

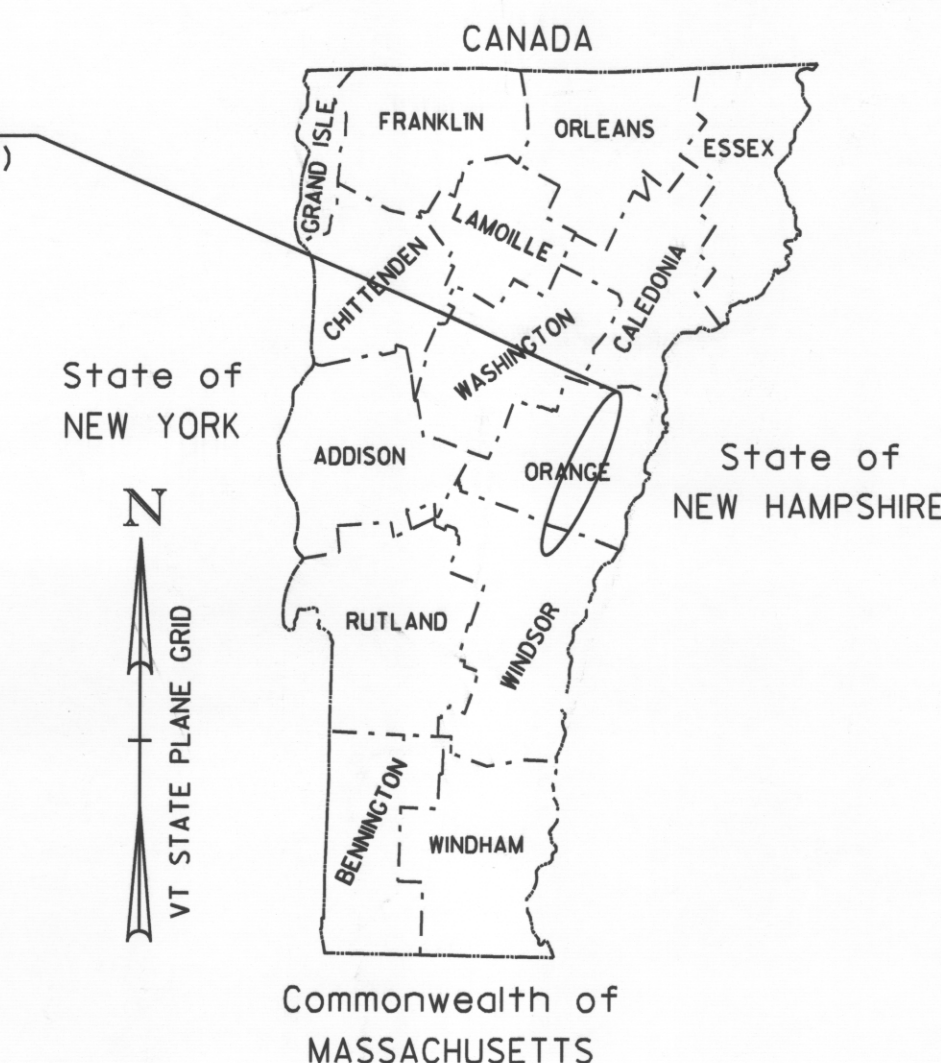
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STATE OF VERMONT AGENCY OF TRANSPORTATION



PROJECT LOCATION
NORWICH - BRADFORD IM SURF (31)



PROPOSED IMPROVEMENT

TOWNS OF NORWICH, THETFORD, FAIRLEE AND BRADFORD COUNTIES OF WINDSOR AND ORANGE INTERSTATE 91 SOUTHBOUND

BEGINNING IN THE TOWN OF NORWICH IN THE SOUTHBOUND LANE AT MILE MARKER 76.443 AND EXTENDING NORTHERLY ALONG INTERSTATE 91 FOR A DISTANCE OF 116,091.36 FT (21.987 MILES) TO MILE MARKER 98.430 IN THE TOWN OF BRADFORD.

LENGTH OF ROADWAY = 116,091.36 FT = (21.987 MILES) (SOUTHBOUND LANE)
LENGTH OF PROJECT = 116,091.36 FT = (21.987 MILES) (SOUTHBOUND LANE)

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES SURFACE PREPARATION INVOLVING PATCHING, POTHOLE REPAIR, AND CRACK-SEALING; OVERLAYING WITH A THIN BITUMINOUS CONCRETE WEARING COURSE ON THE EXISTING INTERSTATE TYPICAL, AND APPLICABLE PAVEMENT MARKINGS.

TRAFFIC DATA

I-91 - SOUTHBOUND	2012 AADT	2022 AADT	2012 DHV	2022 DHV	FLEXIBLE ESALS (2012 - 2022)	FLEXIBLE ESALS (2012 - 2032)
BEGIN PROJECT TO EXIT 14	6,200	6,900	880	980	3,530,000	8,425,000
EXIT 14 TO EXIT 15	4,900	5,600	660	750	1,958,000	4,804,000
EXIT 15 TO EXIT 16	4,000	4,600	560	640	2,658,000	6,452,000
EXIT 16 TO END PROJECT	4,000	3,200	390	440	2,839,000	6,795,000

VAOT STANDARDS

100	01/02/2004
100A	01/02/2004
101	05/30/2003
102	06/30/2003
102A	05/01/2004
103	03/01/2004
105	05/01/2004
106	05/01/2004
107A	06/08/2009
108	06/08/2009
108A	06/08/2009
110	08/08/1995
120	08/08/1995
121	08/08/1995
150	05/01/2004
164	06/08/2009
191	02/01/1999
193	08/18/1995

RECORD PLANS

CONTRACTOR: GORMAN GROUP, LLC - ALBANY, NY

RESIDENT ENGINEER: PAUL PERRY

CONSTRUCTION BEGAN: APRIL 16, 2012

CONSTRUCTION COMPLETE: SEPTEMBER 20, 2012

RECORD PLANS BY: PAUL PERRY & J. HYDE

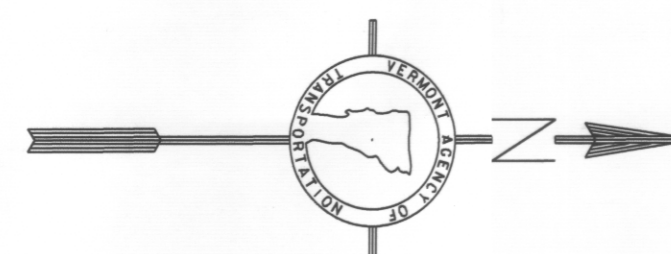
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY: *Paul Perry* DATE: 04/02/13

RESIDENT ENGINEER

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

MM 76.443
BEGIN PROJECT IM SURF (31)



MM 98.43
END PROJECT IM SURF (31)

QUALITY ASSURANCE PROGRAM: LEVEL 1

CONVENTIONAL SYMBOLS

COUNTY LINE	— — — — —
TOWN LINE	— — — — —
LIMITS OF ACCESS	— o — o — o — o —
POINT OF ACCESS	X
FENCE LINE	X — X — X — X —
STONE WALL	o — o — o — o — o — o — o — o — o — o —
TRAVELED WAY	— — — — —
GUARD RAIL	o — o — o — o — o — o — o — o — o — o —
RAILROAD	— — — — —
SURVEY LINE	— — — — —
CULVERT	— — — — —
POWER POLE	⊕
TELEPHONE POLE	⊕
TREES	⊗
CONTROL OF ACCESS	— — — — —
PROPERTY LINE	— — — — —
R.O.W. TAKING LINE	SR — SR — SR
SLOPE RIGHTS	— — — — —
TOP OF CUT	— — — — —
TOE OF SLOPE	— — — — —

SURVEYED BY :
SURVEYED DATE :

DATUM
VERTICAL
HORIZONTAL

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

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.

DIRECTOR OF PROGRAM DEVELOPMENT

APPROVED: *Paul Perry* DATE: 2/4/12

PROJECT MANAGER : MIKE FOWLER

PROJECT NAME : NORWICH - BRADFORD
PROJECT NUMBER : IM SURF (31)

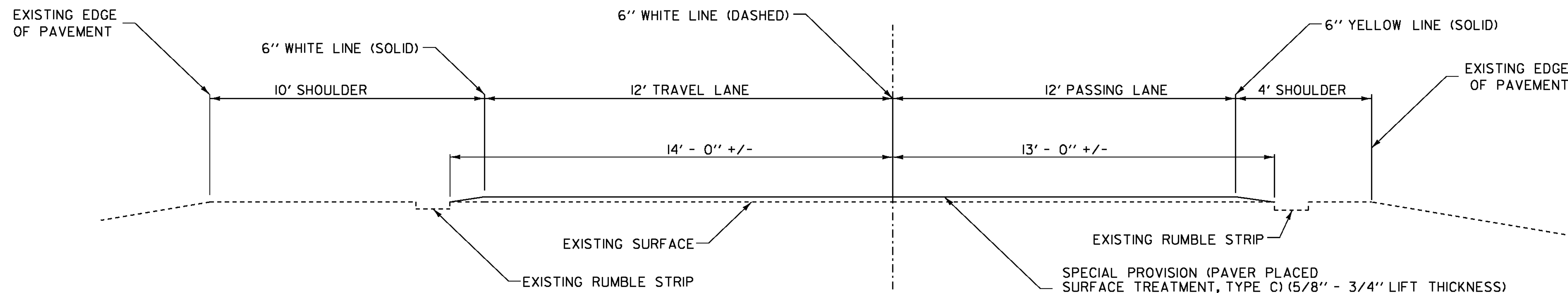
SHEET 1 OF 19 SHEETS

NOTES:

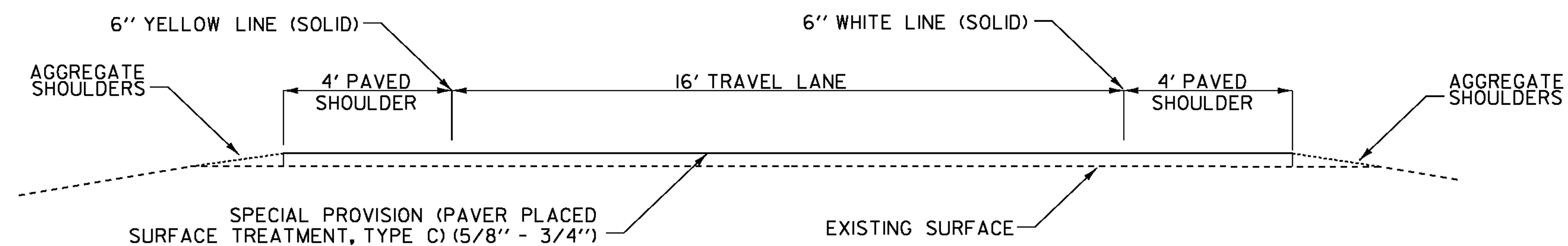
1. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POTHOLE REPAIR, AND CRACK-SEALING SHALL BE PERFORMED PRIOR TO APPLICATION OF THE PAVER PLACED SURFACE TREATMENT. ALL CRACKS GREATER THAN 0.10" AND UP TO 1.0" IN WIDTH SHALL BE SEALED USING THE "BLOW AND GO" FILL METHOD. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE PAID FOR UNDER ITEM 417.20, BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD. THE PATCHING OF ALL CRACKS GREATER THAN 1.0" AND ALL OTHER PATCHING AND POT-HOLE REPAIR SHALL BE COMPLETED USING BITUMINOUS CONCRETE PAVEMENT IN ACCORDANCE WITH ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE II). AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED TO COVER ALL COSTS ASSOCIATED WITH THIS WORK.
2. EXISTING SHOULDER PAVEMENT SURFACES BEYOND THE LIMITS OF THE PAVER PLACED SURFACE TREATMENT SHALL ALSO RECEIVE CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS.
3. FOLLOWING COMPLETION OF COLD PLANING, THE MILLED SURFACE FOR ALL BRIDGES SHALL ALSO RECEIVE CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS, AS DIRECTED BY THE ENGINEER.
4. ALL EXISTING PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO APPLYING ANY CRACK SEALING BEING PERFORMED AND PRIOR TO THE PAVER PLACED SURFACE TREATMENT. ALL LANE DELINEATION IS TO BE MAINTAINED DURING CONSTRUCTION BY THE USE OF LINE STRIPING TARGETS OR TEMPORARY PAINT.
5. A 50' COLD PLANED WEDGE SHALL BE CONSTRUCTED AT THE PROJECT BEGIN, PROJECT END, RAMPS AND AT ALL BRIDGE APPROACHES; A 25' COLD PLANED WEDGE AT ALL U-TURNS OR AS DIRECTED BY THE ENGINEER. THE LONGITUDINAL EDGES OF THE SURFACE TREATMENT SHALL BE FEATHERED AS SHOWN ON THE TYPICAL SECTION, OR AS DIRECTED BY THE ENGINEER. ANY SAWCUTTING AT BUTT JOINTS SHALL BE PAID INCIDENTAL TO ITEM 210.10, COLD PLANING, BITUMINOUS PAVEMENT. THE CONTRACTOR SHALL USE CAUTION WHEN COLD PLANING AND PAVING OPERATIONS OCCUR ADJACENT TO EXISTING DROP INLETS OR CATCH BASINS. ANY DAMAGE WHICH OCCURS TO THESE DRAINAGE STRUCTURES AS A RESULT OF THESE OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE OF VERMONT.
6. IF IT IS DETERMINED IN AREAS ALONG THE BASE OF THE GUARDRAIL THAT WINTER SAND AND OTHER DEBRIS HAS ACCUMULATED SUFFICIENTLY TO AFFECT PROPER CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS, THIS MATERIAL SHALL BE REMOVED PRIOR TO CRACK-SEALING, PATCHING, AND POTHOLE REPAIR AS DIRECTED BY THE ENGINEER. AN ESTIMATED QUANTITY FOR ITEM 203.40 SHOULDER BERM REMOVAL HAS BEEN INCLUDED TO COVER THE COSTS ASSOCIATED WITH THIS WORK.

COMMON
NOTES
FOR BOTH
ALTERNATIVES

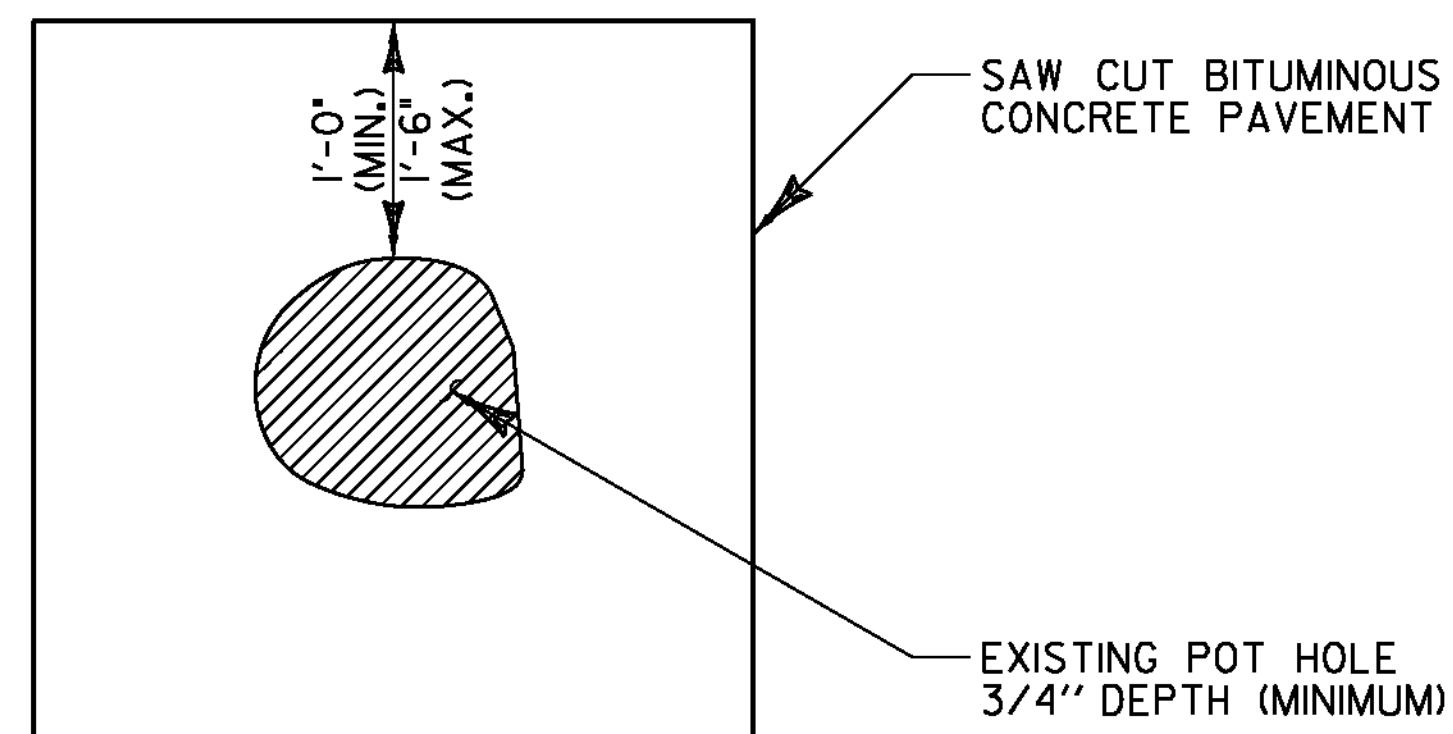
PROJECT NAME: NORWICH - BRADFORD	
PROJECT NUMBER: IM SURF (3I)	
FILE NAME: /pave/11a030/plla030.dgn	PLOT DATE: 07-FEB-2012
PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
IPARM FILE NAME: plla030_02.i	SHEET 2 OF 19



MAINLINE

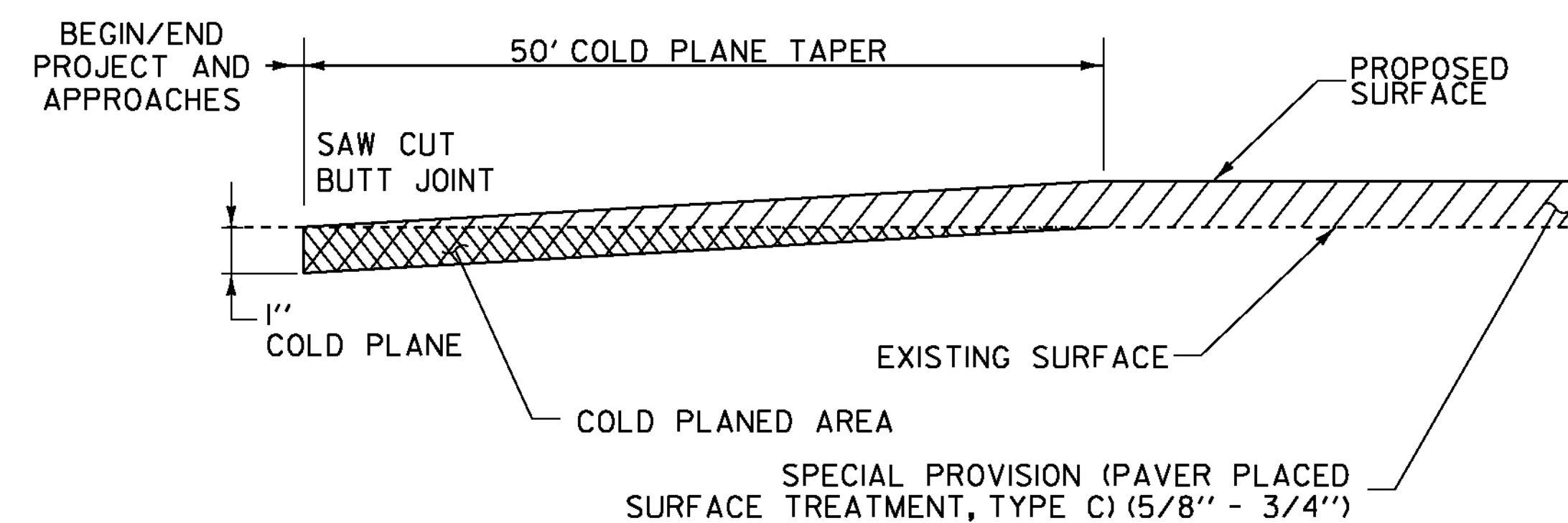


**TYPICAL RAMP SECTION
ALTERNATE A**



EMULSIFIED ASPHALT SHALL BE APPLIED AT ALL PATCH INTERFACES AT A RATE OF 0.25 - 0.5 GAL/SY, EMULSIFIED ASPHALT SHALL MEET THE REQUIREMENTS OF SECTION 404 AND WILL BE CONSIDERED INCIDENTAL TO THE PATCHING MATERIAL.

TYPICAL - POT HOLE REPAIR

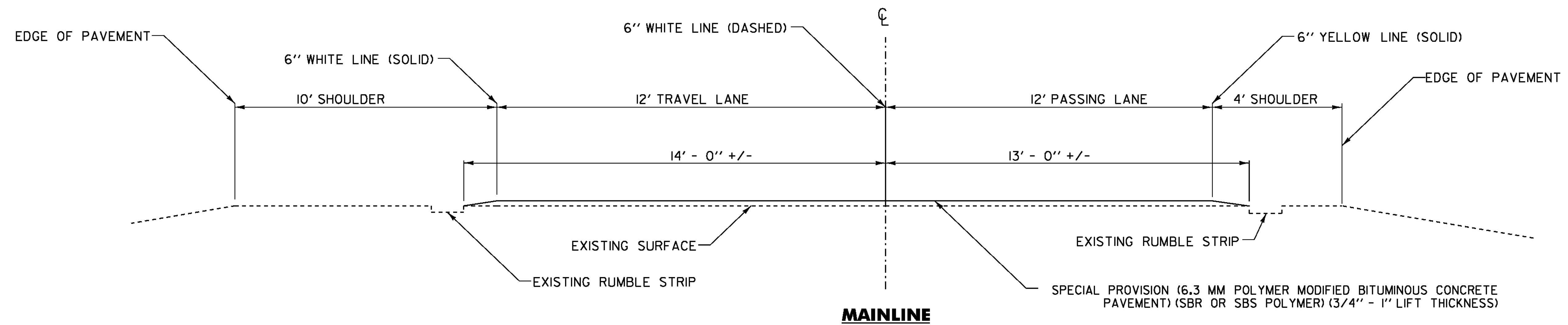


TYPICAL APPROACH AREA DETAIL MAINLINE & RAMPS

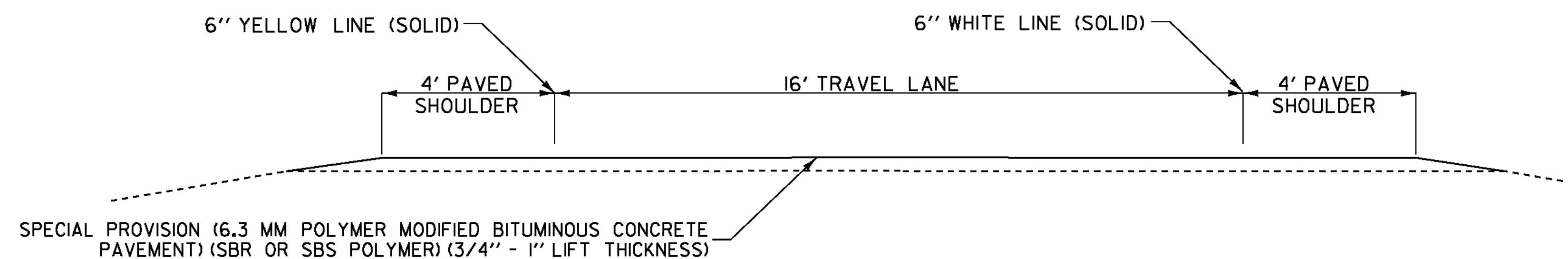
NOT TO SCALE

**ALTERNATE A
TYPICAL
SHEET**

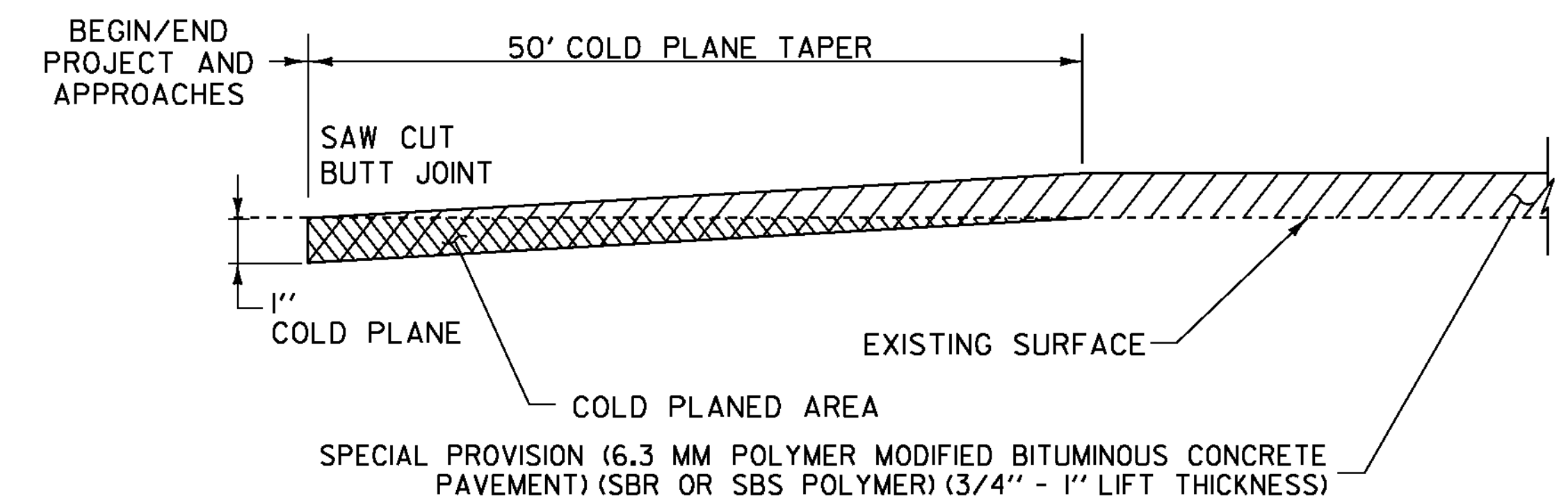
PROJECT NAME: NORWICH - BRADFORD	
PROJECT NUMBER: IM SURF (3I)	
FILE NAME: /pave/lla030/plla030.dgn	PLOT DATE: 07-FEB-2012
PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
IPARM FILE NAME: plla030_03.1	SHEET 3 OF 19



MAINLINE



**TYPICAL RAMP SECTION
ALTERNATE B**



TYPICAL APPROACH AREA DETAIL MAINLINE & RAMPS

NOTES:

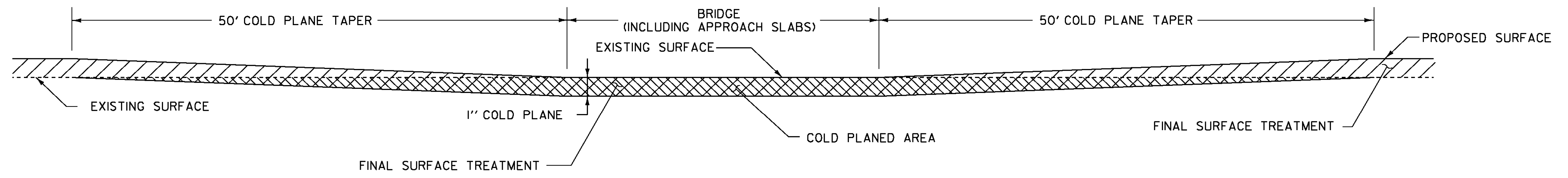
1. PRIOR TO THE PLACEMENT OF THE POLYMER MODIFIED SURFACE TREATMENT, EMULSIFIED ASPHALT SHALL BE APPLIED TO ALL EXISTING PAVEMENT SURFACES AND ON ALL COLD PLANED SURFACES AT A RATE OF 0.080 GAL/SY (+/- 0.01GAL/SY) OR AS DIRECTED BY THE ENGINEER. EMULSIFIED ASPHALT SHALL BE RS-IH OR CRS-IH PER THE MANUFACTURER'S RECOMMENDATION AND PAID UNDER ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-IH OR CRS-IH).
2. THE GYRATION SPECIFICATION FOR THE 6.3 MM POLYMER - MODIFIED BITUMINOUS CONCRETE PAVEMENT SHALL BE 65.

NOT TO SCALE

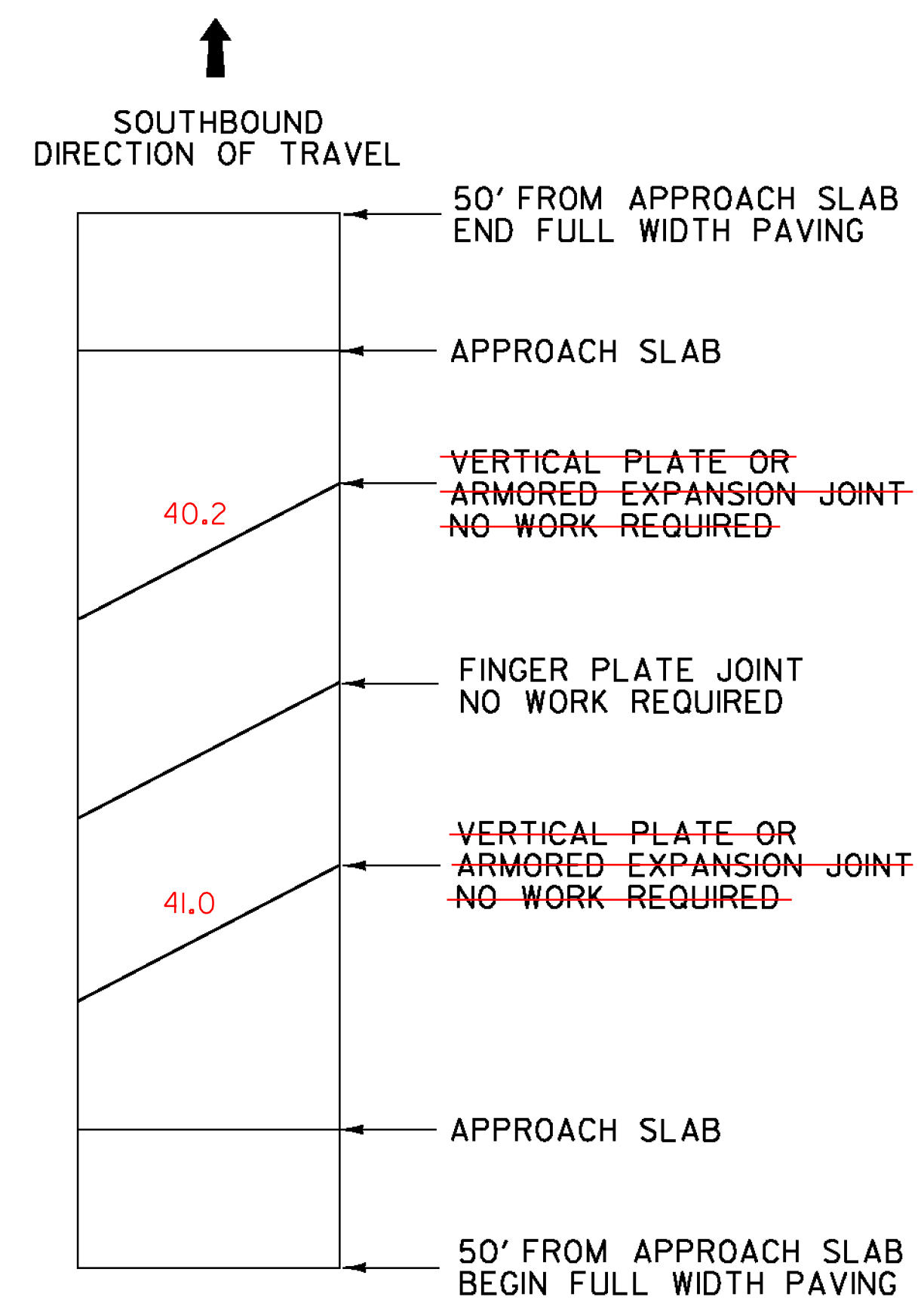
**ALTERNATE B
TYPICAL
SHEET**

PROJECT NAME: NORWICH - BRADFORD
PROJECT NUMBER: IM SURF (3I)

FILE NAME: /pave/lla030/plla030.dgn
PROJECT LEADER: FOWLER
DESIGNED BY: WILDER
IPARM FILE NAME: plla030_04.i
PLOT DATE: 07-FEB-2012
DRAWN BY: WILDER
CHECKED BY: PVMT MGMT
SHEET 4 OF 19



BRIDGE COLD PLANE DETAIL

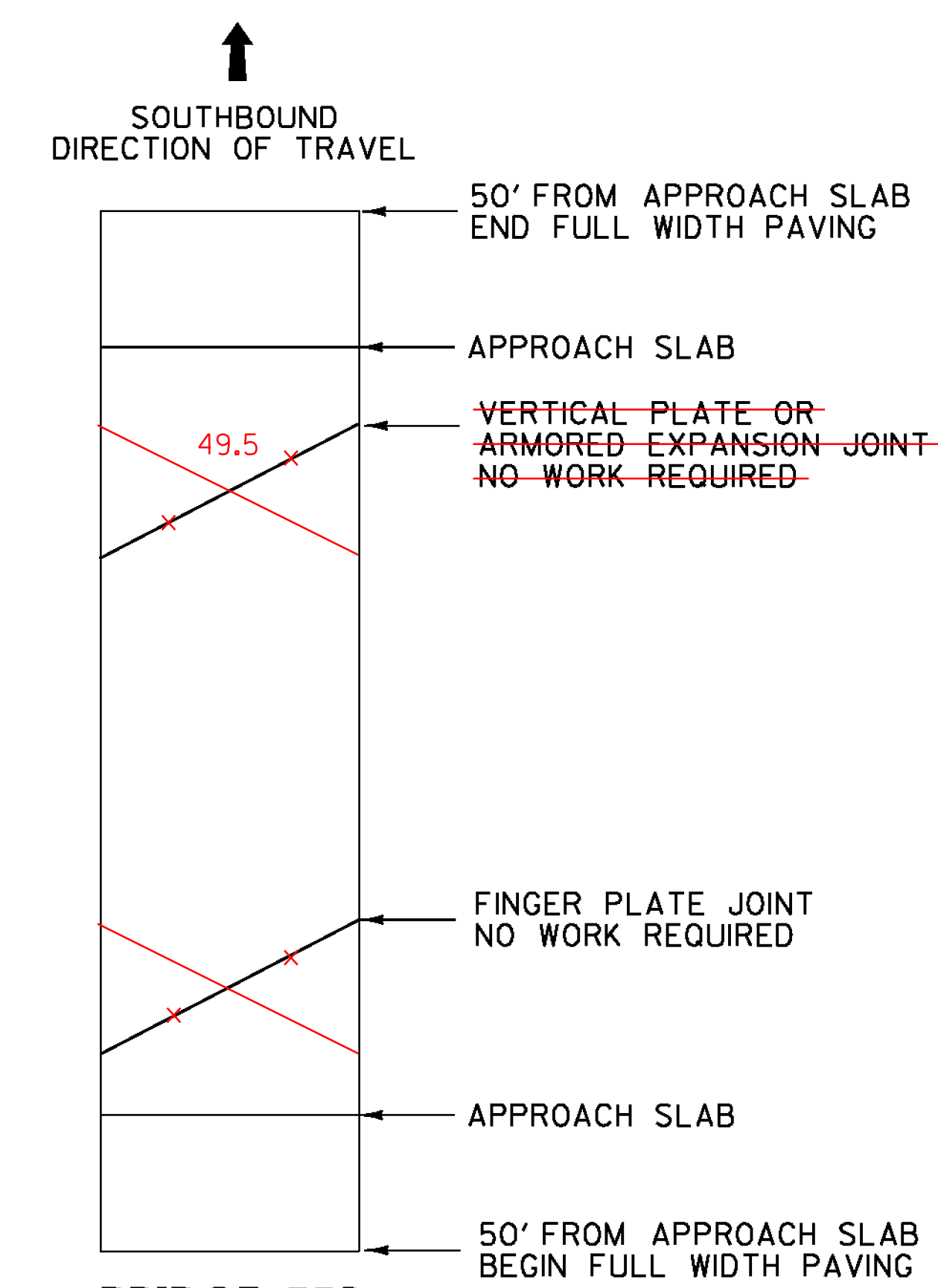


BRIDGE 51S

MM 80.217

LENGTH OF ASPHALTIC PLUG JOINTS:

TOTAL - ~~0'~~ 81.2

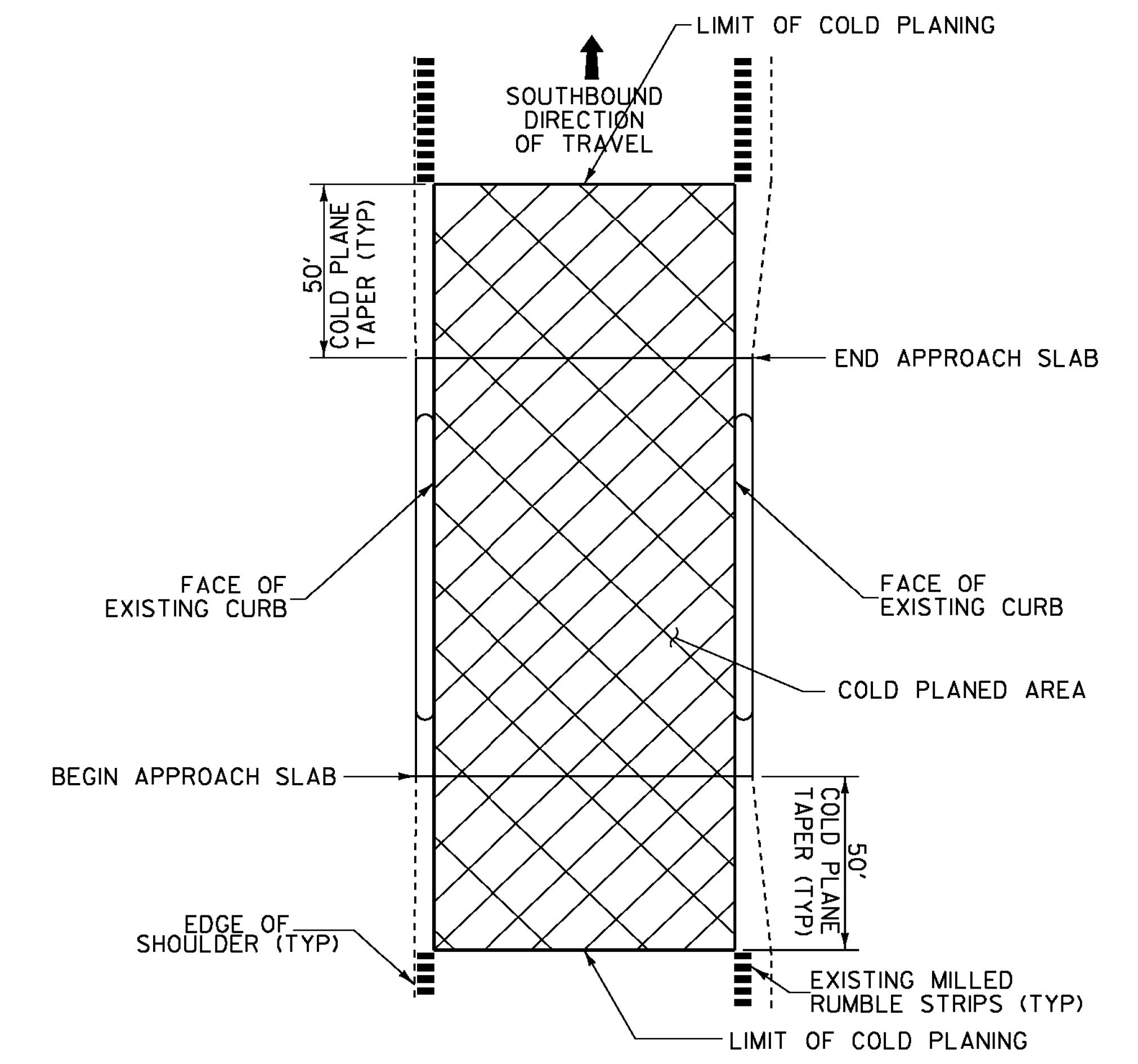


BRIDGE 55S

MM 89.266

LENGTH OF ASPHALTIC PLUG JOINTS:

TOTAL = 0'



= COLD PLANED AREA

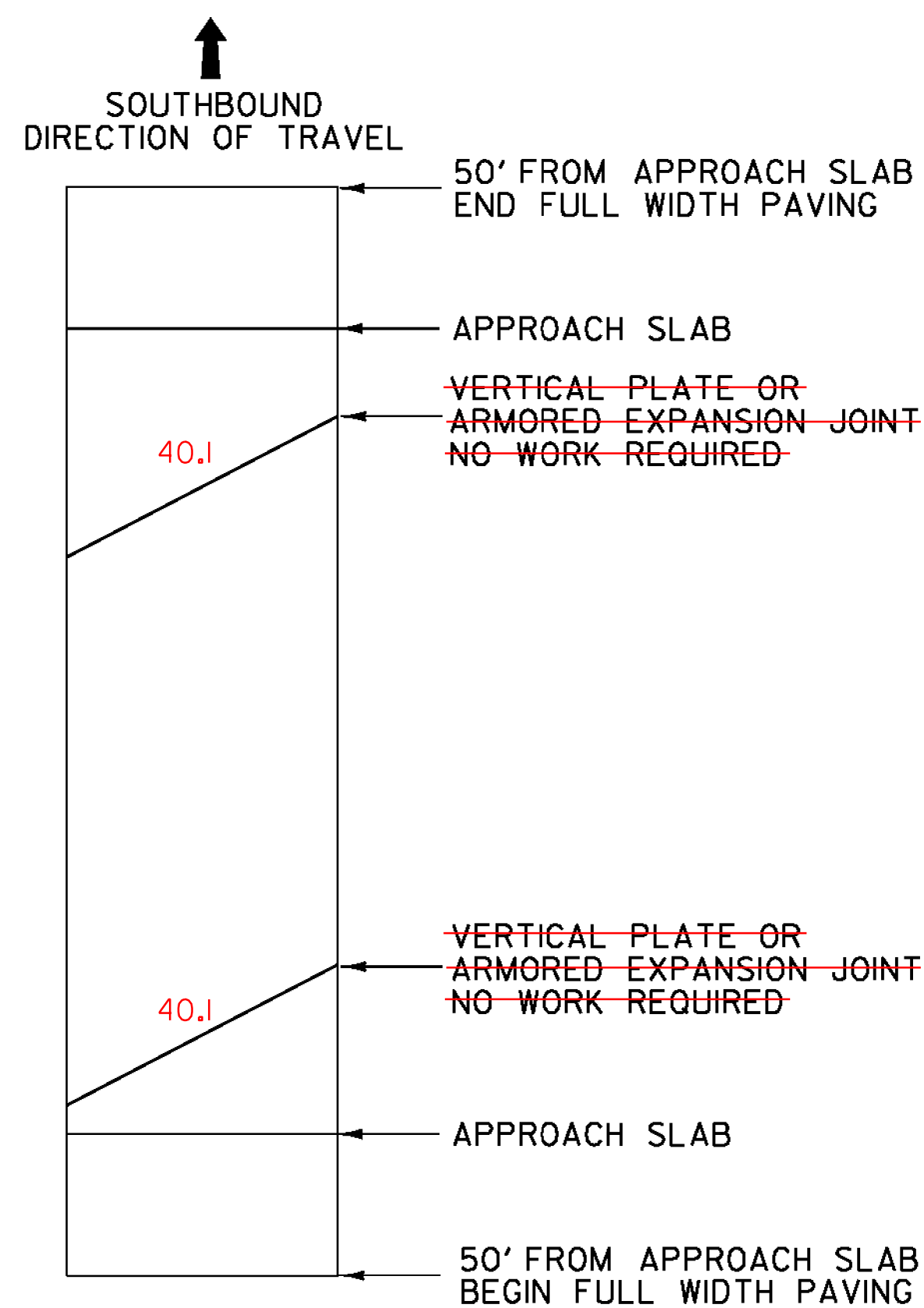
BRIDGE COLD PLANE TYPICAL PLAN

NOTES:

1. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID DAMAGING DRAINAGE STRUCTURES AND EXPANSION JOINTS. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID THE ACCUMULATION OF DEBRIS IN THE DRAINAGE STRUCTURES LOCATED AT CURB LINE AND IN THE EXPANSION JOINTS. THE CONTRACTOR SHALL EXAMINE THESE BRIDGE FEATURES ON A DAILY BASIS TO ENSURE THAT DEBRIS HAS NOT ACCUMULATED. ANY DEBRIS WHICH IS PRESENT SHALL BE REMOVED BY THE CONTRACTOR AT NO COST TO THE STATE.

NOT TO SCALE

BRIDGE DETAIL SHEET # 1	PROJECT NAME: NORWICH - BRADFORD	
	PROJECT NUMBER: IM SURF (31)	
	FILE NAME: /pave/lla030/plla030.dgn	PLOT DATE: 07-FEB-2012
	PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
	DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
	IPARM FILE NAME: plla030_05.i	SHEET 5 OF 19

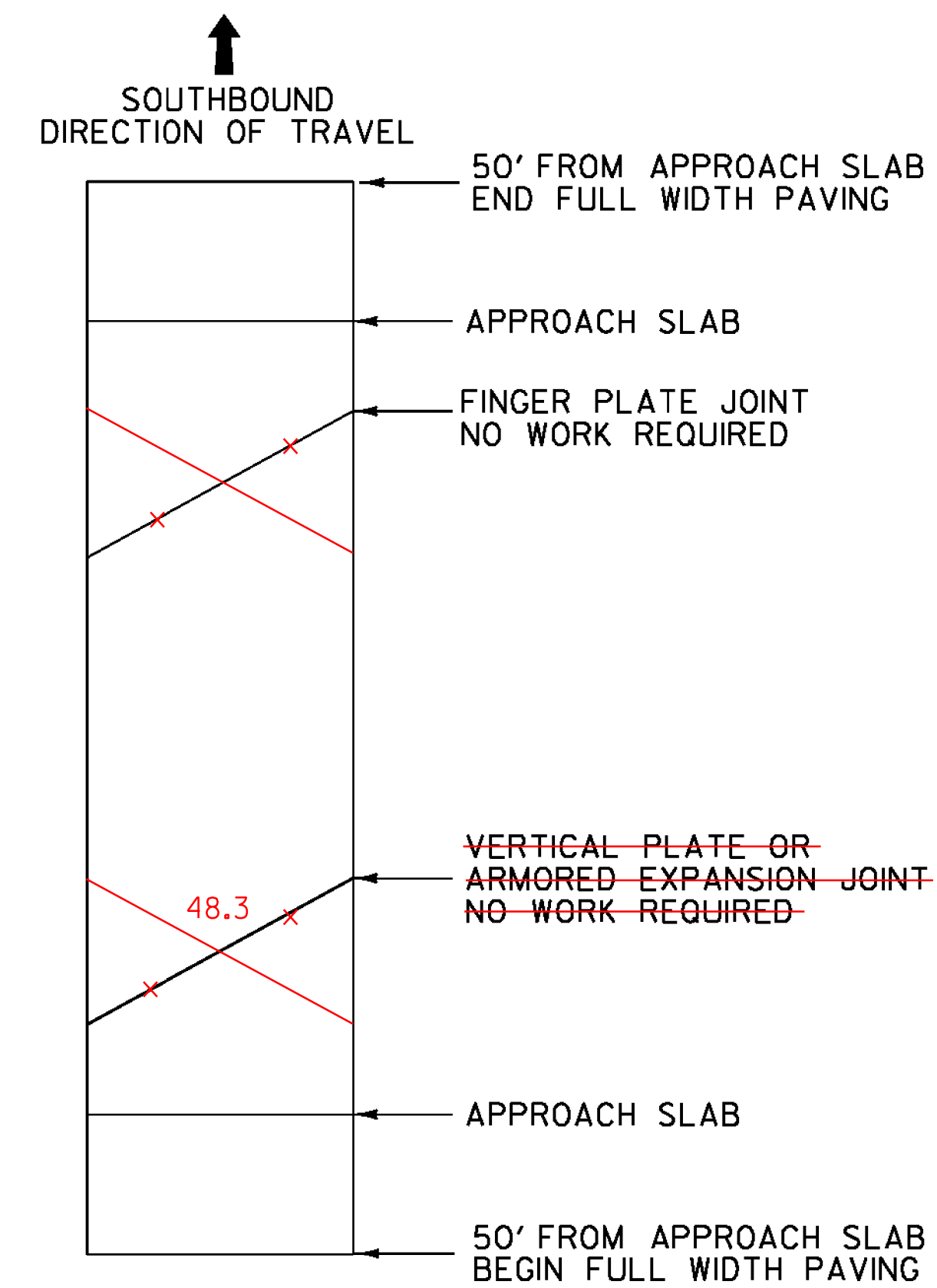


BRIDGE 56S

MM 91.539

LENGTH OF ASPHALTIC PLUG JOINTS:

TOTAL = 0' 80.2



BRIDGE 58S

MM 97.243

LENGTH OF ASPHALTIC PLUG JOINTS:

TOTAL = 0' 48.3

NOT TO SCALE

**BRIDGE
DETAIL SHEET
2**

PROJECT NAME: NORWICH - BRADFORD
PROJECT NUMBER: IM SURF (3I)

FILE NAME: /pave/lla030/plla030.dgn	PLOT DATE: 06-FEB-2012
PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
IPARM FILE NAME: plla030_06.i	SHEET 6 OF 19

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES							
	BRIDGE	ROADWAY	FULL C.E.	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.
						BEGIN ITEMS COMMON TO ALL ALTERNATES	
		16,000		16,000	LF	SHOULDER BERM REMOVAL	203.40
		1		1	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22
		7,500		7,500	SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10
		350		350	TON	AGGREGATE SHOULDERS	402.12
		1		1	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50
		59,200		59,200	LB	BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD (AASHTO M 324 (ASTM D 6690) TYPE II)	417.20
		120		120	HR	POWER BROOM RENTAL, TYPE I	608.30
		600		600	HR	UNIFORMED TRAFFIC OFFICERS	630.10
		350		350	HR	FLAGGERS	630.15
			1	1	LS	TESTING EQUIPMENT, BITUMINOUS	631.17
		1		1	LS	MOBILIZATION/DEMOBILIZATION	635.11
		1		1	LS	TRAFFIC CONTROL	641.10
		4		4	EA	PORTABLE CHANGEABLE MESSAGE SIGN	641.15
		312,000		312,000	LF	6 INCH WHITE LINE	646.214
		242,500		242,500	LF	6 INCH YELLOW LINE	646.215
		5,600		5,600	LF	12 INCH WHITE LINE	646.24
		60		60	EA	LETTER OR SYMBOL	646.30
		157,000		157,000	LF	TEMPORARY 6 INCH WHITE LINE, PAINT	646.622
		121,500		121,500	LF	TEMPORARY 6 INCH YELLOW LINE, PAINT	646.632
		2,500		2,500	LF	TEMPORARY 12 INCH WHITE LINE, PAINT	646.662
		30		30	EA	TEMPORARY LETTER OR SYMBOL, PAINT	646.692
		9,500		9,500	EA	LINE STRIPING TARGETS	646.76
		380,000		380,000	SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85
		1		1	LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50
		100		100	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)	900.680
						END ITEMS COMMON TO ALL ALTERNATES	
						BEGIN ALTERNATE A	
		390,000		390,000	SY	SPECIAL PROVISION (PAVER PLACED SURFACE TREATMENT, TYPE C)	900.675
						END ALTERNATE A	
						BEGIN ALTERNATE B	
		1		1	LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31
		23,000		23,000	TON	SPECIAL PROVISION (6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT) (SBR OR SBS POLYMER)	900.680
		2,600		2,600	CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-IH OR CRS-IH)	900.683
						END ALTERNATE B	

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		COLD PLANING, BITUMINOUS PAVEMENT
150	SY	BEGIN PROJECT
150	SY	END PROJECT
1490	SY	BRIDGE 51S & APPROACHES
1647	SY	BRIDGE 55S & APPROACHES
1140	SY	BRIDGE 56S & APPROACHES
1338	SY	BRIDGE 58S & APPROACHES
140	SY	EXIT 14, RAMP "C"
135	SY	EXIT 14, RAMP "A"
160	SY	EXIT 15, RAMP "C"
135	SY	EXIT 15, RAMP "A"
160	SY	EXIT 16, RAMP "C"
160	SY	EXIT 16, RAMP "D"
559	SY	U-TURNS
7364	SY	SUBTOTAL
136	SY	ROUNDING
7,500	SY	TOTAL
		ALTERNATE A
		SPECIAL PROVISION (PAVER-PLACED SURFACE TREATMENT, TYPE C)
348,274	SY	MAINLINE
4,907	SY	EXIT 14, RAMP "A"
5,308	SY	EXIT 14, RAMP "C"
5,696	SY	EXIT 15, RAMP "A"
2,789	SY	EXIT 15, RAMP "C"
3,510	SY	EXIT 16, RAMP "C"
7,486	SY	EXIT 16, RAMP "D"
1,490	SY	BRIDGE 51S & APPROACHES
1,647	SY	BRIDGE 55S & APPROACHES
1,140	SY	BRIDGE 56S & APPROACHES
1,338	SY	BRIDGE 58S & APPROACHES
383,585	SY	TOTAL
6,415	SY	ROUNDING
390,000	SY	GRAND TOTAL
		ALTERNATE B
		SPECIAL PROVISION (6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT) (SBR OR SBS POLYMER)
20,774	TON	MAINLINE
285	TON	EXIT 14, RAMP "A"
257	TON	EXIT 14, RAMP "C"
331	TON	EXIT 15, RAMP "A"
162	TON	EXIT 15, RAMP "C"
204	TON	EXIT 16, RAMP "C"
236	TON	EXIT 16, RAMP "D"
87	TON	BRIDGE 51S & APPROACHES
96	TON	BRIDGE 55S & APPROACHES
66	TON	BRIDGE 56S & APPROACHES
78	TON	BRIDGE 58S & APPROACHES
22,576	TON	TOTAL
424	TON	ROUNDING
23,000	TON	GRAND TOTAL

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		AGGREGATE SHOULDERS
54	TON	EXIT 14, RAMP "A"
50	TON	EXIT 14, RAMP "C"
44	TON	EXIT 15, RAMP "A"
30	TON	EXIT 15, RAMP "C"
27	TON	EXIT 16, RAMP "C"
75	TON	EXIT 16, RAMP "D"
280	TON	TOTAL
70	TON	ROUNDING
350	TON	GRAND TOTAL

REVISION BY DATE
1 LSW 03/19/12

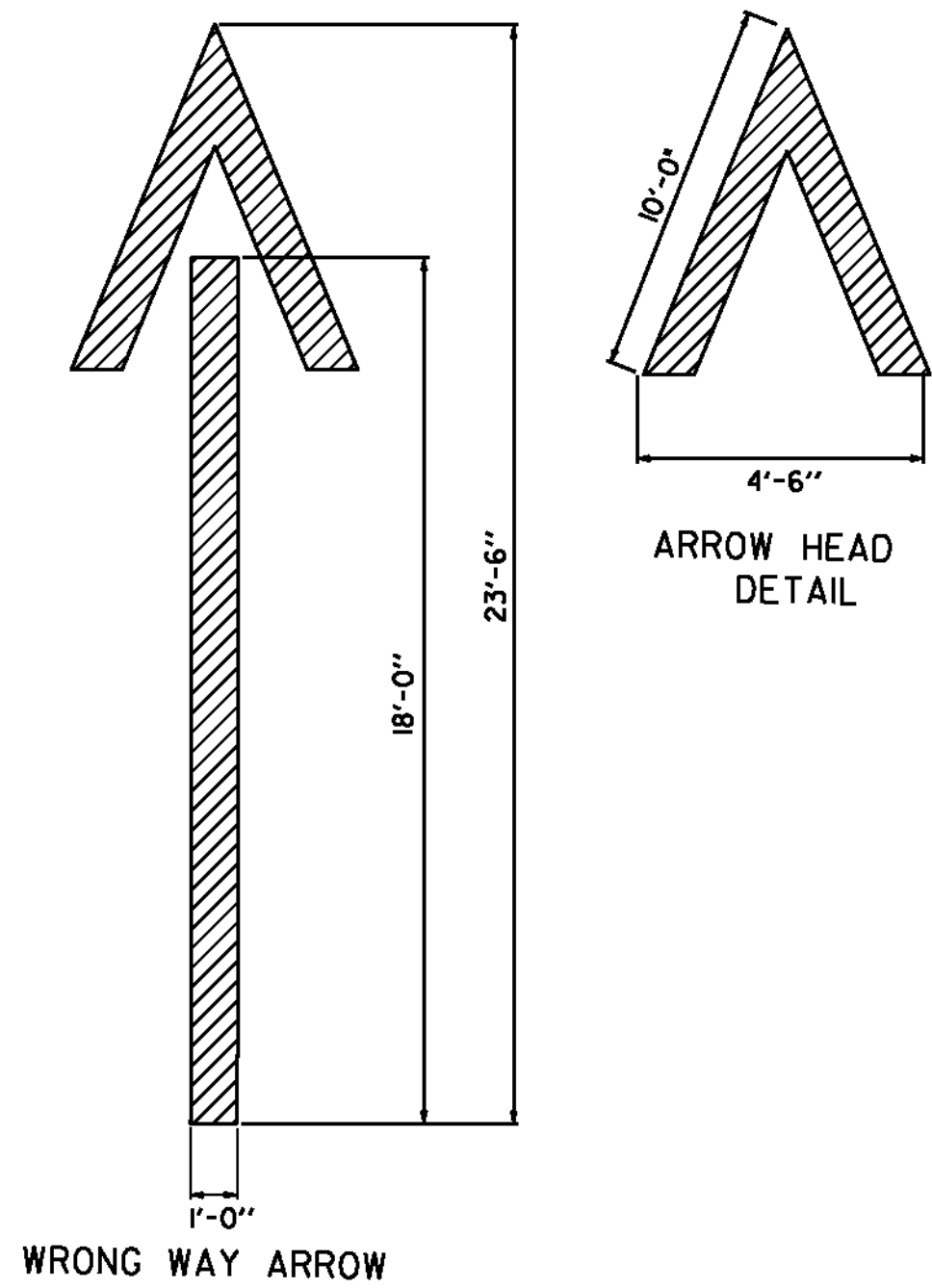
DELETED ITEM 580.20 RAPID SETTING
CONCRETE REPAIR MATERIAL WITH COARSE
AGGREGATE.

PROJECT NAME: NORWICH - BRADFORD
PROJECT NUMBER: 1M SURF (31)

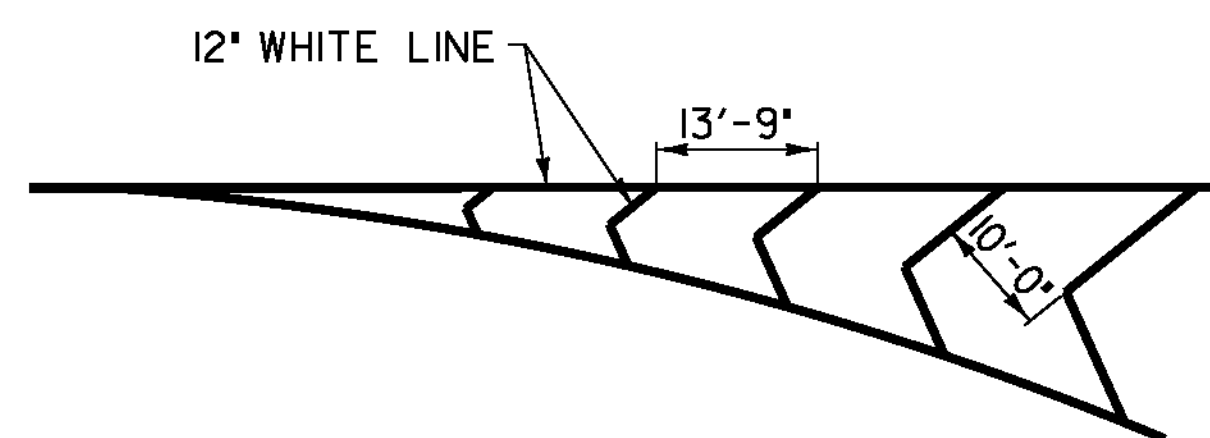
FILE NAME: /pave/11a030/pl1a030.dgn
PROJECT LEADER: FOWLER
DESIGNED BY: WILDER
IPARM FILE NAME: pl1a030_07.1

PLOT DATE: 20-MAR-2012
DRAWN BY: WILDER
CHECKED BY: PVMT MGMT
SHEET 7 OF 19

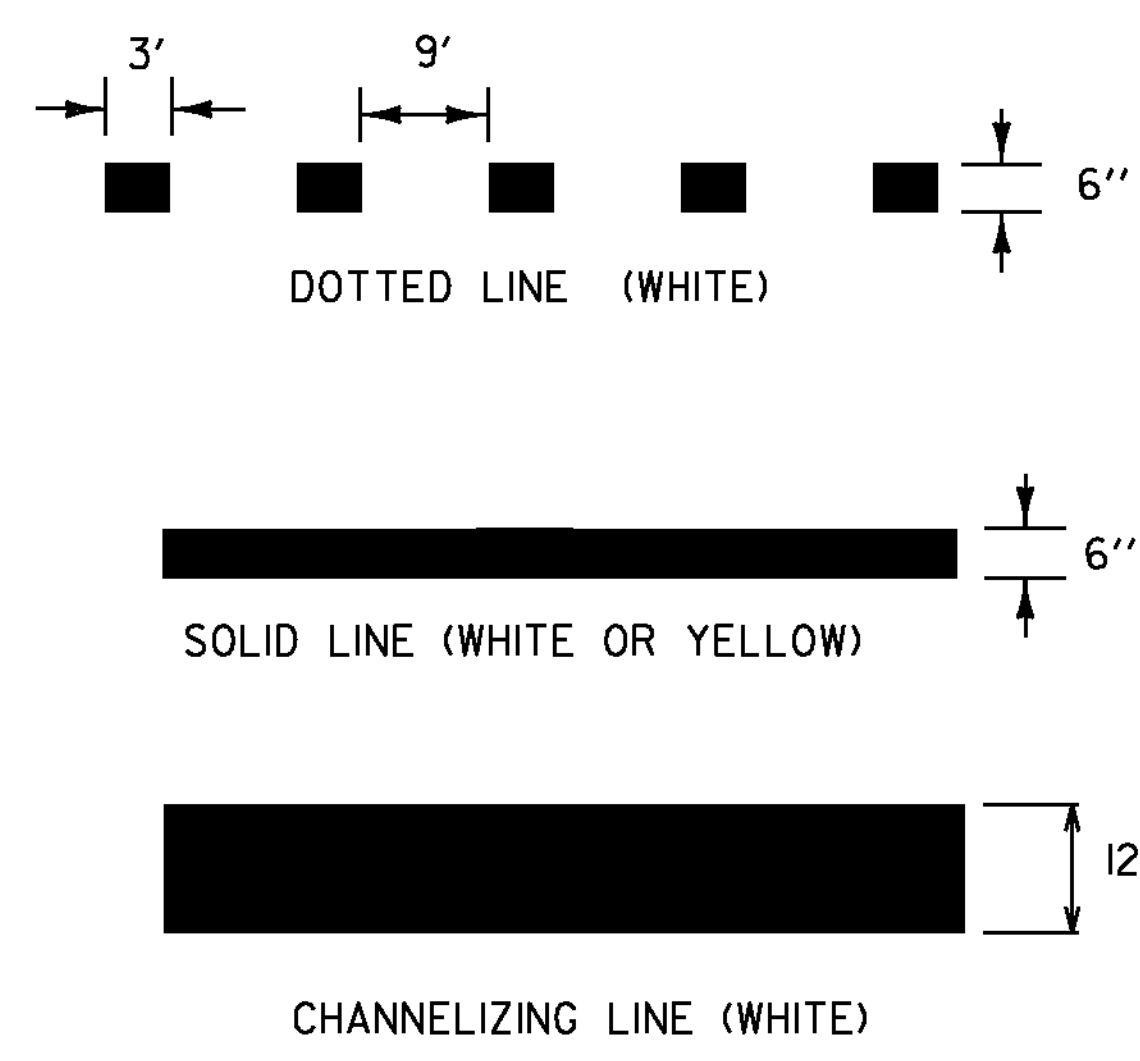
TYPICAL PAVEMENT MARKINGS



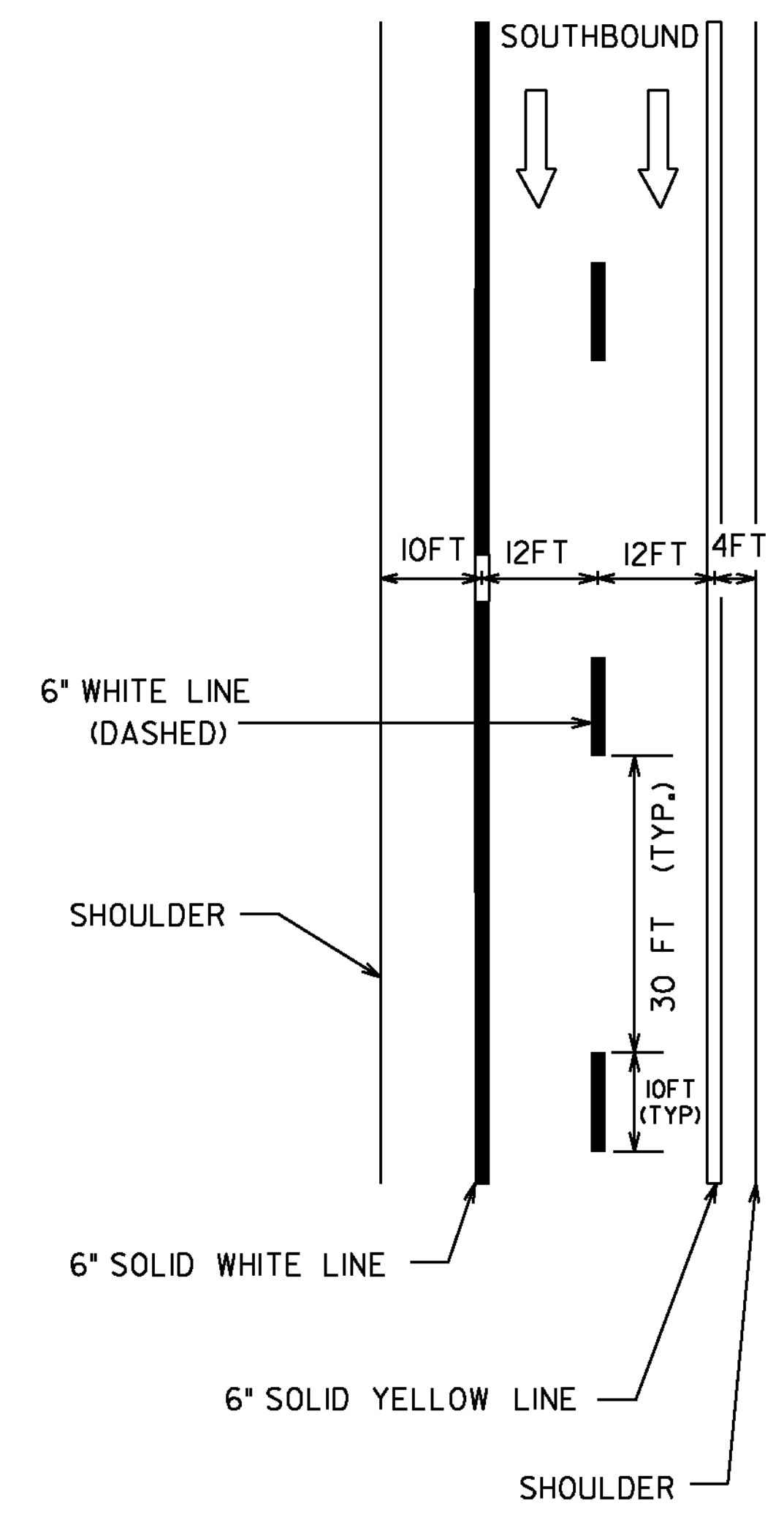
WRONG WAY ARROW DETAIL



GORE MARKING DETAIL



PAVEMENT MARKING LINE DETAILS



TYPICAL MAINLINE MARKING PLAN

LEGEND



NOTES:
1. TWO (2) APPLICATIONS OF FINAL PAVEMENT MARKINGS WILL BE REQUIRED. SEE SPECIAL PROVISIONS FOR COMPLETION DATE REQUIREMENTS.

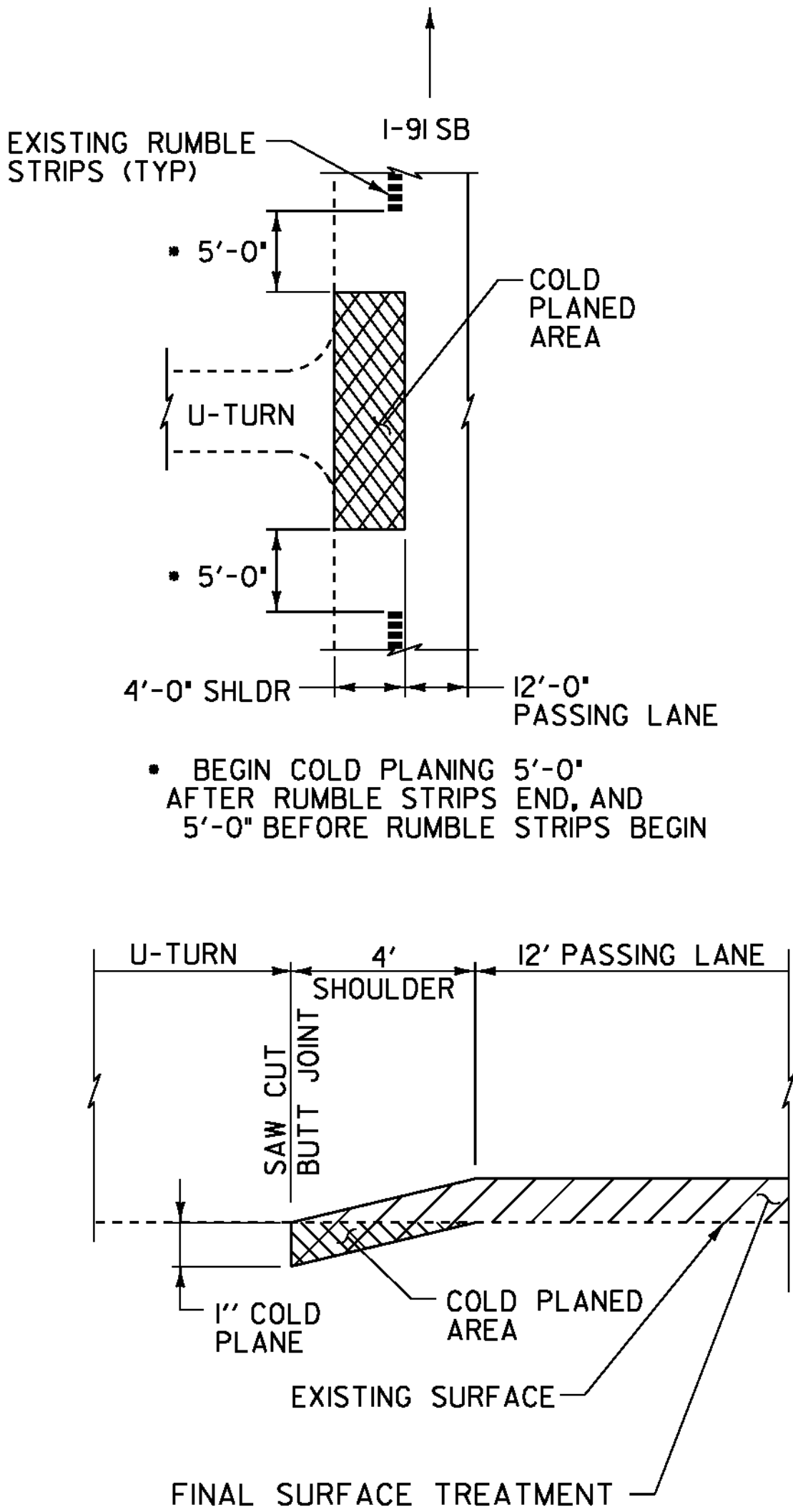
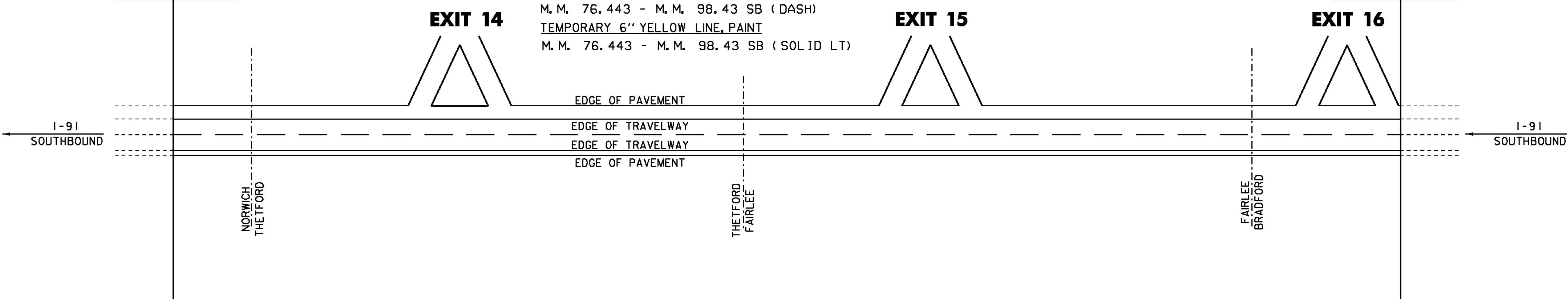
NOT TO SCALE

PAVEMENT MARKING DETAIL SHEET	PROJECT NAME: NORWICH - BRADFORD	
	PROJECT NUMBER: IM SURF (3I)	
	FILE NAME: /pave/11a030/plla030.dgn	PLOT DATE: 22-FEB-2012
	PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
	DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
	IPARM FILE NAME: plla030_08.i	SHEET 8 OF 19

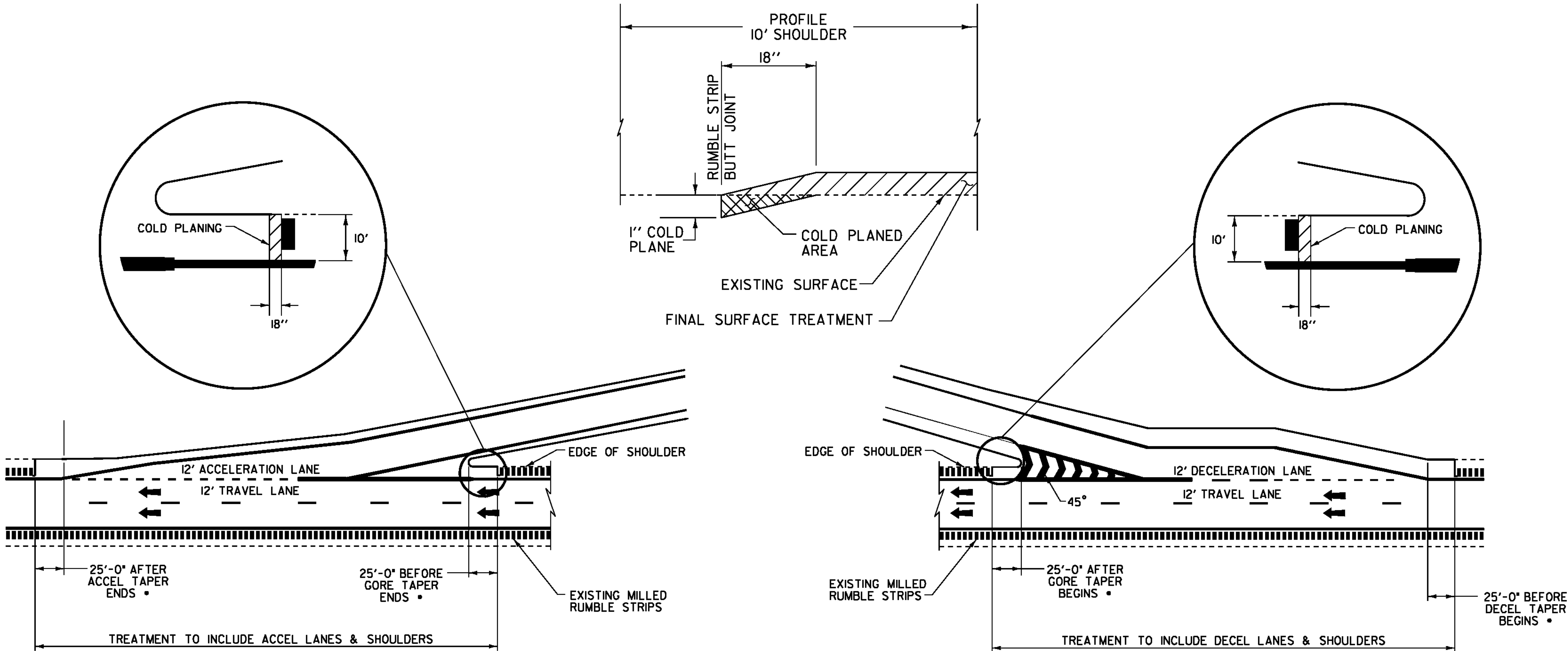
INTERSTATE ROUTE 91 SB
(MM 76.443)
BEGIN PROJECT
IM SURF (31)

6" WHITE LINE
M. M. 76.443 - M. M. 98.43 SB (SOLID RT)
M. M. 76.443 - M. M. 98.43 SB (DASH)
6" YELLOW LINE
M. M. 76.443 - M. M. 98.43 SB (SOLID LT)
TEMPORARY 6" WHITE LINE, PAINT
M. M. 76.443 - M. M. 98.43 SB (SOLID RT)
M. M. 76.443 - M. M. 98.43 SB (DASH)
TEMPORARY 6" YELLOW LINE, PAINT
M. M. 76.443 - M. M. 98.43 SB (SOLID LT)

INTERSTATE ROUTE 91 SB
(MM 98.430)
END PROJECT
IM SURF (31)



COLD PLANE DETAIL AT U-TURNS



RAMP CONSTRUCTION DETAILS

TO BE USED AS DIRECTED BY THE ENGINEER

MAINLINE
PAVEMENT MARKING
SHEET

PROJECT NAME: NORWICH - BRADFORD
PROJECT NUMBER: IM SURF (31)

FILE NAME: /pave/lla030/plla030.dgn
PROJECT MANAGER: MIKE FOWLER
DESIGNED BY: WILDER
IPARM FILE NAME: plla030_09.i

PLOT DATE: 06-FEB-2012
DRAWN BY: WILDER
CHECKED BY: PVMT MGMT
SHEET 9 OF 19

NOT TO SCALE

RAMP "A" 1,850' (SOLID)
RAMP "A" 135' (DOTTED)
RAMP "C" 1,600' (SOLID)
RAMP "C" 95' (DOTTED)

RAMP "A" 1,045' (SOLID)
RAMP "C" 1,075' (SOLID)

RAMP "A" 475' (SOLID)
RAMP "C" 300' (SOLID)
RAMP "C" 115' (DIAGONALS)

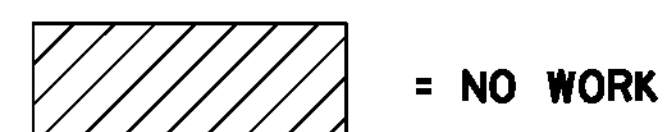
RAMP "C" IO EA (S,T,O,P) (A,H,E,A,D)
(→)

RAMP "A" 1,850' (SOLID)
RAMP "A" 135' (DOTTED)
RAMP "C" 1,600' (SOLID)
RAMP "C" 95' (DOTTED)

RAMP "A" 1,045' (SOLID)
RAMP "C" 1,075' (SOLID)

RAMP "A" 475' (SOLID)
RAMP "C" 300' (SOLID)
RAMP "C" 115' (DIAGONALS)

RAMP "C" IO EA (S,T,O,P) (A,H,E,A,D)
(➡)



EXIT 14 PAVEMENT MARKING SHEET

CHECKED BY: PVMT MGMT
SHEET 10 OF 19

6 INCH WHITE LINE

RAMP "A" 1,850' (SOLID)
RAMP "A" 250' (DOTTED)
RAMP "C" 1,050' (SOLID)
RAMP "C" 75' (DOTTED)

6 INCH YELLOW LINE

RAMP "A" 550' (SOLID)
RAMP "C" 600' (SOLID)

12 INCH WHITE LINE

RAMP "A" 575' (SOLID)
RAMP "C" 475' (SOLID)
RAMP "C" 200' (DIAGONALS)

LETTER OR SYMBOL

RAMP "C" 10 EA (S,T,O,P) (A,H,E,A,D)

TEMPORARY 6 INCH WHITE LINE, PAINT

RAMP "A" 1,850' (SOLID)
RAMP "A" 250' (DOTTED)
RAMP "C" 1,050' (SOLID)
RAMP "C" 75' (DOTTED)

TEMPORARY 6 INCH YELLOW LINE, PAINT

RAMP "A" 550' (SOLID)
RAMP "C" 600' (SOLID)

TEMPORARY 12 INCH WHITE LINE, PAINT

RAMP "A" 575' (SOLID)
RAMP "C" 475' (SOLID)
RAMP "C" 200' (DIAGONALS)

TEMPORARY LETTER OR SYMBOL, PAINT

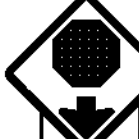
RAMP "C" 10 EA (S,T,O,P) (A,H,E,A,D)



SEE STD. E-193 FOR PLACEMENT

RET(ALL)

CENTER ARROW ON
"WRONG WAY" SIGN



RET(ALL)

WRONG WAY

6" WHITE LINE

6" YELLOW LINE

RAMP "A"

RAMP "B"

12" WHITE LINE

6" WHITE LINE
DOTTED

976'

75'

241'

U.S. 5 NORTH

U.S. 5 NORTH

I-91 NORTH

6" WHITE LINE

6" YELLOW LINE

12" WHITE LINE
DIAGONAL

12" WHITE LINE

6" YELLOW LINE

6" WHITE LINE

6" WHITE LINE
DOTTED

228'

235'

= NO WORK

NOT TO SCALE

EXIT 15
PAVEMENT MARKING
SHEET

DESIGNED BY LSW DATE 4-21-10
DRAWN BY LSW DATE 14-21-10
DESIGN FILE NO. /pave/11a030/p11a030.dgn
PRF FILE p11a030-11.1 DATE PLOTTED 07-FEB-2012
PROJ. NAME NORWICH - BRADFORD
PROJ. NO. IM SURF (31)
SHEET 11 OF 19 SHEETS

6 INCH WHITE LINE
RAMP "C" 1,170' (SOLID)
RAMP "C" 130' (DOTTED)
RAMP "D" 2,375' (SOLID)
RAMP "D" 275' (DOTTED)

6 INCH YELLOW LINE
RAMP "C" 505' (SOLID)
RAMP "D" 1,085' (SOLID)

12 INCH WHITE LINE
RAMP "C" 265' (SOLID)
RAMP "C" 200' (DIAGONALS)
RAMP "D" 370' (SOLID)

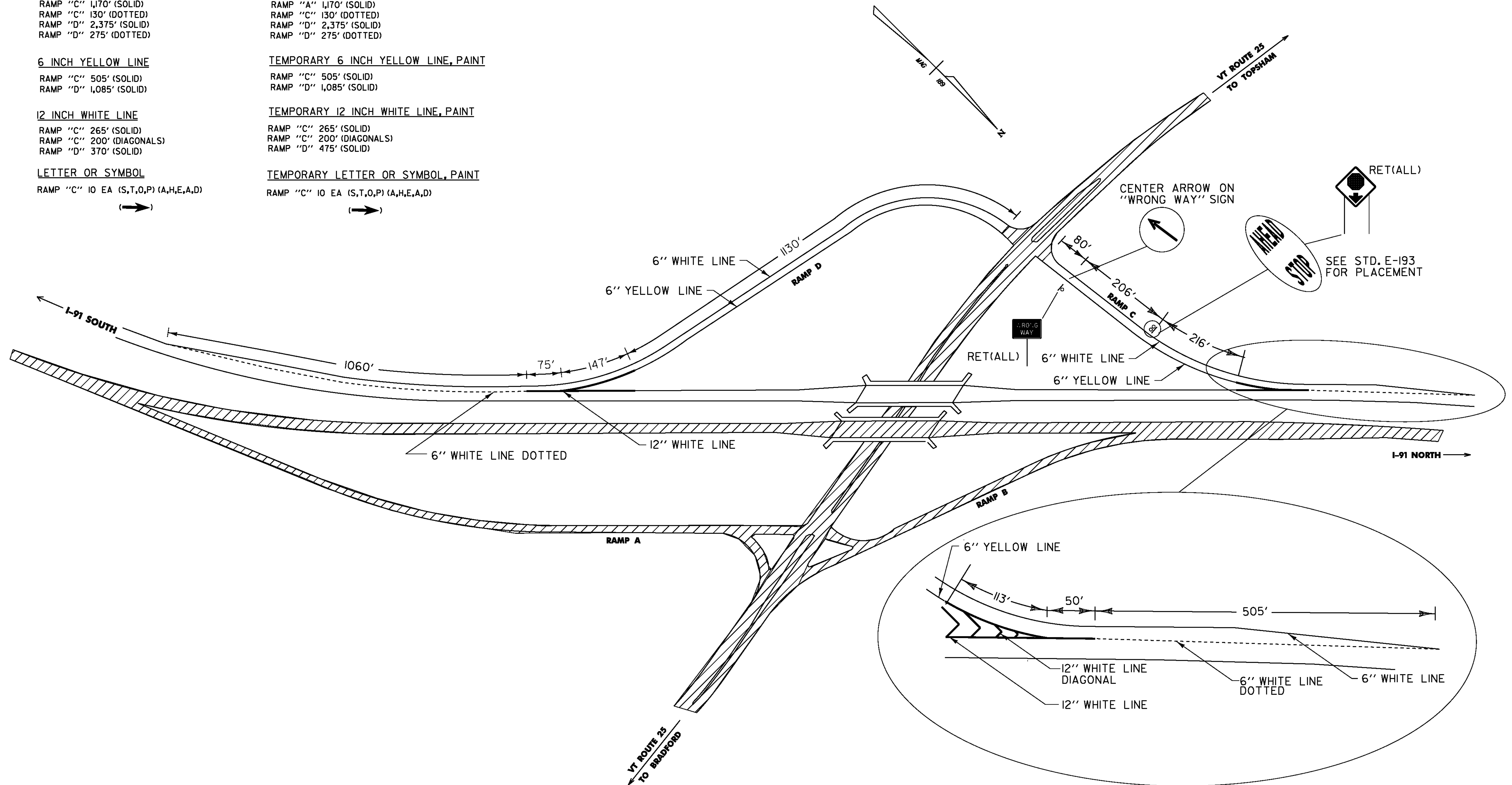
LETTER OR SYMBOL
RAMP "C" 10 EA (S,T,O,P) (A,H,E,A,D)
(→)

TEMPORARY 6 INCH WHITE LINE, PAINT
RAMP "A" 1,170' (SOLID)
RAMP "C" 130' (DOTTED)
RAMP "D" 2,375' (SOLID)
RAMP "D" 275' (DOTTED)

TEMPORARY 6 INCH YELLOW LINE, PAINT
RAMP "C" 505' (SOLID)
RAMP "D" 1,085' (SOLID)

TEMPORARY 12 INCH WHITE LINE, PAINT
RAMP "C" 265' (SOLID)
RAMP "C" 200' (DIAGONALS)
RAMP "D" 475' (SOLID)

TEMPORARY LETTER OR SYMBOL, PAINT
RAMP "C" 10 EA (S,T,O,P) (A,H,E,A,D)
(→)



= NO WORK

NOT TO SCALE

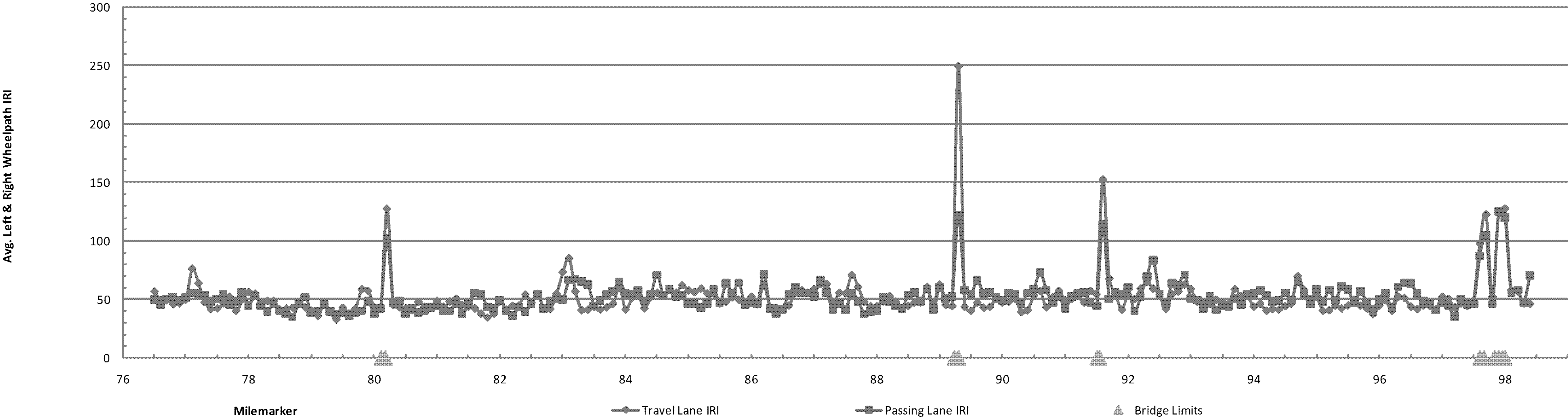
EXIT 16 PAVEMENT MARKING SHEET

DESIGNED BY LSW DATE 4-21-10
DRAWN BY LSW DATE 14-21-10
DESIGN FILE NO. /pave/11a030/p11a030.dgn
PRF FILE p11a030_12.1 DATE PLOTTED 07-FEB-2012
PROJ. NAME NORWICH - BRADFORD
PROJ. NO. IM SURF (31)
SHEET 12 OF 19 SHEETS

I-91 Norwich-Bradford IM SURF(31) Pre. Construction

Profiled 6-3-11

Travel Lane Avg. IRI = 51.9, Passing Lane Avg. IRI = 52.4



**SOUTHBOUND LANE
FOR INFORMATIONAL PURPOSES ONLY**

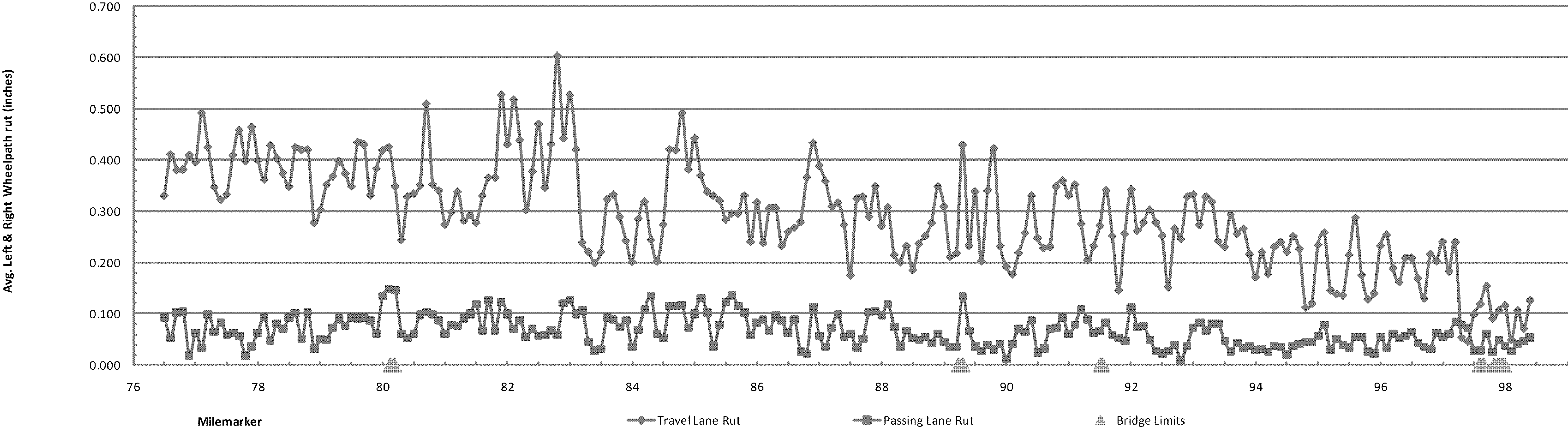
**ROUGHNESS
DATA
INFORMATION**

PROJECT NAME: NORWICH - BRADFORD	
PROJECT NUMBER: IM SURF (31)	
FILE NAME: /pave/lla030/plla030.dgn	PLOT DATE: 07-FEB-2012
PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
IPARM FILE NAME: plla030_i3.i	SHEET 13 OF 19

I-91 Norwich-Bradford IM SURF(31) Pre. Construction

Profiled 6-3-11

Travel Lane Avg. Rut = 0.292", Passing Lane Avg. Rut = 0.067"



**SOUTHBOUND LANE
FOR INFORMATIONAL PURPOSES ONLY**

**RUTTING DATA
INFORMATION**

PROJECT NAME: NORWICH - BRADFORD

PROJECT NUMBER: IM SURF (31)

FILE NAME: /pave/lla030/plla030.dgn

PROJECT LEADER: MIKE FOWLER

DESIGNED BY: WILDER

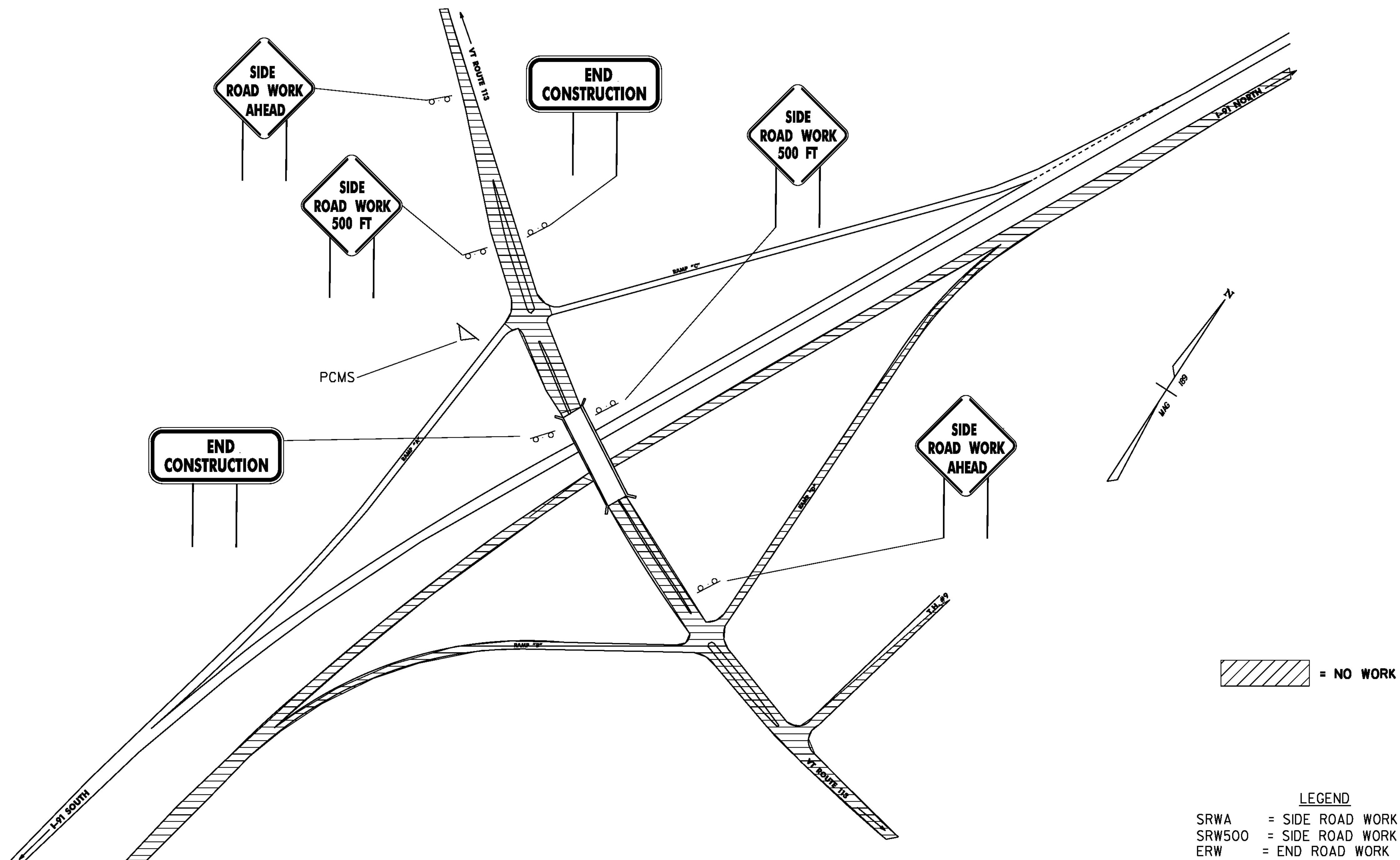
IPARM FILE NAME: plla030_14.1

PLOT DATE: 06-FEB-2012

DRAWN BY: WILDER

CHECKED BY: PVMT MGMT

SHEET 14 OF 19



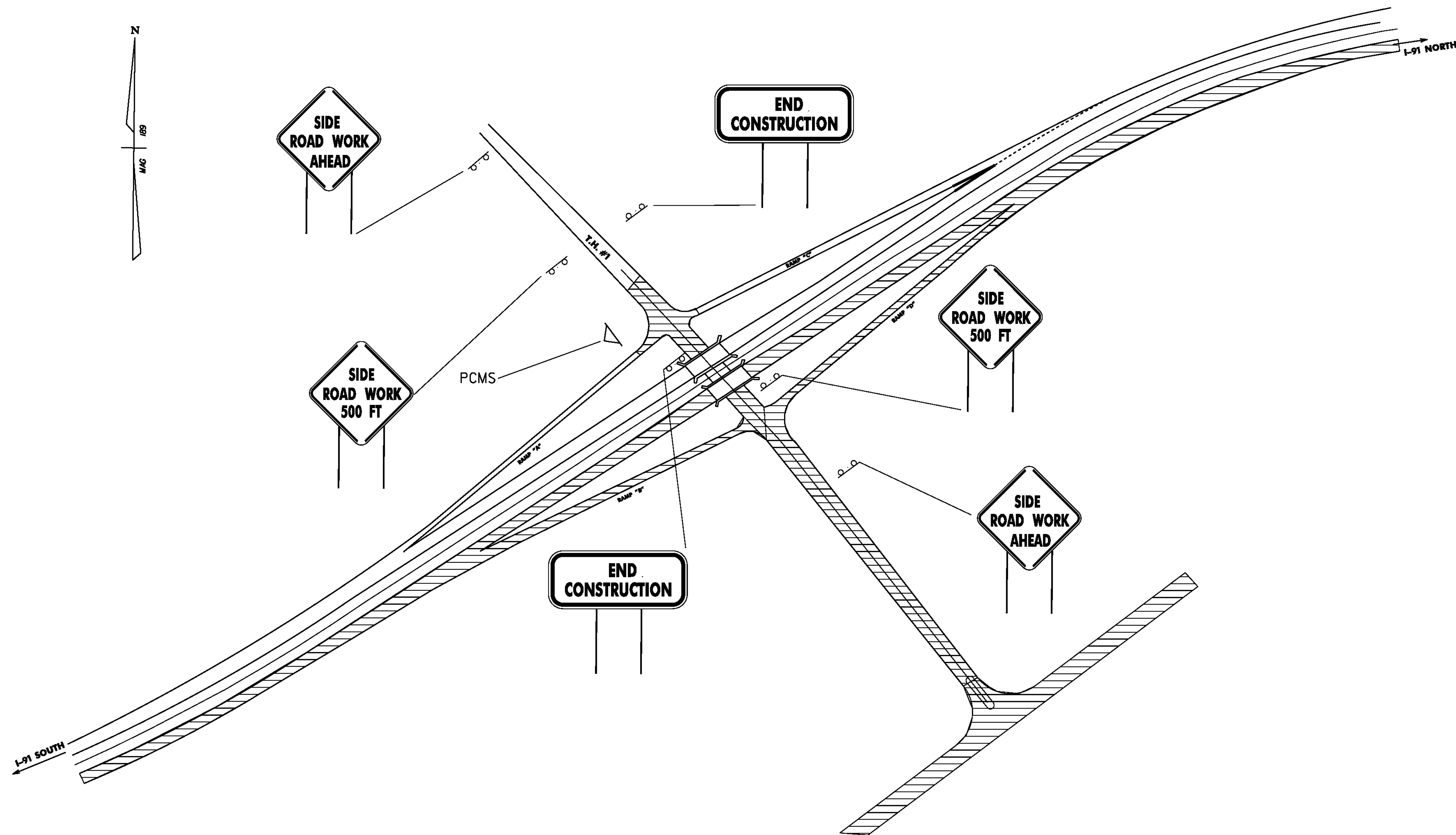
LIST OF CONSTRUCTION SIGNS - EXIT 14

LOCATION	SRWA	SRW500	ERW		PCMS
VT. 113	2	2	2		
RAMP "A"					1
TOTALS	2	2	2		1

CONSTRUCTION APPROACH SIGNING EXIT 14

NOT TO SCALE

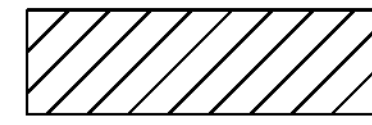
PROJECT NAME: NORWICH - BRADFORD	
PROJECT NUMBER: IM SURF (31)	
FILE NAME: /pave/11a030/plla030.dgn	PLOT DATE: 07-FEB-2012
PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
IPARM FILE NAME: plla030.15.1	SHEET 15 OF 19



LIST OF CONSTRUCTION SIGNS - EXIT 15

LOCATION	SRWA	SRW500	ERW	PCMS
TH # 1	2	2	2	
RAMP "A"				1
TOTALS	2	2	2	1

NOT TO SCALE

- 

= NO WORK
- LEGEND

SRWA = SIDE ROAD WORK AHEAD

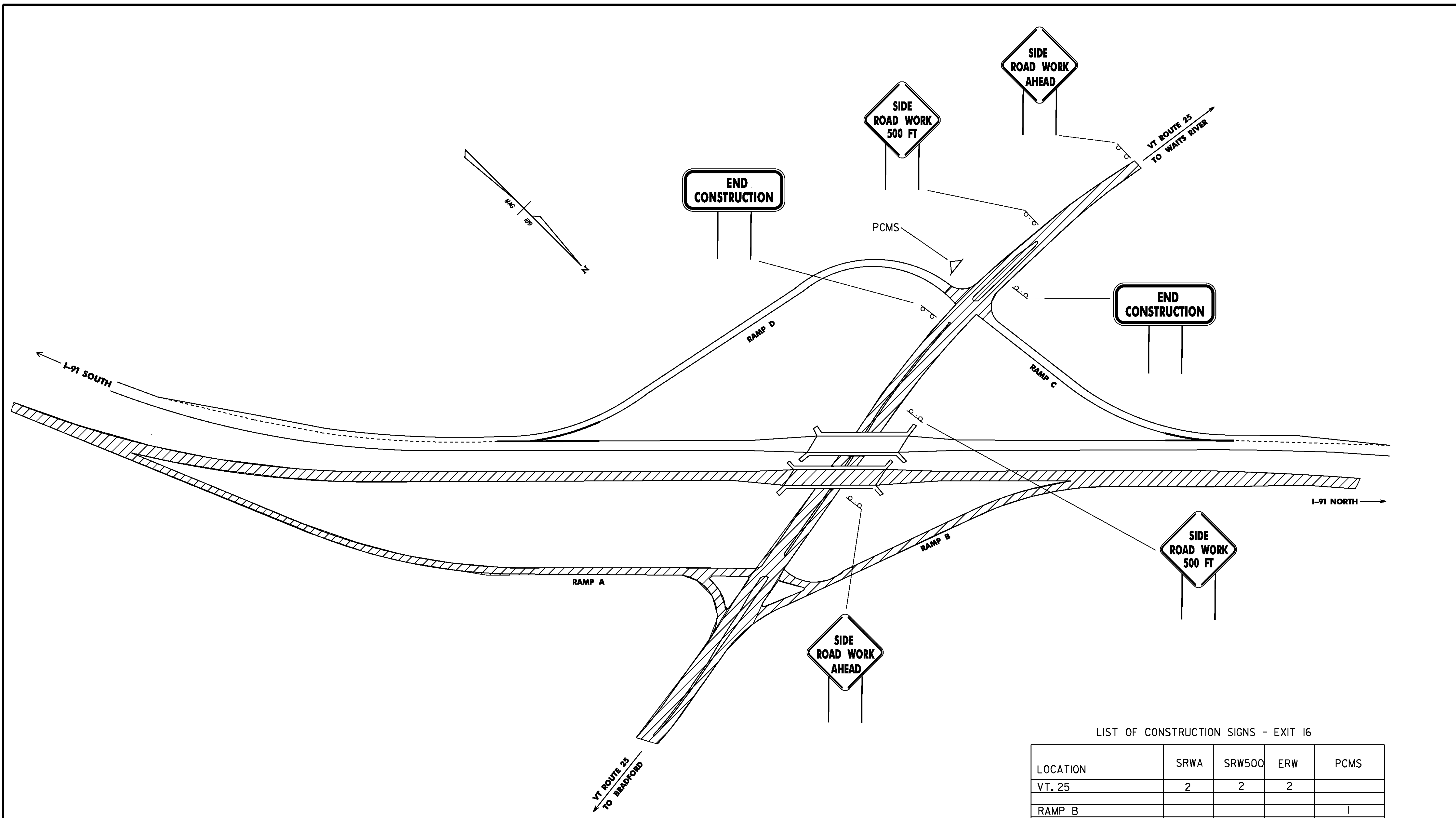
SRW500 = SIDE ROAD WORK 500 FEET

ERW = END ROAD WORK

 = PORTABLE CHANGEABLE MESSAGE SIGN

CONSTRUCTION APPROACH
SIGNING
EXIT 15

PROJECT NAME: NORWICH - BRADFORD	
PROJECT NUMBER: IM SURF (31)	
FILE NAME: /pave/lla030/plla030.dgn	PLOT DATE: 07-FEB-2012
PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
IPARM FILE NAME: plla030.i6.i	SHEET 16 OF 19

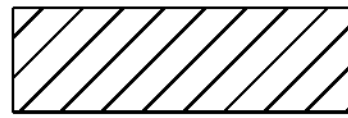


NOT TO SCALE

LIST OF CONSTRUCTION SIGNS - EXIT 16

LOCATION	SRWA	SRW500	ERW	PCMS
VT. 25	2	2	2	
RAMP B				1
TOTALS	2	2	2	1

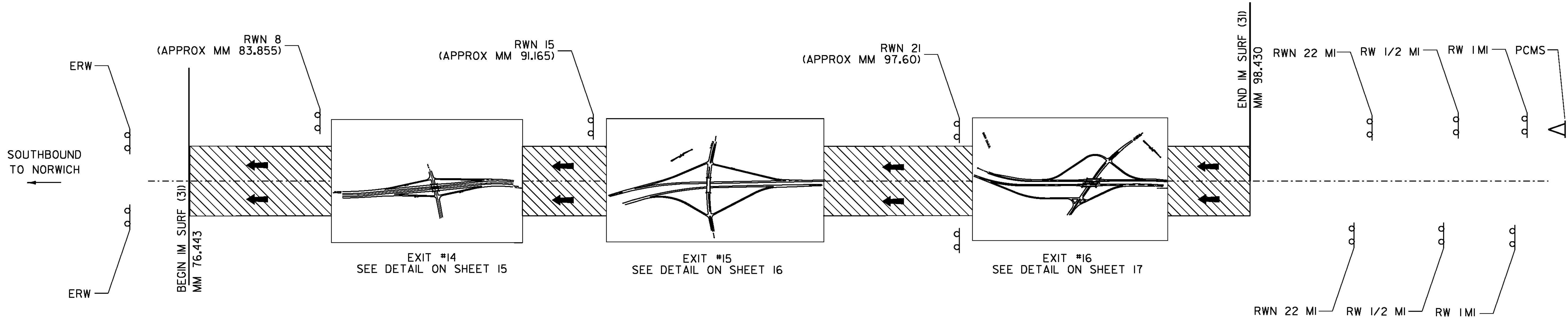
LEGEND

-  = NO WORK
- SRWA = SIDE ROAD WORK AHEAD
- SRW500 = SIDE ROAD WORK 500 FEET
- ERW = END ROAD WORK
-  = PORTABLE CHANGEABLE MESSAGE SIGN

CONSTRUCTION APPROACH
SIGNING
EXIT 16

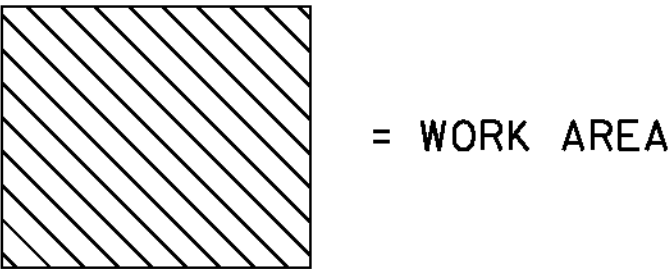
PROJECT NAME: NORWICH - BRADFORD	
PROJECT NUMBER: IM SURF (31)	
FILE NAME: /pave/lla030/plla030.dgn	PLOT DATE: 07-FEB-2012
PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
IPARM FILE NAME: plla030.i7.1	SHEET 17 OF 19

**BEGIN /END PROJECT
CONSTRUCTION APPROACH SIGNING
I-91 SOUTHBOUND**



LIST OF CONSTRUCTION SIGNS - MAINLINE SB

LOCATION	RW 1MI	RW 1/2 MI	RWN 22 MILES	RWN 21 MILES	RWN 15 MILES	RWN 8 MILES	ERW	PCMS
I-91 SOUTHBOUND	2	2	2	1	1	1	2	1
TOTALS	2	2	2	1	1	1	2	1



- LEGEND**
- RWN XX MILES = ROAD WORK NEXT XX MILES
 - ERW = END ROAD WORK
 - RW 1MI = ROAD WORK IN 1 MILE
 - RW 1/2 MI = ROAD WORK IN 1/2 MILE
 - = PORTABLE CHANGEABLE MESSAGE SIGN
 - = DIRECTION OF TRAFFIC FLOW

NOT TO SCALE

CONSTRUCTION APPROACH MAINLINE SIGNING SHEET	PROJECT NAME: NORWICH - BRADFORD	
	PROJECT NUMBER: IM SURF (3I)	
	FILE NAME: /pave/11a030/plla030.dgn	PLOT DATE: 07-FEB-2012
	PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
	DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
	IPARM FILE NAME: plla030_18.1	SHEET 18 OF 19

NOTES:

1. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 641.10, TRAFFIC CONTROL.

2. THE CONTRACTOR SHALL INCLUDE A CONSTRUCTION SIGN APPROACH PACKAGE FOR EXPECTED LANE CLOSURES AND WORK ZONE SPEED REDUCTIONS IN COMPLIANCE WITH VTRANS STANDARDS E-103, E-106 AND THE LATEST REVISION OF THE 2009 MUTCD. PAYMENT FOR PROVIDING THIS PACKAGE SHALL BE INCIDENTAL TO ITEM 641.10, TRAFFIC CONTROL. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN.

3. THE BID PRICE FOR TRAFFIC CONTROL, ITEM 641.10, SHALL INCLUDE ALL APPROACH AND ON-PROJECT CONSTRUCTION SIGNING, PORTABLE ARROW BOARDS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN VTRANS STANDARDS. ALL ADJUSTING, RELOCATING, AND REMOVING OF THESE DEVICES AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED. THE FOLLOWING ITEMS WILL BE PAID FOR SEPARATELY:
630.10 - UNIFORMED TRAFFIC OFFICERS
630.15 - FLAGGERS
646.622 - TEMPORARY 6 INCH WHITE LINE, PAINT
646.632 - TEMPORARY 6 INCH YELLOW LINE, PAINT
646.662 - TEMPORARY 12 INCH WHITE LINE, PAINT
646.692 - TEMPORARY LETTER OR SYMBOL, PAINT

4. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PROVIDED FOR USE ALONG THIS PROJECT. THE PLACEMENT OF THESE UNITS AS WELL AS THE MESSAGE WILL BE APPROVED BY THE ENGINEER. THESE SIGNS WILL BE PAID FOR UNDER ITEM 641.15, PORTABLE CHANGEABLE MESSAGE SIGN.

FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL POSITION A PCMS PRIOR TO EXIT 16 SOUTHBOUND LANE WARNING MOTORISTS OF EXPECTED ROADWAY CONDITIONS AND REDUCED ROADWAY WIDTHS.

PCMS SHOULD NOT REPLACE ANY OF THE SIGNING DETAILED IN THE MUTCD AND SHOULD NOT BE USED IF STANDARD TRAFFIC CONTROL DEVICES ADEQUATELY PROVIDE THE INFORMATION THE MOTORISTS NEED TO TRAVEL SAFELY.

THE PCMS SHALL CONSIST OF EITHER ONE OR TWO PHASES. TYPICALLY, A PHASE SHALL CONSIST OF UP TO THREE LINES OF EIGHT CHARACTERS PER LINE. THE PCMS SHOULD BE USED AS A SUPPLEMENT AND NOT AS A SUBSTITUTE FOR CONVENTIONAL SIGNS AND PAVEMENT MARKINGS.

THE PCMS SHOULD COMMUNICATE WHAT INFORMATION MOTORISTS NEED TO KNOW. UNNECESSARY INFORMATION SHOULD BE AVOIDED. MESSAGES SHOULD BE UPDATED AND/OR CHANGED PERIODICALLY TO DESCRIBE THE WORK ACTIVITY OCCURRING SO THAT THE PCMS CONTINUES TO COMMAND THE ATTENTION OF MOTORISTS.

5. NO CONSTRUCTION SIGNS SHALL BE INSTALLED AS TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE, AND CORNER SIGHT DISTANCE.

6. REFER TO VT. STATE STANDARDS AND THE 2009 MUTCD FOR TEMPORARY TRAFFIC CONTROL SIGN COLORS.

7. DURING CONSTRUCTION IT WILL BE NECESSARY FOR THE CONTRACTOR TO MAINTAIN ONE-LANE TRAFFIC FOR EXTENDED PERIODS OF TIME. IN NO CASE SHALL THE PAVED WIDTH FOR ONE-LANE TRAFFIC, INCLUDING SHOULDERS, BE REDUCED TO LESS THAN 15 FEET IN WIDTH. THIS PAVED WIDTH SHALL REMAIN FREE OF OBSTRUCTIONS AND OBSTACLES AT ALL TIMES.

8. ADDITIONAL RAMP SIGNING MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER.

9. THE DISTANCE SHOWN ON THE "ROAD WORK NEXT XX MILES" (G20-1) SIGN SHALL BE STATED TO THE NEAREST ONE MILE. PLEASE REFER TO PART 6 OF THE 2009 MUTCD SECTION 6F.51.

10. EXISTING SPEED LIMIT SIGNS SHALL BE COMPLETELY COVERED WHEN REDUCED SPEED SIGNS ARE POSTED. KEEP RECORDS WHEN POSTING THE WORK ZONE SPEED LIMIT FOR LEGAL PURPOSES; DOCUMENTING DATES, TIMES, AND LOCATIONS OF SIGNS. WHEN WORK ZONE SPEED LIMIT IS NOT IN USE ALL ASSOCIATED SIGNS SHALL BE COVERED, TURNED OR LAID FLAT SO AS THE MOTORING PUBLIC CANNOT READ THESE SIGNS.

11. PORTABLE OR STATIONARY WORK ZONE SPEED LIMIT SIGNS SHOULD BE SPACED EVERY 1.5 TO 2 MILES WHERE APPLICABLE AS A REMINDER TO THE MOTORIST TRAVELING THROUGH THE WORK ZONE WHAT SPEED THEY SHOULD BE TRAVELING. ALL SPEED LIMIT SIGNS WITHIN THE TEMPORARY SPEED LIMIT ZONE SHALL INCLUDE THE G20-5aP "WORK ZONE" PLAQUE.

12. WHEN REDUCED REGULATORY SPEED LIMIT SIGNS ARE USED, THE RESUMPTION OF THE USUAL SPEED LIMIT SHALL BE INDICATED BY AN APPROPRIATE SPEED LIMIT SIGN AT THE END OF THE WORK ZONE.

**TRAFFIC
CONTROL
NOTE SHEET**

PROJECT NAME: NORWICH - BRADFORD
PROJECT NUMBER: IM SURF (31)

FILE NAME: /pave/11a030/11a030.dgn	PLOT DATE: 06-FEB-2012
PROJECT LEADER: MIKE FOWLER	DRAWN BY: WILDER
DESIGNED BY: WILDER	CHECKED BY: PVMT MGMT
IPARM FILE NAME: 11a030_19.1	SHEET 19 OF 19