BARRICADE (MOD.)
- ▬▬▬▬ TEMPORARY TRAFFIC BARRIER
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

1. SEE TRAFFIC CONTROL PLAN (1 OF 6) FOR ADDITIONAL NOTES.
2. THE COSTS OF TEMPORARY TRAFFIC CONTROL DEVICES INCLUDING BUT NOT LIMITED TO ALL SIGNS, SIGN POSTS, TYPE III BARRICADES, AND TEMPORARY TRAFFIC BARRIERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10 "TRAFFIC CONTROL". PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) WILL BE PAID FOR SEPARATELY UNDER CONTRACT ITEM 641.15.
3. THE PCMS SHALL DISPLAY THE MESSAGES SHOWN ON TRAFFIC CONTROL PLAN (5 OF 6) ONE WEEK (7 DAYS) PRIOR TO THE CLOSURE OF THE BRIDGE. THE PCMS SHALL REMAIN IN PLACE FOR THE DURATION OF CONSTRUCTION, UNTIL THE ROAD IS OPEN TO TRAFFIC.
4. THE NUMBER OF TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL ROADWAY CLOSURE REQUIREMENTS.
5. SEE THE PROJECT SPECIAL PROVISIONS FOR ALLOWABLE BRIDGE CLOSURE PERIOD.

PROJECT NAME: CASTLETON	PLOT DATE: 9/21/2014
PROJECT NUMBER: BRF 015-2(10)	DRAWN BY: D.A. GINGRAS
FILE NAME: z12b138+cp.dgn	CHECKED BY: S.E. BURBANK
PROJECT LEADER: S.E. BURBANK	SHEET 28 OF 82
DESIGNED BY: E.A. FIALA	
TRAFFIC CONTROL PLAN (4 OF 6)	



IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQ'D	REMARKS
	WIDTH (IN)	HEIGHT (IN)			
M1-5	24	24		47*	SEE NOTE 5
M1-5 (B)	36	36		9*	SEE NOTE 5
M3-2	24	12		21*	SEE NOTE 5
M3-2 (B)	36	18		3*	SEE NOTE 5
M3-4	24	12		26*	SEE NOTE 5
M3-4 (B)	36	18		6*	SEE NOTE 5
M4-8	24	12		45*	MOUNT ABOVE THE M3-2 OR M3-4
M4-8 (B)	36	18		9*	MOUNT ABOVE THE M3-2 OR M3-4
M4-8A	24	18		2	MOUNT ON ONE POST
M5-1L	21	15		5	MOUNT BELOW THE MI-5
M5-1R	21	15		4	MOUNT BELOW THE MI-5
M5-2R	21	15		1	MOUNT BELOW THE MI-5
M6-1L	21	15		7	MOUNT BELOW THE MI-5
M6-1L	21	15		5	MOUNT BELOW THE MI-5
M6-1L (B)	30	21		1	MOUNT BELOW THE MI-5
M6-2L	21	15		1	MOUNT BELOW THE MI-5
M6-2R	21	15		4	MOUNT BELOW THE MI-5

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQ'D	REMARKS
	WIDTH (IN)	HEIGHT (IN)			
M6-2R (B)	30	21		2	MOUNT BELOW THE MI-5
M6-3	21	15		17*	MOUNT BELOW THE MI-5
M6-3 (B)	30	21		6*	MOUNT BELOW THE MI-5
R5-11	30	24		1	MOUNT BELOW RII-2
RII-2	48	24		2	MOUNT ON TYPE III BARRICADE (MOD.)
RII-4	60	30		1	MOUNT ON TWO POSTS
SP-1	66	36		9	MOUNT ON TWO POSTS
SP-2	60	36		4	MOUNT ON TWO POSTS
SP-3	60	36		1	MOUNT ON TWO POSTS
SP-4	60	30		1	MOUNT ON TWO POSTS
W20-2	48	48		9	MOUNT ON TWO POSTS
W20-3	48	48		2	MOUNT ON TWO POSTS
W20-3	48	48		4	MOUNT ON TWO POSTS

NOTES:

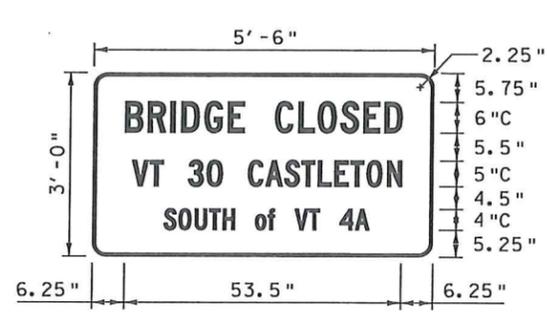
- COLORS FOR THE M1-5, M1-5 (B), M3-2, M3-2 (B), M3-4, AND M3-4 (B) SIGNS SHALL MATCH THE COLORS SHOWN ON VTRANS STD. E-136B.
- COLORS FOR THE M5-1L, M5-1R, M5-2R, M6-1L, M6-1L (B), M6-1R, M6-2L, M6-2R, M6-2R (B), M6-3 AND THE M6-3 (B) SIGNS SHALL BE A BLACK ARROW AND BORDER ON RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND.
- COLORS FOR THE M4-8, M4-8, AND M4-8 (B) SIGNS SHALL BE BLACK TEXT AND BORDER ON RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND.
- COLORS FOR THE SP-1, SP-2, AND SP-3 SIGNS SHALL BE BLACK TEXT AND BORDER ON RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND.
- THE M1-5, M1-5B, M3-2, M3-2 (B), M3-4 AND THE M3-4 (B) SIGNS SHALL BECOME THE PROPERTY OF THE STATE AFTER THEY ARE REMOVED FROM THE DETOUR. THE CONTRACTOR SHALL DELIVER THE SIGNS TO THE STATE GARAGE ON VT-30 IN CASTLETON, JUST NORTH OF THE PROJECT. ALL COSTS ASSOCIATED WITH PROVIDING THE SIGNS TO THE STATE SHALL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
- ALL DETOUR SIGNS SHALL BE COVERED COMPLETELY WHEN THE DETOUR IS NOT IN USE.
- SEE NEXT SHEET FOR DIMENSIONS FOR SP-1, SP-2, SP-3 AND SP-4 SIGNS.

MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) - AT BRIDGE

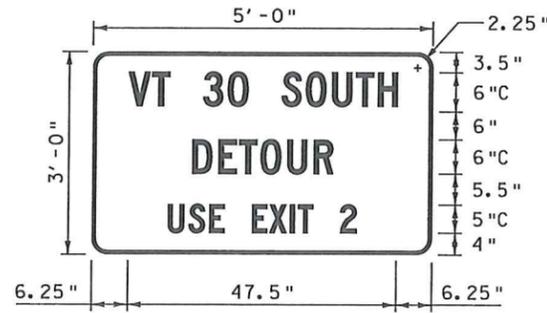
MESSAGE 1	MESSAGE 2	
VT 30	MMMM DD	(DATE) **
BRIDGE	TO	
CLOSED	MMMM DD	(DATE) **

** - MONTH SHALL BE SPELLED OUT - JUNE 10 NOT 6/10

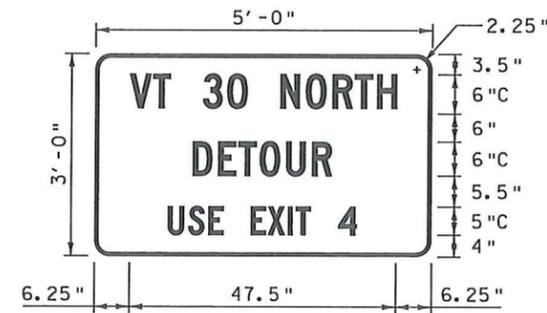
* - NUMBER OF SIGNS REQUIRED ASSUMING APPROXIMATELY 3 LOCATIONS OF CONFIRMATORY ROUTE MARKER ASSEMBLY DETAIL



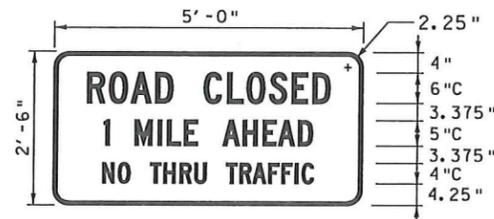
SP-1
NOT TO SCALE



SP-2
NOT TO SCALE



SP-3
NOT TO SCALE



SP-4
NOT TO SCALE

NOTE: COLORS FOR THE SP-4 SIGN SHALL BE BLACK TEXT AND BORDER ON RETROREFLECTIVE FLORESCENT WHITE BACKGROUND. TWO ORANGE FLAGS (ONE EACH SIDE) SHALL BE PLACED AT THE TOP OF THE SP-2 SIGNS. BORDER SHALL BE 0.075" AND INDENT SHALL BE 0.50".

PROJECT NAME: CASTLETON

PROJECT NUMBER: BRF 015-2(10)

FILE NAME: z12bl38+cp.dgn

PROJECT LEADER: S.E. BURBANK

DESIGNED BY: E.A. FIALA

TRAFFIC CONTROL PLAN (6 OF 6)

PLOT DATE: 9/19/2014

DRAWN BY: D.A. GINGRAS

CHECKED BY: S.E. BURBANK

SHEET 30 OF 82

1. TRAFFIC CONTROL DEVICES NOT DETAILED IN THE VERMONT AGENCY OF TRANSPORTATION (VAOT) "STANDARD DRAWINGS" OR THE PROJECT PLANS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
2. CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER.
3. CONSTRUCTION SIGN COVERS SHALL CONSIST OF A PANEL, PAINTED FLAT BLACK, THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.
4. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.
5. NO CROSS-BRACING OR BACK-BRACING TO KEEP POSTS PLUMB WILL BE ALLOWED. CONCRETE FOUNDATIONS, COLLARS OR SOIL BEARING PLATES ARE NOT PERMITTED. CONSTRUCTION SIGNS SHALL BE PLACED ON TWO POSTS.
6. CONSTRUCTION SIGNS INSTALLED ON POSTS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST FIVE FEET ABOVE THE EDGE OF PAVEMENT AND THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT, FOUR FEET OUTSIDE GUARDRAIL, OR TWO FEET OUTSIDE CURBING OR SIDEWALK. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE SIDEWALK OR EDGE OF PAVEMENT, WHICHEVER IS HIGHER.
7. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE THE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
8. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
9. ROLL UP CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ("AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956J TYPE VI AND TYPE VII UNLESS OTHERWISE NOTED.
10. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ("AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956J TYPE VIII OR IX REQUIREMENTS UNLESS OTHERWISE NOTED.
11. WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POSTS. WHEN ANCHORS ARE INSTALLED, STUBS SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
12. ROADWAY AND SHOULDER WIDTHS DEPICTED ON THE STANDARD DRAWINGS MAY VARY.
13. THESE STANDARD DRAWINGS ARE INTENDED TO SERVE AS VTRANS STANDARD OPERATING PROCEDURE. IT IS NOTED THAT COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY BE MODIFIED DUE TO FIELD CONDITIONS, AT THE DISCRETION OF THE ENGINEER.

OTHER STDS. REQUIRED: **NONE**

REVISIONS AND CORRECTIONS
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

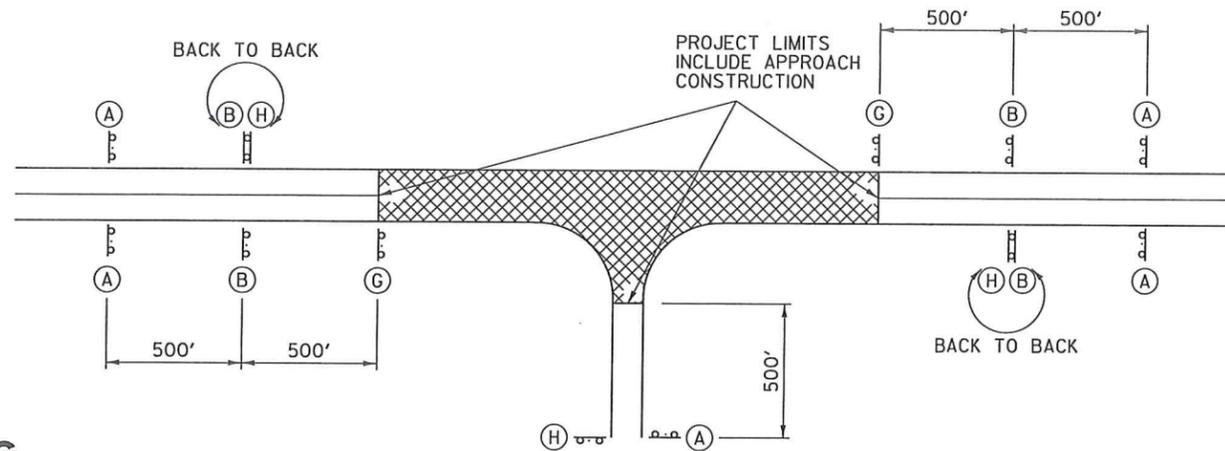
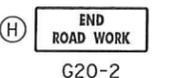
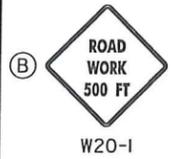
APPROVED
H.A.G. Pl.
HIGHWAY SAFETY & DESIGN ENGINEER
Ruban Stewart
DIRECTOR OF PROGRAM DEVELOPMENT
Mark D. Richter
FEDERAL HIGHWAY ADMINISTRATION

TRAFFIC CONTROL GENERAL NOTES



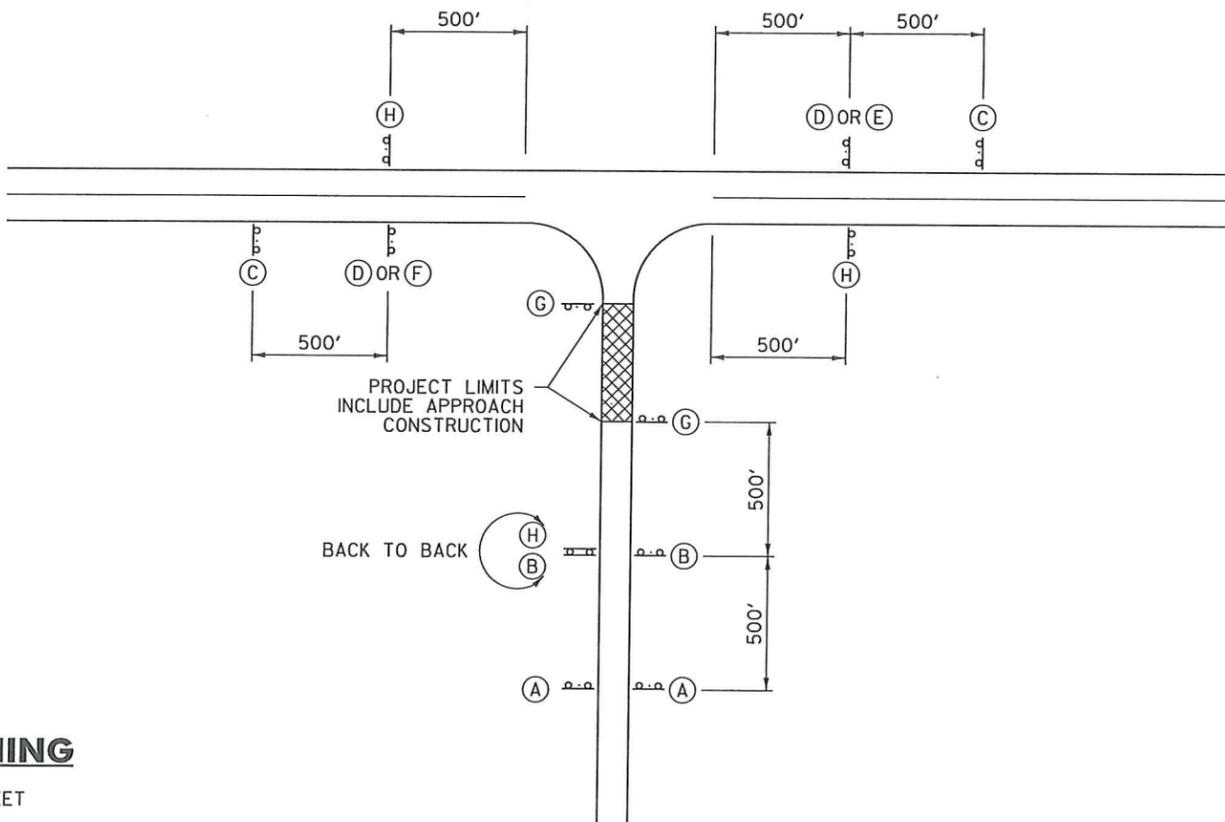
STANDARD
T-1

LEGEND



TYPICAL APPROACH SIGNING

FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.



SIDE ROAD APPROACH SIGNING

TO BE USED WHEN CONSTRUCTION IS UP TO 1000 FEET FROM THE INTERSECTION. FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.

GENERAL NOTES:

1. SIGNS SHOWN ON THIS SHEET ARE INTENDED FOR USE IN PROVIDING ADVANCE WARNING AND INFORMATION ON CONSTRUCTION PROJECTS OVER WHICH TRAFFIC WILL BE MAINTAINED. WHEN ADDITIONAL APPROACH SIGNS OR OTHER TYPES OF ADVANCE SIGNING OR CONTROL ARE NECESSARY, THE PLANS AND/OR THE SPECIFICATIONS FOR THAT PROJECT WILL GIVE THE DETAILS OF THE SIGNS AND DEVICES REQUIRED. FOR ON-PROJECT CONSTRUCTION SIGNS, REFER TO APPROPRIATE STANDARD SHEETS.
2. THE "ROAD WORK NEXT XX MILES" SIGN (G20-1) SHALL BE INSTALLED IN ADVANCE OF TEMPORARY TRAFFIC CONTROL ZONES THAT ARE MORE THAN TWO MILES IN LENGTH OR AS DIRECTED BY THE ENGINEER. DISTANCES SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. SIGNS SHALL BE LOCATED AS DETAILED ON THIS SHEET OR AS OTHERWISE SHOWN ON THE PLANS. THEY SHALL APPEAR AT EACH END OF THE HIGHWAY UNDER CONSTRUCTION AND ON ALL INTERSECTING PUBLIC HIGHWAYS. THE ENGINEER SHALL DETERMINE THE EXACT LOCATIONS.

OTHER STDS. REQUIRED: T-1, T-28

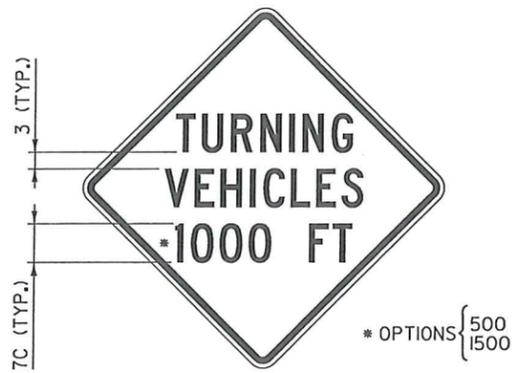
REVISIONS AND CORRECTIONS
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED
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HIGHWAY SAFETY & DESIGN ENGINEER
[Signature]
DIRECTOR OF PROGRAM DEVELOPMENT
[Signature]
Mark D. Richter
FEDERAL HIGHWAY ADMINISTRATION

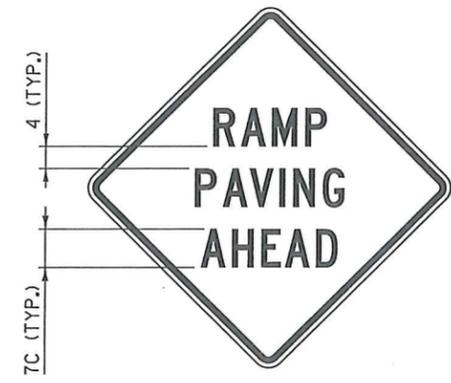
**CONVENTIONAL ROADS
CONSTRUCTION APPROACH
SIGNING**



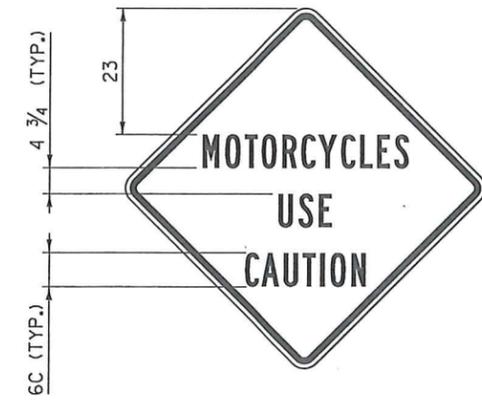
**STANDARD
T-10**



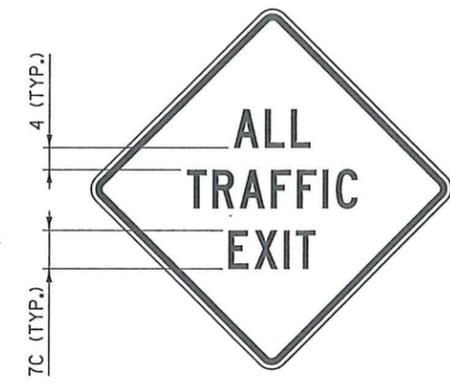
VC-001



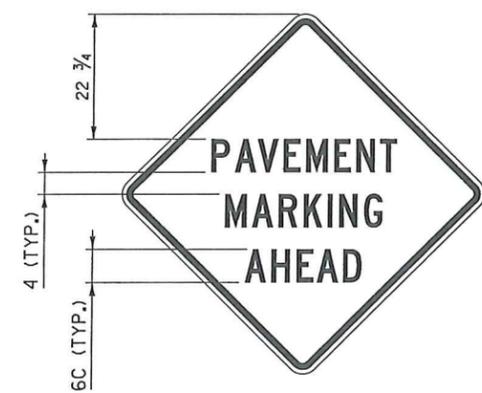
VC-003



VC-004



VC-008



VC-813



VC-869



VC-874

GENERAL NOTES:

1. COLORS FOR SIGNS SHALL BE BLACK LEGEND AND BORDER ON FLUORESCENT ORANGE BACKGROUND.
2. CONSTRUCTION SIGNS SHALL BE 48 INCH BY 48 INCH. IF SOLID SUBSTRATE SIGNS ARE USED, SIGNS SHALL HAVE CORNERS ROUNDED TO A THREE INCH RADIUS.
3. SIGNS SHALL HAVE 1 1/4 INCH WIDE BORDERS THAT ARE INDENTED 3/4 INCH FROM THE EDGE OF THE SIGN.
4. SIGNS SHALL HAVE THE LEGEND CENTERED HORIZONTALLY AND VERTICALLY ON THE SIGN UNLESS OTHERWISE INDICATED.
5. ALL DIMENSIONS SHOWN IN INCHES.

OTHER STDS. REQUIRED: T-1

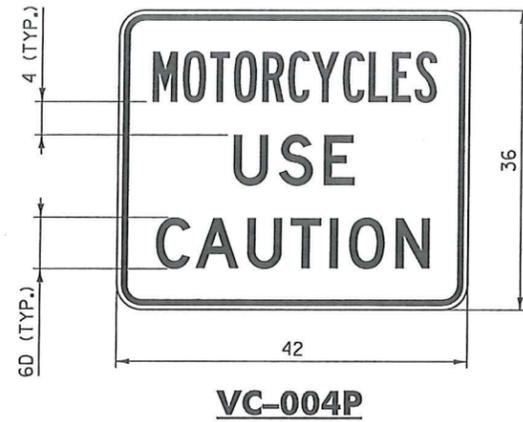
REVISIONS AND CORRECTIONS
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED
W.A.P.
HIGHWAY SAFETY & DESIGN ENGINEER
Rick F. Hunt
DIRECTOR OF PROGRAM DEVELOPMENT
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FEDERAL HIGHWAY ADMINISTRATION

CONSTRUCTION SIGN
DETAILS



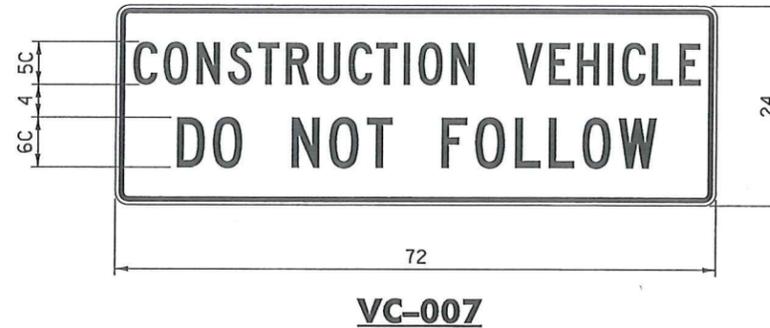
STANDARD
T-28



VC-004P

NOTES:

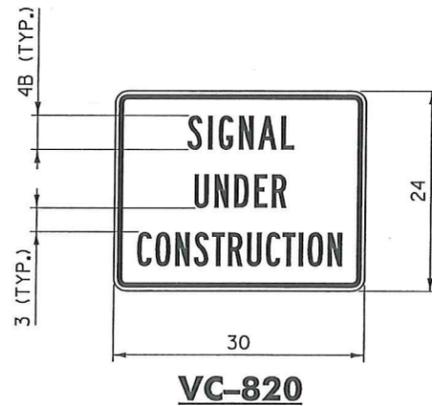
1. CORNERS SHALL BE ROUNDED TO A THREE INCH RADIUS.
2. THE BORDER SHALL BE $\frac{3}{4}$ INCH WIDE WITH A $\frac{1}{2}$ INCH INDENT FROM THE EDGE OF THE SIGN.
3. "MOTORCYCLES" SHALL HAVE A SPECIFIED WIDTH OF 34 INCHES.
4. "USE" SHALL HAVE A SPECIFIED WIDTH OF $14 \frac{1}{2}$ INCHES.
5. "CAUTION" SHALL HAVE A SPECIFIED WIDTH OF $32 \frac{3}{4}$ INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.



VC-007

NOTES:

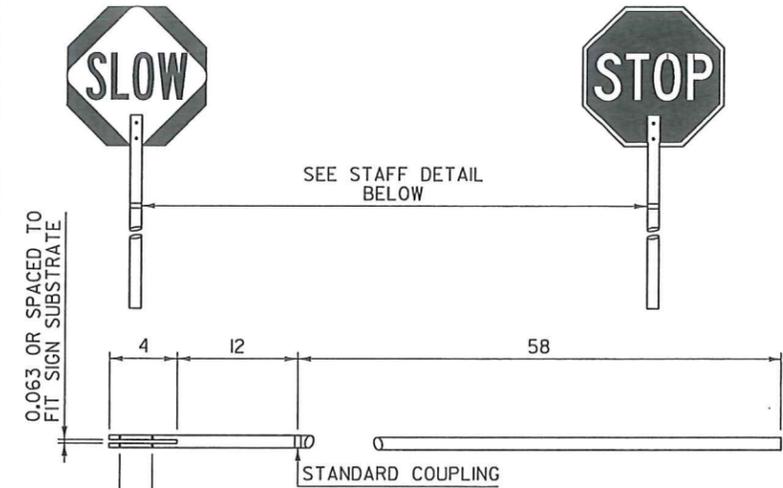
1. CORNERS SHALL BE ROUNDED TO A $1\frac{1}{2}$ INCH RADIUS.
2. THE BORDER SHALL BE $\frac{5}{8}$ INCH WIDE WITH A $\frac{3}{8}$ INCH INDENT FROM THE EDGE OF THE SIGN.
3. "CONSTRUCTION VEHICLE" SHALL HAVE A SPECIFIED WIDTH OF 68 INCHES.
4. "DO NOT FOLLOW" SHALL HAVE A SPECIFIED WIDTH OF $57 \frac{1}{2}$ INCHES.
5. SIGN SHALL BE MOUNTED IN A CONSPICUOUS LOCATION ON THE REAR OF THE CONSTRUCTION VEHICLE.
6. THE SIGN SHALL BE MOUNTED AS NOT TO INTERFERE WITH THE VISIBILITY OF DIRECTIONAL SIGNALS OR TAIL LIGHTS AS REQUIRED BY LAW.
7. SIGN SHALL BE COVERED OR REMOVED WHEN NOT IN USE.



VC-820

NOTES:

1. CORNERS SHALL BE ROUNDED TO A $1\frac{1}{2}$ INCH RADIUS.
2. THE BORDER SHALL BE $\frac{5}{8}$ INCH WIDE WITH A $\frac{3}{8}$ INCH INDENT FROM THE EDGE OF THE SIGN.
3. "SIGNAL" SHALL HAVE A SPECIFIED WIDTH OF $12 \frac{3}{4}$ INCHES.
4. "UNDER" SHALL HAVE A SPECIFIED WIDTH OF 11 INCHES.
5. "CONSTRUCTION" SHALL HAVE A SPECIFIED WIDTH OF $24 \frac{1}{2}$ INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.



STOP-SLOW PADDLE & STAFF DETAIL

NOTES:

1. REFER TO THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) "TEMPORARY TRAFFIC CONTROL - WARNING SIGNS" FOR THE STOP-SLOW PADDLE DESIGN.
2. COLORS FOR THE SLOW SIDE OF THE PADDLE SHALL BE BLACK LEGEND AND BORDER ON A FLUORESCENT ORANGE DIAMOND WITH RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE VII, VIII OR IX REQUIREMENTS.
3. COLORS FOR THE STOP SIDE OF THE PADDLE SHALL BE WHITE RETROREFLECTIVE LEGEND AND BORDER ON A RED RETROREFLECTIVE OCTAGON. BOTH COLORS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE III.
4. SIGN SUBSTRATE MATERIALS SHALL BE ALUMINUM, ACRYLONITRILE BUTADIENE STYRENE (ABS) PLASTIC OR EQUIVALENT.
5. THE STAFF MAY BE RIGID ABS PLASTIC OR WOOD WITH A ONE TO $1\frac{1}{2}$ INCH DIAMETER.
6. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE COMPLETELY VISIBLE TO APPROACHING TRAFFIC AT ALL TIMES. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.

GENERAL NOTES:

1. ALL LEGEND SHALL BE CENTERED VERTICALLY AND HORIZONTALLY UNLESS OTHERWISE NOTED.
2. COLORS FOR SIGNS SHALL BE BLACK LEGEND AND BORDER ON FLUORESCENT ORANGE BACKGROUND UNLESS OTHERWISE NOTED.
3. ALL DIMENSIONS IN INCHES.

OTHER STDS. REQUIRED: T-1

REVISIONS AND CORRECTIONS
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

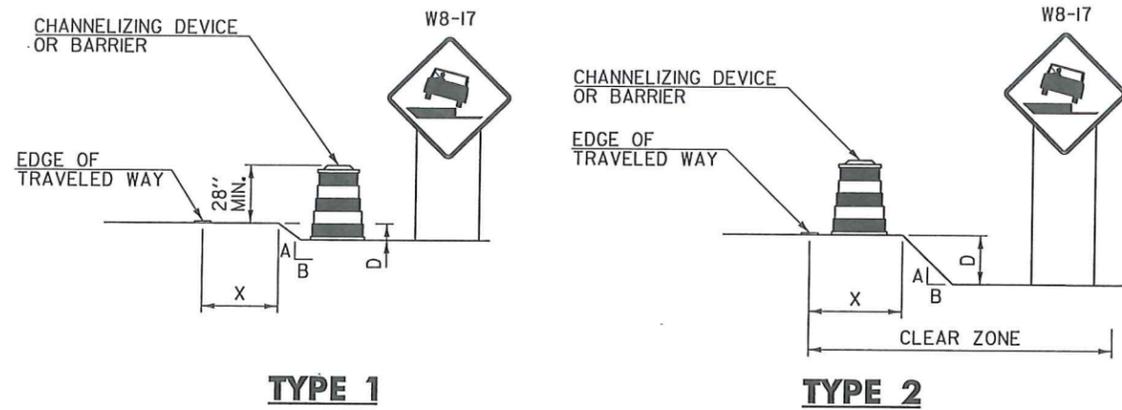
APPROVED
W.A.P.
HIGHWAY SAFETY & DESIGN ENGINEER
Rudolf J. Hunt
DIRECTOR OF PROGRAM DEVELOPMENT
Mark D. Richter
FEDERAL HIGHWAY ADMINISTRATION

**CONSTRUCTION SIGN
DETAILS**



**STANDARD
T-30**

DROP-OFF ADJACENT TO TRAVELED WAY



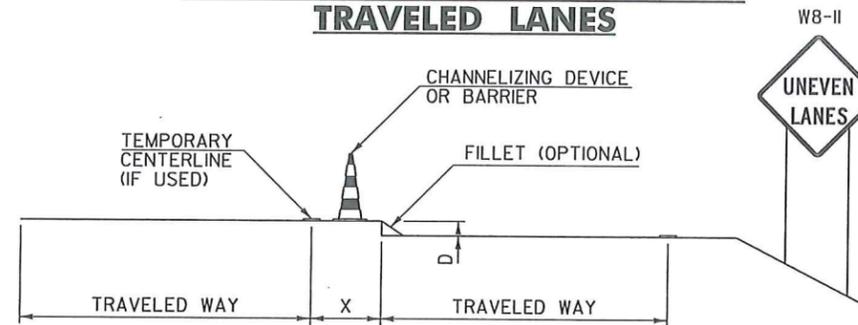
TYPE 1

TYPE 2

NOTES:

1. CHANNELIZING DEVICES OR BARRIER SHOULD BE PLACED TO MAXIMIZE THE WIDTH OF THE TRAVELED WAY.
2. SEE CHART "A" FOR SPECIFIC REQUIREMENTS.
3. IF THE DROP-OFF REQUIRES CHANNELIZING DEVICES TO REMAIN IN PLACE OVERNIGHT, THEN "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS SHOULD BE INSTALLED.

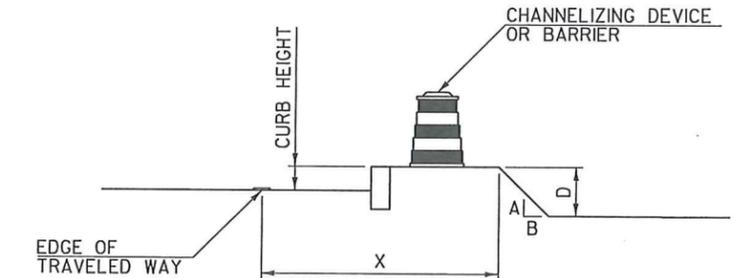
DROP-OFF BETWEEN ADJACENT TRAVELED LANES



NOTES:

1. WHENEVER A LONGITUDINAL DROP-OFF BETWEEN ADJACENT TRAVELED LANES IS TO BE LEFT OVERNIGHT, THEN "UNEVEN LANES" (W8-11) SIGNS AND CHANNELIZING DEVICES SHOULD BE INSTALLED.
2. IF REQUIRED, THE CHANNELIZING DEVICES USED SHOULD BE THOSE WHICH MAXIMIZE THE WIDTH OF THE TRAVELED LANE (I.E. CONES, VERTICAL PANELS OR TUBULAR MARKERS).
3. A BITUMINOUS CONCRETE FILLET WITH A 1.5:1 SLOPE MAY BE USED IN PLACE OF CHANNELIZING DEVICES, HOWEVER THE "UNEVEN LANES" (W8-11) SIGNS SHOULD STILL BE INSTALLED.
4. SEE CHART "A" FOR SPECIFIC REQUIREMENTS.

DROP-OFF BEYOND SHOULDER OR CURB



NOTES:

1. USE CHART "A" FOR VERTICAL CURBS UNDER SIX INCHES, MOUNTABLE CURBS OR ROADWAYS WITH A POSTED SPEED ABOVE 40 MPH.
2. USE CHART "B" FOR VERTICAL CURBS SIX INCHES OR GREATER.

CHART "A" ALL SPEEDS WITH NO CURB OR MOUNTABLE CURB

X (FEET)	DROP (D) (INCHES)	A:B SLOPE	RECOMMENDED DEVICE
0 TO 4'	LESS THAN 2"	ANY	NONE
	2" TO 6"	1:1.5 OR FLATTER	NONE
		STEEPER THAN 1:1.5	CHANNELIZING DEVICE
4' TO 10'	GREATER THAN 6"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER
	LESS THAN 6"	ANY	NONE
10' TO CZ	6" TO 12"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER
	GREATER THAN 12"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER
10' TO CZ	LESS THAN OR EQUAL TO 12"	ANY	NONE
	GREATER THAN 12"	1:3 OR FLATTER	NONE
		STEEPER THAN 1:3	BARRIER

NOTES:

1. THE MINIMUM CLEAR ZONE FOR FREEWAYS IS TO BE DETERMINED PER THE CURRENT AASHTO ROADSIDE DESIGN GUIDE. ALL OTHER HIGHWAYS WILL BE DETERMINED PER THE CURRENT "VERMONT STATE STANDARDS" BOOK.
2. CHANNELIZING DEVICES MAY BE USED INSTEAD OF BARRIER FOR SHORT TERM OPERATIONS.
3. ON BORDERLINE CONDITIONS, THE ENGINEER SHOULD DETERMINE WHICH TREATMENT IS ADEQUATE FOR THE EXISTING CONDITIONS.

CHART "B" 40 MPH OR LESS WITH VERTICAL CURB

X (FEET)	DROP (D) (INCHES)	DEVICE REQUIRED
0-10'	LESS THAN OR EQUAL TO 12"	NONE
0-10'	GREATER THAN 12"	CHANNELIZING DEVICE
GREATER THAN 10'	ANY	NONE

GENERAL NOTES:

1. THESE CONDITIONS AND TREATMENTS ARE ONLY PART OF THE TRAFFIC CONTROL SYSTEM AND SHOULD BE USED IN ADDITION TO THE PROPER WORK ZONE SIGNING.
2. THE FOLLOWING ARE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) COMPLIANT CHANNELIZING DEVICES:
 - A. VERTICAL PANEL
 - B. TYPE I OR TYPE II BARRICADE
 - C. PLASTIC DRUM
 - D. CONE - WHERE APPLICABLE
 - E. TUBULAR MARKERS

IF CHANNELIZING DEVICES ARE REQUIRED TO STAY IN PLACE DURING NIGHTTIME HOURS, THEY SHALL BE STABILIZED WHILE UNATTENDED IN ACCORDANCE WITH THE MUTCD.
3. WHERE BARRIER IS NECESSARY, THE BARRIER SHALL BE TAPERED BEYOND THE CLEAR ZONE. WHEN THE BARRIER CANNOT BE TAPERED BEYOND THE CLEAR ZONE, A MUTCD COMPLIANT END TREATMENT SHALL BE USED. BARRIER AND END TREATMENT SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION.
4. CHANNELIZING DEVICE SPACING ALONG A LONGITUDINAL DROP-OFF (TANGENT) SHALL BE AS FOLLOWS:
 - TANGENT - CHANNELIZING DEVICES SHALL BE SPACED "2S" ("S" IS EQUAL TO THE POSTED SPEED LIMIT IN FEET) APART.
5. "LOW SHOULDER" (W8-9) AND "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS, WHEN USED, SHOULD BEGIN PRIOR TO THE DROP-OFF CONDITION AND SHOULD BE REPEATED EVERY 1500 FEET.

OTHER STDS. REQUIRED: T-1

REVISIONS AND CORRECTIONS
AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED
[Signature]
HIGHWAY SAFETY & DESIGN ENGINEER
[Signature]
DIRECTOR OF PROGRAM DEVELOPMENT
[Signature]
FEDERAL HIGHWAY ADMINISTRATION

CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS



STANDARD
T-35