Record Plans
Contractor: PECKHAM ROAD CORPORATION
Resident Engineer: Ronald Lemaire
Construction Began: May 2, 2016
Construction Complete: November 1, 2017
Record Plans By: Paul Kuehn Jan 2017 / into BlueBeam by: Judy Gilmore April 2018

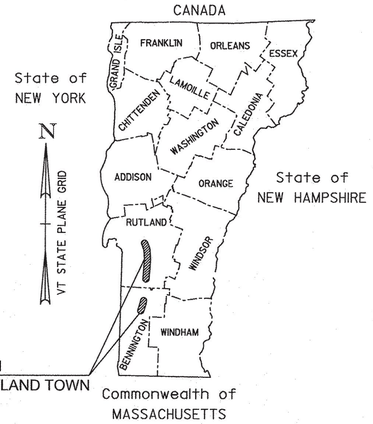
I hereby certify that all construction required by this set of drawings has been accomplished as indicated herein.

BY: e-Signed by Timothy Pockette on 2018-04-04 15:26:09 GMT Resident Engineer

Date: April 04, 2018

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

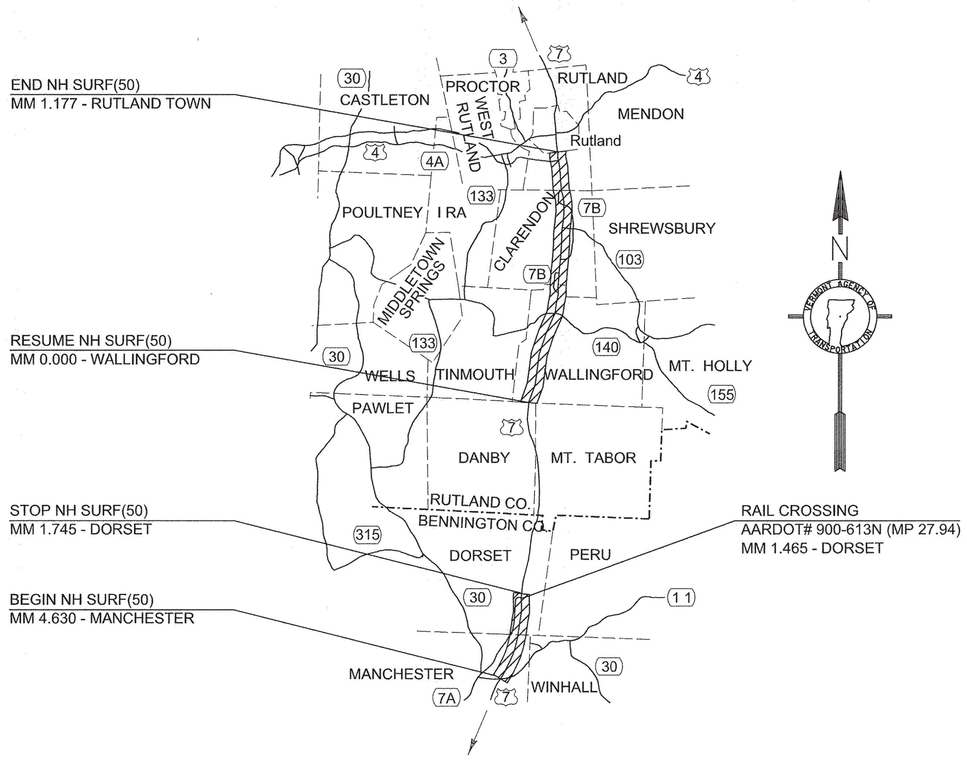


PROPOSED IMPROVEMENT
TOWNS OF MANCHESTER, DORSET, WALLINGFORD, CLARENDON & RUTLAND TOWN
COUNTIES OF BENNINGTON & RUTLAND
U.S. ROUTE 7 - PRINCIPAL ARTERIAL (NHS)

BEGINNING IN THE TOWN OF MANCHESTER ON US ROUTE 7 AT MM 4.630 AND EXTENDING NORTHERLY
ALONG US ROUTE 7 FOR A DISTANCE OF 24,472.80 FEET (4.635 MILES) AND STOPPING AT MM 1.745 IN THE TOWN OF DORSET.
RESUMING IN THE TOWN OF WALLINGFORD AT MM 0.000 AND
EXTENDING NORTHERLY 73,534.56 FEET (13.927 MILES) AND ENDING AT MM 1.177 IN RUTLAND TOWN

LENGTH OF ROADWAY = 98,007.36 FEET (18.562 MILES)
LENGTH OF PROJECT = 98,007.36 FEET (18.562 MILES)

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES SURFACE PREPARATION INVOLVING PATCHING, MICRO-MILLING, POT HOLE REPAIR, CRACK SEALING, OVERLAYING WITH A THIN BITUMINOUS SURFACE TREATMENT, TRAFFIC SIGNAL UPGRADES, TRAFFIC MARKINGS, RAIL CROSSING UPGRADES AND OTHER HIGHWAY RELATED ITEMS.



NOT TO SCALE

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 201 1, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 201 1 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 1
SURVEYED BY : NA SURVEYED DATE : NA
DATUM VERTICAL NA HORIZONTAL NA

Record Plans

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE 12/22/2015

PROJECT MANAGER : MICHAEL J. FOWLER, P.E.

PROJECT NAME : MANCHESTER - RUTLAND TOWN
PROJECT NUMBER : NH SURF(50)

SHEET 1 OF 105 SHEETS

INDEX OF SHEETS

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12.-14.	QUANTITY SHEETS
15.-84.	PLAN SHEETS
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92.-94.	BRIDGE EXPANSION JOINT DETAIL SHEETS
95.	RAIL CROSSING DETAIL SHEET
96.	TRAFFIC CONTROL NOTES
97.	CONSTRUCTION APPROACH SIGNING SHEET
98.-101.	RUTTING DATA INFORMATION SHEETS
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See also,
Revised Sheets from
Addendum #1

STRUCTURES DETAIL SHEETS

SD-516.10 - BRIDGE JOINT ASPHALTIC PLUG	08-29-11

HIGHWAY SAFETY & DESIGN DETAIL SHEETS

HSD-213.01 - MILLED RUMBLE STRIP(SHOULDER) DETAIL	11-03-15
HSD-213.02 - MILLED RUMBLE STRIP(CENTERLINE) DETAIL	11-03-15

VAOT DESIGN STANDARDS

E-140	REGULATORY SIGN DETAILS	08-30-96
E-160	FLANGED CHANNEL STEEL SIGN POST	11-04-99
E-170	TRAFFIC CONTROL SIGNALS PEDESTAL POST MOUNTED	11-04-99
E-171A	TRAFFIC CONTROL SIGNALS GENERAL NOTES & DETAILS	08-09-95
E-171B	TRAFFIC CONTROL SIGNALS MISC. DETAILS	08-09-95
E-171C	TRAFFIC CONTROL SIGNALS CANTILEVER MOUNTING DETAILS	08-09-95
E-173	PULL BOXES AND JUNCTION BOXES	08-09-95
E-175	POWER DROP STANCHIONS	06-08-09
E-190	RAILROAD CROSSING SIGNS & PAVEMENT MARKINGS	06-30-03
E-191	PAVEMENT MARKING DETAILS	02-01-99
E-192	PAVEMENT MARKING DETAILS	10-12-00
E-193	PAVEMENT MARKING DETAILS	08-18-95
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR TYPICALS)	11-10-15
T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-12
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-12
T-11	CONSTRUCTION APPROACH SIGNING DIVIDED HIGHWAY ONE LANE CLOSED	08-06-12
T-12	TRAFFIC CONTROL DIVIDED HIGHWAY ONE LANE CLOSED	08-06-12
T-13	TRAFFIC CONTROL DIVIDED HIGHWAY ONE LANE CLOSED	08-06-12
T-16	TRAFFIC CONTROL FOR U-TURN USE ON DIVIDED HIGHWAY	08-06-12
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08-06-12
T-22	TRAFFIC CONTROL FOR PAVEMENT MARKING ON DIVIDED HIGHWAY	08-06-12
T-23	TRAFFIC CONTROL FOR PAVEMENT MARKING ON DIVIDED HIGHWAY	08-06-12
T-28	CONSTRUCTION SIGN DETAILS	08-06-12
T-29	CONSTRUCTION SIGN DETAILS	08-06-12
T-30	CONSTRUCTION SIGN DETAILS	08-06-12
T-31	CONSTRUCTION SIGN DETAILS	08-06-12
T-33	CONSTRUCTION APPROACH SIGNS	08-06-12
T-36	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING	08-06-12

TRAFFIC DATA

US ROUTE 7	AADT		DHV		%T		%D		ADTT		ESALs	
	2015	2025	2015	2025	2015	2025	2015	2025	2015	2025	(2015~2025)	(2015~2025)
BEGIN PROJECT - MM 1.537 (DORSET)	2300	2300	280	280	12.3	15.0	52	52	360	440	787,000	1,732,000
MM 1.537 (DORSET) - MM 1.745 (DORSET)	4700	4800	530	540	10.9	13.4	58	58	540	670	1,685,000	3,694,000
DANBY/WALLINGFORD TL TO MM 3.662 (WALLINGFORD)	4300	4400	490	510	12.2	15.1	51	51	540	680	1,537,000	3,407,000
MM 3.662 (WALLINGFORD) TO MM 5.431 (WALLINGFORD)	5500	5600	620	630	10.4	12.8	51	51	720	910	2,461,000	5,716,000
MM 5.431 (WALLINGFORD) TO WALLINFORD/CLARENDON TL	6900	7000	780	790	12.6	15.6	54	54	910	1100	2,573,000	5,603,000
WALLINFORD/CLARENDON TL TO MM 3.341 (CLARENDON)	7800	7900	880	890	8.7	10.8	57	57	1200	1500	3,159,000	6,936,000
MM 3.341 (CLARENDON) TO CLARENDON/RUTLAND TL	13,500	13,800	1400	1400	13.6	15.7	51	51	1600	2000	6,935,000	14,696,000
CLARENDON/RUTLAND TL TO MM 0.360 (RUTLAND)	13,400	13,700	1400	1500	5.2	6.5	51	51	980	1300	3,521,000	8,250,000
MM 0.360 (RUTLAND) TO END PROJECT	21,300	21,700	2200	2200	3.6	4.3	54	54	1200	1500	4,415,000	10,281,000

POSTED SPEED ZONES

US ROUTE 7	TOWN	SPEED (MPH)
BEGIN PROJECT - MM 7.520	MANCHESTER	55
MM 0.000 - MM 1.530	DORSET	55
MM 1.530 - MM 1.745	DORSET	40
MM 0.000 - MM 0.970	WALLINGFORD	50
MM 0.970 - MM 1.600	WALLINGFORD	40
MM 1.600 - MM 4.370	WALLINGFORD	50
MM 4.370 - MM 4.970	WALLINGFORD	40
MM 4.970 - MM 5.780	WALLINGFORD	30
MM 5.780 - MM 6.190	WALLINGFORD	35
MM 6.190 - MM 6.530	WALLINGFORD	45
MM 6.530 - MM 7.094	WALLINGFORD	55
MM 0.000 - MM 5.656	CLARENDON	55
MM 0.000 - MM 0.680	RUTLAND TOWN	45
MM 0.680 - MM 1.177	RUTLAND TOWN	40

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200frm.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
INDEX OF SHEETS

PLOT DATE: 1/19/2016
DRAWN BY: B. KIPP
CHECKED BY: N. PAPPAS
SHEET 2 OF 105

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
	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	BENCH MARK
	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

- 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)

- 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

- CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH 'L
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PROJECT DEMARCATION FENCE (PDF)
- BARRIER FENCE (BF)
- 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
- 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

ENVIRONMENTAL RESOURCES

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

ARCHEOLOGICAL & HISTORIC

- ARCHEOLOGICAL BOUNDARY
- HISTORIC DISTRICT BOUNDARY
- 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:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200frm.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: N. PAPPAS
CONVENTIONAL SYMBOLOGY LEGEND SHEET	SHEET 3 OF 105

GENERAL NOTES

1. ANY MODIFICATIONS TO PRODUCE THE PG 70-28 ASPHALT BINDER ARE RESTRICTED TO SBS OR SBR POLYMERS. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POTHOLE REPAIR, AND CRACK SEALING SHALL BE PERFORMED PRIOR TO APPLICATION OF FINAL SURFACE TREATMENT. ALL CRACKS GREATER THAN 0.10 INCH AND UP TO ONE 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 ONE INCH AND ALL OTHER PATCHING AND POTHOLE REPAIR SHALL BE COMPLETED USING 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.

2. 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.

3. ALL EXISTING PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO ANY CRACK SEALING BEING PERFORMED AND PRIOR TO APPLYING THE THIN BITUMINOUS SURFACE TREATMENT. ALL LANE DELINEATION SHALL BE MAINTAINED DURING CONSTRUCTION BY THE USE OF LINE STRIPING TARGETS OR TEMPORARY PAINT AND WILL PAID FOR UNDER ITEM 646.602, 646.612, 646.622, 646.632, 646.642, 646.652, 646.662 AND 646.76 . REMOVAL OF EXISTING PAVEMENT MARKINGS WILL BE PAID FOR UNDER ITEM 646.85 IN AREAS OF PROJECT WHERE MICRO-MILLING IS NOT REQUIRED. REMOVAL OF EXISTING PAVEMENT MARKINGS IN AREAS OF MICRO-MILLING WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675 SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT).

4. MICRO-MILL TRANSITIONS SHALL BE CONSTRUCTED AT THE PROJECT BEGIN, PROJECT STOP, PROJECT RESUME, PROJECT END AND AT EACH BRIDGE APPROACH AS INDICATED ON THE PROJECT DETAIL SHEETS AND AS DIRECTED BY THE ENGINEER. ANY SAW CUTTING AT BUTT JOINTS WILL BE CONSIDERED 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 THE CONTRACTOR'S OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE OF VERMONT.

5. 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.

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

7. 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 WILL PAID FOR 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 RS1-H OR CRS1-H.

8. 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.

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

see revised sheet

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200frm.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: N. PAPPAS
GENERAL NOTES	SHEET 4 OF 105

GENERAL NOTES

RECORD PLANS

1. ANY MODIFICATIONS TO PRODUCE THE PG 70-28 ASPHALT BINDER ARE RESTRICTED TO SBS OR SBR POLYMERS. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POTHOLE REPAIR, AND CRACK SEALING SHALL BE PERFORMED PRIOR TO APPLICATION OF FINAL SURFACE TREATMENT. ALL CRACKS GREATER THAN 0.10 INCH AND UP TO ONE 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 ONE INCH AND ALL OTHER PATCHING AND POTHOLE REPAIR SHALL BE COMPLETED USING 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.

2. 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.

3. ALL EXISTING PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO ANY CRACK SEALING BEING PERFORMED AND PRIOR TO APPLYING THE THIN BITUMINOUS SURFACE TREATMENT. ALL LANE DELINEATION SHALL BE MAINTAINED DURING CONSTRUCTION BY THE USE OF LINE STRIPING TARGETS OR TEMPORARY PAINT AND WILL PAID FOR UNDER ITEM 646.602, 646.612, 646.622, 646.632, 646.642, 646.652, 646.662 AND 646.76 . REMOVAL OF EXISTING PAVEMENT MARKINGS WILL BE PAID FOR UNDER ITEM 646.85 IN AREAS OF PROJECT WHERE MICRO-MILLING IS NOT REQUIRED. REMOVAL OF EXISTING PAVEMENT MARKINGS IN AREAS OF MICRO-MILLING WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675 SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT).

4. MICRO-MILL TRANSITIONS SHALL BE CONSTRUCTED AT THE PROJECT BEGIN, PROJECT STOP, PROJECT RESUME, PROJECT END AND AT EACH BRIDGE APPROACH AS INDICATED ON THE PROJECT DETAIL SHEETS AND AS DIRECTED BY THE ENGINEER. ANY SAW CUTTING AT BUTT JOINTS WILL BE CONSIDERED 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 THE CONTRACTOR'S OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE OF VERMONT.

5. 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.

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

7. 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 WILL PAID FOR 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 0.080 (+/- 0.01) GAL/SY OF RS1-H, CRS1-H, OR 404.65.

8. 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.

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

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

11. **ALL TOWN HIGHWAY APPROACHES 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, IVS AT THE DISCRETION OF THE ENGINEER. THIS MATERIAL WILL BE FROM AN APPROVED SOURCE WITH EITHER A PREVIOUSLY APPROVED MIX DESIGN OR A MIX DESIGN APPROVAL OBTAINED FOR TEH INTENDED PRODUCT. THE SUBSTITUTION OF ITEMS 406.25, 406.27 OR 490.30 WILL BE PAID AT THE CONTRACT UNIT PRICE OF THE LOW PAVEMENT ALTERNATE.** [1]

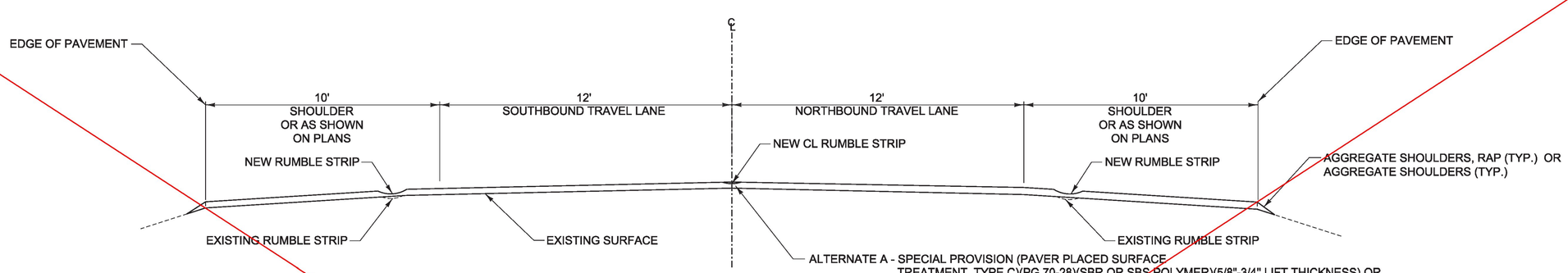
REVISION	DATE	DESCRIPTION	BY
1	02-09-16	ADDED NOTE 10 & 11	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200frm.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
GENERAL NOTES

PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: N. PAPPAS
SHEET 4 OF 105

alternate B used

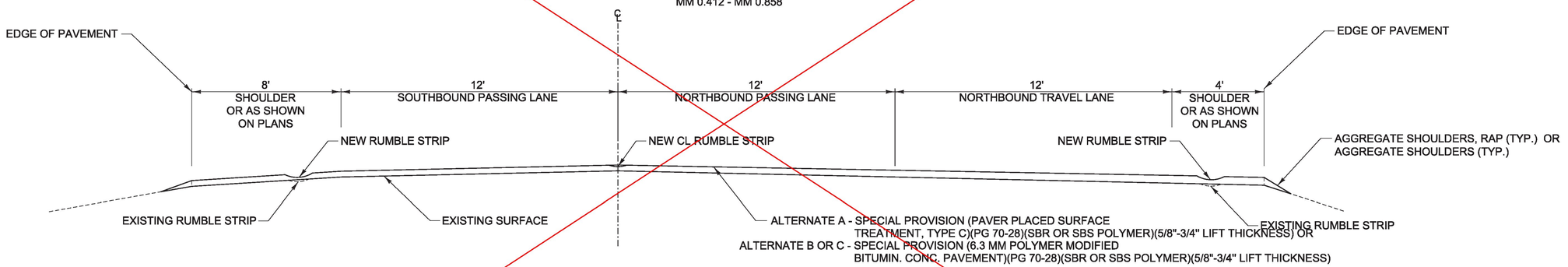


ROADWAY TYPICAL SECTION

NOT TO SCALE

MANCHESTER:
MM 4.630 - MM 7.075

DORSET:
MM 0.412 - MM 0.858

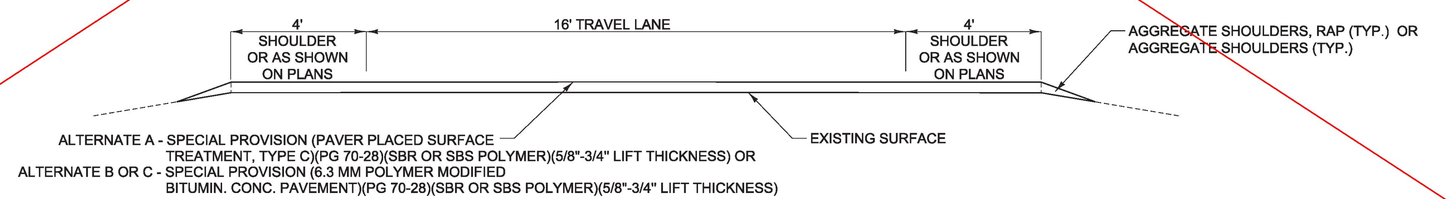


ROADWAY TYPICAL SECTION

NOT TO SCALE

MANCHESTER:
MM 7.075 - MM 7.520

DORSET:
MM 0.000 - MM 0.122



TYPICAL RAMP SECTION

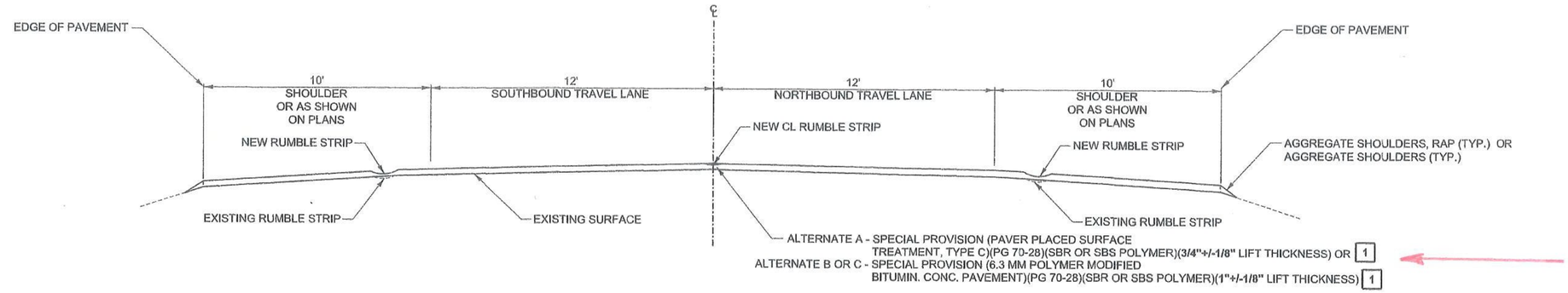
NOT TO SCALE

MANCHESTER:
MM 4.683 - RAMP E (STA E0+00 - STA E11+22)
MM 4.925 - RAMP D (STA D0+00 - STA D17+21)
MM 4.977 - RAMP C (STA C0+00 - STA C11+15)

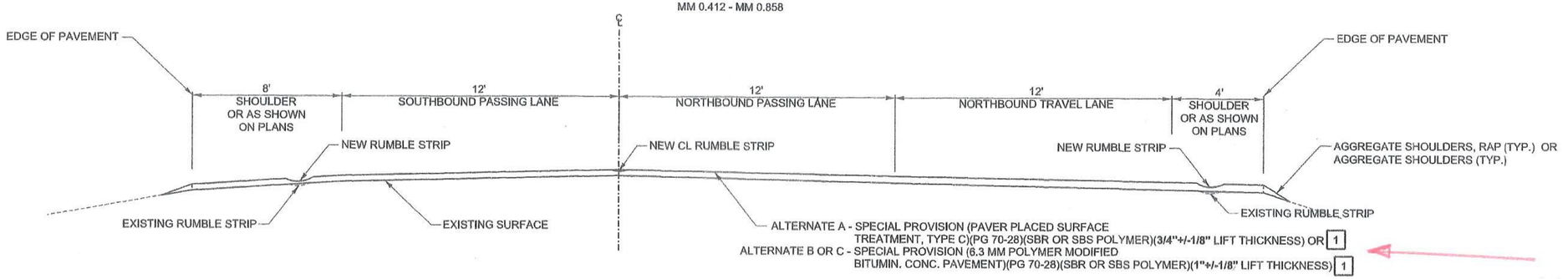
see revised sheet

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/15/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
TYPICAL SECTION SHEET 1	SHEET 5 OF 105

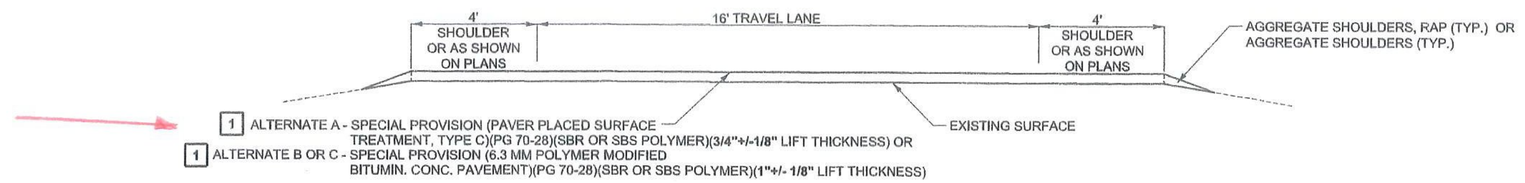
RECORD PLANS



ROADWAY TYPICAL SECTION
NOT TO SCALE
MANCHESTER:
MM 4.630 - MM 7.075
DORSET:
MM 0.412 - MM 0.858



ROADWAY TYPICAL SECTION
NOT TO SCALE
MANCHESTER:
MM 7.075 - MM 7.520
DORSET:
MM 0.000 - MM 0.122



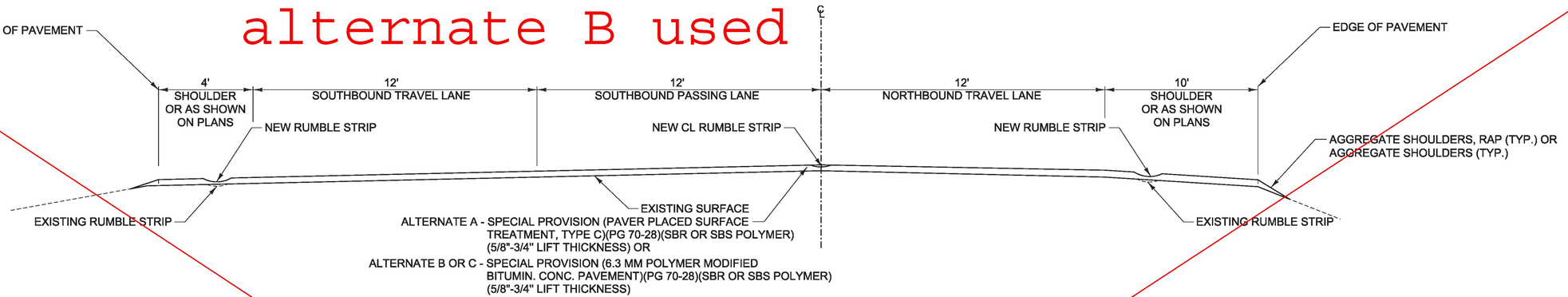
REVISION	DATE	DESCRIPTION	BY
1	02-09-16	MODIFIED TREATMENT THICKNESSES AND TOLERANCES	BWK

TYPICAL RAMP SECTION
NOT TO SCALE
MANCHESTER:
MM 4.683 - RAMP E (STA E0+00 - STA E11+22)
MM 4.925 - RAMP D (STA D0+00 - STA D17+21)
MM 4.977 - RAMP C (STA C0+00 - STA C11+15)

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn — PLOT DATE: 2/9/2016
PROJECT LEADER: M. FOWLER — DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP — CHECKED BY: M. FOWLER
TYPICAL SECTION SHEET 1 — SHEET 5 OF 105

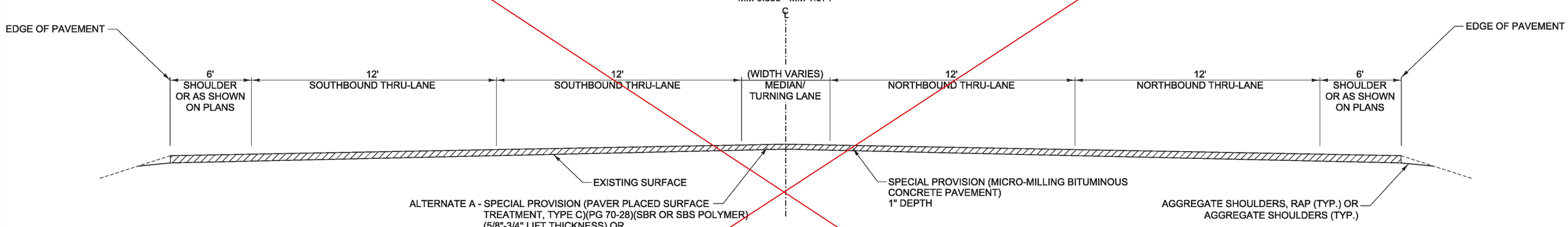
alternate B used



ROADWAY TYPICAL SECTION

NOT TO SCALE

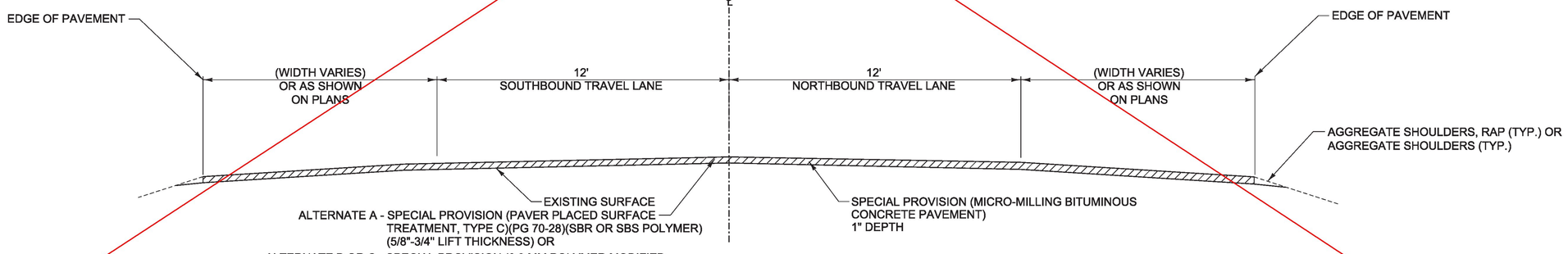
DORSET:
MM 0.000 - MM 0.412
MM 0.858 - MM 1.371



ROADWAY TYPICAL SECTION

NOT TO SCALE

DORSET:
MM 1.371 - MM 1.705 (STA 72+40 - STA 90+00)



ROADWAY TYPICAL SECTION

NOT TO SCALE

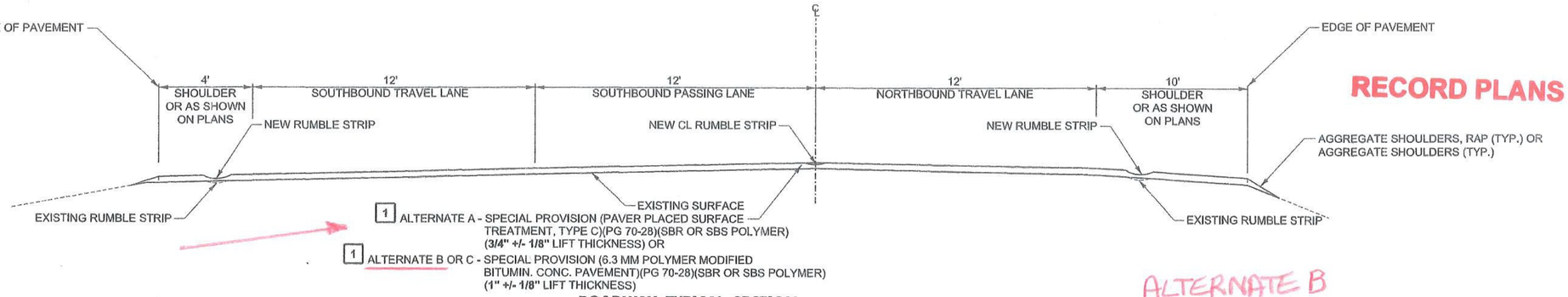
DORSET:
MM 1.705 - MM 1.745 (STA 90+02 - STA 92+14)

see revised sheet

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF (50)

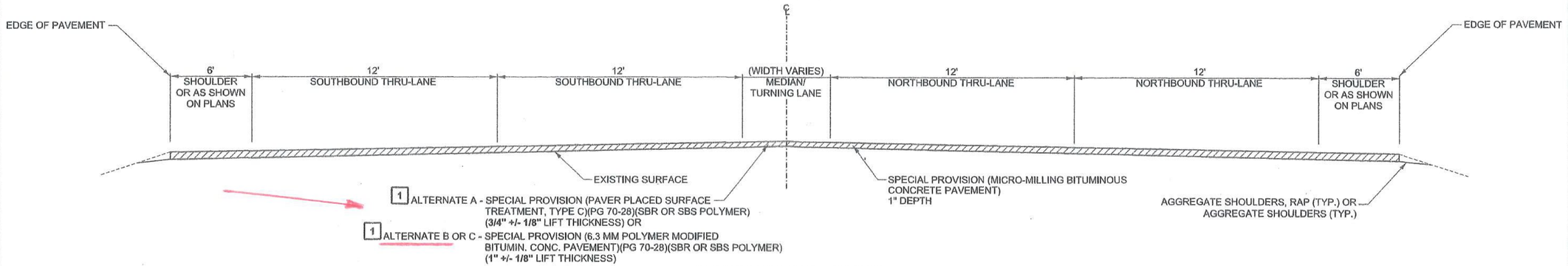
FILE NAME: typ02.dgn	PLOT DATE: 1/15/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
TYPICAL SECTION SHEET 2	SHEET 6 OF 105

RECORD PLANS

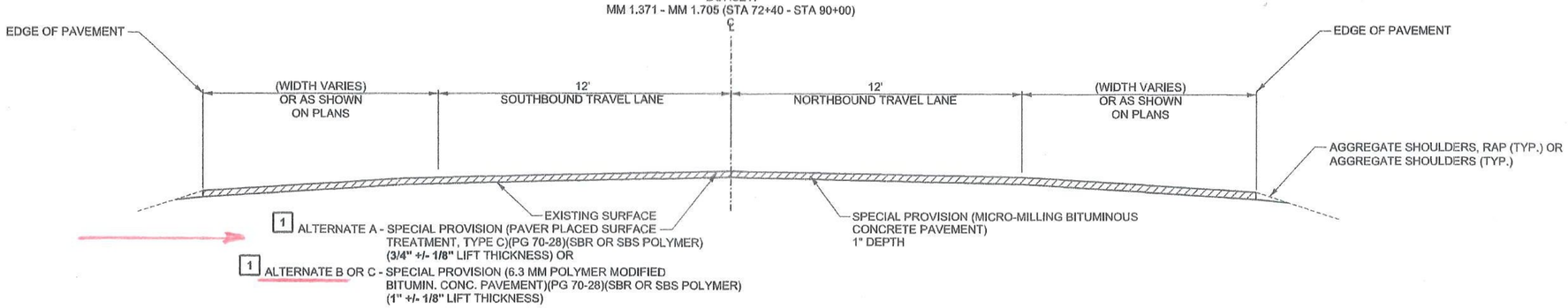


ROADWAY TYPICAL SECTION
NOT TO SCALE
DORSET:
MM 0.000 - MM 0.412
MM 0.858 - MM 1.371

ALTERNATE B USED



ROADWAY TYPICAL SECTION
NOT TO SCALE
DORSET:
MM 1.371 - MM 1.705 (STA 72+40 - STA 90+00)

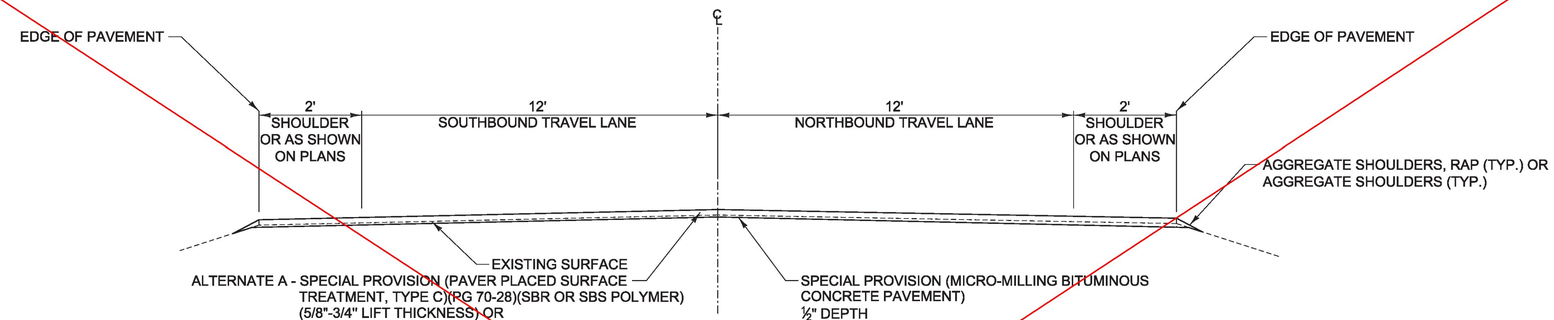


ROADWAY TYPICAL SECTION
NOT TO SCALE
DORSET:
MM 1.705 - MM 1.745 (STA 90+02 - STA 92+14)

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	MODIFIED TREATMENT THICKNESSES AND TOLERANCES	BWK

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF (50)
FILE NAME: typ02.dgn	PLOT DATE: 2/9/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
TYPICAL SECTION SHEET 2	SHEET 6 OF 105

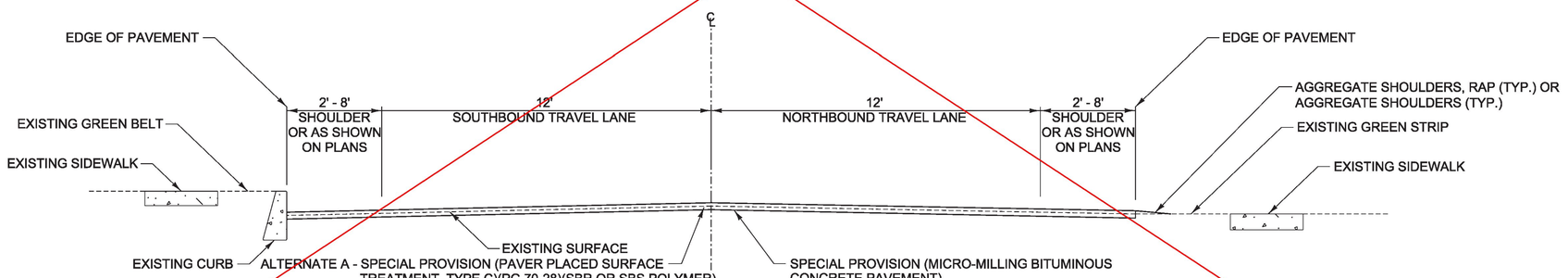
alternate B used



ROADWAY TYPICAL SECTION

NOT TO SCALE

WALLINGFORD:
MM 0.000 - MM 5.156 (W 0+00 - W 272+25)
MM 5.839 - MM 6.465



ROADWAY TYPICAL SECTION

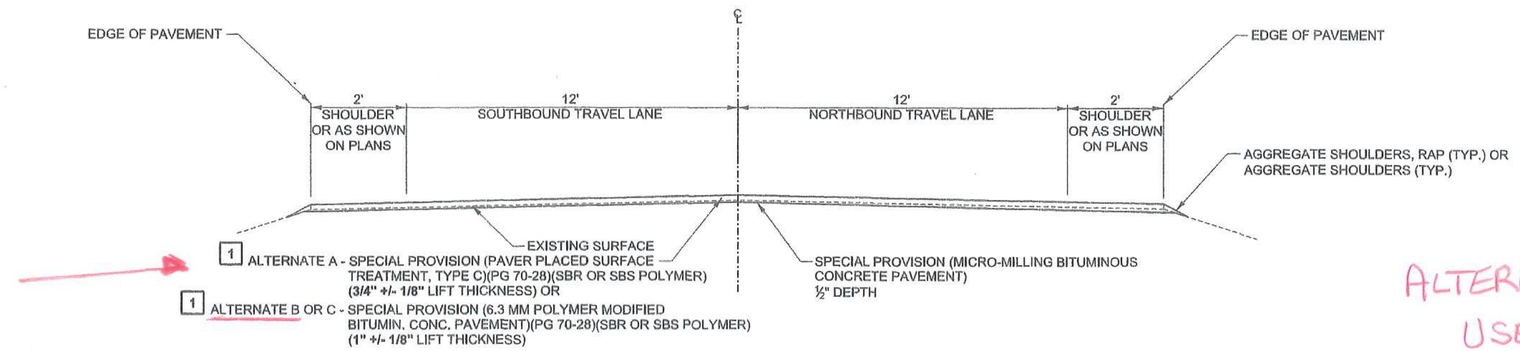
NOT TO SCALE

WALLINGFORD:
MM 5.156 - MM 5.839 (W 272+25 - W 306+32)

see revised sheet

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF (50)
FILE NAME: typ03.dgn	PLOT DATE: 1/15/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
TYPICAL SECTION SHEET 3	SHEET 7 OF 105

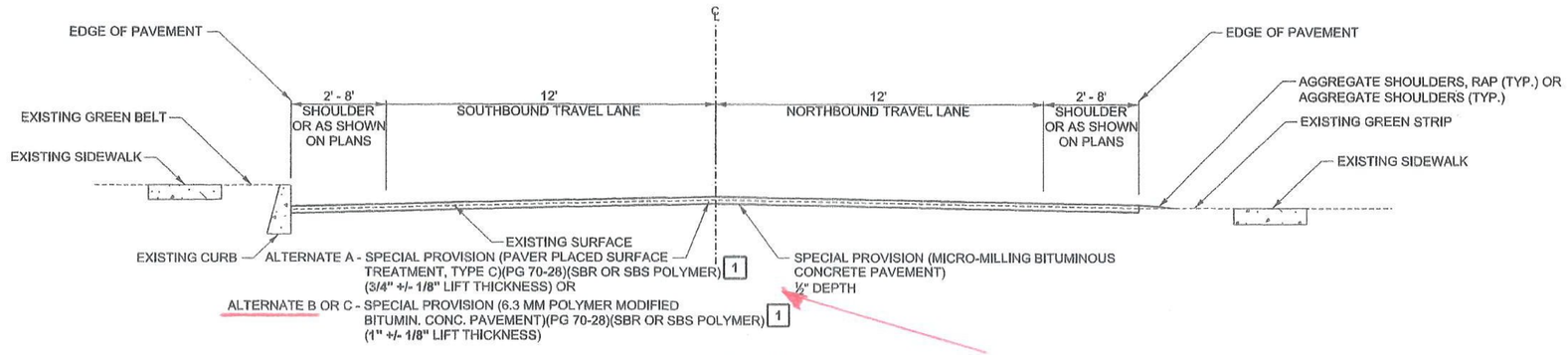
RECORD PLANS



ALTERNATE B USED

ROADWAY TYPICAL SECTION
NOT TO SCALE

WALLINGFORD:
MM 0.000 - MM 5.156 (W 0+00 - W 272+25)
MM 5.839 - MM 6.465



ROADWAY TYPICAL SECTION
NOT TO SCALE

WALLINGFORD:
MM 5.156 - MM 5.839 (W 272+25 - W 306+32)

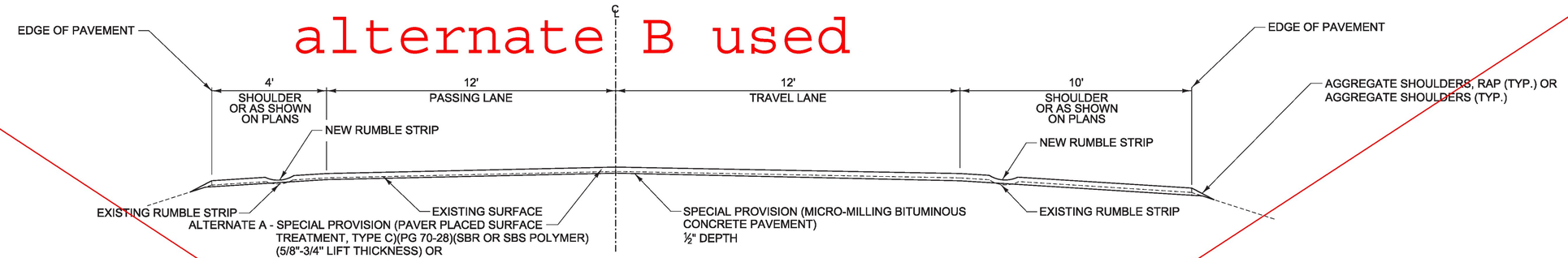
REVISION	DATE	DESCRIPTION	BY
1	02-09-16	MODIFIED TREATMENT THICKNESSES AND TOLERANCES	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF (50)

FILE NAME: typ03.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TYPICAL SECTION SHEET 3

PLOT DATE: 2/9/2016
DRAWN BY: N. PAPPAS
CHECKED BY: M. FOWLER
SHEET 7 OF 105

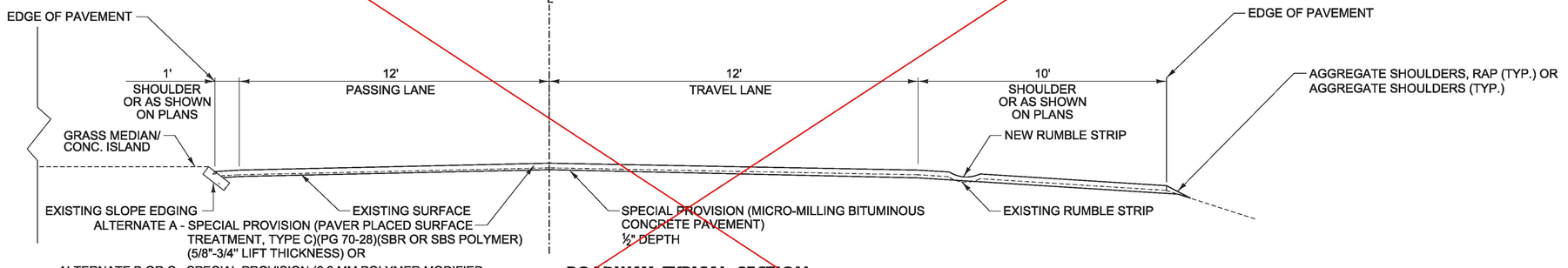
alternate B used



ROADWAY TYPICAL SECTION
NOT TO SCALE

WALLINGFORD:
MM 6.526 - MM 7.110 (NORTHBOUND & SOUTHBOUND)

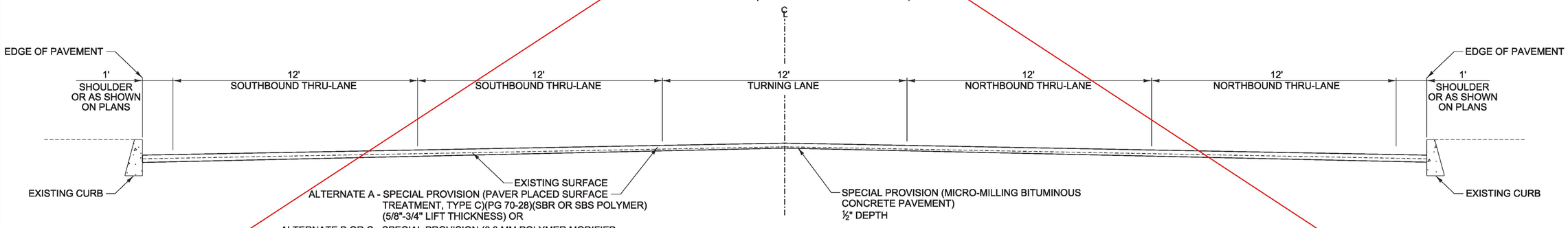
CLARENDON:
MM 0.000 - MM 4.380 (NORTHBOUND & SOUTHBOUND)



ROADWAY TYPICAL SECTION
NOT TO SCALE

CLARENDON:
MM 4.380 - MM 5.657 (NORTHBOUND & SOUTHBOUND)

RUTLAND TOWN:
MM 0.000 - MM 0.737 (NORTHBOUND & SOUTHBOUND)



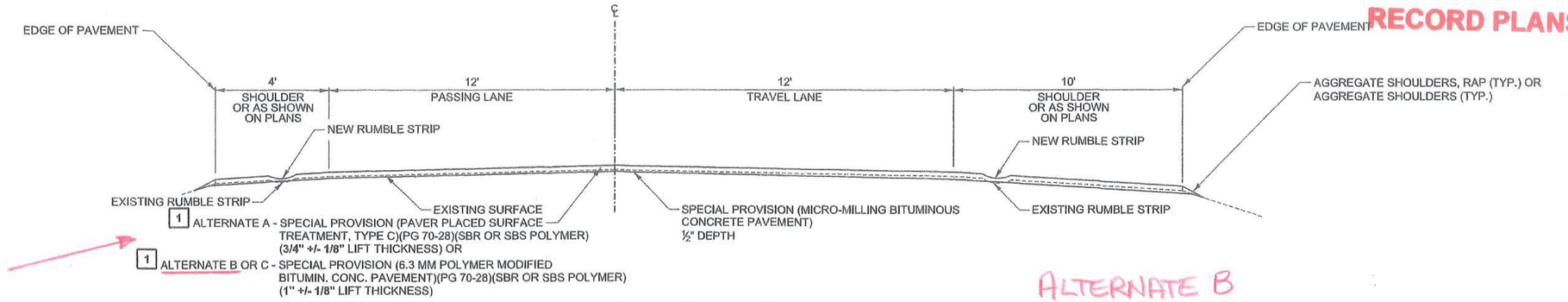
ROADWAY TYPICAL SECTION
NOT TO SCALE

RUTLAND TOWN:
MM 0.737 - MM 1.177

see revised sheet

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF (50)
FILE NAME: typ04.dgn	PLOT DATE: 1/15/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
TYPICAL SECTION SHEET 4	SHEET 8 OF 105

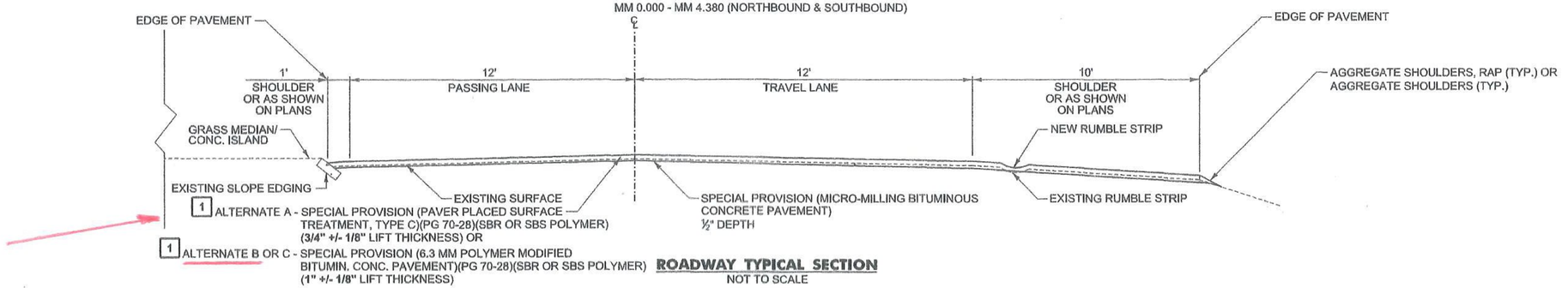
RECORD PLANS



ALTERNATE B USED

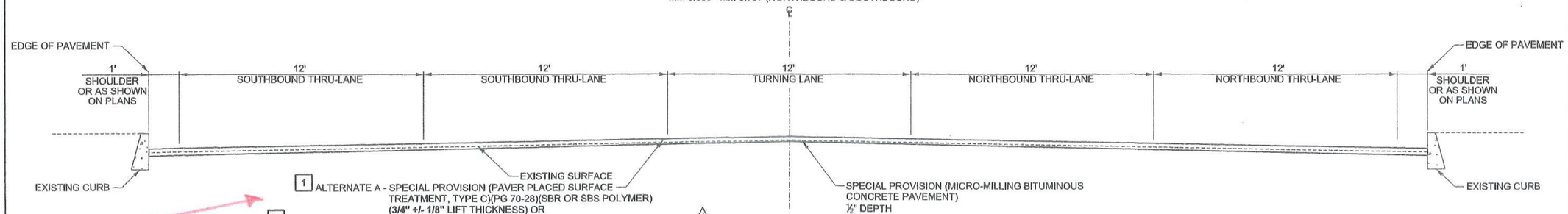
ROADWAY TYPICAL SECTION
NOT TO SCALE

WALLINGFORD:
MM 6.526 - MM 7.110 (NORTHBOUND & SOUTHBOUND)
CLARENDON:
MM 0.000 - MM 4.380 (NORTHBOUND & SOUTHBOUND)



ROADWAY TYPICAL SECTION
NOT TO SCALE

CLARENDON:
MM 4.380 - MM 5.657 (NORTHBOUND & SOUTHBOUND)
RUTLAND TOWN:
MM 0.000 - MM 0.737 (NORTHBOUND & SOUTHBOUND)



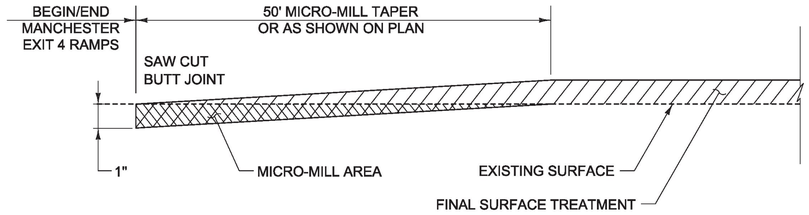
1 **ROADWAY TYPICAL SECTION**
NOT TO SCALE

RUTLAND TOWN:
MM 0.737 - MM 1.177

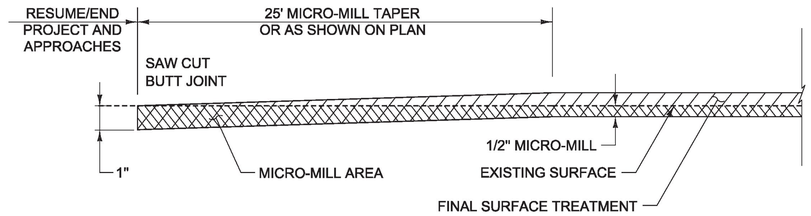
REVISION	DATE	DESCRIPTION	BY
1	02-09-16	MODIFIED TREATMENT THICKNESSES AND TOLERANCES	BWK

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF (50)

FILE NAME: typ04.dgn	PLOT DATE: 2/9/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
TYPICAL SECTION SHEET 4	SHEET 8 OF 105

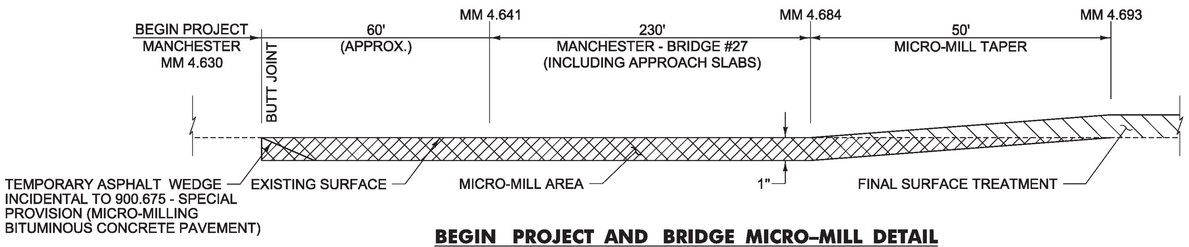


MANCHESTER - EXIT 4, RAMP C
MANCHESTER - EXIT 4, RAMP D
MANCHESTER - EXIT 4, RAMP E

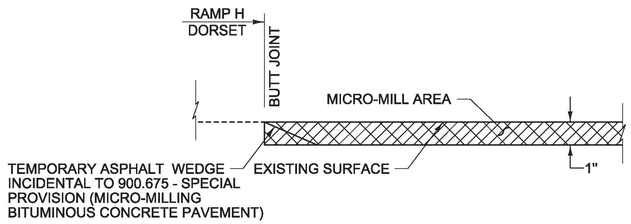


WALLINGFORD - MM 0.000
RUTLAND TOWN - MM 1.177

TYPICAL APPROACH AREA DETAIL MAINLINE & RAMPS

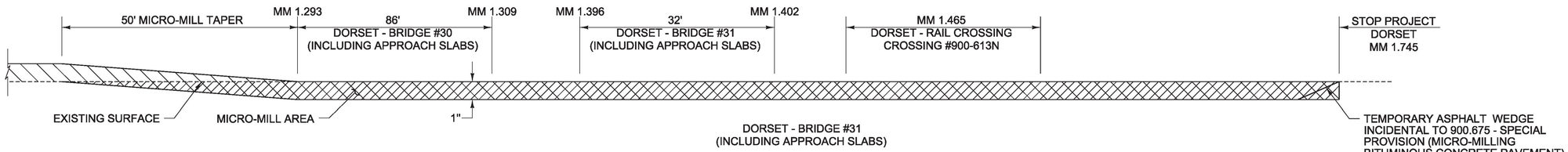


BEGIN PROJECT AND BRIDGE MICRO-MILL DETAIL



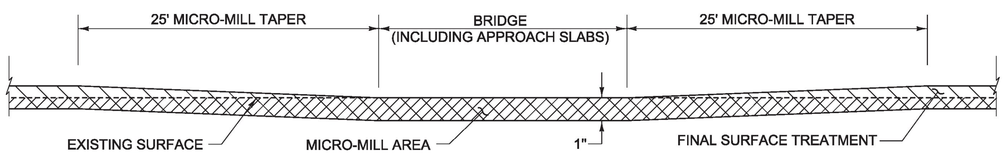
END PROJECT MICRO-MILL DETAIL – RAMP H

DORSET
MM 1.544 - MM 1.676 (STA 81+50 - STA 88+53 LT)



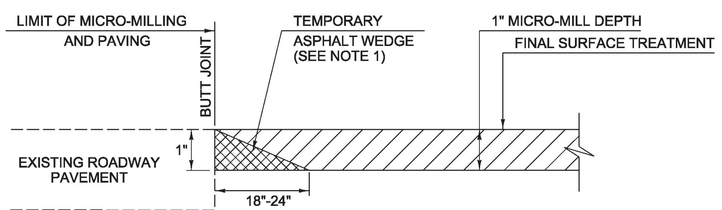
DORSET - BRIDGE #31
(INCLUDING APPROACH SLABS)

MICRO-MILL DETAIL – DORSET



BRIDGE MICRO-MILL DETAIL

BRIDGE 79 - MM 4.625 - WALLINGFORD
BRIDGE 80 - MM 4.736 - WALLINGFORD
BRIDGE 90N - MM 1.341 - CLARENDON
BRIDGE 90S - MM 1.341 - CLARENDON
BRIDGE 96 - MM 5.476 - CLARENDON



ASPHALT WEDGE DETAIL

NOTE:

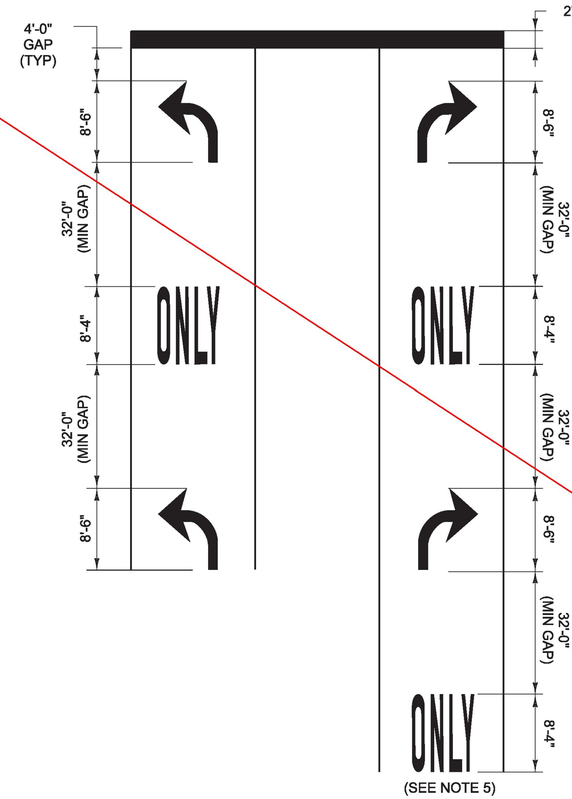
1. TEMPORARY ASPHALT WEDGE WILL BE REMOVED PRIOR TO PAVING AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675 - SPECIAL PROVISION(MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT).

NOTES:

1. REFER TO ASPHALTIC PLUG 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 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.

NOT TO SCALE

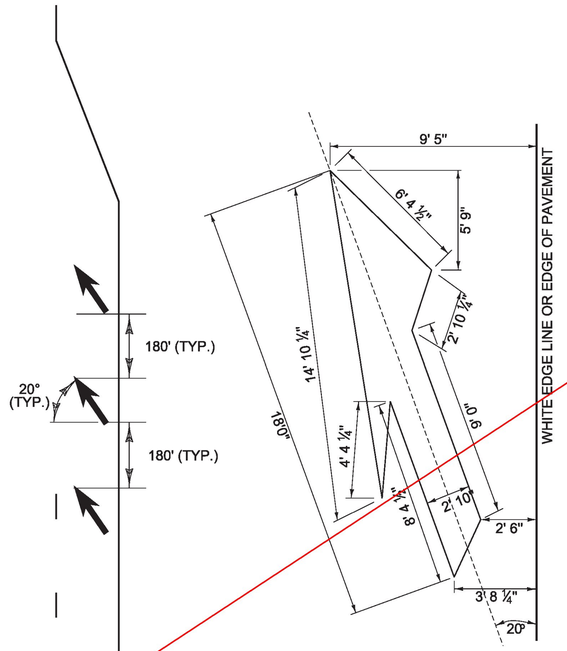
PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/15/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: PVT. MGT.
DETAIL SHEET 1	SHEET 9 OF 105



TYPICAL MARKINGS FOR TURN LANES

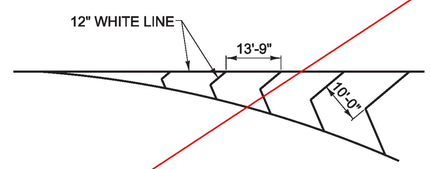
NOTES:

1. MARKINGS START AT THE BEGINNING OF SOLID LANE LINE.
2. THE "ONLY" WORD MARKINGS SHALL BE USED TO SUPPLEMENT LANE-USE ARROW MARKINGS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
3. IF LANE LENGTH IS LESS THAN 50 FEET, ONLY ONE TURN ARROW PLACED AT THE BEGINNING OF THE SOLID LANE LINE IS REQUIRED.
4. THE LONGITUDINAL SPACE BETWEEN WORD OR SYMBOL MESSAGE MARKINGS SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTERS USED FOR LOW SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITIONS.
5. A SECOND "ONLY" IS OPTIONAL WHEN SPACE PERMITS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
6. EXCLUSIVE TURN (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.



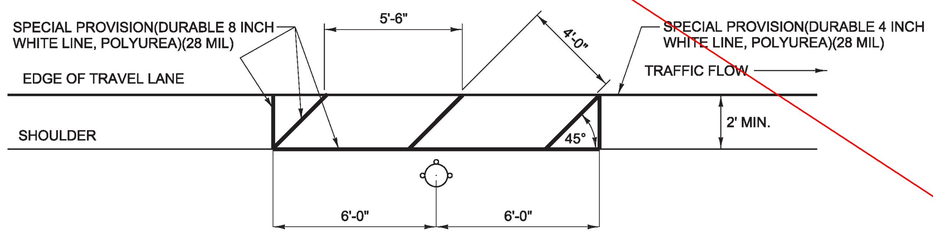
LANE REDUCTION TRANSITION MARKINGS

FIRST LANE REDUCTION ARROW SHALL BE PLACED OPPOSITE THE LAST DASH. TWO MORE ARROWS (TOTAL OF THREE ARROWS) SHALL BE PLACED 180' BETWEEN LAST DASH AND BEGINNING OF LANE TAPER. FOR LEFT LANE USE MIRROR IMAGE



GORE MARKING DETAIL

MANCHESTER - RAMP D
DORSET - RAMP H
CLARENDON - MM 2.479 SB
CLARENDON - MM 2.508 NB
CLARENDON - MM 5.621 SB
RUTLAND TOWN - MM 0.428 SB



FIRE HYDRANT AND NO PARKING PAVEMENT MARKING DETAIL

US ROUTE 7 WALLINGFORD:

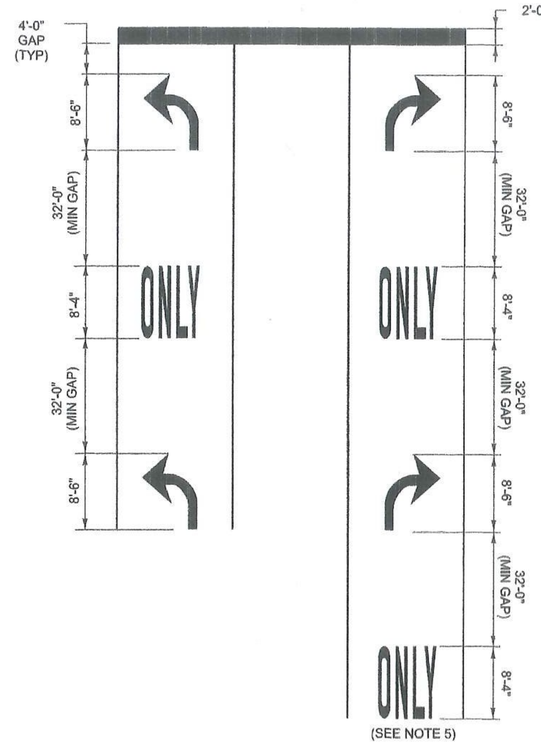
STA W 278+50 RT (MM 5.275)
STA W 290+00 LT (MM 5.492)
STA W 293+53 LT (MM 5.559)
STA W 300+50 LT (MM 5.691)

NOTE: THE CONTRACTOR SHALL ADJUST THE PLACEMENT OF THE FIRE HYDRANT PAVEMENT MARKINGS AND NO PARKING PAVEMENT MARKINGS TO MEET THE EXISTING SITE CONSTRAINTS AS DIRECTED BY THE ENGINEER.

NOT TO SCALE

see revised sheet

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/15/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
DETAIL SHEET 2	SHEET 10 OF 105



TYPICAL MARKINGS FOR TURN LANES

NOTES:

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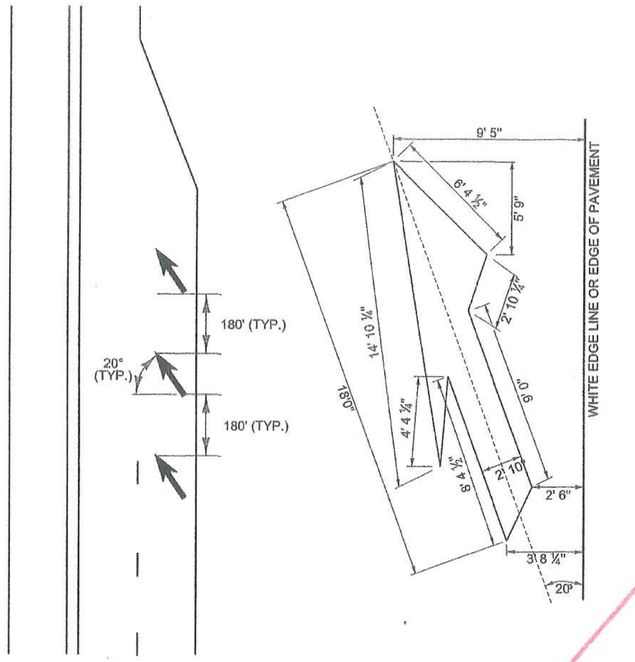
5. A SECOND "ONLY" IS OPTIONAL WHEN SPACE PERMITS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
6. EXCLUSIVE TURN (LEFT OR RIGHT) LANE LINES SHALL BE SOLID AND EXTEND BACK FROM THE STOP LINE TO THE POINT OF FULL LANE WIDTH OF THE TURN LANE.

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	"COLD PLANE DETAIL AT DRIVES" DETAIL WITH APPLICABLE NOTES	BWK



LANE REDUCTION TRANSITION MARKINGS

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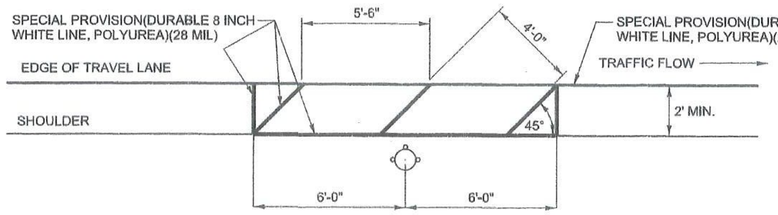


FIRE HYDRANT AND NO PARKING PAVEMENT MARKING DETAIL

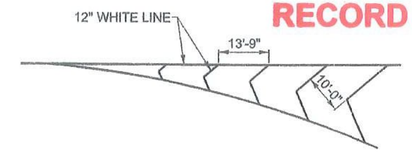
US ROUTE 7 WALLINGFORD:

STA W 278+50 RT (MM 5.275)
STA W 290+00 LT (MM 5.492)
STA W 293+53 LT (MM 5.559)
STA W 300+50 LT (MM 5.691)

NOTE: THE CONTRACTOR SHALL ADJUST THE PLACEMENT OF THE FIRE HYDRANT PAVEMENT MARKINGS AND NO PARKING PAVEMENT MARKINGS TO MEET THE EXISTING SITE CONSTRAINTS AS DIRECTED BY THE ENGINEER.

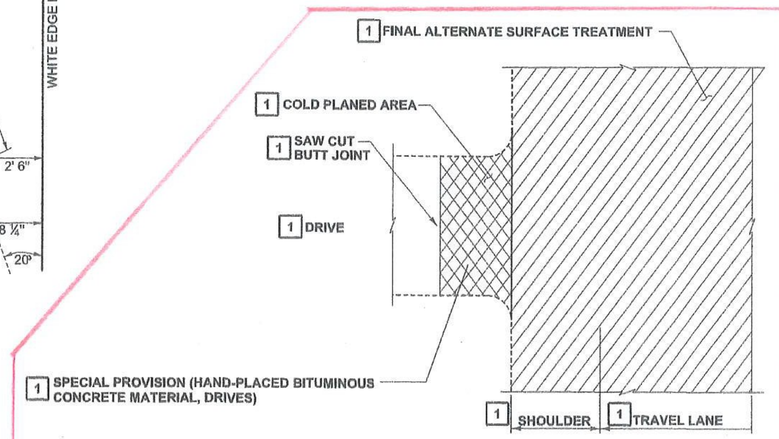
NOT TO SCALE

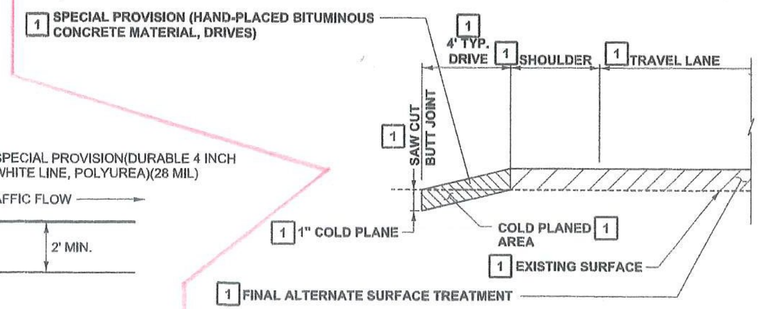
RECORD PLANS



GORE MARKING DETAIL

MANCHESTER - RAMP D
DORSET - RAMP H
CLARENDON - MM 2.479 SB
CLARENDON - MM 2.508 NB
CLARENDON - MM 5.621 SB
RUTLAND TOWN - MM 0.428 SB





1 COLD PLANE DETAILS AT DRIVES

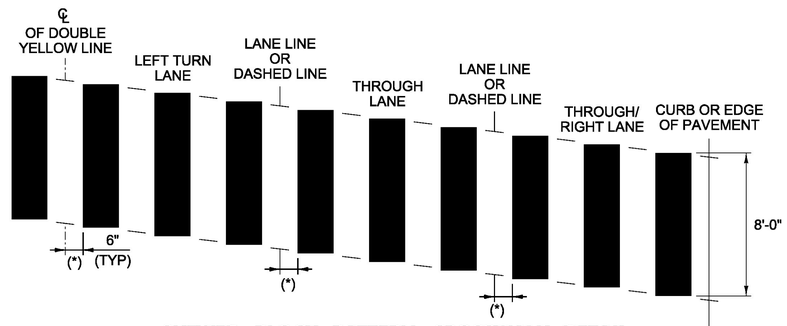
1 NOTES:

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 BITUMINOUS CONCRETE MATERIAL, DRIVES).

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
DETAIL SHEET 2

PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 10 OF 105

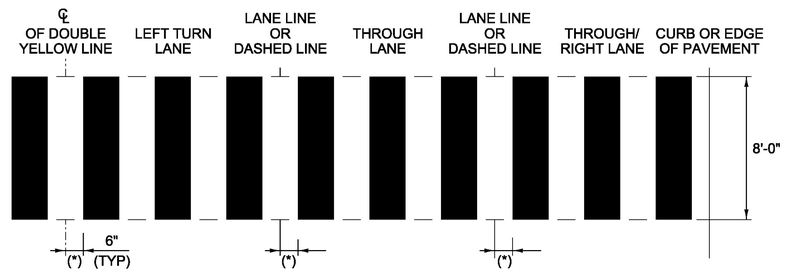


SKEWED BLOCK PATTERN CROSSWALK DETAIL

NOTES:

1. THIS DETAIL IS SETUP FOR AN 11 FOOT LANE.
2. MARK LIGHT STRING LINE ON PAVEMENT ACROSS ROADWAY (CURB TO CURB).
3. ESTABLISH THE CENTERLINE OF THE ROADWAY (DOUBLE YELLOW LINE OR LANE LINE).
4. BLOCKS ARE PARALLEL TO THE CENTERLINE (DOUBLE YELLOW LINE OR LANE LINE) (OFFSET BLOCKS VERTICALLY TO ACHIEVE REQUIRED SKEW).
5. ALWAYS START MEASURING FROM THE CENTERLINE OR LANE LINE RIGHT, WITH THE FLOW OF TRAFFIC.
6. PAINTED BLOCKS SHALL BE 24 INCHES (TYPICAL).

(*) 7. THIS DISTANCE WILL INCREASE TO 1.0' FOR A 12 FOOT LANE.

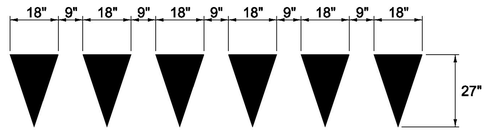


BLOCK PATTERN CROSSWALK DETAIL

NOTES:

1. THIS DETAIL IS SETUP FOR AN 11 FOOT LANE.
2. MARK LIGHT STRING LINE ON PAVEMENT ACROSS ROADWAY (CURB TO CURB).
3. ESTABLISH THE CENTERLINE OF THE ROADWAY (DOUBLE YELLOW LINE OR LANE LINE).
4. BLOCKS ARE PARALLEL TO THE CENTERLINE (DOUBLE YELLOW LINE OR LANE LINE) (OFFSET BLOCKS VERTICALLY TO ACHIEVE RQ SKEW).
5. ALWAYS START MEASURING FROM THE CENTERLINE OR LANE LINE RIGHT, WITH THE FLOW OF TRAFFIC.
6. PAINTED BLOCKS SHALL BE 24 INCHES (TYPICAL).

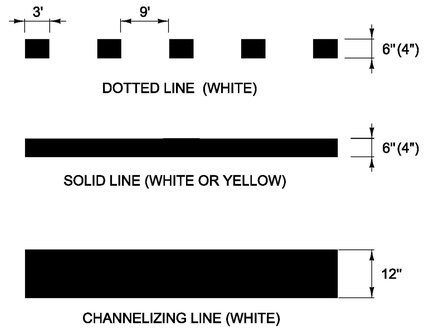
(*) 7. THIS DISTANCE WILL INCREASE TO 1.0' FOR A 12 FOOT LANE.



YIELD LINE DETAILS

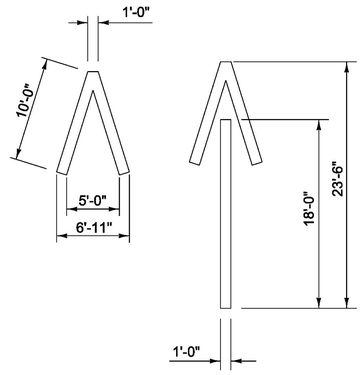
NOTE:

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



PAVEMENT MARKING LINE DETAILS

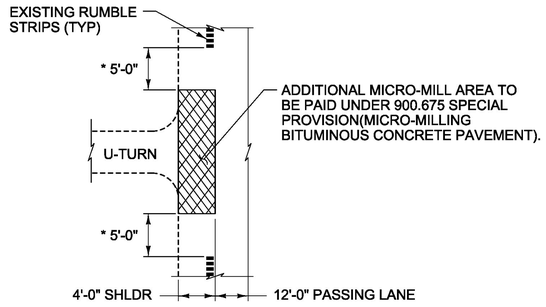
NOT TO SCALE



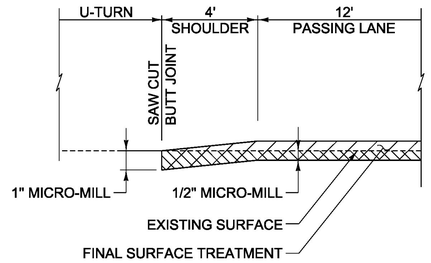
WRONG WAY ARROW

NOT TO SCALE

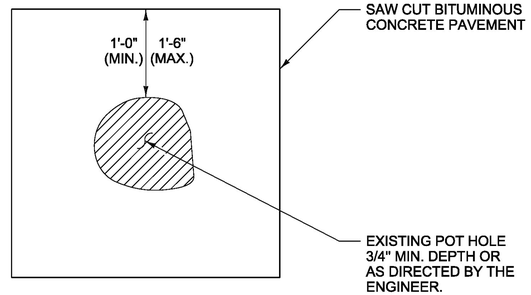
MARKINGS SHALL BE PLACED AT EXISTING WRONG WAY SIGN



* BEGIN MICRO-MILL 5'-0" AFTER RUMBLE STRIPS END, AND END MICRO-MILL 5'-0" BEFORE RUMBLE STRIPS BEGIN



MICRO-MILL DETAIL AT U-TURNS



TYPICAL - POT HOLE REPAIR

NOTE:

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)

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
DETAIL SHEET 3	SHEET 11 OF 105

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES								TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	RAILROAD - BID ITEMS	BRIDGE	FULL C.E. ITEMS	ROADWAY (ALT. A)	ROADWAY (ALT. B)	ROADWAY (ALT. C)		GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
56000								56000		LF	SHOULDER BERM REMOVAL	203.40	27			REMOVAL OF EXISTING PAVEMENT MARKINGS
1								1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-			MANCHESTER - US7
38200								38200		LF	MILLED RUMBLE STRIPS (CENTERLINE)	213.10	82	22597	SF	EXISTING 6" WHITE LINE
139500								139500		LF	MILLED RUMBLE STRIPS (SHOULDER)	213.10	224	16006	SF	EXISTING 6" YELLOW LINE
											BEGIN OPTION AA			1244	SF	EXISTING 12" WHITE LINE
4100								4100		TON	AGGREGATE SHOULDERS	402.12	55	0	SF	EXISTING 24" STOP BAR
4100								4100		TON	AGGREGATE SHOULDERS, RAP	402.13	55	2048	SF	EXISTING SYMBOLS
											END OPTION AA					DORSET - US7
1								1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-	13914	SF	EXISTING 6" WHITE LINE
65000								65000		LB	BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD	417.20	EST.	14418	SF	EXISTING 6" YELLOW LINE
		1702						1702		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	EST.	467	SF	EXISTING 12" WHITE LINE
		100						100		CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20	EST.	1272	SF	EXISTING 12" YELLOW LINE
200								200		HR	POWER BROOM RENTAL, TYPE I	608.30	EST.	133	SF	EXISTING 24" STOP BAR
200								200		HR	POWER BROOM RENTAL, TYPE II	608.31	EST.	2048	SF	EXISTING SYMBOLS
200								200		HR	TRUCK RENTAL	608.37	EST.			
200								200		HR	TRUCK-MOUNTED ATTENUATOR	608.45	EST.	278	SF	ROUNDING
100								100		HR	TRUCK-MOUNTED ATTENUATOR, AWV/PV	608.50	EST.	74425	SF	TOTAL
1200								1200		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			
9500								9500		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	-			
11								11		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-			
72100								72100		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	318			
68200								68200		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	237			
161000								161000		LF	TEMPORARY 6 INCH WHITE LINE, PAINT	646.622	560			
123500								123500		LF	TEMPORARY 6 INCH YELLOW LINE, PAINT	646.632	290			
650								650		LF	TEMPORARY 8 INCH WHITE LINE, PAINT	646.642	12			
1500								1500		LF	TEMPORARY 8 INCH YELLOW LINE, PAINT	646.652	8			
4300								4300		LF	TEMPORARY 12 INCH WHITE LINE, PAINT	646.662	55			
2000								2000		LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	25			
685								685		EACH	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	-			
650								650		LF	TEMPORARY CROSSWALK MARKING, PAINT	646.702	48			
2								2		EACH	TEMPORARY RAILROAD CROSSING SYMBOL	646.710	-			
33000								33000		EACH	LINE STRIPING TARGETS	646.76	460			
74425								74425		SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85	279			
1								1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
1								1		EACH	SPECIAL PROVISION (ADVANCED VEHICLE DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4)	900.620	-			

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200frm.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
QUANTITY SHEET 1

PLOT DATE: 1/15/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 12 OF 105

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES								TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	RAILROAD - BID ITEMS	BRIDGE	FULL C.E. ITEMS	ROADWAY (ALT. A)	ROADWAY (ALT. B)	ROADWAY (ALT. C)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1							1		EACH	SPECIAL PROVISION (ADVANCED VEHICLE DETECTION SYSTEM)(US 7 @ WINDCREST RD.)	900.620	-			
5							5		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620	EST.			
685							685		EACH	SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)	900.620	-			
2							2		EACH	SPECIAL PROVISION (DURABLE RAILROAD CROSSING SYMBOL, POLYUREA)(28 MILS)	900.620	-			
1							1		EACH	SPECIAL PROVISION (PEDESTAL MOUNTED PEDESTRIAN SIGNAL HEAD, COUNTDOWN)(US 7 @ COLD RIVER RD.)	900.620	-			
1							1		EACH	SPECIAL PROVISION (PEDESTAL MOUNTED PEDESTRIAN SIGNAL HEAD, COUNTDOWN)(US 7 @ VT 140)	900.620	-			
1							1		EACH	SPECIAL PROVISION (PEDESTRIAN SIGNAL HEADS, COUNTDOWN)(US 7 @ VT 140)	900.620	-			
	14						14		EACH	SPECIAL PROVISION (PRECAST CONCRETE FIELD PANEL GRADE CROSSING SURFACE)(AARDOT 900-613N)(24"X108")	900.620	-			
	9						9		EACH	SPECIAL PROVISION (PRECAST CONCRETE GAUGE PANEL GRADE CROSSING SURFACE)(AARDOT 900-613N)(48"X108")	900.620	-			
1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER AND CABINET)(US 7 @ N.SHREWSBURY)	900.620	-			
1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER AND CABINET)(US 7 @ WINDCREST RD.)	900.620	-			
1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER)(US 7 @ COLD RIVER RD.)	900.620	-			
1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER)(US 7 @ DIAMOND RUN/HOLIDAY INN)	900.620	-			
1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER)(US 7 @ DIAMOND RUN/US 4)	900.620	-			
1							1		EACH	SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED)(US 7 @ VT 103/CROSSROAD RD.)	900.620	-			
1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ COLD RIVER RD.)	900.620	-			
1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/HOLIDAY INN)	900.620	-			
1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4)	900.620	-			
1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ N.SHREWSBURY)	900.620	-			
1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 103/CROSSROAD RD.)	900.620	-			
1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 140)	900.620	-			
1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ WINDCREST RD.)	900.620	-			
	530						530		LF	SPECIAL PROVISION (BAND JOINT @ PRECAST CONCRETE RAILROAD CROSSING)	900.640	EST.			
4300							4300		LF	SPECIAL PROVISION (DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	55			
950							950		LF	SPECIAL PROVISION (DURABLE 12 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	EST.			
2000							2000		LF	SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)	900.640	25			
72100							72100		LF	SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	318			
68200							68200		LF	SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	237			
161000							161000		LF	SPECIAL PROVISION (DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	560			
123500							123500		LF	SPECIAL PROVISION (DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	290			
650							650		LF	SPECIAL PROVISION (DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	12			

see revised sheet

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200frm.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
QUANTITY SHEET 2

PLOT DATE: 1/15/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 13 OF 105

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

RECORD PLANS

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
			ROADWAY	RAILROAD - BID ITEMS	BRIDGE	FULL C.E. ITEMS	ROADWAY (ALT. A)	ROADWAY (ALT. B)	ROADWAY (ALT. C)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
			1							1		EACH	SPECIAL PROVISION (ADVANCED VEHICLE DETECTION SYSTEM)(US 7 @ WINDCREST RD.)	900.620	-			
			5							5		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620	EST.			
			685							685		EACH	SPECIAL PROVISION (DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)	900.620	-			
			2							2		EACH	SPECIAL PROVISION (DURABLE RAILROAD CROSSING SYMBOL, POLYUREA)(28 MILS)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (PEDESTRIAN SIGNAL HEADS, COUNTDOWN)(US 7 @ COLD RIVER RD.) [1]	900.620	-			
			1							1		EACH	SPECIAL PROVISION (PEDESTAL MOUNTED PEDESTRIAN SIGNAL HEAD, COUNTDOWN)(US 7 @ VT 140)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (PEDESTRIAN SIGNAL HEADS, COUNTDOWN)(US 7 @ VT 140)	900.620	-			
				14						14		EACH	SPECIAL PROVISION (PRECAST CONCRETE FIELD PANEL GRADE CROSSING SURFACE)(AARDOT 900-613N)(24"X108")	900.620	-			
				9						9		EACH	SPECIAL PROVISION (PRECAST CONCRETE GAUGE PANEL GRADE CROSSING SURFACE)(AARDOT 900-613N)(48"X108")	900.620	-			
			1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER AND CABINET)(US 7 @ N.SHREWSBURY)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER AND CABINET)(US 7 @ WINDCREST RD.)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER)(US 7 @ COLD RIVER RD.)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER)(US 7 @ DIAMOND RUN/HOLIDAY INN)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER)(US 7 @ DIAMOND RUN/US 4)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED)(US 7 @ VT 103/CROSSROAD RD.)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ COLD RIVER RD.)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/HOLIDAY INN)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ N.SHREWSBURY)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 103/CROSSROAD RD.)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 140)	900.620	-			
			1							1		EACH	SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ WINDCREST RD.)	900.620	-			
				530						530		LF	SPECIAL PROVISION (BAND JOINT @ PRECAST CONCRETE RAILROAD CROSSING)	900.640	EST.			
			4300							4300		LF	SPECIAL PROVISION (DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	55			
			950							950		LF	SPECIAL PROVISION (DURABLE 12 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	EST.			
			2000							2000		LF	SPECIAL PROVISION (DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)	900.640	25			
			72100							72100		LF	SPECIAL PROVISION (DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	318			
			68200							68200		LF	SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	237			
			161000							161000		LF	SPECIAL PROVISION (DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	560			
			123500							123500		LF	SPECIAL PROVISION (DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	290			
			650							650		LF	SPECIAL PROVISION (DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)	900.640	12			

NO CHANGES

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	DELETED ITEM 900.620 - SPECIAL PROVISION (PEDESTAL MOUNTED PEDESTRIAN SIGNAL HEAD, COUNTDOWN)(US 7 @ COLD RIVER RD.) AND ADDED 900.620 - SPECIAL PROVISION (PEDESTRIAN SIGNAL HEAD, COUNTDOWN)(US 7 @ COLD RIVER RD.)	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200frm.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
QUANTITY SHEET 2

PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 13 OF 105

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	RAILROAD - BID ITEMS	BRIDGE	FULL C.E. ITEMS	ROADWAY (ALT. A)	ROADWAY (ALT. B)	ROADWAY (ALT. C)	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1500							1500		LF	SPECIAL PROVISION (DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	8
650							650		LF	SPECIAL PROVISION (DURABLE CROSSWALK MARKING, POLYUREA)(28 MILS)	900.640	48
	1						1		LU	SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC)(N.A.B.I.)	900.650	-
2500							2500		SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675	EST.
475000							475000		SY	SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT)	900.675	657
200							200		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)	900.680	EST.
660							660		CWT	SPECIAL PROVISION (FOG SEAL SURFACE TREATMENT)	900.683	EST.
				615000			615000		SY	SPECIAL PROVISION (PAVER PLACED SURFACE TREATMENT, TYPE C)(PG 70-28)(SBR OR SBS POLYMER)	900.675	326
					3400		3400		CWT	EMULSIFIED ASPHALT	404.65	EST.
					1		1		LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	-
					35400		35400		TON	SPECIAL PROVISION (6.3 MM POLYMER MODIFIED BITUMIN. CONC. PAVEMENT)(PG 70-28)(SBR OR SBS POLYMER)	900.680	54
						1	1		LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	-
						35400	35400		TON	SPECIAL PROVISION (6.3 MM POLYMER MODIFIED BITUMIN. CONC. PAVEMENT)(PG 70-28)(SBR OR SBS POLYMER)	900.680	54
						3400	3400		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H)	900.683	EST.

BEGIN ALTERNATE ZA1

END ALTERNATE ZA1

BEGIN ALTERNATE ZA2

END ALTERNATE ZA2

BEGIN ALTERNATE ZA3

END ALTERNATE ZA3

DETAILED SUMMARY OF QUANTITIES

SPECIAL PROVISION(MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT)

QUANTITIES	UNIT	ITEMS
		MANCHESTER - US7
1943	SY	BRIDGE 27
		DORSET - US7
11982	SY	BRIDGE 30 APPROACH TO MM 1.745
		WALLINGFORD - US7
116536	SY	TWO-LANE HIGHWAY
12395	SY	SOUTHBOUND - LIMITED ACCESS
12414	SY	NORTHBOUND - LIMITED ACCESS
		CLARENDON - US7
127147	SY	SOUTHBOUND - LIMITED ACCESS
129476	SY	NORTHBOUND - LIMITED ACCESS
		RUTLAND TOWN - US7
16556	SY	SOUTHBOUND
15639	SY	NORTHBOUND
20708	SY	UNDIVIDED HIGHWAY
9547	SY	PAVED APRONS & SIDE LINES
657	SY	ROUNDING
475000	SY	TOTAL

ALTERNATE (ZA1)

QUANTITIES	UNIT	ITEMS
		SPECIAL PROVISION (PAVER PLACED SURFACE TREATMENT, TYPE C)
		MANCHESTER - US7
87201	SY	MAINLINE & RAMPS
		DORSET - US7
52407	SY	MAINLINE
		WALLINGFORD - US7
120153	SY	TWO-LANE HIGHWAY
12395	SY	SOUTHBOUND - LIMITED ACCESS
12414	SY	NORTHBOUND - LIMITED ACCESS
		CLARENDON - US7
127147	SY	SOUTHBOUND - LIMITED ACCESS
129476	SY	NORTHBOUND - LIMITED ACCESS
		RUTLAND TOWN - US7
16556	SY	SOUTHBOUND
15639	SY	NORTHBOUND
20708	SY	UNDIVIDED HIGHWAY
20579	SY	PAVED APRONS & SIDE LINES
326	SY	ROUNDING
615000	SY	TOTAL

ALTERNATE (ZA2)/(ZA3)

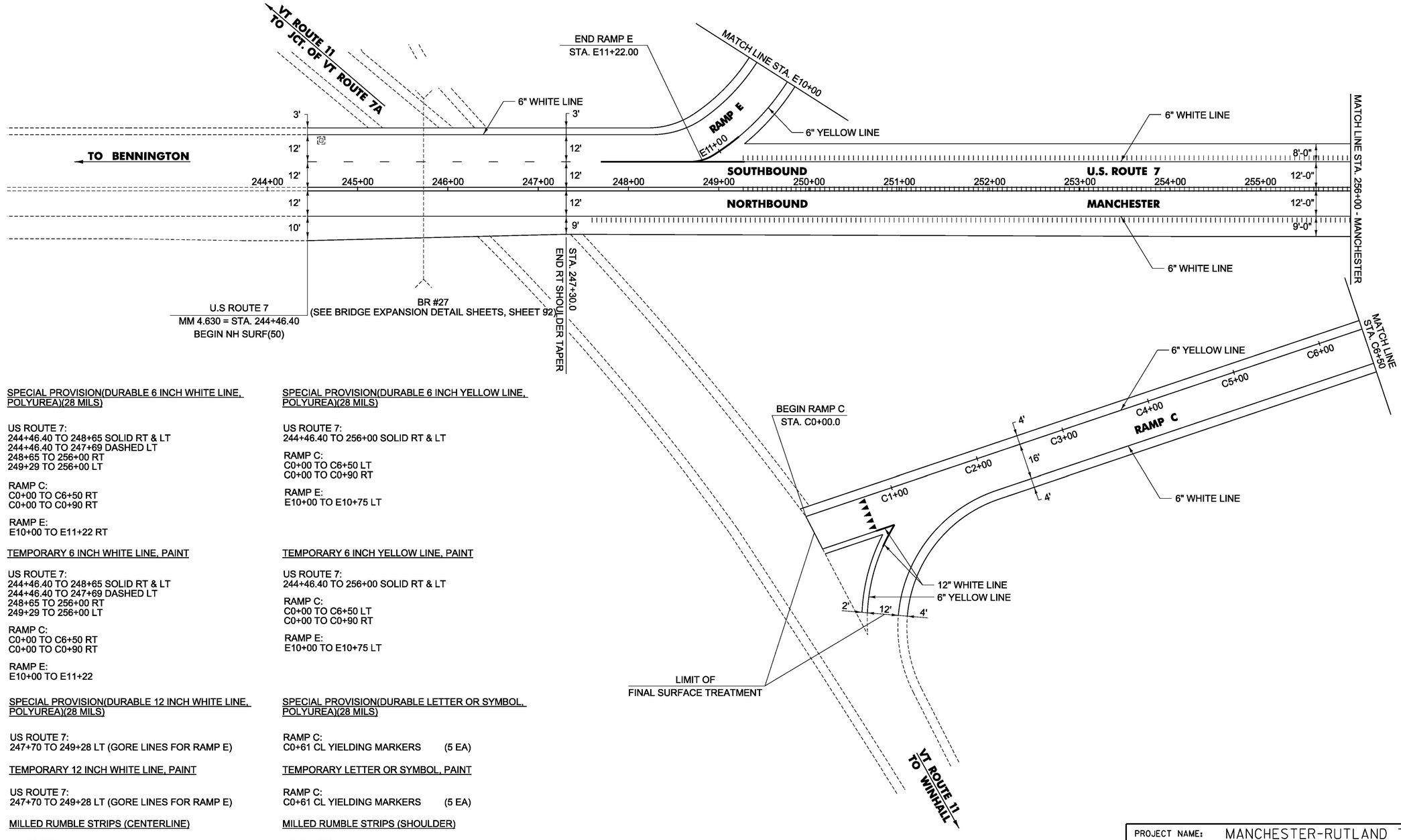
SPECIAL PROVISION (6.3MM POLYMER-MODIFIED BITUMINOUS CONCRETE PAVEMENT)(SBR OR SBS POLYMER)

QUANTITIES	UNIT	ITEMS
		MANCHESTER - US7
5085	TON	MAINLINE & RAMPS
		DORSET - US7
3056	TON	MAINLINE
		WALLINGFORD - US7
7006	TON	TWO-LANE HIGHWAY
723	TON	SOUTHBOUND - LIMITED ACCESS
724	TON	NORTHBOUND - LIMITED ACCESS
		CLARENDON - US7
7414	TON	SOUTHBOUND - LIMITED ACCESS
7550	TON	NORTHBOUND - LIMITED ACCESS
		RUTLAND TOWN - US7
965	TON	SOUTHBOUND
912	TON	NORTHBOUND
1207	TON	UNDIVIDED HIGHWAY
704	TON	PAVED APRONS & SIDE LINES
54	TON	ROUNDING
35400	TON	TOTAL

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200frm.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
QUANTITY SHEET 3

PLOT DATE: 1/15/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 14 OF 105



SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

US ROUTE 7:
244+46.40 TO 248+65 SOLID RT & LT
244+46.40 TO 247+69 DASHED LT
248+65 TO 256+00 RT
249+29 TO 256+00 LT

RAMP C:
C0+00 TO C6+50 RT
C0+00 TO C0+90 RT

RAMP E:
E10+00 TO E11+22 RT

TEMPORARY 6 INCH WHITE LINE, PAINT

US ROUTE 7:
244+46.40 TO 248+65 SOLID RT & LT
244+46.40 TO 247+69 DASHED LT
248+65 TO 256+00 RT
249+29 TO 256+00 LT

RAMP C:
C0+00 TO C6+50 RT
C0+00 TO C0+90 RT

RAMP E:
E10+00 TO E11+22

SPECIAL PROVISION(DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)

US ROUTE 7:
247+70 TO 249+28 LT (GORE LINES FOR RAMP E)

TEMPORARY 12 INCH WHITE LINE, PAINT

US ROUTE 7:
247+70 TO 249+28 LT (GORE LINES FOR RAMP E)

MILLED RUMBLE STRIPS (CENTERLINE)

US ROUTE 7:
249+28 TO 256+00 CL

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

US ROUTE 7:
244+46.40 TO 256+00 SOLID RT & LT

RAMP C:
C0+00 TO C6+50 LT
C0+00 TO C0+90 RT

RAMP E:
E10+00 TO E10+75 LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

US ROUTE 7:
244+46.40 TO 256+00 SOLID RT & LT

RAMP C:
C0+00 TO C6+50 LT
C0+00 TO C0+90 RT

RAMP E:
E10+00 TO E10+75 LT

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

RAMP C:
C0+61 CL YIELDING MARKERS (5 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

RAMP C:
C0+61 CL YIELDING MARKERS (5 EA)

MILLED RUMBLE STRIPS (SHOULDER)

US ROUTE 7:
247+65 TO 256+00 RT
249+28 TO 256+00 LT

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout01.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 1	SHEET 15 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

RAMP D:
D3+00 TO D17+21 RT
D15+82 TO D17+12 CL

RAMP E:
E0+00 TO E10+00 RT

TEMPORARY 6 INCH WHITE LINE, PAINT

RAMP D:
D3+00 TO 17+21 RT
D15+82 TO D17+12 CL

RAMP E:
E0+00 TO E10+00 RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

RAMP D:
D3+00 TO 17+21 LT

RAMP E:
E0+00 TO E10+00 LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

RAMP D:
D3+00 TO 17+21 LT

RAMP E:
E0+00 TO E10+00 LT

SPECIALK PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)

RAMP D:
D17+05

TEMPORARY 24 INCH STOP BAR, PAINT

RAMP D:
D17+05

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

RAMP D:

D9+84 RT "S,T,O,P"	(4 EA)
D10+16 RT "A,H,E,A,D"	(5 EA)
D14+11 RT WRONG WAY ARROW	(1 EA)
D15+84 RT "O,N,L,Y"	(4 EA)
D15+84 LT "O,N,L,Y"	(4 EA)
D16+22 RT ARROW	(1 EA)
D16+22 LT ARROW	(1 EA)
D17+00 RT "S,T,O,P"	(4 EA)
D17+00 LT "S,T,O,P"	(4 EA)

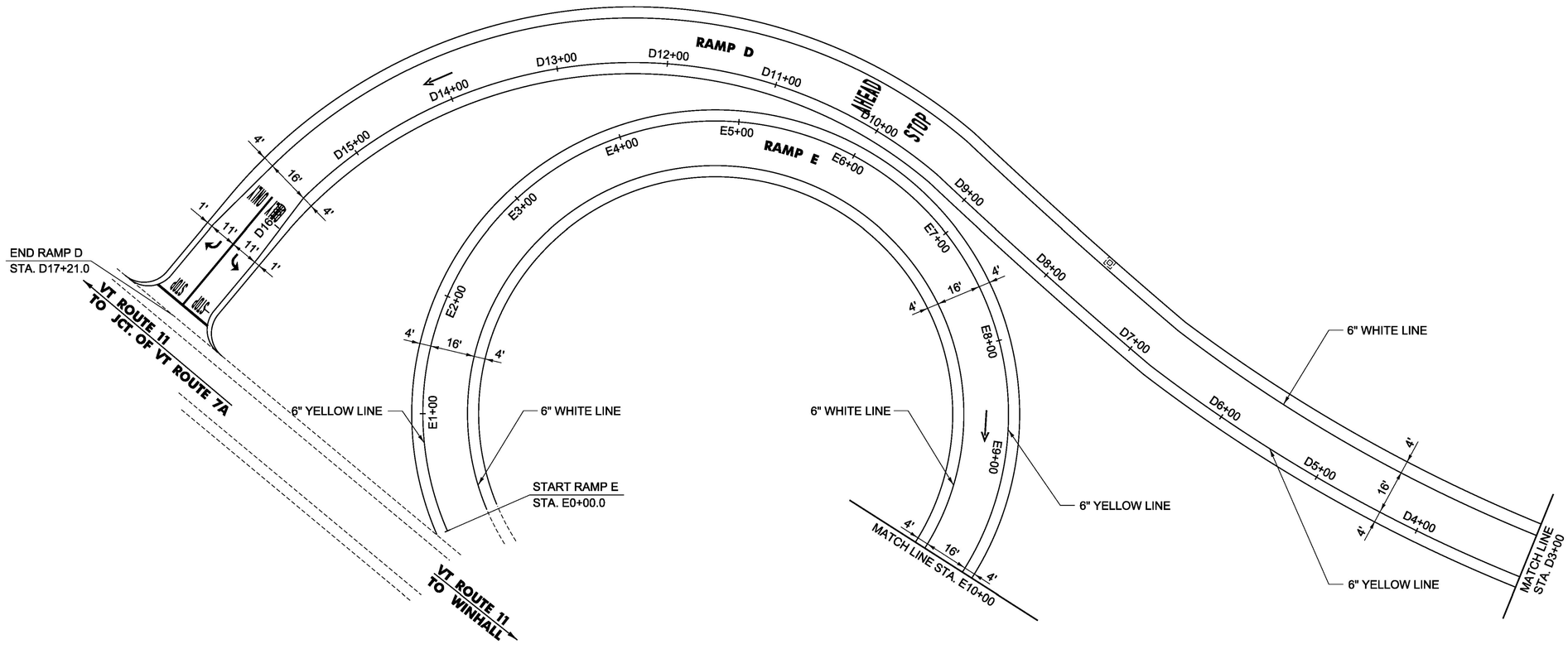
RAMP E:
E8+69 CL WRONG WAY ARROW (1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

RAMP D:

D9+84 RT "S,T,O,P"	(4 EA)
D10+16 RT "A,H,E,A,D"	(5 EA)
D14+11 RT WRONG WAY ARROW	(1 EA)
D15+84 RT "O,N,L,Y"	(4 EA)
D15+84 LT "O,N,L,Y"	(4 EA)
D16+22 RT ARROW	(1 EA)
D16+22 LT ARROW	(1 EA)
D17+00 RT "S,T,O,P"	(4 EA)
D17+00 LT "S,T,O,P"	(4 EA)

RAMP E:
E8+69 CL WRONG WAY ARROW (1 EA)



PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout02.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 2	SHEET 16 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
US ROUTE 7:
256+00 TO 256+14 LT
256+00 TO 258+91 RT
260+66 TO 271+00 RT
257+75 TO 271+00 LT
258+20 TO 266+55 LT DASHED
261+40 TO 264+00 RT DASHED

RAMP D:
D0+00 TO D3+00 RT

RAMP C:
C6+50 TO C11+15 RT

TEMPORARY 6 INCH WHITE LINE, PAINT

US ROUTE 7:
256+00 TO 256+14 LT
256+00 TO 258+91 RT
260+66 TO 271+00 RT
257+75 TO 271+00 LT
258+20 TO 266+55 LT DASHED
261+40 TO 264+00 RT DASHED

RAMP D:
D0+00 TO D3+00 RT

RAMP C:
C6+50 TO C11+15 RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
US ROUTE 7:
256+00 TO 271+00 SOLID RT & LT

RAMP D:
D1+25 TO 3+00 SOLID LT

RAMP C:
C6+50 TO 9+50 SOLID LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

US ROUTE 7:
256+00 TO 271+00 SOLID RT & LT

RAMP D:
D1+25 TO 3+00 SOLID LT

RAMP C:
C6+50 TO 9+50 SOLID LT

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
RAMP C:
C6+70 CL WRONG WAY ARROW (1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

RAMP C:
C6+70 CL WRONG WAY ARROW (1 EA)

SPECIAL PROVISION(DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)
US ROUTE 7:
256+00 TO 258+20 LT (GORE LINES FOR RAMP D)
258+85 TO 261+00 RT (GORE LINES FOR RAMP D)

TEMPORARY 12 INCH WHITE LINE, PAINT

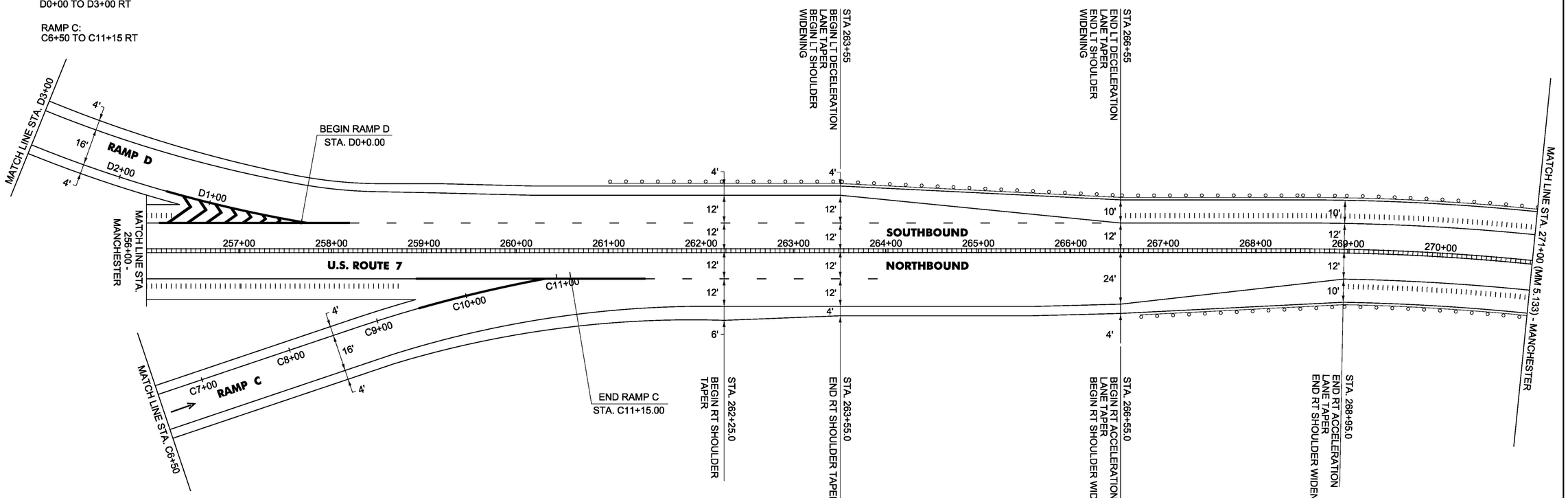
US ROUTE 7:
256+00 TO 258+20 LT (GORE LINES FOR RAMP D)
258+85 TO 261+00 RT (GORE LINES FOR RAMP D)

MILLED RUMBLE STRIPS (CENTERLINE)

US ROUTE 7:
256+00 TO 271+00 CL

MILLED RUMBLE STRIPS (SHOULDER)

US ROUTE 7:
256+00 TO 256+50 LT
256+00 TO 258+85 RT
266+55 TO 271+00 RT
268+95 TO 271+00 LT



PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout03.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 3	SHEET 17 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 5.133 TO MM 5.681 RT & LT

TEMPORARY 6 INCH WHITE LINE, PAINT

MANCHESTER:
MM 5.113 TO MM 5.681 RT & LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 5.113 TO MM 5.246 SOLID RT & LT
MM 5.246 TO MM 5.421 DASHED RT, SOLID LT
MM 5.421 TO MM 5.681 DASHED CL

TEMPORARY 6 INCH YELLOW LINE, PAINT

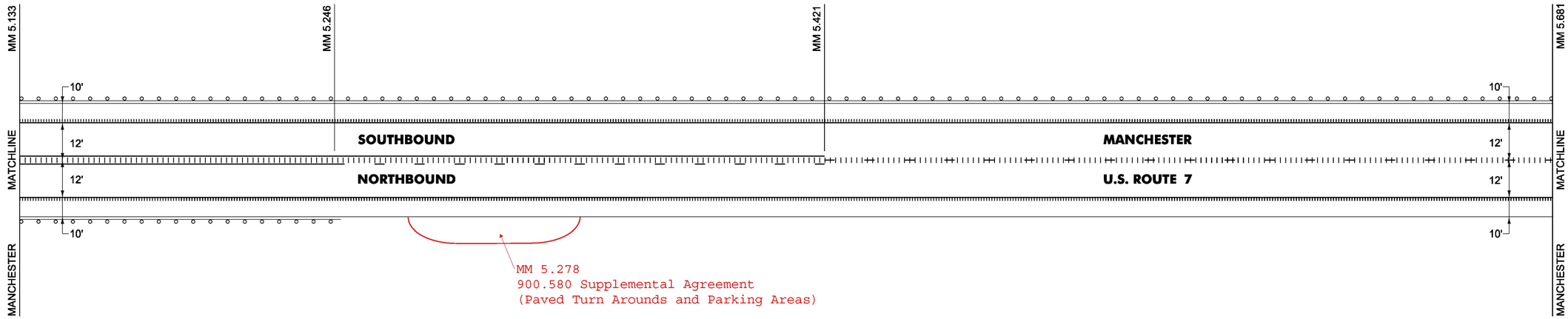
MANCHESTER:
MM 5.113 TO MM 5.246 SOLID RT & LT
MM 5.246 TO MM 5.421 DASHED RT, SOLID LT
MM 5.421 TO MM 5.681 DASHED CL

MILLED RUMBLE STRIPS (CENTERLINE)

MANCHESTER:
MM 5.133 TO MM 5.681 CL

MILLED RUMBLE STRIPS (SHOULDER)

MANCHESTER:
MM 5.133 TO MM 5.681 RT & LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout04.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 4		SHEET 18	OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 5.681 TO MM 6.249 RT & LT

TEMPORARY 6 INCH WHITE LINE, PAINT

MANCHESTER:
MM 5.681 TO MM 6.249 RT & LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, . POLYUREA)(28 MILS)

MANCHESTER:
MM 5.681 TO MM 5.849 SOLID RT, DASHED LT
MM 5.849 TO MM 6.022 DASHED RT, SOLID LT
MM 6.022 TO MM 6.093 DASHED CL
MM 6.093 TO MM 6.249 SOLID RT, DASHED LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

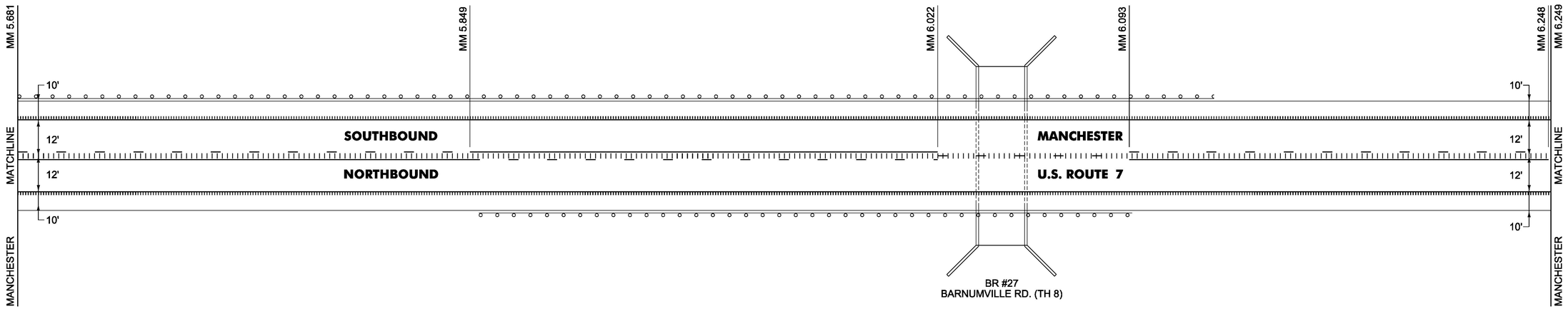
MANCHESTER:
MM 5.681 TO MM 5.849 SOLID RT, DASHED LT
MM 5.849 TO MM 6.022 DASHED RT, SOLID LT
MM 6.022 TO MM 6.093 DASHED CL
MM 6.093 TO MM 6.249 SOLID RT, DASHED LT

MILLED RUMBLE STRIPS (CENTERLINE)

MANCHESTER:
MM 5.681 TO MM 6.249 CL

MILLED RUMBLE STRIPS (SHOULDER)

MANCHESTER:
MM 5.681 TO MM 6.249 RT & LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout05.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: N. PAPPAS	CHECKED BY: M. FOWLER
PLAN SHEET 5	SHEET 19 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 6.249 - MM 6.817 LT & RT

TEMPORARY 6 INCH WHITE LINE, PAINT

MANCHESTER:
MM 6.249 - MM 6.817 LT & RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 6.249 - MM 6.428 DASHED RT, SOLID LT
MM 6.428 - MM 6.817 DASHED CL

TEMPORARY 6 INCH YELLOW LINE, PAINT

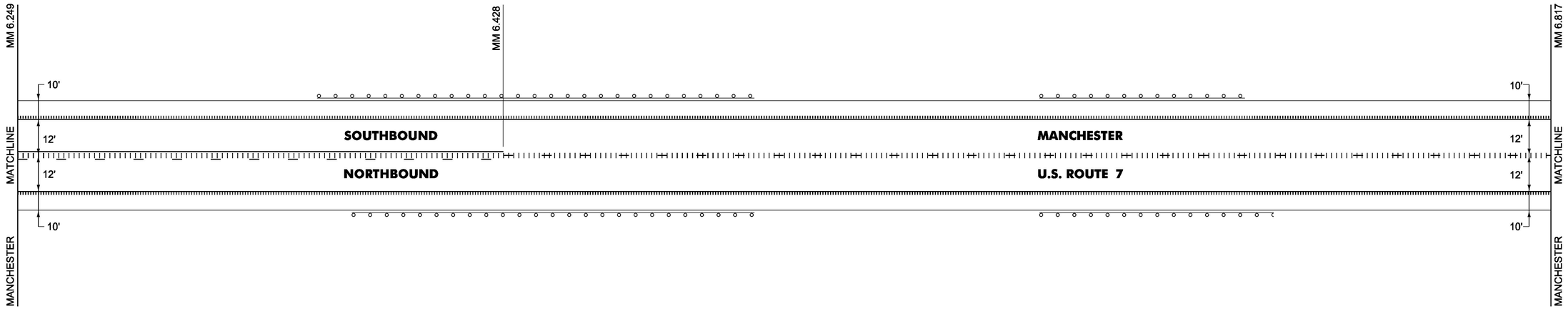
MANCHESTER:
MM 6.249 - MM 6.428 DASHED RT, SOLID LT
MM 6.428 - MM 6.817 DASHED CL

MILLED RUMBLE STRIPS (CENTERLINE)

MANCHESTER:
MM 6.249 TO MM 6.817 CL

MILLED RUMBLE STRIPS (SHOULDER)

MANCHESTER:
MM 6.249 TO MM 6.817 RT & LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout06.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 6		SHEET	20 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 6.817 TO MM 7.385 RT & LT
MM 7.080 TO MM 7.225 DASHED RT

TEMPORARY 6 INCH WHITE LINE, PAINT

MANCHESTER:
MM 6.817 TO MM 7.385 RT & LT
MM 7.080 TO MM 7.225 DASHED RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 6.817 TO MM 6.916 DASHED CL
MM 6.916 TO MM 7.027 SOLID RT, DASHED LT
MM 7.027 TO MM 7.385 SOLID RT & LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

MANCHESTER:
MM 6.817 TO MM 6.916 DASHED CL
MM 6.916 TO MM 7.027 SOLID RT, DASHED LT
MM 7.027 TO MM 7.385 SOLID RT & LT

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

MANCHESTER:
MM 7.225 RT MERGE LEFT ARROW (1 EA)
MM 7.259 RT MERGE LEFT ARROW (1 EA)
MM 7.293 RT MERGE LEFT ARROW (1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

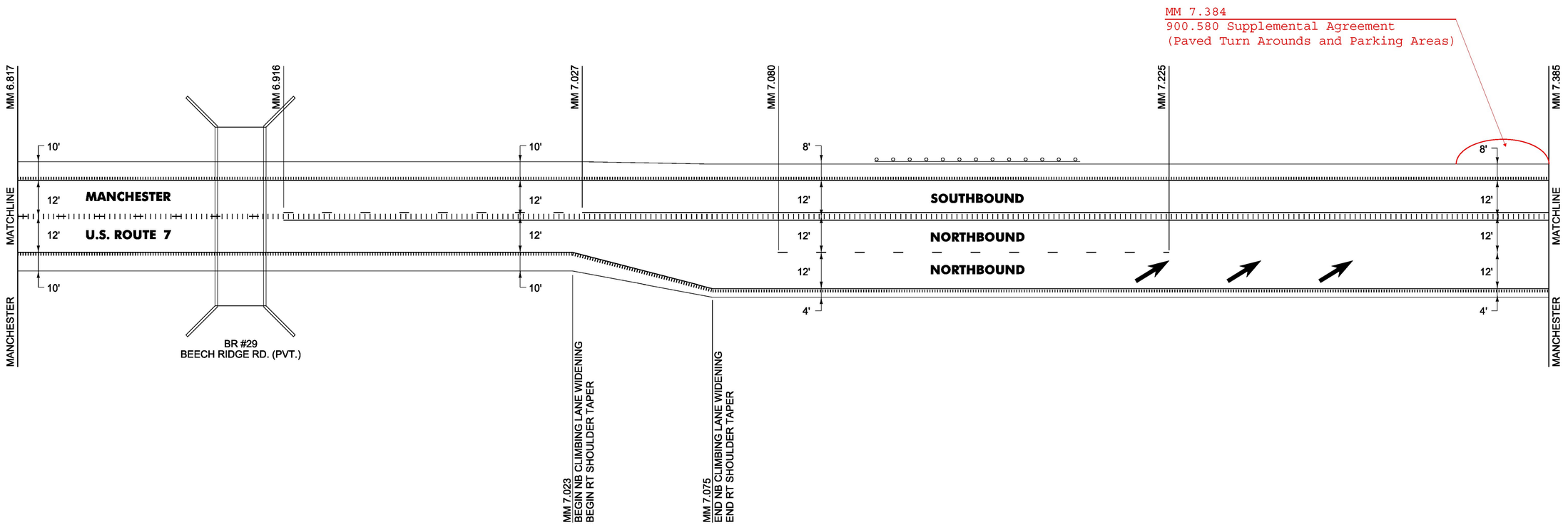
MANCHESTER:
MM 7.225 RT MERGE LEFT ARROW (1 EA)
MM 7.259 RT MERGE LEFT ARROW (1 EA)
MM 7.293 RT MERGE LEFT ARROW (1 EA)

MILLED RUMBLE STRIPS (CENTERLINE)

MANCHESTER:
MM 6.817 TO MM 7.385 CL

MILLED RUMBLE STRIPS (SHOULDER)

MANCHESTER:
MM 6.817 TO MM 7.385 RT & LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout07.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 7	SHEET 21 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 7.385 - MM 7.520 RT & LT

DORSET:
MM 0.000 TO MM 0.433 RT & LT
MM 0.103 TO MM 0.330 DASHED LT

TEMPORARY 6 INCH WHITE LINE, PAINT

MANCHESTER:
MM 7.385 - MM 7.520 RT & LT

DORSET:
MM 0.000 TO MM 0.433 RT & LT
MM 0.103 TO MM 0.330 DASHED LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

MANCHESTER:
MM 7.385 TO MM 7.520 SOLID RT & LT

DORSET:
MM 0.000 TO MM 0.411 SOLID RT & LT
MM 0.411 TO MM 0.433 DASHED RT, SOLID LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

MANCHESTER:
MM 7.385 TO MM 7.520 SOLID RT & LT

DORSET:
MM 0.000 TO MM 0.411 SOLID RT & LT
MM 0.411 TO MM 0.433 DASHED RT, SOLID LT

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

DORSET:
MM 0.037 LT MERGE LEFT ARROW (1 EA)
MM 0.074 LT MERGE LEFT ARROW (1 EA)
MM 0.111 LT MERGE LEFT ARROW (1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

DORSET:
MM 0.037 LT MERGE LEFT ARROW (1 EA)
MM 0.074 LT MERGE LEFT ARROW (1 EA)
MM 0.111 LT MERGE LEFT ARROW (1 EA)

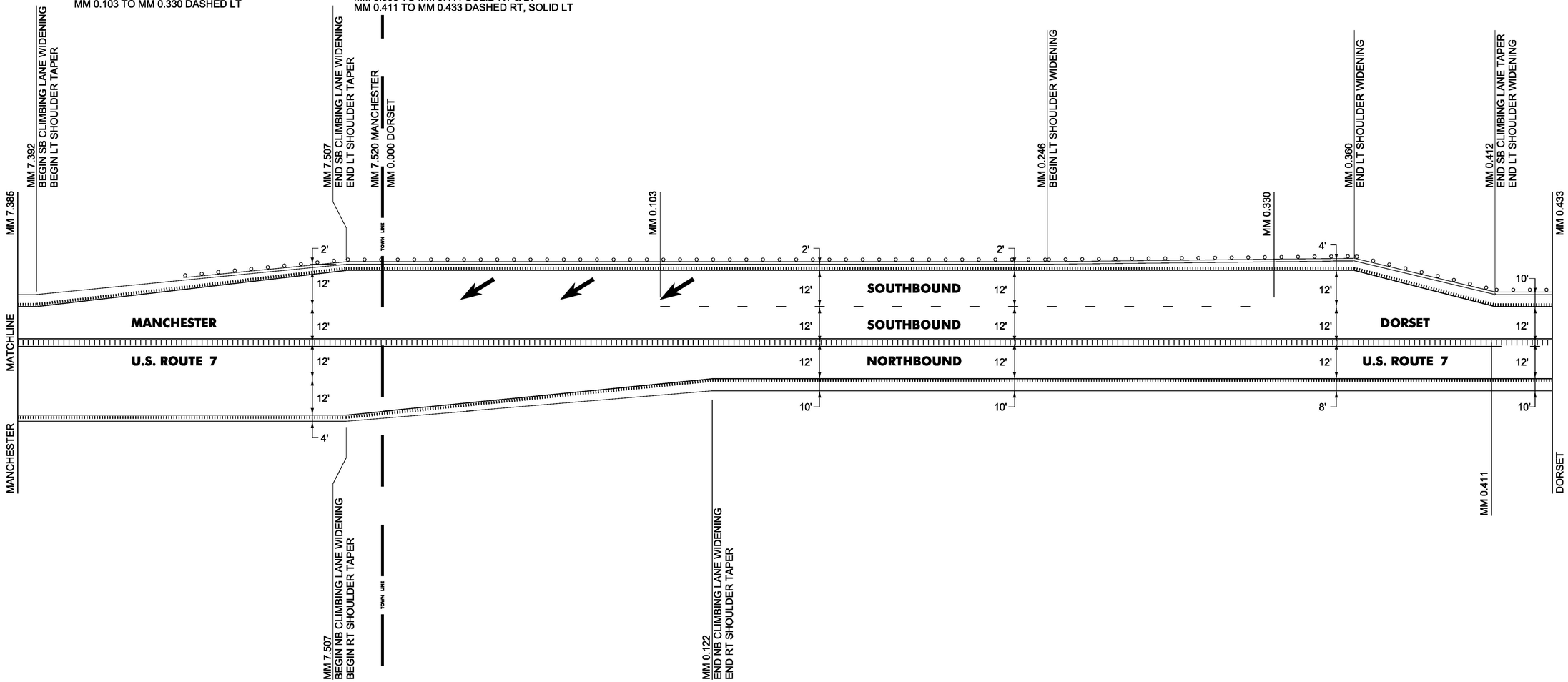
MILLED RUMBLE STRIPS (CENTERLINE)

MANCHESTER:
MM 7.385 TO MM 7.520 CL

MILLED RUMBLE STRIPS (SHOULDER)

MANCHESTER:
MM 7.385 TO MM 7.520 RT & LT

DORSET:
MM 0.000 TO MM 0.433 RT & LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout08.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 8	SHEET 22 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

DORSET:
MM 0.433 TO MM 1.001 RT & LT

TEMPORARY 6 INCH WHITE LINE, PAINT

DORSET:
MM 0.433 TO MM 1.001 RT & LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

DORSET:
MM 0.433 TO MM 0.519 DASHED RT, SOLID LT
MM 0.519 TO MM 0.665 DASHED CL
MM 0.665 TO MM 0.817 SOLID LT, DASHED RT
MM 0.817 TO MM 1.001 SOLID RT & LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

DORSET:
MM 0.433 TO MM 0.519 DASHED RT, SOLID LT
MM 0.519 TO MM 0.665 DASHED CL
MM 0.665 TO MM 0.817 SOLID LT, DASHED RT
MM 0.817 TO MM 1.001 SOLID RT & LT

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

DORSET:
MM 0.981 LT MERGE LEFT ARROW (1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

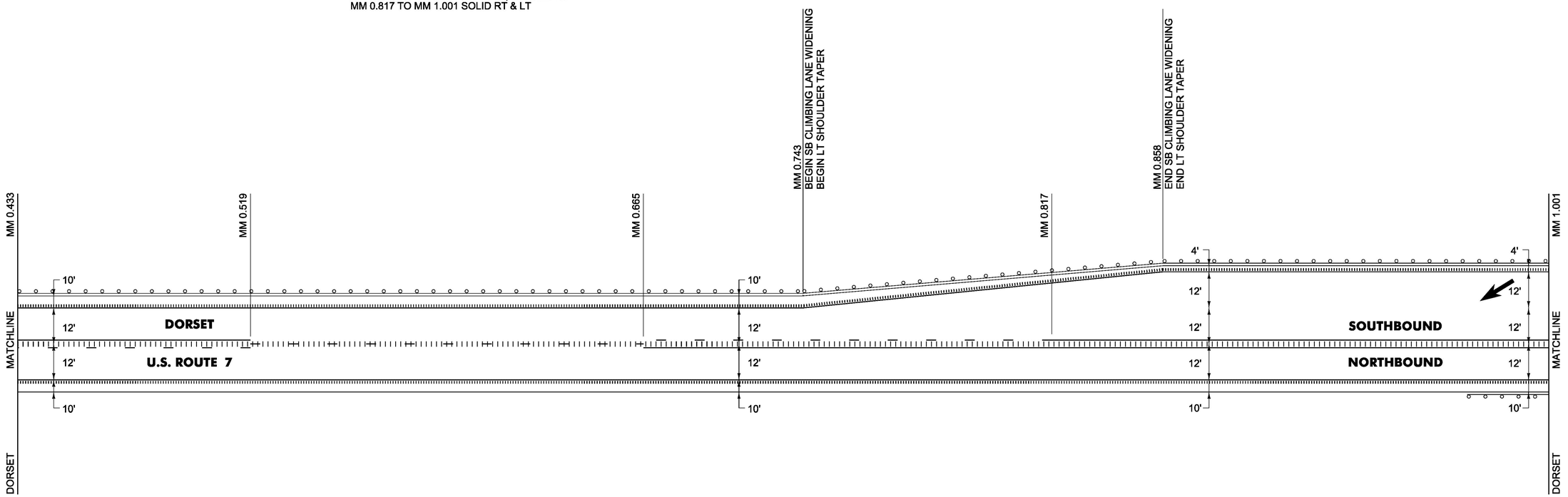
DORSET:
MM 0.981 LT MERGE LEFT ARROW (1 EA)

MILLED RUMBLE STRIPS (CENTERLINE)

DORSET:
MM 0.433 TO MM 1.001 CL

MILLED RUMBLE STRIPS (SHOULDER)

DORSET:
MM 0.433 TO MM 1.001 RT & LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout09.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 9		SHEET 23 OF 105	

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

DORSET:
MM 1.001 TO MM 1.569 RT & LT
MM 1.044 TO MM 1.569 DASHED LT

TEMPORARY 6 INCH WHITE LINE, PAINT

DORSET:
MM 1.001 TO MM 1.569 RT & LT
MM 1.044 TO MM 1.569 DASHED LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

DORSET:
MM 1.001 TO MM 1.569 SOLID RT & LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

DORSET:
MM 1.001 TO MM 1.569 SOLID RT & LT

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

DORSET:
MM 1.015 LT MERGE LEFT ARROW (1 EA)
MM 1.049 LT MERGE LEFT ARROW (1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

DORSET:
MM 1.015 LT MERGE LEFT ARROW (1 EA)
MM 1.049 LT MERGE LEFT ARROW (1 EA)

SPECIAL PROVISION(DURABLE RAILROAD CROSSING SYMBOL, POLYUREA)(28 MILS)

DORSET:
MM 1.320 RT

TEMPORARY RAILROAD CROSSING SYMBOL, PAINT

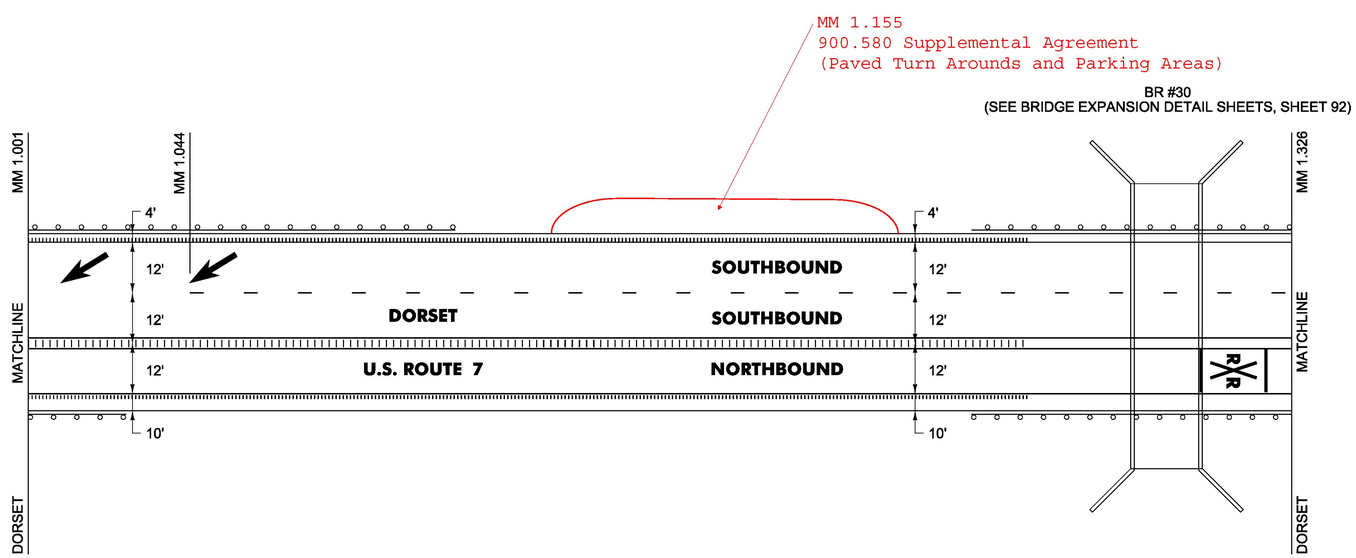
DORSET:
MM 1.320 RT

MILLED RUMBLE STRIPS (CENTERLINE)

DORSET:
MM 1.001 TO MM 1.285 CL

MILLED RUMBLE STRIPS (SHOULDER)

DORSET:
MM 1.001 TO MM 1.285 RT & LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout10.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 10		SHEET	24 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

US ROUTE 7:
70+00 TO 79+00 SOLID RT & LT
70+00 TO 79+00 DASHED LT
72+40 TO 79+00 DASHED RT
78+40 TO 79+00 DOTTED RT

TEMPORARY 6 INCH WHITE LINE, PAINT

US ROUTE 7:
70+00 TO 79+00 SOLID RT & LT
70+00 TO 79+00 DASHED LT
72+40 TO 79+00 DASHED RT
78+40 TO 79+00 DOTTED RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

US ROUTE 7:
70+00 TO 70+40 SOLID RT & LT
70+40 TO 79+00 DOUBLE SOLID MEDIAN RT & LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

US ROUTE 7:
70+00 TO 70+40 SOLID RT & LT
70+40 TO 79+00 DOUBLE SOLID MEDIAN RT & LT

SPECIAL PROVISION(DURABLE 12 INCH YELLOW LINE, POLYUREA)(28 MILS)

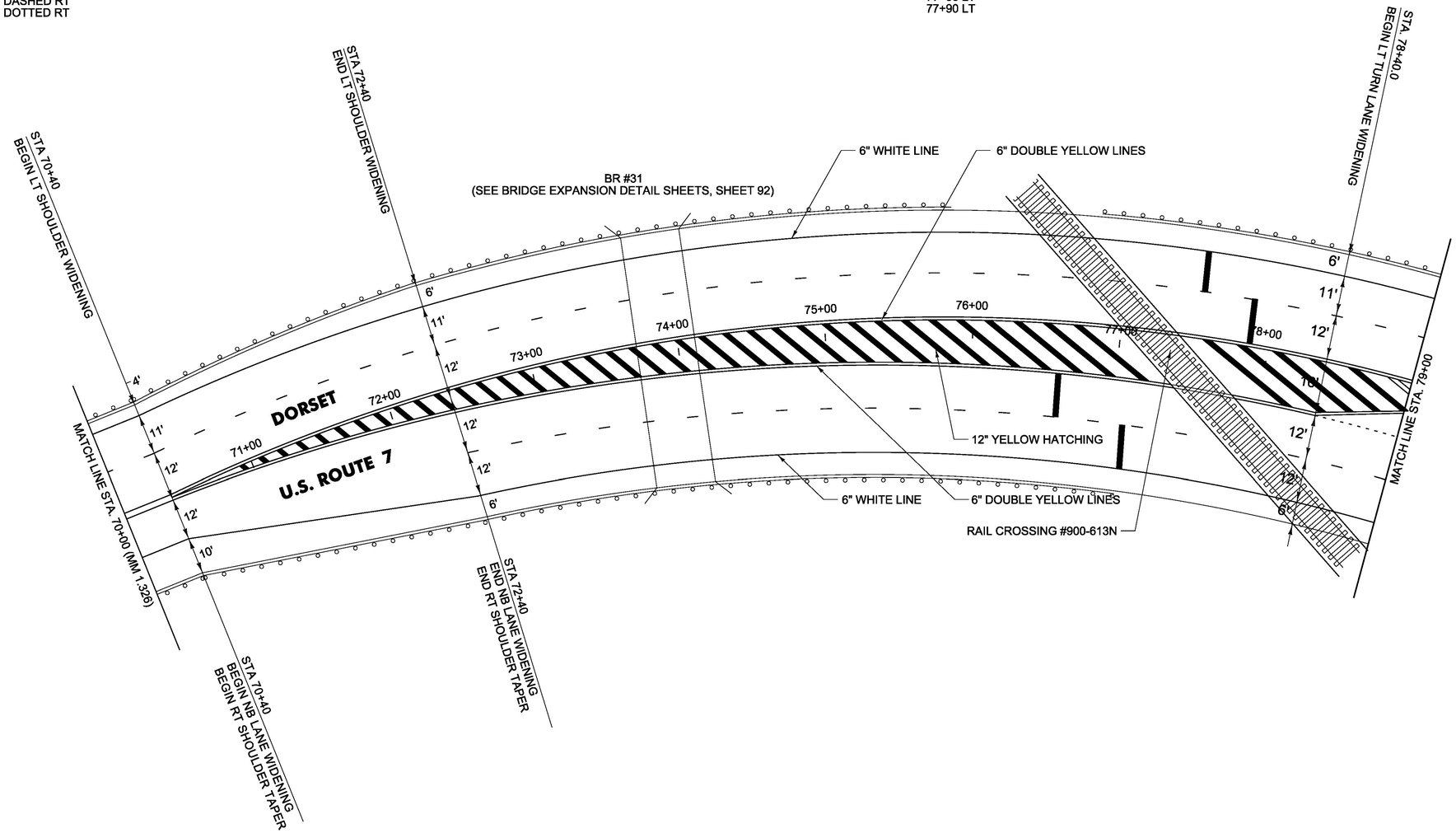
US ROUTE 7:
70+40 TO 79+00 DOUBLE HATCHED MEDIAN RT & LT

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

US ROUTE 7:
76+60 RT
77+05 RT
77+50 LT
77+90 LT

TEMPORARY 24 INCH STOP BAR, PAINT

US ROUTE 7:
76+60 RT
77+05 RT
77+50 LT
77+90 LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout11.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 11	SHEET 25 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

US ROUTE 7:
79+00 TO 81+00 DASHED LT
79+00 TO 83+05 DASHED RT
79+00 TO 79+35 DOTTED LANE LINE RT
79+00 TO 85+00 SOLID RT
79+00 TO 85+00 SOLID LT (EXCLUDING BREAKS)
79+35 TO 81+20 SOLID LANE LINE RT
81+47 EDGE LINE LT VT ROUTE 7A

TEMPORARY 6 INCH WHITE LINE, PAINT

US ROUTE 7:
79+00 TO 81+00 DASHED LT
79+00 TO 83+05 DASHED RT
79+00 TO 79+35 DOTTED LANE LINE RT
79+00 TO 85+00 SOLID RT
79+00 TO 85+00 SOLID LT (EXCLUDING BREAKS)
79+35 TO 81+20 SOLID LANE LINE RT
81+47 EDGE LINE LT VT ROUTE 7A

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

US ROUTE 7:
79+00 TO 81+00 DOUBLE SOLID MEDIAN RT & LT
81+75 TO 85+00 DOUBLE SOLID MEDIAN RT & LT
81+74 DOUBLE SOLID LT, VT ROUTE 7A

TEMPORARY 6 INCH YELLOW LINE, PAINT

US ROUTE 7:
79+00 TO 81+00 DOUBLE SOLID MEDIAN RT & LT
81+75 TO 85+00 DOUBLE SOLID MEDIAN RT & LT
81+74 DOUBLE SOLID LT, VT ROUTE 7A

SPECIAL PROVISION(DURABLE 12 INCH YELLOW LINE, POLYUREA)(28 MILS)

US ROUTE 7:
79+00 TO 81+00 DOUBLE HATCHED MEDIAN LT & RT
81+75 TO 85+00 DOUBLE HATCHED MEDIAN LT & RT

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

US ROUTE 7:
81+47 LT, VT ROUTE 7A

TEMPORARY 24 INCH STOP BAR, PAINT

US ROUTE 7:
81+47 LT, VT ROUTE 7A

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

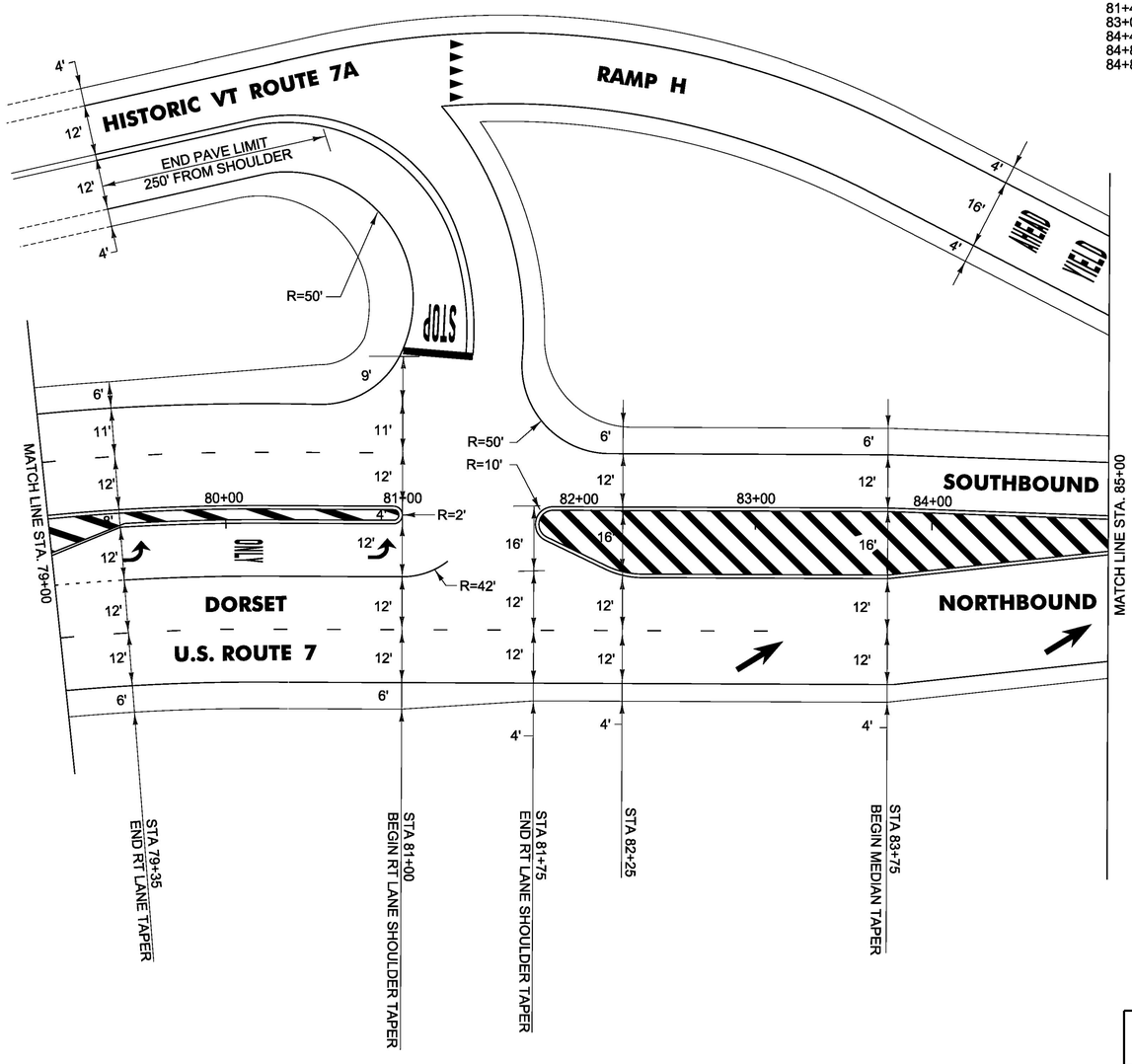
US ROUTE 7:

79+39 RT ARROW	(1 EA)
80+12 RT "O,N,L,Y"	(4 EA)
80+85 RT ARROW	(1 EA)
81+46 LT "S,T,O,P"	(4 EA)
81+46 LT YIELD SYMBOLS	(5 EA)
83+05 RT MERGE ARROW	(1 EA)
84+49 LT "A,H,E,A,D"	(5 EA)
84+80 RT MERGE ARROW	(1 EA)
84+81 LT "Y,I,E,L,D"	(5 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

US ROUTE 7:

79+39 RT ARROW	(1 EA)
80+12 RT "O,N,L,Y"	(4 EA)
80+85 RT ARROW	(1 EA)
81+46 LT "S,T,O,P"	(4 EA)
81+46 LT YIELD LINE	(5 EA)
83+05 RT MERGE ARROW	(1 EA)
84+49 LT "A,H,E,A,D"	(5 EA)
84+80 RT MERGE ARROW	(1 EA)
84+81 LT "Y,I,E,L,D"	(5 EA)



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout12.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 12	SHEET 26 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

US ROUTE 7:
85+00 TO 92+14 SOLID RT & LT
88+53 TO 92+14 DOTTED LANE LINE LT

TEMPORARY 6 INCH WHITE LINE, PAINT

US ROUTE 7:
85+00 TO 92+14 SOLID RT & LT
88+53 TO 92+14 DOTTED LANE LINE LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

US ROUTE 7:
85+00 TO 86+25 DOUBLE SOLID MEDIAN RT & LT
85+00 TO 86+50 SOLID LT, VT ROUTE 7A
86+25 TO 90+20 SOLID RT & LT
90+60 TO 92+14 SOLID RT & LT
90+39 DOUBLE SOLID RT, TH 5

TEMPORARY 6 INCH YELLOW LINE, PAINT

US ROUTE 7:
85+00 TO 86+25 DOUBLE SOLID MEDIAN RT & LT
85+00 TO 86+50 SOLID LT, VT ROUTE 7A
86+25 TO 90+20 SOLID RT & LT
90+60 TO 92+14 SOLID RT & LT
90+39 DOUBLE SOLID RT, TH 5

SPECIAL PROVISION(DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)

US ROUTE 7:
86+25 TO 88+53 GORE AREA LT

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

US ROUTE 7:
90+39 RT, TH 5

TEMPORARY 24 INCH STOP BAR, PAINT

US ROUTE 7:
90+39 RT, TH 5

SPECIAL PROVISION(DURABLE 12 INCH YELLOW LINE, POLYUREA)(28 MILS)

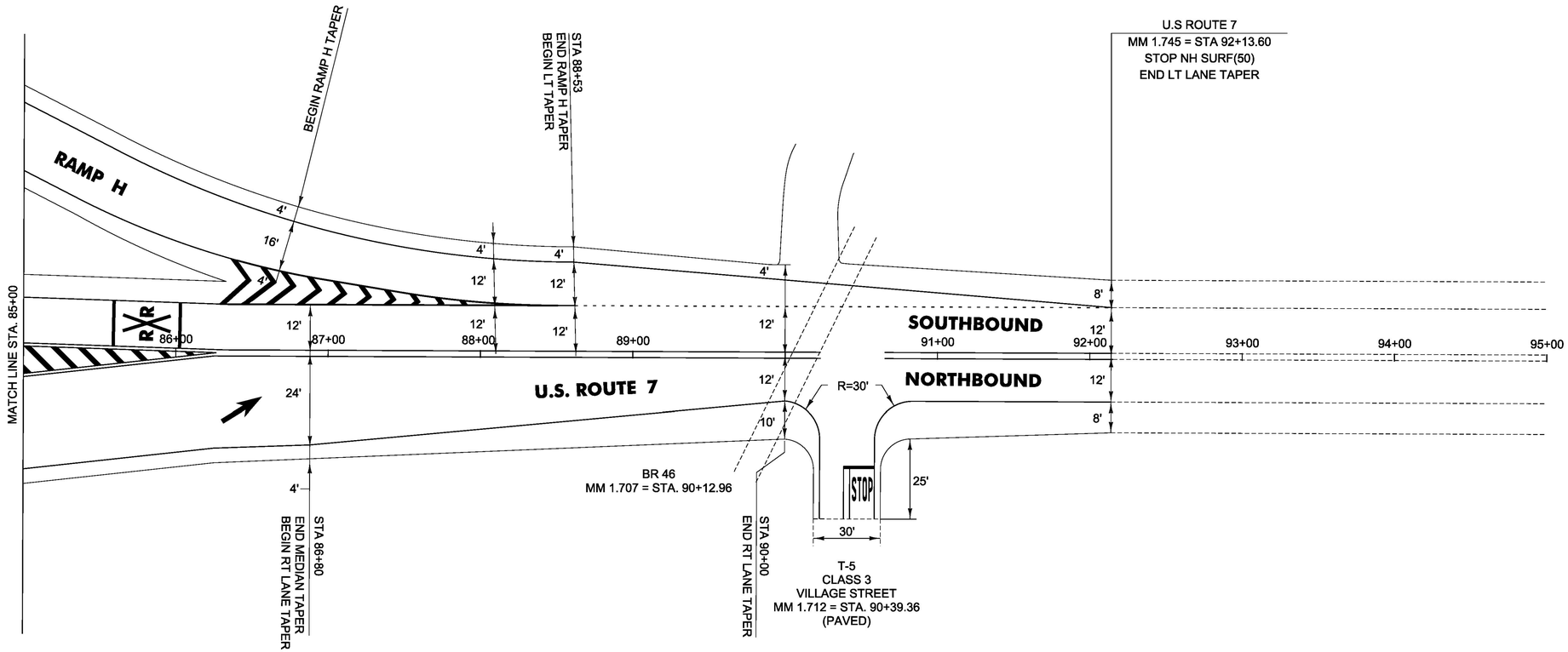
US ROUTE 7:
85+00 TO 86+25 HATCHED MEDIAN RT

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

US ROUTE 7:
86+60 RT MERGE ARROW (1 EA)
90+39 RT, TH 5 - "S,T,O,P" (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

US ROUTE 7:
86+60 RT MERGE ARROW (1 EA)
90+39 RT, TH 5 - "S,T,O,P" (4 EA)



DURABLE RAILROAD CROSSING SYMBOL, POLYUREA

US ROUTE 7:
85+90 LT (1 EA)

TEMPORARY RAILROAD CROSSING SYMBOL, PAINT

US ROUTE 7:
85+90 LT (1 EA)

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout13.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 13	SHEET 27 OF 105

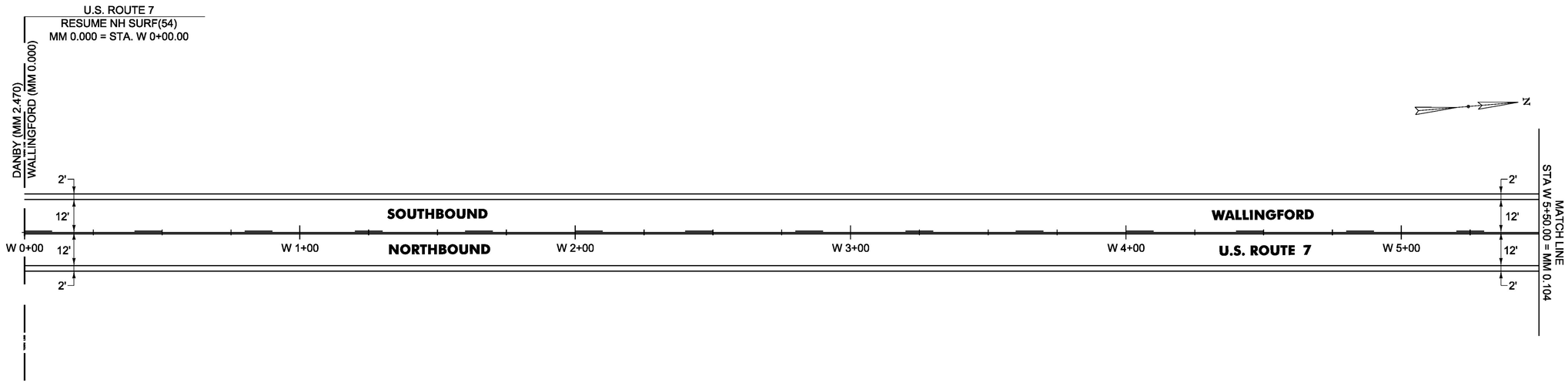
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 0+00 TO W 11+00 SOLID LT & RT

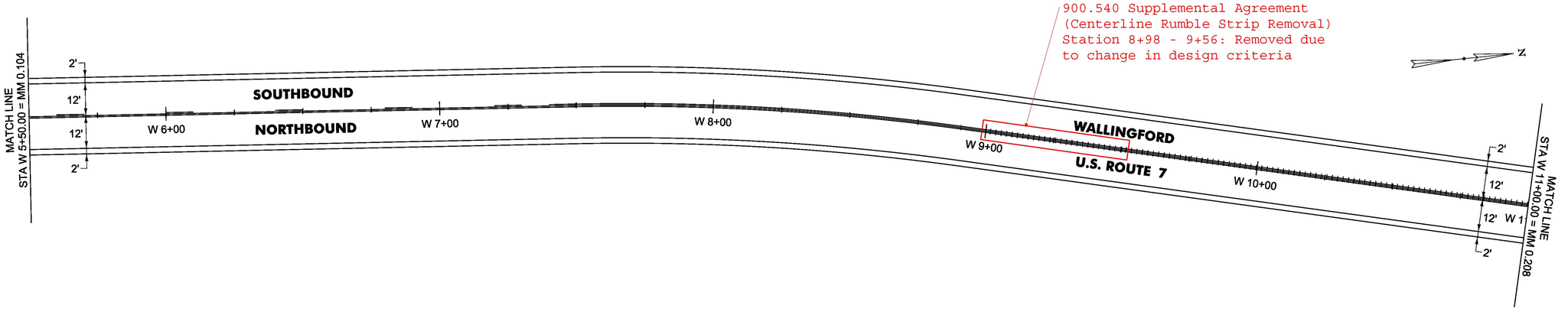
TEMPORARY 4 INCH WHITE LINE, PAINT
W 0+00 TO W 11+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 0+00 TO W 7+40 DASHED LT, SOLID RT
W 7+40 TO W 11+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 0+00 TO W 7+40 DASHED LT, SOLID RT
W 7+40 TO W 11+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 9+00 TO W 11+00 CL





900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 8+98 - 9+56: Removed due
to change in design criteria

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout14.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 14		SHEET	28 OF 105

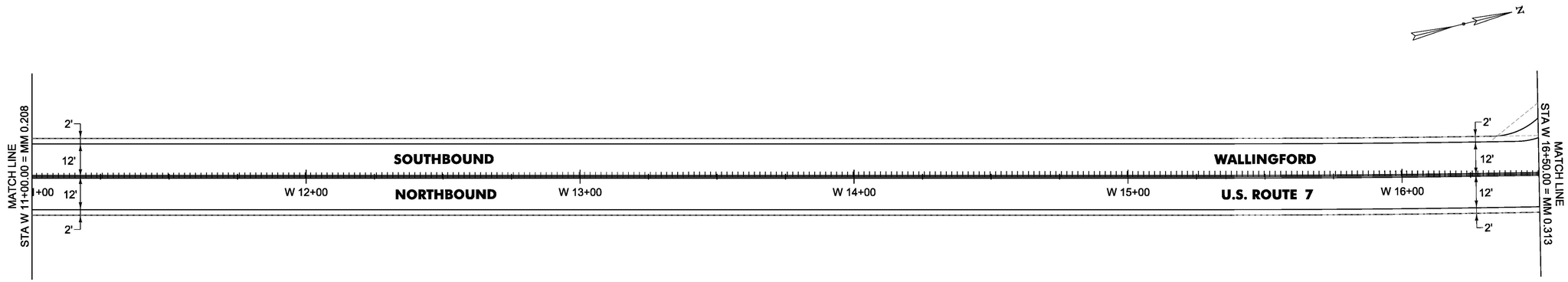
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 11+00 TO W 16+67 SOLID LT
W 11+00 TO W 22+00 SOLID RT
W 16+98 TO W 22+00 SOLID LT

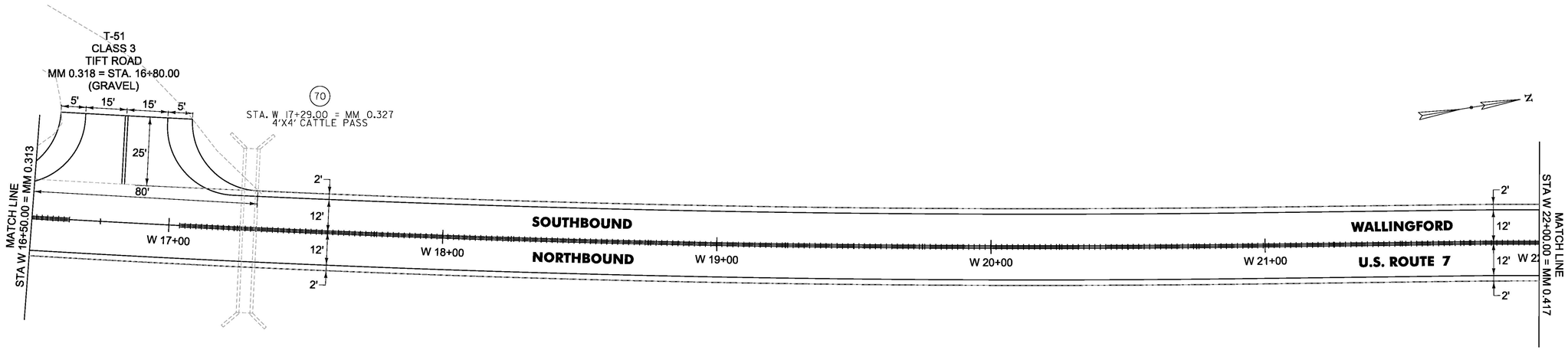
TEMPORARY 4 INCH WHITE LINE, PAINT
W 11+00 TO W 16+45 SOLID LT
W 11+00 TO W 22+00 SOLID RT
W 17+22 TO W 22+00 SOLID LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 11+00 TO W 16+64 SOLID LT & RT
W 16+84 DOUBLE SOLID LT (TH 51)
W 17+04 TO W 22+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 11+00 TO W 16+64 SOLID LT & RT
W 16+84 DOUBLE SOLID LT (TH 51)
W 17+04 TO W 22+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 11+00 TO W 16+64 CL
W 17+04 TO W 22+00 CL





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout15.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 15	SHEET 29 OF 105

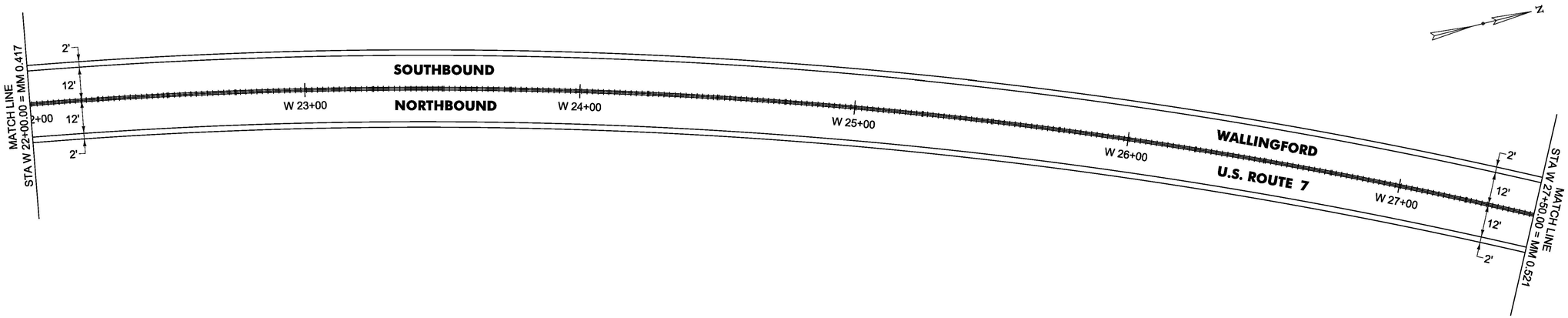
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 22+00 TO W 33+00 SOLID LT & RT

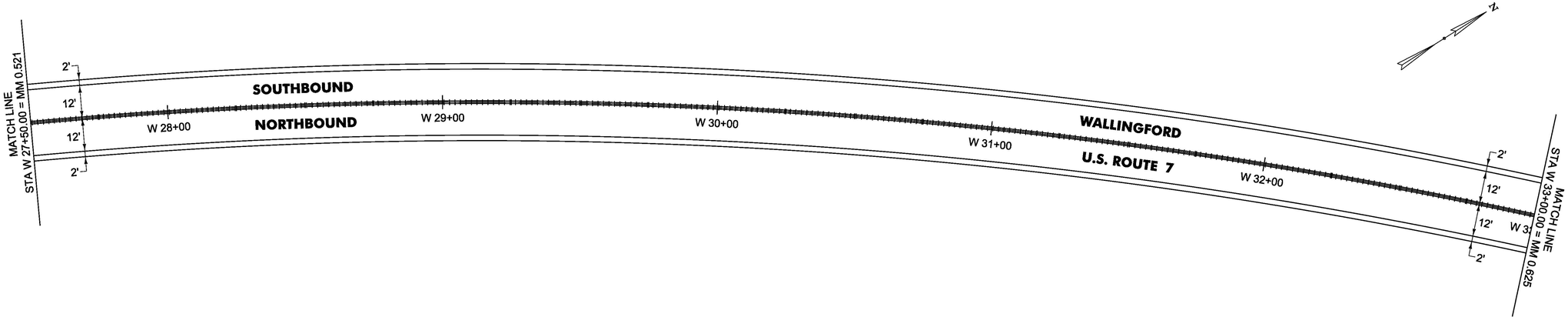
SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 22+00 TO W 33+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 22+00 TO W 33+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 22+00 TO W 33+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 22+00 TO W 33+00 SOLID LT & RT





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout16.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: B. KIPP
PLAN SHEET 16	SHEET 30 OF 105

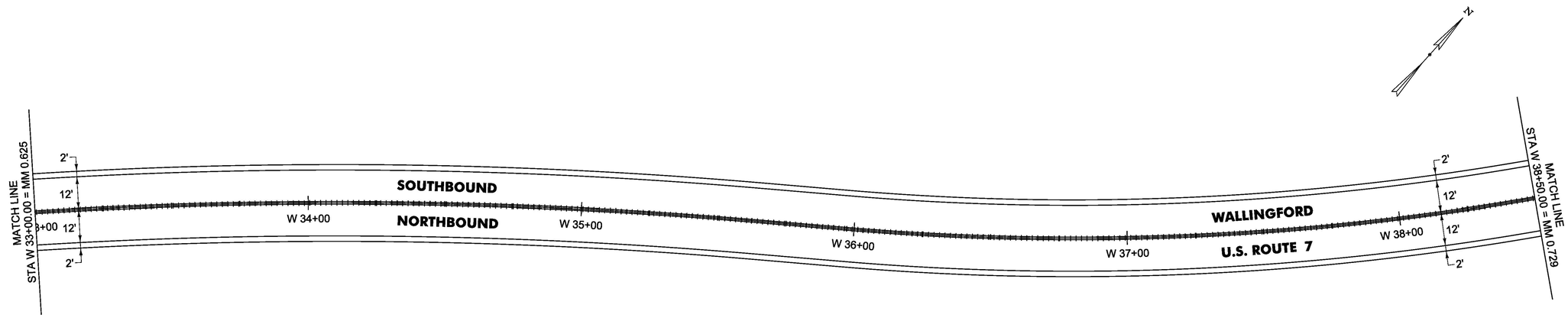
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 33+00 TO W 44+00 SOLID LT & RT

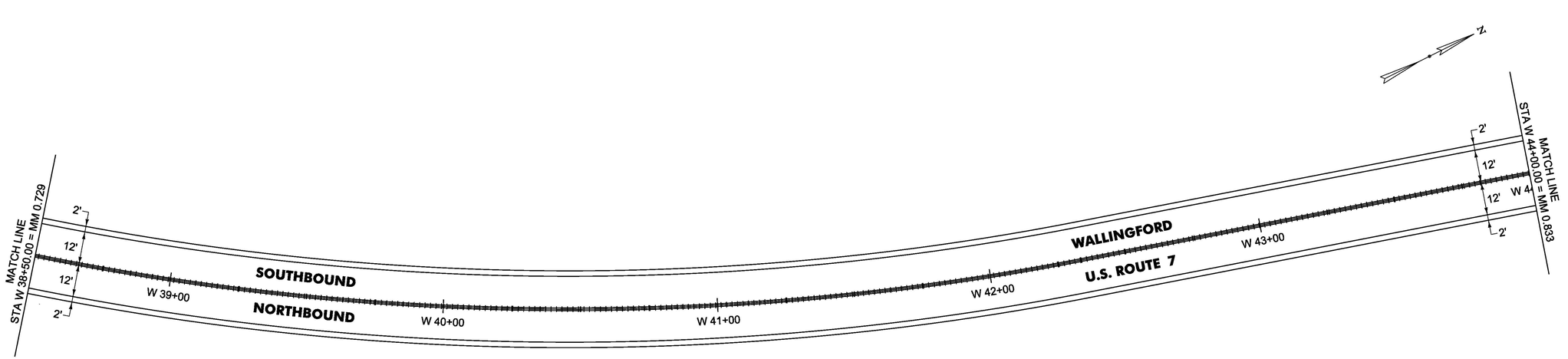
SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 33+00 TO W 44+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 33+00 TO W 44+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 33+00 TO W 44+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 33+00 TO W 44+00 SOLID LT & RT





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout17.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 17	SHEET 31 OF 105

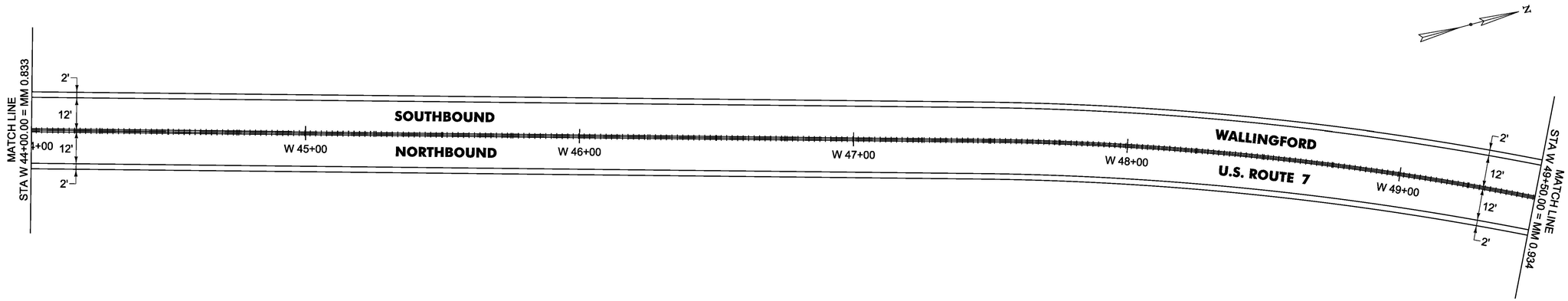
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 44+00 TO W 55+00 SOLID LT & RT

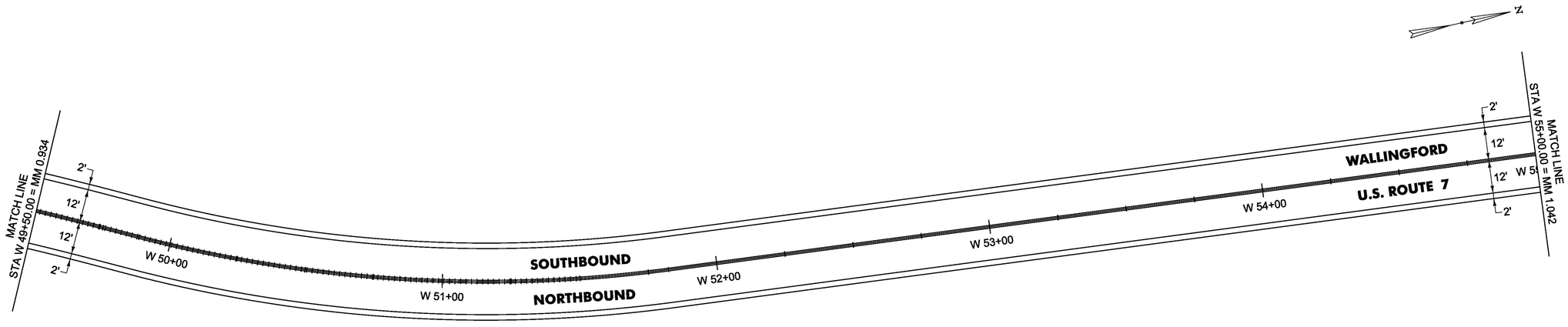
SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 44+00 TO W 55+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 44+00 TO W 51+50 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 44+00 TO W 55+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 44+00 TO W 55+00 SOLID LT & RT





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout18.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 18	SHEET 32 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 55+00 TO W 66+00 SOLID LT
W 55+00 TO W 66+63 SOLID RT
W 60+80 TO W 66+00 SOLID RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 55+00 TO W 60+56 SOLID LT & RT
W 60+76 DOUBLE SOLID RT (TH 59)
W 60+96 TO W 66+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 60+76 TO W 60+75 RT (TH 59)

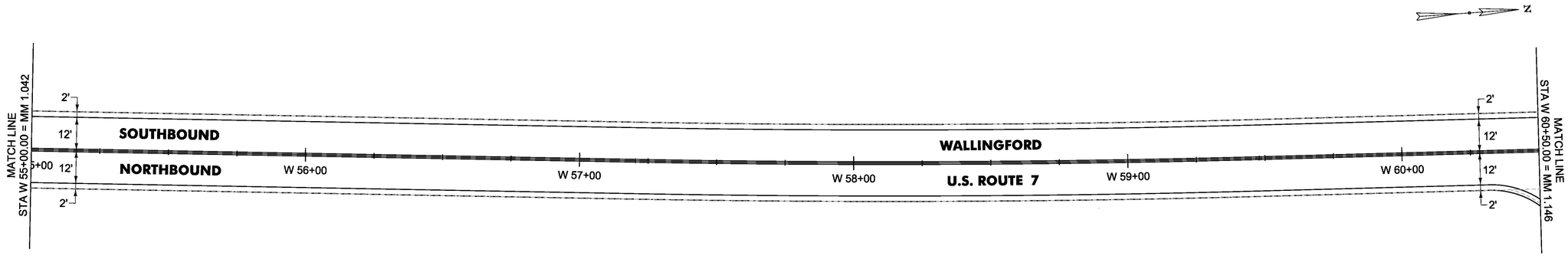
SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 60+80 RT "STOP" (TH 59) (4 EA)

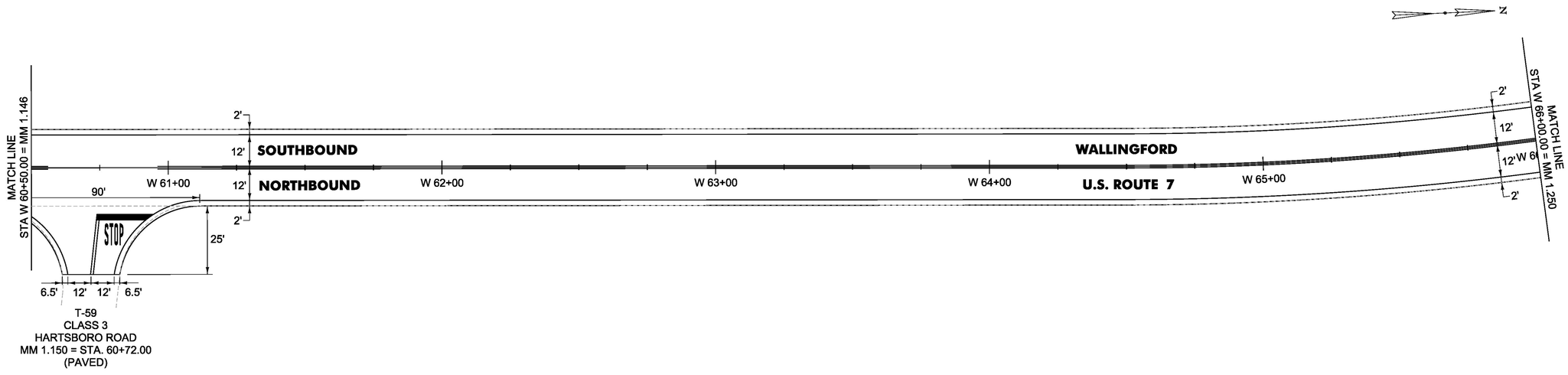
TEMPORARY 4 INCH WHITE LINE, PAINT
W 55+00 TO W 66+00 SOLID LT
W 55+00 TO W 66+63 SOLID RT
W 60+80 TO W 66+00 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 55+00 TO W 60+56 SOLID LT & RT
W 60+76 DOUBLE SOLID RT (TH 59)
W 60+96 TO W 66+00 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
W 60+76 TO W 60+75 RT (TH 59)

TEMPORARY LETTER OR SYMBOL, PAINT
W 60+80 RT "STOP" (TH 59) (4 EA)





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout19.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 19	SHEET 33 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 66+00 TO W 68+70 SOLID LT
W 66+00 TO W 77+00 SOLID RT
W 68+80 TO W 77+00 SOLID RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 66+00 TO W 68+70 SOLID LT
W 66+00 TO W 77+00 SOLID RT
W 68+80 TO W 77+00 SOLID RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 66+00 TO W 68+30 SOLID LT & RT
W 68+50 TO W 68+75 DOUBLE SOLID LT (TH 48)
W 68+70 TO W 77+00 SOLID LT & RT

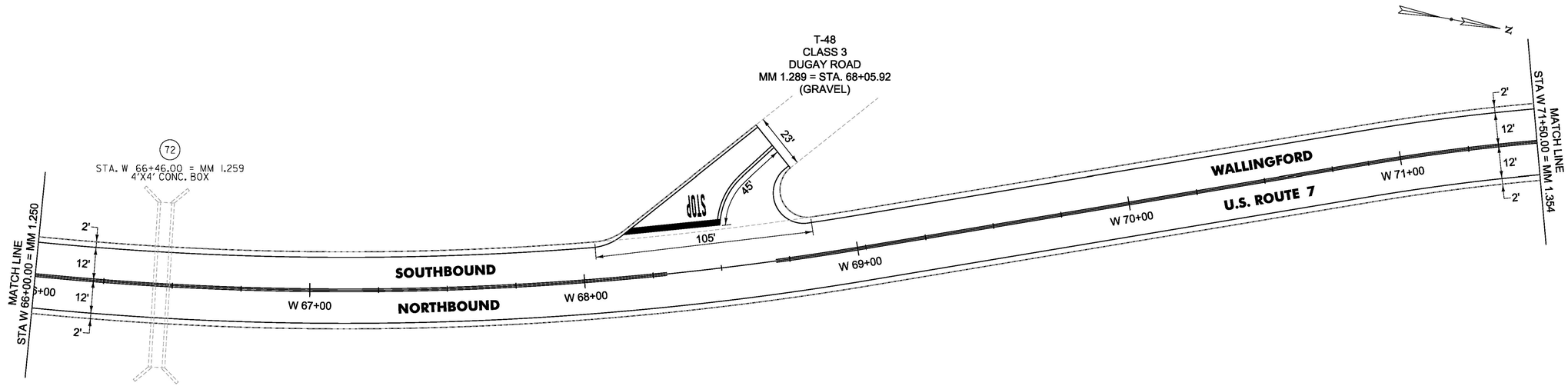
TEMPORARY 4 INCH YELLOW LINE, PAINT
W 66+00 TO W 68+30 SOLID LT & RT
W 68+50 TO W 68+75 DOUBLE SOLID LT (TH 48)
W 68+70 TO W 77+00 SOLID LT & RT

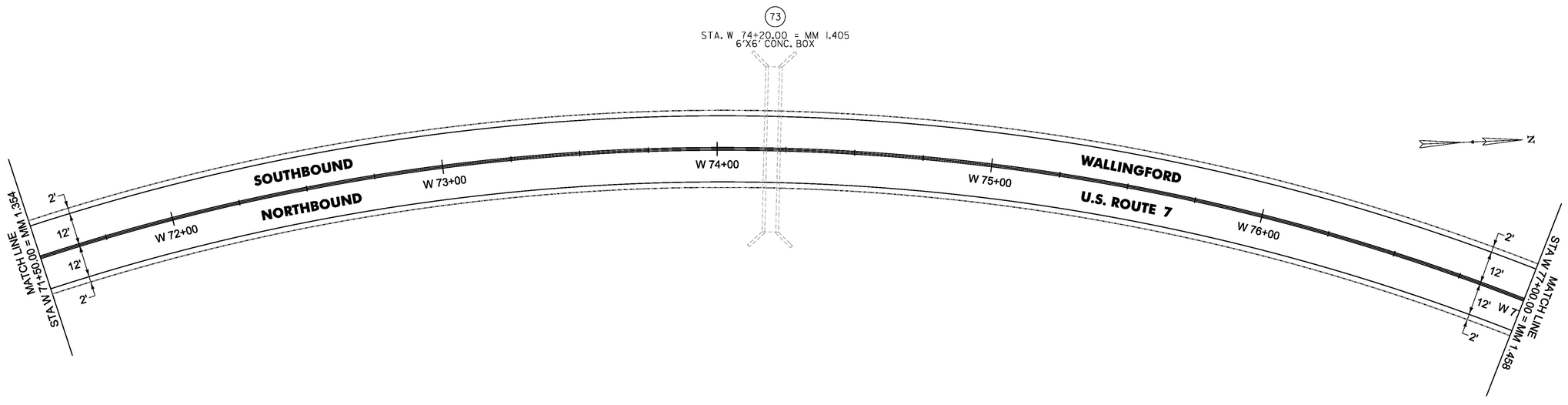
SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 68+16 TO W 60+51 LT (TH 48)

TEMPORARY 24 INCH STOP BAR, PAINT
W 68+16 TO W 60+51 LT (TH 48)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 68+43 LT "STOP" (TH 48) (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
W 68+43 LT "STOP" (TH 48) (4 EA)





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout20.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 20	SHEET 34 OF 105

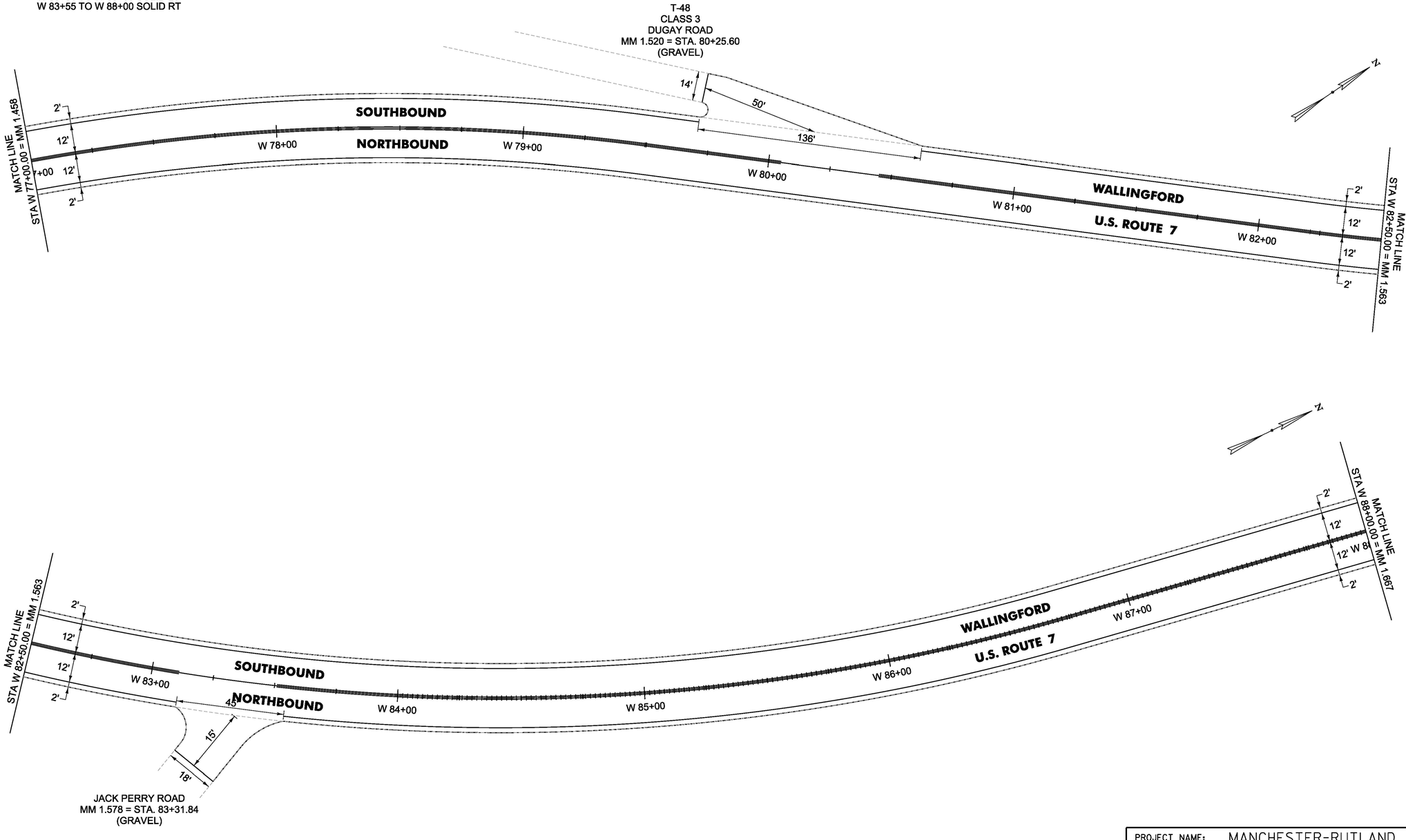
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 77+00 TO W 79+70 SOLID LT
W 77+00 TO W 83+12 SOLID RT
W 80+61 TO W 88+00 SOLID LT
W 83+55 TO W 88+00 SOLID RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 77+00 TO W 79+70 SOLID LT
W 77+00 TO W 83+12 SOLID RT
W 80+61 TO W 88+00 SOLID LT
W 83+55 TO W 88+00 SOLID RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 77+00 TO 80+05 SOLID LT & RT
W 80+45 TO 83+11 SOLID LT & RT
W 83+51 TO 88+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 77+00 TO 80+05 SOLID LT & RT
W 80+45 TO 83+11 SOLID LT & RT
W 83+51 TO 88+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 84+00 TO W 88+00 CL



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout21.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 21	SHEET 35 OF 105

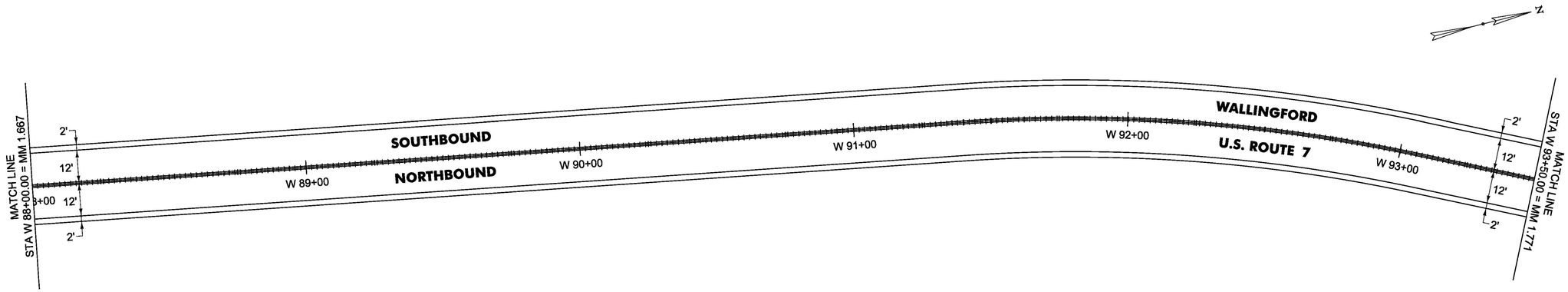
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 88+00 TO W 99+00 SOLID LT & RT

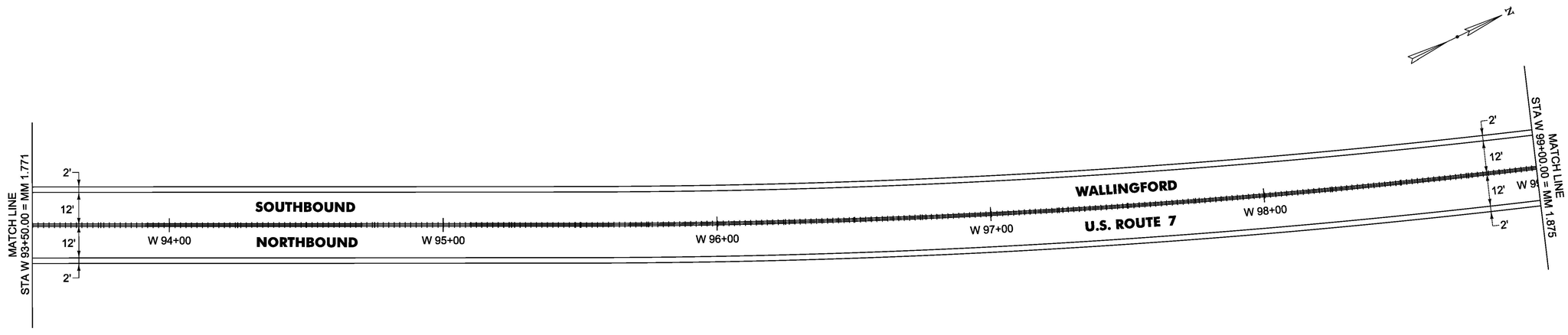
SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 88+00 TO W 99+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 88+00 TO W 99+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 88+00 TO W 99+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 88+00 TO W 99+00 SOLID LT & RT





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout22.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 22	SHEET 36 OF 105

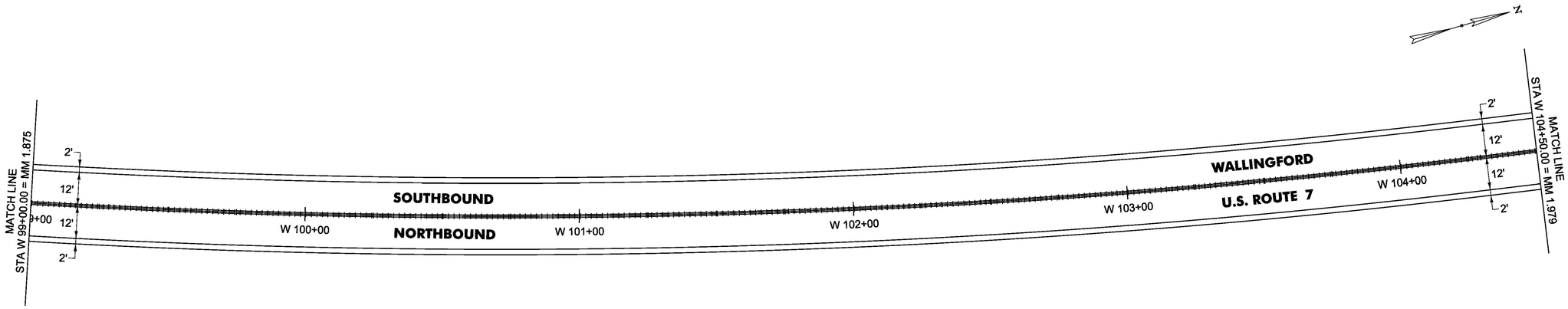
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 99+00 TO W 110+00 SOLID LT & RT

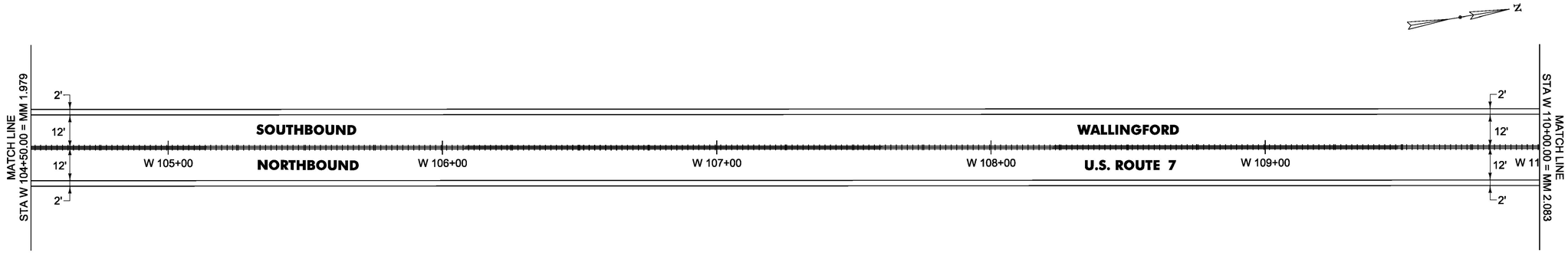
SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 99+00 TO W 110+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 99+00 TO W 110+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 99+00 TO W 110+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 99+00 TO W 110+00 SOLID LT & RT





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout23.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 23		SHEET	37 OF 105

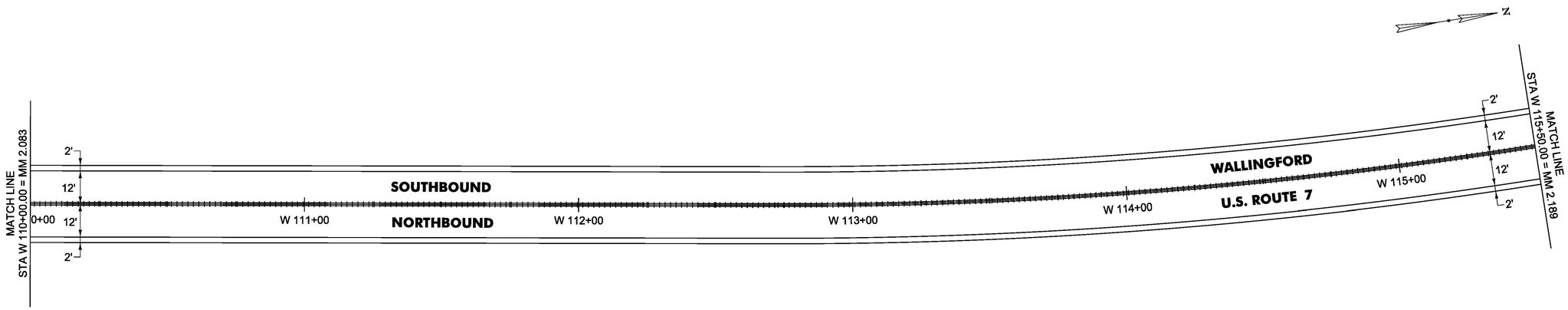
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 110+00 TO W 121+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 110+00 TO W 121+00 SOLID LT & RT

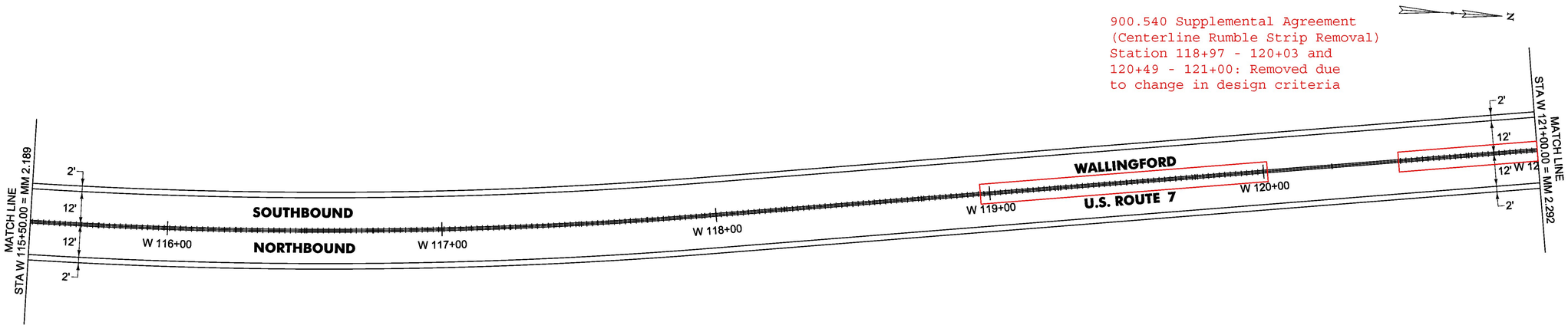
MILLED RUMBLE STRIPS (CENTERLINE)
W 110+00 TO W 120+00 CL
W 120+50 TO W 121+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 110+00 TO W 121+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 110+00 TO W 121+00 SOLID LT & RT



900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 118+97 - 120+03 and
120+49 - 121+00: Removed due
to change in design criteria



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout24.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 24		SHEET	38 OF 105

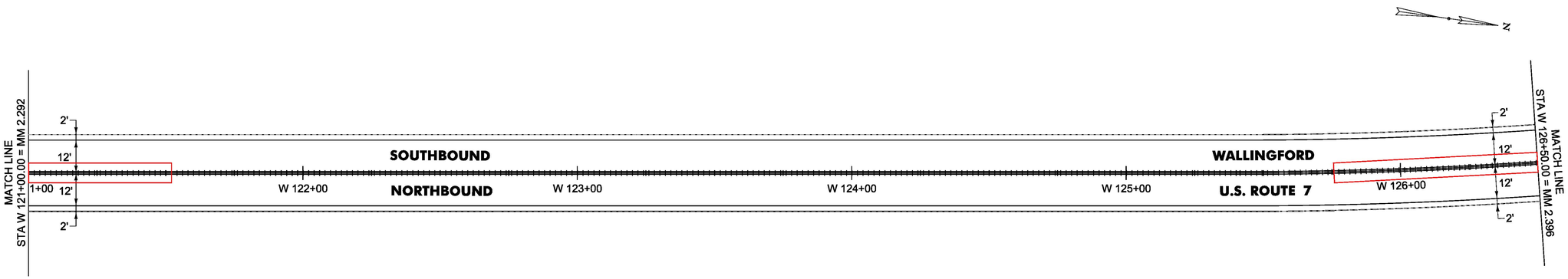
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 121+00 TO W 132+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 121+00 TO W 132+00 SOLID LT & RT

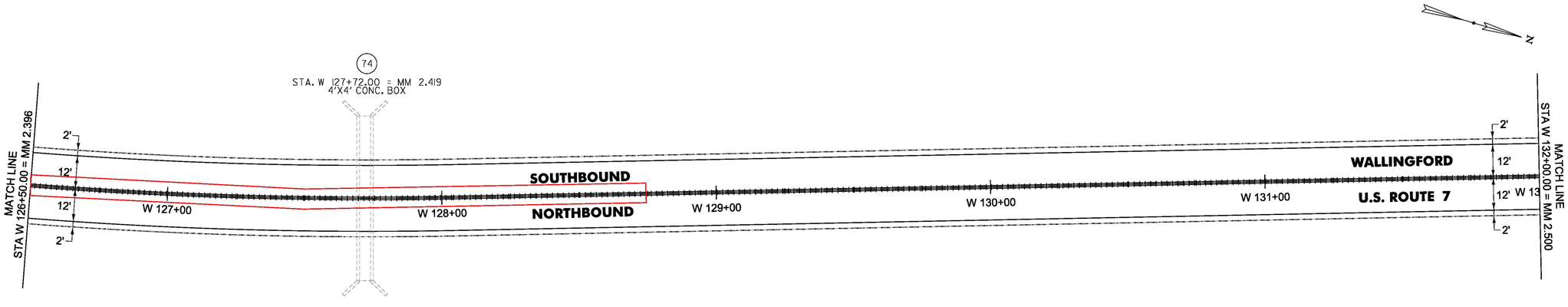
MILLED RUMBLE STRIPS (CENTERLINE)
W 121+00 TO W 132+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 121+00 TO W 132+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 121+00 TO W 132+00 SOLID LT & RT



900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 121+00 - 121+52 and
125+77 - 128+74: Removed due
to change in design criteria



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout25.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 25	SHEET 39 OF 105

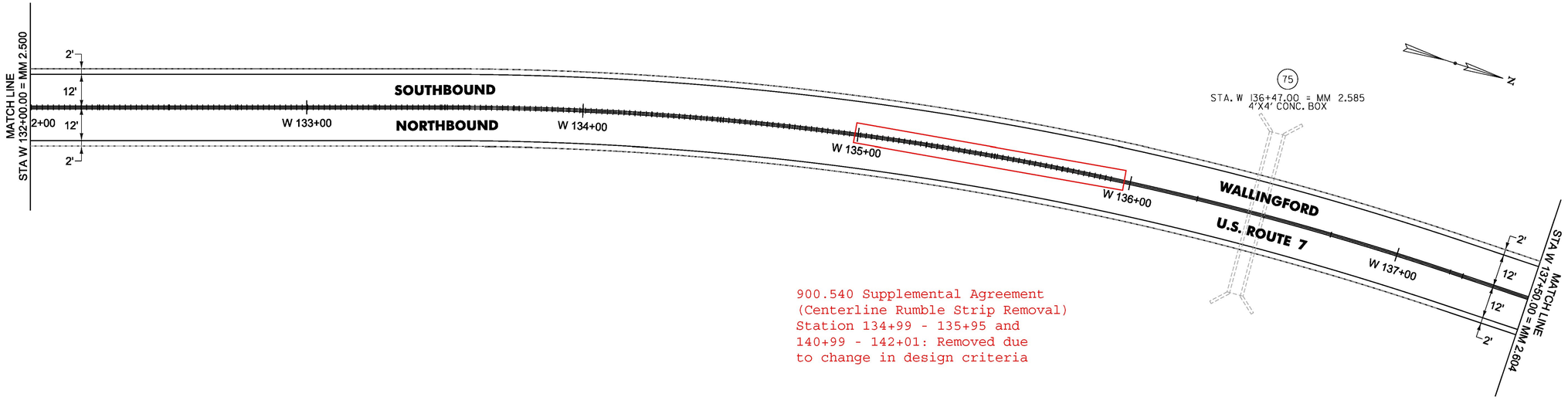
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 132+00 TO W 143+00 SOLID LT & RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 132+00 TO W 143+00 SOLID LT & RT

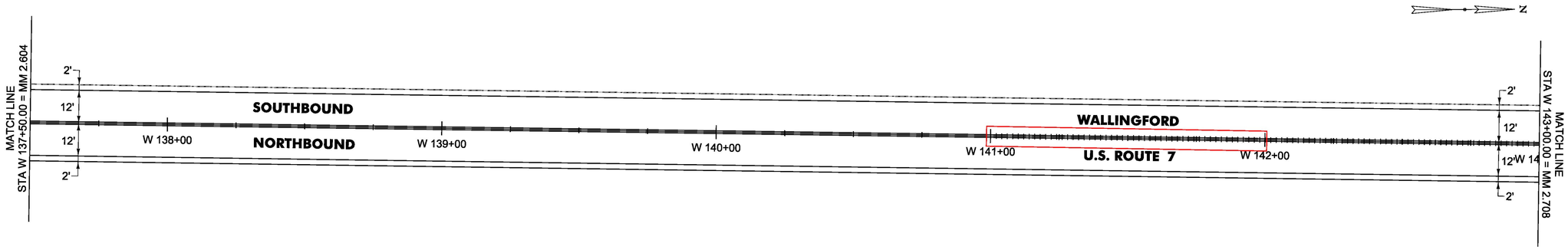
SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 132+00 TO W 143+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 132+00 TO W 143+00 SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 132+00 TO W 135+93 CL
W 141+00 TO W 143+00 CL



900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 134+99 - 135+95 and
140+99 - 142+01: Removed due
to change in design criteria



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout26.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 26	SHEET 40 OF 105

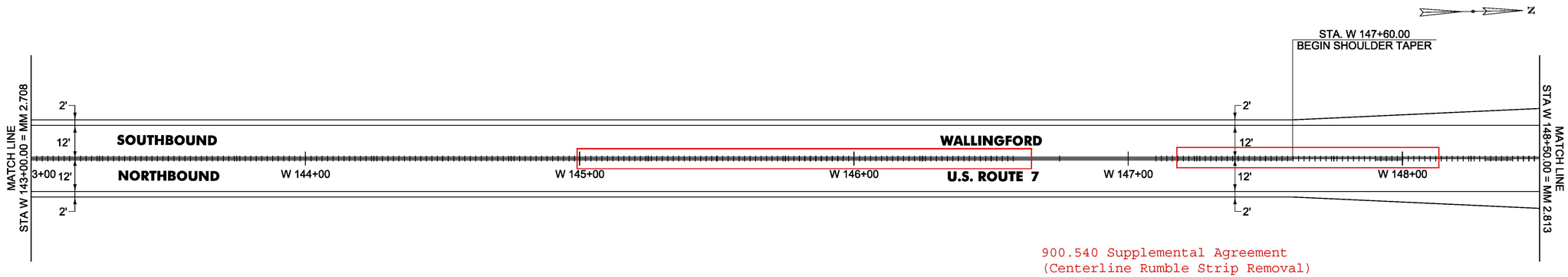
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 143+00 TO W 154+00 SOLID LT & RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 143+00 TO W 154+00 SOLID LT & RT

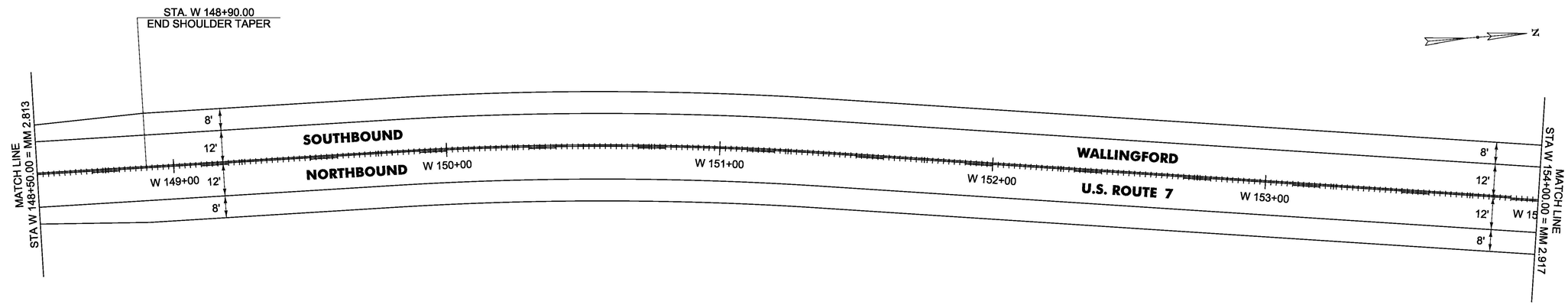
SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 143+00 TO W 147+50 SOLID LT & RT
W 147+50 TO W 153+90 SOLID LT, DASHED RT
W 153+90 TO W 154+00 DASHED CL

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 143+00 TO W 147+50 SOLID LT & RT
W 147+50 TO W 153+90 SOLID LT, DASHED RT
W 153+90 TO W 154+00 DASHED CL

MILLED RUMBLE STRIPS (CENTERLINE)
W 143+00 TO W 146+60 CL
W 147+10 TO W 154+00 CL



900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 144+99 - 146+61 and
147+10 - 148+11: Removed due
to change in design criteria



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout27.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 27	SHEET 41 OF 105

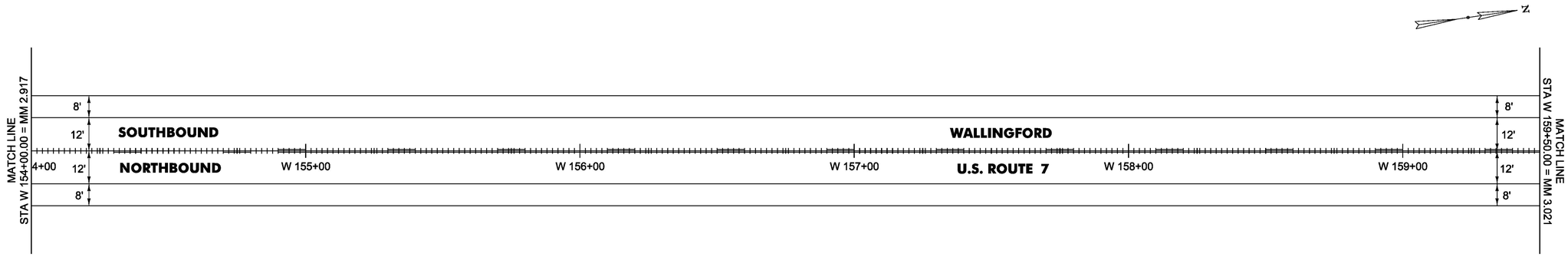
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 154+00 TO W 165+00 SOLID LT & RT

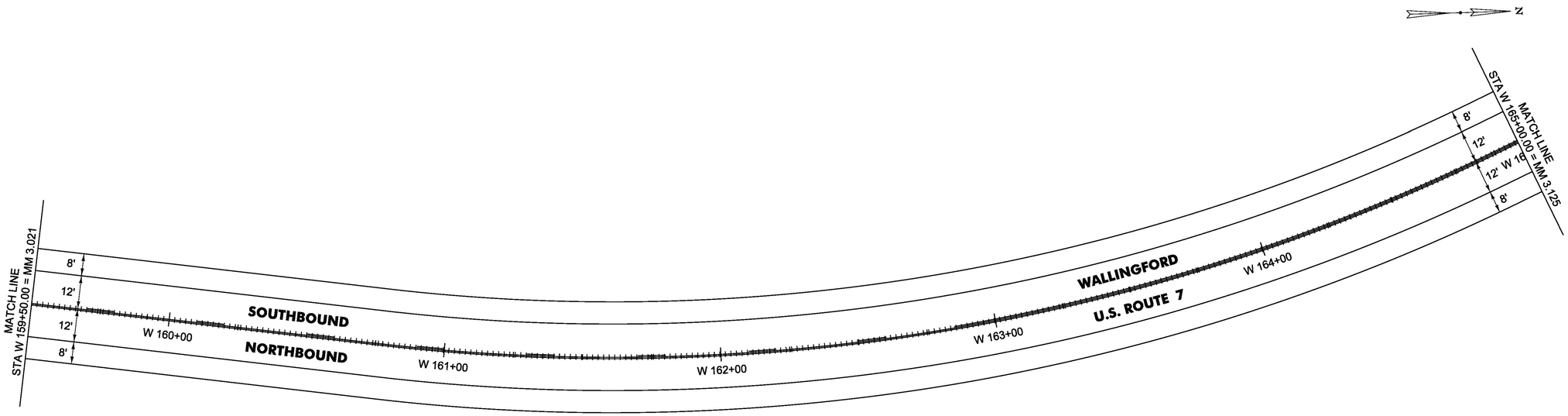
TEMPORARY 4 INCH WHITE LINE, PAINT
W 154+00 TO W 165+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 154+00 TO W 154+90 DASHED CL
W 154+90 TO W 162+85, DASHED LT, SOLID RT
W 162+85 TO W 165+00, SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 154+00 TO W 154+90 DASHED CL
W 154+90 TO W 162+85, DASHED LT, SOLID RT
W 162+85 TO W 165+00, SOLID LT & RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 154+00 TO W 165+00 CL





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout28.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 28	SHEET 42 OF 105

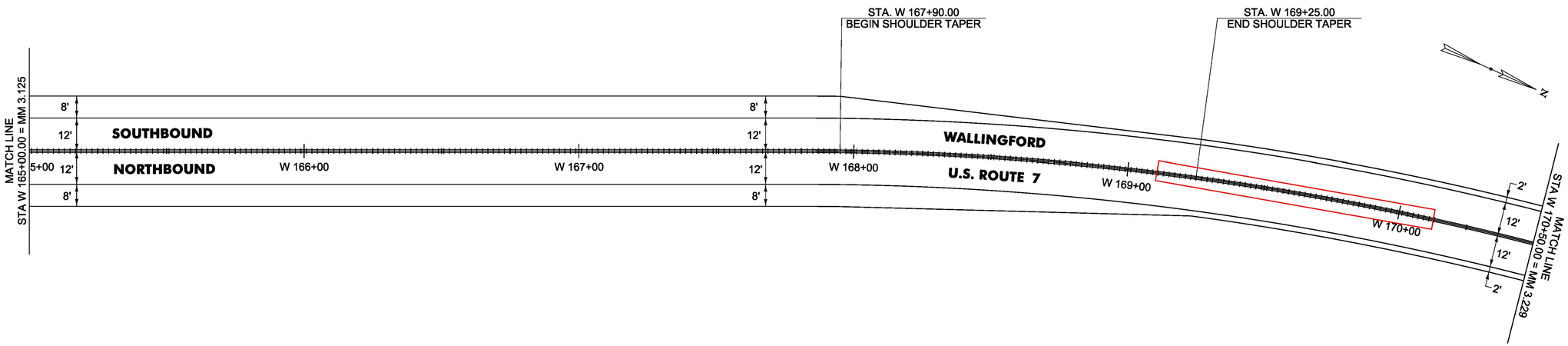
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 165+00 TO W 176+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 165+00 TO W 176+00 SOLID LT & RT

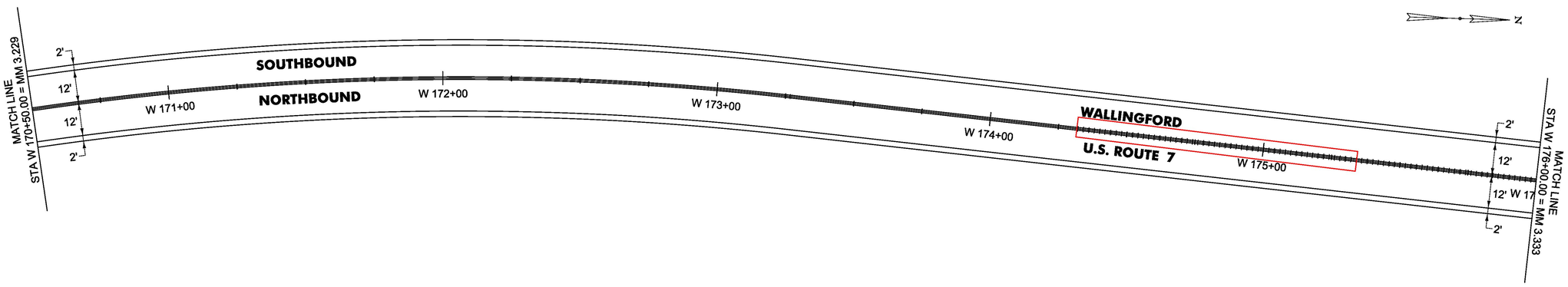
MILLED RUMBLE STRIPS (CENTERLINE)
W 165+00 TO W 170+13 CL
W 174+13 TO W 176+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 165+00 TO W 176+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 165+00 TO W 176+00 SOLID LT & RT



900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 169+10 - 170+13 and
174+28 - 175+32: Removed due
to change in design criteria



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout29.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 29	SHEET 43 OF 105

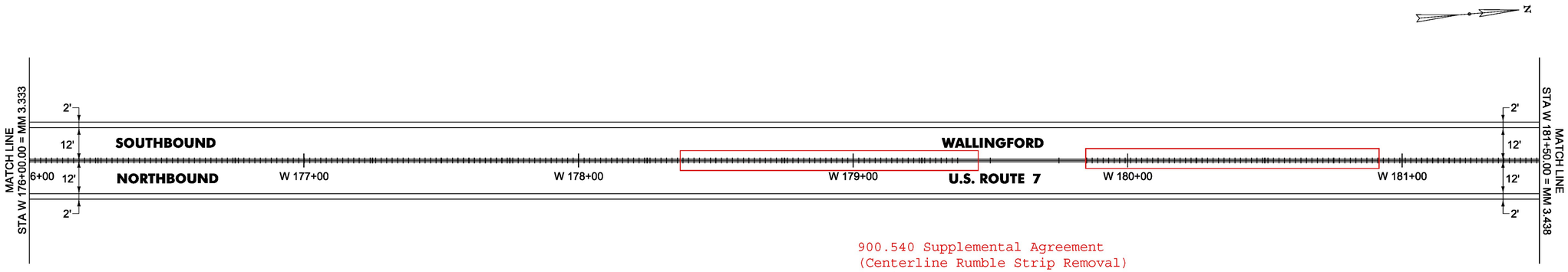
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 176+00 TO W 187+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 176+00 TO 181+00 SOLID LT & RT

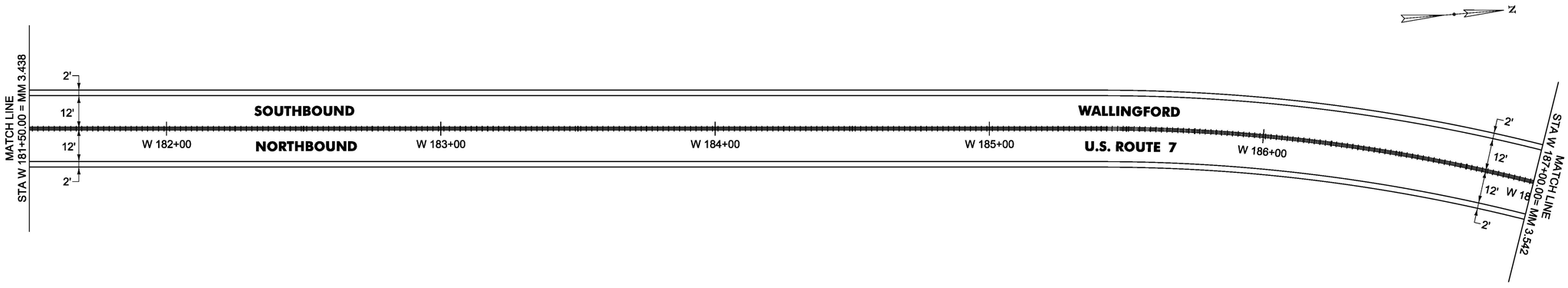
MILLED RUMBLE STRIPS (CENTERLINE)
W 176+00 TO W 179+40 CL
W 179+85 TO W 187+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 176+00 TO W 187+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 176+00 TO 181+00 SOLID LT & RT



900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 178+39 - 179+42 and
179+84 - 180+86: Removed due
to change in design criteria



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout30.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 30	SHEET 44 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 187+00 TO W 198+00 SOLID LT
W 187+00 TO W 193+32 SOLID RT
W 193+59 TO W 198+00 SOLID RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 187+00 TO W 193+25 SOLID LT & RT
W 193+45 DOUBLE SOLID RT (TH 34)
W 193+65 TO W 198+00 SOLID LT, DASHED RT

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 193+45 TO W 193+81 RT (TH 34)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 193+56 RT "STOP" (TH 34) (4 EA)

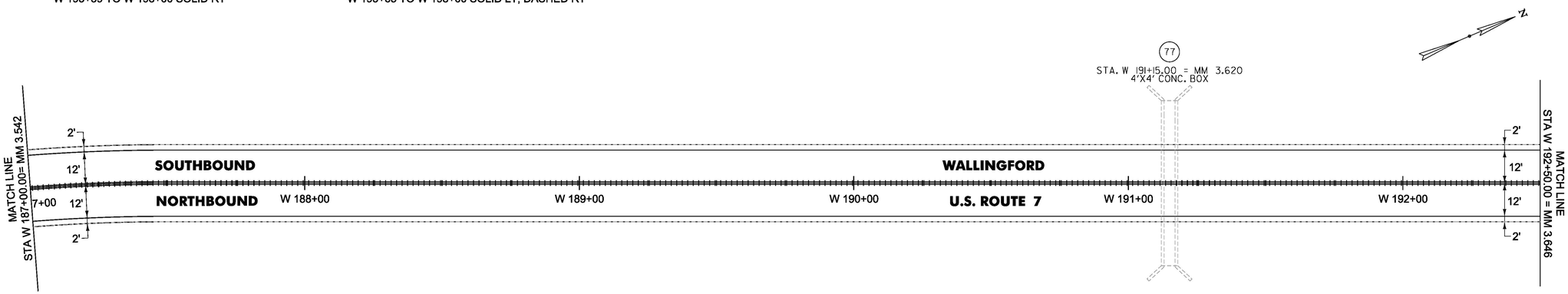
MILLED RUMBLE STRIPS (CENTERLINE)
W 187+00 TO W 193+25 CL
W 193+65 TO W 198+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 187+00 TO W 198+00 SOLID LT
W 187+00 TO W 193+32 SOLID RT
W 193+59 TO W 198+00 SOLID RT

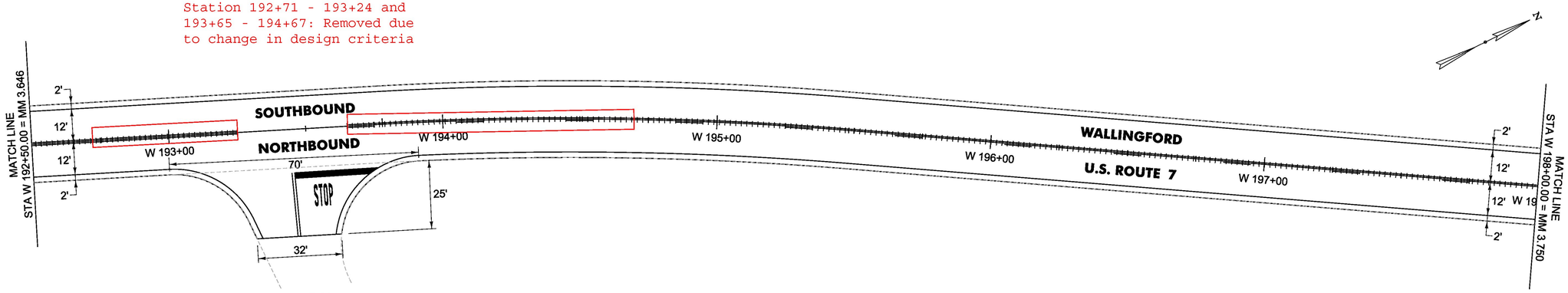
TEMPORARY 4 INCH YELLOW LINE, PAINT
W 187+00 TO W 193+25 SOLID LT & RT
W 193+45 DOUBLE SOLID RT (TH 34)
W 193+65 TO W 198+00 SOLID LT, DASHED RT

TEMPORARY 24 INCH STOP BAR, PAINT
W 193+45 TO W 193+81 RT (TH 34)

TEMPORARY LETTER OR SYMBOL, PAINT
W 193+56 RT "STOP" (TH 34) (4 EA)



900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 192+71 - 193+24 and
193+65 - 194+67: Removed due
to change in design criteria



T-34
CLASS 3
HARTSBORO ROAD
MM 3.663 = STA. 193+40.64
(PAVED)

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout31.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 31	SHEET 45 OF 105

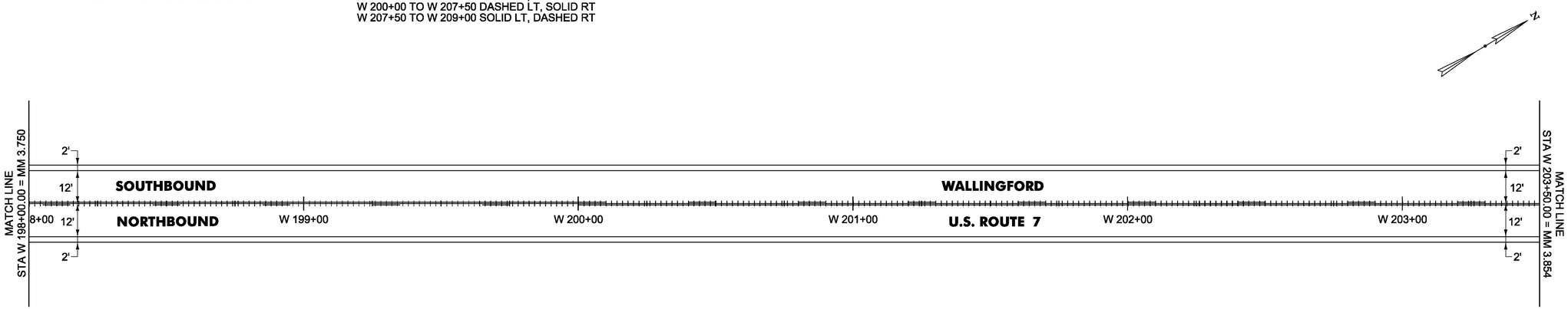
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 198+00 TO W 209+00 SOLID LT & RT

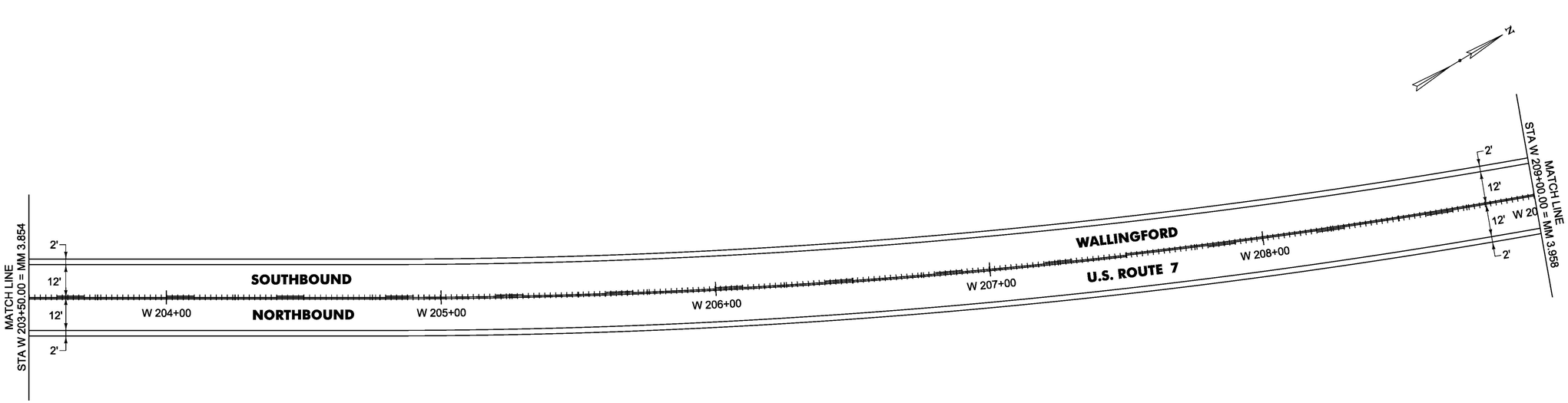
SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 198+00 TO W 200+00 SOLID LT, DASHED RT
W 200+00 TO W 207+50 DASHED LT, SOLID RT
W 207+50 TO W 209+00 SOLID LT, DASHED RT

MILLED RUMBLE STRIPS (CENTERLINE)
W 198+00 TO W 209+00 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 198+00 TO W 209+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 198+00 TO W 200+00 SOLID LT, DASHED RT
W 200+00 TO W 207+50 DASHED LT, SOLID RT
W 207+50 TO W 209+00 SOLID LT, DASHED RT





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout32.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 32	SHEET 46 OF 105

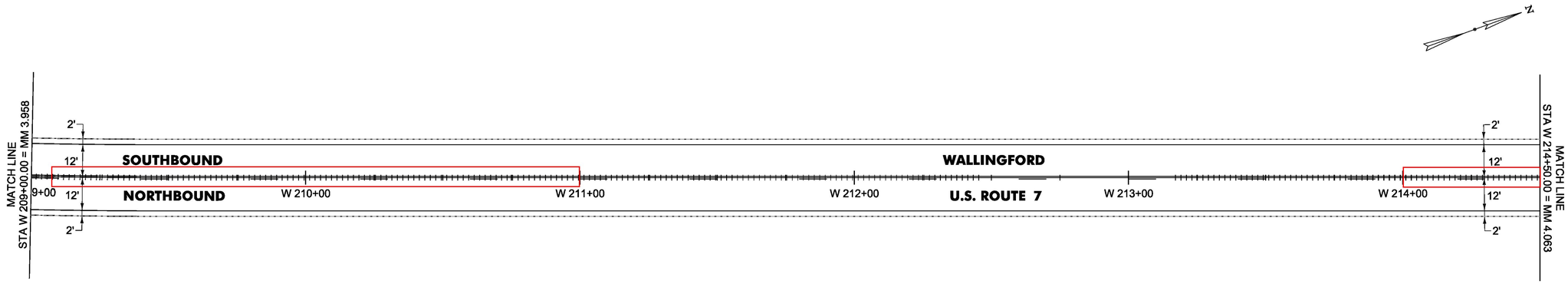
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 209+00 TO W 220+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 209+00 TO W 215+15 SOLID LT, DASHED RT
W 215+15 TO W 220+00 DASHED CL

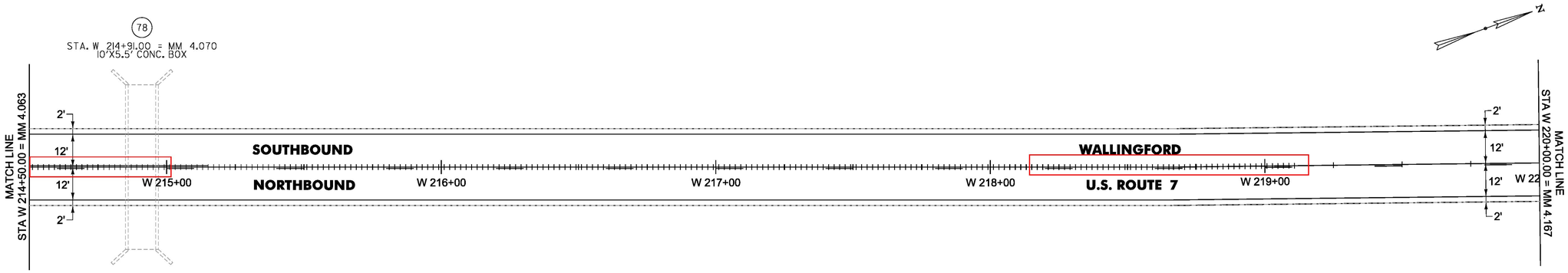
MILLED RUMBLE STRIPS (CENTERLINE)
W 209+00 TO W 212+47 CL
W 213+17 TO W 219+10 CL

TEMPORARY 4 INCH WHITE LINE, PAINT
W 198+00 TO W 209+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 209+00 TO W 215+15 SOLID LT, DASHED RT
W 215+15 TO W 220+00 DASHED CL



900.540 Supplemental Agreement
(Centerline Rumble Strip Removal)
Station 209+18 - 211+00 and
214+00 - 215+01 and 218+14 - 219+18:
Removed due to change in design criteria



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout33.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 33	SHEET 47 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 220+00 TO W 228+14 SOLID LT
W 222+00 TO W 231+00 SOLID RT
W 228+38 TO W 231+00 SOLID LT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 220+00 TO W 228+14 SOLID LT
W 222+00 TO W 231+00 SOLID RT
W 228+38 TO W 231+00 SOLID LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 220+00 TO 222+30 DASHED CL
W 222+30 TO 227+82 DASHED LT, SOLID RT
W 227+82 TO 228+06 SOLID LT & RT
W 228+26 DOUBLE SOLID LT (TH 14)
W 228+46 TO 231+00 SOLID LT & RT

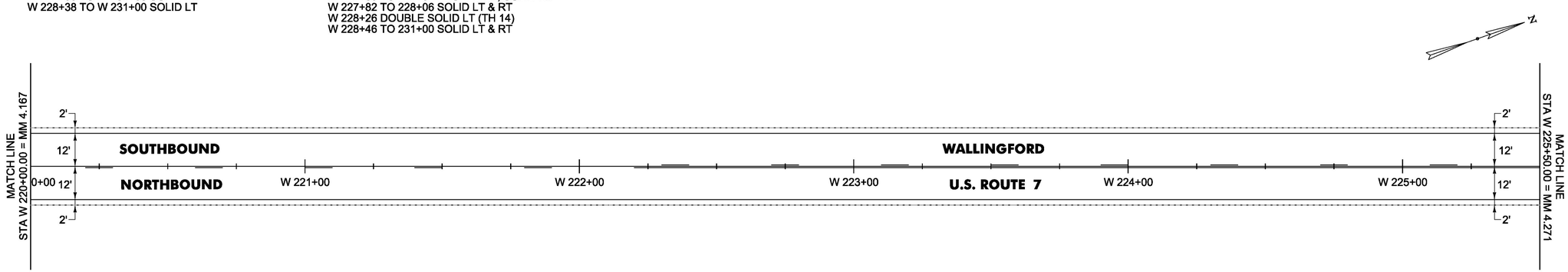
TEMPORARY 4 INCH YELLOW LINE, PAINT
W 220+00 TO 222+30 DASHED CL
W 222+30 TO 227+82 DASHED LT, SOLID RT
W 227+82 TO 228+06 SOLID LT & RT
W 228+26 DOUBLE SOLID LT (TH 14)
W 228+46 TO 231+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 227+98 TO W 228+26 LT (TH 14)

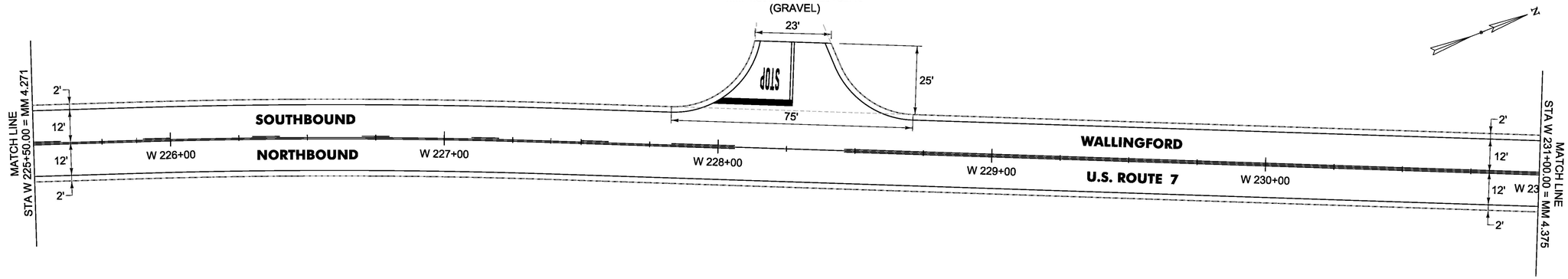
TEMPORARY 24 INCH STOP BAR, PAINT
W 227+98 TO W 228+26 LT (TH 14)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 228+18 LT "STOP" (TH 14) (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
W 228+18 LT "STOP" (TH 14) (4 EA)



T-14
CLASS 3
COOK DRIVE
MM 4.330 = STA. 228+62.40
(GRAVEL)



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout34.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 34	SHEET 48 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 231+00 TO 241+89 SOLID LT
W 231+00 TO 242+00 SOLID RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 231+00 TO W 241+79 SOLID LT & RT
W 241+98 DOUBLE SOLID LT (TH 13)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 241+30 TO W 241+99 LT (TH 13)

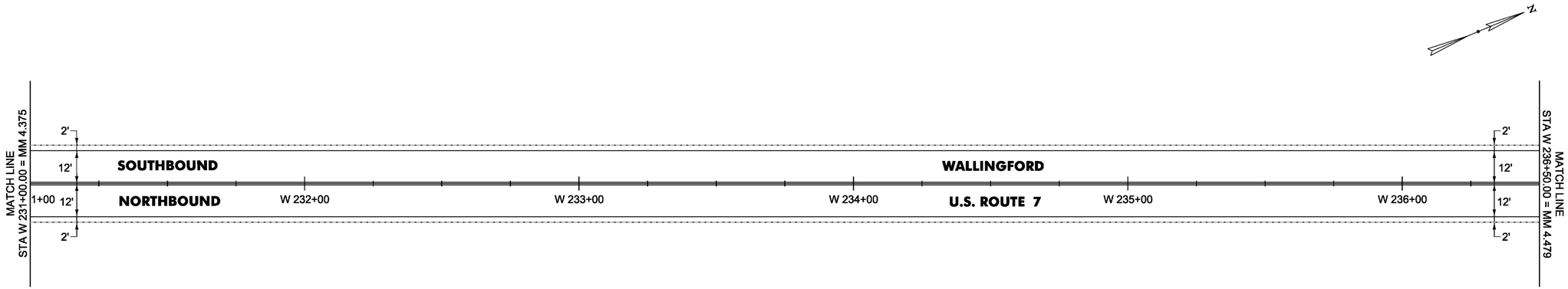
SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 241+97 LT "STOP" (TH 13) (4 EA)

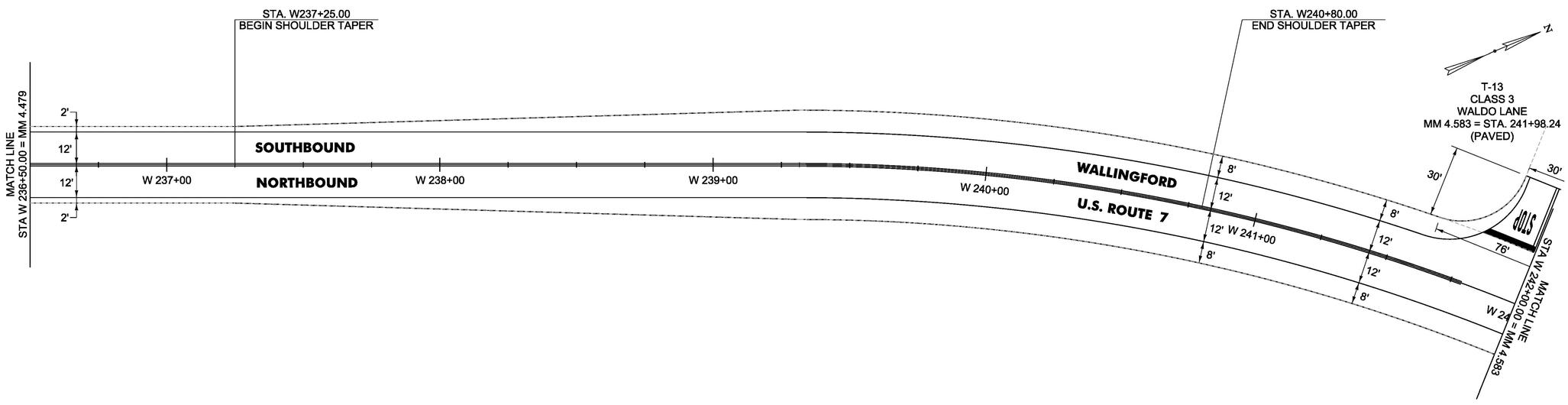
TEMPORARY 4 INCH WHITE LINE, PAINT
W 231+00 TO 241+89 SOLID LT
W 231+00 TO 242+00 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 231+00 TO W 241+79 SOLID LT & RT
W 241+98 DOUBLE SOLID LT (TH 13)

TEMPORARY 24 INCH STOP BAR, PAINT
W 241+30 TO W 241+99 LT (TH 13)

TEMPORARY LETTER OR SYMBOL, PAINT
W 241+97 LT "STOP" (TH 13) (4 EA)





NOT TO SCALE

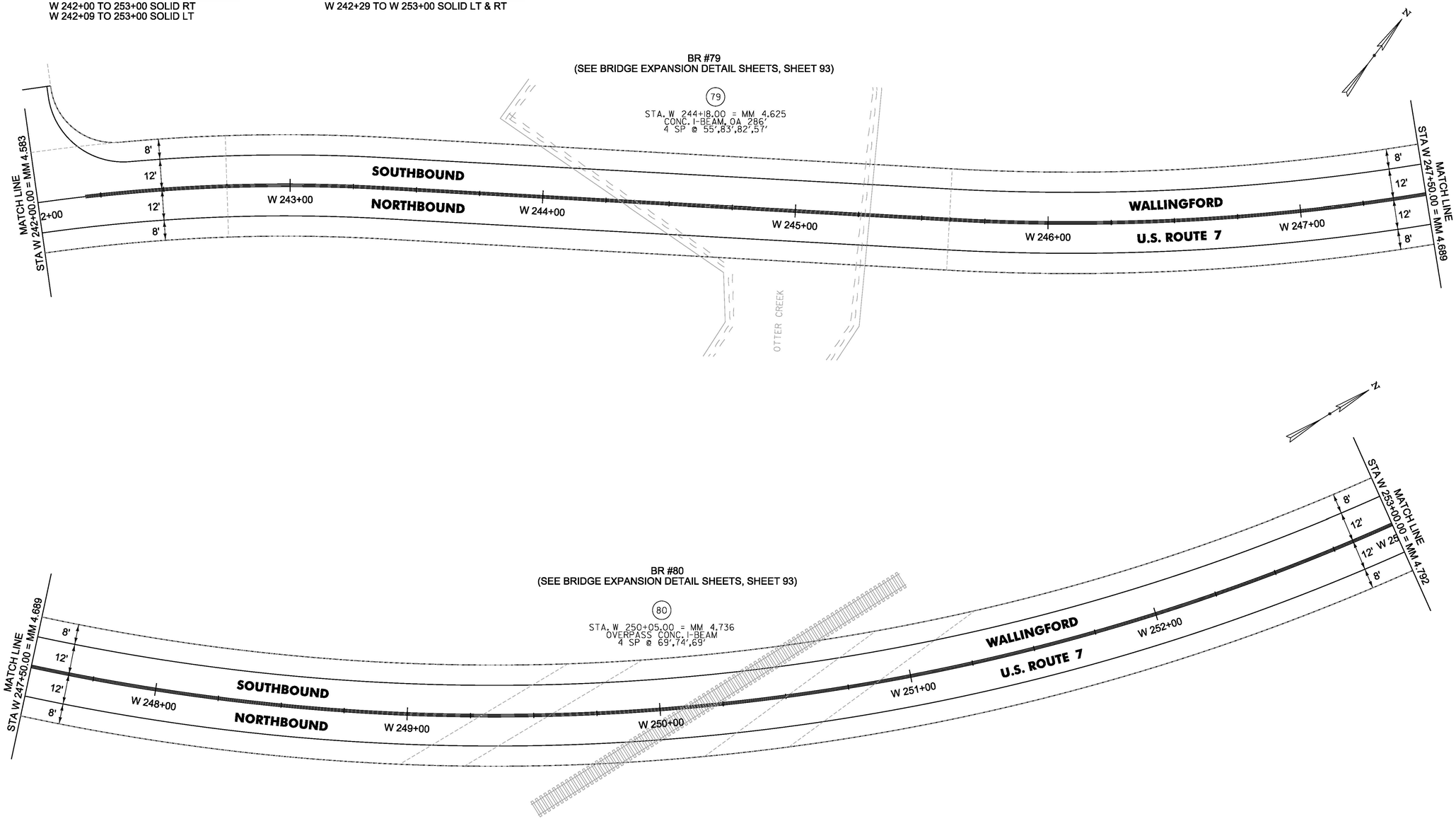
PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout35.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 35	SHEET 49 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 242+00 TO 253+00 SOLID RT
W 242+09 TO 253+00 SOLID LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 242+29 TO W 253+00 SOLID LT & RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 242+00 TO 253+00 SOLID RT
W 242+09 TO 253+00 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 242+29 TO W 253+00 SOLID LT & RT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout36.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 36	SHEET 50 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 253+00 TO 264+00 SOLID LT
W 253+00 TO 257+54 SOLID RT
W 257+77 TO 264+00 SOLID LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 253+00 TO W 257+46 SOLID LT & RT
W 257+66 DOUBLE SOLID RT (TH 68)
W 257+86 TO W 264+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 257+66 TO W 257+84 RT (TH 66)

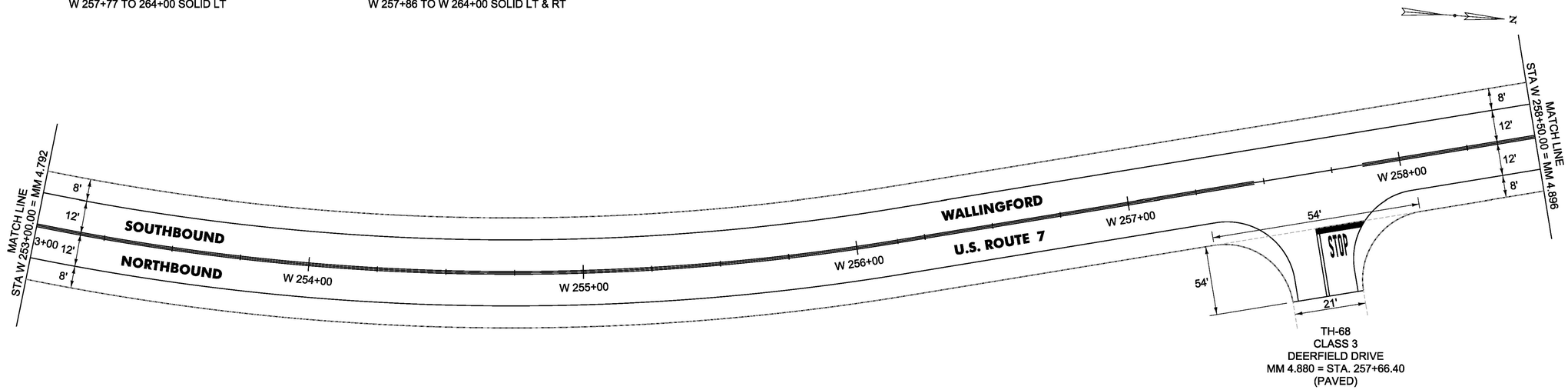
SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 257+74 RT "STOP" (TH 68) (4 EA)

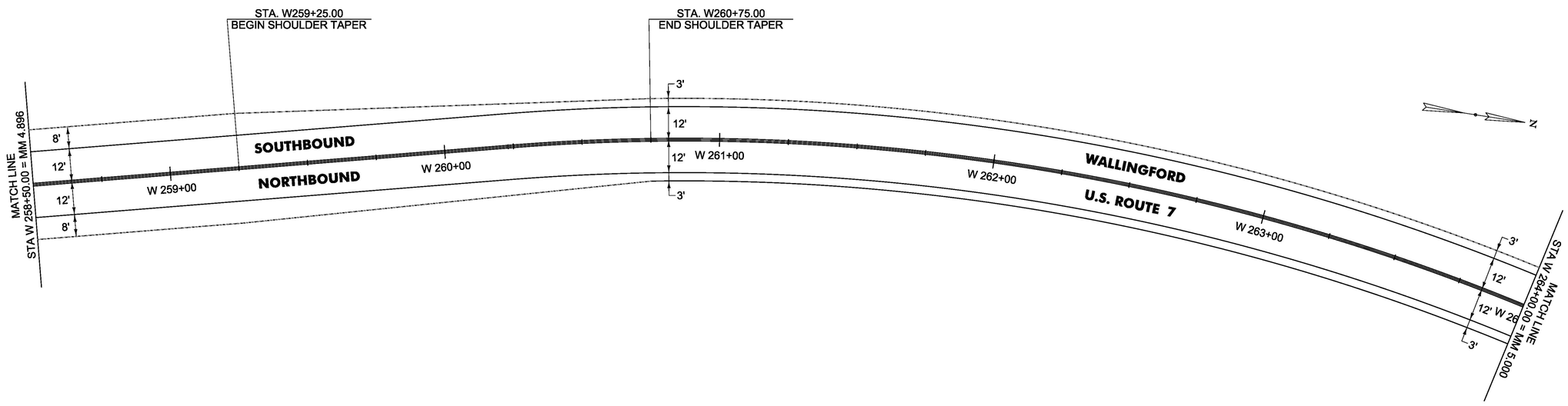
TEMPORARY 4 INCH WHITE LINE, PAINT
W 253+00 TO 264+00 SOLID LT
W 253+00 TO 257+54 SOLID RT
W 257+77 TO 264+00 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 253+00 TO W 257+46 SOLID LT & RT
W 257+66 DOUBLE SOLID RT (TH 68)
W 257+86 TO W 264+00 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
W 257+66 TO W 257+84 RT (TH 66)

TEMPORARY LETTER OR SYMBOL, PAINT
W 257+74 RT "STOP" (TH 68) (4 EA)





NOT TO SCALE

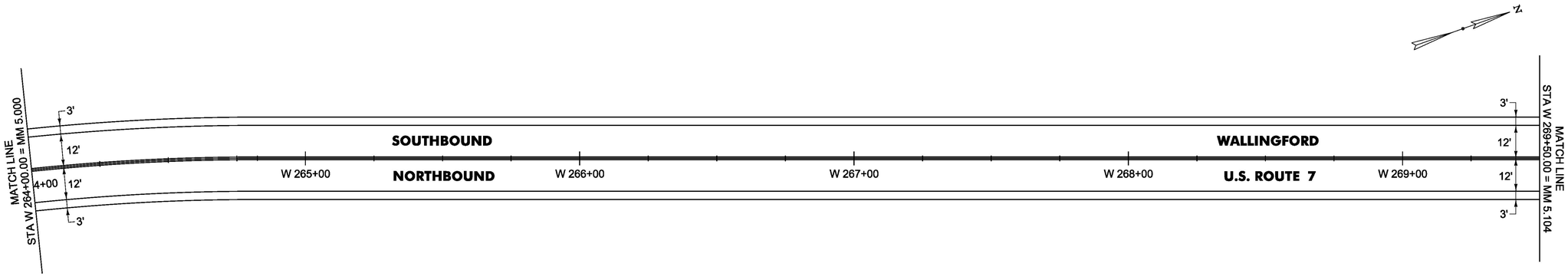
PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout37.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 37	SHEET 51 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 264+00 TO W 269+50 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 264+00 TO W 269+50 SOLID LT & RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 264+00 TO W 269+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 264+00 TO W 269+50 SOLID LT & RT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

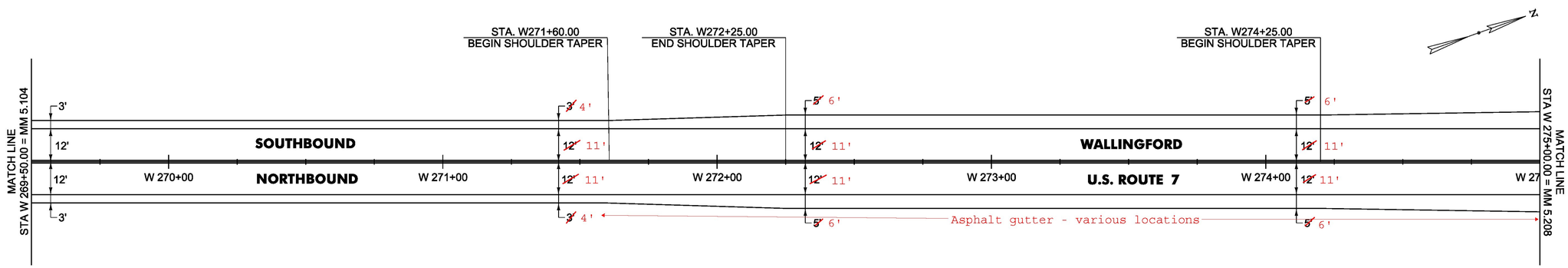
FILE NAME: layout38.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 38		SHEET 52 OF 105	

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 269+50 TO W 275+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 269+50 TO W 275+00 SOLID LT & RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 269+50 TO W 275+00 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 269+50 TO W 275+00 SOLID LT & RT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout39.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 39	SHEET 53 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 275+00 TO W 280+50 SOLID LT
W 275+00 TO W 277+90 SOLID RT
W 278+10 TO W 280+50 SOLID RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 275+00 TO W 280+50 SOLID LT
W 275+00 TO W 277+90 SOLID RT
W 278+10 TO W 280+50 SOLID RT

SPECIAL PROVISION(DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)
W 278+50 RT (HYD. CROSS HATCHING)

TEMPORARY 8 INCH WHITE LINE, PAINT
W 278+50 RT (HYD. CROSS HATCHING)

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 275+00 TO W 277+86 SOLID LT & RT
W 278+20 DOUBLE SOLID LT
W 278+26 TO W 280+05 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 275+00 TO W 277+86 SOLID LT & RT
W 278+20 DOUBLE SOLID LT
W 278+26 TO W 280+05 SOLID LT & RT

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 278+06 TO W 278+18 RT (TH 17)

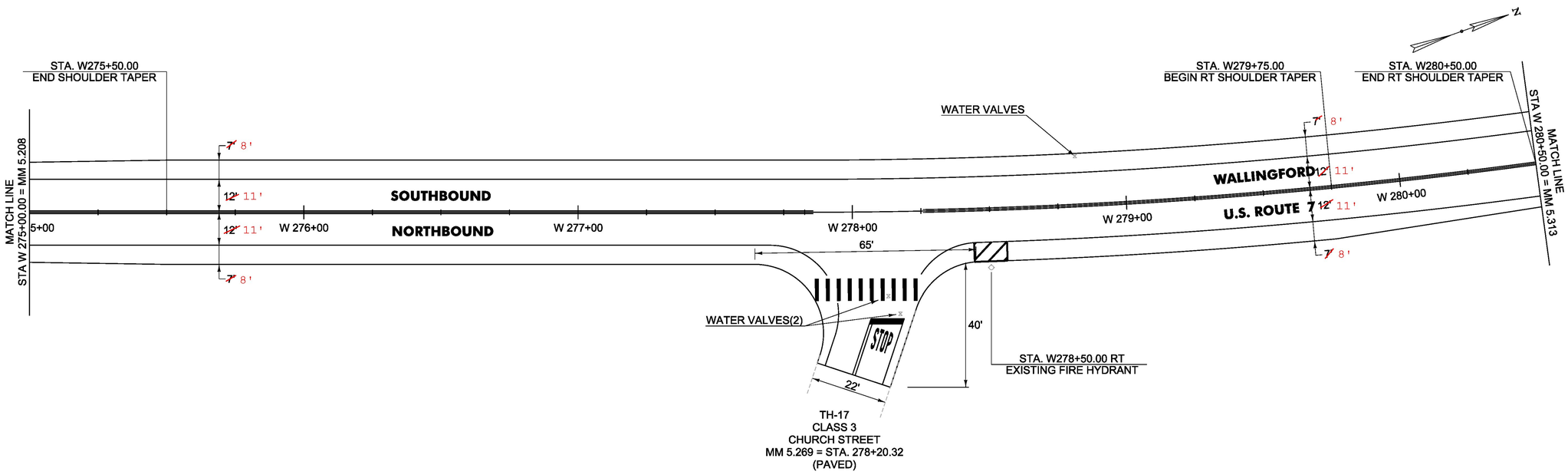
TEMPORARY 24 INCH STOP BAR, PAINT
W 278+06 TO W 278+18 RT (TH 17)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 278+12 RT "STOP" (TH 17) (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
W 278+12 RT "STOP" (TH 17) (4 EA)

SPECIAL PROVISION(DURABLE CROSSWALK MARKING, POLYUREA)(28 MILS)
W 277+86 TO W 278+26 RT (TH 17)

TEMPORARY CROSSWALK MARKING, PAINT
W 277+86 TO W 278+26 RT (TH 17)



NOTE: EXISTING WATER VALVES AND SEWER MANHOLES SHALL BE ADJUSTED BY OTHERS IF NECESSARY.

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout40.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 40		SHEET	54 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 280+50 TO W 280+56 SOLID RT
W 280+50 TO W 281+31 SOLID LT
W 281+13 TO W 286+00 SOLID RT
W 281+50 TO W 286+00 SOLID LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 280+50 TO W 280+64 SOLID LT & RT
W 281+05 TO W 281+16 SOLID LT & RT
W 281+26 DOUBLE SOLID LT
W 281+56 TO W 286+00 SOLID LT & RT

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 281+25 TO W 281+37 LT (TH 56)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 281+30 LT "STOP" (TH 56) (4 EA)

SPECIAL PROVISION(DURABLE CROSSWALK MARKING, POLYUREA)(28 MILS)
W 280+75 TO W 280+92 RT (TH 11)
W 281+22 TO W 281+50 LT (TH 56)

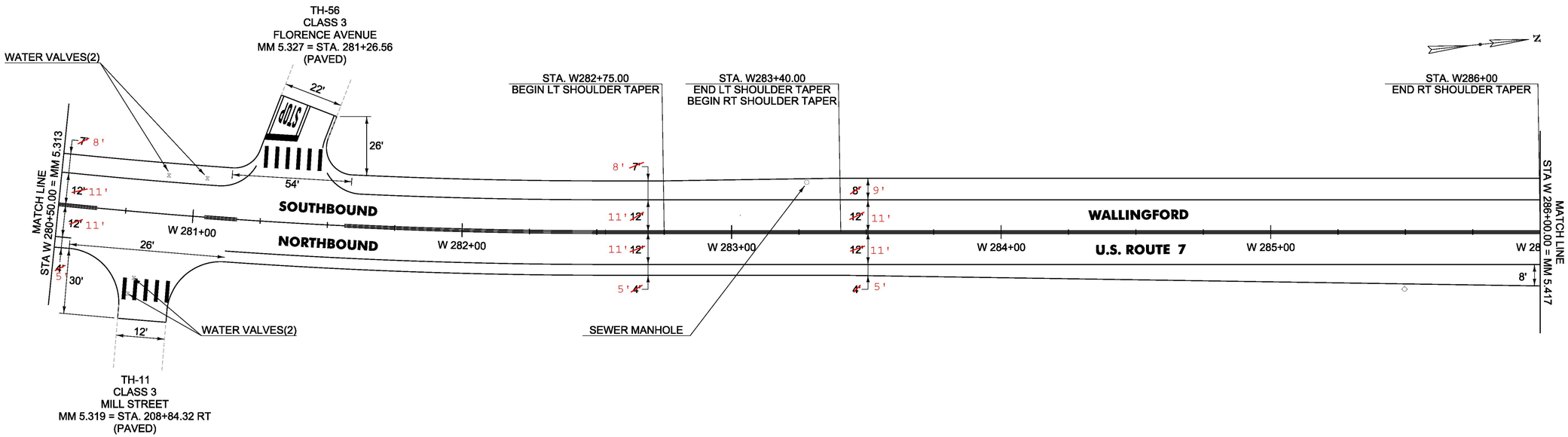
TEMPORARY 4 INCH WHITE LINE, PAINT
W 280+50 TO W 280+56 SOLID RT
W 280+50 TO W 281+31 SOLID LT
W 281+13 TO W 286+00 SOLID RT
W 281+50 TO W 286+00 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 280+50 TO W 280+64 SOLID LT & RT
W 281+05 TO W 281+16 SOLID LT & RT
W 281+26 DOUBLE SOLID LT
W 281+56 TO W 286+00 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
W 281+25 TO W 281+37 LT (TH 56)

TEMPORARY LETTER OR SYMBOL, PAINT
W 281+30 LT "STOP" (TH 56) (4 EA)

TEMPORARY CROSSWALK MARKING, PAINT
W 280+75 TO W 280+92 RT (TH 11)
W 281+22 TO W 281+50 LT (TH 56)



NOT TO SCALE

NOTE: EXISTING WATER VALVES AND SEWER MANHOLES SHALL BE ADJUSTED BY OTHERS IF NECESSARY.

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout41.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 41		SHEET	55 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 286+00 TO W 286+69 SOLID RT
W 286+00 TO W 286+73 SOLID LT
W 286+81 TO W 286+88 SOLID RT
W 286+83 TO W 286+92 SOLID LT
W 287+14 TO W 287+26 SOLID RT
W 287+22 TO W 287+30 SOLID LT
W 287+39 TO W 291+50 SOLID RT
W 287+39 TO W 291+50 SOLID LT

VT ROUTE 140:
W 287+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 286+00 TO W 286+69 SOLID RT
W 286+00 TO W 286+73 SOLID LT
W 286+81 TO W 286+88 SOLID RT
W 286+83 TO W 286+92 SOLID LT
W 287+14 TO W 287+26 SOLID RT
W 287+22 TO W 287+30 SOLID LT
W 287+39 TO W 291+50 SOLID RT
W 287+39 TO W 291+50 SOLID LT

VT ROUTE 140:
W 287+00 SOLID RT & LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 286+00 TO W 286+64 SOLID RT & LT
W 287+43 TO W 291+50 SOLID RT & LT

VT ROUTE 140:
W 287+00 DOUBLE SOLID RT
W 287+00 DOUBLE SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 286+00 TO W 286+64 SOLID RT & LT
W 287+43 TO W 291+50 SOLID RT & LT

VT ROUTE 140:
W 287+00 DOUBLE SOLID RT
W 287+00 DOUBLE SOLID LT

SPECIAL PROVISION(DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)
W 290+00 LT (HYD. CROSS HATCHING)

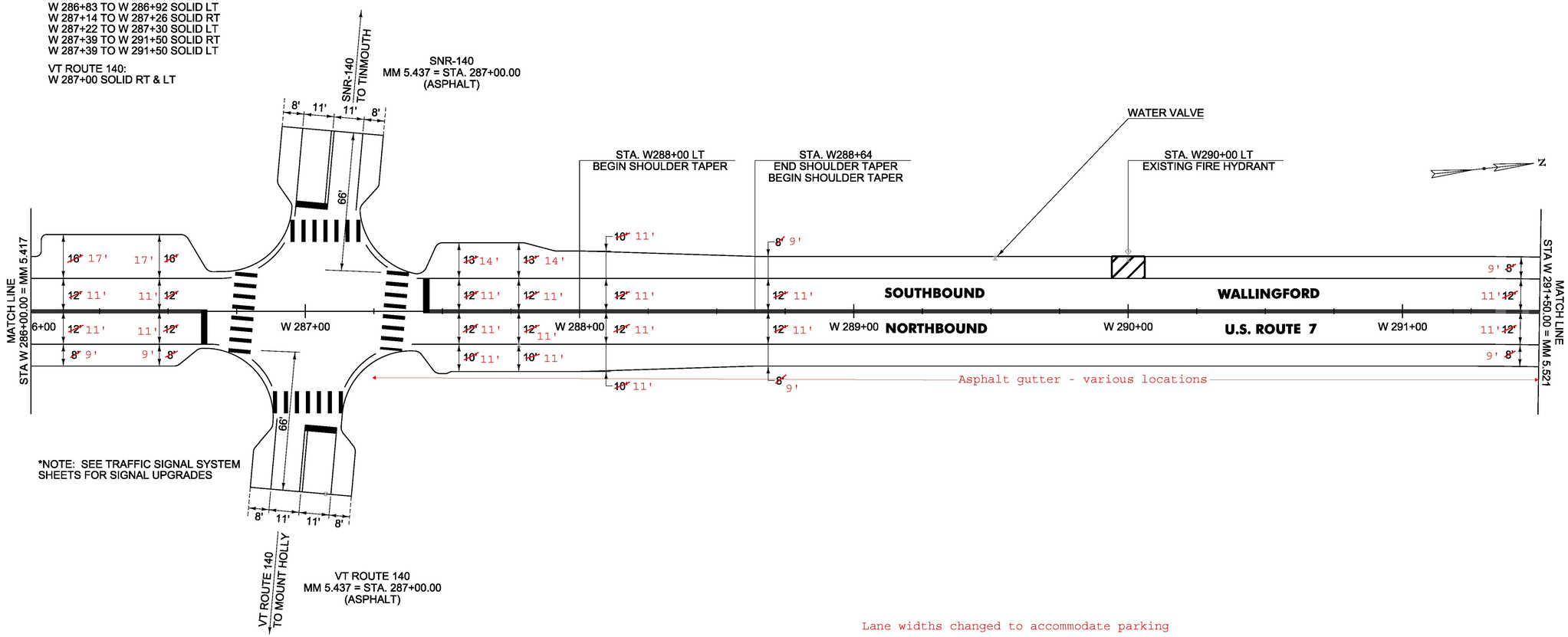
TEMPORARY 8 INCH WHITE LINE, PAINT
W 290+00 LT (HYD. CROSS HATCHING)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 286+63 RT
W 287+00 RT & LT (VT ROUTE 140)
W 287+44 LT

TEMPORARY 24 INCH STOP BAR, PAINT
W 286+63 RT
W 287+00 RT & LT (VT ROUTE 140)
W 287+44 LT

SPECIAL PROVISION(DURABLE CROSSWALK MARKING, POLYUREA)(28 MILS)
W 286+77
W 286+88 TO W 287+14 RT
W 286+93 TO W 287+21 LT
W 287+33

TEMPORARY CROSSWALK MARKING, PAINT
W 286+77
W 286+88 TO W 287+14 RT
W 286+93 TO W 287+21 LT
W 287+33



*NOTE: SEE TRAFFIC SIGNAL SYSTEM SHEETS FOR SIGNAL UPGRADES

Lane widths changed to accommodate parking

NOT TO SCALE

NOTE: EXISTING WATER VALVES AND SEWER MANHOLES SHALL BE ADJUSTED BY OTHERS IF NECESSARY.

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout42.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 42		SHEET	56 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 291+50 TO W 295+68 SOLID RT
W 291+50 TO W 293+56 SOLID LT
W 293+78 TO W 297+00 SOLID LT
W 295+90 TO W 297+00 SOLIDRT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 291+50 TO W 295+68 SOLID RT
W 291+50 TO W 293+56 SOLID LT
W 293+78 TO W 297+00 SOLID LT
W 295+90 TO W 297+00 SOLIDRT

SPECIAL PROVISION(DURABLE CROSSWALK MARKING, POLYUREA)(28 MILS)
W 293+62 LT (TH 58)
W 295+85 RT (TH 10)

TEMPORARY CROSSWALK MARKING, PAINT
W 293+62 LT (TH 58)
W 295+85 RT (TH 10)

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 291+50 TO W 293+47 SOLID RT & LT
W 293+67 DOUBLE SOLID LT (TH 58)
W 293+87 TO W 295+59 SOLID RT & LT
W 295+79 DOUBLE SOLID RT (TH 10)

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 291+50 TO W 293+47 SOLID RT & LT
W 293+67 DOUBLE SOLID LT (TH 58)
W 293+87 TO W 295+59 SOLID RT & LT
W 295+79 DOUBLE SOLID RT (TH 10)

SPECIAL PROVISION(DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)
W 293+53 LT (HYD. CROSS HATCHING)

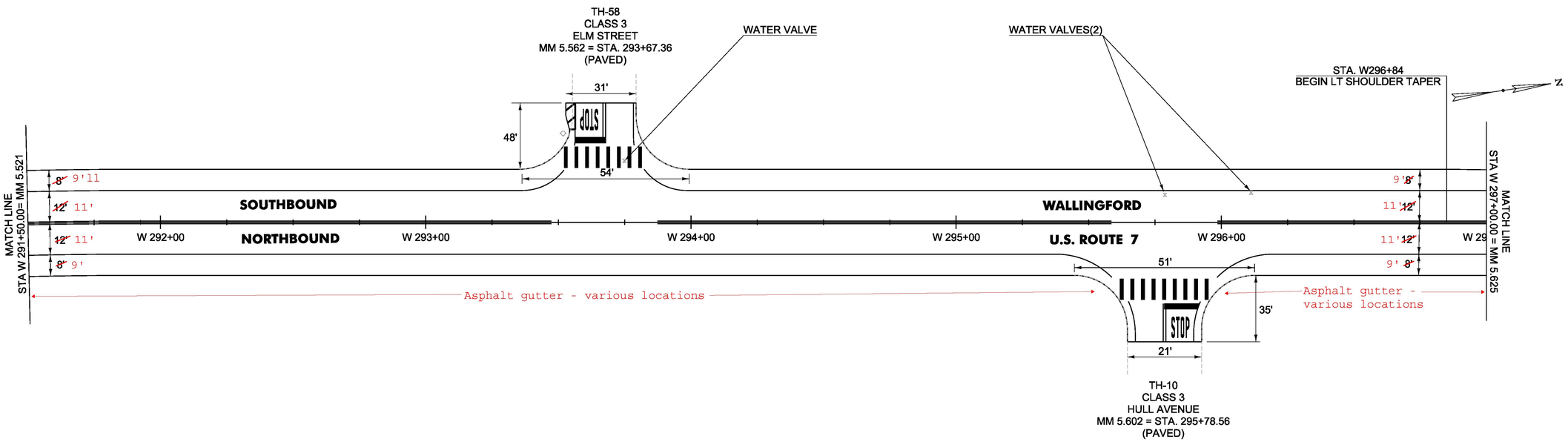
TEMPORARY 8 INCH WHITE LINE, PAINT
W 293+53 LT (HYD. CROSS HATCHING)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 293+56 TO W 293+68 LT (TH 58)
W 295+79 TO W 295+92 RT (TH 10)

TEMPORARY 24 INCH STOP BAR, PAINT
W 293+56 TO W 293+68 LT (TH 58)
W 295+79 TO W 295+92 RT (TH 10)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 293+61 LT "STOP" (TH 58) (4 EA)
W 295+85 RT "STOP" (TH 10) (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
W 293+61 LT "STOP" (TH 58) (4 EA)
W 295+85 RT "STOP" (TH 10) (4 EA)



NOTE: EXISTING WATER VALVES AND SEWER MANHOLES SHALL BE ADJUSTED BY OTHERS IF NECESSARY.

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout43.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 43	SHEET 57 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 297+00 TO W 300+59 SOLID RT
W 297+00 TO W 300+79 SOLID LT
W 301+02 TO W 302+50 SOLID LT
W 301+10 TO W 302+50 SOLID RT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 297+00 TO W 300+59 SOLID RT
W 297+00 TO W 300+79 SOLID LT
W 301+02 TO W 302+50 SOLID LT
W 301+10 TO W 302+50 SOLID RT

SPECIAL PROVISION(DURABLE CROSSWALK MARKING, POLYUREA)(28 MILS)
W 300+71 TO W 301+11 LT

TEMPORARY CROSSWALK MARKING, PAINT
W 300+71 TO W 301+11 LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 297+00 TO W 300+64 SOLID RT & LT
W 300+91 DOUBLE SOLID LT (TH 64)
W 301+10 TO W 302+50 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 297+00 TO W 300+64 SOLID RT & LT
W 300+91 DOUBLE SOLID LT (TH 64)
W 301+10 TO W 302+50 SOLID RT & LT

SPECIAL PROVISION(DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)
W 300+50 LT (HYD. CROSS HATCHING)
W 301+25 TO W 302+50 RT (CROSS HATCHING)

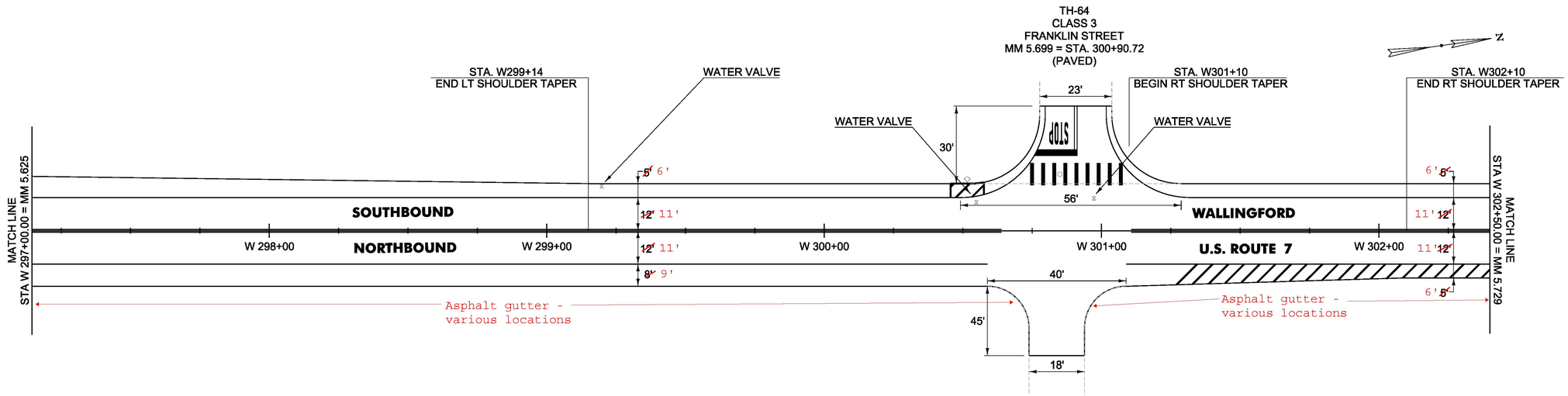
TEMPORARY 8 INCH WHITE LINE, PAINT
W 300+50 LT (HYD. CROSS HATCHING)
W 301+25 TO W 302+50 RT (CROSS HATCHING)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 300+84 LT "STOP" (TH 64) (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
W 300+84 LT "STOP" (TH 64) (4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 300+76 TO W 300+91 LT (TH 64)

DURABLE 24 INCH STOP BAR, POLYUREA
W 300+76 TO W 300+91 LT (TH 64)



NOTE: EXISTING WATER VALVES AND SEWER MANHOLES SHALL BE ADJUSTED BY OTHERS IF NECESSARY.

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout44.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	N. PAPPAS
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 44		SHEET 58 OF 105	

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 302+50 TO W 303+19 RT
W 302+50 TO W 304+48 LT
W 303+69 TO W 308+00 RT
W 304+71 TO W 308+00 LT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 302+50 TO W 303+19 RT
W 302+50 TO W 304+48 LT
W 303+69 TO W 308+00 RT
W 304+71 TO W 308+00 LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 302+50 TO W 303+19 RT & LT
W 304+60 DOUBLE SOLID LT
W 303+64 TO W 304+40 RT & LT
W 304+80 TO W 308+00 RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 302+50 TO W 303+19 RT & LT
W 304+60 DOUBLE SOLID LT
W 303+64 TO W 304+40 RT & LT
W 304+80 TO W 308+00 RT & LT

SPECIAL PROVISION(DURABLE 8 INCH WHITE LINE, POLYUREA)(28 MILS)
W 302+50 TO 303+16 RT (CROSS HATCHING)

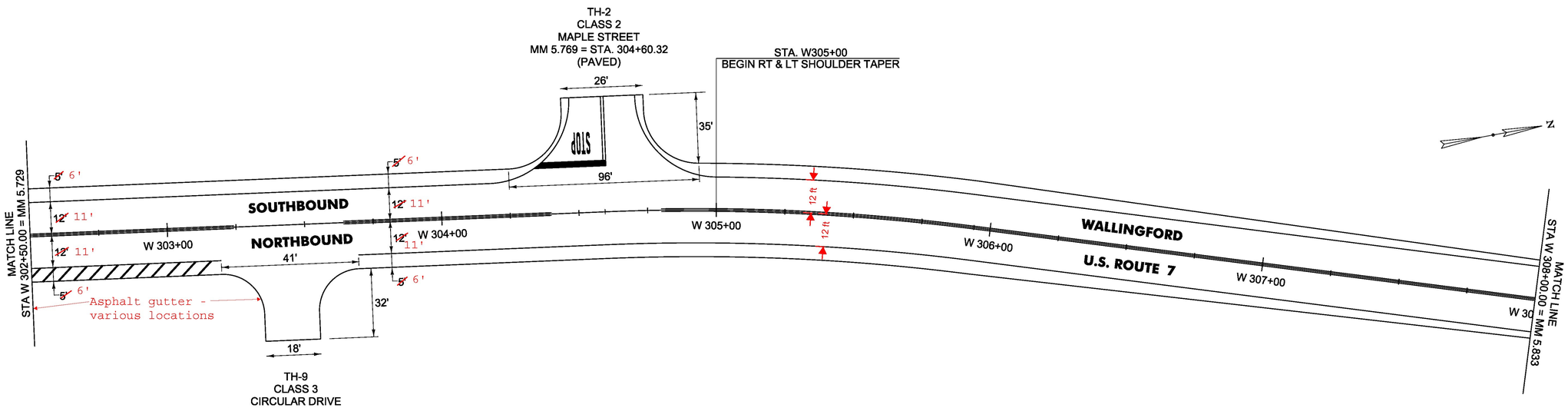
TEMPORARY 8 INCH WHITE LINE, PAINT
W 302+50 TO 303+16 RT (CROSS HATCHING)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 304+50 LT "STOP" (TH 2) (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
W 304+50 LT "STOP" (TH 2) (4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 304+34 TO W 304+60 LT (TH 2)

TEMPORARY 24 INCH STOP BAR, PAINT
W 304+34 TO W 304+60 LT (TH 2)



NOT TO SCALE

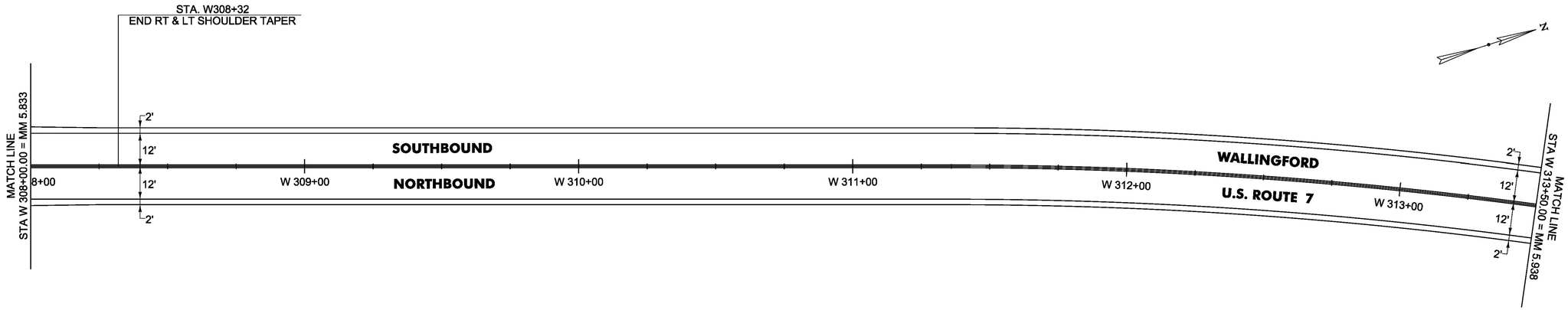
PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout45.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 45	SHEET 59 OF 105

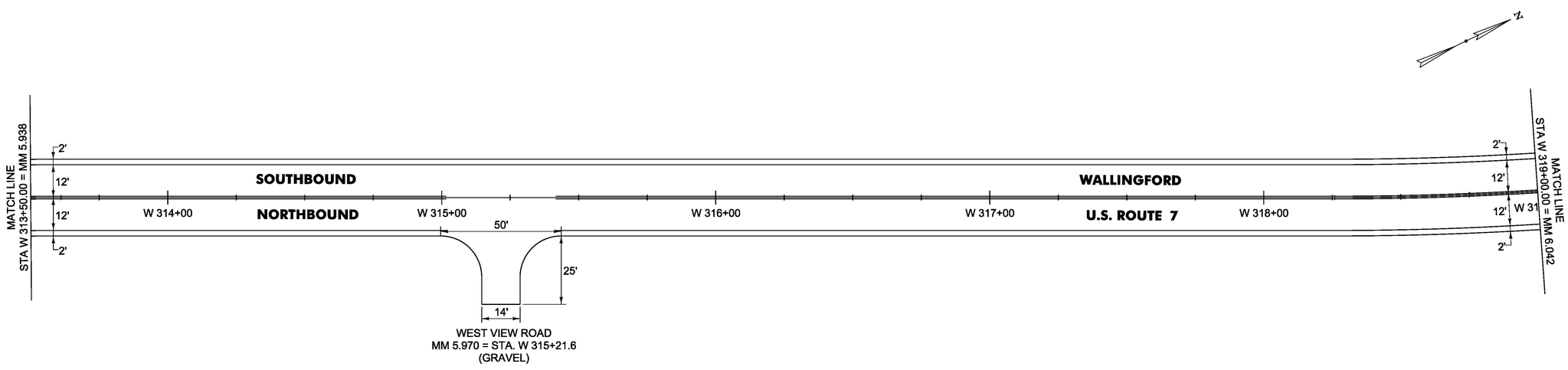
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 308+00 TO W 315+02 RT & LT
W 315+42 TO W 319+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 308+00 TO W 315+02 RT & LT
W 315+42 TO W 319+00 RT & LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 308+00 TO W 315+02RT & LT
W 315+42 TO W 319+00 RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 308+00 TO W 315+02RT & LT
W 315+42 TO W 319+00 RT & LT





NOT TO SCALE

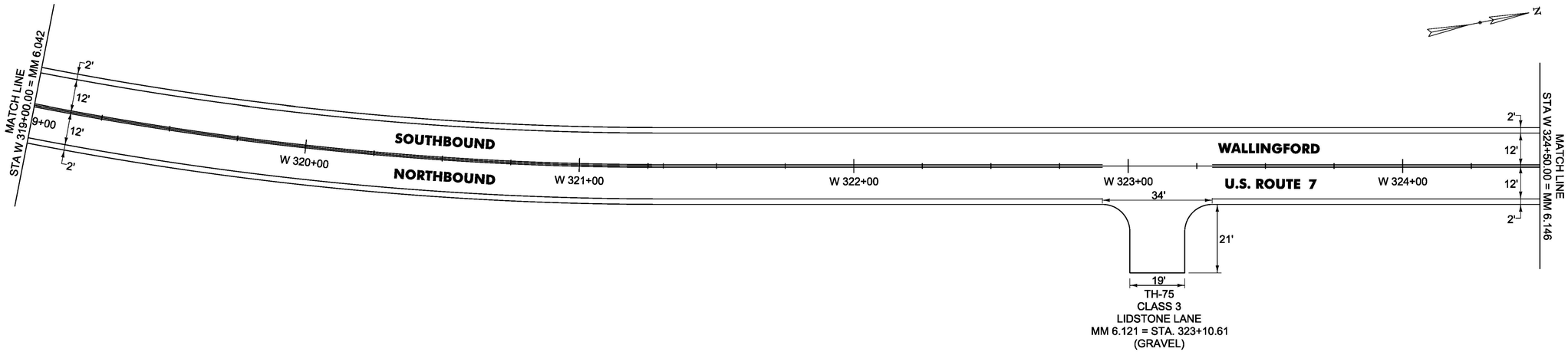
PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout46.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 46	SHEET 60 OF 105

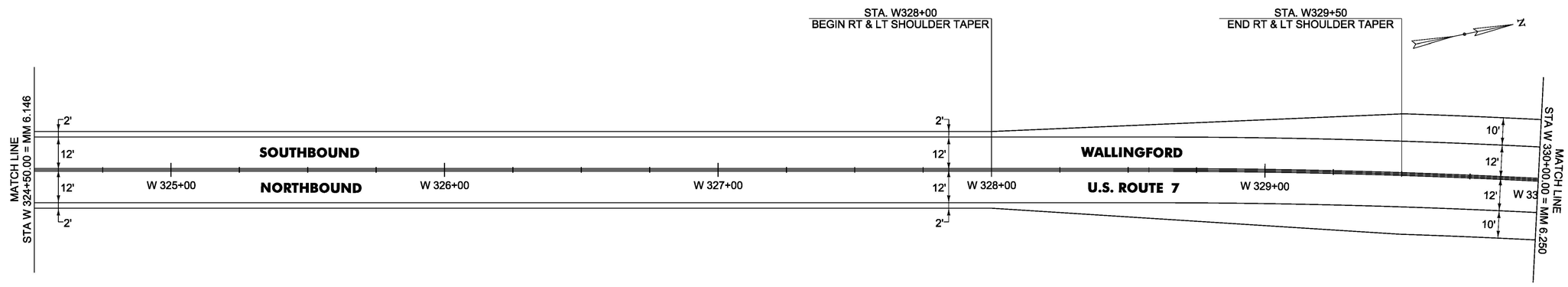
SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 319+00 TO W 322+91 RT
W 322+31 TO W 330+00 LT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 319+00 TO W 322+91 RT
W 322+31 TO W 330+00 LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 319+00 TO W 322+91 RT
W 322+31 TO W 330+00 LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
W 319+00 TO W 322+91 RT
W 322+31 TO W 330+00 LT





NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout47.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 47	SHEET 61 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
W 330+00 TO W 331+96 RT
W 332+19 TO W 335+50 RT
W 330+00 TO W 332+62 LT
W 332+88 TO W 334+59 LT
W 334+80 TO W 335+50 LT

TEMPORARY 4 INCH WHITE LINE, PAINT
W 330+00 TO W 331+96 RT
W 332+19 TO W 335+50 RT
W 330+00 TO W 332+62 LT
W 332+88 TO W 334+59 LT
W 334+80 TO W 335+50 LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
W 330+00 TO W 331+77 RT & LT
W 332+17 TO W 332+52 RT & LT
W 332+94 TO W 334+24 RT & LT
W 334+64 TO W 335+50 RT & LT

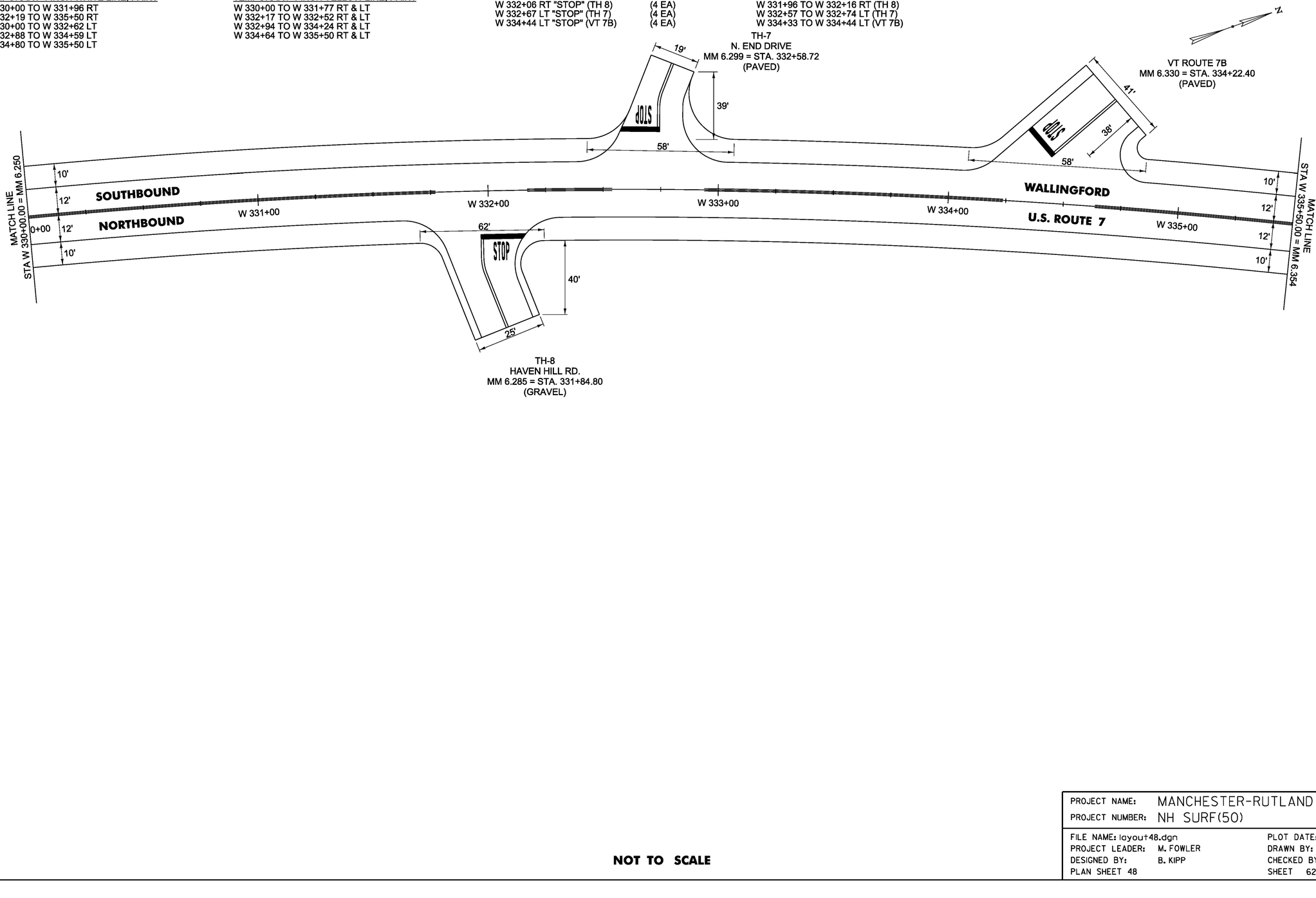
TEMPORARY 4 INCH YELLOW LINE, PAINT
W 330+00 TO W 331+77 RT & LT
W 332+17 TO W 332+52 RT & LT
W 332+94 TO W 334+24 RT & LT
W 334+64 TO W 335+50 RT & LT

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
W 332+06 RT "STOP" (TH 8) (4 EA)
W 332+67 LT "STOP" (TH 7) (4 EA)
W 334+44 LT "STOP" (VT 7B) (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
W 332+06 RT "STOP" (TH 8) (4 EA)
W 332+67 LT "STOP" (TH 7) (4 EA)
W 334+44 LT "STOP" (VT 7B) (4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
W 331+96 TO W 332+16 RT (TH 8)
W 332+57 TO W 332+74 LT (TH 7)
W 334+33 TO W 334+44 LT (VT 7B)

DURABLE 24 INCH STOP BAR, POLYUREA
W 331+96 TO W 332+16 RT (TH 8)
W 332+57 TO W 332+74 LT (TH 7)
W 334+33 TO W 334+44 LT (VT 7B)



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout48.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 48	SHEET 62 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.354 TO MM 6.518 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT
WALLINGFORD:
MM 6.354 TO MM 6.518 RT & LT

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.778 RT - MERGE ARROW (SOUTHBOUND)
MM 6.744 RT - MERGE ARROW (SOUTHBOUND)

TEMPORARY LETTER OR SYMBOL, PAINT
WALLINGFORD:
MM 6.778 RT - MERGE ARROW (SOUTHBOUND) (1 EA)
MM 6.744 RT - MERGE ARROW (SOUTHBOUND) (1 EA)

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.518 TO MM 6.790 RT & LT
MM 6.705 TO MM 6.790 RT DASHED (NORTHBOUND)

TEMPORARY 6 INCH WHITE LINE, PAINT
WALLINGFORD:
MM 6.518 TO MM 6.790 RT & LT
MM 6.705 TO MM 6.790 RT DASHED (NORTHBOUND)

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.354 TO MM 6.465 SOLID RT & LT
MM 6.465 TO MM 6.518 DOUBLE SOLID RT & LT

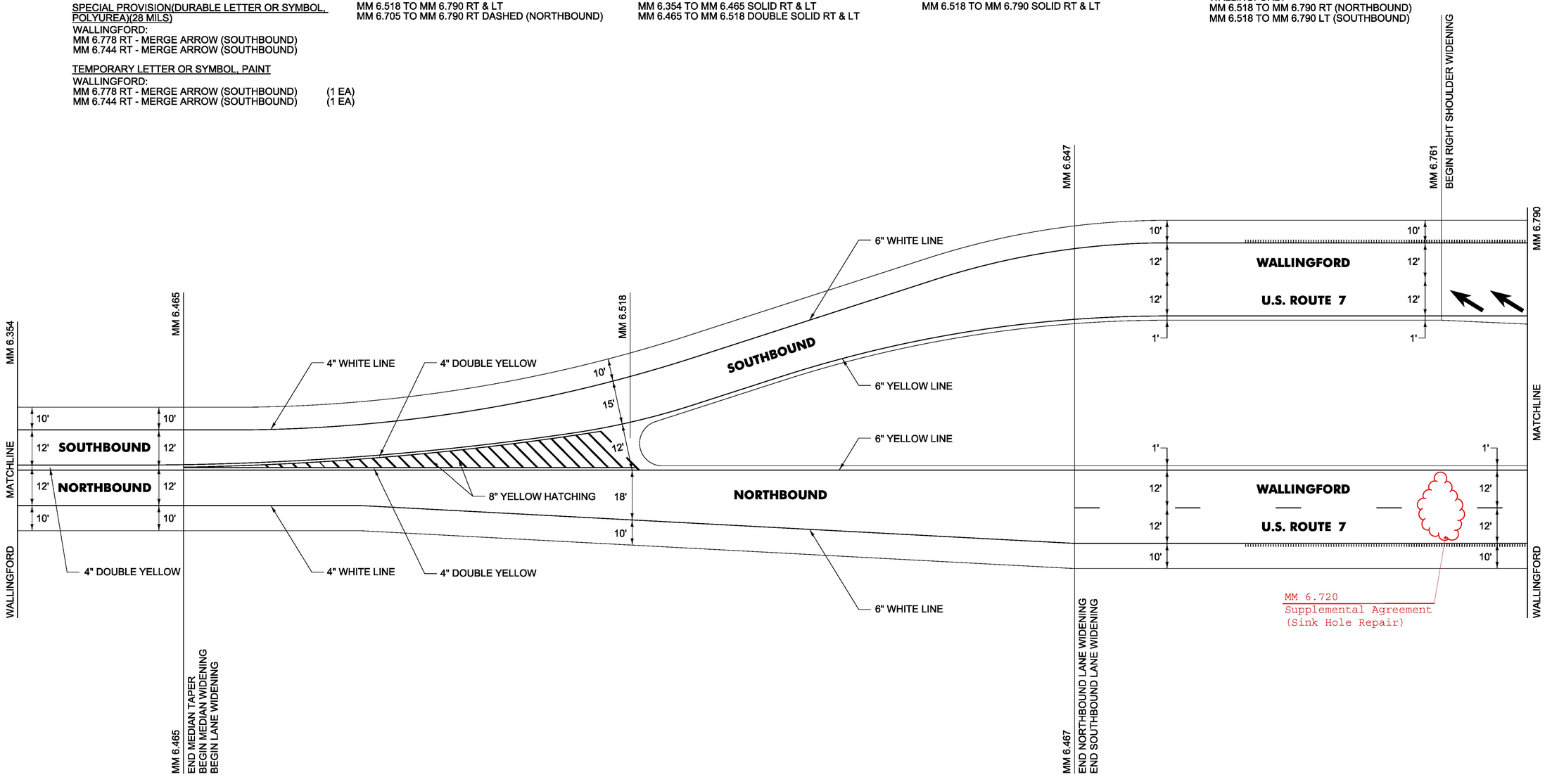
TEMPORARY 4 INCH YELLOW LINE, PAINT
WALLINGFORD:
MM 6.354 TO MM 6.465 SOLID RT & LT
MM 6.465 TO MM 6.518 DOUBLE SOLID RT & LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.518 TO MM 6.790 SOLID RT & LT

TEMPORARY 6 INCH YELLOW LINE, PAINT
WALLINGFORD:
MM 6.518 TO MM 6.790 SOLID RT & LT

SPECIAL PROVISION(DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.465 TO MM 6.518 HATCHED MEDIAN

MILLED RUMBLE STRIPS (SHOULDER)
WALLINGFORD:
MM 6.518 TO MM 6.790 RT (NORTHBOUND)
MM 6.518 TO MM 6.790 LT (SOUTHBOUND)



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout49.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 49	SHEET 63 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.790 TO MM 7.110 SOLID LT (SOUTHBOUND)
MM 6.790 TO MM 7.110 SOLID RT (NORTHBOUND)
MM 6.790 TO MM 7.110 DASHED CL (NORTHBOUND)
MM 6.812 TO MM 7.110 DASHED CL (SOUTHBOUND)

CLARENDON:
MM 0.000 TO MM 0.248 SOLID LT (SOUTHBOUND)
MM 0.000 TO MM 0.248 SOLID RT (NORTHBOUND)
MM 0.000 TO MM 0.248 DASHED CL (SOUTHBOUND)
MM 0.000 TO MM 0.248 DASHED CL (NORTHBOUND)

TEMPORARY 6 INCH WHITE LINE, PAINT
WALLINGFORD:
MM 6.790 TO MM 7.110 SOLID LT (SOUTHBOUND)
MM 6.790 TO MM 7.110 SOLID RT (NORTHBOUND)
MM 6.790 TO MM 7.100 DASHED CL (NORTHBOUND)
MM 6.812 TO MM 7.100 DASHED CL (SOUTHBOUND)

CLARENDON:
MM 0.000 TO MM 0.248 SOLID LT (SOUTHBOUND)
MM 0.000 TO MM 0.248 SOLID RT (NORTHBOUND)
MM 0.000 TO MM 0.248 DASHED CL (SOUTHBOUND)
MM 0.000 TO MM 0.248 DASHED CL (NORTHBOUND)

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.790 TO MM 7.110 SOLID RT (SOUTHBOUND)
MM 6.790 TO MM 7.110 SOLID LT (NORTHBOUND)

CLARENDON:
MM 0.000 TO MM 0.248 SOLID RT (SOUTHBOUND)
MM 0.000 TO MM 0.248 SOLID LT (NORTHBOUND)

TEMPORARY 6 INCH YELLOW LINE, PAINT
WALLINGFORD:
MM 6.790 TO MM 7.110 SOLID RT (SOUTHBOUND)
MM 6.790 TO MM 7.110 SOLID LT (NORTHBOUND)

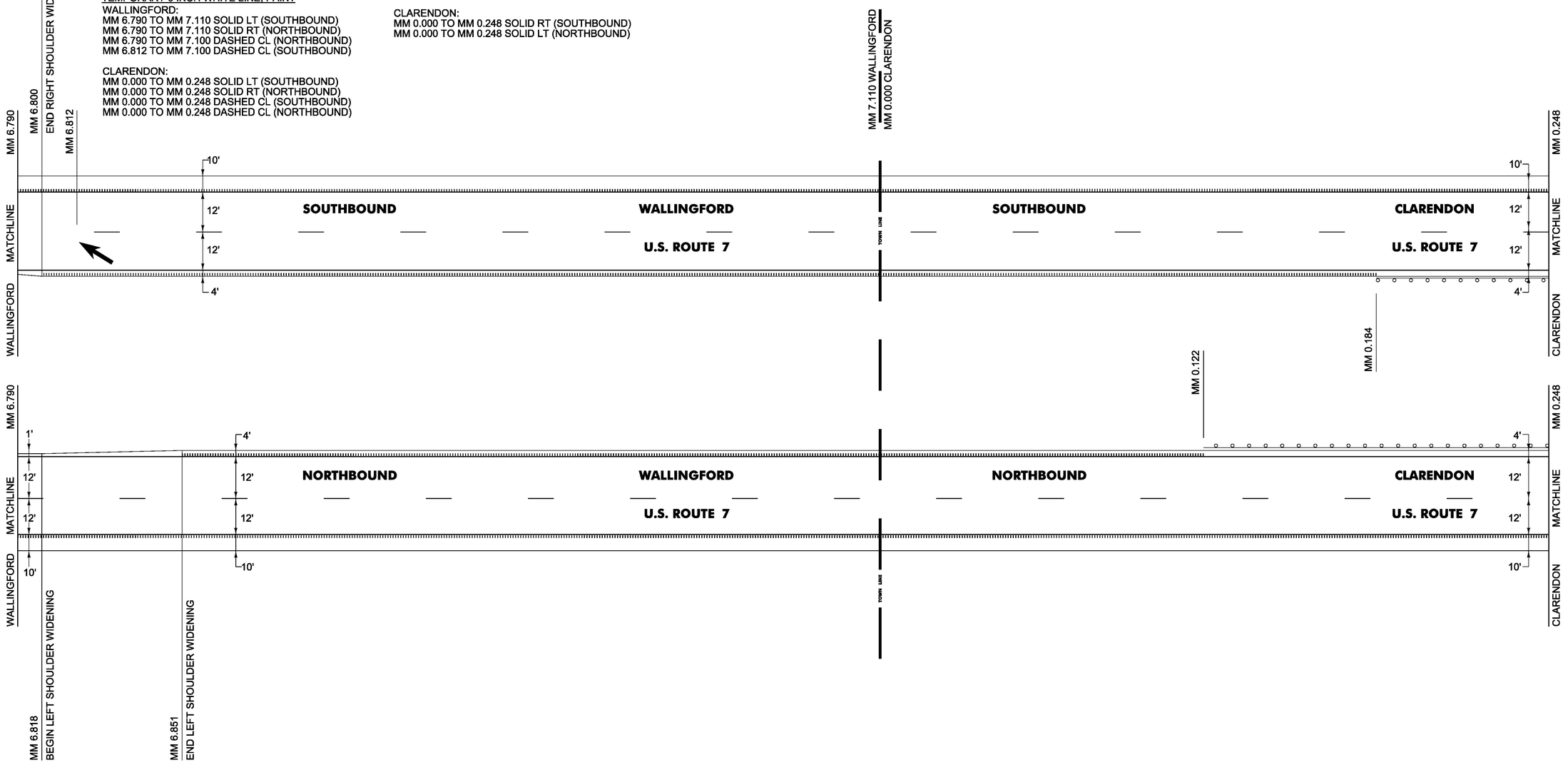
CLARENDON:
MM 0.000 TO MM 0.248 SOLID RT (SOUTHBOUND)
MM 0.000 TO MM 0.248 SOLID LT (NORTHBOUND)

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
WALLINGFORD:
MM 6.812 RT - MERGE ARROW (SOUTHBOUND) (1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
WALLINGFORD:
MM 6.812 RT - MERGE ARROW (SOUTHBOUND) (1 EA)

MILLED RUMBLE STRIPS (SHOULDER)
WALLINGFORD:
MM 6.790 TO MM 7.110 RT (NORTHBOUND)
MM 6.790 TO MM 7.110 LT (SOUTHBOUND)
MM 6.800 TO MM 7.110 RT (SOUTHBOUND)
MM 6.851 TO MM 7.110 LT (NORTHBOUND)

CLARENDON:
MM 0.000 TO MM 0.248 RT (NORTHBOUND)
MM 0.000 TO MM 0.122 LT (NORTHBOUND)
MM 0.000 TO MM 0.184 RT (SOUTHBOUND)
MM 0.000 TO MM 0.248 LT (SOUTHBOUND)



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout50.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 50	SHEET 64 OF 105

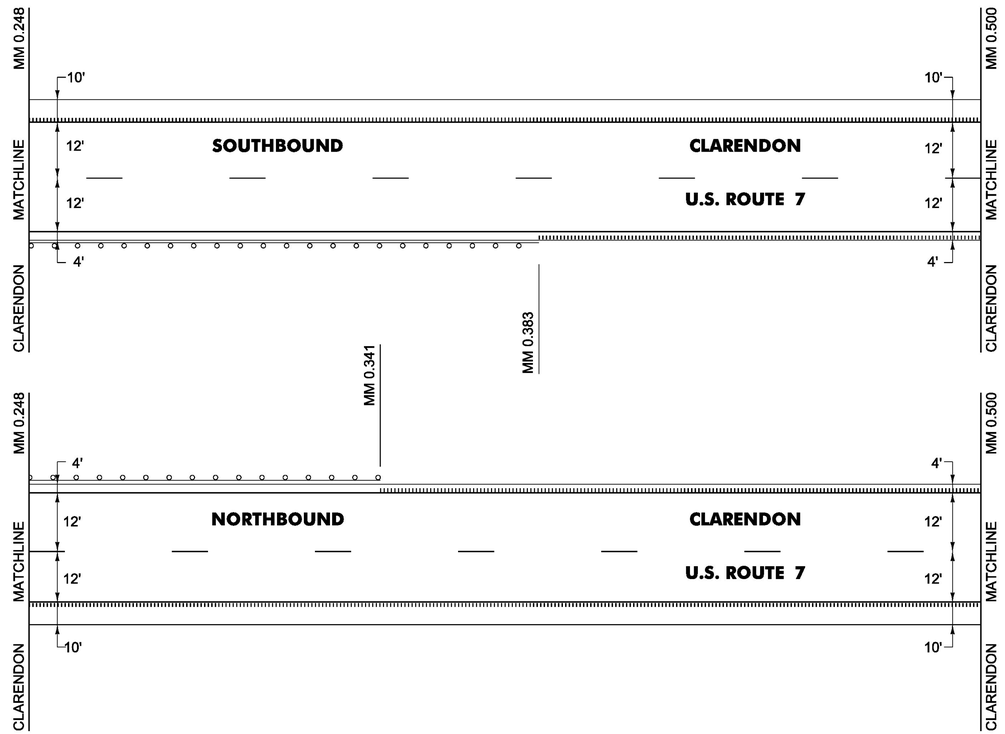
SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON:
MM 0.248 - MM 0.500 SOLID RT (NORTHBOUND)
MM 0.248 - MM 0.500 SOLID LT (SOUTHBOUND)
MM 0.248 - MM 0.500 DASHED CL (NORTHBOUND)
MM 0.248 - MM 0.500 DASHED CL (SOUTHBOUND)

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON:
MM 0.248 - MM 0.500 SOLID RT (NORTHBOUND)
MM 0.248 - MM 0.500 SOLID LT (SOUTHBOUND)
MM 0.248 - MM 0.500 DASHED CL (NORTHBOUND)
MM 0.248 - MM 0.500 DASHED CL (SOUTHBOUND)

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON:
MM 0.248 - MM 0.500 SOLID RT (SOUTHBOUND)
MM 0.248 - MM 0.500 SOLID LT (NORTHBOUND)

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON:
MM 0.248 - MM 0.500 SOLID RT (SOUTHBOUND)
MM 0.248 - MM 0.500 SOLID LT (NORTHBOUND)

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON:
MM 0.248 - MM 0.500 SOLID LT (SOUTHBOUND)
MM 0.248 - MM 0.500 SOLID RT (NORTHBOUND)
MM 0.341 - MM 0.500 SOLID LT (NORTHBOUND)
MM 0.383 - MM 0.500 SOLID RT (SOUTHBOUND)



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout51.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 51	SHEET 65 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (US ROUTE 7):
MM 0.500 - MM 1.000 SOLID EDGE LINE RT (NORTHBOUND)
MM 0.500 - MM 1.000 DASHED CL (NORTHBOUND)
MM 0.500 - MM 1.000 DASHED CL (SOUTHBOUND)
MM 0.500 - MM 0.744 SOLID EDGE LINE LT (SOUTHBOUND)
MM 0.762 - MM 1.000 SOLID EDGE LINE LT (SOUTHBOUND)
MM 0.762 - MM 0.803 SOLID LANE LINE LT (SOUTHBOUND)
MM 0.803 - MM 0.852 DOTTED LANE LINE LT (SOUTHBOUND)

VT ROUTE 7B:
MM 0.736 SOLID EDGE LINE RT & LT (MEDIAN)

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (US ROUTE 7):
MM 0.500 - MM 1.000 SOLID EDGE LINE RT (NORTHBOUND)
MM 0.500 - MM 1.000 DASHED CL (NORTHBOUND)
MM 0.500 - MM 1.000 DASHED CL (SOUTHBOUND)
MM 0.500 - MM 0.744 SOLID EDGE LINE LT (SOUTHBOUND)
MM 0.762 - MM 1.000 SOLID EDGE LINE LT (SOUTHBOUND)
MM 0.762 - MM 0.803 SOLID LANE LINE LT (SOUTHBOUND)
MM 0.803 - MM 0.852 DOTTED LANE LINE LT (SOUTHBOUND)

VT ROUTE 7B:
MM 0.736 SOLID EDGE LINE RT & LT (MEDIAN)

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (US ROUTE 7):
MM 0.500 - MM 0.733 SOLID EDGE LINE LT (NORTHBOUND)
MM 0.746 - MM 1.000 SOLID EDGE LINE LT (NORTHBOUND)
MM 0.500 - MM 0.744 SOLID EDGE LINE RT (SOUTHBOUND)
MM 0.762 - MM 1.000 SOLID EDGE LINE RT (SOUTHBOUND)

VT ROUTE 7B:
MM 0.736 SOLID RT & LT (MEDIAN)

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (US ROUTE 7):
MM 0.500 - MM 0.733 SOLID EDGE LINE LT (NORTHBOUND)
MM 0.746 - MM 1.000 SOLID EDGE LINE LT (NORTHBOUND)
MM 0.500 - MM 0.744 SOLID EDGE LINE RT (SOUTHBOUND)
MM 0.762 - MM 1.000 SOLID EDGE LINE RT (SOUTHBOUND)

VT ROUTE 7B:
MM 0.736 SOLID RT & LT (MEDIAN)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
VT ROUTE 7B:
MM 0.752 LT (SOUTHBOUND, US 7)
MM 0.752 RT (SOUTHBOUND, US 7)
MM 0.752 LT (NORTHBOUND, US 7)

TEMPORARY 24 INCH STOP BAR, PAINT
VT ROUTE 7B:
MM 0.752 LT (SOUTHBOUND, US 7)
MM 0.752 RT (SOUTHBOUND, US 7)
MM 0.752 LT (NORTHBOUND, US 7)

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
VT ROUTE 7B:
MM 0.736 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT
VT ROUTE 7B:
MM 0.736 SOLID RT & LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
VT ROUTE 7B:
MM 0.736 SOLID RT & LT

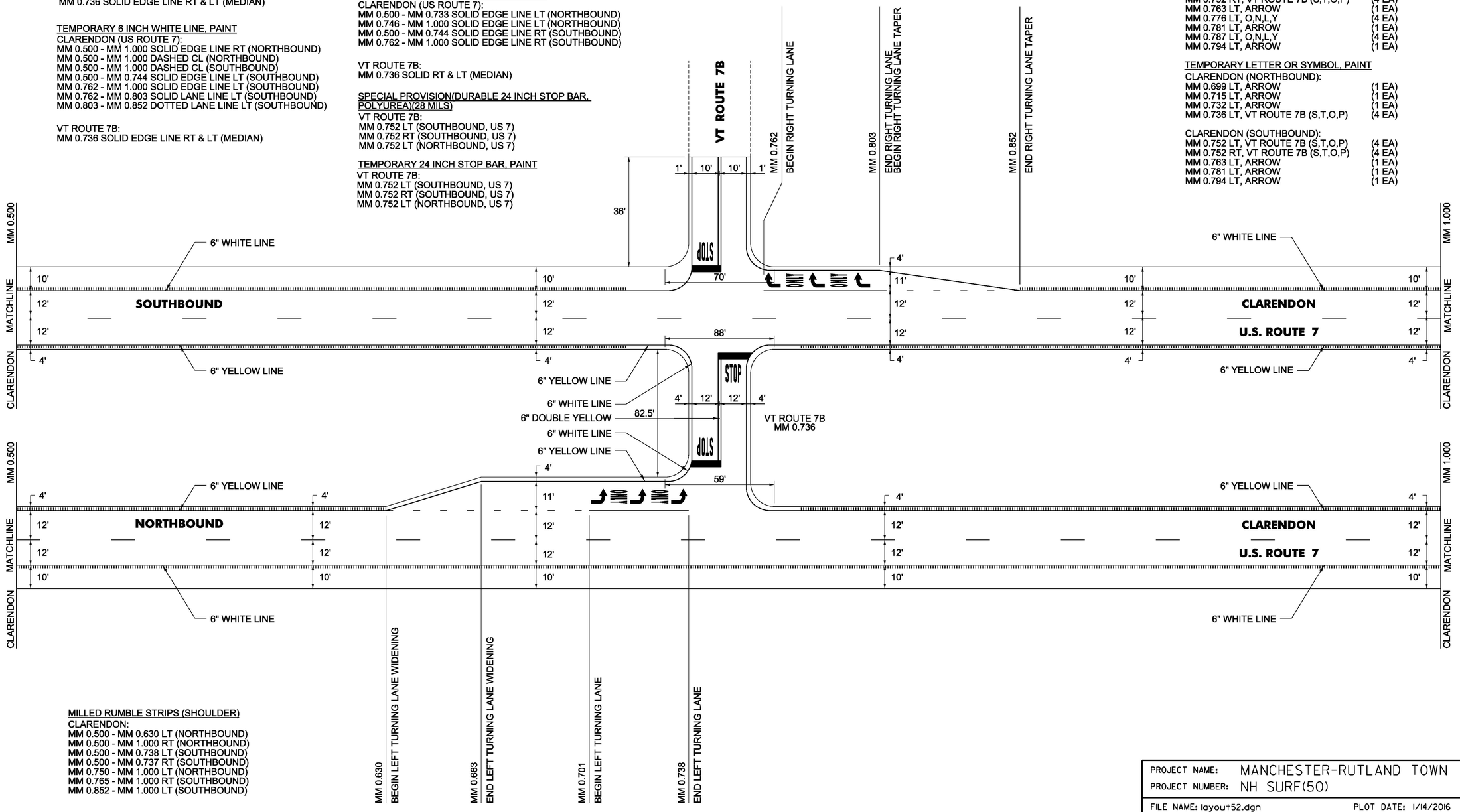
TEMPORARY 4 INCH YELLOW LINE, PAINT
VT ROUTE 7B:
MM 0.736 SOLID RT & LT

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

CLARENDON (NORTHBOUND):	
MM 0.699 LT, ARROW	(1 EA)
MM 0.707 LT, O,N,L,Y	(4 EA)
MM 0.715 LT, ARROW	(1 EA)
MM 0.724 LT, O,N,L,Y	(4 EA)
MM 0.732 LT, ARROW	(1 EA)
MM 0.736 LT, VT ROUTE 7B (S,T,O,P)	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 0.752 LT, VT ROUTE 7B (S,T,O,P)	(4 EA)
MM 0.752 RT, VT ROUTE 7B (S,T,O,P)	(4 EA)
MM 0.763 LT, ARROW	(1 EA)
MM 0.776 LT, O,N,L,Y	(4 EA)
MM 0.781 LT, ARROW	(1 EA)
MM 0.787 LT, O,N,L,Y	(4 EA)
MM 0.794 LT, ARROW	(1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

CLARENDON (NORTHBOUND):	
MM 0.699 LT, ARROW	(1 EA)
MM 0.715 LT, ARROW	(1 EA)
MM 0.732 LT, ARROW	(1 EA)
MM 0.736 LT, VT ROUTE 7B (S,T,O,P)	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 0.752 LT, VT ROUTE 7B (S,T,O,P)	(4 EA)
MM 0.752 RT, VT ROUTE 7B (S,T,O,P)	(4 EA)
MM 0.763 LT, ARROW	(1 EA)
MM 0.781 LT, ARROW	(1 EA)
MM 0.794 LT, ARROW	(1 EA)



MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON:
MM 0.500 - MM 0.630 LT (NORTHBOUND)
MM 0.500 - MM 1.000 RT (NORTHBOUND)
MM 0.500 - MM 0.738 LT (SOUTHBOUND)
MM 0.500 - MM 0.737 RT (SOUTHBOUND)
MM 0.750 - MM 1.000 LT (NORTHBOUND)
MM 0.765 - MM 1.000 RT (SOUTHBOUND)
MM 0.852 - MM 1.000 LT (SOUTHBOUND)

MM 0.630 BEGIN LEFT TURNING LANE WIDENING
MM 0.663 END LEFT TURNING LANE WIDENING
MM 0.701 BEGIN LEFT TURNING LANE
MM 0.738 END LEFT TURNING LANE

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout52.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 52	SHEET 66 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 1.000 - MM 1.250 DASHED CL
MM 1.000 - MM 1.140 SOLID EDGE LINE RT
MM 1.045 - MM 1.110 DOTTED LANE LINE RT
MM 1.110 - MM 1.140 SOLID LANE LINE RT
MM 1.154 - MM 1.250 SOLID EDGE LINE RT

CLARENDON (SOUTHBOUND):
MM 1.000 - MM 1.250 SOLID EDGE LINE LT
MM 1.000 - MM 1.250 DASHED CL
MM 1.155 - MM 1.200 SOLID LANE LINE RT
MM 1.200 - MM 1.250 DOTTED LANE LINE RT

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 1.000 - MM 1.250 DASHED CL
MM 1.000 - MM 1.140 SOLID EDGE LINE RT
MM 1.045 - MM 1.110 DOTTED LANE LINE RT
MM 1.110 - MM 1.140 SOLID LANE LINE RT
MM 1.154 - MM 1.250 SOLID EDGE LINE RT

CLARENDON (SOUTHBOUND):
MM 1.000 - MM 1.250 SOLID EDGE LINE LT
MM 1.000 - MM 1.250 DASHED CL
MM 1.155 - MM 1.200 SOLID LANE LINE RT
MM 1.200 - MM 1.250 DOTTED LANE LINE RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 1.000 - MM 1.140 SOLID EDGE LINE LT
MM 1.154 - MM 1.250 SOLID EDGE LINE LT

CLARENDON (SOUTHBOUND):
MM 1.000 - MM 1.142 SOLID EDGE LINE RT
MM 1.155 - MM 1.250 SOLID EDGE LINE RT

TH 26 (BUMP ROAD):
MM 1.145 SOLID RT & LT (US ROUTE 7 MEDIAN)

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 1.000 - MM 1.140 SOLID EDGE LINE LT
MM 1.154 - MM 1.250 SOLID EDGE LINE LT

CLARENDON (SOUTHBOUND):
MM 1.000 - MM 1.142 SOLID EDGE LINE RT
MM 1.155 - MM 1.250 SOLID EDGE LINE RT

TH 26 (BUMP ROAD):
MM 1.145 SOLID RT & LT (US ROUTE 7 MEDIAN)

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
TH 26 (BUMP ROAD):
MM 1.145 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT
TH 26 (BUMP ROAD):
MM 1.145 SOLID RT & LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
TH 26 (BUMP ROAD):
MM 1.145 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
TH 26 (BUMP ROAD):
MM 1.145 SOLID RT & LT

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

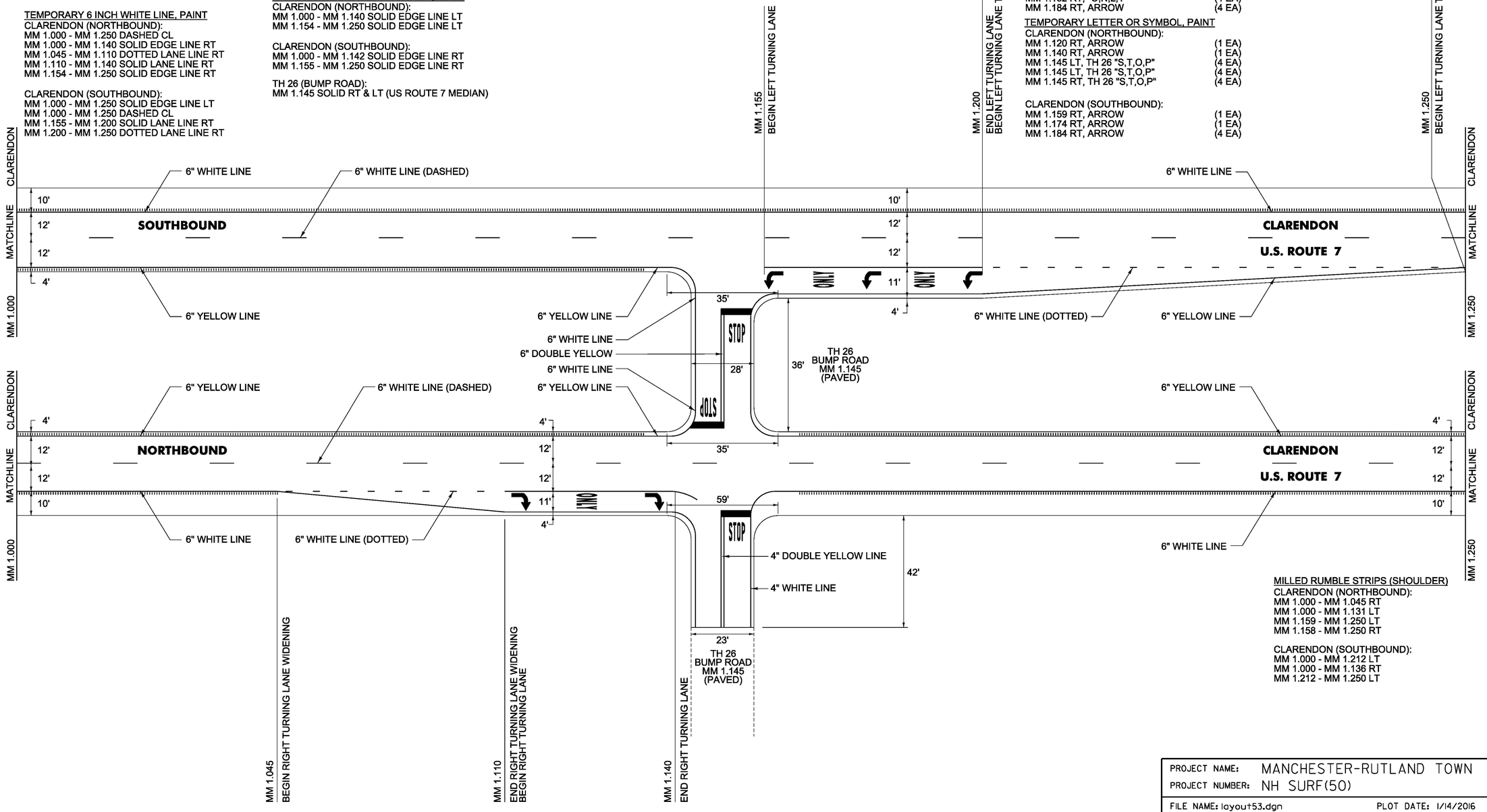
CLARENDON (NORTHBOUND):	
MM 1.120 RT, ARROW	(1 EA)
MM 1.130 RT, "O,N,L,Y"	(4 EA)
MM 1.140 RT, ARROW	(1 EA)
MM 1.145 LT, TH 26 "S,T,O,P"	(4 EA)
MM 1.145 RT, TH 26 "S,T,O,P"	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 1.145 RT, TH 26 "S,T,O,P"	(4 EA)
MM 1.159 RT, ARROW	(1 EA)
MM 1.165 RT, "O,N,L,Y"	(4 EA)
MM 1.174 RT, ARROW	(1 EA)
MM 1.182 RT, "O,N,L,Y"	(4 EA)
MM 1.184 RT, ARROW	(4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

CLARENDON (NORTHBOUND):	
MM 1.120 RT, ARROW	(1 EA)
MM 1.140 RT, ARROW	(1 EA)
MM 1.145 LT, TH 26 "S,T,O,P"	(4 EA)
MM 1.145 LT, TH 26 "S,T,O,P"	(4 EA)
MM 1.145 RT, TH 26 "S,T,O,P"	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 1.159 RT, ARROW	(1 EA)
MM 1.174 RT, ARROW	(1 EA)
MM 1.184 RT, ARROW	(4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 1.145 LT, TH 26
MM 1.145 LT, TH 26
MM 1.145 RT, TH 26

TEMPORARY 24 INCH STOP BAR, PAINT
CLARENDON (NORTHBOUND):
MM 1.145 LT, TH 26
MM 1.145 LT, TH 26
MM 1.145 RT, TH 26



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MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 1.000 - MM 1.045 RT
MM 1.000 - MM 1.131 LT
MM 1.159 - MM 1.250 LT
MM 1.158 - MM 1.250 RT

CLARENDON (SOUTHBOUND):
MM 1.000 - MM 1.212 LT
MM 1.000 - MM 1.136 RT
MM 1.212 - MM 1.250 LT

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout53.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: N. PAPPAS
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 53	SHEET 67 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 1.250 - MM 1.750 DASHED CL
MM 1.250 - MM 1.448 SOLID EDGE LINE RT
MM 1.354 - MM 1.445 DOTTED LANE RT
MM 1.358 - MM 1.396 DOTTED LANE LT
MM 1.396 - MM 1.445 SOLID LANE LINE LT
MM 1.434 - MM 1.448 SOLID LANE LINE RT
MM 1.457 - MM 1.750 SOLID EDGE LINE RT

CLARENDON (SOUTHBOUND):
MM 1.250 - MM 1.750 DASHED CL
MM 1.250 - MM 1.458 SOLID EDGE LINE LT
MM 1.470 - MM 1.529 SOLID LANE LINE RT
MM 1.473 - MM 1.491 SOLID LANE LINE LT
MM 1.476 - MM 1.750 SOLID EDGE LINE LT
MM 1.491 - MM 1.529 DOTTED LANE LINE LT
MM 1.529 - MM 1.567 DOTTED LANE LINE RT

VT ROUTE 7B:
MM 1.466 SOLID RT & LT (US ROUTE 7 MEDIAN)

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 1.250 - MM 1.750 DASHED CL
MM 1.250 - MM 1.448 SOLID EDGE LINE RT
MM 1.354 - MM 1.445 DOTTED LANE RT
MM 1.358 - MM 1.396 DOTTED LANE LT
MM 1.396 - MM 1.445 SOLID LANE LINE LT
MM 1.434 - MM 1.448 SOLID LANE LINE RT
MM 1.457 - MM 1.750 SOLID EDGE LINE RT

CLARENDON (SOUTHBOUND):
MM 1.250 - MM 1.750 DASHED CL
MM 1.250 - MM 1.458 SOLID EDGE LINE LT
MM 1.470 - MM 1.529 SOLID LANE LINE RT
MM 1.473 - MM 1.491 SOLID LANE LINE LT
MM 1.476 - MM 1.750 SOLID EDGE LINE LT
MM 1.491 - MM 1.529 DOTTED LANE LINE LT
MM 1.529 - MM 1.567 DOTTED LANE LINE RT

VT ROUTE 7B:
MM 1.466 SOLID RT & LT (US ROUTE 7 MEDIAN)

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 1.250 - MM 1.445 SOLID EDGE LINE LT
MM 1.457 - MM 1.750 SOLID EDGE LINE LT

CLARENDON (SOUTHBOUND):
MM 1.250 - MM 1.458 SOLID EDGE LINE RT
MM 1.472 - MM 1.750 SOLID EDGE LINE RT

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 1.466 RT, VT ROUTE 7B
MM 1.466 LT, VT ROUTE 7B

CLARENDON (SOUTHBOUND):
MM 1.466 RT, VT ROUTE 7B
MM 1.466 LT, TH 1

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 1.250 - MM 1.445 SOLID EDGE LINE LT
MM 1.457 - MM 1.750 SOLID EDGE LINE LT

CLARENDON (SOUTHBOUND):
MM 1.250 - MM 1.458 SOLID EDGE LINE RT
MM 1.472 - MM 1.750 SOLID EDGE LINE RT

TEMPORARY 24 INCH STOP BAR, PAINT
CLARENDON (NORTHBOUND):
MM 1.466 RT, VT ROUTE 7B
MM 1.466 LT, VT ROUTE 7B

CLARENDON (SOUTHBOUND):
MM 1.466 RT, VT ROUTE 7B
MM 1.466 LT, TH 1

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
TH 1 (MIDDLE ROAD):
MM 1.446 SOLID RT & LT

VT ROUTE 7B:
MM 1.446 SOLID RT & LT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
TH 1 (MIDDLE ROAD):
MM 1.446 SOLID RT & LT

VT ROUTE 7B:
MM 1.446 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT
TH 1 (MIDDLE ROAD):
MM 1.446 SOLID RT & LT

VT ROUTE 7B:
MM 1.446 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
TH 1 (MIDDLE ROAD):
MM 1.446 SOLID RT & LT

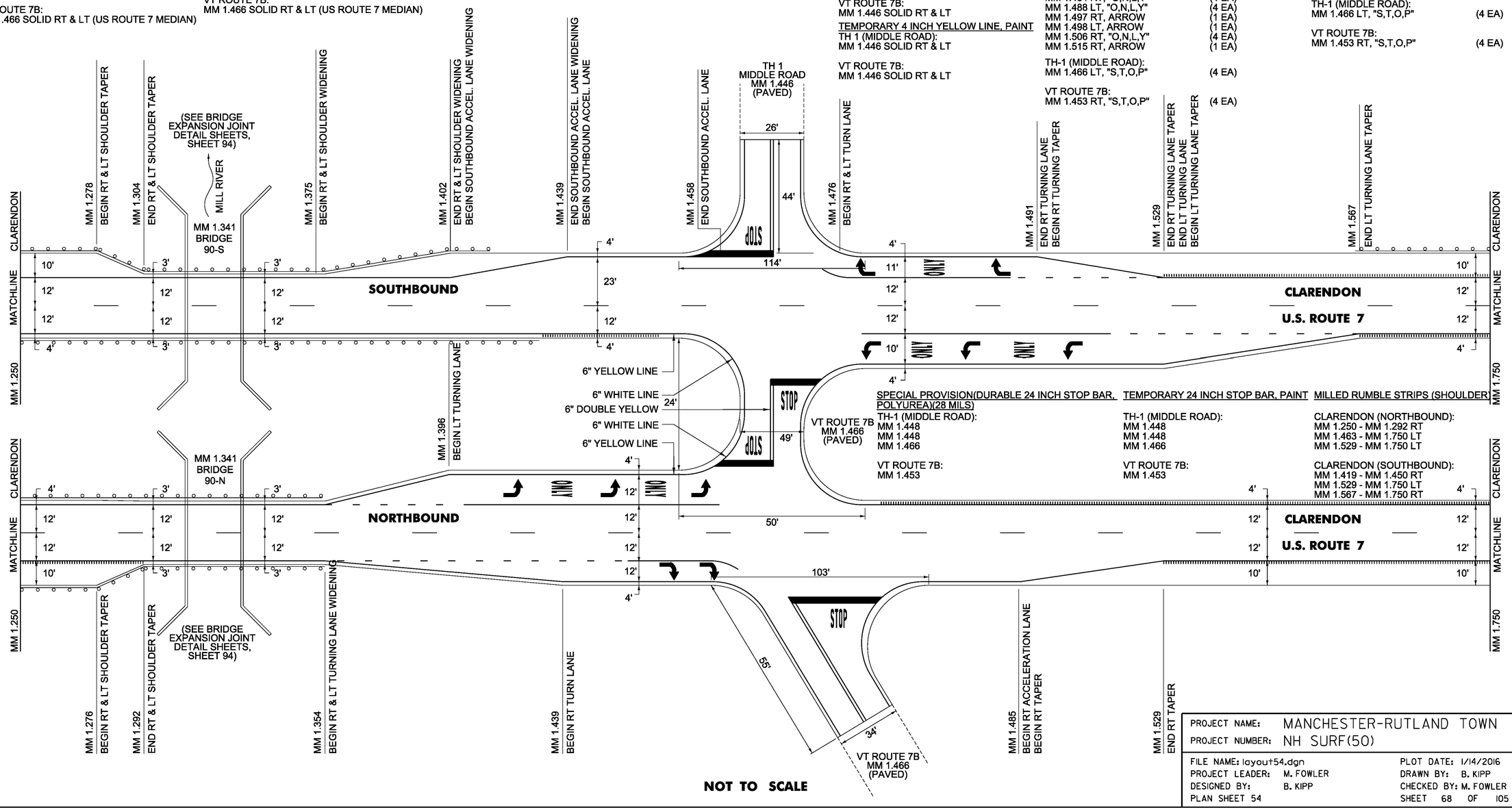
VT ROUTE 7B:
MM 1.446 SOLID RT & LT

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

CLARENDON (NORTHBOUND):	
MM 1.406 LT, ARROW	(1 EA)
MM 1.415 LT, "O,N,L,Y"	(4 EA)
MM 1.425 LT, ARROW	(1 EA)
MM 1.434 LT, "O,N,L,Y"	(4 EA)
MM 1.435 RT, ARROW	(1 EA)
MM 1.444 LT, ARROW	(1 EA)
MM 1.448 RT, ARROW	(1 EA)
TH-1 (MIDDLE ROAD):	
MM 1.448 RT, "S,T,O,P"	(4 EA)
VT ROUTE 7B:	
MM 1.453 LT, "S,T,O,P"	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 1.474 RT, ARROW	(1 EA)
MM 1.478 LT, ARROW	(1 EA)
MM 1.484 RT, "O,N,L,Y"	(4 EA)
MM 1.488 LT, "O,N,L,Y"	(4 EA)
MM 1.497 RT, ARROW	(1 EA)
MM 1.498 LT, ARROW	(1 EA)
MM 1.506 RT, "O,N,L,Y"	(4 EA)
MM 1.515 RT, ARROW	(1 EA)
TH-1 (MIDDLE ROAD):	
MM 1.466 LT, "S,T,O,P"	(4 EA)
VT ROUTE 7B:	
MM 1.453 RT, "S,T,O,P"	(4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

CLARENDON (NORTHBOUND):	
MM 1.406 LT, ARROW	(1 EA)
MM 1.425 LT, ARROW	(1 EA)
MM 1.435 RT, ARROW	(1 EA)
MM 1.444 LT, ARROW	(1 EA)
MM 1.448 RT, ARROW	(1 EA)
TH-1 (MIDDLE ROAD):	
MM 1.448 LT, "S,T,O,P"	(4 EA)
MM 1.448 LT, "S,T,O,P"	(4 EA)
VT ROUTE 7B:	
MM 1.453 RT, "S,T,O,P"	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 1.474 RT, ARROW	(1 EA)
MM 1.478 LT, ARROW	(1 EA)
MM 1.497 RT, ARROW	(1 EA)
MM 1.498 LT, ARROW	(1 EA)
TH-1 (MIDDLE ROAD):	
MM 1.466 LT, "S,T,O,P"	(4 EA)
VT ROUTE 7B:	
MM 1.453 RT, "S,T,O,P"	(4 EA)



SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
TH-1 (MIDDLE ROAD):
MM 1.448
MM 1.448
MM 1.466

VT ROUTE 7B:
MM 1.453

TEMPORARY 24 INCH STOP BAR, PAINT
TH-1 (MIDDLE ROAD):
MM 1.448
MM 1.448
MM 1.466

VT ROUTE 7B:
MM 1.453

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 1.250 - MM 1.292 RT
MM 1.463 - MM 1.750 LT
MM 1.529 - MM 1.750 LT

CLARENDON (SOUTHBOUND):
MM 1.419 - MM 1.450 RT
MM 1.529 - MM 1.750 LT
MM 1.567 - MM 1.750 RT

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout54.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 54	SHEET 68 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 1.750 - MM 2.000 SOLID RT
MM 1.750 - MM 2.000 DASHED CL

CLARENDON (SOUTHBOUND):
MM 1.750 - MM 2.000 SOLID LT
MM 1.750 - MM 2.000 DASHED CL

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 1.750 - MM 2.000 SOLID RT
MM 1.750 - MM 2.000 DASHED CL

CLARENDON (SOUTHBOUND):
MM 1.750 - MM 2.000 SOLID LT
MM 1.750 - MM 2.000 DASHED CL

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 1.750 - MM 2.000 SOLID LT

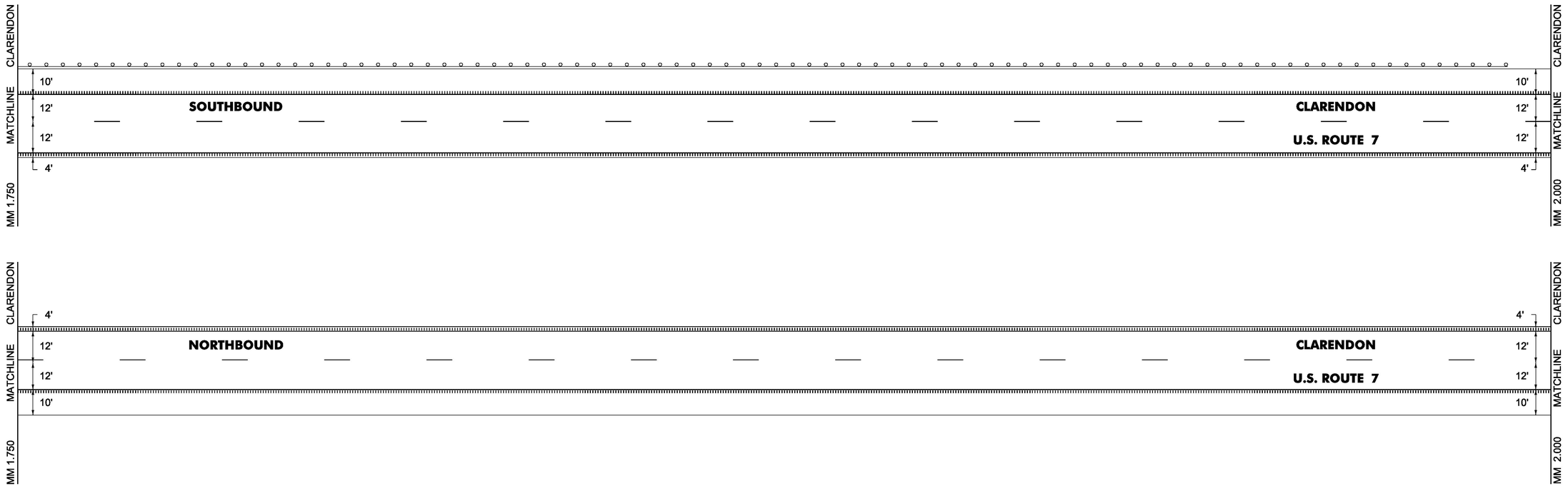
CLARENDON (SOUTHBOUND):
MM 1.750 - MM 2.000 SOLID RT

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 1.750 - MM 2.000 SOLID LT

CLARENDON (SOUTHBOUND):
MM 1.750 - MM 2.000 SOLID RT

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 1.750 - MM 2.000 RT
MM 1.750 - MM 2.000 LT

CLARENDON (SOUTHBOUND):
MM 1.750 - MM 2.000 RT
MM 1.750 - MM 2.000 LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout55.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 55		SHEET 69 OF 105	

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 2.000 - MM 2.750 SOLID RT
MM 2.000 - MM 2.750 DASHED CL
MM 2.304 - MM 2.365 DOTTED LANE LINE RT
MM 2.397 - MM 2.475 SOLID RT
MM 2.523 - MM 2.630 DOTTED LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 2.000 - MM 2.750 SOLID LT
MM 2.000 - MM 2.750 DASHED CL
MM 2.235 - MM 2.455 DOTTED LANE LINE LT
MM 2.471 - MM 2.540 SOLID LT
MM 2.563 - MM 2.661 DOTTED LANE LINE LT

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 2.000 - MM 2.750 SOLID RT
MM 2.000 - MM 2.750 DASHED CL
MM 2.304 - MM 2.365 DOTTED LANE LINE RT
MM 2.397 - MM 2.475 SOLID RT
MM 2.523 - MM 2.630 DOTTED LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 2.000 - MM 2.750 SOLID LT
MM 2.000 - MM 2.750 DASHED CL
MM 2.235 - MM 2.455 DOTTED LANE LINE LT
MM 2.471 - MM 2.540 SOLID LT
MM 2.563 - MM 2.661 DOTTED LANE LINE LT

SPECIAL PROVISION(DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 2.365 - MM 2.377 SOLID LANE LINE RT
MM 2.377 - MM 2.397 GORE AREA RT
MM 2.475 - MM 2.497 GORE AREA RT
MM 2.497 - MM 2.523 SOLID LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 2.445 - MM 2.455 SOLID LANE LINE LT
MM 2.455 - MM 2.471 GORE AREA LT
MM 2.540 - MM 2.550 GORE ARE LT
MM 2.550 - MM 2.563 SOLID LANE LINE LT

TEMPORARY 12 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 2.365 - MM 2.377 SOLID LANE LINE RT
MM 2.377 - MM 2.397 GORE AREA RT
MM 2.475 - MM 2.497 GORE AREA RT
MM 2.497 - MM 2.523 SOLID LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 2.445 - MM 2.455 SOLID LANE LINE LT
MM 2.455 - MM 2.471 GORE AREA LT
MM 2.540 - MM 2.550 GORE AREA LT
MM 2.550 - MM 2.563 SOLID LANE LINE LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 2.000 - MM 2.750 SOLID LT
MM 2.397 - MM 2.475 SOLID RT

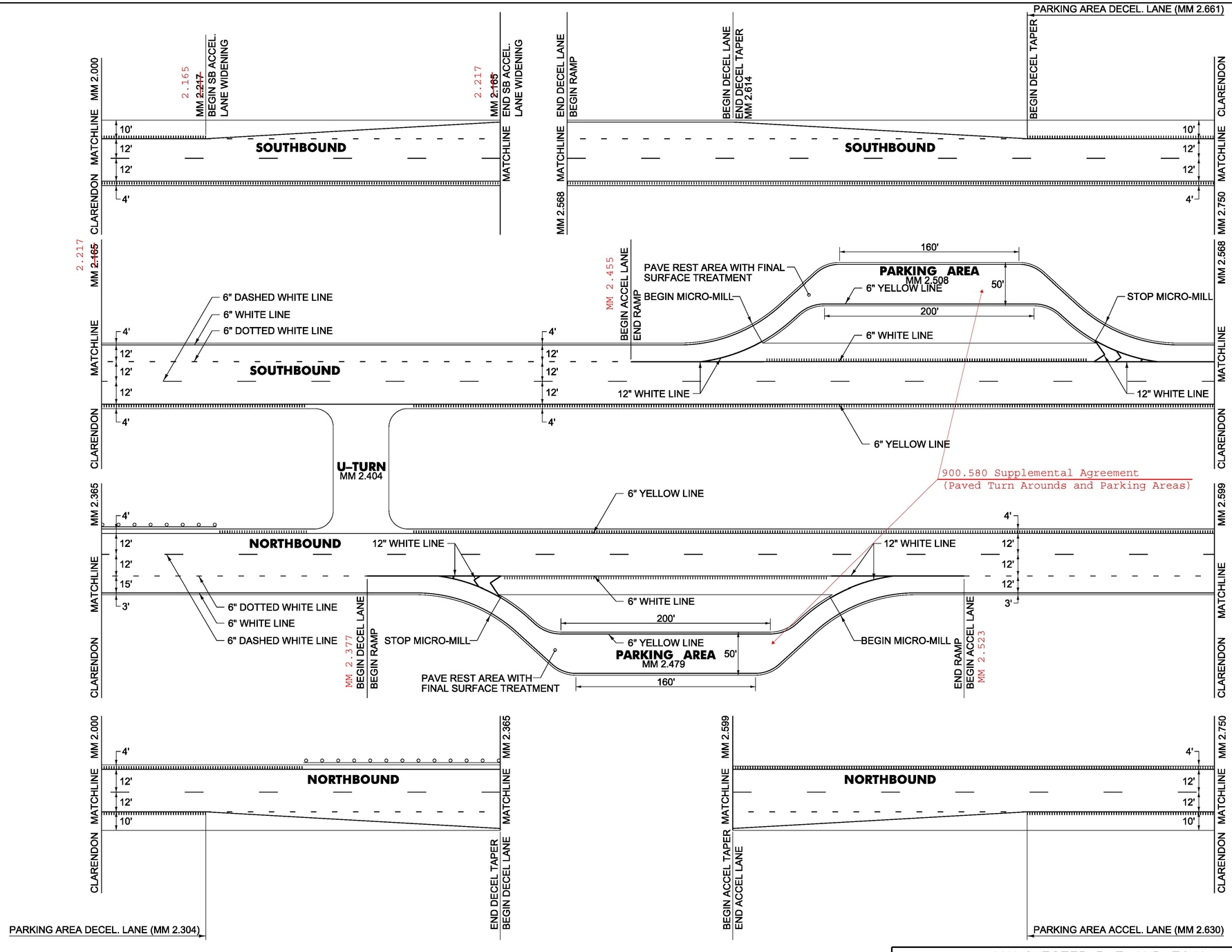
CLARENDON (SOUTHBOUND):
MM 2.000 - MM 2.750 SOLID RT
MM 2.471 - MM 2.540 SOLID LT

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 2.000 - MM 2.750 SOLID LT
MM 2.397 - MM 2.475 SOLID RT

CLARENDON (SOUTHBOUND):
MM 2.000 - MM 2.750 SOLID RT
MM 2.471 - MM 2.540 SOLID LT

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 2.000 - MM 2.273 LT
MM 2.000 - MM 2.304 RT
MM 2.324 - MM 2.348 LT
MM 2.376 - MM 2.750 LT
MM 2.398 - MM 2.474 RT
MM 2.630 - MM 2.750 RT

CLARENDON (SOUTHBOUND):
MM 2.000 - MM 2.235 LT
MM 2.000 - MM 2.336 RT
MM 2.415 - MM 2.750 RT
MM 2.661 - MM 2.750 LT
MM 2.432 - MM 2.527 LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout56.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 56	SHEET 70 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 2.750 - MM 2.861 SOLID RT
MM 2.750 - MM 3.310 DASHED CL
MM 2.873 - MM 3.390 SOLID RT
MM 3.206 - MM 3.263 DOTTED LANE LINE RT
MM 3.222 - MM 3.263 DOTTED LANE LINE LT
MM 3.263 - MM 3.310 SOLID LANE LINE RT
MM 3.263 - MM 3.310 SOLID LANE LINE LT
MM 3.334 - MM 3.447 DASHED CL
MM 3.379 - MM 3.447 SOLID LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 2.750 - MM 3.310 DASHED CL
MM 2.750 - MM 3.312 SOLID LT
MM 3.335 - MM 3.447 SOLID LT
MM 3.334 - MM 3.447 DASHED CL
MM 3.334 - MM 3.390 SOLID LANE LINE RT
MM 3.390 - MM 3.451 DOTTED LANE LINE RT

SPECIAL PROVISION(DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 2.869 HATCHED AREA RT

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
TH 19 (CROSSROAD ROAD)
MM 2.869 DOUBLE YELLOW LT

SPECIAL PROVISION(DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 3.310 - MM 3.319 GORE AREA RT
MM 3.391 - MM 3.447 GORE AREA RT

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 2.750 - MM 2.861 SOLID RT
MM 2.750 - MM 3.310 DASHED CL
MM 2.873 - MM 3.390 SOLID RT
MM 3.206 - MM 3.263 DOTTED LANE LINE RT
MM 3.222 - MM 3.263 DOTTED LANE LINE LT
MM 3.263 - MM 3.310 SOLID LANE LINE RT
MM 3.263 - MM 3.310 SOLID LANE LINE LT
MM 3.334 - MM 3.447 DASHED CL
MM 3.379 - MM 3.447 SOLID LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 2.750 - MM 3.310 DASHED CL
MM 2.750 - MM 2.863 SOLID LT
MM 2.871 - MM 3.447 SOLID LT
MM 3.334 - MM 3.447 DASHED CL
MM 3.334 - MM 3.390 SOLID LANE LINE RT
MM 3.390 - MM 3.451 DOTTED LANE LINE RT

TEMPORARY 8 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 2.869 HATCHED AREA RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
TH 19 (CROSSROAD ROAD)
MM 2.869 DOUBLE YELLOW LT

TEMPORARY 12 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 3.310 - MM 3.319 GORE AREA RT
MM 3.391 - MM 3.447 GORE AREA RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 2.750 - MM 3.310 SOLID LT
MM 2.874 - MM 3.447 SOLID LT

CLARENDON (SOUTHBOUND):
MM 2.750 - MM 3.310 SOLID RT
MM 2.874 - MM 3.447 SOLID RT

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 3.310 CL, US ROUTE 7
MM 3.328 RT, VT ROUTE 103

CLARENDON (SOUTHBOUND):
MM 3.319 LT, TH-19 (CROSSROAD ROAD)
MM 3.334 CL, US ROUTE 7

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 2.750 - MM 3.310 SOLID LT
MM 2.874 - MM 3.447 SOLID LT

CLARENDON (SOUTHBOUND):
MM 2.750 - MM 3.310 SOLID RT
MM 2.874 - MM 3.447 SOLID RT

TEMPORARY 24 INCH STOP BAR, PAINT
CLARENDON (NORTHBOUND):
MM 3.310 CL, US ROUTE 7
MM 3.328 RT, VT ROUTE 103

CLARENDON (SOUTHBOUND):
MM 3.319 LT, TH-19 (CROSSROAD ROAD)
MM 3.334 CL, US ROUTE 7

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):

MM 3.162 RT, "S,I,G,N,A,L"	(6 EA)
MM 3.162 LT, "S,I,G,N,A,L"	(6 EA)
MM 3.169 RT, "A,H,E,A,D"	(5 EA)
MM 3.169 LT, "A,H,E,A,D"	(5 EA)
MM 3.253 RT, ARROW	(1 EA)
MM 3.253 LT, ARROW	(1 EA)
MM 3.266 RT, "O,N,L,Y"	(4 EA)
MM 3.266 LT, "O,N,L,Y"	(4 EA)
MM 3.277 RT, ARROW	(1 EA)
MM 3.277 LT, ARROW	(1 EA)
MM 3.288 RT, "O,N,L,Y"	(4 EA)
MM 3.288 LT, "O,N,L,Y"	(4 EA)
MM 3.299 RT, ARROW	(1 EA)
MM 3.299 LT, ARROW	(1 EA)

VT ROUTE 103:

MM 3.321 RT, YIELDING MARKERS	(5 EA)
MM 3.330 RT, "S,T,O,P"	(4 EA)

CLARENDON (SOUTHBOUND):

MM 3.319 LT, "S,T,O,P"	(4 EA)
MM 3.338 RT, ARROW	(1 EA)
MM 3.353 RT, "O,N,L,Y"	(4 EA)
MM 3.368 RT, ARROW	(1 EA)
MM 3.383 RT, "O,N,L,Y"	(4 EA)
MM 3.398 RT, ARROW	(1 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
CLARENDON (NORTHBOUND):

MM 3.162 RT, "S,I,G,N,A,L"	(6 EA)
MM 3.162 LT, "S,I,G,N,A,L"	(6 EA)
MM 3.169 RT, "A,H,E,A,D"	(5 EA)
MM 3.169 LT, "A,H,E,A,D"	(5 EA)
MM 3.253 RT, ARROW	(1 EA)
MM 3.253 LT, ARROW	(1 EA)
MM 3.266 RT, "O,N,L,Y"	(4 EA)
MM 3.266 LT, "O,N,L,Y"	(4 EA)
MM 3.277 RT, ARROW	(1 EA)
MM 3.277 LT, ARROW	(1 EA)
MM 3.288 RT, "O,N,L,Y"	(4 EA)
MM 3.288 LT, "O,N,L,Y"	(4 EA)
MM 3.299 RT, ARROW	(1 EA)
MM 3.299 LT, ARROW	(1 EA)

VT ROUTE 103:

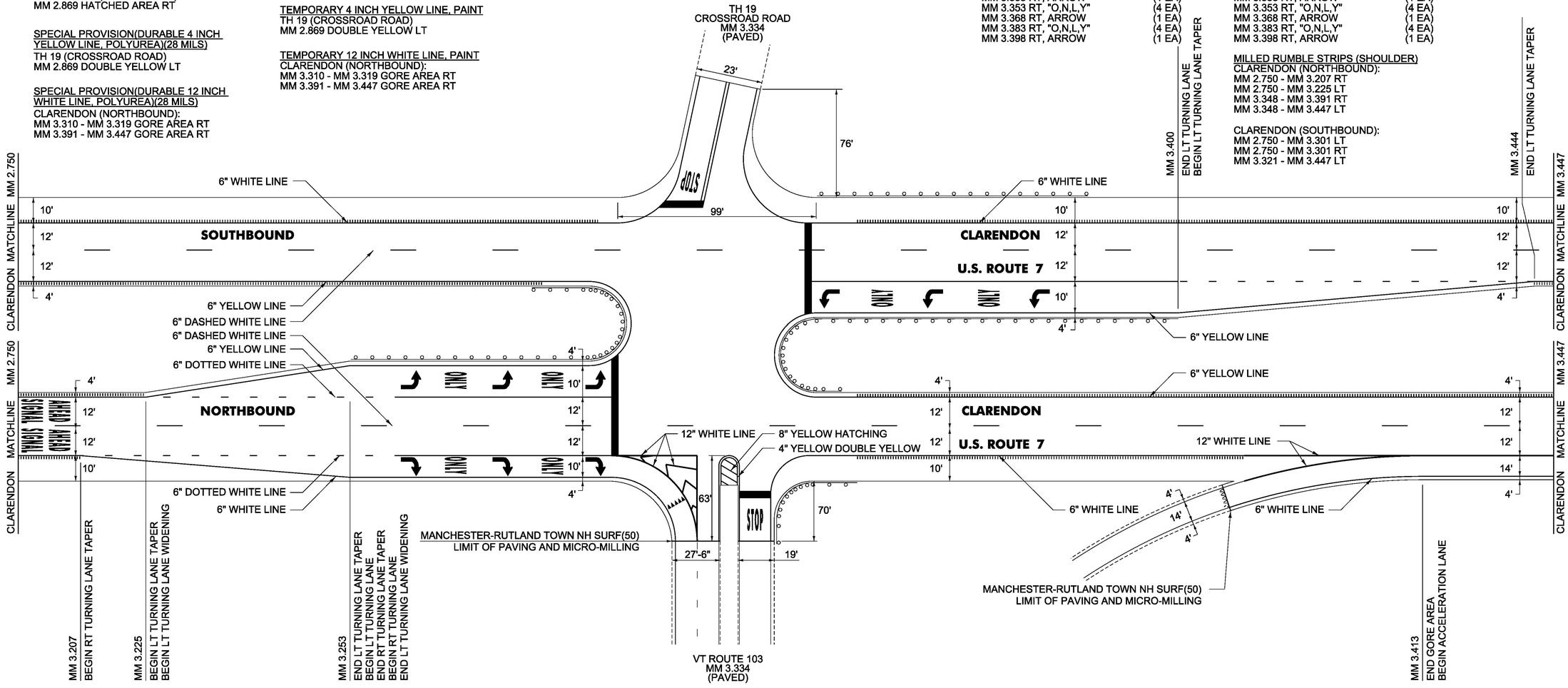
MM 3.321 RT, YIELDING MARKERS	(5 EA)
MM 3.330 RT, "S,T,O,P"	(4 EA)

CLARENDON (SOUTHBOUND):

MM 3.319 LT, "S,T,O,P"	(4 EA)
MM 3.338 RT, ARROW	(1 EA)
MM 3.353 RT, "O,N,L,Y"	(4 EA)
MM 3.368 RT, ARROW	(1 EA)
MM 3.383 RT, "O,N,L,Y"	(4 EA)
MM 3.398 RT, ARROW	(1 EA)

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 2.750 - MM 3.207 RT
MM 2.750 - MM 3.225 LT
MM 3.348 - MM 3.391 RT
MM 3.348 - MM 3.447 LT

CLARENDON (SOUTHBOUND):
MM 2.750 - MM 3.301 LT
MM 2.750 - MM 3.301 RT
MM 3.321 - MM 3.447 LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout57.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 57	SHEET 71 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 3.447 - MM 4.000 SOLID RT
MM 3.447 - MM 4.000 DASHED CL
MM 3.447 - MM 3.522 DOTTED LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 3.447 - MM 4.000 SOLID LT
MM 3.447 - MM 4.000 DASHED CL

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 3.447 - MM 4.000 SOLID RT
MM 3.447 - MM 4.000 DASHED CL
MM 3.447 - MM 3.522 DOTTED LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 3.447 - MM 4.000 SOLID LT
MM 3.447 - MM 4.000 DASHED CL

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 3.447 - MM 4.000 SOLID LT

CLARENDON (SOUTHBOUND):
MM 3.447 - MM 4.000 SOLID RT

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 3.447 - MM 4.000 SOLID LT

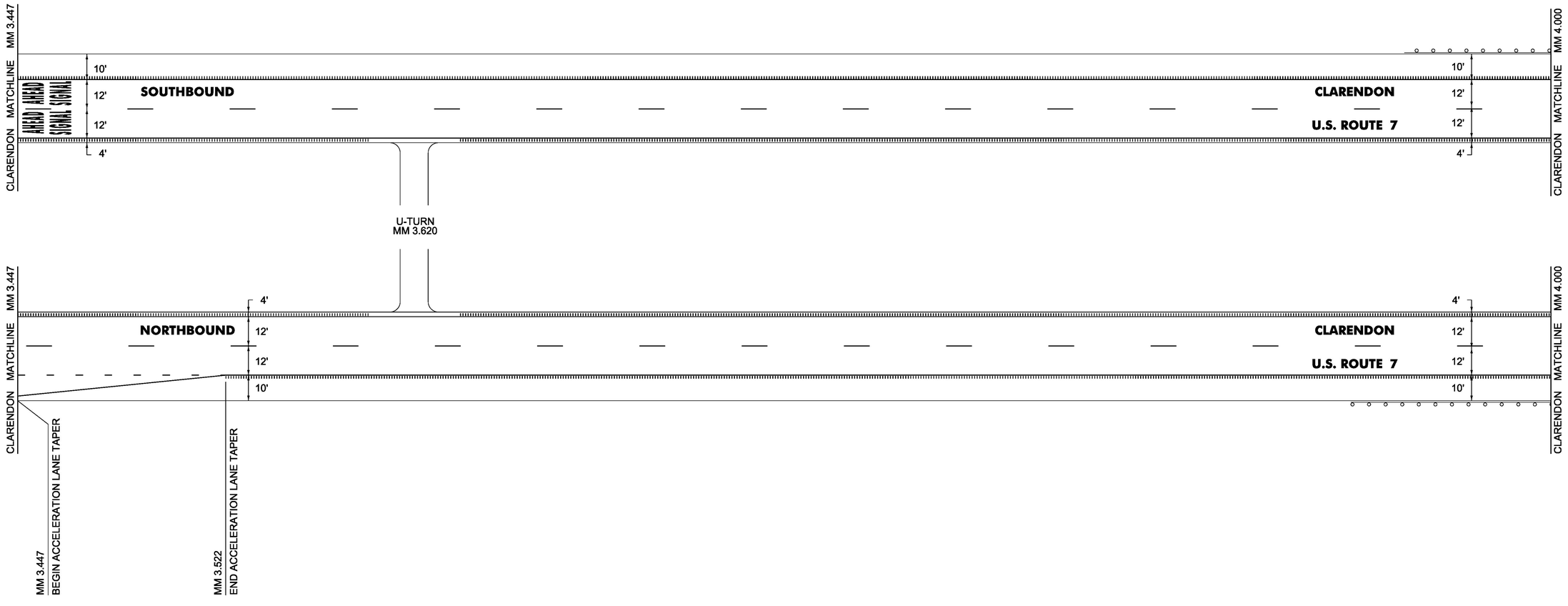
CLARENDON (SOUTHBOUND):
MM 3.447 - MM 4.000 SOLID RT

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
CLARENDON (SOUTHBOUND):
MM 3.550 RT, "A,H,E,A,D" (5 EA)
MM 3.550 LT, "A,H,E,A,D" (5 EA)
MM 3.557 RT, "S,I,G,N,A,L" (6 EA)
MM 3.557 LT, "S,I,G,N,A,L" (6 EA)

TEMPORARY LETTER OR SYMBOL, PAINT
CLARENDON (SOUTHBOUND):
MM 3.550 RT, "A,H,E,A,D" (5 EA)
MM 3.550 LT, "A,H,E,A,D" (5 EA)
MM 3.557 RT, "S,I,G,N,A,L" (6 EA)
MM 3.557 LT, "S,I,G,N,A,L" (6 EA)

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 3.447 - MM 3.606 LT
MM 3.522 - MM 4.000 RT
MM 3.634 - MM 4.000 LT

CLARENDON (SOUTHBOUND):
MM 3.447 - MM 3.606 RT
MM 3.447 - MM 4.000 LT
MM 3.634 - MM 4.000 RT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout58.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 58	SHEET 72 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 4.000 - MM 4.500 SOLID RT
MM 4.000 - MM 4.500 DASHED CL

CLARENDON (SOUTHBOUND):
MM 4.000 - MM 4.500 SOLID LT
MM 4.000 - MM 4.500 DASHED CL

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 4.000 - MM 4.500 SOLID RT
MM 4.000 - MM 4.500 DASHED CL

CLARENDON (SOUTHBOUND):
MM 4.000 - MM 4.500 SOLID LT
MM 4.000 - MM 4.500 DASHED CL

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 4.000 - MM 4.500 SOLID LT

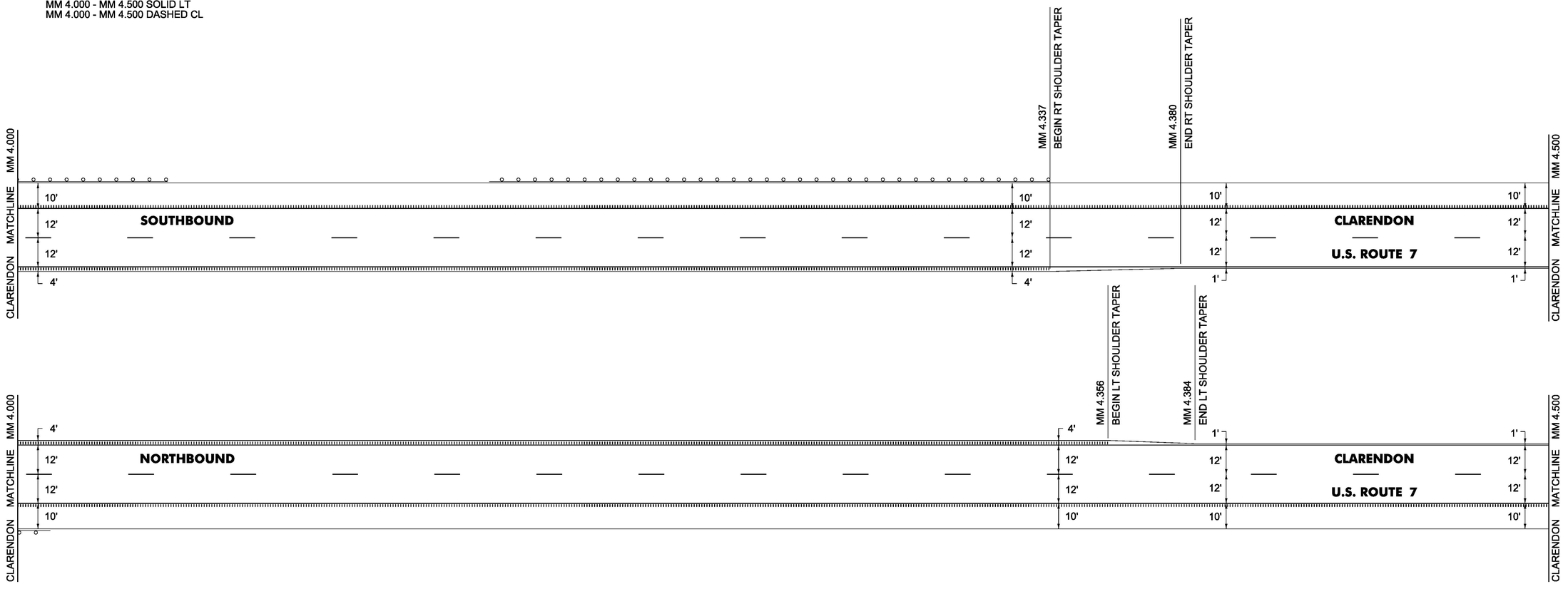
CLARENDON (SOUTHBOUND):
MM 4.000 - MM 4.500 SOLID RT

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 4.000 - MM 4.500 SOLID LT

CLARENDON (SOUTHBOUND):
MM 4.000 - MM 4.500 SOLID RT

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 4.000 - MM 4.500 RT
MM 4.000 - MM 4.356 LT

CLARENDON (SOUTHBOUND):
MM 4.000 - MM 4.337 RT
MM 4.000 - MM 4.500 LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout59.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 59	SHEET 73 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 4.500 - MM 4.749 SOLID RT
MM 4.500 - MM 4.749 DASHED CL
MM 4.655 - MM 4.706 DOTTED LANE LINE LT
MM 4.706 - MM 4.749 SOLID LANE LINE LT
MM 4.768 - MM 5.000 SOLID RT
MM 4.768 - MM 5.000 DASHED CL

CLARENDON (SOUTHBOUND):
MM 4.500 - MM 4.749 SOLID LT
MM 4.500 - MM 4.749 DASHED CL
MM 4.768 - MM 5.000 SOLID LT
MM 4.768 - MM 5.000 DASHED CL
MM 4.768 - MM 4.815 SOLID LANE RT
MM 4.815 - MM 4.860 DOTTED LANE LINE RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 4.500 - MM 4.749 SOLID LT
MM 4.768 - MM 5.000 SOLID LT

VT ROUTE 7B:
MM 4.761 RT SOLID RT & LT

CLARENDON (SOUTHBOUND):
MM 4.500 - MM 4.749 SOLID RT
MM 4.768 - MM 5.000 SOLID RT

VT ROUTE 7B:
MM 4.761 LT SOLID RT & LT

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 4.500 - MM 4.749 RT
MM 4.768 - MM 5.000 RT

CLARENDON (SOUTHBOUND):
MM 4.500 - MM 4.749 LT
MM 4.768 - MM 5.000 LT

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 4.500 - MM 4.749 SOLID RT
MM 4.500 - MM 4.749 DASHED CL
MM 4.655 - MM 4.706 DOTTED LANE LINE LT
MM 4.706 - MM 4.749 SOLID LANE LINE LT
MM 4.768 - MM 5.000 SOLID RT
MM 4.768 - MM 5.000 DASHED CL

CLARENDON (SOUTHBOUND):
MM 4.500 - MM 4.749 SOLID LT
MM 4.500 - MM 4.749 DASHED CL
MM 4.768 - MM 5.000 SOLID LT
MM 4.768 - MM 5.000 DASHED CL
MM 4.768 - MM 4.815 SOLID LANE RT
MM 4.815 - MM 4.860 DOTTED LANE LINE RT

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 4.500 - MM 4.749 SOLID LT
MM 4.768 - MM 5.000 SOLID LT

VT ROUTE 7B:
MM 4.761 RT SOLID RT & LT

CLARENDON (SOUTHBOUND):
MM 4.500 - MM 4.749 SOLID RT
MM 4.768 - MM 5.000 SOLID RT

VT ROUTE 7B:
MM 4.761 LT SOLID RT & LT

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

CLARENDON (NORTHBOUND):	
MM 4.706 LT, ARROW	(1 EA)
MM 4.715 LT, "O,N,L,Y"	(4 EA)
MM 4.724 LT, ARROW	(1 EA)
MM 4.733 LT, "O,N,L,Y"	(4 EA)
MM 4.742 LT, ARROW	(1 EA)
VT ROUTE 7B:	
MM 4.761 RT, "S,T,O,P"	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 4.769 RT, ARROW	(1 EA)
MM 4.784 RT, "O,N,L,Y"	(4 EA)
MM 4.799 RT, ARROW	(1 EA)
VT ROUTE 7B:	
MM 4.759 LT, "S,T,O,P"	(4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

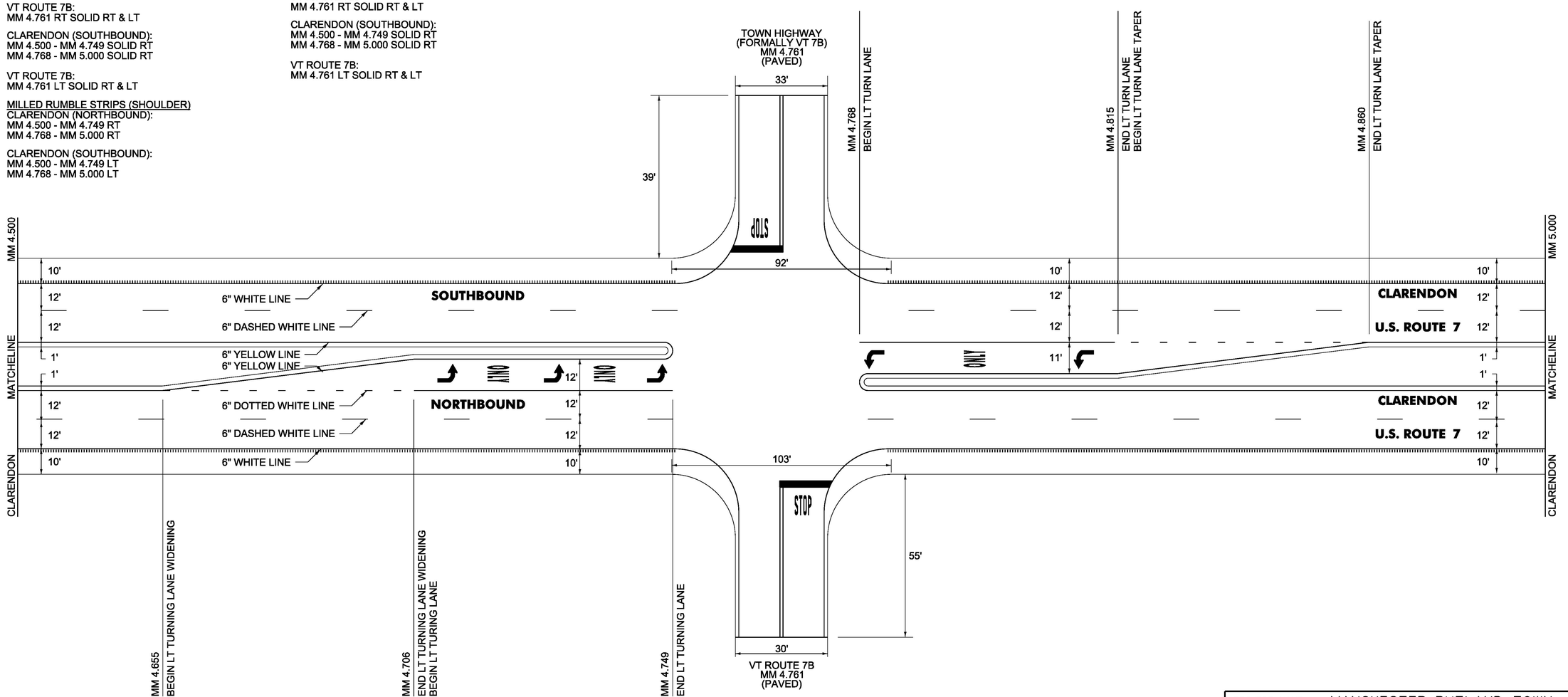
CLARENDON (NORTHBOUND):	
MM 4.706 LT, ARROW	(1 EA)
MM 4.715 LT, "O,N,L,Y"	(4 EA)
MM 4.724 LT, ARROW	(1 EA)
MM 4.733 LT, "O,N,L,Y"	(4 EA)
MM 4.742 LT, ARROW	(1 EA)
VT ROUTE 7B:	
MM 4.761 RT, "S,T,O,P"	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 4.769 RT, ARROW	(1 EA)
MM 4.784 RT, "O,N,L,Y"	(4 EA)
MM 4.799 RT, ARROW	(1 EA)
VT ROUTE 7B:	
MM 4.759 LT, "S,T,O,P"	(4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 4.761 RT, VT ROUTE 7B

CLARENDON (SOUTHBOUND):
MM 4.759 LT, VT ROUTE 7B

TEMPORARY 24 INCH STOP BAR, PAINT
CLARENDON (NORTHBOUND):
MM 4.761 RT, VT ROUTE 7B

CLARENDON (SOUTHBOUND):
MM 4.759 LT, VT ROUTE 7B



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout60.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 60	SHEET 74 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 5.000 - MM 5.171 SOLID RT
MM 5.000 - MM 5.171 DASHED CL
MM 5.091 - MM 5.121 DOTTED LANE LINE LT
MM 5.121 - MM 5.171 SOLID LANE LINE LT
MM 5.202 - MM 5.400 SOLID RT
MM 5.202 - MM 5.400 DASHED CL

CLARENDON (SOUTHBOUND):
MM 5.000 - MM 5.171 SOLID LT
MM 5.000 - MM 5.171 DASHED CL
MM 5.202 - MM 5.400 SOLID LT
MM 5.202 - MM 5.400 DASHED CL
MM 5.202 - MM 5.240 SOLID LANE LINE RT
MM 5.202 - MM 5.246 SOLID LANE LINE LT
MM 5.240 - MM 5.269 DOTTED LANE LINE RT
MM 5.246 - MM 5.269 DOTTED LANE LINE LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 5.000 - MM 5.171 SOLID RT
MM 5.202 - MM 5.400 SOLID RT

TH-4:
MM 5.182 RT SOLID RT & LT

CLARENDON (SOUTHBOUND):
MM 5.000 - MM 5.171 SOLID LT
MM 5.202 - MM 5.400 SOLID RT

TH-4:
MM 5.182 LT SOLID RT & LT

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 5.000 - MM 5.171 SOLID RT
MM 5.000 - MM 5.171 DASHED CL
MM 5.091 - MM 5.121 DOTTED LANE LINE LT
MM 5.121 - MM 5.171 SOLID LANE LINE LT
MM 5.202 - MM 5.400 SOLID RT
MM 5.202 - MM 5.400 DASHED CL

CLARENDON (SOUTHBOUND):
MM 5.000 - MM 5.171 SOLID LT
MM 5.000 - MM 5.171 DASHED CL
MM 5.202 - MM 5.400 SOLID LT
MM 5.202 - MM 5.400 DASHED CL
MM 5.202 - MM 5.240 SOLID LANE LINE RT
MM 5.202 - MM 5.246 SOLID LANE LINE LT
MM 5.240 - MM 5.269 DOTTED LANE LINE RT
MM 5.246 - MM 5.269 DOTTED LANE LINE LT

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 5.000 - MM 5.171 SOLID RT
MM 5.202 - MM 5.400 SOLID RT

TH-4:
MM 5.182 RT SOLID RT & LT

CLARENDON (SOUTHBOUND):
MM 5.000 - MM 5.171 SOLID LT
MM 5.202 - MM 5.400 SOLID RT

TH-4:
MM 5.182 LT SOLID RT & LT

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

CLARENDON (NORTHBOUND):	
MM 5.030 RT, "S,I,G,N,A,L"	(6 EA)
MM 5.030 LT, "S,I,G,N,A,L"	(6 EA)
MM 5.037 RT, "A,H,E,A,D"	(5 EA)
MM 5.037 LT, "A,H,E,A,D"	(5 EA)
MM 5.122 RT, ARROW	(1 EA)
MM 5.122 LT, DOUBLE ARROW	(2 EA)
MM 5.135 RT, "O,N,L,Y"	(4 EA)
MM 5.148 RT, ARROW	(1 EA)
MM 5.148 RT, DOUBLE ARROW	(2 EA)
TH-4:	
MM 5.171 RT, "S,T,O,P"	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 5.203 RT, ARROW	(1 EA)
MM 5.203 LT, ARROW	(1 EA)
MM 5.217 RT, "O,N,L,Y"	(4 EA)
MM 5.217 LT, "O,N,L,Y"	(4 EA)
MM 5.231 RT, ARROW	(1 EA)
MM 5.231 LT, ARROW	(1 EA)
MM 5.337 RT, "A,H,E,A,D"	(5 EA)
MM 5.337 LT, "A,H,E,A,D"	(5 EA)
MM 5.344 RT, "S,I,G,N,A,L"	(6 EA)
MM 5.344 LT, "S,I,G,N,A,L"	(6 EA)
TH-4:	
MM 5.171 LT, "S,T,O,P"	(4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

CLARENDON (NORTHBOUND):	
MM 5.030 RT, "S,I,G,N,A,L"	(6 EA)
MM 5.030 LT, "S,I,G,N,A,L"	(6 EA)
MM 5.037 RT, "A,H,E,A,D"	(5 EA)
MM 5.037 LT, "A,H,E,A,D"	(5 EA)
MM 5.122 RT, ARROW	(1 EA)
MM 5.122 LT, DOUBLE ARROW	(2 EA)
MM 5.135 RT, "O,N,L,Y"	(4 EA)
MM 5.148 RT, ARROW	(1 EA)
MM 5.148 RT, DOUBLE ARROW	(2 EA)
TH-4:	
MM 5.171 RT, "S,T,O,P"	(4 EA)
CLARENDON (SOUTHBOUND):	
MM 5.203 RT, ARROW	(1 EA)
MM 5.203 LT, ARROW	(1 EA)
MM 5.217 RT, "O,N,L,Y"	(4 EA)
MM 5.217 LT, "O,N,L,Y"	(4 EA)
MM 5.231 RT, ARROW	(1 EA)
MM 5.231 LT, ARROW	(1 EA)
MM 5.337 RT, "A,H,E,A,D"	(5 EA)
MM 5.337 LT, "A,H,E,A,D"	(5 EA)
MM 5.344 RT, "S,I,G,N,A,L"	(6 EA)
MM 5.344 LT, "S,I,G,N,A,L"	(6 EA)
TH-4:	
MM 5.202 LT, "S,T,O,P"	(4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 5.171
MM 5.186 RT, TH-4

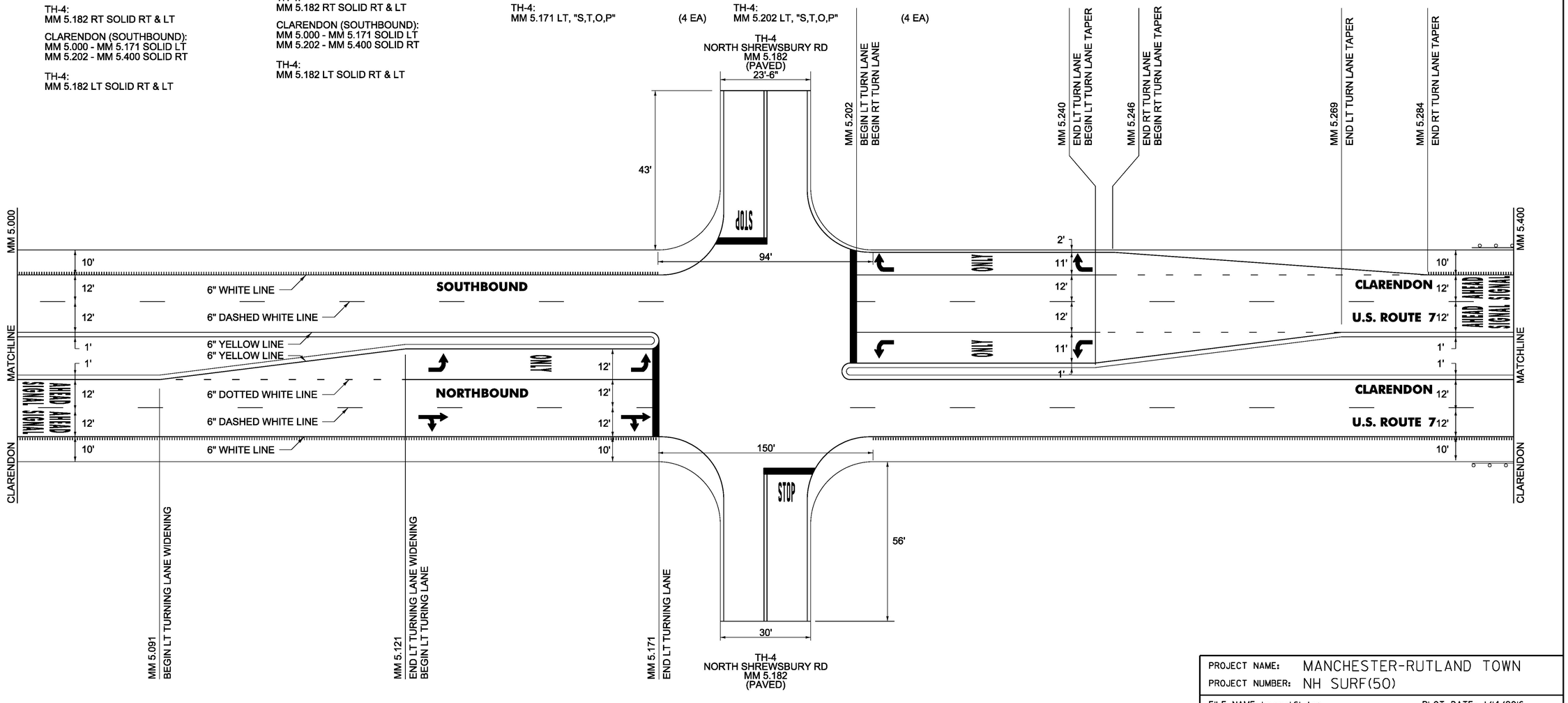
CLARENDON (SOUTHBOUND):
MM 5.189 LT, TH-4
MM 5.202

TEMPORARY 24 INCH STOP BAR, PAINT
CLARENDON (NORTHBOUND):
MM 5.171
MM 5.186 RT, TH-4

CLARENDON (SOUTHBOUND):
MM 5.189 LT, TH-4
MM 5.202

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 5.000 - MM 5.171 RT
MM 5.202 - MM 5.400 RT

CLARENDON (SOUTHBOUND):
MM 5.000 - MM 5.171 LT
MM 5.284 - MM 5.400 LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout61.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 61	SHEET 75 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 5.400 - MM 5.633 SOLID RT
MM 5.400 - MM 5.633 DASHED CL
MM 5.461 - MM 5.500 DOTTED LANE LINE LT
MM 5.500 - MM 5.527 SOLID LANE LINE LT
MM 5.527 - MM 5.581 DOTTED LANE LINE RT
MM 5.581 - MM 5.633 SOLID LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 5.400 - MM 5.549 SOLID LT
MM 5.400 - MM 5.633 DASHED CL
MM 5.563 - MM 5.609 SOLID LT
MM 5.609 - MM 5.633 SOLID LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 5.400 - MM 5.527 SOLID LT
MM 5.560 - MM 5.633 SOLID LT

CLARENDON (SOUTHBOUND):
MM 5.400 - MM 5.527 SOLID RT
MM 5.560 - MM 5.633 SOLID RT

TEMPORARY 6 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 5.400 - MM 5.633 SOLID RT
MM 5.400 - MM 5.633 DASHED CL
MM 5.461 - MM 5.500 DOTTED LANE LINE LT
MM 5.500 - MM 5.527 SOLID LANE LINE LT
MM 5.527 - MM 5.581 DOTTED LANE LINE RT
MM 5.581 - MM 5.633 SOLID LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 5.400 - MM 5.549 SOLID LT
MM 5.400 - MM 5.633 DASHED CL
MM 5.563 - MM 5.609 SOLID LT
MM 5.609 - MM 5.633 SOLID LT

TEMPORARY 6 INCH YELLOW LINE, PAINT
CLARENDON (NORTHBOUND):
MM 5.400 - MM 5.527 SOLID LT
MM 5.560 - MM 5.633 SOLID LT

CLARENDON (SOUTHBOUND):
MM 5.400 - MM 5.527 SOLID RT
MM 5.560 - MM 5.633 SOLID RT

SPECIAL PROVISION(DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):
MM 5.609 - MM 5.633 GORE AREA LT

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
CLARENDON (NORTHBOUND):

MM 5.501 LT, ARROW	(1 EA)
MM 5.512 LT, "O,N,L,Y"	(4 EA)
MM 5.523 LT, ARROW	(1 EA)
MM 5.590 RT, "S,I,G,N,A,L"	(6 EA)
MM 5.590 LT, "S,I,G,N,A,L"	(6 EA)
MM 5.598 RT, "A,H,E,A,D"	(5 EA)
MM 5.598 LT, "A,H,E,A,D"	(5 EA)
MM 5.604 RT, ARROW	(1 EA)
MM 5.619 RT, "O,N,L,Y"	(4 EA)
MM 5.634 RT, ARROW	(1 EA)

CLARENDON (SOUTHBOUND):
VT ROUTE 7B:

MM 5.556 LT, "S,T,O,P"	(4 EA)

TEMPORARY 12 INCH WHITE LINE, PAINT
CLARENDON (NORTHBOUND):
MM 5.609 - MM 5.633 GORE AREA LT

TEMPORARY LETTER OR SYMBOL, PAINT
CLARENDON (NORTHBOUND):

MM 5.501 LT, ARROW	(1 EA)
MM 5.512 LT, "O,N,L,Y"	(4 EA)
MM 5.523 LT, ARROW	(1 EA)
MM 5.590 RT, "S,I,G,N,A,L"	(6 EA)
MM 5.590 LT, "S,I,G,N,A,L"	(6 EA)
MM 5.598 RT, "A,H,E,A,D"	(5 EA)
MM 5.598 LT, "A,H,E,A,D"	(5 EA)
MM 5.604 RT, ARROW	(1 EA)
MM 5.619 RT, "O,N,L,Y"	(4 EA)
MM 5.634 RT, ARROW	(1 EA)

CLARENDON (SOUTHBOUND):
VT ROUTE 7B:

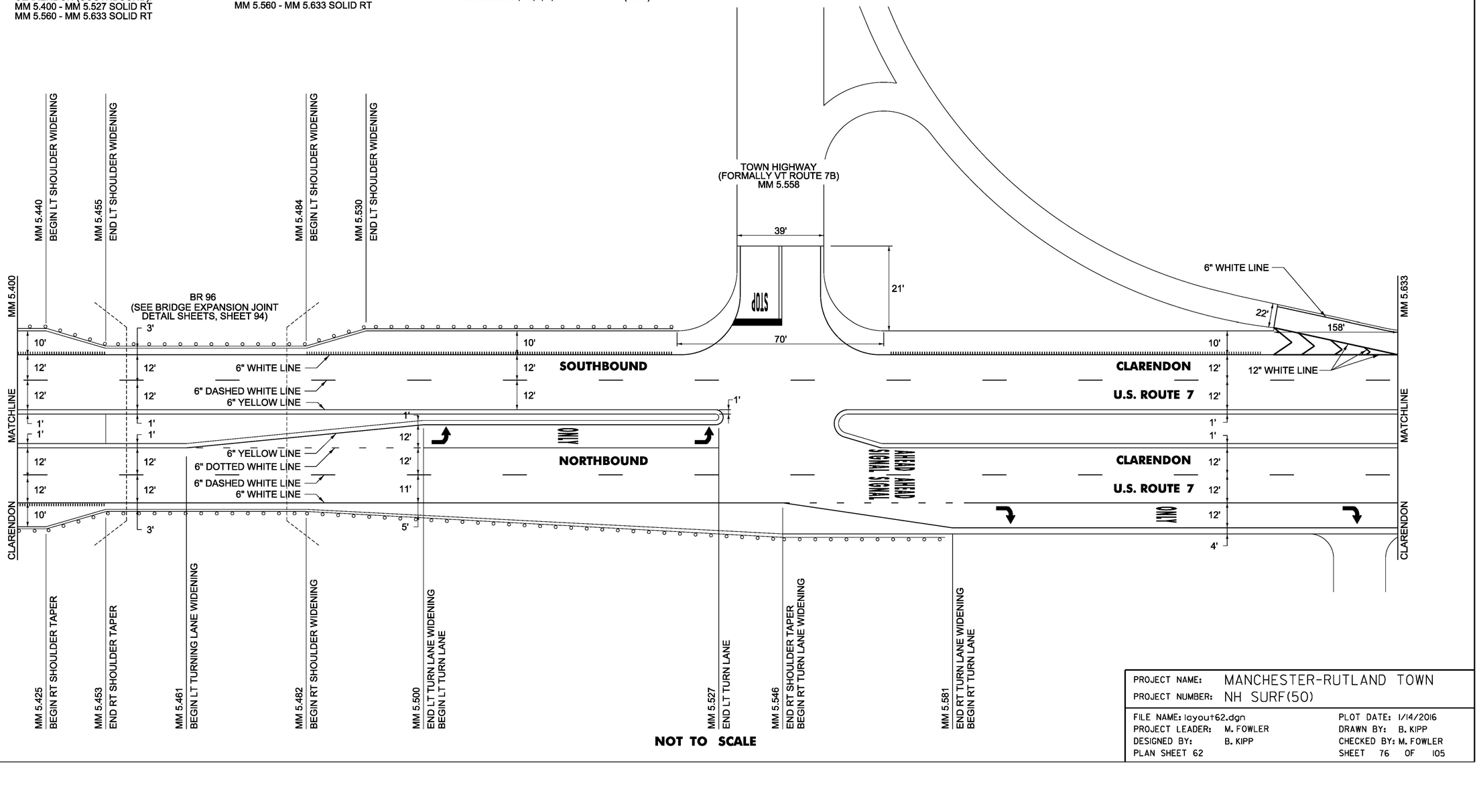
MM 5.556 LT, "S,T,O,P"	(4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
CLARENDON (SOUTHBOUND):
MM 5.558 LT, VT ROUTE 7B

TEMPORARY 24 INCH STOP BAR, PAINT
CLARENDON (SOUTHBOUND):
MM 5.558 LT, VT ROUTE 7B

MILLED RUMBLE STRIPS (SHOULDER)
CLARENDON (NORTHBOUND):
MM 5.400 - MM 5.436 RT

CLARENDON (SOUTHBOUND):
MM 5.400 - MM 5.450 LT
MM 5.493 - MM 5.544 LT
MM 5.573 - MM 5.609 LT



NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout62.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 62	SHEET 76 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

CLARENDON (NORTHBOUND):
MM 5.633 - MM 5.657 DASHED CL
MM 5.633 - MM 5.639 SOLID RT
MM 5.633 - MM 5.639 LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 5.633 - MM 5.657 DASHED CL
MM 5.633 - MM 5.657 DOTTED LANE LINE LT
MM 5.633 - MM 5.657 SOLID LT

RUTLAND TOWN (NORTHBOUND):
MM 0.000 - MM 0.103 DASHED CL
MM 0.000 - MM 0.103 SOLID RT
MM 0.000 - MM 0.103 SOLID LT
MM 0.026 - MM 0.061 DOTTED LANE LINE LT
MM 0.061 - MM 0.103 SOLID LANE LINE LT
MM 0.119 - MM 0.144 SOLID RT
MM 0.119 - MM 0.144 DASHED CL

RUTLAND TOWN (SOUTHBOUND):
MM 0.000 - MM 0.103 DASHED CL
MM 0.000 - MM 0.103 SOLID LT
MM 0.000 - MM 0.019 DOTTED LANE LINE LT
MM 0.119 - MM 0.144 DASHED CL
MM 0.119 - MM 0.144 SOLID LT
MM 0.119 - MM 0.144 SOLID LANE LINE RT

TEMPORARY 6 INCH WHITE LINE, PAINT

CLARENDON (NORTHBOUND):
MM 5.633 - MM 5.657 DASHED CL
MM 5.633 - MM 5.639 SOLID RT
MM 5.633 - MM 5.639 LANE LINE RT

CLARENDON (SOUTHBOUND):
MM 5.633 - MM 5.657 DASHED CL
MM 5.633 - MM 5.657 DOTTED LANE LINE LT
MM 5.633 - MM 5.657 SOLID LT

RUTLAND TOWN (NORTHBOUND):
MM 0.000 - MM 0.103 DASHED CL
MM 0.026 - MM 0.061 DOTTED LANE LINE LT
MM 0.061 - MM 0.103 SOLID LANE LINE LT
MM 0.119 - MM 0.144 DASHED CL

RUTLAND TOWN (SOUTHBOUND):
MM 0.000 - MM 0.103 DASHED CL
MM 0.000 - MM 0.103 SOLID LT
MM 0.000 - MM 0.019 DOTTED LANE LINE LT
MM 0.119 - MM 0.144 DASHED CL
MM 0.119 - MM 0.144 SOLID LT
MM 0.119 - MM 0.144 SOLID LANE LINE RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

CLARENDON (NORTHBOUND):
MM 5.633 - MM 5.657 SOLID LT

CLARENDON (SOUTHBOUND):
MM 5.633 - MM 5.657 SOLID RT

RUTLAND TOWN (NORTHBOUND):
MM 0.000 - MM 0.103 SOLID LT
MM 0.119 - MM 0.144 SOLID LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.000 - MM 0.103 SOLID RT
MM 0.119 - MM 0.144 SOLID RT

TEMPORARY 6 INCH YELLOW LINE, PAINT

CLARENDON (NORTHBOUND):
MM 5.633 - MM 5.657 SOLID LT

CLARENDON (SOUTHBOUND):
MM 5.633 - MM 5.657 SOLID RT

RUTLAND TOWN (NORTHBOUND):
MM 0.000 - MM 0.103 SOLID LT
MM 0.119 - MM 0.144 SOLID LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.000 - MM 0.103 SOLID RT
MM 0.119 - MM 0.144 SOLID RT

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

CLARENDON (NORTHBOUND):
MM 5.624 RT, "O,N,L,Y" (4 EA)
MM 5.637 RT, ARROW (1 EA)

RUTLAND TOWN (NORTHBOUND):
MM 0.061 LT, ARROW (1 EA)
MM 0.061 RT, DOUBLE ARROW (2 EA)
MM 0.072 LT, "O,N,L,Y" (4 EA)
MM 0.083 LT, ARROW (1 EA)
MM 0.083 RT, DOUBLE ARROW (2 EA)
MM 0.113 RT, TH-35 "O,N,L,Y" (4 EA)
MM 0.113 RT, TH-35 ARROW (1 EA)
MM 0.113 RT, TH-35 DOUBLE ARROW (2 EA)

RUTLAND TOWN (SOUTHBOUND):
MM 0.108 LT, TH-3 "S,T,O,P" (4 EA)
MM 0.121 RT, ARROW (1 EA)
MM 0.133 RT, "O,N,L,Y" (4 EA)

TEMPORARY LETTER OR SYMBOL, PAINT

CLARENDON (NORTHBOUND):
MM 5.624 RT, "O,N,L,Y" (4 EA)
MM 5.637 RT, ARROW (1 EA)

RUTLAND TOWN (NORTHBOUND):
MM 0.061 LT, ARROW (1 EA)
MM 0.061 RT, DOUBLE ARROW (2 EA)
MM 0.072 LT, "O,N,L,Y" (4 EA)
MM 0.083 LT, ARROW (1 EA)
MM 0.083 RT, DOUBLE ARROW (2 EA)
MM 0.113 RT, TH-35 "O,N,L,Y" (4 EA)
MM 0.113 RT, TH-35 ARROW (1 EA)
MM 0.113 RT, TH-35 DOUBLE ARROW (2 EA)

RUTLAND TOWN (SOUTHBOUND):
MM 0.108 LT, TH-3 "S,T,O,P" (4 EA)
MM 0.121 RT, ARROW (1 EA)
MM 0.133 RT, "O,N,L,Y" (4 EA)

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

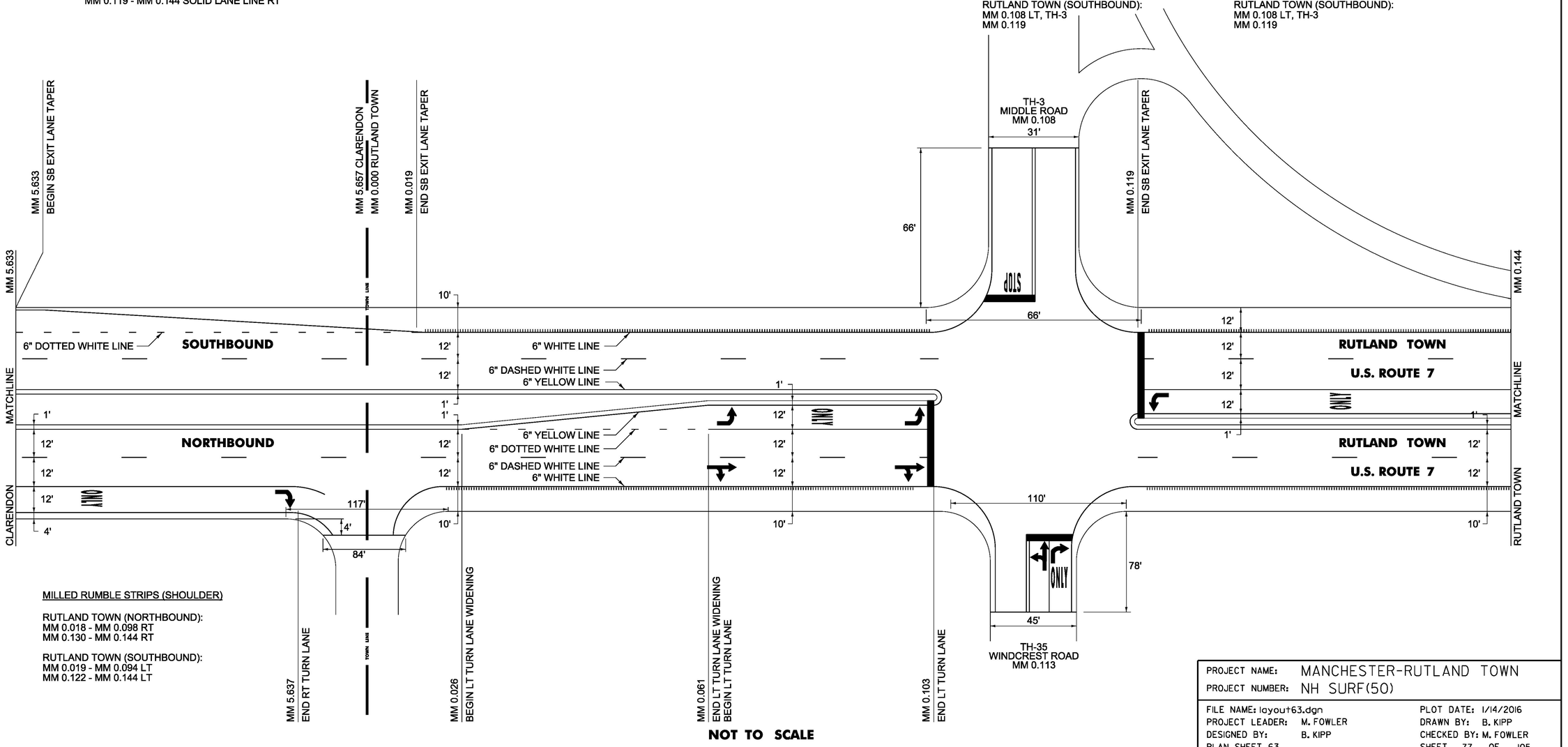
RUTLAND TOWN (NORTHBOUND):
MM 0.103
MM 0.113 RT, TH-35

RUTLAND TOWN (SOUTHBOUND):
MM 0.108 LT, TH-3
MM 0.119

TEMPORARY 24 INCH STOP BAR, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.103
MM 0.113 RT, TH-35

RUTLAND TOWN (SOUTHBOUND):
MM 0.108 LT, TH-3
MM 0.119



MILLED RUMBLE STRIPS (SHOULDER)

RUTLAND TOWN (NORTHBOUND):
MM 0.018 - MM 0.098 RT
MM 0.130 - MM 0.144 RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.019 - MM 0.094 LT
MM 0.122 - MM 0.144 LT

NOT TO SCALE

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout63.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 63	SHEET 77 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

RUTLAND TOWN (NORTHBOUND):
MM 0.144 - MM 0.336 DASHED CL
MM 0.144 - MM 0.336 SOLID RT
MM 0.250 - MM 0.275 DOTTED LANE LINE LT
MM 0.275 - MM 0.336 SOLID LANE LINE LT
MM 0.275 - MM 0.311 DOTTED LANE LINE RT
MM 0.311 - MM 0.311 SOLID LANE LINE RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.144 - MM 0.336 DASHED CL
MM 0.144 - MM 0.175 SOLID LANE LINE RT
MM 0.144 - MM 0.320 SOLID LT
MM 0.175 - MM 0.214 DOTTED LANE LINE RT
MM 0.189 - MM 0.290 DOTTED LANE LINE LT
MM 0.320 - MM 0.336 SOLID LT

TEMPORARY 6 INCH WHITE LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.144 - MM 0.336 DASHED CL
MM 0.144 - MM 0.336 SOLID RT
MM 0.250 - MM 0.275 DOTTED LANE LINE LT
MM 0.275 - MM 0.336 SOLID LANE LINE LT
MM 0.275 - MM 0.311 DOTTED LANE LINE RT
MM 0.311 - MM 0.336 SOLID LANE LINE RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.144 - MM 0.336 DASHED CL
MM 0.144 - MM 0.175 SOLID LANE LINE RT
MM 0.144 - MM 0.320 SOLID LT
MM 0.175 - MM 0.214 DOTTED LANE LINE RT
MM 0.189 - MM 0.290 DOTTED LANE LINE LT
MM 0.320 - MM 0.336 SOLID LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

RUTLAND TOWN (NORTHBOUND):
MM 0.144 - MM 0.336 SOLID LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.144 - MM 0.336 SOLID RT

TEMPORARY 6 INCH YELLOW LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.144 - MM 0.336 SOLID LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.144 - MM 0.336 SOLID RT

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

RUTLAND TOWN (NORTHBOUND):

MM 0.268 LT, ARROW	(1 EA)
MM 0.282 LT, "O,N,L,Y"	(4 EA)
MM 0.296 LT, ARROW	(1 EA)
MM 0.309 RT, ARROW	(1 EA)
MM 0.310 LT, "O,N,L,Y"	(4 EA)
MM 0.324 LT, ARROW	(1 EA)
MM 0.338 RT, "O,N,L,Y"	(4 EA)

RUTLAND TOWN (SOUTHBOUND):

MM 0.144 RT, ARROW	(1 EA)
MM 0.155 RT, "O,N,L,Y"	(4 EA)
MM 0.166 RT, ARROW	(1 EA)

SPECIAL PROVISION(DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)

RUTLAND TOWN (SOUTHBOUND):
MM 0.144 - MM 0.168 GORE AREA LT
MM 0.290 - MM 0.320 GORE AREA LT

TEMPORARY LETTER OR SYMBOL, PAINT

RUTLAND TOWN (NORTHBOUND):

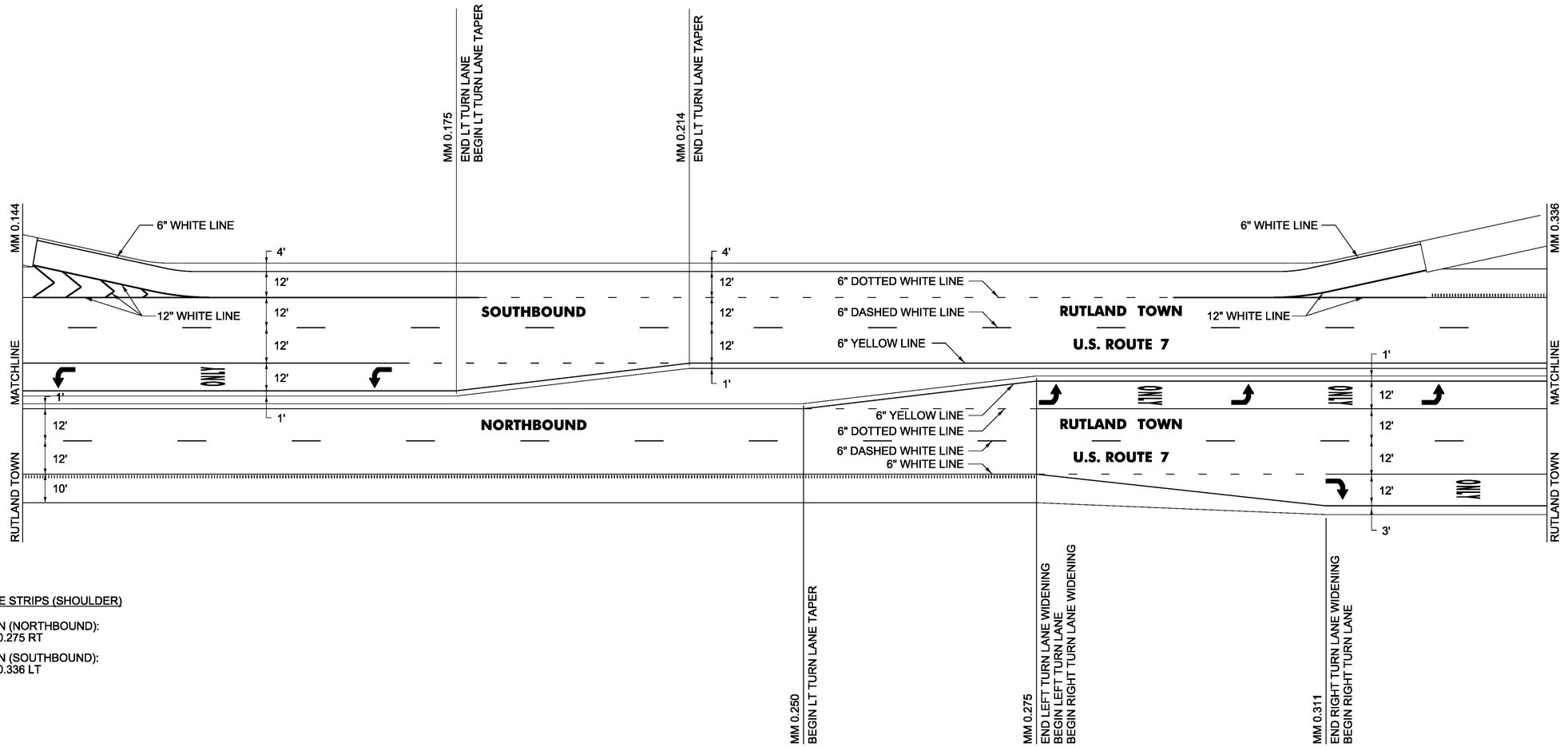
MM 0.268 LT, ARROW	(1 EA)
MM 0.282 LT, "O,N,L,Y"	(4 EA)
MM 0.296 LT, ARROW	(1 EA)
MM 0.309 RT, ARROW	(1 EA)
MM 0.310 LT, "O,N,L,Y"	(4 EA)
MM 0.324 LT, ARROW	(1 EA)
MM 0.338 RT, "O,N,L,Y"	(4 EA)

RUTLAND TOWN (SOUTHBOUND):

MM 0.144 RT, ARROW	(1 EA)
MM 0.155 RT, "O,N,L,Y"	(4 EA)
MM 0.166 RT, ARROW	(1 EA)

TEMPORARY 12 INCH WHITE LINE, PAINT

RUTLAND TOWN (SOUTHBOUND):
MM 0.144 - MM 0.168 GORE AREA LT
MM 0.290 - MM 0.320 GORE AREA LT



MILLED RUMBLE STRIPS (SHOULDER)

RUTLAND TOWN (NORTHBOUND):
MM 0.144 - MM 0.275 RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.320 - MM 0.336 LT

PROJECT NAME:	MANCHESTER-RUTLAND TOWN		
PROJECT NUMBER:	NH SURF(50)		
FILE NAME: layout64.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 64		SHEET	78 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

RUTLAND TOWN (NORTHBOUND):
MM 0.336 - MM 0.352 DASHED CL
MM 0.336 - MM 0.352 SOLID LANE LINE LT
MM 0.336 - MM 0.341 SOLID RT
MM 0.336 - MM 0.342 EDGE LINE RT
MM 0.367 - MM 0.373 SOLID RT, RAISED ISLAND
MM 0.378 - MM 0.475 DASHED CL
MM 0.378 - MM 0.475 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.336 - MM 0.352 DASHED CL
MM 0.336 - MM 0.357 SOLID LT
MM 0.370 - MM 0.419 SOLID LT
MM 0.378 - MM 0.475 DASHED CL
MM 0.378 - MM 0.412 SOLID LANE LINE RT
MM 0.412 - MM 0.475 DOTTED LINE LINE RT
MM 0.419 - MM 0.475 EDGE LINE LT
MM 0.436 - MM 0.475 DOTTED LANE LINE LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)

RUTLAND TOWN (NORTHBOUND):
MM 0.336 - MM 0.352 SOLID LT
MM 0.378 - MM 0.475 SOLID LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.336 - MM 0.352 SOLID RT
MM 0.378 - MM 0.475 SOLID RT

MILLED RUMBLE STRIPS (SHOULDER)

RUTLAND TOWN (NORTHBOUND):
MM 0.388 - MM 0.475 RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.336 - MM 0.345 LT
MM 0.384 - MM 0.419 LT

TEMPORARY 6 INCH WHITE LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.336 - MM 0.352 DASHED CL
MM 0.336 - MM 0.352 SOLID LANE LINE LT
MM 0.336 - MM 0.341 SOLID RT
MM 0.336 - MM 0.342 EDGE LINE RT
MM 0.367 - MM 0.373 SOLID RT, RAISED ISLAND
MM 0.378 - MM 0.475 DASHED CL
MM 0.378 - MM 0.475 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.336 - MM 0.352 DASHED CL
MM 0.336 - MM 0.357 SOLID LT
MM 0.370 - MM 0.419 SOLID LT
MM 0.378 - MM 0.500 DASHED CL
MM 0.378 - MM 0.412 SOLID LANE LINE RT
MM 0.412 - MM 0.475 DOTTED LINE LINE RT
MM 0.419 - MM 0.475 EDGE LINE LT
MM 0.436 - MM 0.475 DOTTED LANE LINE LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.336 - MM 0.352 SOLID LT
MM 0.378 - MM 0.475 SOLID LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.336 - MM 0.352 SOLID RT
MM 0.378 - MM 0.475 SOLID RT

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

RUTLAND TOWN (NORTHBOUND):
MM 0.341 - MM 0.354 EDGE LINE RT
MM 0.357 RT, RAISED ISLAND
MM 0.365 RT, LANE LINE RT
MM 0.367 RT, RAISED ISLAND & LANE LINE RT
MM 0.368 - MM 0.373 EDGE LINE RT
MM 0.370 - MM 3.378 EDGE LINE RT

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

RUTLAND TOWN (NORTHBOUND):
MM 0.352 RT, RAISED ISLAND
MM 0.365 RT, DOUBLE YELLOW
MM 0.365 RT, RAISED MEDIAN

TEMPORARY 4 INCH WHITE LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.341 - MM 0.354 EDGE LINE RT
MM 0.357 RT, RAISED ISLAND
MM 0.365 RT, LANE LINE RT
MM 0.367 RT, RAISED ISLAND & LANE LINE RT
MM 0.368 - MM 0.373 EDGE LINE RT
MM 0.370 - MM 3.378 EDGE LINE RT

TEMPORARY 4 INCH YELLOW LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.352 RT, RAISED ISLAND
MM 0.365 RT, DOUBLE YELLOW
MM 0.365 RT, RAISED MEDIAN

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

RUTLAND TOWN (NORTHBOUND):

MM 0.336 LT, "O,N,L,Y"	(4 EA)
MM 0.342 RT, ARROW	(1 EA)
MM 0.349 LT, ARROW	(1 EA)
MM 0.355 RT, YIELD MARKERS	(4 EA)
MM 0.362 RT, ARROW	(1 EA)
MM 0.362 RT, "O,N,L,Y"	(4 EA)
MM 0.364 RT, ARROW	(1 EA)
MM 0.372 RT, YIELD MARKERS	(4 EA)

RUTLAND TOWN (SOUTHBOUND):

MM 0.366 LT, ARROW	(3 EA)
MM 0.366 LT, "O,N,L,Y"	(12 EA)
MM 0.381 RT, ARROW	(1 EA)
MM 0.390 RT, "O,N,L,Y"	(4 EA)
MM 0.399 RT, ARROW	(1 EA)
MM 0.408 RT, "O,N,L,Y"	(4 EA)
MM 0.417 RT, ARROW	(1 EA)

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

RUTLAND TOWN (NORTHBOUND):
MM 0.352
MM 0.365 RT, DIAMOND RUN PLACE

RUTLAND TOWN (SOUTHBOUND):
MM 0.378
MM 0.366 LT, US ROUTE 4

SPECIAL PROVISION(DURABLE 12 INCH WHITE LINE, POLYUREA)(28 MILS)

RUTLAND TOWN (SOUTHBOUND):
MM 0.419 - MM 0.436 GORE AREA LT

TEMPORARY LETTER OR SYMBOL, PAINT

RUTLAND TOWN (NORTHBOUND):

MM 0.336 LT, "O,N,L,Y"	(4 EA)
MM 0.342 RT, ARROW	(1 EA)
MM 0.349 LT, ARROW	(1 EA)
MM 0.355 RT, YIELD MARKERS	(4 EA)
MM 0.362 RT, ARROW	(1 EA)
MM 0.362 RT, "O,N,L,Y"	(4 EA)
MM 0.364 RT, ARROW	(1 EA)
MM 0.372 RT, YIELD MARKERS	(4 EA)

RUTLAND TOWN (SOUTHBOUND):

MM 0.366 LT, ARROW	(3 EA)
MM 0.366 LT, "O,N,L,Y"	(12 EA)
MM 0.381 RT, ARROW	(1 EA)
MM 0.390 RT, "O,N,L,Y"	(4 EA)
MM 0.399 RT, ARROW	(1 EA)
MM 0.408 RT, "O,N,L,Y"	(4 EA)
MM 0.417 RT, ARROW	(1 EA)

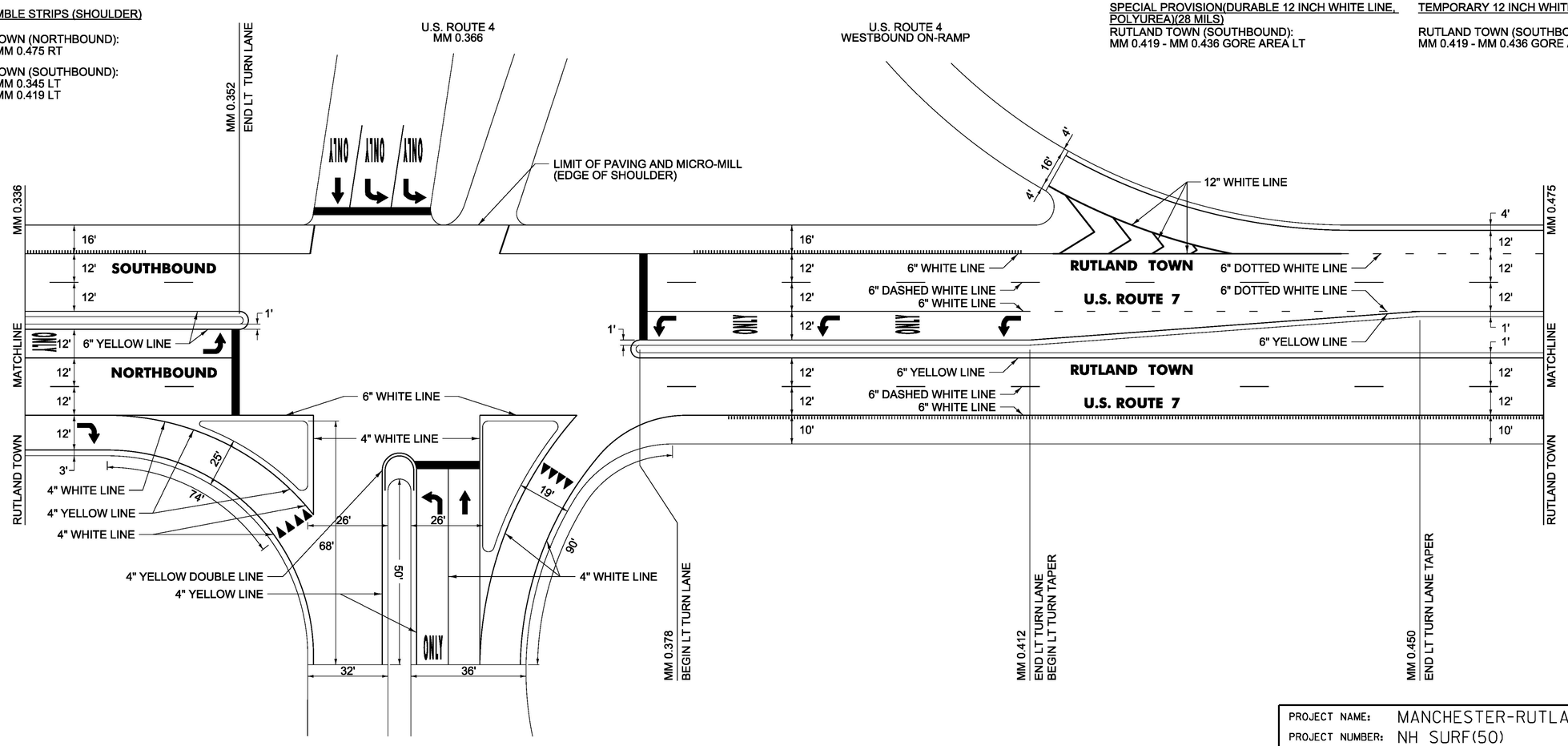
TEMPORARY 24 INCH STOP BAR, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.352
MM 0.365 RT, DIAMOND RUN PLACE

RUTLAND TOWN (SOUTHBOUND):
MM 0.378
MM 0.366 LT, US ROUTE 4

TEMPORARY 12 INCH WHITE LINE, PAINT

RUTLAND TOWN (SOUTHBOUND):
MM 0.419 - MM 0.436 GORE AREA LT



DIAMOND RUN MALL PLACE
MM 0.365

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout65.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 65	SHEET 79 OF 105

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.475 - MM 0.587 SOLID RT
MM 0.475 - MM 0.587 DASHED CL

RUTLAND TOWN (SOUTHBOUND):
MM 0.475 - MM 0.587 SOLID LT
MM 0.475 - MM 0.587 DASHED CL
MM 0.475 - MM 0.507 DOTTED LANE LINE LT

TEMPORARY 6 INCH WHITE LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.475 - MM 0.587 SOLID RT
MM 0.475 - MM 0.587 DASHED CL

RUTLAND TOWN (SOUTHBOUND):
MM 0.475 - MM 0.587 SOLID LT
MM 0.475 - MM 0.587 DASHED CL
MM 0.475 - MM 0.507 DOTTED LANE LINE LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.475 - MM 0.587 SOLID LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.475 - MM 0.587 SOLID RT

TEMPORARY 6 INCH YELLOW LINE, PAINT

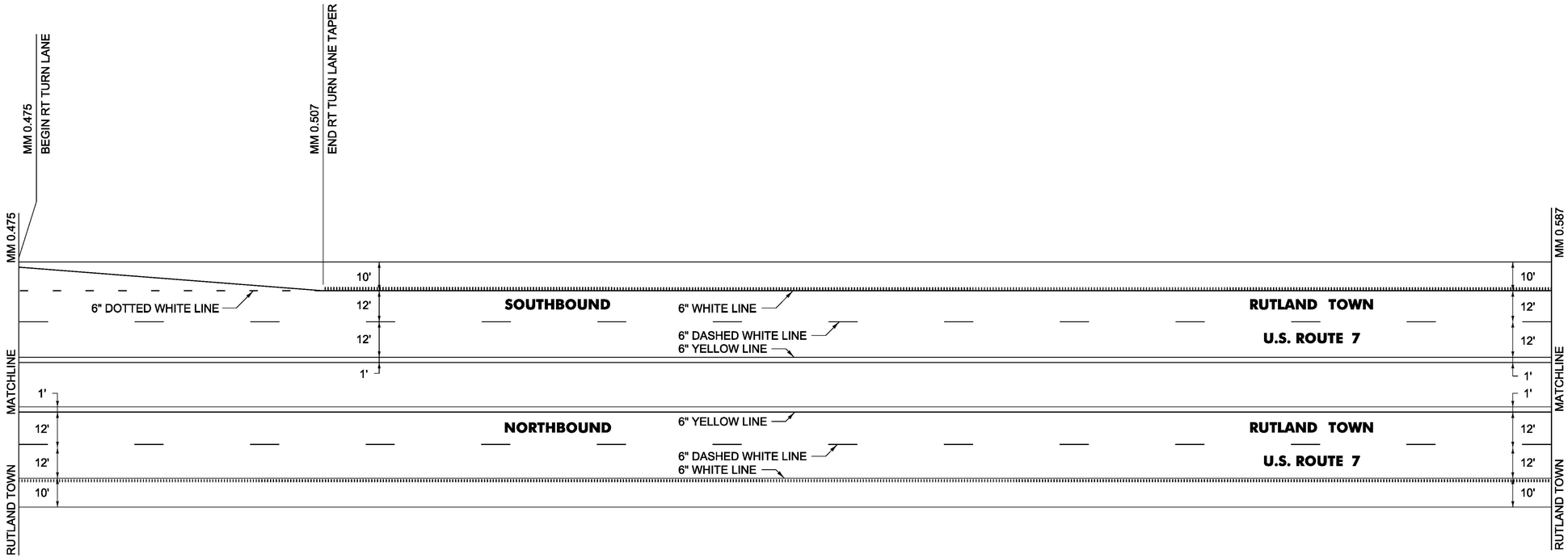
RUTLAND TOWN (NORTHBOUND):
MM 0.475 - MM 0.587 SOLID LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.475 - MM 0.587 SOLID RT

MILLED RUMBLE STRIPS (SHOULDER)

RUTLAND TOWN (NORTHBOUND):
MM 0.475 - MM 0.587 RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.507 - MM 0.587 LT



PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout66.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 66	SHEET 80 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 0.844 EDGE LINES RT (DIAMOND RUN MALL PLACE)
MM 0.844 EDGE LINES LT (HOLIDAY INN)
MM 0.844 LANE LINE LT (HOLIDAY INN)

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 0.844 DOUBLE YELLOW RT (DIAMOND RUN MALL PLACE)
MM 0.844 DOUBLE YELLOW LT (HOLIDAY INN)

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.587 - MM 0.675 DASHED CL
MM 0.587 - MM 0.675 SOLID RT
MM 0.600 - MM 0.651 DOTTED LANE LINE RT
MM 0.613 - MM 0.651 DOTTED LANE LINE LT
MM 0.651 - MM 0.675 SOLID LANE LINE RT
MM 0.651 - MM 0.675 SOLID LANE LINE LT
MM 0.692 - MM 0.765 DASHED CL
MM 0.692 - MM 0.765 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.587 - MM 0.675 DASHED CL
MM 0.587 - MM 0.675 SOLID LT
MM 0.692 - MM 0.765 DASHED CL
MM 0.692 - MM 0.765 SOLID LT
MM 0.692 - MM 0.737 SOLID LANE LINE RT
MM 0.737 - MM 0.763 DOTTED LANE LINE RT

TEMPORARY 4 INCH WHITE LINE, PAINT

RUTLAND TOWN:
MM 0.844 EDGE LINES RT (DIAMOND RUN MALL PLACE)
MM 0.844 EDGE LINES LT (HOLIDAY INN)
MM 0.844 LANE LINE LT (HOLIDAY INN)

TEMPORARY 4 INCH YELLOW LINE, PAINT

RUTLAND TOWN:
MM 0.844 DOUBLE YELLOW RT (DIAMOND RUN MALL PLACE)
MM 0.844 DOUBLE YELLOW LT (HOLIDAY INN)

TEMPORARY 6 INCH WHITE LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.587 - MM 0.675 DASHED CL
MM 0.587 - MM 0.675 SOLID RT
MM 0.600 - MM 0.651 DOTTED LANE LINE RT
MM 0.613 - MM 0.651 DOTTED LANE LINE LT
MM 0.651 - MM 0.675 SOLID LANE LINE RT
MM 0.651 - MM 0.675 SOLID LANE LINE LT
MM 0.692 - MM 0.765 DASHED CL
MM 0.692 - MM 0.765 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.587 - MM 0.675 DASHED CL
MM 0.587 - MM 0.675 SOLID LT
MM 0.692 - MM 0.765 DASHED CL
MM 0.692 - MM 0.765 SOLID LT
MM 0.692 - MM 0.737 SOLID LANE LINE RT
MM 0.737 - MM 0.763 DOTTED LANE LINE RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.587 - MM 0.675 SOLID LT
MM 0.692 - MM 0.737 SOILD LT
MM 0.737 - MM 0.765 DOUBLE SOLID LT

DIAMOND RUN PLACE:
MM 0.684 RT, DOUBLE SOLID CL

RUTLAND TOWN (SOUTHBOUND):
MM 0.587 - MM 0.675 SOLID RT
MM 0.692 - MM 0.737 SOILD RT
MM 0.737 - MM 0.765 DOUBLE SOLID RT

HOLIDAY INN:
MM 0.684 LT, DOUBLE SOLID CL

SPECIAL PROVISION(DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 0.737 - MM 0.765 GORE AREA

TEMPORARY 6 INCH YELLOW LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.587 - MM 0.675 SOLID LT
MM 0.692 - MM 0.737 SOILD LT
MM 0.737 - MM 0.765 DOUBLE SOLID LT

DIAMOND RUN PLACE:
MM 0.684 RT, DOUBLE SOLID CL

RUTLAND TOWN (SOUTHBOUND):
MM 0.587 - MM 0.675 SOLID RT
MM 0.692 - MM 0.737 SOILD RT
MM 0.737 - MM 0.765 DOUBLE SOLID RT

HOLIDAY INN:
MM 0.684 LT, DOUBLE SOLID CL

TEMPORARY 8 INCH YELLOW LINE, PAINT

RUTLAND TOWN:
MM 0.737 - MM 0.765 GORE AREA

SPECIAL PROVISION(DURABLE LETTER OR SYMBOL, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):

MM 0.651 RT, ARROW	(1 EA)
MM 0.651 LT, ARROW	(1 EA)
MM 0.662 RT, "O,N,L,Y"	(4 EA)
MM 0.662 LT, "O,N,L,Y"	(4 EA)
MM 0.673 RT, ARROW	(1 EA)
MM 0.673 LT, ARROW	(1 EA)

DIAMOND RUN PLACE:

MM 0.684 RT, ARROW	(1 EA)
MM 0.684 RT, DOUBLE ARROW	(2 EA)

RUTLAND TOWN (SOUTHBOUND):

MM 0.694 RT, ARROW	(1 EA)
MM 0.694 RT, DOUBLE ARROW	(2 EA)
MM 0.703 RT, "O,N,L,Y"	(4 EA)
MM 0.712 RT, ARROW	(1 EA)
MM 0.712 RT, DOUBLE ARROW	(2 EA)
MM 0.721 RT, "O,N,L,Y"	(4 EA)
MM 0.730 RT, ARROW`	(1 EA)
MM 0.730 RT, DOUBLE ARROW	(2 EA)

HOLIDAY INN:

MM 0.684 LT, ARROW	(1 EA)
MM 0.684 LT, DOUBLE ARROW	(2 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.675
MM 0.684 (DIAMOND RUN PLACE)

RUTLAND TOWN (SOUTHBOUND):
MM 0.684 (HOLIDAY INN)
MM 0.692

MILLED RUMBLE STRIPS

RUTLAND TOWN (SOUTHBOUND):
MM 0.587 - MM 0.675 LT

TEMPORARY LETTER OR SYMBOL, PAINT

RUTLAND TOWN (NORTHBOUND):

MM 0.651 RT, ARROW	(1 EA)
MM 0.651 LT, ARROW	(1 EA)
MM 0.662 RT, "O,N,L,Y"	(4 EA)
MM 0.662 LT, "O,N,L,Y"	(4 EA)
MM 0.673 RT, ARROW	(1 EA)
MM 0.673 LT, ARROW	(1 EA)

DIAMOND RUN PLACE:

MM 0.684 RT, ARROW	(1 EA)
MM 0.684 RT, DOUBLE ARROW	(2 EA)

RUTLAND TOWN (SOUTHBOUND):

MM 0.694 RT, ARROW	(1 EA)
MM 0.694 RT, DOUBLE ARROW	(2 EA)
MM 0.703 RT, "O,N,L,Y"	(4 EA)
MM 0.712 RT, ARROW	(1 EA)
MM 0.712 RT, DOUBLE ARROW	(2 EA)
MM 0.721 RT, "O,N,L,Y"	(4 EA)
MM 0.730 RT, ARROW`	(1 EA)
MM 0.730 RT, DOUBLE ARROW	(2 EA)

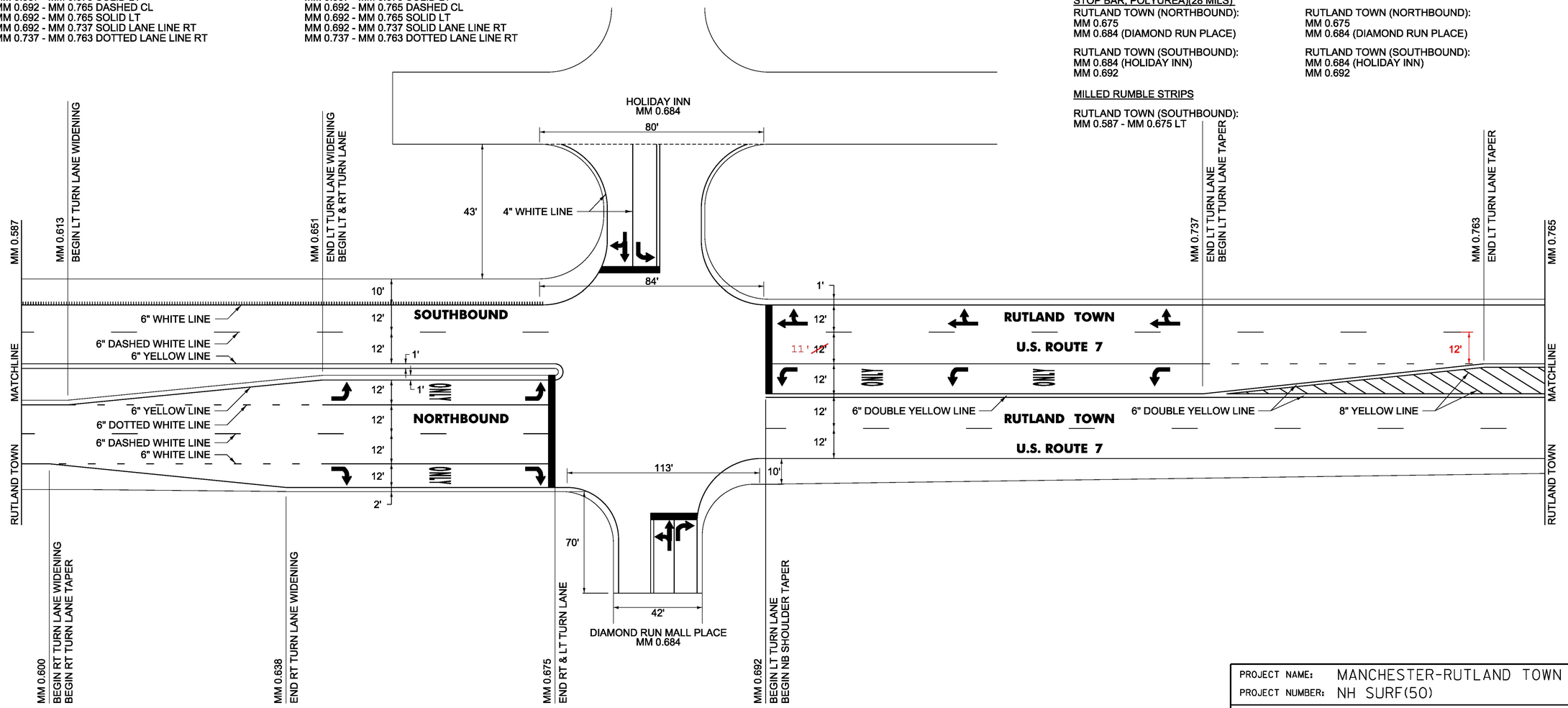
HOLIDAY INN:

MM 0.684 LT, ARROW	(1 EA)
MM 0.684 LT, DOUBLE ARROW	(2 EA)

TEMPORARY 24 INCH STOP BAR, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.675
MM 0.684 (DIAMOND RUN PLACE)

RUTLAND TOWN (SOUTHBOUND):
MM 0.684 (HOLIDAY INN)
MM 0.692



PROJECT NAME:	MANCHESTER-RUTLAND TOWN		
PROJECT NUMBER:	NH SURF(50)		
FILE NAME: layout67.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 67		SHEET 81	OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 0.844 EDGE LINES RT (SEWARD ROAD)
MM 0.844 EDGE LINES LT (SHOPPING CENTER)
MM 0.844 LANE LINE LT (SHOPPING CENTER)

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 0.844 RT DOUBLE YELLOW (SEWARD ROAD)
MM 0.844 LT MEDIAN & GORE AREA (SHOPPING CENTER)

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.765 - MM 0.832 DASHED CL
MM 0.765 - MM 0.832 SOLID RT
MM 0.766 - MM 0.792 DOTTED LANE LINE LT
MM 0.792 - MM 0.832 SOLID LANE LINE LT
MM 0.855 - MM 0.880 DASHED CL
MM 0.855 - MM 0.880 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.765 - MM 0.832 DASHED CL
MM 0.765 - MM 0.832 SOLID LT
MM 0.855 - MM 0.880 DASHED CL
MM 0.855 - MM 0.880 SOLID LT
MM 0.855 - MM 0.880 SOLID LANE LINE LT
MM 0.855 - MM 0.872 SOLID LANE LINE RT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.587 - MM 0.792 DOUBLE SOLID RT
MM 0.792 - MM 0.832 SOLID RT
MM 0.855 - MM 0.880 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.587 - MM 0.792 DOUBLE SOLID LT
MM 0.792 - MM 0.832 SOLID LT
MM 0.855 - MM 0.880 SOLID LT

TEMPORARY 4 INCH WHITE LINE, PAINT

RUTLAND TOWN:
MM 0.844 EDGE LINES RT (SEWARD ROAD)
MM 0.844 EDGE LINES LT (SHOPPING CENTER)
MM 0.844 LANE LINE LT (SHOPPING CENTER)

TEMPORARY 4 INCH YELLOW LINE, PAINT

RUTLAND TOWN:
MM 0.844 RT DOUBLE YELLOW (SEWARD ROAD)
MM 0.844 LT MEDIAN & GORE AREA (SHOPPING CENTER)

TEMPORARY 6 INCH WHITE LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.765 - MM 0.832 DASHED CL
MM 0.765 - MM 0.832 SOLID RT
MM 0.766 - MM 0.792 DOTTED LANE LINE LT
MM 0.792 - MM 0.832 SOLID LANE LINE LT
MM 0.855 - MM 0.880 DASHED CL
MM 0.855 - MM 0.880 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.765 - MM 0.832 DASHED CL
MM 0.765 - MM 0.832 SOLID LT
MM 0.855 - MM 0.880 DASHED CL
MM 0.855 - MM 0.880 SOLID LT
MM 0.855 - MM 0.880 SOLID LANE LINE LT
MM 0.855 - MM 0.872 SOLID LANE LINE RT

TEMPORARY 6 INCH YELLOW LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.587 - MM 0.792 DOUBLE SOLID RT
MM 0.792 - MM 0.832 SOLID RT
MM 0.855 - MM 0.880 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.587 - MM 0.792 DOUBLE SOLID LT
MM 0.792 - MM 0.832 SOLID LT
MM 0.855 - MM 0.880 SOLID LT

SPECIAL PROVISION(DURABLE 8 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 0.765 - MM 0.792 GORE AREA

SPECIAL PROVISION(DURABLE CROSSWALK MARKING, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 0.832
MM 0.844 LT (SHOPPING CENTER)
MM 0.844 RT (SEWARD ROAD)

TEMPORARY 8 INCH YELLOW LINE, PAINT

RUTLAND TOWN:
MM 0.765 - MM 0.792 GORE AREA

TEMPORARY CROSSWALK MARKING, PAINT

RUTLAND TOWN:
MM 0.832
MM 0.844 LT (SHOPPING CENTER)
MM 0.844 RT (SEWARD ROAD)

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

RUTLAND TOWN (NORTHBOUND):	
MM 0.793 LT, ARROW	(1 EA)
MM 0.793 RT, DOUBLE ARROW	(2 EA)
MM 0.804 LT, "O,N,L,Y"	(4 EA)
MM 0.815 LT, ARROW	(1 EA)
MM 0.815 LT, DOUBLE ARROW	(2 EA)
RUTLAND TOWN (SOUTHBOUND):	
MM 0.857 RT, ARROW	(1 EA)
MM 0.857 LT, ARROW	(1 EA)
MM 0.866 LT, "O,N,L,Y"	(4 EA)
MM 0.871 RT, "O,N,L,Y"	(4 EA)
MM 0.875 LT, ARROW	(1 EA)
SHOPPING CENTER:	
MM 0.844 LT, ARROW	(1 EA)
MM 0.844 LT, DOUBLE ARROW	(2 EA)
MM 0.844 LT, "O,N,L,Y"	(4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.832
MM 0.844 (SEWARD ROAD)

RUTLAND TOWN (SOUTHBOUND):
MM 0.844 (SHOPPING CENTER)
MM 0.855

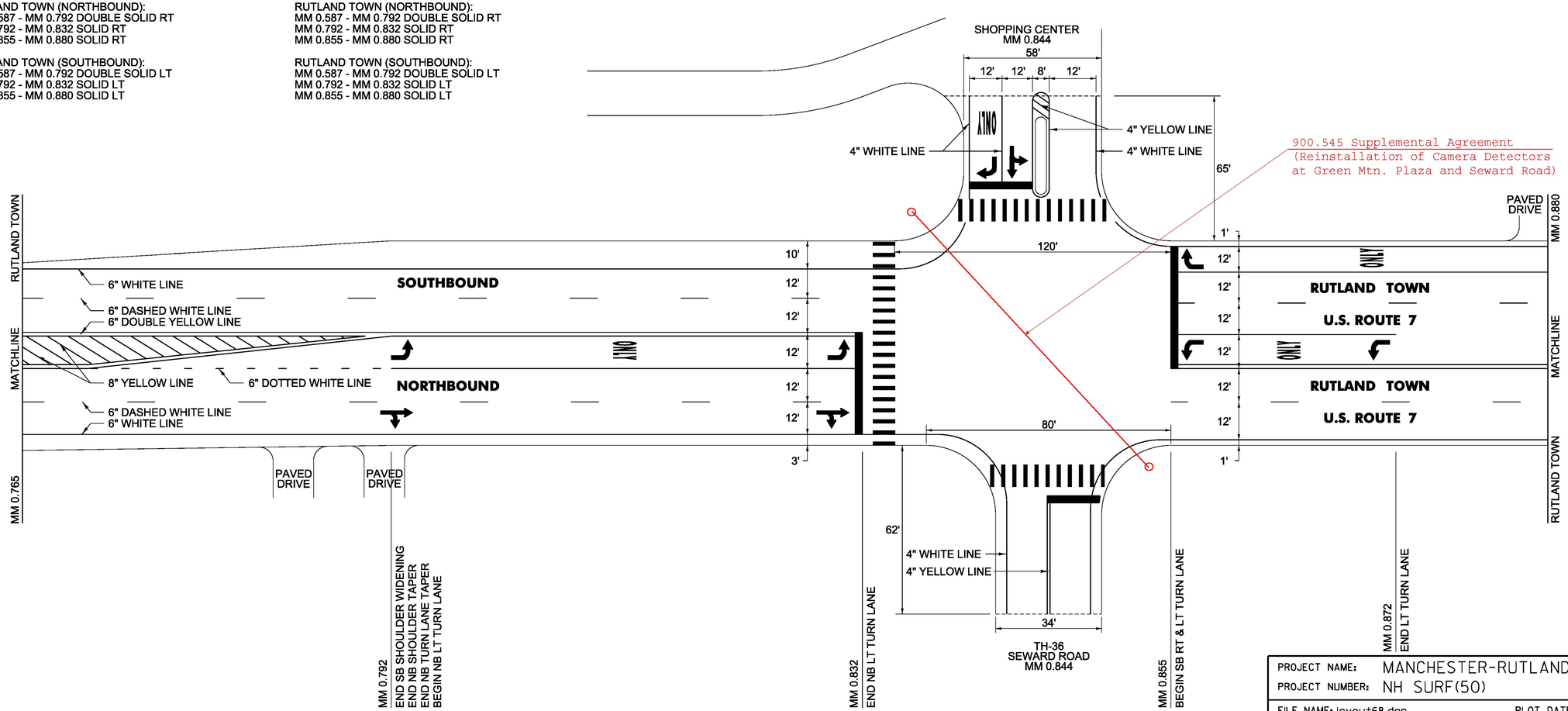
TEMPORARY LETTER OR SYMBOL, PAINT

RUTLAND TOWN (NORTHBOUND):	
MM 0.793 LT, ARROW	(1 EA)
MM 0.793 RT, DOUBLE ARROW	(2 EA)
MM 0.804 LT, "O,N,L,Y"	(4 EA)
MM 0.815 LT, ARROW	(1 EA)
MM 0.815 LT, DOUBLE ARROW	(2 EA)
RUTLAND TOWN (SOUTHBOUND):	
MM 0.857 RT, ARROW	(1 EA)
MM 0.857 LT, ARROW	(1 EA)
MM 0.866 LT, "O,N,L,Y"	(4 EA)
MM 0.871 RT, "O,N,L,Y"	(4 EA)
MM 0.875 LT, ARROW	(1 EA)
SHOPPING CENTER:	
MM 0.844 LT, ARROW	(1 EA)
MM 0.844 LT, DOUBLE ARROW	(2 EA)
MM 0.844 LT, "O,N,L,Y"	(4 EA)

TEMPORARY 24 INCH STOP BAR, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.832
MM 0.844 (SEWARD ROAD)

RUTLAND TOWN (SOUTHBOUND):
MM 0.844 (SHOPPING CENTER)
MM 0.855



PROJECT NAME:	MANCHESTER-RUTLAND TOWN		
PROJECT NUMBER:	NH SURF(50)		
FILE NAME: layout68.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 68		SHEET	82 OF 105

SPECIAL PROVISION(DURABLE 4 INCH WHITE LINE, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 1.031 EDGE LINES LT (RANDBURY ROAD)

SPECIAL PROVISION(DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN:
MM 1.031 DOUBLE YELLOW LT (RANDBURY ROAD)

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.880 - MM 1.060 DASHED CL
MM 0.880 - MM 1.060 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.880 - MM 1.027 SOLID LT
MM 0.880 - MM 0.933 SOLID LANE LINE LT
MM 0.933 - MM 0.965 DOTTED LANE LINE LT
MM 1.034 - MM 1.060 SOLID LT

SPECIAL PROVISION(DURABLE 6 INCH YELLOW LINE, POLYUREA)(28 MILS)
RUTLAND TOWN (NORTHBOUND):
MM 0.880 - MM 0.890 DOUBLE YELLOW LT
MM 0.890 - MM 1.027 SOLID LT
MM 0.890 - MM 1.027 DASHED LT
MM 1.034 - MM 1.060 SOLID LT
MM 1.034 - MM 1.060 DASHED LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.890 - MM 1.027 SOLID RT
MM 0.890 - MM 1.027 DASHED RT
MM 1.034 - MM 1.060 SOLID RT
MM 1.034 - MM 1.060 DASHED RT

TEMPORARY 4 INCH WHITE LINE, PAINT

RUTLAND TOWN:
MM 1.031 EDGE LINES LT (RANDBURY ROAD)

TEMPORARY 4 INCH YELLOW LINE, PAINT

RUTLAND TOWN:
MM 1.031 DOUBLE YELLOW LT (RANDBURY ROAD)

TEMPORARY 6 INCH WHITE LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.880 - MM 1.060 DASHED CL
MM 0.880 - MM 1.060 SOLID RT

RUTLAND TOWN (SOUTHBOUND):
MM 0.880 - MM 1.027 SOLID LT
MM 0.880 - MM 0.933 SOLID LANE LINE LT
MM 0.933 - MM 0.965 DOTTED LANE LINE LT
MM 1.034 - MM 1.060 SOLID LT

TEMPORARY 6 INCH YELLOW LINE, PAINT

RUTLAND TOWN (NORTHBOUND):
MM 0.880 - MM 0.890 DOUBLE YELLOW LT
MM 0.890 - MM 1.027 SOLID LT
MM 0.890 - MM 1.027 DASHED LT
MM 1.034 - MM 1.060 SOLID LT
MM 1.034 - MM 1.060 DASHED LT

RUTLAND TOWN (SOUTHBOUND):
MM 0.890 - MM 1.027 SOLID RT
MM 0.890 - MM 1.027 DASHED RT
MM 1.034 - MM 1.060 SOLID RT
MM 1.034 - MM 1.060 DASHED RT

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

RUTLAND TOWN:	
MM 0.880 LT, ARROW	(1 EA)
MM 0.892 LT, "O,N,L,Y"	(4 EA)
MM 0.897 CL, ARROW	(2 EA)
MM 0.904 LT, ARROW	(1 EA)
MM 0.933 LT, "O,N,L,Y"	(4 EA)
MM 0.934 CL, ARROW	(2 EA)
MM 0.971 CL, ARROW	(2 EA)
MM 1.008 CL, ARROW	(2 EA)
MM 1.045 CL, ARROW	(2 EA)
RANDBURY ROAD:	
MM 1.031 LT, "S,T,O,P"	(4 EA)

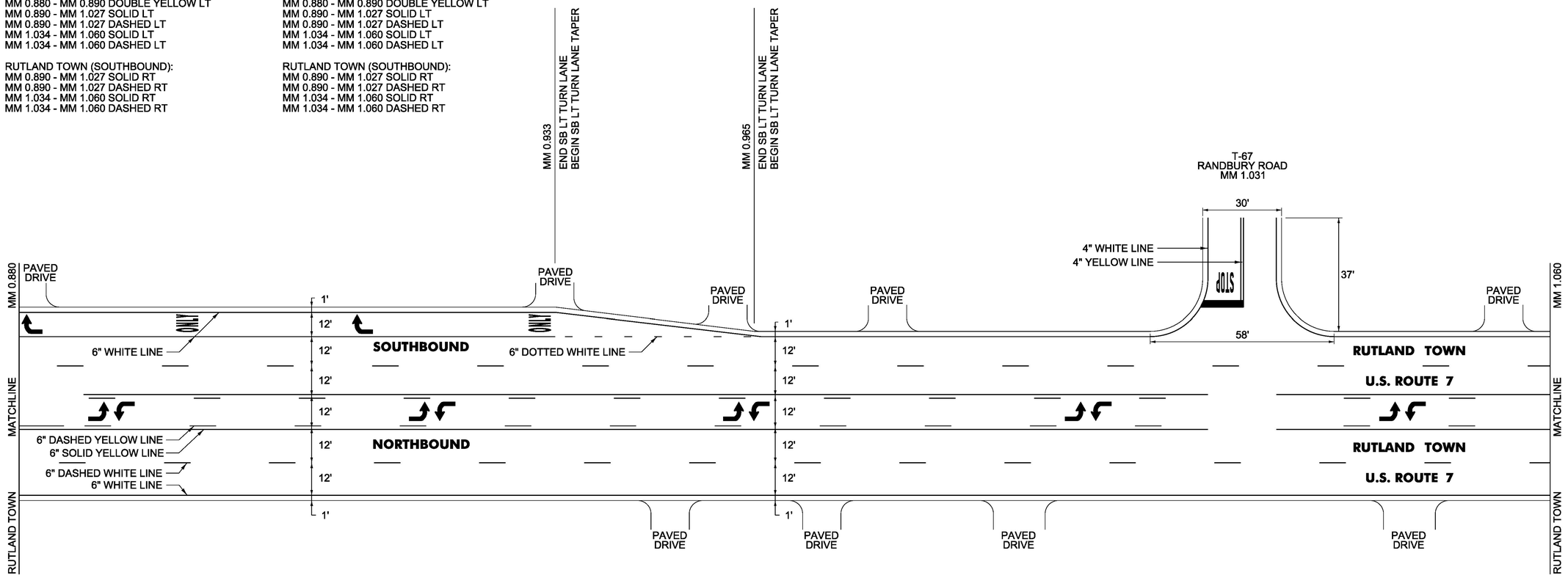
TEMPORARY LETTER OR SYMBOL, PAINT

RUTLAND TOWN:	
MM 0.880 LT, ARROW	(1 EA)
MM 0.892 LT, "O,N,L,Y"	(4 EA)
MM 0.897 CL, ARROW	(2 EA)
MM 0.904 LT, ARROW	(1 EA)
MM 0.933 LT, "O,N,L,Y"	(4 EA)
MM 0.934 CL, ARROW	(2 EA)
MM 0.971 CL, ARROW	(2 EA)
MM 1.008 CL, ARROW	(2 EA)
MM 1.045 CL, ARROW	(2 EA)
RANDBURY ROAD:	
MM 1.031 LT, "S,T,O,P"	(4 EA)

SPECIAL PROVISION(DURABLE 24 INCH STOP BAR, POLYUREA)(28 MILS)
RANDBURY ROAD:
MM 1.031 LT

TEMPORARY 24 INCH STOP BAR, PAINT

RANDBURY ROAD:
MM 1.031 LT



PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: layout69.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
PLAN SHEET 69	SHEET 83 OF 105

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

RUTLAND TOWN:
MM 1.137 EDGE LINES LT (DRIVE)
MM 1.137 EDGE LINES RT (COLD RIVER ROAD)
MM 1.137 LANE LINE RT (COLD RIVER ROAD)

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

RUTLAND TOWN:
MM 1.137 DOUBLE YELLOW LT (DRIVE)
MM 1.137 DOUBLE YELLOW RT (COLD RIVER ROAD)

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

RUTLAND TOWN:
MM 1.060 - MM 1.130 DASHED CL RT
MM 1.060 - MM 1.130 SOLID RT
MM 1.060 - MM 1.130 DASHED CL LT
MM 1.060 - MM 1.130 SOLID LT
MM 1.116 - MM 1.130 SOLID LANE LINE RT
MM 1.143 - MM 1.177 DASHED CL RT
MM 1.143 - MM 1.177 SOLID RT
MM 1.143 - MM 1.177 DASHED CL LT
MM 1.143 - MM 1.177 SOLID LT
MM 1.143 - MM 1.162 SOLID LANE LINE LT

SPECIAL PROVISION(DURABLE 6 INCH WHITE LINE, POLYUREA)(28 MILS)

RUTLAND TOWN:
MM 1.060 - MM 1.100 DASHED RT
MM 1.060 - MM 1.100 SOLID RT
MM 1.060 - MM 1.100 DASHED LT
MM 1.060 - MM 1.100 SOLID LT
MM 1.100 - MM 1.130 DOUBLE YELLOW LT
MM 1.143 - MM 1.177 DOUBLE YELLOW RT

TEMPORARY 4 INCH WHITE LINE, PAINT

RUTLAND TOWN:
MM 1.137 EDGE LINES LT (DRIVE)
MM 1.137 EDGE LINES RT (COLD RIVER ROAD)
MM 1.137 LANE LINE RT (COLD RIVER ROAD)

TEMPORARY 4 INCH YELLOW LINE, PAINT

RUTLAND TOWN:
MM 1.137 DOUBLE YELLOW LT (DRIVE)
MM 1.137 DOUBLE YELLOW RT (COLD RIVER ROAD)

TEMPORARY 6 INCH WHITE LINE, PAINT

RUTLAND TOWN:
MM 1.060 - MM 1.130 DASHED CL RT
MM 1.060 - MM 1.130 SOLID RT
MM 1.060 - MM 1.130 DASHED CL LT
MM 1.060 - MM 1.130 SOLID LT
MM 1.116 - MM 1.130 SOLID LANE LINE RT
MM 1.143 - MM 1.177 DASHED CL RT
MM 1.143 - MM 1.177 SOLID RT
MM 1.143 - MM 1.177 DASHED CL LT
MM 1.143 - MM 1.177 SOLID LT
MM 1.143 - MM 1.162 SOLID LANE LINE LT

TEMPORARY 6 INCH WHITE LINE, PAINT

RUTLAND TOWN:
MM 1.060 - MM 1.100 DASHED RT
MM 1.060 - MM 1.100 SOLID RT
MM 1.060 - MM 1.100 DASHED LT
MM 1.060 - MM 1.100 SOLID LT
MM 1.100 - MM 1.130 DOUBLE YELLOW LT
MM 1.143 - MM 1.177 DOUBLE YELLOW RT

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

RUTLAND TOWN:	
MM 1.083 CL, ARROW	(2 EA)
MM 1.100 CL, ARROW	(2 EA)
MM 1.117 CL, ARROW	(1 EA)
MM 1.117 RT, DOUBLE ARROW	(2 EA)
MM 1.125 CL, ARROW	(1 EA)
MM 1.125 RT, DOUBLE ARROW	(2 EA)
MM 1.144 CL, ARROW	(1 EA)
MM 1.144 LT, DOUBLE ARROW	(2 EA)
MM 1.153 CL, "O,N,L,Y"	(4 EA)
MM 1.155 CL, ARROW	(1 EA)
MM 1.155 LT, DOUBLE ARROW	(2 EA)
COLD RIVER ROAD:	
MM 1.137 RT, ARROW	(1 EA)
MM 1.137 RT, DOUBLE ARROW	(2 EA)
MM 1.137 RT, "O,N,L,Y"	(4 EA)

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

RANDBURY ROAD:
MM 1.130 RT
MM 1.137 RT (COLD RIVER ROAD)
MM 1.137 LT (DRIVE)
MM 1.143 LT

TEMPORARY LETTER OR SYMBOL, PAINT

RUTLAND TOWN:	
MM 1.083 CL, ARROW	(2 EA)
MM 1.100 CL, ARROW	(2 EA)
MM 1.117 CL, ARROW	(1 EA)
MM 1.117 RT, DOUBLE ARROW	(2 EA)
MM 1.125 CL, ARROW	(1 EA)
MM 1.125 RT, DOUBLE ARROW	(2 EA)
MM 1.144 CL, ARROW	(1 EA)
MM 1.144 LT, DOUBLE ARROW	(2 EA)
MM 1.153 CL, "O,N,L,Y"	(4 EA)
MM 1.155 CL, ARROW	(1 EA)
MM 1.155 LT, DOUBLE ARROW	(2 EA)
COLD RIVER ROAD:	
MM 1.137 RT, ARROW	(1 EA)
MM 1.137 RT, DOUBLE ARROW	(2 EA)
MM 1.137 RT, "O,N,L,Y"	(4 EA)

TEMPORARY 24 INCH STOP BAR, PAINT

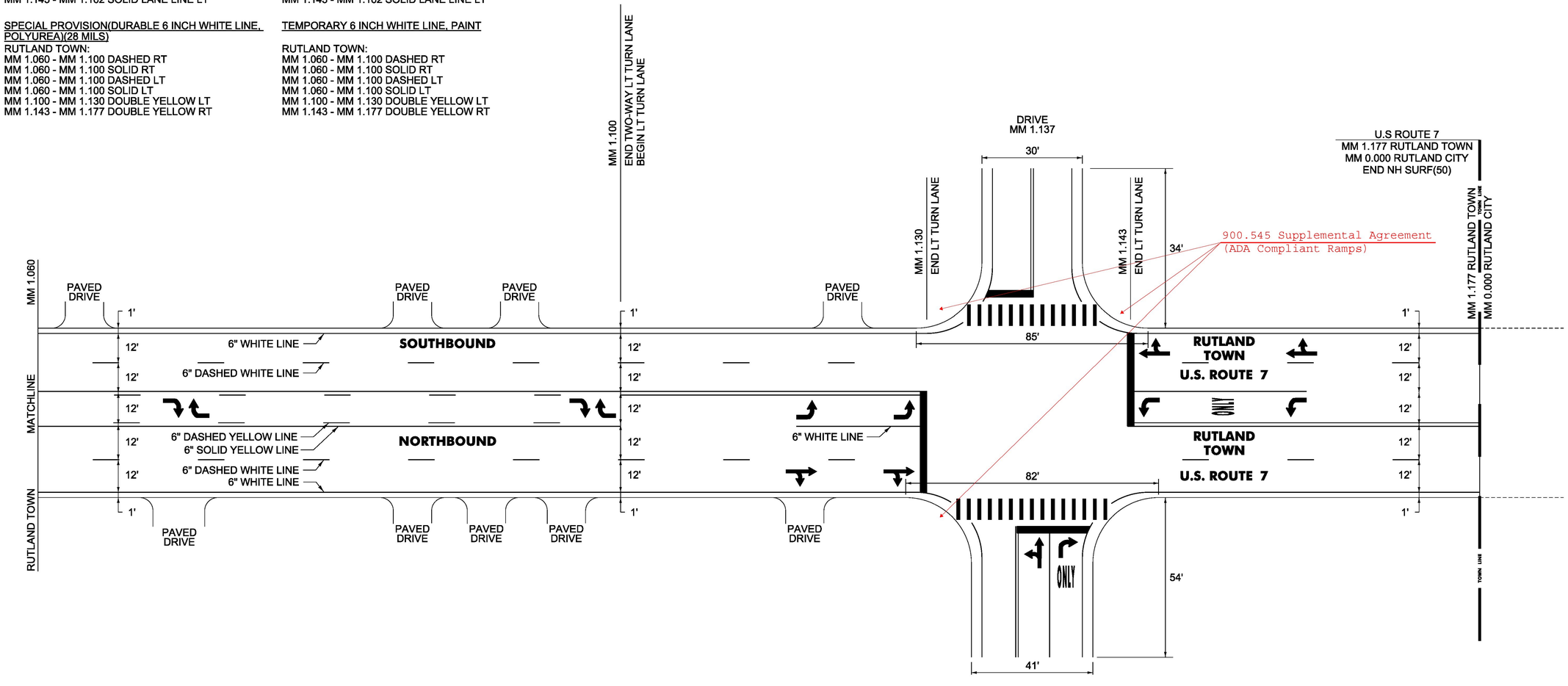
RANDBURY ROAD:
MM 1.130 RT
MM 1.137 RT (COLD RIVER ROAD)
MM 1.137 LT (DRIVE)
MM 1.143 LT

SPECIAL PROVISION(DURABLE CROSSWALK MARKING, POLYUREA)(28 MILS)

RUTLAND TOWN:
MM 1.137 RT (COLD RIVER ROAD)
MM 1.137 LT (DRIVE)

TEMPORARY CROSSWALK MARKING, PAINT

RUTLAND TOWN:
MM 1.137 RT (COLD RIVER ROAD)
MM 1.137 LT (DRIVE)



TH-5
COLD RIVER ROAD
MM 1.137

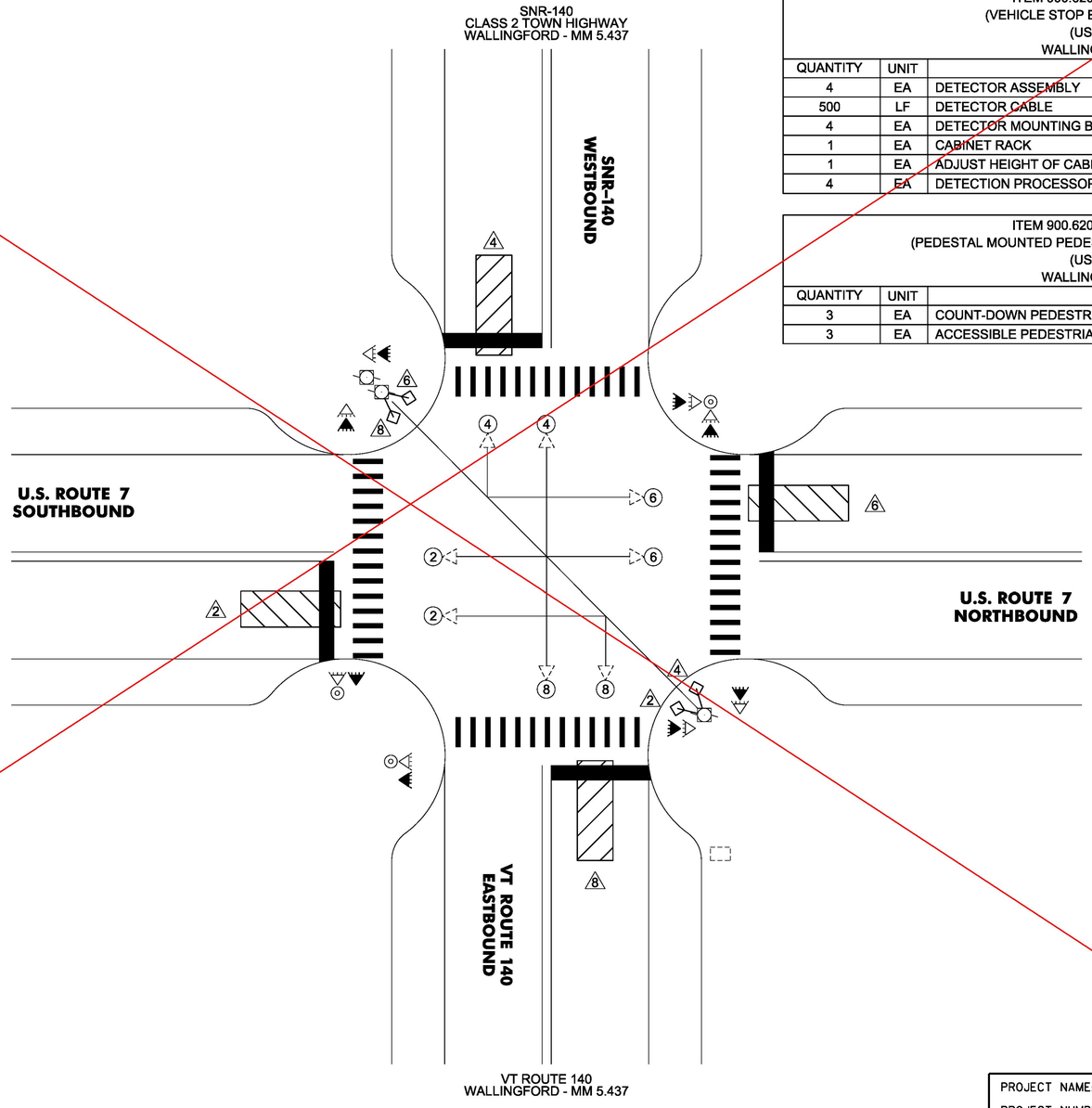
PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: layout70.dgn		PLOT DATE:	1/14/2016
PROJECT LEADER:	M. FOWLER	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	M. FOWLER
PLAN SHEET 70		SHEET	84 OF 105

see revised sheet

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM). MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 678.
3. FOR INFORMATION REGARDING THE INSTALLATION OF THE ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES (ORIENTATION, HEIGHT, ETC.), SEE SECTION 4E08-PEDESTRIAN DETECTORS IN THE 2009 EDITION OF THE MUTCD.
4. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
5. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
6. STOP BAR DETECTION SYSTEM SHALL BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM).
7. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM).
8. SALVAGE EXISTING PEDESTRIAN SIGNAL EQUIPMENT (PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS) TO VTRANS. CONTACT TIM SWEENEY, DISTRICT 7 SIGNAL TECHNICIAN (802)279-0585 TO COORDINATE TRANSFER OF EQUIPMENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (PEDESTRIAN SIGNAL HEADS, COUNTDOWN)(US 7 @ VT 140).



NOT TO SCALE

ITEM 900.620 SPECIAL PROVISION (PEDESTRIAN SIGNAL HEADS, COUNTDOWN) (US 7 @ VT 140) WALLINGFORD MM 5.437		
QUANTITY	UNIT	DESCRIPTION
5	EA	COUNT-DOWN PEDESTRIAN SIGNAL WITH MOUNTING HARDWARE
5	EA	ACCESSIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY (SEE NOTE 3)

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ VT 140) WALLINGFORD MM 5.437		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD

ITEM 900.620 SPECIAL PROVISION (PEDESTAL MOUNTED PEDESTRIAN SIGNAL HEAD, COUNTDOWN) (US 7 @ VT 140) WALLINGFORD MM 5.437		
QUANTITY	UNIT	DESCRIPTION
3	EA	COUNT-DOWN PEDESTRIAN SIGNAL WITH MOUNTING HARDWARE ON PEDESTAL
3	EA	ACCESSIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY (SEE NOTE 3)

LEGEND	
	DESCRIPTION
- - -	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

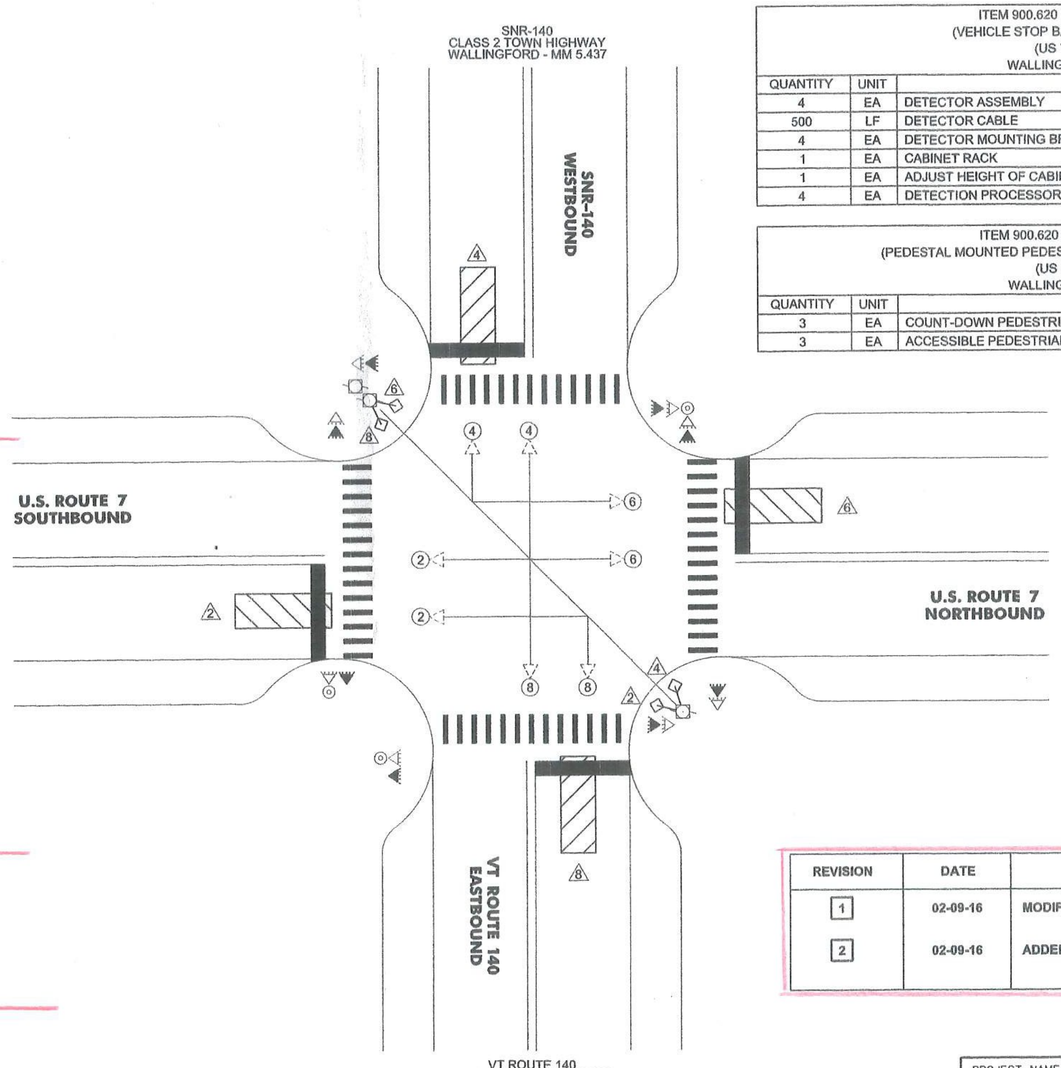
FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 1

PLOT DATE: 1/14/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 85 OF 105

RECORD PLANS

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM). MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 678.
3. FOR INFORMATION REGARDING THE INSTALLATION OF THE ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES (ORIENTATION, HEIGHT, ETC.), SEE SECTION 4E08-PEDESTRIAN DETECTORS IN THE 2009 EDITION OF THE MUTCD.
4. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
5. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
6. STOP BAR DETECTION SYSTEM SHALL BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM).
7. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM).
8. **SALVAGE EXISTING PEDESTRIAN SIGNAL EQUIPMENT (PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS) TO VTRANS. CONTACT VAOT DISTRICT 5 SIGNAL TECHNICIAN AT (802)655-1580. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (PEDESTRIAN SIGNAL HEADS, COUNTDOWN)(US 7 @ VT 140).** [1]



NOT TO SCALE

ITEM 900.620 SPECIAL PROVISION (PEDESTRIAN SIGNAL HEADS, COUNTDOWN) (US 7 @ VT 140) WALLINGFORD MM 5.437		
QUANTITY	UNIT	DESCRIPTION
5	EA	COUNT-DOWN PEDESTRIAN SIGNAL WITH MOUNTING HARDWARE
5	EA	ACCESSIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY (SEE NOTE 3)

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ VT 140) WALLINGFORD MM 5.437		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD

ITEM 900.620 SPECIAL PROVISION (PEDESTAL MOUNTED PEDESTRIAN SIGNAL HEAD, COUNTDOWN) (US 7 @ VT 140) WALLINGFORD MM 5.437		
QUANTITY	UNIT	DESCRIPTION
3	EA	COUNT-DOWN PEDESTRIAN SIGNAL WITH MOUNTING HARDWARE ON PEDESTAL
3	EA	ACCESSIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY (SEE NOTE 3)

LEGEND	
	DESCRIPTION
	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
CT	PROPOSED CONTROLLER CABINET [2]
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL [2]
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	MODIFIED NOTE 8	BWK
2	02-09-16	ADDED OR MODIFIED ROWS ON LEGEND	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 1

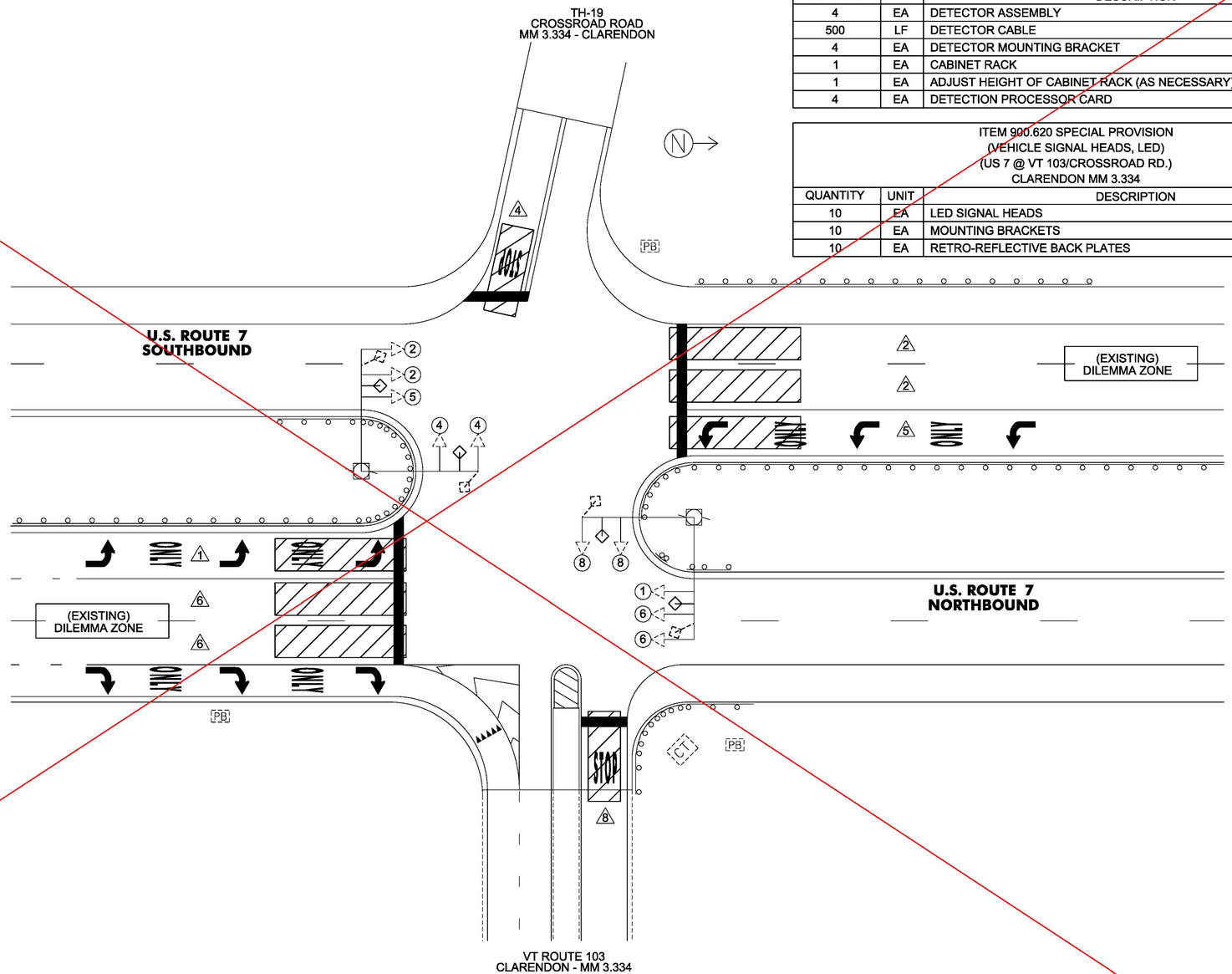
PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 85 OF 105

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 103/CROSSROAD RD.). MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 678.
3. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
4. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
5. STOP BAR DETECTION SYSTEM TO BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 103/CROSSROAD RD.).
6. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 103/CROSSROAD RD.).
7. EXISTING RADAR EQUIPMENT FOR DILEMMA ZONE DETECTION AND ASSOCIATED CABINET EQUIPMENT SHALL BE RETAINED AND REMAIN OPERATIONAL.

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ VT 103/CROSSROAD RD.) CLARENDON MM 3.334		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD

ITEM 900.620 SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED) (US 7 @ VT 103/CROSSROAD RD.) CLARENDON MM 3.334		
QUANTITY	UNIT	DESCRIPTION
10	EA	LED SIGNAL HEADS
10	EA	MOUNTING BRACKETS
10	EA	RETRO-REFLECTIVE BACK PLATES



LEGEND	
	DESCRIPTION
- - -	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

see revised sheet

NOT TO SCALE

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 2

PLOT DATE: 1/14/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 86 OF 105

RECORD PLANS

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
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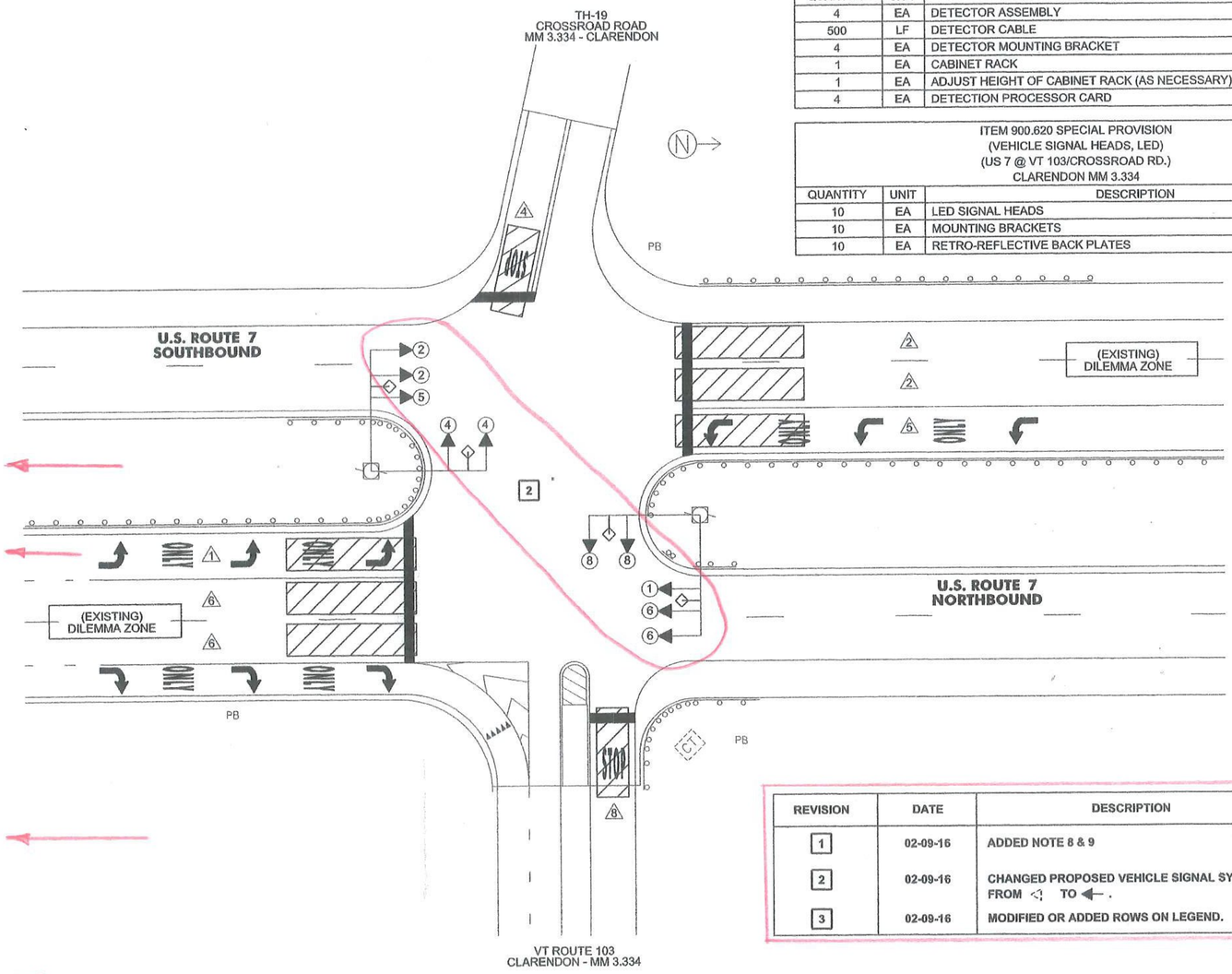
3. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
4. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
5. STOP BAR DETECTION SYSTEM TO BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 103/CROSSROAD RD.).
6. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ VT 103/CROSSROAD RD.).
7. EXISTING RADAR EQUIPMENT FOR DILEMMA ZONE DETECTION AND ASSOCIATED CABINET EQUIPMENT SHALL BE RETAINED AND REMAIN OPERATIONAL.
8. **SALVAGE EXISTING SIGNAL EQUIPMENT (SIGNAL HEADS, DETECTION EQUIPMENT) TO VTRANS. CONTACT THE DISTRICT 5 SIGNAL TECHNICIAN AT (802)655-1580 TO COORDINATE TRANSFER OF EQUIPMENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED)(US 7 @ VT 103/CROSSROAD RD.).** [1]
9. **SIGNAL HEADS SHALL BE MOUNTED SUCH THAT THE TOP ⅓ OF THE SIGNAL HEAD IS EVEN WITH THE MAST ARM.** [1]

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ VT 103/CROSSROAD RD.) CLARENDON MM 3.334		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD

ITEM 900.620 SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED) (US 7 @ VT 103/CROSSROAD RD.) CLARENDON MM 3.334		
QUANTITY	UNIT	DESCRIPTION
10	EA	LED SIGNAL HEADS
10	EA	MOUNTING BRACKETS
10	EA	RETRO-REFLECTIVE BACK PLATES



LEGEND	
	DESCRIPTION
	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
CT	PROPOSED CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
#	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

NOT TO SCALE

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	ADDED NOTE 8 & 9	BWK
2	02-09-16	CHANGED PROPOSED VEHICLE SIGNAL SYMBOLS FROM ◁ TO ← .	BWK
3	02-09-16	MODIFIED OR ADDED ROWS ON LEGEND.	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 2

PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 86 OF 105

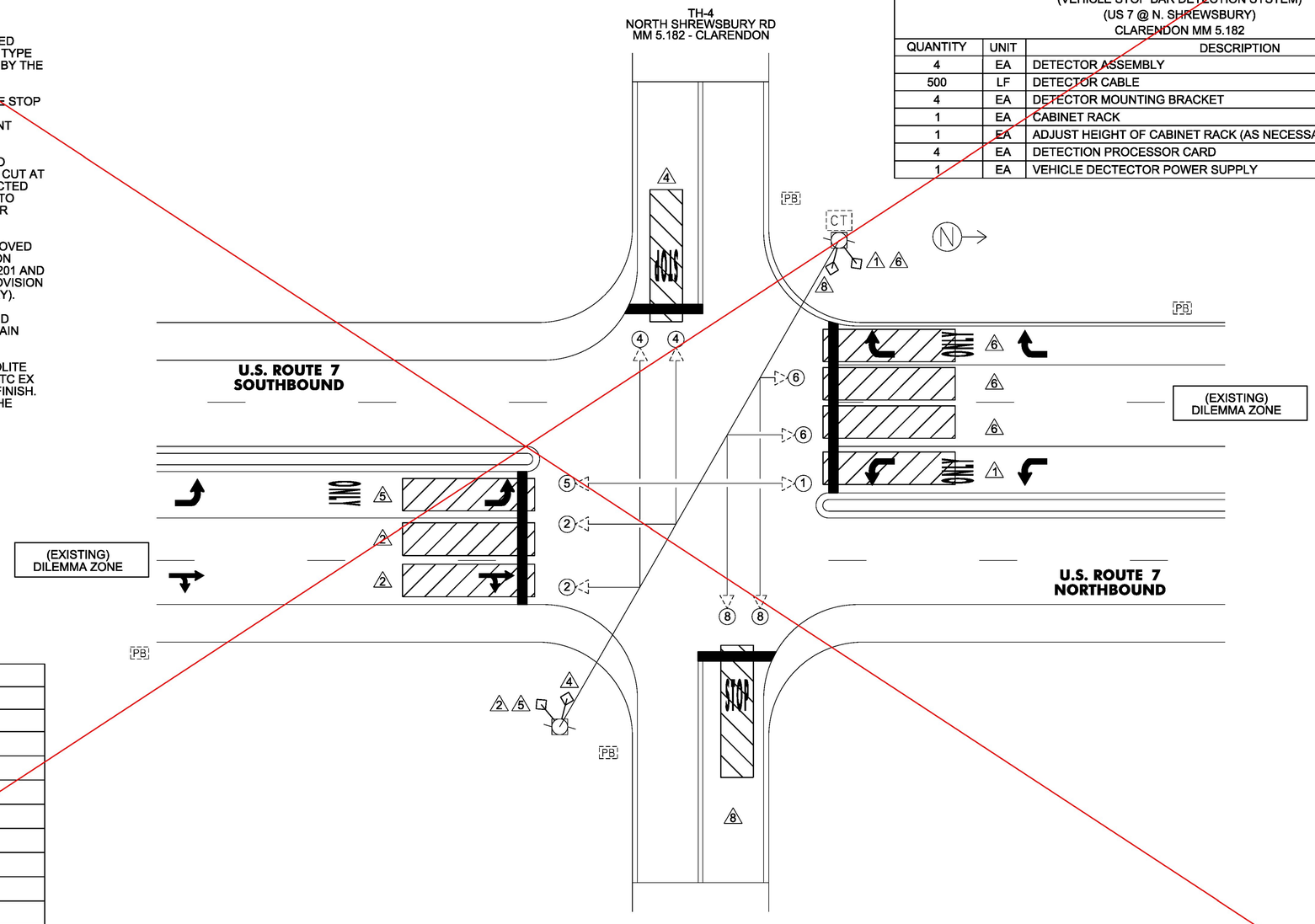
see revised sheet

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ N. SHREWSBURY). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678.
3. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
4. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
5. STOP BAR DETECTION SYSTEM SHALL BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO COLD PLANING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ N. SHREWSBURY).
7. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ N. SHREWSBURY).
8. EXISTING RADAR EQUIPMENT FOR DILEMMA ZONE DETECTION AND ASSOCIATED CABINET EQUIPMENT SHALL BE RETAINED AND REMAIN OPERATIONAL.
9. NEW TRAFFIC SIGNAL CONTROLLER SHALL BE NEMA TS-2, ECONOLITE ASC/3-2100, TRAFFICWARE ATC TRAFFIC CONTROLLER, MCCAIN ATC EX NEMA, WA P44 GROUND-MOUNTED CABINET WITH A FLAT BLACK FINISH. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER AND CABINET) (US 7 @ N. SHREWSBURY) CLARENDON MM 5.182		
QUANTITY	UNIT	DESCRIPTION
1	EA	NEMA TS2 TYPE 1 TRAFFIC SIGNAL CONTROLLER
1	EA	NEMA TYPE P44 TRAFFIC SIGNAL CABINET FLAT BLACK FINISH

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ N. SHREWSBURY) CLARENDON MM 5.182		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD
1	EA	VEHICLE DECTECTOR POWER SUPPLY



LEGEND	
	DESCRIPTION
- - -	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

NOT TO SCALE

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 3

PLOT DATE: 1/14/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 87 OF 105

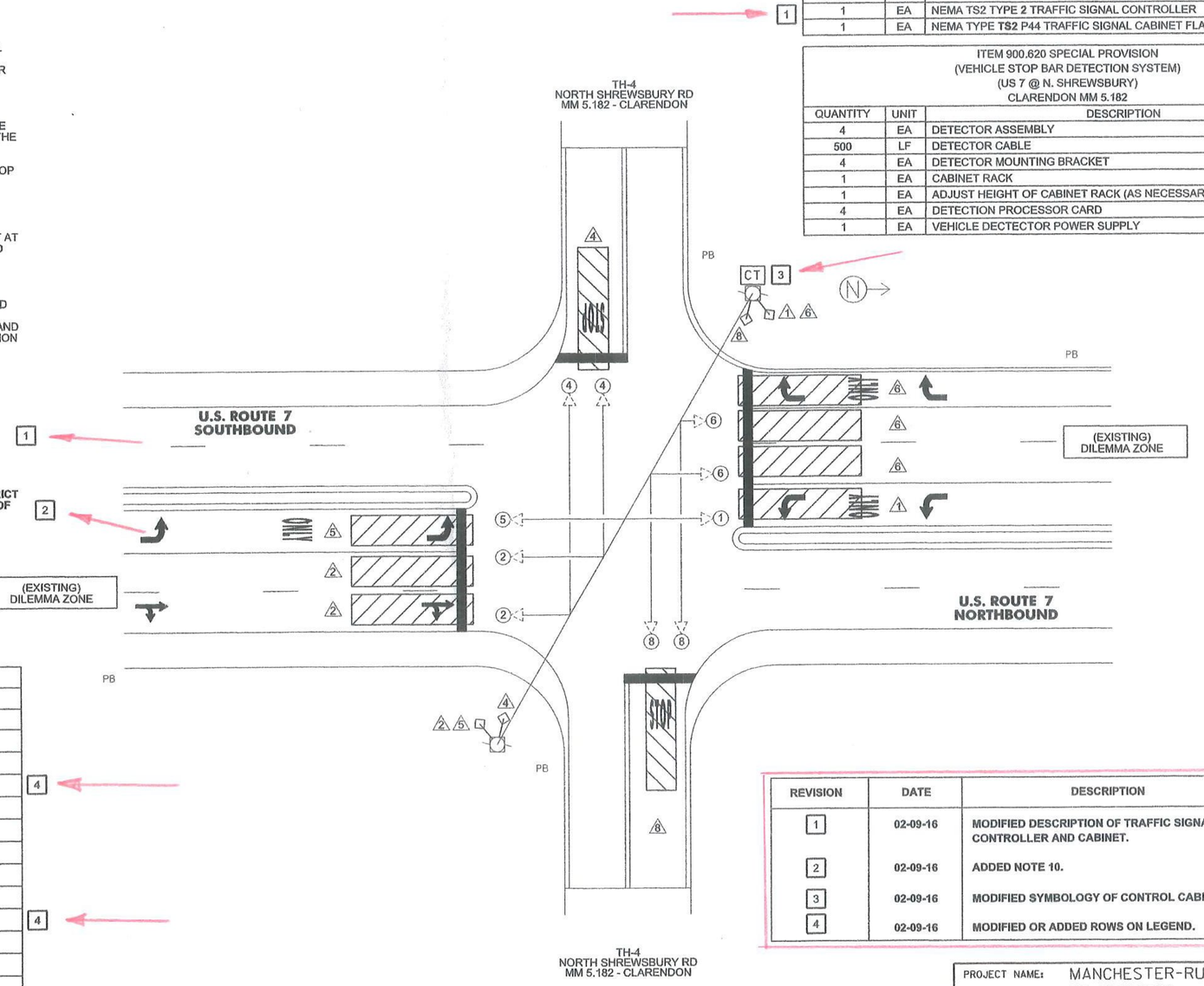
RECORD PLANS

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ N. SHREWSBURY). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678.
3. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
4. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
5. STOP BAR DETECTION SYSTEM SHALL BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO COLD PLANING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ N. SHREWSBURY).
7. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ N. SHREWSBURY).
8. EXISTING RADAR EQUIPMENT FOR DILEMMA ZONE DETECTION AND ASSOCIATED CABINET EQUIPMENT SHALL BE RETAINED AND REMAIN OPERATIONAL.
9. NEW TRAFFIC SIGNAL CONTROLLER SHALL BE NEMA TS2 **TYPE 2**, ECONOLITE ASC/3-2100, TRAFFICWARE ATC TRAFFIC CONTROLLER, MCCAIN ATC EX NEMA, **TS2** P44 GROUND-MOUNTED CABINET WITH A FLAT BLACK FINISH. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.
10. **SALVAGE EXISTING SIGNAL EQUIPMENT (SIGNAL CONTROLLER CABINET, DETECTION EQUIPMENT) TO VTRANS. CONTACT THE DISTRICT 5 SIGNAL TECHNICIAN AT (802)655-1580 TO COORDINATE TRANSFER OF EQUIPTMENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED)(N. SHREWSBURY)**

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER AND CABINET) (US 7 @ N. SHREWSBURY) CLARENDON MM 5.182		
QUANTITY	UNIT	DESCRIPTION
1	EA	NEMA TS2 TYPE 2 TRAFFIC SIGNAL CONTROLLER
1	EA	NEMA TYPE **TS2** P44 TRAFFIC SIGNAL CABINET FLAT BLACK FINISH

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ N. SHREWSBURY) CLARENDON MM 5.182		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD
1	EA	VEHICLE DECTECTOR POWER SUPPLY



LEGEND	
	DESCRIPTION
	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
CT	PROPOSED CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

NOT TO SCALE

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	MODIFIED DESCRIPTION OF TRAFFIC SIGNAL CONTROLLER AND CABINET.	BWK
2	02-09-16	ADDED NOTE 10.	BWK
3	02-09-16	MODIFIED SYMBOLOGY OF CONTROL CABINET "CT".	BWK
4	02-09-16	MODIFIED OR ADDED ROWS ON LEGEND.	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 3

PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 87 OF 105

NOTES:

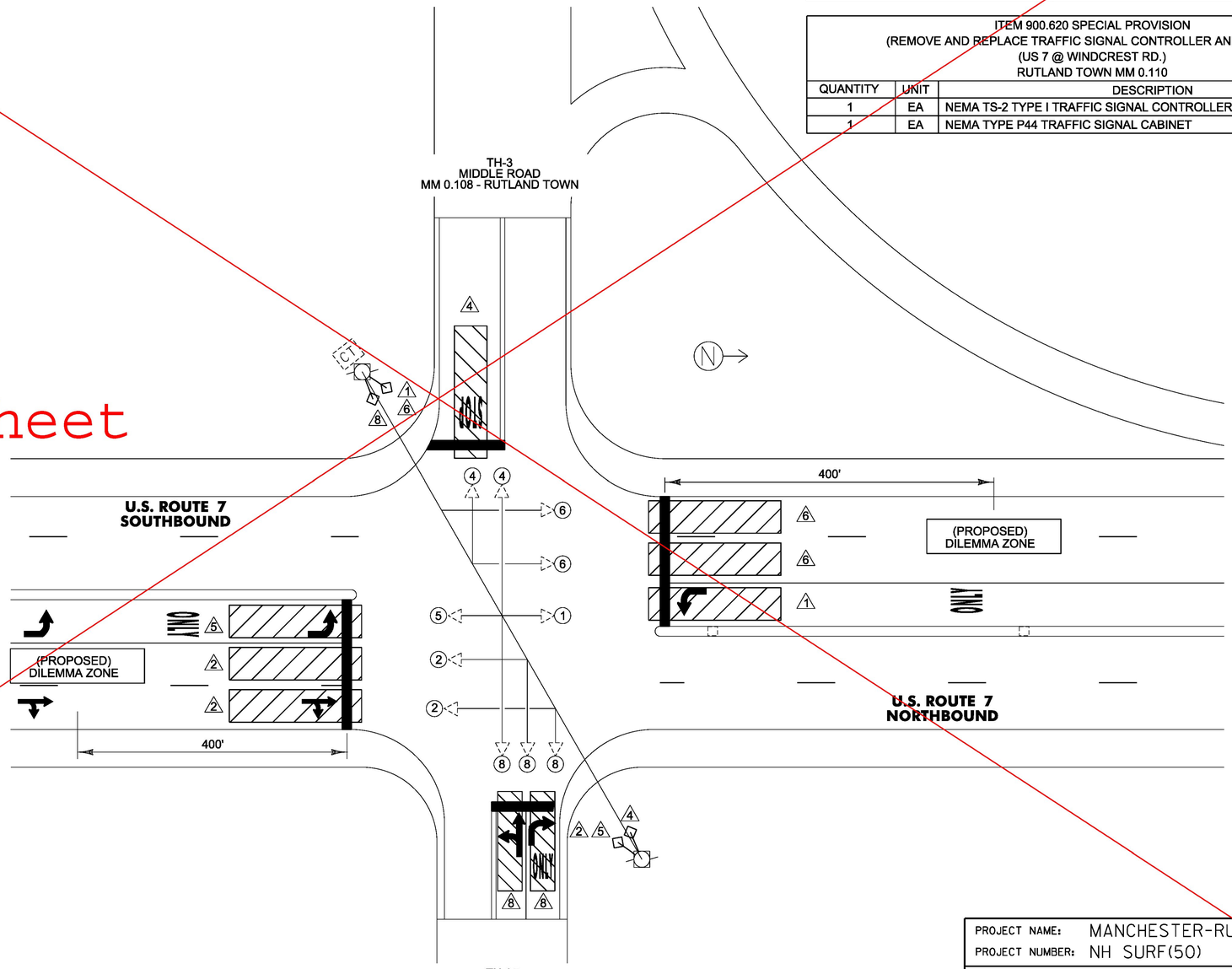
1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS IN THE FIELD WITH THE ENGINEER PRIOR TO INSTALLATION. LOCATIONS MAY BE REVISED AS A RESULT OF THE SITE SURVEY.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ WINDCREST RD.). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678.
3. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
4. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
5. STOP BAR DETECTION SYSTEM SHALL BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620-SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ WINDCREST RD.).
6. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620-SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ WINDCREST RD.).
7. NEW TRAFFIC SIGNAL CONTROLLER SHALL BE NEMA TS-2, ECONOLITE ASC/3-2100, TRAFFICWARE ATC TRAFFIC CONTROLLER, MCCAIN ATC EX NEMA, WA P44 GROUND-MOUNTED CABINET WITH A FLAT BLACK FINISH. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.
8. ADVANCED DETECTION ZONES SHALL BE A MINIMUM OF 400' FROM THE STOP BAR AND SET UP PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

see revised sheet

ITEM 900.620 SPECIAL PROVISION (ADVANCED VEHICLE DETECTION SYSTEM) (US 7 @ WINDCREST RD.) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
2	EA	DETECTOR ASSEMBLY
1000	LF	DETECTOR CABLE
2	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
2	EA	DETECTION PROCESSOR CARD

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ WINDCREST RD.) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD
1	EA	VEHICLE DECTECTOR POWER SUPPLY

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER AND CABINET) (US 7 @ WINDCREST RD.) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
1	EA	NEMA TS-2 TYPE I TRAFFIC SIGNAL CONTROLLER
1	EA	NEMA TYPE P44 TRAFFIC SIGNAL CABINET



LEGEND	
	DESCRIPTION
- - -	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 4

PLOT DATE: 1/14/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 88 OF 105

RECORD PLANS

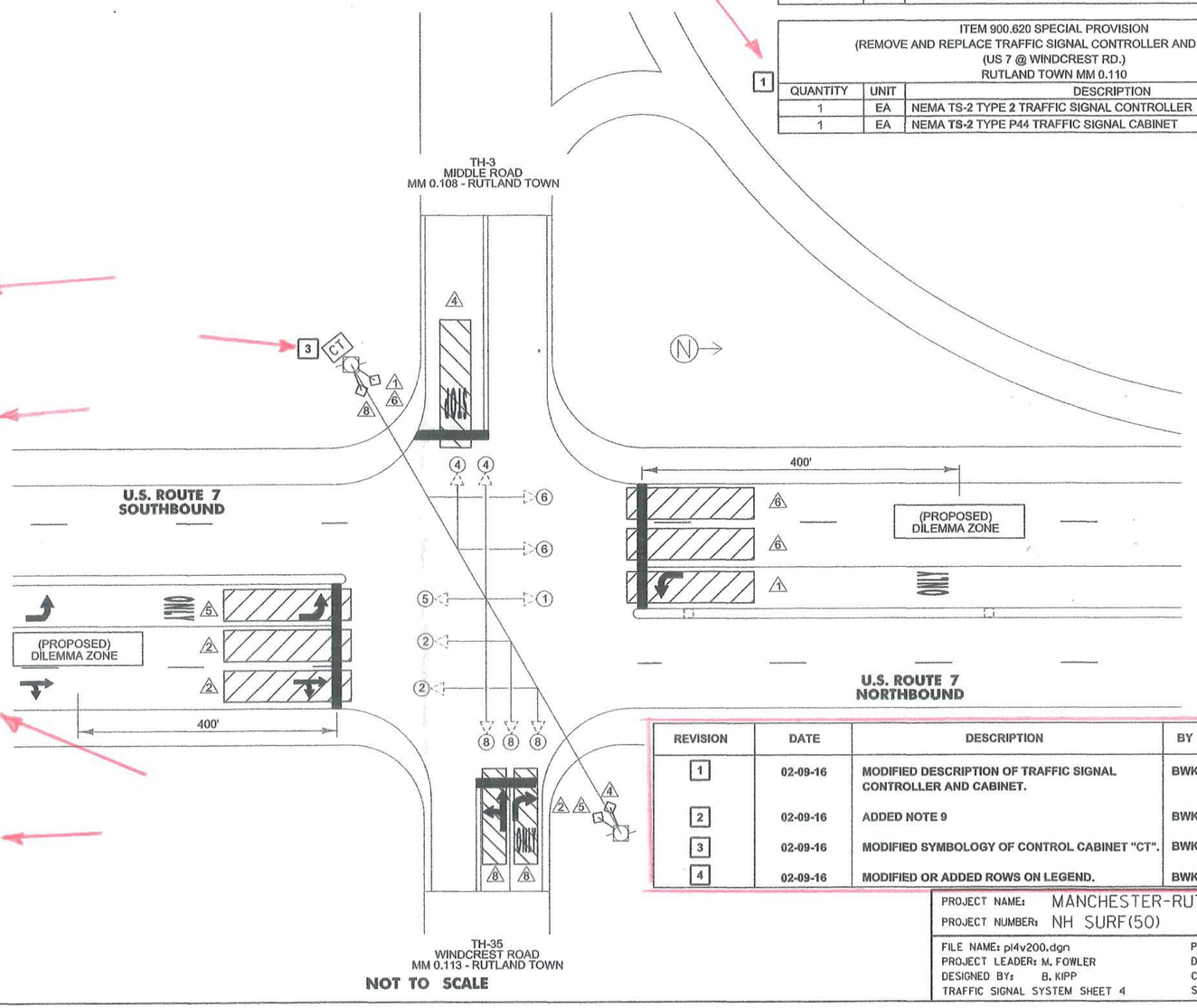
NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ WINDCREST RD.). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678.
3. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
4. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
5. STOP BAR DETECTION SYSTEM SHALL BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620-SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ WINDCREST RD.).
6. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620-SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ WINDCREST RD.).
7. NEW TRAFFIC SIGNAL CONTROLLER SHALL BE NEMA TS-2, **TYPE 2** ECONOLITE ASC/3-2100, TRAFFICWARE ATC TRAFFIC CONTROLLER, MCCAIN ATC EX NEMA, **TS2** P44 GROUND-MOUNTED CABINET WITH A FLAT BLACK FINISH. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY. [1]
8. ADVANCED DETECTION ZONES SHALL BE A MINIMUM OF 400' FROM THE STOP BAR AND SET UP PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
9. **SALVAGE EXISTING SIGNAL EQUIPMENT (SIGNAL CONTROLLER, CONTROLLER CABINET) TO VTRANS. CONTACT THE DISTRICT 5 SIGNAL TECHNICIAN AT (802)855-1580 TO COORDINATE TRANSFER OF EQUIPTMENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED)(US 7 @ WINDCREST RD.).** [2]

ITEM 900.620 SPECIAL PROVISION (ADVANCED VEHICLE DETECTION SYSTEM) (US 7 @ WINDCREST RD.) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
2	EA	DETECTOR ASSEMBLY
1000	LF	DETECTOR CABLE
2	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
2	EA	DETECTION PROCESSOR CARD

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ WINDCREST RD.) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD
1	EA	VEHICLE DECTECTOR POWER SUPPLY

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER AND CABINET) (US 7 @ WINDCREST RD.) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
1	EA	NEMA TS-2 TYPE 2 TRAFFIC SIGNAL CONTROLLER
1	EA	NEMA TS-2 TYPE P44 TRAFFIC SIGNAL CABINET



LEGEND	
	DESCRIPTION
	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
CT	PROPOSED CONTROLLER CABINET [4]
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL [4]
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	MODIFIED DESCRIPTION OF TRAFFIC SIGNAL CONTROLLER AND CABINET.	BWK
2	02-09-16	ADDED NOTE 9	BWK
3	02-09-16	MODIFIED SYMBOLOGY OF CONTROL CABINET "CT".	BWK
4	02-09-16	MODIFIED OR ADDED ROWS ON LEGEND.	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 4

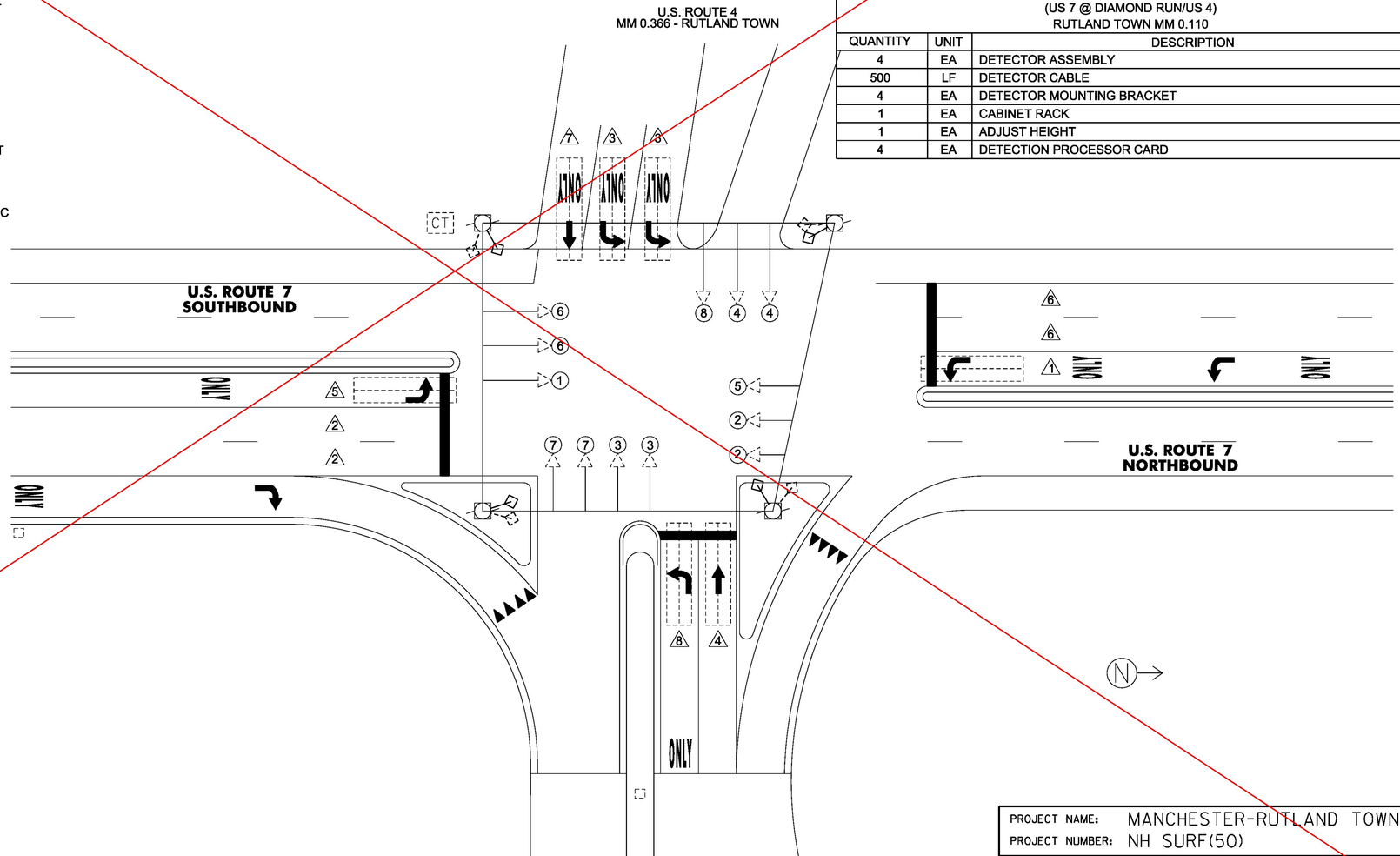
PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 88 OF 105

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678.
3. FOR INFORMATION REGARDING THE INSTALLATION OF THE ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES (ORIENTATION, HEIGHT, ETC.), SEE SECTION 4E08-PEDESTRIAN DETECTORS IN THE 2009 EDITION OF THE MUTCD.
4. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
5. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
6. STOP BAR DETECTION SYSTEM TO BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4).
7. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4).
8. THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2) IN A NEMA P44 TRAFFIC CONTROL CABINET WITH 15" BASE EXTENSION WITH FLAT BLACK FINISH INSTALLED AT ITS PRESENT LOCATION. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.
9. SWITCH-OVER NEW SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK OPERATING PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING SWITCH-OVER.
10. ALL SIGNALS SHALL DWELL ON THE US ROUTE 7 THRU MOVEMENT.
11. THE US ROUTE 7 THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.
12. ADVANCED DETECTION ZONES SHALL BE A MINIMUM OF 400' FROM THE STOP BAR AND SET UP PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

see revised sheet

LEGEND	
	DESCRIPTION
- - -	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION



NOT TO SCALE

ITEM 900.620 SPECIAL PROVISION (ADVANCED VEHICLE DETECTION SYSTEM) (US 7 @ DIAMOND RUN/US 4) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
2	EA	DETECTOR ASSEMBLY
1000	LF	DETECTOR CABLE
2	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
2	EA	DETECTION PROCESSOR CARD

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER) (US 7 @ DIAMOND RUN/US 4) RUTLAND TOWN MM 0.366		
QUANTITY	UNIT	DESCRIPTION
1	EA	TRAFFIC SIGNAL CONTROLLER (ECONOLITE ASC/3)

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ DIAMOND RUN/US 4) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT
4	EA	DETECTION PROCESSOR CARD

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 5

PLOT DATE: 1/14/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 89 OF 105

RECORD PLANS

NOTES:

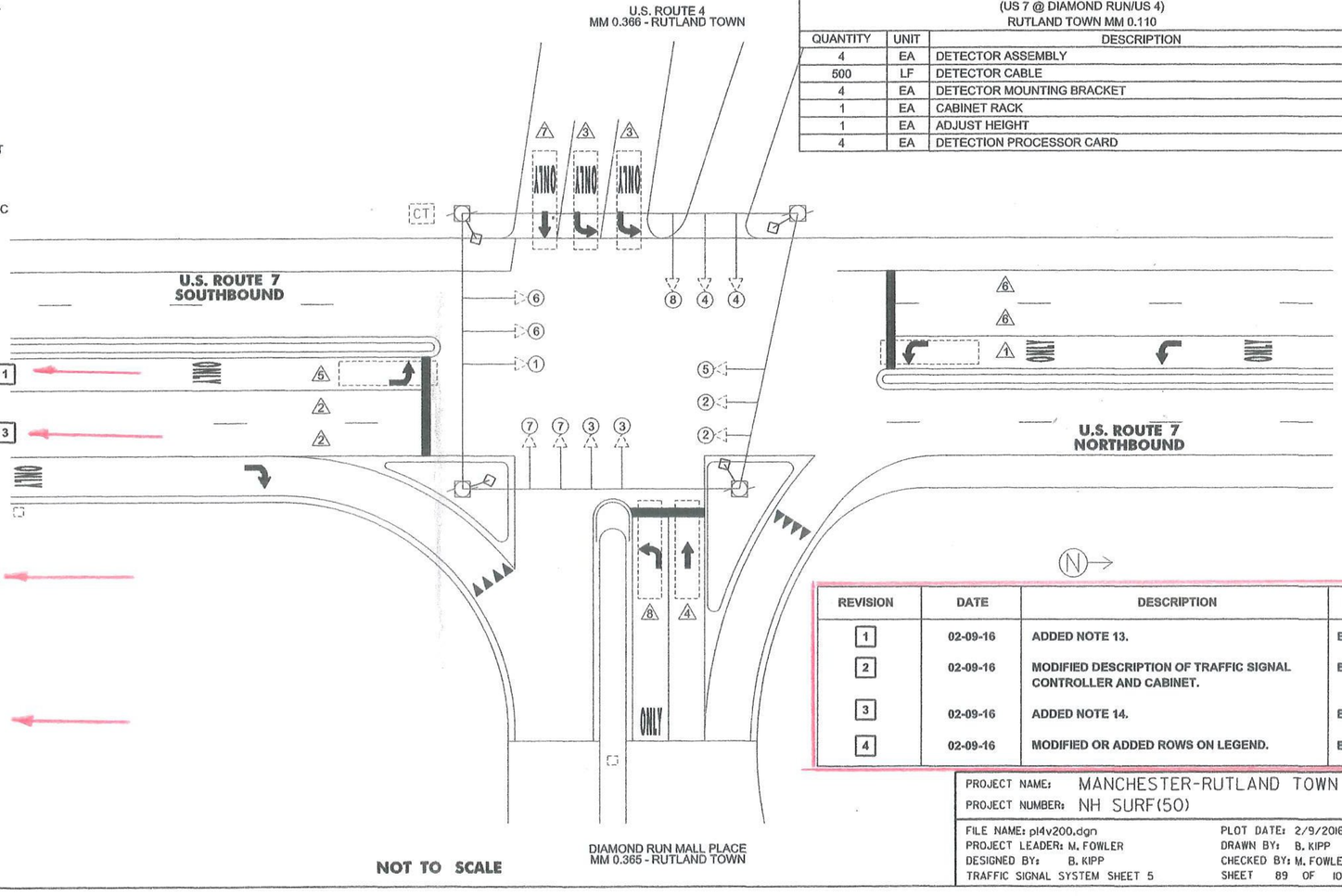
1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. THE CONTRACTOR SHALL CONFIRM ALL LOCATIONS IN THE FIELD WITH THE ENGINEER PRIOR TO INSTALLATION. LOCATIONS MAY BE REVISED AS A RESULT OF THE SITE SURVEY.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678.
3. FOR INFORMATION REGARDING THE INSTALLATION OF THE ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES (ORIENTATION, HEIGHT, ETC.), SEE SECTION 4E08-PEDESTRIAN DETECTORS IN THE 2009 EDITION OF THE MUTCD.
4. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
5. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
6. STOP BAR DETECTION SYSTEM TO BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4).
7. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/US 4).
8. THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2) IN A NEMA P44 TRAFFIC CONTROL CABINET WITH 15" BASE EXTENSION WITH FLAT BLACK FINISH INSTALLED AT ITS PRESENT LOCATION. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.
9. SWITCH-OVER NEW SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK OPERATING PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING SWITCH-OVER.
10. ALL SIGNALS SHALL DWELL ON THE US ROUTE 7 THRU MOVEMENT.
11. THE US ROUTE 7 THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.
12. ADVANCED DETECTION ZONES SHALL BE A MINIMUM OF 400' FROM THE STOP BAR AND SET UP PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
13. **SALVAGE EXISTING SIGNAL EQUIPMENT (SIGNAL CONTROLLER, DETECTION EQUIPMENT) TO VTRANS. CONTACT THE DISTRICT 5 SIGNAL TECHNICIAN AT (802)655-1580 TO COORDINATE TRANSFER OF EQUIPMENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED)(US 7 @ DIAMOND RUN/US 4).**
14. **THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2 TYPE 2) IN THE EXISTING CONTROLLER CABINET.**

LEGEND	
	DESCRIPTION
	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
CT	PROPOSED CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

ITEM 900.620 SPECIAL PROVISION (ADVANCED VEHICLE DETECTION SYSTEM) (US 7 @ DIAMOND RUN/US 4) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
2	EA	DETECTOR ASSEMBLY
1000	LF	DETECTOR CABLE
2	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
2	EA	DETECTION PROCESSOR CARD

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER) (US 7 @ DIAMOND RUN/US 4) RUTLAND TOWN MM 0.366		
QUANTITY	UNIT	DESCRIPTION
1	EA	TRAFFIC SIGNAL CONTROLLER (ECONOLITE ASC/3 **TS2 TYPE 2**)

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ DIAMOND RUN/US 4) RUTLAND TOWN MM 0.110		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT
4	EA	DETECTION PROCESSOR CARD



REVISION	DATE	DESCRIPTION	BY
1	02-09-16	ADDED NOTE 13.	BWK
2	02-09-16	MODIFIED DESCRIPTION OF TRAFFIC SIGNAL CONTROLLER AND CABINET.	BWK
3	02-09-16	ADDED NOTE 14.	BWK
4	02-09-16	MODIFIED OR ADDED ROWS ON LEGEND.	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 5

PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 89 OF 105

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
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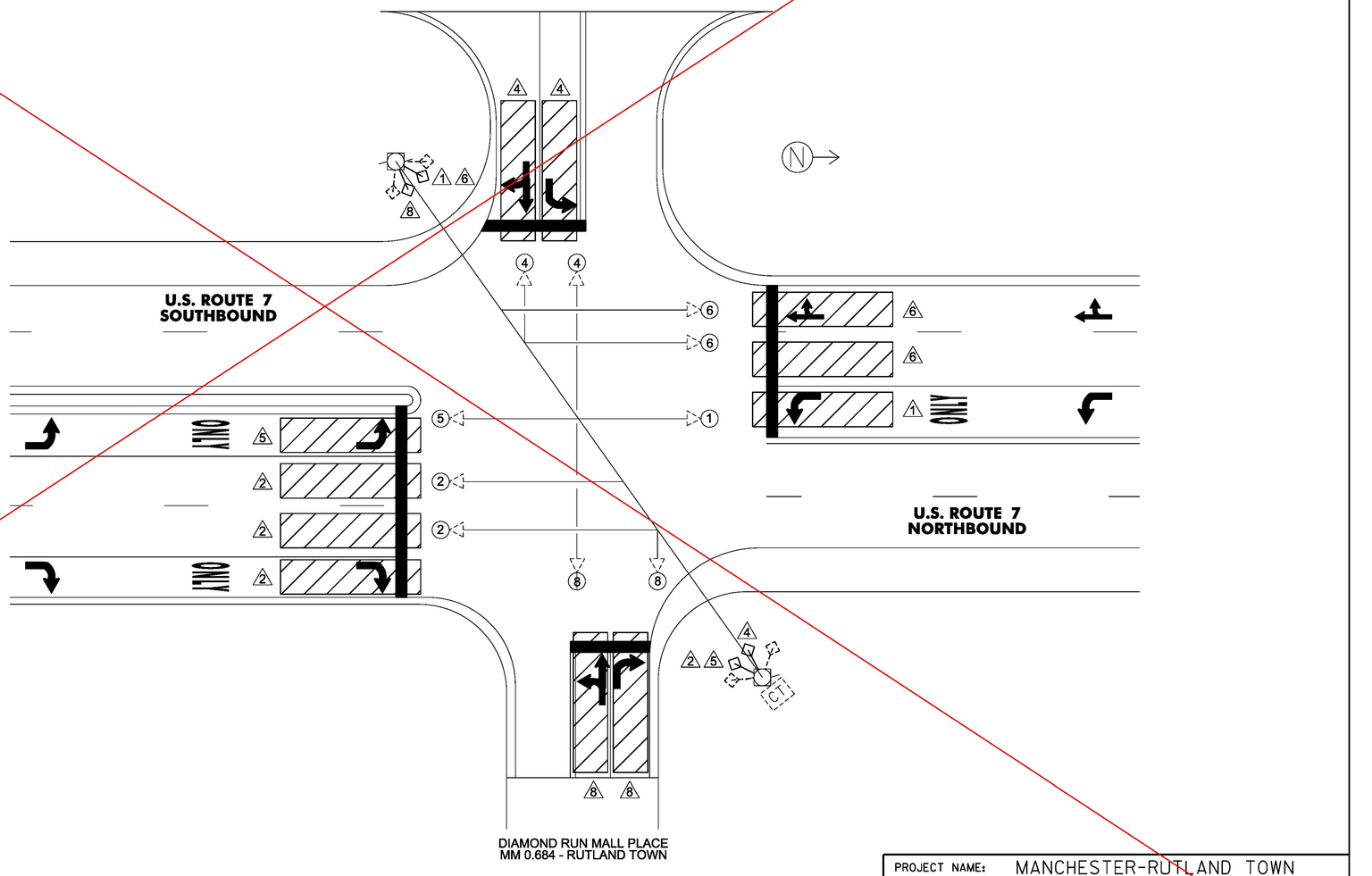
3. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
4. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
5. STOP BAR DETECTION SYSTEM SHALL BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/HOLIDAY INN).
6. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/HOLIDAY INN).
7. THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2) IN A NEMA P44 TRAFFIC CONTROL CABINET WITH 15" BASE EXTENSION WITH FLAT BLACK FINISH INSTALLED AT ITS CURRENT LOCATION. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.
8. SWITCH-OVER NEW SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK OPERATING PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING SWITCH-OVER.
9. ALL SIGNALS SHALL DWELL ON THE US ROUTE 7 THRU MOVEMENT.
10. THE US ROUTE 7 THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.

see revised sheet

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER) (US 7 @ DIAMOND RUN/HOLIDAY INN) RUTLAND TOWN MM 0.684		
QUANTITY	UNIT	DESCRIPTION
1	EA	TRAFFIC SIGNAL CONTROLLER (ECONOLITE ASC/3)

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ DIAMOND RUN/HOLIDAY INN) RUTLAND TOWN MM 0.684		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD

HOLIDAY INN
MM 0.684 - RUTLAND TOWN



LEGEND	
	DESCRIPTION
	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

NOT TO SCALE

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 6

PLOT DATE: 1/14/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 90 OF 105

RECORD PLANS

NOTES:

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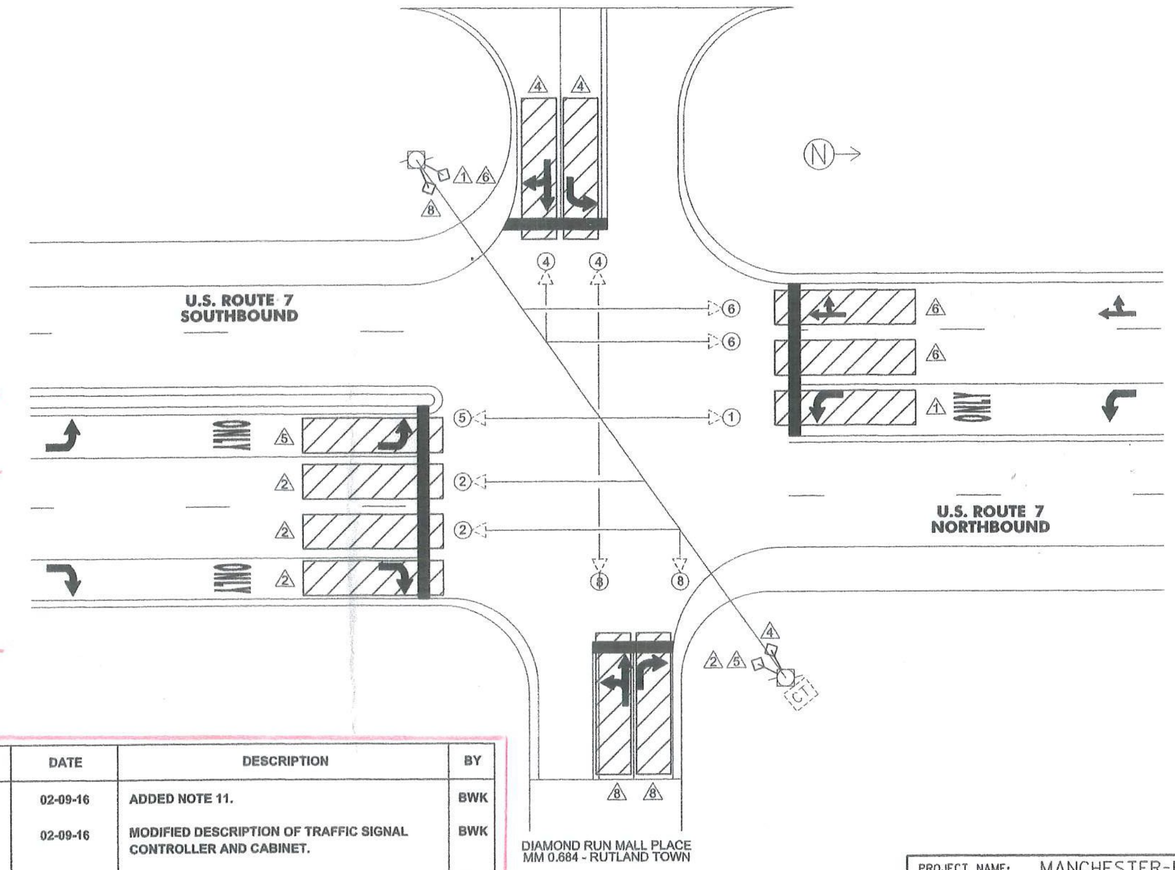
3. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
4. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
5. STOP BAR DETECTION SYSTEM SHALL BE OPERATIONAL PRIOR TO CUTTING LOOPS. EXISTING VEHICLE DETECTOR LOOPS SHALL BE CUT AT THE CURB LINE PRIOR TO MICRO-MILLING/RESURFACING AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/HOLIDAY INN).
6. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM)(US 7 @ DIAMOND RUN/HOLIDAY INN).
7. THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2) IN A NEMA P44 TRAFFIC CONTROL CABINET WITH 15" BASE EXTENSION WITH FLAT BLACK FINISH INSTALLED AT ITS CURRENT LOCATION. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.
8. SWITCH-OVER NEW SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK OPERATING PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING SWITCH-OVER.
9. ALL SIGNALS SHALL DWELL ON THE US ROUTE 7 THRU MOVEMENT.
10. THE US ROUTE 7 THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.
11. **SALVAGE EXISTING SIGNAL EQUIPMENT (SIGNAL CONTROLLER, DETECTION EQUIPMENT) TO VTRANS. CONTACT THE DISTRICT 5 SIGNAL TECHNICIAN AT (802)655-1580 TO COORDINATE TRANSFER OF EQUIPMENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED)(US 7 @ DIAMOND RUN/HOLIDAY INN).**
12. **THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2 TYPE 2) IN THE EXISTING CONTROLLER CABINET.**

LEGEND	
	DESCRIPTION
	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
CT	PROPOSED CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTION LOCATION

2

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER) (US 7 @ DIAMOND RUN/HOLIDAY INN) RUTLAND TOWN MM 0.684		
QUANTITY	UNIT	DESCRIPTION
1	EA	TRAFFIC SIGNAL CONTROLLER (ECONOLITE ASC/3 **TS2 TYPE 2**)

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ DIAMOND RUN/HOLIDAY INN) RUTLAND TOWN MM 0.684		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD



1

3

4

4

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	ADDED NOTE 11.	BWK
2	02-09-16	MODIFIED DESCRIPTION OF TRAFFIC SIGNAL CONTROLLER AND CABINET.	BWK
3	02-09-16	ADDED NOTE 12.	BWK
4	02-09-16	MODIFIED OR ADDED ROWS ON LEGEND.	BWK

NOT TO SCALE

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 6

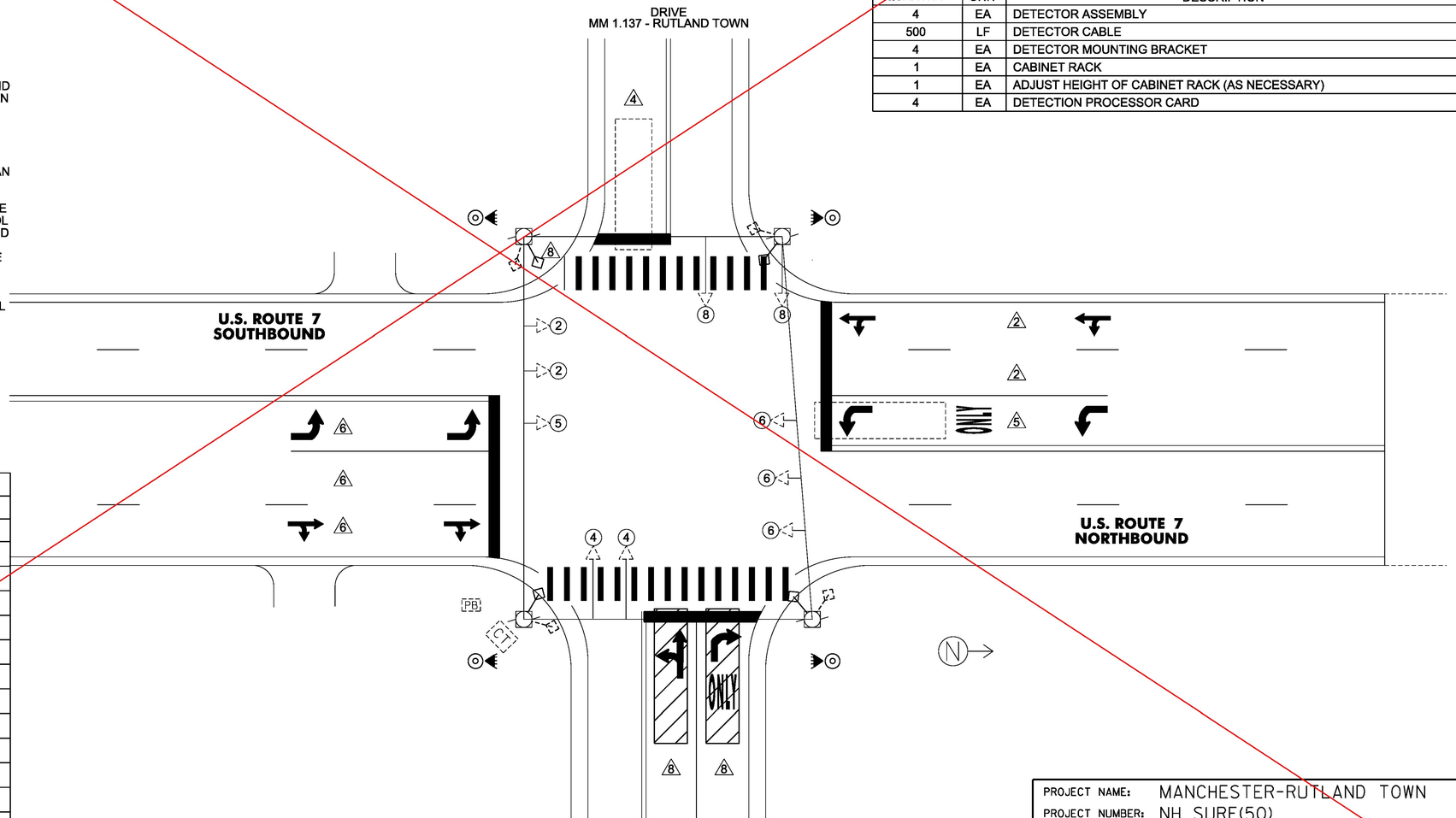
PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 90 OF 105

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE PREEMPTION/VIDEO VEHICLE DETECTION SYSTEM)(US 7 @ COLD RIVER RD.). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678.
3. FOR INFORMATION REGARDING THE INSTALLATION OF THE ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES (ORIENTATION, HEIGHT, ETC.), SEE SECTION 4E08-PEDESTRIAN DETECTORS IN THE 2009 EDITION OF THE MUTCD.
4. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
5. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
6. ALL PEDESTRIAN SIGNAL EQUIPTMENT SHALL HAVE FLAT BLACK HOUSING.
7. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM).
8. SALVAGE ALL EXISTING TRAFFIC SIGNAL EQUIPMENT TO VTRANS. CONTACT TIM SWEENEY, DISTRICT 7 SIGNAL TECHNICIAN (802)279-0585 TO COORDINATE TRANSFER OF EQUIPMENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO 900.620 - SPECIAL PROVISION (PEDESTRIAN SIGNAL HEADS, COUNTDOWN)(US 7 @ COLD RIVER RD.).
9. THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2) IN A NEMA P44 TRAFFIC CONTROL CABINET WITH 15" BASE EXTENSION WITH FLAT BLACK FINISH INSTALLED AT THE LOCATION SHOWN ON THE PLANS. THE TRAFFIC CONTROL CABINET SHALL BE ORIENTED SO THAT THE DOOR DOES NOT FACE THE ROADWAY.
10. SWITCH-OVER NEW SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK OPERATING PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING SWITCH-OVER.
11. ALL SIGNALS SHALL DWELL ON THE US ROUTE 7 THRU MOVEMENT.
12. THE US ROUTE 7 THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.

see revised sheet

LEGEND	
	DESCRIPTION
- - -	EXISTING CONDUIT
	EXISTING JUNCTION BOX
CT	EXISTING CONTROLLER CABINET
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION



NOT TO SCALE

ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER) (US 7 @ COLD RIVER RD.) RUTLAND TOWN MM 1.137		
QUANTITY	UNIT	DESCRIPTION
1	EA	TRAFFIC SIGNAL CONTROLLER (ECONOLITE ASC/3)

ITEM 900.620 SPECIAL PROVISION (PEDESTAL MOUNTED PEDESTRIAN SIGNAL HEAD, COUNTDOWN) (US 7 @ COLD RIVER RD.) RUTLAND TOWN MM 1.137		
QUANTITY	UNIT	DESCRIPTION
4	EA	COUNT-DOWN PEDESTRIAN SIGNAL WITH MOUNTING HARDWARE
4	EA	ACCESSIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY (SEE NOTE 3)
4	EA	PEDESTAL POLES

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ COLD RIVER RD.) RUTLAND TOWN MM 0.684		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 7

PLOT DATE: 1/14/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 91 OF 105

RECORD PLANS

NOTES:

1. THIS PLAN SHEET IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE FOR THE PLACEMENT OF THE HARDWARE LISTED. 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.
2. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE CONDUIT FOR DETECTION CABLE AND EQUIPMENT. IF ADDITIONAL CONDUIT INSTALLATION IS REQUIRED, ALL WORK ASSOCIATED FOR INSTALLATION WILL BE INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE PREEMPTION/VIDEO VEHICLE DETECTION SYSTEM)(US 7 @ COLD RIVER RD.). MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 678.
3. FOR INFORMATION REGARDING THE INSTALLATION OF THE ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES (ORIENTATION, HEIGHT, ETC.), SEE SECTION 4E08-PEDESTRIAN DETECTORS IN THE 2009 EDITION OF THE MUTCD.
4. THE ACTUAL STOP BAR DETECTOR LOCATION WILL BE DETERMINED DURING CONSTRUCTION BASED ON THE OPTIMAL LOCATION FOR TYPE OF DETECTOR SELECTED. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER.
5. STOP BAR DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR. ACTUAL DETECTION ZONES SHALL BE SET UP FOR OPTIMAL DETECTION BY THE CONTRACTOR BASED ON THE FINAL PAVEMENT MARKINGS.
6. ALL PEDESTRIAN SIGNAL EQUIPTMENT SHALL HAVE FLAT BLACK HOUSING.
7. ANY THINNING AND TRIMMING AND/OR REMOVAL OF TREES APPROVED BY THE ENGINEER FOR INSTALLING VEHICLE STOP BAR DETECTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 201 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM).
8. **SALVAGE EXISTING SIGNAL EQUIPMENT (SIGNAL CONTROLLER, PEDESTRIAN COUNTDOWN HEADS, PEDESTRIAN PUSH BUTTONS, DETECTION EQUIPMENT) TO VTRANS. CONTACT THE DISTRICT 5 SIGNAL TECHNICIAN AT (802)655-1580 TO COORDINATE TRANSFER OF EQUIPMENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.620 - SPECIAL PROVISION (VEHICLE SIGNAL HEADS, LED)(US 7 @ COLD RIVER RD.)** 1
9. THE TRAFFIC SIGNAL CONTROLLER AND RELATED EQUIPMENT SHALL BE AN ECONOLITE ASC/3-2100 (NEMA TS2 TYPE 2) IN THE EXISTING CONTROLLER CABINET. 2
10. SWITCH-OVER NEW SIGNAL SYSTEM SHALL NOT OCCUR DURING PEAK OPERATING PERIODS. UNIFORMED TRAFFIC OFFICERS SHALL CONTROL TRAFFIC DURING SWITCH-OVER.
11. ALL SIGNALS SHALL DWELL ON THE US ROUTE 7 THRU MOVEMENT.
12. THE US ROUTE 7 THRU PHASE SHALL BE USED FOR THE START-UP PHASE FOLLOWING FLASHING OPERATION.

3

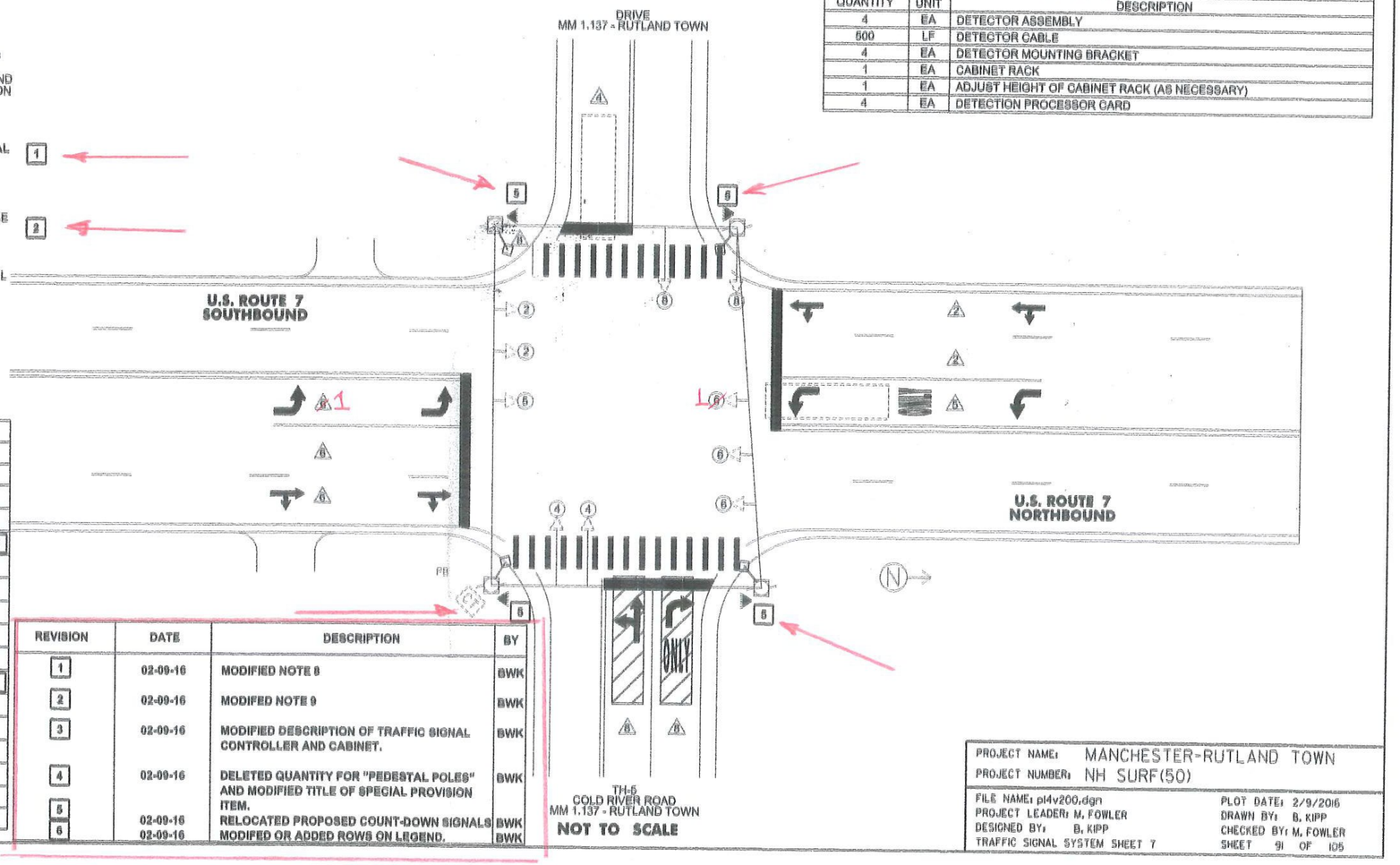
ITEM 900.620 SPECIAL PROVISION (REMOVE AND REPLACE TRAFFIC SIGNAL CONTROLLER) (US 7 @ COLD RIVER RD.) RUTLAND TOWN MM 1.137		
QUANTITY	UNIT	DESCRIPTION
1	EA	TRAFFIC SIGNAL CONTROLLER (ECONOLITE ASC/3 TS2 TYPE 2)

4

ITEM 900.620 SPECIAL PROVISION (PEDESTRIAN SIGNAL HEAD, COUNTDOWN) (US 7 @ COLD RIVER RD.) RUTLAND TOWN MM 1.137		
QUANTITY	UNIT	DESCRIPTION
4	EA	COUNT-DOWN PEDESTRIAN SIGNAL WITH MOUNTING HARDWARE
4	EA	ACCESSIBLE PEDESTRIAN PUSHBUTTON ASSEMBLY (SEE NOTE 3)

5

ITEM 900.620 SPECIAL PROVISION (VEHICLE STOP BAR DETECTION SYSTEM) (US 7 @ COLD RIVER RD.) RUTLAND TOWN MM 0.684		
QUANTITY	UNIT	DESCRIPTION
4	EA	DETECTOR ASSEMBLY
500	LF	DETECTOR CABLE
4	EA	DETECTOR MOUNTING BRACKET
1	EA	CABINET RACK
1	EA	ADJUST HEIGHT OF CABINET RACK (AS NECESSARY)
4	EA	DETECTION PROCESSOR CARD



LEGEND

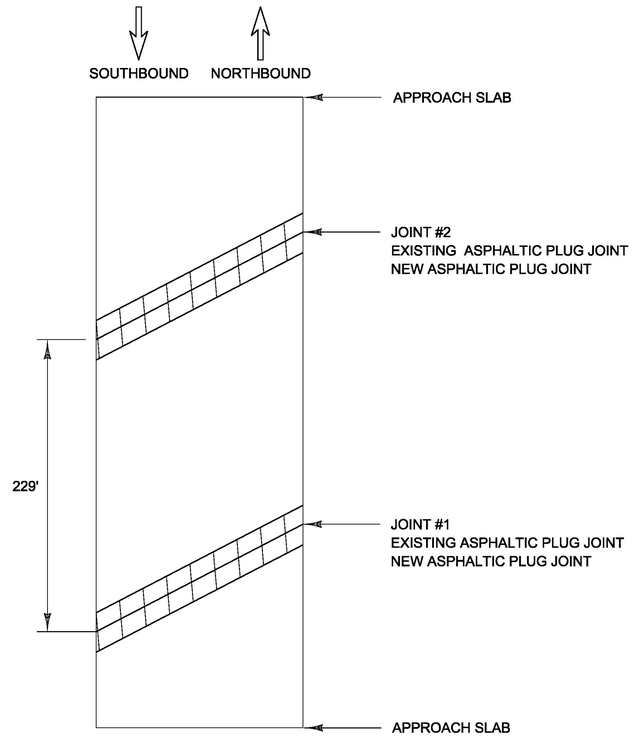
DESCRIPTION	
	EXISTING CONDUIT
	EXISTING JUNCTION BOX
	EXISTING CONTROLLER CABINET
CT	PROPOSED CONTROLLER CABINET 6
	EXISTING POLE
	EXISTING DETECTION AREA
	DETECTION AREA
	EXISTING DETECTOR
	EXISTING VEHICLE SIGNAL
	PROPOSED VEHICLE SIGNAL 6
PB	EXISTING PULL BOX
	EXISTING PEDESTRIAN SIGNAL
	PROPOSED COUNT-DOWN PEDESTRIAN SIGNAL
	EXISTING WIRELESS INTERCONNECT ANTENNA
	VEHICLE STOP BAR DETECTOR LOCATION
	ALTERNATIVE VEHICLE STOP BAR DETECTOR LOCATION

REVISION	DATE	DESCRIPTION	BY
1	02-09-16	MODIFIED NOTE 8	BWK
2	02-09-16	MODIFED NOTE 9	BWK
3	02-09-16	MODIFIED DESCRIPTION OF TRAFFIC SIGNAL CONTROLLER AND CABINET.	BWK
4	02-09-16	DELETED QUANTITY FOR "PEDESTAL POLES" AND MODIFIED TITLE OF SPECIAL PROVISION ITEM.	BWK
5	02-09-16	RELOCATED PROPOSED COUNT-DOWN SIGNALS	BWK
6	02-09-16	MODIFED OR ADDED ROWS ON LEGEND.	BWK

PROJECT NAME: MANCHESTER-RUTLAND TOWN
PROJECT NUMBER: NH SURF(50)

FILE NAME: pl4v200.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TRAFFIC SIGNAL SYSTEM SHEET 7

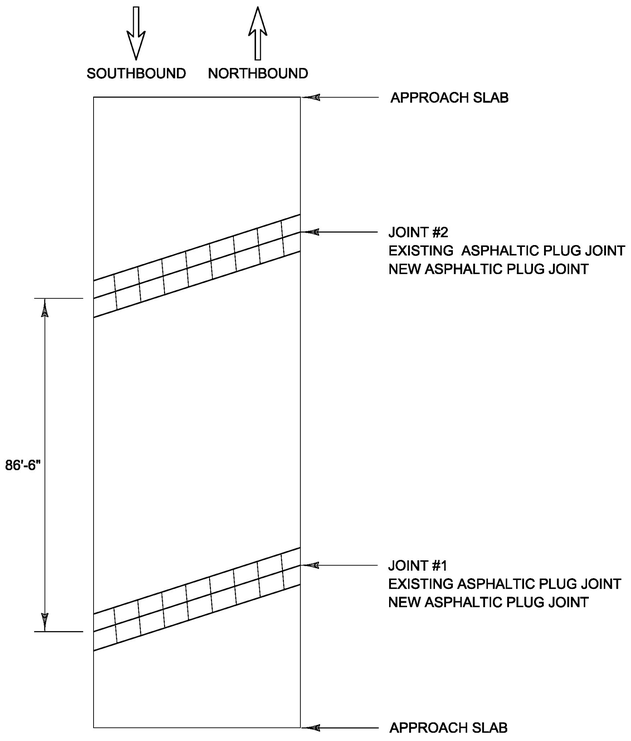
PLOT DATE: 2/9/2016
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 91 OF 105



BRIDGE #27

MM 4.663 - MANCHESTER

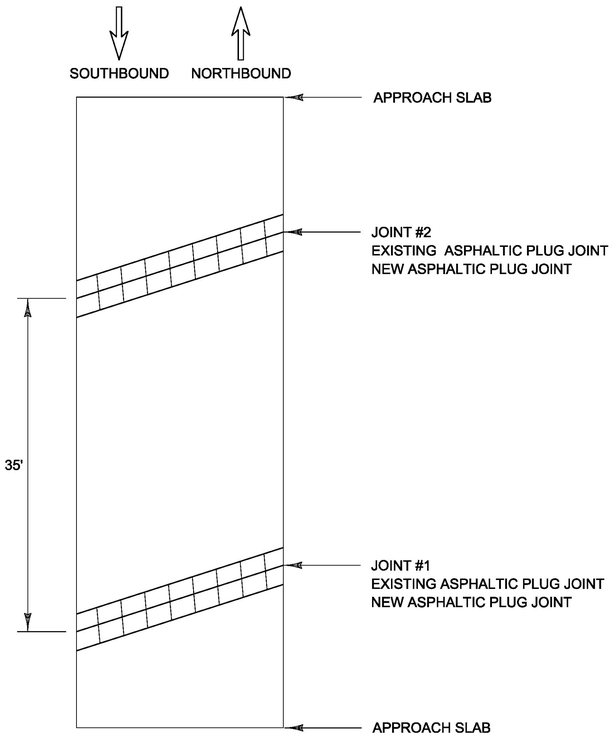
LENGTH OF NEW ASPHALTIC PLUG JOINTS:
JOINT #1 = 66'
JOINT #2 = 66'
TOTAL = 132'



BRIDGE #30

MM 1.301 - DORSET

LENGTH OF NEW ASPHALTIC PLUG JOINTS:
JOINT #1 = 51'
JOINT #2 = ~~51'~~ 50.3'
TOTAL = ~~102'~~ 101.3'

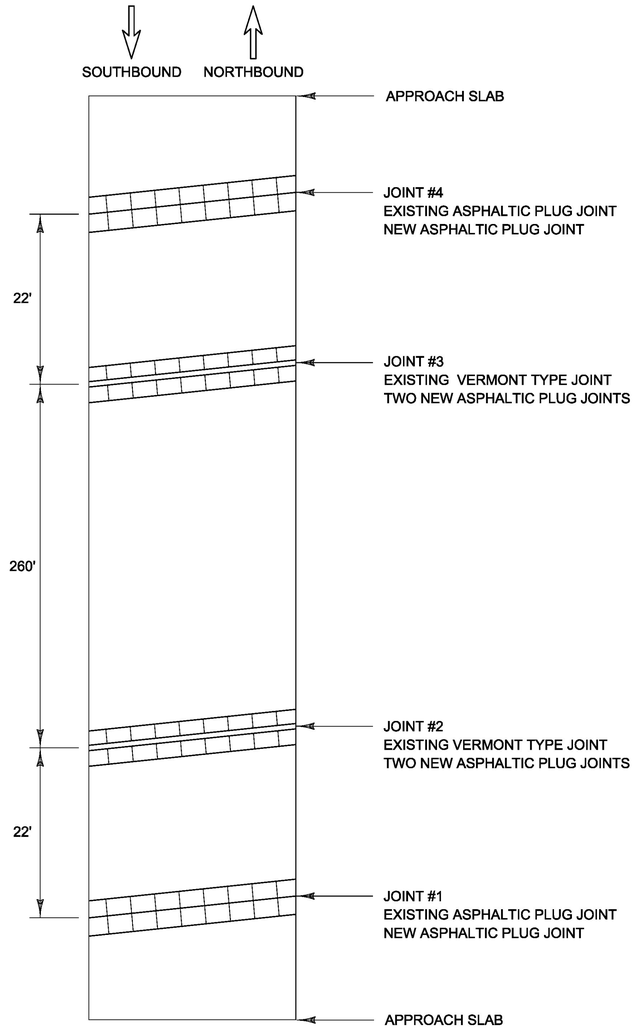


BRIDGE #31

MM 1.477 - DORSET

LENGTH OF NEW ASPHALTIC PLUG JOINTS:
JOINT #1 = ~~97'-6"~~ 100.83'
JOINT #2 = ~~97'-6"~~ 103.17'
TOTAL = ~~195'~~ 204'

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
BRIDGE EXPANSION JOINT DETAIL SHEET 1	SHEET 92 OF 105

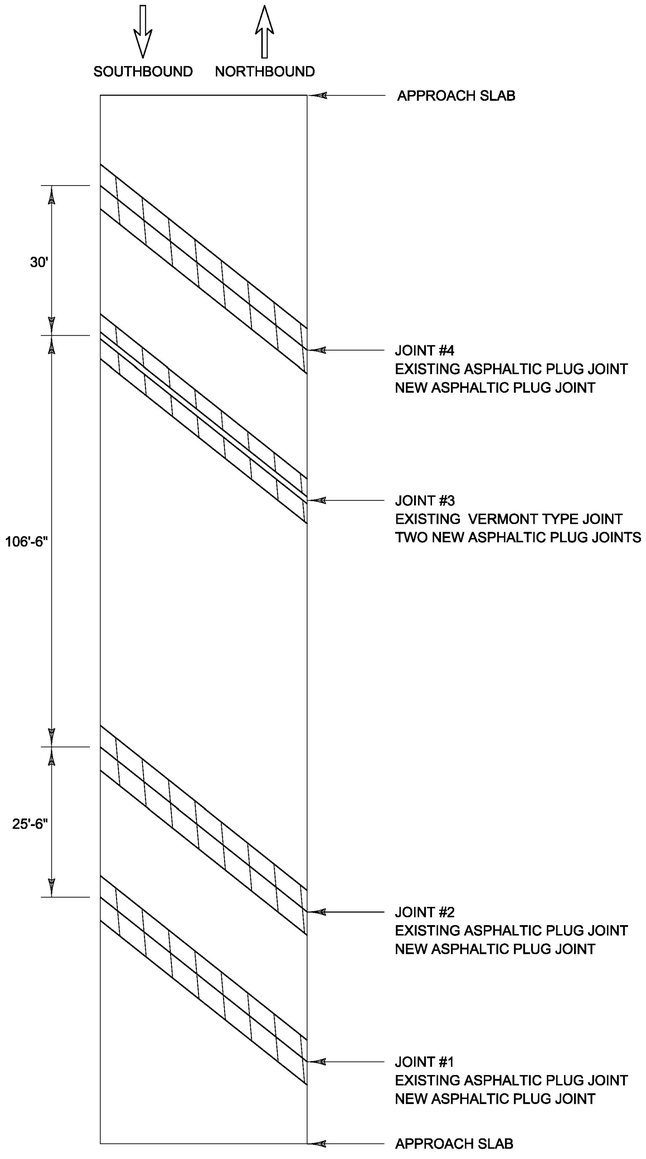


BRIDGE #79

MM 4.625 - WALLINGFORD

LENGTH OF NEW ASPHALTIC PLUG JOINTS:

JOINT #1 = ~~41'~~ 39.5'
JOINT #2 = ~~82'~~ 79.0'
JOINT #3 = ~~82'~~ 78.8'
JOINT #3 = ~~41'~~ 38.5'
TOTAL = ~~246'~~ 235.8'



BRIDGE #80

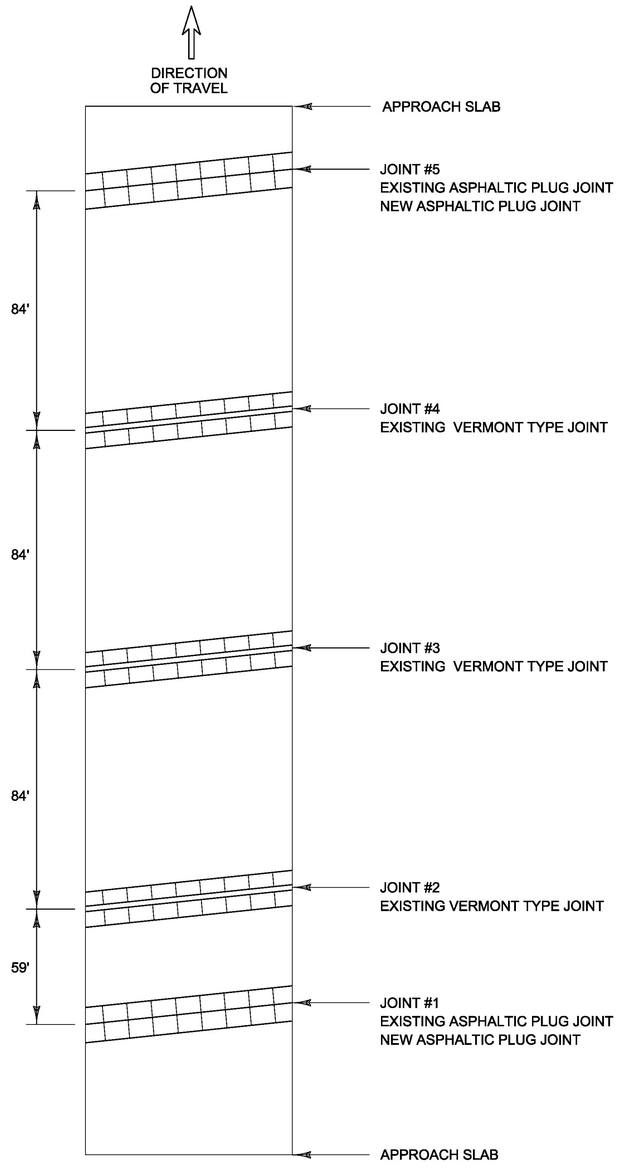
MM 4.717 - WALLINGFORD

LENGTH OF NEW ASPHALTIC PLUG JOINTS:

JOINT #1 = ~~84'~~ 80.4'
JOINT #2 = ~~88'~~ 83.2'
JOINT #3 = ~~176'~~ 163.9
JOINT #4 = ~~84'~~ 74.6'
TOTAL = ~~432'~~ 402.1'

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
BRIDGE EXPANSION JOINT DETAIL SHEET 2	SHEET 93 OF 105

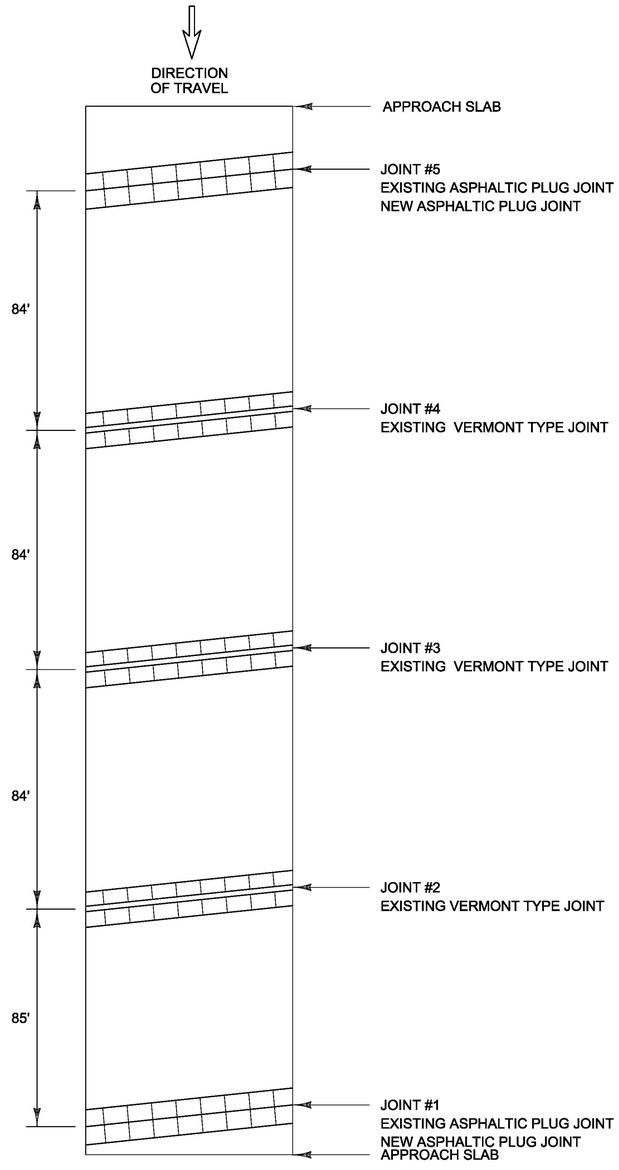


BRIDGE #90–N

MM 1.341 - CLARENDON

LENGTH OF NEW ASPHALTIC PLUG JOINTS:

JOINT #1 = ~~30'~~ 30.06'
JOINT #2 = ~~60'~~ 60.36'
JOINT #3 = ~~60'~~ 59.76'
JOINT #4 = ~~60'~~ 60.26'
JOINT #5 = ~~30'~~ 30.10'
TOTAL = ~~240'~~ 240.54'

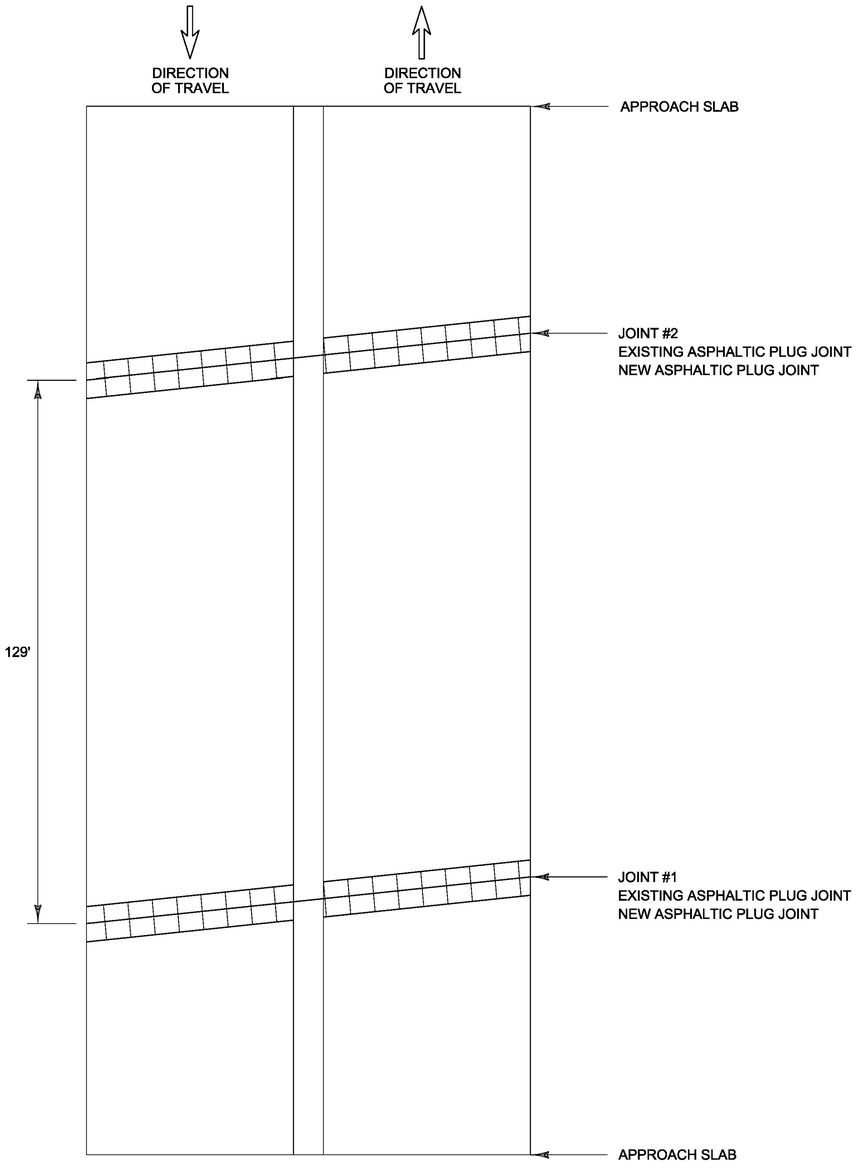


BRIDGE #90–S

MM 1.341 - CLARENDON

LENGTH OF NEW ASPHALTIC PLUG JOINTS:

JOINT #1 = ~~30'~~ 30.4'
JOINT #2 = ~~60'~~ 60.7'
JOINT #3 = ~~60'~~ 60.1'
JOINT #4 = ~~60'~~ 60.4'
JOINT #5 = 30'
TOTAL = ~~240'~~ 241.6'



BRIDGE #96

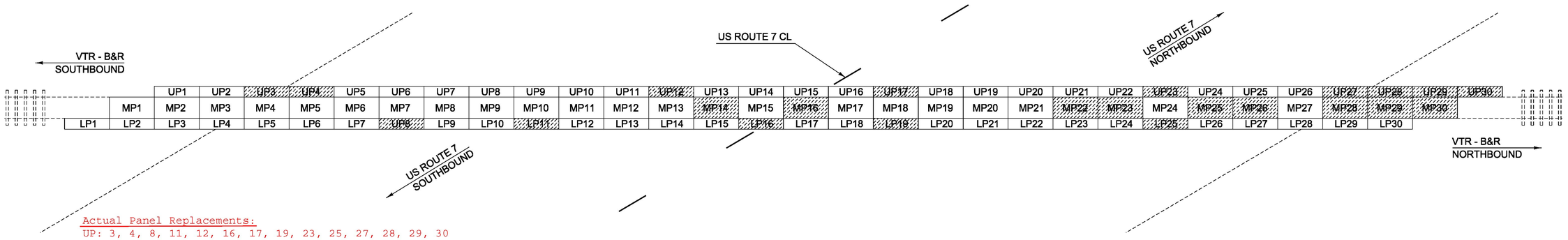
MM 5.476 - CLARENDON

LENGTH OF NEW ASPHALTIC PLUG JOINTS:

JOINT #1 = ~~54'~~ 54.1'
JOINT #2 = ~~61'~~ 62.9'
TOTAL = ~~115'~~ 117.0'

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
BRIDGE EXPANSION JOINT DETAIL SHEET 3	SHEET 94 OF 105



Actual Panel Replacements:
UP: 3, 4, 8, 11, 12, 16, 17, 19, 23, 25, 27, 28, 29, 30
MP: 2, 3, 4, 5, 10, 14, 16, 17, 22, 23, 25, 26, 28, 29, 30

RAIL CROSSING #900-613N
DORSET - US ROUTE 7
RR MILE POST 27.94

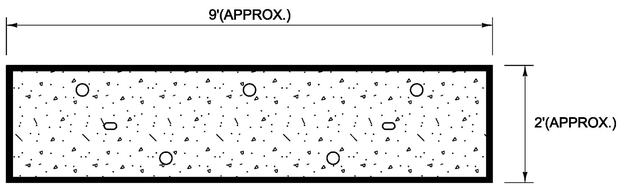
RAILROAD CONCRETE PANEL REPLACMENT

UPPER PANEL REPLACEMENTS (UP#)	~~UP3~~	~~UP4~~	~~UP12~~	~~UP17~~	~~UP23~~	~~UP27~~	~~UP28~~	~~UP29~~	~~UP30~~
MIDDLE PANEL REPLACEMENT (MP#)	~~MP14~~	~~MP16~~	~~MP22~~	~~MP23~~	~~MP25~~	~~MP26~~	~~MP28~~	~~MP29~~	~~MP30~~
LOWER PANEL REPLACEMENTS (LP#)	~~LP8~~	~~LP11~~	~~LP16~~	~~LP19~~	~~LP25~~	LP:	NONE	replaced	

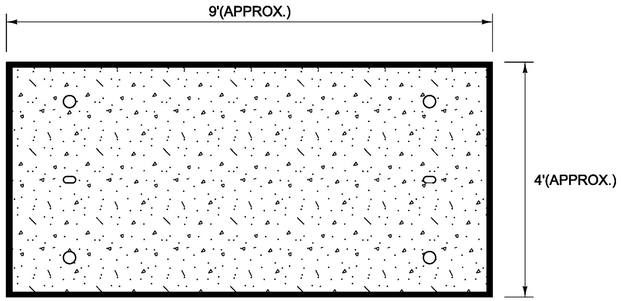
NOTES:

1. PANELS LABELED ABOVE AND LABELED WITH A CROSS-HATCH PATTERN SHALL TO BE REMOVED AND REPLACED. PAYMENT FOR THIS WORK WILL BE MADE UNDER 900.620 - SPECIAL PROVISION (PRECAST CONCRETE FIELD PANEL GRADE CROSSING SURFACE)(AARDOT 900-613N)(24"X108") AND 900.620 - SPECIAL PROVISION (PRECAST CONCRETE GAUGE PANEL GRADE CROSSING SURFACE)(AARDOT 900-613N)(48"X108") AS APPLICABLE.

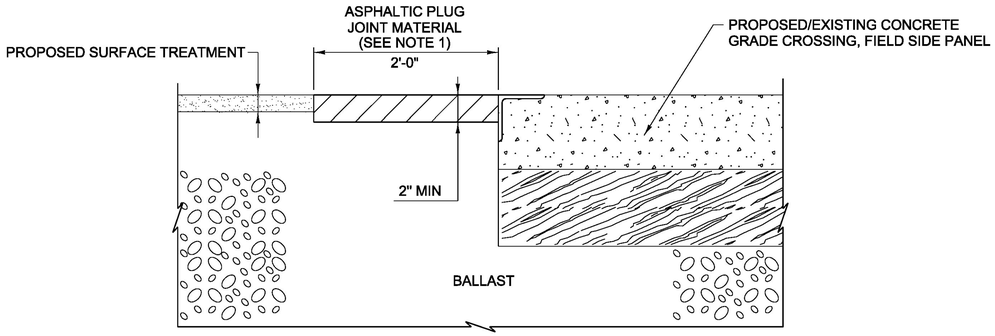
2. CONTRACTOR SHALL ENSURE THAT PROPER TIE HOLE PLUGGING IS PERFORMED ON EXISTING RAIL TIES. PLEASE CONTACT BEN DELORME, VERMONT RAIL SYSTEMS AT (802)775-4356.



UPPER AND LOWER CONCRETE PANELS (UP# & LP#)
(FIELD PANELS)



MIDDLE CONCRETE PANELS (MP#)
(GAUGE PANELS)



ASPHALT TRANSITION FOR CONCRETE GRADE CROSSING PANELS

NOTE:

1. CONTRACTOR SHALL MICRO-MILL 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. ALL WORK ASSOCIATED WITH THIS WORK WILL BE PAID FOR UNDER ITEM 900.640 SPECIAL PROVISION (BAND JOINT @ PRECAST CONCRETE RAILROAD CROSSING).

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200frm.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: N. PAPPAS
RAIL CROSSING DETAIL SHEET	SHEET 95 OF 105

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 STANDARD T-17 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, 646.622 - TEMPORARY 6 INCH WHITE LINE, PAINT, 646.632 - TEMPORARY 6 INCH YELLOW LINE, PAINT, 646.642 - TEMPORARY 8 INCH WHITE LINE, PAINT, 646.652 - TEMPORARY 8 INCH YELLOW LINE, PAINT, 646.662 TEMPORARY 12 INCH WHITE LINE, PAINT, 646.682 - TEMPORARY 24 INCH STOP BAR, PAINT, 646.692 - TEMPORARY LETTER OR SYMBOL, PAINT, 646.702 - TEMPORARY CROSSWALK MARKING, PAINT, 646.710 - TEMPORARY RAILROAD CROSSING SYMBOL, PAINT AND 646.76 - LINE STRIPING TARGETS.

4. ITEM 646.76 - LINE STRIPING TARGETS ARE ONLY REQUIRED FOR THE DASHED CENTERLINE WITHIN PORTIONS OF THE LIMITED ACCESS/DIVIDED HIGHWAY OF US ROUTE 7. THESE LOCATIONS ARE AS FOLLOWS:

   WALLINGFORD (NB&SB) - MM 6.526 - MM 7.996
   CLARENDON (NB&SB) - MM 0.000 - MM 5.656

5. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) WILL BE PLACED ALONG THIS PROJECT AND ARE TO BE USED AS DIRECTED BY THE ENGINEER. THESE SIGNS WILL BE PAID FOR UNDER ITEM 641.15, PORTABLE CHANGEABLE MESSAGE SIGN.

   FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL POSITION A PCMS PRIOR TO THE BEGIN AND END PROJECT LIMITS WARNING MOTORISTS OF EXPECTED ROADWAY CONDITIONS AND REDUCED ROADWAY WIDTHS.

   PCMS SHALL 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 SHALL BE AVOIDED. MESSAGES SHOULD BE UPDATED PERIODICALLY TO DESCRIBE THE WORK ACTIVITY OCCURRING SO THAT THE PCMS CONTINUES TO COMMAND THE ATTENTION OF MOTORISTS.

6. 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.

7. REFER TO VT. STATE STANDARDS AND THE LATEST EDITION OF THE MUTCD FOR TEMPORARY TRAFFIC CONTROL SIGN COLORS.

8. 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.

9. PORTABLE OR STATIONARY WORK ZONE SPEED LIMIT SIGNS SHOULD BE SPACED EVERY 1.5 TO 2 MILES WHERE APPLICABLE AND AFTER INTERSECTIONS AS A REMINDER TO THE MOTORIST TRAVELING THROUGH THE WORK ZONE WHAT SPEED THEY SHOULD BE TRAVELING.

10. 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.

11. 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.

12. 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.

13. 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.

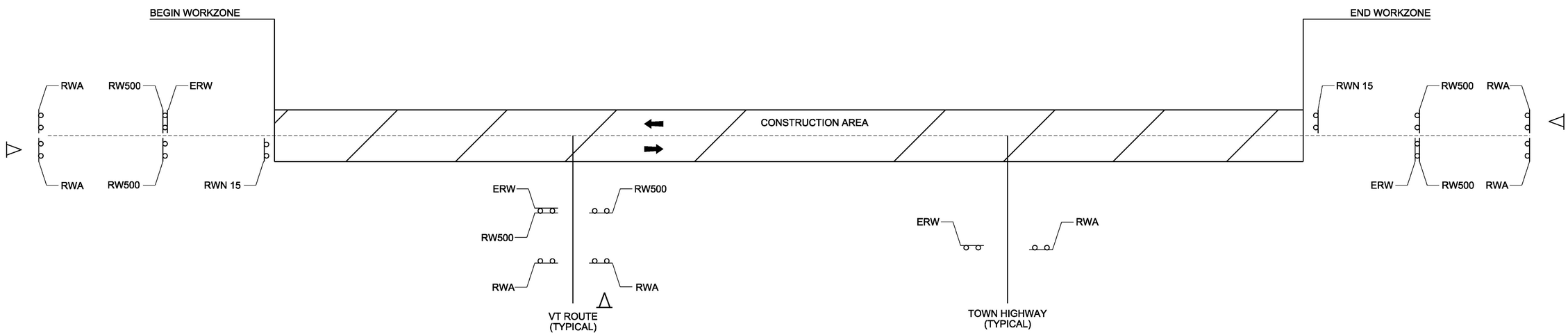
14. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF THE MUTCD SHALL BE USED.

15. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.

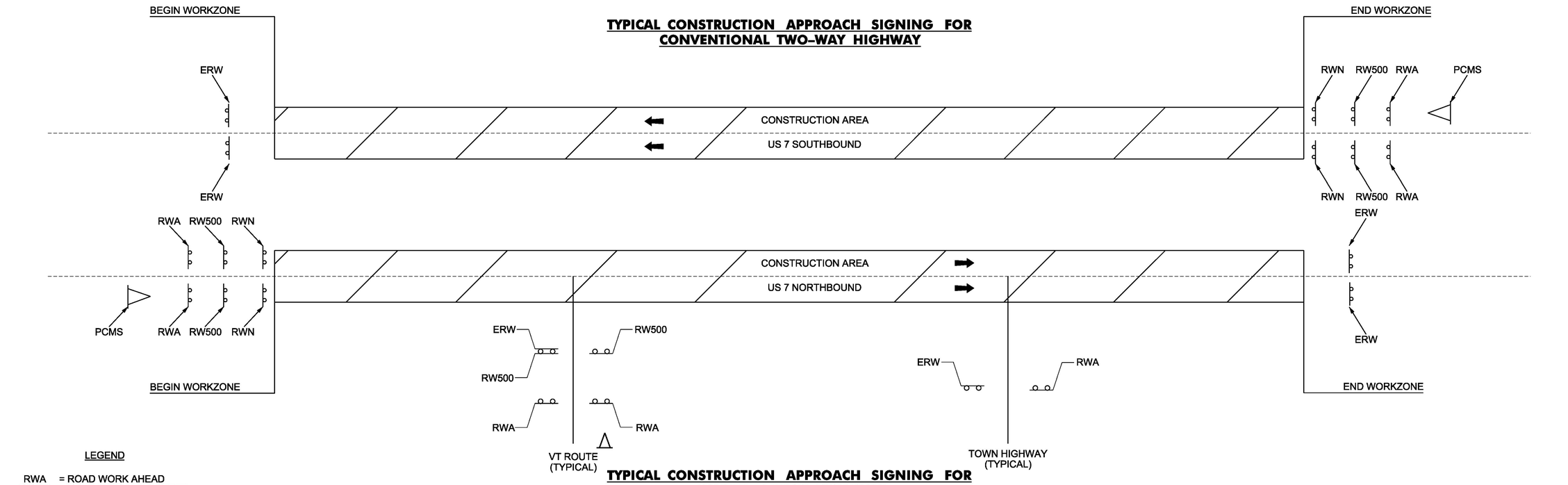
16. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.

17. 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 ITEM 641.10, TRAFFIC CONTROL.

PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: tc notes.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
TRAFFIC CONTROL NOTES SHEET	SHEET 96 OF 105



TYPICAL CONSTRUCTION APPROACH SIGNING FOR CONVENTIONAL TWO-WAY HIGHWAY



TYPICAL CONSTRUCTION APPROACH SIGNING FOR LIMITED ACCESS HIGHWAY

LEGEND

RWA = ROAD WORK AHEAD
RW500 = ROAD WORK IN 500 FEET
RWN = ROAD WORK NEXT (XX MILES)
ERW = END ROAD WORK
SRWA = SIDE ROAD WORK AHEAD
SRW500 = SIDE ROAD WORK 500 FEET

△ = PORTABLE CHANGEABLE MESSAGE SIGN

▨ = WORK AREA

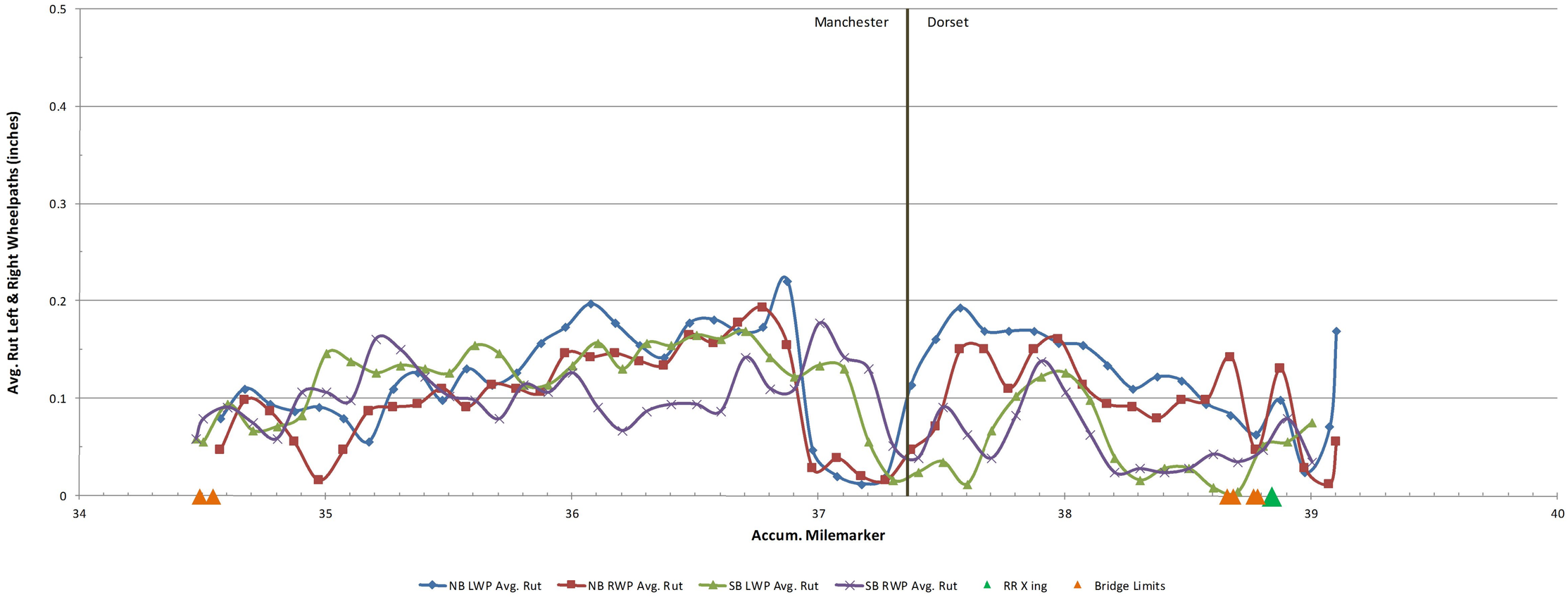
⬅ = DIRECTION OF TRAFFIC FLOW

NOTE:
SEE VAOT STANDARDS T-1, T-10, T-11 AND T-13 FOR SIGN PLACEMENT.
CONSTRUCTION APPROACH SIGNING SHALL BE PLACED AS NOT TO INTERFERE WITH EXISTING TRAFFIC CONTROL DEVICES.
SEE TRAFFIC CONTROL NOTES SHEET.

PROJECT NAME: MANCHESTER-RUTLAND TOWN	
PROJECT NUMBER: NH SURF(50)	
FILE NAME: cas sheet.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
CONSTRUCTION APPROACH SIGNING SHEET	SHEET 97 OF 105

US 7 Manchester-Dorset (part of Manchester-Rutland) NH SURF(50) PreCon Ruts

Profiled 12/2/2014

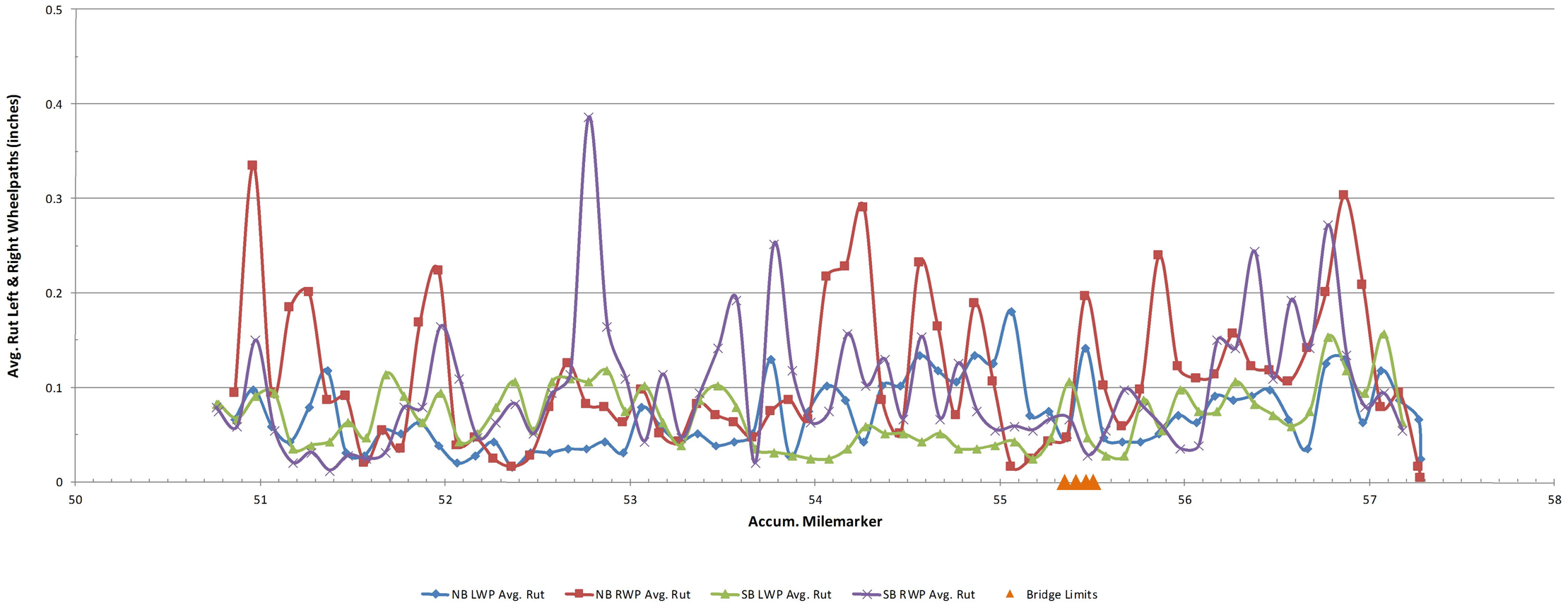


PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
RUTTING DATA INFORMATION SHEET 1	SHEET 98 OF 105

US 7 Wallingford (part of Manchester-Rutland) NH SURF(50) PreCon Ruts

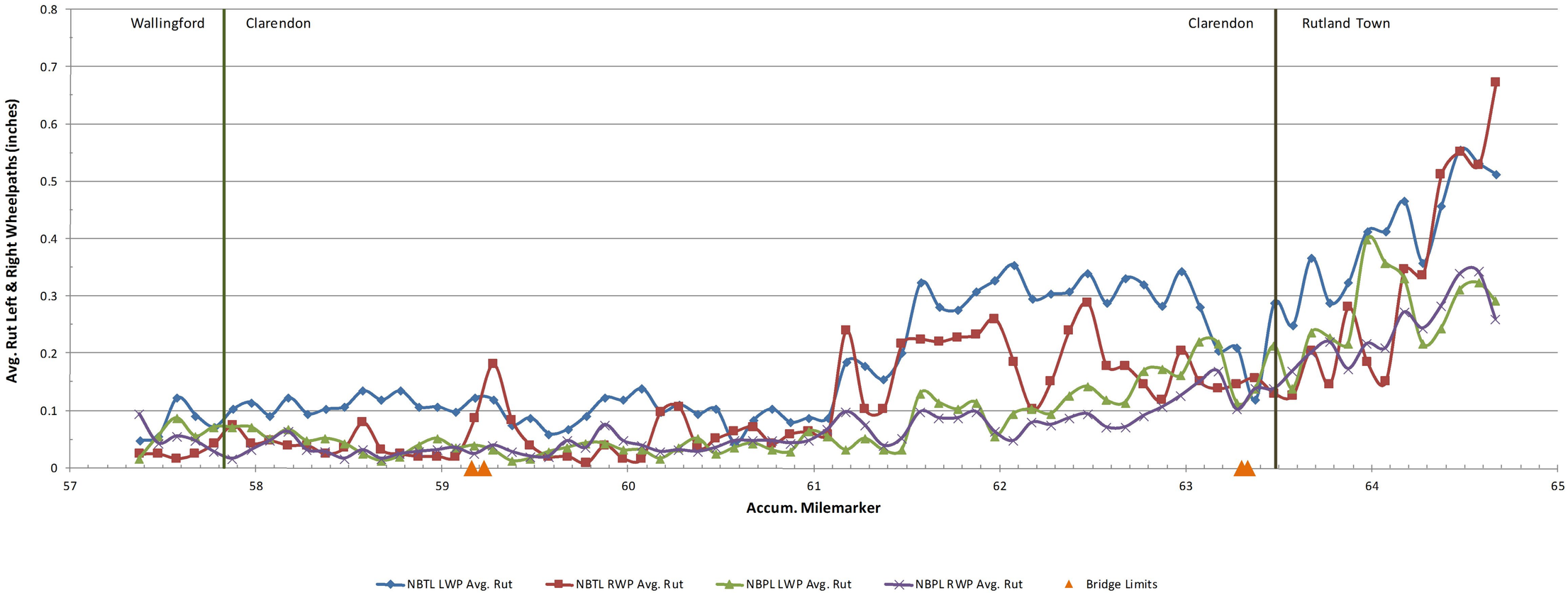
Profiled 12/2/2014



PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
RUTTING DATA INFORMATION SHEET 2	SHEET 99 OF 105

US 7 NB Wallingford-Rutland Town (divided hwy.)(part of Manchester-Rutland) NH SURF(50) PreCon Ruts

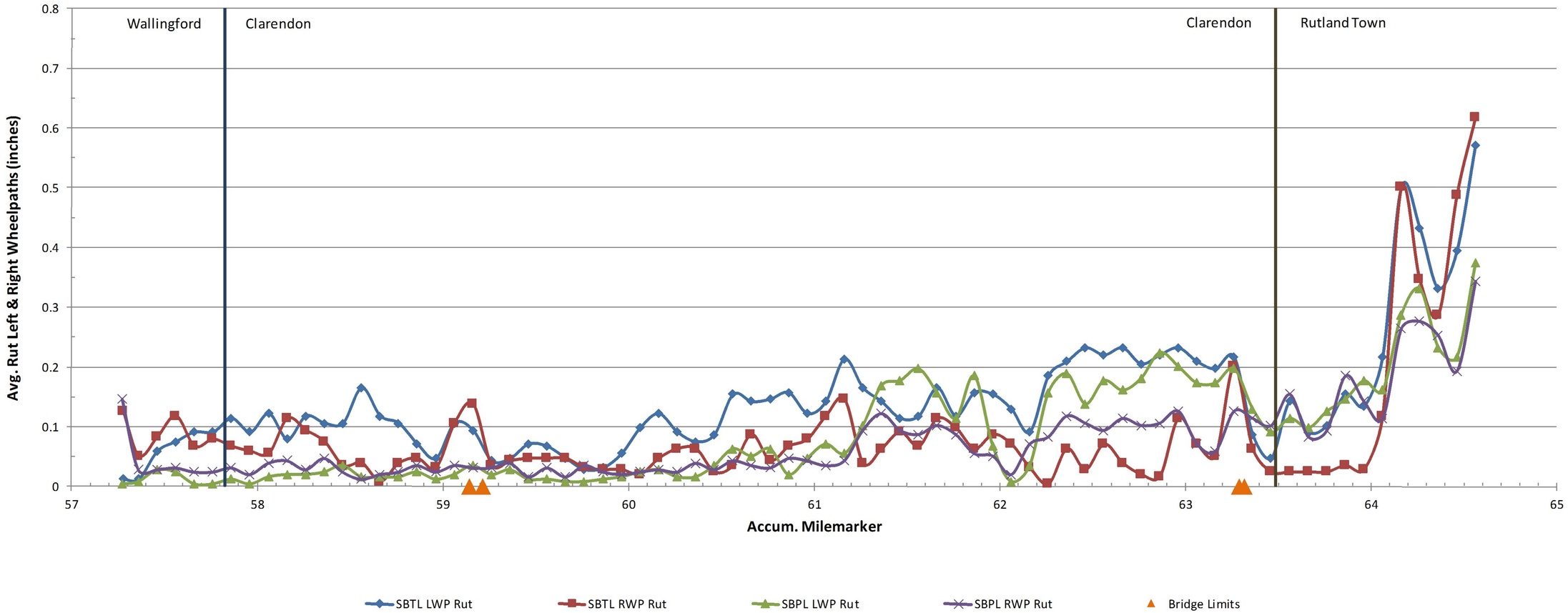
Profiled 12/2/2014



PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
RUTTING DATA INFORMATION SHEET 3	SHEET 100 OF 105

US 7 SB Wallingford-Rutland (divided hwy.)(part of Manchester-Rutland) NH SURF(50) PreCon Ruts

Profiled 12/2/2014

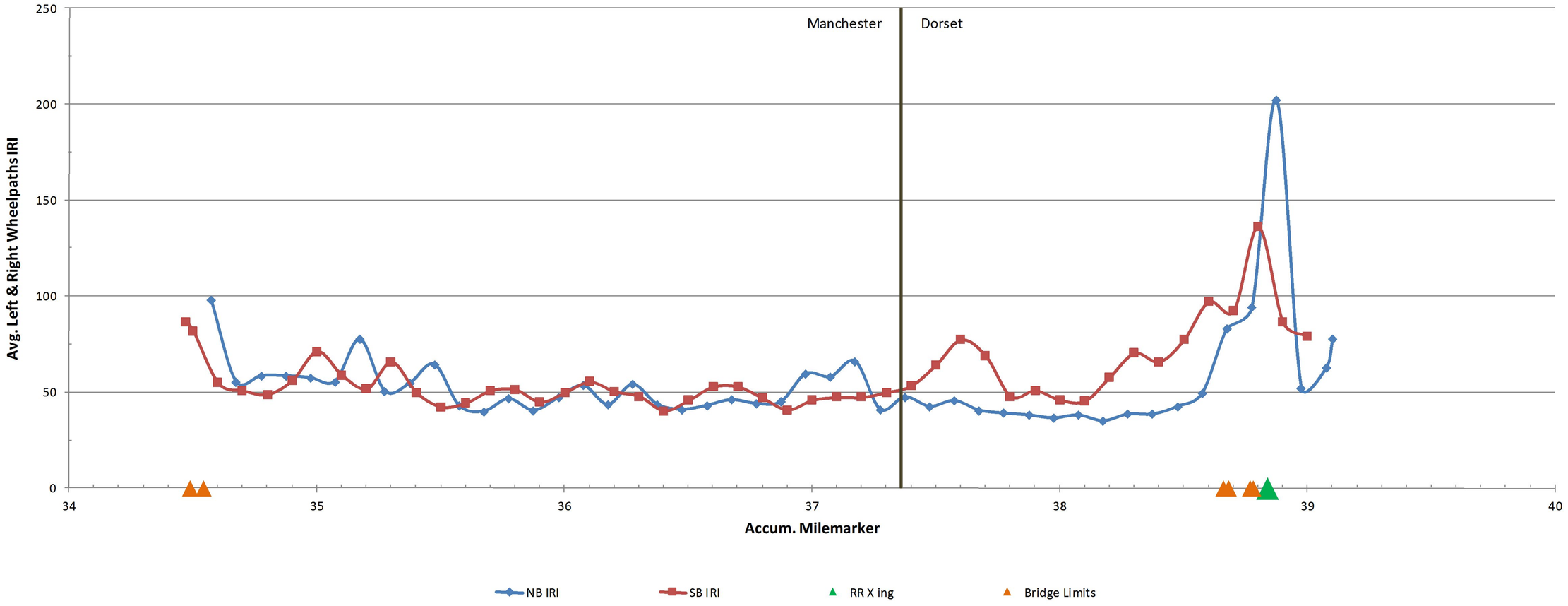


PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
RUTTING DATA INFORMATION SHEET 4	SHEET 101 OF 105

US 7 Manchester-Dorset (part of Manchester-Rutland) NH SURF(50) PreCon IRI

Profiled 12/2/2014

NB Avg. IRI = 55.1 SB Avg. IRI = 59.3



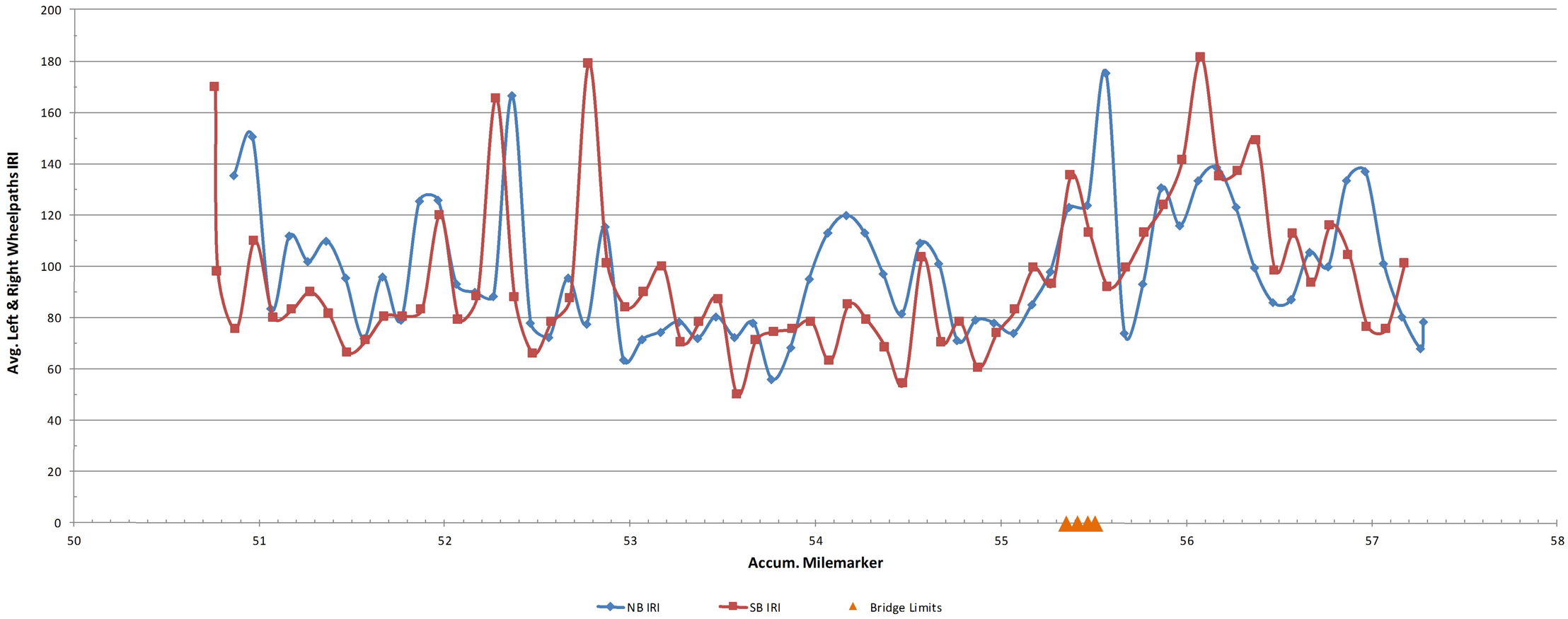
PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
ROUGHNESS DATA INFORMATION SHEET 1	SHEET 102 OF 105

US 7 Wallingford (part of Manchester-Rutland) NH SURF(50) PreCon IRI

Profiled 12/2/2014

NB Avg. IRI = 98.5 SB Avg. IRI = 95.4



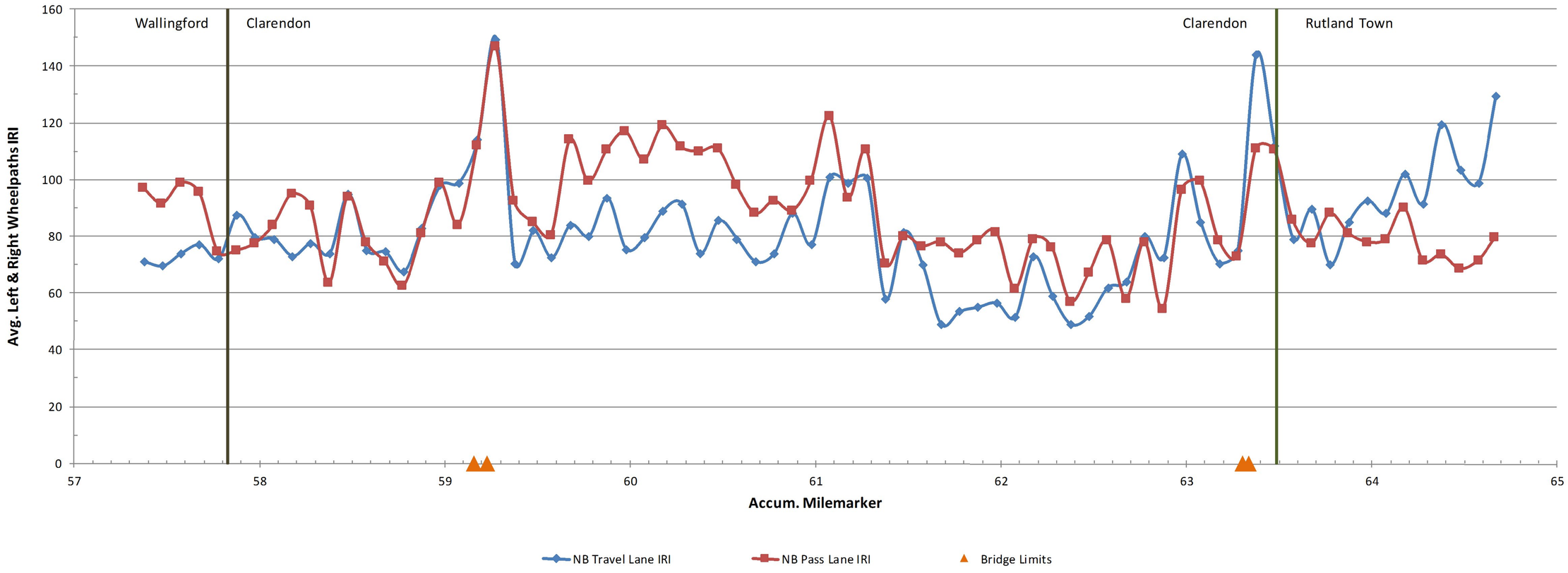
PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)

FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
ROUGHNESS DATA INFORMATION SHEET 2	SHEET 103 OF 105

US 7 NB Wallingford-Rutland Town (divided hwy.)(part of Manchester-Rutland) NH SURF(50) PreCon IRI

Profiled 12/2/2014

NB Travel Lane Avg. IRI = 82.3 NB Pass Lane Avg. IRI = 87.6

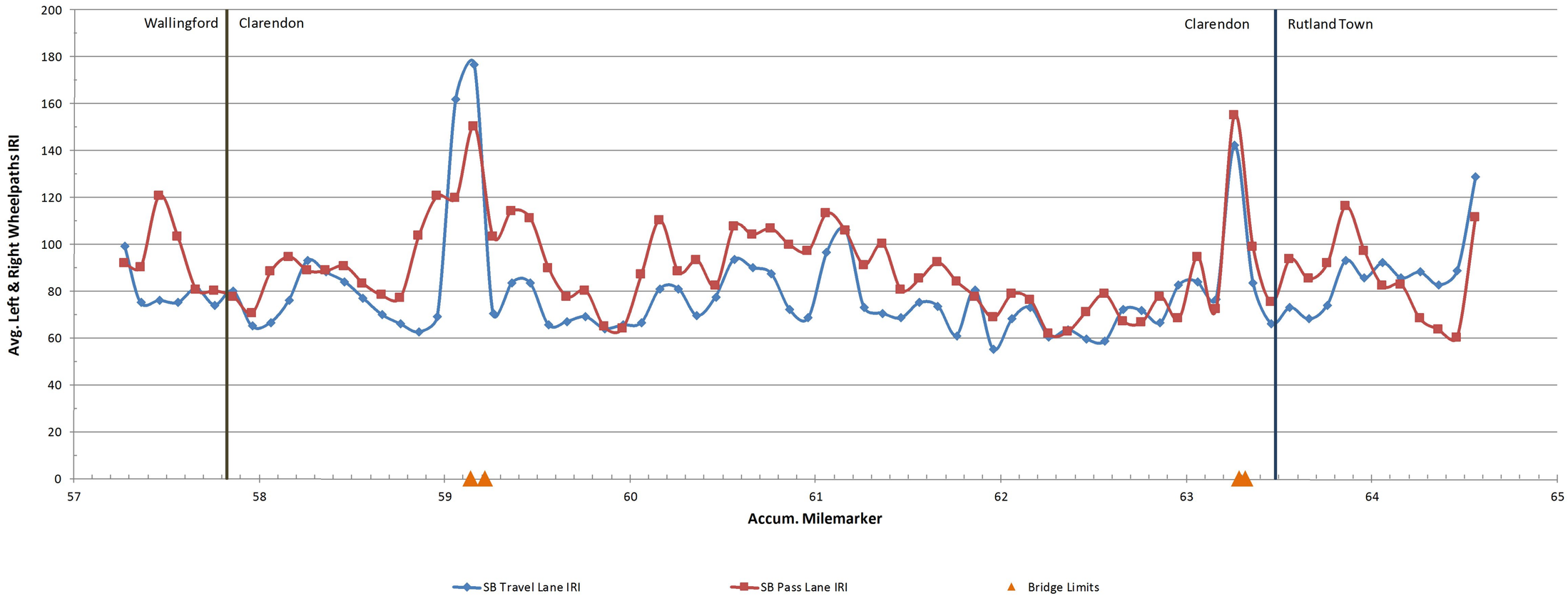


PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
ROUGHNESS DATA INFORMATION SHEET 3	SHEET 104 OF 105

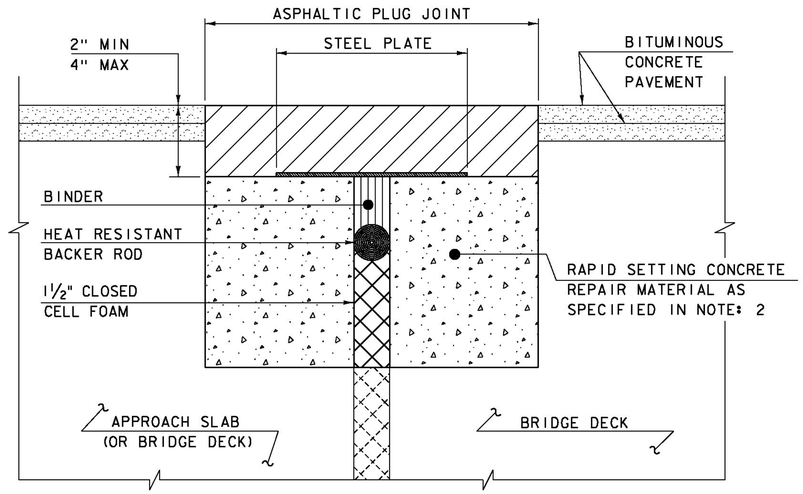
US 7 SB Wallingford-Rutland (divided hwy.)(part of Manchester-Rutland) NH SURF(50) PreCon IRI

Profiled 12/2/2014

SB Travel Lane Avg. IRI = 80.0 SB Pass Lane Avg. IRI = 89.5



PROJECT NAME:	MANCHESTER-RUTLAND TOWN
PROJECT NUMBER:	NH SURF(50)
FILE NAME: pl4v200.dgn	PLOT DATE: 1/14/2016
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
ROUGHNESS DATA INFORMATION SHEET 4	SHEET 105 OF 105



ASPHALTIC PLUG JOINT DETAIL - REHAB

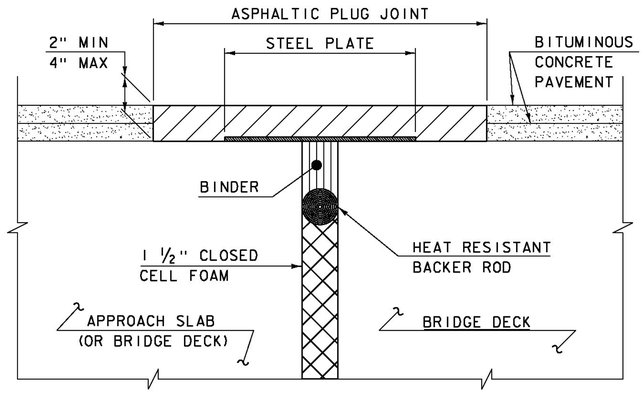
NOTES:

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.

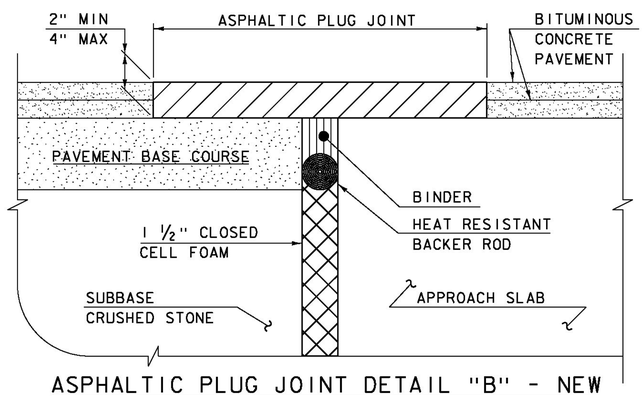
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.

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.

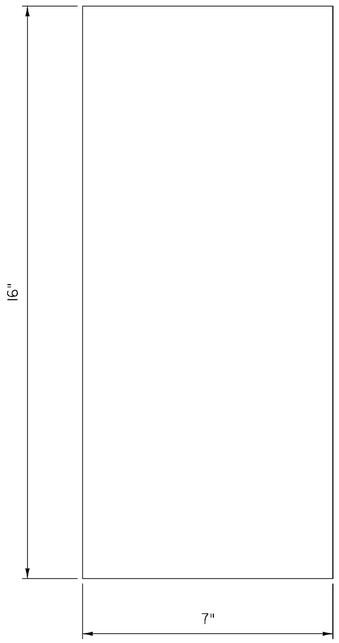
DETAILS ON THIS SHEET ARE NOT TO SCALE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

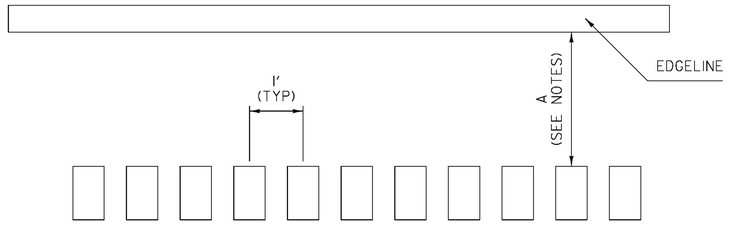
BRIDGE JOINT
ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

STRUCTURES DETAIL
SD-516.10



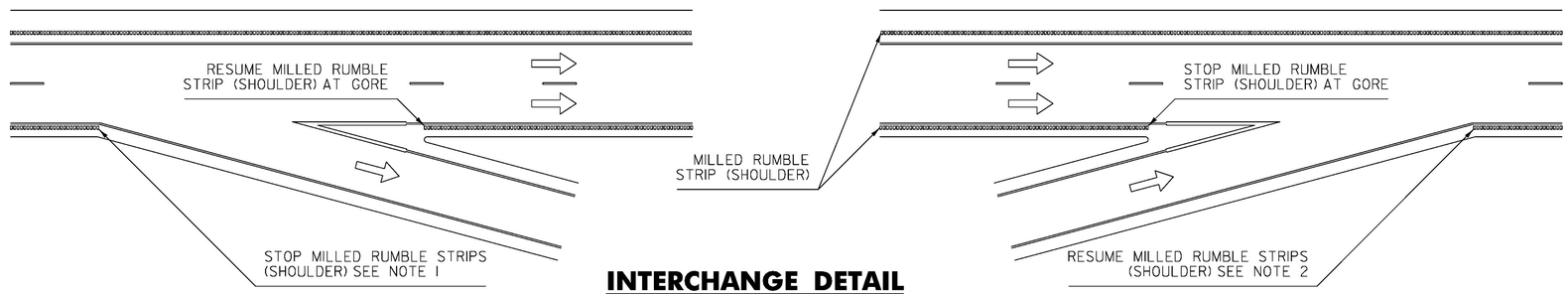
RUMBLE STRIP DETAIL



RUMBLE STRIP LAYOUT DETAIL

NOTES:

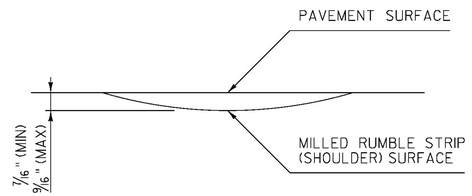
1. DIMENSION "A" SHALL BE 30 INCHES FOR SHOULDERS WITH A WIDTH OF SIX FEET OR GREATER.
2. DIMENSION "A" SHALL BE SIX INCHES FOR SHOULDERS WITH A WIDTH OF LESS THAN SIX FEET, WITHOUT GUARDRAIL.
3. MILLED RUMBLE STRIP (SHOULDER) SHALL BE STOPPED WHEN GUARDRAIL IS PRESENT WITHIN FOUR FEET OF THE EDGE OF TRAVELLED WAY.

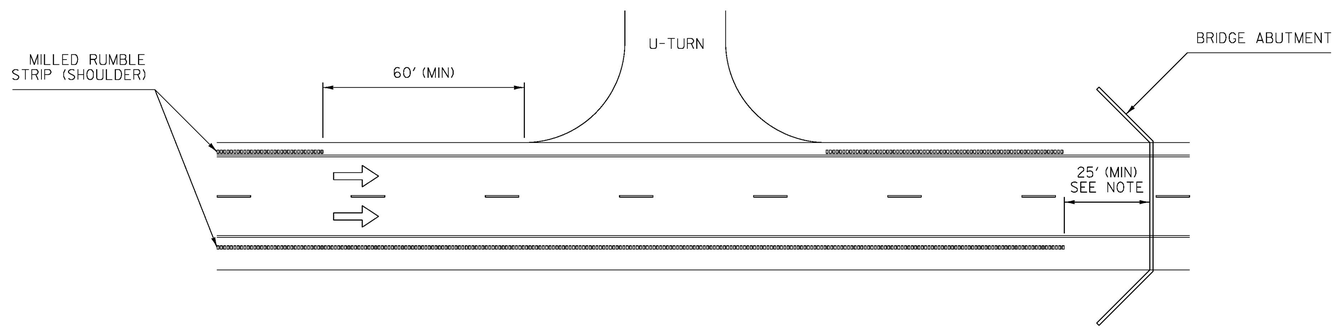


INTERCHANGE DETAIL

NOTES:

1. DETAIL IS SHOWN FOR A TAPERED DECELERATION LANE, FOR PARALLEL DECELERATION LANES MILLED RUMBLE STRIPS (SHOULDER) SHALL STOP AT THE BEGINNING OF THE DECELERATION LANE TAPER.
2. DETAIL IS SHOWN FOR A TAPERED ACCELERATOIN LANE, FOR PARALLEL ACCELERATION LANES MILLED RUMBLE STRIPS (SHOULDER) SHALL STOP AT THE END OF THE ACCELERATION LANE TAPER.





NOTE:

1. MILLED RUMBLE STRIPS (SHOULDER) SHALL STOP A MINIMUM OF 25 FEET PRIOR TO BRIDGE ABUTMENT AND RESUME A MINIMUM OF 25 FEET AFTER THE TRAILING ABUTMENT. THIS DISTANCE MAY BE INCREASED TO MEET THE REQUIREMENTS OF THE RUMBLE STRIP LAYOUT DETAIL NOTE 3 ON THIS SHEET. MILLED RUMBLE STRIPS (SHOULDER) SHALL ALSO STOP PRIOR TO AND RESUME AFTER ALL APPROACH SLABS.

MISCELLANEOUS DETAILS

REV.	DATE	DESCRIPTION
0	NOV. 3, 2015	ORIGINAL APPROVAL

OTHER DETAILS REQUIRED: NONE

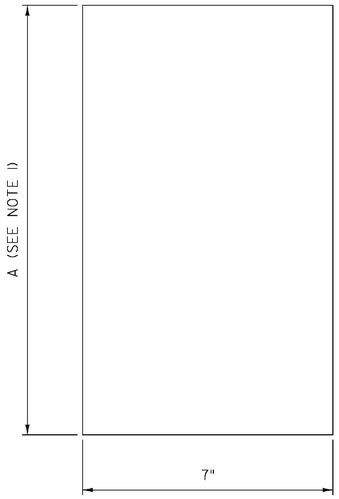
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

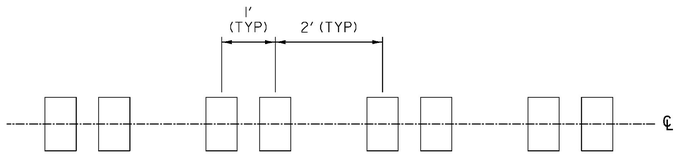
MILLED RUMBLE STRIP (SHOULDER) DETAILS

VTrans Working to Get You There
VERMONT AGENCY OF TRANSPORTATION

HIGHWAY SAFETY & DESIGN DETAIL

HSD-213.01

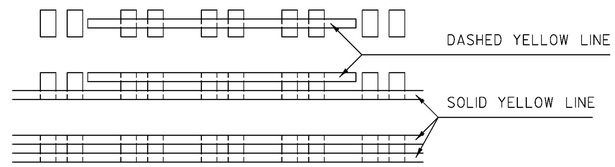




RUMBLE STRIP LAYOUT DETAIL

NOTE:

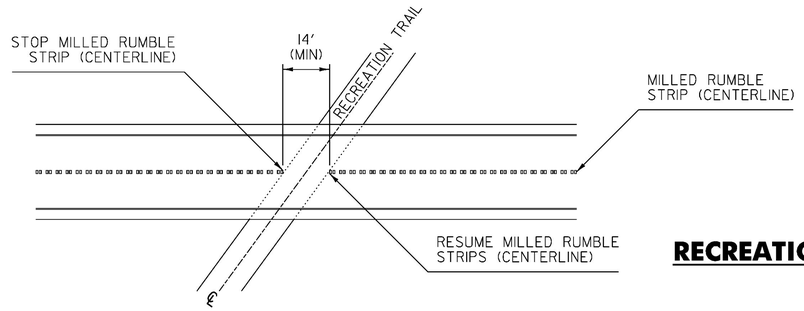
1. RUMBLE STRIPS (CENTERLINE) SHALL BE CENTERED ALONG THE CENTERLINE OF THE ROADWAY AND INSTALLED AT THE INTERVALS AS DETAILED.



PAVEMENT MARKING LAYOUT DETAIL

NOTES:

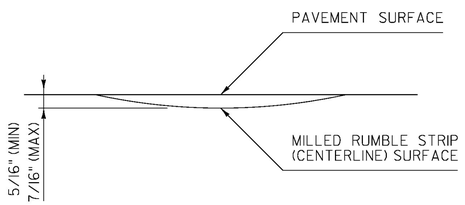
1. MILLED RUMBLE STRIPS (CENTERLINE) SHALL BE INSTALLED PRIOR TO FINAL CENTERLINE PAVEMENT MARKINGS.
2. ALL FINAL CENTERLINE PAVEMENT MARKINGS SHALL BE CENTERED ON THE MILLED RUMBLE STRIPS (CENTERLINE).
3. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CENTERLINE PAVEMENT MARKINGS SHALL BE POLYUREA.



RECREATION TRAIL CROSSING DETAIL

NOTE:

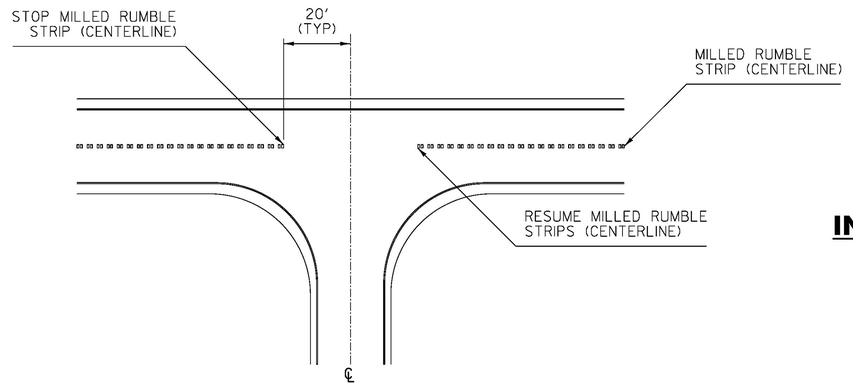
1. WIDTH OF GAP FOR RAIL TRAILS WILL VARY DEPENDENT ON THE SKEW OF THE TRAIL, WITH A 14 FOOT MINIMUM GAP.



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

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

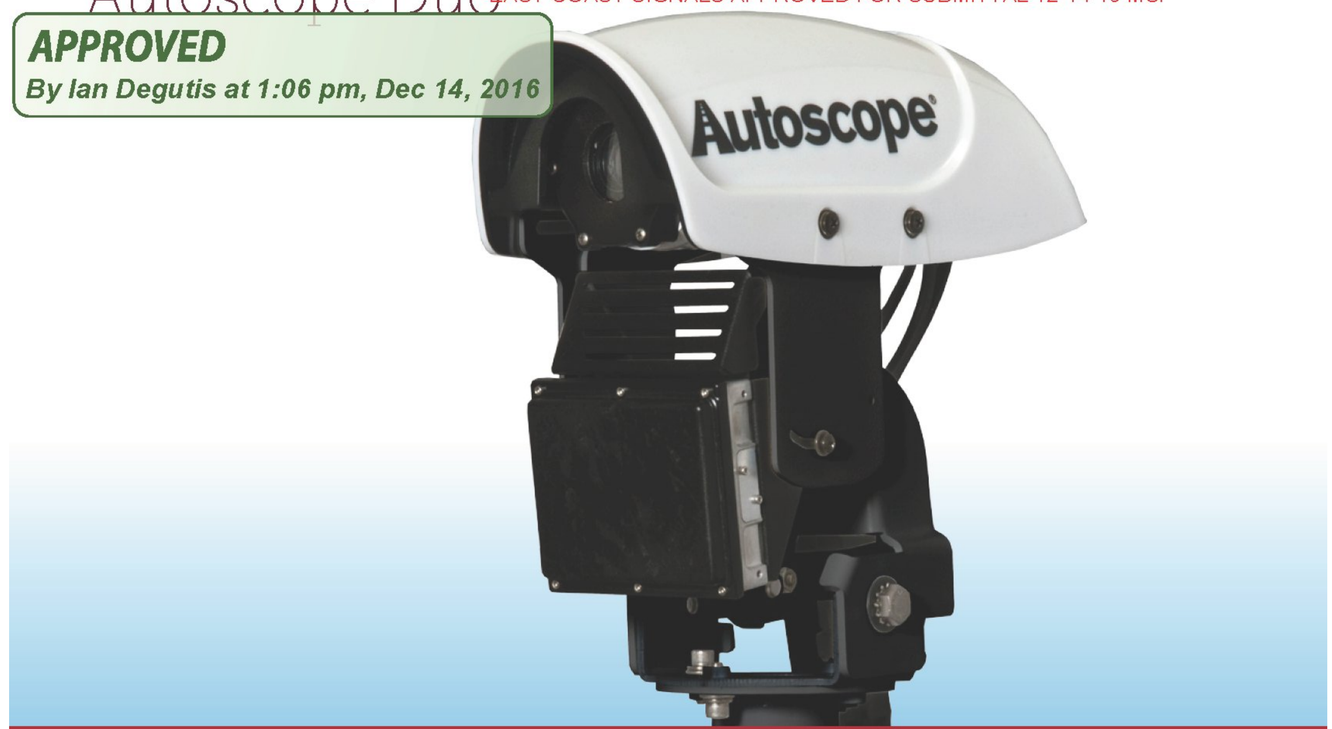
HIGHWAY SAFETY & DESIGN DETAIL

HSD-213.02

Autoscope Duo

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 12-14-16 MSF

APPROVED
By Ian Degutis at 1:06 pm, Dec 14, 2016



▹ ▹Autoscope® Duo™ is a hybrid radar and video vehicle detection system—the first in a new generation of hybrid sensor-based above ground detection

About Duo

As the complexities of transportation management increase, multi-tasking ITS solutions are providing the capability, accuracy and flexibility required for varying types of roadway situations. The Autoscope® Duo™ sensor is a hybrid radar and video vehicle detection system—the first in a new generation of hybrid sensor-based above ground detection. Duo provides superior detection accuracy in all traffic, lighting, weather, and pavement conditions, with the lowest cost of ownership. The Autoscope Duo sensor provides a consistent vehicle detection solution, and inspires ITS applications of continuous data collection and traffic monitoring.

For transportation professionals, this multi-tasking vehicle detection system provides a superior alternative to in-ground detection, while guaranteeing years of low-maintenance service and significant return on investment, especially when compared to the recurring expense of common inductive loop detectors.

At A Glance

- Provides vehicle detection for intersection stop line and advance extension applications
- EasyLink connectivity for broadband communications
- Streaming digital MPEG-4 video output
- User-definable password protection
- Vehicle detection, traffic data measures, speed, and incident detection
- Bicycle detection and differentiation

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Set-Up & Operation

The *Autoscope Duo* unit makes it easier than ever to install and configure an effective detection solution that meets your detection objectives. Multiple detection zones provide traffic count, presence, speed, and incident detection alarms. Incident types include stopped vehicles, wrong direction vehicles, slow-moving vehicles, bicycles, or other customized alarms. Real-time polling or stored data include actuations, volume, occupancy, five vehicle classes by length, density, and other traffic data for user-selected periods or by phase.

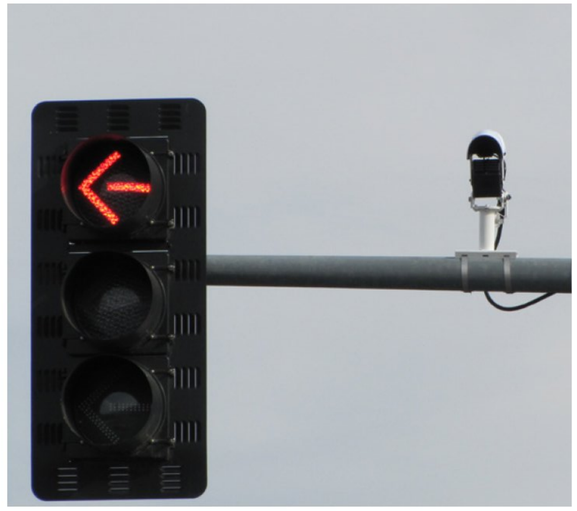
Easily assign detector outputs to interface with NEMA TS1/TS2, TEES Type 170/179 and 2070 ATC controllers. Simple mouse and keyboard operations backup your work, troubleshoot with the Operations Log, and modify your detection layout with other tools in the *Autoscope* Toolbox. Extensive Boolean Logic capabilities provide flexibility in detector layouts to help validate an event or incident alarm. Integrate traffic data quickly into proprietary software applications with the optional *Autoscope* Comserver Software Developer's Kit (SDK) or *Autoscope* Traffic Data Protocol.

Failsafe Operation

Autoscope Duo sensors provide electrical failsafe features. Under failed conditions, all associated detector outputs turn on, ensuring safe intersection operation. This electrical failsafe is the same operation as other equipment in the cabinet as required by all major industry specifications.

Benefits

- Superior detection accuracy
- Easy to install and configure
- Flexible design meets a variety of ITS detection and surveillance applications
- Exceptional value when compared to in-ground detection systems
- Reliable performance
- Low power consumption
- Minimal maintenance
- Native language GUI support
- Unprecedented high performance for above ground detection
- Cost-effective ITS solutions for traffic management



Duo Radar

The *Autoscope Duo* sensor includes a compact, easily-adjustable radar, designed to meet the performance requirements of the traffic intersection environment. The integrated decision logic process will use radar information in adverse conditions.

During setup, the radar is adjusted with the video camera. A convenient adjustment tool helps align the radar to meet the detection objectives. A variety of mounting brackets allow easy installation on existing poles, mast arms, or other structures. The unique bracket design speeds installation by minimizing loose parts and eliminating steps in the setup process.

Duo Camera

The *Autoscope Duo* sensor includes a compact, high-resolution color zoom camera, designed to meet the performance requirements of the traffic intersection environment. ClearVision™ aspects include a custom environmental aperture to produce consistently high-quality video.

During setup, the 10X zoom lens uses standard zoom control from the *Duo Interface Panel* in the cabinet. Focus is factory pre-set. A heated faceplate and adjustable weather shield helps minimize rain, snow, and ice on the faceplate, reducing glare and improving video contrast.

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By Ian Degutis at 1:07 pm, Dec 14, 2016

Autoscope Duo Detection Modules

The *Duo* Detection Module (DDM) is a detector card for a standard Detector Rack or Input File. It performs the decision logic process to combine radar and video information for optimal detector performance. The DDM converts standard NTSC analog video to streaming digital MPEG-4 video to view locally at the traffic cabinet or remotely from the office. The DDM input/output capabilities include detector port master capabilities. The DDM interfaces detector outputs directly to NEMA TS1/TS2, Type 170/179, or 2070 ATC controllers.

Duo Interface Panel

The *Duo* Interface Panel in the cabinet protects other cabinet equipment from outside surges and noise. Its multiple layers of protection include step-down transformer isolation and fuses. Terminal blocks connect up to four (4) *Duo* sensors. A pigtail cable assembly provides simple connection to the *Duo* sensor for power, radar, video, and zoom controls. These electronic devices comply with all applicable requirements of TEES, NEMA TS 2, and IEC60529 standards.

Zoom Control

The *Autoscope Duo* uses a RS-485 circuit to control the zoom of the lens from a handheld controller. Since aiming the camera is most often a one-time event, this simple zoom control helps keep the overall size of the camera small and compact. The installer can conveniently make adjustments with a handheld zoom controller from the bucket, base of pole, or cabinet.

Sensor Cable

The sensor pigtail cable is available in a wide variety of lengths for connection to branch cabling at the base of the pole or a homerun back to the cabinet. The easy-to-install connector helps keep the overall size of the sensor small and compact.

Autoscope Duo Sensor

- Power
  - *16 to 24 VDC, 8 W maximum*
  - *Consumption, current: 300 mA @24VDC, 8 Watts*
- Radar
  - *Max range (passenger car from typical mast arm mount location) 90 m (290 ft)**
  - *Total field of view: ±35° AZ; ±8° EL*
  - *Max transmit power (EIRP) 20 dBm*
  - *Frequency Band: 24.0—24.25 GHz*
  - *Bandwidth < 100 MHz*
- Environmental
  - *-40°C to +60°C (-40°F to +140°F)*
  - *Video and radar sensors sealed in waterproof and dust tight housing which meet NEMA 4 and IP67 standards*

- Video Sensor
  - *Lens: 10x zoom, 5° to 46° horizontal, 4° to 35° vertical*
  - *¼ in. color CCD, NTSC format*
  - *Resolution > 470 TVL horizontal*
  - *Sensitivity at lens, full video, no AGC, 3.0 Lux (typical)*
  - *S/N > 50 dB*
- Video Output
  - *NTSC Composite 75Ω 1 Vpp, BNC connector*
- Single Integrated Duo Sensor Cable
  - *3-wire Power*
  - *Coaxial cable: video transmission*
  - *Two-wire RS-485 (x2) for lens zoom control & for radar data, command, and control*
- Housing & Sunshield
  - *Lightweight, durable polycarbonate construction*
  - *Thermostatically controlled faceplate heater*
  - *Adjustable weather and sunshield with drip guard*
  - *Weatherproof rear connector*
  - *Standard camera bracket tilt-top provided*
- Overall Dimension & Weight
  - *H x W x L: 13 in x 5 in x 11 in (33cm x 12.7cm x 27.9cm)*
  - *4.5 lb (2.0 Kg)*
- Regulatory
  - *FCC Part 15, Class A*
  - *FCC Part 15.245, EN300440 compliant*

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Duo Detection Module

- Power
  - *12 to 24 VDC, 11W maximum*
  - *Consumption, current - @12VDC: 6W, 500mA/@24VDC: 7W, 290mA*
- Communications
  - *Ethernet 10/100 Base-T RJ45 connection for setup and operational use*
  - *Port 1 SDLC DB-15 connector for TS2 Serial Detector I/O communications with the controller*
  - *RS-485 bus on card edge for inter-processor Detector Port communications (master-slave)*
  - *USB connector for serial communications to the radar sensor via the interface panel*
- Environmental
  - *-34°C to +74°C (-29°F to +165°F)*
  - *0 to 95% relative humidity, non-condensing*
- Dimensions & Weight
  - *H x W x L: 4.5 in x 2.24 in x 7 in (114mm x 57mm x 178mm)*
  - *0.5 lb (0.2 Kg)*

Duo Interface Panel

- Power
  - *110/220 VAC 50/60 Hz (switch selectable)*
  - *Fuse protected*
- Environmental
  - *-34°C to +74°C (-29°F to +165°F)*
  - *0 to 95% relative humidity, non-condensing*
- Dimensions & Weight
  - *H x W x L: 4.5 in x 11.0 in x 7.5 in (114mm x 279mm x 190mm)*
  - *3.75 lb (1.7 Kg)*

Warranty

- Three-year warranty
- Extended warranty package to six years

Product Support

- Product support & training by a team of trained Autoscope Technical Support Specialists

Applications

- Signalized Intersection Control
  - Bicycle Detection
  - Adaptive, Traffic Responsive
  - Work-zone safety and temporary construction traffic control
- Traveler information systems & data collection
  - Sub-system of ATMS
  - Remote video surveillance
  - Comprehensive Traffic Data Collection

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1.0 General

This specification sets forth the minimum requirements for a detector rack-based hybrid remote-sensor detection system that provides vehicle presence, traffic flow statistics, event alarms, video snapshots, and full-motion video for traffic control and management systems. The hybrid detection system may also apply to various bicycle, pedestrian, and safety applications. Through intelligent decision logic, this system processes radar information and video images to provide detector outputs to a traffic controller or similar device and complies with the National Electrical Manufacturers Association (NEMA) type C or D detector rack and TEES Input File rack standards.

The system architecture will fully support Ethernet networking of system components through a variety of industry standard and commercially available infrastructures. The data communications shall support direct, modem, and multi-drop interconnects. Simple, standard Ethernet wiring shall minimize overall system cost and improve reliability, utilizing existing infrastructure for easy system installation and maintenance. Optionally, both streaming video and data communications shall be possible over long distances through fiber optic, microwave, or other commonly used digital communications transport configurations.

On the software application side of the network, the system will be integrated through a client-server relationship. The client applications will either be hosted on the same PC as the communications server or may be distributed over a local area network of PC's using the industry standard TCP/IP network protocol. Multiple client applications will execute simultaneously on the same host or multiple hosts, depending on the network configuration.

1.1 System Hardware

The hardware will consist of the following items:

Items to be provided by the system supplier:

a. One or more hybrid radar and image sensors
b. Corresponding number of rack-based MVP detection modules
c. A cabinet interface panel for 1 to 4 sensors with surge suppression and communications distribution
d. Interconnecting cables from the interface panel to the senor and detection module
e. Optional interface cards for traffic signal control applications.
f. Optional notebook or desktop computers to run system software (Supervisor computer).

Items may be provided by others:

a. Hardware installation.
b. Setup and commissioning

1.2 System Software

Each MVP detection module will include detection software for one sensor input for detecting approaching vehicles in multiple traffic lanes and for communicating with traffic controllers or other control devices. Detection zones and special detection instructions will be user-definable through interactive graphics, typically by placing lines or boxes onto an image on a monitor. A personal computer will allow configuration of all applications. The user may change previously defined detection zones. Each MVP will calculate traffic parameters in real-time, allow real-time polling for vehicle presence, traffic flow, event alarms, and video snapshots, and provide local non-volatile data storage for backup or later downloading and analysis.

A software suite will include management tools to plan, install, troubleshoot, and maintain the video detection system. The communications server function will allow multiple office users to share access to video detection installations. To create a custom interface to other TMC systems, an optional software developer's kit or traffic data protocol will provide tools and examples for a system programmer to integrate the video detection system.

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The software shall consist of:
The embedded software will incorporate multiple applications that perform a variety of diagnostic, installation, fault tolerant operations, data communications, digital video streaming, and vehicle/bicycle detection processing.

There will be a suite of client applications for the host client / server PC. The application will execute under Microsoft Windows XP, Vista or 7 operating systems. Available client applications will include:

- Master network browser: Learn a network of connected detection modules, display basic information, and launch applications software to perform operations.
- Configuration setup wizard and editors: Create and modify detector configurations for execution on the detection module.
- Front Panel displays and System Test utilities facilitate maintenance and troubleshooting.
- Operation log: Retrieve, display, and automatically save complete setup configurations and time-stamped event logs for maintenance and troubleshooting. The old log will configure a replacement unit. The user may add various detection alarms and user-defined events to the log.
- Software install: Quickly reconfigure one or more detection modules with a newer release of embedded system software.
- Streaming video player: Play and record streaming video with or without flashing detector overlay.
- Data Retriever: Fetch once or poll continuously for traffic data and alarms and store on PC storage media.
- Communications server as Windows service: Provide fault-tolerant, real-time TCP/IP communications to / from all devices and client applications with full logging capability for systems integration.
- Snapshot Retriever: Retrieve and store images for review or real-time display, such as on websites.
- An optional software developer's kit (SDK) or Traffic Data Protocol will provide necessary tools for software programmers to integrate the detection system into the larger, traffic management system.

1.3 Sensor Hardware

The hybrid sensor will be mountable on a wide variety of standard camera brackets. It contains a rugged, compact radar and 10x zoom lens color camera. The faceplate of the enclosure shall be glass and shall have a thermostatically controlled indium tin oxide (ITO) heater, directly connected to the faceplate to minimize power consumption, and to keep the faceplate clear in extreme weather conditions. The exterior of the lens shall have hydrophilic coating to reduce debris accumulation and maintenance of the lens, Nominal outside dimensions excluding connectors shall not exceed 13 in. x 5 in. x 11 in. The sensor weight shall not exceed 4.5 lb. (2.0 kg).

1.4 Interface Panel Hardware

The small footprint of the interface panel shall be cabinet rail, DIN rail, or computer rack mountable. The interface panel will support up to 4 sensors and detection modules. Typical dimensions are 11 in. x 7.5 in. but depend on the configuration ordered. Two SLO-BLO fuses and electrical surge protectors isolate the sensors from other cabinet equipment.

1.5 Detection Module Hardware

The detection module will be shelf or rack mountable. Nominal outside dimensions excluding connectors will not exceed 4,5 in. x 2.25 in. x 7 in. The detection module will be capable of mounting in a standard Detector Rack or Input File, or in an optional shelf-mounted enclosure. The module weight will not exceed 0.5 lb. (0.2 kg).

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The detection module will comply with the form factor and electrical characteristics of a TEES Input File or NEMA Detector Rack to provide up to sixteen (16) contact closure inputs and twenty-four (24) contact closure outputs, and up to thirty-two (32) inputs and sixty-four (64) outputs via SDLC protocol to a traffic signal controller.

1.6 Power Consumption

The detection system will support "green" strategic goals in its construction and by operating on 110/220 VAC, 50/60Hz at a maximum of 25 watts with the heated faceplate in full operation. A typical 4-sensor installation in an intersection cabinet will consume less than 100 watts. No supplemental surge suppression will be required outside the cabinet.

2.0 Functional Capabilities

The real-time, detection performance of the MVP detection module shall be optimized to meet the detection objective of the traffic application. The detection objective determines sensor mounting location; the number of traffic lanes to monitor; sizing, placement, and orientation of vehicle detectors; and how to minimize the effects of lane-changing maneuvers.

2.1 Real-Time Detectors

The detection module will be capable of simultaneously processing information from the forward-fire radar and video camera. The video will be digitized and analyzed up to 30 times per second. Intelligent decision logic monitors the current operating conditions and combines the radar video information continuously to meet the detection objectives.

Different detector types will be selectable during configuration. All of the following Detector Types will be supported: Stop Line, Count Detector, Presence Detector, Bicycle Detector, Speed Detector, Detector Function, Station, Input, Label, Scheduler, Speed Alarm, and Contrast Loss Detector.

The Stop Line Detector will indicate presence of a moving or stopped vehicle, performing moving vehicle validation and time-persistence validation during Red and compensating for vehicle occlusion effects, camera motion, and poor video contrast. It offers the choice of two behaviors during the Green of the phase. One behavior is similar to Presence detectors with a large detection area during Red and shrinking slightly during Green for better adjacent lane shadow rejection without affecting most timing strategies. The other behavior, with Snappy detection, automatically reduces its size during Green—so there is a larger detection area during Red for safety and a small detection area during Green for more efficient intersection operations, including gap out.

The Detector Function will combine multiple detector outputs together via OR, AND, NAND, NOR, and N of M logical functions to make a decision or qualify an event. In addition, the Detector Function will condition the detector outputs based on the state of the associated traffic signals. Similar to detector types in a traffic controller, all of the following detector output types will be available: Type 0, Type 1, Type 2, Type 3, Type 4, Type 5, Type 6, Type 7, Type 9 (Moving Vehicle Detector), and Type 10 (Contrast Loss Arbitration).

Detectors will accurately detect approaching, speeding, or stopped vehicles in multiple traffic lanes via processing of radar information and video images. Detection events will be available to a variety of parallel and serial outputs simultaneously that reflect the current real-time detector state. The detection module will detect an electrical malfunction, the absence of a valid video, and/or radar signal and choose the appropriate failsafe state, including turning all detector outputs on.

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Once the detection module has been properly set up using the supervisor computer, it will be possible to disconnect the supervisor computer. Thereafter, the detection module will perform vehicle detection as a standalone unit.

2.2 Interval Traffic Data

The detection module will count vehicles in real-time and compute the average of traffic parameters over user-defined time intervals (or time slices) or traffic phases, as follows: Volume, Occupancy, Vehicle Classification, Flow Rate, Headway, Speed, Level of Service, Space Occupancy, Space Speed, and Density.

The time-interval data will be retained in non-volatile flash memory within the detection module for later transfer to the supervisor computer for analysis. The detection module will record traffic data and alarms by event or by multiple time intervals from 1 to 3600 seconds (1 hour) or by intersection cycle split for display, retrieval, and analysis.
Retrieval of data stored in the memory of the detection module will be via a standard RJ45 Ethernet communications port using manufacturer provided software.

2.3 External Interface

It will be possible for the detection module to output the detection signal directly to NEMA TS1, TS2, Type 170, Type 179, 2070, SCATS, and SCOOT controllers. It will be possible to selectively disable and re-enable any or all of the detection outputs. The manufacturer of the detection module will have a communications server software package available to allow the polling of the detection modules for traffic data. This software will be available in the form of a developer's kit or traffic data protocol and supplied when indicated by the project specification. The communications software will be able to operate as a communications server under the Windows XP, Vista and 7 operating system platforms. The detection module will provide 24 open collector TS1 outputs on the front connector and 4 jumper selectable outputs on the rear edge connector. The detection module will provide 16 TS1 open collector inputs on the front connector. The detection module will also offer 64 outputs and 32 inputs via TS2 SDLC Port 1 connector also located on the front.

2.4 Detection Zone Placement

The video detection system will provide flexible detection zone placement at any orientation within the field of view of the sensor. Preferred detector configurations will be to place detection zones across lanes of traffic for optimal count accuracy and to place detection zones parallel to lanes of traffic for optimal presence detection accuracy of moving or stopped vehicles.

Detection zones will be able to be overlapped for optimal road coverage. In addition, selective groups of detectors will be logically combined into a single output and further modified by using optional delay and extend timing and signal state inputs, if available.

The video detection system will detect vehicle passage and presence optimally when the hybrid sensor is mounted to best meet the detection objectives at the site. Optimal detection will be achieved when sensor placement provides an unobstructed view of each traffic lane where vehicle detection is required. Obstruction of the view can occur when vehicles from a lane nearer to the sensor obscure the view of the roadway of a lane further away from the sensor.

2.5 Detection Zone Programming

Placement of detection zones will be by means of a PC with a Windows XP, Vista or 7 operating system, a keyboard, and a mouse. The PC monitor will be able to show the detection zones superimposed on images of traffic scenes.

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The user will create or change detection zones with a mouse on an image of the field-of-view. With the mouse or keyboard, it will be possible to size, orient, and configure detection zones to provide optimal road coverage for the detection objective. It will be possible to edit previously defined detector configurations, to adjust the detection zone size and placement, to add detectors for additional detection objectives, or to reprogram the detection module for different traffic applications, changes in installation site geometry, or traffic rerouting during construction projects.

It will be possible to download configurations from the PC to the detection module, to retrieve the detector configuration that is currently running, and to back up the complete detector configurations by saving them to the PC storage media.

2.6 Detection Zone Operation Verification

It will be possible to verify the real-time detection operation by observing the detectors on the video overlay as vehicles pass through them. When a vehicle is occupying a detection zone, the detection zone's color or intensity on the live video will reflect the state of the detection, thereby visually verifying the proper operation of the detection system. The video may be viewed on an analog video monitor or digitally on a PC.

It will be possible to view assigned contact-closure outputs from the Front Panel application or on the detection module LED output display as controlled by a rotary switch. An LED shall be ON when its assigned detector output or signal controller phase input is ON.

It will be possible to select a color scheme that indicates the state of the detection delay and extension timing.

The supervisor computer will be able to display the real-time vehicle speed, length, classification, and actuation record in milliseconds. It will also be able to display the statistical traffic data listed above for the last complete user specified time interval.

2.7 Providing Optimal Detection

The vehicle and bicycle detection system will provide optimal detection of passage and presence when the sensor is mounted 20 feet (6 m) or higher above the roadway detection area. The best sensor location is in front of the desired coverage area in line with a lane mark, and the distance to the farthest detection zone locations is not greater than 10 times the mounting height of the sensor. The recommended deployment geometry for optimal detection requires that there be an unobstructed view of each traveled lane where detection is required. The sensor, when placed at a mounting height that minimizes vehicle image occlusion and the zoom lens adjusted to match the width of the road, will be able to monitor a maximum of 6 to 8 traffic lanes simultaneously depending on the field of view. A designer's guide for intersection applications will be available from the manufacturer.

2.8 Demand Presence Detection Performance

Using an installed sensor that meets the optimal viewing specifications described above, the system will be able to accurately provide demand presence detection. The demand presence accuracy will be based on the ability to enable a protected turning movement on an intersection stop line, when a demand exists. The probability of not detecting a vehicle for demand presence will be less than 1% error under all operating conditions. In the presence of artifact conditions, the detection module will minimize extraneous (false) protected movement calls to less than 2%.

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To ensure statistical significance, the demand presence accuracy and error will be calculated over time intervals that contain a minimum of one hundred, protected turning movements. These performance specifications will be achieved with adequate detection coverage to sample the driver-behavior pattern of vehicles at the stop line. The calculation of the demand presence error will not include turning movements where vehicles do not pass through the detectors, or where they stop short or stop beyond the combined detection zones. Vehicle lane change anomalies will be excluded from the calculations.

2.9 Count and Speed Detection Performance

Count and speed measurements typically are closer to the sensor than the stop line and occur while the phase is in motion. The position of the detectors allows for greater vehicle separation and better data collection.

The detection module will accurately count multiple vehicles with more than 98% accuracy under all operating conditions for approaching traffic. The count measurement will include more than 100 vehicles in the sample to ensure statistical significance. These specifications will apply to vehicles that travel through the complete detector and shall not include partial detection situations created by lane-changing maneuvers.

The detection module will accurately measure average (arithmetic mean) speed of multiple vehicles with more than 98% accuracy under all operating conditions for approaching traffic. The average speed measurement will include more than 100 vehicles in the sample to ensure statistical significance. The detection module will accurately measure individual vehicle speeds with more than 98% accuracy under all operating conditions for vehicles approaching the sensor. These specifications will apply to vehicles that travel through the complete detector and will not include partial detection situations created by lane-changing maneuvers.

2.10 Video Processing

The sensor will include a compact, color, zoom camera, designed to meet the performance requirements of the traffic intersection environment. A custom aperture and sunshield will ensure consistent high-quality video is available in all weather, lighting, and traffic congestion conditions.

The color video output will provide graphics overlay that indicates the current real-time detector state. The detection module will process a maximum of ninety-nine (99) virtual detection objects placed anywhere in the field of view. An operator-defined Label, visible in the processed video, will be able to show an identifying location title of the camera field of view, various operational system parameters such as time of day, date, IP address, baud rate, processing load index, the state of any detector output, and the state of any detector input.

Snapshot images will be transferred using one of the following options: a. Uncompressed black and white bitmap, b. JPEG black and white image, c. Uncompressed color bitmap, d. JPEG color bitmap. The quality of snapshot images transferred will be user selectable.

It will be possible to stream video from the detection module. It will be possible to save the streamed video files to a network computer hard drive for replay. The compressed video stream will also contain the detector state information that can be overlaid on the video at the operator's request. A single workstation will be able to access and view the compressed digital video stream.

2.11 Radar Processing

The sensor will include rugged, easily adjusted radar, designed to meet the performance requirements of the traffic intersection environment. The intelligent decision logic will use radar information in adverse conditions, such as

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when nighttime headlight reflections occur, or when fog obscures the video. It will improve the crispness of detection outputs.

2.12 Environmental

The detection system will operate reliably in the adverse environment found in the typical traffic intersection and cabinet. It will meet the environmental requirements set forth by the NEMA (National Electrical Manufacturers Association) TS1 and TS2 standards, as well as the environmental requirements set forth in the TEES standard. In the cabinet, operating temperature will be from -34 C to +74 degrees C (-29 F to +165 F) at 0% to 95% relative humidity, non-condensing.

2.13 Electrical

The hybrid detection system will be powered by 110 or 220 VAC to the interface panel, typically from the protected side of the cabinet power distribution. The detection module will consume 11 watts at 12 or 24 VDC, typically from the protected side of the cabinet power distribution. The sensor will consume 8 watts at 24 VDC as provided by the interface panel.

The detection module will include transient protection sufficient to meet the requirements set forth in the NEMA TS1 and TS2 standards. The interface panel and sensor will have appropriate surge protection. No supplemental surge suppression will be required.

The manufacturer of the hybrid detection system will have a Quality System that is ISO9001 registered. Written confirmation of the ISO9001 registration will be available from the manufacturer prior to bid acceptance if requested.

Communications will be via RJ45 connector for Ethernet 10/100MB/s communications on the front of the detection module. This port will be able to download traffic data stored in non-volatile memory as well as the real-time detection information to show detector actuations. The detection module unit will also include one (1) USB 2.0 connector for RS-485/USB communications from the sensor through the interface panel.

The detection module will be equipped with one (1) NTSC composite video input. The detection module will be equipped with a single composite video output BNC connector on the front of the detection module. The detection module will output standard NTSC or PAL video format via BNC connector at 1 Vpp.

The detection module software will be stored in flash memory within the detection module. This software will be capable of being updated without the removal of modules or memory devices. The detection module software and the supervisor will include diagnostic software to allow testing of the detection module functions. This will include the capability to set and clear individual detector outputs and display the status of inputs to enable setup and troubleshooting in the field.

The video output of the sensor will be isolated from earth ground. All video connections from the sensor to the interface panel will also be isolated from earth ground. The video output stage of the image sensor will include transient protection to prevent damage to the sensor due to voltage transients occurring on the coaxial video cable leading from the sensor to the detection module.

2.14 Detection Module Operations Log

The detection module will maintain a non-volatile operations log, which minimally contains: revision numbers for the current detection module hardware and software components; title and comments for the detector

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configuration; date and time the last detector configuration was downloaded to the detection module; date and time the operations log was last cleared; date and time communications were opened or closed with the detection module; date and time of last power-up; and time-stamped, self-diagnosed, hardware and software errors that will aid in system maintenance and troubleshooting. The detection module processor will reboot itself automatically when software or hardware functions are not operating properly.

3.0 Supervisor Computer System

The minimum supervisor computer system, as needed for detector setup and viewing of vehicle detections, will consist of a computer and Windows-based interface software. With an optional USB device, it will be possible to view live video outputs on the PC screen.

4.0 Installation and Training

The supplier of the hybrid detection system may supervise the installation and testing of the detection system and computer equipment as required by the contracting agency.

Training is available to personnel of the contracting agency in the operation, set up, and maintenance of the detection system. Detection module and sensor support hardware and software are sophisticated leading-edge technology. Proper instruction from certified instructors is recommended to ensure the end user has complete competency in system operation. The User's Guide is not an adequate substitute for practical classroom training and formal certification by an approved agency.

5.0 Warranty, Maintenance and Support

For a minimum of three (3) years, the supplier will warrant the detection system. An option for additional warranty year(s) up to 6 years will be available. Ongoing software support by the supplier will include software updates of the detection module and sensor, cabinet interface unit, and supervisor computer applications. These updates will be provided free of charge during the warranty period. The supplier shall maintain a program for technical support and software updates following expiration of the warranty period. This program will be available to the contracting agency in the form of a separate agreement for continuing support.

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EAST COAST SIGNALS A... SUBMITTAL 12-14-16 MSF

APPROVED
By Ian Degutis at 1:09 pm, Dec 14, 2016

ECONOLITE

An ECONOLITE Group Company

Autoscope Duo™
Composite Cable, Water-block, Shielded & Jacketed
Branch Cable Specification

Construction Details:

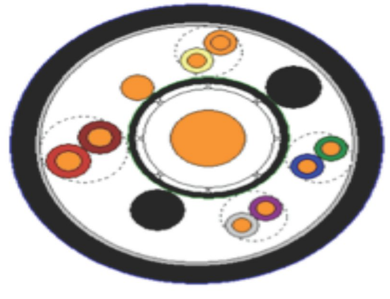
A. RG59 Type Coax – 20 AWG Solid Bare Copper, Dielectric – Foam
   Polyethylene 2 x Tin Copper Braids, Extruded PVC Jacket – Black
   Impedance – 75 OHM / Capacitance – 21.1 pF/ft
   O.D. 0.305" Nominal
B. 3 X 2 Pairs 22 AWG
   Conductor: 22 AWG 7/30 Tin Plated Copper
   Insulation: Extruded PVC - 0.019" Nominal Wall
   Colors: Orange & Yellow - Green & Blue - Violet & Gray
   Max Resistance: 18.5 OHMS.KFT @ 25ºC
   O.D 0.080" Nominal
C. 1 X 1 Pair 18 AWG
   Conductor: 18 AWG 7/26 Tin Plated Copper Alloy
   Insulation: Extruded PVC - 0.010" Nominal Wall
   Colors: Brown & Red
   Max Resistance: 7.19 Ohms.KFT @ 25ºC
   O.D. 0.145" Nominal
D. Drain - 22 AWG 7/30 Tin Copper
E. Filler – Added as Required To Keep The Cable Round
F. Cable – With RG 59 Double Shield As Core And 3 Pairs of 22 AWG
   And 1 Pair Of 18 AWG Around Coax Plus Drain Wire & Filler As Required
G. Water-block Tape Wrapped Around Entire Cable Bundle
H. Jacket Tube Extruded Polyethylene With UV Stabilizer – 0.040" Wall
   Nominal - Round
   O.D. 0.535" Nominal
I. Print: 225715 AUTOSCOPE DUO™ CABLE P/N 214-1003-001 COMPOSITE
   PE JKT (3090194) C (ETL) US AWM CLASS 1 GROUP A 80ºC 300V FV-1 /VM-1

Properties:

Temperature: -75ºC to 75ºC
Voltage: 300 RMS

Packaging:

To Be Supplied On Bulk Reels – 500ft Or 1000ft



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EAST COAST SIGNALS APPROVED FOR SUBMITTAL 12-14-16 MSF

Welcome

Welcome

Thank you for purchasing the *Autoscope*® *Duo*™ Detection System. This traffic detector will provide many years of reliable service for your comprehensive ITS detection needs. This QuickStart Guide summarizes the hardware and installation for *Duo* components.

General Description

The *Autoscope Duo* Sensor combines microwave radar with a normal zoom lens camera to form a new class of hybrid sensor for non-intrusive intersection detection applications. A *Duo* Interface Panel (ADUOIP) provides power, video, and radar interconnect for up to four *Duo* Sensors and *Duo* Detection Modules (ADDM).

The ADUOIP operates on 110/220VAC, 50/60Hz power from the protected power side of the traffic cabinet. This ADUOIP has four terminal blocks for four *Duo* Sensors. One ADDM for each *Duo* Sensor provides interface to the traffic controller or may be configured as a Detector Port Master for simpler wiring.

About the Sensor

Installation Overview

1. Mount bracket on mast arm with stainless steel banding
2. Mount *Duo* Sensor *(see reverse for more information)*
3. Pull cable from sensor to traffic cabinet
4. Wire cabinet *(ADUOIP and ADDM, see Figure 1)*
5. Place traffic safety cones *(for aiming camera - see AN2104)*
6. Level *Duo* Sensor with digital level
7. Aim sensor (zoom, sunshield, barrel rotation, swing, tilt) using Configuration Wizard as guide

Intersection Architecture

Figure 1

Duo & Accessories*

Product	Model Number	Description
	ADUO# **A700-1082-#**	*Autoscope Duo* Sensor
	AMBKTM##	Mounting Bracket (different styles)
	ADUOIP# **214-100#-50#x**	Interface Panel w/Coax & USB Jumpers
	ADUOCBL### **214-1001-5##**	*Duo* Sensor Drop Cable
	214-1003-00#	Branch Cabling
	ADDM **A700-1080**	*Duo* Detection Module
	---	Controller/Cabinet Interfaces

**Parts may be sold separately*

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Part Number: 214-0903-001 REV 00
Printed in the U.S.A.

ECONOLITE®

An Econolite Group Company

Anaheim, CA 92806 USA

www.econolite.com

QuickStart

Autoscope® Duo™

EAST COAST SIGNALS APPROVED FOR SUBMITTAL 12-14-16 MSF

Installation Details

***Autoscope Duo* Setup Diagram**

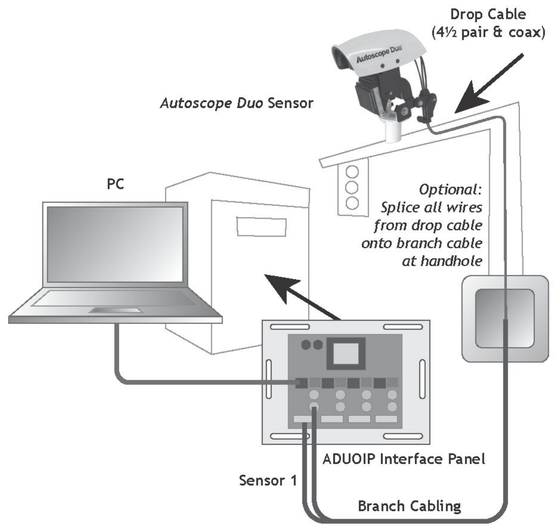

Figure 2

Autoscope Duo Installation Notes

1. Mount *Autoscope Duo* Sensor per manufacturer's recommendations.
2. Push the sunshield forward prior to the aiming process.
3. Install *Duo* Sensor drop cable and optional branch cabling to cabinet. *(Example wiring chart available in manual)*
4. With power off, install *Duo* Interface Panel (ADUOIP) and use tie wraps as connecting cable strain relief.
5. Connect heavy green ground wire from ADUOIP ground to the cabinet ground bus.
6. Connect power wires for ADUOIP to the cabinet protected power supply.
7. Dress *Duo* Sensor drop/branch cable to ADUOIP.
8. Install *Duo* Detection Modules (ADDM) in detector rack or shelf mount enclosures. Connect coax and USB jumper to ADUOIP.
9. Aim and zoom each *Duo* Sensor following the guidelines in Application Note AN2104, *Aiming Autoscope Image Sensors for Intersection Applications*.
10. Please refer to the *Autoscope Duo* Installation Guide with your *Autoscope* Software Suite for additional details. For further assistance, please contact your *Autoscope* representative or Econolite Technical Support at 800-225-6480 x4570, +1.714.630.3700 x4570, or Support@Econolite.com.

About the Interface Panel

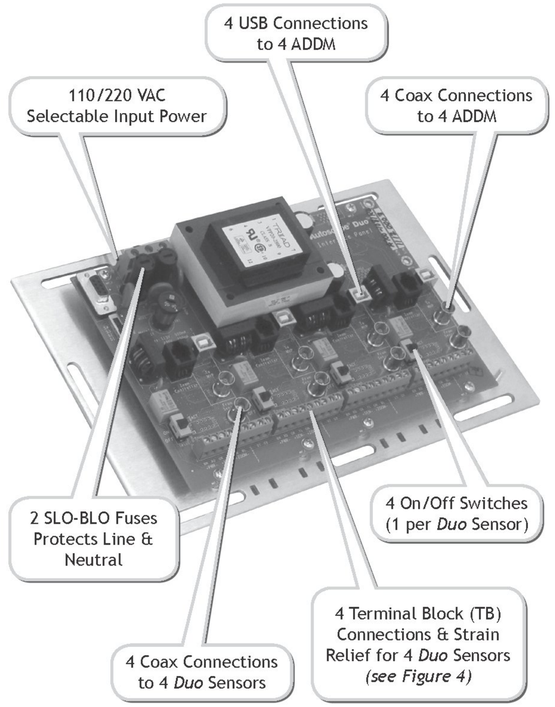

Figure 3

Duo Sensor TB Connections to the *Duo* Interface Panel

#	Wire Color	Connection Point	Function
1	Brown	BN	+ PWR
2	Red	RD	- PWR
3	Orange	OR	+ SEN
4	Yellow	YL	- SEN
5	Green	GN	+ ZOOM
6	Blue	BL	- ZOOM
7	Bare Wire	Safety	Safety
8	Violet	VT	---
9	Gray	GY	---

Figure 4

Required Tools

Item Photo	Name & Usage
	3/16" Allen Wrench *Used to adjust Duo sensor mounting bracket*
	9/16" Wrench *Used to adjust bolts on Duo sensor*
	1/4" Nut Driver *Used to adjust radar level bolts*
	P2 Philip's Head Screwdriver *Used to adjust Duo sensor sunshield*
	1/8" Flat Head Screwdriver *Used to terminate Duo sensor drop/branch cable to ADUOIP*
	Coax Crimp and Strip Tools *Used to properly dress coax cable at handhole and cabinet*
	Digital Level ADDL#1358-001 *Used to precisely level camera and tilt radar*
	Doppler Generator ADDL#1358-001 *For normalizing camera view with radar*
	Zoom Controller AISVZMCTRL#216-1006-501 *For adjusting camera zoom at cabinet*