RECORD PLANS

Contractor: The Gorman Group - Albany, New York
Resident Engineer: Josh Hulett
Construction Began: July 13, 2016
Construction Complete: October 13, 2017
Record Plans By: Josh Hulett / Paul Beyor

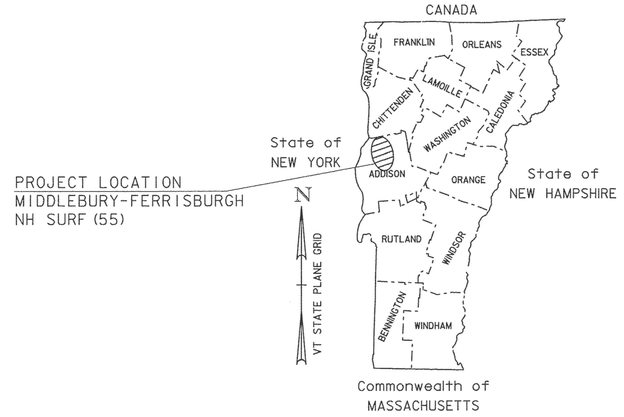
I hereby certify that all construction required by this set of drawings has been accomplished as indicated herein.

By: Josh Hulett Josh Hulett - Resident Engineer

Date: December 12, 2017

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.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



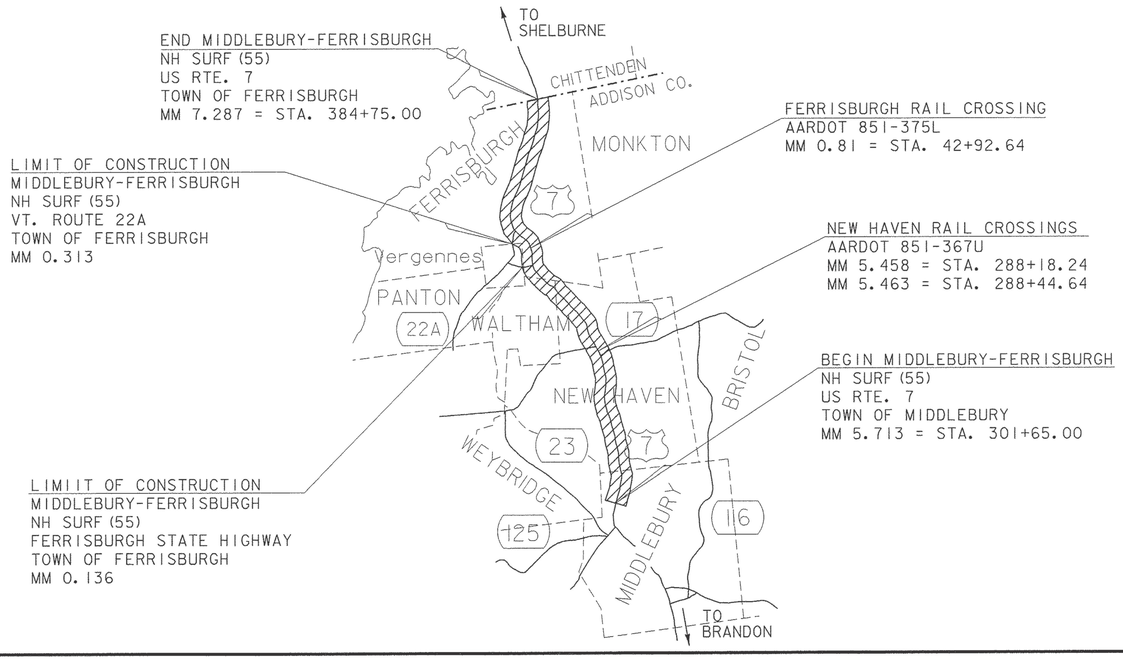
PROPOSED IMPROVEMENT
TOWNS OF MIDDLEBURY, NEW HAVEN, WALTHAM AND FERRISBURGH
COUNTY OF ADDISON
US ROUTE 7 - PRINCIPAL ARTERIAL (NHS)

BEGINNING ON US ROUTE 7 IN THE TOWN OF MIDDLEBURY AT MM 5.713 AND EXTENDING NORTHERLY 18.374 MILES TO MM 7.287 IN THE TOWN OF FERRISBURGH. PROJECT INCLUDES MINOR SEGMENTS OF VT. ROUTE 22A. VT. ROUTE 22A APPROACH RAMP AND FERRISBURGH STATE HIGHWAY ALL IN FERRISBURGH.

PROJECT DATA	LENGTH
MIDDLEBURY MM 5.713 - MM 7.480	1.767 MILES
NEW HAVEN MM 0.000 - MM 7.690	7.690 MILES
WALTHAM MM 0.000 - MM 1.630	1.630 MILES
FERRISBURGH MM 0.000 - MM 7.287	7.287 MILES

LENGTH OF ROADWAY = (97,014.72 FEET) = 18.374 MILES
LENGTH OF PROJECT = (97,014.72 FEET) = 18.374 MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES SURFACE PREPARATION INVOLVING PATCHING, POT HOLE REPAIR AND CRACK SEALING AS NECESSARY; MICRO-MILLING, AND OVERLAYING WITH A THIN BITUMINOUS SURFACE TREATMENT ON THE EXISTING TYPICAL, TWO NEW DILEMMA ZONE DETECTION SYSTEMS, A RAIL CROSSING IMPROVEMENT/RECONSTRUCTION IN FERRISBURGH; AND OTHER HIGHWAY RELATED ITEMS.



SEE SHEET 2 FOR TRAFFIC DATA

NOT TO SCALE

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 I	
SURVEYED BY :	N/A
SURVEYED DATE :	N/A
DATUM	
VERTICAL	N/A
HORIZONTAL	N/A

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE 3/30/2016

PROJECT MANAGER : JONATHAN C. HARRINGTON, P.E.

PROJECT NAME : MIDDLEBURY-FERRISBURGH
PROJECT NUMBER : NH SURF (55)

SHEET 1 OF 96 SHEETS

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6-8. QUANTITY SHEETS
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10-11. COLD PLANE DETAILS SHEETS
12. BRIDGE JOINT DETAIL SHEET
13-14. PAVEMENT MARKING DETAIL SHEETS
15-77. PLAN SHEETS
78-79. TRAFFIC SIGNAL PLAN SHEETS
80. RAILROAD GENERAL NOTES
81. RAILROAD TYPICAL SECTION
82. RAILROAD DETAIL SHEET 1
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DETAILS

HSD-213.02	MILLED RUMBLE STRIP (CENTERLINE) DETAILS	02/04/2016
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	08/29/2011

STANDARDS

E-131	08/08/95
E-190	06/30/03
E-191	02/01/99
E-192	10/12/00
E-193	08/18/95
T-1	08/06/12
T-10	08/06/12
T-17	08/06/12
T-24	08/06/12
T-28	08/06/12
T-29	08/06/12
T-30	08/06/12
T-31	08/06/12
T-35	08/06/12
T-36	08/06/12

TRAFFIC DATA

US ROUTE 7	2015 AADT	2025 AADT	2015 DHV	2025 DHV	FLEXIBLE ESALS (2015-2025)	FLEXIBLE ESALS (2015-2035)
SECTION #1- BEGIN PROJECT TO EXCHANGE ST./HAPPY VALLEY RD IN MIDDLEBURY (MM 5.713 - 6.660)	9100	9300	960	980	2,896,000	6,509,000
SECTION #2 - EXCHANGE ST./HAPPY VALLEY RD IN MIDDLEBURY TO RIVER RD/BELDEN FALLS RD. IN NEW HAVEN (MM 6.660 - 0.556)	10,500	10,800	1100	1100	3,412,000	7,729,000
SECTION #3 - RIVER RD./BELDEN FALLS RD. IN NEW HAVEN TO TOWN HILL RD. IN NEW HAVEN (MM 0.556 - 3.868)	8300	8500	930	950	3,677,000	8,013,000
SECTION #4 - TOWN HILL RD. IN NEW HAVEN TO VT 17E IN NEW HAVEN (MM 3.868 - 5.354)	7000	7200	720	740	2,658,000	5,733,000
SECTION #5 - VT. 17E IN NEW HAVEN TO VT. 22A IN FERRISBURGH (MM 5.354 - 1.511)	7800	7900	800	810	1,952,000	4,331,000
SECTION #6 - VT. 22A IN FERRISBURGH TO END PROJECT (MM 1.511- 7.287)	12,600	13,000	1300	1300	5,698,000	12,440,000

PROJECT NAME: MIDDLEBURY-FERRISBURGH
PROJECT NUMBER: NH SURF(55)

FILE NAME: pl5v015.dgn
PROJECT LEADER: HARRINGTON
DESIGNED BY: BULLOCK
INDEX OF SHEETS

PLOT DATE: 11-APR-2016
DRAWN BY: BULLOCK
CHECKED BY: HARRINGTON

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⧈	BNDNS	BOUND TO BE SET
●	IPNS	IRON PIN SET
◎	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
	APL	BOUND APPARENT LOCATION
	BM	BENCHMARK
	BND	BOUND
	CB	CATCH BASIN
	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
	EL	ELECTRIC POWER POLE
	FPOLE	FLAGPOLE
	GASFIL	GAS FILLER
	GP	GUIDE POST
	GSO	GAS SHUT OFF
	GUY	GUY POLE
	GUYW	GUY WIRE
	GV	GATE VALUE
	H	TREE HARDWOOD
	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
	HYD	HYDRANT
	IP	IRON PIN
	IPIPE	IRON PIPE
	LI	LIGHT - STREET OR YARD
	MB	MAILBOX
	MH	MANHOLE (MH)
	MM	MILE MARKER
	PM	PARKING METER
	PMK	PROJECT MARKER
	POST	POST STONE/WOOD
	RRSIG	RAILROAD SIGNAL
	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
	SAT	SATELLITE DISH
	SHRUB	SHRUB
	SIGN	SIGN
	STUMP	STUMP
	TEL	TELEPHONE POLE
	TIE	TIE
	TSIGN	SIGN W/DOUBLE POST
	VCTRL	CONTROL VERTICAL
	WELL	WELL
	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- UGU — UTILITY (GENERIC-UNKNOWN)
- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEP.
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- AGU — UTILITY (GENERIC-UNKNOWN)
- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEP.
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PDF — PROJECT DEMARCATION FENCE
- BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN LINE — TOWN BOUNDARY LINE
- COUNTY LINE — COUNTY BOUNDARY LINE
- STATE LINE — STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- P/L — PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6F — 6F PROPERTY BOUNDARY
- 4F — 4F PROPERTY BOUNDARY
- HAZ — HAZ HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZ HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

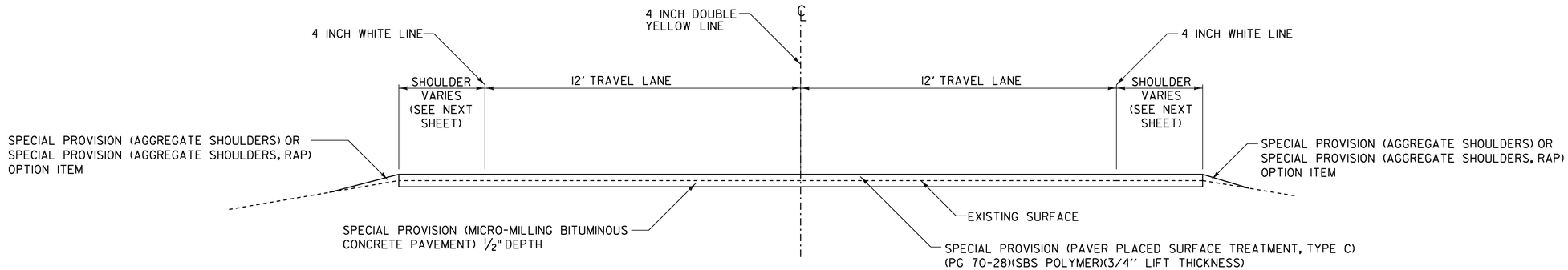
- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- (H) HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

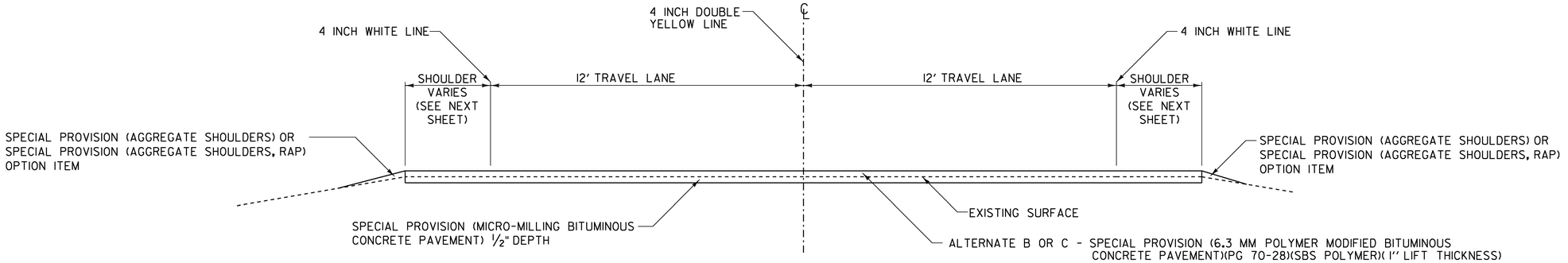
PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: p15v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
CONVENTIONAL SYMBOLOGY LEGEND SHEET	SHEET 3 OF 96



US RTE. 7, VT. RTE. 22A, AND FERRISBURGH STATE HIGHWAY
TYPICAL SECTION – ALTERNATE A
PAVER PLACED SURFACE TREATMENT, TYPE C

NOTE:

1. SPECIAL PROVISION (PAVER PLACED SURFACE TREATMENT, TYPE C")(PG 70-28)(SBS POLYMER)(3/4" LIFT THICKNESS) PAVEMENT TOLERANCE = +/- 1/8 INCH (TOTAL THICKNESS).



US RTE. 7, VT. RTE. 22A, AND FERRISBURGH STATE HIGHWAY
TYPICAL SECTION – ALTERNATE B OR C
6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT (SBS POLYMER)

NOTES:

1. THE GYRATION SPECIFICATION FOR THE 6.3 MM POLYMER - MODIFIED BITUMINOUS CONCRETE PAVEMENT SHALL BE 80. PG BINDER SHALL BE 70-28.
2. SPECIAL PROVISION (6.3 MM POLYMER - MODIFIED BITUMINOUS CONCRETE PAVEMENT)(PG 70-28)(SBS POLYMER)(1" LIFT THICKNESS) PAVEMENT TOLERANCE = +/- 1/8 INCH (TOTAL THICKNESS).

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 07-APR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
TYPICAL SECTIONS SHEET 1	SHEET 4 OF 96

TOWN	STA	STA	LANE TYPICAL		TOWN	STA	STA	LANE TYPICAL
MIDDLEBURY	301+65	330+12	4-11-11-4		NEW HAVEN	316+00	322+00	SEE PLAN SHEET
MIDDLEBURY	330+12	331+11	SEE PLAN SHEET		NEW HAVEN	322+00	327+35	9-12-12-9
MIDDLEBURY	331+11	339+40	8-11-11-4		NEW HAVEN	327+35	331+00	SEE PLAN SHEET
MIDDLEBURY	339+40	341+00	SEE PLAN SHEET		NEW HAVEN	331+00	406+00	5-12-12-5
MIDDLEBURY	341+00	394+89.12	8-12-12-8		WALTHAM	0+00	53+50	5-12-12-5
NEW HAVEN	0+00	4+00	8-12-12-8		WALTHAM	53+50	59+00	SEE PLAN SHEET
NEW HAVEN	4+00	10+00	SEE PLAN SHEET		WALTHAM	59+00	80+75	5-11-12-12-6
NEW HAVEN	10+00	26+00	4-11-12-12-8		WALTHAM	80+75	86+22.24	SEE PLAN SHEET
NEW HAVEN	26+00	27+00	SEE PLAN SHEET		FERRISBURGH	0+00	22+50	SEE PLAN SHEET
NEW HAVEN	27+00	39+75	4-11-12-12-10		FERRISBURGH	22+50	27+25	11-12-12-11
NEW HAVEN	39+75	42+75	SEE PLAN SHEET		FERRISBURGH	27+25	30+15	SEE PLAN SHEET
NEW HAVEN	42+75	55+20	10-12-12-10		FERRISBURGH	30+15	31+95	8-12-12-12-8
NEW HAVEN	55+20	56+65	SEE PLAN SHEET		FERRISBURGH	31+95	41+80	SEE PLAN SHEET
NEW HAVEN	56+65	59+15	4-12-12-4		FERRISBURGH	41+80	70+00	11-12-12-11
NEW HAVEN	59+15	60+50	SEE PLAN SHEET		FERRISBURGH	70+00	76+00	SEE PLAN SHEET
NEW HAVEN	60+50	76+00	10-12--12-10		FERRISBURGH	76+00	80+55	8-12-14-12-10
NEW HAVEN	76+00	79+00	SEE PLAN SHEET		FERRISBURGH	80+55	89+50	SEE PLAN SHEET
NEW HAVEN	79+00	104+50	10-12-12-11-4		FERRISBURGH	89+50	99+00	10.5-12-12-10.5
NEW HAVEN	104+50	110+50	SEE PLAN SHEET		FERRISBURGH	99+00	108+00	SEE PLAN SHEET
NEW HAVEN	110+50	144+00	10-12-12-12-10		FERRISBURGH	108+00	134+15	10-12-12-10
NEW HAVEN	144+00	148+00	SEE PLAN SHEET		FERRISBURGH	134+15	136+24	SEE PLAN SHEET
NEW HAVEN	148+00	174+00	3-11-11-3		FERRISBURGH	136+24	138+00	3.5-12-12-3.5
NEW HAVEN	174+00	176+00	SEE PLAN SHEET		FERRISBURGH	138+00	140+30	SEE PLAN SHEET
NEW HAVEN	176+00	182+50	8-12-12-8		FERRISBURGH	140+30	147+20	10-12-12-10
NEW HAVEN	182+50	188+50	SEE PLAN SHEET		FERRISBURGH	147+20	151+45	SEE PLAN SHEET
NEW HAVEN	188+50	198+00	4-11-12-12-8		FERRISBURGH	151+45	160+50	10.5-12-12-10.5
NEW HAVEN	198+00	201+00	SEE PLAN SHEET		FERRISBURGH	160+50	170+35	SEE PLAN SHEET
NEW HAVEN	201+00	237+50	8-12-12-8		FERRISBURGH	170+35	325+75	8-12-12-8
NEW HAVEN	237+50	243+50	SEE PLAN SHEET		FERRISBURGH	325+75	327+00	SEE PLAN SHEET
NEW HAVEN	243+50	260+75	4-11-12-12-8		FERRISBURGH	327+00	329+77	3-12-12-3
NEW HAVEN	260+75	263+75	SEE PLAN SHEET		FERRISBURGH	329+77	331+75	SEE PLAN SHEET
NEW HAVEN	263+75	278+50	8-12-12-8		FERRISBURGH	331+75	362+85	8-12-12-8
NEW HAVEN	278+50	293+00	SEE PLAN SHEET		FERRISBURGH	362+85	372+35	SEE PLAN SHEET
NEW HAVEN	293+00	316+00	8-12-12-11-4		FERRISBURGH	372+35	384+75	8.5-12-12-8.5

NOT TO SCALE

PROJECT NAME: MIDDLEBURY-FERRISBURGH
PROJECT NUMBER: NH SURF(55)

FILE NAME: pl5v015.dgn
PROJECT LEADER: HARRINGTON
DESIGNED BY: BULLOCK
TYPICAL SECTIONS SHEET 2

PLOT DATE: 16-MAR-2016
DRAWN BY: BULLOCK
CHECKED BY: HARRINGTON
SHEET 5 OF 96

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES								TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	RAILROAD	BRIDGE	FULL CE	ROADWAY (ALTERNATE A)	ROADWAY (ALTERNATE B)	ROADWAY (ALTERNATE C)		GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
	210							210		CY	UNCLASSIFIED EXCAVATION	203.17	5			
19600								19600		LF	SHOULDER BERM REMOVAL	203.40	233			
	10							10		CY	TRENCH EXCAVATION OF EARTH	204.20	4			
1								1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	EST.			
	300							300		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	18			
56600								56600		LF	MILLED RUMBLE STRIPS (CENTERLINE)	213.10	579			
	60							60		CY	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301.25	-			
	30							30		CY	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.26	-			
1								1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-			
28590								28590		LB	BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD (AASHTO M324 (ASTM D 6890) TYPE II)	417.20	282			
	5							5		GAL	WATER REPELLENT, SILANE	514.10	-			
		260						260		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	9			
		100						100		CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20	EST.			
36								36		EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40	EST.			
	240							240		LF	6 INCH UNDERDRAIN PIPE	605.10	6			
	20							20		LF	6 INCH UNDERDRAIN CARRIER PIPE	605.20	3			
270								270		HR	POWER BROOM RENTAL, TYPE I	608.30	EST.			
200								200		HR	POWER BROOM RENTAL, TYPE II	608.31	EST.			
100								100		HR	TRUCK RENTAL	608.37	EST.			
1030								1030		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			
3800								3800		HR	FLAGGERS	630.15	EST.			
			1					1		LS	FIELD OFFICE, ENGINEERS	631.10	-			
			1					1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-			
			3000					3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-			
1								1		LS	MOBILIZATION/DEMOBILIZATION	635.11	-			
1								1		LS	TRAFFIC CONTROL	641.10	-			
6								6		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-			
											BEGIN OPTION AA					
735								735		LF	DURABLE 24 INCH STOP BAR, THERMOPLASTIC	646.482				
735								735		LF	SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)	900.640				
											END OPTION AA					
											BEGIN OPTION BB					
395								395		EACH	DURABLE LETTER OR SYMBOL, THERMOPLASTIC	646.492				
395								395		EACH	SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)	900.620				
											END OPTION BB					
											BEGIN OPTION CC					
5								5		EACH	DURABLE RAILROAD CROSSING SYMBOL, THERMOPLASTIC	646.512				
5								5		EACH	SPECIAL PROVISION (DURABLE RAILROAD CROSSING SYMBOL, POLYUREA)(28 MILS)	900.620				
											END OPTION CC					

PROJECT NAME: MIDDLEBURY-FERRISBURGH
PROJECT NUMBER: NH SURF(55)

FILE NAME: pl5v015.dgn
PROJECT LEADER: HARRINGTON
DESIGNED BY: BULLOCK
QUANTITY SHEET 1

PLOT DATE: 06-APR-2016
DRAWN BY: BULLOCK
CHECKED BY: HARRINGTON
SHEET 6 OF 96

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES							TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	RAILROAD	BRIDGE	FULL CE	ROADWAY (ALTERNATE A)	ROADWAY (ALTERNATE B)	ROADWAY (ALTERNATE C)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
207250							207250		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	2059			
160540							160540		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	1601			
610							610		LF	TEMPORARY 8 INCH WHITE LINE, PAINT	646.642	10			
5340							5340		LF	TEMPORARY 8 INCH YELLOW LINE, PAINT	646.652	45			
735							735		LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	12			
395							395		EACH	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	7			
5							5		EACH	TEMPORARY RAILROAD CROSSING SYMBOL, PAINT	646.712	-			
42200							42200		EACH	LINE STRIPING TARGETS	646.76	2342			
	270						270		SY	GEOTEXTILE UNDER RAILROAD BALLAST	649.21	6			
144							144		SF	TRAFFIC SIGNS, TYPE A	675.20	1			
190							190		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	8			
25							25		EACH	REMOVING SIGNS	675.50	-			
1							1		EACH	TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US RTE. 7 @ MONKTON ROAD)	678.15	-			
1							1		EACH	TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US RTE. 7 @ VT. RTE. 22A)	678.15	-			
100							100		LF	WIRED CONDUIT (2" PVC)(SCH 80)	678.23	-			
2							2		EACH	BRACKET ARM	679.47	-			
1							1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
5							5		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620	-			
6							6		EACH	SPECIAL PROVISION (LUMINAIRE, LED)	900.620				
	1						1		EACH	SPECIAL PROVISION (PRECAST CONCRETE PANEL GRADE CROSSING REPAIR)	900.620	-			
	269						269		EACH	SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES)(8'-6" TIES)	900.620	-			
	20						20		EACH	SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES)(9'-0" TIES)	900.620	-			
	55						55		EACH	SPECIAL PROVISION (REMOVAL AND REPLACMENT OF CROSS TIES)(10'-0" TIES)	900.620	-			
	144						144		LF	SPECIAL PROVISION (BAND JOINT @ PRECAST CONCRETE RAILROAD CROSSING)	900.640	-			
	343						343		LF	SPECIAL PROVISION (CONTINUOUS WELDED RAIL)	900.640	-			
207250							207250		LF	SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	2059			
160540							160540		LF	SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	1601			
610							610		LF	SPECIAL PROVISION (DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	10			
5340							5340		LF	SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	45			
	550						550		LF	SPECIAL PROVISION (RAISE, ALIGN, AND SURFACE TRACK)	900.640	-			
	1						1		LS	SPECIAL PROVISION (PRECAST CONCRETE PANEL GRADE CROSSING SURFACE)(AARDOT 851-375L)	900.645	-			
	1						1		LS	SPECIAL PROVISION (RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM)(AARDOT 851-375L)	900.645	-			
	1						1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, RAIL-HIGHWAY CROSSING)(AARDOT 851-367U)	900.645	-			
	1						1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, RAIL-HIGHWAY CROSSING)(AARDOT 851-375L)	900.645	-			
	1						1		LU	SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC)(NABI)	900.650	-			
	1						1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650	-			
	1						1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650	-			
3400							3400		SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675	122			

PROJECT NAME: MIDDLEBURY-FERRISBURGH
PROJECT NUMBER: NH SURF(55)

FILE NAME: pl5v015.dgn
PROJECT LEADER: HARRINGTON
DESIGNED BY: BULLOCK
QUANTITY SHEET 2

PLOT DATE: 13-APR-2016
DRAWN BY: BULLOCK
CHECKED BY: HARRINGTON
SHEET 7 OF 96

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES

| | | |

PROJECT NOTES:

1. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POTHOLE REPAIR, AND CRACK SEALING SHALL BE PERFORMED PRIOR TO APPLICATION OF ANY SPOT LEVELING OR PLACEMENT OF THE WEARING COURSE. ALL CRACKS GREATER THAN 0.10 INCH AND UP TO 1.0 INCH IN WIDTH SHALL BE SEALED USING THE "BLOW AND GO" FLUSH FILL METHOD. ALL COSTS ASSOCIATED WITH THIS WORK WILL BE PAID FOR UNDER ITEM 417.20, BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD. THE PATCHING OF ALL CRACKS GREATER THAN 1.0 INCH AND ALL OTHER PATCHING AND POTHOLE REPAIR SHALL BE COMPLETED USING BITUMINOUS CONCRETE PAVEMENT ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I). AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED TO COVER ALL COSTS ASSOCIATED WITH THIS WORK. ANY MODIFICATIONS TO PRODUCE THE PG 70-28 ASPHALT BINDER ARE RESTRICTED TO SBS POLYMERS.

2. A 25' MICRO-MILL TRANSITION SHALL BE CONSTRUCTED AT THE PROJECT BEGIN AND PROJECT END, AS DIRECTED BY THE ENGINEER. ANY SAWCUTTING AT BUTT JOINTS SHALL BE PAID INCIDENTAL TO ITEM 900.675, SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT). THE CONTRACTOR SHALL USE CAUTION WHEN MICRO-MILLING 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.

3. BRIDGES WITHIN THIS PROJECT ARE LISTED ON THE BRIDGE JOINT DETAIL SHEET. FOLLOWING COMPLETION OF MICRO-MILLING, THE MILLED SURFACE FOR ALL BRIDGES SHALL RECEIVE CRACK SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS, AS DIRECTED BY THE ENGINEER.

4. ITEM 604.40 CHANGING ELEVATIONS OF DROP INLETS, CATCH BASINS, OR MANHOLES IS AN ESTIMATED ITEM AND SHALL BE PERFORMED AT LOCATIONS SHOWN ON THE PLAN SHEETS OR AS DIRECTED BY THE ENGINEER. ALL DI'S SHALL BE RAISED SUCH THAT THE NEW GRATE ELEVATION MATCHES WITH THE SURROUNDING TERRAIN.

5. PRIOR TO THE PLACEMENT OF THE POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT, EMULSIFIED ASPHALT SHALL BE APPLIED TO ALL EXISTING PAVEMENT SURFACES AND ON ALL MICRO-MILLED SURFACES AT A RATE OF 0.080 GAL/SY (+/- 0.01 GAL/SY) OR AS DIRECTED BY THE ENGINEER. EMULSIFIED ASPHALT SHALL BE RS-1H OR CRS-1H PER THE MANUFACTURER'S RECOMMENDATION AND PAID UNDER ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H) OR ITEM 404.65 EMULSIFIED ASPHALT. TACK COAT APPLICATION RATE ON ALL OTHER PAVED SURFACES SHALL BE 0.025 TO 0.040 GAL/SY OF RS-1H OR CRS-1H.

6. PRIOR TO THE PLACEMENT OF SPECIAL PROVISON (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) TO BE USED AT RAIL CROSSING AARDOT 851-375L IN FERRISBURGH AT MM 0.81, EMULSIFIED ASPHALT SHALL BE APPLIED TO EACH LIFT OF PAVEMENT. PAYMENT FOR THE EMULSIFIED ASPHALT AT THIS LOCATION WILL BE CONSIDERED INCIDENTAL TO SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY). EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 0.025 TO 0.040 GAL/SY.

7. ALL RESIDENTIAL AND COMMERCIAL DRIVES AND GRAVEL PULLOUTS SHALL RECEIVE A FOUR FOOT PAVED APRON, AND ALL FIELD DRIVES SHALL RECEIVE A TWO FOOT PAVED APRON BITUMINUOUS CONCRETE PAVEMENT AT PUBLIC AND/OR PERMITTED DRIVES WHICH IS INSTALLED BY HAND SHALL BE PAID FOR UNDER ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES). BITUMINOUS CONCRETE MATERIAL PLACED BY MECHANICAL METHODS AT THESE LOCATIONS IS EXCLUDED. ALL OTHER BITUMINOUS MATERIALS PLACED WITHIN THE PROJECT LIMITS, WHETHER BY HAND OR MECHANICAL METHODS, SHALL BE PAID UNDER THE APPROPRIATE CONTRACT PAY ITEM FOR BITUMINOUS CONCRETE PAVEMENT.

8. THERE ARE WEIGH-IN-MOTION SENSORS IN THE PAVEMENT AT MM 5.100 NORTHBOUND AND SOUTHBOUND IN NEW HAVEN THAT MAY BE IMPACTED BY CONSTRUCTION ACTIVITIES. INSTALLATION OF NEW SENSORS WILL BE PERFORMED BY OTHERS FOLLOWING COMPLETION OF THE PROJECT. CONTACT CARL PARTON IN THE TRAFFIC RESEARCH DIVISION AT 802-828-2694 WITH ANY QUESTIONS. THERE IS ALSO AN SHRP SITE AND RWIS SENSOR AT MM 5.250 NORTHBOUND IN NEW HAVEN THAT HAVE BOTH BEEN DECOMMISSIONED.

9. ALL TOWN HIGHWAY APPROACHES AND PULLOUTS MAY BE PAVED WITH ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT, TYPE IV, 406.27 MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT, TYPE IV, OR 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS AT THE DISCRETION OF THE ENGINEER. THIS MATERIAL SHALL BE FROM AN APPROVED SOURCE WITH EITHER A PREVIOUSLY APPROVED MIX DESIGN OR A MIX DESIGN APPROVAL OBTAINED FOR THE INTENDED PRODUCT. THE SUBSTITUTION OF ITEM 406.25, 406.27, OR 490.30 WILL BE PAID AT THE CONTRACT UNIT PRICE OF THE LOW BID PAVEMENT ALTERNATE.

10. ALL LANE DELINEATION SHALL BE MAINTAINED DURING CONSTRUCTION BY THE USE OF LINE STRIPING TARGETS OR TEMPORARY PAINT AND WILL BE PAID FOR UNDER ITEM 646.602, 646.612, 646.642, 646.652, AND 646.76. REMOVAL OF EXISTING PAVEMENT MARKINGS IN AREAS OF MICRO-MILLING WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675 SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVMENT).

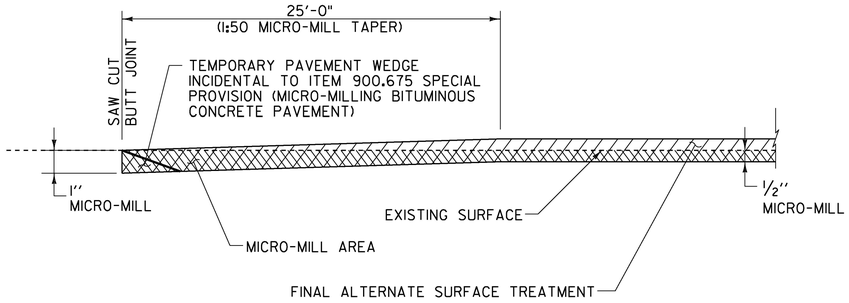
11. ALL RUMBLE STRIPS SHALL RECEIVE TWO APPLICATIONS OF ITEM 900.683 SPECIAL PROVISION (FOG SEAL SURFACE TREATMENT) AT A RATE OF 0.15 GAL/SY WITH A TOLERANCE OF +/- 0.05 OR AS DIRECTED BY THE ENGINEER.

12. ITEM 646.76 LINE STRIPING TARGETS SHALL BE PLACED AS OUTLINED IN THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OR AS INDICATED ON THE PLAN SHEETS.

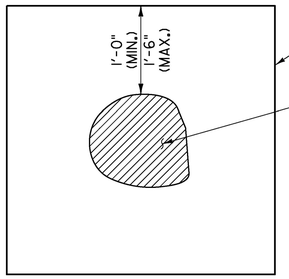
13. IF IT IS DETERMINED BY THE ENGINEER IN AREAS ALONG THE BASE OF THE GUARDRAIL THAT WINTER SAND AND OTHER DEBRIS HAS ACCUMULATED SUFFICIENTLY TO AFFECT PROPER CRACK SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS, THIS MATERIAL SHALL BE REMOVED PRIOR TO CRACK SEALING, PATCHING, AND POTHOLE 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.

14. COORDINATION WILL BE REQUIRED WITH THE PRIME CONTRACTOR FOR THE FERRISBURGH NHG SGNL(42) PROJECT TO ENSURE CURBING WORK IS COMPLETED WITHIN THAT PROJECT BEFORE MIDDLEBURY-FERRISBURGH NH SURF(55) FINAL ALTERNATE SURFACE TREATMENT IS APPLIED.

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 07-APR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
PROJECT NOTES	SHEET 9 OF 96



MICRO-MILL DETAIL AT BEGIN/END PROJECT ON US ROUTE 7, LIMIT OF CONSTRUCTION ON VT. ROUTE 22A & FERRISBURGH STATE HIGHWAY

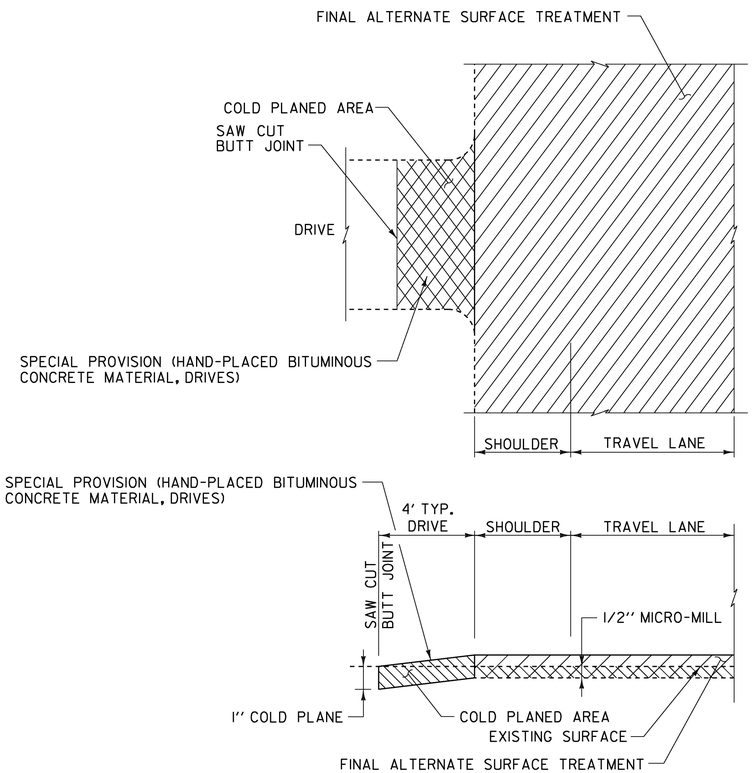


TYPICAL - POT HOLE REPAIR

NOT TO SCALE

NOTES:

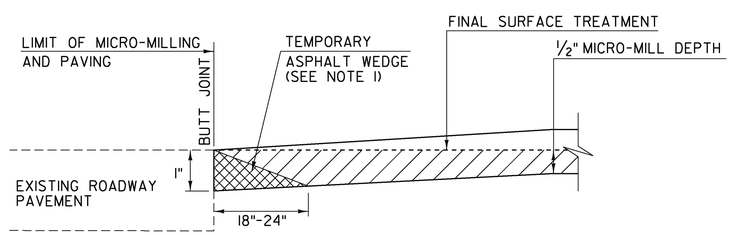
1. EMULSIFIED ASPHALT SHALL BE APPLIED AT ALL PATCH INTERFACES AT A RATE OF 0.25 - 0.50 GAL/SY. EMULSIFIED ASPHALT SHALL MEET THE REQUIREMENTS OF SECTION 404 AND WILL BE CONSIDERED INCIDENTAL TO SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SURFACE PREPARATION, TYPE I).
2. ALL WORK ASSOCIATED WITH POT HOLE REPAIR WILL BE PAID UNDER ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I).



COLD PLANE DETAILS AT DRIVES

NOTES:

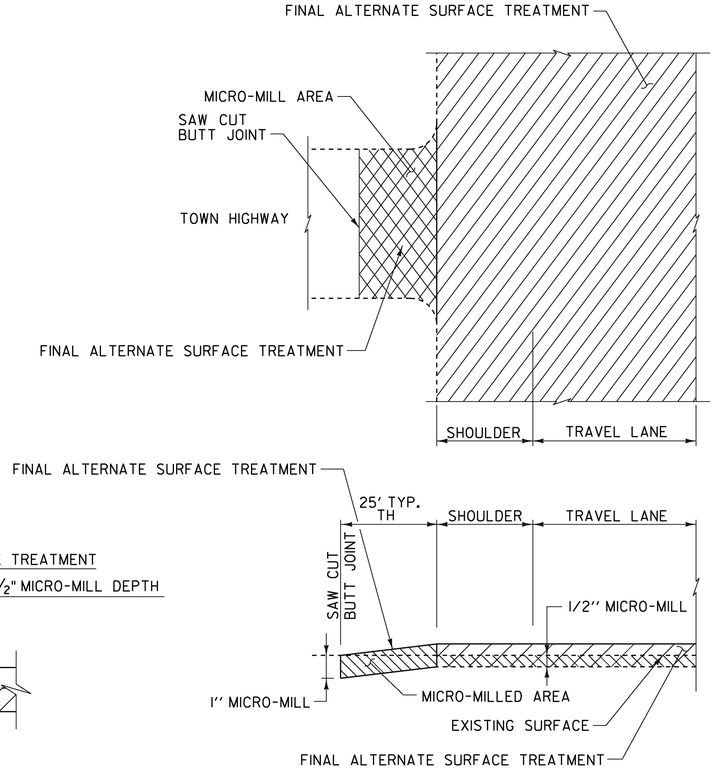
1. COLD PLANING FOR DRIVES SHALL MEET THE REQUIREMENTS OF SECTION 210 AS APPLICABLE.
2. PAYMENT FOR COLD PLANED AREA REQUIRED FOR DRIVES SHALL BE CONSIDERED INCIDENTAL TO SPECIAL PROVISION (HAND-PLACED CONCRETE MATERIAL, DRIVES).



ASPHALT WEDGE DETAIL

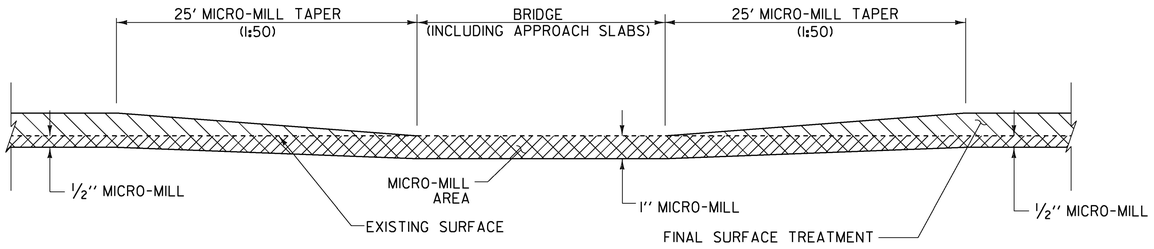
NOTE:

1. TEMPORARY ASPHALT WEDGE WILL BE REMOVED PRIOR TO PAVING AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675 - SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT).



MICRO-MILL DETAILS AT TOWN HIGHWAYS

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
COLD PLANE DETAIL SHEET 1	SHEET 10 OF 96



BRIDGE MICRO-MILLING DETAIL

BRIDGE #129 MM 1.097 NEW HAVEN
BRIDGE #137 MM 2.595 FERRISBURGH
BRIDGE #139 MM 6.219 FERRISBURGH

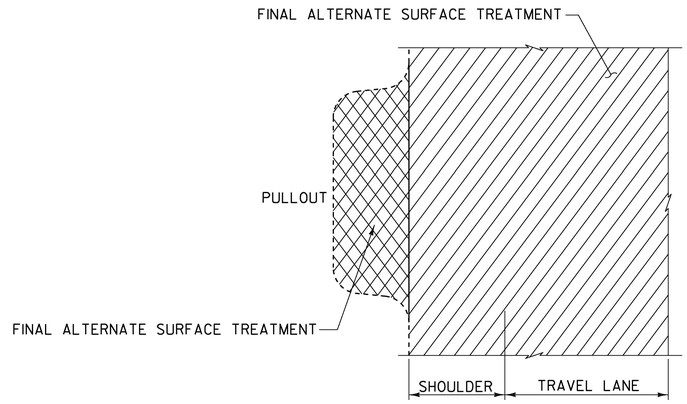
NOTES:

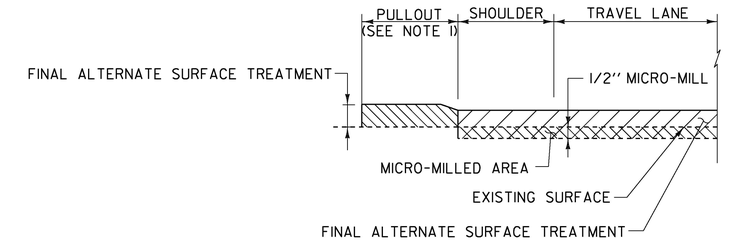
1. REFER TO BRIDGE JOINT DETAIL SHEET SD-516.10 FOR BRIDGE JOINT APPLICATION. ALL NEW BRIDGE JOINTS WILL BE PAID FOR UNDER ITEM 516.10, "BRIDGE EXPANSION JOINT, ASPHALTIC PLUG."

2. 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 NO COST TO THE STATE.

3. 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 OR CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REMOVED BY THE CONTRACTOR AT NO COST TO THE STATE.

4. THE CONTRACTOR SHALL USE CAUTION WHEN MICRO-MILLING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE DECK OR MEMBRANE AS A RESULT OF THESE OPERATIONS THE ENGINEER SHALL CONTACT THE VTRANS CONSTRUCTION STRUCTURES ENGINEER TO PROVIDE AN ASSESSMENT OF THE DAMAGE AND RECOMMEND ANY NECESSARY REPAIRS. THE CONSTRUCTION STRUCTURES ENGINEER WILL ALSO DETERMINE IF THE DAMAGE WAS AVOIDABLE. IF THE CONTRACTOR IS DETERMINED BY THE ENGINEER TO BE AT FAULT FOR THE DAMAGE, THE RECOMMENDED REPAIRS SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE STATE.



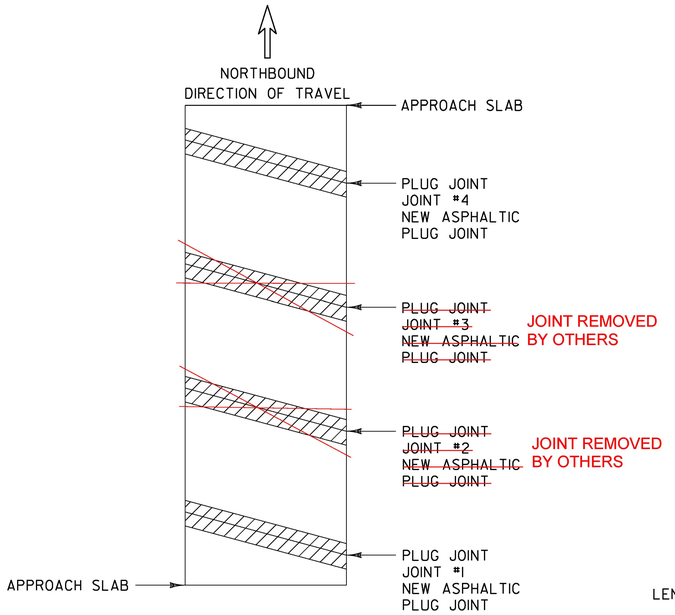


MICRO-MILL DETAILS AT PULLOUTS

NOTE:

1. PAVE 4'-0" UNLESS OTHERWISE NOTED ON PLANS.

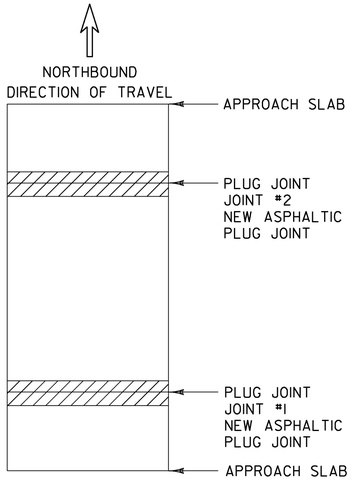
PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: p15v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
COLD PLANE DETAIL SHEET 2	SHEET 11 OF 96



BRIDGE #129

MM 1.097 IN NEW HAVEN
LENGTH OF ASPHALTIC PLUG JOINTS:
JOINT #1 - ~~37'~~ 36.0'
~~JOINT #2 - 37'~~
~~JOINT #3 - 37'~~
JOINT #4 -37' 36.5'

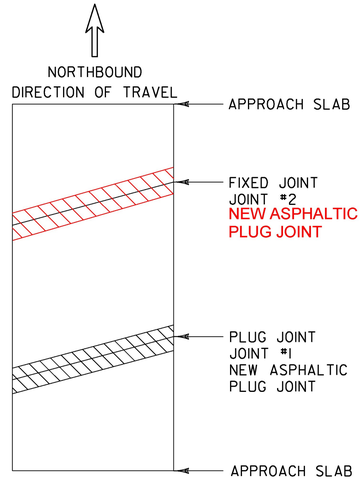
TOTAL = ~~148'~~ 72.5'



BRIDGE #137

MM 2.595 IN FERRISBURGH
LENGTH OF ASPHALTIC PLUG JOINTS:
JOINT #1 - ~~29.5'~~ 30.5'
JOINT #2 - ~~29.0'~~ 30.5'

TOTAL = ~~58.5'~~ 61.0'



BRIDGE #139

MM 6.219 IN FERRISBURGH
LENGTH OF ASPHALTIC PLUG JOINTS:
JOINT #1 - ~~45'~~ 43.67'
JOINT #2 - 44'

TOTAL = ~~45'~~ 87.67'

NOTE:

1. BRIDGES WITHIN THE PROJECT LIMITS ARE:

NEW HAVEN:
BRIDGE NUMBER 130, MM 1.295 - 72" CGMPP CATTLE PASS (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)
BRIDGE NUMBER 130A, MM 2.367 - 72" CGMPP CATTLE PASS (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)
BRIDGE NUMBER 131, MM 5.132 - CONCRETE BOX (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)
BRIDGE NUMBER 132, MM 5.430 - TWIN CGMPP ARCHES (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)
BRIDGE NUMBER 133, MM 6.532 - 120" CGMPP (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)

FERRISBURGH:
BRIDGE NUMBER 135, MM 0.291 - 54" R.C. CS (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)
BRIDGE NUMBER 136, MM 1.661 - R.C. BOX CS - CATTLE PASS (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)
BRIDGE NUMBER 138, MM 4.289 - 48" ACCGMP (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)
BRIDGE NUMBER 138A, MM 5.441 - 48" PCCSP (OVERLAY WITH FINAL ALTERNATE SURFACE TREATMENT)

LEGEND

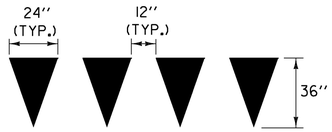
EXISTING BRIDGE JOINTS SHALL BE REPAIRED WITH ASPHALTIC PLUG JOINT

NOTE:

FOR ALL OTHER BRIDGE JOINTS, SEE PLAN SHEET.

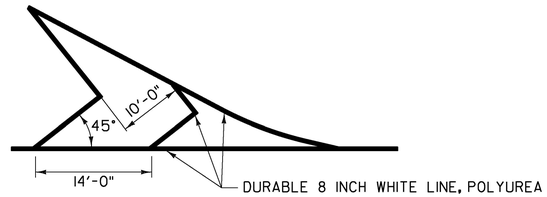
NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
BRIDGE JOINT DETAIL SHEET	SHEET 12 OF 96

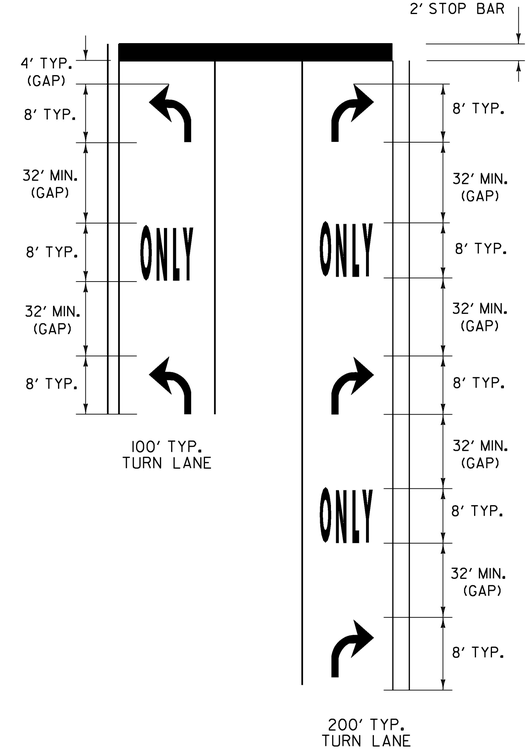


YIELD LINE DETAILS

EACH TRIANGLE WILL BE PAID FOR AS EACH DURABLE LETTER OR SYMBOL.



GORE MARKING DETAIL



TURN ARROWS SHALL BE PLACED AT THE BEGIN AND END OF THE LEFT OR RIGHT TURN LANE.

IF LANE LENGTH IS LESS THAN 100', TURN ARROWS SHOULD BE PLACED AT THE BEGINNING AND END OF THE LEFT OR RIGHT TURN LANE.

THE "ONLY" WORD MARKINGS SHALL BE USED TO SUPPLEMENT LANE-USE ARROW MARKINGS FOR TURN LANES 100' OR LONGER.

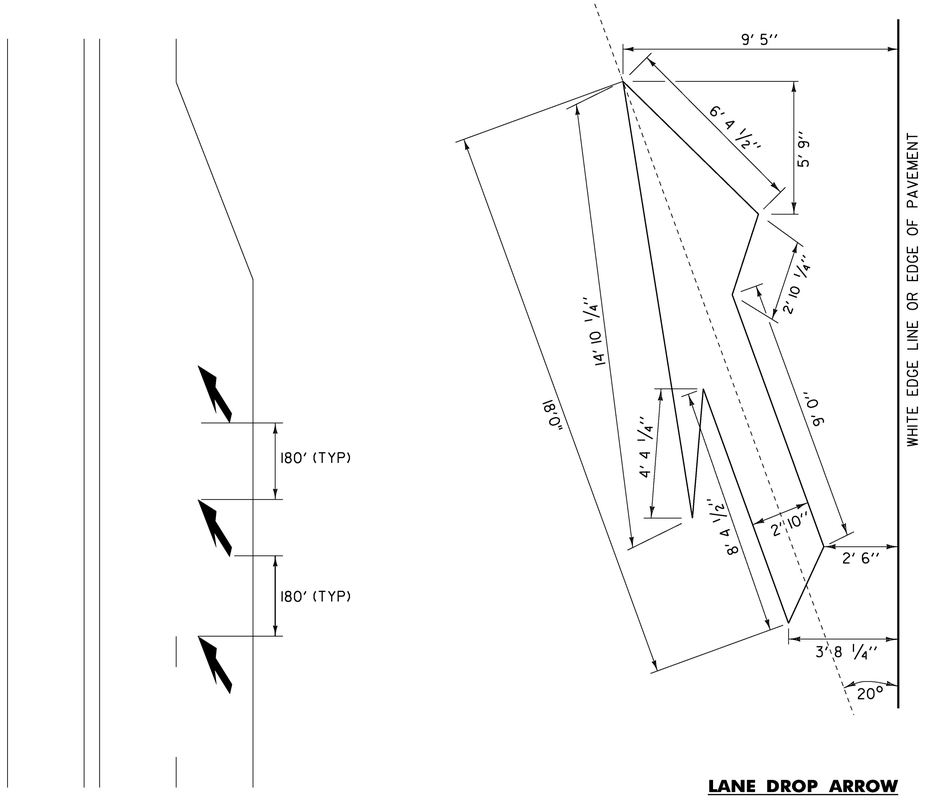
MORE ARROWS AND ONLYS ARE OPTIONAL WHEN SPACE PERMITS. ARROW MARKINGS START AT THE BEGINNING OF THE SOLID LANE LINE.

STOP BARS ARE INSTALLED ONLY WHERE A STOP SIGN OR TRAFFIC SIGNAL IS LOCATED. STOP LETTERS ARE OPTIONAL AT STOP SIGN CONTROLLED APPROACHES. IF INSTALLED THEY SHALL BE FOUR FEET FROM THE STOP BAR. STOP LETTERS SHALL NOT BE USED AT SIGNALIZED APPROACHES.

THE LONGITUDINAL SPACE BETWEEN WORD OR SYMBOL MESSAGE MARKINGS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTERS FOR LOW SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITIONS.

EXCLUSIVE TURN LANES (LEFT OR RIGHT) LANE LINES SHALL BE SOLID AND EXTEND BACK FROM THE STOP LINE TO THE POINT OF FULL LANE WIDTH OF THE TURN LANE. THREE FOOT DOTS WITH A NINE FOOT SPACE SHOULD BE EXTENDED THE FULL LENGTH OF THE LANE TAPER.

TYPICAL MARKINGS FOR TURN LANES

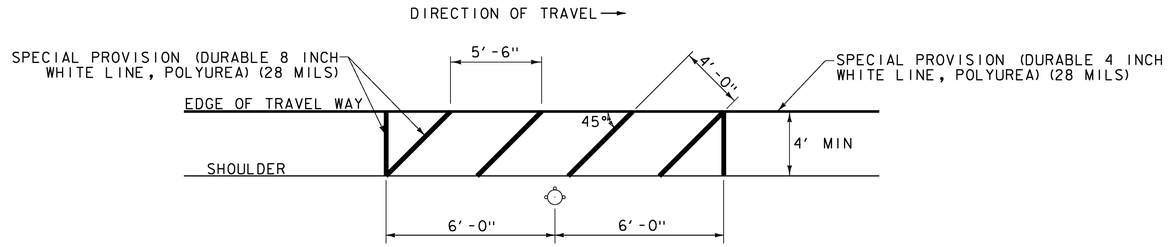


LANE DROP ARROW

NOTES:
1. THE TIP OF THE FIRST LANE REDUCTION ARROW SHALL BE PLACED OPPOSITE THE LAST DASH.
2. THREE ARROWS ARE TO BE PLACED EVERY 180' (MAX) BETWEEN THE LAST DASH AND BEGINNING OF LANE TAPER.
3. FOR LEFT LANE USE MIRROR IMAGE.

LANE REDUCTION TRANSITION MARKINGS

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: p15v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
PAVEMENT MARKING DETAIL SHEET 1	SHEET 13 OF 96



FIRE HYDRANT PAVEMENT MARKING DETAIL

US RTE 7 FERRISBURGH STA. 182+70 RT.

NOTE:

THE CONTRACTOR SHALL ADJUST THE PLACEMENT OF THE FIRE HYDRANT PAVEMENT MARKINGS TO MEET THE EXISTING SITE CONSTRAINTS AS DIRECTED BY THE ENGINEER.

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
PAVEMENT MARKING DETAIL SHEET 2	SHEET 14 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

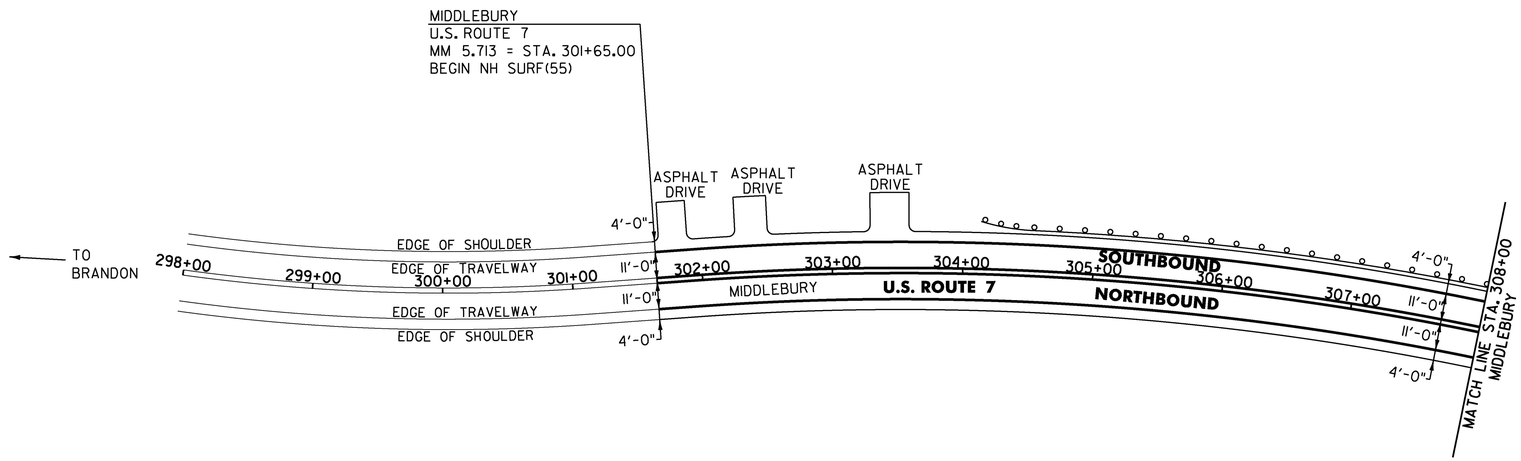
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

MIDDLEBURY:
STA. 301+65 - STA. 308+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

MIDDLEBURY:	LT	℄	RT
STA. 301+65 - STA. 308+00.0	S	-	S



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 1	SHEET 15 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

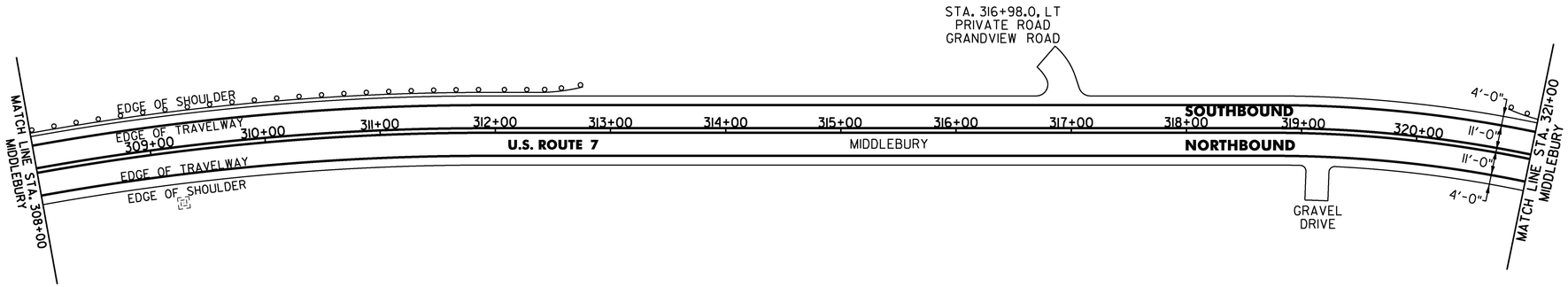
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

MIDDLEBURY:
STA. 308+00.0 - STA. 321+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

MIDDLEBURY:	LT	℄	RT
STA. 308+00.0 - STA. 321+00.0	S	-	S



NOT TO SCALE

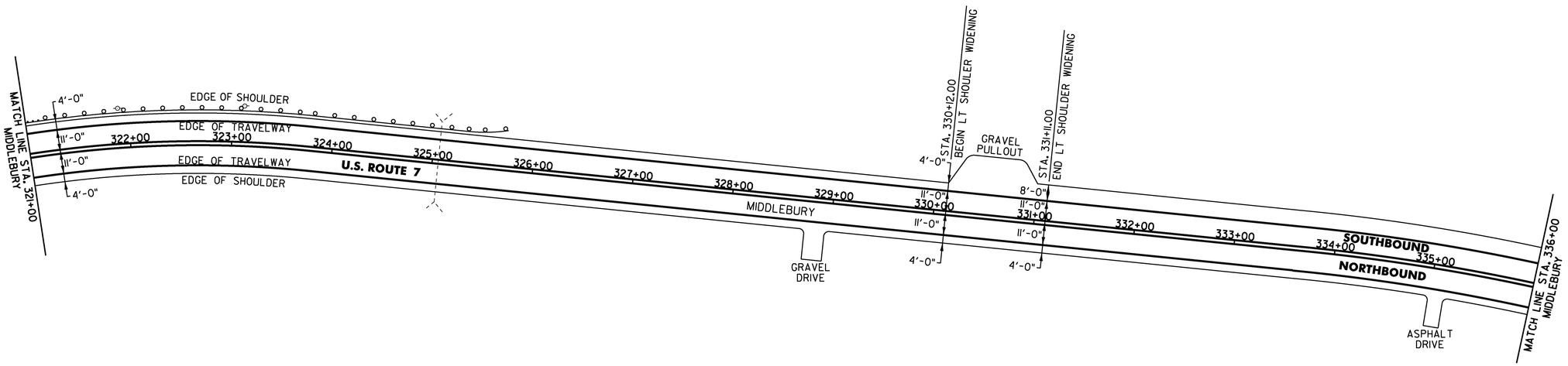
PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 2	SHEET 16 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
MIDDLEBURY:
STA. 321+00.0 - STA. 336+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
MIDDLEBURY:

	LT	℄	RT
STA. 321+00.0 - STA. 336+00.0	S	-	S



NOTE:

1. PAVE 4' APRON AT GRAVEL PULLOUT.

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 3	SHEET 17 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
MIDDLEBURY:
STA. 336+00.0 - STA. 351+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
MIDDLEBURY:

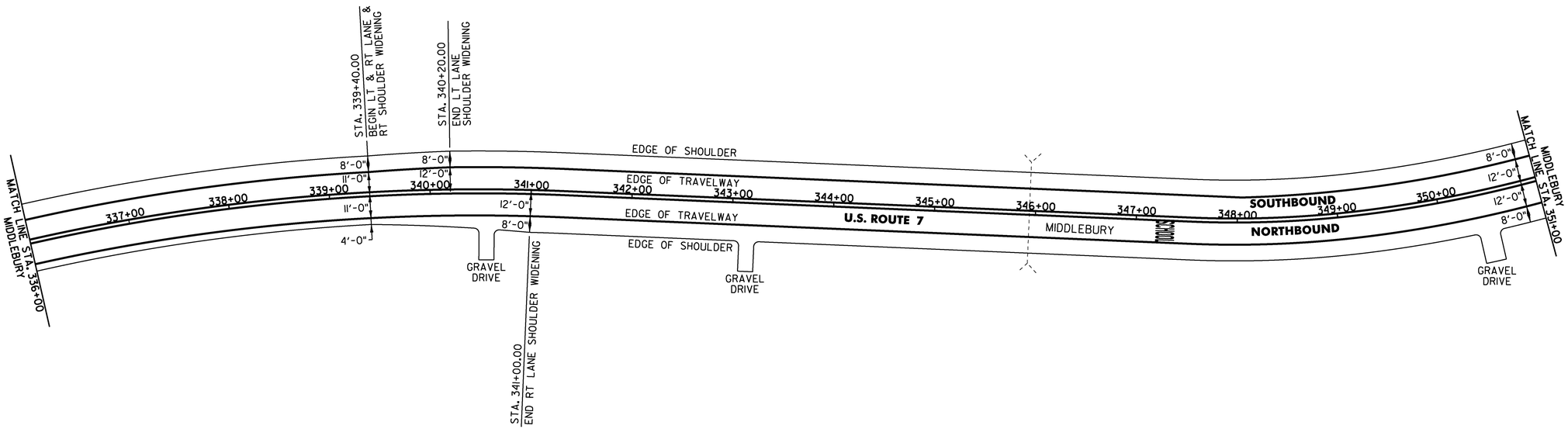
	LT	℄	RT
STA. 336+00.0 - STA. 351+00.0	S	-	S

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
MIDDLEBURY:
STA. 347+21.00 RT, "SCHOOL" (6 EA)

Not installed →

MILLED RUMBLE STRIPS (CENTERLINE)
MIDDLEBURY:
~~STA. 341+09.00 - STA. 348+48.00~~
~~STA. 350+59.00~~ - STA. 351+00.00
STA 350+60

The rumble strips were installed incorrectly and will not be paid for. The Resident Engineer informed L&D before they started on 9/1/16 to make sure they were installing the rumble per VTrans standard, L&D was told to test their truck before starting the work. The rumbles where installed incorrectly on both 9/1 and 9/2. No Payment for the 3,025 LF



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 4	SHEET 18 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
MIDDLEBURY:
STA. 351+00.0 - STA. 367+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

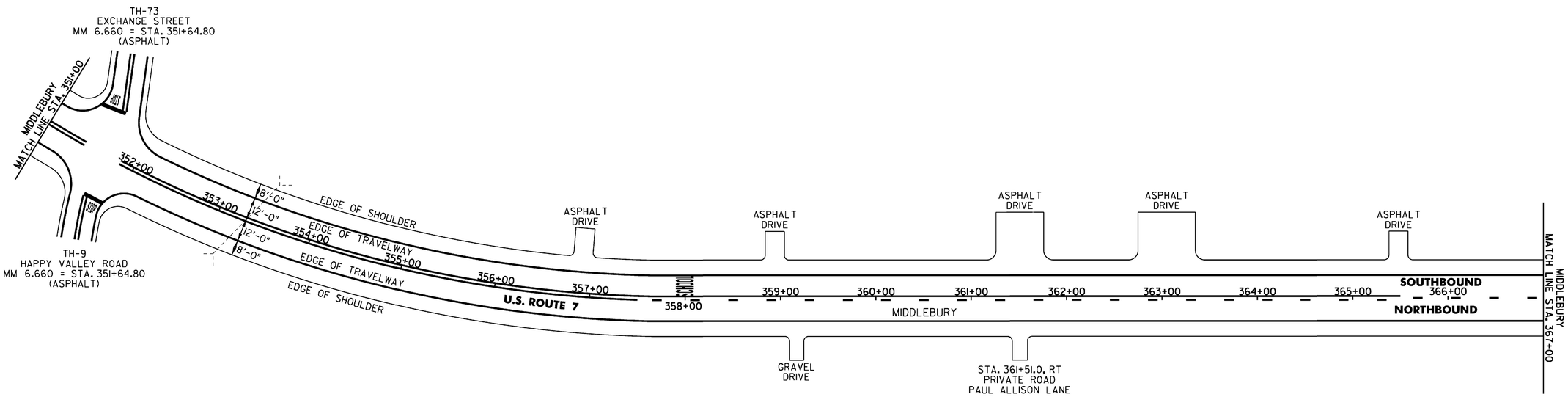
MIDDLEBURY:	LT	℄	RT
STA. 351+64.80 DOUBLE SOLID LT, TH-73			
STA. 351+64.80 DOUBLE SOLID RT, TH-9			
STA. 351+00.0 - STA. 357+50.0	S	-	S
STA. 357+50.0 - STA. 365+50.0	S	-	D
STA. 365+50.0 - STA. 367+00.0	-	D	-

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC
MIDDLEBURY:
STA. 351+64.80 LT, TH-73
STA. 351+64.80 RT, TH-9

MILLED RUMBLE STRIPS (CENTERLINE)
MIDDLEBURY:
STA. 351+00.00 - STA. ~~351+44.00~~ 351+70
352+25 STA. ~~351+84.00~~ - STA. ~~359+04.00~~ 361+40
365+50 STA. ~~365+38.00~~ - STA. 367+00.00

See Rumble Strip non-payment note on Page #18

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
MIDDLEBURY:
STA. 351+64.80 LT, TH-73, "STOP" (4 EA)
STA. 351+64.80 RT, TH-9, "STOP" (4 EA)
STA. 358+00.00 LT, "SCHOOL" (6 EA)



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 5	SHEET 19 OF 96

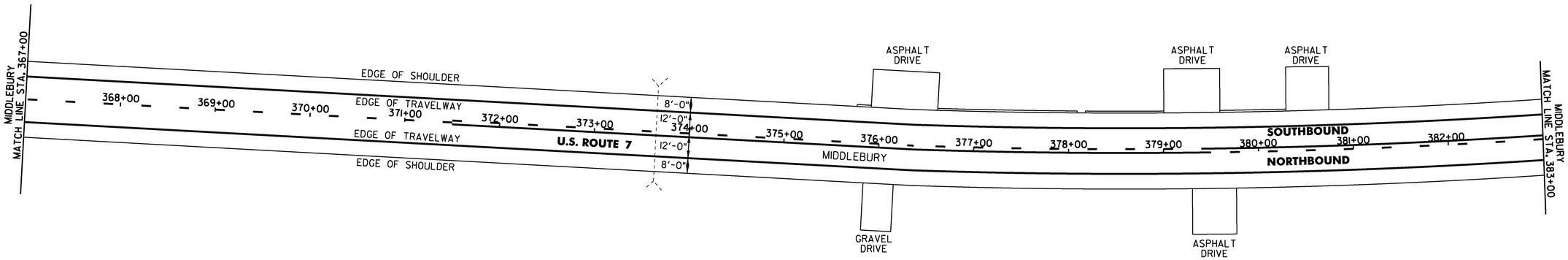
TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
MIDDLEBURY:
STA. 367+00.0 - STA. 383+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

MIDDLEBURY:	LT	℄	RT
STA. 367+00.0 - STA. 371+50.0	-	D	-
STA. 371+50.0 - STA. 379+50.0	D	-	S
STA. 379+50.0 - STA. 383+00.0	S	-	D

MILLED RUMBLE STRIPS (CENTERLINE)
MIDDLEBURY:
STA. 367+00.00 - STA. ~~374+88.00~~ 377+25
382+25 STA. ~~382+27.00~~ - STA. 383+00.00

See Rumble Strip non-payment note on Page #18



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 6	SHEET 20 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

MIDDLEBURY:
STA. 383+00.0 - STA. 394+89.12 LT & RT

NEW HAVEN:
STA. 0+00.0 - STA. 4+00.0 LT & RT

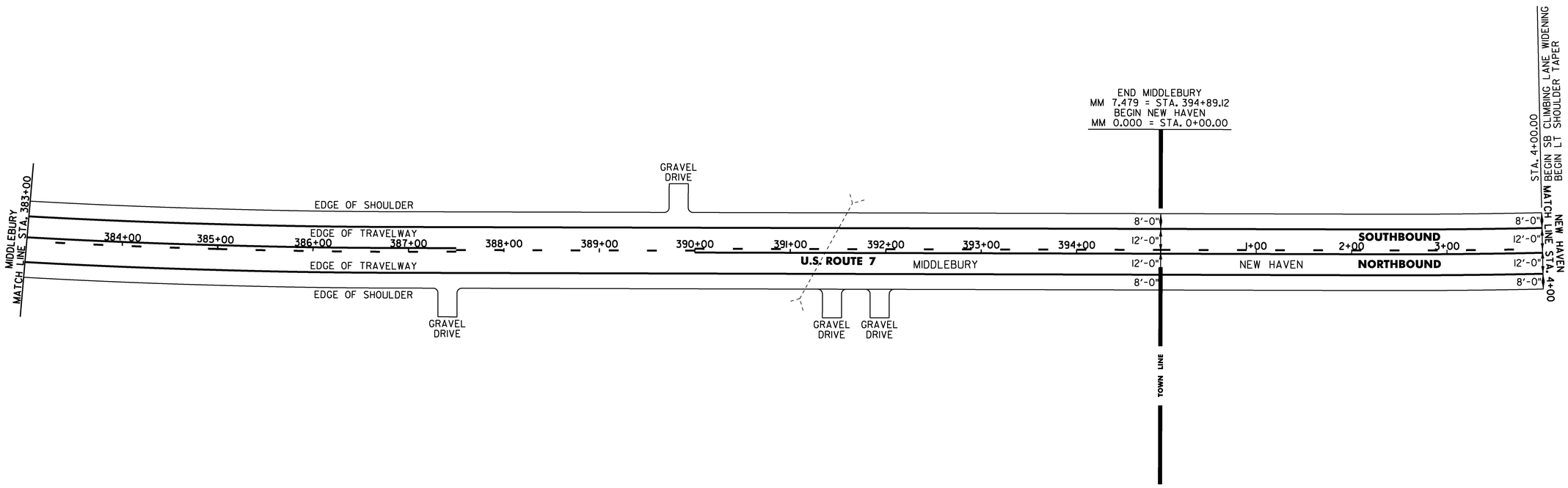
TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

MIDDLEBURY:	LT	℄	RT
STA. 383+00.0 - STA. 387+50.0	S	-	D
STA. 387+50.0 - STA. 390+00.0	-	D	-
STA. 390+00.0 - STA. 394+89.12	D	-	S
NEW HAVEN:			
STA. 0+00.0 - STA. 4+00.0	D	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
MIDDLEBURY:
STA. 383+00.00 - STA. ~~391+78.00~~ 390+50
393+80 STA. ~~394+42.00~~ - STA. 394+89.12
STA 390+50 - STA 391+00
NEW HAVEN:
STA. 0+00.00 - STA. 4+00.00

See Rumble Strip non-payment note on Page #18



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 7	SHEET 21 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 4+00.0 - STA. 20+00.0 LT & RT
STA. 16+50.0 - STA. 20+00.0 DASHED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

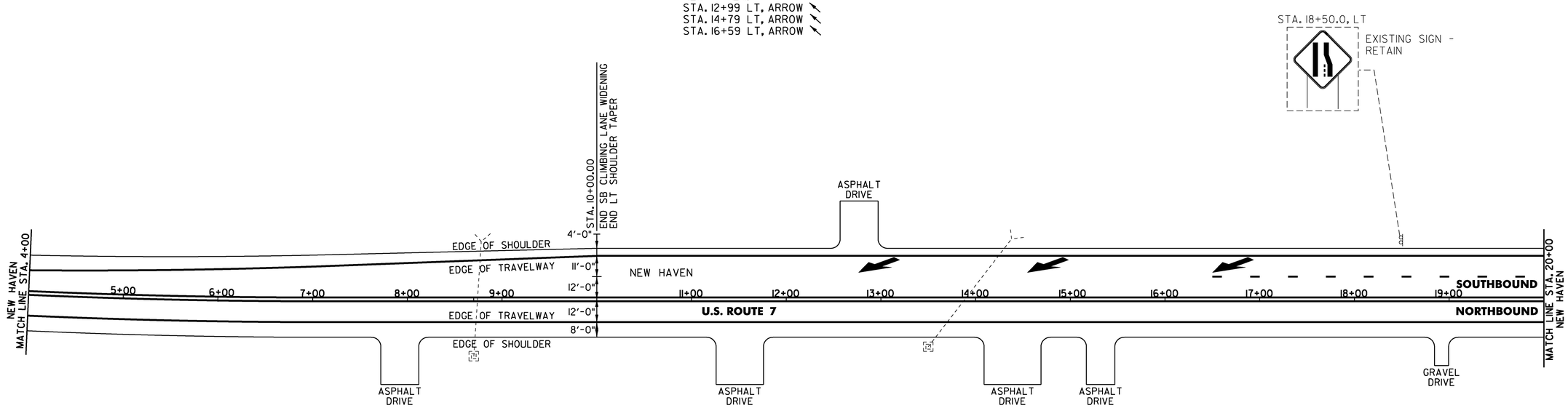
NEW HAVEN:

	LT	C	RT
STA. 4+00.0 - STA. 20+00.0	S	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 4+00.00 - STA. 20+00.00

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

NEW HAVEN:
STA. 12+99 LT, ARROW
STA. 14+79 LT, ARROW
STA. 16+59 LT, ARROW



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 8	SHEET 22 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 20+00.0 - STA. 35+00.0 LT & RT
STA. 20+00.0 - STA. 35+00.0 DASHED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 20+00.0 - STA. 26+66.0	S	-	S
STA. 32+74.0 - STA. 35+00.0	S	-	S

STA. 29+19.84 DOUBLE SOLID LT, TH-32
STA. 29+35.68 DOUBLE SOLID RT, TH-2
STA. 26+66 - STA. 29+04 DOUBLE SOLID MEDIAN LT/RT
STA. 29+56 - STA. 32+74 DOUBLE SOLID MEDIAN LT/RT

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

NEW HAVEN:
~~STA. 29+19.84 LT, TH-32~~
STA. 29+35.68 RT, TH-2

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

NEW HAVEN:
STA. 26+66 C/L - STA. 29+04 C/L (HATCHED MEDIAN)
STA. 29+56 C/L - STA. 32+74 C/L (HATCHED MEDIAN)

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYBMOL, THERMOPLASTIC

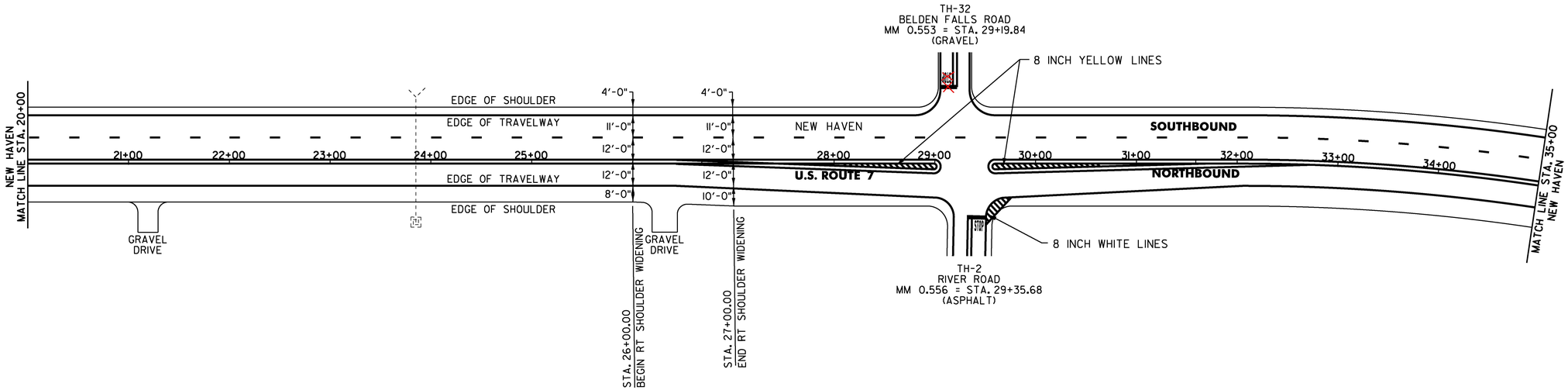
NEW HAVEN:
~~STA. 29+19.84 LT, TH-32, "STOP" (4 EA)~~
STA. 29+35.68 RT, TH-2, "STOP" (4 EA)

TEMPORARY 8 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)

NEW HAVEN:
STA. 29+30 RT. - STA. 29+80 RT. (TH 2 HATCHED SHOULDER)

MILLED RUMBLE STRIPS (CENTERLINE)

NEW HAVEN:
STA. 20+00.00 - STA. ~~29+00.00~~ 28+50
29+62 ~~STA. 29+56.00~~ - STA. 35+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 9	SHEET 23 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 35+00.0 - STA. 51+00.0 LT & RT
STA. 35+00.0 - STA. 39+75.0 DASHED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 35+00.0 - STA. 47+00.0	S	-	S
STA. 47+00.0 - STA. 51+00.0	D	-	S

STA. 38+43.84 DOUBLE SOLID LT, TH-5

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

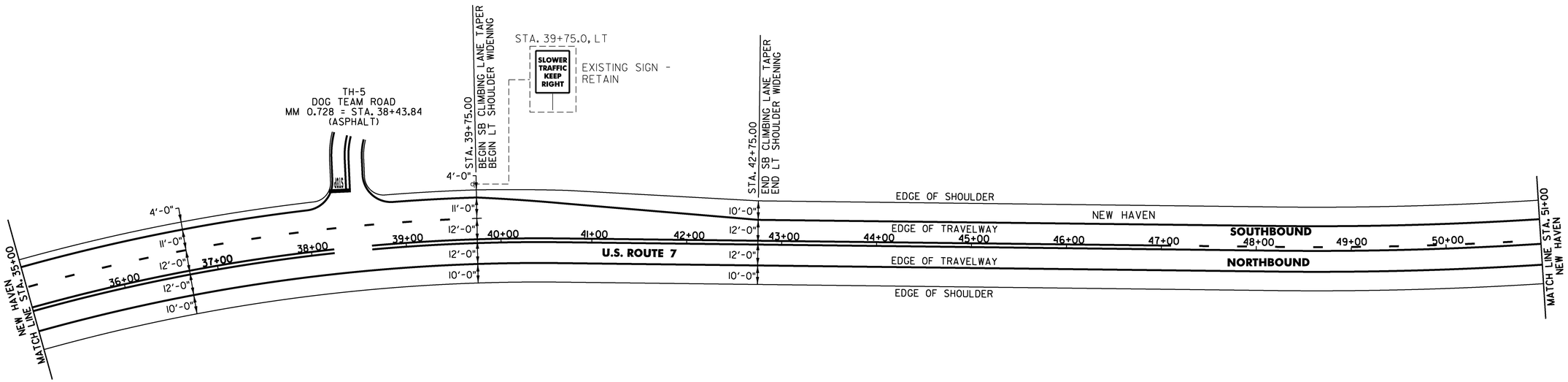
NEW HAVEN:
STA. 38+43.84 LT, TH-5

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

NEW HAVEN:
STA. 38+43.84 LT, TH-5, "STOP" (4 EA)

MILLED RUMBLE STRIPS (CENTERLINE)

NEW HAVEN:
STA. 35+00.00 - STA. ~~38+24.00~~ 38+25
38+84 STA. ~~38+64.00~~ - STA. 51+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

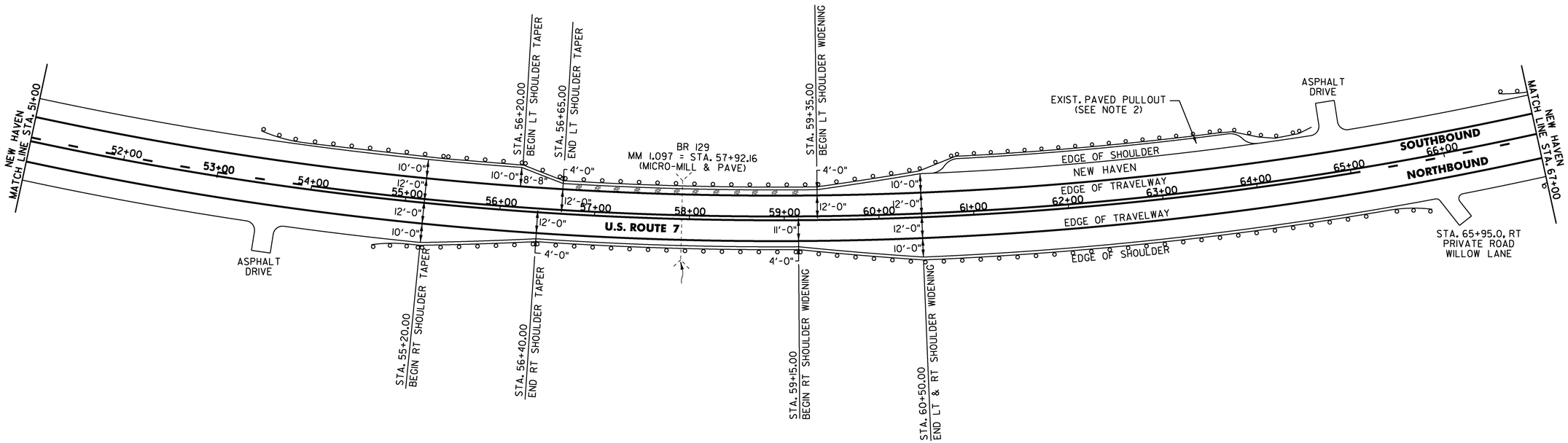
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 10	SHEET 24 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 51+00.0 - STA. 67+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 51+00.0 - STA. 54+00.0	D	-	S
STA. 54+00.0 - STA. 65+00.0	S	-	S
STA. 65+00.0 - STA. 67+00.0	S	-	D

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 51+00.00 - STA. ~~67+00.00~~ 56+00
STA 59+55 - STA 67+00



NOTES:

1. THERE ARE 12 EXISTING DRAINAGE STRUCTURES LOCATED IN THE SOUTHBOUND SHOULDER ON BR 129. HEIGHT ADJUSTMENTS OR REHABILITATIONS WILL NOT BE REQUIRED.

2. PAVE FULL WIDTH OF PULLOUT.

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 11	SHEET 25 OF 96

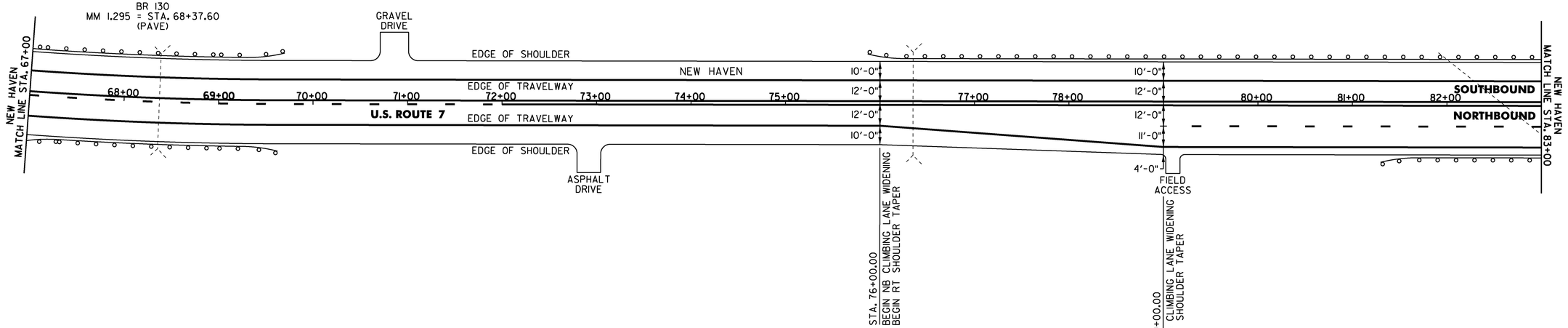
TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 67+00.0 - STA. 83+00.0 LT & RT
STA. 79+00.0 - STA. 83+00.0 DASHED RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 67+00.0 - STA. 72+00.0	S	-	D
STA. 72+00.0 - STA. 83+00.0	S	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 67+00.00 - STA. 83+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 12	SHEET 26 OF 96

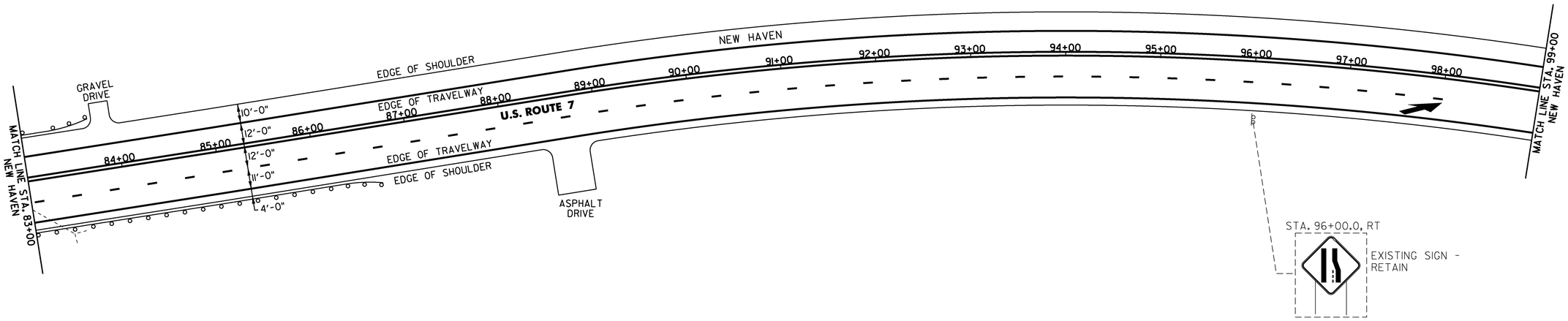
TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 83+00.0 - STA. 99+00.0 LT & RT
STA. 83+00.0 - STA. 98+00.0 DASHED RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
NEW HAVEN:

	LT	℄	RT
STA. 83+00.0 - STA. 99+00.0	S	-	S

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
NEW HAVEN:
STA. 97+91.0 RT, ARROW

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 83+00.00 - STA. 99+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 13	SHEET 27 OF 96

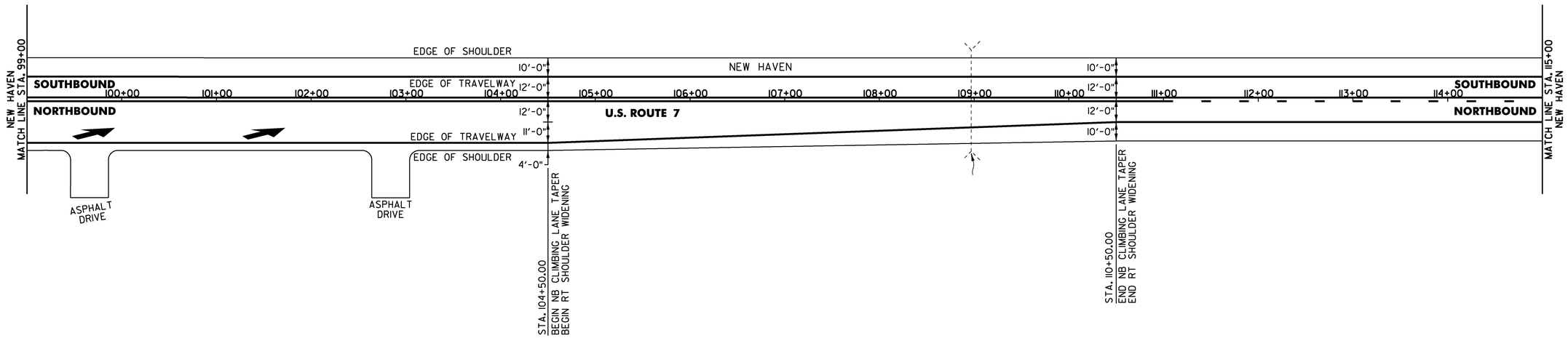
TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 99+00.0 - STA. 115+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 99+00.0 - STA. 111+00.0	S	-	S
STA. 111+00.0 - STA. 115+00.0	S	-	D

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
NEW HAVEN:
STA. 99+71.0 RT, ARROW ↖
STA. 101+51.0 RT, ARROW ↖

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 99+00.00 - STA. 115+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

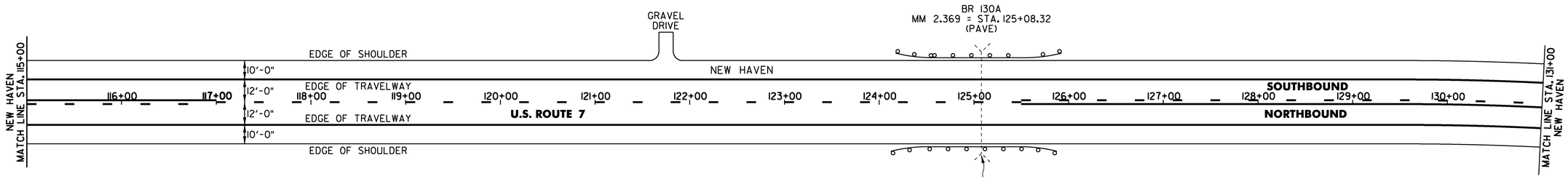
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 14	SHEET 28 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 115+00.0 - STA. 131+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 115+00.0 - STA. 117+00	S	-	D
STA. 117+00.0 - STA. 125+50.0	-	D	-
STA. 125+50.0 - STA. 131+00.0	D	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 115+00.00 - STA. 131+00.00



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PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 15	SHEET 29 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 131+00.0 - STA. 147+00.0 LT & RT

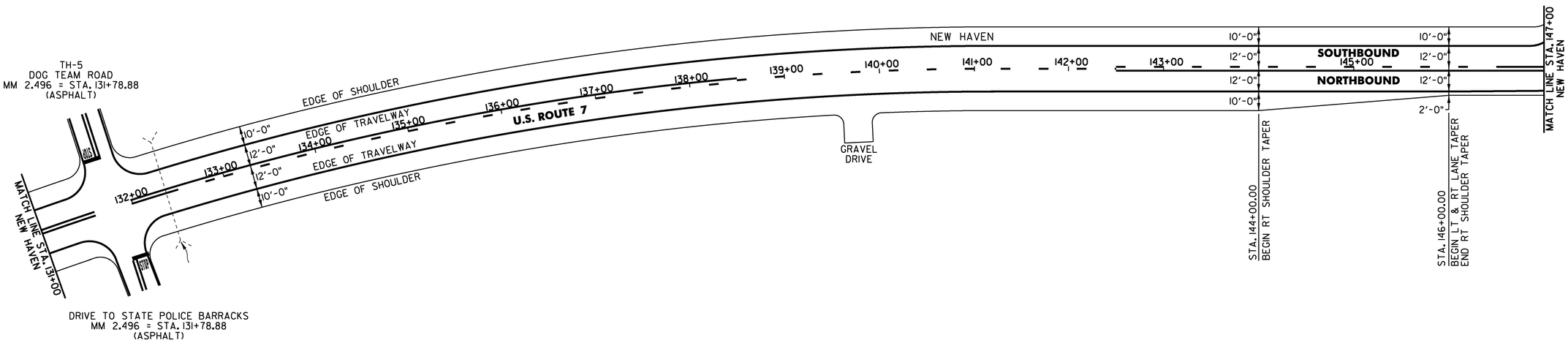
TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC
NEW HAVEN:
STA. 131+78.88 LT. TH-5
STA. 131+78.88 RT (State Police)

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
NEW HAVEN:
STA. 131+78.88 LT, TH-5, "STOP" (4 EA)
STA. 131+78.88 RT, "STOP" (4 EA)

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 131+78.88 DOUBLE SOLID LT, TH-5			
STA. 131+78.88 DOUBLE SOLID RT			
STA. 131+00.0 - STA. 132+50.0	S	-	S
STA. 132+50.0 - STA. 138+50.0	S	-	D
STA. 138+50.0 - STA. 142+50.0	-	D	-
STA. 142+50.0 - STA. 146+50.0	D	-	S
STA. 146+50.0 - STA. 147+00.0	S	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 131+00.00 - STA. ~~131+59.00~~ 131+38
132+25 STA. ~~131+99.00~~ - STA. ~~147+00.00~~ 146+50



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 16	SHEET 30 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 147+00.0 - STA. 163+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 147+36.48 DOUBLE SOLID LT, TH-26			
STA. 147+00.0 - STA. 153+50.0	S	-	S
STA. 153+50.0 - STA. 160+50.0	D	-	S
STA. 160+50.0 - STA. 162+50.0	-	D	-
STA. 162+50.0 - STA. 163+00.0	S	-	D
STA. 149+00.16 DOUBLE SOLID RT, TH-27			

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

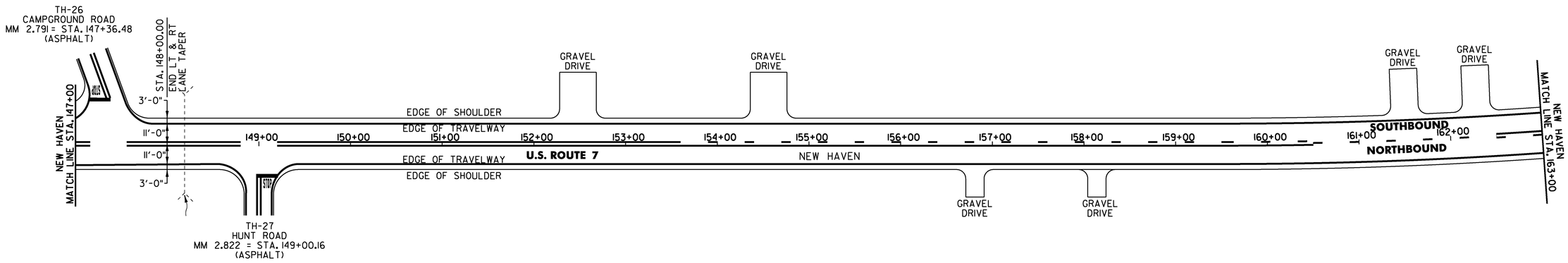
NEW HAVEN:
STA. 147+36.48 LT, TH 26
STA. 149+00.16 RT, TH-27

MILLED RUMBLE STRIPS (CENTERLINE)

NEW HAVEN:
~~STA. 147+00.00 - STA. 147+16.00~~
~~STA. 147+56.00 - STA. 148+80.00~~
149+09 ~~STA. 149+20.00 - STA. 156+29.00~~ 156+50
~~STA. 158+40.00 - STA. 163+00.00~~
STA 158+62 - STA 161+34

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

NEW HAVEN:
STA. 147+36.48 LT, TH 26, "STOP" (4 EA)
STA. 149+00.16 RT, TH-27, "STOP" (4 EA)



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

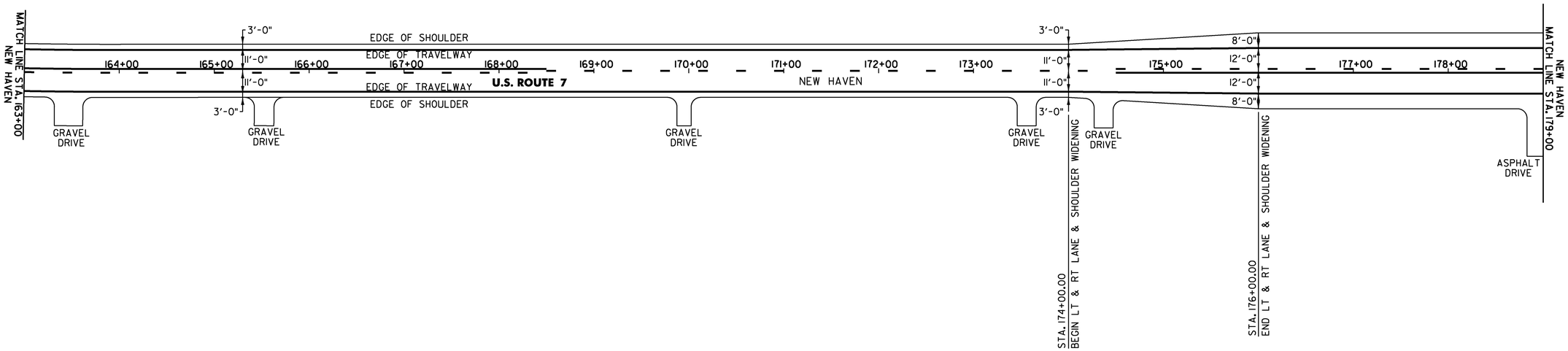
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 17	SHEET 31 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 163+00.0 - STA. 179+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 163+00.0 - STA. 168+50.0	S	-	D
STA. 168+50.0 - STA. 174+50.0	-	D	-
STA. 174+50.0 - STA. 179+00.0	D	-	S

~~MILLED RUMBLE STRIPS (CENTERLINE)~~
~~NEW HAVEN:~~
~~STA. 163+00.00 - STA. 165+26.00~~



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 18	SHEET 32 OF 96

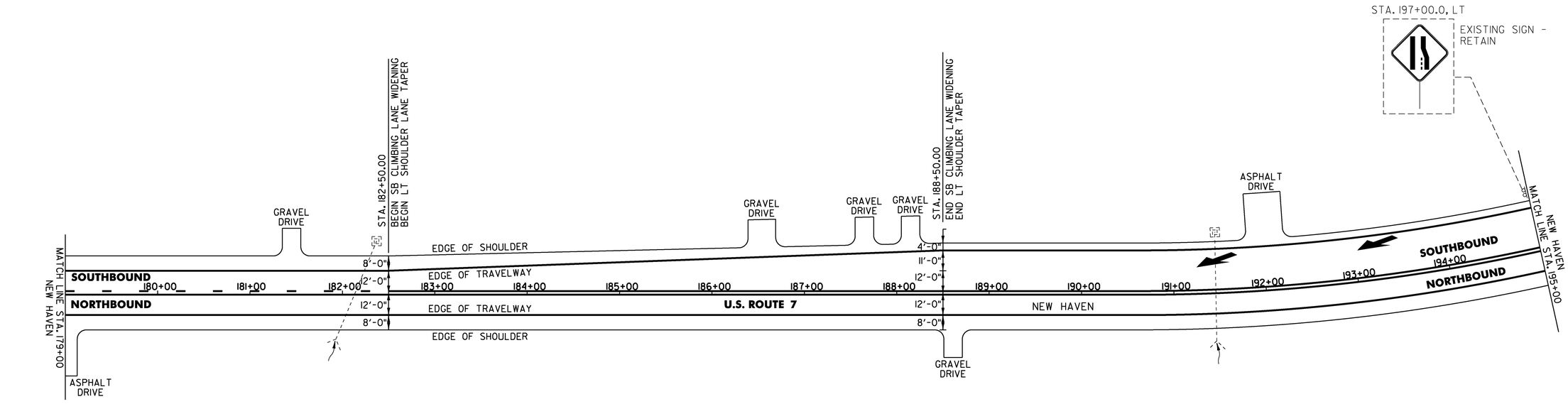
TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 179+00.0 - STA. 195+00.0 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 179+00.0 - STA. 182+50.0	D	-	S
STA. 182+50.0 - STA. 195+00.0	S	-	S

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
NEW HAVEN:
STA. 191+49.0 LT, ARROW ↖
STA. 193+29.0 LT, ARROW ↖

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
179+00 STA. ~~182+69.00~~ - STA. ~~190+61.00~~ 191+50
194+45 STA. ~~193+78.00~~ - STA. 195+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 19	SHEET 33 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 195+00.0 - STA. 211+00.0 LT & RT
STA. 195+00.0 - STA. 198+00.0 DASHED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 195+00.0 - STA. 206+50.0	S	-	S
STA. 206+50.0 - STA. 211+00.0	S	-	D

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

NEW HAVEN:
STA. 205+65.60 RT, TH-3

TEMPORARY 8 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)

NEW HAVEN:
STA. 204+45.0 - STA. 204+80.0 GORE AREA RT
STA. 205+65.60 GORE AREA RT, TH-3

MILLED RUMBLE STRIPS (CENTERLINE)

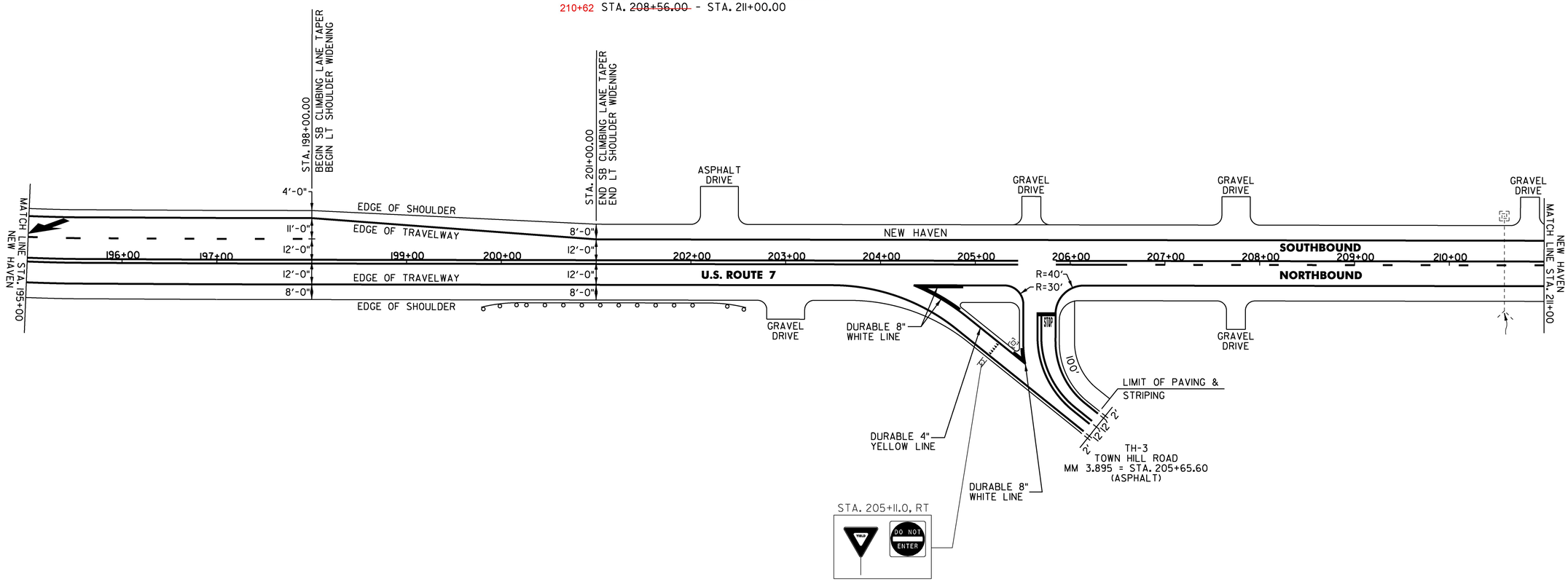
NEW HAVEN:
STA. 195+00.00 - STA. ~~200+64.00~~ 203+00
210+62 STA. ~~208+56.00~~ - STA. 211+00.00

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

NEW HAVEN:
STA. 205+11.0 RT, TH-3, YIELD LINE (5 EA)
STA. 205+65.60 RT, TH-3, "STOP" (4 EA)
STA 195+09 LT ARROW

TEMPORARY LETTER OR SYMBOL, PAINT

NEW HAVEN:
STA. 195+09.00 LT, ARROW ↖
STA. 205+65.60 RT, TH-3, "STOP" (4 EA)



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 20	SHEET 34 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 211+00.0 - STA. 227+00.0 LT & RT

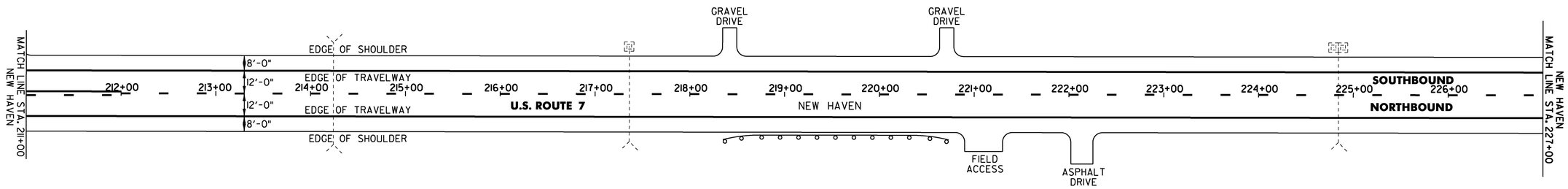
TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 211+00.0 - STA. 212+00.0	S	-	D
STA. 212+00.0 - STA. 227+00.0	-	D	-

MILLED RUMBLE STRIPS (CENTERLINE)

NEW HAVEN:
STA. 211+00.00 - STA. ~~218+59.00~~ 218+55
223+73 STA. ~~223+34.00~~ - STA. 227+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 21	SHEET 35 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 227+00.0 - STA. 243+50.0 LT & RT

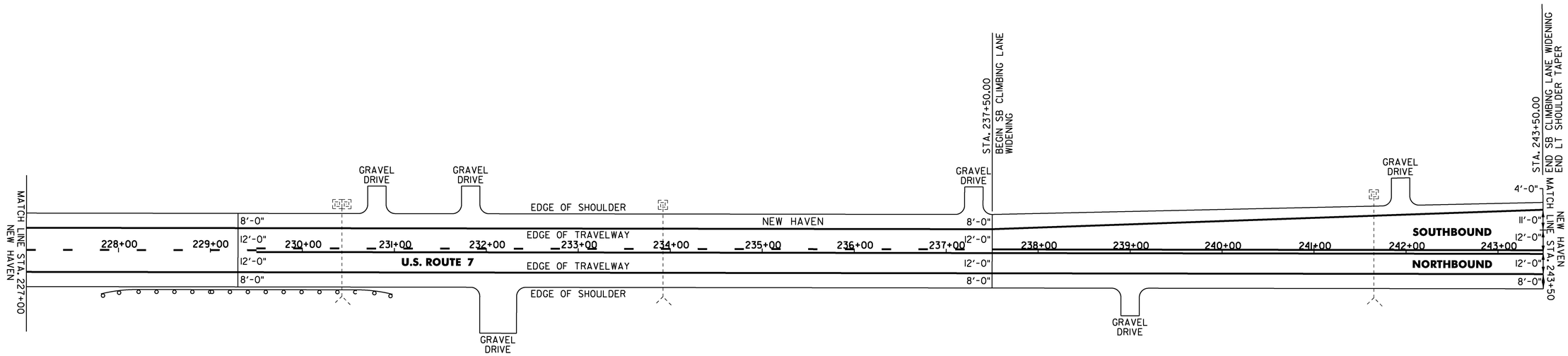
TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 227+00.0 - STA. 229+50.0	-	D	-
STA. 229+50.0 - STA. 237+50.0	D	-	S
STA. 237+50.0 - STA. 243+50.0	S	-	S

MILLED RUMBLE STRIPS (CENTERLINE)

NEW HAVEN:
STA. 227+00.00 - STA. 229+68.00
233+92 STA. ~~233+38.00~~ - STA. 240+77.00
243+15 STA. ~~243+41.00~~ - STA. 243+50.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 22	SHEET 36 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 243+50.0 - STA. 259+00.0 LT & RT
249+75 LT ~~STA. 250+00.0~~ - STA. 259+00.0 DASHED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

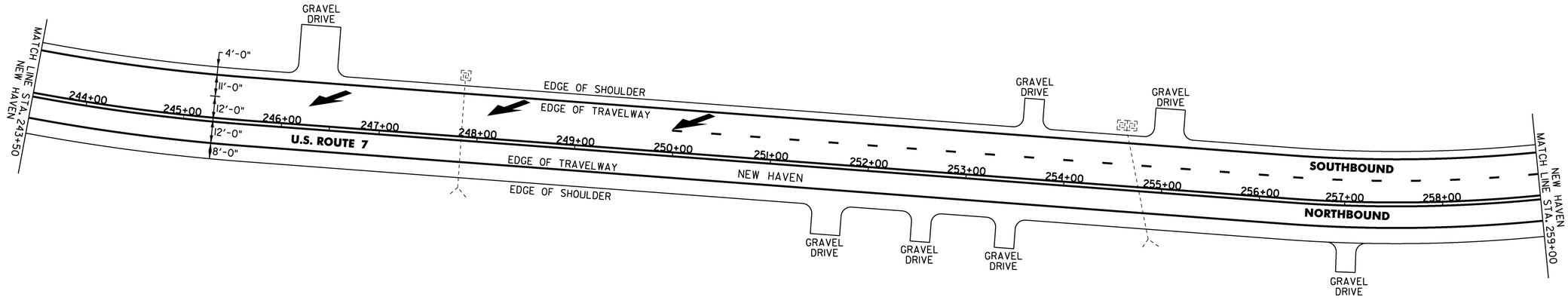
NEW HAVEN:	LT	℄	RT
STA. 243+50.0 - STA. 259+00.0	S	-	S

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

NEW HAVEN:
STA. 246+49.0 LT, ARROW
STA. 248+29.0 LT, ARROW
STA. 250+09.0 LT, ARROW

MILLED RUMBLE STRIPS (CENTERLINE)

NEW HAVEN:
STA. 243+50.00 - STA. 254+50.00
~~STA. 256+61.00 - STA. 259+00.00~~



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

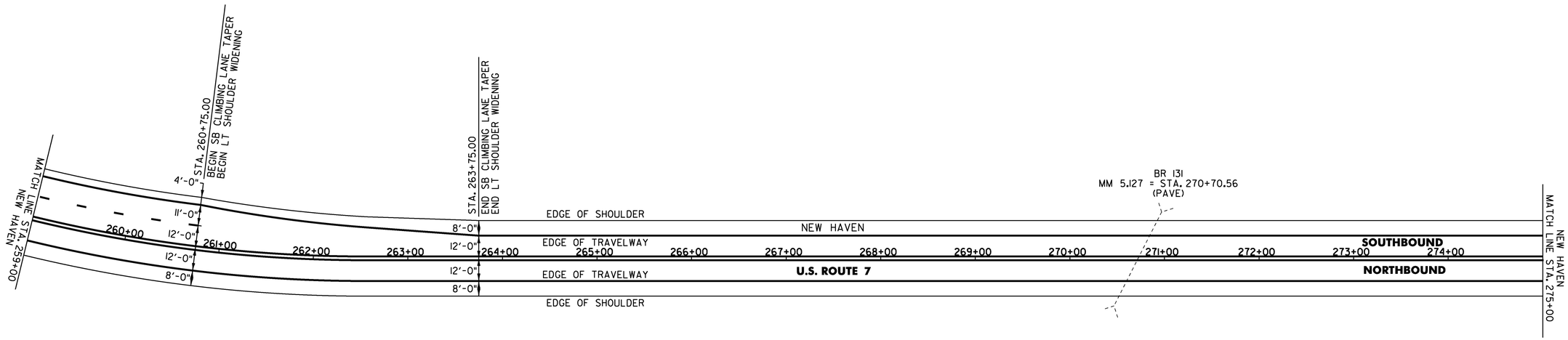
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 23	SHEET 37 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 259+00.0 - STA. 275+00.0 LT & RT
STA. 259+00.0 - STA. ~~260+75.0~~ DASHED LT. 262+19 LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
NEW HAVEN:

	LT	℄	RT
STA. 259+00.0 - STA. 275+00.0	S	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
259+32 STA. ~~259+00.00~~ - STA. ~~274+56.00~~ 274+40



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 24	SHEET 38 OF 96

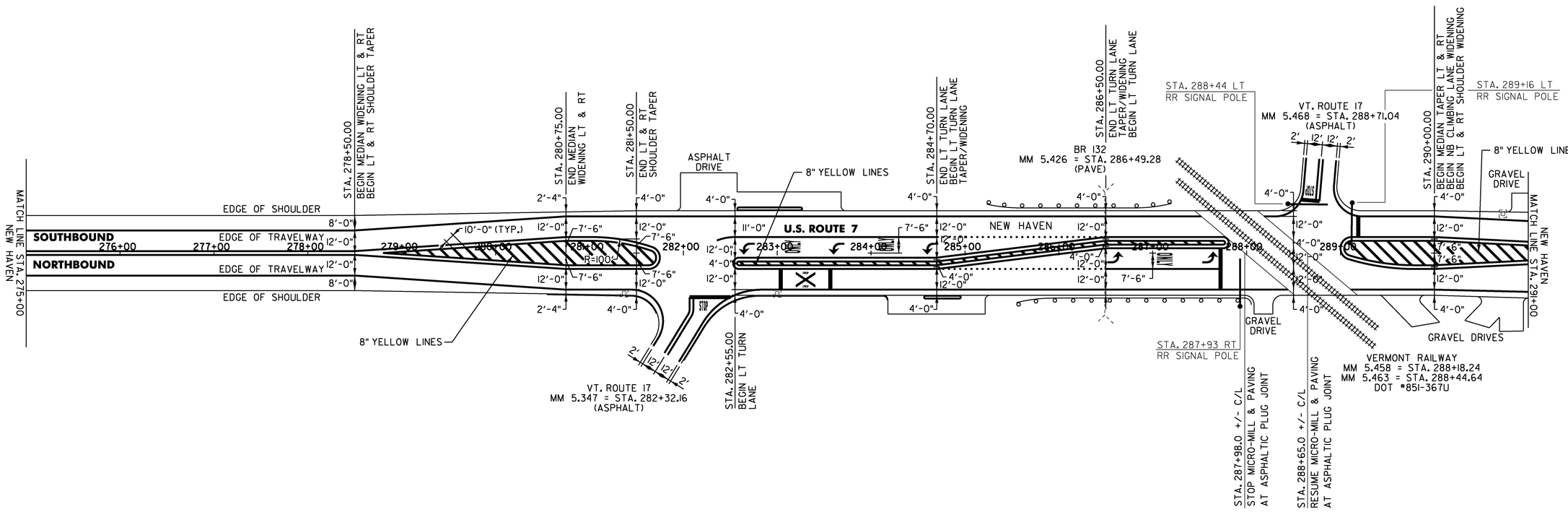
TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 275+00.0 - STA. ~~287+47.0 LT~~ 287+68 LT
STA. 275+00.0 - STA. 288+53.0 RT
STA. 288+12.0 - STA. 291+00.0 LT
STA. 289+18.0 - STA. 291+00.0 RT
STA. 282+35.0 - STA. 284+70.0 SOLID LT
STA. 284+70.0 - STA. 286+50.0 DOTTED LT & RT
STA. 286+50.0 - STA. 287+79.0 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
NEW HAVEN:
STA. 275+00.0 - STA. 278+50.0 DOUBLE SOLID C/L
STA. 278+50.0 - STA. 281+75.0 DOUBLE SOLID MEDIAN LT/RT
STA. 282+55.0 - STA. 287+81.0 DOUBLE SOLID MEDIAN LT/RT
STA. 289+00.0 - STA. 291+00.0 DOUBLE SOLID MEDIAN LT/RT

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
NEW HAVEN:
STA. 278+50.0 - STA. 281+75.0 HATCHED MEDIAN C/L
STA. 282+55.0 - STA. 287+81.0 HATCHED MEDIAN LT/RT
STA. 289+00.0 - STA. 291+00.0 HATCHED MEDIAN C/L

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC
NEW HAVEN:
STA. 282+32.16 RT, VT. ROUTE 17
STA. 288+71.04 LT, VT. ROUTE 17

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
NEW HAVEN:
STA. 282+32.16 RT, VT. ROUTE 17, "STOP" (4 EA)
STA. 282+61.3 LT/RT, ARROW (1 EA)
STA. 283+16.0 LT/RT, "ONLY" (4 EA)
STA. 283+66.0 LT/RT, ARROW (1 EA)
STA. 284+16.0 LT/RT, "ONLY" (4 EA)
STA. 284+66.0 LT/RT, ARROW (4 EA)
STA. 286+54.3 LT/RT, ARROW (1 EA)
STA. 287+10.0 LT/RT, "ONLY" (4 EA)
STA. 287+70.7 LT/RT, ARROW (1 EA)
STA. 288+71.04 LT, VT. ROUTE 17, "STOP" (4 EA)



TEMPORARY LETTER OR SYMBOL, PAINT
NEW HAVEN:
STA. 282+32.16 RT, VT. ROUTE 17, "STOP" (4 EA)
STA. 282+61.3 LT/RT, ARROW (1 EA)
STA. 283+97.6 LT/RT, ARROW (1 EA)
STA. 286+54.3 LT/RT, ARROW (1 EA)
STA. 287+70.7 LT/RT, ARROW (1 EA)
STA. 288+71.04 LT, VT. ROUTE 17, "STOP" (4 EA)

CHANGING ELEV. OF DROP INLETS, CATCH BASINS, OR MANHOLES
NEW HAVEN:
STA. 281+37.0 RT (DID NOT ADJUST)
STA. 283+00.0 RT (DID NOT ADJUST)
STA. 290+73.0 LT (DID NOT ADJUST)

NOTE:
1. FOR RAILROAD PAVEMENT MARKING LAYOUT, SEE SIGNING AND STRIPING, PLAN A.

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

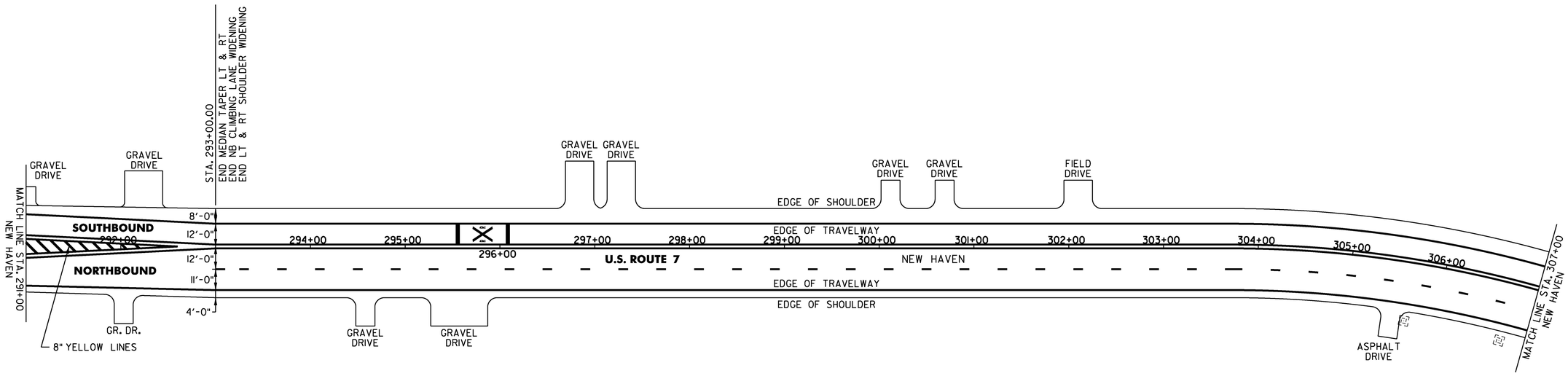
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 25	SHEET 39 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA. 291+00.0 - STA. 307+00.0 LT & RT
STA. 291+00.0 - STA. 307+00.0 DASHED RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
NEW HAVEN:

	LT	℄	RT
STA. 293+00.0 - STA. 307+00.0	S	-	S
STA. 291+00.0 - STA. 293+00.0	DOUBLE SOLID MEDIAN LT/RT		

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS) OR
DURABLE 8 INCH YELLOW LINE, THERMOPLASTIC
NEW HAVEN:
STA. 291+00.0 - STA. 293+00.0 HATCHED MEDIAN LT/RT



NOTE:

1. FOR RAILROAD PAVEMENT MARKING LAYOUT, SEE SIGNING AND STRIPING, PLAN A.

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 26	SHEET 40 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA. 307+00.0 - STA. 322+00.0 LT & RT
STA. 307+00.0 - STA. 310+50.0 DASHED RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

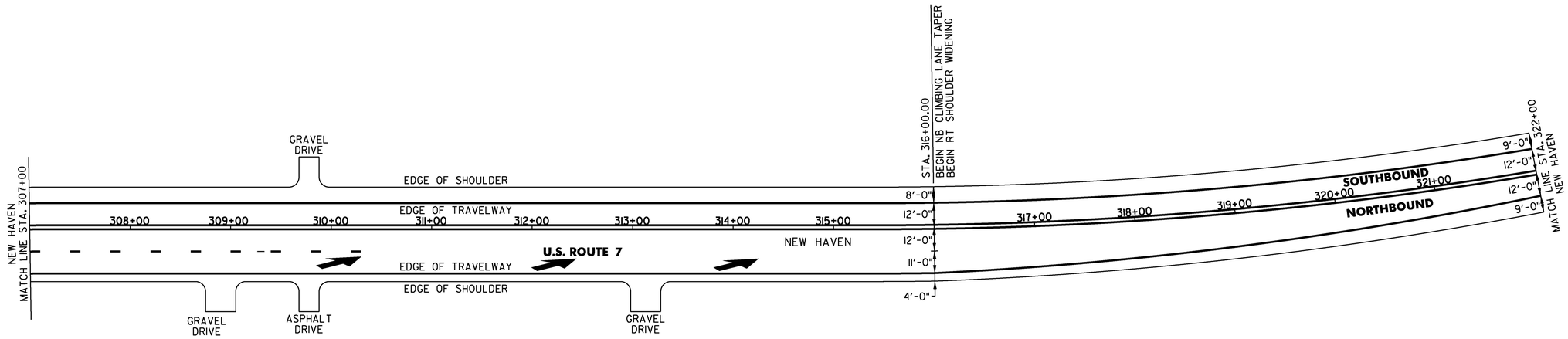
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA. 307+00.0 - STA. 322+00.0	S	-	S

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

NEW HAVEN:
STA. 310+41.0 RT, ARROW ↖
STA. 312+21.0 RT, ARROW ↖
STA. 314+01.0 RT, ARROW ↖

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
314+60 STA. ~~314+68.00~~ - STA. 322+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 27	SHEET 41 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA 322+00.00 - STA 336+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

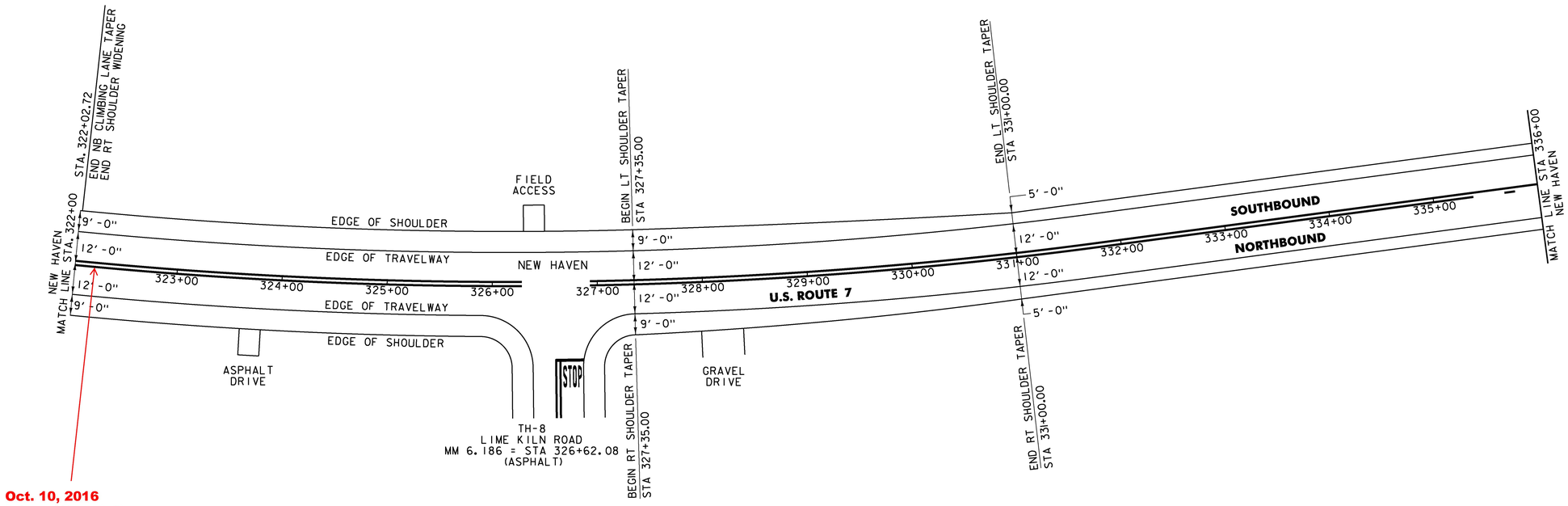
NEW HAVEN:	LT	℄	RT
STA 322+00.00 - STA 335+28.00	S	-	S
STA 335+28.00 - STA 336+00.00	S	-	D

STA 326+62.08 DOUBLE SOLID RT, TH-8

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 322+00.00 - STA. ~~322+61.00~~ 322+10
STA. ~~330+00.00~~ - STA. 336+00.00
333+00.00

TEMPORARY 24 INCH STOP BAR, PAINT
~~SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)~~
NEW HAVEN:
STA 326+62.08 RT, TH-8

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
NEW HAVEN:
STA 326+62.08 RT, TH-8 "STOP" (4 EA)



Oct. 10, 2016
Interim Completion
New Haven 322+07

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

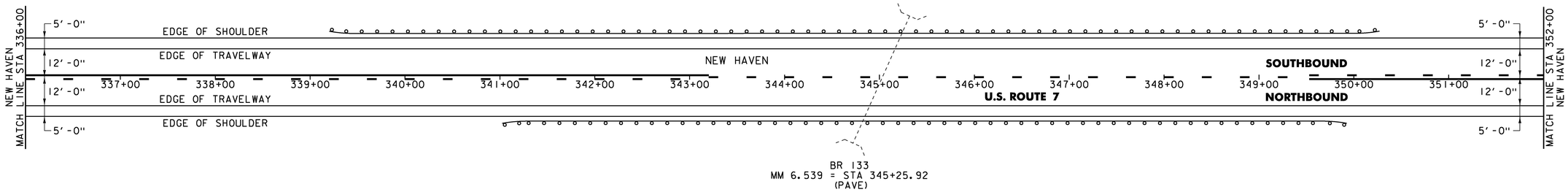
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 28	SHEET 42 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA 336+00.00 - STA 352+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA 336+00.00 - STA 343+20.00	S	-	D
STA 343+20.00 - STA 349+53.00	-	D	-
STA 349+53.00 - STA 352+00.00	S	-	D

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 336+00.00 - STA. 352+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

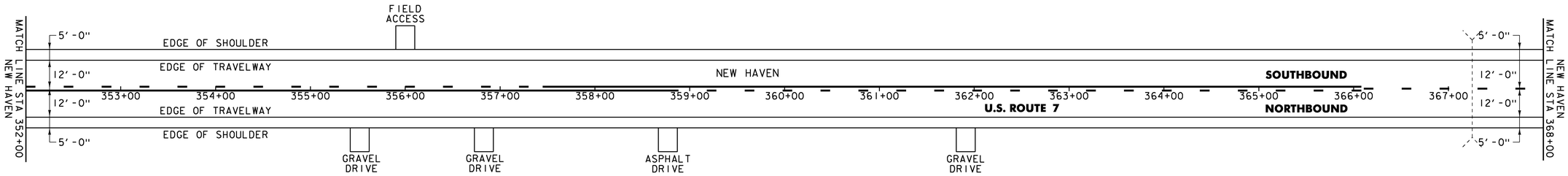
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 29	SHEET 43 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA 352+00.00 - STA 368+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA 352+00.00 - STA 357+45.00	D	-	S
STA 357+45.00 - STA 358+78.00	S	-	S
STA 358+78.00 - STA 366+17.00	S	-	D
STA 366+17.00 - STA 368+00.00	-	D	-

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 352+00.00 - STA. 368+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 30	SHEET 44 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS) OR
DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
NEW HAVEN:
STA 368+00.00 - STA 384+00.00 LT & RT

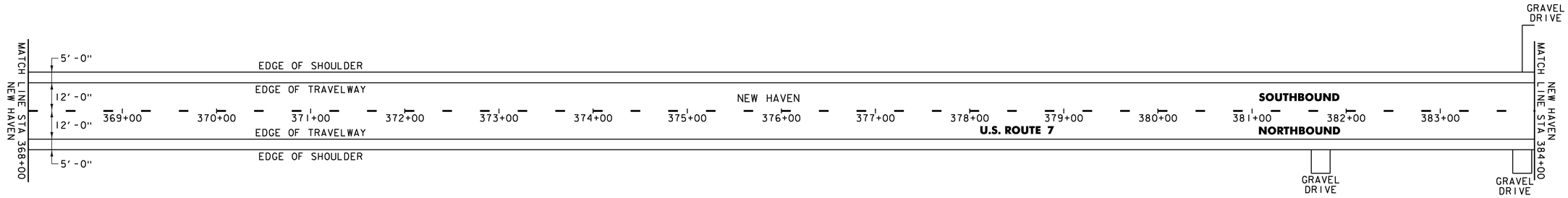
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA 368+00.00 - STA 384+00.00	-	D	-

TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA 368+00.00 - STA 384+00.00	-	D	-

MILLED RUMBLE STRIPS (CENTERLINE)
NEW HAVEN:
STA. 368+00.00 - STA. ~~382+27.00~~
382+20.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

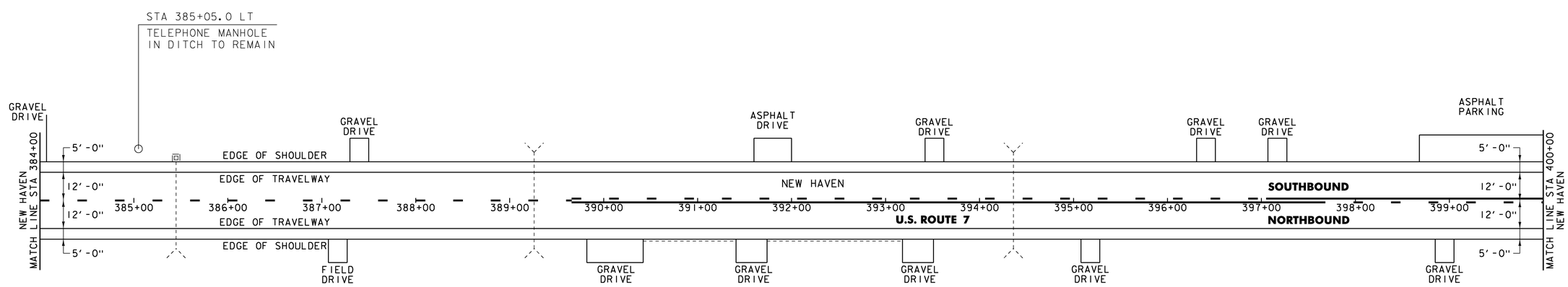
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 31	SHEET 45 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA 384+00.00 - STA 400+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA 384+00.00 - STA 389+66.00	-	D	-
STA 389+66.00 - STA 397+05.00	D	-	S
STA 397+05.00 - STA 397+58.00	S	-	S
STA 397+58.00 - STA 400+00.00	S	-	D



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 32	SHEET 46 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

NEW HAVEN:
STA 400+00.00 - STA 406+03.20 LT & RT

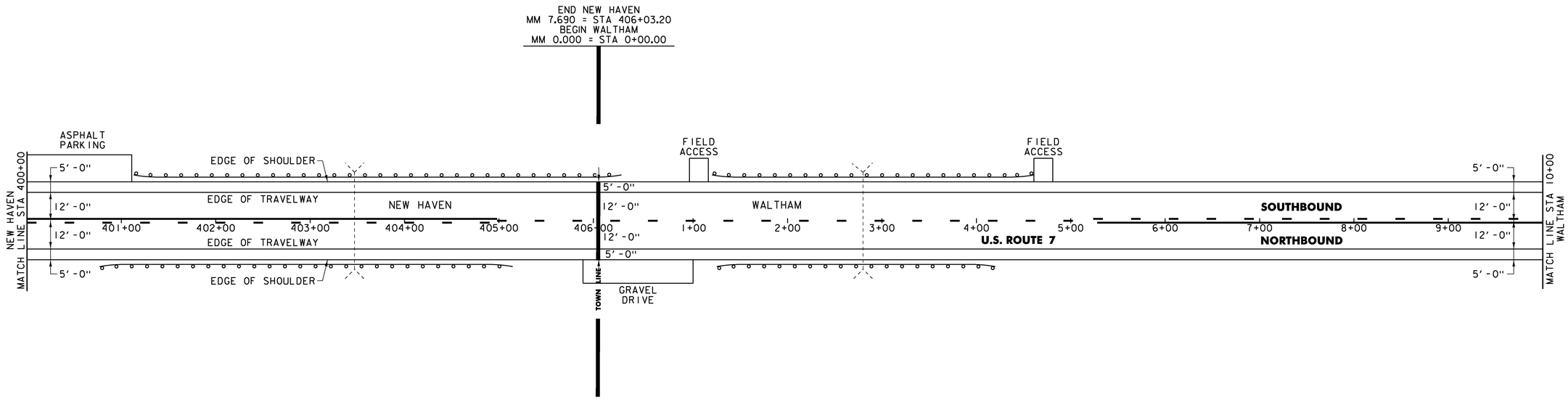
WALTHAM:
STA 0+00.00 - STA 10+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

NEW HAVEN:	LT	℄	RT
STA 400+00.00 - STA 404+98.00	S	-	D
STA 404+98.00 - STA 406+03.20	-	D	-
WALTHAM:			
STA 0+00.00 - STA 5+28.00	-	D	-
STA 5+28.00 - STA 10+00.00	D	-	S

MILLED RUMBLE STRIPS (CENTERLINE)

WALTHAM:
STA. 2+11.00 - STA. 10+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

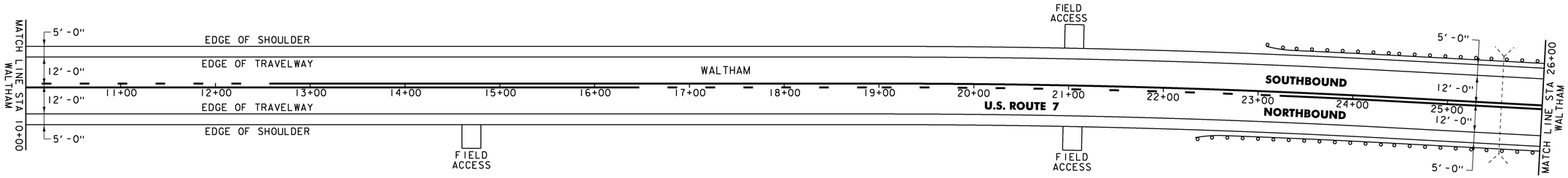
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 33	SHEET 47 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
WALTHAM:
STA 10+00.00 - STA 26+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

WALTHAM:	LT	℄	RT
STA 10+00.00 - STA 12+67.00	D	-	S
STA 12+67.00 - STA 16+37.00	S	-	S
STA 16+37.00 - STA 23+23.00	S	-	D
STA 23+23.00 - STA 26+00.00	S	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
WALTHAM:
STA. 10+00.00 - STA. 26+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 34	SHEET 48 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
WALTHAM:
STA 26+00.00 - STA 42+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

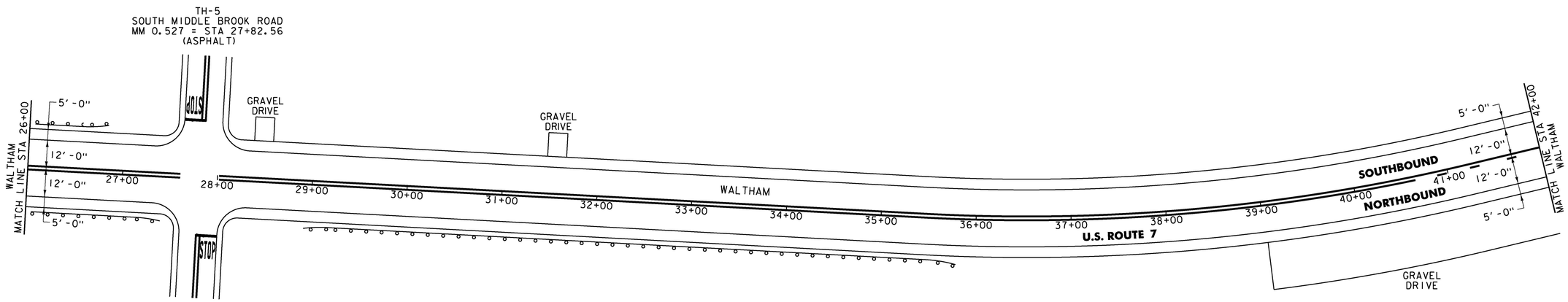
WALTHAM:	LT	℄	RT
STA 26+00.00 - STA. 40+65.00	S	-	S
STA 40+65.00 - STA. 42+00.00	S	-	D

STA 27+82.56 DOUBLE SOLID LT, TH-5
STA 27+82.56 DOUBLE SOLID RT, TH-5

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC
WALTHAM:
STA 27+82.56 LT, TH-5
STA 27+82.56 RT, TH-5

MILLED RUMBLE STRIPS (CENTERLINE)
WALTHAM:
~~STA. 26+00.00 - STA. 27+62.00~~
~~STA. 28+02.00 - STA. 42+00.00~~
STA. 26+00.00 - STA. 27+50.00
STA. 28+21.00 - STA. 39+00.00
STA. 41+50.00 - STA. 42+00.00

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVSION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
WALTHAM:
STA 27+82.56 LT, TH-5 "STOP" (4 EA)
STA 27+82.56 RT, TH-5 "STOP" (4 EA)



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

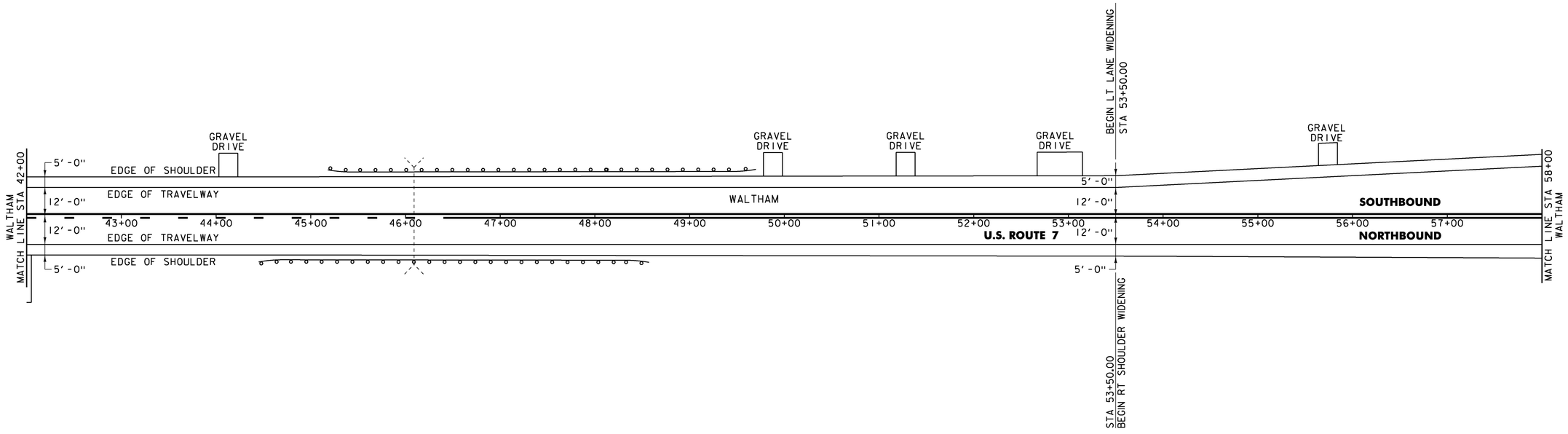
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 35	SHEET 49 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
WALTHAM:
STA 42+00.00 - STA 58+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

WALTHAM:	LT	℄	RT
STA 42+00.00 - STA 46+65.00	S	-	D
STA 46+65.00 - STA 58+00.00	S	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
WALTHAM:
~~STA. 42+24.00 - STA. 52+80.00~~
~~STA. 55+44.00 - STA. 58+00.00~~
STA. 42+00.00 - STA. 52+50.00
STA. 55+52.00 - STA. 58+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 36	SHEET 50 OF 96

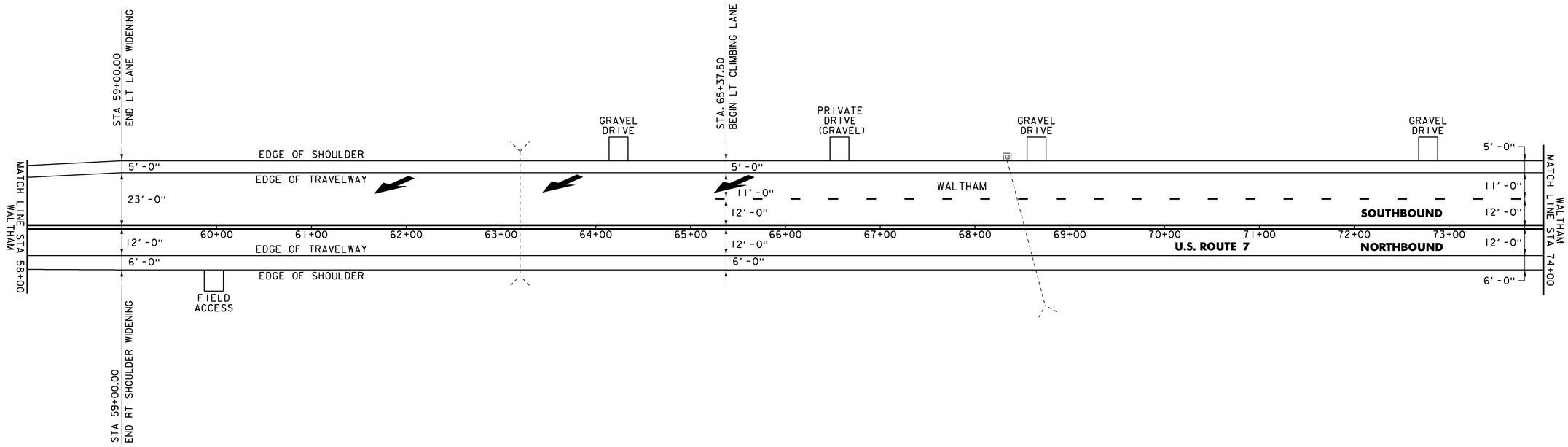
TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
WALTHAM:
STA 58+00.00 - STA 74+00.00 LT & RT
STA 65+37.50 - STA 74+00.00 DASHED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

WALTHAM:	LT	℄	RT
STA 58+00.00 - STA 74+00.00	S	-	S

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVSION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
WALTHAM:
STA. 61+86.5 LT, ARROW
STA. 63+66.5 LT, ARROW
STA. 65+46.5 LT, ARROW

MILLED RUMBLE STRIPS (CENTERLINE)
WALTHAM:
STA. 58+00.00 - STA. ~~72+34.00~~ 71+77.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 37	SHEET 51 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

WALTHAM:
STA 74+00.00 - STA 86+22.24 LT & RT
STA 74+00.00 - STA 86+22.24 DASHED LT

FERRISBURGH:
STA 2+50.00 ~~STA 0+00.00~~ - STA 3+00.00 LT & RT
STA 2+50.00 ~~STA 0+00.00~~ - STA 3+00.00 DASHED LT
STA 2+60.00 - STA 3+00.00 DOTTED RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

WALTHAM:

	LT	℄	RT
STA 74+00.0 - STA. 80+75.0	S	-	S

STA 83+95.20 DOUBLE SOLID RT, TH-3
STA 80+75.00 - STA 83+55.00 DOUBLE SOLID MEDIAN LT & RT
~~STA 84+40.00 - STA 86+00.00 DOUBLE SOLID MEDIAN LT & RT~~
~~STA 86+00.00 - STA 86+22.24 SOLID MEDIAN EDGE LINE LT & RT~~

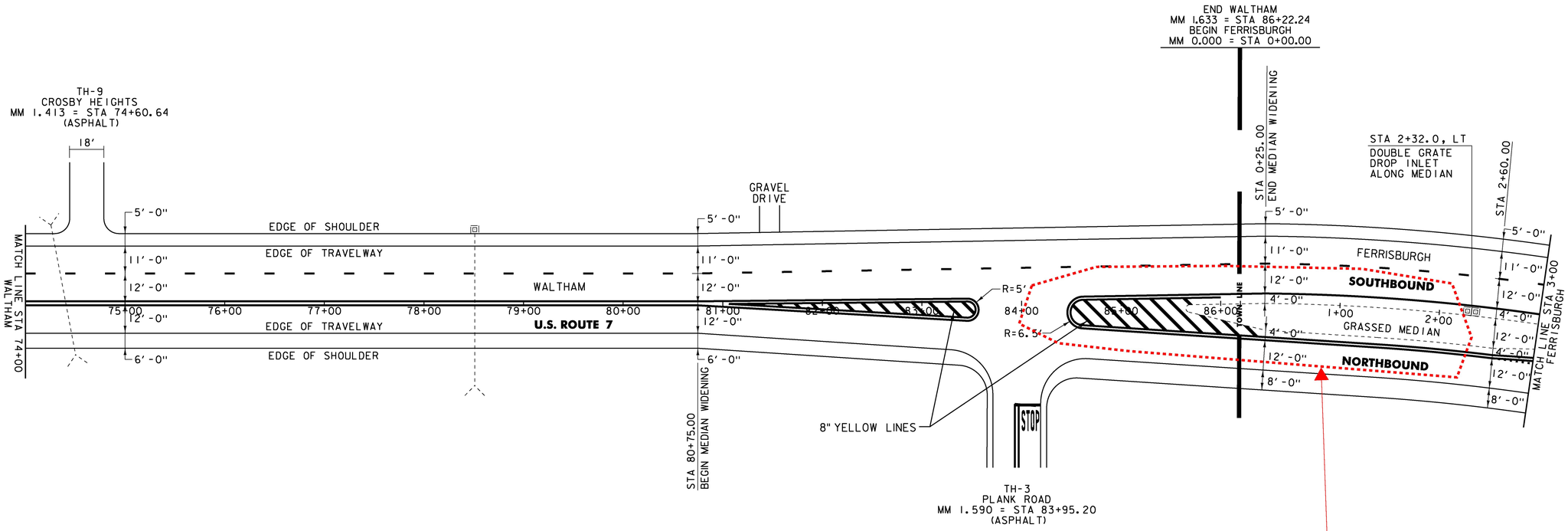
FERRISBURGH:
STA 2+50.00 ~~STA 0+00.00~~ - STA 3+00.00 SOLID MEDIAN EDGE LINE LT
STA 2+50.00 ~~STA 0+00.00~~ - STA. 3+00.00 DOUBLE SOLID MEDIAN RT

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

WALTHAM:
STA 80+75.00 - STA 83+55.00 HATCHED MEDIAN LT & RT
~~STA 84+40.00 - STA 86+00.00 HATCHED MEDIAN LT & RT~~

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

WALTHAM:
STA 83+95.20 RT, TH-3
STA. 74+60 LT, Crosby Heights



See Sheet 52A and 52B for Revised
Plank Road Intersection Details

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

WALTHAM:
STA 83+95.20 RT, TH-3 "STOP" (4 EA)

MILLED RUMBLE STRIPS (CENTERLINE)

WALTHAM:
~~STA. 74+45.00 - STA. 80+75.00~~
STA. 74+75.00 - STA. 80+74.00

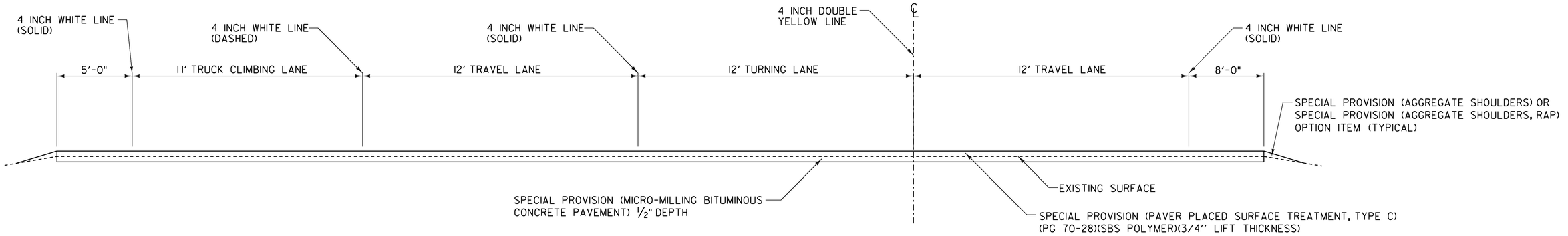
CHANGING ELEV. OF DROP INLETS, CATCH BASINS, OR MANHOLES

FERRISBURGH:
STA 2+32.0 LT (DID NOT ADJUST)

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

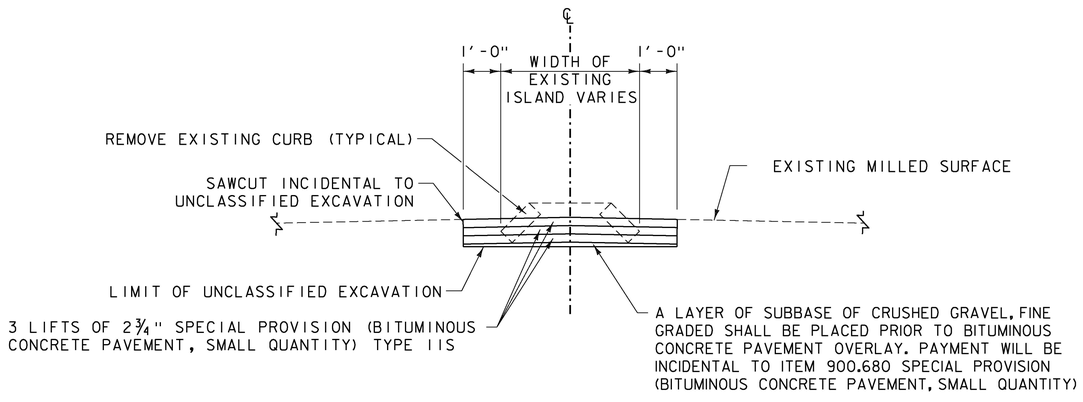
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 38	SHEET 52 OF 96



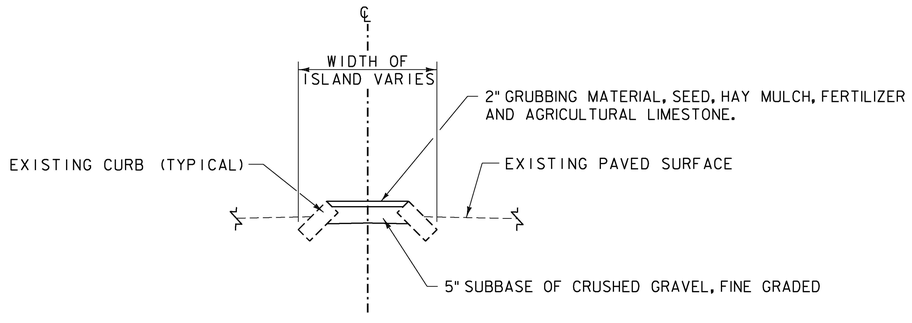
US RTE. 7, VT. RTE. 22A, AND FERRISBURGH STATE HIGHWAY
TYPICAL SECTION – ALTERNATE A
PAVER PLACED SURFACE TREATMENT, TYPE C

NOTE:

1. SPECIAL PROVISION (PAVER PLACED SURFACE TREATMENT, TYPE C")(PG 70-28)(SBS POLYMER)(3/4" LIFT THICKNESS) PAVEMENT TOLERANCE = +/- 1/8 INCH (TOTAL THICKNESS).



ISLAND/CURB REMOVAL DETAIL



NEW ISLAND DETAIL

NOTES:

1. PAYMENT FOR REMOVAL OF EXISTING PAVEMENT, AND REMOVAL OF EXISTING SURFACE MATERIAL BETWEEN CURBING WILL BE INCIDENTAL TO ITEM 203.17 UNCLASSIFIED EXCAVATION.

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 17-MAY-2017
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
Revised Plank Road Intersection Details	SHEET 52A~~+~~ OF 96 ~~2~~

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
WALTHAM STA. 84+16 LT. - FERRISBURGH STA. 0+88 LT. (SOLID)
FERRISBURGH STA. 0+88 LT. - FERRISBURGH STA. 2+58 LT. (DOTTED)

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
WALTHAM STA. 84+16 RT. - FERRISBURGH STA. 2+50 RT. (DOUBLE)

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
WALTHAM STA. 84+16 RT. - FERRISBURGH STA. 1+50 RT. (GORE)

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
WALTHAM STA. 84+16 LT./RT

PAINTED CURB
FERRISBURGH STA. 1+50 RT. - 2+50 RT.

REMOVING AND RESETTING CURB
FERRISBURGH STA. 1+50 RT. - 2+50 RT.

REMOVAL OF EXISTING CURB
WALTHAM STA. 85+80 C/L - FERRISBURGH 2+50 RT.

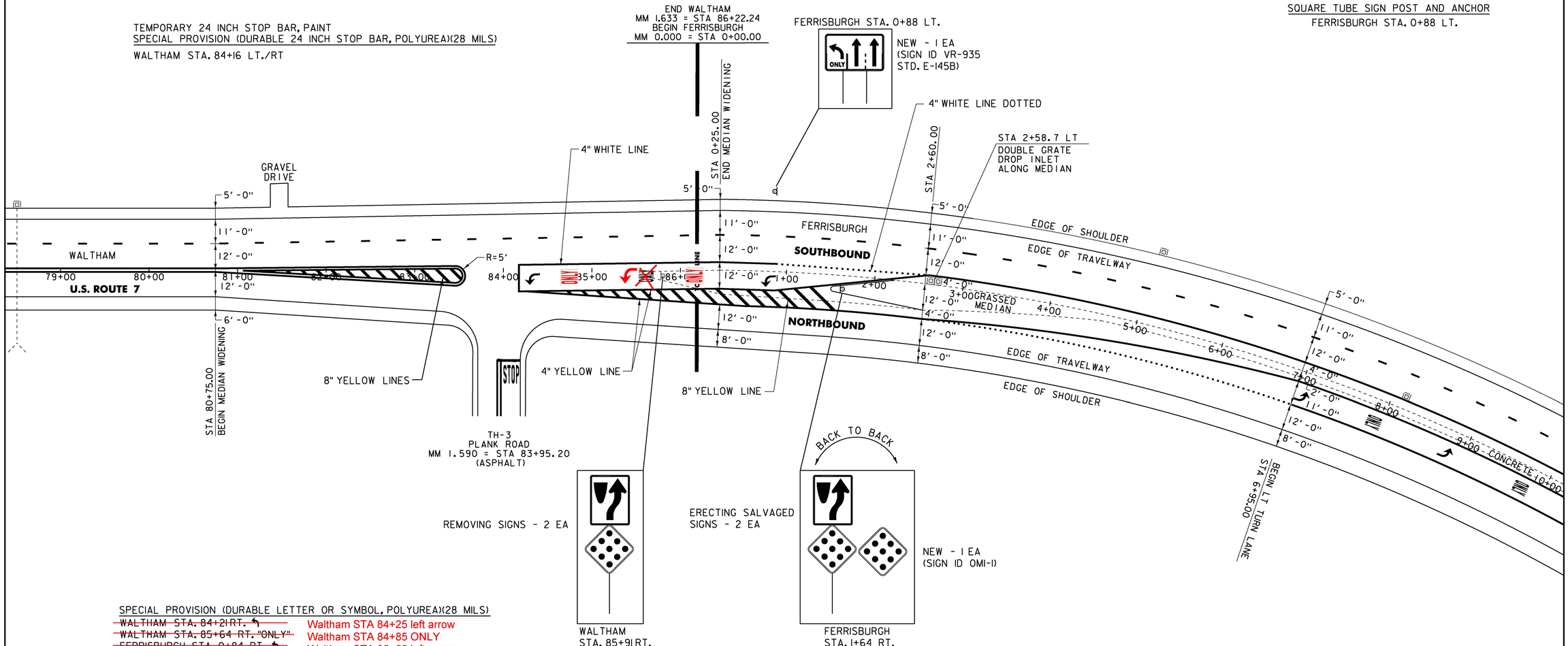
UNCLASSIFED EXCAVATION
WALTHAM STA. 85+80 C/L - FERRISBURGH STA. 2+50 RT.

REMOVING SIGNS
WALTHAM STA. 85+91 RT. (2 EA)

ERECTING SALVAGED SIGNS
FERRISBURGH STA. 1+64 RT. (2 EA)

TRAFFIC SIGN, TYPE A
FERRISBURGH STA. 0+88 LT.
FERRISBURGH STA. 1+64 RT.

SQUARE TUBE SIGN POST AND ANCHOR
FERRISBURGH STA. 0+88 LT.



SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
~~WALTHAM STA. 84+21 RT.~~ Waltham STA 84+25 left arrow
~~WALTHAM STA. 85+64 RT. "ONLY"~~ Waltham STA 84+85 ONLY
~~FERRISBURGH STA. 0+84 RT.~~ Waltham STA 85+55 left arrow
Waltham STA 86+20 ONLY
Ferrisburgh STA 0+65 left arrow

TEMPORARY LETTER OR SYMBOL, PAINT
WALTHAM STA. 84+21 RT.
FERRISBURGH STA. 0+84 RT.

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 17-MAY-2017
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET Revised Plank Road Intersection	SHEET 52B~~2~~ OF 96 ~~2~~

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 3+00.00- STA 6+95.00 DOTTED RT
STA 3+00.00 - STA 11+75.00 DASHED LT
STA 3+00.00 - STA 19+00.00 LT & RT
STA 6+95.00 - STA 12+65.00 SOLID RT
FERRISBURGH STATE HIGHWAY MM 0.000 - MM 0.136 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:
STA 3+00.00 - STA 12+50.00 SOLID MEDIAN EDGE LINE LT
STA 13+25.00 - STA 16+25.00 SOLID MEDIAN EDGE LINE LT
STA 13+25.00 - STA 16+90.00 SOLID MEDIAN EDGE LINE RT
STA 16+25.00 - STA 19+00.00 DOUBLE SOLID MEDIAN LINE LT
STA 16+90.00 - STA 19+00.00 DOUBLE SOLID MEDIAN LINE RT
STA 3+00.00 - STA 6+95.00 DOUBLE SOLID MEDIAN RT
STA 6+95.00 - STA 12+50 SOLID MEDIAN RT
FERRISBURGH STATE HIGHWAY MM 0.000 - MM 0.136 DOUBLE SOLID

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

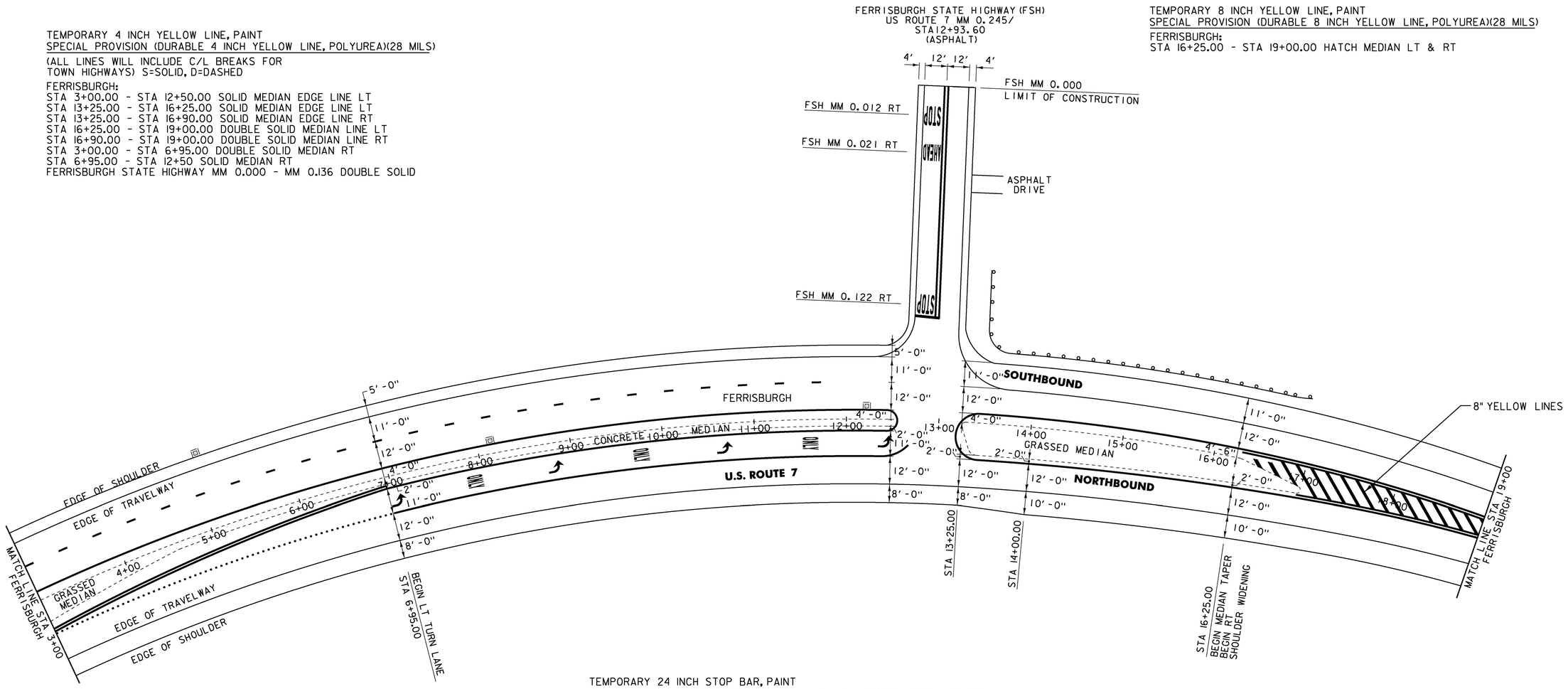
FERRISBURGH:
STA 6+99.30 RT, ARROW (1EA)
STA 7+89.80 RT, "ONLY" (4 EA)
STA 8+80.30 RT, ARROW (1EA)
STA 9+70.80 RT "ONLY" (4 EA)
STA 10+61.30 RT, ARROW (1EA)
STA 11+51.80 RT, "ONLY" (4 EA)
STA 12+42.30 RT, ARROW (1EA)
FERRISBURGH STATE HIGHWAY MM 0.012 RT, "STOP" (4 EA)
FERRISBURGH STATE HIGHWAY MM 0.021RT, "AHEAD" (5 EA)
FERRISBURGH STATE HIGHWAY MM 0.122 RT, "STOP" (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

FERRISBURGH:
STA 6+99.30 RT, ARROW (2 EA)
STA 8+80.30 RT, ARROW (2 EA)
STA 10+61.30 RT, ARROW (2 EA)
STA 12+42.30 RT, ARROW (2 EA)
FERRISBURGH STATE HIGHWAY MM 0.012 RT, "STOP" (8 EA)
FERRISBURGH STATE HIGHWAY MM 0.021 RT, "AHEAD" (10 EA)
FERRISBURGH STATE HIGHWAY MM 0.122 RT, "STOP" (8 EA)

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

FERRISBURGH:
STA 16+25.00 - STA 19+00.00 HATCH MEDIAN LT & RT



TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

FERRISBURGH:
STA 12+93.60 LT, NSH-FSH

CHANGING ELEV. OF DROP INLETS, CATCH BASINS, OR MANHOLES

FERRISBURGH:
STA 8+15.0 LT (DID NOT ADJUST)
STA 12+22.0 LT (DID NOT ADJUST)

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 39	SHEET 53 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 19+00.00 - STA 35+00.00 LT & RT
STA 30+15.00 - STA 31+95.00 DOTTED RT
STA 31+95.00 - STA 33+60.00 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 22+50.00 - STA 27+25.00	S	-	S

STA 19+00.00 - STA 22+50.00 DOUBLE SOLID MEDIAN CL&RT
STA 27+25.00 - STA 31+95.00 DOUBLE SOLID MEDIAN CL&RT
STA 31+95.00 - STA 33+60.00 DOUBLE SOLID LT
STA 34+26.72 DOUBLE SOLID LT, TH-2
STA 34+26.72 DOUBLE SOLID RT, TH-2

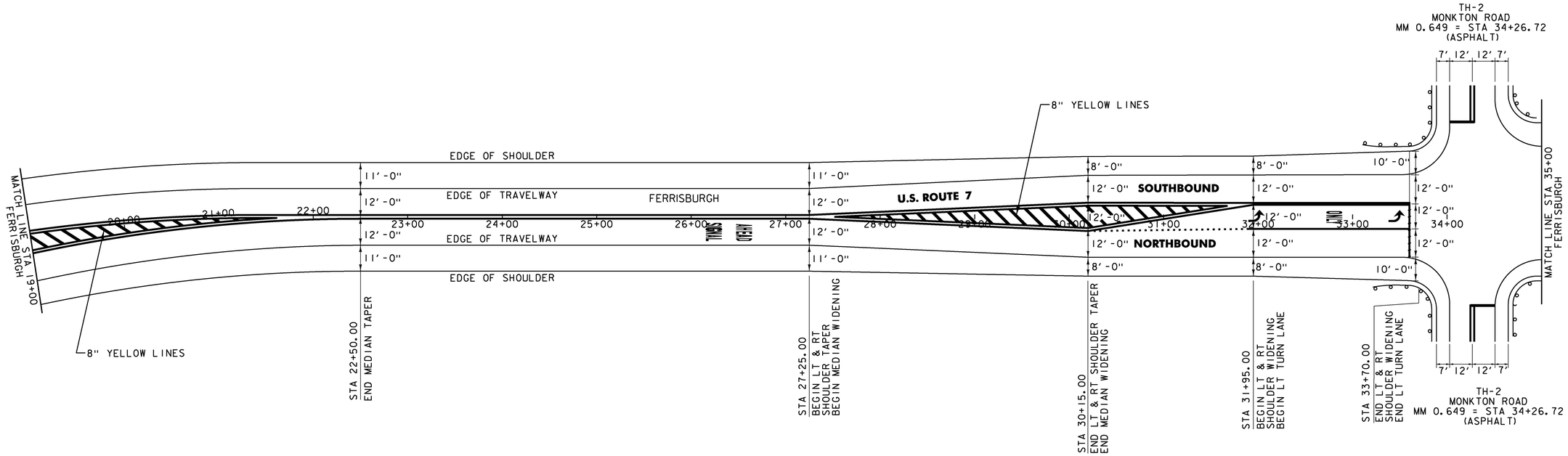
TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
FERRISBURGH:
STA 19+00.00 - STA 22+50.00 HATCHED MEDIAN RT
STA 27+25.00 - STA 31+95.00 HATCHED MEDIAN RT

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

FERRISBURGH:
STA 26+24.00 RT, "SIGNAL" (6 EA)
STA 26+56.00 RT, "AHEAD" (5 EA)
STA 31+99.30 RT, ARROW (1EA)
STA 32+75.6 RT, "ONLY" (4 EA)
STA 33+51.80 RT, ARROW (1EA)

TEMPORARY LETTER OR SYMBOL, PAINT

FERRISBURGH:
STA 26+24.00 RT, "SIGNAL" (6 EA)
STA 26+56.00 RT, "AHEAD" (5 EA)
STA 31+99.30 RT, ARROW (1EA)
STA 33+51.80 RT, ARROW (1EA)



TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

FERRISBURGH:
STA 33+61.00 RT
STA 34+26.72 LT, TH-2
STA 34+26.72 RT, TH-2

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 40	SHEET 54 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:
STA 35+00.00 - STA 51+00.00 LT & RT
STA 35+12.00 - STA 36+75.00 SOLID LANE LINE LT
STA 35+12.00 - STA 36+75.00 SOLID LANE LINE LT
STA 36+75.00 - STA 38+55.00 DOTTED LT
STA 36+75.00 - STA 38+55.00 DOTTED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 41+80.00 - STA 43+50.00	S	-	S
STA 43+50.00 - STA 51+00.00	S	-	D

STA 35+10.00 - STA 36+75.00 DOUBLE SOLID RT
STA 36+75.00 - STA 41+80.00 DOUBLE SOLID MEDIAN LT&RT

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

FERRISBURGH:
STA 36+75.0 - STA 41+80.0 HATCHED MEDIAN LT&RT

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

FERRISBURGH:
STA 35+11.0 LT/RT

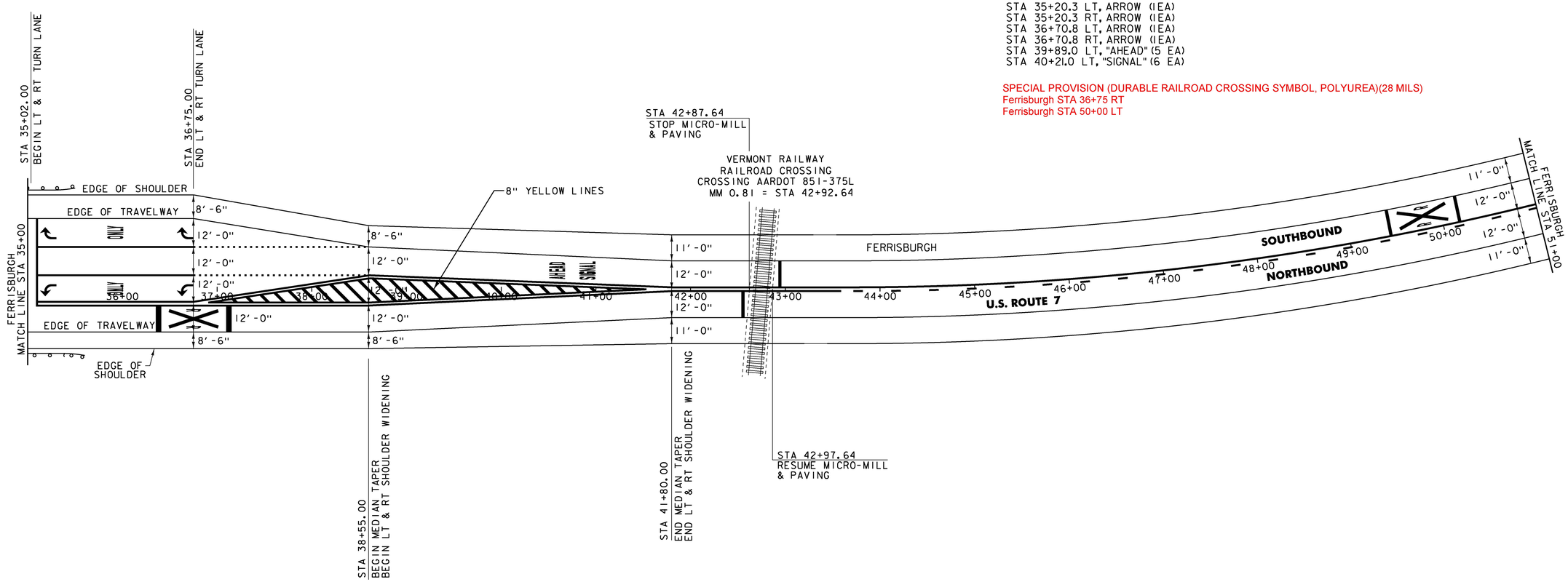
MILLED RUMBLE STRIPS (CENTERLINE)

FERRISBURGH:
~~STA. 43+85.00~~ - STA. 51+00.00
STA. 44+00.00

TEMPORARY LETTER OR SYMBOL, PAINT

FERRISBURGH:
STA 35+20.3 LT, ARROW (1EA)
STA 35+20.3 RT, ARROW (1EA)
STA 36+70.8 LT, ARROW (1EA)
STA 36+70.8 RT, ARROW (1EA)
STA 39+89.0 LT, "AHEAD" (5 EA)
STA 40+21.0 LT, "SIGNAL" (6 EA)

SPECIAL PROVISION (DURABLE RAILROAD CROSSING SYMBOL, POLYUREA)(28 MILS)
Ferrisburgh STA 36+75 RT
Ferrisburgh STA 50+00 LT



NOTE:

1. FOR RAILROAD PAVEMENT MARKING LAYOUT, SEE SIGNING AND STRIPING, PLAN B.

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBO, THERMOPLASTIC

FERRISBURGH:
STA 35+20.3 LT, ARROW (1EA)
STA 35+20.3 RT, ARROW (1EA)
STA 35+95.6 LT, "ONLY" (4 EA)
STA 35+95.6 RT, "ONLY" (4 EA)
STA 36+70.8 LT, ARROW (1EA)
STA 36+70.8 RT, ARROW (1EA)
STA 39+89.0 LT, "AHEAD" (5 EA)
STA 40+21.0 LT, "SIGNAL" (6 EA)

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 41	SHEET 55 OF 96

MILLED RUMBLE STRIPS (CENTERLINE)

FERRISBURGH:
STA. 51+00.00 - STA. 67+00.00

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

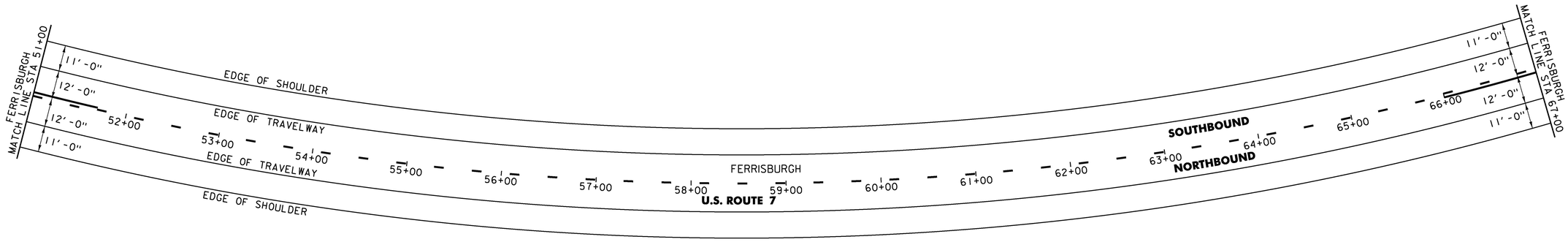
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 51+00.00 - STA 67+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 51+00.00 - STA 51+69.00	S	-	D
STA 51+69.00 - STA 66+00.00	-	D	-
STA 66+00.00 - STA 67+00.00	D	-	S



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 42	SHEET 56 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 67+00.00 - STA 83+00.00 EDGE LINE LT & RT
STA 76+00.00 - STA 77+80.00 DOTTED LANE LINE RT
STA 77+80.00 - STA 79+35.00 SOLID LANE LINE RT
STA 82+55.00 - STA 83+00.00 SOLID LANE LINE LT

TEMPORARY 8 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)

FERRISBURGH:
STA 81+40.00 - STA 82+55.00 GORE AREA LT

TEMPORARY LETTER OR SYMBOL, PAINT

FERRISBURGH:
STA 71+60.0 RT, "SIGNAL" (6 EA)
STA 71+92.0 RT, "AHEAD" (5 EA)
STA 77+14.08 RT, TH-45 "STOP" (4 EA)
STA 77+84.3 RT, ARROW (2 EA)
STA 79+26.8 RT, ARROW (2 EA)
STA 81+59.0 LT, "AHEAD" (5 EA)
STA. 81+91.0 LT, "Y,I,E,L,D" (5 EA)
STA 82+07.8 LT, ARROW (1EA)

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:

	LT	℄	RT
STA 67+00.00 - STA 70+00.00		D -	S

STA 70+00.00 - STA 77+00.00 DOUBLE SOLID MEDIAN CL & RT
STA 77+14.08 DOUBLE SOLID RT, TH-45
STA 77+40.00 - STA 79+35.00 DOUBLE SOLID MEDIAN CL & RT
STA 80+55.00 - STA 83+00.00 DOUBLE SOLID MEDIAN CL & RT

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

FERRISBURGH:
STA 70+00.00 - STA 77+00.00 HATCHED MEDIAN RT
STA 77+40.00- STA 79+35.00 HATCHED MEDIAN RT
STA 80+55.00 - STA 83+00.00 HATCHED MEDIAN RT

MILLED RUMBLE STRIPS (CENTERLINE)

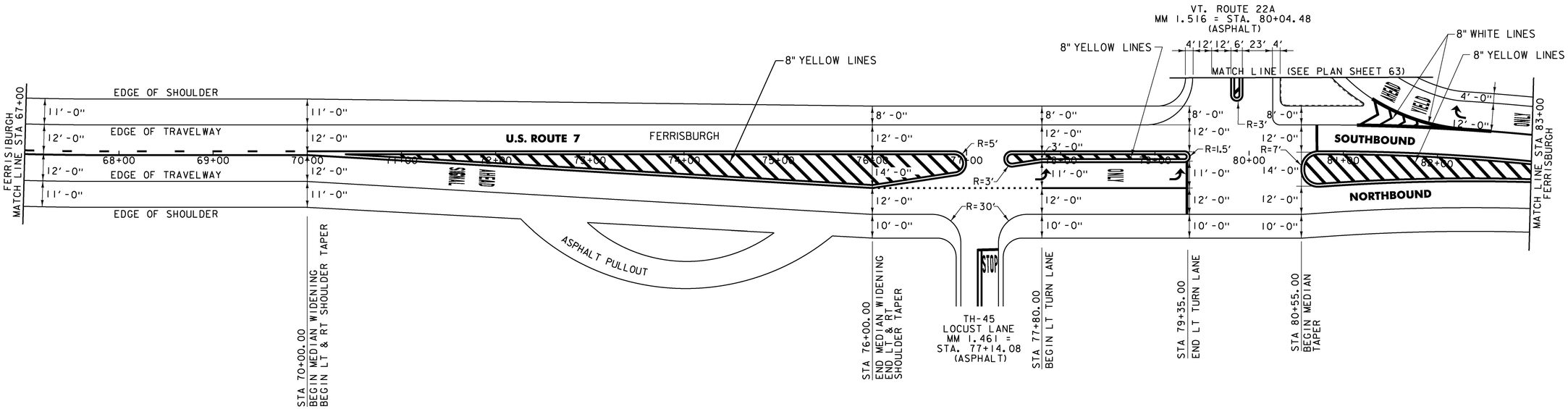
FERRISBURGH:
STA. 67+00.00 - STA. 70+00.00

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

FERRISBURGH:
STA 71+60.0 RT, "SIGNAL" (6 EA)
STA 71+92.0 RT, "AHEAD" (5 EA)
STA 77+14.08 RT, TH-45 "STOP" (4 EA)
STA 77+84.3 RT, ARROW (1EA)
STA 78+57.5 RT, "ONLY" (4 EA)
STA 79+26.8 RT, ARROW (1EA)
STA 81+59.0 LT, "AHEAD" (5 EA)
STA. 81+91.0 LT, "Y,I,E,L,D" (5 EA)
STA 82+07.8 LT, ARROW (1EA)
STA 82+95.3 LT, "ONLY" (4 EA)

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)

FERRISBURGH:
STA 77+14.08 RT, TH-45
STA 79+36.00 RT
STA 80+62.00 LT



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 43	SHEET 57 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 83+00.00 - STA 99+00.00 LT & RT
STA 83+00.00 - STA 85+65.00 SOLID LT
STA 85+65.00 - STA 89+50.00 DOTTED LT

TEMPORARY LETTER OR SYMBOL, PAINT

FERRISBURGH:
STA 83+82.80 LT, ARROW (1EA)
STA 85+57.80 LT, ARROW (1EA)
STA 89+49.00 LT, "AHEAD" (5 EA)
STA 89+81.00 LT, "SIGNAL" (6 EA)

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 85+65.00 - STA 89+76.00	S	-	S
STA 89+76.00 - STA 96+62.00	S	-	D
STA 96+62.00 - STA 99+00.00	S	-	S

STA 83+00.00 - STA 85+65.00 DOUBLE SOLID MEDIAN CL & RT

MILLED RUMBLE STRIPS (CENTERLINE)

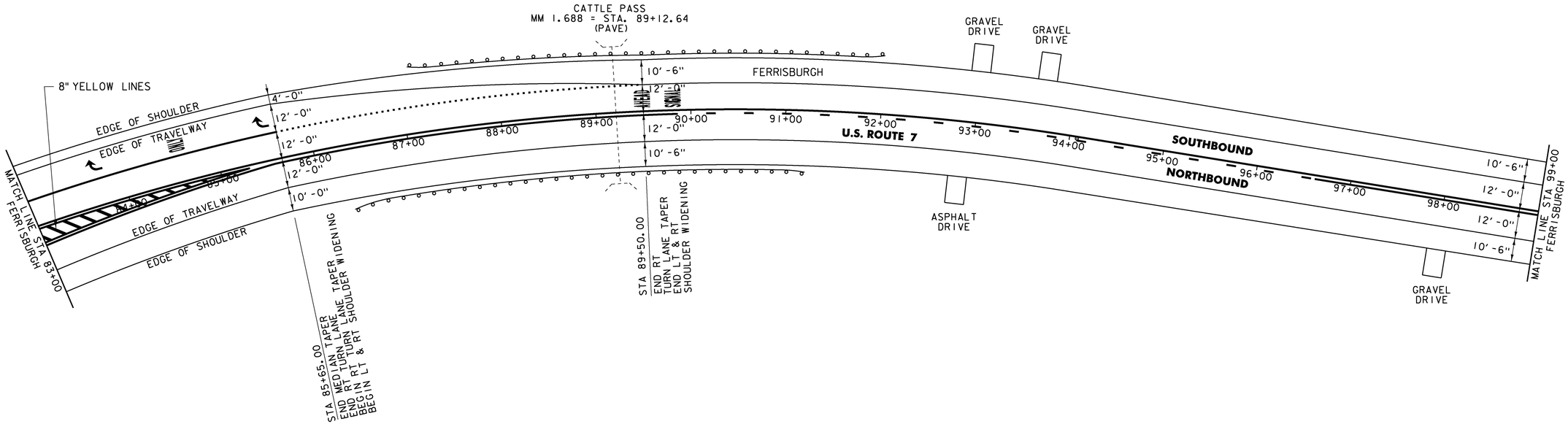
FERRISBURGH:
~~STA. 89+76.00 - STA. 95+04.00~~
STA. 89+75.00 - STA. 99+00.00

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

FERRISBURGH:
STA 83+82.80 LT, ARROW (1EA)
STA 84+70.30 LT, "ONLY" (4 EA)
STA 85+57.80 LT, ARROW (1EA)
STA 89+49.00 LT, "AHEAD" (5 EA)
STA 89+81.00 LT, "SIGNAL" (6 EA)

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

FERRISBURGH:
STA 83+00.00 LT- STA 85+65.00 HATCHED MEDIAN RT



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 44	SHEET 58 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 99+00.00 - STA 115+00.00 LT & RT

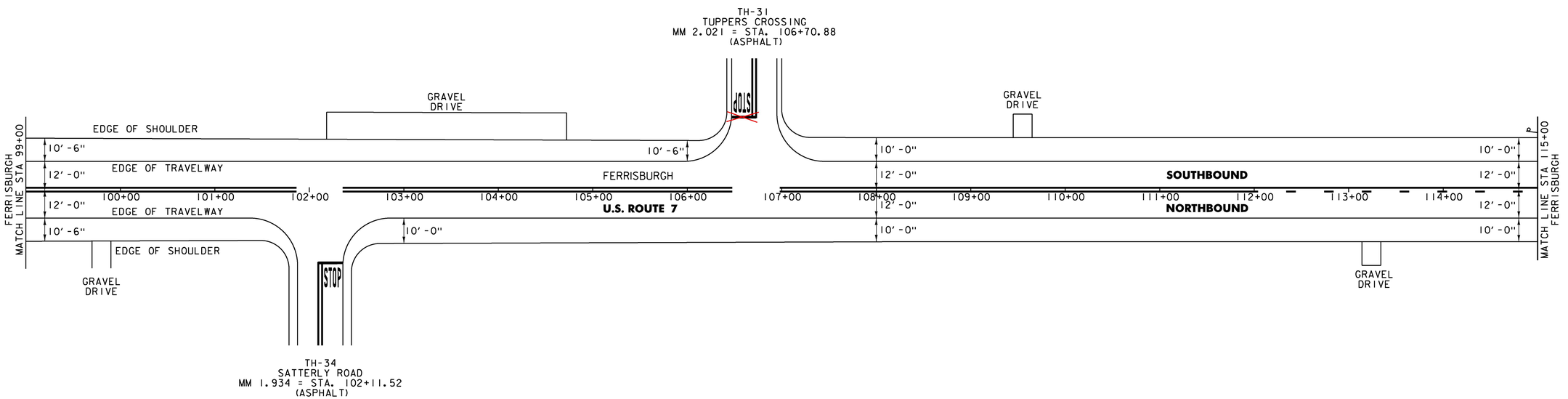
TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 99+00.00 - STA 111+94.00	S	-	S
STA 111+94.00 - STA 115+00.00	S	-	D
STA 102+11.52 DOUBLE SOLID RT, TH-34			
STA 106+70.88 DOUBLE SOLID LT, TH-31			

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
~~STA. 102+43.00 - STA. 106+50.88~~
~~STA. 106+90.88 - STA. 115+00.00~~
STA. 99+00.00 - STA. 99+84.00
STA. 102+50.00 - STA. 106+61.00
STA. 107+00.00 - STA. 115+00.00

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC
FERRISBURGH:
STA 102+11.52 RT, TH-34
~~STA 106+70.88 LT, TH-31~~

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
FERRISBURGH:
STA 102+11.52 RT, TH-34 "STOP" (4 EA)
STA 106+70.88 LT, TH-31 "STOP" (4 EA)



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

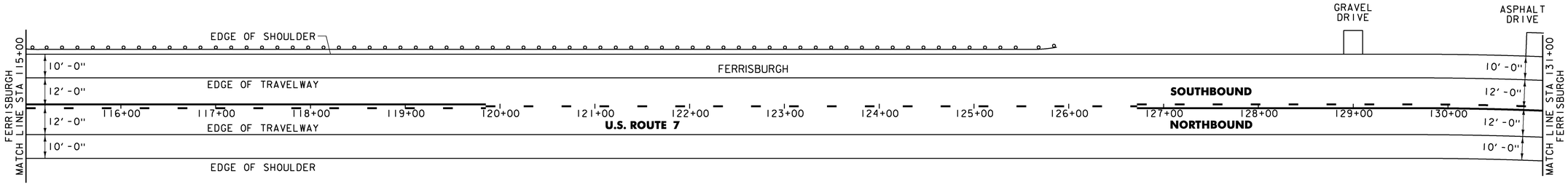
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 45	SHEET 59 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 115+00.00 - STA 131+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 115+00.00 - STA 119+85.00	S	-	D
STA 119+85.00 - STA 126+72.00	-	D	-
STA 126+72.00 - STA 131+00.00	D	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
STA. 115+00.00 - STA. 131+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

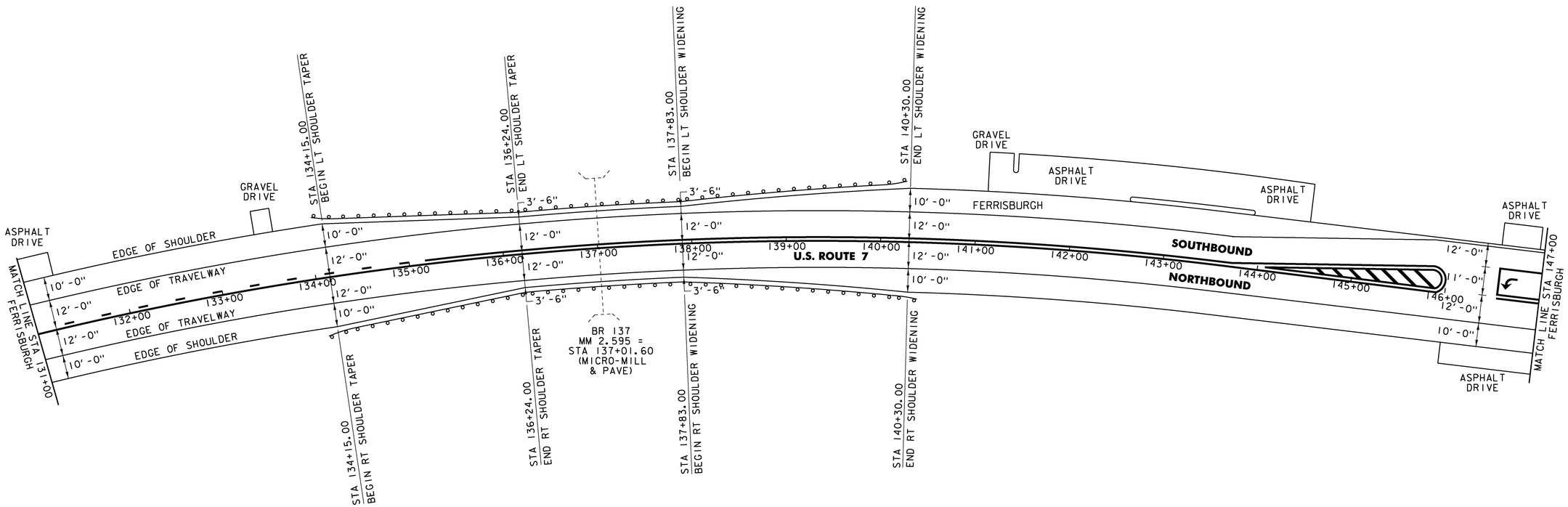
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 46	SHEET 60 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 131+00.0 - STA 147+00.0 LT & RT
STA 146+54.0 - STA 147+00.0 SOLID LT.

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 131+00.0 - STA 135+17.0	D	-	S
STA 135+17.0 - STA 143+72.0	S	-	S
STA 146+54.0 - STA 147+00.0	S	-	S
STA 143+72.0 - STA 145+97.0 DOUBLE SOLID MEDIAN LT/RT			

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
~~STA. 131+00.00 - STA. 132+53.00~~
~~STA. 134+64.00 - STA. 142+03.00~~
STA. 131+00.00 - STA. 131+63.00
STA. 134+00.00 - STA. 142+00.00



TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
FERRISBURGH:
STA 146+68.0 LT. ARROW (1EA)

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
FERRISBURGH:
STA 143+72.0 - STA 145+97.0 HATCHED MEDIAN LT/RT

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC
FERRISBURGH:
STA 146+54.0 LT

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 47	SHEET 61 OF 96

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

FERRISBURGH:
STA 147+17.00 LT "ONLY" (4 EA)
STA 147+78.00 LT ARROW (1EA)
STA 148+40.00 LT "ONLY" (4 EA)
STA 148+93.00 LT ARROW (1EA)
STA 149+57.00 LT ARROW (1EA)
STA 150+18.00 LT "ONLY" (4 EA)
STA 150+75.00 LT ARROW (1EA)
STA 159+52.98 RT "SIGNAL" (6 EA)
STA 159+69.43 RT "AHEAD" (5 EA)
STA 161+97.49 CL ARROW (1EA)
STA 162+70.95 CL "ONLY" (4 EA)

SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 147+00.00 - STA 163+00.00 EDGE LINE LT & RT
STA 147+00.00 - STA 149+04.00 SOLID LT
STA 149+43.00 - STA 150+93.00 SOLID LT
STA 150+93.00 - STA 152+68.00 DOTTED LT
STA 160+12.00 - STA 161+92.00 DOTTED RT
STA 161+92.00 - STA 163+00.00 SOLID RT

SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

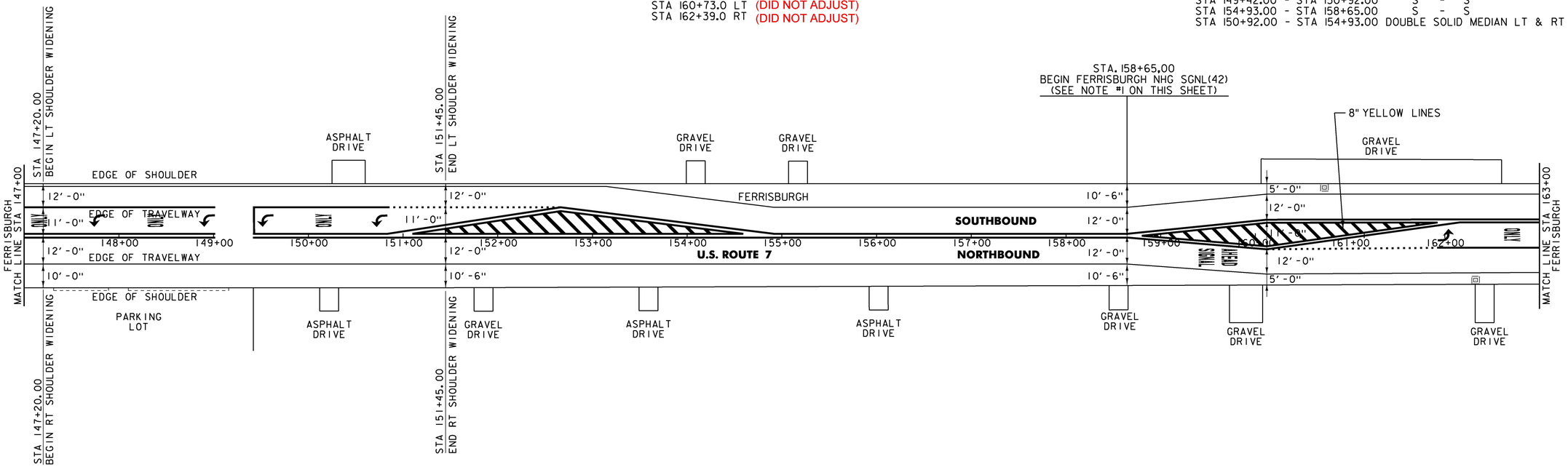
FERRISBURGH:	LT	℄	RT
STA 147+00.00 - STA 149+01.00	S	-	S
STA 149+42.00 - STA 150+92.00	S	-	S
STA 154+93.00 - STA 158+65.00	S	-	S
STA 150+92.00 - STA 154+93.00 DOUBLE SOLID MEDIAN LT & RT			
STA 158+65.00 - STA 161+92.00 DOUBLE SOLID MEDIAN LT & RT			
STA 161+92.00 - STA 163+00.00 DOUBLE SOLID LT			

CHANGING ELEV. OF DROP INLETS, CATCH BASINS, OR MANHOLES

FERRISBURGH:
STA 160+73.0 LT (DID NOT ADJUST)
STA 162+39.0 RT (DID NOT ADJUST)

TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 147+00.00 - STA 149+01.00	S	-	S
STA 149+42.00 - STA 150+92.00	S	-	S
STA 154+93.00 - STA 158+65.00	S	-	S
STA 150+92.00 - STA 154+93.00 DOUBLE SOLID MEDIAN LT & RT			



TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 147+00.00 - STA 158+65.00 EDGE LINE LT & RT
STA 147+00.00 - STA 149+04.00 SOLID LT
STA 149+43.00 - STA 150+93.00 SOLID LT
STA 150+93.00 - STA 152+68.00 DOTTED LT

SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

FERRISBURGH:
STA 158+65.00 - STA 161+92.00 HATCHED MEDIAN LT & RT
STA 150+92.00 - STA 154+93.00 HATCHED MEDIAN LT & RT

TEMPORARY 8 INCH YELLOW LINE, PAINT

FERRISBURGH:
STA 150+92.00 - STA 154+93.00 HATCHED MEDIAN LT & RT

NOTE:

1. A NEW SIGNAL WILL BE INSTALLED AT THE INTERSECTION OF US RTE. 7 AND LITTLE CHICAGO ROAD/MIDDLE BROOK ROAD AS PART OF THE NHG SGNL(42) PROJECT. TEMPORARY MARKINGS WITHIN THE NHG SGNL(42) PROJECT SHALL BE INSTALLED AS PART OF THAT PROJECT.

TEMPORARY LETTER OR SYMBOL, PAINT

FERRISBURGH:
STA 147+78.0 LT ARROW (1EA)
STA 148+93.0 LT ARROW (1EA)
STA 149+57.0 LT ARROW (1EA)
STA 150+75.0 LT ARROW (1EA)

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

FERRISBURGH:
STA 149+43.00 LT

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 48	SHEET 62 OF 96

SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 163+00.00 - STA 179+00.00 EDGE LINE LT & RT
STA 163+00.00 - STA 163+80.00 SOLID RT
STA 165+59.00 - STA 167+26.00 SOLID LT
STA 167+26.00 - STA. 169+06.00 DOTTED LT

TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 170+53.00 - STA. 179+00.00 EDGE LINE LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 170+53.00 - STA 179+00.00	S	-	S

SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 170+53.00 - STA 179+00.00	S	-	S

STA 163+00.00 - STA 163+52.00 DOUBLE SOLID LT
STA 165+79.00 - STA 167+26.00 DOUBLE SOLID RT
STA 167+26.00 - STA 170+53.00 DOUBLE SOLID MEDIAN LT & RT
STA 10+80.00 - STA 11+50.00 DOUBLE SOLID LT (TH-5)
STA 20+80.00 - STA 20+92.00 DOUBLE SOLID RT (TH-14)

SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

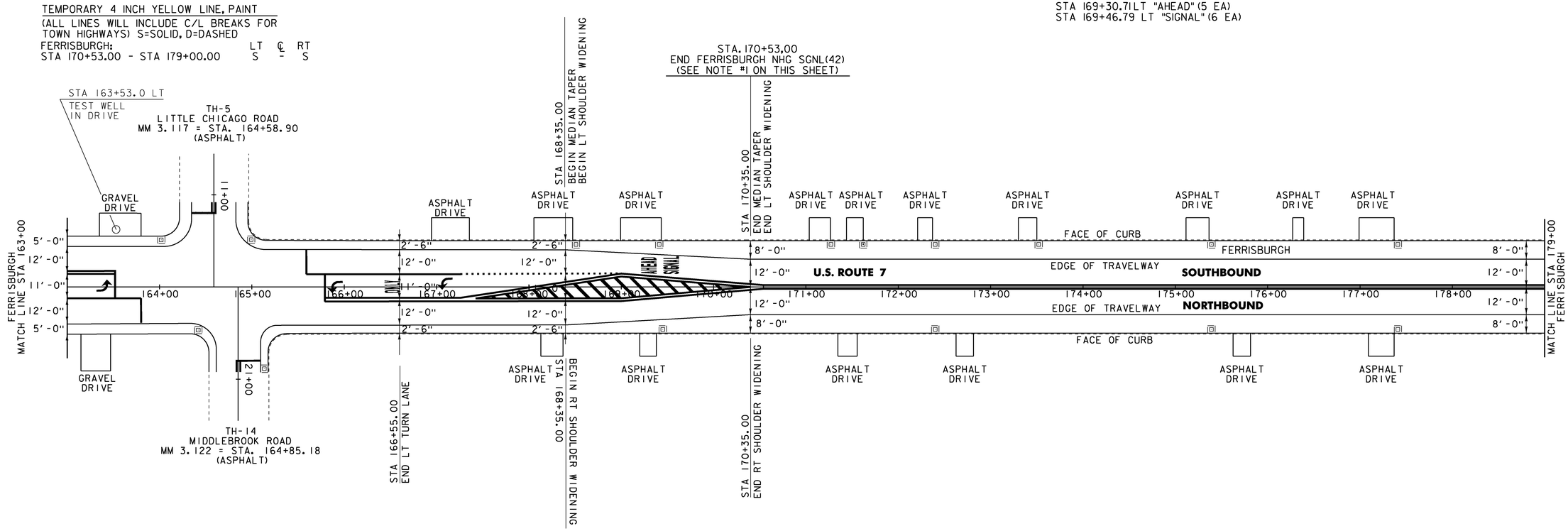
FERRISBURGH:
STA 167+26.00 - STA 170+53.00 HATCHED MEDIAN LT & RT

SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC

FERRISBURGH:
STA 163+52.00 CL
STA 163+80.00 RT
STA 10+80.00 LT (TH-5)
STA 20+80.00 LT (TH-14)
STA 165+59.00 CL
STA 165+79.00 LT

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

FERRISBURGH:
STA 163+40.79 CL ARROW (1EA)
STA 165+87.52 CL ARROW (1EA)
STA 166+52.03 CL "ONLY" (4 EA)
STA 167+10.27 CL ARROW (1EA)
STA 169+30.71LT "AHEAD" (5 EA)
STA 169+46.79 LT "SIGNAL" (6 EA)



CHANGING ELEV. OF DROP INLETS, CATCH BASINS, OR MANHOLES

FERRISBURGH:
STA 164+42.0 RT
STA 164+70.0 LT
STA 165+67.0 LT
STA 165+95.0 RT (TH-14)
STA 168+51.0 LT
STA 169+41.0 LT
STA 169+45.0 RT
STA 171+27.0 LT
STA 171+62.0 LT
STA 172+40.0 LT
STA 172+40.0 RT
STA 173+52.0 LT
STA 175+39.0 LT
STA 175+39.0 RT
STA 177+41.0 LT
STA 177+41.0 RT

(DID NOT ADJUST)

NOTE:

1. A NEW SIGNAL WILL BE INSTALLED AT THE INTERSECTION OF US RTE. 7 AND LITTLE CHICAGO ROAD/MIDDLE BROOK ROAD AS PART OF THE NHG SGNL(42) PROJECT. TEMPORARY MARKINGS WITHIN THE NHG SGNL(42) PROJECT SHALL BE INSTALLED AS PART OF THAT PROJECT.

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

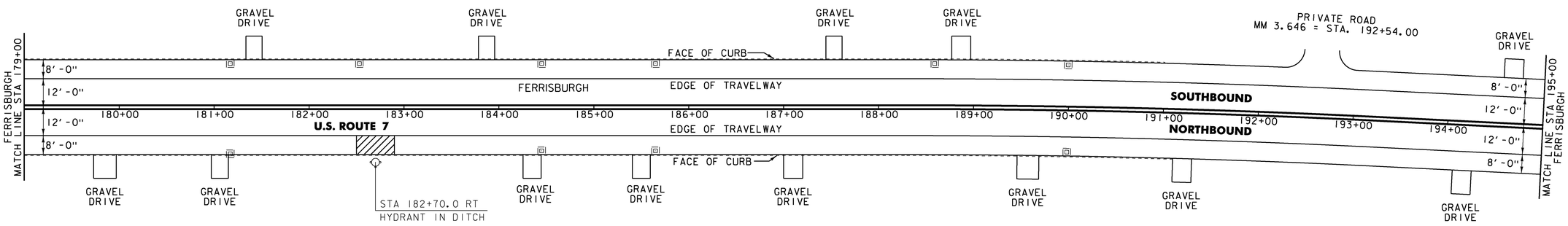
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 49	SHEET 63 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 179+00.00 - STA. 195+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
FERRISBURGH:

	LT	℄	RT
STA 179+00.00 - STA 195+00.00	S	-	S

TEMPORARY 8 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)
FERRISBURGH:
STA 182+64.00 - STA 182+76.00 RT. NO PARKING FIRE HYDRANT



CHANGING ELEV. OF DROP INLETS, CATCH BASINS, OR MANHOLES

FERRISBURGH:
STA 181+17.0 LT
STA 181+17.0 RT
STA 182+53.0 LT
STA 184+45.0 LT
STA 184+45.0 RT
STA 185+65.0 LT
STA 185+65.0 RT
STA 188+59.0 LT
STA 190+99.0 LT
STA 190+99.0 RT

(DID NOT ADJUST)

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

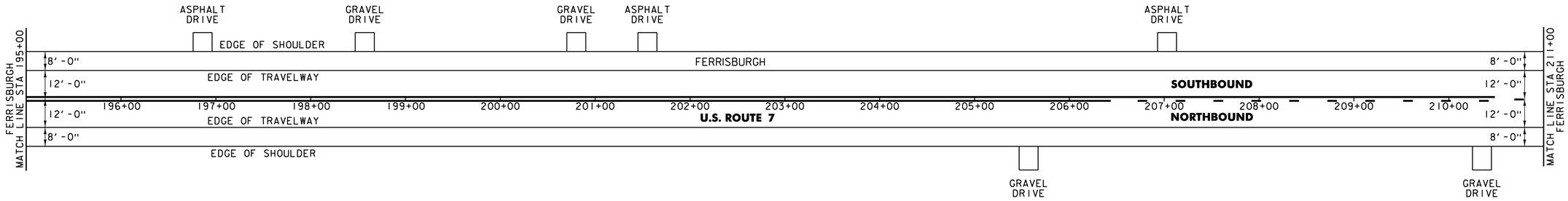
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 50	SHEET 64 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 195+00.00 - STA. 211+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 195+00.00 - STA 206+44.00	S	-	S
STA 206+44.00 - STA 210+44.00	S	-	D
STA 210+44.00 - STA 211+00.00	-	D	-

~~MILLED RUMBLE STRIPS (CENTERLINE)~~
~~FERRISBURGH:~~
~~STA. 206+45.00 - STA. 211+00.00~~



NOT TO SCALE

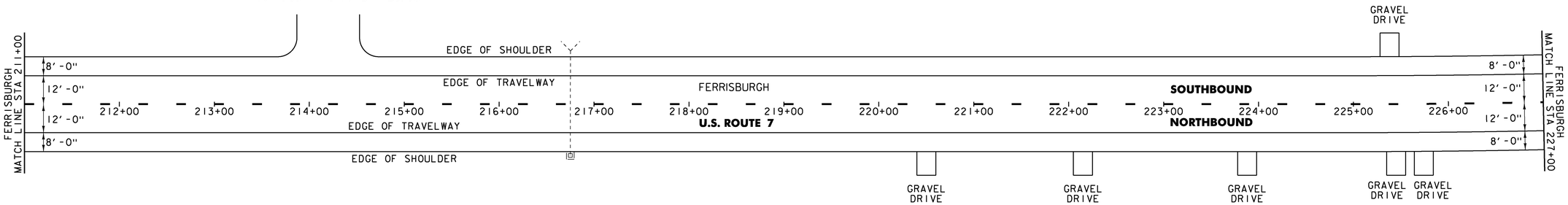
PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 51	SHEET 65 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 211+00.00 - STA. 227+00.00 EDGE LINE LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
FERRISBURGH: LT C RT
STA 211+00.00 - STA 227+00.00 - D -

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
~~STA. 211+00.00 - STA. 223+34.00~~
~~STA. 226+51.00 - STA. 227+00.00~~
STA. 213+62.00 - STA. 223+21.00
STA. 226+00.00 - STA. 227+00.00



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PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 52	SHEET 66 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 227+00.00 - STA. 243+00.00 LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
STA. 227+00.00 - STA. ~~238+66.00~~ 239+15.00

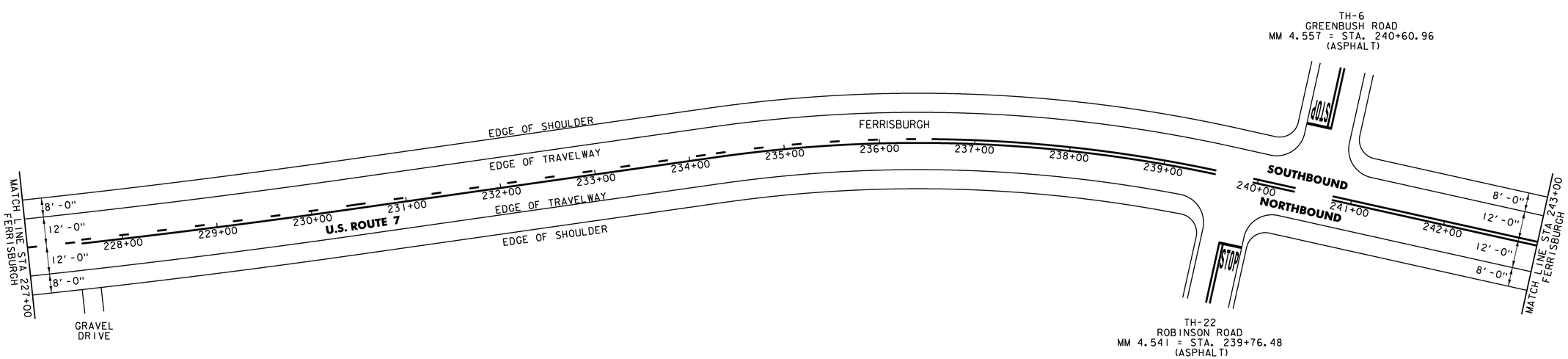
TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 227+00.00 - STA 227+57.00	-	D	-
STA 227+57.00 - STA 236+55.00	D	-	S
STA 236+55.00 - STA 243+00.00	S	-	S

STA 239+76.48 DOUBLE SOLID RT, TH-22
STA 240+60.96 DOUBLE SOLID LT, TH-6

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC
FERRISBURGH:
STA 239+76.48 RT, TH-22
STA 240+60.96 LT, TH-6

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
FERRISBURGH:
STA 239+76.48 RT, TH-22 "STOP" (4 EA)
STA 240+60.96 LT, TH-6 "STOP" (4 EA)



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PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 53	SHEET 67 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)

(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

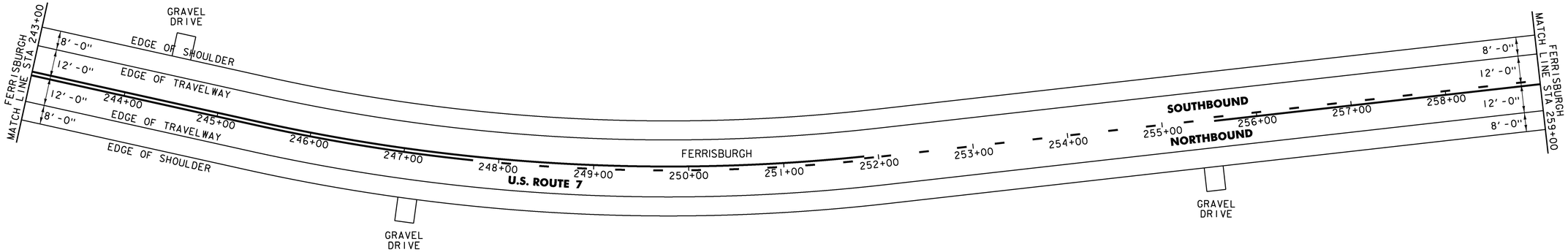
FERRISBURGH:
STA 243+00.00 - STA. 259+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)

(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 243+00.00 - STA 247+63.00	S	-	S
STA 247+63.00 - STA 251+85.00	S	-	D
STA 251+85.00 - STA 255+55.00	-	D	-
STA 255+55.00 - STA 259+00.00	D	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
~~STA. 244+46.00~~ - STA. 259+00.00
STA. 245+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 54	SHEET 68 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 259+00.00 - STA. 275+00.00 LT & RT

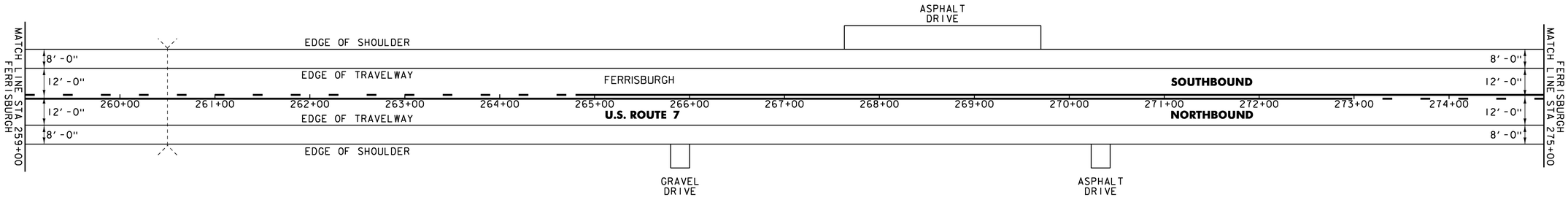
TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 259+00.00 - STA 264+80.00	D	-	S
STA 264+80.00 - STA 272+98.00	S	-	S
STA 272+98.00 - STA 275+00.00	S	-	D

MILLED RUMBLE STRIPS (CENTERLINE)

FERRISBURGH:
~~STA. 259+00.00 - STA. 264+00.00~~
~~STA. 269+28.00 - STA. 274+56.00~~

STA. 259+00.00 - STA. 264+43.00
STA. 269+80.00 - STA. 275+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
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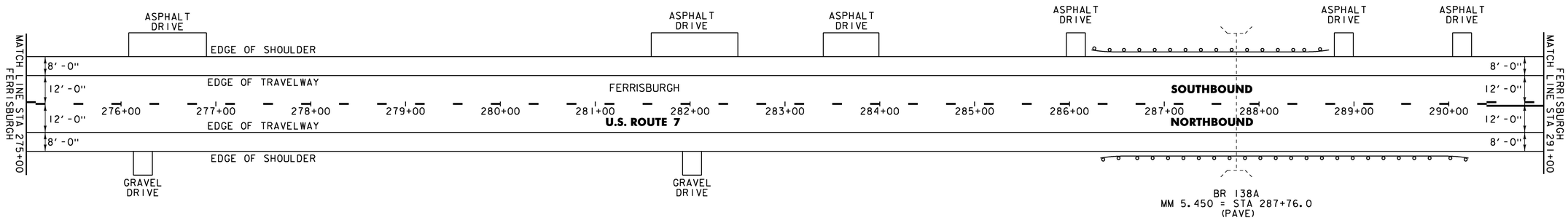
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 55	SHEET 69 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 275+00.00 - STA. 291+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 275+00.00 - STA 275+10.00	S	-	D
STA 275+10.00 - STA 290+40.00	-	D	-
STA 290+40.00 - STA 291+00.00	D	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURG:
STA. 275+00.00 - STA. 275+30.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 56	SHEET 70 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 291+00.00 - STA. 307+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
FERRISBURGH:

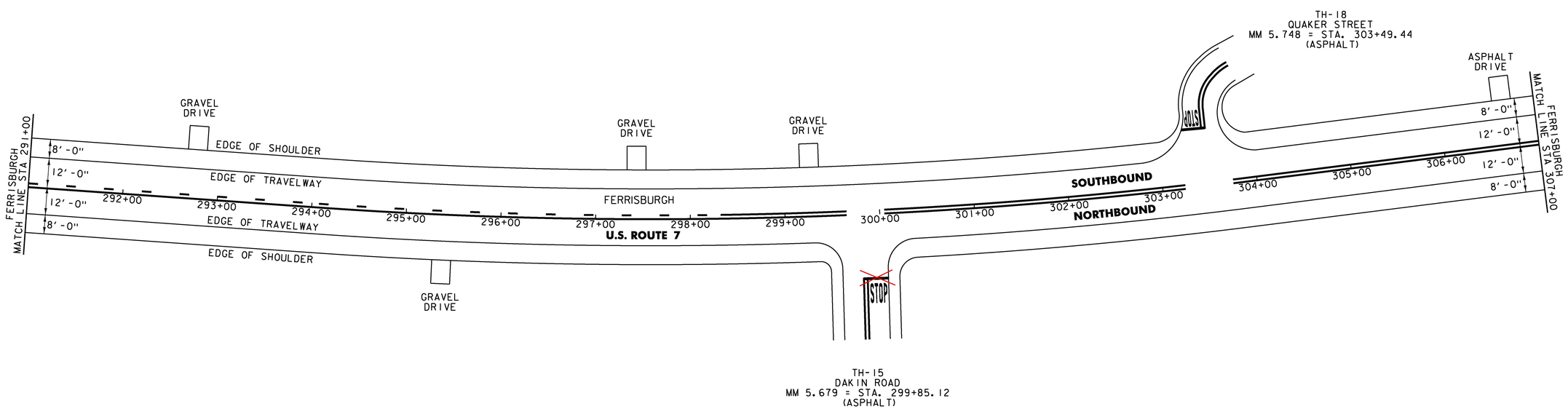
	LT	℄	RT
STA 291+00.00 - STA 298+32.00	D	-	S
STA 298+32.00 - STA 307+00.00	S	-	S

STA 299+85.12 DOUBLE SOLID RT, TH-15

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR
DURABLE 24 INCH STOP BAR, THERMOPLASTIC
FERRISBURGH:
STA 299+85.12 RT, TH-15

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
~~STA. 299+38.00 - STA. 299+65.00~~
~~STA. 300+05.00 - STA. 303+29.44~~
~~STA. 303+69.44 - STA. 305+71.00~~
STA. 300+10.00 - STA. 303+30.00
STA. 303+70.00 - STA. 306+50.00

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
FERRISBURGH:
STA 299+85.12 RT, TH-15 "STOP" (4 EA)
STA. 303+49.44 LT, TH-18 "STOP" (4 EA)



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
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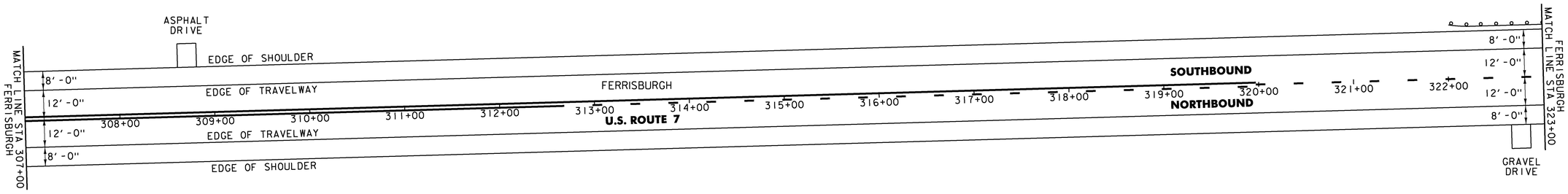
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 57	SHEET 71 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 307+00.00 - STA. 323+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 307+00.00 - STA 312+58.00	S	-	S
STA 312+58.00 - STA 319+97.00	S	-	D
STA 319+97.00 - STA 323+00.00	-	D	-

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
~~STA. 308+35.00~~ - STA. 323+00.00
STA. 310+35.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 58	SHEET 72 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 323+00.00 - STA. 339+00.00 LT & RT

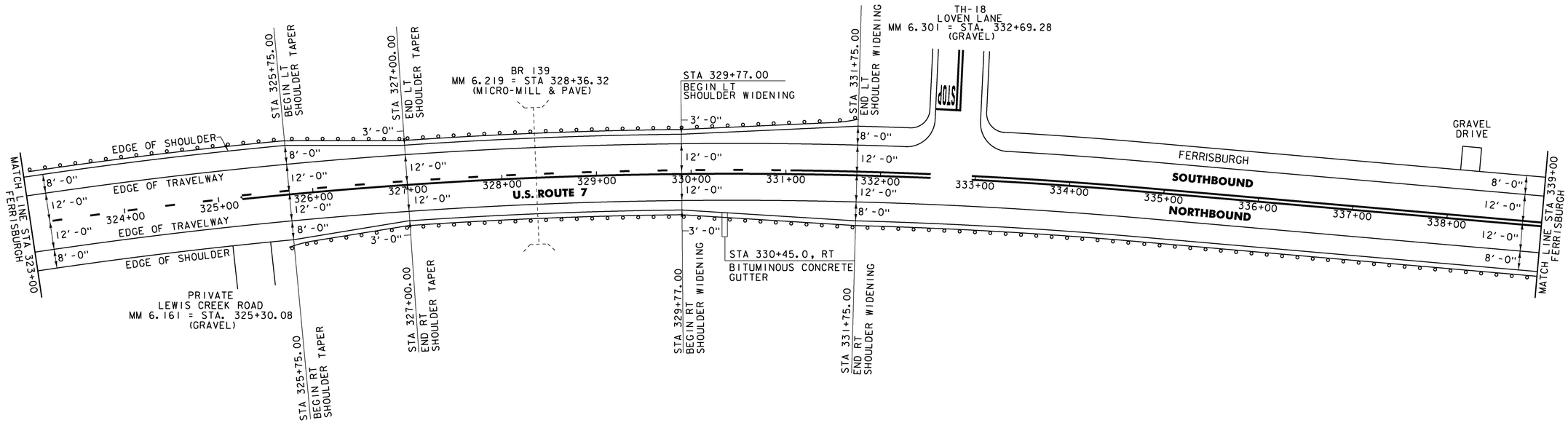
TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 323+00.00 - STA 325+25.00	-	D	-
STA 325+25.00 - STA 331+05.00	D	-	S
STA 331+05.00 - STA 339+00.00	S	-	S

TEMPORARY 24 INCH STOP BAR, PAINT
~~SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS) OR~~
~~DURABLE 24 INCH STOP BAR, THERMOPLASTIC~~
~~FERRISBURGH:~~
~~STA 332+69.28 LT, TH-18~~

TEMPORARY LETTER OR SYMBOL, PAINT
SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC
FERRISBURGH:
STA 332+69.28 LT, TH-18 "STOP" (4 EA)

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
~~STA. 323+00.00 - STA. 332+49.00~~
~~STA. 332+89.00 - STA. 339+00.00~~
STA. 323+00.00 - STA. 326+98.00
STA. 327+02.00 - STA. 329+98.00
STA. 330+02.00 - STA. 332+47.00
STA. 332+90.00 - STA. 339+00.00



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

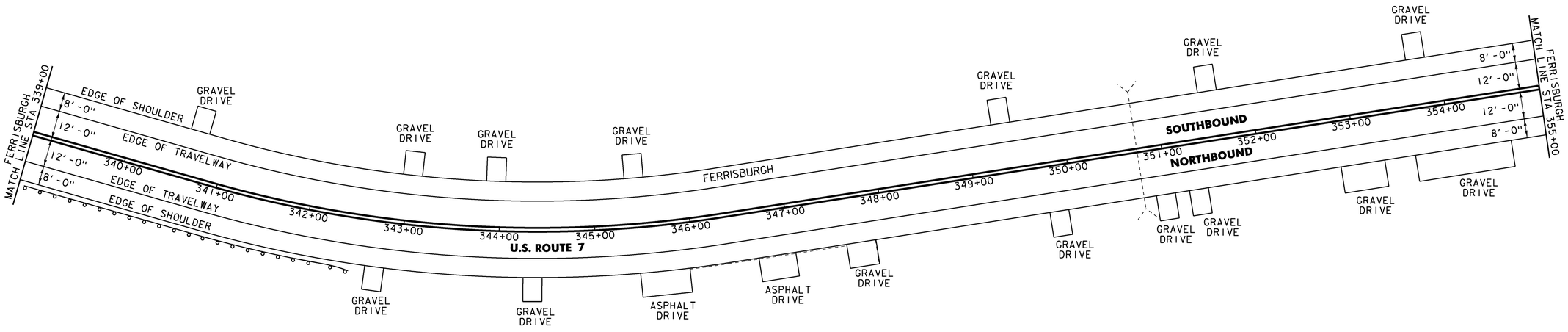
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 59	SHEET 73 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 339+00.00 - STA. 355+00.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:	LT	℄	RT
STA 339+00.00 - STA 355+00.00	S	-	S

MILLED RUMBLE STRIPS (CENTERLINE)
FERRISBURGH:
STA. 339+00.00 - STA. 341+09.00



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DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 60	SHEET 74 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
STA 355+00.00 - STA 371+00.00 LT & RT
STA 364+85.00 - STA 366+65.00 DOTTED RT
STA 366+65.00 - STA 367+40.00 SOLID LANE LINE RT
STA 367+80.00 - STA 368+55.00 SOLID LANE LINE LT
STA 368+55.00 - STA 370+35.00 DOTTED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED

FERRISBURGH:

	LT	℄	RT
STA 355+00.00 - STA 362+85.00	S	-	S
STA 362+85.00 - STA 366+65.00	DOUBLE SOLID	MEDIAN	LT & RT
STA 366+65.00 - STA 368+55.00	DOUBLE SOLID	CENTERLINE	
STA 368+55.00 - STA 371+00.00	DOUBLE SOLID	MEDIAN	LT & RT

STA 367+59.36 DOUBLE SOLID LT, TH-1
STA 367+59.36 DOUBLE SOLID RT, TH-1

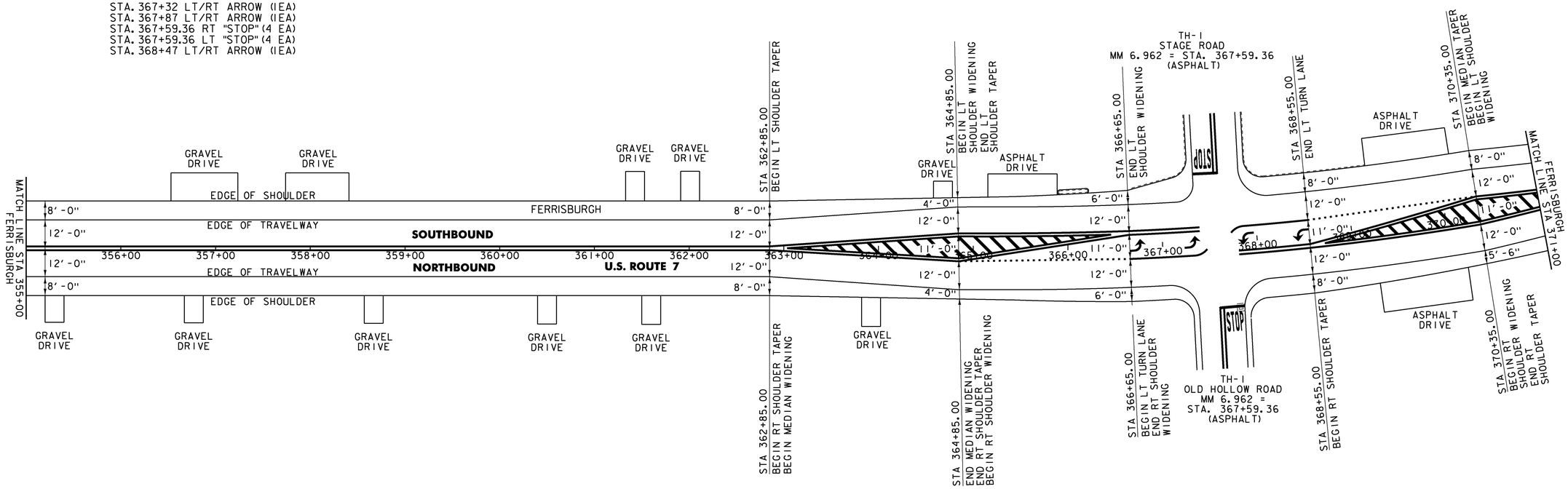
TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

FERRISBURGH:
STA 362+85.00 - STA 366+65.00 HATCHED MEDIAN LT & RT
STA 368+55.00 - STA 371+00.00 HATCHED MEDIAN LT & RT

SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
Ferrisburgh STA 367+59 LT = Stage Road
Ferrisburgh STA 367+59 RT = Old Hollow Road

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURABLE LETTER OR SYMBOL, THERMOPLASTIC

FERRISBURGH:
STA 366+75.3 LT/RT ARROW (1EA)
STA. 367+32 LT/RT ARROW (1EA)
STA. 367+87 LT/RT ARROW (1EA)
STA. 367+59.36 RT "STOP" (4 EA)
STA. 367+59.36 LT "STOP" (4 EA)
STA. 368+47 LT/RT ARROW (1EA)



TEMPORARY LETTER OR SYMBOL, PAINT

FERRISBURGH:
STA. 366+75.3 LT/RT ARROW (1EA)
STA. 367+32 LT/RT ARROW (1EA)
STA. 367+87 LT/RT ARROW (1EA)
STA. 367+59.36 RT "STOP" (4 EA)
STA. 367+59.36 LT "STOP" (4 EA)
STA. 368+47 LT/RT ARROW (1EA)

CHANGING ELEV. OF DROP INLETS, CATCH BASINS, OR MANHOLES

FERRISBURGH:
STA 367+65 RT (DID NOT ADJUST)

NOT TO SCALE

PROJECT NAME: MIDDLEBURY-FERRISBURGH
PROJECT NUMBER: NH SURF(55)

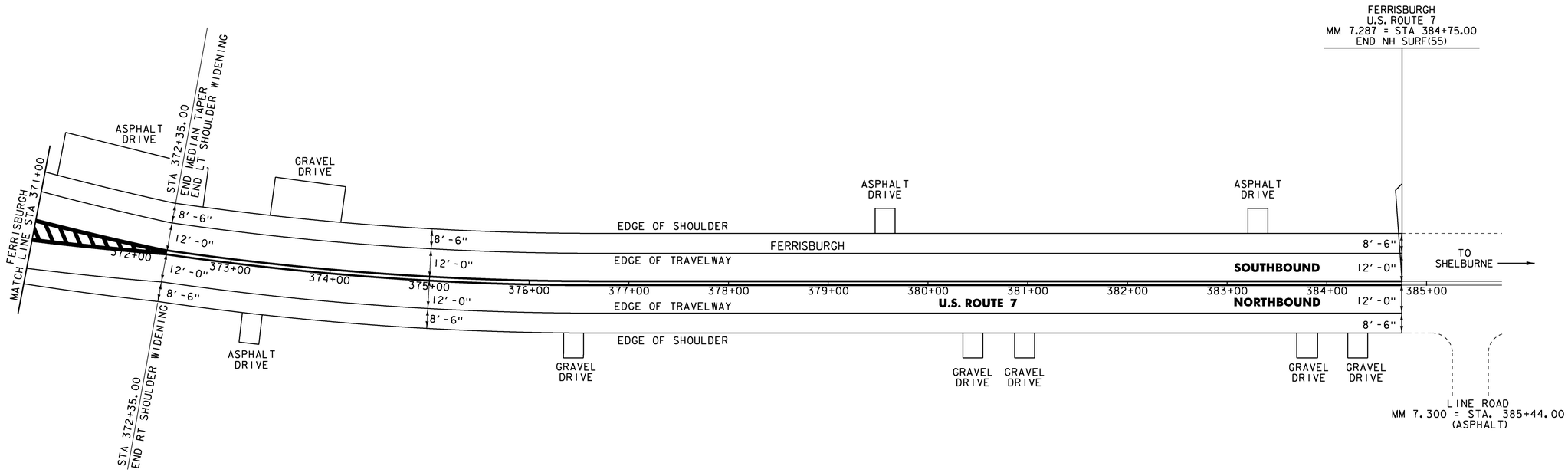
FILE NAME: pl5v015.dgn
PROJECT LEADER: J. HARRINGTON
DESIGNED BY: L. BULLOCK
PLAN SHEET 61

PLOT DATE: 16-MAR-2016
DRAWN BY: L. BULLOCK
CHECKED BY: J. HARRINGTON
SHEET 75 OF 96

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)
FERRISBURGH:
STA 371+00.00 - STA. 384+75.00 LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS) S=SOLID, D=DASHED
FERRISBURGH: LT ℄ RT
STA 372+35.00 - STA 384+75.00 S - S
STA 371+00.00 - STA 372+35.00 DOUBLE SOLID MEDIAN LT & RT

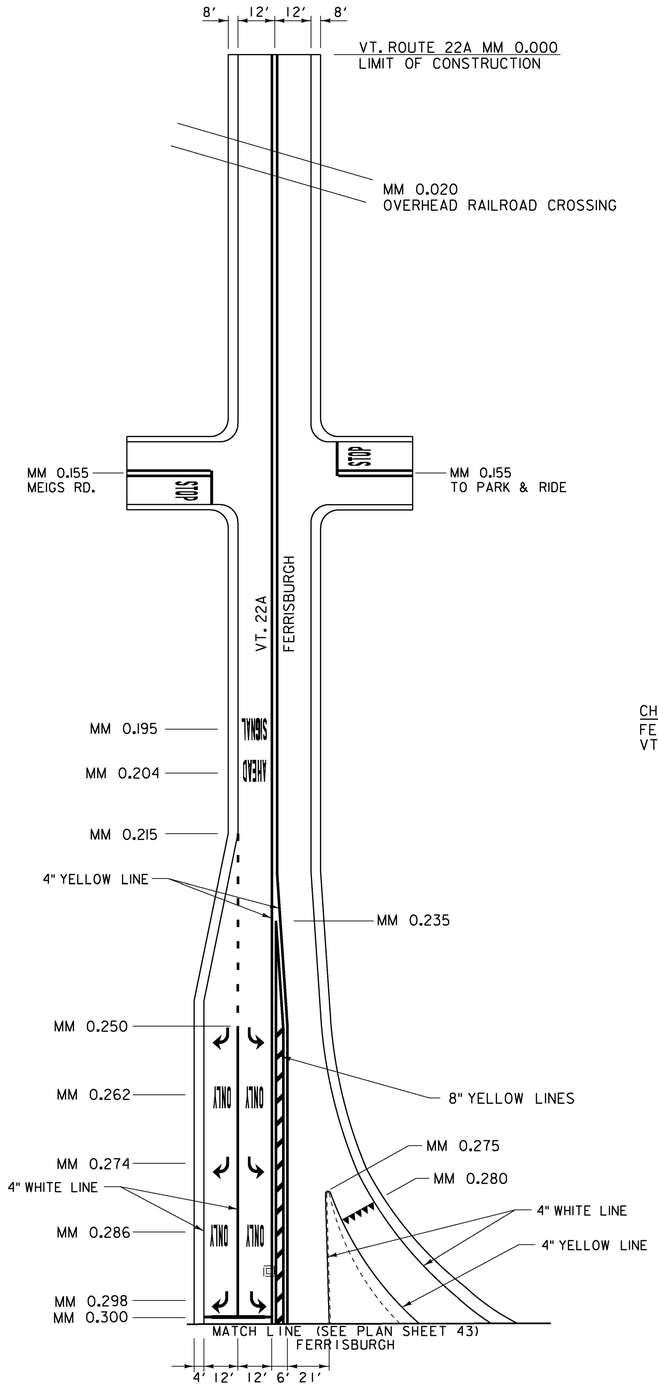
TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
FERRISBURGH:
STA 371+00.00 - STA 372+35.00 HATCHED MEDIAN LT & RT



NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: L. BULLOCK
DESIGNED BY: L. BULLOCK	CHECKED BY: J. HARRINGTON
PLAN SHEET 62	SHEET 76 OF 96



CHANGING ELEV. OF DI'S, CB'S OR MH'S
FERRISBURGH:
VT. 22A MM 0.295 RT (DID NOT ADJUST)

SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS) OR
DURBALE LETTER OR SYMBOL, THERMOPLASTIC

FERRISBURGH:
VT. 22A MM 0.298 RT, ARROW (1 EA)
VT. 22A MM 0.298 RT, ARROW (1 EA)
VT. 22A MM. 0.286 RT, "ONLY" (4 EA)
VT. 22A MM. 0.286 RT, "ONLY" (4 EA)
VT. 22A MM 0.274 RT, ARROW (1 EA)
VT. 22A MM 0.274 RT, ARROW (1 EA)
VT. 22A MM 0.262 RT, "ONLY" (4 EA)
VT. 22A MM 0.262 RT, "ONLY" (4 EA)
VT. 22A MM 0.250 RT, ARROW (1 EA)
VT. 22A MM 0.250 RT, ARROW (1 EA)
VT. 22A MM 0.280 LT, YIELD LINE (5 EA)
VT. 22A MM 0.204 RT, "AHEAD" (5 EA)
VT. 22A MM 0.195 RT, "SIGNAL" (6 EA)
VT. 22A MM 0.155 RT, "STOP" (4 EA)
VT. 22A MM 0.155 LT, "STOP" (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

FERRISBURGH:
VT. 22A MM 0.298 RT, ARROW (1EA)
VT. 22A MM 0.298 RT, ARROW (1EA)
VT. 22A MM 0.262 RT, ARROW (1EA)
VT. 22A MM 0.262 RT, ARROW (1EA)
VT. 22A MM 0.280 LT, YIELD LINE (5 EA)
VT. 22A MM 0.204 RT, "AHEAD" (5 EA)
VT. 22A MM 0.195 RT, "SIGNAL" (6 EA)
VT. 22A MM 0.155 RT, "STOP" (4 EA)
VT. 22A MM 0.155 LT, "STOP" (4 EA)

TEMPORARY 24 INCH STOP BAR, PAINT
SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)

FERRISBURGH:
VT. 22A MM 0.300 RT
VT. 22A MM 0.155 LT
VT. 22A MM 0.155 RT

TEMPORARY 4 INCH WHITE LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND
RADIUS FOR TOWN HIGHWAYS)

FERRISBURGH:
VT. 22A MM 0.000 - MM 0.300 (EDGE LINE LT)
VT. 22A MM 0.000 - MM 0.300 (EDGE LINE RT)
VT. 22A MM 0.250 - MM 0.300 (LANE LINE)
VT. 22A MM 0.215 - MM 0.250 (DOTTED LINE)
VT. 22A MM 0.275 - MM 0.300 (EDGE LINE LT)
VT. 22A MM 0.275 - MM 0.300 (EDGE LINE LT)

TEMPORARY 4 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
(ALL LINES WILL INCLUDE C/L BREAKS FOR
TOWN HIGHWAYS)

FERRISBURGH:
VT. 22A MM 0.000 - MM 0.235 (DOUBLE SOLID CENTERLINE)
VT. 22A MM 0.235 - MM 0.300 (DOUBLE SOLID MEDIAN)
VT. 22A MM 0.155 LT (TO PARK & RIDE)
VT. 22A MM 0.155 RT (MEIGS RD.)

TEMPORARY 8 INCH YELLOW LINE, PAINT
SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)

FERRISBURGH:
VT. 22A MM 0.250 - MM 0.300 (HATCHED MEDIAN)

NOT TO SCALE

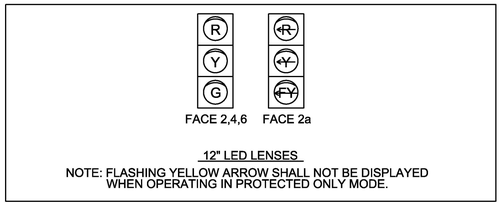
PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)

FILE NAME:	pl5v015.dgn	PLOT DATE:	16-MAR-2016
PROJECT LEADER:	J. HARRINGTON	DRAWN BY:	L. BULLOCK
DESIGNED BY:	L. BULLOCK	CHECKED BY:	J. HARRINGTON
PLAN SHEET 63		SHEET	77 OF 96

LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15 - (US ROUTES 7 & VT ROUTE 22A)	QUANTITY	REMARKS
METER DISCONNECT BREAKER	1	WITH BYPASS
GPS TIME CLOCK	1	INSTANTANEOUS UPDATING
TRAFFIC SIGNAL CONTROLLER (NEMA TS2)	1	SALVAGE EXIST. TO AOT DIST. SIGNAL TECH
NEW 12-INCH POLYCABONATE LED SIGNAL HEADS (TWO-WAY, 3-SECTION, VISORS, DISCONNECT HANGERS, 5" LOUVERED BACKPLATES WITH 1-1/2" RETROREFLECTIVE TAPE AND MOUNTING HARDWARE	2	FLAT BLACK FINISH SALVAGE EXIST. TO AOT DIST. SIGNAL TECH
NEW 12-INCH POLYCARBONATE LED SIGNAL HEADS (ONE-WAY, 3-SECTION, VISORS, DISCONNECT HANGERS, 5" LOUVERED BACKPLATES WITH 1-1/2" RETROREFLECTIVE TAPE AND MOUNTING HARDWARE.	3	FLAT BLACK FINISH SALVAGE EXIST. TO AOT DIST. SIGNAL TECH
NEMA P44 BASE MOUNTED CONTROLLER CABINET WITH 15-INCH EXTENDED BASE ON A CONCRETE FOUNDATION, PAINTED FLAT BLACK WITH ANCILLARY EQUIPMENT	1	SEE STD E-171B SALVAGE EXIST. POLE MOUNTED TO AOT DIST. SIGNAL TECH
DETECTOR ASSEMBLY	4-6	AS REQUIRED
VEHICLE DETECTOR PROCESSOR (CARDS)	1-4	AS REQUIRED
STRAIN POLE CAP	2	SALVAGE EXIST. LIGHT ASSEMBLY TO AOT DIST. SIGNAL TECH
SPAN WIRE	160	SEE STD E-171A
SIGNAL REWIRING	500	#12 GAUGE

PROPOSED SIGNAL FACE ARRANGEMENTS



12" LED LENSES

NOTE: FLASHING YELLOW ARROW SHALL NOT BE DISPLAYED WHEN OPERATING IN PROTECTED ONLY MODE.

TRAFFIC SIGNAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S(VAOT) "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DATED 2011, WITH CURRENT MODIFICATIONS.

2. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR TRAFFIC SIGNAL EQUIPMENT PLACEMENT. THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS IN THE FIELD WITH THE ENGINEER PRIOR TO INSTALLATION. LOCATIONS MAY BE REVISED AS A RESULT OF THE SITE SURVEY.

3. ALL SIGNAL EQUIPMENT AND SIGNS SHALL HAVE SAFETY CABLES.

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

5. STOP BAR AND ADVANCED VEHICLE DETECTOR LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE MANUFACTURER'S GUIDANCE FOR THE TYPE OF DETECTOR SUPPLIED. THE CONTRACTOR SHALL SUBMIT PROPOSED MOUNTING LOCATIONS AND DOCUMENTATIONS OF CONFORMANCE WITH THE MANUFACTURER'S GUIDANCE TO THE ENGINEER FOR APPROVAL.

6. THE ACTUAL STOP BAR DETECTION LOCATIONS WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR THE TYPE OF DETECTOR SELECTED. FINAL LOCATIONS TO BE APPROVED BY THE ENGINEER.

7. STOP BAR VEHICLE DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE FINAL, PERMANENT STOP BAR.

8. ADVANCED VEHICLE DETECTION AREAS SHALL BE A MINIMUM OF 350 TO 400 FEET UPSTREAM OF THE FINAL, PERMANENT STOP BAR.

9. ADVANCED VEHICLE ZONE DETECTION SHALL EXTEND THE GREEN TIME BY TWO SEC.

10. VEHICLE DETECTION SYSTEM SHALL BE ECONOLITE ACCUSCAN BRAND, SMARTMICRO TRAFFIC RADAR BRAND OR WAVETRONIX SMARTSENSOR BRAND.

11. THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2) IN A NEMA (3R) P44 TRAFFIC CONTROL CABINET WITH 15" BASE EXTENSION INSTALLED AT THE LOCATION SHOWN ON PLANS. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.

12. EXISTING SIGNAL TIMINGS SHALL BE UTILIZED. FOR EXISTING SIGNAL TIMING INFORMATION OR OTHER INFORMATION ABOUT THE EXISTING SYSTEM, PLEASE CONTACT THE TRAFFIC SIGNAL OPERATIONS ENGINEER, DEREK LYMAN AT 802-249-5079.

13. THE CONCRETE BASE FOR THE CONTROLLER CABINET SHALL HAVE A 18" X 12" OPENING FOR CONDUIT LOCATED IN THE CENTER. THE OPENING SHALL BE FILLED WITH STONE AND UNUSED CONDUIT PLUGGED WITH STEEL WOOL BEFORE PLUG SEAL IS INSTALLED, PAID FOR UNDER EACH INDIVIDUAL CONTRACT ITEM 678.15 - TRAFFIC SIGNAL SYSTEM, INTERSECTION.

14. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT AND CONTROLLER FOR SIGNAL/DETECTION CABLE AND EQUIPMENT. THE CONTRACTOR SHALL CONTACT THE ENGINEER IF SUFFICIENT SPACE IS NOT AVAILABLE OR TO GET ACCESS FOR CHECKING THE AVAILABILITY OF ENOUGH SPACE. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED ALL WORK ASSOCIATED WITH INSTALLATION WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678 & 679. ALL TRAFFIC SIGNAL/STREET LIGHTING CONDUIT SHALL BE SCHEDULE 80 PVC.

15. ALL WIRE FROM CONTROLLER CABINET TO SIGNAL HEADS TO BE NEW #12 GAUGE.

16. PHASES TO BE WIRED PER NEMA REQUIREMENTS.

17. THERE SHALL BE NO WIRING SPLICES BETWEEN THE SIGNAL CABINET AND THE VEHICLE DETECTORS, UNLESS MADE IN A MANUFACTURER APPROVED JUNCTION.

18. A DISCONNECT BREAKER FOR EACH CIRCUIT SHALL BE INSTALLED IN A RAINPROOF (NEMA 3R), LOCKED CABINET ON A STANCHION NEXT TO OR BELOW THE METER SOCKET.

19. ALL ELECTRICAL WIRING SHALL BE PERFORMED BY A LICENSED ELECTRICIAN AND OVERSEEN BY A MASTER ELECTRICIAN.

20. ANY OTHER MISC. EQUIPMENT NECESSARY TO PROVIDE FULLY FUNCTIONAL DILEMMA ZONE DETECTION SYSTEMS WILL BE CONSIDERED INCIDENTAL TO ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A).

21. ANY OTHER MISC. EQUIPMENT NECESSARY TO PROVIDE FULLY FUNCTIONAL VEHICLE STOPBAR DETECTION SYSTEMS WILL BE CONSIDERED INCIDENTAL TO ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A).

22. REMOVAL OF THE EXISTING SIGNAL SYSTEM SHALL BE PAID FOR UNDER ITEM #678.15, TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ VT ROUTE 22A).

23. ALL WORK RELATED TO PROVIDING A FULLY FUNCTIONAL TRAFFIC SIGNAL SYSTEM, INCLUDING ALL DETECTION EQUIPMENT, WILL BE PAID FOR UNDER ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION UNLESS OTHERWISE SPECIFIED.

24. A UNIFORMED TRAFFIC OFFICER WITH A BLUE LIGHT SHALL BE PRESENT DURING ALL LANE CLOSURES.

25. IF EXISTING VEHICLE DETECTION LOOPS ARE DAMAGED PRIOR TO INSTALLATION OF NEW STOP BAR DETECTION, TEMPORARY DETECTION WILL BE PROVIDED BY THE CONTRACTOR WITHIN 72 HOURS AT NO ADDITIONAL COST TO THE AGENCY.

TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION
(US ROUTE 7 @ VT ROUTE 22A)
SEE LIST OF MAJOR EQUIPMENT, THIS SHEET

CONSTRUCT CONTROLLER CABINET (BASE-MOUNTED)
STA. 80+36, 62' RT(CC1)

WIRED CONDUIT
SEE CHART, THIS SHEET

BRACKET ARM
STA. 81+01, 54' RT(SL1)
STA. 78+33, 85' LT(SL2)

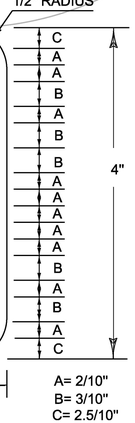
SPECIAL PROVISION (LUMINAIRE, LED)
STA. 81+01, 54' RT(SL1) STA. 81+15, 54' LT(SL4)
STA. 78+33, 85' LT(SL2) STA. 82+50, 40' LT(SL5)
STA. 80+11, 182' LT(SL3)

WIRED CONDUIT	CONDUIT SIZE 2"	CONDUIT SIZE 4"	DESCRIPTION
COMB TO CC1	30'		FUTURE USE
xSTANCHION TO CC1	30'		POWER
CC1 TO xSTP1	30'		SIGNAL & DETECTOR
CC1 TO xSTP1	30'		FUTURE USE
SUBTOTAL	120'		
ROUNDING	120'		
TOTALS	120'		

LEGEND

- MAST ARM & POLE
- CC — CONTROLLER CABINET
- JB PB — JUNCTION BOX / PULLBOX
- (2) — SIGNAL HEAD WITH PHASE NO.
- WIRED CONDUIT
- WIRED CONDUIT IN ELECTRICAL CONDUIT SLEEVE
- (2) — VEHICLE STOPBAR DETECTOR
- DETECTION ZONE (2A) — VEHICLE STOPBAR DETECTION AREA
- PREEMPTION STROBE LIGHT & DETECTOR
- DZD — DILEMNA ZONE DETECTOR
- DILEMMA ZONE — DILEMNA ZONE DETECTION AREA
- LUMINAIRE

PROPERTY OF :
VT. AGENCY OF TRANS.
MAINTENANCE DIV.
IN EMERGENCY CALL :
DIST. TRANS. OFFICE
802-655-1580
NIGHTS & WEEKENDS : 802-878-7111
INTERSECTION NO. MS-502



CONTROLLER PLAQUE DETAIL
NOT TO SCALE

LEGEND: - BLACK (NON-REFL.) - STAMPED PRIOR TO PAINTING
BACKGROUND: NATURAL ALUMINUM OR BRASS SURFACE

NOTES:

1.) THE PLAQUE SHALL BE MOUNTED ON ALL TRAFFIC SIGNAL CONTROLLER CABINETS. IT SHALL BE FASTENED TO THE CONTROLLER CABINET IN SUCH A MANNER AS TO BE NOT EASILY REMOVED, SUCH AS WELDED, RIVETED OR BOLTED WITH VANDAL PROOF BOLTS.

2.) THE LETTERS SHALL BE PUNCHED OR STAMPED, SUCH STAMPING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.

3.) THE BASE MATERIAL FOR THE PLAQUE SHALL BE BRASS OR ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.

↓T = TRAFFIC SIGNAL CLEARANCE IS MEASURED FROM ROADWAY SURFACE TO BOTTOM OF SIGNAL HEAD.

NOTES:
1. CALL DIG SAFE PRIOR TO PERFORMING ANY EXCAVATION WORK. 1-888-DIG-SAFE
2. CALL DISTRICT 5 SIGNAL TECH PRIOR TO PERFORMING ANY EXCAVATION. 802-655-1580
3. SEE UTILITIES SPECIAL PROVSIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

MS-502

PROJECT NAME: MIDDLEBURY-FERRISBURGH
PROJECT NUMBER: NH SURF(55)

FILE NAME: 15v015_sig01.dgn
PROJECT LEADER: L. BULLOCK
DESIGNED BY: S. PALMER
TRAFFIC SIGNAL PLAN
PLOT DATE: 12-APR-2016
DRAWN BY: S. PALMER
CHECKED BY: D. LYMAN
SHEET 78 OF 88

LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEM 678.15 - (US ROUTES 7 & MONKTON ROAD)	QUANTITY	REMARKS
NEW 12-INCH POLYCABONATE LED SIGNAL HEADS (ONE-WAY, 4-SECTION, VISORS, DISCONNECT HANGERS, 5" LOUVERED BACKPLATES WITH 1-1/2" RETROREFLECTIVE TAPE AND MOUNTING HARDWARE	2	FLAT BLACK FINISH SALVAGE EXIST. TO AOT DIST. SIGNAL TECH
SIGNAL WIRING	500	#12 GAUGE
DETECTOR ASSEMBLY	4-6	AS REQUIRED
VEHICLE DETECTOR PROCESSOR (CARDS)	1-4	AS REQUIRED
EMERGENCY PREEMPTION PRIORITY DETECTOR	1	TOMAR, OPTICOM, EMTRAC
EMERGENCY PREEMPTION OPTICAL SENSOR	4	TOMAR, OPTICOM, EMTRAC
EMERGENCY PREEMPTION AC STROBE - RED	4	
LOUVERED BACKPLATES WITH 1-1/2" RETROREFLECTIVE TAPE AND MOUNTING HARDWARE	5	INSTALL NEW FLAT BLACK LOUVERED BACKPLATES ON EXISTING NORTHBOUND & SOUTHBOUND SIGNAL HEADS
1-1/2" RETROREFLECTIVE TAPE	4	ADD TAPE TO EXISTING EASTBOUND & WESTBOUND BACKPLATES
TRAFFIC SIGNAL CONTROLLER (NEMA TS2)	1	ECONOLITE ASC/3-2100. SALVAGE EXISTING TO AOT DIST. SIGNAL TECH
MALFUNCTION MANAGEMENT UNIT	1	SMART MONITOR WITH FYA FUNCTIONALITY

TRAFFIC SIGNAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S(VAOT) "STANDARD SPECIFICATIONS FOR CONSTRUCTION" DATED 2011, WITH CURRENT MODIFICATIONS.

2. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR TRAFFIC SIGNAL SYSTEM EQUIPMENT PLACEMENT. THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS IN THE FIELD WITH THE ENGINEER PRIOR TO INSTALLATION. LOCATIONS MAY BE REVISED AS A RESULT OF THE SITE SURVEY.

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

4. STOP BAR AND ADVANCED VEHICLE DETECTOR LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE MANUFACTURER'S GUIDANCE FOR THE TYPE OF DETECTOR SUPPLIED. THE CONTRACTOR SHALL SUBMIT PROPOSED MOUNTING LOCATIONS AND DOCUMENTATIONS OF CONFORMANCE WITH THE MANUFACTURER'S GUIDANCE TO THE ENGINEER FOR APPROVAL.

5. THE ACTUAL STOP BAR DETECTION LOCATIONS WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR THE TYPE OF DETECTOR SELECTED. FINAL LOCATIONS TO BE APPROVED BY THE ENGINEER.

6. STOP BAR VEHICLE DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE FINAL, PERMANENT STOP BAR.

7. ADVANCED VEHICLE DETECTION AREAS SHALL BE A MINIMUM OF 350 TO 400 FEET UPSTREAM OF THE FINAL, PERMANENT STOP BAR.

8. ADVANCED VEHICLE ZONE DETECTION SHALL EXTEND THE GREEN TIME BY TWO SEC.

9. VEHICLE DETECTION SYSTEM SHALL BE ECONOLITE ACCUSCAN BRAND, SMARTMICRO TRAFFIC RADAR BRAND OR WAVETRONIX SMARTSENSOR BRAND.

10. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT AND CONTROLLER FOR SIGNAL/DETECTION CABLE AND EQUIPMENT. THE CONTRACTOR SHALL CONTACT THE ENGINEER IF SUFFICIENT SPACE IS NOT AVAILABLE OR TO GET ACCESS FOR CHECKING THE AVAILABILITY OF ENOUGH SPACE. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED ALL WORK ASSOCIATED WITH INSTALLATION SHALL BE INCIDENTAL TO CONTRACT ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ MONKTON ROAD). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678. ALL TRAFFIC SIGNAL/STREET LIGHTING CONDUIT SHALL BE SCHEDULE 80 PVC.

11. ALL SIGNAL EQUIPMENT AND MAST ARM MOUNTED SIGNS SHALL HAVE SAFETY CABLES.

12. THERE SHALL BE NO WIRING SPLICES BETWEEN THE SIGNAL CABINET AND THE VEHICLE DETECTORS, UNLESS MADE IN A MANUFACTURER APPROVED JUNCTION.

13. EMERGENCY PREEMPTION EQUIPMENT SHALL BE PLACED ON MAST ARMS TO THE EXTENT POSSIBLE. THE LOCATION OF THE OPTICAL RECEIVER SHALL BE UNOBSTRUCTED BY EXISTING INFRASTRUCTURE, NATURAL ELEMENTS, AND OTHER PROPOSED TRAFFIC SIGNAL AND STREET LIGHTING EQUIPMENT.

14. ALL ELECTRICAL WIRING SHALL BE PERFORMED BY A LICENSED ELECTRICIAN AND OVERSEEN BY A MASTER ELECTRICIAN.

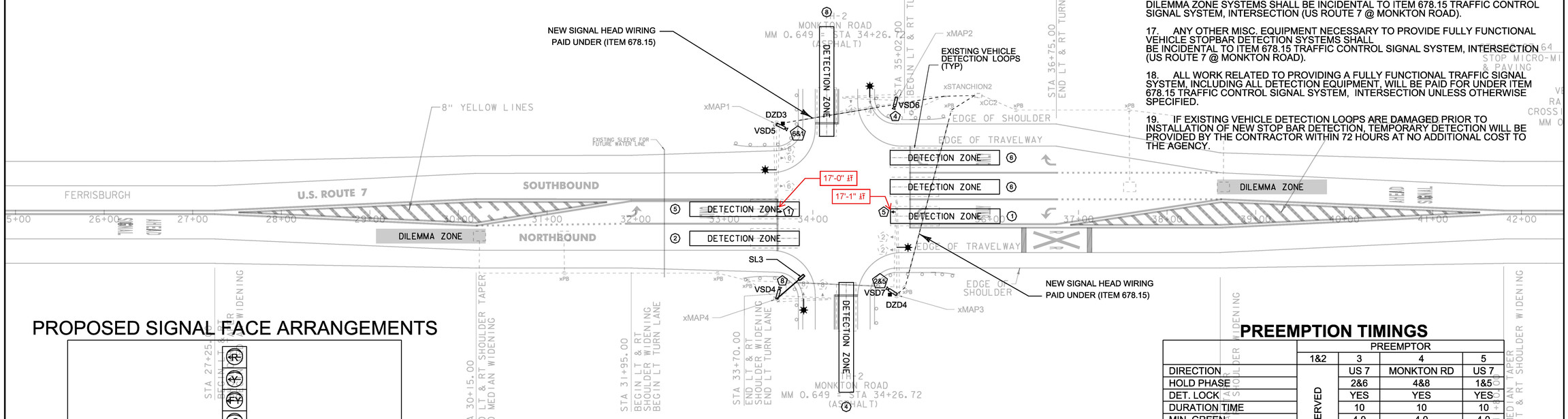
15. A UNIFORMED TRAFFIC OFFICER WITH A BLUE LIGHT SHALL BE PRESENT DURING ALL LANE CLOSURES.

16. ANY OTHER MISC. EQUIPMENT NECESSARY TO PROVIDE FULLY FUNCTIONAL DILEMMA ZONE SYSTEMS SHALL BE INCIDENTAL TO ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ MONKTON ROAD).

17. ANY OTHER MISC. EQUIPMENT NECESSARY TO PROVIDE FULLY FUNCTIONAL VEHICLE STOPBAR DETECTION SYSTEMS SHALL BE INCIDENTAL TO ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (US ROUTE 7 @ MONKTON ROAD).

18. ALL WORK RELATED TO PROVIDING A FULLY FUNCTIONAL TRAFFIC SIGNAL SYSTEM, INCLUDING ALL DETECTION EQUIPMENT, WILL BE PAID FOR UNDER ITEM 678.15 TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION UNLESS OTHERWISE SPECIFIED.

19. IF EXISTING VEHICLE DETECTION LOOPS ARE DAMAGED PRIOR TO INSTALLATION OF NEW STOP BAR DETECTION, TEMPORARY DETECTION WILL BE PROVIDED BY THE CONTRACTOR WITHIN 72 HOURS AT NO ADDITIONAL COST TO THE AGENCY.



PROPOSED SIGNAL FACE ARRANGEMENTS

FACES 1&5

12" LED LENSES

NOTE: FLASHING YELLOW ARROW SHALL NOT BE DISPLAYED WHEN OPERATING IN PROTECTED ONLY MODE.

↓T = TRAFFIC SIGNAL CLEARANCE IS MEASURED FROM ROADWAY SURFACE TO BOTTOM OF SIGNAL HEAD.

PREEMPTION TIMINGS

	PREEMPTOR			
	1&2	3	4	5
DIRECTION	RESERVED	US 7	MONKTON RD	US 7
HOLD PHASE		2&6	4&8	1&5
DET. LOCK		YES	YES	YES
DURATION TIME		10	10	10
MIN. GREEN		4.0	4.0	4.0
HOLD GREEN		12.0	12.0	12.0
HOLD YELLOW		4.0	4.0	4.0
HOLD RED		2.0	2.0	2.0

* FINAL EMERGENCY PREEMPTION TIMINGS TO BE DETERMINED BY THE CONTRACTOR AFTER INSTALLATION WITH INPUT FROM LOCAL EMERGENCY SERVICES DEPARTMENTS

LEGEND

- MAST ARM & POLE
- CC — CONTROLLER CABINET
- JB PB — JUNCTION BOX / PULLBOX
- (2) — SIGNAL HEAD WITH PHASE NO.
- WIRED CONDUIT
- WIRED CONDUIT IN ELECTRICAL CONDUIT SLEEVE
- (2) — VEHICLE STOPBAR DETECTOR
- DETECTION ZONE (2A) — VEHICLE STOPBAR DETECTION AREA
- PREEMPTION STROBE LIGHT & DETECTOR
- DZD — DILEMNA ZONE DETECTOR
- DILEMMA ZONE — DILEMNA ZONE DETECTION AREA
- LUMINAIRE

TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (USS ROUTE 7 @ MONKTON ROAD)
SEE LIST OF MAJOR EQUIPMENT, THIS SHEET

SPECIAL PROVISION (LUMINAIRE, LED)
STA. 34+05, 54' RT(SL3)

⚠ 5/2/2016 - REVISED TO INCLUDE NEW CONTROLLER AND MALFUNCTION MANAGEMENT UNIT TO ACCOMODATE FLASHING YELLOW ARROW OPERATION.

NOTES:
1. CALL DIG SAFE PRIOR TO PERFORMING ANY EXCAVATION WORK. 1-888-DIG-SAFE
2. CALL DISTRICT 5 SIGNAL TECH PRIOR TO PERFORMING ANY EXCAVATION. 802-655-1580
3. SEE UTILITIES SPECIAL PROVSIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

MS-504

PROJECT NAME: MIDDLEBURY-FERRISBURGH
PROJECT NUMBER: NH SURF(55)

FILE NAME: 15v015_sig02.dgn
PROJECT LEADER: L. BULLOCK
DESIGNED BY: S. PALMER
TRAFFIC SIGNAL PLAN

PLOT DATE: 6-APR-2016
DRAWN BY: S. PALMER
CHECKED BY: D. LYMAN
SHEET 79 OF 98

GENERAL NOTES:

1. PROJECT INCLUDES WORK AT TWO SEPARATE AT-GRADE RAILROAD CROSSINGS ALONG U.S. ROUTE 7. THE WORK TO BE PERFORMED AT EACH CROSSING IS OUTLINED BELOW:

   GRADE CROSSING AARDOT 851-367U IS LOCATED AT MP 95.27 ON THE VERMONT RAILWAY NORTHERN SUBDIVISION WHICH IS LOCATED ON U.S. ROUTE 7, MM 5.47 IN THE TOWN OF NEW HAVEN. THE WORK TO BE PERFORMED AT THIS CROSSING INCLUDES THE UPGRADING OF THE EXISTING SIGNING AND STRIPING ON THE HIGHWAY APPROACHES.

   GRADE CROSSING AARDOT 851-375L IS LOCATED AT MP 100.04 ON THE VERMONT RAILWAY NORTHERN SUBDIVISION WHICH IS LOCATED ON U.S. ROUTE 7, MM 0.81 IN THE TOWN OF FERRISBURGH. THE WORK TO BE PERFORMED AT THIS CROSSING INCLUDES THE RECONSTRUCTION OF THE EXISTING AT-GRADE CROSSING SURFACE AND ASSOCIATED RAILROAD APPROACHES, THE REMOVAL AND INSTALLATION OF A NEW GRADE CROSSING WARNING SYSTEM IN ITS ENTIRETY INCLUDING THE REPLACEMENT OF THE EXISTING CANTILEVER SIGNALS WITH NEW CANTILEVER SIGNALS. WORK WILL ALSO INCLUDE SITE GRADING AND THE UPGRADING OF THE EXISTING SIGNING AND STRIPING ON THE HIGHWAY APPROACHES.

2. SEE SHEET 82 FOR PRECAST CONCRETE GRADE PANEL CROSSING DETAILS. TYPE AND DESIGN OF PRECAST CONCRETE CROSSING PANELS SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL TO VAOT AND THE VERMONT RAIL SYSTEM. MANUFACTURER'S SPECIFICATIONS SHALL BE FOLLOWED FOR THE INSTALLATION OF CONCRETE CROSSING PANELS. THE CONTRACTOR SHALL APPLY A PROTECTIVE SEALER TO ALL EXPOSED CONCRETE SURFACES AFTER THE PRECAST CONCRETE GRADE CROSSING HAS BEEN INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE MADE UNDER ITEM 514.10 WATER REPELLENT, SILANE.

3. THE TYPE AND DESIGN OF COMMERCIAL FLANGEWAY MATERIALS SHALL RECEIVE APPROVAL FROM THE ENGINEER. MANUFACTURER'S SPECIFICATIONS SHALL BE FOLLOWED FOR THE INSTALLATION OF COMMERCIAL FLANGEWAY MATERIALS. THE CONTRACTOR SHALL INSTALL THE ELASTOMERIC INTERFACE RAIL SEAL CONNECTED BY AN INTERCLAMP DEVICE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THESE DETAILS DO NOT ILLUSTRATE THE INTERCLAMP DEVICES. ANY DAMAGE TO THE NEW ELASTOMERIC INTERFACE RAIL RESULTING FROM THE CONTRACTOR'S INSTALLATION METHODS SHALL BE REPLACED AT THE CONTRACTOR'S OWN EXPENSE AS DIRECTED BY THE ENGINEER. THE COST OF FURNISHING AND INSTALLING THE ELASTOMERIC INTERFACE RAIL SEAL AND ATTACHMENT HARDWARE WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (PRECAST CONCRETE PANEL GRADE CROSSING SURFACE) (AARDOT 851-375L).

4. THE COST OF PAVING THE THREE LIFTS (SEE SHEET 81) OF SUPERPAVE BITUMINOUS CONCRETE PAVEMENT AT THE RAIL APPROACHES WILL BE PAID FOR UNDER ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY).

5. A MINIMUM OF 15 DAYS PRIOR TO BEGINNING WORK ON THIS RAIL CROSSING THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH VERMONT RAIL SYSTEM. THE CONTRACTOR SHALL HAVE THE TRACK BACK IN SERVICE AT THE END OF EACH WORK PERIOD. THE COST FOR COORDINATION WITH VERMONT RAIL SYSTEM WILL BE CONSIDERED INCIDENTAL TO ITEM 900.650 SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC) (N.A.B.I.).

   THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE OF THE CROSSING WORK ACTIVITIES TO THE ENGINEER AND VERMONT RAIL SYSTEM FOR REVIEW AND APPROVAL. IT IS ANTICIPATED THAT DISRUPTIONS TO RAIL TRAFFIC SHALL BE MINIMIZED AND THAT THE WORK ASSOCIATED WITH THE RECONSTRUCTION OF THE GRADE CROSSING WILL BE COMPLETED WITHIN FIVE CONSECUTIVE WORKDAY PERIODS. THESE CROSSING WORK ACTIVITIES INCLUDING THE COORDINATION, REVIEW AND APPROVAL PROCESS INVOLVING VAOT AND VERMONT RAIL SYSTEM AND THE RECONSTRUCTION OF THE GRADE CROSSING WITHIN FIVE CONSECUTIVE WORK PERIODS SHALL BE INCLUDED IN WORK ACTIVITIES SUMMARIZED UNDER THE SCHEDULING OF THE CONTRACT WORK ITEM 900.620 SPECIAL PROVISION (CPM SCHEDULE).

6. TIE PLATES SHALL BE MINIMUM 14" L x 7¾" W NEW OR FIT DOUBLE SHOULDERED TO FIT THE BASE OF THE RAIL ON WHICH THEY WILL BE USED. EACH TIE PLATE SHALL HAVE AT LEAST 6 HOLES PUNCHED FOR THE USE OF ⅝" TRACK SPIKES. FOUR OF THE HOLES SHALL BE SUCH THAT THEY ALLOW TWO RAIL HOLDING SPIKES ON EACH SIDE OF THE RAIL AND THERE SHALL ALSO BE AT LEAST TWO HOLES FOR PLATE HOLDING SPIKES. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW TIE PLATES, SPIKES AND RAIL ANCHORS AND PAYMENT WILL BE INCLUDED UNDER THE APPROPRIATE ITEM 900.620 SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES).

7. THE CONTRACTOR SHALL PROVIDE NEW 136RE CWR THROUGH THE CONCRETE GRADE CROSSING AS SPECIFIED IN THE PLANS. RAIL WEIGHTS SHALL BE VERIFIED BY VERMONT RAIL SYSTEM AND APPROVED BY THE ENGINEER. ALL RAIL TO BE PAID FOR UNDER THE CONTINUOUS WELDED RAIL ITEM 900.640 SPECIAL PROVISION (CONTINUOUS WELDED RAIL).

8. ALL WELDED JOINTS SHALL BE CROPPED AND WELDED IN ACCORDANCE WITH THE LATEST REVISION OF A.R.E.M.A. SPECIFICATIONS AT AN OFF-SITE ELECTRIC WELDING PLANT. WELDING CAN BE DONE IN FIELD UTILIZING THERMITE WELDING WITH ADVANCE APPROVAL FROM VAOT AND VERMONT RAIL SYSTEM. WELDED JOINTS SHALL BE GROUND TO CONFORM TO THE SHAPE OF THE RAIL ON GAUGE AND FIELD SIDES. ALL WELDS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.640 SPECIAL PROVISION (CONTINUOUS WELDED RAIL).

9. EXCAVATION SHALL CONSIST OF THE EXCAVATION AND DISPOSAL FROM THE WORK SITE OF ALL MATERIALS OF ANY DESCRIPTION ENCOUNTERED IN THE COURSE OF CONSTRUCTION AND WILL BE PAID FOR UNDER ITEM 203.17 UNCLASSIFIED EXCAVATION.

10. THE CONTRACTOR SHALL INSTALL GEOTEXTILE FABRIC UNDER THE RAILROAD BALLAST WITHIN THE LIMITS OF THE PRECAST CONCRETE GRADE PANEL CROSSING AS SHOWN IN THE PLANS PER SECTION 649 AS DIRECTED BY THE ENGINEER AND WILL BE MADE UNDER ITEM 649.21 GEOTEXTILE UNDER RAILROAD BALLAST.

11. THE CONTRACTOR SHALL RAISE, ALIGN AND SURFACE THE TRACK PER ITEM 900.640 SPECIAL PROVISION (RAISE, ALIGN, AND SURFACE TRACK). SURFACING IS TO FINAL GRADE, MULTIPLE PASSES WILL BE CONSIDERED INCIDENTAL TO ITEM 900.640 SPECIAL PROVISION (RAISE, ALIGN, AND SURFACE TRACK).

12. TRACK SURFACING AND BALLAST REGULATING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COORDINATED WITH VERMONT RAIL SYSTEM PRIOR TO COMMENCING WORK. PAYMENT WILL BE MADE UNDER ITEM 900.640 SPECIAL PROVISION (RAISE, ALIGN, AND SURFACE TRACK). BALLAST MATERIAL USED DURING THE TRACK SURFACING OPERATION WILL BE PAID UNDER ITEM 900.680 SPECIAL PROVISION (RAILROAD BALLAST).

13. BALLAST MATERIAL SUPPLIED WILL BE APPROVED BY VERMONT RAIL SYSTEM AND THE ENGINEER PRIOR TO ITS ACCEPTANCE. BALLAST SURFACING AND BALLAST BASE COURSE TO BE PAID FOR UNDER ITEM 900.680 SPECIAL PROVISION (RAILROAD BALLAST). THE ENGINEER AND VERMONT RAIL SYSTEM RESERVE THE RIGHT TO SAMPLE AND TEST THE STONE BALLAST UP TO AND INCLUDING THE POINT OF USE.

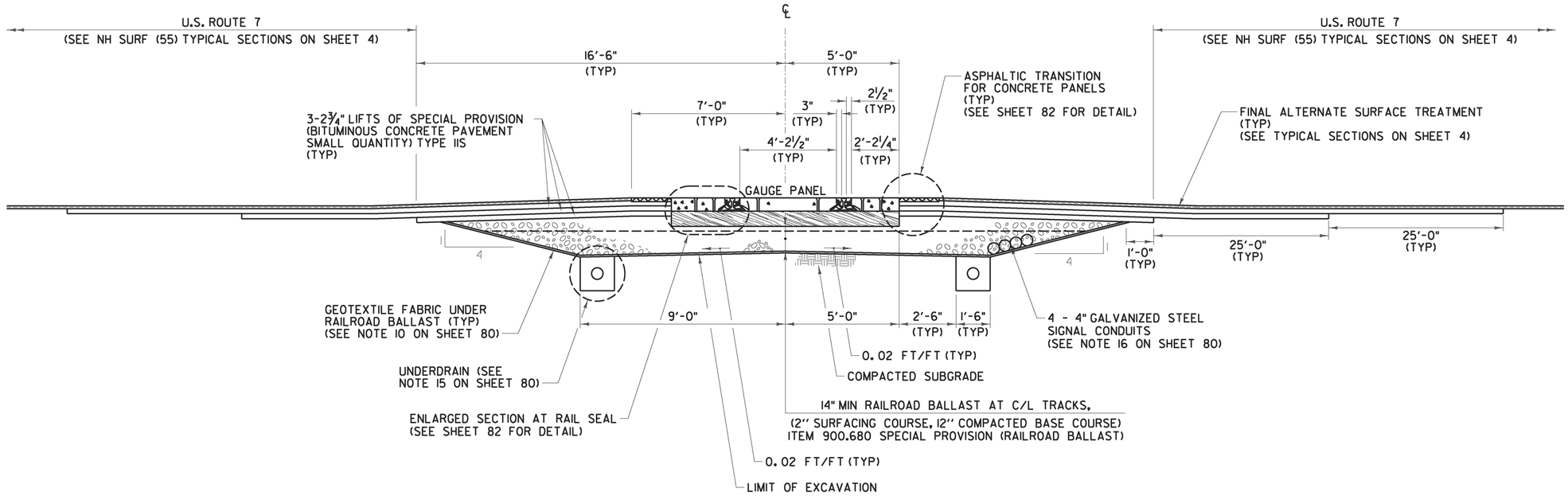
14. THE CONTRACTOR SHALL GRADE THE FINAL PAVEMENT SURFACE TO MATCH INTO THE PROPOSED NH SURF(55) MIDDLEBURY-FERRISBURGH U.S. ROUTE 7 ROAD PROFILE AS DIRECTED BY THE ENGINEER.

15. THE CONTRACTOR WILL INSTALL UNDERDRAIN AND UNDERDRAIN CARRIER PIPE AS SHOWN IN THE PLANS ON SHEET 84 AND AS DIRECTED BY THE ENGINEER. UNDERDRAIN WILL BE PAID FOR UNDER ITEM 605.10 6 INCH UNDERDRAIN PIPE AND UNDERDRAIN CARRIER PIPE UNDER ITEM 605.20 6 INCH UNDERDRAIN CARRIER PIPE.

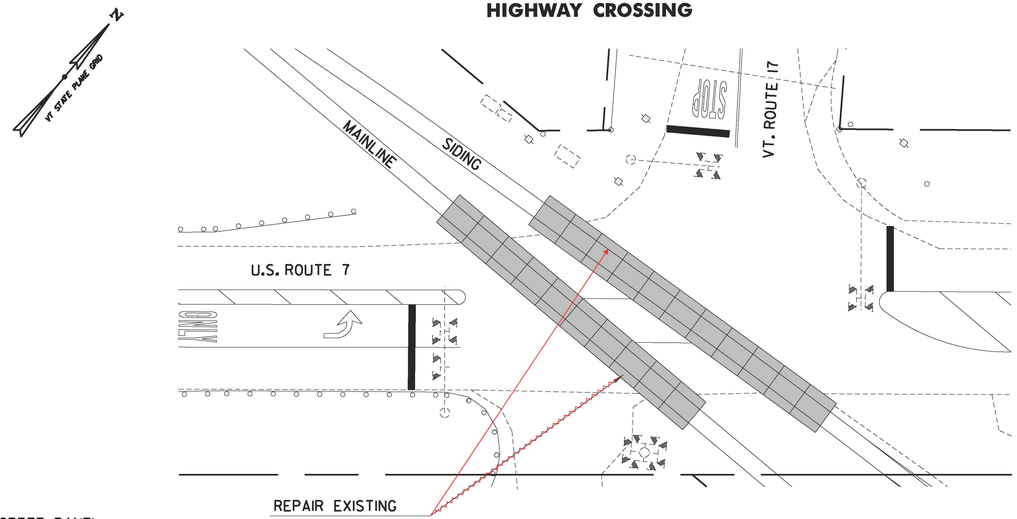
16. SIGNAL CONDUITS SHALL BE INSTALLED AS SHOWN ON SHEETS 84 & 86. ONE CONDUIT SHALL BE INSTALLED AS A SPARE CONDUIT IN EACH RUN FOR FUTURE USE. THE CONDUIT SHALL BE FOUR INCH DIAMETER RIGID GALVANIZED STEEL AND SHALL EXTEND A MINIMUM OF 20 FEET BEYOND EDGE OF CROSSING. CONDUIT ENDS SHALL BE SEALED IN ACCORDANCE WITH THE REQUIREMENTS OF THE A.R.E.M.A. SIGNAL MANUAL AND WILL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM) (AARDOT 851-375L).

17. THE COST FOR PROVIDING VEHICULAR TRAFFIC CONTROL DURING CONSTRUCTION OF THE RAIL HIGHWAY CROSSING WILL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, RAIL-HIGHWAY CROSSING) (AARDOT 851-375L).

ITEM NO.	BID ITEMS	UNIT	851-375L QUANTITY	851-367U QUANTITY	TOTAL QUANTITY
203.17	UNCLASSIFIED EXCAVATION	CY	210	-	210
204.20	TRENCH EXCAVATION OF EARTH	CY	10	-	10
210.10	COLD PLANING, BITUMINOUS PAVEMENT	SY	300	-	300
301.25	SUBBASE CRUSHED GRAVEL, COURSE GRADED	CY	60	-	60
301.26	SUBBASE CRUSHED GRAVEL, FINE GRADED	CY	30	-	30
514.10	WATER REPELLENT, SILANE	GAL	5	-	5
605.10	6 INCH UNDERDRAIN PIPE	LF	240	-	240
605.20	6 INCH UNDERDRAIN CARRIER PIPE	LF	20	-	20
646.512	DURABLE RAILROAD CROSSING SYMBOL, THERMOPLASTIC (OPTION CC)	EA	2	3	5
646.712	TEMPORARY RAILROAD CROSSING SYMBOL, PAINT	EA	2	3	5
649.21	GEOTEXTILE UNDER RAILROAD BALLAST	SY	270	-	270
900.620	SPECIAL PROVISION (DURABLE RAILROAD CROSSING SYMBOL, POLYUREA) (28 MILS) (OPTION CC)	EA	2	3	5
900.620	SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES) (8'-6'' TIES)	EA	269	-	269
900.620	SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES) (9'-0'' TIES)	EA	20	-	20
900.620	SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES) (10'-0'' TIES)	EA	55	-	55
900.620	SPECIAL PROVISION (BAND JOINT @ PRECAST CONCRETE RAILROAD CROSSING)	EA	144	-	144
900.620	SPECIAL PROVISION (PRECAST CONCRETE PANEL GRADE CROSSING REPAIR) (AARDOT 851-367U)	EA	-	1	1
900.640	SPECIAL PROVISION (CONTINUOUS WELDED RAIL)	LF	343	-	343
900.640	SPECIAL PROVISION (RAISE, ALIGN, AND SURFACE TRACK)	LF	550	-	550
900.640	SPECIAL PROVISION (PRECAST CONCRETE PANEL GRADE CROSSING SURFACE) (AARDOT 851-375L)	LS	1	-	1
900.645	SPECIAL PROVISION (RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM) (AARDOT 851-375L)	LS	1	-	1
900.645	SPECIAL PROVISION (TRAFFIC CONTROL, RAIL-HIGHWAY CROSSING) (AARDOT 851-375L)	LS	1	-	1
900.645	SPECIAL PROVISION (TRAFFIC CONTROL, RAIL-HIGHWAY CROSSING) (AARDOT 851-367U)	LS	-	1	1
900.650	SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC) (N.A.B.I.)	LU	0.9	0.1	1
900.680	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	TON	260	-	260
900.680	SPECIAL PROVISION (RAILROAD BALLAST)	TON	375	-	375



TYPICAL SECTION
TOWN OF FERRISBURGH
U.S. ROUTE 7
MM 0.81
AARDOT 851-375L
VERMONT RAILWAY
NORTHERN SUBDIVISION
MP 100.04
HIGHWAY CROSSING



CONCRETE PANEL REPAIR
TOWN OF NEW HAVEN
U.S. ROUTE 7
MM 5.47
AARDOT 851-367U
VERMONT RAILWAY
NORTHERN SUBDIVISION
MP 95.27
HIGHWAY CROSSING

EXISTING PRECAST CONCRETE
GRADE CROSSING PANELS

NOTE:

1. THE CONTRACTOR SHALL REMOUNT THE EXISTING LOOSE CONCRETE PANEL PER THE MANUFACTURERS RECOMMENDATIONS AS DIRECTED BY THE ENGINEER. IF IT IS NECESSARY TO REMOVE THE EXISTING PANEL TO REPAIR THE TIMBER TIE BELOW PRIOR TO MOUNTING, THE CONTRACTOR SHALL REINSTALL THE PANEL PER THE MANUFACTURERS RECOMMENDATIONS. ANY DAMAGE TO THE EXISTING PANEL, ELASTOMERIC INTERFACE, OR OTHER RAILROAD COMPONENTS RESULTING FROM THE CONTRACTORS OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL WORK ASSOCIATED WITH THE REPAIR OF THE EXISTING CONCRETE PANEL SHALL BE PAID UNDER TO ITEM 900.620 SPECIAL PROVISION (PRECAST CONCRETE PANEL GRADE CROSSING REPAIR).

NOT TO SCALE

PROJECT NAME: MIDDLEBURY - FERRISBURGH	
PROJECT NUMBER: NH SURF (55)	
FILE NAME: z15v015rrtyp.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
RAILROAD TYPICAL SECTION	SHEET 81 OF 96

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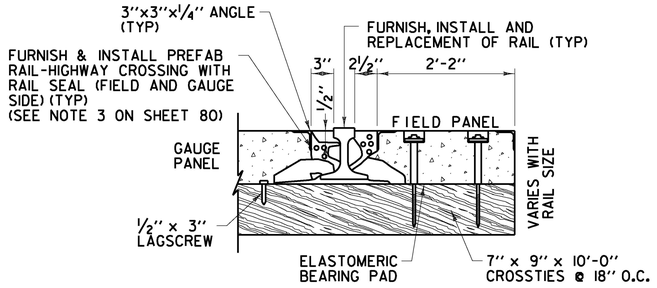
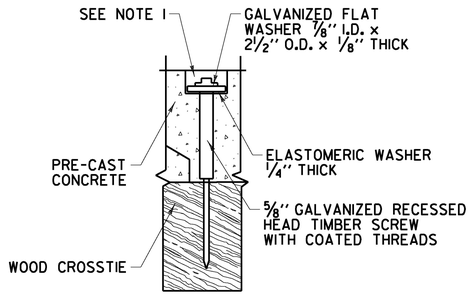
FILE NAME = V:\Projects\ANY\K4\13667A\CADD_MSTN\15v015\Consultants\Rail\z15v015rrtyp.dgn
DATE/TIME = 3/29/2016
USER = 1459



ENLARGED SECTION AT RAIL SEAL

(SEE TYPICAL SECTION ON SHEET 81)

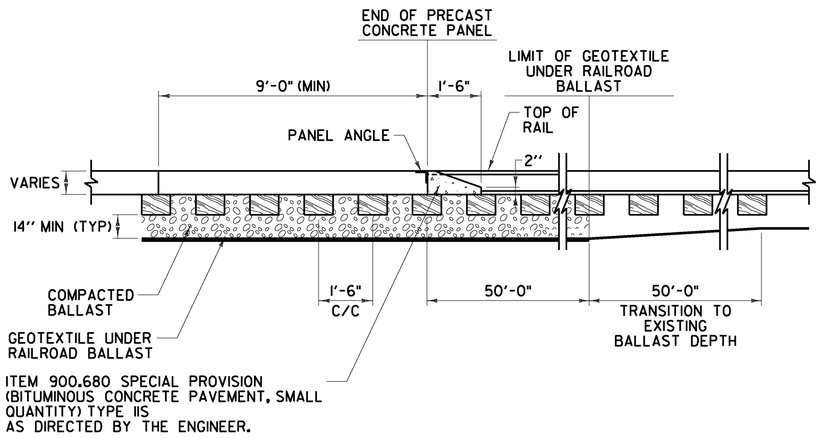


SCREW DETAIL

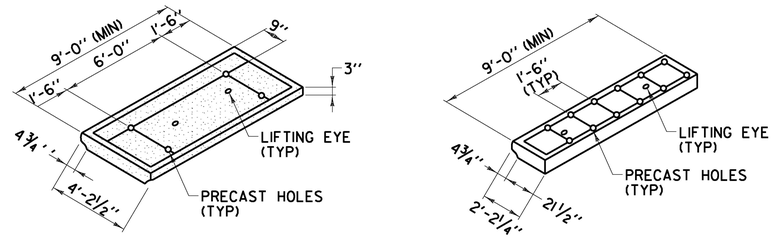
(SEE ENLARGED SECTION AT RAIL THIS SHEET)

NOTE:

1. CONTRACTOR SHALL FILL TO THE TOP OF CONCRETE PANEL WITH APPROVED POLYURETHANE SEALANT AS DIRECTED BY THE ENGINEER; PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (PRECAST CONCRETE PANEL GRADE CROSSING SURFACE).

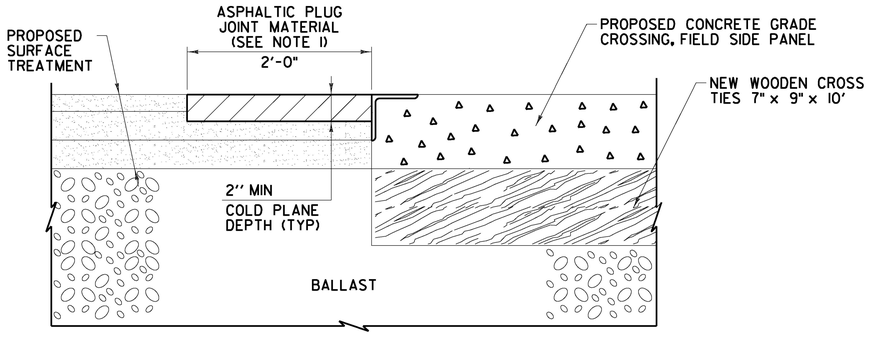


SECTION VIEW



GAUGE **FIELD**

ISOMETRIC VIEWS

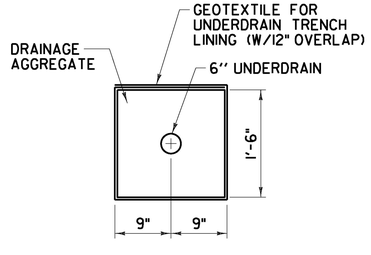


PAVEMENT ASPHALT TRANSITION FOR CONCRETE GRADE CROSSING PANELS

(SEE TYPICAL SECTION ON SHEET 81)

NOTE:

1. CONTRACTOR SHALL COLD PLANE A MINIMUM OF 2" DEEP x 24" WIDE ADJACENT TO THE CONCRETE GRADE CROSSING PANELS AND FILL WITH ASPHALTIC PLUG JOINT MATERIAL AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ASPHALTIC PLUG JOINT MATERIAL WILL BE CONSIDERED INCIDENTAL TO ITEM 900.640 SPECIAL PROVISION (BAND JOINT @ PRECAST CONCRETE RAILROAD CROSSING)



CROSS SECTION UNDERDRAIN WITH GEOTEXTILE

(SEE NOTE 15 ON SHEET 80)

GAUGE AND FIELD PANEL DETAILS

(SEE TYPICAL SECTION ON SHEET 81)

MINIMUM PANEL LENGTH	9'-0"
GAUGE PANEL WIDTH	4'-2 1/2"
FIELD PANEL WIDTH	2'-2 1/4"
HEIGHT DETERMINED BY RAIL SIZE	6" TO 8 1/2"
DIMENSION TOLERANCE	± 1/4"
CROSSTIE CENTERS REQUIRED	1'-6"
CROSSTIE LENGTH REQUIRED	10'-0"
CONCRETE	6000 PSI. 28 DAYS MIN.
REINFORCEMENT REBAR	AMERICAN GRADE 60
LIFTING EYES	4000 LBS. CAPACITY EACH
MEETS HS20-44 LOADING SPECS.	

NOT TO SCALE

PROJECT NAME: MIDDLEBURY - FERRISBURGH	
PROJECT NUMBER: NH SURF (55)	
FILE NAME: z15v015rrdtl_01.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: W.J.M.	CHECKED BY: D.W.E.
RAILROAD DETAIL SHEET 1	SHEET 82 OF 96

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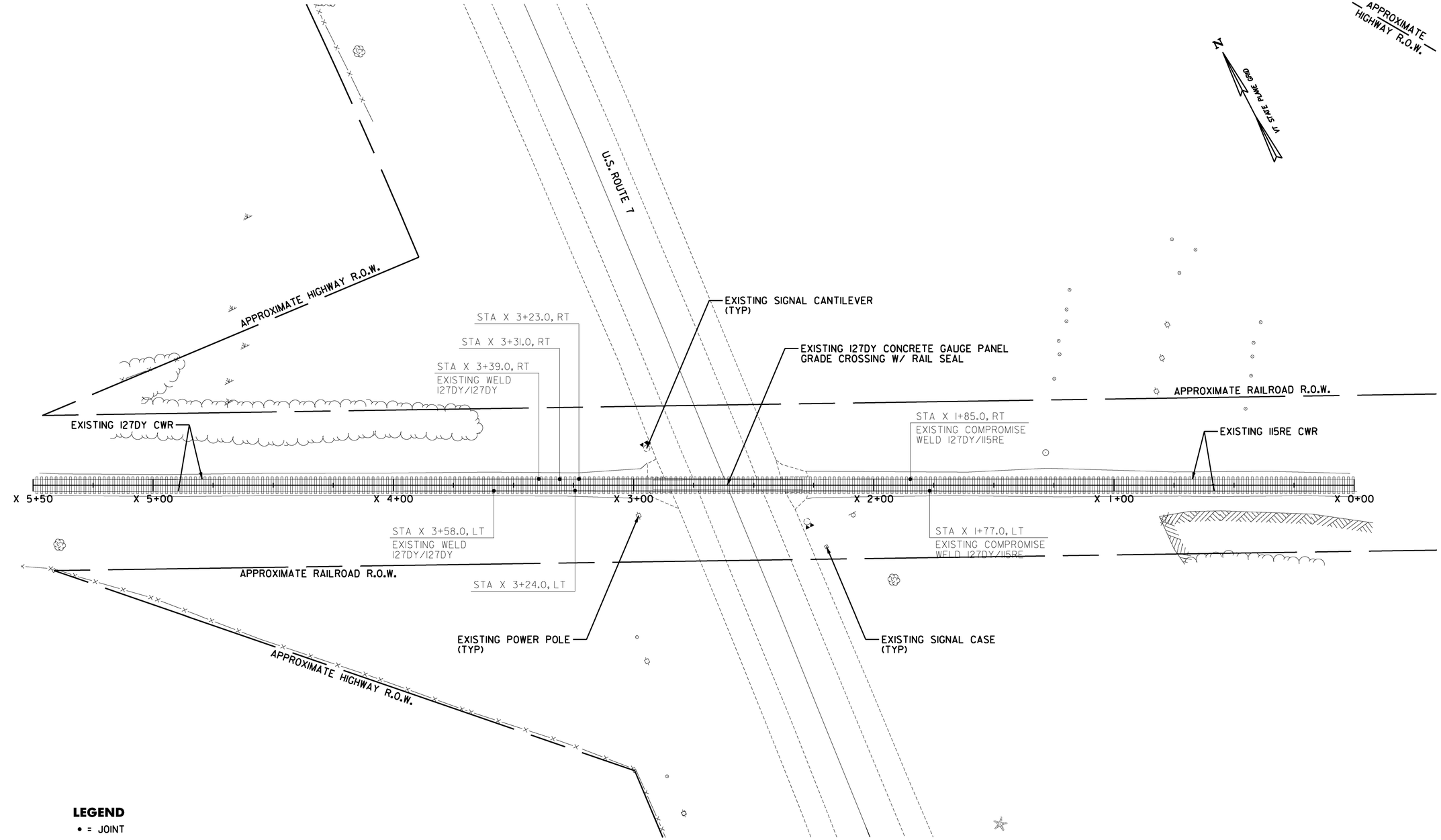
DATE/TIME = 3/29/2016
USER = 1459



LEGEND

• = JOINT

EXISTING JOINTS	
LT	RT
STA X 3+24.0	STA X 3+31.0
	STA X 3+23.0

EXISTING PLAN VIEW
TOWN OF FERRISBURGH
U.S. ROUTE 7
MM 0.81
AARDOT 851-375L
VERMONT RAILWAY
NORTHERN SUBDIVISION
MP 100.04
HIGHWAY CROSSING

0 20 40
SCALE IN FEET

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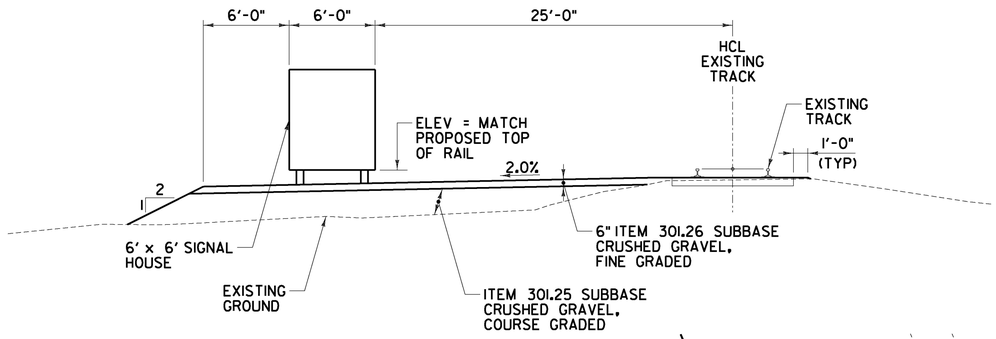
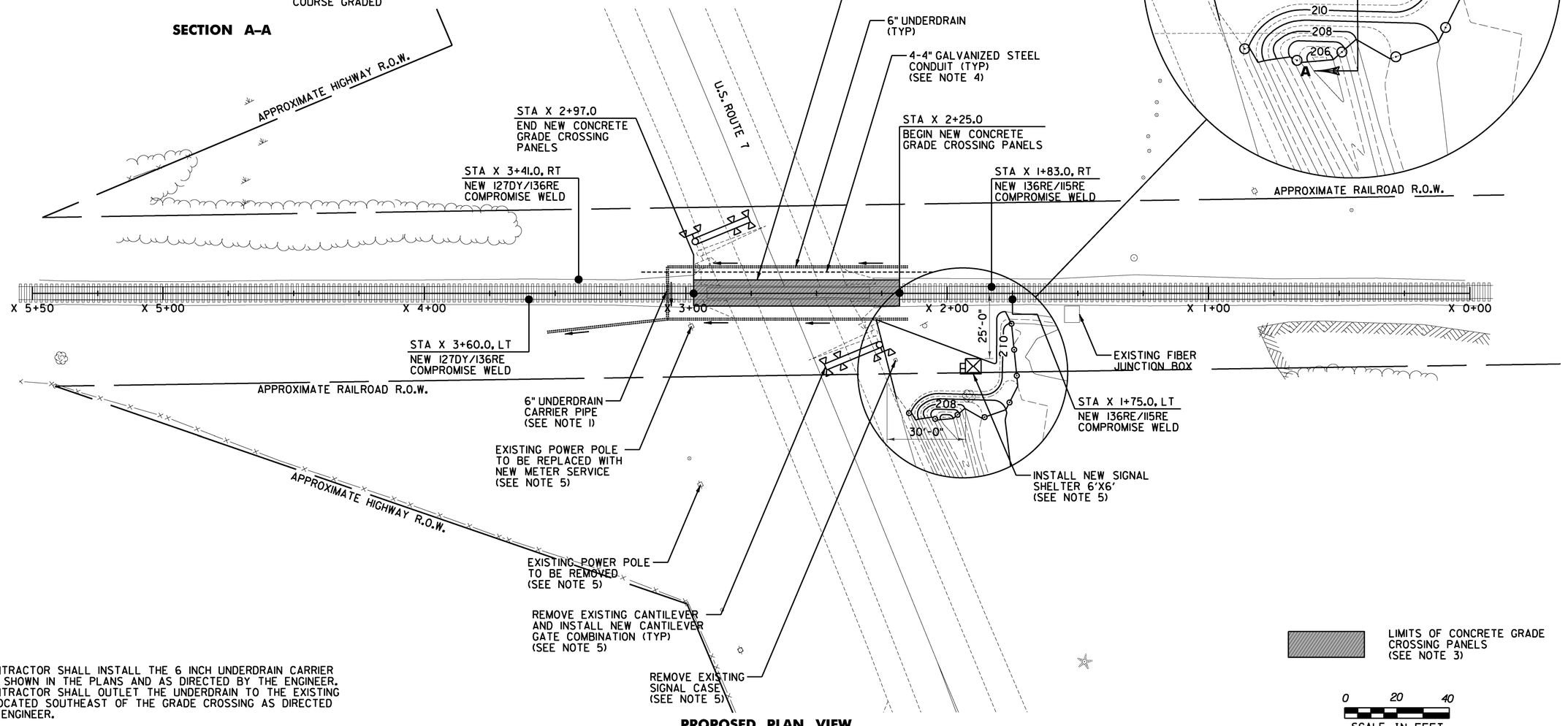
PROJECT NAME: MIDDLEBURY - FERRISBURGH	
PROJECT NUMBER: NH SURF (55)	
FILE NAME: z15v015rrepv.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
EXISTING PLAN VIEW A	SHEET 83 OF 96

FILE NAME = V:\Projects\ANY\X4\30674\CADD\.MSTN\15v015\Consultants\Rail\z15v015rrepv.dgn
DATE/TIME = 3/29/2016
USER = 1459



SECTION A–A



NOTES:

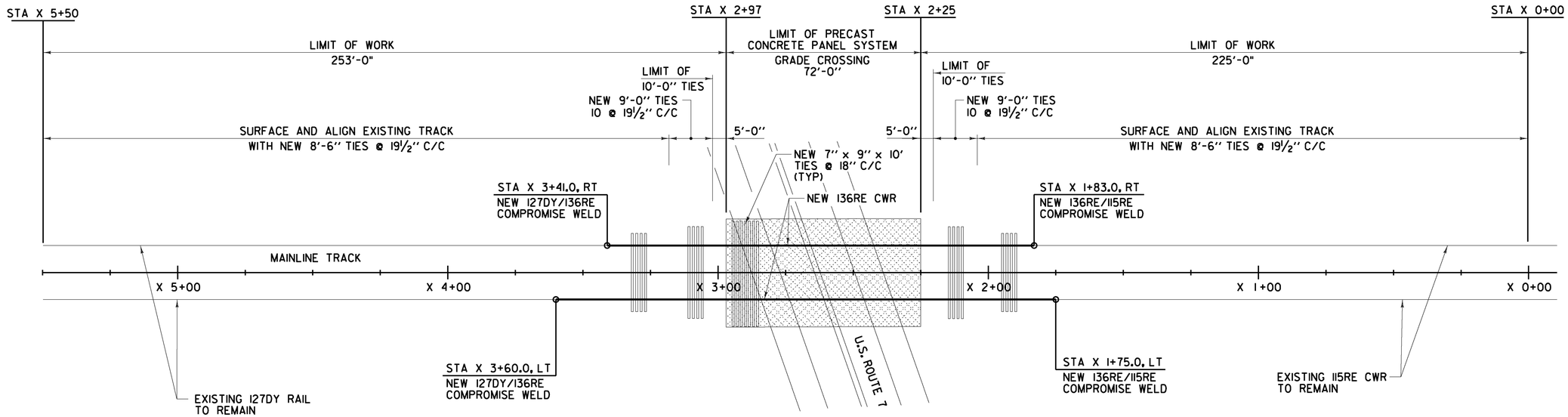
1. THE CONTRACTOR SHALL INSTALL THE 6 INCH UNDERDRAIN CARRIER PIPE AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL OUTLET THE UNDERDRAIN TO THE EXISTING DITCH LOCATED SOUTHEAST OF THE GRADE CROSSING AS DIRECTED BY THE ENGINEER.
2. SEE SHEET 82 FOR PRECAST CONCRETE PANEL CROSSING DETAIL.
3. SEE SHEET 85 FOR PROPOSED SCHEMATIC OF THE CONCRETE GRADE CROSSING.
4. SEE SHEET 86 FOR LOCATION OF PROPOSED CONDUIT.
5. SEE SHEET 86 FOR PROPOSED CROSSING SIGNAL SHEET.

PROPOSED PLAN VIEW
TOWN OF FERRISBURGH
U.S. ROUTE 7
MM 0.81
AARDOT 851-375L
VERMONT RAILWAY
NORTHERN SUBDIVISION
MP 100.04
HIGHWAY CROSSING

CHA

PROJECT NAME: MIDDLEBURY - FERRISBURGH	
PROJECT NUMBER: NH SURF (55)	
FILE NAME: z15v015rrppv.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
PROPOSED PLAN VIEW A	SHEET 84 OF 96

FILE NAME = V:\Projects\ANYX4\30674\CADD_MSTN\15v015\Consultants\Rail\z15v015rrppv.dgn
DATE/TIME = 3/29/2016
USER = 1459



SCHEMATIC PLAN VIEW
TOWN OF FERRISBURGH
U.S. ROUTE 7
MM 0.81
AARDOT 851-375L
VERMONT RAILWAY
NORTHERN SUBDIVISION
MP 100.04
HIGHWAY CROSSING

NOT TO SCALE

PROJECT NAME: MIDDLEBURY - FERRISBURGH	
PROJECT NUMBER: NH SURF (55)	
FILE NAME: z15v015rrspv.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
SCHEMATIC PLAN VIEW A	SHEET 85 OF 96

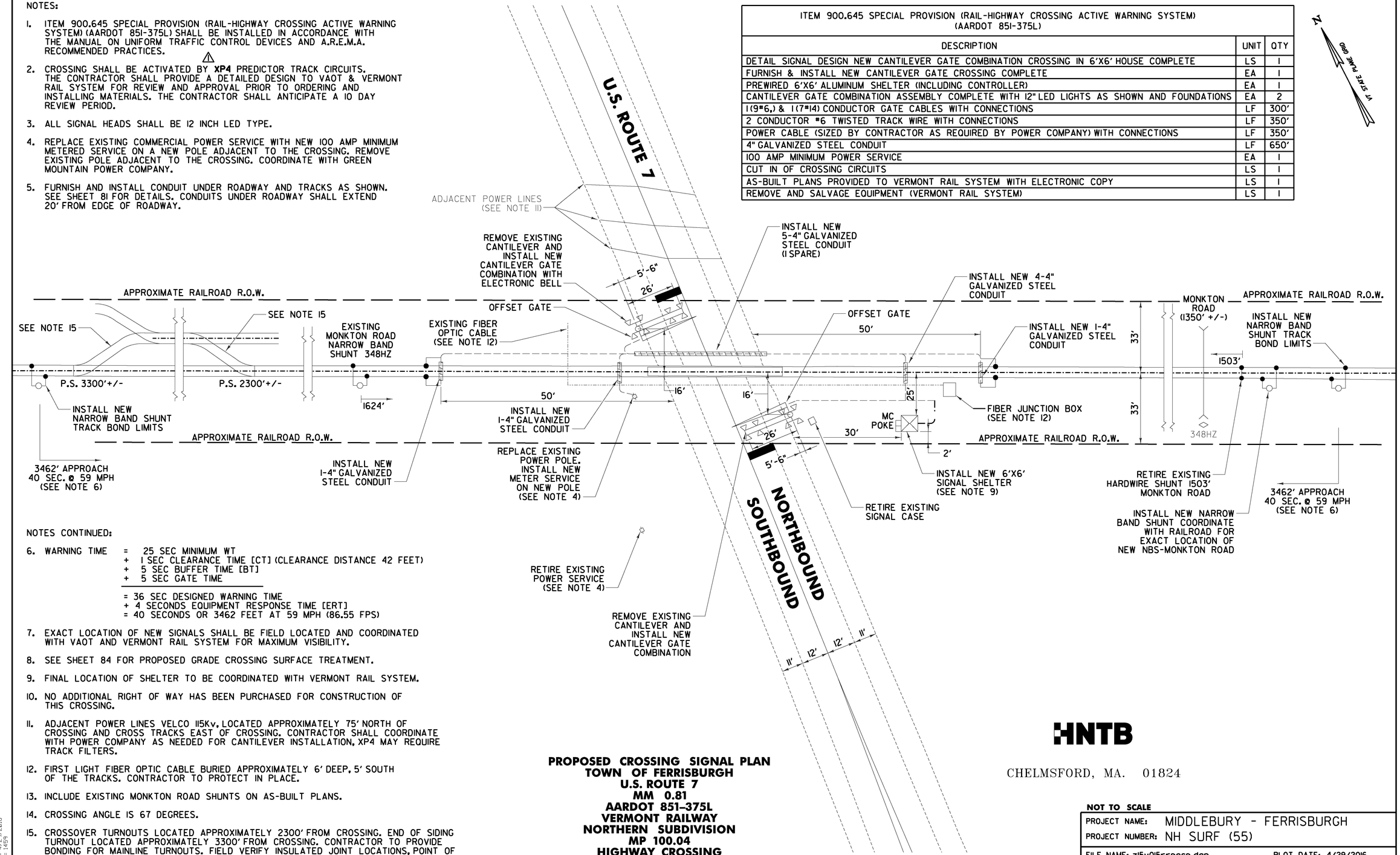
FILE NAME = V:\Projects\ANY\K4\30674\CADD_MSTN\15v015\Consultants\Rail\z15v015rrspv.dgn
DATE/TIME = 3/29/2016
USER = LKS

NOTES:

1. ITEM 900.645 SPECIAL PROVISION (RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM) (AARDOT 851-375L) SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND A.R.E.M.A. RECOMMENDED PRACTICES. ⚠
2. CROSSING SHALL BE ACTIVATED BY **XP4** PREDICTOR TRACK CIRCUITS. THE CONTRACTOR SHALL PROVIDE A DETAILED DESIGN TO VAOT & VERMONT RAIL SYSTEM FOR REVIEW AND APPROVAL PRIOR TO ORDERING AND INSTALLING MATERIALS. THE CONTRACTOR SHALL ANTICIPATE A 10 DAY REVIEW PERIOD.
3. ALL SIGNAL HEADS SHALL BE 12 INCH LED TYPE.
4. REPLACE EXISTING COMMERCIAL POWER SERVICE WITH NEW 100 AMP MINIMUM METERED SERVICE ON A NEW POLE ADJACENT TO THE CROSSING. REMOVE EXISTING POLE ADJACENT TO THE CROSSING. COORDINATE WITH GREEN MOUNTAIN POWER COMPANY.
5. FURNISH AND INSTALL CONDUIT UNDER ROADWAY AND TRACKS AS SHOWN. SEE SHEET 81 FOR DETAILS. CONDUITS UNDER ROADWAY SHALL EXTEND 20' FROM EDGE OF ROADWAY.

ITEM 900.645 SPECIAL PROVISION (RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM)
(AARDOT 851-375L)

DESCRIPTION	UNIT	QTY
DETAIL SIGNAL DESIGN NEW CANTILEVER GATE COMBINATION CROSSING IN 6'X6' HOUSE COMPLETE	LS	1
FURNISH & INSTALL NEW CANTILEVER GATE CROSSING COMPLETE	EA	1
PREWIRED 6'X6' ALUMINUM SHELTER (INCLUDING CONTROLLER)	EA	1
CANTILEVER GATE COMBINATION ASSEMBLY COMPLETE WITH 12" LED LIGHTS AS SHOWN AND FOUNDATIONS	EA	2
1(9#6,) & 1(7#14) CONDUCTOR GATE CABLES WITH CONNECTIONS	LF	300'
2 CONDUCTOR #6 TWISTED TRACK WIRE WITH CONNECTIONS	LF	350'
POWER CABLE (SIZED BY CONTRACTOR AS REQUIRED BY POWER COMPANY) WITH CONNECTIONS	LF	350'
4" GALVANIZED STEEL CONDUIT	LF	650'
100 AMP MINIMUM POWER SERVICE	EA	1
CUT IN OF CROSSING CIRCUITS	LS	1
AS-BUILT PLANS PROVIDED TO VERMONT RAIL SYSTEM WITH ELECTRONIC COPY	LS	1
REMOVE AND SALVAGE EQUIPMENT (VERMONT RAIL SYSTEM)	LS	1



NOTES CONTINUED:

6. WARNING TIME = 25 SEC MINIMUM WT
   + 1 SEC CLEARANCE TIME [CT] (CLEARANCE DISTANCE 42 FEET)
   + 5 SEC BUFFER TIME [BT]
   + 5 SEC GATE TIME
   = 36 SEC DESIGNED WARNING TIME
   + 4 SECONDS EQUIPMENT RESPONSE TIME [ERT]
   = 40 SECONDS OR 3462 FEET AT 59 MPH (86.55 FPS)
7. EXACT LOCATION OF NEW SIGNALS SHALL BE FIELD LOCATED AND COORDINATED WITH VAOT AND VERMONT RAIL SYSTEM FOR MAXIMUM VISIBILITY.
8. SEE SHEET 84 FOR PROPOSED GRADE CROSSING SURFACE TREATMENT.
9. FINAL LOCATION OF SHELTER TO BE COORDINATED WITH VERMONT RAIL SYSTEM.
10. NO ADDITIONAL RIGHT OF WAY HAS BEEN PURCHASED FOR CONSTRUCTION OF THIS CROSSING.
11. ADJACENT POWER LINES VELCO 115Kv, LOCATED APPROXIMATELY 75' NORTH OF CROSSING AND CROSS TRACKS EAST OF CROSSING. CONTRACTOR SHALL COORDINATE WITH POWER COMPANY AS NEEDED FOR CANTILEVER INSTALLATION, XP4 MAY REQUIRE TRACK FILTERS.
12. FIRST LIGHT FIBER OPTIC CABLE BURIED APPROXIMATELY 6' DEEP, 5' SOUTH OF THE TRACKS. CONTRACTOR TO PROTECT IN PLACE.
13. INCLUDE EXISTING MONKTON ROAD SHUNTS ON AS-BUILT PLANS.
14. CROSSING ANGLE IS 67 DEGREES.
15. CROSSOVER TURNOUTS LOCATED APPROXIMATELY 2300' FROM CROSSING. END OF SIDING TURNOUT LOCATED APPROXIMATELY 3300' FROM CROSSING. CONTRACTOR TO PROVIDE BONDING FOR MAINLINE TURNOUTS. FIELD VERIFY INSULATED JOINT LOCATIONS, POINT OF SWITCH LOCATIONS AND INCLUDE ON CONTRACTOR'S DESIGN PLAN.
16. FINAL GATE LENGTH TO BE DETERMINED IN THE FIELD.

PROPOSED CROSSING SIGNAL PLAN
TOWN OF FERRISBURGH
U.S. ROUTE 7
MM 0.81
AARDOT 851-375L
VERMONT RAILWAY
NORTHERN SUBDIVISION
MP 100.04
HIGHWAY CROSSING

HNTB

CHELMSFORD, MA. 01824

REV	DATE	DESCRIPTION
⚠	5-2-16	XP4 ADDED TO NOTE 2

NOT TO SCALE

PROJECT NAME: MIDDLEBURY - FERRISBURGH
PROJECT NUMBER: NH SURF (55)

FILE NAME: z15v015rrpcsp.dgn	PLOT DATE: 4/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: T.L.L.
DESIGNED BY: D.S.B.	CHECKED BY: M.J.E.
PROPOSED CROSSING SIGNAL PLAN	SHEET 86 OF 96

FILE NAME = V:\Projects\ANY\K43\30674\CADD_MSTN\15v015\Consultants\Rail\z15v015rrpcsp.dgn
DATE/TIME = 4/29/2016
USER = LKSY

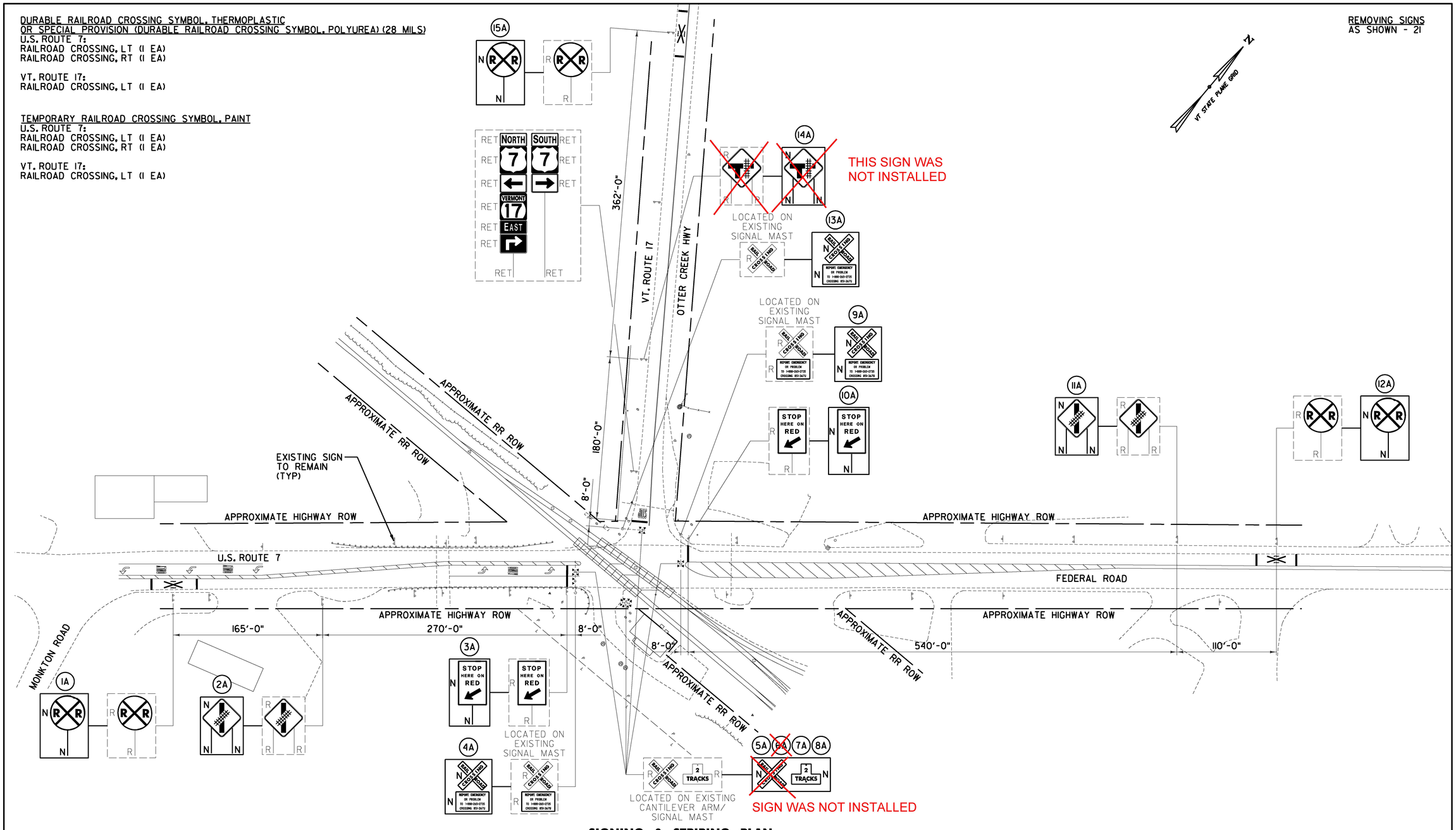
DURABLE RAILROAD CROSSING SYMBOL, THERMOPLASTIC
OR SPECIAL PROVISION (DURABLE RAILROAD CROSSING SYMBOL, POLYUREA) (28 MILS)
U.S. ROUTE 7:
RAILROAD CROSSING, LT (1 EA)
RAILROAD CROSSING, RT (1 EA)

VT. ROUTE 17:
RAILROAD CROSSING, LT (1 EA)

TEMPORARY RAILROAD CROSSING SYMBOL, PAINT
U.S. ROUTE 7:
RAILROAD CROSSING, LT (1 EA)
RAILROAD CROSSING, RT (1 EA)

VT. ROUTE 17:
RAILROAD CROSSING, LT (1 EA)

REMOVING SIGNS
AS SHOWN - 21



SIGNING & STRIPING PLAN
TOWN OF NEW HAVEN
U.S. ROUTE 7
MM 5.47
AARDOT 851-367U
VERMONT RAILWAY
NORTHERN SUBDIVISION
MP 95.27
HIGHWAY CROSSING

NOT TO SCALE

PROJECT NAME: MIDDLEBURY - FERRISBURGH	
PROJECT NUMBER: NH SURF (55)	
FILE NAME: z15v015rrssp.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
SIGNING & STRIPING PLAN A	SHEET 87 OF 96

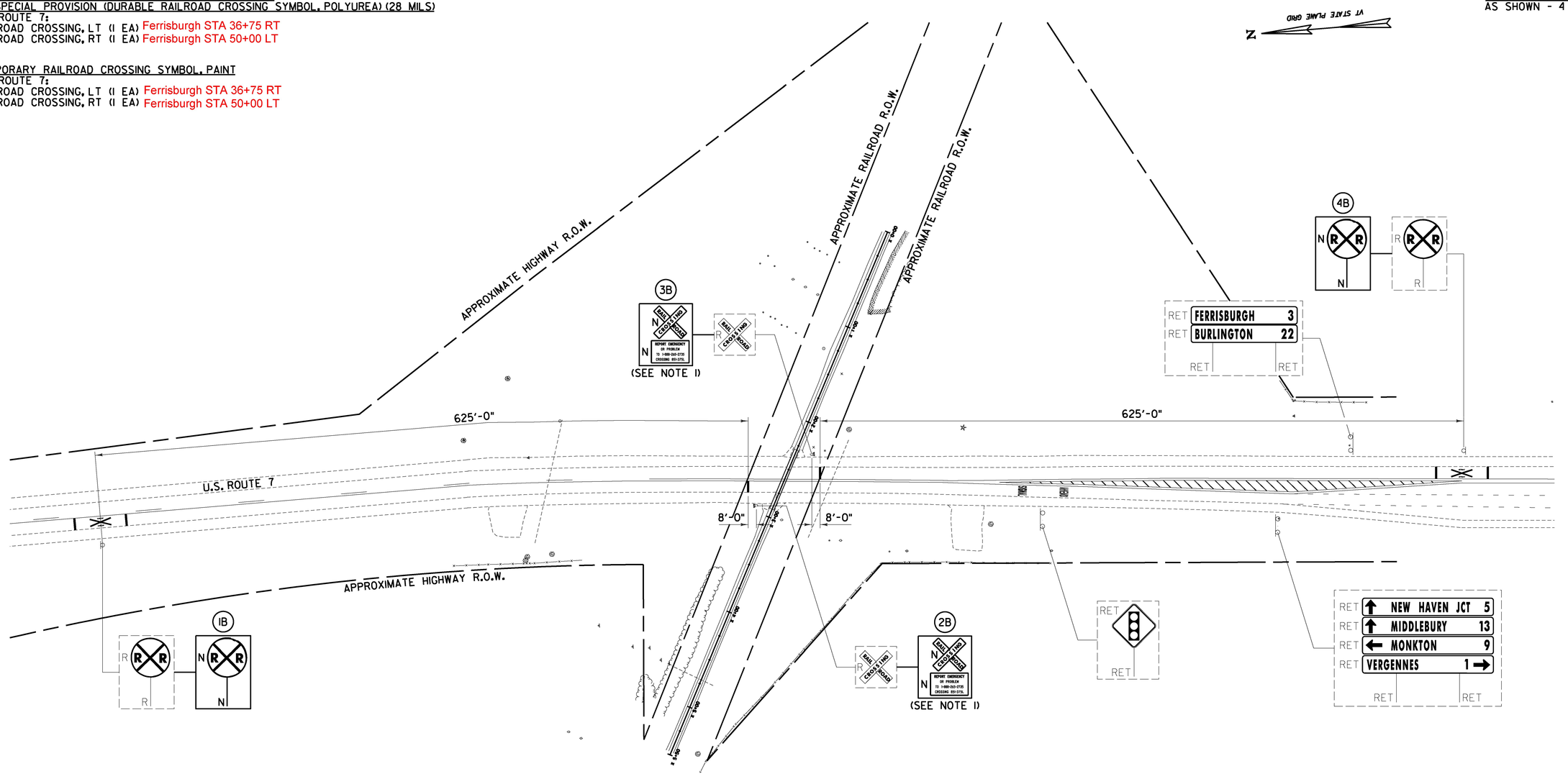
CHA

FILE NAME = V:\Projects\ANY\X4\30674\CADD_MS\TN\15v015\Consultants\Rail\z15v015rrssp.dgn
DATE/TIME = 3/29/2016
USER = 1459

DURABLE RAILROAD CROSSING SYMBOL, THERMOPLASTIC
OR SPECIAL PROVISION (DURABLE RAILROAD CROSSING SYMBOL, POLYUREA) (28 MILS)
U.S. ROUTE 7:
RAILROAD CROSSING, LT (1 EA) Ferrisburgh STA 36+75 RT
RAILROAD CROSSING, RT (1 EA) Ferrisburgh STA 50+00 LT

TEMPORARY RAILROAD CROSSING SYMBOL, PAINT
U.S. ROUTE 7:
RAILROAD CROSSING, LT (1 EA) Ferrisburgh STA 36+75 RT
RAILROAD CROSSING, RT (1 EA) Ferrisburgh STA 50+00 LT

REMOVING SIGNS
AS SHOWN - 4



SIGNING & STRIPING PLAN
TOWN OF FERRISBURGH
U.S. ROUTE 7
MM 0.81
AARDOT 851-375L
VERMONT RAILWAY
NORTHERN SUBDIVISION
MP 100.04
HIGHWAY CROSSING

NOTE:

1. PROPOSED SIGN ASSEMBLY TO BE MOUNTED ON PROPOSED SIGNAL MAST/CANTILEVER.

NOT TO SCALE

PROJECT NAME: MIDDLEBURY - FERRISBURGH	
PROJECT NUMBER: NH SURF (55)	
FILE NAME: z15v015rrssp.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
SIGNING & STRIPING PLAN B	SHEET 88 OF 96

CHA

FILE NAME = V:\Projects\VAN\X4\30674\CADD_MSTN\15v015\Consultants\Rail\z15v015rrssp.dgn
DATE/TIME = 3/29/2016
USER = 1459

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 1

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																	REMARKS	SIGN DETAIL		
			WIDTH (in)	HEIGHT (in)	"A"	SEE NOTE 2	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft					TUBULAR STEEL O (in) lb/ft					W-SHAPE STEEL				SIGN FRAME REQUIRED	SHSM = FHWA STANDARD HIGHWAY SIGNS AND MARKINGS BOOK	DETAIL IN SHSM	DETAIL ON DWG. NUMBER	STD. SHEET NUMBER
															1.8	2.0	2.5	ANCHOR	SLEEVE	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE		WEIGHT	POST SIZE					
												1.12	2.0	3.0	1.88	2.42	3.35				7.6	9.0	10.8	14.6	24"	30"						
U.S. ROUTE 7 AARDOT 851-367U MP 95.27																															
1A		1	36	36	7.07						1					9.50 X			X											WIO-1		
2A		1	36	36	9.00						2					9.75 X 9.75			X											WIO-12		
3A		1	24	36	6.00						1					13.75 X			X											RIO-6		
4A		1	48	9	6.00																							PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST	RI5-1		
		1	15	9	0.94																							PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER MAST		93	
5A		1	48	9	6.00																							PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER ARM	RI5-1		
		1	27	18	2.25																							PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER ARM	RI5-2		
6A		1	48	9	6.00																							PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER ARM	RI5-1		
		1	27	18	2.25																							PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER ARM	RI5-2		
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."												LF	LF	LF	LF	LF	LF		EA		LB	LB	LB	LB								
																56 42.75															
	TOTALS				SF ~~45.51~~ 39.51	SF	EA.	SF				LF			LF ~~56~~ 42.75				EA.		LB				EA.	EA.	LB					

NEW SIGN WAS NOT INSTALLED

PROJECT NAME:	MIDDLEBURY - FERRISBURGH
PROJECT NUMBER:	NH SURF (55)
FILE NAME: z15v015rrtss.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
TRAFFIC SIGN SUMMARY SHEET 1	SHEET 89 OF 96

CHA

FILE NAME = V:\Projects\ANY\K4\30674\CADD_MSTN\15v015\Consultants\Rail\z15v015rrtss.dgn
DATE/TIME = 3/29/2016
USER = HSY

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 2

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
			WIDTH (In)	HEIGHT (In)	"A"	SEE NOTE 2	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (In) lb/ft					TUBULAR STEEL O (In) lb/ft				W-SHAPE STEEL FTG. SIZE				SIGN FRAME REQUIRED	SHSM = FHWA STANDARD HIGHWAY SIGNS AND MARKINGS BOOK	DETAIL IN SHSM	DETAIL ON DWG. NUMBER	STD. SHEET NUMBER
															1.8	2.0	2.5	ANCHOR	SLEEVE	FOUND-ATION	3.0	3.5	4.0	5.0			WEIGHT	POST SIZE					
												1.12	2.0	3.0	1.88	2.42	3.35				7.6	9.0	10.8	14.6	24"	30"						
7A	RAIL CROSSING ROAD	1	48	9	6.00																								PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER ARM	R15-1		
	2 TRACKS	1	27	18	2.25																								PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER ARM	R15-2		
8A	RAIL CROSSING ROAD	1	48	9	6.00																								PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER ARM	R15-1		
	2 TRACKS	1	27	18	2.25																								PROPOSED SIGN TO BE MOUNTED ON EXISTING CANTILEVER ARM	R15-2		
9A	RAIL CROSSING ROAD	1	48	9	6.00																								PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST	R15-1		
	REPORT EMERGENCY OR PROBLEM TO 1-800-265-2735 CROSSING 850-3670	1	15	9	0.94																								PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST		93	
10A	STOP HERE ON RED	1	24	36	6.00						1				14.25 X			X													R10-6		
11A		1	36	36	9.00						2				14.75 X 15.00			X													W10-12		
12A	R R	1	36	36	7.07						1				14.25 X			X													W10-1		
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."												LF	LF	LF	LF	LF ~~56~~ 58.25	LF	EA			LB	LB	LB	LB									
	TOTALS				SF 45.51 ✓	SF	EA.	SF				LF			LF ~~56~~ 58.25				EA.		LB				EA.	EA.	LB						

PROJECT NAME: MIDDLEBURY - FERRISBURGH
PROJECT NUMBER: NH SURF (55)

FILE NAME: z15v015rrtss.dgn
PROJECT LEADER: D.E.G.
DESIGNED BY: M.J.M.
TRAFFIC SIGN SUMMARY SHEET 2

PLOT DATE: 3/29/2016
DRAWN BY: C.A.K.
CHECKED BY: D.W.E.
SHEET 90 OF 96

FILE NAME = V:\Projects\VNY\X4\30674\CADD_MSTN\15v015\Consultants\Rail\z15v015rrtss.dgn
DATE/TIME = 3/29/2016
USER = 1459

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 3

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	SEE NOTE 2	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.8 (1.88)	2.0 (2.42)	2.5 (3.35)	ANCHOR	SLEEVE	TUBULAR STEEL O (in) FOUND-ATION	lb/ft 3.0 (7.6)	3.5 (9.0)	4.0 (10.8)	5.0 (14.6)	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS SHSM = FHWA STANDARD HIGHWAY SIGNS AND MARKINGS BOOK	SIGN DETAIL DETAIL IN SHSM	DETAIL ON DWG. NUMBER	STD. SHEET NUMBER
13A	RAIL CROSSING ROAD	1	48	9	6.00																								PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST	R15-1		
	REPORT EMERGENCY OR PROBLEM TO 1-888-265-2735 CROSSING 851-3475	1	15	9	0.94																								PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST		93	
14A	T	1	~~36~~	~~36~~	~~9.00~~ NEW SIGN WAS NOT INSTALLED					2				14.50 X 15.00			X													W10-4		
15A	R R	1	36	36	7.07					1				14.50 X			X													W10-1		
U.S. ROUTE 7 AARDOT 851-375L MP 100.04																															
1B	R R	1	36	36	7.07					1				15.50 X			X													W10-1		
2B	RAIL CROSSING ROAD	1	48	9	6.00																								PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST	R15-1		
	REPORT EMERGENCY OR PROBLEM TO 1-888-265-2735 CROSSING 851-375L	1	15	9	0.94																								PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST		93	
3B	RAIL CROSSING ROAD	1	48	9	6.00																								PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST	R15-1		
	REPORT EMERGENCY OR PROBLEM TO 1-888-265-2735 CROSSING 851-375L	1	15	9	0.94																								PROPOSED SIGN TO BE MOUNTED ON EXISTING SIGNAL MAST		93	
4B	R R	1	36	36	7.07					1				15.25 X			X													W10-1		
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."											LF	LF	LF	LF	LF ~~70~~ 74.75	LF		EA		LB	LB	LB	LB								
TOTALS				SF ~~51.03~~ 42.03	SF	EA.	SF				LF			LF ~~70~~ 74.75					EA.	LB				EA.	EA.	LB						

PROJECT NAME:	MIDDLEBURY - FERRISBURGH
PROJECT NUMBER:	NH SURF (55)
FILE NAME: z15v015rrtss.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
TRAFFIC SIGN SUMMARY SHEET 3	SHEET 91 OF 96

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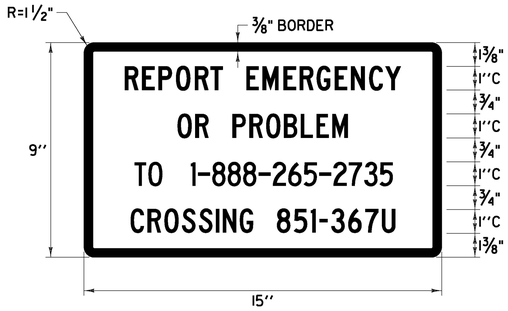
FILE NAME = V:\Projects\ANY\K4\30674\CADD_MSTN\15v015\Consultants\Rail\z15v015rrtss.dgn
DATE/TIME = 3/29/2016
USER = 1459

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 4

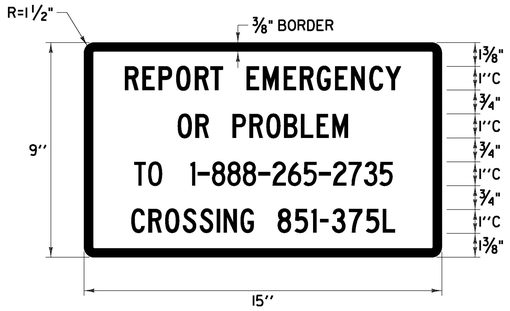
MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																	REMARKS	SIGN DETAIL		
		WIDTH (in)	HEIGHT (in)	"A"	SEE NOTE 2	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR STEEL O (in) lb/ft				FOUND-ATION	W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED	SHSM = FHWA STANDARD HIGHWAY SIGNS AND MARKINGS BOOK	DETAIL IN SHSM	DETAIL ON DWG. NUMBER	STD. SHEET NUMBER
											1.12	2.0	3.0	1.88	2.42	3.35			7.6	9.0	10.8	14.6		24"	30"						
	SHEET 89 SUBTOTAL			39.51 ~~45.51~~											42.75 ~~56~~																
	SHEET 90 SUBTOTAL			✓ 45.51											58.25 ~~56~~																
	SHEET 91 SUBTOTAL			42.03 ~~51.03~~											74.75 ~~70~~																
	ROUNDING			0.05 ~~1.95~~											~~8~~																



COLOR: WHITE BORDER & TEXT (RETROREFLECTIVE)
BLUE BACKGROUND (RETROREFLECTIVE)

MATERIAL: PER VAOT STANDARD E-131

LOCATION: U.S. ROUTE 7
NEW HAVEN:
4A, 9A, 13A



COLOR: WHITE BORDER & TEXT (RETROREFLECTIVE)
BLUE BACKGROUND (RETROREFLECTIVE)

MATERIAL: PER VAOT STANDARD E-131

LOCATION: U.S. ROUTE 7
FERRISBURG:
2B, 3B

NOT TO SCALE

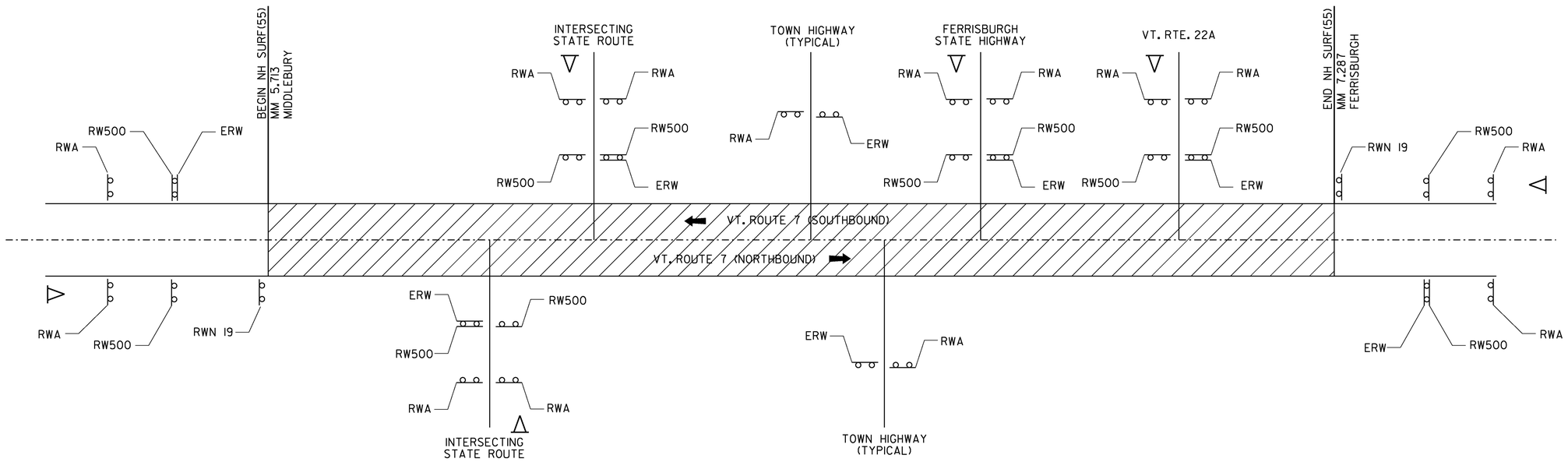
PROJECT NAME: MIDDLEBURY - FERRISBURGH
PROJECT NUMBER: NH SURF (55)

FILE NAME: z15v015rrsds.dgn	PLOT DATE: 3/29/2016
PROJECT LEADER: D.E.G.	DRAWN BY: C.A.K.
DESIGNED BY: M.J.M.	CHECKED BY: D.W.E.
TRAFFIC SIGN DETAIL SHEET	SHEET 93 OF 96

CHA

FILE NAME = V:\Projects\ANY\X4\30674\CADD_MSTN\15v015\Consultants\Rail\z15v015rrsds.dgn
DATE/TIME = 3/29/2016
USER = 1494

CONSTRUCTION APPROACH SIGNING



NOTES:

1. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC 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) WILL NOT BE PAID SEPARATELY BUT WILL BE INCLUDED IN THE UNIT PRICE BID 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 VAOT STANDARDS AND THE LATEST EDITION OF THE MUTCD. PAYMENT FOR PROVIDING THIS PACKAGE WILL BE CONSIDERED INCIDENTAL TO ITEM 641.10, TRAFFIC CONTROL.

3. THE BID PRICE FOR TRAFFIC CONTROL, ITEM 641.10, SHALL INCLUDE ALL APPROACH AND ON-PROJECT CONSTRUCTION SIGNING, PORTABLE ARROW BOARDS, BARRIERS, 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, AND 630.15 - FLAGGERS, 646.602 - TEMPORARY 4 INCH WHITE LINE, PAINT, 646.612 - TEMPORARY 4 INCH YELLOW LINE, PAINT, 646.682 - TEMPORARY 24 INCH STOP BAR, PAINT, 646.692 - TEMPORARY LETTER OR SYMBOL, PAINT, 646.642 - TEMPORARY 8 INCH WHITE LINE, PAINT AND 646.76 - LINE STRIPING TARGETS.

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 RESIDENT 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 THE BEGIN AND END PROJECT LIMITS 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 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 FROM DRIVES AND TOWN HIGHWAYS.

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

7. EXISTING SPEED LIMIT SIGNS SHALL BE 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 AND/OR LAID FLAT SO AS THE MOTORING PUBLIC CANNOT READ THESE SIGNS.

8. PORTABLE OR STATIONARY WORK ZONE SPEED LIMIT SIGNS SHOULD BE SPACED EVERY 1.5 TO TWO MILES WHERE APPLICABLE AND AFTER INTERSECTIONS AS A REMINDER TO THE MOTORIST TRAVELING THROUGH THE WORK ZONE WHAT SPEED THEY SHOULD BE TRAVELING.

9. 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.

10. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MUTCD, PART 6.

11. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES AND COMMERCIAL PROPERTIES AT ALL TIMES. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.

12. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF FOUR FEET. IF THE TPAR IS LESS THAN FIVE FEET IN WIDTH, A FIVE FOOT BY FIVE FOOT PASSING SPACE SHOULD BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE SMOOTH AND CONTINUOUS FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICT WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.

13. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF THE MUTCD SHALL BE USED.

14. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.

15. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.

16. THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPARS AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC. PAYMENT FOR DEVELOPING, IMPLEMENTING, AND MAINTAINING THE TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10.

LEGEND

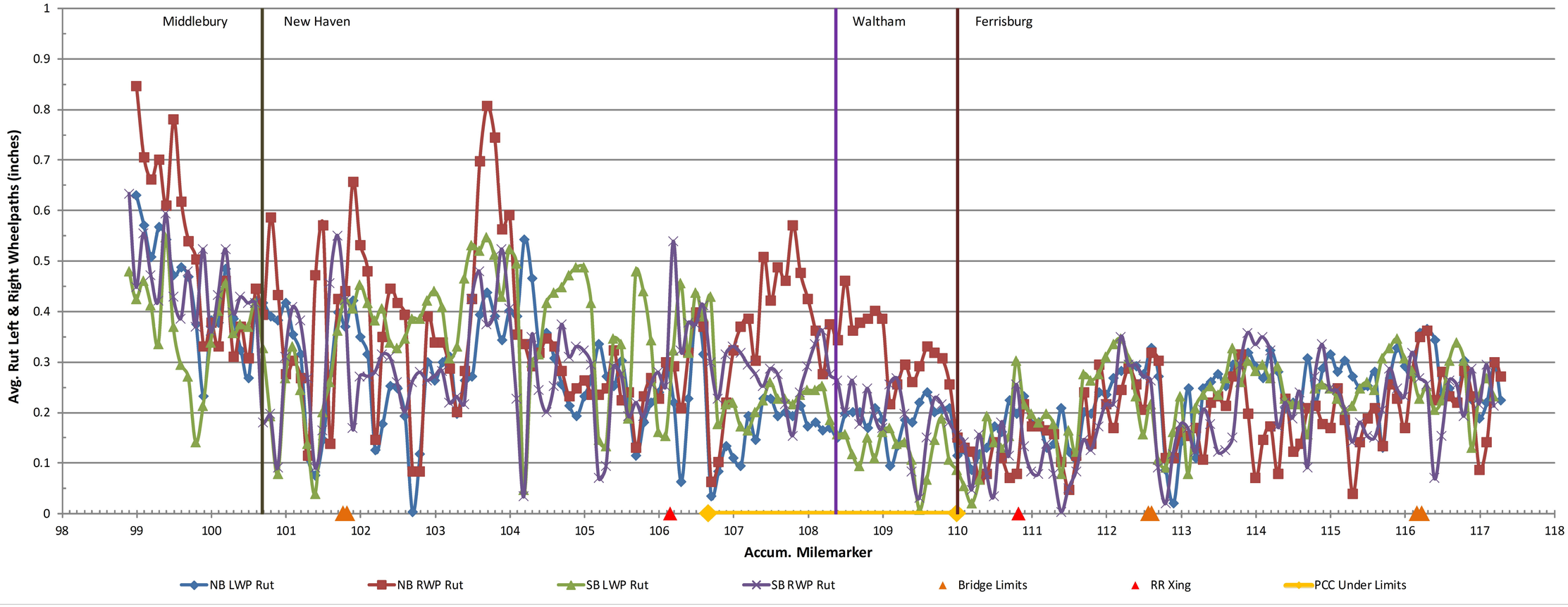
RWA	= ROAD WORK AHEAD
RW500	= ROAD WORK 500 FEET
SRW500	= SIDE ROAD WORK 500 FEET
SRWA	= SIDE ROAD WORK AHEAD
RWN	= ROAD WORK NEXT (XX MILES)
ERW	= END ROAD WORK
△	= PORTABLE CHANGEABLE MESSAGE SIGN
▨	= WORK AREA
⬅	= DIRECTION OF TRAFFIC FLOW

NOT TO SCALE

PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
CONSTRUCTION APPROACH SIGNING SHEET	SHEET 94 OF 96

US 7 Middlebury-Ferrisburg NH SURF(55) Preconstruction Ruts

Profiled 6/10/2015

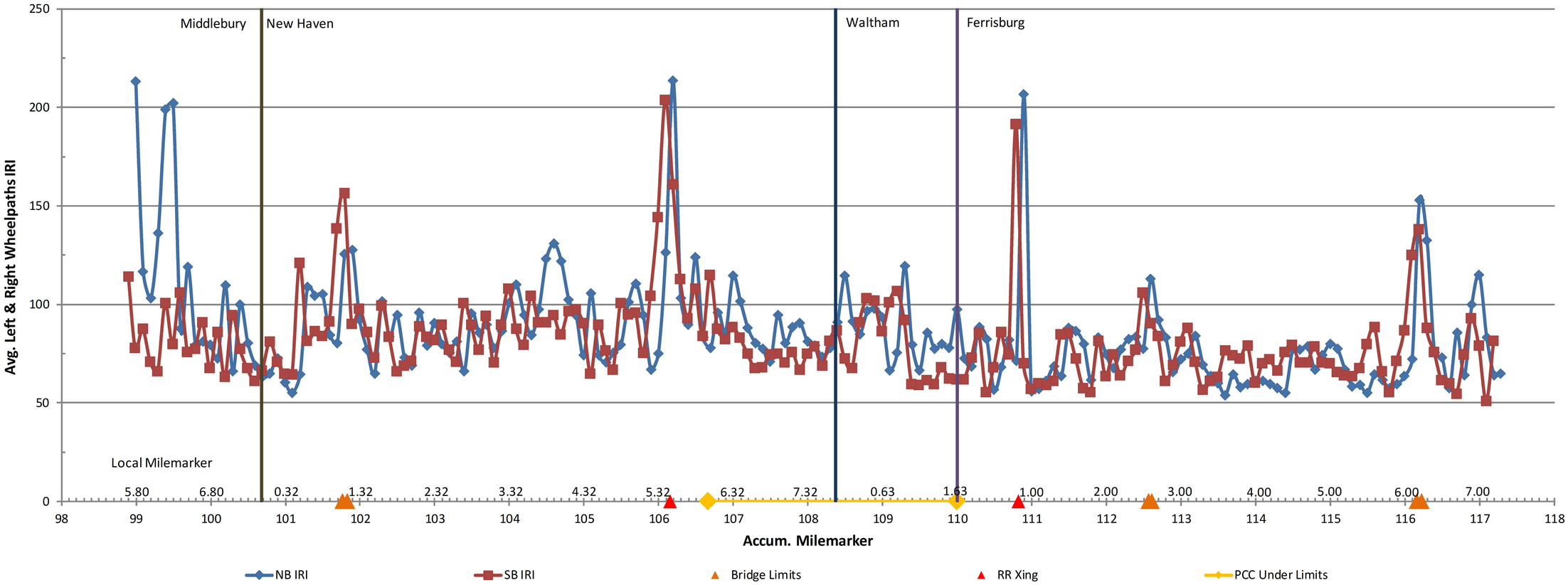


PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
RUTTING DATA INFORMATION SHEET	SHEET 95 OF 96

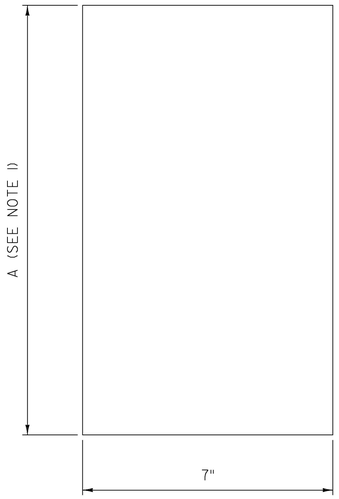
US 7 Middlebury-Ferrisburg NH SURF(55) Preconstruction IRI

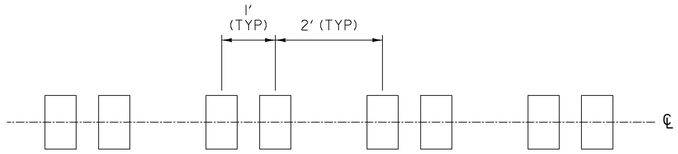
Profiled 6/10/2015

NB Avg. IRI = 86.2 SB Avg. IRI = 82.1



PROJECT NAME:	MIDDLEBURY-FERRISBURGH
PROJECT NUMBER:	NH SURF(55)
FILE NAME: pl5v015.dgn	PLOT DATE: 16-MAR-2016
PROJECT LEADER: HARRINGTON	DRAWN BY: BULLOCK
DESIGNED BY: BULLOCK	CHECKED BY: HARRINGTON
ROUGHNESS DATA INFORMATION SHEET	SHEET 96 OF 96

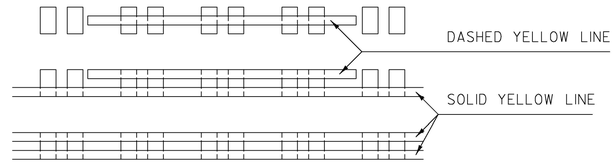




RUMBLE STRIP LAYOUT DETAIL

NOTE:

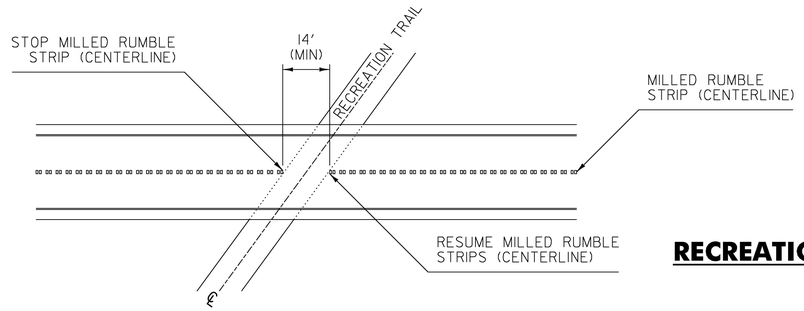
1. MILLED RUMBLE STRIPS (CENTERLINE) SHALL BE CENTERED ALONG THE CENTERLINE OF THE ROADWAY WITH A LATERAL TOLERANCE IN EITHER TRANSVERSE DIRECTION OF +/- ONE INCH AND INSTALLED AT THE INTERVALS AS DETAILED.



PAVEMENT MARKING LAYOUT DETAIL

NOTES:

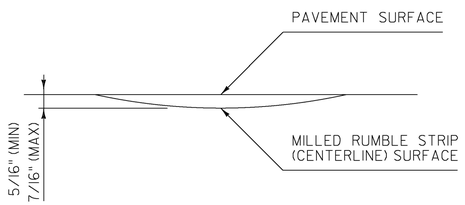
1. MILLED RUMBLE STRIPS (CENTERLINE) SHALL BE INSTALLED PRIOR TO FINAL CENTERLINE PAVEMENT MARKINGS.
2. ALL FINAL CENTERLINE PAVEMENT MARKINGS SHALL BE CENTERED ON THE MILLED RUMBLE STRIPS (CENTERLINE).
3. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CENTERLINE PAVEMENT MARKINGS SHALL BE POLYUREA.



RECREATION TRAIL CROSSING DETAIL

NOTE:

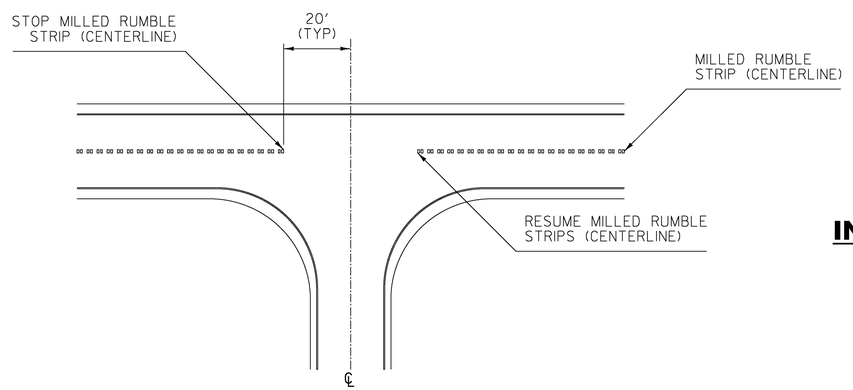
1. WIDTH OF GAP FOR RAIL TRAILS WILL VARY DEPENDENT ON THE SKEW OF THE TRAIL, WITH A 14 FOOT MINIMUM GAP.



RUMBLE STRIP DETAIL

NOTES:

1. DIMENSION "A" SHALL BE 12 INCHES WHEN FOUR INCH CENTERLINE PAVEMENT MARKINGS ARE TO BE INSTALLED AND 18 INCHES WHEN SIX INCH CENTERLINE PAVEMENT MARKINGS ARE TO BE INSTALLED.
2. WHEN MILLED RUMBLE STRIP (CENTERLINE) IS SPECIFIED TO BE SEALED WITH SPECIAL PROVISION (FOG SEAL SURFACE TREATMENT) IT SHALL BE SEALED WITH TWO APPLICATIONS.



INTERSECTION DETAIL

NOTE:

1. MILLED RUMBLE STRIPS (CENTERLINE) SHALL STOP 20 FEET PRIOR TO ALL INTERSECTIONS, IN BOTH DIRECTIONS OF TRAVEL.

REV.	DATE	DESCRIPTION
0	NOV. 3, 2015	ORIGINAL APPROVAL
1	FEB. 4, 2016	ADDED LATERAL TOLERANCE NOTE

OTHER DETAILS REQUIRED: NONE

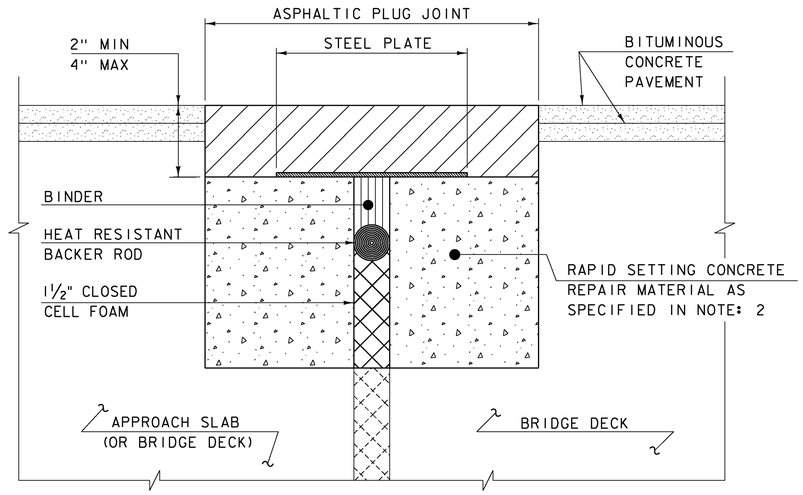
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

MILLED RUMBLE STRIP (CENTERLINE) DETAILS

VTrans Working to Get You There
VERMONT AGENCY OF TRANSPORTATION

HIGHWAY SAFETY & DESIGN DETAIL

HSD-213.02



ASPHALTIC PLUG JOINT DETAIL - REHAB

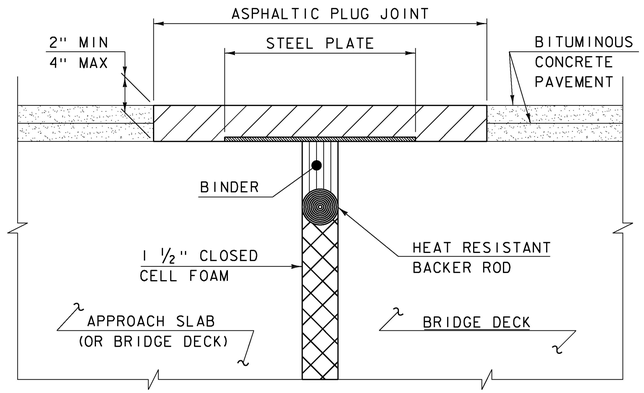
NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.

2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.

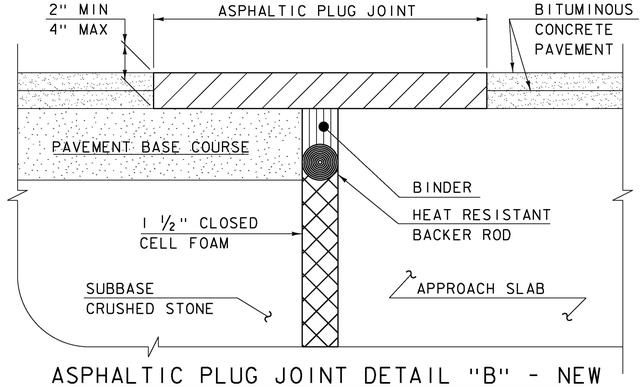
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.

4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

NOTE:
PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

WEATHER LIMITATIONS

APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

DETAILS ON THIS SHEET ARE NOT TO SCALE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

BRIDGE JOINT
ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

STRUCTURES DETAIL
SD-516.10

November 4, 2016

Josh Hulett
Resident Engineer
State of Vermont
Regional Construction Office
189 Troy Ave.
Colchester, VT 05446

RE: Middlebury-Ferrisburgh NH SURF (55)

Dear Josh,

The Gorman Group, LLC. would like to submit the attached submittals/shop drawing associated with the Traffic Signal Items for review and approval on the above referenced project.

We appreciate you taking the time to review our request. Please call me at 603-554-0291 should you have any questions.

Sincerely,

John Cawthern

John Cawthern
Project Manager
The Gorman Group, LLC

East Coast Signals

• Traffic Signals • Highway, Site & Ornamental Lighting • Railroad Signals

LETTER OF TRANSMITTAL

TO: The Gorman Group 200 Church Street Albany NY, 12202	DATE: 11-4-16 ECS JOB NO. 1618	ATTENTION: John RE: Middlebury – Ferrisburgh Submittals

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

☒ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ Certificates of Compliance ☐ Contract Documents

Submittal Progress

	Original	Submitted	DESCRIPTION
	1	11-4-16	Econolite Signal Material Submittals (Cabinet & Detection)
	1	11-4-16	Highway Tech Signal Submittals (Signals and Preemption)
	1	11-4-16	Traffic Parts Replacement Back Plates
	1	11-4-16	Replacement Pole Cap Submittal
	1	11-4-16	Bracket Arm Submittal

THESE ARE TRANSMITTED as checked below:

X For approval ☐ Approved as submitted ☐ Resubmit_____copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return_____corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____200___

REMARKS:

John,

Please find the attached submittals for use on the Middlebury – Ferrisburgh project. If you could please forward onto VAOT for review it would appreciated.

COPY TO: FILE

SIGNED: _____

Matthew S. Fisher
Vice President

If enclosures are not as noted, kindly notify us at once.

69 North Road, Deerfield, NH 03037
Phone: 603.463.5450 Fax: 603.463.5451
www.eastcoastsignals.com

NEMA Cabinet Comparison



One of the most extensive lines of weatherproof NEMA traffic cabinets designed for ultimateease in configuration and installation.

About NEMA Cabinets

Often the first interactions that motorists, pedestrians, and bicyclists have with ITS take place at signalized intersections – where the signals and cabinets represent the front lines of signalized roadways. Econolite offers an extensive, high quality line of NEMA TS1 and TS2 cabinets, built specifically for traffic applications.

Econolite's line of traffic control cabinets are designed and manufactured for rigid pole base or pedestal mounting - zero flex and completely weather proof. Econolite cabinets are manufactured from high-quality, 5052-H32 aluminum.

The design incorporates a door opening that is 80 percent of the front surface for easy access to the traffic controllers and racks. Econolite also accommodates a specified painted finish with a minimum 2 mm thickness powder coating process for extreme durability.

At A Glance

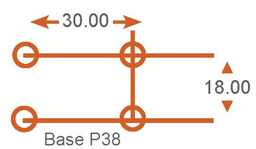
- Plug-N-Go "Power Bus" assembly centralizes power terminations with plug-in connectors simplifying installation and providing flexibility for future expansion with virtually no rewiring
- Modular design and components for ease of maintenance and field upgrades
- Door openings are 80 percent of front surface for greater access to equipment, reducing maintenance time and simplifying diagnostics

ECONOLITE®

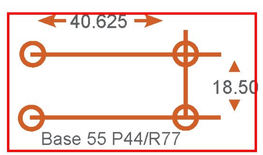
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16 MSF

DATASHEET

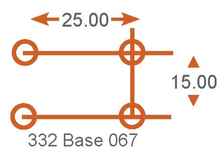
								
Cabinet	**Super P44**	**36 in. G**	**49 in. M**	**60 in. M**	**55 in. P44**	**55 in. P38**	**77 in. R**	**67 in. O**
Dimensions	57.25 in. H x 61 in. W x 28.65 in. D	40 in. H x 24.50 in. W x 17.25 in. D (OD)	49.00 in. H x 30.25 in. W x 16.88 in. D (OD)	60.00 in. H x 30.25 in. W x 16.88 in. D (OD)	55.00 in. H x 44.25 in. W x 26.00 in. D (OD)	55.00 in. H x 38.25 in. W x 26.00 in. D (OD)	76.75 in. H x 44.25 in. W x 26.00 in. D (OD)	67.00 in. H x 30.25 in. W x 24.75 in. D (OD)
Material	Aluminum 0.125 in.							
Finish	Black → Natural, Powder Coat Paint, West Spray Paint							
Access	1-full size door or 2-full size doors (front and back of cabinet)							
Ventilation	Pleated media fiber filter in door 100 Cubic Feet per Minute (CFM) with thermostatic control							
Locking System	Three-point locking system with choice of locks							
Handles	Stainless steel with padlock feature							
Door Stops	Three-position locking stops on bottom of each door							
Detector Rack Assembly	Shelf-mount detector rack assembly							
Configuration	Eight vehicle phases, four pedestrian phases, and four overlaps (optional)							
Police Door	Signal on/off and flash/auto switches and auto/manuals with with police cord (optional)							
Lighting	Incandescent, Fluorescent or LED							
Shelf Drawer	Slide-out shelf/drawer storage unit (optional)							
Flasher	One slot for two-circuit flasher (optional second slot and flasher)							
Flash Transfer Relay	Receptacles for up to 6 flash transfer relatys (optional 8 FTR's)							



Base P38



Base 55 P44/R77



332 Base 067



Standard Base M

ECONOLITE®

3360 E La Palma Avenue, Anaheim, CA 92806 · 714-630-3700 · sales@econolite.com · www.econolite.com

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ASC/3 Series NEMA TS2/Actuated Controllers



The ASC/3 was designed using the latest electronics technology, which offers the user a controller that is more reliable, easier to maintain, and interchangeable.

About ASC/3

The traffic signal controller is one of the most important components of a transportation system. Playing a crucial role in the safety and management of traffic, its importance is undeniable. The controller is also at the heart of any intelligent transportation system (ITS), enhancing transportation efficiency and safety.

The ASC/3 builds upon the proven software, design flexibility, and unique feature set of Econolite's popular ASC/2 family of controllers. All firmware in the ASC/3 is stored in flash memory. This allows for quick and easy intersection programming and software updates in the field without changing hardware or extensive training. The ASC/3 firmware is easily updated in the background while the intersection remains in operation. Once updated, the controller only needs to be power cycled to allow the new firmware to take control. The majority of the electronic components of the ASC/3 are contained in one easy-to-replace module.

At A Glance

- Windows-based remote user interface (optional)
- Advanced controller, coordinator, and preemptor features
- Enhanced transient and environmental protection
- Protocol support for ECPIP, NTCIP, and AB3418
- Software support for Centracs® and Aries®, and any compliant pre-qualified applications
- 16 x 40 LCD display with adjustable contrast

ECONOLITE®

Controller Models

The ASC/3 is available in two models. Both share a common enclosure, power supply, processor, keyboard, display and optional data key telemetry and Ethernet modules.

- ASC/3-1000: Dedicated to the TS2 Type-1 environment
- ASC/3-2100: Can operate in any TS1/TS2 Type-1 and TS2 Type-2 environment

ASC/3-1000: NEMA TS2 / Type-1

The ASC/3-1000 meets and exceeds all requirements of the NEMA TS2 Type-1 Standard. Its interface controls all inputs and outputs over a high-speed RS-485 serial bus (Port 1) with digital addressing that simplifies cabinet wiring. This bus also interfaces directly to a TS2 Malfunction Management Unit (MMU) for enhanced intersection monitoring.

ASC/3-2100: NEMA TS2 Type-2 / TS1

The ASC/3-2100 meets and exceeds all the requirements of the NEMA TS2 Type-2 Standard. It also provides downward compatibility to the Econolite KMC-8000, ASC-8000, ASC/2-2100 and ASC/2S-2100 controllers as well as other NEMA TS1 controllers.

An optional 25-pin telemetry connector matches the KMC-8000 and ASC-8000. This allows the ASC/3-2100 to be used as a direct replacement for older controllers.

Control Features

- 16 phases, 8 configurable concurrent groups in 4 timing rings
- All standard NEMA TS1, TS2 and NTCIP functions
- 16 timed vehicle overlaps
- Transit Signal Priority
- 16 pedestrian phases that can be configured as pedestrian overlaps
- Exclusive pedestrian operation
- Soft vehicle recall
- Conditional service
- Dynamic max operation
- Bike minimum green, second walk and pedestrian clear times, plus a walk and pedestrian clearance maximum
- Advanced walk
- Pedestrian clear protect
- Red maximum
- Vehicle extension 2
- Guaranteed minimum green, walk, ped clear, yellow, red, red revert and overlap green
- Redundant monitoring of the MMU status to enhance intersection monitoring
- 4 timing plans selectable on TOD or coordination plan basis or for one cycle following preemption
- Powerful logic processor

Basic Specifications

- Temperature
  - -34C (-30F) to +74C (+165F)
- Power
  - A built-in, high-efficiency switching power supply generates all required internal voltages as well as 24 VDC for external use.
  - Fuses are mounted on the front of the controller for 120 VAC input and 24 VDC output.
- Dimensions
  - 10 1/2" x 15 1/4" x 9" (H x W x D)

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MMU2-16LE SmartMonitor™
MMU2-16LEip SmartMonitor™



The MMU2-16LE SmartMonitor® series Malfunction Management Unit (MMU) exceeds all the requirements set forth in the NEMA Standard TS2-2003 (R2008)

About the MMU2-16LEip-RM

The MMU2-16LE series includes two large area Liquid Crystal Displays (LCD) for a continuous Full Intersection display. A separate graphical LCD provides a menu driven interface to status, signal voltages, configuration, event logs, and the integrated context sensitive Help System.

The built-in Setup Wizard ensures that the enhanced monitor programming is done quickly and accurately, even by a novice. The industry first patented Diagnostic Wizard automatically pinpoints malfunctioning signals and offers trouble shooting advice.

An Ethernet or EIA-232 port is used to communicate with a Personal Computer or Traffic Management Center using field proven EDI ECcom software.

At A Glance

- A key component for safer traffic control
- The MMU-16LEip model replaces the standard EIA-232 port with a 10/100 Mbps Ethernet port for remote communications with a Traffic Management Center
- Meets the new MMU2 Standard and MUTCD Requirements
- Full intersection LCD back-lighted signal display
- Built-in Set up Wizard automatically configures enhanced parameters

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NEMA TS2-2003 (R2008) Standard Including Amendment #4

The MMU2-16LE SmartMonitor meets all specifications of the NEMA Standard TS2-2003 (R2008) for the MMU2 configuration while maintaining compatibility with NEMA TS1-1989 Assemblies.

NEMA Standard Flashing Yellow Arrow PPLT

Standard MMU2 requirements of TS-2 Amendment #4-2012, providing modes for both TS-2 or TS-1 cabinet configurations.

ECcom PC Software

Access to the MMU2-16LE data is provided by the industry standard ECcom Windows based software for status, event, log retrieval, configuration, and data archival, event logs, and the Help system.

RMS Engine

A DSP coprocessor converts AC input measurements to True RMS voltages, virtually false sentencing due to changes in frequency, phase, or sine wave distortion.

LEDguard®

This innovative signal threshold technique can be used to increase the level of monitoring protection when using LED based signal heads.

Standardized Communications

Real-time SDLC communications with the Controller Unit exchanges field input status, Controller Unit output status, fault status, MMU programming, and time and date.

Event Logging

A time-stamped nonvolatile event log records the complete intersection status as well as AC line events, configuration changes, monitor resets, temperature, and true RMS voltages.

Setup Wizard

Use the built-in setup wizard to configure the NEMA enhanced settings of the SmartMonitor by answering a short series of questions regarding intersection design and operation.

Diagnostic Wizard & Help System

The diagnostic wizard automatically pinpoints faulty signals and offers trouble-shooting guidance. The integrated help system provides context sensitive operational assistance.

Full Intersection & Status Display

Two high contrast, large area LCD continuously show full RYG(W) intersection status. A separate graphic LCD provides a menu driven user interface to status, signal voltages, configuration, event logs, and the Help system.

Program Card Memory

Enhanced settings of the MMU2-16LE SmartMonitor are stored in nonvolatile memory on the program card. Moving the program card to another MMU2-16LE automatically transfers all settings.

Module Choices

- MMU2-16LEip SmartMonitor 12/16 channel LCD Series with Ethernet Port
- MMU2-16LE SmartMonitor 12/16 channel LCD Series with EIA-232 Port

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PS-200 TS2
Cabinet Power Supply



The PS-200 unit, which supplies regulated DC power, unregulated AC power, and a line frequency reference for the Detector Rack, BIUs, load switches, and other auxiliary equipment.

About the PS-200

The PS-200 cabinet power supply is a shelfmounted unit, which supplies regulated DC power, unregulated AC power, and a line frequency reference for the detector rack, BIUs, load switches, and other auxiliary equipment. The PS-200 meets all requirements of the NEMA TS2-2003 standard.

All TS-2 Type 1 cabinet assemblies require the use of this unit, as well as any TS-2 Type 2 cabinet assemblies that utilize Bus Interface Units (BIU).

Each PS-200 cabinet power supply is put through a rigorous quality program and tested under the extreme environmental conditions experienced on the street.

At A Glance

- The PS-200 provides four outputs rated over the full -30°F to 165°F (-34°C to +74°C) NEMA operating temperature range:
  - +12 VDC rated at 2 Amps
  - +24 VDC rated at 2 Amps
  - 12 VAC rated at 0.25 Amps
  - 60 Hz Line Frequency Reference rated at 50 mAmps
  - Input Voltage Operating Range is 89 VAC to 135 VAC at 60 Hz

Display Indicators

A separate LED indicator is provided to display output status and fuse integrity for the three supply outputs. The Line Frequency Reference LED indicator pulses to show 60 Hz activity.

Input / Output Pins

A	AC Neutral
B	Line Frequency Reference Output
C	AC Line Input
D	+12 VDC Output
E	+24 VDC Output
F	Reserved
G	Logic Ground
H	Earth Ground
I	12 VAC Output
J	Reserved

Output Protection

The +12 VDC, +24VDC, and 12 VAC outputs are fused for over-current protection. Each output is protected against voltage transients by a 1500 Watt suppressor.

Test Points

Individual test jacks are provided for the +12 VDC output, +24 VDC output, and Logic Ground reference.

Basic Specifications

- Dimensions
  - 6" H x 5.8" W x 8.3" D

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Bus Interface Unit (BIU)



The BIU-64 is a rack module which interfaces 24V logic I/O signals to the Synchronous Data Link Control (SDLC) serial bus of TS2 Type-1 cabinets.

About the BIU

It is required in all TS2 Type-1 cabinets and in TS2 Type-2 cabinets when controller I/O interface is through the SDLC bus, not via TS1 MS-A, B, and C connectors.

Physically, the *BIU-64* consists of a circuit board and a front panel. A male 64-pin DIN 41612 type-B series connector provides the connection to the backplane of the rack. A female 15-pin metal shell D subminiature connector with latching blocks provides the connection to the SDLC cable. The front panel provides separate indicator lights for Power, Transmit, and Valid Data. It also provides a handle for easy removal of the unit from the rack. A separate TS2 cabinet power supply provides the required 24 VDC power plus a 60 Hz line-timing reference.

At A Glance

- Exceeds BIU requirements of NEMA TS2-2002
- Interfaces detectors, load switches, and 24V signals to TS2 Port-1 SDLC bus
- Used in all TS2 Type-1 cabinets for Terminal and Facilities plus Detector Racks
- Used in TS2 Type-2 for Detector Racks
- Fully hot-swappable
- Separate Power, Transmit, and Valid Data LED indicators display DC power and port status

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Hardware

The BIU measures 2.34 in. W x 4.50 in. H x 6.60 in. D. Low-profile components are used in order to facilitate an optional half-width front plate unit which measures 1.17 in. x 4.5 in. x 6.60 in. The BIU will slide freely into two rack card-guides having a nominal slot width of 0.075 in. and a maximum slot width of 0.125 in.

An aluminum handle is provided on the front panel to allow easy removal of the BIU from the rack. Nominal outer dimensions of the handle shall be 1 in. x 2½ in.

The card rack connector on back of the BIU is a male 64-pin DIN 41612 type-B series. The connector is centered at the edge of the circuit board and oriented with Pin 1 located on top. The circuit board edges align with the connector per DIN 41612.

The Port-1 SDLC bus connector on the front panel of the BIU is a 15-pin metal shell subminiature type with female gold plated contacts. The connector is equipped with latching blocks and mates with a male 15-pin D-type cable connector that is equipped with spring latches (Amp part number 745012-1 or equivalent).

The front panel made of 0.090 in. sheet aluminum and is finished with a durable protective coating. Two indicator lamps are provided on the front panel, as specified by the TS2 Standard, for Power and Transmit. In addition, the front panel provides a Valid Data indicator, which lights whenever a Valid Data frame is received. The Power light flashes during absence of Line Frequency Reference (LFR) from the cabinet power supply. The BIU operates with internally generated 60 Hz reference in the absence of the LFR signal.

Pin Assignments

- Port-1 (SDLC bus) pin assignments shall be as specified in Section 8.6.2.1 of the TS2 Standard:
  - 1 - Rx Data
  - 2 - Logic Ground
  - 3 - Rx Clock +
  - 4 - Logic Ground
  - 5 - Tx Data
  - 6 - Logic Ground
  - 7 - Tx Clock +
  - 8 - Logic Ground
  - 9 - Rx Data -
  - 10 - Not Used
  - 11 - Rx Clock -
  - 12 - Earth Ground
  - 13 - Tx Data -
  - 14 - Reserved
  - 15 - Tx Clock -

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Serial GPS for Cobalt, ASC/3 Controller or ASC/2M Master

About GPS

We provide two different assemblies for serial connection of GPS to ASC/3, CobaltTM controllers and ASC/2M masters. Both include a fused connection to the cabinet 24VDC, a cable to connect to the Garmin antenna, a mounting plate and gaskets for the antenna and a cable to connect to either a 9 pin or 25 pin serial connector.

For clarification, our direct serial interface provides the physical cable connection between the GPS antenna and controller as well as a fused 2-wire lead to power the GPS antenna from the controller cabinet. The serial cable can be provided with a DB9 or DB25 connector and pinned as required for compatibility with the controller. The data communicated through the serial interface to the controller is purely a function of the GPS antenna (Garmin• -34.6°F to +165°F (-37°C to +74°C) a default baud rate of 4800 (adjustable if necessary), 8 data bits, and no parity. The data interface protocol is based on the National Marine Electronics Associations (NMEA) 0183 ASCII interface specification. The standard is fully defined in NMEA 0183, Version 3.0 and may be obtained at www.nmea.org/ Details for the Garmin GPS antenna are available at http://static.garmincdn.com/pumac/GPS16HVS_TechnicalSpecifications.pdf.

Part Number and Description

- 171-1369-501 - GPS 16X with DB9 Cable Assembly
- 171-1369-502 - GPS 16X with DB25 Cable Assembly



Basic Specifications

- Temperature
  - -34.6°F to +165°F (-37°C to +74°C)

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TMIB Cabinet Interface



Econolite's TMIB cabinet interface is a TEES/TS2 detector card for a standard detector card rack or shelf-mount enclosure.

About the TMIB

The TMIB connects up to four AccuScan forward-fire radar units to a traffic controller in the cabinet. The TMIB also facilitates Ethernet-based setup and monitoring communications from a PC to the radar units. Easy to install and set-up, the TMIB manages outputs from radar units around the intersection. Non-volatile memory retains the detector configuration, which can also be saved to a computer or restored from a saved file.

For the traffic controller, valid detection and output of up to 64 objects can facilitates optimal signal timing. Up to 16 wired open-collector outputs or up to 64 SDLC-protocol based outputs provide all the demand information that a modern traffic controller needs in an ITS solution. The TMIB interfaces detector outputs directly to NEMA TS1/TS2, TEES Type 170/179, or 2070 ATC traffic controllers, including SDLC when the controller software supports it in all cabinet types.

At A Glance

- Stop Line, Dilemma Zone, or Advanced vehicle detection
- Cost Effective & Superior Value
- Loop replacement (non-intrusive detection)
- Presence or Pulse Outputs
- Custom trigger conditions
- Easy to install and configure
- Reliable Performance
- Minimal Maintenance
- Low Power Consumption
- 100Base-TX Ethernet to network
- 170/2070, TS1 & TS2 Controller Support

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Installation Options:

- Detector Rack installation
  - 4 rear-edge outputs or up to 16 rear-edge outputs with expansion modules
  - 4 rear-edge status outputs for use with BIU
  - 12 outputs on front panel for wired I/O or to expansion modules
  - SDLC protocol emulates up to 4 BIU functions for up to 64 outputs
- Shelf-Mount Enclosure installation
  - 12 wired open-collector outputs on front panel
  - SDLC protocol emulates up to 4 BIU functions for up to 64 outputs

General Data

- Electrical
  - 10 to 30 VDC, 2.5W, power on read-edge connector
  - Consumption, current <100 mA @ 24 VDC
  - Reset Switch
- Interfaces
  - 44-terminal double row Cinch Jones card edge connector
  - DB-15 NEMA TS2 / TEES SDLC protocol
  - HD-15 for 12 open-collector outputs, 12 or 24 VDC, Ground True
  - RJ45 100Base-Tx Ethernet for PC Data Communication Protocol
  - 4x UMRR sensor interface
  - Optional external power supply
  - Debug and USB connectors (reserved)
- Supported Traffic Sensors:
  - Up to 4 AccuScan models with RS-485 output
- Detector Outputs
  - Up to 16 wired open-collector outputs with expansion module
    (4 detector outputs on rear-edge connector with status angle)
  - Port 1 SDLC protocol response offers up to 64 outputs
- Indicators
  - 24 status LEDs (4 x 6 grind) for diagnostics and 16 outputs (2 power, 2 heartbeat, 2 error, and 2 SDLC rack)
- Regulatory
  - NEMA TS2-2003 compliant
  - TEES
  - FCC Part 15, Class A
- Product support and training available

Basic Specifications

- Dimensions & Weight:
  - H x W x L: 114mm x 57mm??? x 178mm (4.5in x 2.2in x 7in)
  - Weight 0.4 kg (0.8 lb.)
- Environmental:
  - -34°C to +74°C (-29°F to +165°F)
  - 0 to 95% relative humidity, non-condensing
- Warranty – 2 years

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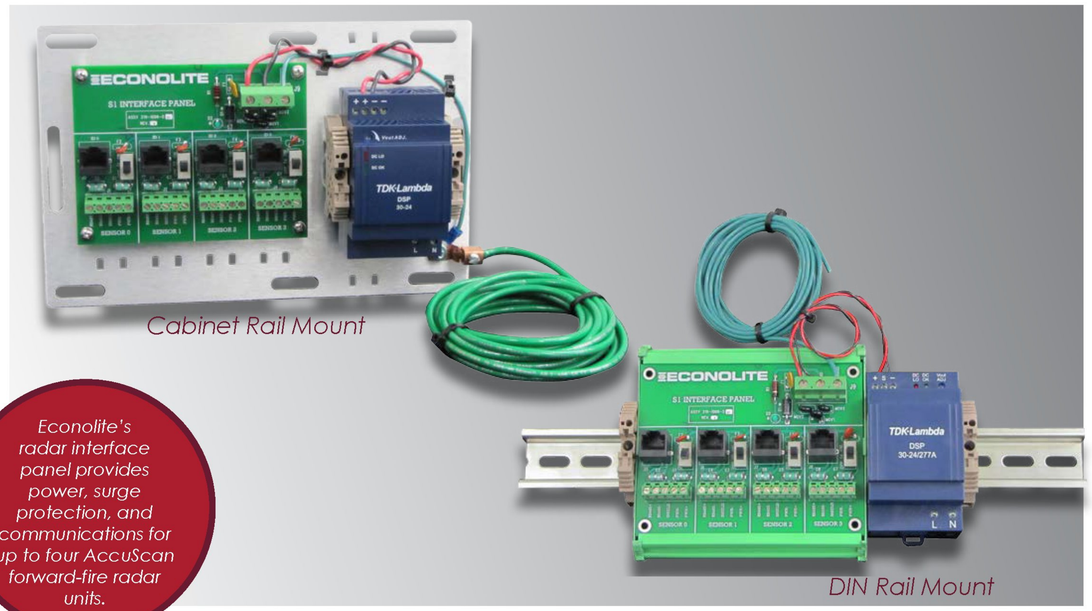
Radar Interface Panels



Cabinet Rail Mount

DIN Rail Mount

Econolite's radar interface panel provides power, surge protection, and communications for up to four AccuScan forward-fire radar units.

About the Interface Panels

Econolite's radar interface panels provide power, surge protection, and communications for up to four AccuScan forward-fire radar units. Typical installation includes a TMIB cabinet interface that provides Ethernet connectivity to the radar units. Direct RS-485 serial communications from the panel to the radar units is also possible. On the interface panel, each radar unit has its own power switch.

Easy to install and set-up, the radar interface panel provides a mechanical place to land cables coming from outside the cabinet and multiple layers of electrical surge suppression to help protect other cabinet equipment from outside surges and noise. Protection includes transformer isolation, MOV, gas discharge tubes, diode isolation, and resettable fuses. Power is 110 or 220 VAC to the replaceable power supply on the interface panel, typically wired from the protected side of the cabinet power distribution. No supplemental surge suppression will be required.

This small-footprint interface panel is available for cabinet rail or DIN rail mounting. A power LED indicates when the interface panel is active.

At A Glance

- Supports 1 to 4 AccuScan sensors
- Surge suppression and communications distribution
- Isolates TMIB from outside cabling
- Easy to install and wire
- DIN rail or cabinet rail mount
- Reliable Performance
- Minimal Maintenance
- LED power indicator
- Low Power Consumption
- TEES and NEMA compliant

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Installation Options

- Cabinet Rail Mount
  - Slots support most cabinet rail spacing's
  - Rail lugs available separately
- DIN Rail Mount
  - DIN rail available separately

General Data

- Electrical
  - 110 or 220 VAC, 50 or 60 Hz, 30W
  - Ground wire to cabinet ground
- Interfaces
  - 4x 5-pin Phoenix connectors to radar units
  - 4x RJ12 connectors to TMIB cabinet interface (order appropriate number cables with panel)
- Indicators
  - Power Status LEDs on panel and power supply
- Environmental
  - -34°C to +74°C (-29°F to +165°F)
  - 0 to 95% relative humidity, non-condensing

  Regulatory:
  - NEMA TS 2-2003 compliant
  - TEES
  - FCC Part 15, Class A
- Product support and training available through the EGI Learning Center

Basic Specifications

- Dimensions & Weight (Cabinet Rail Mount):
  - W x L x H: 241mm x 160mm x 71mm (9.5in x 6.3in x 2.8in)
  - Weight 0.8 kg (1.8 lb.)
- Dimensions & Weight (DIN Rail Mount):
  - W x L x H: 185mm x 127mm x 67mm (7.3in x 5in x 2.6in)
  - Weight 0.7 kg (1.5 lb.)
- Warranty
  - 2 years

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EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16 MSF

DETECTION

DATASHEET

AccuScan 300



The advanced capabilities of radar-based detection far outweigh the simplicity of inductive loops.

About AccuScan 300

The cornerstone of any ITS program is vehicle detection at a signalized intersection. The key is for accurate, reliable and maintenance free vehicle presence detection at the stop bar. The Econolite AccuScan 300 radar-based detection solution is specifically designed to provide accurate stop bar detection for signalized intersection control. It provides up to six lanes of vehicle detection at up to 344 feet – enabling vehicle queue detection. AccuScan 300 is a forward-fire radar sensor delivering precise sampling measurements on an individual lane bases, ideal for single and multi-phase intersections. AccuScan 300 is an Intelligent Transportation System (ITS) solution with central management software that is convenient for fast integration to existing network infrastructure.

AccuScan 300 works with Econolite's radar sensor configuration and management software (TMConfigurator), which allows for easy sensor setup and programming of detection zones. AccuScan 300 is fully compatible with 170/2070 and NEMA controllers and multiple sensors and can be easily integrated into NEMA or 33X series cabinets using one full-width detector rack-compatible interface module (TMIB).

At A Glance

- Stop Bar vehicle and bike detection
- By lane detection accuracy
- Loop replacement (non-intrusive detection)
- Flexible installation
- On-board Attitude Sensor simplifies sensor aiming
- Custom trigger conditions
- ETA, Dilemma Zone, Queue Length, and Speed measurement
- Convenient installation wizard
- Geographical Awareness
- RS-485 and 100Base-TX Ethernet interface option
- 170/2070, TS1 & TS2 Interface available

ECONOLITE®

DATASHEET

Intersection features and functions:

- Stop Bar Vehicle Detection for up to 6 lanes
- Counting and Classification
- Wrong Way Detection (vehicle moving opposite to the defined direction of traffic)
- Speed measurement

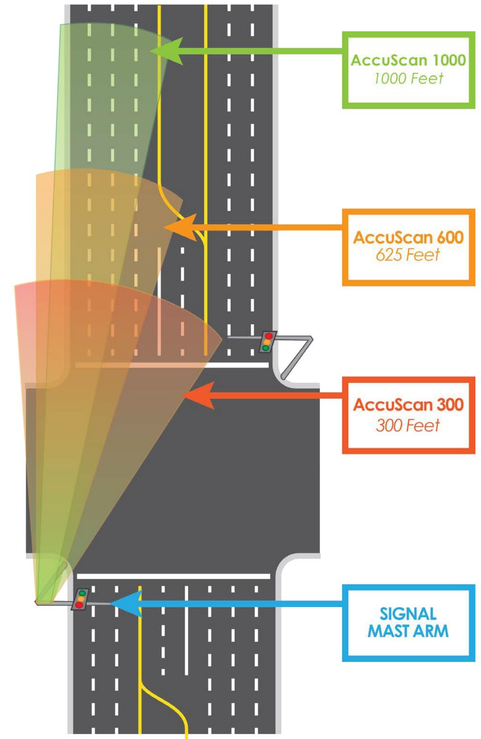
Installation Parameters:

- Traffic Direction: Approaching & Receding
- Typical Mounting Height: 18-24ft (6-8m)
- Typical Sensor Azimuth Angle: -12º
- Typical Sensor Elevation Angle: -6º
- Typical Stop Bar Detection Distance: 60-150ft (20-50m)

(Parameters may vary based on site geometry and detection objectives)

General Data:

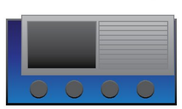
- Sensor Performance
  - Maximum Range Typ. 344 ft (105m)
  - Range Accuracy: Typ. < ±2.5% or < ±0.25m (bigger of)
  - Speed Accuracy: Typ. < ±0.28m/s or ±1% (bigger of)
  - Update Time: ≤ 50ms
  - Track Initialization Time: 6-10 cycles
  - Simultaneously Tracked Objects: up to 64
- Interface
  - RS485 half/full duplex
  - 100BaseT Ethernet
- Environmental
  - Ambient Temperature: -40ºF to +185ºF (-40ºC to +85ºC)
  - IP 67 (with connector mated)
- Mechanical
  - Weight (Approximate): 10.22oz (290g)
  - Dimensions (LxDxH)…3.7in x 1.5in x 3.3in (95mm, 38.1mm, 85mm)
  - Connector: Hirose LF10 series circular type
  - Power Supply: 24VDC, 3.7W
  - Frequency Band: 24GHz
- Compliance
  - ETSI EN 300-440, FCC part 15, RSS-310, RSS-210, SRRC, KCC, NCC
- Warranty
  - 2 Years
- Product support and training available through the EGI Learning Cente



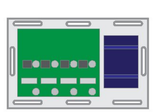
RADAR (x4)



CONTROLLER (x1)



INTERFACE PANEL (x1)



CABINET INTERFACE

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EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16 MSF

DETECTION

DATASHEET

AccuScan 600



The advanced capabilities of radar-based detection far outweigh the simplicty of inductive loops.

About AccuScan 600

Actively managing and controlling traffic at intersections and dilemma zones requires accurate extended vehicle detection from the stop bar to 500 feet before the stop bar. With Econolite's AccuScan 600 radar detection solution, agencies and MPOs can actively manage dilemma zones and intersections based on traffic demand to enhance safety and efficiency even on curved approaches. A single Econolite AccuScan 600 sensor enables up to six lanes of vehicle detection at various distances up to 625 feet from the mounting location of the sensor. By providing vehicle detection out to 625 feet, Econolite AccuScan 600 enables dilemma zone protection, green light extension, ETA, queue, and bicycle detection strategies. AccuScan 600 is an Intelligent Transportation System (ITS) solution with central management software that is convenient for fast integration to existing network infrastructure.

At A Glance

- Stop Bar and Advance vehicle detection – in one sensor
- Loop replacement (non-intrusive detection)
- Depth by-lane detection accuracy
- On-board Attitude Sensor simplifies sensor aiming
- Flexible installation
- Custom trigger conditions
- ETA, Dilemma Zone, Queue Length and Speed measurement
- Convenient installation wizard
- Geographical Awareness
- 100Base-TX Ethernet interface option
- 170/2070, TS1 & TS2 Interface

ECONOLITE®

DATASHEET

Enhancing Safety

A research study by the Texas Department of Transportation (TxDOT) demonstrated that advance detection significantly reduced collision occurrence at intersections. The study on advance detection found:

- 58% reduction in red light violations
- 39% reduction in severe crash frequency
- 80% reduction in heavy-vehicle red light violations

Intersection Features & Options

- Stop bar and advance detection for up to 4 lanes
- Counting and classification
- Wrong way detection
- Speed measurement

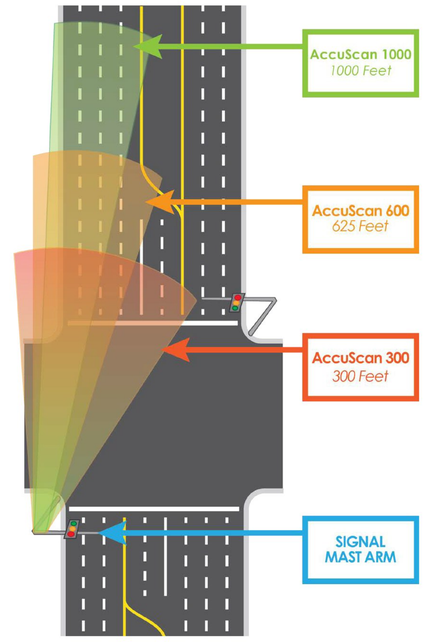
Installation Parameters

- Traffic Direction: Approaching & Receding
- Typical Mounting Height: 18-24ft (6-8m)
- Typical Sensor Azimuth Angle: -8º
- Typical Sensor Elevation Angle: -6º
- Typical Stop Bar Detection Distance: 60-150ft (20-50m)
- Typical Advance Detection Distance: 150ft-480ft (50-160m)

(Parameters may vary based on site geometry and detection objectives)

General Data

- Sensor Performance
  - Maximum Range Typ: 625 ft (190m)
  - Range Accuracy: Typ. < ±2.5% or < ±0.25m (bigger of)
  - Speed Accuracy: Typ. < ±0.28m/s or ±1% (bigger of)
  - Update Time: ≤ 50ms
  - Track Initialization Time: 6-10 cycles
  - Simultaneously Tracked Objects: up to 64
- Interface
  - RS485 half/full duplex
  - 100BaseT Ethernet
- Environmental
  - Ambient Temperature: -40ºF to +185ºF (-40ºC to +85ºC)
  - IP 67 (with connector mated)
- Mechanical
  - Weight (Approximate): 11.64oz (330g)
  - Dimensions (LxWxH): 4.3in x 1.5in x 3.8in(110mm, 38.1mm, 99mm)
  - Connector: Sensor LF10 series circular type
  - Power Supply: 24VDC, 3.7W
  - Frequency Band: 24GHz
- Compliance
  - ETSI EN 300-440, FCC part 15, RSS-310, RSS-210, SRRC, KCC, NCC
- Warranty
  - 2 Years
- Product support and training available through the EGI Learning Center



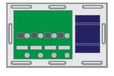
RADAR (x4)



CONTROLLER (x1)



INTERFACE PANEL (x1)



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EAST COAST SIGNALS APPROVED FPR SUBMITTAL 11-4-16 MSF

STR-LWY-4M-HT-IP-02–06

LEDway® IP66 Street Light – Type IV Medium – Horizontal Tenon Mount – 20–60 LEDs

Product Description

Luminaire housing is all aluminum construction. Standard luminaire utilizes terminal block for power input suitable for #2–#14 AWG wire. Luminaire is designed to mount on a 2" (51mm) IP, 2.375" (60mm) O.D. horizontal tenon or 1.25" (32mm) IP, 1.66" (42mm) O.D. horizontal tenon when ordered with XA-XIL125IP accessory kit and is adjustable +/-5˚ to allow for luminaire leveling (two axis T-level included). Horizontal tenon must be minimium 8" (203mm) long.

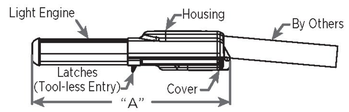
Performance Summary

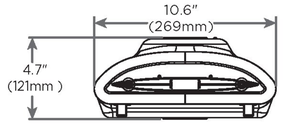
- Utilizes BetaLED® Technology
- Patented NanoOptic® Product Technology
- Made in the U.S.A. of U.S. and imported parts
- **CRI:** Minimum 70 CRI
- **CCT:** 5700K (+/- 500K) Standard, 4000K (+/- 300K)
- **Limited Warranty†:** 10 years on luminaire/10 years on Colorfast DeltaGuard® finish
- **EPA and Weight:** Reference EPA and Weight spec sheet

Accessories

Field Installed Accessories	
XA-BRDSPK30 (20-30 LEDs)	**XA-XSLBLS30 (20-30 LEDs)**
XA-BRDSPK60 (40-60 LEDs) Bird Spikes for Light Engine	**XA-XSLBLS60 (40-60 LEDs)** External Backlight Shield
XA-BRDSPKHSG Bird Spikes for Housing	**XA-XIL125IP** 1.25" (32mm) IP Pipe Sealing Kit







LED Count (x10)	Dimension	Measurements
02	"A"	17.5" (443mm)
03	"A"	17.5" (443mm)
04	"A"	22.0" (559mm)
05	"A"	22.0" (559mm)
06	"A"	22.0" (559mm)

Ordering Information

Example: STR-LWY-4M-HT-02-E-UL-SV-525-IP-OPTIONS

STR-LWY	4M	HT		E				IP -
Product	**Optic**	**Mounting**	**LED Count (x10)**	**Version**	**Voltage**	**Color Options***	**Drive Current**	**Options**
STR-LWY	**4M** Type IV Medium	**HT** Horizontal Tenon	**02** **03** **04** **05** **06**	**E**	**UL** Universal 120–277V **UH** Universal 347–480V	**SV** Silver (Standard) **BK** Black **BZ** Bronze **PB** Platinum Bronze **WH** White	**525**** 525mA **700** 700mA	**IP** IP66 Classification **40K** 4000K Color Temperature - Color temperature per luminaire **DIM** 0–10V Dimming - Control by others - Refer to dimming spec sheet for details - Can't exceed specified drive current **F** Fuse - Not available with all ML options. Refer to ML spec sheet for availability with ML options - When code dictates fusing, use time delay fuse **HL** Hi/Low (175/350/525 Dual Circuit Input) - Refer to ML spec sheet for details - Sensor not included **ML** Multi-Level - Refer to ML spec sheet for details **N** No Quick Disconnect Harness or Leveling Bubble - Standard product features unless N option is specified **PD** Power Door - All connections between door and luminaire are shipped unconnected from the factory; door release spring included to open door automatically when the latches are released **R** NEMA Photocell Receptacle - Not available with all ML options. Refer to ML spec sheet for availability with ML options - Photocell by others - Intended for downlight applications at 0˚ tilt **SC** Door Safety Tether - Stainless steel aircraft cable **UTL** Utility - Includes exterior wattage label that reflects watts for the drive current selected. The ability to exceed selected drive current will be disabled

† See www.cree.com/lighting/products/warranty for warranty terms.

* Light engine portion of extrusion is not painted and will remain natural aluminum regardless of color selection. ** Available on luminaires with 30-60 LEDs.

BetaLED TECHNOLOGY

RoHS

c UL us

Rev. Date 03/21/2013

CREE®

www.cree.com/lighting T (800) 236-6800 F (262) 504-5415

EAST COAST SIGNALS APPROVED FPR SUBMITTAL 11-4-16 MSF

STR-LWY-4M-HT-IP-02-06

Product Specifications

CONSTRUCTION & MATERIALS

- Housing is all aluminum construction
- Terminal block for power input suitable for #2–#14 AWG wire
- Luminaire is designed to mount on a 2" (51mm) IP, 2.375" (60mm) O.D. horizontal tenon or 1.25" (32mm) IP, 1.66" (42mm) O.D. horizontal tenon when ordered with XA-XIL125IP accessory kit and is adjustable +/-5° to allow for luminaire leveling (two axis T-level included). Horizontal tenon must be minimum 8" (203mmm) long
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Standard is silver. Bronze, black, white, and platinum bronze are also available

ELECTRICAL SYSTEM

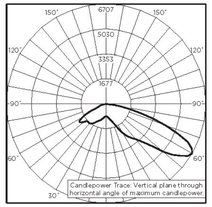
- **Input Voltage:** 120–277V or 347–480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Quick disconnect harness suitable for mate and break under load provided on power feed to driver for ease of maintenance
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

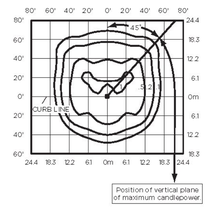
- cULus Listed
- Suitable for wet locations
- Enclosure rated IP66 per IEC 60529 when ordered without R or ML options
- Consult factory for CE Certified products
- Meets CALTrans 611 Vibration testing and GR-63-CORE Section 4.4.1/5.4.2 Earthquake Zone 4
- Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish are endurance tested to withstand 5,000 hours of elevated ambient salt fog as defined in ASTM Standard B 117
- Product qualified on the DesignLights Consortium ("DLC") Qualified Products List ("QPL") when ordered without full backlight control shield
- RoHS Compliant
- Meets Buy American requirements within ARRA

Photometry

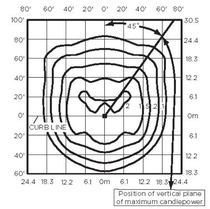
All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory.



CESTL Test Report #: 2013-0028
STR-LWY-4M-**-06-E-UL-700-40K
Initial Delivered Lumens: 11,036



STR-LWY-4M-**-03-E-UL-700
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 5,907
Initial FC at grade



STR-LWY-4M-**-06-E-UL-700
Mounting Height: 25' (7.6m) A.F.G.
Initial Delivered Lumens: 11,683
Initial FC at grade

IES Files
To obtain an IES file specific to your project consult:
http://www.cree.com/lighting/tools-and-support/exterior-ies-configuration-tool

Lumen Output, Electrical, and Lumen Maintenance Data

Type IV Medium Distribution													
LED Count (x10)	5700K		4000K		System Watts 120–277V	System Watts 347–480V	TOTAL CURRENT						50K Hours Projected Lumen Maintenance Factor @ 15°C (59°F)**
	Initial Delivered Lumens	BUG Ratings* Per TM-15-11	Initial Delivered Lumens	BUG Ratings* Per TM-15-11			120V	208V	240V	277V	347V	480V	
525mA @ 25°C (77°F)													
03	4,725	B2 U0 G1	4,550	B2 U0 G1	53	55	0.45	0.26	0.23	0.21	0.16	0.13	93%
04	6,313	B2 U0 G1	6,079	B2 U0 G1	66	71	0.56	0.33	0.29	0.26	0.21	0.16	
05	7,839	B2 U0 G2	7,549	B2 U0 G2	86	87	0.72	0.42	0.37	0.33	0.25	0.19	
06	9,346	B2 U0 G2	9,000	B2 U0 G2	100	103	0.84	0.49	0.43	0.38	0.30	0.22	
700mA @ 25°C (77°F)													
02	3,977	B1 U0 G1	3,830	B1 U0 G1	47	51	0.39	0.23	0.21	0.19	0.15	0.12	91%
03	5,907	B2 U0 G1	5,698	B2 U0 G1	70	73	0.59	0.34	0.30	0.27	0.21	0.16	
04	7,891	B2 U0 G2	7,598	B2 U0 G2	91	93	0.77	0.45	0.39	0.35	0.27	0.20	
05	9,799	B2 U0 G2	9,436	B2 U0 G2	113	115	0.96	0.55	0.48	0.43	0.33	0.25	
06	11,683	B3 U0 G2	11,250	B2 U0 G2	134	135	1.13	0.65	0.57	0.50	0.39	0.29	

* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf.
** For recommended lumen maintenance factor data see TD-13. Calculated L_{70} based on 10,000 hours LM-80-08 testing: > 150,000 hours in accordance with guidelines describing "successors to previously tested subcomponents" (Section 5) per Sep 9, 2011 ENERGY STAR guidelines.
See http://www.energystar.gov/ia/partners/prod_development/new_specs/downloads/luminaires/ENERGY_STAR_Final_Lumen_Maintenance_Guidance.pdf.

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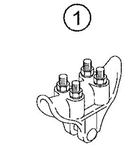
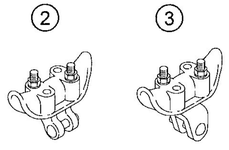
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

PELCO PRODUCTS, INC.

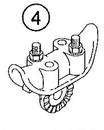
COMPONENTS
Span Wire



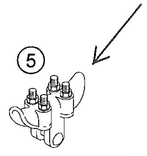
OPTIONS
J-BOLTS
STAINLESS BUSHING
STAINLESS UPGRADE



ITEM 2-3 OPTIONS
STAINLESS BUSHING
STAINLESS UPGRADE

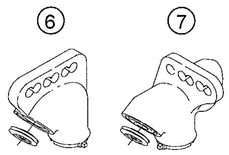


OPTIONS
STAINLESS UPGRADE

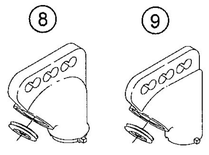


OPTIONS
J-BOLTS
STAINLESS UPGRADE

ITEM	DESCRIPTION	PART NO.
	SPAN WIRE CLAMP:	
1	3/4" Wide Slot, Alum	SE-0321
	5/8" Wide Slot, Alum	SE-4077
	½" Wide Slot, Alum	SE-3211
2	90° w/ J-Bolts & 3/4" Slot, Alum	SE-3212
3	Universal w/ 3/4" Wide Slot & J-Bolts, Alum	SE-3217
4	Serrated w/ J-Bolts, Alum	SE-3213
5	½" Wide Slot, Iron	SE-0338
6	WIRE OUTLET BODY:	
	1½" NPS w/ Grommet, ½" Wide Comb, Iron	SE-4118
	1½" NPS w/ Roll Pin, ½" Wide Comb, Iron	SE-4103
7	Double Universal 1½" NPS, ½" Wide Comb, Iron	SE-4155
8	3/4" Wide Comb, Alum	SE-4117
9	3/4" Wide Comb, Brass	SE-0322-B
10	Multi Clevis Tri-Stud, 3/4" Wide Comb, Alum	SE-0558
11	Single Clevis Tri-Stud, 3/4" Wide Comb, Alum	SE-0531
12	Tri-Stud, 3/4" Wide Comb, Alum	SE-0545
13	Tri-Stud Adjustable w/ Grommet, Alum	SE-0523
14	Double Adjustable Tri-Stud, Alum	SE-0532
15	Double Single Clevis 1½" NPS, 3/4" Wide Comb, Alum	SE-4058



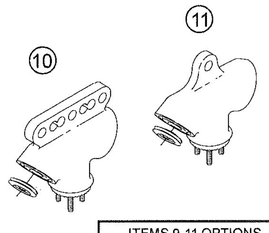
ITEMS 6-7 OPTIONS
DOUBLE SET SCREWS
PAINT



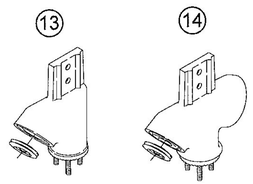
OPTIONS
DOUBLE SETSCREWS
STAINLESS BUSHING
PAINT

Notes:

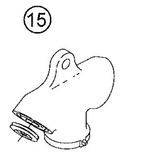
1. All assemblies are supplied standard with stainless steel fasteners and galvanized hardware on span wire clamps. Stainless upgrade shall include stainless steel hardware on span wire clamps.
2. Specify options when ordering.



ITEMS 9-11 OPTIONS
STAINLESS BUSHING
PAINT



ITEM 12-13 OPTIONS
PAINT

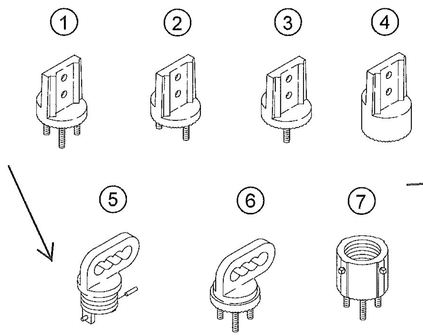


OPTIONS
DOUBLE SETSCREWS
STAINLESS BUSHING
STAINLESS UPGRADE
PAINT

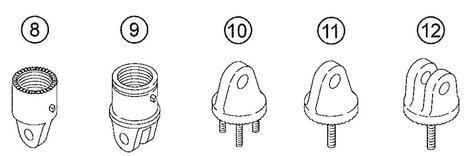
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

PELCO PRODUCTS, INC.

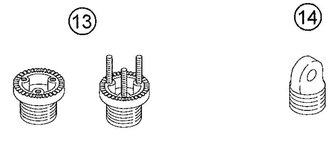
COMPONENTS
Span Wire



ITEM 1-7 OPTIONS
PAINT



ITEM 8-11 OPTIONS
STAINLESS BUSHING
PAINT



OPTIONS
TRI-BOLT or TRI-STUD

ITEM	DESCRIPTION	PART NO.
	HANGER BODY:	
1	Tri-Stud, Alum	SE-0512
2	Double Stud, Alum	SE-0516
3	Tri-Stud, Alum	SE-0438
4	1½" NPS, Alum	SE-0530
	DISCONNECT BALANCER:	
5	1½" NPS, ½" Wide Comb, Iron	SE-0380
6	Tri-Stud, 3/4" Wide Comb, Alum	SE-0505
7	TRI-STUD ADAPTER, 1½" NPS, Alum	SE-0533
8	CLEVIS ADAPTER:	
	1½" NPS, 3/4" Clevis, Alum	SE-4030
9	1½" NPS, Double, 3/4" Wide Slot, Alum	AB-0316
10	Tri-Stud, 3/4" Wide Clevis, Alum	SE-4031
11	Single Stud, 3/4" Wide Clevis, Alum	SE-0540
12	Single Stud, 3/4" Wide Slot, Alum	SE-0630
13	TRI-BOLT/TRI-STUD ADAPTER, 1½" NPS, Alum	SE-0502
14	SPAN WIRE ADAPTER:	
	1½" NPS, Brass	SE-0345
	1½" NPS, Alum w/ Stainless Bushing	SE-0371

Notes:

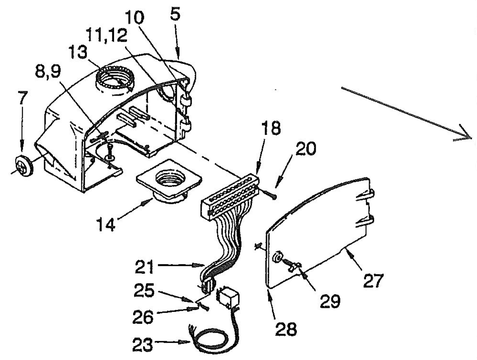
1. All assemblies are supplied standard with stainless steel fasteners.
2. Specify options when ordering.

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

PELCO PRODUCTS, INC.

DISCONNECT HANGER ASSEMBLIES

(1)



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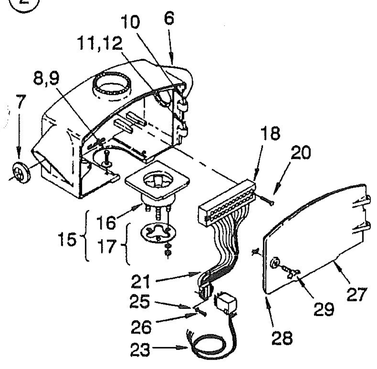

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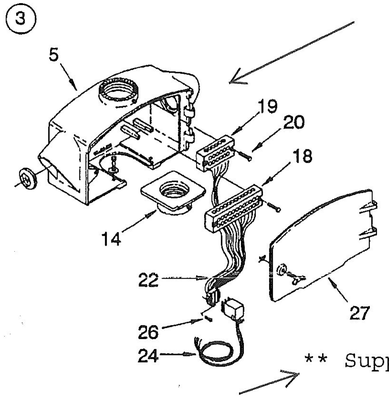
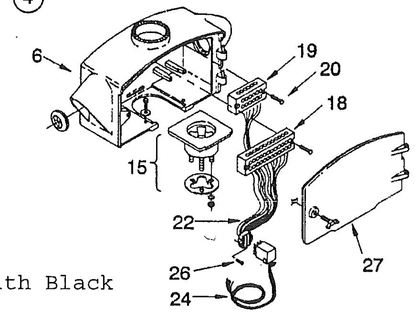


** Supplied with Black

(4)



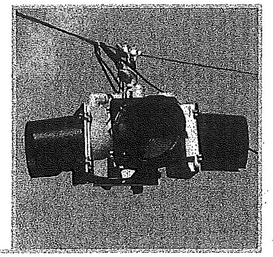
ITEM	DESCRIPTION	PART NO.
	12 CIRCUIT DISCONNECT HANGER ASSY.	
(1)	W/ 1½" Threaded Top & 1½" Threaded Hub	SE-3073
(2)	W/ 2" Non-Threaded Top & Tri-Stud Hub	SE-5031
	18 CIRCUIT DISCONNECT HANGER ASSY.	
(3)	W/ 1½" Threaded Top & 1½" Threaded Hub	SE-3077
(4)	W/ 2" Non-Threaded Top & Tri-Stud Hub	SE-5032
5	DISCONNECT BODY, 1½" Threaded	SE-0383
6	DISCONNECT BODY, 2" Non-Threaded	SE-0506
7	NEOPRENE GROMMET, W/ Diaphram	SE-0449
8	BOLT, Hex. Hd., ¼"-20 x 5/8"	FS-2001
9	FENDER WASHER, ¼" x 1"	FS-4000
10	ROLL PIN, 3/16" x 1¼", Stainless Steel	FS-6301-SS
11	GROOVE PIN, 3/16" x 1½", Stainless Steel	FS-6203-SS
12	HAIRPIN CLIP, 1/8", Stainless Steel	FS-6902-SS
13	SETSCREW, Square Hd., S.S., ¼"-20 x 3/4"	FS-3207-SS
14	DISCONNECT HUB, 1½"	SE-0378
	W/ SETSCREW, Sq. Hd. S.S., ¼"-20 x ½"	FS-3218-SS
15	DISCONNECT HUB ASSY., Tri-Stud	SE-5033
16	DISCONNECT HUB, Tri-Stud	SE-0504
17	HARDWARE KIT, W/O Gasket	SE-5035
18	TERMINAL BLOCK, 12 Circuit	SE-0388
19	TERMINAL BLOCK, 6 Circuit	SE-0387
20	SCREW, Phillips Pan Hd., #10-32 x 1¼"	FS-3904
21	FEMALE HARNESS ASSY., 12 Circuit	SE-0396
22	FEMALE HARNESS ASSY., 18 Circuit	SE-0395
23	MALE HARNESS, 12 Circuit, 48"	SE-0392
24	MALE HARNESS, 18 Circuit, 48"	SE-0406
25	FLATWASHER, #6	FS-4117
26	SCREW, Phillips Pan Hd., Self-Tap, #6-32 x 3/8"	FS-3102
27	DISCONNECT DOOR	SE-0379
28	GASKET, 3/16" Closed Sponge Cord	SE-4000
29	WING SCREW W/ Hairpin Keeper	SE-0407

NOTE:
1. PLEASE SPECIFY COLOR WHEN ORDERING.
2. ALL HARNESSES COME WITH 18 AWG WIRE PRE-TINNED & NUMBERED ON 3" CENTERS
3. SEE BACK FOR HANGER ASSEMBLIES.

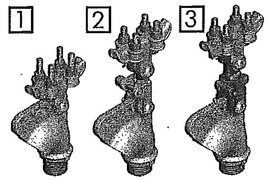
320 S.W. 18th St. • Edmond, Oklahoma 73013 • (405) 340-3434 • FAX: (405) 340-3435 • E-mail: pelco@pelcoinc.com

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

Iron 2-Way, 3-Way & 4-Way Span Wire Hanger Assemblies

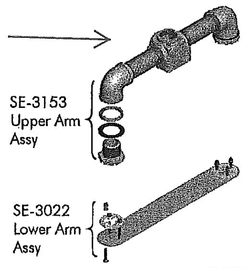


Pelco's Span Wire mountings are available in aluminum or iron with 1-1/2" or tri-stud fittings. Balance adjusters provide additional adjustment capabilities, while tether assemblies may be used to anchor the bottom of signals in windy applications.



1. SE-3070 - Coating ☐ **Span Wire Hanger Assy, 1-1/2" NPS**
2. SE-3273 - ☐ **Span Wire Hanger Assy, 1-1/2" NPS Balance Adjuster**
3. SE-3275 - ☐ **Span Wire Hanger Assy, 1-1/2" NPS PAL Balance Adjuster**

P__=Paint

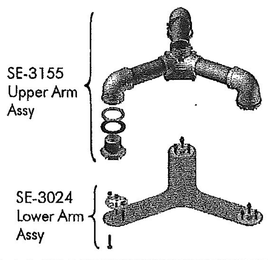


Upper & Lower Arm Assy, 2-Way 16-1/2" CTC

SE-3154 - Coating ☐ P-34 Black

P__=Paint

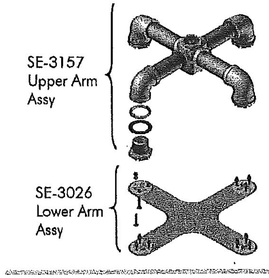
For 2-Way Span Wire Mount



Upper & Lower Arm Assy, 3-Way 16-1/2" CTC

SE-3156 - Coating ☐

P__=Paint



Upper & Lower Arm Assy, 4-Way 16-1/2" CTC

SE-3158 - Coating ☐

P__=Paint

Note: 1. All assemblies are supplied standard with stainless steel fasteners and galvanized hardware on span wire clamps. Stainless upgrade to include stainless hardware and stainless slotted washer where applicable.
2. See Reference Section for available paint colors.

FREE-SWINGING

1-Way Assemblies

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

Designed to accommodate all traffic signals, with the exception of optically programmed. The Tallon Series Astro-Brac is designed to be tough and durable. It features all-axis adjustability and is designed to facilitate the mounting of any size signal to any size mast arm or pole.

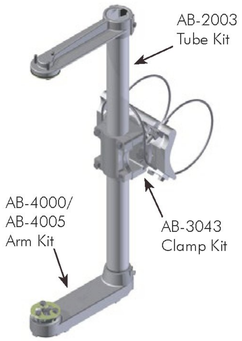




Astro-Brac Assy, Tallon Series, 1-Way Band Mount

	Signal Section		Band Length		Coating
AB-0618	- [4]	-	[42]	-	[P34]
	1=1 Sec 2=2 Sec 3=3 Sec 4=4 Sec 5=5 Sec		See Note		PNC=Process No Color P__=Paint

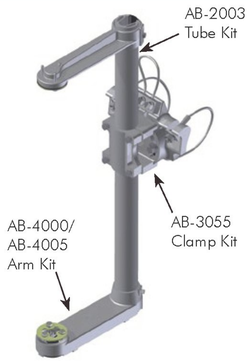
Note:
Band Length: 29", 36", 42", 48", 56", 72", or 84".
Stainless steel upgrade available: includes stainless clamp screw and slotted washer.
Specify by including -SS in the part number, i.e., AB-0618-3-29-SS-PNC.



Astro-Brac Assy, Tallon Series, 1-Way Cable Mount

	Signal Section		Cable Length		Coating
AB-0617	- [ ]	-	[ ]	-	[ ]
	1=1 Sec 2=2 Sec 3=3 Sec 4=4 Sec 5=5 Sec		See Note		PNC=Process No Color P__=Paint

Note:
Cable Length: 62", 84", 96", 110", 120", 132", 144", or 220".
Stainless steel upgrade available: includes stainless cable and slotted washer.
Specify by including -SS in the part number, i.e., AB-0617-3-62-SS-PNC.



Astro-Brac Assy, Galaxy Series, 1-Way Cable Mount

	Signal Section		Cable Length		Coating
AG-0125	- [ ]	-	[ ]	-	[ ]
	1=1 Sec 2=2 Sec 3=3 Sec 4=4 Sec 5=5 Sec		See Note		PNC=Process No Color P__=Paint

Note:
Cable Length: 62", 84", 96", 110", 120", 132", 144", 220", or 280".
Stainless steel upgrade available: includes stainless cable and slotted washer.
Specify by including -SS in the part number, i.e., AG-0125-3-62-SS-PNC.

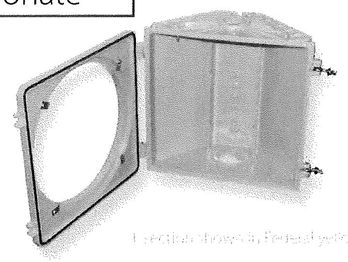
Note: 1. All assemblies are supplied standard with stainless steel fasteners.
2. See Reference Section page iv for cable and band clamp kit pole diameters.
3. See Reference Section for available paint colors.

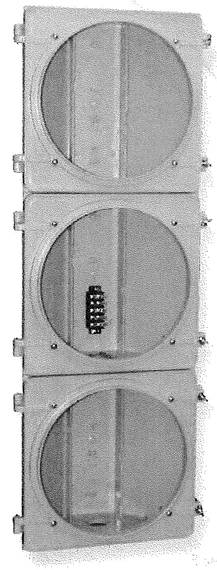
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

Traffic Signal Housing

Highway Tech

8" Diameter
12" Diameter
Aluminum
Polycarbonate





Overview

McCain's Traffic Signal Housings, available in eight and twelve inch varieties, provide a durable and low-maintenance housing for standard LED modules as well as McCain incandescent optical assemblies. Manufactured from polycarbonate or aluminum, the housings are compliant with multiple agency standards including the Institute of Transportation Engineers (ITE), Caltrans, and most state Departments of Transportation (DOTs). An industry leader in signal manufacturing and supply, McCain offers an extensive range of materials, configurations, and accessories, including backplates, visors, and signal assemblies, to meet your traffic signal requirements.

Benefits

- Modular design promotes flexible configuration options: one to five sections, vertical, horizontal, and doghouse (5-section cluster)
- Fabricated from aluminum or polycarbonate with 10% fiberglass reinforcement (available without fiberglass reinforcement)
- 8" or 12" diameter
- Weathertight doors
- Custom hardware and terminal block location available

Product Description

The McCain Traffic Signal Housings are modular in design, allowing a multitude of signal housing configurations for standard LEDs as well as McCain incandescent optical assemblies.

Available in polycarbonate and aluminum, each section is injection molded or cast in one piece. Reinforcement ribs and serrated ports, both top and bottom, provide strength and positive locking with other sections and mounting hardware. Positive latching of doors is achieved with stainless steel eyebolts and wing nut assemblies, and the doors feature four metal threaded inserts for visor attachment. A positive seal is assured with an E.P.D.M. rubber gasket creating a moisture-free and dust-tight atmosphere.

Traffic Signal Housings are compatible with McCain backplates and visors, available in both aluminum and ABS. The top and bottom ports allow installation into many framework mounting assemblies.

Signals supplied will be black, 3 & 4-Section with Tunnel visors

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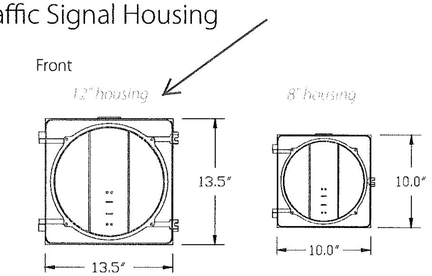
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

Traffic Signal Housing



Dimensions are approximate and may vary.

3-section 12" housing shown as an example configuration. 3-section 8" housing height dimensions is listed in parentheses.

Depth for the 8" and 12" housings are approximately the same.

Minor differences between the 8" and 12" may not be shown.

Standard Features

- Modular sections, one-piece, injection molded or cast
- 72-tooth serrated boss and reinforcing ribs, top and bottom
- Brass threaded inserts for visor attachment (4)
- Housings have a cast boss for mounting a 5 or 6-position terminal block; one side of terminal block with fast-on terminals, the other side with screw terminals
- The words red, amber, and green are cast next to each boss to identify light source lead wires
- 5 or 6-position terminal block installed in center section (1) (alternate mounting is available)
- Stainless steel door roll pins and eye bolt/wing nut assemblies
- Integral lugs on the housing and doors with stainless steel roll pins provide effective door hinges
- Weathertight E.P.D.M. rubber door gasket
- Aluminum and polycarbonate, and 8" and 12" housings can be mixed in one signal head

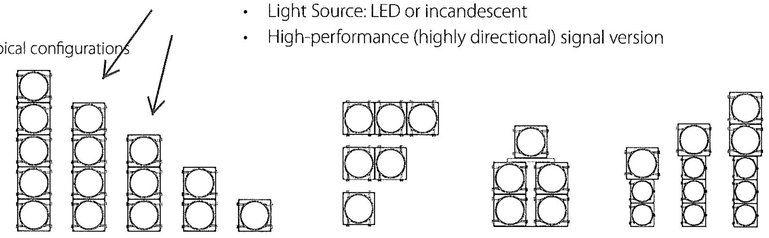
General Specifications

Dimensions: (1-section)	8": 10.0"H x 10.0" W x 7.0"D 12": 13.5"H x 13.5"W x 7.0"D		
Material:	Polycarbonate: Ultraviolet and heat stabilized, flame retardant, permanently colored, 10% fiber-glass reinforcement Aluminum: Type 360, reduced corrosion, increased powder coat adhesion		
Finish(es):	Polycarbonate: Colored resins integral to housing Aluminum: Powder coated		
Color(s):	Federal yellow, signal green, black, or custom colors		
Mounting:	2.0" hole top and bottom fits 1.5" NPT fittings		
Environmental:	Operating temperature: -37°C to +74°C Humidity: 0 to 95% (non-condensing)		
Shipping Weight: (empty, 1-section)	Polycarbonate:	8" - 2.1 lbs	12" - 4.2 lbs
	Aluminum:	8" - 4.0 lbs	12" - 7.8 lbs

Options

- Fiberglass-free polycarbonate
- Location, quantity, and type of terminal blocks
- Door mounting hardware: Push pin (removable) or roll pin (permanent)
- Visors
- Backplates
- Mounting: Various framework, orientation, and configurations
- Light Source: LED or incandescent
- High-performance (highly directional) signal version

Typical configurations



Highway Tech
Traffic Signal & ITS System Intergrators
(207) 375-8248

To learn more about McCain's Integrated Traffic Solutions, please contact sales@mccain-inc.com or call (760) 727-8100

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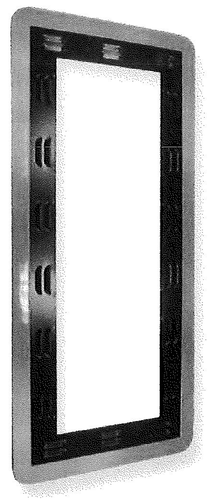
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

Backplates with Retroreflective Borders



Shown is a 3-Section Louvered Version

Overview

McCain's Backplates for traffic signals provide a visual contrast between signal heads and the background enhancing signal visibility that is further improved with the use of retroreflective tape around the border of the backplate. The use of retroreflective tape has received approval from the Federal Highway Administration (FHWA), *MUTCD-Interim Approval for Use of Retroreflective Border on Signal Backplates*, February 6, 2004. A seven-year safety study showed that the use of retroreflective backplate borders reduced total crashes at intersections by 15% to 24%. Backplates with retroreflective borders provide an aesthetically pleasing and functional look in addition to increased traffic safety for your intersections.

Benefits and Features

- Enhanced signal visibility
- 1", 2", or 3" Retroreflective tape border
- Available in 1-section thru 5-section in-line, and 5-section cluster configurations
- Fits 8" and 12" signals
- 5" overall width
- Louvered and non-louvered
- Standard flat black powder coat face
- Compatible with most standard signal mountings

Product Description

McCain's Backplates with retroreflective borders for standard traffic signals fit both 8" and 12" signal heads, are fabricated from louvered aluminum, and have five-inch borders. They accommodate retroreflective tape widths of one inch, two inches, or three inches around the perimeter of the backplates.

The backplate aluminum is 0.050" thick and is powder coated flat black for increased visual contrast against the background.

McCain backplates are configured for one-section to five-section in-line or five-section cluster signals. All the in-line backplates are fabricated from one solid piece of aluminum. The five-section cluster backplate is a three-piece design.

The retroreflective tape is specially designed by 3M for vertical mounting and comes in two options:

3M 3930 Series High Intensity Prismatic Reflective Sheeting
3M 3990 Series Diamond Grade VIP Reflective Sheeting

Backplates shall be 3 & 4-Section Louvered Aluminum with 2" Reflective Tape, Fluorescent Yellow 3M # 4081

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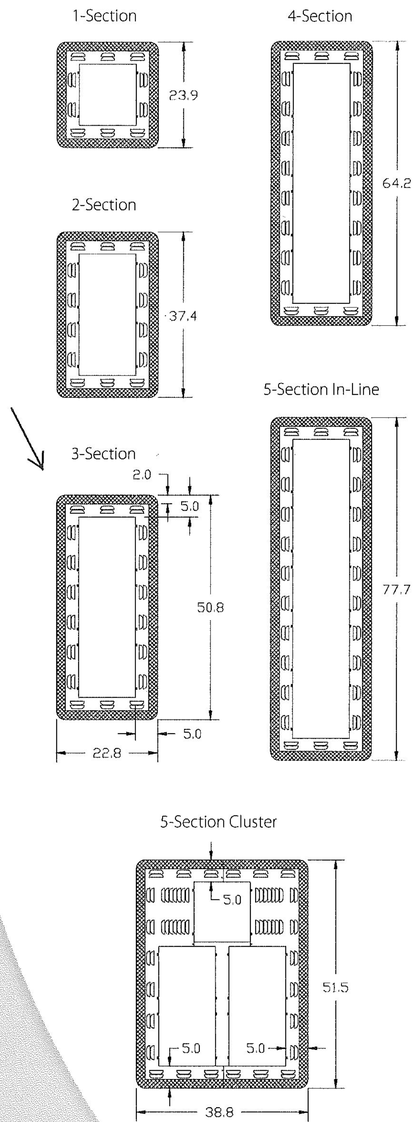
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

Backplates with Retroreflective Borders

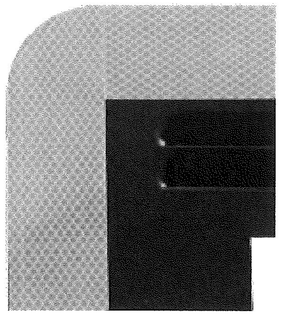
CAD of Examples of Backplates with 2" Tape



Dimensions rounded to the nearest 0.1"
Dimensions shown for 3-section backplate (except height) are typical of all backplates shown for 2" width tape

Retroreflective Tape Specifications

Type:	Prismatic, Series 3930 or 3990
Color:	Yellow (standard), white (optional)
Width:	1, 2, or 3 inches
Manufacturer:	3M



Close-up of Reflective Tape
(louvered backplate)

Retroreflection

Retroreflection occurs when a surface reflects a portion of the light from a source (headlights) directly back to an observer (driver) located near the source.

Retroreflective tape utilizes "cube corner reflection" to create the reflection back toward the source of the light. Small retroreflective "lens elements" embedded in the tape have three mutually perpendicular surfaces that refract a light ray (headlight beam) off the three surfaces and return it toward its source.

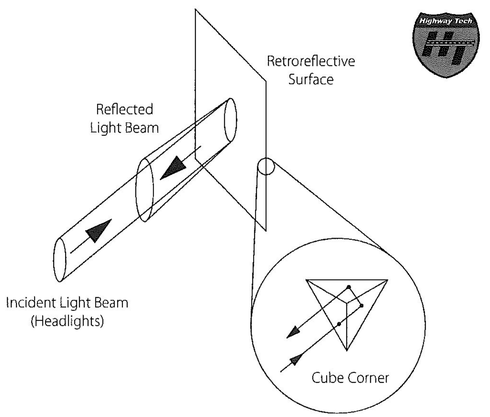


Diagram of Retroreflection

To learn more about McCain's Integrated Traffic Solutions, please contact ***info@mccain-inc.com*** *or call* ***(760) 727-8100***

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EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

GE
Lighting

GTX™ City
VLA Model
LED Signal Modules
8 and 12 inch
Incandescent look (120V)



Robust Features
- Optimal thermal management for longer life.
- Provides performance under extreme field temperature conditions.

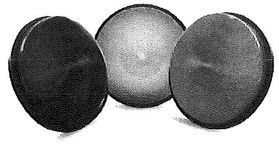
Innovative Design
- Low profile module permits efficient installation into existing traffic housings.
- Power consumption levels allow compatibility with most controllers.
- Mask compatible to fit your unique signaling needs.*

Outstanding Performance
- High-brightness central light source and custom optical lensing distribute light uniformly and efficiently.
- Rigorously tested for long life design and low maintenance costs.
- Excellent color uniformity.

Meets Rigorous Certification & Testing Standards
- Intertek ETL Verified compliant.
- Compliant with ITE VTCSH LED Circular Signal Supplement dated June 27th 2005.
- CSA approved version available.

* Sold separately. Refer to masks datasheet TRAF208.

imagination at work



The Greatest Signals Stand the Test of Time.™

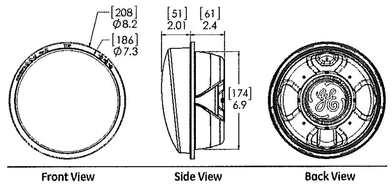
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

GTX™ City LED Signal Modules

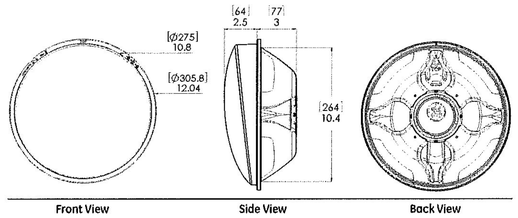
- 8 and 12 inch

Mechanical Outline

Dimensions in inches [mm]



8 inch



12 inch

Design Compliance

Test type	Compliance
Luminous Intensity	ITE VTCSH- LED Circular Signal Supplement -June 2005
Chromaticity	ITE VTCSH- LED Circular -June 2005
Moisture Resistance	Blown Wind Rain MIL-STD-810F method 506.4
Mechanical Vibration	MIL-STD-883 Method 2007
Electronic Noise	FCC Title 47 Sub. B Sec 15[1]
Transient Voltage Protection	Sec. 2.1.6 NEMA TS2-2003, 300V, 2500W Sec. 2 .1.6 NEMA TS2-2003, 600V, 10µF Sec. 2.1.8 NEMA TS2-2003, 1kV, 2Ω
Controller Compatibility	ITE VTCSH- LED Circular Signal Supplement -June 2005
Wiring	NFPA 70, National Electric Code
Transient Suppression	Sec. 8.2 IEC 61000-4-5 & Sec. 6.1.2 ANSI/IEEE C62.41.2 - 2002, 3KV, 2 Ω Sec. 8.0 IEC 61000-4-12 & Sec. 6.1.1 ANSI/IEEE C62.41.2 - 2002, 6KV, 30 Ω

Operating Specifications

Parameter	Rating
Operating Temperature Range*	-40 to +74°C (-40 to +165°F)
Operating Voltage Range	80 to 135 V (60Hz AC)
Power Factor (PF)	> 90%
Total Harmonic Distortion (THD)	< 20%
Minimum Voltage Turn-Off (VTO)	35 V
Turn-On / Turn-Off Time	< 75 ms
Lens & Shell Material	UV Stabilized Polycarbonate
Wiring	8 in lamp: 40 in, 20 AWG, Color Coded with Strain Relief ** 12 in lamp: 40 in, 20 AWG, Color Coded with Strain Relief **

* Operating Temperature Range per ITE 2005, Section 3.3.2
** For CSA approved version : 40in, 18AWG, Color Coded with Strain Relief

Product Information

Model Number	Front Shell	Size (in)	AC Voltage Nominal	Power (W) Nominal	Wavelength (nm) nominal	Maintained Intensity (Cd) Minimum[2]
DR4-RTFB-VLA	Tinted	8	120V - 60Hz	6.7	628	165
DR4-RCFB-VLA	Clear					
DR4-YZFB-VLA	Tinted	8	120V - 60Hz	10.9	588	410
DR4-YTFB-VLA	Tinted	8	120V - 60Hz	7.9	589	410
DR4-YCFB-VLA	Clear					
DR4-GTFB-VLA	Tinted	8	120V - 60Hz	7.3	499	215
DR4-GCFB-VLA	Clear					
DR6-RTFB-VLA	Tinted	12	120V - 60Hz	6.7	625	365
DR6-RCFB-VLA	Clear					
DR6-YZFB-VLA	Tinted	12	120V - 60Hz	10.9	588	910
DR6-YTFB-VLA	Tinted	12	120V - 60Hz	9.9	589	910
DR6-YCFB-VLA	Clear					
DR6-GTFB-VLA	Tinted	12	120V - 60Hz	8.4	501	475
DR6-GCFB-VLA	Clear					

Standard product equipped with universal connectors (insulated spade-quick disconnect).
All colors available in tinted or clear lens.
[1] Class A
[2] Measured at vertical angle of -2.5° and at horizontal angle of 0°.

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ME Office - Tel. (207) 375-8216 - Fax (866) 252-7014
NY Office - Tel. (607) 299-1604 - Fax (866) 350-3162

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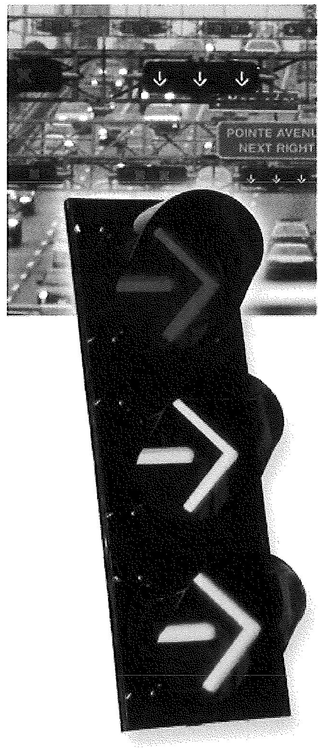
GE
Lighting Solutions



Incandescent look

GT1™ LED Arrow Signals

12 inch Red, Yellow, Green

Excellent Appearance & Visibility

- Efficient optical design allows omnidirectional arrow placement with maximum light output and expanded view
- Expanded view for fixed and span wire applications meets new ITE requirements
- Excellent color uniformity creates an incandescent look for easy readability
- Improved luminous intensity uniformity exceeds new ITE requirements
- New or retrofit use

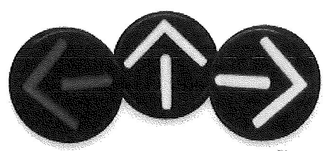
Outstanding Reliability & Robust Operation

- High efficiency and high-brightness LED light source
- Improved failed state impedance protection detects the loss of LED load
- Optimized thermal management for longer life
- O-ring gasket and over-molded electrical connector provide increased moisture and dust protection
- Provides performance under extreme field temperature conditions

Meets Rigorous Certification & Testing Standards

- Intertek ETL Verified compliant
- DOE compliant
- CSA approved
- Using MIL-STD-810F for environmental robustness, passed reliability and qualification testing including high temperature, high humidity cycling
- Compliant with the new ITE VTCSH LED Vehicle Arrow Traffic Signal Supplement dated July 1, 2007

imagination at work



The Greatest Signals Stand the Test of Time.™

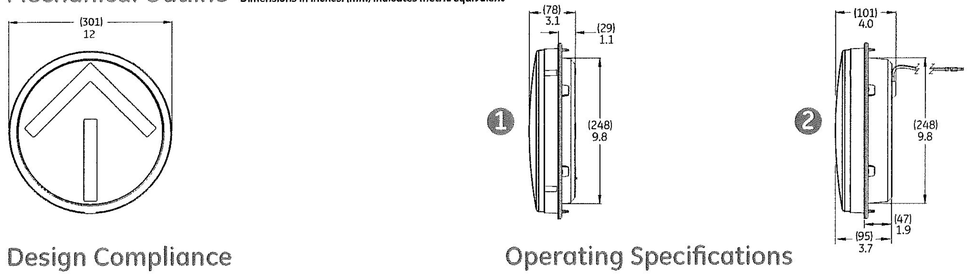
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

GT1™ LED Arrow Signals

- 12 inch module

Mechanical Outline

Dimensions in inches. (mm) indicates metric equivalent



Design Compliance

Test type	Compliance
Luminous Intensity	ITE VTCSH-LED Vehicle Arrow Traffic Signal Supplement, July 2007
Chromaticity	ITE VTCSH-LED Vehicle Arrow Traffic Signal Supplement, July 2007
Moisture Resistance	NEMA STD 250 Type 4 – 1991 Blown Wind Rain MIL-STD-810F method 506.4
Mechanical Vibration	MIL-STD-883 Method 2007
Electronic Noise	FCC Title 47 Sub. B Sec.15[1]
Transient Voltage Protection	Sec. 2.1.6 NEMA TS2-2003, 300V, 2500W Sec. 2.1.6 NEMA TS2-2003, 600V, 10µF Sec. 2.1.8 NEMA TS2-2003
Controller Compatibility	ITE VTCSH-LED Vehicle Arrow Traffic Signal Supplement, July 2007
Wiring	NFPA 70, National Electric Code
Transient Suppression	Sec. 8.2 IEC 1000-4-5 & Sec. 6.1.2 ANSI/IEEE C62.41.2 - 2002, 3KV, 2Ω Sec. 8.0 IEC 1000-4-12 & Sec. 6.1.1 ANSI/IEEE C62.41.2 - 2002, 6KV, 30Ω

Operating Specifications

Parameter	Rating
Operating Temperature Range*	-40 to +74°C (-40 to +165°F)
Operating Voltage Range	80 to 135 V (60Hz AC)
Power Factor (PF)	> 90 %
Total Harmonic Distortion (THD)	< 20 %
Voltage Turn-Off (VTO)	35 V
Turn-On / Turn-Off Time	< 75msec
Lens & Shell Material	UV Stabilized Polycarbonate
Wiring	16 AWG, Color Coded with Strain Relief

*Performed in compliance with ITE test method described in the technical notes

Product Information

Model Number	Size (in)	AC Voltage Nominal	Power (W) Nominal	Wavelength (nm) Dominant	Maintained Intensity (Cd) Minimum	Luminous Intensity Spec	Mechanical Outline
DR6-RTAAN-17A	12	120V – 60Hz	5	626	58	A & B	1
DR6-YTAAN-17A*	12	120V – 60Hz	9	589	146	A & B	1
DR6-YTAAN-17A-VX	12	120V – 60Hz	6	589	146	A	2
DR6-GTAAN-17A	12	120V – 60Hz	5	500	76	A & B	1
DR6-GCAAN-17A	12	120V – 60Hz	5	500	76	A & B	1

Standard product equipped with universal connectors (spade-quick disconnect).
All lamps available in tinted or clear lens.
* Luminous intensity measured at T_o = 25°C for yellow (these models are not Intertek ETL Verified compliant).
[1] Class A

Distributed by:

Highway Tech
6 Sabattus Road - P.O. Box 1209 - Sabattus, ME 04280
ME Office - Tel. (207) 375-8248 - Fax (866) 232-7014
NY Office - Tel. (607) 299-4604 - Fax (866) 350-3162

GE Lighting Solutions • **1-888-MY-GE-LED** • www.gelightingsolutions.com
1 - 8 8 8 - 6 9 - 4 3 - 5 3 3

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TRAF064-R050913

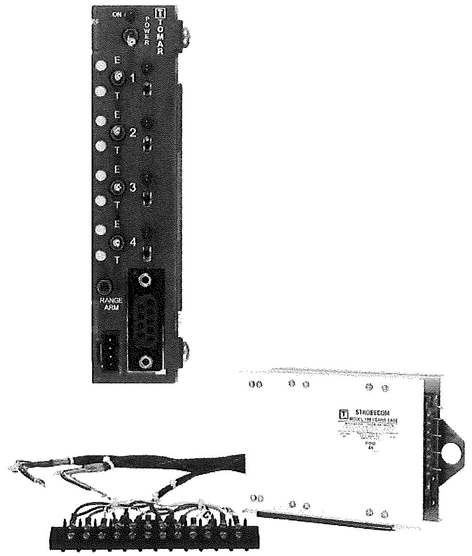
EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

TOMAR Electronics, Inc.
Clearing the Way

Highway Tech

2140 OSP Card and Card Cage

STROBECOM II



The model 2140 Optical Signal Processor (OSP) is the most advanced of the three 2000 Series OSP's offered by TOMAR. Installed inside the traffic cabinet, the 2140 provides power for 209X Optical Detectors, receives and decodes signals from the detectors, logs preemption and priority control activity, communicates with other traffic control devices, and optically isolates the preemption channels.

The 2140 is delivered default programmed to respond on a first-come, first-served basis to optical signals from vehicles within two signal bands. Emergency band signals are typically emitted by emergency vehicles to effect a preemption of normal traffic control timing and are given the highest priority to allow rapid emergency response with enhanced safety. Transit band signals are generally emitted by transit or other non-emergency municipal vehicles to effect a priority change for the vehicle's approach direction without necessarily interrupting traffic control timing. Up to 65,000 vehicles in each signal band can be individually identified and up to 15,000 events can be logged in non-volatile EEPROM memory.

Using a simple Windows-based configuration program, the user can define up to 16 additional classes within each signal band with different priorities, detection ranges, and choices of actions, from simple vehicle logging to full traffic preemption.

Equipped with a serial port and the ability to classify and announce the presence of multiple vehicles in real-time, the 2140 makes an excellent intelligent vehicle sensor for ITS applications.

Tri-color LED's and test switches on the front panel of the 2140 provide output status indication and diagnostic feedback to assist in troubleshooting.

The 2140 OSP is compatible with NEMA TS-1, TS-2, and CA/NY 170, and 2070 controllers and meets all NEMA and CalTrans environmental requirements. The 2140 plugs directly into a 170 input file without any additional hardware and does not use the internal 24VDC cabinet power. For NEMA cabinets without prewired preemption slots, the TOMAR model 1881 rack provides the necessary hardware and harnessing to allow simple connection to detector outputs and controller inputs.

TRUE 10 Year Warranty!
Covers the 2140 and all STROBECOM II components. Unlike other manufacturers, TOMAR's ten year warranty has NO fees or charges for warranty repairs after five years.

NOTICE:
The sale of these items are restricted to state and local governments and to authorized distributors only.

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

ONLY the TOMAR 2140 Optical Signal Processor offers the following features:

- **Modular construction** allows tool-less field repair and firmware upgrades. Competitive products must be returned to the factory for repair.
- **Plug and Play firmware** allows the adding of preemption channels or other accessories in the field without manual configuration. You buy only what is needed today and add more capability later, saving precious funds.
- **Active Reflection Suppression** prevents cross street preemption due to reflected emitter energy. Only TOMAR's advanced, digital signal processing can eliminate this troublesome side effect, making system installation and set up far less critical.
- **Expansion port** for easy connection of the 2140 to other accessory modules like green phase monitors, confirmation light drivers, and external preemption adapters for controllers that do not have internal preemption software.
- **Preemption channel disconnect switches** allow the preemption outputs from the 2140 to be physically disconnected from the controller inputs during setup and test. Traffic technicians can perform all system setup without disrupting traffic flow with system tests.

Specifications for OSP Card

Item	Description
Signal Coding	The 2140 shall be capable of receiving, decoding, and prioritizing the Emergency and Transit signals transmitted by TOMAR 2060 identifying emitters. The system shall be software configurable to accept or reject older non-identifying optical signals.
Signal Acquisition Time	Typical signal acquisition time shall be approximately 2.5 seconds. Acquisition time will vary depending upon the number of identification codes present simultaneously and on the density of optical noise.
Simultaneous Signals	Each channel module shall be capable of receiving and decoding up to 10 coded signals simultaneously. Additional simultaneous signals will be ignored.
Range	2500 feet maximum adjustable down to 200 feet in 255 steps for each signal band.
Range Adjustment	Range adjustment shall be accomplished via front panel switches and emitter or via serial port command.
Maximum Number of Codes	There shall be at least 65,000 unique identification codes available in each signal band.
Priority Determination	The 2140 shall be delivered with default priority grouping, responding on a first-come, first-serve basis to signals within each signal band. Signals in the Emergency signal band shall be given priority over signals in the Transit signal band. Optionally, the user shall be able to define additional priority classes within each signal band. Up to 16 priority groups within each signal band may be defined.
Event Logging	The system shall log all valid signal receipts along with the time, date, and duration of receipt. The logging capacity of the card shall be a minimum of 1300 events. The oldest events shall be discarded when newer events are received. The number of events to be stored shall be expandable by adding additional memory. The stored logs shall be downloadable via RS-232 port. The 2140's operating system shall allow connection to a controller, a local computer, or a modem.
Output Signals	The 2140 shall provide four optically isolated output channels for placing calls on the traffic controllers preempt inputs. All output signals shall comply with NEMA signal level definitions.
Control Timers	Each channel shall be equipped with 3 control timers described as: MAX CALL: Sets the maximum time a preempt call is allowed to be active. CALL EXTENSION: Sets the time a call is held after the optical signal terminates. CALL DELAY: Sets the time a call must be pending before the assertion of the call to the controller.
Electrical Requirements	120VAC 50/60 Hz
Temperature Range	-40 degrees Celsius to +75 degrees Celsius
Transient Protection	Input power is MOV protected from line transients.
Fusing	Input power connections are fused at 1/2 amp to prevent cabinet wiring damage in the event of an electrical failure.

Specifications for 1881 Card Cage and Harness

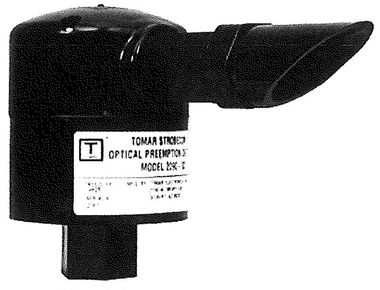
Item	Description
Mechanical	Height 5.80" (147.3mm) Length 8.06" (204.7mm) Width 2.90" (73.7mm)
Mounting	The 1881 can sit on mounting feet atop a shelf or can be hung, using the mounting holes in the top flange, under a shelf.
Construction	Anodized aluminum with upper mounting flange and lower mounting feet. Open frame with single 22/44 card edge connector and 60" long controller and detector terminal block cables.

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

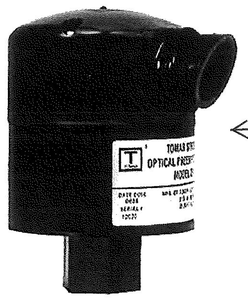
TOMAR Electronics, Inc.

2090/2091 Optical Preemption Detectors

STROBECOM II



2090–SD Detector



2091–SD Detector

The TOMAR 209X–SD Optical Preemption Detectors sense the optical pulses emitted by properly equipped emergency or transit vehicles. Mounted to observe the approaches of an intersection, 209X–SD Detectors are used with TOMAR 2000 Series Optical Signal Processors to inform the traffic control system of the presence of designated vehicles.

Using 209X–SD Detectors and STROBECOM II throughout your traffic control system reduces emergency response time, allows emergency vehicles to travel with greater safety, and improves transit vehicle timeliness.

TRUE 10 Year Warranty!
10 year warranty covers the 209x-SD and all STROBECOM II components. Unlike other manufacturers, TOMAR's ten year warranty has NO fees or charges for warranty repairs after five years.

NOTICE:
The sale of these items are restricted to state and local governments and to authorized distributors only.

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

ONLY TOMAR 209X–SD Detectors offer these important features:

- Military derived sensor technology for direct sunlight rejection and detection performance unmatched by ANY other system.
- Fully encapsulated electronics for complete resistance to water, heat, and vibration.
- Complete electronics protection from damage due to miswiring or electrical transients.
- Wide field of view option for uncompromised detection even in untethered span wire applications without the risk of side street activation.
- Simple parallel detector installation without any special cabling for enhanced detection around corners and over hills.

Specifications for 2090–SD and 2091–SD Detectors

Item	Description
Maximum Range	2500 feet minimum when used with a TOMAR 2000 Series Optical Signal Processor.
Optical Pulse Rise Time Discrimination	The 2090–SD and 2091–SD input stages are optimized for the detection of strobe pulses with a rise time from start of pulse to peak of pulse of 10 microseconds or less. Slower pulses such as varying sunlight and incandescent emergency lighting will be highly attenuated and substantially ignored by the detector's digital discriminators.
2090–SD Field of View	13 degrees conical centered about the viewport normal axis (typical).
2091–SD Field of View	60 degrees conical centered about the viewport normal axis (typical).
Power Requirements	VOLTAGE: 12 to 30VDC CURRENT: 15 mA maximum
Wiring Connections	Blue Wire - GROUND Yellow - SIGNAL Orange Wire - +12 to 30 VDC Shield and Drain Wire - CONNECT TO BLUE WIRE AT TRAFFIC CABINET
Temperature Range	-40° Celsius to +75° Celsius
Physical Construction	The 2090–SD and 2091–SD enclosures are black, glass-filled, UV stabilized, polycarbonate suitable for all-weather use. All electronic circuitry is completely encapsulated in polyurethane for protection from shock, vibration, and moisture. A weep hole is provided for allowing the escape of condensation or other internal moisture build-up in the sight tube of the detector.
Size and Weight	2.75" dia. (69.8 mm) X 3.375" tall (85.7 mm) with side mounted 4" long (101.5 mm) sight tube
Mounting	The 2090–SD and 2091–SD are easily mounted using standard hardware on either span wire or mast arm. The unit has a 1/2" female pipe mount hub and internal terminal block for connection to a 3/C shielded detector cable. ***** See catalog page 23 for available mounting hardware.

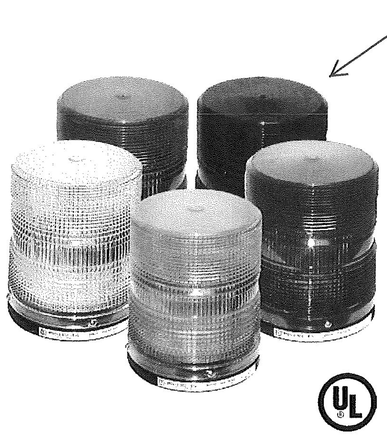
Available Option

Model No.	Description
2091–OPTIC	Upgrade package that allows the user to convert a 2090–SD detector in the field to a 2091–SD.
2090–OPTIC	Upgrade package that allows the user to convert a 2091–SD detector in the field to a 2090–SD

Highway Tech Signal Equipment Sales, Inc
6 Sabattus Road, P.O. Box 1209
Sabattus, ME 04280
Tel (207) 375-8248
Fax (207) 375-8279
info@highwaytech.com

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

TOMAR Electronics, Inc.



804 MAXI I™ STROBE

Medium Profile - Single Flash Strobe

- universal mounting
- built-in RFI filters
- solid state power supply
- xenon strobe lamp
- five year warranty on power supply
- one year warranty on lamp
- available in six lens colors
- UL listed (AC models only)

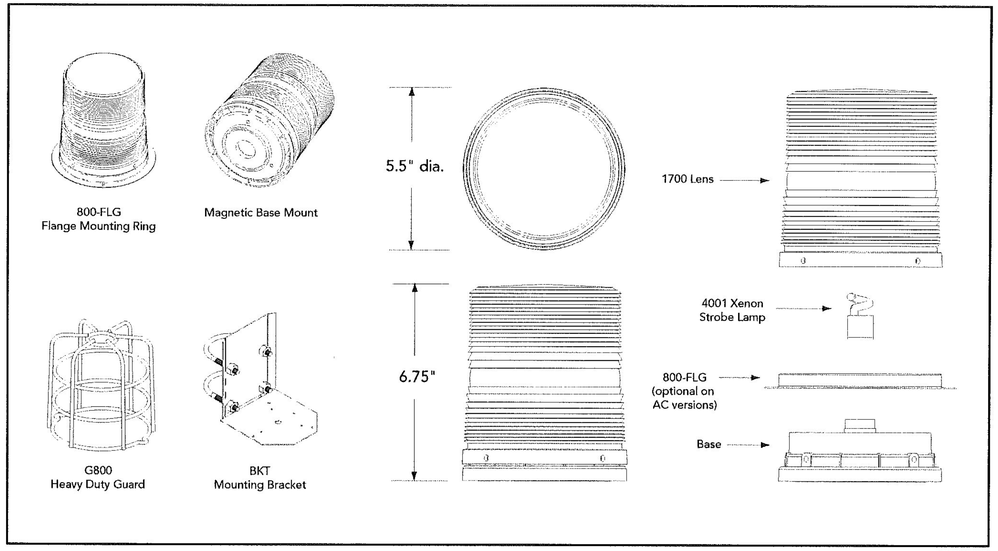
The model 804 family is a medium profile, single flash strobe light featuring universal mounting, full size 360° Lexan® lens, high efficiency regulated solid state power supply, and heavy duty xenon strobe lamp. All units are polarity protected and have built-in filters to protect against radio interference and spike voltages. The model 804 features a fully potted Lexan®, multi-purpose mounting base which is vibration and water resistant. The 804 also features a field replaceable plug-in strobe lamp and state of the art energy storage capacitor for increased intensity.

Ordering Information

Please specify lens colors and model number when ordering. Available colors are Amber, Blue, Clear, Green, Purple and Red.

Model No.	Description	Voltage, Frequency
804–110	AC strobe with 10" leads, UL listed	120VAC, 50/60Hz
804LC–110	AC strobe with AC cord set, UL listed	120VAC, 50/60Hz
804–240	AC strobe with 10" leads, UL listed	240VAC, 50/60Hz
804–1274	DC strobe with 10" leads	12 – 74VDC
804MB–1274	DC strobe, magnetic mount and 10' coil cord	12 – 74VDC
804MBSC–1274	DC strobe, magnetic mount and 10' straight cord	12 – 74VDC

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16



Specifications

Item	Description
Voltage and Amperage	12-74VDC draws 1.25A @ 12V tapering to 0.2A average @ 74V 120VAC draws 0.3A average 240VAC draws 0.3A average
Power Supply Output 11 Watts	8 joules per flash
Flash Rate	80 to 95 flashes per minute
Size and Weight	6.75" tall x 5.5" dia. x 2.2 lbs (171mm x 140mm x 1.0kg)

Available Options

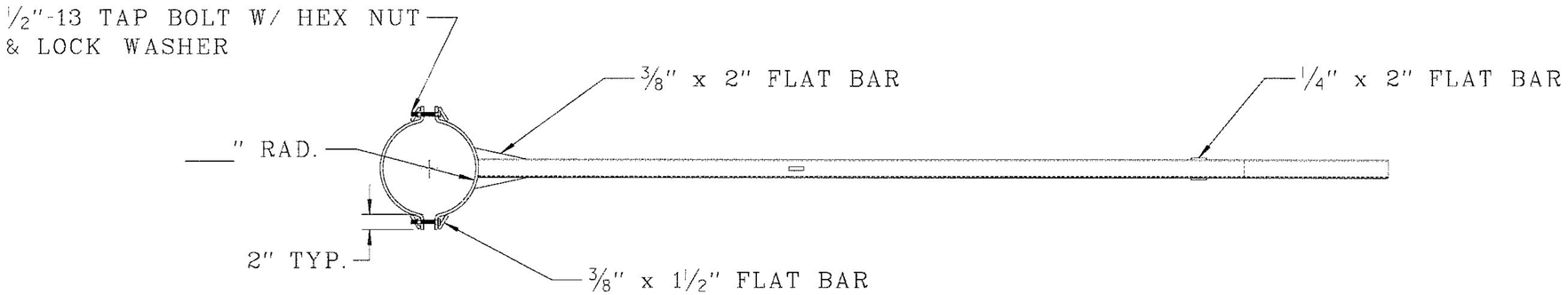
NOTE: All "/" options are factory installed only.

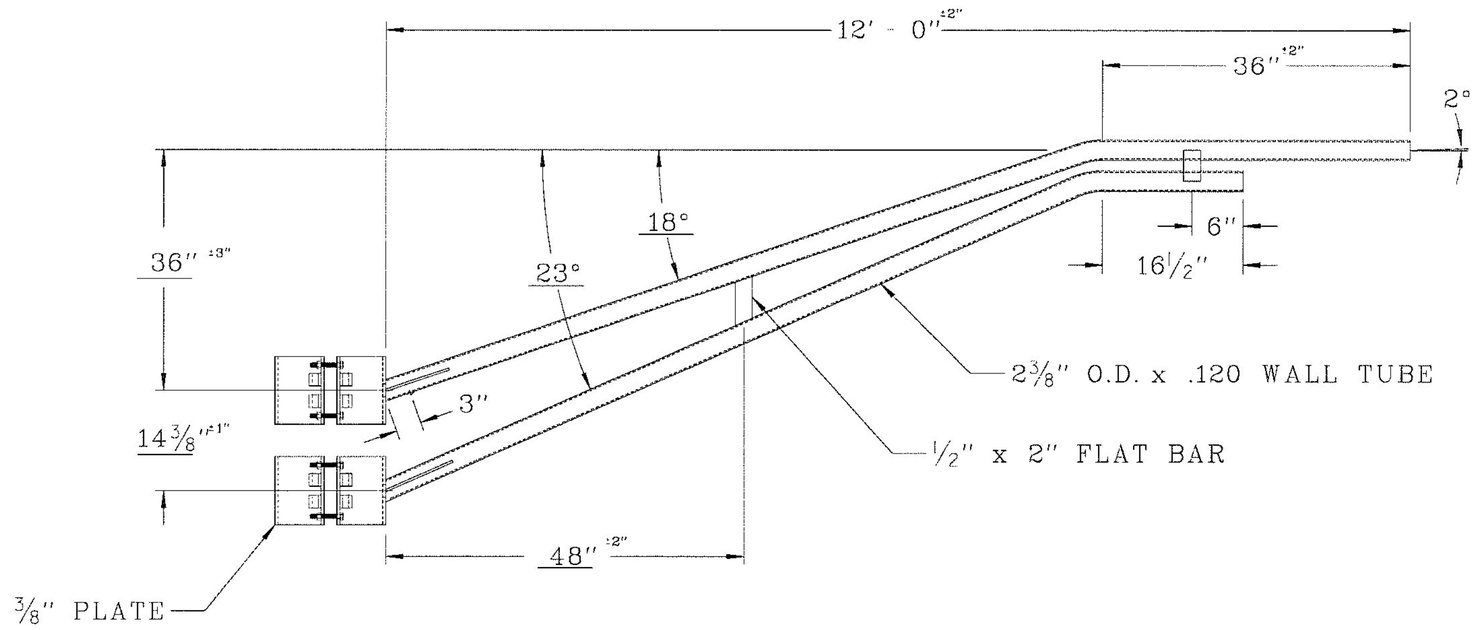
Model No.	Description
BKT	Mounting bracket
/LBO–MAXI	Lens blackout segment 180°
800/1250–DC	Clear lens dust cover
G800	Heavy duty guard
TBO–MAXI	Top lens blackout
800–FLG	Chrome flange mounting ring (standard on DC versions, optional on AC versions)

Replacement Parts

Model No.	Description
4001	Xenon strobe lamp
1700	Color lens (please specify color) - RED ←
801–110–BASE	120VAC power supply
801LC–BASE	120VAC power supply with AC cord set
801MBSC–BASE	120VAC power supply with magnetic mount and straight cord
801–240–BASE	240VAC power supply
801–1274–BASE	12–74VDC power supply
801MB–BASE	12–74VDC power supply with magnetic mount and coil cord

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16





SHT. 2 OF 2

FOR SHOP DWG. SEE SHT. 1 OF 2

REV.	DATE	DESCRIPTION	BY
03	3-8-07	CHGD GUSSETS ECR ~ 068	K.M.B.
02	11-16-99	ADDED SALES DWG	J.F.K.
01	9-23-99	ON ITEM #8 2" WAS 1½"	J.F.K.

TOLERANCES: UNLESS OTHERWISE SPECIFIED
FRACTIONS: ± ¼"
DECIMALS: 2 PLACE ± .030; 3 PLACE ± .030
ANGLES: ± 1 DEG.

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UTILITY METALS
(A DIV. OF FABRICATED METALS CORP.)
P.O.BOX 9054
LOUISVILLE KY. 40209-9054
PHONE(502)363-6681
TOLL FREE (800)627-8276
FAX (502)368-2656

JOB: C200S120RN 12' TRUSS FOR ___" DIA.
APPROVED: REV. 03
DWN: J. F. K. DATE: 2-6-98
SCALE: 1/16" = 1" DWG: G-4664-03

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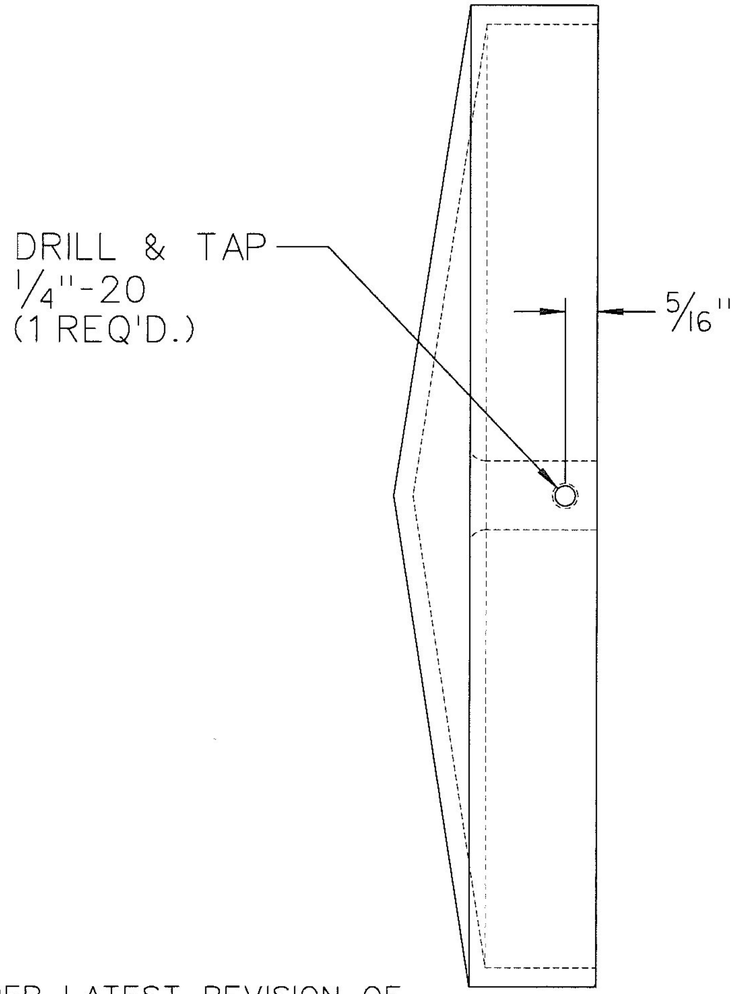
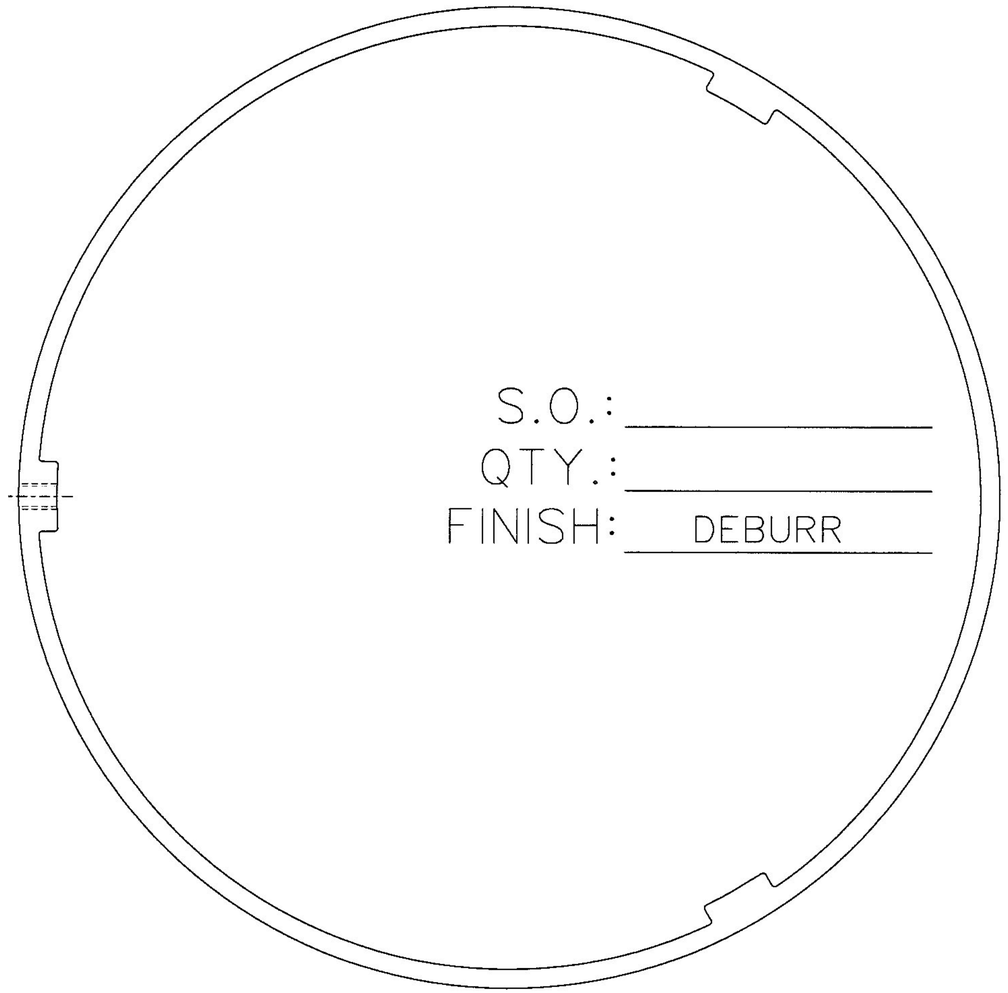
BILL OF MATERIAL

WGT.	ITEM	DESCRIPTION	QTY. PER (1) ASS'Y	CUTTING QTY.	MP-CODES						PART NUMBER	DWG. NUMBER
2	1	8" PINNACLE (CASTING)	1		OM	D	T	G			ZPIN8 C-64184	B-5901

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 11-4-16

REV.	DATE	DESCRIPTION	BY
01	5/1/03	REMOVED SET SCREW FROM BILL OF MATERIAL (ECR #03-072)	WH





BUILD PER LATEST REVISION OF
FMC'S WORKMANSHIP STANDARDS
UNLESS OTHERWISE NOTED

TOLERANCES:
UNLESS OTHERWISE SPECIFIED

FRACTIONAL	± 1/16"
2 PLACE DEC.	± .03
3 PLACE DEC.	± .005
ANGULAR	± 1°

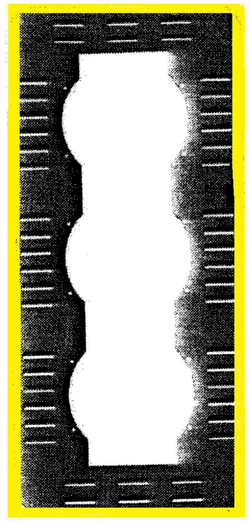
FABRICATED METALS LLC
MANUFACTURER OF RAILROAD AND INDUSTRIAL METAL PRODUCTS SINCE 1955

DESCRIPTION:
PINNACLE FOR 8" PIPE
(MACHINED)

DRAWN BY:	S. TOLER
APPROVED:	
SCALE:	6"-1'-0"
ECN:	5/1/03
DATE:	7/26/99

PART NO.
CCPIN8
0264184

DWG. NO.
A-5902-01



Replacement Econolite Back Plates with reflective striping.

3 section 12" Econolite Aluminum
Louvered Backplate w/T95-11
2" tape applied