

INDEX OF SHEETS

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16. COLD-PLANING DETAILS
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- 19-20. BLANK.

STANDARDS

- |           |  |            |
|-----------|--|------------|
| 21. C-1   | TREATED TIMBER CURB  | 10-25-85 R |
| 22. E-100 | CONSTRUCTION APPROACH SIGNS                                  | 05-26-89 R |
| 23. E-101 | CONSTRUCTION SIGN DETAILS                                    | 10-30-87   |
| 24. E-102 | CONSTRUCTION SIGN DETAILS                                    | 01-23-89 R |
| 25. E-103 | MAINLINE TRAFFIC CONTROL DIVIDED HIGHWAY;<br>ONE LANE CLOSED | 01-23-89 R |
| 26. E-106 | TRAFFIC CONTROL MISCELLANEOUS DETAILS                        | 01-23-89 R |
| 27. E-110 | MAJOR MAINTENANCE OPERATION LANE<br>CLOSURE                  | 03-01-88 R |
| 28.       | BLANK.   |            |
| 29. E-191 | PAVEMENT MARKING DETAILS                                     | 01-23-89 R |
| 30. G-1   | STEEL BEAM GUARD RAIL  | 10-31-85 R |

RECORD PLANS

CONTRACTOR **PIKE INDUSTRIES INC.**  
TILTON, N.H.

RESIDENT ENGINEER **JAMES FOREST**

CONSTRUCTION BEGAN **5/29/90**  
CONSTRUCTION COMPLETED **5/11/91**

RECORD PLANS BY **J. MARSELL**

I hereby certify that all the construction required by this set of drawings has been accomplished as indicated herein.

By *James Forest* Resident Engineer  
Date **11-20-91**

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found on microfiche in Central Files.

STATE OF VERMONT  
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT  
TOWN OF ST. JOHNSBURY  
COUNTY OF CALEDONIA  
U.S. ROUTE 2 (F.A.P.)

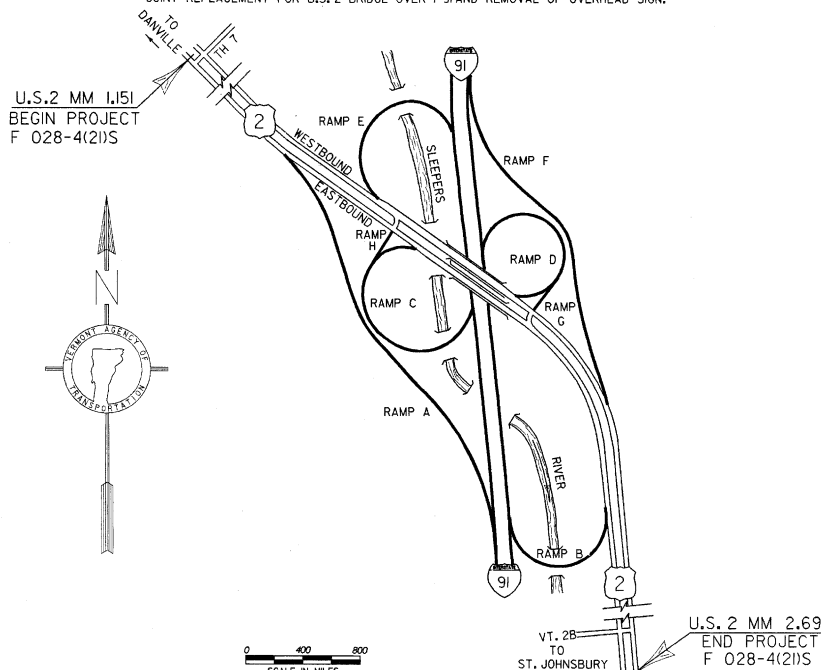
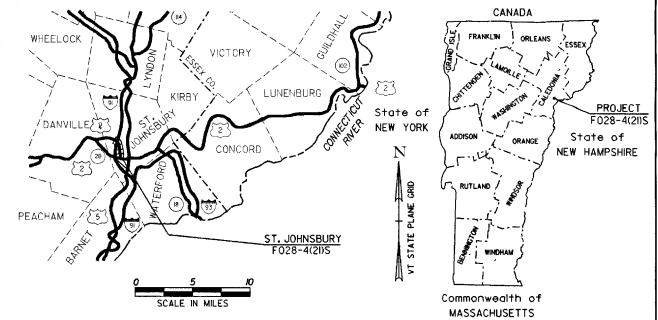
ON U.S. ROUTE 2 BEGINNING AT MILE MARKER 1.151 AND EXTENDING EASTERLY  
1.539 MILES TO MILE MARKER 2.690.

LENGTH OF ROADWAY 7,799.26 FEET= 1.477 MILES

LENGTH OF BRIDGE 326.66 FEET= 0.062 MILES

LENGTH OF PROJECT 8,125.92 FEET= 1.539 MILES

PROJECT CONSISTS OF LEVELING AND OVERLAYING WITH BITUMINOUS CONCRETE PAVEMENT,  
JOINT REPLACEMENT FOR U.S. 2 BRIDGE OVER I-91 AND REMOVAL OF OVERHEAD SIGN.



TRAFFIC DATA

ST. JOHNSBURY: 1990 ADT = 5680  
V = 50 MPH (UNLESS OTHERWISE NOTED)

CONVENTIONAL SIGNS

- COUNTY LINE
- TOWN LINE
- LIMITS OF ACCESS
- POINT OF ACCESS
- FENCE LINE
- STONE WALL
- TRAVELED WAY
- GUARD RAIL
- RAILROAD
- SURVEY LINE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- TREES
- CONTROL OF ACCESS
- PROPERTY LINE
- ROAD TAKING LINE
- SLOPE RIGHTS
- TOP OF CUT
- TOP OF SLOPE

DATE PLOTTED 25-MAY-1990

DATUM	N/A
VERTICAL	N/A
HORIZONTAL	N/A

899021TE



PROJECT PROCESSED UNDER  
SECONDARY ROAD PLAN

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD  
APPROVED *James A. Marcell* DATE **11/27/91**  
DIRECTOR OF PLANNING & PRECONSTRUCTION

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
DIVISION ADMINISTRATOR

PROJECT **ST. JOHNSBURY**  
**F028-4(2)S**  
SHEET 1 OF 30 SHEETS

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE AGENCY SECRETARY.  
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1986 AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON NOVEMBER 21, 1985 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

U.S. 2 MM 2.690  
END PROJECT  
F 028-4(2)S

## TYPICAL SECTIONS

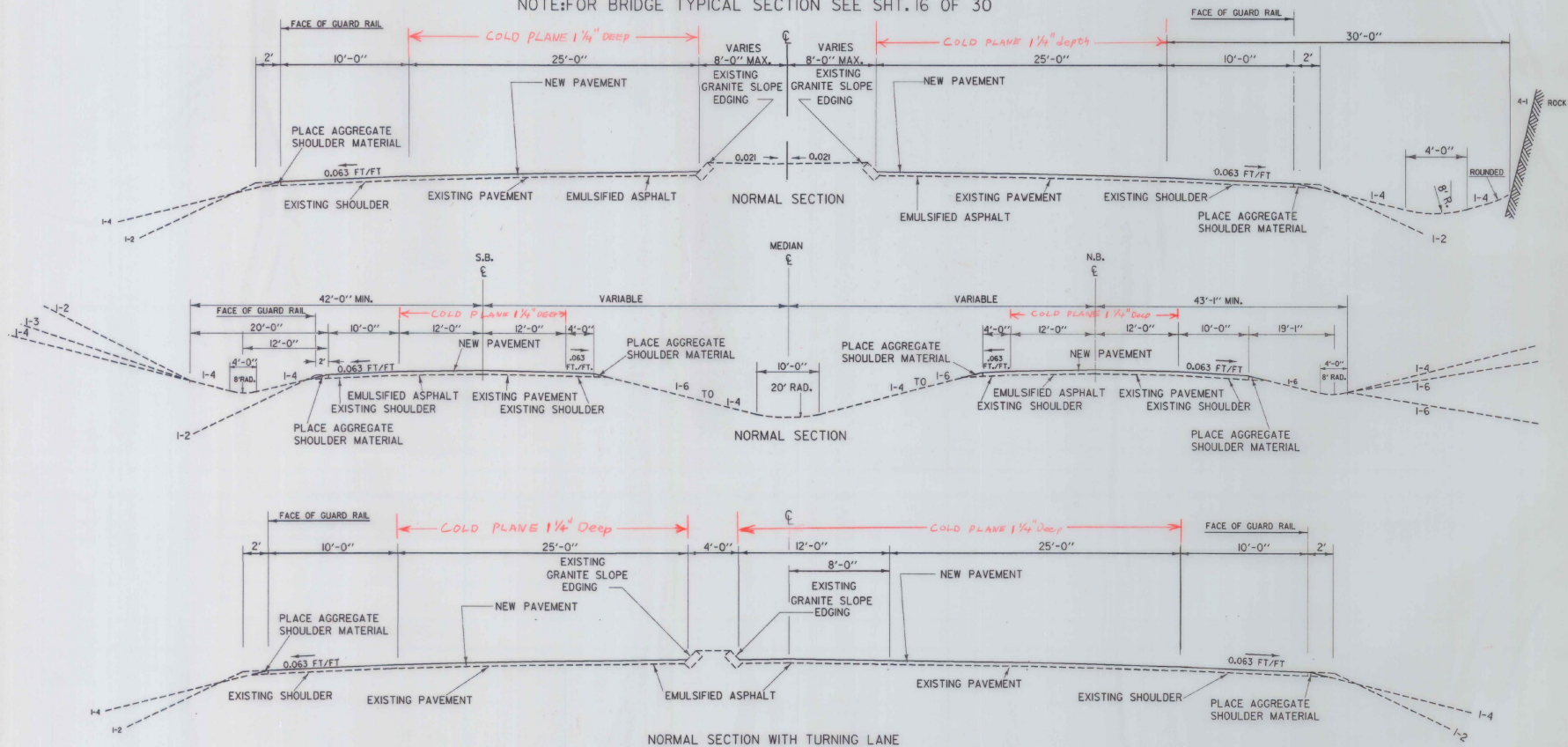
2 1/2" BITUMINOUS CONCRETE PAVEMENT (± 1/4") (TYPE III OVER 1 1/2" TYPE III)

~~432 TONS PER MILE LEVELING COURSE OF BITUMINOUS CONCRETE PAVEMENT~~

~~COLD PLANE 2-3" Wide Travel Lane & Passing Lane 1 1/2" deep~~  
 EMULSIFIED ASPHALT, TO BE APPLIED AT THE RATE OF 0.015 GAL./SQ. YD.  
 OR AS DIRECTED BY THE ENGINEER.

NOTE: THE LEVELING COURSE MAY BE TYPE III OR TYPE IV, AS DIRECTED BY THE ENGINEER.

NOTE: FOR BRIDGE TYPICAL SECTION SEE SHT. 16 OF 30





\* Crossover Stop Bar, Word Markings and Edge Lines are included on East Bound Sheet.

BUILT AS DESIGNED

DURABLE LETTER IN WORD MARKING

MM 1.165 Rt. (STOP)  
 1.163 Lt. (STOP)  
 1.221 Lt. (ONLY)  
 1.174 Lt. (ONLY)  
 1.198 Lt. (ONLY)  
 TH 7 (STOP)

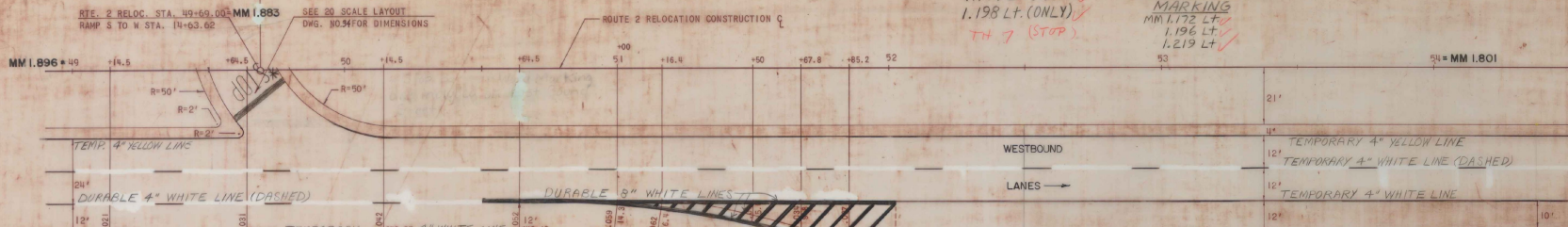
DURABLE ARROW MARKING  
 MM 1.172 Lt.  
 1.196 Lt.  
 1.219 Lt.

DURABLE 8" WHITE LINE (GORE AREA)

MM 1.835 ~ 1.867 Lt.

DURABLE 24" STOP BAR

MM 1.663 ~ 1.167 Rt.  
 1.161 ~ 1.165 Lt.  
 TH 7



P.C. RAMP W TO S STA. 0+00.00  
 61' RT. RTE. 2 STA. 50+64.92 = MM 1.665

RAMP W TO S  
 EXIT TERMINAL  
 RAMP E

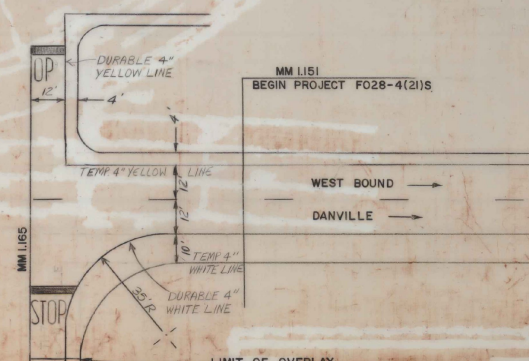
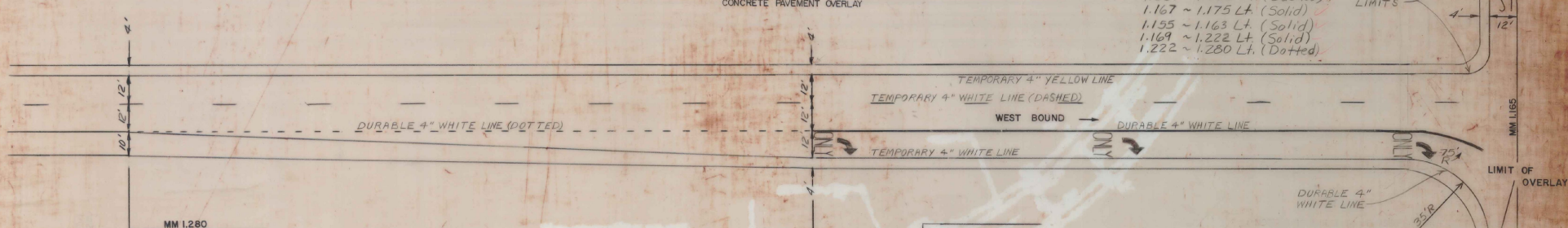
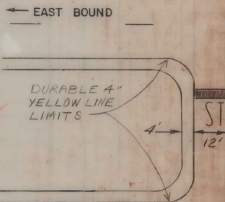
PAVING LIMITS FOR 1 1/2\"/>

TEMPORARY 4\"/>
 MM 1.151 ~ 1.896 Lt. (Dashed)  
 1.836 ~ 1.896 Lt. (Solid)  
 1.175 ~ 1.839 Lt. (Solid)  
 1.151 ~ 1.155 Lt. (Solid)

TEMPORARY 4\"/>
 MM 1.884 ~ 1.896 Rt.  
 1.167 ~ 1.874 Rt.  
 1.151 ~ 1.161 Rt.

DURABLE 4\"/>
 MM 1.167 Rt. (Lt./Rt. Crossover Edges)

DURABLE 4\"/>
 MM 1.163 Lt./Rt. (Solid)  
 1.867 ~ 1.896 Lt. (Dashed)  
 1.167 ~ 1.175 Lt. (Solid)  
 1.155 ~ 1.163 Lt. (Solid)  
 1.169 ~ 1.222 Lt. (Solid)  
 1.222 ~ 1.280 Lt. (Dotted)



NOTE: THIS SHEET TO BE USED FOR PAVEMENT MARKINGS AND PAVING LIMITS ONLY.

STATE OF VERMONT  
 DEPARTMENT OF HIGHWAYS

TOWN OF ST. JOHNSBURY  
 ROUTE No. 1-91 & RTE. 2 STA.  
 ROUTE 2 RELOC. STA. 40+00 TO STA. 51+00  
 RAMP E

BUILT  
 PROJECT No. F028-4(2)S.  
 SHEET 4 OF 30

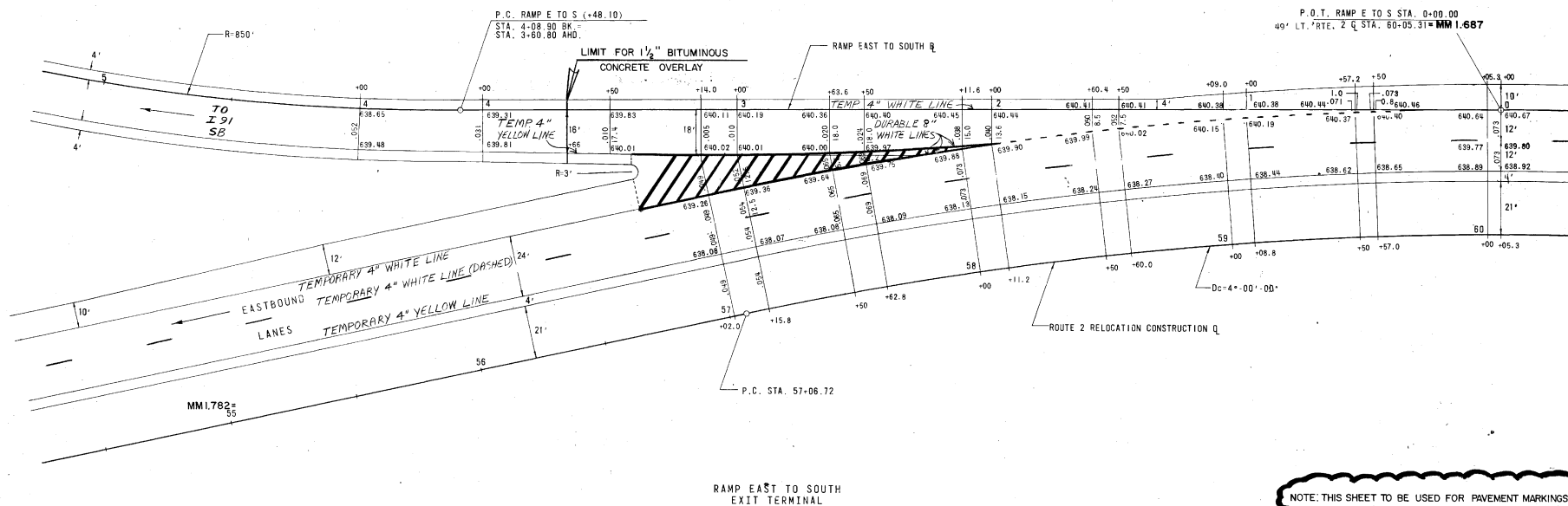
DESIGNED BY  
 DRAWN BY  
 CHECKED BY  
 COMPLETED BY

Durable 8" White Line  
(Gore Area)  
MM 1.723 ~ 1.750 R+

Durable 4" White Line  
MM 1.693 ~ 1.723 (Dotted)

Temporary 4" White Line  
MM 1.151 ~ 1.782 (Dashed)  
1.151 ~ 1.753 (Solid)  
1.750 ~ 1.782 (Solid)

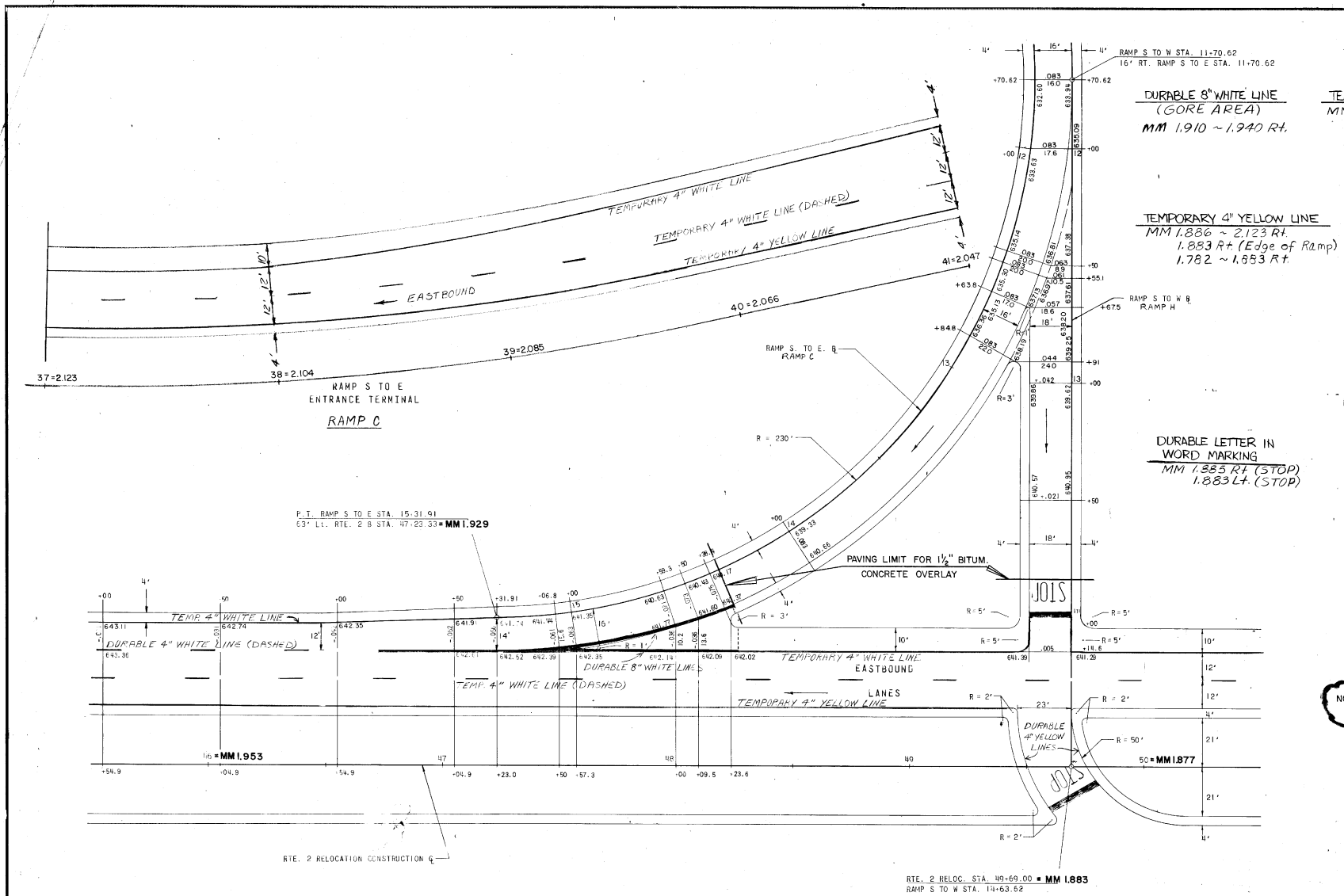
Temporary 4" Yellow Line  
MM 1.167 ~ 1.782 R+  
1.151 ~ 1.163 R+  
1.750 ~ 1.754 R+ (On Ramp)



NOTE: THIS SHEET TO BE USED FOR PAVEMENT MARKINGS & PAVING LIMITS ONLY

STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF	ST. JOHNSBURY
ROUTE NO.	I-91 & RTE. 2
ROUTE 2 RELOC. STA.	55+00 TO STA. 60+00
RAMP A	
PROJECT No. E028-4(2)15	
SHEET	5 of 30

SUPERVISOR BY S.C.F.  
 DRAWN BY S.C.F.  
 CHECKED BY J.V.  
 COMPLETED 1/27/77



**DURABLE 24" STOP BAR**  
 MM 1.883 ~ 1.887 Rt.  
 1.877 ~ 1.884 Lt.

**DURABLE 8" WHITE LINE (GORE AREA)**  
 MM 1.910 ~ 1.940 Rt.

**TEMPORARY 4" WHITE LINE**  
 MM 1.782 ~ 2.123 Rt. (Dashed)  
 1.910 ~ 2.123 Rt. (Solid)  
 1.887 ~ 1.910 Rt. (Solid)  
 1.782 ~ 1.883 Rt. (Solid)

**TEMPORARY 4" YELLOW LINE**  
 MM 1.886 ~ 2.123 Rt.  
 1.883 Rt. (Edge of Ramp)  
 1.782 ~ 1.853 Rt.

**DURABLE 4" WHITE LINE**  
 MM 1.940 ~ 1.993 Rt. (Dashed)  
 1.887 Rt./Lt. (Solid)

**DURABLE 4" YELLOW LINE**  
 MM 1.882 Lt./Rt. (Edge of Crossover)

**DURABLE LETTER IN WORD MARKING**  
 MM 1.885 Rt. (STOP)  
 1.883 Lt. (STOP)

**RAMP S TO W ENTRANCE TERMINAL RAMP H**

NOTE: THIS SHEET TO BE USED FOR PAVEMENT MARKINGS & PAVING LIMITS ONLY

STATE OF VERMONT  
 DEPARTMENT OF HIGHWAYS

TOWN OF ST. JOHNSBURG  
 ROUTE NO. 1-91 & RTE. 2 STA.  
 RTE. 2 RELOC. STA. 46.00 TO 50.00  
 RAMP C AND RAMP H

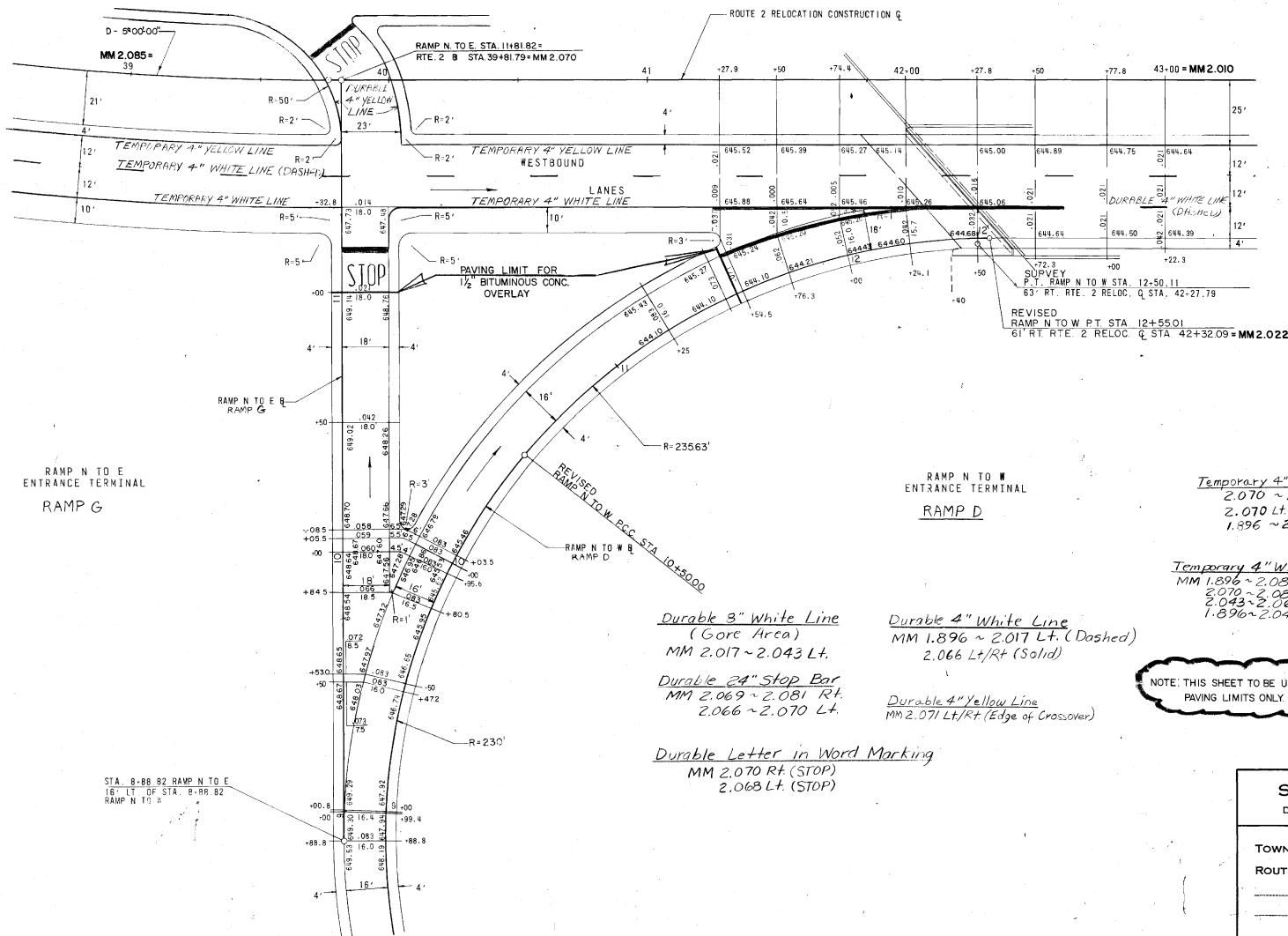
PROJECT NO. E028-4(2)15  
 SHEET 6 OF 30

SURVEYED BY C.C. 11  
 TRACED BY C.C. 11  
 CHECKED BY J.M. 11  
 DATE 11/11/11

RTE. 2 RELOC. STA. 49-69.00 • MM 1.883  
 RAMP S TO W STA. 14-63.62

P.T. RAMP S TO E STA. 15-31.91  
 E3° Lt. RTE. 2 B STA. 47-23.33 • MM 1.929

RTE. 2 RELOCATION CONSTRUCTION



Temporary 4" Yellow Line  
 2.070 ~ 2.085 Lt  
 2.070 Lt (Edge of Ramp)  
 1.896 ~ 2.065 Lt

Temporary 4" White Line  
 MM 1.896 ~ 2.085 Lt (Dashed)  
 2.070 ~ 2.085 Lt (Solid)  
 2.043 ~ 2.066 Lt (Solid)  
 1.896 ~ 2.040 Lt (Solid)

Durable 3" White Line  
 (Gore Area)  
 MM 2.017 ~ 2.043 Lt.

Durable 4" White Line  
 MM 1.896 ~ 2.017 Lt. (Dashed)  
 2.066 Lt/Rt (Solid)

Durable 24" Stop Bar  
 MM 2.069 ~ 2.081 Rt.  
 2.066 ~ 2.070 Lt.

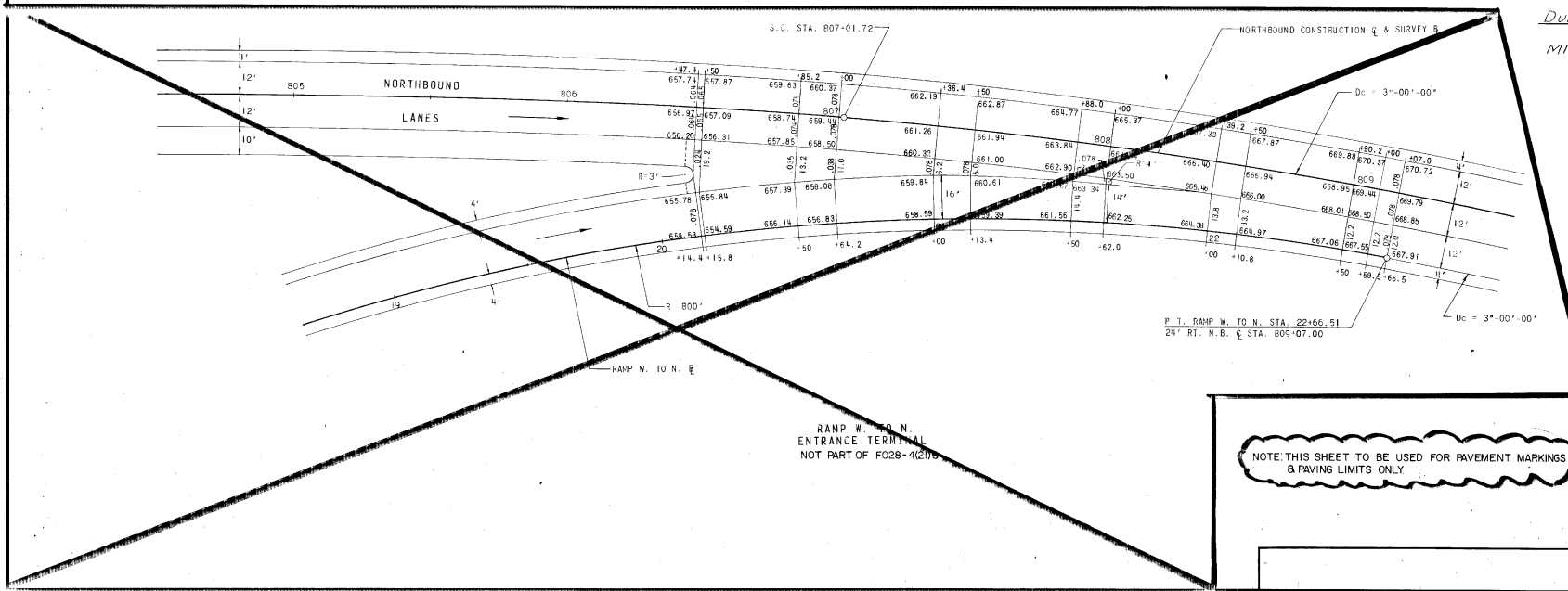
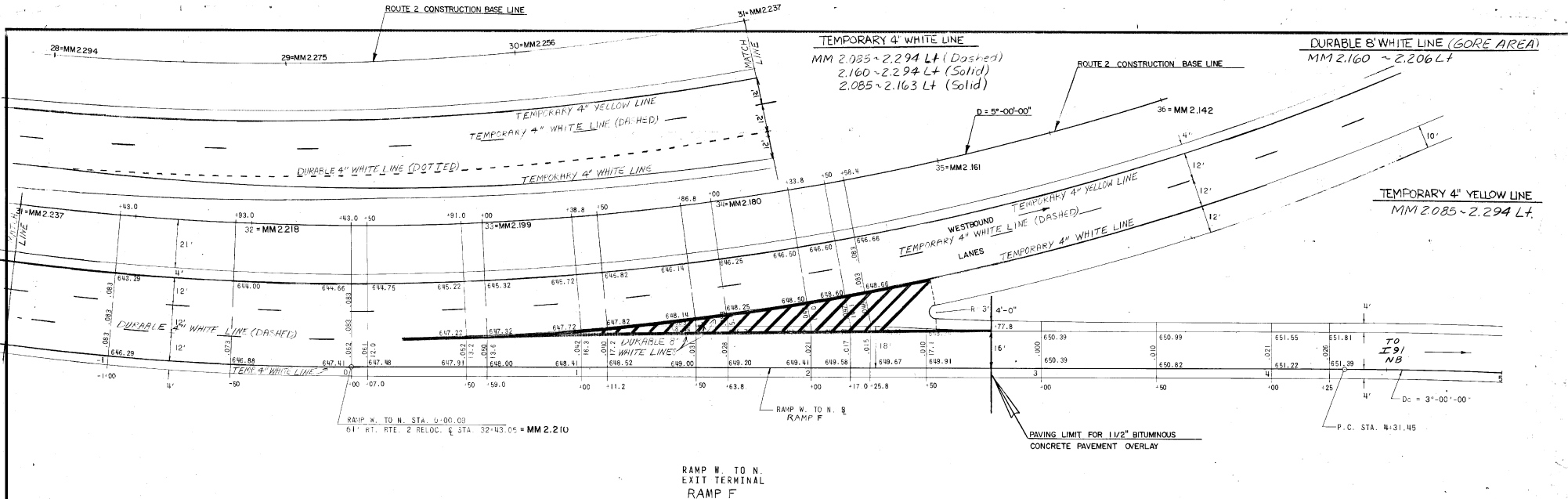
Durable 4" Yellow Line  
 MM 2.071 Lt/Rt (Edge of Crossover)

Durable Letter in Word Marking  
 MM 2.070 Rt (STOP)  
 2.068 Lt. (STOP)

NOTE: THIS SHEET TO BE USED FOR PAVEMENT MARKINGS B PAVING LIMITS ONLY.

<b>STATE OF VERMONT</b>	
DEPARTMENT OF HIGHWAYS	
TOWN OF	ST. JOHNSBURY
ROUTE NO.	1-91 & RTE. 2 STA.
	ROUTE 2 RELOC. 39-00 - 43-00
	RAMP G AND RAMP D
PROJECT NO.	E02B-4(2)S
SHEET	7 OF 30

DESIGNED BY: C.C.C.  
 DRAWN BY: J.C.C.  
 CHECKED BY: J.C.C.  
 COMPLETE: J.C.C.



DURABLE 4" WHITE LINE  
 MM 2.206 ~ 2.235 Lt. (Dashed)  
 2.235 ~ 2.294 Lt. (Dotted)

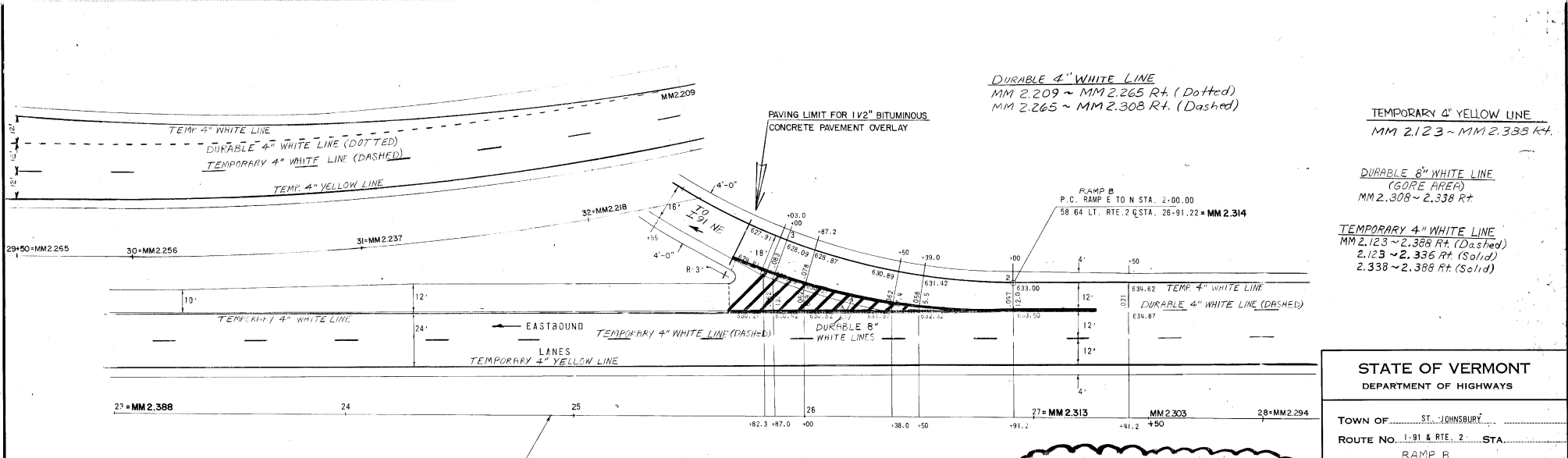
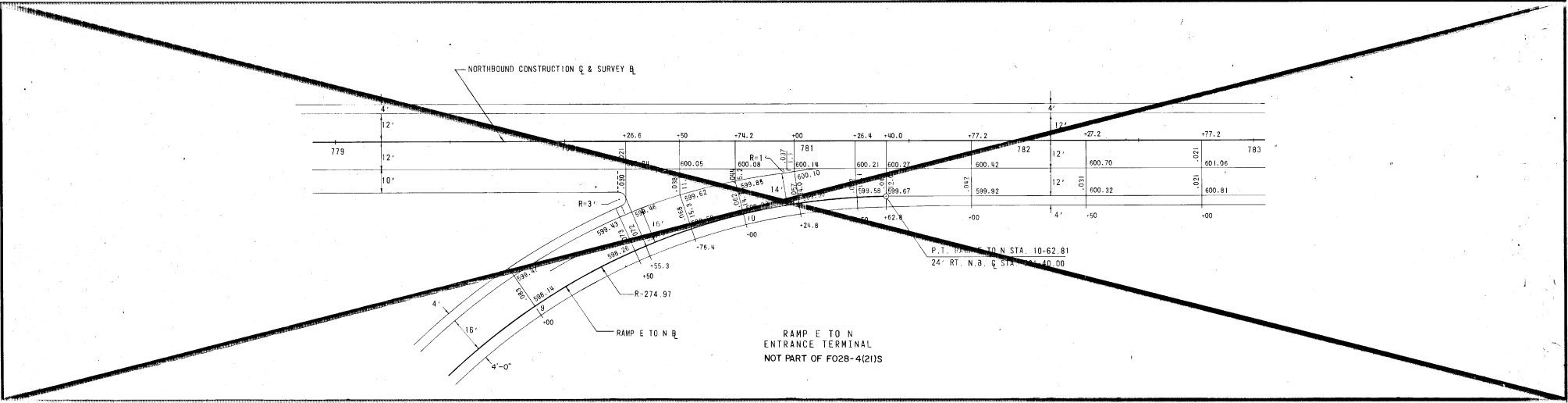
STATE OF VERMONT  
 DEPARTMENT OF HIGHWAYS

TOWN OF ST. JOHNSBURY  
 ROUTE NO. 1-91 & RTE. 2 STA.  
 RAMP F  
 ROUTE 2 RELOC. STA. 31+50 TO 36+00

PROJECT NO. F028-4(2)S  
 SHEET 8 OF 30

NOTE: THIS SHEET TO BE USED FOR PAVEMENT MARKINGS & PAVING LIMITS ONLY

SUBMITTED BY S.C.S.V.  
 DRAWN BY S.C.S.V.  
 CHECKED BY S.C.S.V.  
 COMPLETED 10/20



NOTE: THIS SHEET TO BE USED FOR PAVEMENT MARKINGS & PAVING LIMITS ONLY

STATE OF VERMONT  
DEPARTMENT OF HIGHWAYS

TOWN OF ST. JOHNSBURY

ROUTE No. 1-91 & RTE. 2 STA. RAMP B  
ROUTE 2 RELOC. STA. 23+00 TO STA. 27+50

PROJECT No. FO28-4(2)S  
SHEET 9 OF 30

DESIGNED BY C.C.A.  
DRAWN BY J.C.C.  
CHECKED BY J.C.C.  
INCHES BY 1/4"  
COMPLETED 1/21/71

**DURABLE 4" WHITE LINE**  
 MM 2.664 ~ 2.689 Lt. (Dotted)  
 2.630 ~ 2.664 Lt. (Solid)  
 2.540 ~ 2.628 Rt. (Solid)  
 2.513 ~ 2.540 Rt. (Dotted)  
 2.633 ~ 2.643 Rt. (Solid)  
 2.615 ~ 2.625 Rt. (Solid)  
 2.634 Rt. (Vt. 2-B Lane Line) (Solid)

**DURABLE ARROW MARKING**  
 MM 2.661 E  
 2.638 E  
 2.621 Rt.  
 2.544 Rt.  
 2.633 Rt.  
 2.635 Rt.

**DURABLE 24" STOP BAR**  
 MM 2.631 ~ 2.639 Rt. (VT. 2B)  
**DURABLE 4" YELLOW LINE**  
 MM 2.610 ~ 2.622 Lt. (DBL)  
**DURABLE 8" YELLOW LINE**  
 MM 2.612 ~ 2.622 Lt. (DIAGONALS)

**DURABLE LETTER IN WORD MARKINGS**  
 MM 2.663 E (ONLY)  
 2.642 E (ONLY)  
 2.633 Rt. (STOP)  
 2.617 Rt. (ONLY)  
 2.541 Rt. (ONLY)  
 2.635 Rt. (STOP)

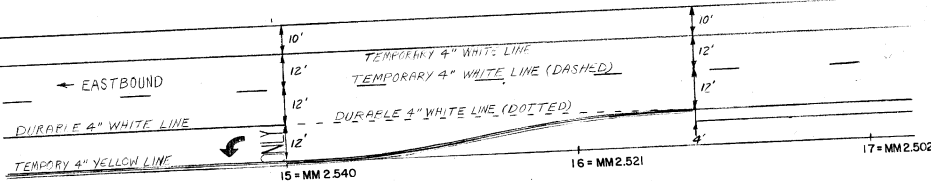
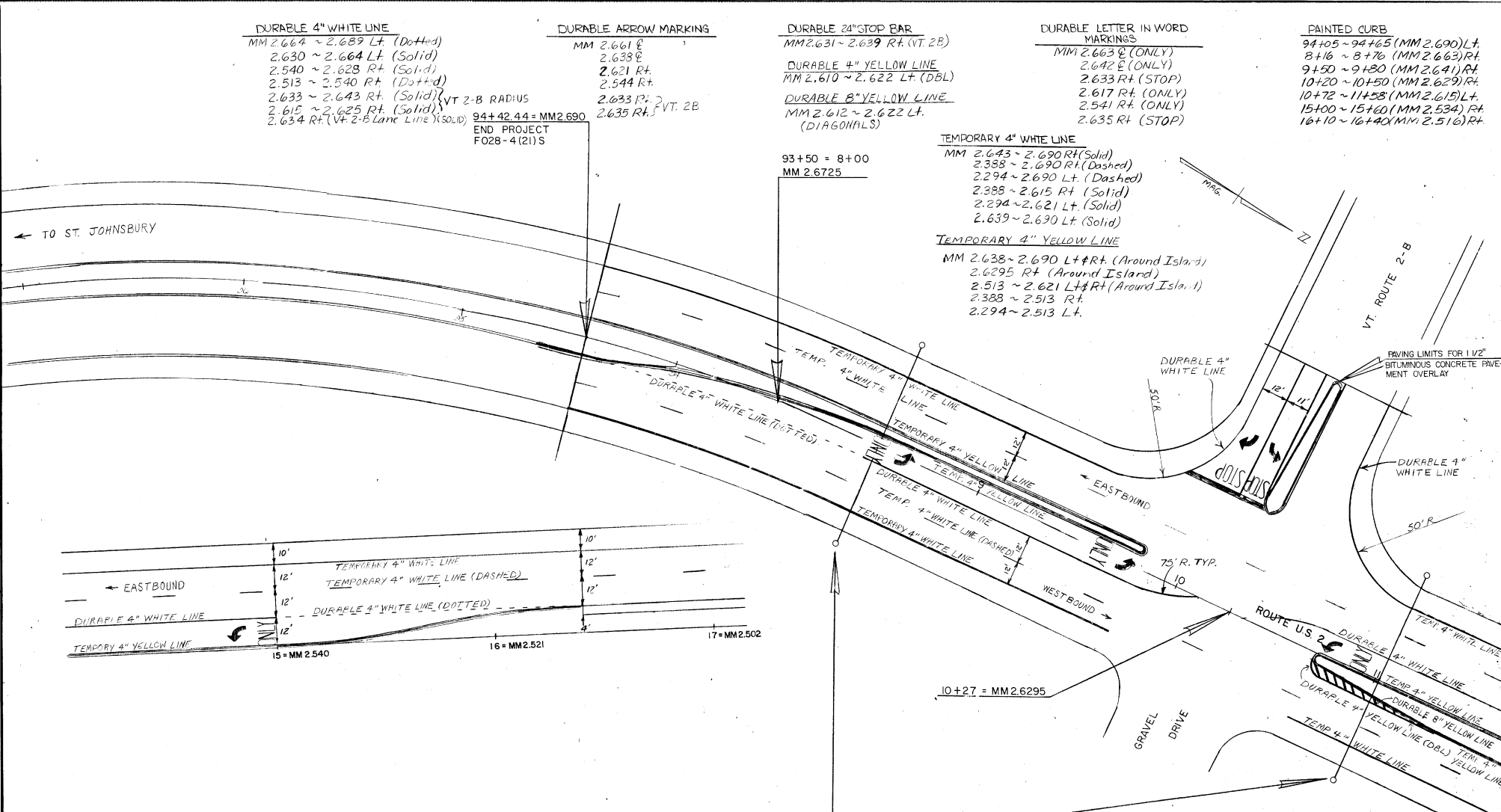
**PAINTED CURB**  
 94+05 ~ 94+65 (MM 2.690) Lt.  
 8+16 ~ 8+76 (MM 2.663) Rt.  
 9+50 ~ 9+80 (MM 2.641) Rt.  
 10+20 ~ 10+50 (MM 2.629) Rt.  
 10+72 ~ 11+58 (MM 2.615) Lt.  
 15+00 ~ 15+60 (MM 2.534) Rt.  
 16+10 ~ 16+40 (MM 2.516) Rt.

VT 2-B RADIUS  
 94+42.44 = MM 2.690  
 END PROJECT  
 F028-4(21) S

93+50 = 8+00  
 MM 2.6725

**TEMPORARY 4" WHITE LINE**  
 MM 2.643 ~ 2.690 Rt. (Solid)  
 2.388 ~ 2.690 Rt. (Dashed)  
 2.294 ~ 2.690 Lt. (Dashed)  
 2.388 ~ 2.615 Rt. (Solid)  
 2.294 ~ 2.621 Lt. (Solid)  
 2.639 ~ 2.690 Lt. (Solid)

**TEMPORARY 4" YELLOW LINE**  
 MM 2.638 ~ 2.690 Lt + Rt. (Around Island)  
 2.6295 Rt. (Around Island)  
 2.513 ~ 2.621 Lt + Rt. (Around Island)  
 2.388 ~ 2.513 Rt.  
 2.294 ~ 2.513 Lt.

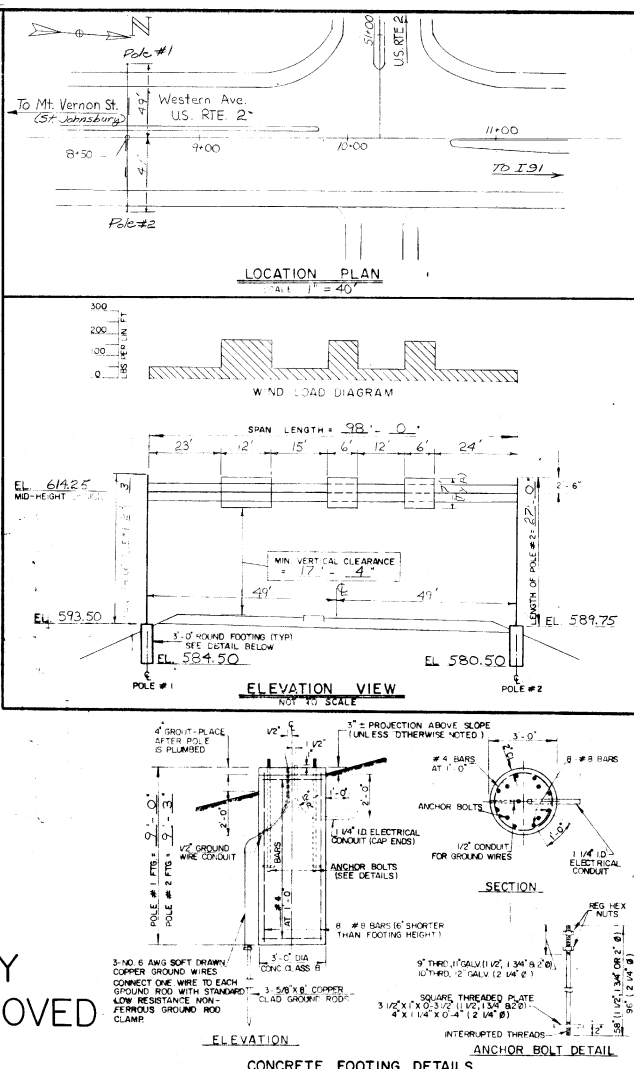
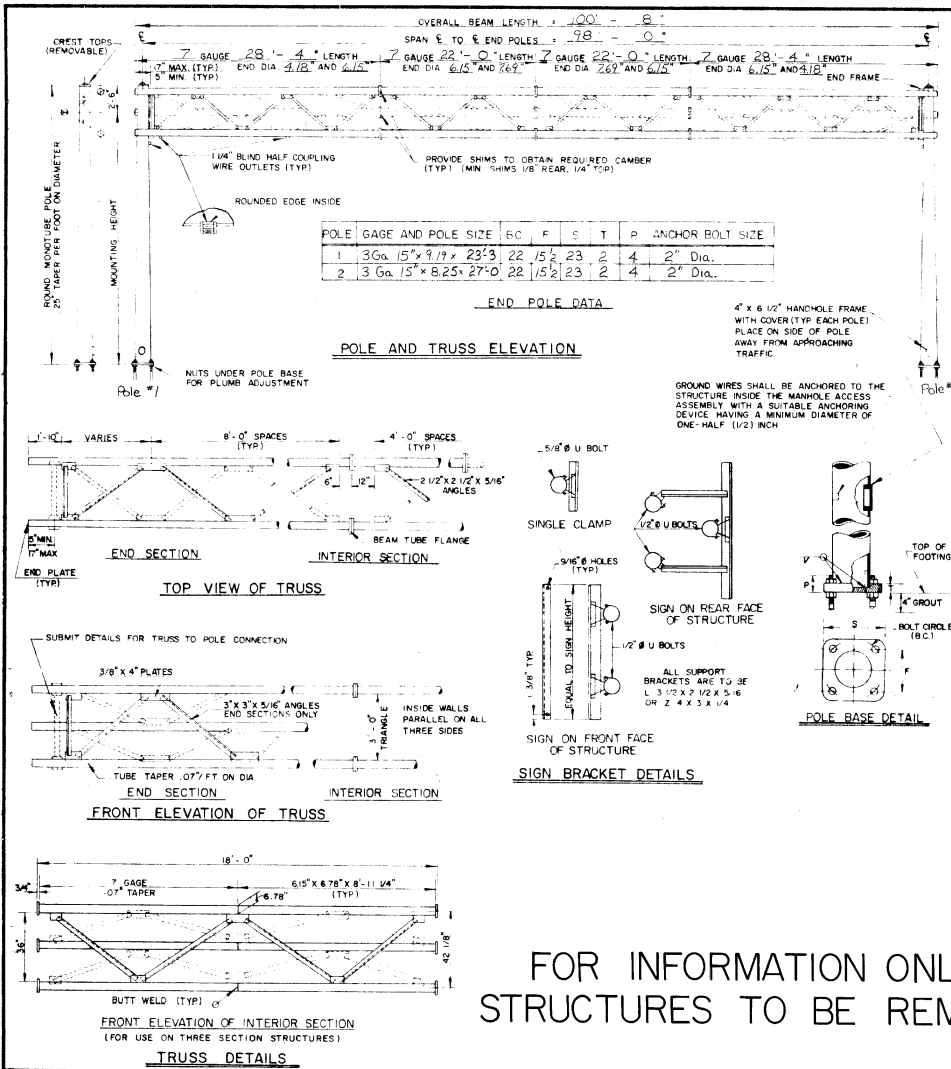


MM 2.663(8+50) AND MM 2.615(11+02)  
 REMOVE EXISTING SIGN STRUCTURES  
 SEE SHEETS 11 AND 12 FOR  
 DETAILS

ST. JOHNSBURY

SURVEYED BY	DATE
DRAWN BY	DATE 73
TRACED BY	DATE 73

PROJ. F no. 028-4(21)S  
 SHEET 10 OF 30.



- GENERAL NOTES**
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED JAN 1972, WITH CURRENT MODIFICATIONS.
  - OVERHEAD SIGN SUPPORTS SHALL CONFORM TO A A.S.H.O. PUBLICATION ENTITLED "SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS" DATE 1968, OR ITS SUBSEQUENT REVISIONS.
  - ANCHOR BOLTS: FOUR HIGH STRENGTH STEEL ANCHOR BOLTS WITH TWO HEXAGONAL NUTS PER BOLT SHALL BE FURNISHED WITH EACH POLE. BOLTS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. BOLTS SHALL BE OF ADEQUATE DIAMETER TO RESIST THE FULL BENDING MOMENT OF THE POLE AT YIELD STRENGTH STRESS.
  - FLANGE BOLTS: ALL FLANGE BOLTS AND HEX NUTS SHALL BE HIGH STRENGTH STEEL AND SHALL CONFORM TO A S.T.M. SPECIFICATIONS A 325. THESE BOLTS AND ATTACHED NUTS SHALL BE HOT DIPPED GALVANIZED PER ASTM A 153, WITH THE NUTS TAPERED .015 OVERSIZE TO INSURE PROPER FITTING. THE FLANGE BOLTS SHALL BE CAPABLE OF RESISTING 133% OF THE FULL DESIGN STRESS OF THE TUBE AT ITS YIELD STRENGTH STRESS.
  - CROSS BEAM CHORDS AND UPRIGHT POLE MEMBERS: STEEL TUBES SHALL BE FORMED AND WELDED WITH ONE CONTINUOUS LONGITUDINAL WELD INSIDE AFTER FORMING AND WELDING THEY SHALL BE COLD ROLLED TO INSURE UNIFORMITY OF SIZE, SMOOTHNESS OF WELD AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 P.S.I. THERE SHALL BE NO TRANSVERSE WELDING EXCEPT AS INDICATED ON THIS SHEET OR EXCEPT AT THE FLANGE CONNECTIONS AND POLE BASE PLATES, WHERE THE TUBES SHALL TELESCOPE. THE FLANGES AND PLATES TO BE CONTINUOUSLY WELDED BOTH INSIDE AND OUT TO WITHSTAND THE FULL TRANSFER OF TUBE BENDING STRENGTH TO THE BOLTS. WELDING SHALL BE PERFORMED BY THE ELECTRIC ARC PROCESS USING "E 60" CLASS COATED ELECTRODES APPROVED BY THE AMERICAN WELDING SOCIETY. ALL WELDING SLAG SHALL BE CHIPPED AND BRUSHED AWAY, PERMITTING ACCURATE WELD INSPECTION.
  - GALVANIZING: ALL STEEL COMPONENTS EXCEPT CONCRETE REINFORCING BARS ARE TO BE HOT DIPPED GALVANIZED AFTER FABRICATION. THE ASSEMBLIES SHALL BE DESIGNED AND FABRICATED TO PERMIT GALVANIZING ON ALL INTERIOR AND EXTERIOR SURFACES, FREE OF POCKETS AND OTHER STRUCTURAL OBSTRUCTIONS THAT WILL NOT PERMIT PROPER DEPOSITION OF ZINC COATING. GALVANIZING SHALL BE IN ACCORDANCE WITH A S.T.M. SPECIFICATION A 123 AND A 153.
  - ADDITIONAL DESIGN CRITERIA**  
 CONCRETE:  $f_c = 1200$  P.S.I.  $f_s = 3000$  P.S.I.  
 REINFORCING:  $f_s = 20000$  P.S.I. (INTERMEDIATE GRADE)  
 FOOTING SOIL PRESSURE: 3 KIPS PER SQ. FT. MAXIMUM  
 WIND LOAD: 25 LBS. PER SQ. FT. (MINIMUM ON THE EXPOSED SIGN AND POLE SURFACES)  
 50 LBS. PER LINEAR FOOT OF EXPOSED TRUSS AREA (FOR THE TRUSS AS DETAIL ON THIS SHEET)
  - SHOP DRAWINGS (6 COPIES OF EACH) SHALL BE SUBMITTED TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, FOR APPROVAL PRIOR TO FABRICATION.
  - AN EQUIVALENT ALUMINUM ALLOY SPAN OR OTHER ALTERNATE DESIGN DETAILS OR MATERIALS MAY BE SUBSTITUTED FOR DETAILS AND MATERIALS SHOWN UPON SUBMITTAL OF DRAWINGS FOR WRITTEN APPROVAL OF THE ENGINEER.
  - CROSS BEAM CHORDS SHALL BE CAMBERED TO THE ANTICIPATED DEAD LOAD DEFLECTION.
  - EACH OVERHEAD TRAFFIC SIGN SUPPORT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND AS DETAILED ON THIS SHEET.
  - THE COST OF SIGN SUPPORT BRACKETS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 677.0 OVERHEAD TRAFFIC SIGN SUPPORT, TRI-CHORD.
  - POLE MATERIAL SHALL BE A NON-SHRINKING MORTAR CONFORMING TO SPEC SUBSECTION 707.04 MORTAR TYPE IV.
  - SHOP DRAWINGS SPECIFIED IN NOTE NO. 8 SHALL INCLUDE THE FOLLOWING INFORMATION:  
 A. DETAILED DRAWING OF EACH COMPONENT OF THE SIGN SUPPORT STRUCTURE.  
 B. MATERIAL SPECIFICATION FOR EACH COMPONENT OF THE SIGN SUPPORT STRUCTURE, EITHER BY COMPLETE SPECIFICATION OR BY REFERENCE TO APPLICABLE A.S.T.M. STANDARD.  
 C. NOTATION OF PROJECT NAME, PROJECT NUMBER, ROUTE NUMBER, AND STATIONING TO BE INCLUDED ON EACH SHEET, INCLUDING STANDARD SHEETS AND SPECIFICATION SHEETS.  
 D. DETAILS FOR LOCATION OF SIGNS AND SIGN SUPPORT BRACKETS ON THE SUPPORT STRUCTURE.  
 E. ALL ELEVATIONS AND DIMENSIONS NECESSARY TO PROVIDE A COMPLETE SET OF RECORD PLANS.

FOR INFORMATION ONLY  
STRUCTURES TO BE REMOVED

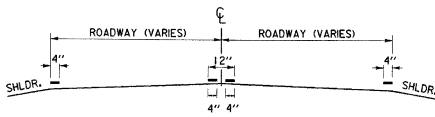
REVISIONS AND CORRECTIONS	DRAWN BY W. TRIPP	OCT. 1968
	TRACED BY J.A.A.	OCT. 1968
	CHECKED BY R. HAUPT	OCT. 1968

DETAILS OF ITEM 677.10  
OVERHEAD TRAFFIC SIGN SUPPORT  
TRI-CHORD TRUSS WITH ROUND MONOTUBE END POLES

STATE OF VERMONT  
DEPARTMENT OF HIGHWAYS  
STANDARD STRUCTURES  
SB-SSI-71

PROJECT St. Johnsbury F.028-4(2)S  
TOWN OF St. Johnsbury  
ROUTE NO. US RTE. 2 STA. MM 2.663(8+50)  
98' SPAN TRI-CORD OVERHEAD SUPPORT  
BRIDGE SECTION SUPERVISOR J. Wood  
COMPLETED BY J.R. Guilmette CHECKED BY J. MEYER  
PROJECT NO. F.028-4(2)S  
SHEET 11 OF 30

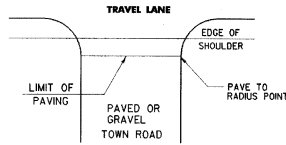




**PAVEMENT MARKING PLACEMENT DETAIL**

**TRAFFIC NOTES**

NOT TO SCALE



**PAVING LIMITS FOR TOWN ROADS**

**GUIDELINES FOR MINIMUM INTERIM PAVEMENT MARKINGS FOR CONSTRUCTION ZONES**

- A. DEFINITION - INTERIM MARKINGS ARE MARKINGS THAT ARE PLACED PRIOR TO THE APPLICATION OF FINAL PAVEMENT MARKINGS ON THE WEARING COURSE AS SPECIFIED IN THE PROJECT PLANS. THE COST ASSOCIATED WITH THE INTERIM MARKINGS INCLUDING MATERIAL COST, PLACEMENT COSTS, AND REMOVAL COSTS SHALL BE SUBSIDIARY TO THE SPECIFIED FINAL PAVEMENT MARKINGS.
- B. INTERIM MARKINGS SHALL CONSIST OF TAPE, OR, TEMPORARY RAISED PAVEMENT MARKERS (RPM'S).  
 THE TAPE SHALL BE OF A TYPE EASILY REMOVED IF PLACED ON THE FINAL PAVEMENT SURFACE. INTERIM TAPE MARKINGS OR RPM'S WILL BE OFFSET AND REMOVED IMMEDIATELY UPON APPLICATION OF THE SPECIFIED FINAL MARKINGS AND SHALL BE APPLIED AS DESCRIBED BELOW.

STATEMENTS A OR B PERTAIN TO THE PAVEMENT MARKINGS PLACED ON THE WEARING COURSE. MARKINGS PLACED ON THE BASE COURSE OR VARIOUS LIFTS OF PAVEMENT MAY CONSIST OF TAPE, PAINT OR RPM'S. IF TAPE IS USED, IT SHALL BE THE TYPE THAT CAN BE PAVED OVER OR A TYPE EASILY REMOVED. IF RPM'S ARE USED, PAYMENT SHALL BE THE LINEAR RATE AS IF A SOLID LINE WAS APPLIED.

- C. CENTERLINE AND GORE AREA MARKINGS SHALL BE APPLIED AT THE END OF EACH WORKING DAY. THE FOLLOWING LAYOUT REQUIREMENTS SHALL BE MET:

NO PASSING ZONE  
 -SOLID STRIPES- DOUBLE YELLOW REMOVABLE PAVEMENT MARKING TAPE LINES SPACED 4' APART.

OR  
 -RAISED PAVEMENT MARKERS- IN NO CASE SHALL TEMPORARY RAISED PAVEMENT MARKERS BE USED FOR MORE THAN THREE CALENDAR DAYS BEFORE THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.

RAISED PAVEMENT MARKERS (REMOVABLE) WHEN USED, SHALL BE PLACED ON 5' CENTERS WITH EVERY 4TH MARKER BEING REFLECTORIZED. THE RAISED PAVEMENT MARKINGS SHALL BE SUPPLEMENTED WITH BLACK ON ORANGE "DO NOT PASS" SIGNS PLACED AT THE BEGINNING OF THE NO PASSING ZONE AND EVERY 1000' THEREAFTER THROUGHOUT THE NO PASSING ZONE. ALL TEMPORARY RAISED PAVEMENT MARKERS SHALL BE REMOVED IMMEDIATELY UPON PLACEMENT OF THE SPECIFIED FINAL MARKINGS. ALL COSTS ASSOCIATED WITH "DO NOT PASS" SIGNS AND THEIR INSTALLATION SHALL BE SUBSIDIARY TO THE SPECIFIED FINAL PAVEMENT MARKINGS.

DASHED LINE  
 -10-FOOT SOLID LINE WITH 30-FOOT GAP.

OR  
 -4 FOOT SOLID LINE WITH 36 FOOT GAP TO BE REMOVED IMMEDIATELY UPON THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.

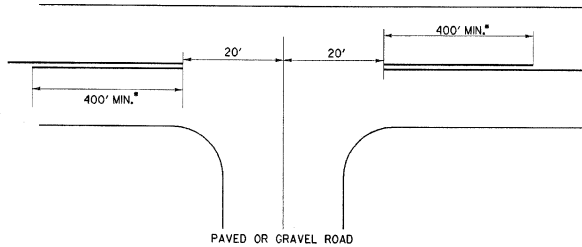
OR  
 -4 RETRO-REFLECTIVE RPM'S ON THREE FOOT CENTERS WITH A 30 FOOT GAP TO BE REMOVED IMMEDIATELY UPON THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.

GORE AREAS  
 GORE AREAS TO INCLUDE 8" CHANNELIZING LINE AND 4" DASHED LINE. SEE STANDARD E-191.

D. EDGE LINES  
 UNLESS SPECIFIED, FINAL EDGE LINES ARE NOT REQUIRED UNTIL COMPLETION OF THE PROJECT. EDGE LINES HOWEVER SHOULD BE APPLIED AT THE END OF THE DAY WHERE TRAFFIC VOLUMES ARE HIGH AND/OR A DELAY OF SEVERAL DAYS IS ANTICIPATED. IN THESE INSTANCES, TAPE, PAINT OR RPM'S CAN BE USED AS THE MARKING. MATERIAL QUANTITIES ARE TO BE PAID UNDER THE APPROPRIATE BID ITEM FOR TEMPORARY LINES. RPM'S SHOULD BE RETRO-REFLECTIVE TEMPORARY MARKERS ON A 5' SPACING PATTERN AND THE SAME COLOR AS THE LINE THEY ARE SUBSTITUTING FOR.

E. PRIOR TO ACCEPTANCE, THE PAVEMENT MARKINGS SHALL BE COMPLETED FOR THE ENTIRE PROJECT BY THE CONTRACTOR AS DETAILED ON THE PLANS OR DIRECTED BY THE RESIDENT ENGINEER.

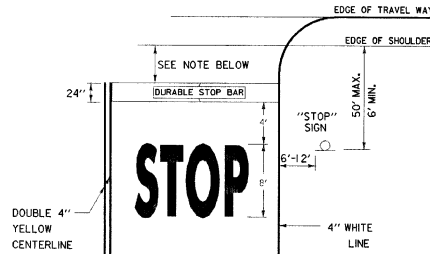
F. THE DURABLE STOP BAR SHALL BE APPLIED AT ALL NEWLY PAVED SIDEROAD LOCATIONS. THE DURABLE "STOP" MARKINGS ARE TO BE APPLIED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.



A SOLID LINE IN THE DIRECTION OF TRAVEL IS BEGUN AT A LOCATION 400 FEET IN ADVANCE OF THE INTERSECTION. THE DISTANCE IS MEASURED FROM A POINT 20 FEET IN ADVANCE OF THE CENTERLINE OF THE INTERSECTING ROADWAY.

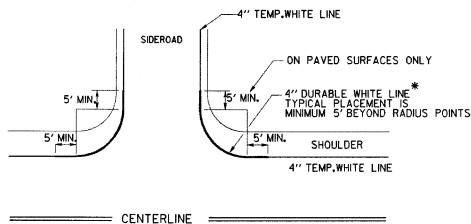
\* CENTERLINE TREATMENT SHALL CONSIST OF A MINIMUM OF 400 FEET OF SOLID LINE IN ADVANCE OF THE INTERSECTION AND SHALL BE PAIRED WITH EITHER A SOLID OR DASHED LINE DEPENDING ON SIGHT DISTANCE AVAILABILITY IN THE OPPOSING LANE.

**APPROACH TO A SIDE ROAD INTERSECTION**



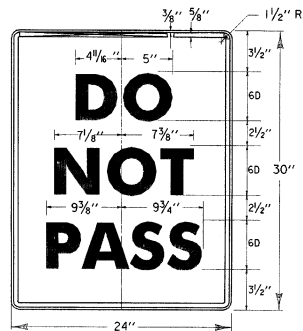
THE "DESIRED STOPPING POINT" IS THE LOCATION BASED ON SITE CONDITIONS THAT BEST ALLOWS THE STOPPED VEHICLE TO VIEW THE APPROACHING TRAFFIC, IN NO CASE MORE THAN 30 FEET OR LESS THAN 4 FEET FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.

**PAVEMENT MARKING DETAILS**  
 (SEE TRAFFIC NOTE "F")



\* FOR ALL PAVED CLASS 1 & CLASS 2 TOWN HIGHWAYS AND ANY CLASS 3 TOWN HIGHWAY WIDER THAN 22 FEET.

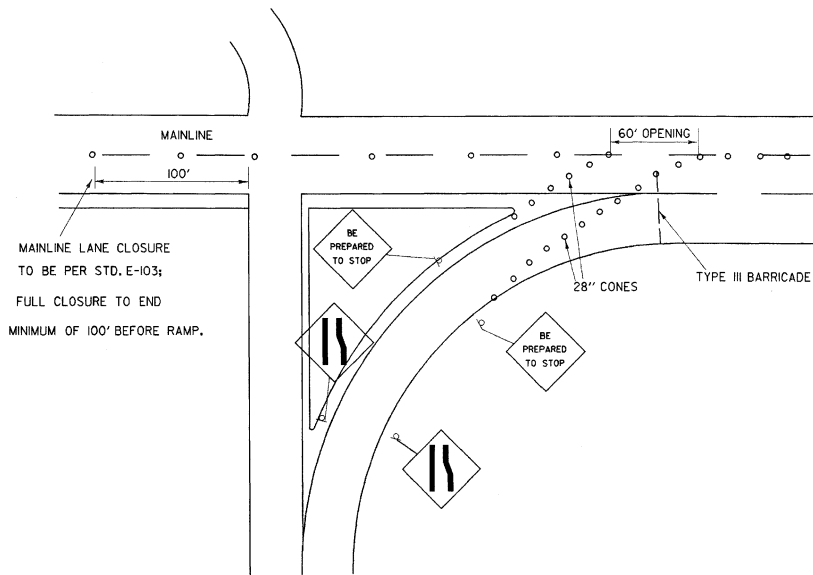
**DURABLE EDGELINE RADIUS LAYOUT TYPICAL**



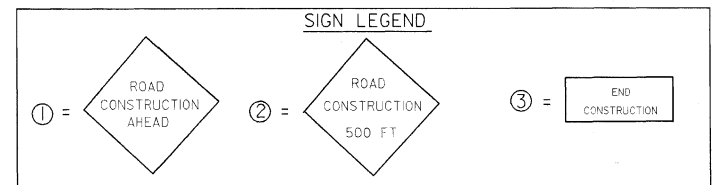
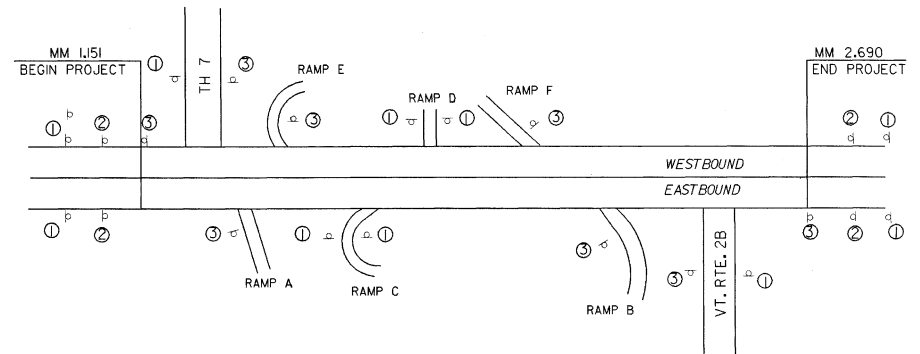
LEGEND - BLACK (NON-REF.) BACKGROUND - ORANGE (ENCAPSULATED LENS) SEE NOTE \* C SIGN DETAIL

89802MK  
 MASHMA.DGN

REVISIONS		SURVEYED BY		DATE	
DELETED DRIVE DETAIL		WILDER		03/90	
REVISED STOPBAR - CL		BOYD			
07/11/89		DESIGN FILE NO.	89802ISJ	8-MAR-1990	DATE PLOTTED
NOTES CHANGED, SIGN ADDED		PROJ. NAME	ST. JOHNSBURY		
10/03/89 DAR		PROJ. NO.	F028-4(2)IS		
		SHEET 13	OF 30 SHEETS		



SHOWN ABOVE IS THE PROPOSED RAMP CLOSURE FOR CONSTRUCTION. HOWEVER, THE RESIDENT ENGINEER MAY ADJUST IN THE FIELD IF HE DETERMINES OTHER TRAFFIC CONTROL MORE FEASIBLE.

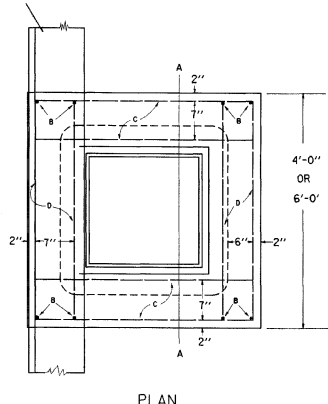


**CONSTRUCTION APPROACH SIGNING**  
FOR SIGN PLACEMENT LOCATION, SEE STANDARD E-100

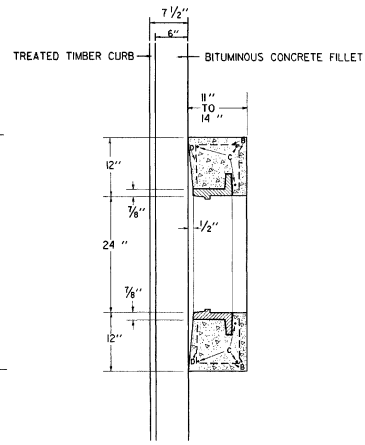
DATUM  
VERTICAL \_\_\_\_\_  
HORIZONTAL \_\_\_\_\_

SURVEYED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY WHEELER DATE 3/90  
SQUAD LEADER BOYD  
DESIGN FILE NO. ZG0450,54389802ISJ.DGNH  
PRF 89802ICS DATE PLOTTED 25-MAY-1990  
FILE  
PROJ. NAME ST. JOHNSBURY  
PROJ. NO. F028-4(2)S  
SHEET 14 OF 30 SHEETS

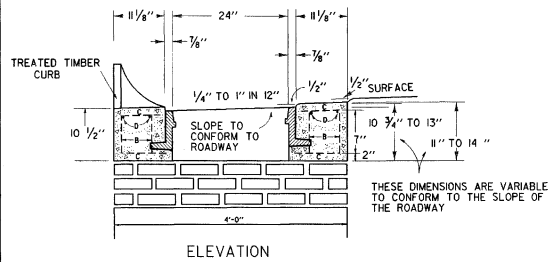
TREATED TIMBER CURB AND BITUMINOUS CONCRETE FILLET



PLAN



SECTION A-A



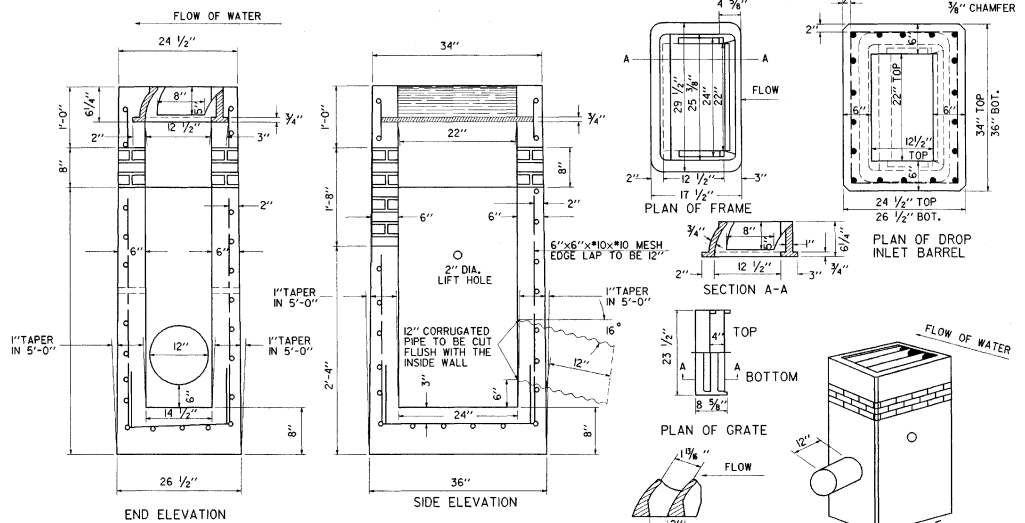
ELEVATION

THESE DIMENSIONS ARE VARIABLE TO CONFORM TO THE SLOPE OF THE ROADWAY

4'-0" X 4'-0" STEEL SCHEDULE

BAR	NO	LENGTH	
B	4	4'-8"	STRAIGHT
C	6	3'-6"	STRAIGHT
D	4	3'-8"	STRAIGHT

CONCRETE CLASS B = 0.41 C.Y.  
REINFORCING STEEL = 58 LBS.  
4'-0" X 6'-0"  
CONCRETE CLASS B = 0.54 C.Y.  
REINFORCING STEEL = 74 LBS.



END ELEVATION

SIDE ELEVATION

PLAN OF FRAME

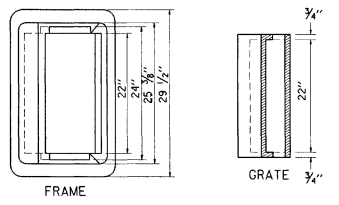
PLAN OF DROP INLET BARREL

SECTION A-A

PLAN OF GRATE

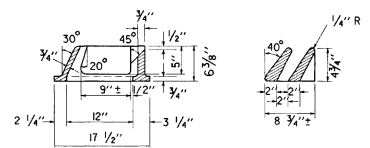
SECTION A-A GRATE

ISOMETRIC



FRAME

GRATE



ALTERNATE GRATE AND FRAME

TOP FOR A DROP INLET WITH TREATED TIMBER CURB

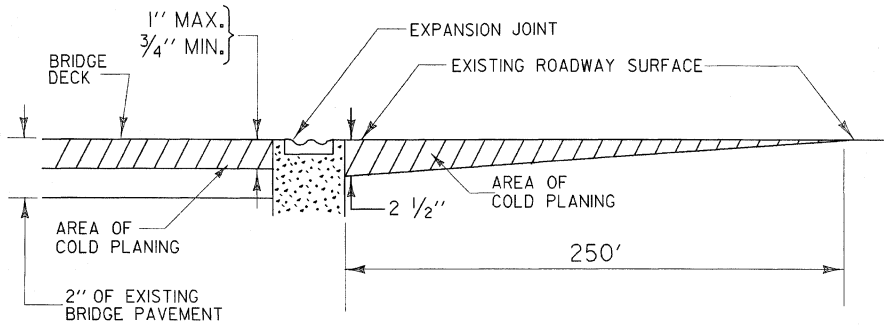
GENERAL NOTES:

1. THE CONTRACTOR SHALL, IN ACCORDANCE WITH SECTION 604 OF THE STATE OF VERMONT STANDARD SPECIFICATIONS, DISMANTLE EACH DROP INLET WHICH IS TO BE ADJUSTED AND REMOVE ALL EXISTING BRICKS.
2. THE DROP INLETS WILL THEN BE RECONSTRUCTED TO THE REQUIRED GRADE WITH NEW BRICKS (CONFORMING TO SECTION 705.01(b) OF THE STATE OF VERMONT STANDARD SPECIFICATIONS) USING THE EXISTING OR A NEW FRAME AND TOP AS DIRECTED BY THE ENGINEER.
3. ALL WORK SHALL COMPLY WITH SECTION 604.04(f) OF THE STATE OF VERMONT STANDARD SPECIFICATIONS AND SHALL BE PAID AS ITEM 604.40 CHANGING ELEVATIONS OF DROP INLETS, CATCH BASINS, OR MANHOLES.

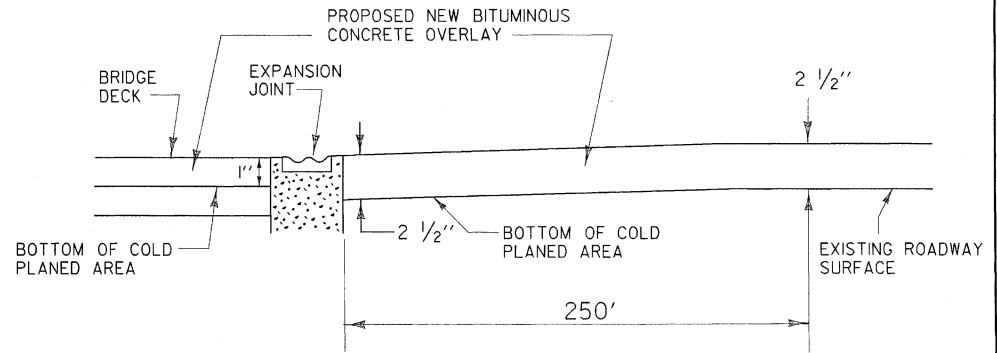
PRECAST REINFORCED CONCRETE CURB DROP INLET WITH CAST IRON GRATE

DRAWN BY WHEELER/SO B DATE 8-89  
SQUAD LEADER BOYD / SO B  
DESIGN FILE NO. Z60150,54189B021S.J.DGN  
PRF FILE 890221D16 (VI+D10) PLOTTED 23-MAR-1990  
PROJ. NAME ST. JOHNSBURY  
PROJ. NO. F 028-4(215)  
SHEET 15 OF 30 SHEETS

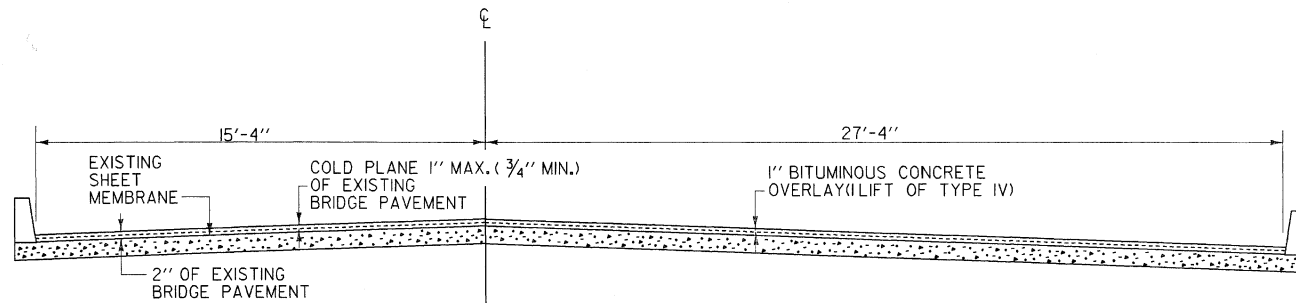
## BRIDGE APPROACH DETAIL AND TYPICAL SECTION



EXISTING CONDITIONS (PROFILE VIEW)  
NO SCALE



PROPOSED CONDITIONS (PROFILE VIEW)  
NO SCALE

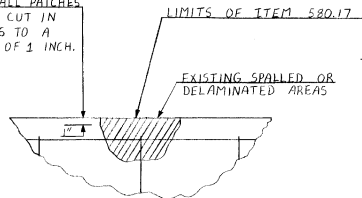


EAST BOUND BRIDGE  
MM 1.974 ~ MM 2.036  
WEST BOUND BRIDGE  
MM 1.961 ~ MM 2.023

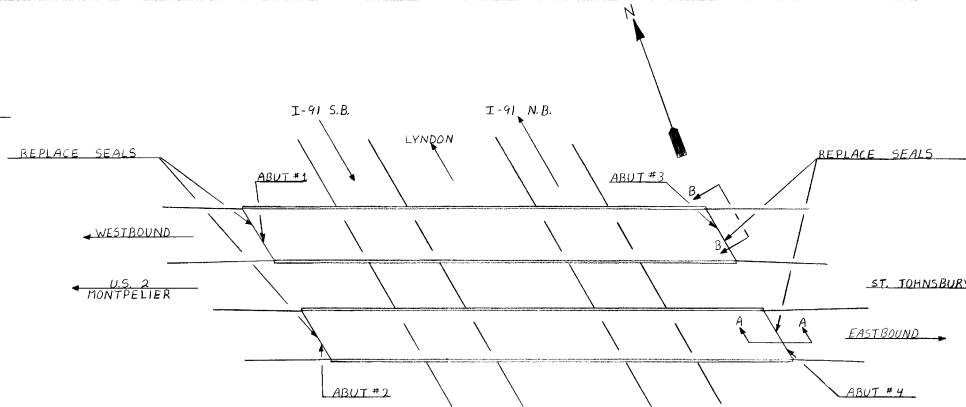
1" BITUMINOUS CONCRETE PAVEMENT (LIFT TYPE IV) ( $\pm 1/4"$ )  
EMULSIFIED ASPHALT, TO BE APPLIED AT A RATE OF  
0.015 GAL./SQ. YD. OR AS DIRECTED BY THE ENGINEER.

DRAWN BY	DAYE-WHEELER	DATE	3-89
SQUAD LEADER	BOYD		
DESIGN FILE NO.	200150.54189B021S.J.DGN		
PRF FILE	89B021 CP. PRF	DATE PLOTTED	15-JUN-1990
PROJ. NAME	ST. JOHNSBURY		
PROJ. NO.	F 028-4(2)S		
SHEET	16	OF	30 SHEETS

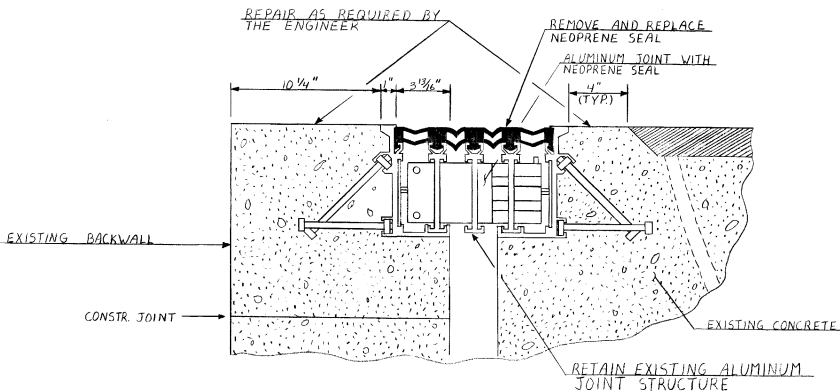
THE EDGES OF ALL PATCHES SHALL BE SAW CUT IN STRAIGHT LINES TO A MINIMUM DEPTH OF 1 INCH.



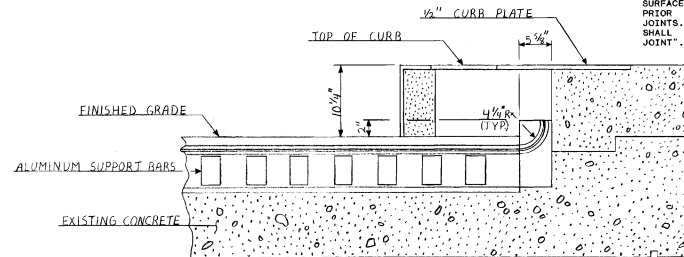
DETAILS SHOWING LIMITS OF RAPID SETTING CONCRETE.



PLAN  
N.T.S.



DETAIL A-A  
Scale: 3"=1'-0"



DETAIL B-B  
Scale: 1 1/2"=1'-0"

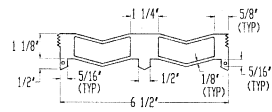
GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 1986, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1985, AND ITS LATEST REVISIONS.
  2. THE RUBBER IN ALL THE EXISTING EXPANSION JOINTS SHALL BE REMOVED AND ALL THE ALUMINUM CONTACT SURFACES SCRUBBED AND BLAST CLEANED, AND BLOWN FREE OF ALL DEBRIS. LABOR, EQUIPMENT AND MATERIALS REQUIRED TO REMOVE THE RUBBER AND CLEAN THE CONTACT SURFACES SHALL BE PAID FOR UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".
  3. THE GAP AT THE EXPANSION JOINTS SHALL BE BRIDGED WITH STEEL PLATES OR OTHER SUITABLE MATERIALS. FIVE SETS OF CONSTRUCTION DETAILS FOR BRIDGING THE EXPANSION JOINTS SHALL BE SUBMITTED TO THE STRUCTURES ENGINEER FOR REVIEW AND APPROVAL PRIOR TO REMOVAL OF THE EXISTING RUBBER. PAYMENT FOR FLAGGERS AND BRIDGING THE JOINTS SHALL BE INCLUDED UNDER THE PRICE BID FOR ITEM 527.10, "MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS".
  4. THE FABRICATOR SHALL FURNISH FIVE SETS OF FABRICATION AND CONSTRUCTION DRAWINGS FOR THE NEOPRENE IN THE EXPANSION JOINTS, PER SUBSECTION 105.03.
  5. THE NEOPRENE FOR THE EXPANSION JOINTS SHALL BE SUPPLIED BY D.S. BROWN, P.O. BOX 158, 153 E. CHERRY ST., NORTH BALTIMORE, OH 45872, TEL. 419-287-2561, ATTN: ED VANAMAN. D.S. BROWN SHALL HAVE A REPRESENTATIVE ON THE PROJECT PRIOR TO PLACEMENT OF THE NEOPRENE. THE REPRESENTATIVE SHALL BE AVAILABLE FOR FIVE WORK DAYS. THE CONTRACTOR SHALL GIVE THE SUPPLIER ONE WEEKS NOTICE PRIOR TO THE START OF PLACEMENT OF THE NEOPRENE. COST OF LABOR, EQUIPMENT AND MATERIALS TO INSTALL THE NEOPRENE IN THE EXPANSION JOINT SHALL BE INCLUDED UNDER THE UNIT PRICE BID FOR ITEM 516.10, "BRIDGE EXPANSION JOINT".
  6. PATCHING OF CONCRETE HAUNCHES AT EXPANSION JOINTS SHALL INCLUDE REMOVAL AND DISPOSAL OF UNSOUND AND DELAMINATED CONCRETE AS DIRECTED BY THE ENGINEER. THE PREPARED SURFACES SHALL BE THOROUGHLY SANDBLASTED TO REMOVE ALL LOOSE MATERIAL AND ANY CONTAMINANTS. THE REINFORCING STEEL (IF EXPOSED) SHALL BE SANDBLASTED. THE MATERIAL USED TO FILL A PATCH SHALL BE PLACED AND FINISHED OR FORMED SO THAT THE FINAL SURFACE WILL BE AT THE SAME ELEVATION AS THE ORIGINAL SURFACE.
- THE BONDING AGENT AND ITS APPLICATION PROCEDURE SHALL COMPLY WITH THE REQUIREMENTS OF THE PATCHING MATERIAL MANUFACTURER. PAYMENT FOR BONDING AGENT WILL BE SUBSIDIARY TO ITEM 560.17, RAPID SETTING CONCRETE REPAIR MATERIAL.
- PAYMENT FOR PATCHING OF CONCRETE, BONDING AGENT, AND REMOVAL OF EXISTING CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 560.17.
7. "DELASTIBOND", A LUBRICATING ADHESIVE TO BE FURNISHED BY THE SUPPLIER, D.S. BROWN, SHALL BE USED ON ALL CONTACT SURFACES, NEOPRENE TO NEOPRENE TO ALUMINUM. JUST PRIOR TO INSTALLING THE NEW NEOPRENE ON THE EXPANSION JOINTS, PAYMENT FOR LABOR, EQUIPMENT AND MATERIALS SHALL BE SUBSIDIARY TO ITEM 516.10, "BRIDGE EXPANSION JOINT".

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION**

Town Of	ST. JOHNSBURY	Bridge No.	103E461
Highway No.	U.S. 2	Log Sta.	
	U.S. 2 OVER I-91	Surv. Sta.	
<b>JOINT DETAILS</b>			
Designed By	B. L. DONALD	Drawn By	B. L. DONALD
Checked By	Date	Bridge Design Supervisor	
B. P. GENDRON 02/27/98		P. GENDRON 02/27/98	
PROJECT	ST. JOHNSBURY	PROJECT NO.	F028-4(2)5
I.G.C. Info.		Bridge Sheet No.	
		Sheet 17 of 30	



ITEM NO.	PART NO.	DESCRIPTION	LENGTH		MATL.	FINISH	REMARKS	QUAN.
			FEET	INCHES				
1	AX-72	2 BAY SEAL	.	.	NEO.	.		8063'
2	NX-62	LUBE OIL	.	.	.	.	GALLONS	2
3	U-118	URETHANE HAMMER	.	.	.	.	INCLUDE 2 EXTRA HEADS	1



2-BAY NEOPRENE SEAL  
AX-72  
(NEOPRENE)

RECEIVED \_\_\_\_\_  
 CK'D BY \_\_\_\_\_  
 RESUBMIT \_\_\_\_\_  
 BY \_\_\_\_\_  
 APPROVED \_\_\_\_\_  
 DATE \_\_\_\_\_  
*R.P. Chapman*

D.S. BROWN 90-2347 SHEET 1 OF 1

 F.A.P. NO.: F-023-4(21)S STATE PROJ. NO.: -- BRIDGE NO.: -- DISTRIBUTOR: -- DATE: 9-19-90	 THE D.S. BROWN COMPANY, INC. NORTH BALTIMORE, OHIO 45872-0158 U.S.A. NONE NONE U.S. 2 OVER 1-91 ST. JOHNSBURY VERMONT AX-72 & BILL OF MATERIALS	DATE	SYM	REVISION	DR	CK



M Bridge  
1991

ST. JOHNSBURY  
FO28-4(21)S

1991

VERMONT AGENCY  
TRANSPORTATION  
PHASE-III INTERSTATE  
HANGER 4005