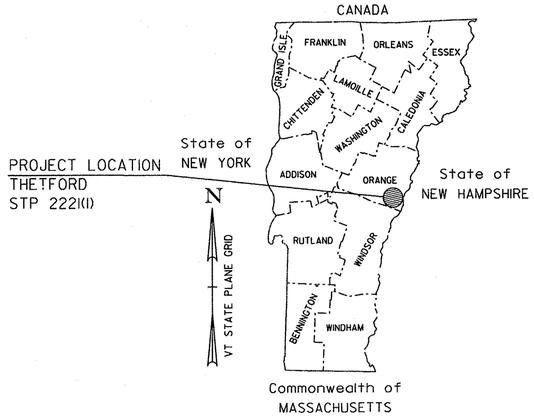
STATE OF VERMONT
AGENCY OF TRANSPORTATION



TRAFFIC DATA													
LOCATION	MILE MARKS	AADT		DHV		%T		%D		ADTT		ESALs	
		2014	2024	2014	2024	2014	2024	2014	2024	2014	2024	2014-2024	2014-2034
VT 113-SEGMENT 1													
BEGIN PROJECT TO TUCKER HILL RD	0.79-4.76	2000	2100	330	340	5.8	7.4	74	74	120	150	190,000	446,000
VT 113-SEGMENT 2													
TUCKER HILL RD TO ACADEMY RD	4.76-6.24	3400	3500	490	500	3.2	4.0	68	68	180	230	333,000	758,000
ACADEMY RD TO I-91 SB RAMPS	6.24-6.96	2900	3000	430	440	1.6	2.0	65	65	140	190	362,000	899,000
I-91 SB RAMPS TO I-91 NB RAMPS	6.96-7.13	2700	2800	410	420	1.1	1.4	77	77	160	210	403,000	1,001,000
I-91 NB RAMPS TO US 5	7.13-8.49	2600	2700	400	410	2.7	3.4	61	61	180	240	464,000	1,152,000
US 5 TO END PROJECT (NH BORDER)	8.49-8.74	2100	2200	340	350	5.8	7.2	57	57	120	160	251,000	577,000

POSTED SPEED : 30, 40, 45 AND 50 MPH
DESIGN SPEED : EQUAL TO POSTED SPEED

PROPOSED IMPROVEMENT
TOWN OF THETFORD
COUNTY OF ORANGE
VT ROUTE 113 (MAJOR COLLECTOR)

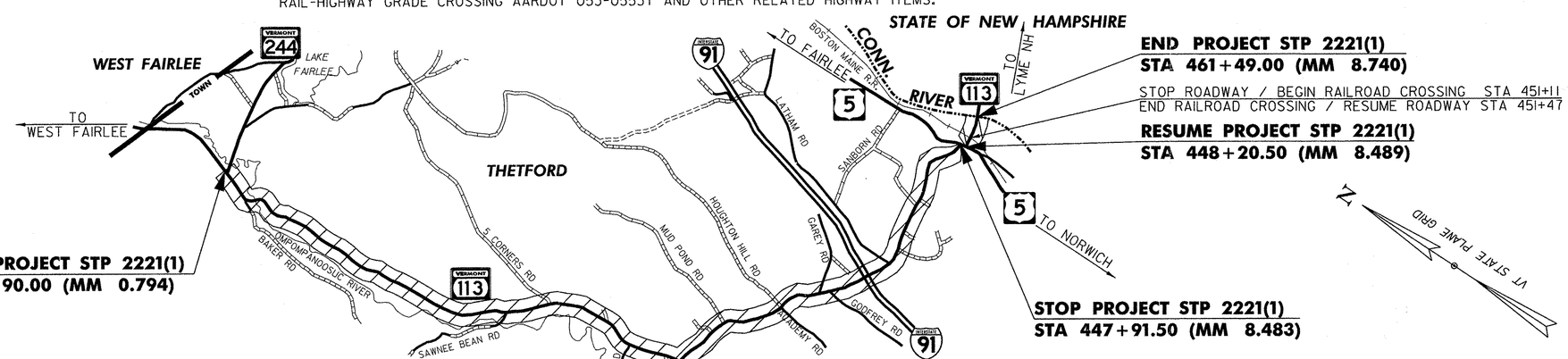
BEGINNING WEST OF THE INTERSECTION OF VT ROUTE 113 AND VT ROUTE 244 IN THETFORD AT STATION 41+90.00 (MM 0.794) AND EXTENDING EASTERLY ALONG VT ROUTE 113 A DISTANCE OF 40,601.50 FEET (7.690 MILES) TO THE NORTHERN INTERSECTION OF US ROUTE 5 AND VT ROUTE 113 STOPPING AT STATION 447+91.50 (MM 8.483). THE PROJECT RESUMES APPROXIMATELY 275.00 FT (0.052 MILES) SOUTH ON US ROUTE 5 AT THE INTERSECTION OF US ROUTE 5 AND VT ROUTE 113 AT STATION 448+20.50 (MM 8.489) AND EXTENDING EASTERLY ALONG VT ROUTE 113 A DISTANCE OF 1328.50 FT (0.252 MILES) TO STATION 461+49.00 (MM 8.740).

THETFORD	STA 41+90.00 (MM 0.794)	~ STA 447+91.50 (MM 8.483)	=	40,601.50 FEET (7.690 MILES)
	STA 448+20.50 (MM 8.489)	~ STA 451+11.00 (MM 8.544)	=	290.50 FEET (0.055 MILES)
	STA 451+47.00 (MM 8.551)	~ STA 461+49.00 (MM 8.740)	=	1,002.00 FEET (0.190 MILES)
RAILROAD CROSSING	STA 451+11.00 (MM 8.544)	~ STA 451+47.00 (MM 8.551)	=	36.00 FEET (0.007 MILES)
RAILROAD CONSTRUCTION	STA 747+40.20	~ STA 748+61.86	=	121.66 FEET (0.023 MILES)

LENGTH OF ROADWAY = 41,894.00 FEET (7.934 MILES)
LENGTH OF RAILROAD CROSSING = 36.00 FEET (0.007 MILES)
LENGTH OF RAILROAD = 121.66 FEET (0.023 MILES)
LENGTH OF PROJECT = 41,930.00 FEET (7.941 MILES)

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANING, RECLAIMING AND PAVING OF THE EXISTING HIGHWAY, NEW PAVEMENT MARKINGS, GUARDRAIL, SIGNS, RAIL-HIGHWAY GRADE CROSSING AARDOT 053-0553T AND OTHER RELATED HIGHWAY ITEMS.

SUPERPAVE BITUMINOUS CONCRETE PAVEMENT MIXTURE DESIGN CRITERIA		
	SEGMENT 1	SEGMENT 2
DESIGN LANE/DESIGN LIFE ESAL	330,040	770,770
DESIGN NUMBER OF GYRATIONS	65	65
PERFORMANCE GRADED ASPHALT BINDER	SEE SUBSECTION 490.03(b)	



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

QUALITY ASSURANCE PROGRAM : LEVEL

SURVEYED BY : VAOT - R. GILMAN 3
SURVEYED DATE : 06-15-2012

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83

STATE OF VERMONT JOHN H. REID NO. 5649 REGISTERED PROFESSIONAL ENGINEER

TranSystems
SHEETS 44 TO 56

STATE OF VERMONT CHRISTOPHER R. BEAM No. 8529 REGISTERED PROFESSIONAL ENGINEER

CONSULTING ENGINEERS
SHEETS 1 TO 43 AND SHEETS 57 TO 303

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE 9/8/2015
PROJECT MANAGER : MICHAEL J. FOWLER, P.E.

PROJECT NAME : THETFORD
PROJECT NUMBER : STP 2221(1)

SHEET 1 OF 303 SHEETS

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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INDEX OF VAOT STANDARDS

STD	DATE	DESCRIPTION
A-76	3/3/2003	STANDARDS FOR TOWN & DEVELOPMENT ROADS
B-71	7/8/2005	STANDARDS FOR RESIDENTIAL AND COMMERCIAL DRIVES
C-3A	3/10/2008	SIDEWALK RAMPS
C-3B	3/10/2008	SIDEWALK RAMPS AND MEDIAN ISLANDS
C-10	2/11/2008	CURBING
D-3	6/1/1994	TREATED GUTTERS
D-15	6/1/1994	PRECAST REINFORCED CONCRETE CATCH BASIN W/CAST IRON GRATE, PRECAST REINFORCED CONCRETE MANHOLE W/ CAST IRON COVER, CAST IRON GRATE WITH FRAME, TYPE D, CAST IRON GRATE WITH FRAME, TYPE E
D-30	8/13/2007	UNDERDRAIN CONSTRUCTION DETAILS
D-33	3/12/2007	REINFORCED CONCRETE STRAIGHT HEADWALL
E-121	8/8/1995	STANDARD SIGN PLACEMENT CONVENTIONAL ROAD
E-123	3/16/2004	GUIDE SIGN PLACEMENT MISCELLANEOUS DETAILS
E-127	8/8/1995	ROUTE MARKINGS AT RURAL INTERSECTIONS
E-131	8/8/1995	GUIDE SIGN DETAILS
E-132	8/18/1995	GENERAL MOTORIST SERVICE SIGN DETAILS
E-136B	8/8/1995	STATE ROUTE MARKER SIGN DETAILS
E-136C	8/8/1995	STATE NUMBERED TOWN HIGHWAY SIGN DETAILS
E-141	9/20/1995	REGULATORY SIGN DETAILS
E-145A	12/23/1994	REGULATORY SIGN DETAILS - LANE USE CONTROL SIGNS TWO AND FOUR LANE APPROACHES
E-153	5/1/2004	WARNING SIGN DETAILS
E-154	5/1/2004	WARNING SIGN DETAILS
E-155	5/1/2004	WARNING SIGN DETAILS
E-163	5/20/1999	TUBULAR STEEL SIGN POST
E-190	6/30/2003	RAILROAD CROSSING SIGNS AND PAVEMENT MARKINGS
E-192	10/12/2000	PAVEMENT MARKING DETAILS
E-193	8/18/1995	PAVEMENT MARKING DETAILS
G-1	2/10/2014	STEEL BEAM GUARDRAIL WITH STEEL POSTS, STEEL BEAM GUARDRAIL WITH WOOD POSTS
G-1d	2/10/2014	STEEL BEAM GUARDRAIL APPROACH END TERMINAL, STEEL BEAM GUARDRAIL TRAILING END TERMINAL, ANCHOR FOR STEEL BEAM GUARDRAIL, STEEL BEAM MEDIAN BARRIER
J-3	8/7/1995	MAILBOX SUPPORT DETAIL (SINGLE AND MULTIPLE SUPPORT)
T-1	8/6/2012	TRAFFIC CONTROL GENERAL NOTES
T-10	8/6/2012	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING
T-17	8/6/2012	TRAFFIC CONTROL MISCELLANEOUS DETAILS
T-24	8/6/2012	TRAFFIC CONTROL FOR MAINTENANCE PAVEMENT MARKING OPERATION
T-28	8/6/2012	CONSTRUCTION SIGN DETAILS
T-30	8/6/2012	CONSTRUCTION SIGN DETAILS
T-35	8/6/2012	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS
T-36	8/6/2012	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING
T-40	1/2/2013	DELINEATORS AND MILEPOSTS
T-42	4/9/2014	BRIDGE NUMBER PLAQUE
T-44	4/9/2014	MILEMARKER DETAILS STATE AND TOWN HIGHWAYS
T-45	1/2/2013	SQUARE TUBE SIGN POST AND ANCHOR

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2	INDEX OF SHEETS
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14	PROJECT NOTES
15	MATERIAL TRANSITION DIAGRAM
16-21	TYPICAL SECTIONS SHEETS 1-6
22-24	DETAIL SHEETS 1-3
25	HEADWALL DETAIL SHEET
26	PAVEMENT MARKING DETAILS SHEET
27	RUMBLE STRIP DETAIL SHEET
28-31	QUANTITY SHEETS 1-4
32-34	ITEM DETAIL SHEETS 1-3
35	DRAINAGE DETAIL SHEET
36	UNDERDRAIN DETAIL SHEET
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44	GRADE CROSSING NOTES
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46	TRACK PROFILE
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49-56	RAILROAD SIGNAL PLANS 1-8
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300	TRAFFIC CONTROL PLAN
301-303	REGIONAL DETOUR PLANS 1-3
SD-516.10	STRUCTURES DETAIL BRIDGE JOINT ASPHALTIC PLUG 05-07-2010

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
INDEX OF SHEETS

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 2 OF 303

CLD 12-0337

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.

SIGNS

N	NEW SIGN
RET	RETAIN SIGN
S	SALVAGE SIGN
R	REMOVE SIGN OR POST
R&S	REMOVE AND SALVAGE

PAVEMENT MARKINGS

YL	YELLOW LINE
WL	WHITE LINE

DRAINAGE SYMBOLOGY

DRAINAGE

OTDI	OPEN THROAT DRAINAGE INLET

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

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

COMMON TOPOGRAPHIC POINT SYMBOLS

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

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

PROPOSED GEOMETRY CODES

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

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

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

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

CZ	CLEAR ZONE
	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

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

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

TOWN LINE	TOWN BOUNDARY LINE
COUNTY LINE	COUNTY BOUNDARY LINE
STATE LINE	STATE BOUNDARY LINE
	PROPOSED STATE R.O.W. (LIMITED ACCESS)
	PROPOSED STATE R.O.W.
	STATE ROW (LIMITED ACCESS)
	STATE ROW
	TOWN ROW
	PERMANENT EASEMENT LINE (P)
	TEMPORARY EASEMENT LINE (T)
	SURVEY LINE
P/L P/L	PROPERTY LINE (P/L)
SR SR SR	SLOPE RIGHTS
6f 6f	6F PROPERTY BOUNDARY
4f 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
T&E	THREATENED & ENDANGERED SPECIES
HAZ HAZ	HAZARDOUS WASTE AREA
AG	AGRICULTURAL LAND
HABITAT	FISH & WILDLIFE HABITAT
FLOOD PLAIN	FLOOD PLAIN
OHW	ORDINARY HIGH WATER (OHW)
	STORM WATER
	USDA FOREST SERVICE LANDS
	WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

ARCH	ARCHEOLOGICAL BOUNDARY
HISTORIC DIST	HISTORIC DISTRICT BOUNDARY
HISTORIC	HISTORIC AREA
H	HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

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

PROJECT NAME:	THETFORD
PROJECT NUMBER:	STP 2221(1)

FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CONVENTIONAL SYMBOLOGY LEGEND SHEET	SHEET 3 OF 303

CLD 12-0337

GPS CONTROL POINTS

HVCTRL #1

POINT #40 (FROM 10C224)

NORTH = 507237.016
EAST = 1704130.704
ELEV. = 731.471

HVCTRL #1 IS SURVEY POINT #40 FROM VTRANS PROJECT STP 2921(1), BETHEL-RANDOLPH 10C224, HVCTRL IS IRON PIPE WITH RED CAP - NO FURTHER DESCRIPTION.

HVCTRL #2

POINT #41 (FROM 10C224)

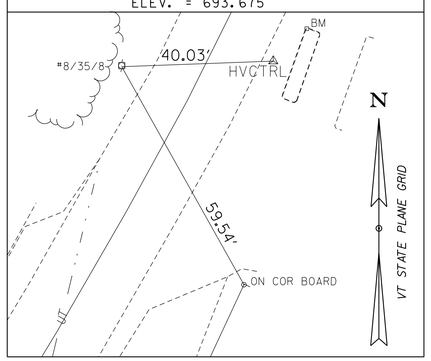
NORTH = 505255.459
EAST = 1704778.614
ELEV. = 691.789

HVCTRL #2 IS SURVEY POINT #41 FROM VTRANS PROJECT STP 2921(1), BETHEL-RANDOLPH 10C224, HVCTRL IS IRON PIPE WITH RED CAP - NO FURTHER DESCRIPTION.

TRAVERSE TIES

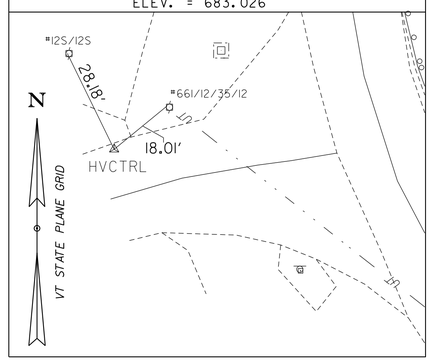
HVCTRL #3

NORTH = 504328.613
EAST = 1703268.12
ELEV. = 693.675



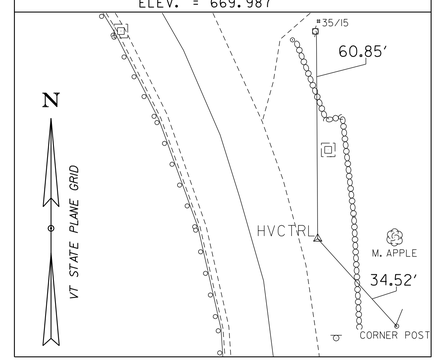
HVCTRL #4

NORTH = 503800.262
EAST = 1702975.562
ELEV. = 683.026



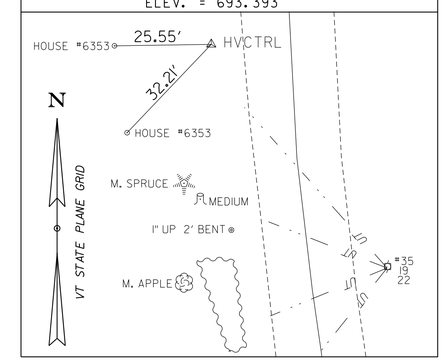
HVCTRL #5

NORTH = 503277.304
EAST = 1703497.903
ELEV. = 669.987



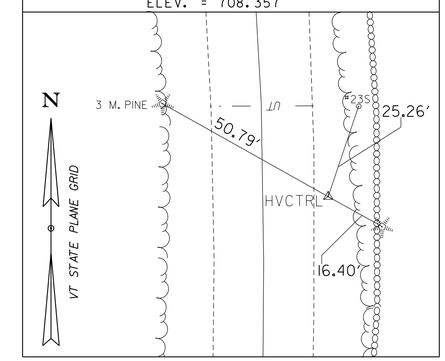
HVCTRL #6

NORTH = 502466.988
EAST = 1703287.020
ELEV. = 693.393



HVCTRL #7

NORTH = 501315.333
EAST = 1703557.093
ELEV. = 708.357



ALIGNMENT TIES

NORTH =	NORTH =	NORTH =	NORTH =	NORTH =
EAST =	EAST =	EAST =	EAST =	EAST =
ELEV. =	ELEV. =	ELEV. =	ELEV. =	ELEV. =

DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: X99C194T1.DGN	PLOT DATE: 9/4/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: S. DONOVAN
DESIGNED BY: VTRANS	CHECKED BY: P. BEYOR
TIE SHEET #1	SHEET 4 OF 303

CLD 12-0337

GPS CONTROL POINTS

HVCTRL #90

THETFORD

NORTH = 485974.576
EAST = 1706229.437
ELEV. = 610.980

GENERAL LOACTION, THETFORD, VT
TO REACH FROM THE VT ROUTE 113 BRIDGE OVER I-91 AT EXIT 14 GO NORTHWEST ALONG VT 113 FOR 2.3 MI (3.7 KM) TO THE INTERSECTION OF TUCKER HILL ROAD LEFT IN THETFORD CENTER. TURN LEFT AND GO WEST ALONG TUCKER HILL ROAD FOR 0.15 MI (0.24 KM) TO THE INTERSECTION OF A GRAVEL DRIVE LEFT LEADING TO HOUSE NO 139 AND THE SITE OF THE MARK ON THE LEFT IN A LAWN IN FRONT OF A CEMETERY. THE MARK IS SET 7 CM BELOW GROUND SURFACE IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT POURED 1.5 M (4.9 FT) DEEP. THE MARK IS 5.3 M (17.4 FT) SOUTH OF AND ABOUT 0.1M (0.3 FT) LOWER THAN THE CENTERLINE OF TUCKER HILL ROAD, 4.8 M (15.7 FT) WEST OF THE CENTERLINE OF THE GRAVEL DRIVE, 9.6 M (31.5 FT) NORTH OF THE NORTHWEST CORNER OF THE ATTACHED BARN ON HOUSE 139, AND 10.2 M (33.5 FT) NORTHEAST OF THE MOST EASTERLY GATEPOST OF THE GATE FOR THE CEMETERY

HVCTRL #91

THETFORD AZ MK

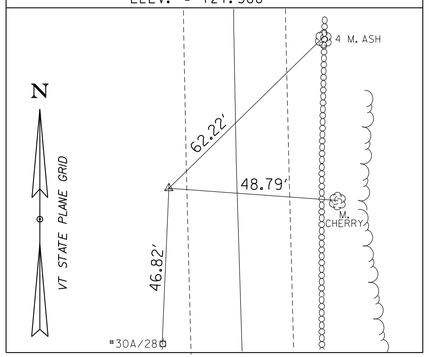
NORTH = 487988.878
EAST = 1707352.612
ELEV. = 601.060

GENERAL LOACTION, THETFORD, VT. OWNERSHIP, DIVID POLLI, HALE FUNERAL HOME, PO BOX 377, BRADFORD, VT 05033. TO REACH FROM THE VT ROUTE 113 BRIDGE OVER I-91 AT EXIT 14 GO NORTHWEST ALONG VT 113 FOR 2.3 MI (3.7 KM) TO THE INTERSECTION OF TUCKER HILL ROAD LEFT IN THETFORD CENTER. CONTINUE STRAIGHT AHEAD AND GO NORTH ALONG VT ROUTE 113 FOR 0.4 MI (0.6 KM) TO THE INTERSECTION OF A GRAVEL DRIVE RIGHT LEADING TO THE HALE FUNERAL HOME OF THETFORD. TURN RIGHT AND GO SOUTHEAST UP THE DRIVE FOR ABOUT 50 M (164.0 FT) TO THE FUNERAL HOME AND THE SITE OF THE MARK IN A LAWN SOUTHEAST OF THE FUNERAL HOME. THE MARK IS SET 5 CM BELOW GROUND SURFACE IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT POURED 1.5 M (4.9 FT) DEEP. THE MARK IS 58.6 M (192.3 FT) EAST OF AND ABOUT 10.0 (32.8 FT) HIGHER THAN THE CENTERLINE OF VT ROUTE 113, 40.6 M (133.2 FT) SOUTHEAST OF THE SOUTHEAST CORNER OF THE FUNERAL HOME, 45.2 M (148.3 FT) EAST OF POLE NO 106/10, AND 18.1M (59.4 FT) WEST NORTHWEST OF A 15 CM APPLE.

TRAVERSE TIES

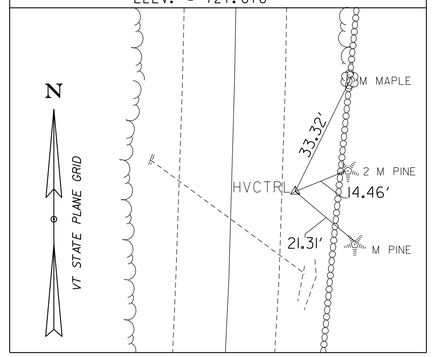
HVCTRL #8

NORTH = 499828.198
EAST = 1703434.951
ELEV. = 721.388



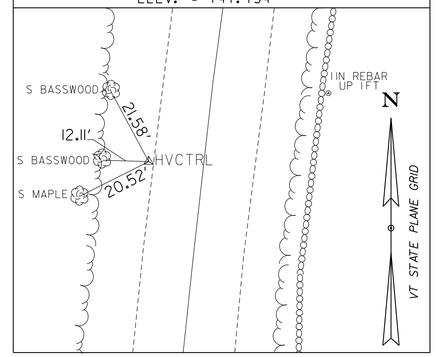
HVCTRL #9

NORTH = 498964.106
EAST = 1703524.051
ELEV. = 727.076



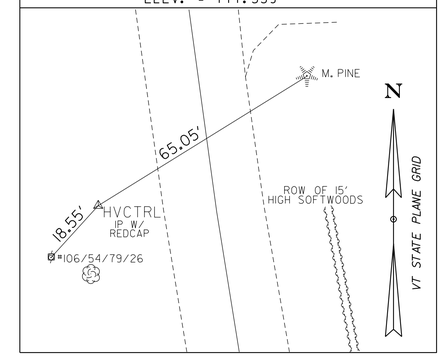
HVCTRL #10

NORTH = 498387.835
EAST = 1703434.28
ELEV. = 741.154



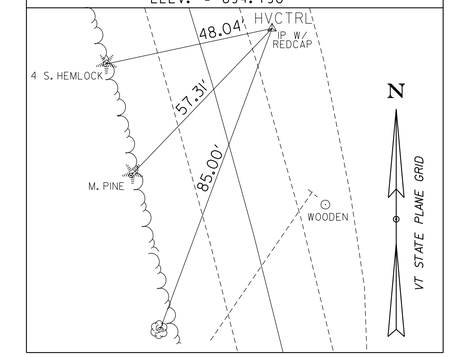
HVCTRL #11

NORTH = 496997.973
EAST = 1703402.617
ELEV. = 711.539



HVCTRL #12

NORTH = 496235.022
EAST = 1703687.609
ELEV. = 694.190



ALIGNMENT TIES

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: X99C194T1.DGN	PLOT DATE: 9/4/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: S. DONOVAN
DESIGNED BY: VTRANS	CHECKED BY: P. BEYOR
TIE SHEET #2	SHEET 5 OF 303

CLD 12-0337

GPS CONTROL POINTS

HVCTRL #92

191 EXIT 14

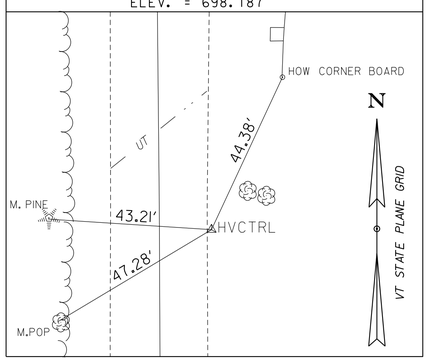
NORTH = 478812.653
EAST = 1715609.584
ELEV. = 682.070

GENERAL LOCATION, THETFORD, VT.
IT IS SET 2 CM BELOW GROUND SURFACE IN THE TOP OF A 0.9 M X 0.3 M ROCK OUTCROP. IT IS 31.7 M SE OF AND ABOUT 4.0 M HIGHER THAN THE I-91 NORTHBOUND SE EDGE OF PAVEMENT, ABOUT 111.0 M NE OF THE VT RTE 113 NE EDGE OF PAVEMENT, 35.7 M EAST BY NORTH EAST OF THE EAST CORNER OF A 1.8 M SQUARE CONCRETE FOOTING FOR A ROAD WEATHER INFORMATION SYSTEM STATION, 14.4 M NORTH BY NORTH WEST OF A DRILL HOLE CONTAINING THE SHANK FOR DESTROYED STATION THETFORD 191, 73.2 M NNE OF POLE NO 214, AND 28.5 M NE OF A FWP IN A BUSH.

TRAVERSE TIES

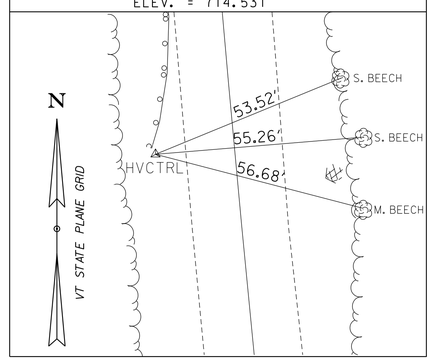
HVCTRL #13

NORTH = 495002.166
EAST = 1703793.332
ELEV. = 698.187



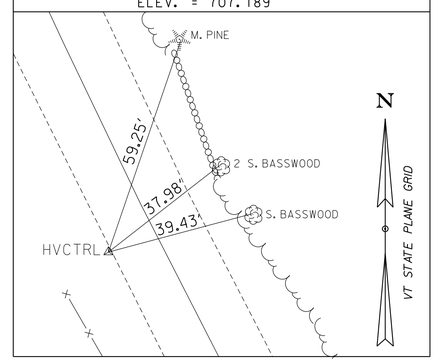
HVCTRL #14

NORTH = 493891.242
EAST = 1703804.847
ELEV. = 714.531



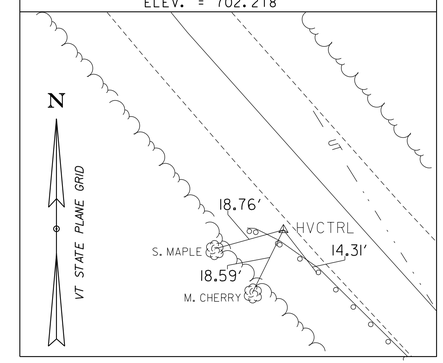
HVCTRL #15

NORTH = 493407.988
EAST = 1703945.369
ELEV. = 707.189



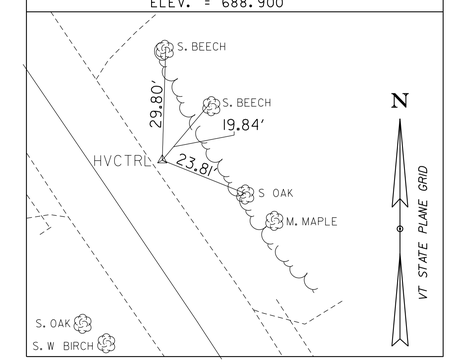
HVCTRL #16

NORTH = 492800.006
EAST = 1704298.397
ELEV. = 702.218



HVCTRL #17

NORTH = 492273.785
EAST = 1704786.015
ELEV. = 688.900



ALIGNMENT TIES

NORTH =	NORTH =	NORTH =	NORTH =	NORTH =
EAST =	EAST =	EAST =	EAST =	EAST =
ELEV. =	ELEV. =	ELEV. =	ELEV. =	ELEV. =

DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: X99C194T1.DGN	PLOT DATE: 9/4/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: S. DONOVAN
DESIGNED BY: VTRANS	CHECKED BY: P. BEYOR
TIE SHEET #3	SHEET 6 OF 303

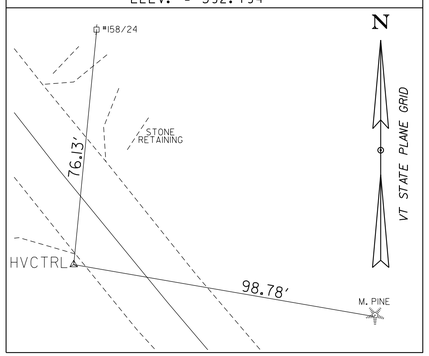
CLD 12-0337

GPS CONTROL POINTS

TRAVERSE TIES

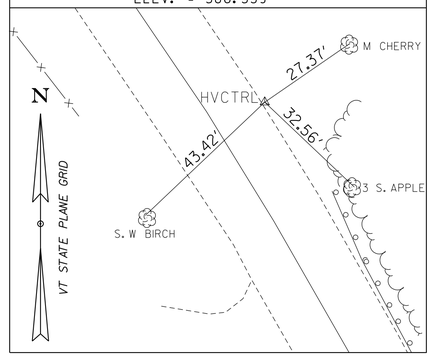
HVCTRL #18

NORTH =	490655.870
EAST =	1705829.160
ELEV. =	592.194



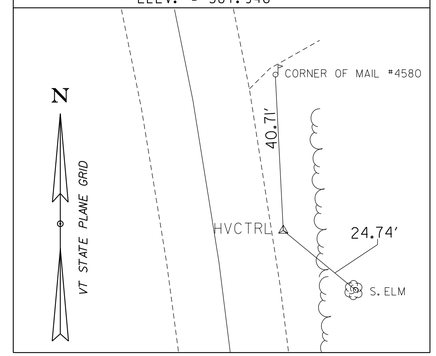
HVCTRL #19

NORTH =	489749.522
EAST =	1706742.257
ELEV. =	586.539



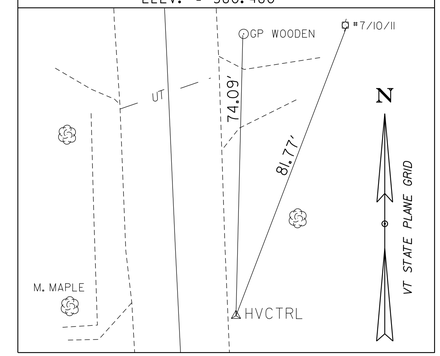
HVCTRL #20

NORTH =	488749.631
EAST =	1707134.113
ELEV. =	581.946



HVCTRL #21

NORTH =	488166.501
EAST =	1707167.834
ELEV. =	580.480



HVCTRL #22

NORTH =	487988.878
EAST =	1707352.612
ELEV. =	601.060

NOT TIED

ALIGNMENT TIES

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME:	X99C194T1.DGN	PLOT DATE:	9/4/2015
PROJECT LEADER:	M. FOWLER	DRAWN BY:	S. DONOVAN
DESIGNED BY:	VTRANS	CHECKED BY:	P. BEYOR
TIE SHEET #4		SHEET	7 OF 303

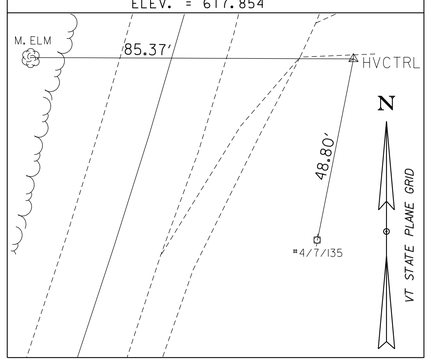
CLD 12-0337

GPS CONTROL POINTS

TRAVERSE TIES

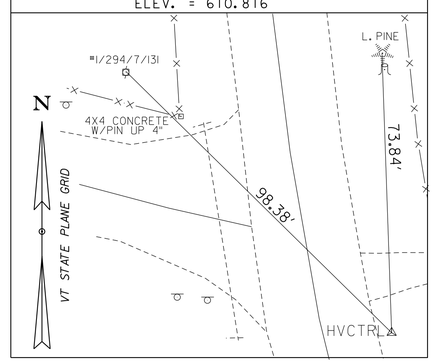
HVCTRL #23

NORTH = 486863.739
EAST = 1707161.665
ELEV. = 617.854



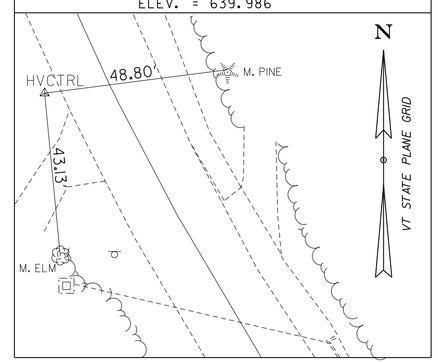
HVCTRL #24

NORTH = 485998.763
EAST = 1706927.287
ELEV. = 610.816



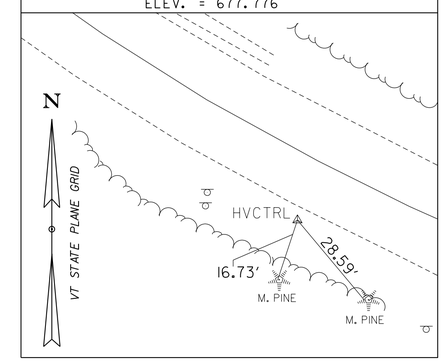
HVCTRL #25

NORTH = 484100.949
EAST = 1707494.929
ELEV. = 639.986



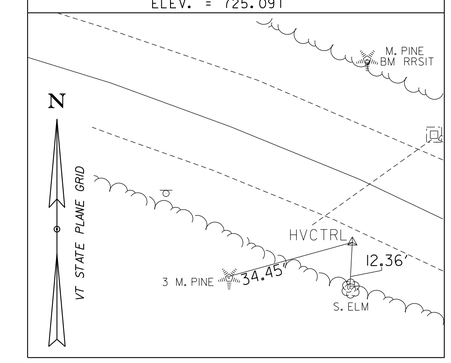
HVCTRL #26

NORTH = 483771.590
EAST = 1707807.95
ELEV. = 677.776



HVCTRL #27

NORTH = 483605.213
EAST = 1708359.104
ELEV. = 725.091



ALIGNMENT TIES

NORTH =	NORTH =	NORTH =	NORTH =	NORTH =
EAST =	EAST =	EAST =	EAST =	EAST =
ELEV. =	ELEV. =	ELEV. =	ELEV. =	ELEV. =

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: X99C194T1.DGN	PLOT DATE: 9/4/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: S. DONOVAN
DESIGNED BY: VTRANS	CHECKED BY: P. BEYOR
TIE SHEET #5	SHEET 8 OF 303

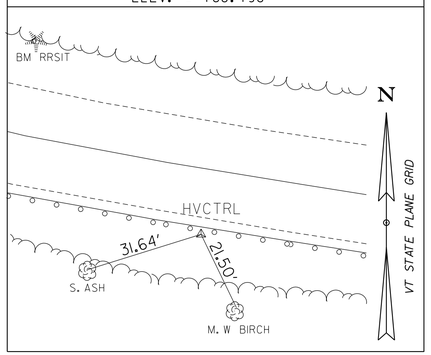
CLD 12-0337

GPS CONTROL POINTS

TRAVERSE TIES

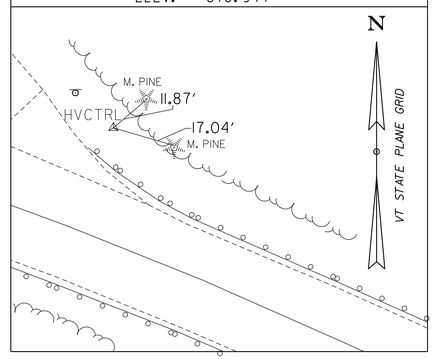
HVCTRL #28

NORTH = 483357.821
EAST = 1708861.10
ELEV. = 768.198



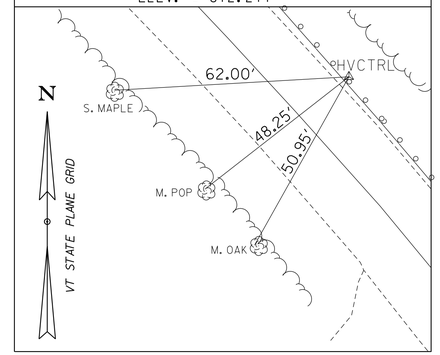
HVCTRL #29

NORTH = 483256.385
EAST = 1709592.137
ELEV. = 818.944



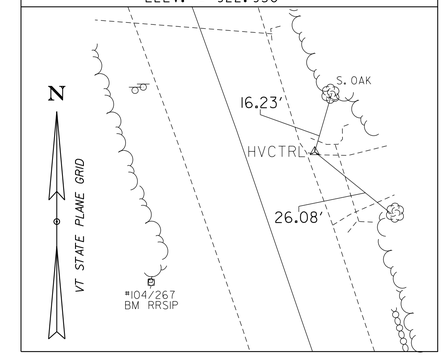
HVCTRL #30

NORTH = 482820.379
EAST = 1710202.564
ELEV. = 872.211



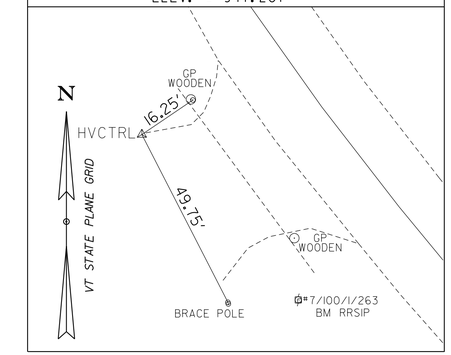
HVCTRL #31

NORTH = 482189.827
EAST = 1710561.472
ELEV. = 922.950



HVCTRL #32

NORTH = 481600.000
EAST = 1710742.628
ELEV. = 941.207



ALIGNMENT TIES

NORTH =	NORTH =	NORTH =	NORTH =	NORTH =
EAST =	EAST =	EAST =	EAST =	EAST =
ELEV. =	ELEV. =	ELEV. =	ELEV. =	ELEV. =

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: X99C194TI.DGN	PLOT DATE: 9/4/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: S. DONOVAN
DESIGNED BY: VTRANS	CHECKED BY: P. BEYOR
TIE SHEET #6	SHEET 9 OF 303

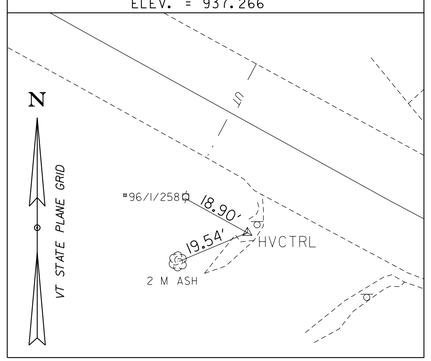
CLD 12-0337

GPS CONTROL POINTS

TRAVERSE TIES

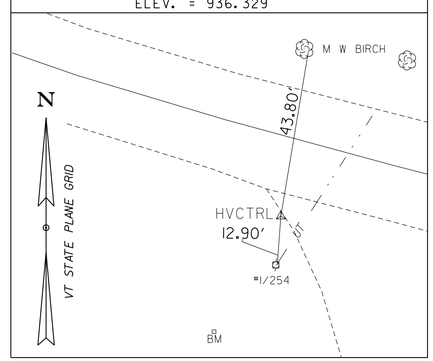
HVCTRL #33

NORTH =	481140.675
EAST =	1711352.854
ELEV. =	937.266



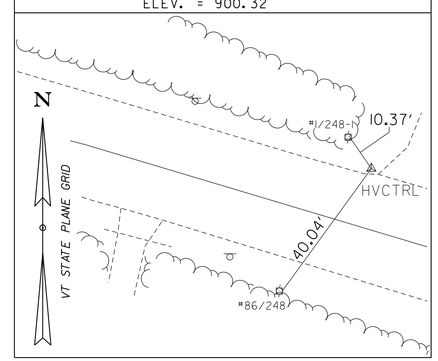
HVCTRL #34

NORTH =	480868.238
EAST =	1711938.137
ELEV. =	936.329



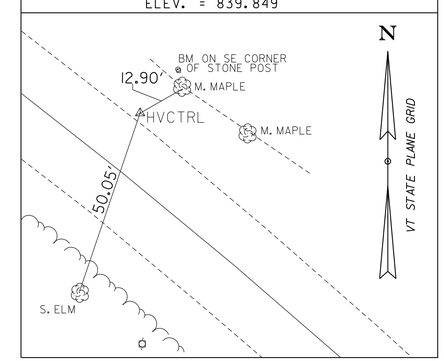
HVCTRL #35

NORTH =	480750.820
EAST =	1712518.50
ELEV. =	900.32



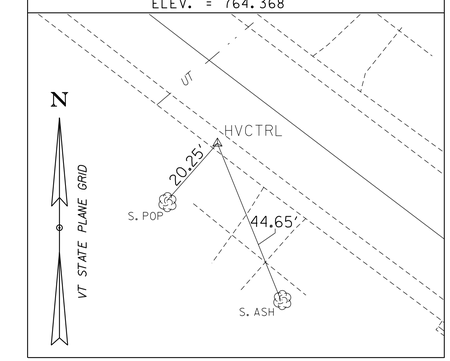
HVCTRL #36

NORTH =	480514.529
EAST =	1713079.741
ELEV. =	839.849



HVCTRL #37

NORTH =	479480.433
EAST =	1714069.935
ELEV. =	764.368



ALIGNMENT TIES

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME:	X99C194TI.DGN	PLOT DATE:	9/4/2015
PROJECT LEADER:	M. FOWLER	DRAWN BY:	S. DONOVAN
DESIGNED BY:	VTRANS	CHECKED BY:	P. BEYOR
TIE SHEET #7		SHEET	10 OF 303

CLD 12-0337

GPS CONTROL POINTS

TRAVERSE TIES

HVCTRL #38

NORTH = 478342.879
EAST = 1715612.779
ELEV. = 689.120

NOT TIED

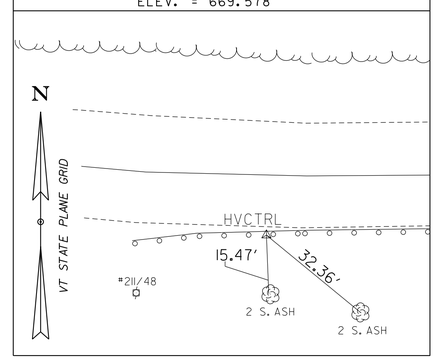
HVCTRL #39

NORTH = 478812.653
EAST = 1715609.584
ELEV. = 682.070

NOT TIED

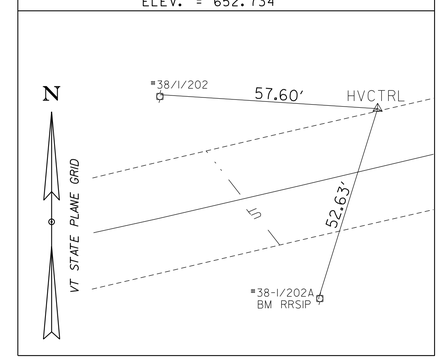
HVCTRL #40

NORTH = 478129.237
EAST = 1716529.816
ELEV. = 669.578



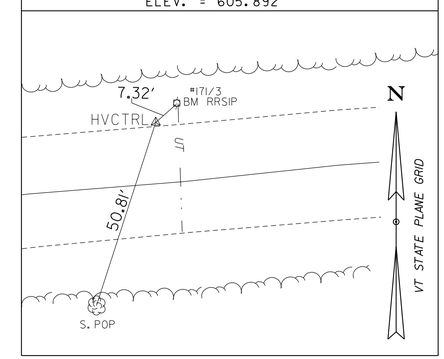
HVCTRL #41

NORTH = 478474.135
EAST = 1717942.506
ELEV. = 652.734



HVCTRL #42

NORTH = 478617.149
EAST = 1718652.935
ELEV. = 605.892



ALIGNMENT TIES

NORTH =	NORTH =	NORTH =	NORTH =	NORTH =
EAST =	EAST =	EAST =	EAST =	EAST =
ELEV. =	ELEV. =	ELEV. =	ELEV. =	ELEV. =

DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: X99C194T1.DGN
PROJECT LEADER: M. FOWLER
DESIGNED BY: VTRANS
TIE SHEET #8

PLOT DATE: 9/4/2015
DRAWN BY: S. DONOVAN
CHECKED BY: P. BEYOR
SHEET 11 OF 303

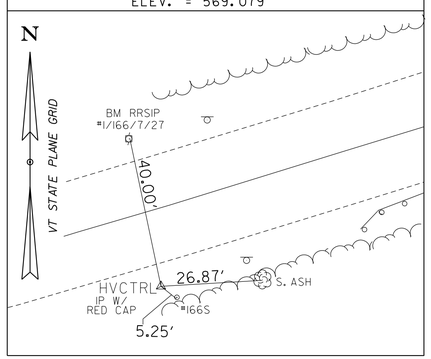
CLD 12-0337

GPS CONTROL POINTS

TRAVERSE TIES

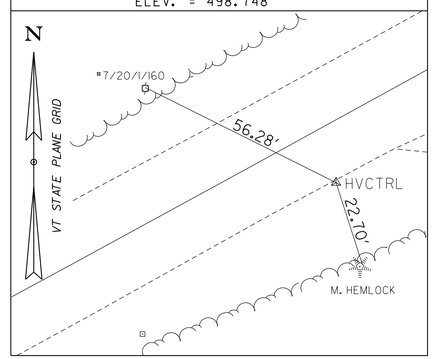
HVCTRL #43

NORTH = 478667.830
EAST = 1719435.117
ELEV. = 569.079



HVCTRL #44

NORTH = 478996.923
EAST = 1720240.711
ELEV. = 498.748



HVCTRL #45

NORTH = 479309.233
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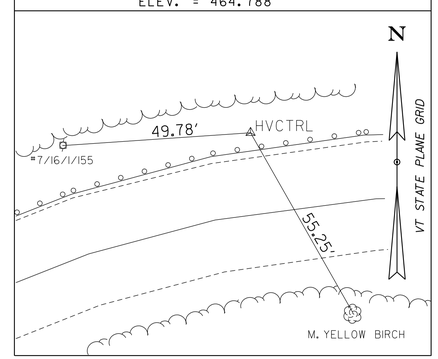

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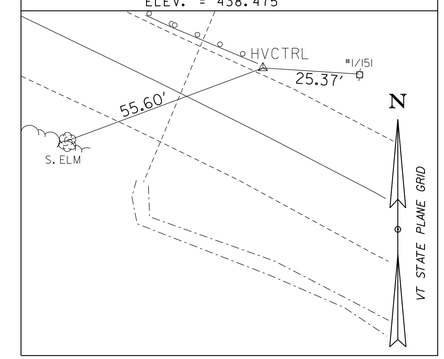

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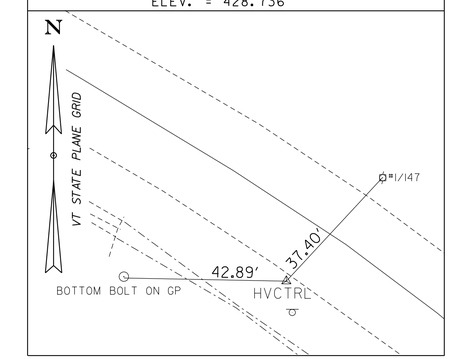

ALIGNMENT TIES

NORTH =	NORTH =	NORTH =	NORTH =	NORTH =
EAST =	EAST =	EAST =	EAST =	EAST =
ELEV. =	ELEV. =	ELEV. =	ELEV. =	ELEV. =

DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME:	X99C194T1.DGN	PLOT DATE:	9/4/2015
PROJECT LEADER:	M. FOWLER	DRAWN BY:	S. DONOVAN
DESIGNED BY:	VTRANS	CHECKED BY:	P. BEYOR
TIE SHEET #9		SHEET	12 OF 303

CLD 12-0337

GPS CONTROL POINTS

TRAVERSE TIES

HVCTRL #48

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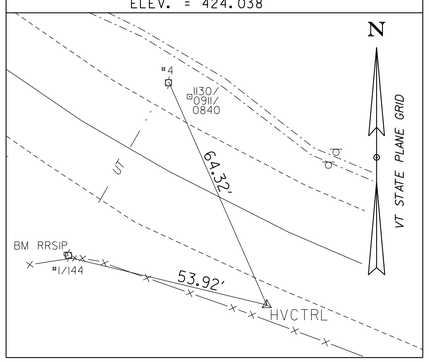
ELEV. = 424.038



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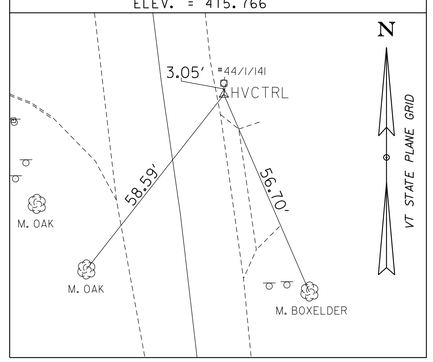

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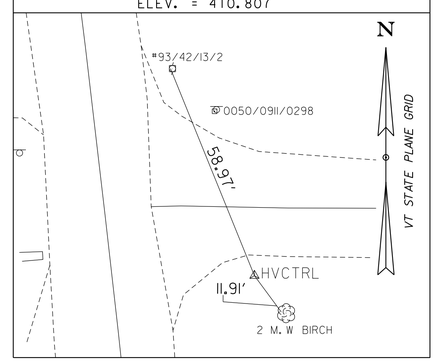

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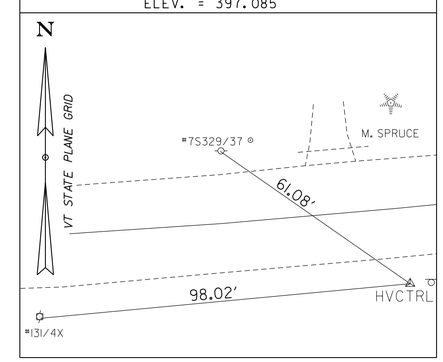

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NOT TIED

ALIGNMENT TIES

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EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83
ADJUSTMENT	COMPASS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME:	X99C194T1.DGN	PLOT DATE:	9/4/2015
PROJECT LEADER:	M. FOWLER	DRAWN BY:	S. DONOVAN
DESIGNED BY:	VTRANS	CHECKED BY:	P. BEYOR
TIE SHEET #10		SHEET	13 OF 303

CLD 12-0337

PROJECT NOTES

1. APPROXIMATE HISTORIC AND OTHER RESOURCE LOCATIONS HAVE BEEN IDENTIFIED, SEE PROJECT PLAN SHEETS FOR LOCATIONS. THE PROJECT SHALL BE CONSTRUCTED AS DESIGNED AND WITHIN THE LIMITS ESTABLISHED BY THE CROSS SECTIONS. IF IT IS DEEMED NECESSARY BY THE CONTRACTOR TO WORK BEYOND THOSE LIMITS IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ACQUIRE ANY NECESSARY STATE AND FEDERAL PERMITS.

2. ALL BORINGS WERE TAKEN IN THE CENTER OF THE TRAVEL LANE AND THEREFORE MAY NOT BE REPRESENTATIVE OF THE FOOTPRINT.

3. ALL PROPOSED WORK TO BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY.

4. AN ESTIMATED QUANTITY OF ITEM 201.10 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS, HAS BEEN INCLUDED TO REMOVE ANY VEGETATION, PARTIAL AND FULL TREE REMOVAL, THINNING AND TRIMMING FOR SIGNS, AND ANY ASSOCIATED GRUBBING WITHIN THE ASSUMED THREE ROD R.O.W. OR GREATER IF NECESSARY WHEN R.O.W. HAS BEEN CONFIRMED BEYOND THE ASSUMED THREE RODS. THE ENGINEER MAY EXCLUDE REMOVAL IN SOME AREAS WHERE DEEMED NECESSARY AND APPROPRIATE OR NECESSITATED BY PERMIT REQUIREMENTS OR PER THE CONSTRUCTION ENVIRONMENTAL ENGINEER RECOMMENDATIONS.

5. ADDITIONAL QUANTITIES FOR ITEM 203.15 COMMON EXCAVATION, ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED, ITEM 301.35 SUBBASE OF DENSE GRADED CRUSHED STONE, AND ITEM 649.11 GEOTEXTILE FOR ROADBED SEPARATOR HAVE BEEN ESTIMATED TO ADDRESS POSSIBLE UNSUITABLE SUBBASE MATERIAL ENCOUNTERED WITHIN THE PROJECT. REFER TO DETAIL ON SHEET 24.

6. AN ESTIMATED QUANTITY OF ITEM 204.21 TRENCH EXCAVATION OF ROCK HAS BEEN INCLUDED IN THE EVENT LEDGE IS ENCOUNTERED DURING THE INSTALLATION OF UNDERDRAIN. SEE UTILITY SPECIAL PROVISIONS FOR BLASTING REQUIREMENTS WITHIN TEN FEET OF EXISTING UTILITIES.

7. COLD PLANING SHALL BE COMPLETED ACCORDING TO THE TYPICAL SECTIONS OR AS DENOTED OTHERWISE ON THE PLANS. A FULL DEPTH BUTT JOINT SHALL BE CONSTRUCTED AT THE PROJECT BEGIN AND END, AND ALL PAVED SIDE ROAD APPROACHES AS SHOWN ON THE PROJECT PLANS OR AS OTHERWISE DIRECTED BY THE ENGINEER. ALL JOINTS SHALL BE SAW CUT, INCIDENTAL TO ITEM 210.10 COLD PLANING, BITUMINOUS PAVEMENT.

8. THE CONTRACTOR SHALL USE CAUTION WHEN COLD PLANING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE DECK OR MEMBRANE AS A RESULT OF THE CONTRACTOR'S OPERATIONS THE ENGINEER SHALL CONTACT THE VAOT 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.

9. PRIOR TO PAVING IN COLD PLANE AREAS, ANY EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED TO A DEPTH OF THREE INCHES OR AS DIRECTED BY THE ENGINEER. EXCAVATION SHALL BE PAID FOR USING THE APPROPRIATE RENTAL ITEMS. THE METHOD OF REMOVAL AND THE USE OF RENTAL ITEMS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK BEING DONE. MATERIAL REMOVED SHALL BE REPLACED WITH ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED. EXCAVATED MATERIAL SHALL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM THE PROJECT AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE DONE BEFORE THE INTERMEDIATE COURSE IS PLACED.

10. AN ESTIMATED QUANTITY OF ITEM 203.40 SHOULDER BERM REMOVAL HAS BEEN INCLUDED FOR THE REMOVAL OF BUILT UP SAND, SOD ETC ADJACENT TO THE SHOULDER, IN GUARDRAIL AREAS OF THE COLD PLANE AND OVERLAY TYPICAL SECTION, TO ALLOW FREE DRAINAGE OFF THE SHOULDER.

11. PRIOR TO RECLAIMING, ANY EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED TO THE DEPTH OF RECLAIMING OR AS DIRECTED BY THE ENGINEER. EXCAVATED MATERIAL SHALL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM THE PROJECT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR USING THE APPROPRIATE RENTAL ITEMS. THE METHOD OF REMOVAL AND THE USE OF RENTAL ITEMS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK BEING DONE. MATERIAL REMOVED SHALL BE REPLACED WITH ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED. AN ADDITIONAL QUANTITY OF ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED HAS BEEN INCLUDED TO CORRECT SUPERELEVATION AND GRADATION DEFICIENCIES WITHIN THE RECLAIMED SECTION.

12. THE FIRST RECLAIM PASS SHALL BE PERFORMED FROM TOP OF BANK TO TOP OF BANK WHERE FULL WIDTH IS NOT ACHIEVABLE. THE FIRST RECLAIM PASS WILL BE PAID UNDER ITEM 310.20 RECLAIMED STABILIZED BASE. THE SECOND RECLAIM PASS SHALL BE PERFORMED FULL WIDTH PER THE TYPICAL SECTION. THE SECOND RECLAIM PASS SHALL BE PAID UNDER ITEM 900.675 SPECIAL PROVISION (RECLAIMED STABLIZED BASE, LIQUID CALCIUM CHLORIDE). ITEM 900.625 SPECIAL PROVISION (LIQUID CALCIUM CHLORIDE FOR BASE STABILIZATION) SHALL BE MIXED INTO THE SECOND RECLAIM PASS. AFTER FINAL GRADING AND COMPACTION, A SECOND APPLICATION SHALL BE APPLIED ON TOP OF THE RECLAIMED SURFACE.

13. FOR THE PURPOSES OF QUANTITY CALCULATION IT HAS BEEN ASSUMED ITEM 900.675 SPECIAL PROVISION (COLD MIXED RECYCLED BITUMINOUS PAVEMENT, PORTLAND CEMENT) WILL REQUIRE 3% BY WEIGHT OF ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT, COLD MIX WITH CEMENT). FOR THE SAME PURPOSE IT HAS ALSO BEEN ASSUMED 1% BY WEIGHT OF PORTLAND CEMENT WILL BE REQUIRED BY MIX DESIGN. THE PORTLAND CEMENT WILL BE PAID UNDER ITEM 900.680 SPECIAL PROVISION (PORTLAND CEMENT FOR COLD MIXED RECYCLING).

14. ITEM 900.680 SPECIAL PROVISION (MATERIAL TRANSFER VEHICLE, COLD MIX) HAS BEEN ESTIMATED USING A UNIT WEIGHT OF 2.0 TONS/CY. THE AVERAGE BULK SPECIFIC GRAVITY DETERMINED IN THE MIX DESIGN WILL BE USED FOR THE ACTUAL PAYMENT QUANTITY.

15. SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TOLERANCE = +/- 1/4 INCH (TOTAL THICKNESS)
COLD MIXED RECYCLED BITUMINOUS BASE COURSE TOLERANCE = +/- 1/4 INCH.
SUBBASE OF CRUSHED GRAVEL, FINE GRADED TOLERANCE = +/- 1.0 INCH (TOTAL SUBBASE THICKNESS).

16. EMULSIFIED ASPHALT TYPE CRS-1H OR RS-1H SHALL BE APPLIED AS A TACK COAT ON ALL EXISTING OR COLD PLANED PAVEMENT SURFACES AT THE RATE OF 0.080 GAL/SY, ON ALL COLD MIX PAVEMENT SURFACES AT A RATE OF 0.040 TO 0.060 GAL/SY, AND BETWEEN ALL COURSES OF BITUMINOUS CONCRETE PAVEMENT AT THE RATE OF 0.025 TO 0.040 GAL/SY. PAYMENT WILL BE MADE UNDER ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H).

17. THE WEARING COURSE SHALL BE TYPE IVS SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, THE INTERMEDIATE COURSE SHALL BE TYPE IIIS SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, AND THE BASE COURSE SHALL BE SPECIAL PROVISION (COLD MIXED RECYCLED BITUMINOUS PAVEMENT, PORTLAND CEMENT). ALL PG GRADED ASPHALT CEMENT USED IN THE SUPERPAVE BITUMINOUS CONCRETE PAVEMENT SHALL BE AS SPECIFIED IN SUBSECTION 490.03(b).

18. ALL SIDE ROADS ARE TO BE PAVED 25 FEET FROM THE EDGE OF MAINLINE SHOULDER UNLESS OTHERWISE SPECIFIED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

19. EDGES OF PAVEMENT SHALL INCLUDE A SAFETY EDGE AS SHOWN ON SHEET 22.

20. ALL EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDER MATERIAL AS DIRECTED BY THE ENGINEER AND WILL BE PAID UNDER ITEM 402.13 AGGREGATE SHOULDERS, RAP.

21. ALL PAVED AND GRAVEL RESIDENTIAL AND COMMERCIAL DRIVES SHALL RECEIVE A FOUR FEET PAVED APRON AND ALL FIELD AND WOODS DRIVES SHALL RECEIVE A TWO FEET PAVED APRON UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL REQUIRED EXCAVATION AND ASSOCIATED DRIVE GRADING IN DRIVE AREAS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE NEW BITUMINOUS SURFACE SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER AND WILL BE PAID FOR UNDER ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES). BITUMINOUS CONCRETE MATERIAL PLACED BY MECHANICAL METHODS AT THESE LOCATIONS IS EXCLUDED. ALL OTHER BITUMINOUS MATERIALS PLACED WITHIN THE PROJECT LIMITS, WHETHER BY HAND OR MECHANICAL METHODS, WILL BE PAID UNDER THE APPROPRIATE CONTRACT PAY ITEM FOR SUPERPAVE BITUMINOUS CONCRETE PAVEMENT.

22. MAILBOX PULL-OFFS TO BE SURFACED WITH ITEM 402.13 AGGREGATE SHOULDERS, RAP AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

23. QUANTITIES HAVE BEEN ESTIMATED FOR ITEM 617.10 RELOCATE MAILBOX, SINGLE SUPPORT AND ITEM 617.12 RELOCATE MAILBOX, MULTIPLE SUPPORT TO BE USED AS DETERMINED BY THE ENGINEER.

24. ASPHALTIC PLUG-TYPE JOINT SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS. SEE BRIDGE JOINT ASPHALTIC PLUG (STRUCTURES DETAIL SD-516.10)

BRIDGE #32 -	370+00	(MM 7.008)	52' ASPHALTIC JOINT	BRIDGE #25 -	61+36	(MM 1.162)	43' ASPHALTIC JOINT
	372+09	(MM 7.047)	52' ASPHALTIC JOINT	BRIDGE #33 -	461+49	(MM 8.740)	21' ASPHALTIC JOINT

25. COMPACTION, GRADING, AND CLEANUP OF ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED; ITEM 402.13 AGGREGATE SHOULDERS, RAP AND ITEM 651.35 TOPSOIL, IS TO BE INCLUDED IN THE CONTRACT UNIT PRICE OF EACH ITEM.

26. ESTIMATED QUANTITIES OF ITEM 604.412, 604.415 REHAB DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I, CLASS II IS ESTIMATED AND SHALL BE PERFORMED AT LOCATIONS SHOWN ON THE PLAN SHEETS OR AS DIRECTED BY THE ENGINEER. ALL DI'S SHALL BE RAISED OR REHABILITATED SUCH THAT THE NEW GRATE ELEVATION MATCHES WITH THE SURROUNDING TERRAIN.

27. AN ESTIMATED QUANTITY OF ITEM 653.20 TEMPORARY EROSION MATTING HAS BEEN INCLUDED FOR AREAS WITH PROPOSED SIDE SLOPES STEEPER THAN 1:2 BUT FLATTER THAN 1:1.5 OR AS DIRECTED BY THE ENGINEER.

28. ALL STONE SLOPES (NOT IN DITCHES) SHALL BE STABILIZED AS SHOWN ON THE FILL SLOPE WITH STONE FILL DETAIL ON SHEET 22.

29. ESTIMATED QUANTITIES OF ITEM 613.10 STONE FILL, TYPE I; ITEM 651.40 GRUBBING MATERIAL (6"); ITEM, 653.20 TEMPORARY EROSION MATTING AND ITEM 608.25 ALL PURPOSE EXCAVATOR RENTAL, TYPE I HAVE BEEN INCLUDED FOR AREAS WITH PROPOSED SIDE SLOPES STEEPER THAN 1:1.5 AND TO PROVIDE FOR REPAIR OF EXISTING STONE LINED DRAINAGE OUTLETS OR WASHOUTS LOCATED ALONG THE ROADWAY SIDE SLOPES AS DIRECTED BY THE ENGINEER.

30. ADDITIONAL QUANTITIES FOR PAY ITEM 649.51 GEOTEXTILE FOR SILT FENCE; ITEM 651.15 SEED; ITEM 651.18 FERTILIZER; ITEM 651.20 AGRICULTURAL LIMESTONE; ITEM 653.20 TEMPORARY EROSION MATTING AND ITEM 651.25 HAY MULCH HAVE BEEN INCLUDED FOR STONE FILL SLOPE STABILIZATION AREAS TO BE PLACED ON GRUBBING MATERIAL (6") OR GRUBBING MATERIAL (2") AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

31. QUANTITIES FOR ITEM 653.50 BARRIER FENCE AND ITEM 653.60 EROSION LOG HAVE BEEN INCLUDED FOR USE ADJACENT TO THE ENVIRONMENTALLY SENSITIVE AREAS IDENTIFIED IN THE PLANS AND AS DIRECTED BY THE ENGINEER. INSTALLATION SHALL BE PER MANUFACTURER RECOMMENDATIONS.

32. DAMAGE TO ANY DI'S, CROSS CULVERTS OR OTHER DRAINAGE FEATURES DUE DIRECTLY TO THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

33. AN ESTIMATED QUANTITY OF ITEM 619.17 YIELDING MARKER POSTS HAS BEEN INCLUDED TO DELINEATE PIPE INLETS, PIPE OUTLETS AND DROP INLETS LOCATED OUTSIDE OF THE PAVEMENT SURFACE OR AS DIRECTED BY THE ENGINEER.

34. IN AREAS WHERE A UTILITY POLE OR SIMILAR NON-YIELDING OBJECT IS LOCATED WITHIN FOUR FEET BEHIND GUARDRAIL, A REDUCED POST SPACING SHALL BE USED AS DETAILED ON SHEET 23.

35. A 3'-7" OF BACK SLOPE IS REQUIRED BEHIND THE FACE OF GUARDRAIL WITH SIX FEET POSTS. IF THIS CANNOT BE OBTAINED THEN EIGHT FEET POSTS SHALL BE USED. PAYMENT WILL BE MADE UNDER ITEM 621.20 STEEL BEAM GUARDRAIL, GALVANIZED AND ITEM 621.205 STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS.

36. ESTIMATED QUANTITIES OF ITEM 608.25 ALL PURPOSE EXCAVATOR RENTAL, TYPE I, ITEM 608.37 TRUCK RENTAL, AND ITEM 608.40 LOADER RENTAL, TYPE I HAVE BEEN INCLUDED FOR THE PROVISION OF CONSTRUCTING GUARDRAIL END TERMINAL AREAS WITH EXCAVATED DITCHING MATERIAL AND THE REMOVAL OF BUILT UP EXCESS SHOULDER MATERIAL IN NON-GUARDRAIL LOCATIONS.
AN ESTIMATED QUANTITY OF ITEM 203.30 EARTH BORROW HAS BEEN INCLUDED FOR USE WITH THE GUARDRAIL END TERMINAL AREA. 25 CY OF ITEM 203.30 EARTH BORROW HAS BEEN ESTIMATED FOR EACH NEW END TERMINAL AREA. GUARDRAIL END TERMINAL AREAS SHALL BE CAPPED WITH AN ESTIMATED THREE INCH DEPTH OF ITEM 651.35 TOPSOIL UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE QUANTITIES INCLUDED REFLECT FIVE CY OF ITEM 651.35 TOPSOIL FOR EACH NEW GUARDRAIL END TERMINAL AREA. ITEM 653.20 TEMPORARY EROSION MATTING SHALL BE PLACED ON SLOPES GREATER THEN 1:6 CREATED BY THE GUARDRAIL END TERMINAL AREAS. THE QUANTITIES INCLUDED REFLECT 25 SY OF ITEM 653.20 TEMPORARY EROSION MATTING FOR EACH NEW GUARDRAIL END TERMINAL AREA. PRIOR TO THE PLACEMENT OF TEMPORARY EROSION MATTING PLACE TOPSOIL AND SEED USING ITEM 651.35 TOPSOIL, ITEM 651.15 SEED, ITEM 651.18 FERTILIZER AND ITEM 651.20 AGRICULTURAL LIMESTONE.

37. DURABLE PAVEMENT MARKINGS ARE OPTIONED AS SHOWN ON THE PLAN SHEETS FOR THIS PROJECT. THE CONTRACTOR SHALL BID THE SAME MARKING MATERIAL FOR ALL OPTION ITEMS.

38. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POT HOLE REPAIR, AND CRACK SEALING SHALL BE PERFORMED FOLLOWING COLD PLANING AND PRIOR TO PAVING. THE PATCHING OF ALL CRACKS GREATER THAN 1.0" AND POT HOLE REPAIR SHALL BE COMPLETED USING BITUMINOUS CONCRETE PAVEMENT IN ACCORDANCE WITH ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I). AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED.

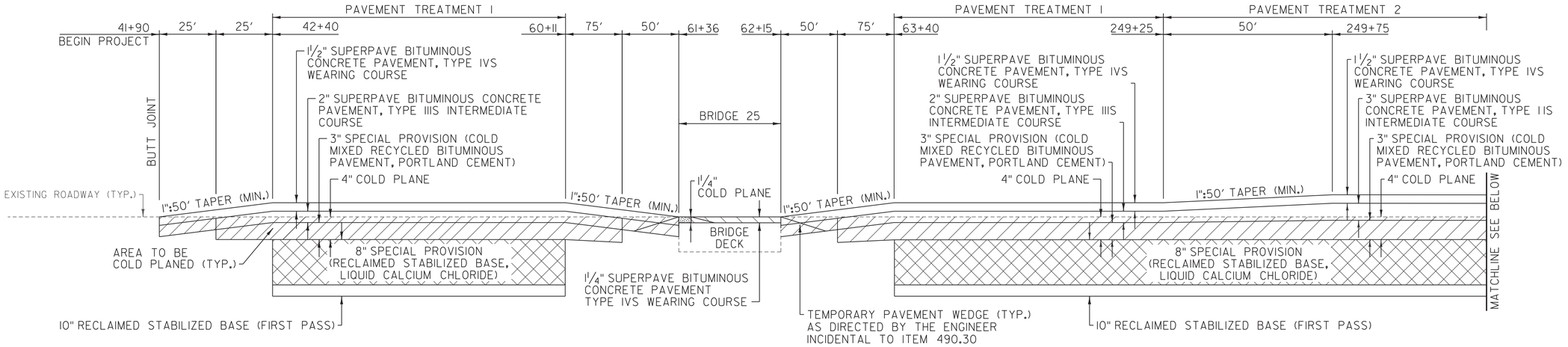
39. THE WATER, SEWER, AND UNDERGROUND TELEPHONE LINES SHOWN ON THE PLANS ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES. THE CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING NEAR THE WATER, SEWER, AND UNDERGROUND TELEPHONE LINES. ANY DAMAGE TO THESE UTILITIES WILL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE. SEE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

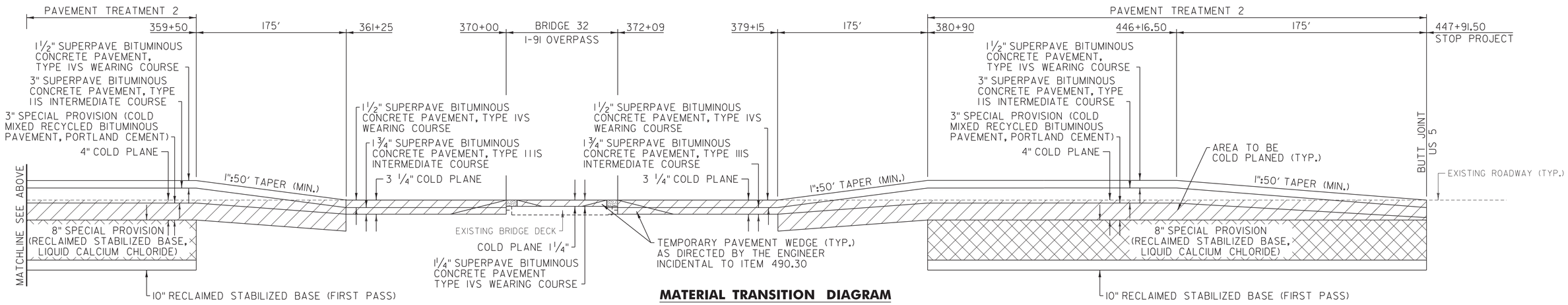
40. WHEN FINISHED GRADE HAS BEEN MET, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SIGNS BEING RETAINED ARE IN CONFORMANCE WITH VAOT STANDARD E-121 AS DIRECTED BY THE ENGINEER.

41. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THETFORD STP EH09(10) SIDEWALK PROJECT. THETFORD STP 2221(1) WILL INSTALL CURB, SIDEWALK LANDINGS, DETECTABLE WARNING SURFACES, CROSSWALK SIGNAGE AND STRIPING AS SHOWN ON THE PLANS. THETFORD STP EH09(10) WILL CONSTRUCT THE SIDEWALK NETWORK CONNECTING TO THE CROSSWALKS.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194typ.dgn	PLOT DATE: 9/18/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PROJECT NOTES	SHEET 14 OF 303

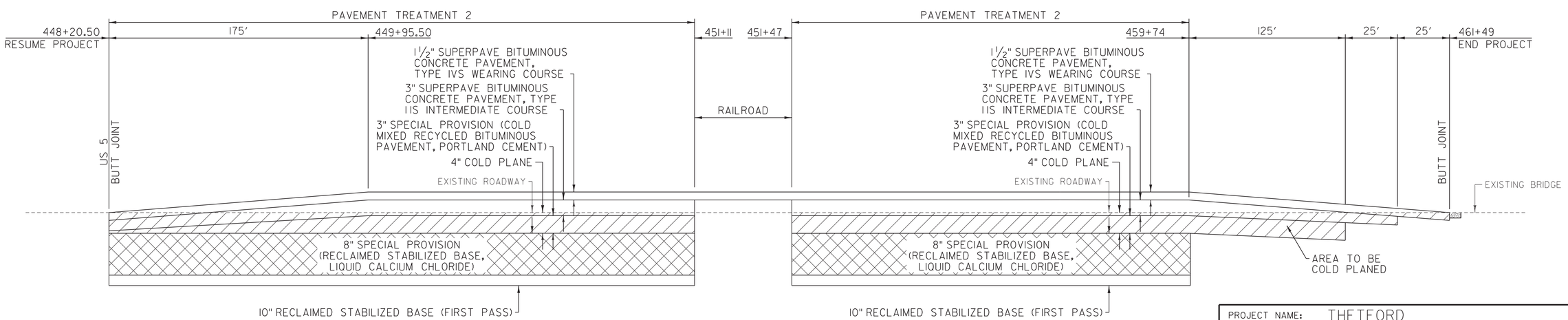
CLD 12-0337





MATERIAL TRANSITION DIAGRAM

41+90 - 447+91.50



MATERIAL TRANSITION DIAGRAM

448+20.5 - 461+49

NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c1944typ.dgn	PLOT DATE: 9/18/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
MATERIAL TRANSITION DIAGRAM	SHEET 15 OF 303

CLD 12-0337

RECOMMENDED ORDER OF OPERATIONS FOR RECLAIMED STABILIZED BASE WITH LIQUID CALCIUM CHLORIDE PAVEMENT REHABILITATION

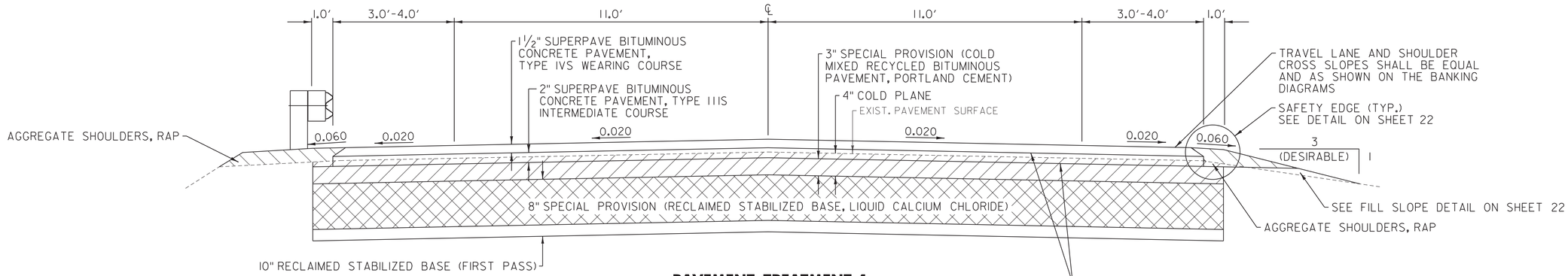
STEP	DESCRIPTION	PAYMENT ITEM(S)
1	INSTALL ALL PROJECT UNDERDRAIN INSTALL ALL CULVERT EXTENSIONS AND HEADWALLS	ITEM 605.10 6 INCH UNDERDRAIN PIPE ITEM 601.XXXX DRAINAGE PIPE, ITEM 541.25 CONCRETE, CLASS B AND ITEM 507.11 REINFORCING STEEL, LEVEL 1
2	CONSTRUCT SIDE SLOPES	ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED ITEM 613.10 STONE FILL, TYPE 1 RENTAL ITEMS
3	COLD PLANE EXISTING BITUMINOUS CONCRETE PAVEMENT FOUR INCHES	ITEM 210.10 COLD PLANING, BITUMINOUS PAVEMENT
4	RECONSTRUCT EXISTING SHOULDERS AS DIRECTED BY THE ENGINEER	ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED
5	RECLAIM EXISTING ROADBED 10" AS SHOWN ON PROJECT TYPICAL SHEETS	ITEM 310.20 RECLAIMED STABILIZED BASE. WATER USED FOR STABILIZATION WILL BE CONSIDERED INCIDENTAL TO ITEM 310.20 RECLAIMED STABILIZED BASE PER SPECIFICATION. USE AS DIRECTED BY THE ENGINEER
6	CORRECT SUPERELEVATION DEFICIENCIES	ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED SEE NOTE 11 ON SHEET 14
7	RECLAIM ROADBED EIGHT INCHES WITH LIQUID CALCIUM CHLORIDE, FINAL GRADING AND COMPACTION, AND APPLY LIQUID CALCIUM CHLORIDE ON SURFACE.	ITEM 900.625 SPECIAL PROVISION (LIQUID CALCIUM CHLORIDE FOR BASE STABILIZATION) ITEM 900.675 SPECIAL PROVISION (RECLAIMED STABILIZED BASE, LIQUID CALCIUM CHLORIDE)
8	PLACE THREE INCH COLD MIXED RECYCLED BITUMINOUS PAVEMENT, PORTLAND CEMENT IN ONE LIFT	ITEM 900.675 SPECIAL PROVISION (COLD MIXED RECYCLED BITUMINOUS PAVEMENT, PORTLAND CEMENT), ITEM 900.680 SPECIAL PROVISION (AGGREGATE TO MEET COLD MIXED GRADATION), ITEM 900.680 SPECIAL PROVISION (PORTLAND CEMENT FOR COLD MIXED RECYCLING) AND ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT, COLD MIX WITH CEMENT)
9	PLACE TYPE IIS OR TYPE IIIS INTERMEDIATE COURSE PLACE TYPE IVS WEARING COURSE AS SHOWN ON PROJECT TYPICAL SECTIONS SHEETS	ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

RECLAIM OPERATIONS NOTES

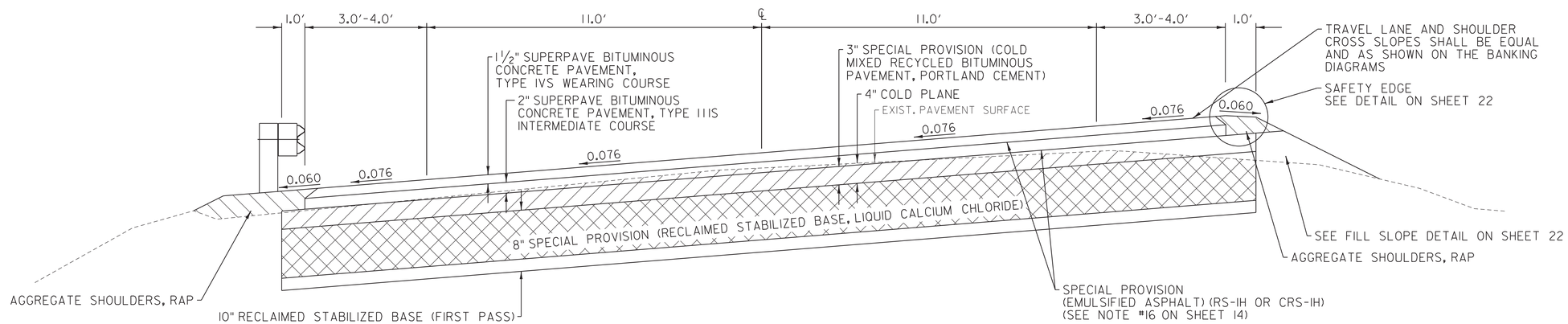
1. THIS LIST OF PROCEDURES FOR REHABILITATING THE EXISTING ROAD IS PRESENTED FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL PREPARE THEIR OWN SCHEDULE OF OPERATIONS TO COMPLETE THE PROPOSED WORK IN ACCORDANCE WITH PROJECT SPECIFICATIONS WHILE UTILIZING THE APPROPRIATE PAY ITEMS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

2. DEPTH OF SHOULDER PAVEMENT IS NOT CERTAIN FOR THE LENGTH OF THE PROJECT, AS THE BORINGS WERE TAKEN IN THE CENTER OF THE TRAVEL LANES.

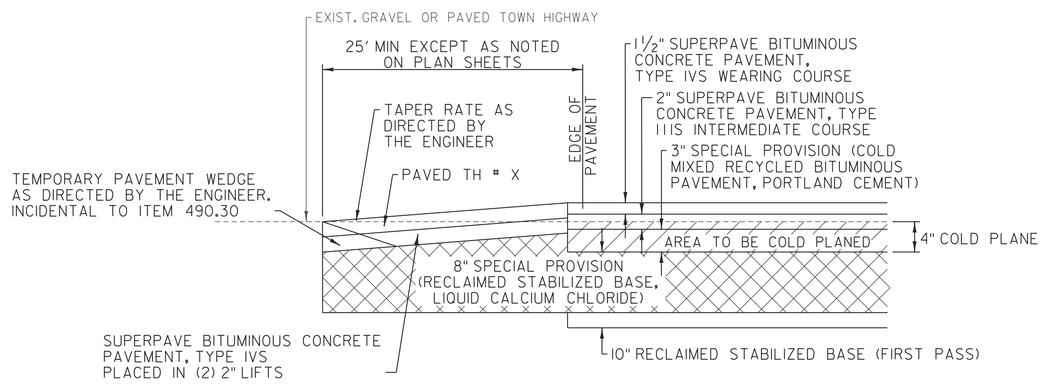
NOT TO SCALE



PAVEMENT TREATMENT 1
RECLAIM TYPICAL SECTION – NORMAL CROWN
42+40 - 60+11 (3 FOOT SHOULDER)
63+40 - 249+25 (4 FOOT SHOULDER)



PAVEMENT TREATMENT 1
RECLAIM TYPICAL SECTION – MAXIMUM BANKED SECTION 0.076
42+40 - 60+11 (3 FOOT SHOULDER)
63+40 - 249+25 (4 FOOT SHOULDER)

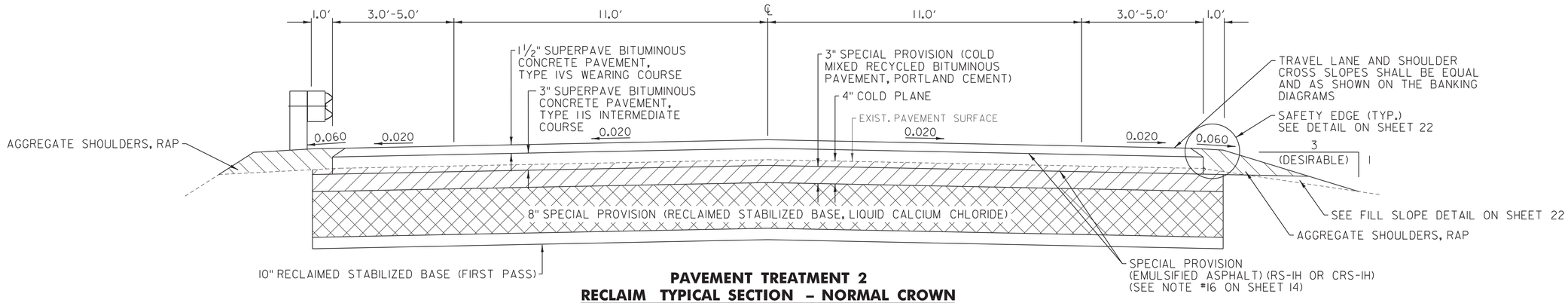


TOWN HIGHWAY TRANSITION DETAIL
AT COLD PLANE AND RECLAIM AREAS
TH 21 - 59+63 (BARKER RD)
TH 20 - 189+01 (SAWNEE BEAN RD)
TH 61 - 210+25 (FIVE CORNERS RD)

NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194typ.dgn	PLOT DATE: 9/18/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TYPICAL SECTIONS SHEET 2	SHEET 17 OF 303

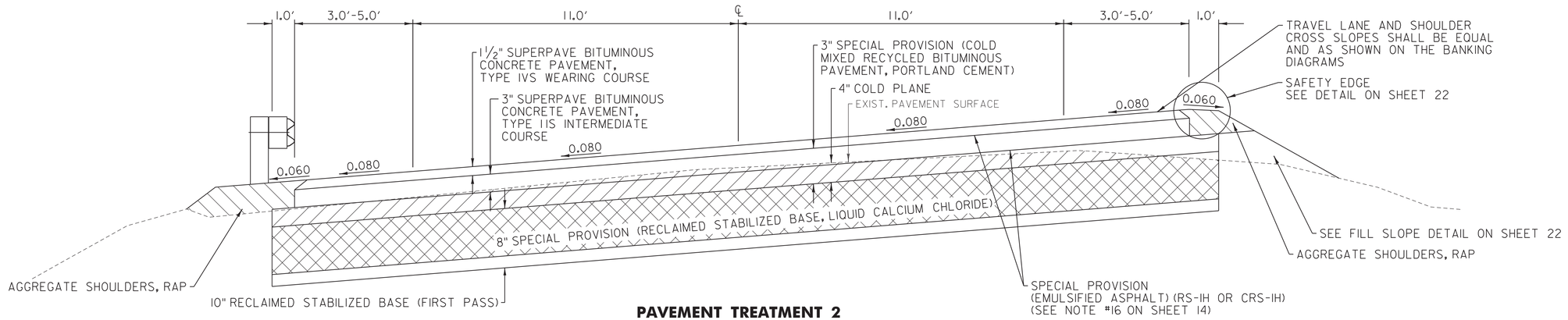
CLD 12-0337



PAVEMENT TREATMENT 2

RECLAIM TYPICAL SECTION – NORMAL CROWN

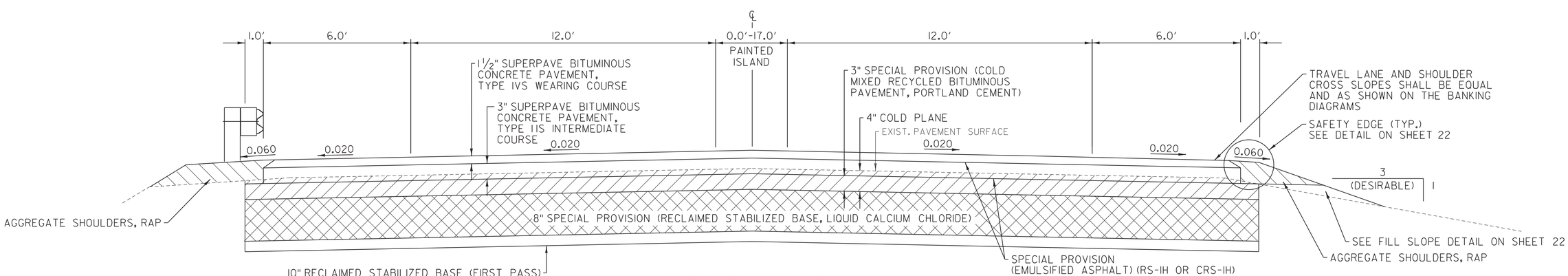
249+25 - 312+00 (4 FOOT SHOULDER)
312+00 - 340+00 (3 FOOT SHOULDER)
340+00 - 343+47 (4 FOOT SHOULDER)
343+47 - 359+50 (5 FOOT SHOULDER)
385+00 - 447+91.50 (4 FOOT SHOULDER)
448+20.50 - 451+11 (4 FOOT SHOULDER)
451+47 - 459+74 (4 FOOT SHOULDER)



PAVEMENT TREATMENT 2

RECLAIM TYPICAL SECTION – MAXIMUM BANKED SECTION 0.080

249+25 - 312+00 (4 FOOT SHOULDER)
312+00 - 340+00 (3 FOOT SHOULDER)
340+00 - 343+47 (4 FOOT SHOULDER)
343+47 - 359+50 (5 FOOT SHOULDER)
385+00 - 447+91.50 (4 FOOT SHOULDER)
448+20.50 - 451+11 (4 FOOT SHOULDER)
451+47 - 459+74 (4 FOOT SHOULDER)



PAVEMENT TREATMENT 2

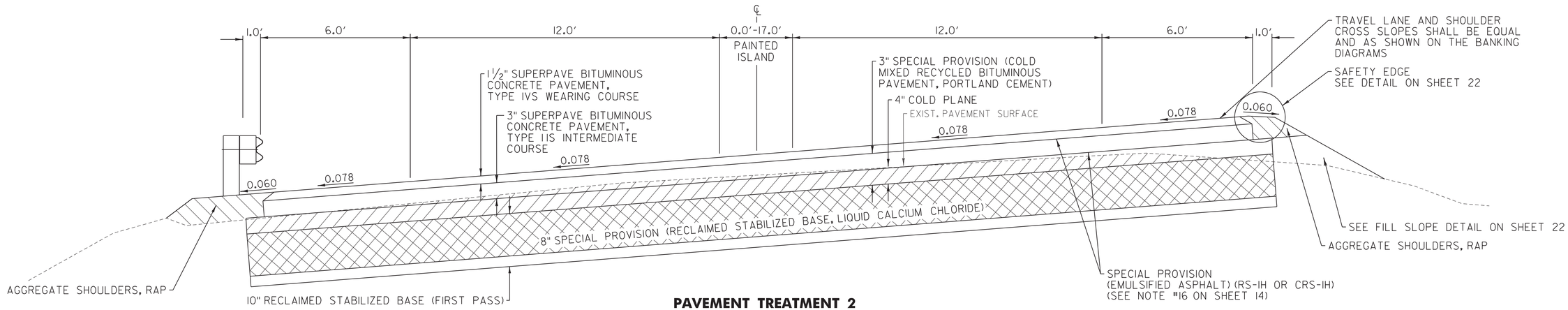
RECLAIM TYPICAL SECTION – NORMAL CROWN

380+90 - 385+00

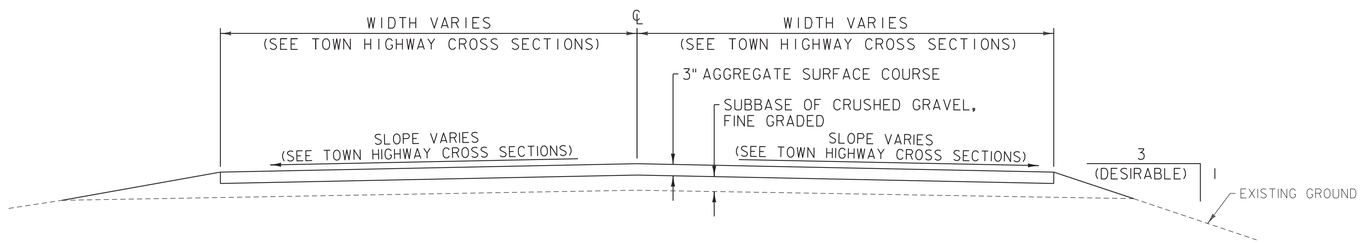
NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194typ.dgn	PLOT DATE: 9/18/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TYPICAL SECTIONS SHEET 3	SHEET 18 OF 303

CLD 12-0337

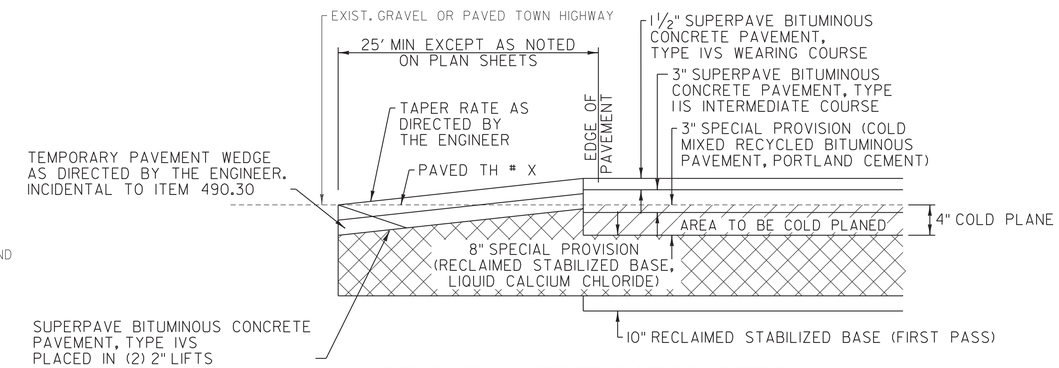


PAVEMENT TREATMENT 2
RECLAIM TYPICAL SECTION – MAXIMUM BANKED SECTION 0.078
380+90 - 385+00



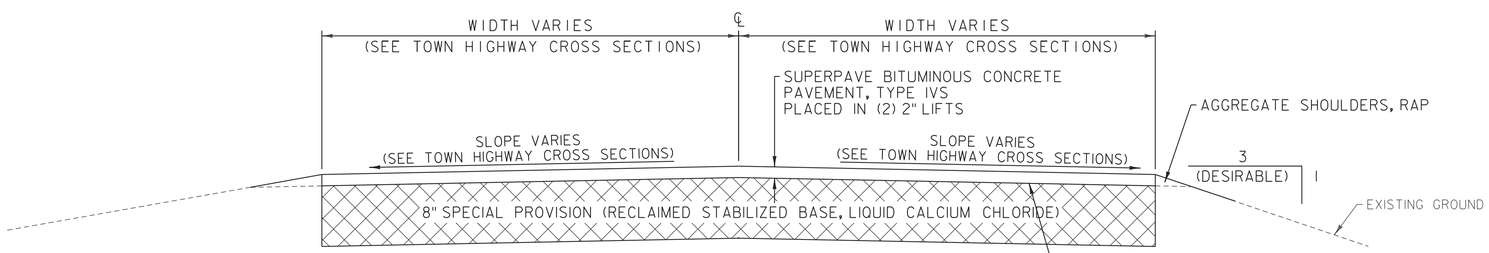
GRAVEL TOWN HIGHWAY TYPICAL SECTION

TH 73 - 242+00 (TRUSSELL RD)
TH 6 - 268+10 (BUZZELL BRIDGE RD)
TH 6 - 269+58 (BUZZELL BRIDGE RD)
TH 71 - 293+32 (CAMP FARNSWORTH RD)
TH 71 - 294+25 (CAMP FARNSWORTH RD
TH 30 - 299+40 (MUD POND RD)
TH 31 - 329+85 (HOUGHTON HILL RD)



TOWN HIGHWAY TRANSITION DETAIL
AT COLD PLANE AND RECLAIM AREAS

TH 29 - 251+11 (TUCKER HILL RD)
TH 70 - 327+83 (LIBRARY RD)
TH 3 - 329+65 (ACADEMY RD)
TH 40 - 352+53 (GODFREY RD)
TH 41 - 388+54 (ASA BURTON RD)
TH 42 - 395+34 (EVANS RD)
TH 43 - 412+68 (BERGER RD)



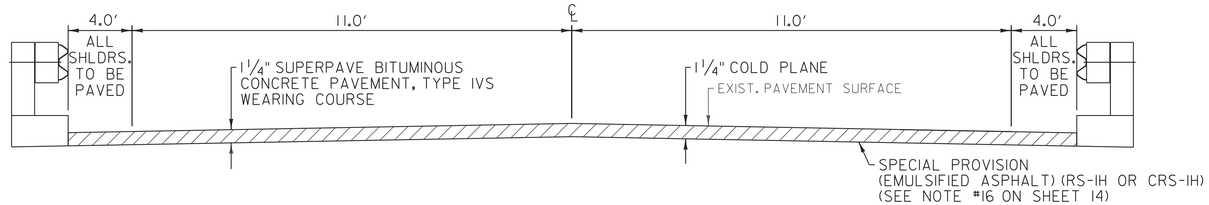
PAVED TOWN HIGHWAY TYPICAL SECTION

TH 75 - 346+54 (GAREY RD)
TH 34 - 409+97 (CADWELL RD)

NOT TO SCALE

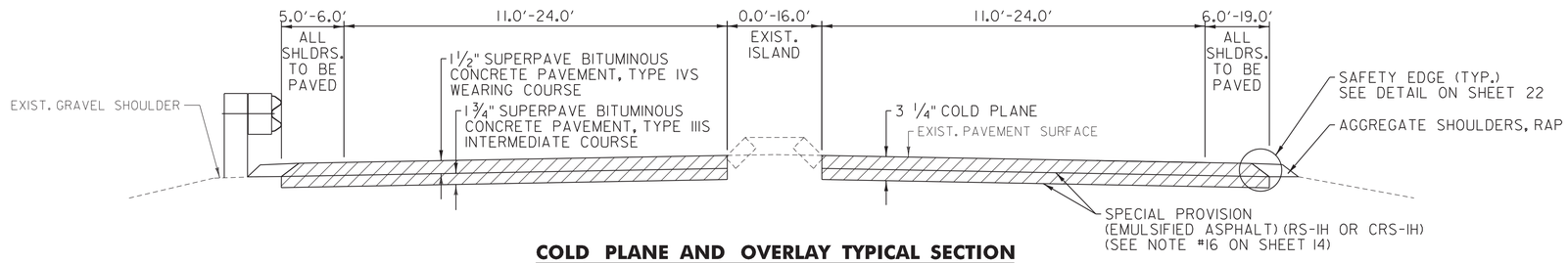
PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194typ.dgn	PLOT DATE: 9/18/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TYPICAL SECTIONS SHEET 4	SHEET 19 OF 303

CLD 12-0337



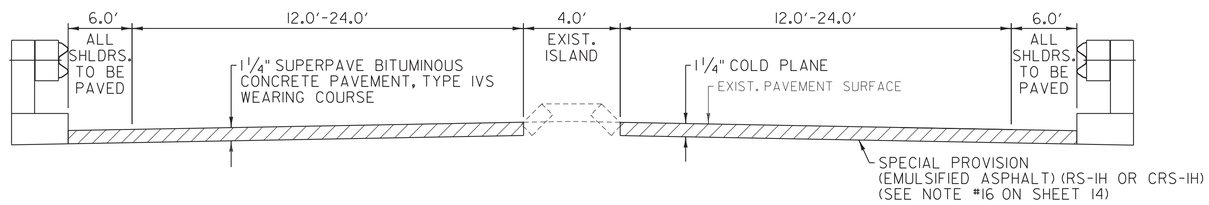
BRIDGE 25 COLD PLANE AND OVERLAY TYPICAL SECTION

60+86 - 62+65



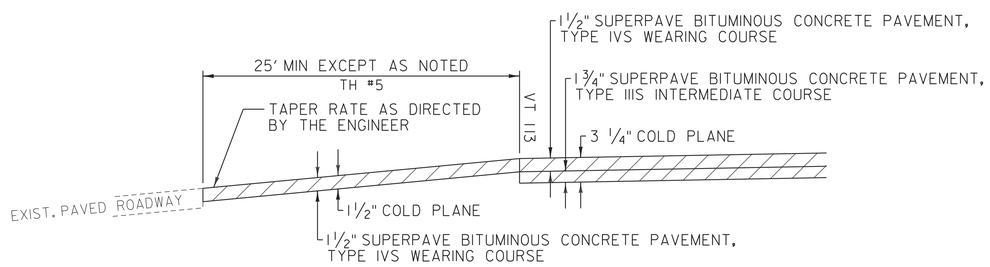
COLD PLANE AND OVERLAY TYPICAL SECTION

360+00 - 370+00
372+09 - 380+40



BRIDGE 32 COLD PLANE AND OVERLAY TYPICAL SECTION

370+00 - 372+09



APPROACH AREA DETAIL
FOR PAVED TOWN HIGHWAYS
IN COLD PLANE AND OVERLAY AREAS

TH 5 - 379+59 (LATHAM RD)

NOT TO SCALE

PROJECT NAME: THETFORD	
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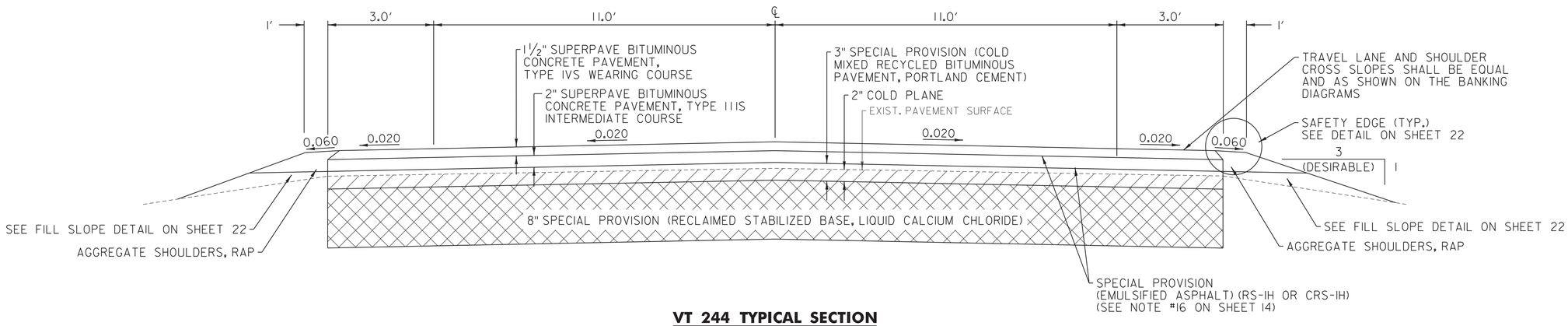
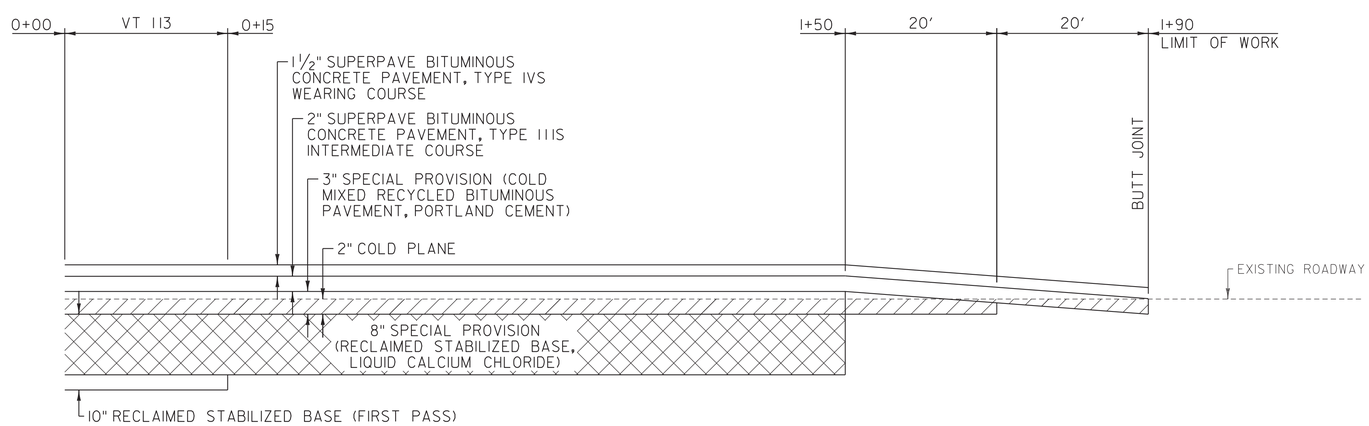
FILE NAME: z99c194typ.dgn	PLOT DATE: 9/18/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TYPICAL SECTIONS SHEET 5	SHEET 20 OF 303

CLD 12-0337



VT 244 TYPICAL SECTION

0+14 TO 1+90

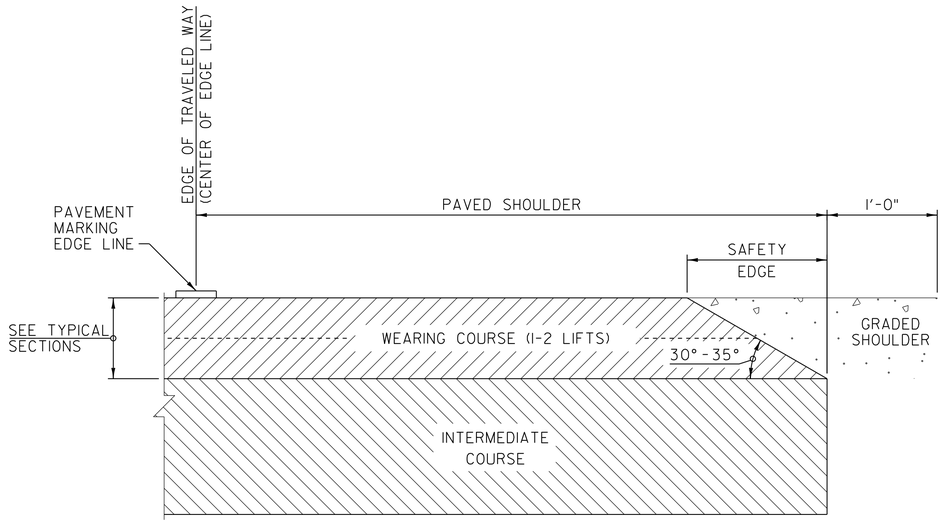


VT 244 MATERIAL TRANSITION DIAGRAM

NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194typ.dgn	PLOT DATE: 9/18/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TYPICAL SECTIONS SHEET 6	SHEET 21 OF 303

CLD 12-0337

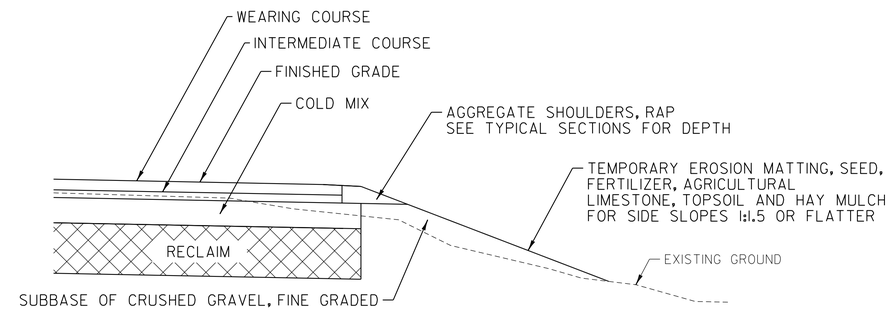


SAFETY EDGE DETAIL

SAFETY EDGE NOTES

1. THE EDGE OF PAVEMENT SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE 30 TO 35 DEGREE ANGLE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.

2. THE PAVED SHOULDER EXTENDS FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF THE WEARING COURSE, INCLUDES THE "SAFETY EDGE".

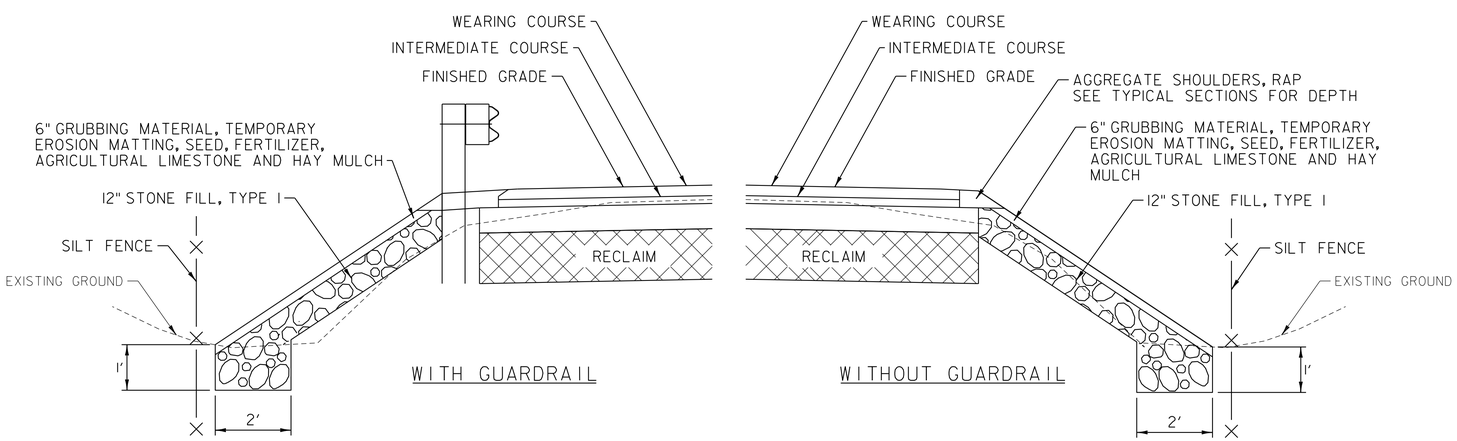


FILL SLOPE DETAIL

(FOR SLOPES 1:1.5 OR FLATTER)

FILL SLOPE NOTE

IF DUE TO GROWING SEASON TIME CONSTRAINTS IT IS DEEMED NECESSARY BY THE CONSTRUCTION ENVIRONMENTAL ENGINEER THAT A MORE RAPID VEGETATION ESTABLISHMENT IS REQUIRED, PLACEMENT OF TWO INCHES OF GRUBBING MATERIAL SHALL BE PLACED ON THE SLOPE PRIOR TO PLACEMENT OF SEED, FERTILIZER, TEMPORARY EROSION MATTING, AND AGRICULTURAL LIMESTONE. PLACEMENT OF THE GRUBBING MATERIAL WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD OF ITEM 651.40 GRUBBING MATERIAL (2").



FILL SLOPE WITH STONE FILL DETAIL

FILL SLOPE WITH STONE FILL NOTES

1. STONE FILL TO BE PLACED ON SLOPES STEEPER THAN 1:1.5

2. ANY EXCAVATION REQUIRED TO INSTALL STONE FILL SHALL BE PAID FOR UNDER ITEM 608.25 ALL PURPOSE EXCAVATOR RENTAL, TYPE I.

NOT TO SCALE

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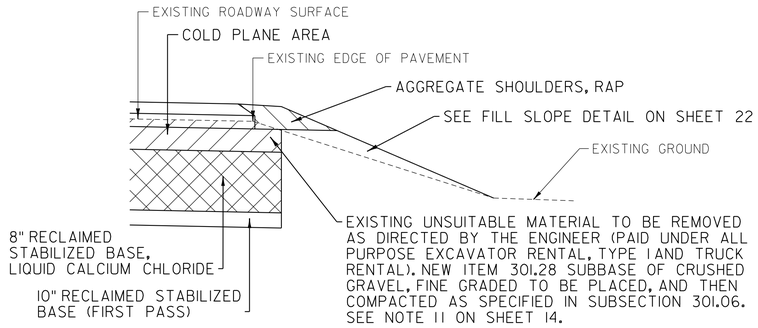
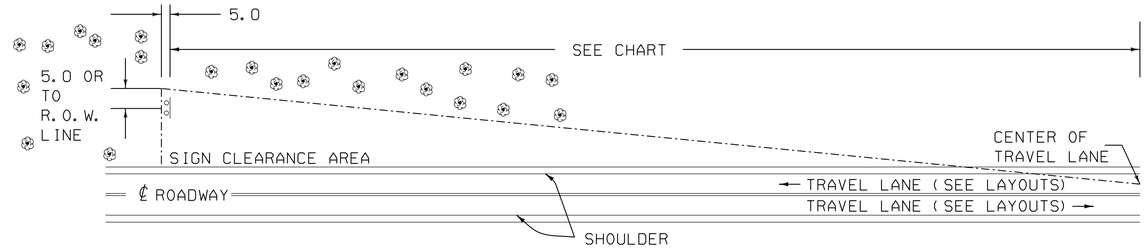
FILE NAME: z99c194typ.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
DETAIL SHEET 1	SHEET 22 OF 303

CLD 12-0337



SHOULDER RECONSTRUCTION IN RECLAIM AREA

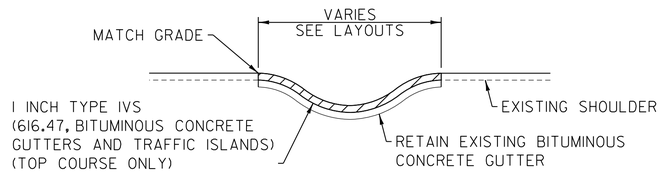


MINIMUM SIGN SIGHT DISTANCE CHART

APPROACH SPEED (mph)	SIGHT DISTANCE (feet)
30 OR LESS	300
35	350
40	400
45	450
50	500
55	550

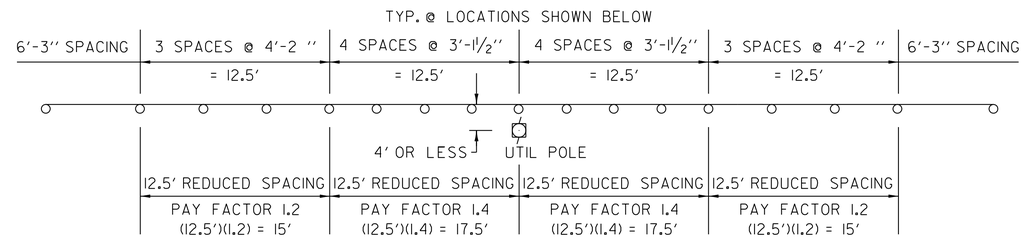
THE CONTRACTOR SHALL REMOVE ALL WOODY STEMMED GROWTH INCLUDING BRUSH, SAPLINGS AND TREE LIMBS GROWING WITHIN OR PROJECTING INTO THE CLEARANCE AREA AND DOWN TO GROUND LEVEL. PAYMENT WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 201.10 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS. NO CHEMICALS (POISONS OR DEFOLIANTS) WILL BE ALLOWED.

THINNING AND TRIMMING DETAIL



BITUMINOUS CONCRETE GUTTERS

54+32 - 55+43 RT
59+50 - 61+20 LT

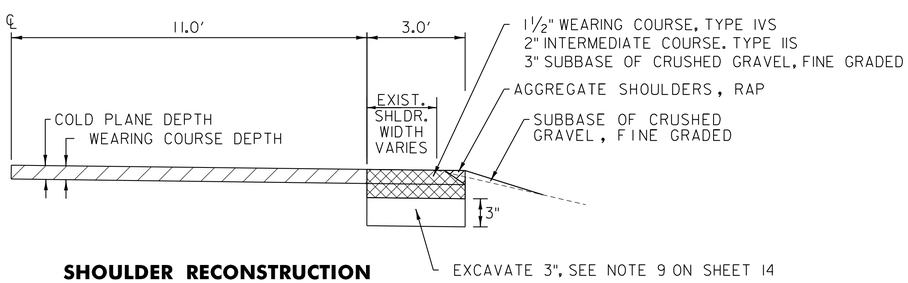


NON-YIELDING OBJECT DETAIL

OBJECTS WITHIN 4.0 FT OF GUARDRAIL

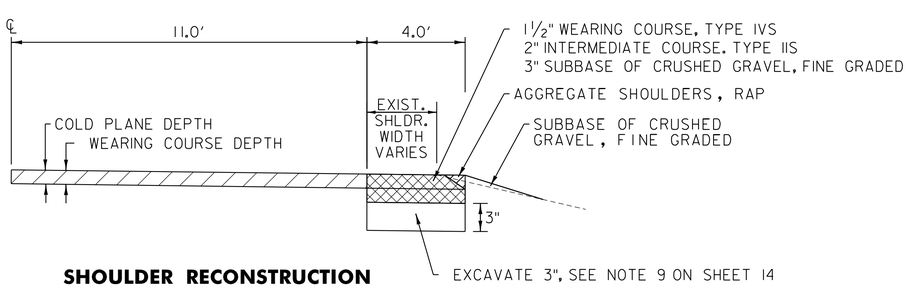
LOCATION

267+20 RT



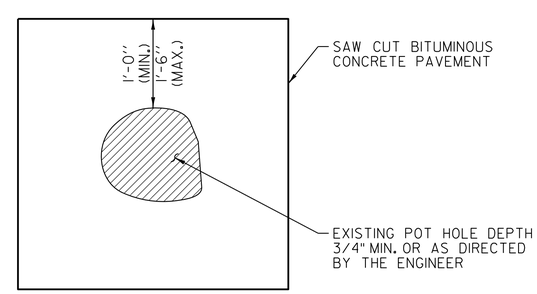
SHOULDER RECONSTRUCTION IN COLD PLANE AREA

41+00 - 42+00



SHOULDER RECONSTRUCTION IN COLD PLANE AREA

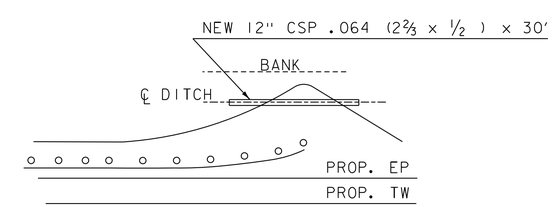
448+20.50 - 449+45.50



TYPICAL POT HOLE REPAIR

TYPICAL POT HOLE REPAIR NOTES

1. EMULSIFIED ASPHALT SHALL BE APPLIED AT ALL PATCH INTERFACES AT A RATE OF 0.25 - 0.5 GAL/SY. EMULSIFIED ASPHALT SHALL MEET THE REQUIREMENTS OF SECTION 404 AND WILL BE CONSIDERED INCIDENTAL TO ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT PREPARATION, TYPE I).
2. ALL WORK ASSOCIATED WITH POT HOLE REPAIR WILL BE PAID UNDER ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT PREPARATION, TYPE I).



PIPE AT G-1d

LOCATION

172+77 - 173+07 RT
185+38 - 185+68 LT

NOT TO SCALE

PROJECT NAME: THETFORD	
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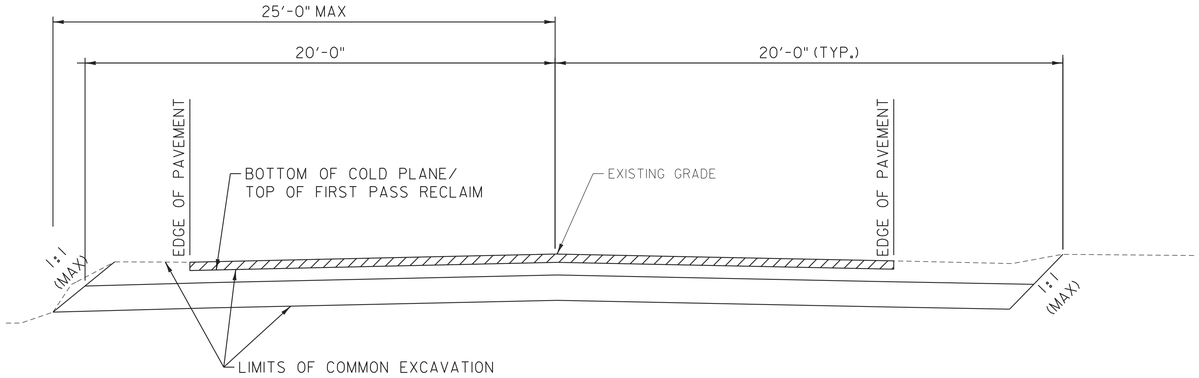
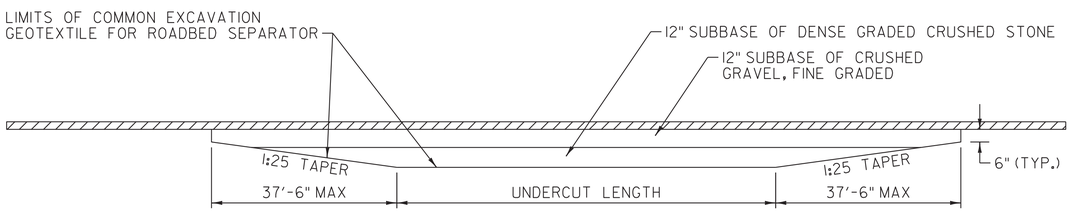
FILE NAME: z99c194typ.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
DETAIL SHEET 2	SHEET 23 OF 303

CLD 12-0337



UNSUITABLE SUBBASE MATERIAL UNDERCUT DETAIL

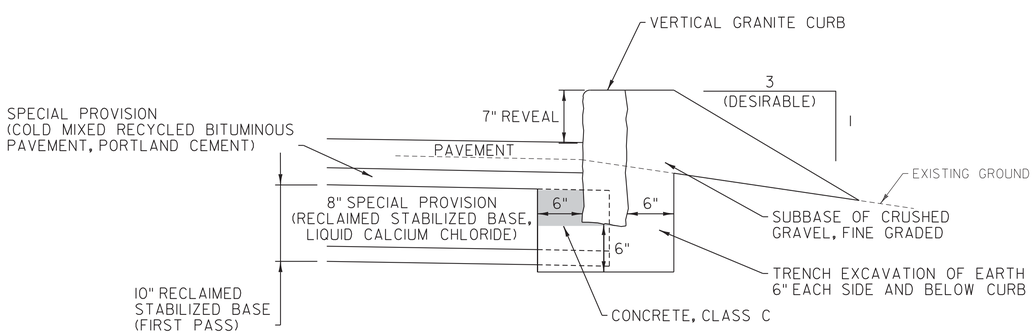


UNSUITABLE SUBBASE MATERIAL TRANSITION DETAIL

UNSUITABLE SUBBASE MATERIAL TRANSITION NOTES

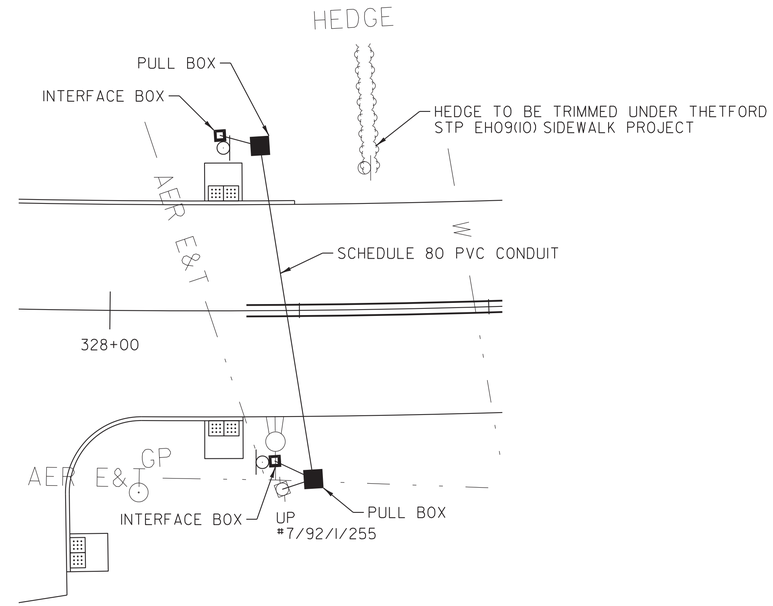
1. THE ENGINEER SHALL HAVE ANY UNDERCUT CANDIDATE AREAS ENCOUNTERED DURING CONSTRUCTION REVIEWED BY THE VTRANS CONSTRUCTION PAVING ENGINEER AND APPROVED BY THE PROJECT MANAGER PRIOR TO TREATMENT.

2. ALL UNDERCUTS SHALL BE FULL WIDTH.



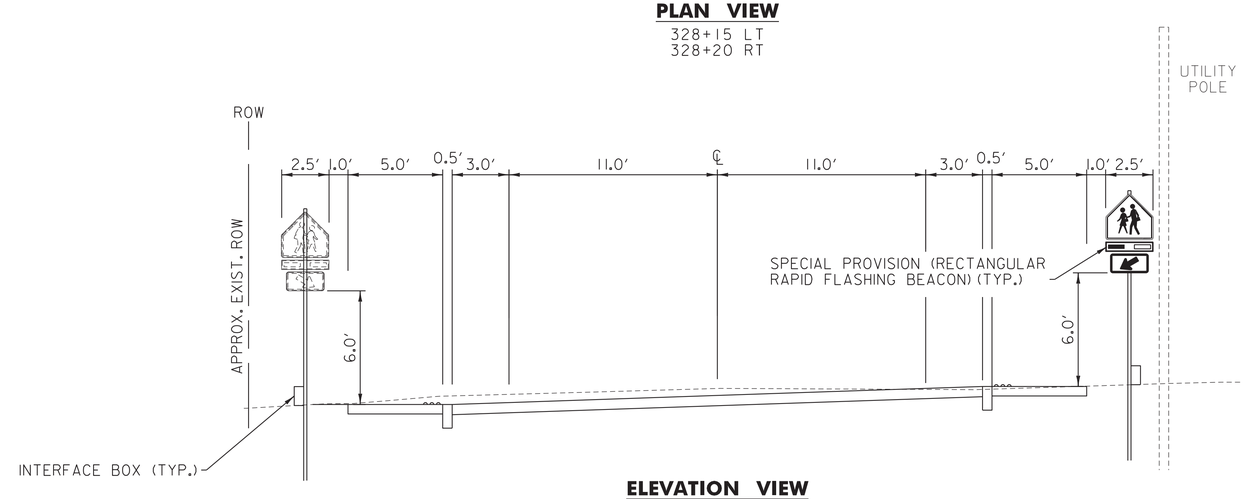
VERTICAL GRANITE CURB DETAIL

320+80 TO 321+07 LT
327+46 TO 328+25 LT
327+95 TO 328+18 RT



PLAN VIEW

328+15 LT
328+20 RT



ELEVATION VIEW

(LOOKING UPSTATION)

RECTANGULAR RAPID FLASHING BEACON DETAIL

PAYMENT FOR RECTANGULAR RAPID FLASHING BEACON ASSEMBLIES WILL BE MADE UNDER ITEM 900.650 SPECIAL PROVISION (RECTANGULAR RAPID FLASHING BEACON).

NOT TO SCALE

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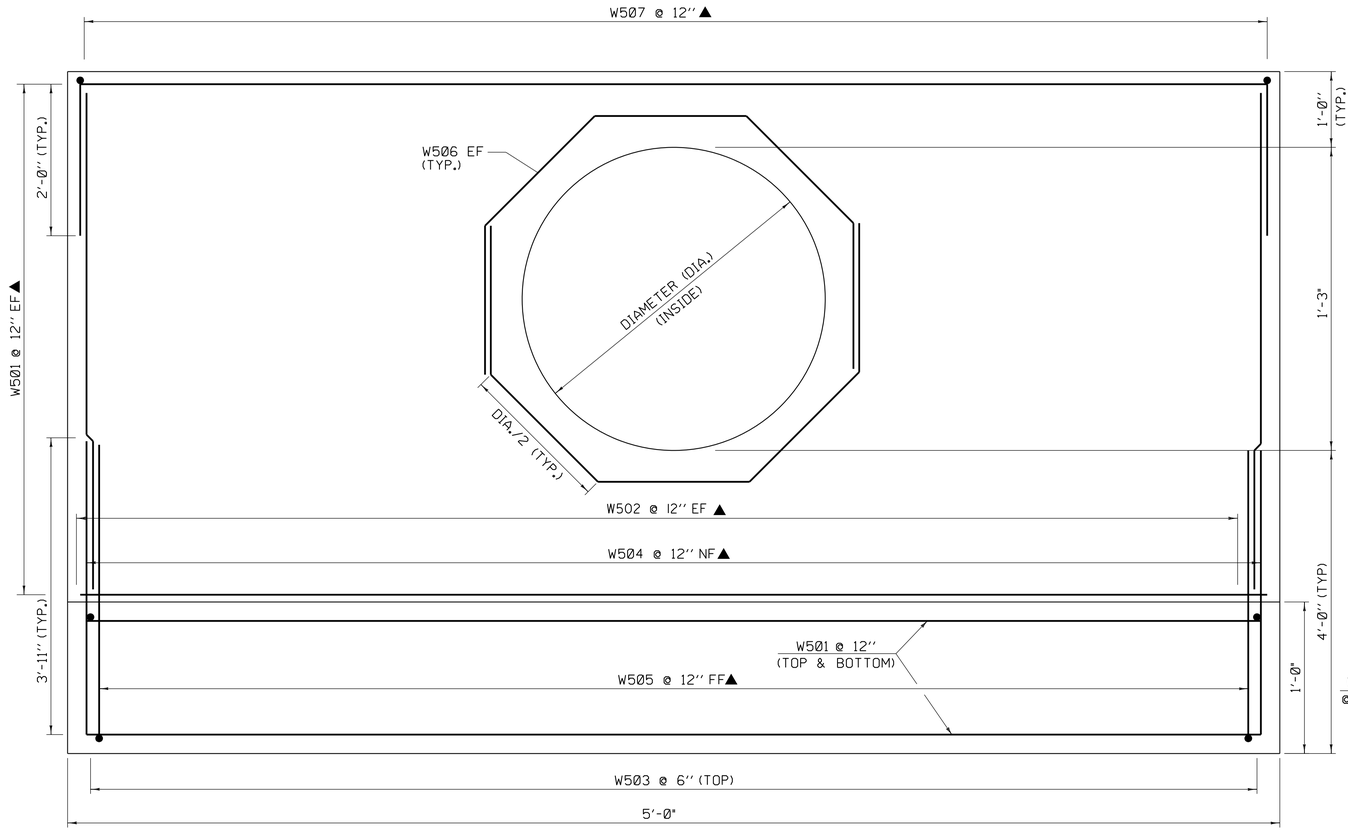
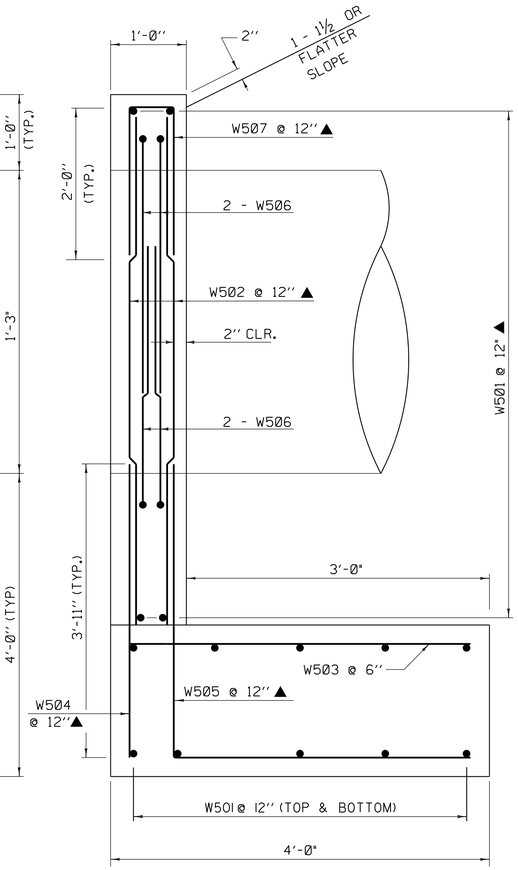
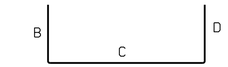
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
DETAIL SHEET 3	SHEET 24 OF 303

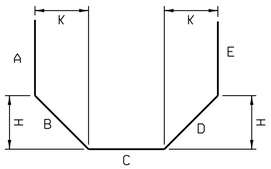
CLD 12-0337







REBAR TYPE: I7



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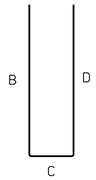


REBAR TYPE: S10

DESIGN CRITERIA

1. ASSUMED ALLOWABLE LOAD FOR SPREAD FOOTINGS
   - ON SOIL: 4 KSF
   - ON LEDGE: 10 KSF
2. REINFORCING STEEL GRADE: 60 KSI, LEVEL I
3. CONCRETE CLASS B: 3500 PSI
4. SOIL UNIT WEIGHT: 140 PSF
5. ASSUMED FOOTING FRICTION COEFFICIENT: 0.55
6. SOIL FRICTION ANGLE: 33.67°
7. DEDUCT VOLUME OF PIPE.
8. ALL EXPOSED EDGES WILL BE CHAMFERED ONE INCH.
9. ALL REBAR CLEARANCES SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
10. CONSTRUCTION JOINT SURFACE SHALL BE ROUGH.

REBAR NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

STEEL SCHEDULE FOR REINFORCED CONCRETE HEADWALL DIA. 15''

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	H	K
1	22	5	4'-6"	W501	STR.							
2	12	5	5'-0"	W502	STR.							
3	11	5	3'-6''	W503	STR.							
4	6	5	3'-11''	W504	STR.							
5	6	5	6'-10''	W505	17		3'-11''	2'-11''	——			
6	4	5		W506	14	0'-8"	0'-8"	0'-8"	0'-8"	0'-8"	0'-5⅝"	0'-5⅝"
7	6	5		W507	S10		2'-0''	0'-7''	2'-0''			

PIPE DIAMETER	15''
CONCRETE QUANTITY (CY)	1.67
LENGTH OF BARS	303'
WEIGHT OF BARS (LB)	316

HEADWALL DETAIL FOR 15" PIPE

STA 110+33 LT
STA 164+19 LT

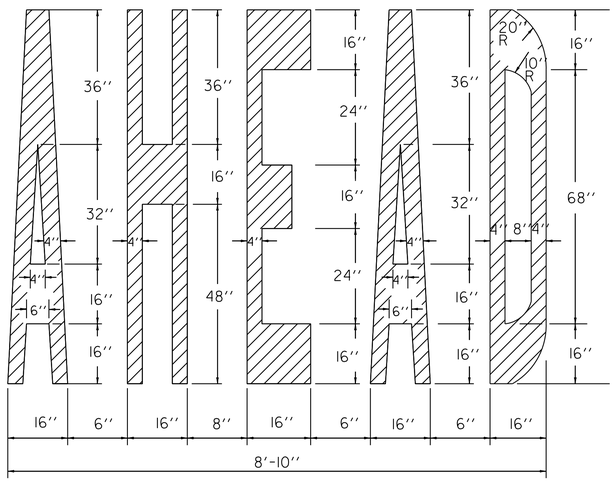
NOT TO SCALE

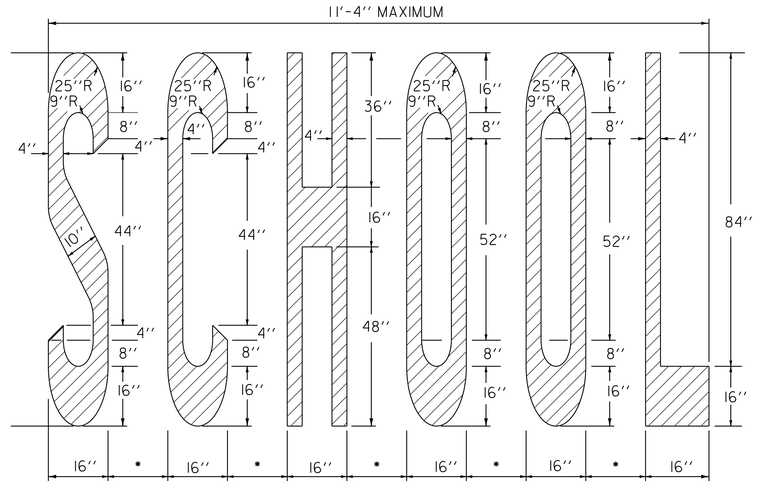
PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

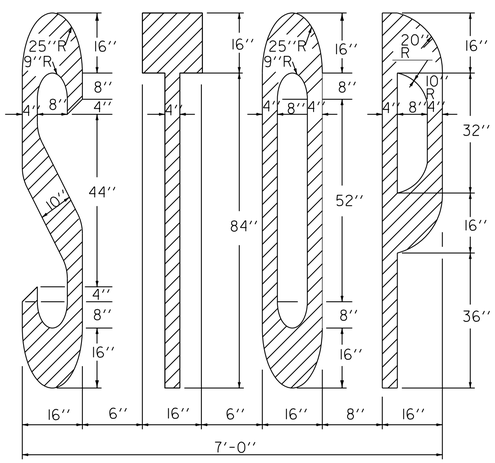
FILE NAME: z99c194typ.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: S. BEAUMONT
HEADWALL DETAIL SHEET

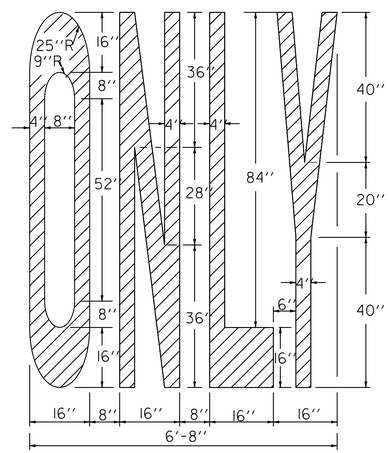
PLOT DATE: 9/4/2015
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 25 OF 303

CLD 12-0337

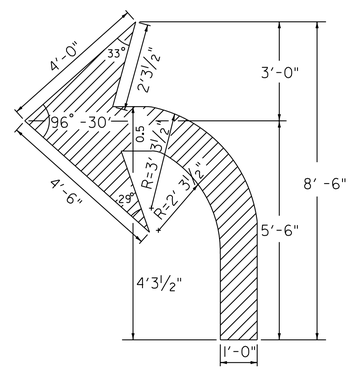




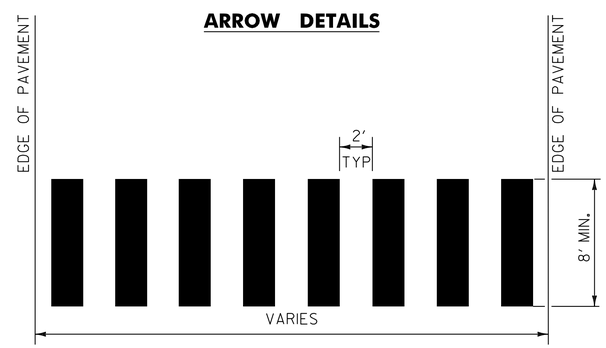


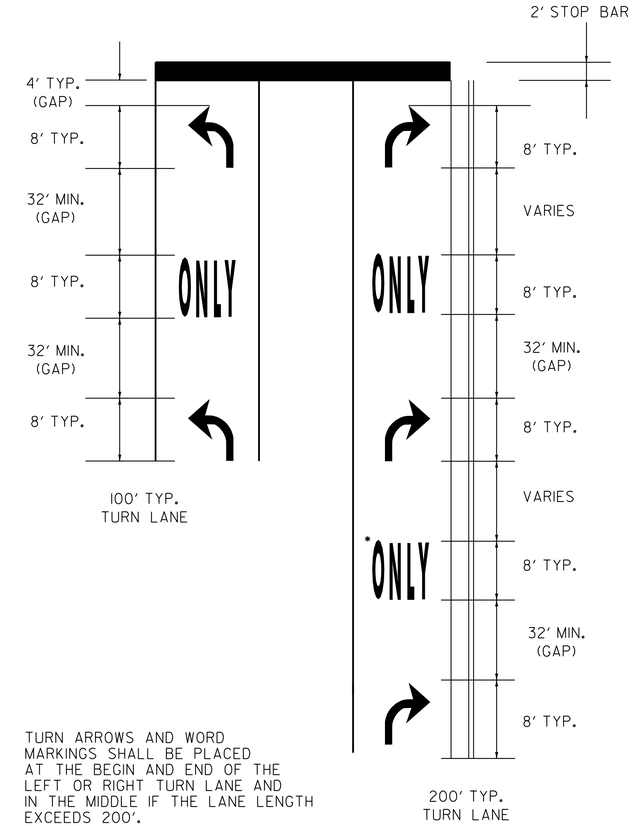


PAVEMENT MARKING DETAILS



ARROW DETAILS





TURN ARROWS AND WORD MARKINGS SHALL BE PLACED AT THE BEGIN AND END OF THE LEFT OR RIGHT TURN LANE AND IN THE MIDDLE IF THE LANE LENGTH EXCEEDS 200'.

IF LANE LENGTH IS LESS THAN 50 FEET, ONLY ONE TURN ARROW PLACED AT THE BEGINNING OF THE SOLID LANE LINE, IS REQUIRED.

THE "ONLY" WORD MARKINGS SHALL BE USED TO SUPPLEMENT LANE-USE ARROW MARKINGS

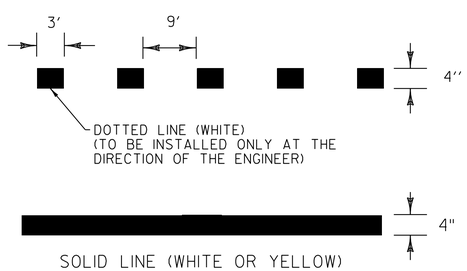
THE LONGITUDINAL SPACE BETWEEN WORD OR SYMBOL MESSAGE MARKINGS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTERS FOR LOW SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITIONS.

STOP BARS ARE INSTALLED ONLY WHERE A STOP SIGN OR TRAFFIC SIGNAL ARE LOCATED.

* A SECOND "ONLY" IS OPTIONAL WHEN SPACE PERMITS. ARROW MARKINGS START AT THE BEGINNING OF THE SOLID LANE LINE.

EXCLUSIVE TURN LANES (LEFT OR RIGHT) LANE LINES SHALL BE SOLID AND EXTEND BACK FROM THE STOP LINE TO THE POINT OF FULL LANE WIDTH OF THE TURN LANE.

TYPICAL MARKINGS FOR TURN LANES



PAVEMENT MARKING LINE DETAILS

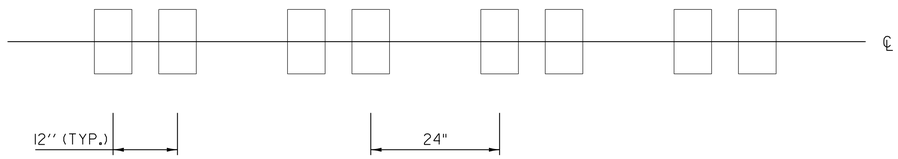
1. MARK LIGHT STRING LINE ON PAVEMENT ACROSS ROADWAY (CURB TO CURB).
2. ESTABLISH THE CENTER LINE OF THE ROADWAY (DOUBLE YELLOW LINE OR LANE LINE).
3. BLOCKS ARE PARALLEL TO THE CENTERLINE (DOUBLE YELLOW LINE OR LANE LINE) (OFFSET BLOCKS VERTICALLY TO ACHEIVE REQUIRED SKEW).
4. ALWAYS START MEARSURING FROM THE CENTERLINE OR LANE LINE RIGHT, WITH THE FLOW OF TRAFFIC.
5. PAINTED BLOCKS ARE 24 INCHES (TYPICAL).
6. ADJUST SPACING (12 INCHES-24 INCHES) TO AVOID WHEEL PATHS.

BLOCK PATTERN CROSSWALK DETAIL

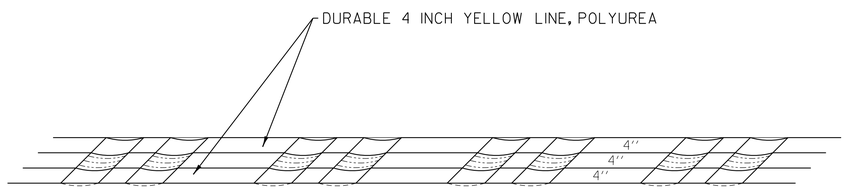
NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194tsdet.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PAVEMENT MARKING DETAILS SHEET	SHEET 26 OF 303

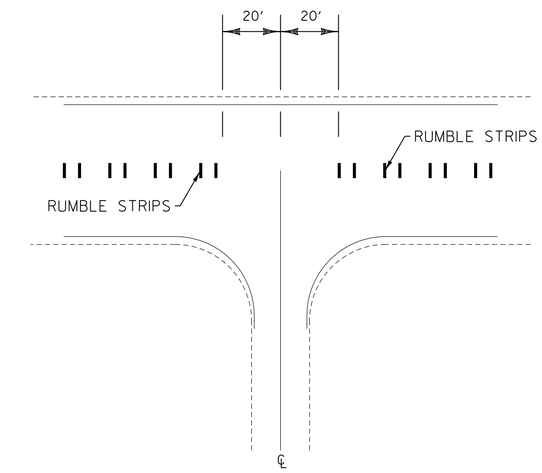
CLD 12-0337



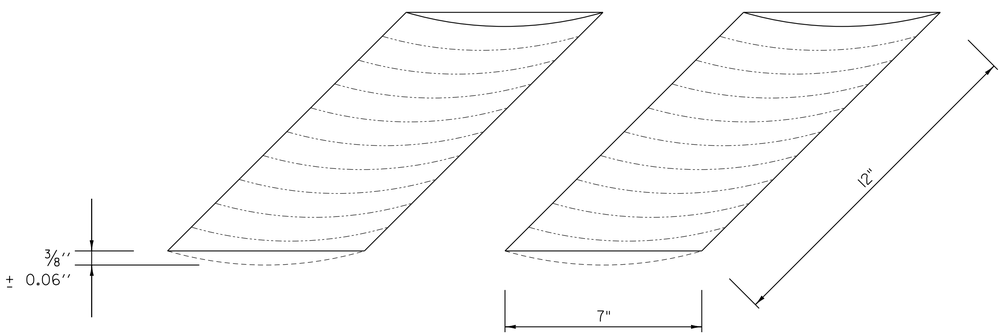
RUMBLE STRIP LAYOUT



PAVEMENT MARKINGS DETAIL



INTERSECTION DETAIL



RUMBLE STRIP DETAIL

LOCATION

82+20 TO 188+81 CL
189+21 TO 210+05 CL
210+45 TO 241+80 CL
242+20 TO 247+10 CL
273+00 TO 293+12 CL
293+52 TO 294+05 CL
294+45 TO 299+22 CL
299+62 TO 312+25 CL
383+00 TO 388+34 CL
388+74 TO 395+07 CL
395+47 TO 409+76 CL
410+16 TO 412+48 CL
412+88 TO 442+50 CL

NOTES

1. CENTERLINE RUMBLE STRIPS NOT TO EXTEND BEYOND CENTERLINE WHEN CENTERLINE IS A DOUBLE YELLOW LINE, WITH OR WITHOUT A PASSING ZONE.
2. CENTERLINE RUMBLE STRIP TO BE PLACED ALONG CENTERLINE OF ROADWAY.
3. CENTERLINE RUMBLE STRIP TO STOP 20 FEET PRIOR TO THE CENTERLINE OF AN INTERSECTION.

NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194tsdet.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
RUMBLE STRIP DETAIL SHEET	SHEET 27 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES					TOTALS		DESCRIPTIONS			
ROADWAY	ROADWAY(NO FED/STATE PARTICIPATIO	TRAINING	RAILROAD - BID ITEMS	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1					1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-
14050			140		14190		CY	COMMON EXCAVATION	203.15	EST.
1300					1300		CY	EARTH BORROW	203.30	25
775					775		LF	SHOULDER BERM REMOVAL	203.40	EST.
5100					5100		CY	TRENCH EXCAVATION OF EARTH	204.20	31
20					20		CY	TRENCH EXCAVATION OF ROCK	204.21	EST.
1					1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-
25					25		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	EST.
132600					132600		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	218
26000					26000		LF	MILLED RUMBLE STRIPS	213.10	35
32300					32300		TON	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.28	136
7050					7050		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	EST.
142500					142500		SY	RECLAIMED STABILIZED BASE	310.20	436
70					70		CY	AGGREGATE SURFACE COURSE	401.10	7
5450					5450		TON	AGGREGATE SHOULDERS, RAP	402.13	33
1					1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-
33689			11		33700		TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	490.30	100
1					1		LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	-
1					1		LU	MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	490.32	-
1					1		LU	SURFACE TOLERANCE PAY ADJUSTMENT (N.A.B.I.)	490.33	-
1					1		LU	LONGITUDINAL JOINT COMPACTION PAY ADJUSTMENT (N.A.B.I.)	490.34	-
2800					2800		LB	REINFORCING STEEL, LEVEL I	507.11	8
170					170		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	2
16					16		CY	CONCRETE, CLASS B	541.25	0.81
1.5					1.5		CY	CONCRETE, CLASS C	541.30	0.4
60					60		LF	12" CSP .064 (2-2/3 X 1/2)	601.0005	-
18					18		LF	15" PCCSP .064 (2-2/3 X 1/2)	601.0410	-
20					20		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415	-
5					5		LF	24" PCCSP .064 (2-2/3 X 1/2)	601.0425	-
5					5		LF	24" RCP CLASS III	601.0825	-
107					107		LF	15" CPEP(SL)	601.2610	-
48					48		LF	18" CPEP(SL)	601.2615	-
2					2		EACH	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	604.20	-
	1				1		EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40	-
8					8		EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412	-
4					4		EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS II	604.415	-
11800					11800		LF	6 INCH UNDERDRAIN PIPE	605.10	33
100					100		HR	POWER GRADER RENTAL	608.15	EST.
415					415		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.
40					40		HR	POWER BROOM RENTAL, TYPE I	608.30	EST.

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COLD PLANING, BITUMINOUS PAVEMENT
129785	SY	VT 113
1003	SY	VT 244
1594	SY	TOWN HIGHWAYS
132382	SY	SUBTOTAL
218	SY	ROUNDING
132600	SY	TOTAL
		SUBBASE OF CRUSHED GRAVEL, FINE GRADED
16604	TON	FILL NEEDED FOR DIFFERENCES IN SUPERELEVATION
		AND GRADTION DEFICIENCIES
1524	TON	TOWN HIGHWAYS
14036	TON	UNSUITABLE SUBBASE MATERIAL UNDERCUT
32164	TON	SUBTOTAL
136	TON	ROUNDING
32300	TON	TOTAL
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
		PAVEMENT TREATMENT 1
6021	TON	VT 113, TYPE IV S, WEARING COURSE
8003	TON	VT 113, TYPE III S, INTERMEDIATE COURSE
70	TON	VT 244, TYPE IV S, WEARING COURSE
93	TON	VT 244, TYPE III S, INTERMEDIATE COURSE
		PAVEMENT TREATMENT 2
6578	TON	VT 113, TYPE IV S, WEARING COURSE
11324	TON	VT 113, TYPE II S, INTERMEDIATE COURSE
		COLD PLANE AND OVERLAY
960	TON	VT 113, TYPE III S, INTERMEDIATE COURSE
		TOWN HIGHWAYS
540	TON	TOWN HIGHWAYS, TYPE IV S, WEARING COURSE
11	TON	RAILROAD
33600	TON	SUBTOTAL
100	TON	ROUNDING
33700	TON	TOTAL

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
QUANTITY SHEET 1

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 28 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES					TOTALS		DESCRIPTIONS			
ROADWAY	ROADWAY(NO FED/STATE PARTICIPATIO	TRAINING	RAILROAD - BID ITEMS	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
490					490		HR	TRUCK RENTAL	608.37	EST.
40					40		HR	LOADER RENTAL, TYPE I	608.40	EST.
2530					2530		CY	STONE FILL, TYPE I	613.10	23
160					160		LF	VERTICAL GRANITE CURB	616.21	9
7					7		TON	BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS	616.47	0.5
17					17		EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	EST.
2					2		EACH	RELOCATE MAILBOX, MULTIPLE SUPPORT	617.12	EST.
25					25		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	4
60					60		SF	DETECTABLE WARNING SURFACE	618.30	4
157					157		EACH	YIELDING MARKER POSTS	619.17	EST.
4925					4925		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	27
5150					5150		LF	STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.205	22.5
51					51		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	-
4					4		EACH	GUARDRAIL APPROACH SECTION, GALV HD STEEL BEAM	621.737	-
70					70		LF	REMOVE AND RESET GUARDRAIL	621.75	2
9600					9600		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	57
60					60		LF	TEMPORARY TRAFFIC BARRIER	621.90	-
1600					1600		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.
12000					12000		HR	FLAGGERS	630.15	EST.
				1	1		LS	FIELD OFFICE, ENGINEERS	631.10	-
				1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16	-
				1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-
				3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-
		520			520		HR	EMPLOYEE TRAINEESHIP	634.10	-
1					1		LS	MOBILIZATION/DEMOBILIZATION	635.11	-
1					1		LS	TRAFFIC CONTROL	641.10	-
8					8		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-
								BEGIN OPTION AA		
84300					84300		LF	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	646.402	304
84300					84300		LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.404	304
								END OPTION AA		
								BEGIN OPTION BB		
56300					56300		LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412	55
56300					56300		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414	55
								END OPTION BB		
26100					26100		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414	135
								BEGIN OPTION CC		
460					460		LF	DURABLE 8 INCH YELLOW LINE, THERMOPLASTIC	646.452	5
460					460		LF	DURABLE 8 INCH YELLOW LINE, POLYUREA	646.454	5
								END OPTION CC		

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
QUANTITY SHEET 2

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 29 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES					TOTALS		DESCRIPTIONS			
ROADWAY	ROADWAY(NO FED/STATE PARTICIPATIO	TRAINING	RAILROAD - BID ITEMS	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
								BEGIN OPTION DD		
280					280		LF	DURABLE 24 INCH STOP BAR, THERMOPLASTIC	646.482	4
280					280		LF	DURABLE 24 INCH STOP BAR, POLYUREA	646.484	4
								END OPTION DD		
								BEGIN OPTION EE		
130					130		EACH	DURABLE LETTER OR SYMBOL, THERMOPLASTIC	646.492	-
130					130		EACH	DURABLE LETTER OR SYMBOL, POLYUREA	646.494	-
								END OPTION EE		
								BEGIN OPTION FF		
75					75		LF	DURABLE CROSSWALK MARKING, THERMOPLASTIC	646.502	2
75					75		LF	DURABLE CROSSWALK MARKING, POLYUREA	646.504	2
								END OPTION FF		
								BEGIN OPTION GG		
2					2		EACH	DURABLE RAILROAD CROSSING SYMBOL, THERMOPLASTIC	646.512	-
2					2		EACH	DURABLE RAILROAD CROSSING SYMBOL, POLYUREA	646.514	-
								END OPTION GG		
252900					252900		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	912
249000					249000		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	2370
840					840		LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	12
264					264		EACH	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	-
225					225		LF	TEMPORARY CROSSWALK MARKING, PAINT	646.702	6
6					6		EACH	TEMPORARY RAILROAD CROSSING SYMBOL, PAINT	646.712	-
16900					16900		EACH	LINE STRIPING TARGETS	646.76	50
670					670		LF	PAINTED CURB	646.81	10
2900					2900		SF	PAINTED ISLAND	646.82	31
21200					21200		SY	GEOTEXTILE FOR ROADBED SEPARATOR	649.11	EST.
730					730		SY	GEOTEXTILE FOR SILT FENCE	649.51	8
790					790		LB	SEED	651.15	EST.
2640					2640		LB	FERTILIZER	651.18	EST.
11					11		TON	AGRICULTURAL LIMESTONE	651.20	EST.
11					11		TON	HAYMULCH	651.25	EST.
570					570		CY	TOPSOIL	651.35	EST.
35100					35100		SY	GRUBBING MATERIAL (2")	651.40	81
750					750		SY	GRUBBING MATERIAL (6")	651.40	12
22000					22000		SY	TEMPORARY EROSION MATTING	653.20	204
130					130		LF	BARRIER FENCE	653.50	EST.
2730					2730		LF	EROSION LOG	653.60	15
1650					1650		SF	TRAFFIC SIGNS, TYPE A	675.20	2.85
420					420		LB	TUBULAR STEEL SIGN POST	675.33	2
4135					4135		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
QUANTITY SHEET 3

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 30 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 4

SUMMARY OF ESTIMATED QUANTITIES / TOTALS / DESCRIPTIONS

ROADWAY	ROADWAY(NO FED/STATE PARTICIPATIO	TRAINING	RAILROAD - BID ITEMS	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
4					4		EACH	FOUNDATION FOR TUBULAR STEEL POST	675.43	-
394					394		EACH	REMOVING SIGNS	675.50	-
40					40		EACH	ERECTING SALVAGED SIGNS	675.60	-
50					50		EACH	DELINEATOR WITH STEEL POST	676.10	-
50					50		EACH	REMOVAL OF EXISTING DELINEATOR	676.12	-
225					225		LF	WIRED CONDUIT (2")(PVC)	678.23	7
1					1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-
5					5		EACH	SPECIAL PROVISION (CORING CONCRETE)	900.620	-
6					6		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620	-
1					1		EACH	SPECIAL PROVISION (GNSS CONSTRUCTION INSPECTION EQUIPMENT)	900.620	-
			200		200		EACH	SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES)	900.620	-
2					2		EACH	SPECIAL PROVISION (SCHOOL ZONE FLASHING BEACON, SOLAR-POWERED)	900.620	-
18					18		EACH	SPECIAL PROVISION (SOIL BEARING SLIP BASE) (2 1/2")	900.620	-
142500					142500		GAL	SPECIAL PROVISION (LIQUID CALCIUM CHLORIDE FOR BASE STABILIZATION)	900.625	436
575					575		LF	SPECIAL PROVISION (BARRIER FOR TEMPORARY TRAFFIC PROTECTION)	900.640	12.5
1					1		LS	SPECIAL PROVISION (GPS MACHINE CONTROL GRADING)	900.645	-
			1		1		LS	SPECIAL PROVISION (RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM) (AARDOT 053-553T)	900.645	-
			1		1		LS	SPECIAL PROVISION (RECONSTRUCT RAIL-HIGHWAY CROSSING) (AARDOT 053-553T)	900.645	-
1					1		LS	SPECIAL PROVISION (RECTANGULAR RAPID FLASHING BEACON)	900.645	-
			1		1		LS	SPECIAL PROVISION (REGRADING AND REALIGNING TRACK)	900.645	-
			1		1		LU	SPECIAL PROVISION (MAINTENANCE OF RAIL TRAFFIC) (N.A.B.I.)	900.650	-
			1		1		LU	SPECIAL PROVISION (TEST TRAIN ALLOWANCE) (N.A.B.I.)	900.650	-
144500					144500		SY	SPECIAL PROVISION (COLD MIXED RECYCLED BITUMINOUS PAVEMENT, PORTLAND CEMENT)	900.675	229
2800					2800		SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675	34
142500					142500		SY	SPECIAL PROVISION (RECLAIMED STABILIZED BASE, LIQUID CALCIUM CHLORIDE)	900.675	436
3650					3650		TON	SPECIAL PROVISION (AGGREGATE TO MEET COLD MIXED GRADATION)	900.680	38
50					50		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)	900.680	EST
33700					33700		TON	SPECIAL PROVISION (MATERIAL TRANSFER VEHICLE)	900.680	111
24200					24200		TON	SPECIAL PROVISION (MATERIAL TRANSFER VEHICLE, COLD MIX)	900.680	117
210					210		TON	SPECIAL PROVISION (PORTLAND CEMENT FOR COLD MIXED RECYCLING)	900.680	-
			530		530		TON	SPECIAL PROVISION (RAILROAD BALLAST)	900.680	-
1155					1155		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H)	900.683	8
14500					14500		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT, COLD MIX WITH CEMENT)	900.683	50

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SPECIAL PROVISION (COLD MIXED RECYCLED BITUMINOUS PAVEMENT, PORTLAND CEMENT)
141247	SY	VT 113
756	SY	VT 244
2268	SY	TOWN HIGHWAYS
144271	SY	SUBTOTAL
229	SY	ROUNDING
144500	SY	TOTAL
		SPECIAL PROVISION (RECLAIMED STABILIZED BASE, LIQUID CALCIUM CHLORIDE)
139146	SY	VT 113
650	SY	VT 244
2268	SY	TOWN HIGHWAYS
142064	SY	SUBTOTAL
436	SY	ROUNDING
142500	SY	TOTAL
		SPECIAL PROVISION (MATERIAL TRANSFER VEHICLE)
		PAVEMENT TREATMENT 1
6021	TON	VT 113, TYPE IV S, WEARING COURSE
8003	TON	VT 113, TYPE III S, INTERMEDIATE COURSE
70	TON	VT 244, TYPE IV S, WEARING COURSE
93	TON	VT 244, TYPE III S, INTERMEDIATE COURSE
		PAVEMENT TREATMENT 2
6578	TON	VT 113, TYPE IV S, WEARING COURSE
11324	TON	VT 113, TYPE II S, INTERMEDIATE COURSE
		COLD PLANE AND OVERLAY
960	TON	VT 113, TYPE III S, INTERMEDIATE COURSE
		TOWN HIGHWAYS
540	TON	TOWN HIGHWAYS, TYPE IV S, WEARING COURSE
33589	TON	SUBTOTAL
111	TON	ROUNDING
33700	TON	TOTAL
		SPECIAL PROVISION (MATERIAL TRANSFER VEHICLE, COLD MIX)
24083	TON	COLD MIX
24083	TON	SUBTOTAL
117	TON	ROUNDING
24200	TON	TOTAL

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
QUANTITY SHEET 4

PLOT DATE: 9/18/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 31 OF 303

CLD 12-0337

LOCATION			DRAINAGE		GUARDRAIL						MISCELLANEOUS													REMARKS
			604.412	604.415	621.20	621.205	621.60	621.737	621.75	621.80	613.10	651.15	651.40	653.20	676.10									
MM	MM	POS	REHAB. DI, CB, OR MH, CLASS I	REHAB. DI, CB, OR MH, CLASS II	STEEL BEAM GUARDRAIL GALV.	STEEL BEAM GUARDRAIL GALV. W/8' POSTS	ANCHOR FOR STEEL BEAM RAIL	GUARDRAIL APPROACH SECTION, GALV. HD STEEL BEAM	REMOVE AND RESET GUARDRAIL	REMOVAL & DISPOSAL OF GUARDRAIL	STONE FILL, TYPE I	SEED	GRUBBING MATERIAL (6")	TEMP. EROSION MATTING	DELIN. WITH STEEL POST									
			EACH	EACH	LF	LF	EACH	EACH	LF	LF	CY	LB	SY	SY	EACH									
	THETFORD																							
41+90.0	461+49.0	LT/RT	8	4								548.0		13244										ESTIMATED QUANTITY TO BE USED AS DIRECTED BY THE ENGINEER
41+90.0	461+49.0	LT/RT									2254	208.0		6539										SEE DITCH CLEANING DETAIL SHEETS
41+90.0	461+49.0	LT/RT									7													SEE DRAINAGE DETAIL SHEET
41+90.0	461+49.0	LT/RT										7.0		1275										ESTIMATED QUANTITY TO BE USED AT GUARDRAIL TERMINALS
47+66.0	51+29.0	LT								363.0														
47+65.0	51+27.5	LT			29.0	337.5	2								2									SEE STANDARD G-1d
49+50.0	50+50.0	LT									21	2.0	63	63										
52+35.0	52+75.0	RT									14	1.5	42	42										
	BRIDGE 25																							
58+95.0	61+16.0	LT								221.0														
58+90.5	60+90.5	LT			202.0		1								1									SEE STANDARD G-1d
60+90.5	61+15.5	LT						1																
61+15.5	61+95.0	LT																						RETAIN EXIST. BRIDGE RAIL
	BRIDGE 25																							
60+80.0	61+48.0	RT							68.0						1									
61+48.0	62+32.5	RT																						RETAIN EXIST. BRIDGE RAIL
62+33.0	63+44.0	RT								111.0														
62+32.5	62+57.5	RT						1																
62+57.5	63+45.0	RT			14.5	75.0	1								1									SEE STANDARD G-1d
63+69.0	70+37.0	RT								668.0														
63+69.0	70+31.5	RT			466.5	200.0	2								2									SEE STANDARD G-1d
70+76.0	73+83.0	RT								307.0														
70+72.5	73+85.0	RT			316.5		2								2									SEE STANDARD G-1d
114+00.0	114+50.0	RT									17	2.0	51	51										
144+89.0	146+90.0	LT								201.0														
144+90.0	148+90.0	LT			29.0	375.0	2								2									SEE STANDARD G-1d
145+18.0	146+94.0	RT								176.0														
145+30.5	146+93.0	RT			29.0	137.5	2								2									SEE STANDARD G-1d
147+25.0	147+75.0	LT									7	1.0	21	21										
158+94.0	161+45.0	RT								251.0														
158+95.0	161+45.0	RT			254.0		2								2									SEE STANDARD G-1d
173+43.0	178+69.0	RT								526.0														
172+92.0	178+67.0	RT			29.0	550.0	2								2									SEE STANDARD G-1d, PIPE 172+77 ~ 173+07
173+00.0	174+50.0	RT									23	2.5	69	69										
177+32.0	178+70.0	LT								138.0														
185+40.0	192+01.0	LT								661.0														
185+53.0	192+03.0	LT			654.0		2								2									SEE STANDARD G-1d, PIPE 185+38 ~ 185+68
189+19.0	191+79.0	RT								260.0														
189+18.0	191+76.5	RT			277.0		1								1									CONNECT TO EXIST. RAIL ON TH 20, SEE STANDARD G-1d
190+00.0	192+00.0	LT									41	4.0	123	123										
213+04.0	216+16.0	LT								312.0														
213+03.5	216+16.0	LT			316.5		2								2									SEE STANDARD G-1d
SUBTOTAL SHEET 32			8	4	2617.0	1675.0	21	2	68.0	4195.0	2384	776.0	369	21427	22									

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
ITEM DETAIL SHEET 1

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 32 OF 303

CLD 12-0337

LOCATION			DRAINAGE		GUARDRAIL						MISCELLANEOUS													REMARKS
			604.412	604.415	621.20	621.205	621.60	621.737	621.75	621.80	613.10	651.15	651.40	653.20	676.10									
MM	MM	POS	REHAB. DI, CB, OR MH, CLASS I	REHAB. DI, CB, OR MH, CLASS II	STEEL BEAM GUARDRAIL GALV.	STEEL BEAM GUARDRAIL GALV. W/8' POSTS	ANCHOR FOR STEEL BEAM RAIL	GUARDRAIL APPROACH SECTION, GALV. HD STEEL BEAM	REMOVE AND RESET GUARDRAIL	REMOVAL & DISPOSAL OF GUARDRAIL	STONE FILL, TYPE I	SEED	GRUBBING MATERIAL (6")	TEMP. EROSION MATTING	DELIN. WITH STEEL POST									
			EACH	EACH	LF	LF	EACH	EACH	LF	LF	CY	LB	SY	SY	EACH									
213+50.0	216+00.0	LT									36	3.5	108	108										
230+48.0	241+67.0	RT								1119.0														
230+15.0	241+65.0	RT			29.0	1125.0	2								2									SEE STANDARD G-1d
234+99.0	238+49.0	LT								350.0														
234+49.0	238+49.0	LT			404.0		2								2									SEE STANDARD G-1d
235+00.0	236+50.0	LT									28	3.0	84	84										
265+81.0	267+47.0	RT								166.0														
265+80.0	267+67.5	RT			29.0	177.5	2								2									SEE STANDARD G-1d, SEE NON-YIELDING OBJECT DETAIL ON SHEET 23
282+73.0	289+50.0	RT								677.0														
282+72.5	289+47.5	RT			679.0		2								2									SEE STANDARD G-1d
292+57.0	296+12.0	RT								355.0														
292+57.0	296+07.0	RT			29.0	325.0	2								2									SEE STANDARD G-1d
294+35.0	294+75.0	RT									7	1.0	21	21										
294+48.0	550+42.0	LT								482.0														
294+48.0	550+45.0	LT			29.0	487.5	2								2									BEGINS ON TH 71, ENDS ON TH 30, SEE STANDARD G-1d
550+55.0	304+62.0	RT/LT								525.0														
550+51.0	304+62.0	RT/LT			29.0	500.0	2								2									BEGINS ON TH 30, SEE STANDARD G-1d
303+50.0	304+00.0	LT									7	1.0	21	21										
342+41.0	343+04.0	LT								63.0														
342+04.0	343+04.0	LT			29.0	75.0	2								2									SEE STANDARD G-1d
342+41.0	343+44.0	RT								103.0														
342+29.0	343+41.5	RT			29.0	87.5	2								2									SEE STANDARD G-1d
367+56.0	373+46.5	RT																						RETAIN ALUMINUM RAIL (INCLUDES BRIDGE 32)
368+51.0	374+51.0	LT																						RETAIN ALUMINUM RAIL (INCLUDES BRIDGE 32)
383+74.0	385+98.0	RT								224.0														
414+20.0	416+70.0	RT								250.0														
414+20.0	416+20.0	RT			204.0		2								2									SEE STANDARD G-1d
415+00.0	415+50.0	RT									14	1.5	42	42										
415+60.0	416+45.0	LT								85.0														
415+59.0	416+71.5	LT			29.0	87.5	2								2									SEE STANDARD G-1d
415+75.0	416+25.0	LT									11	1.5	33	33										
425+16.0	431+26.0	LT								610.0														
421+00.0	431+25.0	LT			566.5	462.5	2								2									SEE STANDARD G-1d
427+00.0	427+50.0	LT									6	1.0	18	18										
430+00.0	431+00.0	LT									14	1.5	42	42										
SUBTOTAL SHEET 33			0	0	2085.5	3327.5	24	0	0.0	5009.0	123	14.0	369	369	24									

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
ITEM DETAIL SHEET 2

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 33 OF 303

CLD 12-0337

LOCATION			DRAINAGE		GUARDRAIL						MISCELLANEOUS													REMARKS
			604.412	604.415	621.20	621.205	621.60	621.737	621.75	621.80	613.10	651.15	651.40	653.20	676.10									
MM	MM	POS	REHAB. DI, CB, OR MH, CLASS I	REHAB. DI, CB, OR MH, CLASS II	STEEL BEAM GUARDRAIL GALV.	STEEL BEAM GUARDRAIL GALV. W/8' POSTS	ANCHOR FOR STEEL BEAM RAIL	GUARDRAIL APPROACH SECTION, GALV. HD STEEL BEAM	REMOVE AND RESET GUARDRAIL	REMOVAL & DISPOSAL OF GUARDRAIL	STONE FILL, TYPE I	SEED	GRUBBING MATERIAL (6")	TEMP. EROSION MATTING	DELIN. WITH STEEL POST									
			EACH	EACH	LF	LF	EACH	EACH	LF	LF	CY	LB	SY	SY	EACH									
431+60.0	432+87.0	LT								127.0														
431+60.0	433+10.0	LT			29.0	125.0	2								2									SEE STANDARD G-1d
459+86.0	461+48.0	RT								162.0														
459+85.5	461+23.0	RT			139.5		1								1									SEE STANDARD G-1d
461+23.0	461+48.0	RT					1	1																SEE STANDARD G-1d
460+98.0	461+48.0	LT								50.0														
460+97.5	461+22.5	LT			27.0		1								1									SEE STANDARD G-1d
461+22.5	461+47.5	LT					1	1																SEE STANDARD G-1d
SUBTOTAL SHEET 32			8	4	2617.0	1675.0	21	2	68.0	4195.0	2384	776.0	369	21427	22									
SUBTOTAL SHEET 33			0	0	2085.5	3327.5	24	0	0.0	5009.0	123	14.0	369	369	24									
SUBTOTAL SHEET 34			0	0	195.5	125.0	6	2	0.0	339.0	0	0.0	0	0	4									
PROJECT SUBTOTAL			8	4	4898.0	5127.5	51	4	68.0	9543.0	2507	790.0	738	21796	50									
TOTAL ROUNDING			0	0	27.0	22.5	0	0	2.0	57.0	23	0.0	12	204	0									
PROJECT TOTAL			8	4	4925.0	5150.0	51	4	70.0	9600.0	2530	790.0	750	22000	50									

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
ITEM DETAIL SHEET 3

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 34 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET 1

STATION Feet	STATION Feet	POS.	PIPE ID NUMBER	INLET/OUTLET TYPE INLET	INLET/OUTLET TYPE OUTLET	DITCH IN	DITCH OUT	PIPE ARCH SPAN in	PIPE ARCH RISE in	PIPE ARCH L ft	PIPE D in	PIPE L ft	ALLOWABLE OPTIONS PCCSP in	CAAP in	RCP CLASS in	CSP in	CPEP (SL) in	PCCSP (PI) in	PIPE ELBOW no. deg.	ES ea	CB ea	PRCC DI	DEPTH DI ft	CONC CLASS B cy	REINF STEEL lb	DI GRATE type	CHAN ELEV ea	CRM cy	TRENCH EXCAVATION EARTH cy	TRENCH EXCAVATION ROCK cy	COMM EXC cy	UNC CHAN EXC cy	STRUCT EXCAV cy	GRAN BKFILL STRUCT cy	GRAN BORR cy	EROS MATT sy	STONE FILL cy	STONE FILL type	MARKER POSTS LT ea	MARKER POSTS RT ea	GEO UNDER SF sy		REMARKS
63+02		RT																											5.0														REMOVE EXISTING DI & 12" CGMP
63+02		LT/RT		PRCDI							18	48.0					X				4.0		7			1-A			71.0					4.00			1.0	I		1			
74+10		LT		HW							24	5.0	0.064											2.85	516.0				15.0					0.46			2.0	I	1				
107+37		LT		HW							18	5.0	0.064											2.05	376.0				10.0					0.42						1			
110+33		LT		HW							15	5.0	0.064											1.67	316.0				8.0					0.39			1.0	I	1				SEE HEADWALL DETAIL SHEET
164+19		LT		HW							15	5.0	0.064											1.67	316.0				8.0					0.39			1.0	I	1				SEE HEADWALL DETAIL SHEET
172+77	173+07	RT									12	30.0				0.064													7.0					2.22									GUARDRAIL FLARE
185+38	185+68	LT									12	30.0				0.064													8.0					2.22									GUARDRAIL FLARE
281+64		LT																											9.0														REMOVE EXISTING OTDI
281+66		LT		PRCDI							18	5.0	0.064								4.0		6			1-A			12.0					0.80					1				
288+24		LT		HW							18	5.0	0.064											2.05	376.0				10.0					0.42			1.0	I	1				
308+82		LT		CHW							18	5.0	0.064											2.05	376.0				10.0					0.42			1.0	I	1				
333+05	333+36	RT									15	31.0					X												13.0					2.44									DRIVE PIPE
335+17	335+48	LT									15	31.0					X												13.0					2.44									DRIVE PIPE
335+57	335+82	LT									15	25.0					X												11.0					1.97									DRIVE PIPE
339+58	339+78	LT									15	20.0					X												9.0					1.57									DRIVE PIPE
340+62		RT									15	8.0	0.064																3.0					0.63			1.0	I		1			
459+96		LT		HW							24	5.0			III									2.85	516.0				13.0					0.46					1				
PROJECT TOTALS											12	60.0				0.064					-			15.19	2792.0	-			235.0					21.25			8.0	I	8	2			
											15	18.0	0.064								-	-				-	-											II					
											15	107.0					X				2	4.0				2	A											III					
											18	20.0	0.064									5.0					B											IV					
											18	48.0					X					6.0					D																
											24	5.0	0.064									7.0					E																
											24	5.0			III							8.0					COVER STEEL																

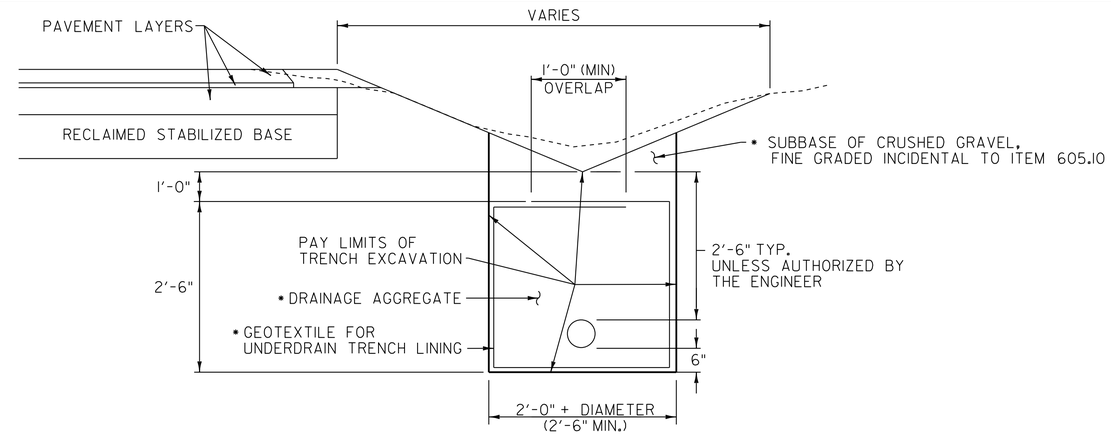
PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: P. SHEDD	CHECKED BY: N. LEMAY
DRAINAGE DETAIL SHEET	SHEET 35 OF 303

CLD 12-0337

LOCATION				605.10	*	*	*	204.20	204.21	619.17	REMARKS
				6 INCH UNDERDRAIN PIPE	DRAINAGE AGGREGATE	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	GEOTEXTILE FOR UNDERDRAIN TRENCH LINING	TRENCH EXCAVATION OF EARTH	TRENCH EXCAVATION OF ROCK	YIELDING MARKER POSTS	
SITE	STA	STA	POS	LF	CY	TON	SY	CY	CY	EA	
	THETFORD										
	41+90	461+49	LT/RT							113	INLETS AND OUTLETS OF CULVERTS
1	44+02	45+85	RT	183	78	41	309	88		1	18' OFFSET FROM CL CONNECT UD TO EXIST. OTDI (ITEM 900.620 SP (CORING CONCRETE))
2	48+00	50+25	RT	225	72	50	323	84		1	16' OFFSET FROM CENTERLINE
3	52+85	55+45	RT	260	65	58	329	79		1	14' OFFSET FROM CL CONNECT UD TO EXIST. DI (ITEM 900.620 SP (CORING CONCRETE))
4	56+85	59+32	RT	247	102	55	409	117		1	18' OFFSET FROM CENTERLINE CONNECT UNDERDRAIN TO EXISTING DI (ITEM 900.620 SPECIAL PROVISION (CORING CONCRETE))
5	62+50	63+00	LT	50	22	11	86	24		1	19.6' OFFSET FROM CENTERLINE CONNECT TO NEW DI
6	63+04	63+75	LT	71	29	16	117	33		1	19.6' OFFSET FROM CENTERLINE CONNECT TO NEW DI
7	66+34	67+25	LT	91	32	20	137	44		1	18' OFFSET FROM CENTERLINE CONNECT UNDERDRAIN TO EXISTING DI (ITEM 900.620 SPECIAL PROVISION (CORING CONCRETE))
8	67+68	70+25	LT	257	85	57	375	123		1	20' OFFSET FROM CENTERLINE CONNECT UNDERDRAIN TO EXISTING OTDI (ITEM 900.620 SPECIAL PROVISION (CORING CONCRETE))
9	70+50	72+25	LT	175	45	39	225	71		1	20' OFFSET FROM CENTERLINE
10	81+38	84+50	RT	312	82	70	405	102		1	18' OFFSET FROM CENTERLINE
11	88+40	98+25	RT	985	248	220	1252	300		1	16' OFFSET FROM CENTERLINE
12	98+85	102+00	RT	315	77	70	395	94		1	16' OFFSET FROM CENTERLINE
13	105+00	107+37	RT	237	62	53	307	75		1	16' OFFSET FROM CENTERLINE
14	107+40	110+25	LT	285	70	64	358	112		1	18' OFFSET FROM CENTERLINE
15	110+50	115+25	LT	475	196	106	787	237		1	18' OFFSET FROM CENTERLINE
16	116+25	117+80	LT	155	35	35	187	43		1	18' OFFSET FROM CENTERLINE
17	133+00	138+40	LT	540	193	121	823	252		1	18' OFFSET FROM CENTERLINE
18	134+50	138+70	RT	420	127	94	585	176		1	18' OFFSET FROM CENTERLINE
19	155+50	158+00	LT	250	56	56	301	91		1	18' OFFSET FROM CENTERLINE
20	160+50	164+05	LT	355	97	79	469	116		1	19' OFFSET FROM CENTERLINE
21	171+00	174+07	LT	307	87	69	413	82	20	1	17.5' OFFSET FROM CENTERLINE
22	183+00	187+35	RT	435	136	97	616	199		1	18' OFFSET FROM CENTERLINE
23	272+28	277+75	LT	547	182	122	801	249		1	18' OFFSET FROM CENTERLINE

NOT TO SCALE

LOCATION				605.10	*	*	*	204.20	204.21	619.17	REMARKS
				6 INCH UNDERDRAIN PIPE	DRAINAGE AGGREGATE	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	GEOTEXTILE FOR UNDERDRAIN TRENCH LINING	TRENCH EXCAVATION OF EARTH	TRENCH EXCAVATION OF ROCK	YIELDING MARKER POSTS	
SITE	STA	STA	POS	LF	CY	TON	SY	CY	CY	EA	
24	281+66	285+25	LT	359	115	80	515	168		1	18' OFFSET FROM CENTERLINE CONNECT TO NEW DI
25	285+50	288+25	LT	275	84	62	385	124		1	18' OFFSET FROM CENTERLINE
26	288+50	290+95	LT	245	59	55	305	89		1	18' OFFSET FROM CENTERLINE
27	298+25	300+75	RT	250	63	56	318	99		1	20' OFFSET FROM CENTERLINE
28	301+00	302+25	RT	125	41	28	182	48		1	20' OFFSET FROM CENTERLINE
29	304+75	308+25	LT	350	92	78	454	140		1	18' OFFSET FROM CENTERLINE
30	332+00	340+35	LT	835	245	187	1145	385		1	17' OFFSET FROM CENTERLINE
31	332+35	340+75	RT	840	269	188	1206	391		1	17' OFFSET FROM CENTERLINE
32	405+05	408+80	RT	375	105	84	502	160		1	20' OFFSET FROM CENTERLINE
33	409+00	412+18	RT	318	99	71	450	128		1	20' OFFSET FROM CENTERLINE
34	426+50	432+68	RT	618	235	138	976	301		1	18' OFFSET FROM CENTERLINE
	PROJECT SUBTOTAL			11767	3585	2630	16447	4824	20	147	
								235		10	SEE DRAINAGE DETAIL SHEET
								10			VERTICAL GRANITE CURB
		ROUNDING		33				31			
	PROJECT TOTAL			11800				5100	20	157	



DRAINAGE AGGREGATE SHALL MEET THE REQUIREMENTS OF SUBSECTION 704.16
• ITEMS WILL BE PAID UNDER ITEM 605.10 6 INCH UNDERDRAIN PIPE

UNDERDRAIN DETAIL

NOTES

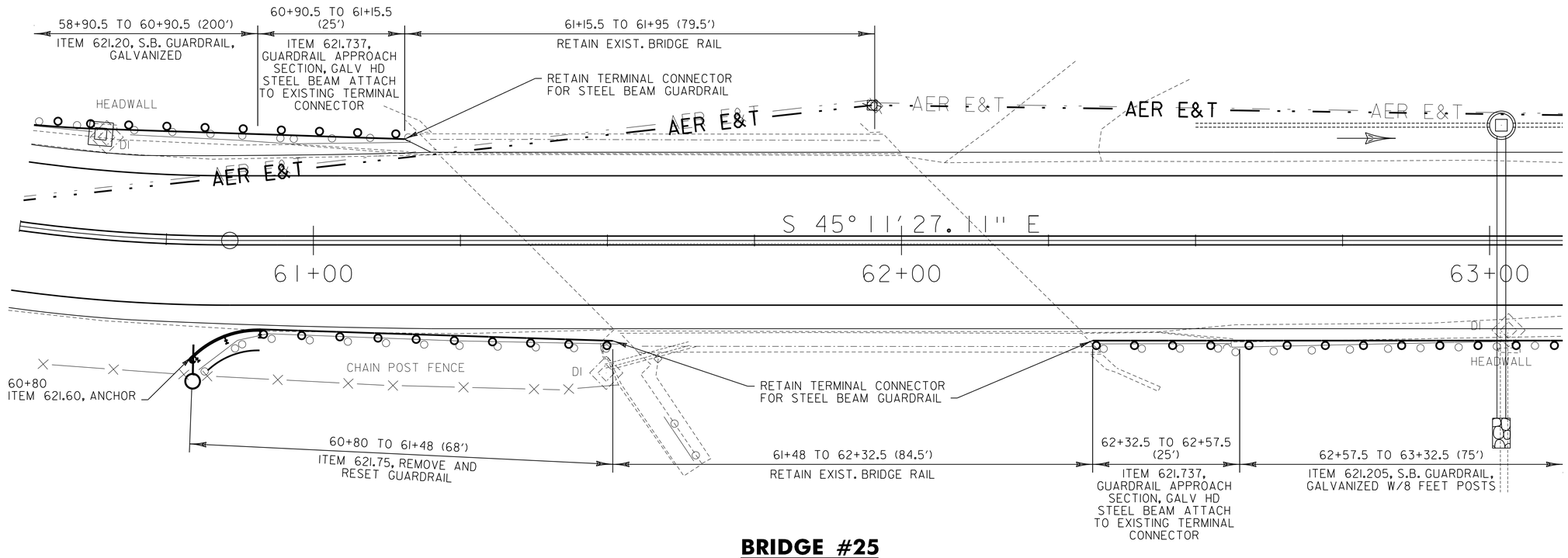
1. GEOTEXTILE FOR UNDERDRAIN TRENCH LINING SHALL NOT BE PLACED AROUND UNDERDRAIN WHEN COVER ABOVE PIPE IS LESS THAN ONE FOOT.
2. THE END OF THE UNDERDRAIN PIPE AT THE BEGINNING OF ALL UNDERDRAIN RUNS SHALL BE WRAPPED IN GEOTEXTILE FABRIC. PAYMENT FOR THE WORK IS INCLUDED IN THE UNIT PRICE BID FOR ITEM 605.10 6 INCH UNDERDRAIN PIPE.
3. VERIFY THAT MILEMARKER POSTS OR OTHER SIGN POSTS WILL NOT DAMAGE THE GEOTEXTILE FOR UNDERDRAIN TRENCH LINING. POSTS SHALL BE INSTALLED PER VAOT STANDARD E-121.

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
UNDERDRAIN DETAIL SHEET

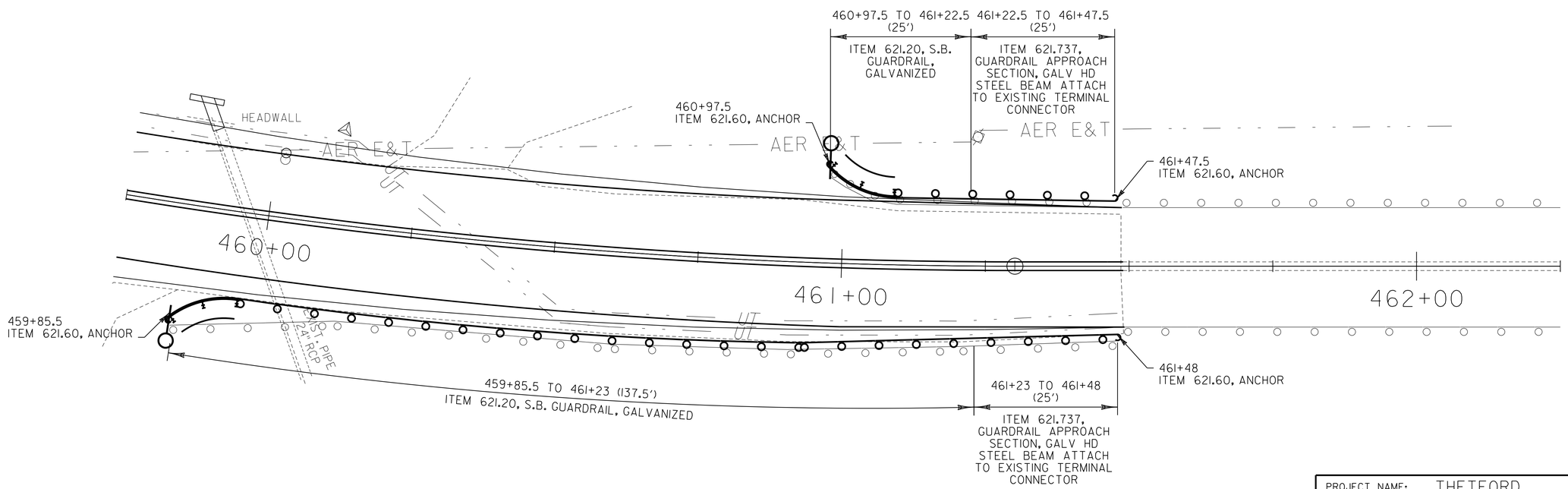
PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 36 OF 303

CLD 12-0337



BRIDGE #25

61+79 (MM 1.170)



BRIDGE #33

OVER CONNECTICUT RIVER

NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
BRIDGE DETAIL SHEET	SHEET 37 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SOILS & FOUNDATION UNIT
DRILLING NOTES

PROJECT NAME: THETFORD **PROJECT NUMBER:** STP 2221(1)S **SITE:** VT-113 **DATE:** 08/2012
BORING CREW: SALISBURY, GARROW **TESTED BY:** J. TOUCHETTE **REVIEWED BY:** M. MEYERS

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-101	08/20/12	0.8	8.7 RT	0.00 – 0.45	C	Asphalt Pavement								
				0.45 – 5.0	A	Si Sa, brn, moist	10.8	A-2-4	Si Sa	13.8	54.1	32.1		
				NLTD										
B-102	08/20/12	1.0	7.8 LT	0.00 – 0.25	C	Asphalt Pavement								
				0.25 – 2.5	A	Sa Si, brn, moist	3.3	A-2-4	Sa	15.4	65.2	19.4		
				2.5 – 5.0	A	Si Sa, brn, moist	9.1	A-2-4	Sa	4.7	78.4	16.9		
				NLTD										
B-103	08/20/12	1.2	6.6 RT	0.00 – 0.32	C	Asphalt Pavement								
				0.32 – 2.0	A	Si Sa, brn, moist	4.4	A-2-4	Gr Sa	22.8	61.9	15.3		
				2.0 – 5.0	A	Si Sa, drk brn, moist	5.7	A-2-4	Gr Sa	21.1	67.4	11.5		
				NLTD										
Cont.														

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-104	08/20/12	1.4	7.3 LT	0.00 – 0.28	C	Asphalt Pavement								
				0.28 – 1.1	A	Si Sa, brn, moist	3.5	A-1-b	Sa	17.0	71.1	11.9		
				1.10 – 5.0	A	Sa, drk brn, moist	12.6	A-2-4	Si Sa	7.1	72.6	20.3		
				NLTD										
B-105	08/20/12	1.6	5.5 RT	0.00 – 0.37	C	Asphalt Pavement								
				0.37 – 5.0	A	Si Sa, brn, moist	7.1	A-2-4	Si Sa	6.5	73.0	20.5		
				NLTD										
B-106	08/20/12	1.8	8.0 LT	0.00 – 0.45	C	Asphalt Pavement								
				0.45 – 5.0	A	Si Sa, brn, moist	3.3	A-2-4	Sa	11.2	73.2	15.6		
				NLTD										
B-107	08/20/12	2.0	6.5 RT	0.00 – 0.42	C	Asphalt Pavement								
				0.42 – 5.0*	A	Si Sa, brn, moist	7.7	A-2-4	Si Sa	16.2	61.1	22.7		
						*Encountered cobble @ 2.0' - 2.6'								
				NLTD										
B-108	08/20/12	2.2	5.6 LT	0.00 – 0.35	C	Asphalt Pavement								
				0.35 – 5.0	A	Si Sa, brn, moist	4.6	A-2-4	Gr Sa	27.4	54.2	18.4		
				NLTD										
Cont.														

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-109	08/20/12	2.4	5.3 RT	0.00 – 0.45	C	Asphalt Pavement								
				0.45 – 5.0	A	Si Sa, brn, moist	6.1	A-2-4	Gr Sa	22.1	59.7	18.2		
				NLTD										
B-110	08/20/12	2.6	7.8 LT	0.00 – 0.32	C	Asphalt Pavement								
				0.32 – 5.0	A	Si Sa, brn, moist	3.3	A-1-b	Gr Sa	21.0	60.7	18.3		
				NLTD										
B-111	08/20/12	2.8	5.0 RT	0.00 – 0.52	C	Asphalt Pavement								
				0.52 – 5.0	A	Sa Si, brn, moist	3.4	A-2-4	Sa	15.6	67.5	16.9		
				NLTD										
B-112	08/20/12	3.0	8.5 LT	0.00 – 0.52	C	Asphalt Pavement								
				0.52 – 5.0	A	Si Sa, brn, moist	10.3	A-2-4	Si Gr Sa	25.6	53.5	20.9		
				NLTD										
B-113A	08/20/12	3.2	6.0 LT	0.00 – 0.55	C	Asphalt Pavement								
				0.55 – 5.0	A	Si Sa, brn, moist	7.7	A-1-b	Sa Gr	46.0	39.8	14.2		
				NLTD										
B-114	08/20/12	3.4	5.2 LT	0.00 – 0.35	C	Asphalt Pavement								
				0.35 – 2.2	A	Sa Si, brn, moist	4.5	A-2-4	Gr Sa	29.7	51.5	18.8		
				2.2 – 5.0	A	Sa, brn, moist	3.8	A-2-4	Sa	3.0	84.0	13.0		
				NLTD										
Cont.														

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-115	08/21/12	3.6	6.0 RT	0.00 – 0.52	C	Asphalt Pavement								
				0.52 – 2.7	A	Sa Si, brn, moist	2.9	A-1-b	Gr Sa	29.5	51.6	18.9		
				2.7 – 5.0	A	Sa, brn, moist	4.6	A-2-4	Sa	7.8	78.4	13.8		
				NLTD										
B-116	08/21/12	3.8	7.3 LT	0.00 – 0.42	C	Asphalt Pavement								
				0.42 – 5.0	A	Si Sa, brn, moist	5.9	A-2-4	Gr Sa	22.4	62.1	15.5		
				NLTD										
B-117	08/21/12	4.0	5.7 RT	0.00 – 0.58	C	Asphalt Pavement								
				0.58 – 5.0	A	Si Sa, brn, moist	4.8	A-2-4	Gr Si Sa	21.9	53.8	24.3		
				NLTD										
B-118	08/21/12	4.2	5.9 LT	0.00 – 0.60	C	Asphalt Pavement								
				0.60 – 5.0	A	Si Sa, brn, moist	9.0	A-2-4	Si Sa	12.8	57.8	29.4		
				NLTD										
B-119	08/21/12	4.4	5.2 RT	0.00 – 0.60	C	Asphalt Pavement								
				0.60 – 5.0	A	Sa Si, brn, moist	4.8	A-2-4	Gr Si Sa	23.4	46.3	30.3		
				NLTD										
Cont.														

NOTE

SEE PLAN SHEETS FOR BORE HOLE LOCATIONS.

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: VTRANS
BORING LOGS SHEET 1

PLOT DATE: 9/4/2015
DRAWN BY: VTRANS
CHECKED BY: VTRANS
SHEET 38 OF 303

CLD 12-0337

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-120	08/21/12	4.6	5.5 LT	0.00 – 0.72	C	Asphalt Pavement								
				0.72 – 2.7	A	Gr Sa, brn, moist	1.6	A-1-a	Gr	74.0	19.7	6.3		
				2.7 – 4.0	A	Si Cl, brn, moist	20.0	A-4	Cl Si	1.0	6.7	92.3	30	20
				4.0 – 9.0	A	Cl, brn, moist	34.6	A-6	Si Cl	0.0	2.7	97.3	36	24
				9.0 – 10.0	A	Sa Si, brn, moist	12.5	A-4	Si	1.5	18.7	79.8		
				NLTD										
B-121	08/21/12	4.8	7.5 RT	0.00 – 0.62	C	Asphalt Pavement								
				0.62 – 2.5	A	Gr Sa, brn, moist	2.9	A-1-b	Sa Gr	41.3	40.7	18.0		
				2.5 – 5.0	A	Si Sa, brn, moist	13.3	A-2-4	Sa	1.8	79.0	19.2		
				NLTD										
B-122	08/21/12	5.0	5.4 LT	0.00 – 0.48	C	Asphalt Pavement								
				0.48 – 3.4	A	Gr Si Sa, brn, moist	3.1	A-1-b	Sa Gr	49.1	37.5	13.4		
				3.4 – 5.0	A	Si Sa, brn, moist	8.8	A-4	Si Sa	11.5	52.8	35.7		
				NLTD										
B-123	08/21/12	5.2	6.2 RT	0.00 – 0.58	C	Asphalt Pavement								
				0.58 – 5.0	A	Si Sa, brn, moist	7.8	A-2-4	Si Gr Sa	28.1	48.7	23.2		
				NLTD										
Cont.														

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE COLOR MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-124	08/21/12	5.4	5.6 LT	0.00 – 0.70	C	Asphalt Pavement								
				0.70 – 5.0	A	Gr Si Sa, brn, moist	5.1	A-1-b	Sa Gr	43.6	38.8	17.6		
				NLTD										
B-125	08/21/12	5.6	6.3 RT	0.00 – 0.72	C	Asphalt Pavement								
				0.72 – 3.0	A	Gr Si Sa, brn, moist	8.0	A-2-4	Si Gr Sa	30.9	38.9	30.2		
				3.0 – 5.0	A	Si Sa, brn, moist	6.9	A-2-4	Gr Si Sa	20.4	52.1	27.5		
				NLTD										
B-126	08/21/12	5.8	6.0 LT	0.00 – 0.83	C	Asphalt Pavement								
				0.83 – 5.0	A	Gr Si Sa, brn, moist	7.6	A-2-4	Si Gr Sa	32.5	42.4	25.1		
				NLTD										
B-127	08/21/12	6.0	6.0 RT	0.00 – 0.55	C	Asphalt Pavement								
				0.55 – 3.0	A	Gr Si Sa, brn, moist	2.9	A-1-b	Sa Gr	44.2	41.4	14.4		
				3.0 – 5.0	A	Sa Si, gry, moist	13.9	A-2-4	Gr Si Sa	24.1	48.1	27.8		
				NLTD										
B-128	08/21/12	6.2	6.2 LT	0.00 – 0.92	C	Asphalt Pavement								
				0.92 – 5.0	A	Sa Si, brn, moist	8.9	A-2-4	Gr Si Sa	26.0	43.6	30.4		
				NLTD										
Cont.														

7.7BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-129	08/21/12	6.4	6.0 RT	0.00 – 1.20	C	Asphalt Pavement								
				1.20 – 4.0	A	Weathered ledge, gry, dry	2.8	A-2-4	Gr Si Sa	31.2	35.2	33.6		
				4.0 – 5.0	A	Weathered rock								
				TLOB @ 4		*Penetrated rock for 1ft								
B-129A	08/21/12	6.4	4.5 RT	0.00 – 1.20	C	Asphalt Pavement								
				1.20 – 3.5	A	Si Sa, brn, moist	6.9	A-1-b	Gr Sa	30.6	52.8	16.6		
				3.5 – 5.0	A	Weathered rock								
				TLOB @ 5										
B-129B	08/21/12	6.39	6.6 RT	0.00 – 0.85	C	Asphalt Pavement								
				0.85 – 2.0	A	Si Sa, gry, moist	4.8	A-1-b	Si Gr Sa	37.2	39.7	23.1		
				TLOB @ 2										
B-129C	08/21/12	6.41	6.8 RT	0.00 – 0.90	C	Asphalt Pavement								
				0.90 – 4.5	A	Si Sa, gry, moist	3.4	A-1-b	Sa Gr	47.2	34.6	18.2		
				TLOB @ 4.5										
B-130	08/21/12	6.6	6.3 LT	0.00 – 0.62	C	Asphalt Pavement								
				0.62 – 5.0	A	Gr Si Sa, brn, moist	5.8	A-2-4	Gr Si Sa	22.4	50.7	26.9		
				NLTD										
Cont.														

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-131	08/21/12	6.8	6.0 RT	0.00 – 0.68	C	Asphalt Pavement								
				0.68 – 5.0	A	Gr Si Sa, brn, moist	1.8	A-1-b	Gr Sa	32.9	48.4	18.7		
				NLTD										
B-132B	08/21/12	7.0	5.5 RT	0.00 – 0.68	C	Asphalt Pavement								
				0.68 – 2.5	A	Gr Si Sa, brn, moist	1.3	A-1-a	Gr	73.7	18.2	8.1		
				2.5 – 5.0	A	Si Sa, brn, moist	12.3	A-4	Si Sa	15.6	47.3	37.1		
				NLTD										
B-133	08/21/12	7.2	4.6 RT	0.00 – 0.88	C	Asphalt Pavement								
				0.88 – 5.0	A	Si Sa, brn, moist	6.1	A-1-b	Gr Sa	38.8	43.8	17.4		
				NLTD										
B-134	08/21/12	7.4	6.8 LT	0.00 – 0.60	C	Asphalt Pavement								
				0.60 – 5.0	A	Gr Si Sa, brn, moist	6.6	A-2-4	Gr Si Sa	23.2	52.1	24.7		
				NLTD										
B-135	08/21/12	7.6	5.7 RT	0.00 – 0.78	C	Asphalt Pavement								
				0.78 – 5.0	A	Si Sa, brn, moist	5.5	A-1-b	Gr Sa	37.5	45.8	16.7		
				NLTD										
Cont.														

NOTE

SEE PLAN SHEETS FOR BORE HOLE LOCATIONS.

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: VTRANS
BORING LOGS SHEET 2

PLOT DATE: 9/4/2015
DRAWN BY: VTRANS
CHECKED BY: VTRANS
SHEET 39 OF 303

CLD 12-0337

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-136	08/21/12	7.8	6.3 LT	0.00 – 0.65	C	Asphalt Pavement								
				0.65 – 2.6	A	Si Gr Sa, brn, moist	3.8	A-1-b	Gr Sa	39.9	41.7	18.4		
				2.6 – 5.0	A	Cl, brn, moist	24.6	A-4	Si	2.5	13.5	84.0		
				NLTD										
B-137	08/21/12	8.0	7.0 RT	0.00 – 0.78	C	Asphalt Pavement								
				0.78 – 3.0	A	Gr Sa, brn, moist	2.5	A-1-b	Gr Sa	33.9	49.2	16.9		
				3.0 – 5.0	A	Si, brn, moist	23.7	A-4	Si	6.0	12.7	81.3		
				NLTD										
B-138	08/21/12	8.2	5.6 LT	0.00 – 0.98	C	Asphalt Pavement								
				0.98 – 2.5	A	Gr Sa, brn, moist	2.3	A-1-b	Gr Sa	42.8	42.9	14.3		
				2.5 – 5.0	A	Sa Si, brn, moist	22.6	A-4	Sa Si	4.4	32.0	63.6		
				NLTD										
B-139	08/21/12	8.39	4.5 RT	0.00 – 0.62	C	Asphalt Pavement								
				0.62 – 2.2	A	Si Sa, brn, moist	5.0	A-2-4	Gr Si Sa	22.6	50.3	27.1		
				2.2 – 5.0	A	Sa Si, brn, moist	14.3	A-4	Sa Si	3.7	44.8	51.5		
				NLTD										
Cont.														

BORING No.	DATE DRILLED	MILE MARKER	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
B-140	08/21/12	8.6	5.5 LT	0.00 – 0.48	C	Asphalt Pavement								
				0.48 – 5.0	A	Si Sa, brn, moist	9.1	A-2-4	Gr Si Sa	26.1	39.2	34.7		
				NLTD										
SAMPLE TYPE "A" = Auger														
SAMPLE TYPE "C" = Core Sample														
NLTD = No Ledge To Depth														
TLOB = To Ledge or Boulder														

NOTE

SEE PLAN SHEETS FOR BORE HOLE LOCATIONS.

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: VTRANS
BORING LOGS SHEET 3

PLOT DATE: 9/4/2015
DRAWN BY: VTRANS
CHECKED BY: VTRANS
SHEET 40 OF 303

CLD 12-0337

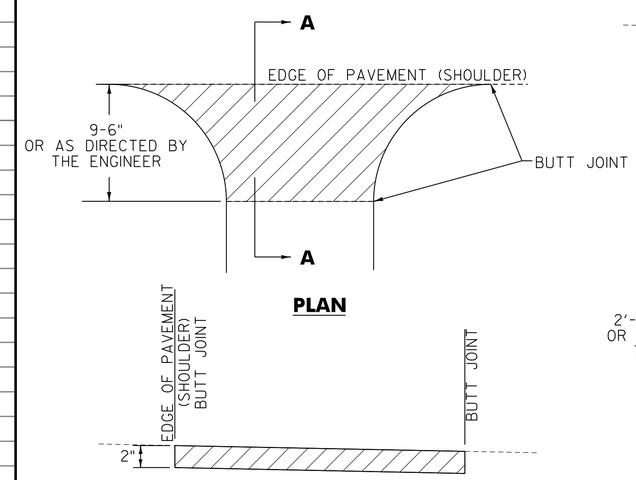
LOCATION OF DRIVES

STATION	POSTION	QUANTITY (SY)
VT 113		
42+24	LT	11
42+48	RT	6
43+52	RT	3
44+53	RT	10
45+89	LT	11
45+96	RT	6
46+88	LT	5
47+39	RT	39
48+74	RT	8
51+42	RT	11
51+44	LT	9
52+02	RT	21
52+07	LT	11
53+85	LT	139
55+55	RT	19
56+27	LT	3
58+03	RT	11
62+23	LT	9
63+58	RT	3
64+47	LT	11
66+00	LT	11
67+42	LT	11
70+53	RT	14
72+65	LT	11
73+99	LT	10
74+00	RT	7
74+61	RT	10
75+81	RT	5
76+36	LT	9
76+58	RT	11
78+57	LT	2
81+12	LT	7
94+96	LT	4
102+71	RT	2
103+52	LT	3
106+99	LT	9
107+03	RT	10
120+21	LT	11
120+64	RT	3
121+67	LT	8
129+11	RT	11
129+44	LT	9
136+37	RT	9
139+48	LT	37
139+86	RT	7
140+88	RT	10
142+08	RT	3
142+16	LT	3
143+96	LT	11
147+14	RT	9
147+89	RT	9
149+24	LT	11
152+84	LT	11
155+22	LT	6
159+22	LT	9
162+60	RT	11
169+24	LT	7
169+48	RT	5
170+35	RT	6

STATION	POSTION	QUANTITY (SY)
172+37	RT	3
175+60	RT	11
179+14	LT	9
180+24	LT	11
180+54	RT	7
181+31	LT	11
181+59	RT	7
187+94	RT	11
192+07	RT	9
192+76	LT	11
195+52	RT	11
196+85	RT	10
199+53	LT	9
199+56	RT	11
200+86	RT	11
202+39	RT	18
202+60	LT	11
203+15	RT	9
204+20	RT	11
205+45	RT	18
206+55	RT	3
213+25	RT	8
214+18	RT	11
216+40	LT	11
218+79	LT	11
219+58	LT	25
222+94	LT	10
228+53	RT	11
228+72	LT	7
229+47	RT	11
229+92	RT	11
233+14	LT	11
242+10	LT	9
243+85	LT	11
248+13	RT	11
251+31	LT	3
252+48	LT	19
254+75	LT	11
256+24	LT	281
256+36	RT	11
258+04	RT	153
259+09	LT	37
259+13	RT	23
260+71	RT	10
261+48	LT	10
261+87	RT	11
262+45	RT	11
262+99	LT	9
263+52	LT	8
263+49	RT	28
264+63	RT	15
264+76	LT	10
265+21	LT	12
268+02	LT	11
270+02	LT	6
270+15	RT	36
271+47	RT	6
271+85	LT	5
276+55	RT	11
279+76	LT	11

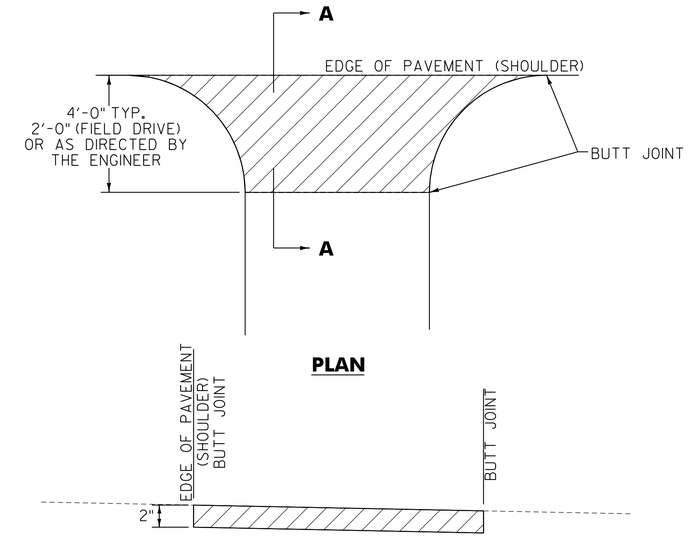
STATION	POSTION	QUANTITY (SY)
302+60	RT	11
308+63	LT	13
309+33	LT	4
314+42	RT	11
314+73	LT	12
315+55	RT	22
316+53	RT	5
318+43	LT	6
318+50	RT	17
320+57	LT	26
320+73	RT	20
322+57	LT	18
323+04	RT	17
327+29	LT	18
331+25	RT	7
332+05	RT	5
333+20	RT	8
334+63	RT	2
335+33	LT	10
335+70	LT	6
335+94	RT	2
339+66	LT	7
340+62	LT	10
343+15	LT	7
344+11	LT	6
344+18	RT	33
349+93	LT	12
351+81	LT	11
355+69	LT	3
355+79	RT	3
356+39	LT	13
380+72	RT	15
381+13	LT	11
390+38	LT	11
396+40	LT	4
399+53	LT	11
400+05	RT	17
402+49	LT	13
412+78	LT	11
415+49	LT	3
417+13	LT	4
419+51	RT	10
422+88	RT	11
424+44	RT	11
425+43	RT	11
437+48	RT	11
442+16	LT	8
443+90	RT	9
444+45	RT	4
445+65	RT	11
446+28	LT	22
446+53	RT	11
449+07	LT	9
450+18	RT	12
451+85	LT	7
454+31	LT	5
455+99	LT	9
456+60	RT	5
456+84	LT	18
458+18	LT	3

STATION	POSTION	QUANTITY (SY)
459+48	RT	11
460+34	LT	7
THETFORD SUBTOTAL		**2456**
PULLOFFS		
291+04	RT	310
PULLOFF SUBTOTAL		**310**
THETFORD SUBTOTAL		2456
PULLOFF SUBTOTAL		310
PROJECT SUBTOTAL		**2766**
ROUNDING		34
PROJECT TOTAL		**2800**



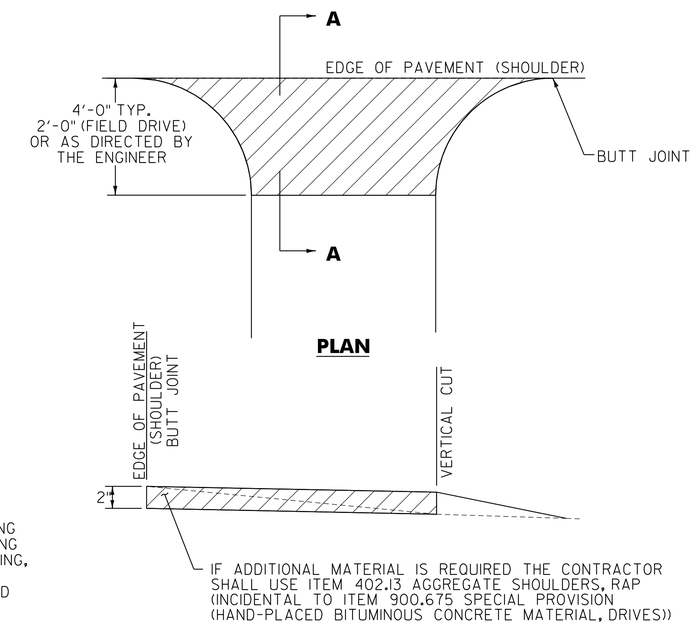
SECTION A – A

HANDWORK DETAILS FOR PULLOFFS



SECTION A – A

HANDWORK DETAILS FOR PAVED DRIVES



SECTION A – A

HANDWORK DETAILS FOR GRAVEL DRIVES

NOTES

1. PAVING LIFT NOT TO EXCEED 2".

2. THE COST OF PLACING SUBBASE MATERIAL, CLEANING EXISTING PAVED SURFACES, INCLUDING POWER EQUIPMENT, AND FOR FILLING JOINTS, CRACKS AND HOLES AT LEAST 24 HOURS BEFORE PAVING, WILL NOT BE PAID DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675, SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).

3. EXCAVATION NEEDED TO ACHIEVE PROPER DRIVE AND PULLOFF SLOPES WILL NOT BE PAID DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675, SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).

LEGEND

ITEM 900.675 - SPECIAL PROVISION
(HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)

NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
HANDWORK DETAIL SHEET	SHEET 41 OF 303

CLD 12-0337

LOCATION				FEET OF DITCHING PERCENT GRADE		613.10 STONE FILL, TYPE I	651.15 SEED	653.20 TEMP EROS. MATT.	REMARKS
SITE	STA	STA	POS	0-2.5	2.5-10	(CY)	(LBS)	(SY)	
1	42+25	44+30	RT		205	30			
2	43+04	2+35	LT		224	33			VT 244 REMOVE PAVED GUTTER
3	44+30	51+25	RT	695			10.0	309	
4	51+25	52+80	RT		155	23			
5	58+10	61+35	LT	325			4.5	144	
6	62+15	66+65	LT	450			6.5	200	
7	66+65	73+95	LT		730	108			
8	79+20	84+25	RT	505			7.0	224	
9	84+25	87+85	RT		360	53			
10	87+85	105+60	RT	1775			24.5	789	
11	105+60	107+30	LT	170			2.5	76	
12	107+30	112+10	LT		480	71			
13	112+10	116+15	LT	405			6.0	180	
14	126+70	127+80	LT	110			1.5	49	
15	126+70	134+00	RT	730			10.5	324	
16	132+00	134+00	LT	200			3.0	89	
17	134+00	137+30	LT		330	49			
18	134+00	137+30	RT		330	49			
19	142+55	144+90	RT	235			3.5	104	
20	148+05	150+50	RT		245	36			
21	154+00	159+30	LT		530	79			
22	159+30	181+70	LT	2240			31.0	996	
23	174+25	181+70	RT	745			10.5	331	
24	181+70	184+80	LT		310	46			
25	181+90	187+45	RT		555	82			REMOVE PAVED GUTTER
26	206+15	208+55	LT	240			3.5	107	
27	221+75	229+70	RT	795			11.0	353	
28	238+25	240+25	LT		200	30			

LOCATION				FEET OF DITCHING PERCENT GRADE		613.10 STONE FILL, TYPE I	651.15 SEED	653.20 TEMP EROS. MATT.	REMARKS
SITE	STA	STA	POS	0-2.5	2.5-10	(CY)	(LBS)	(SY)	
29	248+15	250+80	RT		265	39			
30	256+10	261+35	LT	525			7.5	233	
31	264+00	267+55	RT	355			5.0	158	
32	267+55	279+85	RT		1230	182			
33	268+15	269+90	LT		175	26			REMOVE PAVED GUTTER
34	270+10	271+75	LT		165	24			REMOVE PAVED GUTTER
35	270+29	270+78	RT	49			0.5	22	
36	271+95	275+55	LT		360	53			REMOVE PAVED GUTTER
37	276+75	277+70	LT		95	14			REMOVE PAVED GUTTER
38	277+85	278+90	LT		105	16			REMOVE PAVED GUTTER
39	279+85	290+40	LT		1055	156			
40	295+70	300+95	RT		525	78			
41	304+50	311+50	LT		700	104			
42	307+25	314+50	RT		725	107			
43	314+50	324+75	RT	1025			14.5	456	
44	327+35	333+50	LT	615			9.0	273	
45	327+35	328+75	RT	140			2.0	62	
46	333+50	340+35	LT		685	101			
47	328+75	345+85	RT		1710	253			
48	343+30	345+80	LT		250	37			
49	356+31	357+16	RT	85			0.5	23	
50	357+25	359+05	LT		180	27			
51	383+00	385+50	RT		250	37			
52	390+25	391+80	RT	155			2.5	69	
53	391+80	395+00	RT		320	47			

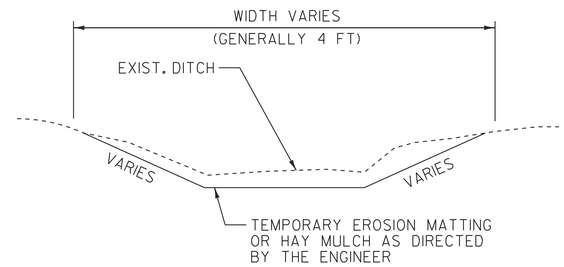
PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
DITCH CLEANING DETAIL SHEET 1

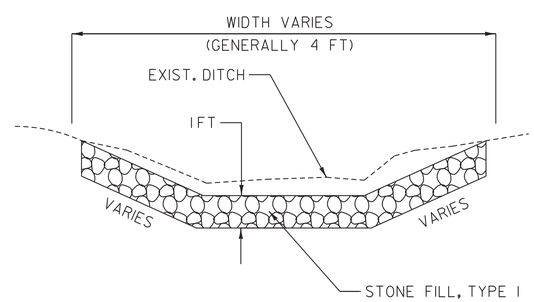
PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 42 OF 303

CLD 12-0337

LOCATION				FEET OF DITCHING PERCENT GRADE		613.10 STONE FILL, TYPE I	651.15 SEED	653.20 TEMP EROS. MATT.	REMARKS
SITE	STA	STA	POS	0-2.5	2.5-10	(CY)	(LBS)	(SY)	
54	396+25	398+20	RT	195			3.0	87	
55	398+20	410+25	RT		1205	179			
56	416+60	417+65	RT		105	16			
57	425+70	430+35	RT		465	69			
58	433+00	440+90	LT	790			11.0	351	
59	448+80	451+45	LT	265			4.0	118	
60	448+80	451+45	RT	265			4.0	118	
61	451+45	454+10	RT	265			4.0	118	
	VT 244								
62	0+13	1+90	RT				5.0	176	
		SUBTOTAL		14349	15224	2254.0	208.0	6539	SEE ITEM DETAIL SHEET FOR ROUNDING AND PROJECT TOTAL



DITCH DETAIL < 2.5 PERCENT GRADE



DITCH DETAIL ≥ 2.5 PERCENT GRADE

VAOT LOW GROW /FINE FESCUE MIX SEEDING FORMULA

% WT.	BROADCAST LBS./A.	HYDROSEED LBS./A.	NAME	PUR %	GERM %
38	57	95	CREEPING RED FESCUE	98	90
29	43.5	72.5	HARD FESCUE	95	85
15	22.5	37.5	CHEWINGS FESCUE	95	87
15	22.5	37.5	ANNUAL RYEGRASS	95	90
3	4.5	7.5	INERTS	--	--
100.0	150 LB/A	250 LB/A			

SEEDING NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDROSEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON THE EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

DITCHING NOTES

1. CLEANING AT PIPE INLET AND OUTLET AREAS, AND DITCH CLEANING THROUGHOUT THE PROJECT, SHALL BE PERFORMED AT LOCATIONS IDENTIFIED ON THIS SHEET AND AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE UNDER THE APPLICABLE EQUIPMENT RENTAL ITEM(S).

2. GRADES LESS THAN 2.5 PERCENT SHALL USE ITEM 651.25 HAY MULCH OR ITEM 653.20 TEMPORARY EROSION MATTING AS DIRECTED BY THE ENGINEER.

   GRADES EQUAL TO 2.5 PERCENT TO 10 PERCENT SHALL USE ITEM 613.10 STONE FILL, TYPE I AS DIRECTED BY THE ENGINEER.

   GRADES GREATER THAN 10 PERCENT SHALL USE ITEM 613.11 STONE FILL, TYPE II AS DIRECTED BY THE ENGINEER.

NOT TO SCALE

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

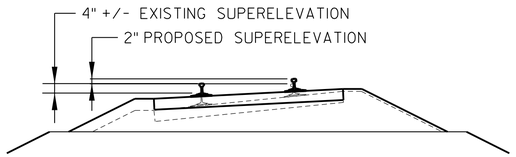
FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
DITCH CLEANING DETAIL SHEET 2

PLOT DATE: 9/18/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 43 OF 303

CLD 12-0337

VT 113/WASHINGTON COUNTY RAILROAD
CONNECTICUT RIVER DIVISION
BRADFORD SUBDIVISION
RR MP 26.81
RR SPEED PASSENGER 30 MPH VRS TIMETABLE
RR SPEED FREIGHT 25 MPH VRS TIMETABLE
ROADWAY SPEED 40 MPH

AADT		DHV		ESALS	
2014	2024	2014	2024	2014-2024	2014-2034
2100	2200	340	350	251,000	577,000



TYPICAL PROPOSED AND EXISTING TRACK APPROACH SECTION
N. T. S.
(SEE NOTE 10)

GRADE CROSSING NOTES

1. ALL NEW WELDED RAIL JOINTS WITHIN THE CROSSING AREA AND BETWEEN THE INSULATED JOINTS WILL BE CROPPED AND WELDED IN ACCORDANCE WITH THE LATEST REVISION OF A.R.E.M.A. SPECIFICATIONS AT AN OFF-SITE ELECTRIC WELDING PLANT. WELDING CAN BE DONE IN FIELD UTILIZING THERMITE WELDING WITH ADVANCE APPROVAL FROM THE AGENCY. WELDED JOINTS SHALL BE GROUND TO CONFORM TO THE SHAPE OF THE RAIL ON GAUGE AND FIELD SIDES. ALL FIELD WELDS SHALL BE ULTRASONICALLY TESTED AND A COPY OF THE RESULTS GIVEN TO THE ENGINEER AND RAILROAD. FIELD WELDS SHALL NOT BE CONSIDERED ACCEPTED UNTIL SUCH TIME THAT THE ULTRASONIC TEST RESULTS ARE APPROVED BY THE RAILROAD. WELDING, GRINDING, AND ULTRASONIC TESTING OF RAIL JOINTS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL-HIGHWAY CROSSING) (AARDOT 053-553T).

2. TIE SPACING UNDER THE WELDED RAIL AREA SHALL BE 18 INCHES ON CENTER.

3. NEW 7"X9"X10'-0" AND 7"X9"X8'-6" TIES SHALL BE USED IN CROSSING AREA AS SHOWN. TIES IN APPROACH AREAS SHALL BE REPLACED AS RECOMMENDED BY THE RAILROAD AND APPROVED BY THE ENGINEER.

4. TIE PLATES SHALL BE NEW 14 INCH PLATES, MANUFACTURED FOR THE RAIL SIZE USED. PLATES SHALL BE INSPECTED AND APPROVED BY THE RAILROAD AND THE ENGINEER. RAIL FASTENERS SHALL BE CUT TRACK SPIKES.

5. BALLAST SHALL EXTEND 12 INCHES BEYOND END OF TIES AND SLOPE 1:2 TO THE ROADBED. (SEE GRADE CROSSING DETAILS)

6. TYPE AND DESIGN OF PRECAST CONCRETE PANELS SHALL RECEIVE APPROVAL FROM THE ENGINEER.

7. INSTALLATION OF INSULATED JOINTS: THE MAXIMUM STAGGER BETWEEN INSULATED RAIL JOINTS SHALL BE 4'-6", MINIMUM SHALL BE 3'-6".

8. BITUMINOUS CONCRETE PAVEMENT SHALL FOLLOW LATEST EDITION OF THE AGENCY'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND SHALL BE PLACED PARALLEL TO CROSSING TO MINIMIZE APPROACH SETTLEMENT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

9. CONTRACTOR SHALL LINE, TAMP, AND SURFACE TRACK WITHIN LIMITS OF FULL DEPTH CONSTRUCTION TO THE NEW TRACK ALIGNMENT AND PROFILE TO THE SATISFACTION OF THE ENGINEER AND RAILROAD. THE WORK OF LINE, TAMP, AND SURFACE TRACK WITHIN THE LIMITS OF FULL DEPTH CONSTRUCTION WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T).

10. CONTRACTOR SHALL REGRADE AND REALIGN THE TRACK APPROACHES. FURNISHING, DELIVERING, AND DISTRIBUTING BALLAST FOR REGRADING AND REALIGNING THE TRACK APPROACHES WILL BE PAID FOR UNDER ITEM 900.680 SPECIAL PROVISION (RAILROAD BALLAST). INSTALLING THE BALLAST IN THE TRACK APPROACHES WILL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (REGRADING AND REALIGNING TRACK).

11. THE CONTRACTOR SHALL INSTALL THE PRECAST CONCRETE PANELS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DAMAGE TO THE PRECAST CONCRETE PANELS RESULTING FROM THE CONTRACTOR'S INSTALLATION METHODS SHALL BE REPLACED AT THE CONTRACTOR'S OWN EXPENSE AS DIRECTED BY THE ENGINEER. THE COST OF FURNISHING AND INSTALLING THE PRECAST CONCRETE PANELS AND ATTACHMENT HARDWARE WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T).

12. THE COST OF PAVING TWO LIFTS OF TYPE IIS BASE COURSE, WITHIN THE RAIL-HIGHWAY CROSSING LIMITS, SHALL NOT BE PAID SEPARATELY, BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T). THE COST OF PAVING THE TYPE IVS WEARING COURSE, WITHIN THE RAIL-HIGHWAY CROSSING LIMITS, WILL BE PAID UNDER ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT.

13. THE CONTRACTOR SHALL TAPER THE VT 113 PAVEMENT AT A RATE OF ONE INCH IN 50 FEET MINIMUM TO THE HEIGHT OF THE EXISTING RAIL HIGHWAY CROSSING OR AS DIRECTED BY THE ENGINEER.

14. 4" GALVANIZED STEEL SIGNAL CONDUITS (HEAVY WALL) ARE TO BE INSTALLED WITH SECURED END CAPS IN LOCATIONS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS ITEM WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T).

15. THE CONTRACTOR SHALL PROVIDE, LOCATE AND MAINTAIN TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AT LOCATIONS, AS DIRECTED BY THE ENGINEER. THE MESSAGE BOARDS SHALL ADVISE THE TRAVELING PUBLIC "RAILROAD CROSSING CONSTRUCTION ON VT 113 WITH 48 HOUR VT 113 ROAD CLOSURE ON SATURDAY (DATE) AND SUNDAY (DATE), SEEK ALTERNATIVE ROUTES." THE COST OF THE TWO PCMS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 (SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T).

16. THE PAYMENT FOR PROVIDING TRAFFIC CONTROL AND PEDESTRIAN ACCESS OVER THE CROSSING, DURING THE CONSTRUCTION OF THIS PAVED RAIL-HIGHWAY GRADE CROSSING WILL BE MADE UNDER ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T).

17. THE CONTRACTOR SHALL PROVIDE SURVEY AND SURVEY LAYOUT NECESSARY TO CONSTRUCT THE TRACK ALIGNMENT AND PROFILE AS SHOWN ON THE PLANS. THE SURVEY WILL BE CONSIDERED INCIDENTAL TO THE ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T). SEE ROADWAY SURVEY TIE SHEETS FOR PROJECT SURVEY CONTROL.

18. IN THE RAIL - HIGHWAY CROSSING LIMITS THE CONTRACTOR SHALL REMOVE THE TRACK; RAIL, TIES, OTHER TRACK MATERIAL (OTM) NECESSARY TO EXCAVATE AND CONSTRUCT THE TRANSITION TO EXISTING BALLAST DEPTH, AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL PREPARE THE SUBGRADE, INSTALL THE GEOTEXTILE FABRIC, RECONSTRUCT THE TRACK THAT WAS REMOVED, AND LINE, TAMP, AND SURFACE THE TRACK IN THE RAIL - HIGHWAY CROSSING LIMITS TO OBTAIN A SMOOTH ALIGNMENT AND SURFACE IN ACCORDANCE WITH THE PLANS. THE WORK OF TRACK REMOVAL, TRACK RECONSTRUCTION, LINE, TAMP AND SURFACE TRACK IN THE RAIL - HIGHWAY CROSSING LIMITS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL-HIGHWAY CROSSING) (AARDOT 053-553T). PAYMENT FOR EXCAVATION IN THE RAIL-HIGHWAY CROSSING LIMITS WILL BE MADE UNDER ITEM 203.15 COMMON EXCAVATION. PAYMENT FOR BALLAST FURNISHED, DELIVERED AND DISTRIBUTED IN THE RAIL - HIGHWAY CROSSING LIMITS WILL BE MADE UNDER ITEM 900.680 SPECIAL PROVISION (RAILROAD BALLAST).

19. THE EXISTING JOINTED TRACK IN THE NORTH AND SOUTH APPROACHES TO THE RAIL - HIGHWAY CROSSING IS TO BE REGRADED AND REALIGNED IN ACCORDANCE WITH THE PLANS. TIES IN THE APPROACHES IDENTIFIED IN DEFECTIVE CONDITION BY THE RAILROAD AND ENGINEER ARE TO BE REMOVED AND REPLACED. ANY DAMAGED RAIL BONDS ARE TO BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE, AND THEIR REPLACEMENT WILL BE CONSIDERED INCIDENTAL TO THE ITEM OF WORK UNDER WHICH THEY WERE DAMAGED. PAYMENT FOR THE REMOVAL AND REPLACEMENT OF CROSS TIES WILL BE MADE UNDER ITEM 900.620 SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF CROSS TIES). BALLAST REQUIRED FOR REGRADING OF THE APPROACHES WILL BE PAID FOR UNDER ITEM 900.680 SPECIAL PROVISION (RAILROAD BALLAST). REGRADING AND REALIGNING OF THE TRACK APPROACHES WILL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (REGRADING AND REALIGNING TRACK) (AARDOT 053-553T). THE NEW 115 LB RAIL ON THE NORTH TRACK APPROACH WILL BE PAID UNDER ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T).

20. TEMPORARY PAVEMENT FILLETS SHALL BE USED TO PROVIDE FOR DIFFERENCES IN VERTICAL HEIGHT AT SAW CUTS AND AT THE RAILS BETWEEN PLACEMENT OF THE BASE COURSE AND THE FINAL WEARING COURSE. INSTALLATION AND REMOVAL OF TEMPORARY PAVEMENT FILLETS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL - HIGHWAY CROSSING) (AARDOT 053-553T).

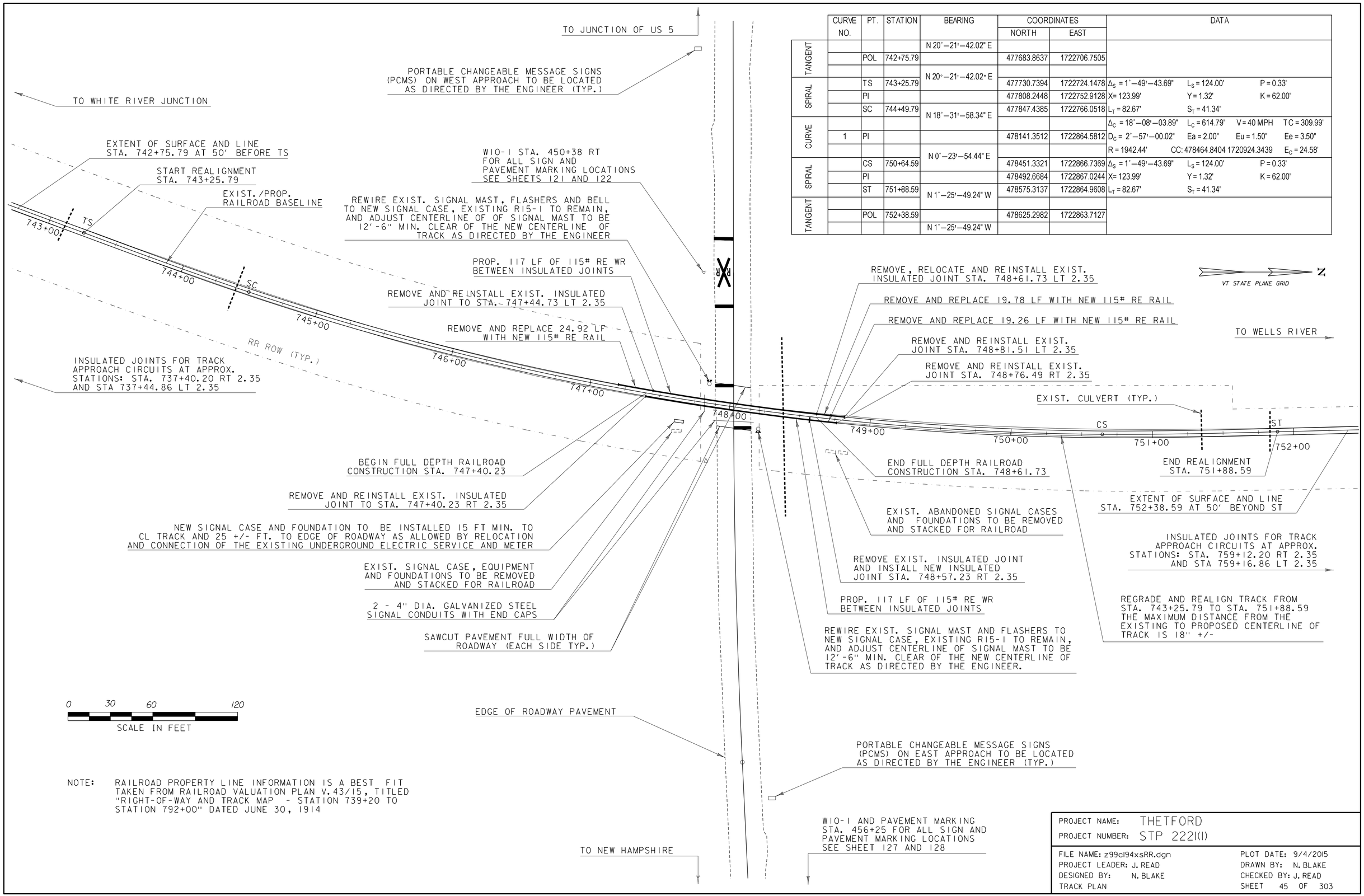
21. THE CONTRACTOR SHALL RELOCATE THE EXISTING UNDERGROUND ELECTRIC SERVICE AND METER CONNECTIONS FROM THE EXISTING SIGNAL CASE TO THE NEW SIGNAL CASE. THE COST OF THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM) (AARDOT 053-553T).

22. THE EXISTING RAILROAD DITCH NEAR STATION 748+00 IS TO BE CLEANED AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK WILL BE MADE UNDER THE APPLICABLE EQUIPMENT RENTAL ITEMS.

23. THE CONTRACTOR SHALL DESIGN AND RECONSTRUCT THE EXISTING "STYLE C" RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM TO PROVIDE THE SAME WARNING TIME AS THE CURRENT ACTIVE WARNING SYSTEM. FROM ENGINEERING CALCULATIONS THE CURRENT WARNING TIME IS ESTIMATED AT 22.6 SECONDS; BASED ON A TRAIN APPROACH DISTANCE OF 995 FT, TRAIN MAXIMUM SPEED OF 30 MPH, AND CLEAR LENGTH OF 80 FEET FOR A WB-50 TRUCK. THE RECONSTRUCTED RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM WILL USE THE EXISTING TRACK APPROACH CIRCUITS FROM THE APPROACH INSULATED JOINTS TO THE RELOCATED ISLAND INSULATED JOINTS, TO INCLUDE EXISTING JOINT BOND WIRES; THE EXISTING SIGNAL MASTS, ROUNDLES AND FLASHERS; SIGNAL MAST FOUNDATIONS; THREE EXISTING ISLAND INSULATED JOINTS; ONE NEW ISLAND INSULATED JOINT; AND THE EXISTING UNDERGROUND ELECTRIC SERVICE AND METER. THE RECONSTRUCTED RAIL-HIGHWAY ACTIVE WARNING SYSTEM SHALL PROVIDE A NEW SIGNAL CASE WITH ALL NEW CIRCUITRY, COMPONENTS, WIRING AND BATTERIES; A NEW SIGNAL MAINTAINER'S TEST SWITCH; NEW TRACK WIRES TO THE APPROACH AND ISLAND CIRCUITS; NEW WIRING OF THE EXISTING SIGNAL MASTS, FLASHERS AND BELL; AND RELOCATION AND CONNECTION OF THE EXISTING UNDERGROUND ELECTRIC SERVICE AND METER. THE RECONSTRUCTED ACTIVE WARNING SYSTEM WILL BE PAID UNDER ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM) (AARDOT 053-553T). PAYMENT FOR THE REMOVAL AND INSTALLATION OF THE THREE EXISTING INSULATED ISLAND JOINTS AND INSTALLATION OF THE NEW ISLAND JOINT WILL BE MADE UNDER ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL-HIGHWAY CROSSING) (AARDOT 053-553T).

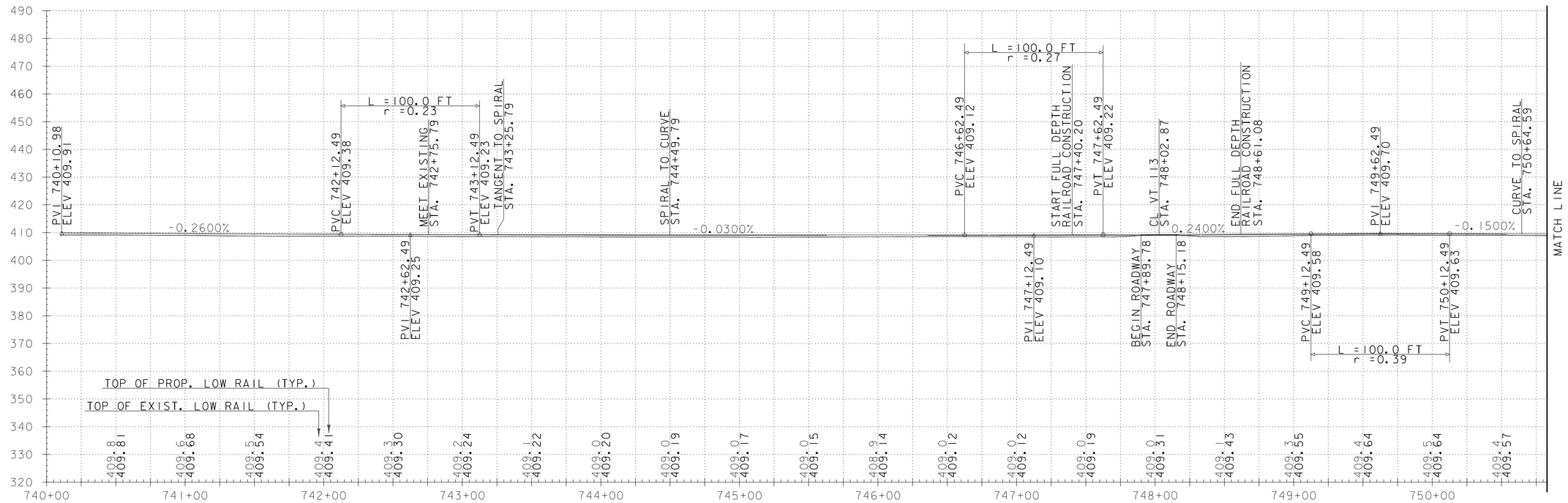
24. PRIOR TO CONSTRUCTION THE ENGINEER, RAILROAD, AND CONTRACTOR SHALL INSPECT THE CONDITION OF THE EXISTING BOND WIRES. ANY EXISTING DAMAGED BOND WIRES SHALL BE REPLACED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION. THE CONTRACTOR WILL BE PAID FOR THIS WORK UNDER ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL-HIGHWAY CROSSING ACTIVE WARNING SYSTEM) (AARDOT 053-553T).

	CURVE NO.	PT.	STATION	BEARING	COORDINATES NORTH	COORDINATES EAST	DATA			
TANGENT				N 20°–21'–42.02" E						
		POL	742+75.79		477683.8637	1722706.7505				
				N 20°–21'–42.02" E						
SPIRAL		TS	743+25.79		477730.7394	1722724.1478	Δ_S = 1°–49'–43.69"	L_S = 124.00'	P = 0.33'	
		PI			477808.2448	1722752.9128	X= 123.99'	Y = 1.32'	K = 62.00'	
		SC	744+49.79	N 18°–31'–58.34" E	477847.4385	1722766.0518	L_T = 82.67'	S_T = 41.34'		
CURVE							Δ_C = 18°–08'–03.89"	L_C = 614.79'	V = 40 MPH	TC = 309.99'
	1	PI			478141.3512	1722864.5812	D_C = 2°–57'–00.02"	Ea = 2.00"	Eu = 1.50"	Ee = 3.50"
				N 0°–23'–54.44" E			R = 1942.44'	CC: 478464.8404	1720924.3439	E_C = 24.58'
SPIRAL		CS	750+64.59		478451.3321	1722866.7369	Δ_S = 1°–49'–43.69"	L_S = 124.00'	P = 0.33'	
		PI			478492.6684	1722867.0244	X= 123.99'	Y = 1.32'	K = 62.00'	
		ST	751+88.59	N 1°–25'–49.24" W	478575.3137	1722864.9608	L_T = 82.67'	S_T = 41.34'		
TANGENT										
		POL	752+38.59		478625.2982	1722863.7127				
				N 1°–25'–49.24" W						

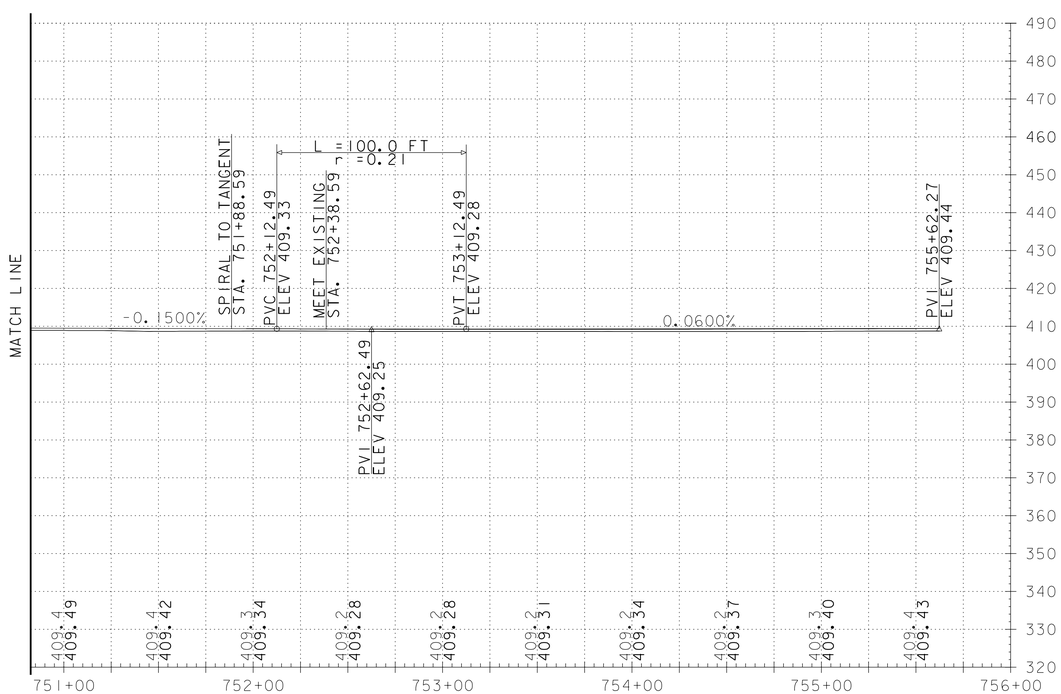


NOTE: RAILROAD PROPERTY LINE INFORMATION IS A BEST FIT TAKEN FROM RAILROAD VALUATION PLAN V.43/15, TITLED "RIGHT-OF-WAY AND TRACK MAP - STATION 739+20 TO STATION 792+00" DATED JUNE 30, 1914

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N. BLAKE
DESIGNED BY: N. BLAKE	CHECKED BY: J. READ
TRACK PLAN	SHEET 45 OF 303



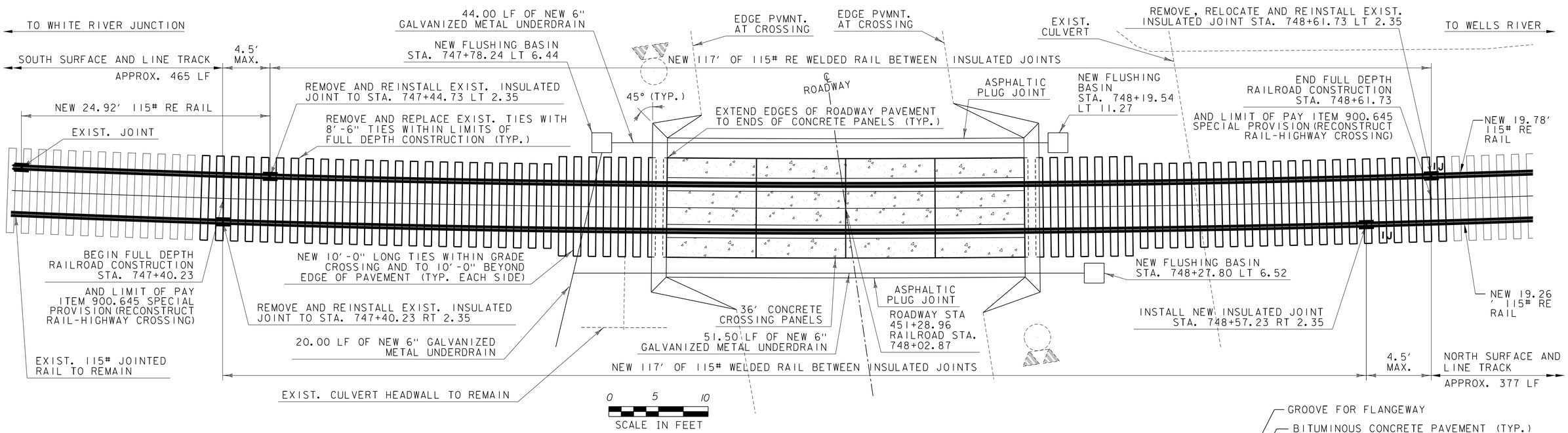
RAILROAD MAINLINE TOP OF GRADE RAIL PROFILE



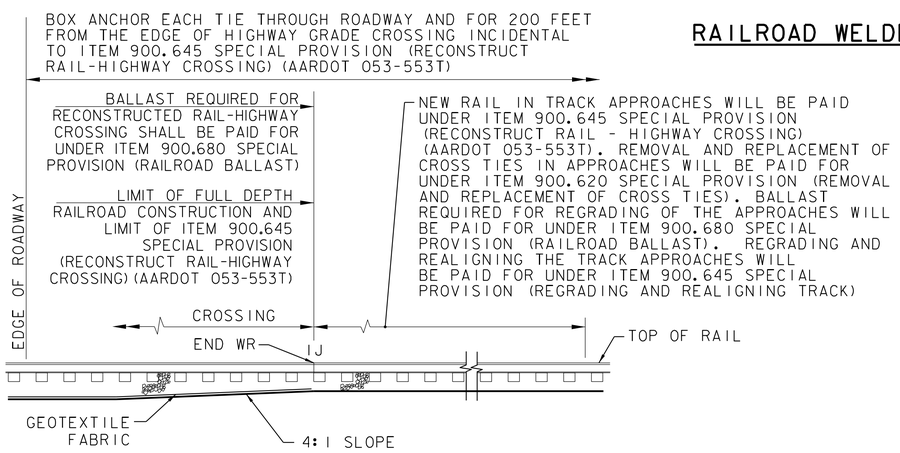
NOTES:

1. STATIONS AND ELEVATIONS ARE IN FEET (TYP.).
2. THE GRADES SHOWN TO THE NEAREST TENTH ARE THE EXISTING TOP OF LOW RAIL ALONG THE CENTERLINE OF TRACK LT 2.35 FT (TYP.).
3. THE GRADES SHOWN TO THE NEAREST HUNDRETH ARE THE PROPOSED TOP OF LOW RAIL ALONG THE CENTERLINE OF TRACK LT 2.35 FT (TYP.).
4. THE PROPOSED GRADE OF THE HIGH RAIL ALONG THE CENTERLINE OF TRACK RT 2.35 FT IS DETERMINED BY ADDING THE ACTUAL SUPERELEVATION TO THE PROPOSED LOW RAIL ELEVATION (SEE CURVE DATA ON THE TRACK PLAN). SUPERELEVATION IN THE SPIRALS, TRANSITIONS UNIFORMLY FROM ZERO SUPERELEVATION TO FULL SUPERELEVATION.

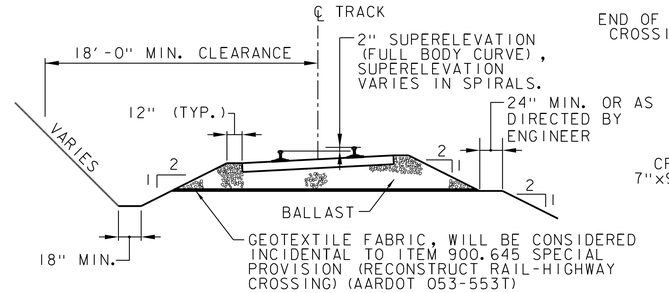
PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N. BLAKE
DESIGNED BY: N. BLAKE	CHECKED BY: J. READ
TRACK PROFILE	SHEET 46 OF 303



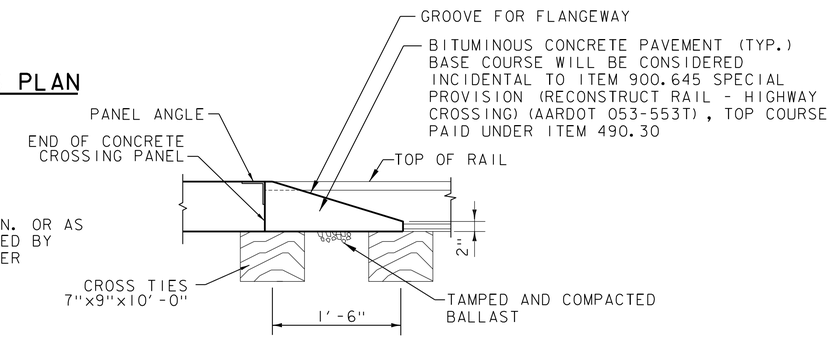
RAILROAD WELDED RAIL (WR), TIES, AND INSULATED JOINTS PLAN



TYPICAL BALLAST TRANSITION



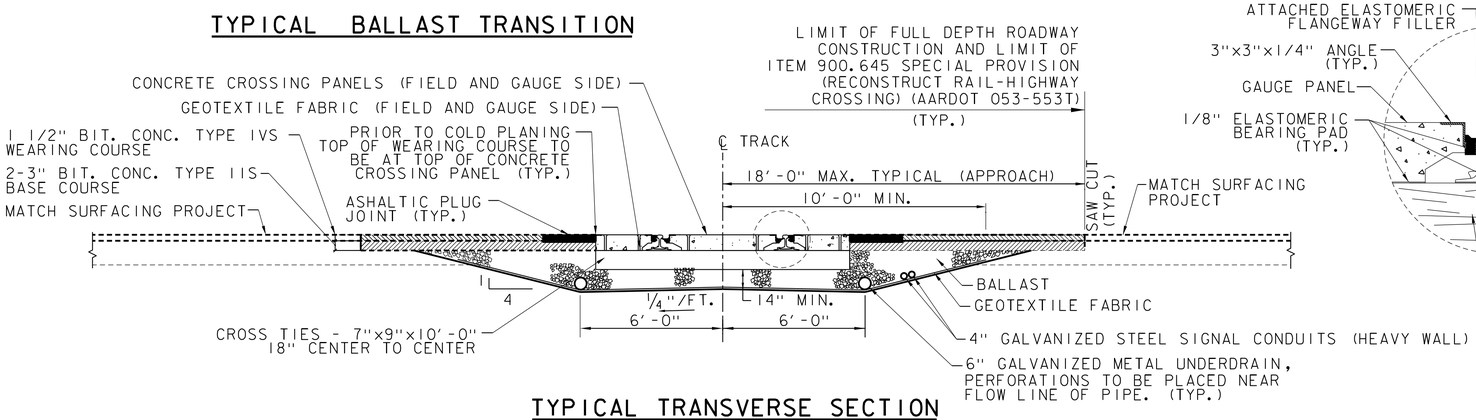
TYPICAL APPROACH SECTION



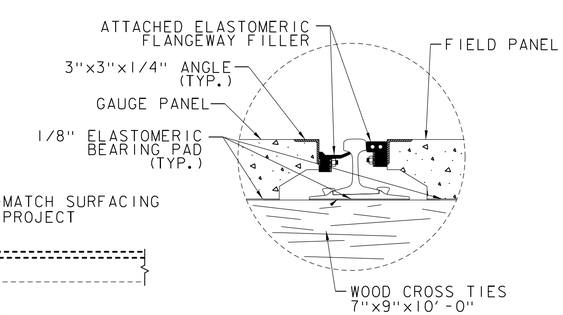
CONCRETE CROSSING PANEL END SIDE VIEW

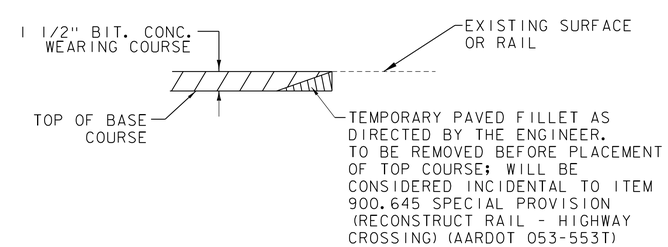
N.T.S.

NOTE: GAUGE SIDE SHOWN (FIELD SIDE SIMILAR)



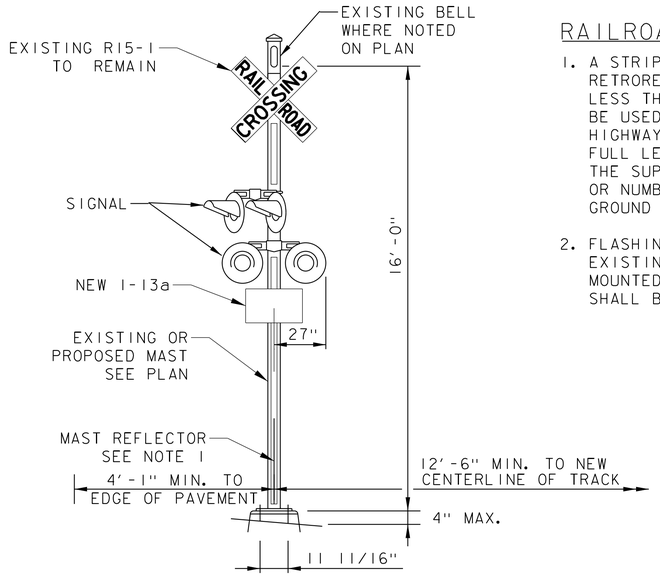
TYPICAL TRANSVERSE SECTION





DETAIL AT TEMPORARY VERTICAL JOINTS

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N. BLAKE
DESIGNED BY: N. BLAKE	CHECKED BY: J. READ
GRADE CROSSING DETAILS 1 OF 2	SHEET 47 OF 303



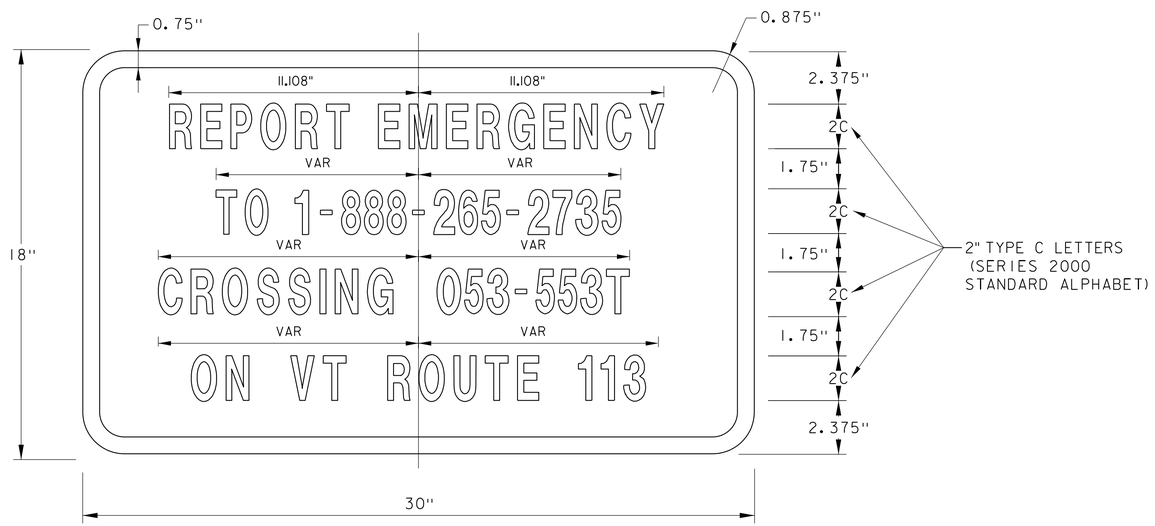
TYPICAL RAILROAD SIGNAL DETAIL

NTS

RAILROAD SIGNAL MAST NOTES:

1. A STRIP OF ASTM TYPE III OR TYPE V RETROREFLECTIVE WHITE MATERIAL NOT LESS THAN 2 INCHES IN WIDTH, SHALL BE USED ON EACH SUPPORT AT HIGHWAY-RAIL GRADE CROSSING FOR THE FULL LENGTH OF THE FRONT AND BACK OF THE SUPPORT FROM THE CROSSBUCK SIGN OR NUMBER OF TRACKS SIGN TO NEAR GROUND LEVEL.

2. FLASHING LIGHT SIGNAL EQUIPMENT AND EXISTING 12" FLASHING LIGHT UNITS MOUNTED ON THE CROSSING SIGNAL MAST SHALL BE REWIRED.



I-13a SIGN

COLORS:

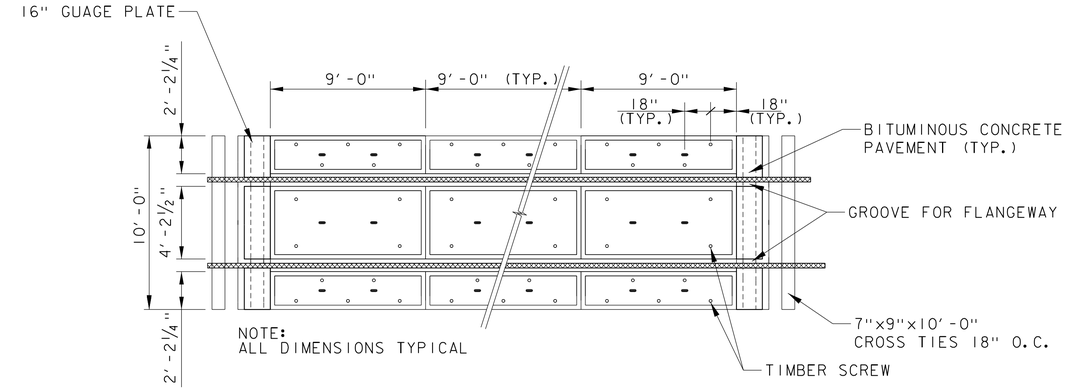
LEGEND	WHITE	(RETROREFLECTIVE)
BACKGROUND	BLUE	(RETROREFLECTIVE)

GENERAL MOTORIST SERVICE SIGN NOTES:

1. THE COLORS, LETTERING, DESIGN, AND SPECIFICATION SHALL CONFORM TO THE NOTES SHOWN ON VAOT STANDARD E-132. THE SIGN BASE MATERIALS SHALL CONFORM TO BASE MATERIAL A OR C AS NOTED ON VAOT STANDARD E-132.

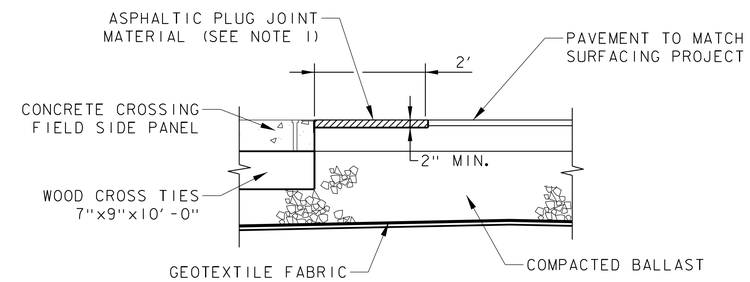
2. THE EMERGENCY CONTACT TELEPHONE NUMBER IS 1-888-265-2735, THE CROSSING NUMBER IS 053-553T ON VT 113.

3. PLACE A MINIMUM OF (3) I-13 SIGNS ONE ON EACH SIDE OF THE CROSSING AND ONE ON THE SIGNAL CASE OR HOUSE.



TYPICAL VIEW OF CROSSING PANELS

NTS

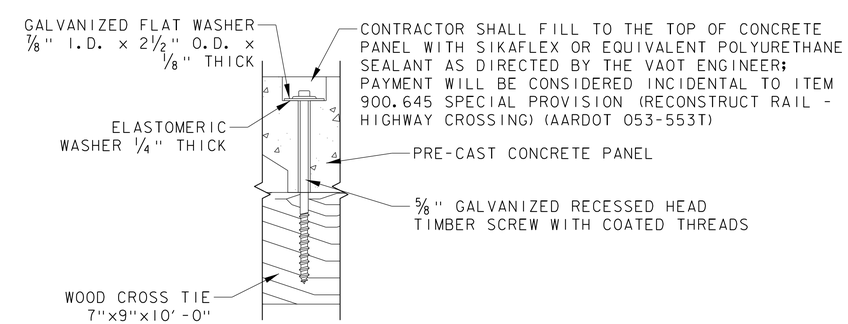


ASPHALT TRANSITION FOR CONCRETE GRADE CROSSING PANELS

NTS

NOTE:

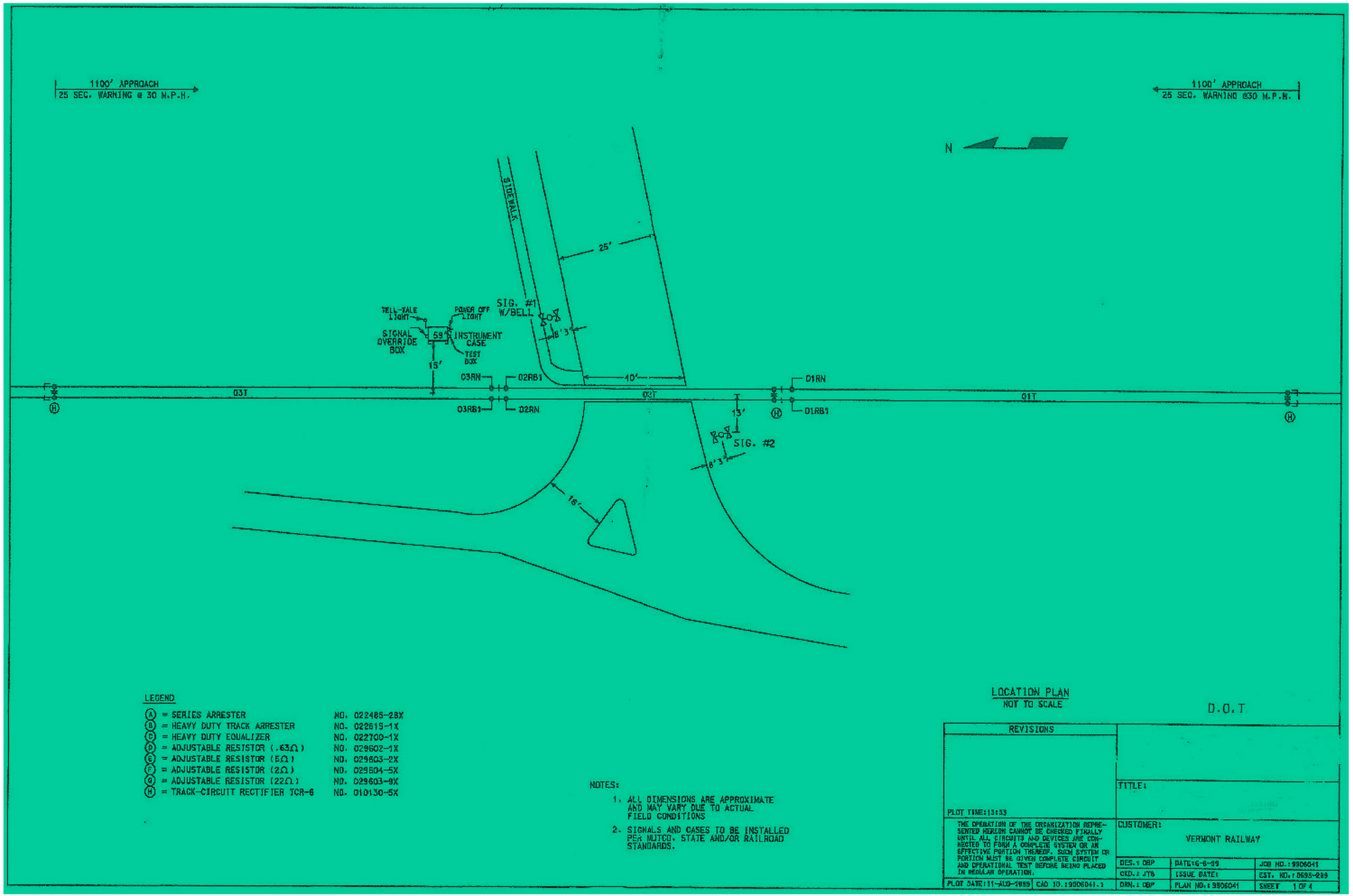
1. CONTRACTOR SHALL COLD PLANE A MINIMUM OF 2" DEEP x 24" WIDE ADJACENT TO THE CONCRETE GRADE CROSSING PANELS AND FILL WITH ASHALTIC PLUG JOINT MATERIAL AS DIRECTED BY THE VAOT ENGINEER. ALL WORK ASSOCIATED WITH THIS ITEM WILL BE PAID UNDER ITEM 900.645 SPECIAL PROVISION (RECONSTRUCT RAIL-HIGHWAY CROSSING) (AARDOT 053-553T).



CONCRETE CROSSING PANEL TIMBER SCREW DETAIL

NTS

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N. BLAKE
DESIGNED BY: N. BLAKE	CHECKED BY: J. READ
GRADE CROSSING DETAILS 2 OF 2	SHEET 48 OF 303



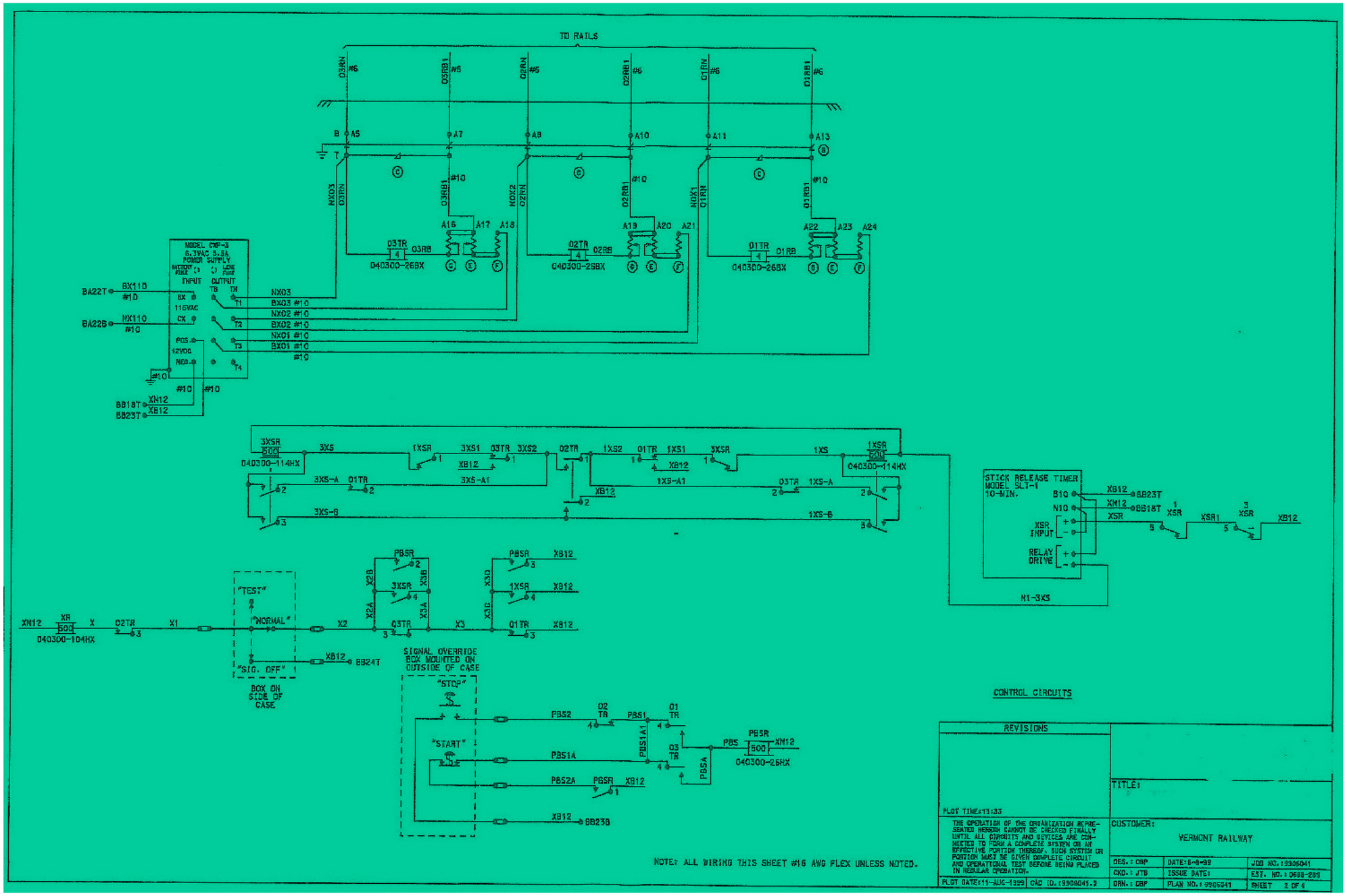
NOTES:

1. SIGNAL PLANS PROVIDED BY VERMONT RAIL SYSTEM (VRS) ARE OF SIMILAR "STYLE C" CROSSING CIRCUITRY FOR ACTIVE WARNING SYSTEMS ON THE WASHINGTON COUNTY RAILROAD CONNECTICUT DIVISION BRADFORD SUBDIVISION (VRS TIMETABLE 5).

2. THE REQUIREMENT FOR 1100 FOOT APPROACH WITH 25 SECOND WARNING IS NOT REQUIRED FOR THIS CROSSING. THE PROPOSED DESIGN SHALL BE PERFORMED FOR 30 MPH TRACK SPEED AND THE EXISTING APPROACH CIRCUIT DISTANCES.

3. BATTERIES PROVIDED SHALL BE ELM-240R INSTEAD OF THE EMF-240R IDENTIFIED ON RAILROAD SIGNAL PLAN 3 AND 4.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N/A
DESIGNED BY: N/A	CHECKED BY: N/A
RAILROAD SIGNAL PLAN 1OF 8	SHEET 49 OF 303



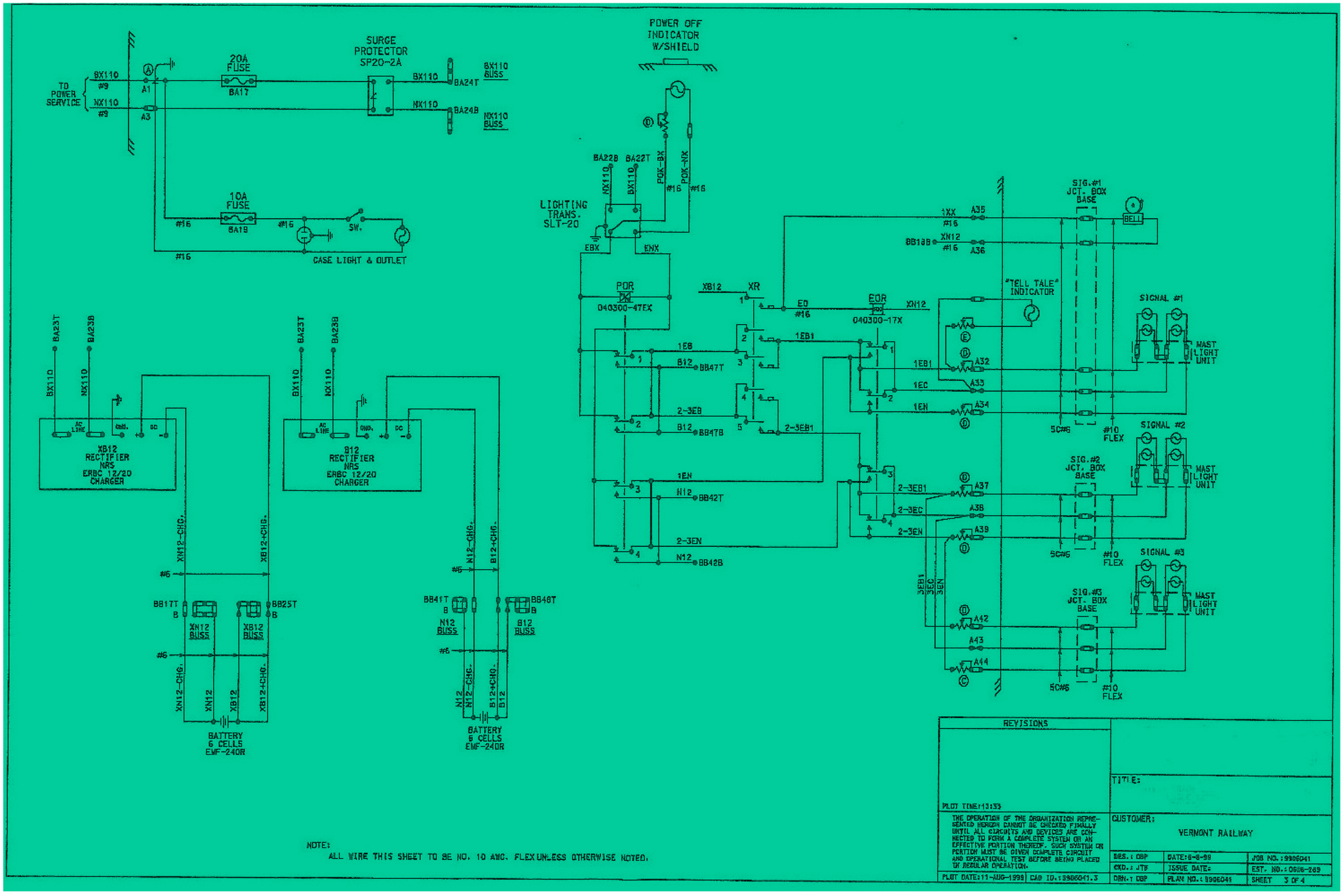
NOTES:

1. SIGNAL PLANS PROVIDED BY VERMONT RAIL SYSTEM (VRS) ARE OF SIMILAR "STYLE C" CROSSING CIRCUITRY FOR ACTIVE WARNING SYSTEMS ON THE WASHINGTON COUNTY RAILROAD CONNECTICUT DIVISION BRADFORD SUBDIVISION (VRS TIMETABLE 5).

2. THE REQUIREMENT FOR 1100 FOOT APPROACH WITH 25 SECOND WARNING IS NOT REQUIRED FOR THIS CROSSING. THE PROPOSED DESIGN SHALL BE PERFORMED FOR 30 MPH TRACK SPEED AND THE EXISTING APPROACH CIRCUIT DISTANCES.

3. BATTERIES PROVIDED SHALL BE ELM-240R INSTEAD OF THE EMF-240R IDENTIFIED ON RAILROAD SIGNAL PLAN 3 AND 4.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99cl94detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N/A
DESIGNED BY: N/A	CHECKED BY: N/A
RAILROAD SIGNAL PLAN 2 OF 8	SHEET 50 OF 303



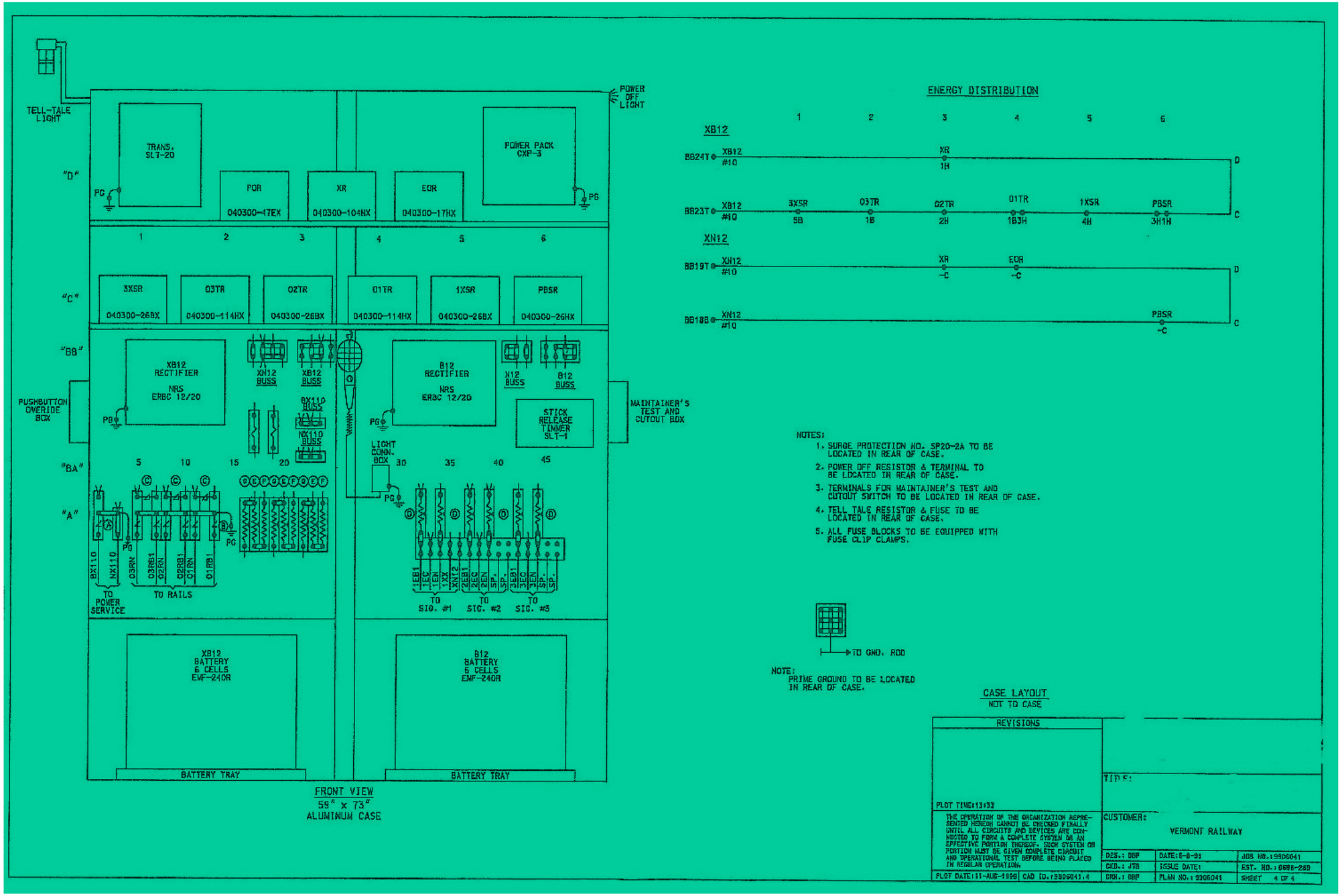
NOTES:

1. SIGNAL PLANS PROVIDED BY VERMONT RAIL SYSTEM (VRS) ARE OF SIMILAR "STYLE C" CROSSING CIRCUITRY FOR ACTIVE WARNING SYSTEMS ON THE WASHINGTON COUNTY RAILROAD CONNECTICUT DIVISION BRADFORD SUBDIVISION (VRS TIMETABLE 5).

2. THE REQUIREMENT FOR 1100 FOOT APPROACH WITH 25 SECOND WARNING IS NOT REQUIRED FOR THIS CROSSING. THE PROPOSED DESIGN SHALL BE PERFORMED FOR 30 MPH TRACK SPEED AND THE EXISTING APPROACH CIRCUIT DISTANCES.

3. BATTERIES PROVIDED SHALL BE ELM-240R INSTEAD OF THE EMF-240R IDENTIFIED ON RAILROAD SIGNAL PLAN 3 AND 4, SHOWN ABOVE.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N/A
DESIGNED BY: N/A	CHECKED BY: N/A
RAILROAD SIGNAL PLAN 3 OF 8	SHEET 51 OF 303



NOTES:

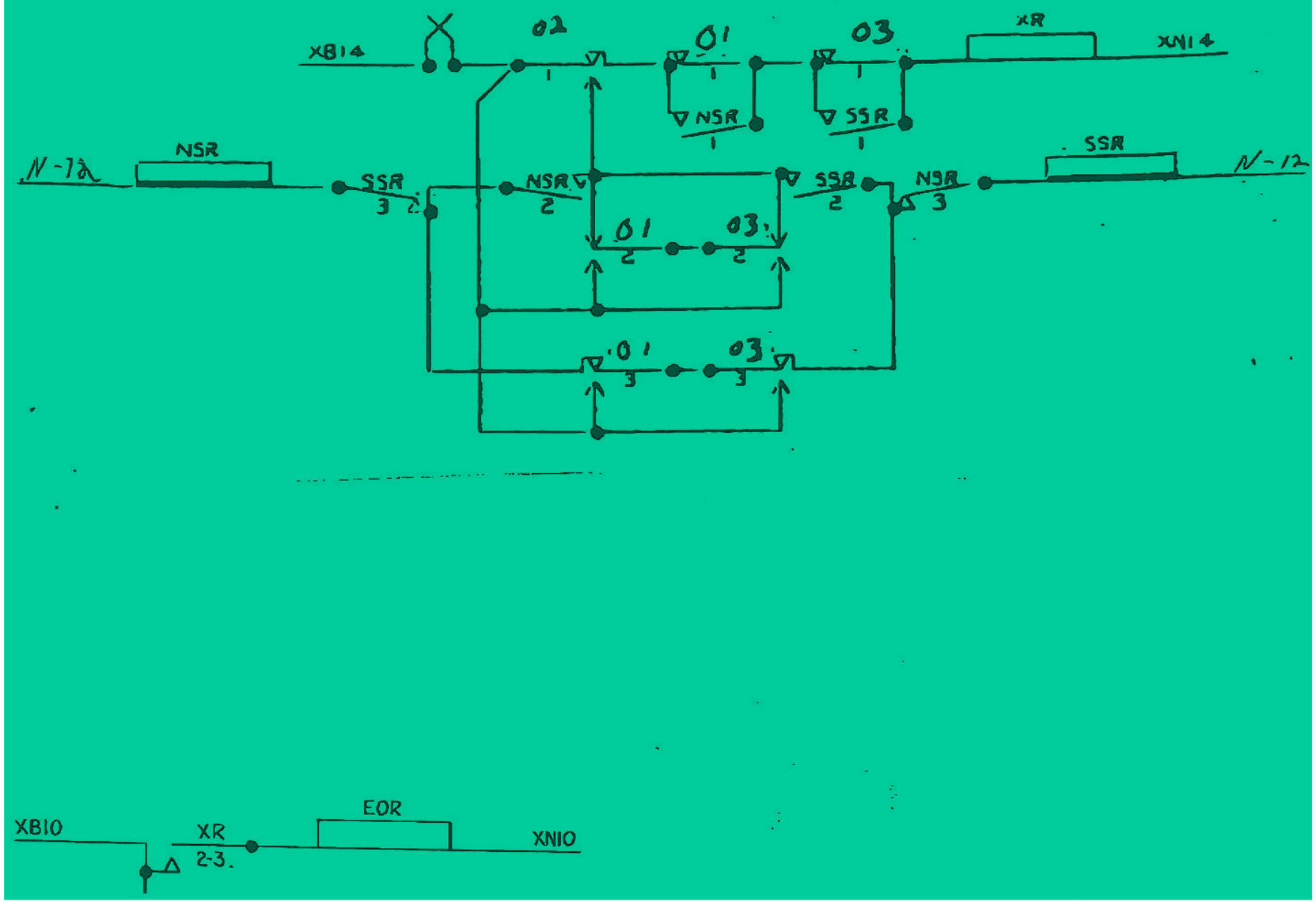
1. SIGNAL PLANS PROVIDED BY VERMONT RAIL SYSTEM (VRS) ARE OF SIMILAR "STYLE C" CROSSING CIRCUITRY FOR ACTIVE WARNING SYSTEMS ON THE WASHINGTON COUNTY RAILROAD CONNECTICUT DIVISION BRADFORD SUBDIVISION (VRS TIMETABLE 5).

2. THE REQUIREMENT FOR 1100 FOOT APPROACH WITH 25 SECOND WARNING IS NOT REQUIRED FOR THIS CROSSING. THE PROPOSED DESIGN SHALL BE PERFORMED FOR 30 MPH TRACK SPEED AND THE EXISTING APPROACH CIRCUIT DISTANCES.

3. BATTERIES PROVIDED SHALL BE ELM-240R INSTEAD OF THE EMF-240R IDENTIFIED ON RAILROAD SIGNAL PLAN 3 AND 4, SHOWN ABOVE.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N/A
DESIGNED BY: N/A	CHECKED BY: N/A
RAILROAD SIGNAL PLAN 4 OF 8	SHEET 52 OF 303

UNIVERSAL AC-DC TRACK CIRCUIT (Typical Application)

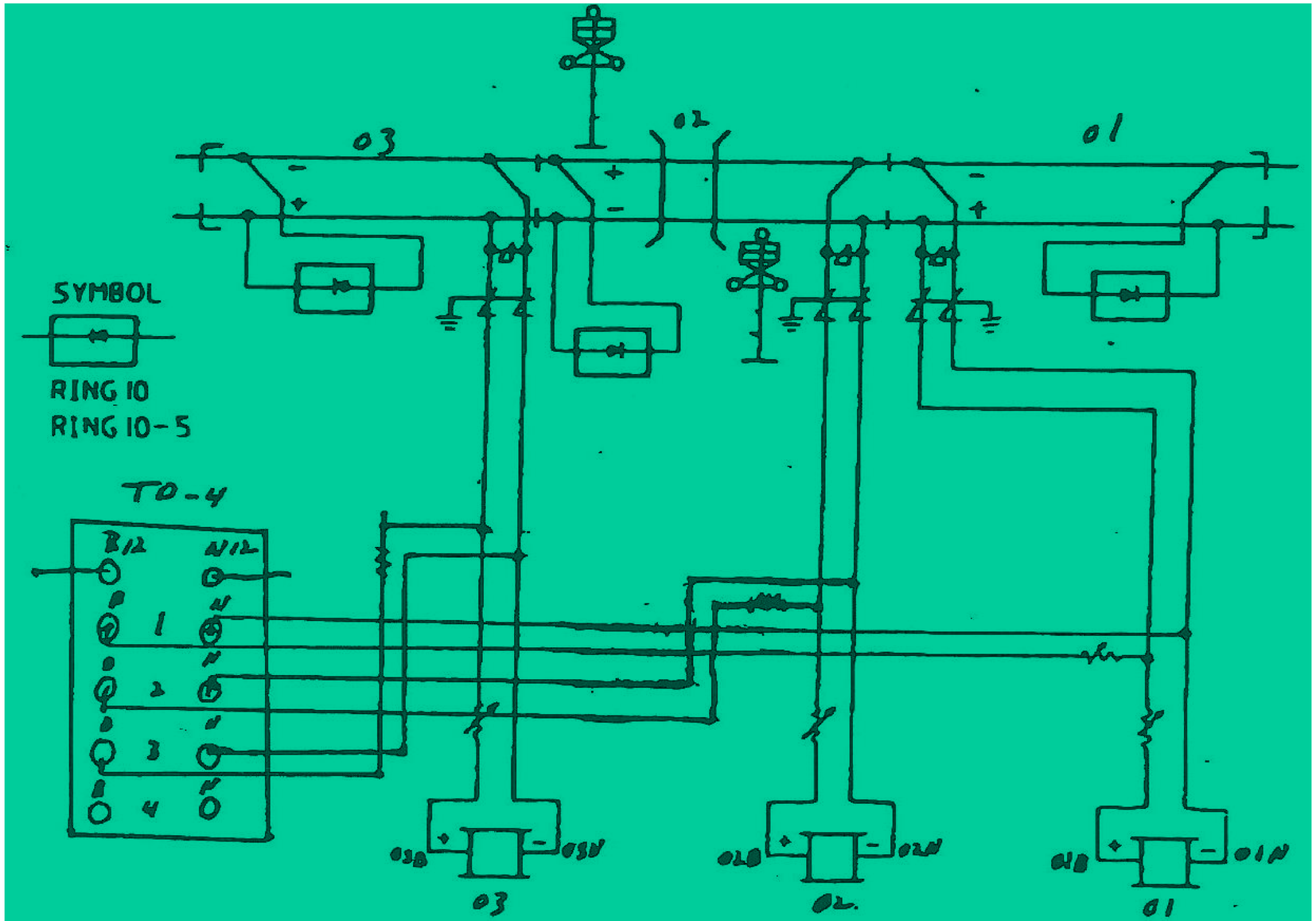


NOTES:

1. SIGNAL PLANS PROVIDED BY VERMONT RAIL SYSTEM (VRS) ARE OF SIMILAR "STYLE C" CROSSING CIRCUITRY FOR ACTIVE WARNING SYSTEMS ON THE WASHINGTON COUNTY RAILROAD CONNECTICUT DIVISION BRADFORD SUBDIVISION (VRS TIMETABLE 5).

2. FOR BATTERY REQUIREMENTS SEE RAILROAD SIGNAL PLAN 1-4 OF 8.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N/A
DESIGNED BY: N/A	CHECKED BY: N/A
RAILROAD SIGNAL PLAN 5 OF 8	SHEET 53 OF 303



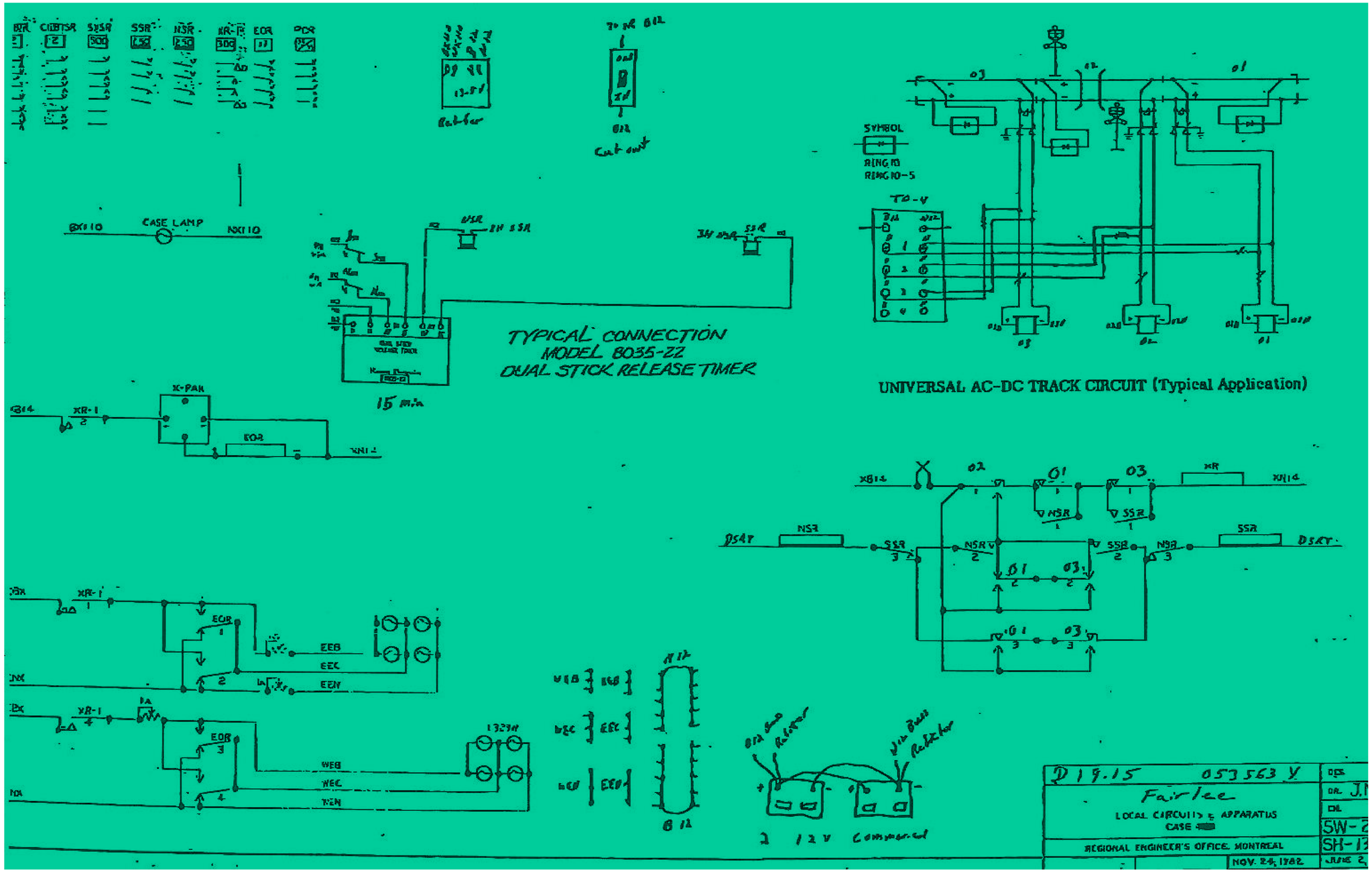
UNIVERSAL AC-DC TRACK CIRCUIT (Typical Application)

NOTES:

1. SIGNAL PLANS PROVIDED BY VERMONT RAIL SYSTEM (VRS) ARE OF SIMILAR "STYLE C" CROSSING CIRCUITRY FOR ACTIVE WARNING SYSTEMS ON THE WASHINGTON COUNTY RAILROAD CONNECTICUT DIVISION BRADFORD SUBDIVISION (VRS TIMETABLE 5).

2. FOR BATTERY REQUIREMENTS SEE RAILROAD SIGNAL PLAN 1-4 OF 8.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N/A
DESIGNED BY: N/A	CHECKED BY: N/A
RAILROAD SIGNAL PLAN 6 OF 8	SHEET 54 OF 303

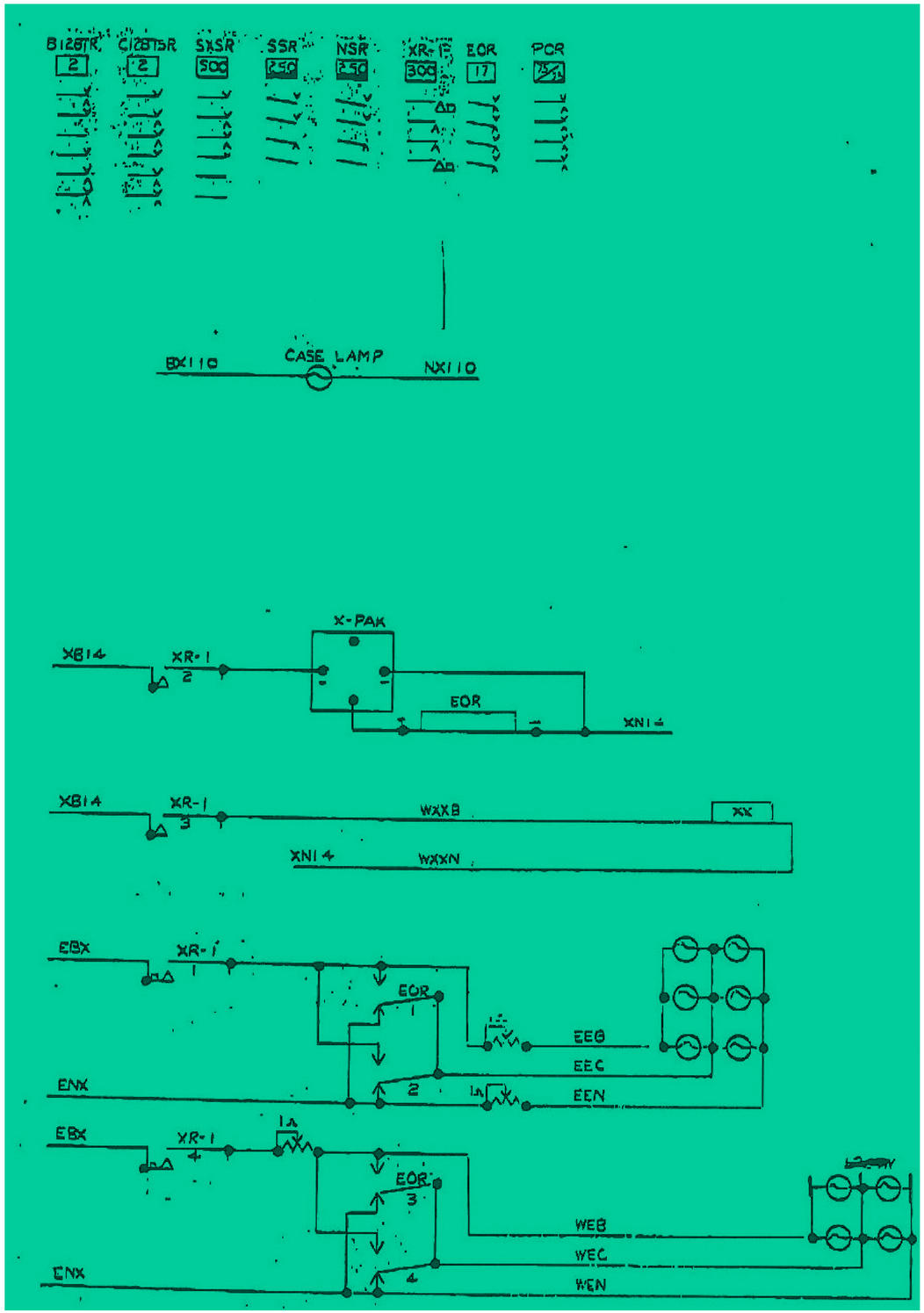


NOTES:

1. SIGNAL PLANS PROVIDED BY VERMONT RAIL SYSTEM (VRS) ARE OF SIMILAR "STYLE C" CROSSING CIRCUITRY FOR ACTIVE WARNING SYSTEMS ON THE WASHINGTON COUNTY RAILROAD CONNECTICUT DIVISION BRADFORD SUBDIVISION (VRS TIMETABLE 5).

2. FOR BATTERY REQUIREMENTS SEE RAILROAD SIGNAL PLAN 1-4 OF 8.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N/A
DESIGNED BY: N/A	CHECKED BY: N/A
RAILROAD SIGNAL PLAN 7 OF 8	SHEET 55 OF 303



NOTES:

1. SIGNAL PLANS PROVIDED BY VERMONT RAIL SYSTEM (VRS) ARE OF SIMILAR "STYLE C" CROSSING CIRCUITRY FOR ACTIVE WARNING SYSTEMS ON THE WASHINGTON COUNTY RAILROAD CONNECTICUT DIVISION BRADFORD SUBDIVISION (VRS TIMETABLE 5).

2. FOR BATTERY REQUIREMENTS SEE RAILROAD SIGNAL PLAN 1-4 OF 8.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194detailsRR.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: J. READ	DRAWN BY: N/A
DESIGNED BY: N/A	CHECKED BY: N/A
RAILROAD SIGNAL PLAN 8 OF 8	SHEET 56 OF 303

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
41+90 TO 43+26 SOLID LT
41+90 TO 45+50 SOLID RT
44+29 TO 45+50 SOLID LT
0+09 TO 1+90 SOLID LT (VT 244)
0+11 TO 1+90 SOLID RT (VT 244)

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
41+90 TO 43+57 SOLID LT & RT
43+97 TO 45+50 SOLID LT & RT
0+18 TO 1+90 SOLID LT & RT (VT 244)

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)
43+47 TO 43+77 LT (VT 244)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
0+26 LT - "STOP" (VT 244)

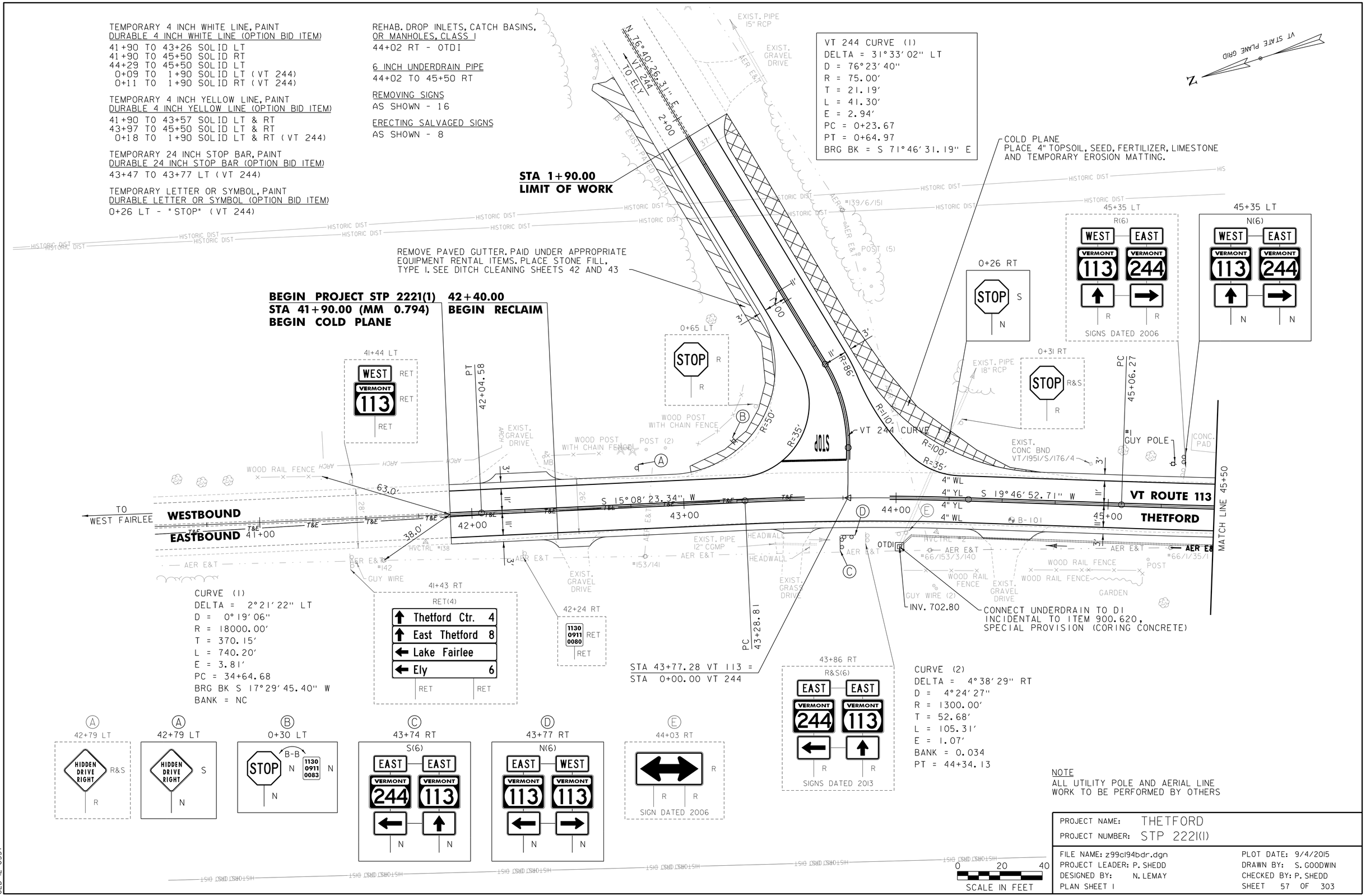
REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I
44+02 RT - OTDI

6 INCH UNDERDRAIN PIPE
44+02 TO 45+50 RT

REMOVING SIGNS
AS SHOWN - 16

ERECTING SALVAGED SIGNS
AS SHOWN - 8

VT 244 CURVE (1)
DELTA = 31°33'02" LT
D = 76°23'40"
R = 75.00'
T = 21.19'
L = 41.30'
E = 2.94'
PC = 0+23.67
PT = 0+64.97
BRG BK = S 71°46'31.19" E



CURVE (1)
DELTA = 2°21'22" LT
D = 0°19'06"
R = 18000.00'
T = 370.15'
L = 740.20'
E = 3.81'
PC = 34+64.68
BRG BK S 17°29'45.40" W
BANK = NC

STA 43+77.28 VT 113 =
STA 0+00.00 VT 244

CURVE (2)
DELTA = 4°38'29" RT
D = 4°24'27"
R = 1300.00'
T = 52.68'
L = 105.31'
E = 1.07'
BANK = 0.034
PT = 44+34.13

NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 1	SHEET 57 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
45+50 TO 51+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
45+50 TO 51+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
45+50 TO 45+85 RT
48+00 TO 50+25 RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
49+50 TO 50+50 LT

STEEL BEAM GUARDRAIL, GALVANIZED
47+65 TO 47+77.5 LT
51+15 TO 51+27.5 LT

DELINEATOR WITH STEEL POST
47+65 LT
51+27.5 LT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
47+77.5 TO 51+15 LT

ANCHOR FOR STEEL BEAM RAIL
2 (SEE STANDARD G-1d)

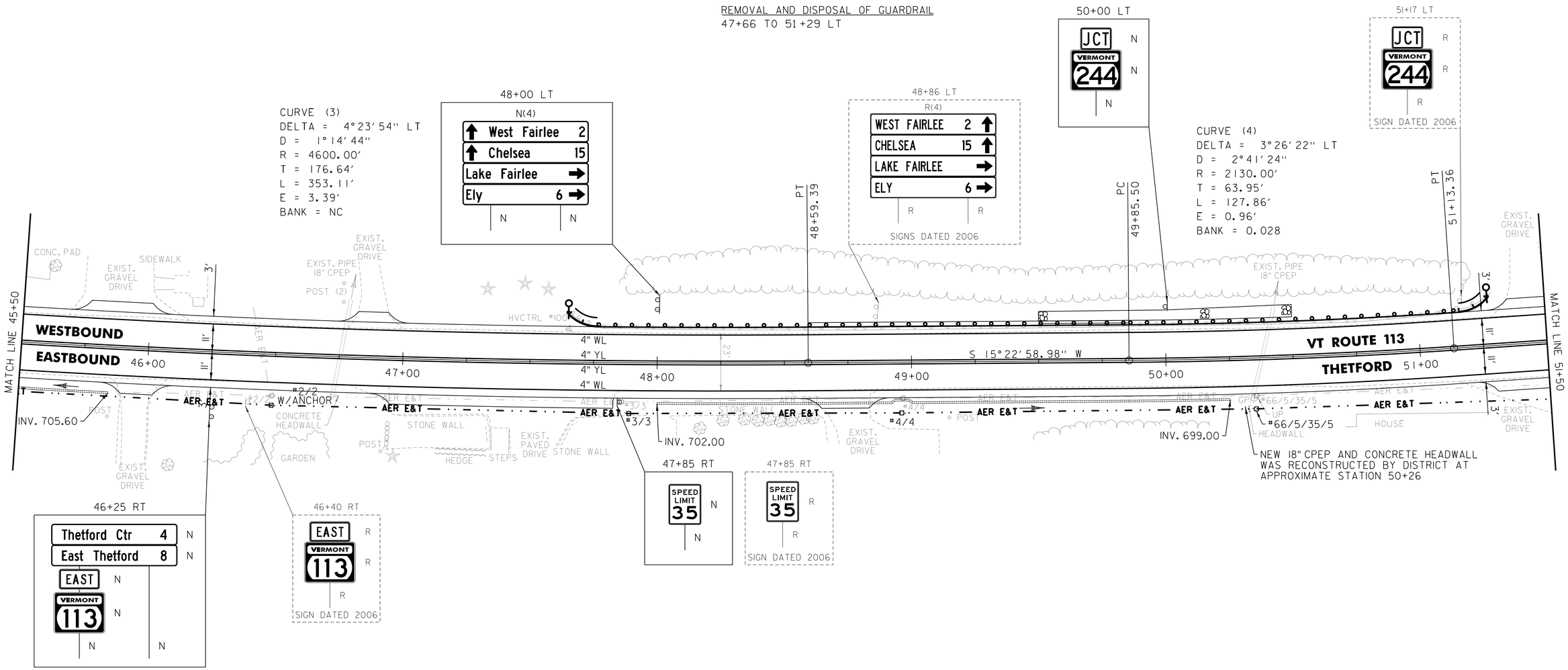
REMOVAL AND DISPOSAL OF GUARDRAIL
47+66 TO 51+29 LT

REMOVING SIGNS
AS SHOWN - 9

VT STATE PLANE GRID

CURVE (3)
DELTA = 4°23'54" LT
D = 1°14'44"
R = 4600.00'
T = 176.64'
L = 353.11'
E = 3.39'
BANK = NC

CURVE (4)
DELTA = 3°26'22" LT
D = 2°41'24"
R = 2130.00'
T = 63.95'
L = 127.86'
E = 0.96'
BANK = 0.028



NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 2	SHEET 58 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
51+50 TO 57+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
51+50 TO 57+50 SOLID LT & RT

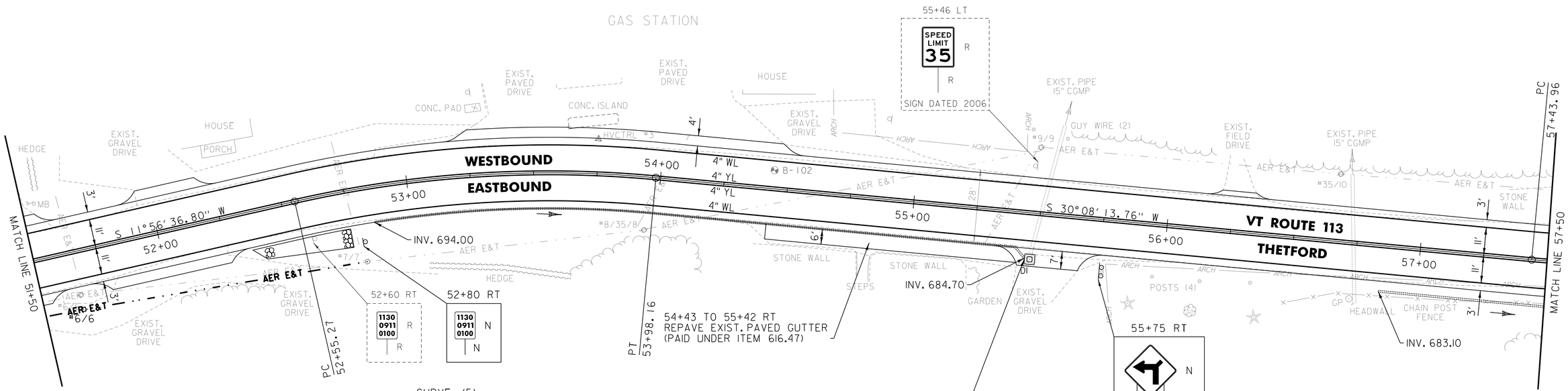
6 INCH UNDERDRAIN PIPE
52+85 TO 55+45 RT
56+85 TO 57+50 RT

REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS II
55+47 RT - DI

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
52+35 TO 52+75 RT

BITUMINOUS CONCRETE
GUTTERS AND TRAFFIC ISLANDS
54+32 TO 55+43 RT

REMOVING SIGNS
AS SHOWN - 2



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 3	SHEET 59 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
57+50 TO 63+50 SOLID LT
57+50 TO 59+24 SOLID RT
59+24 TO 59+50 SOLID RT (TH 21)
59+70 TO 59+96 SOLID RT (TH 21)
59+96 TO 63+50 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
57+50 TO 59+40 SOLID LT & RT
59+60 DOUBLE SOLID RT (TH 21)
59+80 TO 63+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)
59+61 TO 59+77 RT (TH 21)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
59+67 RT - "STOP" (TH 21)

18" CPEP(SL)
63+02 CL

PRECAST REINFORCED CONCRETE
DROP INLET WITH CAST IRON GRATE
63+02 LT

REHAB. DROP INLETS, CATCH BASINS,
OR MANHOLES, CLASS I
60+62 LT - DI

6 INCH UNDERDRAIN PIPE
57+50 TO 59+32 RT
62+50 TO 63+00 LT
63+04 TO 63+50 LT

STONE FILL, TYPE I
63+01 TO 63+04 RT

BITUMINOUS CONCRETE
GUTTERS AND TRAFFIC ISLANDS
59+50 TO 61+20 LT

STEEL BEAM GUARDRAIL, GALVANIZED
58+90.5 TO 60+90.5 LT
63+32.5 TO 63+45 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
62+57.5 TO 63+32.5 RT

GUARDRAIL APPROACH
SECTION, GALV HD STEEL BEAM
60+90.5 TO 61+15.5 LT
62+32.5 TO 62+57.5 RT

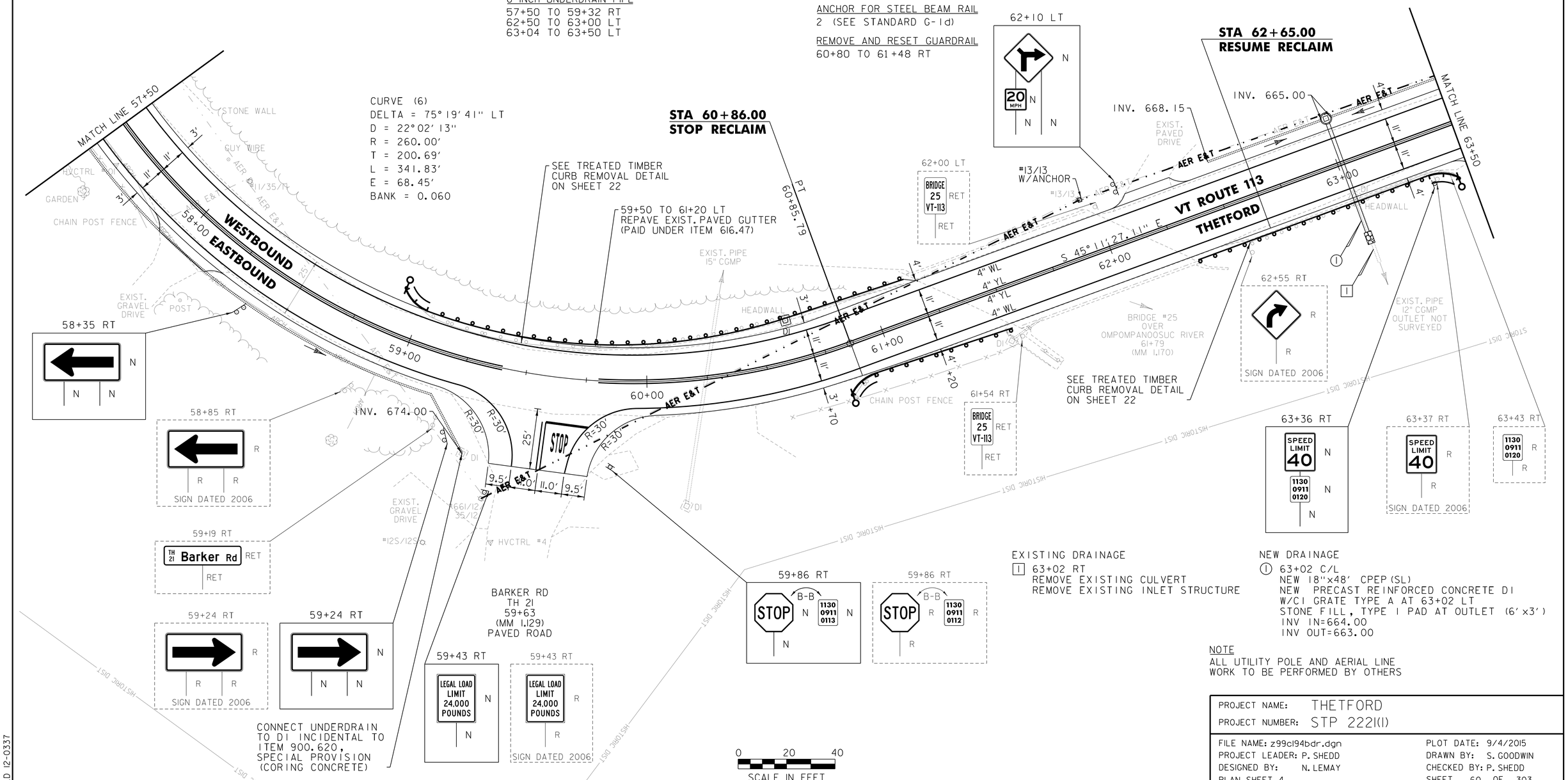
ANCHOR FOR STEEL BEAM RAIL
2 (SEE STANDARD G-1d)

REMOVE AND RESET GUARDRAIL
60+80 TO 61+48 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
58+95 TO 61+16 LT
62+33 TO 63+44 RT

DELINEATOR WITH STEEL POST
58+90.5 LT
60+80 RT
63+45 RT

REMOVING SIGNS
AS SHOWN - 8



EXISTING DRAINAGE
[I] 63+02 RT
REMOVE EXISTING CULVERT
REMOVE EXISTING INLET STRUCTURE

NEW DRAINAGE
(1) 63+02 C/L
NEW 18"x48' CPEP(SL)
NEW PRECAST REINFORCED CONCRETE DI
W/CI GRATE TYPE A AT 63+02 LT
STONE FILL, TYPE I PAD AT OUTLET (6'x3')
INV IN=664.00
INV OUT=663.00

NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 4	SHEET 60 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
63+50 TO 69+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
63+50 TO 69+50 SOLID LT & RT

REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I
67+67 LT - OTDI

REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS II
65+79 RT - DI

6 INCH UNDERDRAIN PIPE
63+50 TO 63+75 LT
66+34 TO 67+25 LT
67+68 TO 69+50 LT

STEEL BEAM GUARDRAIL, GALVANIZED
63+69 TO 68+19 RT

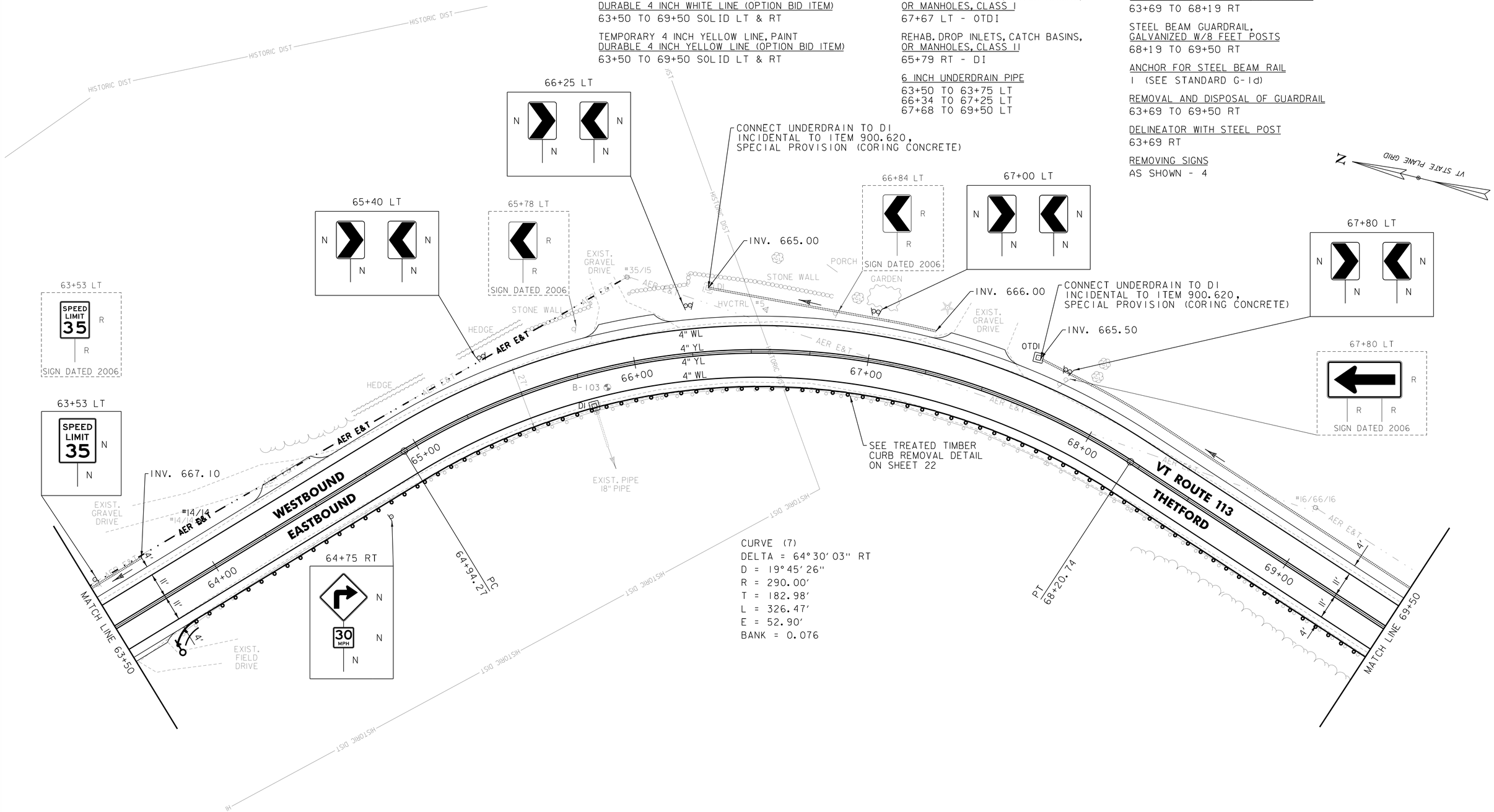
STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS
68+19 TO 69+50 RT

ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
63+69 TO 69+50 RT

DELINEATOR WITH STEEL POST
63+69 RT

REMOVING SIGNS
AS SHOWN - 4



CURVE (7)
DELTA = 64°30'03" RT
D = 19°45'26"
R = 290.00'
T = 182.98'
L = 326.47'
E = 52.90'
BANK = 0.076

NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 5	SHEET 61 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
69+50 TO 75+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
69+50 TO 75+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
69+50 TO 70+25 LT
70+50 TO 72+25 LT

STONE FILL, TYPE I
74+22 TO 74+30 LT

STEEL BEAM GUARDRAIL, GALVANIZED
70+19 TO 70+31.5 RT
70+72.5 TO 73+85 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
69+50 TO 70+19 RT

ANCHOR FOR STEEL BEAM RAIL
3 (SEE STANDARD G-1d)

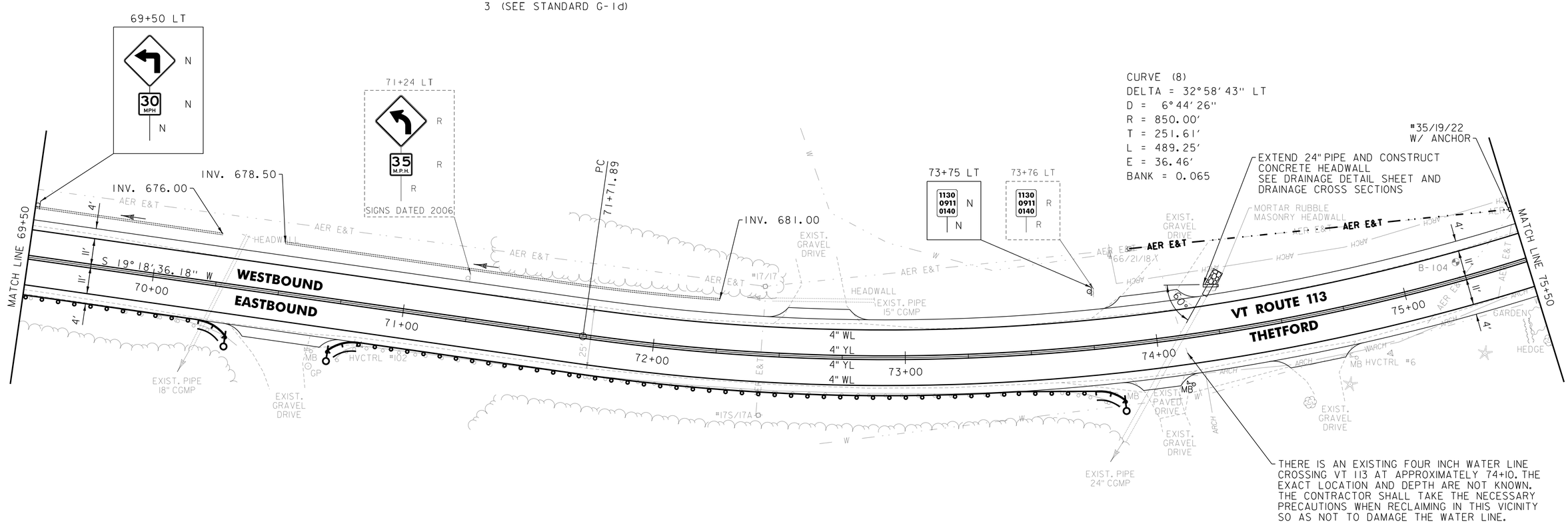
REMOVAL AND DISPOSAL OF GUARDRAIL
69+50 TO 70+37 RT
70+76 TO 73+83 RT

DELINEATOR WITH STEEL POST
70+31.5 RT
70+72.5 RT
73+85 RT

RELOCATE MAILBOX, SINGLE SUPPORT
74+10 RT

REMOVING SIGNS
AS SHOWN - 3

24" PCCSP .064 (2-2/3 X 1/2)
74+10 LT



NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 6	SHEET 62 OF 303

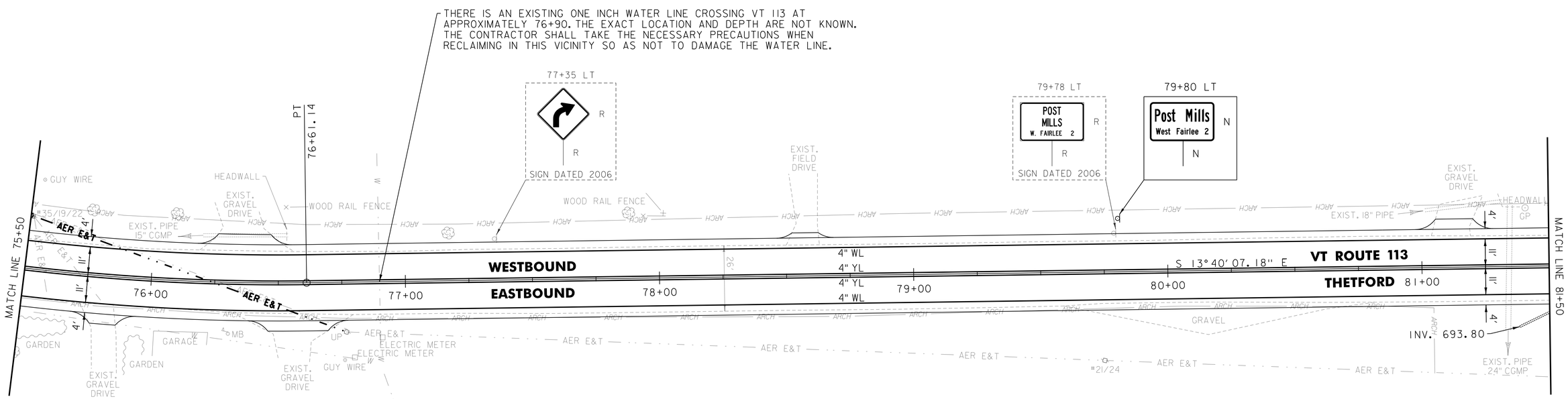
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
75+50 TO 81+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
75+50 TO 81+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
81+38 TO 81+50 RT

REMOVING SIGNS
AS SHOWN - 2



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 7	SHEET 63 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
81+50 TO 87+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
81+50 TO 87+50 SOLID LT & RT

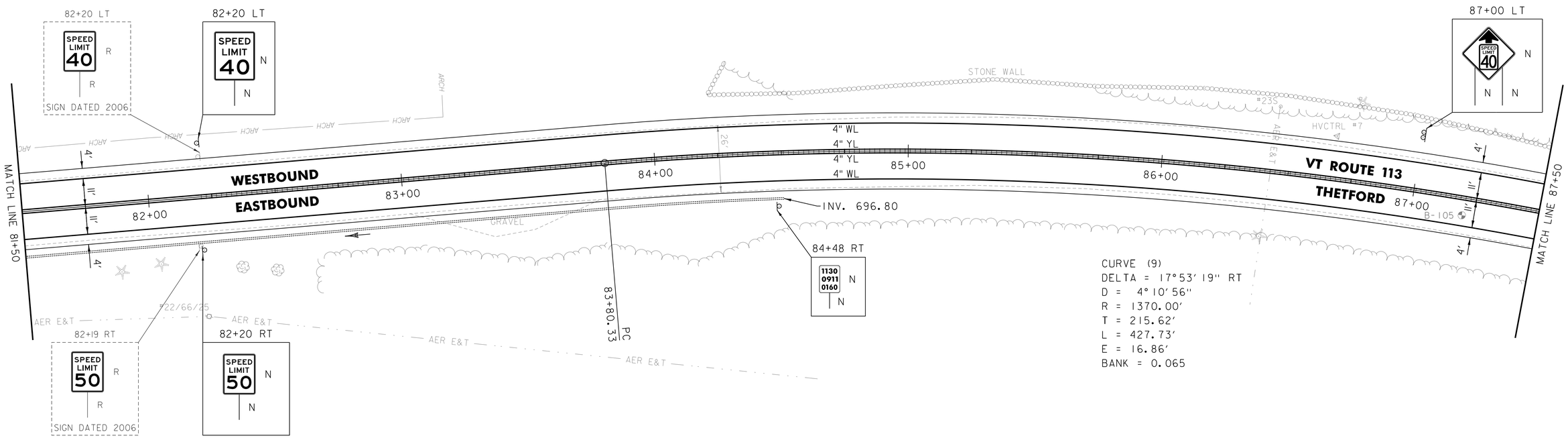
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
81+50 TO 82+20 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE, POLYUREA
82+20 TO 87+50 SOLID LT & RT

MILLED RUMBLE STRIPS
82+20 TO 87+50 CL

6 INCH UNDERDRAIN PIPE
81+50 TO 84+50 RT

REMOVING SIGNS
AS SHOWN - 2



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 8	SHEET 64 OF 303

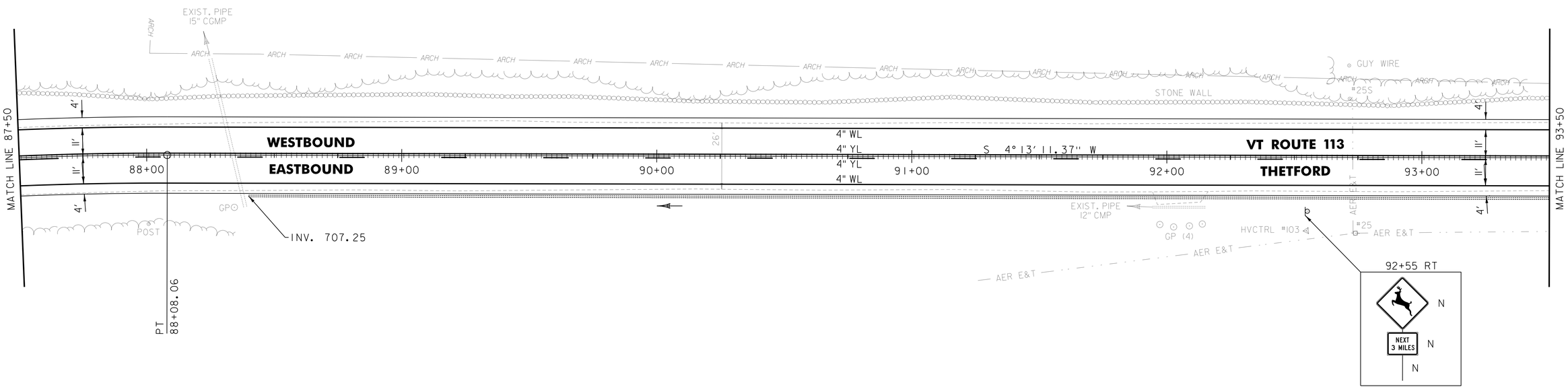
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
87+50 TO 93+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
87+50 TO 87+65 SOLID LT & RT
87+65 TO 93+50 SOLID LT, DASHED RT

6 INCH UNDERDRAIN PIPE
88+40 TO 93+50 RT

MILLED RUMBLE STRIPS
87+50 TO 93+50 CL



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 9	SHEET 65 OF 303

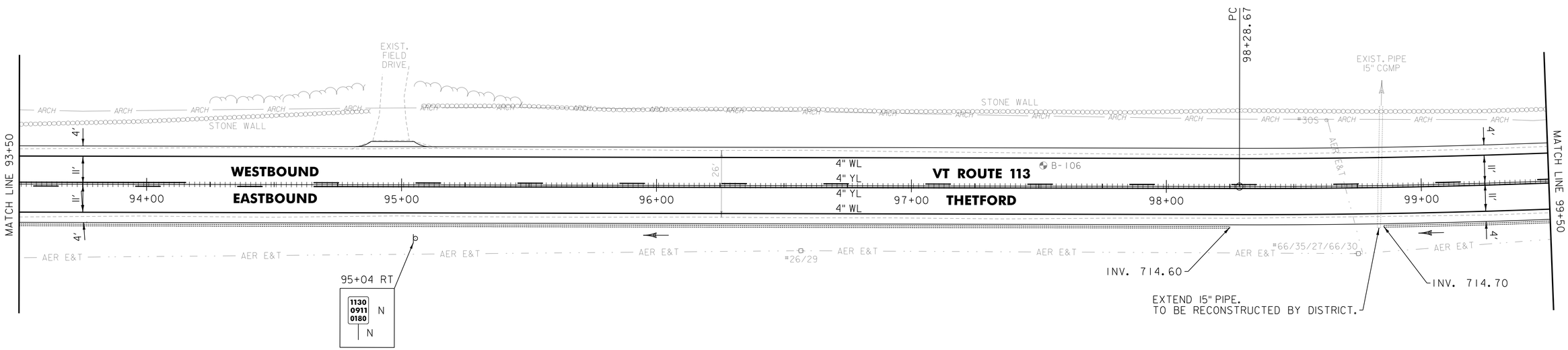
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
93+50 TO 99+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
93+50 TO 94+15 SOLID LT, DASHED RT
94+15 TO 94+65 DASHED CL
94+65 TO 99+50 DASHED LT, SOLID RT

6 INCH UNDERDRAIN PIPE
93+50 TO 98+25 RT
98+85 TO 99+50 RT

MILLED RUMBLE STRIPS
93+50 TO 99+50 CL



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 10	SHEET 66 OF 303

CLD 12-0337

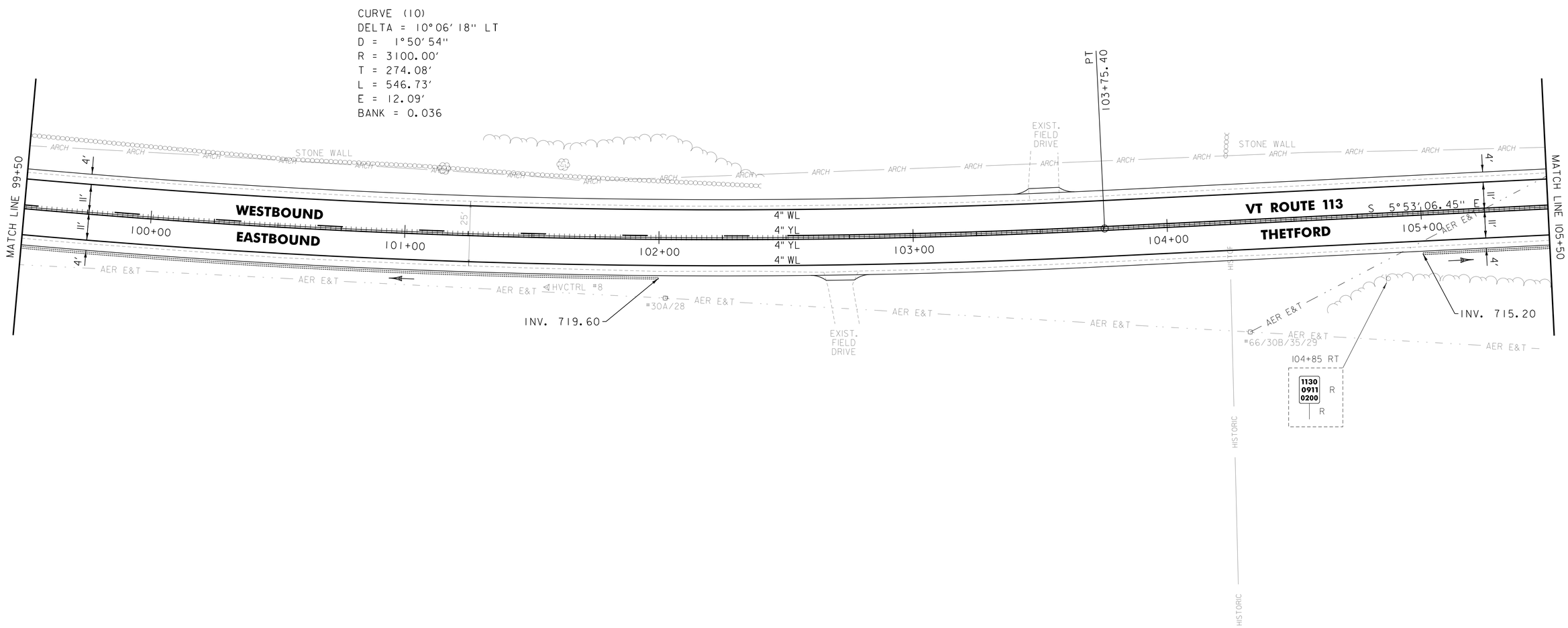
TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
99+50 TO 105+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
99+50 TO 102+50 DASHED LT, SOLID RT
102+50 TO 105+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
99+50 TO 102+00 RT
105+00 TO 105+50 RT

MILLED RUMBLE STRIPS
99+50 TO 105+50 CL

REMOVING SIGNS
AS SHOWN - 1



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 11	SHEET 67 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
105+50 TO 111+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
105+50 TO 111+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
105+50 TO 107+37 RT

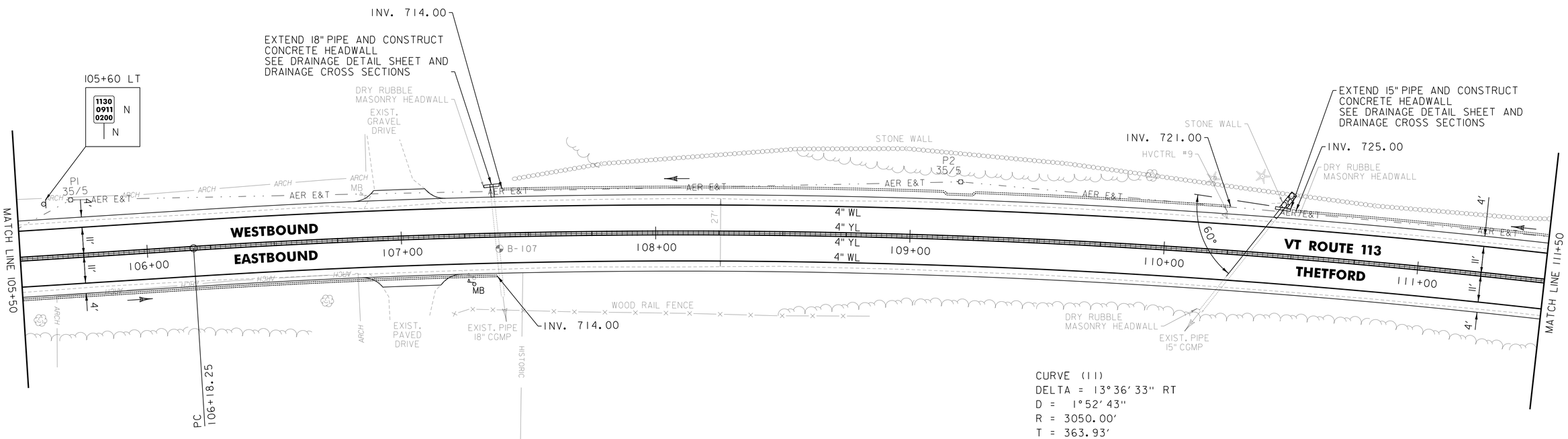
MILLED RUMBLE STRIPS
105+50 TO 111+50 CL

6 INCH UNDERDRAIN PIPE
105+50 TO 107+37 RT
107+40 TO 110+25 LT
110+50 TO 111+50 LT

STONE FILL, TYPE I
110+44 TO 110+50 LT

RELOCATE MAILBOX, SINGLE SUPPORT
107+28 RT

15" PCCSP .064 (2-2/3 X 1/2)
110+33 LT



CURVE (11)
DELTA = 13°36'33" RT
D = 1°52'43"
R = 3050.00'
T = 363.93'
L = 724.44'
E = 21.64'
BANK = 0.021 AT 35 MPH

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 12	SHEET 68 OF 303

CLD 12-0337

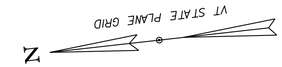
TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
111+50 TO 117+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
111+50 TO 117+50 SOLID LT & RT

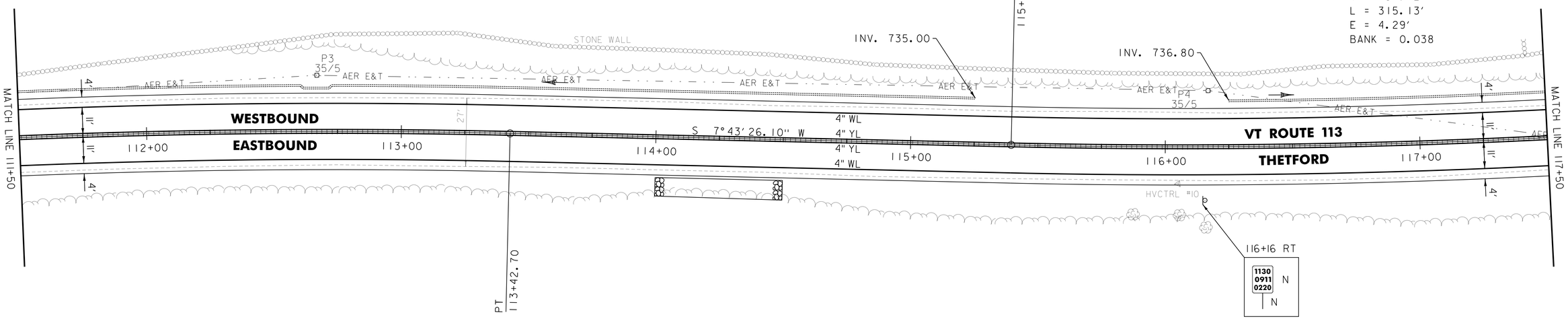
6 INCH UNDERDRAIN PIPE
111+50 TO 115+25 LT
116+25 TO 117+50 LT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
114+00 TO 114+50 RT

MILLED RUMBLE STRIPS
111+50 TO 117+50 CL



CURVE (12)
DELTA = 6°13'34" LT
D = 1°58'33"
R = 2900.00'
T = 157.72'
L = 315.13'
E = 4.29'
BANK = 0.038



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 13	SHEET 69 OF 303

CLD 12-0337

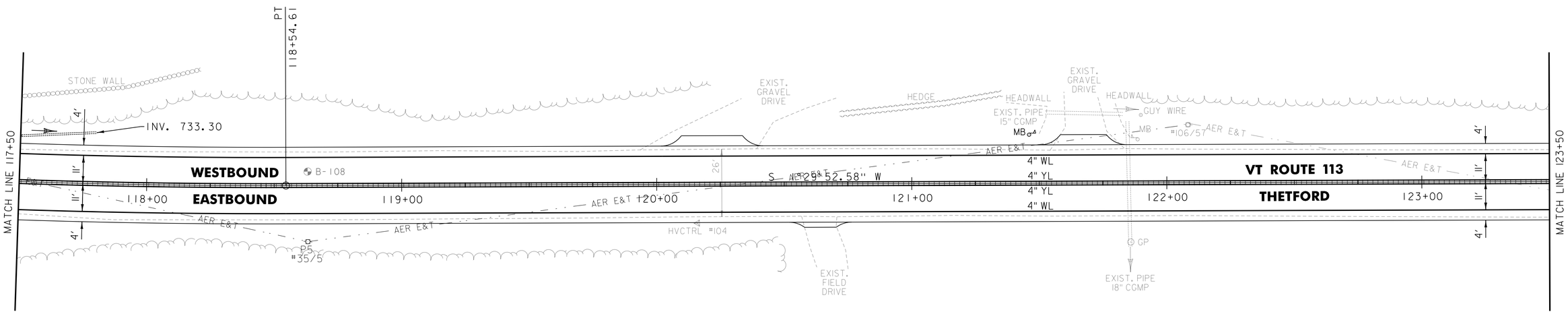
TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
117+50 TO 123+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
117+50 TO 123+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
117+50 TO 117+80 LT

MILLED RUMBLE STRIPS
117+50 TO 123+50 CL

RELOCATE MAILBOX, SINGLE SUPPORT
121+46 LT



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 14	SHEET 70 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
123+50 TO 129+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
123+50 TO 129+50 SOLID LT & RT

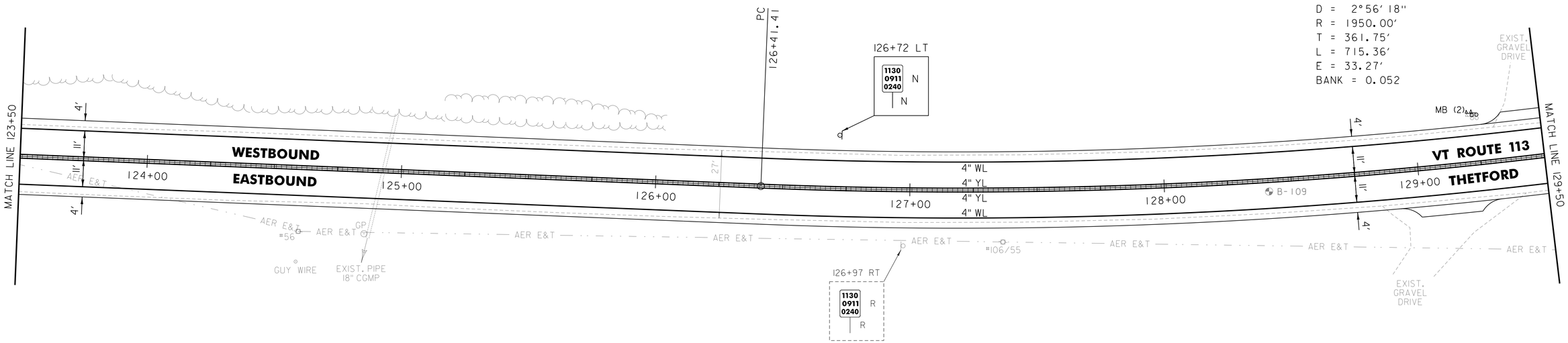
MILLED RUMBLE STRIPS
123+50 TO 129+50 CL

RELOCATE MAILBOX, SINGLE SUPPORT
129+23 LT
129+25 LT

REMOVING SIGNS
AS SHOWN - 1

VT STATE PLANE GRID
N

CURVE (13)
DELTA = 21°01'09" LT
D = 2°56'18"
R = 1950.00'
T = 361.75'
L = 715.36'
E = 33.27'
BANK = 0.052



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 15	SHEET 71 OF 303

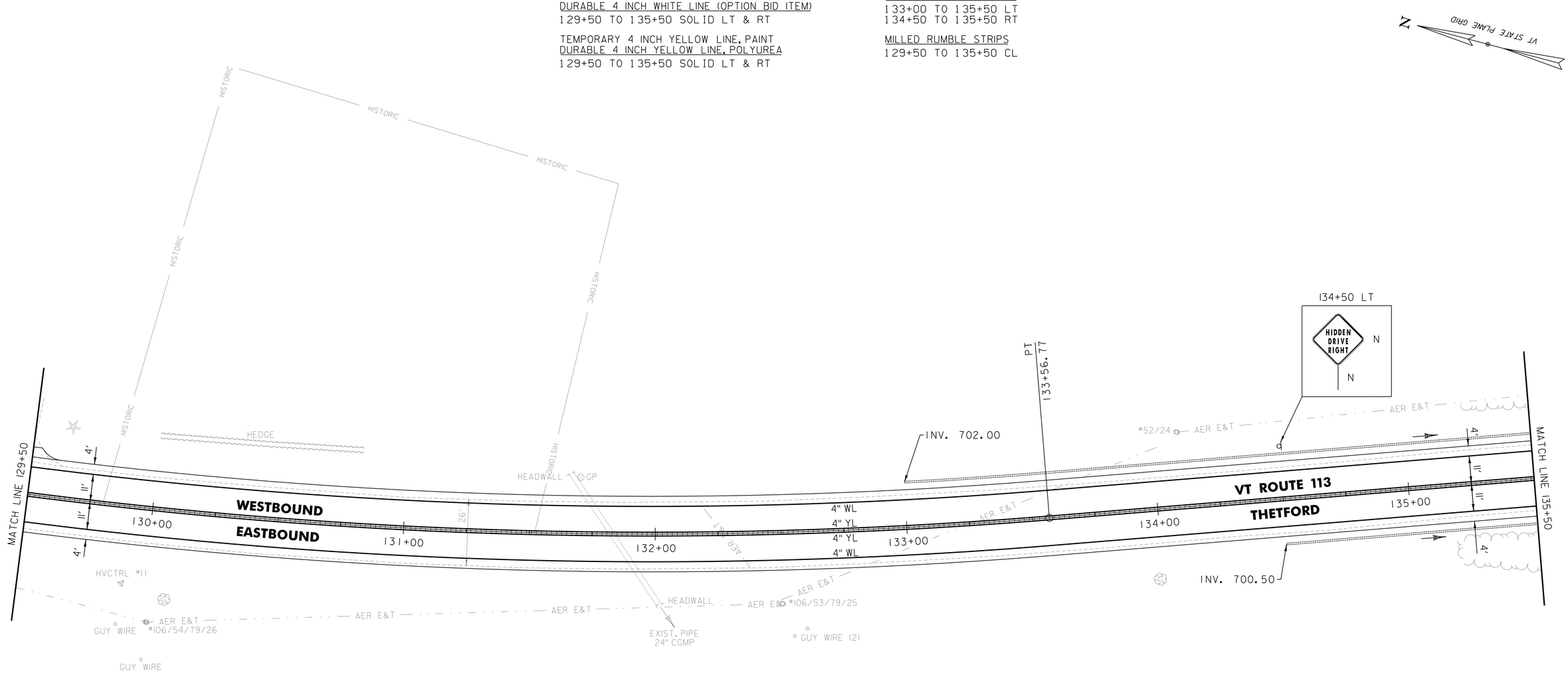
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
129+50 TO 135+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
129+50 TO 135+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
133+00 TO 135+50 LT
134+50 TO 135+50 RT

MILLED RUMBLE STRIPS
129+50 TO 135+50 CL



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 16	SHEET 72 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
135+50 TO 141+50 SOLID LT & RT

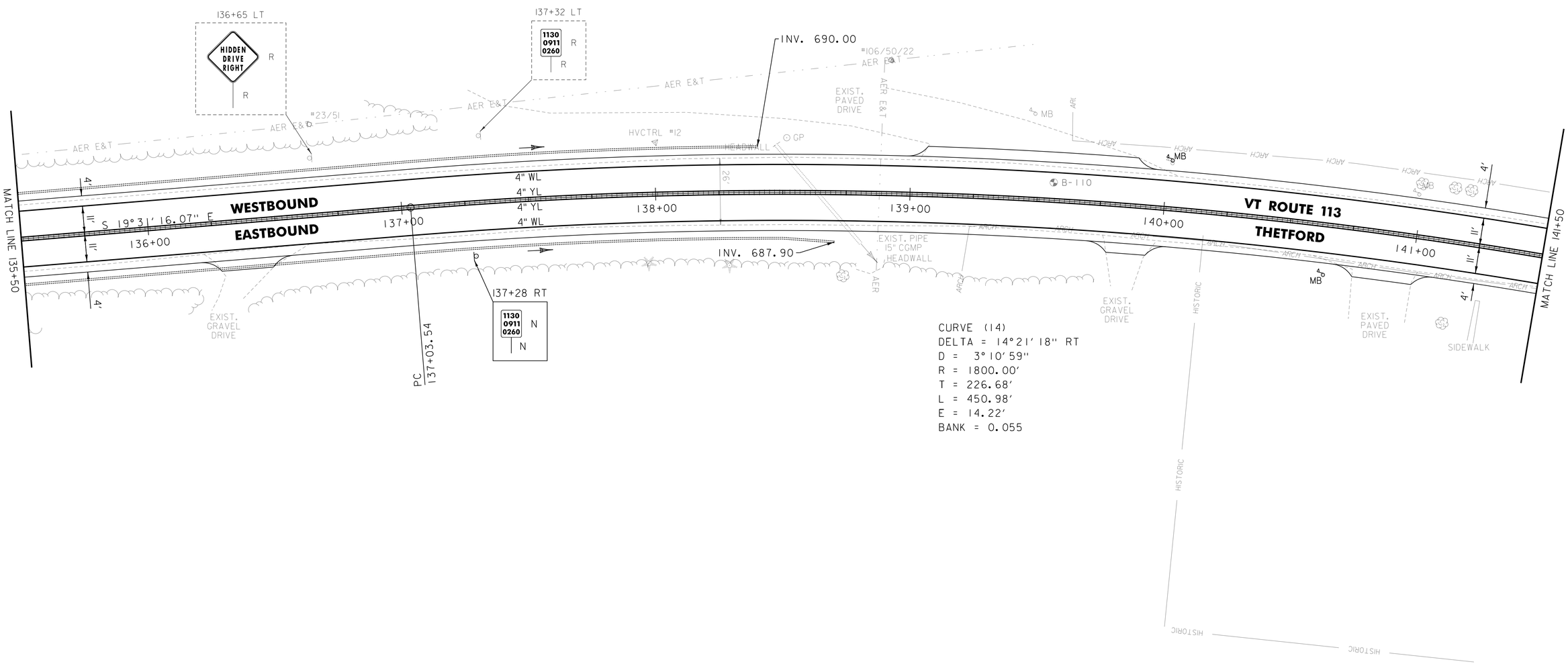
TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
135+50 TO 141+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
135+50 TO 138+40 LT
135+50 TO 138+70 RT

MILLED RUMBLE STRIPS
135+50 TO 141+50 CL

RELOCATE MAILBOX, SINGLE SUPPORT
140+02 LT
140+65 RT

REMOVING SIGNS
AS SHOWN - 2



CURVE (14)
DELTA = 14°21' 18" RT
D = 3°10' 59"
R = 1800.00'
T = 226.68'
L = 450.98'
E = 14.22'
BANK = 0.055

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 17	SHEET 73 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
141+50 TO 147+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
141+50 TO 147+50 SOLID LT & RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
147+25 TO 147+50 LT

STEEL BEAM GUARDRAIL, GALVANIZED
144+90 TO 145+02.5 LT
145+30.5 TO 145+43 RT
146+80.5 TO 146+93 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
145+02.5 TO 147+50 LT
145+43 TO 146+80.5 RT

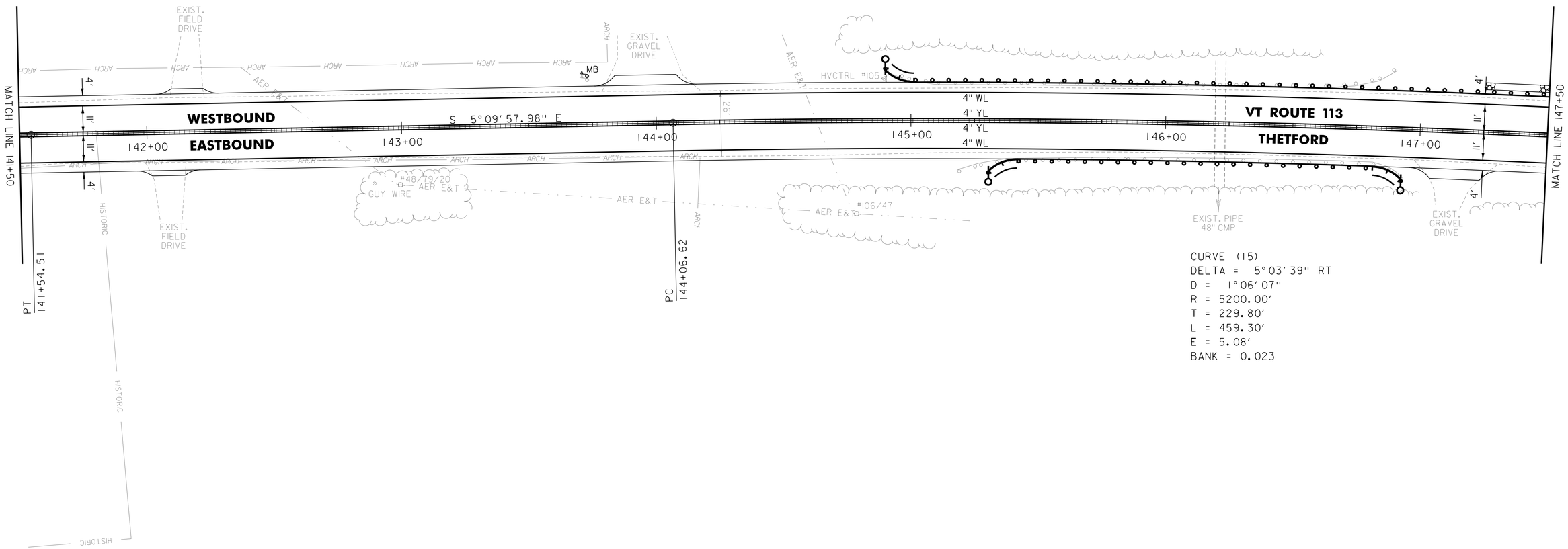
ANCHOR FOR STEEL BEAM RAIL
3 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
144+89 TO 146+90 LT
145+18 TO 146+94 RT

DELINEATOR WITH STEEL POST
144+90 LT
145+30.5 RT
146+93 RT

MILLED RUMBLE STRIPS
141+50 TO 147+50 CL

RELOCATE MAILBOX, SINGLE SUPPORT
143+73 LT



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 18	SHEET 74 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
147+50 TO 153+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
147+50 TO 153+50 SOLID LT & RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
147+50 TO 147+75 LT

STEEL BEAM GUARDRAIL, GALVANIZED
148+77.5 TO 148+90 LT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
147+50 TO 148+77.5 LT

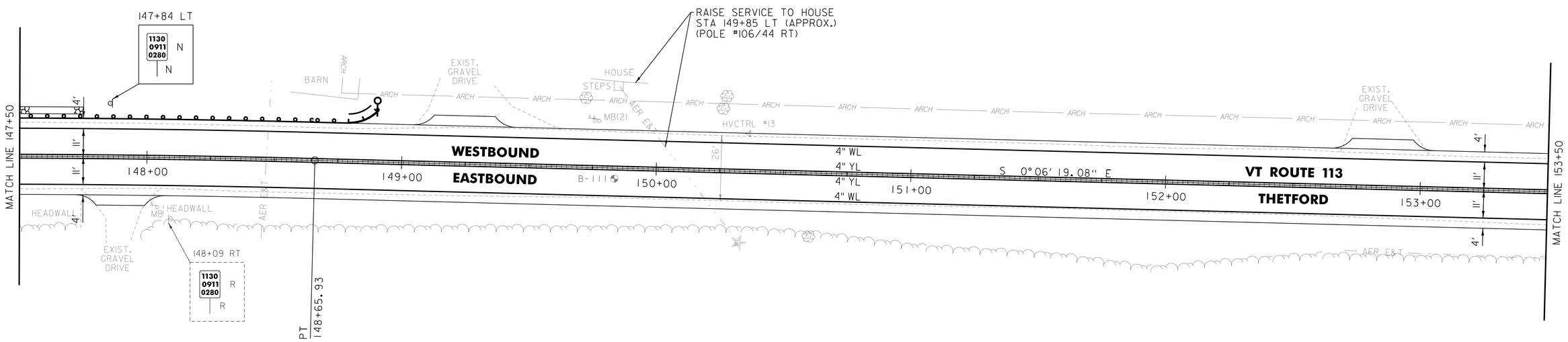
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

DELINEATOR WITH STEEL POST
148+90 LT

MILLED RUMBLE STRIPS
147+50 TO 153+50 CL

REMOVING SIGNS
AS SHOWN - 1

VT STATE PLANE GRID
N



NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 19	SHEET 75 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
153+50 TO 159+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
153+50 TO 159+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
155+50 TO 158+00 LT

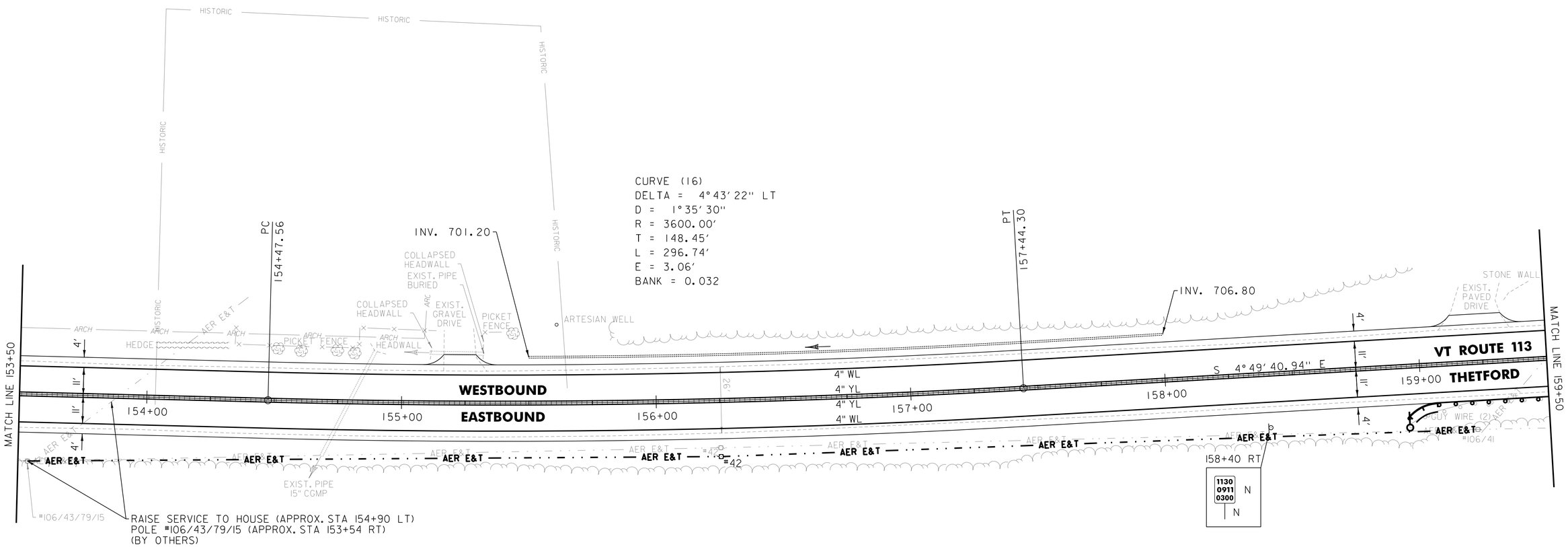
STEEL BEAM GUARDRAIL, GALVANIZED
158+95 TO 159+50 RT

ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
158+94 TO 159+50 RT

DELINEATOR WITH STEEL POST
158+95 RT

MILLED RUMBLE STRIPS
153+50 TO 159+50 CL



NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 20	SHEET 76 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
159+50 TO 165+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
159+50 TO 165+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
160+50 TO 164+05 LT

STONE FILL, TYPE I
164+16 TO 164+19 LT

STEEL BEAM GUARDRAIL, GALVANIZED
159+50 TO 161+45 RT

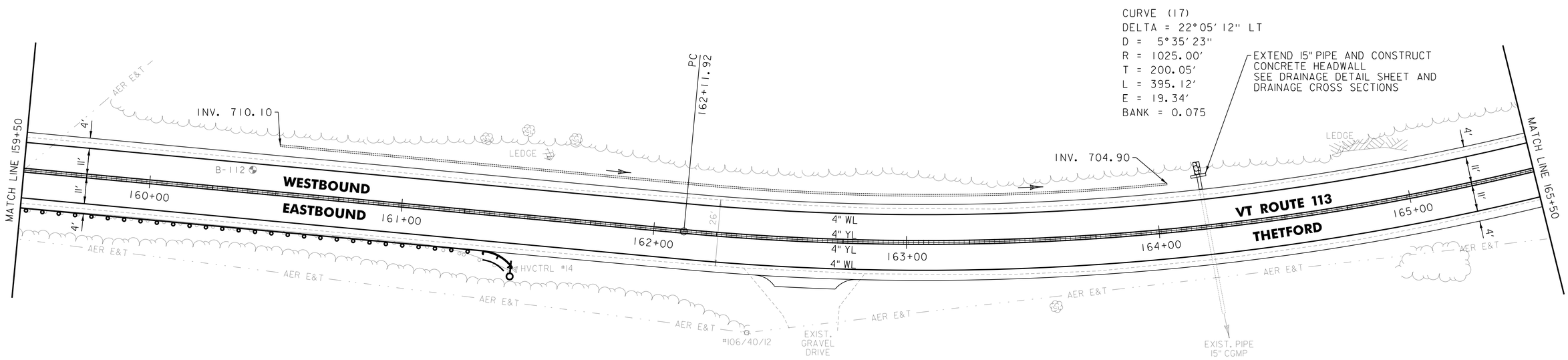
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
159+50 TO 161+45 RT

DELINEATOR WITH STEEL POST
161+45 RT

MILLED RUMBLE STRIPS
159+50 TO 165+50 CL

15" PCCSP .064 (2-2/3 X 1/2)
164+19 LT



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 21	SHEET 77 OF 303

CLD 12-0337

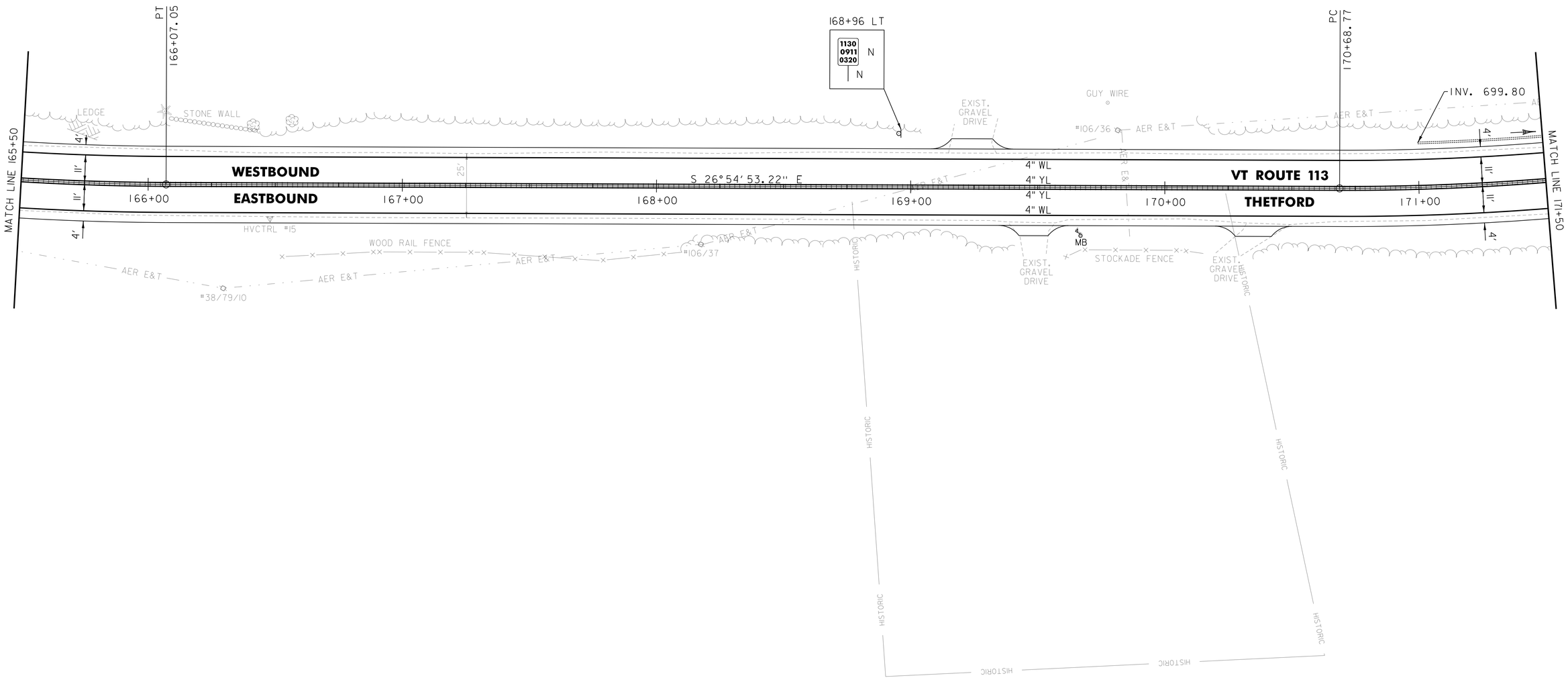
TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
165+50 TO 171+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
165+50 TO 171+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
171+00 TO 171+50 LT

RELOCATE MAILBOX, SINGLE SUPPORT
169+67 RT

MILLED RUMBLE STRIPS
165+50 TO 171+50 CL



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 22	SHEET 78 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
171+50 TO 176+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
171+50 TO 176+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
171+50 TO 174+07 LT

12" CSP .064 (2-2/3 X 1/2)
172+77 TO 173+07 RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
173+00 TO 174+50 RT

STEEL BEAM GUARDRAIL, GALVANIZED
172+92 TO 173+04.5 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
173+04.5 TO 176+50 RT

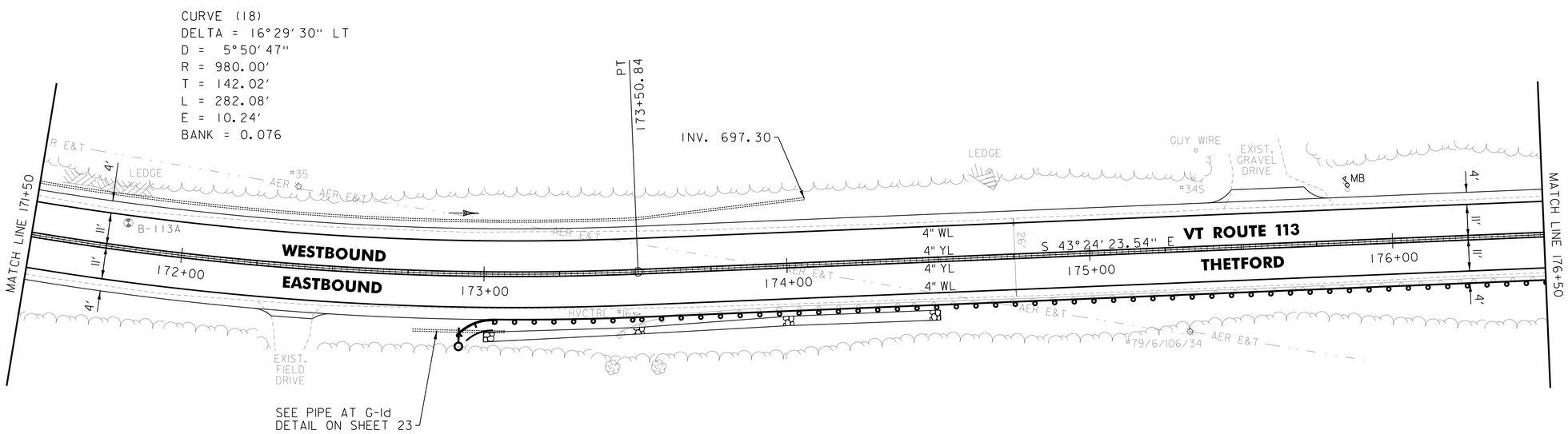
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
173+43 TO 176+50 RT

DELINEATOR WITH STEEL POST
172+92 RT

RELOCATE MAILBOX, SINGLE SUPPORT
175+86 LT

MILLED RUMBLE STRIPS
171+50 TO 176+50 CL



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 23	SHEET 79 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
176+50 TO 181+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
176+50 TO 181+50 SOLID LT & RT

STEEL BEAM GUARDRAIL, GALVANIZED
178+54.5 TO 178+67 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
176+50 TO 178+54.5 RT

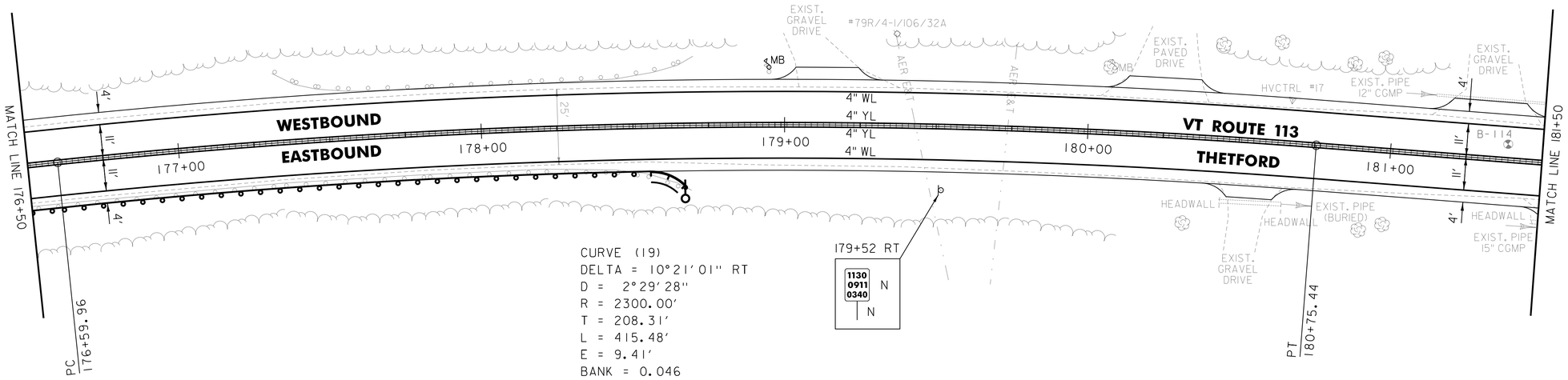
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
176+50 TO 178+69 RT
177+32 TO 178+70 LT

DELINEATOR WITH STEEL POST
178+67 RT

MILLED RUMBLE STRIPS
176+50 TO 181+50 CL

RELOCATE MAILBOX, SINGLE SUPPORT
178+95 LT



CURVE (19)
DELTA = 10°21'01" RT
D = 2°29'28"
R = 2300.00'
T = 208.31'
L = 415.48'
E = 9.41'
BANK = 0.046

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 24	SHEET 80 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
181+50 TO 186+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
181+50 TO 186+50 SOLID LT & RT

12" CSP .064 (2-2/3 X 1/2)
185+38 TO 185+68 LT

6 INCH UNDERDRAIN PIPE
183+00 TO 186+50 RT

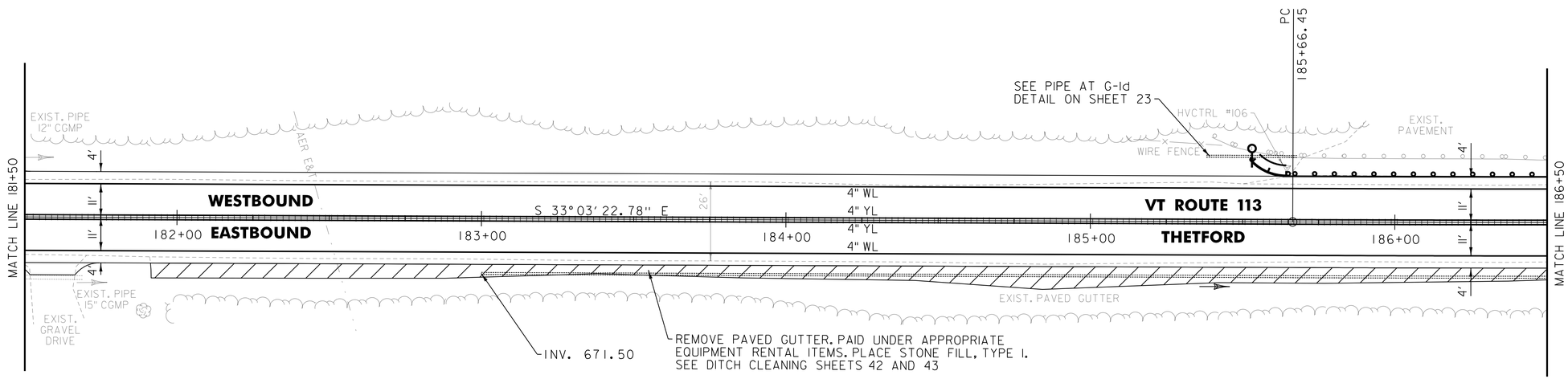
STEEL BEAM GUARDRAIL, GALVANIZED
185+53 TO 186+50 LT

ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
185+40 TO 186+50 LT

DELINEATOR WITH STEEL POST
185+53 LT

MILLED RUMBLE STRIPS
181+50 TO 186+50 CL



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 25	SHEET 81 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)

186+50 TO 192+50 SOLID LT
186+50 TO 188+60 SOLID RT
188+60 TO 188+90 SOLID RT (TH 20)
189+12 TO 189+42 SOLID RT (TH 20)
189+42 TO 192+50 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT

186+50 TO 188+81 SOLID LT & RT
189+01 DOUBLE SOLID RT (TH 20)
189+21 TO 192+50 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)

189+01 DOUBLE SOLID RT (TH 20)

DURABLE 4 INCH YELLOW LINE, POLYUREA

186+50 TO 188+81 SOLID LT & RT
189+21 TO 192+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)

189+02 TO 189+21 RT (TH 20)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)

189+08 RT - "STOP" (TH 20)

GRUBBING MATERIAL (6")
STONE FILL, TYPE I

190+00 TO 192+00 LT

6 INCH UNDERDRAIN PIPE

186+50 TO 187+35 RT

STEEL BEAM GUARDRAIL, GALVANIZED

186+50 TO 192+03 LT
189+18 TO 191+76.5 RT (BEGIN ON TH 20)

ANCHOR FOR STEEL BEAM RAIL

2 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL

186+50 TO 192+01 LT
189+19 TO 191+79 RT (BEGIN ON TH 20)

DELINEATOR WITH STEEL POST

191+76.5 RT
192+03 LT

MILLED RUMBLE STRIPS

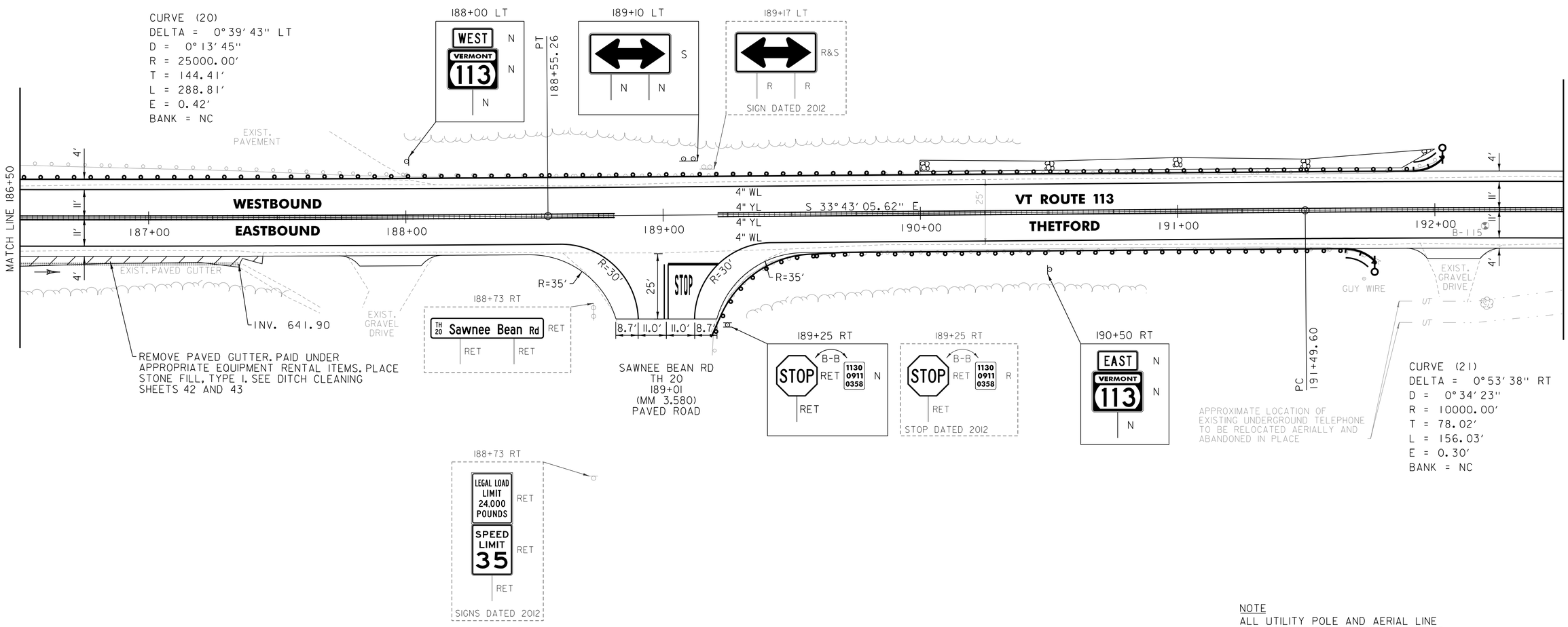
186+50 TO 188+81 CL
189+21 TO 192+50 CL

REMOVING SIGNS

AS SHOWN - 2

ERECTING SALVAGED SIGNS

AS SHOWN - 1



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 26	SHEET 82 OF 303

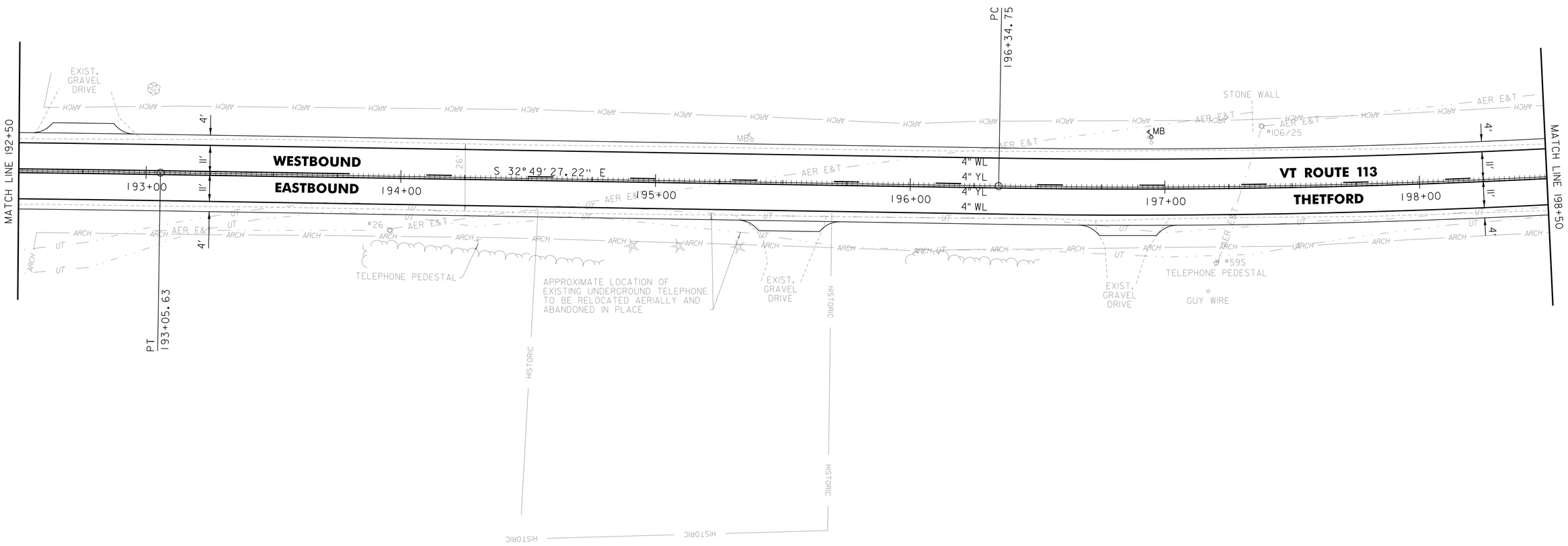
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
192+50 TO 198+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
192+50 TO 193+80 SOLID LT & RT
193+80 TO 198+50 DASHED LT, SOLID RT

MILLED RUMBLE STRIPS
192+50 TO 198+50 CL

RELOCATE MAILBOX, SINGLE SUPPORT
196+95 LT



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 27	SHEET 83 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
198+50 TO 203+50 SOLID LT & RT

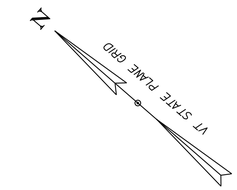
TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
198+50 TO 200+90 DASHED LT, SOLID RT
200+90 TO 203+50 SOLID LT & RT

MILLED RUMBLE STRIPS
198+50 TO 203+50 CL

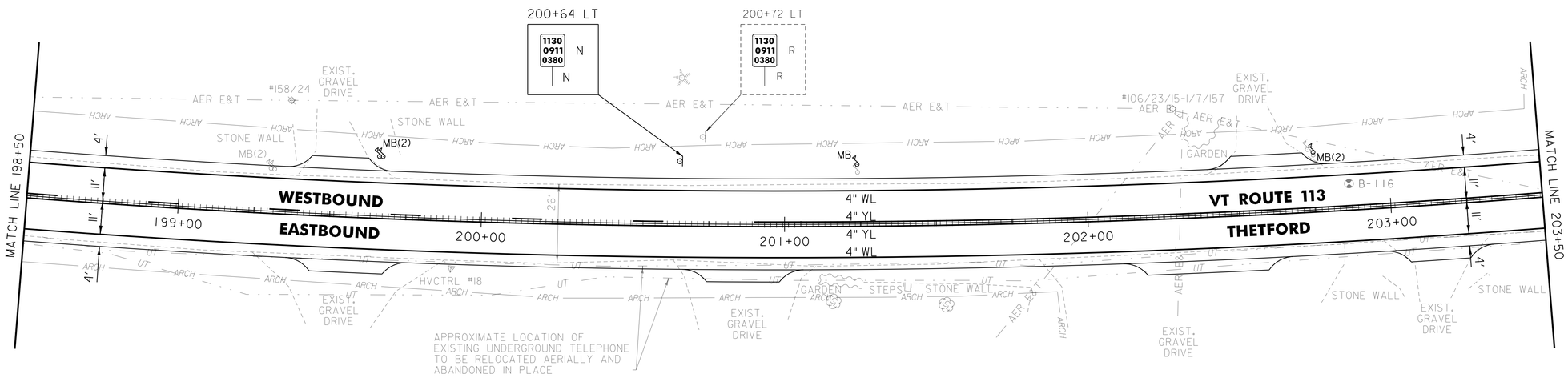
RELOCATE MAILBOX, SINGLE SUPPORT
201+24 LT

RELOCATE MAILBOX, MULTIPLE SUPPORT
199+66 LT
202+75 LT

REMOVING SIGNS
AS SHOWN - 1



CURVE (22)
DELTA = 14°07'40" LT
D = 1°45'47"
R = 3250.00'
T = 402.73'
L = 801.38'
E = 24.86'
BANK = 0.035



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

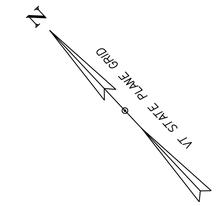
PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 28	SHEET 84 OF 303

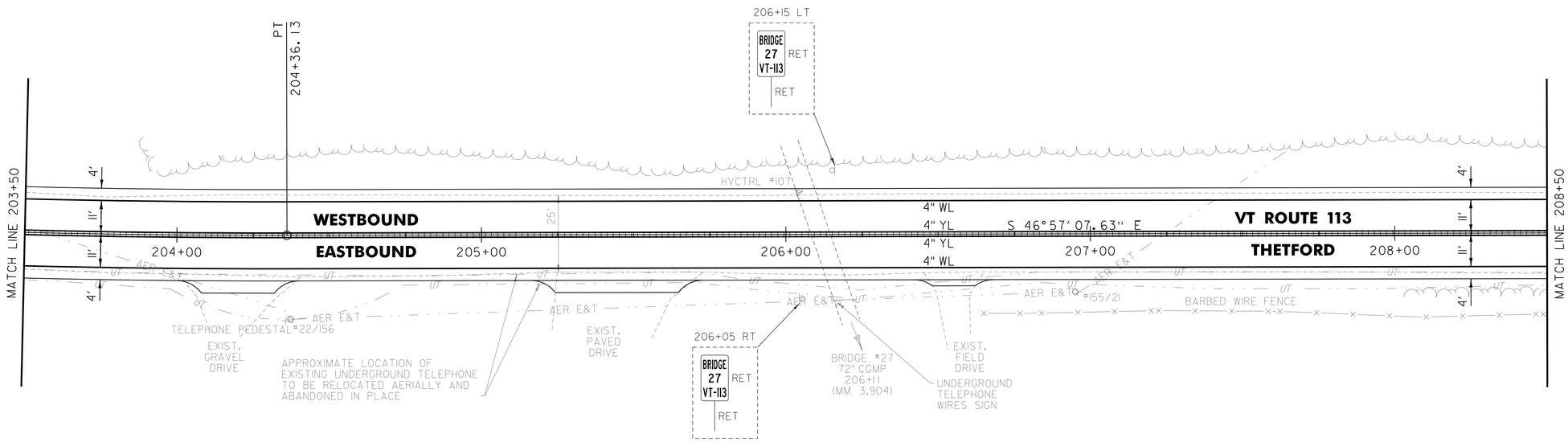
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
203+50 TO 208+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
203+50 TO 208+50 SOLID LT & RT

MILLED RUMBLE STRIPS
203+50 TO 208+50 CL





NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 29	SHEET 85 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)

208+50 TO 214+50 SOLID RT
208+50 TO 209+78 SOLID LT
209+78 TO 210+12 SOLID LT (TH 61)
210+33 TO 210+78 SOLID LT (TH 61)
210+78 TO 214+50 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT

208+50 TO 210+05 SOLID LT & RT
210+22 TO 210+25 DOUBLE SOLID LT (TH 61)
210+45 TO 214+50 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)

210+22 TO 210+25 DOUBLE SOLID LT (TH 61)

DURABLE 4 INCH YELLOW LINE, POLYUREA

208+50 TO 210+05 SOLID LT & RT
210+45 TO 214+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)

210+00 TO 210+25 LT (TH 61)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)

210+15 LT - "STOP" (TH 61)

GRUBBING MATERIAL (6")
STONE FILL, TYPE I

213+50 TO 214+50 LT

STEEL BEAM GUARDRAIL, GALVANIZED

213+03.5 TO 214+50 LT

ANCHOR FOR STEEL BEAM RAIL

1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL

213+04 TO 214+50 LT

DELINEATOR WITH STEEL POST

213+03.5 LT

MILLED RUMBLE STRIPS

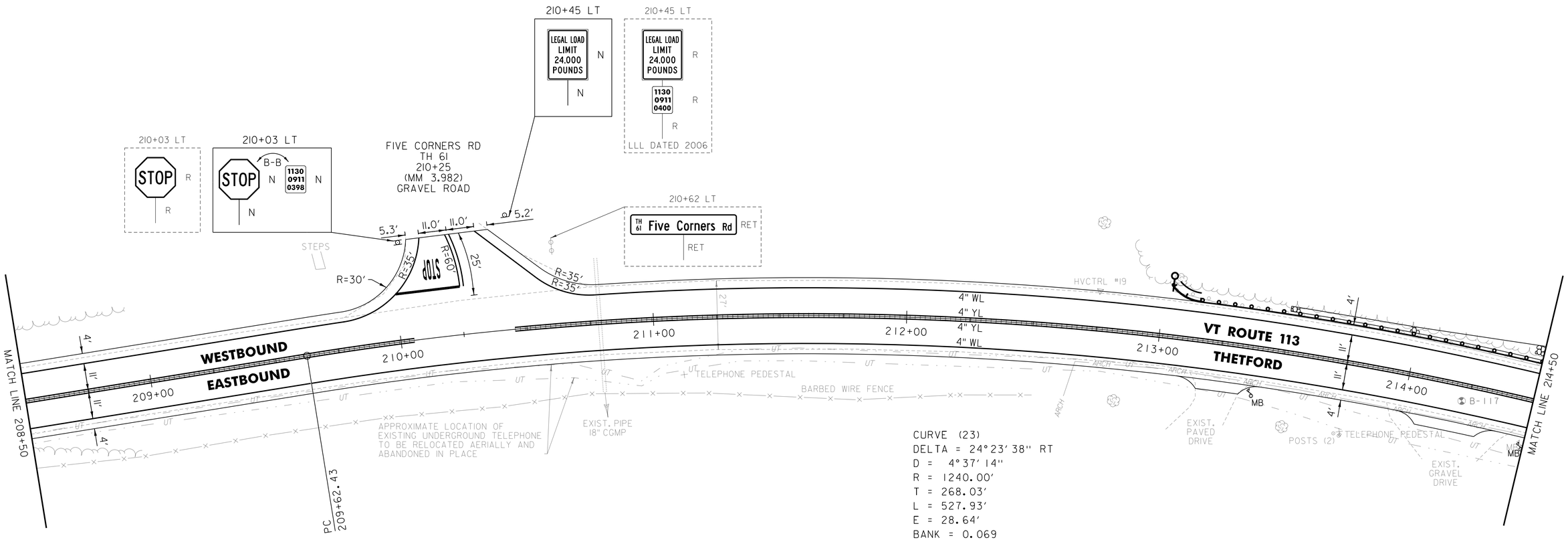
208+50 TO 210+05 CL
210+45 TO 214+50 CL

RELOCATE MAILBOX, SINGLE SUPPORT

213+40 RT
214+50 RT

REMOVING SIGNS

AS SHOWN - 3



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 30	SHEET 86 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
214+50 TO 220+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
214+50 TO 220+50 SOLID LT & RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
214+50 TO 216+00 LT

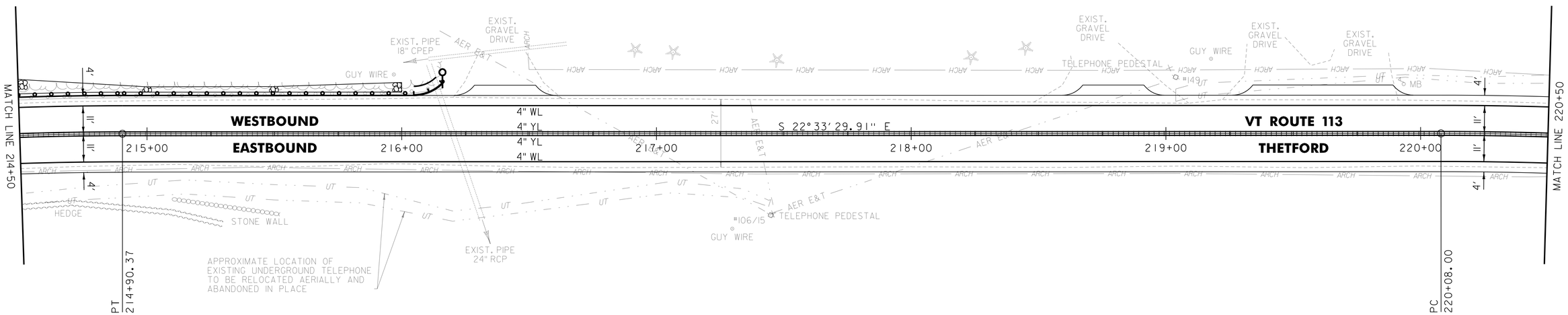
STEEL BEAM GUARDRAIL, GALVANIZED
214+50 TO 216+16 LT

ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
214+50 TO 216+16 LT

DELINEATOR WITH STEEL POST
216+16 LT

MILLED RUMBLE STRIPS
214+50 TO 220+50 CL



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 31	SHEET 87 OF 303

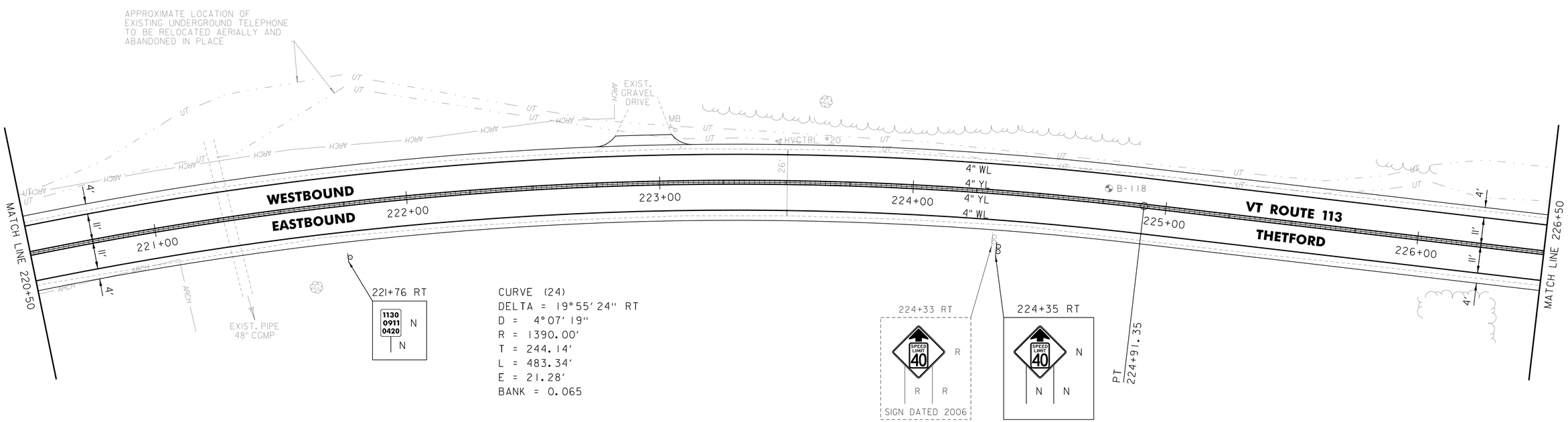
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
220+50 TO 226+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
220+50 TO 226+50 SOLID LT & RT

MILLED RUMBLE STRIPS
220+50 TO 226+50 CL

REMOVING SIGNS
AS SHOWN - 1



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 32	SHEET 88 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
226+50 TO 232+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
226+50 TO 232+50 SOLID LT & RT

STEEL BEAM GUARDRAIL, GALVANIZED
230+15 TO 230+27.5 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
230+27.5 TO 232+50 RT

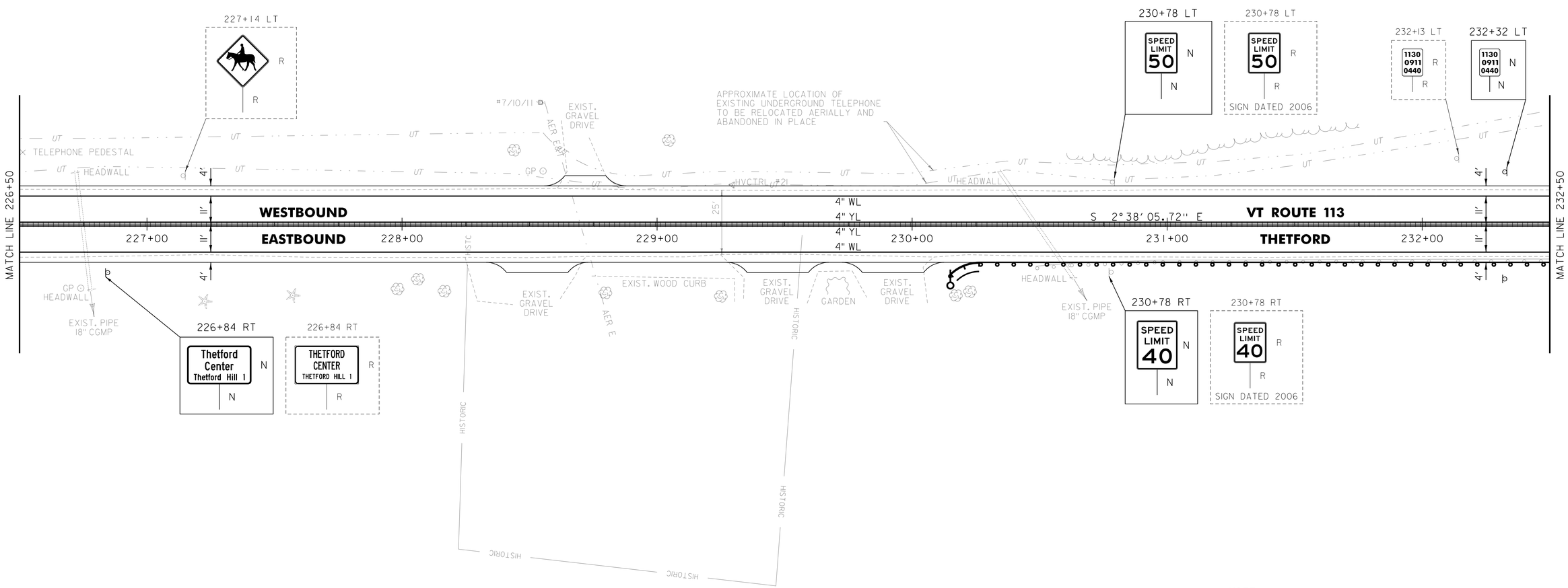
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
230+48 TO 232+50 RT

DELINEATOR WITH STEEL POST
230+15 RT

MILLED RUMBLE STRIPS
226+50 TO 232+50 CL

REMOVING SIGNS
AS SHOWN - 5



NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 33	SHEET 89 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
232+50 TO 238+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
232+50 TO 238+50 SOLID LT & RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
235+00 TO 236+50 LT

STEEL BEAM GUARDRAIL, GALVANIZED
234+49 TO 238+49 LT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
232+50 TO 238+50 RT

ANCHOR FOR STEEL BEAM RAIL
2 (SEE STANDARD G-1d)

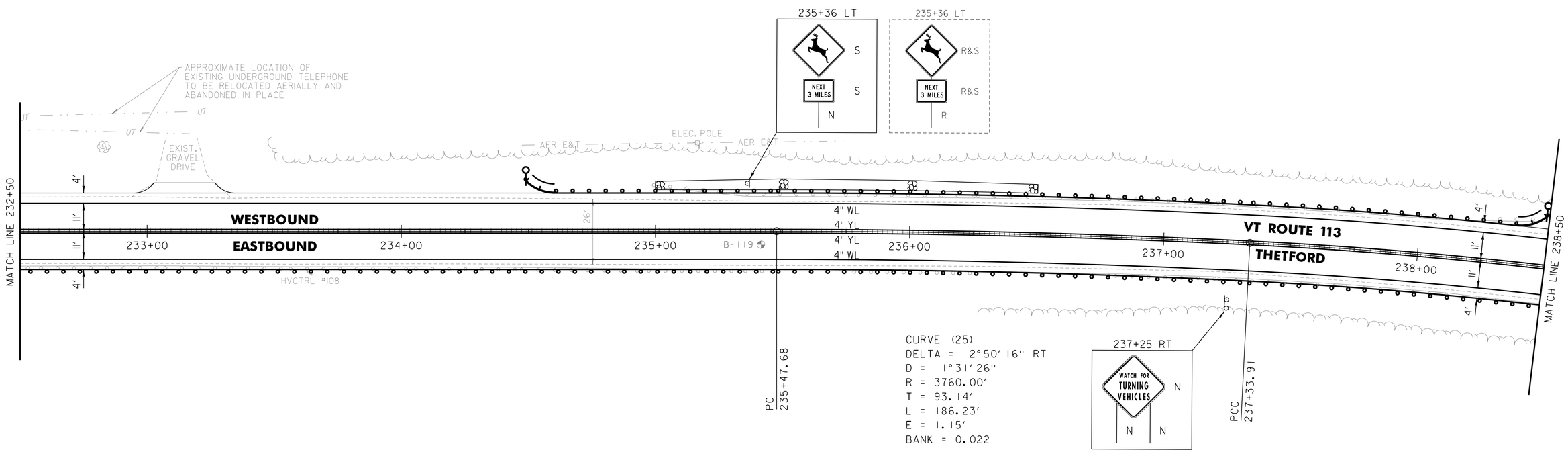
REMOVAL AND DISPOSAL OF GUARDRAIL
232+50 TO 238+50 RT
234+99 TO 238+49 LT

DELINEATOR WITH STEEL POST
234+49 LT
238+49 LT

MILLED RUMBLE STRIPS
232+50 TO 238+50 CL

REMOVING SIGNS
AS SHOWN - 2

ERECTING SALVAGED SIGNS
AS SHOWN - 2



NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 34	SHEET 90 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
238+50 TO 244+50 SOLID RT
238+50 TO 241+60 SOLID LT
242+40 TO 244+50 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
238+50 TO 241+80 SOLID LT & RT
242+20 TO 244+50 SOLID LT & RT

STEEL BEAM GUARDRAIL, GALVANIZED
241+52.5 TO 241+65 RT

STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS
238+50 TO 241+52.5 RT

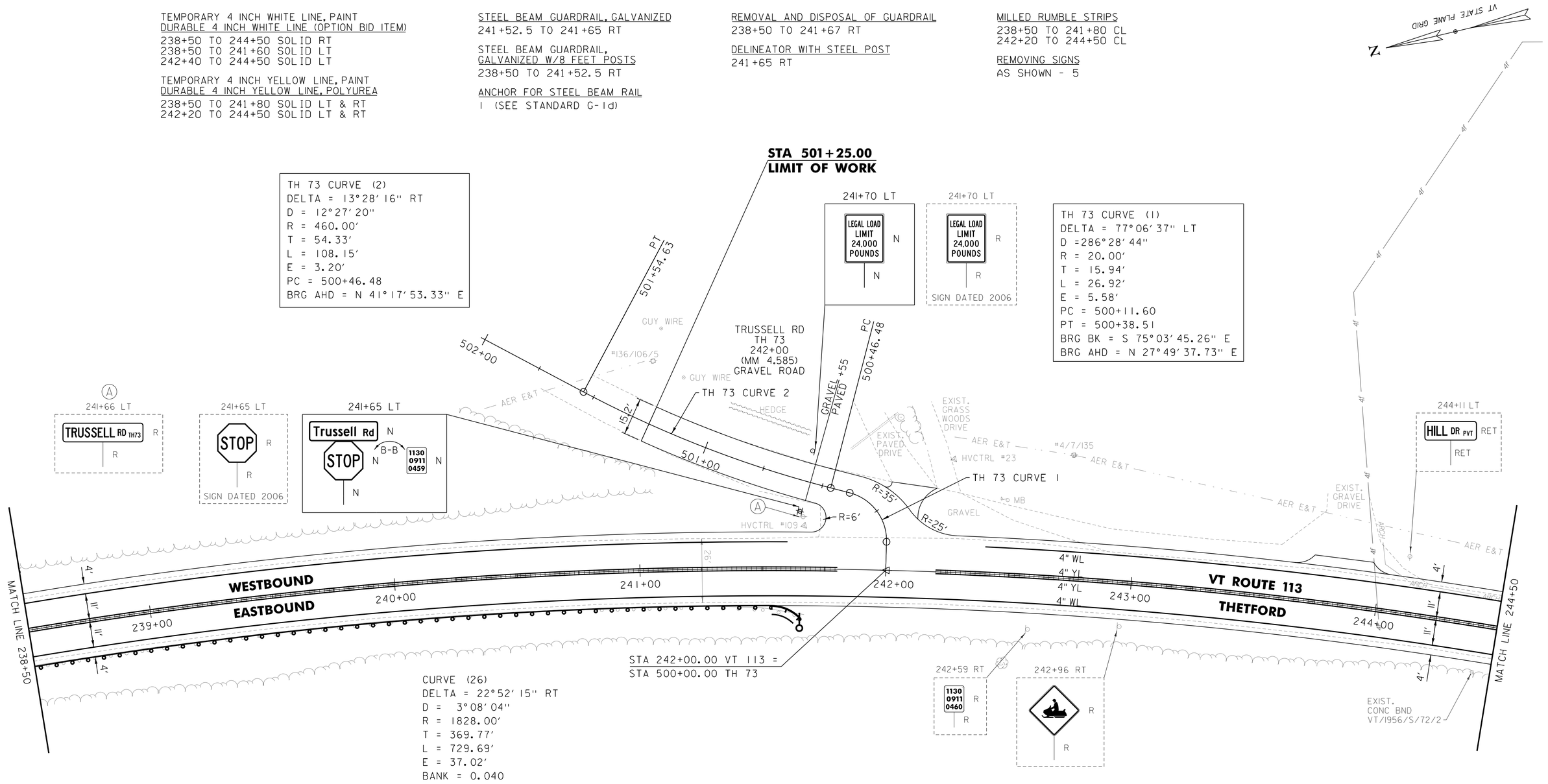
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
238+50 TO 241+67 RT

DELINEATOR WITH STEEL POST
241+65 RT

MILLED RUMBLE STRIPS
238+50 TO 241+80 CL
242+20 TO 244+50 CL

REMOVING SIGNS
AS SHOWN - 5



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 35	SHEET 91 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
244+50 TO 249+50 SOLID LT & RT

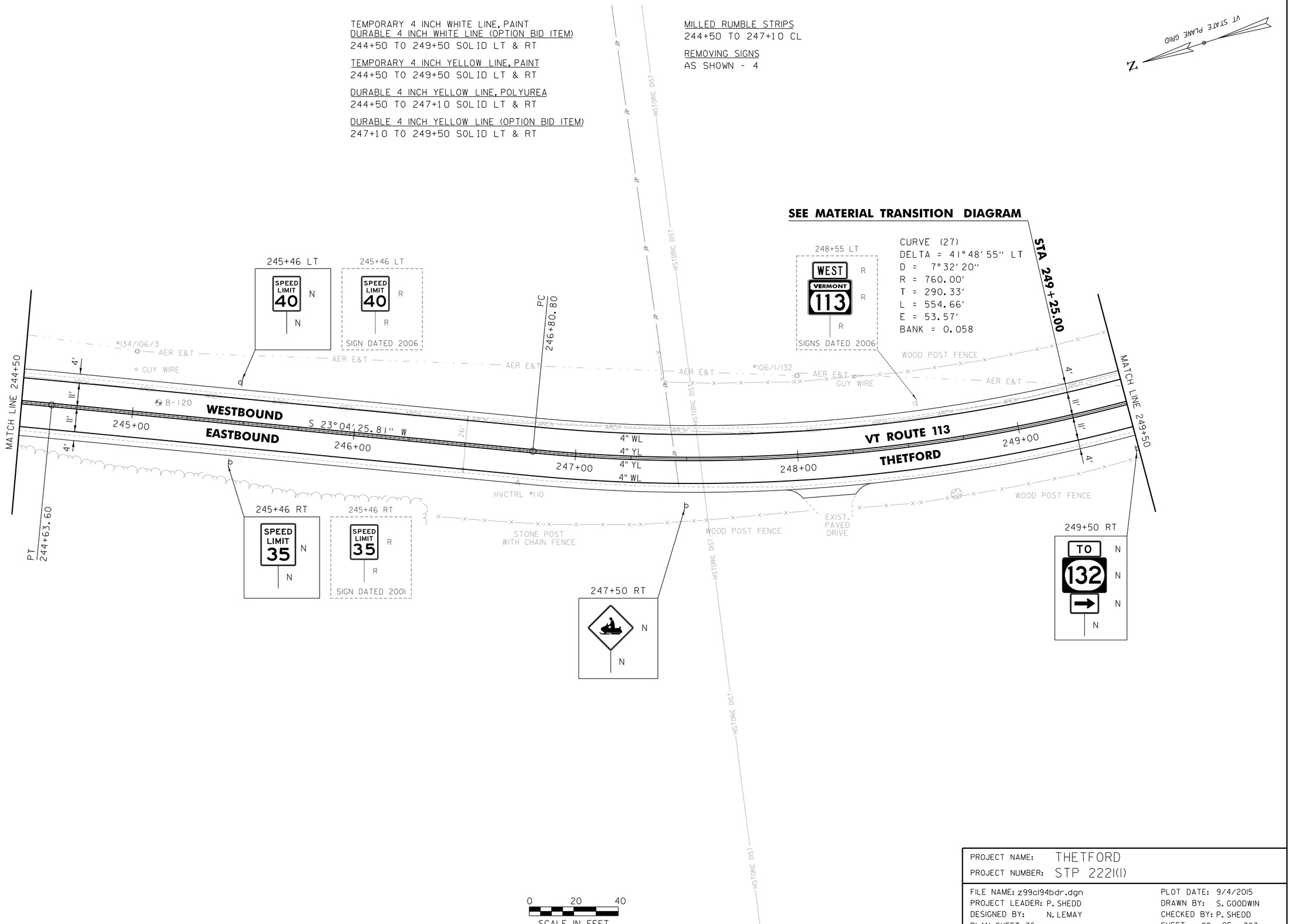
TEMPORARY 4 INCH YELLOW LINE, PAINT
244+50 TO 249+50 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE, POLYUREA
244+50 TO 247+10 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
247+10 TO 249+50 SOLID LT & RT

MILLED RUMBLE STRIPS
244+50 TO 247+10 CL

REMOVING SIGNS
AS SHOWN - 4



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 36	SHEET 92 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)

249+50 TO 255+50 SOLID LT
249+50 TO 250+79 SOLID RT
250+79 TO 250+91 SOLID RT (TH 29)
251+12 TO 251+51 SOLID RT (TH 29)
251+51 TO 255+50 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)

249+50 TO 250+87 SOLID LT & RT
251+02 TO 251+07 DOUBLE SOLID RT (TH 29)
251+27 TO 255+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)

251+08 TO 251+28 RT (TH 29)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)

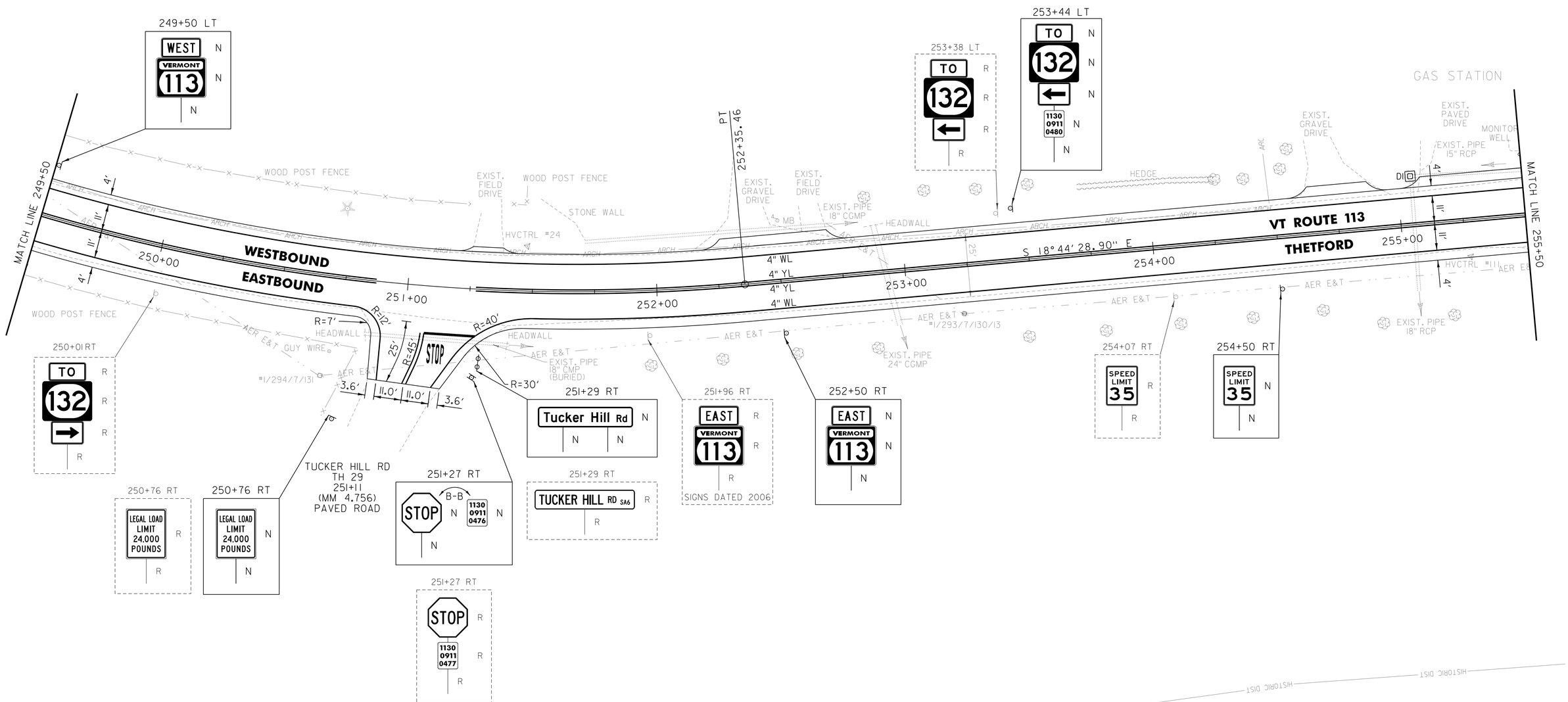
251+13 RT - "STOP" (TH 29)

REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS II

255+05 LT - DI

REMOVING SIGNS

AS SHOWN - 13



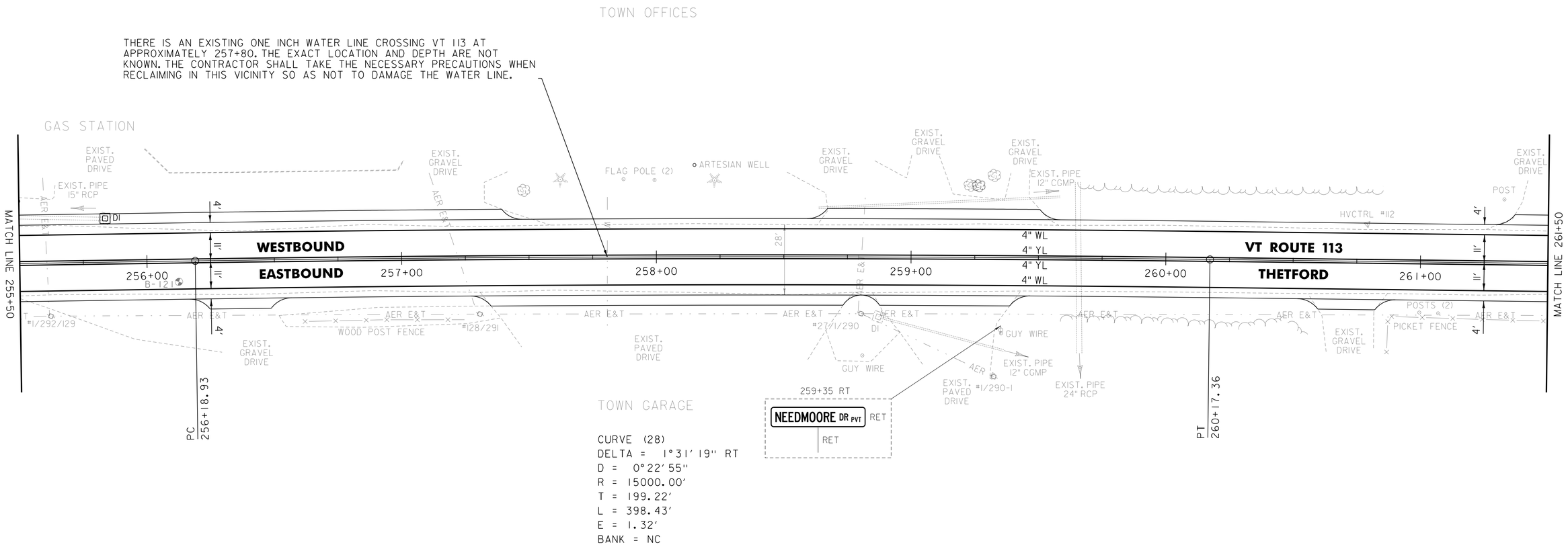
PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 37	SHEET 93 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
255+50 TO 261+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
255+50 TO 261+50 SOLID LT & RT

REHAB. DROP INLETS, CATCH BASINS,
OR MANHOLES, CLASS II
255+84 LT - DI



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 38	SHEET 94 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
261+50 TO 266+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
261+50 TO 266+50 SOLID LT & RT

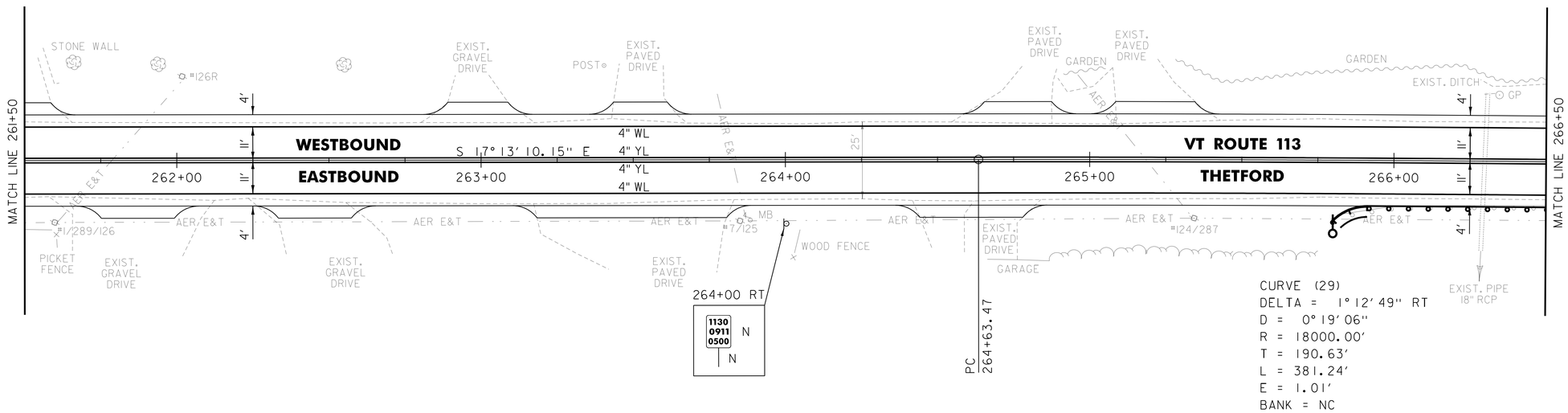
STEEL BEAM GUARDRAIL, GALVANIZED
265+80 TO 265+92.5 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
265+92.5 TO 266+50 RT

ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
265+81 TO 266+50 RT

DELINEATOR WITH STEEL POST
265+80 RT



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 39	SHEET 95 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
266+50 TO 272+50 SOLID LT
266+50 TO 267+70 SOLID RT
268+50 TO 269+18 SOLID RT
269+98 TO 272+50 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
266+50 TO 267+90 SOLID LT & RT
268+30 TO 269+38 SOLID LT & RT
269+78 TO 272+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
272+28 TO 272+50 LT

STEEL BEAM GUARDRAIL, GALVANIZED
267+55 TO 267+67.5 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
266+50 TO 267+55 RT

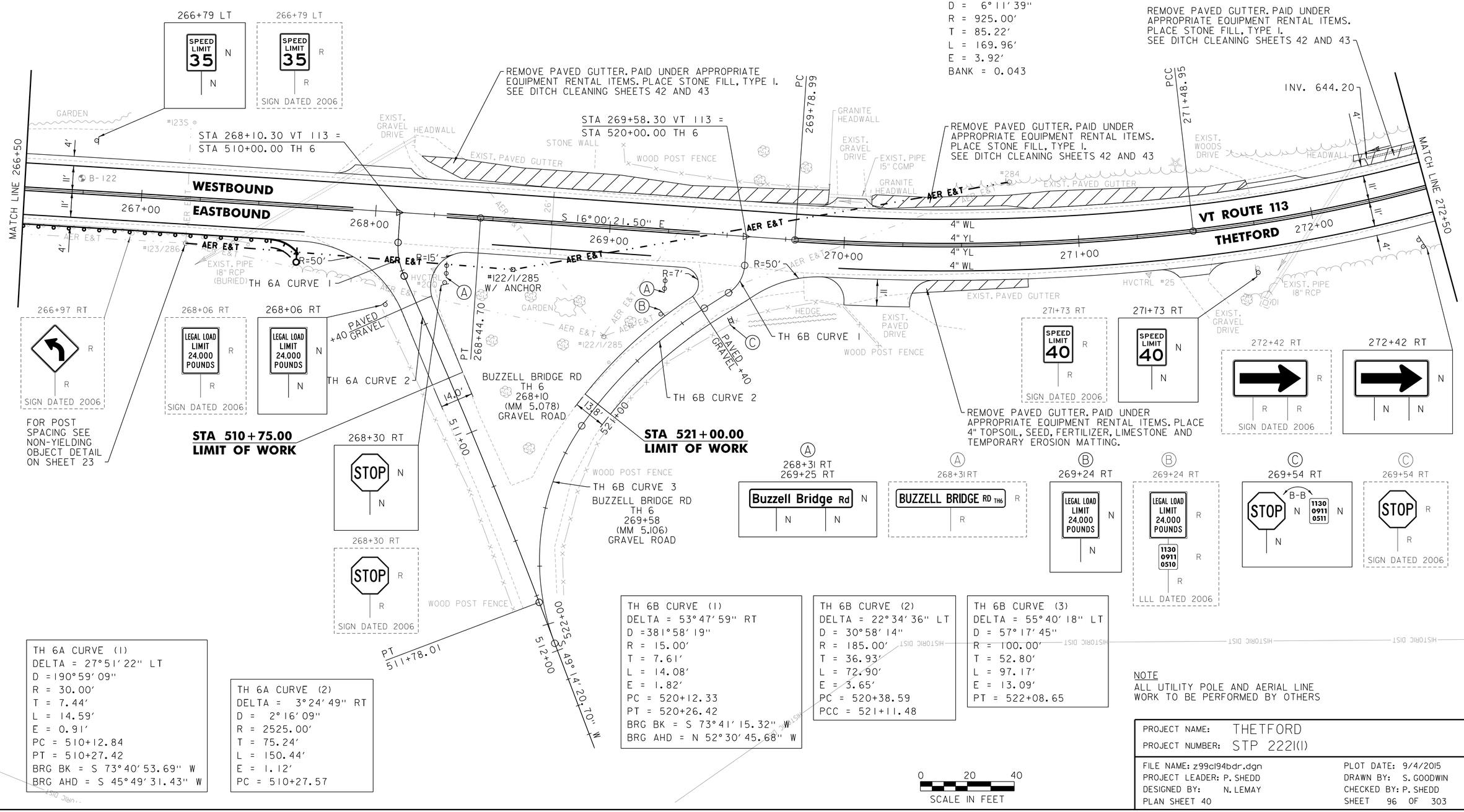
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
266+50 TO 267+47 RT

DELINEATOR WITH STEEL POST
267+67.5 RT

REMOVING SIGNS
AS SHOWN - 10

CURVE (30)
DELTA = 10°31'40" LT
D = 6°11'39"
R = 925.00'
T = 85.22'
L = 169.96'
E = 3.92'
BANK = 0.043



TH 6A CURVE (1)
DELTA = 27°51'22" LT
D = 190°59'09"
R = 30.00'
T = 7.44'
L = 14.59'
E = 0.91'
PC = 510+12.84
PT = 510+27.42
BRG BK = S 73°40'53.69" W
BRG AHD = S 45°49'31.43" W

TH 6A CURVE (2)
DELTA = 3°24'49" RT
D = 2°16'09"
R = 2525.00'
T = 75.24'
L = 150.44'
E = 1.12'
PC = 510+27.57

TH 6B CURVE (1)
DELTA = 53°47'59" RT
D = 381°58'19"
R = 15.00'
T = 7.61'
L = 14.08'
E = 1.82'
PC = 520+12.33
PT = 520+26.42
BRG BK = S 73°41'15.32" W
BRG AHD = N 52°30'45.68" W

TH 6B CURVE (2)
DELTA = 22°34'36" LT
D = 30°58'14"
R = 185.00'
T = 36.93'
L = 72.90'
E = 3.65'
PC = 520+38.59
PCC = 521+11.48

TH 6B CURVE (3)
DELTA = 55°40'18" LT
D = 57°17'45"
R = 100.00'
T = 52.80'
L = 97.17'
E = 13.09'
PT = 522+08.65

NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 40	SHEET 96 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
272+50 TO 278+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
272+50 TO 278+50 SOLID LT & RT

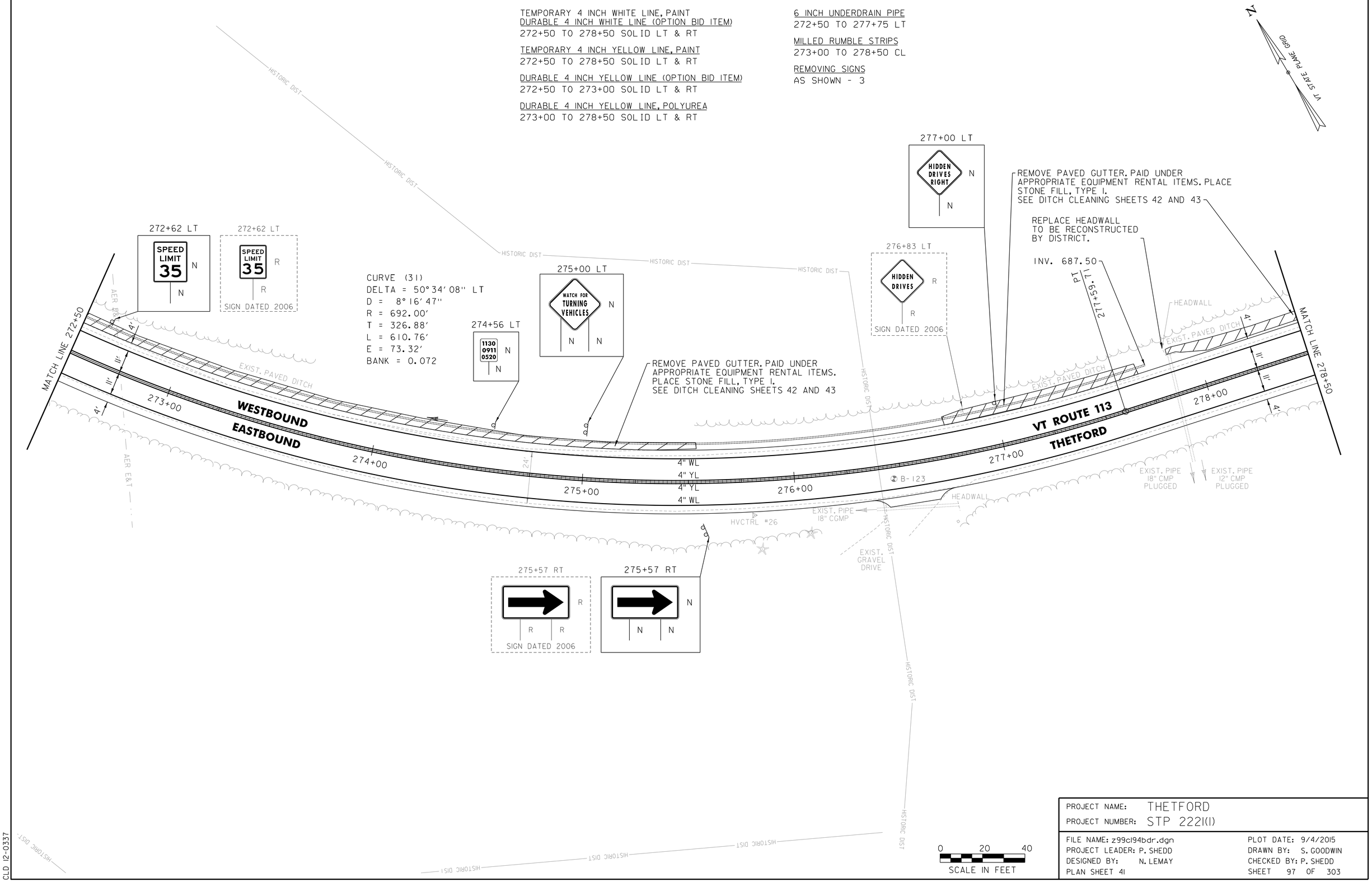
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
272+50 TO 273+00 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE, POLYUREA
273+00 TO 278+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
272+50 TO 277+75 LT

MILLED RUMBLE STRIPS
273+00 TO 278+50 CL

REMOVING SIGNS
AS SHOWN - 3



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 41	SHEET 97 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
278+50 TO 284+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
278+50 TO 284+50 SOLID LT & RT

18" PCCSP .064 (2-2/3X1/2)
281+63 TO 281+65 LT

PRECAST REINFORCED CONCRETE
DROP INLET WITH CAST IRON GRATE
281+66 LT

6 INCH UNDERDRAIN PIPE
281+66 TO 284+50 LT

STEEL BEAM GUARDRAIL, GALVANIZED
282+72.5 TO 284+50 RT

ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
282+73 TO 284+50 RT

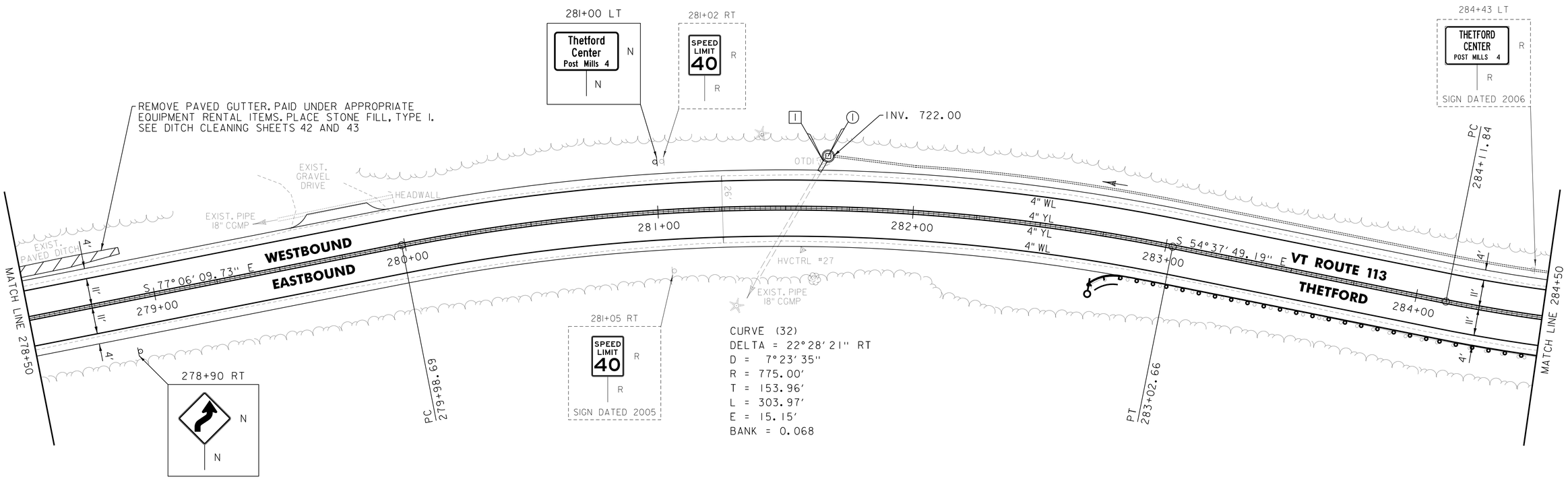
DELINEATOR WITH STEEL POST
282+72.5 RT

MILLED RUMBLE STRIPS
278+50 TO 284+50 CL

REMOVING SIGNS
AS SHOWN - 3

EXISTING DRAINAGE
[1] 281+64 LT
REMOVE EXISTING INLET STRUCTURE

NEW DRAINAGE
(1) 281+66 LT
NEW 18"x5' PCCSP
NEW PRECAST REINFORCED CONCRETE DI
W/CI GRATE TYPE A AT 281+66 LT
CONNECT TO EXISTING 18" CGMP
INV IN=721.74



CURVE (32)
DELTA = 22°28'21" RT
D = 7°23'35"
R = 775.00'
T = 153.96'
L = 303.97'
E = 15.15'
BANK = 0.068

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 42	SHEET 98 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
284+50 TO 290+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
284+50 TO 290+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
284+50 TO 285+25 LT
285+50 TO 288+25 LT
288+50 TO 290+50 LT

STONE FILL, TYPE I
288+35 TO 288+40 LT

STEEL BEAM GUARDRAIL, GALVANIZED
284+50 TO 289+47.5 RT

ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
284+50 TO 289+50 RT

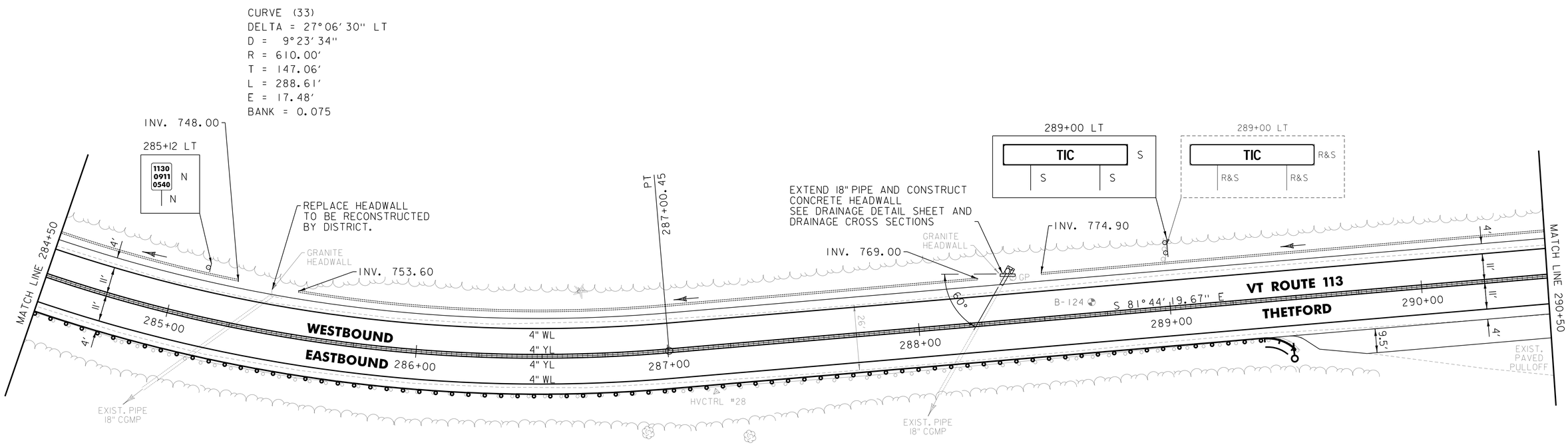
DELINEATOR WITH STEEL POST
289+47.5 RT

MILLED RUMBLE STRIPS
284+50 TO 290+50 CL

REMOVING SIGNS
AS SHOWN - 1

ERECTING SALVAGED SIGNS
AS SHOWN - 1

18" PCCSP .064 (2-2/3 X 1/2)
288+24 LT



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 43	SHEET 99 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
290+50 TO 296+50 SOLID RT
290+50 TO 292+92 SOLID LT
293+72 TO 293+85 SOLID LT
294+65 TO 296+50 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
290+50 TO 293+12 SOLID LT & RT
293+52 TO 294+05 SOLID LT & RT
294+45 TO 296+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
290+50 TO 290+95 LT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
294+35 TO 294+75 RT

STEEL BEAM GUARDRAIL, GALVANIZED
292+57 TO 292+69.5 RT
294+48 TO 294+60.5 LT
295+94.5 TO 296+07 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
292+69.5 TO 295+94.5 RT
294+60.5 TO 296+50 LT

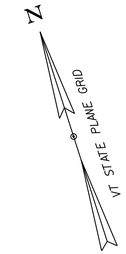
ANCHOR FOR STEEL BEAM RAIL
3 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
292+57 TO 296+12 RT
294+48 TO 296+50 LT

DELINEATOR WITH STEEL POST
292+57 RT
294+48 LT
296+07 RT

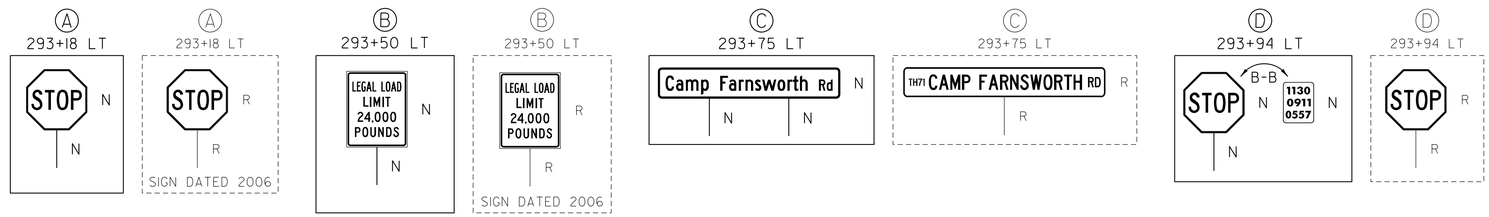
MILLED RUMBLE STRIPS
290+50 TO 293+12 CL
293+52 TO 294+05 CL
294+45 TO 296+50 CL

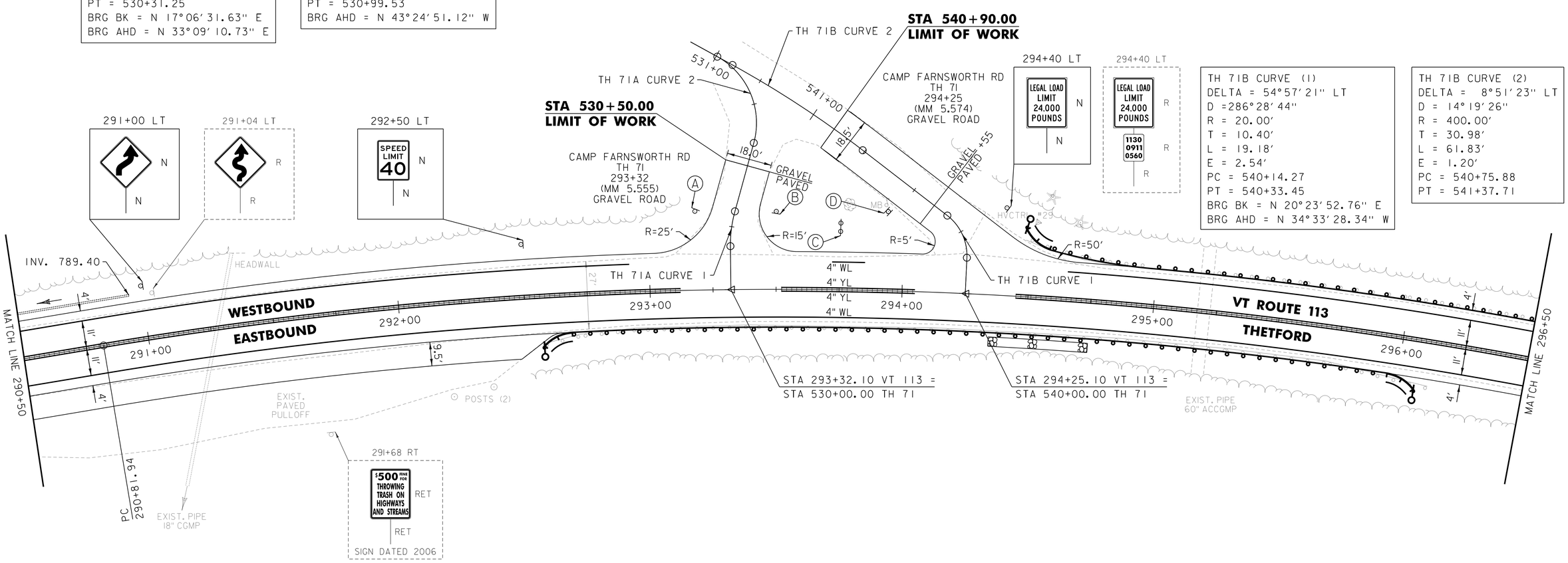
REMOVING SIGNS
AS SHOWN - 8



TH 71A CURVE (1)
DELTA = 16°02'39" RT
D = 114°35'30"
R = 50.00'
T = 7.05'
L = 14.00'
E = 0.49'
PC = 530+17.25
PT = 530+31.25
BRG BK = N 17°06'31.63" E
BRG AHD = N 33°09'10.73" E

TH 71A CURVE (2)
DELTA = 76°34'02" LT
D = 190°59'09"
R = 30.00'
T = 23.68'
L = 40.09'
E = 8.22'
PC = 530+59.44
PT = 530+99.53
BRG AHD = N 43°24'51.12" W





TH 71B CURVE (1)
DELTA = 54°57'21" LT
D = 286°28'44"
R = 20.00'
T = 10.40'
L = 19.18'
E = 2.54'
PC = 540+14.27
PT = 540+33.45
BRG BK = N 20°23'52.76" E
BRG AHD = N 34°33'28.34" W

TH 71B CURVE (2)
DELTA = 8°51'23" LT
D = 14°19'26"
R = 400.00'
T = 30.98'
L = 61.83'
E = 1.20'
PC = 540+75.88
PT = 541+37.71

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 44	SHEET 100 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
296+50 TO 302+50 SOLID RT
296+50 TO 299+02 SOLID LT
299+82 TO 302+50 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
296+50 TO 299+22 SOLID LT & RT
299+62 TO 302+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
298+25 TO 300+75 RT
301+00 TO 302+25 RT

STEEL BEAM GUARDRAIL, GALVANIZED
550+32.5 TO 550+45 LT (TH 30)
550+51 TO 550+63.5 LT (TH 30)

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
296+50 TO 550+32.5 LT (TH 30)
550+63.5 RT (TH 30) TO 302+50 LT

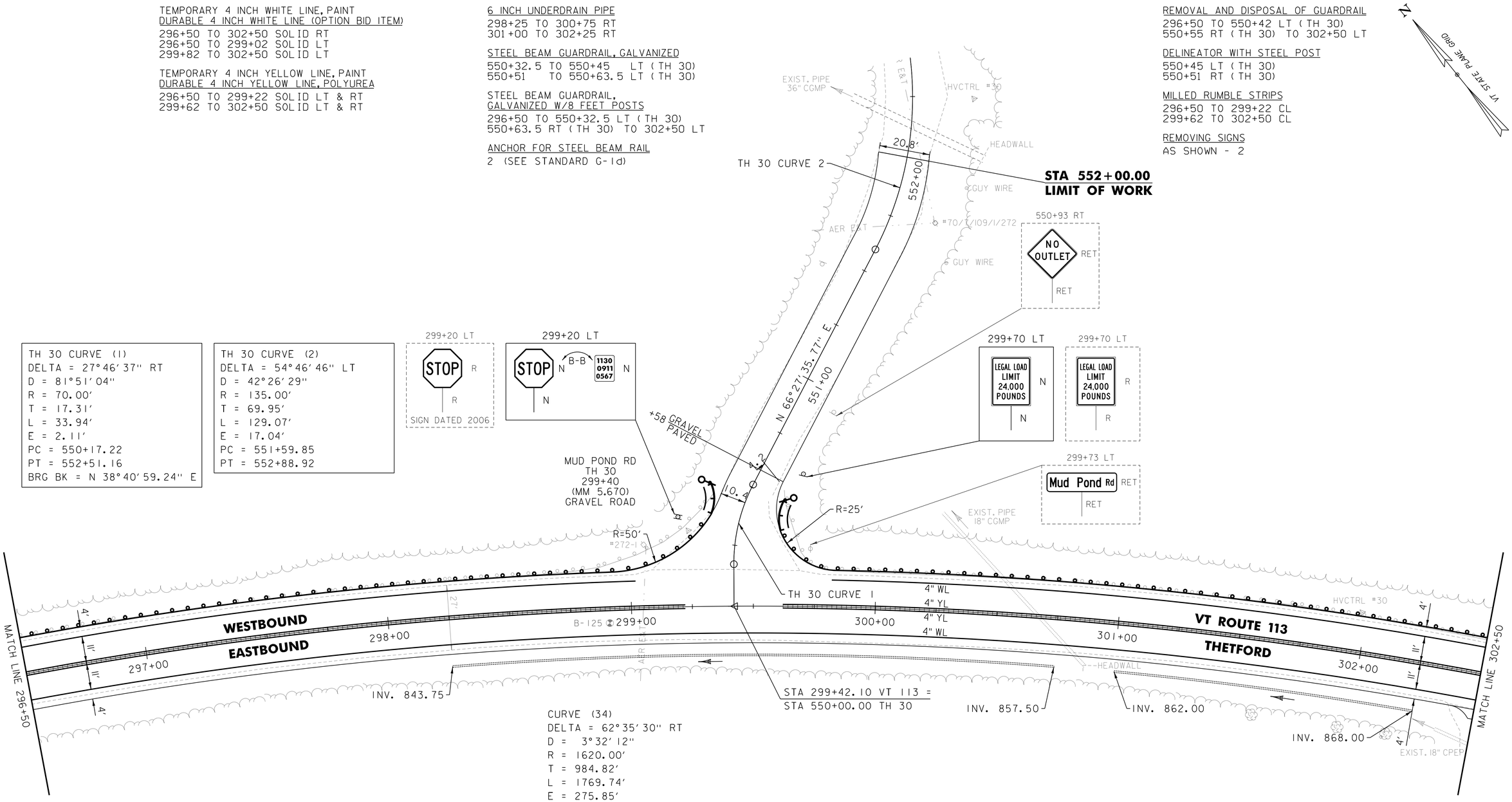
ANCHOR FOR STEEL BEAM RAIL
2 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
296+50 TO 550+42 LT (TH 30)
550+55 RT (TH 30) TO 302+50 LT

DELINEATOR WITH STEEL POST
550+45 LT (TH 30)
550+51 RT (TH 30)

MILLED RUMBLE STRIPS
296+50 TO 299+22 CL
299+62 TO 302+50 CL

REMOVING SIGNS
AS SHOWN - 2



TH 30 CURVE (1)
DELTA = 27°46'37" RT
D = 81°51'04"
R = 70.00'
T = 17.31'
L = 33.94'
E = 2.11'
PC = 550+17.22
PT = 552+51.16
BRG BK = N 38°40'59.24" E

TH 30 CURVE (2)
DELTA = 54°46'46" LT
D = 42°26'29"
R = 135.00'
T = 69.95'
L = 129.07'
E = 17.04'
PC = 551+59.85
PT = 552+88.92

CURVE (34)
DELTA = 62°35'30" RT
D = 3°32'12"
R = 1620.00'
T = 984.82'
L = 1769.74'
E = 275.85'
BANK = 0.043

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 45	SHEET 101 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
302+50 TO 308+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
302+50 TO 308+50 SOLID LT & RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
303+50 TO 304+00 LT

6 INCH UNDERDRAIN PIPE
304+75 TO 308+25 LT

STEEL BEAM GUARDRAIL, GALVANIZED
304+49.5 TO 304+62 LT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
302+50 TO 304+49.5 LT

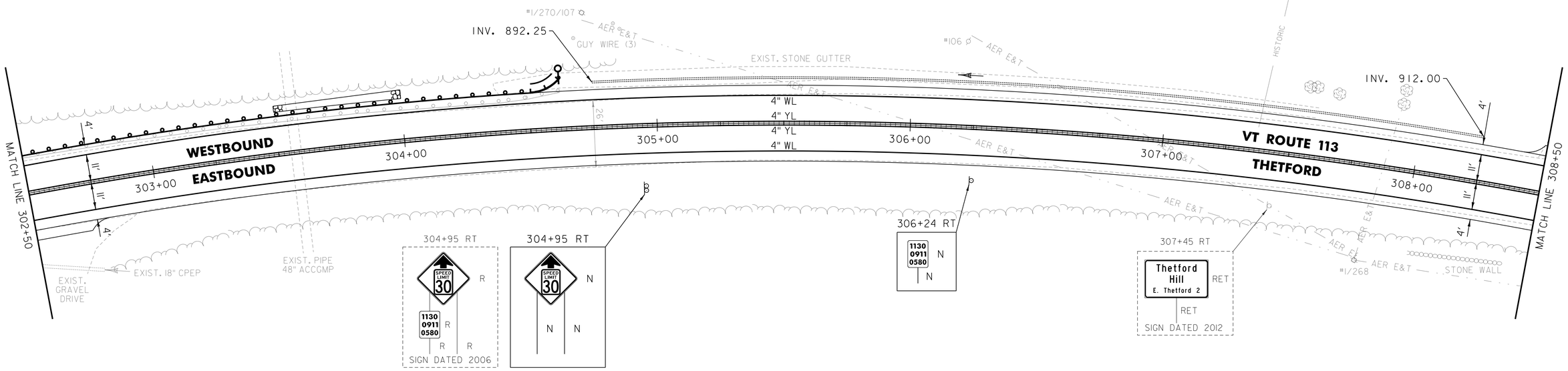
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
302+50 TO 304+62 LT

DELINEATOR WITH STEEL POST
304+62 LT

MILLED RUMBLE STRIPS
302+50 TO 308+50 CL

REMOVING SIGNS
AS SHOWN - 2



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 46	SHEET 102 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
308+50 TO 314+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
308+50 TO 314+50 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE, POLYUREA
308+50 TO 312+25 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
312+25 TO 314+50 SOLID LT & RT

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
313+27 RT - "SCHOOL"

MILLED RUMBLE STRIPS
308+50 TO 312+25 CL

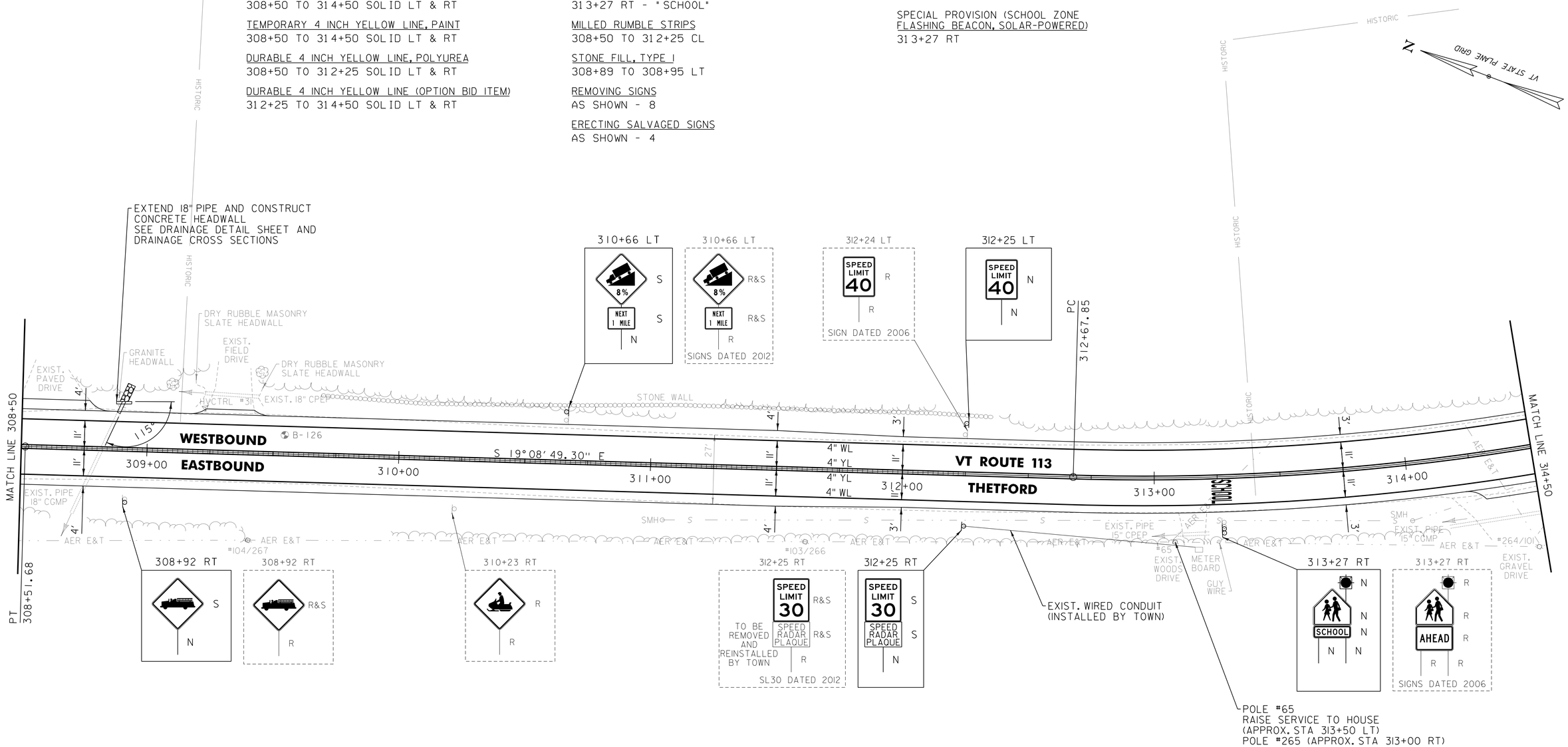
STONE FILL, TYPE I
308+89 TO 308+95 LT

REMOVING SIGNS
AS SHOWN - 8

ERECTING SALVAGED SIGNS
AS SHOWN - 4

18" PCCSP .064 (2-2/3 X 1/2)
308+82 LT

SPECIAL PROVISION (SCHOOL ZONE FLASHING BEACON, SOLAR-POWERED)
313+27 RT



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 47	SHEET 103 OF 303

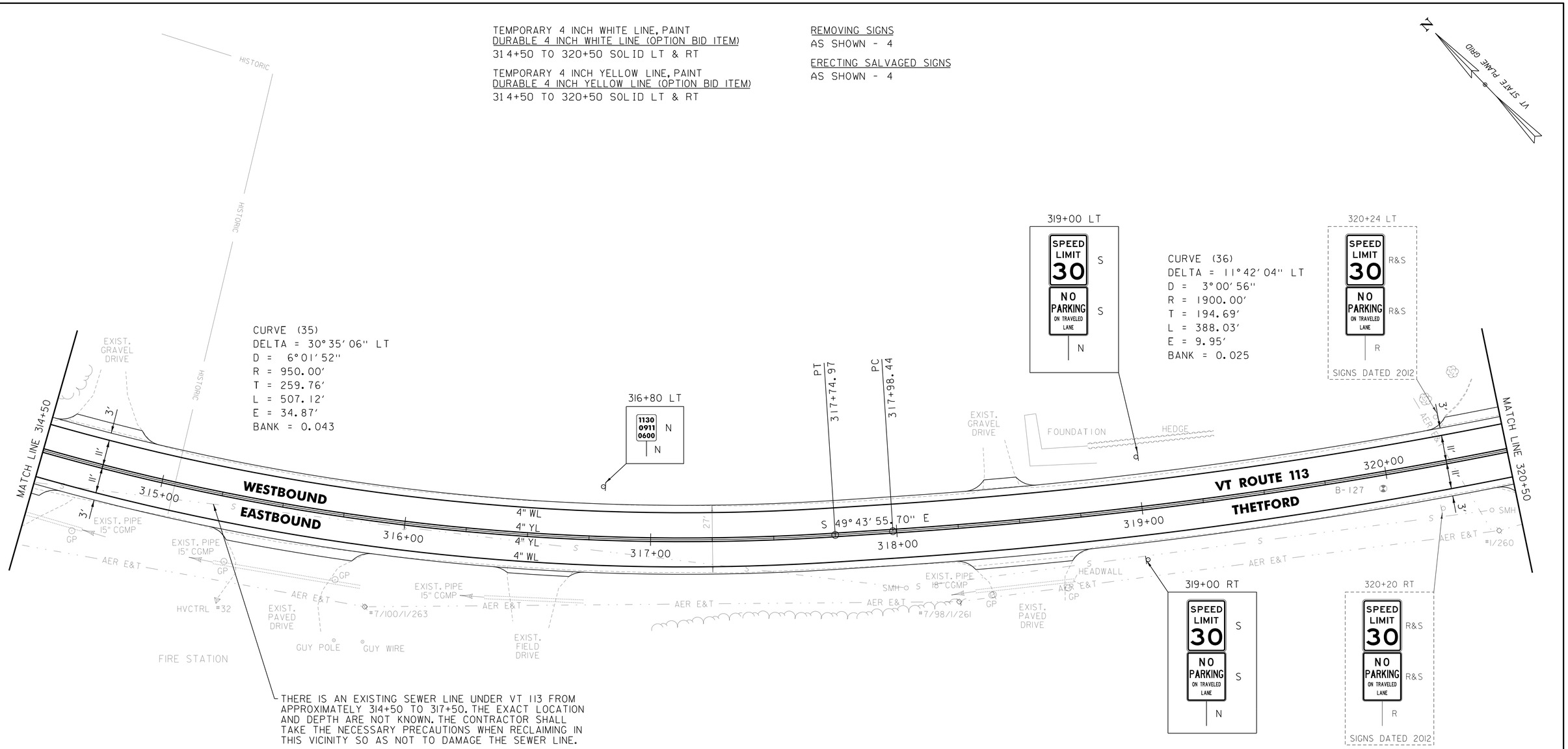
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
314+50 TO 320+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
314+50 TO 320+50 SOLID LT & RT

REMOVING SIGNS
AS SHOWN - 4

ERECTING SALVAGED SIGNS
AS SHOWN - 4



THERE IS AN EXISTING SEWER LINE UNDER VT 113 FROM APPROXIMATELY 314+50 TO 317+50. THE EXACT LOCATION AND DEPTH ARE NOT KNOWN. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS WHEN RECLAIMING IN THIS VICINITY SO AS NOT TO DAMAGE THE SEWER LINE.

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 48	SHEET 104 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
320+50 TO 321+01 SOLID LT & RT
321+07 TO 326+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
320+50 TO 321+01 SOLID LT & RT
321+07 TO 326+50 SOLID LT & RT

TEMPORARY CROSSWALK MARKING, PAINT
DURABLE CROSSWALK MARKING (OPTION BID ITEM)
321+04 LT TO RT

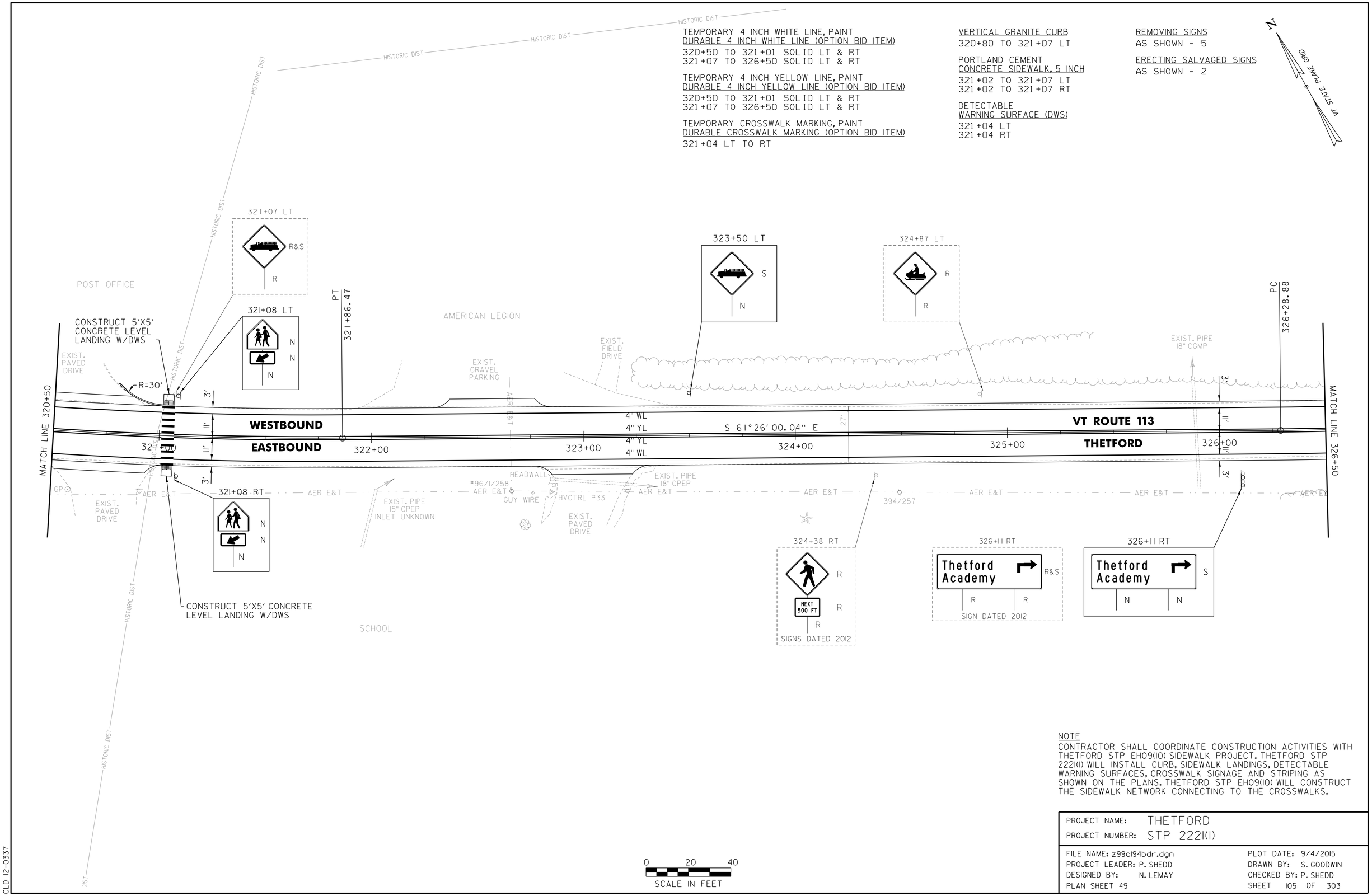
VERTICAL GRANITE CURB
320+80 TO 321+07 LT

PORTLAND CEMENT
CONCRETE SIDEWALK, 5 INCH
321+02 TO 321+07 LT
321+02 TO 321+07 RT

DETECTABLE
WARNING SURFACE (DWS)
321+04 LT
321+04 RT

REMOVING SIGNS
AS SHOWN - 5

ERECTING SALVAGED SIGNS
AS SHOWN - 2



NOTE
CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THETFORD STP EH09(10) SIDEWALK PROJECT. THETFORD STP 2221(1) WILL INSTALL CURB, SIDEWALK LANDINGS, DETECTABLE WARNING SURFACES, CROSSWALK SIGNAGE AND STRIPING AS SHOWN ON THE PLANS. THETFORD STP EH09(10) WILL CONSTRUCT THE SIDEWALK NETWORK CONNECTING TO THE CROSSWALKS.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 49	SHEET 105 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
326+50 TO 327+48 SOLID RT
326+50 TO 328+12 SOLID LT
328+18 TO 329+42 SOLID LT
328+18 TO 329+25 SOLID RT
329+25 TO 329+55 SOLID RT (TH 3)
329+76 TO 330+06 SOLID RT (TH 3)
330+06 TO 332+50 SOLID RT
330+22 TO 332+50 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
326+50 TO 327+68 SOLID LT & RT
328+18 TO 329+45 SOLID LT & RT
329+65 DOUBLE SOLID RT (TH 3)
330+02 TO 332+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)
329+66 TO 329+86 RT (TH 3)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
329+72 RT - "STOP" (TH 3)
331+92 LT - "SCHOOL"

TEMPORARY CROSSWALK MARKING, PAINT
DURABLE CROSSWALK MARKING (OPTION BID ITEM)
327+78 TO 327+95 RT (TH 70)
328+15 LT TO RT

VERTICAL GRANITE CURB
327+46 TO 328+25 LT
327+95 TO 328+18 RT

PORTLAND CEMENT
CONCRETE SIDEWALK, 5 INCH
327+73 TO 327+79 RT
327+95 TO 328+00 RT
328+13 TO 328+18 RT
328+13 TO 328+18 LT
329+62 TO 329+69 LT

DETECTABLE
WARNING SURFACE (DWS)
327+76 RT
327+96 RT
328+15 RT
328+15 LT
329+63 LT

6 INCH UNDERDRAIN PIPE
332+00 TO 332+50 LT
332+35 TO 332+50 RT

REMOVING SIGNS
AS SHOWN - 11

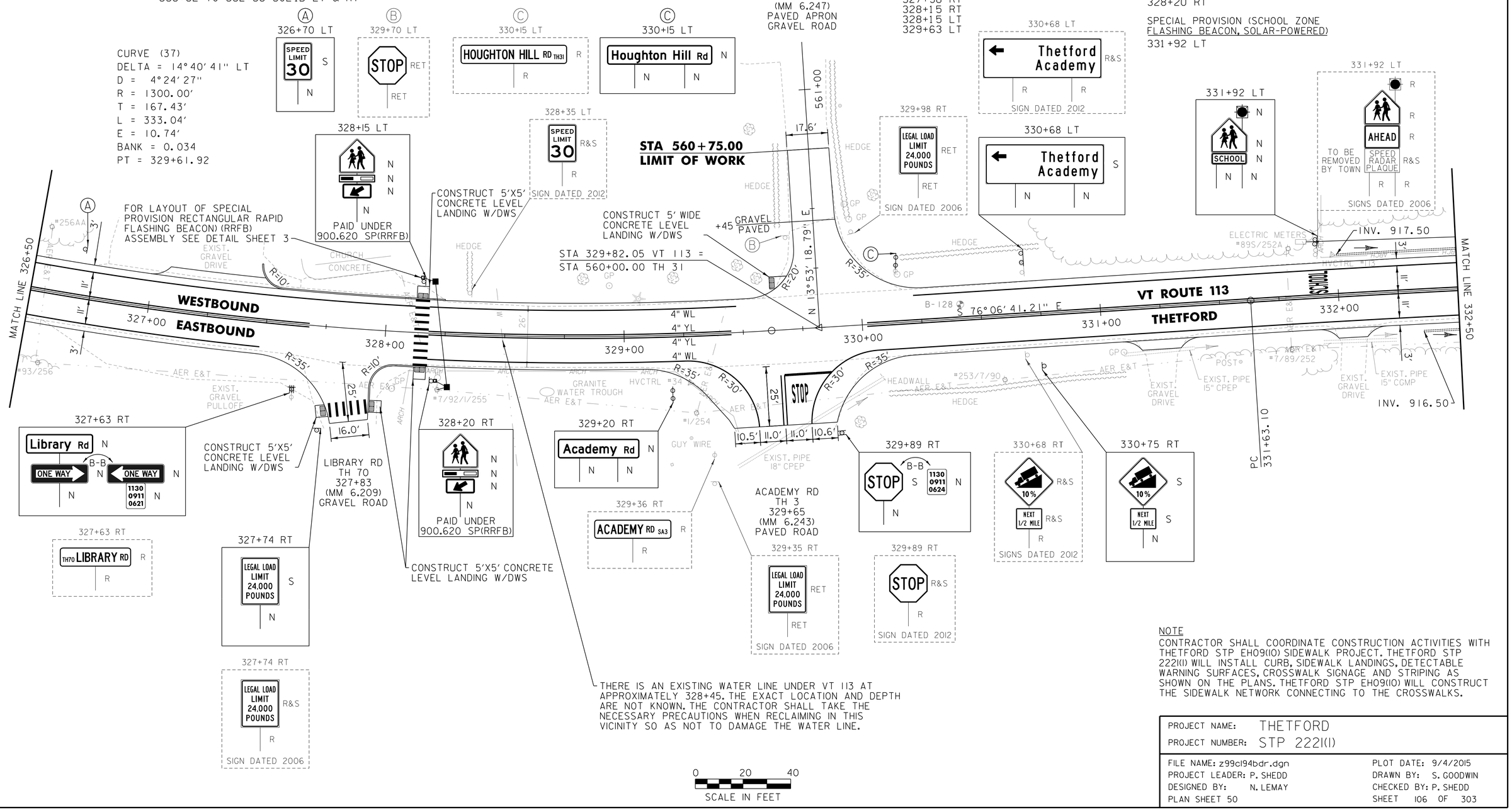
ERECTING SALVAGED SIGNS
AS SHOWN - 6

WIRED CONDUIT (2") (PVC)
331+88 TO 332+50 LT

SPECIAL PROVISION
(RECTANGULAR RAPID FLASHING BEACON)
328+15 LT
328+20 RT

SPECIAL PROVISION (SCHOOL ZONE
FLASHING BEACON, SOLAR-POWERED)
331+92 LT

CURVE (37)
DELTA = 14°40'41" LT
D = 4°24'27"
R = 1300.00'
T = 167.43'
L = 333.04'
E = 10.74'
BANK = 0.034
PT = 329+61.92



NOTE
CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THETFORD STP EH09(10) SIDEWALK PROJECT. THETFORD STP 2221(1) WILL INSTALL CURB, SIDEWALK LANDINGS, DETECTABLE WARNING SURFACES, CROSSWALK SIGNAGE AND STRIPING AS SHOWN ON THE PLANS. THETFORD STP EH09(10) WILL CONSTRUCT THE SIDEWALK NETWORK CONNECTING TO THE CROSSWALKS.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 50	SHEET 106 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
332+50 TO 338+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
332+50 TO 338+50 SOLID LT & RT

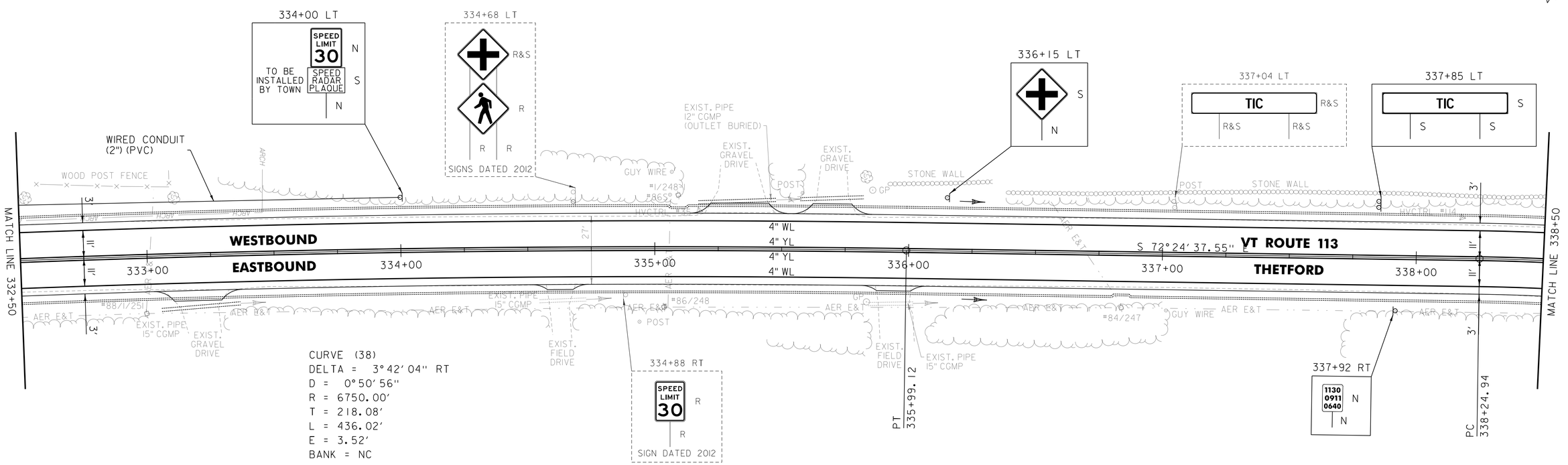
15" CPEP(SL)
333+05 TO 333+36 RT
335+17 TO 335+48 LT
335+57 TO 335+82 LT

6 INCH UNDERDRAIN PIPE
332+50 TO 338+50 LT
332+50 TO 338+50 RT

REMOVING SIGNS
AS SHOWN - 4

ERECTING SALVAGED SIGNS
AS SHOWN - 2

WIRED CONDUIT (2") (PVC)
332+50 TO 334+00 LT



CURVE (38)
DELTA = 3°42'04" RT
D = 0°50'56"
R = 6750.00'
T = 218.08'
L = 436.02'
E = 3.52'
BANK = NC

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 51	SHEET 107 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
338+50 TO 344+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
338+50 TO 344+50 SOLID LT & RT

15" CPEP(SL)
339+58 TO 339+78 LT

15" PCCSP .064 (2-2/3 X 1/2)
340+62 RT

6 INCH UNDERDRAIN PIPE
338+50 TO 340+35 LT
338+50 TO 340+75 RT

STONE FILL, TYPE I
340+85 TO 340+93 RT

STEEL BEAM GUARDRAIL, GALVANIZED
342+04 TO 342+16.5 LT
342+29 TO 342+41.5 RT
342+91.5 TO 343+04 LT
343+29 TO 343+41.5 RT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
342+16.5 TO 342+91.5 LT
342+41.5 TO 343+29 RT

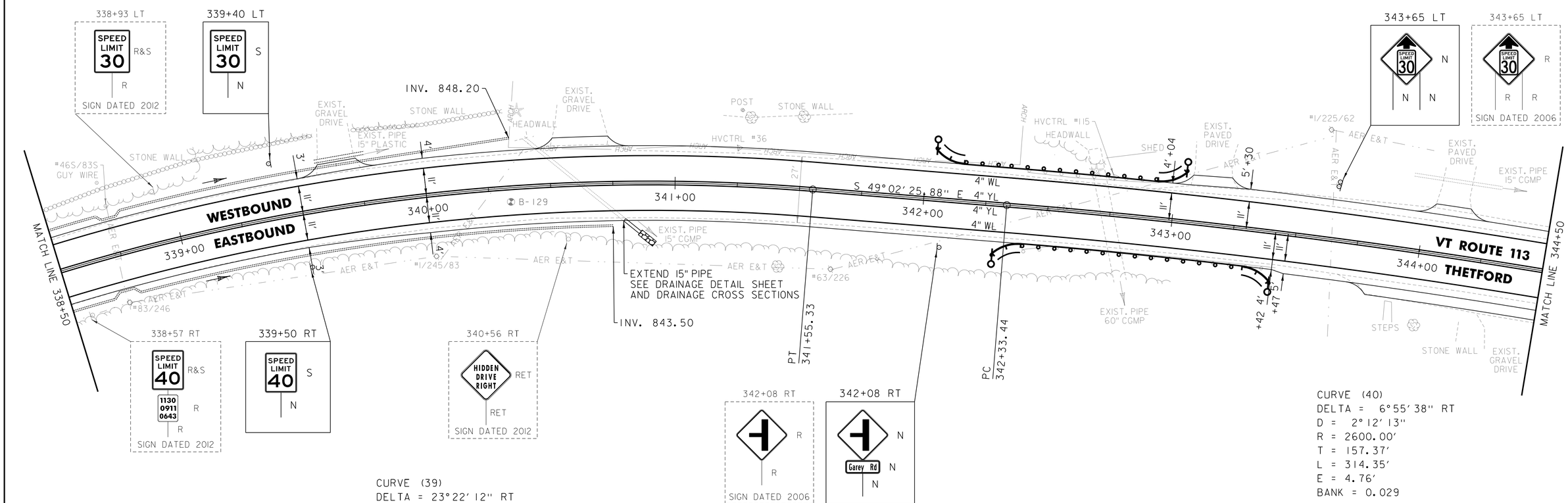
ANCHOR FOR STEEL BEAM RAIL
4 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
342+41 TO 343+04 LT
342+41 TO 343+44 RT

DELINEATOR WITH STEEL POST
342+04 LT
342+29 RT
343+04 LT
343+41.5 RT

REMOVING SIGNS
AS SHOWN - 5

ERECTING SALVAGED SIGNS
AS SHOWN - 2



CURVE (39)
DELTA = 23°22'12" RT
D = 7°04'25"
R = 810.00'
T = 167.52'
L = 330.38'
E = 17.14'
BANK = 0.066

CURVE (40)
DELTA = 6°55'38" RT
D = 2°12'13"
R = 2600.00'
T = 157.37'
L = 314.35'
E = 4.76'
BANK = 0.029

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 52	SHEET 108 OF 303

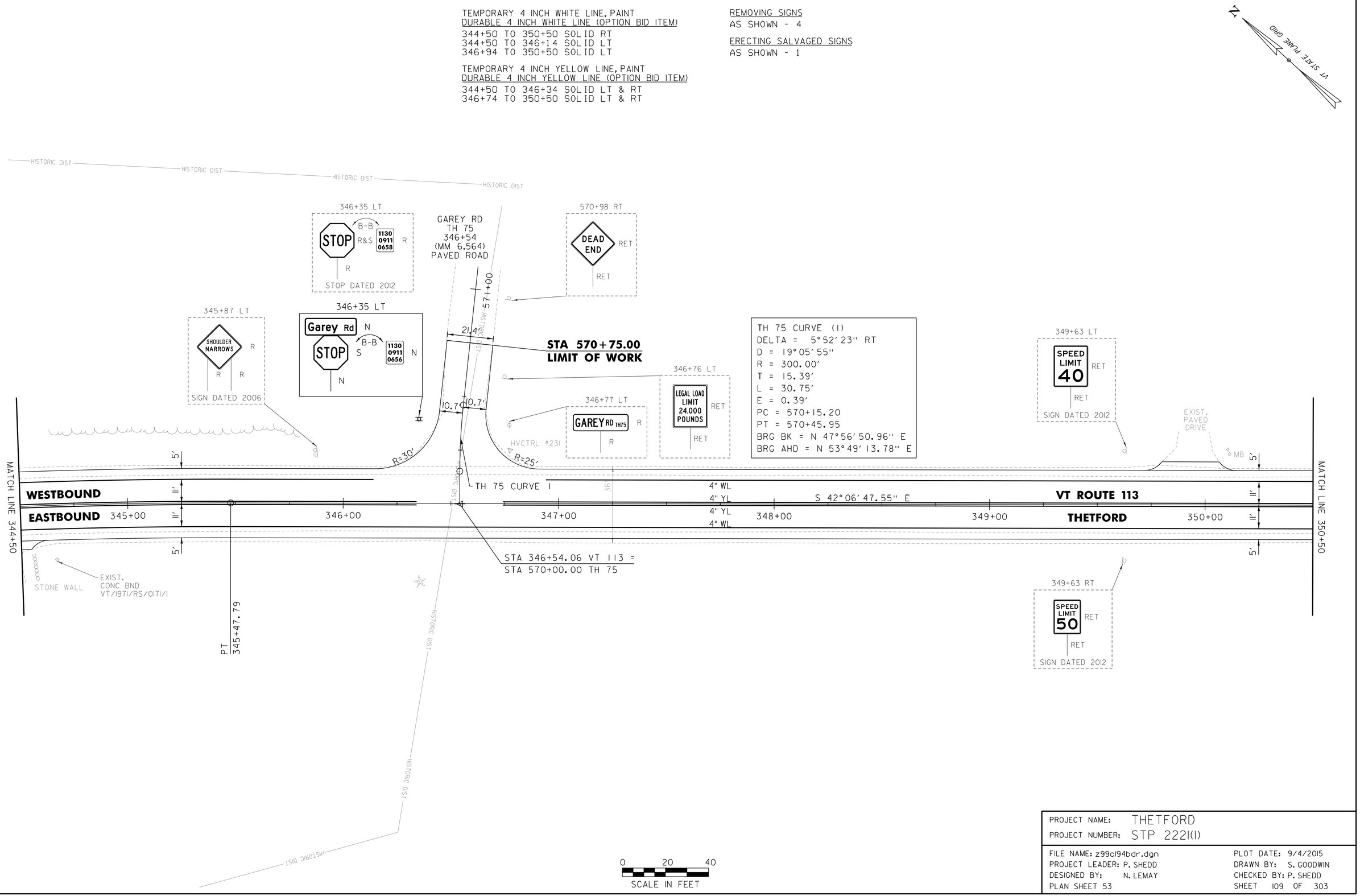
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
344+50 TO 350+50 SOLID RT
344+50 TO 346+14 SOLID LT
346+94 TO 350+50 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
344+50 TO 346+34 SOLID LT & RT
346+74 TO 350+50 SOLID LT & RT

REMOVING SIGNS
AS SHOWN - 4

ERECTING SALVAGED SIGNS
AS SHOWN - 1



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 53	SHEET 109 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)

350+50 TO 356+50 SOLID LT
350+50 TO 352+13 SOLID RT
352+13 TO 352+43 SOLID RT (TH 90)
352+64 TO 352+94 SOLID RT (TH 90)
352+94 TO 356+50 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)

350+50 TO 352+33 SOLID LT & RT
352+53 DOUBLE SOLID RT (TH 40)
352+73 TO 356+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)

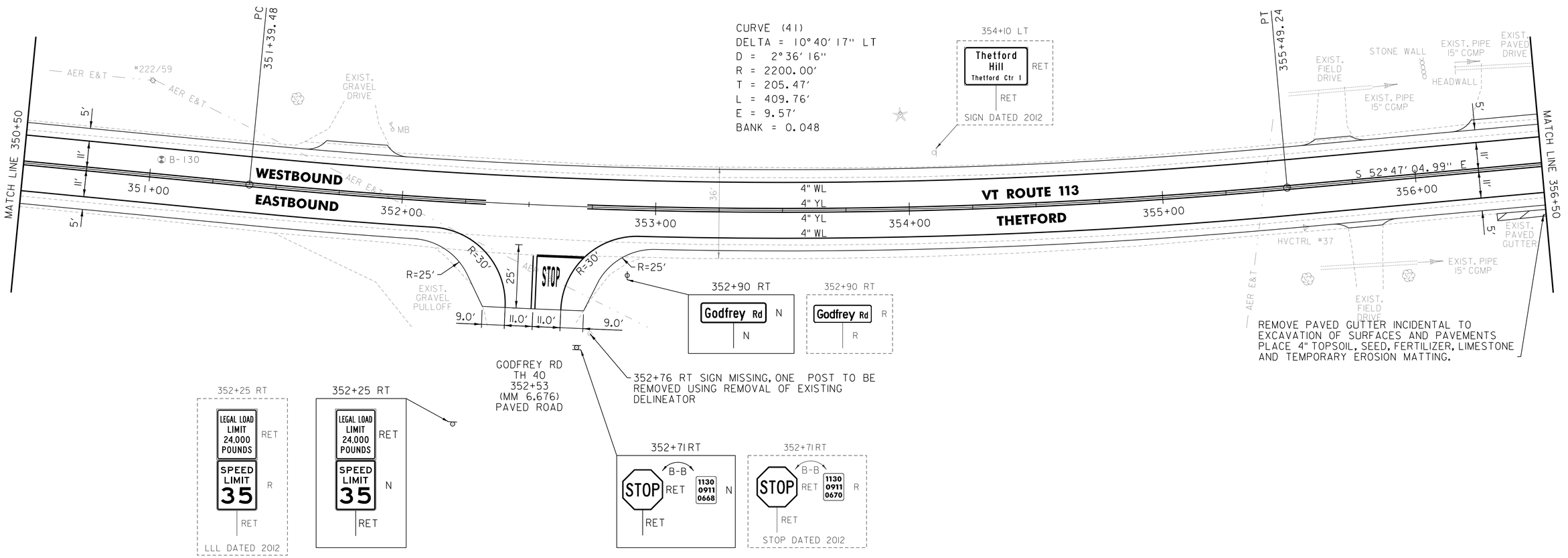
352+54 TO 352+72 RT (TH 40)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)

352+60 RT - "STOP" (TH 40)

REMOVING SIGNS
AS SHOWN - 3

REMOVAL OF EXISTING DELINEATOR
352+76 RT



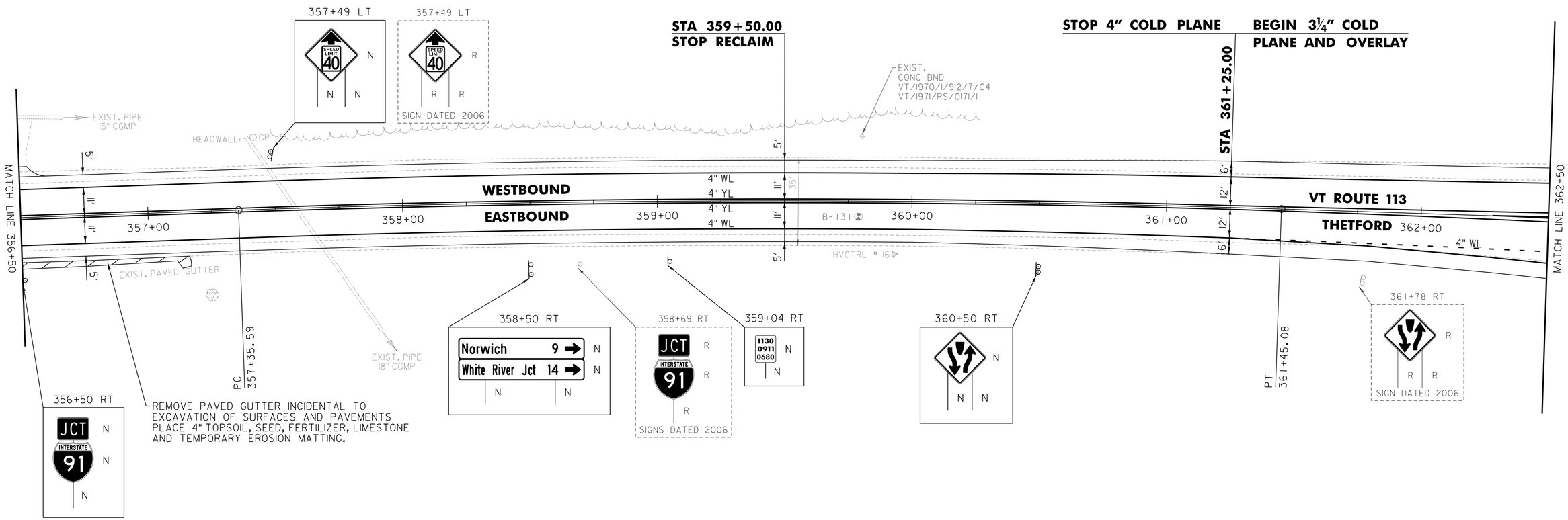
PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 54	SHEET 110 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
356+50 TO 362+50 SOLID LT & RT
361+25 TO 362+50 DOTTED RT (LANE LINE)

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
356+50 TO 362+28 SOLID LT & RT
362+28 TO 362+50 DOUBLE SOLID LT & RT (ISLAND)

REMOVING SIGNS
AS SHOWN - 4



CURVE (42)
DELTA = 3°50'47" RT
D = 0°56'21"
R = 6100.00'
T = 204.82'
L = 409.49'
E = 3.44'
BANK = RC

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 55	SHEET III OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)

362+50 TO 364+40 DOTTED RT (LANE LINE)
362+50 TO 366+85 SOLID RT
362+50 TO 366+98 SOLID LT
364+40 TO 367+20 SOLID RT (LANE LINE)
367+42 TO 368+50 SOLID RT
367+48 TO 368+50 SOLID LT
367+60 RT TO 368+50 SOLID LT (LANE LINE)

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)

362+50 TO 363+66 DOUBLE SOLID LT (ISLAND)
362+50 TO 364+06 DOUBLE SOLID RT (ISLAND)
363+66 TO 367+19 SOLID LT (ISLAND)
364+06 TO 367+19 SOLID RT (ISLAND)
367+85 TO 368+50 SOLID RT (ISLAND)
367+85 TO 368+50 SOLID RT (ISLAND)

DURABLE 8 INCH YELLOW LINE, POLYUREA

363+03 TO 363+66 SOLID LT & RT (DIAGONALS)

TEMPORARY LETTER OR SYMBOL, PAINT

364+44 RT - RIGHT TURN ARROW
366+86 RT - RIGHT TURN ARROW
367+92 LT - LEFT TURN ARROW

DURABLE LETTER OR SYMBOL (OPTION BID ITEM)

364+44 RT - RIGHT TURN ARROW
364+84 RT - "ONLY"
365+25 RT - RIGHT TURN ARROW
365+65 RT - "ONLY"
366+05 RT - RIGHT TURN ARROW
366+46 RT - "ONLY"
366+86 RT - RIGHT TURN ARROW
367+92 LT - LEFT TURN ARROW
368+41 LT - "ONLY"

PAINTED CURB

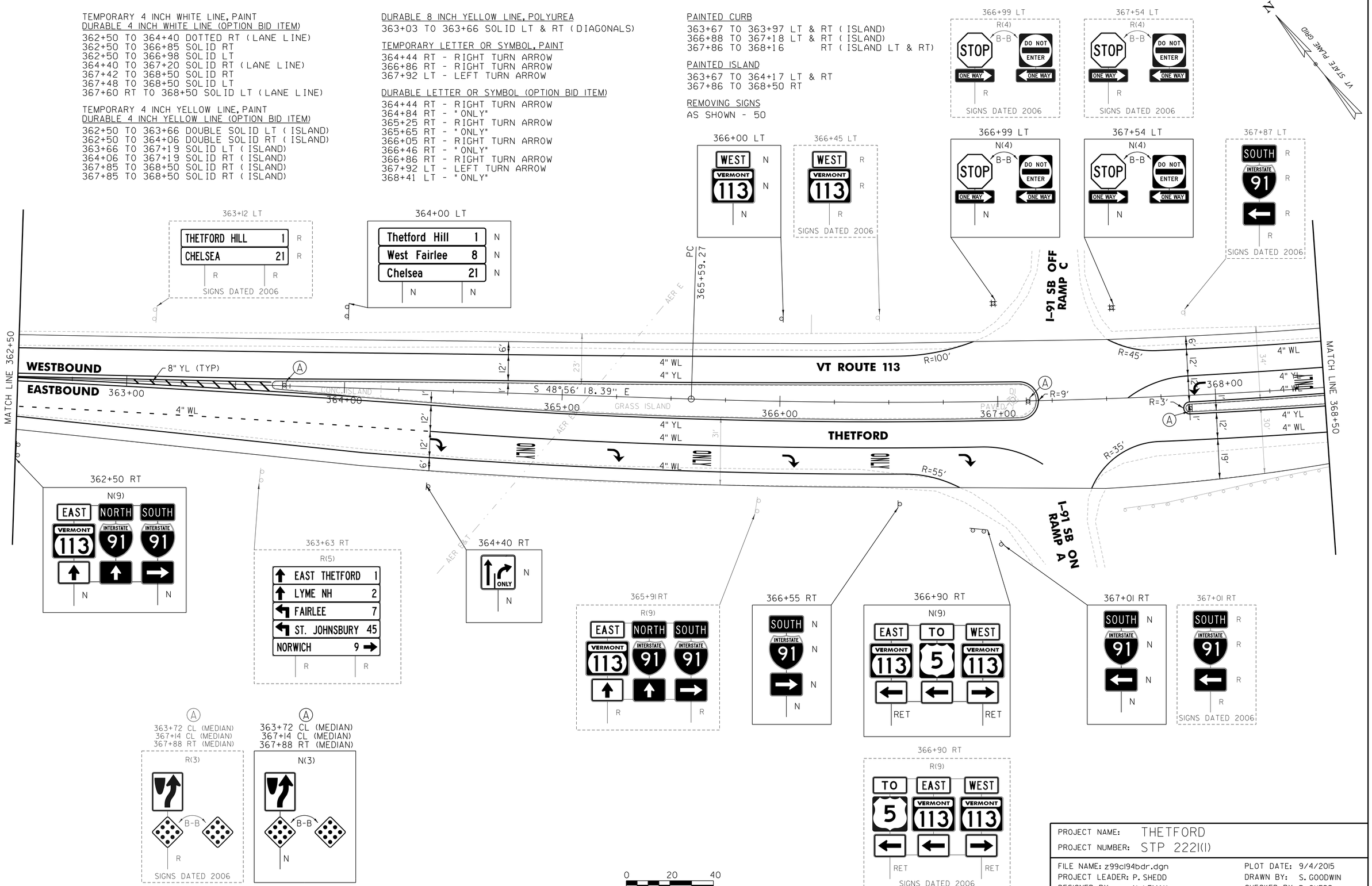
363+67 TO 363+97 LT & RT (ISLAND)
366+88 TO 367+18 LT & RT (ISLAND)
367+86 TO 368+16 RT (ISLAND LT & RT)

PAINTED ISLAND

363+67 TO 364+17 LT & RT
367+86 TO 368+50 RT

REMOVING SIGNS

AS SHOWN - 50



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 56	SHEET 112 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)

368+50 TO 374+50 SOLID LT
368+50 TO 370+90 SOLID LT (LANE LINE)
368+50 TO 374+50 SOLID RT
370+90 TO 372+75 DOTTED LT (LANE LINE)
371+00 TO 373+00 DOTTED RT (LANE LINE)
373+00 TO 374+50 SOLID RT (LANE LINE)

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)

368+50 TO 374+50 SOLID RT TO LT (ISLAND)
368+50 TO 374+50 SOLID RT TO LT (ISLAND)

TEMPORARY LETTER OR SYMBOL, PAINT

370+86 LT - LEFT TURN ARROW
373+04 RT - LEFT TURN ARROW

DURABLE LETTER OR SYMBOL (OPTION BID ITEM)

368+90 LT - LEFT TURN ARROW
369+39 LT - "ONLY"
369+88 LT - LEFT TURN ARROW
370+37 LT - "ONLY"
370+86 LT - LEFT TURN ARROW
373+04 RT - LEFT TURN ARROW
373+45 RT - "ONLY"
373+87 RT - LEFT TURN ARROW
374+29 RT - "ONLY"

PAINTED CURB

370+70 TO 371+00 RT (ISLAND LT & RT)
371+01 TO 371+31 RT (ISLAND LT & RT)
372+45 TO 373+05 LT (ISLAND LT & RT)

PAINTED ISLAND

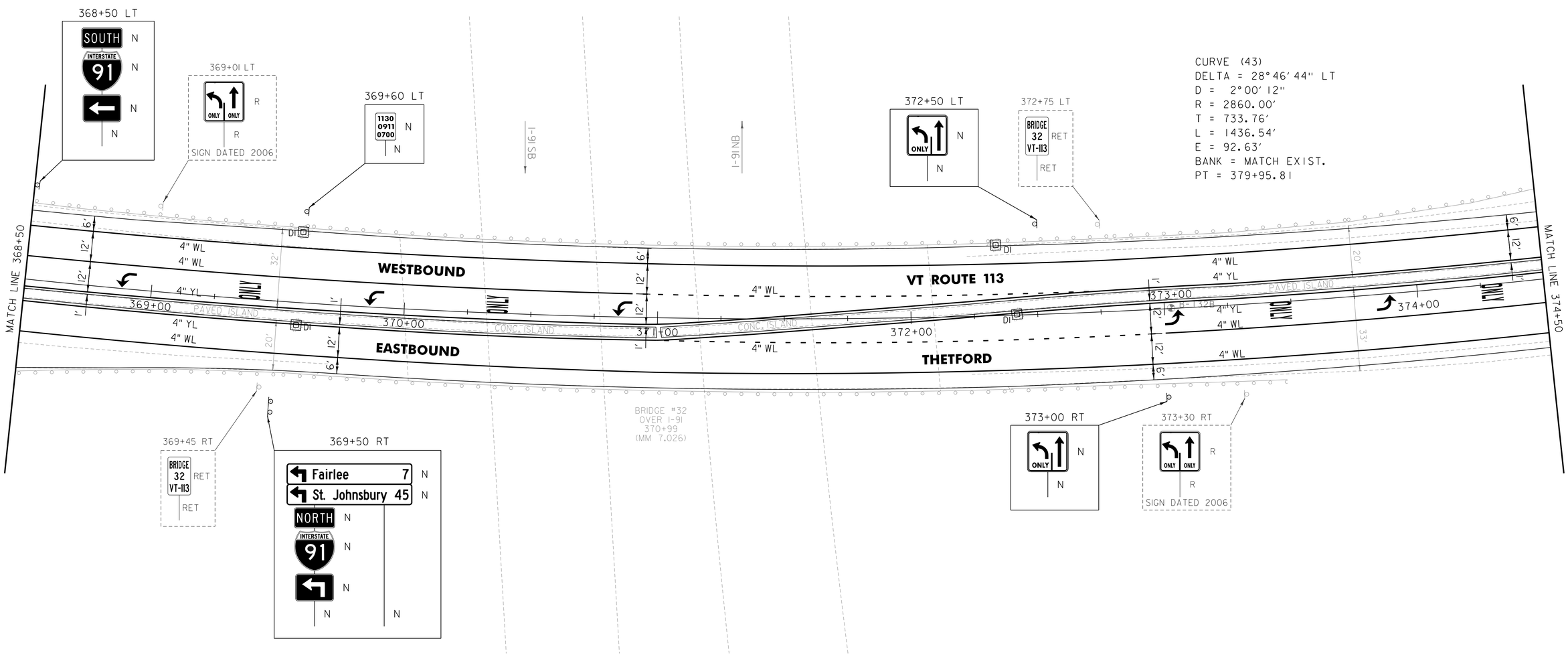
368+50 TO 370+99 RT
371+02 RT TO 374+50 LT

REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I

369+58 LT - DI
369+58 RT - DI
372+34 LT - DI
372+42 LT - DI

REMOVING SIGNS

AS SHOWN - 2



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 57	SHEET 113 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
374+50 TO 375+94 SOLID LT
374+50 TO 375+85 SOLID RT (LANE LINE)
374+50 TO 375+83 SOLID RT
376+56 TO 379+13 SOLID LT
376+71 TO 380+50 SOLID RT
379+13 TO 379+49 SOLID LT (TH 5)
379+71 TO 380+00 SOLID LT (TH 5)
380+00 TO 380+50 SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
374+50 TO 375+59 SOLID LT (ISLAND)
374+50 TO 375+59 SOLID LT (ISLAND)
376+43 TO 378+11 SOLID LT (ISLAND)
376+43 TO 379+12 SOLID RT (ISLAND)
378+11 TO 379+39 DOUBLE SOLID LT (ISLAND)
379+12 TO 379+39 DOUBLE SOLID RT (ISLAND)
379+59 TO 379+60 DOUBLE SOLID LT (TH 5)
379+79 TO 380+50 DOUBLE SOLID LT (ISLAND)
379+79 TO 380+50 DOUBLE SOLID RT (ISLAND)

DURABLE 8 INCH YELLOW LINE, POLYUREA
378+38 TO 379+37 SOLID LT & RT (DIAGONALS)
379+81 TO 380+50 SOLID LT & RT (DIAGONALS)

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)
379+40 TO 379+58 LT (TH 5)

TEMPORARY LETTER OR SYMBOL, PAINT
375+52 RT - LEFT TURN ARROW
379+53 LT - "STOP" (TH 5)

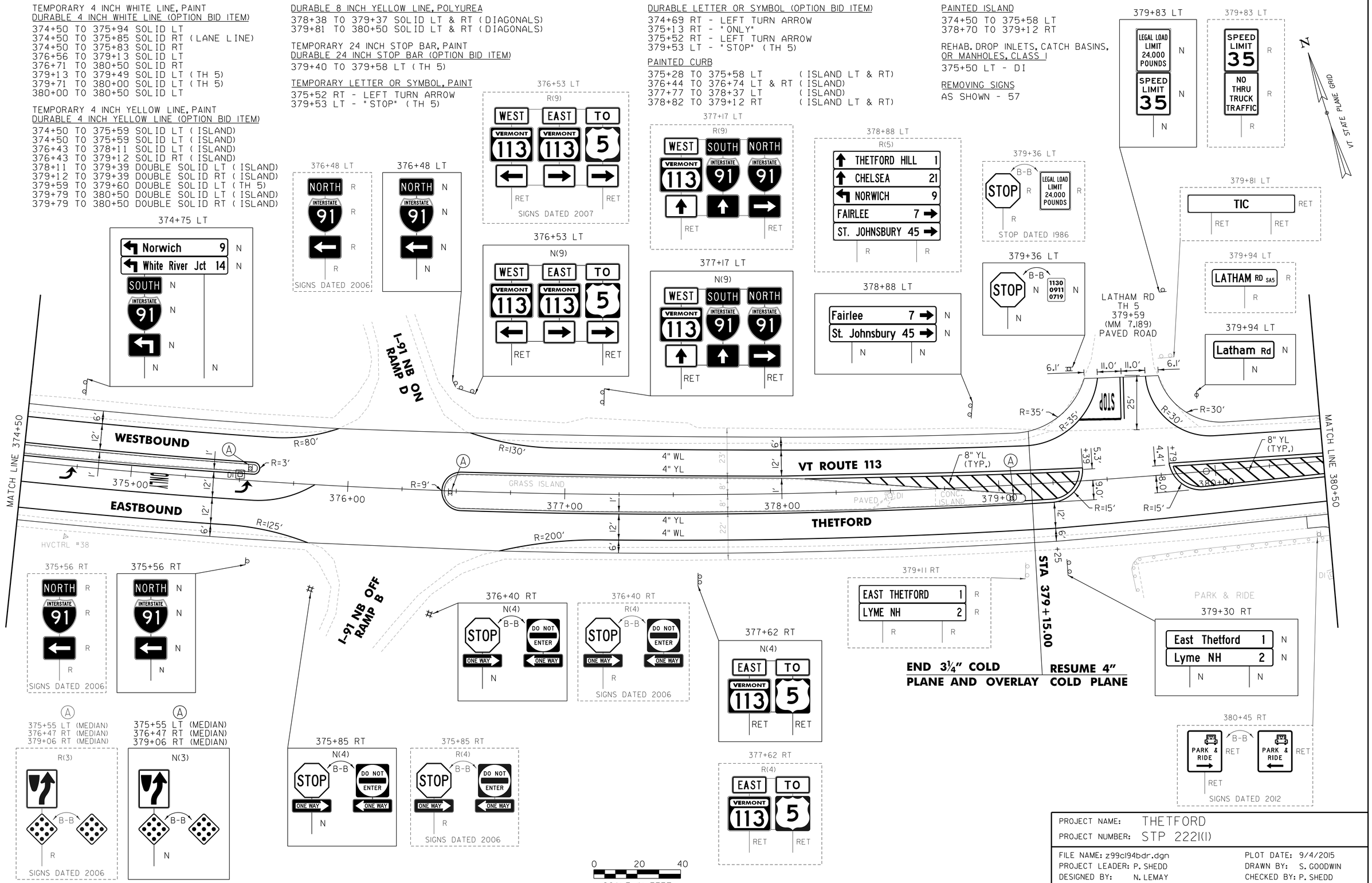
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
374+69 RT - LEFT TURN ARROW
375+13 RT - "ONLY"
375+52 RT - LEFT TURN ARROW
379+53 LT - "STOP" (TH 5)

PAINTED CURB
375+28 TO 375+58 LT (ISLAND LT & RT)
376+44 TO 376+74 LT & RT (ISLAND)
377+77 TO 378+37 LT (ISLAND)
378+82 TO 379+12 RT (ISLAND LT & RT)

PAINTED ISLAND
374+50 TO 375+58 LT
378+70 TO 379+12 RT

REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I
375+50 LT - DI

REMOVING SIGNS
AS SHOWN - 57



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 58	SHEET 114 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
380+50 TO 386+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
380+50 TO 383+00 DOUBLE SOLID LT & RT (ISLAND)
383+00 TO 386+50 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
380+50 TO 383+00 DOUBLE SOLID LT (ISLAND)
380+50 TO 383+00 DOUBLE SOLID RT (ISLAND)

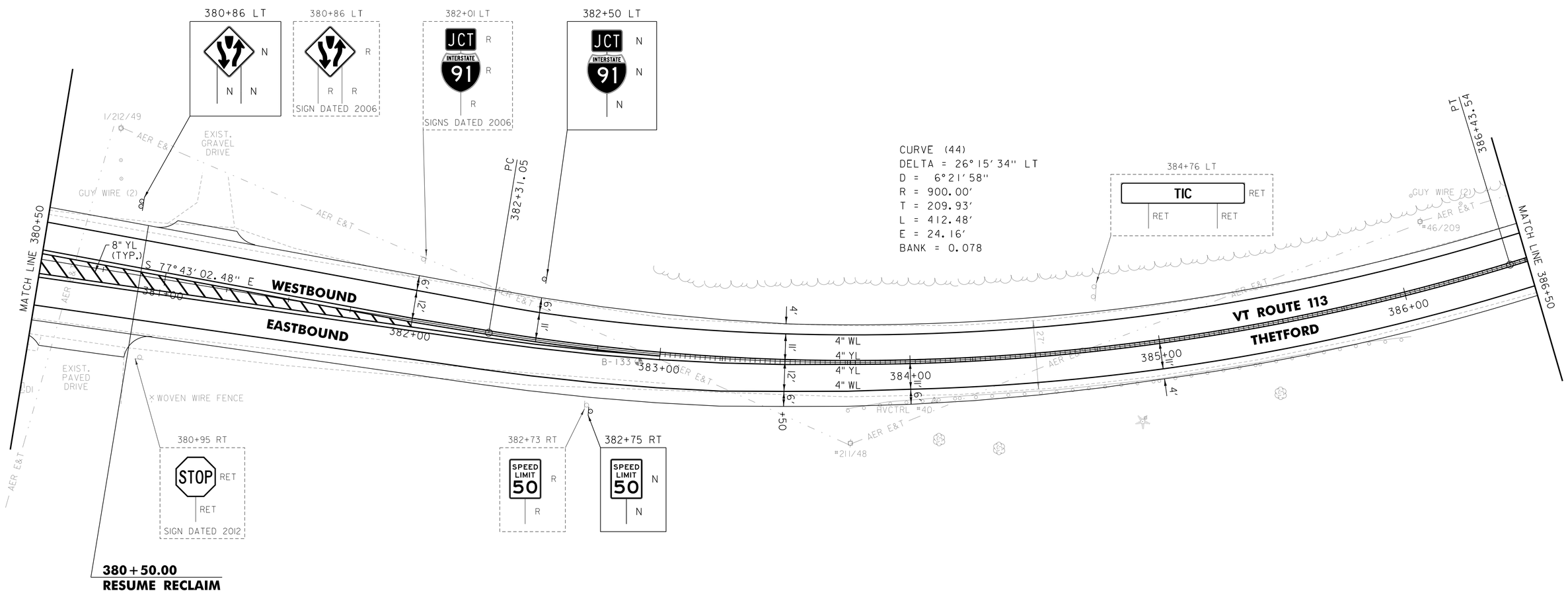
DURABLE 4 INCH YELLOW LINE, POLYUREA
383+00 TO 386+50 SOLID LT & RT

DURABLE 8 INCH YELLOW LINE, POLYUREA
380+50 TO 382+00 SOLID RT (DIAGONALS)

REMOVAL AND DISPOSAL OF GUARDRAIL
383+74 TO 385+98 RT

MILLED RUMBLE STRIPS
383+00 TO 386+50 CL

REMOVING SIGNS
AS SHOWN - 4



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 59	SHEET 115 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)

386+50 TO 392+50 SOLID LT
386+50 TO 388+09 SOLID RT
388+09 TO 388+43 SOLID RT (TH 41)
388+65 TO 389+00 SOLID RT (TH 41)
389+00 TO 392+50 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT

386+50 TO 388+34 SOLID LT & RT
388+54 DOUBLE SOLID RT (TH 41)
388+74 TO 392+50 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)

388+54 DOUBLE SOLID RT (TH 41)

DURABLE 4 INCH YELLOW LINE, POLYUREA

386+50 TO 388+34 SOLID LT & RT
388+74 TO 392+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)

388+54 TO 388+78 RT (TH 41)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)

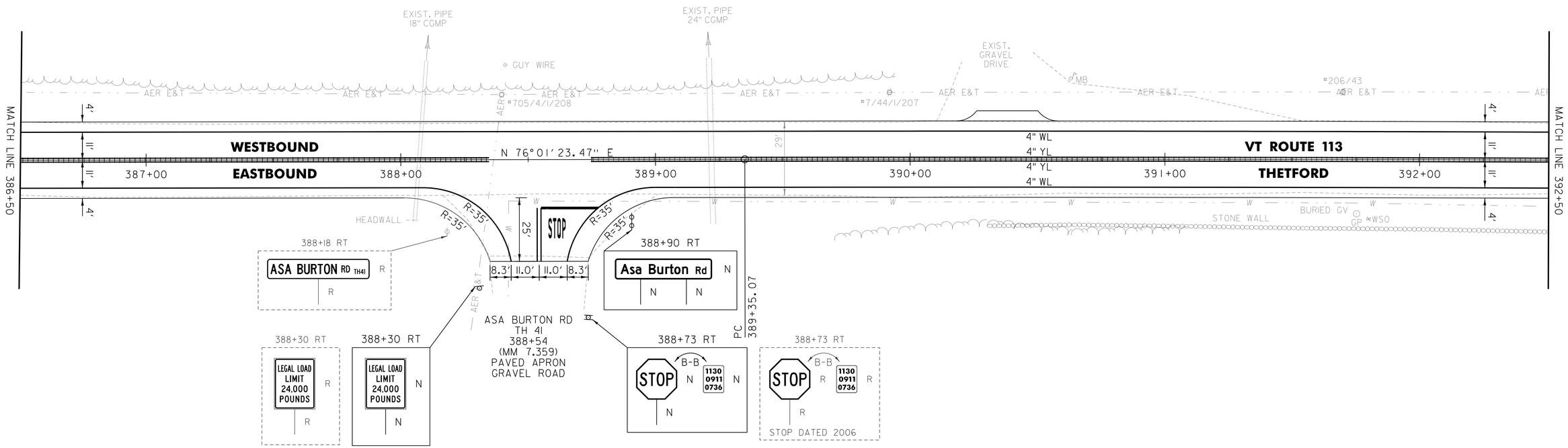
388+61 RT - "STOP" (TH 41)

MILLED RUMBLE STRIPS

386+50 TO 388+34 CL
388+74 TO 392+50 CL

REMOVING SIGNS

AS SHOWN - 4



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 60	SHEET 116 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
392+50 TO 398+50 SOLID LT
392+50 TO 394+99 SOLID RT
394+99 TO 395+11 SOLID RT (TH 42)
395+33 TO 395+69 SOLID RT (TH 42)
395+69 TO 398+50 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
392+50 TO 395+07 SOLID LT & RT
395+22 TO 395+27 DOUBLE SOLID RT (TH 42)
395+47 TO 398+50 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
395+22 TO 395+27 DOUBLE SOLID RT (TH 42)

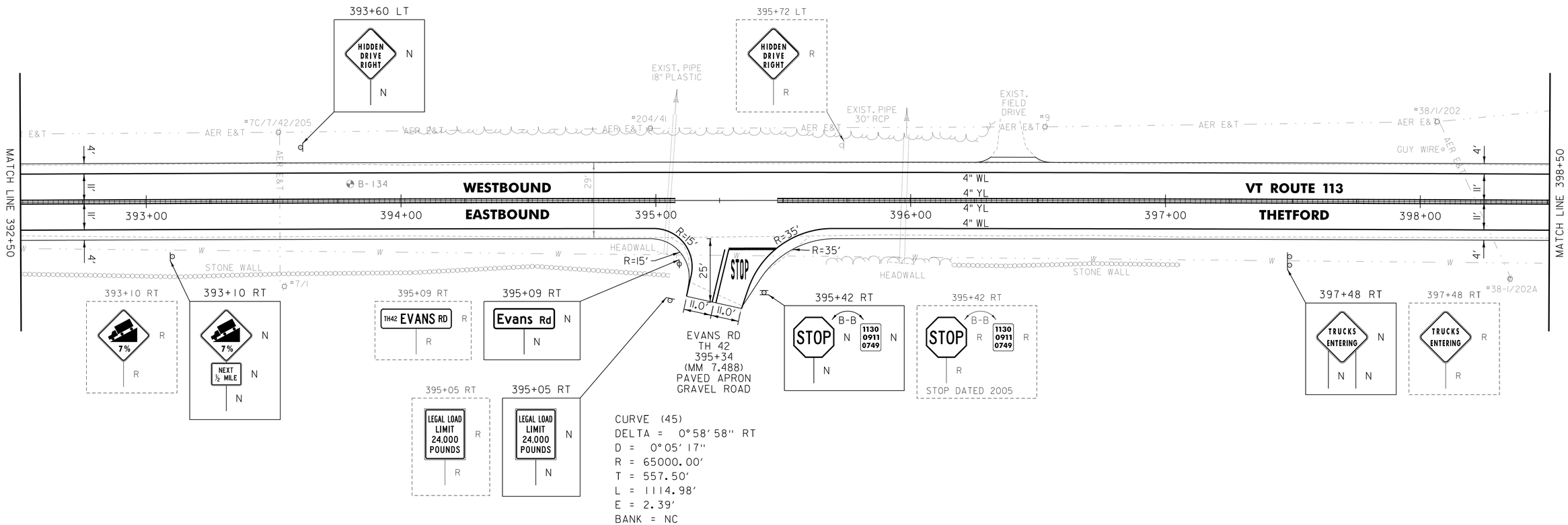
DURABLE 4 INCH YELLOW LINE, POLYUREA
392+50 TO 395+07 SOLID LT & RT
395+47 TO 398+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)
395+28 TO 395+47 RT (TH 42)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
395+32 RT - "STOP" (TH 42)

MILLED RUMBLE STRIPS
392+50 TO 395+07 CL
395+47 TO 398+50 CL

REMOVING SIGNS
AS SHOWN - 7



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 61	SHEET 117 OF 303

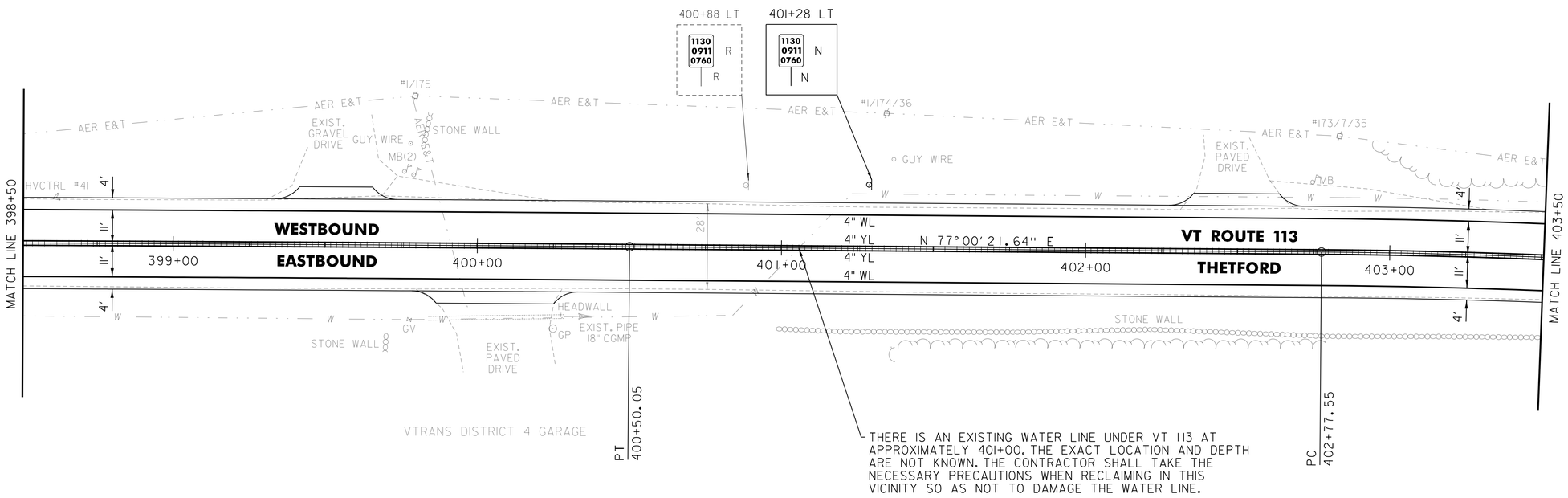
CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
398+50 TO 403+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
398+50 TO 403+50 SOLID LT & RT

MILLED RUMBLE STRIPS
398+50 TO 403+50 CL

REMOVING SIGNS
AS SHOWN - 1



THERE IS AN EXISTING WATER LINE UNDER VT 113 AT APPROXIMATELY 401+00. THE EXACT LOCATION AND DEPTH ARE NOT KNOWN. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS WHEN RECLAIMING IN THIS VICINITY SO AS NOT TO DAMAGE THE WATER LINE.

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 62	SHEET 118 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
403+50 TO 409+25 SOLID LT & RT

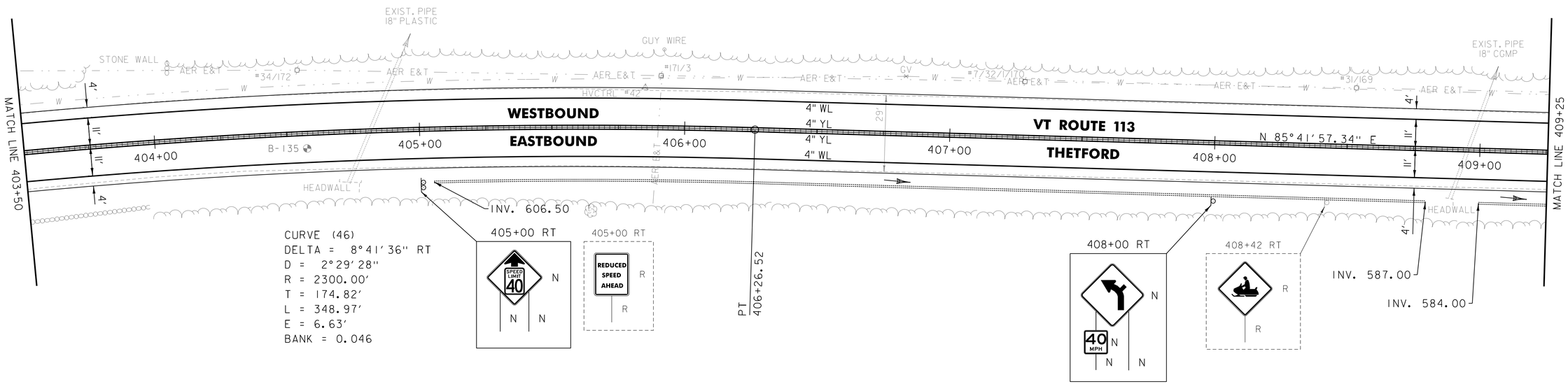
TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
403+50 TO 409+25 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
405+05 TO 408+80 RT
409+00 TO 409+25 RT

MILLED RUMBLE STRIPS
403+50 TO 409+25 CL

REMOVING SIGNS
AS SHOWN - 2

N
VT STATE PLANE GRID



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 63	SHEET 119 OF 303

CLD 12-0337

TH 34 CURVE (1)
DELTA = 21°43′22″ RT
D = 49°49′21″
R = 115.00′
T = 22.07′
L = 43.60′
E = 2.10′
PC = 580+15.69
PT = 580+59.29
BRG BK = N 4°18′02.66″ W

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
409+25 TO 409+58 LT
409+25 TO 412+29 RT
409+58 LT TO 580+37 LT (TH 34)
410+29 TO 414+50 LT
413+09 TO 414+50 RT
580+40 RT TO 410+29 LT (TH 34)

TEMPORARY 4 INCH YELLOW LINE, PAINT
409+25 TO 409+76 SOLID LT & RT
410+16 TO 412+48 SOLID LT & RT
412+88 TO 414+50 SOLID LT & RT
580+19 TO 581+40 DOUBLE SOLID LT (TH 34)

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
580+19 TO 581+40 SOLID LT & RT (TH 34)

DURABLE 4 INCH YELLOW LINE, POLYUREA
409+25 TO 409+76 SOLID LT & RT
410+16 TO 412+48 SOLID LT & RT
412+88 TO 414+50 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)
580+19 LT (TH 34)

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
580+26 LT - "STOP" (TH 34)

6 INCH UNDERDRAIN PIPE
409+25 TO 412+18 RT

STEEL BEAM GUARDRAIL, GALVANIZED
414+20 TO 414+50 RT

ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

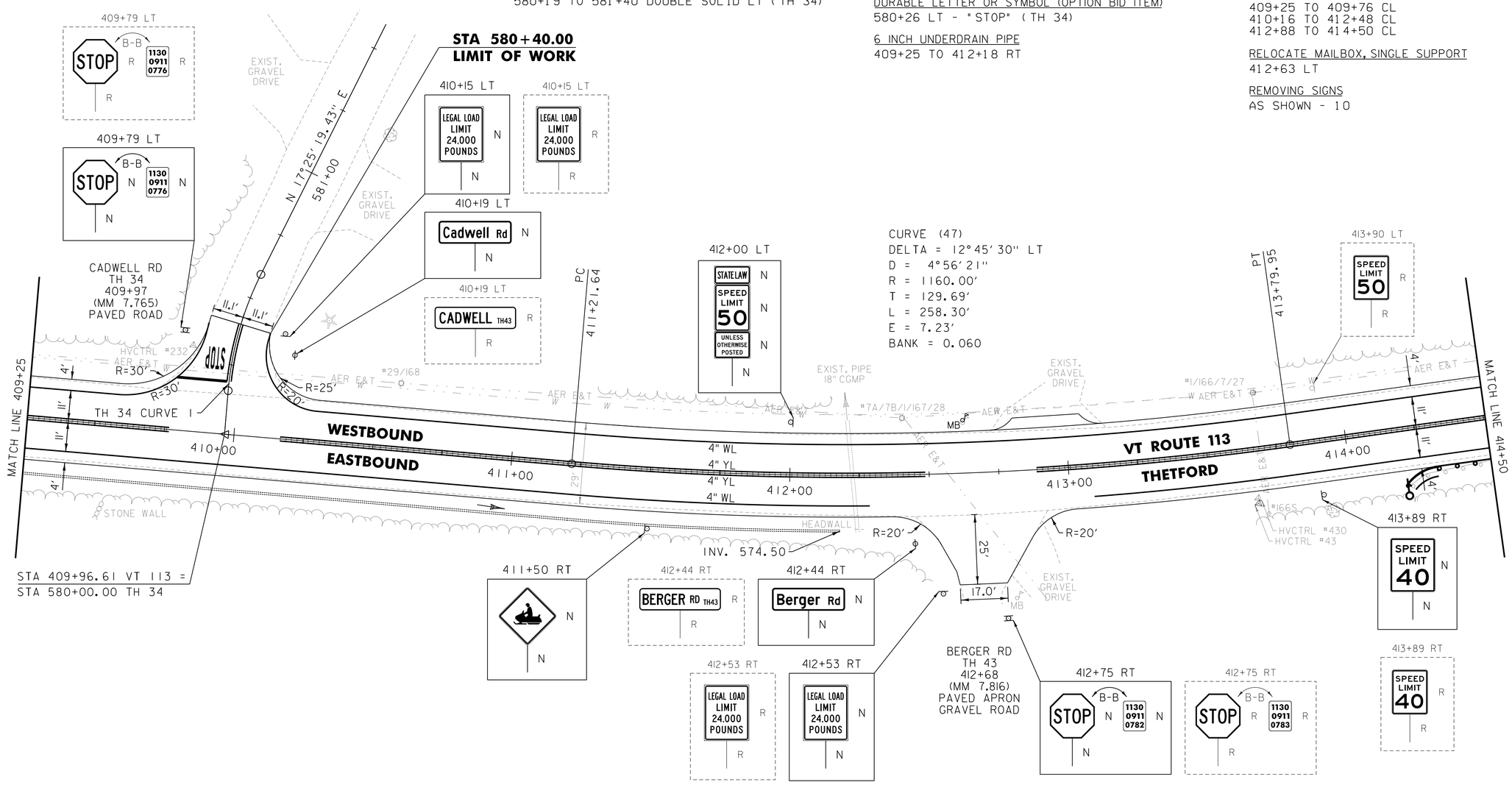
REMOVAL AND DISPOSAL OF GUARDRAIL
414+20 TO 414+50 RT

DELINEATOR WITH STEEL POST
414+20 RT

MILLED RUMBLE STRIPS
409+25 TO 409+76 CL
410+16 TO 412+48 CL
412+88 TO 414+50 CL

RELOCATE MAILBOX, SINGLE SUPPORT
412+63 LT

REMOVING SIGNS
AS SHOWN - 10



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 64	SHEET 120 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
414+50 TO 420+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
414+50 TO 420+50 SOLID LT & RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
415+00 TO 415+50 RT
415+75 TO 416+25 LT

STEEL BEAM GUARDRAIL, GALVANIZED
414+50 TO 416+20 RT
415+59 TO 415+71.5 LT
416+59 TO 416+71.5 LT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
415+71.5 TO 416+59 LT

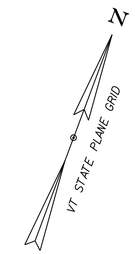
ANCHOR FOR STEEL BEAM RAIL
3 (SEE STANDARD G-1d)

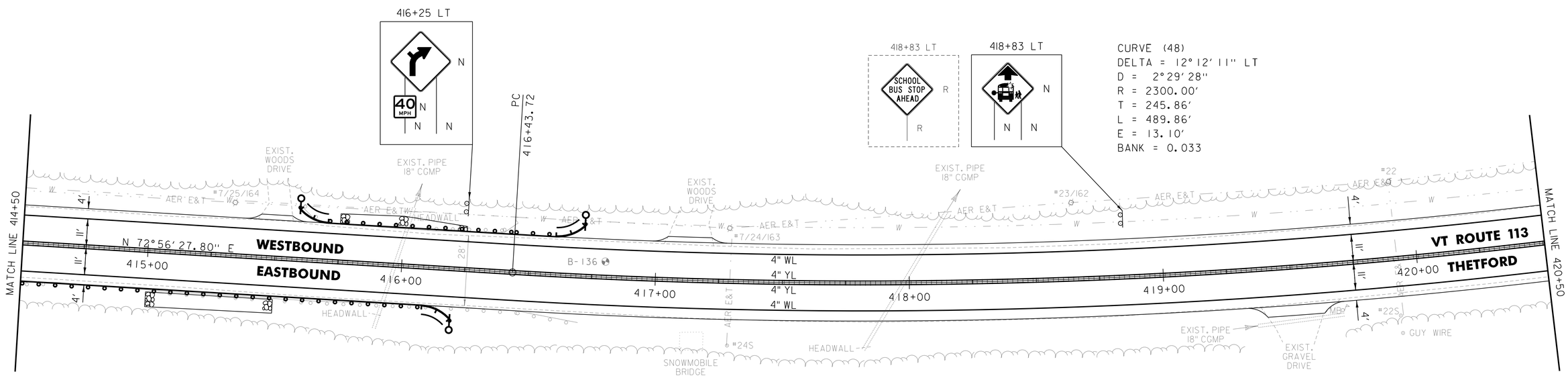
REMOVAL AND DISPOSAL OF GUARDRAIL
414+50 TO 416+70 RT
415+60 TO 416+45 LT

DELINEATOR WITH STEEL POST
415+59 LT
416+20 RT
416+71.5 LT

MILLED RUMBLE STRIPS
414+50 TO 420+50 CL

REMOVING SIGNS
AS SHOWN - 1





CURVE (48)
DELTA = 12°12'11" LT
D = 2°29'28"
R = 2300.00'
T = 245.86'
L = 489.86'
E = 13.10'
BANK = 0.033

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 65	SHEET 121 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
420+50 TO 426+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
420+50 TO 426+50 SOLID LT & RT

STEEL BEAM GUARDRAIL, GALVANIZED
421+00 TO 426+50 LT

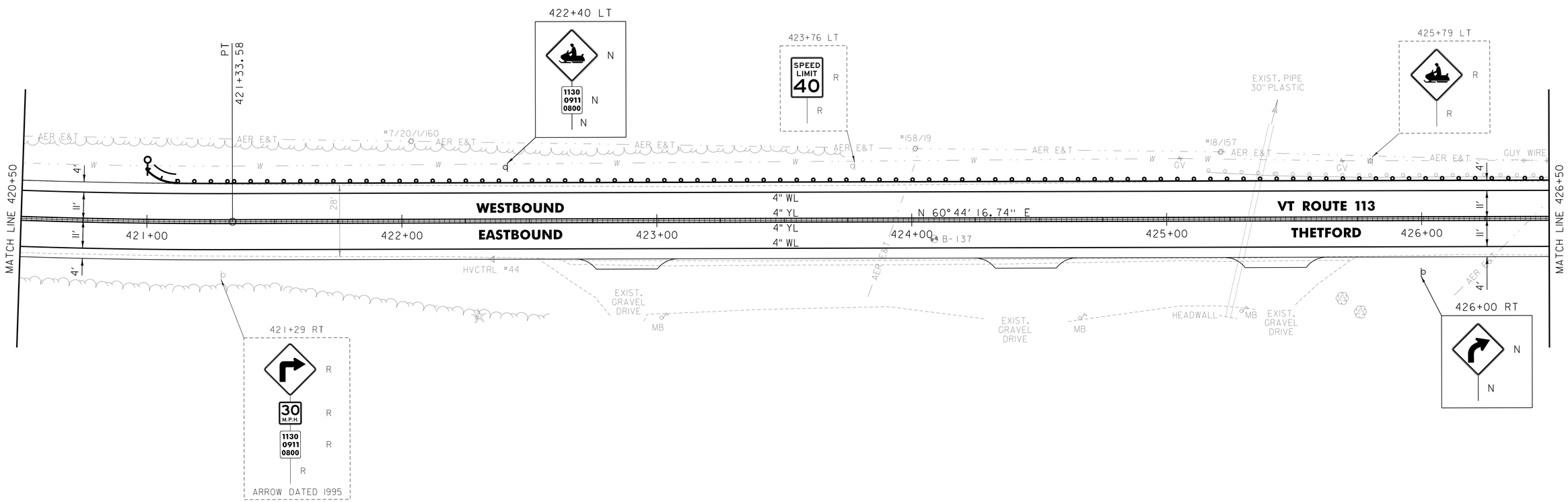
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
425+16 TO 426+50 LT

DELINEATOR WITH STEEL POST
421+00 LT

MILLED RUMBLE STRIPS
420+50 TO 426+50 CL

REMOVING SIGNS
AS SHOWN - 5



0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 66	SHEET 122 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
426+50 TO 432+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
426+50 TO 432+50 SOLID LT & RT

6 INCH UNDERDRAIN PIPE
426+50 TO 432+50 RT

GRUBBING MATERIAL (6")
STONE FILL, TYPE I
427+00 TO 427+50 LT
430+00 TO 431+00 LT

STEEL BEAM GUARDRAIL, GALVANIZED
431+60 TO 431+72.5 LT
431+12.5 TO 431+25 LT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
426+50 TO 431+12.5 LT
431+72.5 TO 432+50 LT

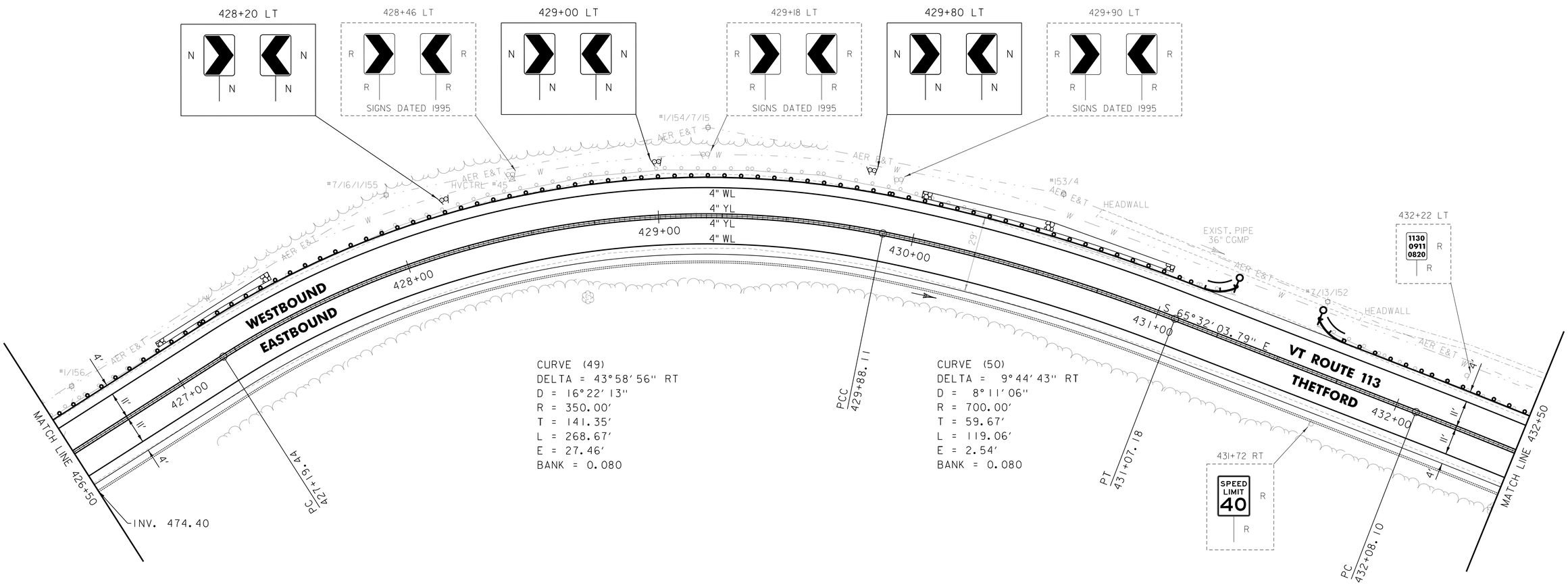
ANCHOR FOR STEEL BEAM RAIL
2 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
426+50 TO 431+26 LT
431+60 TO 432+50 LT

DELINEATOR WITH STEEL POST
431+25 LT
431+60 LT

MILLED RUMBLE STRIPS
426+50 TO 432+50 CL

REMOVING SIGNS
AS SHOWN - 8



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 67	SHEET 123 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
432+50 TO 438+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE, POLYUREA
432+50 TO 438+50 SOLID LT & RT

TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
437+99 RT - "STOP"
438+31 RT - "AHEAD"

6 INCH UNDERDRAIN PIPE
432+50 TO 432+68 RT

STEEL BEAM GUARDRAIL, GALVANIZED
432+97.5 TO 433+10 LT

STEEL BEAM GUARDRAIL,
GALVANIZED W/8 FEET POSTS
432+50 TO 432+97.5 LT

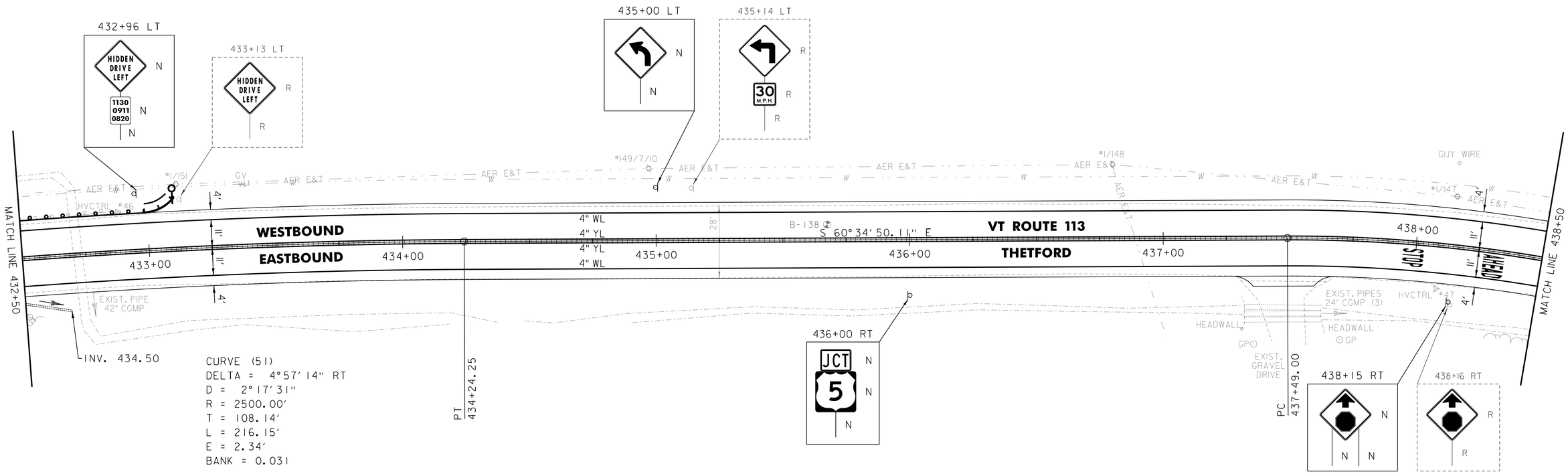
ANCHOR FOR STEEL BEAM RAIL
1 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
432+50 TO 432+87 LT

DELINEATOR WITH STEEL POST
433+10 LT

MILLED RUMBLE STRIPS
432+50 TO 438+50 CL

REMOVING SIGNS
AS SHOWN - 4



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 68	SHEET 124 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
438+50 TO 443+50 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
438+50 TO 443+50 SOLID LT & RT

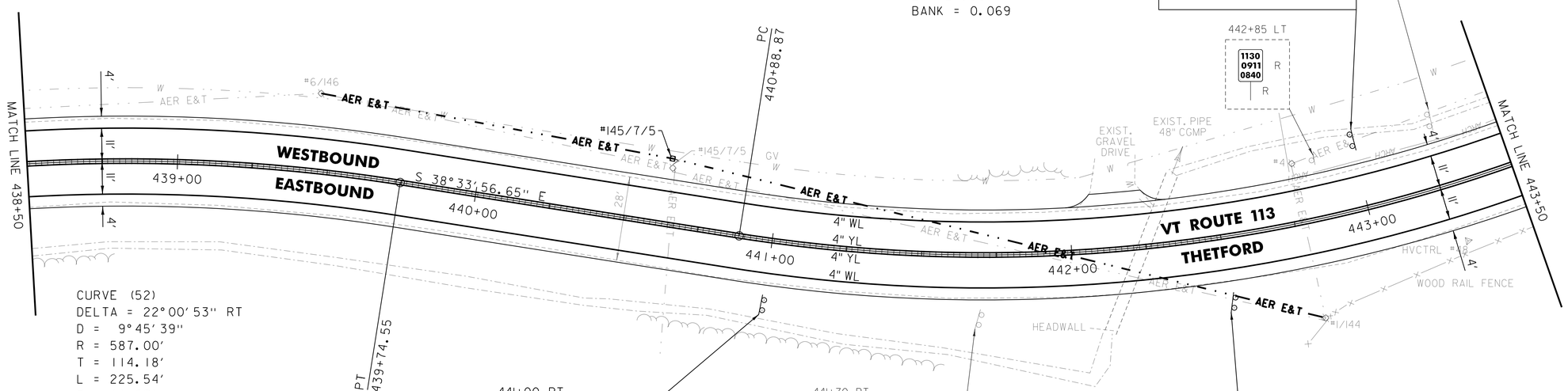
DURABLE 4 INCH YELLOW LINE, POLYUREA
438+50 TO 442+50 SOLID LT & RT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
442+50 TO 443+50 SOLID LT & RT

MILLED RUMBLE STRIPS
438+50 TO 442+50 CL

REMOVING SIGNS
AS SHOWN - 9

ERECTING SALVAGED SIGNS
AS SHOWN - 1



CURVE (52)
DELTA = 22°00'53" RT
D = 9°45'39"
R = 587.00'
T = 114.18'
L = 225.54'
E = 11.00'
BANK = 0.066

CURVE (53)
DELTA = 32°16'18" LT
D = 10°54'49"
R = 525.00'
T = 151.89'
L = 295.70'
E = 21.53'
BANK = 0.069

443+28 LT

THETFORD HILL 2	R
CHELSEA 23	R

R R

443+00 LT

Thetford Hill 2	N
West Fairlee 10	N
Chelsea 23	N

N N

442+85 LT

1130
0911
0840

R
R

441+00 RT

NOTICE
VT-113 E. THETFORD
BRIDGE TO NH
15 TON LIMIT

S

N N

441+70 RT

NOTICE
VT-113 E. THETFORD
BRIDGE TO NH
15 TON LIMIT

R&S

R R

442+51 RT
N(4)

← Fairlee 8	
Lyme NH →	
Norwich 10 →	
White River Jct 15 →	

RET RET

442+51 RT
R(5)

← NORTH THETFORD 2	
← FAIRLEE 8	
LYME NH →	
NORWICH 10 →	
WHITE RIVER JCT 15 →	

RET RET

NOTE
ALL UTILITY POLE AND AERIAL LINE
WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 69	SHEET 125 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
443+50 TO 447+83 SOLID LT
443+50 TO 447+97 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
443+50 TO 447+87 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)
447+87 TO 447+92 RT

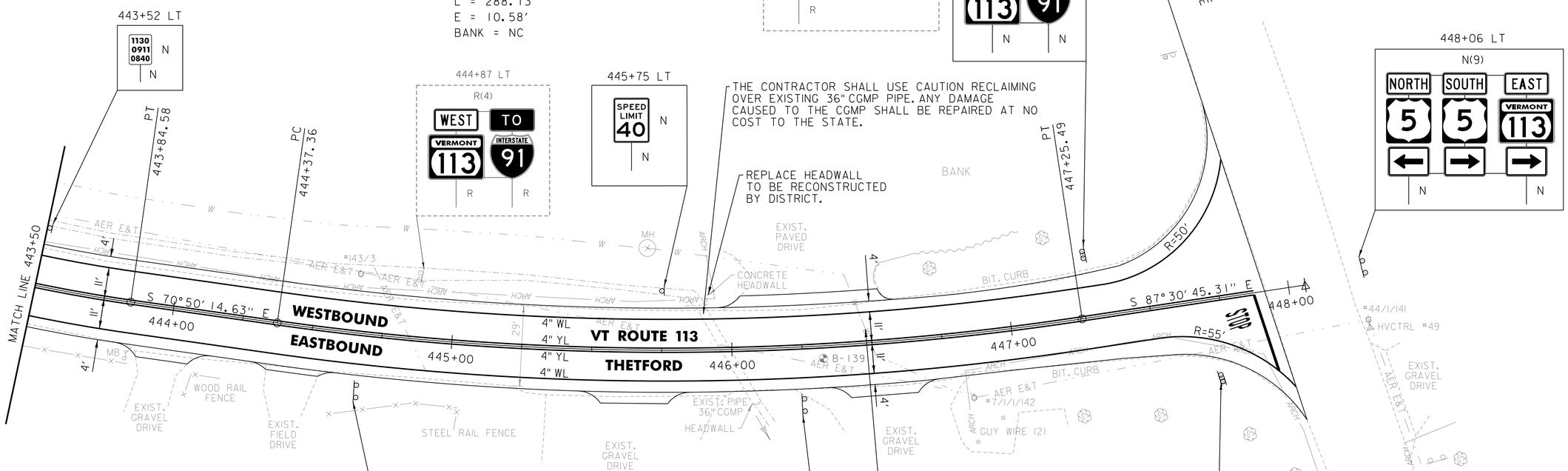
TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
447+81 RT - "STOP"

REMOVING SIGNS
AS SHOWN - 18

ERECTING SALVAGED SIGNS
AS SHOWN - 1

STOP PROJECT STP 2221(1)
STA 447+91.50 (MM 8.483)
STOP RECLAIM

CURVE (54)
DELTA = 16°40′31″ LT
D = 5°47′15″
R = 990.00′
T = 145.09′
L = 288.13′
E = 10.58′
BANK = NC



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 70	SHEET 126 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
448+18 TO 452+75 SOLID LT
448+23 TO 452+75 SOLID RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
448+25 TO 452+75 SOLID LT & RT

TEMPORARY 24 INCH STOP BAR, PAINT
DURABLE 24 INCH STOP BAR (OPTION BID ITEM)
448+22 TO 448+25 LT

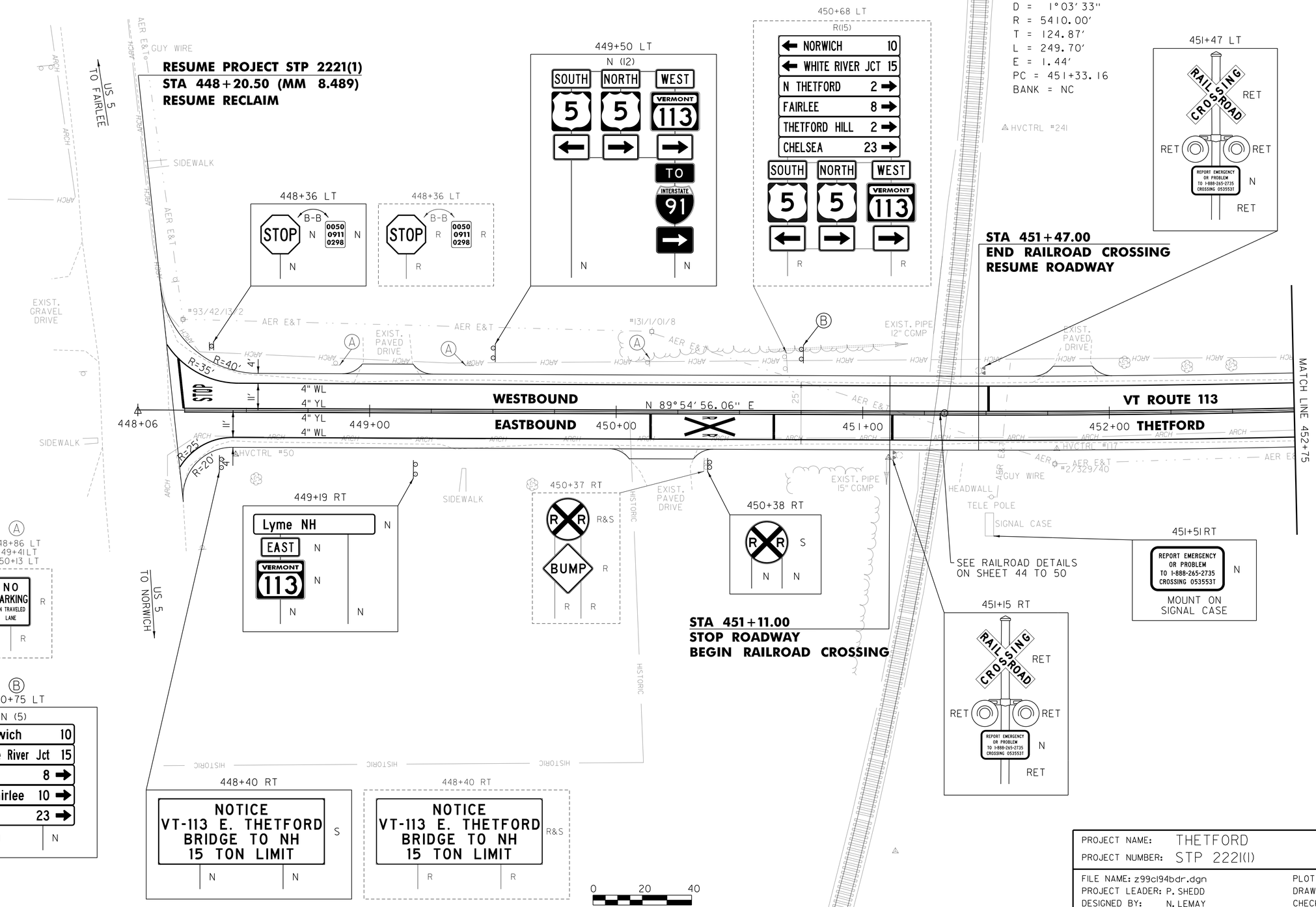
TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
448+32 LT - "STOP"

TEMPORARY RAILROAD CROSSING SYMBOL, PAINT
DURABLE RAILROAD CROSSING SYMBOL (OPTION BID ITEM)
450+38 RT

REMOVING SIGNS
AS SHOWN - 23

ERECTING SALVAGED SIGNS
AS SHOWN - 2

CURVE (55)
DELTA = 2°38'40" LT
D = 1°03'33"
R = 5410.00'
T = 124.87'
L = 249.70'
E = 1.44'
PC = 451+33.16
BANK = NC



PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 71	SHEET 127 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
452+75 TO 457+75 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
452+75 TO 457+75 SOLID LT & RT

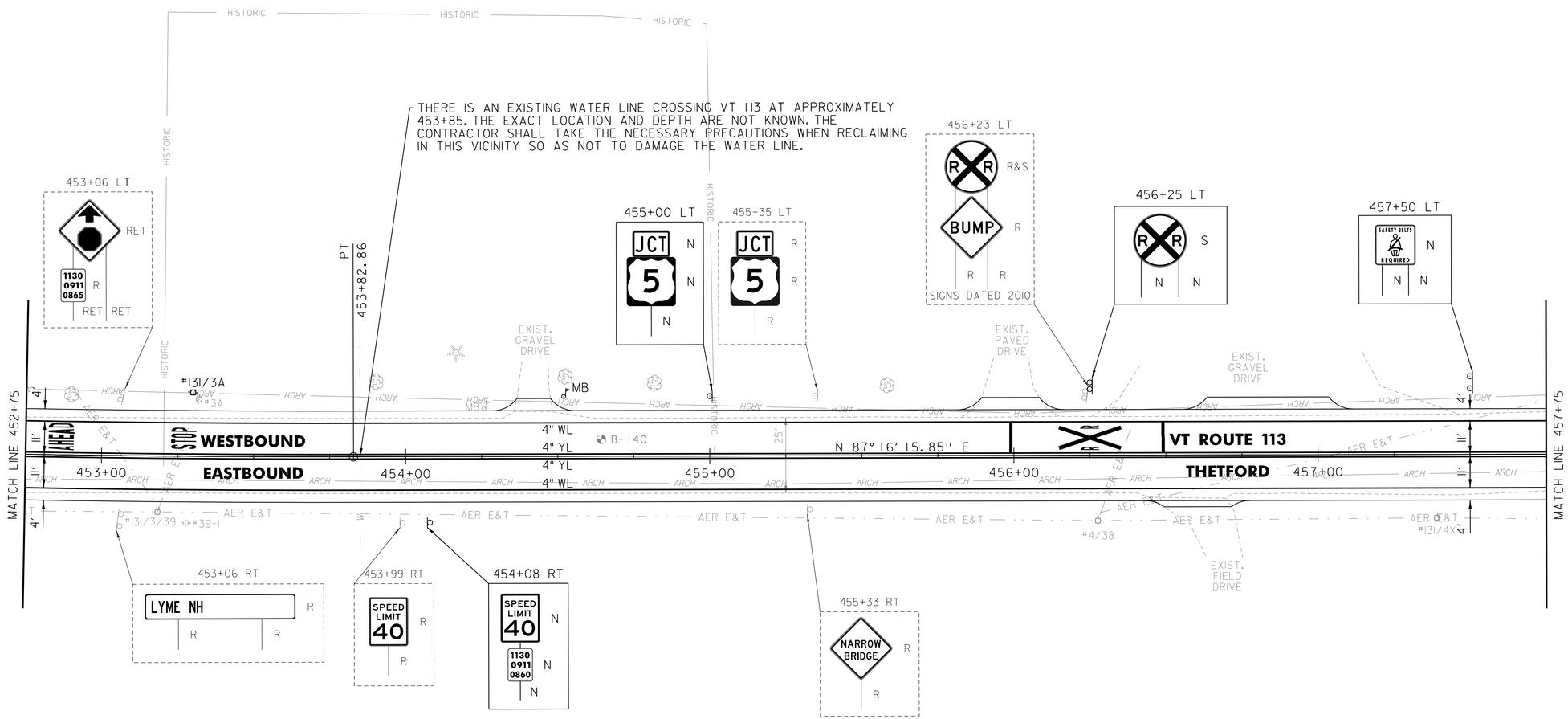
TEMPORARY LETTER OR SYMBOL, PAINT
DURABLE LETTER OR SYMBOL (OPTION BID ITEM)
452+86 LT - "AHEAD"
453+26 LT - "STOP"

TEMPORARY RAILROAD CROSSING SYMBOL, PAINT
DURABLE RAILROAD CROSSING SYMBOL (OPTION BID ITEM)
456+25 LT

RELOCATE MAILBOX, SINGLE SUPPORT
454+52 LT

REMOVING SIGNS
AS SHOWN - 8

ERECTING SALVAGED SIGNS
AS SHOWN - 1



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

0 20 40
SCALE IN FEET

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 72	SHEET 128 OF 303

CLD 12-0337

TEMPORARY 4 INCH WHITE LINE, PAINT
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)
457+75 TO 461+49 SOLID LT & RT

TEMPORARY 4 INCH YELLOW LINE, PAINT
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)
457+75 TO 461+49 SOLID LT & RT

STEEL BEAM GUARDRAIL, GALVANIZED
459+85.5 TO 461+23 RT
460+97.5 TO 461+22.5 LT

GUARDRAIL APPROACH
SECTION, GALV HD STEEL BEAM
461+22.5 TO 461+47.5 LT
461+23 TO 461+48 RT

ANCHOR FOR STEEL BEAM RAIL
4 (SEE STANDARD G-1d)

REMOVAL AND DISPOSAL OF GUARDRAIL
459+86 TO 461+48 RT
460+98 TO 461+48 LT

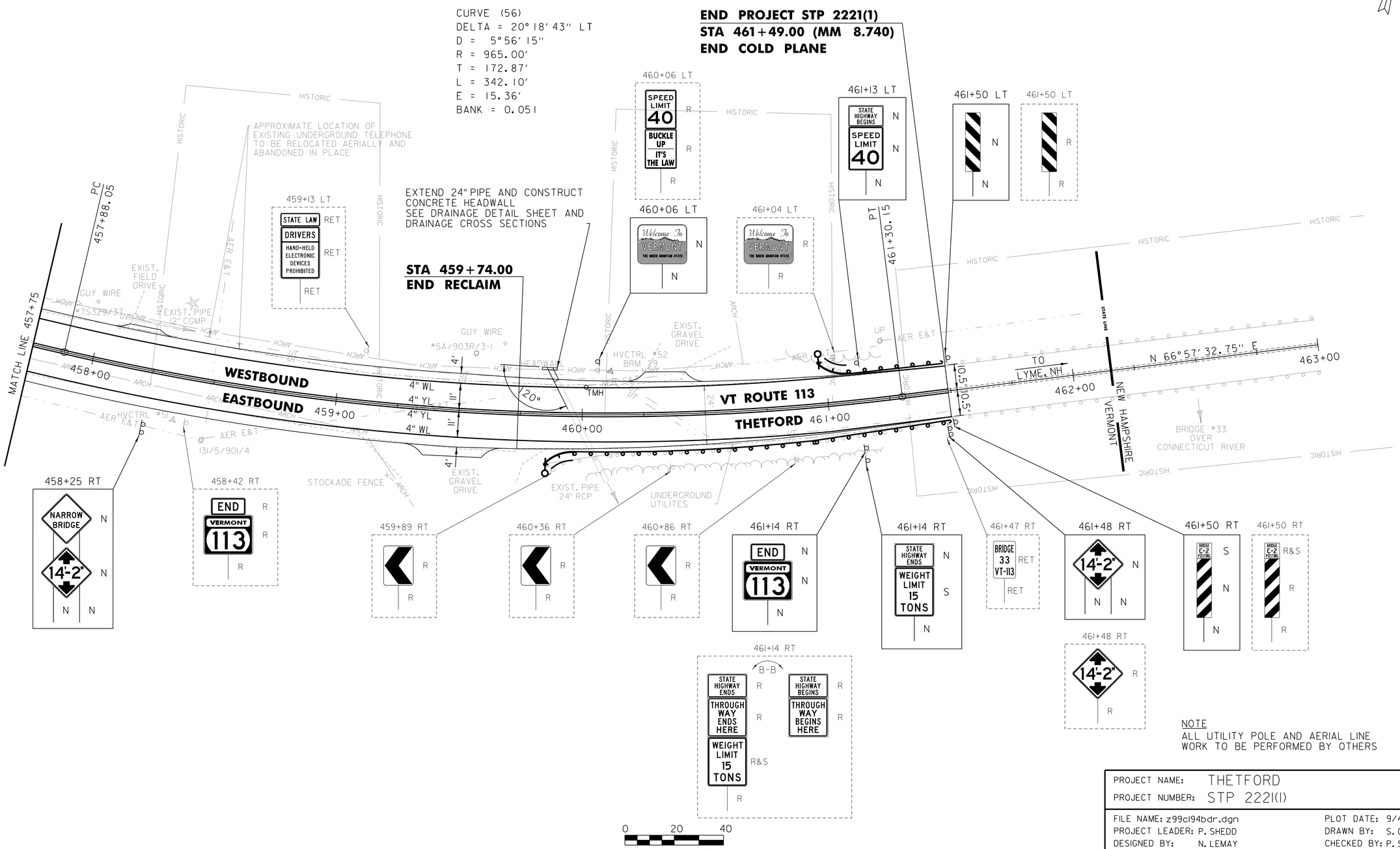
DELINEATOR WITH STEEL POST
459+85.5 RT
460+97.5 LT

24" RCP CLASS III
459+96 LT

CHANGING ELEVATION
OF DROP INLETS, CATCH BASINS, OR MANHOLES (NON-PART.)
460+02 LT (TMH)

REMOVING SIGNS
AS SHOWN - 17

ERECTING SALVAGED SIGNS
AS SHOWN - 2



NOTE
ALL UTILITY POLE AND AERIAL LINE WORK TO BE PERFORMED BY OTHERS

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194bdr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
PLAN SHEET 73	SHEET 129 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #1

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
THETFORD	1130 0911 XXXX	25	6	10	10.50						25	X			X															VD-700 SEE SHEET 154 FOR LOCATIONS			T-44
VT 244 0+26 RT	STOP						1				1		X		X																		
0+30 LT	STOP 1130 0911 0083	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	RI-1		T-44
VT 113 42+79 LT	HIDDEN DRIVE RIGHT						1				1		X		X																		
43+74 RT	EAST EAST						1 1				2		X		X														#2C				
	VERMONT 244 VERMONT 113						1 1																										
	← ↑						1 1																										
43+77 RT	EAST WEST	1 1	24 24	12 12	2.00 2.00						2		X		X														#2C	GREEN ON WHITE GREEN ON WHITE	M3-2 M3-4		
	VERMONT 113 VERMONT 113	1 1	30 30	24 24	5.00 5.00																									M1-5 M1-5			E-136B E-136B
	← →	1 1	21 21	15 15	2.19 2.19																									GREEN ON WHITE GREEN ON WHITE	M6-1 M6-1		
45+35 LT	WEST EAST	1 1	24 24	12 12	2.00 2.00						2		X		X														#2C	GREEN ON WHITE GREEN ON WHITE	M3-4 M3-2		
	VERMONT 113 VERMONT 244	1 1	30 30	24 24	5.00 5.00																									M1-5 M1-5			E-136B E-136B
	↑ →	1 1	21 21	15 15	2.19 2.19																									GREEN ON WHITE GREEN ON WHITE	M6-3 M6-1		
												FT 250	FT 135	FT		EA	LB	LB	LB		LB	LB	LB	LB									
SHEET TOTALS					SF 53.93	SF	EA. 8	SF				FT 385					LB			EA.	LB				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #1

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 130 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #2

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	NEW & SALVAGED SIGNS "B"	NEW & SALVAGED SIGNS SALV SIGN	NEW & SALVAGED SIGNS SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	SQUARE STEEL (in) 2.0 lb/ft 2.42	SQUARE STEEL (in) 2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	TUBULAR ALUMINUM Ø (in) 4.0 lb/ft 1.7	TUBULAR ALUMINUM Ø (in) 4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	TUBULAR STEEL Ø (in) 3.0 lb/ft 7.6	TUBULAR STEEL Ø (in) 3.5 lb/ft 9.0	TUBULAR STEEL Ø (in) 4.0 lb/ft 10.8	TUBULAR STEEL Ø (in) 5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	W-SHAPE STEEL WEIGHT	W-SHAPE STEEL POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
46+25 RT	Thetford Ctr 4 East Thetford 8	1 1	72 72	12 12	6.00 6.00						2		X		X															VD2-1 VD2-1		155 155	
	EAST	1	24	12	2.00																									GREEN ON WHITE	M3-2		
	VERMONT 113	1	30	24	5.00																									MI-5			E-136B
47+85 RT	SPEED LIMIT 35	1	24	30	5.00						1		X		X																R2-1		
48+00 LT	West Fairlee 2 Chelsea 15	1 1	72 72	12 12	6.00 6.00						2			X																VDI-1A VDI-1A		155 155	
	Lake Fairlee → Ely 6 →	1 1	72 72	12 12	6.00 6.00																									VDI-1 VDI-1A		155 155	
50+00 LT	JCT	1	21	15	2.19						1		X		X															GREEN ON WHITE	M2-1		
	VERMONT 244	1	30	24	5.00																									MI-5			E-136B
55+75 RT		1	36	36	9.00						2		X		X															WI-1MdL		158	
	20 MPH	1	18	18	2.25																										WI3-1P		
58+35 RT		1	48	24	8.00						2		X		X																WI-6		
59+24 RT		1	48	24	8.00						2		X		X																WI-6		
59+43 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
59+86 RT	STOP 1130 0911 0113	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	RI-1		T-44
												FT	FT 180	FT 30		EA	LB	LB	LB		LB	LB	LB	LB									
					SHEET TOTALS	SF 94.11	SF	EA.	SF			FT 210					LB			EA.	LB				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #2

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 131 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #3

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
												SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL							
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED		SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												lb/ft					lb/ft				lb/ft											
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
62+10 LT		1	36	36	9.00						2		X		X														WI-1MdR		I58	
	20 MPH	1	18	18	2.25																									WI3-1P		
63+36 RT	SPEED LIMIT 40	1	24	30	5.00						1		X		X															R2-1		
	1130 0911 0120	1	6	10	0.42																								VD-700			T-44
63+53 LT	SPEED LIMIT 35	1	30	36	7.50						1		X		X															R2-1		
64+75 RT		1	30	30	6.25						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-1R		
	30 MPH	1	18	18	2.25																								ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI3-1P		
65+40 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
65+40 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
66+25 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
66+25 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
67+00 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
67+00 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
67+80 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
												FT	FT 180	FT		EA	LB	LB	LB		LB	LB	LB	LB								
					SHEET TOTALS	SF 67.67	SF	EA.	SF			FT 180					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

CLD 12-0337

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #3

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 132 OF 303

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #4

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
											NO. OF POSTS	SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL							
												1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		lb/ft					lb/ft				lb/ft				24"	30"						
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
67+80 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
69+50 LT		1	30	30	6.25						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-1L		
		1	18	18	2.25																								ASTM TYPE IX FLUORESCENT YELLOW SHEETING	W13-1P		
79+80 LT		1	30	18	3.75						1		X		X														VD-018		158	
82+20 LT		1	30	36	7.50						1		X		X															R2-1		
82+20 RT		1	24	30	5.00						1		X		X															R2-1		
87+00 LT		1	36	36	9.00						2		X		X															W3-5		
92+55 RT		1	30	30	6.25						1		X		X															W11-3		
		1	24	18	3.00																									W7-3aP		
134+50 LT		1	30	30	6.25						1		X		X														VW-133			E-154
												FT	FT 135	FT		EA	LB	LB	LB		LB	LB	LB	LB								
												FT 135					LB			EA.	LB				EA.	EA.	LB					
		SHEET TOTALS			SF 54.25	SF	EA.	SF																								

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #4

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 133 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #5

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 (1.88 lb/ft)	2.0 (2.42 lb/ft)	2.5 (3.35 lb/ft)	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 (1.3 lb/ft)	4.0 (1.7 lb/ft)	4.0 MOD (1.7 lb/ft)	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 (7.6 lb/ft)	3.5 (9.0 lb/ft)	4.0 (10.8 lb/ft)	5.0 (14.6 lb/ft)	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
188+00 LT	WEST	1	24	12	2.00						1		X		X															GREEN ON WHITE	M3-4		
	VERMONT 113	1	30	24	5.00																									MI-5			E-136B
189+10 LT							1				2		X		X																		
189+25 RT	1130 0911 0358	1	6	10	0.42				1																					VD-700 BACK TO BACK ON RETAINED POST AND STOP SIGN			T-44
190+50 RT	EAST	1	24	12	2.00						1		X		X															GREEN ON WHITE	M3-2		
	VERMONT 113	1	30	24	5.00																									MI-5			E-136B
210+03 LT	STOP 1130 0911 0398	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	RI-1		T-44
210+45 LT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
224+35 RT	SPEED LIMIT 40	1	36	36	9.00						2		X		X																W3-5		
226+84 RT	Thetford Center Thetford Hill 1	1	30	18	3.75						1		X		X															VD-018		158	
230+78 LT	SPEED LIMIT 50	1	24	30	5.00						1		X		X																R2-1		
230+78 RT	SPEED LIMIT 40	1	30	36	7.50						1		X		X																R2-1		
235+36 LT							1				1		X		X																W11-3		
	NEXT 3 MILES						1																								W7-3aP		
												FT	FT 180	FT		EA	LB	LB	LB		LB	LB	LB	LB									
SHEET TOTALS			SF 51.34	SF	EA. 3	SF						FT 180					LB			EA.	LB				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #5

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 134 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #6

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																	REMARKS	SIGN DETAIL		
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)				W-SHAPE STEEL				SIGN FRAME REQUIRED		SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE					
												lb/ft					lb/ft				lb/ft											
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
237+25 RT	WATCH FOR TURNING VEHICLES	1	36	36	9.00						2		X		X														VW-205			E-154
241+65 LT	Trussell Rd	1	42	12	3.50						1		X		X														D3-1		157	
	STOP 1130 0911 0459	1 1	30 6	30 10	6.25 0.42																								VD-700 BACK TO BACK	R1-1		T-44
241+70 LT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X														VR-017			E-141
245+46 LT	SPEED LIMIT 40	1	24	30	5.00						1		X		X															R2-1		
245+46 RT	SPEED LIMIT 35	1	30	36	7.50						1		X		X															R2-1		
247+50 RT		1	30	30	6.25						1		X		X														W11-6H FOLDING/HINGED SEE STANDARD E-153 FOR HINGE DETAIL			E-153
249+50 LT	WEST	1	24	12	2.00						1		X		X														GREEN ON WHITE	M3-4		
	VERMONT 113	1	30	24	5.00																								M1-5			E-136B
249+50 RT	TO	1	24	12	2.00						1		X		X														BLACK ON WHITE	M4-5		
	132	1	30	24	5.00																											E-136C
		1	21	15	2.19																								BLACK ON WHITE	M6-1		
250+76 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X														VR-017			E-141
251+27 RT	STOP 1130 0911 0476	1 1	30 6	30 10	6.25 0.42						1		X		X														VD-700 BACK TO BACK	R1-1		T-44
												FT	FT 165	FT		EA	LB	LB	LB		LB	LB	LB	LB								
												FT 165					LB			EA.	LB				EA.	EA.	LB					
		SHEET TOTALS			SF 70.78	SF	EA.	SF																								

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

CLD 12-0337

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #6

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 135 OF 303

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #7

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 (1.88 lb/ft)	2.0 (2.42 lb/ft)	2.5 (3.35 lb/ft)	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 (1.3 lb/ft)	4.0 (1.7 lb/ft)	4.0 MOD (1.7 lb/ft)	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 (7.6 lb/ft)	3.5 (9.0 lb/ft)	4.0 (10.8 lb/ft)	5.0 (14.6 lb/ft)	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
251+29 RT	Tucker Hill Rd	1	57	12	4.75						2		X		X															D3-1		157	
252+50 RT	EAST	1	24	12	2.00						1		X		X															GREEN ON WHITE	M3-2		
	VERMONT 113	1	30	24	5.00																									M1-5			E-136B
253+44 LT	TO	1	24	12	2.00						1		X		X															BLACK ON WHITE	M4-5		
	132	1	30	24	5.00																												E-136C
	←	1	21	15	2.19																									BLACK ON WHITE	M6-1		
	1130 0911 0480	1	6	10	0.42																									VD-700			T-44
254+50 RT	SPEED LIMIT 35	1	24	30	5.00						1		X		X																R2-1		
266+79 LT	SPEED LIMIT 35	1	24	30	5.00						1		X		X																R2-1		
268+06 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
268+30 RT	STOP	1	30	30	6.25						1		X		X																R1-1		
268+31 RT	Buzzell Bridge Rd	1	69	12	5.75						2		X		X															D3-1		157	
269+24 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
269+25 RT	Buzzell Bridge Rd	1	69	12	5.75						2		X		X															D3-1		157	
												FT	FT 195	FT		EA	LB	LB	LB		LB	LB	LB	LB									
					SHEET TOTALS							FT 195					LB			EA.	LB				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

SHEET TOTALS: SF 59.11 | SF | EA. | SF

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #7

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 136 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #8

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	NEW & SALVAGED SIGNS "B"	NEW & SALVAGED SIGNS SALV SIGN	NEW & SALVAGED SIGNS SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	SQUARE STEEL (in) 2.0 lb/ft 2.42	SQUARE STEEL (in) 2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	TUBULAR ALUMINUM Ø (in) 4.0 lb/ft 1.7	TUBULAR ALUMINUM Ø (in) 4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	TUBULAR STEEL Ø (in) 3.0 lb/ft 7.6	TUBULAR STEEL Ø (in) 3.5 lb/ft 9.0	TUBULAR STEEL Ø (in) 4.0 lb/ft 10.8	TUBULAR STEEL Ø (in) 5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	W-SHAPE STEEL WEIGHT	W-SHAPE STEEL POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
269+54 RT	STOP 1130 0911 0511	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	R1-1		T-44
271+73 RT	SPEED LIMIT 40	1	24	30	5.00						1		X		X																R2-1		
272+42 RT		1	48	24	8.00						2		X		X																W1-6		
272+62 LT	SPEED LIMIT 35	1	30	36	7.50						1		X		X																R2-1		
275+00 LT	WATCH FOR TURNING VEHICLES	1	36	36	9.00						2		X		X															VW-205			E-154
275+57 RT		1	48	24	8.00						2		X		X																W1-6		
277+00 LT	HIDDEN DRIVES RIGHT	1	30	30	6.25						1		X		X															VW-054			E-154
278+90 RT		1	30	30	6.25						1		X		X																W1-4R		
281+00 LT	Thetford Center Post Mills 4	1	30	18	3.75						1		X		X															VD-018		158	
289+00 LT	TIC						1			2																							
291+00 LT		1	30	30	6.25						1		X		X																W1-4R		
292+50 LT	SPEED LIMIT 40	1	24	30	5.00						1		X		X																R2-1		
293+18 LT	STOP	1	30	30	6.25						1		X		X																R1-1		
293+50 LT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
293+75 LT	Camp Farnsworth Rd	1	72	12	6.00						2		X		X															D3-1		157	
												FT	FT 270	FT		EA	LB	LB	LB		LB	LB	LB	LB								
	SHEET TOTALS				SF 88.92	SF	EA. 1	SF				FT 270					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #8

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 137 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #9

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
293+94 LT	STOP 1130 0911 0557	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	RI-1		T-44
294+40 LT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
299+20 LT	STOP 1130 0911 0567	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	RI-1		T-44
299+70 LT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
304+95 RT	SPEED LIMIT 30	1	36	36	9.00						2		X		X																W3-5		
308+92 RT							1				1		X		X																		
310+66 LT	8%						1				1		X		X																		
	NEXT 1 MILE						1																										
312+25 LT	SPEED LIMIT 40	1	24	30	5.00						1		X		X																R2-1		
312+25 RT	SPEED LIMIT 30						1				1			X	X																		
	SPEED RADAR PLAQUE																													TO BE INSTALLED BY TOWN			
313+27 RT		1	36	36	6.75						2			X																SP (SOIL BEARING SLIP BASE)(2 1/2") MOUNT WITH NEW SOLAR-POWERED BEACON FLUORESCENT YELLOW GREEN	SI-1		
	SCHOOL	1	36	12	3.00																									FLUORESCENT YELLOW GREEN	S4-3P		
												FT	FT 135	FT 45		EA	LB	LB	LB		LB	LB	LB	LB									
SHEET TOTALS					SF 47.09	SF	EA. 4	SF				FT 180					LB			EA.	LB				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #9

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 138 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #10

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
											NO. OF POSTS	SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL							
												1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED			
												lb/ft					lb/ft				lb/ft				24"	30"						
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6							SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
319+00 LT	SPEED LIMIT 30						1				1		X		X																	
	NO PARKING ON TRAVELED LANE						1																									
319+00 RT	SPEED LIMIT 30						1				1		X		X																	
	NO PARKING ON TRAVELED LANE						1																									
321+08 LT		1	30	30	4.69						1		X		X														FLUORESCENT YELLOW GREEN	SI-1		
		1	24	12	2.00																								FLUORESCENT YELLOW GREEN	W16-7P		
321+08 RT		1	30	30	4.69						1		X		X														FLUORESCENT YELLOW GREEN	SI-1		
		1	24	12	2.00																								FLUORESCENT YELLOW GREEN	W16-7P		
323+50 LT							1				1		X		X																	
326+11 RT	Thetford Academy						1				2		X		X																	
326+70 LT	SPEED LIMIT 30						1				1		X		X																	
327+63 RT	Library Rd	1	42	12	3.50						1		X		X														D3-1		157	
	ONE WAY / ONE WAY	1 1	36 36	12 12	3.00 3.00																								BACK TO BACK	R6-1L R6-1R		
	1130 0911 0621	1	6	10	0.42																								VD-700			T-44
SHEET TOTALS		SF 23.30	SF	EA. 7	SF							FT 135			EA		LB				LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #10

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 139 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #11

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
327+74 RT	LEGAL LOAD LIMIT 24,000 POUNDS						1				1		X		X															EXISTING POST DAMAGED			
328+15 LT		1	30	30																										FLUORESCENT YELLOW GREEN INSTALL RECTANGULAR RAPID FLASHING BEACON BETWEEN S1-1 & W16-7P. SIGNS AND POST ARE PAID UNDER 900.620 SP(RRFB)	S1-1		
		1	24	12																										FLUORESCENT YELLOW GREEN	W16-7P		
328+20 RT		1	30	30																										FLUORESCENT YELLOW GREEN INSTALL RECTANGULAR RAPID FLASHING BEACON BETWEEN S1-1 & W16-7P. SIGNS AND POST ARE PAID UNDER 900.620 SP(RRFB)	S1-1		
		1	24	12																										FLUORESCENT YELLOW GREEN	W16-7P		
329+20 RT	Academy Rd	1	54	12	4.50						2		X		X															D3-1		157	
329+89 RT	STOP 1130 0911 0624	1	6	10	0.42		1				1		X		X															BACK TO BACK VD-700 EXISTING POST DAMAGED			T-44
330+15 LT	Houghton Hill Rd	1	66	12	5.50						2		X		X															D3-1		157	
330+68 LT	← Thetford Academy						1				2		X		X																		
330+75 RT	10%						1				1		X		X																		
	NEXT ½ MILE						1																										
331+92 LT		1	36	36	6.75						2			X																SP (SOIL BEARING SLIP BASE)(2 1/2") MOUNT WITH NEW SOLAR-POWERED BEACON FLUORESCENT YELLOW GREEN	S1-1		
	SCHOOL	1	36	12	3.00																									FLUORESCENT YELLOW GREEN	S4-3P		
344+00 LT	SPEED LIMIT 30	1	24	30	5.00						1			X	X																R2-1		
	SPEED RADAR PLAQUE																													TO BE INSTALLED BY TOWN			
												FT	FT 135	FT 45		EA	LB	LB	LB		LB	LB	LB	LB									
					SHEET TOTALS	SF 25.17	SF	EA. 5	SF			FT 180					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #11

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 140 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #12

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
											NO. OF POSTS	SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL							
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED		SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												lb/ft					lb/ft				lb/ft												
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6									
336+15 LT							1				1		X		X																	
337+85 LT	TIC						1			2																						
339+40 LT	SPEED LIMIT 30						1				1		X		X																	
339+50 RT	SPEED LIMIT 40						1				1		X		X																	
342+08 RT		1	30	30	6.25						1		X		X														W2-2M			E-155
	Garey Rd	1	21	8	1.17																								W16-8P		158	
343+65 LT	SPEED LIMIT 30	1	36	36	9.00						2		X		X															W3-5		
346+35 LT	Garey Rd	1	39	12	3.25						1		X		X														D3-1		157	
	STOP 1130 0911 0656	1	6	10	0.42		1																						VD-700 BACK TO BACK			T-44
352+25 RT	SPEED LIMIT 35	1	24	30	5.00				1																				MOUNT BELOW RETAINED LEGAL LOAD SIGN	R2-1		
352+71 RT	1130 0911 0668	1	6	10	0.42				1																				VD-700 BACK TO BACK ON RETAINED POST AND STOP SIGN			T-44
352+90 RT	Godfrey Rd	1	42	12	3.50						1		X		X														D3-1		157	
												FT	FT 120	FT		EA	LB	LB	LB		LB	LB	LB	LB								
SHEET TOTALS		SF 29.01	SF	EA. 5	SF							FT 120					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #12

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 141 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #13

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
											NO. OF POSTS	SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL							
												1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED			
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		lb/ft					lb/ft				lb/ft				24"	30"					SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6									
356+50 RT	JCT	1	21	15	2.19						1		X		X														WHITE ON BLUE	M2-1		
	INTERSTATE 91	1	24	24	4.00																									M1-1		
357+49 LT	SPEED LIMIT 40	1	36	36	9.00						2		X		X															W3-5		
358+50 RT	Norwich 9 → White River Jct 14 →	1 1	72 72	12 12	6.00 6.00						2		X		X														VD1-1A VD1-1A		155 155	
360+50 RT		1	36	36	9.00						2		X		X															W6-1		
362+50 RT	EAST NORTH SOUTH	1 1 1	24 24 24	12 12 12	2.00 2.00 2.00						2			X														#3B	SP (SOIL BEARING SLIP BASE)(2 1/2") GREEN ON WHITE WHITE ON BLUE WHITE ON BLUE	M3-2 M3-1 M3-3		
	VERMONT 113 INTERSTATE 91 INTERSTATE 91	1 1 1	30 24 24	24 24 24	5.00 4.00 4.00																									M1-5 M1-1 M1-1		E-136B
	↑ ↑ →	1 1 1	21 21 21	15 15 15	2.19 2.19 2.19																								GREEN ON WHITE WHITE ON BLUE WHITE ON BLUE	M6-3 M6-3 M6-1		
363+72 CL (MEDIAN)		1	24	30	5.00						1		X		X															R4-7		
		1 1	18 18	18 18	2.25 2.25																								BACK TO BACK	OM1-1 OM1-1		
364+00 LT	Thetford Hill 1	1	72	12	6.00						2		X		X														VD2-1		155	
	West Fairlee 8 Chelsea 21	1 1	72 72	12 12	6.00 6.00																								VD2-1 VD2-1		155 155	
364+40 RT	↑ ↱ ONLY	1	30	30	6.25						1		X		X														VR-92IR			E-145A
366+00 LT	WEST	1	24	12	2.00						1		X		X														GREEN ON WHITE	M3-4		
	VERMONT 113	1	30	24	5.00																								MI-5			E-136B
												FT	FT 180	FT 30		EA	LB	LB	LB		LB	LB	LB	LB								
				SHEET TOTALS	SF 102.51	SF	EA.	SF				FT 210					LB		EA.		LB				EA.	EA.	LB				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #13

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 142 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #14

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
366+55 RT	SOUTH	1	24	12	2.00						1		X		X															WHITE ON BLUE	M3-3		
	INTERSTATE 91	1	24	24	4.00																										M1-1		
	→	1	21	15	2.19																									WHITE ON BLUE	M6-1		
366+90 RT	EAST TO WEST	1 1 1	24 24 24	12 12 12	2.00 2.00 2.00				2																				#3C	GREEN ON WHITE BLACK ON WHITE GREEN ON WHITE	M3-2 M4-5 M3-4		
	VERMONT 113 / 5 / VERMONT 113	1 1 1	30 24 30	24 24 24	5.00 4.00 5.00																									M1-5 M1-5	M1-4		E-136B E-136B
	← ← →	1 1 1	21 21 21	15 15 15	2.19 2.19 2.19																									GREEN ON WHITE BLACK ON WHITE GREEN ON WHITE	M6-1 M6-1 M6-1		
366+99 LT	STOP / DO NOT ENTER	1 1	30 30	30 30	6.25 6.25						1		X		X															BACK TO BACK	R1-1 R5-1		
	ONE WAY / ONE WAY	1 1	36 36	12 12	3.00 3.00																									BACK TO BACK	R6-1R R6-1L		
367+01 RT	SOUTH	1	24	12	2.00						1		X		X															WHITE ON BLUE	M3-3		
	INTERSTATE 91	1	24	24	4.00																										M1-1		
	←	1	21	15	2.19																									WHITE ON BLUE	M6-1		
367+14 CL (MEDIAN)		1	24	30	5.00						1		X		X																R4-7		
		1 1	18 18	18 18	2.25 2.25																									BACK TO BACK	OM1-1 OM1-1		
367+54 LT	STOP / DO NOT ENTER	1 1	30 30	30 30	6.25 6.25						1		X		X															BACK TO BACK	R1-1 R5-1		
	ONE WAY / ONE WAY	1 1	36 36	12 12	3.00 3.00																									BACK TO BACK	R6-1R R6-1L		
												FT	FT 75	FT		EA	LB	LB	LB		LB	LB	LB	LB								
												FT 75					LB			EA.	LB				EA.	EA.	LB					
		SHEET TOTALS			SF 89.45	SF	EA.	SF																								

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #14

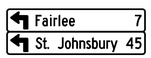
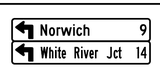
PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 143 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #15

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
											NO. OF POSTS	SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL							
												1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED			
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		lb/ft					lb/ft				lb/ft				24"	30"					SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6									
367+88 RT (MEDIAN)		1	24	30	5.00						1		X		X															R4-7		
		1 1	18 18	18 18	2.25 2.25																								BACK TO BACK	OMI-1 OMI-1		
368+50 LT		1	24	12	2.00						1		X		X														WHITE ON BLUE	M3-3		
		1	24	24	4.00																									M1-1		
		1	21	15	2.19																								WHITE ON BLUE	M6-1		
369+50 RT		1 1	72 72	12 12	6.00 6.00						2			X																VDI-1A VDI-1A		155 155	
		1	24	12	2.00																								WHITE ON BLUE	M3-1		
		1	24	24	4.00																									M1-1		
		1	21	15	2.19																								WHITE ON BLUE	M5-1		
372+50 LT		1	30	30	6.25						1		X		X														VR-92IL			E-145A
373+00 RT		1	30	30	6.25						1		X		X														VR-92IL			E-145A
374+75 LT		1 1	72 72	12 12	6.00 6.00						2			X																VDI-1A VDI-1A	SP (SOIL BEARING SLIP BASE)(2 1/2")		155 155	
		1	24	12	2.00																								WHITE ON BLUE	M3-3		
		1	24	24	4.00																									M1-1		
		1	21	15	2.19																								WHITE ON BLUE	M5-1		
												FT	FT 60	FT 60		EA	LB	LB	LB		LB	LB	LB	LB								
SHEET TOTALS					SF 70.57	SF	EA.	SF				FT 120					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #15

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 144 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #16

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
375+55 LT (MEDIAN)		1	24	30	5.00						1		X		X																R4-7		
		1 1	18 18	18 18	2.25 2.25																									BACK TO BACK	OMI-1 OMI-1		
375+56 RT		1	24	12	2.00						1		X		X															WHITE ON BLUE	M3-1		
		1	24	24	4.00																										M1-1		
		1	21	15	2.19																									WHITE ON BLUE	M6-1		
375+85 RT		1 1	30 30	30 30	6.25 6.25						1		X		X															BACK TO BACK	R1-1 R5-1		
		1 1	36 36	12 12	3.00 3.00																									BACK TO BACK	R6-1R R6-1L		
376+40 RT		1 1	30 30	30 30	6.25 6.25						1		X		X															BACK TO BACK	R1-1 R5-1		
		1 1	36 36	12 12	3.00 3.00																									BACK TO BACK	R6-1R R6-1L		
376+47 RT (MEDIAN)		1	24	30	5.00						1		X		X																R4-7		
		1 1	18 18	18 18	2.25 2.25																									BACK TO BACK	OMI-1 OMI-1		
376+48 LT		1	24	12	2.00						1		X		X															WHITE ON BLUE	M3-1		
		1	24	24	4.00																										M1-1		
		1	21	15	2.19																									WHITE ON BLUE	M6-1		
												FT	FT 90	FT		EA	LB	LB	LB		LB	LB	LB	LB								
		SHEET TOTALS			SF 72.38	SF	EA.	SF				FT 90					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #16

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 145 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #17

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
376+53 LT	WEST EAST TO	1 1 1	24 24 24	12 12 12	2.00 2.00 2.00				2																				#3C	GREEN ON WHITE GREEN ON WHITE BLACK ON WHITE	M3-4 M3-2 M4-5		
	VERMONT 113 VERMONT 113 5	1 1 1	30 30 24	24 24 24	5.00 5.00 4.00																									MI-5 MI-5 MI-4		E-136B E-136B	
	← → →	1 1 1	21 21 21	15 15 15	2.19 2.19 2.19																									GREEN ON WHITE GREEN ON WHITE BLACK ON WHITE	M6-1 M6-1 M6-1		
377+17 LT	WEST SOUTH NORTH	1 1 1	24 24 24	12 12 12	2.00 2.00 2.00				2																				#3B	GREEN ON WHITE WHITE ON BLUE WHITE ON BLUE	M3-4 M3-3 M3-1		
	VERMONT 113 INTERSTATE 91 INTERSTATE 91	1 1 1	30 24 24	24 24 24	5.00 4.00 4.00																									MI-5 MI-1 MI-1		E-136B	
	↑ ↑ →	1 1 1	21 21 21	15 15 15	2.19 2.19 2.19																									GREEN ON WHITE WHITE ON BLUE WHITE ON BLUE	M6-3 M6-3 M6-1		
377+62 RT	EAST TO	1 1	24 24	12 12	2.00 2.00				2																				#1B	GREEN ON WHITE BLACK ON WHITE	M3-2 M4-5		
	VERMONT 113 5	1 1	30 24	24 24	5.00 4.00																									MI-5 MI-4		E-136B	
378+88 LT	Fairlee 7 → St. Johnsbury 45 →	1 1	72 72	12 12	6.00 6.00						2		X		X															VDI-1A VDI-1A		156 156	
379+06 RT (MEDIAN)	↱	1	24	30	5.00						1		X		X																R4-7		
	◈ ◈	1 1	18 18	18 18	2.25 2.25																									BACK TO BACK	OMI-1 OMI-1		
379+30 RT	East Thetford 1 Lyme NH 2	1 1	72 72	12 12	6.00 6.00						2		X		X															VD2-1 VD2-1		156 156	
379+36 LT	STOP 1130 0911 0719	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	R1-1		T-44
379+83 LT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
	SPEED LIMIT 35	1	24	30	5.00																										R2-1		
												FT	FT 105	FT		EA	LB	LB	LB		LB	LB	LB	LB									
					SF	SF	EA.	SF				FT 105					LB			EA.	LB				EA.	EA.	LB					
					SHEET TOTALS 115.31																												

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #17

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 146 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #18

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
379+94 LT	Latham Rd	1	42	12	3.50						1		X		X															D3-1		157	
380+86 LT		1	36	36	9.00						2		X		X																W6-1		
382+50 LT	JCT	1	21	15	2.19						1		X		X															WHITE ON BLUE	M2-1		
	INTERSTATE 91	1	24	24	4.00																										M1-1		
382+75 RT	SPEED LIMIT 50	1	24	30	5.00						1		X		X																R2-1		
388+30 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
388+73 RT	STOP 1130 0911 0736	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	R1-1		T-44
388+90 RT	Asa Burton Rd	1	60	12	5.00						2		X		X															D3-1		157	
393+10 RT	7%	1	30	30	6.25						1		X		X																W7-1a		
	NEXT ½ MILE	1	24	18	3.00																										W7-3aP		
393+60 LT	HIDDEN DRIVE RIGHT	1	30	30	6.25						1		X		X															VW-133			E-154
395+05 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X															VR-017			E-141
395+09 RT	Evans Rd	1	39	12	3.25						1		X		X															D3-1		157	
395+42 RT	STOP 1130 0911 0749	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	R1-1		T-44
397+48 RT	TRUCKS ENTERING	1	36	36	9.00						2		X		X															VW-202			E-154
												FT	FT 240	FT		EA	LB	LB	LB		LB	LB	LB	LB									
												FT 240					LB			EA.	LB				EA.	EA.	LB						
	SHEET TOTALS				SF 79.78	SF	EA.	SF																									

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #18

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 147 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #19

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	NEW & SALVAGED SIGNS "B"	NEW & SALVAGED SIGNS SALV SIGN	NEW & SALVAGED SIGNS SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	SQUARE STEEL (in) 2.0 lb/ft 2.42	SQUARE STEEL (in) 2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	TUBULAR ALUMINUM Ø (in) 4.0 lb/ft 1.7	TUBULAR ALUMINUM Ø (in) 4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	TUBULAR STEEL Ø (in) 3.0 lb/ft 7.6	TUBULAR STEEL Ø (in) 3.5 lb/ft 9.0	TUBULAR STEEL Ø (in) 4.0 lb/ft 10.8	TUBULAR STEEL Ø (in) 5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	W-SHAPE STEEL WEIGHT	W-SHAPE STEEL POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
405+00 RT	SPEED LIMIT 40	1	36	36	9.00						2		X		X																VD-700 BACK TO BACK	W3-5		
408+00 RT		1	36	36	9.00						2		X		X																	W1-10L		
	40 MPH	1	18	18	2.25																											W13-1P		
409+79 LT	STOP 1130 0911 0776	1 1	30 6	30 10	6.25 0.42						1		X		X																	R1-1		T-44
410+15 LT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X																VR-017			E-141
410+19 LT	Cadwell Rd	1	42	12	3.50						1		X		X																D3-1		157	
411+50 RT		1	30	30	6.25						1		X		X																W11-6H FOLDING/HINGED SEE STANDARD E-153 FOR HINGE DETAIL			E-153
412+00 LT	STATE LAW	1	24	12	2.00						1		X		X																W16-18P ASTM TYPE IX FLUORESCENT YELLOW SHEETING		158	
	SPEED LIMIT 50	1	24	30	5.00																											R2-1		
	UNLESS OTHERWISE POSTED	1	24	18	3.00																													
412+44 RT	Berger Rd	1	42	12	3.50						1		X		X																D3-1		157	
412+53 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1		X		X																VR-017			E-141
412+75 RT	STOP 1130 0911 0782	1 1	30 6	30 10	6.25 0.42						1		X		X																VD-700 BACK TO BACK	R1-1		T-44
413+89 RT	SPEED LIMIT 40	1	30	36	7.50						1		X		X																	R2-1		
																																R2-5P		
												FT	FT 195	FT		EA	LB	LB	LB		LB	LB	LB	LB									
				SHEET TOTALS	SF 74.34	SF	EA.	SF				FT 195					LB		EA.		LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #19

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 148 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #20

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
											NO. OF POSTS	SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL							
												1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED			
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE		lb/ft					lb/ft				lb/ft				24"	30"					SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6									
416+25 LT		1	36	36	9.00						2		X		X															WI-10R		
		1	18	18	2.25																									WI3-1P		
418+83 LT		1	36	36	9.00						2		X		X														FLUORESCENT YELLOW GREEN	S3-1		
422+40 LT		1	30	30	6.25						1		X		X														FOLDING/HINGED WI1-6H SEE STANDARD E-153 FOR HINGE DETAIL			E-153
		1	6	10	0.42																								VD-700			T-44
426+00 RT		1	30	30	6.25						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-2R		
428+20 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
428+20 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
429+00 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
429+00 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
429+80 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
429+80 LT		1	24	30	5.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-8		
432+96 LT		1	30	30	6.25						1		X		X														VW-133			E-154
		1	6	10	0.42																								VD-700			T-44
435+00 LT		1	30	30	6.25						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	WI-2L		
												FT	FT 210	FT		EA	LB	LB	LB		LB	LB	LB	LB								
												FT 210					LB			EA.	LB				EA.	EA.	LB					
SHEET TOTALS					SF 76.09	SF	EA.	SF																								

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #20

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 149 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #21

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
436+00 RT	JCT	1	21	15	2.19						1		X		X															BLACK ON WHITE	M2-1		
	5	1	24	24	4.00																										M1-4		
438+15 RT		1	36	36	9.00						2		X		X																W3-1		
441+00 RT	NOTICE VT-113 E. THETFORD BRIDGE TO NH 15 TON LIMIT						1				2			X																SP (SOIL BEARING SLIP BASE)(2 1/2")			
442+51 RT	← Fairlee 8 Lyme NH →	1 1	72 72	12 12	6.00 6.00				2																					VD1-1A VD1-1		156 156	
	Norwich 10 → White River Jct 15 →	1 1	72 72	12 12	6.00 6.00																									VD1-1A VD1-1A		156 156	
443+00 LT	Thetford Hill 2	1	72	12	6.00						2		X		X															VD2-1		156	
	West Fairlee 10 Chelsea 23	1 1	72 72	12 12	6.00 6.00																									VD2-1 VD2-1		156 156	
444+68 RT	NORTH SOUTH EAST	1 1 1	24 24 24	12 12 12	2.00 2.00 2.00				2																				#3B	BLACK ON WHITE BLACK ON WHITE GREEN ON WHITE	M3-1 M3-3 M3-2		
	5 5 VERMONT 113	1 1 1	24 24 30	24 24 24	4.00 4.00 5.00																									M1-5	M1-4 M1-4		E-136B
	← → →	1 1 1	21 21 21	15 15 15	2.19 2.19 2.19																									BLACK ON WHITE BLACK ON WHITE GREEN ON WHITE	M6-1 M6-1 M6-1		
445+75 LT	SPEED LIMIT 40	1	24	30	5.00						1		X		X																R2-1		
446+25 RT	TRUCKS TO NH USE VT-25A EAST 8 MILES AHEAD ←						1				2			X																SP (SOIL BEARING SLIP BASE)(2 1/2")			
447+29 LT	WEST TO	1 1	24 24	12 12	2.00 2.00						2		X		X														#1B	GREEN ON WHITE WHITE ON BLUE	M3-4 M4-5		
	VERMONT 113 INTERSTATE 91	1 1	30 24	24 24	5.00 4.00																									M1-5	M1-1		E-136B
												FT	FT 120	FT 60		EA	LB	LB	LB		LB	LB	LB	LB									
					SF 100.76	SF	EA. 2	SF				FT 180					LB			EA.	LB				EA.	EA.	LB						

SHEET TOTALS

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #21

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 150 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #22

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
447+72 RT	STOP 0050 0911 0304	1 1	36 6	36 10	9.00 0.42						2		X		X															BACK TO BACK VD-700 INSTALL ON LEFT POST	RI-1		T-44
448+06 LT	NORTH SOUTH EAST	1 1 1	24 24 24	12 12 12	2.00 2.00 2.00						2			X															#3B	SP (SOIL BEARING SLIP BASE)(2 1/2") PLACE ACROSS FROM BLACK ON WHITE NORTH VT113 / US5 BLACK ON WHITE INTERSECTION GREEN ON WHITE	M3-1 M3-3 M3-2		
	5 5 VERMONT 113	1 1 1	24 24 30	24 24 24	4.00 4.00 5.00																									MI-5	MI-4 MI-4		E-136B
	← → →	1 1 1	21 21 21	15 15 15	2.19 2.19 2.19																									BLACK ON WHITE BLACK ON WHITE GREEN ON WHITE	M6-1 M6-1 M6-1		
448+36 LT	STOP 0050 0911 0298	1 1	30 6	30 10	6.25 0.42						1		X		X															VD-700 BACK TO BACK	RI-1		T-44
448+40 RT	NOTICE VT-113 E. THETFORD BRIDGE TO NH 15 TON LIMIT						1				2			X																SP (SOIL BEARING SLIP BASE)(2 1/2")			
449+19 RT	Lyme NH	1	72	12	6.00						2		X		X															VDI-1		156	
	EAST	1	24	12	2.00																									GREEN ON WHITE	M3-2		
	VERMONT 113	1	30	24	5.00																									MI-5			E-136B
449+50 LT	SOUTH NORTH WEST	1 1 1	24 24 24	12 12 12	2.00 2.00 2.00						2									2	235.6								#3B	BLACK ON WHITE BLACK ON WHITE GREEN ON WHITE	M3-3 M3-1 M3-4		
	5 5 VERMONT 113	1 1 1	24 24 30	24 24 24	4.00 4.00 5.00																									MI-5	MI-4 MI-4		E-136B
	← → →	1 1 1	21 21 21	15 15 15	2.19 2.19 2.19																									BLACK ON WHITE BLACK ON WHITE GREEN ON WHITE	M6-1 M6-1 M6-1		
	TO	1	24	12	2.00																									WHITE ON BLUE	M4-5		
	INTERSTATE 91	1	24	24	4.00																										MI-1		
	→	1	21	15	2.19																									WHITE ON BLUE	M6-1		
												FT	FT 75	FT 60		EA	LB	LB	LB		LB 235.6	LB	LB	LB								
		SHEET TOTALS			SF 88.42	SF	EA. 1	SF				FT 135					LB			EA. 2	LB 235.6				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #22

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 151 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #23

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW & SALVAGED SIGNS "A"	NEW & SALVAGED SIGNS "B"	NEW & SALVAGED SIGNS SALV SIGN	NEW & SALVAGED SIGNS SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	SQUARE STEEL (in) 2.0 lb/ft 2.42	SQUARE STEEL (in) 2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	TUBULAR ALUMINUM Ø (in) 4.0 lb/ft 1.7	TUBULAR ALUMINUM Ø (in) 4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	TUBULAR STEEL Ø (in) 3.0 lb/ft 7.6	TUBULAR STEEL Ø (in) 3.5 lb/ft 9.0	TUBULAR STEEL Ø (in) 4.0 lb/ft 10.8	TUBULAR STEEL Ø (in) 5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	W-SHAPE STEEL FTG. SIZE 30"	W-SHAPE STEEL WEIGHT	W-SHAPE STEEL POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL SHSM	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
450+38 RT	R R						1				2		X		X																		
450+75 LT	← Norwich 10 ← White River Jct 15	1 1	72 72	12 12	6.00 6.00						2									2	182.4									VDI-1A VDI-1A		156 156	
	Fairlee 8 → West Fairlee 10 →	1 1	72 72	12 12	6.00 6.00																									VDI-1A VDI-1A		156 156	
	Chelsea 23 →	1	72	12	6.00																									VDI-1A		156	
451+15 RT 451+47 LT 451+51 RT	REPORT EMERGENCY OR PROBLEM TO 1-888-265-2735 CROSSING 053553T	3	30	18	11.25				3																					1-13a SEE GRADE CROSSING DETAILS 2 OF 2		48	
454+08 RT	SPEED LIMIT 40	1	24	30	5.00						1		X		X																R2-1		
	1130 0911 0860	1	6	10	0.42																									VD-700			T-44
455+00 LT	JCT	1	21	15	2.19						1		X		X															BLACK ON WHITE	M2-1		
	5	1	24	24	4.00																										M1-4		
456+25 LT	R R						1				2		X		X																		
457+50 LT	SAFETY BELTS REQUIRED	1	36	36	9.00						2		X		X															VR-128		158	
458+25 RT	NARROW BRIDGE	1	36	36	9.00						2			X																SP (SOIL BEARING SLIP BASE)(2 1/2")	W5-2		
	14'-2"	1	36	36	9.00																										W12-2		
460+06 LT	Welcome To VERMONT THE GREEN MOUNTAIN STATE	1	30	24	5.00						1		X		X															VD-421		158	
461+13 LT	STATE HIGHWAY BEGINS	1	24	18	3.00						1		X		X															VR-039			E-141
	SPEED LIMIT 40	1	24	30	5.00																										R2-1		
												FT	FT 150	FT 30		EA	LB	LB	LB		LB 182.4	LB	LB	LB								
SHEET TOTALS					SF 92.86	SF	EA. 2	SF				FT 180					LB			EA. 2	LB 182.4				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #23

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 152 OF 303

CLD 12-0337

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET #24

SHSM = FHWA 2004 STANDARD HIGHWAY SIGNS AND MARKINGS BOOK AND THE 2012 SUPPLEMENT TO THE 2004 EDITION

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																		REMARKS	SIGN DETAIL		
												SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)					W-SHAPE STEEL							
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	1.75	2.0	2.5	ANCHOR	SLEEVE	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE 24"	FTG. SIZE 30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED		SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												lb/ft					lb/ft				lb/ft											
												1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6								
461+14 RT	STATE HIGHWAY ENDS	1	24	18	3.00						1		X		X														VR-038			E-141
	WEIGHT LIMIT 15 TONS						1																									
461+14 RT	END	1	24	12	2.00						1		X		X														GREEN ON WHITE	M4-6		
	VERMONT 113	1	30	24	5.00																								M1-5			E-136B
461+48 RT	14'-2"	1	36	36	9.00						2		X		X															W12-2		
461+50 LT		1	12	36	3.00						1		X		X														ASTM TYPE IX FLUORESCENT YELLOW SHEETING	OM-3L		
461+50 RT	BRIDGE C-2 POSTING						1				1		X		X																	
		1	12	36	3.00																								ASTM TYPE IX FLUORESCENT YELLOW SHEETING	OM-3R		
	SUBTOTAL SHEET 130 SUBTOTAL SHEET 131 SUBTOTAL SHEET 132 SUBTOTAL SHEET 133				53.93 94.11 67.67 54.25		8					250	135 180 180 135	30																		
	SUBTOTAL SHEET 134 SUBTOTAL SHEET 135 SUBTOTAL SHEET 136 SUBTOTAL SHEET 137				51.34 70.78 59.11 88.92		3 1						180 165 195 270																				
	SUBTOTAL SHEET 138 SUBTOTAL SHEET 139 SUBTOTAL SHEET 140 SUBTOTAL SHEET 141				47.09 23.30 25.17 29.01		4 7 5 5						135 135 135 120	45 45																		
	SUBTOTAL SHEET 142 SUBTOTAL SHEET 143 SUBTOTAL SHEET 144 SUBTOTAL SHEET 145				102.51 89.45 70.57 72.38								180 75 60 90	30 60																		
	SUBTOTAL SHEET 146 SUBTOTAL SHEET 147 SUBTOTAL SHEET 148 SUBTOTAL SHEET 149				115.31 79.78 74.34 76.09								105 240 195 210																				
	SUBTOTAL SHEET 150 SUBTOTAL SHEET 151 SUBTOTAL SHEET 152 SUBTOTAL SHEET 153				100.76 88.42 92.86 25.00		2 1 2 2						120 75 150 90	60 60 30							2 2	235.6 182.4											
	ROUNDING				2.85																	2.0										
												FT 250	FT 3555	FT 360		EA	LB	LB	LB		LB 420	LB	LB	LB								
	PROJECT TOTALS				SF 1655	SF	EA. 40	SF				FT 4165					LB			EA. 4	LB 420				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND VAOT "SIGN POST DESIGN GUIDELINE."

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tsdet.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC SIGN SUMMARY SHEET #24

PLOT DATE: 9/18/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 153 OF 303

CLD 12-0337

GENERAL NOTES

SIGN DESIGN AND FABRICATION NOTES

1. ALL SIGNS SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST REVISION OF THE MUTCD, THE 2004 STANDARD HIGHWAY SIGNS AND MARKINGS (SHSM), AND THE 2012 SUPPLEMENT TO THE 2004 EDITION (SHSM) DETAILS AS AVAILABLE, VAOT STANDARDS OR AS DETAILED IN THE PLANS.
2. ALL LETTERS AND NUMBERS USED FOR ALL SIGNS SHALL CONFORM TO THE APPLICABLE FONT AS DEFINED AND DETAILED IN THE 2004 SHSM AND THE 2012 SUPPLEMENT.
3. ALL ARROWS AND SYMBOLS SHALL CONFORM WITH THE 2004 SHSM AND THE 2012 SUPPLEMENT UNLESS OTHERWISE DETAILED IN THE PLANS.
4. COLORS USED ON ALL SIGNS SHALL CONFORM WITH THE REQUIREMENTS OF SECTION 1A.12 OF THE 2009 MUTCD AND LATEST REVISIONS.
5. SIGN SHEETING FOR FLUORESCENT YELLOW AND FLUORESCENT YELLOW GREEN SHALL BE AASHTO M268 (ASTM D4956) TYPE VII, VIII OR IX. ALL OTHER SIGN SHEETING SHALL BE TYPE III OR IV.
6. SHEETING TYPES AND MANUFACTURERS SHALL NOT BE MIXED ON A SINGLE SIGN ASSEMBLY. SHEETING COLOR/TYPE SHOULD BE BY THE SAME MANUFACTURER AND BE CONSISTENT THROUGHOUT THE PROJECT UNLESS OTHERWISE DETAILED ON THE PLANS.
7. SIGN BASE MATERIAL FOR DELINEATORS AND MILE MARKER PLAQUES (VD-700) SHALL BE 0.063" THICK FLAT SHEET ALUMINUM. ALL TOWN HIGHWAY SIGNS (D3-1) SHALL BE 0.125" THICK FLAT SHEET ALUMINUM OR EXTRUDED ALUMINUM WITH 0.25 INCH FLANGE AND 0.090 INCH WEB. UNLESS OTHERWISE NOTED ON THE PLANS, ALL OTHER SIGNS SHALL BE FLAT SHEET ALUMINUM WITH THE FOLLOWING MINIMUM THICKNESSES:

SIGN SIZE	12" X 12"		
	18" X 18"		
	21" X 15"		
	24" X 8"		
	24" X 10"		48" X 18"
	24" X 12"	36" X 12"	48" X 24"
	24" X 18"	36" X 15"	48" X 30"
	24" X 24"	36" X 18"	48" X 42"
	24" X 30"	36" X 24"	48" X 48"
	30" X 15"	36" X 36"	48" X 60"
	30" X 18"	36" X 42"	72" X 10"
	30" X 30"	36" X 48"	72" X 12"
	30" X 42"	36" X 54"	72" X 20"
THICKNESS	0.080"	0.100"	0.125"

SIGN POST NOTES

1. ALL SIGN POSTS SHALL BE INSTALLED IN A NEW ANCHOR. ALL SIGNS INSTALLED IN PAVED OR CONCRETE ISLANDS OR SIDEWALKS SHALL ALSO BE INSTALLED WITH AN 18" SLEEVE. PAYMENT FOR SLEEVE WILL BE CONSIDERED INCIDENTAL TO THE SIGN POST.
2. 1.75" SQUARE STEEL POSTS SHALL BE 14 GAUGE STEEL. 2.0" AND 2.5" SQUARE STEEL POSTS SHALL BE 12 GAUGE STEEL.

SIGN INSTALLATION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTY CAUSED BY THE CONTRACTOR, AT NO COST TO THE STATE.
2. ALL SIGNS WITHIN THE PROJECT LIMITS ARE TO BE RETAINED, REMOVED OR REPLACED AS NOTED OR AS DIRECTED BY THE ENGINEER. SIGN LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED IN THE FIELD.
3. ALL SIGN PLACEMENT SHALL BE IN CONFORMANCE WITH VAOT STANDARD E-121 STANDARD SIGN PLACEMENT CONVENTIONAL ROADS, UNLESS OTHERWISE NOTED.
4. ALL SIGNS, FRAMES, MOUNTING HARDWARE, POSTS, AND ANCHORS FOR ANY SIGN ASSEMBLY SHALL BE REPLACED AT THE SAME TIME. MIXING OF OLD AND NEW SIGNS ON THE SAME ASSEMBLY WILL NOT BE ALLOWED EXCEPT AS NOTED ON THE PLANS.
5. NEW SIGNS WITH THEIR GREATER NIGHTTIME RETROREFLECTIVITY CAN OBSCURE OLDER SIGNS MOUNTED ADJACENT TO THEM. TO AVOID CONFUSION OF ROAD USERS, WORK SHALL BE COORDINATED SUCH THAT ALL SIGNS ASSOCIATED WITH A CURVE, INTERSECTION, OR SPEED CHANGE, SHALL BE REPLACED ON THE SAME DAY AND NOT LEFT INCOMPLETE NOR WITH A MIXTURE OF OLD AND NEW SIGNS WITHIN A GROUP OF ASSOCIATED SIGNS.

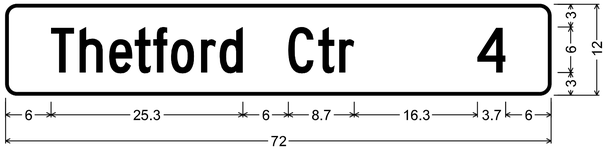
MILE MARKERS

STATION	MILE MARK	REMARKS
THETFORD		
52+80 RT	1130/0911/0100	NEW
63+36 RT	1130/0911/0120	NEW W/ SL 40
73+75 LT	1130/0911/0140	NEW
84+48 RT	1130/0911/0160	NEW
95+04 RT	1130/0911/0180	NEW
105+60 LT	1130/0911/0200	NEW
116+16 RT	1130/0911/0220	NEW
126+72 LT	1130/0911/0240	NEW
137+28 RT	1130/0911/0260	NEW
147+84 LT	1130/0911/0280	NEW
158+40 RT	1130/0911/0300	NEW
168+96 LT	1130/0911/0320	NEW
179+52 RT	1130/0911/0340	NEW
200+64 LT	1130/0911/0380	NEW
221+76 RT	1130/0911/0420	NEW
232+32 LT	1130/0911/0440	NEW
253+44 LT	1130/0911/0480	NEW W/ TO RTE 132 LEFT
264+00 RT	1130/0911/0500	NEW
274+56 LT	1130/0911/0520	NEW
285+12 LT	1130/0911/0540	NEW
306+24 RT	1130/0911/0580	NEW
316+80 LT	1130/0911/0600	NEW
337+92 RT	1130/0911/0640	NEW
359+04 RT	1130/0911/0680	NEW
369+60 LT	1130/0911/0700	NEW
401+28 LT	1130/0911/0760	NEW
422+40 LT	1130/0911/0800	NEW W/ SNOWMOBILE SIGN
432+96 LT	1130/0911/0820	NEW W/ HIDDEN DRIVE LEFT
443+52 LT	1130/0911/0840	NEW
454+08 RT	1130/0911/0860	NEW W/ SL 40

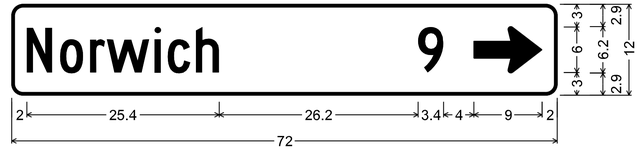
MILE MARKER NOTES

1. MILE MARKERS SHOWN ABOVE AND NOT NOTED AS BEING WITH ANOTHER SIGN ARE QUANTIFIED ON TRAFFIC SIGN SUMMARY SHEET #1.
2. MILE MARKERS SHOWN ABOVE AND NOTED AS BEING WITH ANOTHER SIGN ARE QUANTIFIED ON THE TRAFFIC SIGN SUMMARY SHEET WITH THE CORRESPONDING STATION.
3. MILE MARKERS AT TOWN HIGHWAYS ARE SHOWN ON THE TRAFFIC SIGN SUMMARY SHEETS WITH THE APPLICABLE TOWN HIGHWAY SIGNING.
4. INSTALL MILE MARKER POSTS BEYOND THE UNDERDRAIN TRENCH.

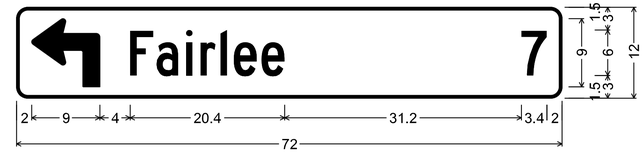
NOT TO SCALE



VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[Thetford Ctr] C 2K; [4] C 2K;

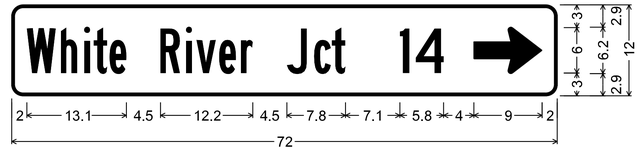


VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[Norwich] C 2K; [9] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;

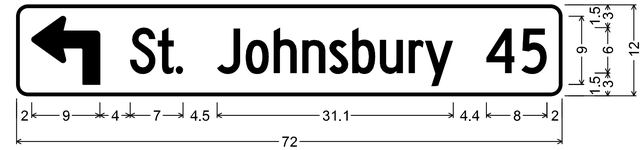


VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
90 Deg Advanced Turn Arrow Custom 9.0" X 9.0"; [Fairlee] C 2K;
[7] C 2K;

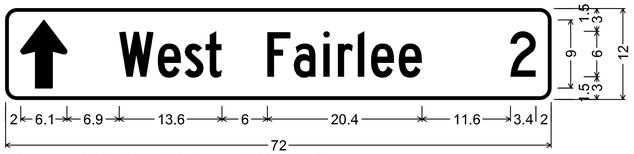
VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[East Thetford] C 2K; [8] C 2K;



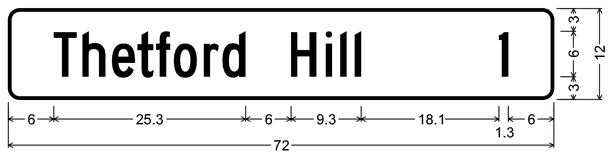
VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[White] B 2K; [River] B 2K; [Jct] B 2K; [14] C 2K;
Standard Arrow Custom 9.0" X 6.1" 0°;



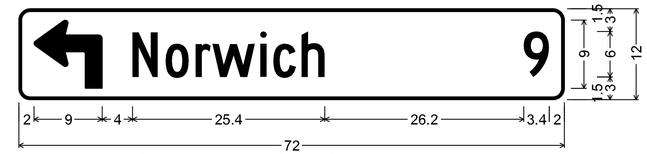
VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
90 Deg Advanced Turn Arrow Custom 9.0" X 9.0";
[St. Johnsbury] C 2K 70% spacing; [45] C 2K;



VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 90°; [West Fairlee] C 2K; [2] C 2K;

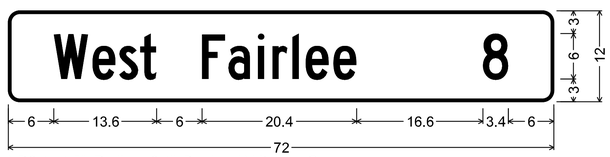


VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[Thetford Hill] C 2K; [1] C 2K;

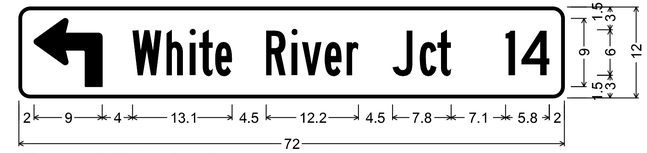


VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
90 Deg Advanced Turn Arrow Custom 9.0" X 9.0"; [Norwich] C 2K;
[9] C 2K;

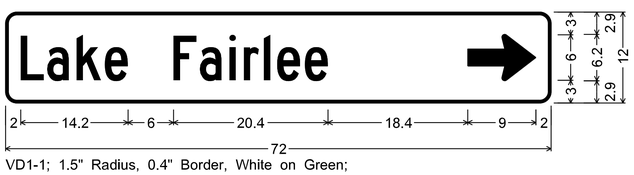
VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 90°; [Chelsea] C 2K; [15] C 2K;



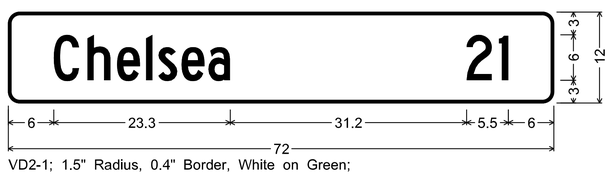
VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[West Fairlee] C 2K; [8] C 2K;



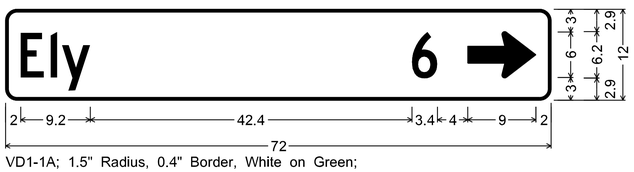
VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
90 Deg Advanced Turn Arrow Custom 9.0" X 9.0"; [White] B 2K;
[River] B 2K; [Jct] B 2K; [14] C 2K;



VD1-1; 1.5" Radius, 0.4" Border, White on Green;
[Lake Fairlee] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;



VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[Chelsea] C 2K; [21] C 2K;



VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[Ely] C 2K; [6] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;

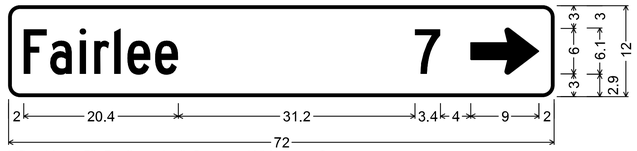
DESTINATION SIGN NOTES VD1-1, VD1-1A, VD2-1

THE DESTINATION SIGNS SHOWN ON THIS SHEET SHALL HAVE WHITE RETROREFLECTIVE AASHTO M268 (ASTM D4956) TYPE III OR IV TEXT, ARROWS AND BORDERS ON A GREEN RETROREFLECTIVE ASTM D4956 TYPE III OR IV BACKGROUND

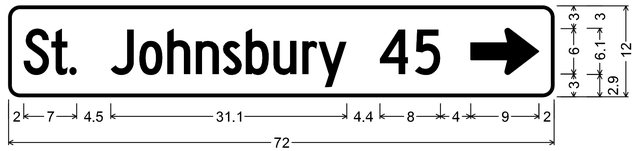
NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194tsdet.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TRAFFIC SIGN DETAIL SHEET 2	SHEET 155 OF 303

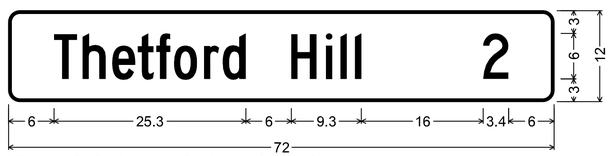
CLD 12-0337



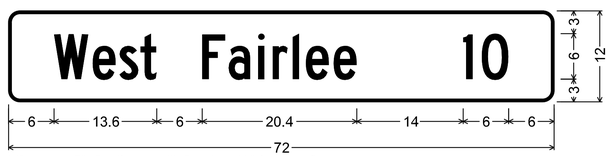
VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[Fairlee] C 2K; [7] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;



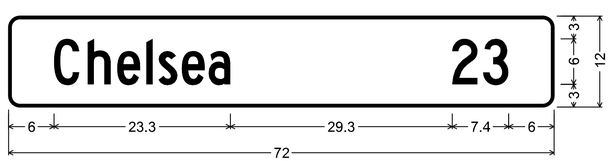
VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[St. Johnsbury] C 2K 70% spacing; [45] C 2K;
Standard Arrow Custom 9.0" X 6.1" 0°;



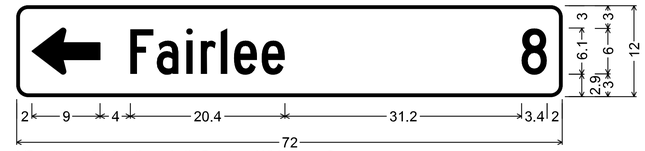
VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[Thetford Hill] C 2K; [1] C 2K;



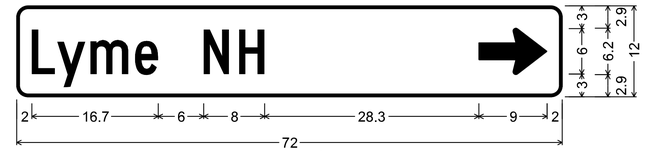
VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[West Fairlee] C 2K; [10] C 2K;



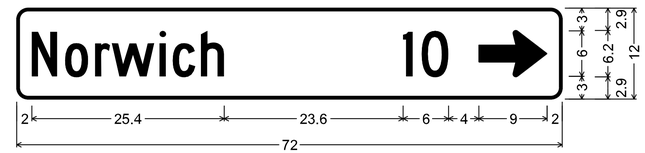
VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[Chelsea] C 2K; [23] C 2K;



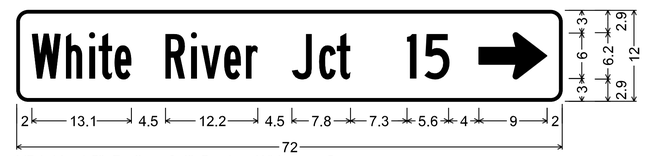
VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 180°; [Fairlee] C 2K; [8] C 2K;



VD1-1; 1.5" Radius, 0.4" Border, White on Green;
[Lyme NH] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;

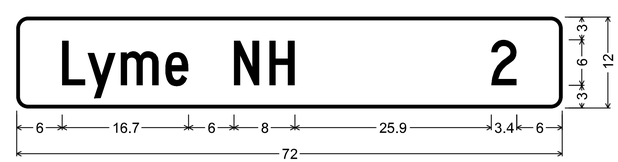


VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[Norwich] C 2K; [10] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;

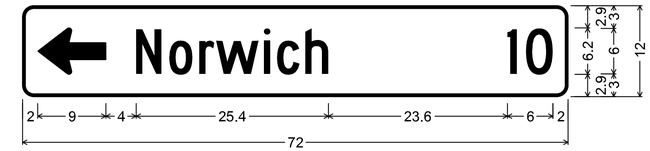


VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[White] B 2K; [River] B 2K; [Jct] B 2K; [15] C 2K;
Standard Arrow Custom 9.0" X 6.1" 0°;

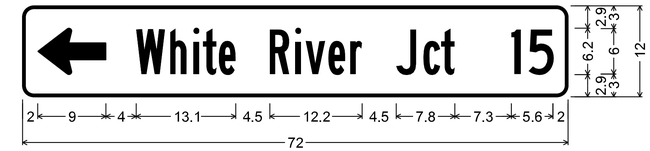
VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[East Thetford] C 2K; [1] C 2K;



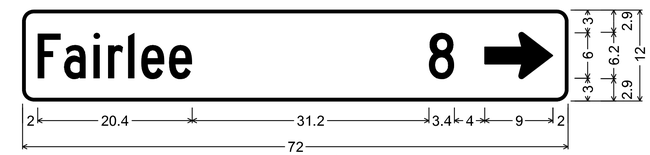
VD2-1; 1.5" Radius, 0.4" Border, White on Green;
[Lyme NH] C 2K; [2] C 2K;



VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 180°; [Norwich] C 2K; [10] C 2K;

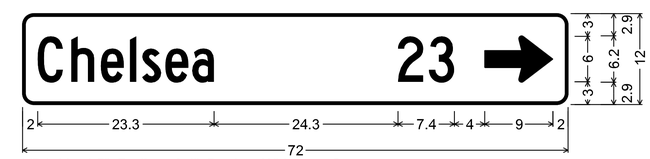


VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 180°; [White] B 2K; [River] B 2K;
[Jct] B 2K; [15] C 2K;



VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[Fairlee] C 2K; [8] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;

VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[West Fairlee] C 2K; [10] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;



VD1-1A; 1.5" Radius, 0.4" Border, White on Green;
[Chelsea] C 2K; [23] C 2K; Standard Arrow Custom 9.0" X 6.1" 0°;

VD1-1; 1.5" Radius, 0.4" Border, White on Green;
[Lyme NH] C 2K;

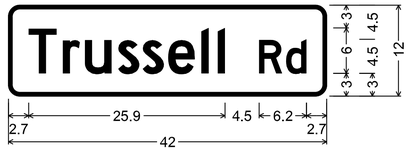
DESTINATION SIGN NOTES VD1-1, VD1-1A, VD2-1

THE DESTINATION SIGNS SHOWN ON THIS SHEET SHALL HAVE WHITE RETROREFLECTIVE AASHTO M268 (ASTM D4956) TYPE III OR IV TEXT, ARROWS AND BORDERS ON A GREEN RETROREFLECTIVE ASTM D4956 TYPE III OR IV BACKGROUND

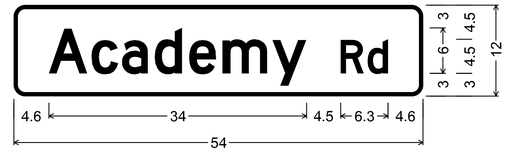
NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194tsdet.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TRAFFIC SIGN DETAIL SHEET 3	SHEET 156 OF 303

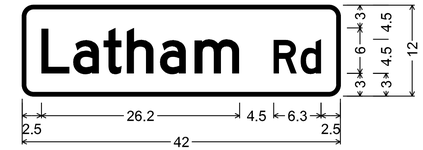
CLD 12-0337



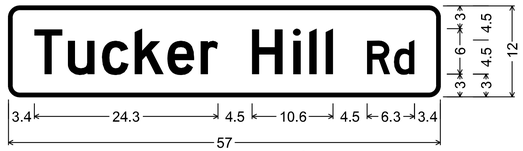
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Trussell] D 2K; [Rd] D 2K;



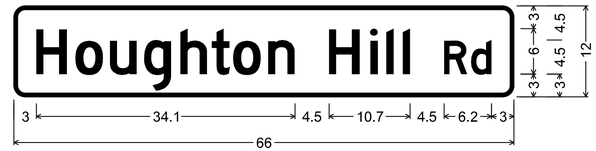
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Academy] D 2K; [Rd] D 2K;



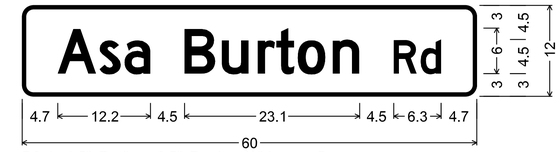
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Latham] D 2K; [Rd] D 2K;



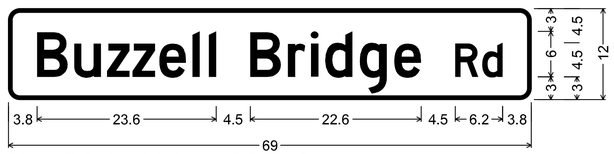
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Tucker Hill] D 2K; [Rd] D 2K;



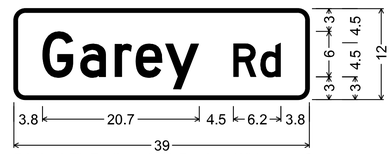
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Houghton Hill] D 2K; [Rd] D 2K;



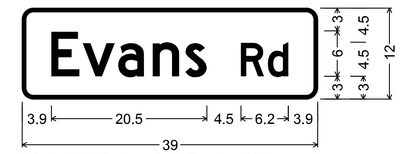
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Asa Burton] D 2K; [Rd] D 2K;



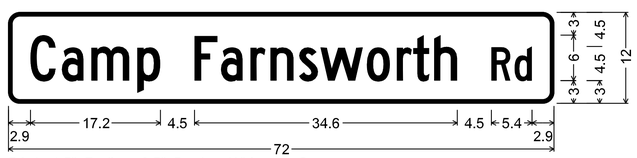
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Buzzell Bridge] D 2K; [Rd] D 2K;



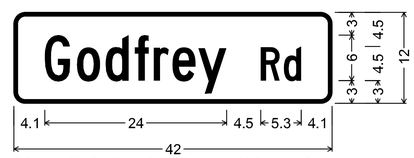
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Garey] D 2K; [Rd] D 2K;



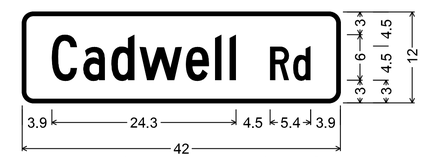
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Evans] D 2K; [Rd] D 2K;



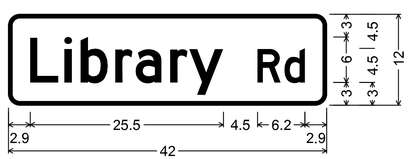
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Camp Farnsworth] C 2K; [Rd] C 2K;



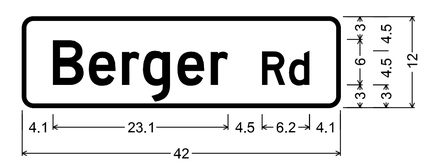
D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Godfrey] C 2K; [Rd] C 2K;



D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Cadwell] C 2K; [Rd] C 2K;



D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Library] D 2K; [Rd] D 2K;



D3-1; 1.5" Radius, 0.5" Border, White on Green;
[Berger] D 2K; [Rd] D 2K;

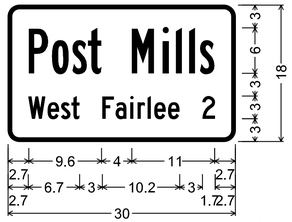
TOWN HIGHWAY SIGNS D3-1

TOWN HIGHWAY SIGNS SHALL BE DOUBLE SIDED SIGNS
AND SHALL BE INSTALLED WITH 12 INCH BRACKETS.

NOT TO SCALE

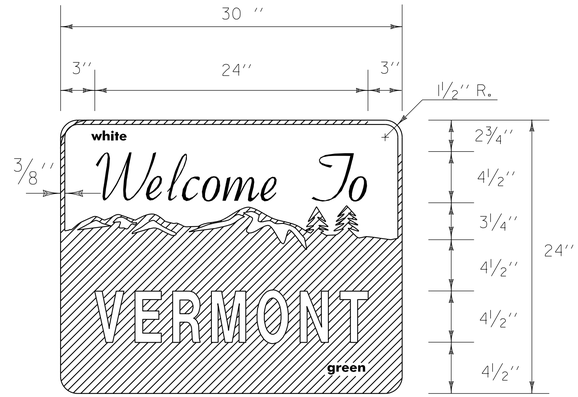
PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194tsdet.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TRAFFIC SIGN DETAIL SHEET 4	SHEET 157 OF 303

CLD 12-0337



1.5" Radius, 0.5" Border, White on Green;
[Post Mills] B 2K;
[West Fairlee 2] C 2K;

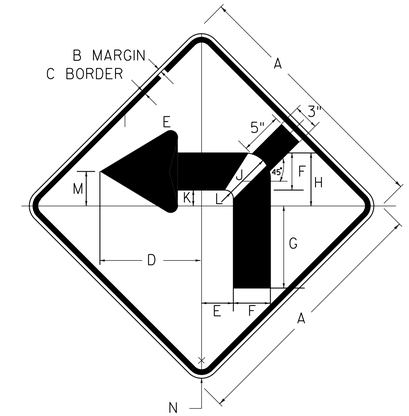
VD-018



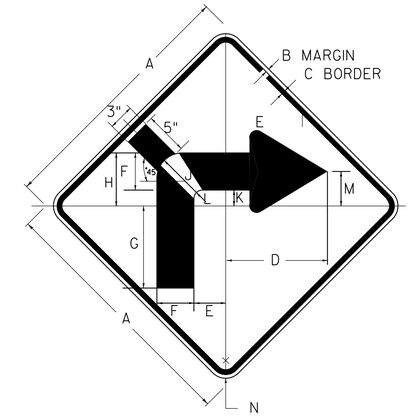
VD-421

NOTE:
FOR THE WORDS "WELCOME TO" USE GERBER FONT MURRAY HILL BOLD OR EQUIVALENT. TEXT COLOR IS GREEN. ALL OTHER TEXT USE GERBER FONT SOUVENIR DEMI BOLD OR EQUIVALENT. TEXT COLOR IS WHITE. REFER TO VAOT STD. E-131 FOR COLORS.

MATERIALS:
SEE VAOT STD. E-136B FOR MATERIALS



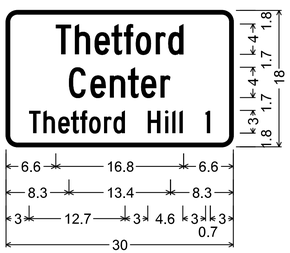
W1-1MdL



W1-1MdR

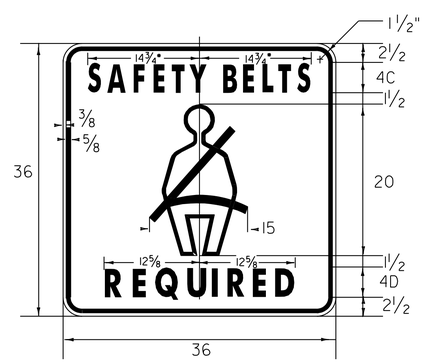
COLORS
TEXT AND BORDER - BLACK (NON-REFL.)
BACKGROUND - YELLOW (REFL.)

DIMENSIONS (INCHES)												
A	B	C	D	E	F	G	H	J	K	L	M	N
36	5/8	7/8	14 3/8	4 1/2	5 1/2	11 5/8	7 1/2	3 5/8	2 1/4	1 1/4	4 7/8	2 1/4



1.5" Radius, 0.5" Border, White on Green;
[Thetford] C 2K; [Center] C 2K;
[Thetford Hill 1] C 2K;

VD-018

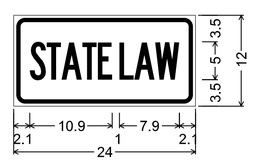


VR-128

BLACK ON WHITE

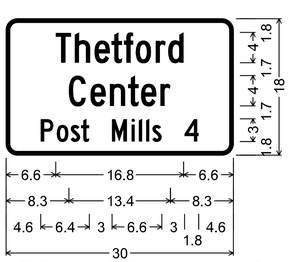
*REDUCE SPACING 50%

FOR SEAT BELT SYMBOL LAYOUT SEE THE 2004 STANDARD HIGHWAY SIGNS BOOK PAGE 6-21.



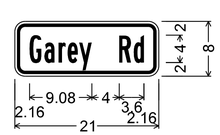
1.5" Radius, 0.5" Border, 0.4" Indent,
Black on Flourescent Yellow;
[STATE LAW] B 2K specified length;

W16-18P



1.5" Radius, 0.5" Border, White on Green;
[Thetford] C 2K; [Center] C 2K;
[Post Mills 4] C 2K;

VD-018



1.50" Radius, 0.38" Border, 0.38" Indent, Black on Yellow;
[Garey Rd] B 2K;

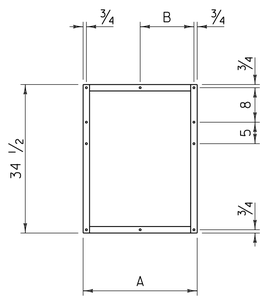
W16-8P

NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194tsdet.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TRAFFIC SIGN DETAIL SHEET 5	SHEET 158 OF 303

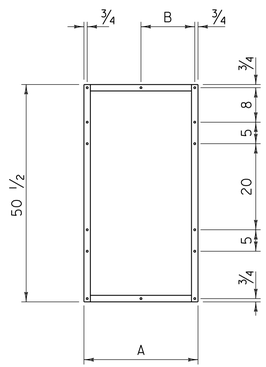
CLD 12-0337

TYPE 1



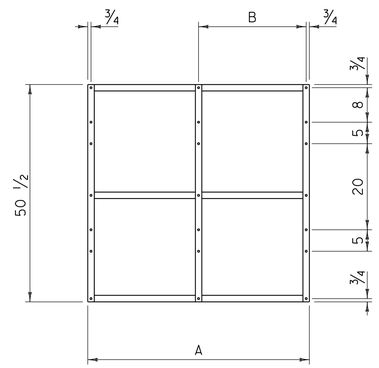
FRAME TYPE	A	B
1A	26 1/2	12 1/2
1B	29 1/2	15 1/2
1C	32 1/2	15 1/2

TYPE 2

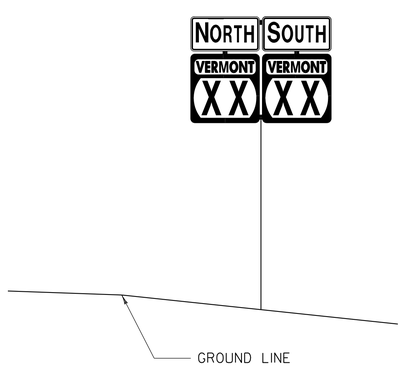


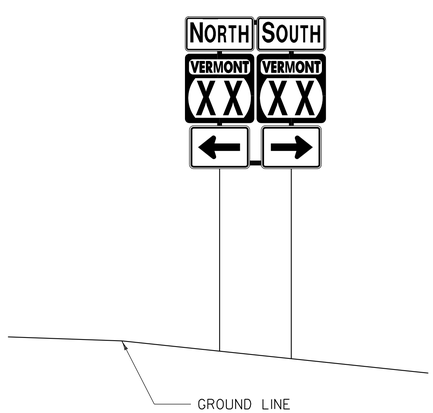
FRAME TYPE	A	B
2A	26 1/2	12 1/2
2B	29 1/2	15 1/2
2C	32 1/2	15 1/2

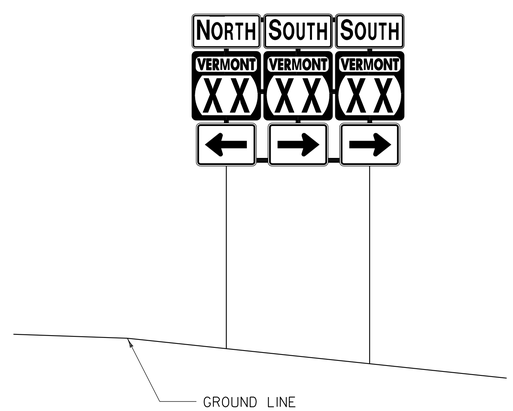
TYPE 3



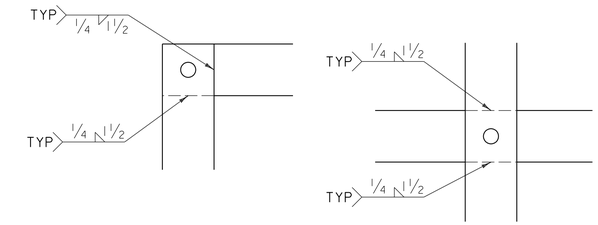
FRAME TYPE	A	B
3A	51 1/2	25
3B	54 1/2	28
3C	57 1/2	28
3D	63 1/2	31







ROUTE MARKER ASSEMBLY FRAMES



NOTE:

TWO WELDS PER CONNECTION.

WELDING DETAILS

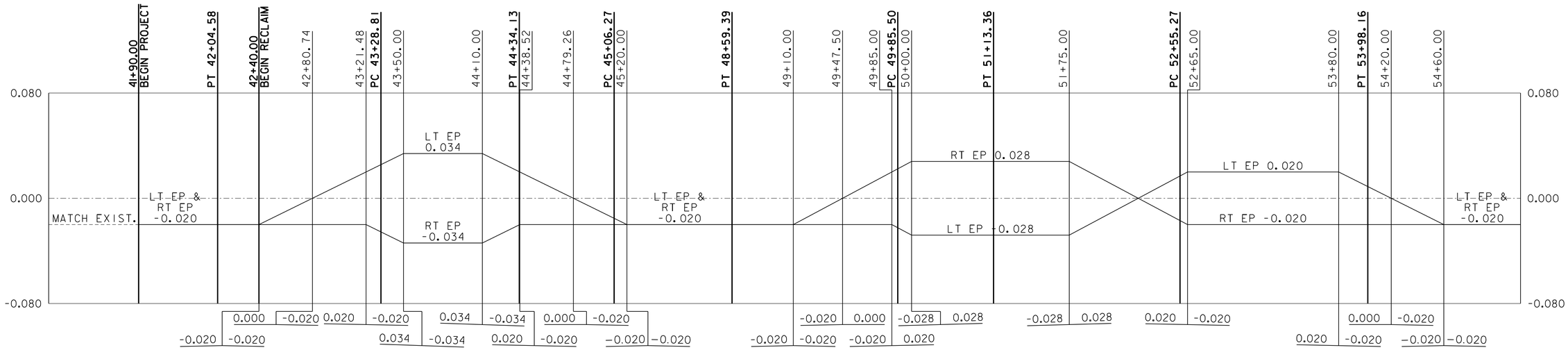
GENERAL NOTES:

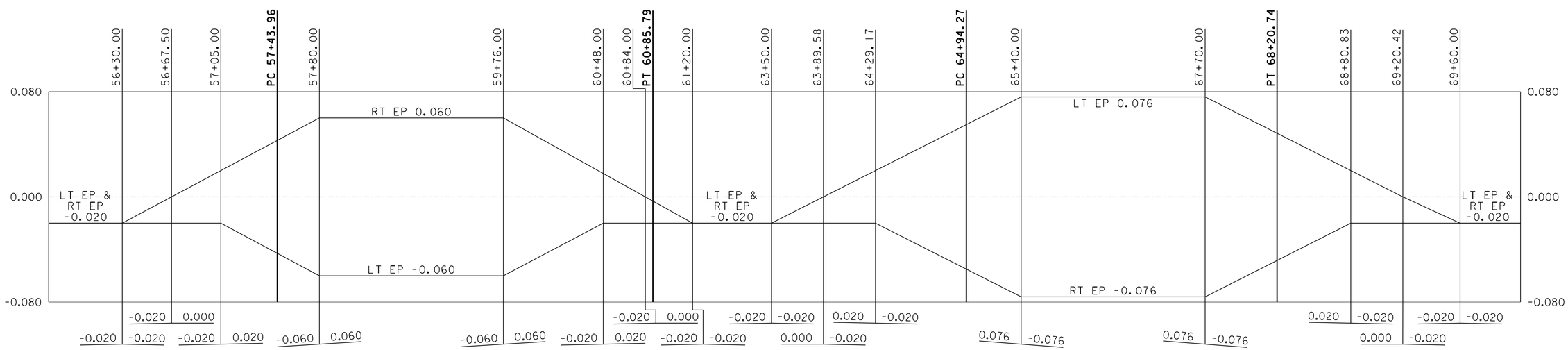
1. TYPE 1A FRAME ASSEMBLY TO BE USED WITH TWO 24 INCH WIDE SIGN COLUMNS.
2. TYPE 1B FRAME ASSEMBLY TO BE USED WITH ONE 24 INCH WIDE SIGN COLUMN AND ONE 30 INCH WIDE SIGN COLUMN.
3. TYPE 1C FRAME ASSEMBLY TO BE USED WITH TWO 30 INCH WIDE SIGN COLUMNS.
4. TYPE 2A FRAME ASSEMBLY TO BE USED WITH TWO 24 INCH WIDE SIGN COLUMNS.
5. TYPE 2B FRAME ASSEMBLY TO BE USED WITH ONE 24 INCH WIDE SIGN COLUMN AND ONE 30 INCH WIDE SIGN COLUMN.
6. TYPE 2C FRAME ASSEMBLY TO BE USED WITH TWO 30 INCH WIDE SIGN COLUMNS.
7. TYPE 3A FRAME ASSEMBLY TO BE USED WITH THREE 24 INCH WIDE SIGN COLUMNS.
8. TYPE 3B FRAME ASSEMBLY TO BE USED WITH TWO 24 INCH WIDE SIGN COLUMNS AND ONE 30 INCH WIDE SIGN COLUMN, WITH THE 30 INCH SIGN COLUMN IN AN OUTSIDE POSITION.
9. TYPE 3C FRAME ASSEMBLY TO BE USED WITH ONE 24 INCH WIDE SIGN COLUMN IN THE CENTER AND TWO 30 INCH SIGN COLUMNS ON THE OUTSIDE OR ONE 30 INCH SIGN COLUMN IN THE CENTER AND TWO 24 INCH SIGN COLUMNS ON THE OUTSIDE.
10. TYPE 3D FRAME ASSEMBLY TO BE USED WITH THREE 30 INCH WIDE SIGN COLUMNS.
11. STANDARD FRAMES SHALL BE CONSTRUCTED OF 5/16 INCH X 1 1/2 INCH A-36 STEEL. THE FRAME SHALL BE PAINTED WITH ONE COAT OF PRIMER AND A SECOND COAT OF BLACK PAINT. THE PAINT SHALL BE OF THE TYPE USED ON EXTERIOR METAL SURFACES TO PREVENT METAL CORROSION.
12. ALL HOLES SHALL BE 7/16 INCH DIAMETER. POSITION OF DRILLED HOLES ON FRAMES BASED UPON MOUNTING HOLES ON SIGNS AT TWO INCHES FROM TOP AND BOTTOM EDGES. SIGN/FRAME ASSEMBLIES SHOULD EXHIBIT A ONE INCH SPACE BETWEEN SIGN PANELS.
13. FOR SIGN COMBINATIONS OTHER THAN ABOVE, THE FRAME DIMENSIONS AND HOLE SPACING SHALL BE MODIFIED AS NECESSARY.
14. SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SECTION 2D.29 FOR INSTALLATION SEQUENCE.

NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194tsdet.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TRAFFIC SIGN DETAIL SHEET 6	SHEET 159 OF 303

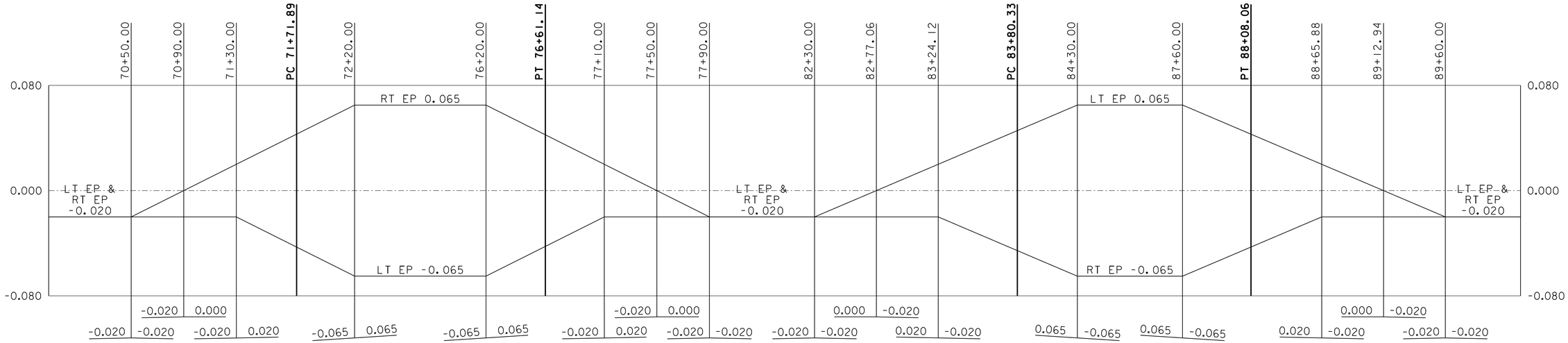
CLD 12-0337



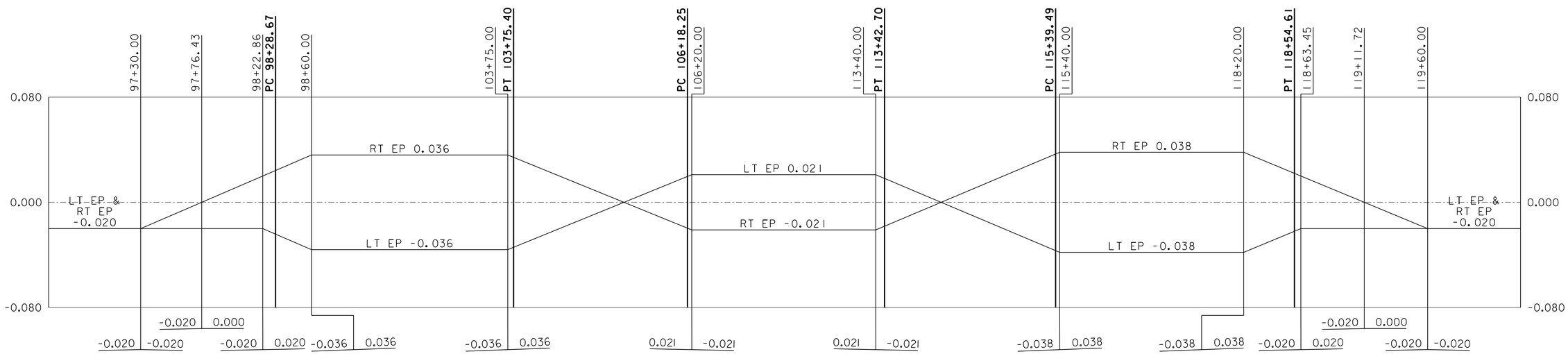


PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 1	SHEET 160 OF 303

CLD 12-0337



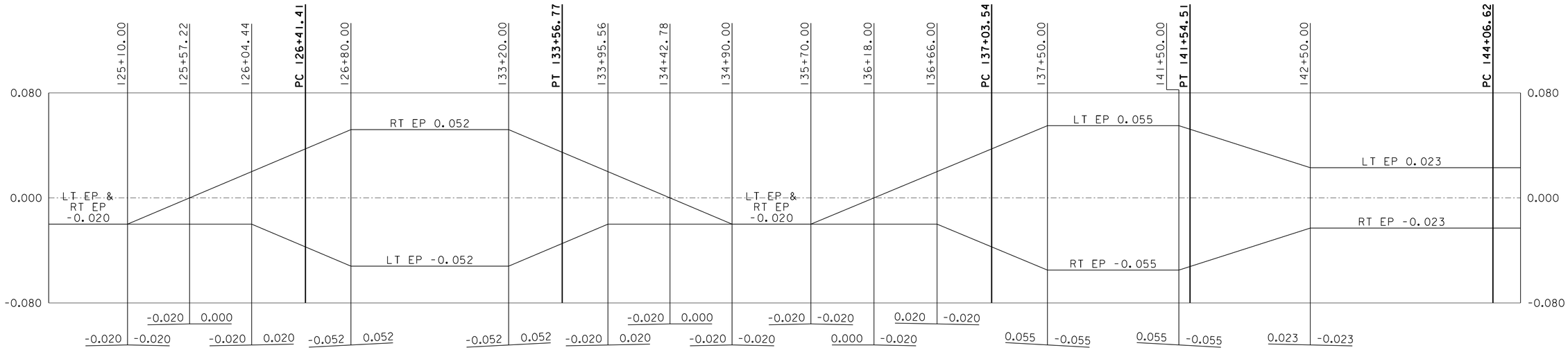
CURVE 8 **CURVE 9**



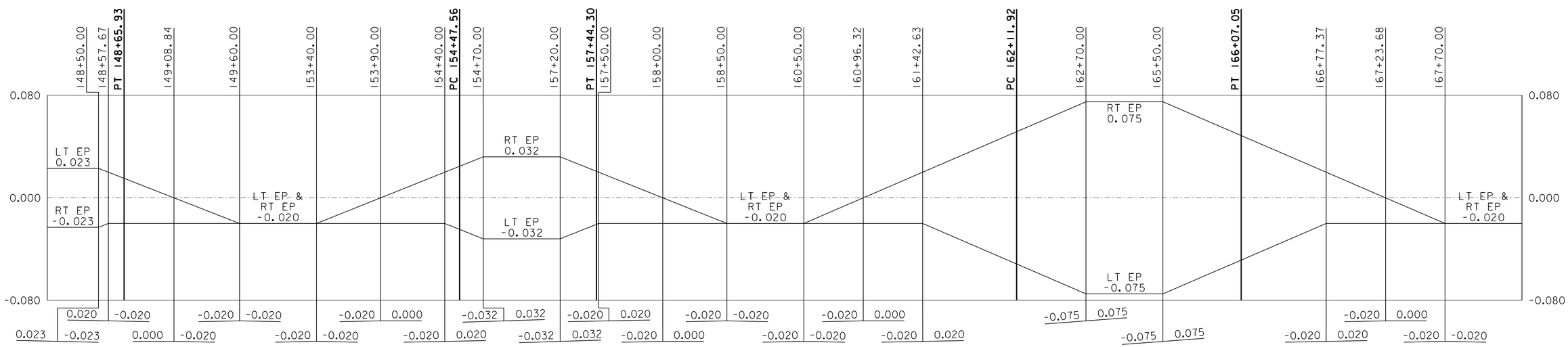
CURVE 10 **CURVE 11** **CURVE 12**

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 2	SHEET 161 OF 303

CLD 12-0337



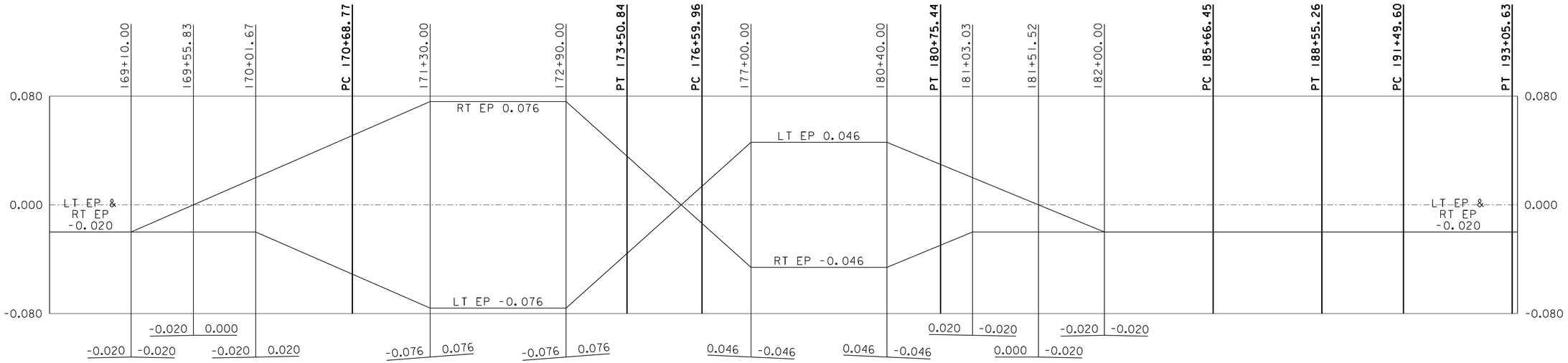
CURVE 13 **CURVE 14** **CURVE 15**



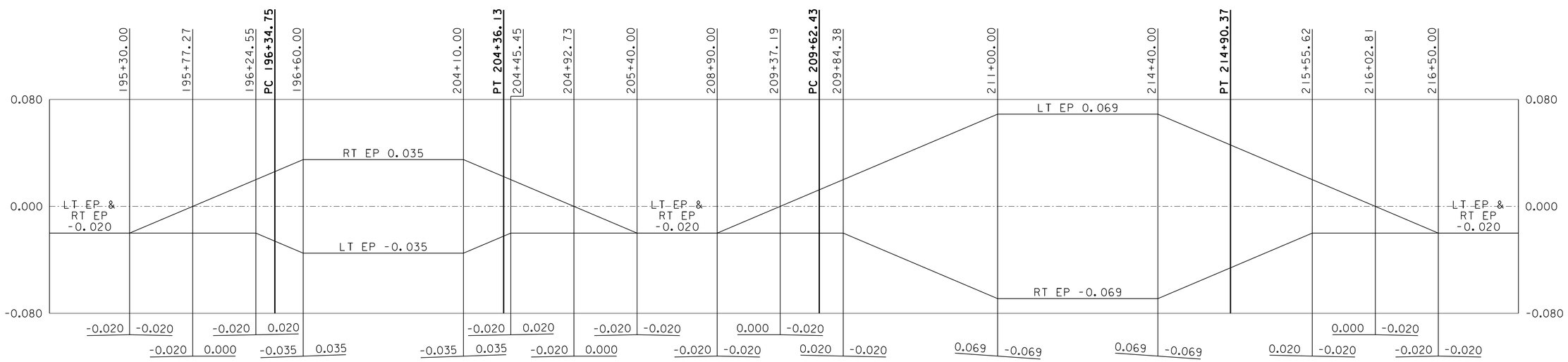
CURVE 15 **CURVE 16** **CURVE 17**

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 3	SHEET 162 OF 303

CLD 12-0337



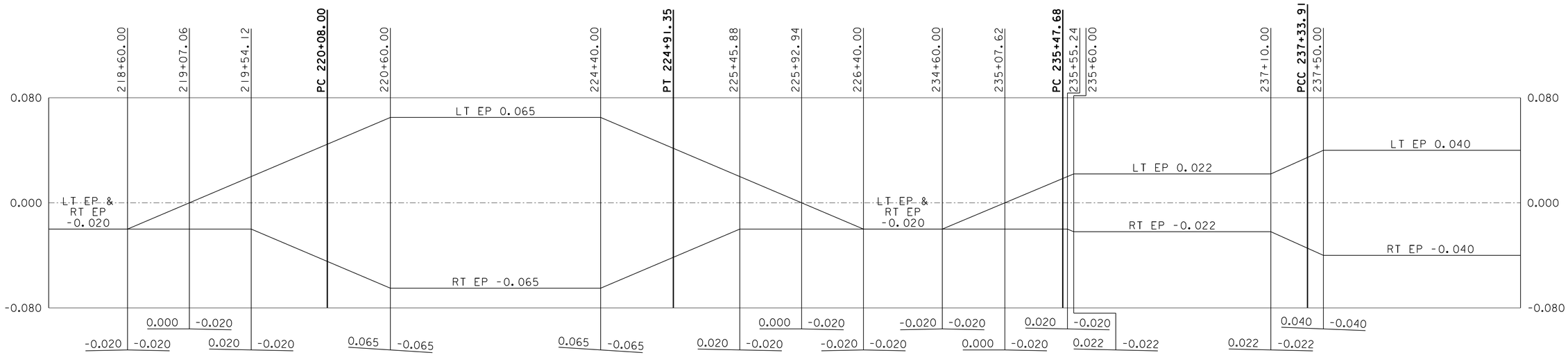
CURVE 18 **CURVE 19** **CURVE 20** **CURVE 21**



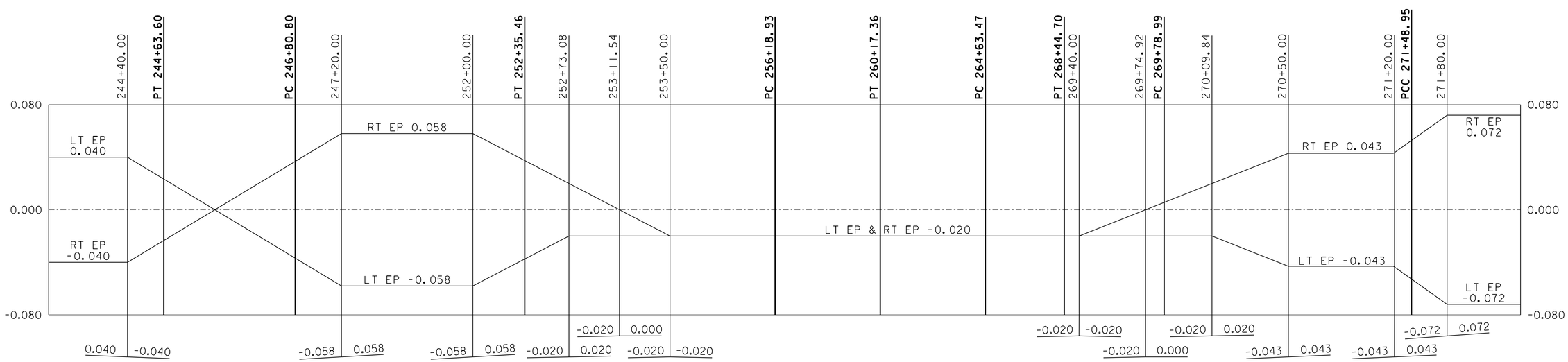
CURVE 22 **CURVE 23**

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 4	SHEET 163 OF 303

CLD 12-0337



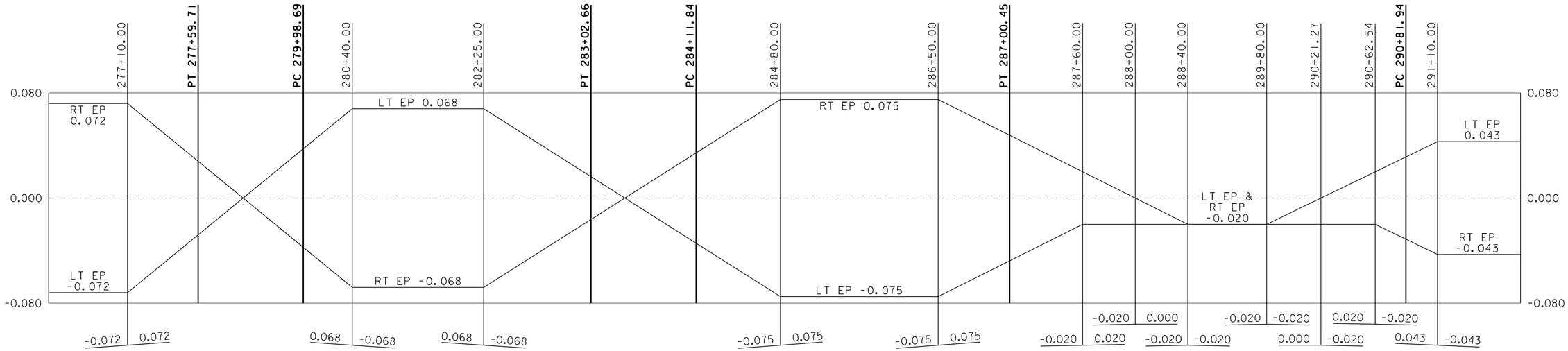
CURVE 24 **CURVE 25** **CURVE 26**



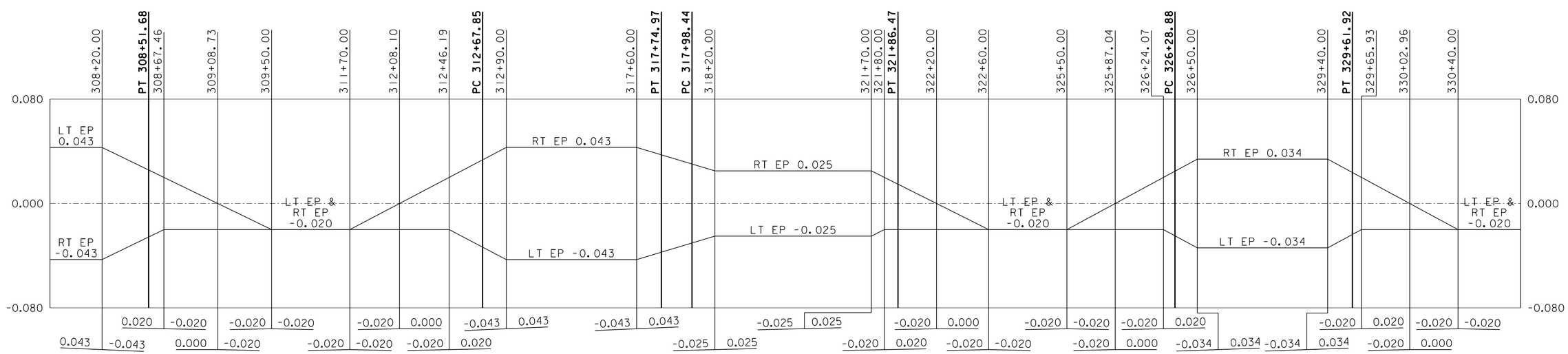
CURVE 26 **CURVE 27** **CURVE 28** **CURVE 29** **CURVE 30** **CURVE 31**

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 5	SHEET 164 OF 303

CLD 12-0337



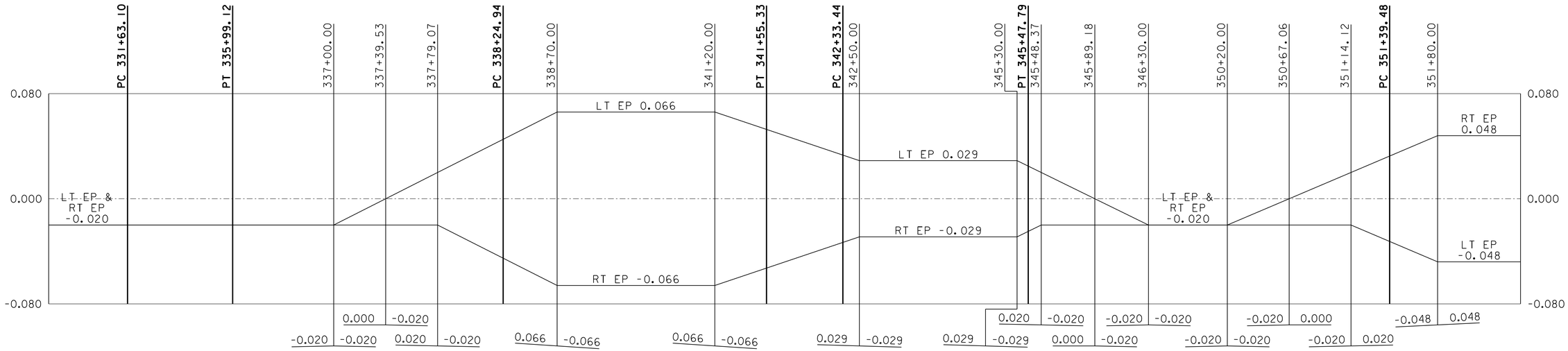
CURVE 31 **CURVE 32** **CURVE 33** **CURVE 34**



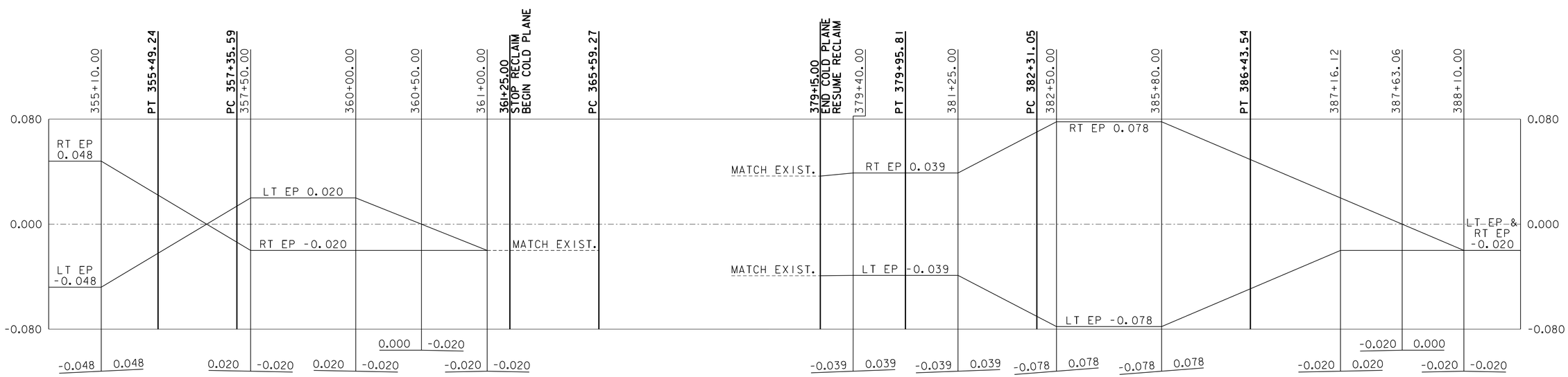
CURVE 34 **CURVE 35** **CURVE 36** **CURVE 37**

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 6	SHEET 165 OF 303

CLD 12-0337



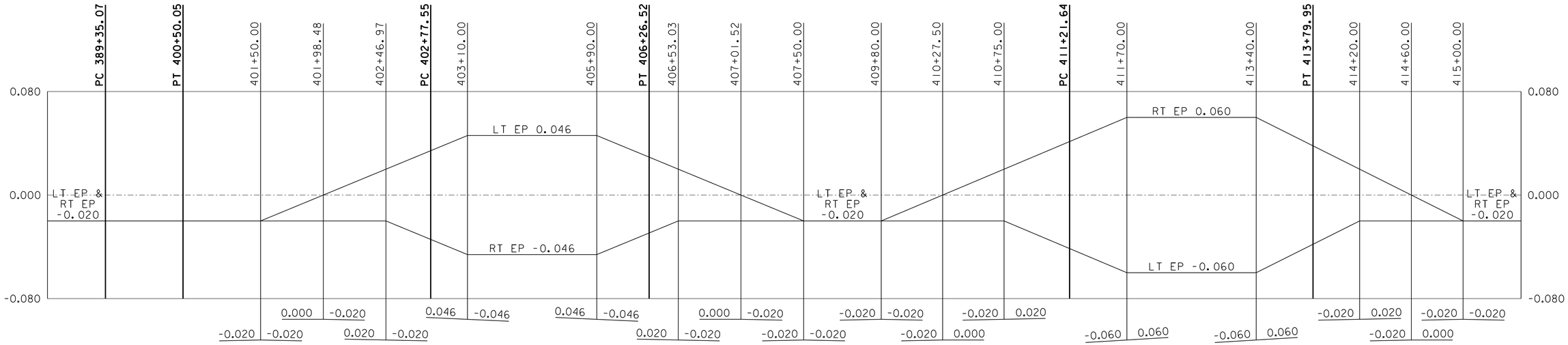
CURVE 38 **CURVE 39** **CURVE 40** **CURVE 41**



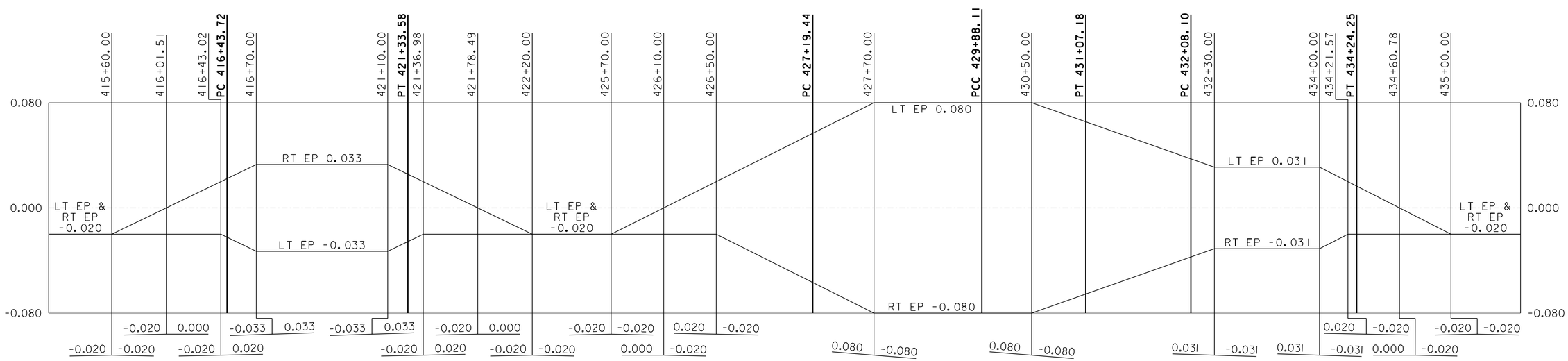
CURVE 41 **CURVE 42** **CURVE 43** **CURVE 44**

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 7	SHEET 166 OF 303

CLD 12-0337



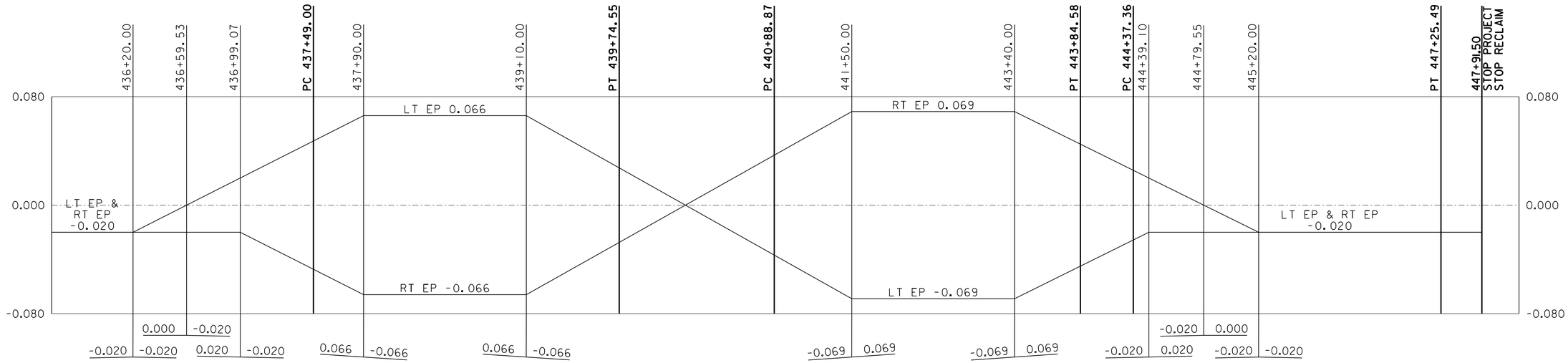
CURVE 45 **CURVE 46** **CURVE 47**



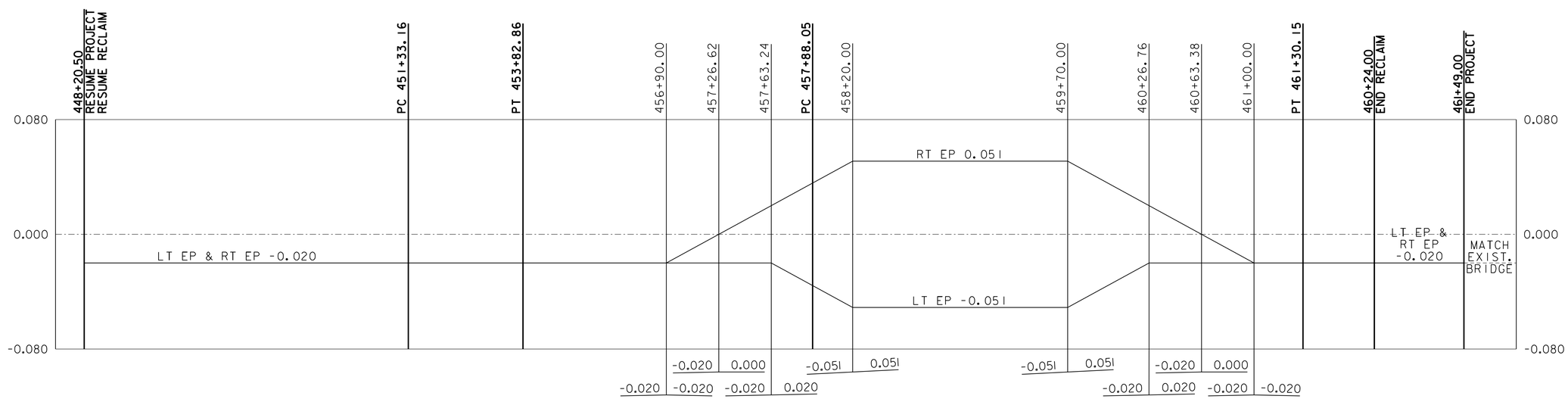
CURVE 48 **CURVE 49** **CURVE 50** **CURVE 51**

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 8	SHEET 167 OF 303

CLD 12-0337



CURVE 52 **CURVE 53** **CURVE 54**



CURVE 55 **CURVE 56**

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194frm.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
BANKING SHEET 9	SHEET 168 OF 303

CLD 12-0337

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	Maximum Banking	Design Speed
Curve 1	PC	34+64.38	506167.120	1703791.949	18000	740.20	2°21'22.07"	Left	NC	50
	PI	38+34.53	505814.092	1703680.668						
	CC		500755.630	1720959.238						
	PT	42+04.58	505456.787	1703583.993						
Tangent	PT	42+04.58	505456.787	1703583.993						
	PC	43+28.81	505336.866	1703551.546						
Curve 2	PC	43+28.81	505336.866	1703551.546	1300	105.31	4°38'29.38"	Right	0.034	35
	PI	43+81.50	505286.010	1703537.786						
	CC		505676.394	1702296.668						
	PT	44+34.13	505236.434	1703519.956						
Tangent	PT	44+34.13	505236.434	1703519.956						
	PC	45+06.27	505168.546	1703495.540						
Curve 3	PC	45+06.27	505168.546	1703495.540	4600	353.11	4°23'53.74"	Left	NC	35
	PI	46+82.91	505002.325	1703435.758						
	CC		503611.764	1707824.100						
	PT	48+59.39	504832.010	1703388.900						
Tangent	PT	48+59.39	504832.010	1703388.900						
	PC	49+85.50	504710.413	1703355.445						
Curve 4	PC	49+85.50	504710.413	1703355.445	2130	127.86	3°26'22.18"	Left	0.028	35
	PI	50+49.45	504648.753	1703338.481						
	CC		504145.386	1705409.136						
	PT	51+13.36	504586.185	1703325.246						
Tangent	PT	51+13.36	504586.185	1703325.246						
	PC	52+55.27	504447.356	1703295.880						
Curve 5	PC	52+55.27	504447.356	1703295.880	450	142.89	18°11'36.96"	Right	RC	35
	PI	53+27.32	504376.864	1703280.969						
	CC		504540.483	1702855.621						
	PT	53+98.16	504314.551	1703244.793						
Tangent	PT	53+98.16	504314.551	1703244.793						
	PC	57+43.96	504015.492	1703071.176						
Curve 6	PC	57+43.96	504015.492	1703071.176	260	341.83	75°19'40.87"	Left	0.060	35
	PI	59+44.65	503841.930	1702970.415						
	CC		503884.953	1703296.030						
	PT	60+85.79	503700.494	1703112.796						
Tangent	PT	60+85.79	503700.494	1703112.796						
	PC	64+94.27	503412.619	1703402.596						
Curve 7	PC	64+94.27	503412.619	1703402.596	290	326.47	64°30'03.28"	Right	0.076	40
	PI	66+77.25	503283.665	1703532.412						
	CC		503206.876	1703198.219						
	PT	68+20.74	503110.979	1703471.904						
Tangent	PT	68+20.74	503110.979	1703471.904						
	PC	71+71.89	502779.583	1703355.786						
Curve 8	PC	71+71.89	502779.583	1703355.786	850	489.25	32°58'43.35"	Left	0.065	40
	PI	74+23.50	502542.129	1703272.584						
	CC		502498.505	1704157.968						
	PT	76+61.14	502297.645	1703332.041						
Tangent	PT	76+61.14	502297.645	1703332.041						
	PC	83+80.33	501598.823	1703501.990						
Curve 9	PC	83+80.33	501598.823	1703501.990	1370	427.73	17°53'18.55"	Right	0.065	50
	PI	85+95.95	501389.309	1703552.943						
	CC		501275.083	1702170.791						
	PT	88+08.06	501174.274	1703537.077						
Tangent	PT	88+08.06	501174.274	1703537.077						
	PC	98+28.67	500156.430	1703461.977						
Curve 10	PC	98+28.67	500156.430	1703461.977	3100	546.73	10°06'17.83"	Left	0.036	50
	PI	101+02.74	499883.097	1703441.809						
	CC		499928.322	1706553.573						
	PT	103+75.40	499610.465	1703469.912						
Tangent	PT	103+75.40	499610.465	1703469.912						
	PC	106+18.25	499368.890	1703494.813						

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	Maximum Banking	Design Speed
Curve 11	PC	106+18.25	499368.890	1703494.813	3050	724.44	13°36'32.56"	Right	0.021	50
	PI	109+82.19	499006.874	1703532.128						
	CC		499056.161	1700460.888						
	PT	113+42.70	498646.241	1703483.216						
Tangent	PT	113+42.70	498646.241	1703483.216						
	PC	115+39.49	498451.236	1703456.767						
Curve 12	PC	115+39.49	498451.236	1703456.767	2900	315.13	6°13'33.52"	Left	0.038	50
	PI	116+97.21	498294.949	1703435.570						
	CC		498061.477	1706330.456						
	PT	118+54.61	498137.286	1703431.447						
Tangent	PT	118+54.61	498137.286	1703431.447						
	PC	126+41.41	497350.761	1703410.879						
Curve 13	PC	126+41.41	497350.761	1703410.879	1950	715.36	21°01'08.65"	Left	0.052	50
	PI	130+03.15	496989.138	1703401.423						
	CC		497299.786	1705360.213						
	PT	133+56.77	496648.185	1703522.302						
Tangent	PT	133+56.77	496648.185	1703522.302						
	PC	137+03.54	496321.348	1703638.177						
Curve 14	PC	137+03.54	496321.348	1703638.177	1800	450.98	14°21'18.09"	Right	0.055	50
	PI	139+30.21	496107.702	1703713.922						
	CC		495719.870	1701941.644						
	PT	141+54.51	495881.948	1703734.332						
Tangent	PT	141+54.51	495881.948	1703734.332						
	PC	144+06.62	495630.862	1703757.033						
Curve 15	PC	144+06.62	495630.862	1703757.033	5200	459.30	5°03'38.90"	Right	0.023	50
	PI	146+36.43	495401.994	1703777.725						
	CC		495162.637	1698578.156						
	PT	148+65.93	495172.193	1703778.148						
Tangent	PT	148+65.93	495172.193	1703778.148						
	PC	154+47.56	494590.559	1703779.216						
Curve 16	PC	154+47.56	494590.559	1703779.216	3600	296.74	4°43'21.86"	Left	0.032	50
	PI	155+96.02	494442.106	1703779.489						
	CC		494597.176	1707379.210						
	PT	157+44.30	494294.180	1703791.984						
Tangent	PT	157+44.30	494294.180	1703791.984						
	PC	162+11.92	493828.216	1703831.342						
Curve 17	PC	162+11.92	493828.216	1703831.342	1025	395.12	22°05'12.28"	Left	0.075	50
	PI	164+11.97	493628.881	1703848.179						
	CC		493914.486	1704852.705						
	PT	166+07.05	493450.504	1703938.732						
Tangent	PT	166+07.05	493450.504	1703938.732						
	PC	170+68.77	493038.800	1704147.735						
Curve 18	PC	170+68.77	493038.800	1704147.735	980	282.08	16°29'30.33"	Left	0.076	50
	PI	172+10.79	492912.162	1704212.023						
	CC		493482.411	1705021.582						
	PT	173+50.84	492808.984	1704309.616						
Tangent	PT	173+50.84	492808.984	1704309.616						
	PC	176+59.96	492584.416	1704522.028						
Curve 19	PC	176+59.96	492584.416	1704522.028	2300	415.48	10°21'00.76"	Right	0.046	50
	PI	178+68.26	492433.080	1704665.172						
	CC		491003.924	1702851.087						
	PT	180+75.44	492258.489	1704778.797						
Tangent	PT	180+75.44	492258.489	1704778.797						
	PC	185+66.45	491846.956	1705046.626						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
HORIZONTAL ALIGNMENT SHEET 1

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 169 OF 303

CLD 12-0337

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	Maximum Banking	Design Speed
Curve 20	PC	185+66.45	491846.956	1705046.626	25000	288.81	0°39'42.84"	Left	NC	50
	PI	187+10.86	491725.924	1705125.394						
	CC		505483.537	1725999.994						
	PT	188+55.26	491605.811	1705205.555						
Tangent	PT	188+55.26	491605.811	1705205.555						
	PC	191+49.60	491360.988	1705368.943						
Curve 21	PC	191+49.60	491360.988	1705368.943	10000	156.03	0°53'38.39"	Right	NC	50
	PI	192+27.61	491296.095	1705412.252						
	CC		485809.898	1697051.168						
	PT	193+05.63	491230.534	1705454.542						
Tangent	PT	193+05.63	491230.534	1705454.542						
	PC	196+34.75	490953.957	1705632.949						
Curve 22	PC	196+34.75	490953.957	1705632.949	3250	801.38	14°07'40.40"	Left	0.035	50
	PI	200+37.49	490615.527	1705851.256						
	CC		492715.664	1708364.046						
	PT	204+36.13	490340.618	1706145.566						
Tangent	PT	204+36.13	490340.618	1706145.566						
	PC	209+62.43	489981.361	1706530.177						
Curve 23	PC	209+62.43	489981.361	1706530.177	1240	527.93	24°23'37.71"	Right	0.069	50
	PI	212+30.46	489798.403	1706726.047						
	CC		489075.189	1705683.741						
	PT	214+90.37	489550.882	1706828.868						
Tangent	PT	214+90.37	489550.882	1706828.868						
	PC	220+08.00	489072.849	1707027.446						
Curve 24	PC	220+08.00	489072.849	1707027.446	1390	483.34	19°55'24.19"	Right	0.065	50
	PI	222+52.14	488847.392	1707121.103						
	CC		488539.613	1705743.796						
	PT	224+91.35	488603.514	1707132.326						
Tangent	PT	224+91.35	488603.514	1707132.326						
	PC	235+47.68	487548.301	1707180.887						
Curve 25	PC	235+47.68	487548.301	1707180.887	3760	186.23	2°50'16.33"	Right	0.022	40
	PI	236+40.81	487455.263	1707185.169						
	CC		487375.447	1703424.863						
	PCC	237+33.91	487362.128	1707184.839						
Curve 26	PCC	237+33.91	487362.128	1707184.839	1828	729.69	22°52'15.20"	Right	0.040	40
	PI	241+03.68	486992.364	1707183.529						
	CC		487368.603	1705356.851						
	PT	244+63.60	486652.179	1707038.612						
Tangent	PT	244+63.60	486652.179	1707038.612						
	PC	246+80.80	486452.347	1706953.484						
Curve 27	PC	246+80.80	486452.347	1706953.484	760	554.66	41°48'54.71"	Left	0.058	35
	PI	249+71.14	486185.242	1706839.698						
	CC		486154.490	1707652.684						
	PT	252+35.46	485910.305	1706932.981						
Tangent	PT	252+35.46	485910.305	1706932.981						
	PC	256+18.93	485547.168	1707056.188						
Curve 28	PC	256+18.93	485547.168	1707056.188	15000	398.43	1°31'18.75"	Right	NC	35
	PI	258+18.16	485358.507	1707120.198						
	CC		480727.718	1692851.509						
	PT	260+17.36	485168.212	1707179.175						
Tangent	PT	260+17.36	485168.212	1707179.175						
	PC	264+63.47	484742.097	1707311.238						
Curve 29	PC	264+63.47	484742.097	1707311.238	18000	381.24	1°12'48.65"	Right	NC	35
	PI	266+54.09	484560.016	1707367.670						
	CC		479413.504	1690118.039						
	PT	268+44.70	484376.780	1707420.232						
Tangent	PT	268+44.70	484376.780	1707420.232						
	PC	269+78.99	484247.699	1707457.260						

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	Maximum Banking	Design Speed
Curve 30	PC	269+78.99	484247.699	1707457.260	925	169.96	10°31'39.81"	Left	0.043	35
	PI	270+64.21	484165.782	1707480.759						
	CC		484502.757	1708346.401						
	PCC	271+48.95	484089.537	1707518.829						
Curve 31	PCC	271+48.95	484089.537	1707518.829	692	610.76	50°34'08.42"	Left	0.072	40
	PI	274+75.83	483797.088	1707664.854						
	CC		484398.670	1708137.942						
	PT	277+59.71	483724.128	1707983.485						
Tangent	PT	277+59.71	483724.128	1707983.485						
	PC	279+98.69	483670.786	1708216.436						
Curve 32	PC	279+98.69	483670.786	1708216.436	775	303.97	22°28'20.53"	Right	0.068	40
	PI	281+52.65	483636.421	1708366.515						
	CC		482915.338	1708043.453						
	PT	283+02.66	483547.300	1708492.062						
Tangent	PT	283+02.66	483547.300	1708492.062						
	PC	284+11.84	483484.100	1708581.092						
Curve 33	PC	284+11.84	483484.100	1708581.092	610	288.61	27°06'30.47"	Left	0.075	40
	PI	285+58.90	483398.975	1708701.009						
	CC		483981.515	1708934.191						
	PT	287+00.45	483377.845	1708846.542						
Tangent	PT	287+00.45	483377.845	1708846.542						
	PC	290+81.94	483323.030	1709224.072						
Curve 34	PC	290+81.94	483323.030	1709224.072	1620	1769.7	62°35'30.37"	Right	0.043	40
	PI	300+66.75	483181.526	1710198.669						
	CC		481719.840	1708991.301						
	PT	308+51.68	482251.189	1710521.682						
Tangent	PT	308+51.68	482251.189	1710521.682						
	PC	312+67.85	481858.041	1710658.184						
Curve 35	PC	312+67.85	481858.041	1710658.184	950	507.12	30°35'06.40"	Left	0.043	30
	PI	315+27.61	481612.653	1710743.383						
	CC		482169.635	1711555.630						
	PT	317+74.97	481444.755	1710941.586						
Tangent	PT	317+74.97	481444.755	1710941.586						
	PC	317+98.44	481429.585	1710959.495						
Curve 36	PC	317+98.44	481429.585	1710959.495	1900	388.03	11°42'04.34"	Left	0.025	30
	PI	319+93.13	481303.744	1711108.049						
	CC		482879.344	1712187.582						
	PT	321+86.47	481210.647	1711279.039						
Tangent	PT	321+86.47	481210.647	1711279.039						
	PC	326+28.88	480999.092	1711667.595						
Curve 37	PC	326+28.88	480999.092	1711667.595	1300	333.04	14°40'41.17"	Left	0.034	30
	PI	327+96.32	480919.028	1711814.646						
	CC		482140.832	1712289.230						
	PT	329+61.92	480878.838	1711977.186						
Tangent	PT	329+61.92	480878.838	1711977.186						
	PC	331+63.10	480830.548	1712172.485						
Curve 38	PC	331+63.10	480830.548	1712172.485	6750	436.02	3°42'03.66"	Right	NC	30
	PI	333+81.18	480778.201	1712384.193						
	CC		474277.888	1710552.255						
	PT	335+99.12	480712.297	1712592.080						
Tangent	PT	335+99.12	480712.297	1712592.080						
	PC	338+24.94	480644.053	1712807.349						
Curve 39	PC	338+24.94	480644.053	1712807.349	810	330.38	23°22'11.67"	Right	0.066	40
	PI	339+92.46	480593.428	1712967.037						
	CC		479871.924	1712562.570						
	PT	341+55.33	480483.614	1713093.545						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99cl94frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
HORIZONTAL ALIGNMENT SHEET 2

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 170 OF 303

CLD 12-0337

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	Maximum Banking	Design Speed
Tangent	PT	341+55.33	480483.614	1713093.545						
	PC	342+33.44	480432.408	1713152.535						
Curve 40	PC	342+33.44	480432.408	1713152.535	2600	314.35	6°55'38.33"	Right	0.029	40
	PI	343+90.81	480329.250	1713271.375						
	CC		478468.957	1711448.170						
	PT	345+47.79	480212.511	1713376.905						
Tangent	PT	345+47.79	480212.511	1713376.905						
	PC	351+39.48	479773.585	1713773.689						
Curve 41	PC	351+39.48	479773.585	1713773.689	2200	409.76	10°40'17.44"	Left	0.048	50
	PI	353+44.95	479621.161	1713911.478						
	CC		481248.900	1715405.696						
	PT	355+49.24	479496.889	1714075.110						
Tangent	PT	355+49.24	479496.889	1714075.110						
	PC	357+35.59	479384.183	1714223.512						
Curve 42	PC	357+35.59	479384.183	1714223.512	6100	409.49	3°50'46.60"	Right	RC	50
	PI	359+40.41	479260.303	1714386.628						
	CC		474526.334	1710534.162						
	PT	361+45.08	479125.760	1714541.066						
Tangent	PT	361+45.08	479125.760	1714541.066						
	PC	365+59.27	478853.689	1714853.370						
Curve 43	PC	365+59.27	478853.689	1714853.370	2860	1436.5	28°46'44.10"	Left	Match Exist./ 0.039	50
	PI	372+93.03	478371.703	1715406.630						
	CC		481010.142	1716732.017						
	PT	379+95.81	478215.607	1716123.596						
Tangent	PT	379+95.81	478215.607	1716123.596						
	PC	382+31.05	478165.563	1716353.452						
Curve 44	PC	382+31.05	478165.563	1716353.452	900	412.48	26°15'34.05"	Left	0.078	50
	PI	384+40.98	478120.904	1716558.575						
	CC		479044.962	1716544.913						
	PT	386+43.54	478171.608	1716762.289						
Tangent	PT	386+43.54	478171.608	1716762.289						
	PC	389+35.07	478242.022	1717045.194						
Curve 45	PC	389+35.07	478242.022	1717045.194	65000	1115.0	0°58'58.17"	Right	NC	50
	PI	394+92.57	478376.676	1717586.191						
	CC		415166.442	1732744.593						
	PT	400+50.05	478502.030	1718129.418						
Tangent	PT	400+50.05	478502.030	1718129.418						
	PC	402+77.55	478553.182	1718351.089						
Curve 46	PC	402+77.55	478553.182	1718351.089	2300	348.97	8°41'35.70"	Right	0.046	50
	PI	404+52.37	478592.490	1718521.432						
	CC		476312.076	1718868.241						
	PT	406+26.52	478605.600	1718695.760						
Tangent	PT	406+26.52	478605.600	1718695.760						
	PC	411+21.64	478642.730	1719189.495						
Curve 47	PC	411+21.64	478642.730	1719189.495	1160	258.30	12°45'29.54"	Left	0.060	50
	PI	412+51.33	478652.456	1719318.817						
	CC		479799.464	1719102.505						
	PT	413+79.95	478690.500	1719442.797						
Tangent	PT	413+79.95	478690.500	1719442.797						
	PC	416+43.72	478767.880	1719694.968						
Curve 48	PC	416+43.72	478767.880	1719694.968	2300	489.86	12°12'11.06"	Left	0.033	40
	PI	418+89.58	478840.005	1719930.013						
	CC		480966.688	1719020.251						
	PT	421+33.58	478960.183	1720144.501						
Tangent	PT	421+33.58	478960.183	1720144.501						
	PC	427+19.44	479246.553	1720655.599						
Curve 49	PC	427+19.44	479246.553	1720655.599	350	268.67	43°58'56.35"	Right	0.080	40
	PI	428+60.79	479315.643	1720778.909						
	CC		478941.215	1720826.680						
	PCC	429+88.11	479279.727	1720915.616						

Element	Point Type	Station	Northing	Easting	Radius	Length	Delta / Theta	Rotation Direction	Maximum Banking	Design Speed
Curve 50	PCC	429+88.11	479279.727	1720915.616	700	119.06	9°44'43.12"	Right	0.080	40
	PI	430+47.79	479264.564	1720973.332						
	CC		478602.703	1720737.745						
	PT	431+07.18	479239.850	1721027.648						
Tangent	PT	431+07.18	479239.850	1721027.648						
	PC	432+08.10	479198.054	1721119.507						
Curve 51	PC	432+08.10	479198.054	1721119.507	2500	216.15	4°57'13.67"	Right	0.031	40
	PI	433+16.24	479153.267	1721217.939						
	CC		476922.529	1720084.139						
	PT	434+24.25	479100.147	1721312.137						
Tangent	PT	434+24.25	479100.147	1721312.137						
	PC	437+49.00	478940.627	1721595.015						
Curve 52	PC	437+49.00	478940.627	1721595.015	587	225.54	22°00'53.46"	Right	0.066	40
	PI	438+63.18	478884.542	1721694.471						
	CC		478429.323	1721306.681						
	PT	439+74.55	478795.266	1721765.652						
Tangent	PT	439+74.55	478795.266	1721765.652						
	PC	440+88.87	478705.873	1721836.926						
Curve 53	PC	440+88.87	478705.873	1721836.926	525	295.70	32°16'17.98"	Left	0.069	40
	PI	442+40.76	478587.112	1721931.615						
	CC		479033.165	1722247.420						
	PT	443+84.58	478537.255	1722075.088						
Tangent	PT	443+84.58	478537.255	1722075.088						
	PC	444+37.36	478519.929	1722124.945						
Curve 54	PC	444+37.36	478519.929	1722124.945	990	288.13	16°40'30.67"	Left	NC	40
	PI	445+82.45	478472.304	1722261.994						
	CC		479455.074	1722449.912						
	PT	447+25.49	478466.007	1722406.946						
Tangent	PT	447+25.49	478466.007	1722406.946						
	POE	448+05.97	478462.514	1722487.356						
US Route 5										
Tangent	POB	448+06.00	478190.043	1722521.982						
	PC	451+33.16	478190.525	1722849.143						
Curve 55	PC	451+33.16	478190.525	1722849.143	5410	249.70	2°38'40.20"	Left	NC	40
	PI	452+58.03	478190.709	1722974.015						
	CC		483600.519	1722841.171						
	PT	453+82.86	478196.654	1723098.745						
Tangent	PT	453+82.86	478196.654	1723098.745						
	PC	457+88.05	478215.946	1723503.475						
Curve 56	PC	457+88.05	478215.946	1723503.475	965	342.10	20°18'43.10"	Left	0.051	40
	PI	459+60.92	478224.176	1723676.145						
	CC		479179.851	1723457.531						
	PT	461+30.15	478291.834	1723835.220						
Tangent	PT	461+30.15	478291.834	1723835.220						
	POE	467+46.05	478532.888	1724401.984						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
HORIZONTAL ALIGNMENT SHEET 3

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 171 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	POB	41+00.00	703.17	25	8.67%				
	PVI	41+25.00	705.34						
Linear	PVI	41+25.00	705.34	25	8.21%				
	PVI	41+50.00	707.39						
Linear	PVI	41+50.00	707.39	25	7.19%				
	PVI	41+75.00	709.19						
Linear	PVI	41+75.00	709.19	25	6.29%				
	PVI	42+00.00	710.76						
Linear	PVI	42+00.00	710.76	25	2.04%				
	PVI	42+25.00	711.27						
Linear	PVI	42+25.00	711.27	25	1.08%				
	PVI	42+50.00	711.54						
Linear	PVI	42+50.00	711.54	25	-1.81%				
	PVI	42+75.00	711.09						
Linear	PVI	42+75.00	711.09	25	-2.26%				
Linear	PVI	43+00.00	710.52	44	-2.64%				
	PVC	43+44.00	709.36						
Symmetrical Parabola	PVC	43+44.00	709.36	170	-2.64%	1.96%	37	0.98	
	POVC	43+50.00	709.21						
	POVC	44+00.00	708.31						
	PVI	44+29.00	707.12						
	VLOW	44+41.50	708.08						
	POVC	44+50.00	708.09						
	POVC	45+00.00	708.54						
	PVRC	45+14.00	708.79						
Symmetrical Parabola	PVRC	45+14.00	708.79	98	1.96%	-2.14%	24	-0.50	312
	POVC	45+50.00	709.22						
	VHIGH	45+60.92	709.25						
	PVI	45+63.00	709.75						
	POVC	46+00.00	708.93						
	PVT	46+12.00	708.70						
Linear	PVT	46+12.00	708.70	24	-2.14%				
	PVC	46+36.00	708.19						
Symmetrical Parabola	PVC	46+36.00	708.19	102	-2.14%	-1.06%	94	0.14	
	POVC	46+50.00	707.90						
	PVI	46+87.00	707.10						
	POVC	47+00.00	707.04						
	PVT	47+38.00	706.56						
Linear	PVT	47+38.00	706.56	56.5	-1.06%				
	POVT	47+50.00	706.43						
	PVC	47+94.50	705.96						
Symmetrical Parabola	PVC	47+94.50	705.96	65	-1.06%	-2.39%	49	-0.11	842
	POVC	48+00.00	705.90						
	PVI	48+27.00	705.62						
	POVC	48+50.00	705.06						
	PVT	48+59.50	704.84						
Linear	PVT	48+59.50	704.84	25.5	-2.39%				
	PVC	48+85.00	704.23						
Symmetrical Parabola	PVC	48+85.00	704.23	120	-2.39%	-0.51%	64	0.28	
	POVC	49+00.00	703.89						
	PVI	49+45.00	702.80						
	POVC	49+50.00	703.01						
	POVC	50+00.00	702.52						
	PVT	50+05.00	702.49						
Linear	PVT	50+05.00	702.49	68	-0.51%				
	POVT	50+50.00	702.26						
	PVC	50+73.00	702.14						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	50+73.00	702.14	106	-0.51%	-2.79%	46	-0.30	526
	POVC	51+00.00	701.93						
	PVI	51+26.00	701.87						
	POVC	51+50.00	701.11						
	PVT	51+79.00	700.39						
Linear	PVT	51+79.00	700.39	72	-2.79%				
	POVT	52+00.00	699.80						
	POVT	52+50.00	698.41						
	PVC	52+51.00	698.38						
Symmetrical Parabola	PVC	52+51.00	698.38	70	-2.79%	-4.40%	44	-0.14	707
	PVI	52+86.00	697.40						
	POVC	53+00.00	696.73						
	PVT	53+21.00	695.86						
Linear	PVT	53+21.00	695.86	69	-4.40%				
	PVOT	53+50.00	694.58						
	PVC	53+90.00	692.82						
Symmetrical Parabola	PVC	53+90.00	692.82	142	-4.40%	-1.57%	50	0.50	
	POVC	54+00.00	692.39						
	POVC	54+50.00	690.54						
	PVI	54+61.00	689.70						
	POVC	55+00.00	689.19						
	PVT	55+32.00	688.58						
Linear	PVT	55+32.00	688.58	78.0	-1.57%				
	POVT	55+50.00	688.30						
	POVT	56+00.00	687.52						
	PVC	56+10.00	687.36						
Symmetrical Parabola	PVC	56+10.00	687.36	250	-1.57%	-4.03%	102	-0.77	564
	POVC	56+50.00	686.65						
	POVC	57+00.00	685.55						
	PVI	57+35.00	685.40						
	POVC	57+50.00	684.20						
	POVC	58+00.00	682.60						
	POVC	58+50.00	680.76						
	PVT	58+60.00	680.36						
Linear	PVT	58+60.00	680.36	40	-4.03%				
	PVC	59+00.00	678.75						
Symmetrical Parabola	PVC	59+00.00	678.75	70	-4.03%	-2.62%	50	0.12	
	POVC	59+00.00	678.75						
	PVI	59+35.00	677.34						
	POVC	59+50.00	676.99						
	PVT	59+70.00	676.42						
Linear	PVT	59+70.00	676.42	77	-2.62%				
	POVT	60+00.00	675.64						
	PVI	60+47.00	674.41						
Linear	PVI	60+47.00	674.41	39	-2.25%				
	POVT	60+50.00	674.34						
	PVI	60+86.00	673.53						
Linear	PVI	60+86.00	673.53	50	-1.13%				
	POVT	61+00.00	673.37						
	PVI	61+36.00	672.97						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 1

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 172 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVI	61+36.00	672.97	79	-0.93%				
Bridge 25									
Linear	PVI	62+15.00	672.23						
Linear	PVI	62+15.00	672.23	50	-1.53%				
	POVT	62+50.00	671.70						
	PVI	62+65.00	671.47						
Linear	PVI	62+65.00	671.47	34.5	-1.15%				
	PVC	62+99.50	671.07						
Symmetrical Parabola	PVC	62+99.50	671.07	59	-1.15%	-0.79%	165	0.03	
	POVC	63+00.00	671.07						
	PVI	63+29.00	670.74						
	POVC	63+50.00	670.57						
	PVT	63+58.50	670.50						
Linear	PVT	63+58.50	670.50	180.5	-0.79%				
	POVT	64+00.00	670.17						
	POVT	64+50.00	669.78						
	POVT	65+00.00	669.38						
	PVC	65+39.00	669.08						
Symmetrical Parabola	PVC	65+39.00	669.08	250	-0.79%	3.59%	57	1.37	
	POVC	65+50.00	669.00						
	VLOW	65+84.13	668.90						
	POVC	66+00.00	668.92						
	POVC	66+50.00	669.28						
	PVI	66+64.00	668.09						
	POVC	67+00.00	670.07						
	POVC	67+50.00	671.31						
	PVT	67+89.00	672.57						
Linear	PVT	67+89.00	672.57	62	3.59%				
	POVT	68+00.00	672.97						
	POVT	68+50.00	674.76						
	PVC	68+51.00	674.80						
Symmetrical Parabola	PVC	68+51.00	674.80	80	3.59%	4.66%	75	0.11	
	PVI	68+91.00	676.23						
	POVC	69+00.00	676.72						
	PVT	69+31.00	678.10						
Linear	PVT	69+31.00	678.10	35	4.66%				
	POVT	69+50.00	678.98						
	PVC	69+66.00	679.73						
Symmetrical Parabola	PVC	69+66.00	679.73	80	4.66%	3.57%	73	-0.11	1025
	POVC	70+00.00	681.23						
	PVI	70+06.00	681.59						
	PVT	70+46.00	683.02						
Linear	PVT	70+46.00	683.02	129	3.57%				
	POVT	70+50.00	683.16						
	POVT	71+00.00	684.94						
	POVT	71+50.00	686.73						
	PVC	71+75.00	687.62						
Symmetrical Parabola	PVC	71+75.00	687.62	250	3.57%	0.51%	82	-0.96	478
	POVC	72+00.00	688.47						
	POVC	72+50.00	689.95						
	PVI	73+00.00	692.08						
	POVC	73+50.00	691.98						
	POVC	74+00.00	692.54						
	PVT	74+25.00	692.71						
Linear	PVT	74+25.00	692.71	201	0.51%				
	POVT	74+50.00	692.83						
	POVT	75+00.00	693.09						
	POVT	75+50.00	693.34						
	POVT	76+00.00	693.59						
	PVC	76+26.00	693.72						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	76+26.00	693.72	50	0.51%	0.90%	126	0.02	
	POVC	76+50.00	693.87						
	PVI	76+51.00	693.85						
	PVT	76+76.00	694.08						
Linear	PVT	76+76.00	694.08	504	0.90%				
	POVT	77+00.00	694.29						
	POVT	77+50.00	694.74						
	POVT	78+00.00	695.19						
	POVT	78+50.00	695.65						
	POVT	79+00.00	696.10						
	POVT	79+50.00	696.55						
	POVT	80+00.00	697.00						
	POVT	80+50.00	697.45						
	POVT	81+00.00	697.90						
	POVT	81+50.00	698.35						
	PVC	81+80.00	698.62						
Symmetrical Parabola	PVC	81+80.00	698.62	50	0.90%	0.50%	123	-0.03	2680
	POVC	82+00.00	698.79						
	PVI	82+05.00	698.85						
	PVT	82+30.00	698.97						
Linear	PVT	82+30.00	698.97	55.5	0.50%				
	POVT	82+50.00	699.07						
	PVC	82+85.50	699.25						
Symmetrical Parabola	PVC	82+85.50	699.25	275	0.50%	3.34%	97	0.98	
	POVC	83+00.00	699.33						
	POVC	83+50.00	699.78						
	POVC	84+00.00	700.49						
	PVI	84+23.00	699.93						
	POVC	84+50.00	701.46						
	POVC	85+00.00	702.69						
	POVC	85+50.00	704.17						
	PVT	85+60.50	704.52						
Linear	PVT	85+60.50	704.52	61	3.34%				
	POVT	86+00.00	705.84						
	PVC	86+21.50	706.56						
Symmetrical Parabola	PVC	86+21.50	706.56	325	3.34%	-0.51%	84	-1.56	443
	POVC	86+50.00	707.46						
	POVC	87+00.00	708.81						
	POVC	87+50.00	709.87						
	PVI	87+84.00	711.98						
	POVC	88+00.00	710.63						
	POVC	88+50.00	711.10						
	POVC	89+00.00	711.27						
	VHIGH	89+03.61	711.27						
	PVT	89+46.50	711.16						
Linear	PVT	89+46.50	711.16	23.5	-0.51%				
	POVT	89+50.00	711.14						
	PVC	89+70.00	711.04						
Symmetrical Parabola	PVC	89+70.00	711.04	180	-0.51%	1.33%	98	0.41	
	POVC	90+00.00	710.93						
	VLOW	90+19.69	710.91						
	POVC	90+50.00	710.96						
	PVI	90+60.00	710.58						
	POVC	91+00.00	711.24						
	PVT	91+50.00	711.78						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 2

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 173 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	91+50.00	711.78	495	1.33%				
	POVT	92+00.00	712.45						
	POVT	92+50.00	713.11						
	POVT	93+00.00	713.78						
	POVT	93+50.00	714.44						
	POVT	94+00.00	715.11						
	POVT	94+50.00	715.78						
	POVT	95+00.00	716.44						
	POVT	95+50.00	717.11						
	POVT	96+00.00	717.77						
	PVC	96+45.00	718.37						
Symmetrical Parabola	PVC	96+45.00	718.37	200	1.33%	-0.50%	109	-0.46	689
	POVC	96+50.00	718.44						
	POVC	97+00.00	718.97						
	PVI	97+45.00	719.71						
	POVC	97+50.00	719.27						
	VHIGH	97+90.41	719.34						
	POVC	98+00.00	719.34						
	PVT	98+45.00	719.21						
Linear	PVT	98+45.00	719.21	17.5	-0.50%				
	POVT	98+50.00	719.18						
	PVC	98+62.50	719.12						
Symmetrical Parabola	PVC	98+62.50	719.12	235	-0.50%	2.48%	79	0.87	
	POVC	99+00.00	719.02						
	VLOW	99+01.95	719.02						
	POVC	99+50.00	719.17						
	PVI	99+80.00	718.53						
	POVC	100+00.00	719.63						
	POVC	100+50.00	720.41						
	PVT	100+97.50	721.44						
Linear	PVT	100+97.50	721.44	42.5	2.48%				
	POVT	101+00.00	721.50						
	PVC	101+40.00	722.50						
Symmetrical Parabola	PVC	101+40.00	722.50	190	2.48%	-1.85%	44	-1.03	344
	POVC	101+50.00	722.73						
	POVC	102+00.00	723.57						
	PVI	102+35.00	724.85						
	VHIGH	102+48.83	723.84						
	POVC	102+50.00	723.84						
	POVC	103+00.00	723.55						
	PVT	103+30.00	723.09						
Linear	PVT	103+30.00	723.09	255	-1.85%				
	POVT	103+50.00	722.72						
	POVT	104+00.00	721.80						
	POVT	104+50.00	720.88						
	POVT	105+00.00	719.95						
	POVT	105+50.00	719.03						
	PVC	105+85.00	718.38						
Symmetrical Parabola	PVC	105+85.00	718.38	290	-1.85%	4.10%	49	2.16	
	POVC	106+00.00	718.13						
	POVC	106+50.00	717.61						
	VLOW	106+75.14	717.55						
	POVC	107+00.00	717.61						
	PVI	107+30.00	715.70						
	POVC	107+50.00	718.12						
	POVC	108+00.00	719.15						
	POVC	108+50.00	720.68						
	PVT	108+75.00	721.64						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	108+75.00	721.64	187.5	4.10%				
	POVT	109+00.00	722.67						
	POVT	109+50.00	724.72						
	POVT	110+00.00	726.77						
	POVT	110+50.00	728.82						
	PVC	110+62.50	729.33						
Symmetrical Parabola	PVC	110+62.50	729.33	275	4.10%	2.21%	145	-0.65	708
	POVC	111+00.00	730.82						
	POVC	111+50.00	732.65						
	PVI	112+00.00	734.96						
	POVC	112+50.00	735.80						
	POVC	113+00.00	737.12						
	PVT	113+37.50	738.00						
Linear	PVT	113+37.50	738.00	132	2.21%				
	POVT	113+50.00	738.27						
	POVT	114+00.00	739.38						
	POVT	114+50.00	740.48						
	PVC	114+69.50	740.91						
Symmetrical Parabola	PVC	114+69.50	740.91	375	2.21%	-6.91%	41	-4.27	298
	POVC	115+00.00	741.47						
	POVC	115+50.00	741.90						
	VHIGH	115+60.28	741.91						
	POVC	116+00.00	741.72						
	POVC	116+50.00	740.93						
	PVI	116+57.00	745.05						
	POVC	117+00.00	739.54						
	POVC	117+50.00	737.54						
	POVC	118+00.00	734.93						
	PVT	118+44.50	732.09						
Linear	PVT	118+44.50	732.09	158	-6.91%				
	POVT	118+50.00	731.71						
	POVT	119+00.00	728.26						
	POVT	119+50.00	724.80						
	POVT	120+00.00	721.35						
	PVC	120+02.50	721.17						
Symmetrical Parabola	PVC	120+02.50	721.17	335	-6.91%	-0.10%	49	2.85	
	POVC	120+50.00	718.12						
	POVC	121+00.00	715.40						
	POVC	121+50.00	713.19						
	PVI	121+70.00	709.60						
	POVC	122+00.00	711.49						
	POVC	122+50.00	710.29						
	POVC	123+00.00	709.61						
	PVT	123+37.50	709.43						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 3

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 174 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	123+37.50	709.43	870.5	-0.10%				
	POVT	123+50.00	709.41						
	POVT	124+00.00	709.36						
	POVT	124+50.00	709.31						
	POVT	125+00.00	709.26						
	POVT	125+50.00	709.21						
	POVT	126+00.00	709.15						
	POVT	126+50.00	709.10						
	POVT	127+00.00	709.05						
	POVT	127+50.00	709.00						
	POVT	128+00.00	708.95						
	POVT	128+50.00	708.89						
	POVT	129+00.00	708.84						
	POVT	129+50.00	708.79						
	POVT	130+00.00	708.74						
	POVT	130+50.00	708.69						
	POVT	131+00.00	708.63						
	POVT	131+50.00	708.58						
	POVT	132+00.00	708.53						
	PVC	132+08.00	708.52						
Symmetrical Parabola	PVC	132+08.00	708.52	380	-0.10%	-3.57%	110	-1.65	501
	POVC	132+50.00	708.40						
	POVC	133+00.00	708.04						
	POVC	133+50.00	707.45						
	PVI	133+98.00	708.32						
	POVC	134+00.00	706.64						
	POVC	134+50.00	705.60						
	POVC	135+00.00	704.33						
	POVC	135+50.00	702.83						
	PVT	135+88.00	701.54						
Linear	PVT	135+88.00	701.54	332	-3.57%				
	POVT	136+00.00	701.11						
	POVT	136+50.00	699.32						
	POVT	137+00.00	697.53						
	POVT	137+50.00	695.75						
	POVT	138+00.00	693.96						
	POVT	138+50.00	692.17						
	POVT	139+00.00	690.39						
	PVC	139+20.00	689.67						
Symmetrical Parabola	PVC	139+20.00	689.67	200	-3.57%	-1.86%	117	0.43	
	POVC	139+50.00	688.64						
	POVC	140+00.00	687.09						
	PVI	140+20.00	686.10						
	POVC	140+50.00	685.75						
	POVC	141+00.00	684.63						
	PVT	141+20.00	684.24						
Linear	PVT	141+20.00	684.24	202.5	-1.86%				
	POVT	141+50.00	683.68						
	POVT	142+00.00	682.75						
	POVT	142+50.00	681.82						
	POVT	143+00.00	680.88						
	PVC	143+22.50	680.46						
Symmetrical Parabola	PVC	143+22.50	680.46	325	-1.86%	4.63%	50	2.64	
	POVC	143+50.00	680.03						
	POVC	144+00.00	679.62						
	VLOW	144+15.78	679.60						
	POVC	144+50.00	679.71						
	PVI	144+85.00	677.44						
	POVC	145+00.00	680.30						
	POVC	145+50.00	681.40						
	POVC	146+00.00	682.98						
	PVT	146+47.50	684.96						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	146+47.50	684.96	137.5	4.63%				
	POVT	146+50.00	685.07						
	POVT	147+00.00	687.39						
	POVT	147+50.00	689.70						
	PVC	147+85.00	691.32						
Symmetrical Parabola	PVC	147+85.00	691.32	400	4.63%	-0.85%	73	-2.74	397
	POVC	148+00.00	692.00						
	POVC	148+50.00	694.04						
	POVC	149+00.00	695.74						
	POVC	149+50.00	697.09						
	PVI	149+85.00	700.58						
	POVC	150+00.00	698.10						
	POVC	150+50.00	698.77						
	POVC	151+00.00	699.10						
	VHIGH	151+22.79	699.14						
	POVC	151+50.00	699.09						
	PVT	151+85.00	698.87						
Linear	PVT	151+85.00	698.87	35	-0.85%				
	POVT	152+00.00	698.74						
	PVC	152+20.00	698.57						
Symmetrical Parabola	PVC	152+20.00	698.57	350	-0.85%	3.98%	73	2.11	
	POVC	152+50.00	698.38						
	VLOW	152+81.78	698.31						
	POVC	153+00.00	698.33						
	POVC	153+50.00	698.63						
	PVI	153+95.00	697.08						
	POVC	154+00.00	699.27						
	POVC	154+50.00	700.26						
	POVC	155+00.00	701.59						
	POVC	155+50.00	703.27						
	PVT	155+70.00	704.04						
Linear	PVT	155+70.00	704.04	120	3.98%				
	POVT	156+00.00	705.23						
	POVT	156+50.00	707.22						
	PVC	156+90.00	708.81						
Symmetrical Parabola	PVC	156+90.00	708.81	480	3.98%	-1.85%	82	-3.50	422
	POVC	157+00.00	709.20						
	POVC	157+50.00	710.98						
	POVC	158+00.00	712.45						
	POVC	158+50.00	713.62						
	POVC	159+00.00	714.48						
	PVI	159+30.00	718.35						
	POVC	159+50.00	715.04						
	POVC	160+00.00	715.30						
	VHIGH	160+17.46	715.32						
	POVC	160+50.00	715.25						
	POVC	161+00.00	714.90						
	POVC	161+50.00	714.25						
	PVT	161+70.00	713.91						
Linear	PVT	161+70.00	713.91	160	-1.85%				
	POVT	162+00.00	713.35						
	POVT	162+50.00	712.42						
	POVT	163+00.00	711.50						
	PVC	163+30.00	710.94						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 4

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 175 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	163+30.00	710.94	300	-1.85%	-0.43%	211	0.53	
	POVC	163+50.00	710.58						
	POVC	164+00.00	709.76						
	POVC	164+50.00	709.06						
	PVI	164+80.00	708.16						
	POVC	165+00.00	708.48						
	POVC	165+50.00	708.01						
	POVC	166+00.00	707.67						
	PVT	166+30.00	707.52						
Linear	PVT	166+30.00	707.52	455	-0.43%				
	POVT	166+50.00	707.43						
	POVT	167+00.00	707.22						
	POVT	167+50.00	707.00						
	POVT	168+00.00	706.79						
	POVT	168+50.00	706.57						
	POVT	169+00.00	706.36						
	POVT	169+50.00	706.14						
	POVT	170+00.00	705.92						
	POVT	170+50.00	705.71						
	PVC	170+85.00	705.56						
Symmetrical Parabola	PVC	170+85.00	705.56	100	-0.43%	-1.57%	88	-0.14	1000
	POVC	171+00.00	705.48						
	PVI	171+35.00	705.34						
	POVC	171+50.00	705.04						
	PVT	171+85.00	704.56						
Linear	PVT	171+85.00	704.56	727	-1.57%				
	POVT	172+00.00	704.33						
	POVT	172+50.00	703.54						
	POVT	173+00.00	702.76						
	POVT	173+50.00	701.98						
	POVT	174+00.00	701.19						
	POVT	174+50.00	700.41						
	POVT	175+00.00	699.63						
	POVT	175+50.00	698.84						
	POVT	176+00.00	698.06						
	POVT	176+50.00	697.28						
	POVT	177+00.00	696.49						
	POVT	177+50.00	695.71						
	POVT	178+00.00	694.93						
	POVT	178+50.00	694.14						
	POVT	179+00.00	693.36						
	PVC	179+12.00	693.17						
Symmetrical Parabola	PVC	179+12.00	693.17	520	-1.57%	-8.01%	81	-4.19	417
	POVC	179+50.00	692.49						
	POVC	180+00.00	691.31						
	POVC	180+50.00	689.83						
	POVC	181+00.00	688.04						
	POVC	181+50.00	685.93						
	PVI	181+72.00	689.10						
	POVC	182+00.00	683.52						
	POVC	182+50.00	680.80						
	POVC	183+00.00	677.77						
	POVC	183+50.00	674.42						
	POVC	184+00.00	670.77						
	PVT	184+32.00	668.27						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	184+32.00	668.27	532	-8.01%				
	POVT	184+50.00	666.83						
	POVT	185+00.00	662.82						
	POVT	185+50.00	658.82						
	POVT	186+00.00	654.81						
	POVT	186+50.00	650.80						
	POVT	187+00.00	646.80						
	POVT	187+50.00	642.79						
	POVT	188+00.00	638.79						
	POVT	188+50.00	634.78						
	POVT	189+00.00	630.77						
	POVT	189+50.00	626.77						
	PVC	189+64.00	625.65						
Symmetrical Parabola	PVC	189+64.00	625.65	530	-8.01%	-1.53%	82	4.29	
	POVC	190+00.00	622.84						
	POVC	190+50.00	619.21						
	POVC	191+00.00	615.88						
	POVC	191+50.00	612.86						
	POVC	192+00.00	610.14						
	PVI	192+29.00	604.42						
	POVC	192+50.00	607.73						
	POVC	193+00.00	605.63						
	POVC	193+50.00	603.83						
	POVC	194+00.00	602.34						
	POVC	194+50.00	601.15						
	PVT	194+94.00	600.36						
Linear	PVT	194+94.00	600.36	476.5	-1.53%				
	POVT	195+00.00	600.27						
	POVT	195+50.00	599.50						
	POVT	196+00.00	598.74						
	POVT	196+50.00	597.97						
	POVT	197+00.00	597.21						
	POVT	197+50.00	596.44						
	POVT	198+00.00	595.68						
	POVT	198+50.00	594.91						
	POVT	199+00.00	594.14						
	POVT	199+50.00	593.38						
	PVC	199+70.50	593.07						
Symmetrical Parabola	PVC	199+70.50	593.07	185	-1.53%	-3.88%	79	-0.54	553
	POVC	200+00.00	592.56						
	POVC	200+50.00	591.45						
	PVI	200+63.00	591.65						
	POVC	201+00.00	590.02						
	POVC	201+50.00	588.28						
	PVT	201+55.50	588.06						
Linear	PVT	201+55.50	588.06	154.5	-3.88%				
	POVT	202+00.00	586.34						
	POVT	202+50.00	584.40						
	POVT	203+00.00	582.46						
	PVC	203+10.00	582.08						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 5

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 176 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	203+10.00	582.08	360	-3.88%	1.73%	64	2.52	
	POVC	203+50.00	580.65						
	POVC	204+00.00	579.22						
	POVC	204+50.00	578.18						
	PVI	204+90.00	575.10						
	POVC	205+00.00	577.52						
	POVC	205+50.00	577.26						
	VLOW	205+59.00	577.25						
	POVC	206+00.00	577.38						
	POVC	206+50.00	577.90						
	PVT	206+70.00	578.21						
Linear	PVT	206+70.00	578.21	302.5	1.73%				
	POVT	207+00.00	578.73						
	POVT	207+50.00	579.59						
	POVT	208+00.00	580.46						
	POVT	208+50.00	581.32						
	POVT	209+00.00	582.18						
	POVT	209+50.00	583.05						
	PVC	209+72.50	583.44						
Symmetrical Parabola	PVC	209+72.50	583.44	475	1.73%	-1.12%	167	-1.69	616
	POVC	210+00.00	583.89						
	POVC	210+50.00	584.60						
	POVC	211+00.00	585.15						
	POVC	211+50.00	585.56						
	POVC	212+00.00	585.81						
	PVI	212+10.00	587.54						
	POVC	212+50.00	585.92						
	VHIGH	212+60.55	585.92						
	POVC	213+00.00	585.88						
	POVC	213+50.00	585.68						
	POVC	214+00.00	585.34						
	PVT	214+47.50	584.88						
Linear	PVT	214+47.50	584.88	285	-1.12%				
	POVT	214+50.00	584.85						
	POVT	215+00.00	584.29						
	POVT	215+50.00	583.73						
	POVT	216+00.00	583.17						
	POVT	216+50.00	582.61						
	POVT	217+00.00	582.05						
	PVC	217+32.50	581.68						
Symmetrical Parabola	PVC	217+32.50	581.68	275	-1.12%	0.48%	172	0.55	
	POVC	217+50.00	581.49						
	POVC	218+00.00	581.06						
	POVC	218+50.00	580.77						
	PVI	218+70.00	580.14						
	POVC	219+00.00	580.62						
	VLOW	219+25.08	580.60						
	POVC	219+50.00	580.62						
	POVC	220+00.00	580.76						
	PVT	220+07.50	580.80						
Linear	PVT	220+07.50	580.80	180	0.48%				
	POVT	220+50.00	581.00						
	POVT	221+00.00	581.24						
	POVT	221+50.00	581.48						
	PVC	221+87.50	581.66						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	221+87.50	581.66	675	0.48%	-0.53%	671	-0.85	1410
	POVC	222+00.00	581.72						
	POVC	222+50.00	581.93						
	POVC	223+00.00	582.11						
	POVC	223+50.00	582.25						
	POVC	224+00.00	582.35						
	POVC	224+50.00	582.41						
	POVC	225+00.00	582.43						
	VHIGH	225+09.41	582.43						
	PVI	225+25.00	583.28						
	POVC	225+50.00	582.42						
	POVC	226+00.00	582.37						
	POVC	226+50.00	582.29						
	POVC	227+00.00	582.16						
	POVC	227+50.00	582.00						
	POVC	228+00.00	581.81						
	POVC	228+50.00	581.57						
	PVT	228+62.50	581.51						
Linear	PVT	228+62.50	581.51	435.5	-0.53%				
	POVT	229+00.00	581.31						
	POVT	229+50.00	581.05						
	POVT	230+00.00	580.78						
	POVT	230+50.00	580.52						
	POVT	231+00.00	580.26						
	POVT	231+50.00	579.99						
	POVT	232+00.00	579.73						
	POVT	232+50.00	579.47						
	PVC	232+98.00	579.21						
Symmetrical Parabola	PVC	232+98.00	579.21	480	-0.53%	6.22%	71	4.05	
	POVC	233+00.00	579.20						
	VLOW	233+35.43	579.11						
	POVC	233+50.00	579.13						
	POVC	234+00.00	579.41						
	POVC	234+50.00	580.04						
	POVC	235+00.00	581.02						
	PVI	235+38.00	577.95						
	POVC	235+50.00	582.35						
	POVC	236+00.00	584.04						
	POVC	236+50.00	586.07						
	POVC	237+00.00	588.46						
	POVC	237+50.00	591.2						
	PVT	237+78.00	592.89						
Linear	PVT	237+78.00	592.89	265	6.22%				
	POVT	238+00.00	594.26						
	POVT	238+50.00	597.37						
	POVT	239+00.00	600.48						
	POVT	239+50.00	603.59						
	POVT	240+00.00	606.70						
	PVC	240+43.00	609.38						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 6

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 177 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	240+43.00	609.38	360	6.22%	1.08%	70	-2.31	390
	POVC	240+50.00	609.81						
	POVC	241+00.00	612.69						
	POVC	241+50.00	615.22						
	POVC	242+00.00	617.39						
	PVI	242+23.00	620.58						
	POVC	242+50.00	619.20						
	POVC	243+00.00	620.65						
	POVC	243+50.00	621.75						
	POVC	244+00.00	622.49						
	PVT	244+03.00	622.52						
Linear	PVT	244+03.00	622.52	142	1.08%				
	POVT	244+50.00	623.03						
	POVT	245+00.00	623.57						
	PVC	245+45.00	624.06						
Symmetrical Parabola	PVC	245+45.00	624.06	360	1.08%	-3.60%	77	-2.11	410
	POVC	245+50.00	624.11						
	POVC	246+00.00	624.45						
	VHIGH	246+27.98	624.51						
	POVC	246+50.00	624.47						
	POVC	247+00.00	624.17						
	PVI	247+25.00	626.00						
	POVC	247+50.00	623.54						
	POVC	248+00.00	622.58						
	POVC	248+50.00	621.30						
	POVC	249+00.00	619.69						
	PVT	249+05.00	619.51						
Linear	PVT	249+05.00	619.51	20	-3.60%				
	PVI	249+25.00	618.79						
Linear	PVI	249+25.00	618.79	75	-3.52%				
	POVT	249+50.00	617.91						
	PVC	250+00.00	616.15						
Symmetrical Parabola	PVC	250+00.00	616.15	324	-3.52%	0.75%	76	1.73	
	POVC	250+50.00	614.56						
	POVC	251+00.00	613.29						
	POVC	251+50.00	612.35						
	PVI	251+62.00	610.45						
	POVC	252+00.00	611.75						
	POVC	252+50.00	611.47						
	VLOW	252+67.05	611.45						
	POVC	253+00.00	611.52						
	PVT	253+24.00	611.66						
Linear	PVT	253+24.00	611.66	280	0.75%				
	POVT	253+50.00	611.86						
	POVT	254+00.00	612.23						
	POVT	254+50.00	612.61						
	POVT	255+00.00	612.98						
	POVT	255+50.00	613.36						
	POVT	256+00.00	613.74						
	PVC	256+04.00	613.77						
Symmetrical Parabola	PVC	256+04.00	613.77	130	0.75%	-0.84%	82	-0.26	743
	POVC	256+50.00	613.98						
	VHIGH	256+65.37	614						
	PVI	256+69.00	614.25						
	POVC	257+00.00	613.92						
	PVT	257+34.00	613.71						
Linear	PVT	257+34.00	613.71	163	-0.84%				
	POVT	257+50.00	613.57						
	POVT	258+00.00	613.15						
	POVT	258+50.00	612.73						
	PVC	258+97.00	612.34						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	258+97.00	612.34	100	-0.84%	1.12%	51	0.25	
	POVC	259+00.00	612.31						
	VLOW	259+39.78	612.16						
	PVI	259+47.00	611.92						
	POVC	259+50.00	612.17						
	PVT	259+97.00	612.48						
Linear	PVT	259+97.00	612.48	127.5	1.12%				
	POVT	260+00.00	612.51						
	POVT	260+50.00	613.08						
	POVT	261+00.00	613.64						
	PVC	261+24.50	613.91						
Symmetrical Parabola	PVC	261+24.50	613.91	275	1.12%	-1.44%	107	-0.88	558
	POVC	261+50.00	614.17						
	POVC	262+00.00	614.50						
	VHIGH	262+44.88	614.59						
	POVC	262+50.00	614.59						
	PVI	262+62.00	615.46						
	POVC	263+00.00	614.45						
	POVC	263+50.00	614.07						
	PVT	263+99.50	613.47						
Linear	PVT	263+99.50	613.47	192	-1.44%				
	POVT	264+00.00	613.47						
	POVT	264+50.00	612.75						
	POVT	265+00.00	612.02						
	POVT	265+50.00	611.30						
	PVC	265+91.50	610.70						
Symmetrical Parabola	PVC	265+91.50	610.70	325	-1.44%	8.41%	33	4.00	
	POVC	266+00.00	610.59						
	VLOW	266+39.11	610.36						
	POVC	266+50.00	610.38						
	POVC	267+00.00	610.92						
	POVC	267+50.00	612.22						
	PVI	267+54.00	608.36						
	POVC	268+00.00	614.28						
	POVC	268+50.00	617.10						
	POVC	269+00.00	620.68						
	PVT	269+16.50	622.02						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 7

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 178 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
	PVT	269+16.50	622.02						
	POVT	269+50.00	624.84						
	POVT	270+00.00	629.04						
	POVT	270+50.00	633.25						
	POVT	271+00.00	637.45						
	POVT	271+50.00	641.66						
	POVT	272+00.00	645.86						
	POVT	272+50.00	650.07						
	POVT	273+00.00	654.27						
	POVT	273+50.00	658.48						
	POVT	274+00.00	662.68						
	POVT	274+50.00	666.89						
	POVT	275+00.00	671.09						
Linear	POVT	275+50.00	675.30	1245.5	8.41%				
	POVT	276+00.00	679.50						
	POVT	276+50.00	683.71						
	POVT	277+00.00	687.91						
	POVT	277+50.00	692.12						
	POVT	278+00.00	696.32						
	POVT	278+50.00	700.53						
	POVT	279+00.00	704.73						
	POVT	279+50.00	708.94						
	POVT	280+00.00	713.14						
	POVT	280+50.00	717.35						
	POVT	281+00.00	721.55						
	POVT	281+50.00	725.75						
	PVC	281+62.00	726.76						
	PVC	281+62.00	726.76						
	POVC	282+00.00	729.93						
	POVC	282+50.00	734.01						
	POVC	283+00.00	738.00						
Symmetrical Parabola	PVI	283+37.00	741.48	350	8.41%	7.05%	257	-0.60	968
	POVC	283+50.00	741.89						
	POVC	284+00.00	745.68						
	POVC	284+50.00	749.37						
	POVC	285+00.00	752.97						
	PVT	285+12.00	753.81						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
	PVT	285+12.00	753.81						
	POVT	285+50.00	756.49						
	POVT	286+00.00	760.02						
	POVT	286+50.00	763.54						
	POVT	287+00.00	767.06						
	POVT	287+50.00	770.59						
	POVT	288+00.00	774.11						
	POVT	288+50.00	777.64						
	POVT	289+00.00	781.16						
	POVT	289+50.00	784.68						
	POVT	290+00.00	788.21						
	POVT	290+50.00	791.73						
	POVT	291+00.00	795.26						
	POVT	291+50.00	798.78						
	POVT	292+00.00	802.3						
	POVT	292+50.00	805.83						
	POVT	293+00.00	809.35						
	POVT	293+50.00	812.88						
	POVT	294+00.00	816.40						
	POVT	294+50.00	819.92						
	POVT	295+00.00	823.45						
	POVT	295+50.00	826.97						
	POVT	296+00.00	830.50						
	POVT	296+50.00	834.02						
Linear	POVT	297+00.00	837.54	2359	7.05%				
	POVT	297+50.00	841.07						
	POVT	298+00.00	844.59						
	POVT	298+50.00	848.12						
	POVT	299+00.00	851.64						
	POVT	299+50.00	855.16						
	POVT	300+00.00	858.69						
	POVT	300+50.00	862.21						
	POVT	301+00.00	865.73						
	POVT	301+50.00	869.26						
	POVT	302+00.00	872.78						
	POVT	302+50.00	876.31						
	POVT	303+00.00	879.83						
	POVT	303+50.00	883.35						
	POVT	304+00.00	886.88						
	POVT	304+50.00	890.40						
	POVT	305+00.00	893.93						
	POVT	305+50.00	897.45						
	POVT	306+00.00	900.97						
	POVT	306+50.00	904.50						
	POVT	307+00.00	908.02						
	POVT	307+50.00	911.55						
	POVT	308+00.00	915.07						
	POVT	308+50.00	918.59						
	PVC	308+71.00	920.07						
	PVC	308+71.00	920.07						
	POVC	309+00.00	922.02						
	POVC	309+50.00	924.93						
Symmetrical Parabola	PVI	309+70.00	927.05	198	7.05%	2.54%	44	-1.12	339
	POVC	310+00.00	927.27						
	POVC	310+50.00	929.04						
	PVT	310+69.00	929.57						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 8

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 179 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	310+69.00	929.57	64	2.54%				
	POVT	311+00.00	930.36						
	PVC	311+33.00	931.20						
Symmetrical Parabola	PVC	311+33.00	931.20	170	2.54%	3.21%	255	0.14	
	POVC	311+50.00	931.63						
	POVC	312+00.00	932.99						
	PVI	312+18.00	933.36						
	POVC	312+50.00	934.44						
	POVC	313+00.00	935.99						
	PVT	313+03.00	936.08						
Linear	PVT	313+03.00	936.08	77	3.21%				
	POVT	313+50.00	937.59						
	PVC	313+80.00	938.55						
Symmetrical Parabola	PVC	313+80.00	938.55	150	3.21%	0.60%	57	-0.49	488
	POVC	314+00.00	939.16						
	POVC	314+50.00	940.37						
	PVI	314+55.00	940.96						
	POVC	315+00.00	941.15						
	PVT	315+30.00	941.41						
Linear	PVT	315+30.00	941.41	120	0.60%				
	POVT	315+50.00	941.53						
	POVT	316+00.00	941.82						
	PVC	316+50.00	942.12						
Symmetrical Parabola	PVC	316+50.00	942.12	100	0.60%	0.20%	252	-0.05	2770
	PVI	317+00.00	942.42						
	POVC	317+00.00	942.37						
	PVT	317+50.00	942.52						
Linear	PVT	317+50.00	942.52	246	0.20%				
	POVT	318+00.00	942.62						
	POVT	318+50.00	942.72						
	POVT	319+00.00	942.82						
	POVT	319+50.00	942.92						
	PVC	319+96.00	943.02						
Symmetrical Parabola	PVC	319+96.00	943.02	140	0.20%	-2.40%	54	-0.46	485
	POVC	320+00.00	943.02						
	VHIGH	320+06.81	943.03						
	POVC	320+50.00	942.85						
	PVI	320+66.00	943.16						
	POVC	321+00.00	942.22						
	PVT	321+36.00	941.48						
Linear	PVT	321+36.00	941.48	259	-2.40%				
	POVT	321+50.00	941.14						
	POVT	322+00.00	939.94						
	POVT	322+50.00	938.74						
	POVT	323+00.00	937.54						
	POVT	323+50.00	936.34						
	PVC	323+95.00	935.26						
Symmetrical Parabola	PVC	323+95.00	935.26	350	-2.40%	2.41%	73	2.11	
	POVC	324+00.00	935.14						
	POVC	324+50.00	934.15						
	POVC	325+00.00	933.50						
	POVC	325+50.00	933.19						
	VLOW	325+69.54	933.16						
	PVI	325+70.00	931.06						
	POVC	326+00.00	933.23						
	POVC	326+50.00	933.61						
	POVC	327+00.00	934.33						
	PVT	327+45.00	935.28						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	327+45.00	935.28	32	2.41%				
	POVT	327+50.00	935.40						
	PVC	327+77.00	936.05						
Symmetrical Parabola	PVC	327+77.00	936.05	220	2.41%	-5.08%	29	-2.06	254
	POVC	328+00.00	936.52						
	VHIGH	328+47.85	936.91						
	POVC	328+50.00	936.91						
	PVI	328+87.00	938.71						
	POVC	329+00.00	936.44						
	POVC	329+50.00	935.13						
	PVT	329+97.00	933.12						
Linear	PVT	329+97.00	933.12	283	-5.08%				
	POVT	330+00.00	932.97						
	POVT	330+50.00	930.43						
	POVT	331+00.00	927.89						
	POVT	331+50.00	925.35						
	POVT	332+00.00	922.81						
	POVT	332+50.00	920.27						
	PVC	332+80.00	918.74						
Symmetrical Parabola	PVC	332+80.00	918.74	80	-5.08%	-8.92%	21	-0.38	321
	POVC	333+00.00	917.63						
	PVI	333+20.00	916.71						
	POVC	333+50.00	914.01						
	PVRC	333+60.00	913.14						
Symmetrical Parabola	PVRC	333+60.00	913.14	124	-8.92%	-6.73%	57	0.34	
	POVC	334+00.00	909.72						
	PVI	334+22.00	907.61						
	POVC	334+50.00	905.83						
	PVRC	334+84.00	903.44						
Symmetrical Parabola	PVRC	334+84.00	903.44	166	-6.73%	-8.60%	89	-0.39	661
	POVC	335+00.00	902.35						
	POVC	335+50.00	898.75						
	PVI	335+67.00	897.85						
	POVC	336+00.00	894.87						
	PVT	336+50.00	890.71						
Linear	PVT	336+50.00	890.71	75	-8.60%				
	POVT	337+00.00	886.41						
	PVC	337+25.00	884.26						
Symmetrical Parabola	PVC	337+25.00	884.26	50	-8.60%	-10.33%	29	-0.11	650
	PVI	337+50.00	882.11						
	POVC	337+50.00	882.00						
	PVT	337+75.00	879.53						
Linear	PVT	337+75.00	879.53	110	-10.33%				
	POVT	338+00.00	876.95						
	POVT	338+50.00	871.78						
	PVC	338+85.00	868.17						
Symmetrical Parabola	PVC	338+85.00	868.17	100	-10.33%	-12.57%	45	-0.28	532
	POVC	339+00.00	866.59						
	PVI	339+35.00	863.00						
	POVC	339+50.00	860.98						
	PVT	339+85.00	856.72						
Linear	PVT	339+85.00	856.72	7.5	-12.57%				
	PVC	339+92.50	855.78						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 9

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 180 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	339+92.50	855.78	275	-12.57%	-5.21%	37	2.53	
	POVC	340+00.00	854.84						
	POVC	340+50.00	849.00						
	POVC	341+00.00	843.82						
	PVI	341+30.00	838.50						
	POVC	341+50.00	839.31						
	POVC	342+00.00	835.46						
	POVC	342+50.00	832.29						
	PVT	342+67.50	831.34						
Linear	PVT	342+67.50	831.34	61.5	-5.21%				
	POVT	343+00.00	829.65						
	PVC	343+29.00	828.14						
Symmetrical Parabola	PVC	343+29.00	828.14	220	-5.21%	-8.08%	76	-0.79	485
	POVC	343+50.00	827.01						
	POVC	344+00.00	824.11						
	PVI	344+39.00	822.41						
	POVC	344+50.00	820.88						
	POVC	345+00.00	817.32						
	PVT	345+49.00	813.52						
Linear	PVT	345+49.00	813.52	154	-8.08%				
	POVT	345+50.00	813.43						
	POVT	346+00.00	809.39						
	POVT	346+50.00	805.35						
	POVT	347+00.00	801.31						
	PVC	347+03.00	801.07						
Symmetrical Parabola	PVC	347+03.00	801.07	510	-8.08%	-2.32%	88	3.67	
	POVC	347+50.00	797.39						
	POVC	348+00.00	793.76						
	POVC	348+50.00	790.4						
	POVC	349+00.00	787.33						
	POVC	349+50.00	784.54						
	PVI	349+58.00	780.45						
	POVC	350+00.00	782.04						
	POVC	350+50.00	779.82						
	POVC	351+00.00	777.88						
	POVC	351+50.00	776.22						
	POVC	352+00.00	774.84						
	PVT	352+13.00	774.53						
Linear	PVT	352+13.00	774.53	157	-2.32%				
	POVT	352+50.00	773.67						
	POVT	353+00.00	772.51						
	POVT	353+50.00	771.35						
	PVC	353+70.00	770.89						
Symmetrical Parabola	PVC	353+70.00	770.89	400	-2.32%	-7.62%	76	-2.65	404
	POVC	354+00.00	770.13						
	POVC	354+50.00	768.61						
	POVC	355+00.00	766.75						
	POVC	355+50.00	764.57						
	PVI	355+70.00	766.25						
	POVC	356+00.00	762.05						
	POVC	356+50.00	759.20						
	POVC	357+00.00	756.02						
	POVC	357+50.00	752.51						
	PVT	357+70.00	751.01						
Linear	PVT	357+70.00	751.01	10	-7.62%				
	PVC	357+80.00	750.25						
Symmetrical Parabola	PVC	357+80.00	750.25	130	-7.62%	-9.71%	62	-0.34	581
	POVC	358+00.00	748.70						
	PVI	358+45.00	745.30						
	POVC	358+50.00	744.52						
	POVC	359+00.00	739.95						
	PVT	359+10.00	738.99						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	359+10.00	738.99	90	-9.71%				
	POVT	359+50.00	735.10						
	PVI	360+00.00	730.25						
Linear	PVI	360+00.00	730.25	125	-9.60%				
	POVT	360+50.00	725.45						
	POVT	361+00.00	720.64						
	PVI	361+25.00	718.24						
I-91 Cold Plane Area (361+25 - 379+15)									
Linear	PVI	379+15.00	682.02	10	-1.43%				
	PVI	379+25.00	681.87						
Linear	PVI	379+25.00	681.87	25	-1.43%				
	PVI	379+50.00	681.52						
Linear	PVI	379+50.00	681.52	25	-1.70%				
	PVI	379+75.00	681.09						
Linear	PVI	379+75.00	681.09	25	-2.24%				
	PVI	380+00.00	680.53						
Linear	PVI	380+00.00	680.53	25	-2.32%				
	PVI	380+25.00	679.95						
Linear	PVI	380+25.00	679.95	15	-2.39%				
	PVI	380+40.00	679.59						
Linear	PVI	380+40.00	679.59	10	-2.43%				
	PVI	380+50.00	679.35						
Linear	PVI	380+50.00	679.35	25	-2.49%				
	PVI	380+75.00	678.73						
Linear	PVI	380+75.00	678.73	25	-2.57%				
	PVI	381+00.00	678.08						
Linear	PVI	381+00.00	678.08	25	-2.66%				
	PVI	381+25.00	677.42						
Linear	PVI	381+25.00	677.42	25	-2.74%				
	PVI	381+50.00	676.73						
Linear	PVI	381+50.00	676.73	25	-2.82%				
	PVI	381+75.00	676.03						
Linear	PVI	381+75.00	676.03	25	-2.91%				
	PVI	382+00.00	675.30						
Linear	PVI	382+00.00	675.30	25	-2.99%				
	PVI	382+25.00	674.55						
Linear	PVI	382+25.00	674.55	25	-3.08%				
	PVI	382+50.00	673.78						
Linear	PVI	382+50.00	673.78	322.5	-3.12%				
	POVT	383+00.00	672.23						
	POVT	383+50.00	670.67						
	POVT	384+00.00	669.11						
	POVT	384+50.00	667.55						
	POVT	385+00.00	665.99						
	POVT	385+50.00	664.43						
	PVC	385+72.50	663.73						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 10

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 181 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	385+72.50	663.73	375	-3.12%	1.64%	79	2.23	
	POVC	386+00.00	662.92						
	POVC	386+50.00	661.69						
	POVC	387+00.00	660.78						
	POVC	387+50.00	660.19						
	PVI	387+60.00	657.88						
	POVC	388+00.00	659.92						
	VLOW	388+18.29	659.90						
	POVC	388+50.00	659.96						
	POVC	389+00.00	660.32						
	PVT	389+47.50	660.96						
Linear	PVT	389+47.50	660.96	96.5	1.64%				
	POVT	389+50.00	661.00						
	POVT	390+00.00	661.82						
	PVC	390+44.00	662.54						
Symmetrical Parabola	PVC	390+44.00	662.54	270	1.64%	-2.79%	61	-1.49	379
	POVC	390+50.00	662.63						
	POVC	391+00.00	663.20						
	VHIGH	391+43.99	663.36						
	POVC	391+50.00	663.35						
	PVI	391+79.00	664.75						
	POVC	392+00.00	663.10						
	POVC	392+50.00	662.44						
	POVC	393+00.00	661.36						
	PVT	393+14.00	660.99						
Linear	PVT	393+14.00	660.99	21	-2.79%				
	PVC	393+35.00	660.40						
Symmetrical Parabola	PVC	393+35.00	660.40	270	-2.79%	0.17%	91	1.00	
	POVC	393+50.00	660.00						
	POVC	394+00.00	658.82						
	POVC	394+50.00	657.92						
	PVI	394+70.00	656.64						
	POVC	395+00.00	657.29						
	POVC	395+50.00	656.94						
	VLOW	395+89.80	656.85						
	POVC	396+00.00	656.86						
	PVT	396+05.00	656.86						
Linear	PVT	396+05.00	656.86	35	0.17%				
	PVC	396+40.00	656.92						
Symmetrical Parabola	PVC	396+40.00	656.92	360	0.17%	-5.79%	60	-2.68	361
	POVC	396+50.00	656.93						
	VHIGH	396+50.06	656.93						
	POVC	397+00.00	656.72						
	POVC	397+50.00	656.10						
	POVC	398+00.00	655.07						
	PVI	398+20.00	657.22						
	POVC	398+50.00	653.63						
	POVC	399+00.00	651.77						
	POVC	399+50.00	649.49						
	PVT	400+00.00	646.81						
Linear	PVT	400+00.00	646.81	108.5	-5.79%				
	POVT	400+50.00	643.91						
	POVT	401+00.00	641.02						
	PVC	401+08.50	640.53						
Symmetrical Parabola	PVC	401+08.50	640.53	175	-5.79%	-7.41%	108	-0.36	750
	POVC	401+50.00	638.05						
	PVI	401+96.00	635.46						
	POVC	402+00.00	634.84						
	POVC	402+50.00	631.41						
	PVT	402+83.50	628.98						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Linear	PVT	402+83.50	628.98	226.5	-7.41%				
	POVT	403+00.00	627.75						
	POVT	403+50.00	624.05						
	POVT	404+00.00	620.34						
	POVT	404+50.00	616.63						
	POVT	405+00.00	612.93						
	PVC	405+10.00	612.18						
Symmetrical Parabola	PVC	405+10.00	612.18	240	-7.41%	-5.01%	100	0.72	
	POVC	405+50.00	609.30						
	POVC	406+00.00	605.92						
	PVI	406+30.00	603.29						
	POVC	406+50.00	602.79						
	POVC	407+00.00	599.91						
	PVT	407+50.00	597.27						
Linear	PVT	407+50.00	597.27	136	-5.01%				
	POVT	408+00.00	594.77						
	POVT	408+50.00	592.26						
	PVC	408+86.00	590.46						
Symmetrical Parabola	PVC	408+86.00	590.46	200	-5.01%	-2.68%	86	0.58	
	POVC	409+00.00	589.77						
	POVC	409+50.00	587.49						
	PVI	409+86.00	585.45						
	POVC	410+00.00	585.51						
	POVC	410+50.00	583.81						
	PVT	410+86.00	582.77						
Linear	PVT	410+86.00	582.77	85	-2.68%				
	POVT	411+00.00	582.39						
	POVT	411+50.00	581.05						
	PVC	411+71.00	580.49						
Symmetrical Parabola	PVC	411+71.00	580.49	230	-2.68%	-10.53%	29	-2.26	253
	POVC	412+00.00	579.57						
	POVC	412+50.00	577.30						
	PVI	412+86.00	577.40						
	POVC	413+00.00	574.19						
	POVC	413+50.00	570.22						
	POVC	414+00.00	565.40						
	PVT	414+01.00	565.30						
Linear	PVT	414+01.00	565.30	140.8	-10.53%				
	POVT	414+50.00	560.14						
	POVT	415+00.00	554.87						
	PVC	415+41.80	550.47						
Symmetrical Parabola	PVC	415+41.80	550.47	280	-10.53%	-6.33%	67	1.47	
	POVC	415+50.00	549.61						
	POVC	416+00.00	544.60						
	POVC	416+50.00	539.96						
	PVI	416+81.80	535.73						
	POVC	417+00.00	535.69						
	POVC	417+50.00	531.80						
	POVC	418+00.00	528.29						
	PVT	418+21.80	526.87						
Linear	PVT	418+21.80	526.87	103.2	-6.33%				
	POVT	418+50.00	525.09						
	POVT	419+00.00	521.93						
	PVC	419+25.00	520.34						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 11

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 182 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	419+25.00	520.34	100	-6.33%	-6.85%	193	-0.06	2131
	POVC	419+50.00	518.75						
	PVI	419+75.00	517.18						
	POVC	420+00.00	515.45						
	PVT	420+25.00	513.76						
Linear	PVT	420+25.00	513.76	168.6	-6.85%				
	POVT	420+50.00	512.05						
	POVT	421+00.00	508.62						
	POVT	421+50.00	505.20						
	PVC	421+93.60	502.22						
Symmetrical Parabola	PVC	421+93.60	502.22	240	-6.85%	-3.38%	69	1.04	
	POVC	422+00.00	501.78						
	POVC	422+50.00	498.58						
	POVC	423+00.00	495.75						
	PVI	423+13.60	494.00						
	POVC	423+50.00	493.27						
	POVC	424+00.00	491.16						
	PVT	424+33.60	489.94						
Linear	PVT	424+33.60	489.94	69.4	-3.38%				
	POVT	424+50.00	489.39						
	POVT	425+00.00	487.70						
	PVC	425+03.00	487.60						
Symmetrical Parabola	PVC	425+03.00	487.60	210	-3.38%	-8.25%	43	-1.28	327
	POVC	425+50.00	485.75						
	POVC	426+00.00	483.23						
	PVI	426+08.00	484.05						
	POVC	426+50.00	480.13						
	POVC	427+00.00	476.44						
	PVT	427+13.00	475.39						
Linear	PVT	427+13.00	475.39	249.5	-8.25%				
	POVT	427+50.00	472.34						
	POVT	428+00.00	468.21						
	POVT	428+50.00	464.09						
	POVT	429+00.00	459.96						
	POVT	429+50.00	455.84						
	PVC	429+62.50	454.81						
Symmetrical Parabola	PVC	429+62.50	454.81	325	-8.25%	-1.65%	49	2.68	
	POVC	430+00.00	451.85						
	POVC	430+50.00	448.36						
	POVC	431+00.00	445.38						
	PVI	431+25.00	441.40						
	POVC	431+50.00	442.91						
	POVC	432+00.00	440.94						
	POVC	432+50.00	439.48						
	PVT	432+87.50	438.72						
Linear	PVT	432+87.50	438.72	506.5	-1.65%				
	POVT	433+00.00	438.52						
	POVT	433+50.00	437.69						
	POVT	434+00.00	436.87						
	POVT	434+50.00	436.05						
	POVT	435+00.00	435.22						
	POVT	435+50.00	434.40						
	POVT	436+00.00	433.58						
	POVT	436+50.00	432.75						
	POVT	437+00.00	431.93						
	POVT	437+50.00	431.11						
	PVC	437+94.00	430.38						

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVC	437+94.00	430.38	150	-1.65%	-0.50%	131	0.22	
	POVC	438+00.00	430.28						
	POVC	438+50.00	429.58						
	PVI	438+69.00	429.15						
	POVC	439+00.00	429.07						
	PVT	439+44.00	428.77						
Linear	PVT	439+44.00	428.77	125	-0.50%				
	POVT	439+50.00	428.74						
	POVT	440+00.00	428.49						
	POVT	440+50.00	428.24						
	PVC	440+69.00	428.15						
Symmetrical Parabola	PVC	440+69.00	428.15	110	-0.50%	-1.88%	80	-0.19	836
	POVC	441+00.00	427.93						
	PVI	441+24.00	427.87						
	POVC	441+50.00	427.33						
	PVT	441+79.00	426.84						
Linear	PVT	441+79.00	426.84	153.5	-1.88%				
	POVT	442+00.00	426.44						
	POVT	442+50.00	425.50						
	POVT	443+00.00	424.56						
	PVC	443+32.50	423.95						
Symmetrical Parabola	PVC	443+32.50	423.95	115	-1.88%	-0.68%	96	0.17	
	POVC	443+50.00	423.64						
	PVI	443+90.00	422.87						
	POVC	444+00.00	422.92						
	PVT	444+47.50	422.48						
Linear	PVT	444+47.50	422.48	32.5	-0.68%				
	POVT	444+50.00	422.46						
	PVC	444+80.00	422.26						
Symmetrical Parabola	PVC	444+80.00	422.26	140	-0.68%	-2.74%	68	-0.36	592
	POVC	445+00.00	422.09						
	PVI	445+50.00	421.78						
	POVC	445+50.00	421.42						
	POVC	446+00.00	420.38						
	PVT	446+20.00	419.86						
Linear	PVT	446+20.00	419.86	46.5	-2.74%				
	POVT	446+50.00	419.04						
	PVI	446+66.50	418.59						
Linear	PVI	446+66.50	418.59	75	-2.64%				
	POVT	447+00.00	417.70						
	PVI	447+41.50	416.61						
Linear	PVI	447+41.50	416.61	50	-2.72%				
	POVT	447+50.00	416.37						
	POE	447+91.50	415.24						
US ROUTE 5									
Linear	POB	448+20.50	412.13	2.5	-3.56%				
	PVC	448+23.00	412.04						
Symmetrical Parabola	PVC	448+23.00	412.04	143	-3.56%	-0.75%	51	0.50	
	POVC	448+50.00	411.15						
	PVI	448+94.50	409.50						
	POVC	449+00.00	409.89						
	POVC	449+50.00	409.11						
	PVCC	449+66.00	408.96						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 12

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 183 OF 303

CLD 12-0337

Element	Type	Station	Elevation	Length	Entrance Grade	Exit Grade	K	Middle Ordinate	SSD/HSD
Symmetrical Parabola	PVCC	449+66.00	408.96	160	-0.75%	1.10%	86	0.37	
	POVC	450+00.00	408.77						
	VLOW	450+31.08	408.72						
	PVI	450+46.00	408.36						
	POVC	450+50.00	408.74						
	POVC	451+00.00	408.99						
	PVT	451+26.00	409.24						
Linear	PVT	451+26.00	409.24	0.96	1.10%				
	PVI	451+26.96	409.25						
Railroad Crossing	PVI	451+26.96	409.25	8.75	3.58%				
	PVI	451+28.96	409.32						
	PVI	451+33.71	409.49						
	PVI	451+35.71	409.56						
Linear	PVI	451+35.71	409.56	14.29	-1.06%				
	PVC	451+50.00	409.41						
Symmetrical Parabola	PVC	451+50.00	409.41	100	-1.06%	-0.93%	766	0.02	
	PVI	452+00.00	408.88						
	POVC	452+00.00	408.90						
	PVT	452+50.00	408.42						
Linear	PVT	452+50.00	408.42	110	-0.93%				
	POVT	453+00.00	407.95						
	POVT	453+50.00	407.49						
	PVC	453+60.00	407.39						
Symmetrical Parabola	PVC	453+60.00	407.39	180	-0.93%	-3.14%	81	-0.50	578
	POVC	454+00.00	406.92						
	PVI	454+50.00	406.56						
	POVC	454+50.00	406.06						
	POVC	455+00.00	404.89						
	PVT	455+40.00	403.73						
Linear	PVT	455+40.00	403.73	122.5	-3.14%				
	POVT	455+50.00	403.42						
	POVT	456+00.00	401.85						
	POVT	456+50.00	400.28						
	PVC	456+62.50	399.88						
Symmetrical Parabola	PVC	456+62.50	399.88	145	-3.14%	-1.29%	78	0.34	
	POVC	457+00.00	398.80						
	PVI	457+35.00	397.61						
	POVC	457+50.00	397.62						
	POVC	458+00.00	396.77						
	PVT	458+07.50	396.67						
Linear	PVT	458+07.50	396.67	69.5	-1.29%				
	POVT	458+50.00	396.12						
	PVC	458+77.00	395.77						
Symmetrical Parabola	PVC	458+77.00	395.77	190	-1.29%	5.89%	26	1.70	
	POVC	459+00.00	395.58						
	VLOW	459+11.16	395.55						
	POVC	459+50.00	395.84						
	PVI	459+72.00	394.55						
	POVC	460+00.00	397.04						
	POVC	460+50.00	399.19						
	PVRC	460+67.00	400.14						
Symmetrical Parabola	PVRC	460+67.00	400.14	66	5.89%	2.57%	20	-0.27	358
	PVI	461+00.00	402.08						
	POVC	461+00.00	401.81						
	PVT	461+33.00	402.93						
Linear	PVT	461+33.00	402.93	16	2.57%				
	POE	461+49.00	403.33						

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

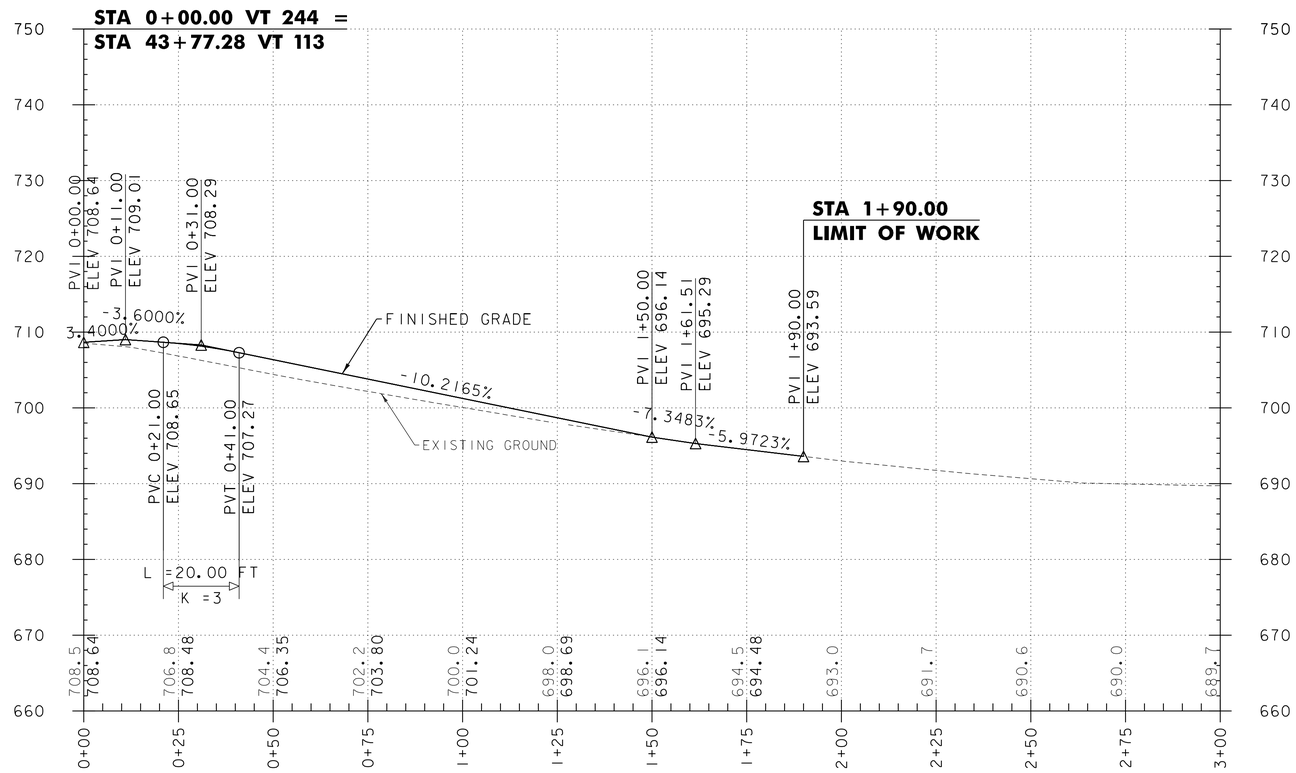
FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
VERTICAL ALIGNMENT SHEET 13

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 184 OF 303

CLD 12-0337

NOTES

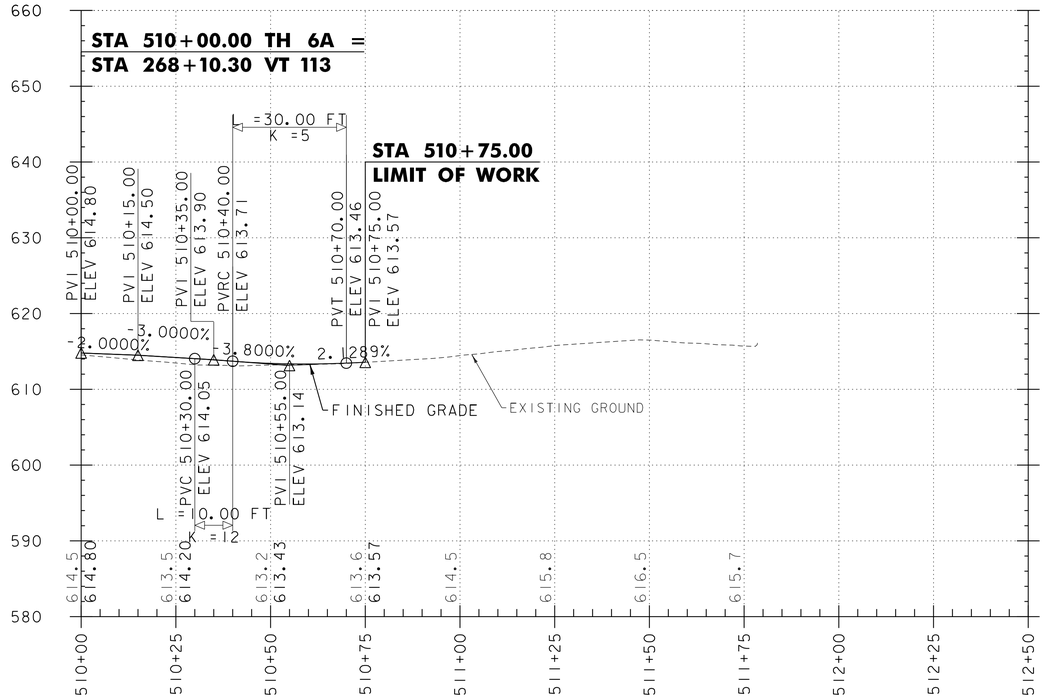
1. STATIONS AND ELEVATIONS ARE IN FEET.
2. THE ELEVATIONS SHOWN TO THE NEAREST TENTH ARE THE EXISTING GROUND ALONG THE CENTERLINE.
3. THE ELEVATIONS SHOWN TO THE NEAREST HUNDRETH ARE THE FINISHED GRADE ALONG THE CENTERLINE.



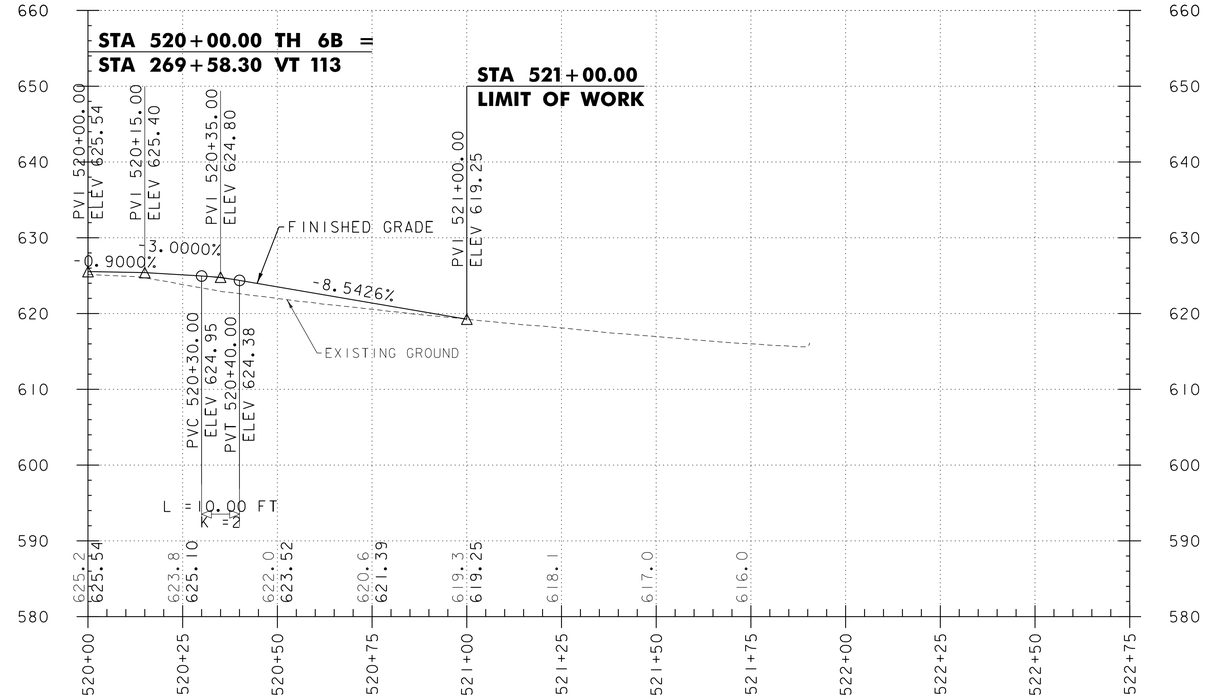
VT ROUTE 244 PROFILE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194proth.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
VT 244 PROFILE	SHEET 185 OF 303

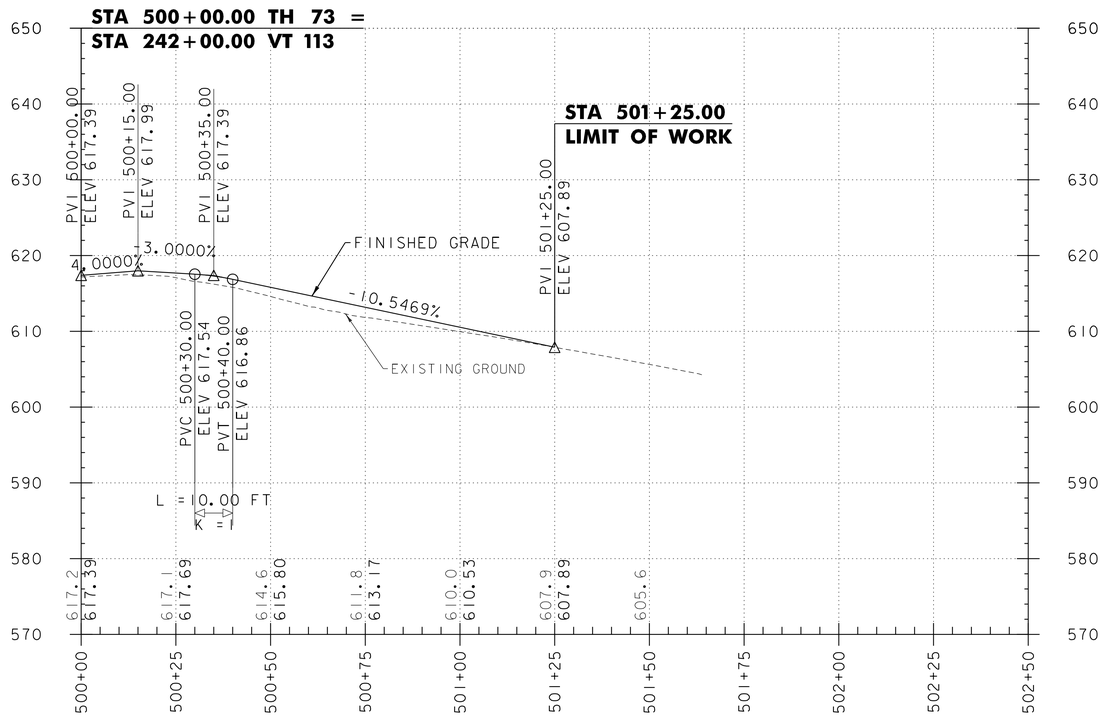
CLD 12-0337



TH 6A (BUZZELL BRIDGE RD)



TH 6B (BUZZELL BRIDGE RD)



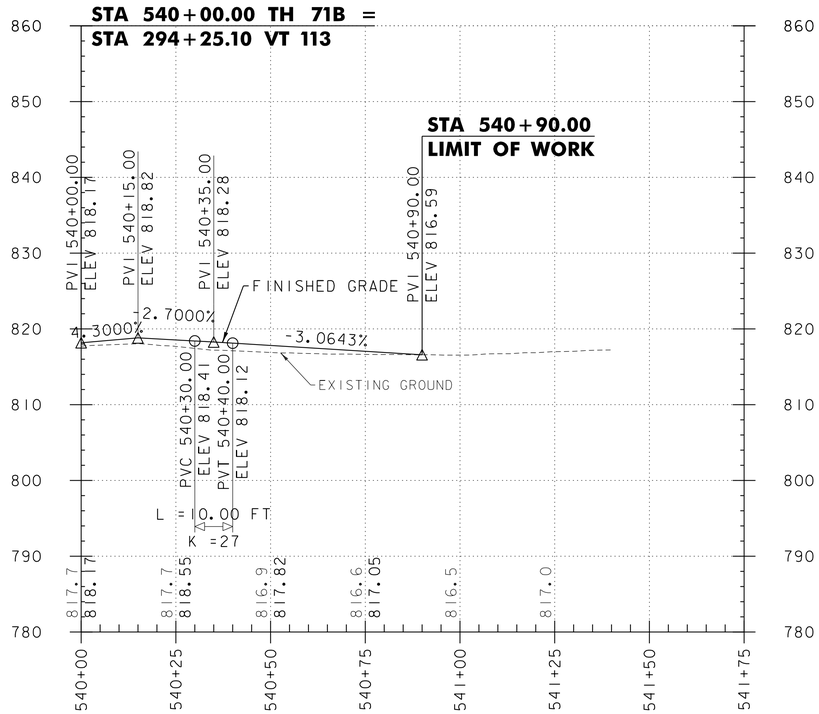
TH 73 (TRUSSELL RD)

NOTES

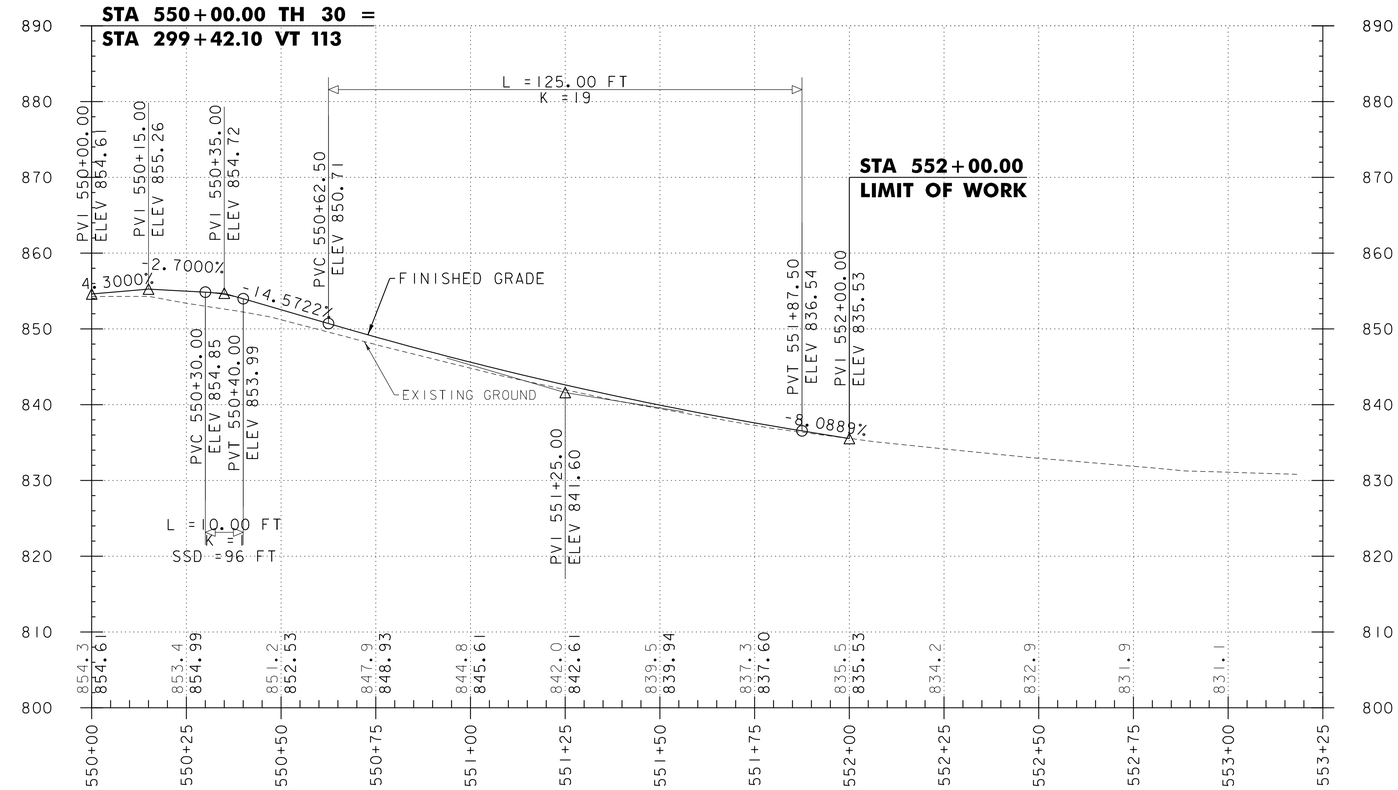
1. STATIONS AND ELEVATIONS ARE IN FEET.
2. THE ELEVATIONS SHOWN TO THE NEAREST TENTH ARE THE EXISTING GROUND ALONG THE CENTERLINE.
3. THE ELEVATIONS SHOWN TO THE NEAREST HUNDRETH ARE THE FINISHED GRADE ALONG THE CENTERLINE.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194proth.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TOWN HIGHWAY PROFILES 1	SHEET 186 OF 303

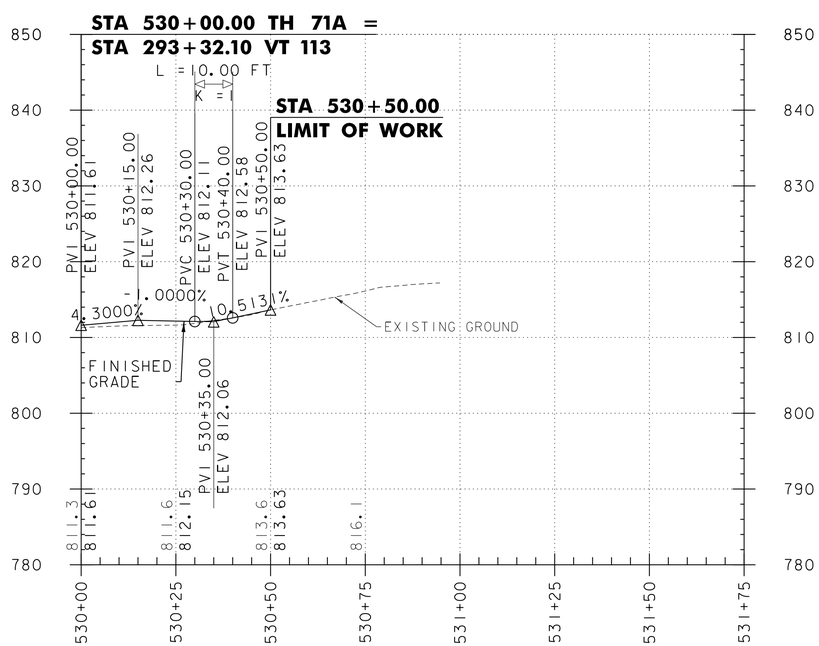
CLD 12-0337



TH 71B (CAMP FARNSWORTH RD)



TH 30 (MUD POND RD)



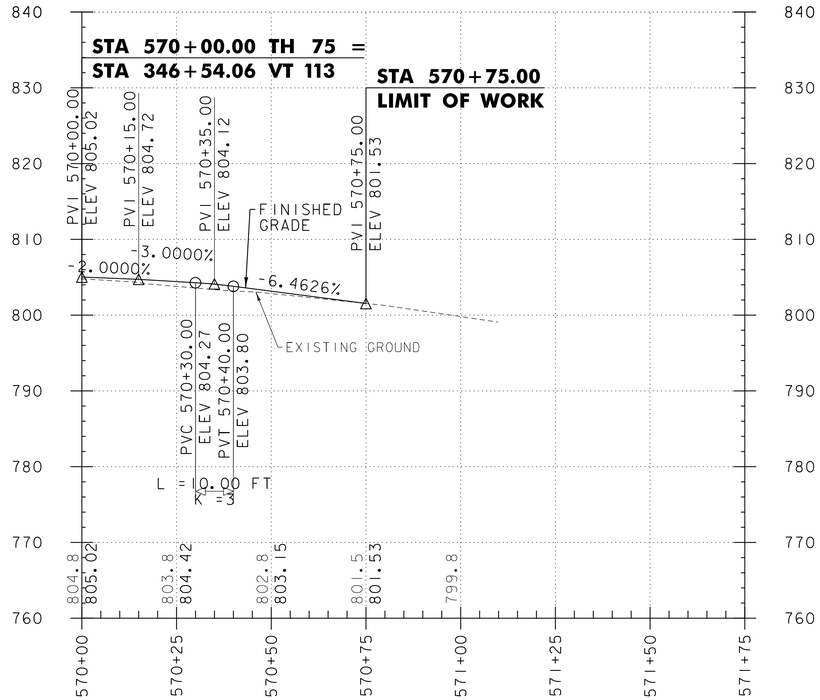
TH 71A (CAMP FARNSWORTH RD)

NOTES

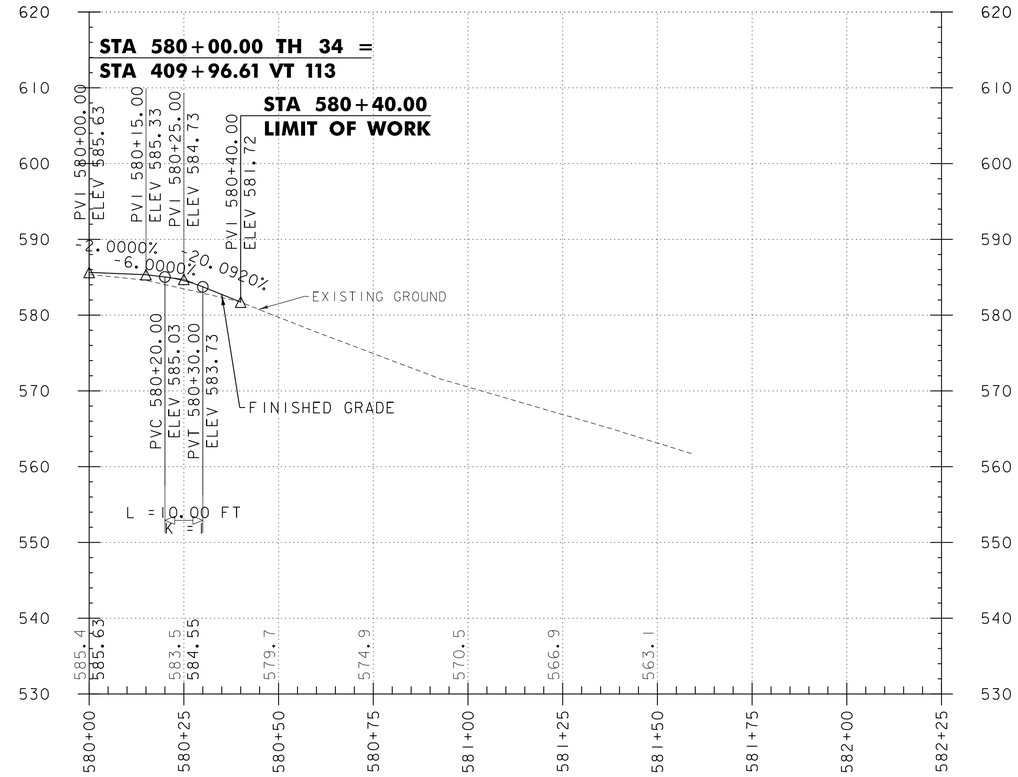
1. STATIONS AND ELEVATIONS ARE IN FEET.
2. THE ELEVATIONS SHOWN TO THE NEAREST TENTH ARE THE EXISTING GROUND ALONG THE CENTERLINE.
3. THE ELEVATIONS SHOWN TO THE NEAREST HUNDRETH ARE THE FINISHED GRADE ALONG THE CENTERLINE.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194proth.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TOWN HIGHWAY PROFILES 2	SHEET 187 OF 303

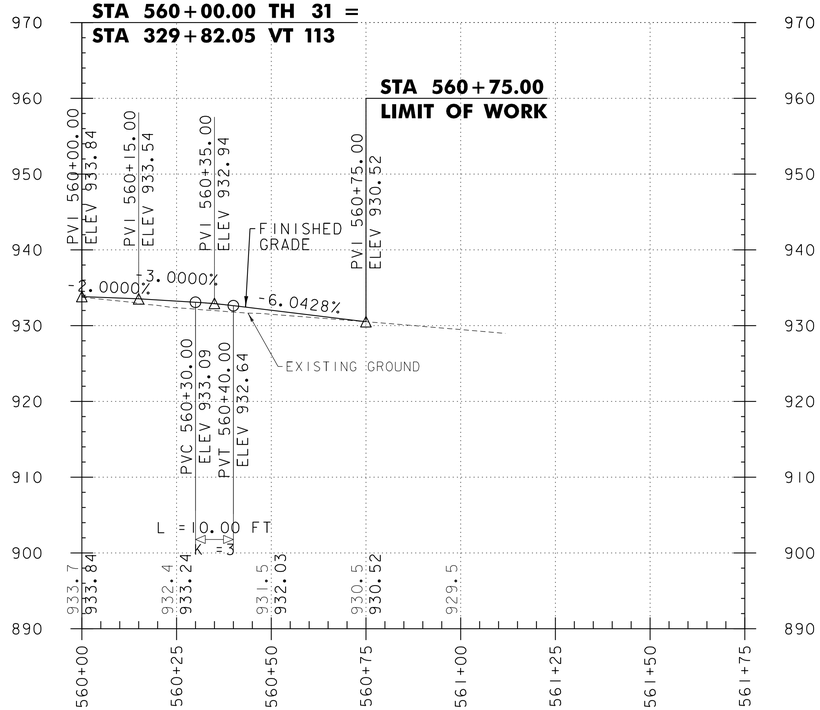
CLD 12-0337



TH 75 (GAREY RD)



TH 34 (CADWELL RD)



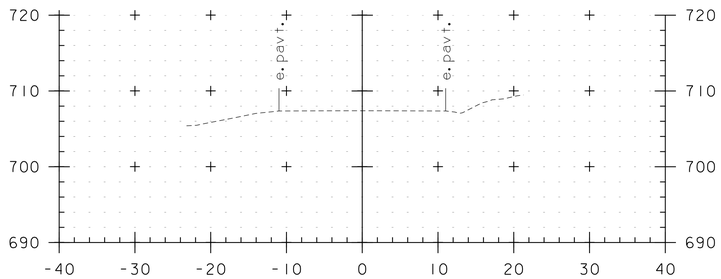
TH 31 (HOUGHTON HILL RD)

NOTES

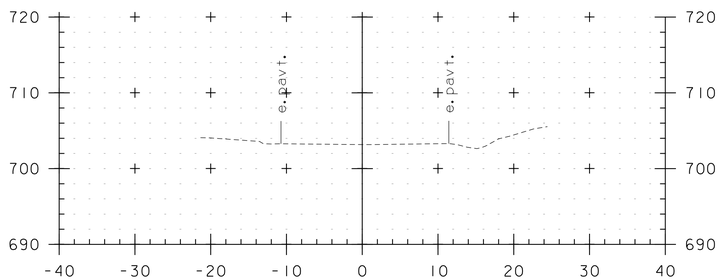
1. STATIONS AND ELEVATIONS ARE IN FEET.
2. THE ELEVATIONS SHOWN TO THE NEAREST TENTH ARE THE EXISTING GROUND ALONG THE CENTERLINE.
3. THE ELEVATIONS SHOWN TO THE NEAREST HUNDRETH ARE THE FINISHED GRADE ALONG THE CENTERLINE.

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194proth.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
TOWN HIGHWAY PROFILES 3	SHEET 188 OF 303

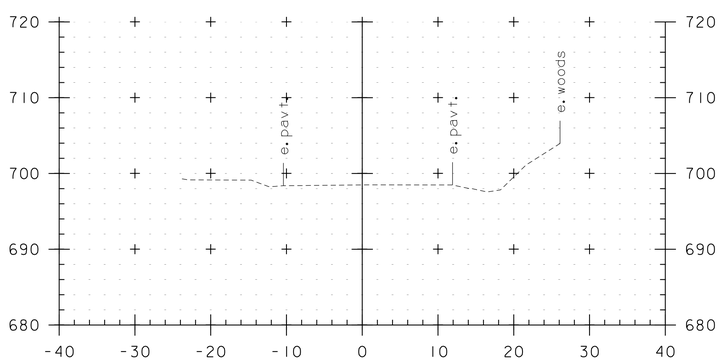
CLD 12-0337



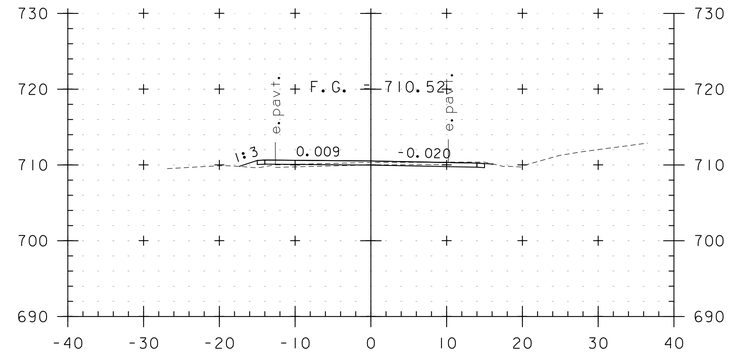
41+50



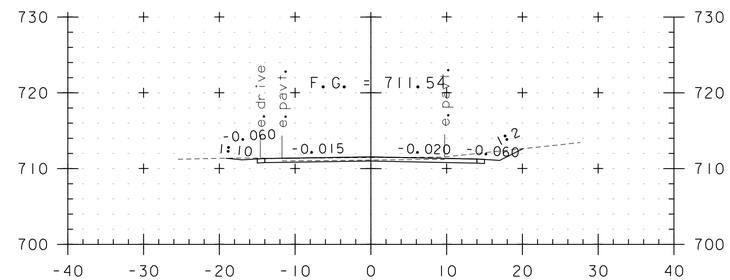
41+00



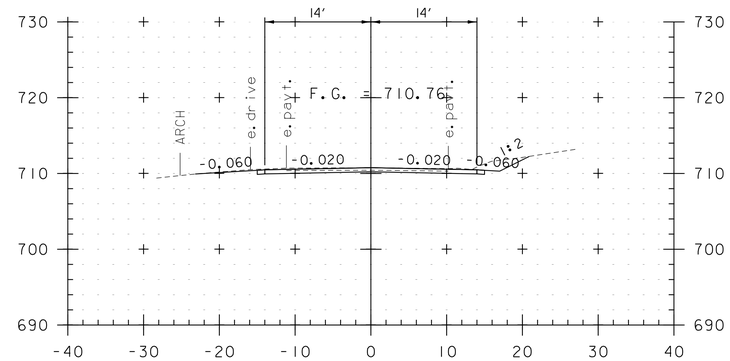
40+50



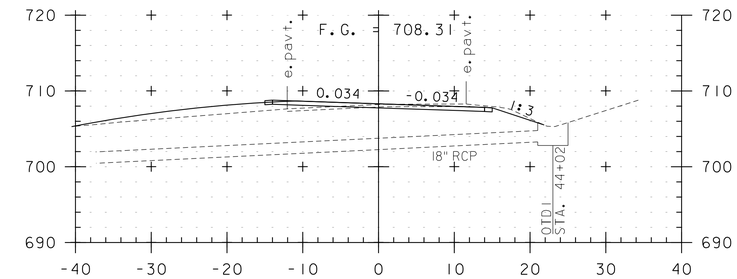
43+00



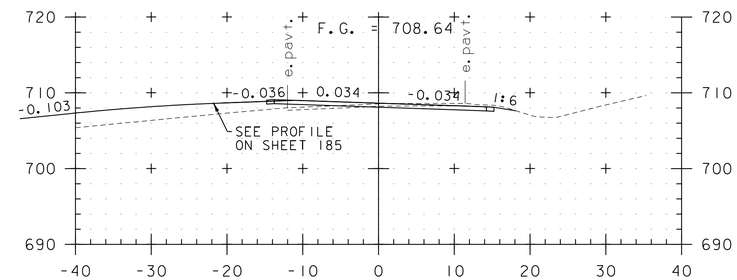
42+50



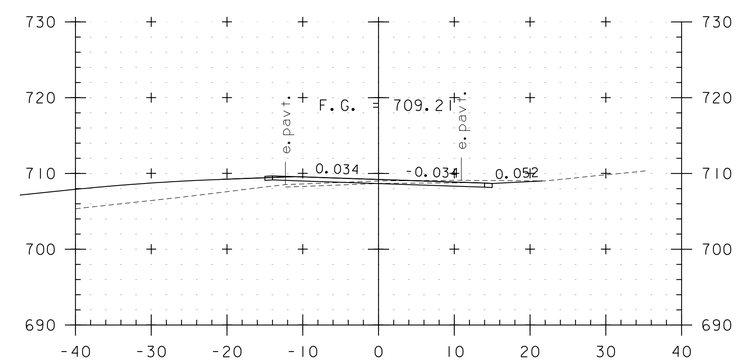
42+00



44+00



43+77
VT 244



43+50

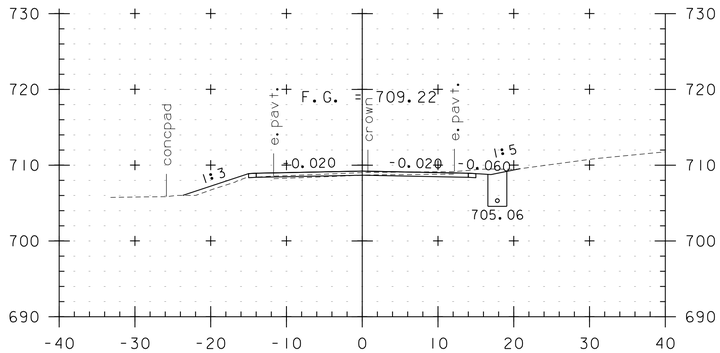
STA. 41+90 BEGIN PROJECT

0 10 20
SCALE IN FEET

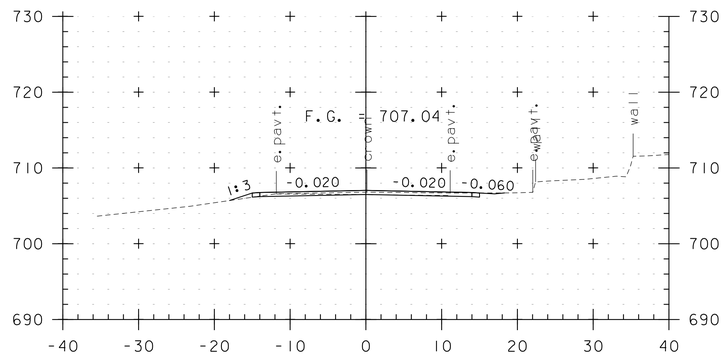
STA. 40+50 TO STA. 44+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 1	SHEET 189 OF 303

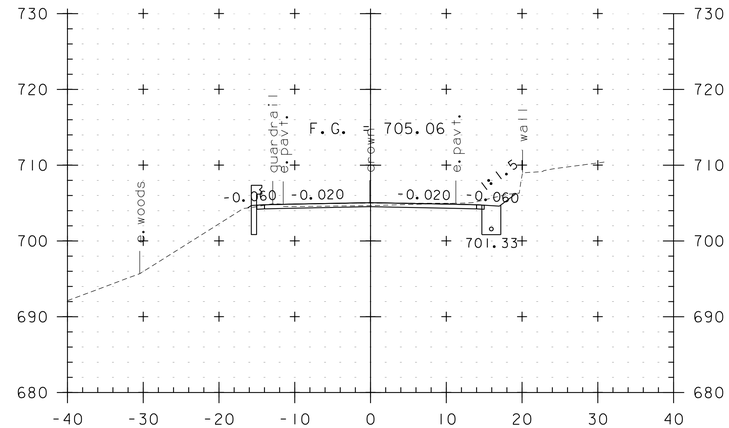
CLD 12-0337



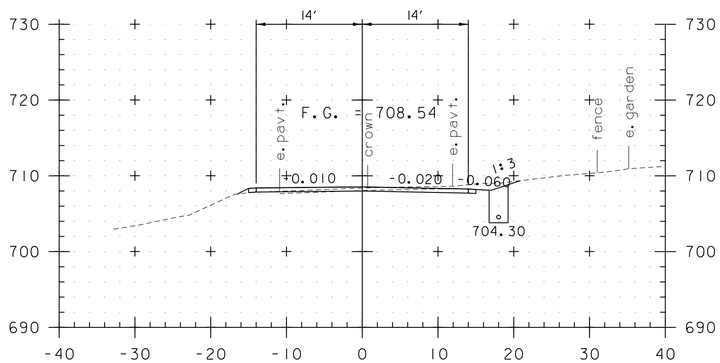
45+50



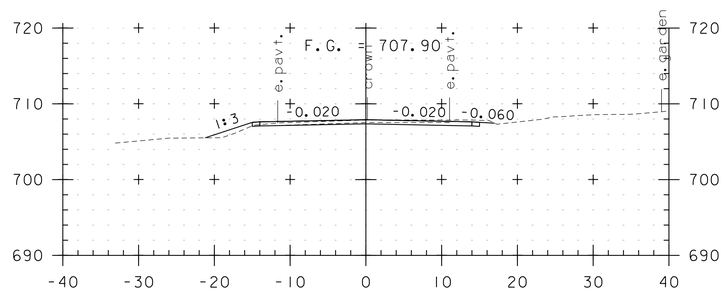
47+00



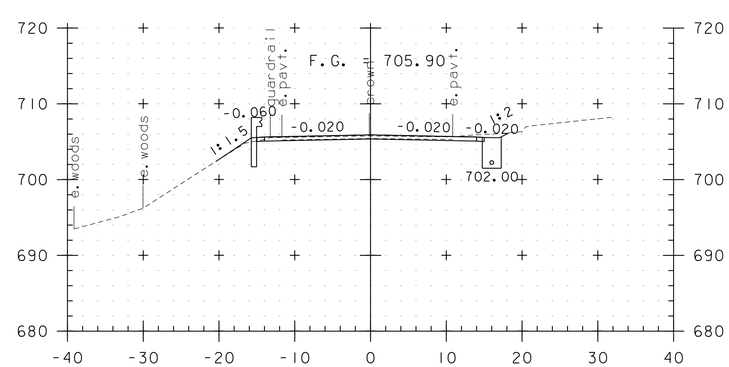
48+50



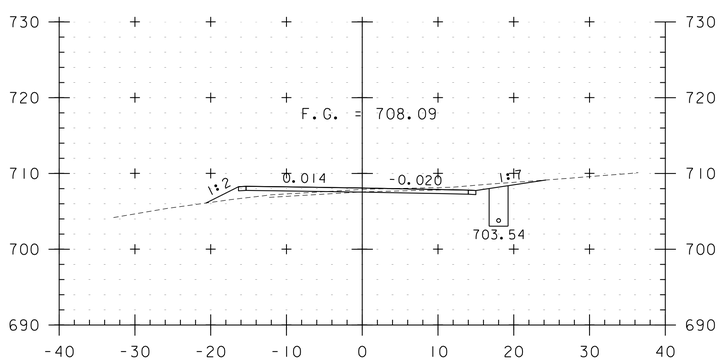
45+00



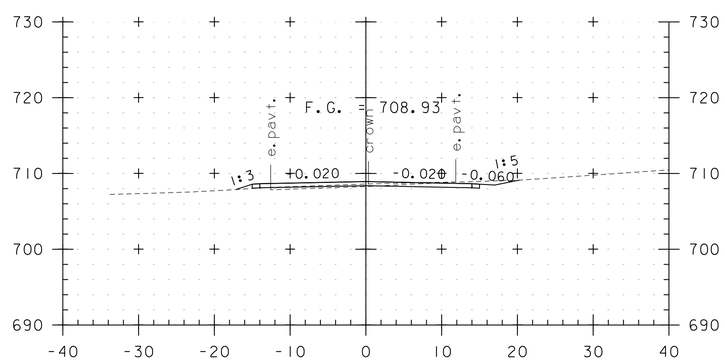
46+50



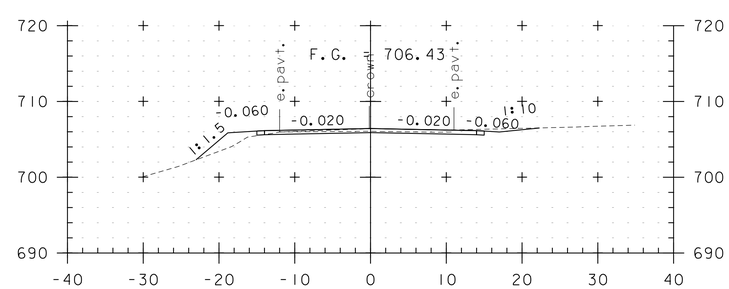
48+00



44+50



46+00



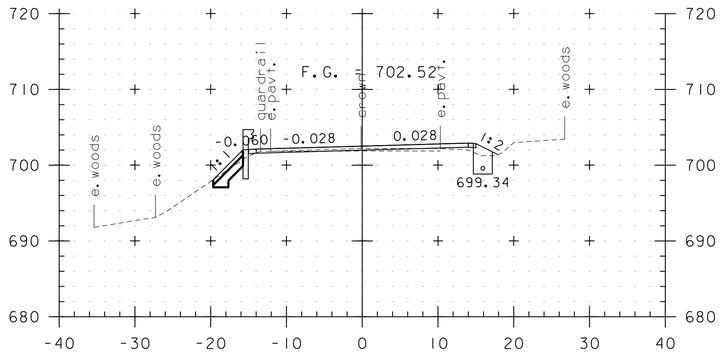
47+50

0 10 20
SCALE IN FEET

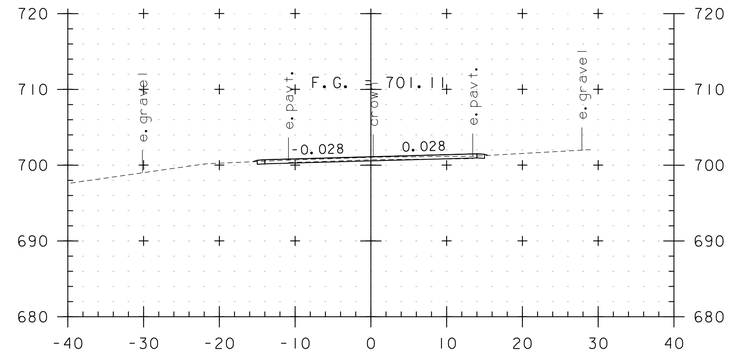
STA. 44+50 TO STA. 48+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 2	SHEET 190 OF 303

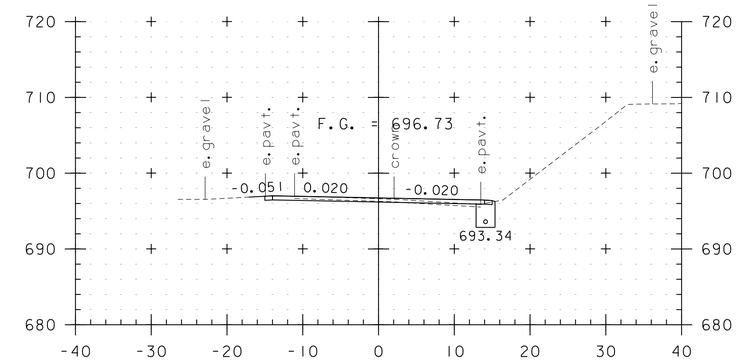
CLD 12-0337



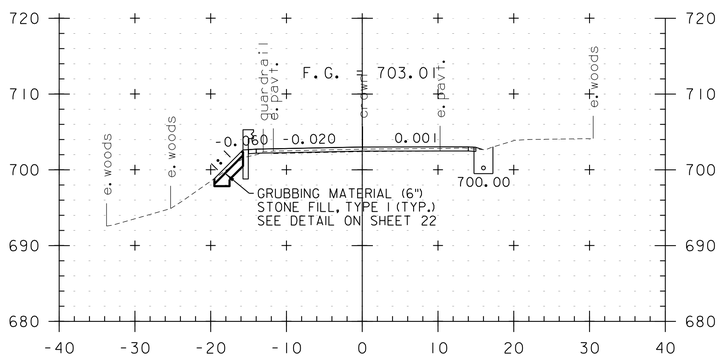
50+00



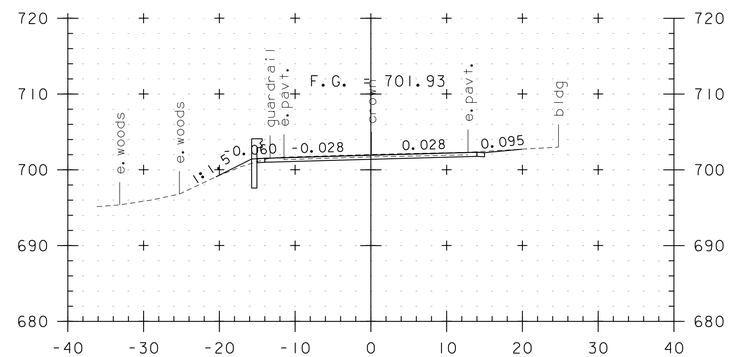
51+50



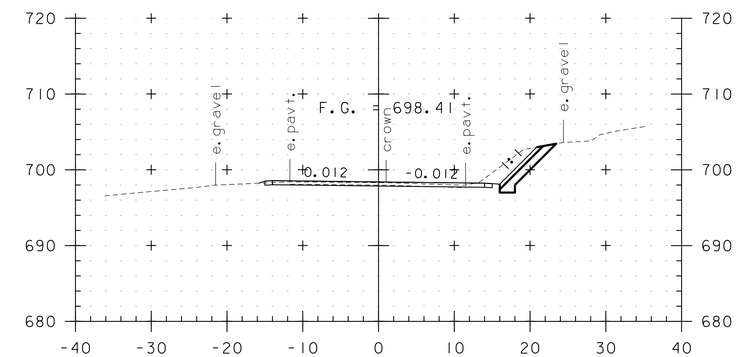
53+00



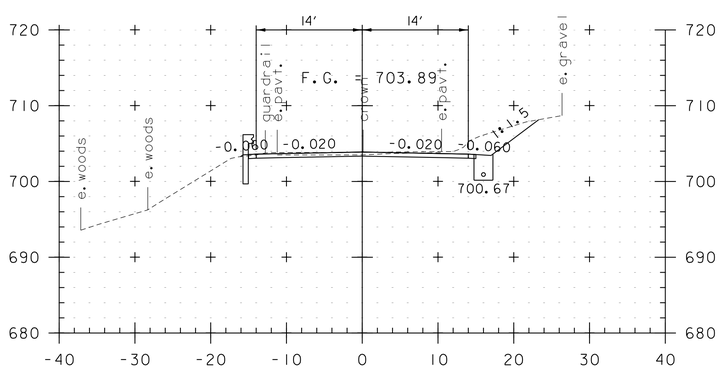
49+50



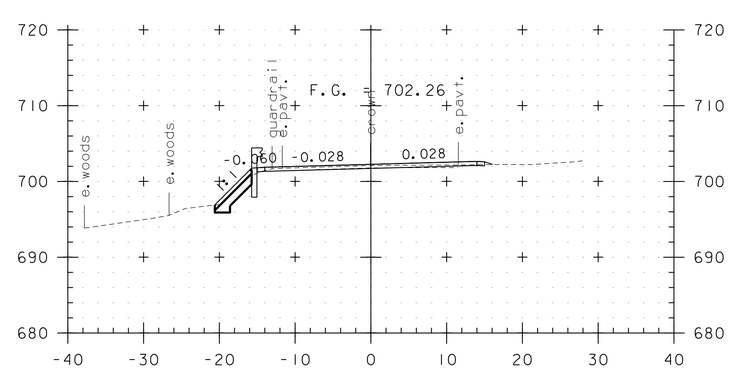
51+00



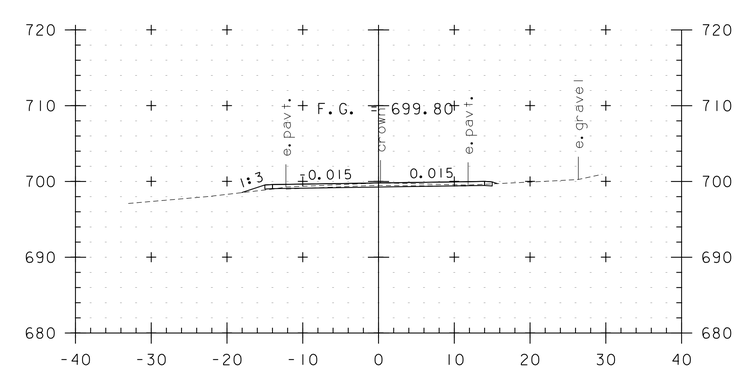
52+50



49+00



50+50



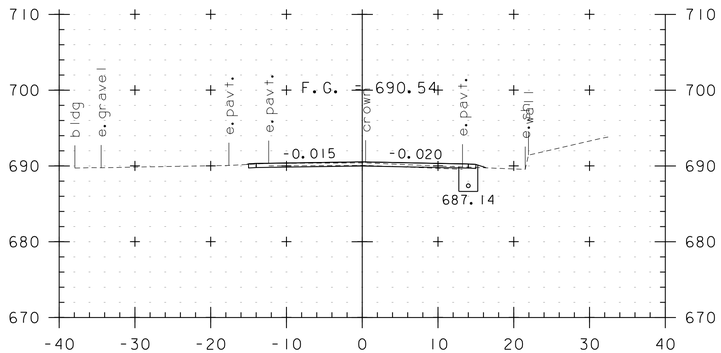
52+00

0 10 20
SCALE IN FEET

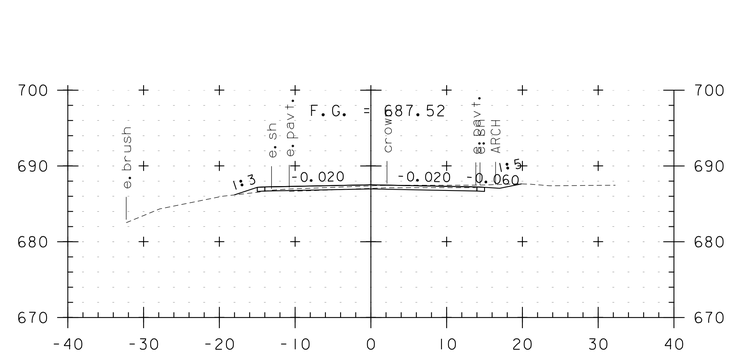
STA. 49+00 TO STA. 53+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 3	SHEET 191 OF 303

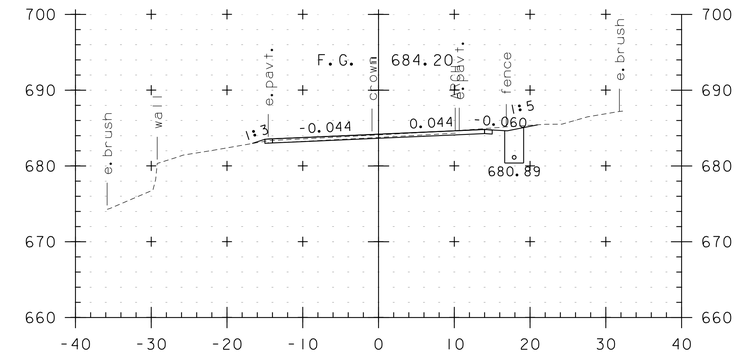
CLD 12-0337



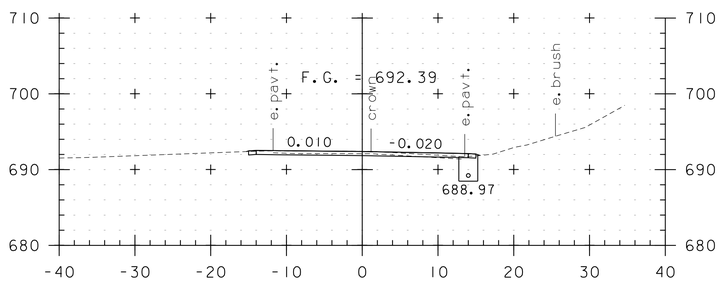
54+50



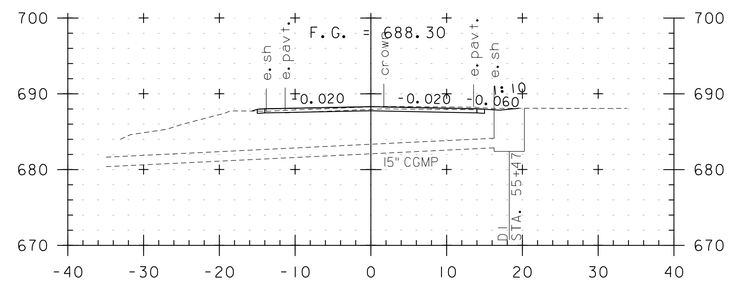
56+00



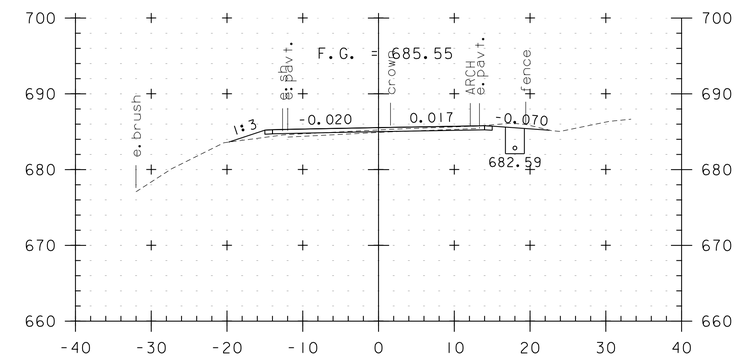
57+50



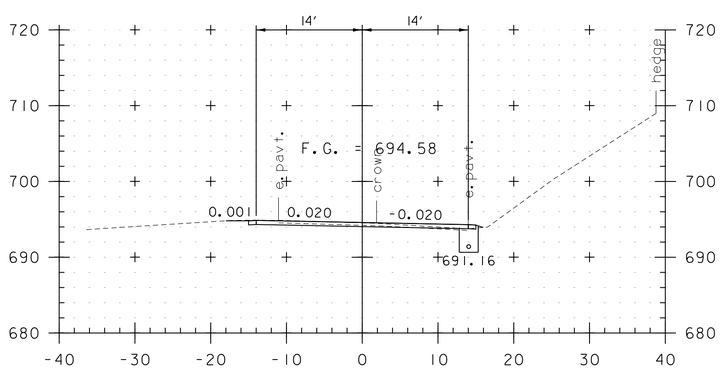
54+00



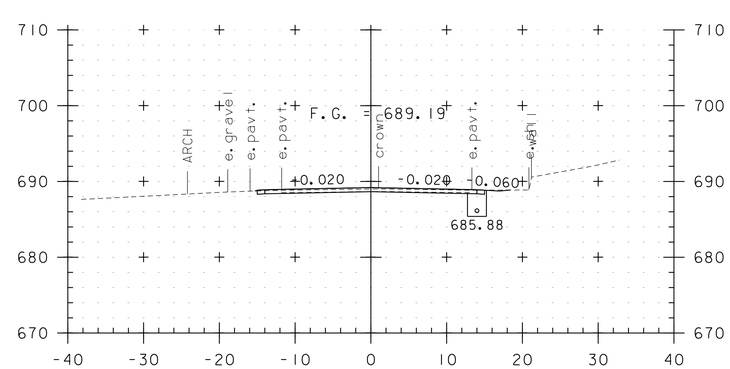
55+50



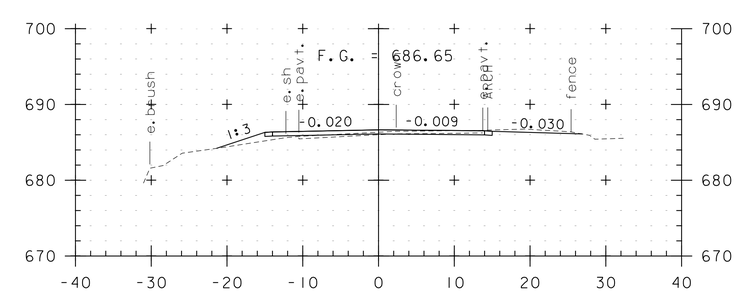
57+00



53+50



55+00



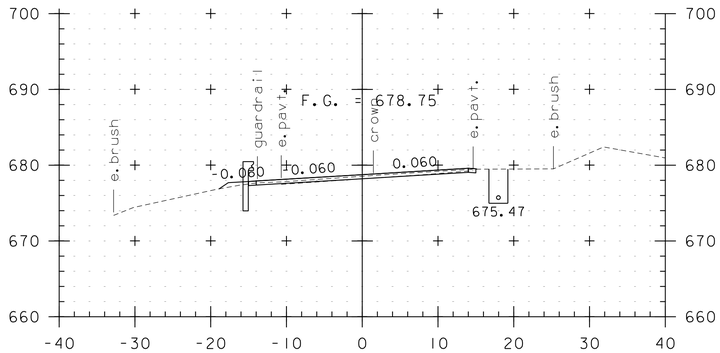
56+50

0 10 20
SCALE IN FEET

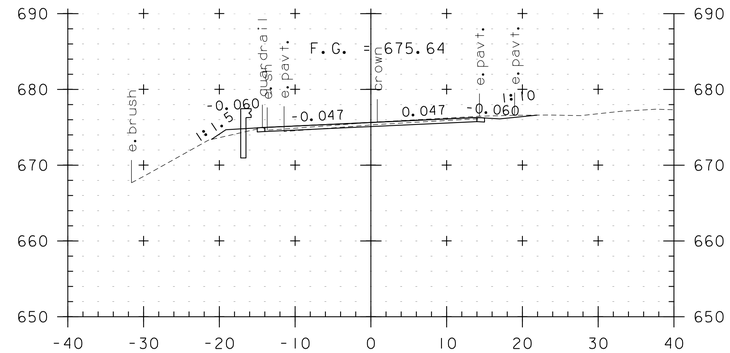
STA. 53+50 TO STA. 57+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 4	SHEET 192 OF 303

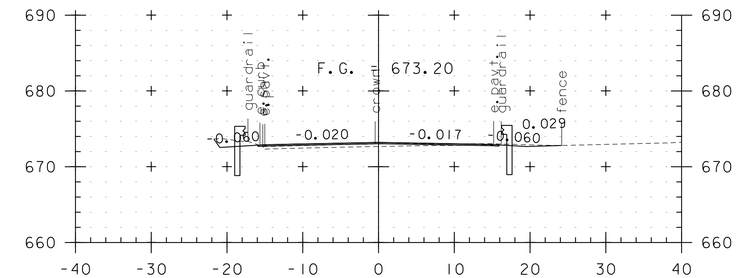
CLD 12-0337



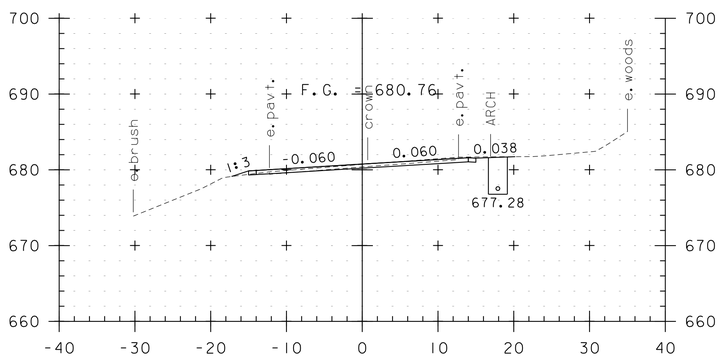
59+00



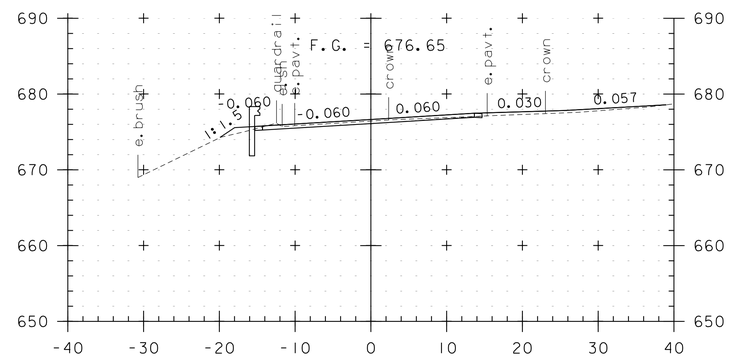
60+00



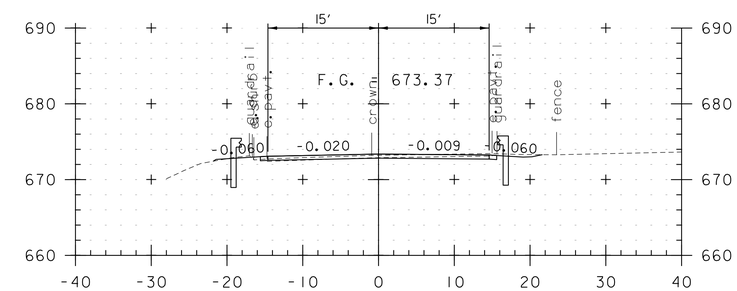
61+15.50
BEGIN BRIDGE 25 APPROACH



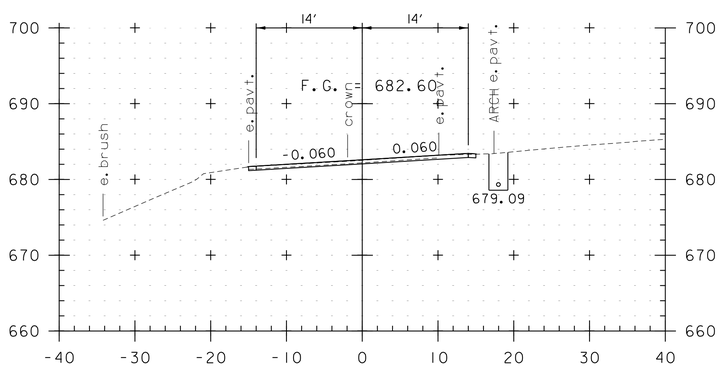
58+50



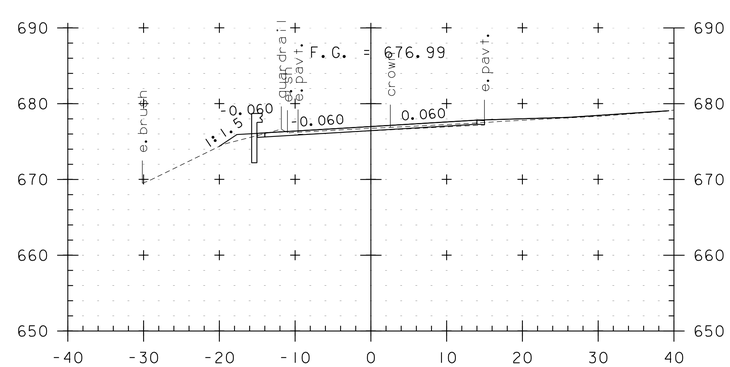
59+63
TH 21



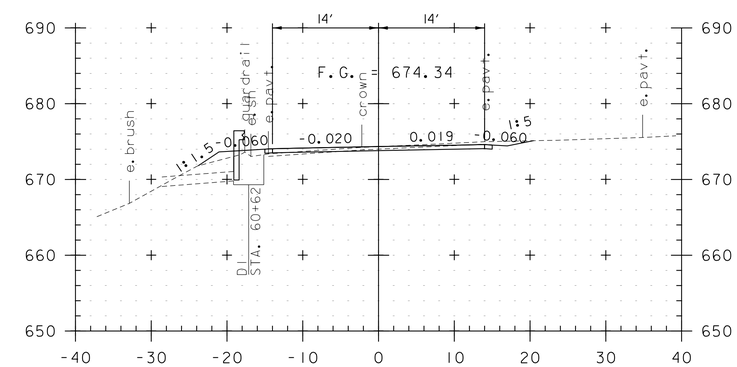
61+00



58+00



59+50



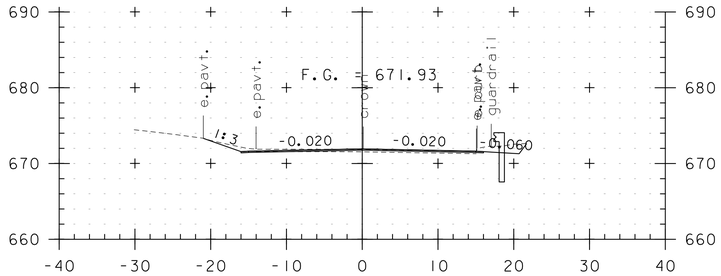
60+50

0 10 20
SCALE IN FEET

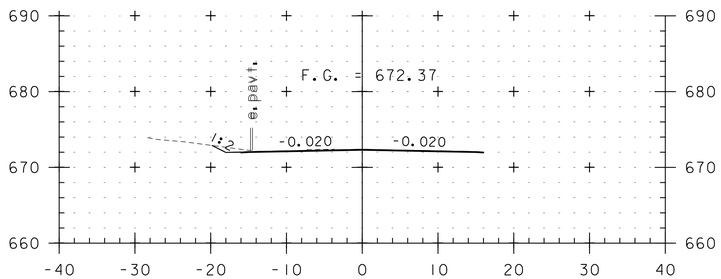
STA. 58+00 TO STA. 61+15.50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 5	SHEET 193 OF 303

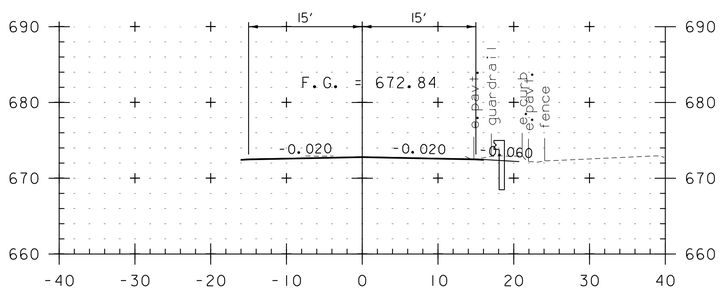
CLD 12-0337



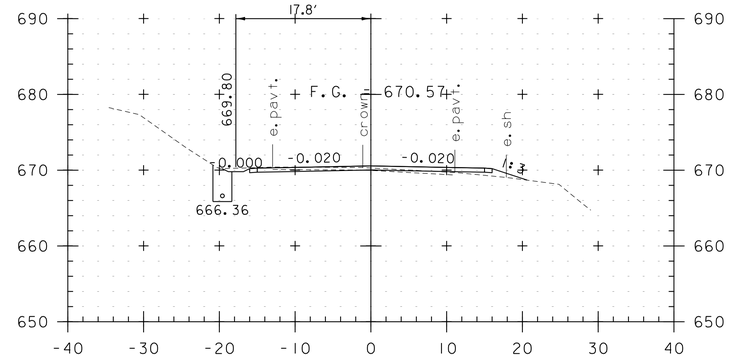
62+35.50
END BRIDGE 25 APPROACH



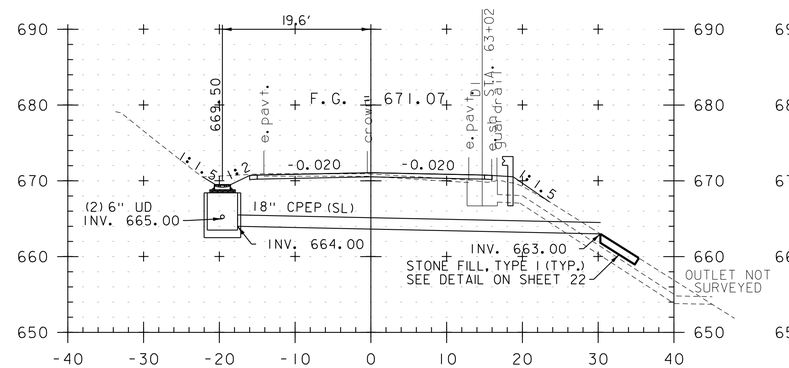
62+00



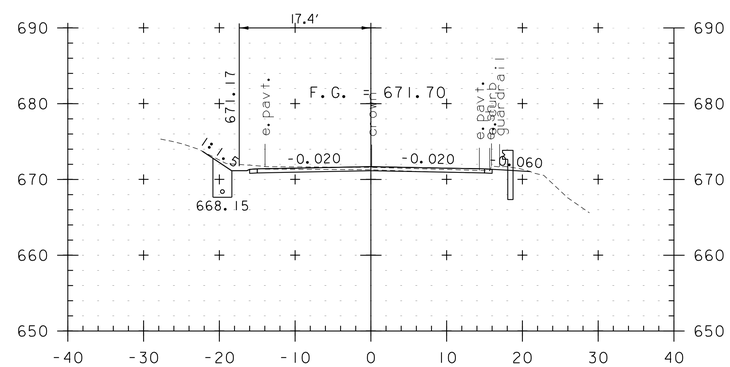
61+50



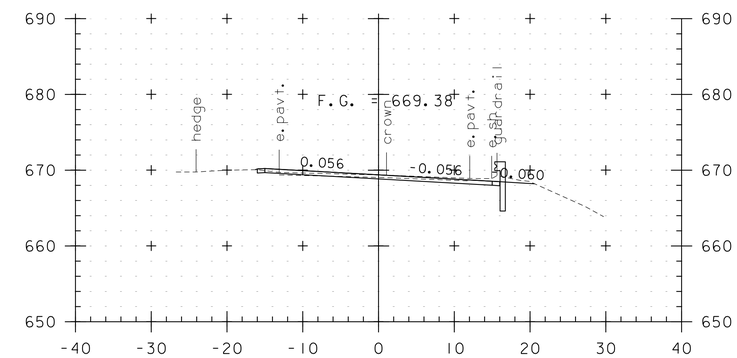
63+50



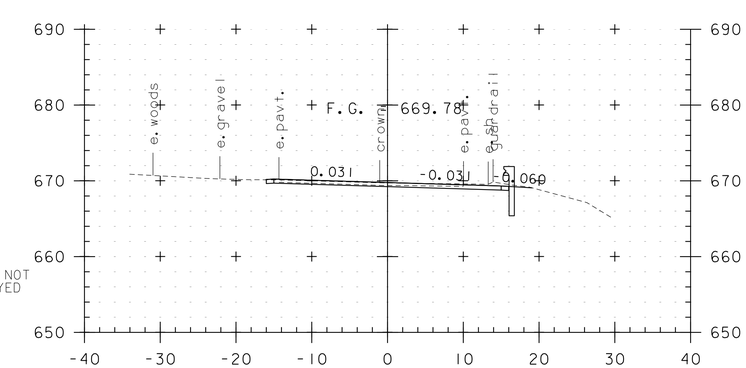
63+00



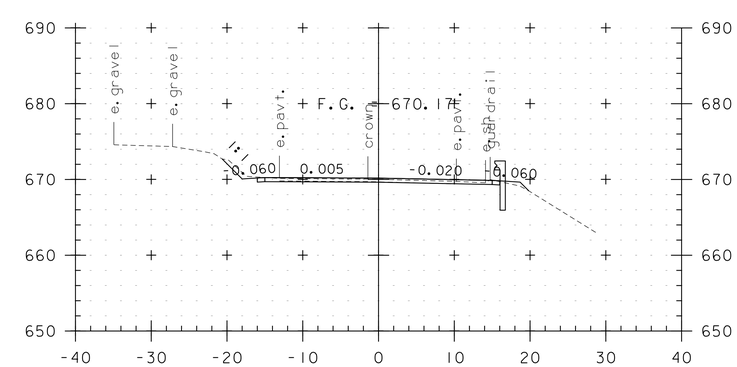
62+50



65+00



64+50



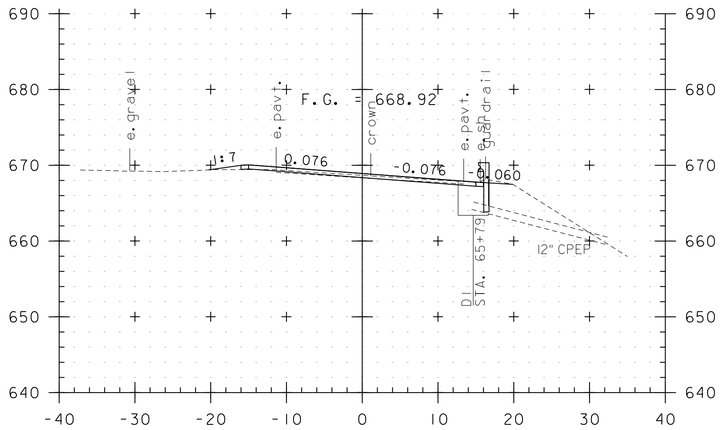
64+00

0 10 20
SCALE IN FEET

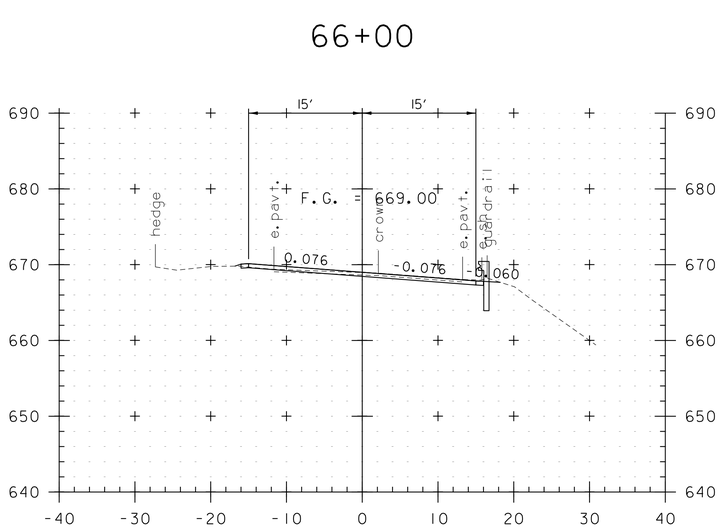
STA. 61+50 TO STA. 65+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 6	SHEET 194 OF 303

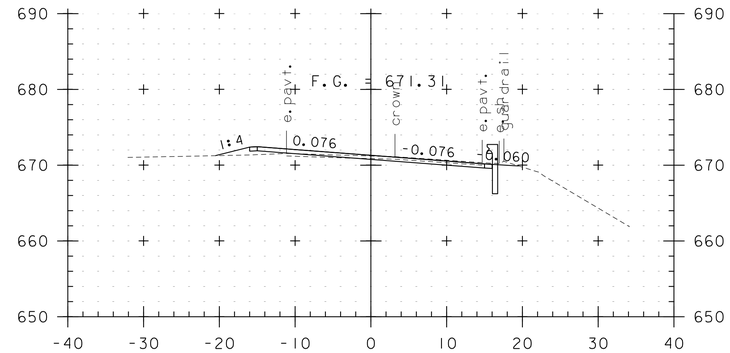
CLD 12-0337



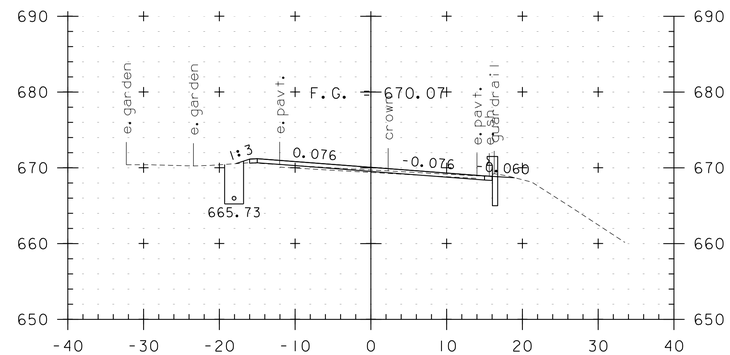
66+00



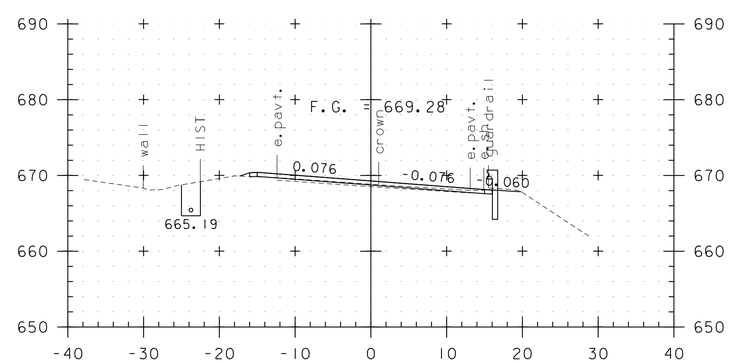
65+50



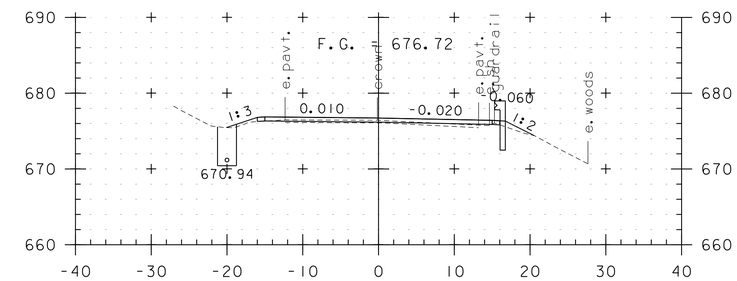
67+50



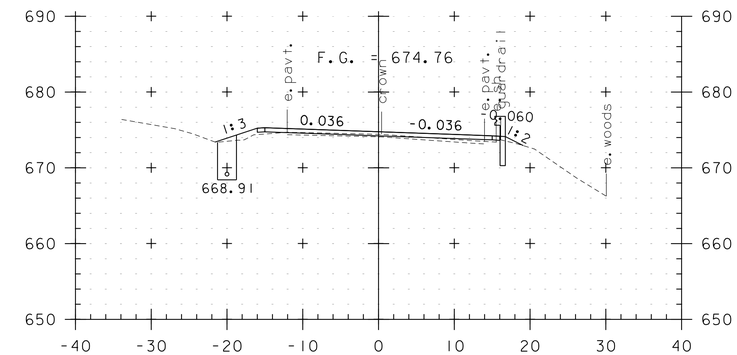
67+00



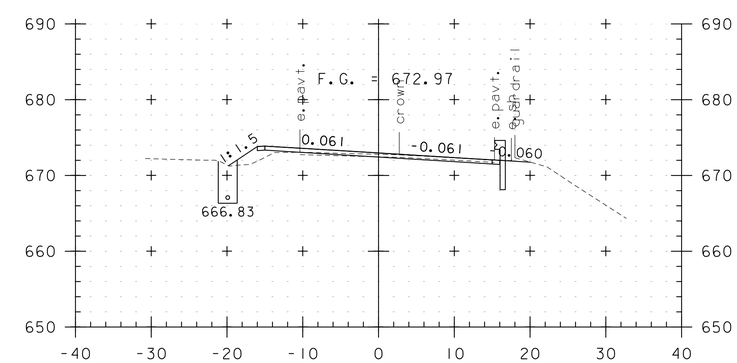
66+50



69+00



68+50



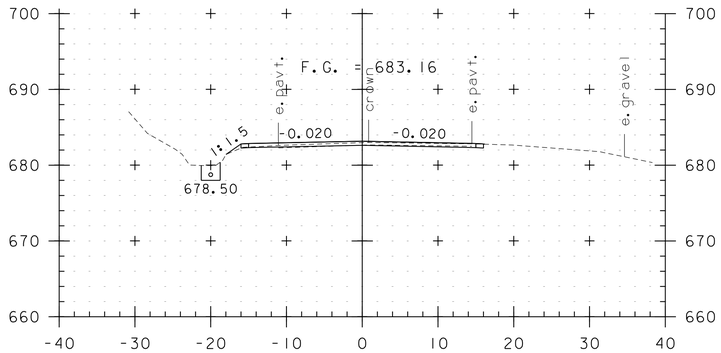
68+00

0 10 20
SCALE IN FEET

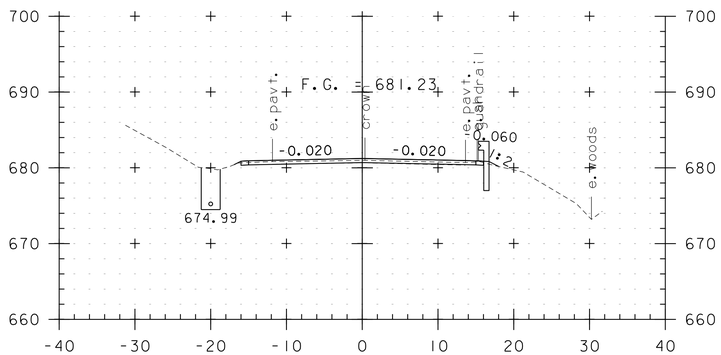
STA. 65+50 TO STA. 69+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 7	SHEET 195 OF 303

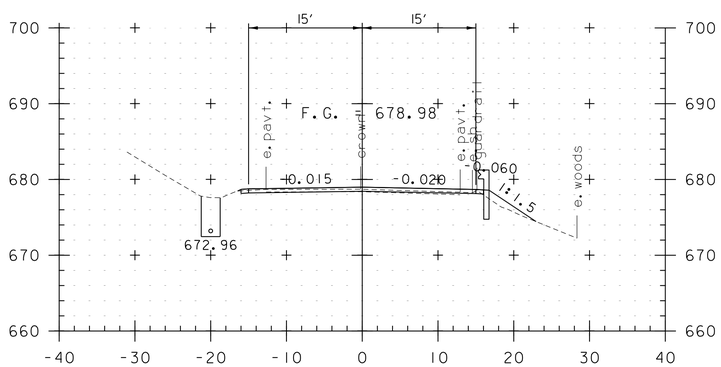
CLD 12-0337



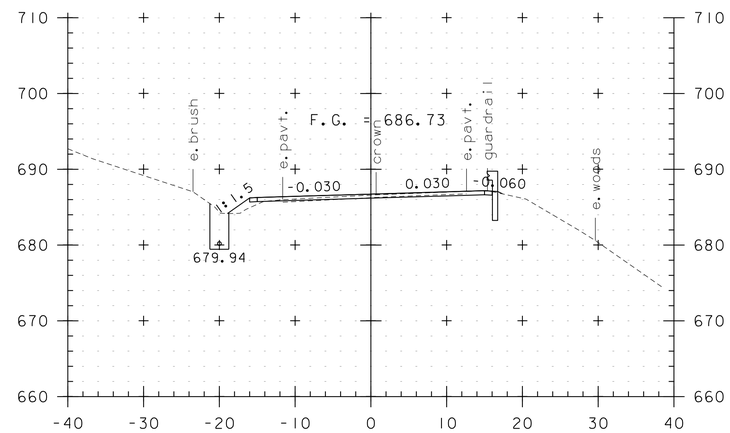
70+50



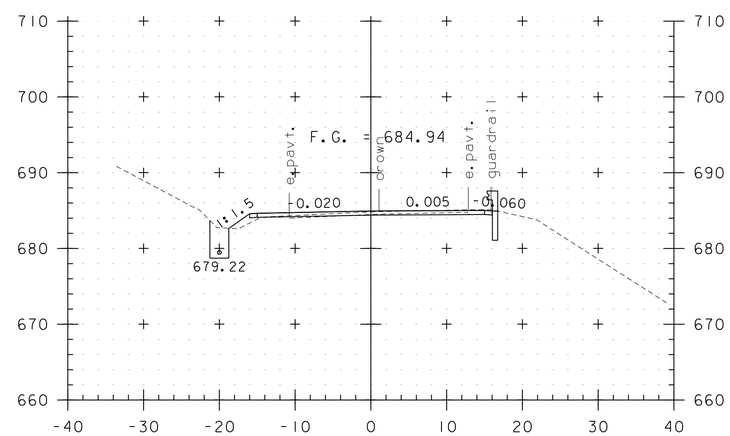
70+00



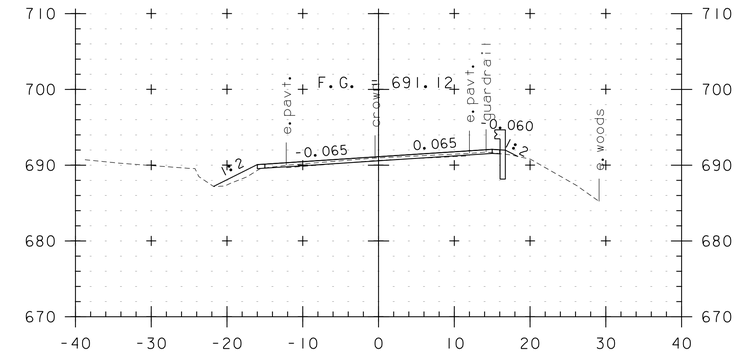
69+50



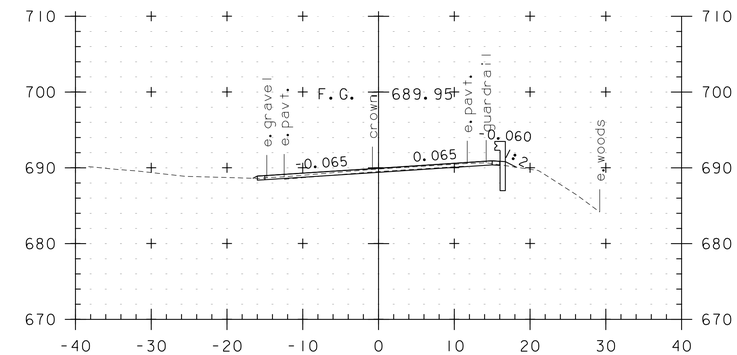
71+50



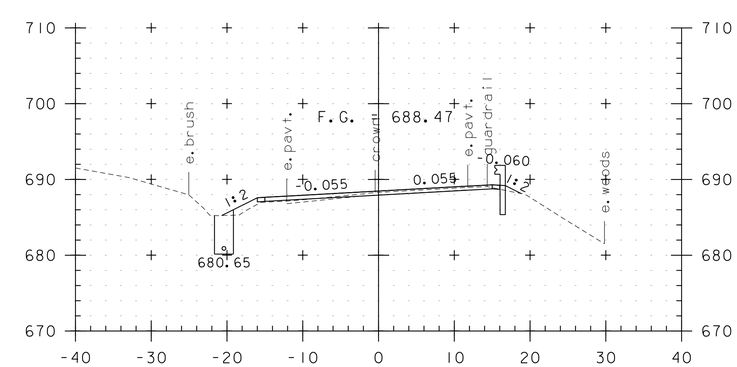
71+00



73+00



72+50



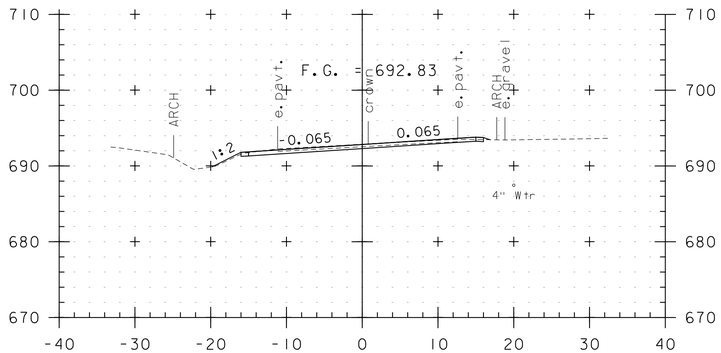
72+00

0 10 20
SCALE IN FEET

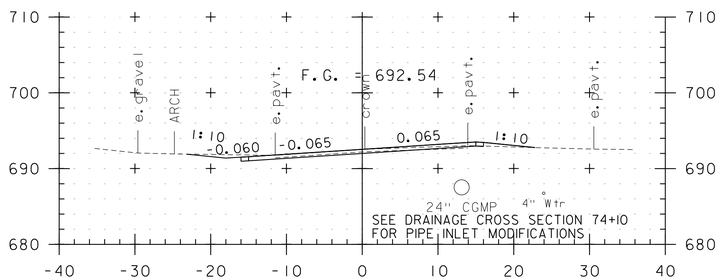
STA. 69+50 TO STA. 73+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 8	SHEET 196 OF 303

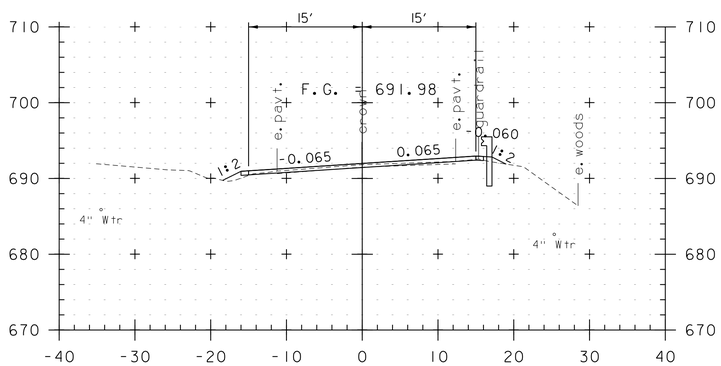
CLD 12-0337



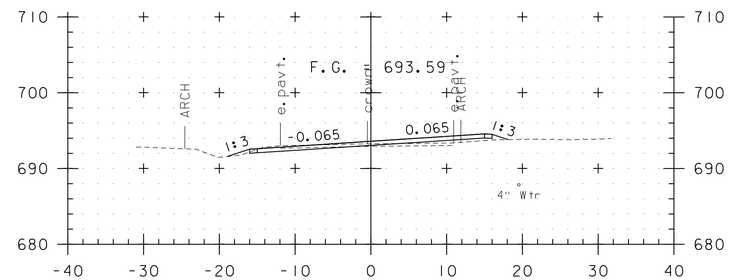
74+50



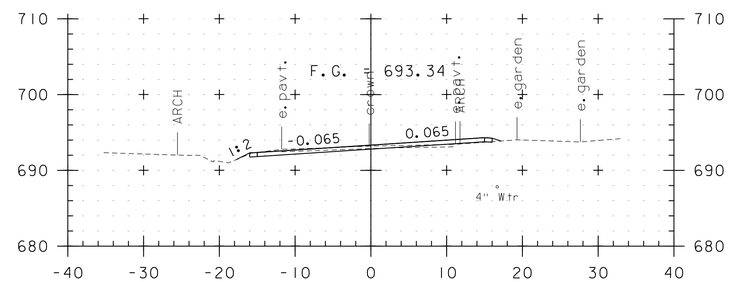
74+00



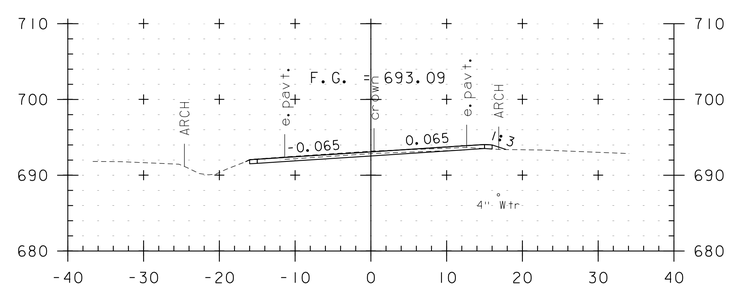
73+50



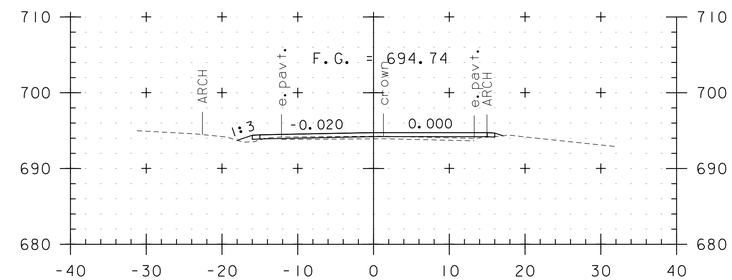
76+00



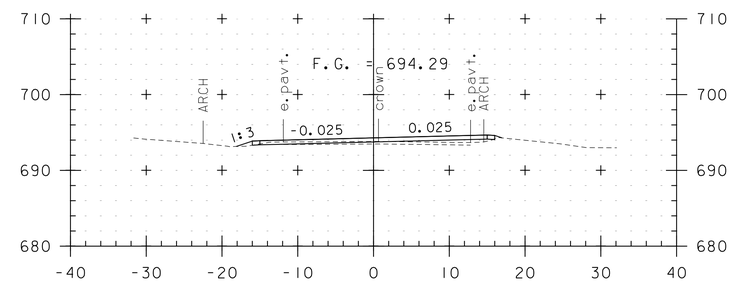
75+50



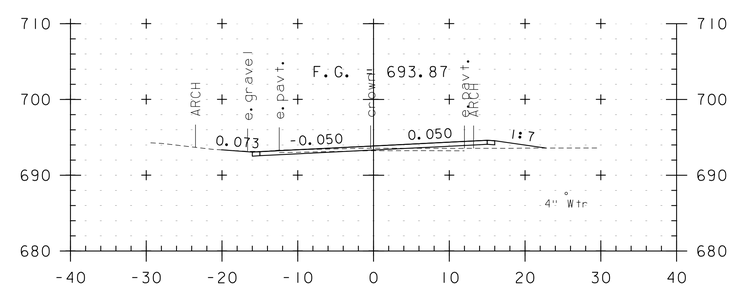
75+00



77+50



77+00



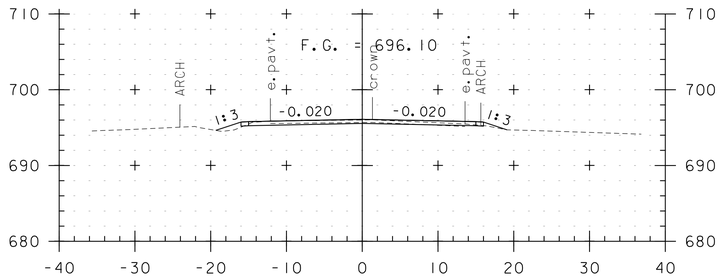
76+50

0 10 20
SCALE IN FEET

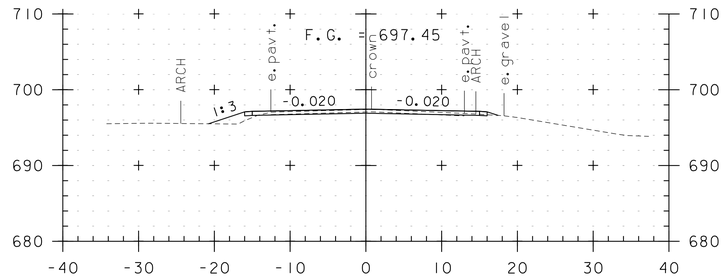
STA. 73+50 TO STA. 77+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 9	SHEET 197 OF 303

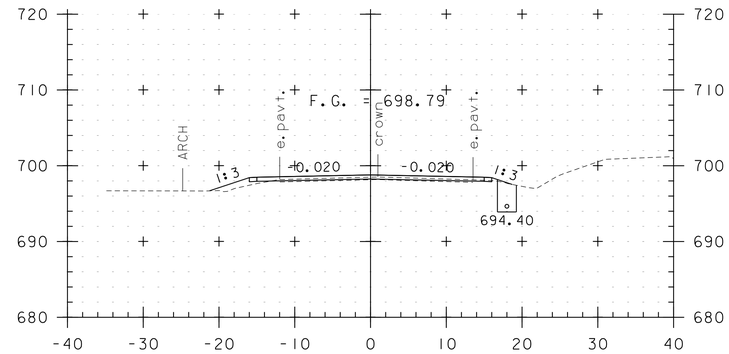
CLD 12-0337



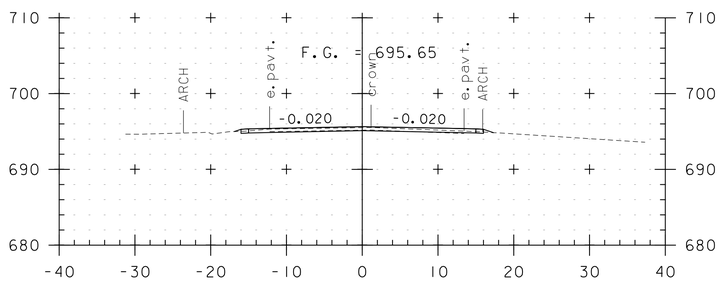
79+00



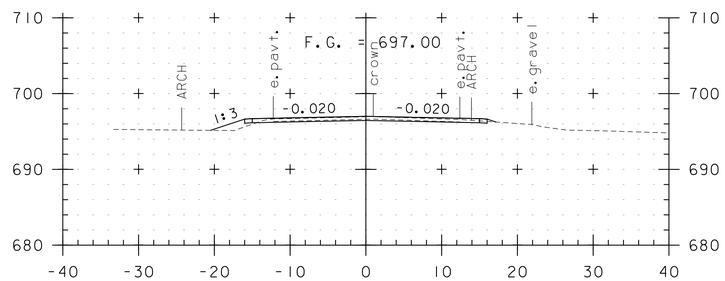
80+50



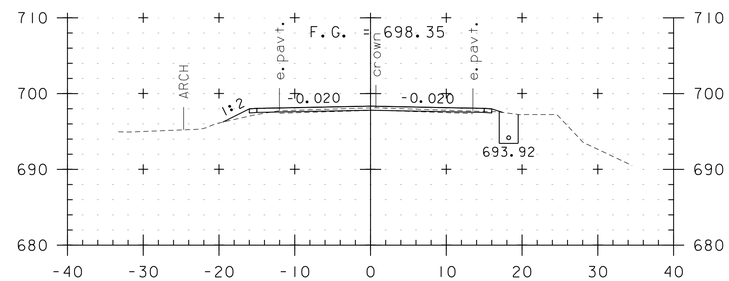
82+00



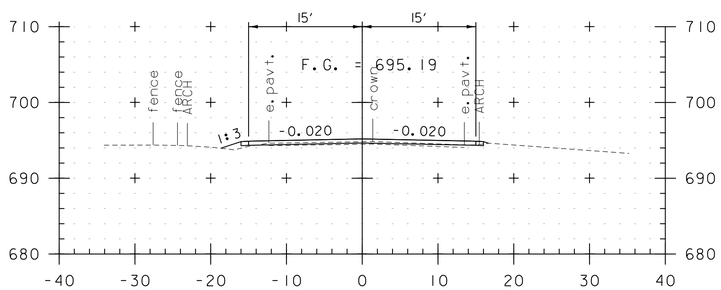
78+50



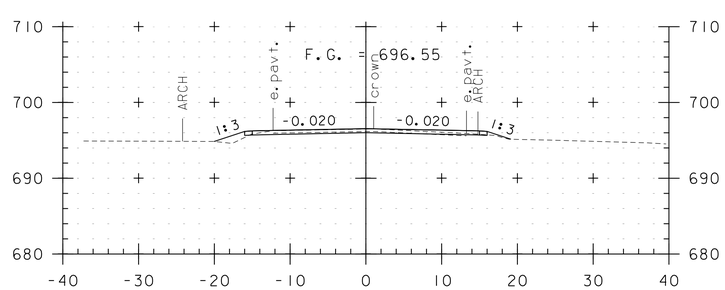
80+00



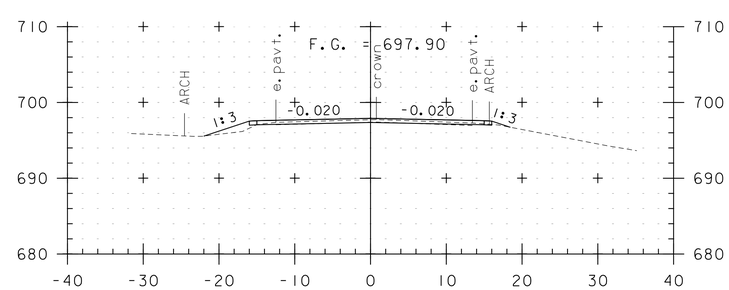
81+50



78+00



79+50



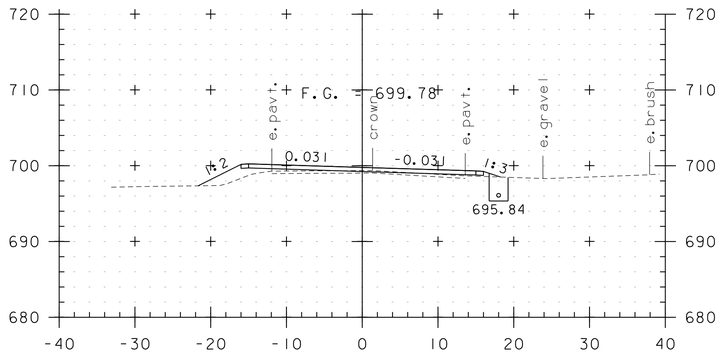
81+00

0 10 20
SCALE IN FEET

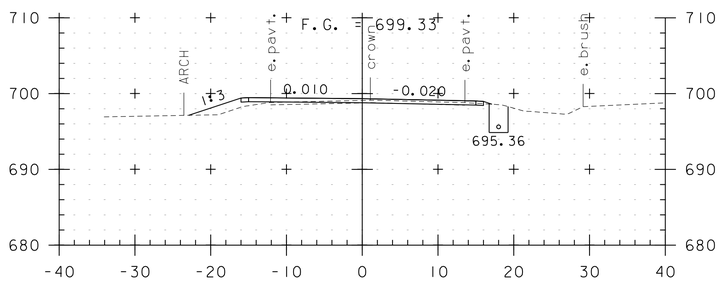
STA. 78+00 TO STA. 82+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 10	SHEET 198 OF 303

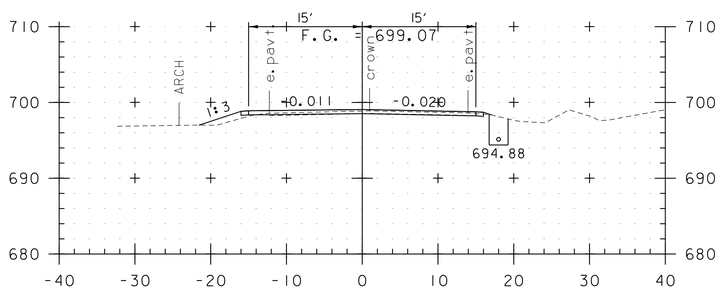
CLD 12-0337



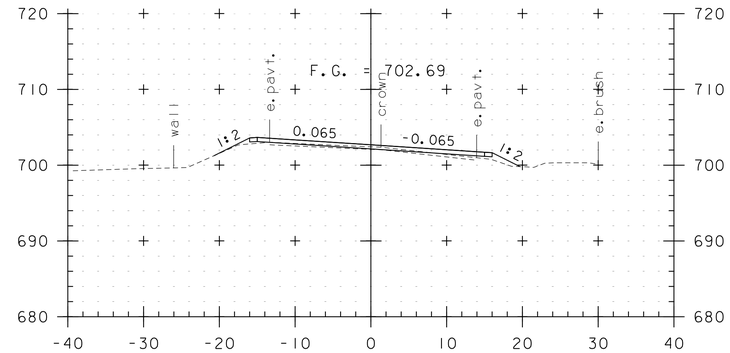
83+50



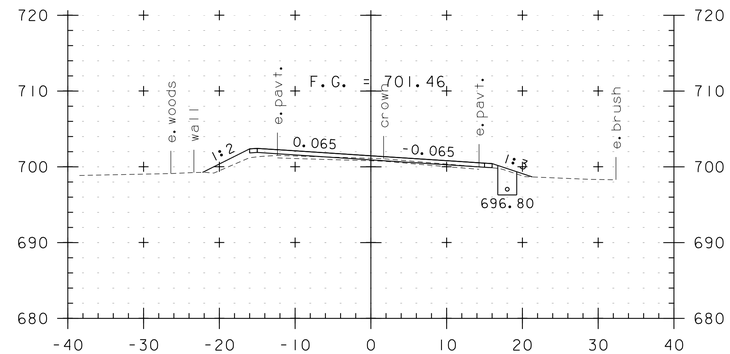
83+00



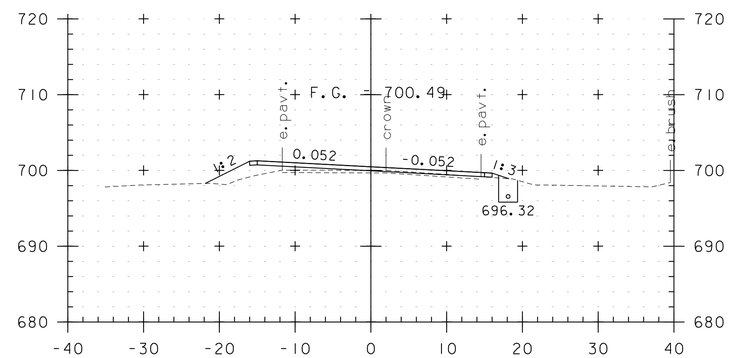
82+50



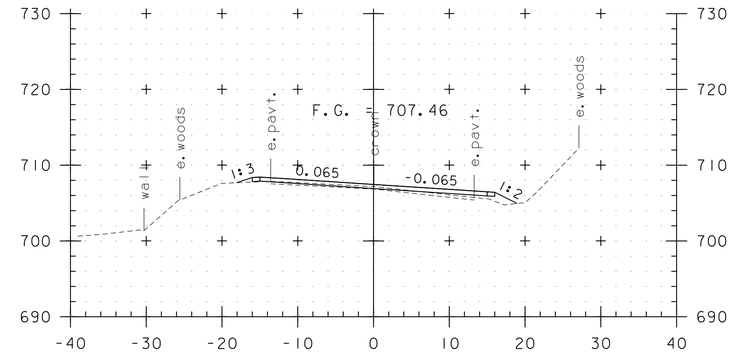
85+00



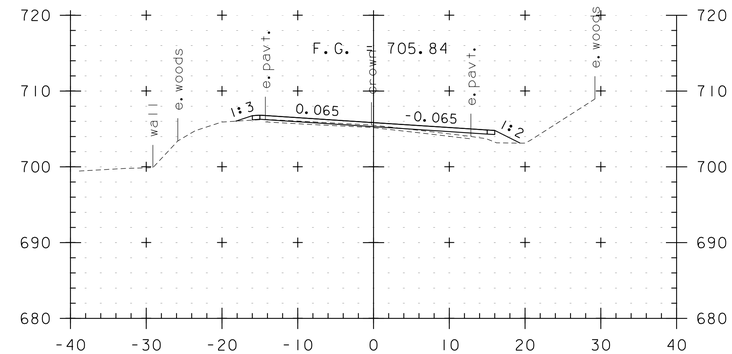
84+50



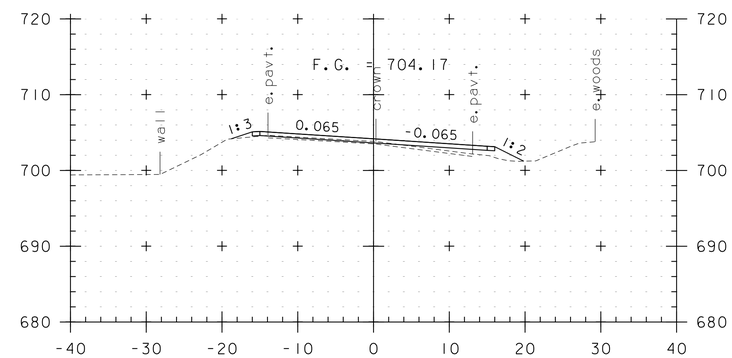
84+00



86+50



86+00



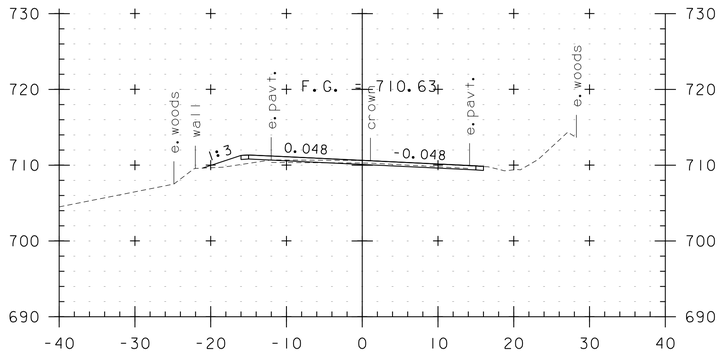
85+50

0 10 20
SCALE IN FEET

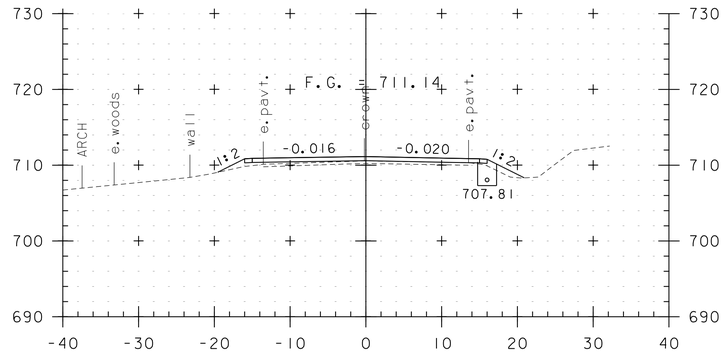
STA. 82+50 TO STA. 86+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 11	SHEET 199 OF 303

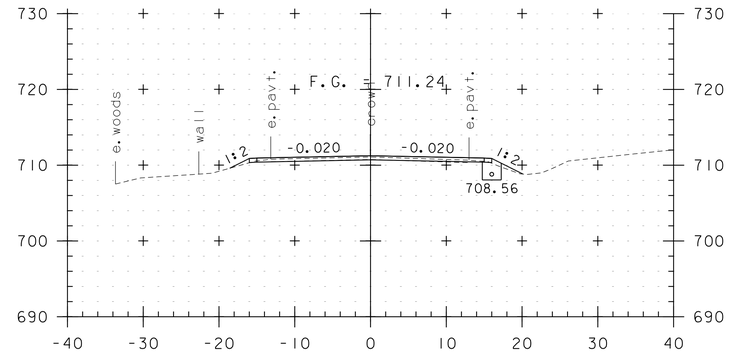
CLD 12-0337



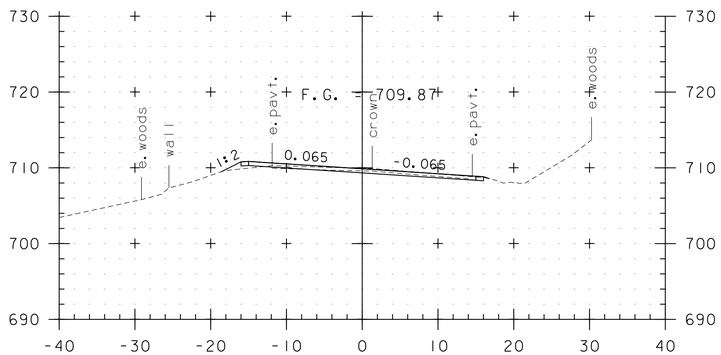
88+00



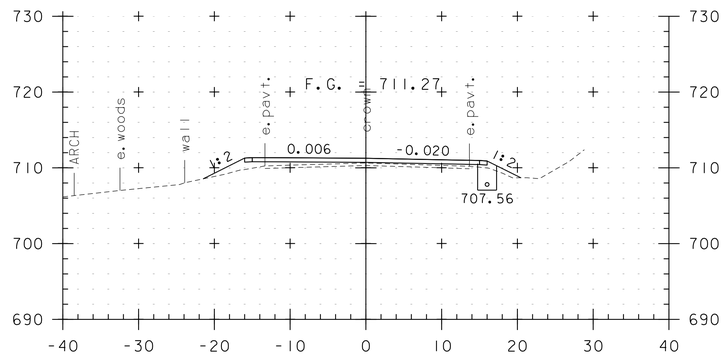
89+50



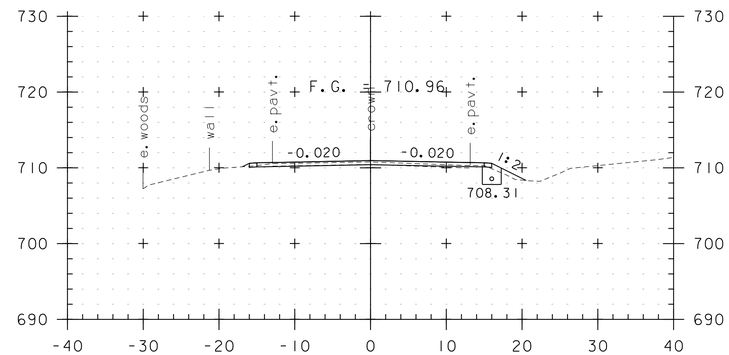
91+00



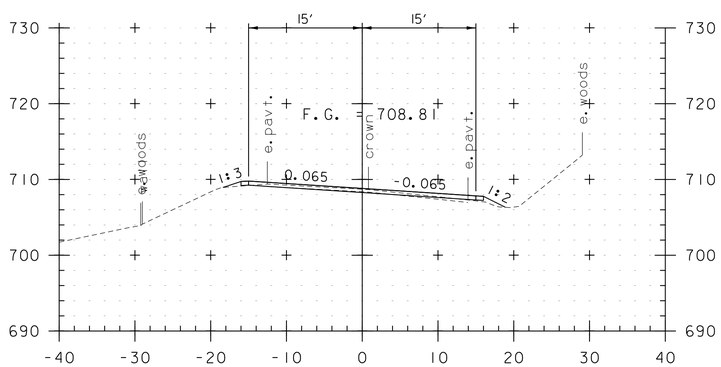
87+50



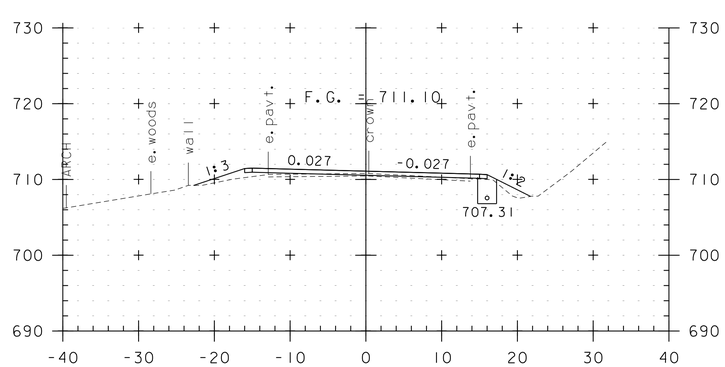
89+00



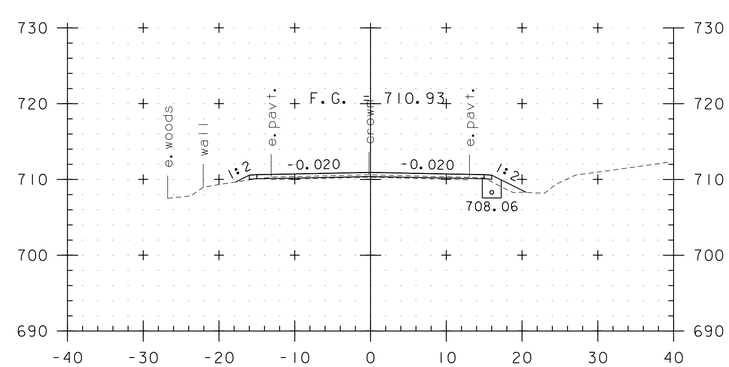
90+50



87+00



88+50



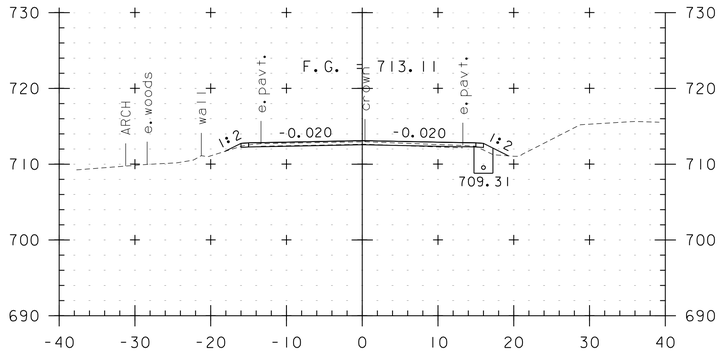
90+00

0 10 20
SCALE IN FEET

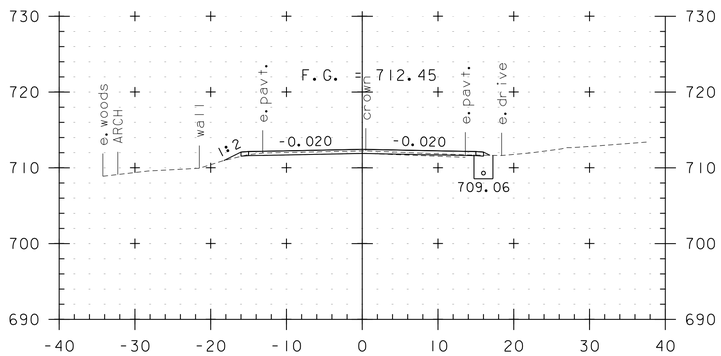
STA. 87+00 TO STA. 91+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 12	SHEET 200 OF 303

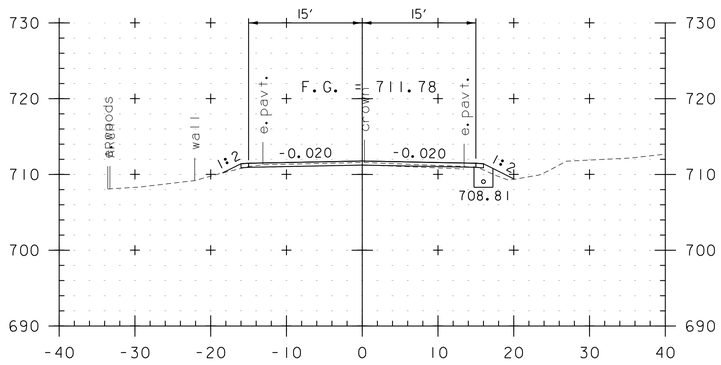
CLD 12-0337



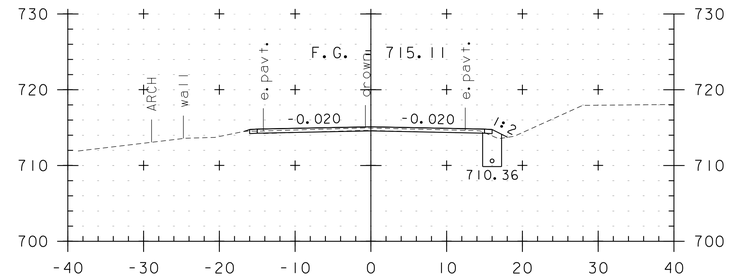
92+50



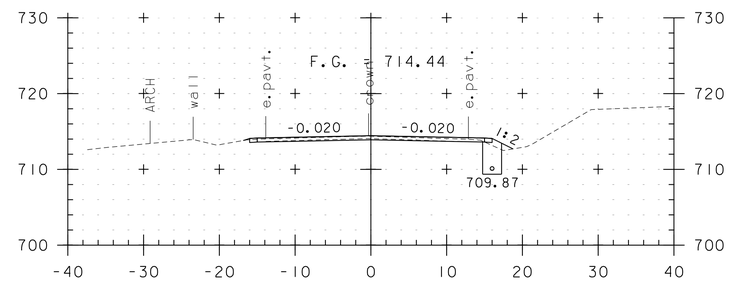
92+00



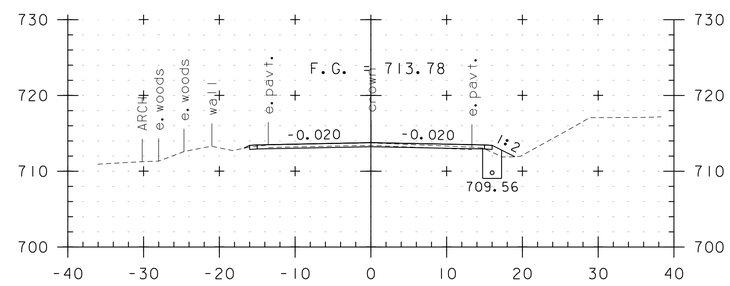
91+50



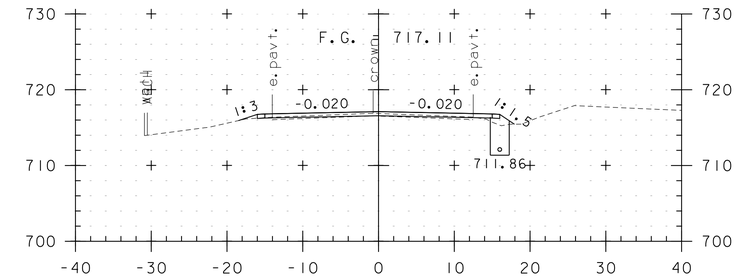
94+00



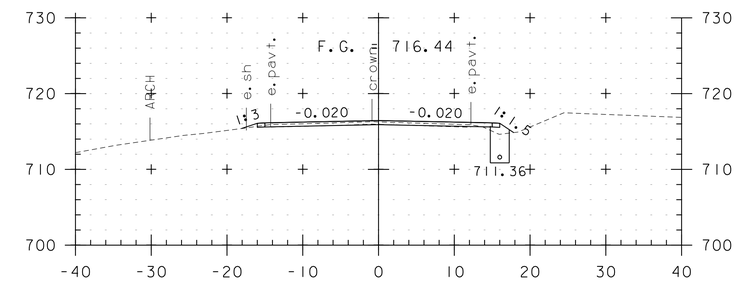
93+50



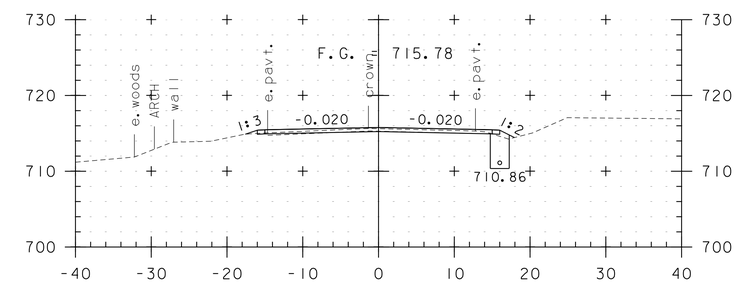
93+00



95+50



95+00



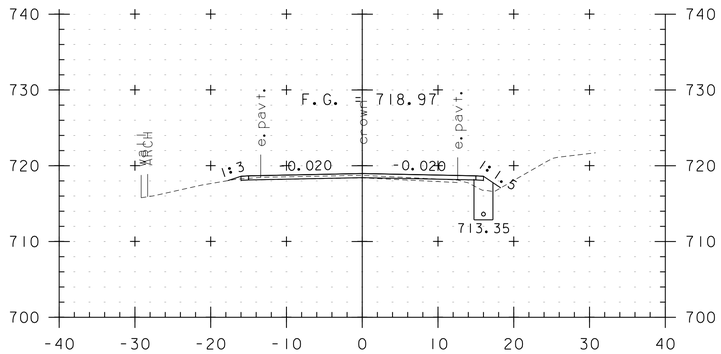
94+50

0 10 20
SCALE IN FEET

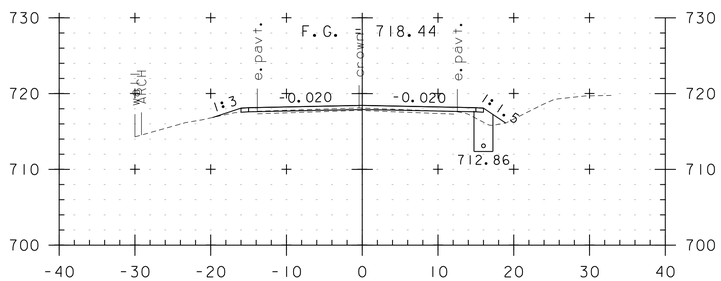
STA. 91+50 TO STA. 95+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 13	SHEET 201 OF 303

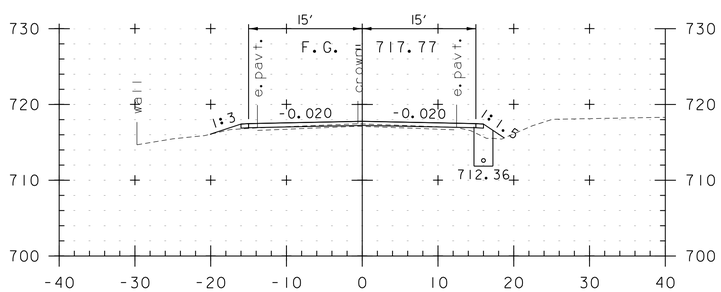
CLD 12-0337



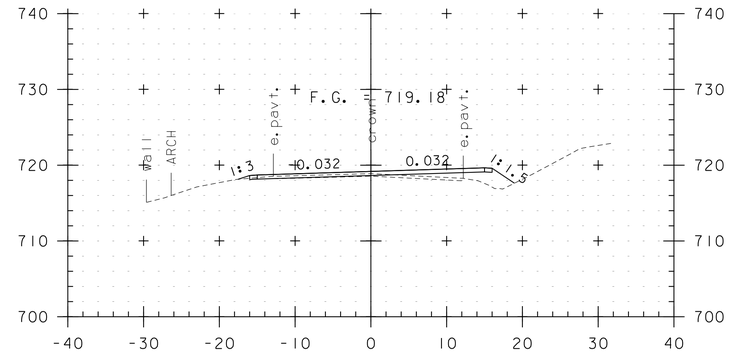
97+00



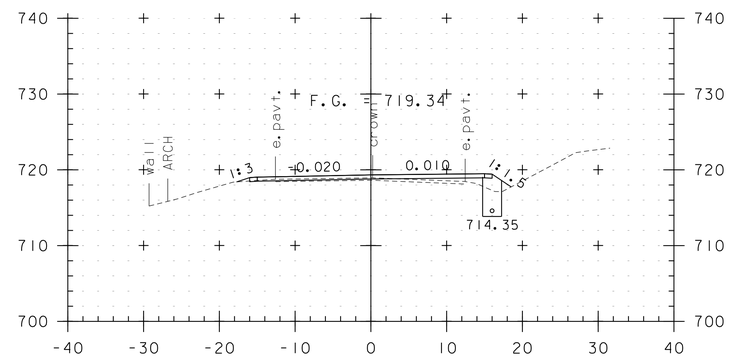
96+50



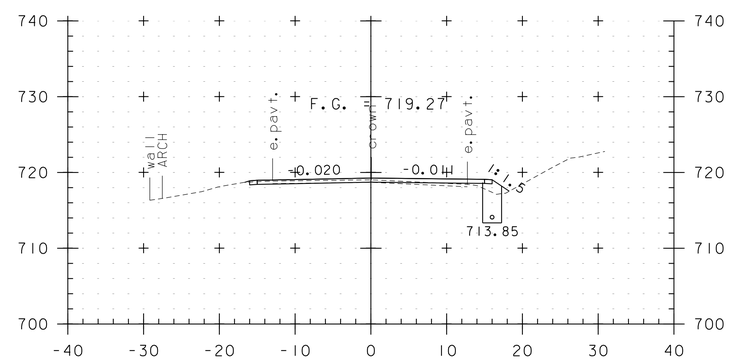
96+00



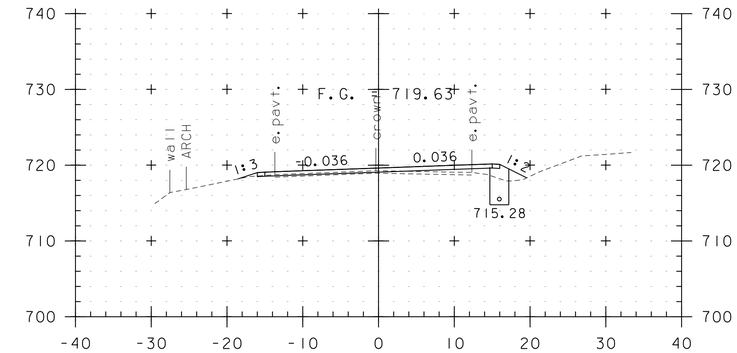
98+50



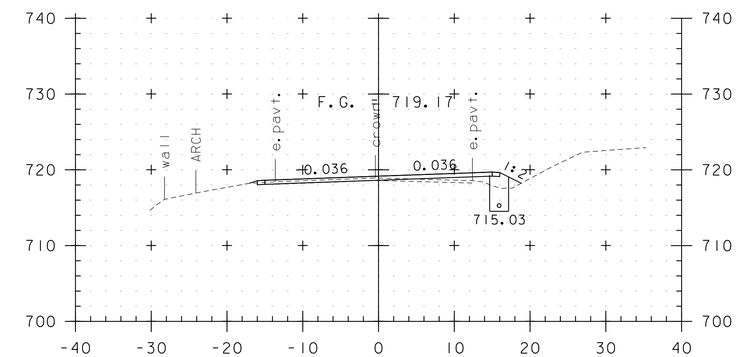
98+00



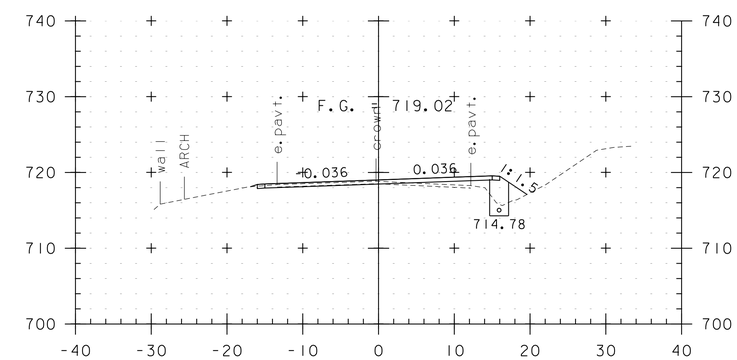
97+50



100+00



99+50



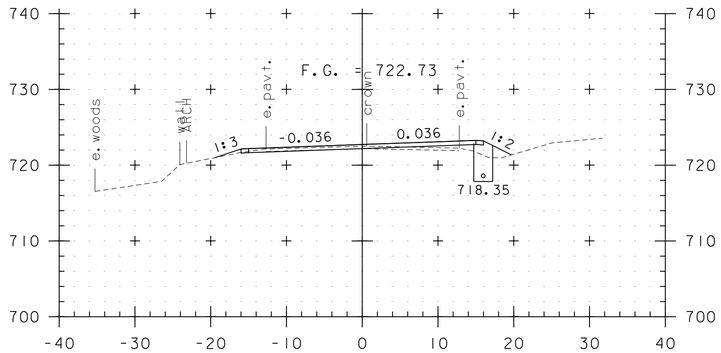
99+00

0 10 20
SCALE IN FEET

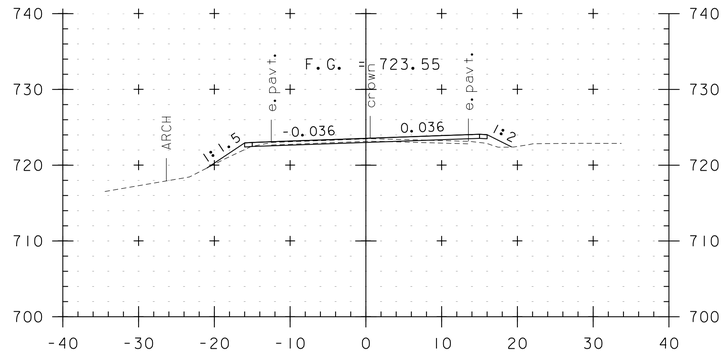
STA. 96+00 TO STA. 100+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 14	SHEET 202 OF 303

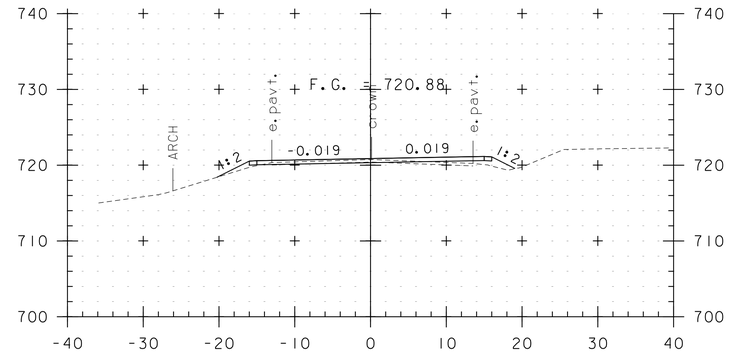
CLD 12-0337



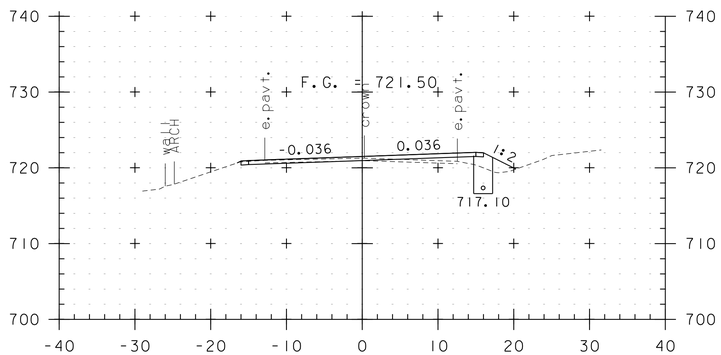
101+50



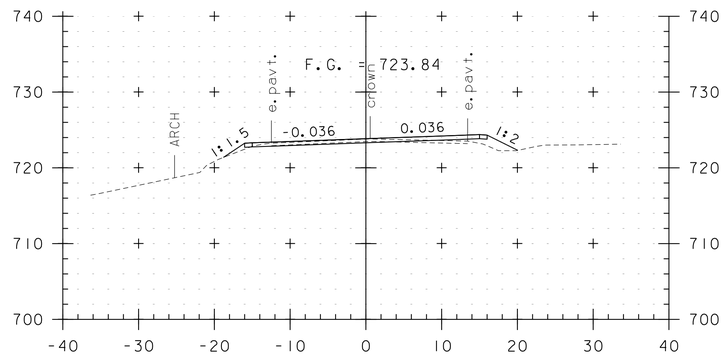
103+00



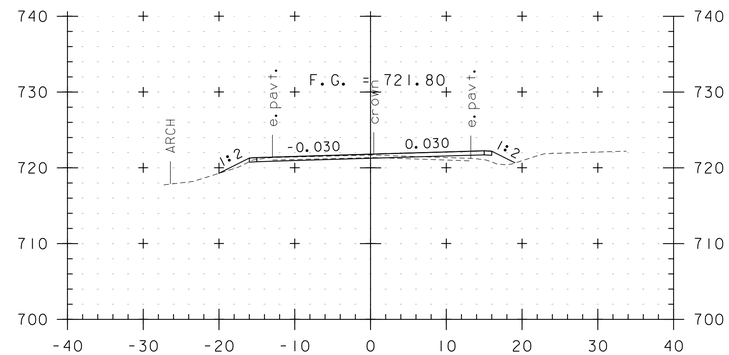
104+50



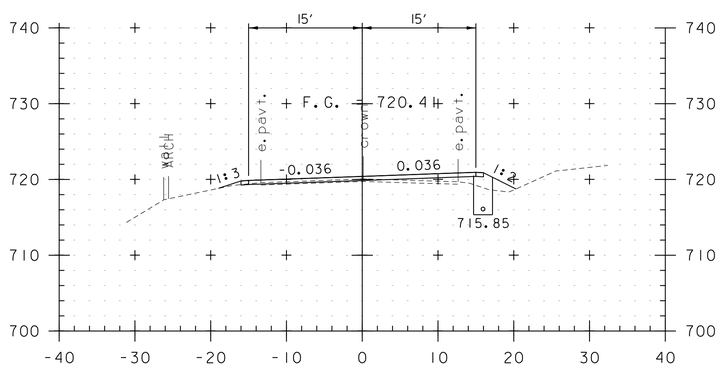
101+00



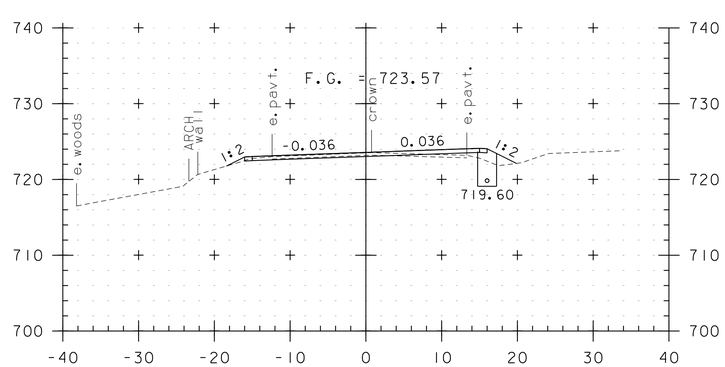
102+50



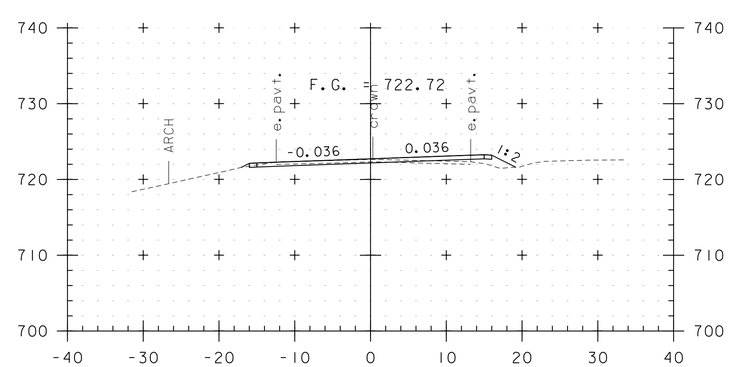
104+00



100+50



102+00



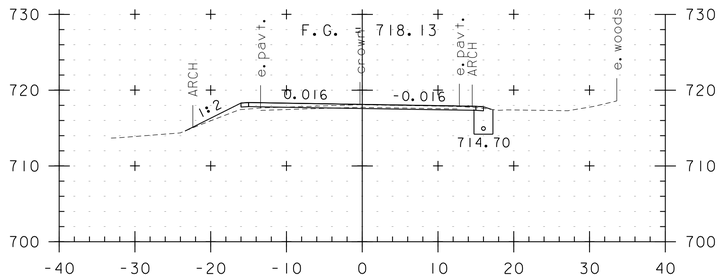
103+50

0 10 20
SCALE IN FEET

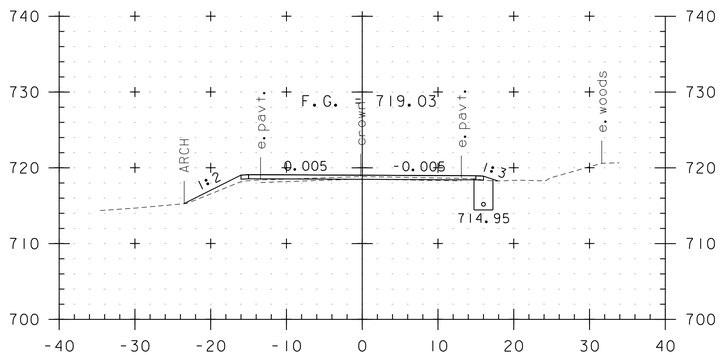
STA. 100+50 TO STA. 104+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 15	SHEET 203 OF 303

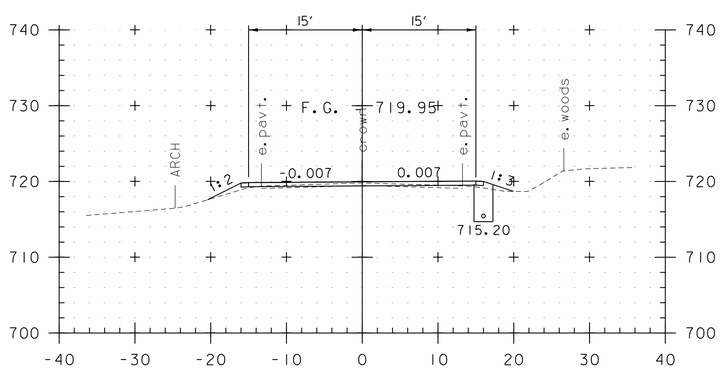
CLD 12-0337



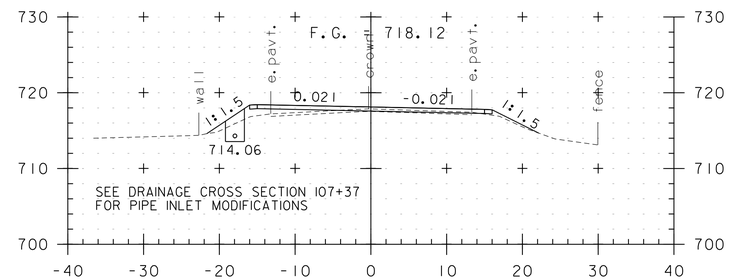
106+00



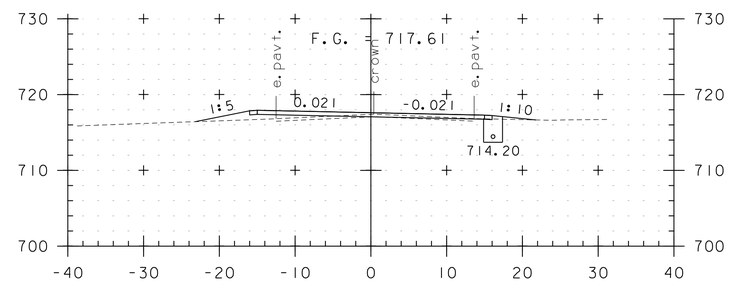
105+50



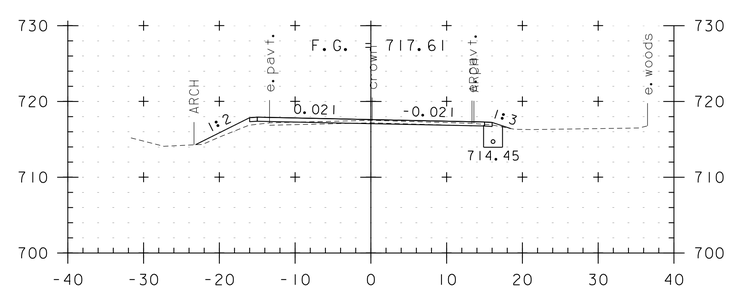
105+00



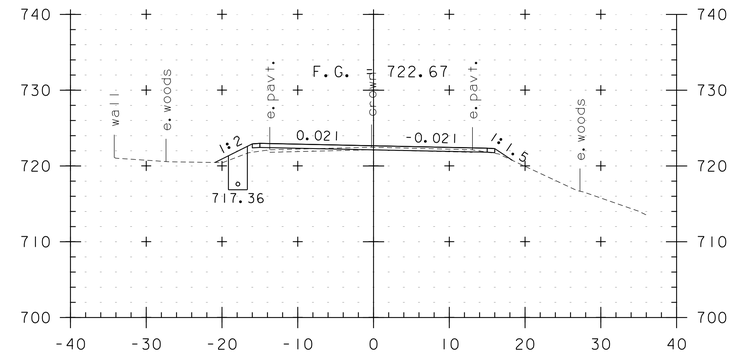
107+50



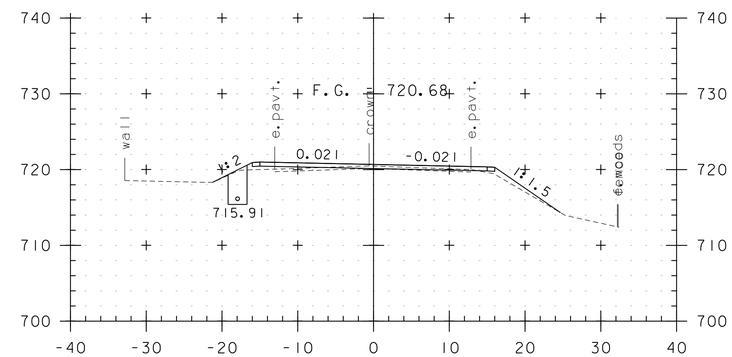
107+00



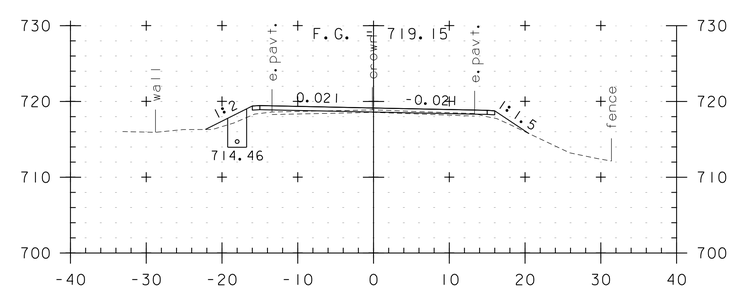
106+50



109+00



108+50



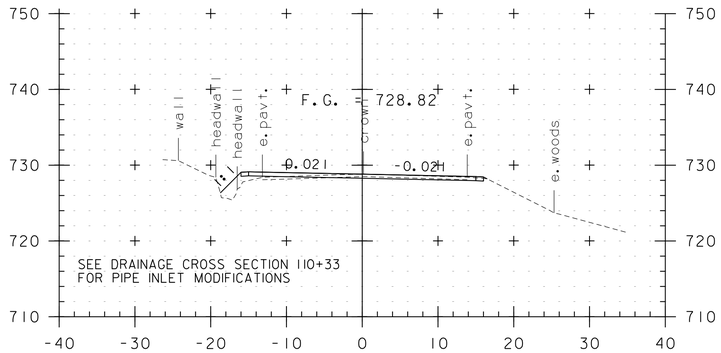
108+00

0 10 20
SCALE IN FEET

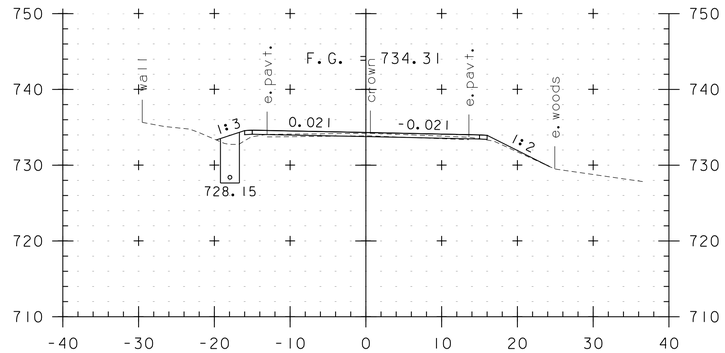
STA. 105+00 TO STA. 109+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 16	SHEET 204 OF 303

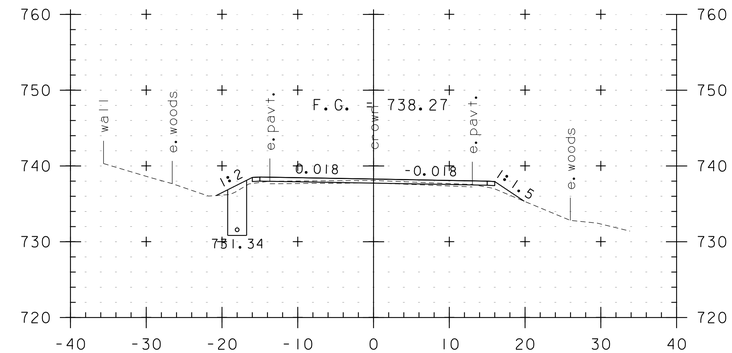
CLD 12-0337



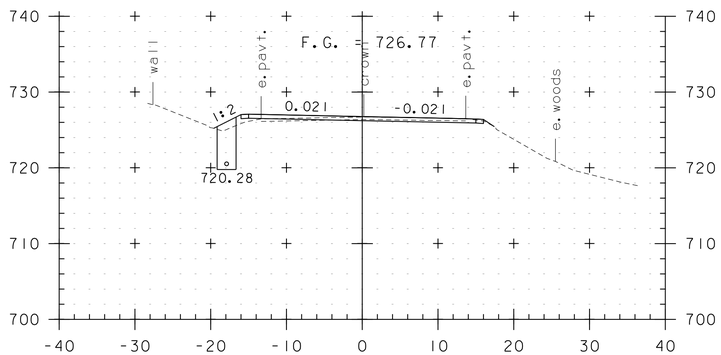
110+50



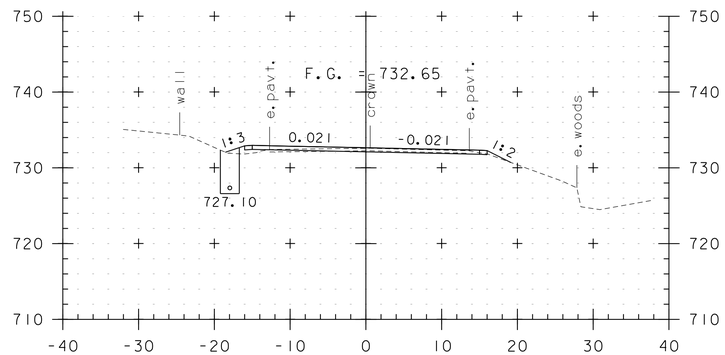
112+00



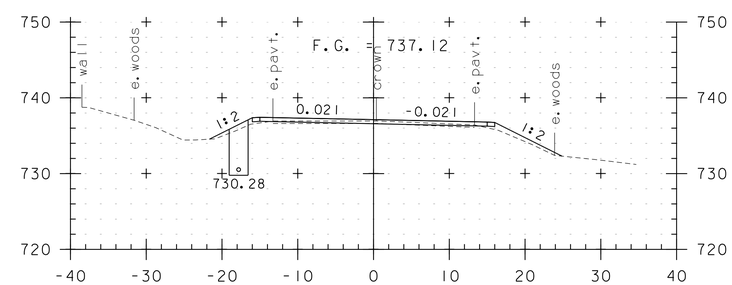
113+50



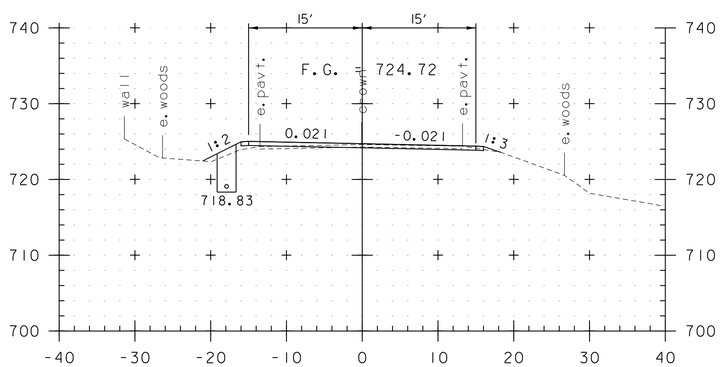
110+00



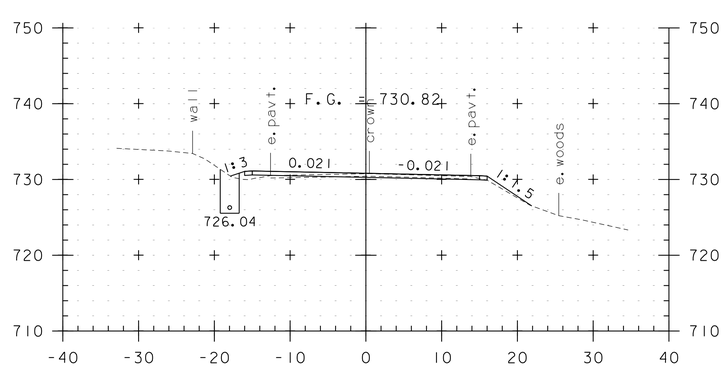
111+50



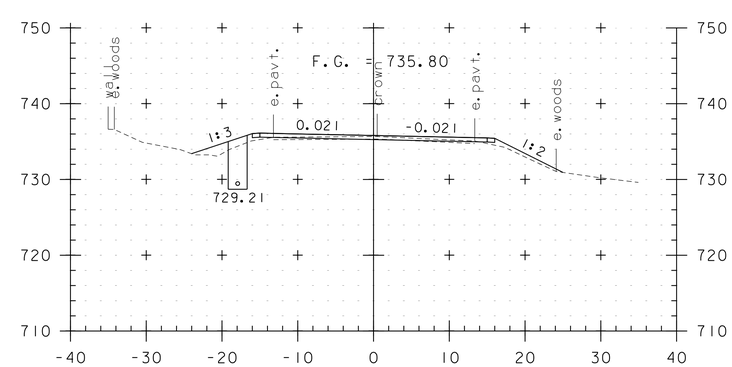
113+00



109+50



111+00



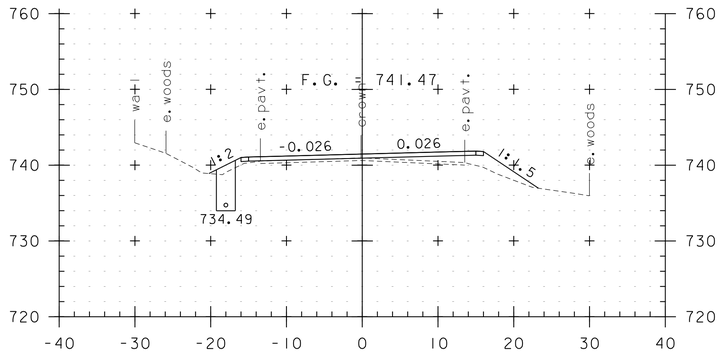
112+50

0 10 20
SCALE IN FEET

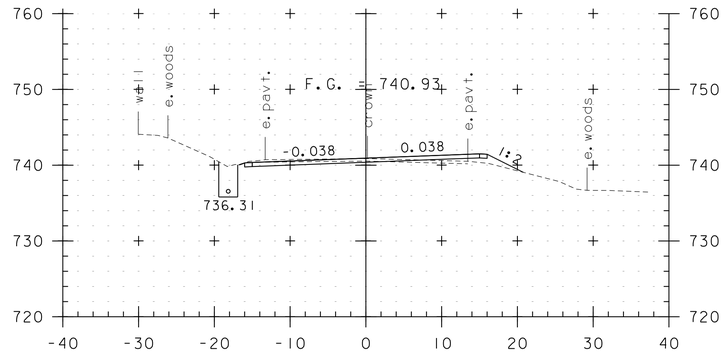
STA. 109+50 TO STA. 113+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 17	SHEET 205 OF 303

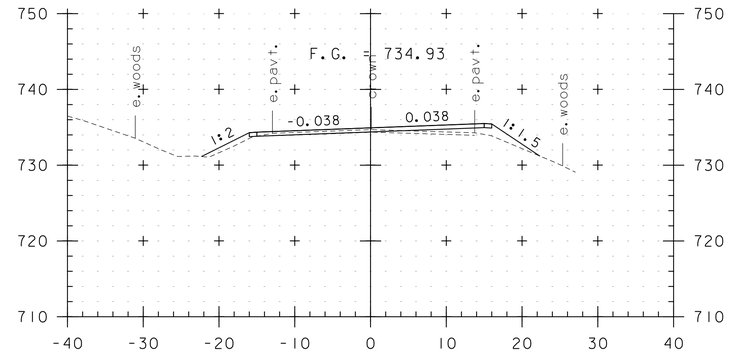
CLD 12-0337



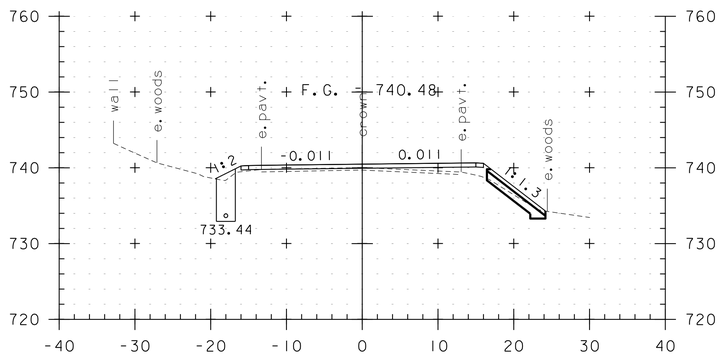
115+00



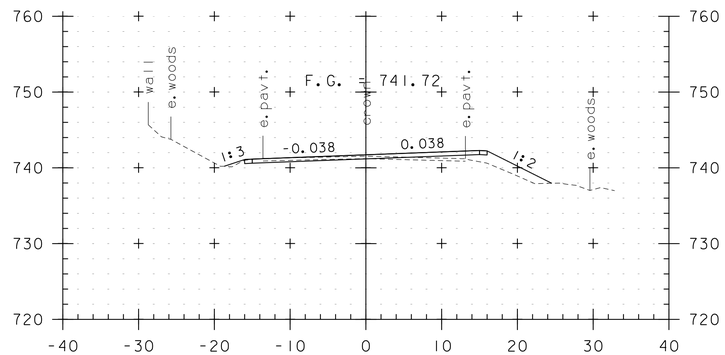
116+50



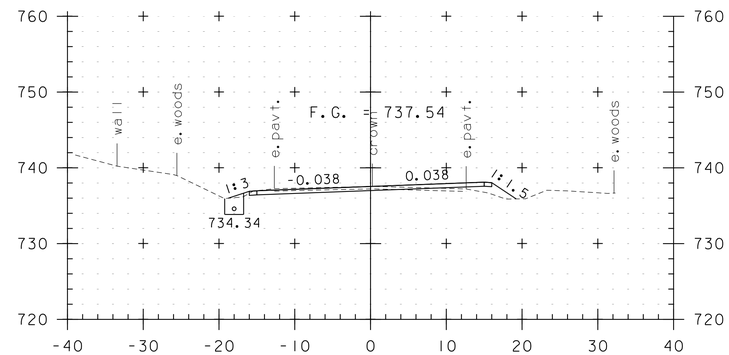
118+00



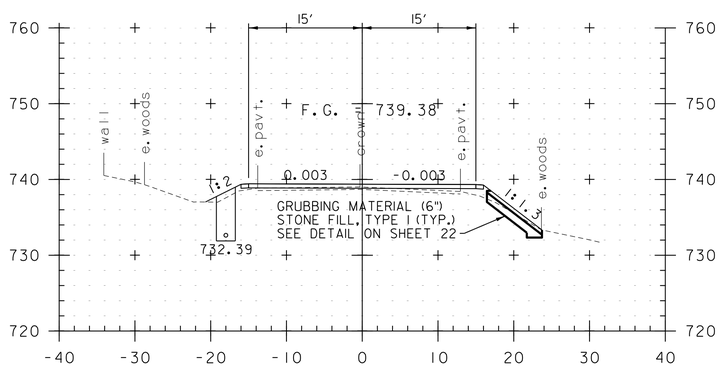
114+50



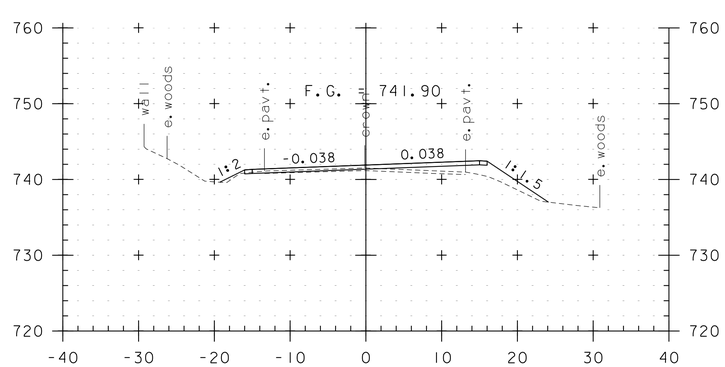
116+00



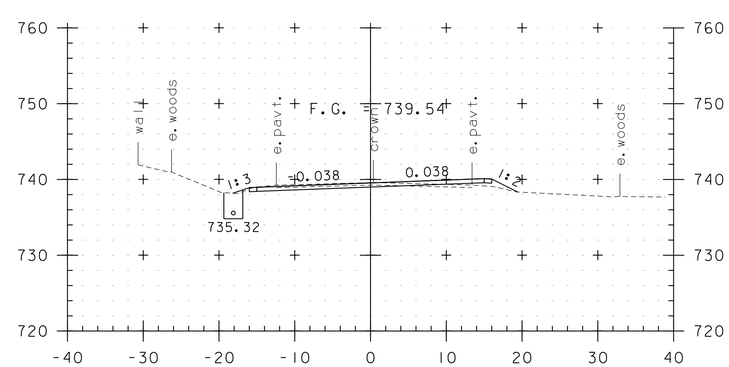
117+50



114+00



115+50



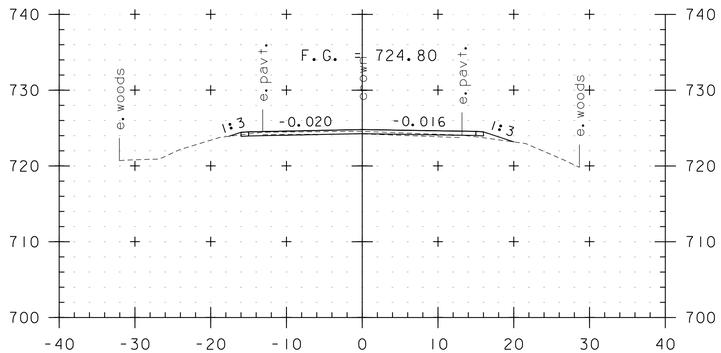
117+00

0 10 20
SCALE IN FEET

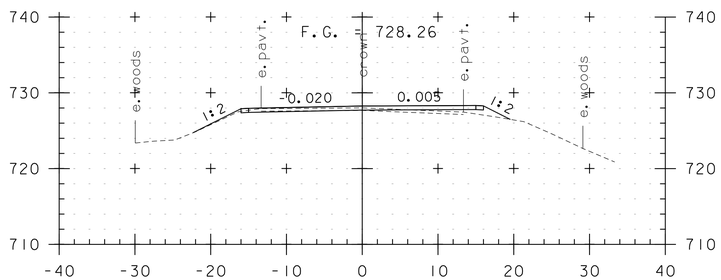
STA. 114+00 TO STA. 118+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 18	SHEET 206 OF 303

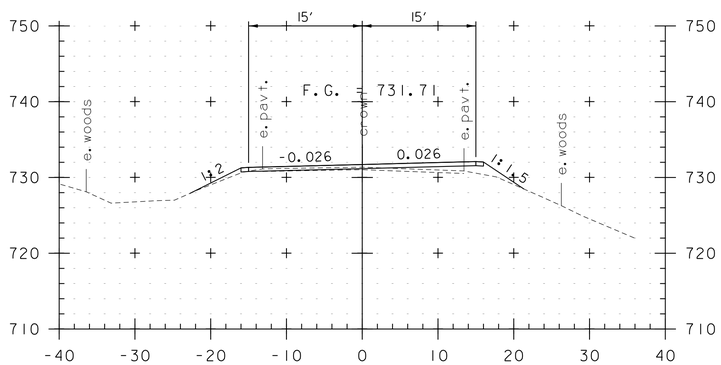
CLD 12-0337



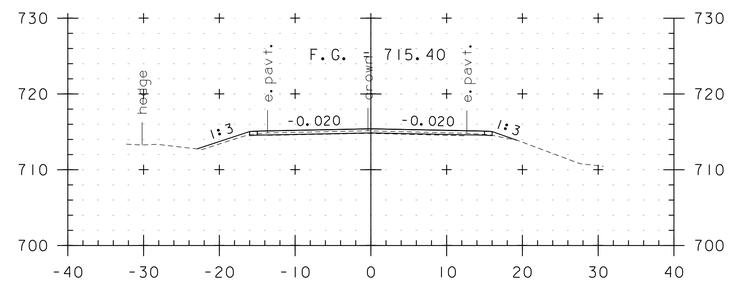
119+50



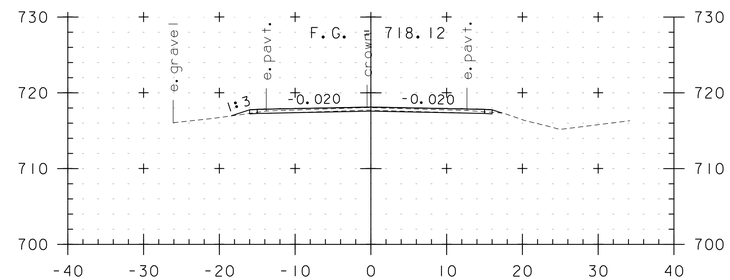
119+00



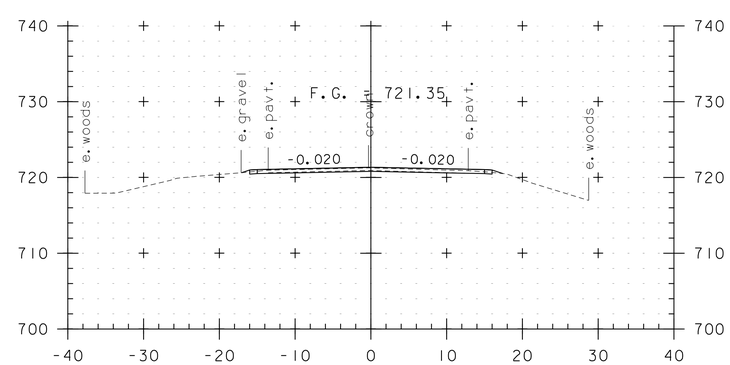
118+50



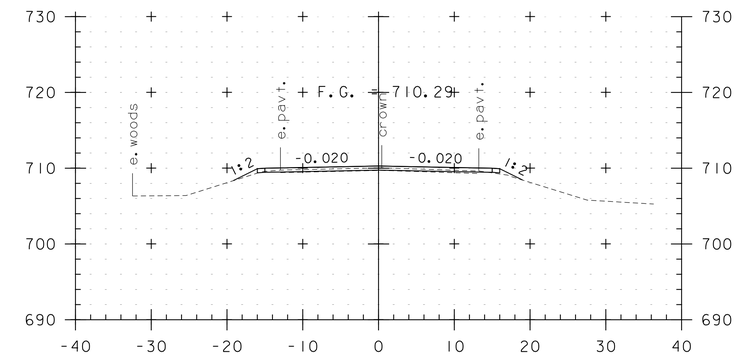
121+00



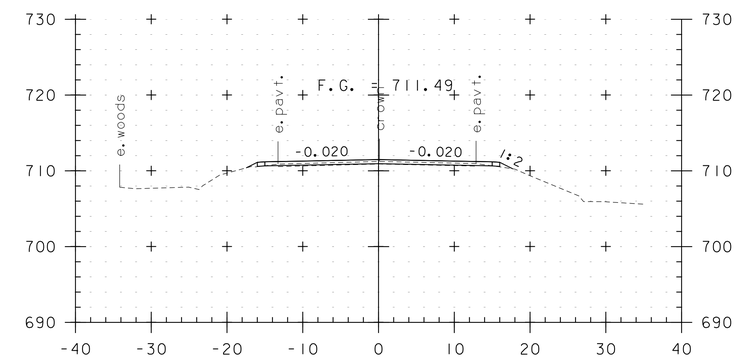
120+50



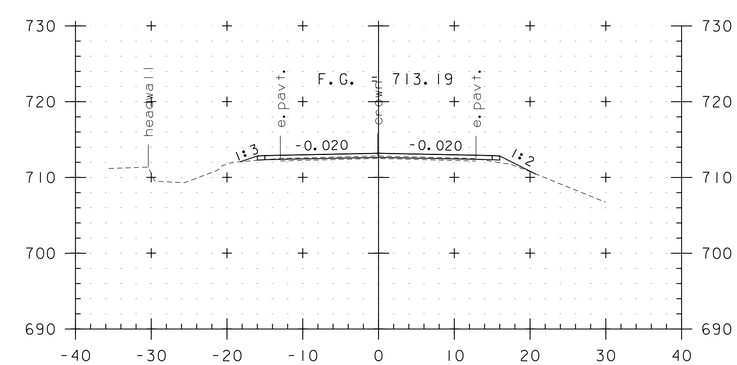
120+00



122+50



122+00



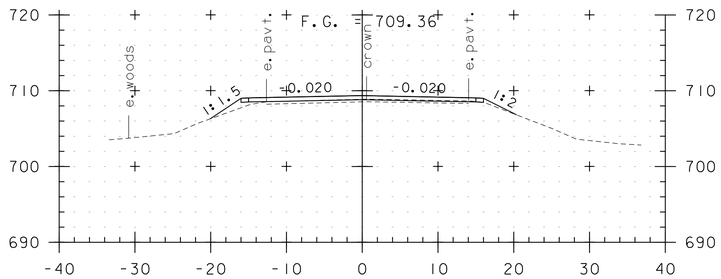
121+50

0 10 20
SCALE IN FEET

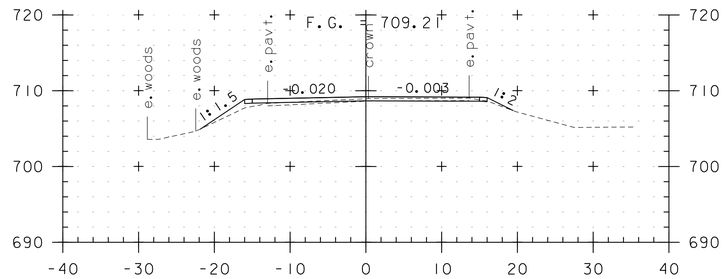
STA. 118+50 TO STA. 122+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 19	SHEET 207 OF 303

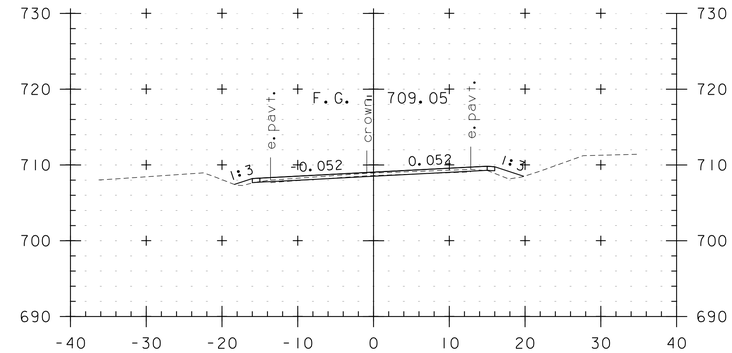
CLD 12-0337



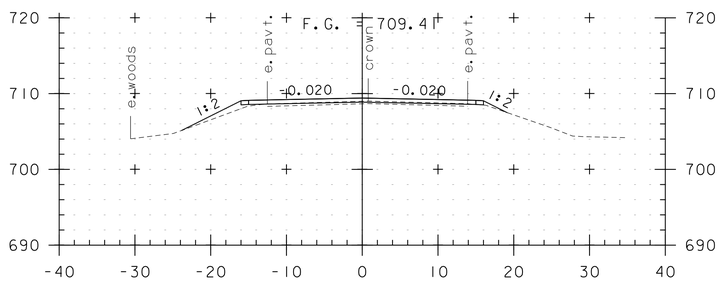
124+00



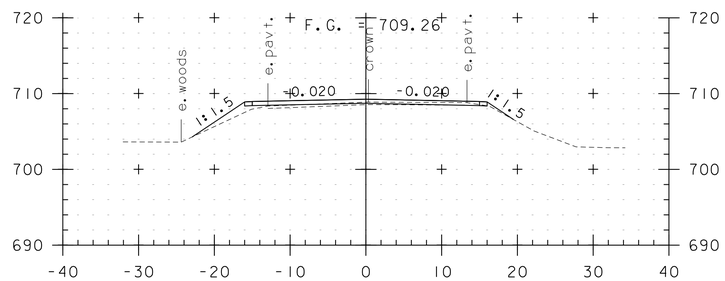
125+50



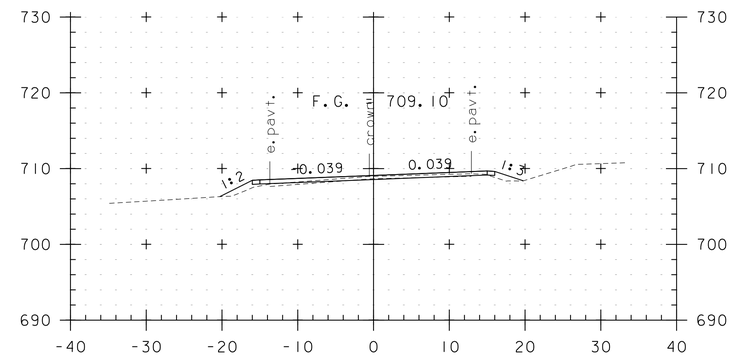
127+00



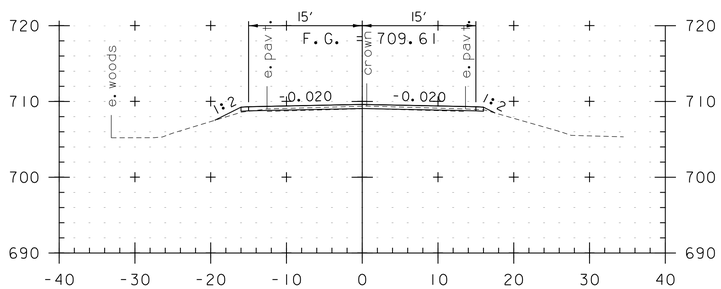
123+50



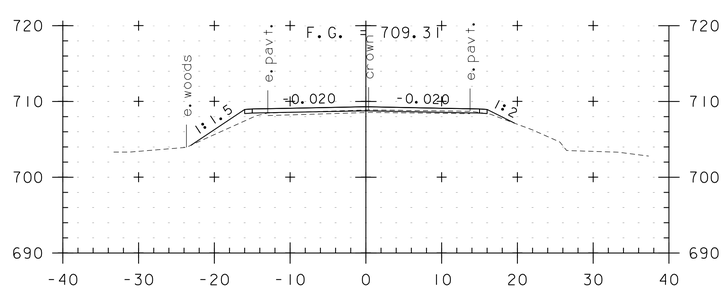
125+00



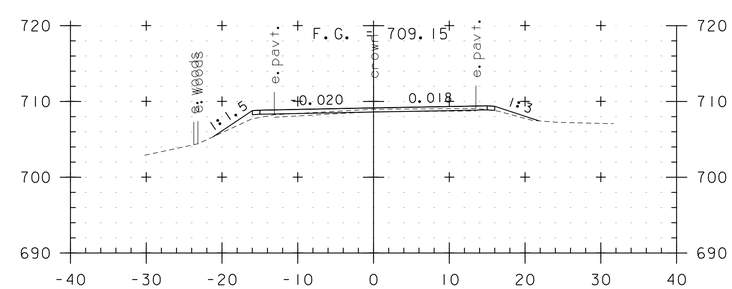
126+50



123+00



124+50



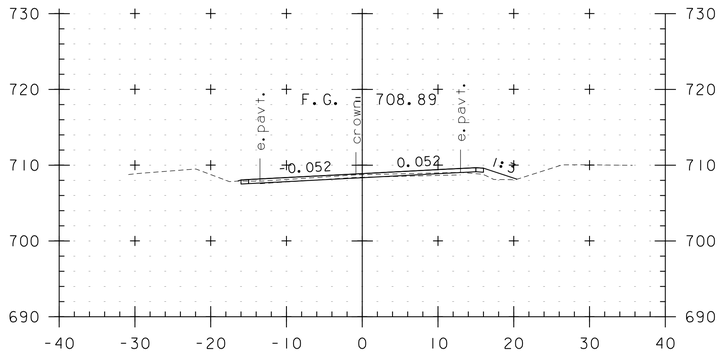
126+00

0 10 20
SCALE IN FEET

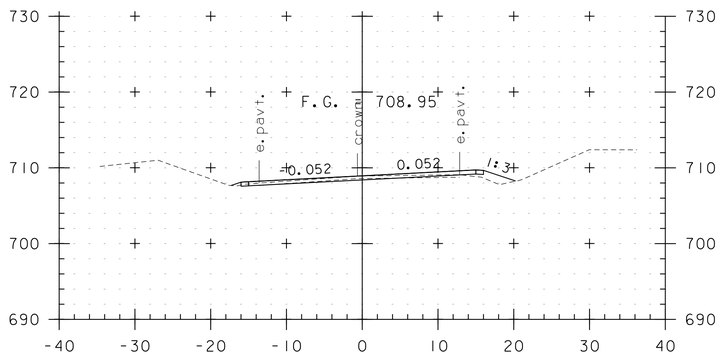
STA. 123+00 TO STA. 127+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 20	SHEET 208 OF 303

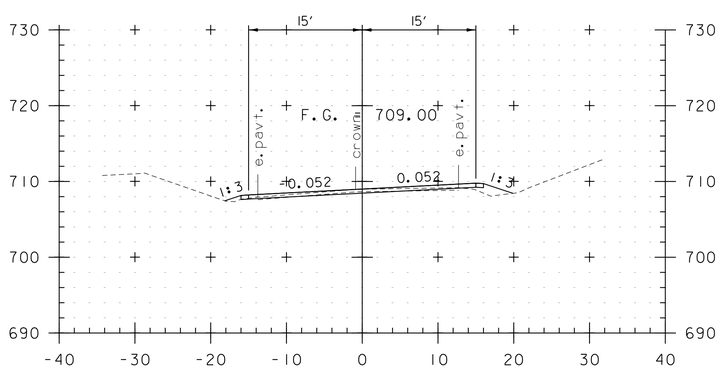
CLD 12-0337



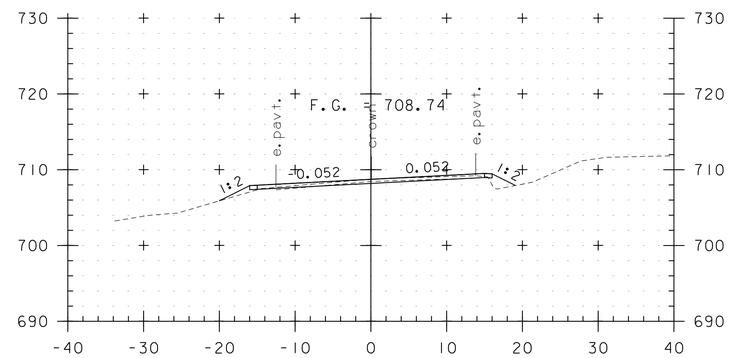
128+50



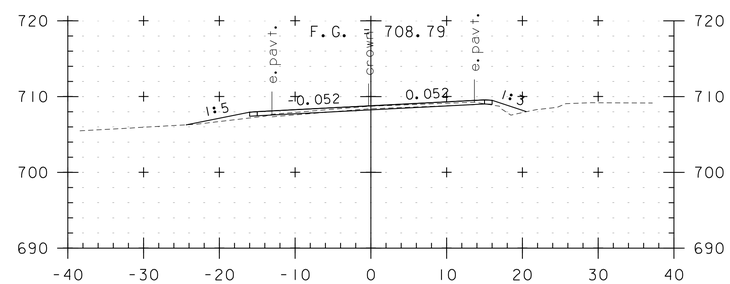
128+00



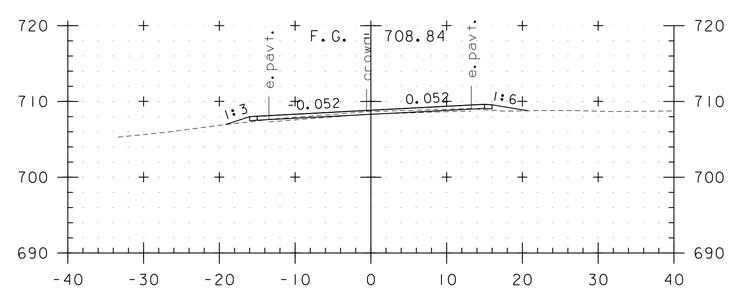
127+50



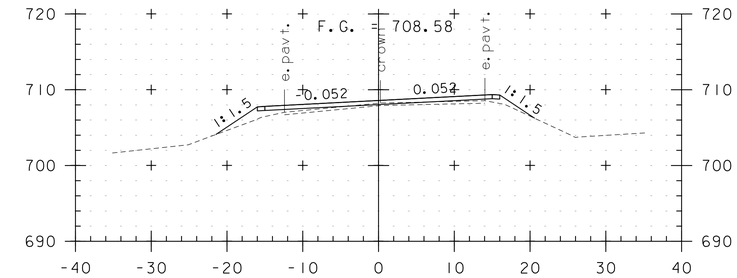
130+00



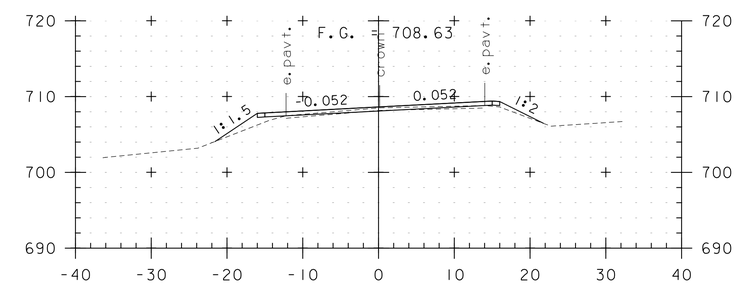
129+50



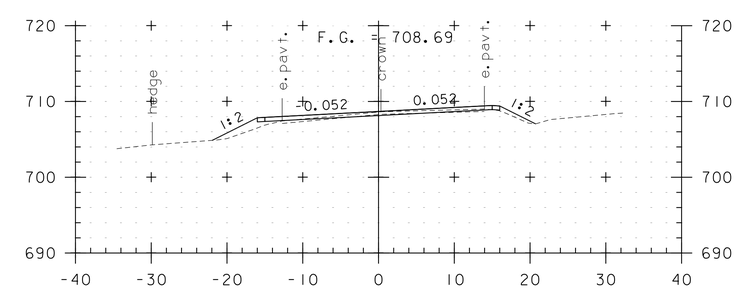
129+00



131+50



131+00



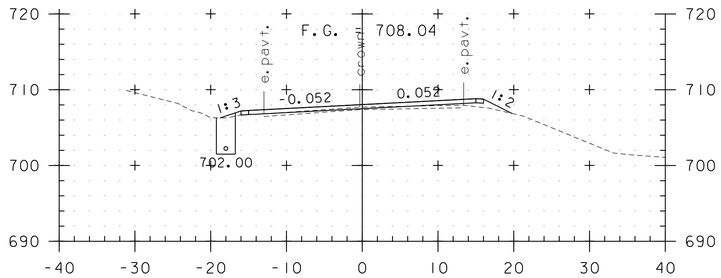
130+50

0 10 20
SCALE IN FEET

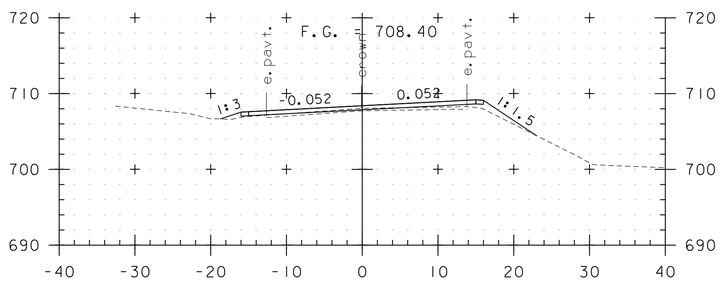
STA. 127+50 TO STA. 131+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 21	SHEET 209 OF 303

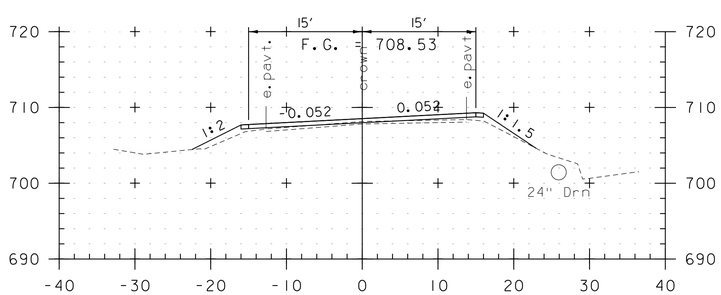
CLD 12-0337



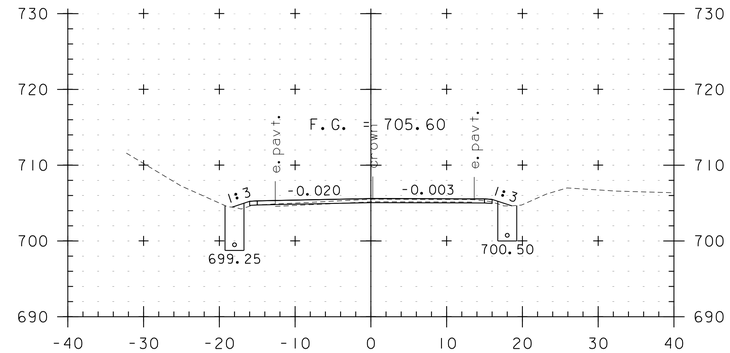
133+00



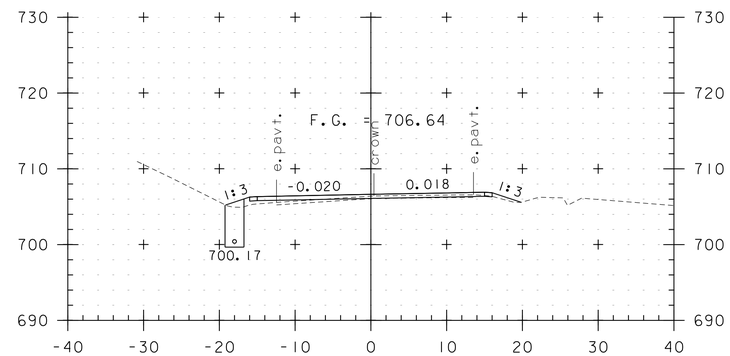
132+50



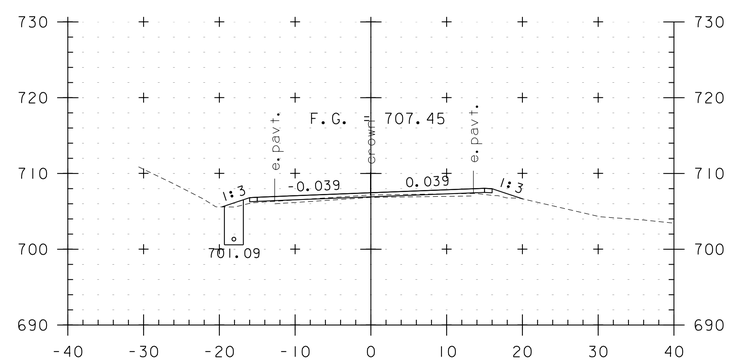
132+00



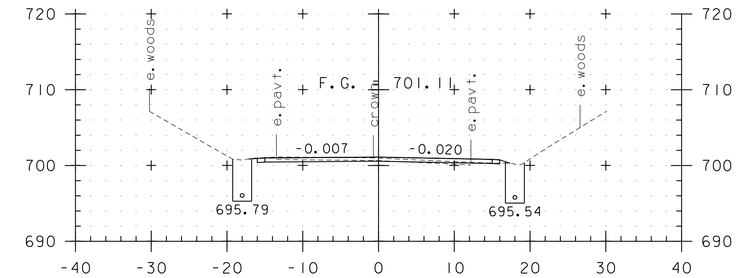
134+50



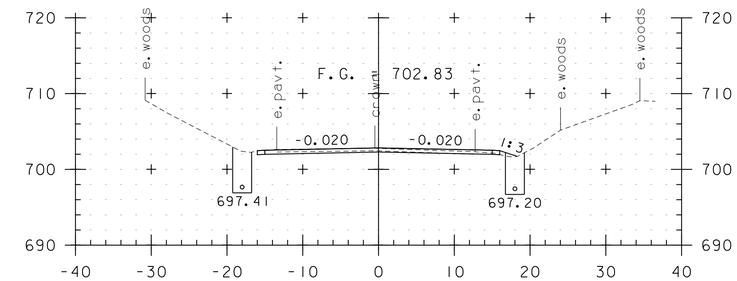
134+00



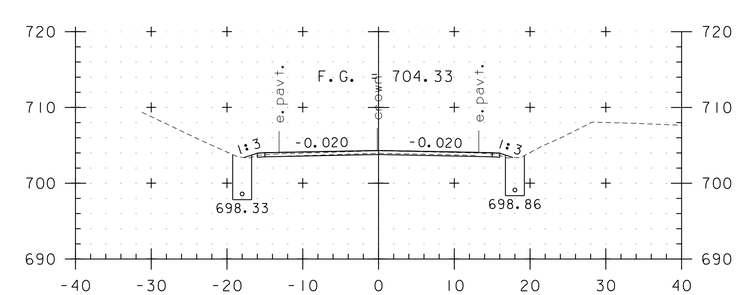
133+50



136+00



135+50



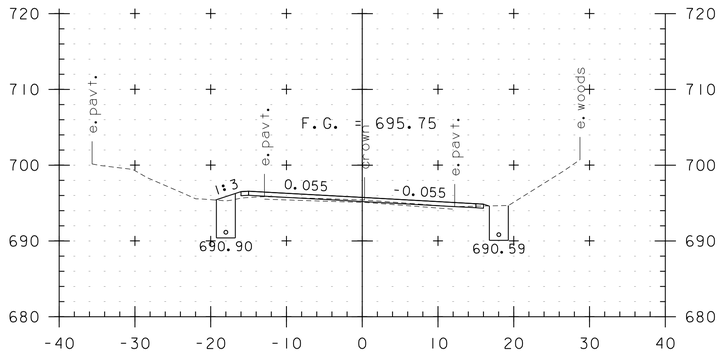
135+00

0 10 20
SCALE IN FEET

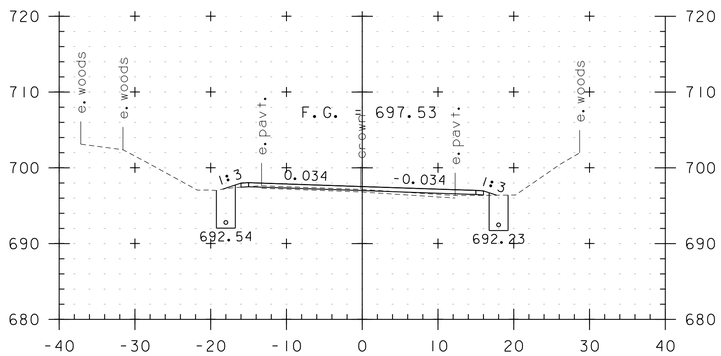
STA. 132+00 TO STA. 136+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 22	SHEET 210 OF 303

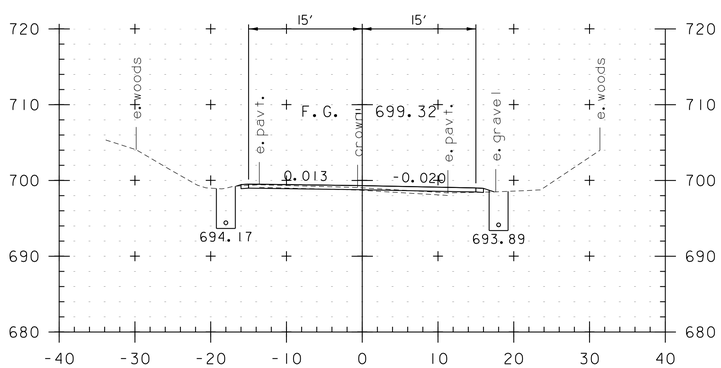
CLD 12-0337



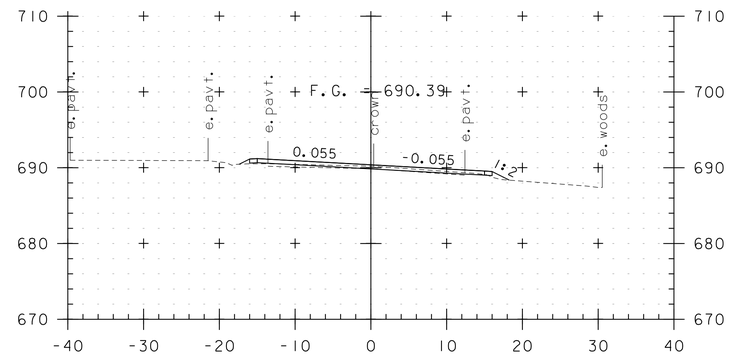
137+50



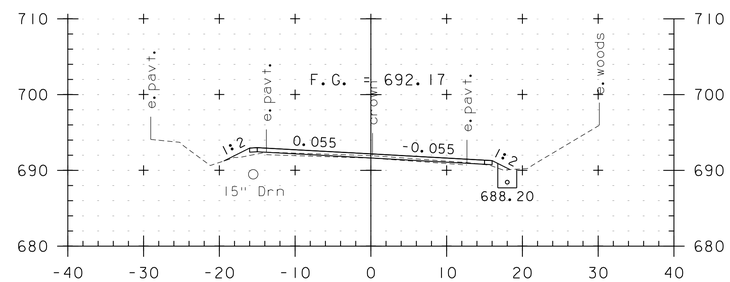
137+00



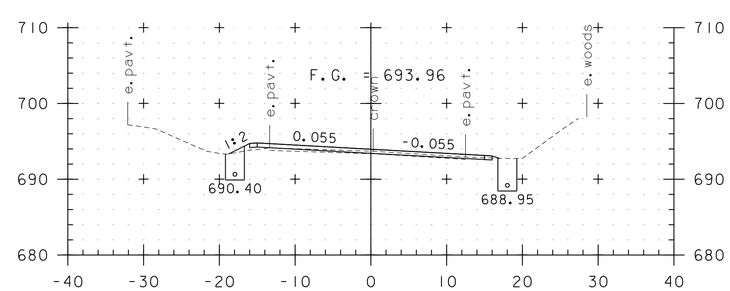
136+50



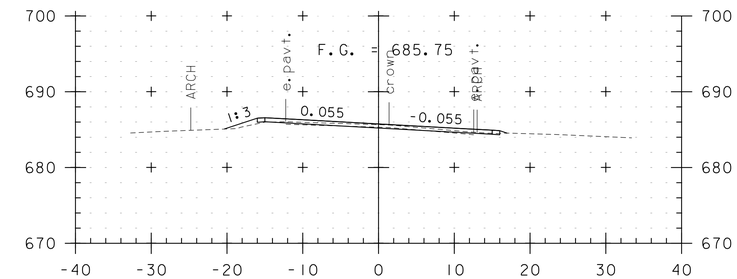
139+00



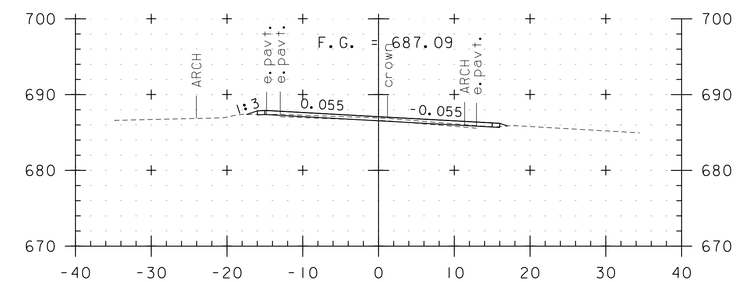
138+50



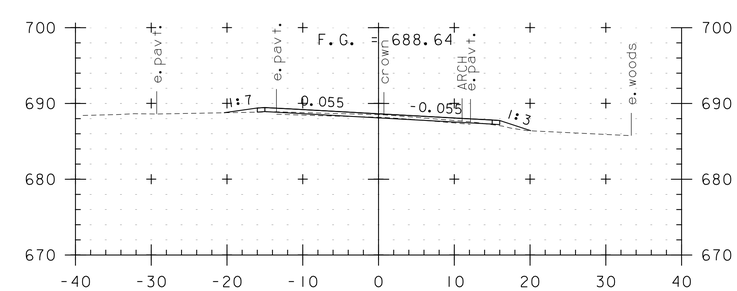
138+00



140+50



140+00



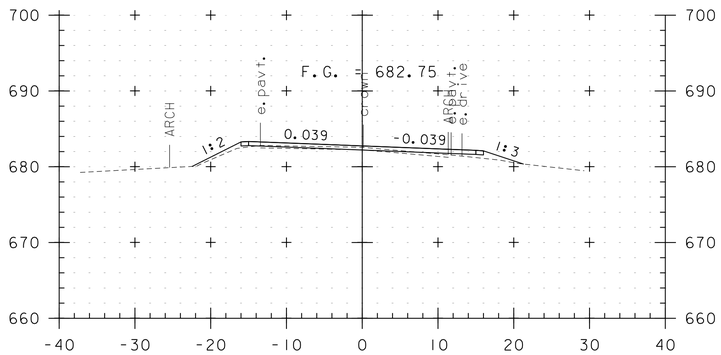
139+50

0 10 20
SCALE IN FEET

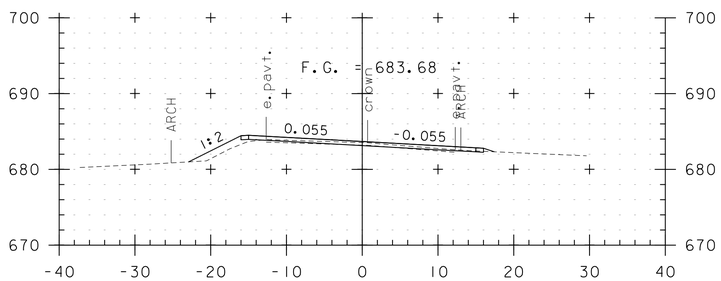
STA. 136+50 TO STA. 140+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 23	SHEET 211 OF 303

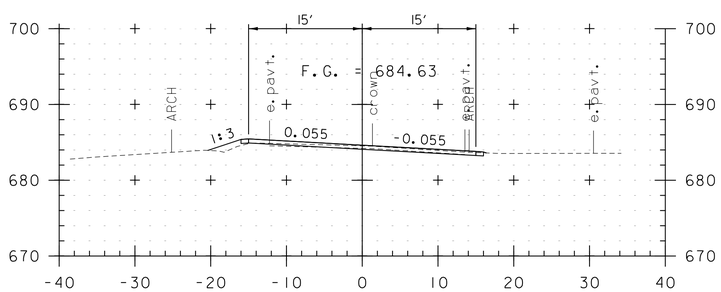
CLD 12-0337



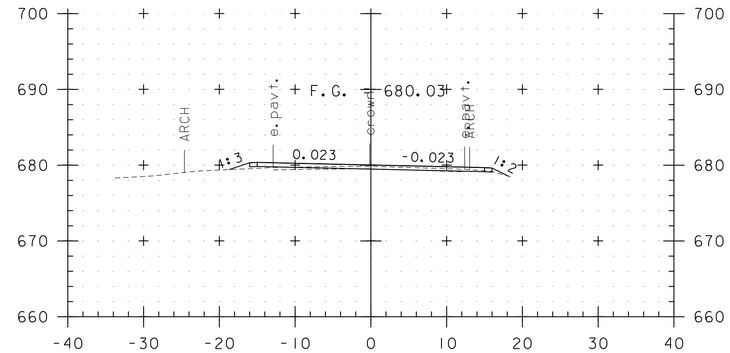
142+00



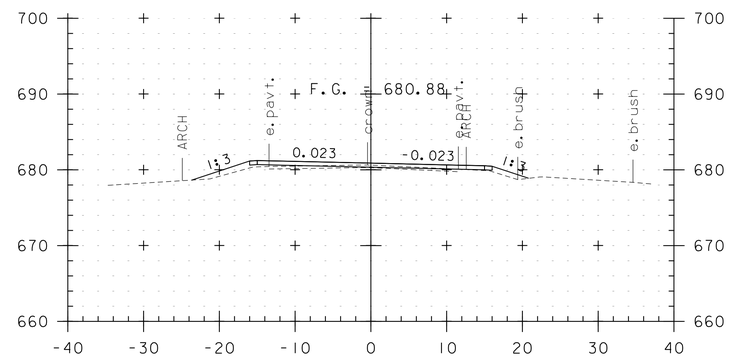
141+50



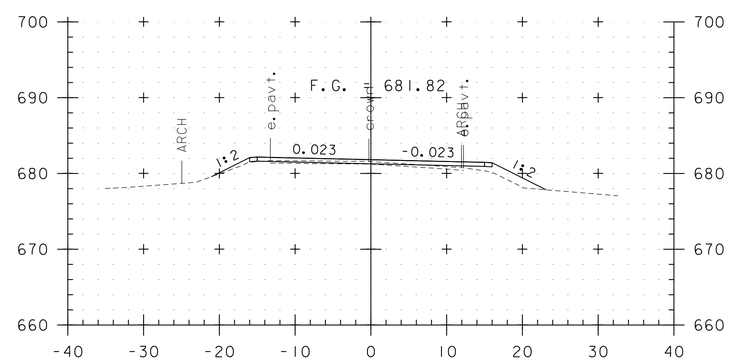
141+00



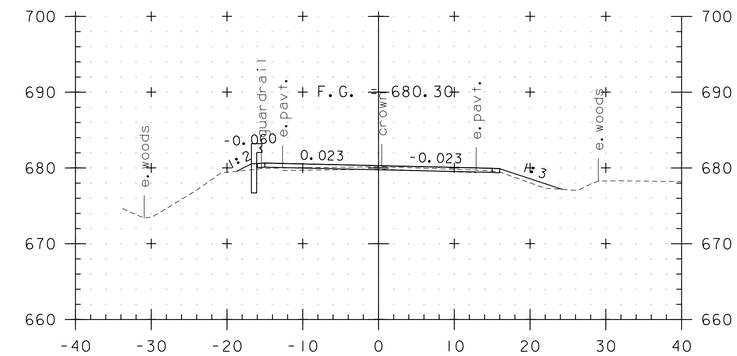
143+50



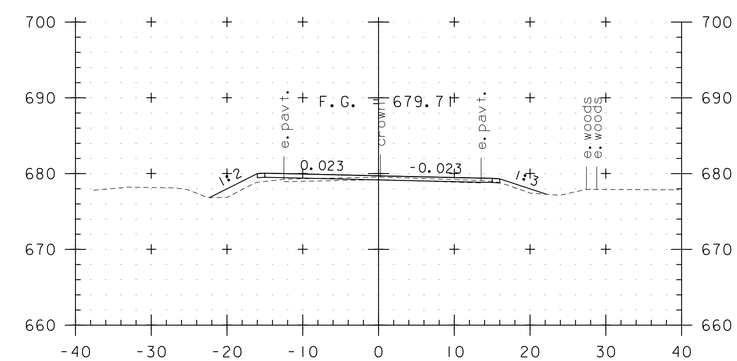
143+00



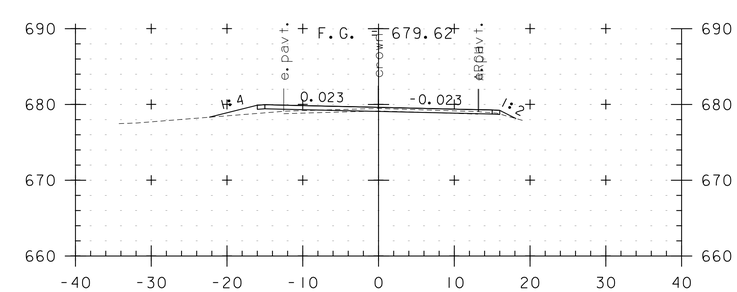
142+50



145+00



144+50



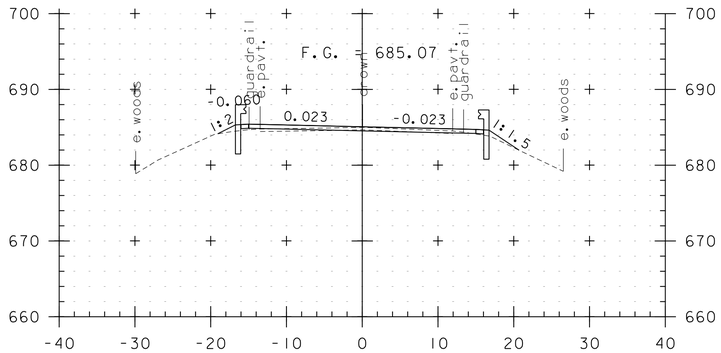
144+00

0 10 20
SCALE IN FEET

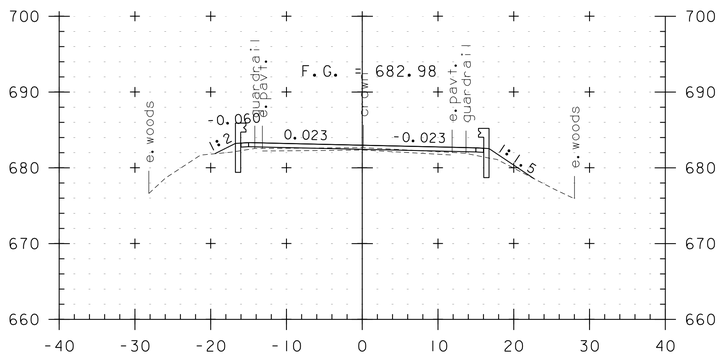
STA. 141+00 TO STA. 145+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 24	SHEET 212 OF 303

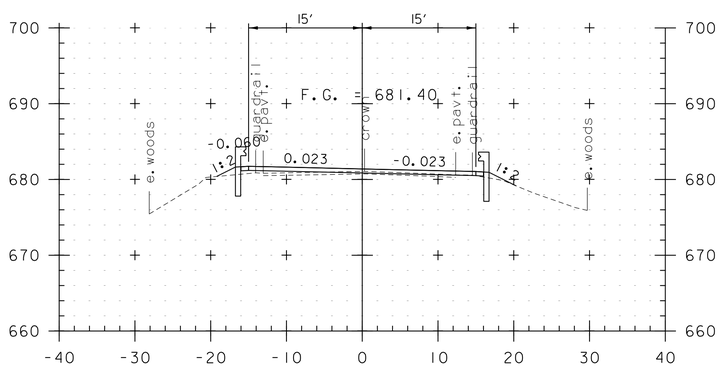
CLD 12-0337



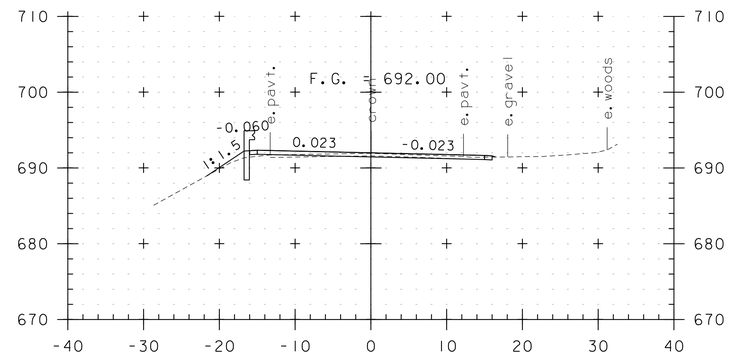
146+50



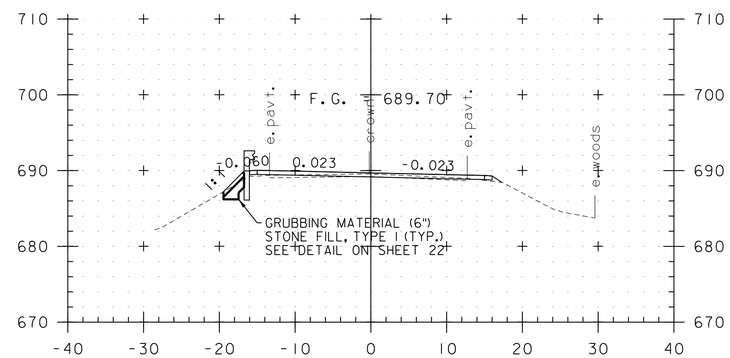
146+00



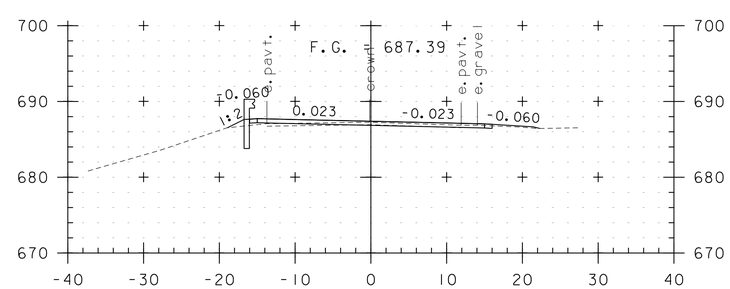
145+50



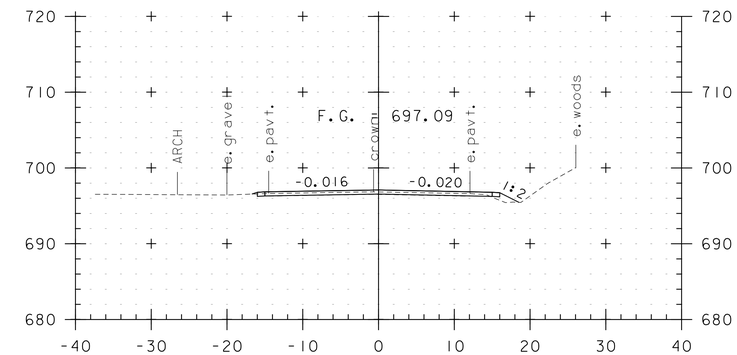
148+00



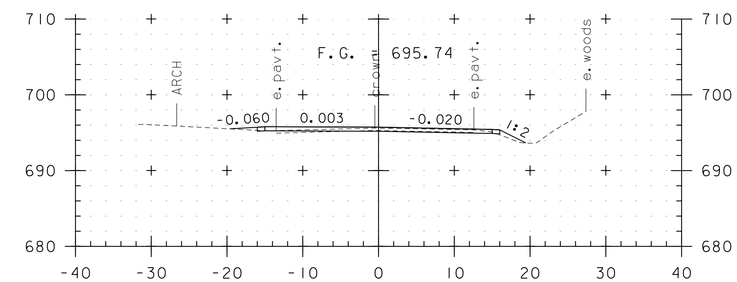
147+50



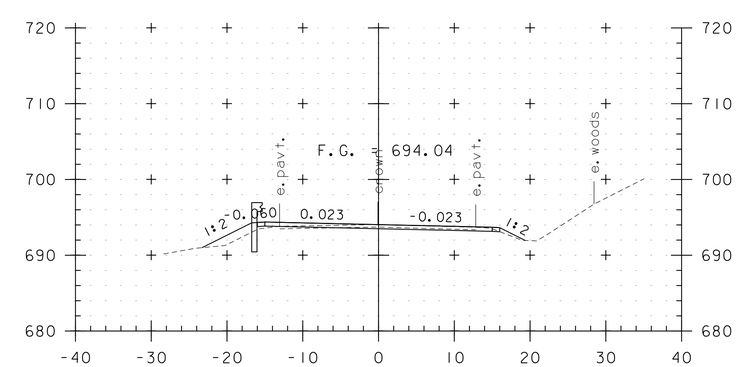
147+00



149+50



149+00



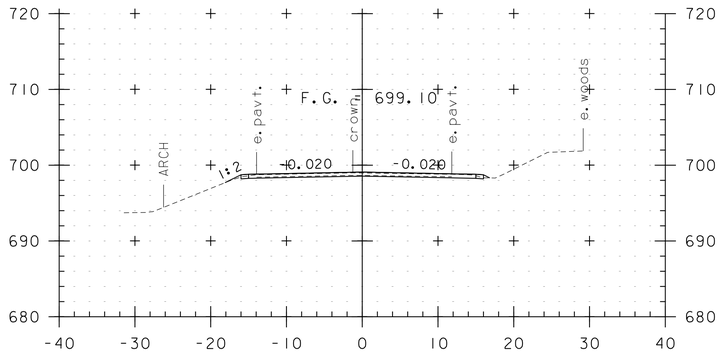
148+50

0 10 20
SCALE IN FEET

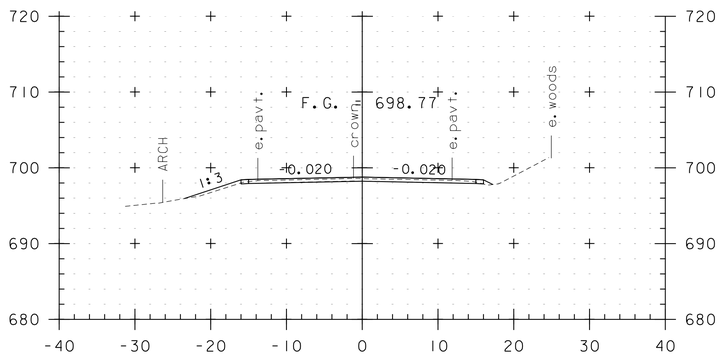
STA. 145+50 TO STA. 149+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 25	SHEET 213 OF 303

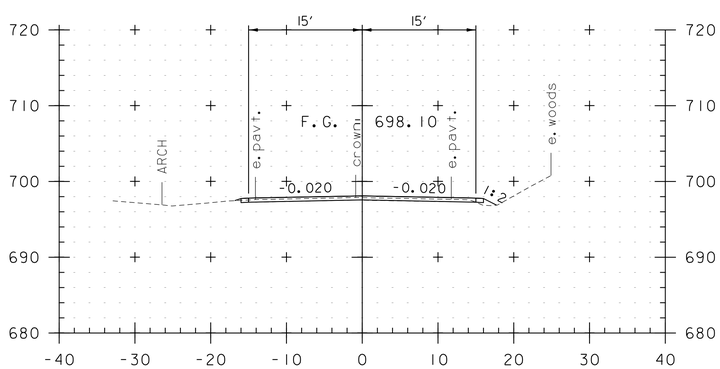
CLD 12-0337



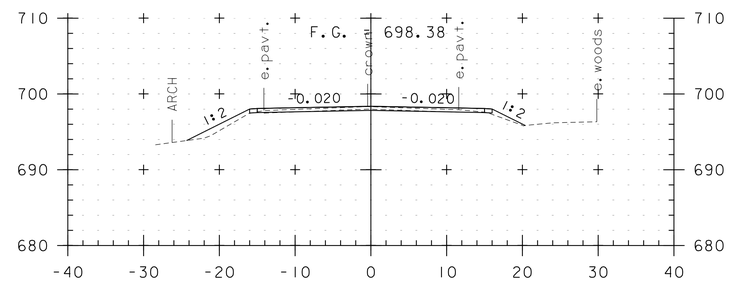
151+00



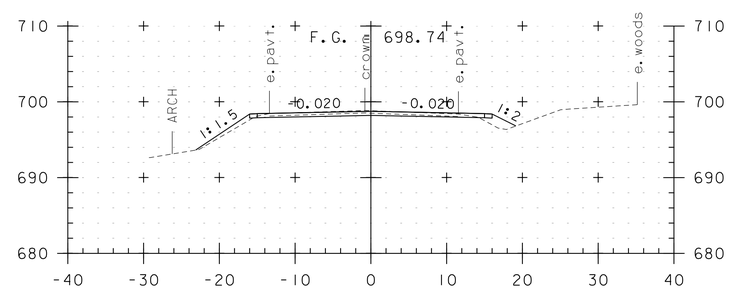
150+50



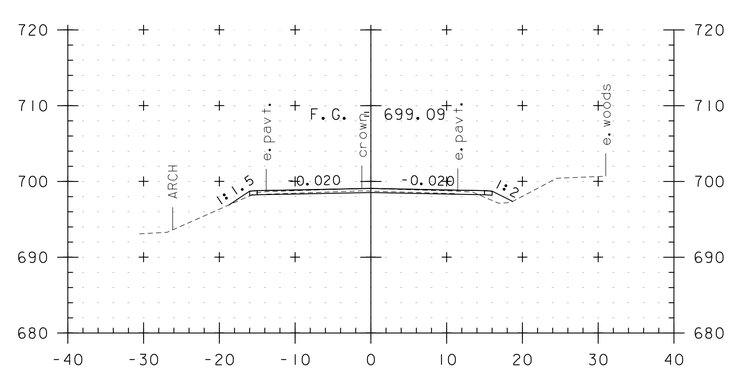
150+00



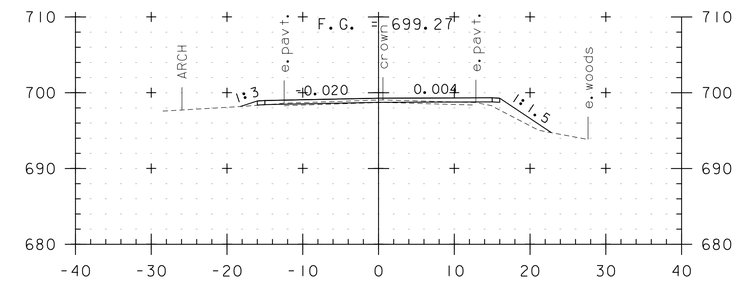
152+50



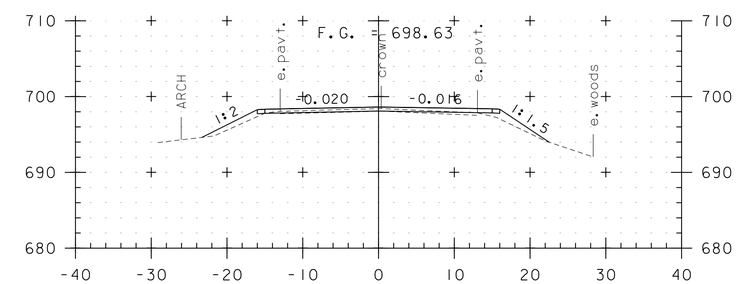
152+00



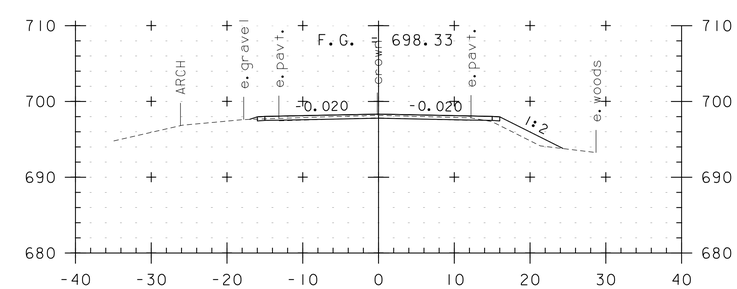
151+50



154+00



153+50



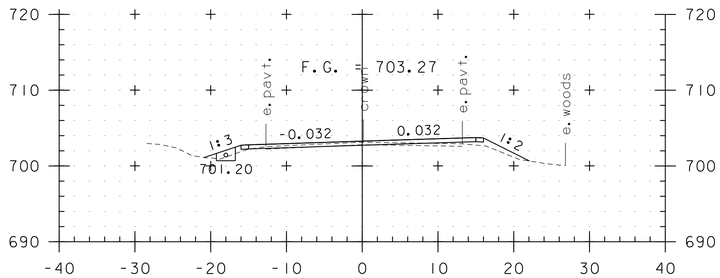
153+00

0 10 20
SCALE IN FEET

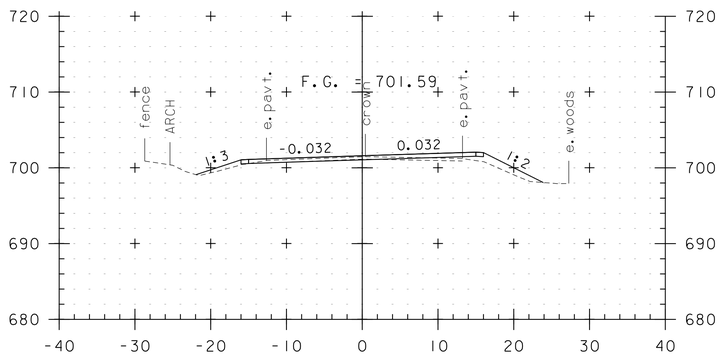
STA. 150+00 TO STA. 154+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 26	SHEET 214 OF 303

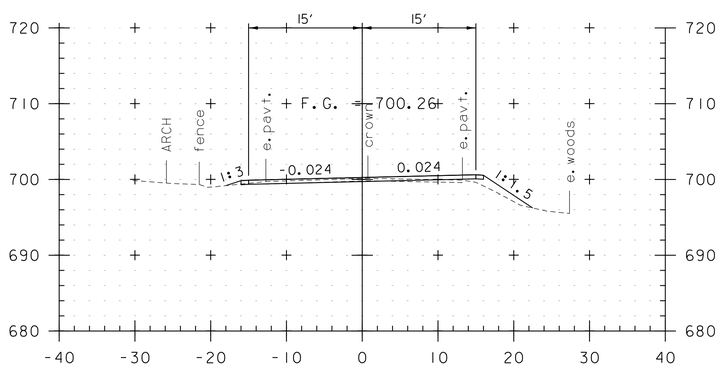
CLD 12-0337



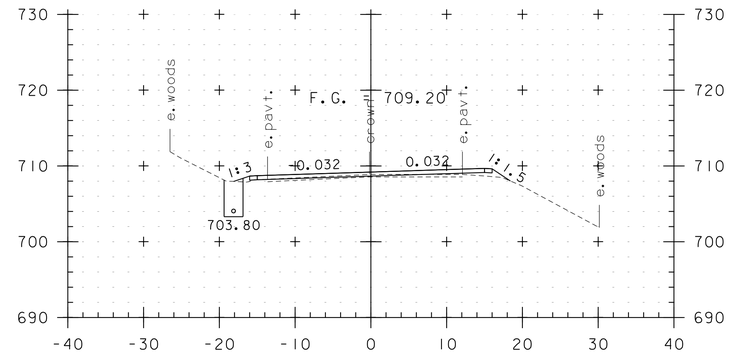
155+50



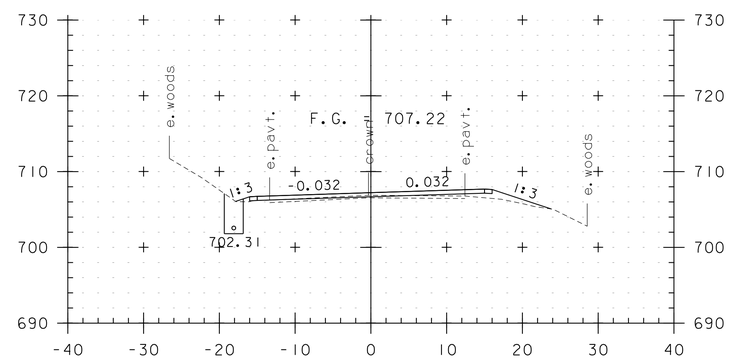
155+00



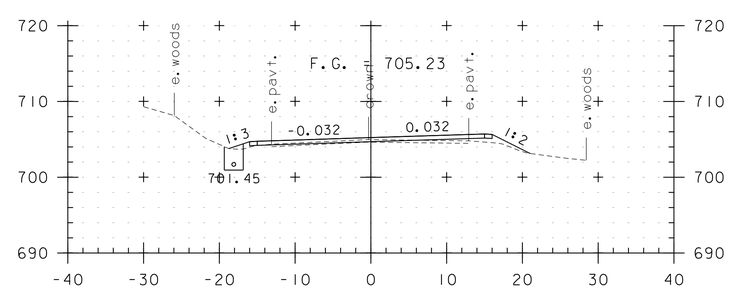
154+50



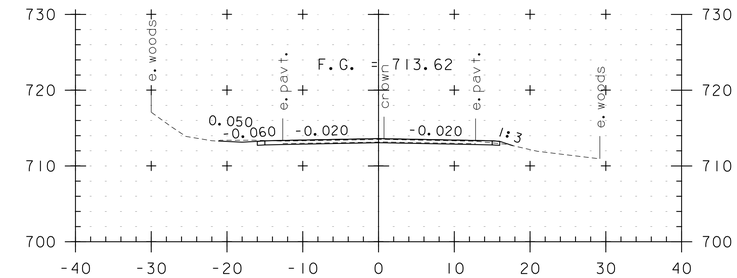
157+00



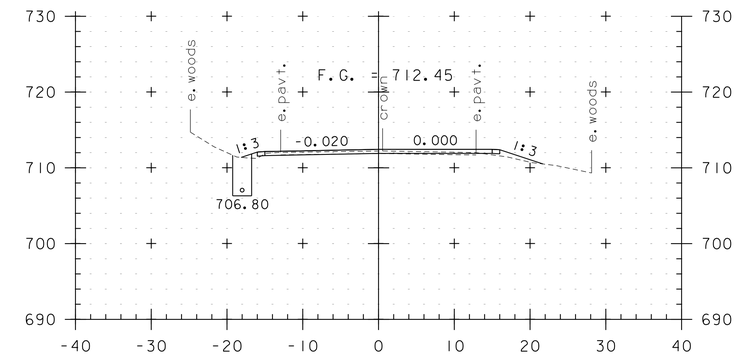
156+50



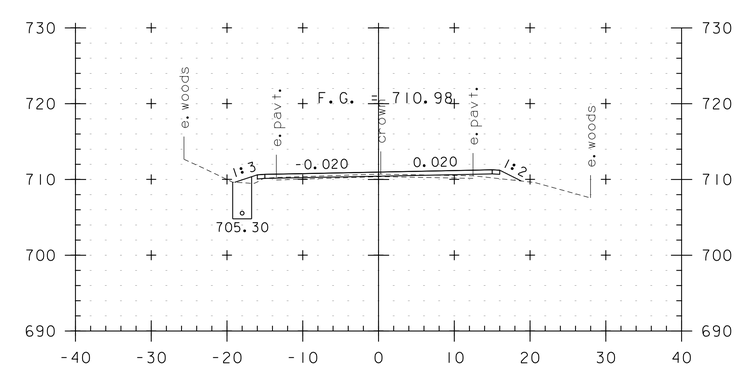
156+00



158+50



158+00



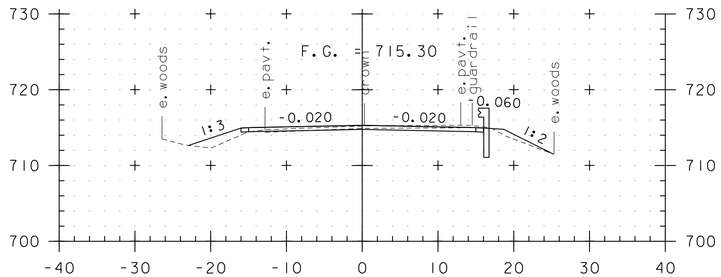
157+50

0 10 20
SCALE IN FEET

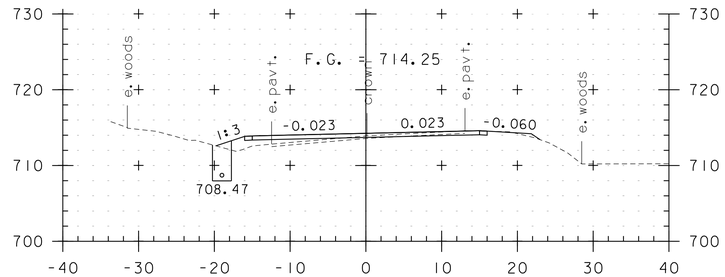
STA. 154+50 TO STA. 158+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 27	SHEET 215 OF 303

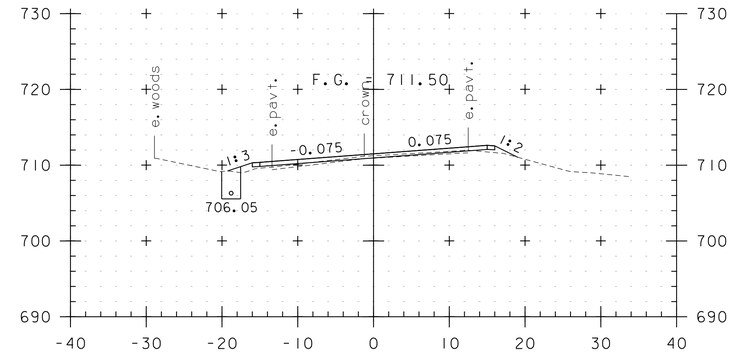
CLD 12-0337



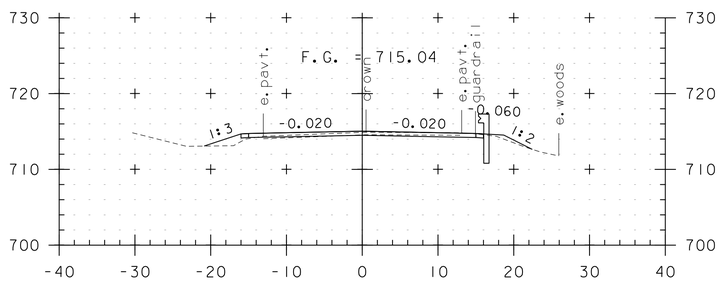
160+00



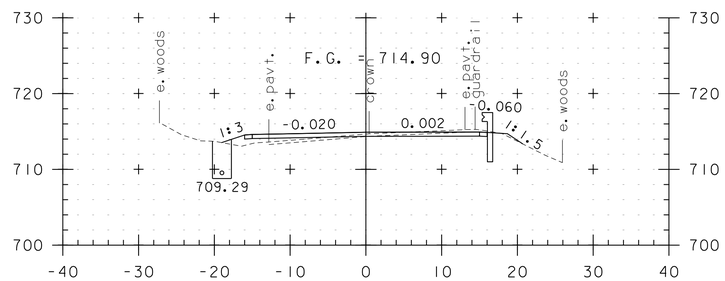
161+50



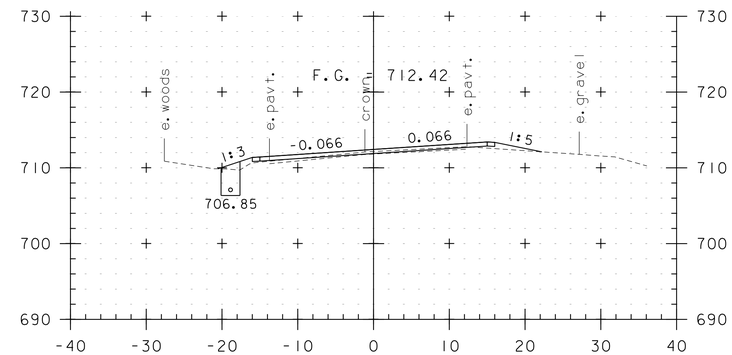
163+00



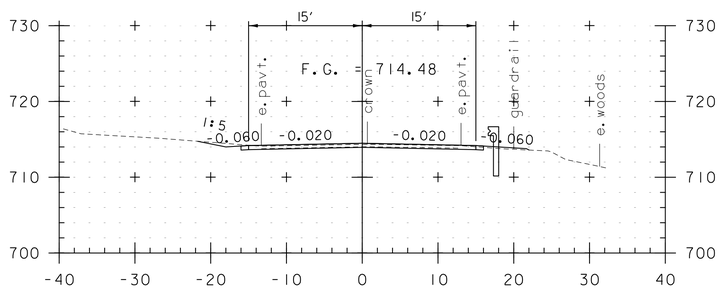
159+50



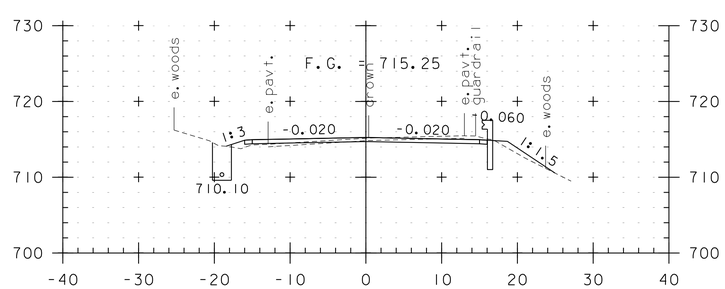
161+00



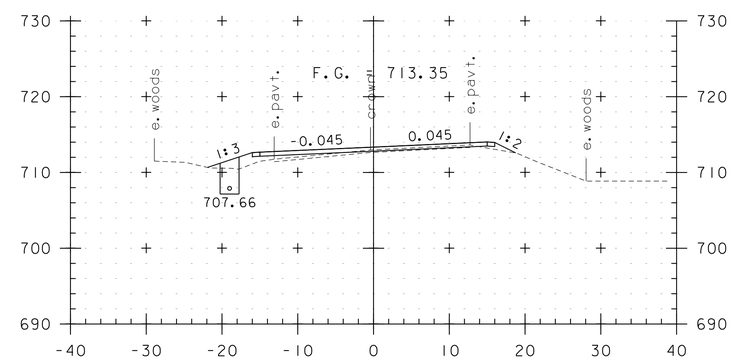
162+50



159+00



160+50



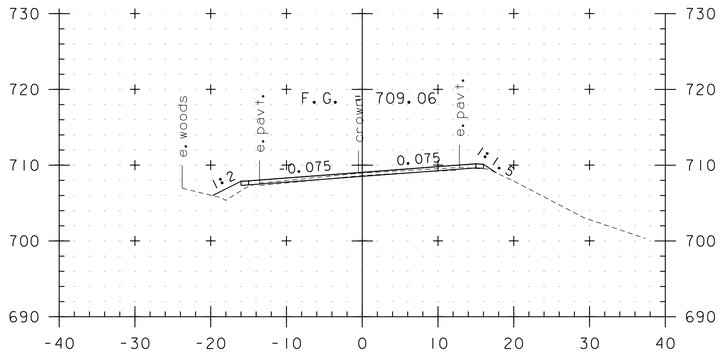
162+00

0 10 20
SCALE IN FEET

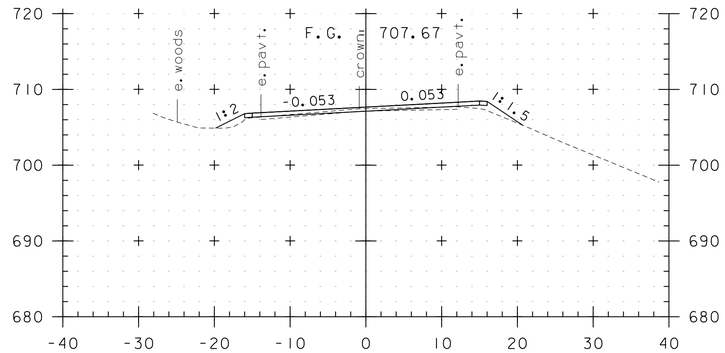
STA. 159+00 TO STA. 163+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 28	SHEET 216 OF 303

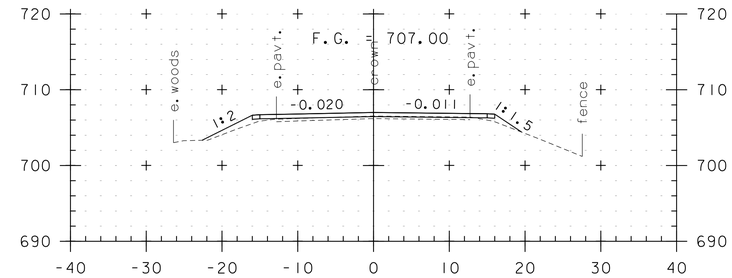
CLD 12-0337



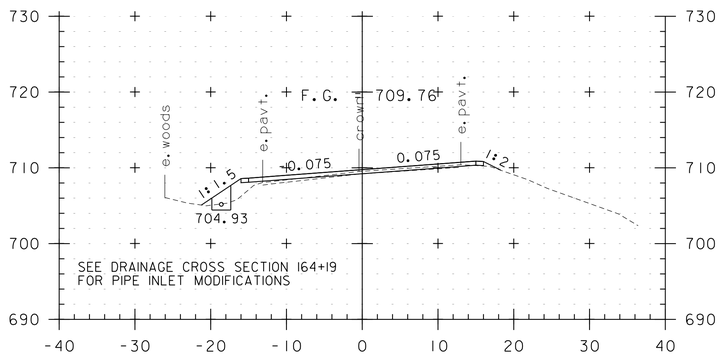
164+50



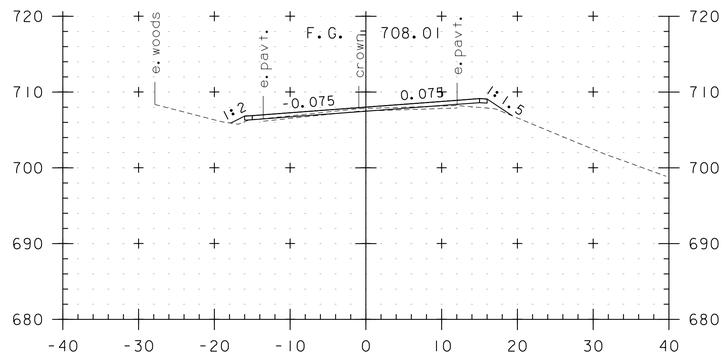
166+00



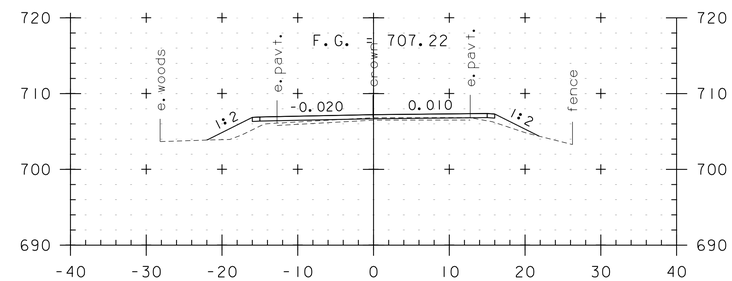
167+50



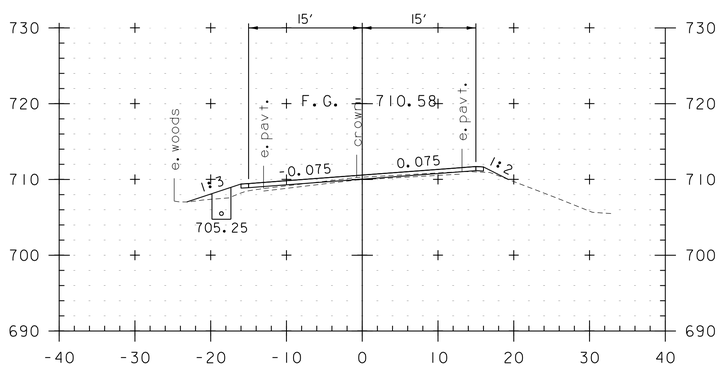
164+00



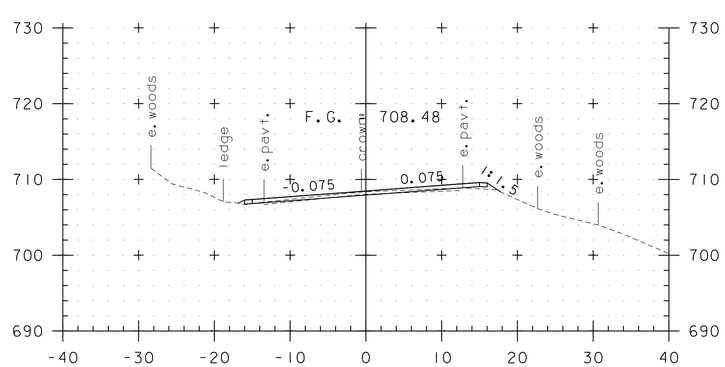
165+50



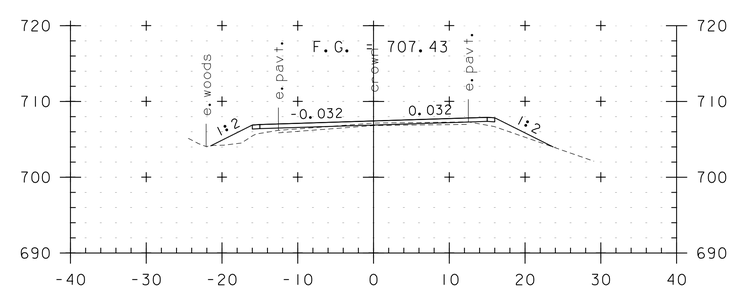
167+00



163+50



165+00



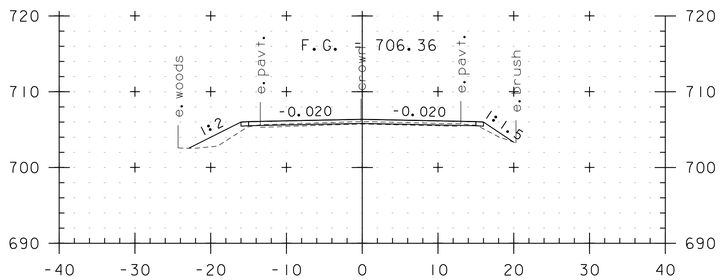
166+50

0 10 20
SCALE IN FEET

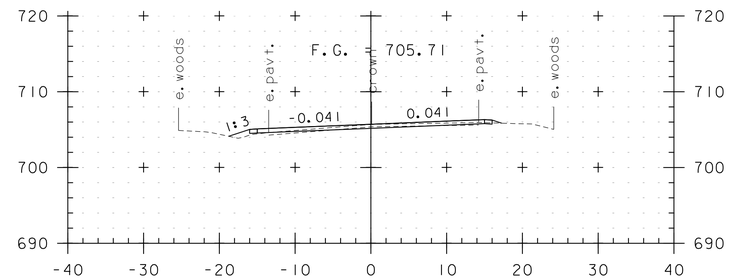
STA. 163+50 TO STA. 167+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 29	SHEET 217 OF 303

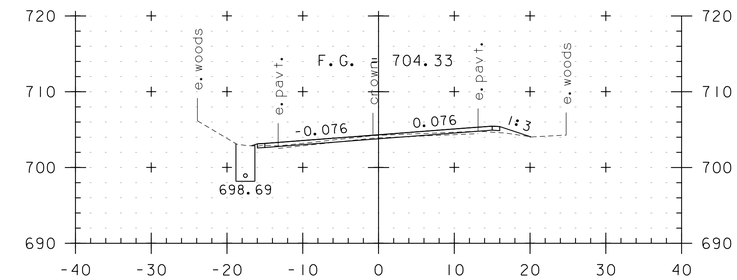
CLD 12-0337



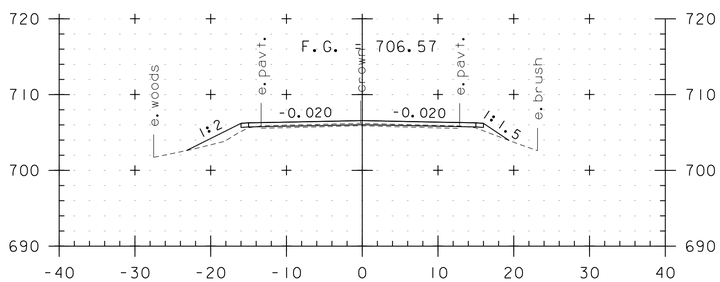
169+00



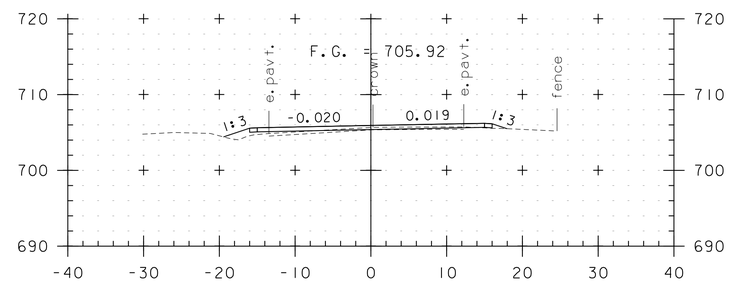
170+50



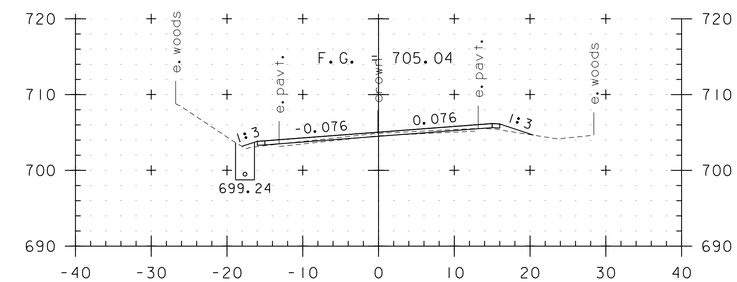
172+00



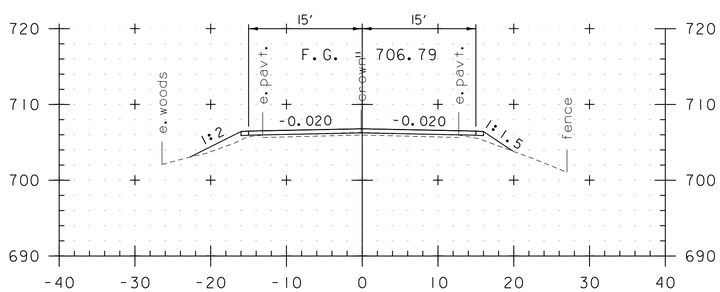
168+50



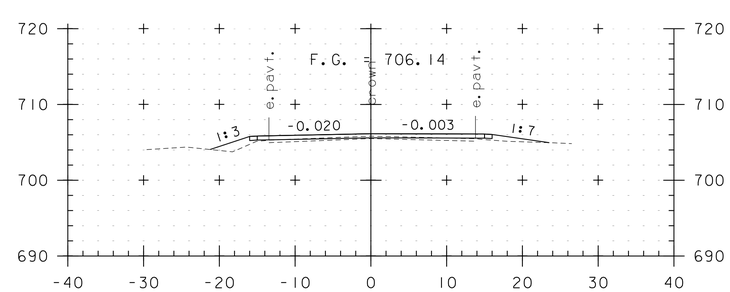
170+00



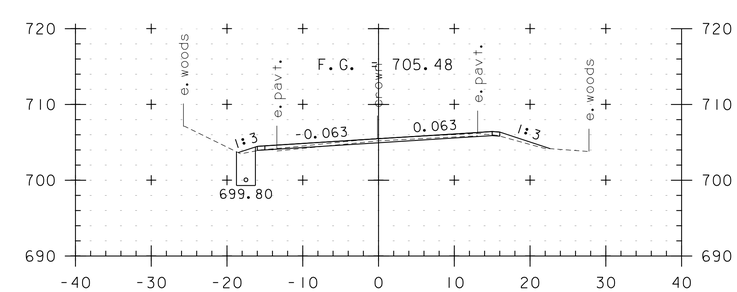
171+50



168+00



169+50



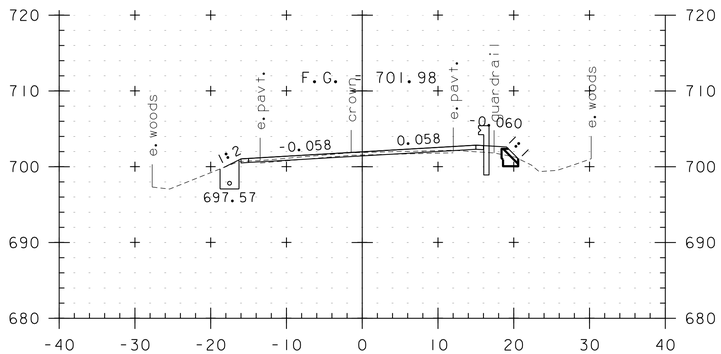
171+00

0 10 20
SCALE IN FEET

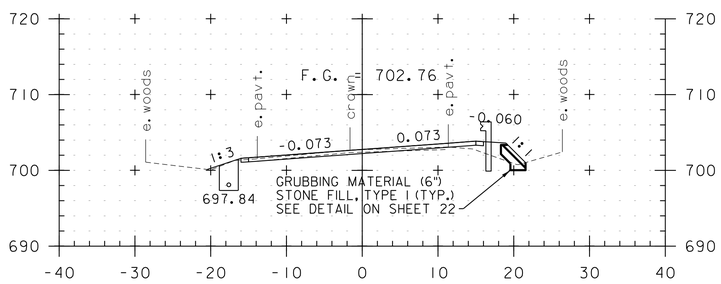
STA. 168+00 TO STA. 172+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 30	SHEET 218 OF 303

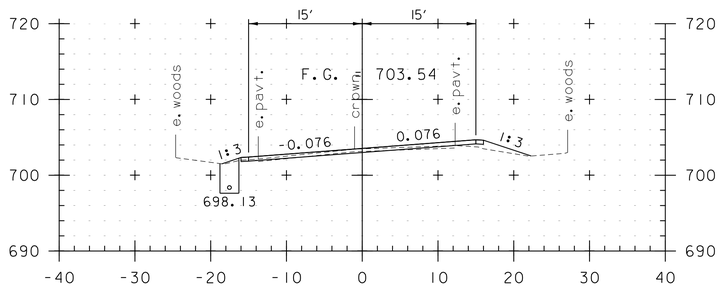
CLD 12-0337



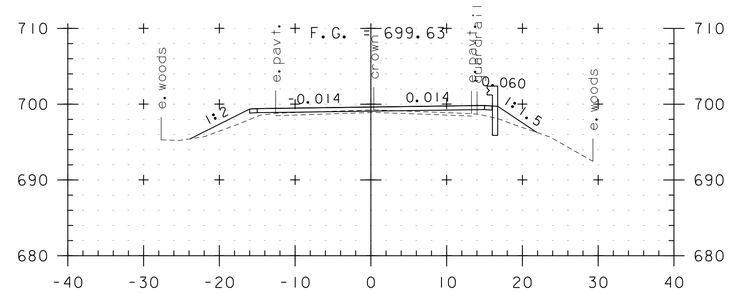
173+50



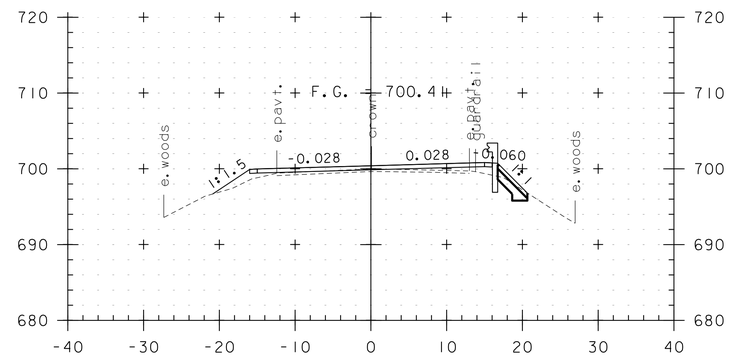
173+00



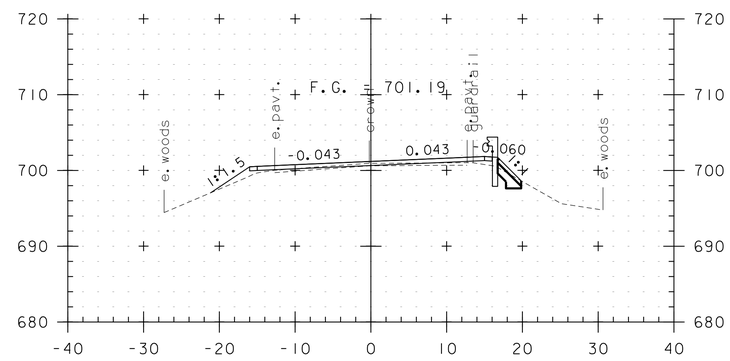
172+50



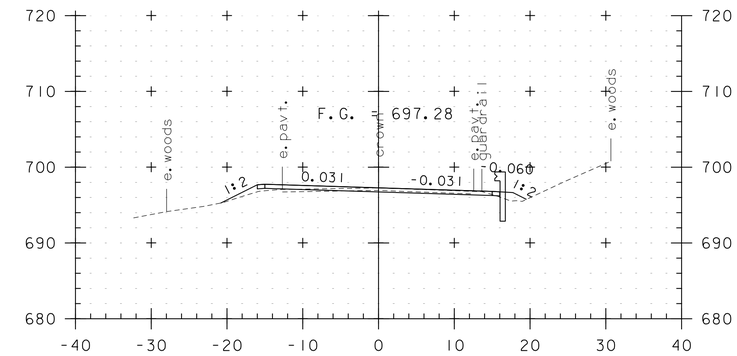
175+00



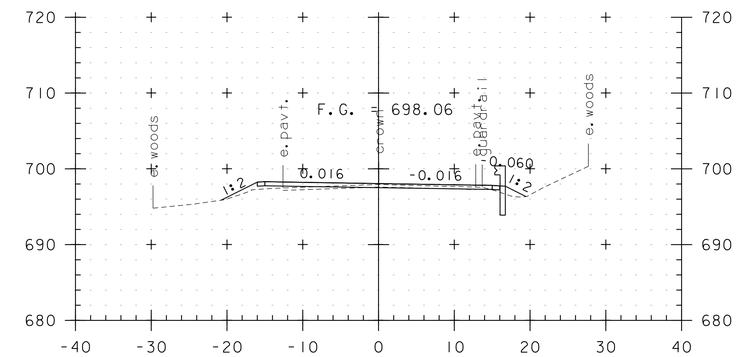
174+50



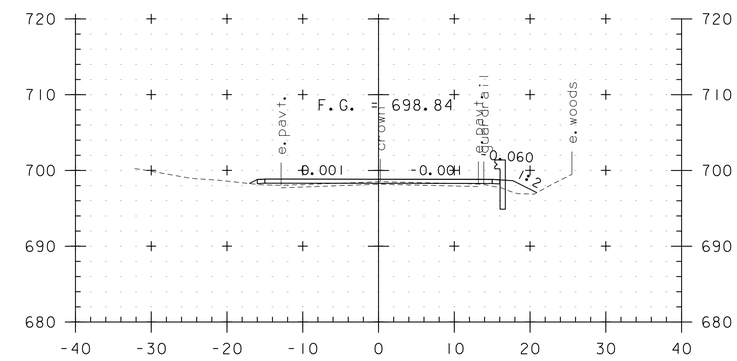
174+00



176+50



176+00



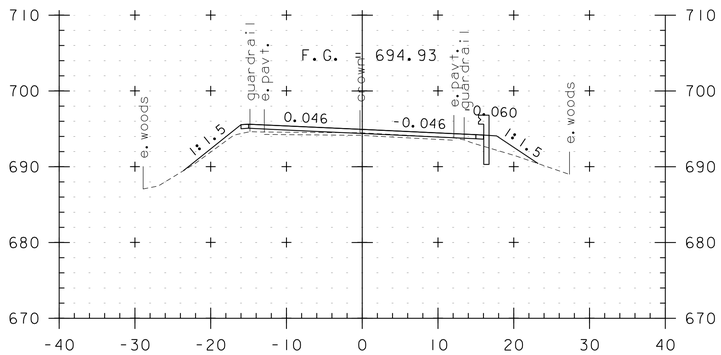
175+50

0 10 20
SCALE IN FEET

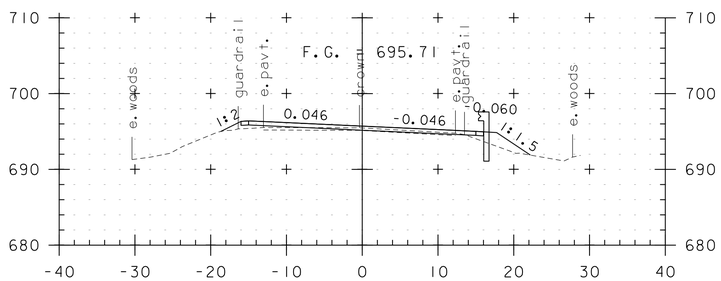
STA. 172+50 TO STA. 176+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 31	SHEET 219 OF 303

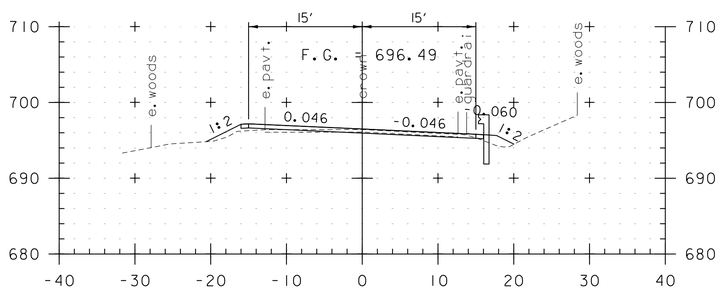
CLD 12-0337



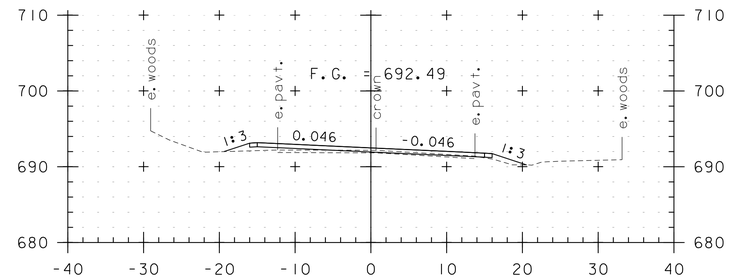
178+00



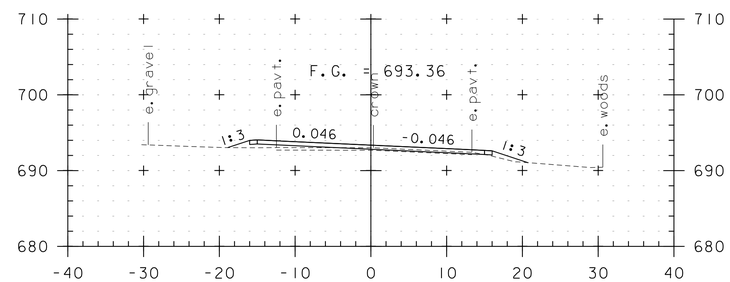
177+50



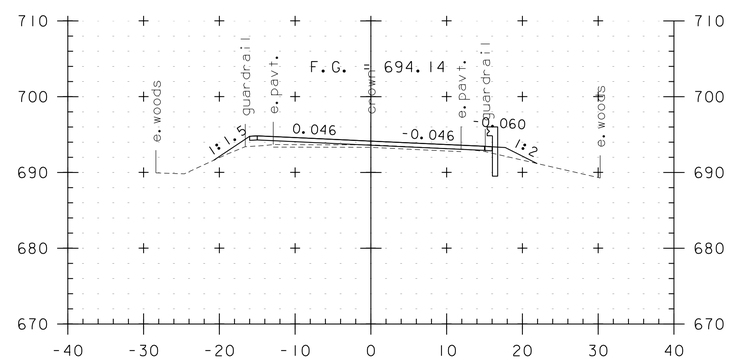
177+00



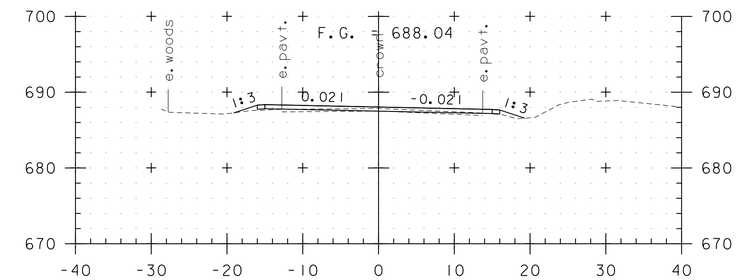
179+50



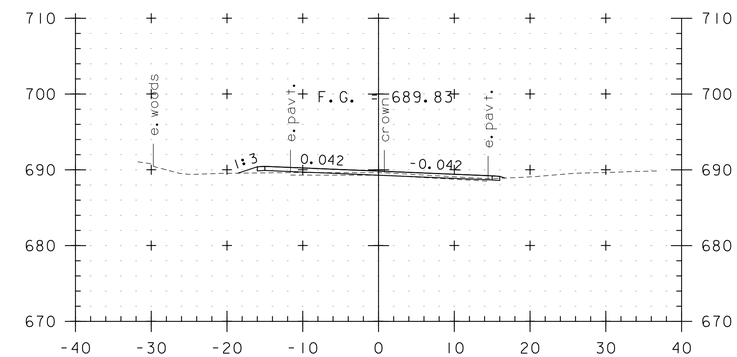
179+00



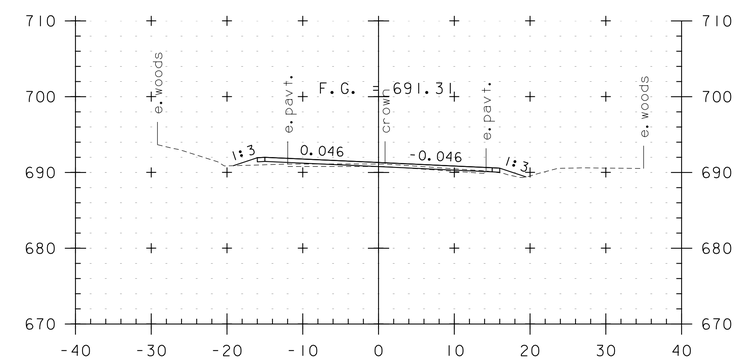
178+50



181+00



180+50



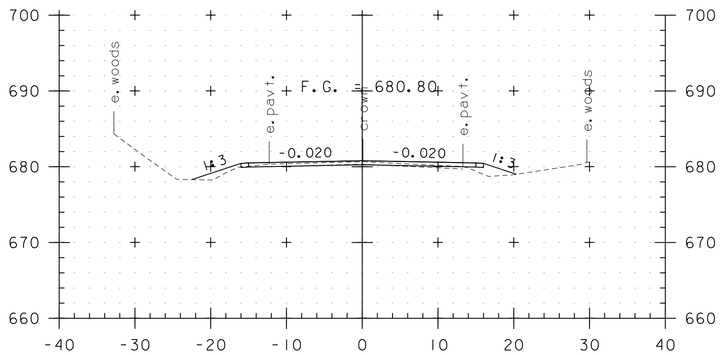
180+00

0 10 20
SCALE IN FEET

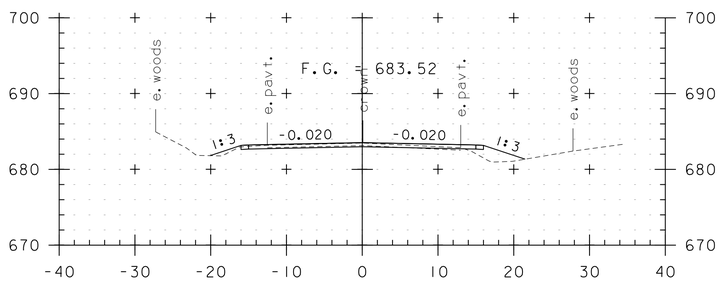
STA. 177+00 TO STA. 181+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 32	SHEET 220 OF 303

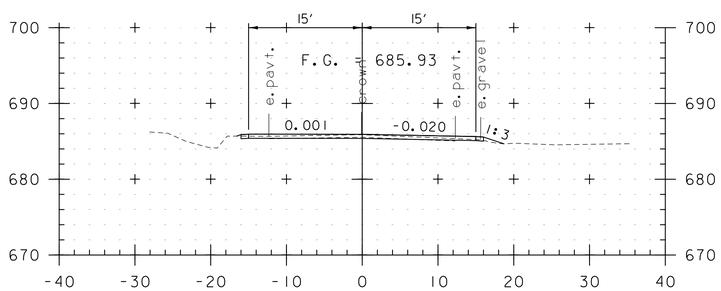
CLD 12-0337



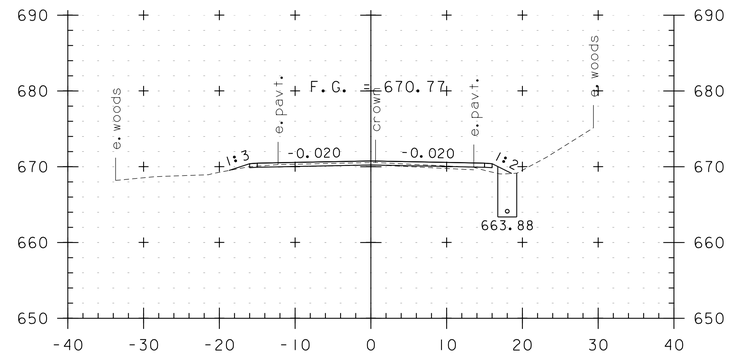
182+50



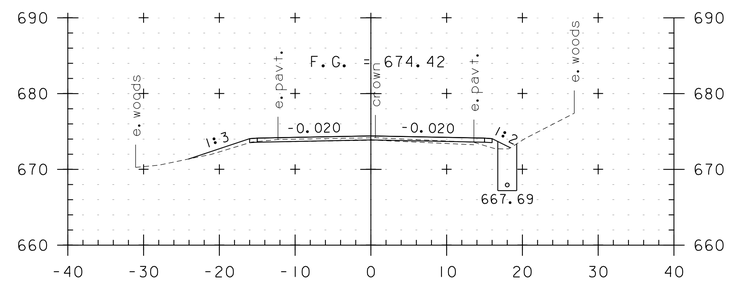
182+00



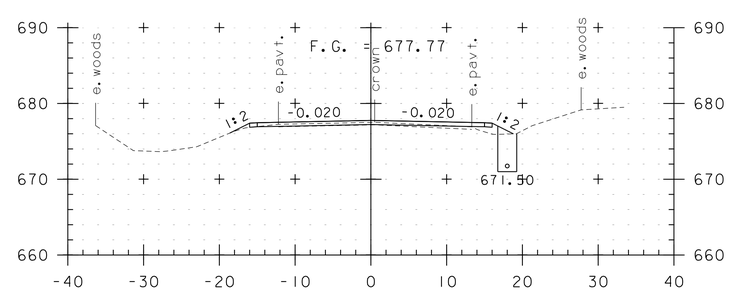
181+50



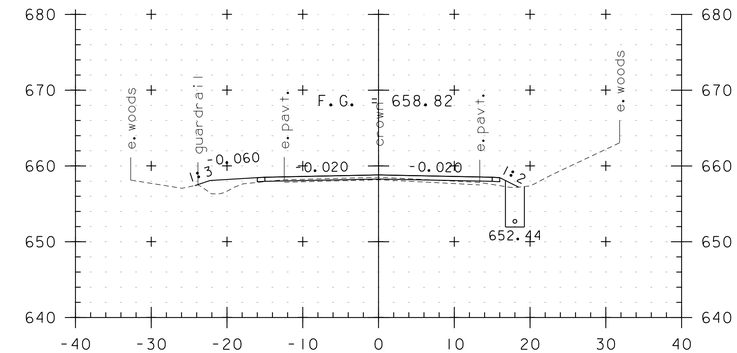
184+00



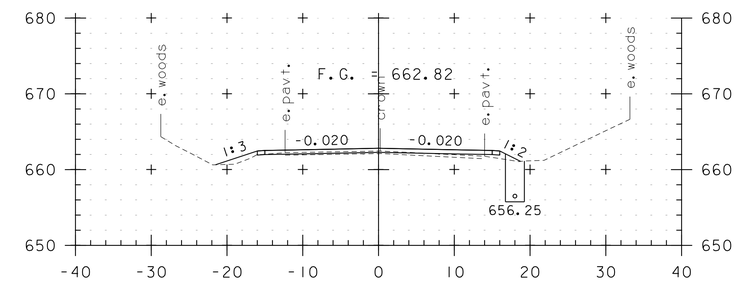
183+50



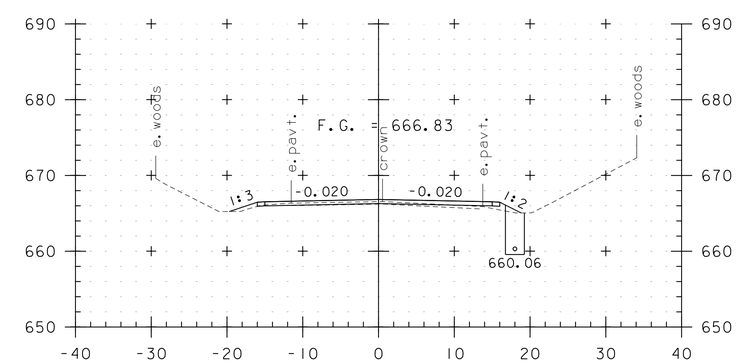
183+00



185+50



185+00



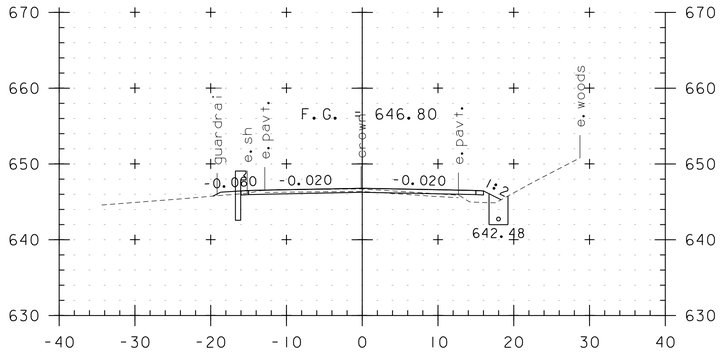
184+50

0 10 20
SCALE IN FEET

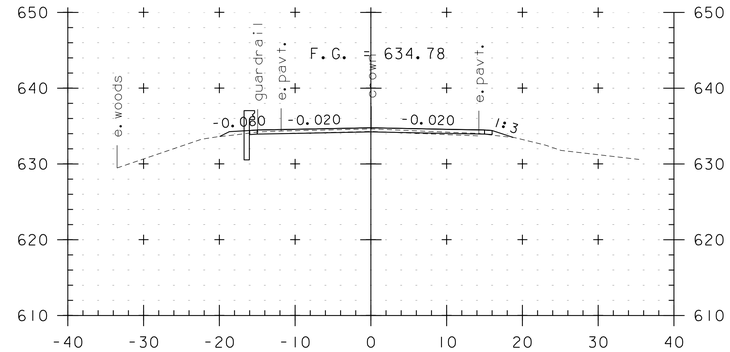
STA. 181+50 TO STA. 185+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 33	SHEET 221 OF 303

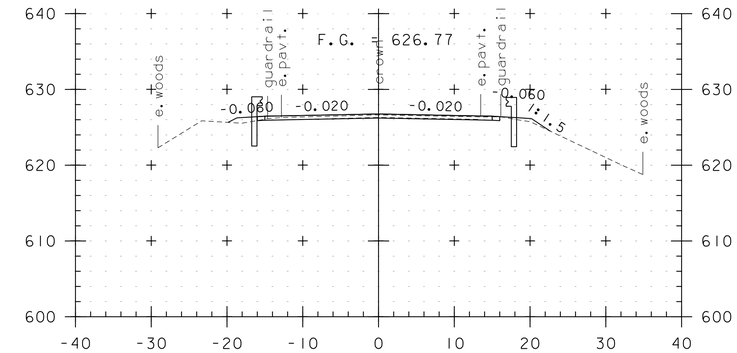
CLD 12-0337



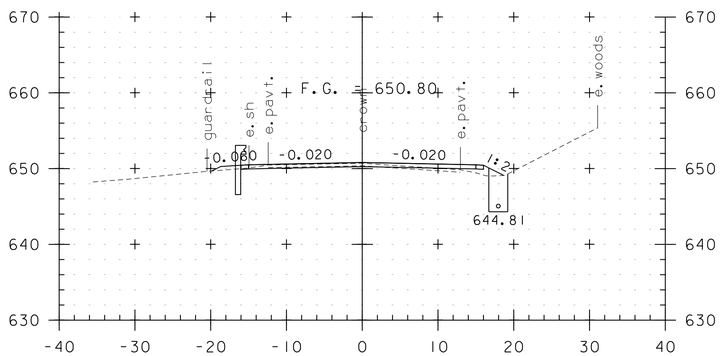
187+00



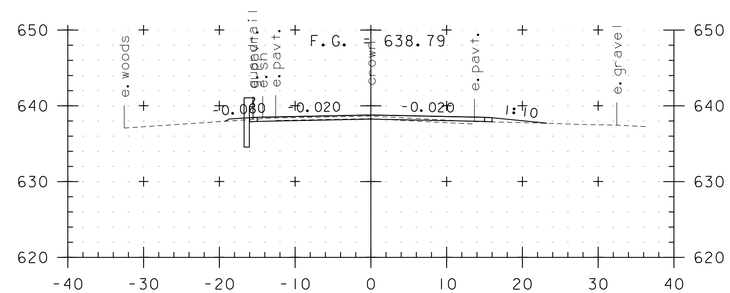
188+50



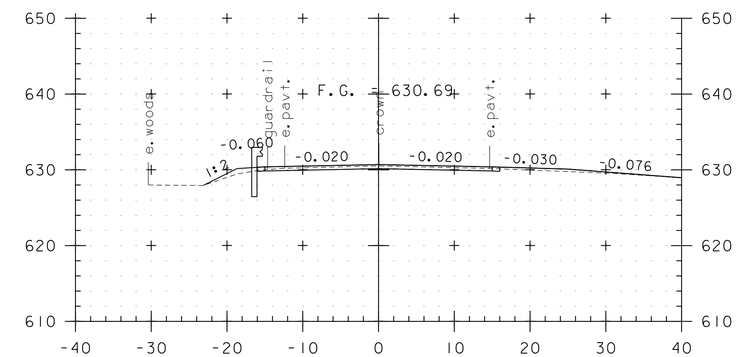
189+50



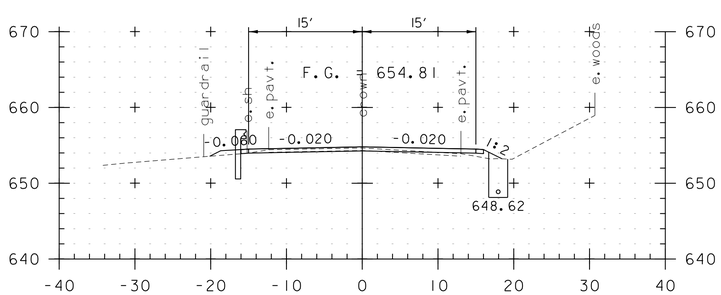
186+50



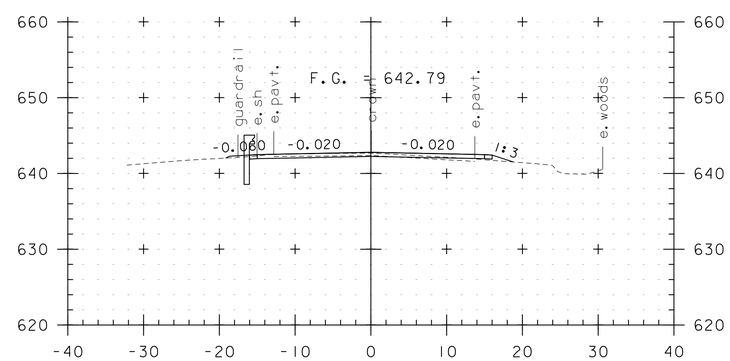
188+00



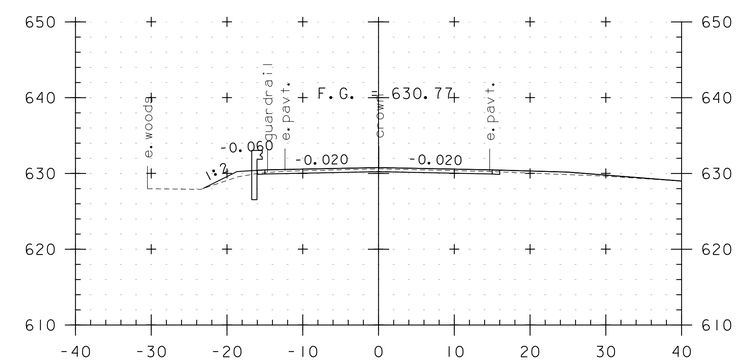
189+01
TH 20



186+00



187+50



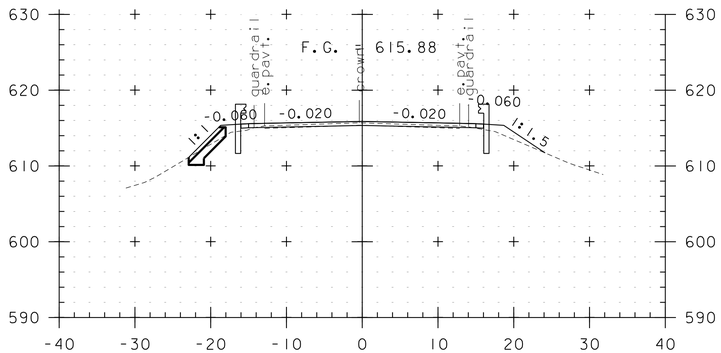
189+00

0 10 20
SCALE IN FEET

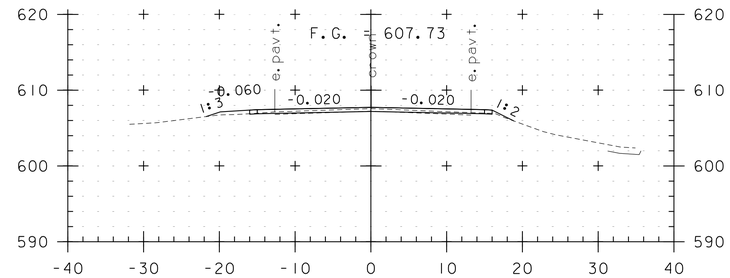
STA. 186+00 TO STA. 189+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 34	SHEET 222 OF 303

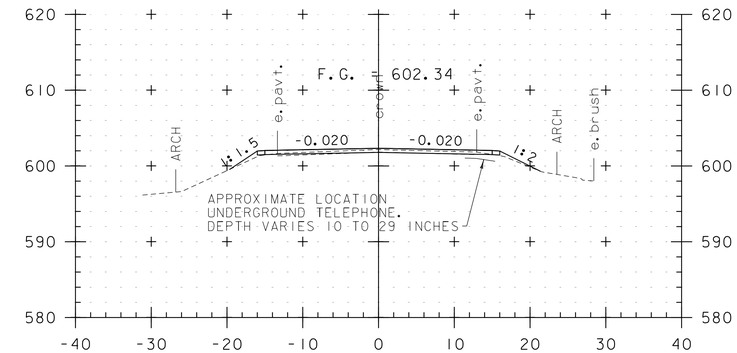
CLD 12-0337



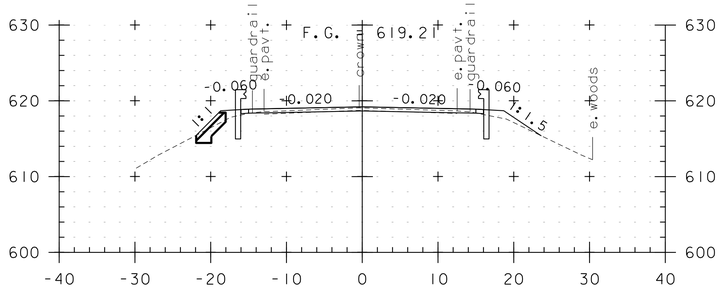
191+00



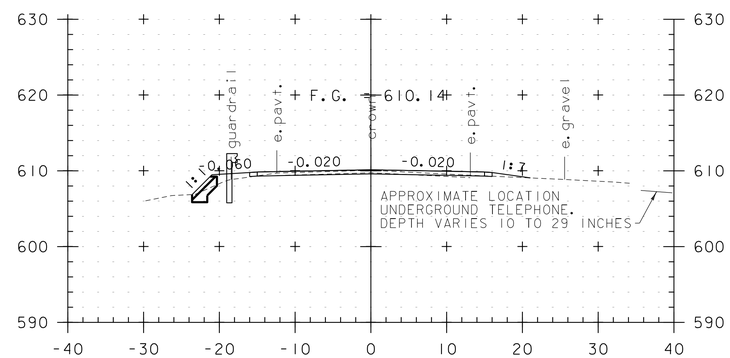
192+50



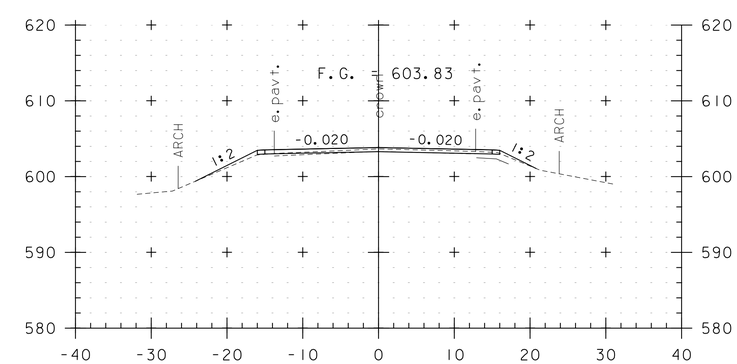
194+00



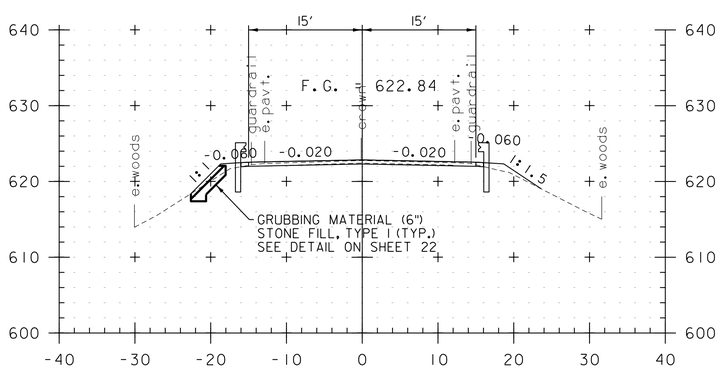
190+50



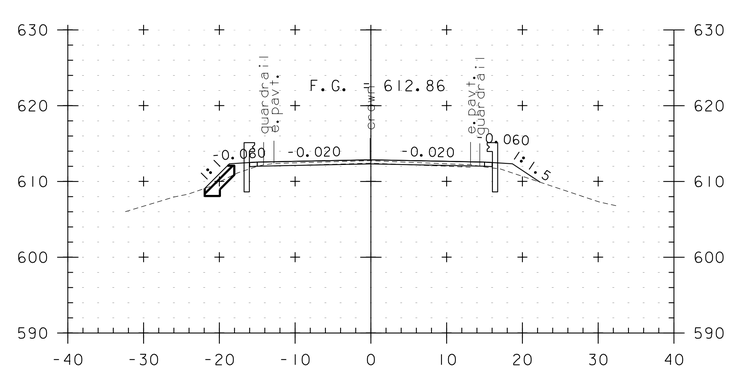
192+00



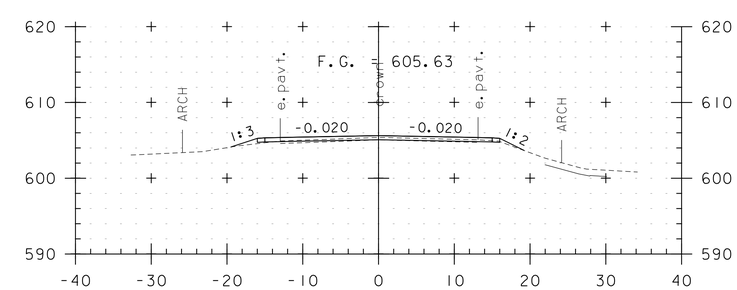
193+50



190+00



191+50



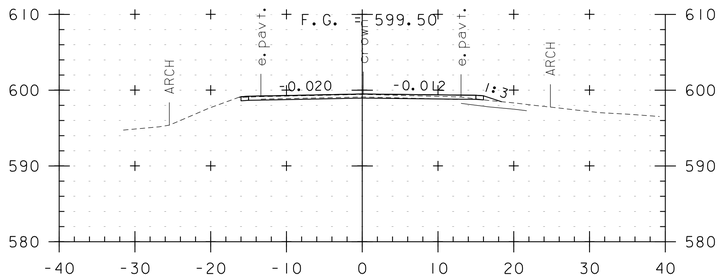
193+00

0 10 20
SCALE IN FEET

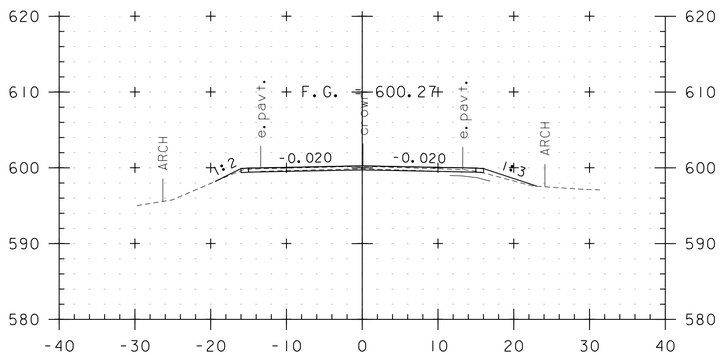
STA. 190+00 TO STA. 194+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 35	SHEET 223 OF 303

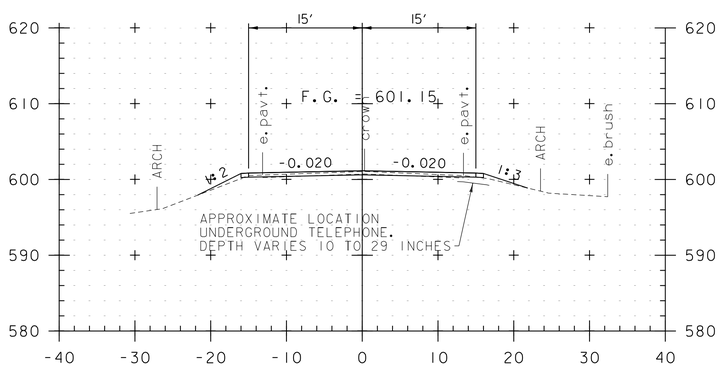
CLD 12-0337



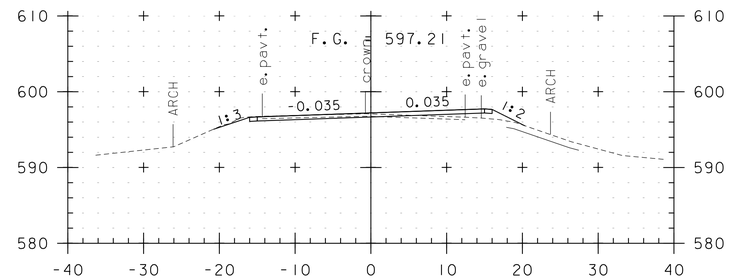
195+50



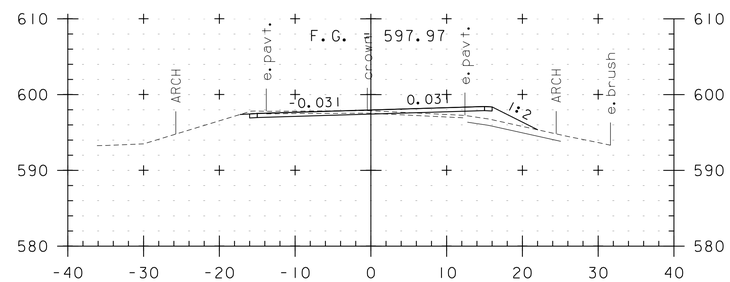
195+00



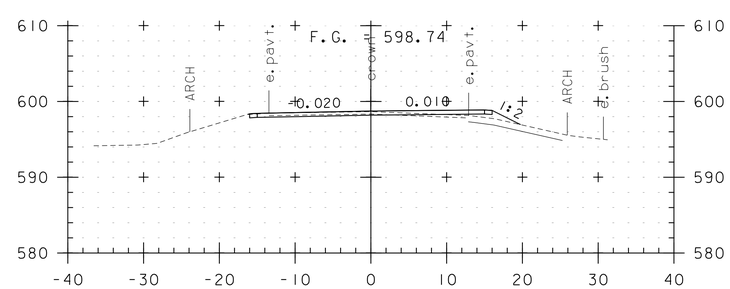
194+50



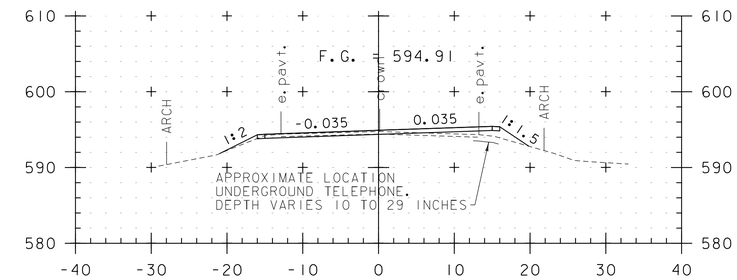
197+00



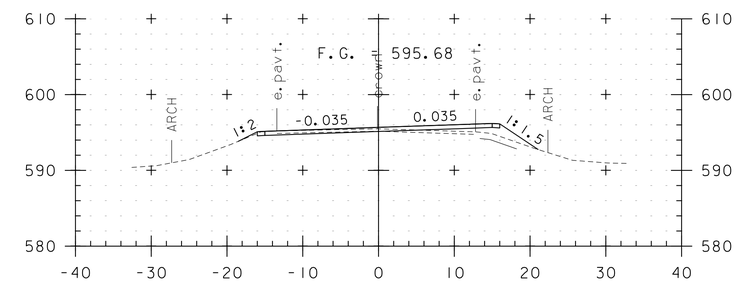
196+50



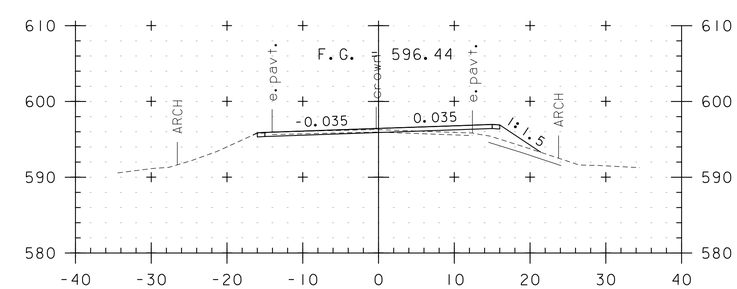
196+00



198+50



198+00



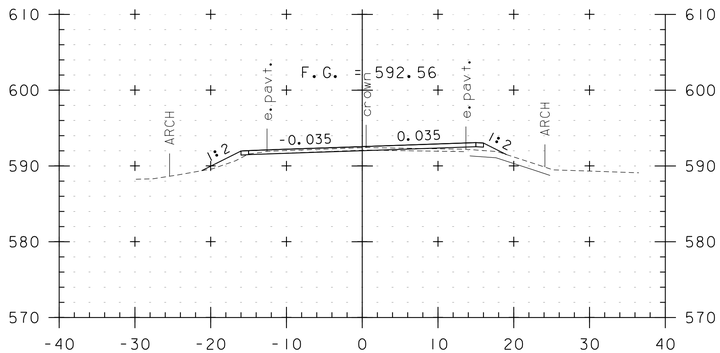
197+50

0 10 20
SCALE IN FEET

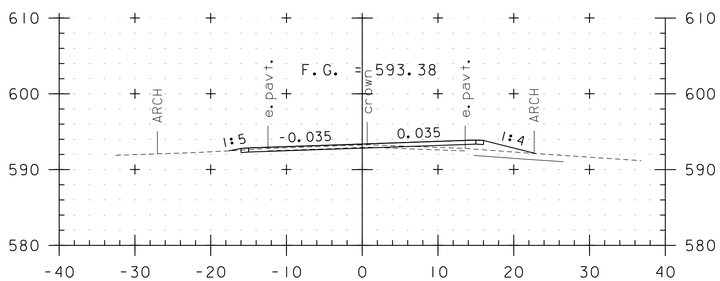
STA. 194+50 TO STA. 198+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 36	SHEET 224 OF 303

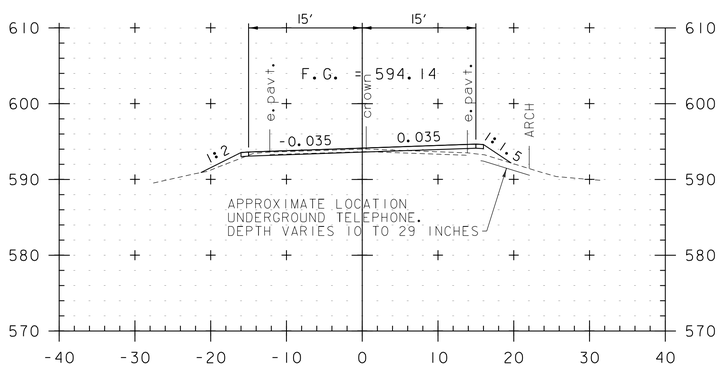
CLD 12-0337



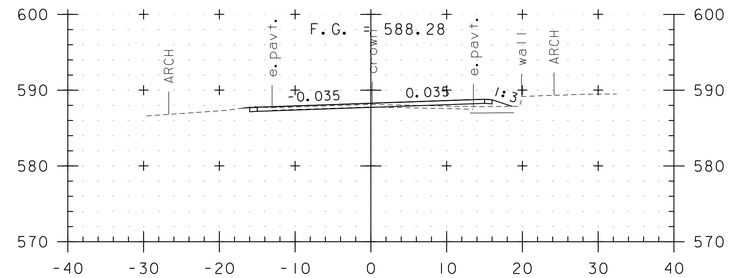
200+00



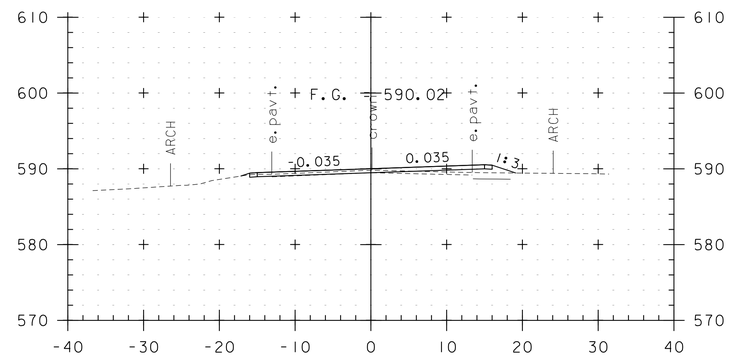
199+50



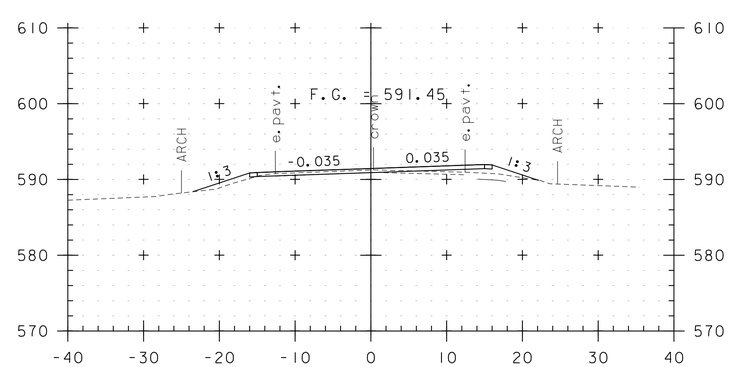
199+00



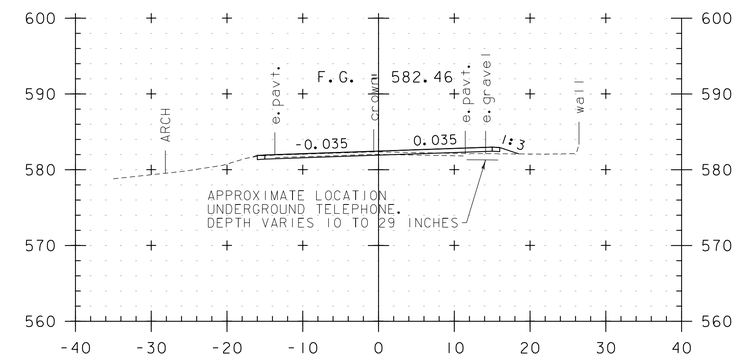
201+50



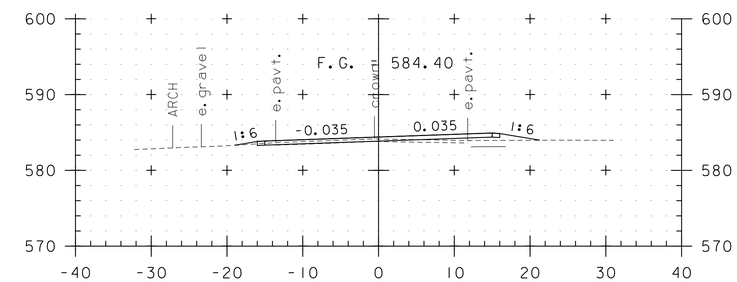
201+00



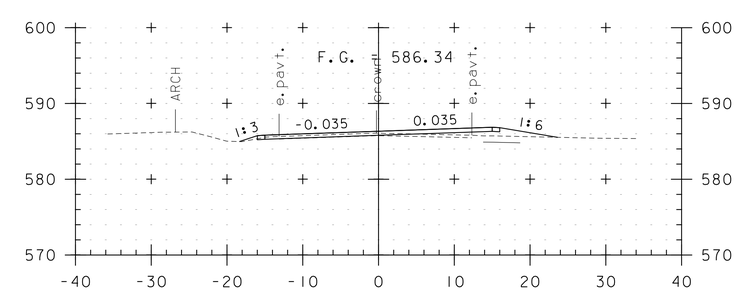
200+50



203+00



202+50



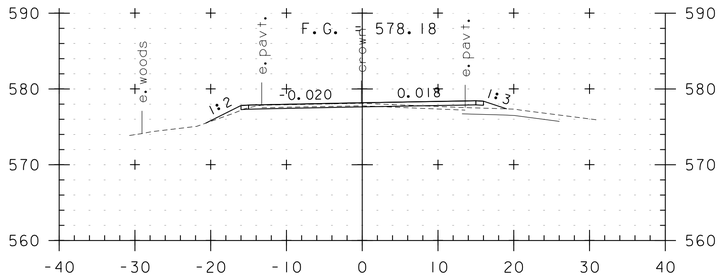
202+00

0 10 20
SCALE IN FEET

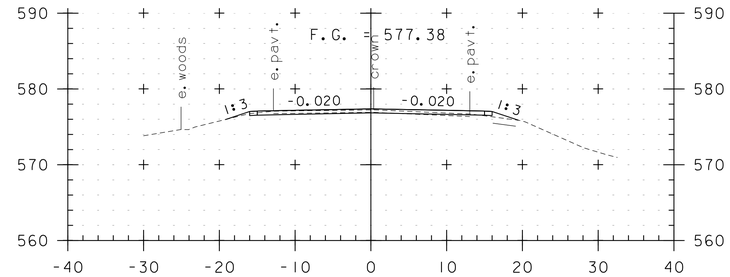
STA. 199+00 TO STA. 203+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 37	SHEET 225 OF 303

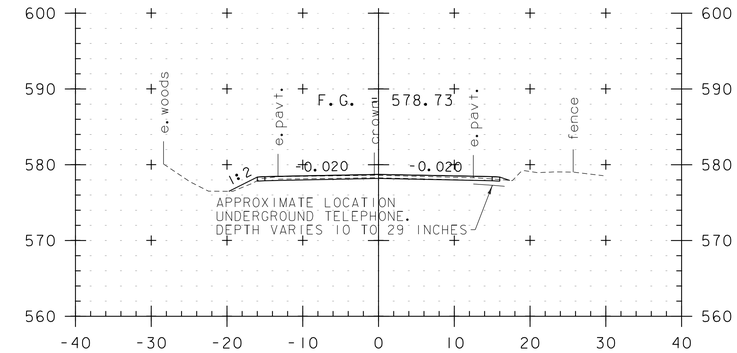
CLD 12-0337



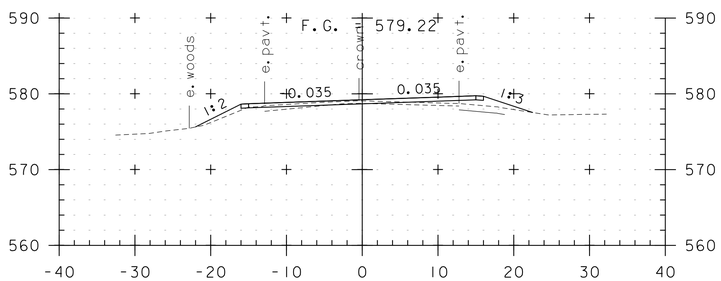
204+50



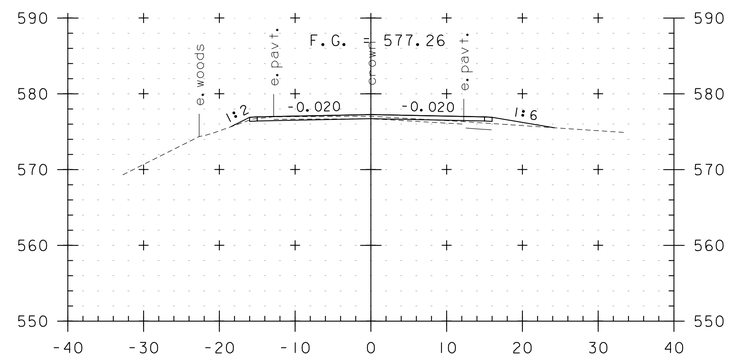
206+00



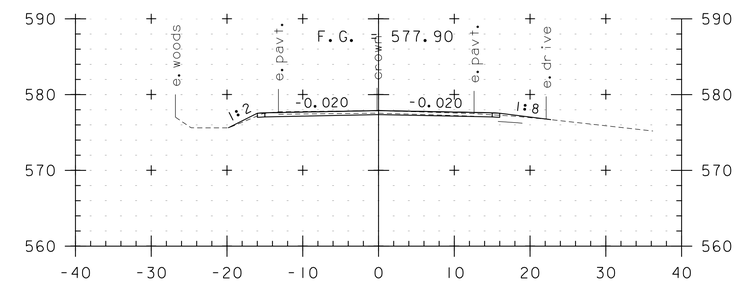
207+00



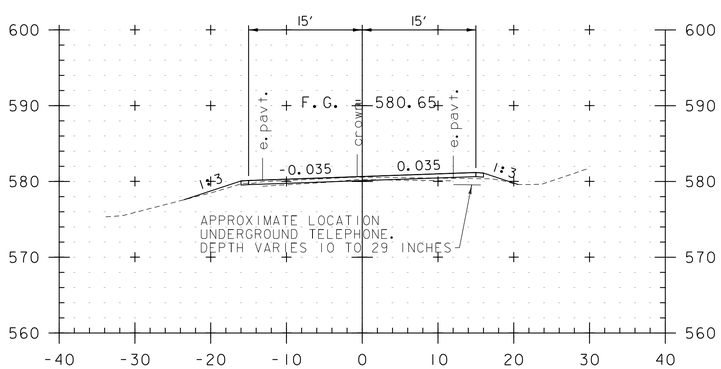
204+00



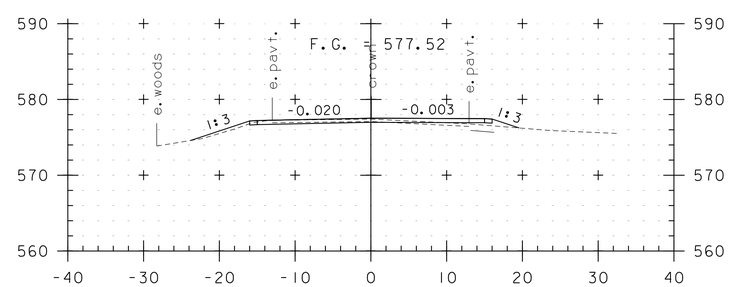
205+50



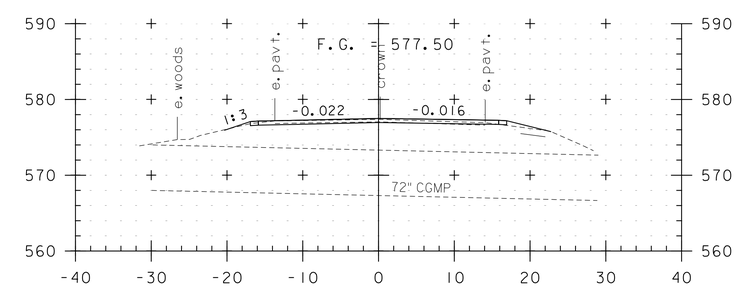
206+50



203+50



205+00



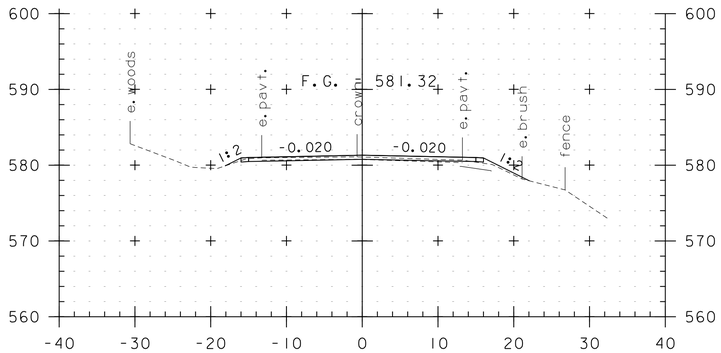
206+11
BRIDGE 27

0 10 20
SCALE IN FEET

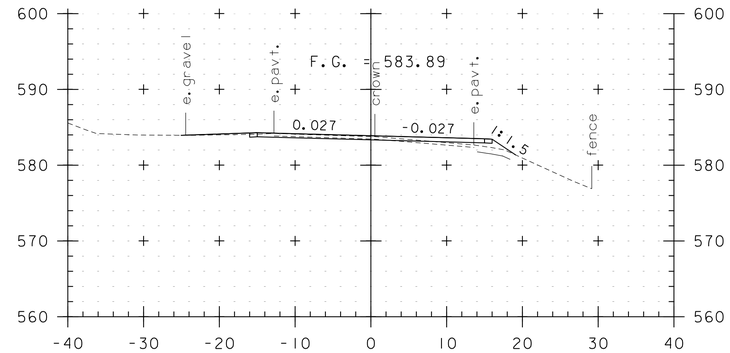
STA. 203+50 TO STA. 207+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 38	SHEET 226 OF 303

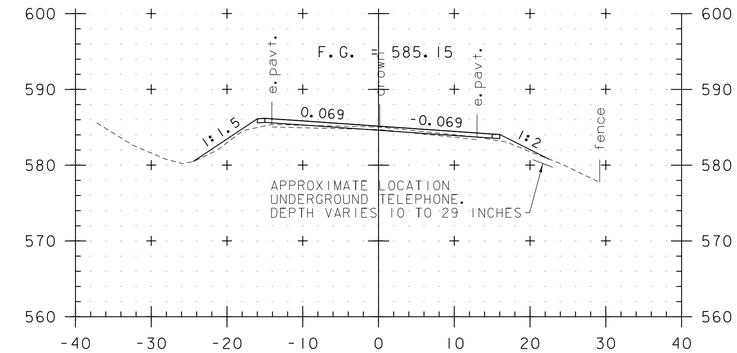
CLD 12-0337



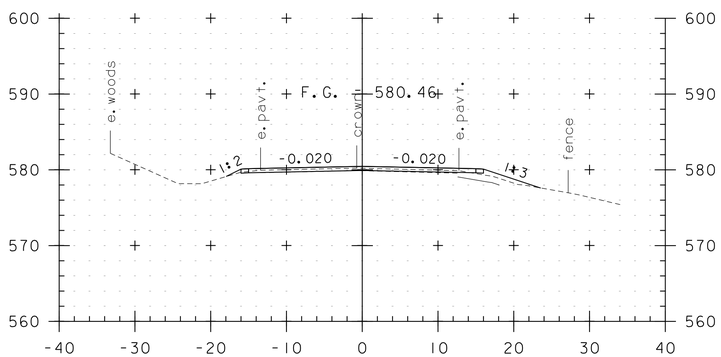
208+50



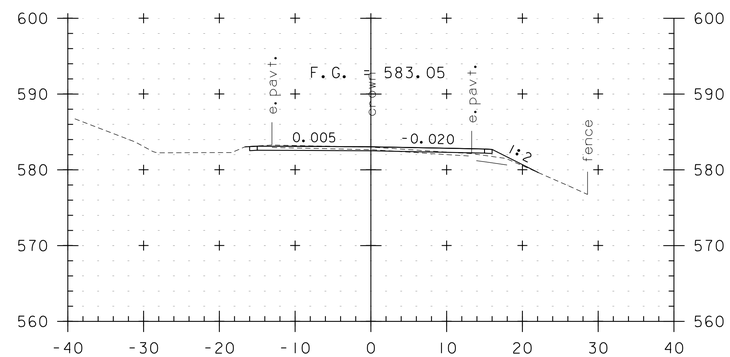
210+00



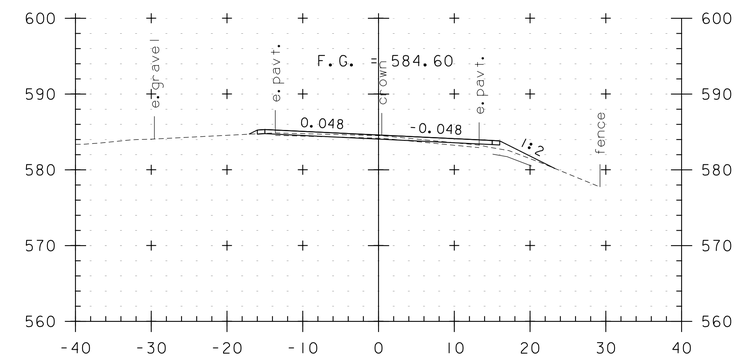
211+00



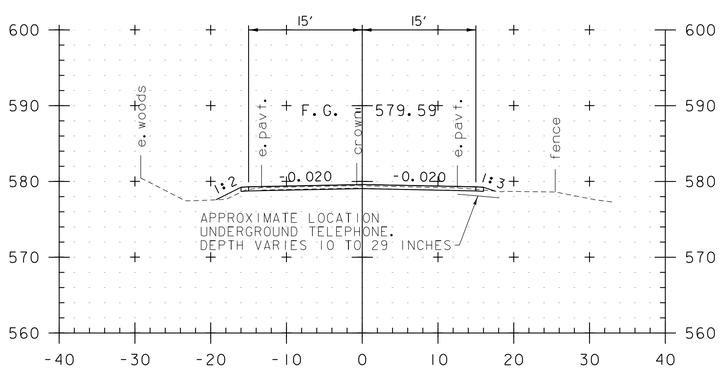
208+00



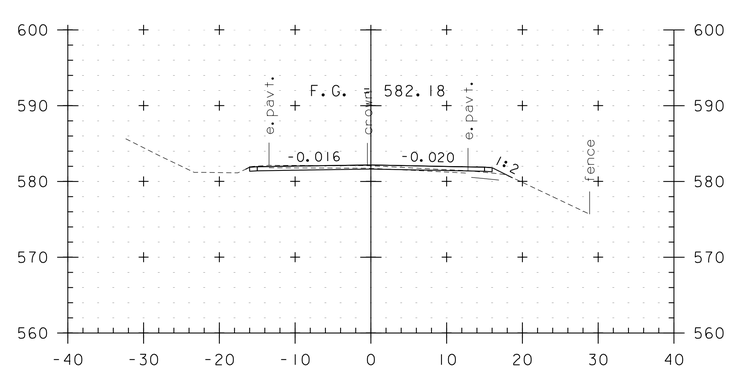
209+50



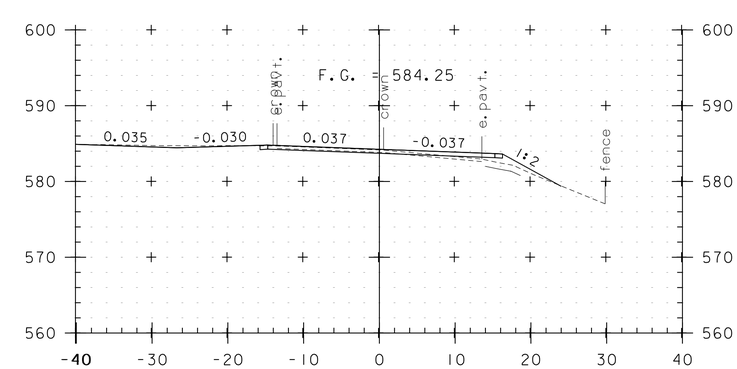
210+50



207+50



209+00



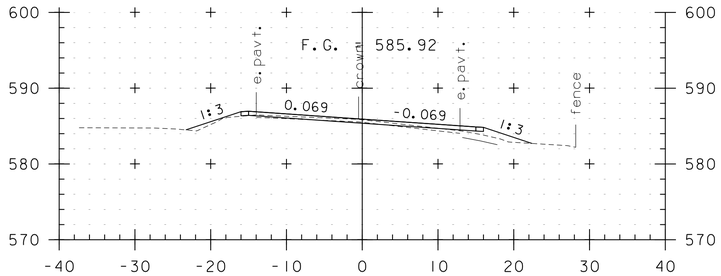
210+25
TH 61

0 10 20
SCALE IN FEET

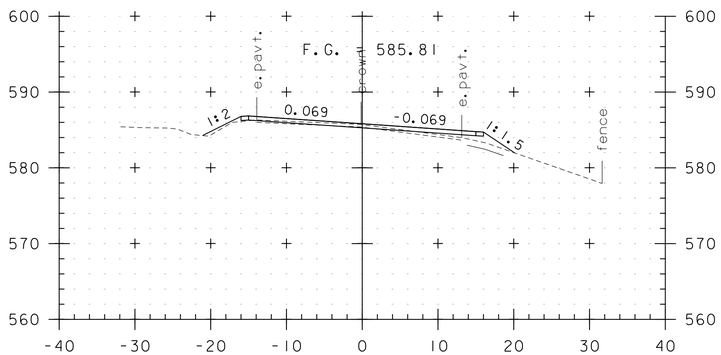
STA. 207+50 TO STA. 211+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 39	SHEET 227 OF 303

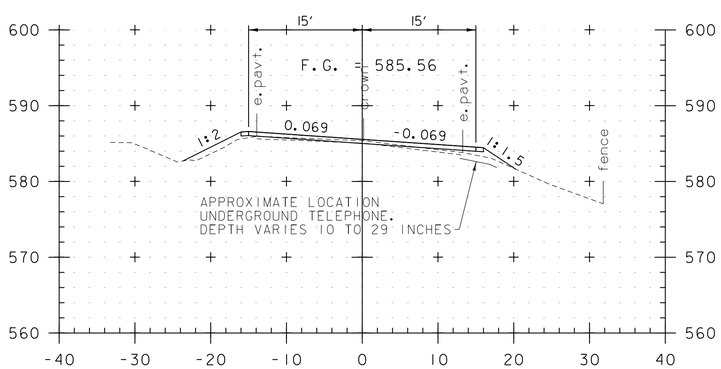
CLD 12-0337



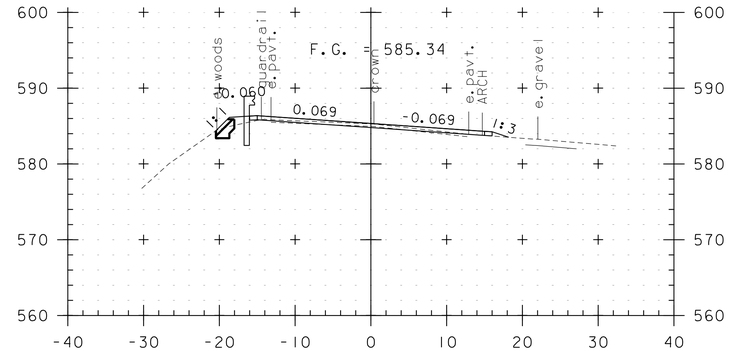
212+50



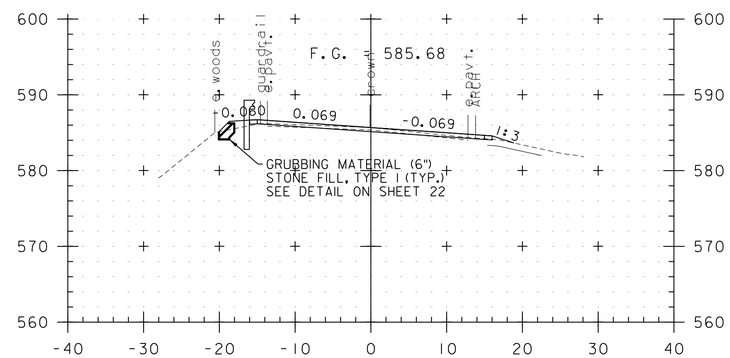
212+00



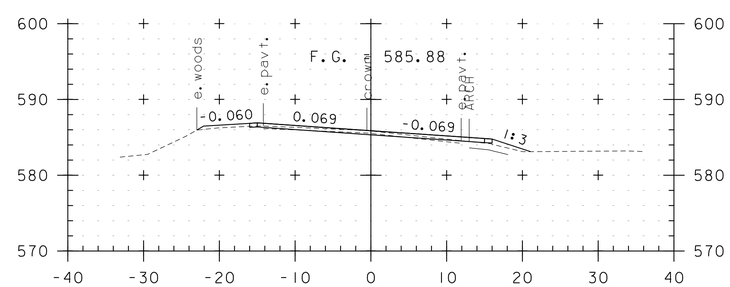
211+50



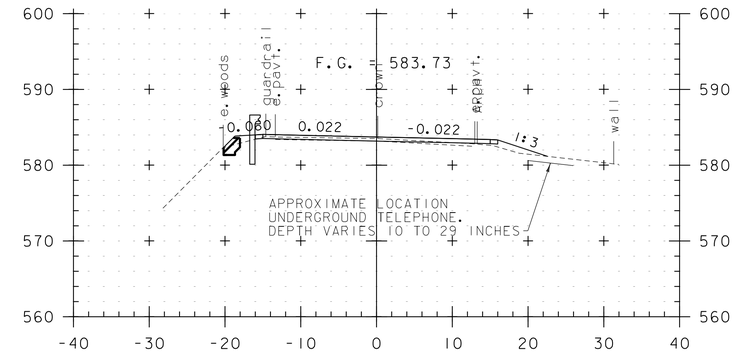
214+00



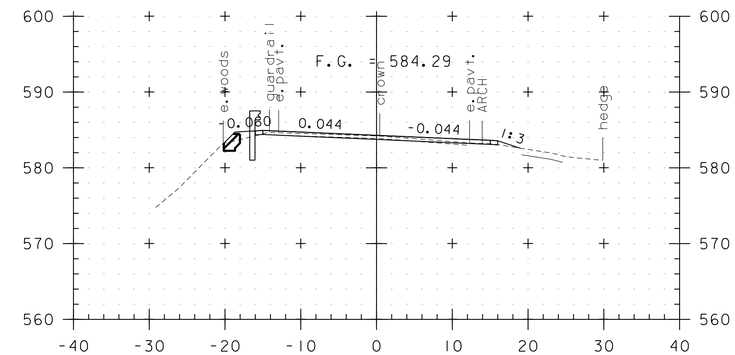
213+50



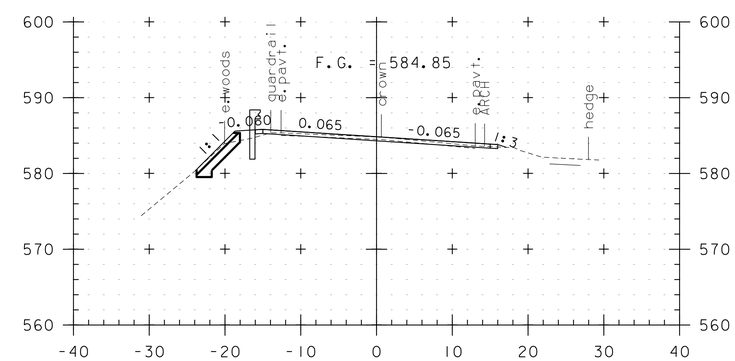
213+00



215+50



215+00



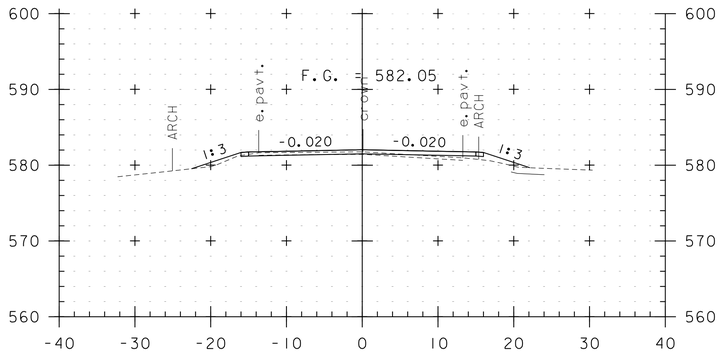
214+50

0 10 20
SCALE IN FEET

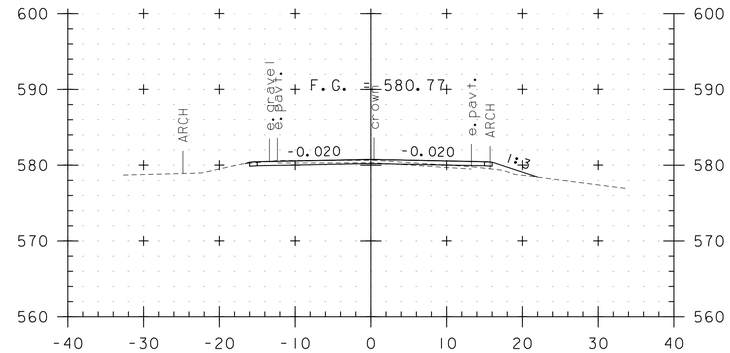
STA. 211+50 TO STA. 215+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 40	SHEET 228 OF 303

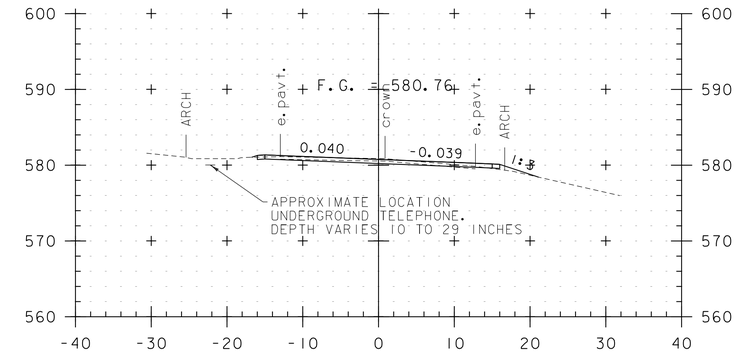
CLD 12-0337



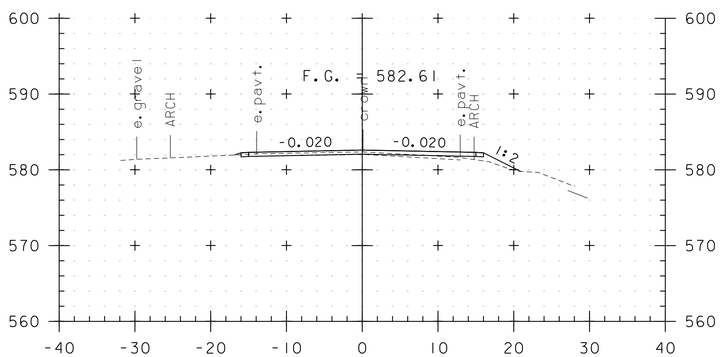
217+00



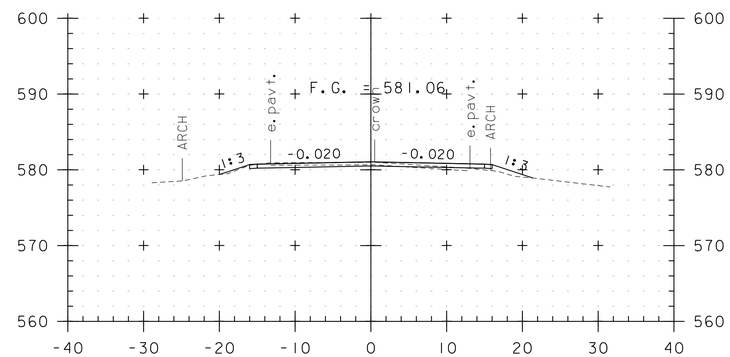
218+50



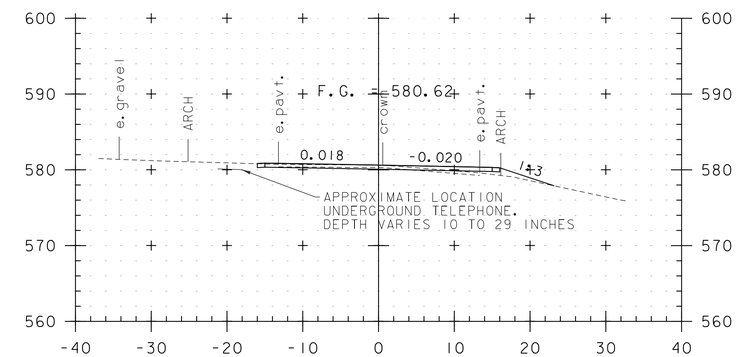
220+00



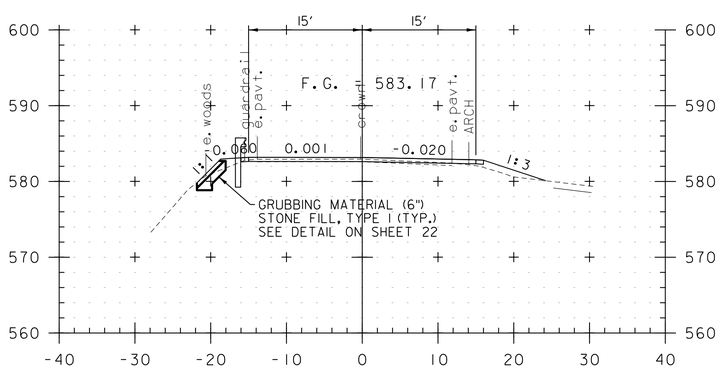
216+50



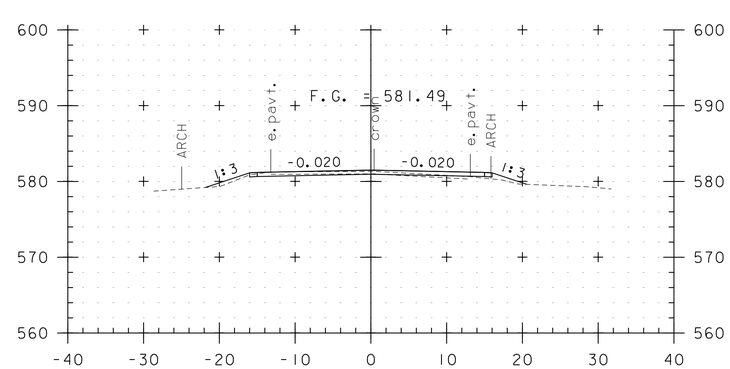
218+00



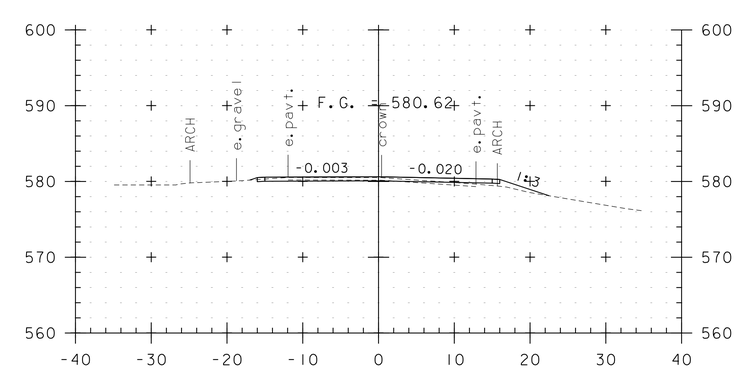
219+50



216+00



217+50



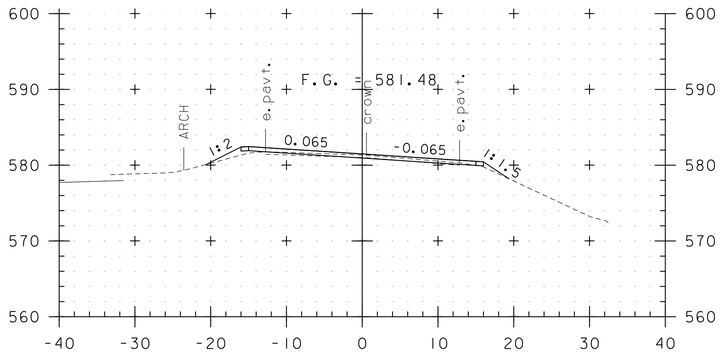
219+00

0 10 20
SCALE IN FEET

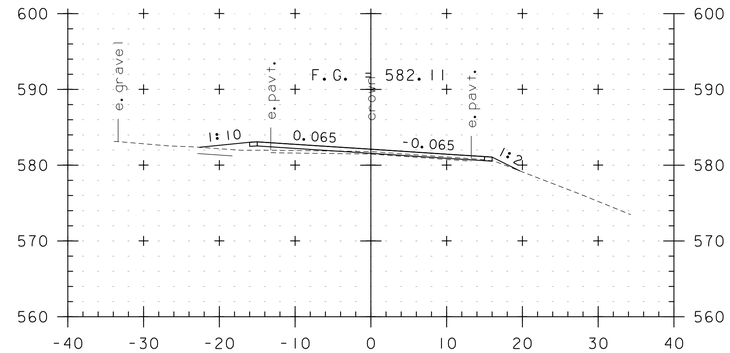
STA. 216+00 TO STA. 220+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 41	SHEET 229 OF 303

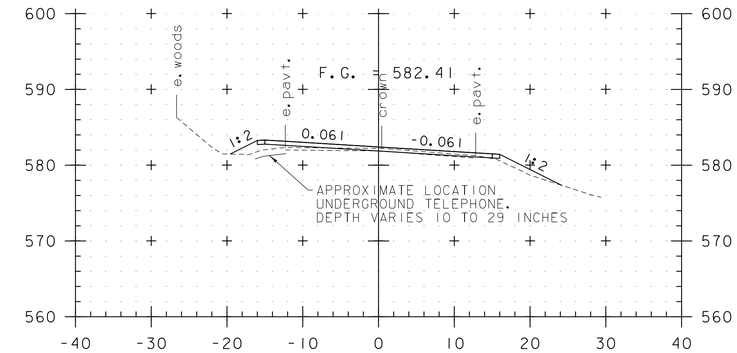
CLD 12-0337



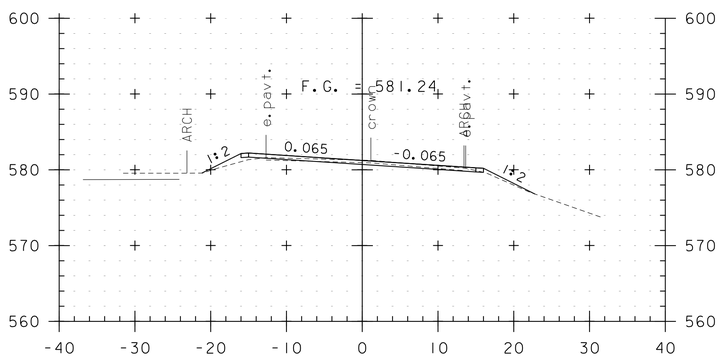
221+50



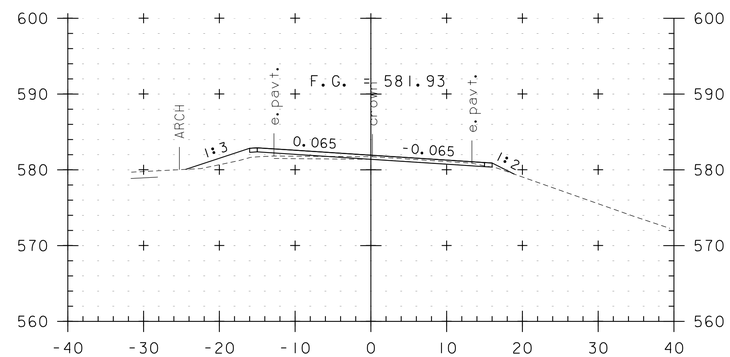
223+00



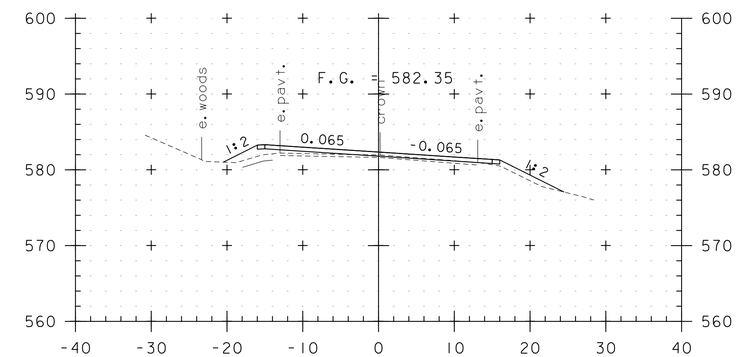
224+50



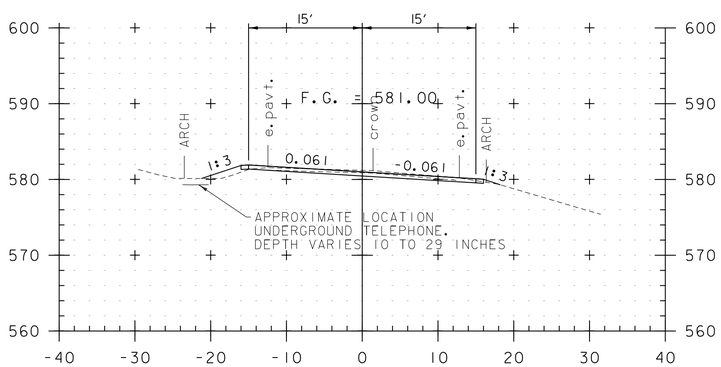
221+00



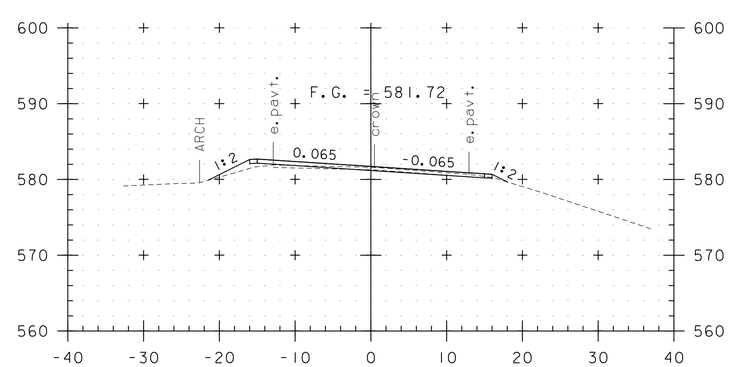
222+50



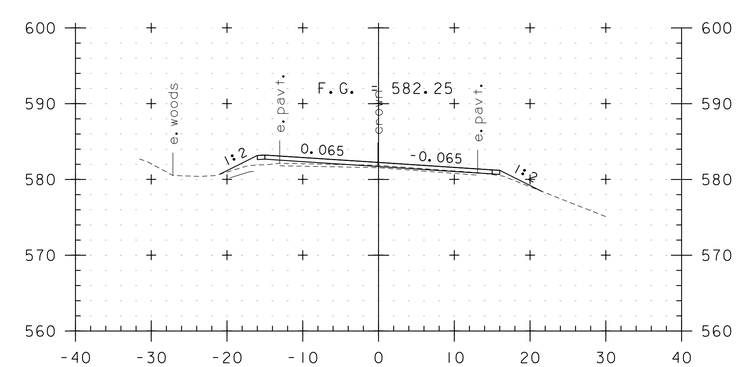
224+00



220+50



222+00



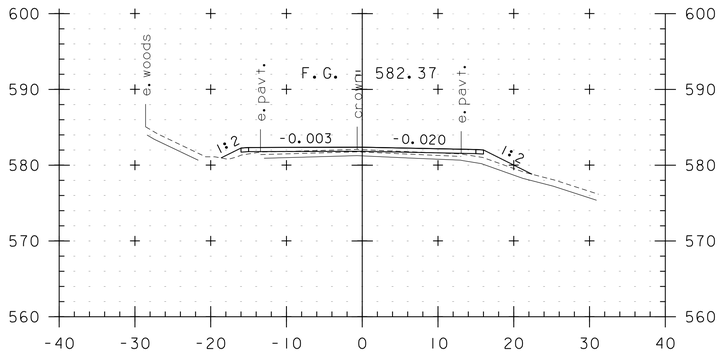
223+50

0 10 20
SCALE IN FEET

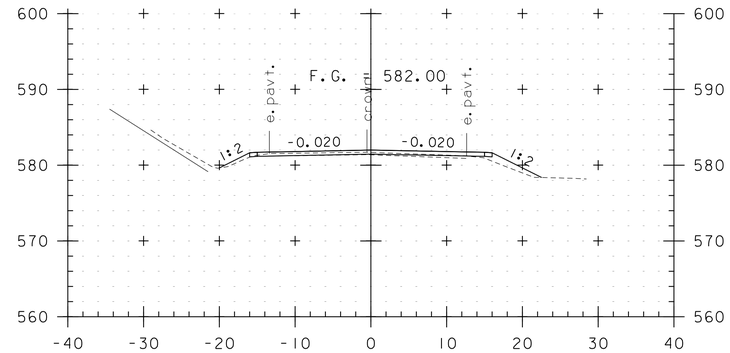
STA. 220+50 TO STA. 224+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 42	SHEET 230 OF 303

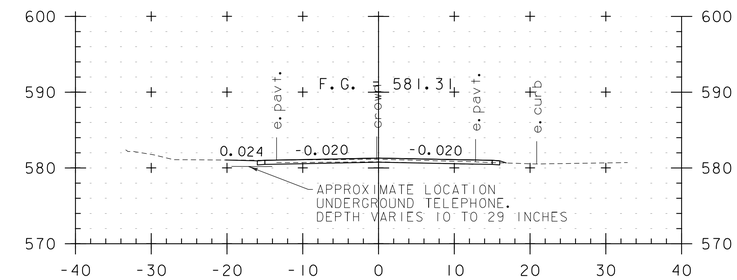
CLD 12-0337



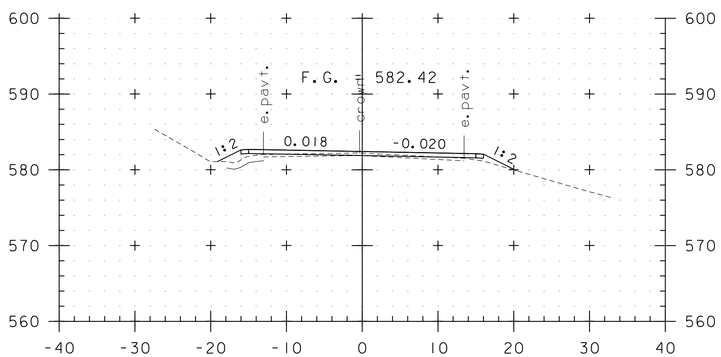
226+00



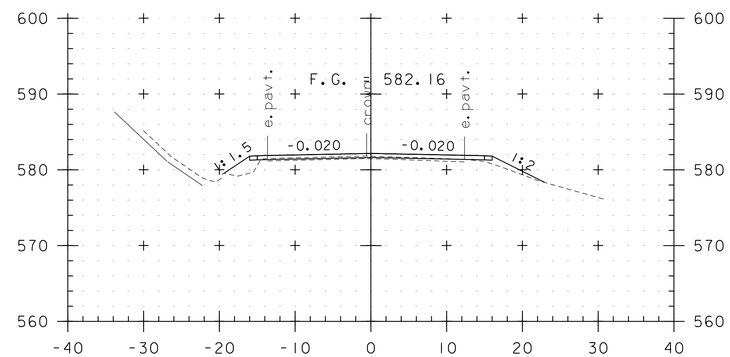
227+50



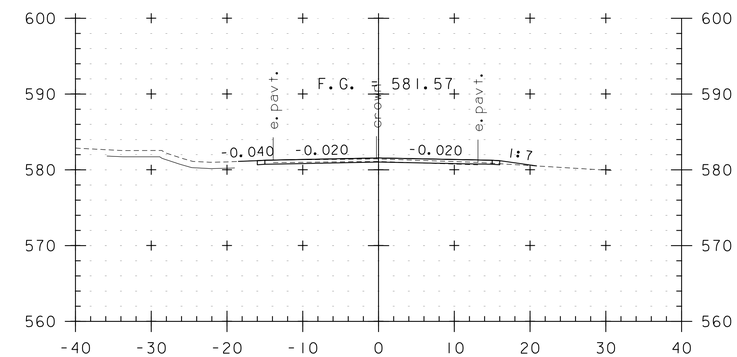
229+00



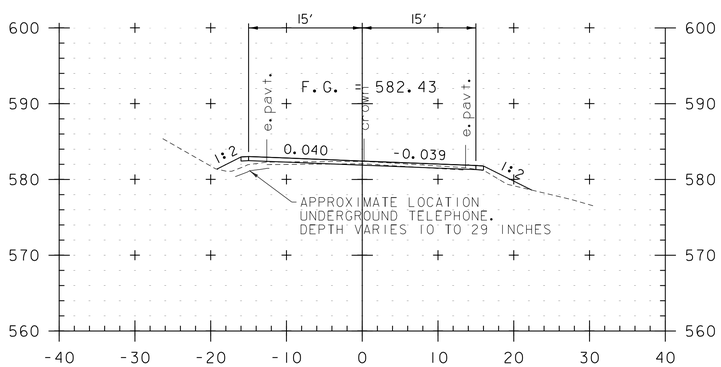
225+50



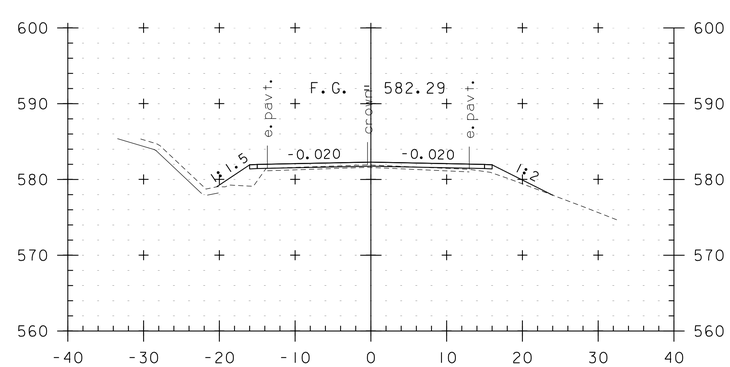
227+00



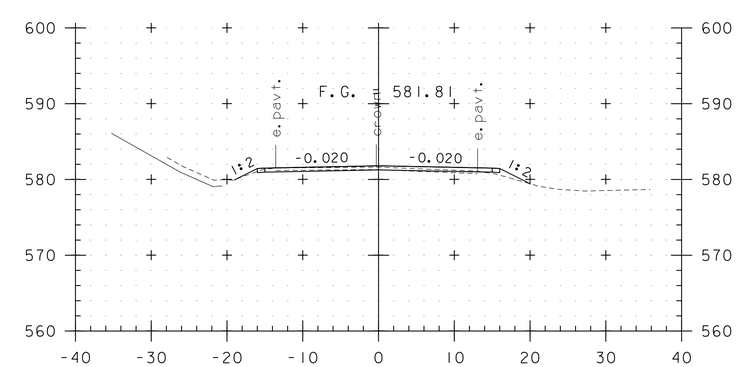
228+50



225+00



226+50



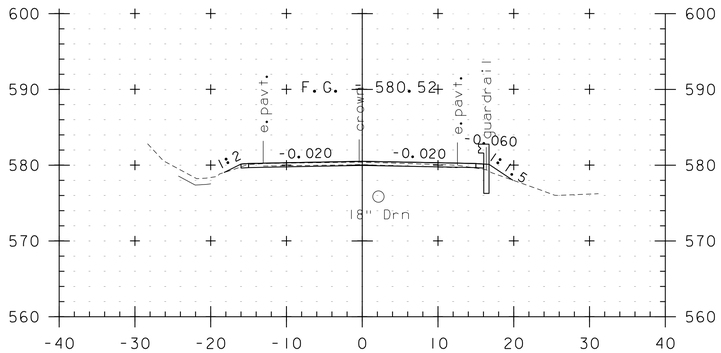
228+00

0 10 20
SCALE IN FEET

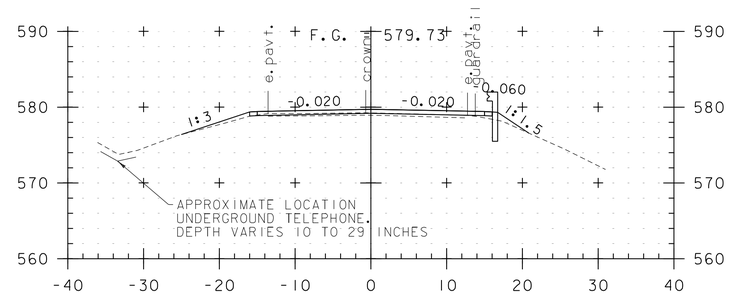
STA. 225+00 TO STA. 229+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 43	SHEET 231 OF 303

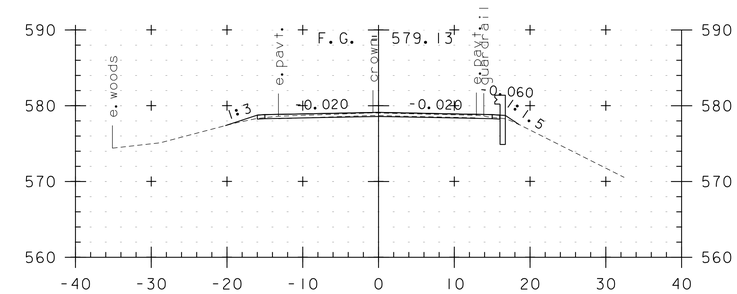
CLD 12-0337



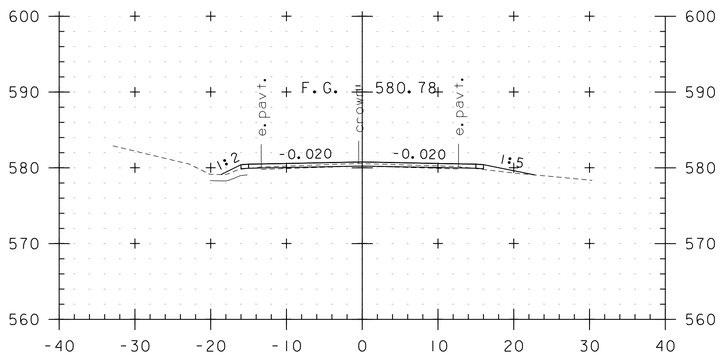
230+50



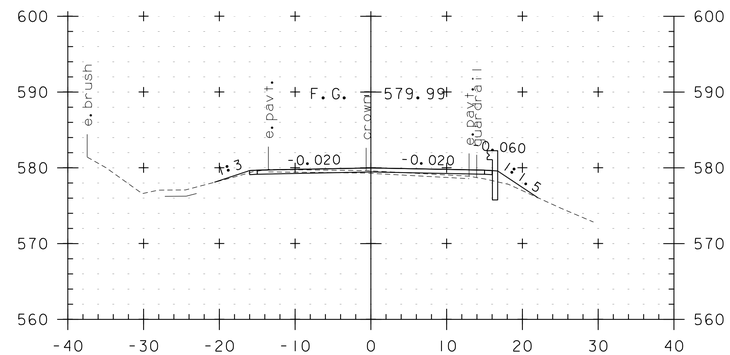
232+00



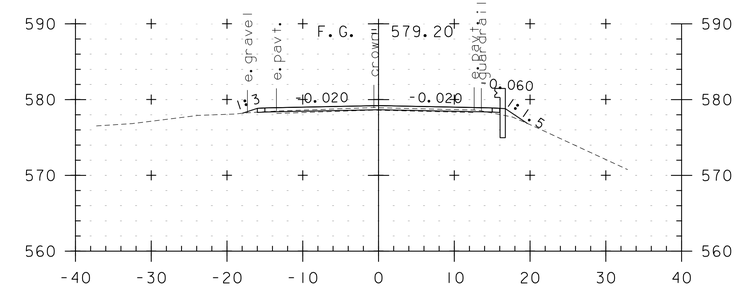
233+50



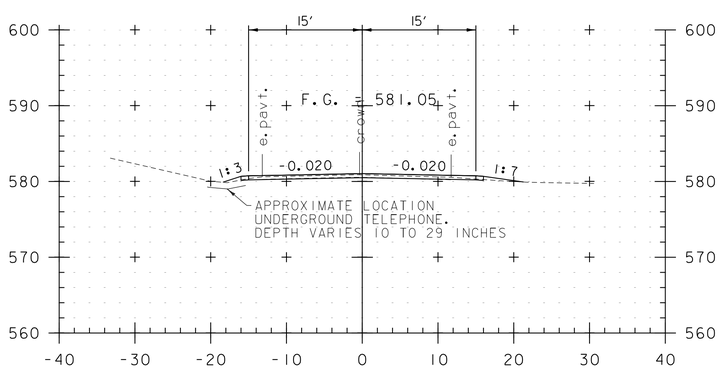
230+00



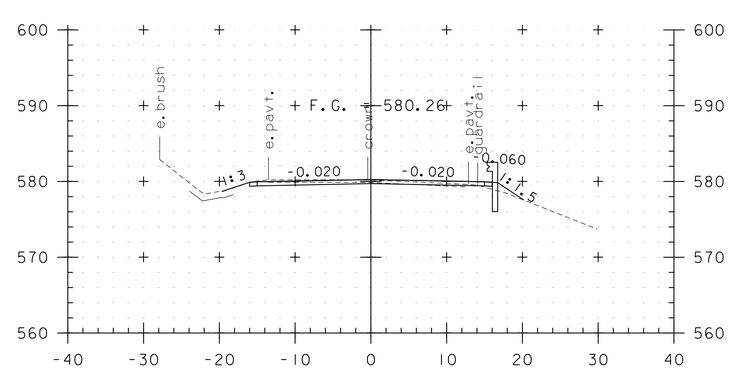
231+50



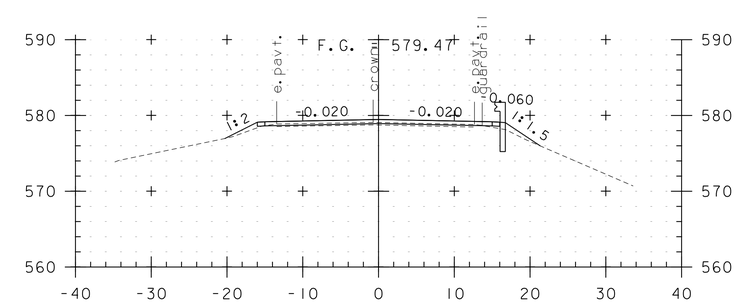
233+00



229+50



231+00



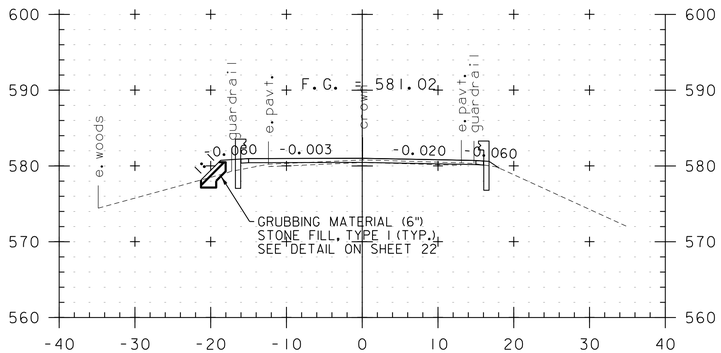
232+50

0 10 20
SCALE IN FEET

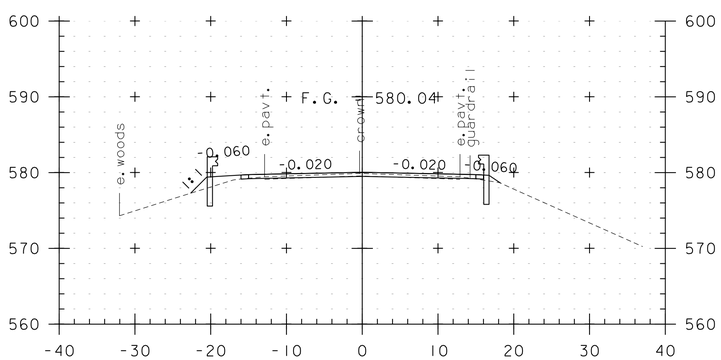
STA. 229+50 TO STA. 233+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 44	SHEET 232 OF 303

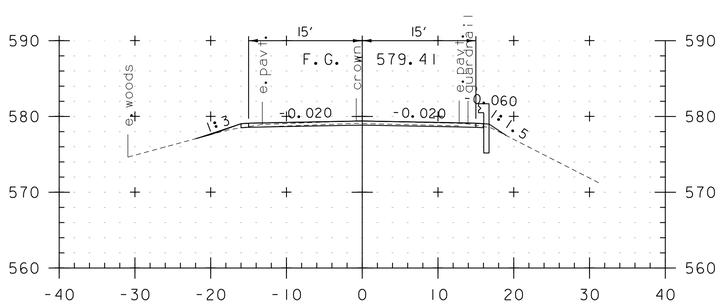
CLD 12-0337



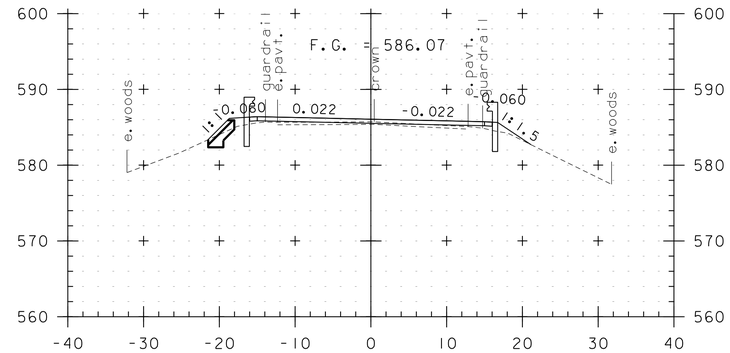
235+00



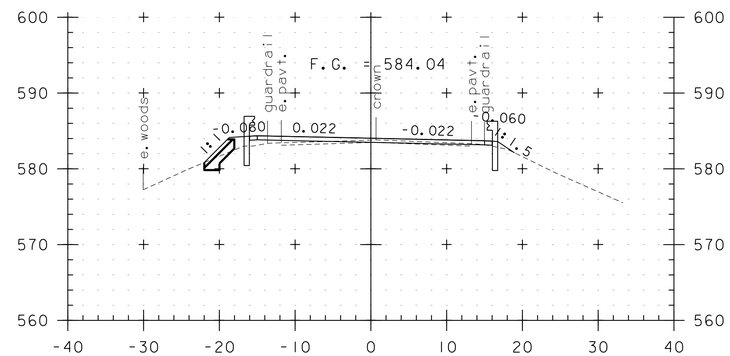
234+50



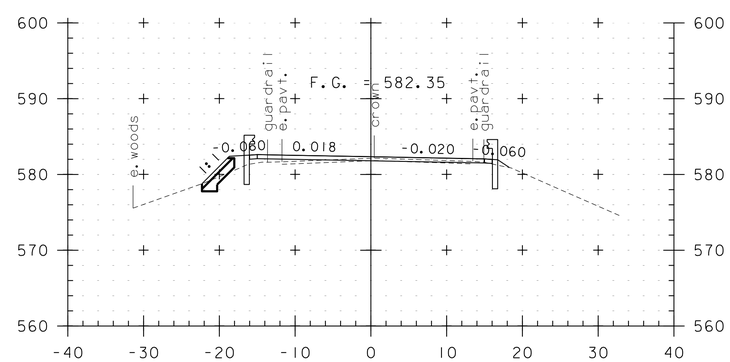
234+00



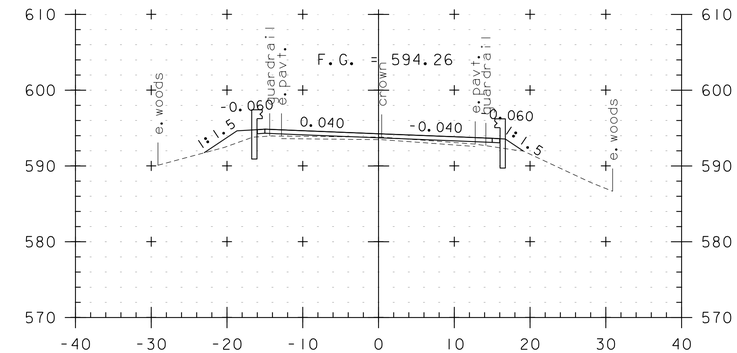
236+50



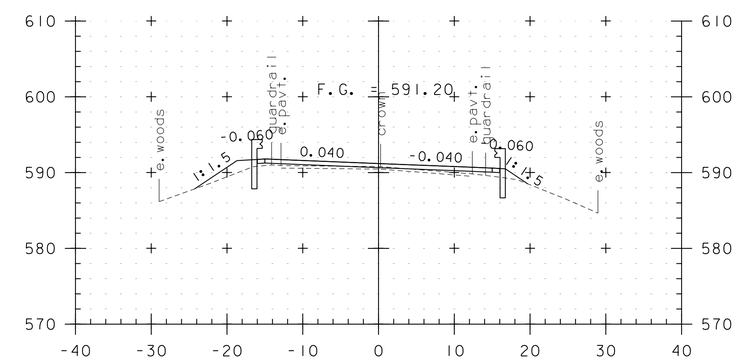
236+00



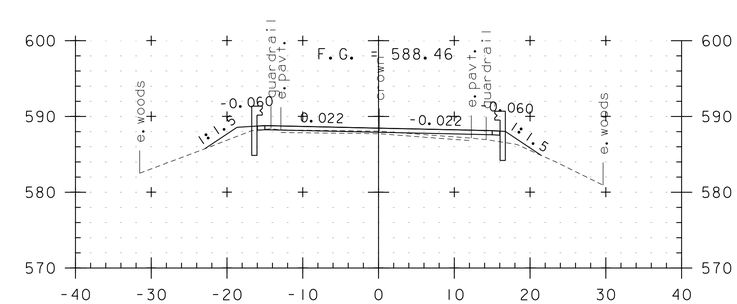
235+50



238+00



237+50



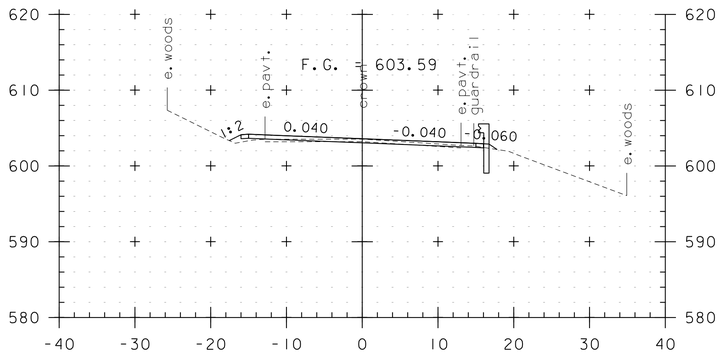
237+00

0 10 20
SCALE IN FEET

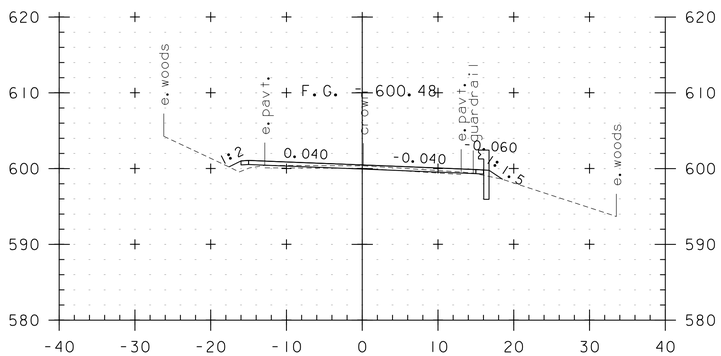
STA. 234+00 TO STA. 238+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 45	SHEET 233 OF 303

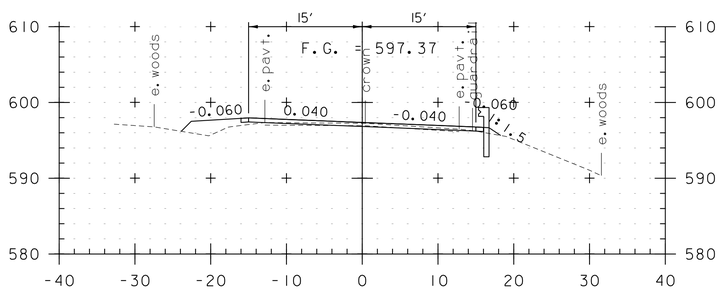
CLD 12-0337



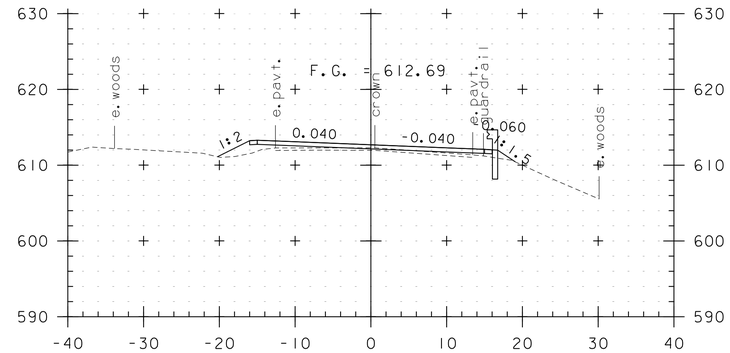
239+50



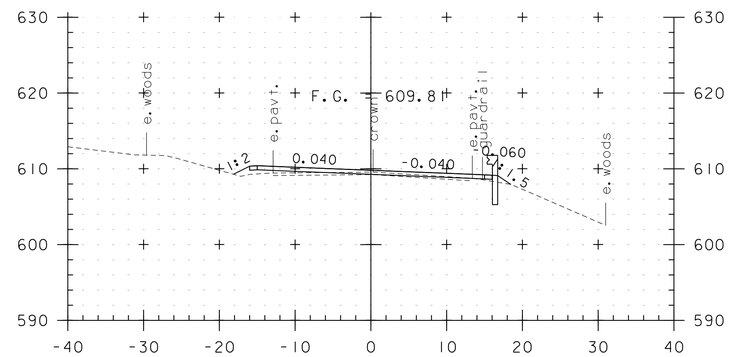
239+00



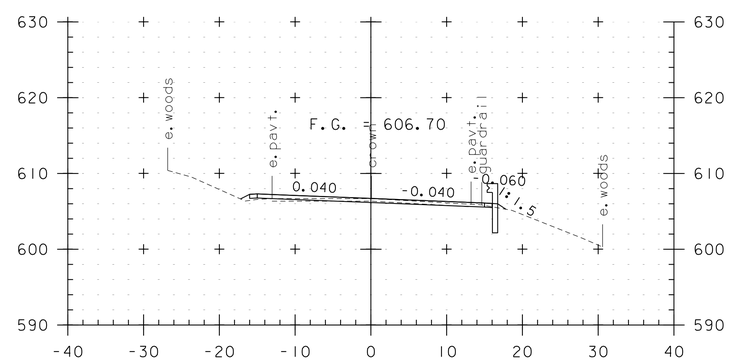
238+50



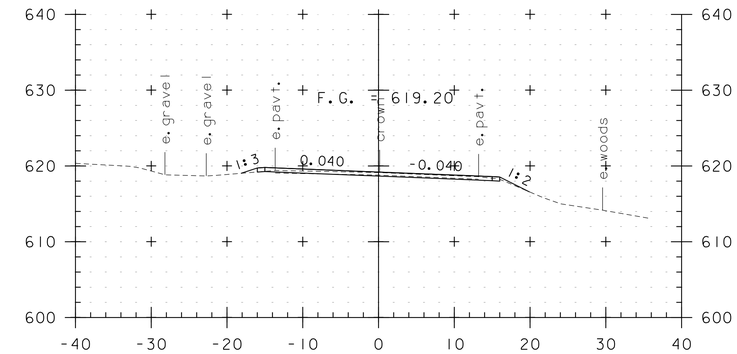
241+00



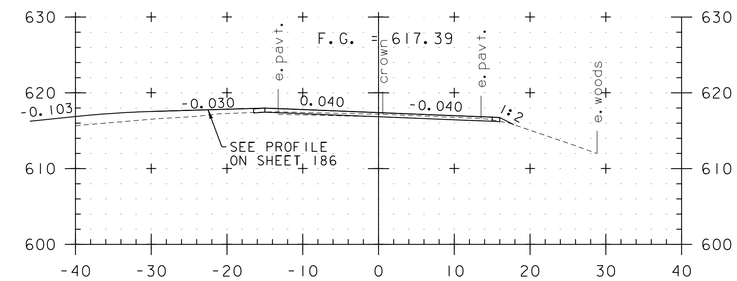
240+50



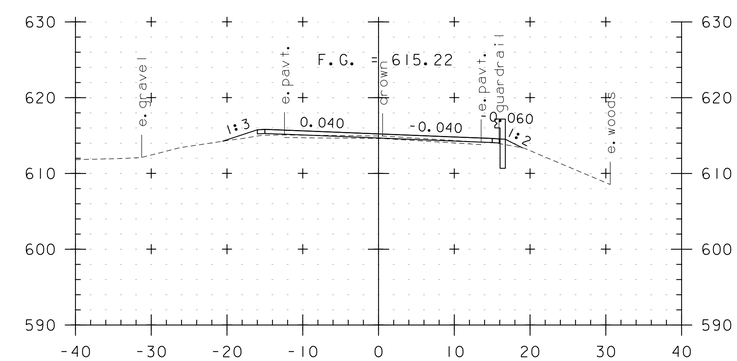
240+00



242+50



242+00
TH 73



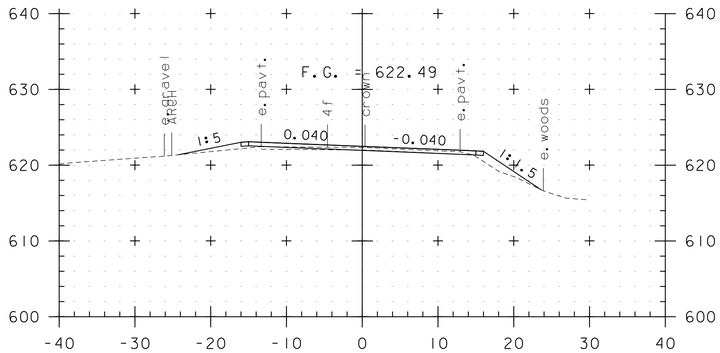
241+50

0 10 20
SCALE IN FEET

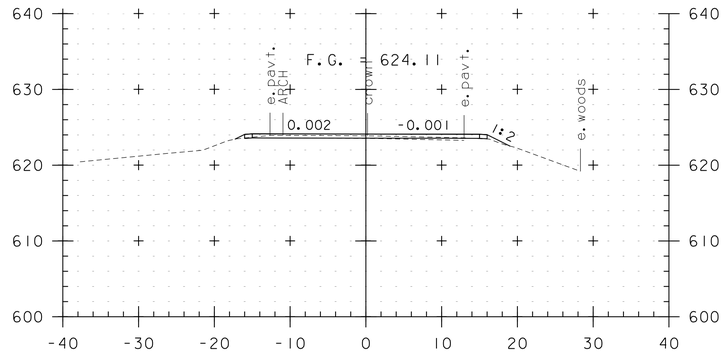
STA. 238+50 TO STA. 242+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 46	SHEET 234 OF 303

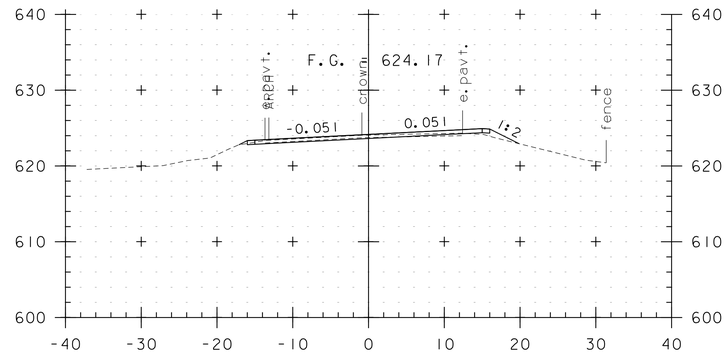
CLD 12-0337



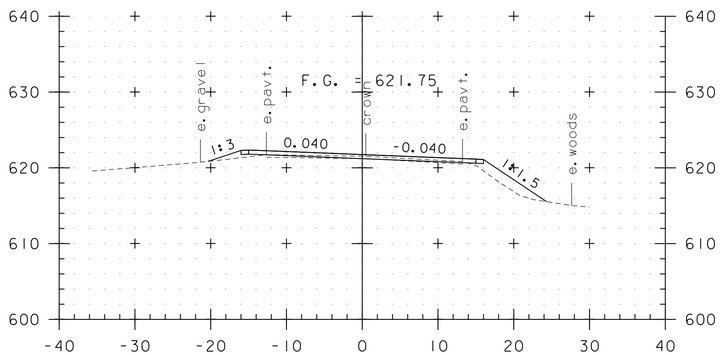
244+00



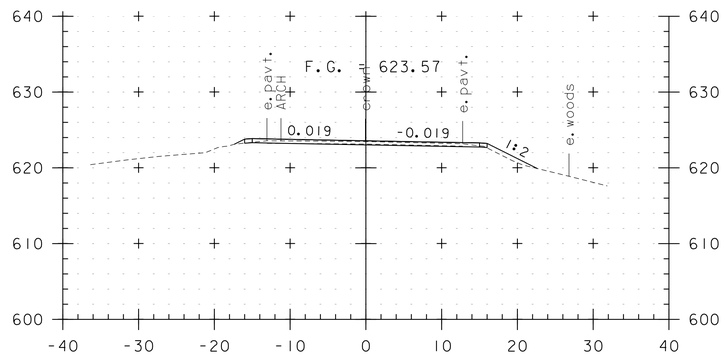
245+50



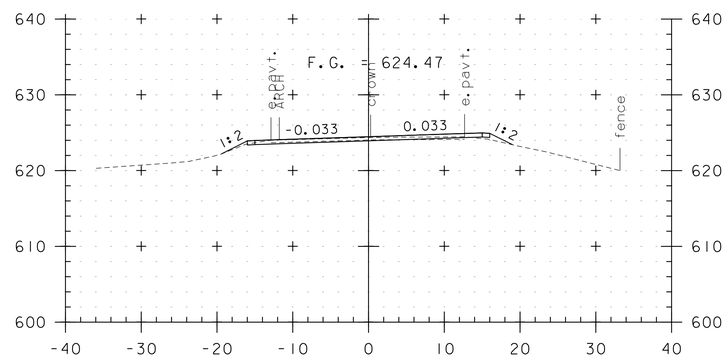
247+00



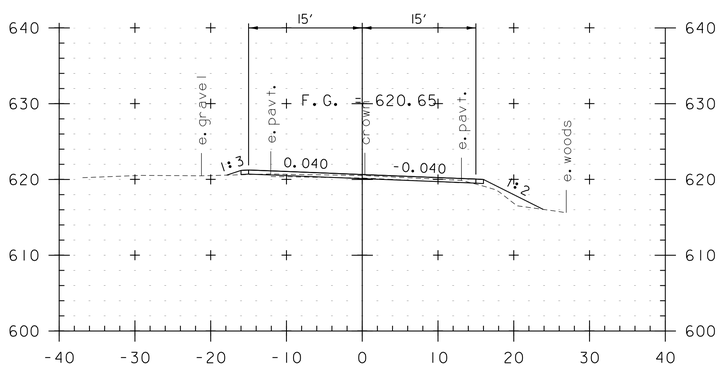
243+50



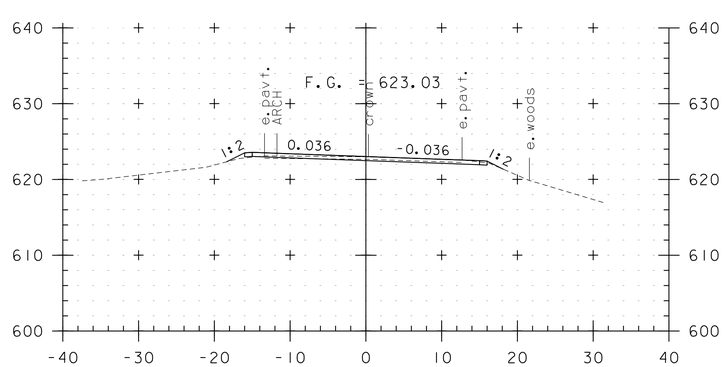
245+00



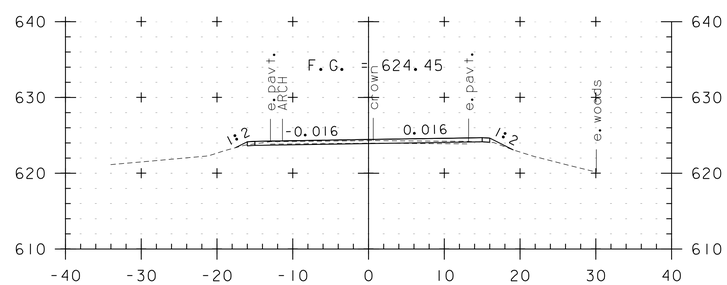
246+50



243+00



244+50



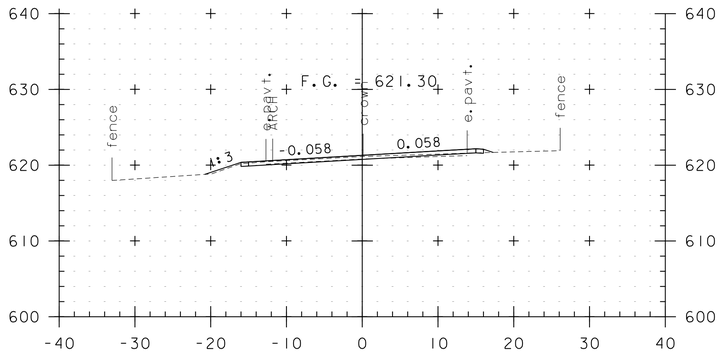
246+00

0 10 20
SCALE IN FEET

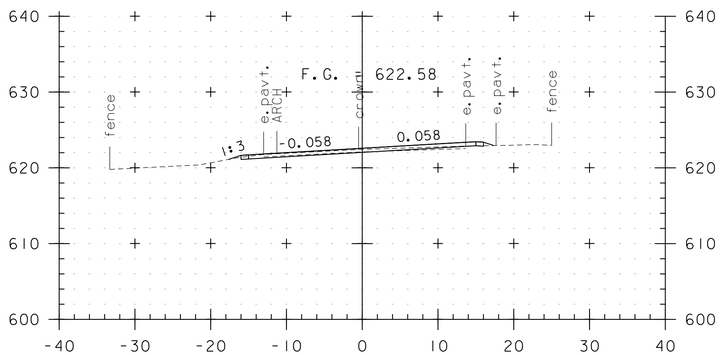
STA. 243+00 TO STA. 247+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 47	SHEET 235 OF 303

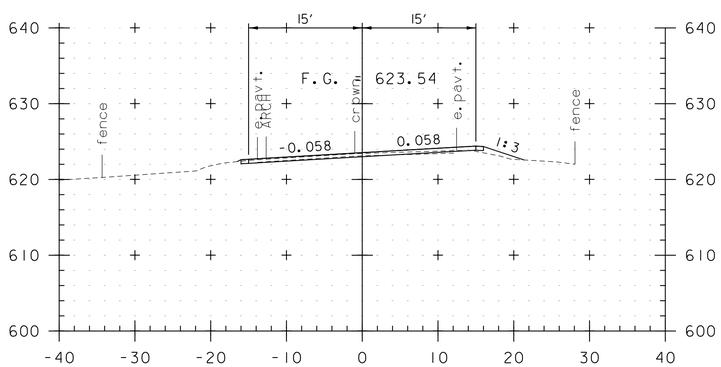
CLD 12-0337



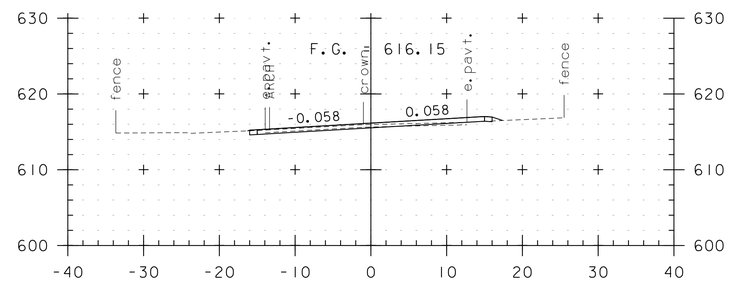
248+50



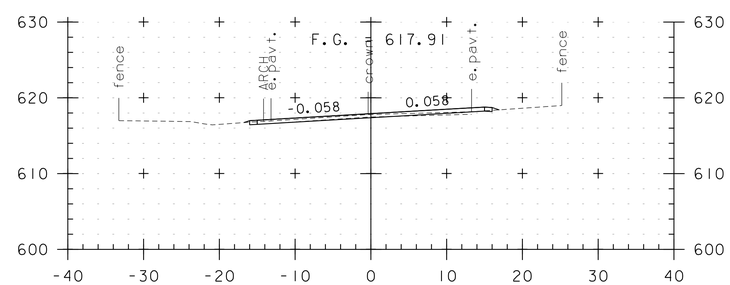
248+00



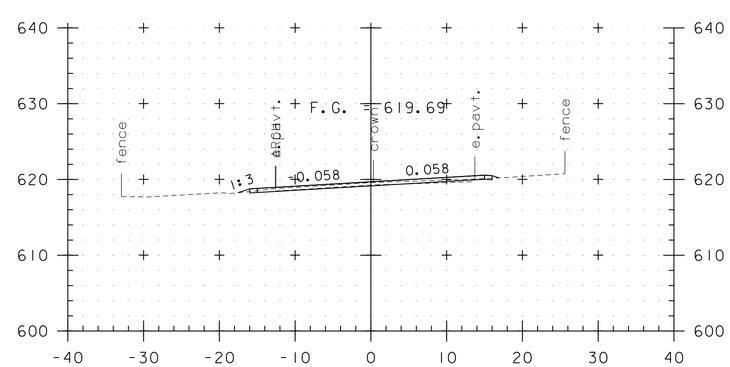
247+50



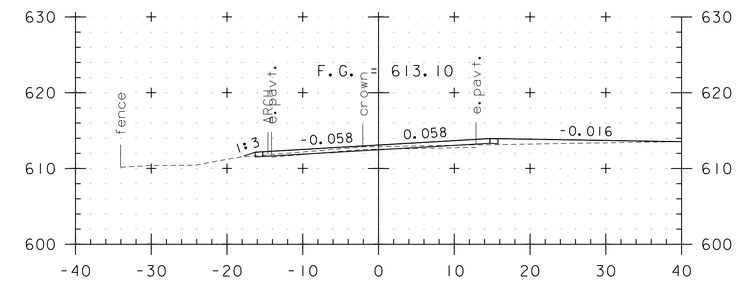
250+00



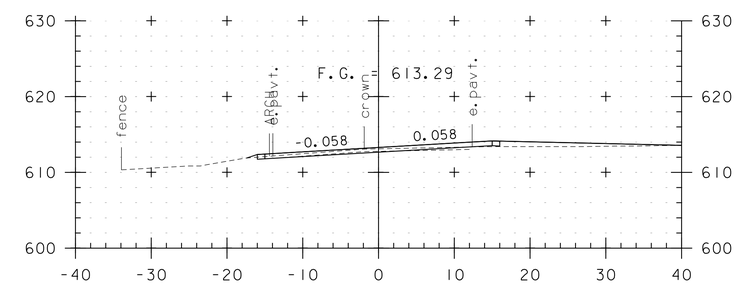
249+50



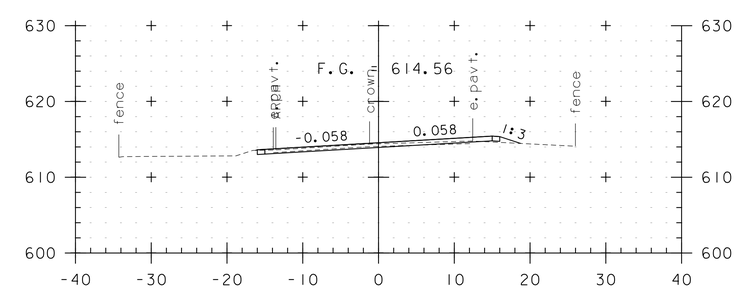
249+00



251+11
TH 29



251+00



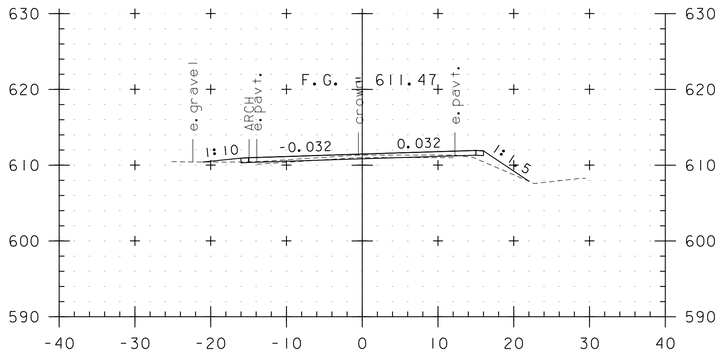
250+50

0 10 20
SCALE IN FEET

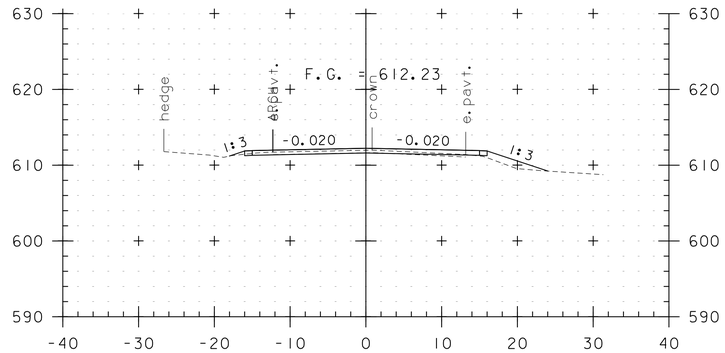
STA. 247+50 TO STA. 251+11

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 48	SHEET 236 OF 303

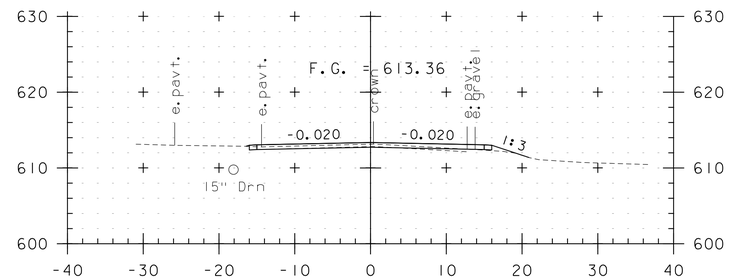
CLD 12-0337



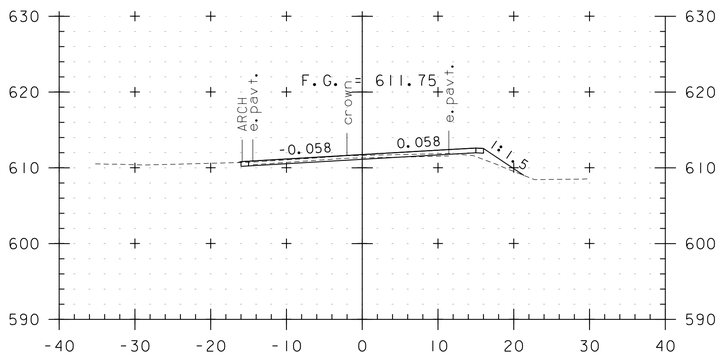
252+50



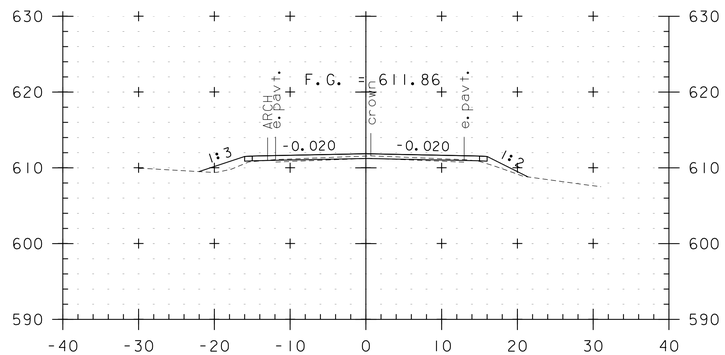
254+00



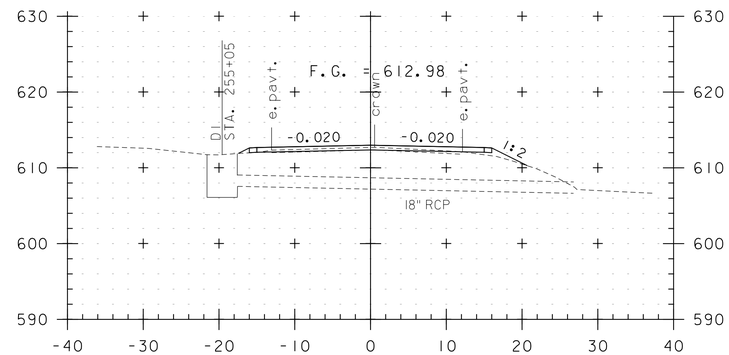
255+50



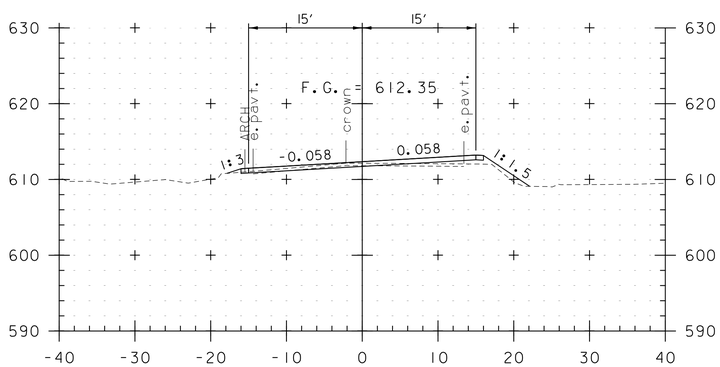
252+00



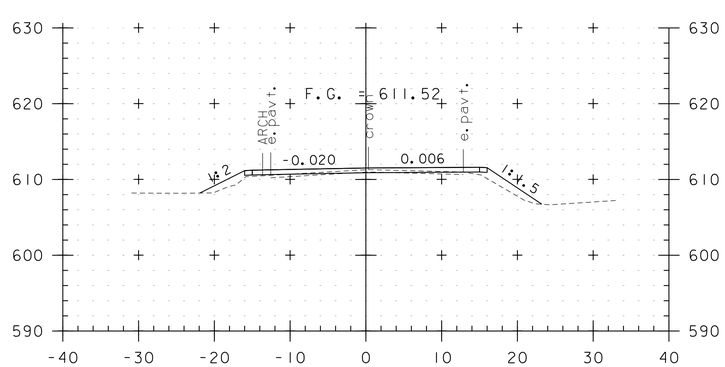
253+50



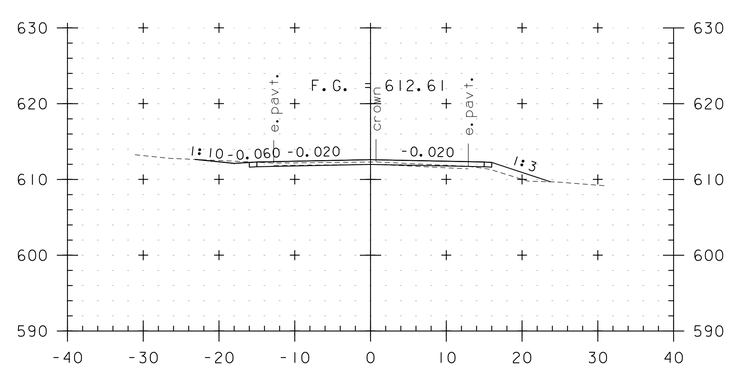
255+00



251+50



253+00



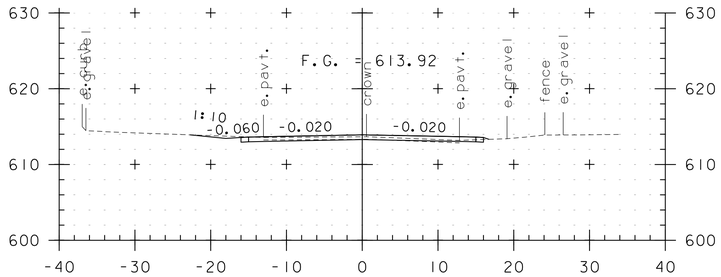
254+50

0 10 20
SCALE IN FEET

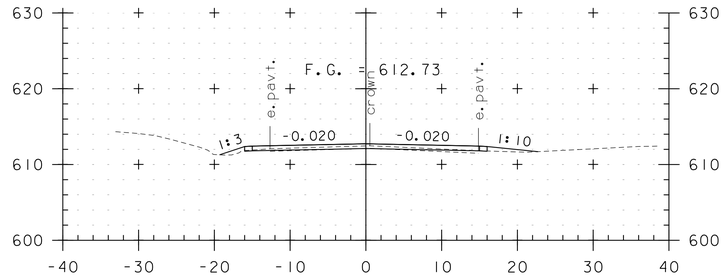
STA. 251+50 TO STA. 255+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 49	SHEET 237 OF 303

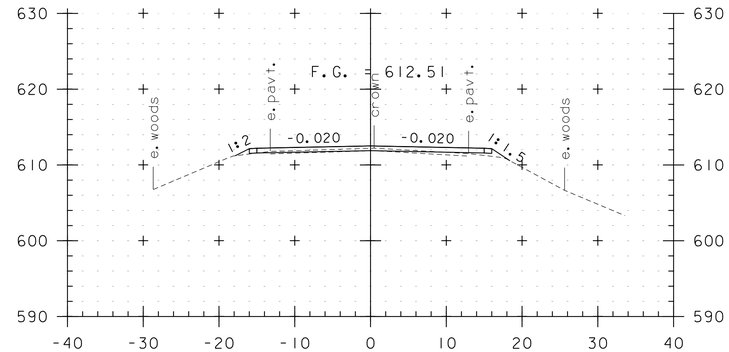
CLD 12-0337



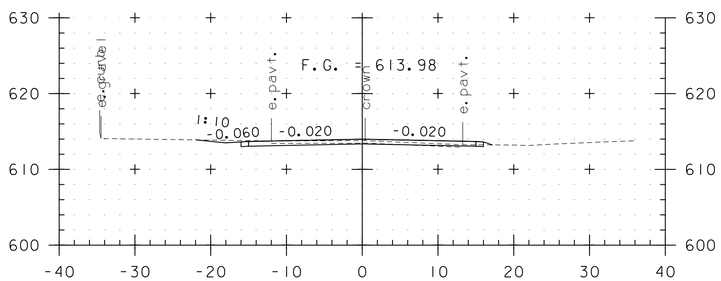
257+00



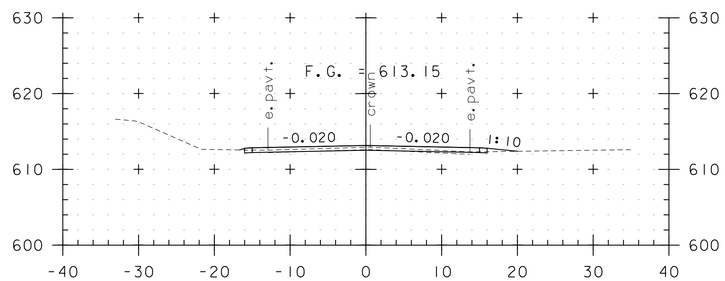
258+50



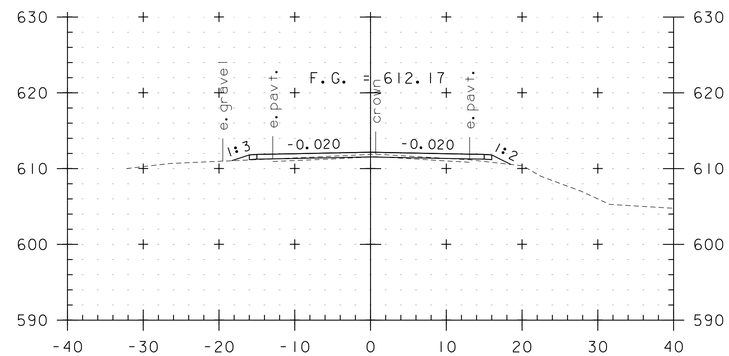
260+00



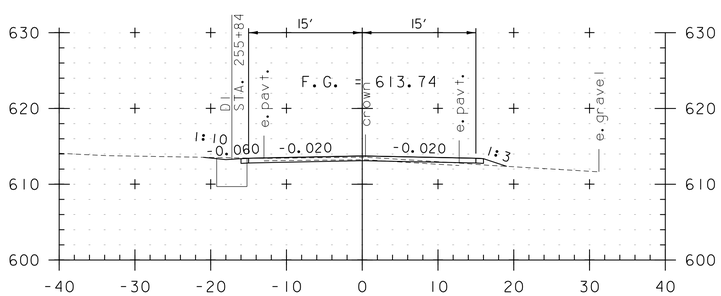
256+50



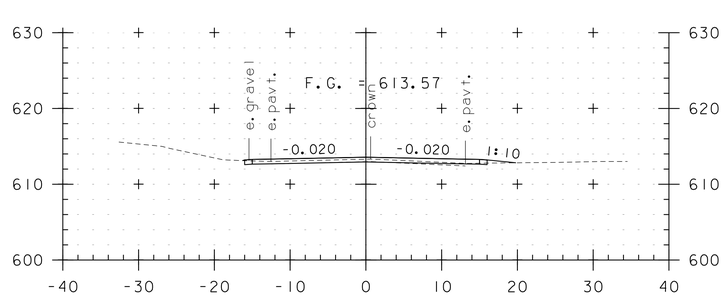
258+00



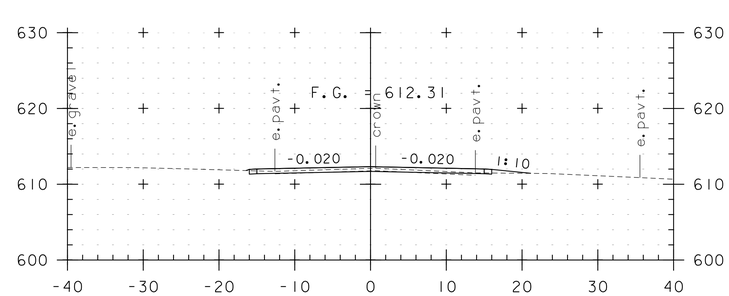
259+50



256+00



257+50



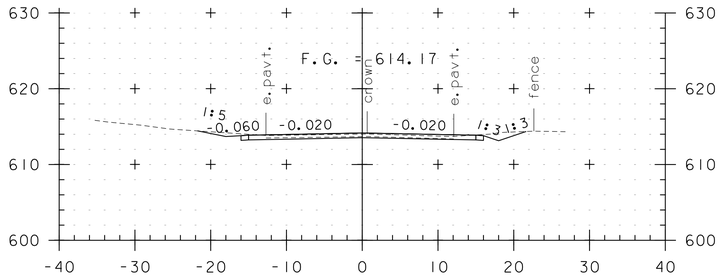
259+00

0 10 20
SCALE IN FEET

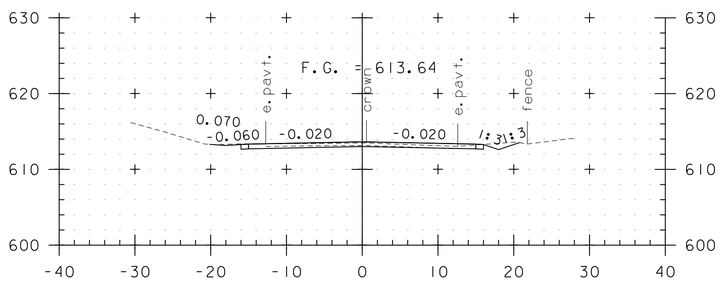
STA. 256+00 TO STA. 260+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 50	SHEET 238 OF 303

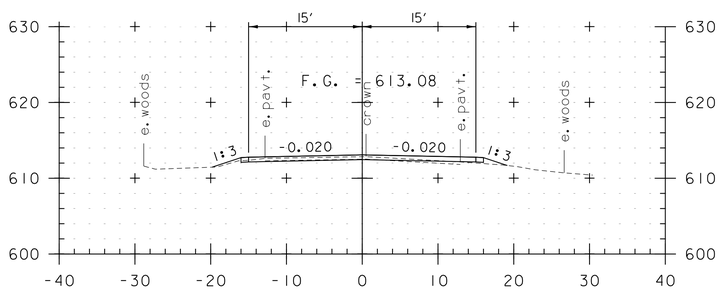
CLD 12-0337



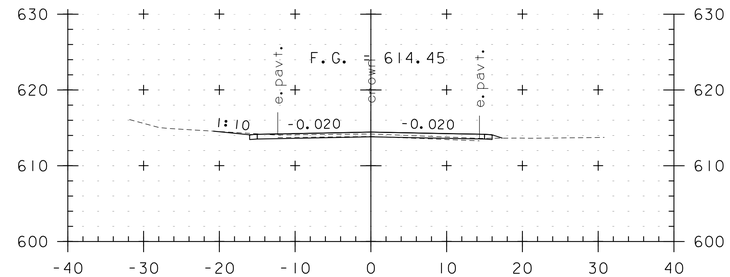
261+50



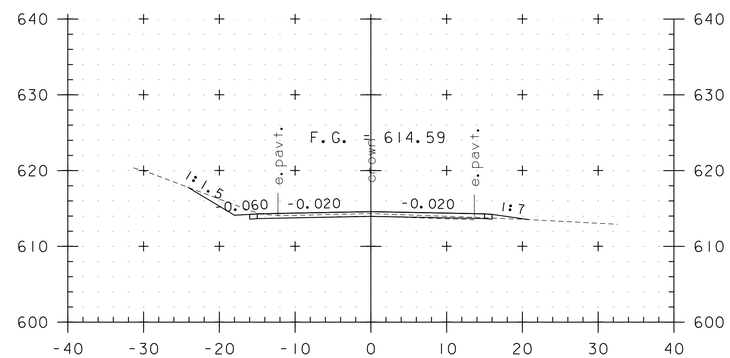
261+00



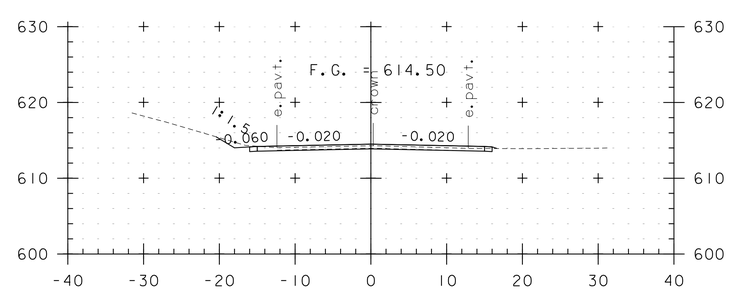
260+50



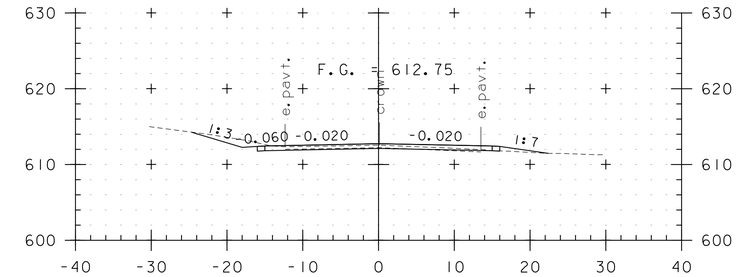
263+00



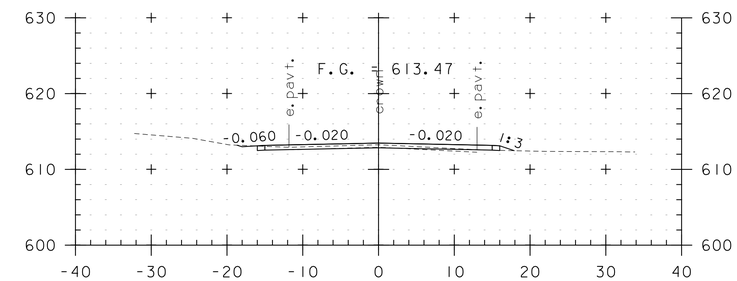
262+50



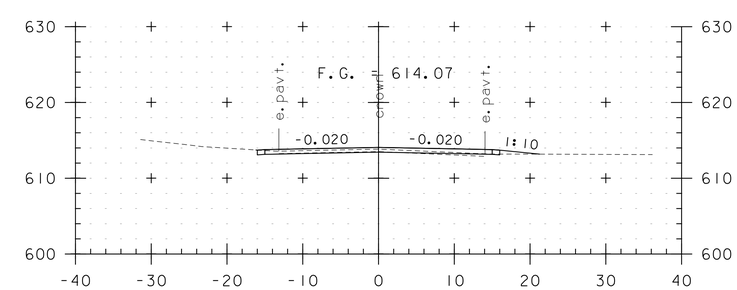
262+00



264+50



264+00



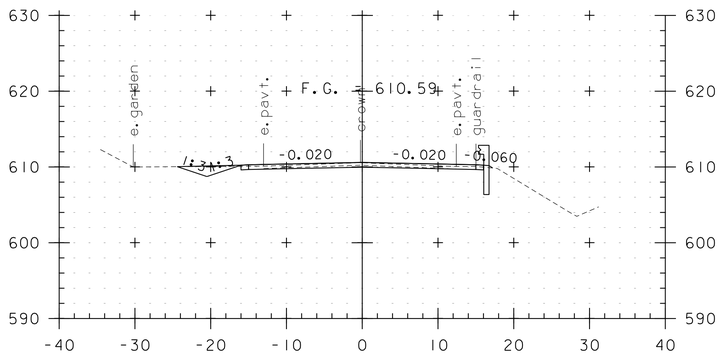
263+50

0 10 20
SCALE IN FEET

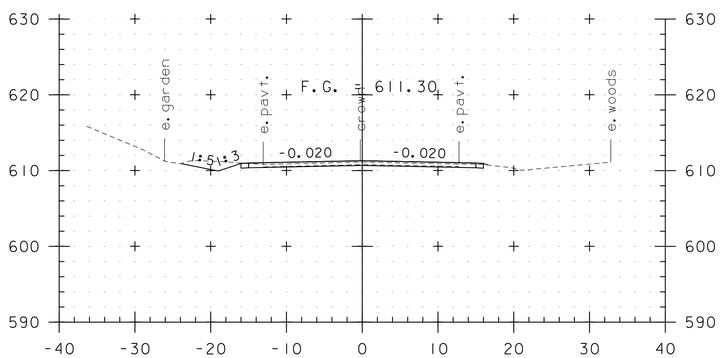
STA. 260+50 TO STA. 264+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 51	SHEET 239 OF 303

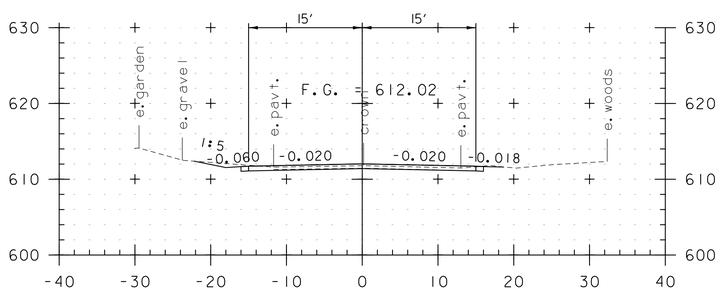
CLD 12-0337



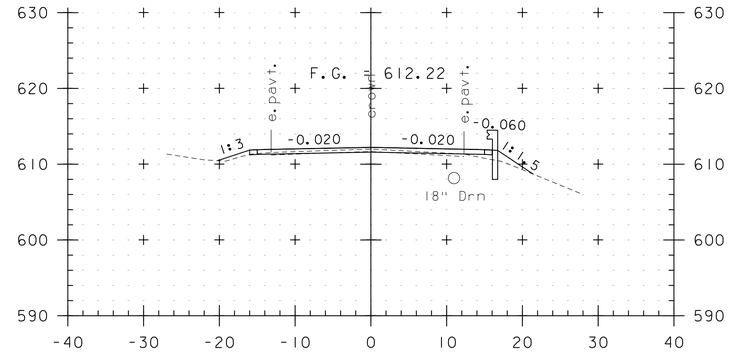
266+00



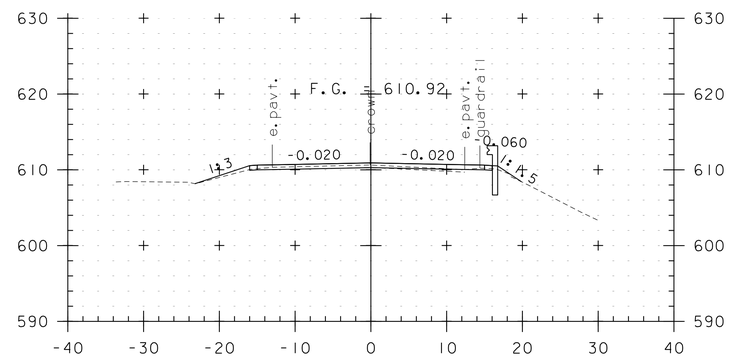
265+50



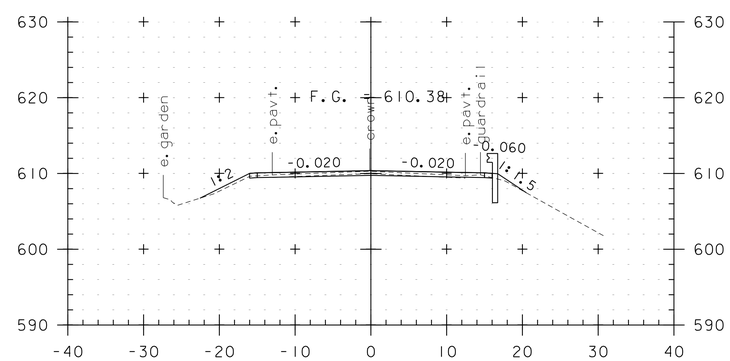
265+00



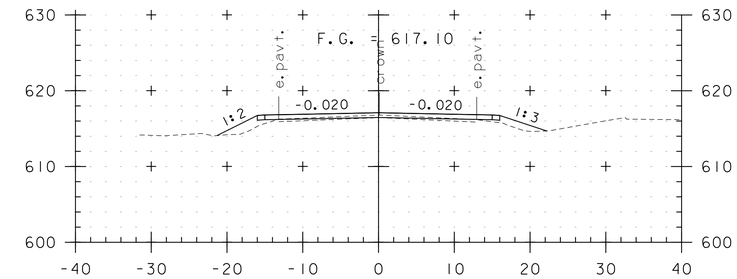
267+50



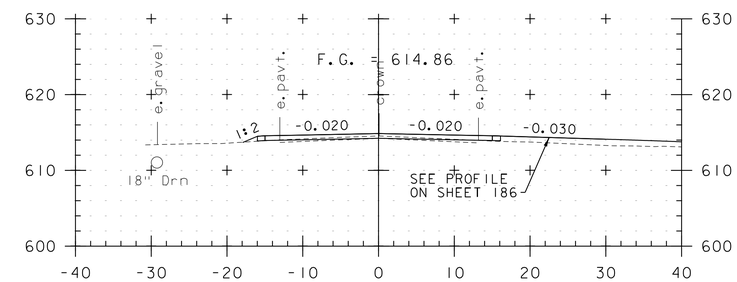
267+00



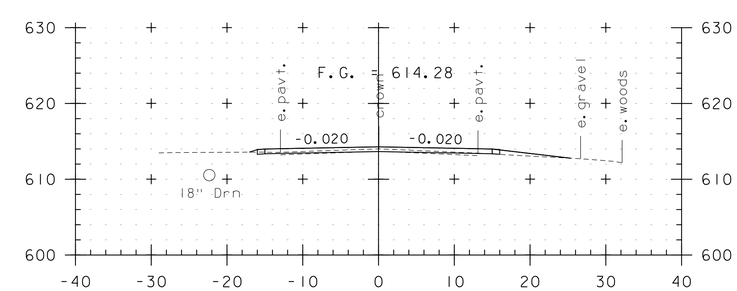
266+50



268+50



268+10
TH 6



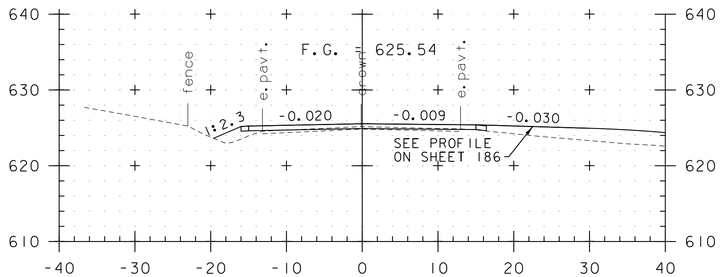
268+00

0 10 20
SCALE IN FEET

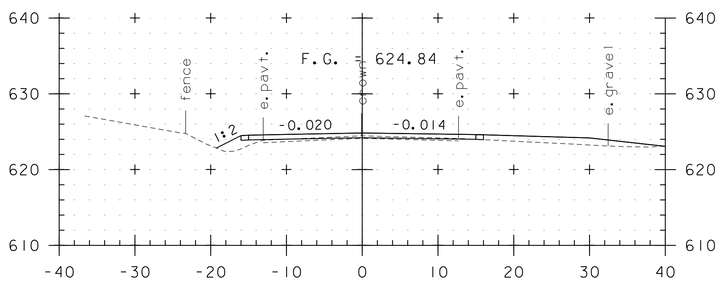
STA. 265+00 TO STA. 268+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 52	SHEET 240 OF 303

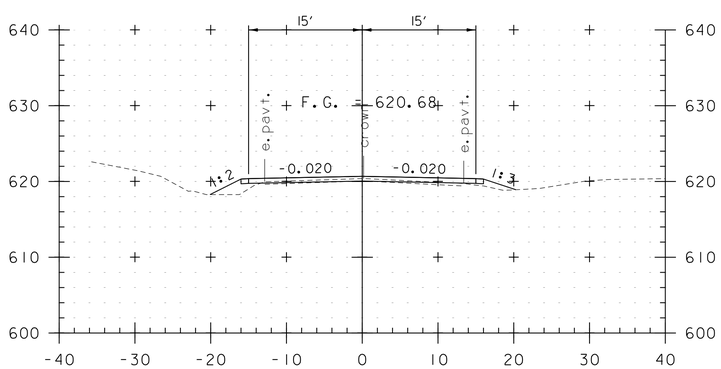
CLD 12-0337



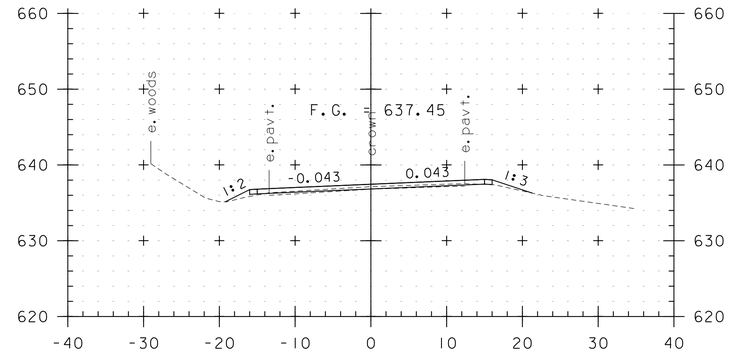
269+58
TH 6



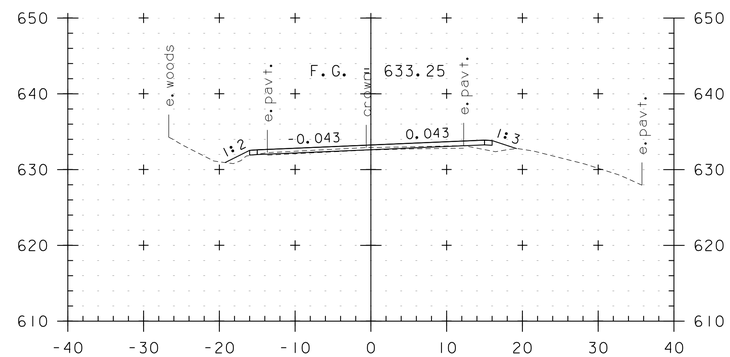
269+50



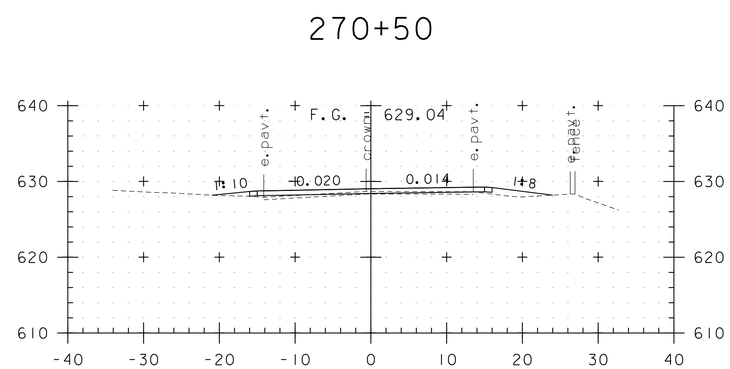
269+00



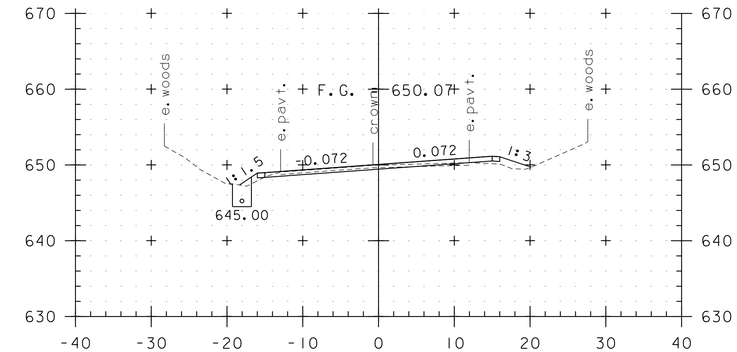
271+00



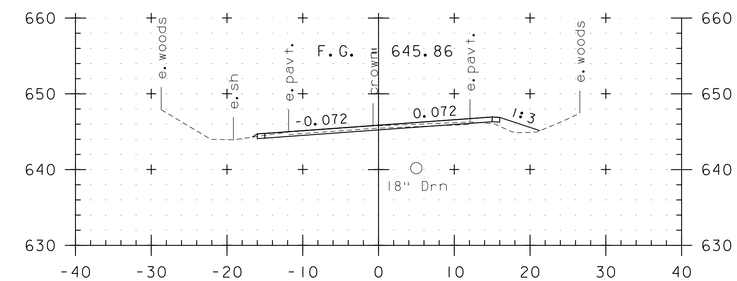
270+50



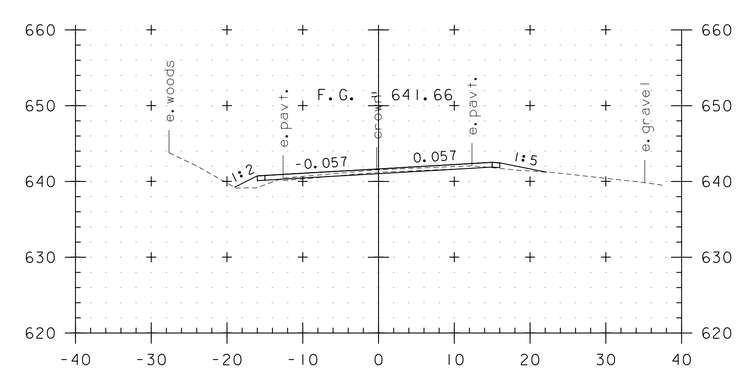
270+00



272+50



272+00



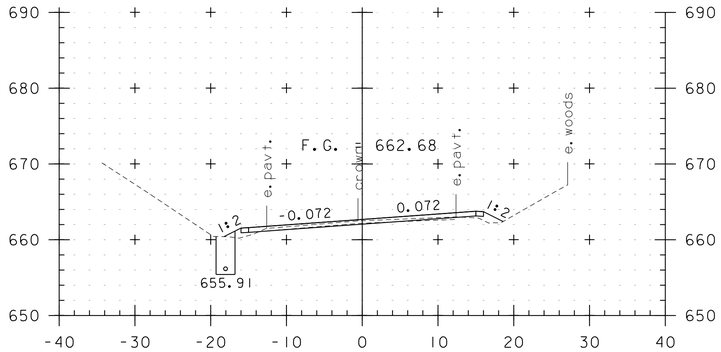
271+50

0 10 20
SCALE IN FEET

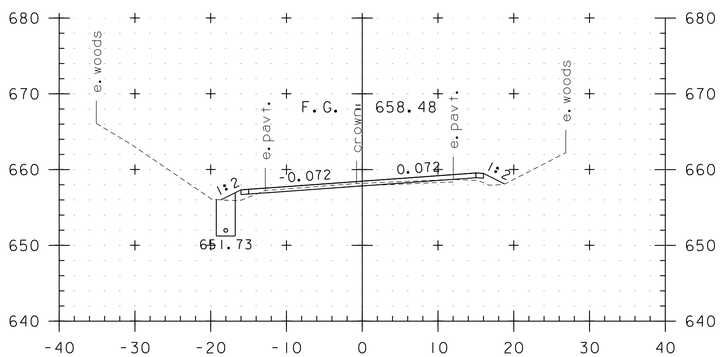
STA. 269+00 TO STA. 272+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 53	SHEET 241 OF 303

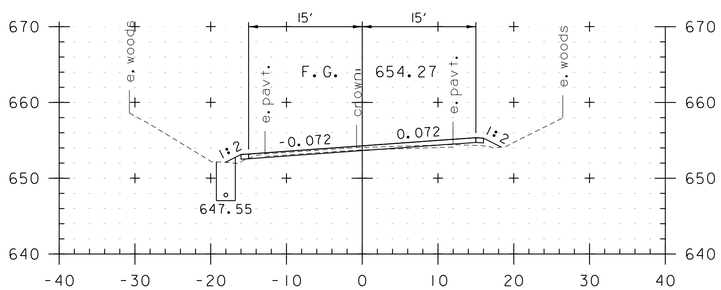
CLD 12-0337



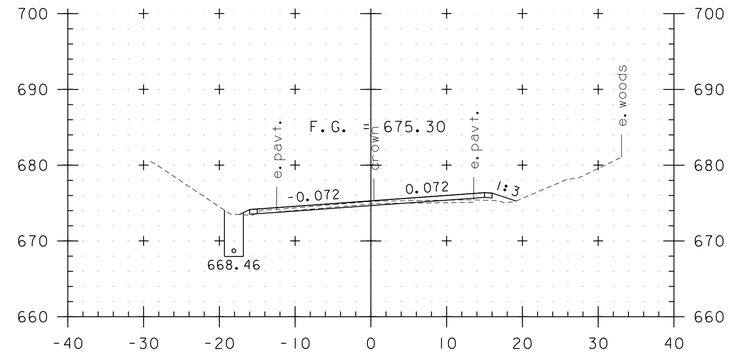
274+00



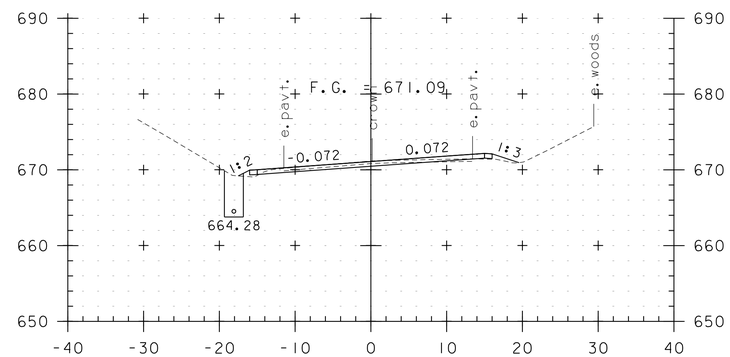
273+50



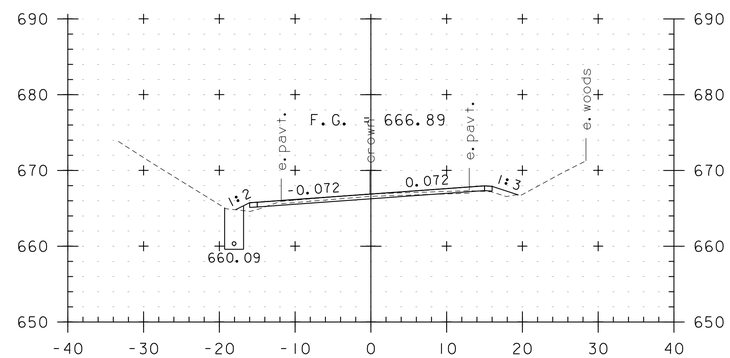
273+00



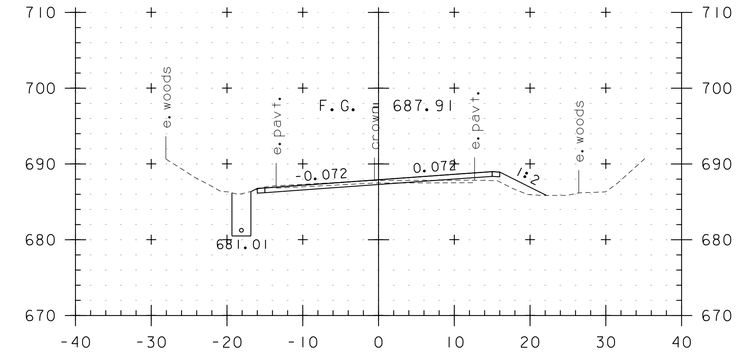
275+50



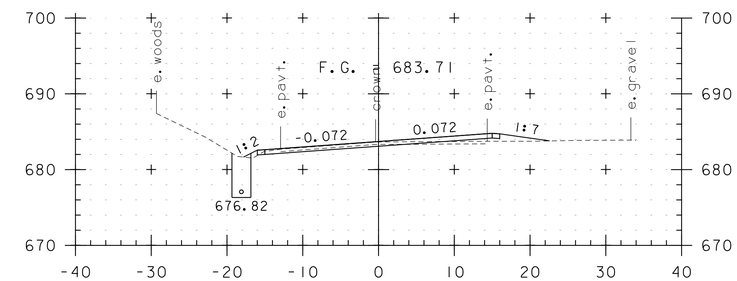
275+00



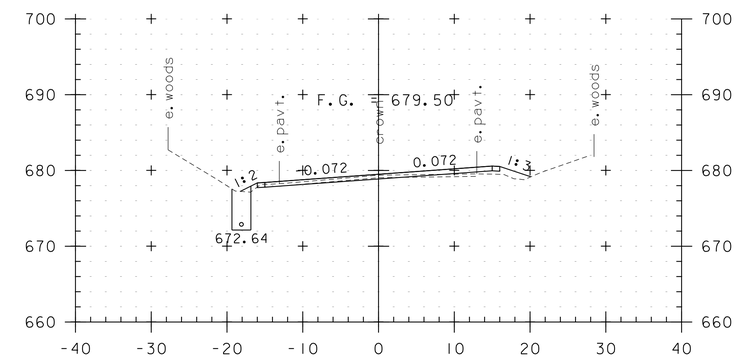
274+50



277+00



276+50



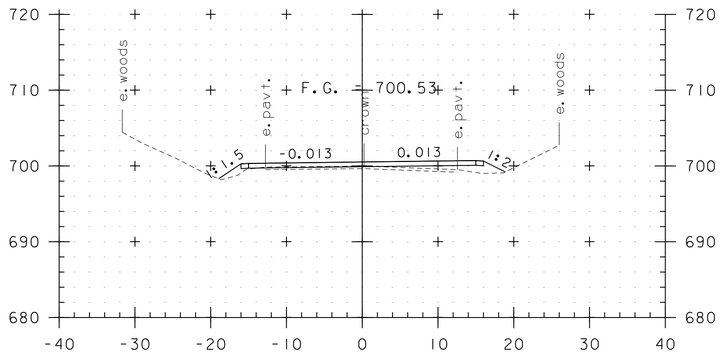
276+00

0 10 20
SCALE IN FEET

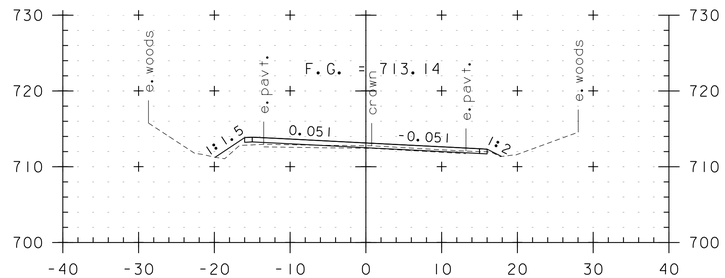
STA. 273+00 TO STA. 277+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 54	SHEET 242 OF 303

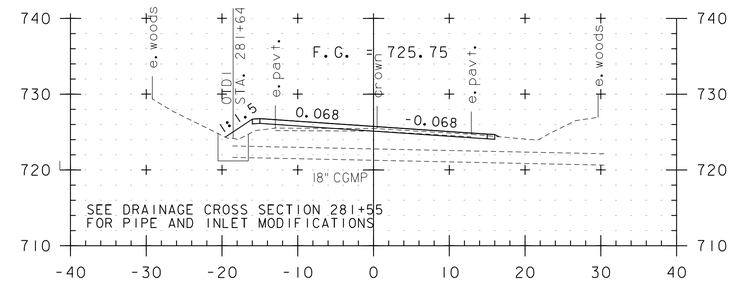
CLD 12-0337



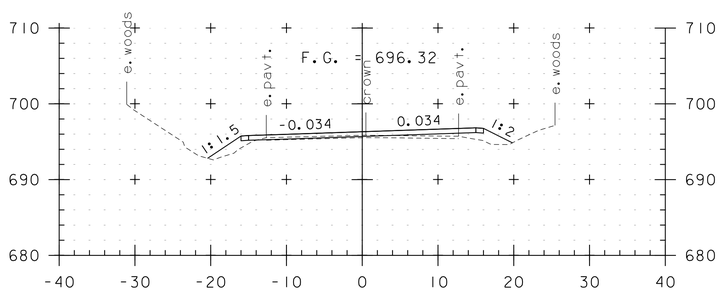
278+50



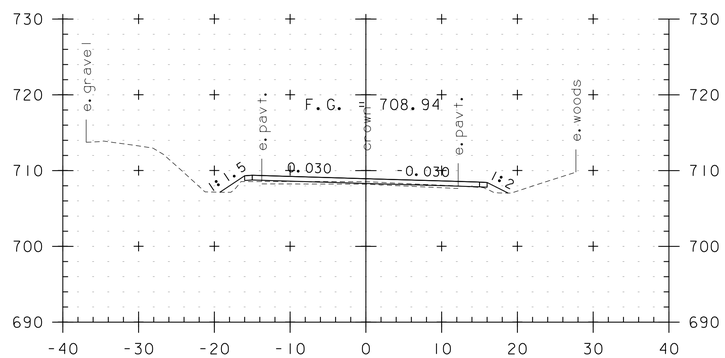
280+00



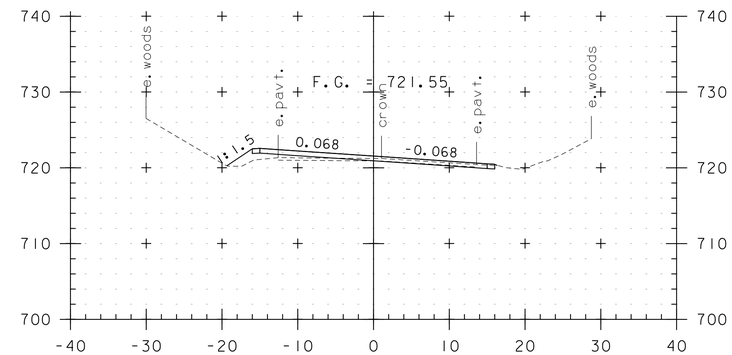
281+50



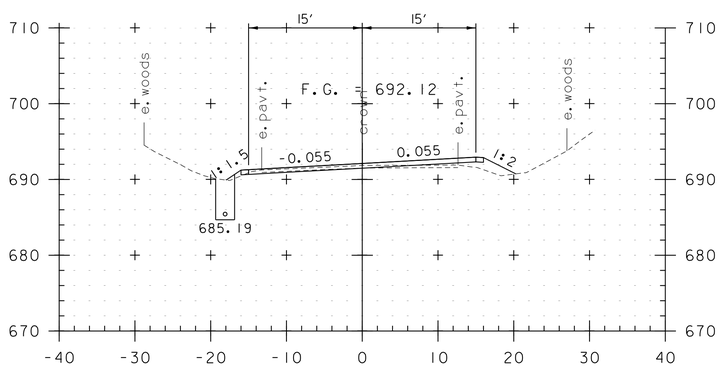
278+00



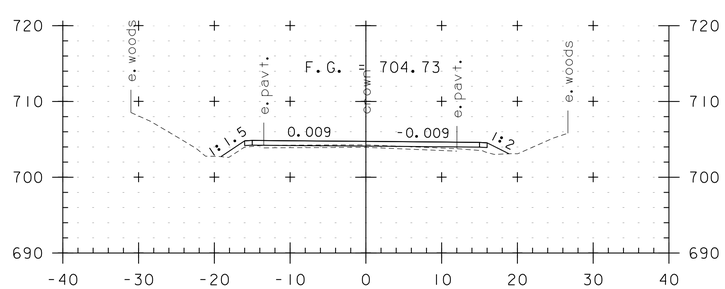
279+50



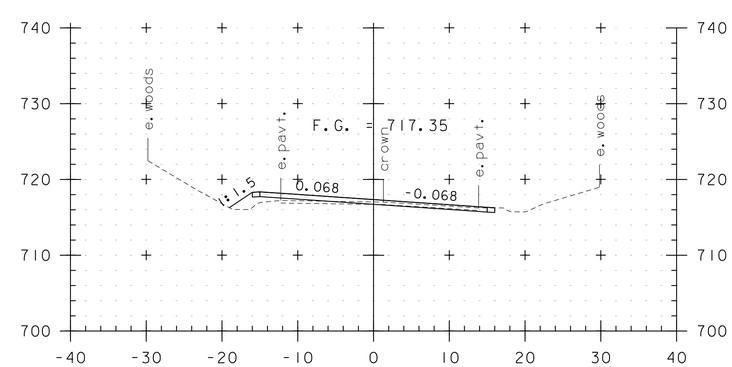
281+00



277+50



279+00



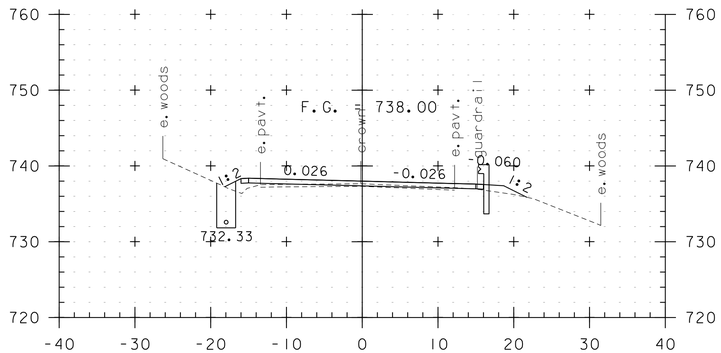
280+50

0 10 20
SCALE IN FEET

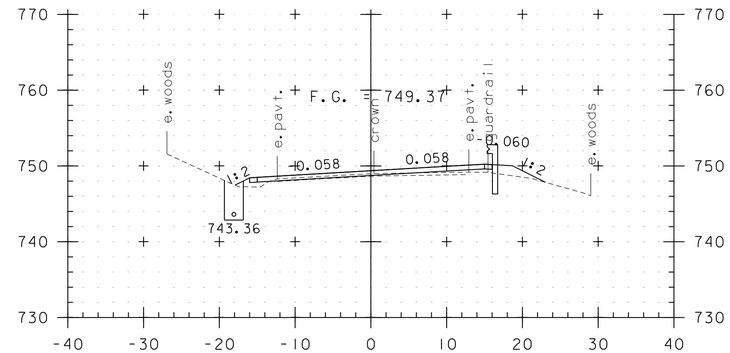
STA. 277+50 TO STA. 281+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 55	SHEET 243 OF 303

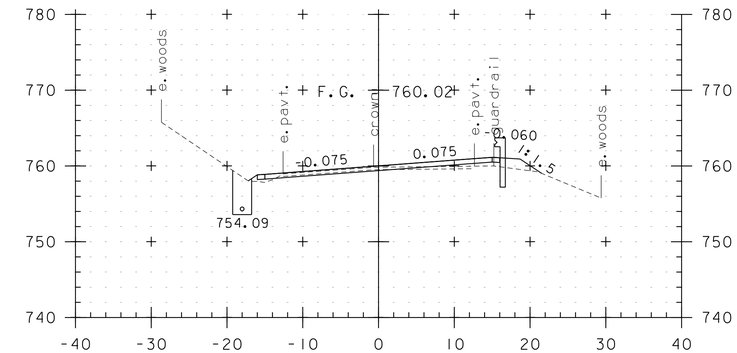
CLD 12-0337



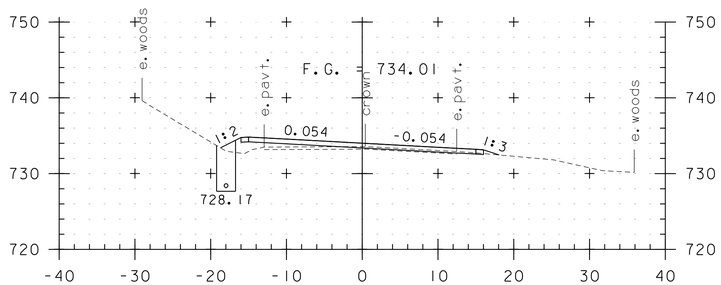
283+00



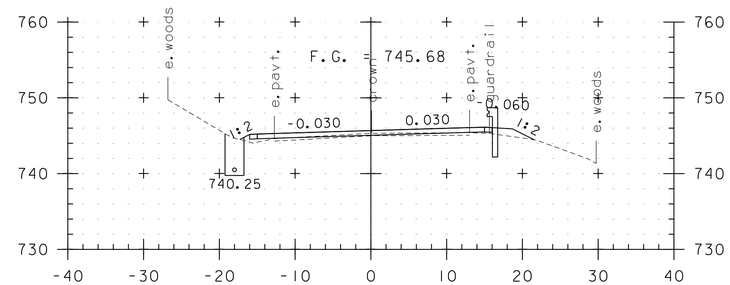
284+50



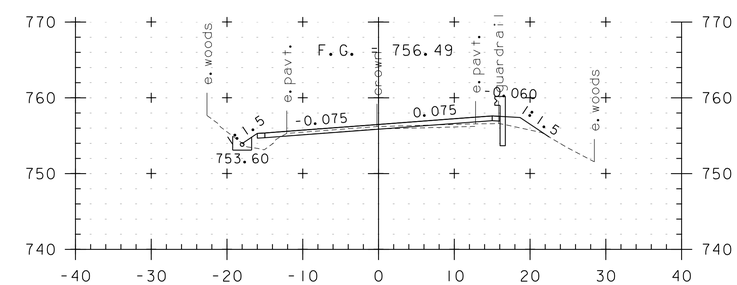
286+00



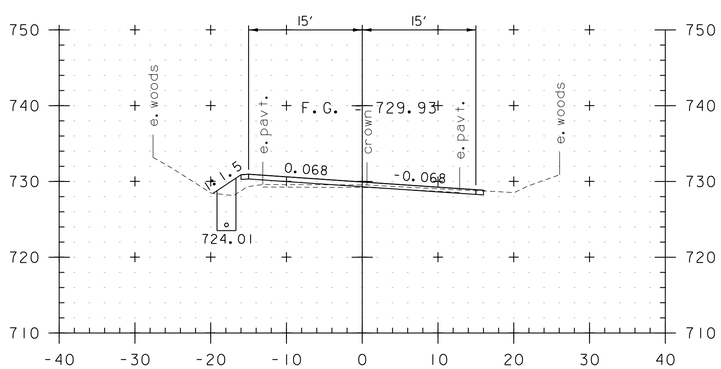
282+50



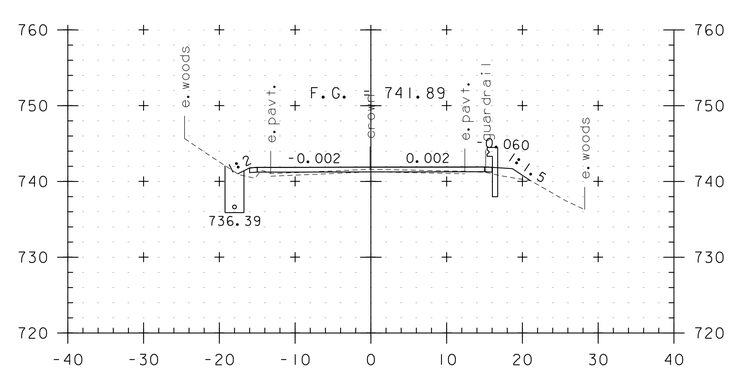
284+00



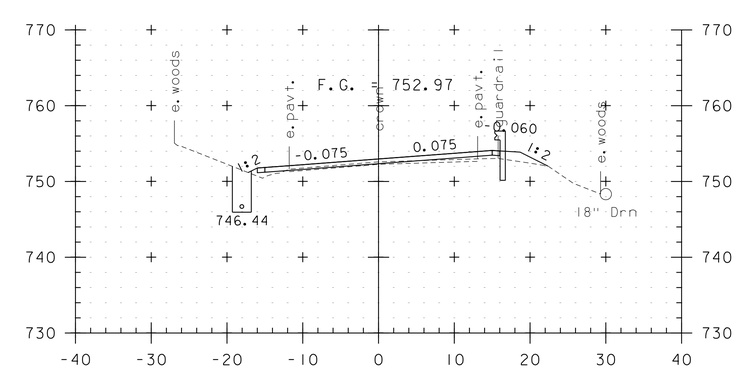
285+50



282+00



283+50



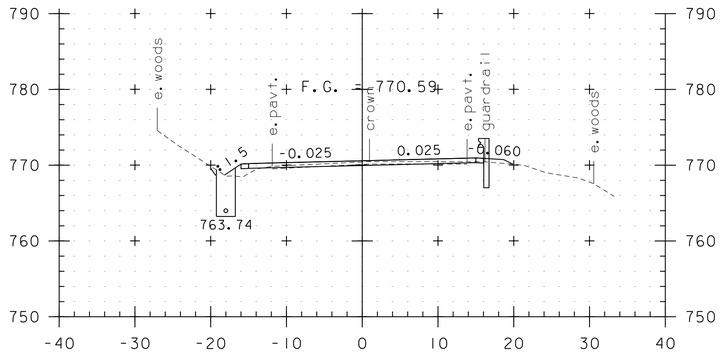
285+00

0 10 20
SCALE IN FEET

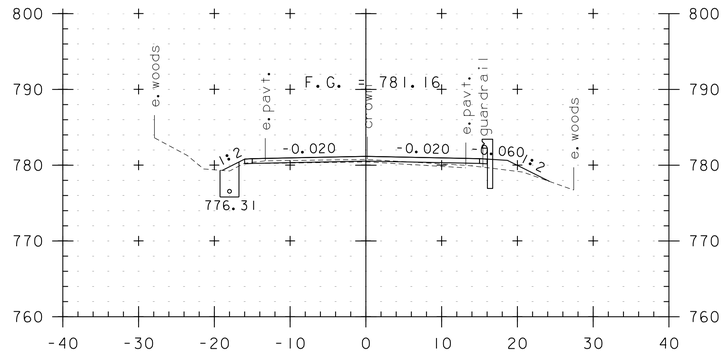
STA. 282+00 TO STA. 286+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 56	SHEET 244 OF 303

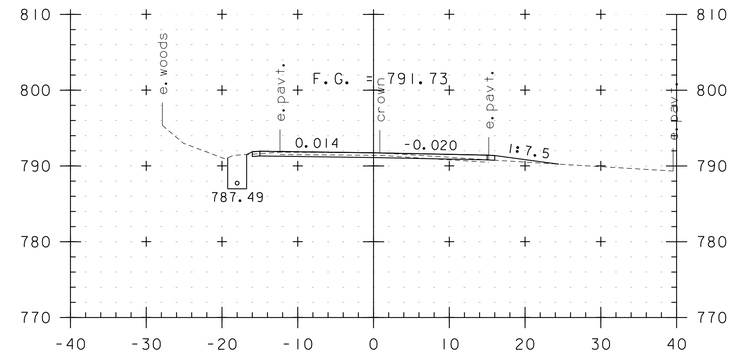
CLD 12-0337



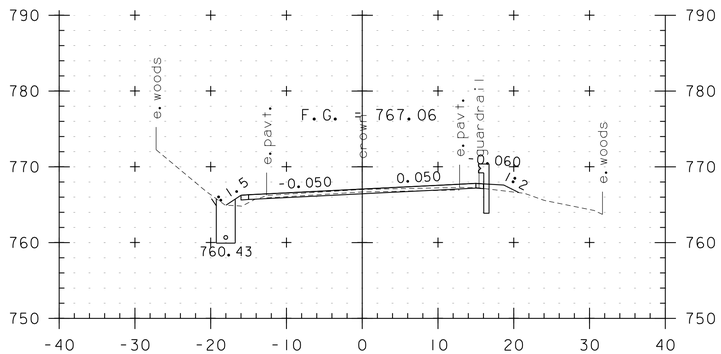
287+50



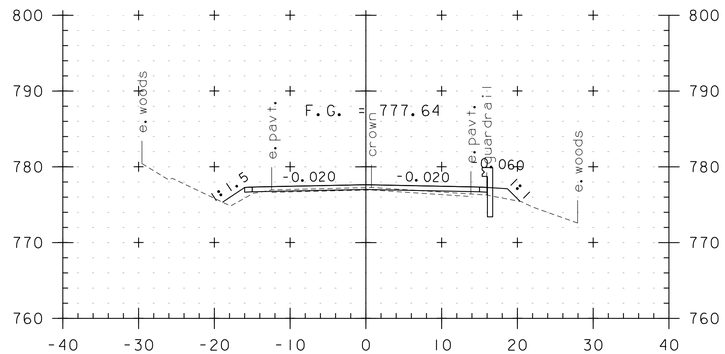
289+00



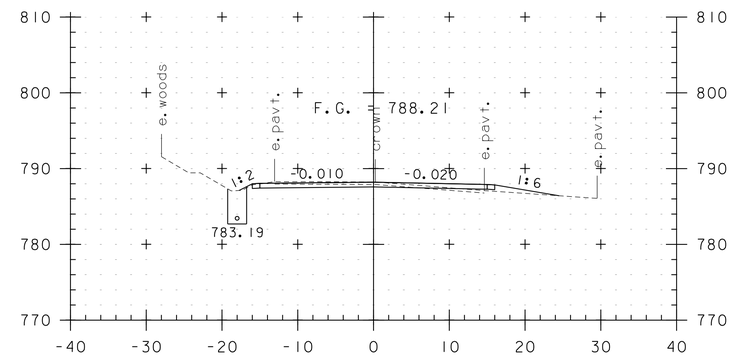
290+50



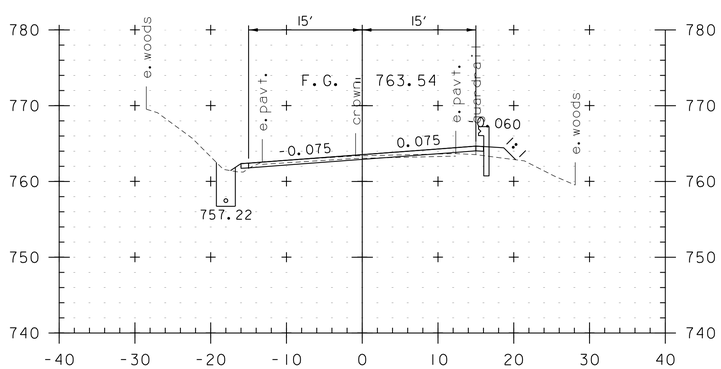
287+00



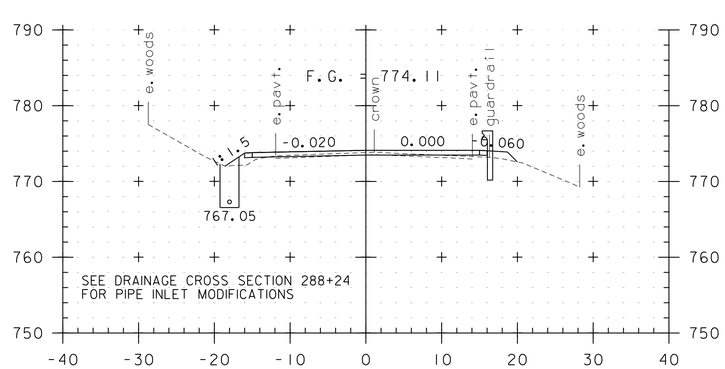
288+50



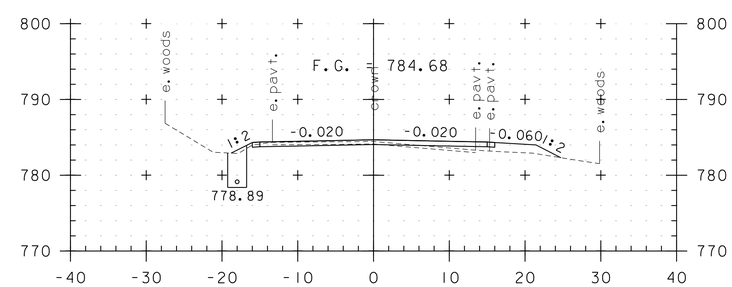
290+00



286+50



288+00



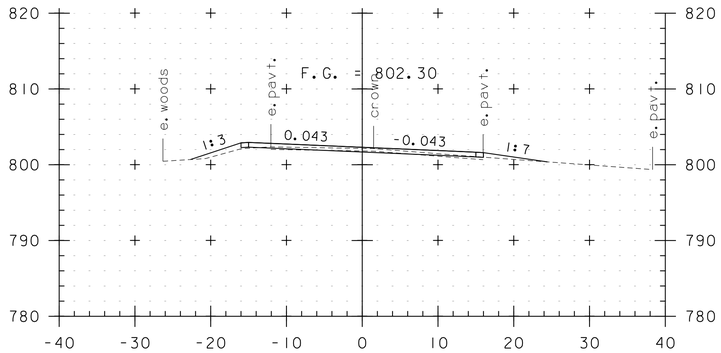
289+50

0 10 20
SCALE IN FEET

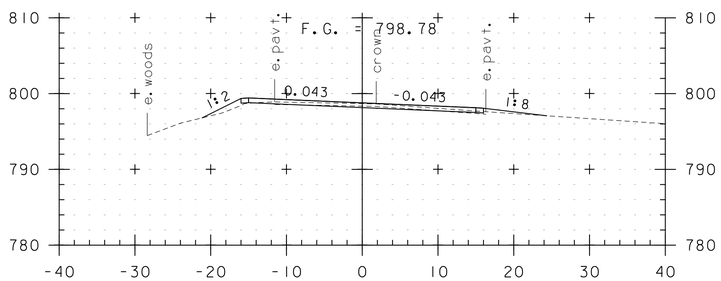
STA. 286+50 TO STA. 290+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 57	SHEET 245 OF 303

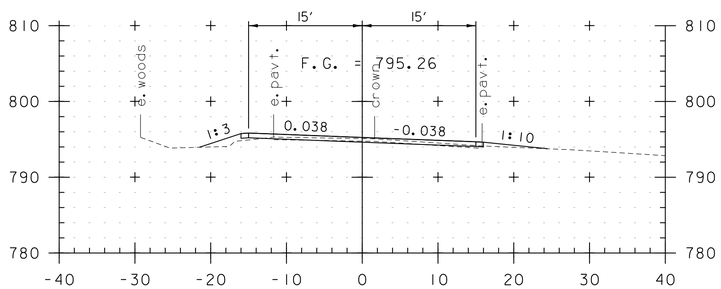
CLD 12-0337



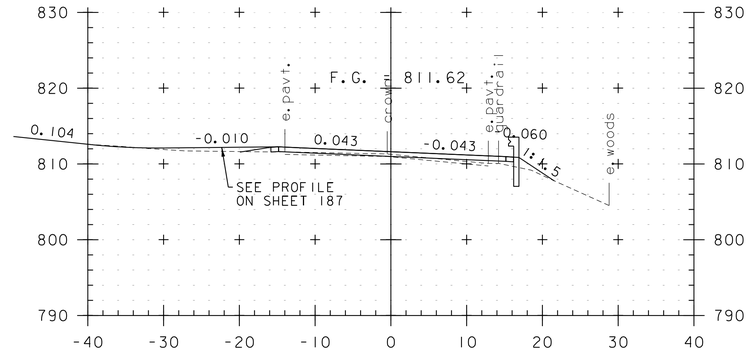
292+00



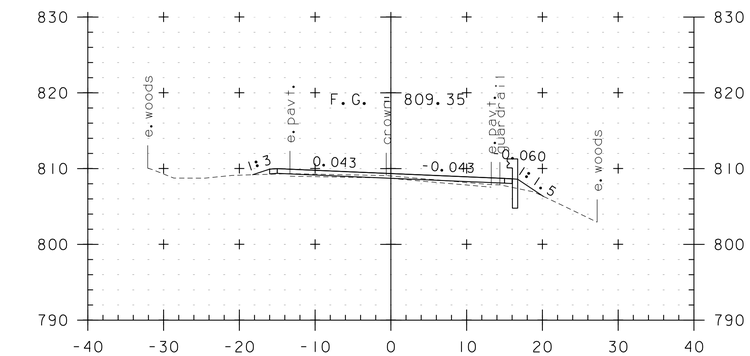
291+50



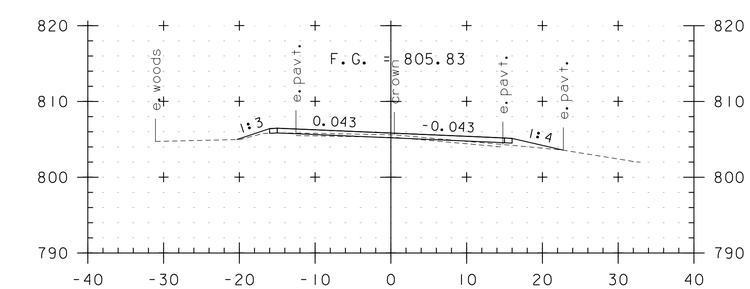
291+00



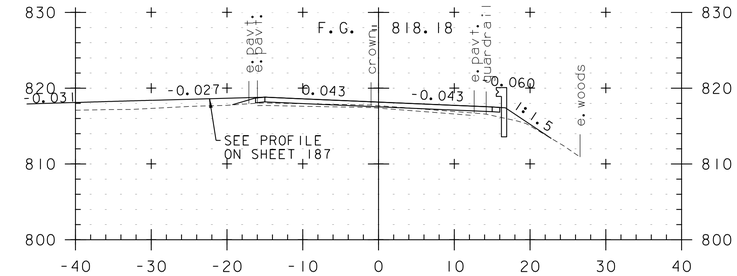
293+32
TH 71



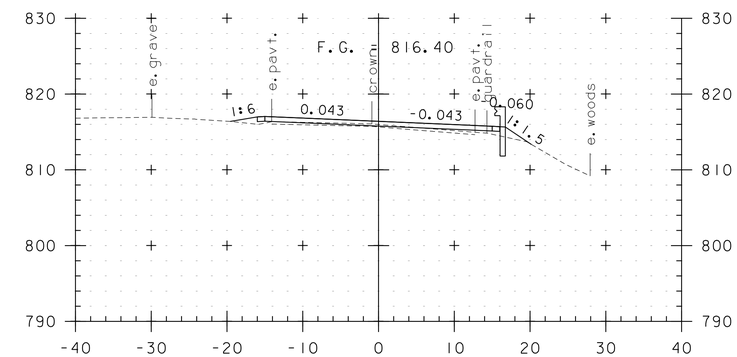
293+00



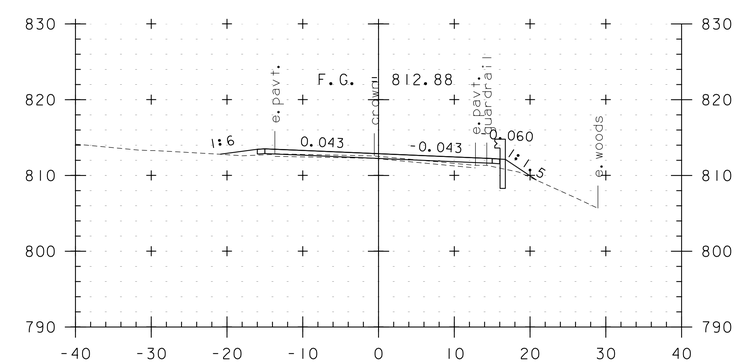
292+50



294+25
TH 71



294+00



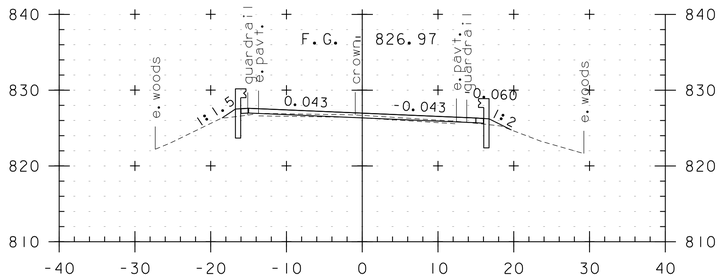
293+50

0 10 20
SCALE IN FEET

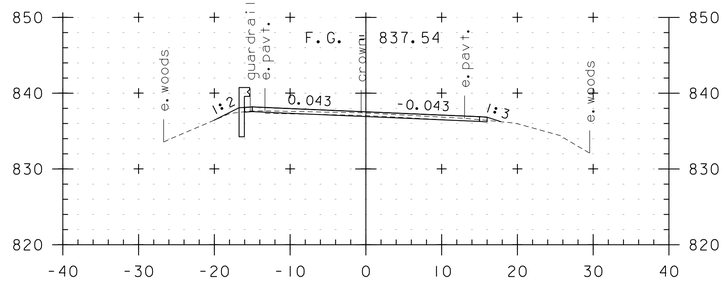
STA. 291+00 TO STA. 294+25

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 58	SHEET 246 OF 303

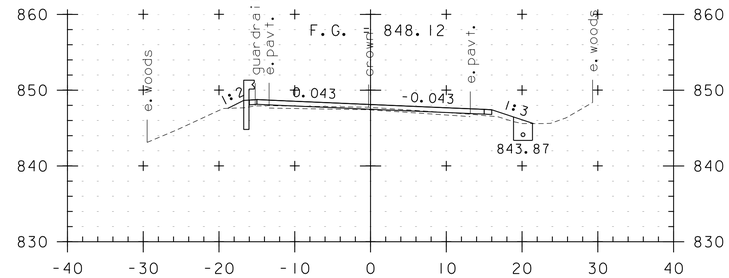
CLD 12-0337



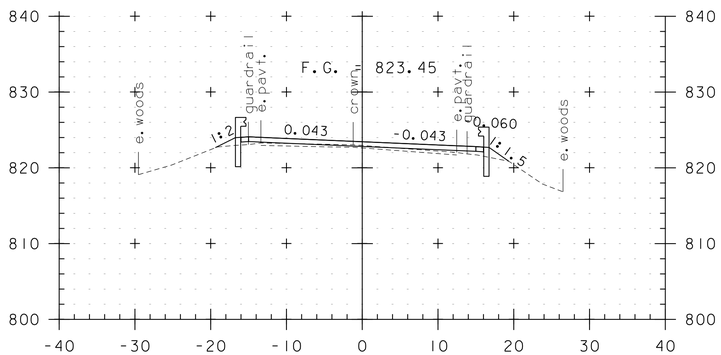
295+50



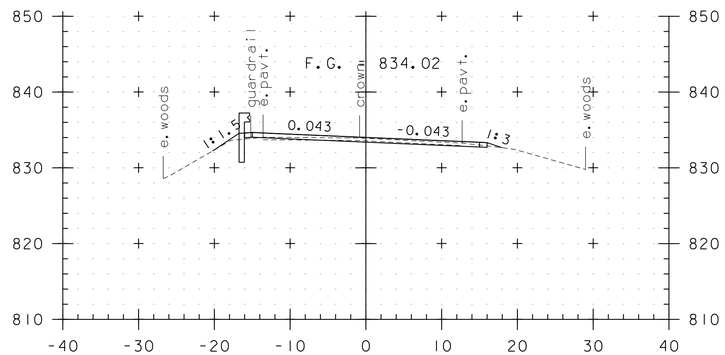
297+00



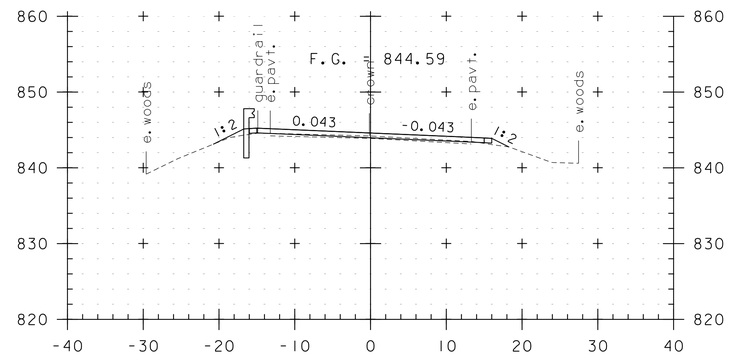
298+50



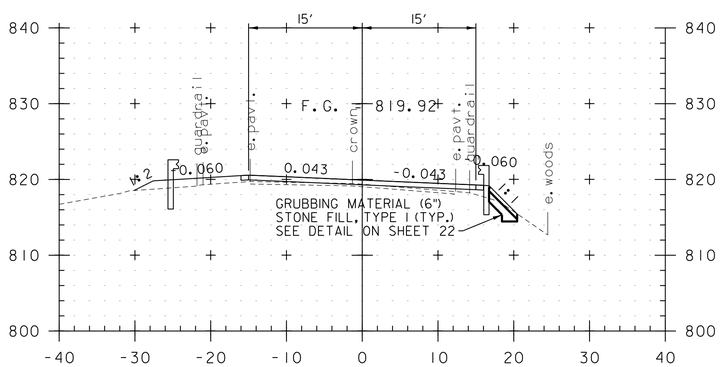
295+00



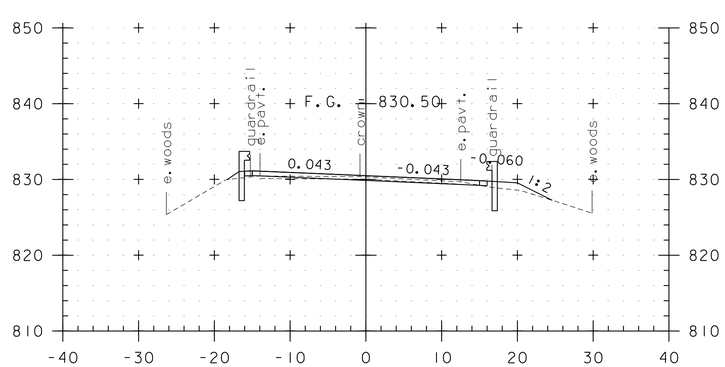
296+50



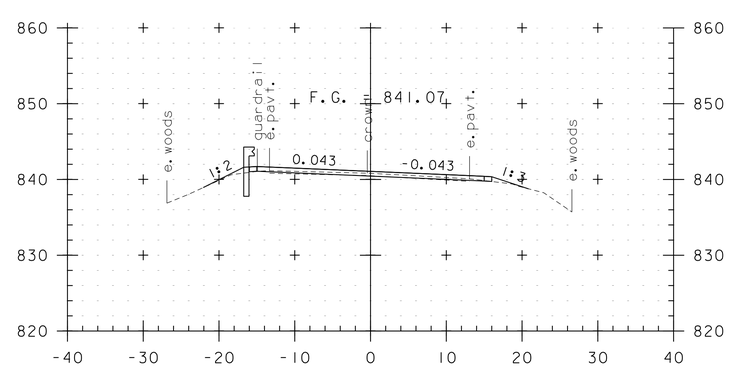
298+00



294+50



296+00



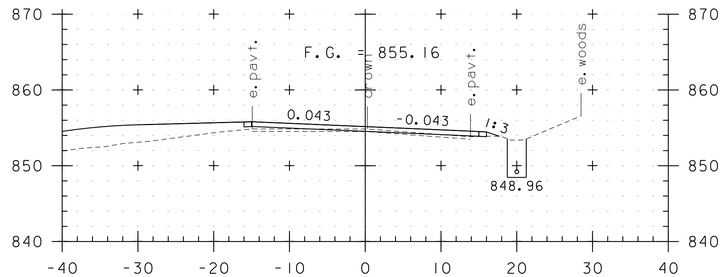
297+50

0 10 20
SCALE IN FEET

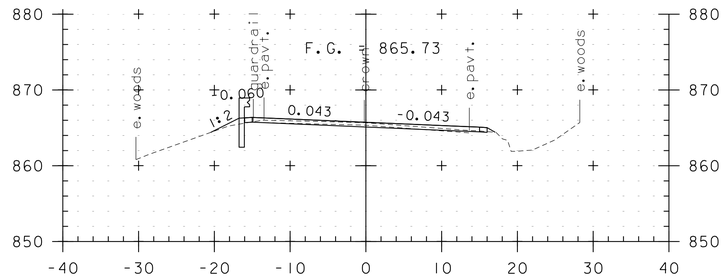
STA. 294+50 TO STA. 298+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 59	SHEET 247 OF 303

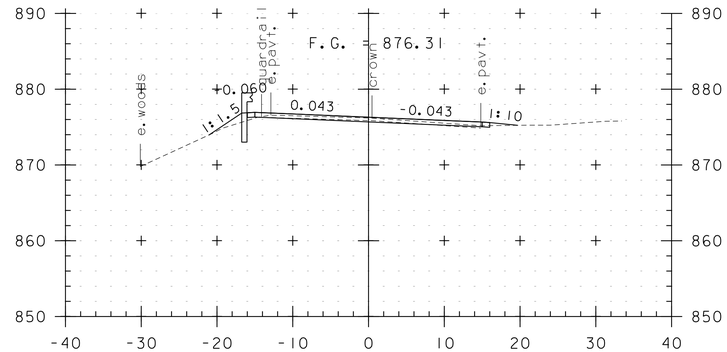
CLD 12-0337



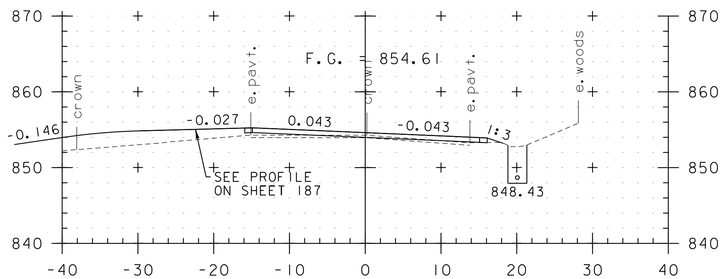
299+50



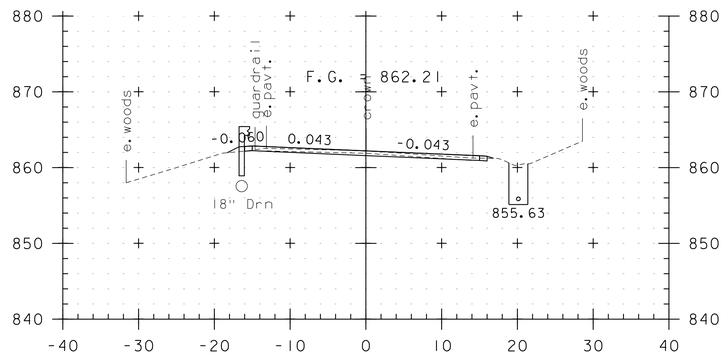
301+00



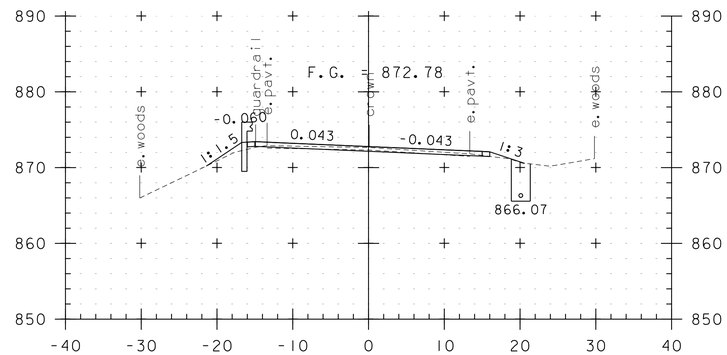
302+50



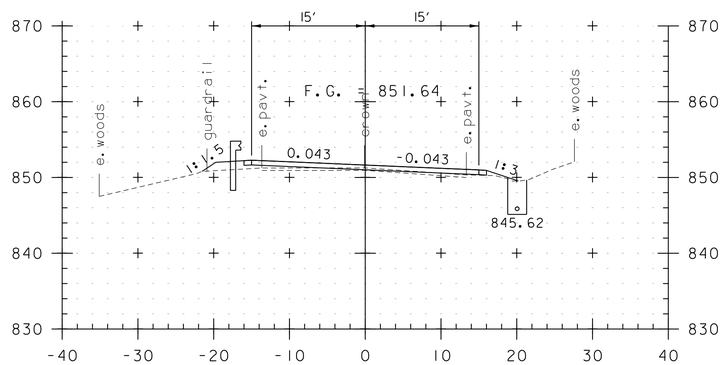
299+42
TH 30



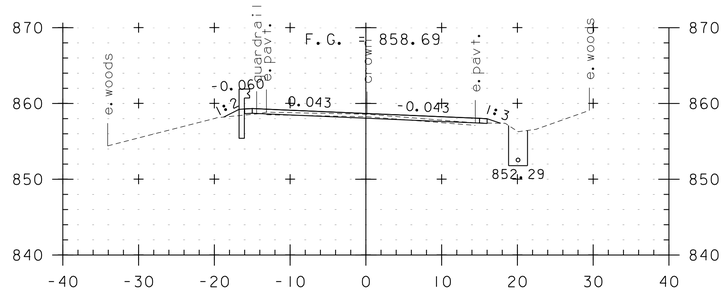
300+50



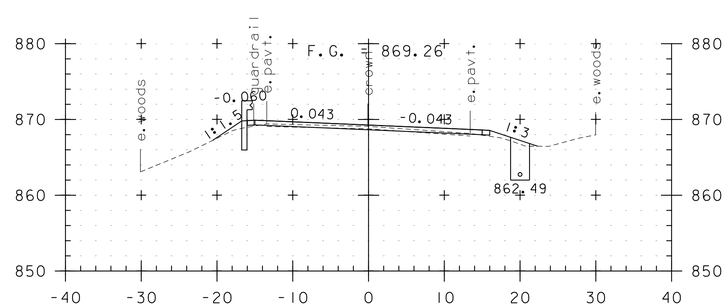
302+00



299+00



300+00



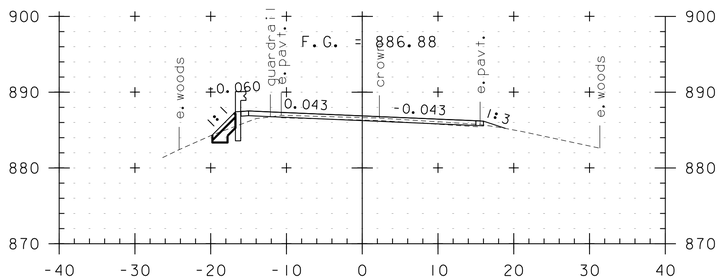
301+50

0 10 20
SCALE IN FEET

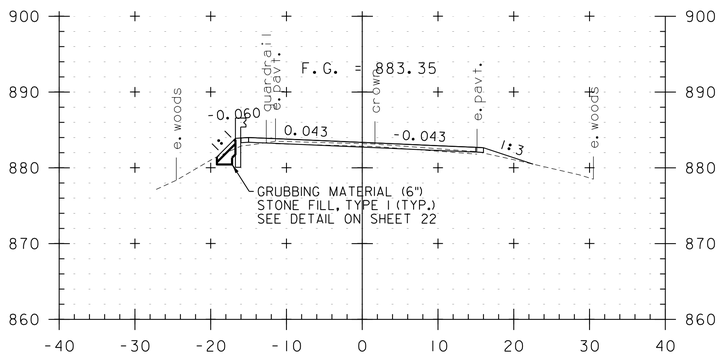
STA. 299+00 TO STA. 302+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 60	SHEET 248 OF 303

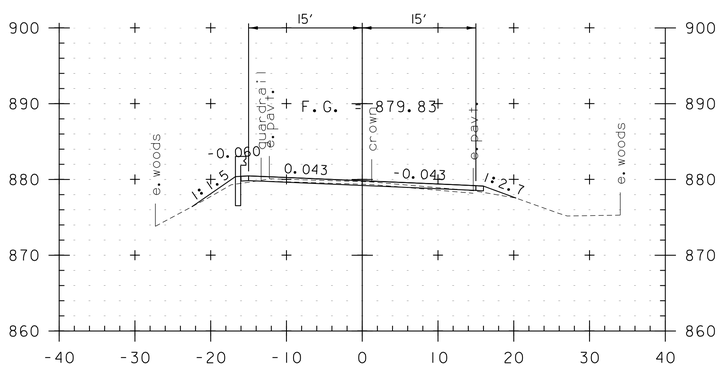
CLD 12-0337



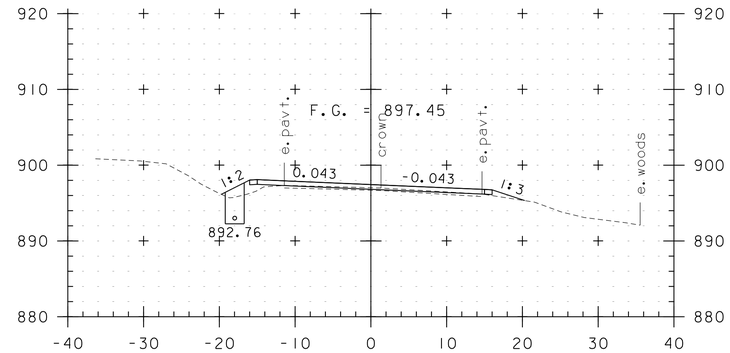
304+00



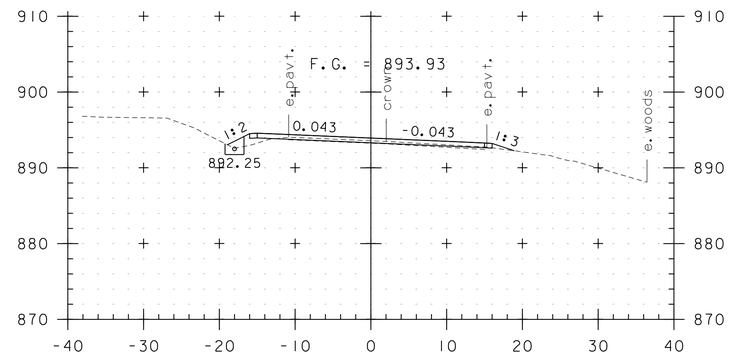
303+50



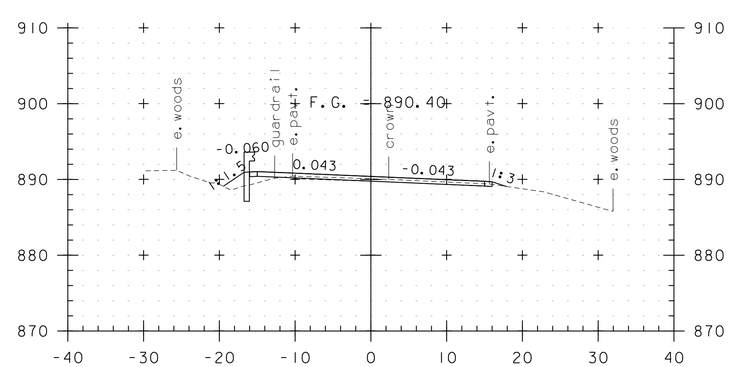
303+00



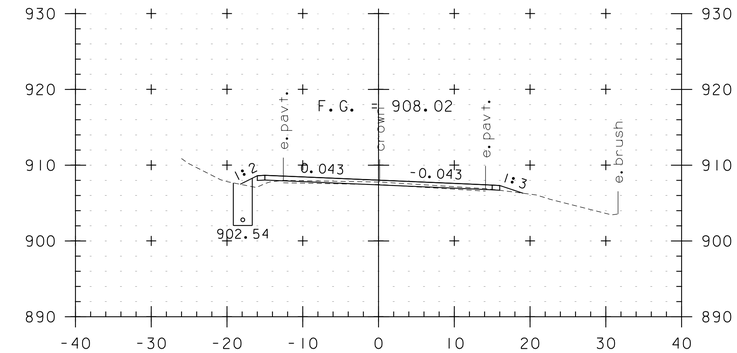
305+50



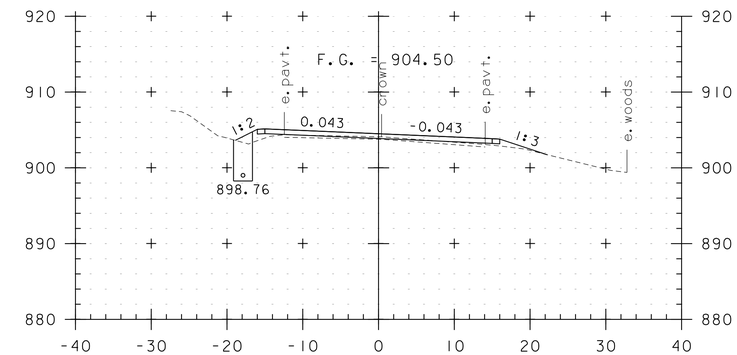
305+00



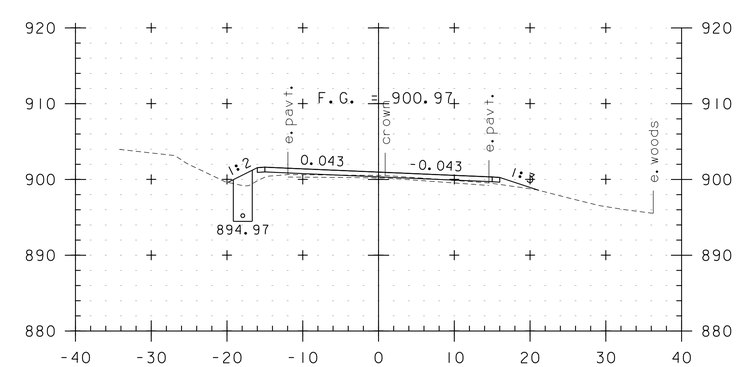
304+50



307+00



306+50



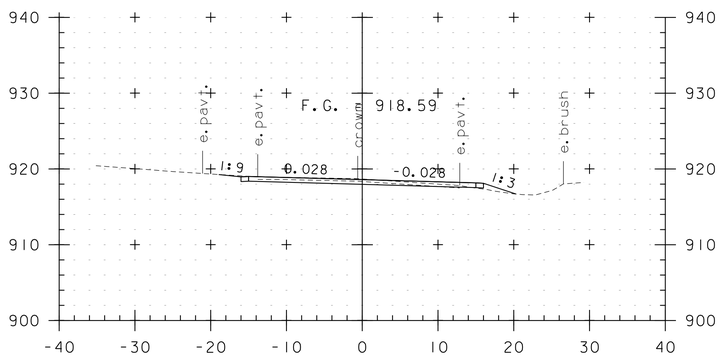
306+00

0 10 20
SCALE IN FEET

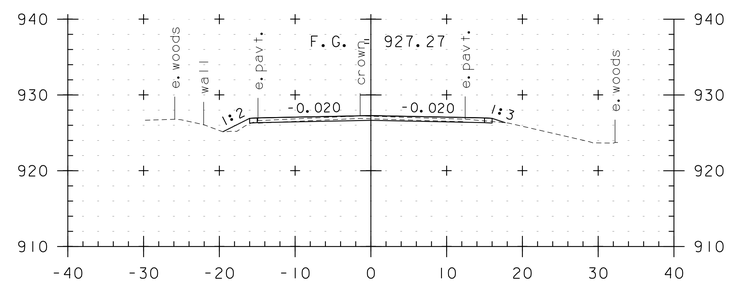
STA. 303+00 TO STA. 307+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 61	SHEET 249 OF 303

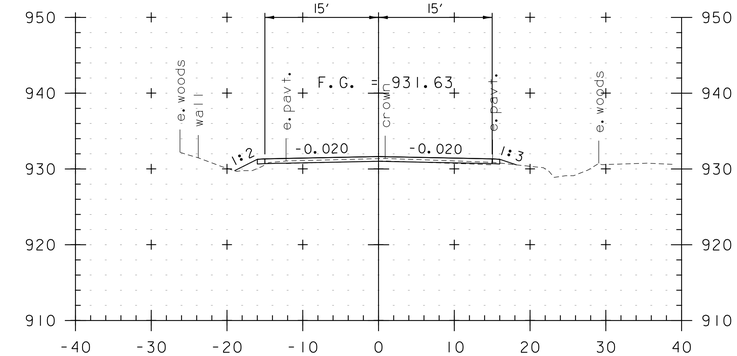
CLD 12-0337



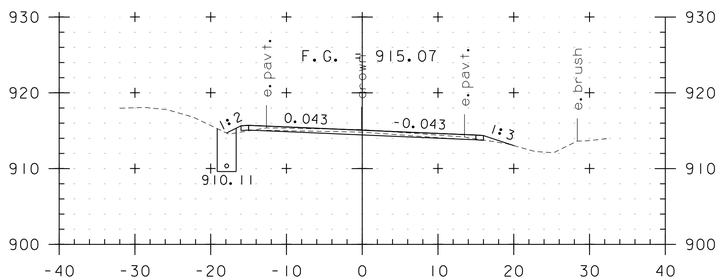
308+50



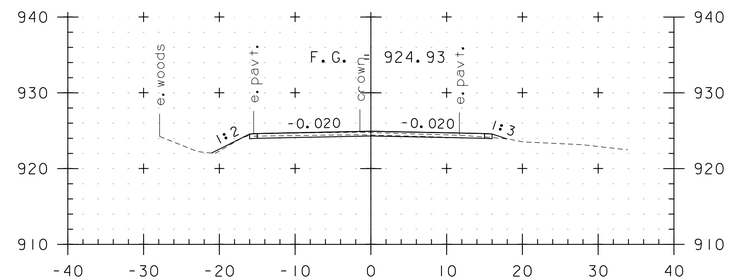
310+00



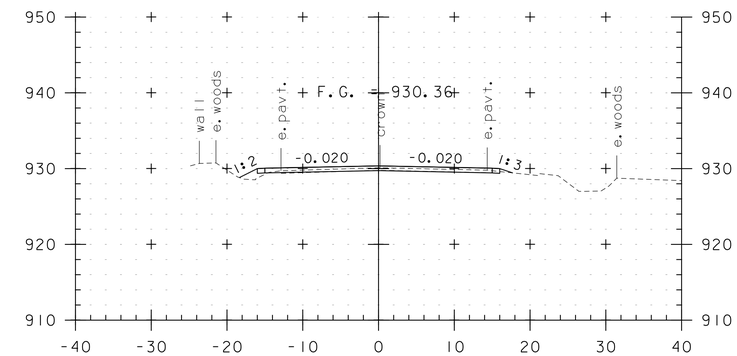
311+50



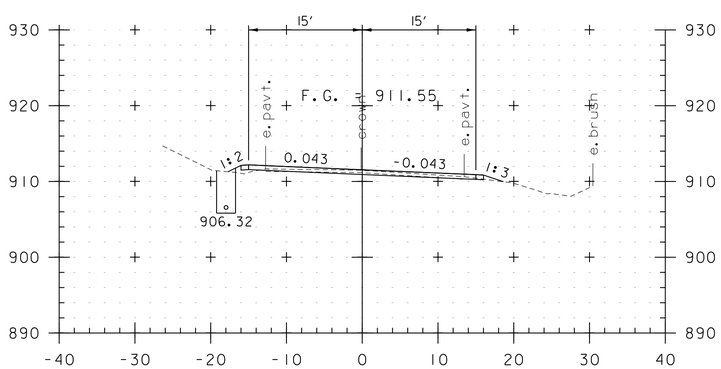
308+00



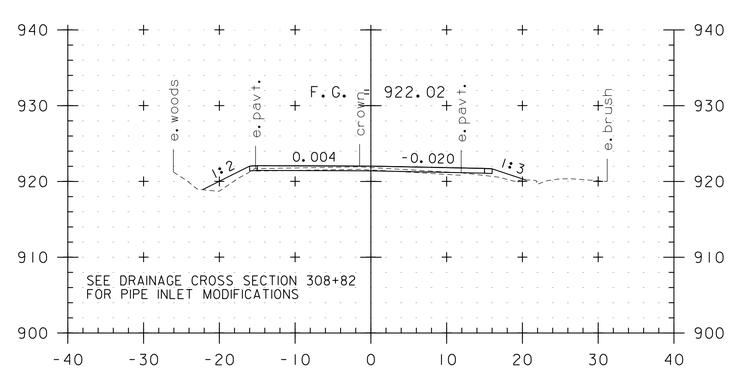
309+50



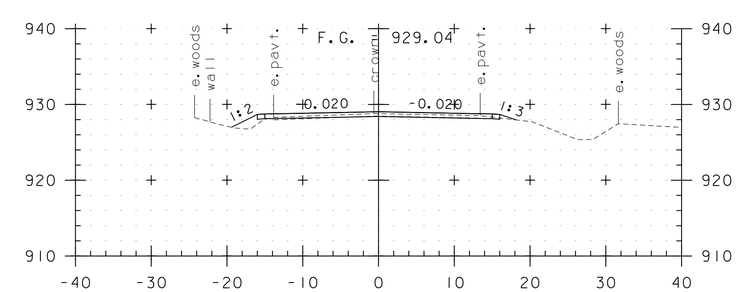
311+00



307+50



309+00



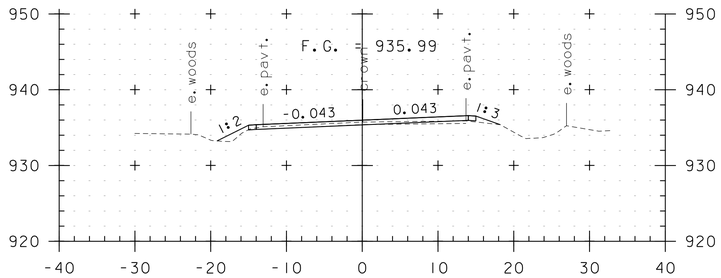
310+50

0 10 20
SCALE IN FEET

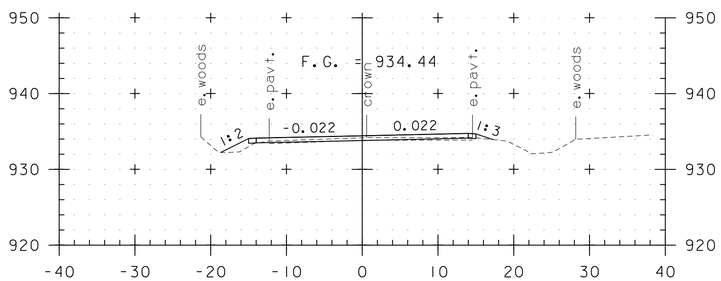
STA. 307+50 TO STA. 311+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 62	SHEET 250 OF 303

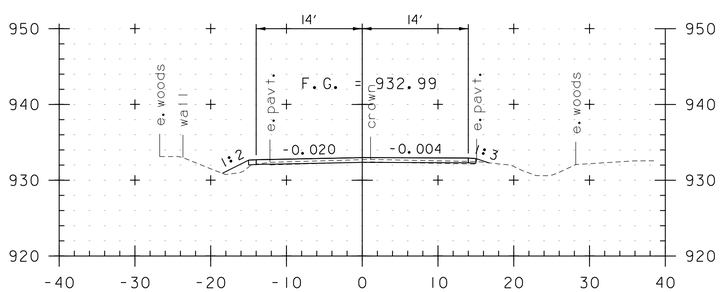
CLD 12-0337



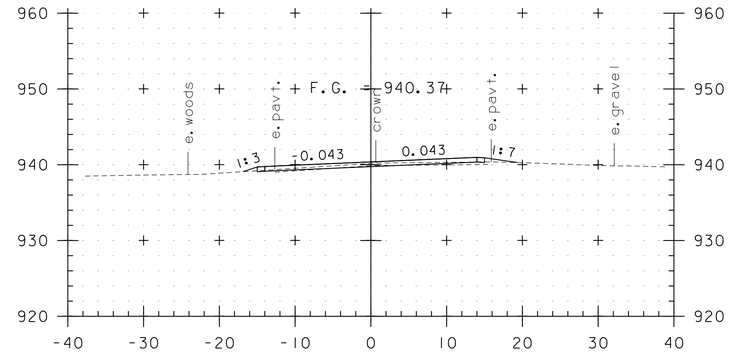
313+00



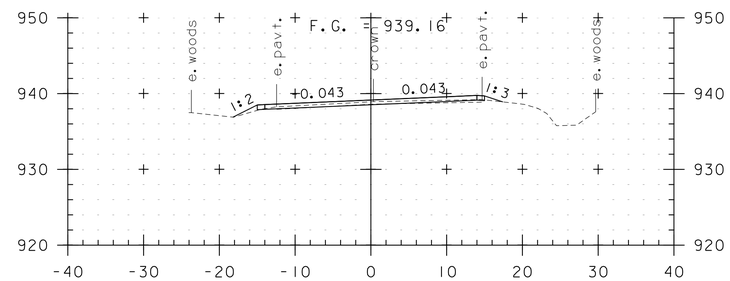
312+50



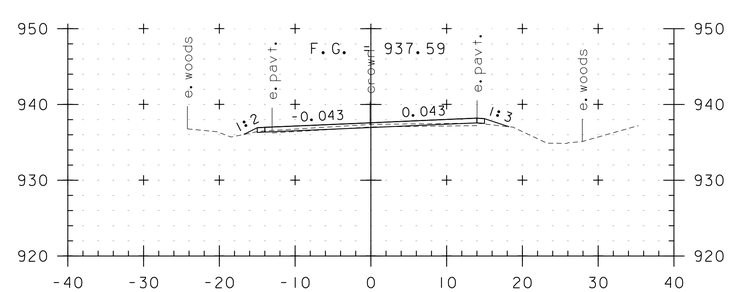
312+00



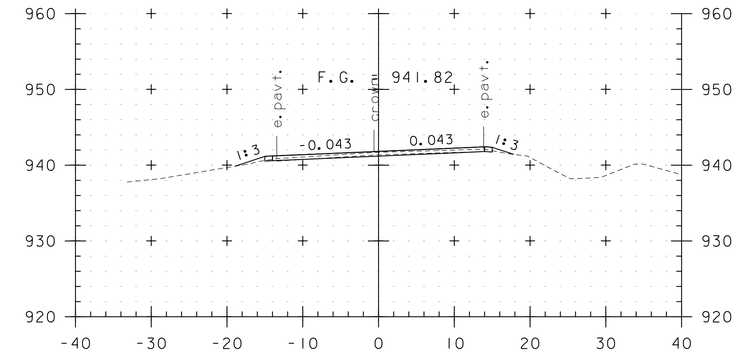
314+50



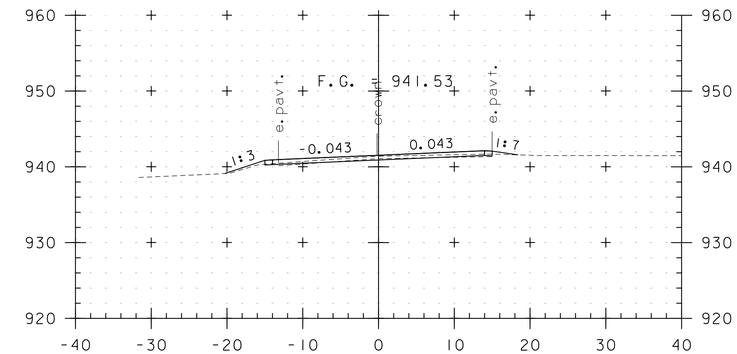
314+00



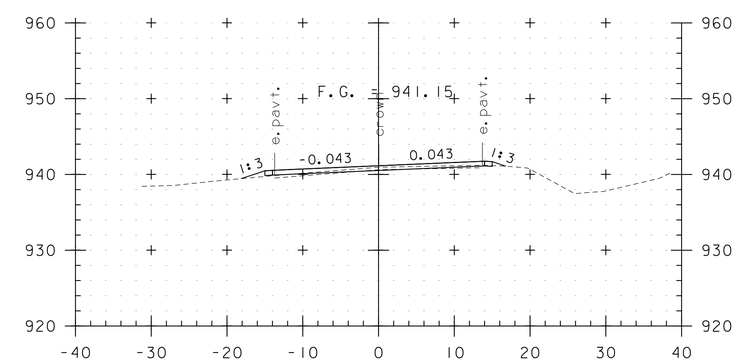
313+50



316+00



315+50



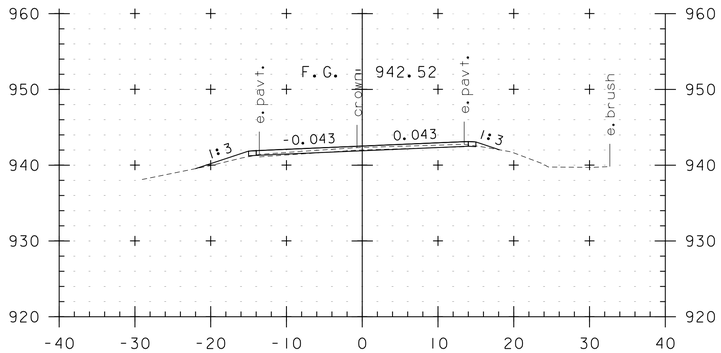
315+00

0 10 20
SCALE IN FEET

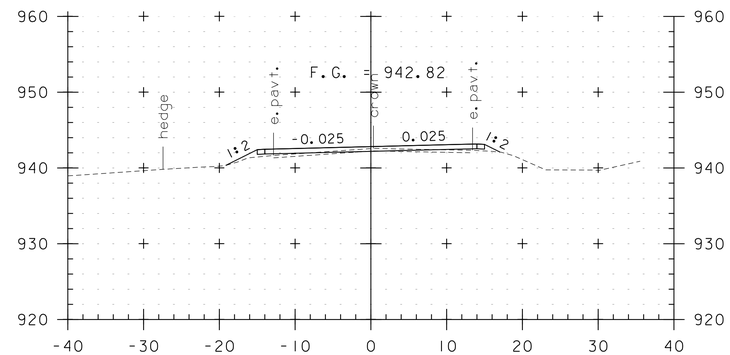
STA. 312+00 TO STA. 316+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 63	SHEET 251 OF 303

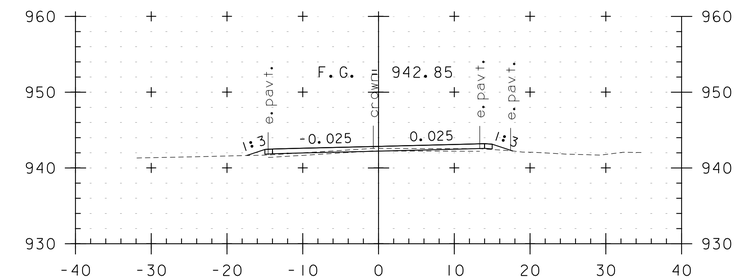
CLD 12-0337



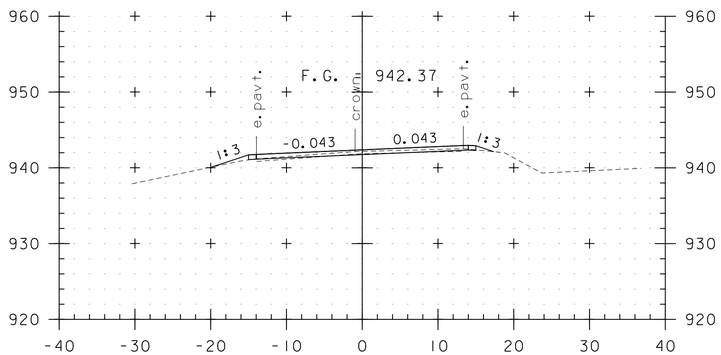
317+50



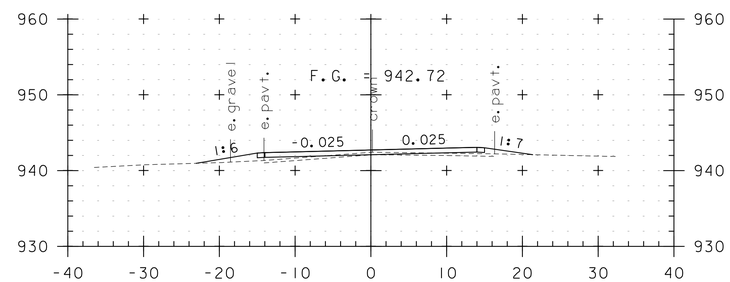
319+00



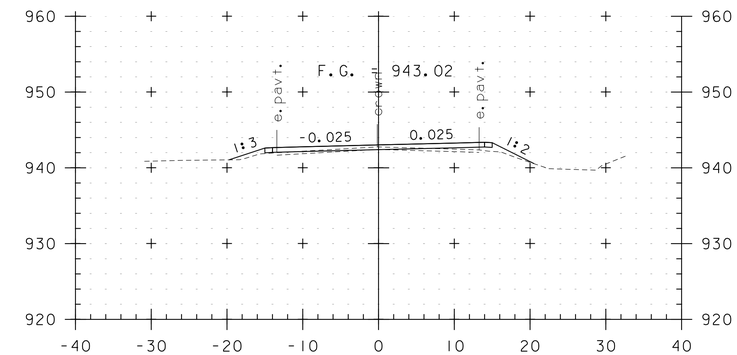
320+50



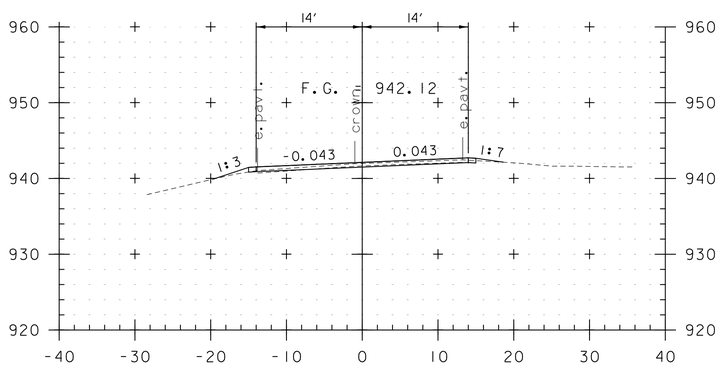
317+00



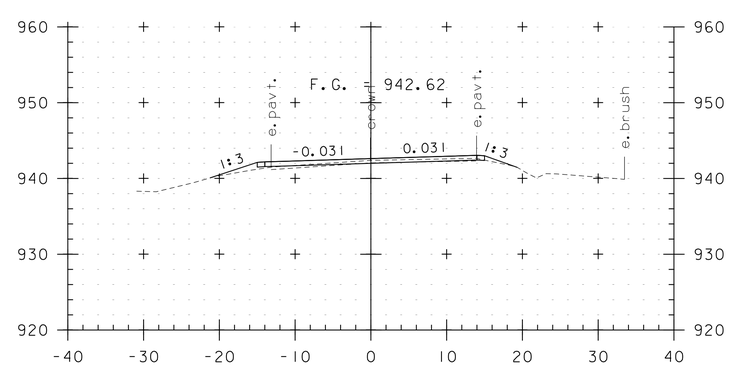
318+50



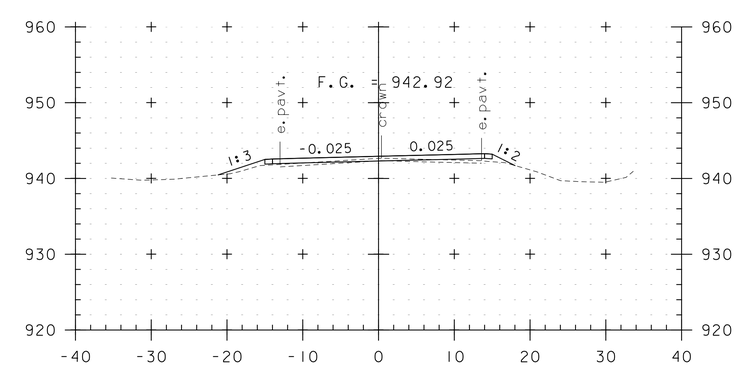
320+00



316+50



318+00



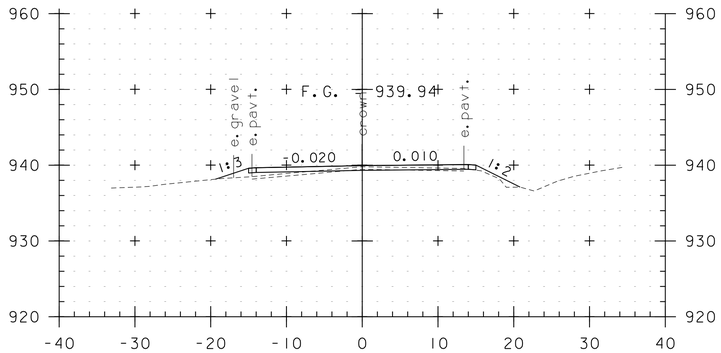
319+50

0 10 20
SCALE IN FEET

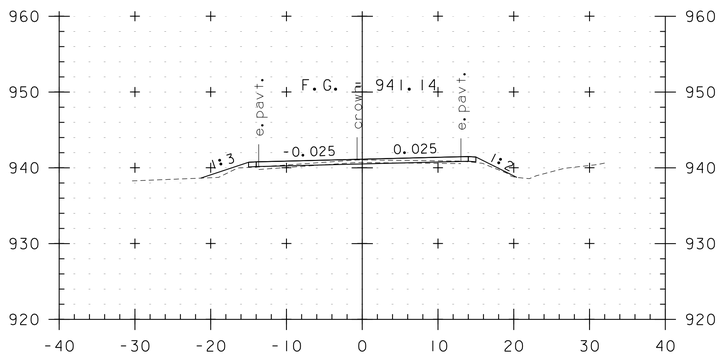
STA. 316+50 TO STA. 320+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 64	SHEET 252 OF 303

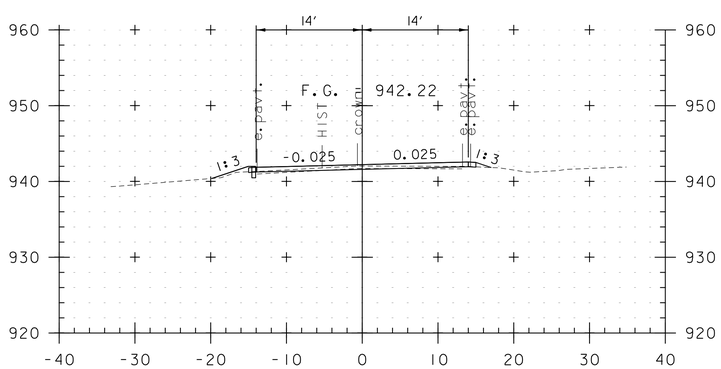
CLD 12-0337



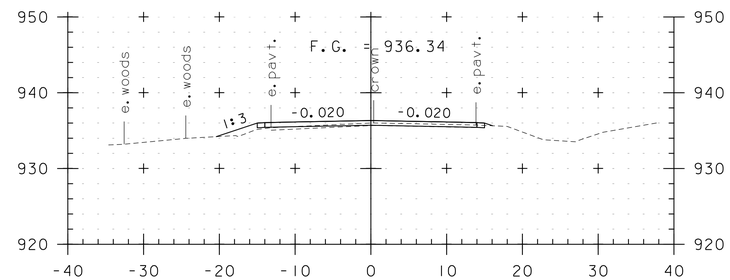
322+00



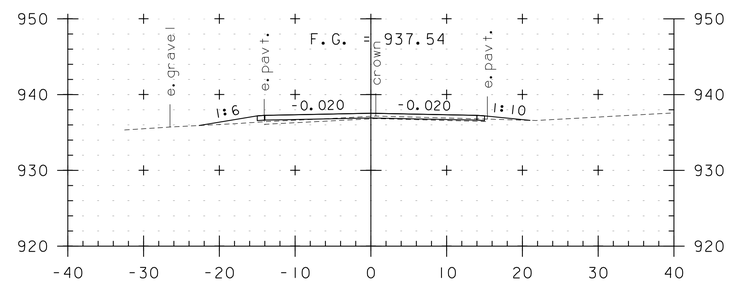
321+50



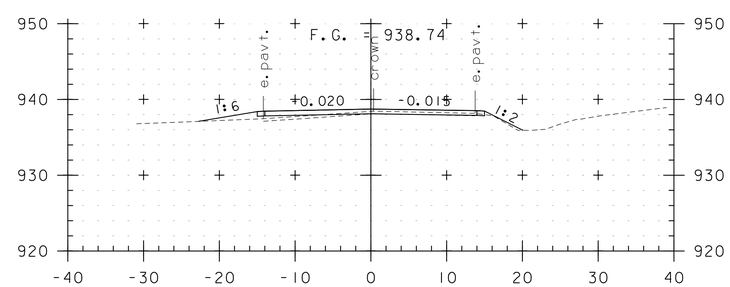
321+00



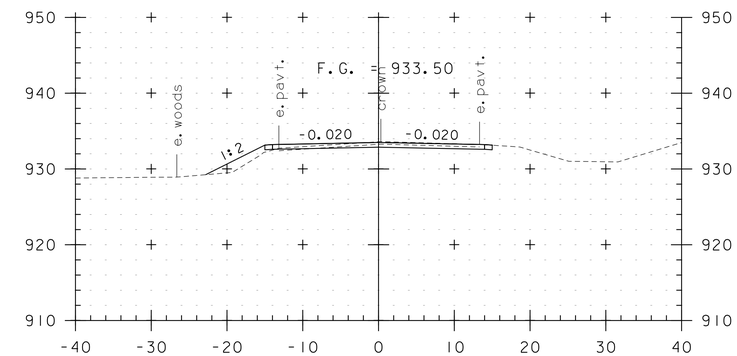
323+50



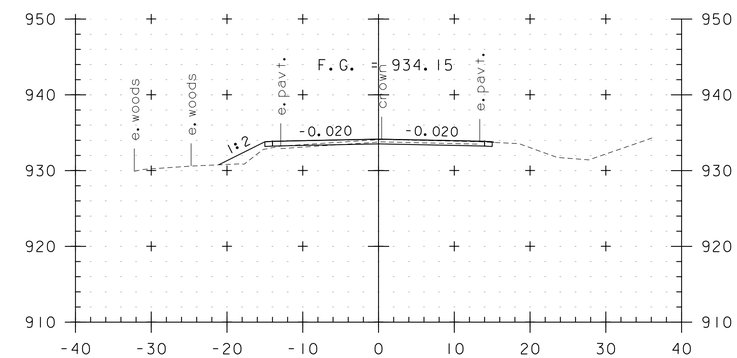
323+00



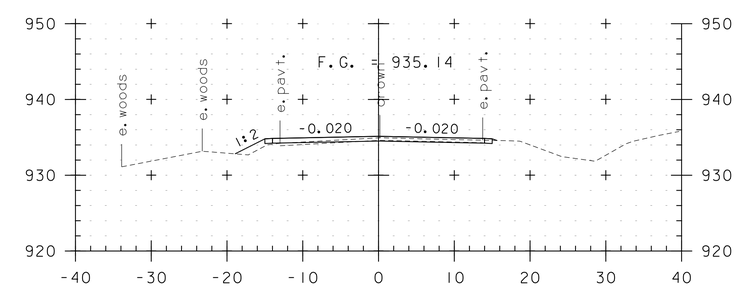
322+50



325+00



324+50



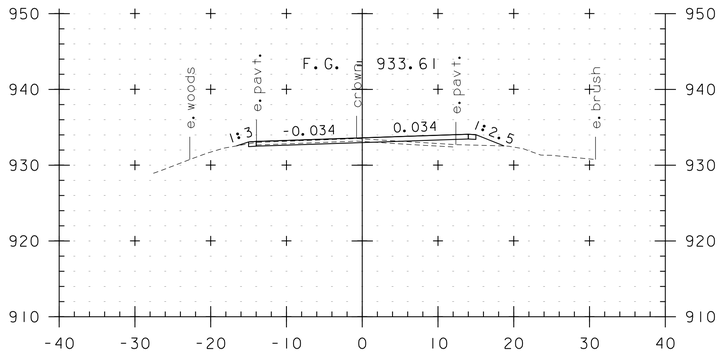
324+00

0 10 20
SCALE IN FEET

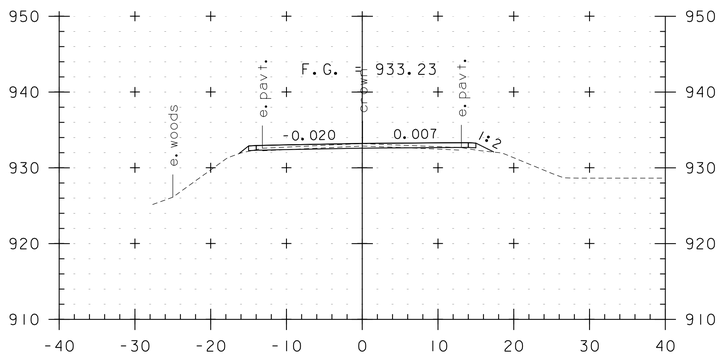
STA. 321+00 TO STA. 325+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 65	SHEET 253 OF 303

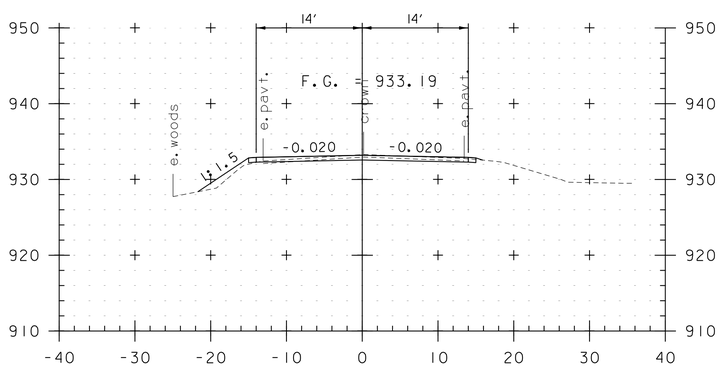
CLD 12-0337



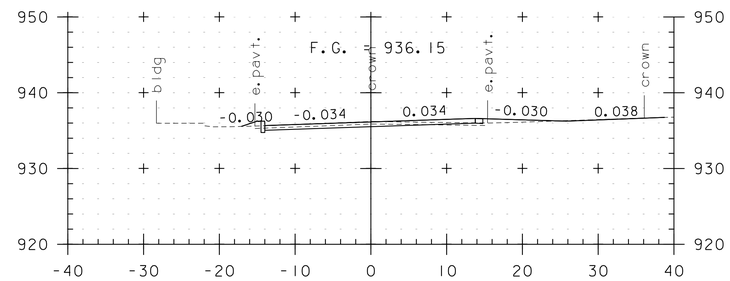
326+50



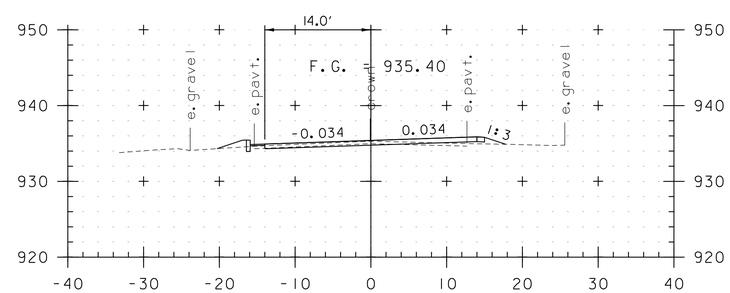
326+00



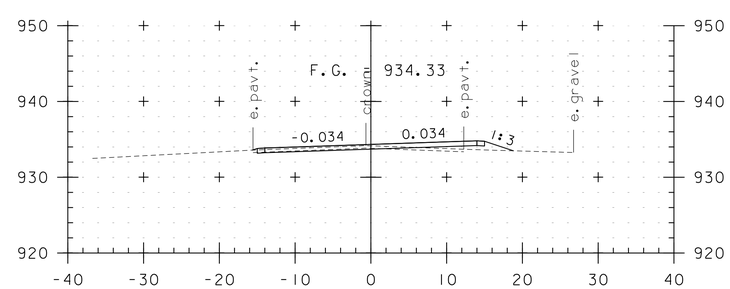
325+50



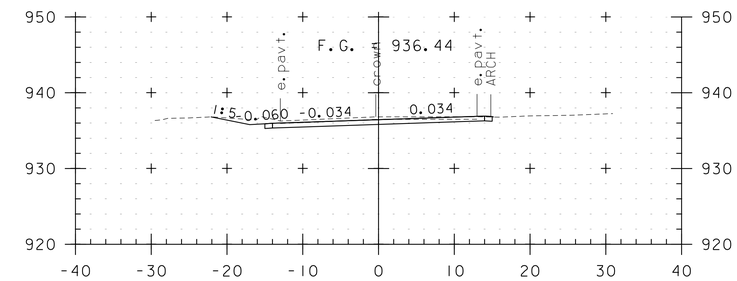
327+83
TH 70



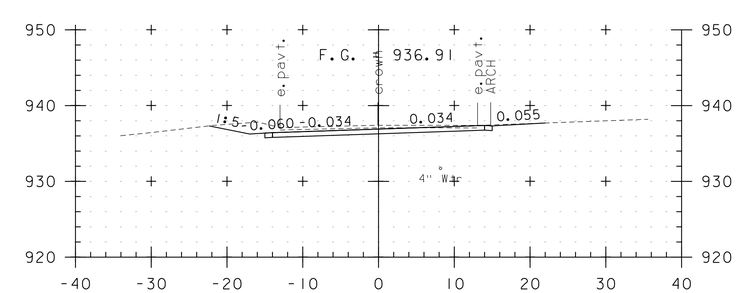
327+50



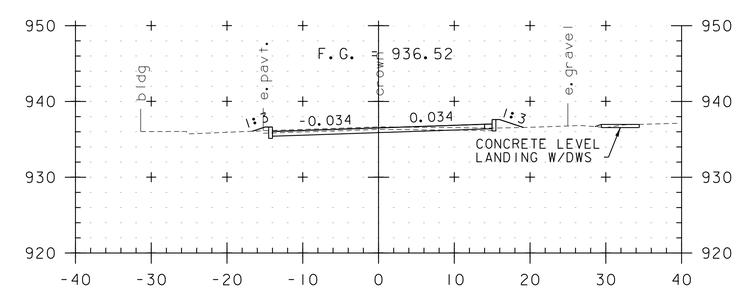
327+00



329+00



328+50



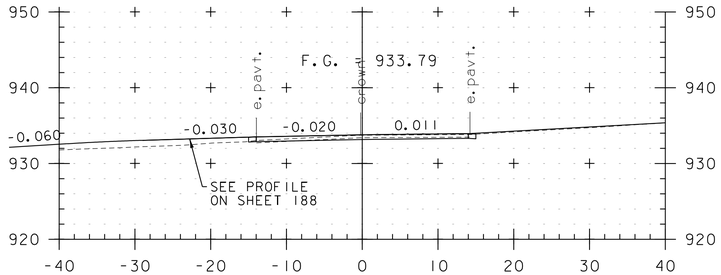
328+00

0 10 20
SCALE IN FEET

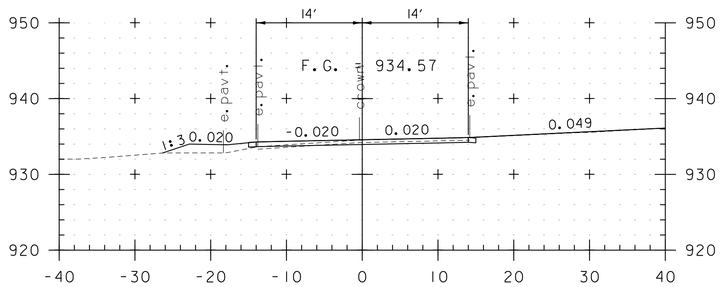
STA. 325+50 TO STA. 329+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 66	SHEET 254 OF 303

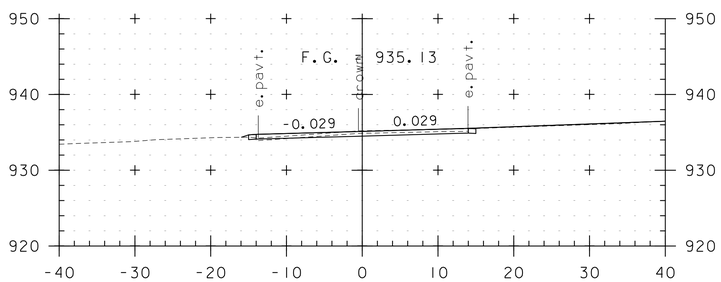
CLD 12-0337



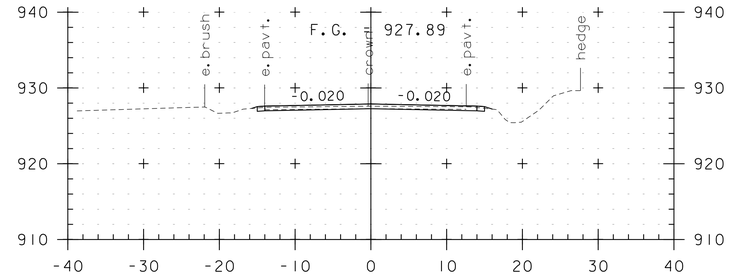
329+82
TH 31



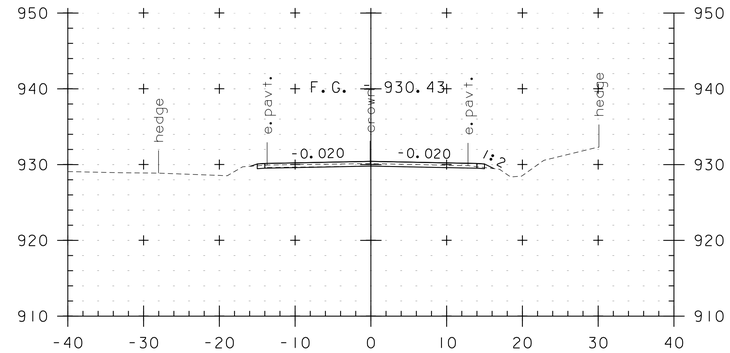
329+65
TH 3



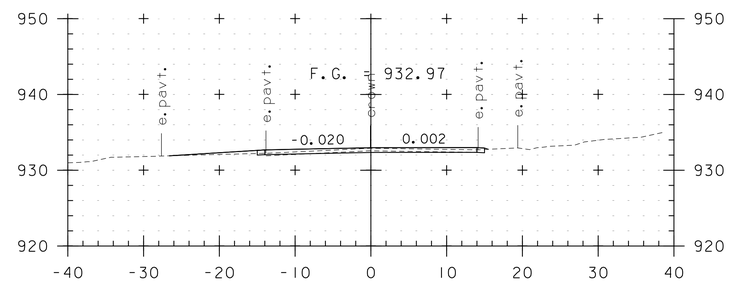
329+50



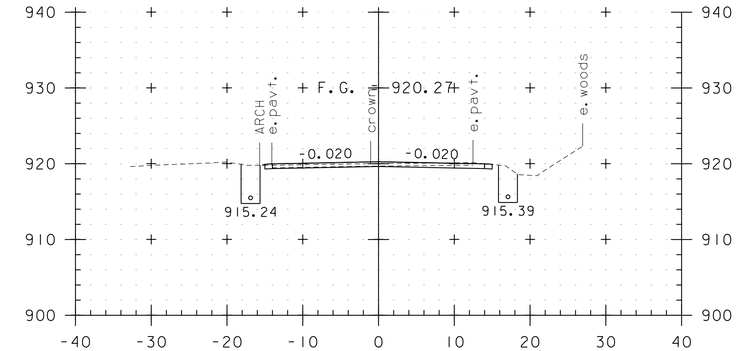
331+00



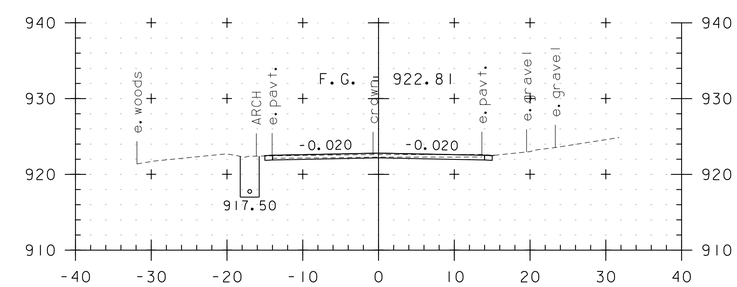
330+50



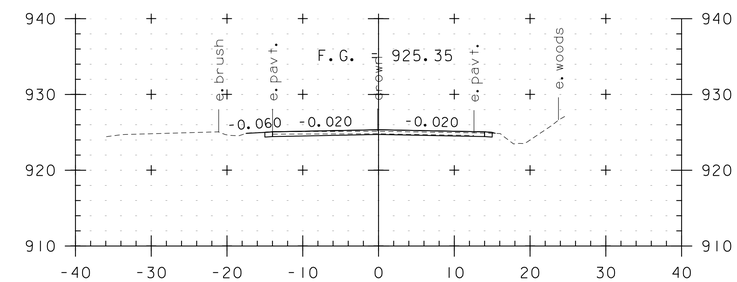
330+00



332+50



332+00



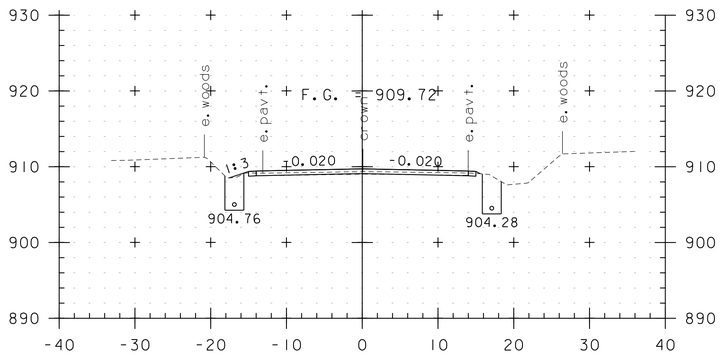
331+50

0 10 20
SCALE IN FEET

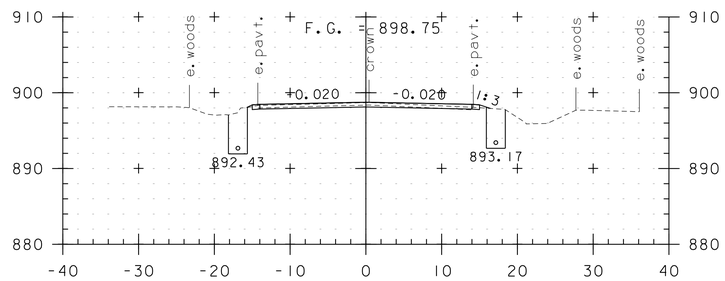
STA. 329+50 TO STA. 332+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 67	SHEET 255 OF 303

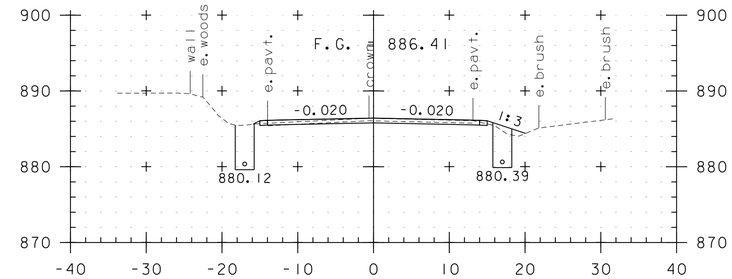
CLD 12-0337



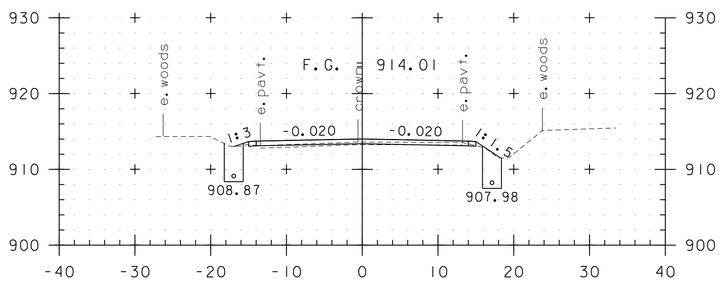
334+00



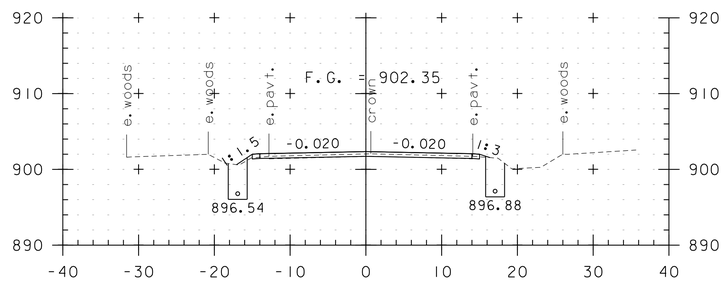
335+50



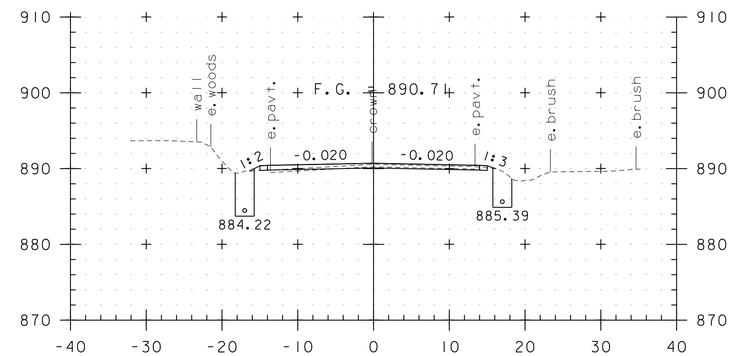
337+00



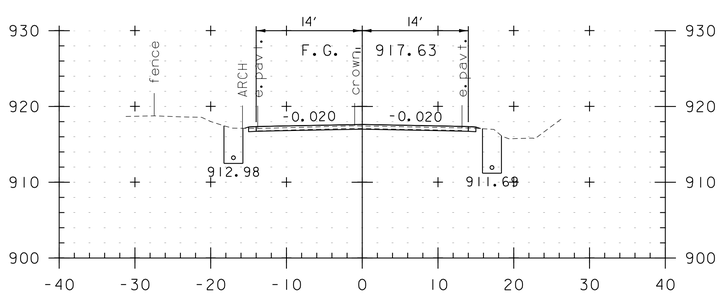
333+50



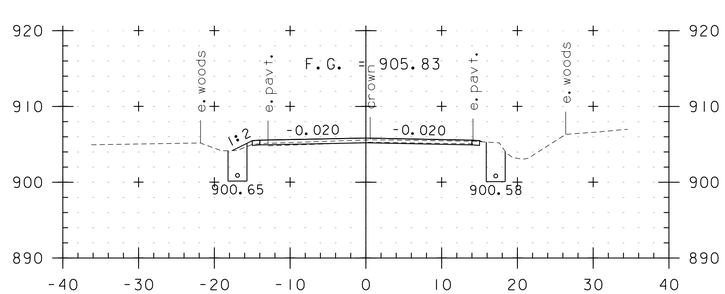
335+00



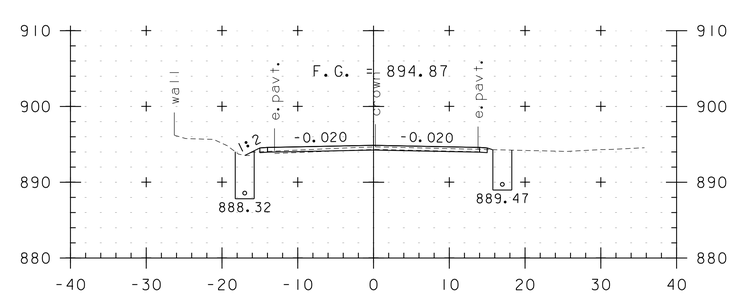
336+50



333+00



334+50



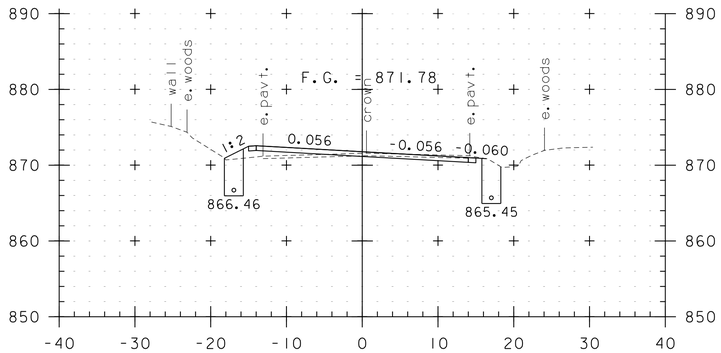
336+00

0 10 20
SCALE IN FEET

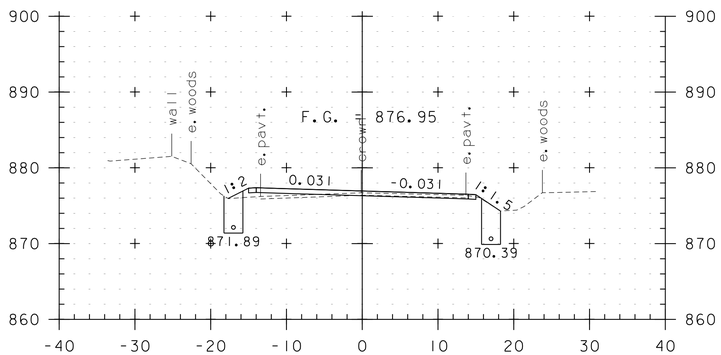
STA. 333+00 TO STA. 337+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 68	SHEET 256 OF 303

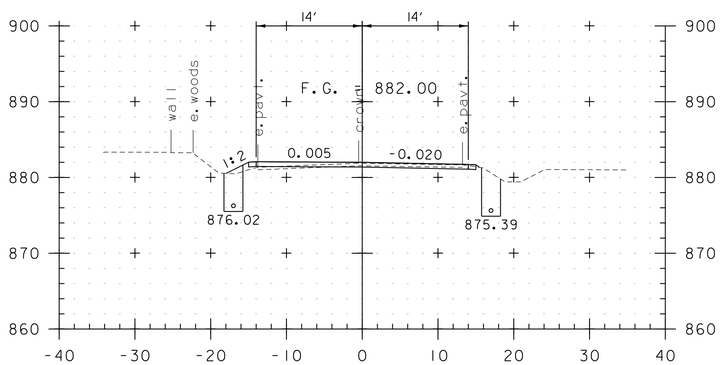
CLD 12-0337



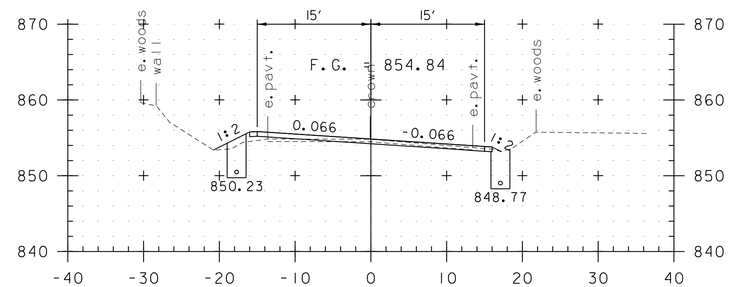
338+50



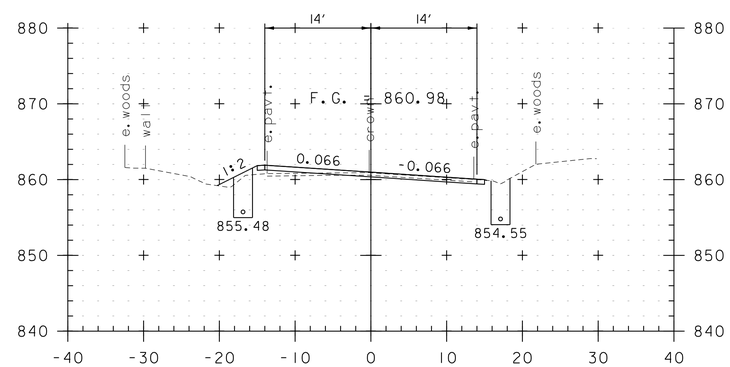
338+00



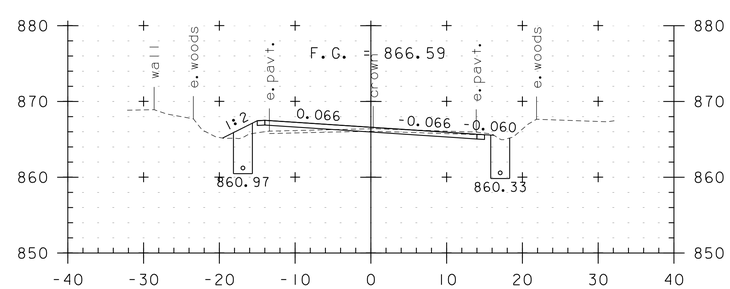
337+50



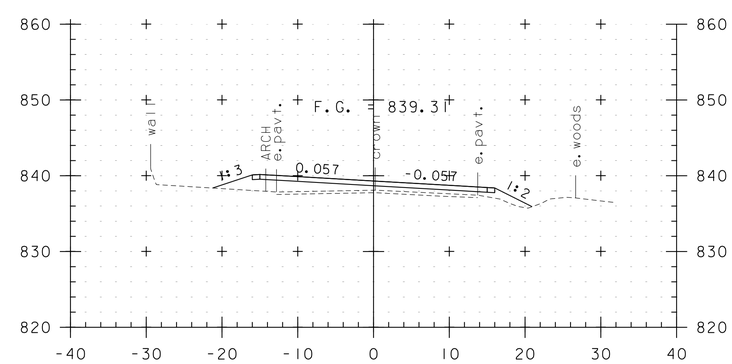
340+00



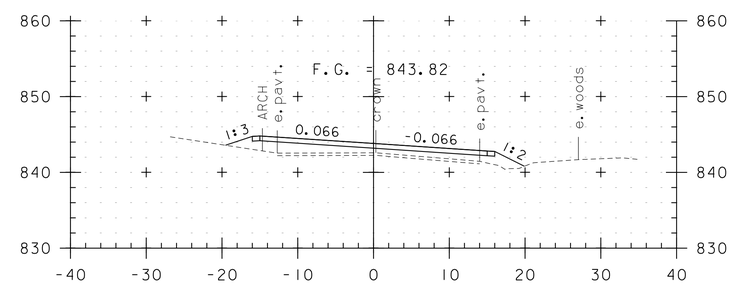
339+50



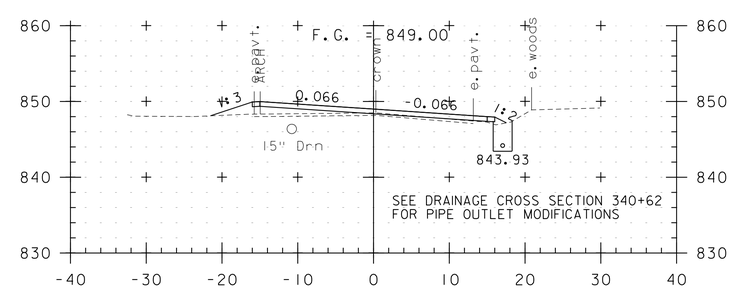
339+00



341+50



341+00



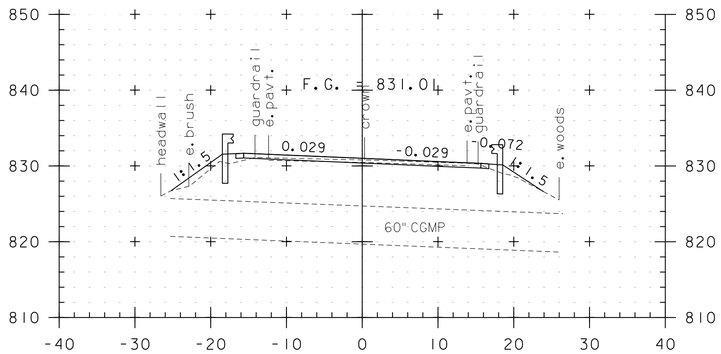
340+50

0 10 20
SCALE IN FEET

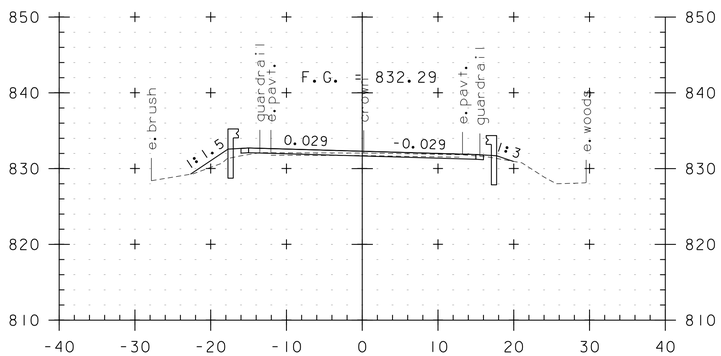
STA. 337+50 TO STA. 341+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 69	SHEET 257 OF 303

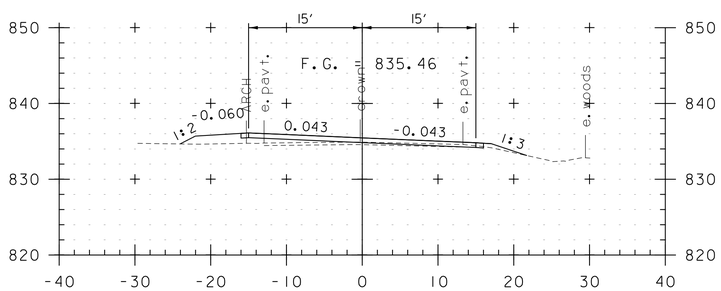
CLD 12-0337



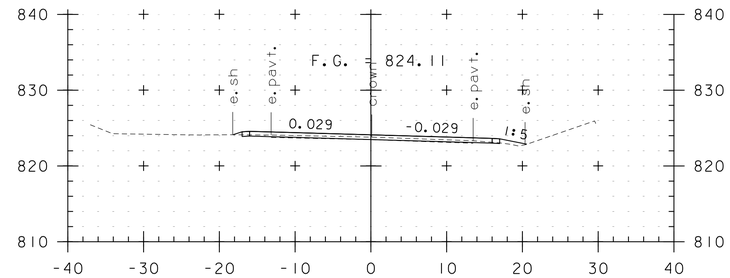
342+74



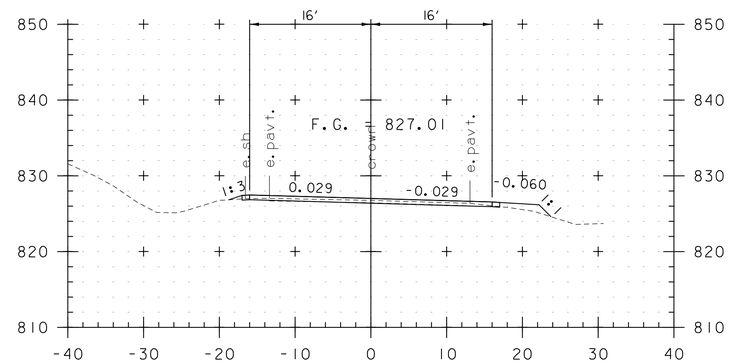
342+50



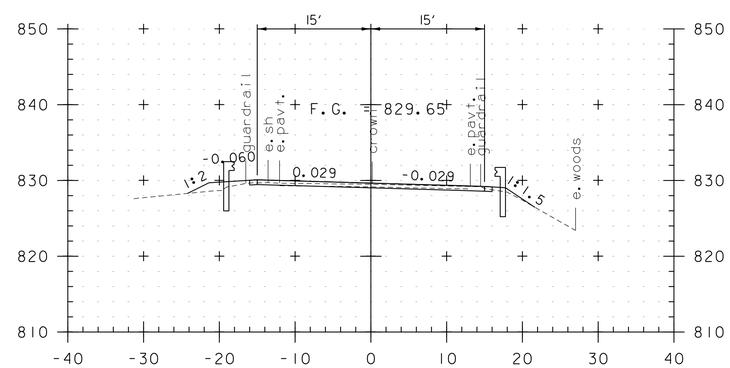
342+00



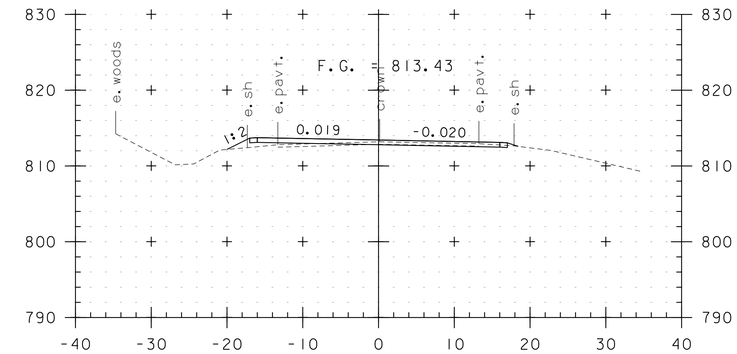
344+00



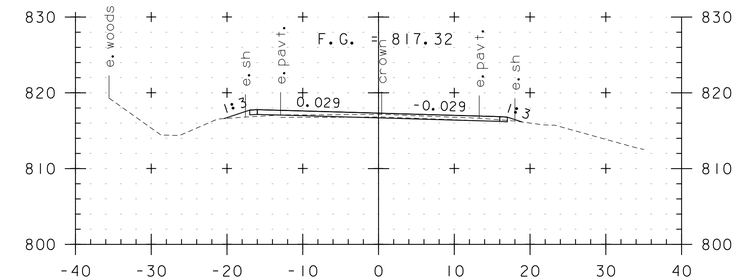
343+50



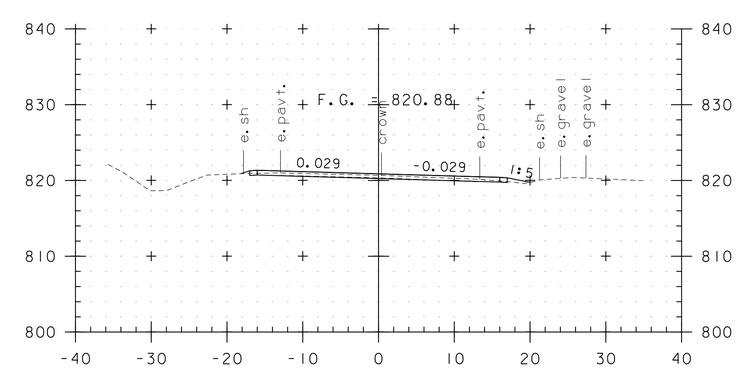
343+00



345+50



345+00



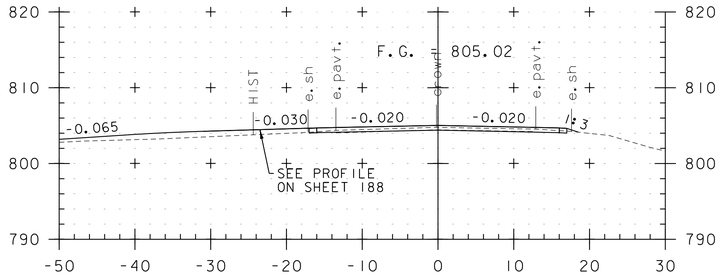
344+50

0 10 20
SCALE IN FEET

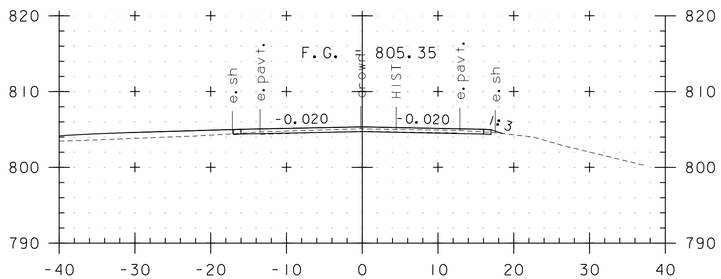
STA. 342+00 TO STA. 345+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 70	SHEET 258 OF 303

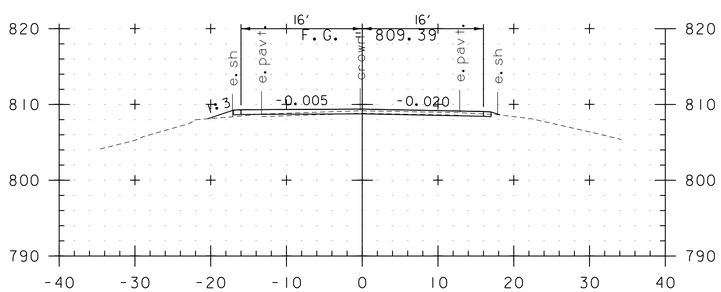
CLD 12-0337



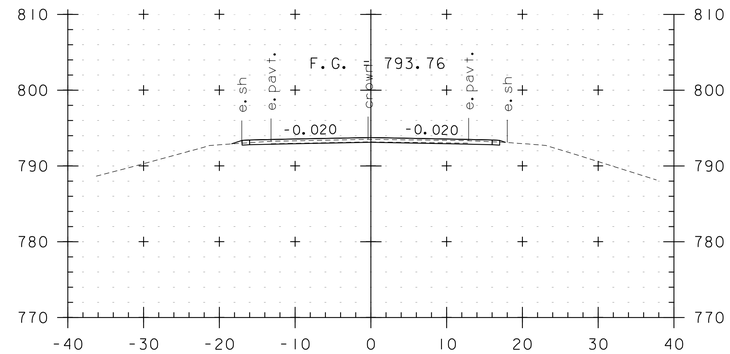
346+54
TH 75



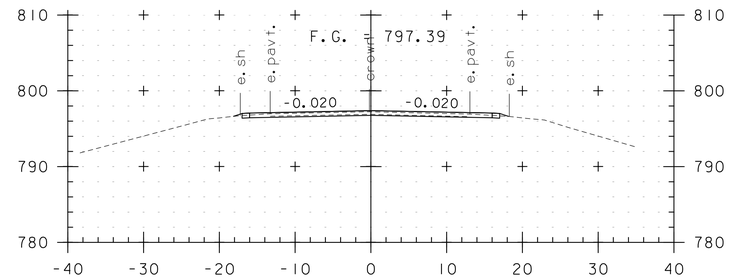
346+50



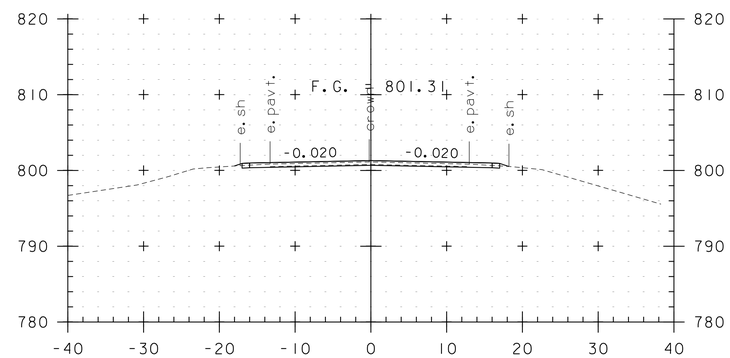
346+00



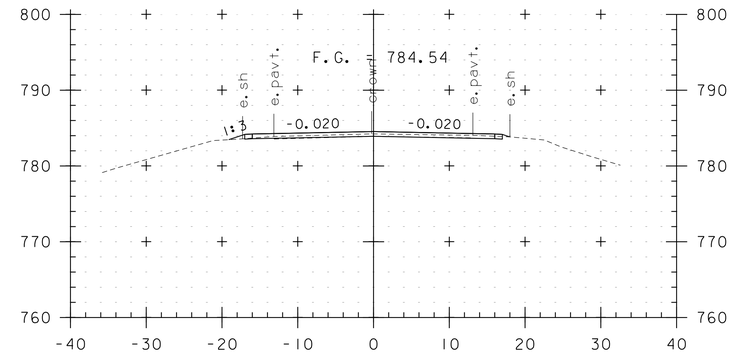
348+00



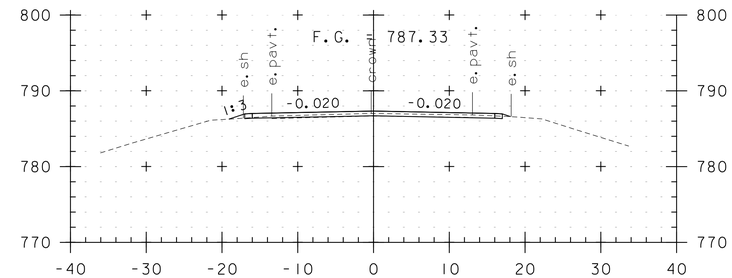
347+50



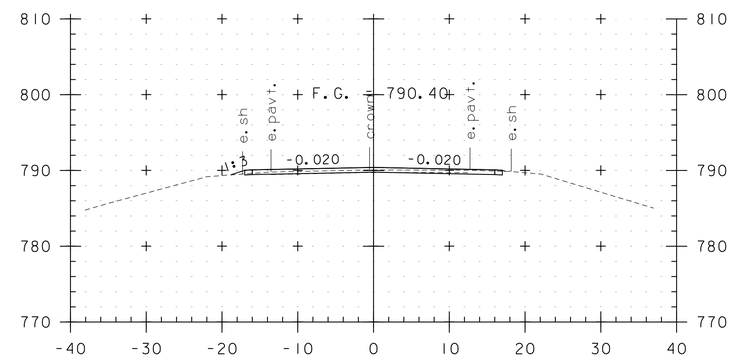
347+00



349+50



349+00



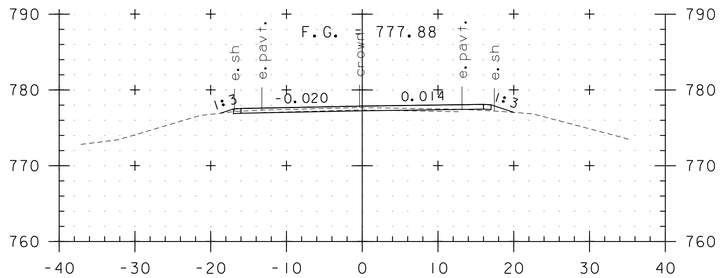
348+50

0 10 20
SCALE IN FEET

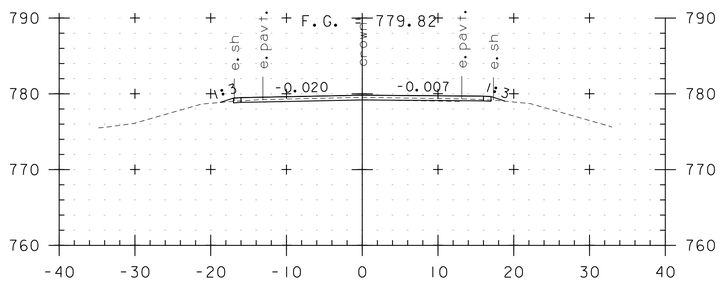
STA. 346+00 TO STA. 349+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 71	SHEET 259 OF 303

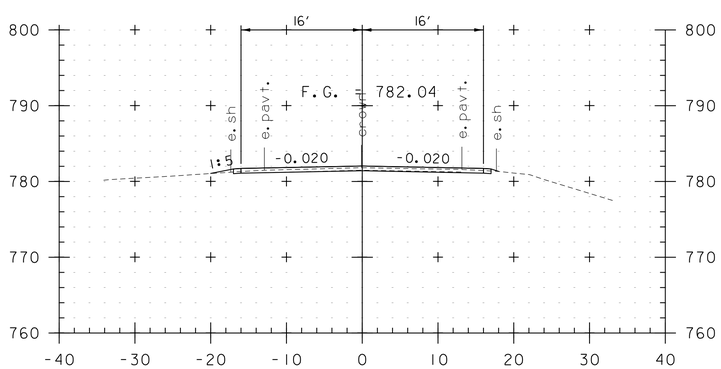
CLD 12-0337



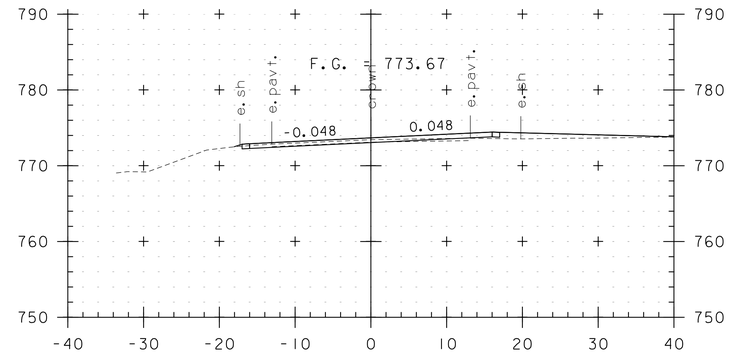
351+00



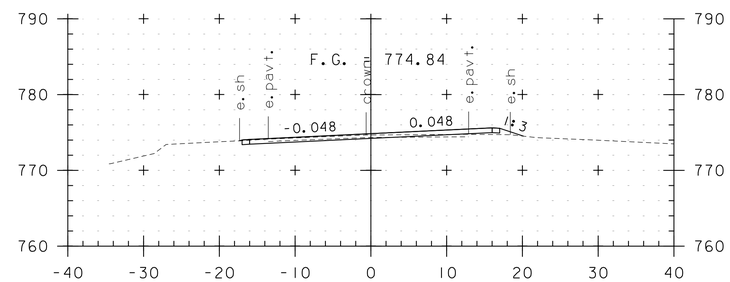
350+50



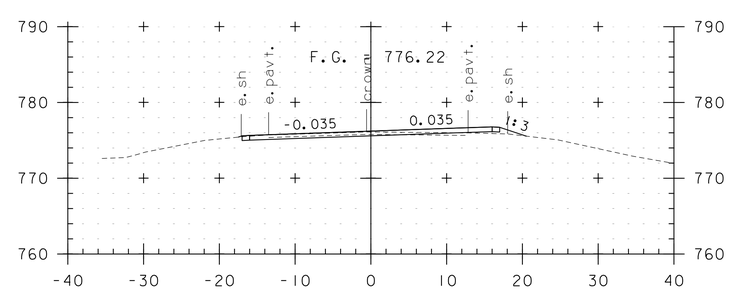
350+00



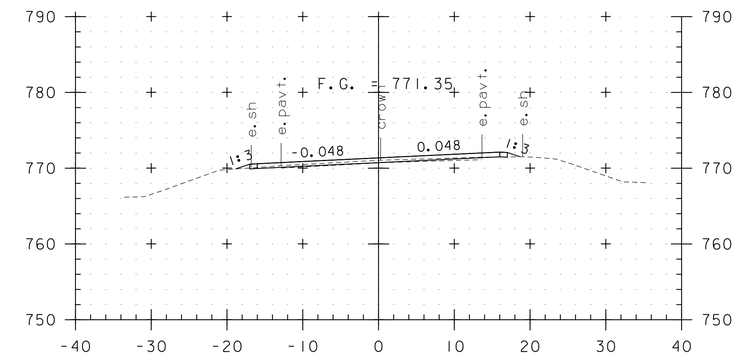
352+50



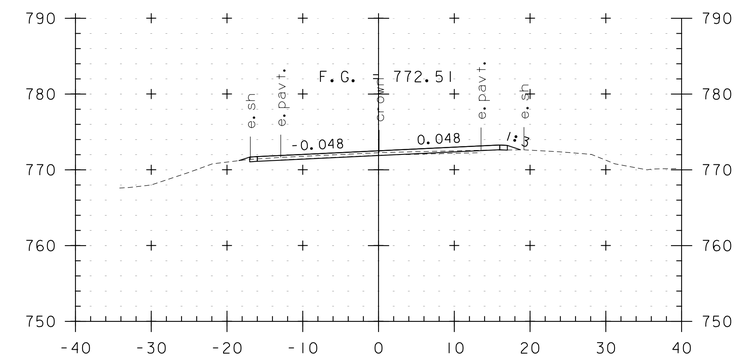
352+00



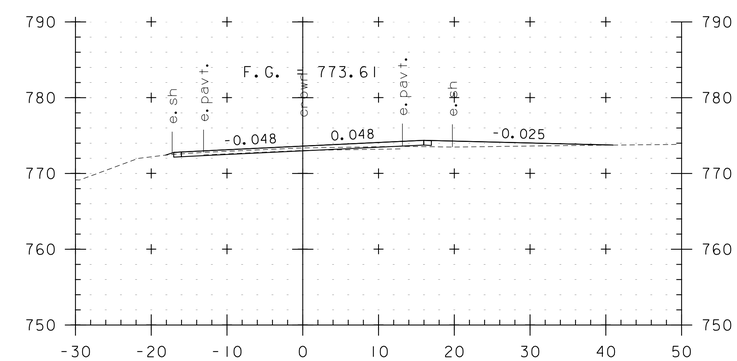
351+50



353+50



353+00



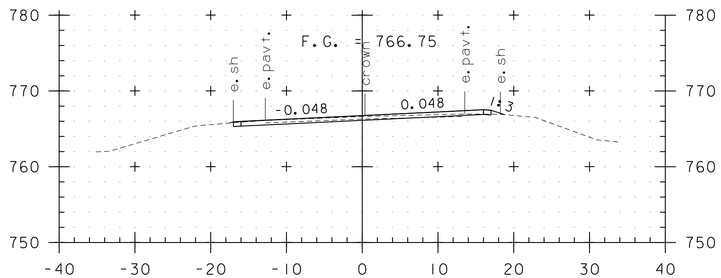
352+53
TH 40

0 10 20
SCALE IN FEET

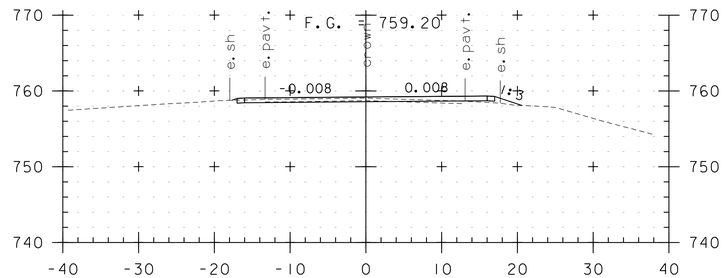
STA. 350+00 TO STA. 353+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 72	SHEET 260 OF 303

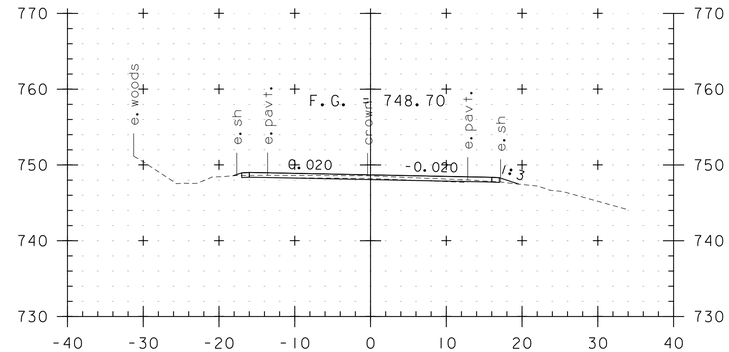
CLD 12-0337



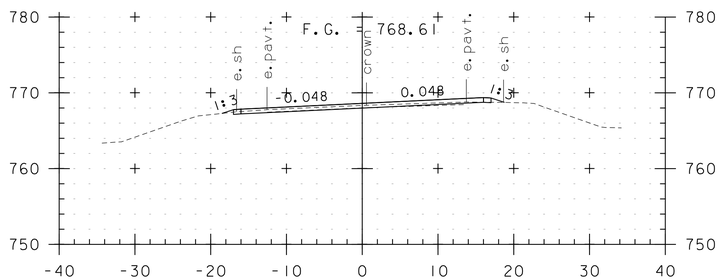
355+00



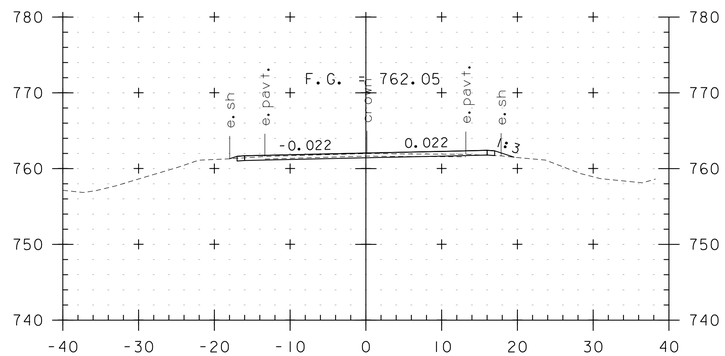
356+50



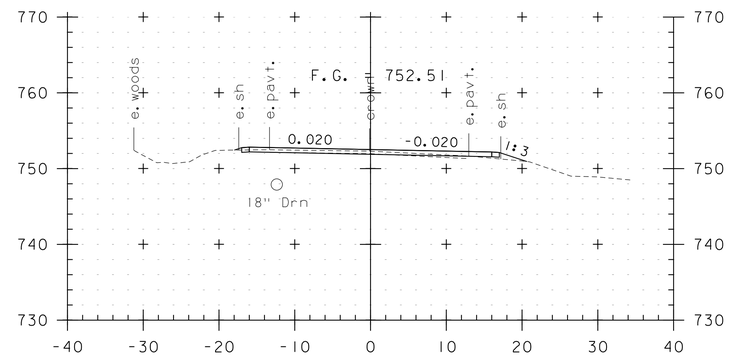
358+00



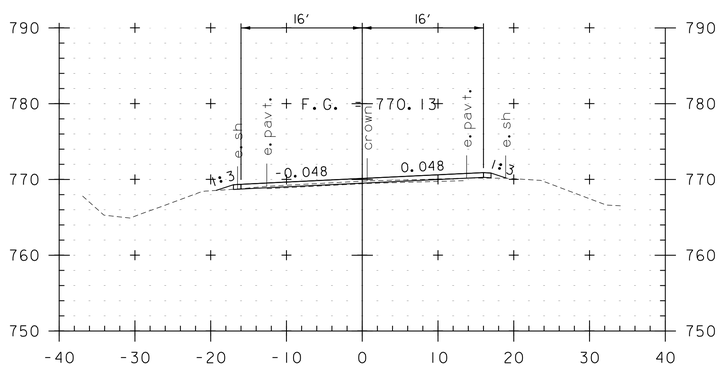
354+50



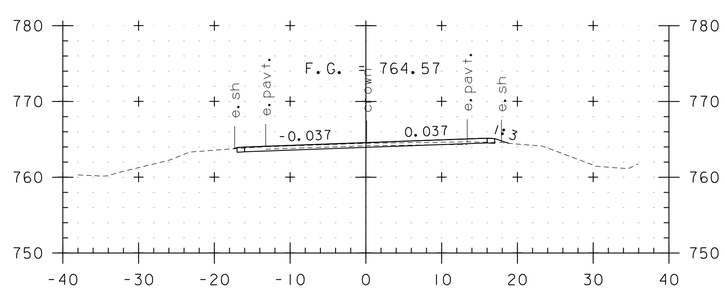
356+00



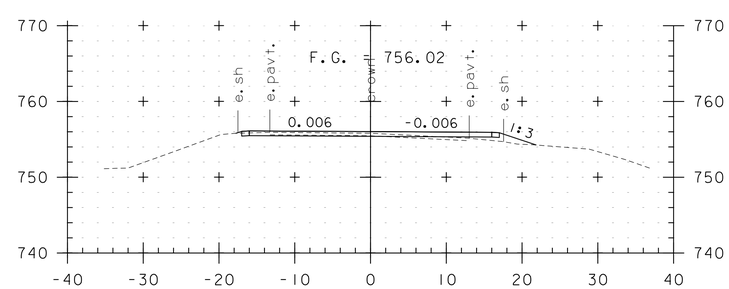
357+50



354+00



355+50



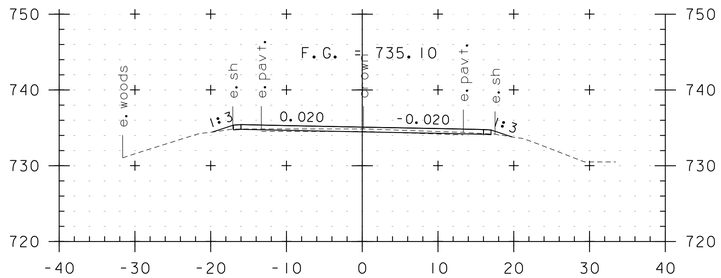
357+00

0 10 20
SCALE IN FEET

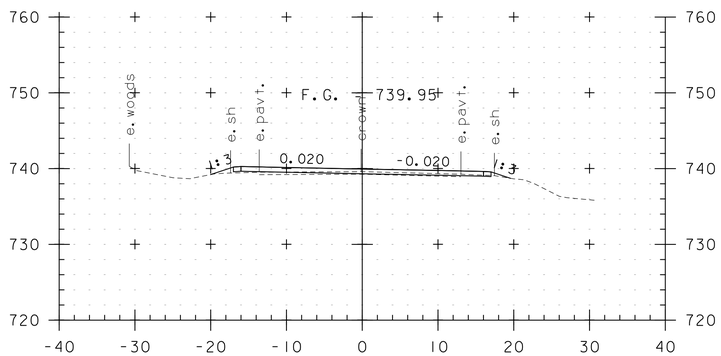
STA. 354+00 TO STA. 358+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 73	SHEET 261 OF 303

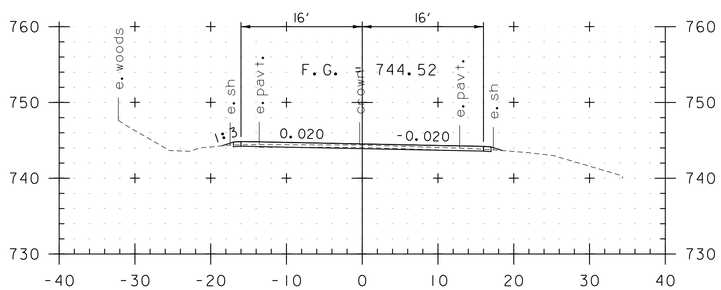
CLD 12-0337



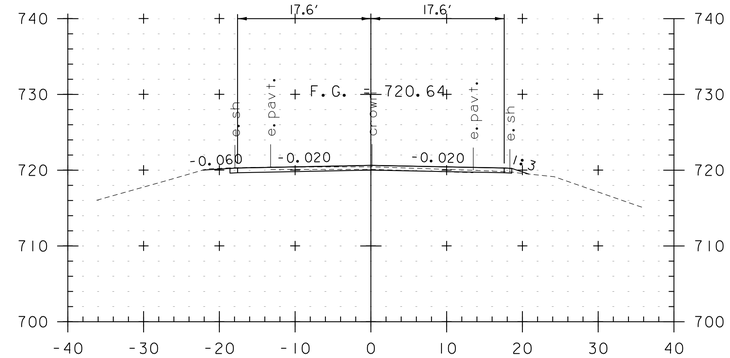
359+50



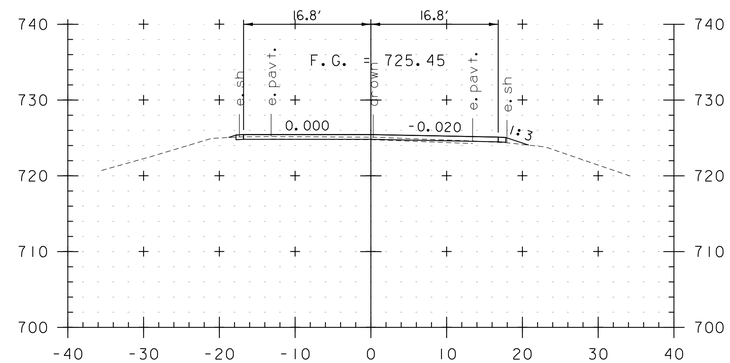
359+00



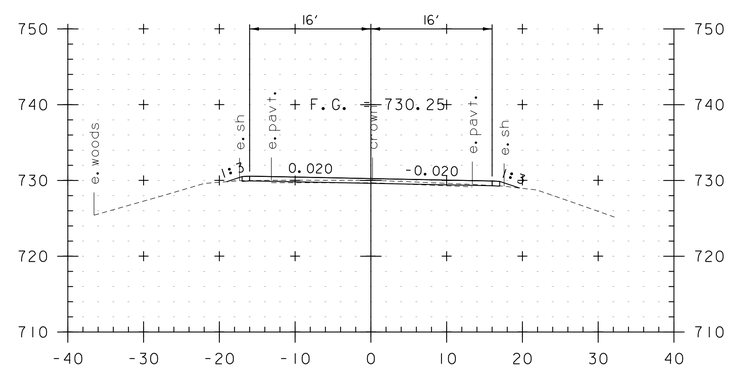
358+50



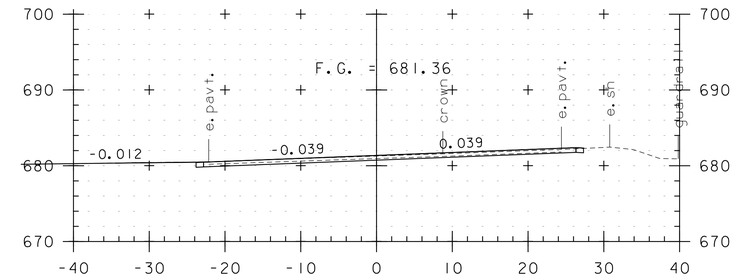
361+00



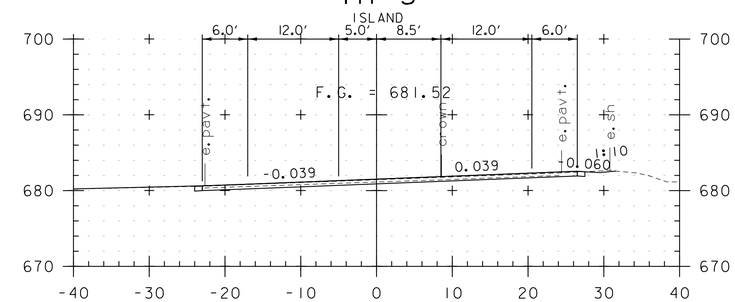
360+50



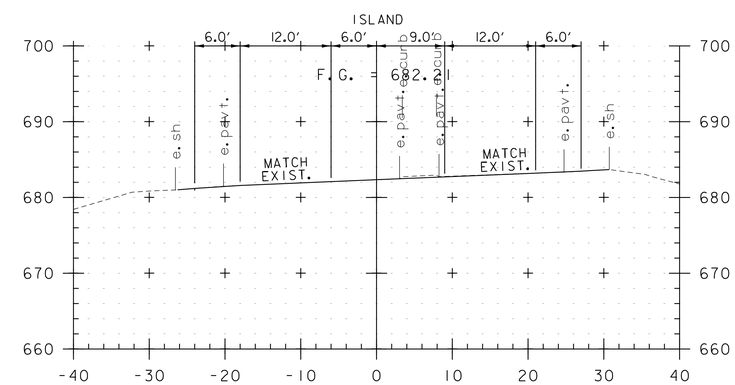
360+00



379+59
TH 5



379+50



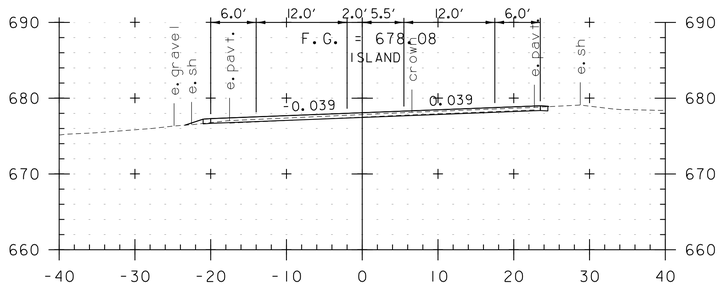
379+00

0 10 20
SCALE IN FEET

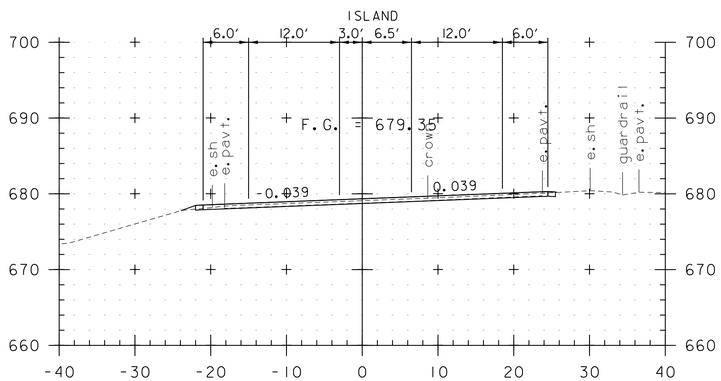
STA. 358+50 TO STA. 379+59

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 74	SHEET 262 OF 303

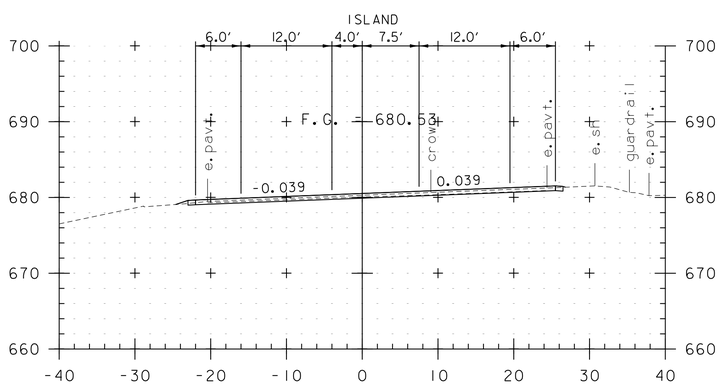
CLD 12-0337



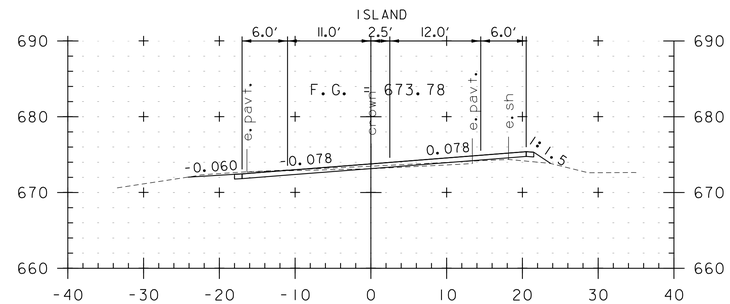
381+00



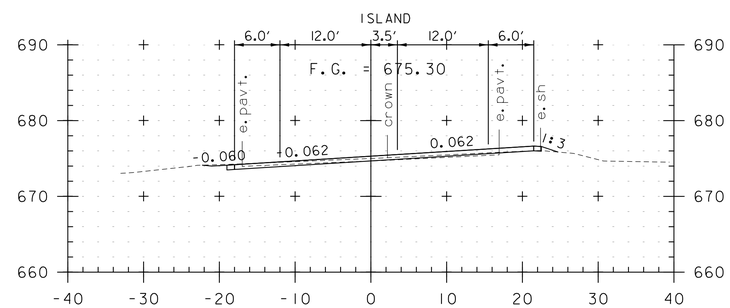
380+50



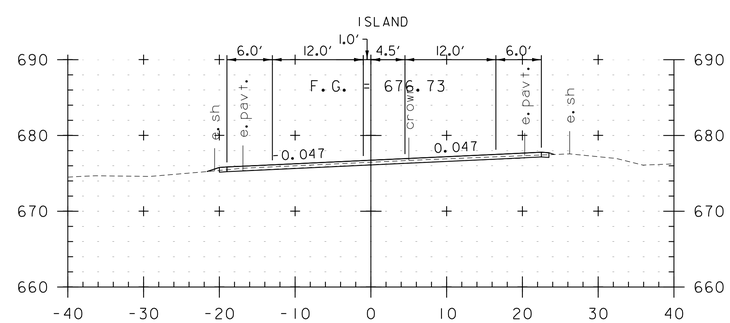
380+00



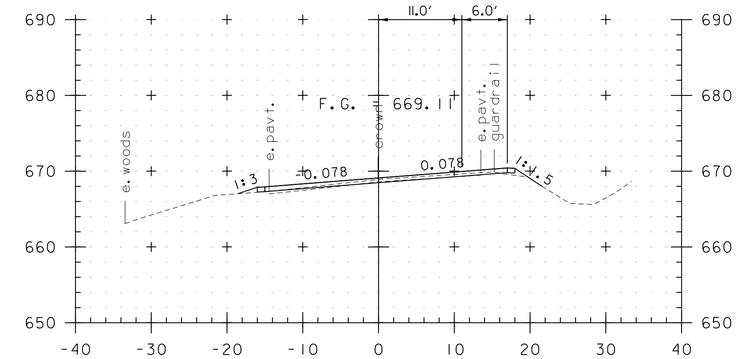
382+50



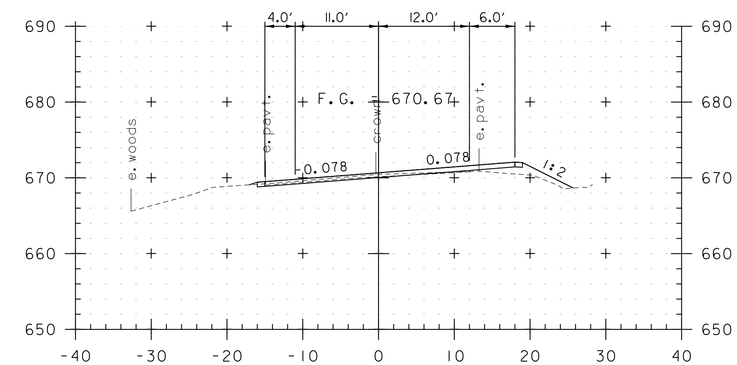
382+00



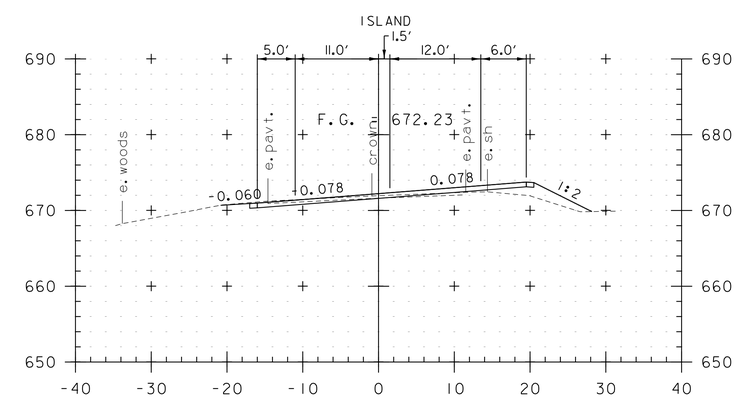
381+50



384+00



383+50



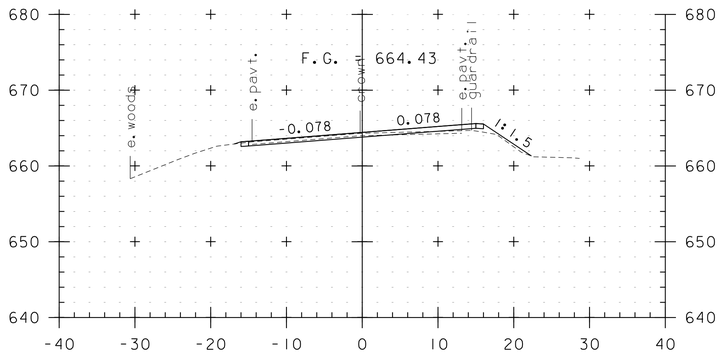
383+00

0 10 20
SCALE IN FEET

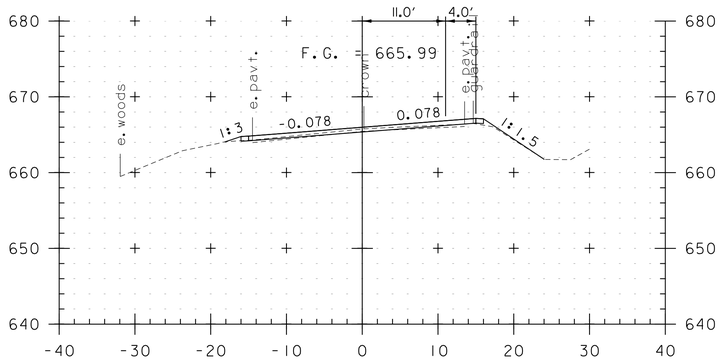
STA. 380+00 TO STA. 384+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 75	SHEET 263 OF 303

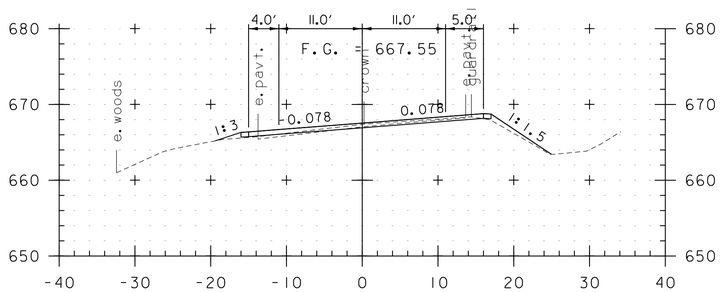
CLD 12-0337



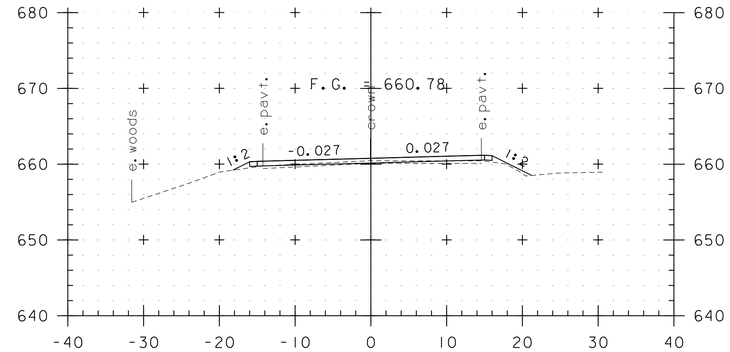
385+50



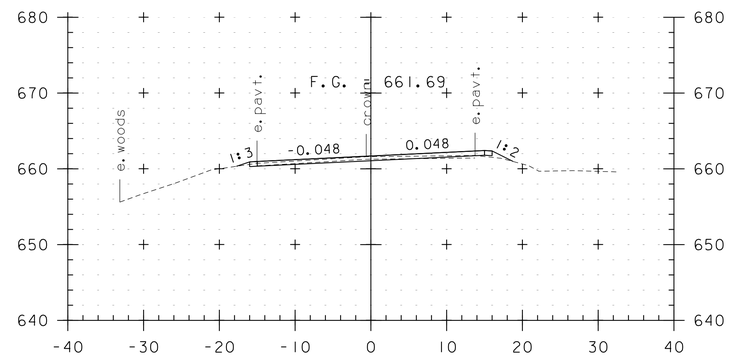
385+00



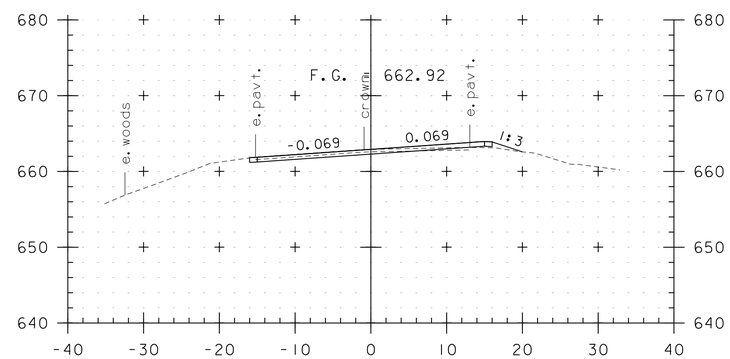
384+50



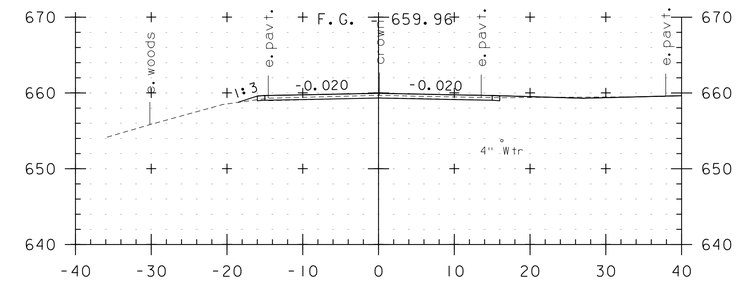
387+00



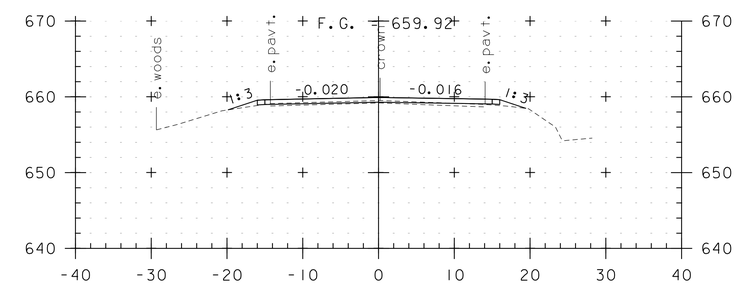
386+50



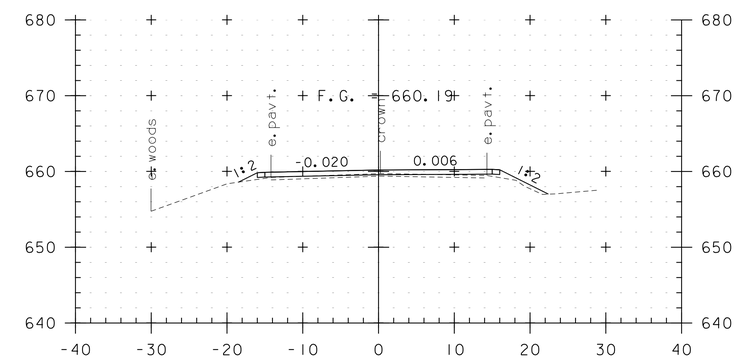
386+00



388+50



388+00



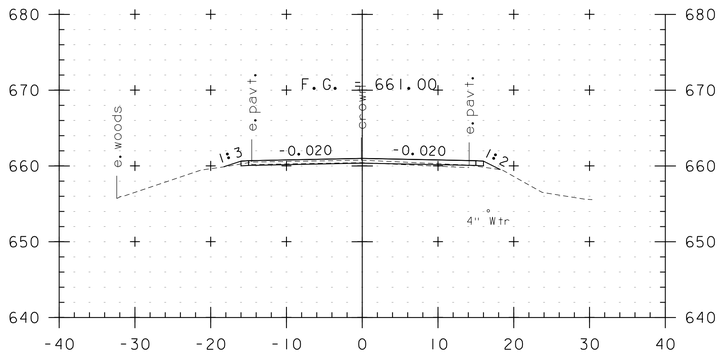
387+50

0 10 20
SCALE IN FEET

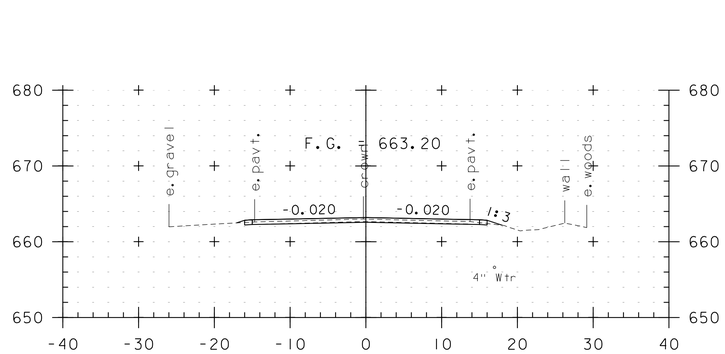
STA. 384+50 TO STA. 388+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 76	SHEET 264 OF 303

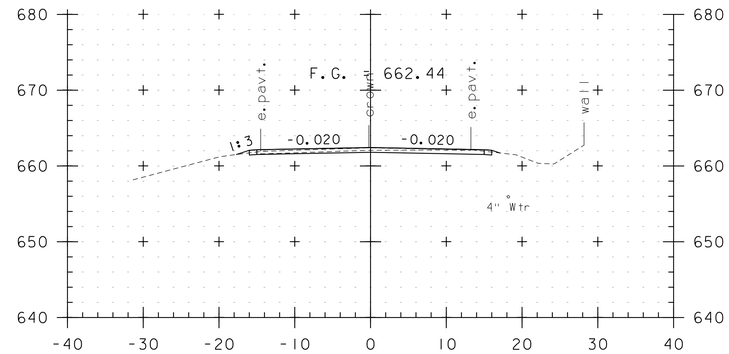
CLD 12-0337



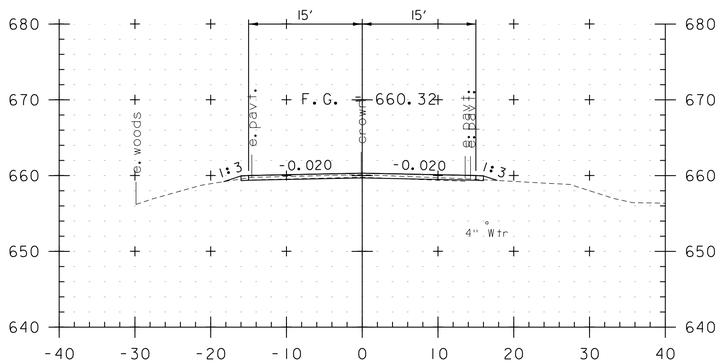
389+50



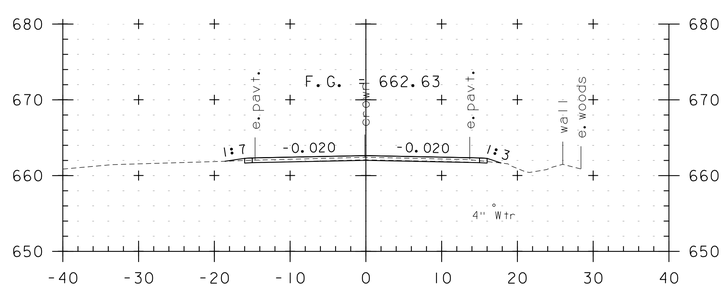
391+00



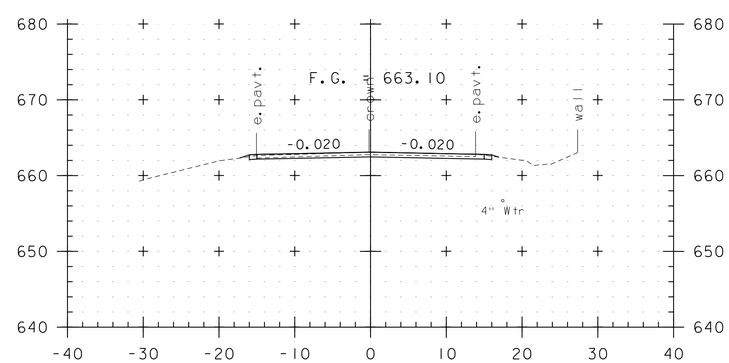
392+50



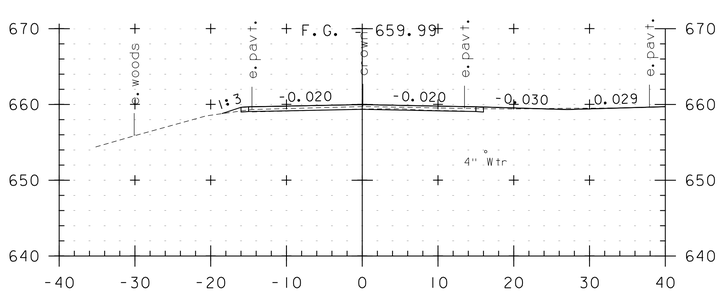
389+00



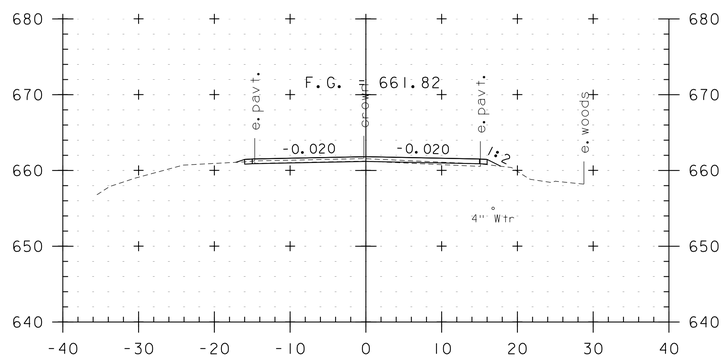
390+50



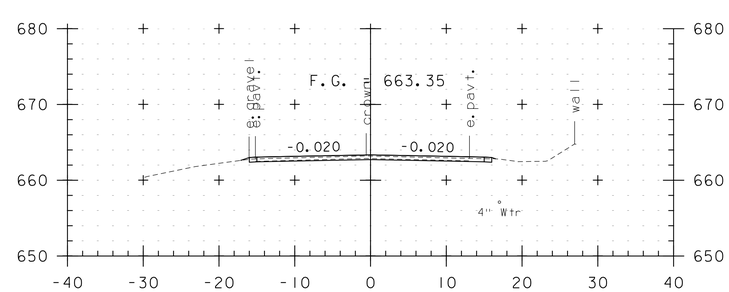
392+00



388+54
TH 41



390+00



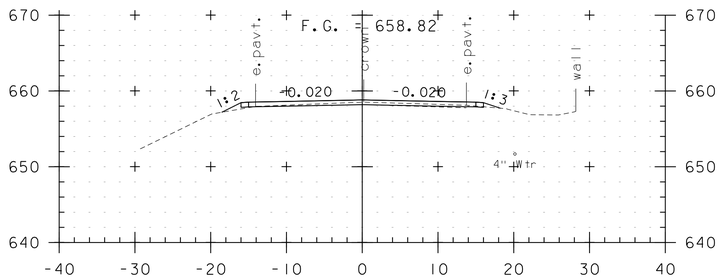
391+50

0 10 20
SCALE IN FEET

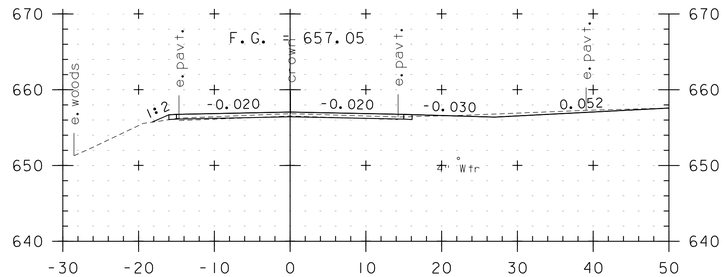
STA. 388+54 TO STA. 392+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 77	SHEET 265 OF 303

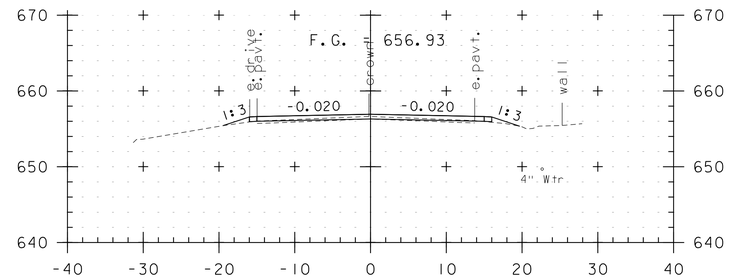
CLD 12-0337



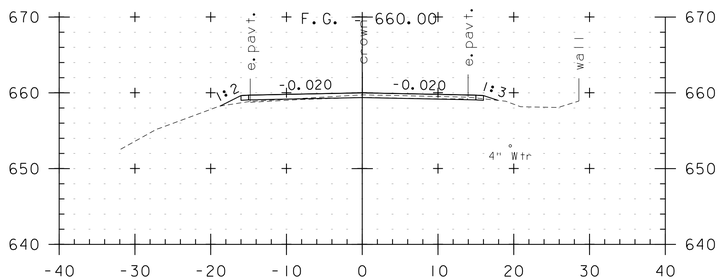
394+00



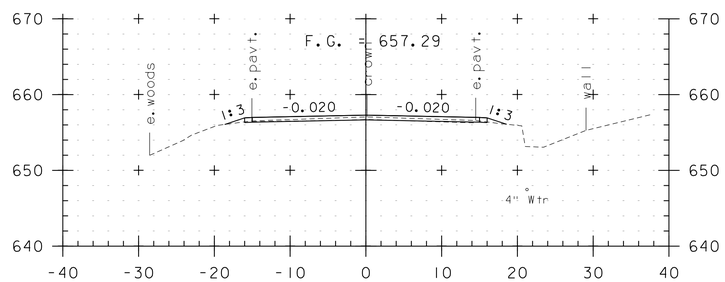
395+34
TH 42



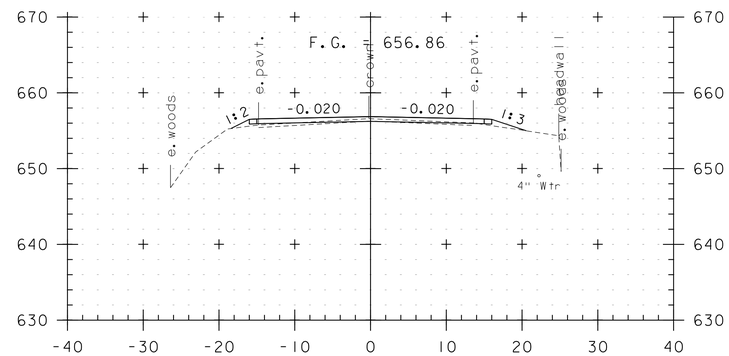
396+50



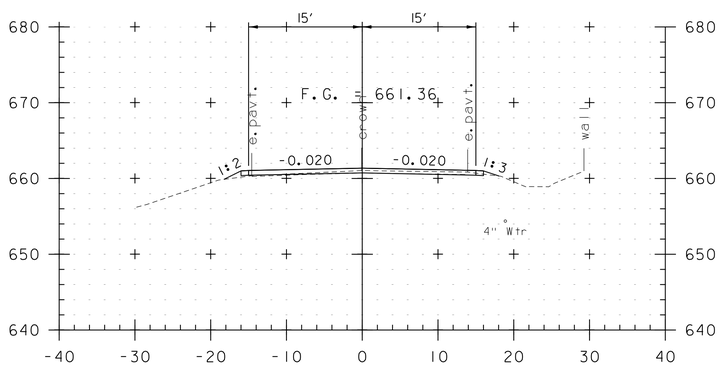
393+50



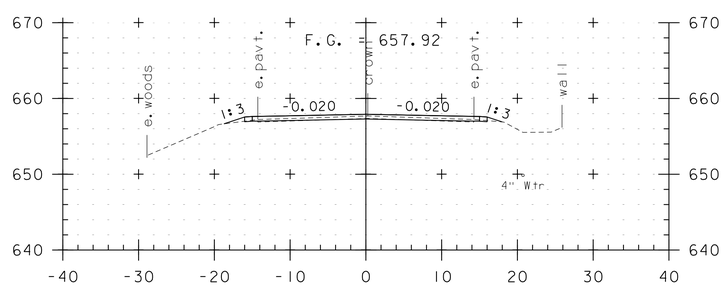
395+00



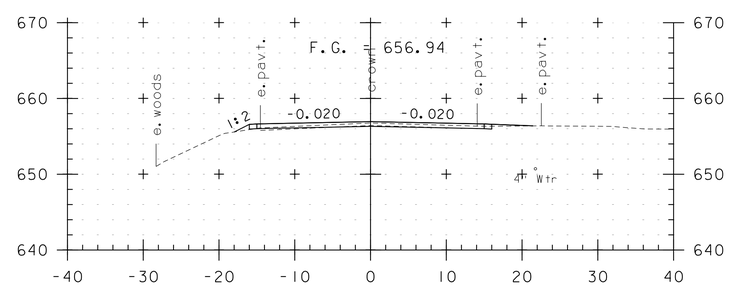
396+00



393+00



394+50



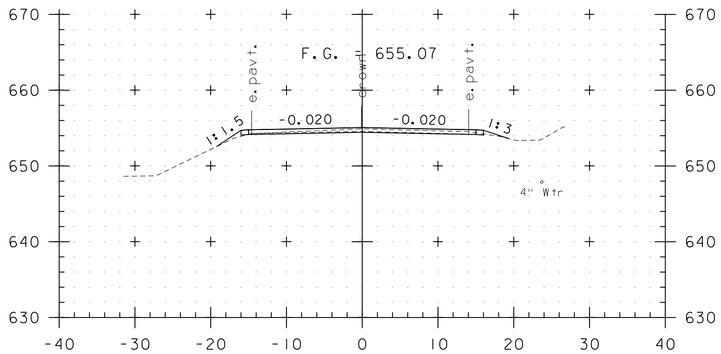
395+50

0 10 20
SCALE IN FEET

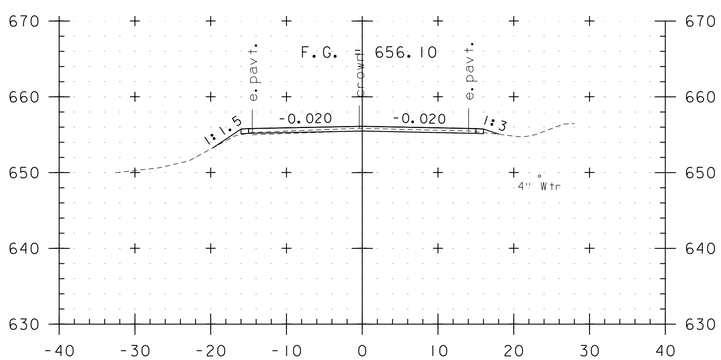
STA. 393+00 TO STA. 396+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 78	SHEET 266 OF 303

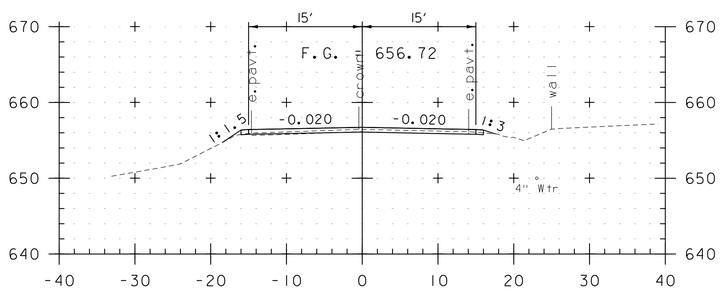
CLD 12-0337



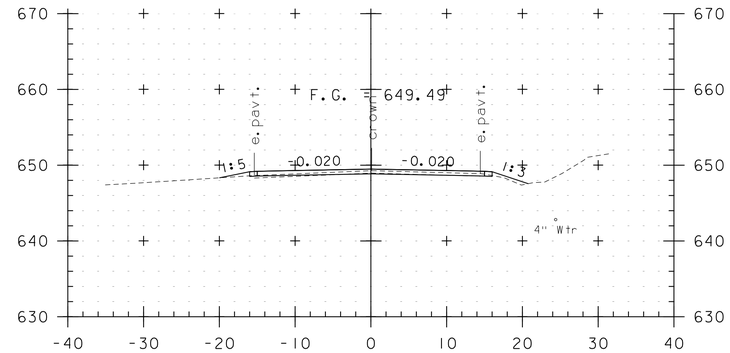
398+00



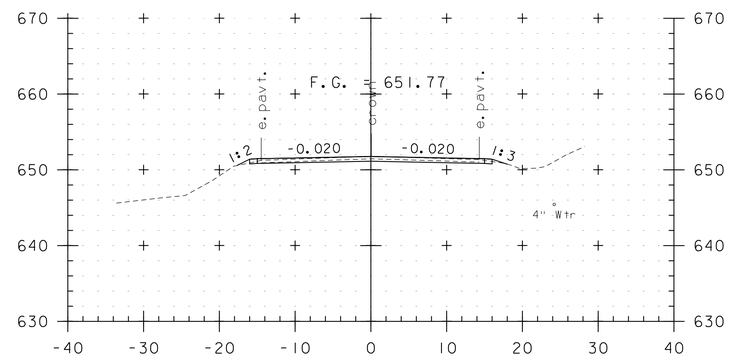
397+50



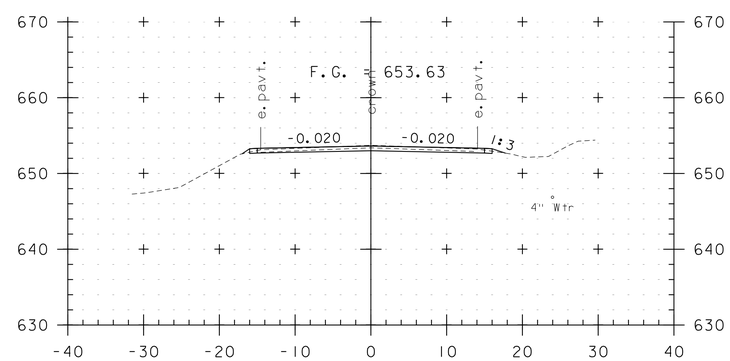
397+00



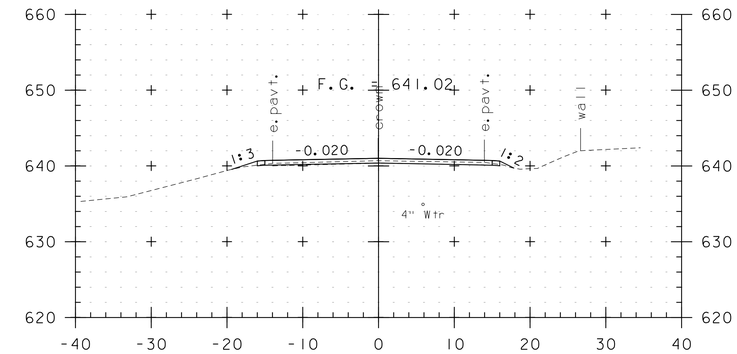
399+50



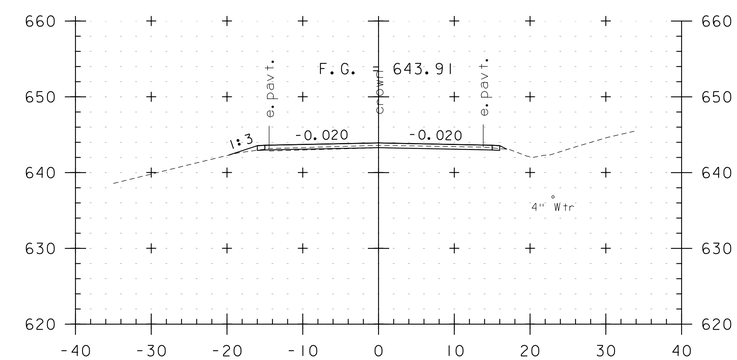
399+00



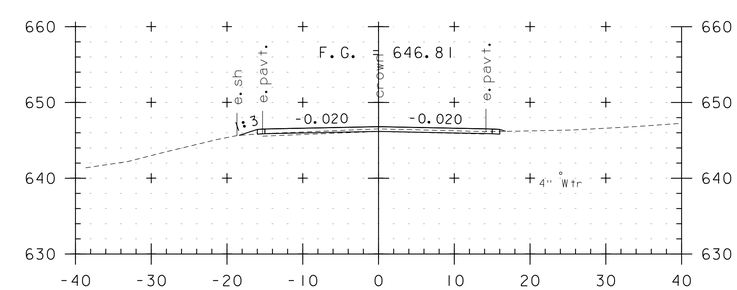
398+50



401+00



400+50



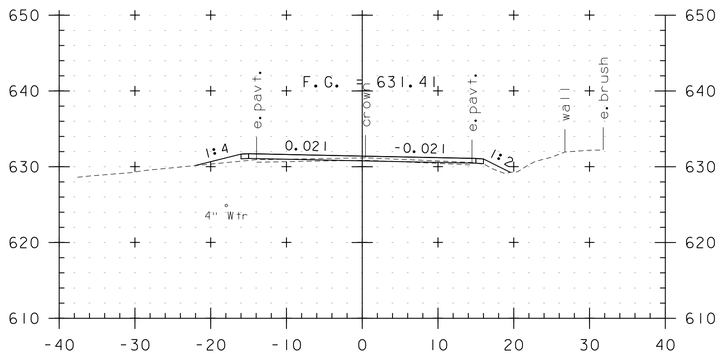
400+00

0 10 20
SCALE IN FEET

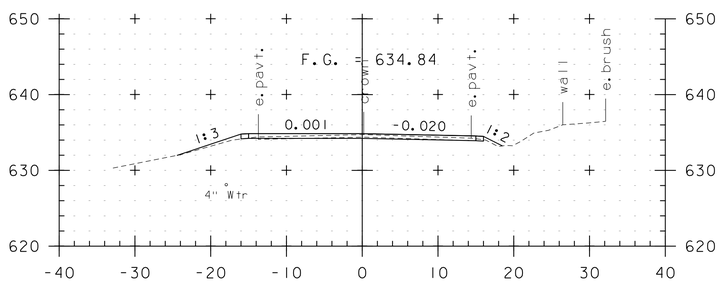
STA. 397+00 TO STA. 401+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 79	SHEET 267 OF 303

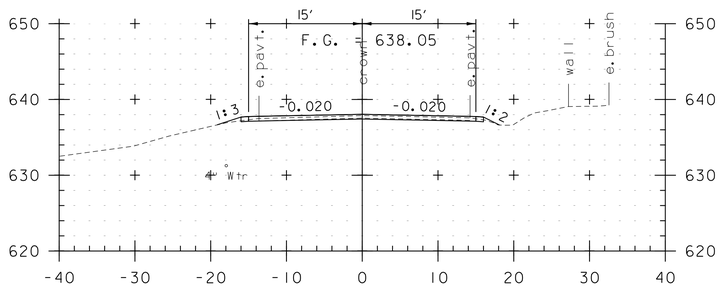
CLD 12-0337



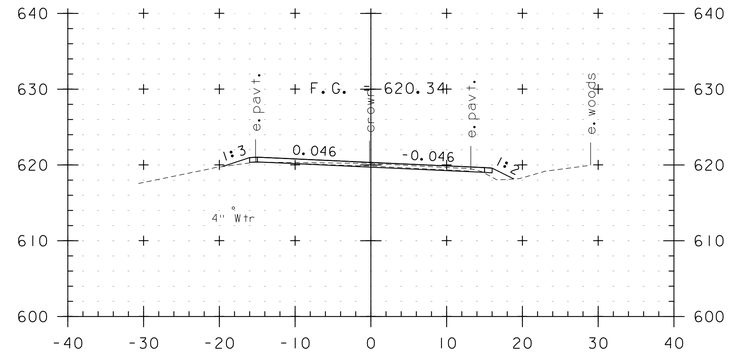
402+50



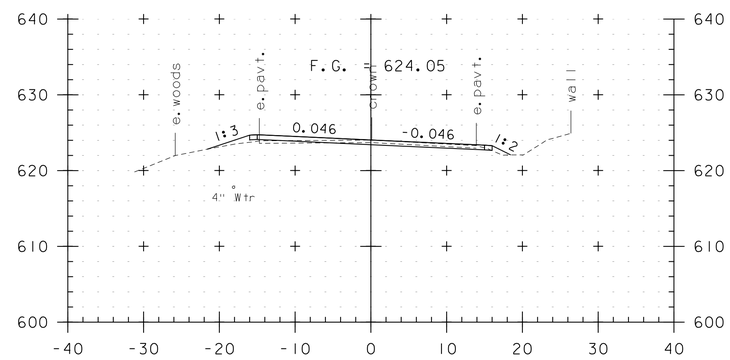
402+00



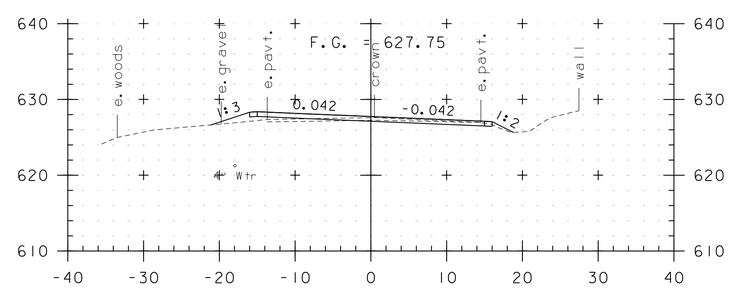
401+50



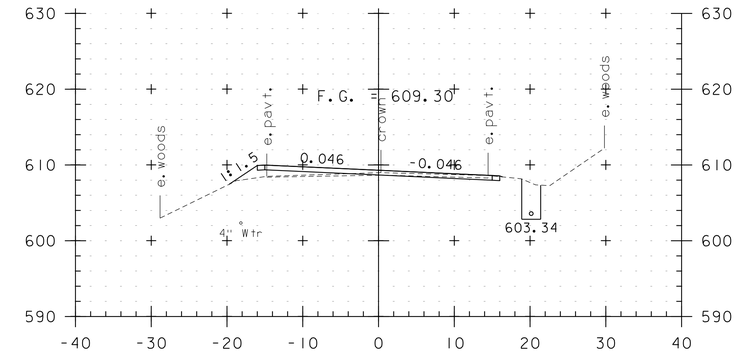
404+00



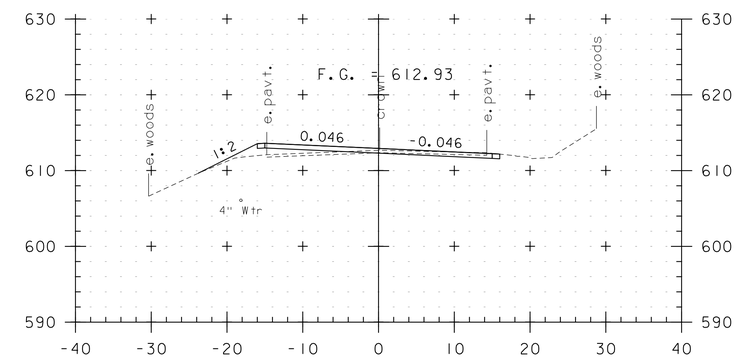
403+50



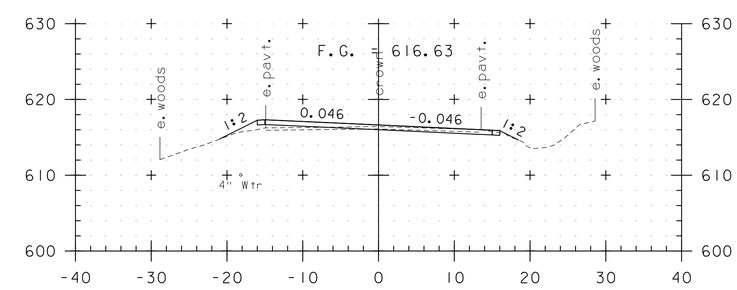
403+00



405+50



405+00



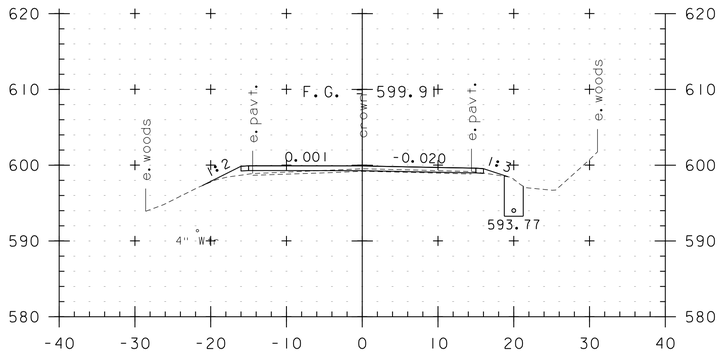
404+50

0 10 20
SCALE IN FEET

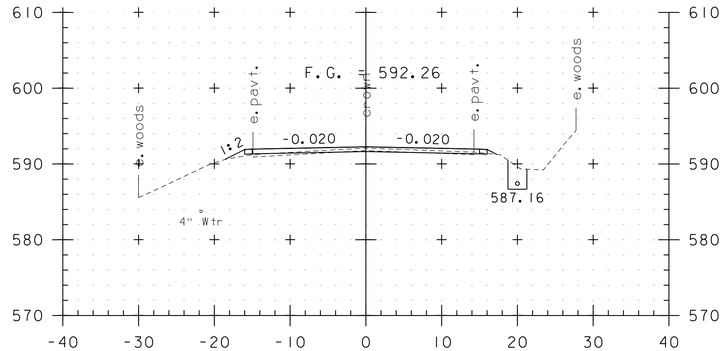
STA. 401+50 TO STA. 405+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 80	SHEET 268 OF 303

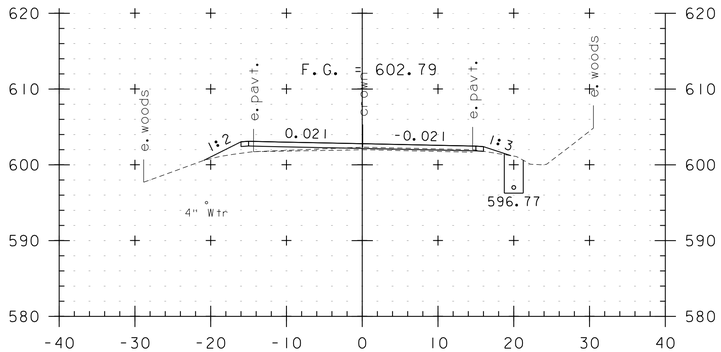
CLD 12-0337



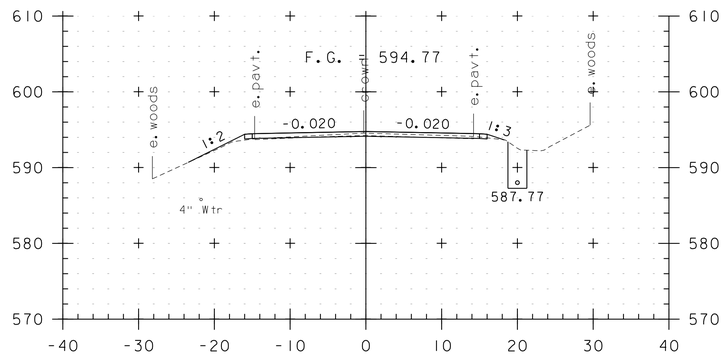
407+00



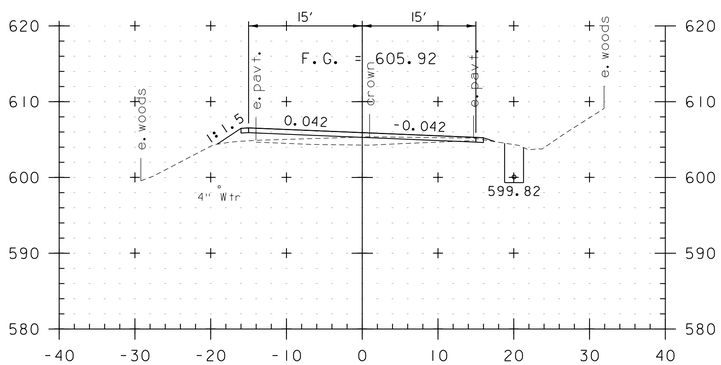
408+50



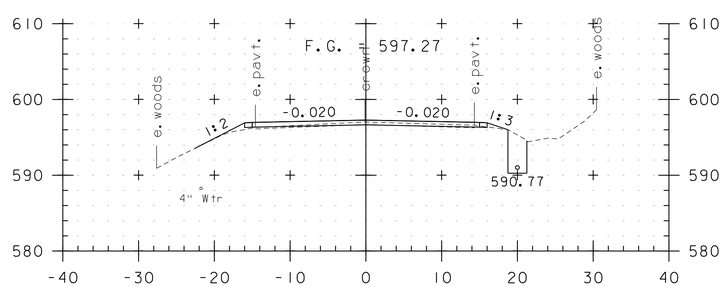
406+50



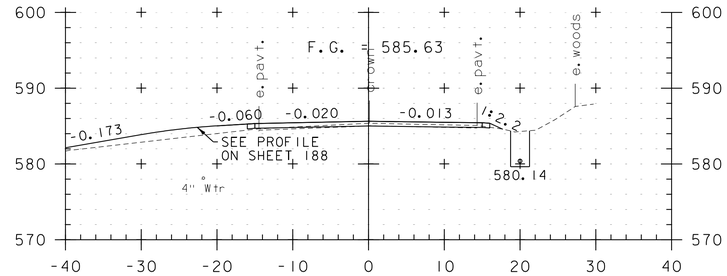
408+00



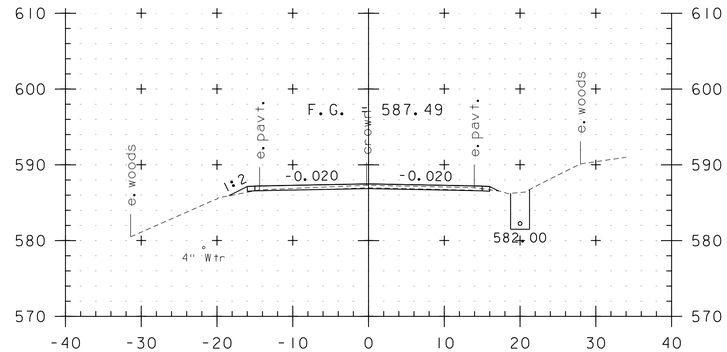
406+00



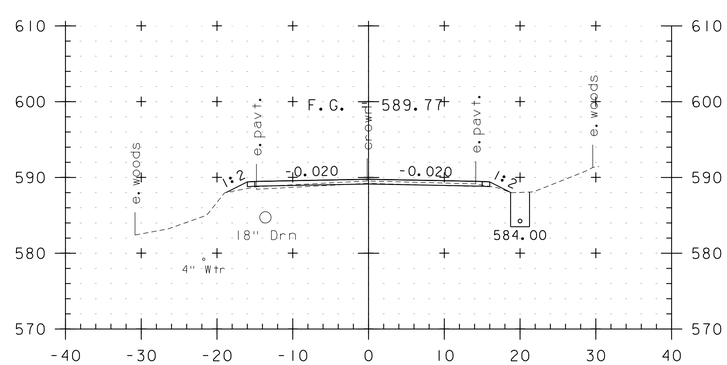
407+50



409+97
TH 34



409+50



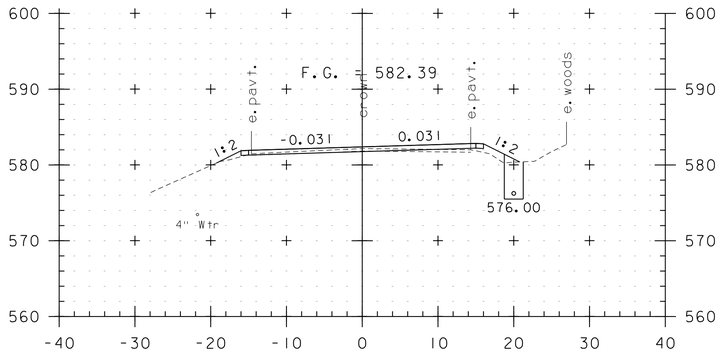
409+00

0 10 20
SCALE IN FEET

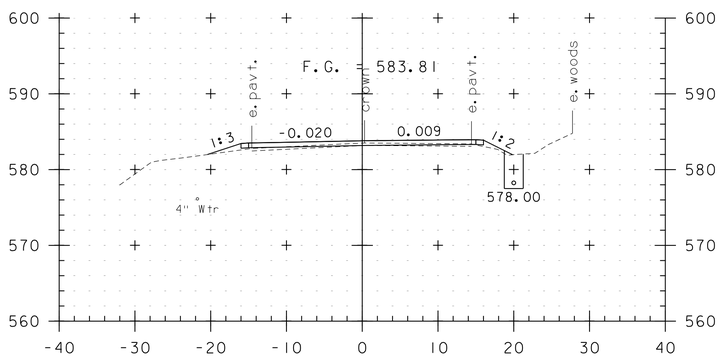
STA. 406+00 TO STA. 409+97

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 81	SHEET 269 OF 303

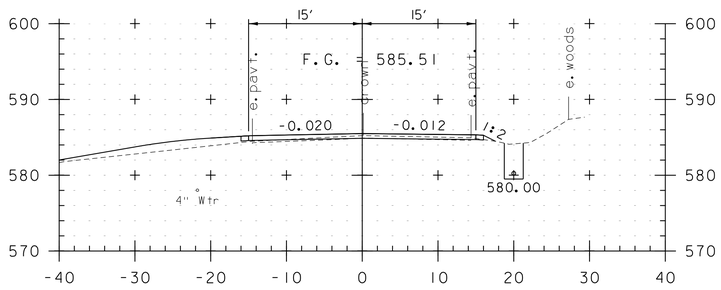
CLD 12-0337



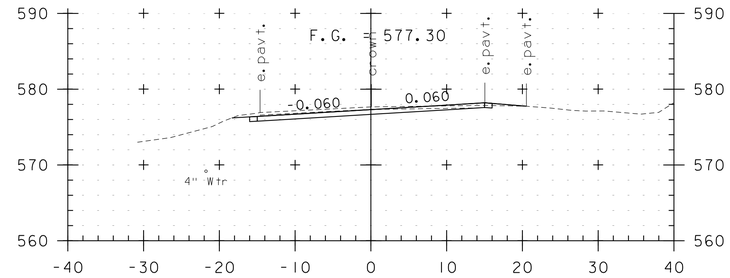
411+00



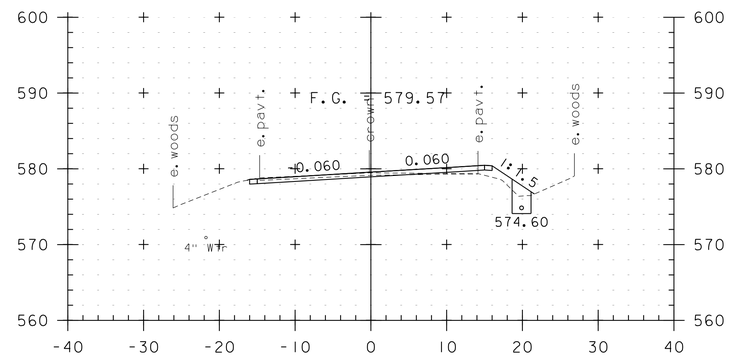
410+50



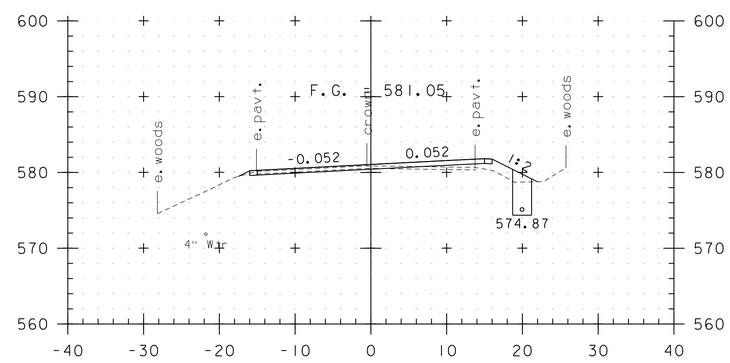
410+00



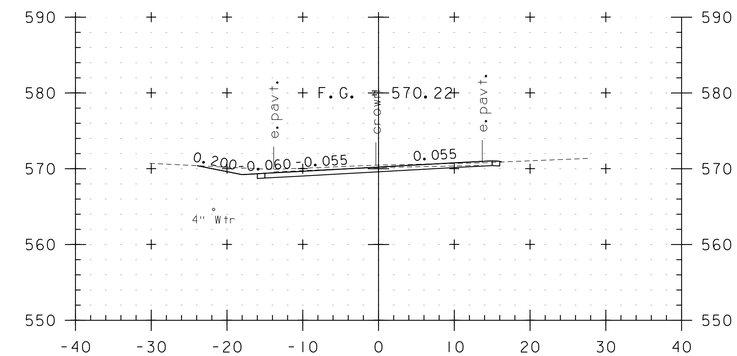
412+50



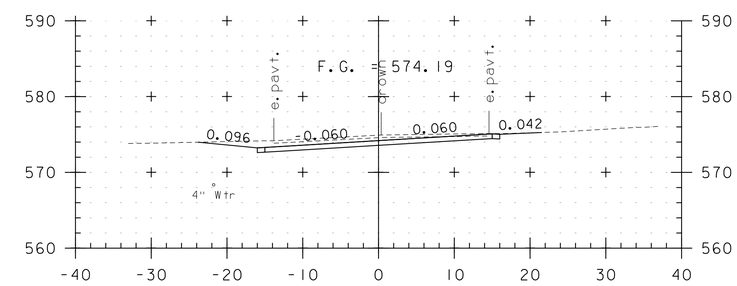
412+00



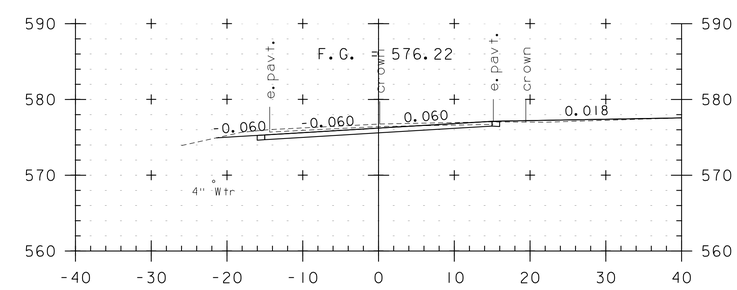
411+50



413+50



413+00



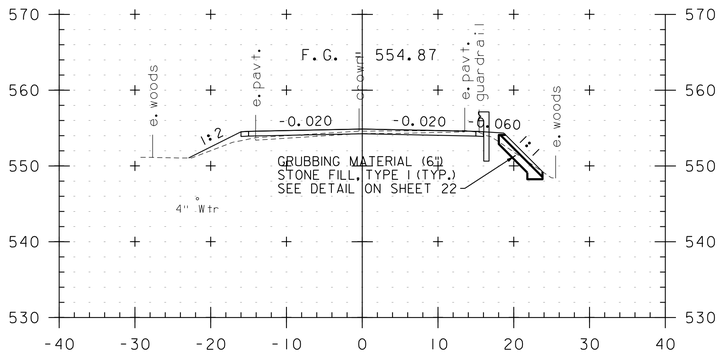
412+68
TH 43

0 10 20
SCALE IN FEET

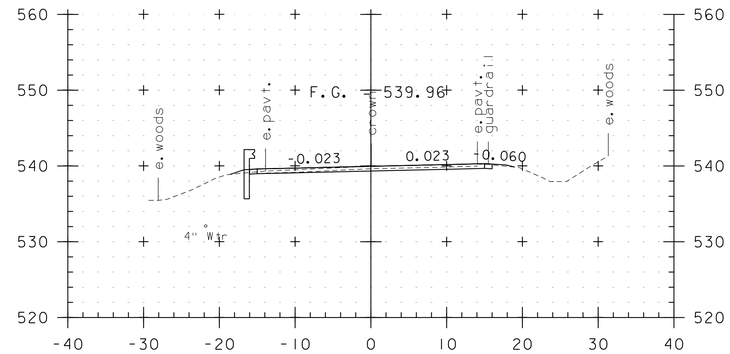
STA. 410+00 TO STA. 413+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 82	SHEET 270 OF 303

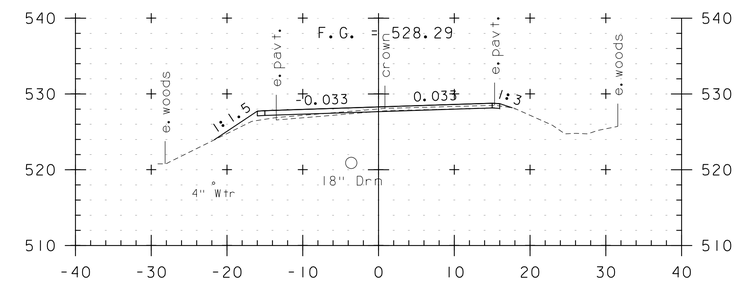
CLD 12-0337



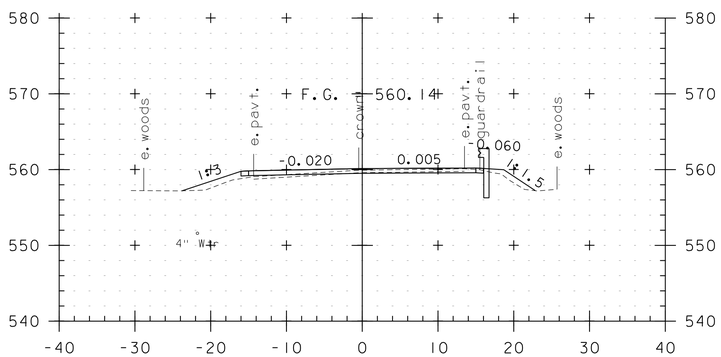
415+00



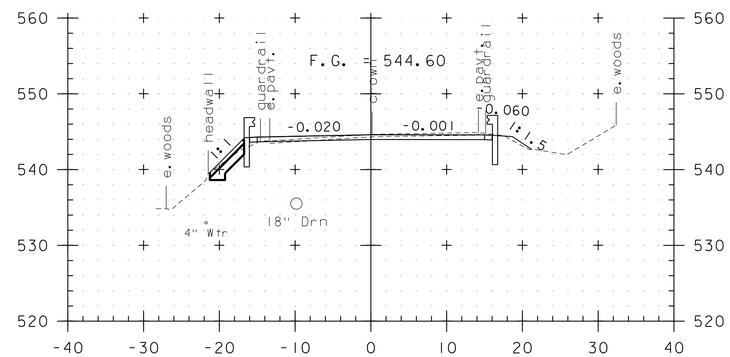
416+50



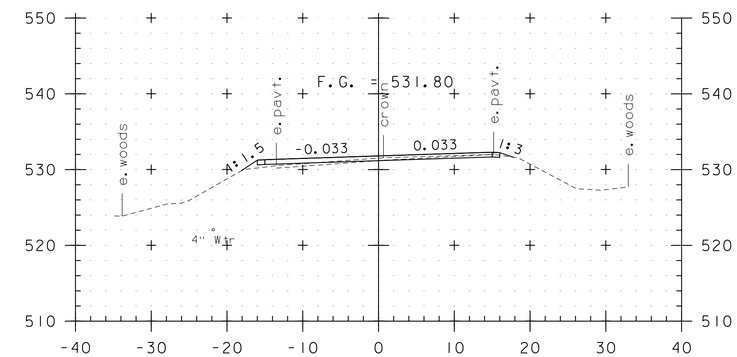
418+00



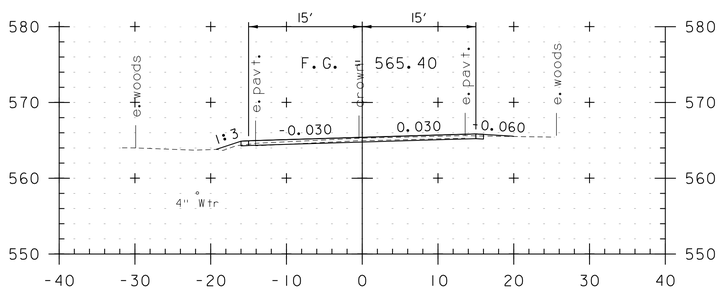
414+50



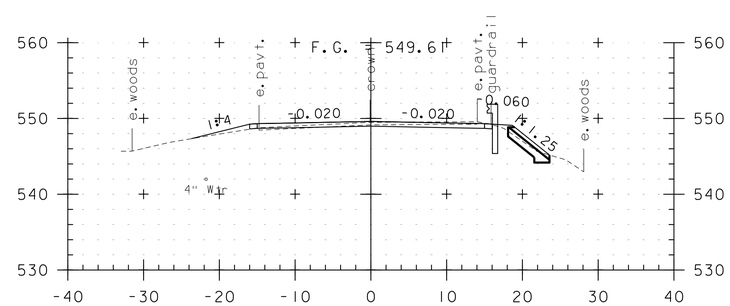
416+00



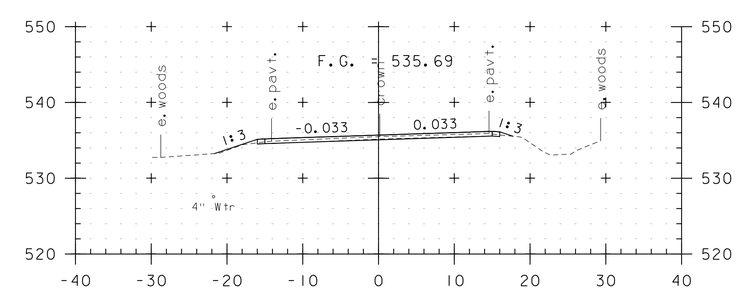
417+50



414+00



415+50



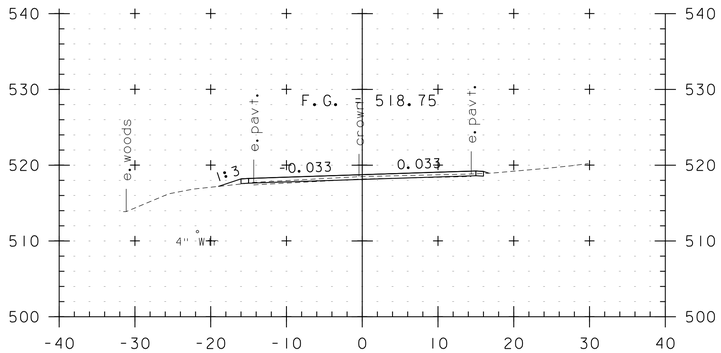
417+00

0 10 20
SCALE IN FEET

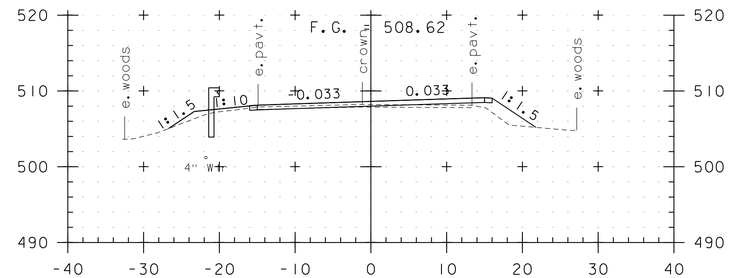
STA. 414+00 TO STA. 418+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 83	SHEET 271 OF 303

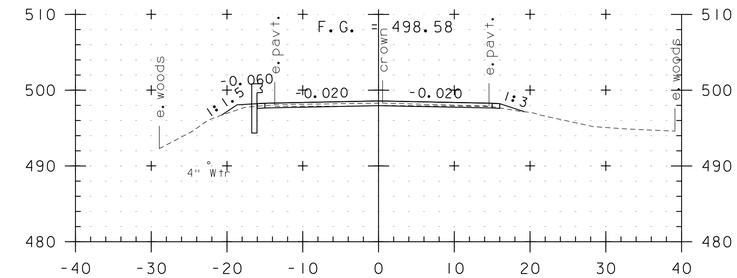
CLD 12-0337



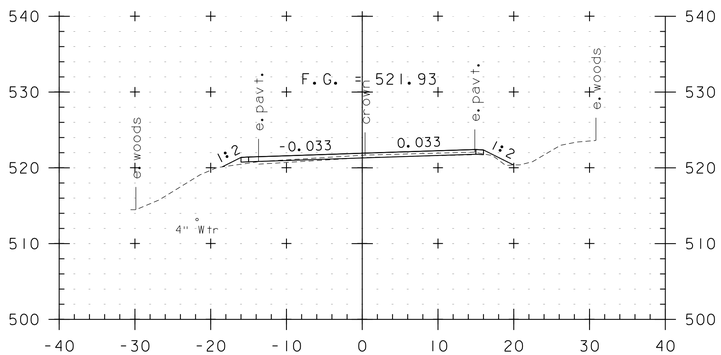
419+50



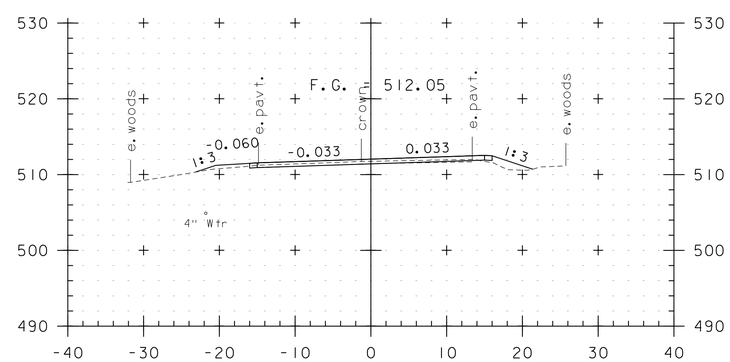
421+00



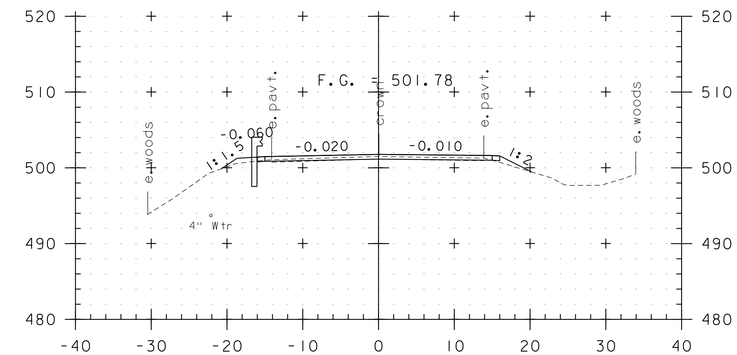
422+50



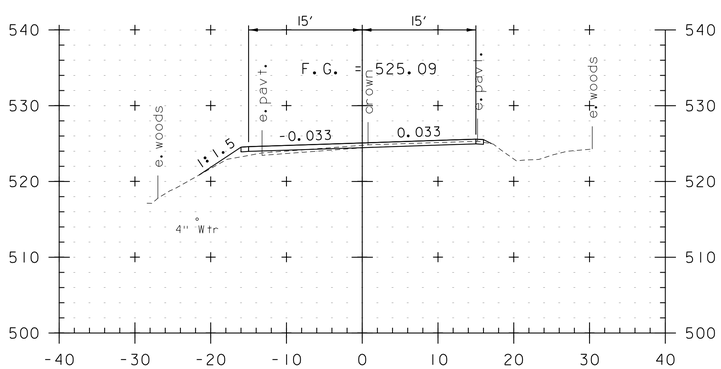
419+00



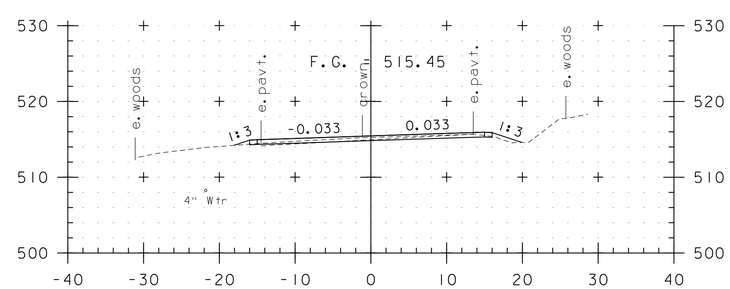
420+50



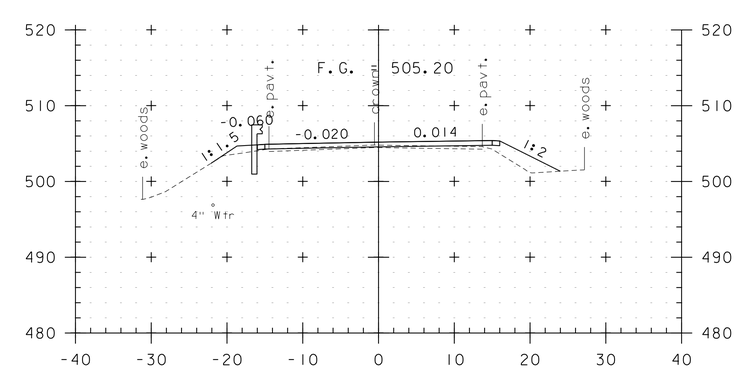
422+00



418+50



420+00



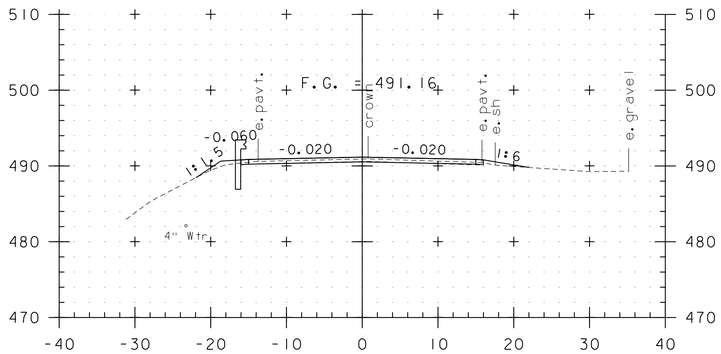
421+50

0 10 20
SCALE IN FEET

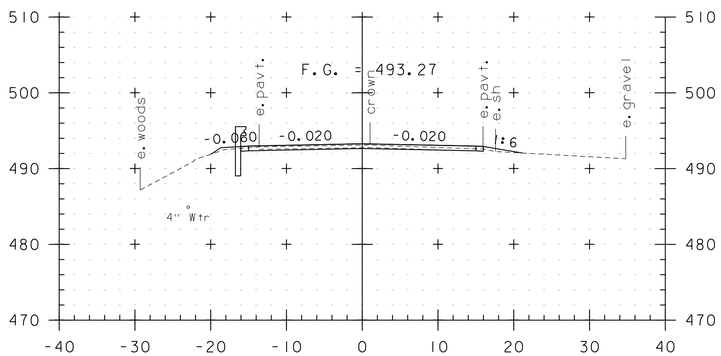
STA. 418+50 TO STA. 422+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 84	SHEET 272 OF 303

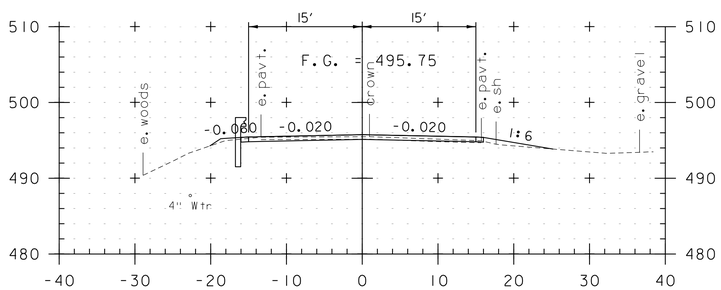
CLD 12-0337



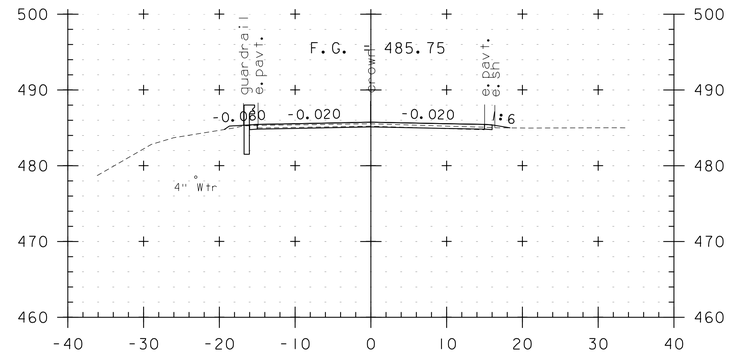
424+00



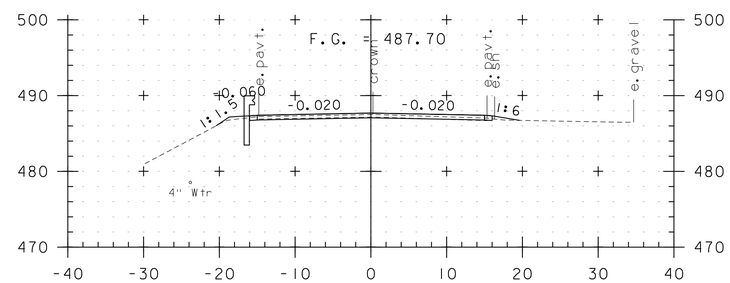
423+50



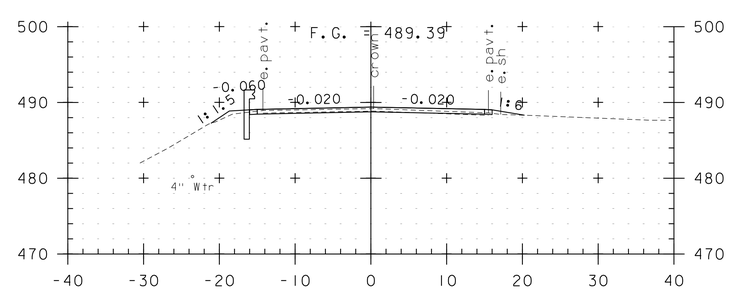
423+00



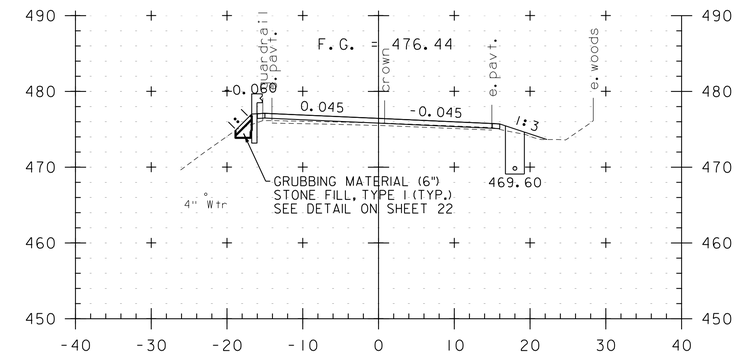
425+50



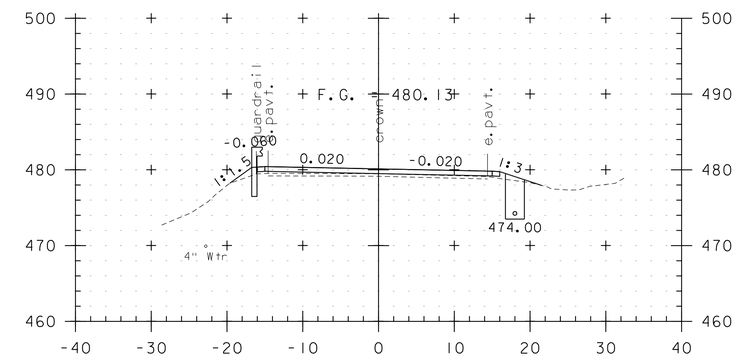
425+00



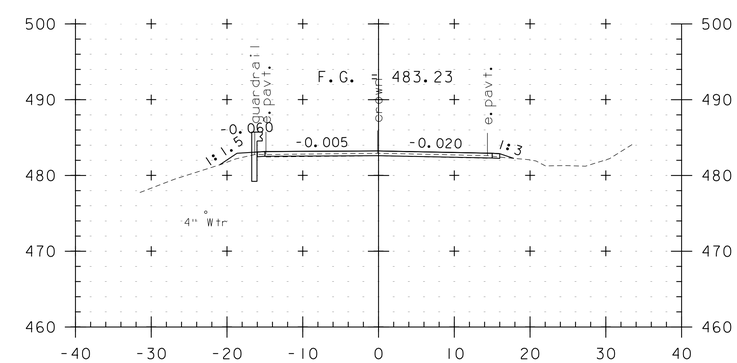
424+50



427+00



426+50



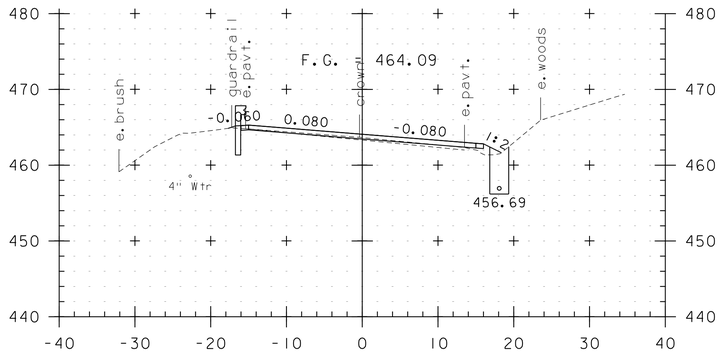
426+00

0 10 20
SCALE IN FEET

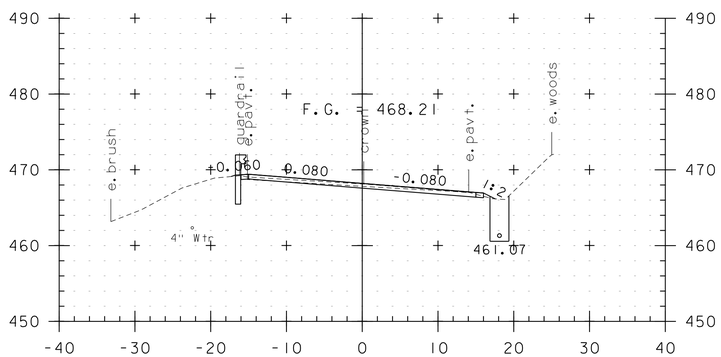
STA. 423+00 TO STA. 427+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 85	SHEET 273 OF 303

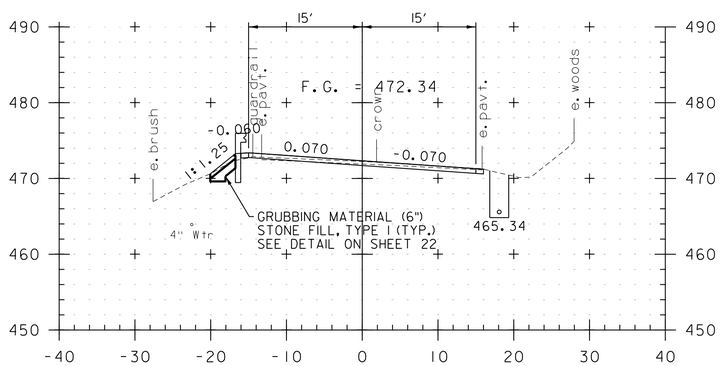
CLD 12-0337



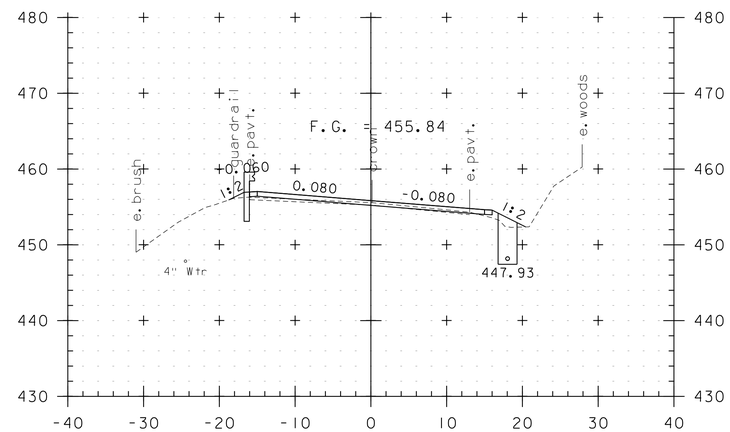
428+50



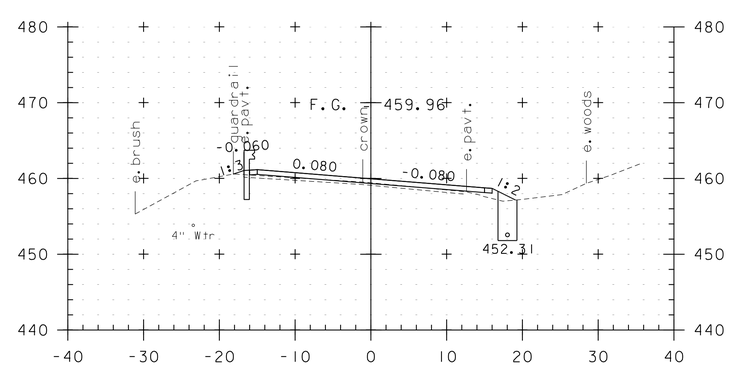
428+00



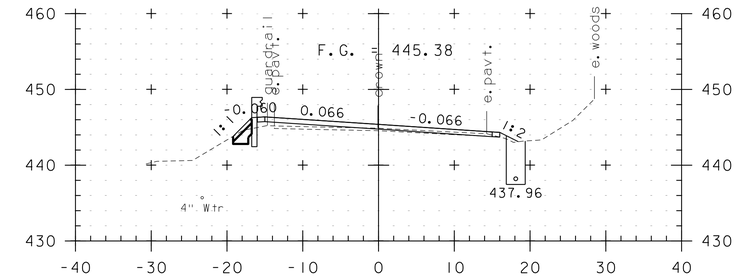
427+50



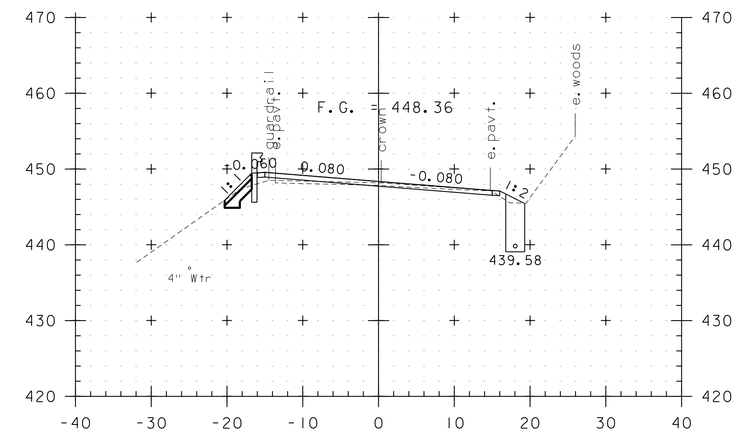
429+50



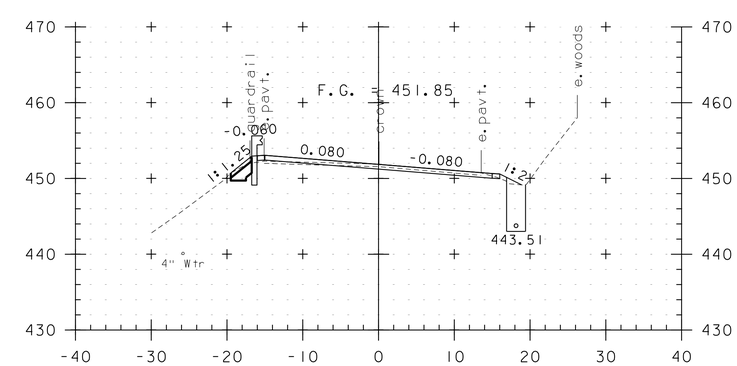
429+00



431+00



430+50



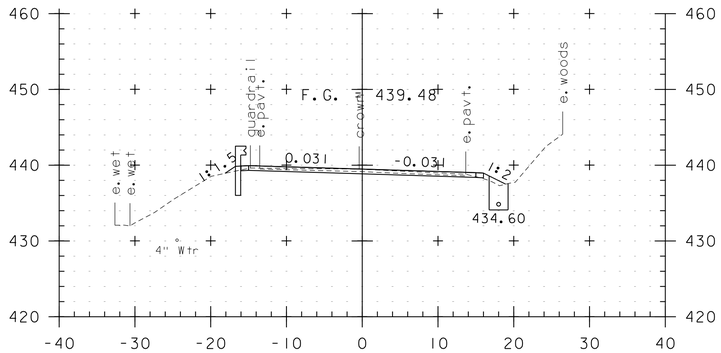
430+00

0 10 20
SCALE IN FEET

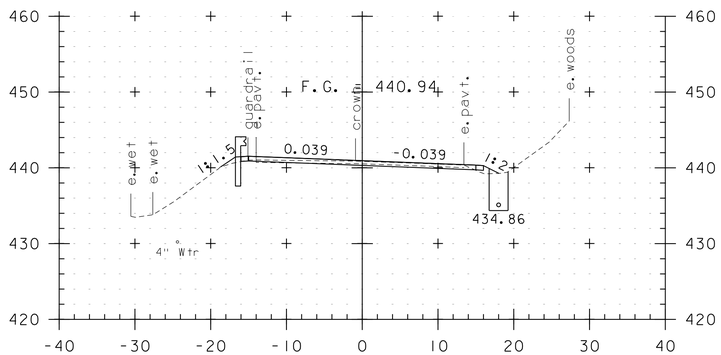
STA. 427+50 TO STA. 431+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 86	SHEET 274 OF 303

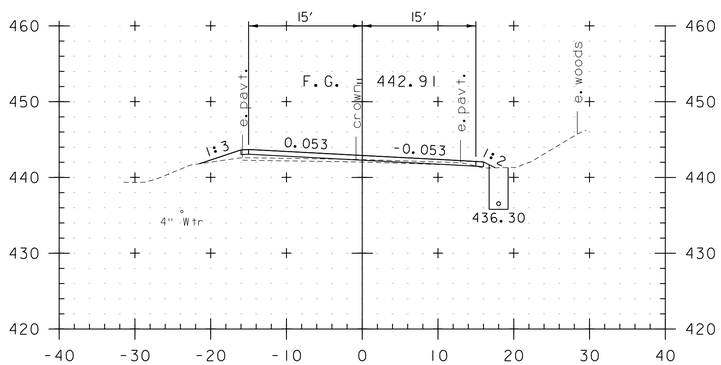
CLD 12-0337



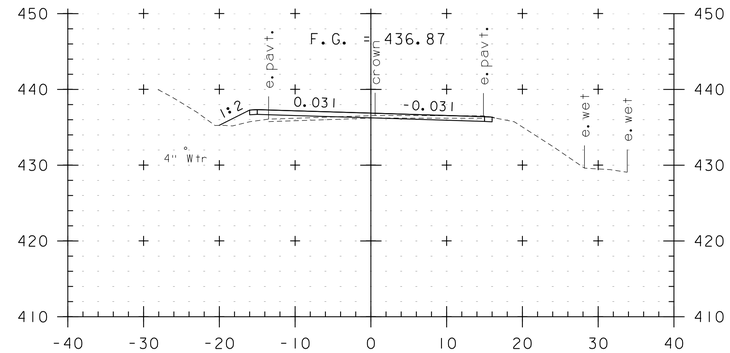
432+50



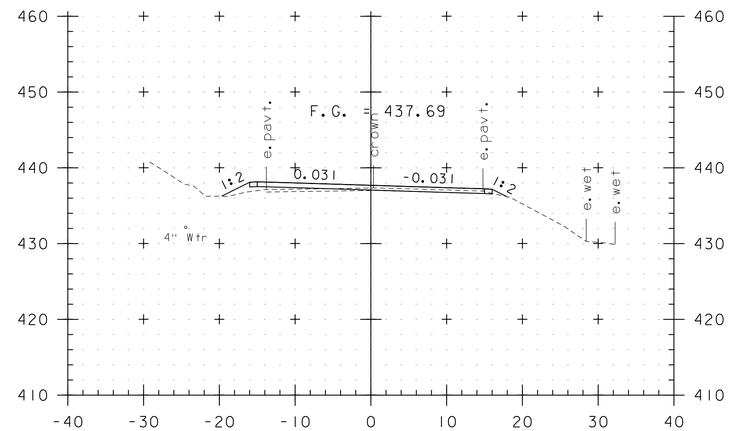
432+00



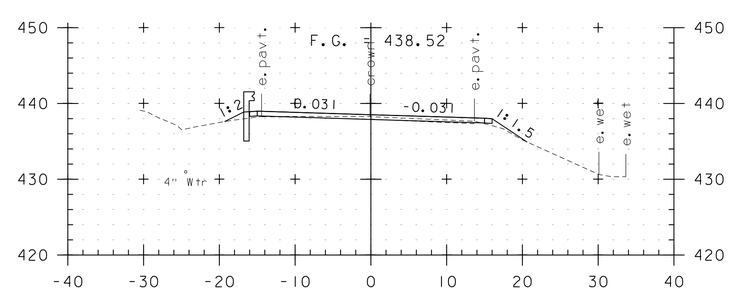
431+50



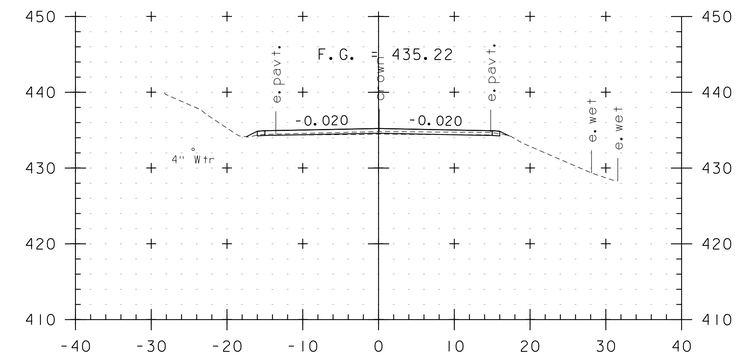
434+00



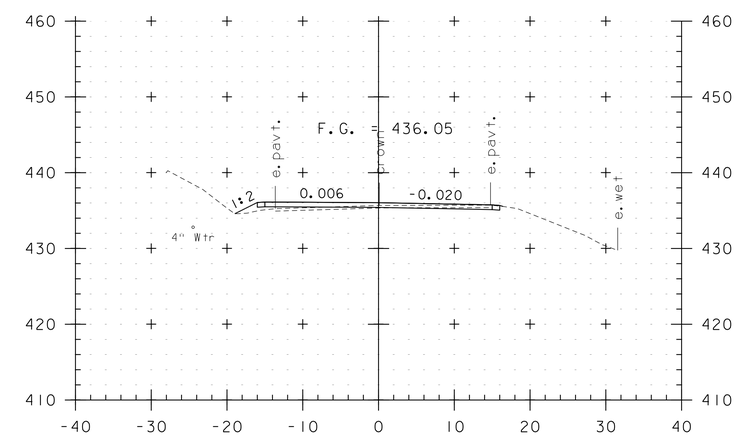
433+50



433+00



435+00



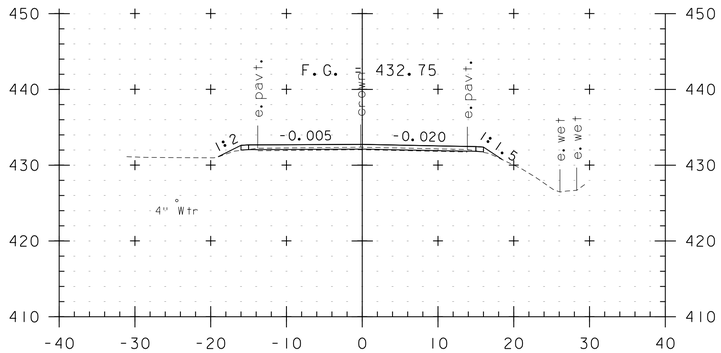
434+50

0 10 20
SCALE IN FEET

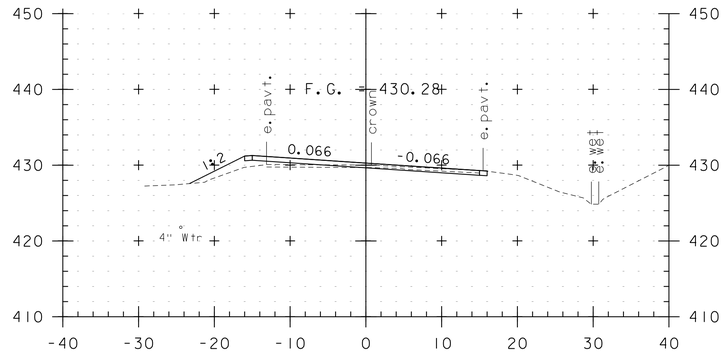
STA. 431+50 TO STA. 435+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 87	SHEET 275 OF 303

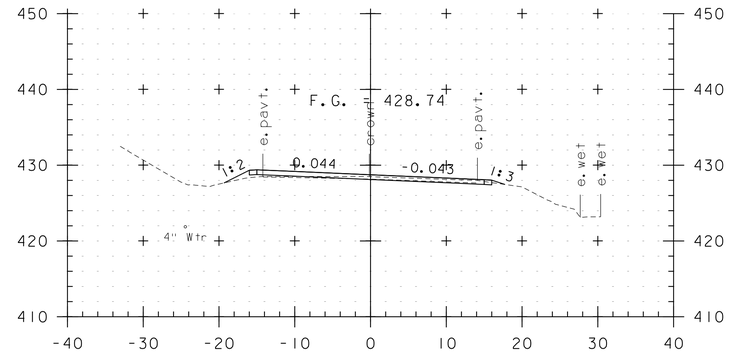
CLD 12-0337



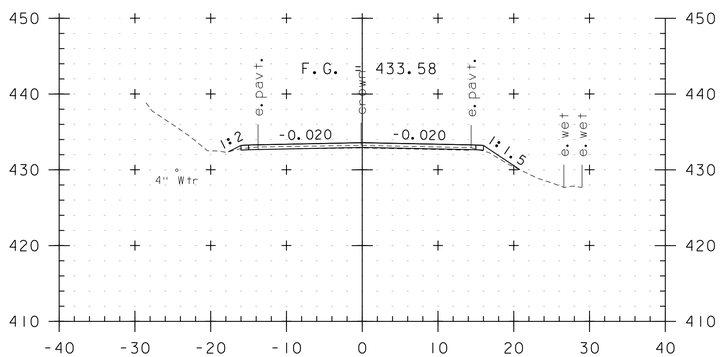
436+50



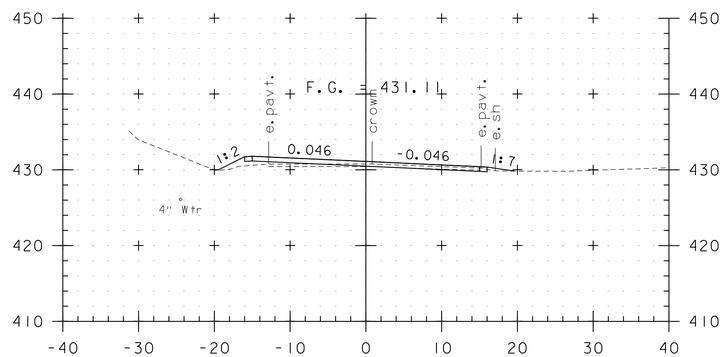
438+00



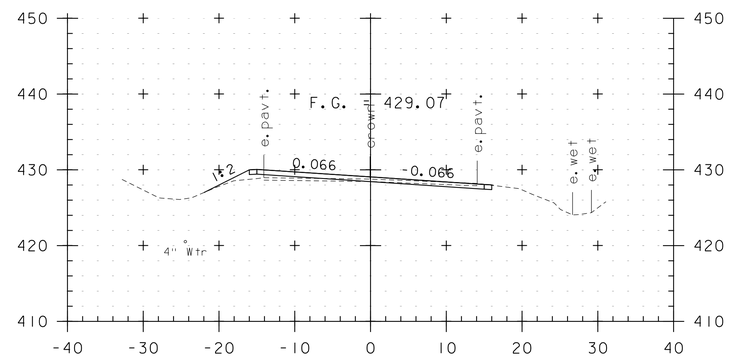
439+50



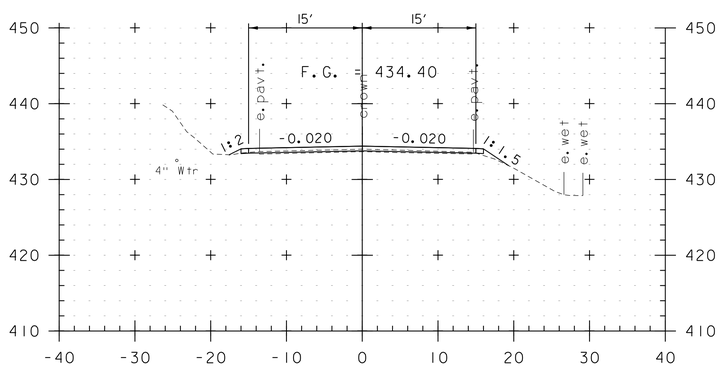
436+00



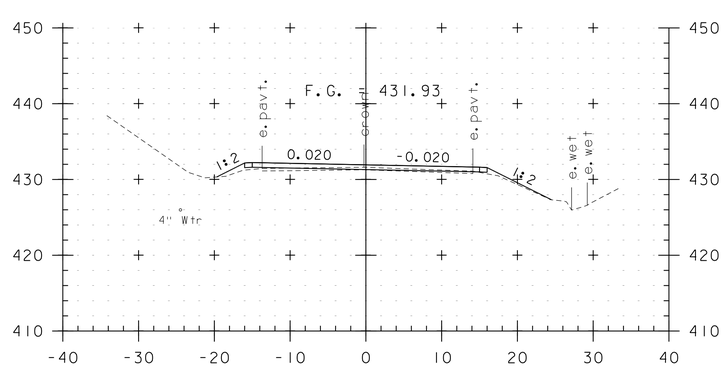
437+50



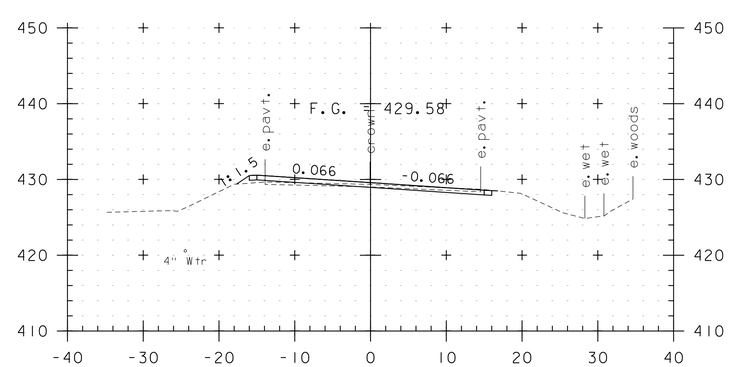
439+00



435+50



437+00



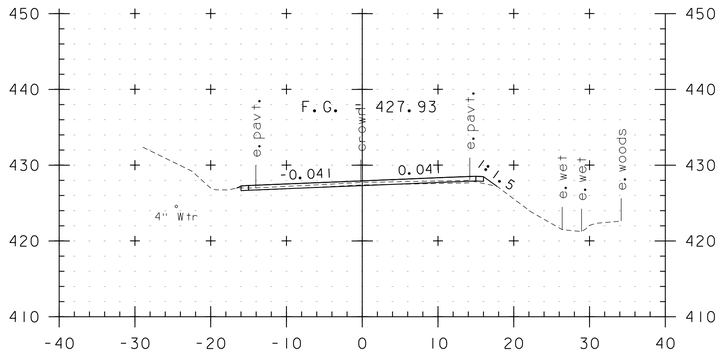
438+50

0 10 20
SCALE IN FEET

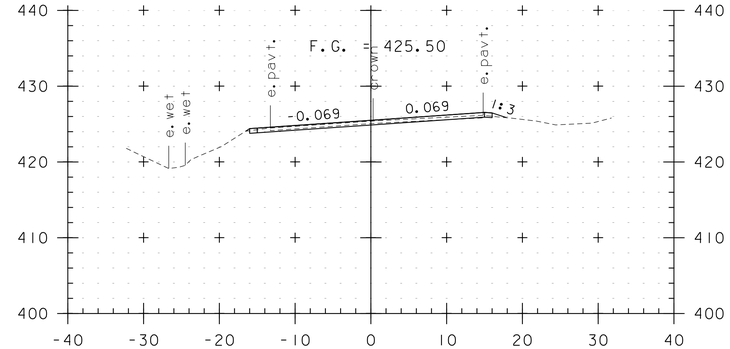
STA. 435+50 TO STA. 439+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 88	SHEET 276 OF 303

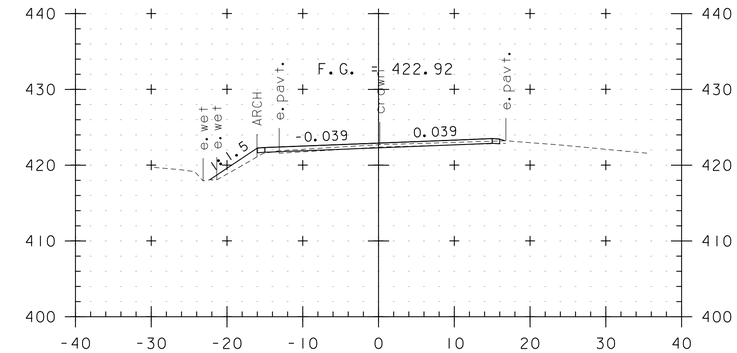
CLD 12-0337



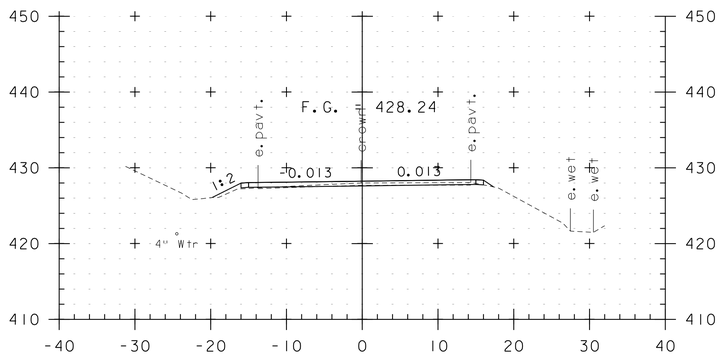
441+00



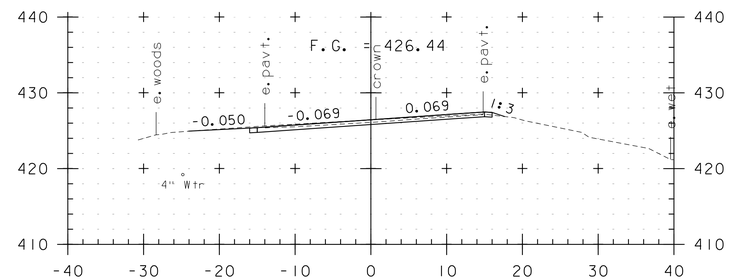
442+50



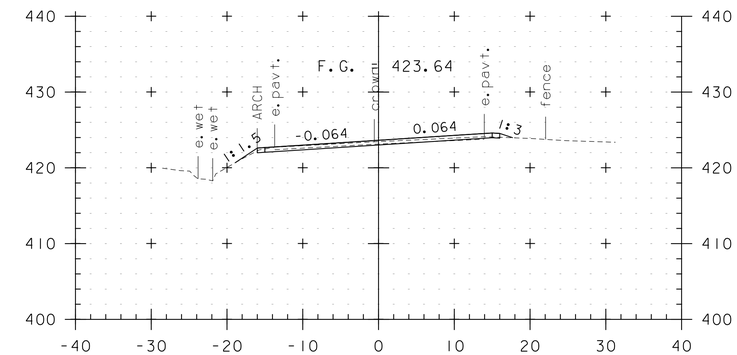
444+00



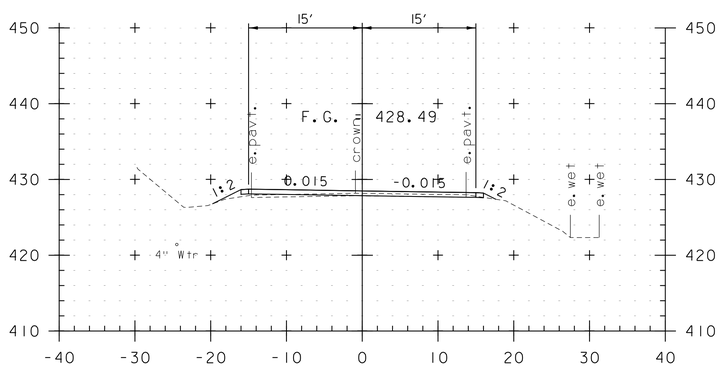
440+50



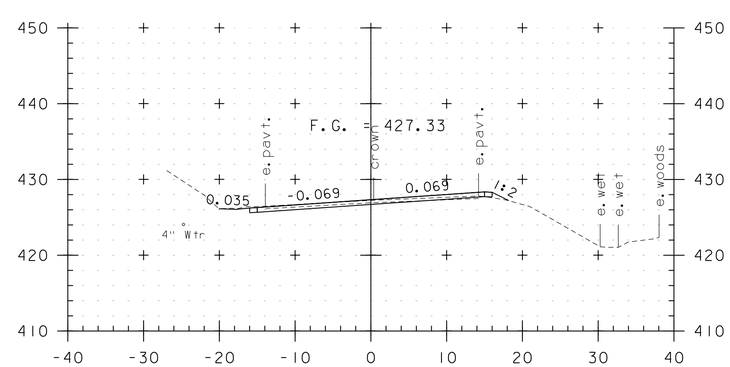
442+00



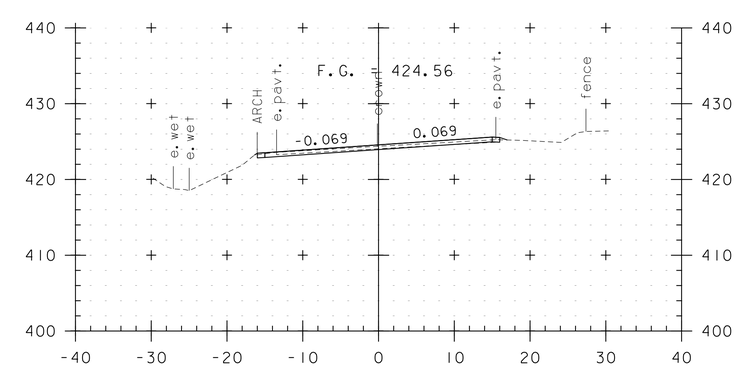
443+50



440+00



441+50



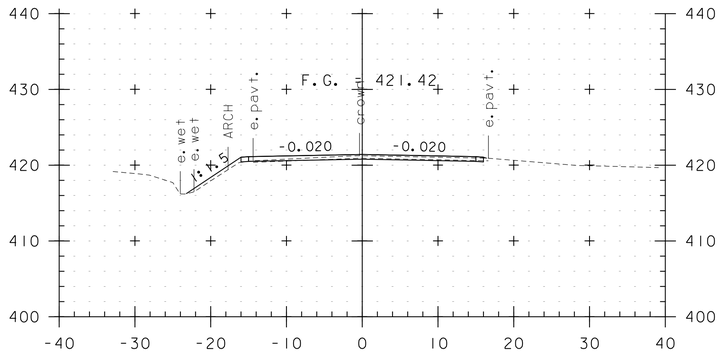
443+00

0 10 20
SCALE IN FEET

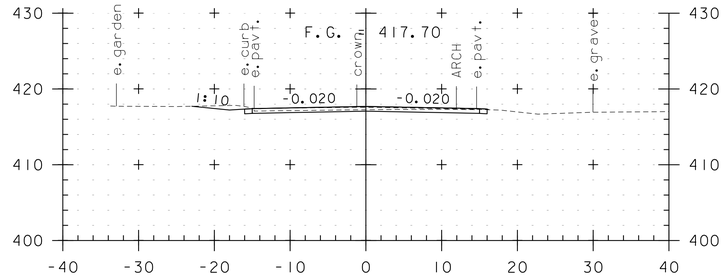
STA. 440+00 TO STA. 444+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 89	SHEET 277 OF 303

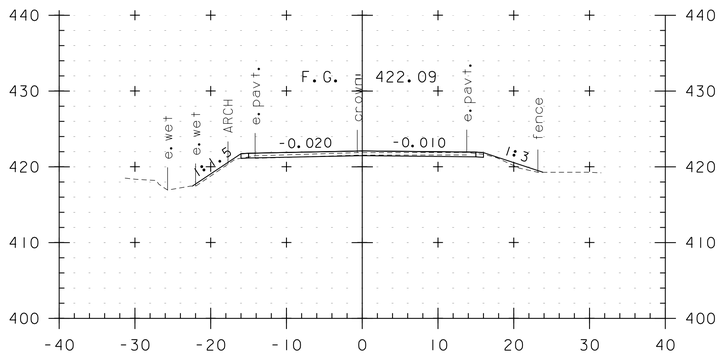
CLD 12-0337



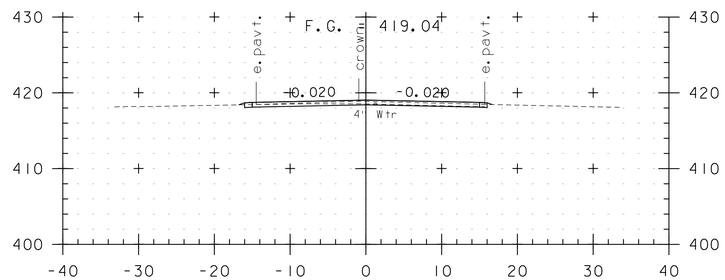
445+50



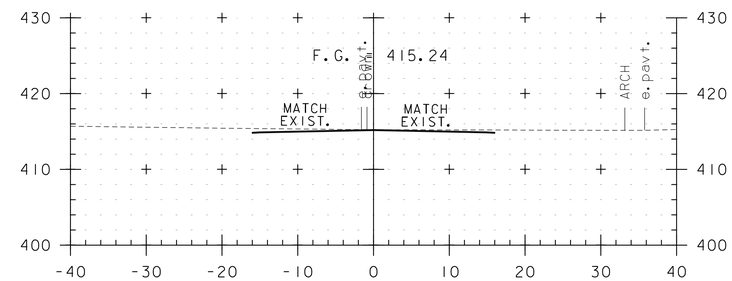
447+00



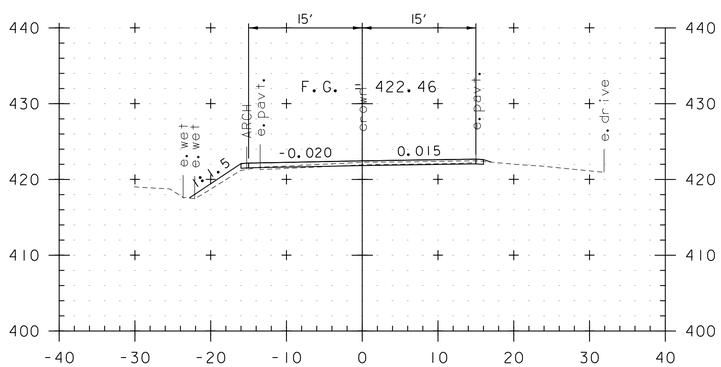
445+00



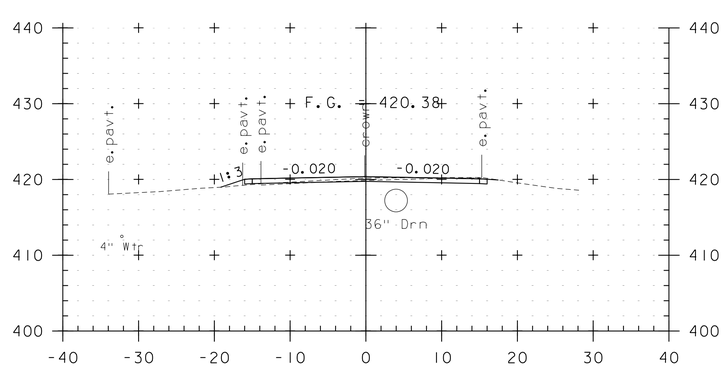
446+50



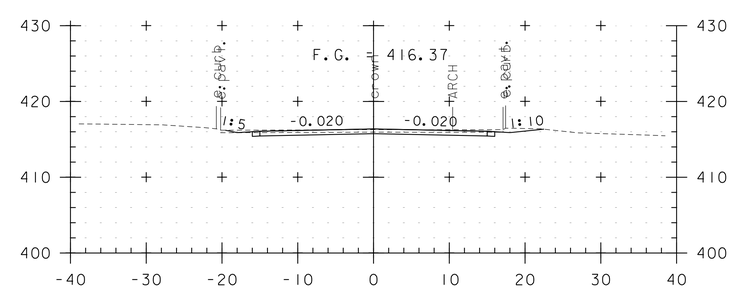
447+91.50
STOP PROJECT



444+50



446+00



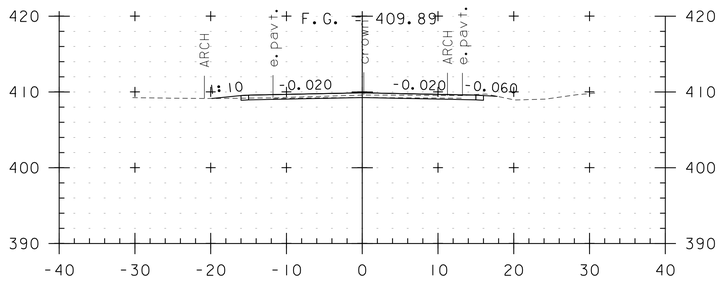
447+50

0 10 20
SCALE IN FEET

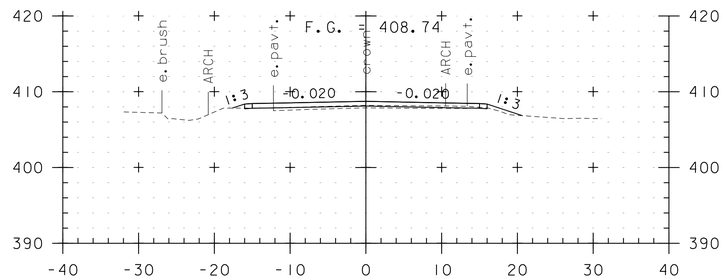
STA. 444+50 TO STA. 447+91.50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 90	SHEET 278 OF 303

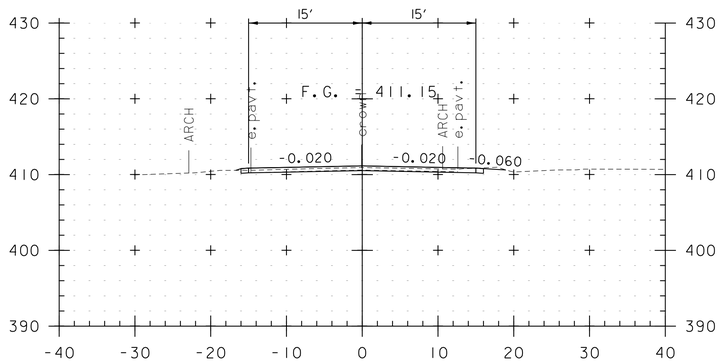
CLD 12-0337



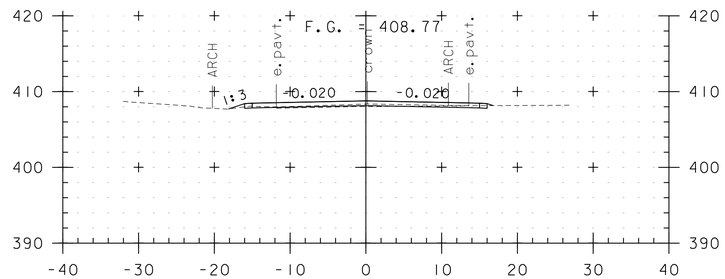
449+00



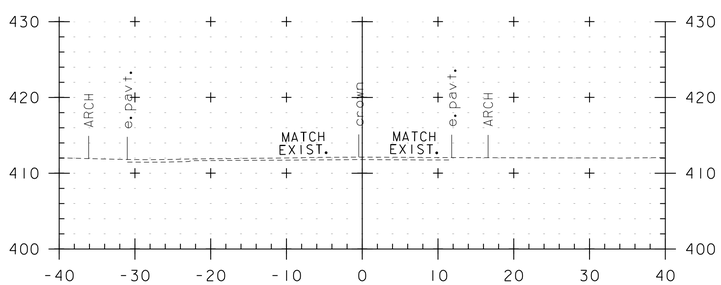
450+50



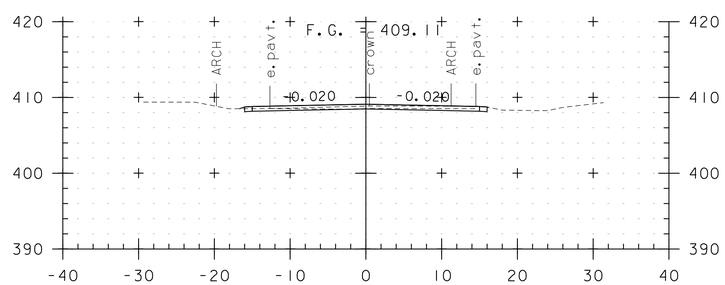
448+50



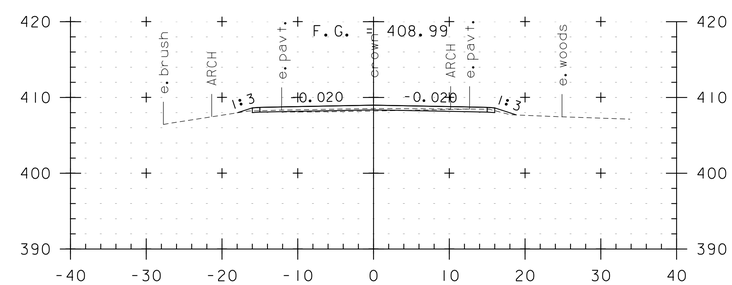
450+00



448+20.50
RESUME PROJECT



449+50



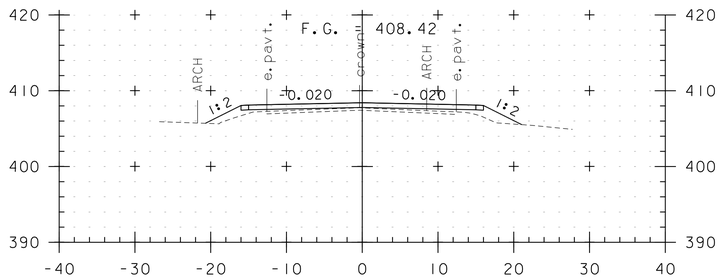
451+00

0 10 20
SCALE IN FEET

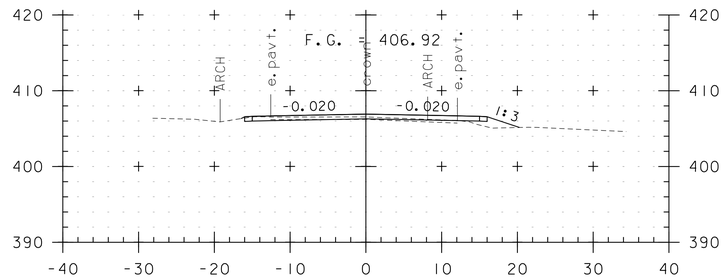
STA. 448+20.50 TO STA. 451+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 91	SHEET 279 OF 303

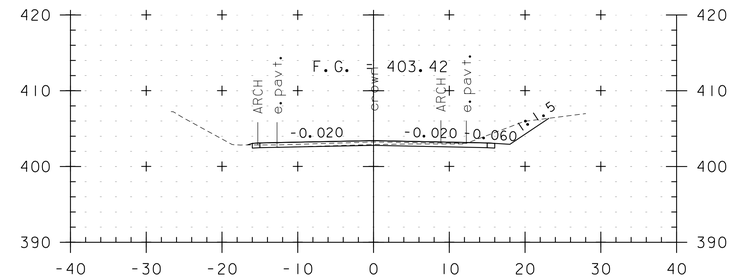
CLD 12-0337



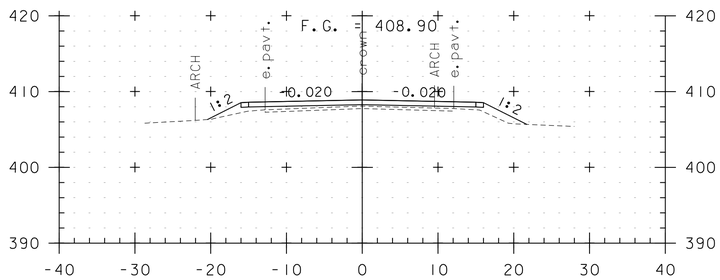
452+50



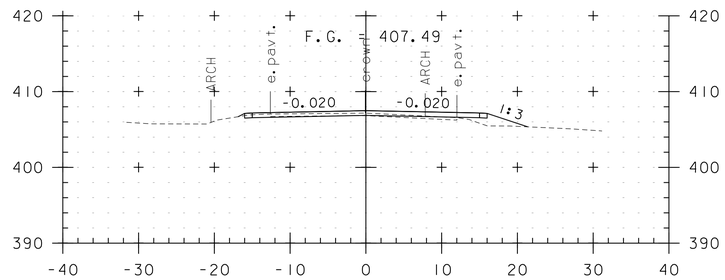
454+00



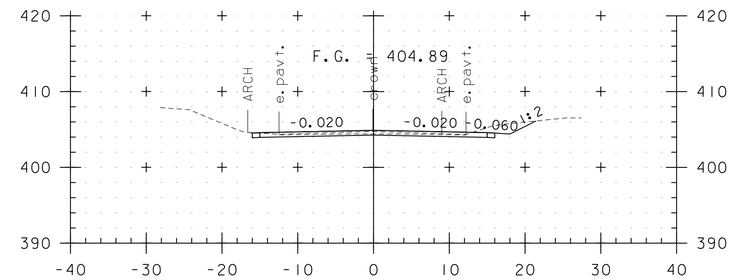
455+50



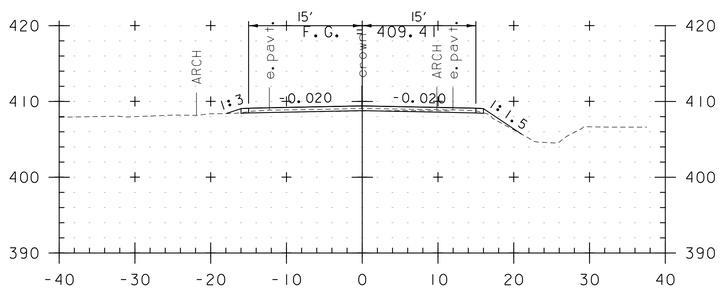
452+00



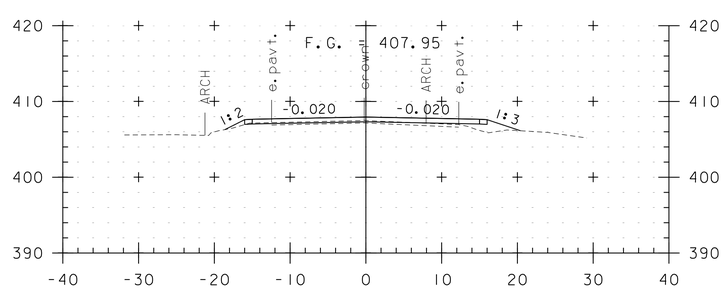
453+50



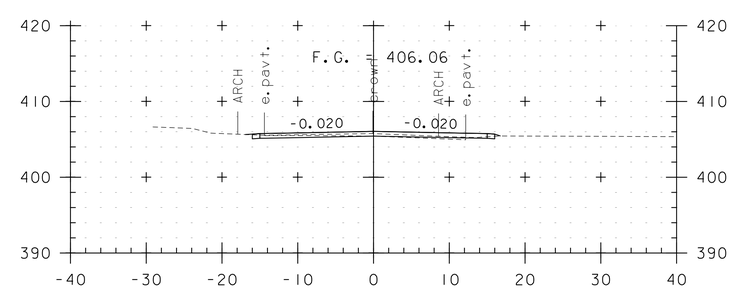
455+00



451+50



453+00



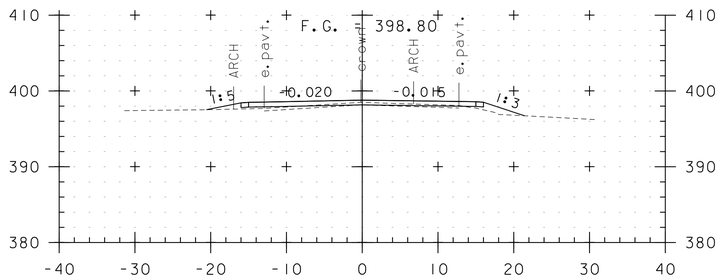
454+50

0 10 20
SCALE IN FEET

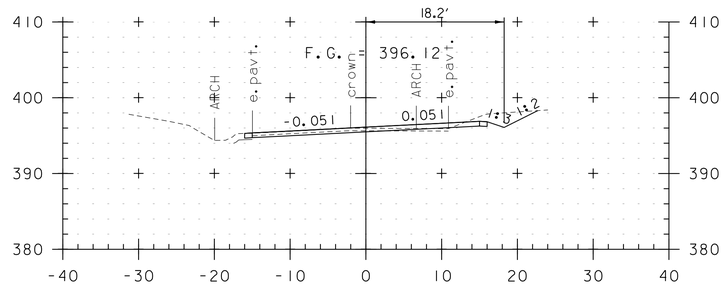
STA. 451+50 TO STA. 455+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 92	SHEET 280 OF 303

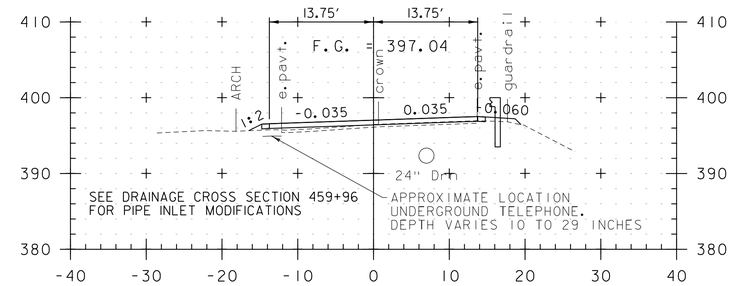
CLD 12-0337



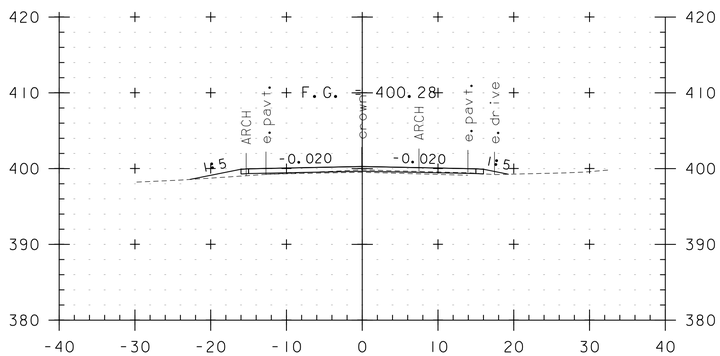
457+00



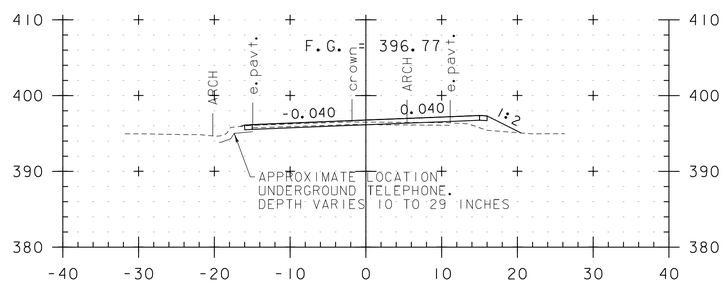
458+50



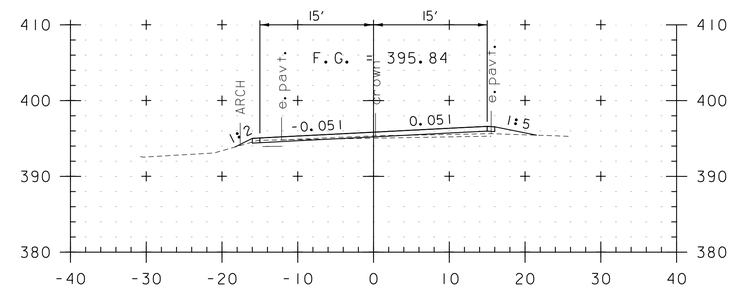
460+00



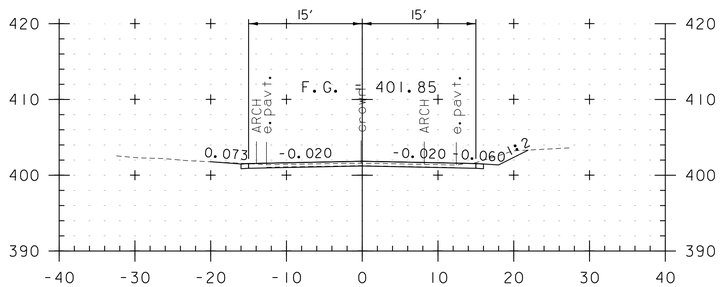
456+50



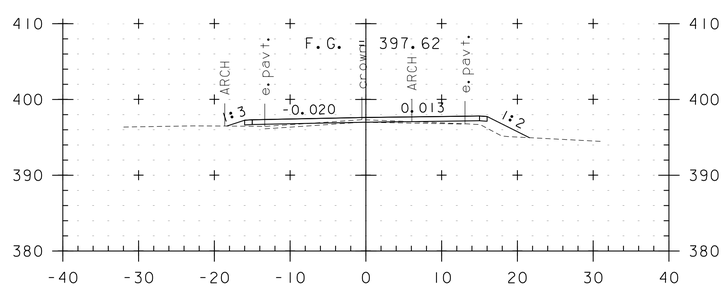
458+00



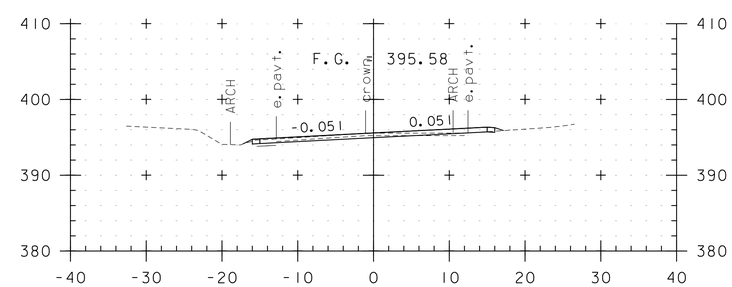
459+50



456+00



457+50



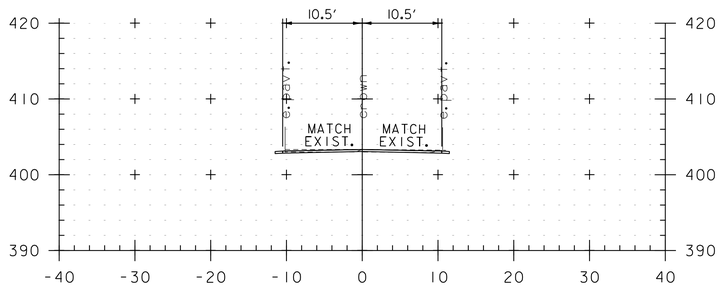
459+00

0 10 20
SCALE IN FEET

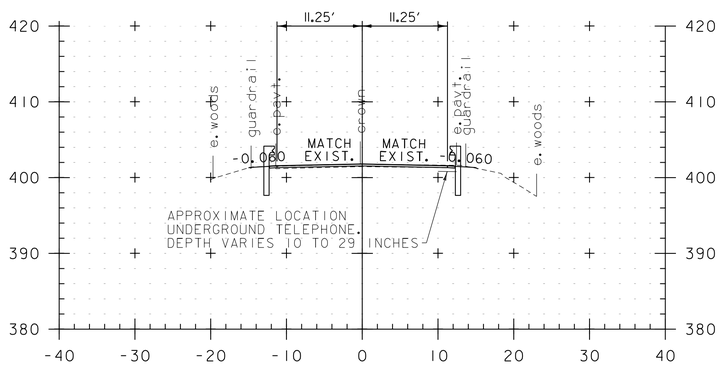
STA. 456+00 TO STA. 460+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 93	SHEET 281 OF 303

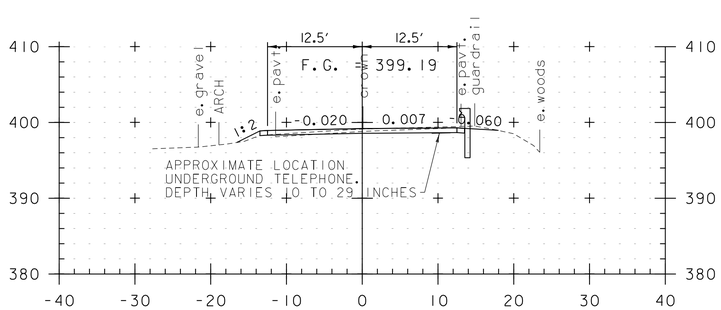
CLD 12-0337



461+49
END PROJECT



461+00



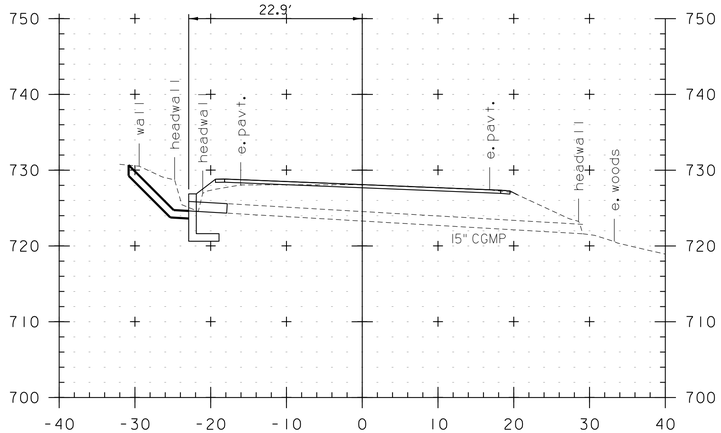
460+50

0 10 20
SCALE IN FEET

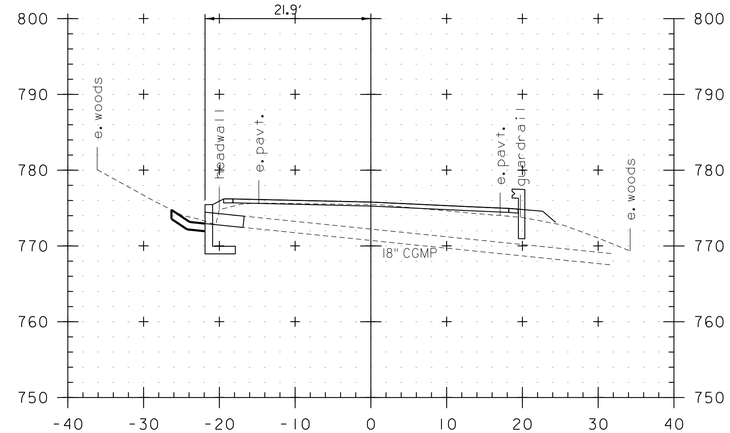
STA. 460+50 TO STA. 461+49

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xs.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET 94	SHEET 282 OF 303

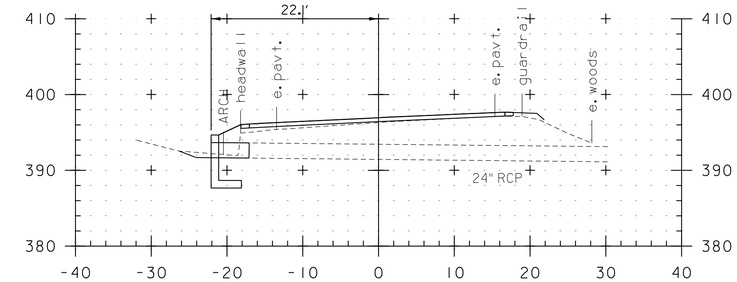
CLD 12-0337



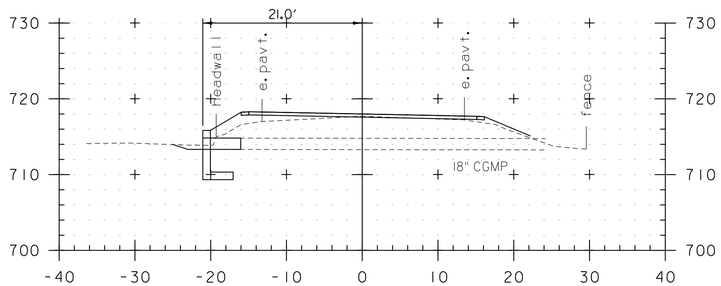
110+33



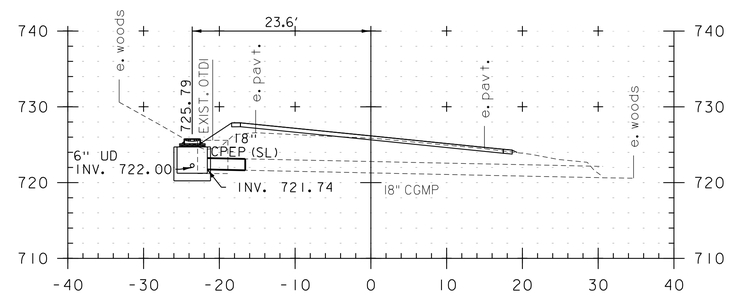
288+24



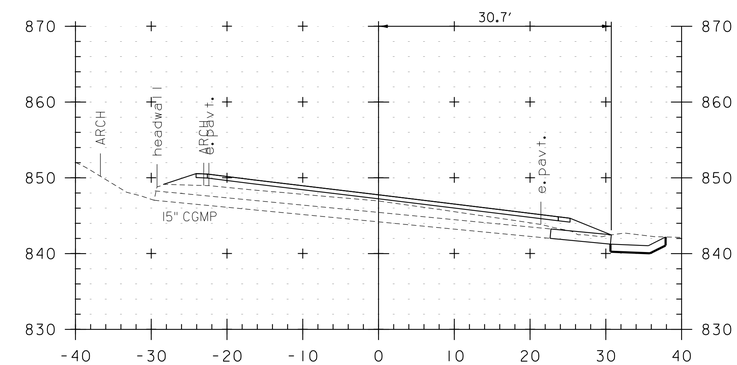
459+96



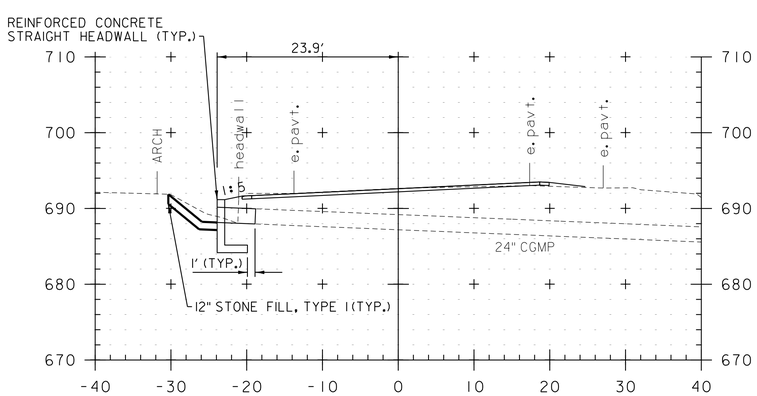
107+37



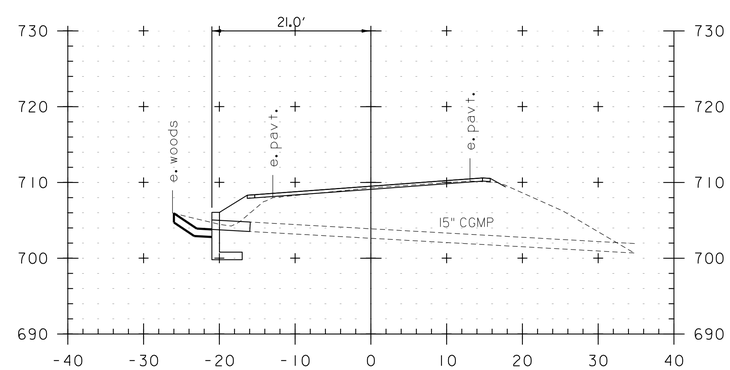
281+55



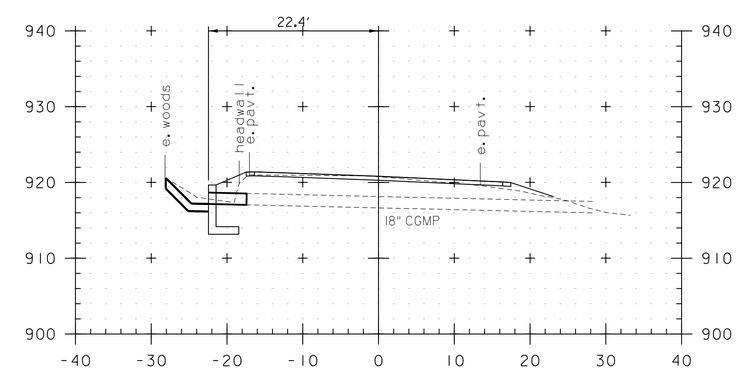
340+62



74+10



164+19



308+82

DRAINAGE NOTES

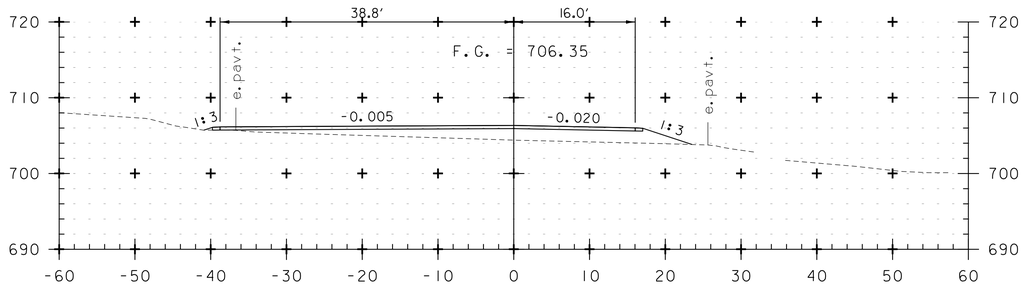
1. SEE PLAN SHEETS FOR SKEW ANGLE OF HEADWALLS.
2. HEADWALLS TO BE CONSTRUCTED IN ACCORDANCE WITH VAOT STANDARD D-33 OR AS SHOWN ON THE HEADWALL DETAIL SHEET.
3. PIPE EXTENSIONS SHALL MATCH THE SIZE AND MATERIAL OF THE EXISTING PIPES AS DIRECTED BY THE ENGINEER.
4. CONSTRUCT STONE SLOPE AS SHOWN ON THE FILL SLOPE WITH STONE FILL DETAIL ON SHEET 22.
5. REGRADE INLET AND DITCHES AS SHOWN ON THE DITCH CLEANING DETAIL SHEETS (SHEET 42 AND 43).
6. STABILIZE EROSION IN DITCHES AND AT OUTLETS AS NEEDED.
7. DRAINAGE CROSS SECTIONS ARE TAKEN ALONG THE EXISTING PIPE.

0 10 20
SCALE IN FEET

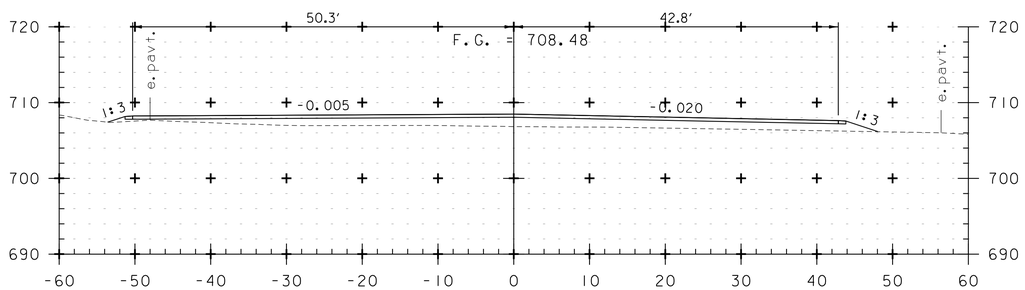
STA. 74+10 TO STA. 459+96

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsdrn.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION DRAINAGE SHEET	SHEET 283 OF 303

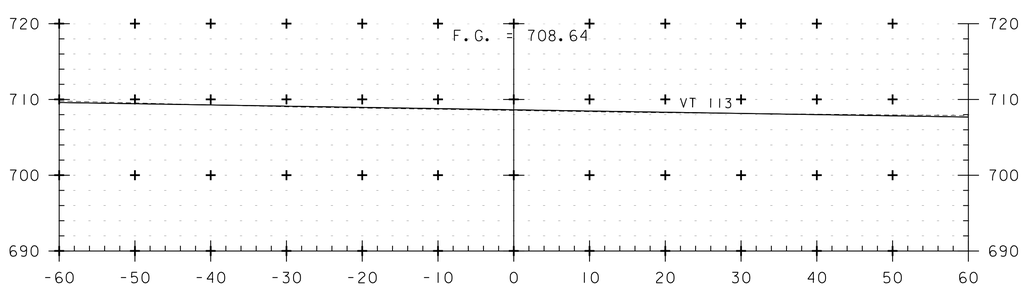
CLD 12-0337



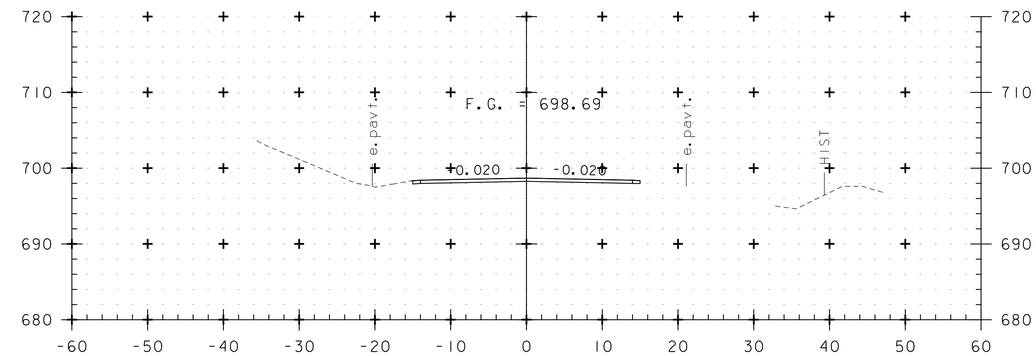
0+50



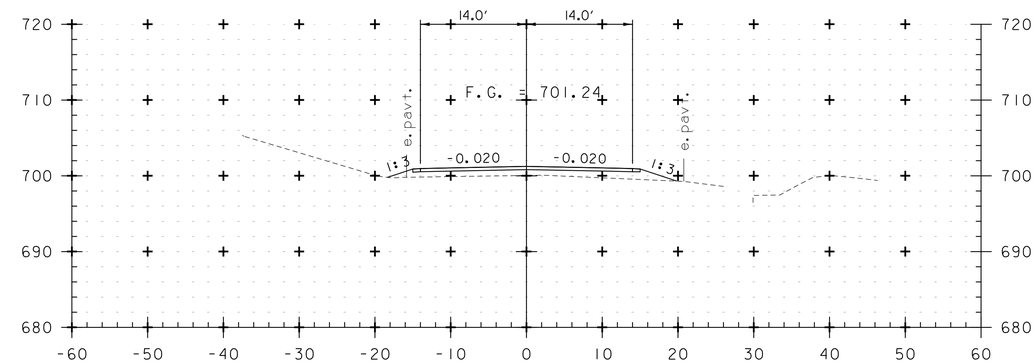
0+25



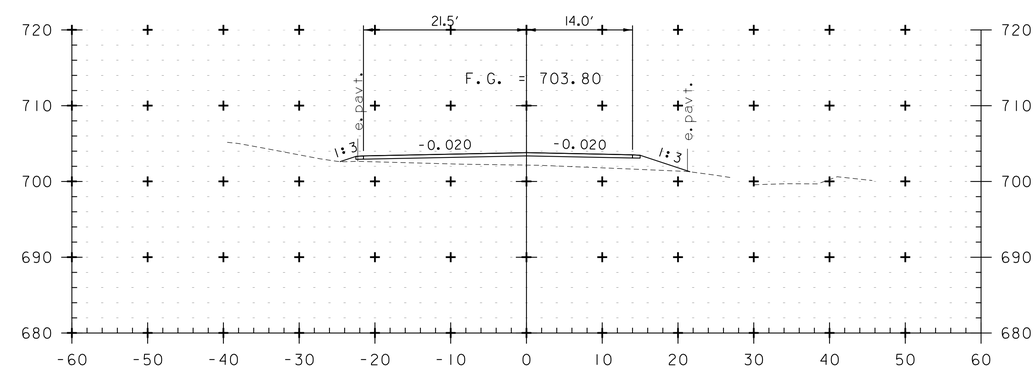
0+00



1+25



1+00



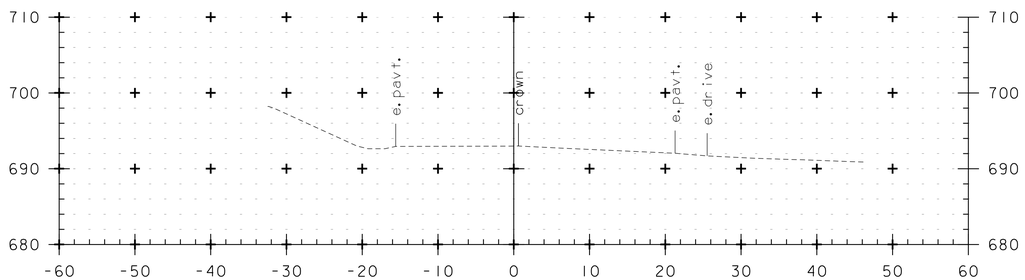
0+75

0 10 20
SCALE IN FEET

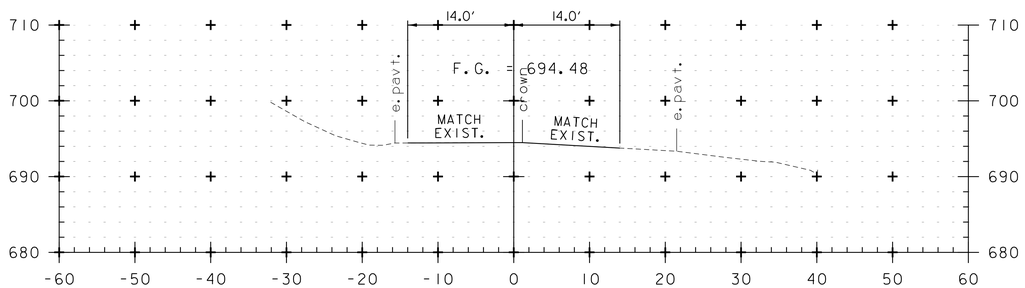
STA. 0+00 TO STA. 1+25

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsvt244.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET VT 244 (1 OF 2)	SHEET 284 OF 303

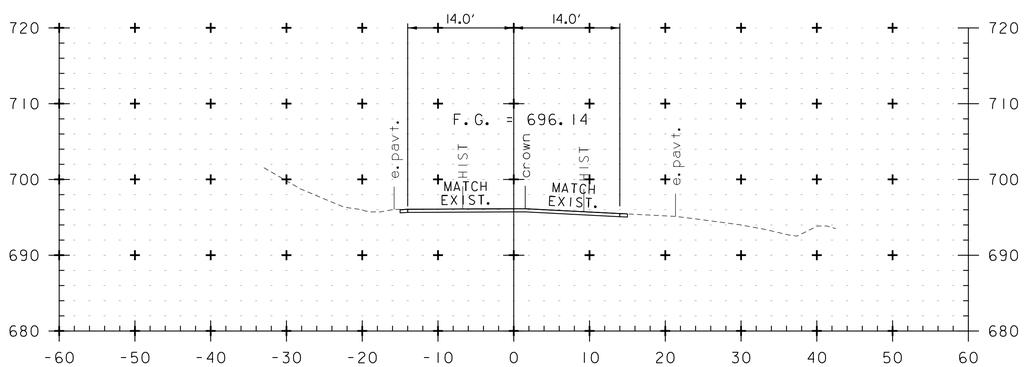
CLD 12-0337



2+00



1+75



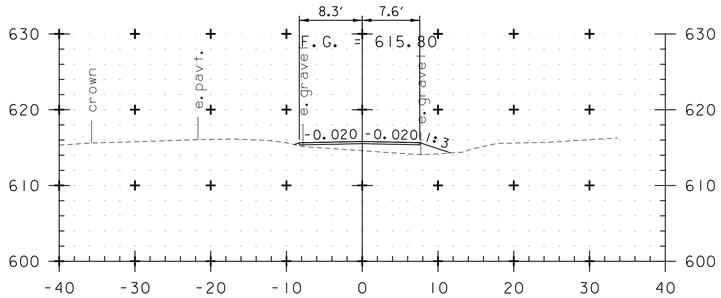
1+50

0 10 20
SCALE IN FEET

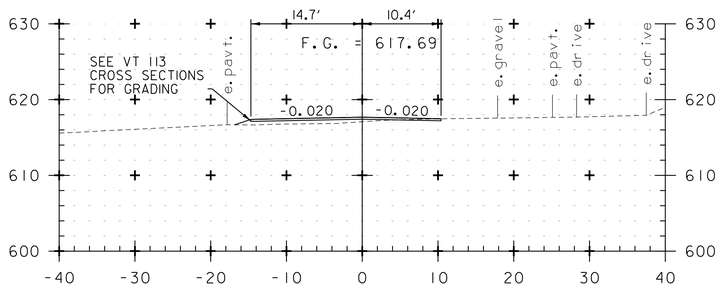
STA. 1+50 TO STA. 2+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsvt244.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET VT 244 (2 OF 2)	SHEET 285 OF 303

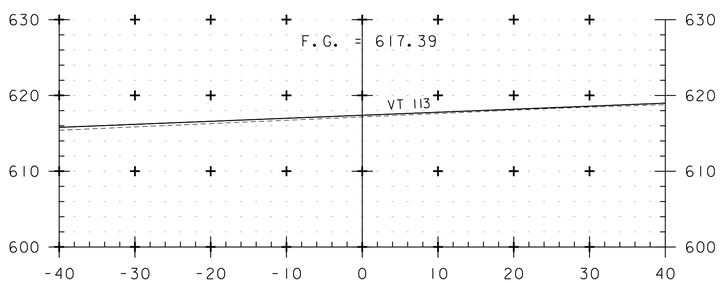
CLD 12-0337



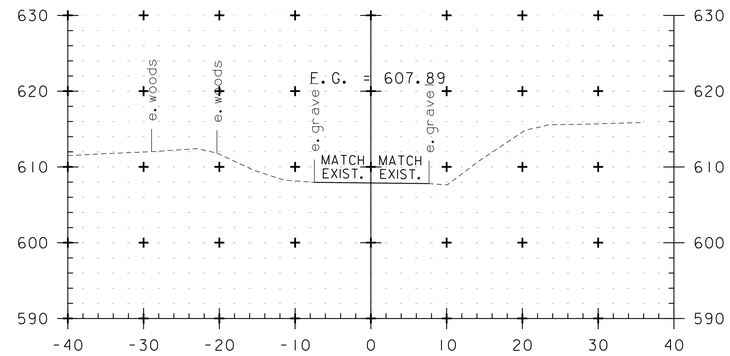
500+50



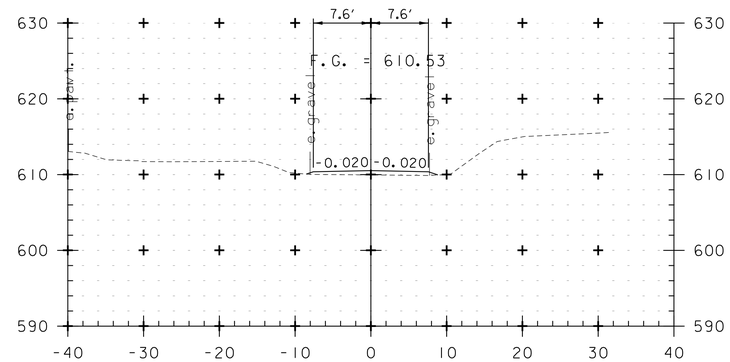
500+25



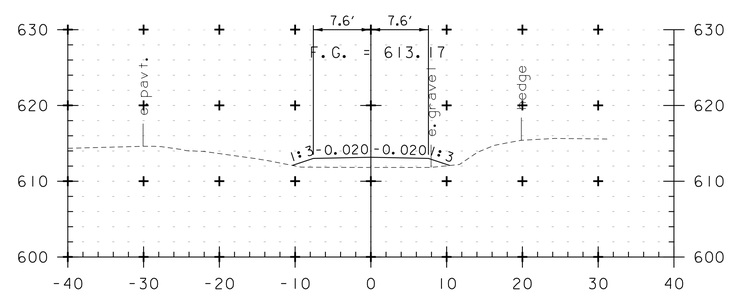
500+00



501+25



501+00



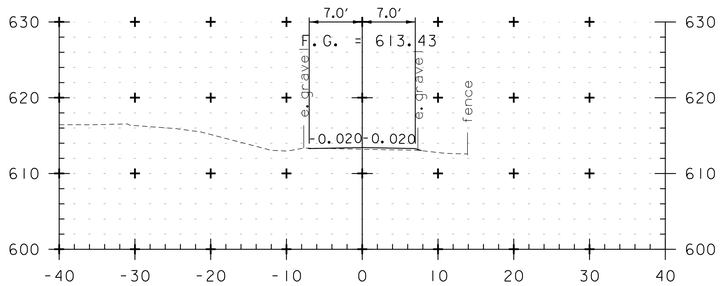
500+75

0 10 20
SCALE IN FEET

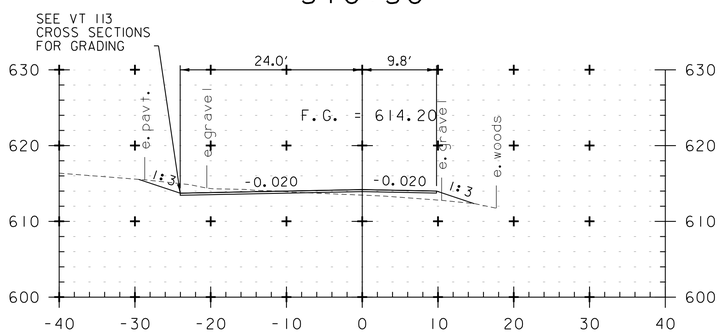
STA. 500+00 TO STA. 501+25

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth73.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 73	SHEET 286 OF 303

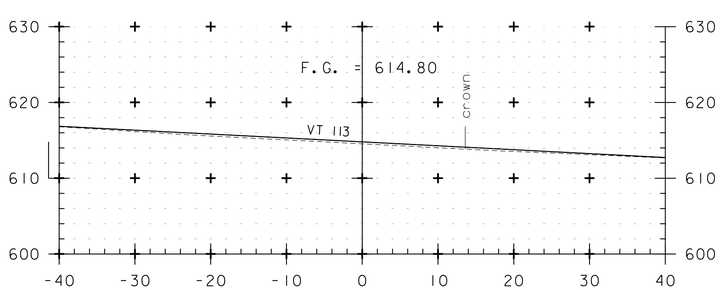
CLD 12-0337



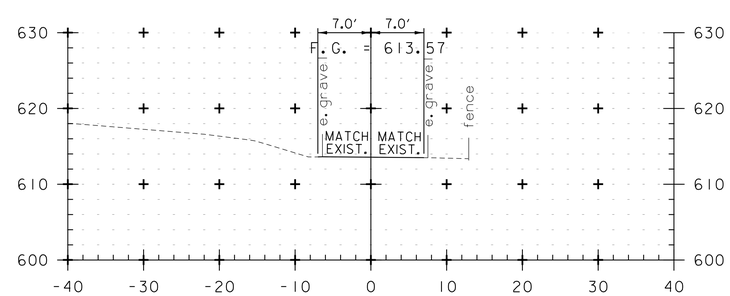
510+50



510+25



510+00



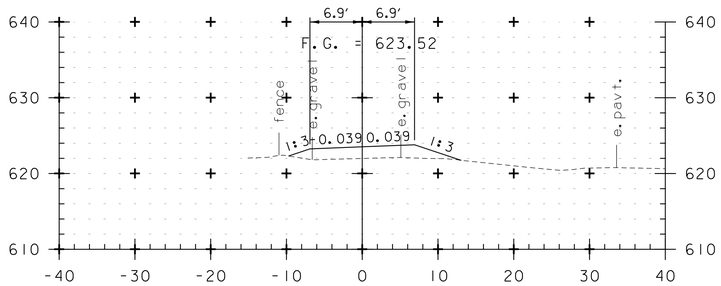
510+75

0 10 20
SCALE IN FEET

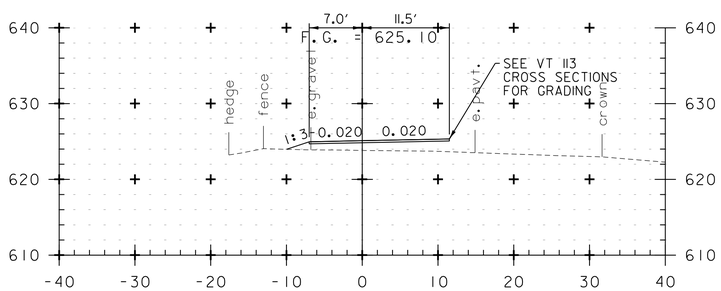
STA. 510+00 TO STA. 510+75

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth6A.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 6	SHEET 287 OF 303

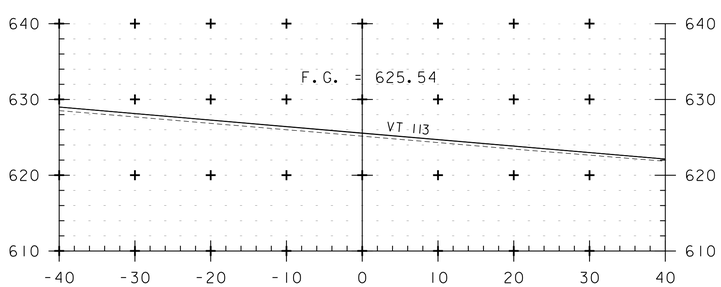
CLD 12-0337



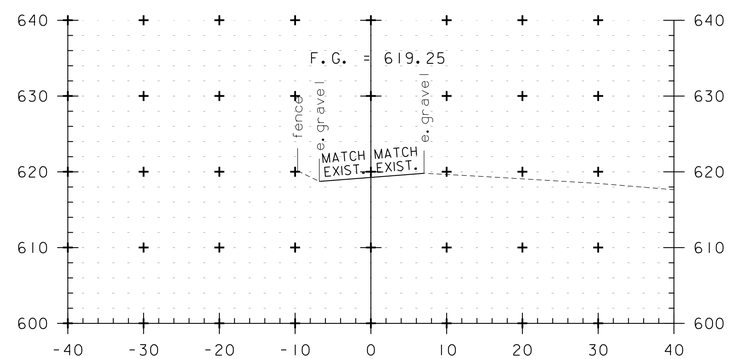
520+50



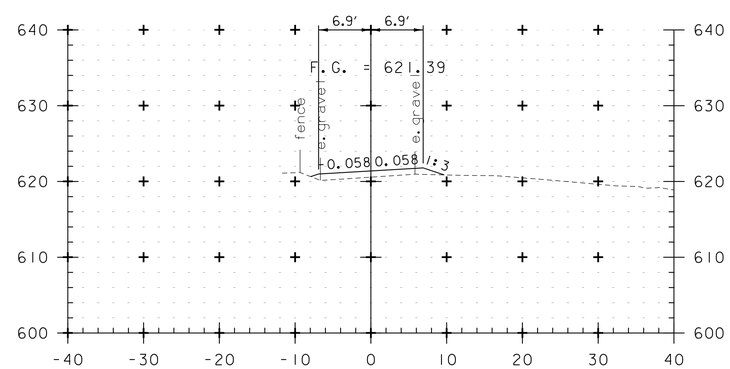
520+25



520+00



521+00



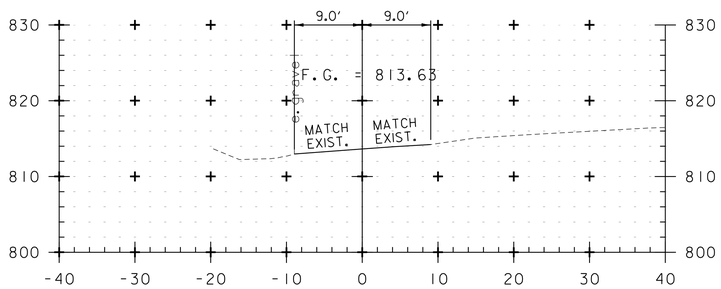
520+75

0 10 20
SCALE IN FEET

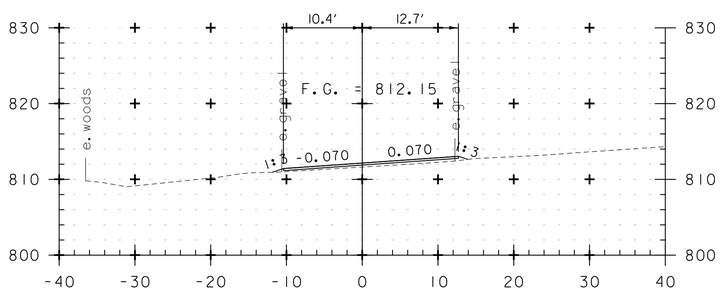
STA. 520+00 TO STA. 521+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth6B.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 6	SHEET 288 OF 303

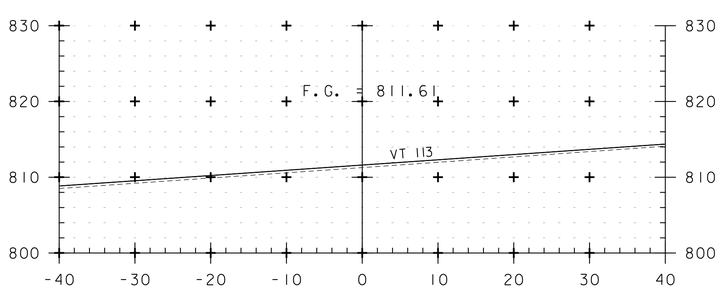
CLD 12-0337



530+50



530+25



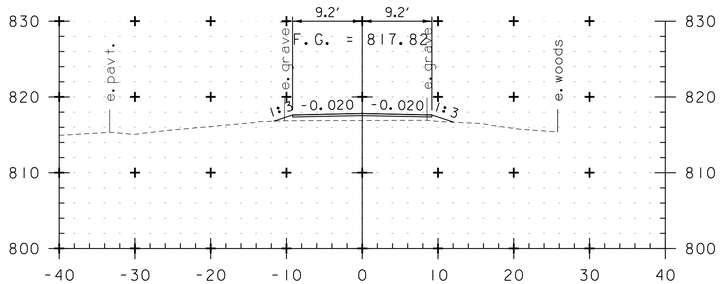
530+00

0 10 20
SCALE IN FEET

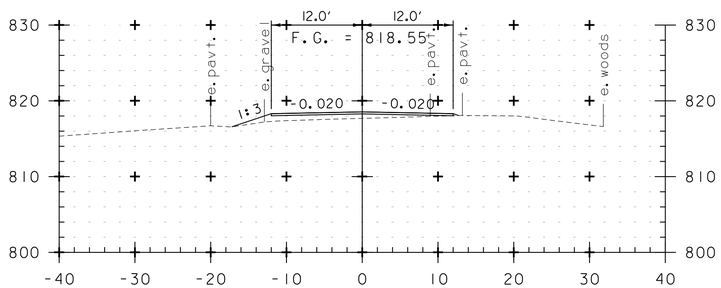
STA. 530+00 TO STA. 530+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth71A.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 71	SHEET 289 OF 303

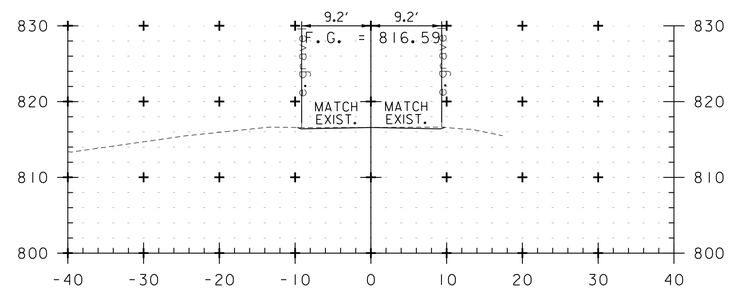
CLD 12-0337



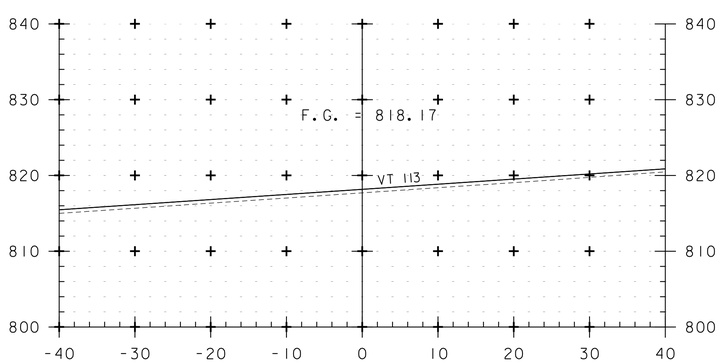
540+50



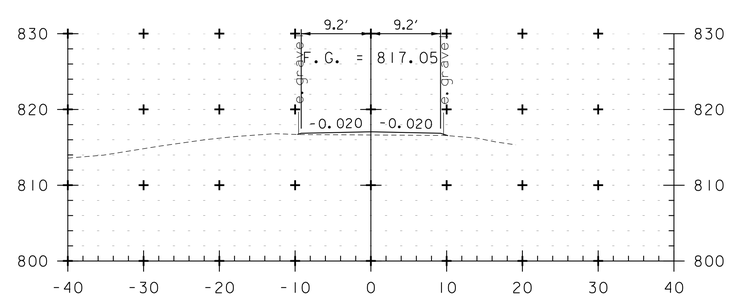
540+25



540+90



540+00



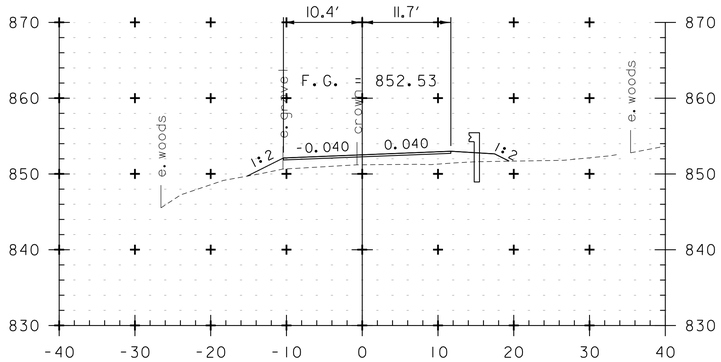
540+75

0 10 20
SCALE IN FEET

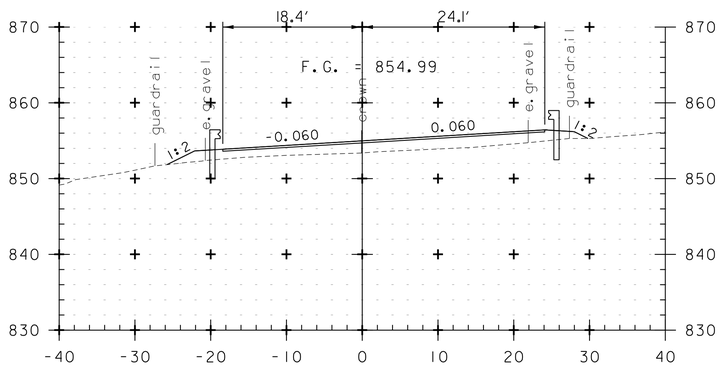
STA. 540+00 TO STA. 540+90

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth71B.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 71	SHEET 290 OF 303

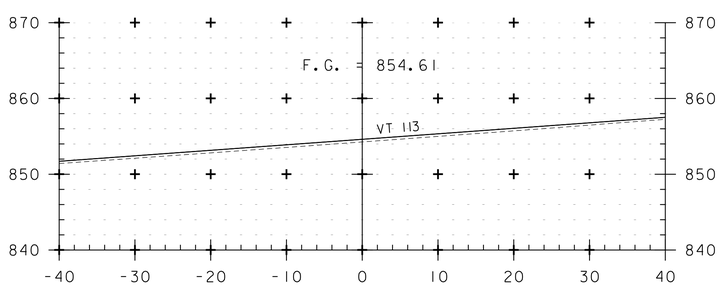
CLD 12-0337



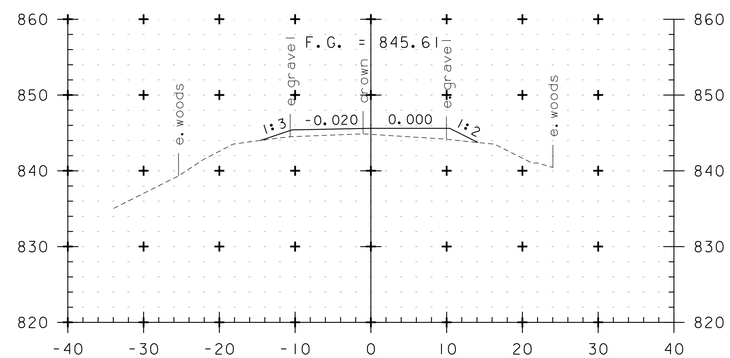
550+50



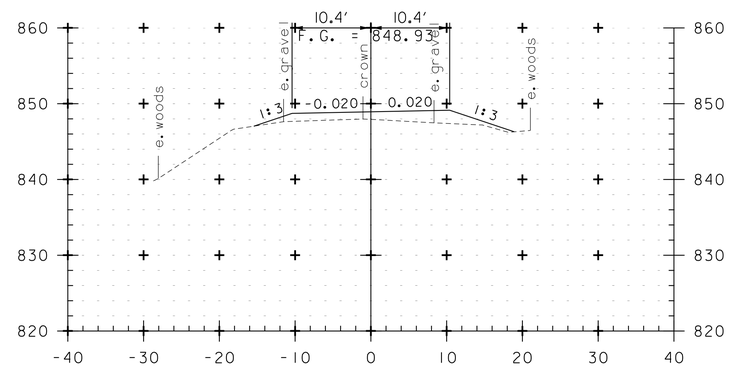
550+25



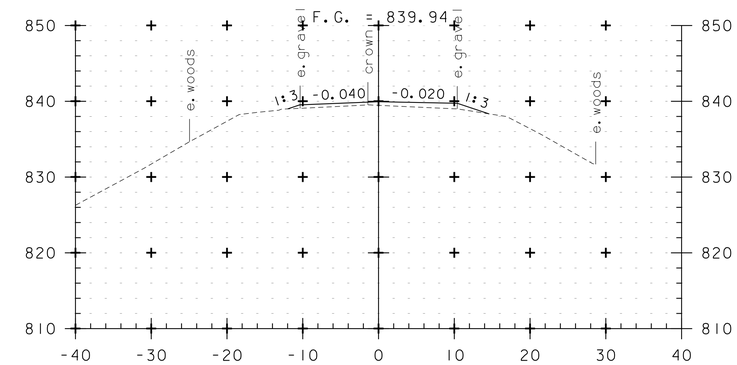
550+00



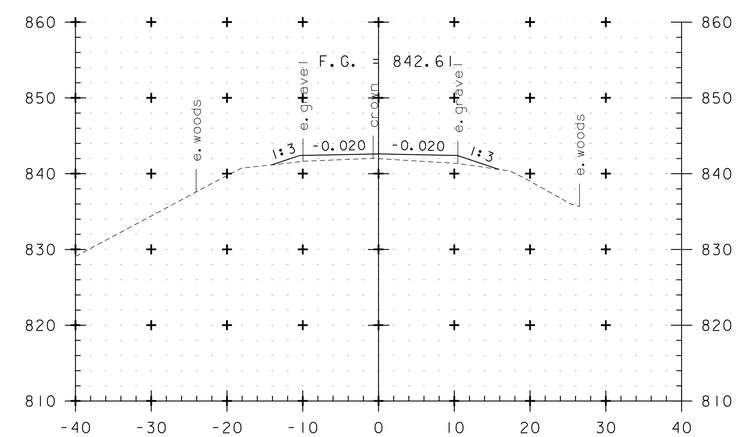
551+00



550+75



551+50



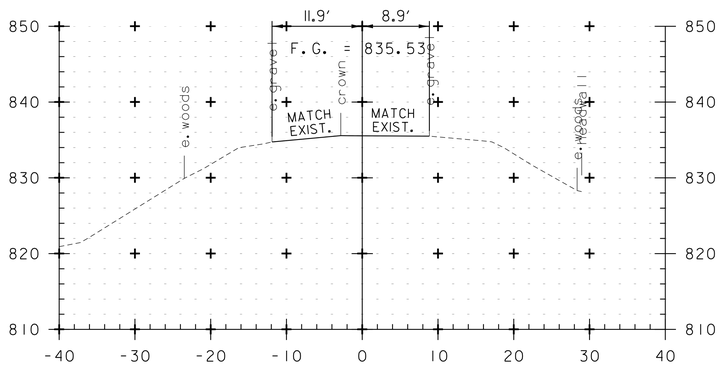
551+25

0 10 20
SCALE IN FEET

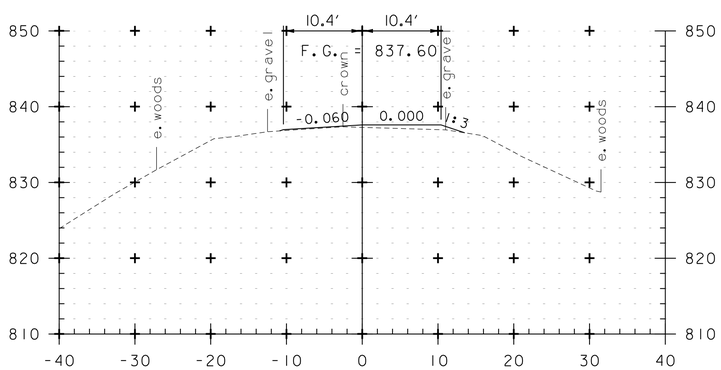
STA. 550+00 TO STA. 551+50

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth30.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 30 (1 OF 2)	SHEET 291 OF 303

CLD 12-0337



552+00



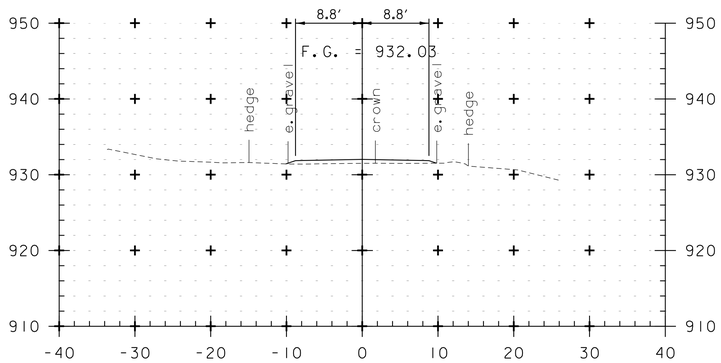
551+75

0 10 20
SCALE IN FEET

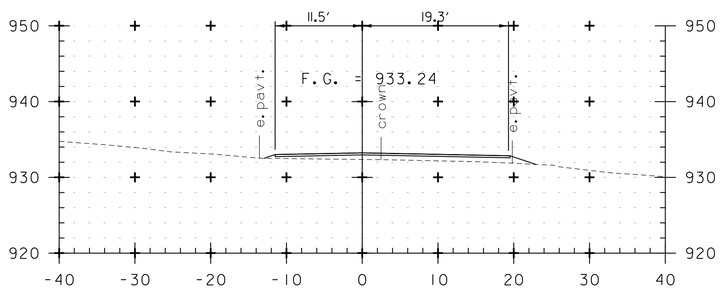
STA. 551+75 TO STA. 552+00

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth30.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 30 (2 OF 2)	SHEET 292 OF 303

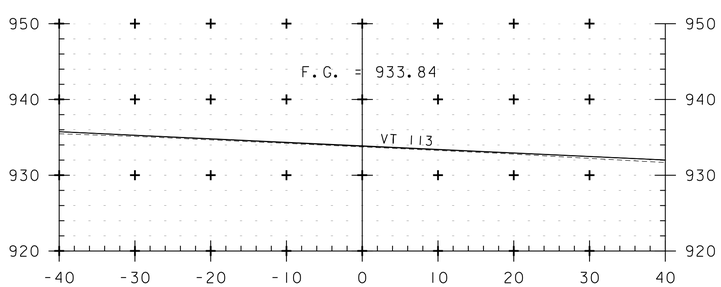
CLD 12-0337



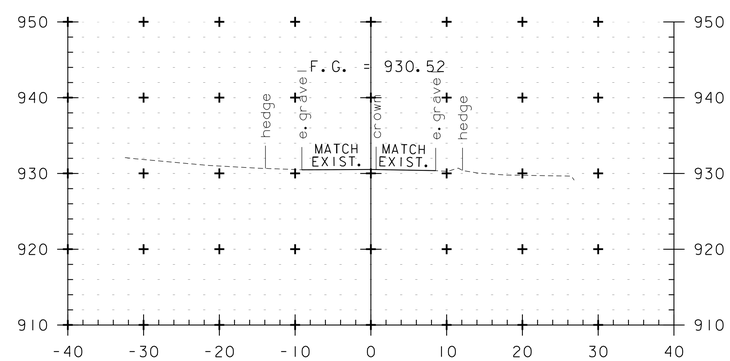
560+50



560+25



560+00



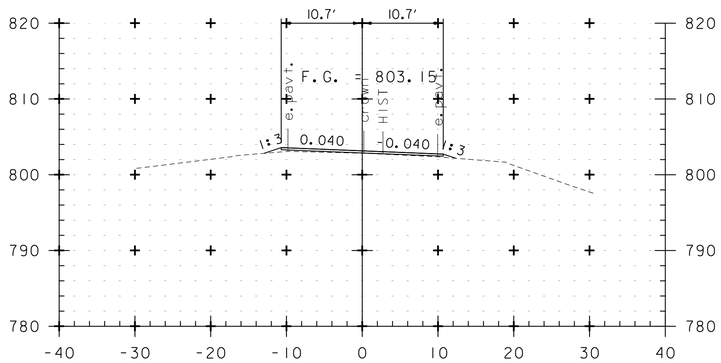
560+75

0 10 20
SCALE IN FEET

STA. 560+00 TO STA. 560+75

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth31.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 31	SHEET 293 OF 303

CLD 12-0337



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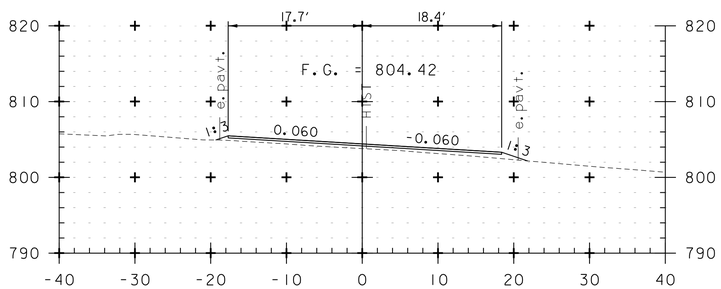

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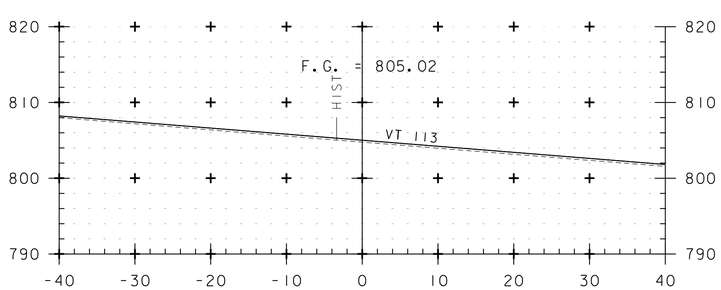
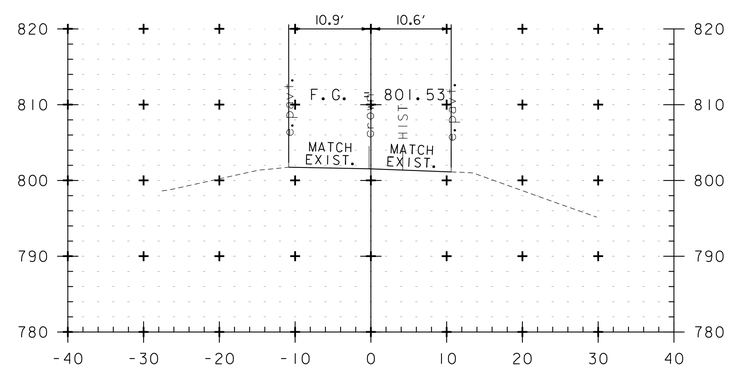


570+00



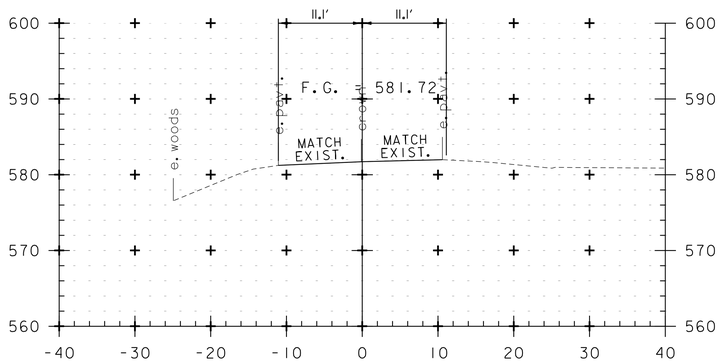
570+75

0 10 20
SCALE IN FEET

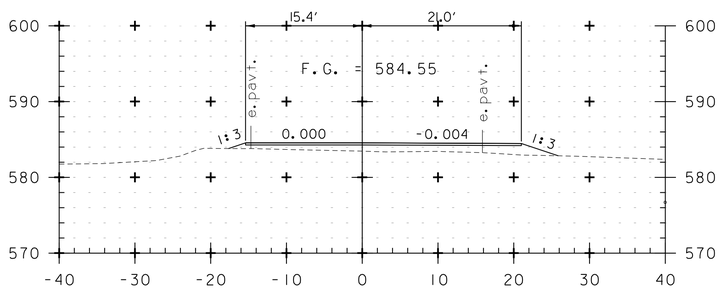
STA. 570+00 TO STA. 570+75

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth75.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 75	SHEET 294 OF 303

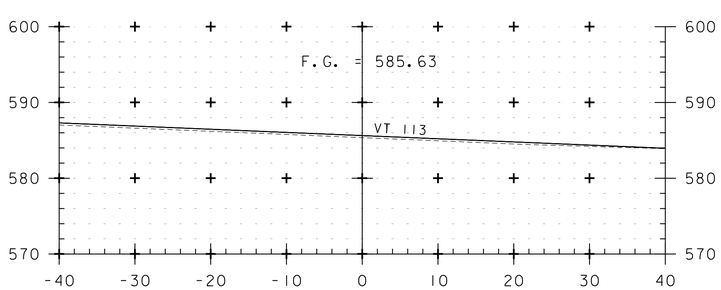
CLD 12-0337



580+40



580+25



580+00

0 10 20
SCALE IN FEET

STA. 580+00 TO STA. 580+40

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194xsth34.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: N. LEMAY	CHECKED BY: P. SHEDD
CROSS SECTION SHEET TH 34	SHEET 295 OF 303

CLD 12-0337

CONSTRUCTION OPERATIONS TRAFFIC PROTECTION PLAN

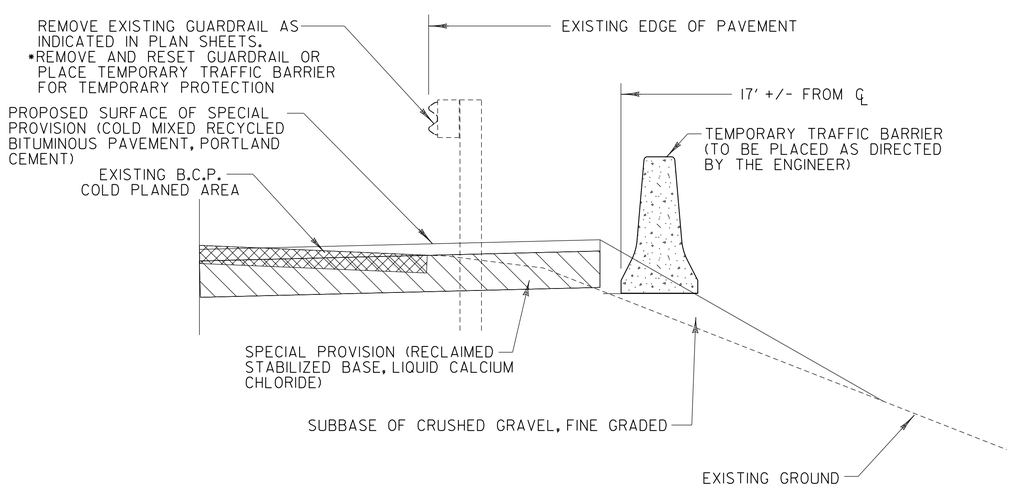
EXISTING GUARDRAIL INVENTORY								PROTECTION PLAN	
BEGIN STA.	END STA.	OFFSET	LENGTH (LF)	RETAIN/REPLACE (Y/N)	APPROX. OFFSET DISTANCE FROM PROPOSED CENTERLINE TO FACE OF EXISTING RAIL (LF)	EXISTING RAIL TYPE (POST AND BARRIER)	ASSESSED CONDITION (GOOD/FAIR/POOR)	CONSTRUCTION CONDITION	900.640 BARRIER FOR TEMPORARY TRAFFIC PROTECTION (LF)
THETFORD VT 113									
47+66	51+29	LT	363	N	13	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
58+95	61+16	LT	221	N	12-18	STEEL W-BEAM	FAIR	58+95-60+20 REMOVE AND RESET FACE OF RAIL TO 15 FEET OFF PROPOSED CENTERLINE BEFORE FIRST PASS OF RECLAIM OPERATION THEN REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE. 60+20-61+16 LEAVE IN PLACE FOR ALL OPERATIONS THEN REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	125
60+80	61+48	RT	68	Y	15-17	STEEL W-BEAM	GOOD	LEAVE IN PLACE FOR ALL OPERATIONS AND REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
62+33	63+44	RT	111	Y	16-17	STEEL W-BEAM	FAIR	LEAVE IN PLACE FOR ALL OPERATIONS AND REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
63+69	70+37	RT	668	N	14-17	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
70+76	73+83	RT	307	N	14-16	STEEL W-BEAM	GOOD	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
144+89	146+90	LT	201	N	14-15	STEEL W-BEAM	GOOD	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
145+18	146+94	RT	176	N	13-15	STEEL W-BEAM	GOOD	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
158+94	161+45	RT	251	N	14-15	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
173+43	178+69	RT	526	N	13-15	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
177+32	178+70	LT	138	N	15-16	STEEL W-BEAM	POOR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS.	
185+40	192+01	LT	661	N	14-21	STEEL W-BEAM	GOOD	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
189+19	191+79	RT	260	N	14-16	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
213+04	216+16	LT	312	N	14-15	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	

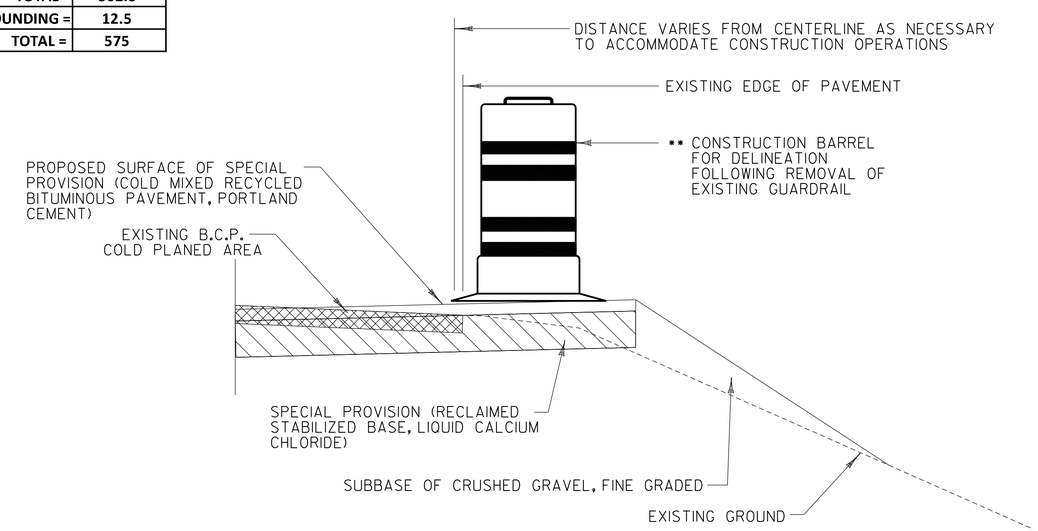
CONSTRUCTION OPERATIONS TRAFFIC PROTECTION PLAN

EXISTING GUARDRAIL INVENTORY								PROTECTION PLAN	
BEGIN STA.	END STA.	OFFSET	LENGTH (LF)	RETAIN/REPLACE (Y/N)	APPROX. OFFSET DISTANCE FROM PROPOSED CENTERLINE TO FACE OF EXISTING RAIL (LF)	EXISTING RAIL TYPE (POST AND BARRIER)	ASSESSED CONDITION (GOOD/FAIR/POOR)	CONSTRUCTION CONDITION	900.640 BARRIER FOR TEMPORARY TRAFFIC PROTECTION (LF)
230+48	241+67	RT	1119	N	14-16	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
234+99	238+49	LT	350	N	14-15	STEEL W-BEAM	POOR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IVS LEVELING COURSE IS COMPLETE.	
265+81	267+47	RT	166	N	14-15	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
282+73	289+50	RT	677	N	15-16	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
292+57	296+12	RT	355	N	14-16	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
294+48	299+34	LT	482	N	15-16	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
299+63	304+62	LT	525	N	12-16	STEEL W-BEAM	FAIR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
342+41	343+04	LT	63	N	13-14	STEEL W-BEAM	POOR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
342+41	343+44	RT	103	N	14-15	STEEL W-BEAM	POOR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
367+56	369+66	RT	210	Y	>28'	ALUMINUM	GOOD	LEAVE IN PLACE FOR ALL OPERATIONS AND RETAIN EXISTING RAIL.	
368+51	369+61	LT	110	Y	>29'	ALUMINUM	GOOD	LEAVE IN PLACE FOR ALL OPERATIONS AND RETAIN EXISTING RAIL.	
372+32	374+51	LT	219	Y	>28'	ALUMINUM	GOOD	LEAVE IN PLACE FOR ALL OPERATIONS AND RETAIN EXISTING RAIL.	
372+38	373+47	RT	109	Y	>29'	ALUMINUM	GOOD	LEAVE IN PLACE FOR ALL OPERATIONS AND RETAIN EXISTING RAIL.	
383+74	385+98	RT	224	N	14-15	STEEL W-BEAM	POOR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS.	
414+20	416+70	RT	250	N	15-17	STEEL W-BEAM	POOR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
415+60	416+45	LT	85	N	15	STEEL W-BEAM	POOR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	

CONSTRUCTION OPERATIONS TRAFFIC PROTECTION PLAN

EXISTING GUARDRAIL INVENTORY								PROTECTION PLAN	
BEGIN STA.	END STA.	OFFSET	LENGTH (LF)	RETAIN/REPLACE (Y/N)	APPROX. OFFSET DISTANCE FROM PROPOSED CENTERLINE TO FACE OF EXISTING RAIL (LF)	EXISTING RAIL TYPE (POST AND BARRIER)	ASSESSED CONDITION (GOOD/FAIR/POOR)	CONSTRUCTION CONDITION	900.640 BARRIER FOR TEMPORARY TRAFFIC PROTECTION (LF)
425+16	431+26	LT	610	Y	14-19	STEEL W-BEAM	FAIR	425+15-428+27.5 REMOVE AND RESET FACE OF RAIL TO 17 FEET OFF PROPOSED CENTERLINE BEFORE FIRST PASS OF RECLAIM OPERATION THEN REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE. 428+27.5-430+02.5 LEAVE IN PLACE FOR ALL OPERATIONS THEN REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE. 430+02.5-431+27.5 REMOVE AND RESET FACE OF RAIL TO 17 FEET OFF PROPOSED CENTERLINE BEFORE FIRST PASS OF RECLAIM OPERATION THEN REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	437.5
431+60	432+87	LT	127	N	15-17	STEEL W-BEAM	POOR	REMOVE BEFORE FIRST PASS OF RECLAIM OPERATION AND DELINEATE WITH BARRELS AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
459+86	461+48	RT	162	Y	12-16	STEEL W-BEAM	FAIR	LEAVE IN PLACE FOR ALL OPERATIONS AND REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
460+98	461+48	LT	50	Y	11.5	STEEL W-BEAM	FAIR	LEAVE IN PLACE FOR ALL OPERATIONS AND REMOVE AND INSTALL NEW AFTER COLD MIX LIFT OR TYPE IIIS INTERMEDIATE COURSE IS COMPLETE.	
								TOTAL =	**562.5**
								ROUNDING =	**12.5**
								TOTAL =	**575**





TEMPORARY TRAFFIC PROTECTION AND DELINEATION DETAILS FOR ROADSIDE HAZARDS DURING CONSTRUCTION

NOT TO SCALE

* PAYMENT FOR THIS WORK WILL BE PAID UNDER ITEM 900.640 SPECIAL PROVISION (BARRIER FOR TEMPORARY TRAFFIC PROTECTION)

** PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10

PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194frm.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: P. SHEDD
TRAFFIC PROTECTION PLAN 3

PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: N. LEMAY
SHEET 298 OF 303

CLD 12-0337

TEMPORARY TRAFFIC CONTROL NOTES

1. THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE THE STANDARD FOR ALL TRAFFIC CONTROL DEVICES, EXISTING SIGNS AND MARKINGS SHALL BE VALID UNTIL SUCH TIME AS THEY ARE REPLACED OR RECONSTRUCTED. WHEN NEW TRAFFIC CONTROL DEVICES ARE ERECTED OR PLACED, OR EXISTING TRAFFIC CONTROL DEVICES ARE REPLACED OR REPAIRED, THE EQUIPMENT, DESIGN, METHOD OF INSTALLATION, PLACEMENT OR REPAIR SHALL CONFORM WITH SUCH STANDARDS.

2. CONSTRUCTION ZONE SIGN LAYOUT SHALL BE IN ACCORDANCE WITH SECTION 6 OF THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND LATEST REVISIONS.

3. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR APPROVAL BY THE PROJECT MANAGER PRIOR TO THE START OF CONSTRUCTION. THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10, TRAFFIC CONTROL. THE TRAFFIC CONTROL PLAN SHALL BE IN COMPLIANCE WITH VTRANS STANDARDS AND THE LATEST EDITION OF THE MUTCD. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN.

4. THE CONTRACTOR IS REQUIRED TO OBTAIN PERMITTING FROM
   MR. WILLIAM LAMBERT
   STATE OF NEW HAMPSHIRE
   DEPARTMENT OF TRANSPORTATION
   ADMINISTRATOR BUREAU OF TRAFFIC
   TEL. (603) 271-2291
   FOR THE PLACEMENT OF MUTCD COMPLIANT CONSTRUCTION WARNING SIGN PACKAGE, PLACEMENT OF PORTABLE CHANGEABLE MESSAGE SIGNS, AND SIGNAGE REQUIRED FOR THE REGIONAL DETOUR WITHIN THE STATE OF NEW HAMPSHIRE.

5. DIG SAFE SHALL BE NOTIFIED PRIOR TO THE INSTALLATION OF ANY SIGNS IN NEW HAMPSHIRE AT TEL. (888) 344-7233

6. THE BID PRICE FOR ITEM 641.10, TRAFFIC CONTROL, SHALL INCLUDE ALL OF THE FOLLOWING, AS NEEDED: APPROACH, ON AND OFF PROJECT CONSTRUCTION SIGNING, PORTABLE ARROW BOARDS, BARRIERS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN VAOT STANDARDS. ALL ADJUSTING, RELOCATING AND REMOVING OF THESE DEVICES AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED.

7. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) WILL BE PROVIDED FOR USE ALONG THIS PROJECT AND ARE TO BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL POSITION PORTABLE CHANGEABLE MESSAGE SIGNS WARNING MOTORISTS OF THE EXPECTED ROADWAY CONDITIONS AHEAD. THE MESSAGE TO BE DISPLAYED SHALL BE SUBMITTED TO THE ENGINEER IN ADVANCE FOR APPROVAL. MESSAGES SHOULD BE UPDATED PERIODICALLY TO DESCRIBE THE WORK ACTIVITY OCCURRING SO THAT THE PCMS CONTINUES TO COMMAND THE ATTENTION OF MOTORISTS. THE COST OF PROVIDING THESE MESSAGE SIGNS SHALL BE PAID UNDER ITEM 641.15, PORTABLE CHANGEABLE MESSAGE SIGN.

8. CONSTRUCTION SIGNS SHALL BE IN NEW OR LIKE NEW CONDITION PER VAOT STANDARDS.

9. DIAMOND SHAPED SIGNS SHALL BE 48" X 48" WITH BLACK TEXT AND BORDER ON A RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND.

10. RETROREFLECTIVE SHEETING SHALL BE MINIMUM AASHTO M268 (ASTM D4956) TYPE III OR VII AS NOTED ON VAOT STANDARD T-1 AND IN THE SPECIAL PROVISIONS.

11. ALL PERMANENT SIGNS THAT CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE COMPLETELY COVERED, THE PAYMENT FOR WHICH WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10 TRAFFIC CONTROL.

12. ALL TEMPORARY CONSTRUCTION SIGNS SHALL BE MOUNTED ON STANDS OR POSTS THAT COMPLY WITH NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350 (NCHRP 350).

13. WHERE TEMPORARY SIGNS ARE PLACED BEHIND GUARDRAIL, THEY SHALL BE ADJUSTED SUCH THAT THE BOTTOM OF THE SIGNS ARE ABOVE THE TOP OF GUARDRAIL.

14. SEE VAOT STANDARD T-1, T-10 AND T-17 FOR ADDITIONAL SIGN PLACEMENT DETAILS.

15. A MINIMUM LANE WIDTH OF 10 FEET SHALL BE MAINTAINED AT ALL TIMES, INCLUDING SHOULDERS.

16. THE CONTRACTOR SHALL PROVIDE ACCESS THROUGH THE WORK ZONE FOR EMERGENCY VEHICLES AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL COMMERCIAL AND MUNICIPAL PROPERTIES DURING BUSINESS HOURS. COORDINATE MAJOR WORK ON COMMERCIAL OR MUNICIPAL ACCESSES WITH THE OWNER AT LEAST ONE WEEK PRIOR TO STARTING THE WORK. ALL COMMERCIAL AND MUNICIPAL ACCESSES SHALL BE KEPT FREE OF WORK AND TRAFFIC CONTROLLED BY UNIFORMED TRAFFIC OFFICERS OR FLAGGERS AS REQUIRED BY THE ENGINEER. ACCESS TO ALL PROPERTIES MAY BE RESTRICTED FOR A SHORT DURATION (A FEW HOURS). THIS WORK WILL BE COORDINATED WITH THE OWNER.

17. WHEN COLD PLANED BITUMINOUS PAVEMENT IS OPEN TO TRAFFIC, A "MOTORCYCLES USE CAUTION" SIGN, AS PER VAOT STANDARD T-17, SHALL BE PROVIDED.

18. AS THE PAVING OPERATION MOVES, FLAGGER SIGNS SHALL BE MOVED ACCORDINGLY. AT NO TIME SHOULD THE FLAGGER SYMBOL SIGN BE MORE THAN 1000 FEET FROM THE FLAGGER STATION. FLAGGER SIGNS SHALL BE COVERED OR TURNED AWAY FROM TRAFFIC WHEN FLAGGING OPERATIONS CEASE FOR LONGER THAN 15 MINUTES.

19. CONES SHALL BE USED TO CLEARLY DEFINE THE TRAVEL SPACE AND PROVIDE SEPARATION FROM THE WORK SPACE ALONG ITS ENTIRE LENGTH.

20. THE CONTRACTOR SHALL LEAVE NO LONGITUDINAL DROP-OFFS DURING THE OVERNIGHT HOURS, THEREFORE, THE FULL ROADWAY WIDTH SHALL BE COLD PLANED OR PAVED DURING THE THE DAILY WORK PERIOD. WHEN NECESSARY, DROP-OFF PROTECTION IN THESE AREAS SHALL CONFORM TO VAOT STANDARD T-36.

21. 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.

REGIONAL DETOUR TRAFFIC CONTROL NOTES

1. TRAFFIC WILL BE MAINTAINED ON A REGIONAL DETOUR VIA ROUTES VT 113, VT 25, NH 10, NH 25 AND US 5 BETWEEN THETFORD, FAIRLEE, ORFORD NH, HANOVER NH AND LYME NH. IT IS ANTICIPATED THAT THE RAILROAD CROSSING WORK WHICH REQUIRES THE ROAD CLOSURE AND REGIONAL DETOUR WILL BE PERFORMED AND COMPLETED OVER THE COURSE OF ONE WEEKEND DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SCHEDULE OF THIS WORK WITH THE RIVENDELL INTERSTATE SCHOOL DISTRICT TEL. (603) 353-2170 TO ENSURE THERE ARE NO CONFLICTS WITH OR INTERRUPTIONS TO SCHOOL BUS SERVICE IN THE PROJECT AREA.

2. TWO PORTABLE CHANGEABLE MESSAGE SIGNS "PCMS" SHALL BE PLACED AT THE PROJECT LOCATION 14 DAYS PRIOR TO THE START OF CONSTRUCTION TO WARN OF THE IMPENDING DETOUR. THESE PCMS SHALL THEN BE REMOVED AND DEPLOYED TO LOCATIONS APPROVED BY THE ENGINEER ONCE CONSTRUCTION HAS BEGUN. PAYMENT FOR THESE SIGNS WILL BE INCLUDED IN ITEM 641.15 "PORTABLE CHANGEABLE MESSAGE SIGN".

3. ITEM 641.12 "PUBLIC RELATIONS OFFICER" SHALL BE USED FOR THE COORDINATION OF DETOUR INFORMATION AND TRAFFIC DELAYS FOR THE PUBLIC.

4. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE TRAFFIC FLOW OF THE DETOUR SHALL BE REMOVED OR COVERED BY THE CONTRACTOR. ALL SIGNS REMOVED OR COVERED SHALL BE REPLACED OR UNCOVERED WHEN THE TRAFFIC CONTROL PLAN IS DISASSEMBLED. PAYMENT FOR THIS WORK WILL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".

5. ITEM 621.90 "TEMPORARY TRAFFIC BARRIER" SHALL BE USED FOR THE CLOSURE OF THE RAILROAD CROSSING. CONTRACTOR SHALL INSTALL BARRIER AS NECESSARY TO PREVENT THE TRAVELLING PUBLIC FROM ENTERING THE CONSTRUCTION SITE.

PEDESTRIAN TRAFFIC CONTROL NOTES

1. 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.

2. 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.

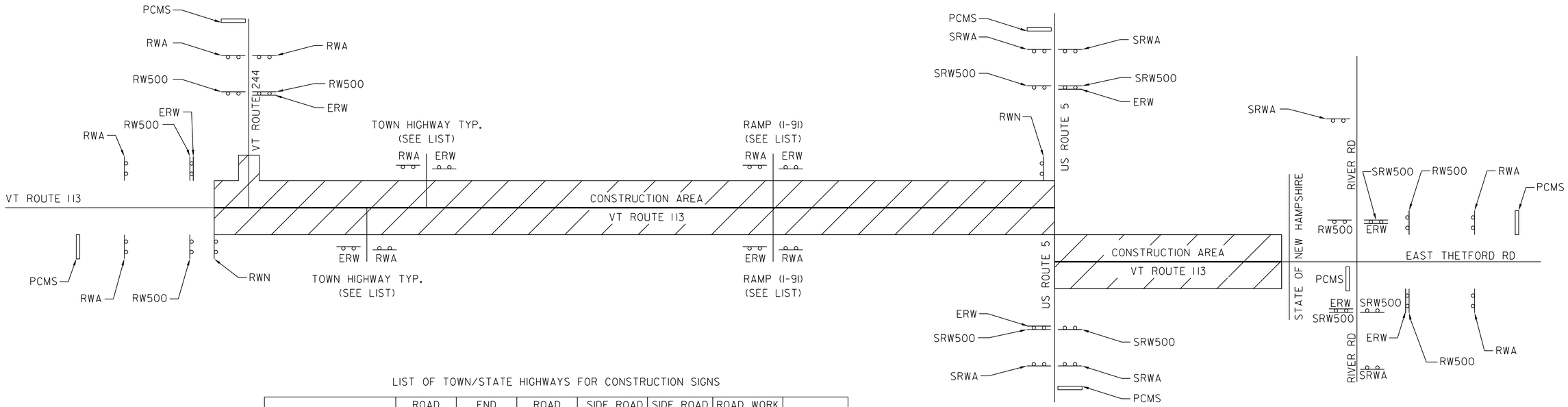
3. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE SHALL 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 CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.

4. 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.

5. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OR TRAVEL.

6. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.

7. THE CONTRACTOR SHALL SUBMIT A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED OR AS DIRECTED BY THE ENGINEER. 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 WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10 TRAFFIC CONTROL.



LIST OF TOWN/STATE HIGHWAYS FOR CONSTRUCTION SIGNS

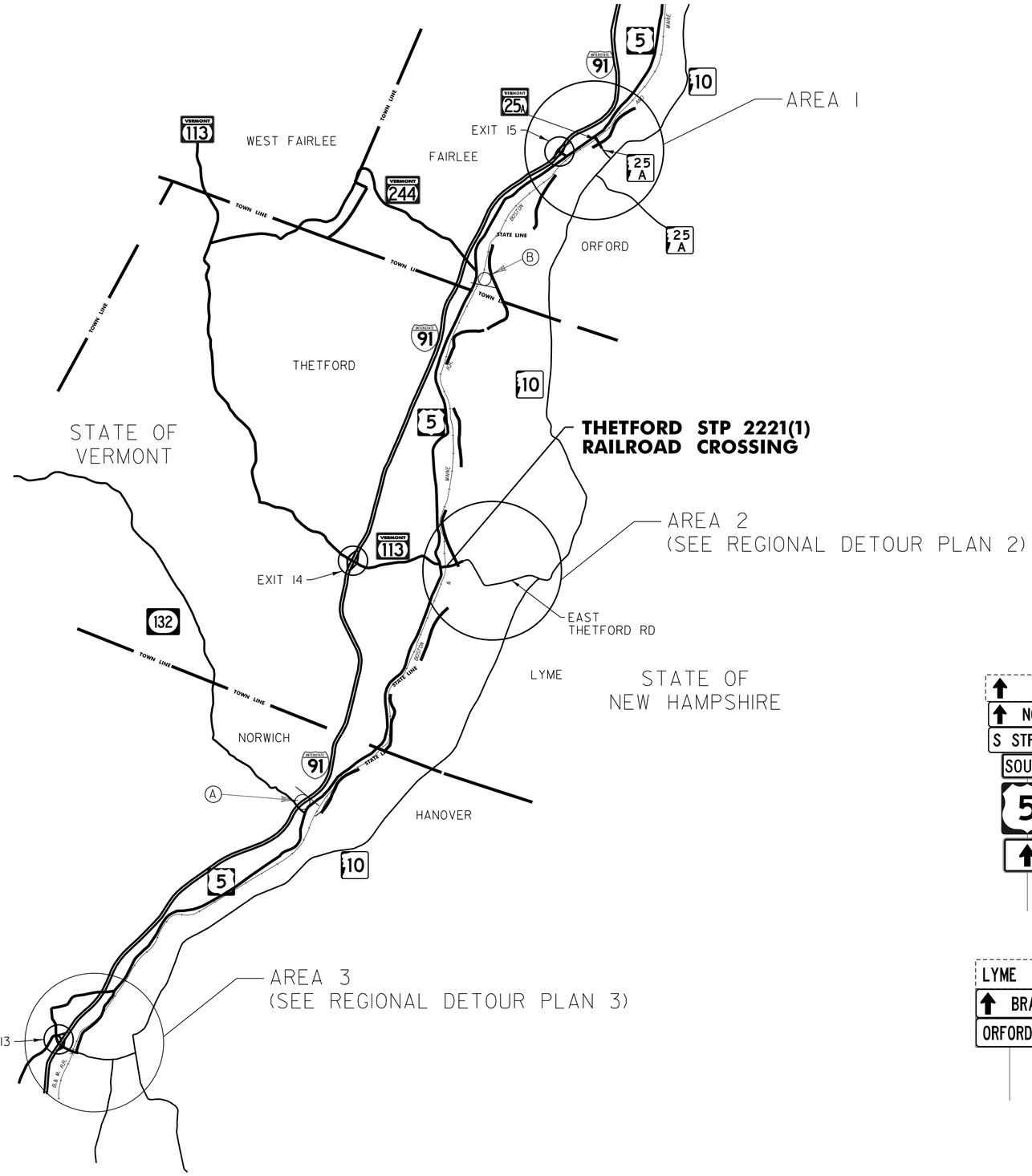
TOWN/STATE HIGHWAY NAME	ROAD WORK AHEAD (RWA)	END ROAD WORK (ERW)	ROAD WORK 500' (RW500)	SIDE ROAD WORK AHEAD (SRWA)	SIDE ROAD WORK 500' (SRW500)	ROAD WORK NEXT 8 MILES (RWN)	PCMS
VT ROUTE 113							
BEGINNING OF PROJECT	2	1	2			1	1
VT ROUTE 244	2	1	2				1
TH 21	1	1					
TH 20	1	1					
TH 61	1	1					
TH 73 DEAD END	-	-					
TH 29	1	1					
TH 6	1	1					
TH 71 DEAD END	-	-					
TH 30 DEAD END	-	-					
TH 70	1	1					
TH 3	1	1					
TH 31	1	1					
TH 75 DEAD END	-	-					
TH 40	1	1					
SOUTHBOUND ON		1					
SOUTHBOUND OFF	1						1
NORTHBOUND OFF	1						1
NORTHBOUND ON		1					
TH 5	1	1					
TH 41 DEAD END	-	-					
TH 42 DEAD END	-	-					
TH 34	1	1					
TH 43 DEAD END	-	-					
US ROUTE 5		2		4	4		2
END OF PROJECT	2	1	2			1	1
RIVER RD (NH)		2		2	4		1
TOTAL	19	20	6	6	8	2	8

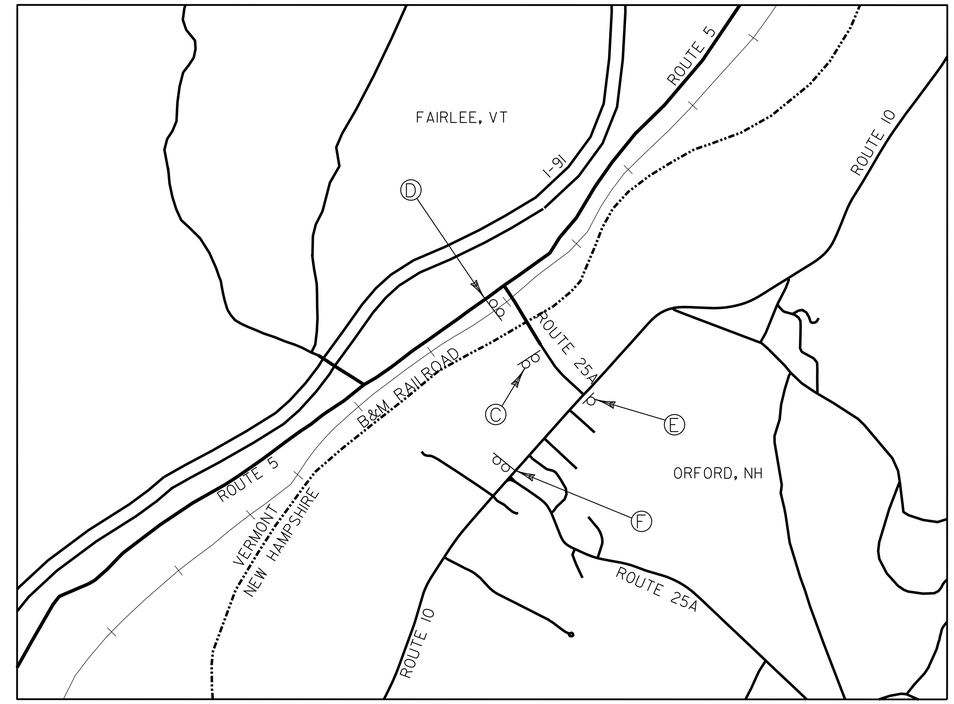
PROJECT NAME: THETFORD
PROJECT NUMBER: STP 2221(1)

FILE NAME: z99c194tcp.dgn
PROJECT LEADER: P. SHEDD
DESIGNED BY: N. LEMAY
TRAFFIC CONTROL PLAN

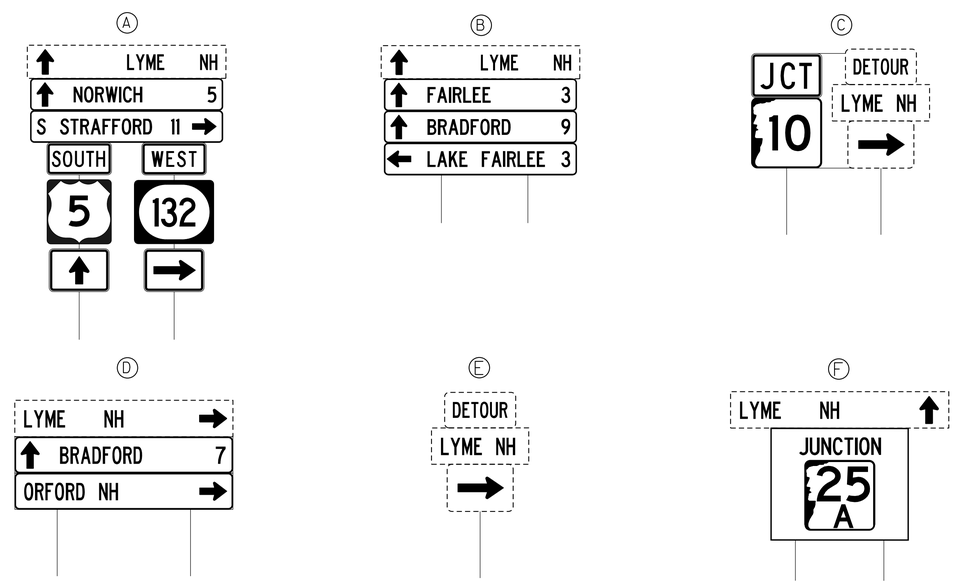
PLOT DATE: 9/4/2015
DRAWN BY: S. GOODWIN
CHECKED BY: P. SHEDD
SHEET 300 OF 303

CLD 12-0337





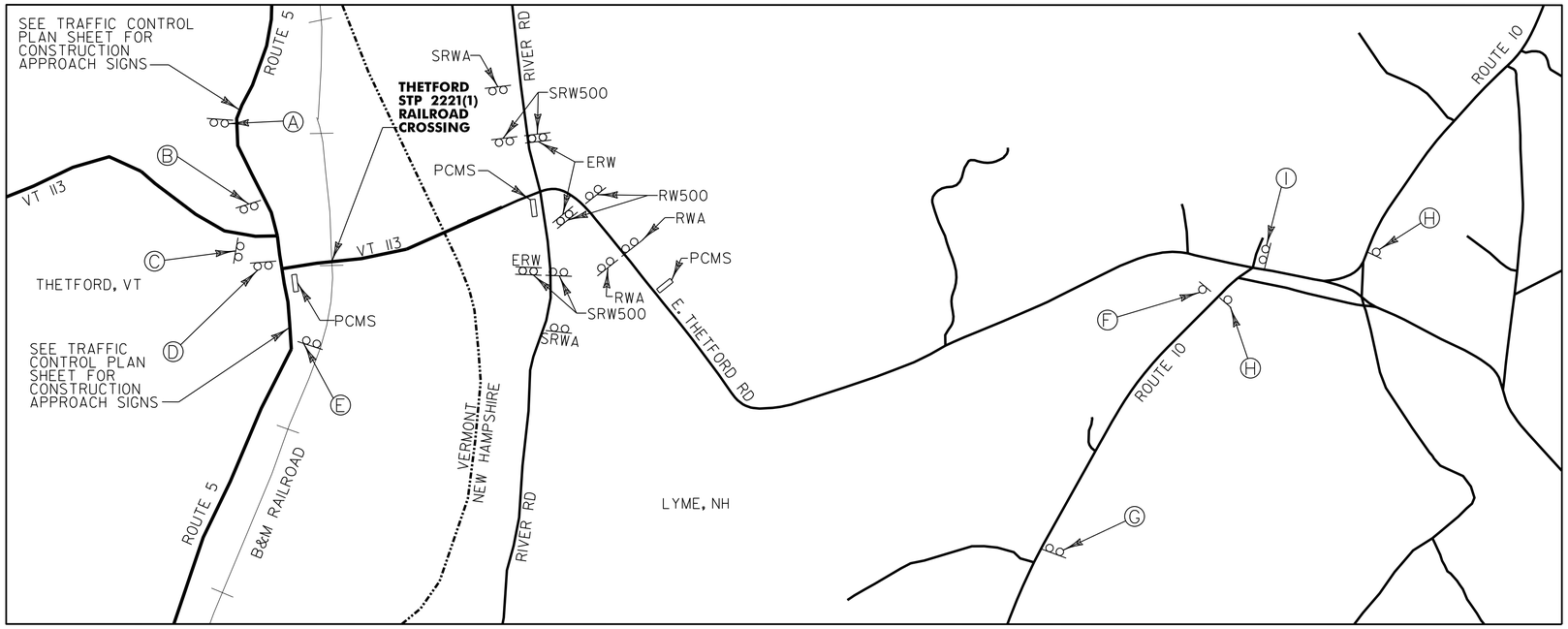
AREA 1
FAIRLEE, VT AND ORFORD, NH



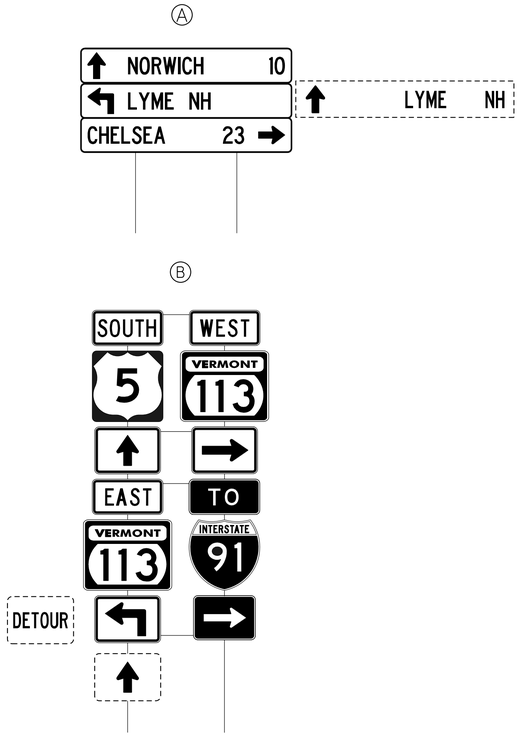
NOT TO SCALE

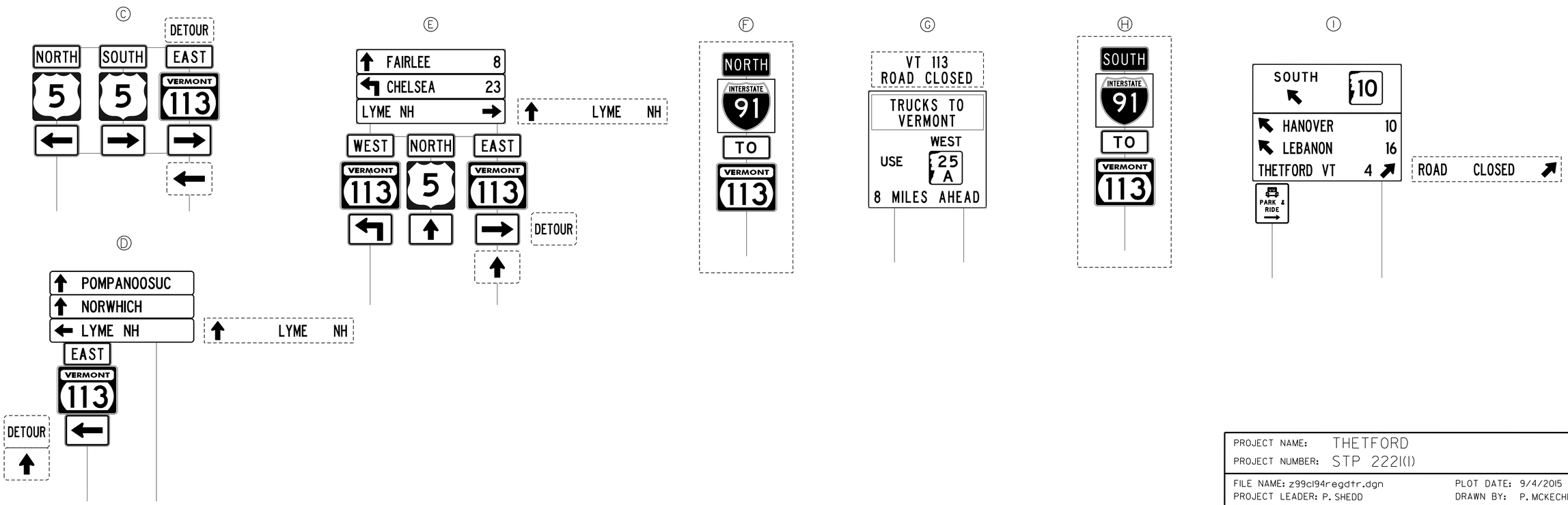
PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194regdtr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: S. GOODWIN
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
REGIONAL DETOUR PLAN 1	SHEET 301 OF 303

CLD 12-0337



AREA 2
THETFORD, VT AND LYME, NH





NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194regdtr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: P. MCKECHNIE
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
REGIONAL DETOUR PLAN 2	SHEET 302 OF 303

CLD 12-0337

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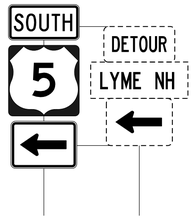

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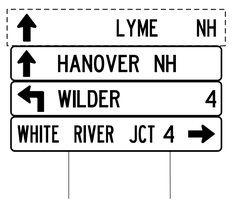

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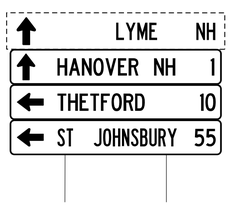

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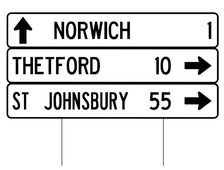

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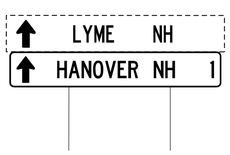

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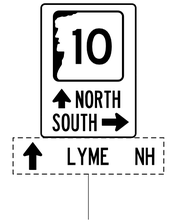

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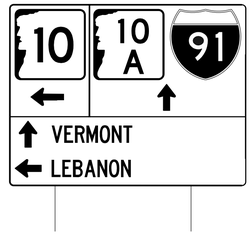

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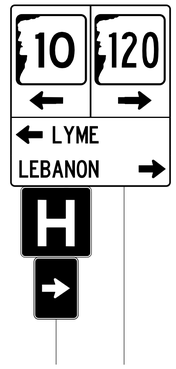

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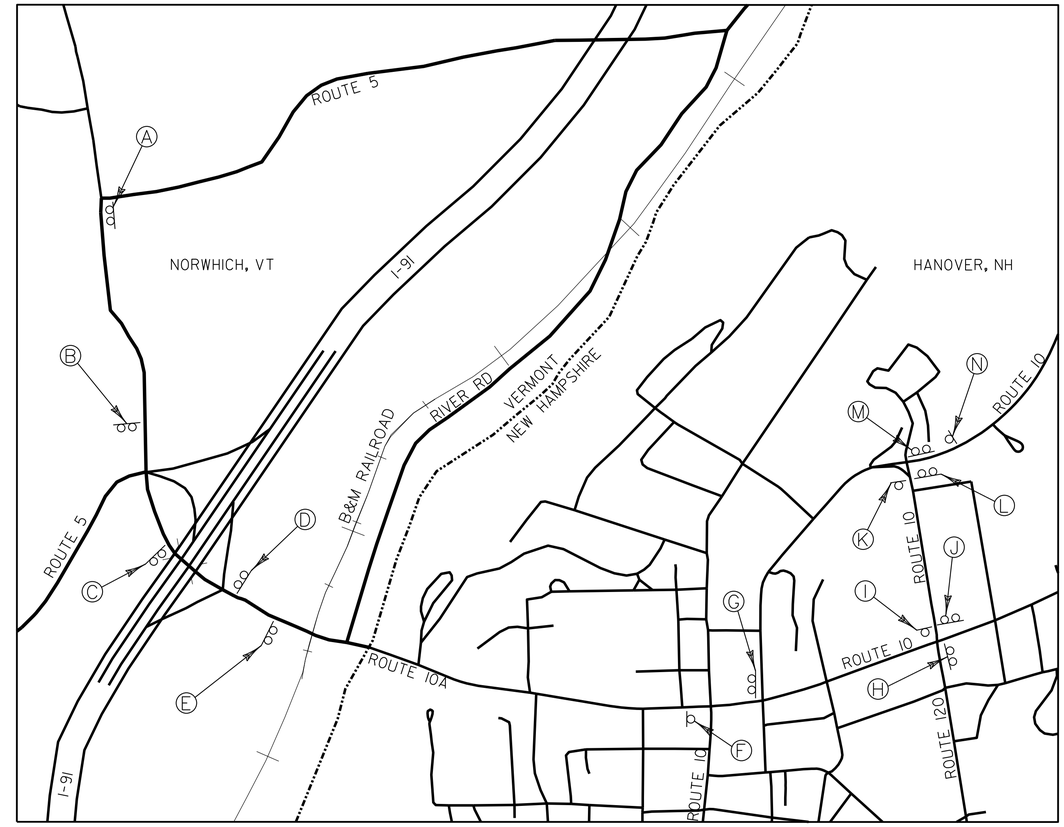

AREA 3
NORWICH, VT AND HANOVER, NH

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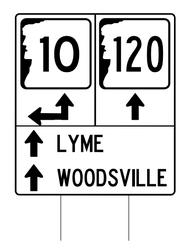

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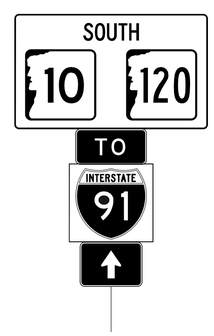

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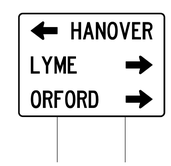

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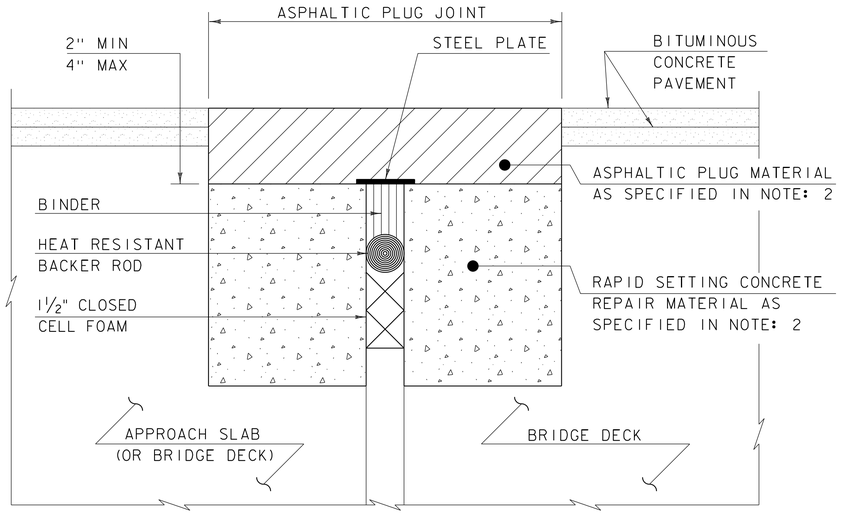
NOT TO SCALE

PROJECT NAME: THETFORD	
PROJECT NUMBER: STP 2221(1)	
FILE NAME: z99c194regdtr.dgn	PLOT DATE: 9/4/2015
PROJECT LEADER: P. SHEDD	DRAWN BY: P. MCKECHNIE
DESIGNED BY: M. HALEY	CHECKED BY: P. SHEDD
REGIONAL DETOUR PLAN 3	SHEET 303 OF 303

CLD 12-0337



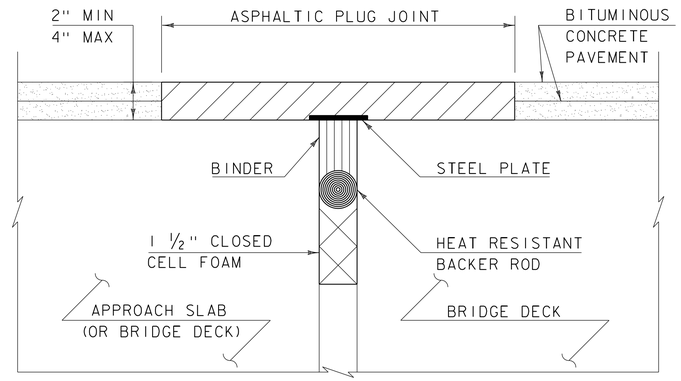
ASPHALTIC PLUG-TYPE JOINT DETAIL - REHAB

NOTES: (NOT TO SCALE)

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 COURSE 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.



ASPHALTIC PLUG-TYPE JOINT DETAIL - NEW

(NOT TO SCALE)

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. REPAIR MATERIAL GREATER THAN 4 INCHES FROM FINISHED GRADE WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
5. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
6. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
7. 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.
8. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.
9. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
10. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.
11. ONCE THE JOINT REACHES 82 DEG C (180 DEG F) +/-, WATER MAY BE USED TO EXPEDITE THE COOLING PROCESS.
12. PROTECT JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.

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.

REVISIONS

MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION

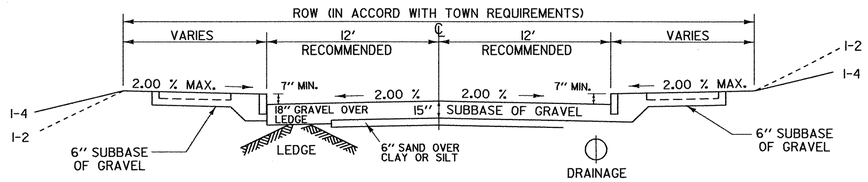
BRIDGE JOINT ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

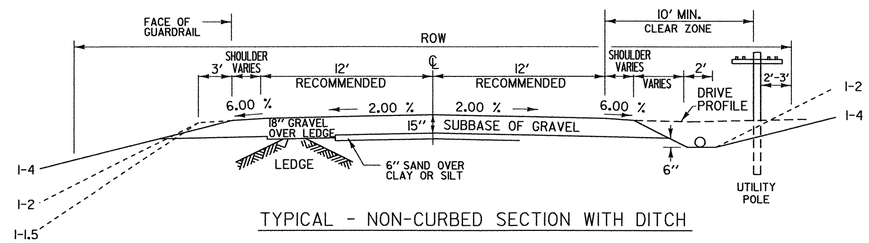
STRUCTURES DETAIL

SD-516.10

ROADWAY TYPICALS

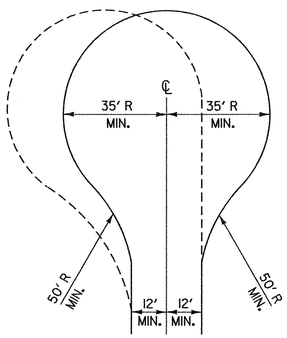


TYPICAL - CURBED SECTION WITH 5' SIDEWALKS

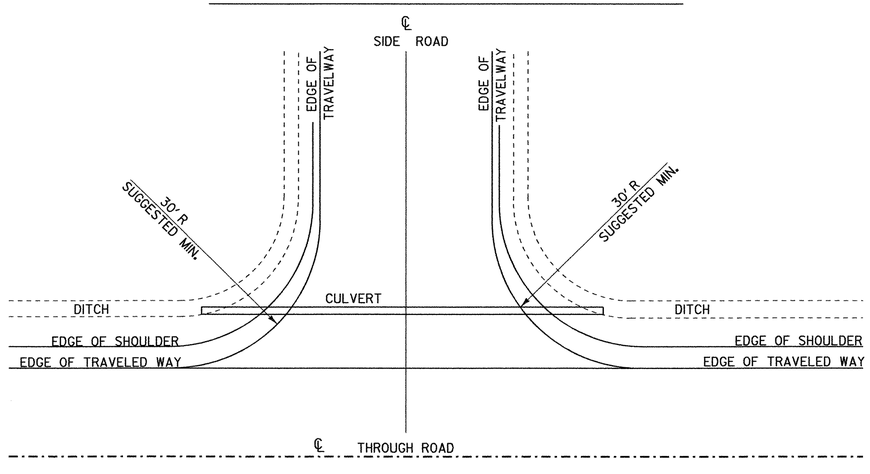


TYPICAL - NON-CURBED SECTION WITH DITCH

CUL-DE-SAC FOR DEAD END ROADS

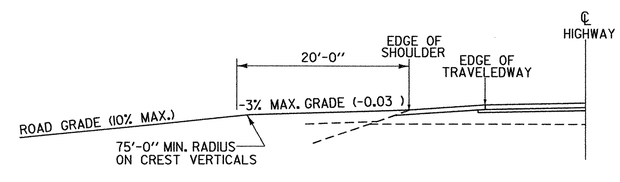


INTERSECTION OF THROUGH ROAD AND SIDE ROAD



FOR THROUGH ROADS WITH SIDEWALKS & CURBING, SEE STANDARDS C2 & C3.
PROVIDE DROP INLETS ON EACH SIDE OF SIDE ROAD AT INTERSECTION AS NECESSARY.

PROFILE OF INTERSECTION (CUT SECTION)
SHOWING 5" DEPRESSION



PROFILE OF INTERSECTION (FILL SECTION)

GENERAL NOTES FOR LOCAL ROADS

1. SUBBASE, SAND CUSHION AND SUBGRADE SHOULD BE CONSTRUCTED AND COMPACTED TO THE DIMENSIONS SHOWN IN ACCORDANCE WITH VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. WHERE LOCAL ORDINANCES HAVE BEEN ADOPTED RELATIVE TO ROAD DIMENSIONS AND CONSTRUCTION, THEY SHOULD GOVERN. THE DIMENSIONS SUGGESTED ARE INTENDED TO BE APPLIED ONLY IN LOW TRAFFIC VOLUME CONDITIONS (AVERAGE DAILY TRAFFIC LESS THAN 250 VEHICLES PER DAY), AND WHERE HEAVY TRUCK TRAFFIC IS INFREQUENT.
2. EXPOSED EARTH SLOPES SHOULD BE SEEDED, FERTILIZED AND MULCHED IN ACCORDANCE WITH VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
3. DRAINAGE:

   ROADWAY - 18" MINIMUM DIAMETER, OF METAL, REINFORCED CONCRETE OR POLYETHYLENE PIPE, WITH DROP INLETS OR CATCH BASINS, AS REQUIRED. HYDRAULIC ANALYSIS TO DETERMINE APPROPRIATE PIPE DIAMETER IS RECOMMENDED FOR ALL LIVE STREAM CROSSINGS AND ELSEWHERE WHERE LARGE STORM FLOWS MAY BE EXPECTED.

   DRIVES - 15" MINIMUM DIAMETER, OF METAL, REINFORCED CONCRETE OR POLYETHYLENE PIPE.

   UNDERDRAIN - 6" MINIMUM DIAMETER, OF METAL, PVC PLASTIC OR POLYETHYLENE PIPE.

   LOCATION, DEPTH AND CONSTRUCTION DETAILS SHOULD FOLLOW PRACTICE SPECIFIED BY LOCAL ORDINANCE OR THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
4. HORIZONTAL CURVATURE - THE FOLLOWING WILL APPLY:

DESIGN SPEED	MINIMUM RADII RURAL (1)	MINIMUM RADII URBAN (2)
25 MPH	185 FT.	180 FT.
30 MPH	275 FT.	300 FT.
35 MPH	380 FT.	460 FT.
40 MPH	510 FT.	675 FT.
45 MPH	660 FT.	945 FT.
50 MPH	835 FT.	1280 FT.

(1) BASED ON CROSS SLOPE = 6.0 %
(2) BASED ON MAINTAINING NORMAL CROWN SECTION THROUGHOUT CURVE : EFFECTIVE CROSS SLOPE = 2.0 %

FOR OTHER SUPERELEVATION RATES, SEE CHAPTER III OF THE AASHTO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS" FOR APPROPRIATE CURVE RADII.

5. GRADIENT OF ROADS - 10% MAXIMUM GRADE SUGGESTED, ALTHOUGH GRADES UP TO 16 % MAY BE ALLOWED IN MOUNTAINOUS TERRAIN.
6. GUARD RAIL - PROVIDE GUARD RAIL WITH TREATED WOOD OR STEEL POSTS, OF A DESIGN IN ACCORDANCE WITH VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE AASHTO ROADSIDE DESIGN GUIDE, AND VAOT STANDARD DRAWINGS. GENERALLY, WHERE SLOPES ARE 1:3 OR STEEPER, AND THE HEIGHT OF DROPOFF AT EDGE OF SHOULDER EXCEEDS 5', GUARD RAIL SHOULD BE INSTALLED. ALSO, WHERE SLOPES ARE 1:3 OR FLATTER, GUARD RAIL MAY NOT BE NEEDED IF THE AREA AT THE BOTTOM OF THE SLOPE IS FREE OF HAZARDS. THE LOCAL VAOT DISTRICT TRANSPORTATION ADMINISTRATOR MAY BE CONTACTED FOR ASSISTANCE.
7. PAVING - ROADS WITH GRADES EXCEEDING 7% SHOULD BE PAVED UNLESS WAIVED BY THE LOCAL GOVERNING BODY. FOR TRAFFIC VOLUMES GREATER THAN, OR EQUAL TO, 250 VEHICLES PER DAY, OR WHERE HEAVY TRUCKS ARE COMMON, A PAVEMENT DESIGN SHOULD BE PERFORMED TO DETERMINE APPROPRIATE THICKNESSES OF SUBBASE AND PAVEMENT.
8. TRAVELED WAY AND SHOULDER WIDTHS - WIDTHS SHOWN ON THIS STANDARD ARE FOR LOW SPEED/LOW TRAFFIC VOLUME CONDITIONS. FOR ADDITIONAL GUIDANCE IN THE DESIGN OF LOCAL ROADS AND STREETS, SEE THE LATEST EDITION OF AASHTO'S PUBLICATION "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS", OR THE VAOT "VERMONT STATE STANDARDS".
9. UTILITY LINE LOCATION TO CONFORM TO LOCAL REQUIREMENTS.

REVISIONS AND CORRECTIONS

JAN. 21, 1971 - ORIGINAL DATE OF ISSUE
MAR. 12, 1971 - DIMENSIONS CHANGED ON TURN-A-ROUND
JULY 13, 1973 - INTERSECTION PROFILES ADDED
DEC. 7, 1993 - REVISED TO REFLECT CURRENT DESIGN CRITERIA
JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.
MAR. 10, 1995 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.
MARCH 3, 2003 - REVISED TO REFLECT CURRENT DESIGN CRITERIA

APPROVED

DIRECTOR OF PROGRAM DEVELOPMENT

C. Allan Wright
CHIEF OF UTILITIES

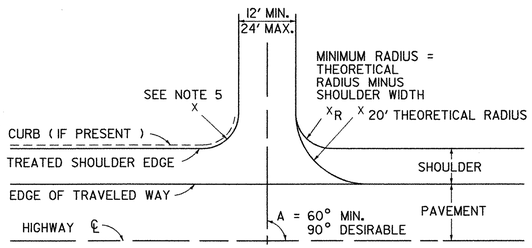
FEDERAL HIGHWAY ADMINISTRATION

STANDARDS FOR TOWN & DEVELOPMENT ROADS

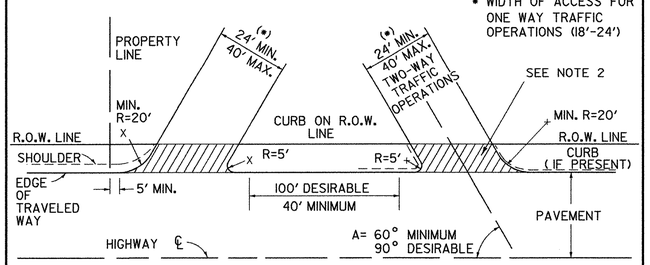
VERMONT AGENCY OF TRANSPORTATION

STANDARD A-76

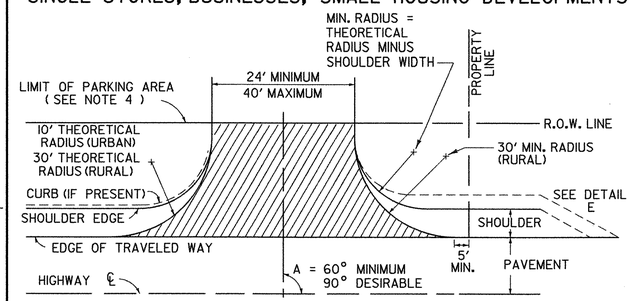
DETAIL A — RESIDENTIAL DRIVE



DETAIL B — DUAL COMMERCIAL DRIVE TO BE USED ONLY UNDER SPECIAL CONDITIONS

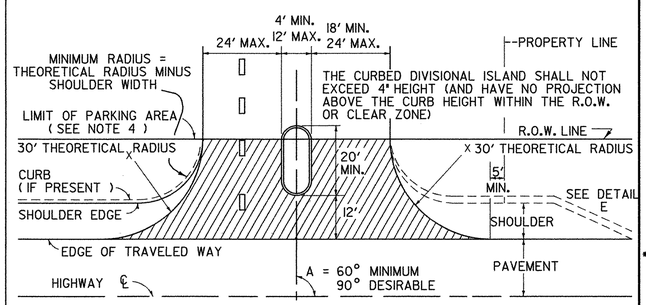


DETAIL C — TWO-WAY UNDIVIDED COMMERCIAL DRIVE FOR SINGLE STORES, BUSINESSES, SMALL HOUSING DEVELOPMENTS

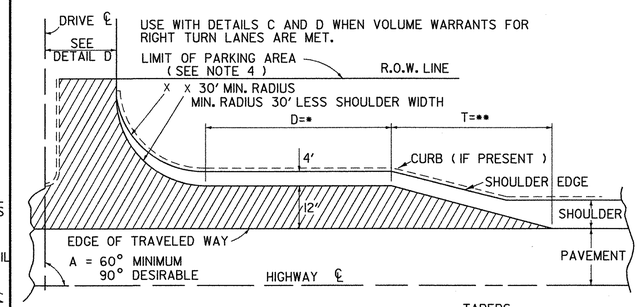


THIS DETAIL WILL ALSO APPLY TO COMMERCIAL SERVICE DRIVES, WHEN AUTHORIZED, HAVING A MAXIMUM WIDTH OF 20'. THE SERVICE DRIVE WILL HAVE A "SERVICE VEHICLES ONLY" SIGN PLACED AT THE HIGHWAY ROW LINE. SIGN SHALL BE 18"X 24" AS PRESCRIBED IN THE "STANDARD HIGHWAY SIGNS BOOK". A SUPPLEMENTAL PUBLICATION TO MUTCD.

DETAIL D — TWO-WAY COMMERCIAL DRIVE WITH DIVISIONAL ISLAND FOR SHOPPING CENTERS, LARGE HOUSING DEVELOPMENTS, INDUSTRIAL PLANTS AND SERVICE STATIONS



DETAIL E — RIGHT TURN LANE FOR COMMERCIAL DRIVE (UNSIGNALIZED INTERSECTIONS ONLY)

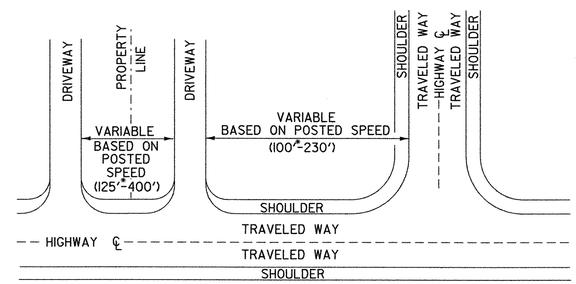


• STORAGE LENGTH IS VARIABLE DEPENDING ON TRAFFIC VOLUME AND MUST BE ADJUSTED TO PROVIDE PROPER DECELERATION LENGTH. REFER TO VAOT STANDARD E-192

TAPERS

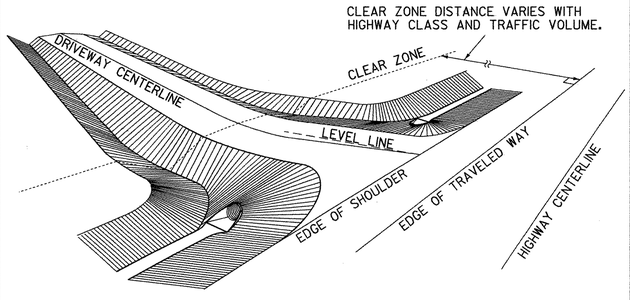
SPEED (MPH)	30	35	40	50
••LENGTH (MIN)(FT)(T)	100	120	140	180
RATE	8:1	10:1	12:1	15:1

DETAIL F — MINIMUM HORIZONTAL SEPARATION BETWEEN DRIVEWAYS AND INTERSECTING SIDEROADS

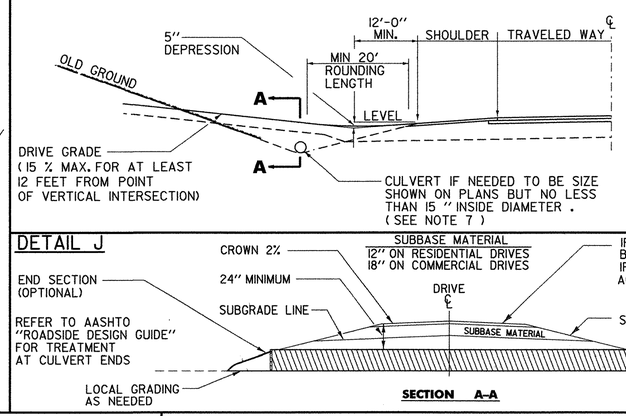


• MINIMUM UNLESS NO OTHER REASONABLE ACCESS IS AVAILABLE AND PRIOR APPROVAL IS GRANTED BY THE VAOT ITEMS SUCH AS TRAFFIC SIGNALS, HIGH TRAFFIC VOLUMES, OR FUNCTIONAL CLASS OF HIGHWAY SHOULD BE CONSIDERED WHEN DETERMINING APPROPRIATE SEPARATION DISTANCE. WHEN CURRENT RECOMMENDED SEPARATION DISTANCE CANNOT BE OBTAINED RESTRICTION OF TURNING MOVEMENTS MAY BE REQUIRED.

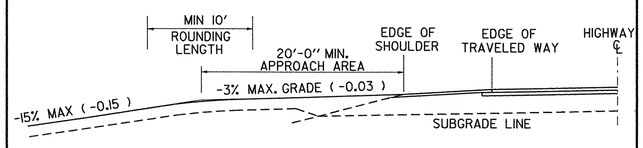
DETAIL G — PERSPECTIVE SKETCH OF DRIVE INTERSECTION SHOWING DEPRESSION



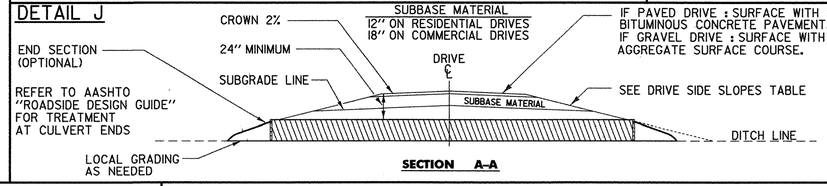
DETAIL H — PROFILE OF DRIVE INTERSECTION SHOWING 5" DEPRESSION (CUT SECTION)



DETAIL I — PROFILE OF DRIVE INTERSECTION (FILL SECTION)



DETAIL J



DRIVE SIDE SLOPES

LOCATION OF SLOPE	SLOPE RATE
V > 40 MPH	1:6 OR FLATTER
URBAN AREAS, OR V ≤ 40 MPH	1:4 DESIRABLE 1:2 ALLOWABLE
OUTSIDE CLEAR ZONE	1:2 OR FLATTER

NOTES:

1. THIS SHEET IS INTENDED FOR USE BY DESIGNERS ON HIGHWAY PROJECTS AND IN CONJUNCTION WITH A PERMIT FOR WORK WITHIN HIGHWAY RIGHTS OF WAY (FORM TA 210). ALL CONSTRUCTION REQUIRED BY THE PERMIT AND INDICATED ON THIS SHEET SHALL BE THE RESPONSIBILITY OF THE APPLICANT AND IS SUBJECT TO THE APPROVAL OF THE VT. AGENCY OF TRANSPORTATION. WHEN USED WITH THE PLANS FOR A HIGHWAY CONSTRUCTION PROJECT. THIS SHEET IS INTENDED TO BE A GUIDE FOR THE DESIGNER CONCERNING DRIVE WIDTHS, HORIZONTAL, VERTICAL AND GEOMETRIC CHARACTERISTICS.
2. ALL COMMERCIAL DRIVES SHALL BE PAVED FROM THE EDGE OF THE TRAVELED WAY TO THE HIGHWAY RIGHT-OF-WAY, TO THE FARTHEST POINT OF CURVATURE ON THE DRIVEWAY EDGE OR AS DIRECTED BY THE DISTRICT TRANSPORTATION ADMINISTRATOR. THIS PAVING IS INDICATED IN DETAILS (B THRU E) BY HATCHING.
3. DEPTH OF SUBBASE AND PAVEMENT TO BE THE SAME AS HIGHWAY OR AS SHOWN IN DETAIL J WITHIN THE LIMITS OF THE HIGHWAY RIGHT-OF-WAY.
4. VEHICULAR ACCESS FROM PARKING AREAS TO THE RIGHT-OF-WAY AT OTHER THAN APPROVED ACCESS POINTS WILL BE PREVENTED BY THE CONSTRUCTION OF CURBING OR OTHER SUITABLE PHYSICAL BARRIER.
5. IF CURB IS PRESENT, SEE APPROPRIATE CURB DETAIL STANDARD OR MATCH TOWN/CITY STANDARD CURB TREATMENT.
6. WHERE TRAFFIC VOLUME FOR A PROJECT IS SUBSTANTIAL THE AGENCY MAY REQUIRE SPECIAL LANES FOR TURNING, SIGNALS OR OTHER MODIFICATIONS. BASED ON TRAFFIC STUDIES THE AGENCY WILL DETERMINE SPECIFIC TREATMENT TO BE USED. ON DEVELOPER PROJECTS THE AGENCY WILL WORK WITH THE APPLICANT TO IMPLEMENT CHANGES TO THE STATE HIGHWAY.
7. CIRCULAR DRAINAGE CULVERTS UNDER DRIVES SHALL HAVE A MINIMUM INSIDE DIAMETER (I.D.) OF 15". PIPE ARCHES USED UNDER DRIVES SHALL HAVE A MINIMUM INSIDE CROSS-SECTIONAL AREA EQUIVALENT TO THAT PROVIDED BY A 15" CIRCULAR PIPE.
8. THE OFFSET BETWEEN THE PROPERTY LINE AND THE EDGE OF THE DRIVEWAY MAY BE GOVERNED BY LOCAL ZONING LAWS. DRIVEWAY WIDTH RESTRICTIONS SHOWN PERTAIN ONLY TO THE AREA WITHIN THE HIGHWAY R.O.W. OR THE END OF THE TURNING RADIUS WHICHEVER IS GREATEST.
9. DRIVEWAY GRADES STEEPER THAN THOSE SHOWN MAY BE ALLOWED AS LONG AS A 20' APPROACH AREA IS ACHIEVED FOR THE VEHICLE TO PAUSE BEFORE ENTERING THE HIGHWAY. (WHERE CURB & SIDEWALKS EXIST, SEE STANDARDS C-2A & C-2B)
10. INTERSECTION SIGHT DISTANCES, EQUAL TO OR GREATER THAN THOSE SHOWN BELOW, SHOULD BE PROVIDED IN BOTH DIRECTIONS FOR ALL DRIVES ENTERING ON PUBLIC HIGHWAYS, UNLESS OTHERWISE APPROVED BY THE AGENCY OF TRANSPORTATION. INTERSECTION SIGHT DISTANCE IS MEASURED FROM A POINT ON THE DRIVE AT LEAST 15 FEET FROM THE EDGE OF TRAVELED WAY OF THE ADJACENT ROADWAY AND MEASURED FROM A HEIGHT OF EYE OF 3.5 FEET ON THE DRIVE TO A HEIGHT OF 3.50 FEET ON THE ROADWAY.

SIGHT DISTANCE CHART

POSTED SPEED OR DESIGN SPEED (M.P.H.)	MINIMUM STOPPING SIGHT DISTANCE (FT)	MINIMUM INTERSECTION SIGHT DISTANCE • (FT)
25	155	280
30	200	335
35	250	390
40	305	445
45	360	500
50	425	555
55	495	610
60	570	665
65	645	720

THE ABOVE VALUES ARE TAKEN FROM THE 2004 AASHTO " A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS & STREETS."

NOTE : ADVANCE WARNING SIGNS WILL BE REQUIRED IF OBTAINABLE INTERSECTION SIGHT DISTANCES ARE BELOW MINIMUM STOPPING SIGHT DISTANCES.

THE CHART IS ENTERED TO SELECT DESIGN VALUES BASED ON THE POSTED SPEED LIMIT IN MPH. VALUES FOR DESIGN ARE CALCULATED BASED ON THE DESIGN SPEED IN MPH.

• ASSUMES A GAP OF 7.5 SECONDS IN THE TRAFFIC STREAM ON THE HIGHWAY MAINLINE BASED ON THE HIGHWAY DESIGN SPEED IN MPH. THIS ALLOWS A STOPPED PASSENGER VEHICLE TO ENTER THE MAINLINE FROM THE DRIVE WITHOUT UNDULY INTERFERING WITH THE HIGHWAY OPERATIONS.

REVISIONS AND CORRECTIONS

DEC. 11, 1992 - THIS STANDARD SUPERCEDES B-71 (7/23/80R), B-71A (3/12/90), AND B-13 (12/14/71).
JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.
MAR. 10, 1995 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.
NOV. 16, 2000 - CHANGES MADE TO CONFORM WITH LANGUAGE AND DIMENSIONS IN ACCESS MANAGEMENT PROGRAM GUIDELINES.
FEB 1, 2004 - CHANGES MADE TO SIGHT DISTANCE CHART TO CONFORM WITH NEWEST AASHTO CRITERIA.
JULY 8, 2005 - CHANGE MADE TO OBJECT HEIGHT TO CONFORM WITH NEWEST AASHTO CRITERIA

APPROVED

DIRECTOR OF PROGRAM DEVELOPMENT

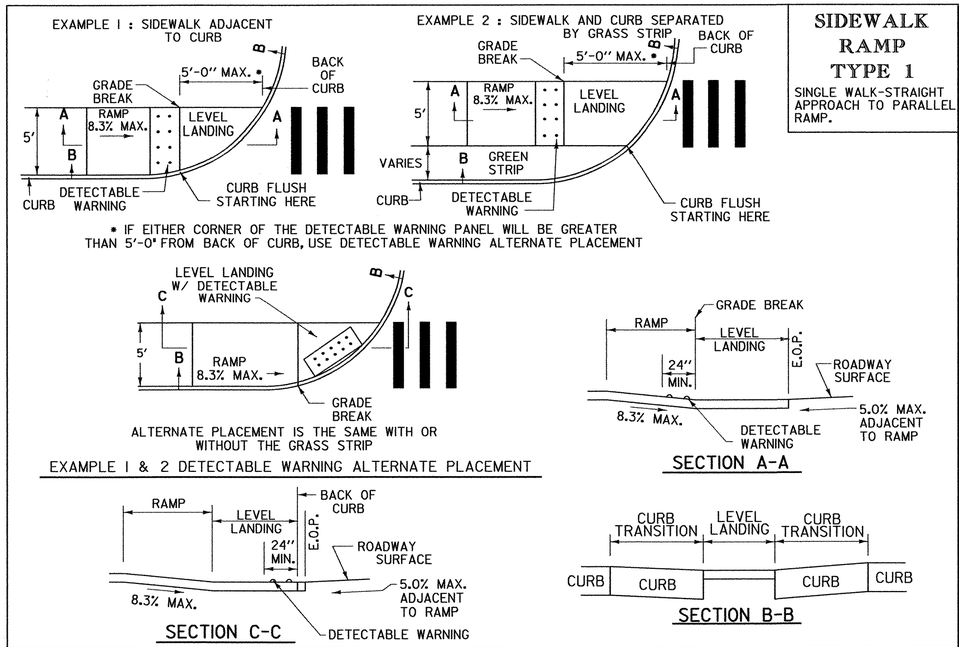
CHIEF OF UTILITIES AND PERMITS

FEDERAL HIGHWAY ADMINISTRATION

STANDARDS FOR RESIDENTIAL AND COMMERCIAL DRIVES

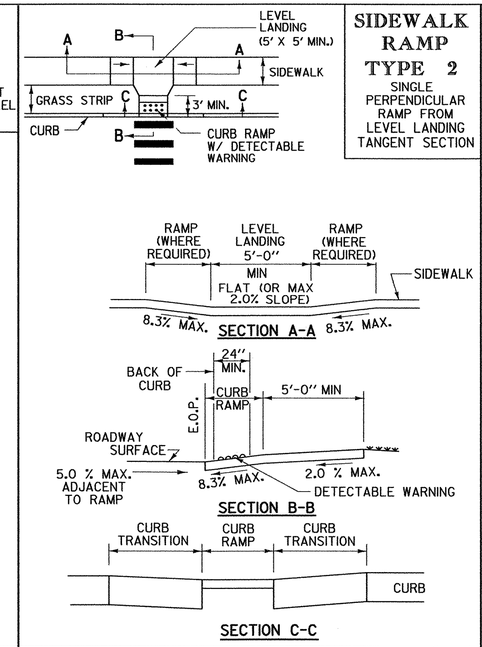
VERMONT AGENCY OF TRANSPORTATION

STANDARD B-71



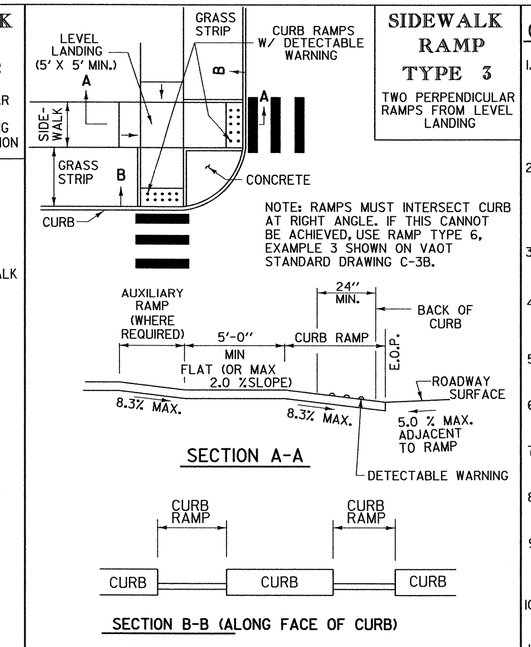
SIDEWALK RAMP TYPE 1

SINGLE WALK-STRAIGHT APPROACH TO PARALLEL RAMP.



SIDEWALK RAMP TYPE 2

SINGLE PERPENDICULAR RAMP FROM LEVEL LANDING TANGENT SECTION

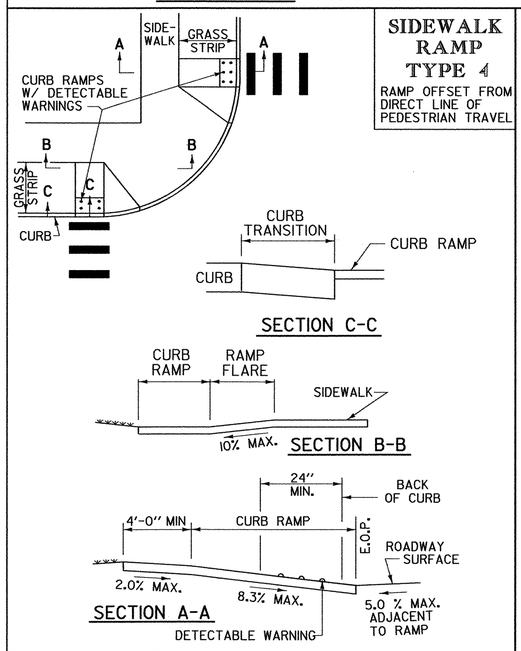


SIDEWALK RAMP TYPE 3

TWO PERPENDICULAR RAMPS FROM LEVEL LANDING

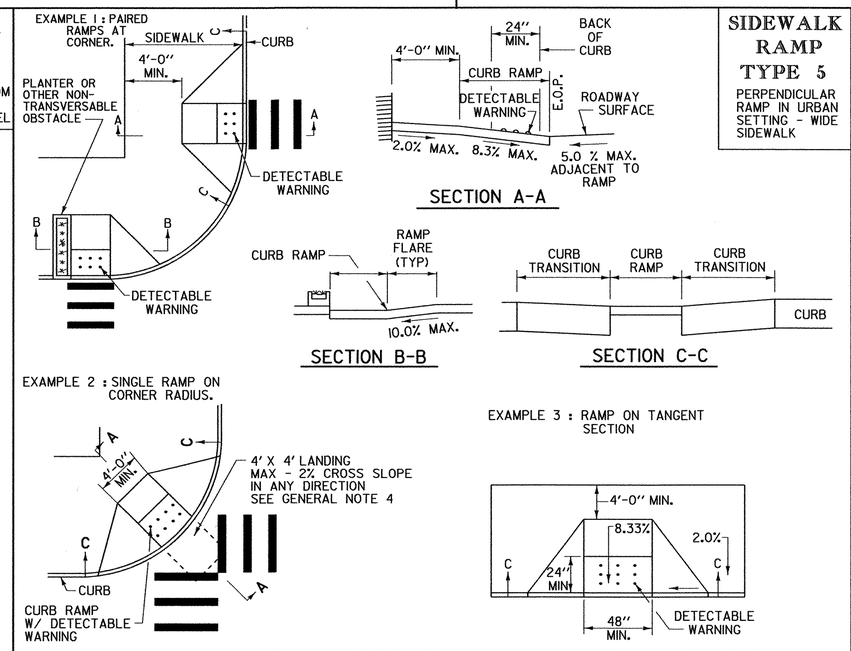
GENERAL NOTES:

1. THE DIMENSIONS AND GRADES SHOWN ON THIS STANDARD WILL BE ADHERED TO IN THE DESIGN AND THE CONSTRUCTION OF SIDEWALK RAMPS. WHERE SIDEWALKS RUN ADJACENT TO ROADWAYS ON STEEP (5% OR GREATER) GRADES, RAMP GRADES WILL BE AS FLAT AS POSSIBLE. (ON LOW SIDE OF DRIVES AND INTERSECTING SIDE STREETS, RAMPS SHALL SLOPE TOWARDS DRIVE OR SIDE STREET @ 2%)
2. NOMINAL RAMP DIMENSIONS AND GRADES:
   RAMP WIDTH - 4'-0" MINIMUM
   RAMP SLOPE - 8.3% MAXIMUM
   FLARE SLOPE - 10% MAXIMUM
   RAMP CROSS SLOPE - 2.0% MAXIMUM
3. A LEVEL LANDING (NO GREATER THAN 2.0% SLOPE IN ANY DIRECTION) SHALL BE PROVIDED AT THE TOP OF SIDEWALK RAMPS TO ALLOW FOR STOPPING AND MANEUVERING OF WHEELCHAIRS.
4. LEVEL LANDINGS (NO GREATER THAN 2.0% SLOPE IN ANY DIRECTION) AT THE BOTTOM OF PERPENDICULAR RAMPS SHALL BE WHOLLY CONTAINED WITHIN MARKED CROSSWALKS.
5. DUMMY JOINTS SHALL BE PROVIDED AT TRANSITIONS (GRADE CHANGES) AT TOPS AND BOTTOMS OF RAMPS AND FLARES.
6. VERTICAL DROP-OFF EDGES TO RAMPS WILL NOT BE BUILT UNLESS THE RAMP ABUTS AN AREA WHICH WILL NOT BE USED BY PEDESTRIANS.
7. NO VERTICAL "LIP" OR "CURB REVEAL" WILL BE PROVIDED WHERE THE RAMP ADJOINS THE ROADWAY.
8. AT MARKED CROSSWALKS, THE FULL WIDTH OF THE RAMP OR LANDING SHALL BE CONTAINED WITHIN THE PAVEMENT MARKINGS.
9. WHERE POSSIBLE, RAMP FLARES SHOULD BE LOCATED OUTSIDE THE DIRECT LINE OF TRAVEL MOST LIKELY TO BE FOLLOWED BY THE VISUALLY IMPAIRED.
10. SIGNS, POLES, PLANTERS, MAILBOXES, ETC. SHALL NOT BE LOCATED WHERE THEY WILL INTERFERE WITH THE USE OF SIDEWALK RAMPS.
11. WHERE POSSIBLE, SIDEWALK RAMPS SHOULD NOT BE LOCATED WHERE USERS MUST CROSS DROP INLET GRATES, MANHOLE COVERS OR OTHER ACCESS LIDS. IF THIS CANNOT BE AVOIDED THEN GRATE DESIGN AND PLACEMENT SHALL CONFORM TO ADA REQUIREMENTS.
12. CURB DRAINAGE SHOULD BE CONSTRUCTED SO AS TO PRECLUDE THE FLOW OF WATER PAST THE SIDEWALK RAMP.
13. WHEREVER FEASIBLE, TWO SIDEWALK RAMPS ARE RECOMMENDED IN PREFERENCE TO A SINGLE RAMP.
14. JOINTS WILL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT SIDEWALK SPECIFICATIONS, HOWEVER EXPANSION JOINTS WITHIN THE SIDEWALK RAMP AREA WILL BE AVOIDED WHEREVER POSSIBLE.
15. SIDEWALKS THAT ARE LESS THAN 5' WIDE REQUIRE 5' WIDE BY 5' LONG PASSING AREAS (NO GREATER THAN 2.0% CROSS SLOPE) AT INTERVALS NOT TO EXCEED 200 FEET.
16. E.O.P. = EDGE OF PAVEMENT
17. THE PUBLIC SIDEWALK CURB RAMP STANDARDS DEPICTED HERE MAY NOT BE APPROPRIATE FOR ALL LOCATIONS. FIELD CONDITIONS AT INDIVIDUAL LOCATIONS MAY REQUIRE SPECIFIC DESIGNS. DESIGNS MUST BE CONSISTENT WITH THE PROVISIONS OF THIS SHEET TO THE MAXIMUM EXTENT FEASIBLE ON ALTERATION PROJECTS AND WHEN STRUCTURALLY PRACTICABLE ON NEW CONSTRUCTION PROJECTS AS REQUIRED BY THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES.



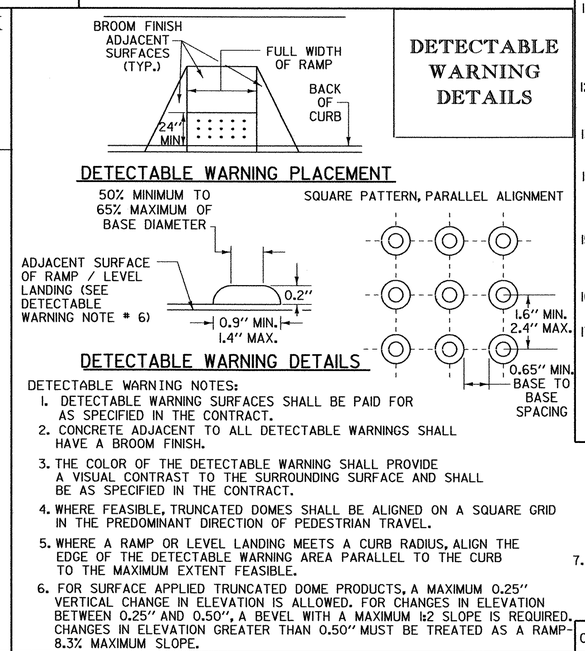
SIDEWALK RAMP TYPE 4

RAMP OFFSET FROM DIRECT LINE OF PEDESTRIAN TRAVEL



SIDEWALK RAMP TYPE 5

PERPENDICULAR RAMP IN URBAN SETTING - WIDE SIDEWALK



DETECTABLE WARNING DETAILS

DETECTABLE WARNING NOTES:

1. DETECTABLE WARNING SURFACES SHALL BE PAID FOR AS SPECIFIED IN THE CONTRACT.
2. CONCRETE ADJACENT TO ALL DETECTABLE WARNINGS SHALL HAVE A BROOM FINISH.
3. THE COLOR OF THE DETECTABLE WARNING SHALL PROVIDE A VISUAL CONTRAST TO THE SURROUNDING SURFACE AND SHALL BE AS SPECIFIED IN THE CONTRACT.
4. WHERE FEASIBLE, TRUNCATED DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF PEDESTRIAN TRAVEL.
5. WHERE A RAMP OR LEVEL LANDING MEETS A CURB RADIUS, ALIGN THE EDGE OF THE DETECTABLE WARNING AREA PARALLEL TO THE CURB TO THE MAXIMUM EXTENT FEASIBLE.
6. FOR SURFACE APPLIED TRUNCATED DOME PRODUCTS, A MAXIMUM 0.25" VERTICAL CHANGE IN ELEVATION IS ALLOWED. FOR CHANGES IN ELEVATION BETWEEN 0.25" AND 0.50", A BEVEL WITH A MAXIMUM 1:2 SLOPE IS REQUIRED. CHANGES IN ELEVATION GREATER THAN 0.50" MUST BE TREATED AS A RAMP - 8.3% MAXIMUM SLOPE.
7. IF ANY PORTION OF THE EDGE OF THE DETECTABLE WARNING CLOSEST TO THE CURB WILL BE GREATER THAN 5'-0" FROM THE BACK OF CURB, THEN THE PANEL(S) SHALL BE LOCATED ON THE LEVEL LANDING AS CLOSE TO PARALLEL TO THE CURB LINE AS POSSIBLE.

OTHER STANDARDS REQUIRED: C-2A, C-2B, C-3B AND C-10

REVISIONS AND CORRECTIONS

FEB. 2, 2004 - DATE OF ORIGINAL ISSUE
SEPT. 1, 2004 - MINOR REVISIONS TO COMPLY WITH ADAAG
MAR. 10, 2008 - MINOR REVISIONS TO COMPLY WITH ADA STANDARDS

APPROVED

LOCAL TRANSPORTATION FACILITIES PROGRAM MANAGER

DIRECTOR OF PROGRAM DEVELOPMENT

FEDERAL HIGHWAY ADMINISTRATION

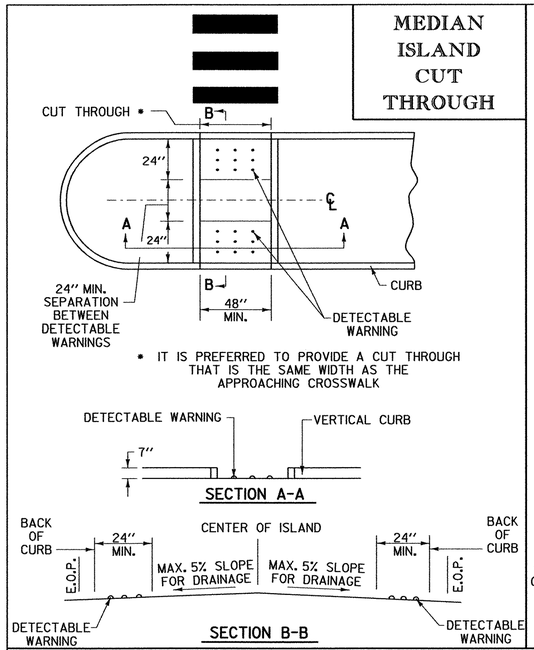
SIDEWALK RAMPS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

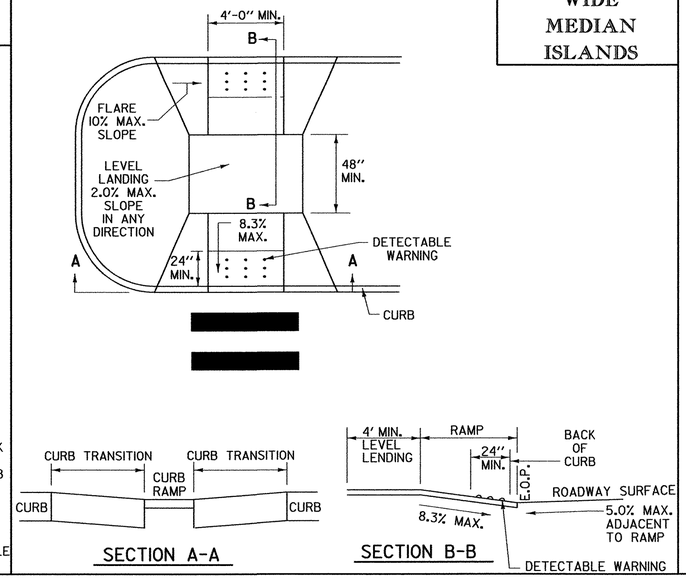
C-3A

MEDIAN ISLAND CUT THROUGH

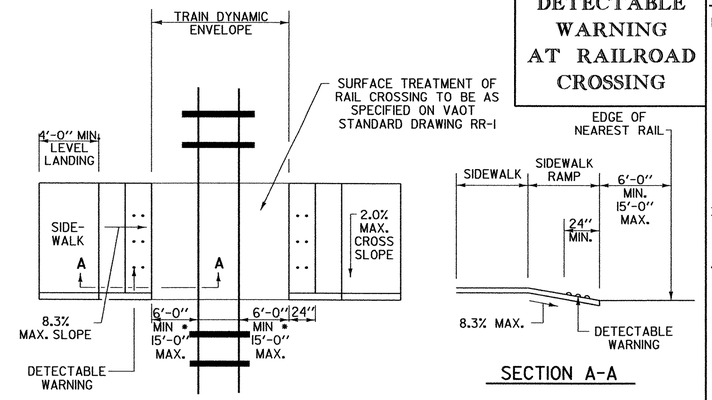


* IT IS PREFERRED TO PROVIDE A CUT THROUGH THAT IS THE SAME WIDTH AS THE APPROACHING CROSSWALK

RAMPS AT WIDE MEDIAN ISLANDS



DETECTABLE WARNING AT RAILROAD CROSSING



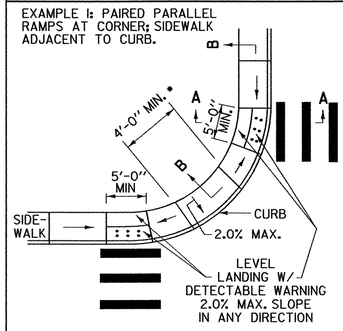
* WHERE THIS DISTANCE CANNOT BE MET, A CLEARANCE DISTANCE BETWEEN THE TOE OF THE SIDEWALK RAMP AND THE FACE OF RAIL WILL BE UPON AGREEMENT BETWEEN THE REQUESTING PARTY AND THE RAILROAD. HOWEVER, THE DETECTABLE WARNING SHALL BE OUTSIDE THE EDGE OF THE DYNAMIC ENVELOPE.

NOTE: WHERE A PEDESTRIAN GATE IS PROVIDED ACROSS THE SIDEWALK, THE NEAREST EDGE OF THE DETECTABLE WARNING SHALL BE A MINIMUM OF 2'-0" FROM THE FACE OF THE GATE ARM.

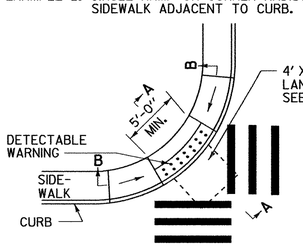
GENERAL NOTES:

1. THE DIMENSIONS AND GRADES SHOWN ON THIS STANDARD WILL BE ADHERED TO IN THE DESIGN AND THE CONSTRUCTION OF SIDEWALK RAMPS. WHERE SIDEWALKS RUN ADJACENT TO ROADWAYS ON STEEP (5% OR GREATER) GRADES, RAMP GRADES WILL BE AS FLAT AS POSSIBLE. (ON LOW SIDE OF DRIVES AND INTERSECTING SIDE STREETS, RAMPS SHALL SLOPE TOWARDS DRIVE OR SIDE STREET @ 2%)
2. NOMINAL RAMP DIMENSIONS AND GRADES:
   RAMP WIDTH - 4'-0" MINIMUM
   RAMP SLOPE - 8.3% MAXIMUM
   FLARE SLOPE - 10% MAXIMUM
   RAMP CROSS SLOPE - 2.0% MAXIMUM
3. A LEVEL LANDING (NO GREATER THAN 2.0% SLOPE IN ANY DIRECTION) SHALL BE PROVIDED AT THE TOP OF SIDEWALK RAMPS TO ALLOW FOR STOPPING AND MANEUVERING OF WHEELCHAIRS.
4. LEVEL LANDINGS (NO GREATER THAN 2.0% SLOPE IN ANY DIRECTION) AT THE BOTTOM OF PERPENDICULAR RAMPS SHALL BE WHOLLY CONTAINED WITHIN MARKED CROSSWALKS.
5. DUMMY JOINTS SHALL BE PROVIDED AT TRANSITIONS (GRADE CHANGES) AT TOPS AND BOTTOMS OF RAMPS AND FLARES.
6. VERTICAL DROP-OFF EDGES TO RAMPS WILL NOT BE BUILT UNLESS THE RAMP ABUTS AN AREA WHICH WILL NOT BE USED BY PEDESTRIANS.
7. NO VERTICAL "LIP" OR "CURB REVEAL" WILL BE PROVIDED WHERE THE RAMP ADJOINS THE ROADWAY.
8. AT MARKED CROSSWALKS, THE FULL WIDTH OF THE RAMP OR LANDING SHALL BE CONTAINED WITHIN THE PAVEMENT MARKINGS.
9. WHERE POSSIBLE, RAMP FLARES SHOULD BE LOCATED OUTSIDE THE DIRECT LINE OF TRAVEL MOST LIKELY TO BE FOLLOWED BY THE VISUALLY IMPAIRED.
10. SIGNS, POLES, PLANTERS, MAILBOXES, ETC. SHALL NOT BE LOCATED WHERE THEY WILL INTERFERE WITH THE USE OF SIDEWALK RAMPS.
11. WHERE POSSIBLE, SIDEWALK RAMPS SHOULD NOT BE LOCATED WHERE USERS MUST CROSS DROP INLET GRATES, MANHOLE COVERS OR OTHER ACCESS LIDS. IF THIS CANNOT BE AVOIDED THEN GRATE DESIGN AND PLACEMENT SHALL CONFORM TO ADA REQUIREMENTS.
12. CURB DRAINAGE SHOULD BE CONSTRUCTED SO AS TO PRECLUDE THE FLOW OF WATER PAST THE SIDEWALK RAMP.
13. WHEREVER FEASIBLE, TWO SIDEWALK RAMPS ARE RECOMMENDED IN PREFERENCE TO A SINGLE RAMP.
14. JOINTS WILL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT SIDEWALK SPECIFICATIONS, HOWEVER EXPANSION JOINTS WITHIN THE SIDEWALK RAMP AREA WILL BE AVOIDED WHEREVER POSSIBLE.
15. SIDEWALKS THAT ARE LESS THAN 5' WIDE REQUIRE 5' WIDE BY 5' LONG PASSING AREAS (NO GREATER THAN 2.0% CROSS SLOPE) AT INTERVALS NOT TO EXCEED 200 FEET.
16. E.O.P. = EDGE OF PAVEMENT
17. THE PUBLIC SIDEWALK CURB RAMP STANDARDS DEPICTED HERE MAY NOT BE APPROPRIATE FOR ALL LOCATIONS. FIELD CONDITIONS AT INDIVIDUAL LOCATIONS MAY REQUIRE SPECIFIC DESIGNS. DESIGNS MUST BE CONSISTENT WITH THE PROVISIONS OF THIS SHEET TO THE MAXIMUM EXTENT FEASIBLE ON ALTERATION PROJECTS AND WHEN STRUCTURALLY PRACTICABLE ON NEW CONSTRUCTION PROJECTS AS REQUIRED BY THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES.

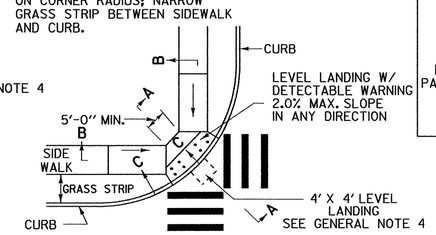
EXAMPLE 1: PAIRED PARALLEL RAMPS AT CORNER; SIDEWALK ADJACENT TO CURB.



EXAMPLE 2: SINGLE RAMP ON CORNER RADIUS: SIDEWALK ADJACENT TO CURB.



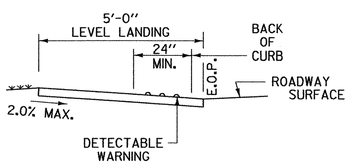
EXAMPLE 3: SINGLE PARALLEL RAMP ON CORNER RADIUS; NARROW GRASS STRIP BETWEEN SIDEWALK AND CURB.



SIDEWALK RAMP TYPE 6

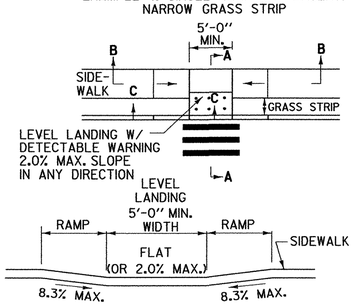
NARROW SIDEWALK PARALLEL RAMPS AND LEVEL LANDINGS WITHIN WALKWAY.

* WHERE A 4' MINIMUM SEPARATION BETWEEN RAMPS CANNOT BE ATTAINED, THE SIDEWALK SHOULD REMAIN AT THE SAME ELEVATION AS ADJOINING LEVEL LANDINGS.



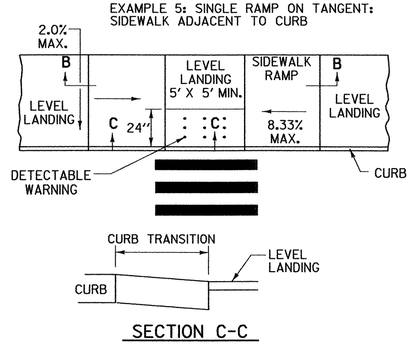
SECTION A-A

EXAMPLE 4: SINGLE RAMP ON TANGENT: NARROW GRASS STRIP



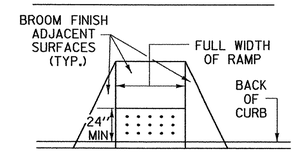
SECTION B-B

EXAMPLE 5: SINGLE RAMP ON TANGENT: SIDEWALK ADJACENT TO CURB

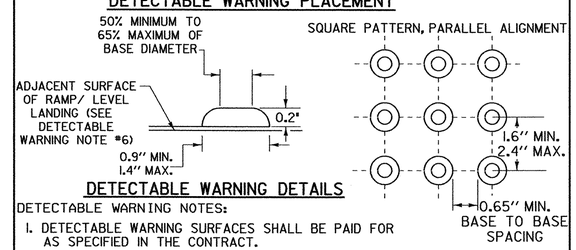


SECTION C-C

DETECTABLE WARNING DETAILS



DETECTABLE WARNING PLACEMENT



DETECTABLE WARNING DETAILS

DETECTABLE WARNING NOTES:

1. DETECTABLE WARNING SURFACES SHALL BE PAID FOR AS SPECIFIED IN THE CONTRACT.
2. CONCRETE ADJACENT TO ALL DETECTABLE WARNINGS SHALL HAVE A BROOM FINISH.
3. THE COLOR OF THE DETECTABLE WARNING SHALL PROVIDE A VISUAL CONTRAST TO THE SURROUNDING SURFACE AND SHALL BE AS SPECIFIED IN THE CONTRACT.
4. WHERE FEASIBLE, TRUNCATED DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF PEDESTRIAN TRAVEL.
5. WHERE A RAMP OR LEVEL LANDING MEETS A CURB RADIUS, ALIGN THE EDGE OF THE DETECTABLE WARNING AREA PARALLEL TO THE CURB TO THE MAXIMUM EXTENT FEASIBLE.
6. FOR SURFACE APPLIED TRUNCATED DOME PRODUCTS, A MAXIMUM 0.25" VERTICAL CHANGE IN ELEVATION IS ALLOWED. FOR CHANGES IN ELEVATION BETWEEN 0.25" AND 0.50", A BEVEL WITH A MAXIMUM 1:2 SLOPE IS REQUIRED. CHANGES IN ELEVATION GREATER THAN 0.50" MUST BE TREATED AS A RAMP-8.3% MAXIMUM SLOPE.
7. IF ANY PORTION OF THE EDGE OF THE DETECTABLE WARNING CLOSEST TO THE CURB WILL BE GREATER THAN 5'-0" FROM THE BACK OF CURB, THEN THE PANEL(S) SHALL BE LOCATED ON THE LEVEL LANDING AS CLOSE TO PARALLEL TO THE CURB LINE AS POSSIBLE.

OTHER STANDARDS REQUIRED: C-2A, C-2B, C-3A, C-10 AND RR-1

REVISIONS AND CORRECTIONS

FEB. 2, 2004	- DATE OF ORIGINAL ISSUE
SEPT. 1, 2004	- MINOR REVISIONS TO COMPLY WITH ADAAG
MAR. 10, 2008	- MINOR REVISIONS TO COMPLY WITH ADA STANDARDS

APPROVED

LOCAL TRANSPORTATION FACILITIES PROGRAM MANAGER

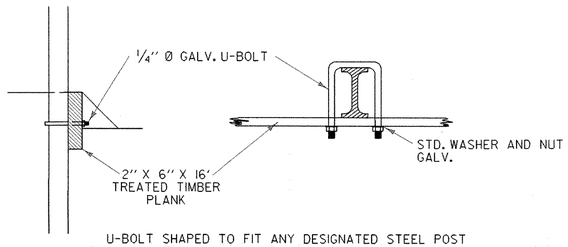
DIRECTOR OF PROGRAM DEVELOPMENT

FEDERAL HIGHWAY ADMINISTRATION

SIDEWALK RAMPS AND MEDIAN ISLANDS

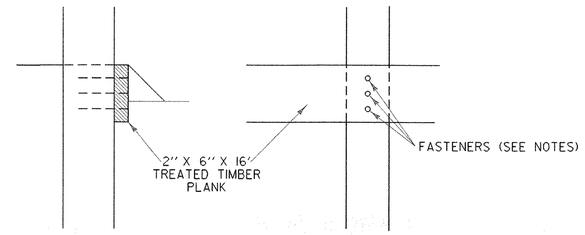
VERMONT AGENCY OF TRANSPORTATION

STANDARD C-3B

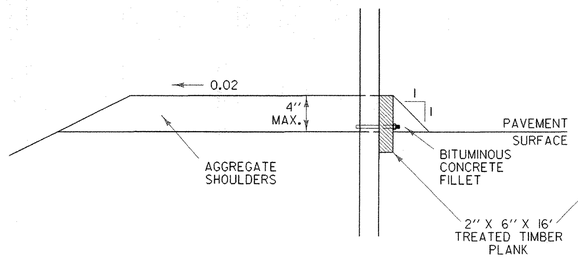


U-BOLT SHAPED TO FIT ANY DESIGNATED STEEL POST

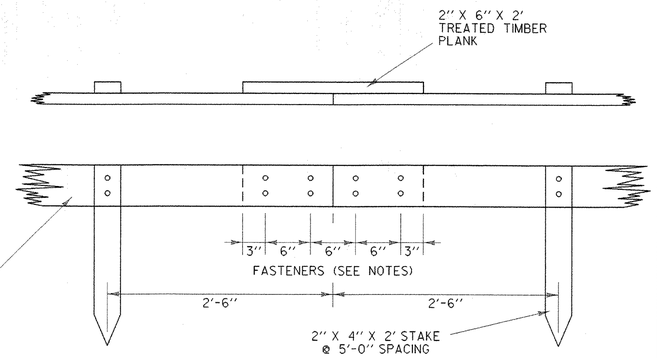
WITH STEEL POSTS



WITH WOOD POSTS (EXISTING CONDITION)

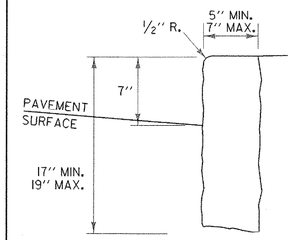


BITUMINOUS CONCRETE FILLET DETAIL

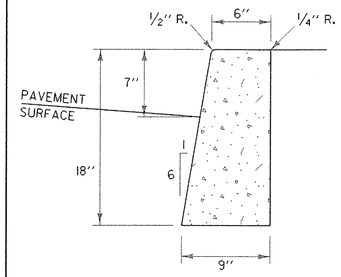


SPLICE DETAIL

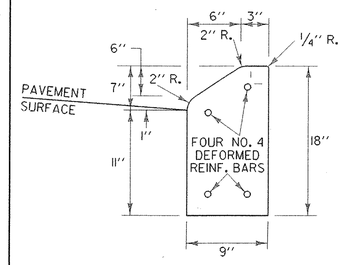
TREATED TIMBER CURB



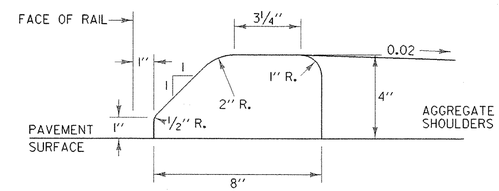
VERTICAL GRANITE CURB



CAST IN PLACE CONCRETE CURB, TYPE B

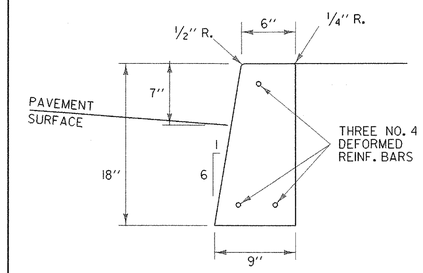


PRECAST REINFORCED CONCRETE CURB, TYPE A

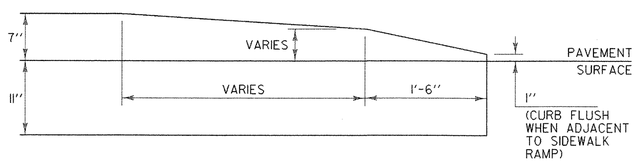


USE ONLY WITH STEEL BEAM GUARDRAIL

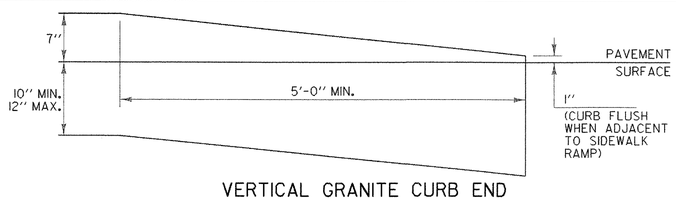
BITUMINOUS CONCRETE CURB, TYPE A



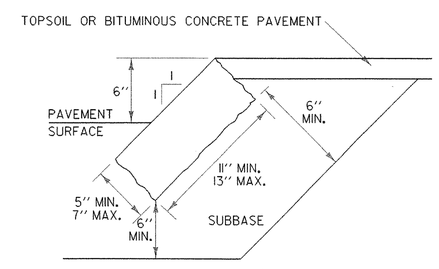
PRECAST REINFORCED CONCRETE CURB, TYPE B



CONCRETE CURB END



VERTICAL GRANITE CURB END



EDGING TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.

GRANITE SLOPE EDGING

GENERAL NOTES:

1. HEIGHT OF REVEAL OF CURB SHALL NOT EXCEED FOUR INCHES WHERE DESIGN OR POSTED SPEED IS EQUAL TO OR GREATER THAN 40 MPH AND WHEN INSTALLED WITH GUARDRAIL (STANDARD SHAPE TO BE BURIED TO THIS DEPTH).
2. WHEN CONCRETE SIDEWALK IS CONSTRUCTED ADJACENT TO CONCRETE OR VERTICAL GRANITE CURB, ASPHALT TREATED FELT SHALL BE PLACED BETWEEN THE SIDEWALK AND CURB FOR THE TOTAL DEPTH OF THE SIDEWALK.
3. FASTENERS (20d NAILS OR SCREWS) SHALL BE CORROSION RESISTANT TO THE TREATED LUMBER.
4. FOR SPECIFICATIONS FOR EXPANSION/CONTRACTION JOINTS AND LENGTHS OF SECTIONS, SEE SECTION 616.
5. JOINTS BETWEEN CURB SECTIONS SHALL BE MORTARED IN CONFORMANCE WITH SECTION 616.
6. BITUMINOUS CONCRETE AND TREATED TIMBER CURB SHALL BE IN CONFORMANCE WITH SECTION 616.
7. TWO INCH MINIMUM CLEARANCE FROM FACE OF CONCRETE TO EDGE OF REINFORCING STEEL.

OTHER STDS. REQUIRED: **NONE**

REVISIONS AND CORRECTIONS

FEB. 11, 2008 - ORIGINAL APPROVAL DATE

APPROVED

Kevin S. Marshia
ROADWAY, TRAFFIC & SAFETY ENGINEER

Richard Theriault
DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter
FEDERAL HIGHWAY ADMINISTRATION

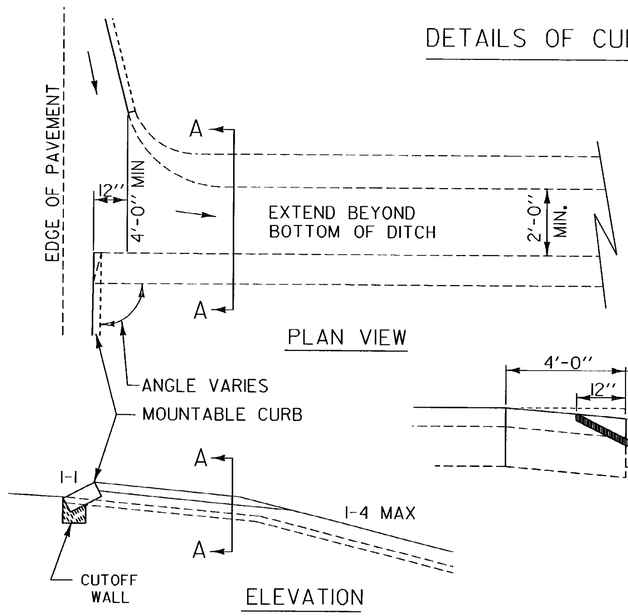
CURBING

VERMONT AGENCY OF TRANSPORTATION

STANDARD

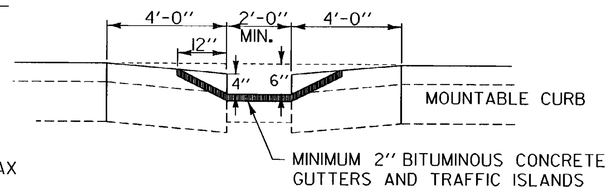
C-10

DETAILS OF CURB DRAINS



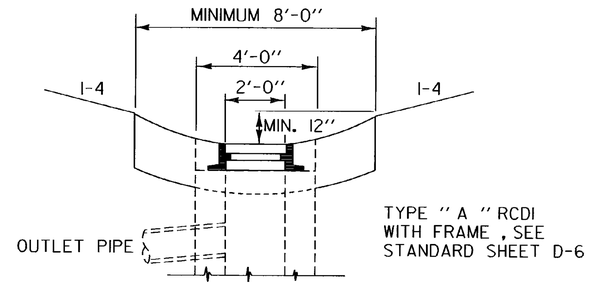
NOT TO BE USED ON ROADWAY GRADES EXCEEDING 2%

A 6'' DEPTH OF COARSE SAND OR GRAVEL SHALL BE USED TO REPLACE UNSUITABLE MATERIAL ENCOUNTERED BELOW SUBGRADE AT THE DIRECTION OF THE ENGINEER.

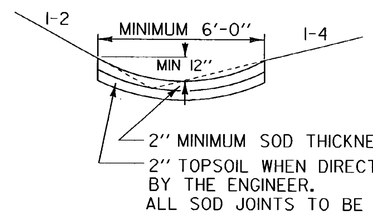


SECTION A-A

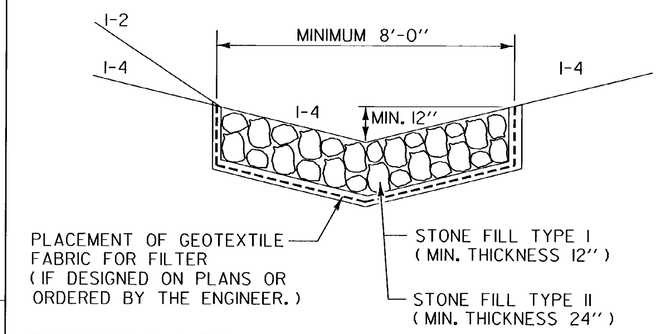
DROP INLET WITH GRATE IN TREATED GUTTER



SODDING

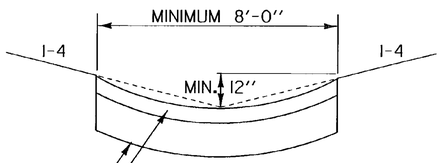


STONE FILL TYPE I
STONE FILL TYPE II



EXCAVATION PAID FOR
AS COMMON EXCAVATION.

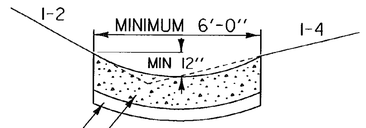
BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS



2'' BITUMINOUS CONCRETE APPLIED
IN TWO COURSES.

6'' DEPTH OF GRAVEL OR
SAND IF DIRECTED BY THE ENGINEER.

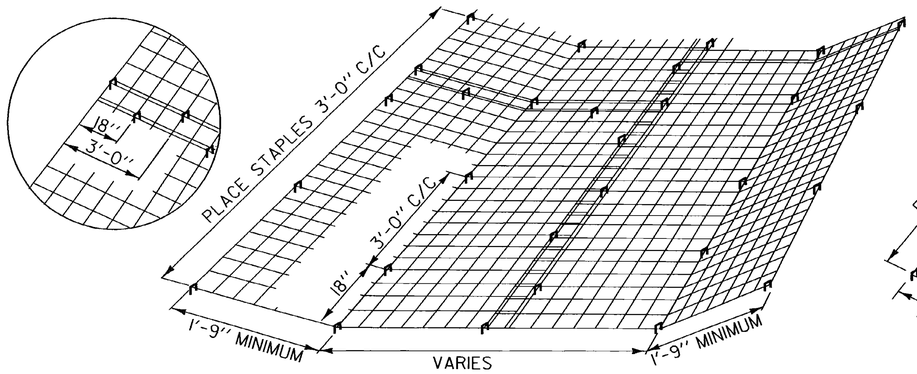
PORTLAND CEMENT CONCRETE GUTTER



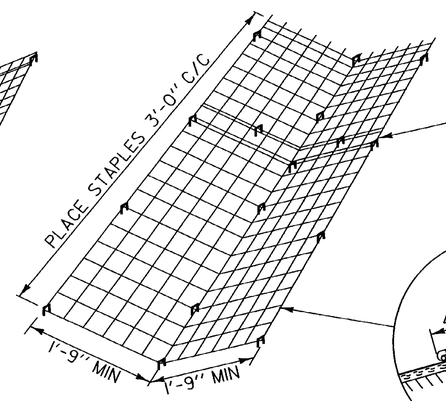
6'' STRUCTURAL CONCRETE

6'' DEPTH OF GRAVEL OR SAND IF
DIRECTED BY THE ENGINEER

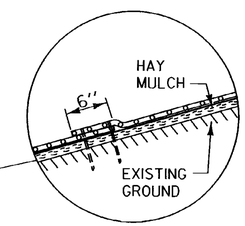
ON ALL OVERLAPS , PLACE STAPLES
EVERY 18'', ALTERNATING ON BOTH SIDES
OF 6'' OVERLAP.



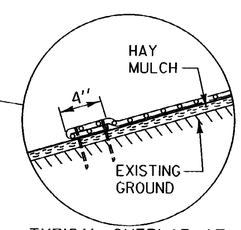
TYPICAL FLAT BOTTOM DITCH



TYPICAL '' V '' DITCH



TYPICAL OVERLAP



TYPICAL OVERLAP AT
ALL ENDS AND EDGES

DETAILS OF PLACING EROSION MATTING

REVISIONS AND CORRECTIONS

APR. 2, 1986 - ORIGINAL APPROVAL DATE

JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.

APPROVED

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

DIRECTOR OF ENGINEERING

P.E.

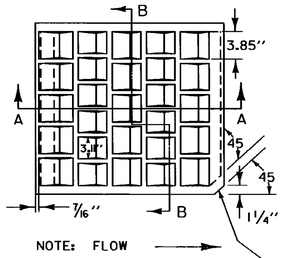
DESIGN ENGINEER

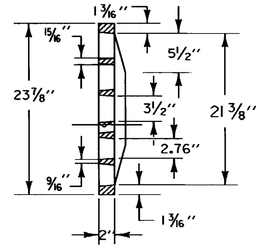
TREATED GUTTERS

VERMONT AGENCY OF TRANSPORTATION

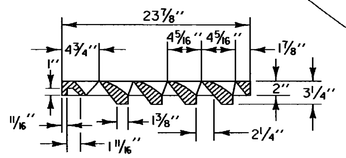
STANDARD

D - 3





SECTION B-B



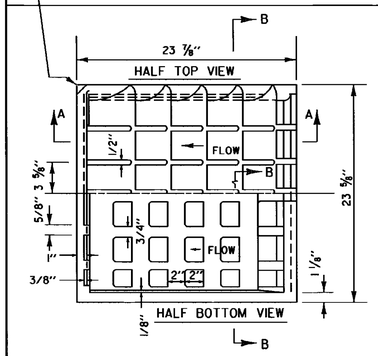
SECTION A-A

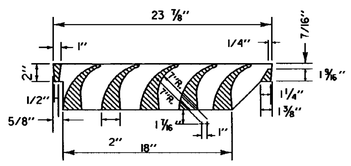
NOTE: THIS CORNER LEFT OFF FOR "RIGHT" GRATE DIAGONALLY OPPOSITE CORNER FOR "LEFT" GRATE TO FIT IN KEYED FRAMES.

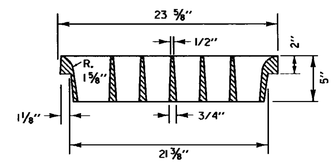
THIS CORNER LEFT OFF FOR "RIGHT" GRATE, DIAG. OPPOSITE CORNER FOR "LEFT" GRATE, TO FIT IN KEYED FRAMES.

TYPE "E" GRATE
(NOT TO SCALE)

NOTE: ALTERNATE TYPE E GRATE BELOW







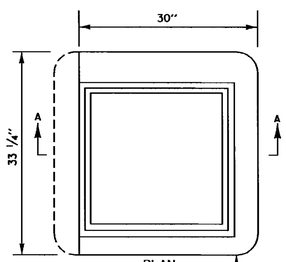
SECTION B-B

CAST IRON GRATE
TYPE E

NOTE: THIS FRAME TO BE PLACED IN DROP INLET TOP BEFORE CONCRETE IS POURED.

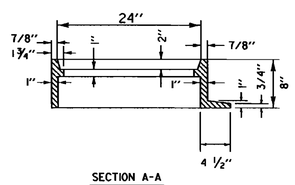
4 FLANGES UNLESS OTHERWISE INDICATED.

FRAMES TO BE FURNISHED WITH 3 FLANGES WHEN USED IN CONJUNCTION WITH CURB OR AS DIRECTED BY THE ENGINEER.



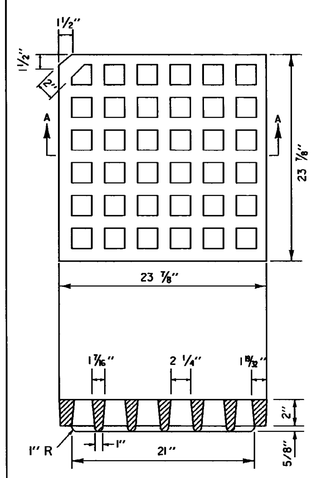
PLAN

MADE WITH 3 OR 4 FLANGES



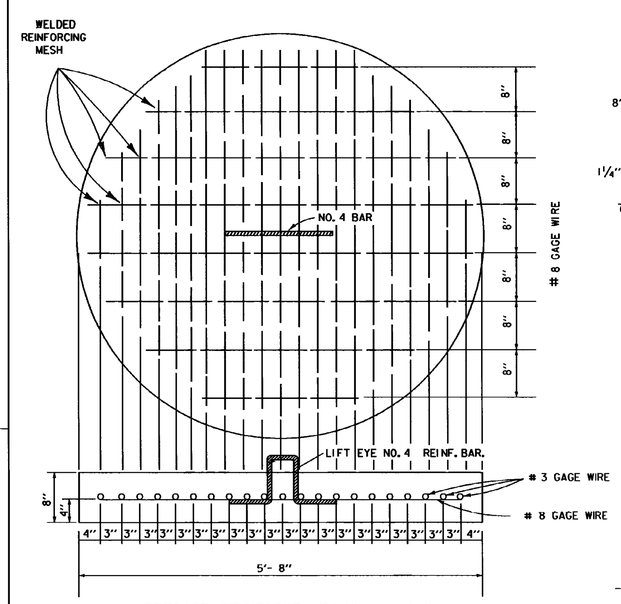
SECTION A-A

FRAME
FOR
TYPE D OR TYPE E
GRATE

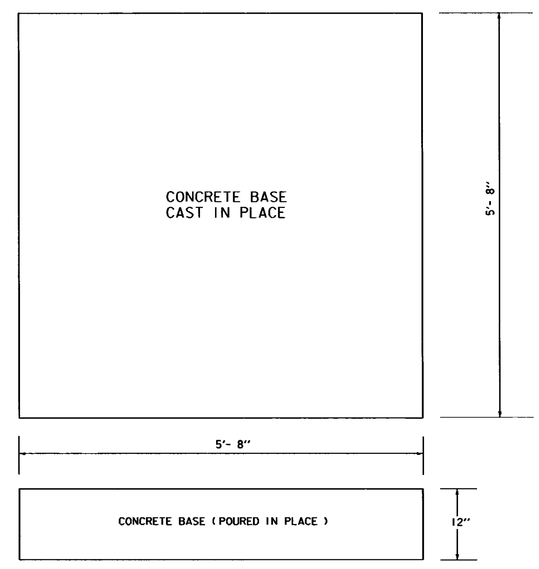


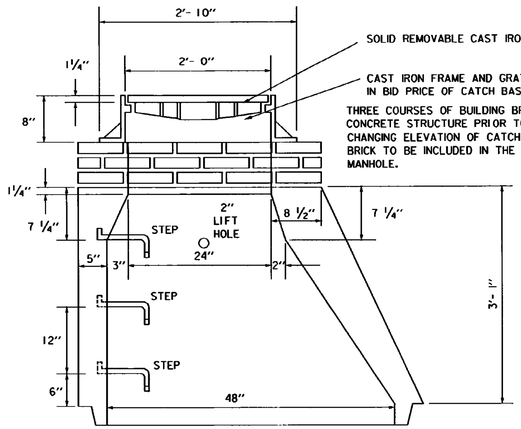
SECTION A-A

CAST IRON GRATE
TYPE D



PRECAST REINFORCED CONCRETE BASE

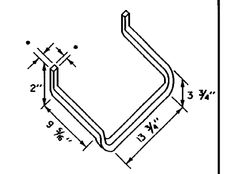




SOLID REMOVABLE CAST IRON COVER OR GRATE

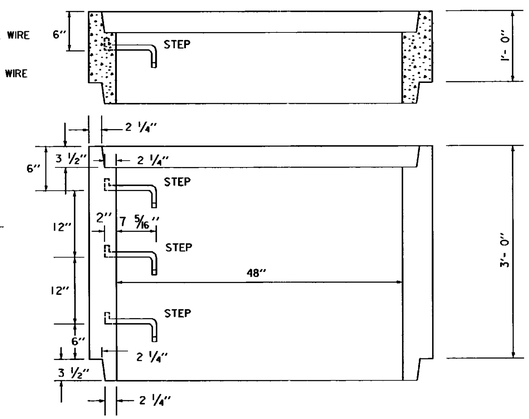
CAST IRON FRAME AND GRATE, OR COVER, TO BE INCLUDED IN BID PRICE OF CATCH BASIN OR MANHOLE.

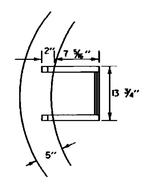
THREE COURSES OF BUILDING BRICK TO BE PLACED ON TOP OF CONCRETE STRUCTURE PRIOR TO PLACING FRAME TO FACILITATE CHANGING ELEVATION OF CATCH BASIN OR MANHOLE WHEN REQUIRED. BRICK TO BE INCLUDED IN THE BID PRICE FOR CATCH BASIN OR MANHOLE.



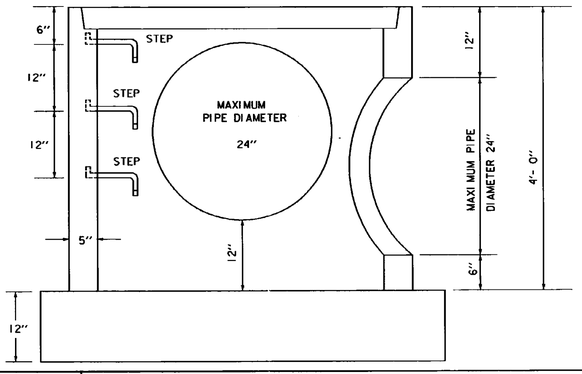
ALUMINUM STEP
(DROP FRONT)

* - INDIVIDUAL METAL RUNGS SHALL HAVE A MINIMUM DIMENSION OF 1" OR SHALL BE PAINTED OR OTHERWISE TREATED TO RESIST CORROSION AND RUSTING.





STEP DETAIL
TOP VIEW



REVISIONS AND CORRECTIONS

DEC. 6, 1971 - ORIGINAL APPROVAL
OCT. 22, 1976 - CAST IRON GRATE WITH FRAME, TYPE E ADDED
OCT. 6, 1978 - TYPE D GRATE ADDED
OCT. 30, 1985 - IMPERFECT TRENCH DETAILS DELETED
FEB. 17, 1993 - SECOND CAST IRON GRATE TYPE E ADDED.
MAR. 23, 1994 - ADDED NOTE FOR STEP DETAILS
JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.

APPROVED

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

Gordon S. MacArthur
DIRECTOR OF ENGINEERING

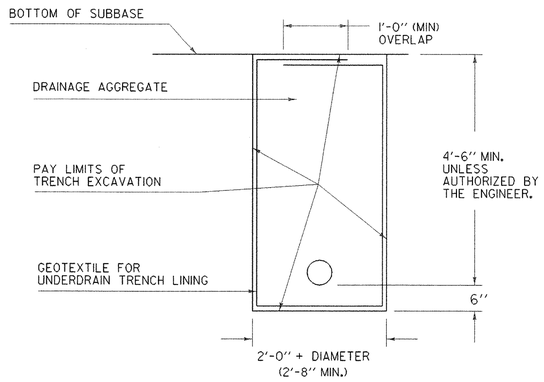
Robert M. Murphy
DESIGN ENGINEER

PRECAST REINFORCED CONCRETE CATCH BASIN W/ CAST IRON GRATE
PRECAST REINFORCED CONCRETE MANHOLE W/ CAST IRON COVER

CAST IRON GRATE WITH FRAME, TYPE D
CAST IRON GRATE WITH FRAME, TYPE E

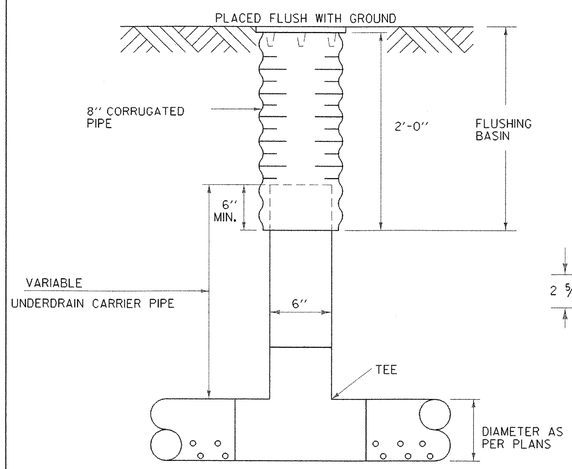
VERMONT AGENCY OF TRANSPORTATION

STANDARD
D-15

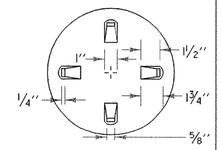


DRAINAGE AGGREGATE SHALL MEET THE REQUIREMENTS OF SECTION 704.

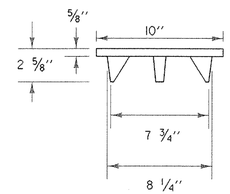
UNDERDRAIN



A FLUSHING BASIN AT THE BEGINNING OF A RUN SHALL BE A 90° ELBOW.



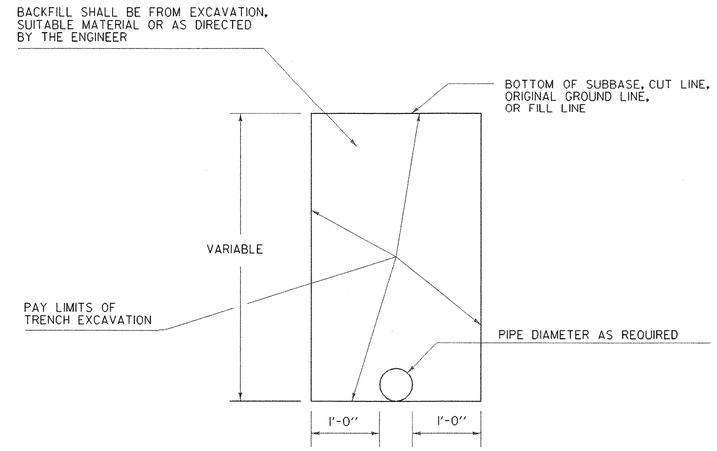
TOP VIEW



SIDE VIEW

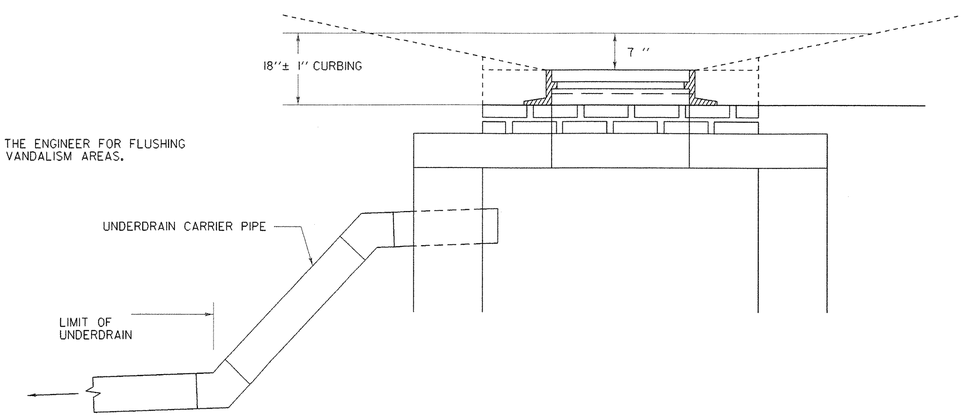
CAST IRON COVER

UNDERDRAIN FLUSHING BASIN

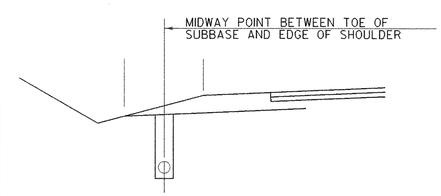


UNDERDRAIN CARRIER PIPE

TO BE USED AS SHOWN OR AS DIRECTED BY THE ENGINEER FOR FLUSHING IN AREAS OF LAWNS, SCHOOLS, AND POSSIBLE VANDALISM AREAS.



URBAN TYPE FLUSHING INSTALLATION



UNDERDRAIN TO BE LAID AS SHOWN ABOVE, AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER

UNDERDRAIN LOCATION

GENERAL NOTES

1. GRADE FOR UNDERDRAIN PIPE SHALL BE PARALLEL WITH THE GRADE OF THE ROAD UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
2. THE UNDERDRAIN SHALL BE TAKEN TO A PROPER OUTLET AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
3. ELBOWS, T'S, AND OTHER JUNCTION UNITS NECESSARY FOR PROPER INSTALLATION OF THE UNDERDRAIN, AS DIRECTED BY THE ENGINEER, SHALL BE INCLUDED IN THE UNIT BID PRICE FOR UNDERDRAIN OR CARRIER PIPE.
4. A YIELDING MARKER POST SHALL BE PLACED NEXT TO THE FLUSHING BASIN OR AS DIRECTED BY THE ENGINEER.

NOT TO SCALE

REVISIONS AND CORRECTIONS

AUG 13, 2007 - ORIGINAL APPROVAL DATE

APPROVED

Kevin A. Marshia
ROADWAY, TRAFFIC & SAFETY ENGINEER

Richard Fetheault
DIRECTOR OF PROGRAM DEVELOPMENT

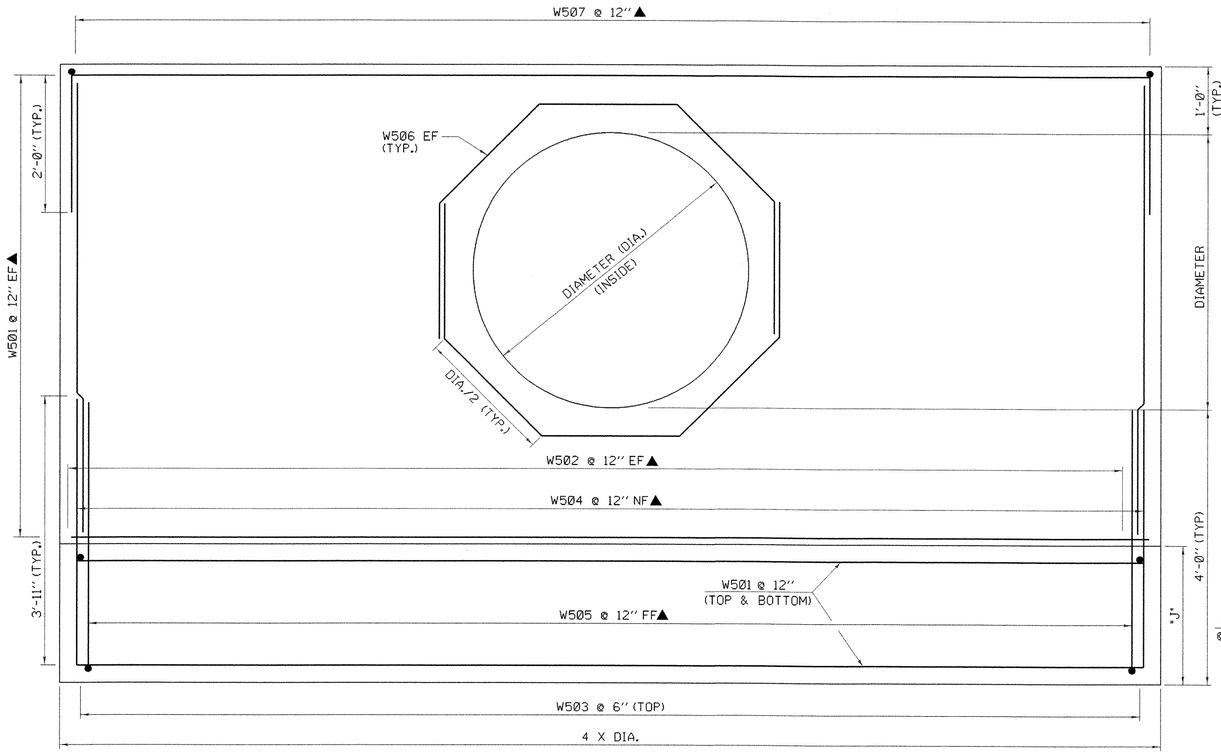
Mark D. Richter
FEDERAL HIGHWAY ADMINISTRATION

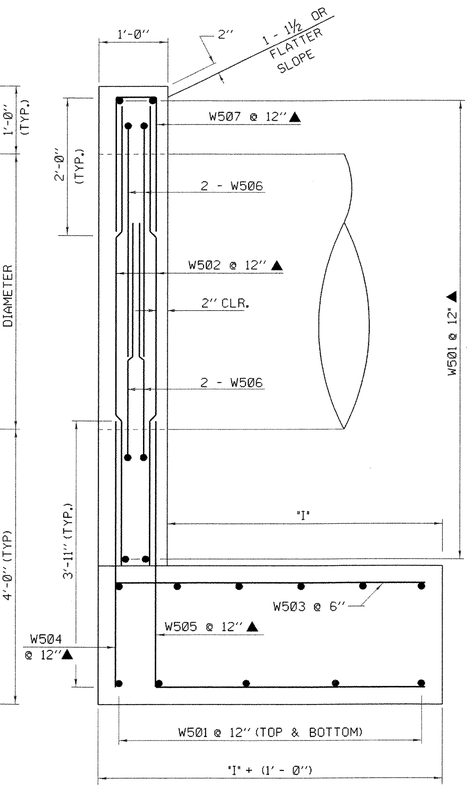
UNDERDRAIN CONSTRUCTION DETAILS

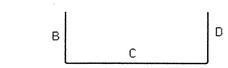
VERMONT AGENCY OF TRANSPORTATION

STANDARD

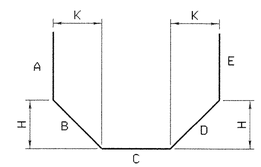
D-30



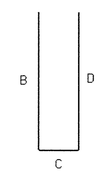




REBAR TYPE: I7



REBAR TYPE: I4



REBAR TYPE: S10

DESIGN CRITERIA

1. ASSUMED ALLOWABLE LOAD FOR SPREAD FOOTINGS
   - ON SOIL: 4 KSF
   - ON LEDGE: 10 KSF
2. REINFORCING STEEL GRADE: 60 KSI
3. CONCRETE CLASS B: 3500 PSI
4. SOIL UNIT WEIGHT: 140 PSF
5. ASSUMED FOOTING FRICTION COEFFICIENT: 0.55
6. SOIL FRICTION ANGLE: 33.67°
7. DEDUCT VOLUME OF PIPE.
8. ALL EXPOSED EDGES WILL BE CHAMFERED ONE INCH.
9. ALL REBAR CLEARANCES SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
10. CONSTRUCTION JOINT SURFACE SHALL BE ROUGH.

REBAR NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

PIPE DIAMETER	48"	42"	36"	30"	24"	18"
DIMENSION "I"	48"	48"	42"	42"	36"	36"
DIMENSION "J"	24"	24"	18"	18"	12"	12"
CONCRETE QUANTITY (CY)	9.61	8.20	5.63	4.54	2.85	2.05
LENGTH OF BARS	1130'	949'	767'	635'	495'	360'
WEIGHT OF BARS (LB)	1179	990	800	662	516	376

STEEL SCHEDULE FOR REINFORCED CONCRETE HEADWALL DIA. 48"

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	H	K
1	28	5	15'-6"	W501	STR.							
2	34	5	6'-9"	W502	STR.							
3	33	5	4'-6"	W503	STR.							
4	17	5	3'-11"	W504	STR.							
5	17	5	7'-10"	W505	17		3'-11"	3'-11"	—			
6	4	5		W506	14	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	1'-5"	1'-5"
7	17	5		W507	S10		2'-0"	0'-7"	2'-0"			

STEEL SCHEDULE FOR REINFORCED CONCRETE HEADWALL DIA. 42"

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	H	K
1	26	5	13'-6"	W501	STR.							
2	30	5	6'-3"	W502	STR.							
3	29	5	4'-6"	W503	STR.							
4	15	5	3'-11"	W504	STR.							
5	15	5	7'-10"	W505	17		3'-11"	3'-11"	—			
6	4	5		W506	14	1'-9"	1'-9"	1'-9"	1'-9"	1'-9"	1'-2⅞"	1'-2⅞"
7	15	5		W507	S10		2'-0"	0'-7"	2'-0"			

STEEL SCHEDULE FOR REINFORCED CONCRETE HEADWALL DIA. 36"

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	H	K
1	24	5	11'-6"	W501	STR.							
2	26	5	6'-3"	W502	STR.							
3	25	5	4'-0"	W503	STR.							
4	13	5	3'-11"	W504	STR.							
5	13	5	7'-4"	W505	17		3'-11"	3'-5"	—			
6	4	5		W506	14	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-0¾"	1'-0¾"
7	13	5		W507	S10		2'-0"	0'-7"	2'-0"			

STEEL SCHEDULE FOR REINFORCED CONCRETE HEADWALL DIA. 30"

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	H	K
1	24	5	9'-6"	W501	STR.							
2	22	5	5'-9"	W502	STR.							
3	21	5	4'-10"	W503	STR.							
4	11	5	3'-11"	W504	STR.							
5	11	5	7'-4"	W505	17		3'-11"	3'-5"	—			
6	4	5		W506	14	1'-3"	1'-3"	1'-3"	1'-3"	1'-3"	0'-10⅝"	0'-10⅝"
7	11	5		W507	S10		2'-0"	0'-7"	2'-0"			

STEEL SCHEDULE FOR REINFORCED CONCRETE HEADWALL DIA. 24"

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	H	K
1	24	5	7'-6"	W501	STR.							
2	18	5	5'-9"	W502	STR.							
3	17	5	3'-6"	W503	STR.							
4	9	5	3'-11"	W504	STR.							
5	9	5	6'-10"	W505	17		3'-11"	2'-11"	—			
6	4	5		W506	14	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	0'-8½"	0'-8½"
7	9	5		W507	S10		2'-0"	0'-7"	2'-0"			

STEEL SCHEDULE FOR REINFORCED CONCRETE HEADWALL DIA. 18"

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	H	K
1	22	5	5'-6"	W501	STR.							
2	14	5	5'-3"	W502	STR.							
3	13	5	3'-6"	W503	STR.							
4	7	5	3'-11"	W504	STR.							
5	7	5	6'-10"	W505	17		3'-11"	2'-11"	—			
6	4	5		W506	14	0'-9"	0'-9"	0'-9"	0'-9"	0'-9"	0'-6⅜"	0'-6⅜"
7	7	5		W507	S10		2'-0"	0'-7"	2'-0"			

NOT TO SCALE

REVISIONS AND CORRECTIONS

MAR. 12, 2007 - ORIGINAL APPROVAL DATE

APPROVED

Kevin A. Marshia
ROADWAY, TRAFFIC & SAFETY ENGINEER

Richard Tetreault
DIRECTOR OF PROGRAM DEVELOPMENT

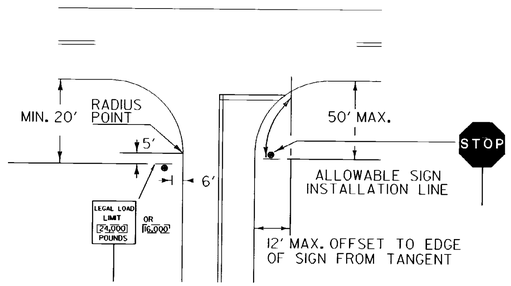
Mark D. Richter
FEDERAL HIGHWAY ADMINISTRATION

REINFORCED CONCRETE STRAIGHT HEADWALL

VERMONT AGENCY OF TRANSPORTATION

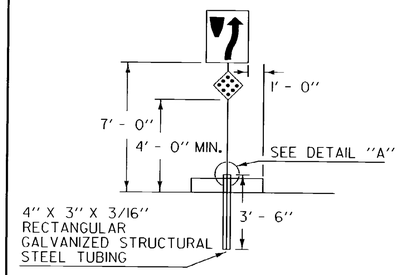
STANDARD

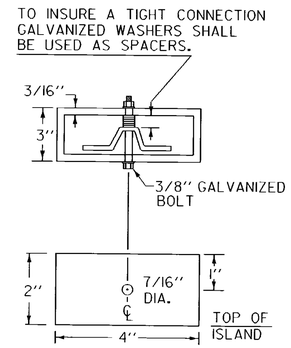
D-33



STOP SIGN SHALL BE PLACED ON DRIVERS RIGHT, MAINTAINING MAXIMUM VISIBLITY. CLEARANCE SHALL BE A MINIMUM OF 6' AND A MAXIMUM OF 50' FROM EDGE LINE OF INTERSECTING ROADWAY AND DOES NOT HAVE TO BE ADJACENT TO THE STOP BAR.

LEGAL LOAD LIMIT AND STOP SIGNS AT INTERSECTIONS WITH TOWN HIGHWAYS

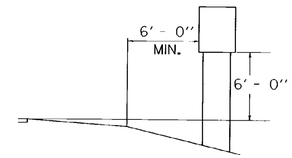


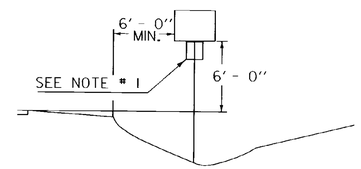


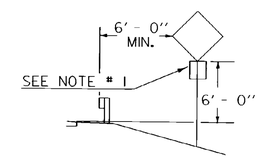
SLEEVE DETAIL "A"

SIGNS ON MEDIAN ISLANDS IN THE LINE OF TRAFFIC

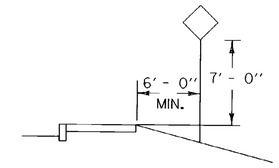
INCREASE VERTICAL CLEARANCE TO 7' IN AREAS OF FREQUENT ROADSIDE PARKING OR PEDESTRIAN ACTIVITY

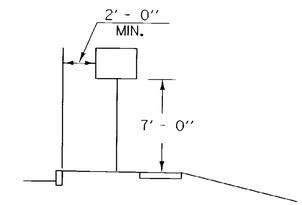




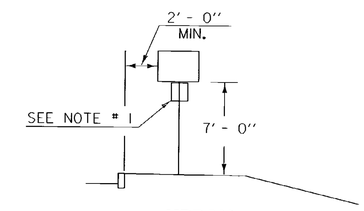


RURAL





IF SUFFICIENT CLEARANCE IS NOT AVAILABLE BETWEEN CURB AND SIDEWALK MOUNT SIGN BEHIND SIDEWALK AS SHOWN AT TOP. CHECK FOR ADEQUATE R.O.W..



URBAN

NOTES:

1. IN BOTH RURAL AND URBAN LOCATIONS. IF A SECONDARY SIGN IS MOUNTED BELOW ANOTHER SIGN, THE MINIMUM CLEARANCE MAY BE REDUCED BY ONE FOOT.
2. IN RURAL AREAS WITH NO OR MINIMAL SHOULDER, THE LATERAL CLEARANCE TO THE EDGE OF A SIGN SHOULD BE A MINIMUM OF 12' FROM THE EDGE OF THE TRAVELED WAY.
3. ALSO SEE OTHER STANDARD SHEETS FOR MOUNTING CLEARANCE AND SPACING OF DESTINATION AND ROUTE MARKER ASSEMBLIES AND TOWN LINE SIGNS.

POST REFERENCE:

REFER TO THE DETAILS ON THE APPROPRIATE STANDARD DRAWING FOR INFORMATION CONCERNING THE PROPER MOUNTING OF SIGNS ON APPROPRIATE POSTS.

OTHER STDS. REQUIRED: **E-160** **E-161** **E-162** **E-163** **E-164**

REVISIONS AND CORRECTIONS

JAN. 23, 1995 - DATE OF ORIGINAL ISSUE

AUG. 08, 1995 - VARIOUS MINOR NOTE REVISIONS

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

Gordon S. MacArthur
DIRECTOR OF ENGINEERING

David A. Ross
TRAFFIC AND SAFETY ENGINEER

STANDARD SIGN PLACEMENT CONVENTIONAL ROAD

/traf/std/stdel21.dgn : stdel21.i

VERMONT AGENCY OF TRANSPORTATION

STANDARD

E-121

STREET NAME SIGNS NOTES

DESIGN

LETTERS, DIGITS, ARROWS, SYMBOLS, SPACING AND TEXT DIMENSIONS SHALL CONFORM WITH THE "STANDARD HIGHWAY SIGNS BOOK" AND DESIGNS PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION (FHWA).

MATERIALS

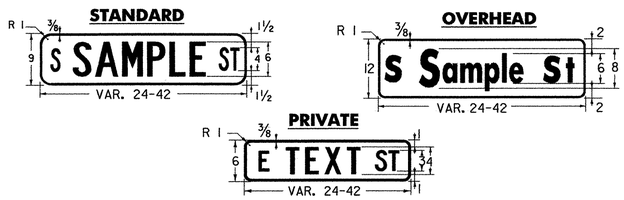
THE SIGN BASE MATERIALS USED FOR THE STREET SIGNS MAY BE EITHER OF THE FOLLOWING: A - EXTRUDED ALUMINUM BLADES WITH RETROREFLECTIVE SHEETING B - FLAT ALUMINUM BLADES WITH RETROREFECTIVE SHEETING THE MATERIAL FOR THE BLADES SHALL BE EITHER EXTRUDED ALUMINUM WITH A 0.25 INCH FLANGE THICKNESS AND A 0.090 INCH WEBB (MIN) OR FLAT SHEET ALUMINUM WITH A MINIMUM THICKNESS OF 0.125 INCH. THE PREFERRED MOUNTING METHOD FOR STREET SIGNS IS POST TOP MOUNTING BRACKETS. HARDWARE FOR MOUNTING SIGNS TO POST SHALL BE INCIDENTAL TO OTHER ITEMS. MOUNTING METHOD WILL BE AS SHOWN ON THE PLANS. MINIMUM VERTICAL CLEARANCE IS 8 FEET TO THE BOTTOM OF THE SIGN. FOR POST TOP MOUNTINGS SIGNS SHALL HAVE TEXT ON BOTH SIDES.

COLORS

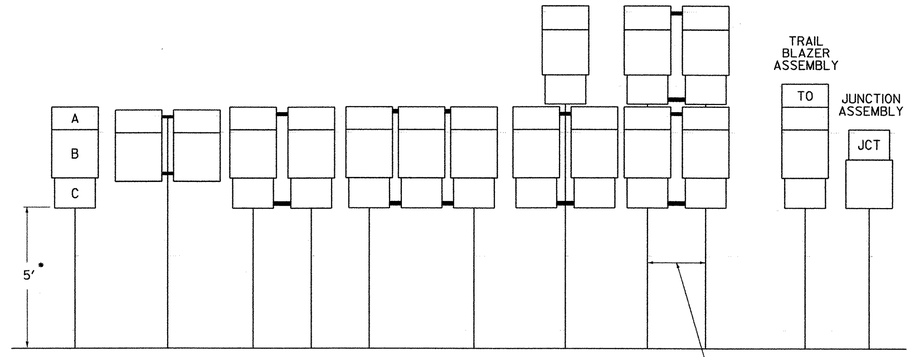
THE STREET SIGNS SHOWN ON THIS SHEET SHALL HAVE WHITE RETROREFLECTIVE ASTM TYPE III TEXT, ON A GREEN RETROREFLECTIVE ASTM TYPE III BACKGROUND. THE COLORS SHALL CONFORMWITH THE COLORS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICALS AND APPROVED BY THE FHWA.

SPECIFICATIONS

STREET SIGNS SHALL MEET THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
STANDARD SIGNS - USE A 9 INCH HIGH BLADE WITH SERIES "B" LETTERING (MIN) WITH 6 INCH LETTERS FOR THE STREET NAME. 4 INCH LETTERS FOR OTHER TEXT. PVT. SIGNS - USE A 6 INCH HIGH BLADE WITH SERIES B LETTERING (MIN) WITH 4 INCH LETTERS FOR THE STREET NAME, 3 INCH LETTERS FOR OTHER TEXT. OVERHEAD SIGNS USE A 12 INCH HIGH BLADE WITH 8 INCH UPPER CASE AND 6 INCH LOWER CASE LETTERS. FOR ALL 6, 9, 12 INCH BLADES USE LENGTHS OF 24, 30, 36 OR 42 INCH.



STREET NAME SIGNS



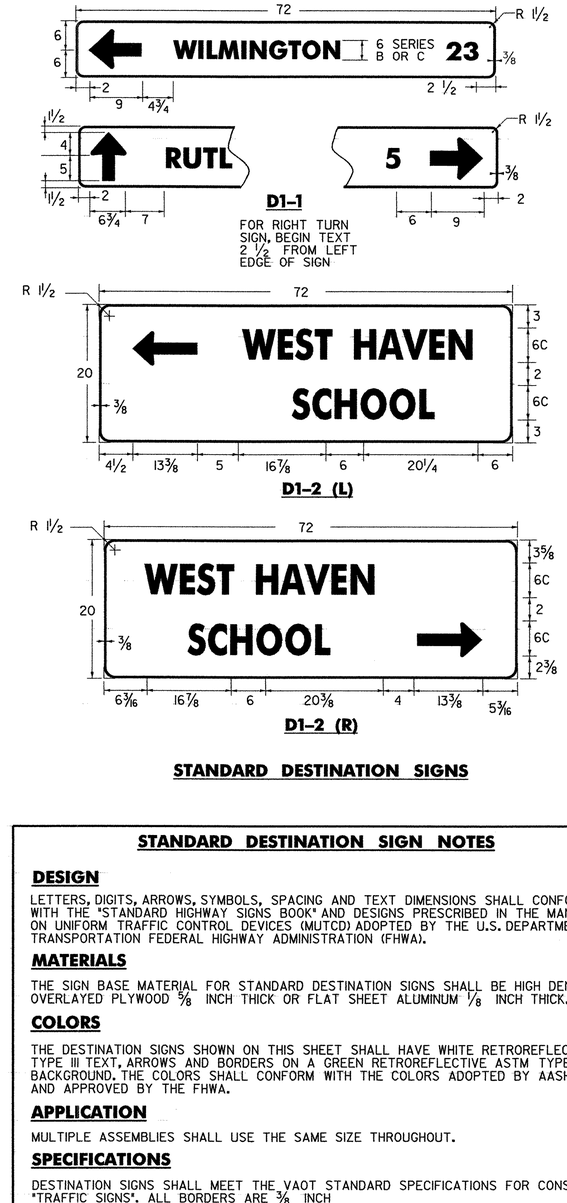
STANDARD MOUNTING OF ROUTE MARKER ASSEMBLIES

A - CARDINAL DIRECTION MARKER
B - ROUTE NUMBER
C - ADVANCE TURN ARROW OR DIRECTIONAL ARROW

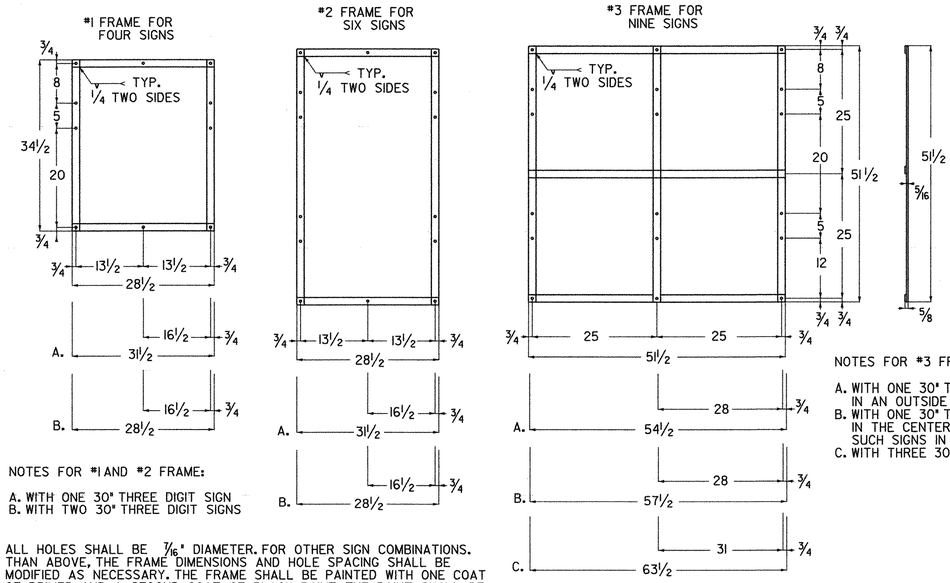
* WHERE PARKING OR PEDESTRIAN TRAFFIC WILL OCCUR IN THE IMMEDIATE VICINITY OF THESE SIGNS MINIMUM VERTICAL CLEARANCE SHALL BE INCREASED TO 7'

INSTALLATION SEQUENCE:

IN MULTIPLE HORIZONTAL MOUNTINGS PLACE A ROUTE MARKER ASSEMBLY INDICATING A LEFT TURN ON THE LEFT SIDE OF THE ASSEMBLY; RIGHT TURN ON THE RIGHT SIDE. FOR VERTICALLY STACKED MOUNTINGS PLACE THE STRAIGHT THROUGH MOVE INDICATION ON TOP, THE LEFT OR RIGHT TURNS AS APPROPRIATE BENEATH.



STANDARD DESTINATION SIGNS



NOTES FOR #1 AND #2 FRAME:

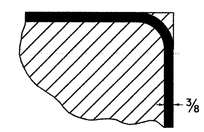
A. WITH ONE 30" THREE DIGIT SIGN
B. WITH TWO 30" THREE DIGIT SIGNS

NOTES FOR #3 FRAME:

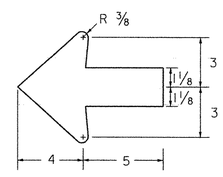
A. WITH ONE 30" THREE DIGIT SIGN IN AN OUTSIDE POSITION.
B. WITH ONE 30" THREE DIGIT SIGN IN THE CENTER POSITION OR TWO SUCH SIGNS IN THE OUTSIDE POSITIONS.
C. WITH THREE 30" THREE DIGIT SIGNS.

ALL HOLES SHALL BE 7/16" DIAMETER. FOR OTHER SIGN COMBINATIONS. THAN ABOVE, THE FRAME DIMENSIONS AND HOLE SPACING SHALL BE MODIFIED AS NECESSARY. THE FRAME SHALL BE PAINTED WITH ONE COAT OF PRIMER AND A SECOND COAT OF BLACK PAINT. THE PAINT SHALL BE OF THE TYPE USED ON EXTERIOR METAL SURFACES TO PREVENT METAL CORROSION.
STANDARD FRAMES SHALL BE 5/16" x 1 1/2" WELDED DUCTILE IRON GRADE 60-40-18.

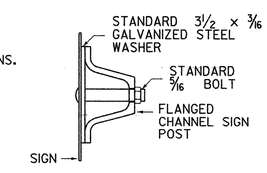
ROUTE MARKER ASSEMBLY FRAMES



BORDER DETAIL

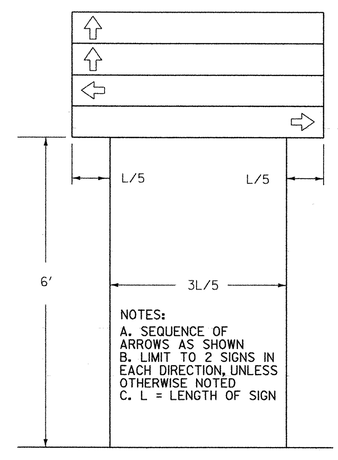


STANDARD ARROW



INSTALLATION DETAIL

(ALL DIMENSIONS SHOWN IN INCHES EXCEPT WHERE NOTED)



DESTINATION ASSEMBLY

STANDARD DESTINATION SIGN NOTES

DESIGN

LETTERS, DIGITS, ARROWS, SYMBOLS, SPACING AND TEXT DIMENSIONS SHALL CONFORM WITH THE "STANDARD HIGHWAY SIGNS BOOK" AND DESIGNS PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION (FHWA).

MATERIALS

THE SIGN BASE MATERIAL FOR STANDARD DESTINATION SIGNS SHALL BE HIGH DENSITY OVERLAYED PLYWOOD 5/8 INCH THICK OR FLAT SHEET ALUMINUM 1/8 INCH THICK.

COLORS

THE DESTINATION SIGNS SHOWN ON THIS SHEET SHALL HAVE WHITE RETROREFLECTIVE ASTM TYPE III TEXT, ARROWS AND BORDERS ON A GREEN RETROREFLECTIVE ASTM TYPE III BACKGROUND. THE COLORS SHALL CONFORM WITH THE COLORS ADOPTED BY AASHTO AND APPROVED BY THE FHWA.

APPLICATION

MULTIPLE ASSEMBLIES SHALL USE THE SAME SIZE THROUGHOUT.

SPECIFICATIONS

DESTINATION SIGNS SHALL MEET THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION "TRAFFIC SIGNS". ALL BORDERS ARE 3/8 INCH

OTHER STDS. E-160, E-164 REQUIRED:

REVISIONS AND CORRECTIONS

APR. 01, 1988 - DATE OF ORIGINAL ISSUE
JAN. 23, 1989 - DELETED TOWN LINE INFO.
AUG. 08, 1995 - REVISED DESTINATION SIGN DETAILS DETAILED SIGN LOCATION TYPICAL
MARCH 16, 2004 - REVISED ROUTE MARKER ASSEMBLY FRAMES DETAIL CHANGED SIZE OF D-BOARDS

APPROVED

DIRECTOR OF PROGRAM DEVELOPMENT

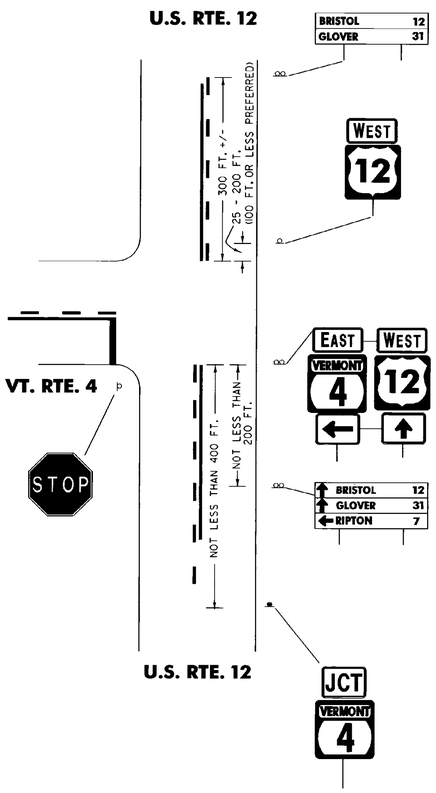
TRAFFIC OPERATIONS ENGINEER

FEDERAL HIGHWAY ADMINISTRATION

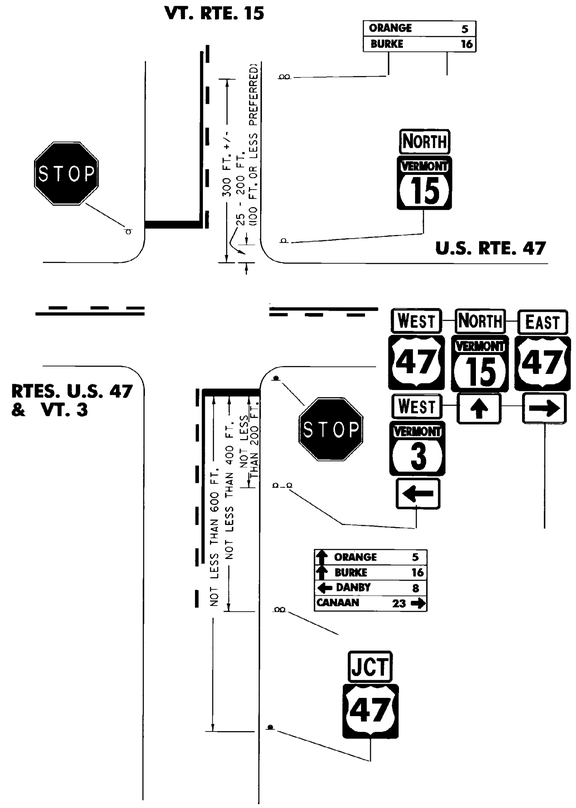
GUIDE SIGN PLACEMENT MISCELLANEOUS DETAILS

VERMONT AGENCY OF TRANSPORTATION

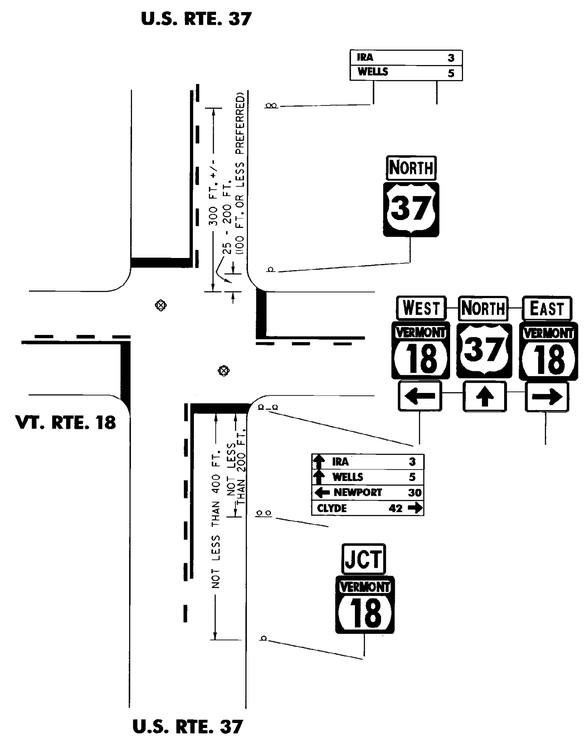
STANDARD
E-123



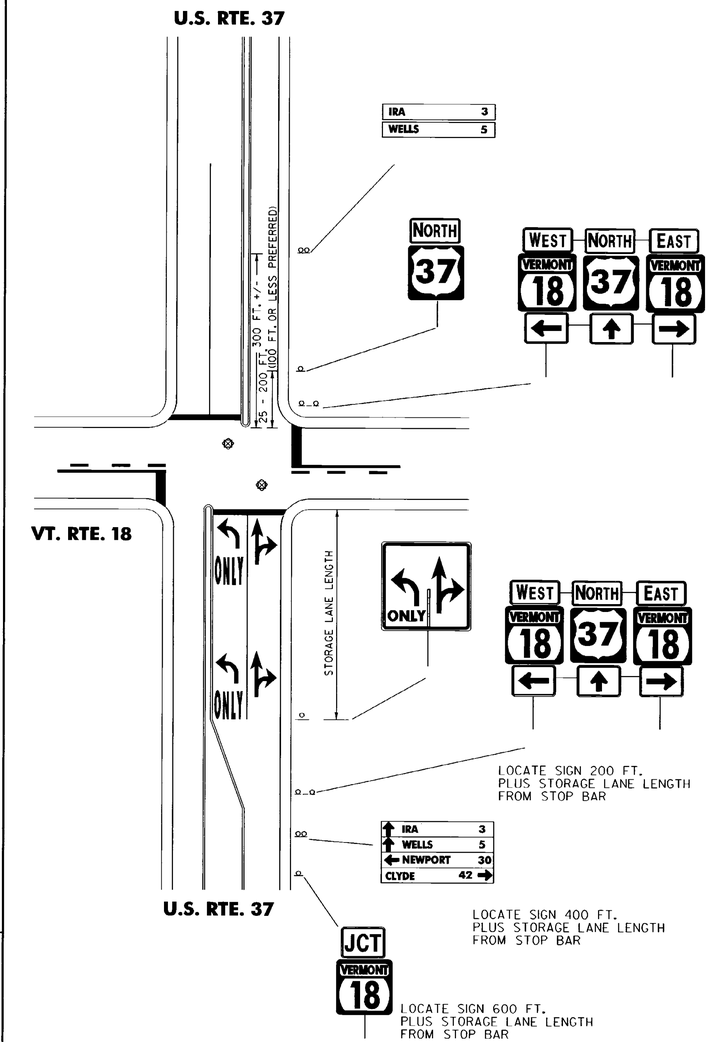
RURAL INTERSECTION - THROUGH MOVEMENT -



SINGLE LANE,STOP CONTROL



SINGLE LANE WITH SIGNAL



MULTI - LANE INTERSECTION - SIGNALIZED

GENERAL NOTES:

1. RECOMMENDED SIGN SPACING AS SHOWN IS SOMETIMES NOT OBTAINABLE DUE TO COMMERCIAL CONFLICTS ETC. AT BUSY INTERSECTIONS. JUDGEMENT MUST BE USED IN THESE CASES TO PLACE SIGNS AS TO GIVE ADEQUATE NOTICE. IT IS ESPECIALLY IMPORTANT TO PLACE SIGNS CLEAR OF OBSTRUCTION BY OTHER SIGNS, POLES, POSTS, FENCES, ETC. .
2. - BENT ARROWS ARE USED WHEN THE INTERSECTION CANNOT BE SEEN
   - STRAIGHT ARROWS ARE TO BE USED WHEN THE INTERSECTION CAN BE SEEN.
3. SIGNING SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
4. TWO DESTINATION BOARDS FOR EACH DIRECTION ARE PERMISSABLE.

OTHER STDS. REQUIRED:

REVISIONS AND CORRECTIONS

DEC. 18, 1989 - DATE OF ORIGINAL ISSUE
AUG. 08, 1995 - MINOR SIGN AND NOTE REVISIONS

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

Gordon W. MacArthur
DIRECTOR OF ENGINEERING

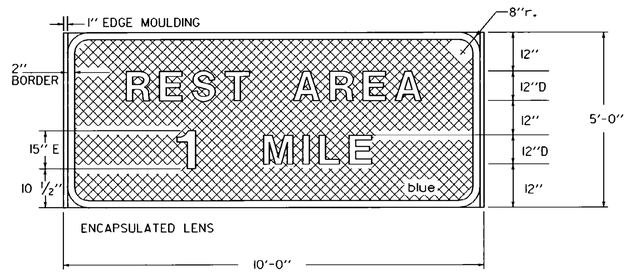
David A. Ross
TRAFFIC AND SAFETY ENGINEER

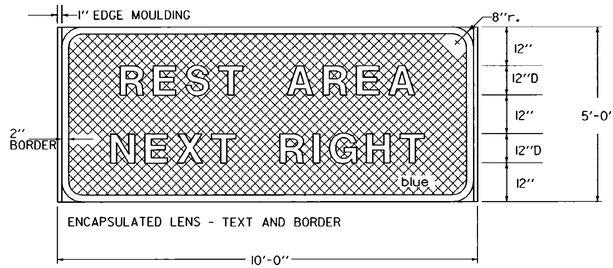
ROUTE MARKINGS AT RURAL INTERSECTIONS

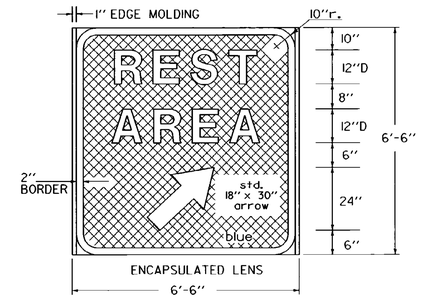
/traf/std/stdel27.dgn : stdel27.i

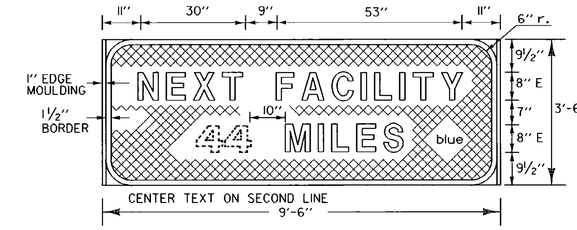
VERMONT AGENCY OF TRANSPORTATION

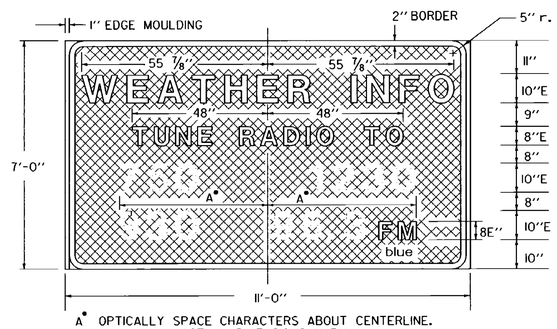
STANDARD E-127



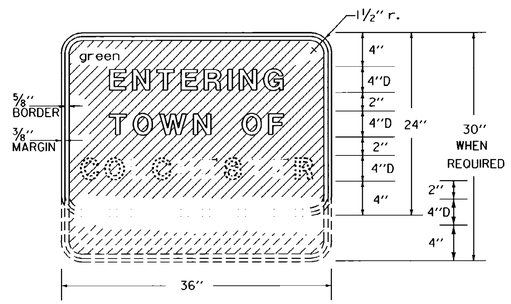


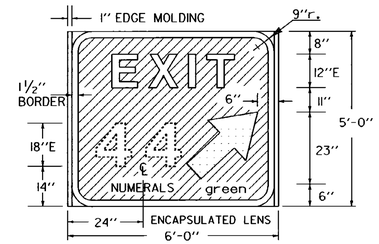


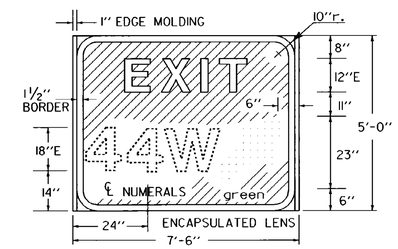


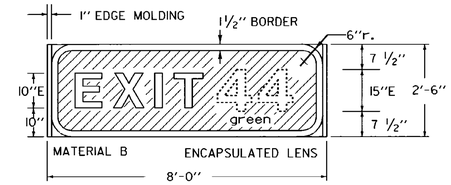


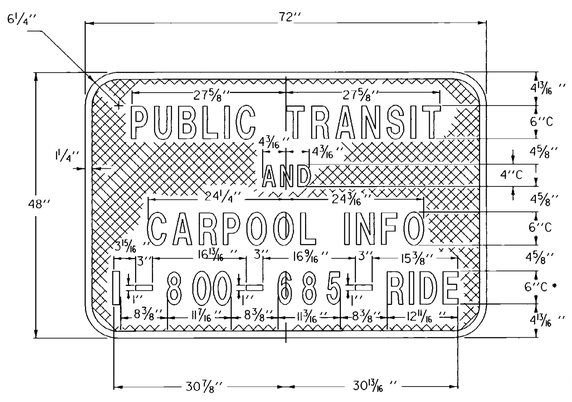
A• OPTICALLY SPACE CHARACTERS ABOUT CENTERLINE.
ACTUAL DIMENSIONS VARY.



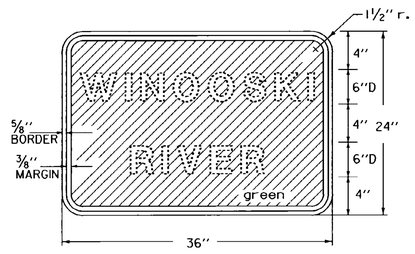


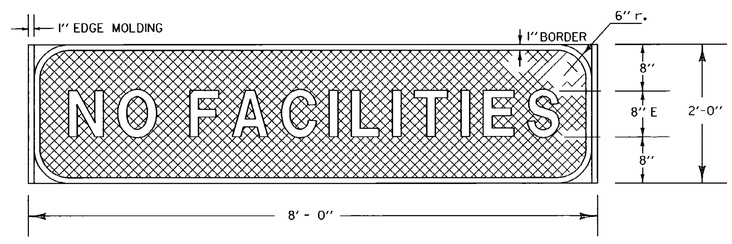


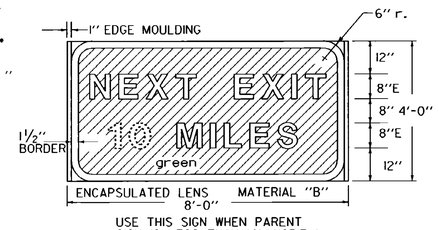




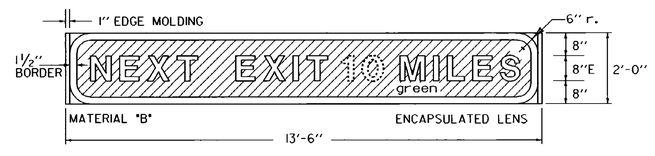
• Reduce spacing of text by 40%.







USE THIS SIGN WHEN PARENT
SIGN IS LESS THAN 14' (HORIZ.)



USE THIS SIGN WHEN PARENT
SIGN IS 14' OR MORE (HORIZ.)

GENERAL:

DOTTED LINES AND NUMERALS INDICATE TEXT THAT VARIES. GREEN SIGNS HAVE SINGLE LINE CROSSHATCHING AND BLUE SIGNS ARE SHOWN WITH DOUBLE LINE CROSSHATCHING.

MATERIALS:

THE SIGN BASE MATERIAL USED FOR THE GUIDE SIGNS ON THIS SHEET MAY BE ANY OF THE FOLLOWING EXCEPT AS NOTED:

A - HIGH DENSITY OVERLAID PLYWOOD. 3/4" MINIMUM THICKNESS WITH REFLECTIVE SHEETING. (MAY BE USED FOR TYPE A SIGNS ONLY).
B - EXTRUDED ALUMINUM PANELS, WITH REFLECTIVE SHEETING.
C - FORMED GALVANIZED STEEL PANELS, WITH REFLECTIVE SHEETING.

TEXT AND BORDER:

THE MATERIAL FOR THE TEXT AND BORDER AND SYMBOLS OF THESE SIGNS SHALL BE OF FLAT SHEET ALUMINUM 0.040" THICKNESS WITH WHITE OR SILVER ENCAPSULATED SHEETING, AS NOTED FOR EACH SIGN.

THE "EXIT NUMBER" PANELS AND "NEXT EXIT MILES" SIGNS SHALL BE ENCAPSULATED LENS SHEETING ONLY IN THE FOLLOWING INSTANCES:

1.) WHEN MOUNTED OVERHEAD
2.) WHEN MOUNTED ABOVE THE ADVANCED "1 MILE" SIGNS
3.) WHEN MOUNTED ON THE "RIGHT LANE" OR "NEXT RIGHT" SIGNS - (TEXT ONLY)

THE EXIT GORE SIGN SHALL BE CONSTRUCTED ENTIRELY WITH ENCAPSULATED LENS SHEETING.

COLORS:

THE SIGNS SHALL HAVE A REFLECTORIZED WHITE TEXT ON A REFLECTORIZED GREEN OR BLUE BACKGROUND AS INDICATED FOR EACH SIGN UNLESS OTHERWISE NOTED. THE GREEN AND BLUE SHALL CONFORM WITH THOSE FOUND IN STANDARD COLOR TOLERANCE CHARTS AS APPROVED BY THE U.S. DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

LETTERING:

LETTERS AND DIGITS SHALL CONFORM WITH THE REQUIREMENTS FOUND IN THE PUBLICATION "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" PRINTED BY THE FEDERAL HIGHWAY ADMINISTRATION.

DESIGNS:

THE DESIGN OF THESE SIGNS SHALL CONFORM WITH THE DETAILS SET FORTH IN THE MANUAL "STANDARD HIGHWAY SIGNS" AS SPECIFIED IN "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

SPECIFICATIONS:

THE SIGNS SHALL MEET THE STANDARD STATE SPECIFICATIONS FOR "TRAFFIC SIGNS".

OTHER STDS. REQUIRED:

REVISIONS AND CORRECTIONS

SEPT. 10, 1987 - DATE OF ORIGINAL ISSUE
DEC. 18, 1989 - CHANGE DIMENSION ERRORS
CHANGE 2 DIGIT EXIT SIGN SIZE.
AUG. 08, 1995 - REVISED CARPOOL SIGN DETAIL

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

DIRECTOR OF ENGINEERING

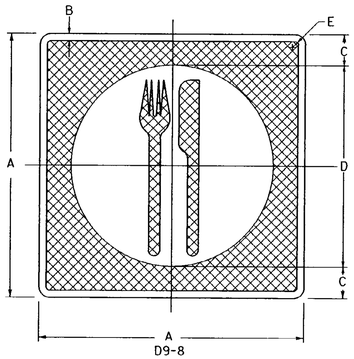
TRAFFIC AND SAFETY ENGINEER

GUIDE SIGN DETAILS

/traf/std/stdel31.dgn : stdel31.1

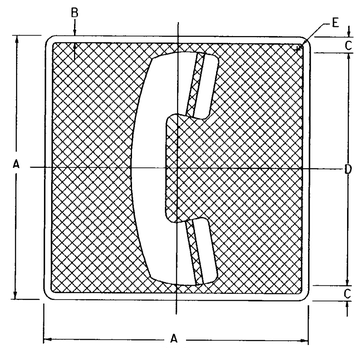
VERMONT AGENCY OF TRANSPORTATION

STANDARD
E-131



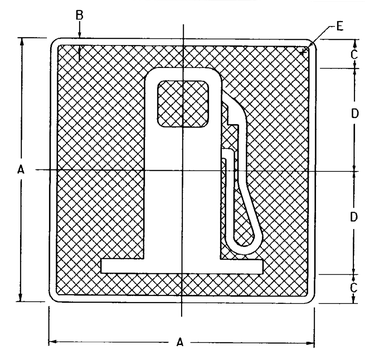
D9-8

SIGN	DIMENSIONS (INCHES)				
	A	B	C	D	E
MIN	18	1/2	1 1/2	15	1 1/2
STD	24	1/2	2	20	1 1/2
SPECIAL	30	3/4	2 1/2	25	1 7/8



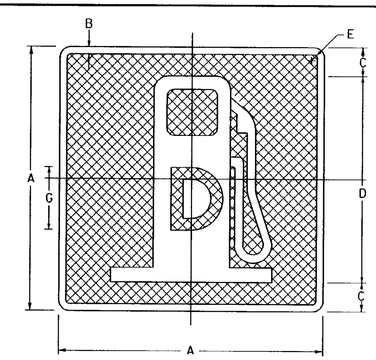
D9-1

SIGN	DIMENSIONS (INCHES)				
	A	B	C	D	E
MIN	18	1/2	1 1/2	15	1 1/2
STD	24	1/2	2	20	1 1/2
SPECIAL	30	3/4	2 1/2	25	1 7/8



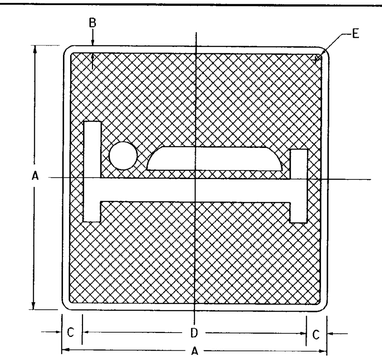
D9-7

SIGN	DIMENSIONS (INCHES)				
	A	B	C	D	E
MIN	18	1/2	3	6	1 1/2
STD	24	1/2	3	9	1 1/2
SPECIAL	30	3/4	3 3/4	11 1/4	1 7/8



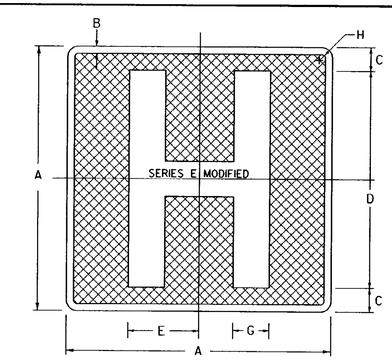
D9-11

SIGN	DIMENSIONS (INCHES)					
	A	B	C	D	E	G
MIN	18	1/2	1 1/2	15	1 1/2	4E(M)
STD	24	1/2	2	20	1 1/2	6E(M)
SPECIAL	30	3/4	2 1/2	25	1 7/8	8E(M)



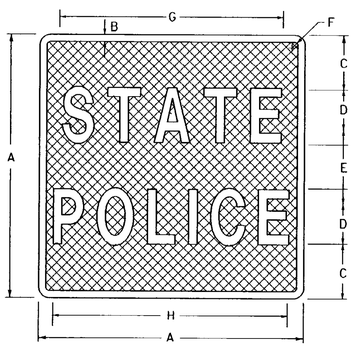
D9-9

SIGN	DIMENSIONS (INCHES)				
	A	B	C	D	E
MIN	18	1/2	1 1/2	15	1 1/2
STD	24	1/2	2	20	1 1/2
SPECIAL	30	3/4	2 1/2	25	1 7/8

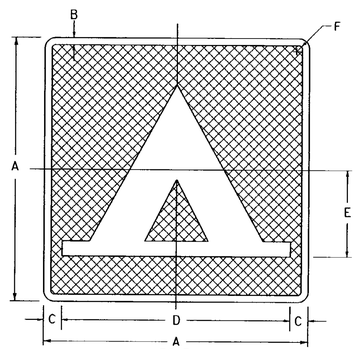


D9-2

SIGN	DIMENSIONS (INCHES)						
	A	B	C	D	E	G	H
MIN	18	1/2	1 1/2	15			1 1/2
STD	24	1/2	2	20	6 3/8	3 1/5	1 1/2
SPECIAL	30	3/4	2 1/2	25	8	4	1 7/8

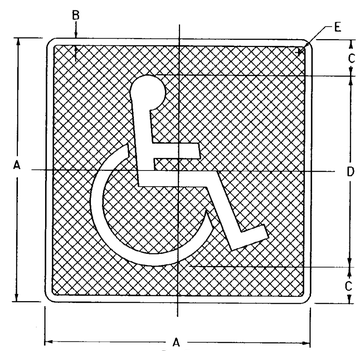


SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
MIN AND STD	24	1/2	5	5C	4	1 1/2	14 9/16	18
SPECIAL	30	1/2	6	6C	6	1 1/2	18 3/4	22 7/16



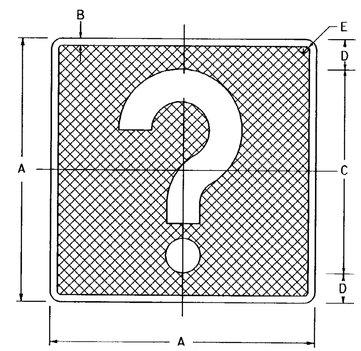
D9-3

SIGN	DIMENSIONS (INCHES)					
	A	B	C	D	E	F
MIN	18	1/2	1 1/2	15	6	1 1/2
STD	24	1/2	2	20	8	1 1/2
SPECIAL	30	3/4	2 1/2	25	10	1 7/8



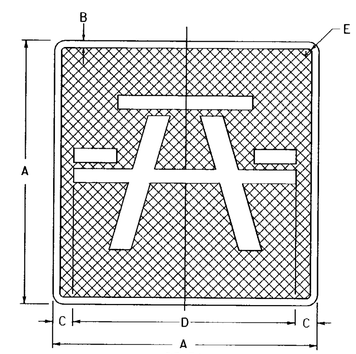
D9-6

SIGN	DIMENSIONS (INCHES)				
	A	B	C	D	E
MIN	18	1/2	1 1/2	15	1 1/2
STD	24	1/2	2	20	1 1/2
SPECIAL	30	3/4	2 1/2	25	1 7/8



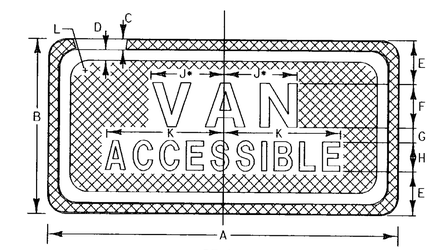
D9-10

SIGN	DIMENSIONS (INCHES)				
	A	B	C	D	E
MIN	18	1/2	1 1/2	15	1 1/2
STD	24	1/2	2	20	1 1/2
SPECIAL	30	3/4	2 1/2	25	1 7/8



D5-5A

SIGN	DIMENSIONS (INCHES)				
	A	B	C	D	E
MIN	18	1/2	1 1/2	15	1 1/2
STD	24	1/2	2	20	1 1/2
SPECIAL	30	3/4	2 1/2	25	1 7/8

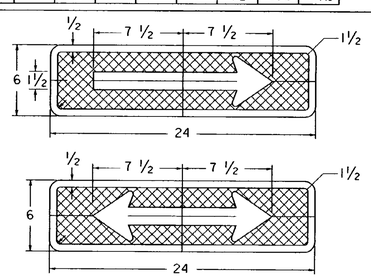


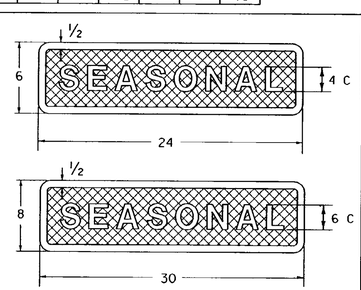
R7-8A

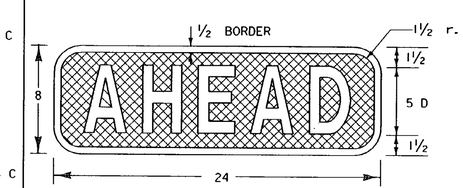
* INCREASE SPACING 50%

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K	L
STD	12	6	3/8	3/8	1 1/2	1 1/2D	1/2	ID	2 1/4	4	1 1/2
SPECIAL	18	9	3/8	5/8	2 1/4	2D	1	1 1/2D	2 3/4	7	1 1/2

NOTE :
ALL DIMENSIONS SHOWN IN INCHES







NOTES

MATERIALS

THE SIGN BASE MATERIAL USED FOR THE GUIDE SIGNS SHOWN ON THIS SHEET MAY BE ANY OF THE FOLLOWING MINIMUM THICKNESSES NOTED.

A - FLAT SHEET ALUMINUM - 0.060
B - HIGH DENSITY OVERLAID PLYWOOD -1/2"
C - GALVANIZED FLAT SHEET STEEL - 16 GA.

COLORS

THE SIGNS SHALL BE WHITE OR SILVER REFLECTORIZED SHEETING WITH A REVERSE SCREENED BLUE BACKGROUND. THE BLUE SHALL CONFORM WITH THE STANDARD COLORS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS AND APPROVED BY THE U.S. DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADIMINISTRATION.

LETTERING

LETTERS SHALL CONFORM WITH THE REQUIREMENTS FOUND IN THE PUBLICATION "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" PRINTED BY THE FEDERAL HIGHWAY ADMINISTRATION.

DESIGN

THE DESIGN OF THESE SIGNS SHALL CONFORM WITH THE DETAILS SET FORTH IN THE MANUAL "STANDARD HIGHWAY SIGNS" AS SPECIFIED IN "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." LETTER-NUMERAL DESIGNATION UNDER EACH SYMBOL IS IDENTIFICATION IN MANUAL.

SPECIFICATIONS

THESE SIGNS SHALL MEET THE STANDARD STATE SPECIFICATIONS FOR "TRAFFIC SIGNS."

OTHER STDS. REQUIRED:

REVISIONS AND CORRECTIONS

SEPT. 10, 1987 - DATE OF ORIGINAL ISSUE
DEC. 18, 1989 - DELETED SERVICE MOUNTING DETAIL
REVISED "STATE POLICE" SIGN
ADDED "AHEAD" SIGN
AUG. 18, 1995 - SIGN DETAIL REVISIONS PER STANDARD HIGHWAY SIGNS MANUAL

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

DIRECTOR OF ENGINEERING

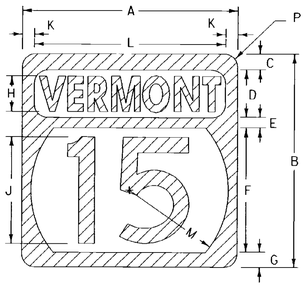
TRAFFIC AND SAFETY ENGINEER

GENERAL MOTORIST SERVICES SIGN DETAILS

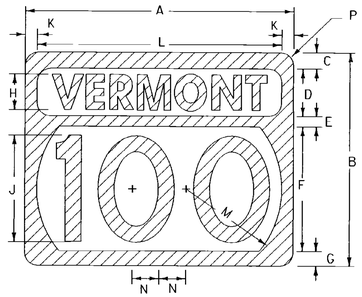
/traf/std/stdel32.dgn : stdel32.i

VERMONT AGENCY OF TRANSPORTATION

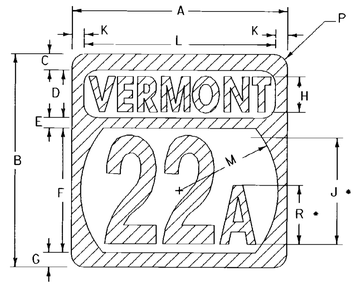
STANDARD
E-132



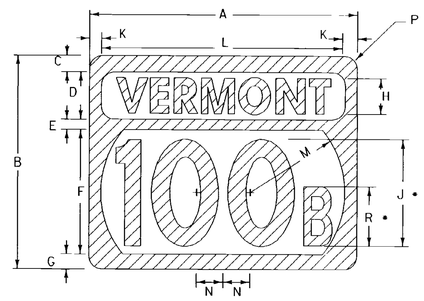
1 OR 2 DIGIT STATE ROUTE MARKER



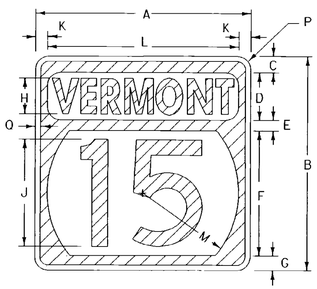
3 DIGIT STATE ROUTE MARKER



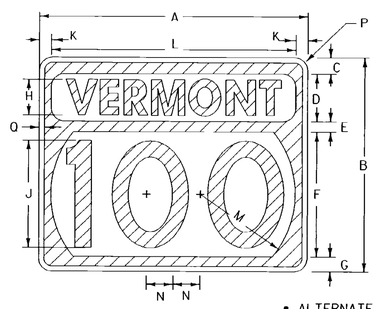
1 OR 2 DIGIT ALTERNATE STATE ROUTE MARKER



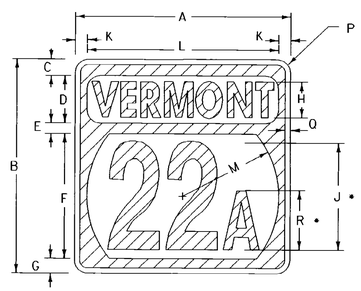
3 DIGIT ALTERNATE STATE ROUTE MARKER

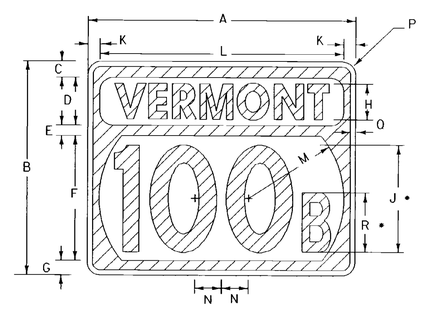


STATE ROUTE MARKER FOR GUIDE SIGN USE. (INTERSTATE TYPICAL)



- ALTERNATE ROUTE SIGNS: OPTICALLY SPACE NUMERALS ABOUT VERTICAL CENTER-LINE AND REDUCE SPACING AS NECESSARY FOR EACH ROUTE

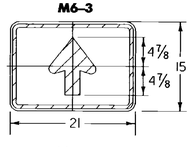




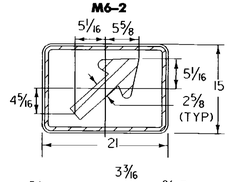
ALTERNATE STATE ROUTE MARKER FOR GUIDE SIGN USE. (INTERSTATE TYPICAL)

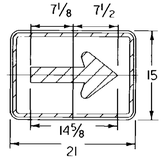
SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
1,2-digits	24	24	1½	6	1	14	1½	4C	12D	1	22	11	-	1½	½	7B
1,2-digits	36	36	2⅝	8	1¾	21	2⅝	6C	18D	2	32	16½	-	2¼	⅞	10B
3,-digits	30	24	1½	6	1	14	1½	4D	12D	1	28	11	3	1½	½	7B
3,-digits	45	36	2⅝	8	1¾	21	2⅝	6D	18D	2	41	16½	4½	2¼	⅞	10B

M6-3

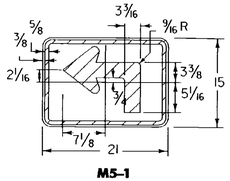


M6-2



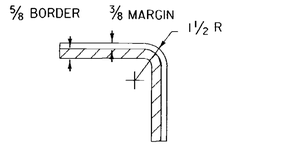


M6-1

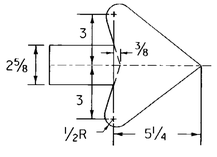


M5-1

DIRECTION ARROW OR ADVANCE TURN ARROWS

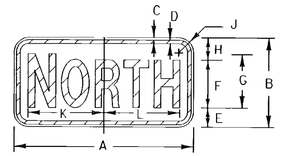


TYPICAL RADIUS DETAIL



TYPICAL ARROW DETAIL

(ALL DIMENSIONS IN INCHES)

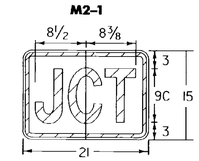


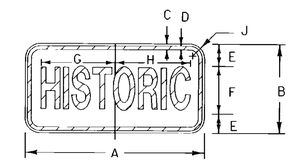
M3-1 M3-3 M3-2 M3-4

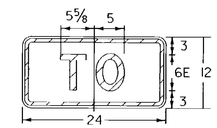
SIGN	DIMENSIONS (INCHES)									NORTH		SOUTH		EAST		WEST	
	A	B	C	D	E	F	G	H	J	K	L	K	L	K	L	K	L
MIN. & STD.	24	12	⅜	⅝	2¾	6C	7C	3¼	1½	10¼	10¼	10¼	9 11/16	7⅛	8⅜	8¾	8 11/16
SPECIAL	30	15	⅜	⅝	3¼	8C	9C	3¾	1½	12 11/16	12 11/16	12 11/16	12½	10⅜	11⅛	11⅝	11⅝

CARDINAL DIRECTION MARKER

M2-1







M4-5

TRAILBLAZER

SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J
MIN. & STD.	24	12	⅜	⅝	3½	5B	10⅛	9⅞	1½
SPECIAL	30	15	⅜	⅝	4	7B*	12⅜	12⅝	1½

* REDUCE SPACING 35%

MATERIALS

THE SIGN BASE MATERIAL MAY BE ANY OF THE FOLLOWING, WITH THE MINIMUM THICKNESSES AS NOTED:

FLAT SHEET ALUMINUM

LESS THAN 24'' X 24''	0.060''
WHEN USED ON GUIDE SIGNS	0.060''
24'' X 24'', 30'' X 24''	0.080''
36'' X 36'', 45'' X 36''	0.100''

GALVANIZED FLAT SHEET STEEL

LESS THAN 24'' X 24''	18 GAGE
WHEN USED ON GUIDE SIGNS	18 GAGE
24'' X 24'', 30'' X 24''	16 GAGE
36'' X 36'', 45'' X 36''	14 GAGE

THE REFLECTIVE MATERIAL SHALL BE WHITE REFLECTIVE SHEETING APPLIED TO THE ENTIRE BACKGROUND. THE TEXTS MAY BE LETTERING FILM, SILK SCREENED, OR HAND PAINTED.

COLORS

COLORS FOR GUIDE USE: TEXT AND SHIELD - GREEN (REFL.) BACKGROUND AND BORDER - WHITE (REFL.)
STATE ROUTE MARKERS SHALL HAVE REFLECTIVE GREEN TEXT AND BORDERS ON REFLECTORIZED WHITE BACKGROUNDS.

GREEN AREAS ARE INDICATED BY SINGLE LINE CROSSHATCHING

LETTERING

LETTERS AND DIGITS SHALL CONFORM WITH THE ''STANDARD ALPHABET FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS'' ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION AND FHWA.

SPECIFICATIONS

STATE ROUTE MARKERS AND AUXILIARY ROUTE MARKERS SHALL MEET THE STANDARD STATE SPECIFICATIONS FOR TRAFFIC SIGNS.

DESIGNS

THE DESIGNS OF STATE ROUTE MARKERS AND AUXILIARY MARKERS SHALL CONFORM WITH THE REQUIREMENTS SET FORTH IN THE ''MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES'' ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION AND FHWA.

OTHER STDS. REQUIRED:

REVISIONS AND CORRECTIONS

AUG. 08, 1995 - DATE OF ORIGINAL ISSUE

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

Gordon S. MacCallum
DIRECTOR OF ENGINEERING

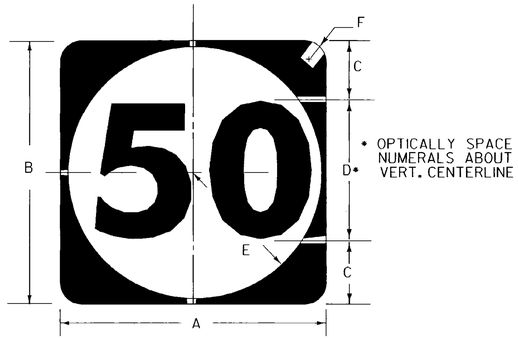
David A Ross
TRAFFIC AND SAFETY ENGINEER

STATE ROUTE MARKER SIGN DETAILS

/traf/std/stdel36b.dgn : stdel36b.i

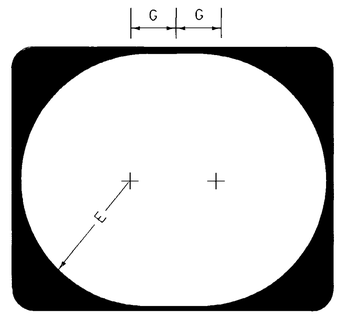
VERMONT AGENCY OF TRANSPORTATION

STANDARD
E-136 B

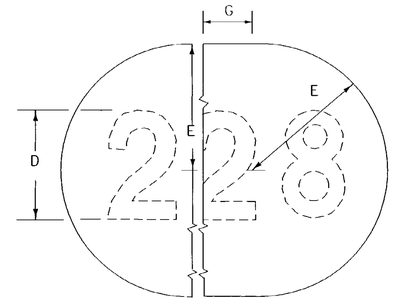


1 OR 2 DIGIT STATE ROUTE MARKERS

SIGN	DIMENSIONS (INCHES)						
	A	B	C	D	E	F	G
1,2-digits	24	24	6	12D	11	1 1/2	-
1,2-digits	36	36	9	18D	16 1/2	2 1/4	-
3,-digits	30	24	6	12D	11	1 1/2	3
3,-digits	45	36	9	18D	16 1/2	2 1/4	4 1/2

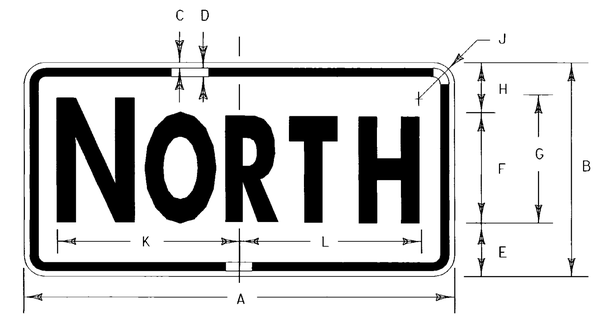


3 DIGIT STATE ROUTE MARKER
(SEE DIMENSION CHART FOR 1 OR 2 DIGIT SIGNS)



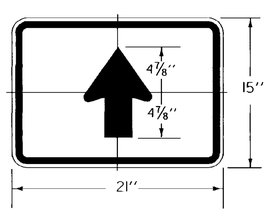
STATE ROUTE MARKER FOR GUIDE SIGN USE

SIGN	DIMENSIONS (INCHES)		
	D	E	G
1,2-digits	12D	12	-
1,2-digits	18D	18	-
3,-digits	12D	12	3
3,-digits	18D	18	4 1/2

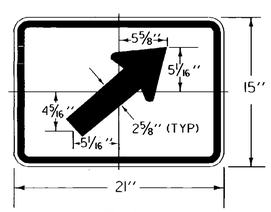


SIGN	DIMENSIONS (INCHES)									M3-1 NORTH		M3-3 SOUTH		M3-2 EAST		M3-4 WEST	
	A	B	C	D	E	F	G	H	J	K	L	K	L	K	L	K	L
MIN. & STD.	24	12	3/8	5/8	2 3/4	6C	7C	3 1/4	1 1/2	10 1/4	10 1/4	10 1/4	9 9/16	7 7/8	8 3/8	8 3/4	8 13/16
SPECIAL	30	15	3/8	5/8	3 1/4	8C	9C	3 3/4	1 1/2	12 11/16	12 11/16	12 11/16	12 1/2	10 3/8	11 1/8	11 5/8	11 5/8

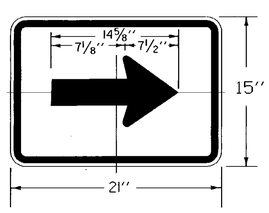
CARDINAL DIRECTION MARKER



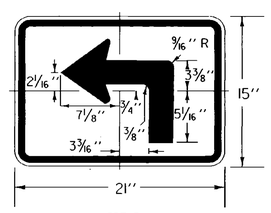
M6-3



M6-2

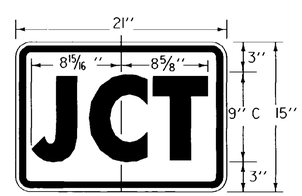


M6-1

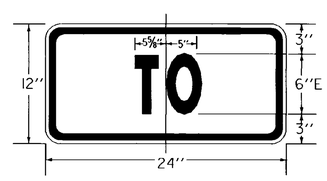


M5-1

DIRECTION ARROW OR ADVANCE TURN ARROWS

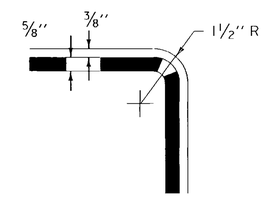


M2-1

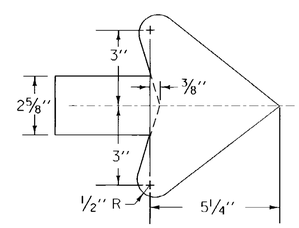


M4-5

TRAILBLAZER



TYPICAL RADIUS AND BORDER DETAIL



ARROW DETAILS

MATERIALS

THE SIGN BASE MATERIAL MAY BE ANY OF THE FOLLOWING, WITH THE MINIMUM THICKNESSES AS NOTED:

FLAT SHEET ALUMINUM

LESS THAN 24'' X 24''	0.060''
WHEN USED ON GUIDE SIGNS	0.060''
24'' X 24'', 30'' X 24''	0.080''
36'' X 36'', 45'' X 36''	0.100''

GALVANIZED FLAT SHEET STEEL

LESS THAN 24'' X 24''	18 GAGE
WHEN USED ON GUIDE SIGNS	18 GAGE
24'' X 24'', 30'' X 24''	16 GAGE
36'' X 36'', 45'' X 36''	14 GAGE

THE REFLECTIVE MATERIAL SHALL BE WHITE REFLECTIVE SHEETING APPLIED TO THE ENTIRE BACKGROUND. THE TEXTS MAY BE LETTERING FILM, SILK SCREENED, OR HAND PAINTED.

COLORS

STATE NUMBERED TOWN HIGHWAY ROUTE MARKERS SHALL HAVE BLACK TEXT AND BORDER ON REFLECTORIZED WHITE BACKGROUNDS.

LETTERING

LETTERS AND DIGITS SHALL CONFORM WITH THE ''STANDARD ALPHABET FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS'' ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION AND FHWA.

SPECIFICATIONS

STATE NUMBERED TOWN HIGHWAY ROUTE MARKERS AND AUXILIARY ROUTE MARKERS SHALL MEET THE STANDARD STATE SPECIFICATIONS FOR TRAFFIC SIGNS.

DESIGNS

THE DESIGNS OF STATE NUMBERED TOWN HIGHWAY ROUTE MARKERS AND AUXILIARY MARKERS SHALL CONFORM WITH THE REQUIREMENTS SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES'' ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION AND FHWA.

OTHER STDS. REQUIRED:

REVISIONS AND CORRECTIONS

AUG. 08, 1995 - DATE OF ORIGINAL ISSUE

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

Gordon R. MacArthur
DIRECTOR OF ENGINEERING

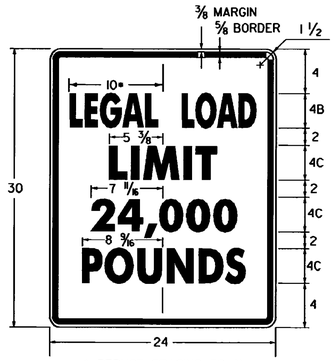
David A. Ross
TRAFFIC AND SAFETY ENGINEER

STATE NUMBERED TOWN HIGHWAY SIGN DETAILS

/traf/std/stdel36c.dgn : stdel36c.i

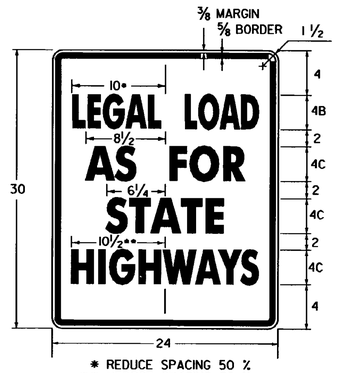
VERMONT AGENCY OF TRANSPORTATION

STANDARD
E-136 C



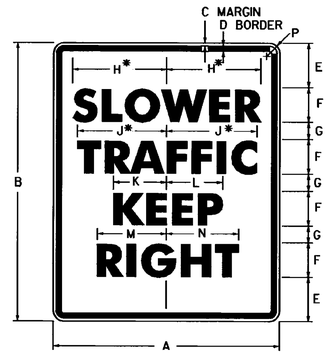
* REDUCE SPACING 50 %
LINE 3 ALTERNATE - 16,000

VR-017



* REDUCE SPACING 50 %
** REDUCE SPACING 38 %

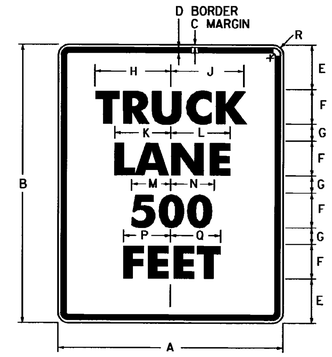
VR-079



* REDUCE SPACING 25 %

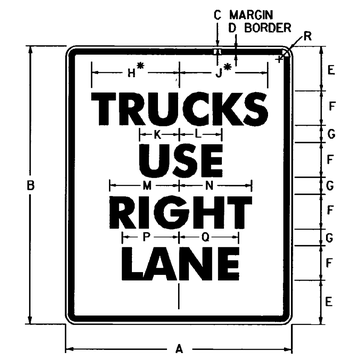
R4-3

SIGN	DIMENSIONS (INCHES)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	P
STD.	24	30	3/8	5/8	3 5/8	4D	2 1/4	9 3/4	10	6	6 9/16	7 1/8	7 5/8	1 1/2
EXPWY.	36	48	5/8	7/8	6	6D	4	14 5/8	15	9	9 13/16	10 11/16	11 3/8	2 1/4
FWY.	48	60	3/4	1 1/4	7 1/4	8D	4 1/2	19 1/2	20	12	13 1/8	14 1/4	15 1/4	3



R4-6

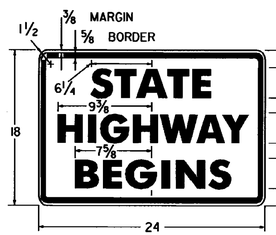
SIGN	DIMENSIONS (INCHES)														
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
STD.	24	30	3/8	5/8	3 5/8	4E	2 1/4	9 13/16	9 11/16	7 9/16	7 11/16	5 11/16	5 13/16	6 7/8	7 1/16	1 1/2
EXPWY.	36	48	5/8	7/8	6	6E	4	14 3/4	14 1/2	11 5/16	11 1/2	8 1/2	8 3/4	10 5/16	10 5/8	2 1/4
FWY.	48	60	3/4	1 1/4	7 1/4	8E	4 1/2	19 5/8	19 3/8	15 1/8	15 3/8	11 3/8	11 5/8	13 3/4	14 1/8	3



* REDUCE SPACING 32 %

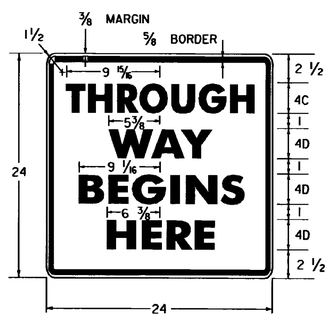
R4-5

SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
STD.	24	30	3/8	5/8	3 5/8	4D	2 1/4	9 9/16	9 3/16	4 3/4	5	7 1/8	7 5/8	6 1/4	6 5/8	1 1/2
EXPWY.	36	48	5/8	7/8	6	6D	4	14 5/16	13 13/16	7 1/8	7 1/2	10 11/16	11 3/8	9 3/8	9 15/16	2 1/4
FWY.	48	60	3/4	1 1/4	7 1/4	8D	4 1/2	19 1/8	18 3/8	9 1/2	10	14 1/4	15 1/4	12 1/2	13 1/4	3

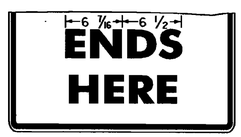


VR-039

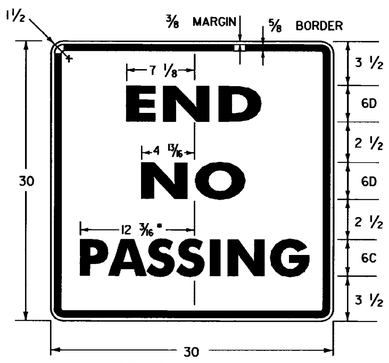
VR-038



VR-041

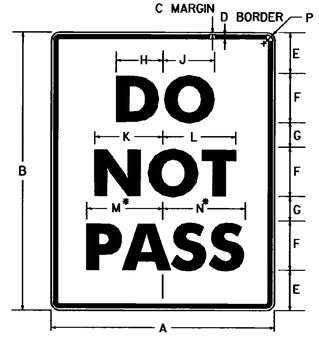


VR-040



* REDUCE SPACING 50 %

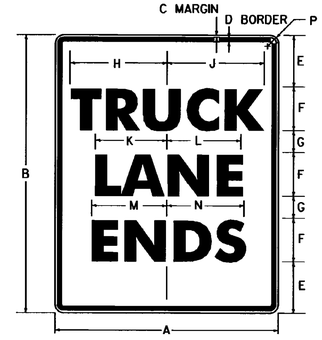
VR-417



* REDUCE SPACING 40 %

R4-1

SIGN	DIMENSIONS (INCHES)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	P
STD.	24	30	3/8	5/8	3 1/2	6D	2 1/2	4 11/16	5	7 1/8	7 3/8	9 3/8	9 3/4	1 1/2
EXPWY.	36	48	5/8	7/8	7	8D	5	6 1/4	6 5/8	9 1/2	9 3/4	12 1/2	13	2 1/4
FWY.	48	60	3/4	1 1/4	8	10D	7	7 3/4	8 5/16	11 7/8	12 1/4	15 5/8	16 1/4	3



VR-186

SIGN	DIMENSIONS (INCHES)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	P
STD.	24	30	3/8	5/8	3 1/2	6C	2 1/2	10 1/4	10 3/16	7 3/4	7 3/4	7 15/16	8	1 1/2
EXPWY.	36	48	5/8	7/8	7	8C	5	13 11/16	13 5/8	10 3/8	10 5/16	10 11/16	10 11/16	2 1/4
FWY.	48	60	3/4	1 1/4	8	10D	7	20 5/8	20 5/8	15 7/8	15 15/16	16 1/16	16 1/16	3

GENERAL:

1. ALL DIMENSIONS IN INCHES.

COLORS:

THE REGULATORY SIGNS SHOWN ON THIS SHEET SHALL HAVE BLACK TEXT ON REFLECTORIZED WHITE BACKGROUND, UNLESS OTHERWISE NOTED. THE COLORS SHALL CONFORM WITH THE COLORS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND APPROVED BY THE DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

MATERIALS:

THE SIGN BASE MATERIALS USED FOR REGULATORY SIGNS SHOWN ON THIS SHEET MAY BE ANY OF THE FOLLOWING OF THE MINIMUM THICKNESS NOTED.

	24'' X 18'' 24'' X 24'' 24'' X 30'' 30'' X 30''	36'' X 48'' 48'' X 60''
FLAT SHEET ALUMINUM	0.080''	0.100''
HIGH DENSITY OVERLAID PLYWOOD	1/2''	5/8''
GALVANIZED FLAT SHEET STEEL	16 GAGE	14 GAGE

THE REFLECTIVE MATERIAL FOR GROUND MOUNTED SIGNS SHALL BE AASHTO TYPE II OR III WHITE REFLECTIVE SHEETING APPLIED TO THE ENTIRE BACKGROUND OF THE SIGN. THE THE TEXT OF THE SIGNS MAY BE LETTERING FILM, SILK SCREENED OR HAND PAINTED. HAND PAINTING MUST BE COMPARABLE IN QUALITY TO THE RESULTS OBTAINED BY SILK SCREENING.

SPECIFICATIONS:

REGULATORY SIGNS SHALL MEET THE VERMONT STANDARD SPECIFICATIONS FOR TRAFFIC SIGNS.

TEXT DESIGN:

LETTERS, DIGITS, ARROWS, SPACING AND TEXT DIMENSIONS SHALL CONFORM WITH THE ''STANDARD ALPHABET FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS'' AND DESIGNS PRESCRIBED IN THE STANDARD HIGHWAY SIGNS AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

OTHER STDS.: NONE REQUIRED

REVISIONS AND CORRECTIONS

OCT. 30, 1987 - DATE OF ORIGINAL ISSUE
SEPT. 20, 1995 - ADDED AND DELETED SIGN DETAIL, ADDED SIGN ID NUMBERS, MINOR NOTE REVISIONS.

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

DIRECTOR OF ENGINEERING

TRAFFIC AND SAFETY ENGINEER

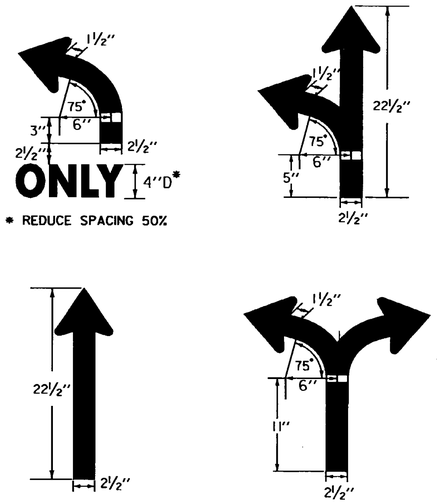
REGULATORY SIGN DETAILS

/traf/std/stdel4l.dgn : stdel4l.l

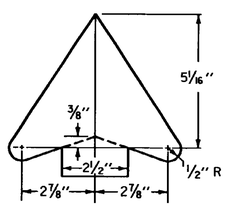
VERMONT AGENCY OF TRANSPORTATION

STANDARD

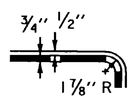
E-141



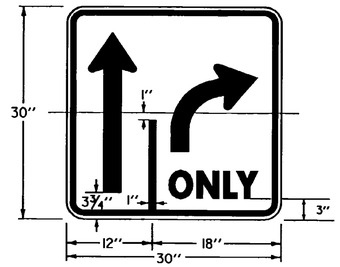
SYMBOL DETAILS



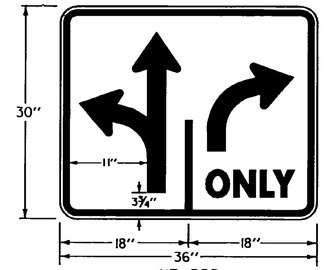
ARROW HEAD DETAIL



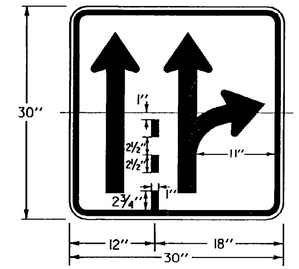
BORDER/MARGIN DETAIL



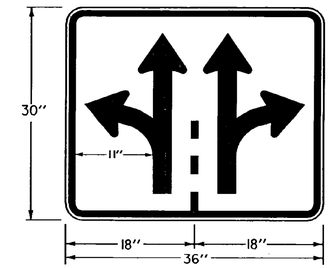
VR-921



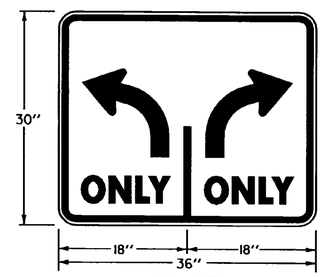
VR-922



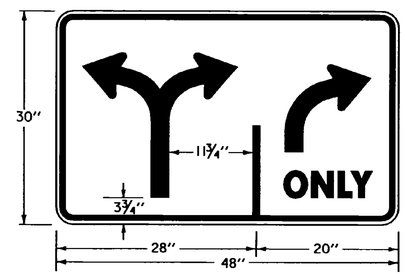
VR-923



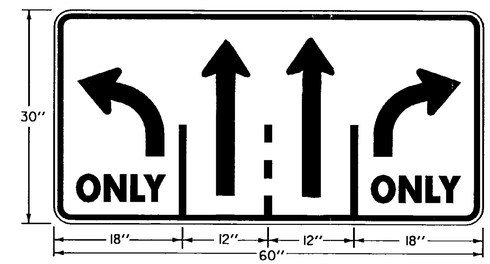
VR-924



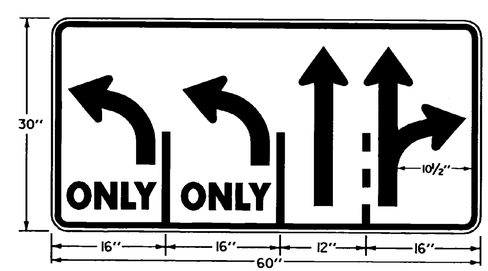
VR-925



VR-926



VR-941



VR-942

COLORS:

THE REGULATORY SIGNS SHOWN ON THIS SHEET SHALL HAVE BLACK TEXT ON REFLECTORIZED WHITE BACKGROUND. THE COLORS SHALL CONFORM WITH THE COLORS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND APPROVED BY THE DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

MATERIALS:

THE SIGN BASE MATERIALS USED FOR REGULATORY SIGNS SHOWN ON THIS SHEET MAY BE ANY OF THE FOLLOWING OF THE MINIMUM THICKNESS NOTED.

	30'' X 30''	36'' X 30''	48'' X 30'' 60'' X 30''
FLAT SHEET ALUMINUM	0.080''	0.100''	0.125''
HIGH DENSITY OVERLAID PLYWOOD	1/2''	5/8''	5/8''
GALVANIZED FLAT SHEET STEEL	16 GAGE	14 GAGE	12 GAGE

THE REFLECTIVE MATERIAL SHALL BE AASHTO TYPE II OR III WHITE REFLECTIVE SHEETING APPLIED TO THE ENTIRE BACKGROUND OF THE SIGN. THE TEXT OF THE SIGNS MAY BE LETTERING FILM, SILK SCREENED OR HAND PAINTED. HAND PAINTING MUST BE COMPARABLE IN QUALITY TO THE RESULTS OBTAINED BY SILK SCREENING.

SPECIFICATIONS:

REGULATORY SIGNS SHALL MEET THE VERMONT STANDARD SPECIFICATIONS FOR TRAFFIC SIGNS.

TEXT DESIGN:

LETTERS, DIGITS, ARROWS, SPACING AND TEXT DIMENSIONS SHALL CONFORM WITH THE ''STANDARD ALPHABET FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS'' AND DESIGNS PRESCRIBED IN THE STANDARD HIGHWAY SIGNS AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

NOTES:

1. OPTICALLY CENTER SYMBOLS WITHIN SECTIONS UNLESS OTHERWISE NOTED.
2. ''VR-9XX'' IS THE SIGN CODE NUMBER.
3. MIRROR IMAGES ARE NOT SHOWN BUT CARRY THE SAME CODE NUMBER.
4. THESE SIGNS ARE INTENDED FOR GROUND MOUNTING ONLY.
5. OTHER VARIATIONS OF THESE STANDARD DESIGNS ARE DEPICTED IN THE VT SIGN IDENTIFICATION MANUAL. WHEN THEY ARE USED THEY SHOULD BE DESIGNED USING THE DIMENSIONS AND DETAILS SHOWN HERE.

OTHER STDS. REQUIRED NONE

REVISIONS AND CORRECTIONS

DEC. 23, 1994 - DATE OF ORIGINAL ISSUE

APPROVED

Gordon R. MacArthur
DIRECTOR OF ENGINEERING

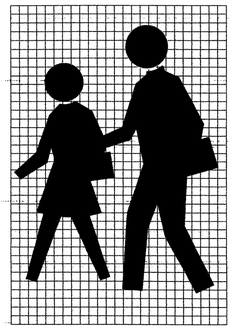
David A. Ross
TRAFFIC AND SAFETY ENGINEER

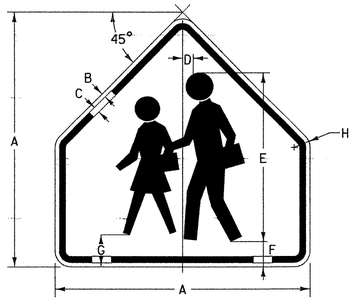
REGULATORY SIGN DETAILS
LANE USE CONTROL SIGNS
TWO AND FOUR LANE APPROACHES

/traf/std/stdel45.dgn/stdel45a.1

VERMONT AGENCY OF TRANSPORTATION

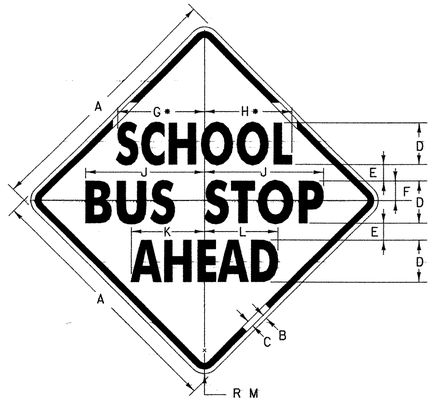
STANDARD
E-145 A





S1-1

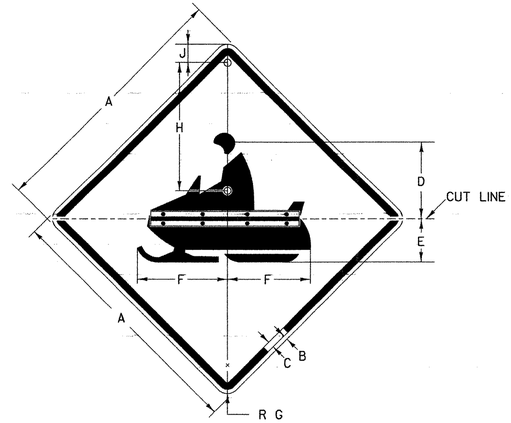
SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
MIN./STD.	30	1/2	3/4	2	20	3	3 3/4	1 7/8
EXPWY.	36	5/8	7/8	2 1/2	24	3 1/2	4 1/2	2 1/4
SPECIAL	48	3/4	1 1/4	3 1/4	32	5	6	3



S3-1

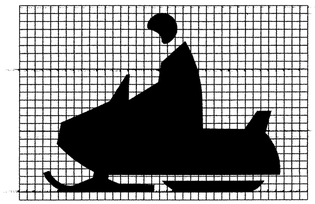
* REDUCE SPACING 13 1/2%

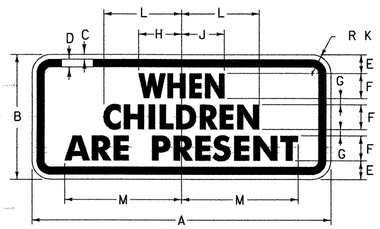
SIGN	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L	M
MIN./STD.	30	1/2	3/4	5C	2	2 1/2	10	10 1/2	14	8 1/4	9	1 7/8
SPECIAL	36	5/8	7/8	6C	3	3	11 3/4	12 3/4	17	10	11	2 1/4



W11-6H

SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J
STD.	30	1/2	3/4	11 7/16	5 9/16	12 11/16	1 7/8	14	2 1/2
SPECIAL	36	5/8	7/8	14 1/8	6 3/4	15 1/4	2 1/4	19	2 1/2



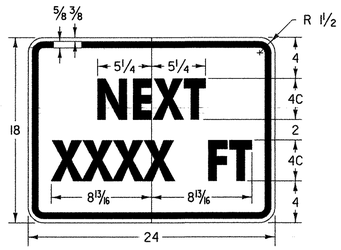


S4-2

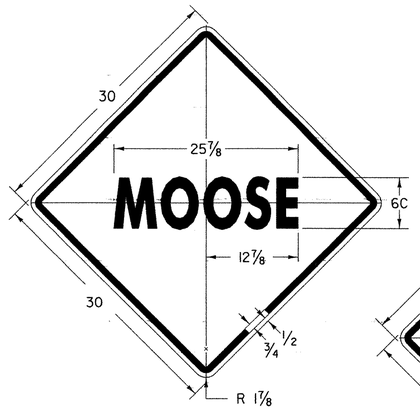
COLORS:

BORDER AND LEGEND - BLACK (NON-REFL)
BACKGROUND - WHITE (RETROREFLECTIVE)

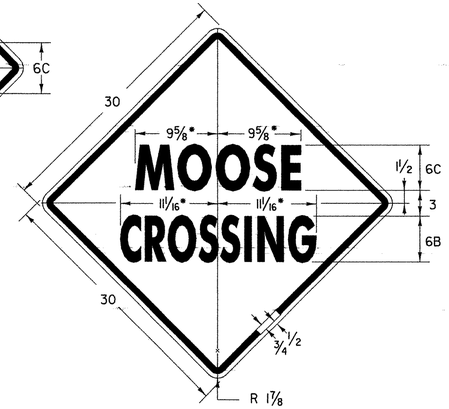
SIGN	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L	M
MIN./STD.	24	10	3/8	5/8	1 1/2	2D	1/2	3 1/2	3 5/16	1 1/2	6 1/4	9 5/16
EXPWY.	36	15	5/8	7/8	2 1/4	3D	3/4	5 3/16	5 1/8	2 1/4	9 3/8	14
SPECIAL	48	20	3/4	1 1/4	3	4D	1	7	6 5/8	3	12 1/2	18 5/8



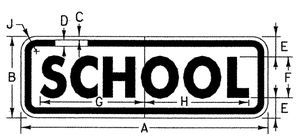
W16-4



VW-001

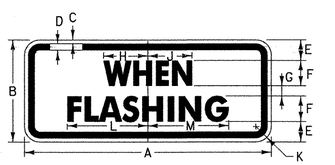


VW-000



S4-3

SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J
MIN./STD.	24	8	3/8	5/8	2	4D	10	10 1/4	1 1/2
EXPWY.	36	12	5/8	7/8	3	6D	15	15 3/8	2 1/4
SPECIAL	48	16	3/4	1 1/4	4	8D	20	20 1/2	3



S4-4

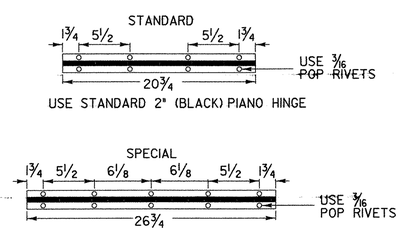
COLORS:

BORDER AND LEGEND - BLACK (NON-REFL)
BACKGROUND - WHITE (RETROREFLECTIVE)

SIGN	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L	M
MIN./STD.	24	10	3/8	5/8	2	2 1/2D	1	4 3/8	4 1/4	1 1/2	7 5/8	8 1/16
EXPWY.	36	15	5/8	7/8	2 3/4	4D	1 1/2	6 15/16	6 13/16	2 1/4	12 3/16	12 15/16
SPECIAL	48	20	3/4	1 1/4	4	5D	2	8 3/4	8 1/2	3	15 1/4	16 1/8

(ALL DIMENSIONS SHOWN IN INCHES EXCEPT WHERE NOTED)

* REDUCE SPACING 50%



HINGE DETAILS

NOTES

DESIGN

LETTERS, DIGITS, ARROWS, SYMBOLS, SPACINGS, AND TEXT DIMENSIONS SHALL CONFORM WITH THE "STANDARD HIGHWAY SIGNS BOOK" AND DESIGNS PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION (FHWA).

MATERIALS

THE SIGN BASE MATERIALS USED FOR THE WARNING SIGNS SHOWN ON THIS SHEET MAY BE ANY OF THE FOLLOWING, OF THE MINIMUM THICKNESS NOTED.

	24" X 8" 24" X 10" 24" X 18" 24" X 24" 30" X 30"	36" X 12" 36" X 15" 36" X 36"	48" X 16" 48" X 20"
FLAT SHEET ALUMINUM	0.080"	0.100"	0.125"

REFLECTORIZATION

THE BACKGROUND RETROREFLECTIVE MATERIAL SHALL BE ASTM TYPE III, TYPE VIII OR TYPE IX RETROREFLECTIVE SHEETING APPLIED TO THE ENTIRE SIGN.
THE TEXT, BORDER AND SYMBOLS SHALL BE LETTERING FILM OR SILK SCREENED.

COLORS

ALL THE WARNING SIGNS SHOWN ON THIS SHEET SHALL HAVE BLACK TEXT AND SYMBOLS ON RETROREFLECTORIZED YELLOW BACKGROUND UNLESS OTHERWISE NOTED.
FLUORESCENT YELLOW-GREEN BACKGROUND SHALL BE USED WITH SCHOOL WARNING SIGNS. THE COLORS SHALL CONFORM WITH THE COLORS ADOPTED BY AASHTO AND APPROVED BY THE FHWA.

SPECIFICATIONS

WARNING SIGNS SHALL MEET THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION "TRAFFIC SIGNS".

OTHER STDS. E-142
REQUIRED:

REVISIONS AND CORRECTIONS

AUG. 08, 1995 - DATE OF ORIGINAL ISSUE
JAN. 15, 1997 - ADDED HINGE DETAIL
MAY 01, 2004 - CHANGED COLOR FOR SCHOOL WARNING SIGN CHANGED REFLECTIVE SHEETING TO TYPE III, TYPE VIII OR TYPE IX

APPROVED

DIRECTOR OF PROGRAM DEVELOPMENT

TRAFFIC OPERATIONS ENGINEER

FEDERAL HIGHWAY ADMINISTRATION

WARNING SIGN DETAILS

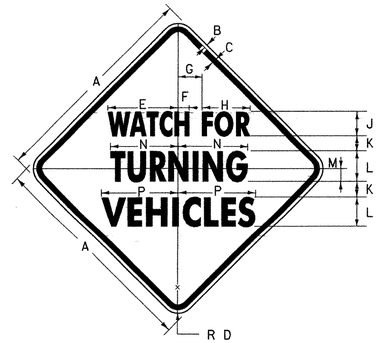
VERMONT AGENCY OF TRANSPORTATION

STANDARD
E-153

W5-1

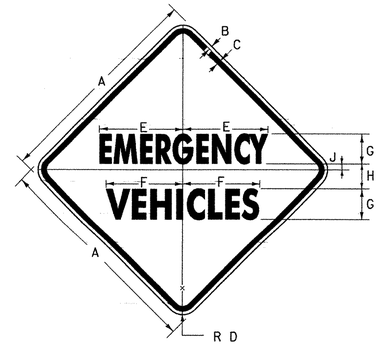
• REDUCE SPACING 25%

SIGN	DIMENSIONS (INCHES)										
	A	B	C	D	E	F	G	H	J	K	L
MIN.	30	1/2	3/4	5D	3	1 3/4	7 7/8	8 5/8	14 3/4	15 1/8	1 7/8
STD.	36	5/8	7/8	6D	3 1/2	2	9 1/2	10 5/16	17 5/8	18 1/4	2 1/4
SPECIAL	48	3/4	1 1/4	8D	4	3	12 11/16	13 3/4	23 1/2	23 3/8	3



VW-205

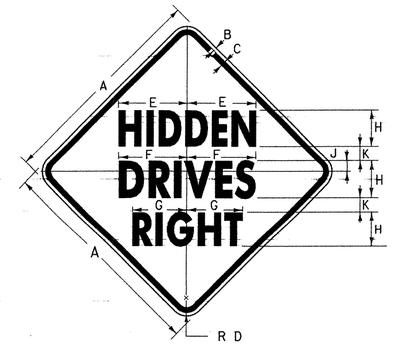
SIGN	DIMENSIONS (INCHES)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	P
MIN.	30	1/2	3/4	1 7/8	9 5/8	1 1/2	3 3/8	6 3/8	4B	2	5B	2	9 1/4	10 1/4
STD.	36	5/8	7/8	2 1/4	11 3/4	1 7/8	4	8	4C	2 1/2	5C	2	11 1/2	12 7/8
SPECIAL	48	3/4	1 1/4	3	14 3/4	2 3/8	5 3/8	10	5C	3 3/8	8B	2 5/8	14 15/16	16 7/16



VW-544

• REDUCE SPACING 50%

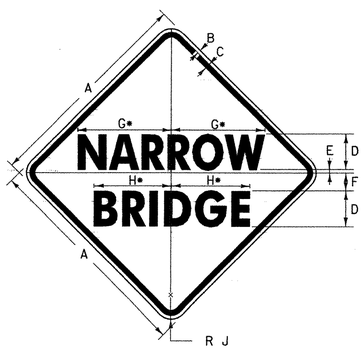
SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J
MIN.	30	1/2	3/4	1 7/8	12 3/4	9 1/16	4C•	3 3/8	7/8
STD.	36	5/8	7/8	2 1/4	14 3/16	11 5/16	5C•	4	1
SPECIAL	48	3/4	1 1/4	3	19 1/8	15 7/16	6C	5 3/8	1 3/8



VW-054

SIGN	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	J	K	L	M
PATH	18	3/8	5/8	1 3/8	5 5/8	5 5/8	4 7/16	3C	7/8	1 13/16	4 9/16	3 5/16
MIN.	24	3/8	5/8	1 1/2	7 11/16	7 5/8	6 3/16	4C	1 3/16	2	6 3/16	4 7/8
STD.	30	1/2	3/4	1 7/8	9 9/16	9 1/2	7 11/16	5C	1 1/2	2	7 3/4	6 1/8
EXPWY.	36	5/8	7/8	2 1/4	11 7/16	11 7/16	9 3/16	6C	1 13/16	2 3/8	9 5/16	7 3/8
SPECIAL	48	3/4	1 1/4	3	15 3/8	15 1/4	12 5/16	8C	2 3/8	3 3/16	12 3/8	9 13/16

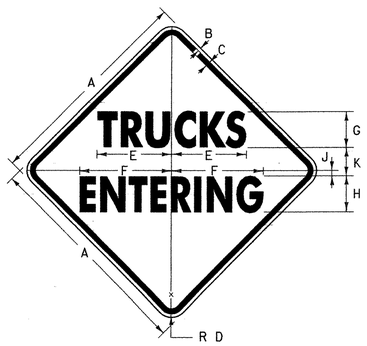
VW-133



W5-2

• REDUCE SPACING 20%

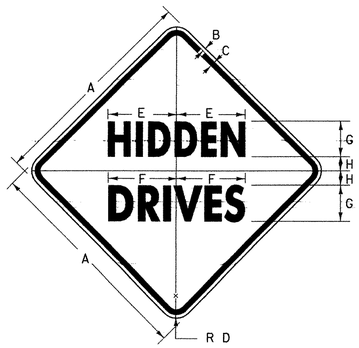
SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J
PATH	18	3/8	5/8	3D	1/4	1 3/8	7 5/8	6 1/4	1 3/8
MIN.	24	3/8	5/8	4D	1/4	2	10 7/16	8 3/4	1 1/2
STD.	30	1/2	3/4	5D	1/2	2 1/2	13 11/16	10 7/8	1 7/8
SPECIAL	36	5/8	7/8	6D	3/4	3	15 11/16	13 11/16	2 1/4



VW-202

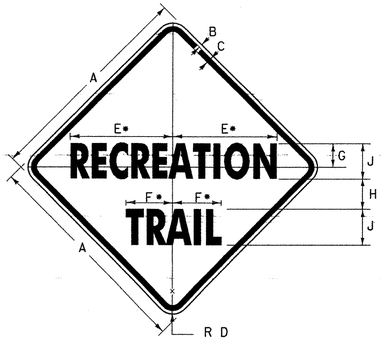
SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
MIN.	30	1/2	3/4	1 7/8	14 7/16	6 11/16	5C	5C	3/4	4
STD.	36	5/8	7/8	2 1/4	17 3/8	8	6C	6C	7/8	4 3/16
SPECIAL	48	3/4	1 1/4	3	23 1/8	10 11/16	8B	8C	1 3/16	6 3/8

(ALL DIMENSIONS SHOWNIN INCHES EXCEPT WHERE NOTED)



VW-060

SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
PATH	18	3/8	1/2	1 1/8	5 3/4	5 1/2	3C	1 1/8
MIN.	24	3/8	5/8	1 1/2	7 11/16	7 5/8	4C	2
STD.	30	1/2	3/4	1 7/8	9 9/16	9 1/2	5C	2
EXPWY.	36	5/8	7/8	2 1/4	11 1/2	11 7/16	6C	2 3/8
SPECIAL	48	3/4	1 1/4	3	15 3/8	15 1/4	8C	3 3/16



VW-622

• REDUCE SPACING 50%

SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J
MIN.	24	3/8	5/8	1 1/2	11 9/16	5 5/16	2 11/16	3 5/16	4C
STD.	30	1/2	3/4	1 7/8	14 7/16	6 11/16	3 5/16	4 3/16	5C
SPECIAL	36	5/8	7/8	2 1/4	17 3/8	8	4	5	6C

NOTES

DESIGN

LETTERS, DIGITS, ARROWS, SYMBOLS, SPACINGS AND TEXT SHALL CONFORM WITH THE "STANDARD HIGHWAY SIGNS BOOK" AND DESIGNS PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION (FHWA).

MATERIALS

THE SIGN BASE MATERIALS USED FOR THE WARNING SIGNS SHOWN ON THIS SHEET MAY BE ANY OF THE FOLLOWING, OF THE MINIMUM THICKNESS NOTED:

	18" x 18"	24" x 24" 30' x 30"	36" x 36"	48" x 48"
FLAT SHEET ALUMINUM	0.060"	0.080"	0.100"	0.125"

REFLECTORIZATION

THE BACKGROUND RETROREFLECTIVE MATERIAL SHALL BE ASTM TYPE III, TYPE VIII, OR TYPE IX RETROREFLECTIVE SHEETING APPLIED TO THE ENTIRE SIGN.
THE TEXT, BORDER, AND SYMBOLS SHALL BE LETTERING FILM OR SILK SCREENED.

COLORS

ALL OF THE WARNING SIGNS SHOWN ON THIS SHEET SHALL HAVE BLACK TEXT AND SYMBOLS ON RETROREFLECTORIZED YELLOW BACKGROUND, UNLESS OTHERWISE NOTED. THE COLORS SHALL CONFORM WITH THE COLORS ADOPTED BY AASHTO AND APPROVED BY THE FHWA.

SPECIFICATIONS

WARNING SIGNS SHALL MEET THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION "TRAFFIC SIGNS".

OTHER STDS. REQUIRED:

REVISIONS AND CORRECTIONS

AUG. 08, 1995 - DATE OF ORIGINAL ISSUE

MAY 01, 2004 - CHANGED REFLECTIVE SHEETING TO TYPE III
MINOR NOTE CHANGES ADDED PATH DIMENSIONS

APPROVED

DIRECTOR OF PROGRAM DEVELOPMENT

TRAFFIC OPERATIONS ENGINEER

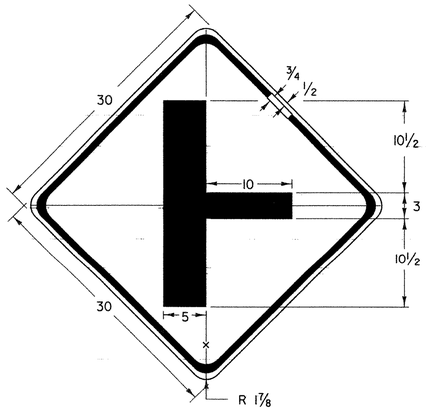
FEDERAL HIGHWAY ADMINISTRATION

WARNING SIGN DETAILS

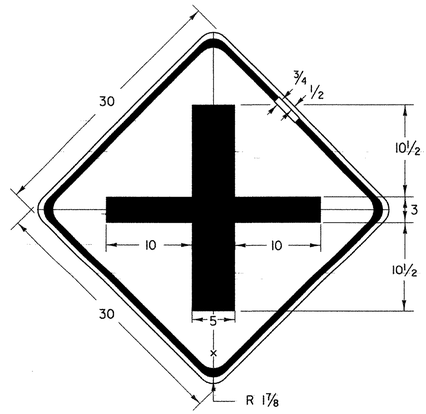
VERMONT AGENCY OF TRANSPORTATION

STANDARD

E-154

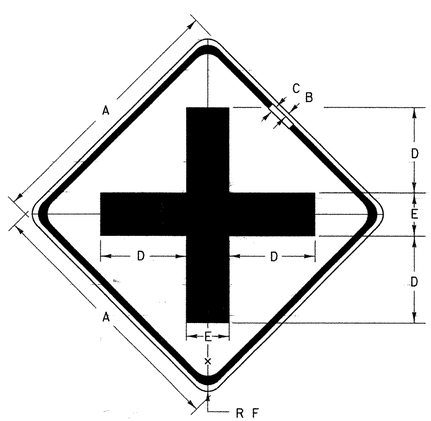


W2-2M



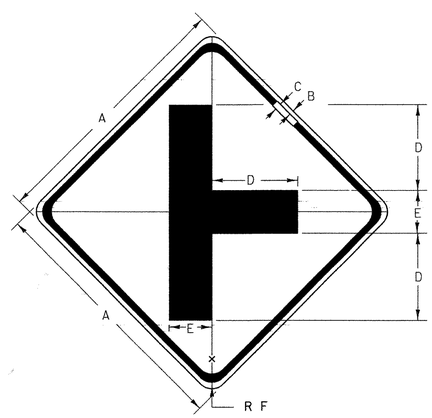
W2-1M

STATE ROUTE /MINOR TOWN HIGHWAY INTERSECTION SIGNS (TYP.)



W2-1

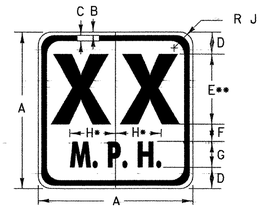
SIGN	DIMENSIONS (INCHES)					
	A	B	C	D	E	F
PATH	18	3/8	5/8	6	3	1 1/2
MIN.	24	3/8	5/8	8	4	1 1/2
STD.	30	1/2	3/4	10	5	1 7/8
EXPWY.	36	5/8	7/8	12	6	2 1/4
SPECIAL	48	3/4	1 1/4	16	8	3



W2-2

SIGN	DIMENSIONS (INCHES)					
	A	B	C	D	E	F
PATH	18	3/8	5/8	6	3	1 1/2
MIN.	24	3/8	5/8	8	4	1 1/2
STD.	30	1/2	3/4	10	5	1 7/8
EXPWY.	36	5/8	7/8	12	6	2 1/4
SPECIAL	48	3/4	1 1/4	16	8	3

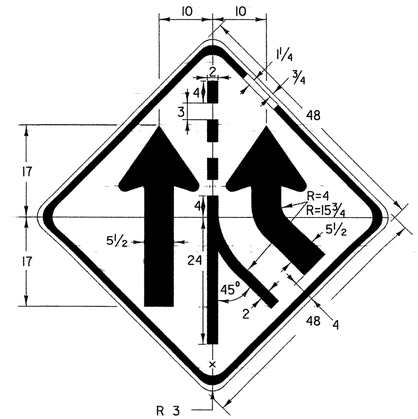
STATE ROUTE /STATE ROUTE OR MAJOR TOWN HIGHWAY INTERSECTION SIGNS (TYP.)



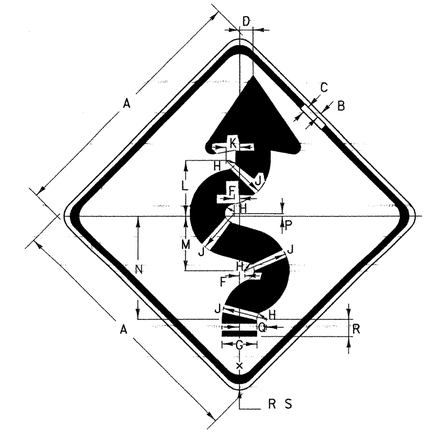
W13-1

* INCREASE SPACING 100%
** OPTICALLY SPACE NUMERALS ABOUT VERTICAL CENTERLINE

SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J
STD.	18	3/8	5/8	2 1/2	8E	2	3E	5 5/16	1 1/2
SPECIAL	24	3/8	5/8	3 5/8	10E	2 3/4	4E	7/16	1 1/2

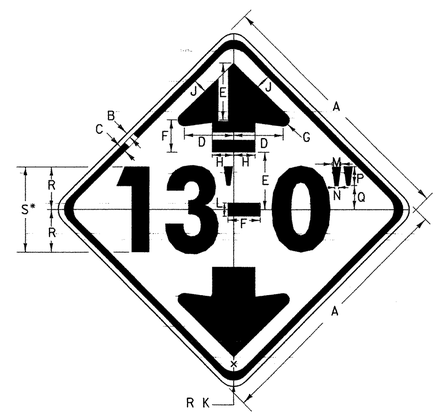


W4-3



W1-5

SIGN	DIMENSIONS (INCHES)																	
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
PATH	18	3/8	5/8	1	9 5/8	3/8	2 1/2	5/8	3	1	4	4	8 5/8	1/4	2	1 1/4	1 1/2
MIN.	24	3/8	5/8	1 1/4	12 3/4	1/2	3 1/4	7/8	4 1/8	1 1/4	5 3/16	5 1/4	11 3/8	1/4	2 1/2	1 19/32	1 1/2
STD.	30	1/2	3/4	1 9/16	15 15/16	5/8	4 1/16	1 3/32	5 5/32	1 9/16	6 3/64	6 9/16	14 7/32	5/16	3 1/8	2	1 7/8
EXPWY.	36	5/8	7/8	1 7/8	19 1/8	3/4	4 7/8	1 5/16	6 3/16	1 7/8	7 25/32	7 7/8	17 1/16	3/8	3 3/4	2 19/32	2 1/4
SPECIAL	48	3/4	1 1/4	2 1/2	25 1/2	1	6 1/2	1 3/4	8 1/4	2 1/2	10 3/8	10 1/2	22 3/4	1/2	5	3 3/16	3



W12-2

* OPTICALLY SPACE VERTICAL CLEARANCE ABOUT VERTICAL CENTERLINE (WHERE 10" IS USED IN VERT. CLEARANCE, USE SERIES C NUMERALS)

SIGN	DIMENSIONS (INCHES)																
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
MIN.	30	1/2	3/4	5 3/4	6 5/8	3 3/4	3/4	2 1/2	1 11/16	1 7/8	1 9/16	1	7/16	2 1/4	3 5/16	5	10D
STD. & EXPWY.	36	5/8	7/8	6 7/8	8	4 1/2	1	3	2	2 1/4	1 7/8	1 1/4	1/2	2 3/4	4	6	12D
FWY.	48	3/4	1 1/4	9 3/16	10 5/8	5 7/8	1 5/16	4	2 5/8	3	2 7/16	1 5/8	5/8	3 5/8	5 1/2	8	16D

(ALL DIMENSIONS SHOWN IN INCHES EXCEPT WHERE NOTED)

NOTES

DESIGN

LETTERS, DIGITS, ARROWS, SYMBOLS, SPACINGS, AND TEXT DIMENSIONS SHALL CONFORM WITH THE "STANDARD HIGHWAY SIGNS BOOK" AND DESIGNS PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION (FHWA). SEE STANDARD SHEET E-151 FOR ARROWHEAD DETAILS.

MATERIALS

THE SIGN BASE MATERIALS USED FOR THE WARNING SIGNS SHOWN ON THIS SHEET MAY BE ANY OF THE FOLLOWING, OF MINIMUM THICKNESS NOTED.

	18" X 18"	24"X24" 30"X30"	36"X36"	48"X48"
FLAT SHEET ALUMINUM	0.060"	0.080"	0.100"	0.125"

REFLECTORIZATION

THE BACKGROUND RETROREFLECTIVE MATERIAL SHALL BE ASTM TYPE III, TYPE VIII OR TYPE IX RETROREFLECTIVE SHEETING APPLIED TO THE ENTIRE SIGN.
THE TEXT, BORDER AND SYMBOLS SHALL BE LETTERING FILM OR SILK SCREENED.

COLORS

ALL THE WARNING SIGNS SHOWN ON THIS SHEET SHALL HAVE BLACK TEXT AND SYMBOLS ON RETROREFLECTORIZED YELLOW BACKGROUND UNLESS OTHERWISE NOTED.
THE COLORS SHALL CONFORM WITH THE COLORS ADOPTED BY AASHTO AND APPROVED BY THE FHWA.

SPECIFICATIONS

WARNING SIGNS SHALL MEET THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION "TRAFFIC SIGNS".

OTHER STDS. REQUIRED: E-151

REVISIONS AND CORRECTIONS

AUG. 08, 1995 - DATE OF ORIGINAL ISSUE
MAY 01, 2004 - CHANGED REFLECTIVE SHEETING TO TYPE III MINOR NOTE CHANGES

APPROVED

DIRECTOR OF PROGRAM DEVELOPMENT

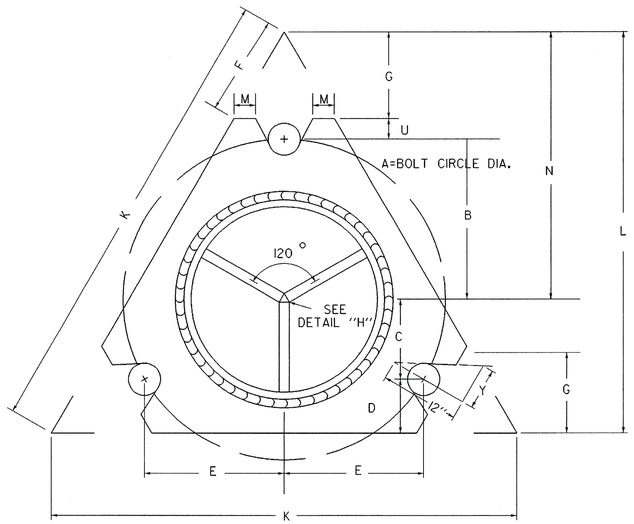
TRAFFIC OPERATIONS ENGINEER

FEDERAL HIGHWAY ADMINISTRATION

WARNING SIGN DETAILS

VERMONT AGENCY OF TRANSPORTATION

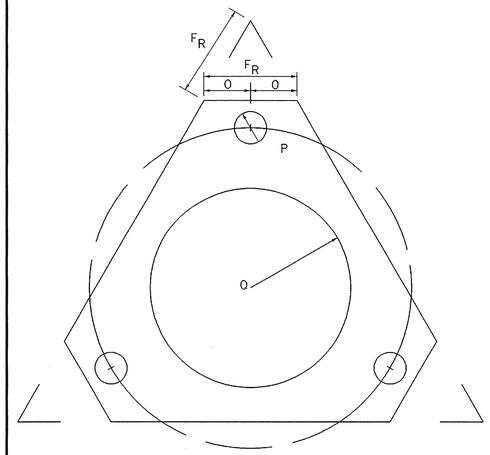
STANDARD
E-155



DETAILS OF MULTI-DIRECTIONAL SLIP BASE

TABLE A

DIMENSIONS NOMINAL PIPE SIZES	BOLT SIZE & TORQUE	WELD SIZE	t	Y	A	B	C	D	E	F	G	K	L	M	U	N
3" DIA. 3½" DIA.	⅝"Ø×3¼" T=450"LBS.	⅜"	⅝"	7"	7"	3½"	1¾"	1¼"	3"	2 5/16"	2"	10⅜"	9"	½"	½"	6"
4" DIA. 5" DIA.	¾"Ø×3¾" T=750"LBS.	7/16"	⅞"	8 9/16"	9"	4½"	2¼"	1½"	3⅞"	2⅞"	2½"	13"	11¼"	⅝"	½"	7½"

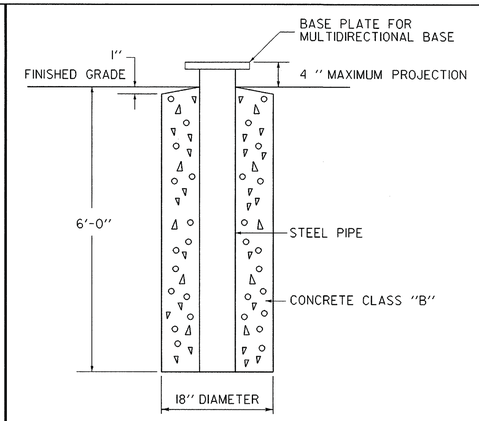


BOLT RETAINER PLATE

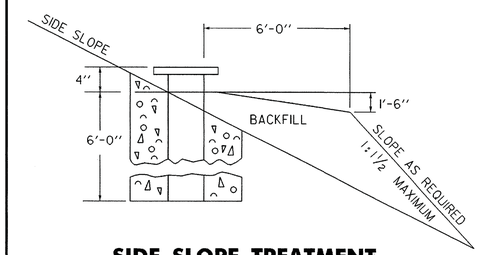
28 GAUGE (0.0187") GALVANIZED STEEL

BOLT RETAINER PLATE SIMILAR IN DETAIL TO THE BASE PLATES WITH THE FOLLOWING EXCEPTIONS

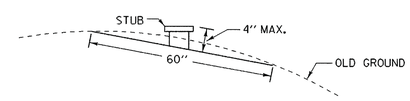
DIMENSIONS NOMINAL PIPE SIZES	F_R	O	P	Q
3" DIA. 3½" DIA.	2⅛"	1 1/16"	11/16"	2½"
4" DIA. 5" DIA.	2⅝"	1 5/16"	13/16"	2⅞"



FOUNDATION DETAIL



SIDE SLOPE TREATMENT



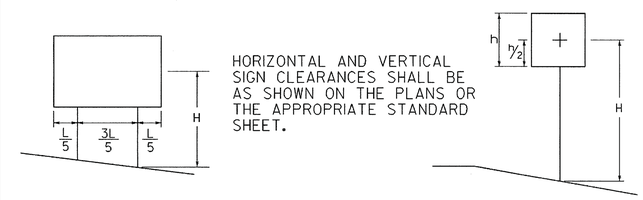
SEE GENERAL NOTE # 4.

GENERAL NOTES

1. THE STEEL PIPE SHALL BE MANUFACTURED TO ASTM A501 OR ASTM A-53, TYPES E OR S, GRADE B AND SHALL BE GALVANIZED AS PER ASTM A-153.
2. THE MATERIAL FOR THE MULTIDIRECTIONAL SLIP BASE ASSEMBLY SHALL CONFORM TO AASHTO M-270, GRADE 36 STEEL, AND BE GALVANIZED AS PER ASTM A-153.
3. THE BOLTS, NUTS AND CIRCULAR WASHERS SHALL CONFORM TO ASTM SECTION 15 A-325, "HIGH STRENGTH CARBON STEEL BOLTS FOR STRUCTURAL STEEL JOINTS". ALL BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS PER ASTM A-123.
4. ALL DIMENSIONS REFERRING TO STUB HEIGHT IN THE VARIOUS TABLES AND FOUNDATION DETAILS SHALL BE ADJUSTED AS REQUIRED TO RESULT IN A TOTAL STUB HEIGHT WHICH IS NOT MORE THAN FOUR INCHES ABOVE A 60-INCH CHORD ALIGNED RADIALLY TO THE CENTERLINE OF THE HIGHWAY AND CONNECTING ANY POINT, WITHIN THE LENGTH OF THE CHORD, ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE.

CONSTRUCTION METHOD

HOLES FOR POST FOOTINGS MAY BE AUGERED OR DUG. IF THE MATERIAL IS FIRM AND IF ALL DISTURBED SOIL AROUND THE CIRCUMFERENCE OF THE THE AUGERED HOLE IS REMOVED, THE HOLES MAY BE LEFT WITH EARTH SIDES. IF NOT, A SUITABLE FORM APPROVED BY THE ENGINEER SHALL BE USED. CORRUGATED METAL CULVERT PIPE OR PAPER FORMS, MANUFACTURED FOR USE AS CONCRETE COLUMN FORMS, WILL BE ACCEPTABLE. THE STUB SHALL BE EXTENDED TO THE BOTTOM OF THE HOLE AND SET ON A CONCRETE PAD FOOTING TO SUPPORT THE POST SO THE POST SHALL BE HELD SECURELY IN PLACE AT THE BOTTOM. THIS MAY BE DONE BY EMBEDDING THE POST AND CONCRETE BLOCK FOOTING IN WET CONCRETE, AND ALLOWING TO SET WITH THE POST SECURED IN POSITION; PLUMBED AND PROPERLY BRACED. THE REMAINDER OF THE FOOTING MAY THEN BE POURED. THE TIME BETWEEN POURS FOR THE CURING OF THE CONCRETE SHALL BE AS DETERMINED BY THE ENGINEER. THE FORM SHALL BE LEFT IN PLACE AND THE HOLE BACKFILLED AND COMPACTED AS DIRECTED BY THE ENGINEER. NO PART OF THE FORM SHALL SHOW ABOVE THE GROUND LINE WHEN THE WORK IS COMPLETED.

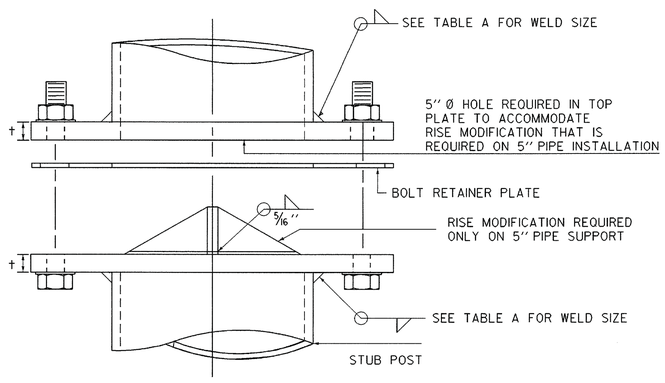


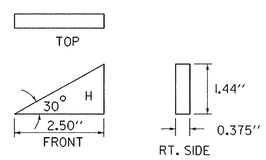
POST SELECTION CHART DETAIL

POST SELECTION CHART

SIGN AREA (FT ²) × H (FT) ≤ SV (SELECTION VALUE)

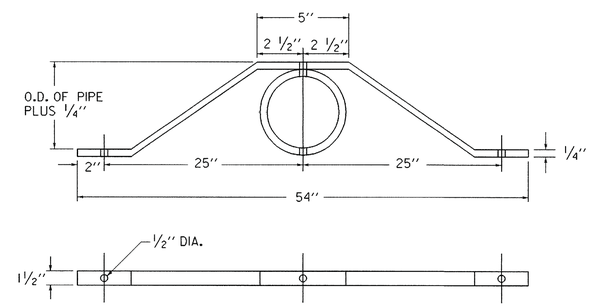
POST DIA. INCHS	WEIGHT LB/FT	Sv	DESIGN CRITERIA
3	7.6	318	WIND SPEED = 60 MPH (10-YEAR MEAN RECURRENCE INTERVAL) WIND PRESSURE = 15 PSF STEEL MIN YIELD Fy = 36,000 PSI ALLOWABLE STRESS = (1.4) 0.66 Fy
3 ½	9.0	442	
4	10.8	593	
5	14.6	1007	





DETAIL "H"

3 REQUIRED
MOUNTED 120° APART
RISE MODIFICATION REQUIRED ONLY FOR 5" PIPE SUPPORT



SIGN SUPPORT BRACE

(REQUIRED WHEN INSTALLING 3 ASSEMBLY FRAME AS SHOWN ON STANDARD E-123)

OTHER STDS. REQUIRED:

REVISIONS AND CORRECTIONS

SEPT. 26, 1987 - DATE OF ORIGINAL ISSUE
AUG. 18, 1995 - REVISED TITLE BLOCK
MAR. 11, 1996 - REVISED POST SELECTION CHART
MAY 20, 1999 - LOST ORIGINAL NEEDED NEW SIGNATURE

APPROVED

DIRECTOR OF PROJECT DEVELOPMENT

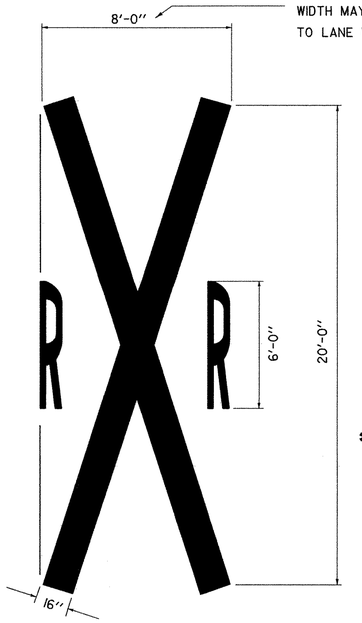
TUBULAR STEEL SIGN POST

/traf/std/stdel63.dgn : stdel63.i

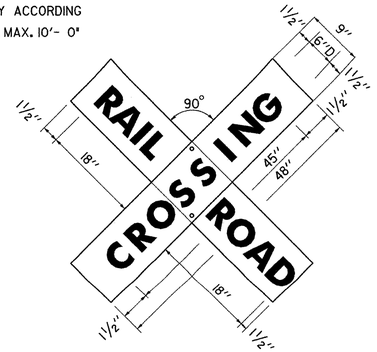
VERMONT AGENCY OF TRANSPORTATION

STANDARD

E-163



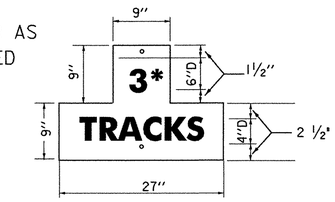
PAVEMENT MARKINGS



RAILROAD CROSSING SIGN (CROSSBUCK)

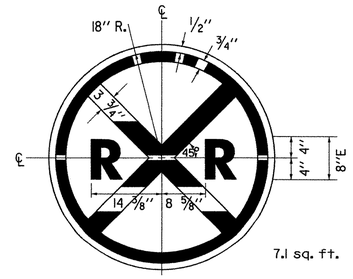
R15-1

* NUMBER AS REQUIRED



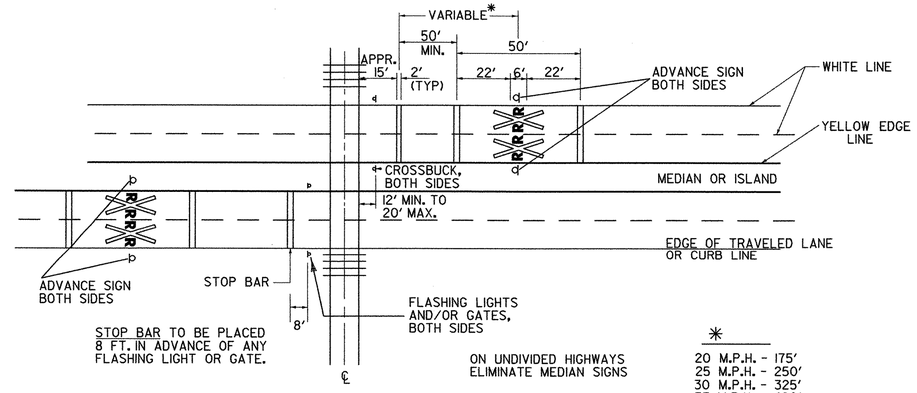
MULTI TRACKS SIGN

R15-2



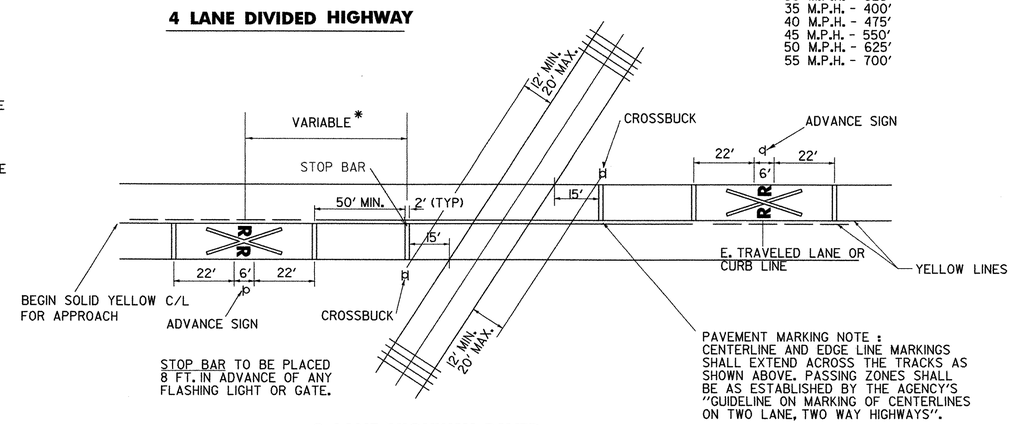
W10-1

ADVANCE SIGN



*
20 M.P.H. - 175'
25 M.P.H. - 250'
30 M.P.H. - 325'
35 M.P.H. - 400'
40 M.P.H. - 475'
45 M.P.H. - 550'
50 M.P.H. - 625'
55 M.P.H. - 700'

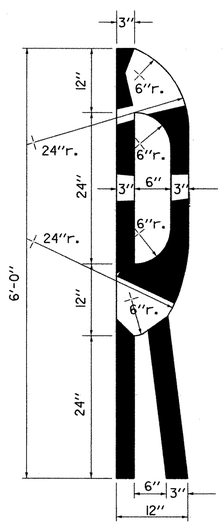
4 LANE DIVIDED HIGHWAY

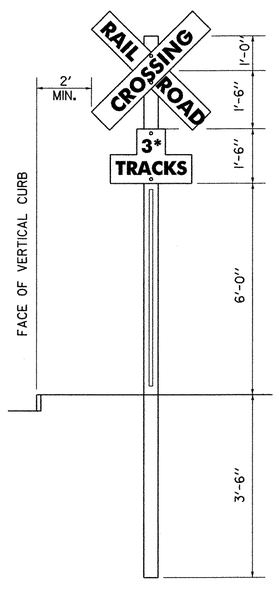


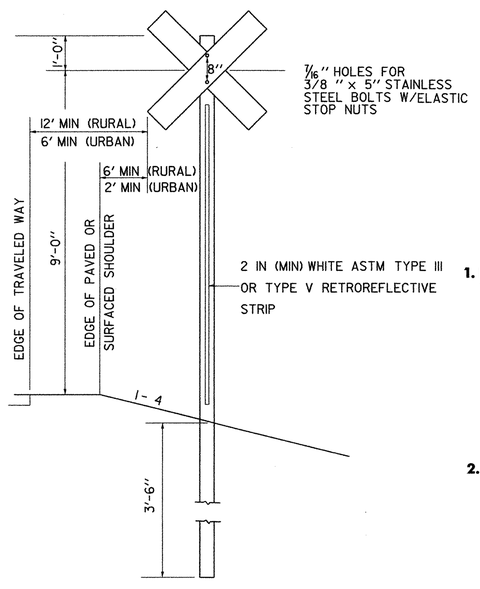
PAVEMENT MARKING NOTE : CENTERLINE AND EDGE LINE MARKINGS SHALL EXTEND ACROSS THE TRACKS AS SHOWN ABOVE. PASSING ZONES SHALL BE AS ESTABLISHED BY THE AGENCY'S "GUIDELINE ON MARKING OF CENTERLINES ON TWO LANE, TWO WAY HIGHWAYS".

2 LANE HIGHWAY PAVED

ALSO APPLICABLE TO UNPAVED ROADS FOR PLACEMENT OF CROSSBUCKS AND ADVANCE SIGNS







SIGN MATERIALS AND COLORS

CROSSBUCKS SHALL BE 0.100" ALUMINUM WITH WHITE ASTM TYPE III OR TYPE V RETROREFLECTIVE SHEETING APPLIED TO BOTH SIDES OF SIGN PANELS

ADVANCE SIGN SHALL BE 0.125" ALUMINUM WITH YELLOW ASTM TYPE III OR TYPE V RETROREFLECTIVE SHEETING APPLIED TO THE ENTIRE BACKGROUND.

MULTI TRACKS SIGN SHALL BE 0.060" ALUMINUM WITH WHITE ASTM TYPE III OR TYPE V RETROREFLECTIVE SHEETING APPLIED TO BOTH SIDES OF SIGN PANELS.

TEXT, STRIPES AND BORDERS SHALL BE EITHER SILK SCREENED OR LETTERING FILM.

GENERAL NOTES

1. PAVEMENT MARKINGS

THESE MARKINGS SHALL BE PLACED, IF PHYSICALLY FEASIBLE, ON ALL PAVED APPROACHES TO RAILROAD CROSSINGS, WHERE THERE ARE SIGNALS AND/OR AUTOMATIC GATE AND AT ALL OTHER CROSSINGS WHERE THE PREVAILING SPEED OF HIGHWAY TRAFFIC IS 40 M.P.H. OR GREATER.
THE MARKINGS SHALL ALSO BE PLACED AT CROSSINGS WHERE ENGINEERING STUDIES INDICATE THERE IS A SIGNIFICANT POTENTIAL CONFLICT BETWEEN VEHICLES AND TRAINS. ALL MARKINGS SHALL BE WHITE EXCEPT FOR MEDIAN EDGELINES AND CENTERLINE ON 2 LANE ROADS WHICH SHALL BE YELLOW. THE RAILROAD CROSSING SYMBOL SHALL CONSIST OF THE "X" FLANKED BY TWO "R"'s AND THREE 24" STOP BARS; TWO BRACKETING THE "X", ONE AT THE CROSSING. AT MINOR CROSSINGS OR IN URBAN AREAS, THESE MARKINGS MAY BE OMITTED IF AN ENGINEERING STUDY INDICATES THAT OTHER DEVICES INSTALLED PROVIDE SUITABLE PROTECTION.

2. CROSSBUCKS

WHERE PHYSICALLY FEASIBLE AND VISIBLE TO APPROACHING TRAFFIC, THESE SIGNS SHALL BE INSTALLED ON THE RIGHT-HAND SIDE OF THE ROADWAY FOR EACH APPROACH TO THE CROSSING. MULTI-LANE DIVIDED HIGHWAYS SHALL HAVE SIGNS MOUNTED ON BOTH SIDES OF THE ROADWAY APPROACHES.

3. AUXILIARY SIGNS

A "NUMBER OF TRACKS" SIGN SHALL BE USED WHERE THERE ARE TWO OR MORE TRACKS AT THE CROSSING.

4. ADVANCE WARNING SIGNS

RAILROAD ADVANCE WARNING SIGNS WILL BE PROVIDED AND LOCATED IN ACCORDANCE WITH SECTION 8B-3 OF MUTCD

5. SIGN POSTS

A STRIP OF ASTM TYPE III OR TYPE V RETROREFLECTIVE WHITE MATERIAL NOT LESS THAN 2 INCHES IN WIDTH, SHALL BE USED ON EACH SUPPORT AT HIGHWAY-RAIL GRADE CROSSINGS FOR THE FULL LENGTH OF THE FRONT AND BACK OF THE SUPPORT FROM THE CROSSBUCK SIGN OR NUMBER OF TRACKS SIGN TO NEAR GROUND LEVEL.

THIS SHEET IS NOT TO SCALE	OTHER STDS REQUIRED E-160

REVISIONS AND CORRECTIONS

SEPT. 10, 1987 - DATE OF ORIGINAL ISSUE

JAN. 12, 1988 - REVISE LOCATION OF ADVANCE SIGNS DELETED ALUMINUM 3" X 3" TUBE

JUNE 30, 2003 - ADDED RETROREFLECTIVE STRIP TO POST, CHANGED SHEETING TO ASTM TYPE III OR TYPE V RETROREFLECTIVE SHEETING

APPROVED

DIRECTOR OF PROGRAM DEVELOPMENT

TRAFFIC OPERATIONS ENGINEER

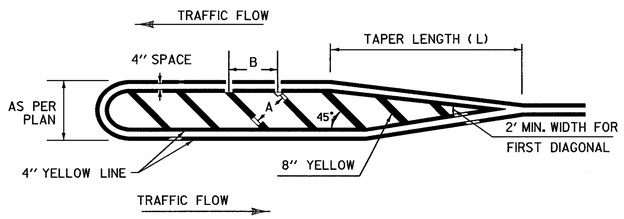
FEDERAL HIGHWAY ADMINISTRATION

RAILROAD CROSSING SIGNS AND PAVEMENT MARKINGS

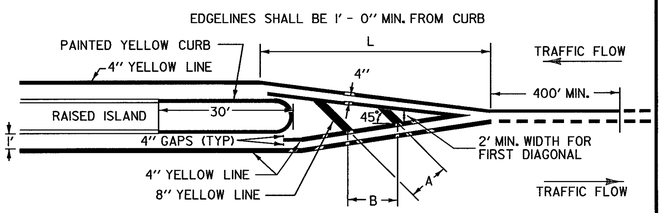
VERMONT AGENCY OF TRANSPORTATION

STANDARD

E-190



PAINTED ISLAND DETAIL



ISLAND APPROACH MARKINGS

DIMENSIONS		CONDITIONS FOR USE	
A	B		
5'	7'	LOW SPEED OR HIGH SPEED/W POOR SIGHT DISTANCE, <200'	WHERE LENGTH OF DIAGONAL AREA IS 75' MAX.
10'	14'	HIGH SPEED AND GOOD SIGHT DISTANCE, ≥200'	WHERE LENGTH OF DIAGONAL AREA EXCEEDS 75'

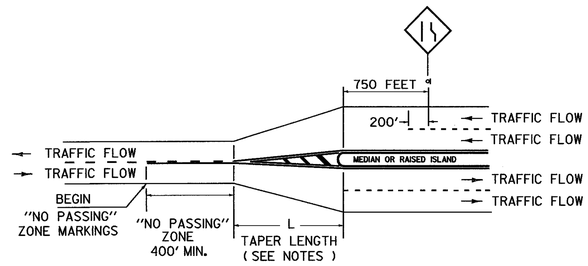
TAPER LENGTH NOTES

1. FOR DESIGN OF LEFT OR RIGHT TURN LANES REFER TO VTRANS 'GUIDELINE FOR DETERMINING STORAGE, TAPER AND DECELERATION LENGTHS FOR LEFT AND RIGHT-TURN LANES AT INTERSECTIONS'
2. MINIMUM LENGTH OF TAPER = (L) — L = 100 FEET ≤ 30 mph; L = 180 FEET > 30 mph
3. THE ENTIRE TAPER LENGTH MAY BE USED FOR DECELERATION.

NOTE:

A SOLID LINE IN THE DIRECTION OF TRAVEL IS BEGUN AT A LOCATION 400 FEET MIN. IN ADVANCE OF THE BEGIN TAPER FOR THE PAVEMENT WIDTH TRANSITION.

PASSING ZONE SHOWN FOR REFERENCE ONLY, ACTUAL MARKINGS BASED ON FIELD CONDITIONS.



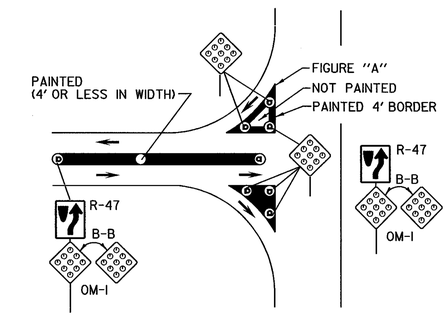
"NO PASSING" ZONE LAYOUT IN PAVEMENT WIDTH TRANSITIONS, TWO LANE HIGHWAY TO DIVIDED HIGHWAY

THE FOLLOWING GUIDELINES WILL BE USED WHEN PAINTING ISLAND ON STATE HIGHWAYS AND RECOMMENDED FOR ISLANDS ON OTHER SYSTEMS WITHIN THE STATE.

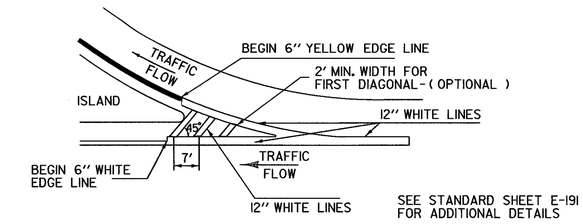
I. PAINTING: ISLANDS WHICH ARE FOUR FEET IN WIDTH AND TRIANGLE ISLANDS WHICH ARE LESS THAN FOUR HUNDRED AND FIFTY SQUARE FEET SHALL BE PAINTED ENTIRELY. TRIANGLES WHICH ARE FOUR HUNDRED AND FIFTY SQUARE FEET AND LARGER SHALL BE PAINTED WITH A FOUR FOOT BORDER AS SHOWN ON FIGURE "A" OF THE PAINTED ISLAND DETAIL.

II. SIGNS: ALL APPROACH NOSES TO THE ISLANDS IN THE LINE OF TRAFFIC WILL BE SIGNED WITH A KEEP RIGHT (R-47) SIGN AS WELL AS OBJECT MARKERS PLACED BACK TO BACK TO INDICATE THE BEGINNING (END) OF THE ISLAND.

III. EXCEPTIONS: THERE WILL BE SPECIAL CASES WHICH REQUIRE AN EXCEPTION TO, OR MODIFICATION OF THIS GUIDELINE. THESE QUESTIONS SHOULD BE REFERRED TO THE TRAFFIC DESIGN ENGINEER OR DELEGATED REPRESENTATIVE.

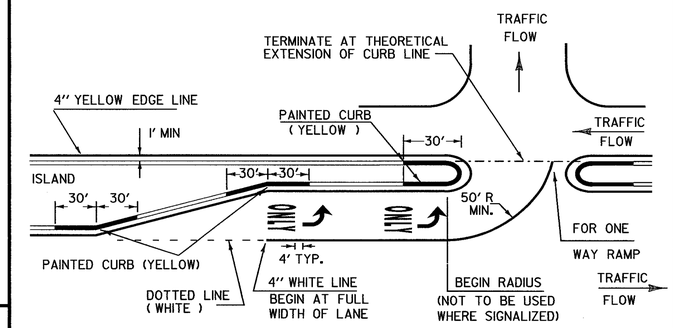


PAINTED ISLANDS

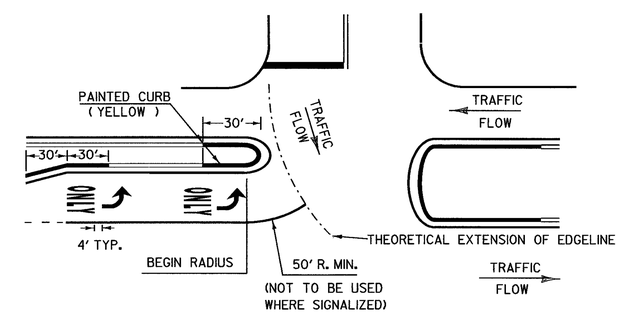


GORE MARKING DETAIL - EXIT

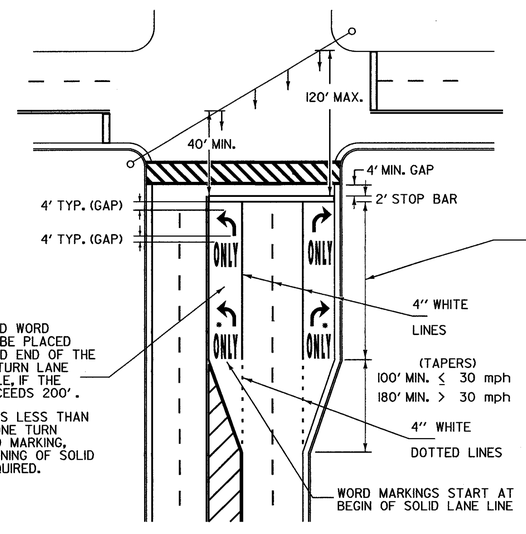
TRANSVERSE LINES



TURN LANE AND PAINTED CURB DETAIL



CURB PAINTING: CURB SHALL BE PAINTED ON THE ISLAND NOSE AND TO A POINT 30 FEET FROM THE END OF THE ISLAND. IN ADDITION, CURB SHALL BE PAINTED 30 FEET FROM ANY CHANGE IN CURB DIRECTION.



TURN ARROWS AND WORD MARKINGS SHALL BE PLACED AT THE BEGIN AND END OF THE LEFT (OR RIGHT) TURN LANE AND IN THE MIDDLE, IF THE LANE LENGTH EXCEEDS 200'.

* IF LANE LENGTH IS LESS THAN 100 FEET, ONLY ONE TURN ARROW AND WORD MARKING, PLACED AT BEGINNING OF SOLID LANE LINE, IS REQUIRED.

EXCLUSIVE TURN LANES (LEFT OR RIGHT) LANE LINES SHALL BE SOLID AND EXTEND BACK FROM THE STOP LINE TO THE POINT OF FULL LANE WIDTH OF THE TURN LANE.

FOR DESIGN OF LEFT OR RIGHT TURN LANES REFER TO VTRANS 'GUIDELINE FOR DETERMINING STORAGE, TAPER AND DECELERATION LENGTHS FOR LEFT AND RIGHT-TURN LANES AT INTERSECTIONS'

TYPICAL MARKINGS FOR SIGNALIZED INTERSECTION

THIS SHEET NOT TO SCALE

OTHER STDS. REQUIRED E-191 E-193

REVISIONS AND CORRECTIONS

AUG. 18, 1995 - DATE OF ORIGINAL ISSUE
OCT. 14, 1998 - CHANGED GORE MARKING DETAIL
DEC. 28, 1998 - CHANGED GORE MARKING HATCHING TO 12" PER FHWA
OCT. 12, 2000 - CHANGED TURN LANE CRITERIA

APPROVED

DIRECTOR OF PROJECT DEVELOPMENT

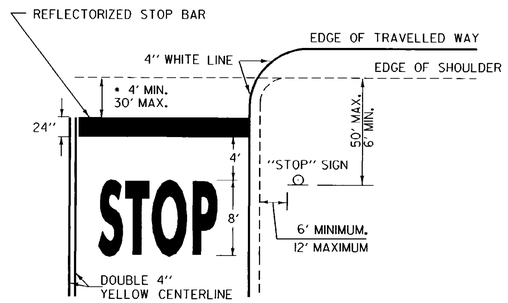
ROADWAY & TRAFFIC DESIGN ENGINEER

PAVEMENT MARKING DETAILS

/traf/english/std/el92.dgn

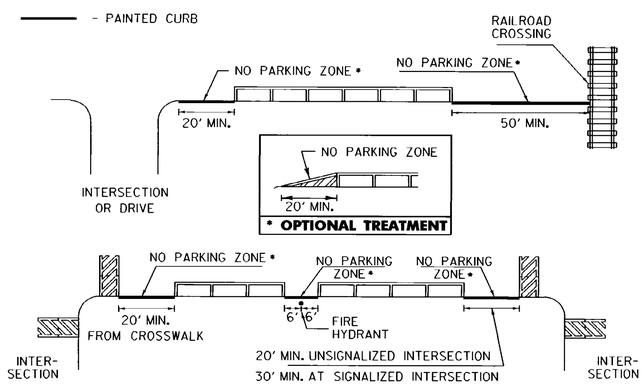
VERMONT AGENCY OF TRANSPORTATION

STANDARD E-192

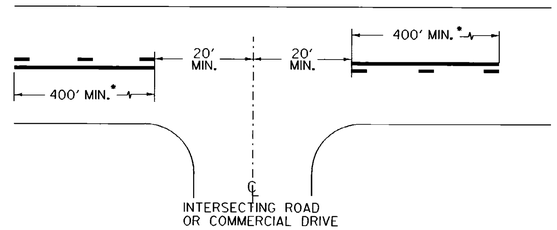


• THE "DESIRED STOPPING POINT" IS THE LOCATION BASED ON SITE CONDITIONS THAT BEST ALLOWS THE STOPPED VEHICLE TO VIEW THE APPROACHING TRAFFIC.

STOP BAR LAYOUT



NO PARKING LAYOUT DETAILS



• THE SOLID LINE SHALL BE PAIRED WITH EITHER A SOLID OR DASHED LINE DEPENDING ON SIGHT DISTANCE AVAILABILITY IN THE OPPOSING DIRECTION. ADJUSTMENTS TO THE 40 FOOT CENTERLINE OPENING MAY BE MADE TO ACCOMMODATE SKEWED INTERSECTIONS.

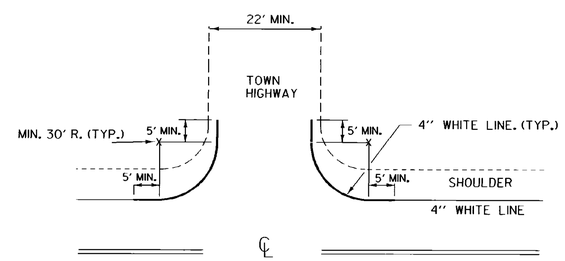
CENTERLINE BREAKES:

A. AT ALL STATE HIGHWAYS AND TOWN HIGHWAYS, INCLUDING CLASS 4 TH'S. THAT HAVE STOP AND LEGAL LOAD LIMIT SIGNS INSTALLED

B. COMMERCIAL DRIVES:

1. WHERE A SEPERATE TURN LANE EXISTS ON THE MAIN LINE (LT. OR RT.)
2. SIGNIFICANT TRAFFIC VOLUMES EXISTS.
3. IF MOTORISTS NEED ASSISTANCE TO DEFINE ENTRANCE POINTS.

CENTERLINE LAYOUT

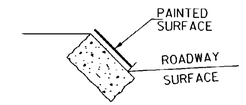


EDGELINES SHALL BE APPLIED TO ALL STATE HIGHWAYS AND SHOULD BE MAINTAINED AT A CONSTANT DISTANCE FROM THE CENTERLINE UNLESS PAVEMENT WIDTH INCREASES TO ALLOW WIDER LANES.

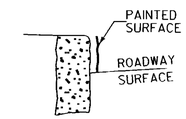
APPLY EDGELINE AS DETAILED ON ALL PAVED CLASS 1 & CLASS 2 TOWN HIGHWAYS AND ANY CLASS 3 TOWN HIGHWAY 22 FEET OR MORE IN WIDTH.

IF MIN. 30 FOOT RADIUS CANNOT BE OBTAINED, OR THE TOWN HIGHWAY IS NOT PAVED, BREAK THE EDGELINE USING AN 80 FOOT GAP AT INTERSECTION.

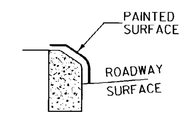
EDGELINE LAYOUTS



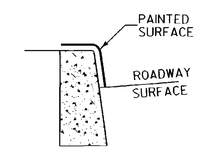
GRANITE SLOPE EDGING



VERTICAL GRANITE CURB

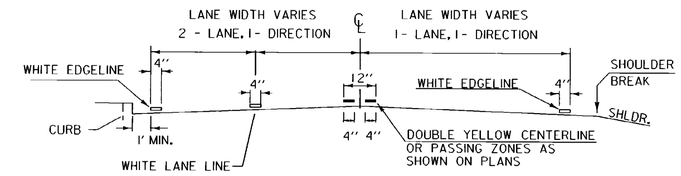


TYPE A (CONCRETE)

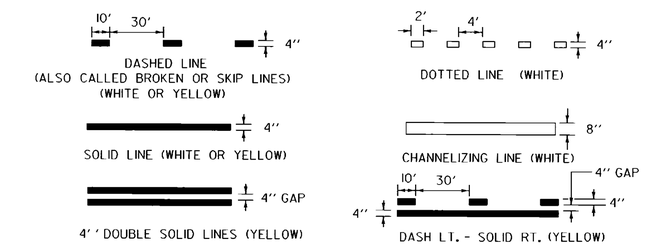


TYPE B (CONCRETE)

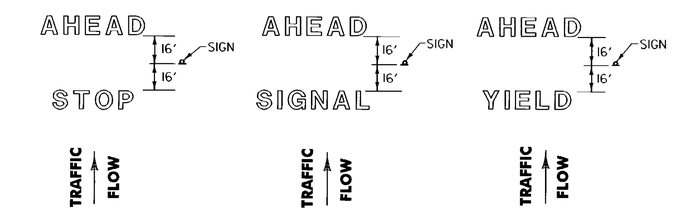
PAINTED CURB



PAVEMENT MARKING PLACEMENT DETAIL

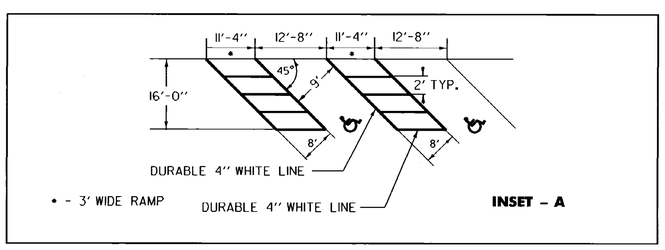


PAVEMENT MARKING LINE DETAILS



LETTER IN WORD MARKING SPACING DETAIL

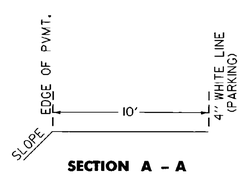
NOTE: SINGLE WORDS CENTERED ON SIGN ie: SCHOOL OR YIELD



INSET - A

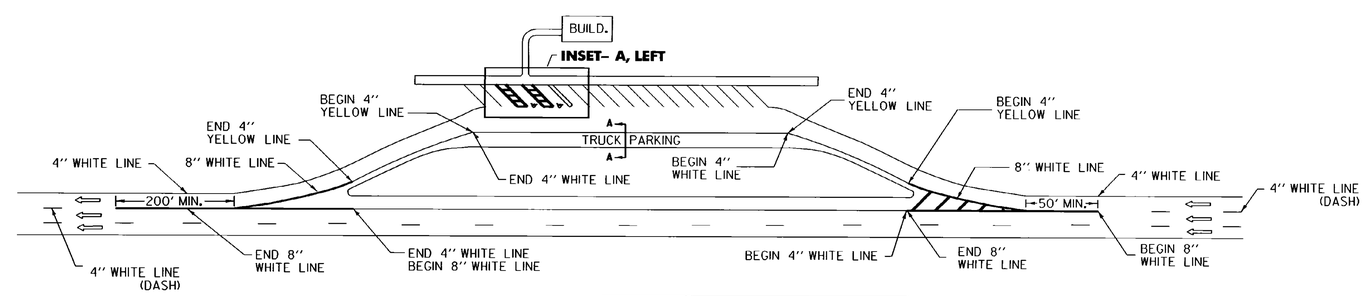
NOTE:

SEE STANDARD SHEET E-191 FOR HANDICAP SYMBOL POSITIONING AND DETAIL.



SECTION A - A

TRUCK PARKING DETAIL



REST AREA PARKING DETAILS

THIS SHEET IS NOT TO SCALE

OTHER STDS. E - 191, E - 192 REQUIRED

REVISIONS AND CORRECTIONS

AUG. 18, 1995 - DATE OF ORIGINAL ISSUE

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

DIRECTOR OF ENGINEERING

TRAFFIC AND SAFETY ENGINEER

PAVEMENT MARKING DETAILS

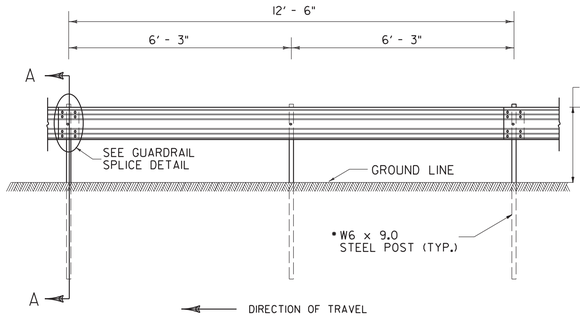
/traf/std/stdel93.dgn/stdel93.i

VERMONT AGENCY OF TRANSPORTATION

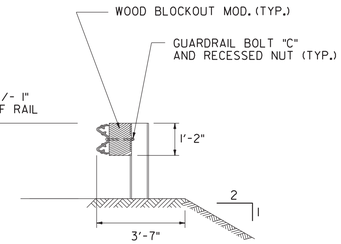
STANDARD

E-193

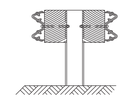
"W" BEAM GUARDRAIL WITH STEEL POSTS



ELEVATION FROM ℄ OF ROAD

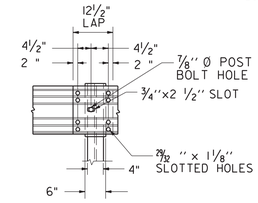


SINGLE - FACED BARRIER

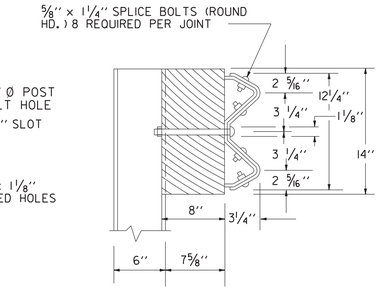


DOUBLE - FACED BARRIER

SECTION A -A



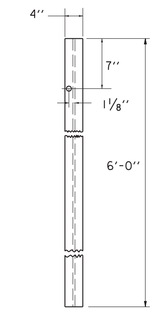
PLAN



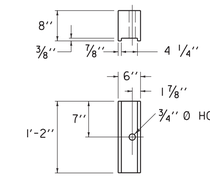
ELEVATION

SECTION

GUARDRAIL SPLICE DETAIL



FRONT FACE
STEEL POST

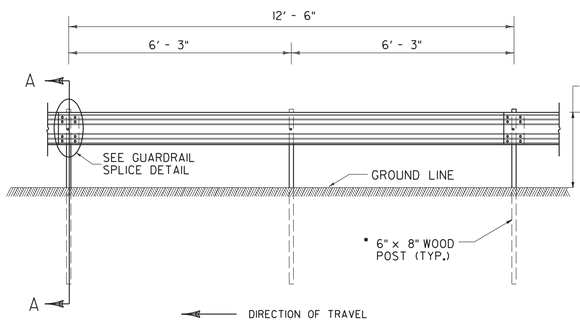


POST FACE
MODIFIED WOOD BLOCKOUT- ROUTED
6" X 8" X 1'-2"
FOR USE W/ STEEL POSTS ONLY

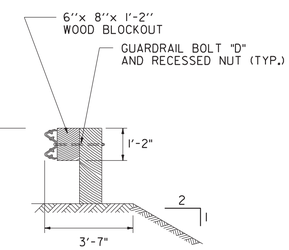
NOTES:

1. BLOCKS SHALL BE MADE OF TIMBER WITH A STRESS GRADE OF 1200 PSI OR MORE. TESTING SHALL BE IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU, SOUTHERN PINE INSPECTION BUREAU OR OTHER APPROPRIATE ASSOCIATION. TIMBER FOR BLOCKS SHALL BE ROUGH SAWN (UNPLANED) WITH DIMENSIONS INDICATED. THE SIZE TOLERANCE OF ROUGH SAWN BLOCKS IN THE DIRECTION OF THE BOLT HOLES SHALL BE NOT MORE THAN +/- ¼".
2. SUPPLY WOOD BLOCKS PER AASHTO M 168.
3. TREAT WITH PRESERVATIVE PER AASHTO M 133.
4. BLOCKOUTS MAY ALSO BE MADE OF APPROVED ALTERNATIVE MATERIAL.

"W" BEAM GUARDRAIL WITH WOOD POSTS

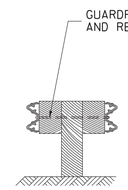


ELEVATION FROM ℄ OF ROAD



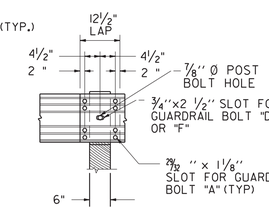
SINGLE - FACED BARRIER

• NOTE : UNLESS OTHERWISE SPECIFIED ON PLANS

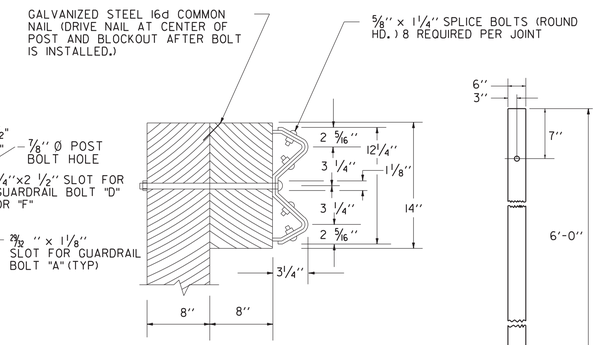


DOUBLE - FACED BARRIER

SECTION A -A



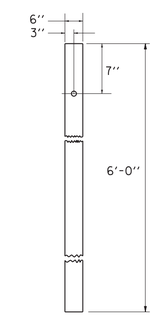
PLAN



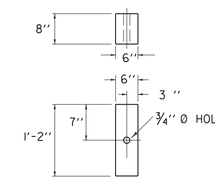
ELEVATION

SECTION

GUARDRAIL SPLICE DETAIL



FRONT FACE
WOOD POST

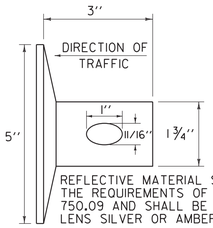


POST FACE
WOOD BLOCKOUT
6" X 8" X 1'-2"

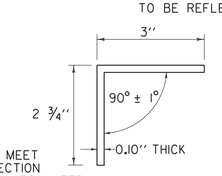
NOTES:

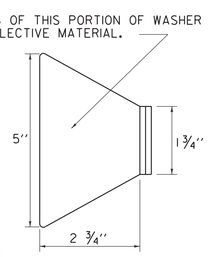
1. BLOCKS SHALL BE MADE OF TIMBER WITH A STRESS GRADE OF 1200 PSI OR MORE. TESTING SHALL BE IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU, SOUTHERN PINE INSPECTION BUREAU OR OTHER APPROPRIATE ASSOCIATION. TIMBER FOR BLOCKS SHALL BE ROUGH SAWN (UNPLANED) WITH DIMENSIONS INDICATED. THE SIZE TOLERANCE OF ROUGH SAWN BLOCKS IN THE DIRECTION OF THE BOLT HOLES SHALL BE NOT MORE THAN +/- ¼".
2. SUPPLY WOOD BLOCKS PER AASHTO M 168.
3. TREAT WITH PRESERVATIVE PER AASHTO M 133.
4. BLOCKOUTS MAY ALSO BE MADE OF APPROVED ALTERNATIVE MATERIAL.

GUARDRAIL DELINEATOR

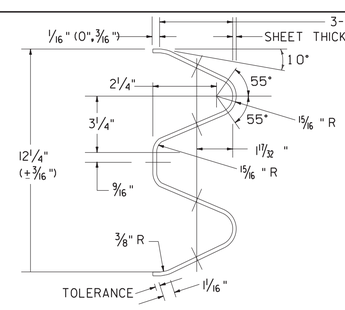


REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.09 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER.

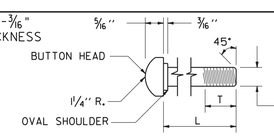




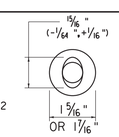
THIS REFLECTORIZED ALUMINUM WASHER IS TO BE PLACED IN VALLEY OF BEAM WHEN MOUNTING BEAM ONTO EACH FIFTH POST. WASHER SHALL MEET SPECIFICATION REQUIREMENTS FOR A.S.T.M. B-209 ALLOY 5052-H32.



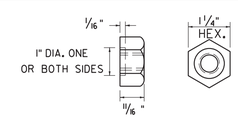
ARTBA RE-3[206'-3"=12'-6" CLASS A, TYPE 11-73
TYPICAL GUARDRAIL SECTION



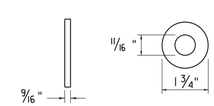
GUARDRAIL BOLT



GUARDRAIL BOLTS				FASTENER USED IN	
BOLT DES.	ARTBA REF. NO.	L	T (MIN.)	STEEL POSTS	WOOD POSTS
"A"	F-3[1¼]-76	1¼"	1"	X	X
"C"	F-3[9½]-76	9½"	1¾"	X	
"D"	F-3[18]-76	18"	2½"		X
"F"	F-3[25]-76	25"	2"		X



RECESSED NUT FOR GUARDRAIL BOLT



WASHER FOR ⅝" BOLTS
ARTBA F-13-73
NOTE: WASHER IS USED UNDER RECESSED NUT WHERE GUARDRAIL BOLT IS USED WITH WOOD POSTS.

GENERAL NOTES:

1. GUARDRAIL SHALL MEET THE REQUIREMENTS OF AASHTO M 180, CLASS A, TYPE 1, UNLESS OTHERWISE DESIGNATED.
2. GUARDRAIL SHALL BE SINGLE FACED UNLESS OTHERWISE DESIGNATED.
3. GUARDRAIL SECTIONS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW FOR THE LANE NEAREST THE GUARDRAIL.
4. FOR DESCRIPTION AND SPECIFICATION OF PARTS IDENTIFIED BY (ARTBA ...) AND OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS & RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO. 13, TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE", LATEST EDITION.
5. STANDARD STEEL BEAM TO BE 1/8" AND THE HEAVY DUTY TO BE 9/64 " THICK.

OTHER STANDARD REQUIRED: G-1d

REVISIONS AND CORRECTIONS

JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.

JAN. 3, 2000 - UPDATED TO REFLECT METRIC STD. CHANGES

FEB. 10, 2014 - UPDATED TO REFLECT GUARDRAIL HEIGHT OF 29"; AS NOTED IN FHWA LETTER DATED MAY 17, 2010

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

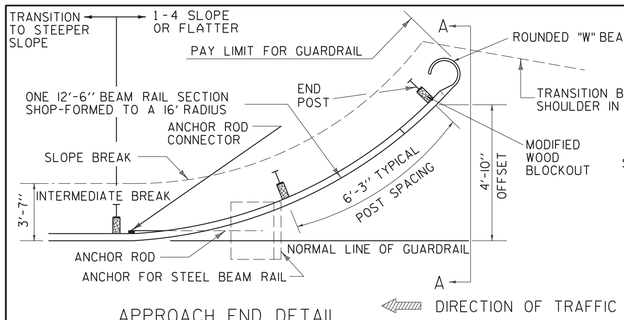
FEDERAL HIGHWAY ADMINISTRATION

STEEL BEAM GUARDRAIL WITH STEEL POSTS
STEEL BEAM GUARDRAIL WITH WOOD POSTS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

G-1

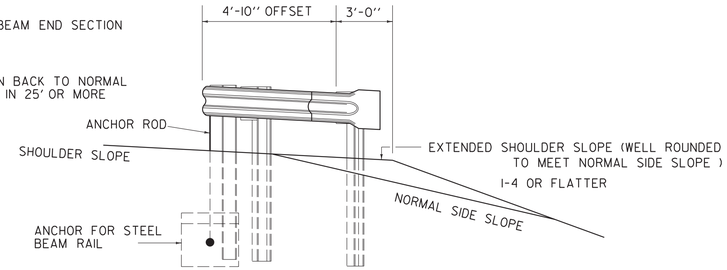


APPROACH END DETAIL

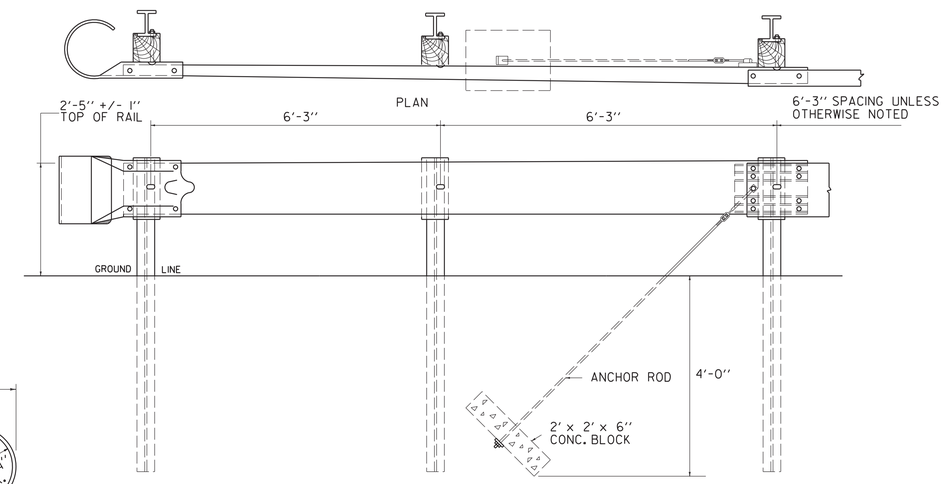
NHS APPROVED FOR USE WHERE DESIGN SPEED IS 40 OR LESS MPH

NON-NHS APPROVED FOR USE WHERE DESIGN SPEED IS 50 OR LESS MPH

DIRECTION OF TRAFFIC

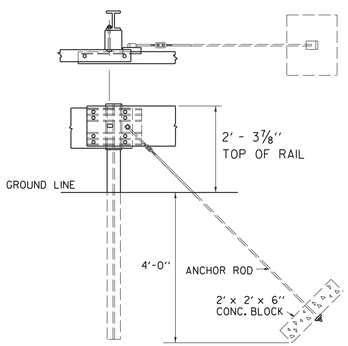


SECTION A-A

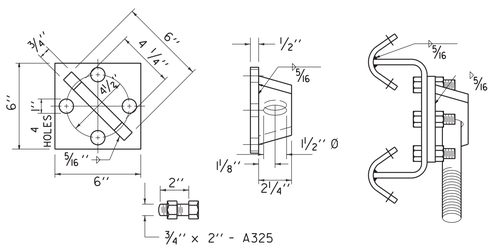


ASSEMBLY ELEVATION

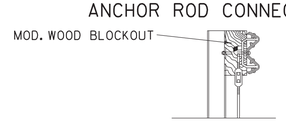
TRAILING END TERMINAL FOR USE ON ONE-WAY HIGHWAYS

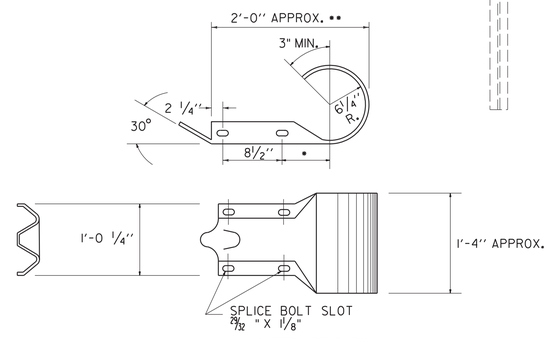


ANCHOR ROD



ANCHOR ROD CONNECTOR

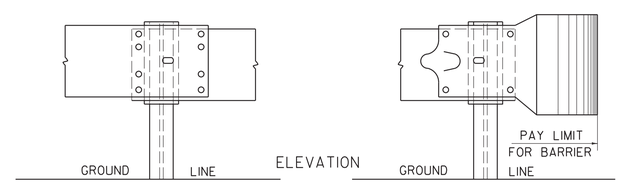


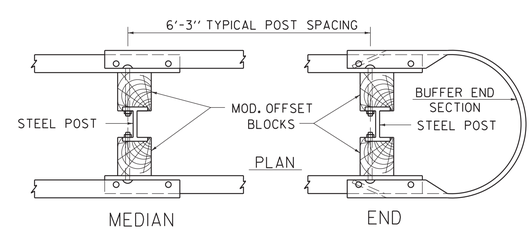


(ARTBA RE-6-79)

ROUNDED "W" BEAM END SECTION

• THIS DIMENSION IS 7 1/2" IN RE-7-79. IF THE DIMENSION IS USED IN THIS PART, IT WILL GIVE AN ACCEPTABLE OVERALL LENGTH (••) OF APPROXIMATELY 2'- 11/2."



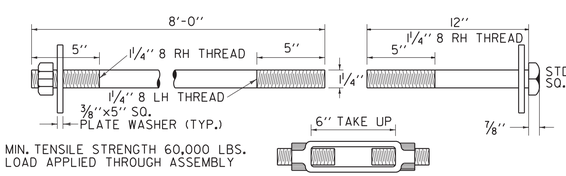


STEEL BEAM MEDIAN BARRIER

NOTE: TO BE USED OUTSIDE CLEAR ZONE ONLY.

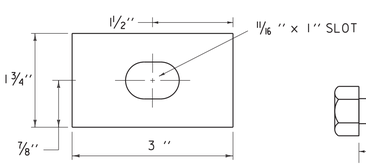
GENERAL NOTES:

1. ALL METAL PARTS SHALL BE GALVANIZED
2. ALL WOOD POSTS SHALL BE GIVEN A PRESERVATIVE TREATMENT
3. DETAILS PERTINENT TO THE STANDARD INSTALLATION OF "W" BEAM SECTIONS WILL BE FOUND ON STANDARD DRAWING G-1.
4. FOR DESCRIPTION AND SPECIFICATIONS OF PARTS IDENTIFIED BY "(ARTBA...)" AND OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS AND RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO. 13, TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE", LATEST EDITION.
5. THE TRANSITION FROM THE APPROACH END TO THE STANDARD STEEL BEAM GUARDRAIL SHALL BE 25'-0" UNLESS OTHERWISE SPECIFIED.
6. WHEN STANDARD STEEL BEAM CONNECTS TO BRIDGE APPROACH RAIL OF A DIFFERENT HEIGHT THE LENGTH NEEDED TO TRANSITION THE HEIGHT OF STANDARD STEEL BEAM TO MATCH THE BRIDGE APPROACH RAIL SHALL BE 25'-0" UNLESS OTHERWISE SPECIFIED.
7. WHEN STANDARD STEEL BEAM CONNECTS TO A MANUFACTURED TERMNAL SECTION OF A DIFFERENT HEIGHT THE LENGTH NEEDED TO TRANSITION THE HEIGHT OF STANDARD STEEL BEAM TO MATCH THE MANUFACTURED TERMINAL SECTION SHALL BE 25'-0" UNLESS OTHERWISE SPECIFIED.



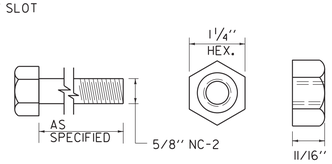
MIN. TENSILE STRENGTH 60,000 LBS.
LOAD APPLIED THROUGH ASSEMBLY

TURNBUCKLE



RECTANGULAR GUARDRAIL PLATE WASHER

(ARTBA F-12-73)



5/8" HEX NUT AND BOLT "F"

(ARTBA F-8-76)

FASTENER DETAILS

OTHER STANDARD REQUIRED: G-1

REVISIONS AND CORRECTIONS

JUNE 1, 1994 - REISSUED, WITHOUT CHANGE, UNDER NEW SIGNATURES.

JAN. 3, 2000 - UPDATED TO REFLECT METRIC STD. CHANGES

FEB. 10, 2014 - UPDATED TO REFLECT GUARDRAIL HEIGHT OF 29"; AS NOTED IN FHWA LETTER DATED MAY 17, 2010

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

STEEL BEAM GUARDRAIL APPROACH END TERMINAL
STEEL BEAM GUARDRAIL TRAILING END TERMINAL
ANCHOR FOR STEEL BEAM GUARDRAIL
STEEL BEAM MEDIAN BARRIER

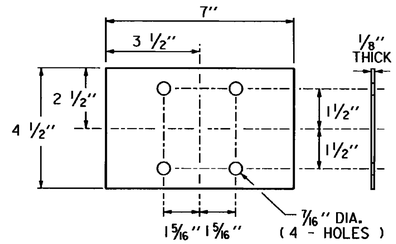
VERMONT AGENCY OF TRANSPORTATION

STANDARD

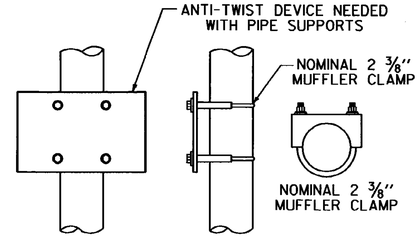
G-1d

NOTES

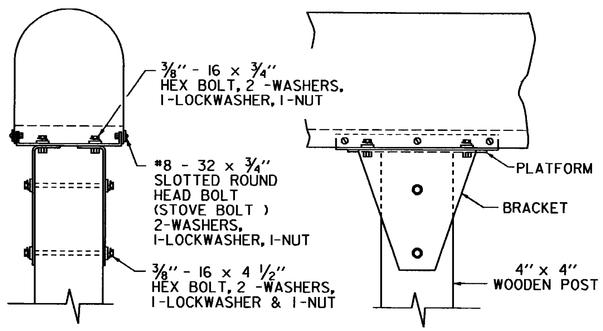
1. ONLY LIGHTWEIGHT MAILBOXES MADE OF LIGHT SHEET METAL OR PLASTIC SHALL BE USED. MAILBOXES SHALL MEET REQUIREMENTS AND APPROVAL OF THE U.S. POSTAL SERVICE.
2. AN ALTERNATE MAILBOX SUPPORT STRUCTURE DESIGN AND CONSTRUCTION MAY BE USED AS LONG AS PROVEN CRASHWORTHY AND MEETS GUIDELINES AS SET OUT IN AASHTO'S "GUIDE FOR ERECTING MAILBOXES ON HIGHWAYS". SUPPORT STRUCTURE SHALL ALSO MEET REQUIREMENTS OF THE U.S. POSTAL SERVICE.
3. MAILBOX TURNOUT SHALL MEET B-17 STANDARD AS SET OUT IN "STATE OF VERMONT AGENCY OF TRANSPORTATION DESIGN STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION".
4. IF THE STANDARD TURNOUT OFFSET CANNOT BE ATTAINED DUE TO RIGHT-OF-WAY CONSTRAINTS OR OTHER REASONS THE TURNOUT SHALL BE MODIFIED AS DIRECTED BY THE ENGINEER.

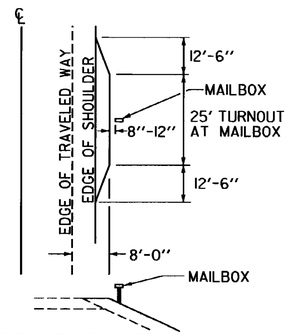


ANTI-TWIST DEVICE DETAIL FOR METAL PIPE

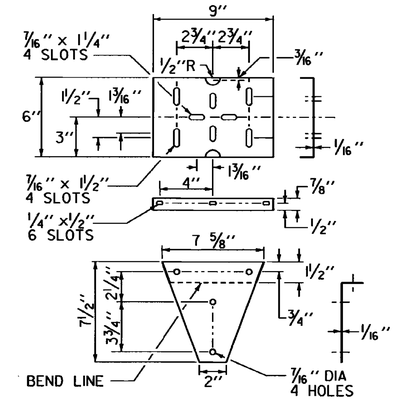


ANTI-TWIST DEVICE ASSEMBLY FOR METAL PIPES (USED FOR SINGLE AND MULTIPLE INSTALLATIONS)



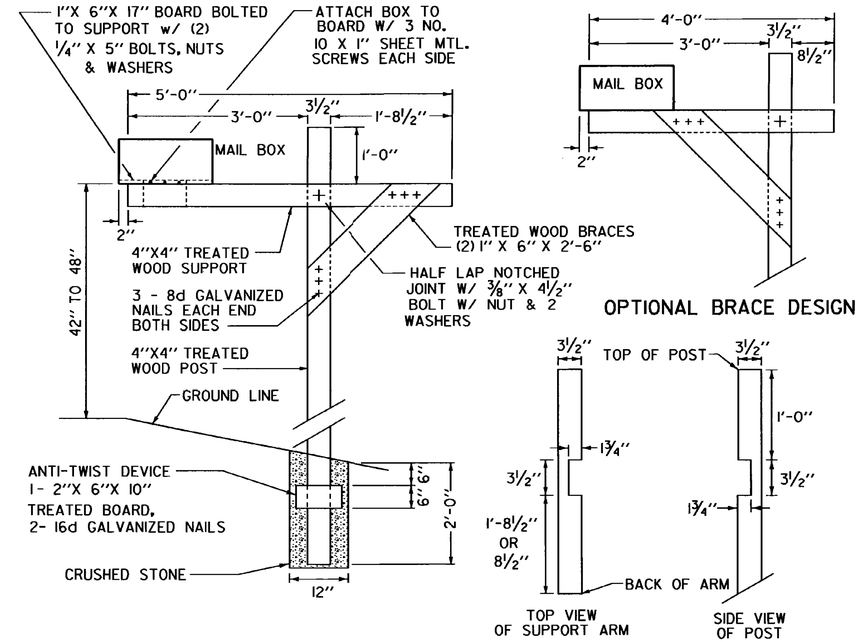


TURNOUT AT MAILBOX NOT NECESSARY IF SHOULDER WIDTH IS 8'-0" OR GREATER.



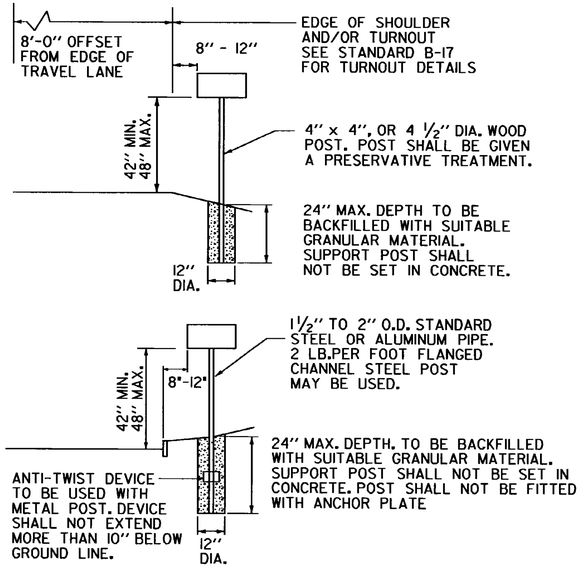
SINGLE MAILBOX SUPPORT

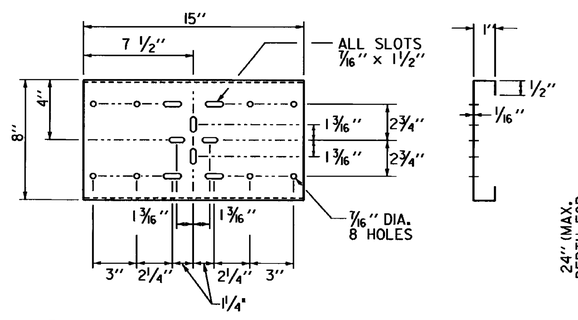
PLATFORM AND BRACKET DETAIL FOR METAL OR WOOD POSTS (USED FOR SINGLE AND MULTIPLE BOXES)



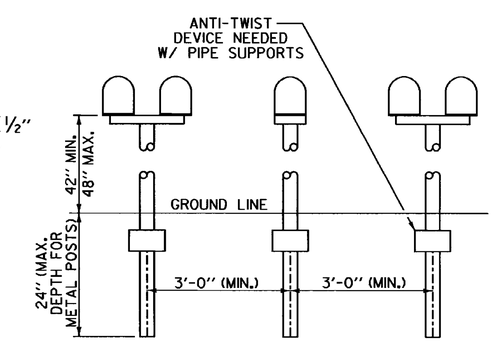
CANTILEVER TYPE MAILBOX SINGLE SUPPORT

NOTE: ALL WOOD DIMENSIONS ARE NOMINAL SIZE



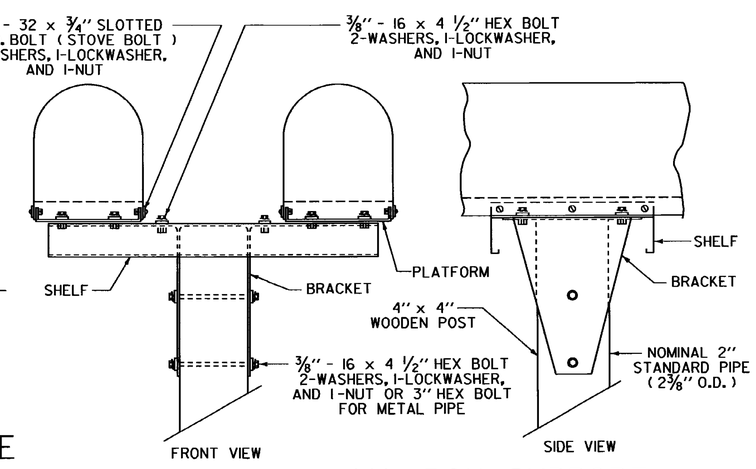


SHELF FOR TWO BOXES



SPACING FOR MULTIPLE POST INSTALLATION

(APPLIES TO BOTH SINGLE AND MULTIPLE MAILBOX SUPPORTS)



MULTIPLE MAILBOX SUPPORT

REVISIONS AND CORRECTIONS	
AUGUST 7, 1995	ORIGINAL APPROVAL

APPROVED

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

DIRECTOR OF ENGINEERING

DESIGN ENGINEER

MAILBOX SUPPORT DETAIL
(SINGLE AND MULTIPLE SUPPORT)

VERMONT AGENCY OF TRANSPORTATION

STANDARD

J-3

1. TRAFFIC CONTROL DEVICES NOT DETAILED IN THE VERMONT AGENCY OF TRANSPORTATION (VAOT) ''STANDARD DRAWINGS'' OR THE PROJECT PLANS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON TRAFFIC CONTROL DEVICES" (MUTCD) AND THE ''STANDARD HIGHWAY SIGNS AND MARKINGS'' BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

2. CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER.

3. CONSTRUCTION SIGN COVERS SHALL CONSIST OF A PANEL, PAINTED FLAT BLACK, THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.

4. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.

5. NO CROSS-BRACING OR BACK-BRACING TO KEEP POSTS PLUMB WILL BE ALLOWED. CONCRETE FOUNDATIONS, COLLARS OR SOIL BEARING PLATES ARE NOT PERMITTED. CONSTRUCTION SIGNS SHALL BE PLACED ON TWO POSTS.

6. CONSTRUCTION SIGNS INSTALLED ON POSTS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST FIVE FEET ABOVE THE EDGE OF PAVEMENT AND THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT, FOUR FEET OUTSIDE GUARDRAIL, OR TWO FEET OUTSIDE CURBING OR SIDEWALK. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE SIDEWALK OR EDGE OF PAVEMENT, WHICHEVER IS HIGHER.

7. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE THE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.

8. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.

9. ROLL UP CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE VI AND TYPE VII UNLESS OTHERWISE NOTED.

10. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE VIII OR IX REQUIREMENTS UNLESS OTHERWISE NOTED.

11. WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POSTS. WHEN ANCHORS ARE INSTALLED, STUBS SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.

12. ROADWAY AND SHOULDER WIDTHS DEPICTED ON THE STANDARD DRAWINGS MAY VARY.

13. THESE STANDARD DRAWINGS ARE INTENDED TO SERVE AS VTRANS STANDARD OPERATING PROCEDURE. IT IS NOTED THAT COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY BE MODIFIED DUE TO FIELD CONDITIONS, AT THE DISCRETION OF THE ENGINEER.

OTHER STDS. REQUIRED: **NONE**

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

TRAFFIC CONTROL GENERAL NOTES

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-1

LEGEND

(A) ROAD WORK AHEAD — W20-1

(B) ROAD WORK 500 FT — W20-1

(C) SIDE ROAD WORK AHEAD — VC-869

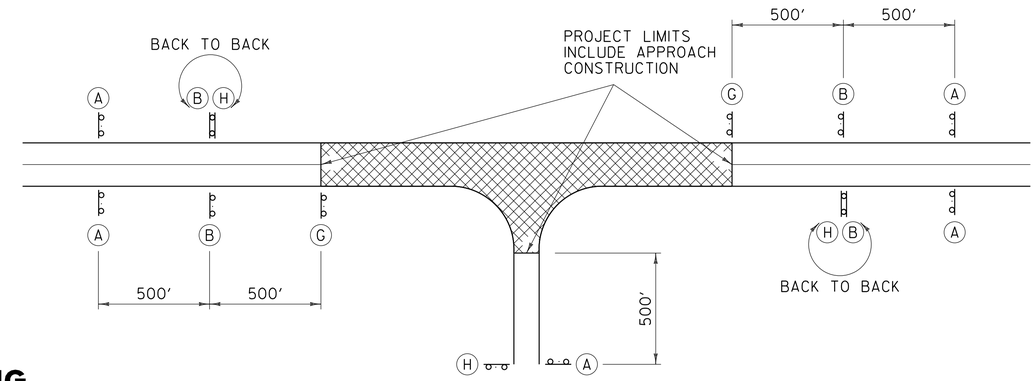
(D) SIDE ROAD WORK 500 FT — VC-869

(E) SIDE ROAD WORK LEFT — VC-869

(F) SIDE ROAD WORK RIGHT — VC-869

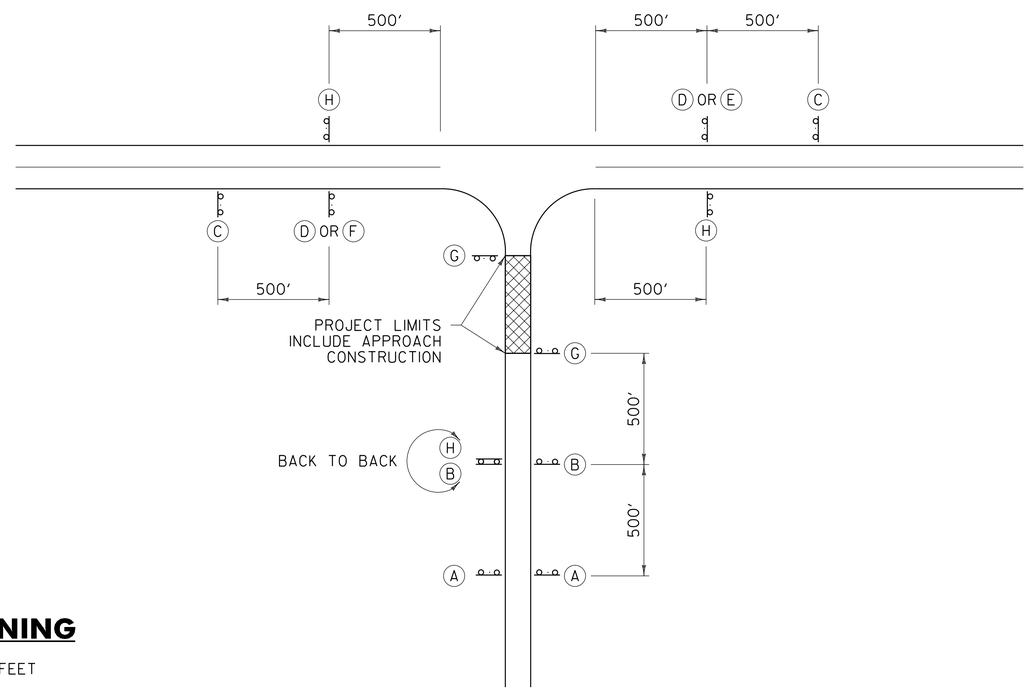
(G) ROAD WORK NEXT XX MILES — G20-1

(H) END ROAD WORK — G20-2



TYPICAL APPROACH SIGNING

FIELD CONDITIONS MAY DICTATE THE ACTUAL PLACEMENT.



SIDE ROAD APPROACH SIGNING

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

GENERAL NOTES:

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

OTHER STDS. REQUIRED: **T–1, T–28**

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

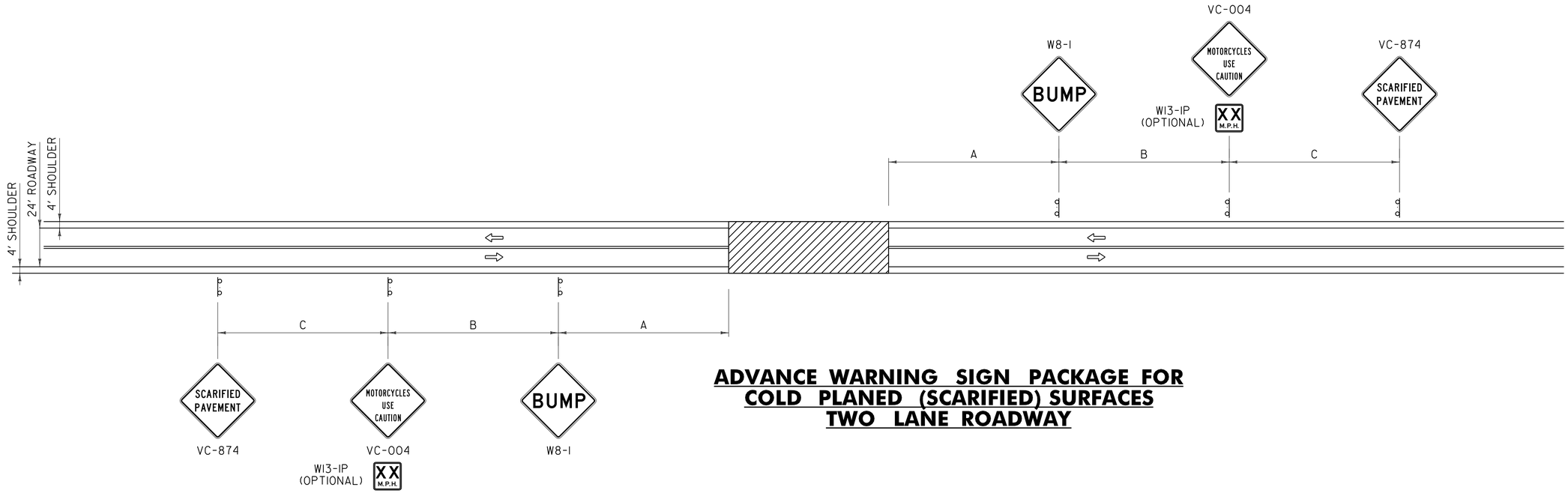
FEDERAL HIGHWAY ADMINISTRATION

CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING

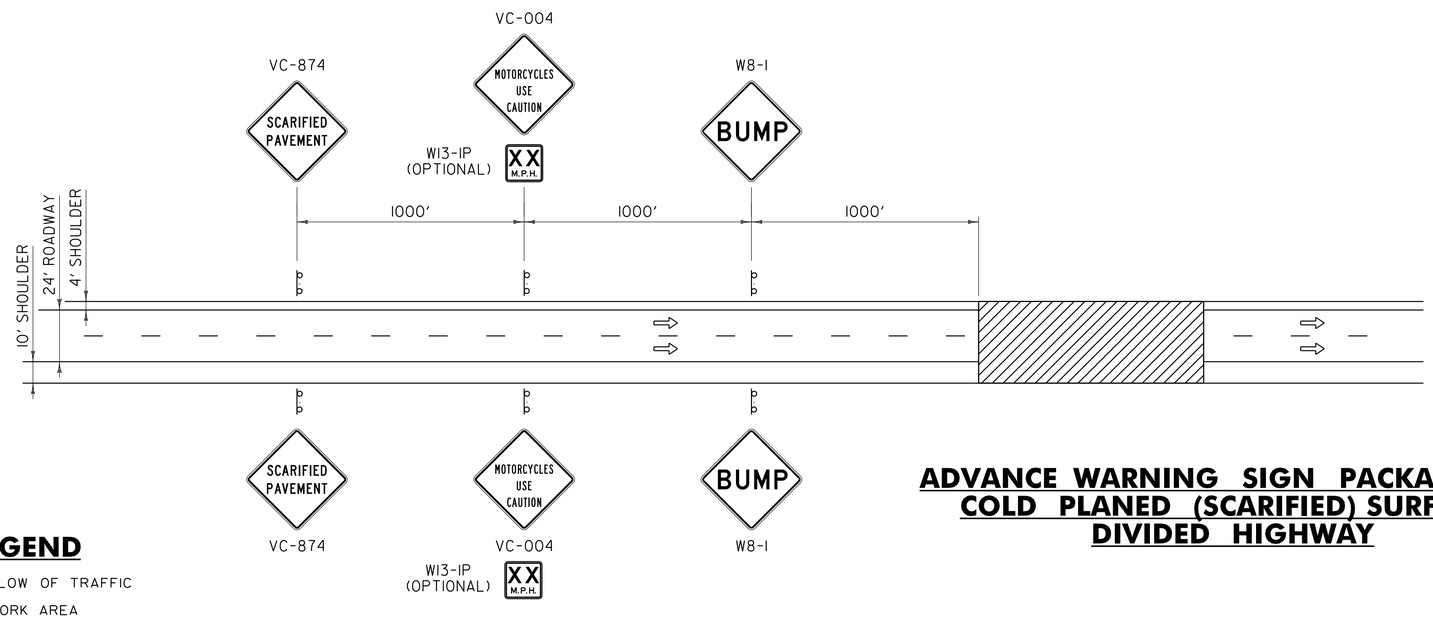
VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-10



ADVANCE WARNING SIGN PACKAGE FOR COLD PLANED (SCARIFIED) SURFACES TWO LANE ROADWAY



ADVANCE WARNING SIGN PACKAGE FOR COLD PLANED (SCARIFIED) SURFACES DIVIDED HIGHWAY

LEGEND

⇨ FLOW OF TRAFFIC

WORK AREA

GENERAL NOTES:

1. THE BUMP SIGN MAY BE ELIMINATED WHEN THERE IS NO BUMP. WHEN THE CONTRACTOR IS WORKING IN THE CONSTRUCTION AREA, THE APPROPRIATE ADVANCED WARNING SIGN PACKAGE SHALL BE USED. SEE THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) FOR ADDITIONAL INFORMATION.
2. GATE POSTING OF SIGNS IS AN OPTION AS DETERMINED BY THE ENGINEER FOR TWO LANE ROADWAY WHEN PASSING, TURNING OR CLIMBING LANES LIMIT VISIBILITY.
3. FOR DIMENSIONS A, B AND C, REFER TO THE MUTCD. USE TABLE 6C-1 (RECOMMENDED ADVANCE WARNING SIGN MINIMUM SPACING), FOR SIGN SPACING.

OTHER STDS. REQUIRED: **T–1, T–28**

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

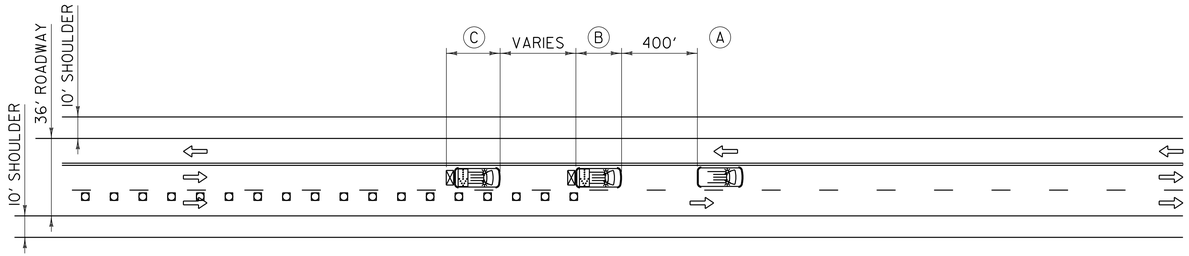
FEDERAL HIGHWAY ADMINISTRATION

TRAFFIC CONTROL MISCELLANEOUS DETAILS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

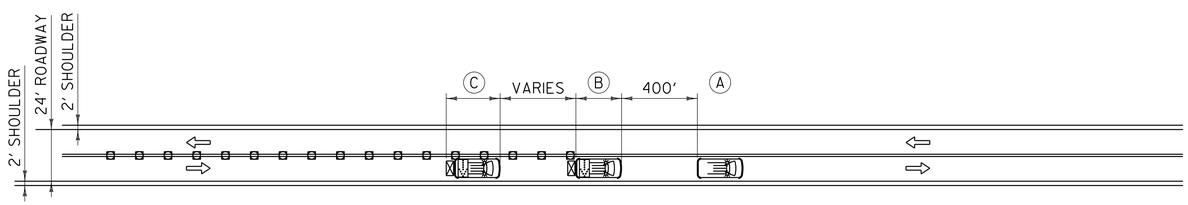
T-17



PAVEMENT MARKING OPERATION ON MULTI-LANE ROAD

NOTES:

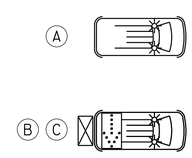
1. PAVEMENT MARKING OPERATION VEHICLE (C) SHOULD TRAVEL AT A VARYING DISTANCE FROM THE PAVEMENT MARKING OPERATION SO AS TO PROVIDE ADEQUATE SIGHT DISTANCE FOR TRAFFIC APPROACHING FROM THE REAR.
2. ON HIGH SPEED ROADWAYS, A THIRD PROTECTION VEHICLE SHOULD BE USED - THE FIRST PROTECTION VEHICLE ON THE SHOULDER (IF POSSIBLE), THE SECOND PROTECTION VEHICLE IN THE CLOSED LANE, AND THE THIRD PROTECTION VEHICLE IN THE CLOSED LANE.
3. ARROW PANELS SHALL BE AS A MINIMUM TYPE B, 60 INCHES BY 30 INCHES (MUTCD FIGURE 6F-6, SECTION 6F.61).
4. WORK SHOULD BE PERFORMED DURING OFF-PEAK TRAFFIC HOURS WHEN PRACTICAL.



PAVEMENT MARKING OPERATION ON TWO LANE ROAD

NOTES:

1. ALL PAVEMENT MARKING VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.
2. THE DISTANCE BETWEEN THE WORK AND PROTECTION VEHICLES MAY VARY ACCORDING TO TERRAIN AND OTHER FACTORS. PROTECTION VEHICLES ARE USED TO WARN TRAFFIC OF THE OPERATION AHEAD.
3. UNIFORMED TRAFFIC OFFICERS MAY BE USED TO CONTROL TRAFFIC AT INTERSECTIONS.
4. VEHICLE MOUNTED SIGNS SHALL BE MOUNTED WITH BOTTOM OF THE SIGN AT A MINIMUM HEIGHT OF ONE FOOT ABOVE THE PAVEMENT. SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.
5. ARROW PANELS ARE OPTIONAL; WHEN USED ARROW PANELS SHALL BE DISPLAYED IN CAUTION MODE.



OPERATION VEHICLE SYMBOLOGY

- FLOW OF TRAFFIC
- FLASHING ARROW PANEL
- TRUCK MOUNTED ATTENUATOR (TMA)
- CONE
- PAVEMENT MARKING OPERATION VEHICLE
- (A) PAVEMENT MARKING VEHICLE WITH FLASHING ARROW PANEL, "WET PAINT WITH LEFT ARROW" VC-886L, "WET PAINT WITH RIGHT ARROW" VC-886R SIGNS.
- (B) PROTECTION VEHICLE WITH CONE CAPABILITIES AND TMA.
- (C) PROTECTION VEHICLE WITH FLASHING ARROW PANEL, TMA, "WET PAINT" VC-885, "WET PAINT WITH LEFT ARROW" VC-886L, "WET PAINT WITH RIGHT ARROW" VC-886R SIGNS.

GENERAL NOTES:

1. ALL VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS IN ADDITION TO VEHICLE HAZARD LIGHTS.
2. PROTECTION VEHICLE SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
3. SIGNS LOCATED ON PAVEMENT MARKING OPERATION VEHICLES SHALL BE PLACED SO AS NOT TO OBSCURE OTHER SIGNS OR FLASHING ARROW PANELS.
4. REPEAT "WET PAINT" (VC-885) SIGN AS NEEDED AT SIDE ROADS
5. ALL DISTANCES ARE DESIRABLE MINIMUMS. FIELD CONDITIONS SHALL CONTROL THE ACTUAL SPACING OF THE VEHICLES.
6. CONE SPACING SHALL BE ADEQUATE SO THAT DRIVERS CAN ALWAYS SEE ONE CONE.

OTHER STDS. REQUIRED: **T-1, T-29**

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

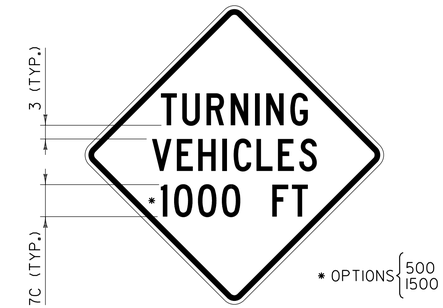
FEDERAL HIGHWAY ADMINISTRATION

TRAFFIC CONTROL FOR MAINTENANCE PAVEMENT MARKING OPERATION

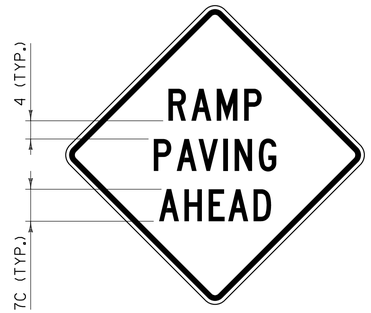
VERMONT AGENCY OF TRANSPORTATION

STANDARD

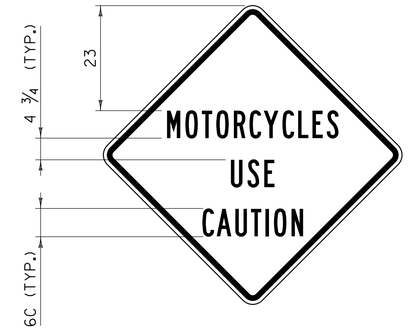
T-24



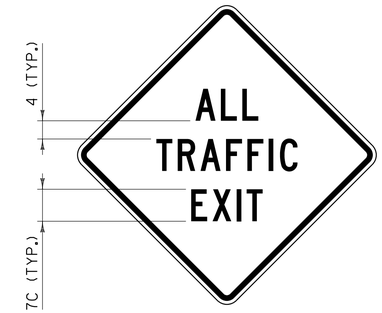
VC–001



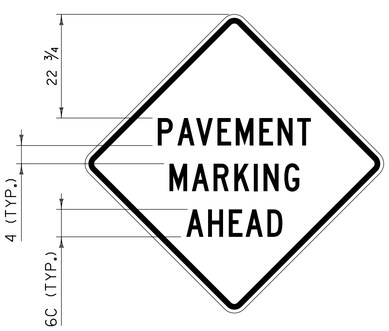
VC–003



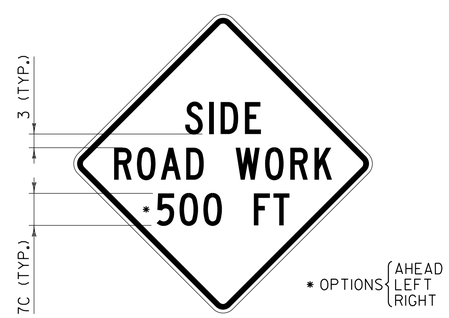
VC–004



VC–008



VC–813



VC–869

VC–874

GENERAL NOTES:

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

OTHER STDS. REQUIRED: **T–1**

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

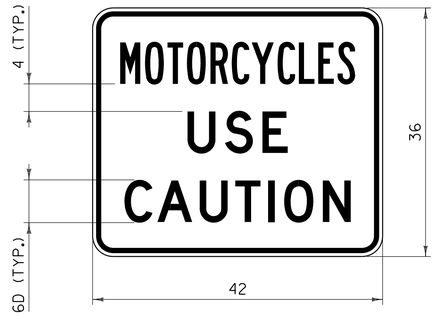
FEDERAL HIGHWAY ADMINISTRATION

CONSTRUCTION SIGN DETAILS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

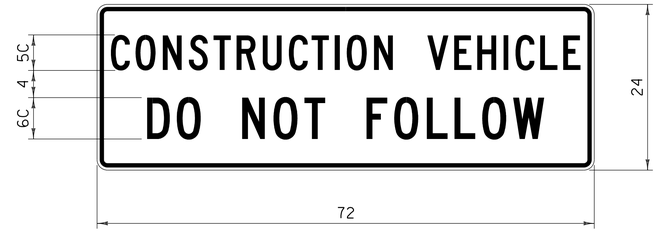
T - 28



VC–004P

NOTES:

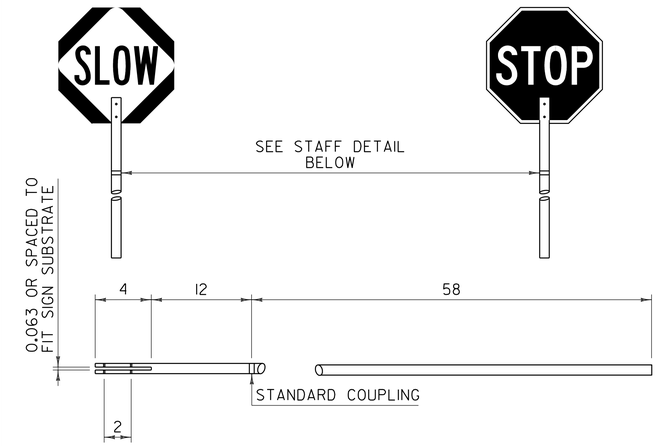
1. CORNERS SHALL BE ROUNDED TO A THREE INCH RADIUS.
2. THE BORDER SHALL BE ¾ INCH WIDE WITH A ½ INCH INDENT FROM THE EDGE OF THE SIGN.
3. "MOTORCYCLES" SHALL HAVE A SPECIFIED WIDTH OF 34 INCHES.
4. "USE" SHALL HAVE A SPECIFIED WIDTH OF 14 ½ INCHES.
5. "CAUTION" SHALL HAVE A SPECIFIED WIDTH OF 32 ¾ INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.



VC–007

NOTES:

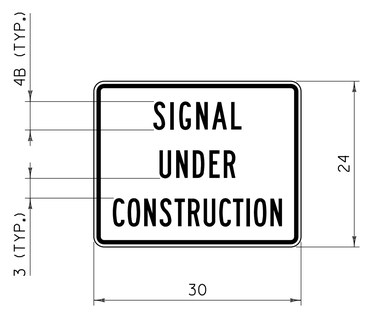
1. CORNERS SHALL BE ROUNDED TO A 1½ INCH RADIUS.
2. THE BORDER SHALL BE ⅝ INCH WIDE WITH A ⅜ INCH INDENT FROM THE EDGE OF THE SIGN.
3. "CONSTRUCTION VEHICLE" SHALL HAVE A SPECIFIED WIDTH OF 68 INCHES.
4. "DO NOT FOLLOW" SHALL HAVE A SPECIFIED WIDTH OF 57 ½ INCHES.
5. SIGN SHALL BE MOUNTED IN A CONSPICUOUS LOCATION ON THE REAR OF THE CONSTRUCTION VEHICLE.
6. THE SIGN SHALL BE MOUNTED AS NOT TO INTERFERE WITH THE VISIBILITY OF DIRECTIONAL SIGNALS OR TAIL LIGHTS AS REQUIRED BY LAW.
7. SIGN SHALL BE COVERED OR REMOVED WHEN NOT IN USE.



STOP–SLOW PADDLE & STAFF DETAIL

NOTES:

1. REFER TO THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) "TEMPORARY TRAFFIC CONTROL - WARNING SIGNS" FOR THE STOP-SLOW PADDLE DESIGN.
2. COLORS FOR THE SLOW SIDE OF THE PADDLE SHALL BE BLACK LEGEND AND BORDER ON A FLUORESCENT ORANGE DIAMOND WITH RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE VII, VIII OR IX REQUIREMENTS.
3. COLORS FOR THE STOP SIDE OF THE PADDLE SHALL BE WHITE RETROREFLECTIVE LEGEND AND BORDER ON A RED RETROREFLECTIVE OCTAGON. BOTH COLORS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE III.
4. SIGN SUBSTRATE MATERIALS SHALL BE ALUMINUM, ACRYLONITRILE BUTADIENE STYRENE (ABS) PLASTIC OR EQUIVALENT.
5. THE STAFF MAY BE RIGID ABS PLASTIC OR WOOD WITH A ONE TO 1½ INCH DIAMETER.
6. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE COMPLETELY VISIBLE TO APPROACHING TRAFFIC AT ALL TIMES. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.



VC–820

NOTES:

1. CORNERS SHALL BE ROUNDED TO A 1½ INCH RADIUS.
2. THE BORDER SHALL BE ⅝ INCH WIDE WITH A ⅜ INCH INDENT FROM THE EDGE OF THE SIGN.
3. "SIGNAL" SHALL HAVE A SPECIFIED WIDTH OF 12 ¾ INCHES.
4. "UNDER" SHALL HAVE A SPECIFIED WIDTH OF 11 INCHES.
5. "CONSTRUCTION" SHALL HAVE A SPECIFIED WIDTH OF 24 ½ INCHES.
6. SIGN SHALL ONLY BE INSTALLED AS A SUPPLEMENTAL TO A PARENT WARNING SIGN AND SHALL NOT BE INSTALLED BY ITSELF.

GENERAL NOTES:

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

OTHER STDS. REQUIRED: **T–1**

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

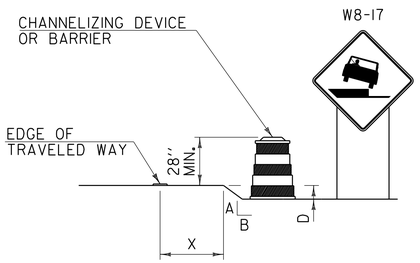
CONSTRUCTION SIGN DETAILS

VERMONT AGENCY OF TRANSPORTATION

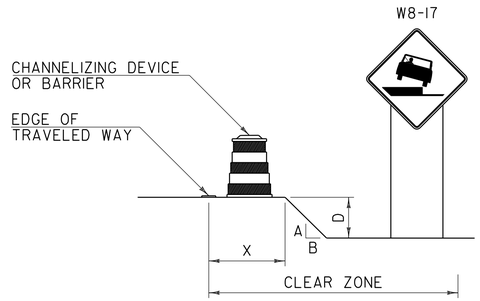
STANDARD

T-30

DROP-OFF ADJACENT TO TRAVELED WAY



TYPE 1

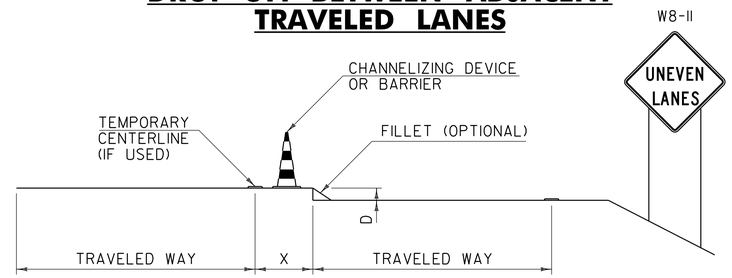


TYPE 2

NOTES:

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

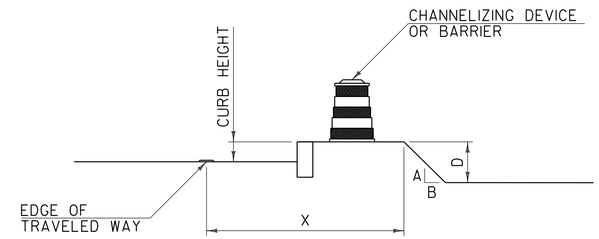
DROP-OFF BETWEEN ADJACENT TRAVELED LANES



NOTES:

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

DROP-OFF BEYOND SHOULDER OR CURB



NOTES:

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

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

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

NOTES:

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

CHART "B"
40 MPH OR LESS WITH VERTICAL CURB

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

GENERAL NOTES:

1. THESE CONDITIONS AND TREATMENTS ARE ONLY PART OF THE TRAFFIC CONTROL SYSTEM AND SHOULD BE USED IN ADDITION TO THE PROPER WORK ZONE SIGNING.
2. THE FOLLOWING ARE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) COMPLIANT CHANNELIZING DEVICES:

   A. VERTICAL PANEL
   B. TYPE I OR TYPE II BARRICADE
   C. PLASTIC DRUM
   D. CONE - WHERE APPLICABLE
   E. TUBULAR MARKERS

   IF CHANNELIZING DEVICES ARE REQUIRED TO STAY IN PLACE DURING NIGHTTIME HOURS, THEY SHALL BE STABILIZED WHILE UNATTENDED IN ACCORDANCE WITH THE MUTCD.
3. WHERE BARRIER IS NECESSARY, THE BARRIER SHALL BE TAPERED BEYOND THE CLEAR ZONE. WHEN THE BARRIER CANNOT BE TAPERED BEYOND THE CLEAR ZONE, A MUTCD COMPLIANT END TREATMENT SHALL BE USED. BARRIER AND END TREATMENT SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION.
4. CHANNELIZING DEVICE SPACING ALONG A LONGITUDINAL DROP-OFF (TANGENT) SHALL BE AS FOLLOWS:

   TANGENT - CHANNELIZING DEVICES SHALL BE SPACED "2S" ("S" IS EQUAL TO THE POSTED SPEED LIMIT IN FEET) APART.
5. "LOW SHOULDER" (W8-9) AND "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS, WHEN USED, SHOULD BEGIN PRIOR TO THE DROP-OFF CONDITION AND SHOULD BE REPEATED EVERY 1500 FEET.

OTHER STDS. REQUIRED: **T-1**

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

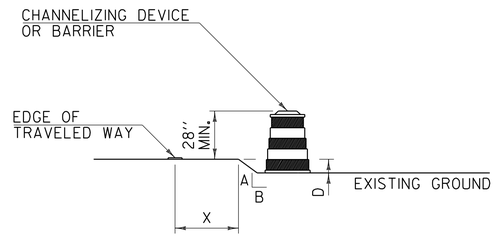
CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-35

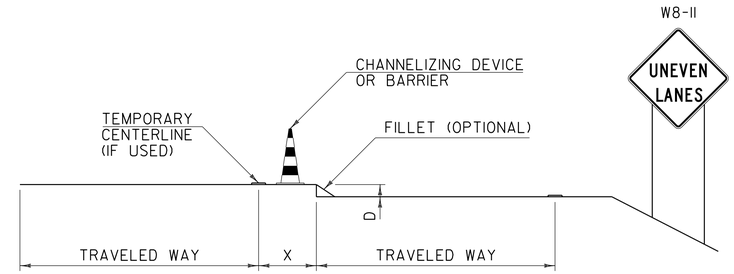
DROP-OFF ADJACENT TO TRAVELED WAY



NOTES:

1. CHANNELIZING DEVICES SHOULD BE PLACED TO MAXIMIZE THE WIDTH OF THE TRAVELED WAY.
2. SEE CHART "A" FOR SPECIFIC REQUIREMENTS.
3. IF THE DROP-OFF REQUIRES CHANNELIZING DEVICES TO REMAIN IN PLACE OVERNIGHT, THEN "LOW SHOULDER" (W8-9) OR "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS SHOULD BE INSTALLED.

DROP-OFF BETWEEN ADJACENT TRAVELED LANES



NOTES:

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

CHART "A"
ALL SPEEDS WITH NO CURB

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

NOTE:

1. ON BORDERLINE CONDITIONS, THE ENGINEER SHOULD DETERMINE WHICH TREATMENT IS ADEQUATE FOR THE EXISTING CONDITIONS.

GENERAL NOTES:

1. THESE CONDITIONS AND TREATMENTS ARE ONLY PART OF THE TRAFFIC CONTROL SYSTEM AND SHOULD BE USED IN ADDITION TO THE PROPER WORK ZONE SIGNING.
2. THE FOLLOWING ARE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) COMPLIANT CHANNELIZING DEVICES:

   A. VERTICAL PANEL
   B. TYPE I OR TYPE II BARRICADE
   C. PLASTIC DRUM
   D. CONE - WHERE APPLICABLE
   E. TUBULAR MARKERS

   IF CHANNELIZING DEVICES ARE REQUIRED TO STAY IN PLACE DURING NIGHTTIME HOURS, THEY SHALL BE STABILIZED WHILE UNATTENDED IN ACCORDANCE WITH THE MUTCD.
3. WHERE BARRIER IS NECESSARY, THE BARRIER SHALL BE TAPERED BEYOND THE CLEAR ZONE. WHEN THE BARRIER CANNOT BE TAPERED BEYOND THE CLEAR ZONE, A MUTCD COMPLIANT END TREATMENT SHALL BE USED. BARRIER AND END TREATMENT SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION.
4. CHANNELIZING DEVICE SPACING ALONG A LONGITUDINAL DROP-OFF (TANGENT) SHALL BE AS FOLLOWS:

   TANGENT - CHANNELIZING DEVICES SHALL BE SPACED "2S" ("S" IS EQUAL TO THE POSTED SPEED LIMIT IN FEET) APART.
5. "LOW SHOULDER" (W8-9) AND "SHOULDER DROP-OFF SYMBOL" (W8-17) SIGNS, WHEN USED, SHOULD BEGIN PRIOR TO THE DROP-OFF CONDITION AND SHOULD BE REPEATED EVERY 1500 FEET.

OTHER STDS. REQUIRED: T-1

REVISIONS AND CORRECTIONS

AUG. 6, 2012 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

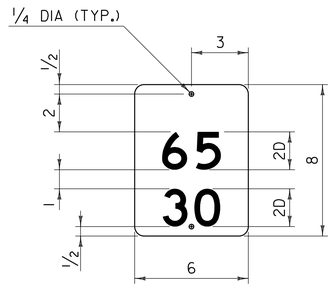
FEDERAL HIGHWAY ADMINISTRATION

CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING

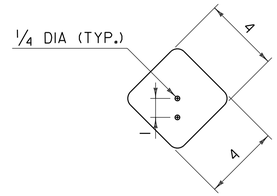
VERMONT AGENCY OF TRANSPORTATION

STANDARD

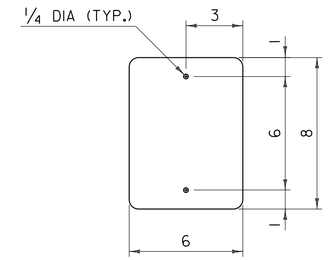
T-36



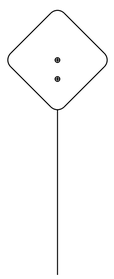
INTERSTATE MILEPOST PLAQUE



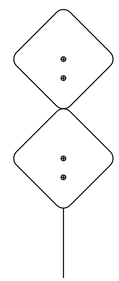
TYPE I DELINEATOR



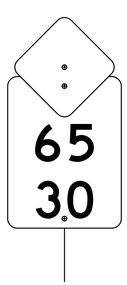
TYPE II DELINEATOR



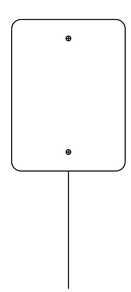
TYPE I



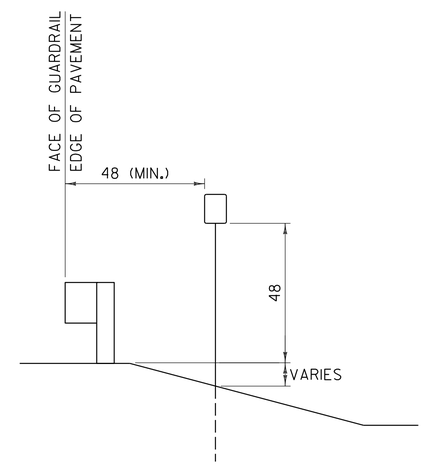
TYPE I – U-TURNS



WHITE TYPE I
WITH MILEPOST PLAQUE



TYPE II



INSTALLATION DETAIL*

• INSTALLATION DETAIL APPLICABLE TO ALL DELINEATOR ASSEMBLIES

GENERAL NOTES:

1. THE FIRST LINE OF TEXT ON INTERSTATE MILEPOST PLAQUES INDICATES THE WHOLE NUMBER MILEAGE FROM THE BEGINNING OF A ROUTE. MILEAGE IS ALWAYS MEASURED TRAVELING FROM THE SOUTH TO NORTH OR FROM THE WEST TO EAST. THE ROUTE DIRECTION IS ESTABLISHED USING THE VERMONT AGENCY OF TRANSPORTATION (VAOT) ROUTE LOGS.
2. THE SECOND LINE OF TEXT ON INTERSTATE MILEPOST PLAQUES INDICATES THE ADDITIONAL MILEAGE, IN HUNDREDTHS, FROM THE BEGINNING OF A ROUTE. MILEAGE IS ALWAYS MEASURED TRAVELING FROM THE SOUTH TO NORTH OR FROM THE WEST TO EAST. THE ROUTE DIRECTION IS ESTABLISHED USING THE VAOT ROUTE LOGS.
3. THE INTERSTATE MILEPOST PLAQUE SHALL BE GREEN RETROREFLECTIVE LEGEND ON A WHITE RETROREFLECTIVE BACKGROUND AND SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE III.
4. ALL LINES OF TEXT SHALL BE CENTERED HORIZONTALLY AND SHALL BE AS IDENTIFIED IN THE PLANS.
5. THE INTERSTATE MILEPOST PLAQUE AND DELINEATOR BASE MATERIAL SHALL BE 0.063 INCH FLAT SHEET ALUMINUM.
6. CORNERS SHALL BE ROUNDED TO A 1/2 INCH RADIUS.
7. A TYPE III DELINEATOR CONSISTS OF A TYPE I DELINEATOR FACING THE NORMAL DIRECTION OF TRAVEL AND A SINGLE RED TYPE I DELINEATOR FACING THE OPPOSITE DIRECTION. THE WHITE DELINEATOR AND RED DELINEATOR COMBINATION IS PLACED ON THE DRIVER'S RIGHT AND THE AMBER DELINEATOR AND RED DELINEATOR COMBINATION ON THE DRIVER'S LEFT.
8. DELINEATORS SHALL HAVE WHITE, GREEN, OR BLUE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 ASTM D 4956 TYPE III, OR RED OR YELLOW RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 ASTM D 4956 TYPE VII, VIII, OR IX.
9. A SINGLE 14 GAGE, 1.75 INCH SQUARE STEEL POST AND 12 GAGE, TWO INCH SQUARE ANCHOR SHALL BE USED FOR INSTALLATION. THE ANCHOR SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
10. THE TOP OF POST SHALL BE ONE INCH ABOVE THE UPPER HOLE FOR ALL TYPE I DELINEATORS.
11. THE TOP OF POST SHALL BE FLUSH WITH THE TOP OF ALL TYPE II DELINEATORS.
12. ALL DIMENSIONS SHOWN IN INCHES.

OTHER STDS. REQUIRED: **T–45**

REVISIONS AND CORRECTIONS

JAN. 2, 2013 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

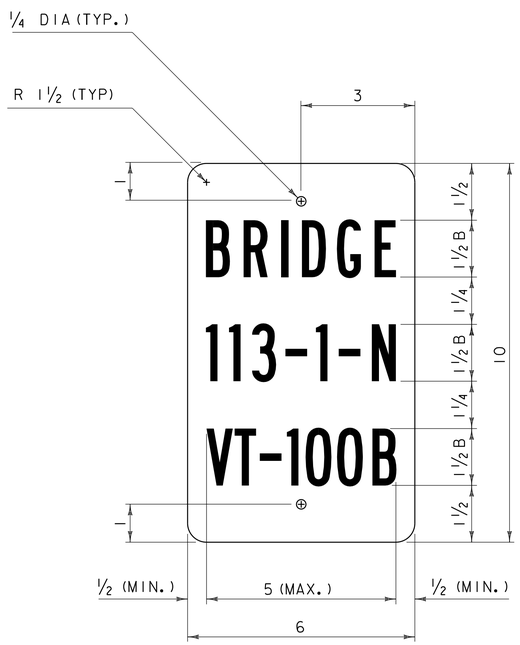
FEDERAL HIGHWAY ADMINISTRATION

DELINEATORS AND MILEPOSTS

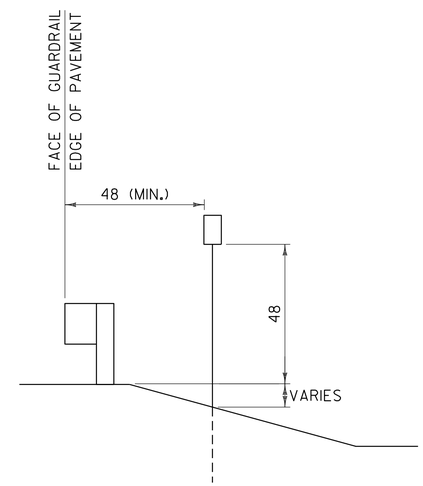
VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-40



VD-701



VD-701 INSTALLATION DETAIL

GENERAL NOTES:

1. BRIDGE NUMBER PLAQUES ARE TO BE INSTALLED ALONG THE FEDERAL AID HIGHWAY SYSTEM INCLUDING ALL STATE HIGHWAYS AND TOWN HIGHWAYS ON THE FEDERAL AID HIGHWAY SYSTEM.
2. BRIDGE NUMBER PLAQUES SHALL BE LOCATED ON BOTH BRIDGE APPROACHES AT THE NEAREST VISIBLE LOCATION.
3. THE SIGN BASE MATERIAL SHALL BE 0.063 INCH FLAT SHEET ALUMINUM.
4. THE SIGN SHALL BE WHITE RETROREFLECTIVE LEGEND ON A GREEN RETROREFLECTIVE BACKGROUND, BOTH SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE III.
5. THE SECOND LINE OF TEXT INDICATES THE BRIDGE NUMBER. THE BRIDGE NUMBER CAN BE OBTAINED USING THE VERMONT AGENCY OF TRANSPORTATION (VAOT) ROUTE LOGS OR BY CONSULTING WITH THE VAOT STRUCTURES SECTION.
6. THE THIRD LINE OF TEXT INDICATES THE STATE ROUTE NUMBER. IN ALL CASES THIS WILL BE DEPICTED USING THE LETTER ABBREVIATION, FOLLOWED BY A HYPHEN, FOLLOWED BY THE ROUTE NUMBER. FOR EXAMPLE US ROUTE 2 WOULD BE IDENTIFIED USING US-2.
7. THE SECOND AND THIRD LINES OF TEXT SHALL BE CENTERED HORIZONTALLY AND SHALL BE AS DEFINED IN THE PLANS.
8. A SINGLE 14 GAGE, 1.75 INCH SQUARE STEEL POST AND 12 GAGE, TWO INCH SQUARE ANCHOR SHALL BE USED FOR INSTALLATION. THE ANCHOR SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
9. ALL DIMENSIONS SHOWN IN INCHES.

OTHER STDS. REQUIRED: **T-45**

REVISIONS AND CORRECTIONS

APRIL 9, 2014 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

BRIDGE NUMBER PLAQUE

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-42

1 - ADDISON	2 - BENNINGTON	3 - CALEDONIA	4 - CHITTENDEN	5 - ESSEX	6 - FRANKLIN	7 - GRAND ISLE	8 - LAMOILLE
0101 ADDISON	0201 ARLINGTON	0301 BARNET	0401 BOLTON	0501 AVERILL	0601 BAKERSFIELD	0701 ALBURGH	0801 BELVIDERE
0102 BRIDPORT	0202 BENNINGTON	0302 BURKE	0402 BUELS GORE	0502 AVERYS GORE	0602 BERKSHIRE	0702 GRAND ISLE	0802 CAMBRIDGE
0103 BRISTOL	0203 DORSET	0303 DANVILLE	0403 BURLINGTON	0503 BLOOMFIELD	0603 ENOSBURG	0703 ISLE LA MOTTE	0803 EDEN
0104 CORNWALL	0204 GLASTENBURY	0304 GROTON	0404 CHARLOTTE	0504 BRIGHTON	0604 FAIRFAX	0704 NORTH HERO	0804 ELMORE
0105 FERRISBURGH	0205 LANDGROVE	0305 HARDWICK	0405 COLCHESTER	0505 BRUNSWICK	0605 FAIRFIELD	0705 SOUTH HERO	0805 HYDE PARK
0106 GOSHEN	0206 MANCHESTER	0306 KIRBY	0406 ESSEX	0506 CANAAN	0606 FLETCHER		0806 JOHNSON
0107 GRANVILLE	0207 PERU	0307 LYNDON	0407 HINESBURG	0507 CONCORD	0607 FRANKLIN		0807 MORRISTOWN
0108 HANCOCK	0208 POWNAL	0308 NEWARK	0408 HUNTINGTON	0508 EAST HAVEN	0608 GEORGIA		0808 STOWE
0109 LEICESTER	0209 READSBORO	0309 PEACHAM	0409 JERICHO	0509 FERDINAND	0609 HIGHGATE		0809 WATERVILLE
0110 LINCOLN	0210 RUPERT	0310 RYEGATE	0410 MILTON	0510 GRANBY	0610 MONTGOMERY		0810 WOLCOTT
0111 MIDDLEBURY	0211 SANDGATE	0311 ST JOHNSBURY	0411 RICHMOND	0511 GUILDHALL	0611 RICHFORD		
0112 MONKTON	0212 SEARSBURG	0312 SHEFFIELD	0412 ST GEORGE	0512 LEMINGTON	0612 ST ALBANS CITY		
0113 NEW HAVEN	0213 SHAFTSBURY	0313 STANNARD	0413 SHELBURNE	0513 LEWIS	0613 ST ALBANS TOWN		
0114 ORWELL	0214 STAMFORD	0314 SUTTON	0414 SO BURLINGTON	0514 LUNENBURG	0614 SHELDON		
0115 PANTON	0215 SUNDERLAND	0315 WALDEN	0415 UNDERHILL	0515 MAIDSTONE	0615 SWANTON		
0116 RIPTON	0216 WINHALL	0316 WATERFORD	0416 WESTFORD	0516 NORTON			
0117 SALISBURY	0217 WOODFORD	0317 WHEELOCK	0417 WILLISTON	0517 VICTORY			
0118 SHOREHAM			0418 WINOOSKI	0518 WARNERS GRANT			
0119 STARKSBORO				0519 WARREN GORE			
0120 VERGENNES							
0121 WALTHAM							
0122 WEYBRIDGE							
0123 WHITING							

9 - ORANGE	10 - ORLEANS	11 - RUTLAND	12 - WASHINGTON	13 - WINDHAM	14 - WINDSOR
0901 BRADFORD	1001 ALBANY	1101 BENSON	1201 BARRE CITY	1301 ATHENS	1401 ANDOVER
0902 BRAINTREE	1002 BARTON	1102 BRANDON	1202 BARRE TOWN	1302 BRATTLEBORO	1402 BALTIMORE
0903 BROOKFIELD	1003 BROWNINGTON	1103 CASTLETON	1203 BERLIN	1303 BROOKLINE	1403 BARNARD
0904 CHELSEA	1004 CHARLESTON	1104 CHITTENDEN	1204 CABOT	1304 DOVER	1404 BETHEL
0905 CORINTH	1005 COVENTRY	1105 CLARENDON	1205 CALAIS	1305 DUMMERSTON	1405 BRIDGEWATER
0906 FAIRLEE	1006 CRAFTSBURY	1106 DANBY	1206 DUXBURY	1306 GRAFTON	1406 CAVENDISH
0907 NEWBURY	1007 DERBY	1107 FAIR HAVEN	1207 E MONTPELIER	1307 GUILFORD	1407 CHESTER
0908 ORANGE	1008 GLOVER	1108 HUBBARDTON	1208 FAYSTON	1308 HALIFAX	1408 HARTFORD
0909 RANDOLPH	1009 GREENSBORO	1109 IRA	1209 MARSHFIELD	1309 JAMAICA	1409 HARTLAND
0910 STRAFFORD	1010 HOLLAND	1110 MENDON	1210 MIDDLESEX	1310 LONDONDERRY	1410 LUDLOW
0911 THETFORD	1011 IRASBURG	1111 MIDDLETOWN SPRINGS	1211 MONTPELIER	1311 MARLBORO	1411 NORWICH
0912 TOPSHAM	1012 JAY	1112 MT HOLLY	1212 MORETOWN	1312 NEWFANE	1412 PLYMOUTH
0913 TUNBRIDGE	1013 LOWELL	1113 MT TABOR	1213 NORTHFIELD	1313 PUTNEY	1413 POMFRET
0914 VERSHIRE	1014 MORGAN	1114 PAWLET	1214 PLAINFIELD	1314 ROCKINGHAM	1414 READING
0915 WASHINGTON	1015 NEWPORT CITY	1115 PITTSFIELD	1215 ROXBURY	1315 SOMERSET	1415 ROCHESTER
0916 WEST FAIRLEE	1016 NEWPORT TOWN	1116 PITTSFORD	1216 WAITSFIELD	1316 STRATTON	1416 ROYALTON
0917 WILLIAMSTOWN	1017 TROY	1117 POULTNEY	1217 WARREN	1317 TOWNSHEND	1417 SHARON
	1018 WESTFIELD	1118 PROCTOR	1218 WATERBURY	1318 VERNON	1418 SPRINGFIELD
	1019 WESTMORE	1119 RUTLAND CITY	1219 WOODBURY	1319 WARDSBORO	1419 STOCKBRIDGE
		1120 RUTLAND TOWN	1220 WORCESTER	1320 WESTMINSTER	1420 WEATHERSFIELD
		1121 KILLINGTON		1321 WHITINGHAM	1421 WESTON
		1122 SHREWSBURY		1322 WILMINGTON	1422 WEST WINDSOR
		1123 SUDBURY		1323 WINDHAM	1423 WINDSOR
		1124 TINMOUTH			1424 WOODSTOCK
		1125 WALLINGFORD			
		1126 WELLS			
		1127 WEST HAVEN			
		1128 WEST RUTLAND			

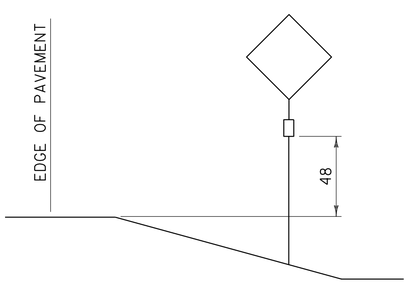
COUNTY AND TOWN DESIGNATIONS

9020 BARNET STATE HIGHWAY
9025 BENNINGTON NORTH STATE HIGHWAY
9030 BERLIN STATE HIGHWAY
9090 BRATTLEBORO STATE HIGHWAY
9150 CASTLETON STATE HIGHWAY
9180 COVENTRY STATE HIGHWAY
9210 FAIR HAVEN STATE HIGHWAY
9240 FAIRLEE STATE HIGHWAY
9270 FERRISBURGH STATE HIGHWAY
9330 MAIDSTONE STATE HIGHWAY
9360 MIDDLESEX STATE HIGHWAY
9390 MONTPELIER STATE HIGHWAY
9420 MONTPELIER JUNCTION STATE HIGHWAY
9430 NEWBURY STATE HIGHWAY
9480 NORTON STATE HIGHWAY
9540 NORWICH STATE HIGHWAY
9600 PUTNEY STATE HIGHWAY
9630 QUECHEE STATE HIGHWAY
9720 ST ALBANS STATE HIGHWAY SOUTH
9730 ST JOHNSBURY STATE HIGHWAY
9750 SOUTH ALBURGH STATE HIGHWAY
9840 WESTMINSTER STATE HIGHWAY
9870 WILDER STATE HIGHWAY
9900 WINHALL STATE HIGHWAY
9990 WEST RUTLAND - RUTLAND (BUSINESS US-4)
9991 BELLOWS FALLS S0117 (ROCK - WEST ST)
9992 BELLOWS FALLS S0117 (BRIDGE ST)
9993 BURLINGTON (ALTERNATE US-7)
9994 DERBY (ALTERNATE US-5)
9995 MONTPELIER (BUSINESS US-2)
9996 NEWPORT (ALTERNATE US-5)
9997 ST JOHNSBURY (ALTERNATE US-5)
9998 SO BURLINGTON - KENNEDY DRIVE

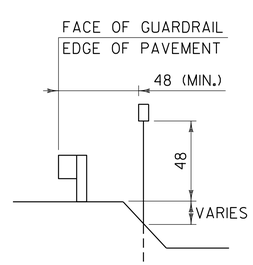
NAMED STATE AND TOWN HIGHWAYS ROUTE NUMBERS

GENERAL NOTES:

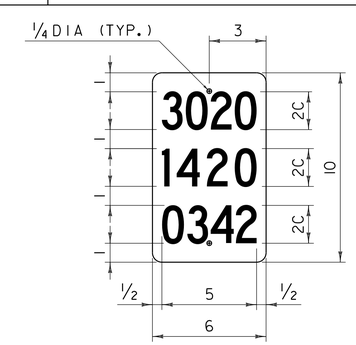
1. MILEMARKERS ARE TO BE INSTALLED ALONG THE FEDERAL AID HIGHWAY SYSTEM INCLUDING ALL STATE HIGHWAYS AND TOWN HIGHWAYS ON THE FEDERAL AID HIGHWAY SYSTEM.
2. MILEMARKERS WILL NORMALLY BE INSTALLED AT EACH 0.20 MILE INTERVAL, ALTERNATING SIDES OF THE ROAD, RESULTING IN A SIGN FACING TRAFFIC EACH 0.40 MILES. A MILEMARKER WILL ALSO BE INSTALLED AT EACH INTERSECTION, ON THE SAME POST AS THE STOP SIGN (MILEMARKER TO BE PLACED PARALLEL TO MAINLINE TRAVELED WAY, VISIBLE TO TRAFFIC). ANY MILEMARKER LOCATION FALLING WITHIN 0.05 MILE OF AN INTERSECTION WILL BE OMITTED. WHEN THE NORMAL LOCATION OF A MILEMARKER IS UNDESIRABLE, SUCH AS ON A LAWN, DRIVEWAY, OR LEDGE, AN ATTEMPT WILL BE MADE TO LOCATE IT ON THE OPPOSITE SIDE OF THE ROAD. IF NO SUITABLE LOCATION CAN BE FOUND WITHIN 20 FEET OF THE NORMAL LOCATION, IT MAY BE OMITTED.
3. ON CLASS 1 TOWN HIGHWAYS OR OTHER CONGESTED LOCATIONS MILEMARKERS WILL ONLY BE INSTALLED ON EXISTING SIGN POSTS AND WILL CARRY THE ACTUAL MILEAGE TO THAT LOCATION. A MILEMARKER LOCATED EVERY 0.10 MILES IS DESIRABLE THROUGH THESE LOCATIONS.
4. THE FIRST LINE OF TEXT ON MILEMARKERS INDICATE THE STATE ROUTE NUMBER. THE FOURTH NUMERAL BEING THE CORRESPONDING ROUTE NUMBER LETTER DESIGNATION. FOR EXAMPLE US-2 (WHICH HAS NO LETTER DESIGNATION) WOULD BE IDENTIFIED USING 0020 AND VT-100B WOULD BE IDENTIFIED USING 1002. FOR ANY NAMED FEDERAL AID HIGHWAY SYSTEM HIGHWAYS, THE FOUR DIGIT ROUTE NUMBER (9000 SERIES) LISTED UNDER "NAMED STATE AND TOWN HIGHWAYS ROUTE NUMBERS" SHALL BE UTILIZED.
5. THE SECOND LINE OF TEXT ON MILEMARKERS INDICATE THE COUNTY AND TOWN. THE COUNTY IS INDICATED IN THE FIRST AND SECOND NUMERALS AND THE TOWN IN THE THIRD AND FOURTH NUMERALS. THE APPROPRIATE FOUR DIGIT DESIGNATIONS ARE LISTED PER TOWN, UNDER "COUNTY AND TOWN DESIGNATIONS."
6. THE THIRD LINE OF TEXT ON MILEMARKERS INDICATE THE MILEAGE, IN HUNDREDTHS, FROM THE TOWN LINE OR BEGINNING OF A ROUTE. MILEAGE IS ALWAYS MEASURED TRAVELING FROM THE SOUTH TO NORTH OR FROM THE WEST TO EAST. THE ROUTE DIRECTION IS ESTABLISHED USING THE VERMONT AGENCY OF TRANSPORTATION (VAOT) ROUTE LOGS.
7. THE SIGN BASE MATERIAL SHALL BE 0.063 INCH FLAT SHEET ALUMINUM.
8. THE SIGN SHALL BE WHITE RETROREFLECTIVE LEGEND ON A GREEN RETROREFLECTIVE BACKGROUND, BOTH SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE III.
9. CORNERS SHALL BE ROUNDED TO A ½ INCH RADIUS.
10. ALL LINES OF TEXT SHALL BE CENTERED HORIZONTALLY AND SHALL BE AS IDENTIFIED IN THE PLANS. THE THREE LINES OF TEXT WILL EACH CONTAIN FOUR NUMERALS.
11. WHEN INSTALLED ON ITS OWN POST, A SINGLE 14 GAGE, 1.75 INCH SQUARE STEEL POST AND 12 GAGE, 2 INCH SQUARE ANCHOR SHALL BE USED FOR INSTALLATION. THE ANCHOR SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
12. ALL DIMENSIONS SHOWN IN INCHES.



VD-700 INSTALLATION DETAIL SUPPLEMENTARY SIGN



VD-700 INSTALLATION DETAIL



VD-700

OTHER STDS. REQUIRED: T-45

REVISIONS AND CORRECTIONS

APRIL 9, 2014 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

MILEMARKER DETAILS STATE AND TOWN HIGHWAYS

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-44

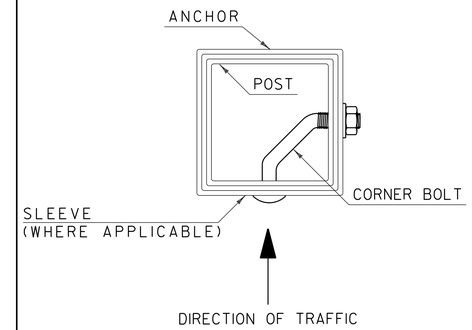
POST AND ANCHOR SELECTION CHART

POST SIZE (IN.)	POST THICKNESS (IN.)	POST WEIGHT (LBS/FT.)	POST GAGE	SECTION MODULUS ($IN.^3$)	ONE POST SV	TWO POST SV	THREE POST SV	POSTS PERMITTED IN 8' PATH	ANCHOR SIZE (IN.)	ANCHOR GAGE	MINIMUM ANCHOR LENGTH
1.75	.083	1.88	14	0.222	45	90	135	TWO	2.00	12	30
2.00	.109	2.42	12	0.393	80	160	240	TWO	2.25	12	48
2.50	.109	3.35	12	0.673	137	274	411	ONE	3.00	7	48

NOTES:

1. ALL SIGN POSTS SHALL HAVE 7/16 INCH HOLES EVERY ONE INCH ON CENTER (ALL FOUR SIDES).
2. THE NUMBER OF SIGN POSTS PERMITTED WITHIN AN EIGHT FOOT PATH ASSUMES THAT THE SIGN ASSEMBLY IS NOT PROTECTED BY GUARDRAIL OR IS LOCATED WITHIN A GUARDRAIL'S DEFLECTION DISTANCE DETERMINED PER THE CURRENT "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) ROADSIDE DESIGN GUIDE. ADDITIONAL POSTS MAY BE INSTALLED USING SLIP BASES THAT MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION.
3. TO USE THE SELECTION VALUE (SV) COLUMNS IN THE TABLE ABOVE, MULTIPLY A SIGN'S SURFACE AREA IN SQUARE FEET (H x L) BY THE SIGN'S HEIGHT IN FEET MEASURED FROM THE GROUND TO THE CENTROID OF THE SIGN ASSEMBLY (h). THIS RESULT MUST BE LESS THAN OR EQUAL TO THE CORRESPONDING SELECTION VALUE. NOTE THAT FOR SIGNS WITH MULTIPLE POSTS, THE LARGEST HEIGHT DIMENSION SHALL BE USED TO CALCULATE THE POST SELECTION VALUE.
4. THE DESIGN CRITERIA UTILIZED IN SIGN POST AND ANCHOR SELECTION IS AS FOLLOWS: WIND SPEED OF 70 MPH (10 YEAR MEAN RECURRENCE INTERVAL), WIND PRESSURE OF 19 PSF, STEEL MINIMUM YIELD OF 55,000 PSI, AND AN ALLOWABLE STRESS OF 1.4 (0.60 FY).

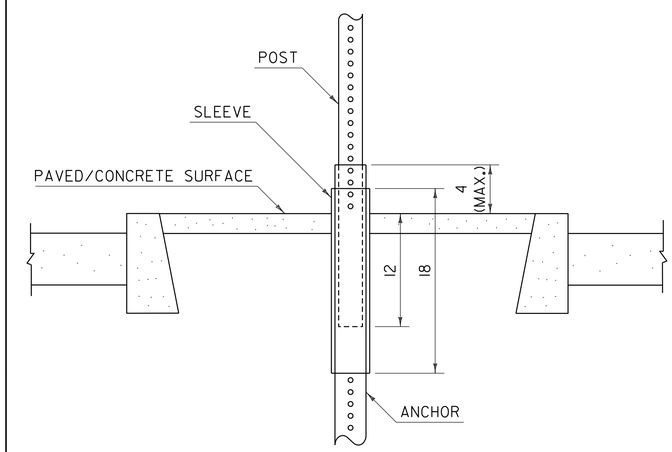
CORNER BOLT INSTALLATION DETAIL



NOTES:

1. CORNER BOLTS SHALL BE 5/16 INCH DIAMETER WITH 18 THREADS PER INCH AND DIMENSIONS SHALL BE DETERMINED BASED ON THE OUTERMOST DIMENSION OF THE SLEEVE, ANCHOR OR POST. THREAD EXPOSURE MUST EXCEED THE CORRESPONDING NUT WIDTH. THE CORNER BOLT AND CORRESPONDING HARDWARE SHALL BE ZINC PLATED, MEETING OR EXCEEDING THE REQUIREMENTS OF THE "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) A307.

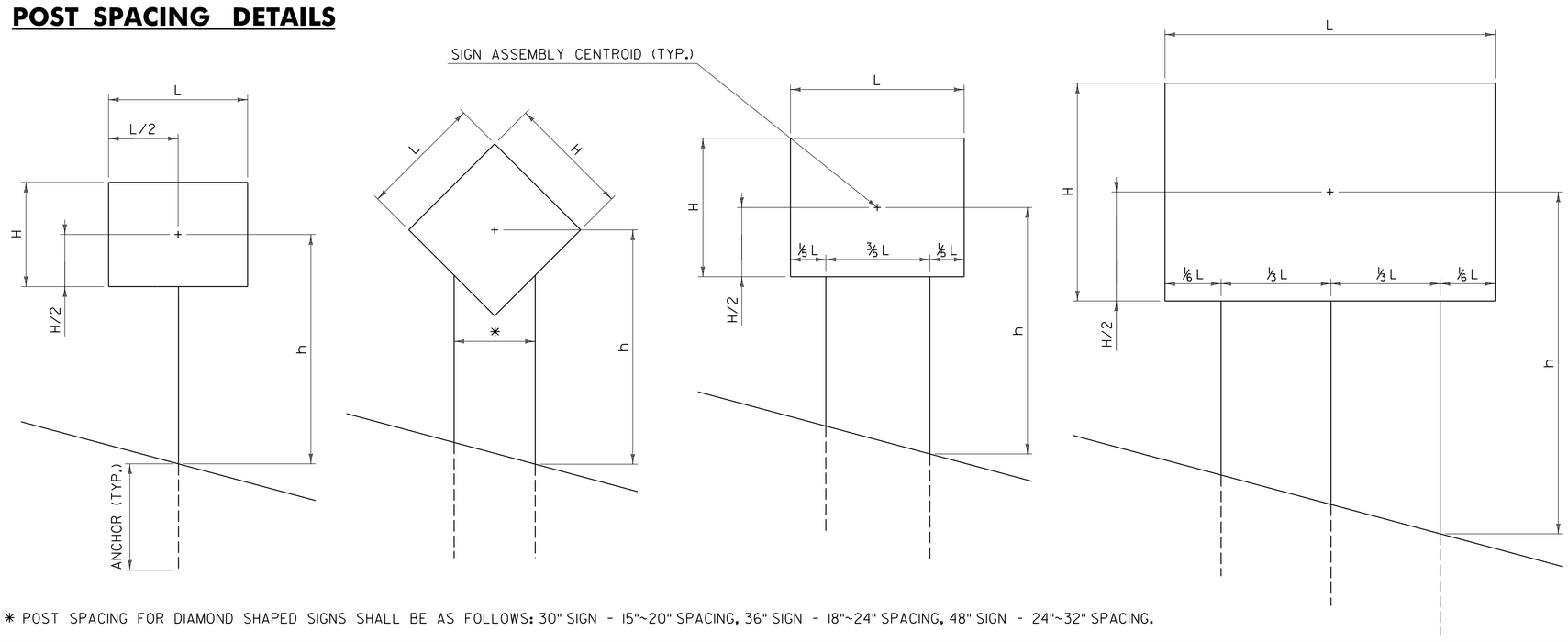
SLEEVE /ANCHOR INSTALLATION DETAIL



NOTES:

1. A SLEEVE SHALL BE INSTALLED FOR SIGN INSTALLATIONS IN CONCRETE OR PAVEMENT.
2. THE SLEEVE SHALL BE 18 INCHES MINIMUM IN LENGTH.
3. THREE INCH SLEEVES THAT DO NOT HAVE HOLES WILL REQUIRE THAT 7/16 INCH HOLES ARE DRILLED TO FACILITATE CONNECTIONS.
4. REFER TO CURRENT EDITION OF THE "VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION" FOR MATERIAL REQUIREMENTS.

POST SPACING DETAILS



* POST SPACING FOR DIAMOND SHAPED SIGNS SHALL BE AS FOLLOWS: 30" SIGN - 15"~20" SPACING, 36" SIGN - 18"~24" SPACING, 48" SIGN - 24"~32" SPACING.

GENERAL NOTES:

1. ALL SQUARE TUBE STEEL POSTS AND ANCHORS SHALL BE FORMED INTO A SIZE AND SHAPE IN SUCH A MANNER THAT NEITHER FLASH NOR WELD SHALL INTERFERE WITH THE TELESCOPING PROPERTIES, NOR DAMAGE THE GALVANIZING.
2. ANCHORS MAY BE DRIVEN OR SET INTO A DUG HOLE AND BACKFILLED. IF DRIVEN, A DRIVING CAP SHALL BE USED. THE DUG HOLE INSTALLATION METHOD SHALL BE UTILIZED IN AREAS WITH POOR SOIL CONDITIONS OR AS DIRECTED BY THE ENGINEER. BACKFILL SHALL BE COMPACTED AS DIRECTED BY THE ENGINEER.
3. THE TOPS OF SIGN POSTS SHALL BE AT OR NEAR THE TOP OF SIGN. THE POST SHALL NOT EXTEND ABOVE THE TOP OF SIGN.
4. SIGN POSTS SHALL BE INSTALLED A MINIMUM OF ONE FOOT BELOW GROUND, INSIDE THE ANCHOR. THE LENGTH OF ANCHOR EXPOSED ABOVE GROUND SHALL NOT EXCEED FOUR INCHES.
5. ALL DIMENSIONS SHOWN IN INCHES.

OTHER STDS. REQUIRED: **NONE**

REVISIONS AND CORRECTIONS

JAN. 2, 2013 - ORIGINAL APPROVAL DATE

APPROVED

HIGHWAY SAFETY & DESIGN ENGINEER

DIRECTOR OF PROGRAM DEVELOPMENT

Mark D. Richter

FEDERAL HIGHWAY ADMINISTRATION

SQUARE TUBE SIGN POST AND ANCHOR

VERMONT AGENCY OF TRANSPORTATION

STANDARD

T-45