STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
COUNTY OF WASHINGTON
CITY OF MONTPELIER

WINOOSKI RIVER WEST BIKEWAY

BEGINNING AT A POINT AT THE WEST EDGE OF TAYLOR ST. AND EXTENDING NORTH WESTERLY APPROXIMATELY 5027 FEET TO THE EXISTING BIKE PATH ALONG THE WINOOSKI RIVER

LENGTH OF PATHWAY 4779.16 FEET = 0.905 MILES.
LENGTH OF BRIDGES 178.00 FEET = 0.034 MILES.
LENGTH OF RAILROAD CROSSINGS 70.00 FEET = 0.013 MILES.
LENGTH OF PROJECT 5027.16 FEET = 0.952 MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES GRADING, DRAINAGE, SUBBASE, PAVEMENT, BRIDGE STRUCTURES, TRACK AND SOFTBALL FIELD RELOCATION, FENCING, LIGHTING AND SIGNING FOR AN URBAN BIKE PATH.

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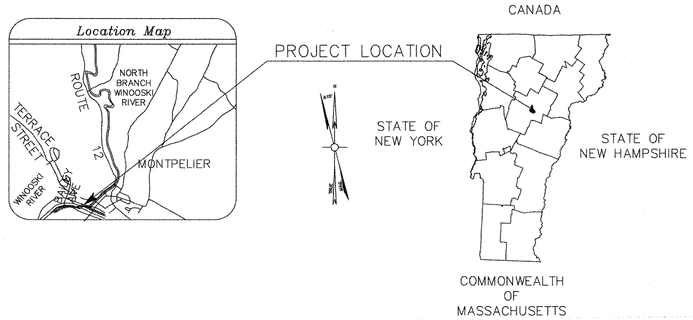


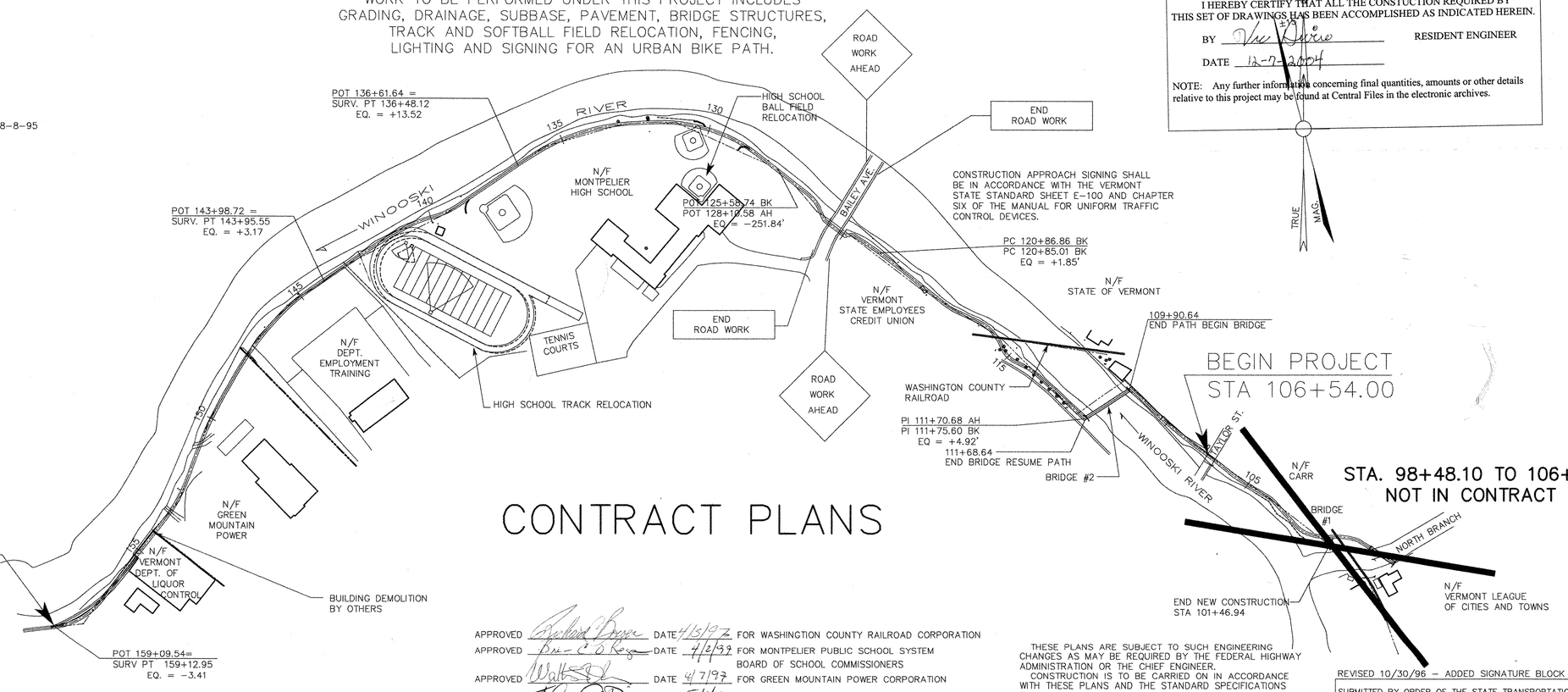
RECORD PLANS

CONTRACTOR: UNITED CONSTRUCTION CORP.
RESIDENT ENGINEER: VIC DWIRE
CONSTRUCTION BEGAN: MARCH 16, 1998
CONSTRUCTION COMPLETE: JANUARY 6, 1999
RECORD PLANS BY: K. NORTH & N. GARBACIK

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

BY Vic Dwire RESIDENT ENGINEER
DATE 12-7-2004

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



CONTRACT PLANS

* INDICATES OUT OF ORDER.

CONVENTIONAL SIGNS

FENCE LINE
TREE LINE
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
UTILITY POLE
PATH LIGHTING
ELECTRIC LINE
TREES
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

DATUM

VERTICAL	NGVD 1929
HORIZONTAL	N/A

APPROVED Richard Boyer DATE 4/15/97 FOR WASHINGTON COUNTY RAILROAD CORPORATION
APPROVED [illegible] DATE 4/2/97 FOR MONTPELIER PUBLIC SCHOOL SYSTEM BOARD OF SCHOOL COMMISSIONERS
APPROVED [illegible] DATE 4/7/97 FOR GREEN MOUNTAIN POWER CORPORATION
APPROVED [illegible] DATE 5/6/97 FOR STATE OF VERMONT DEPARTMENT OF BUILDINGS AND GENERAL SERVICES
APPROVED [illegible] DATE 4/1/97 FOR VERMONT STATE EMPLOYEES CREDIT UNION

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON MARCH 15, 1990 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

GRAPHIC SCALE
200 0 100 200 400 800
(SCALE IN FEET)
1 inch = 200ft.

STATE OF VERMONT KENNETH W. PINKHAM No. 2582 PROFESSIONAL ENGINEER REGISTERED

BUS. (802) 658-5588 P+E+A FAX (802) 658-3629
PINKHAM ENGINEERING ASSOCIATES, INC.
Engineers • Planners • Landscape Architects • Surveyors
The Maltex Building
431 Pine St., Burlington, VT 05401

REVISED 10/30/96 – ADDED SIGNATURE BLOCK

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD
APPROVED [illegible] DATE 12-3-96
Director of P.B. Admin ~~CHIEF ENGINEER~~

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

PROJECT WINOOSKI RIVER WEST BIKEWAY, BWM–BIKE (4)S
SHEET 1 OF 132 SHEETS

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	TRACK & BALLFIELD	RAILROAD	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
				0.5	0.5	1	LS	CLEARING AND GRUBBING (MODIFIED)	201.10 (MOD.)	
					16	16	EA	REMOVING SMALL TREES	201.15	EST
					1	1	AC	THINNING AND TRIMMING	201.30	EST
	1305				2195	3500	CY	COMMON EXCAVATION	203.15	61
					10	10	CY	SOLID ROCK EXCAVATION	203.16	EST
				40		40	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	1
					50	50	CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.28	EST
					1000	1000	CY	SAND BORROW	203.31	EST
	1120					1120	CY	SAND BORROW (MODIFIED A RUNNING TRACK)	203.31(MOD.A)	2
	1000					1000	CY	SAND BORROW (MODIFIED B SOFTBALL FIELD)	203.31(MOD.B)	2
					100	100	CY	GRANULAR BORROW	203.32	EST
				44		44	CY	GRAVEL BACKFILL FOR SLOPE STABILIZATION	203.35	4
					7850	7850	SY	FINE GRADING – SUBGRADE	203.40	55
					630	630	CY	TRENCH EXCAVATION OF EARTH	204.20	8
					10	10	CY	TRENCH EXCAVATION OF ROCK	204.21	EST
				190		190	CY	STRUCTURE EXCAVATION	204.25	11
				150		150	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	9
					3000	3000	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	53
					640	640	TON	BITUMINOUS CONCRETE PAVEMENT PG 58-28	406.25	13
				77.5	26.5	104	CY	CONCRETE, CLASS B	501.25	
				8700	2400	11100	LB	REINFORCING STEEL	507.15	3
					50	50	LF	DRILLING AND GROUTING DOWELS	507.16	EST
				12		12	GAL	WATER REPELLENT	514.10	
				2		2	GAL	JOINT SEALER, POLYURETHANE	524.20	
					200	200	SF	TREATED TIMBER BIN TYPE RETAINING WALL	526.15	50
					10	10	CY	REMOVAL OF CONCRETE OR MASONRY	529.25	EST
				1		1	LS	PREFABRICATED MULTI MODAL BRIDGE	545.20	
					70	70	LF	12" CPEP	601.0905	
					161	161	LF	15" CPEP	601.0910	
					60	60	LF	18" CPEP	601.0915	
					75	75	LF	24" CPEP	601.0920	
					34	34	LF	30" CPEP	601.0925	
					2	2	EA	18" CPEPES	601.7015	
					2	2	EA	24" CPEPES	601.7020	
					2	2	EA	30" CPEPES	601.7025	
					97.5	97.5	CY	CEMENT RUBBLE MASONRY	602.15	0.4
				5	5	10	CY	DRY RUBBLE MASONRY	602.20	EST

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION, ITEM 203.15
2134	CY	MAINLINE
1191	CY	TRACK
114	CY	BALLFIELD
61	CY	ROUNDING
3500	CY	TOTAL
		TRENCH EXCAVATION OF EARTH, 204.20
216	CY	DRAINAGE
406	CY	ELECTRICAL
8	CY	ROUNDING
630	CY	TOTAL
		GRANULAR BACKFILL FOR STRUCTURES, ITEM 204.30
76	CY	BRIDGE #2 – ABUTMENT #1
65	CY	BRIDGE #2 – ABUTMENT #2
9	CY	ROUNDING
150	CY	TOTAL
		SUBBASE OF DENSE GRADED CRUSHED STONE, ITEM 301.35
2947	CY	MAINLINE
53	CY	ROUNDING
3000	CY	TOTAL
		BITUMINOUS CONCRETE PAVEMENT, ITEM 406.25 PG 58-28
627	TON	MAINLINE
13	TON	ROUNDING
640	TON	TOTAL
		CONCRETE, CLASS B, ITEM 501.25
45.5	CY	BRIDGE #2 – ABUTMENT #1
32	CY	BRIDGE #2 – ABUTMENT #2
26.5	CY	DRAINAGE
0	CY	ROUNDING
104	CY	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS FROM	STATIONS TO		BRIDGE	PATHWAY	EQUATIONS +	EQUATIONS –	FEET	MILES	REMARKS
~~98+49.10~~	~~98+92.70~~			~~43.60~~			~~43.60~~	~~0.008~~	~~CONC. SIDEWALK APRON~~
~~98+92.70~~	~~100+27.80~~		~~135.10~~				~~135.10~~	~~0.026~~	~~BRIDGE #1~~
~~100+27.80~~	~~100+63.00~~	~~35.20~~					~~35.20~~	~~0.007~~	
~~100+63.00~~	~~101+46.94~~			~~83.94~~			~~83.94~~	~~0.016~~	~~RAILROAD APPROACH~~
106+54.00	109+90.64			336.64			336.64	0.064	
109+90.64	111+68.64		178.00				178.0	0.034	BRIDGE #2
111+68.64	159+12.95			4744.31	+23.46	–255.25	4512.52	0.854	
TOTALS			178.00	5080.95	+23.46	–255.25	5027.16	0.952	

PLOT: 6829SCH1

PROJECT NAME MONTPELIER WINOOSKI RIVER WEST BIKE PATH
PROJECT NUMBER BWM–BIKE (4)S

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	TRACK & BALL FIELD	RAILROAD	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					5	5	EA	CHANGING ELEVATIONS OF SEWER MH	604.23	
					2	2	EA	CHANGE ELEVATION OF DI, CB OR MH	604.40	
					1	1	EA	CAST IRON COVER WITH FRAME	604.50	
					10	10	EA	CAST IRON GRATE WITH FRAME, TYPE D	604.51	
					1	1	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I (NABI)	608.25	
					90	90	MGAL	DUST CONTROL WITH WATER	609.10	EST
					1	1	TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	EST.
					16	16	CY	STONE FILL, TYPE I	613.10	1
					1	1	HR	TRUCK RENTAL (NOT A BID ITEM) *	608.37	
					12	12	CY	STONE FILL, TYPE II	613.11	1
				200		200	CY	STONE FILL, TYPE IV	613.13	
					60	60	LF	CAST-IN-PLACE CEMENT CONCRETE CURB, TYPE B	616.28	
	2748					2748	LF	TREATED TIMBER CURB (MODIFIED A)	616.35(MOD. A)	
	500					500	LF	TREATED TIMBER CURB (MODIFIED B)	616.35(MOD. B)	
					60	60	LF	REMOVAL OF EXISTING CURB	616.41	
					22	22	SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	
					18	18	EA	WOOD MARKER POSTS	619.15	
					1130	1130	LF	CHAIN LINK FENCE, 6 FEET, VINYL COATED, (MODIFIED BLACK VINYL COATED)	620.12 (MOD.)	
					160	160	LF	CHAIN LINK FENCE, 8 FEET, VINYL COATED, (MODIFIED BLACK VINYL COATED)	620.13 (MOD.)	
					16	16	LF	GATE FOR CHAIN LINK FENCE, 6 FEET, (MODIFIED)(BLACK VINYL COATED)	620.16	
					26	26	EA	BRACING ASSEMBLY FOR CHAIN LINK FENCE, 6 FEET,	620.21	
					2	2	EA	BRACING ASSEMBLY FOR CHAIN LINK FENCE, 8 FEET,	620.22	
	105					105	LF	REMOVING AND RESETTING FENCE (MODIFIED, BACKSTOPS)	620.50 (MOD.)	1
					150	150	LF	REMOVAL OF EXISTING FENCE	620.55	10
					645	645	LF	PLANK RAIL	621.15	3
					300	300	EA.	REMOVAL AND DISPOSAL OF GUIDE POSTS (MOD)	621.81	8
					9	9	EA	GUIDE POSTS	621.85	
					5	5	EA	GUIDE POSTS (MODIFIED)	621.85 (MOD.)	
					100	100	HR	UNIFORMED TRAFFIC OFFICERS	630.10	
					500	500	HR	FLAGGERS	630.15	
					1	1	LS	FIELD OFFICE - ENGINEERS	631.10	
					1	1	LS	TESTING EQUIPMENT-CONCRETE	631.16	
					1	1	LS	TESTING EQUIPMENT-BITUMINOUS	631.17	
					1	1	LS	MOBILIZATION	635.10	
					2	2	EA	RAILROAD CROSSING SYMBOL	646.32	
					62	62	LF	12" WHITE LINES	646.24	
					40	40	LF	CROSSWALK MARKING/DIAGONAL LINE	646.31	

* ITEM OUT OF NUMERICAL ORDER

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS −	FEET	MILES	REMARKS
TOTALS									

Revised August 6, 1997
ADDENDUM NO. 1

PLOT: 6829SCH2

PROJECT NAME MONTPELIER-WINOOSKI RIVER WEST BIKE PATH
PROJECT NUMBER BWV-BIKE (4)S

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	TRACK & BALLFIELD	RAILWAY	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
				200		200	SY	GEOTEXTILE FABRIC UNDER STONE FILL	649.31	
			500			500	SY	GEOTEXTILE FOR SILT FENCE	649.51	EST
			50			50	SY	GEOTEXTILE FOR FILTER CURTAIN	649.61	10
	107		313			420	LB	SEED	651.15	
			50			50	LB	SEED - WINTER RYE	651 17	EST
	205		600			805	LB	FERTILIZER	651.18	
	0.8		3.2			4.0	TON	AGRICULTURAL LIMESTONE	651.20	0.8
	0.8		3.2			4.0	TON	HAY MULCH	651.25	0.8
			230			230	EA	HAYBALES FOR EROSION CONTROL	651.26	EST
	165				815	980	CY	TOPSOIL	651.35	8
					500	500	SY	GRUBBING MATERIAL	651.40	EST
			200			200	SY	EROSION MATTING	654.10	EST
					8	8	EA	TRANSPLANTING TREES	656.45	
					126	126	SF	TRAFFIC SIGNS (TYPE A)	675.20	
					3700	3700	LF	WIRED - CONDUIT (2" PVC SCHEDULE 40)	678.23	47
					42	42	EA	JUNCTION BOX	678.26	
					41	41	EA	LIGHT POLE BASE	679.21	
					41	41	EA	LIGHT POLE (MOD)	679.45	
					12	12	EA	LIGHT POLE (MOD 1)	679.45	
		10				10	LF	PAVED RAIL-HIGHWAY CROSSING	931.10	
								OPTION BID ITEMS		
					710	710	LB	FLANGED CHANNEL SIGN POSTS	675.30	
					710	710	LB	SQUARE TUBE STEEL POSTS AND ANCHORS	675.34	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	10 ITEMS
		SEED ITEM 651.15
313	LB	ROADWAY
68	LB	TRACK
39 EST	LB	BALLFIELD
420	LB	TOTAL
		FERTILIZER ITEM 651.18
600	LB	ROADWAY
130	LB	TRACK
75 EST	LB	BALLFIELD
805	LB	TOTAL
		AGRICULTURAL LIMESTONE ITEM 651.20
2.4	TON	ROADWAY
0.5	TON	TRACK
0.3	TON	BALLFIELD
0.8	TON	ROUNDING
4.0	TON	TOTAL
		HAY MULCH ITEM 651.25
2.4	TON	ROADWAY
0.5	TON	TRACK
0.3	TON	BALLFIELD
0.8	TON	ROUNDING
4.0	TON	TOTAL
		TOPSOIL ITEM 651.35
807	CY	ROADWAY
106	CY	TRACK
59 EST	CY	BALLFIELD
8	CY	ROUNDING
980	CY	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS		PAVEMENT WIDTHS			EQUATIONS		FEET	MILES	REMARKS
FROM	TO				+	−			
TOTALS									

REVISED AUGUST 6, 1997
ADDENDUM NO. 1

PLOT: 6829SCH3 GND

PROJECT NAME MONTPELIER-WINOOSKI RIVER WEST BIKE PATH
PROJECT NUMBER BWM-BIKE (4)S

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CPEP	PCCSP PI TH	PIPE ELBOW NO-DEG	END SECT EA	CB	DEPTH DI	CONC. CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV.	CRM CY	TR EXCAV EARTH CY	ROCK CY	COMM EXC CY	UNCL CHAN EXC CY	STRUCT EXCAV CY	GRAN BKF STRUCT CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	TYPE	MRKR POSTS LT	RT	RELAY CY	ADJ. ELEV. OF VALVE BOX EA	REMARKS	STA.	STA.	LT.	RT.	END TREATMENT
108+33		RT.		RCDI/						15	8									12'-6"	7.9	647	D			22						11					1			6' CHAIN LINK FENCE, VINYL COATED (MODIFIED)– ITEM 620.12 (MOD.)					
																																							4'×~~6'~~ 4' RCDI ADDITION OF 15" CPEP					
108+33		CL																						1	STORM																				
~~112+01~~		~~LT~~																																						CHANGE ELEVATION OF RCDI TO MATCH NEW FINISH GRADE. NEW C.I. COVER.	107+49	109+79	230		
																																									109+00	109+91		120	
																								~~1~~	~~SEWER~~															~~CHANGE ELEVATION OF SEWER MANHOLE~~ NOT DONE	111+68	111+71		30	
112+88		CL		RCDI/						12	~~26~~ 24				X					5'-0"	2.6	231	D			22						5		1	I	1					111+64	111+68	30		
																																								STONE PAD, TYPE I AT OUTLET	117+43	117+68		25	
115+~~18~~ 50		~~LT~~ CL		RCDI/						15	86				X					7'-6"	3.7	316	D			11										1					118+58	118+68		10	
																																								RCDI TO BE CONNECTED TO EXISTING RCP.	119+45	120+50		105	
~~115+18~~	~~115+50~~	LT		RCDI/						~~15~~	~~32~~				X					4'-0"	2.1	193	D			13						4				1					129+00	131+00	200		
																																								VOID	140+60	142+20	160		
~~115+00~~	~~115+50~~	RT			X																					11								1	I						154+00	158+10		210	
																																								~~CONSTRUCT SPECIAL DITCH W/STONE FILL PAD TYPE I AT OUTLET~~ NOT DONE	155+77	155+87	10		
115+94		RT																						1	SEWER																				
																																								CHANGE ELEVATION OF SEWER MANHOLE					
117+70		LT																						1	SEWER																				
																																								CHANGE ELEVATION OF SEWER MANHOLE					
122+65		RT																																							8' CHAIN LINK FENCE, VINYL COATED (MODIFIED) – ITEM 620.13 (MOD.)					
																								1	STORM																137+00	138+60	160		
																																								CHANGE ELEVATION OF EXISTING STORM MANHOLE					
~~122+65~~	~~123+05~~	RT/LT		RCDI/						~~15~~	~~46~~				X					4'-0"	2.1	193	D			22						2				1									
																																								OUTLET AT EXISTING STORM MANHOLE NOT DONE	REMOVING AND RESETTING FENCE (MODIFIED BACKSTOPS) – ITEM 620.50 (MOD.)				
129+50 56		CL		RCDI/						12	44 57				X					4'-0"	2.1	193	D			15						5		1	I	1	1				128+58	128+90	45		
																																								STONE PAD, TYPE ~~II~~ I AT OUTLET	130+23	130+61		44	
136+~~50~~ 40		CL		RCDI/		X				18	35 49				X					4'-6"	2.3	200	D			13						5				1	1				138+60	138+74	15		
																																										REMOVAL OF EXISTING FENCE – ITEM 620.55				
139+84 ~~140+00~~		LT		RCDI/		X				15	~~26~~ 55				X					4'-0"	2.6	231	D			42						6		1	I	1					130+61	131+81		120	
																																								SPECIAL DITCH	143+24		20		
142+~~68~~ 67		CL		ES/ES						18	~~25~~ 28				X			2																											
																																										PLANK RAIL ITEM 621.15				
145+55		RT																						1	SEWER																106+90	109+00		210	
																																								CHANGE ELEVATION OF SEWER MANHOLE	143+32	144+68	136		
147+58		CL		ES/ES	X	X				30	34 40				X			2								21						6		4	II	1	1				144+78	147+74	296		
																																								TYPE II STONE PAD AT INLET AND OUTLET					
150+~~90~~ 92		CL	45° RT.	ES/		X				24	40 46				X			1								4						5		10/3	I/II	1	1								
																																								STONE PAD, TYPE II @ OUTLET, SLOPE STABILIZATION STONE FILL TYPE I					
153+~~40~~ 40.5		CL		ES/	X	X				24	35 34				X			1								3						5		3	II	1	1								
																																								STONE PAD TYPE II @ OUTLET					
154+46		LT																						1	SEWER																				
																																								CHANGE ELEVATION OF SEWER MANHOLE					
157+45		CL		RCDI/						15	~~57~~ 40				X					4'-0"	2.1	193	D			11						7		2	II	1	1								
																																								STONE PAD TYPE II @ OUTLET					
																																									TOTALS				
TOTALS										12 15 18 24 30	70 161 60 75 34							6		27.5	2397	9	7		216						61		15 17	I II	11	7								

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	MRK PST
TOTALS										

ARCHIVED IN DPR

PROJECT NAME WINOOSKI RIVER WEST BIKE PATH
PROJECT NUMBER BWM–BIKE (4)S

68295OH4

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

N.I.C.

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	SUBBASE AREA	SUBBASE CU. YDS.
	3.7385 %	98+49.10	521.70				0				0		0	
						.90		0						0
		98+50.00	521.73				9				1		5	
						42.7		7				23		9
		98+92.70	523.33	BUTT – END PATH BEGIN BRIDGE #1							28		7	
									C 7					
135.1' V.C.	4.9889 %	99+00		523.68					F 23					
									SB 249					
		+50		524.98										
		+60.25	526.70											
	-4.9889 %													
		100		524.43										
		+27.80	523.33	BUTT – END BRIDGE RESUME PATH										
		+28.00	523.32											
	-4.9889 %													
50' V.C.		+50		522.97							75		19	
		+53.00	522.46											
		+78.00	523.71											
	5.000 %													
50' V.C.		101	524.57				0				148		19	
		+03.00	524.96											
						50		1				148		33
		+28.00												
	0.000 %	+40	524.96											
		+46.94		END NEW CONSTRUCTION										
50' V.C.		+50		524.93							12		17	
		+70	524.96			50		2						31
		102		523.84			0				17		19	
	-3.7500 %													
		+20	523.09			50		9				16		34
60' V.C.														
		+50	521.96	522.28			10				0		18	
		+80	522.12			50		34				3		29
		103		522.23			27				3		15	
						50		47				0		30
	0.5294 %	+50		522.49			24				0		17	
						50		47				0		34
		104		522.75			27				0		20	
						50		40				1		31
		+50		523.02			16				1		14	
						50						2		27
		+97	523.29											
50' V.C.		105		523.29			12				1		15	
		+22	523.40											
						50		19						27
	3.6234 %	+47	524.31											
		+50		524.42			9				6		14	
		+74	525.28											
						50		15				7		26
50' V.C.		+99	526.19											
	0.000 %													
		106		525.98			7				2		14	
						24		9				1		
		1[illegible]4	526.19	BUTT – EDGE TAYLOR ST.			14				0		14	
	TAYLOR ST.													
		+50		525.31										
		106+54	525.17	EDGE TAYLOR ST.							0		14	
	-3.3077 %													
		+81	524.28			46		16				3		24
									C 64					
		107		523.73			5		F 23		3		14	
50' V.C.									SB 324					
		+06	523.45											
						50		13				4		26
		+31	523.16											
		+50		522.93			9				1		14	
		CARRIED FORWARD												
		COLUMN FOOTINGS						29				7		50

STA: 98+49.10 TO 106+54 NOT IN CONTRACT

BEGIN PROJECT

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	SUBBASE AREA	SUBBASE CU. YDS.
						50		21				3		30
	-1.1724 %	108		522.35			14				2		18	
		+01	522.34											
						50		12				6		32
		+50		522.07			1				5		17	
		+51												
						50		1				6		24
	1.3750 %	+71	522.03											
40' V.C.														
		+91	522.30											
		109		522.81			1				1		9	
		+11	523.30			50		1				1		39
	+5.0000%	+50	525.25				0				0		33	
														44
		+75	526.50										63	
		+78.2	526.66			40.7								105
		+90.64	526.73	BUTT – END PATH BEGIN BRIDGE									96	
		+95.70	524.11											
	+1.7166%	110		526.91										
		+50		526.27										
167.0' V.C.		+79.2	528.27											
		111		527.31										
	-1.1425 %	+50		527.43										
		+62.7	527.31											
		+68.64	527.31	BUTT – END BRIDGE RESUME PATH										
		+70.68	527.22	527.22			64				0		76	
		STA 111+70.68 AH												
		=STA 111+75.60 BK												
		EQ. = +4.92												
						29.33		72				0		84
		112		526.88			69				0		78	
	-1.1618 %					50		132				0		112
		+50		526.30			74				0		43	
									C 550					
		+63.17	526.15						F 8					
						50		104	SB 367			0		56
50' V.C.		+88.17	525.86											
		113		526.02			38				0		18	
		+13.17	526.12			50		59				0		33
		+50		526.52			26				0		18	
	1.0768 %													
		+90	526.95			50		44				4		30
100' V.C.		114		527.04			22				4		14	
		+40	527.49											
						50		53				4		26
		+50		526.82			35				0		14	
		+90	525.86											
						50		86				0		26
	-3.2636 %	115		525.53			58				0		14	
		+35	524.39			50		107				0		30
30' V.C.														
		+50	523.90	524.02			58				0		18	
		+65	523.90											
	0.00 %													
		+75	523.90			50		71				8		34
									C 504					
30' V.C.		+90	523.90						F 75					
									SB 281					
		116		523.38			19				9		19	
	-4.9455 %													
		+05	523.16			50		47				17		31
		+50	520.93				32				9		14	
		+50.2	520.92			50		52				11		27
		117		519.15			24				3		15	
100' V.C.		+00.2	518.45			50		44				6		28
		+50		518.76			23				3		15	
	0.6262 %													
		+50.2	518.76											
		CARRIED FORWARD												
		COLUMN FOOTINGS						906				66		791

SUMMARY AND BALANCES

STATION TO STATION		TOTAL EXCAV EARTH & ROCK	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL	SUBBASE
BEGIN	100+00	7		23					9
100+00	105+00	179		197					249
106+54	110+00	64		23					324
110+00	115+00	550		8					367
115+00	120+00	504		75					281
120+00	125+00	206		34					238
125+00	130+00	70		12					110
130+00	135+00	58		60					277
135+00	140+00	119		67					271
140+00	145+00	176		107					248
145+00	150+00	71		103					343
150+00	155+00	199		319					288
155+00	END	113		46					230
		2130		854					2977

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION TOTAL CY	EXCAVATION ROCK CY	EMBANKMENT CY	SUBBASE CY
1	1	29		7	50
1	2	906		66	791
2	1	446		73	447
2	2	291		136	654
3	1	216		521	699
3	2	242		51	336
		2130		854	2977

REMARKS

EARTH AND ROCK EXCAVATION	2130
PAVEMENT EXCAVATION	0
EARTH EXCAVATION	2130
PLANIMETERED FILL	854
LESS FACTORED PAVEMENT	0
LESS DISPLACEMENT OF LARGE	
STRUCTURES	0
NET PLANIMETERED FILL	854
FACTOR 0.15	128
PLANIMETERED FILL INCL. FACTOR	982
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	2130
CHANNEL EXCAVATION	40
UNDERDRAIN EXCAVATION	0
STRUCTURE EXCAVATION	180
TOTAL MAT'L AVAILABLE FOR FILL	2350
TOTAL FILL INCLUDING FACTOR	982
TOTAL MATERIAL FOR FILL	
BORROW	
EXCESS EXCAVATION	1368

6829SCH6

PROJECT NAME MONTPELIER–WINOOSKI RIVER WEST BIKEWAY
PROJECT NUMBER BWM–BIKE (4)S

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

N.I.C.

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	SUBBASE AREA	SUBBASE CU. YDS.
	3.7385 %	98+49.10	521.70				0				0		0	
						.90		0						0
		98+50.00	521.73				9				1		5	
						42.7		7				23		9
		98+92.70	523.33	BUTT – END PATH BEGIN BRIDGE #1							28		7	
									C 7					
135.1' V.C.	4.9889 %	99+00		523.68					F 23					
									SB 249					
		+50		524.98										
		+60.25	526.70											
	-4.9889 %	100		524.43										
		+27.80	523.33	BUTT – END BRIDGE RESUME PATH										
		+28.00	523.32											
50' V.C.	-4.9889 %													
		+50		522.97							75		19	
		+53.00	522.46											
		+78.00	523.71											
	5.000 %													
50' V.C.		101	524.57				0				148		19	
		+03.00	524.96											
						50		1				148		33
		+28.00												
	0.000 %	+40	524.96											
		+45.94		END NEW CONSTRUCTION										
50' V.C.		+50		524.93							12		17	
		+70	524.96			50						27		31
	-3.7500 %	102		523.84			0				17		19	
		+20	523.09			50		9				16		34
60' V.C.														
		+50	521.96	522.28			10				0		18	
		+80	522.12			50		34				3		29
		103		522.23			27				3		15	
						50		47				0		30
		+50		522.49			24				0		17	
	0.5294 %					50		47				0		34
		104		522.75			27				0		20	
						50		40				1		31
		+50		523.02			16				1		14	
						50						2		27
		+97	523.29											
50' V.C.		105		523.29			12				1		15	
		+22	523.40											
						50		19						27
	3.6234 %	+47	524.31											
		+50		524.42			9				6		14	
		+74	525.28											
						50		15				7		26
50' V.C.		+99	526.19											
	0.000 %													
		106		525.98			7				2		14	
						24		9				1		
		+[illegible]	526.19	BUTT – EDGE TAYLOR ST.			14				0		14	
TAYLOR ST.		+50		525.31										
		106+54	525.17	EDGE TAYLOR ST.							0		14	
	-3.3077 %	+81	524.28			46		16				3		24
									C 64					
50' V.C.		107		523.73			5		F 23		3		14	
									SB 324					
		+06	523.45											
						50		13				4		26
		+31	523.16											
		+50		522.93			9				1		14	
		CARRIED FORWARD												
		COLUMN FOOTINGS						29				7		50

STA. 98+49.10 TO 106+24 NOT IN CONTRACT

BEGIN PROJECT

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	SUBBASE AREA	SUBBASE CU. YDS.
						50		21				3		30
	-1.1724 %	108		522.35			14				2		18	
		+01	522.34											
						50		12				6		32
		+50		522.07			1				5		17	
		+51												
	1.3750 %					50		1				6		24
		+71	522.03											
40' V.C.														
		+91	522.30											
		109		522.81			1				1		9	
	+5.0000%	+11	523.30			50		1				1		39
		+50	525.25				0				0		33	
														44
		+75	526.50										63	
		+78.2	526.66			40.7								105
		+90.64	526.73	BUTT – END PATH BEGIN BRIDGE									96	
		+95.70	524.11											
167.0' V.C.	+1.7166%	110		526.91										
		+50		526.27										
		+79.2	528.27											
	1.1425 %	111		527.31										
		+50		527.43										
		+62.7	527.31											
		+68.64	527.31	BUTT – END BRIDGE RESUME PATH										
		+70.68	527.22	527.22			64				0		76	
		STA 111+70.68 AH												
		=STA 111+75.60 BK												
		EQ. = +4.92												
						29.33		72				0		84
	-1.1618 %	112		526.88			69				0		78	
						50		132				0		112
		+50		526.30			74				0		43	
									C 550					
		+63.17	526.15						F 8					
						50		104	SB 367			0		56
50' V.C.		+88.17	525.86											
		113		526.02			38				0		18	
		+13.17	526.12			50		59				0		33
	1.0768 %													
		+50		526.52			26				0		18	
		+90	526.95			50		44				4		30
100' V.C.														
		114		527.04			22				4		14	
		+40	527.49											
						50		53				4		26
		+50		526.82			35				0		14	
		+90	525.86											
	-3.2636 %					50		86				0		26
		115		525.53			58				0		14	
		+35	524.39			50		107				0		30
30' V.C.														
		+50	523.90	524.02			58				0		18	
		+65	523.90											
	0.00 %													
		+75	523.90			50		71				8		34
									C 504					
30' V.C.		+90	523.90						F 75					
									SB 281					
		116		523.38			19				9		19	
	-4.9455 %													
		+05	523.16			50		47				17		31
		+50	520.93				32				9		14	
		+50.2	520.92			50		52				11		27
		117		519.15			24				3		15	
100' V.C.														
		+00.2	518.45			50		44				6		28
	0.6262 %													
		+50		518.76			23				3		15	
		+50.2	518.76											
		CARRIED FORWARD												
		COLUMN FOOTINGS						906				66		791

SUMMARY AND BALANCES

STATION	TO STATION	TOTAL EXCAV EARTH & ROCK	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL	SUBBASE
BEGIN	100+00	7		23					9
100+00	105+00	179		197					249
106+54	110+00	64		23					324
110+00	115+00	550		8					367
115+00	120+00	504		75					281
120+00	125+00	206		34					238
125+00	130+00	70		12					110
130+00	135+00	58		60					277
135+00	140+00	119		67					271
140+00	145+00	176		107					248
145+00	150+00	71		103					343
150+00	155+00	199		319					288
155+00	END	113		46					230
		2130		854					2977

SHEET NO.	COL. NO.	EXCAVATION TOTAL CY	EXCAVATION ROCK CY	EMBANKMENT CY	SUBBASE CY
1	1	29		7	50
1	2	906		66	791
2	1	446		73	447
2	2	291		136	654
3	1	216		521	699
3	2	242		51	336
		2130		854	2977

REMARKS	
EARTH AND ROCK EXCAVATION	2130
PAVEMENT EXCAVATION	0
EARTH EXCAVATION	2130
PLANIMETERED FILL	854
LESS FACTORED PAVEMENT	0
LESS DISPLACEMENT OF LARGE	
STRUCTURES	0
NET PLANIMETERED FILL	854
FACTOR 0.15	128
PLANIMETERED FILL INCL. FACTOR	982
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	2130
CHANNEL EXCAVATION	40
UNDERDRAIN EXCAVATION	0
STRUCTURE EXCAVATION	180
TOTAL MAT'L AVAILABLE FOR FILL	2350
TOTAL FILL INCLUDING FACTOR	982
TOTAL MATERIAL FOR FILL	
BORROW	
EXCESS EXCAVATION	1368

6829SCH6

PROJECT NAME MONTPELIER–WINOOSKI RIVER WEST BIKEWAY
PROJECT NUMBER BWM–BIKE (4)S

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	SUBBASE AREA	SUBBASE CU. YDS.
	0.6262 %	117+50	518.88	518.88			23				3		15	
		+50.2				50		44				7		27
		+78.13												
		118					25				4		14	
						50		39				7		26
		+50					25				3		14	
						50		41				5		26
		119					19				2		14	
						50		32				6		26
		+50	520.58	520.58			16				4		14	
						50		27				8		26
		120	521.00				13				5		14	
	-1.2855 %					50		40				7		26
		+50	520.36	520.36			30				3		14	
						50		45				4		26
		121		519.71			19				1		14	
						50		19				2		26
		+50		519.07			9				1		14	
						49.15		22				1		26
	BAILEY AVE.	+99.15	518.44	BUTT - BACK OF SIDEWALK			15				0		14	
		122		520.00										
		+49.75	518.81	BUTT - BACK OF SIDEWALK			15				0		14	
	5.0000 %	+50		518.82					C 206					
									F 34					
		+64.75	519.56						SB 238					
	-2.0352 %	+79.75	519.26			50.25		14				1		28
		+84.55	520.16											
40' V.C.		123		518.92			0				1		16	
		+04.55	518.75											
						48.16		7				4		28
		+24.55	518.90											
		+48.16					8				4		14	
		+50		519.08		50		15				7		26
		+98.16					8				4		14	
		124		519.45		50		16				6		26
		+48.16					9				2		14	
		+50		519.81		50		28				2		26
		+98.16					21				0		14	
	0.7295 %	125		520.18										
						50		25				1		26
		+48.16					6				1		14	
		+50		520.54										
		+54.16		520.57										
		STA 125+58.74 BK =STA 128+10.58 AH EQ. = -251.84'							C 70					
									F 12					
									SB 110					
50' V.C.		128+10.58												
		+31.6	520.77											
		+50		520.66										
		+52.39					7				3		14	
						50.53		16				3		26
		+56.6	520.63											
	-0.5682 %	129		520.38										
		+02.92					10				0		14	
		+29.8	520.21											
						50.61		16				2		26
		+50		520.16										
		+53.53					7				2		14	
50' V.C.		+54.8	520.07											
		CARRIED FORWARD												
		COLUMN FOOTINGS						446				73		447

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	SUBBASE AREA	SUBBASE CU. YDS.
		+79.8	520.28											
						50.71		13				6		32
	0.8573	130		520.46										
		+04.24					7				4		20	
		+50		520.88		50.84		10				7		32
		+55.08					4				3		14	
		+58	520.95											
						50.98		8				6		26
		131		521.23										
		+06.06					4				3		14	
		+50		521.37		51.16		8				6		26
		+57.22		521.35			5				3		14	
	240' V.C.	+78	521.97											
						51.01		6				6		28
		132		521.29										
		+08.23		521.26			1		C 58		3		16	
		+50		520.99		49.99		3	F 60			5		29
		+58.22		520.94			2		SB 277		2		15	
	-1.2194 %	+98	520.51											
						50.87		6				3		27
		133		520.48										
		+08	520.39											
		+09.09		520.37			4				1		14	
	50' V.C.	+33	520.08											
						51.01		4				5		27
		+50		520.00										
		+60.10		519.94			0				4		15	
		+58	519.96											
						50.93		5				7		27
		134		519.75										
		+11.03		519.69			5				3		14	
		+50		519.50		50.82		6				5		26
		+61.85		519.44			1				2		14	
	-0.5000 %	135		519.25		50.70		2				10		29
		+12.55		519.18			1				9		17	
		+50		519.00		50.53		2				13		31
		+63.08		518.93			1				5		16	
		136		518.75		50.35		5				8		30
		+13.43		518.68			4				4		16	
		+18	518.66											
						50.09		10				5		28
	50' V.C.	+43	518.53											
		+50		519.21			7				1		14	
		+61.48												
		STA 136+61.64 BK =STA 136+48.12 AH EQ. = +13.52'				50		14	C 119 F 67 SB 271			2		26
	1.7866 %	+48.12												
		+54.48	520.15											
		137		519.59			8				1		14	
						50		19				2		26
		+50		520.54			13				1		14	
						50		25				2		26
		138		521.49			14				1		14	
						50		15				6		26
		+18	521.83											
		+50		522.26			2				6		14	
	120' V.C.	+78	522.97											
						50.28		8				6		26
		139		522.22										
		+00.28					7				1		14	
		+38	521.61											
	-2.2727 %					50		6				12		26
		+50		521.33										
		+52.28					0				12		14	
		+74	520.79											
	50' V.C.	+99	520.22			49.89		15				11		26
		140		520.39										
		+02.17					16				0		14	
		+24	520.38											
	0.6189 %	+50		520.54		49.79		50				0		26
		+51.96					38				0		14	
		141		520.85		50.06		42				1		26
		+02.02					7				1		14	
		+50		521.16		50.05		9				2		22
		+52.07					3				1		10	
		142		521.46										
		CARRIED FORWARD												
		COLUMN FOOTINGS						291				136		654

SUMMARY AND BALANCES

STATION TO STATION		TOTAL EXCAV EARTH & ROCK	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL	SUBBASE

SHEET NO.	COL. NO.	SUMMARY BY COLUMNS					REMARKS
		EXCAVATION TOTAL CY	EXCAVATION ROCK CY	EMBANKMENT CY		SUBBASE	

PLOT: 6829SCH7

PROJECT NAME MONTPELIER WINOOSKI RIVER WEST BIKE PATH
PROJECT NUMBER BWM-BIKE (4)S

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GRADES						TOTAL EXCAVATION EARTH AND ROCK		ROCK EXCAVATION		EMBANKMENT		SUBBASE	
V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
		142		521.46		50.12		18				14		29
	0.6189 %	+02.19					18				12		17	
		+50		521.77		49.87		41				11		31
		+50.3	521.78											
		+52.06					26		C 176		0		16	
						14.95		7	F 107			18		10
		+67.01							SB 248		64		21	
50' V.C.		+75.3	521.93											
		143		521.80										
		+00.3	521.80			25.94		2				44		23
		+02.95					3				3		14	
		+50		521.55		50.18		4				6		26
		+53.13					1				3		14	
		+98.77												
		STA 143+98.77 BK =STA 143+95.55 AH EQ. = +3.17				50.04		2				6		26
		+95.55												
		144		521.31			1				3		14	
						50		1				5		29
		+50		521.06			0				2		17	
						50		0				5		32
		145		520.81							3		18	
						50						4		33
		+50		520.56							1		18	
						50						4		33
	-0.4976 %	146		520.31							3		18	
						50		0				8		33
		+50		520.06			0				6		18	
						50		15				6		30
		147		519.81			16				1		14	
						50		15				8		26
		+50		519.56			0		C 71		8		14	
						8		0	F 103			9		26
		+58							SB 343		52		14	
						42		0				45		26
		148		519.31							6		14	
						50		14				6		26
		+50		519.06			15				1		14	
						50		15				4		26
		149		518.81			1				3		14	
		+26.4	518.68			50		5						26
50' V.C.		+50		518.61			4				2		14	
		+51.4	518.55											
						50		7				4		26
		+76.4	518.68											
	0.5158 %	+86.5	518.73											
50' V.C.		150		518.78			4				2		14	
		+11.5	518.86											
						50		16				3		26
		+36.5	518.73											
	-0.5300 %	+50		518.66			13				1		14	
		+73.3	518.53			46		11				132		32
		+96					0				154		24	
50' V.C.		+98.3	518.40											
		151		518.47					C 199					
									F 319					
	0.5143 %	+23.3	518.53			54		14	SB 288			155		38
		+50		518.67			14				1		14	
		+65.8	518.75											
						50		21				2		26
40' V.C.		+85.8	518.85											
		152		519.35			9				1		14	
		+05.8	519.54											
	+3.4646 %	+09.3	519.66			50		8				10		29
80' V.C.		+49.3	521.05											
		+50		520.53			0				10		17	
		+89.3	520.35											
	-1.7576 %					50		0				12		31
		153					0				3		16	
						CARRIED FORWARD								
						COLUMN FOOTINGS		216				521		699

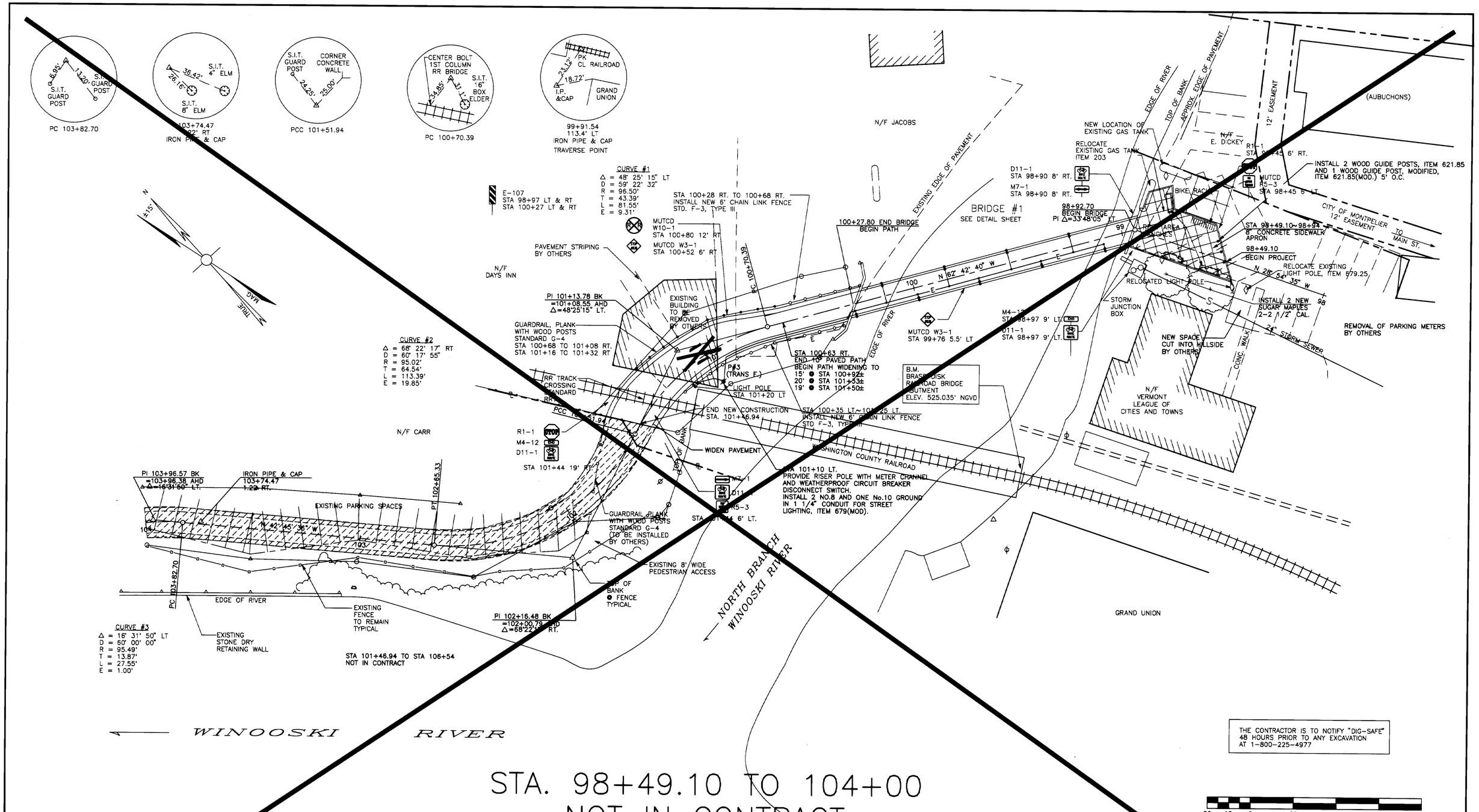
GRADES						TOTAL EXCAVATION EARTH AND ROCK		ROCK EXCAVATION		EMBANKMENT		SUBBASE	
V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V.C.	DIST	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
	-1.7576 V.C.	153		520.16			0				3		16	
		+06.8	520.04											
						50		16				3		28
50' V.C.		+31.8	519.60	519.74										
		+40												
		+50		519.70			17				0		14	
		+56.8	519.73			50		47				1		26
	0.5004 %													
		154		519.94			24				1		14	
						50		42				1		26
		+50		520.19			12				0		14	
		+64.67	520.27											
						50		24				0		26
50' V.C.		+89.67	520.39											
		155		520.14			14				0		14	
		+14.67	520.22			50.40		14				11		31
		+50	518.92											
	-2.4342 %	+50.40					1				12		20	
		+76	518.29											
						50		1				13		35
		156		517.82										
		+00.40					0				2		18	
50' V.C.		+01	517.68	517.81	0.13									
		+26	517.57			50		19				2		30
		+50	517.47						C 113					
		+50.40					20		F 46		0		14	
									SB 230					
	-0.4277 %													
						50		19				5		26
		157	517.26											
		+00.40					0				5		14	
		+35	517.07											
						50.47		7				6		26
		+50		517.06										
		+50.87					7				1		14	
50' V.C.		+60	517.00	517.06	0.06									
		+85	517.13			50.34		14				3		26
	0.5256 %													
		158		517.21										
		+01.21					8				2		14	
		+13	517.19											
50' V.C.		+38	517.41	517.66	0.25	50.99		16				4		26
	4.5800 %	+50		518.03										
		+52.42					9				2		14	
		+63	518.56											
						47.58		20				2		25
50' V.C.		+88	519.70	519.49	-0.21									
	1.5949 %	159		519.84			14				0			
													14	
		STA 159+07.10 BK =STA 159+12.95 AH EQ. = -5.85												
						9.54		3				0		5
		+12.95	520.10				0				0		14	
					END PROJECT									
						CARRIED FORWARD								
						COLUMN FOOTINGS		242				51		336

SUMMARY AND BALANCES									
STATION TO STATION		TOTAL EXCAV EARTH & ROCK	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES		ACCUMULATIVE EXCESSES		SUBBASE
					CUT	FILL	CUT	FILL	

SHEET NO.	COL. NO.	SUMMARY BY COLUMNS						REMARKS
		EXCAVATION		EMBANKMENT		SUBBASE		
		TOTAL CY	ROCK CY	CY				

PROJECT NAME MONTPELIER WINOOSKI RIVER WEST BIKE PATH
PROJECT NUMBER BWM-BIKE (4)S

6829SCH8



#	REVISIONS	DATE	#	REVISIONS	DATE

SURVEY: PEA
CALCULATED: NPN/LDY
PLOT: 6829-R3
DESIGN: DAW
DRAFT: NPN/JMM
CHECKED: LDY
APPROVED: LDY
DATE: 9/25/96
SCALE: 1"=20'

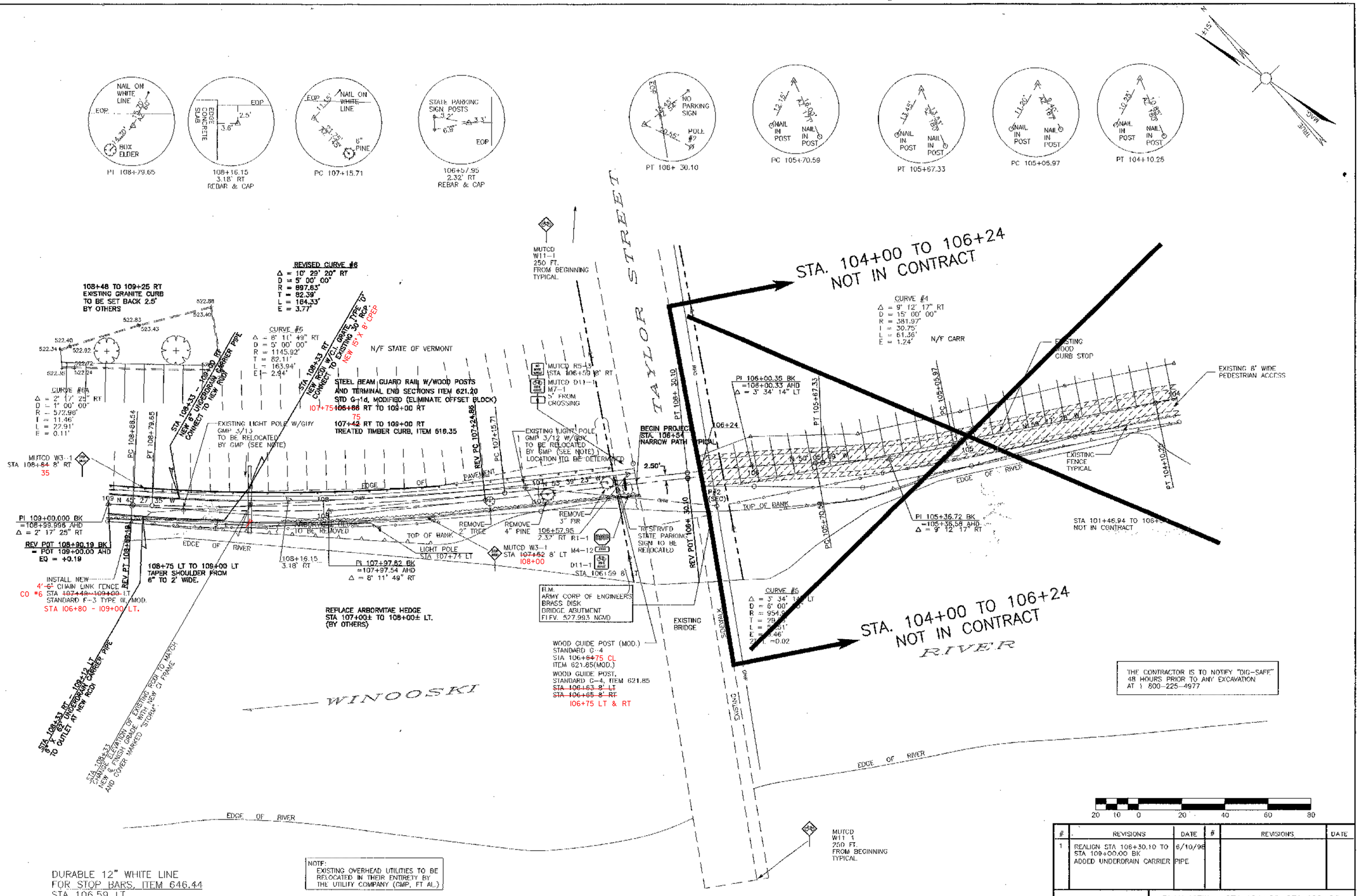
PLAN VIEW - STA 98+49.10~STA 104+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

PROJ. NO. 6829

SHEET 10 OF 132

FAX. (802)-658-3629 P.E.A. BUS. (802)- 658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
The Maltex Building, 431 Pine St., Burlington, VT 05401



#	REVISIONS	DATE	#	REVISIONS	DATE
1	REALIGN STA 106+30.10 TO STA 109+00.00 BK ADDED UNDERDRAIN CARRIER PIPE	6/10/98			

SURVEY: PEA
CALCULATED: LDY
PLOT: 6829-R4
DESIGN: DAW
DRAFT: NPN/JMM
CHECKED: LDY
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

PROJ. NO. 6829

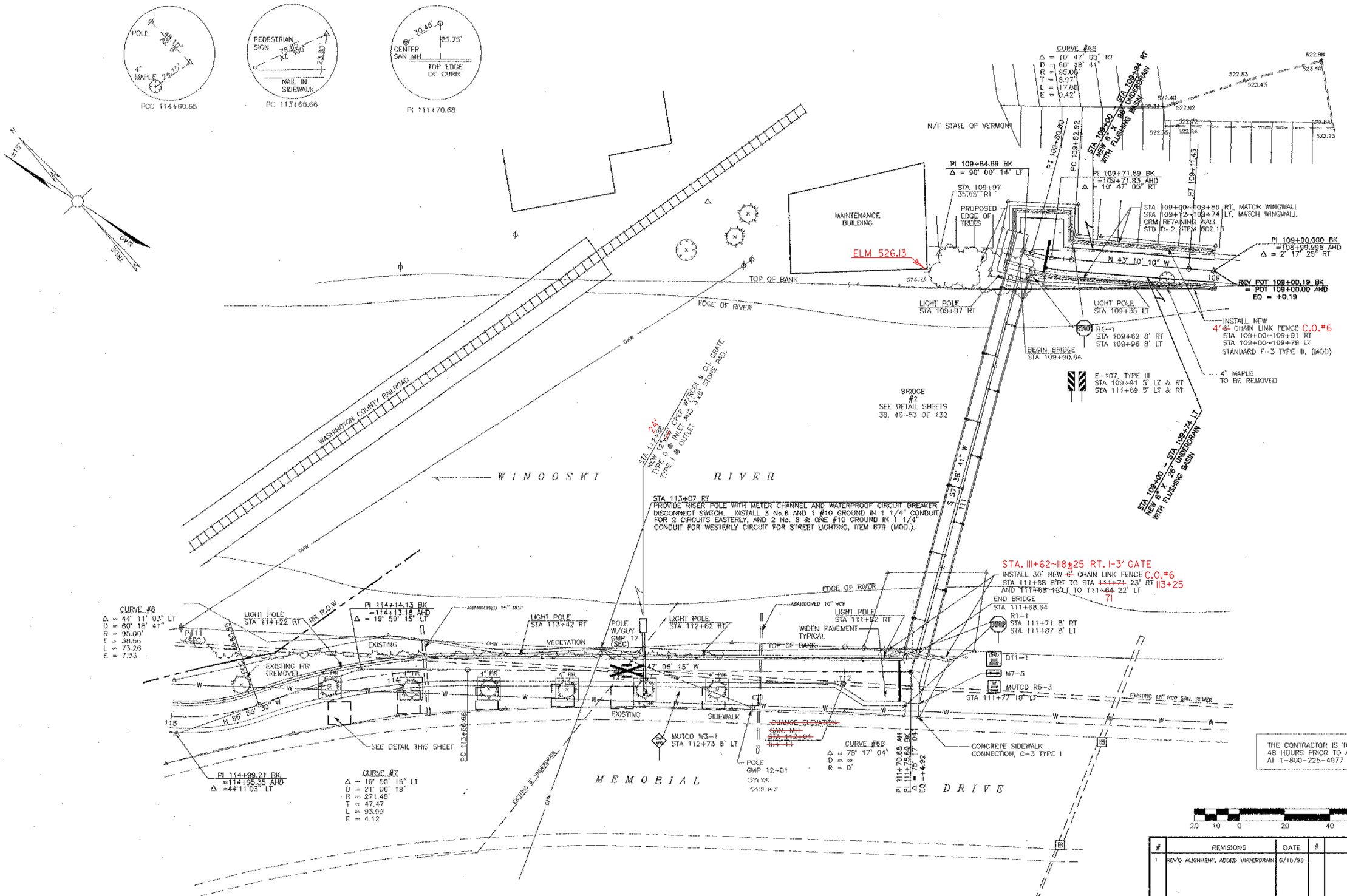
SHEET 11 OF 132

PLAN VIEW – STA 104+00~STA 109+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

ARCHIVED IN DPR



#	REVISIONS	DATE	#	REVISIONS	DATE
1	REV'D ALIGNMENT, ADDED UNDERDRAIN	6/10/98			

SURVEY: PEA
CALCULATED: LDY
PLOT: 6829-R5
DESIGN: DAW
DRAFT: NPN/JMM
CHECKED: LDY
APPROVED: KWP
DATE: 1/9/97
SCALE: 1"=20'

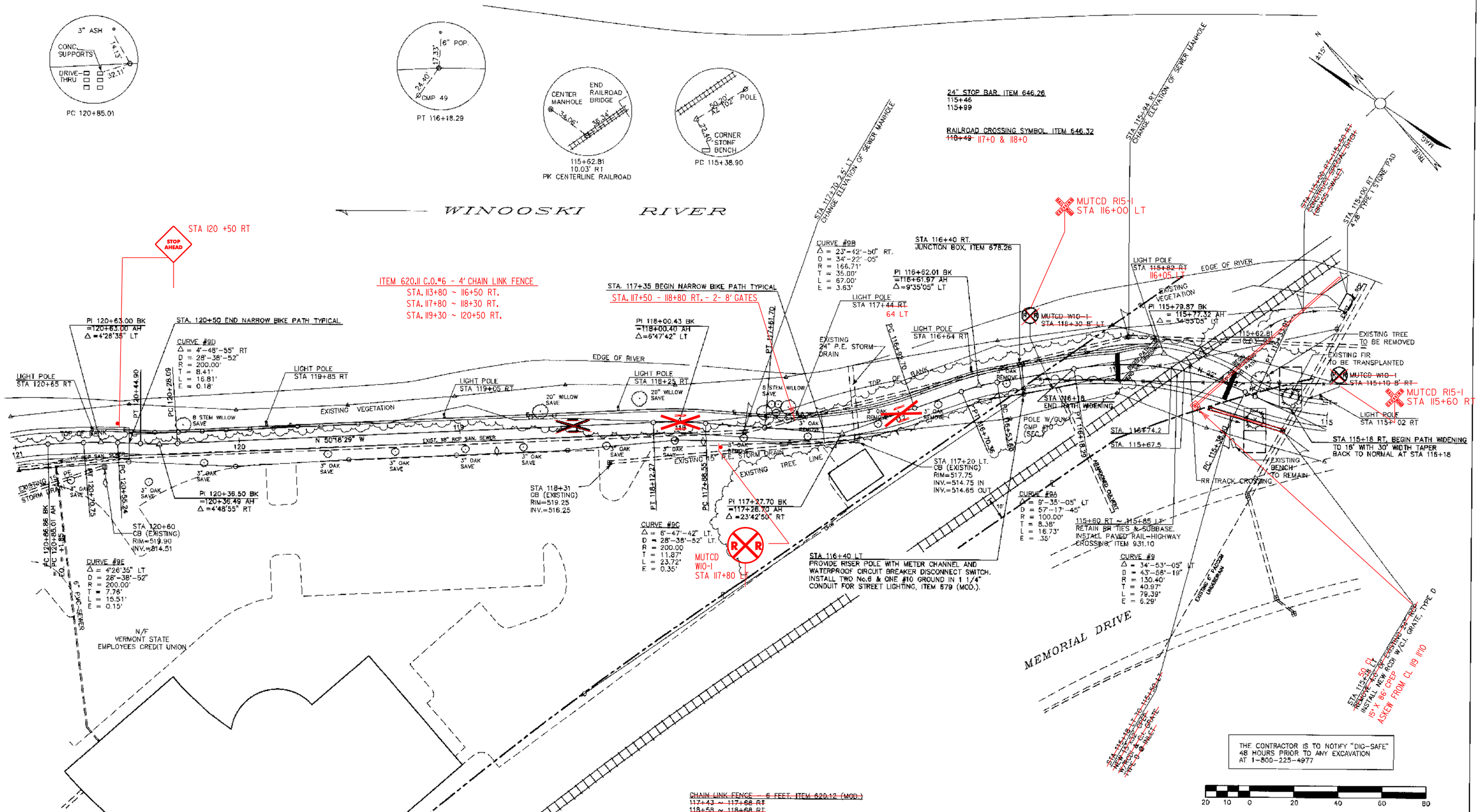
PROJ. NO. 6829

SHEET 12 OF 132

PLAN VIEW – STA 109+00~STA 115+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

FAX. (802)-658-3620 P.E.A. BUS. (802)- 658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407



#	REVISIONS	DATE	#	REVISIONS	DATE
1	RE-ALIGN STA 116+50 TO 121+00	3/25/93			

SURVEY: PEA
CALCULATED: LDY/NPN
PLOT: 6829-R6
DESIGN: DAW
DRAFT: NPN
CHECKED: LDY
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

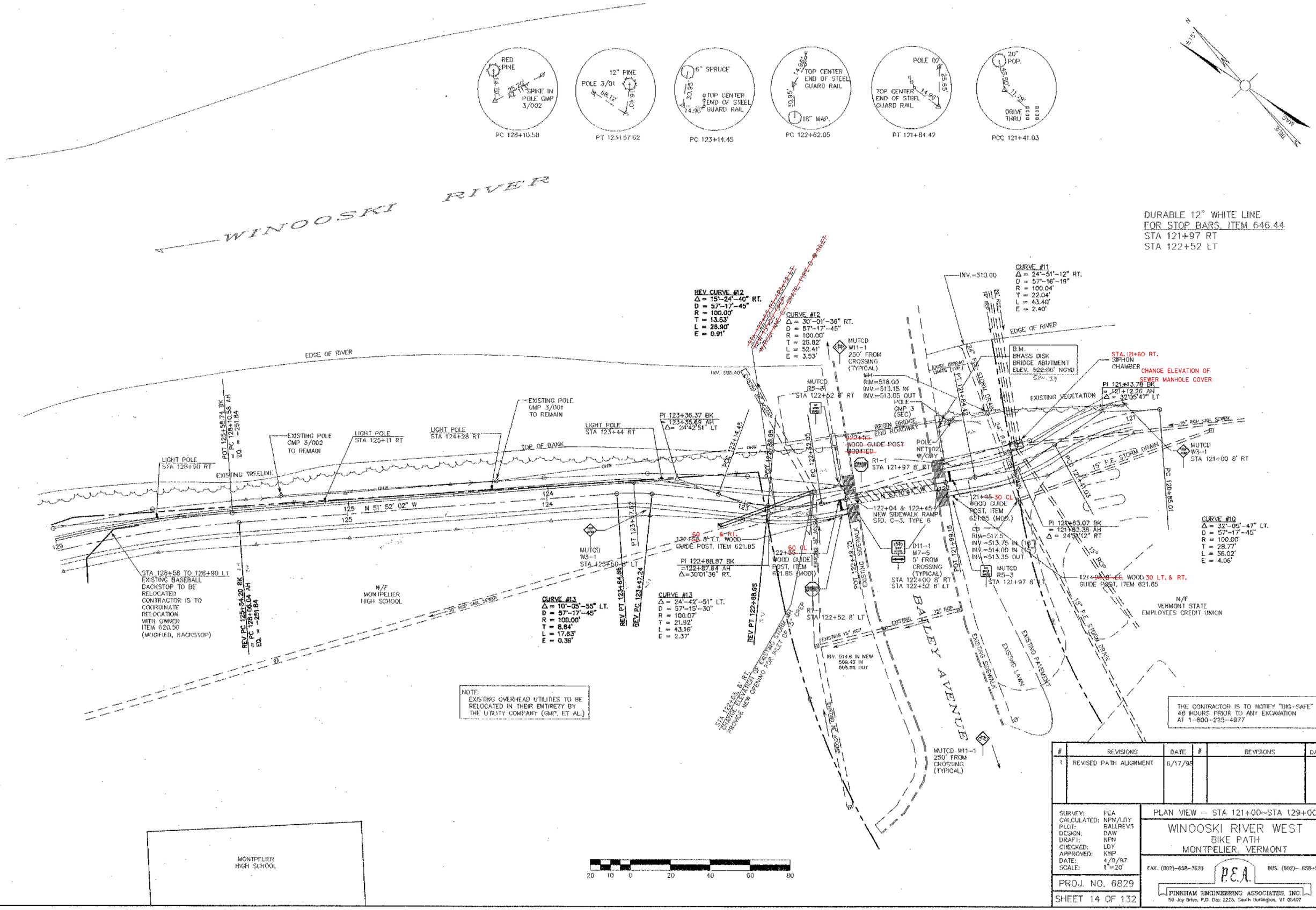
PLAN VIEW - STA 115+00~STA 121+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

PROJ. NO. 6829

SHEET 13 OF 132

FAX. (802)-658-3629 P.E.A. BUS. (802)- 658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407



THE CONTRACTOR IS TO NOTIFY "DIG-SAFE" 48 HOURS PRIOR TO ANY EXCAVATION AT 1-800-225-4977

#	REVISIONS	DATE	#	REVISIONS	DATE
1	REVISED PATH ALIGNMENT	6/17/98			

SURVEY: PEA
CALCULATED: NPN/LDY
PLOT: BALLREV3
DESIGN: DAW
DRAFT: NPN
CHECKED: LDY
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

PLAN VIEW – STA 121+00~STA 129+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

PROJ. NO. 6829

SHEET 14 OF 132

FAX. (802)-658-3629 P.E.A. BUS. (802)- 658-5568
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

WINOOSKI RIVER

STA 132+64 RT
PROVIDE RISER POLE WITH METER CHANNEL AND WATERPROOF CIRCUIT BREAKER DISCONNECT SWITCH.
INSTALL TWO No. 4 & ONE #10 GROUND IN 1 1/4" CONDUIT FOR EASTERLY CIRCUIT AND TWO No. 4 & ONE #10 GROUND FOR WESTERLY CIRCUIT, STREET LIGHTING, ITEM 679 (MOD.).
CONTRACTOR TO ARRANGE WITH GMP TO PROVIDE SECONDARY ELECTRICAL SERVICE.

EDGE OF RIVER

LIGHT POLE STA 132+75 RT

LIGHT POLE STA 133+60 RT

REMOVE MAPLE

POLE GMP 21/01 W/GUY
PRL HAS NO TRANSF./SEC

REMOVE PINES

LIGHT POLE STA 131+90 RT

STA 130+61 TO 131+81 RT (20, 50)
EXISTING FENCELINE TO BE REMOVED

LIGHT POLE STA 131+05 RT

EXISTING TREELINE

STA ~~130+23 TO 130+61 RT~~ (129+58 RT.)
EXISTING BACKSTOP TO BE RELOCATED
ITEM 620.50 (MODIFIED BACKSTOP)

PI 130+24.50 BK
=130+06.13 AHD
Δ = 40° 56' 54" LT

STA 129+55.55
NEW 12"x50' CMCP
W/RCO & C.I. GRATE TYPE D @ INLET
& 4'x 8' STONE PAD, TYPE I @ OUTLET
CHANGE ELEVATION OF DI (ADDITIONAL)

N
±15°
TRUE
MAG

PI 134+41.77 BK
=134+32.81 AHD
Δ = 31° 20' 55" LT

LIGHT POLE STA 134+45 RT

TOP OF BANK

S 87° 11' 04" W

132

133

134

131

130

129

135

LIGHT POLE STA 130+20 RT

14" MAPLE TO BE REMOVED

STA 131+18.09
6.04' LT

14" PINE TO BE REMOVED

TOP OF BANK

LIGHT POLE STA 129+35 RT

EXISTING VEGETATION TO REMAIN

REV PC 133+21.76

REV PT 133+14.68

PC 132+63.13

PT 132+20.06

EXISTING 36" RCP SAN. SEWER

REV CURVE #15
Δ = 24° 22' 60" LT
D = 8° 53' 02"
R = 644.95'
T = 139.34'
L = 274.47'
E = 14.88'

CURVE #15
Δ = 31° 20' 55" LT
D = 9° 00' 00"
R = 636.62'
T = 178.64'
L = 348.32'
E = 24.59'

REV CURVE #14
Δ = 46° 34' 29" LT
D = 9° 58' 17"
R = 576.53'
T = 248.14'
L = 468.65'
E = 51.13'

INSTALL NEW 6' CHAIN LINK FENCE
STA 129+00~131+00 LT
STANDARD F-3 TYPE III W/ TOP RAIL
TOP SELVAGE OF FENCE TO BE "KNUCKLED OVER"

EXISTING SOFTBALL DIAMOND TO BE RELOCATED

520

CURVE #14
Δ = 40° 56' 54" LT
D = 10° 00' 00"
R = 572.96'
T = 213.93'
L = 409.46'
E = 38.63'

L = 10°-55'-45" LT
R = 576.53'

N/F MONTPELIER HIGH SCHOOL

CRASS LINE

SKINNED AREA

521

90°

60°

84' 10 1/4"

PROPOSED SITE OF RELOCATED SOFTBALL DIAMOND

16' DIA.

522

38'

25'

35'

SEE MISCELLANEOUS DETAIL SHEET 37 OF 132 FOR TYPICAL SECTION OF SKINNED AREA

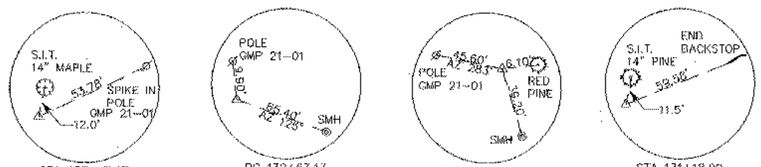
SOFT BALL FIELD SURVEY BASELINE
INTERIOR BUILDING CORNER @ STA 50+00

MONTPELIER HIGH SCHOOL

RELOCATED BACKSTOP
ITEM 620.50 (MODIFIED BACKSTOP)

THE CONTRACTOR IS TO NOTIFY "DIG-SAFE" 48 HOURS PRIOR TO ANY EXCAVATION AT 1-800-225-4977

20 10 0 20 40 60 80



STA 133+13.47
13.05' LT
REBAR & CAP

PC 132+63.13

PT 132+20.06

STA 131+18.09
6.04' LT
REBAR & CAP

#	REVISIONS	DATE	#	REVISIONS	DATE
1	REVISED PATH ALIGNMENT	6/17/98			

SURVEY: PEA
CALCULATED: NPM/LDY
PLOT: BALLREV1
DESIGN: DAW
DRAFT: NPM/JMM
CHECKED: LDY
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

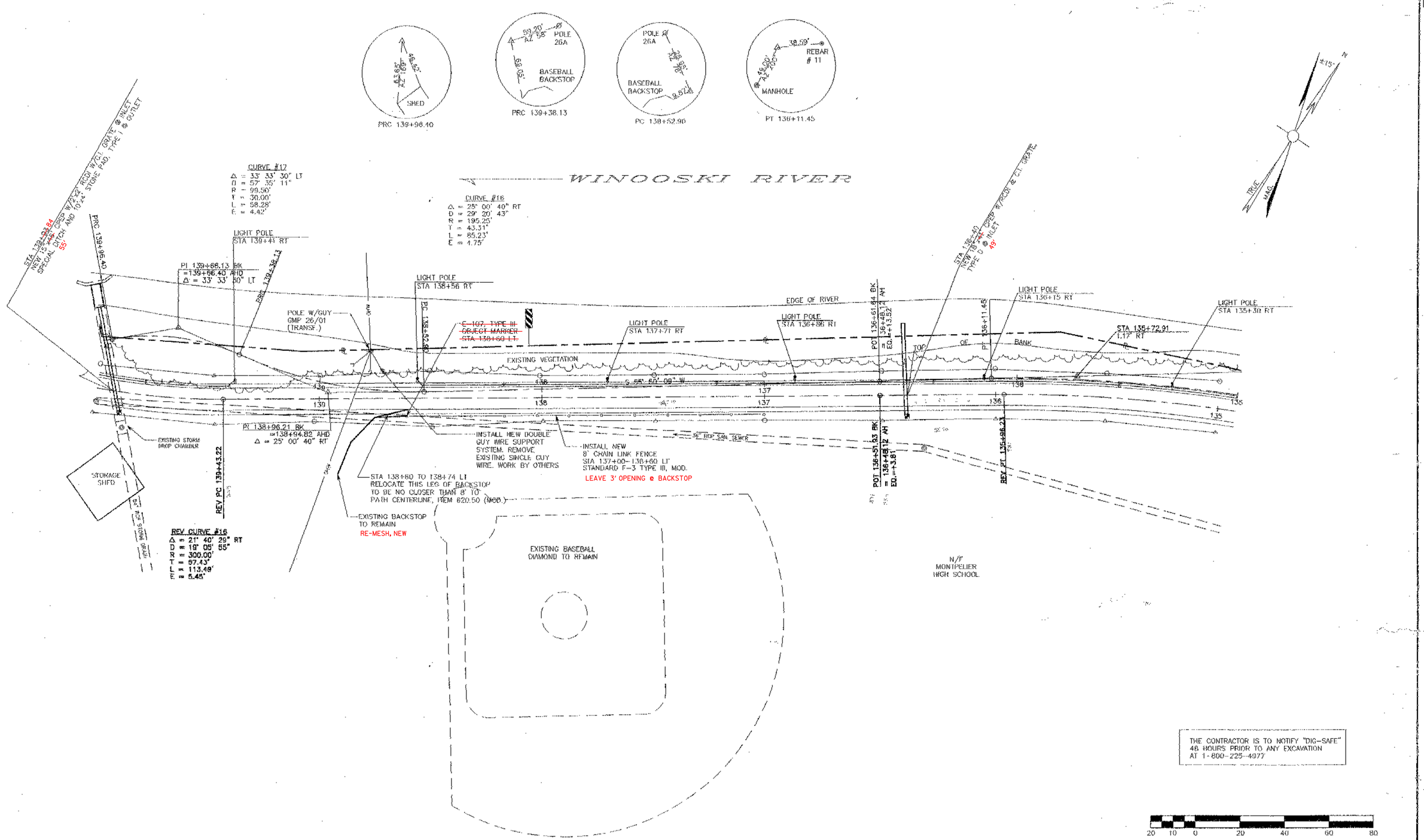
PROJ. NO. 6829

SHEET 15 OF 132

PLAN VIEW – STA 129+00~STA 135+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

FAX. (802)-658-3529 P.E.A. BUS. (802)- 658-5598
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407



THE CONTRACTOR IS TO NOTIFY "DIG-SAFE" 48 HOURS PRIOR TO ANY EXCAVATION AT 1-800-225-4977

#	REVISIONS	DATE	#	REVISIONS	DATE
1	REVISED PATH ALIGNMENT	6/17/98			

SURVEY: PEA
CALCULATED: NPN/LDY
PLOT: BALLREV2
DESIGN: DAW
DRAFT: NPN/JMM
CHECKED: LDY
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

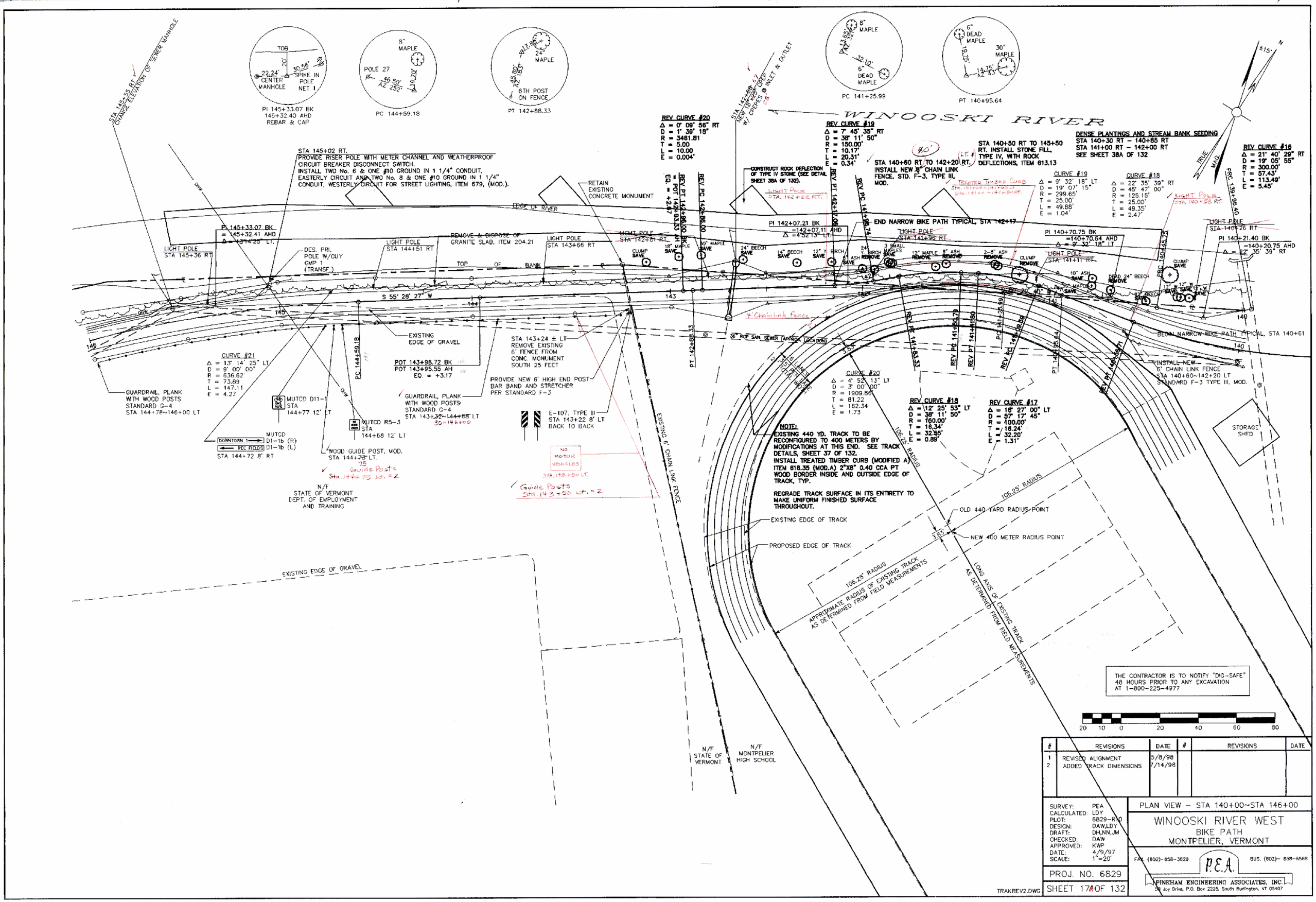
PROJ. NO. 6829

SHEET 16 OF 132

PLAN VIEW – STA 135+00–STA 140+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

FAX. (802)-658-3529 P.E.A. BUS. (802)- 658-5598
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2320, South Burlington, VT 05407



#	REVISIONS	DATE	#	REVISIONS	DATE
1	REVISED ALIGNMENT	5/8/98			
2	ADDED TRACK DIMENSIONS	7/14/98			

SURVEY: PEA
CALCULATED: LDY
PLOT: 6829-R10
DESIGN: DAW,LDY
DRAFT: DH,NN,JM
CHECKED: DAW
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

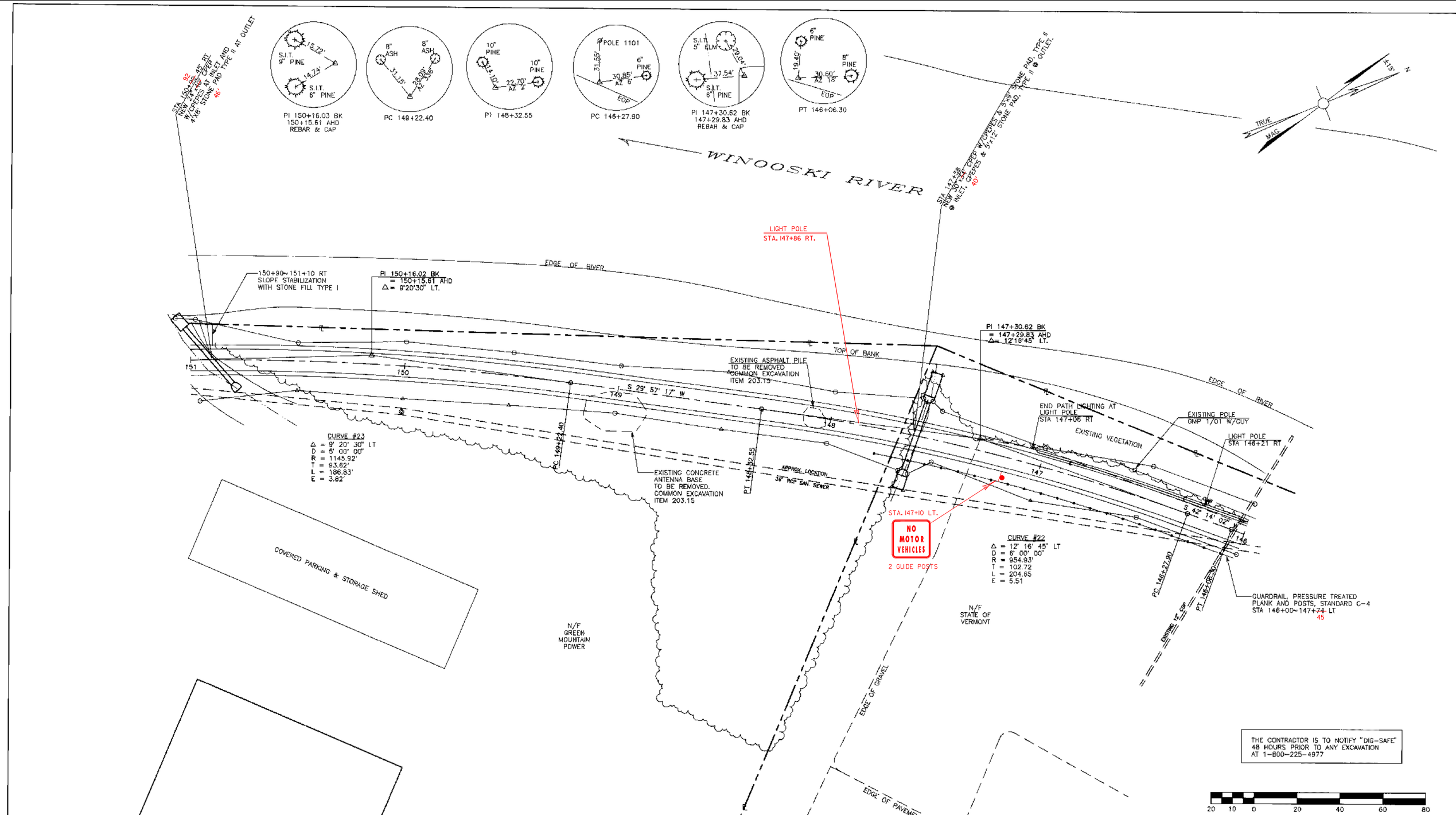
PROJ. NO. 6829

SHEET 17 OF 132

PLAN VIEW – STA 140+00~STA 146+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

FAX (802)-658-3829 P.E.A. BUS. (802)- 658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
54 Joy Drive, P.O. Box 2225, South Burlington, VT 05407



THE CONTRACTOR IS TO NOTIFY "DIG-SAFE" 48 HOURS PRIOR TO ANY EXCAVATION AT 1-800-225-4977

#	REVISIONS	DATE	#	REVISIONS	DATE

SURVEY: PEA
CALCULATED: LDY
PLOT: 6829-R11
DESIGN: LDY,DAW
DRAFT: DH,NN,JM
CHECKED: DAW
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

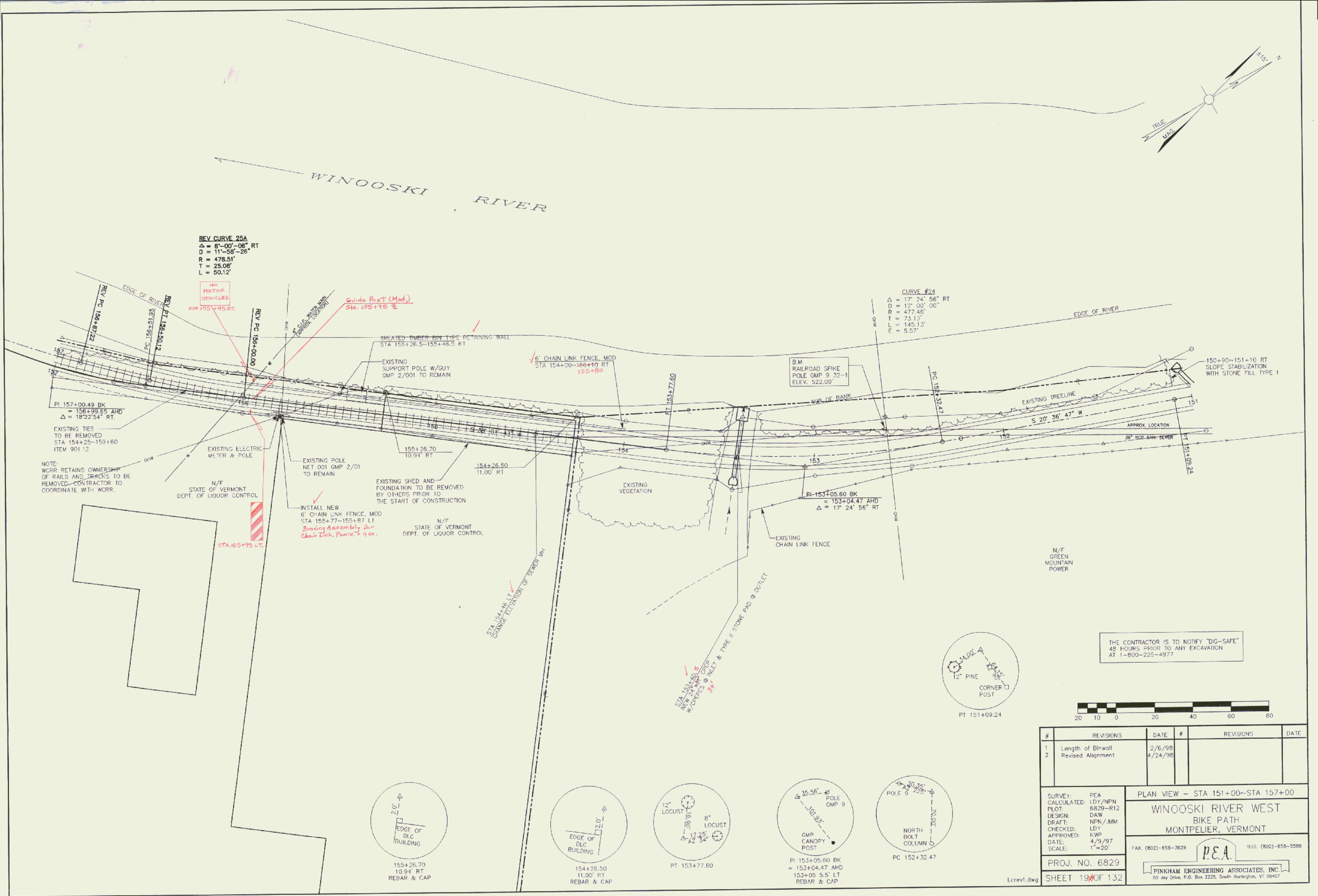
PROJ. NO. 6829

SHEET 18 OF 132

PLAN VIEW - STA 146+00~STA 151+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407



#	REVISIONS	DATE	#	REVISIONS	DATE
1	Length of Binwall	2/6/98			
2	Revised Alignment	4/24/98			

SURVEY: PEA
CALCULATED: LDY/NPN
PLOT: 6829-R12
DESIGN: DAW
DRAFT: NPN/JMM
CHECKED: LDY
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

PROJ. NO. 6829

SHEET 19 OF 132

PLAN VIEW - STA 151+00~STA 157+00

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

FAX. (802)-658-3629 P.E.A. TEL. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

#	REVISIONS	DATE	#	REVISIONS	DATE
1	REVISED ALIGNMENT	4/24/98			

SURVEY: PEA
CALCULATED: NPN/LDY
PLOT: 6829-R13
DESIGN: DAW
DRAFT: NPN/JMM
CHECKED: LDY
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

PLAN VIEW – STA 157+00~STA 159+12.95

WINOOSKI RIVER WEST
BIKE PATH
MONTPELIER, VERMONT

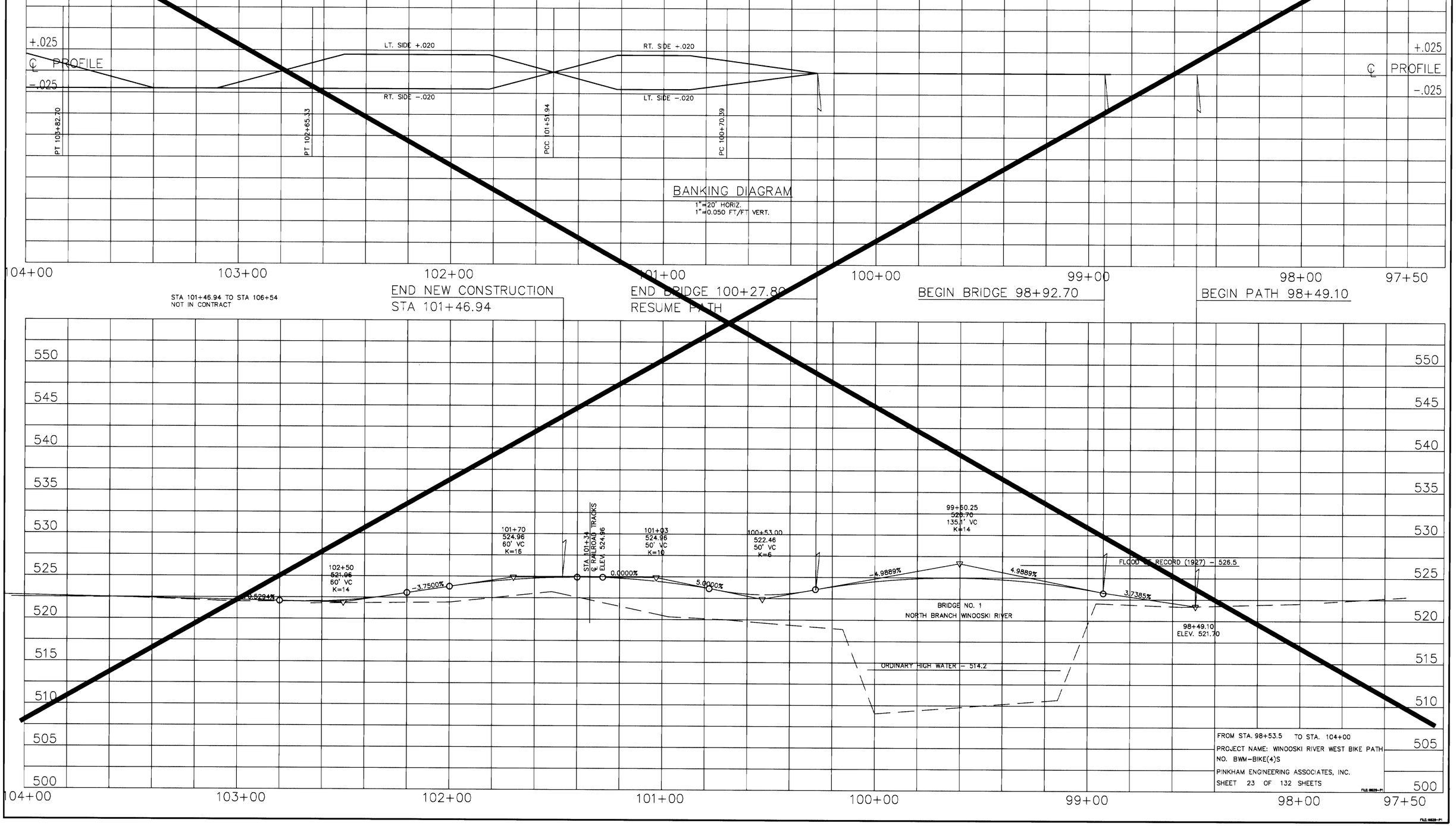
PROJ. NO. 6829

SHEET 20 OF 132

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

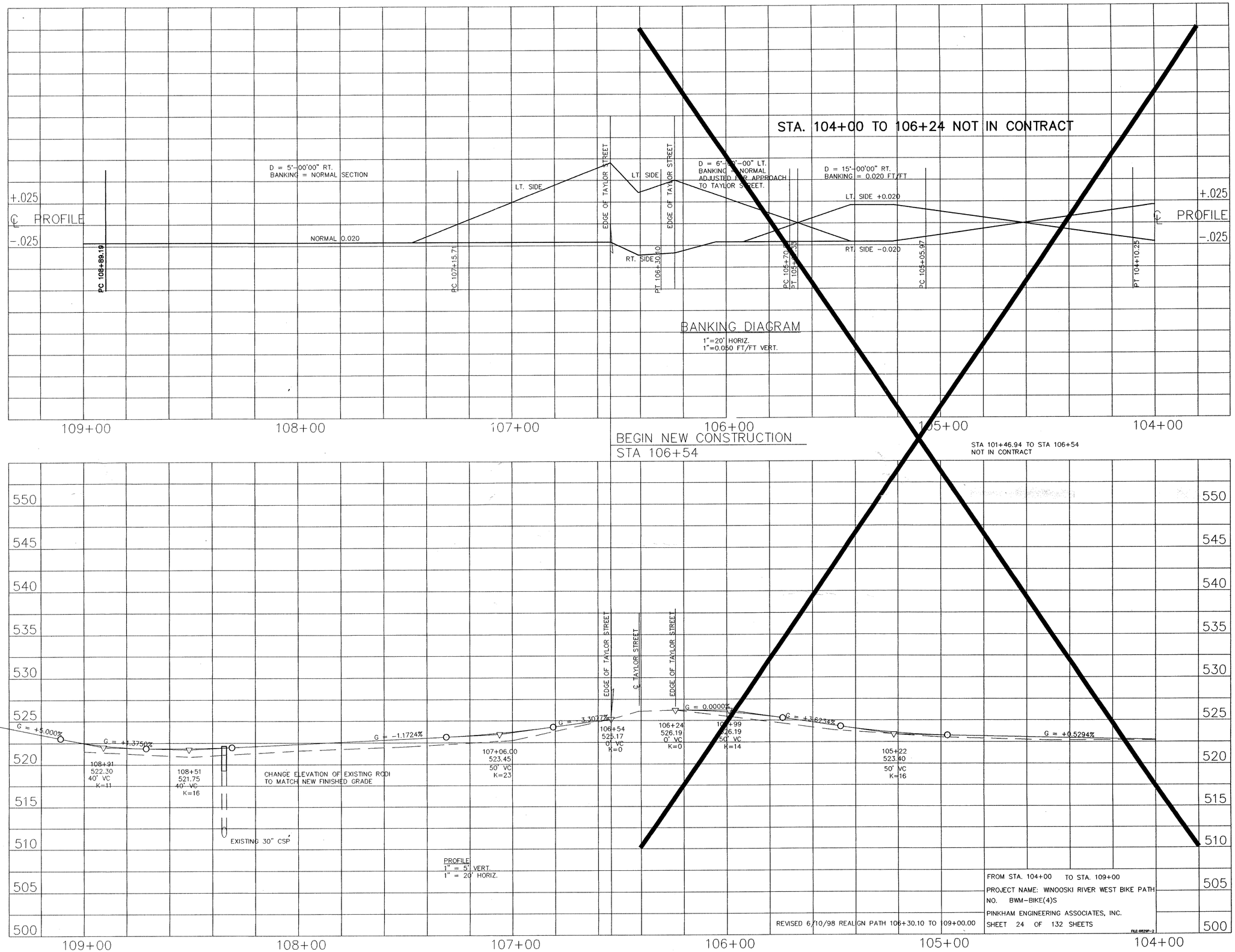
Lcrsv2.dwg

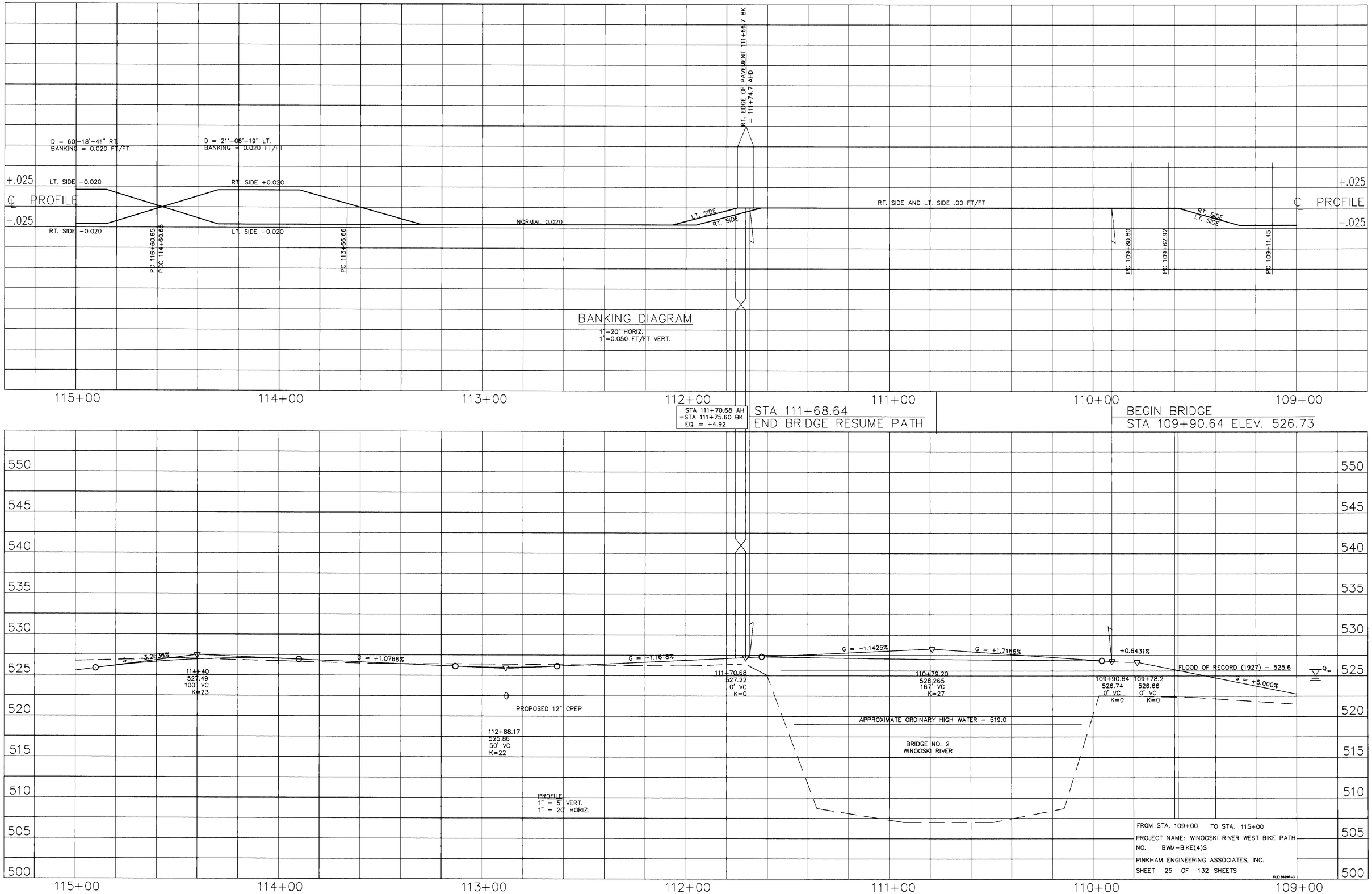
STA. 98+49.10 TO 104+00 NOT IN CONTRACT

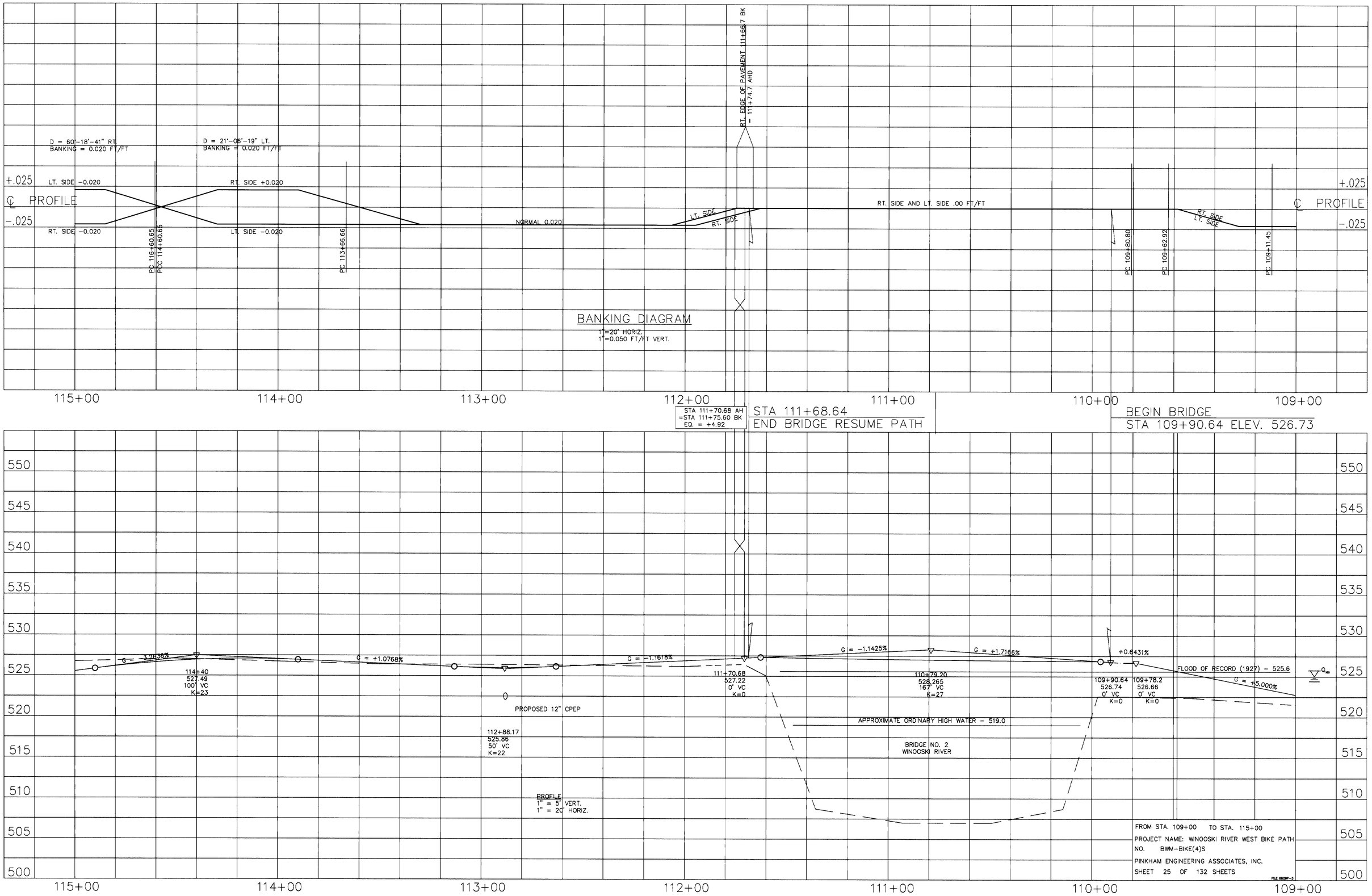


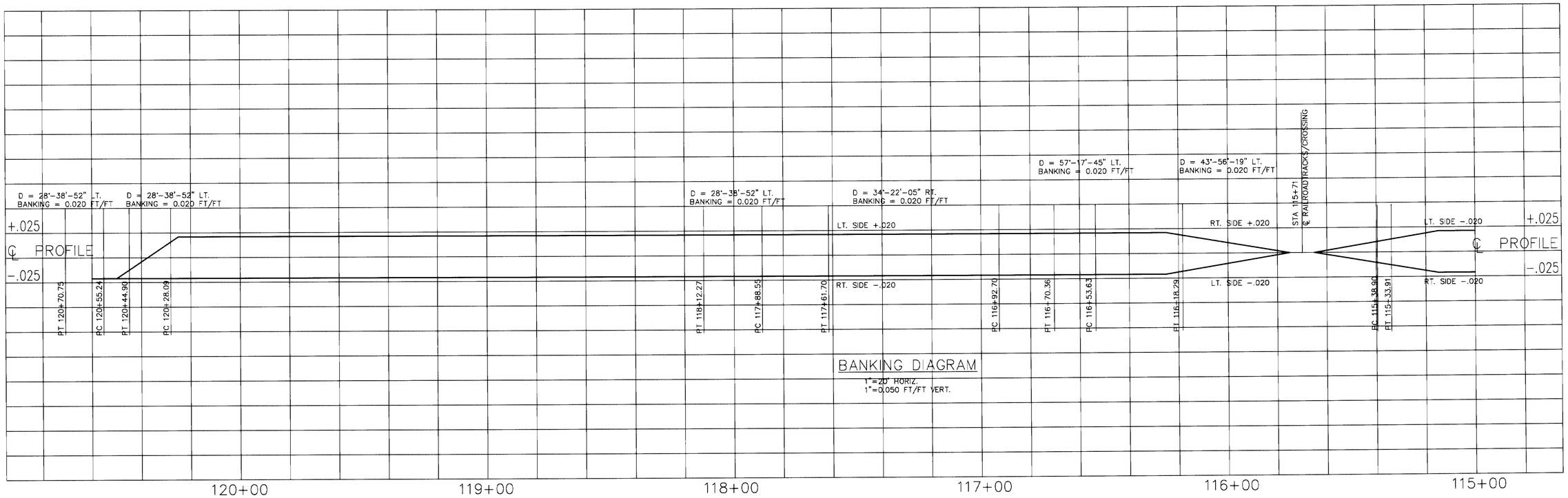
FROM STA. 98+53.5 TO STA. 104+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 23 OF 132 SHEETS

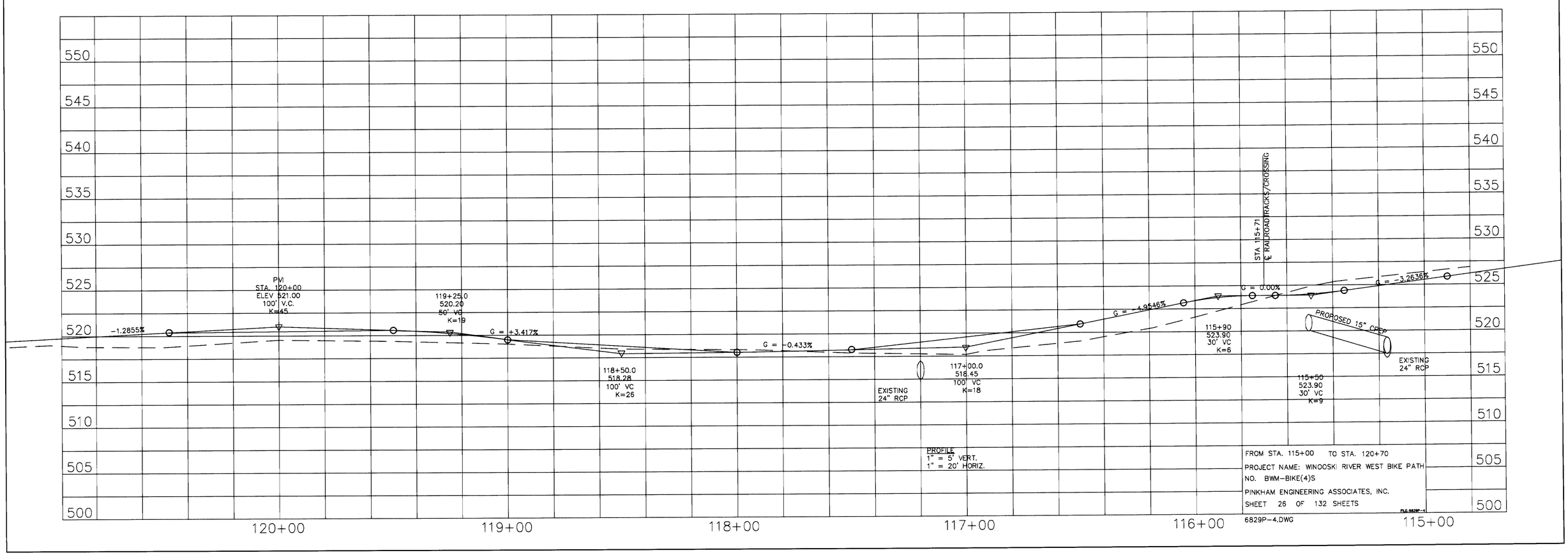
FILE: 8625-P1

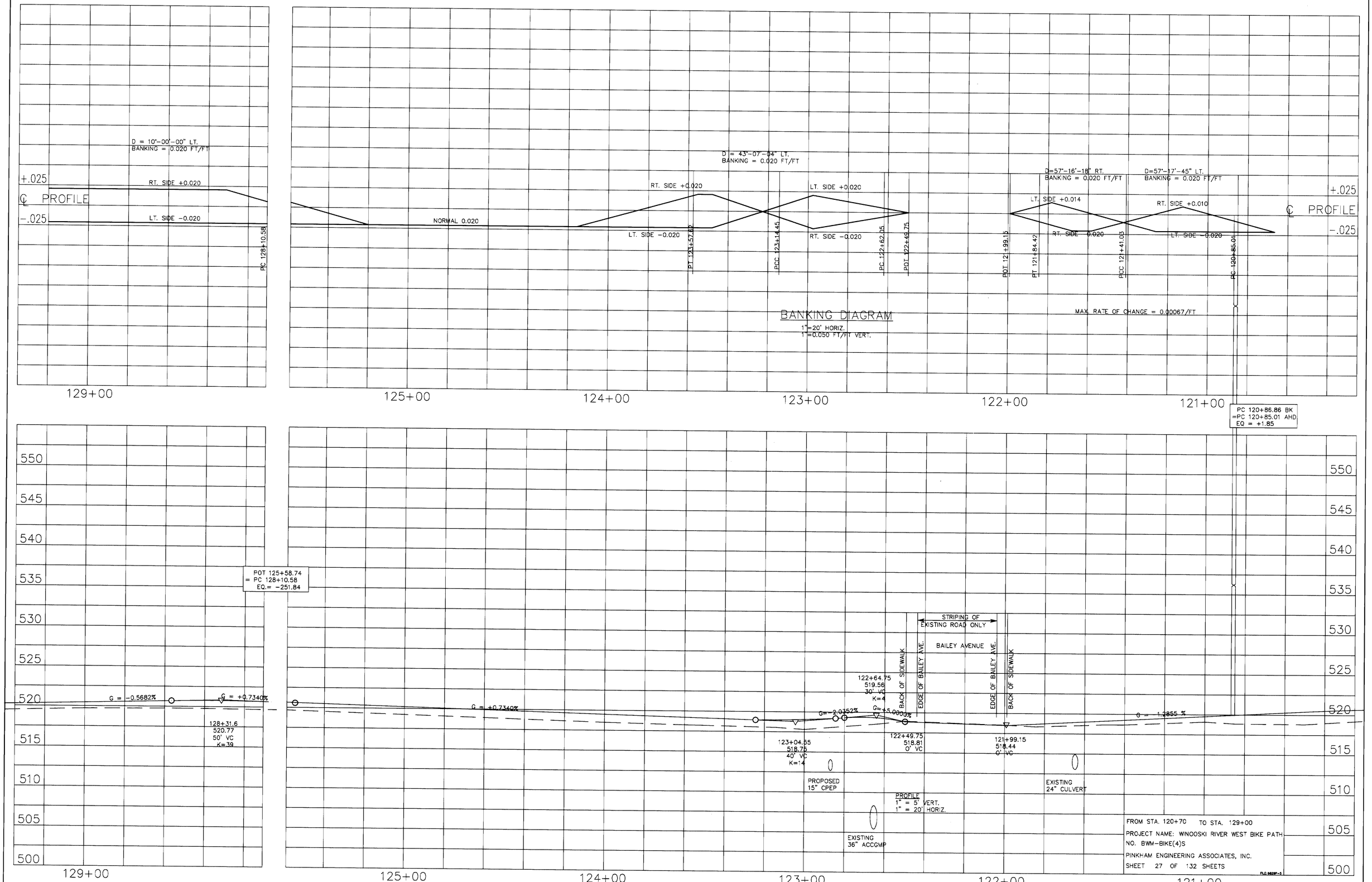

STA. 104+00 TO 106+24 NOT IN CONTRACT
D = 5°-00'00" RT.
BANKING = NORMAL SECTION
LT. SIDE
NORMAL 0.020
RT. SIDE
EDGE OF TAYLOR STREET
D = 6°-00'00" LT.
BANKING = NORMAL
ADJUSTED FOR APPROACH
TO TAYLOR STREET.
D = 15°-00'00" RT.
BANKING = 0.020 FT/FT
LT. SIDE +0.020
RT. SIDE -0.020
+.025
℄ PROFILE
-.025
PC 108+89.19
PC 107+15.71
PT 106+30.10
PC 105+05.97
PT 104+10.25
BANKING DIAGRAM
1"=20' HORIZ.
1"=0.050 FT/FT VERT.
109+00
108+00
107+00
106+00
105+00
104+00
BEGIN NEW CONSTRUCTION
STA 106+54
STA 101+46.94 TO STA 106+54
NOT IN CONTRACT
550
545
540
535
530
525
520
515
510
505
500
G = +5.000%
G = +1.3750%
G = -1.1724%
G = 3.3077%
G = 0.0000%
G = +3.6234%
G = +0.5294%
108+91
522.30
40' VC
K=11
108+51
521.75
40' VC
K=16
CHANGE ELEVATION OF EXISTING RCDI
TO MATCH NEW FINISHED GRADE
EXISTING 30" CSP
107+06.00
523.45
50' VC
K=23
106+54
525.17
0' VC
K=0
106+24
526.19
0' VC
K=0
106+99
526.19
50' VC
K=14
105+22
523.40
50' VC
K=16
PROFILE
1" = 5' VERT.
1" = 20' HORIZ.
REVISED 6/10/98 REALIGN PATH 106+30.10 TO 109+00.00
FROM STA. 104+00 TO STA. 109+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 24 OF 132 SHEETS

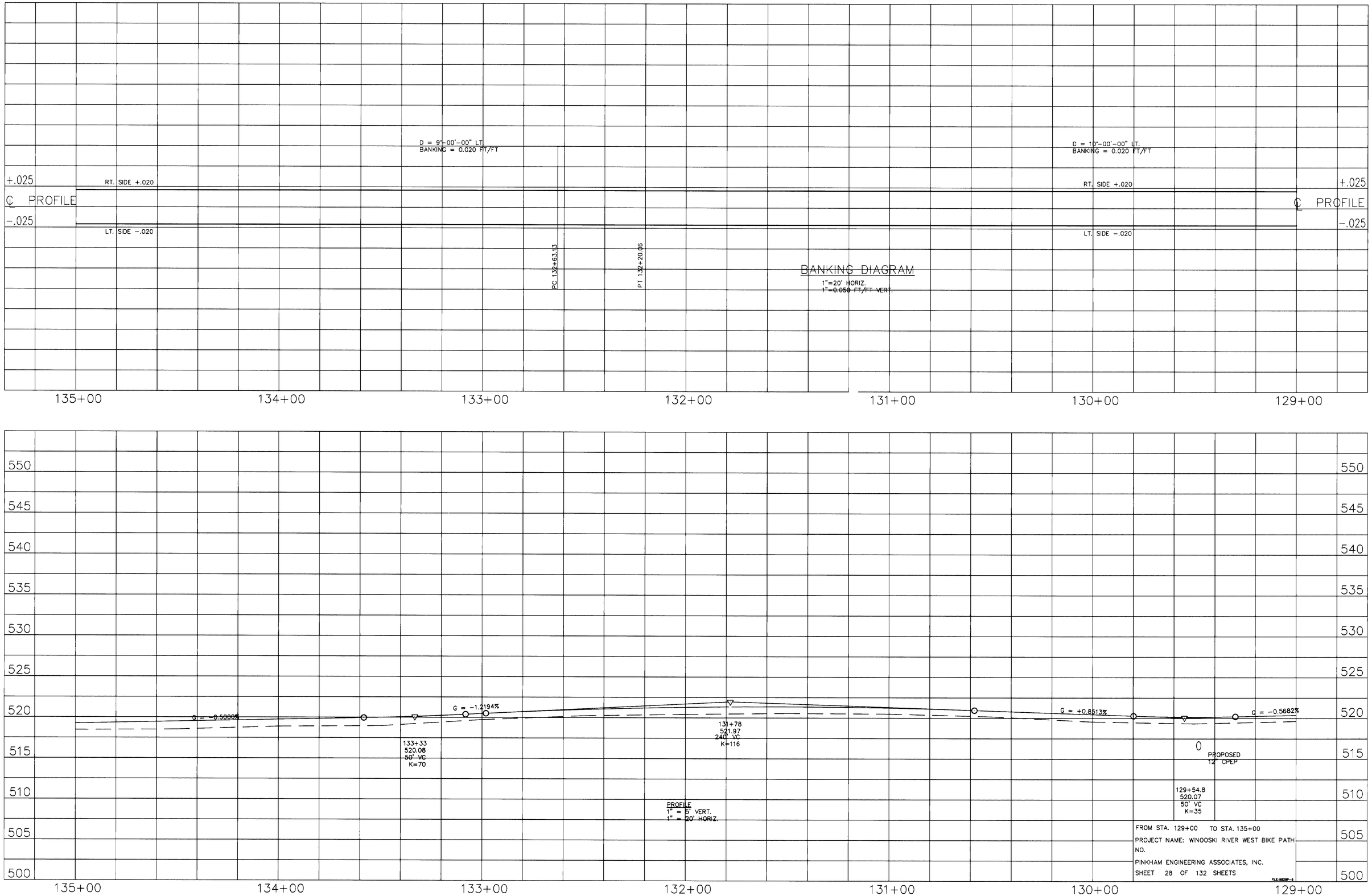

D = 60'-18'-41" RT.
BANKING = 0.020 FT/FT
D = 21'-06'-19" LT.
BANKING = 0.020 FT/FT
+.025
LT. SIDE -0.020
RT. SIDE +0.020
℄ PROFILE
-.025
RT. SIDE -0.020
LT. SIDE -0.020
NORMAL 0.020
LT. SIDE
RT. SIDE
RT. EDGE OF PAVEMENT 111+66.7 BK
= 111+74.7 AHD
RT. SIDE AND LT. SIDE .00 FT/FT
RT. SIDE
LT. SIDE
PC 116+60.65
PCC 114+60.65
PC 113+66.66
PC 109+80.80
PC 109+62.92
PC 109+11.45
BANKING DIAGRAM
1"=20' HORIZ.
1"=0.050 FT/FT VERT.
115+00
114+00
113+00
112+00
111+00
110+00
109+00
STA 111+70.68 AH
=STA 111+75.60 BK
EQ. = +4.92
STA 111+68.64
END BRIDGE RESUME PATH
BEGIN BRIDGE
STA 109+90.64 ELEV. 526.73
550
545
540
535
530
525
520
515
510
505
500
G = -3.2836%
114+40
527.49
100' VC
K=23
G = +1.0768%
G = -1.1618%
111+70.68
527.22
0' VC
K=0
G = -1.1425%
G = +1.7166%
110+79.20
526.266
167' VC
K=27
+0.6431%
109+90.64
526.74
0' VC
K=0
109+78.2
526.66
0' VC
K=0
FLOOD OF RECORD (1927) - 525.6
G = +5.000%
PROPOSED 12" CPEP
112+88.17
525.86
50' VC
K=22
APPROXIMATE ORDINARY HIGH WATER - 519.0
BRIDGE NO. 2
WINOOSKI RIVER
PROFILE
1" = 5' VERT.
1" = 20' HORIZ.
FROM STA. 109+00 TO STA. 115+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 25 OF 132 SHEETS

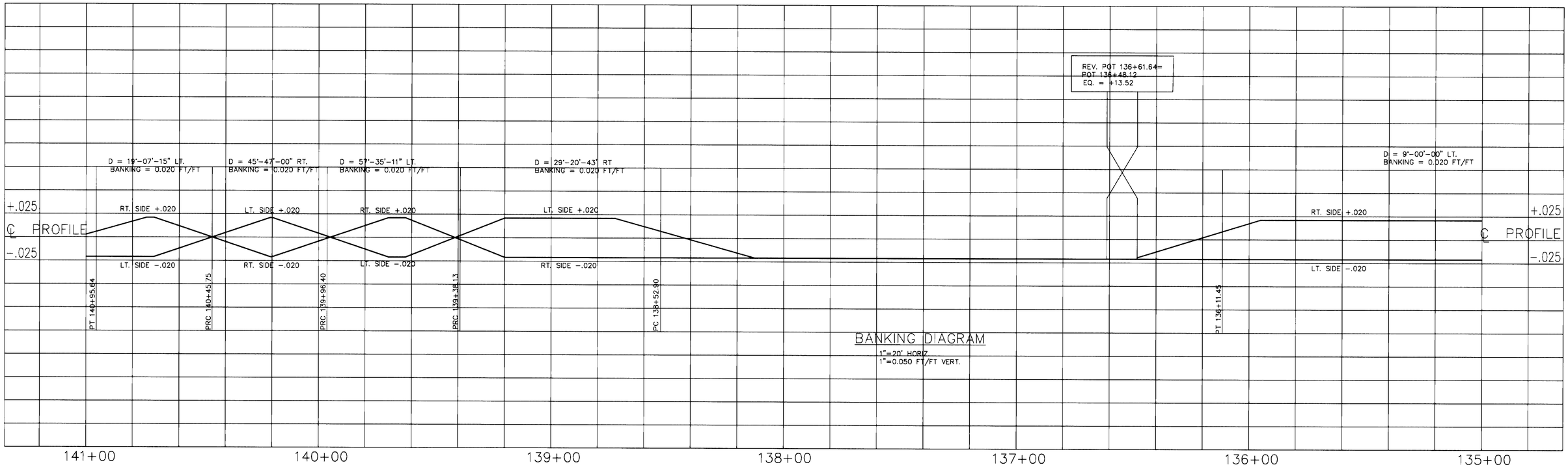

D = 60'-18'-4" RT.
BANKING = 0.020 FT/FT
D = 21'-06'-19" LT.
BANKING = 0.020 FT/FT
RT. EDGE OF PAVEMENT 111+66.7 BK
= 111+74.7 AHD
+.025
LT. SIDE -0.020
RT. SIDE +0.020
℄ PROFILE
-.025
RT. SIDE -0.020
LT. SIDE -0.020
NORMAL 0.020
LT. SIDE
RT. SIDE
RT. SIDE AND LT. SIDE .00 FT/FT
RT. SIDE
LT. SIDE
PC 116+60.65
PCC 114+60.65
PC 113+66.66
PC 109+80.80
PC 109+62.92
PC 109+11.45
BANKING DIAGRAM
1"=20' HORIZ.
1"=0.050 FT/FT VERT.
115+00
114+00
113+00
112+00
111+00
110+00
109+00
STA 111+70.68 AH
=STA 111+75.60 BK
EQ. = +4.92
STA 111+68.64
END BRIDGE RESUME PATH
BEGIN BRIDGE
STA 109+90.64 ELEV. 526.73
550
545
540
535
530
525
520
515
510
505
500
G = -3.2536%
G = +1.0768%
G = -1.1618%
G = -1.1425%
G = +1.7166%
+0.6431%
G = +5.000%
114+40
527.49
100' VC
K=23
111+70.68
527.22
0' VC
K=0
110+79.20
526.265
167' VC
K=27
109+90.64
526.74
0' VC
K=0
109+78.2
526.66
0' VC
K=0
FLOOD OF RECORD (1927) - 525.6
PROPOSED 12" CPEP
APPROXIMATE ORDINARY HIGH WATER - 519.0
112+88.17
525.86
50' VC
K=22
BRIDGE NO. 2
WINOOSKI RIVER
PROFILE
1" = 5' VERT.
1" = 20' HORIZ.
FROM STA. 109+00 TO STA. 115+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 25 OF 132 SHEETS

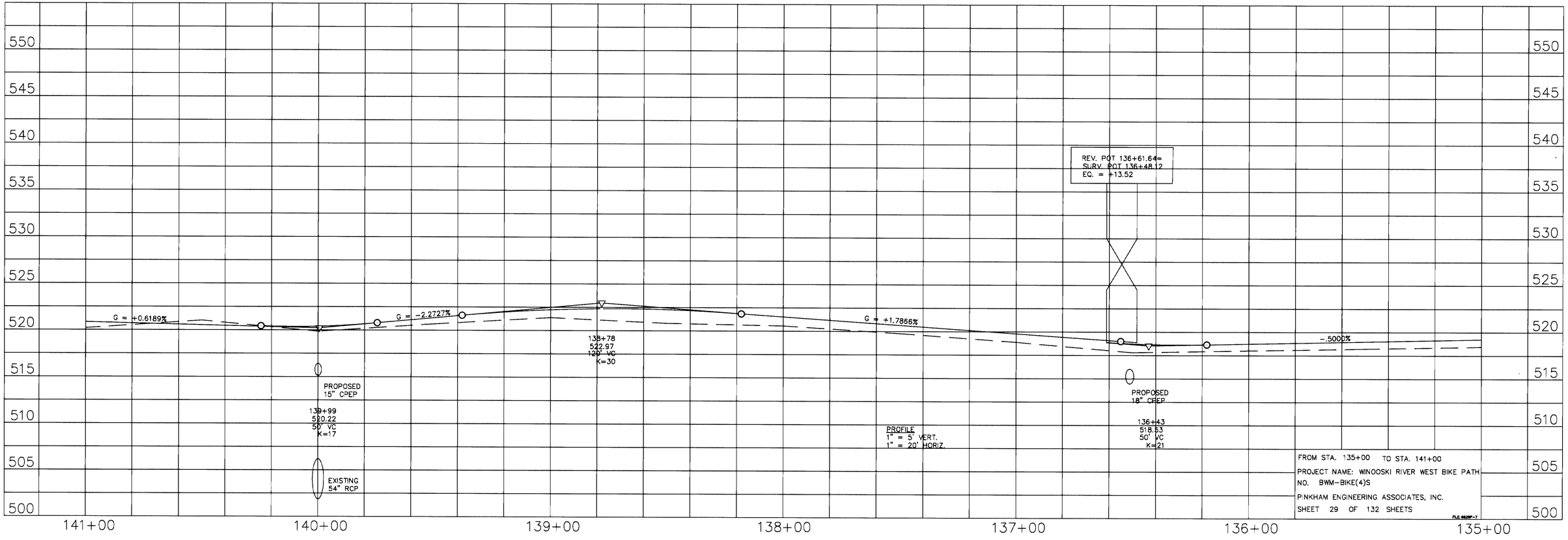

D = 28°-38'-52" LT.
BANKING = 0.020 FT/FT
D = 28°-38'-52" LT.
BANKING = 0.020 FT/FT
D = 28°-38'-52" LT.
BANKING = 0.020 FT/FT
D = 34°-22'-05" RT.
BANKING = 0.020 FT/FT
D = 57°-17'-45" LT.
BANKING = 0.020 FT/FT
D = 43°-56'-19" LT.
BANKING = 0.020 FT/FT
+.025
℄ PROFILE
-.025
LT. SIDE +.020
RT. SIDE +.020
LT. SIDE -.020
RT. SIDE -.020
LT. SIDE -.020
RT. SIDE -.020
STA 115+71
℄ RAILROAD TRACKS/CROSSING
PT 120+70.75
PC 120+55.24
PT 120+44.90
PC 120+28.09
PT 118+12.27
PC 117+88.55
PT 117+61.70
PC 116+92.70
PT 116+70.36
PC 116+53.63
PT 116+18.79
PC 115+38.90
PT 115+33.91
BANKING DIAGRAM
1"=20' HORIZ.
1"=0.050 FT/FT VERT.
120+00
119+00
118+00
117+00
116+00
115+00


550
545
540
535
530
525
520
515
510
505
500
-1.2855%
PVI
STA. 120+00
ELEV 521.00
100' V.C.
K=45
119+25.0
520.20
50' VC
K=19
G = +3.417%
118+50.0
518.28
100' VC
K=26
G = -0.433%
EXISTING
24" RCP
117+00.0
518.45
100' VC
K=18
G = 4.9546%
115+90
523.90
30' VC
K=6
STA 115+71
℄ RAILROAD TRACKS/CROSSING
G = 0.00%
PROPOSED 15" CPEP
G = -3.2636%
115+50
523.90
30' VC
K=9
EXISTING
24" RCP
PROFILE
1" = 5' VERT.
1" = 20' HORIZ.
FROM STA. 115+00 TO STA. 120+70
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 26 OF 132 SHEETS
6829P-4.DWG
120+00
119+00
118+00
117+00
116+00
115+00


D = 10°-00'-00" LT.
BANKING = 0.020 FT/FT
+.025
RT. SIDE +0.020
℄ PROFILE
-.025
LT. SIDE -0.020
PC 128+10.58
D = 43°-07'-04" LT.
BANKING = 0.020 FT/FT
RT. SIDE +0.020
LT. SIDE +0.020
NORMAL 0.020
LT. SIDE -0.020
RT. SIDE -0.020
PT 123+57.62
PCC 123+14.45
PC 122+62.05
POT 122+49.75
D=57°-16'-18" RT.
BANKING = 0.020 FT/FT
D=57°-17'-45" LT.
BANKING = 0.020 FT/FT
LT. SIDE +0.014
RT. SIDE +0.010
RT. SIDE 0.020
LT. SIDE -0.020
POT 121+99.15
PT 121+84.42
PCC 121+41.03
PC 120+85.01
BANKING DIAGRAM
1"=20' HORIZ.
1"=0.050 FT/FT VERT.
MAX. RATE OF CHANGE = 0.00067/FT
129+00
125+00
124+00
123+00
122+00
121+00
PC 120+86.86 BK
=PC 120+85.01 AHD
EQ = +1.85
550
545
540
535
530
525
520
515
510
505
500
POT 125+58.74
= PC 128+10.58
EQ.= -251.84
G = -0.5682%
G = +0.7340%
128+31.6
520.77
50' VC
K=39
G = +0.7340%
G = -2.0352%
G = +5.0000%
122+64.75
519.56
30' VC
K=4
123+04.55
518.75
40' VC
K=14
122+49.75
518.81
0' VC
121+99.15
518.44
0' VC
G = 1.2855 %
STRIPING OF
EXISTING ROAD ONLY
BAILEY AVENUE
BACK OF SIDEWALK
EDGE OF BAILEY AVE.
EDGE OF BAILEY AVE.
BACK OF SIDEWALK
PROPOSED
15" CPEP
EXISTING
36" ACCGMP
EXISTING
24" CULVERT
PROFILE
1" = 5' VERT.
1" = 20' HORIZ.
FROM STA. 120+70 TO STA. 129+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 27 OF 132 SHEETS


D = 9°-00'-00" LT.
BANKING = 0.020 FT/FT
D = 10°-00'-00" LT.
BANKING = 0.020 FT/FT
+.025
RT. SIDE +.020
℄ PROFILE
-.025
LT. SIDE -.020
PC 132+63.13
PT 132+20.06
BANKING DIAGRAM
1"=20' HORIZ.
1"=0.050 FT/FT VERT.
135+00
134+00
133+00
132+00
131+00
130+00
129+00
550
545
540
535
530
525
520
515
510
505
500
G = -0.5000%
G = -1.2194%
133+33
520.08
50' VC
K=70
131+78
521.97
240' VC
K=116
G = +0.8513%
G = -0.5682%
PROPOSED
12" CPEP
129+54.8
520.07
50' VC
K=35
PROFILE
1" = 5' VERT.
1" = 20' HORIZ.
FROM STA. 129+00 TO STA. 135+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO.
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 28 OF 132 SHEETS





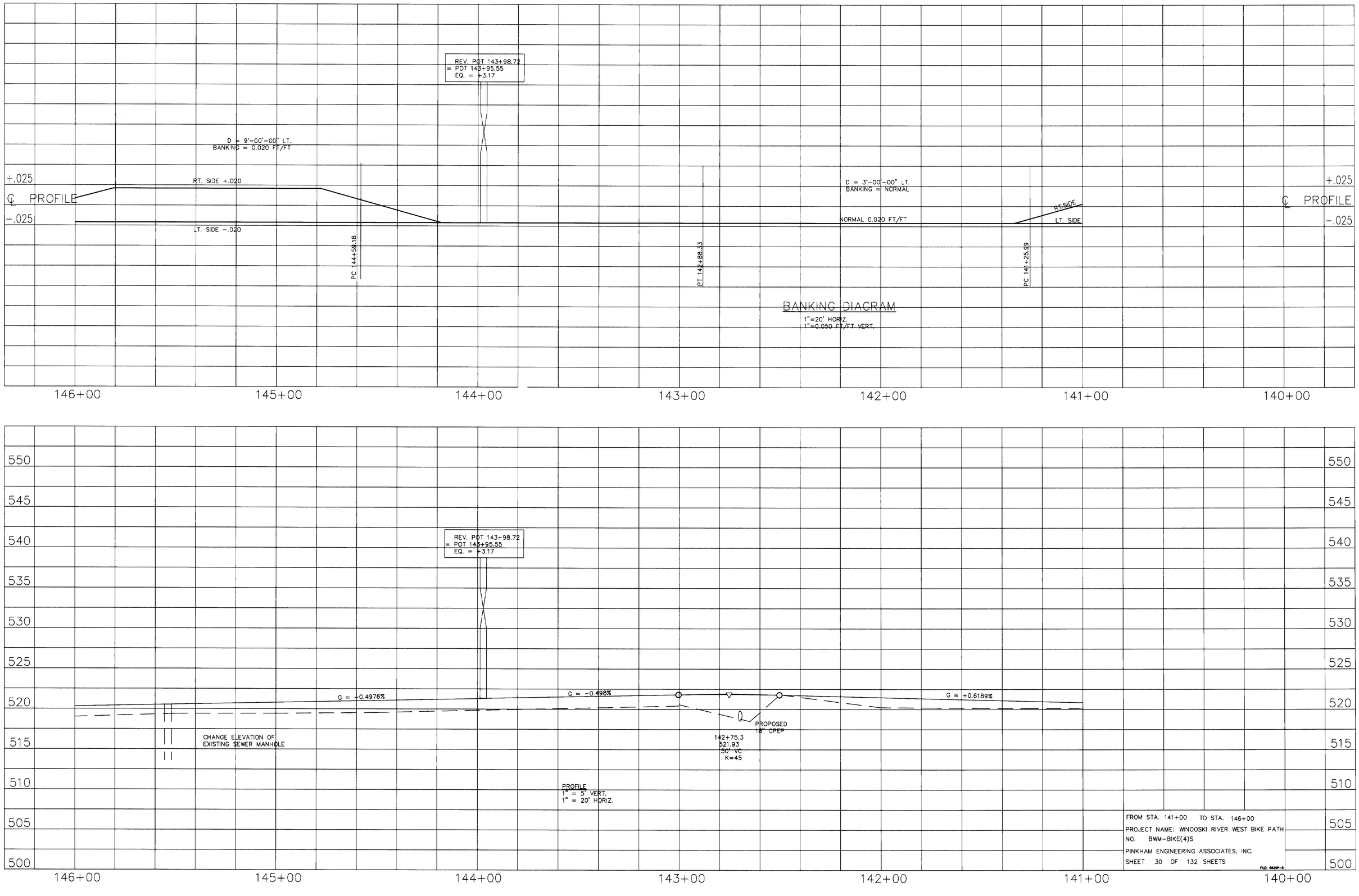
FROM STA. 135+00 TO STA. 141+00

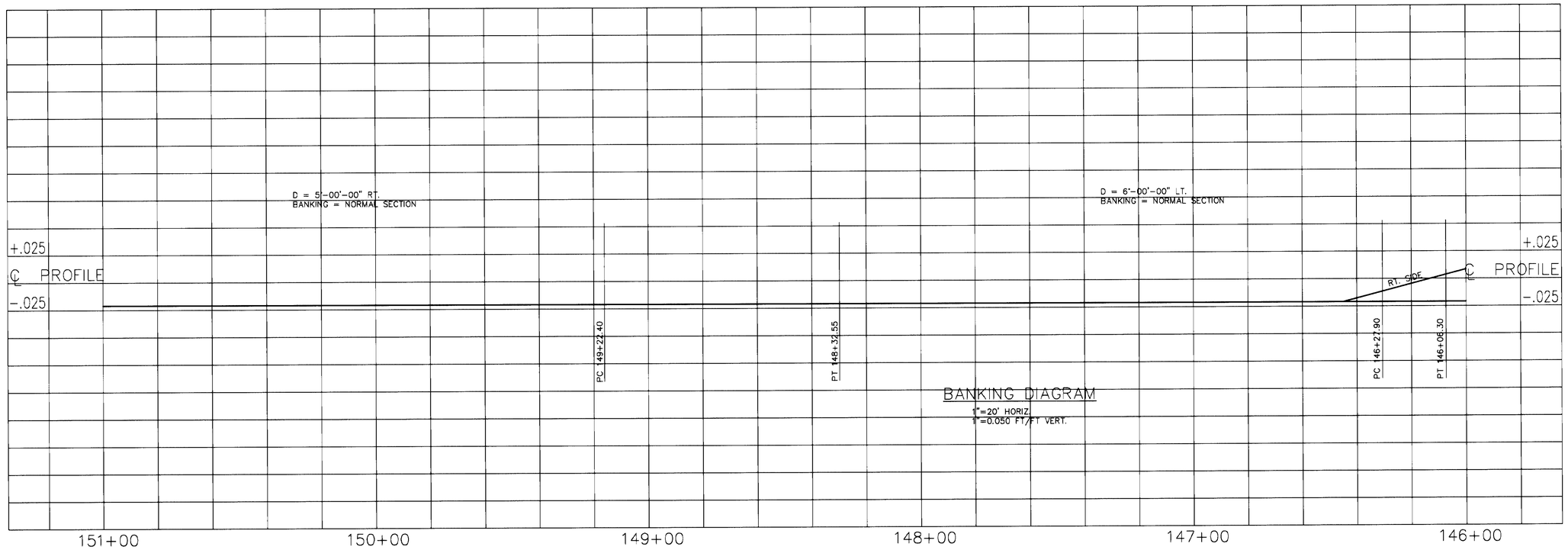
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

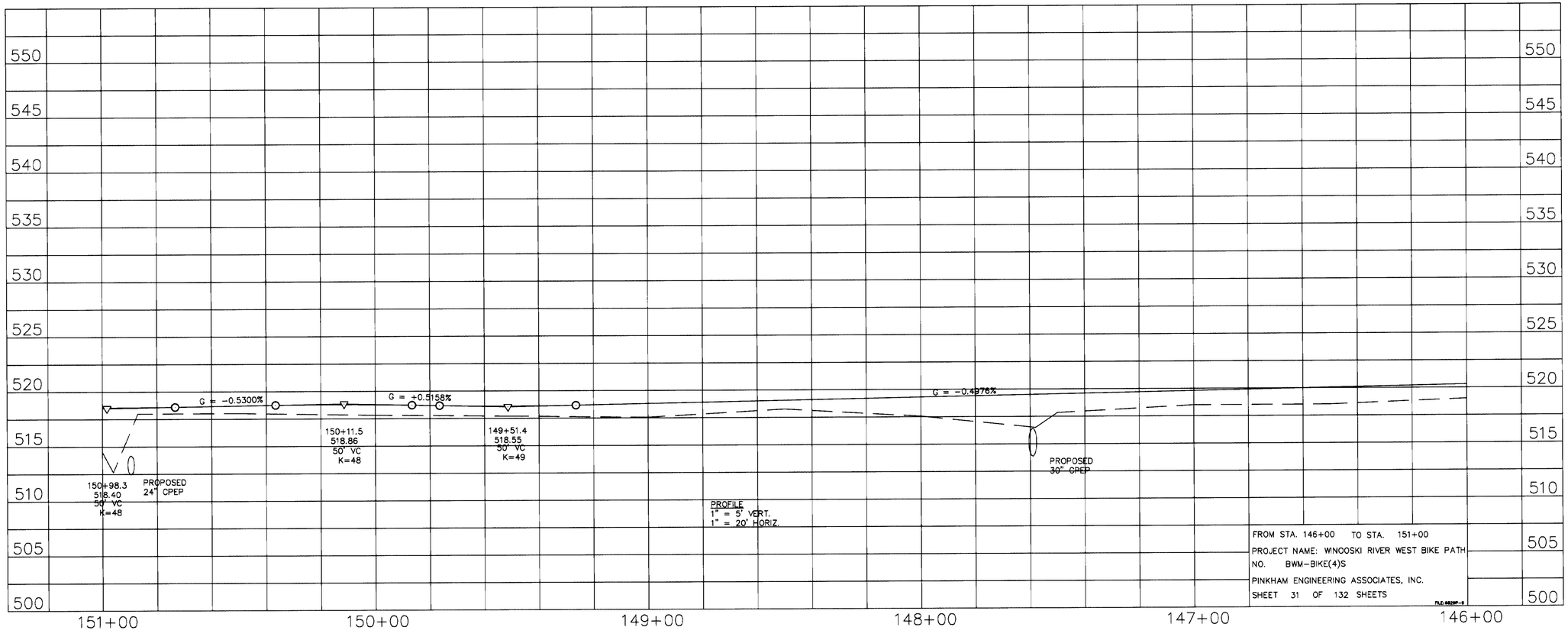
NO. BWM-BIKE(4)S

PINKHAM ENGINEERING ASSOCIATES, INC.

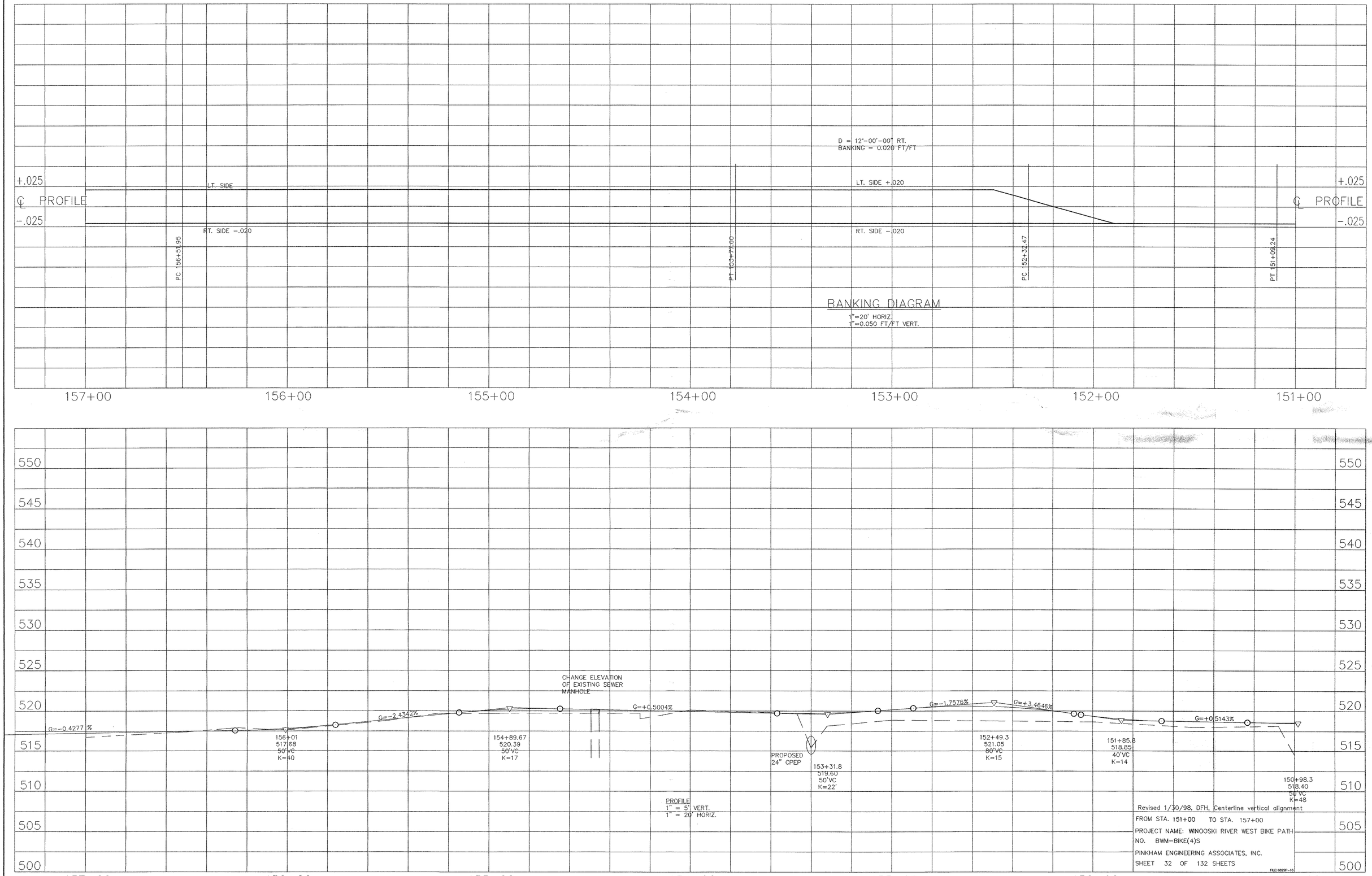
SHEET 29 OF 132 SHEETS


REV. POT 143+98.72
= POT 143+95.55
EQ. = +3.17
D = 9°-00'-00" LT.
BANKING = 0.020 FT/FT
+.025
℄ PROFILE
-.025
RT. SIDE +.020
LT. SIDE -.020
PC 144+59.18
PT 142+88.33
D = 3°-00'-00" LT.
BANKING = NORMAL
NORMAL 0.020 FT/FT
RT. SIDE
LT. SIDE
PC 141+25.99
BANKING DIAGRAM
1"=20' HORIZ.
1"=0.050 FT/FT VERT.
146+00
145+00
144+00
143+00
142+00
141+00
140+00
550
545
540
535
530
525
520
515
510
505
500
G = -0.4976%
G = -0.498%
G = +0.6189%
PROPOSED
18" CPEP
142+75.3
521.93
50' VC
K=45
CHANGE ELEVATION OF
EXISTING SEWER MANHOLE
PROFILE
1" = 5' VERT.
1" = 20' HORIZ.
FROM STA. 141+00 TO STA. 146+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 30 OF 132 SHEETS





FROM STA. 146+00 TO STA. 151+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 31 OF 132 SHEETS


D = 12°-00'-00" RT.
BANKING = 0.020 FT/FT
+.025
℄ PROFILE
-.025
LT. SIDE
RT. SIDE -.020
LT. SIDE +.020
RT. SIDE -.020
PC 156+51.95
PT 153+77.60
PC 152+32.47
PT 151+09.24
BANKING DIAGRAM
1"=20' HORIZ.
1"=0.050 FT/FT VERT.
157+00
156+00
155+00
154+00
153+00
152+00
151+00
550
545
540
535
530
525
520
515
510
505
500
G=-0.4277 %
G=-2.4342%
CHANGE ELEVATION
OF EXISTING SEWER
MANHOLE
G=+0.5004%
G=-1.7576%
G=+3.4646%
G=+0.5143%
156+01
517.68
50'VC
K=40
154+89.67
520.39
50'VC
K=17
PROPOSED
24" CPEP
153+31.8
519.60
50'VC
K=22'
152+49.3
521.05
80'VC
K=15
151+85.8
518.85
40'VC
K=14
150+98.3
518.40
50'VC
K=48
PROFILE
1" = 5' VERT.
1" = 20' HORIZ.
Revised 1/30/98, DFH, Centerline vertical alignment
FROM STA. 151+00 TO STA. 157+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 32 OF 132 SHEETS
FILE:6829P-10

TRAFFIC SIGN SUMMARY SHEET

STATION	SIGN LEGEND	NEW SIGNS				NEW SIGN POSTS			REMARKS
		SIGN DIMENSIONS	MUTCD NO.	SHEET NO.	AREA	NUMBER OF POSTS	FLANGED CHANNEL 2.0 LB./FT.	FLANGED CHANNEL 3.0 LB./FT.	
98+45 RT	STOP	18"x18"	R1-1	10	2.25	1		X	
98+45 RT	NO MOTOR VEHICLES	24"x24"	R5-3	10	4.0				
98+90 RT	BIKE ROUTE M	24"x18" 12"x9"	D11-1 M7-1	10 10	3.0 .75	1	X		
98+97 RT	E-107 TYPE III	12"x36"	E-107 TYPE III	10	3.0				ATTACH TO BRIDGE STRUCTURE
98+97 LT	E-107 TYPE III	12"x36"	E-107 TYPE III	10	3.0				ATTACH TO BRIDGE STRUCTURE
98+97 LT	CHEV BIKE ROUTE	12"x4" 24"x18"	M4-12 D11-1	10 10	.25 3.0	1	X		
99+76 RT	STOP AHEAD	18"x18"	W3-1	10	2.25	1	X		
100+27 LT	E-107 TYPE III	12"x36"	E-107 TYPE III	10	3.0				ATTACH TO BRIDGE STRUCTURE
100+27 RT	E-107 TYPE III	12"x36"	E-107 TYPE III	10	3.0				ATTACH TO BRIDGE STRUCTURE
100+52 RT	STOP AHEAD	18"x18"	W3-1	10	2.25	1	X		
100+52 RT	RR	18" DIA.	W10-1	10	1.76	1	X		
101+44 RT	STOP CHEV BIKE ROUTE	18"x18" 12"x4" 24"x18"	R1-1 M4-12 D11-1	10 10 10	2.25 .25 3.0	1		X	
101+44 LT	BIKE ROUTE M NO MOTOR VEHICLES	24"x18" 12"x9" 24"x24"	D11-1 M7-1 R5-3	10 10 10	3.0 .75 4.0	1		X	
106+54 ±250' RT TAYLOR ST.	W11-1	30"x30"	W11-1	11	6.25	1		43.5 X	SEE SHEET 36
106+54 ±250' LT TAYLOR ST.	W11-1	30"x30"	W11-1	11	6.25	1		42 X	SEE SHEET 36
106+59 RT	NO MOTOR VEHICLES BIKE ROUTE M	24"x24" 24"x18" 12"x9"	R5-3 D11-1 M7-1	11 11 11	4.0 3.0 .75	1		43.5 X	SEE SHEET 36 SEE SHEET 36 SEE SHEET 36
106+59 LT	STOP CHEV BIKE ROUTE	18"x18" 12"x4" 24"x18"	R1-1 M4-12 D11-1	11 11 11	2.25 .25 3.0	1		42 X	SEE SHEET 36 SEE SHEET 36
108+00 ~~107+52 LT~~	STOP AHEAD	18"x18"	W3-1	11	2.25	1	25 X		SEE SHEET 36
108+35 ~~+84~~ RT	STOP AHEAD	18"x18"	W3-1	11	2.25	1	25 X		SEE SHEET 36
109+62 RT	STOP	18"x18"	R1-1	12	2.25	1	24 X		SEE STD E-143
109+81 RT	E-107 TYPE III	12"x36"	E-107 TYPE III	12	3.0				SEE STD E-107 & E-120 ATTACH TO BRIDGE STRUCTURE
109+91 LT	E-107 TYPE III	12"x36"	E-107 TYPE III	12	3.0				SEE STD E-107 & E-120 ATTACH TO BRIDGE STRUCTURE
109+96 LT	STOP	18"x18"	R1-1	12	2.25	1	24 X		SEE STD E-143
TOTALS					40.75		98 ~~4~~	171 ~~4~~	

STATION	SIGN LEGEND	NEW SIGNS				NEW SIGN POSTS			REMARKS
		SIGN DIMENSIONS	MUTCD NO.	SHEET NO.	AREA	NUMBER OF POSTS	FLANGED CHANNEL 2.0 LB./FT.	FLANGED CHANNEL 3.0 LB./FT.	
111+69 RT	E-107 TYPE III	12"x36"	E-107 TYPE III	12	3.0				SEE STD E-107 & E-120 ATTACH TO BRIDGE STRUCTURE
111+69 LT	E-107 TYPE III	12"x36"	E-107 TYPE III	12	3.0				SEE STD E-107 & E-120 ATTACH TO BRIDGE STRUCTURE
111+71 RT	STOP	18"x18"	R1-1	12	2.25	1	25 X		SEE STD E 143
111+77 LT	BIKE ROUTE M NO MOTOR VEHICLES	24"x18" 12"x9" 24"x24"	D11-1 M7-5 R5 3	12 12 12	3.0 .75 4.0	1		43.5 X	SEE SHEET 36 SEE SHEET 36 SEE SHEET 36
111+87 LT	STOP	18"x18"	R1-1	12	2.25	1	24 X		SEE STD E-143
113+00 ~~112+73~~ LT	STOP AHEAD	18"x18"	W3-1	12	2.25	1	26 X		SEE SHEET 36
113+75 ~~115+10~~ RT	RR	18" DIA.	W10-1	13	1.76	1	~~X~~	40.5 X	SEE SHEET 36
117+80 ~~116+30~~ LT	RR	18" DIA.	W10-1	13	1.76	1	~~X~~	40.5 X	SEE SHEET 36
120+50 ~~121+00~~ RT	STOP AHEAD	18"x18"	W3-1	13	2.25	1	25 X		SEE SHEET 36
121+97 RT	STOP	18"x18"	R1-1	14	2.25	1	24 X		SEE STD E-143
121+97 LT	NO MOTOR VEHICLES	24"x24"	R5-3	14	4.0	1	25 X		SEE SHEET 36
122+00 RT	BIKE ROUTE M	24"x18" 12"x9"	D11-1 M7-5	17 12	3.0 .75	1		39 X	SEE SHEET 36 SEE SHEET 36
122+52 ±250' RT BAILEY AVE.	W11-1	30"x30"	W11-1	14	6.25	1		0 X	SEE SHEET 36
122+00 ±250' LT BAILEY AVE.	W11-1	30"x30"	W11-1	14	6.25	1		40.5 X	SEE SHEET 36
122+52 LT	BIKE ROUTE M	24"x18" 12"x9"	D11-1 M7-5	17 12	3.0 .75	1		40.5 X	SEE SHEET 36 SEE SHEET 36
122+52 RT	NO MOTOR VEHICLES	24"x24"	R5-3	14	4.0	1	25 X		SEE SHEET 36
122+52 LT	STOP	18"x18"	R1-1	14	2.25	1	24 X		SEE STD E-143
124+00 LT ~~123+50 LT~~	STOP AHEAD	18"x18"	W3-1	14	2.25	1	25 X		SEE SHEET 36
ELIMINATED ~~138+60 LT~~	E-107 TYPE III	12"x36"	E-107 TYPE III	16	3.0				~~SEE STD E-107 & E-120 ATTACH TO BACKSTOP FENCE~~
143+25 ~~+22~~ LT	E-107 TYPE III	12"x36"	E-107 TYPE III	17	3.0	1	26 X		SEE STD E-107 & E-120
143+25 ~~+22~~ LT	E-107 TYPE III	12"x36"	E-107 TYPE III	17	3.0	1	~~X~~		BACK TO BACK WITH SIGN ABOVE
144+68 LT	NO MOTOR VEHICLES	24"x24"	R5-3	17	4.0	1	26 X		SEE SHEET 36
144+72 RT	M M	6"x24" 6"x24"	D1-1b(R) D1-1b(L)	17 17	1.0 1.0	1	24 X		SEE SHEET 36 SEE SHEET 36
144+77 LT	BIKE ROUTE	24"x18"	D11-1	17	3.0	1	24 X		SEE SHEET 36
TOTALS					85.02		323 ~~16~~	244.5 ~~5~~	

FINAL LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE DESIGN DIVISION'S "SIGN POST DESIGN MANUAL".

PROJECT NAME MONTPELIER-WINOOSKI RIVER WEST BIKEWAY
PROJECT NUMBER BWM-BIKE (4)S

PLOT 6829SIGN

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 5

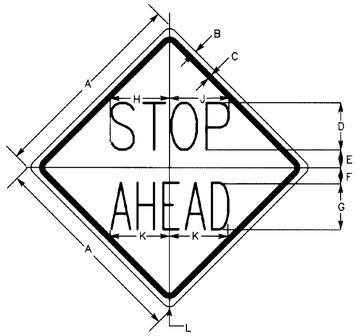
Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH ~~(mm)~~ IN.	HEIGHT ~~(mm)~~ IN.	NEW & SALVAGED SIGNS "A" SF	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS: FLANGED CHANNEL LB./FT. 2.0 ~~kg/m~~ ~~1.7~~	3.0	4.5	SQUARE STEEL (mm) kg/m 44 / 3.4	50 / 3.9	63 / 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) kg/m 75 / 1.9	100 / 2.5	100 MOD / 2.5	FOUND-ATION	TUBULAR STEEL Ø (mm) kg/m 75 / 11.3	89 / 13.4	100 / 16.1	125 / 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
115+60 RT.	RAIL CROSSING ROAD		48" 48"	9" 9"	3 3								39.0 X																							
116+0 LT.	RAIL CROSSING ROAD		48" 48"	9" 9"	3 3								37.5 X																							
106+59 RT.			36"	36"	9		1						42.0 X																					ADDITIONAL		
147+10 LT.	NO MOTOR VEHICLES		24"	24"	4							25.0 X																								
155+95 LT.			12"	36"	3							27.0 X																								
155+95 RT.	NO MOTOR VEHICLES		24"	24"	4							25.0 X																								
GIVEN TO CITY	BIKE ROUTE		24"	24"	4																															
GIVEN TO CITY			12"	9"	0.75																															
GIVEN TO CITY	BIKE ROUTE		24"	24"	4																															
GIVEN TO CITY			12"	9"	0.75																															
GIVEN TO CITY			12"	9"	0.75																															
159+25 LT.	NO MOTOR VEHICLES		24"	24"	4							25.0 X																								
143+50 LT.	NO MOTOR VEHICLES		24"	24"	4							25.0 X																								
												m 127	m	m 118.5	m	m	m		EA	kg	kg	kg		kg	kg	kg	kg								
												245.5 LBS.																								
TOTALS					m²	m²	EA	m²				m			m					kg			EA	kg				EA	EA	kg					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

FILE NAME =$FILE$
DATE/TIME =$DATE$
USER =$HTUSER$

PROJECT: MONTPELIER	PROJECT NO.: BWM BIKE (4)S
DESIGN FILE NAME:	
IPARM FILE NAME: pb054ss05.I	PLOT DATE: 12/00
SURVEYED BY: N/A	SURVEY DATE: N/A
SQUAD LEADER:	DRAWN BY:
	SHEET: 35A OF 132

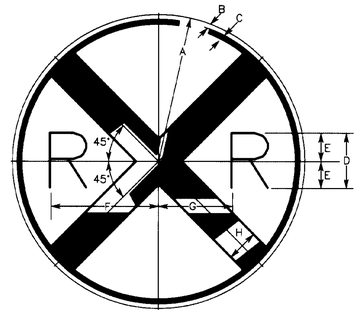


W3-1

SIGN	DIMENSIONS (INCHES)										
	A	B	C	D	E	F	G	H	J	K	L
BIKE	18	3/8	5/8	3D	1-3/4	3/4	3C	4-3/4	5-1/4	5-3/8	1-1/2

COLORS

LEGEND -BLACK (NON-REFL)
BACKGROUND-YELLOW (REFL)

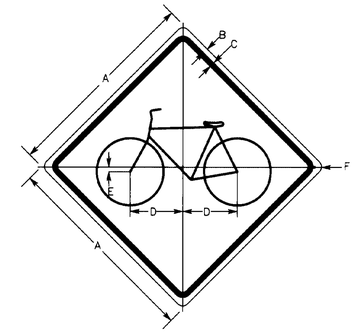


W10-1

SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
MIN.	15	3/8	5/8	7E	3-1/2	12-3/8	7-1/8	3

COLORS

LEGEND -BLACK (NON-REFL)
BACKGROUND-YELLOW (REFL)

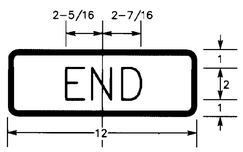


W11-1

SIGN	DIMENSIONS (INCHES)					
	A	B	C	D	E	F
STD.	24	3/8	5/8	6-11/16	13/16	1-1/2

COLORS

LEGEND -BLACK (NON-REFL)
BACKGROUND-YELLOW (REFL)



M4-12

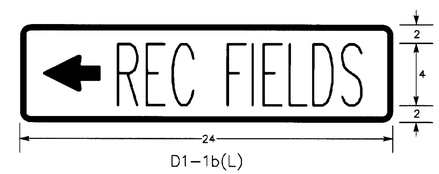
COLORS

LEGEND -WHITE (REFL)
BACKGROUND-GREEN (REFL)

D1-1b(R)

COLORS

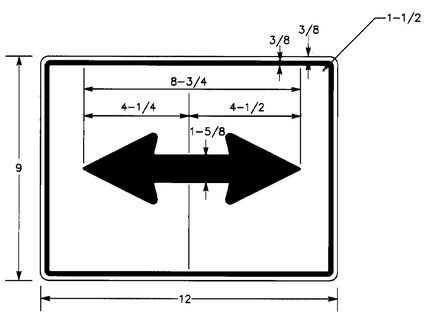
LEGEND -WHITE (REFL)
BACKGROUND-GREEN (REFL)



D1-1b(L)

COLORS

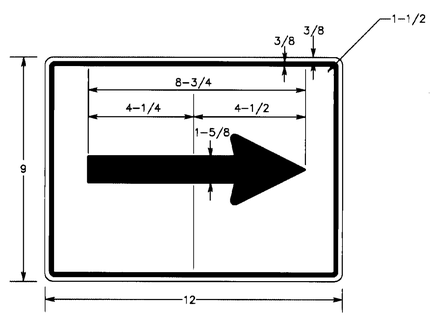
LEGEND -WHITE (REFL)
BACKGROUND-GREEN (REFL)



M7-5

COLORS

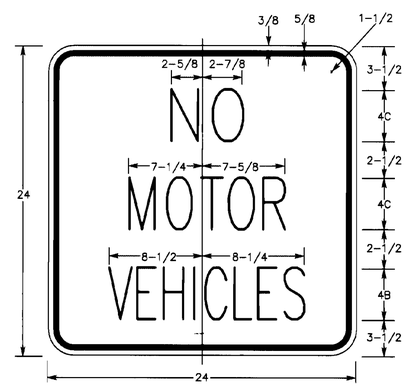
LEGEND -WHITE (REFL)
BACKGROUND-GREEN (NON-REFL)



M7-1

COLORS

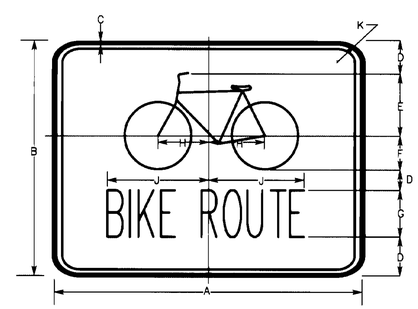
LEGEND -WHITE (REFL)
BACKGROUND-GREEN (NON-REFL)



R5-3

COLORS

LEGEND -BLACK (NON-REFL)
BACKGROUND-WHITE (REFL)



D11-1

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
STD-MIN	24	18	1/2	1-1/2	7	3-1/2	3C	5-1/2	9-1/2	1-1/2

COLORS

LEGEND -WHITE (REFL)
BACKGROUND-GREEN

ADDITIONAL PROJECT SIGNS

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
The Maltex Building, 431 Pine St., Burlington, VT 05401

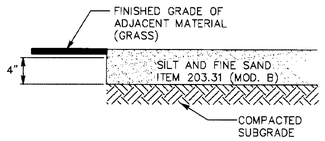
SURVEYED BY PEA DATE
DRAWN BY NPN DATE
SQUAD LEADER

DESIGN FILE NO. 6829DET8 DATE PLOTTED 9/25/96

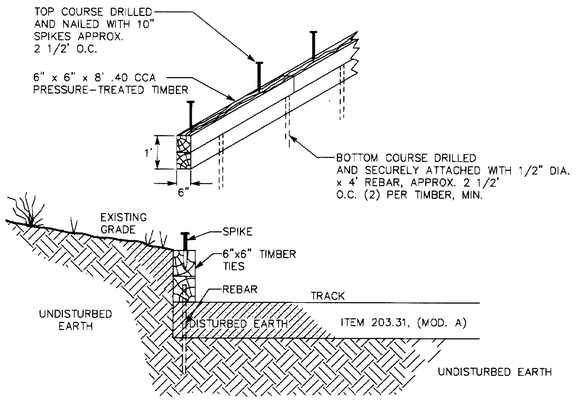
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY BWM-BIKE(4)S

PROJ. NO. 6829

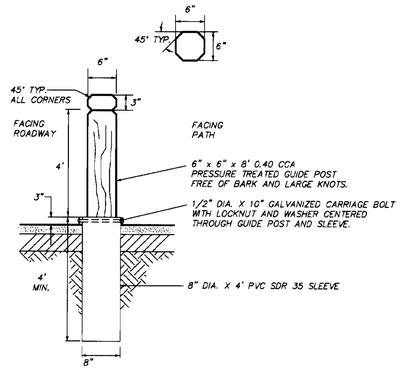
SHEET 36 OF 132 SHEETS



RELOCATED SOFTBALL FIELD TYPICAL
N.T.S.

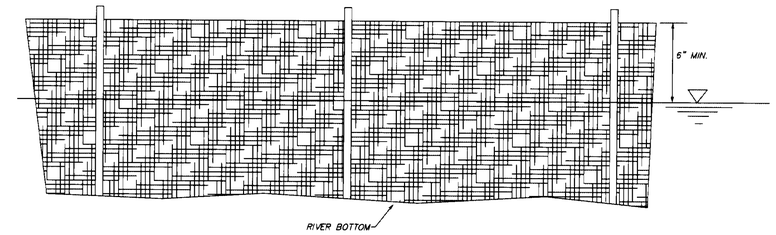


TIMBER RETAINING WALL TYPICAL
N.T.S.
ITEM 616.35, TREATED TIMBER CURB (MOD. B)



NOTE: CORNERS OF WOOD BOLLARD MAY REQUIRE CHAMFERING TO PROVIDE ADEQUATE FIT INTO PVC SLEEVE.

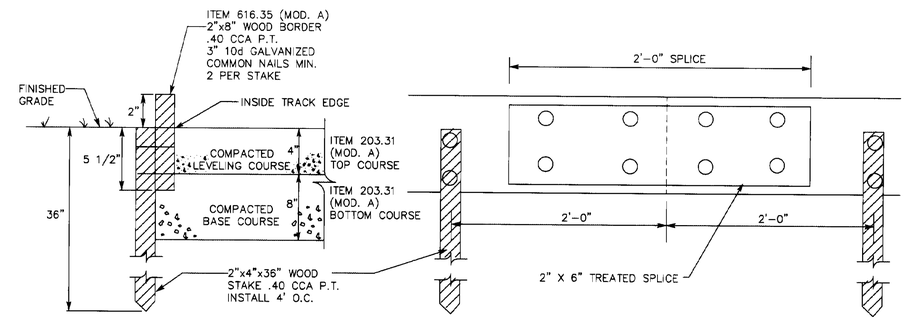
WOOD GUIDE POST (MODIFIED)
N.T.S.
ITEM 621.85, (MOD.)



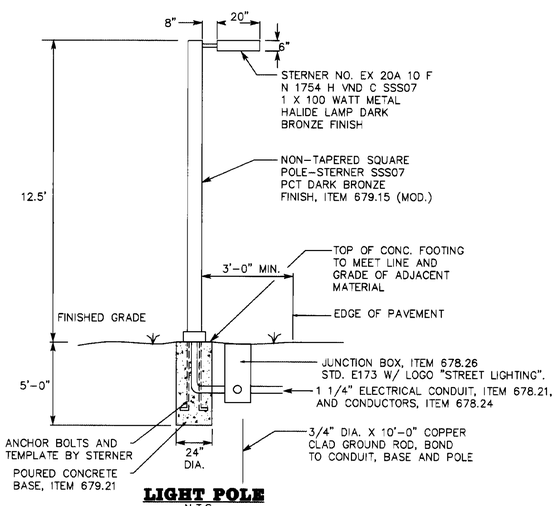
CONSTRUCT CURTAIN SECURED TO WOODEN OR FLANGED CHANNEL STEEL POSTS OF APPROPRIATE SPACING AND STRENGTH TO WITHSTAND RIVER CONDITIONS AT THE TIME OF CONSTRUCTION.

CURTAIN IS TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND VISIBLE TURBIDITY HAS RETURNED TO NORMAL. REMOVE CAREFULLY TO MINIMIZE RESUSPENSION OF MATERIAL.

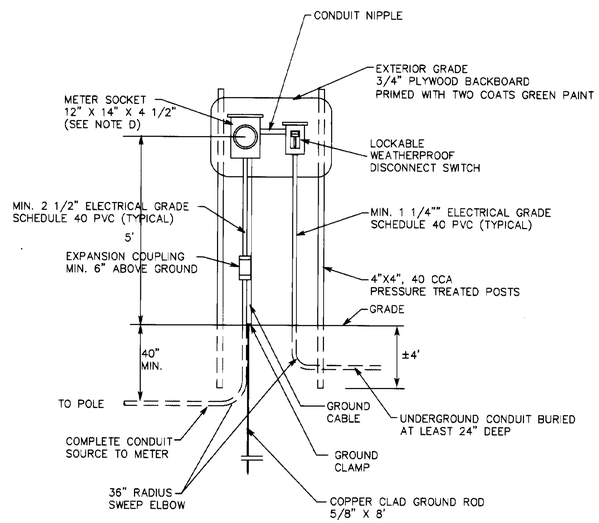
TEMPORARY TURBIDITY CURTAIN TYPICAL
N.T.S.
ITEM 649.61, GEOTEXTILE FOR FILTER CURTAIN



EDGE OF RELOCATED TRACK PAVEMENT
N.T.S.
ITEM 616.35 TREATED TIMBER CURB (MOD. A)

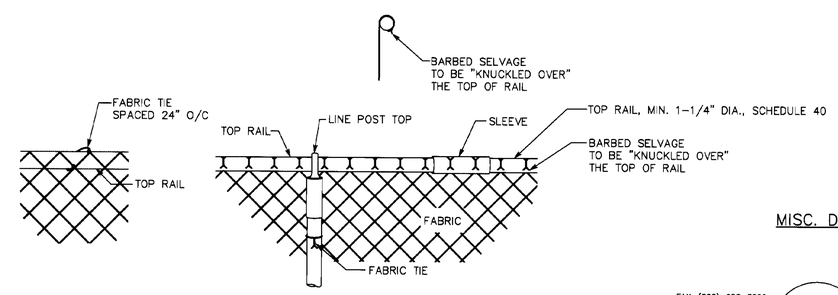


LIGHT POLE
N.T.S
ITEM 679.15 (MOD.)



A. LOCATION OF THE PEDESTAL WILL BE DETERMINED BY GMP AND THE ENGINEER.
B. TRENCH SHOULD BE DUG MINIMUM OF 18 INCHES WIDE AND 46 INCHES DEEP.
C. A PULL ROPE HAVING A MINIMUM PULL STRENGTH OF 240 LBS IS REQUIRED TO BE INSTALLED IN THE CONDUIT BY THE CONTRACTOR. THE CABLE MUST BE INSTALLED IN THE CONDUIT AND CONNECTED IN THE METER SOCKET.
D. IF 350 MCM CABLE IS USED A METER SOCKET WITH A BUSS BAR IS REQUIRED. MILLBANK U9253-O. ANCHOR 1URS1804UG (OR EQUIVELANT) SOCKETS MEET THIS REQUIREMENT.
E. THE GROUND CABLE MUST BE CONNECTED IN THE METER SOCKET TO ITS OWN GROUND TERMINAL.

METER PEDESTAL TYPICAL
N.T.S.
ITEM 679.15 (MOD.)



FENCE TOP RAIL DETAIL
N.T.S.

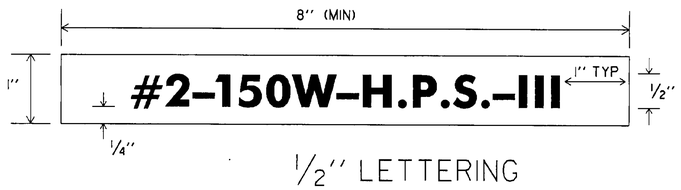
MISC. DETAILS

FAX. (802)-658-3829 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

SURVEYED BY	PEA	DATE	
DRAWN BY	NPN/JMM	DATE	
SQUAD LEADER			
DESIGN FILE NO.	6829DET9	DATE PLOTTED	4/9/97
PROJ. NAME	WINOOSKI RIVER WEST BIKEWAY BWM-BIKE(4)S		
PROJ. NO.	6829		

SHEET 37 OF 132 SHEETS

DETAILS FOR TAGS ATTACHED TO STREET LIGHT POLES



LEGEND: BLACK OR WHITE (NON-REFL.) - STAMPED PRIOR TO PRINTING/PAINTING.
BACKGROUND: NATURAL ALUMINUM OR FLAT BLACK SURFACE, SAME AS POLE FINISH.

NOTES:

1. THE TAG SHALL BE MOUNTED ON ALL STREET LIGHT POLES IN SUCH A MANNER AS NOT TO BE EASILY REMOVED, SUCH AS WELDED, RIVETED, OR BOLTED WITH VANDAL PROOF BOLTS.
2. THE LETTERS SHALL BE PUNCHED, STAMPED, ENGRAVED, OR PHOTO-ETCHED. PUNCHING, STAMPING OR ENGRAVING SHALL PENETRATE AT LEAST 1/2 THE BASE MATERIAL THICKNESS.
3. THE BASE MATERIAL FOR THE TAG SHALL BE ALUMINUM WITH A MINIMUM THICKNESS OF 0.100 INCHES.
4. THE TAG SHALL BE ATTACHED TO THE POLE ABOVE THE HANDHOLE, 6 INCHES MAXIMUM. IF THE POLE HAS A TRANSFORMER BASE, ATTACH TAG TO COVER.

GENERAL STREET LIGHT NOTES

CONCRETE BASES

THE OFFSET FOR CONCRETE BASES (EDGE OF PAVEMENT TO CENTER OF CONCRETE BASE) TO BE A MINIMUM OF 3 FEET OR AS OTHERWISE NOTED ON THE PLANS.

WHEN CONCRETE BASES ARE INSTALLED IN SLOPING GROUND, THE GREATEST EXPOSED HEIGHT TO KEEP ALL OF THE TOP ABOVE GROUND MUST BE DOUBLED AND THEN ADDED TO THE MINIMUM DEPTH FOR THE TOTAL BASE DEPTH.

CARE SHOULD BE TAKEN WHERE CONCRETE BASES, DRAINAGE STRUCTURES OR UTILITIES ARE CLOSE TOGETHER.

CONDUIT

A 2 INCH (I.D.) MINIMUM CONDUIT SHALL BE USED AT ALL LOCATIONS UNLESS OTHERWISE NOTED ON THE PLANS. ALL CONDUIT SHALL BE AT LEAST (SCHEDULE 40 P.V.C.) OR RIGID GALVANIZED STEEL ELECTRICAL CONDUIT (AND CONFORM TO THE REQUIREMENTS OF UL-6), TYPE OF CONDUIT (P.V.C. OR STEEL) SHALL BE NOTED ON THE PLANS.

CONDUIT SLEEVE

MINIMUM WALL THICKNESS FOR RIGID PLASTIC PIPE SLEEVES SHALL BE 1/35TH THE DIAMETER. ALL CONDUIT RUNS UNDER ROADWAY SHALL BE INSTALLED IN RIGID PLASTIC OR STEEL PIPE SLEEVES. THE SLEEVE SHALL EXTEND TO WITHIN 2 FEET OF THE SIDE OF A CONCRETE BASE OR PULLBOX. WHERE NO CONCRETE BASE OR PULLBOX IS PRESENT, THE SLEEVE SHALL EXTEND 4 FEET BEYOND THE OUTSIDE EDGE OF SHOULDER OR FACE OF CURB. BACKFILLING AROUND A SLEEVE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER,S SPECIFICATIONS.

WHEN JACKING A SLEEVE UNDER A ROADWAY IT SHALL BE STEEL WITH A MINIMUM DIAMETER OF 8 INCHES AND MINIMUM WALL THICKNESS OF 3/8 INCH. ACTUAL LENGTH TO BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

WIRE

ALL WIRING BETWEEN THE METER AND/OR POWER SOURCE AND THE FIRST POLE AND/OR PULLBOX AND BETWEEN POLES AND/OR PULLBOXES SHALL BE COPPER AND SIZED AS SPECIFIED ON THE PLANS. ALL WIRE SHALL HAVE TYPE XHHW INSULATION OR EQUIVALENT.

GROUNDING

ALL CONDUIT MUST INCLUDE A GROUNDING CONDUCTOR. RIGID STEEL CONDUIT SHALL BE PROPERLY CONNECTED AT THE JOINTS SO AS TO BE WATERTIGHT AND MAINTAIN ELECTRICAL CONTINUITY AND HAVE GROUNDING BUSHINGS SO AS TO ACT AS A GROUND CONDUCTOR.

ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

PULLBOXES

FOR DETAILS SEE STANDARD SHEET E-173.

GENERAL

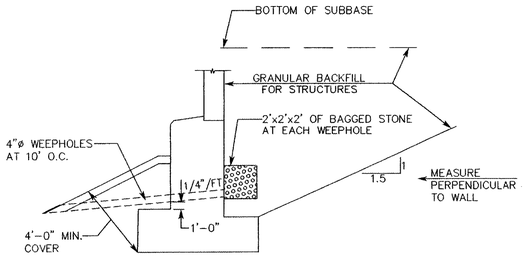
THE LOAD ON EACH BRANCH OF A THREE WIRE CIRCUIT SHALL BE AS BALANCED AS POSSIBLE, LOAD TO NEUTRAL.

THE LAST CONCRETE POLE BASE AT THE END OF EACH CIRCUIT AND SOME PULLBOXES SHALL HAVE A CONDUIT SWEEP WITH CAP INSTALLED FOR FUTURE USE.

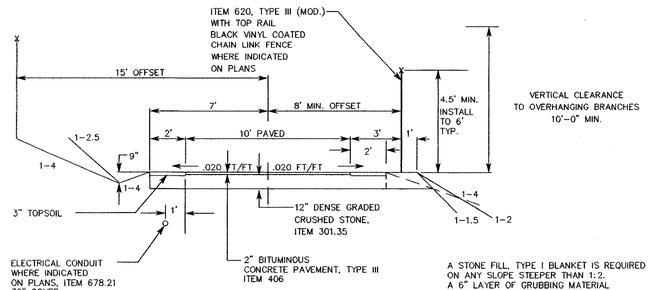
THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY ELECTRICAL PERMITS.

PLOTTED: 1-JUL-1997

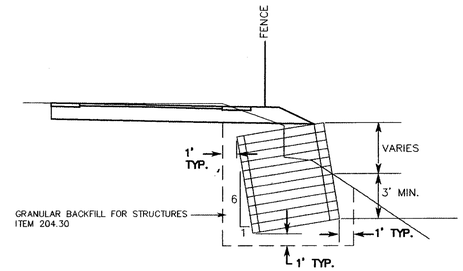
STREET LIGHTING GENERAL NOTES AND INFORMATION	PREPARED BY _____ DATE ____ CHECKED BY _____ DATE ____ DESIGN SUPERVISOR _____ DATE ____ PROJ. MONTPELIER BW-M-BIKE(4)S SHEET 37A OF _____ SHEETS



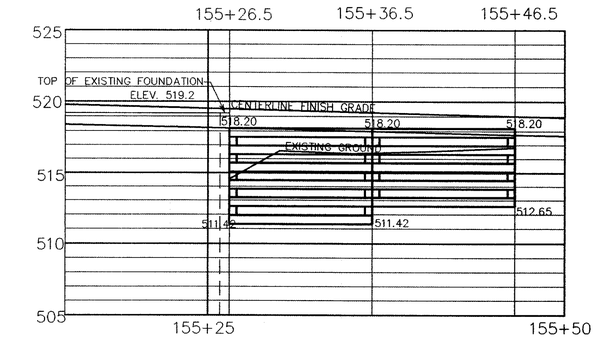
ABUTMENT DRAINAGE
N.T.S.



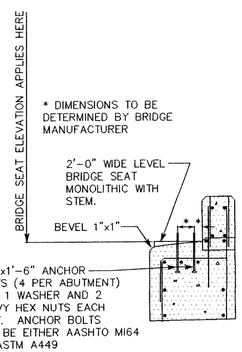
BIKE PATH TYPICAL
N.T.S.



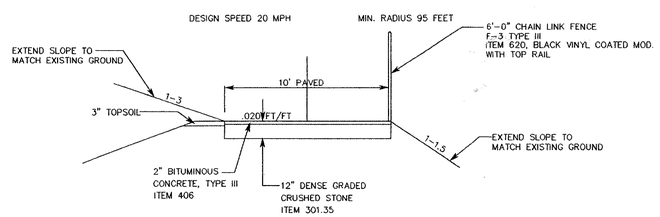
TIMBER BINWALL TYPICAL SECTION
1" = 5'
REFER TO STANDARD DETAIL H-2, SHEETS 1, 2 & 3 OF 3, DATED JAN 11, 1990



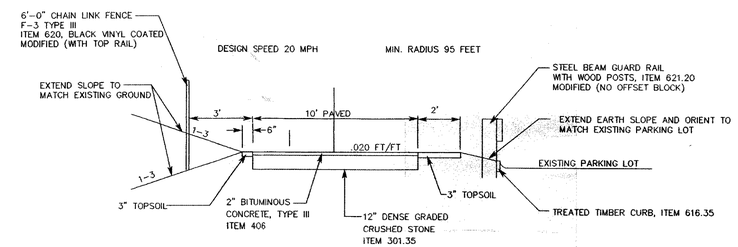
TIMBER BINWALL ELEVATION
1" = 5'
REFER TO STANDARD DETAIL H-2, SHEETS 1, 2 & 3 OF 3, DATED JAN 11, 1990
USE DESIGN "A".



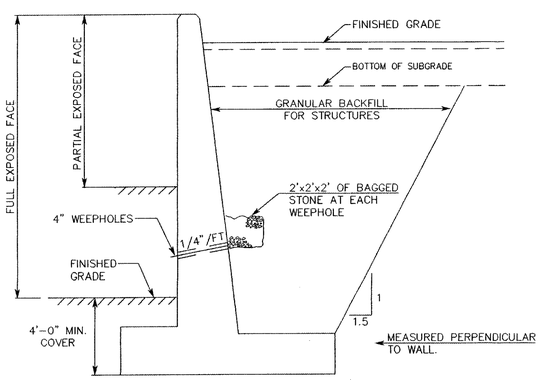
BRIDGE ABUTMENT BEARING DETAIL
N.T.S



NARROW BIKE PATH TYPICAL
N.T.S.
STA 117+35 TO STA 120+50
STA 141+00 TO STA 142+00



NARROW BIKE PATH TYPICAL
N.T.S.
STA 106+54 TO STA 109+00



WINGWALL DRAINAGE
N.T.S.

SEEDING FORMULA
URBAN AREAS

%WT.	LBS./ACRE	NAME	PUR%	GERM%
42.5	34.0	CREEPING RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100	80.0			

GENERAL 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. (HYDRO SEEDERS 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 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.

MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.

SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

SEEDING FORMULA
STREAMBANK AREAS

LBS./1000 SF	NAME
34.0	ANNUAL RYE
8.0	CROWNVETCH

FINE GRADE/HAY MULCH
PIN JUTE MATTING

PLANT SCHEDULE

KEY	QUANTITY	LATIN NAME	COMMON NAME	SIZE	MISC.
CS	35	CORMUS SERICEA	REDTWIG DOGWOOD	15-18"	
TO	6	TUJA OCCIDENTALIS	EASTERN CEDAR	4-5'	
TS	6	TSUGA CANADENSIS	CANADIAN HEMLOCK	3-4'	
VD	16	VIBURNAM DENTATUM	ARROWOOD VIBURNAM	18-24"	
VT	16	VIBURNAM TRILOBUM	AMERICAN CRANBERRY	18-24"	

REVISED 6/10/1998, DFH, ADDED NARROW PATH TYPICAL SECTION
REVISED 2/6/1998, DFH, ADDED TIMBER BINWALL ELEVATION AND TYPICAL SECTION

PATHWAY TYPICALS
& BRIDGE DETAILS

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

SURVEYED BY PEA DATE
DRAWN BY NPN,JMM DATE 4/9/97
SQUAD LEADER
DESIGN FILE NO. 6829DET7 DATE 4/9/97 PLOTTED
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY BWM-BIKE(4)S
PROJ. NO.
SHEET 38 OF 132 SHEETS

WINOOSKI RIVER

SURV. PI 139+46.20 BK
=139+45.96 AHD
REBAR & CAP

STORAGE SHED
50.95'
51.83'

SURV. PI 139+46.20 BK
=139+45.96 AHD
REBAR & CAP

N
+15°
TRUE
MAG.

LIGHT POLE
REV. STA 140+40 RT

LIGHT POLE
REV. STA 141+25 RT

LIGHT POLE
REV. STA 142+10 RT

LIGHT POLE
REV. STA 142+95 RT

STORAGE SHED

96.34 M (316.08')

21'

REMOVE ABANDONED TRACK SECTIONS TO 4" DEPTH, ADD 4" TOPSOIL, FERTILIZE, SEED & MULCH.

TREATED TIMBER CURB (MODIFIED A)
ITEM 616.35 (MOD. A)
2"x8" .40 CCA PT
WOOD BORDER
INSIDE EDGE OF TRACK, TYP.
SEE SHEET 37 OF 132
FOR DETAIL

368.60'

221.21'

RADIUS 107.99'
INSIDE TRACK

S 80° 20' 10" W
S 52° 43' 29" W
374.78'

200° 03' 46"

36° 41' 42"

RETAIN
EXISTING
12" MAPLE

RADIUS 128.59'
OUTSIDE TRACK

84° 40' 34"

REMOVE ABANDONED TRACK SECTIONS TO 4" DEPTH, ITEM 203.15
ADD 4" TOPSOIL, FERTILIZE, SEED AND MULCH.

9+00 9+50 10+00 10+50 11+00 11+50 12+00 12+50 13+00 13+50 14+00 14+50

316.08'

CONCRETE MONUMENT
(TO BE SET)

VOID

CONCRETE MONUMENT
(TO BE SET)

ITEM 616.35 (MOD. B)
TREATED TIMBER CURB
WALL TYP.
SEE SHEET 37 OF 132
FOR DETAIL

EXISTING LIGHT
POLE TO BE
RELOCATED
ITEM 679.25

TENNIS
COURTS

32° 13' 28"

222.22'

RADIUS 128.59'
OUTSIDE TRACK

RADIUS 107.99'
INSIDE TRACK

RELOCATED
LIGHT POLE

TREATED TIMBER CURB (MODIFIED A)
ITEM 616.35 (MOD. A)
2"x8" .40 CCA PT
WOOD BORDER
INSIDE EDGE OF TRACK, TYP.
SEE SHEET 37 OF 132
FOR DETAIL

CUT BACK EXISTING
UNDERDRAIN AND
GRADE TO DRAIN
TO EXISTING RCDI
ITEM 203.15

EXISTING FENCELINE
TO REMAIN

EXISTING 6' CHAIN LINK FENCE

SURV. PI 143+20.75 BK
=143+20.55 AHD
REBAR & CAP

21'

400 METER TRACK, SEE TYPICAL
SHEET 39-42 OF 132
FOR DETAIL
AND SPECIFICATIONS
FOR MATERIAL

EXISTING EDGE
OF TRACK

RELOCATED EDGE
OF TRACK

20 10 0 20 40 60 80

MON.
2.8'
11.70'
1.35'
FACE
OF
FNC.

SURV. PI 143+20.75 BK
143+20.55 AHD
REBAR & CAP

N/F MONTPELIER HIGH SCHOOL

N/F STATE OF VERMONT

#	REVISIONS	DATE	#	REVISIONS	DATE

SURVEY: PEA
CALCULATED: NPN
PLOT: 6829TRK2
DESIGN: NPN
DRAFT: NPN
CHECKED: LDY
APPROVED: KWP
DATE: 4/9/97
SCALE: 1"=20'

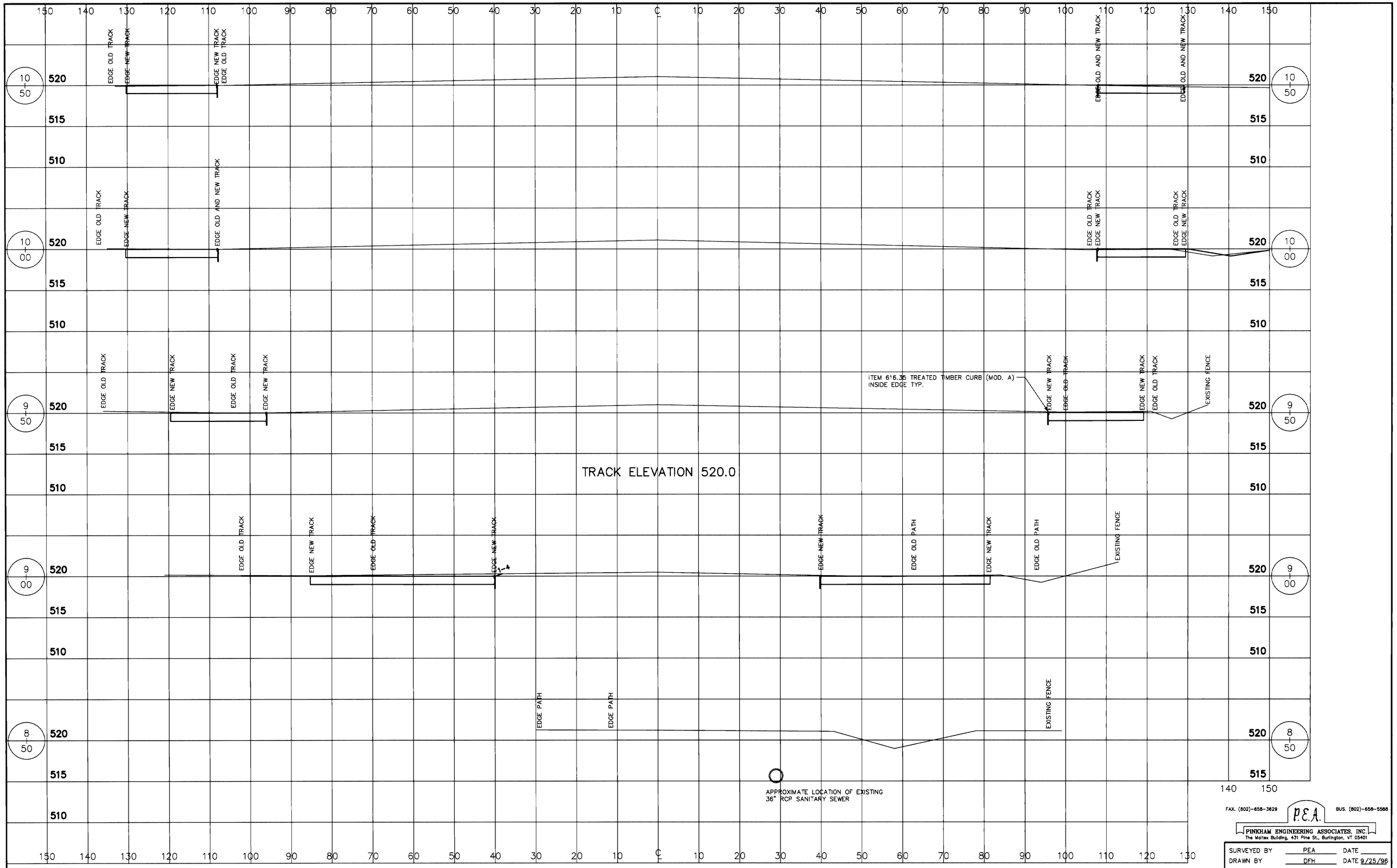
PROJ. NO. 6829

SHEET 39 OF 132

400 METER TRACK RELOCATION PLAN

WINOOSKI RIVER WEST
BIKE PATH
MONTEPELIER, VERMONT

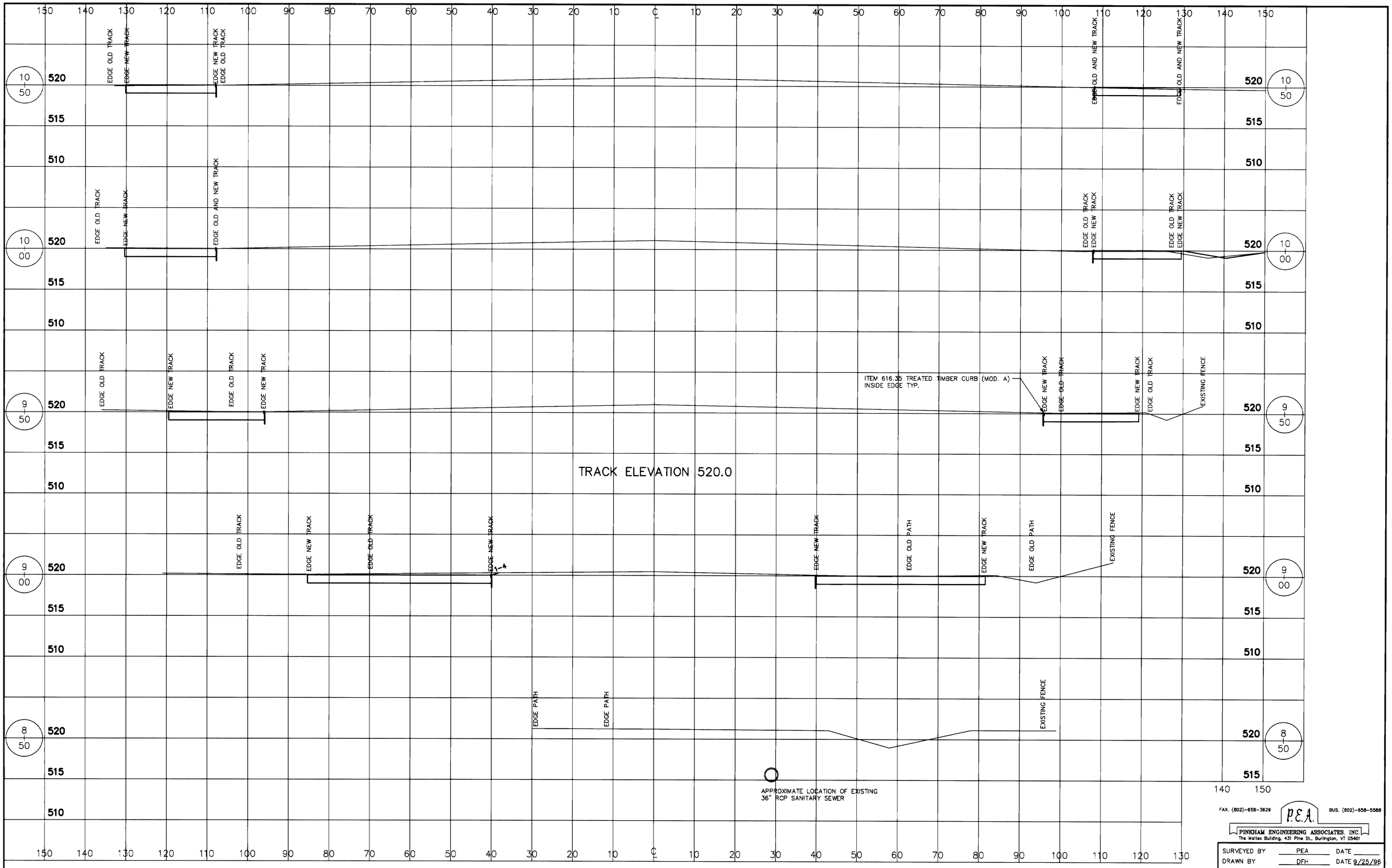
FAX. (802)-658-3829 P.E.A. BUS. (802)- 658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407



400 METER TRACK SECTIONS
1" = 5' VERT.
1" = 20' HORIZ.

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
The Maltex Building, 431 Pine St., Burlington, VT 05401

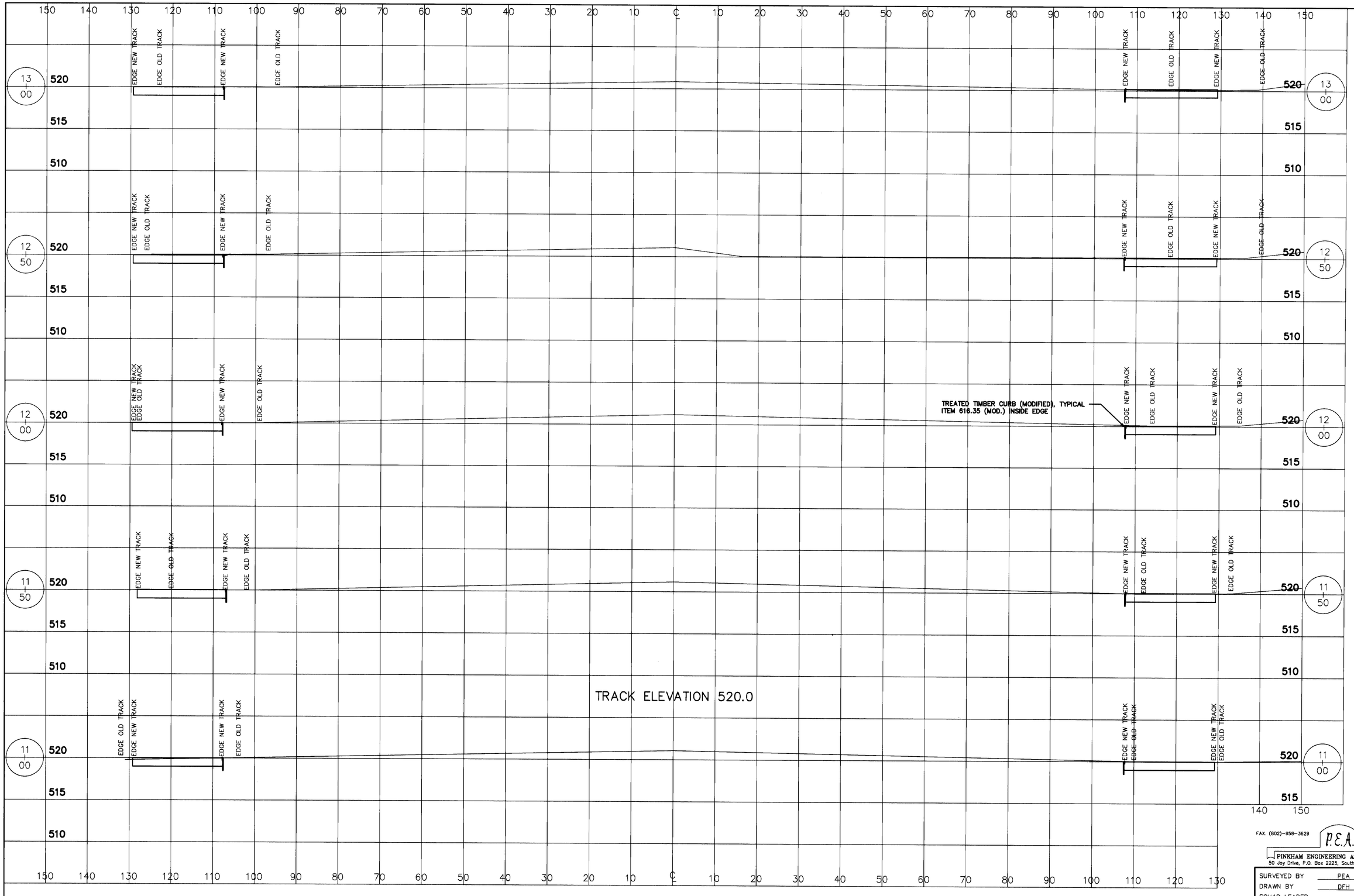
SURVEYED BY	PEA	DATE	
DRAWN BY	DFH	DATE	9/25/96
SQUAD LEADER			
DESIGN FILE NO.	6829TKX1	DATE PLOTTED	9/25/96
PROJ. NAME	WINOOSKI RIVER WEST BIKEWAY		
PROJ. NO.	6829		
SHEET	40 OF 132 SHEETS		



400 METER TRACK SECTIONS
1" = 5' VERT.
1" = 20' HORIZ.

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
The Maltex Building, 431 Pine St., Burlington, VT 05401

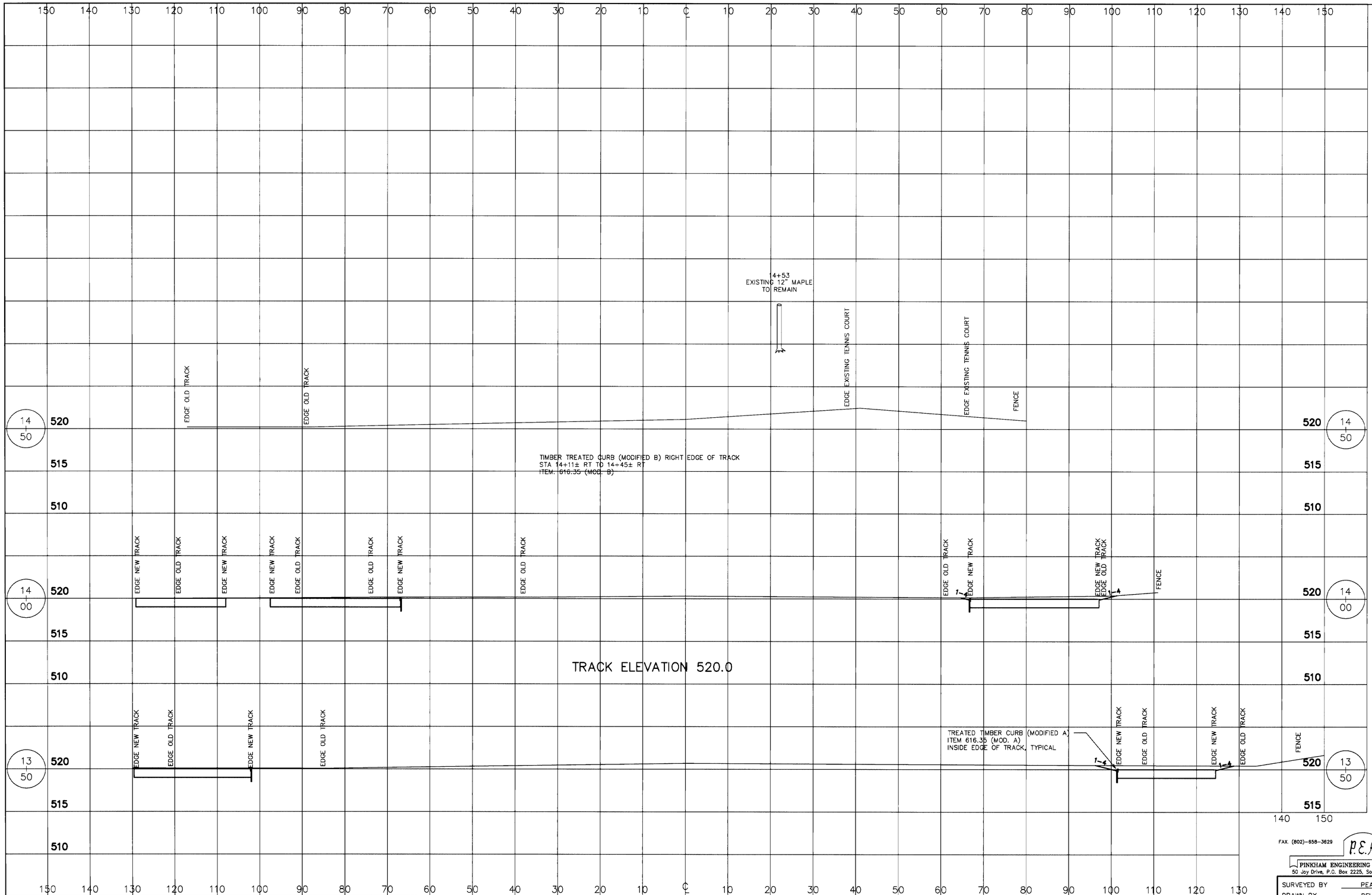
SURVEYED BY	PEA	DATE	
DRAWN BY	DFH	DATE	9/25/96
SQUAD LEADER			
DESIGN FILE NO.	6829TKX1	DATE PLOTTED	9/25/96
PROJ. NAME	WINOOSKI RIVER WEST BIKEWAY		
PROJ. NO.	6829		
SHEET	40 OF 132 SHEETS		



400 METER TRACK SECTIONS
SCALE: 1" = 10'

FAX. (802)-858-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

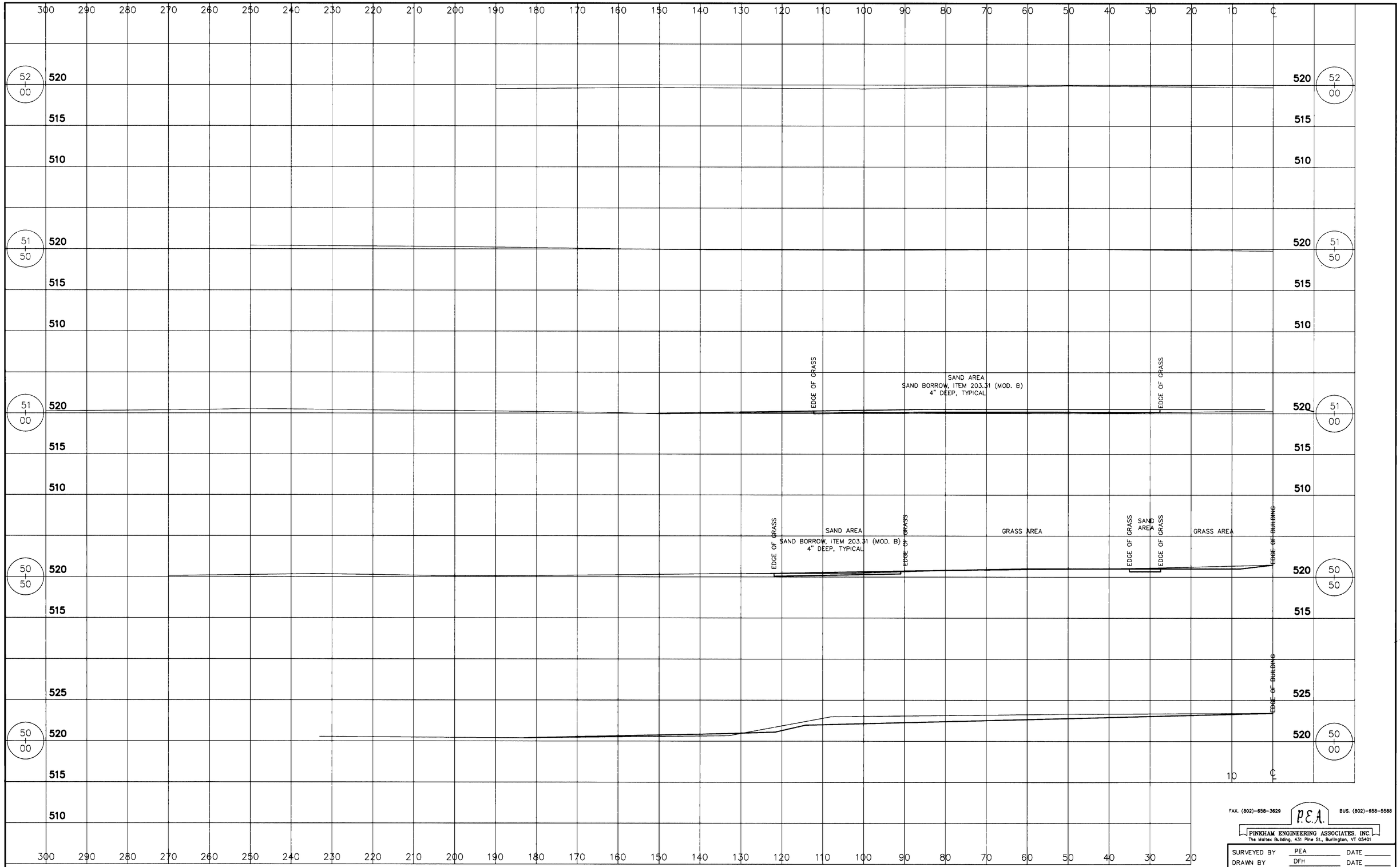
SURVEYED BY PEA DATE
DRAWN BY DFH DATE
SQUAD LEADER
DESIGN FILE NO. 6829TKX2 DATE PLOTTED 4/9/97
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY
PROJ. NO. 6829
SHEET 41 OF 132 SHEETS



400 METER TRACK SECTIONS
1" = 5' VERT.
1" = 10' HORIZ.

FAX (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

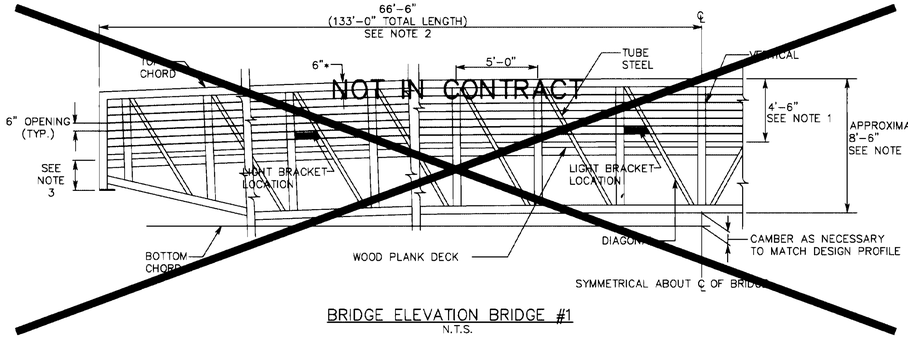
SURVEYED BY PEA DATE
DRAWN BY DFH DATE
SQUAD LEADER
DESIGN FILE NO. 6829TKX3 DATE PLOTTED 4/9/97
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY
PROJ. NO. 6829
SHEET 42 OF 132 SHEETS



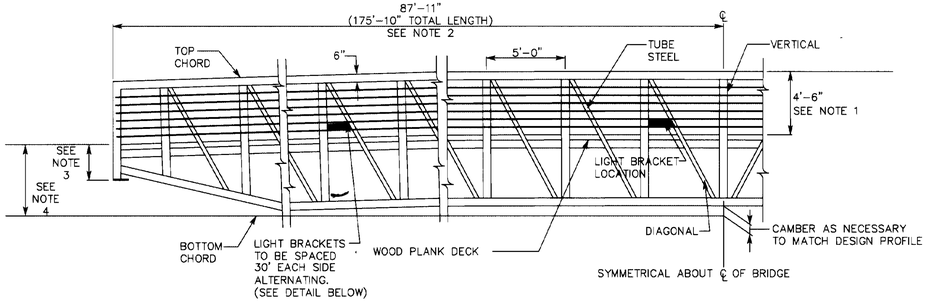
SOFTBALL FIELD SECTIONS
1" = 5' VERT.
1" = 10' HORIZ.

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
The Maltex Building, 431 Pine St., Burlington, VT 05401

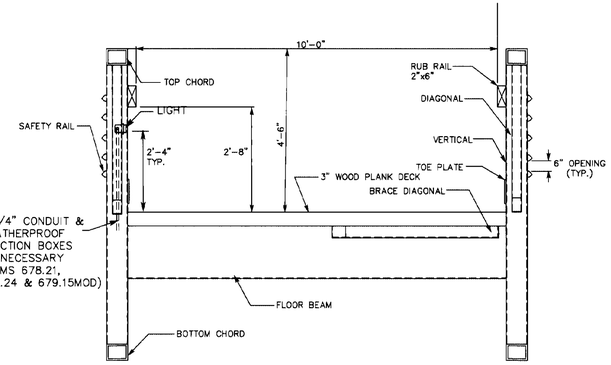
SURVEYED BY	PEA	DATE	
DRAWN BY	DFH	DATE	
SQUAD LEADER			
DESIGN FILE NO.	6829BLX1	DATE PLOTTED	9/25/96
PROJ. NAME	WINOOSKI RIVER WEST BIKEWAY		
PROJ. NO.	6829		
SHEET 43	OF 132 SHEETS		



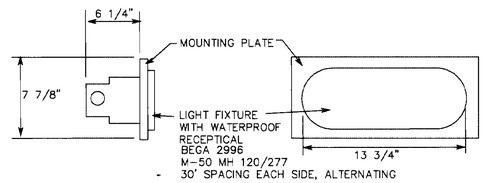
BRIDGE ELEVATION BRIDGE #1
N.T.S.



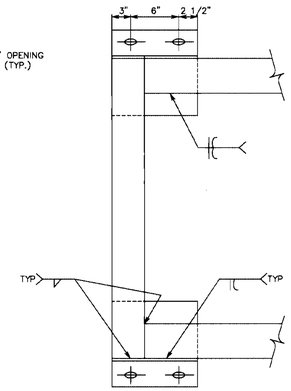
BRIDGE ELEVATION BRIDGE #2
N.T.S.



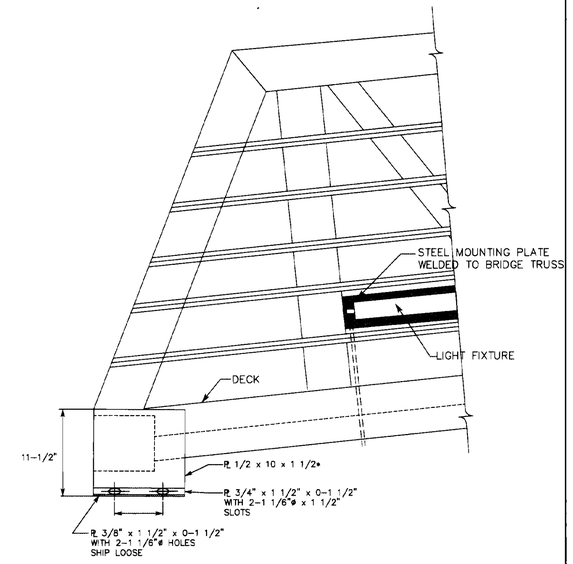
BRIDGE SECTION
N.T.S.



LIGHT MOUNTING DETAIL
N.T.S.



PLAN BEARING ASSM
N.T.S.



BRIDGE BEARING ASSEMBLY-ELEVATION
N.T.S.

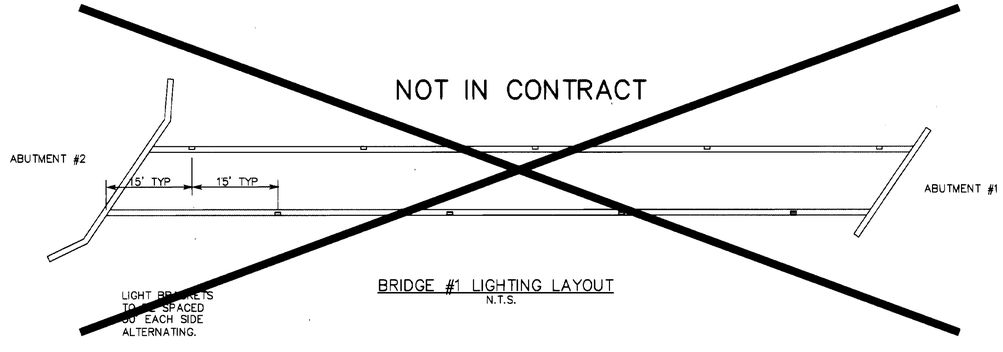
NOTE:

1.) APPROXIMATE DIMENSION ONLY, ACTUAL DEPTH OF STRUCTURE TO BE PROVIDED BY BRIDGE MANUFACTURER.

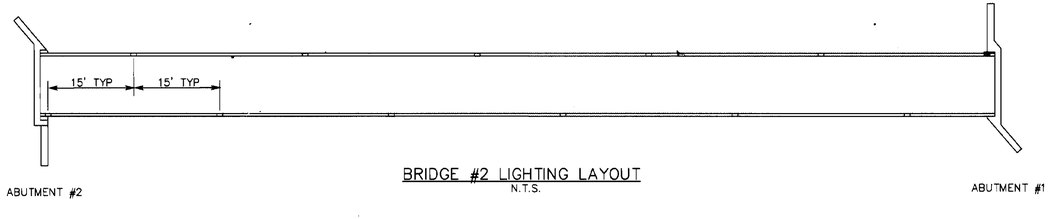
2.) TOTAL LENGTH OF BRIDGE SHALL BE AS MEASURED AT 60°F.

3.) DEPTH OF STRUCTURE FROM BEARING TO TOP OF FINISHED DECK SHALL BE SUPPLIED BY BRIDGE MANUFACTURER TO CONTRACTOR FOR CONSTRUCTION OF ABUTMENTS.

4.) PATH GEOMETRY ALLOWS FOR A MAXIMUM OF 1'-8" BETWEEN BRIDGE DECK AND BOTTOM CHORD ELEVATIONS AT ABUTMENTS TO INSURE INSTALLATION OF SUPERSTRUCTURE ABOVE 100 YEAR DESIGN FLOOD.



BRIDGE #1 LIGHTING LAYOUT
N.T.S.



BRIDGE #2 LIGHTING LAYOUT
N.T.S.

CONCRETE NOTES

1. CLASSES OF CONCRETE SHALL BE AS FOLLOWS:

   ABUTMENTS AND WINGWALLS: CLASS "B" CONCRETE

2. ALL PORTLAND CEMENT SHALL BE AIR-ENTRAINED.

3. ALL REINFORCING STEEL SHALL BE FURNISHED IN THE FULL LENGTH SHOWN ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS, THE MINIMUM LAP FOR SPLICES SHALL BE AS FOLLOWS:

BAR SIZE	f'c = 3,500 PSI
#4 OR SMALLER	16 INCHES
#5	26
#6	31
#7	34
#8	45
#9	57
#11	89

4. ALL REINFORCING SHALL HAVE THE FOLLOWING COVER:

   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3 INCHES

   CONCRETE THAT IS TO BE FORMED AND THEN EXPOSED TO EARTH OR WEATHER
   PRINCIPAL REINFORCEMENT . . . . . 2 INCHES

5. ALL ANCHOR BOLTS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M-111 & ASTM A123. FORMS FOR ANCHOR BOLTS SHALL BE PLACED PRIOR TO POURING CONCRETE.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING CONCRETE STAINS OR DISCOLORATIONS DURING CONSTRUCTION, UNTIL SUCH TIME AS THE SURFACES ARE APPROVED AND ACCEPTED. ANY CONCRETE STAINS OR DISCOLORATIONS OCCURRING PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE REMOVED AND THE SURFACE RESTORED BY THE CONTRACTOR AT HIS OWN EXPENSE.

7. HORIZONTAL CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE PLANS WILL NOT BE PERMITTED, UNLESS AUTHORIZED BY THE ENGINEER.

8. CONCRETE SURFACE TREATMENT:

   A. RUBBED FINISH SHALL BE PROVIDED ON ALL CONCRETE SURFACES VISIBLE IN ELEVATION, INCLUDING ALL EXPOSED SURFACES OR WINGWALLS TO ONE FOOT BELOW GROUND LINE.

   B. FLOAT FINISH SHALL BE APPLIED TO THE BEAM SEATS AND TOPS OF WINGWALLS.

   C. PROTECTIVE COMPOUND SHALL BE APPLIED TO ALL EXPOSED CONCRETE AREAS INCLUDING EXPOSED SURFACES OF WINGWALLS TO ONE FOOT BELOW GROUND LINE. (WATER REPELLENT #514.10)

9. ALL FORMS SHALL BE OF REMOVABLE TYPE THAT WILL PRODUCE THE DIMENSIONS OF THE PLANS.

10. ALL CONSTRUCTION JOINTS SHALL BE COATED WITH A THIN COATING OF MORTAR OR NEAT CEMENT GROUT IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

GENERAL NOTES

1. SPECIFICATIONS: VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 1990 EDITION AND SPECIAL PROVISIONS.

   BRIDGES (AASHTO 1989).

3. ALLOWABLE DESIGN STRESSES:

   CLASS "A" & CLASS "B": BASED ON f'c = 3,500 PSI

   REINFORCEMENT (ASTM A615 GRADE 60) fs = 24,000 PSI

4. LIVE LOAD: 85 PSF UNIFORMLY DISTRIBUTED 172'x10'x85 PSF = 146,200 PSF

5. FUTURE PAVING ALLOWANCE: NONE.

6. REMAIN-IN-PLACE FORMS: THE USE OF REMAIN-IN-PLACE FORMS ON THIS STRUCTURE IS NOT ALLOWED.

7. CLASS "B" CONCRETE: CLASS "B" CONCRETE SHALL BE USED FOR THE ENTIRE SUBSTRUCTURE.

8. DECKING: BRIDGE DECK SHALL BE SINGLE LAYER, 3" THICK PRESSURE TREATED, WOOD PLANK, MATERIALS MEETING SECTION 709.01 AND SECTION 522.12 (a).

9. JOINT SEAL: SEE SPECIFICATIONS.

10. EXPOSED EDGES: EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1" UNLESS DIMENSIONED OTHERWISE.

11. REINFORCEMENT: ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.

12. STRUCTURAL STEEL: WELDED TUBULAR STRUCTURE DESIGN SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE (ANSI D1.1-8)-CHAPTER 10-TUBULAR STEEL. ALL STEEL TO CONFORM TO ASTM A847 FOR HIGH STRENGTH, SELF WEATHERING, LOW ALLOY, ATMOSPHERIC CORROSION RESISTANT, COLD FORMED, WELDED SQUARE AND RECTANGULAR TUBING, AND ASTM A588, ASTM A606 OR ASTM A242.

13. CONSTRUCTION JOINTS: CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

14. DECIMAL DIMENSIONS: WHEN DIMENSIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS.

15. THE BRIDGE MANUFACTURER SHALL CERTIFY TO THE AGENCY THAT ALL DESIGN REQUIREMENTS WILL BE MET. ALL PLANS AND SHOP DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT.

BRIDGE SUPERSTRUCTURE DETAILS

FAX. (802)-658-3829 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

SURVEYED BY PEA DATE
DRAWN BY JMM DATE
SQUAD LEADER
DESIGN FILE NO. 6829DET6 DATE PLOTTED 4/9/97
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY BWM-BIKE(4)S
PROJ. NO. 6829
SHEET 46 OF 132 SHEETS

NOT IN CONTRACT

EXISTING EDGE OF PAVEMENT

EDGE OF RIVER

TOP OF BANK

APPROX. EDGE OF PAVEMENT

N/F
E. DICKEY

12' EASEMENT

20' TO SOIL BORING #1 AT TOP OF BANK

LIMIT OF STONE FILL TYPE IV

98+92.70
BEGIN BRIDGE

BRIDGE #1
SEE SHEET 49 FOR DETAILS

BEGIN PROJECT
STA 98+49.10
ELEV. 521.70

100+27.80 END BRIDGE
RESUME PATH

N 82° 42' 40" W

PC 100+70.39

SB-2

SOIL BORING #2

EXISTING BUILDING TO BE REMOVED BY OTHERS

TURBIDITY FILTER CURTAIN TO BE INSTALLED TO MATCH THE RIVER CONDITIONS AT THE TIME OF CONSTRUCTION (SEE DETAIL).

CENTER BOLT
1ST COLUMN
RR BRIDGE

S.I.T.
16"
BOX
ALDER

24.85'

11.1'

CURVE #1
Δ = 48° 25' 15" LT
D = 59° 22' 32"
R = 96.50'
T = 43.39'
L = 81.55'
E = 9.31'

PC 100+70.39

LIMIT OF STONE FILL TYPE IV

EDGE OF RIVER

WASHINGTON COUNTY RAILROAD

VERMONT LEAGUE OF CITIES AND TOWNS

24" STORM SEWER

TRUE
MAG
N
+15°

PLAN
SCALE HOR. 1"=10'
VERT 1"=5'

BRIDGE NO.1 SUPERSTRUCTURE ESTIMATED QUANTITIES

ITEM	DESCRIPTION	NET	TOTAL
528.10	ONE WAY TEMPORARY BRIDGE (MODIFIED, PREFABRICATED, PERMANENT STRUCTURE @ STA 98+93±)	1 LS	1 LS
531.10	END BEARING ASS'BLY	2 EA	2 EA

100+27.80 ELEV. 523.33
END BRIDGE – RESUME PATHWAY

98+92.70 ELEV. 523.33
BEGIN BRIDGE

135.1'

PVI
99+60.25
526.70
135.1

100 YR FLOOD ELEV. = 526.5
SEE NOTE A THIS SHEET

100+53
527.46
50' V.C.

101+03
524.96
50' VC

STA 98+49.10
ELEV. 521.7

BOTTOM OF WASHINGTON COUNTY RAILROAD BRIDGE ELEV. 522.01

1/4" PER FT.

STA 100+67.80~100+92.70
TAPER SUBBASE FROM 46" TO 12"

STONE FILL, TYPE IV MATCH EXISTING GRADE

TURBIDITY FILTER CURTAIN (SEE DETAIL)

ORDINARY HIGH WATER 514.20

BOF 513.75

2' MIN.

4'-0" TYP.

STA 98+49.10~98+92.70
TAPER SUBBASE FROM 12" TO 46"

BOF 513.70

6" GRAVEL BACKFILL TYP.

GRADE

STONE FILL, TYPE IV TO 2' BELOW STREAM BED

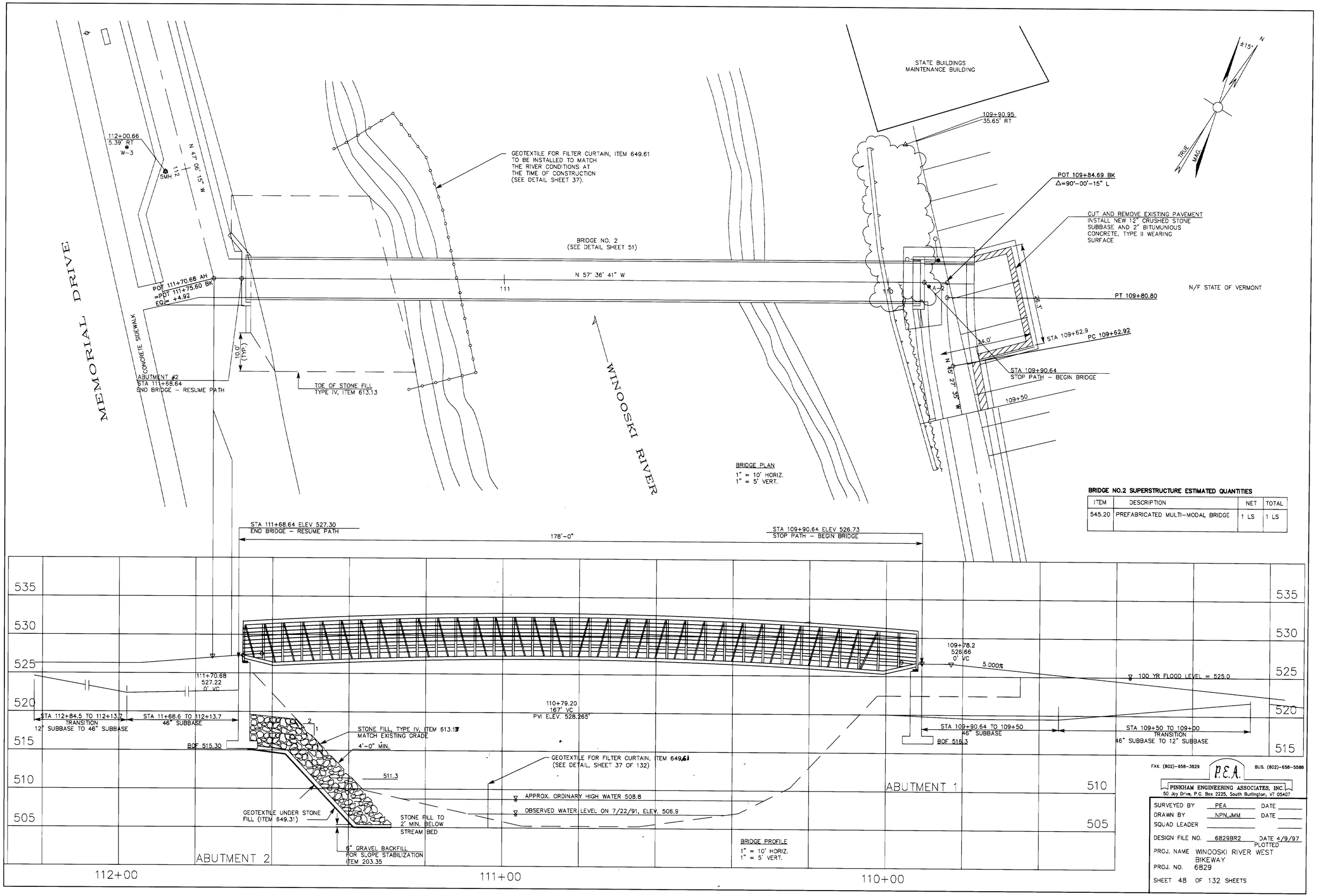
530 525 520 515 510 505

100+50 99+50 98+50

NOTE A:
THE BOTTOM OF THIS STRUCTURE IS DESIGNED TO MATCH OR EXCEED THE HEIGHT OF THE EXISTING WASHINGTON COUNTY RAILROAD BRIDGE LOCATED JUST DOWNGRADIENT OF THIS STRUCTURE.

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-9888
PINKHAM ENGINEERING ASSOCIATES, INC.
The Maltex Building, 431 Pine St., Burlington, VT 05401

SURVEYED BY PEA DATE 7/22/91
DRAWN BY NPN,JMM DATE
SQUAD LEADER
DESIGN FILE NO. 6829BR3 DATE 9/25/96 PLOTTED
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY
PROJ. NO. 6829
SHEET 47 OF 132 SHEETS



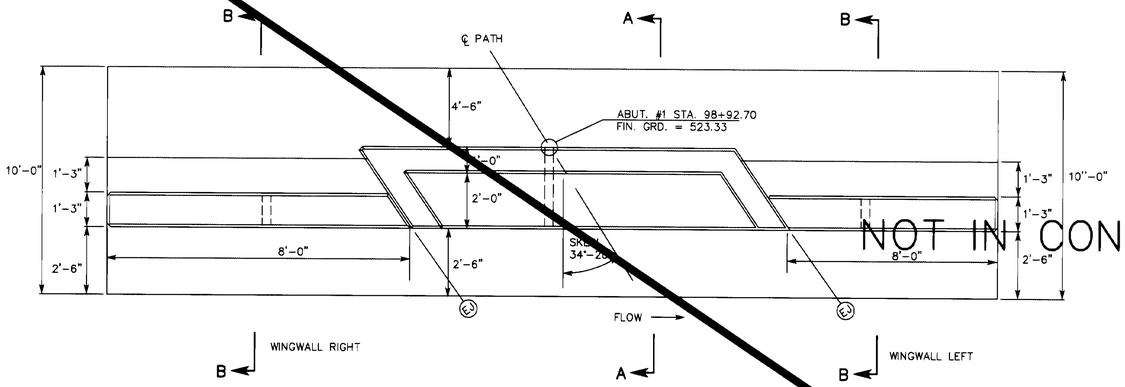
BRIDGE NO.2 SUPERSTRUCTURE ESTIMATED QUANTITIES

ITEM	DESCRIPTION	NET	TOTAL
545.20	PREFABRICATED MULTI-MODAL BRIDGE	1 LS	1 LS

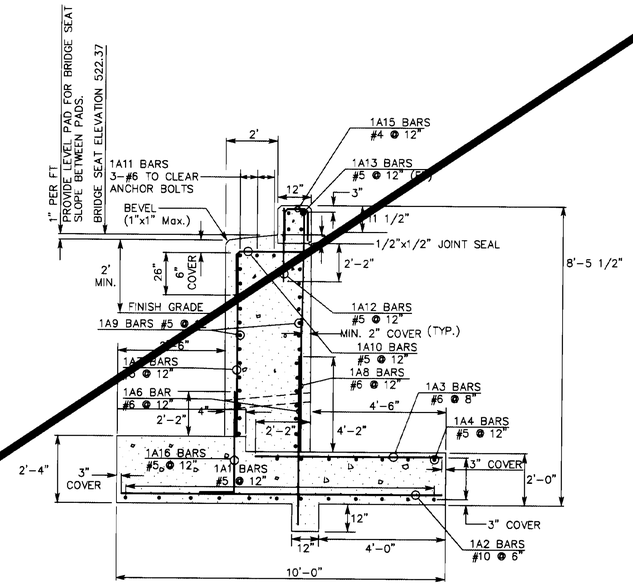
FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

SURVEYED BY PEA DATE
DRAWN BY NPN,JMM DATE
SQUAD LEADER
DESIGN FILE NO. 6829BR2 DATE PLOTTED 4/9/97
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY
PROJ. NO. 6829
SHEET 48 OF 132 SHEETS

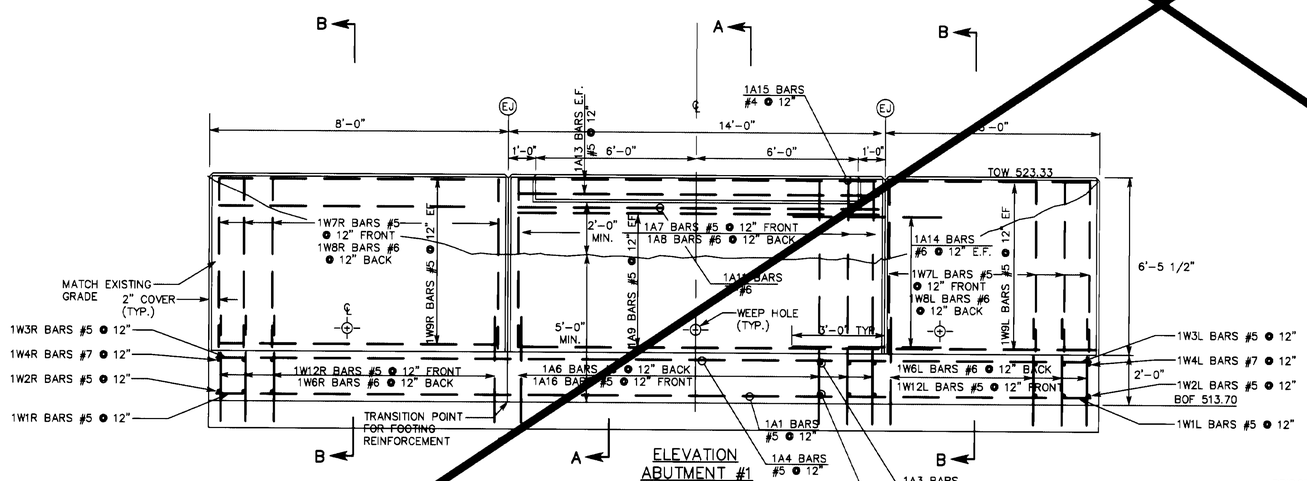
NOT IN CONTRACT



PLAN
SCALE 3/8"=1'-0"

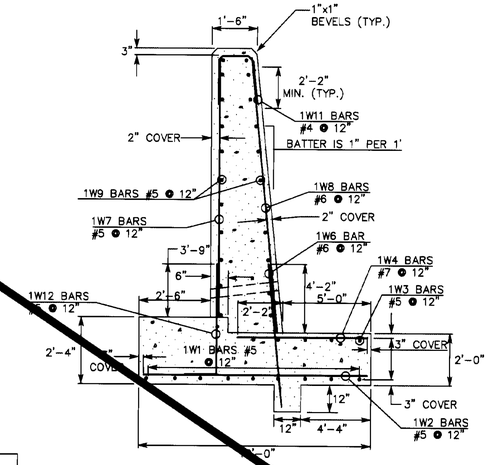


DETAIL OF ABUTMENT
SECTION A-A
SECTION A-A



ELEVATION
ABUTMENT #1
SCALE 3/8"=1'-0"

*NOTE:
DRAWN TO 4'-6" ACTUAL DIMENSION TO BE SUPPLIED BY BRIDGE MANUFACTURER ALL EXPOSED CONCRETE SURFACES TO RECEIVE RUBBED FINISH



DETAIL OF WINGWALL
SECTION B-B
SCALE 3/8"=1'-0"

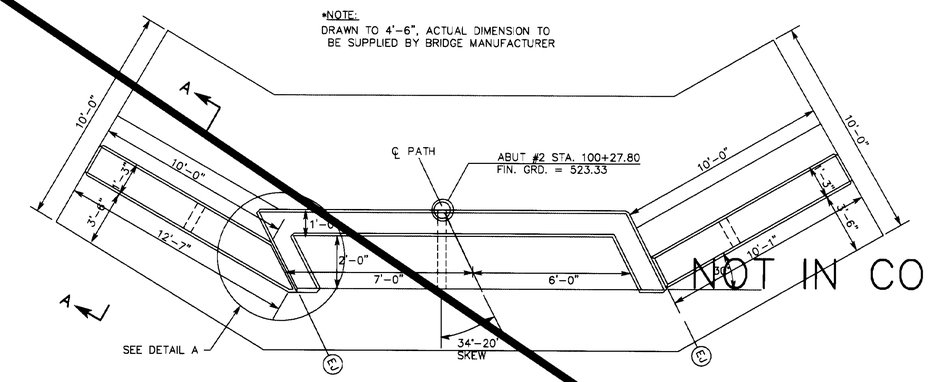
BRIDGE NO. 1 SUBSTRUCTURE ESTIMATED QUANTITIES

ITEM	DESCRIPTION	NET ABUT 1	NET ABUT 2	ROUND	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	55 C.Y.	67 C.Y.	8 C.Y.	130 C.Y.	
204.25	STRUCTURE EXCAVATION	71 C.Y.	93 C.Y.	6 C.Y.	170 C.Y.	
204.30	GRANULAR BACKFILL FOR STRUCTURES	42 C.Y.	36 C.Y.	14 C.Y.	160 C.Y.	
501.25	CONCRETE, CLASS B	39 C.Y.	48 C.Y.	4 C.Y.	45 C.Y.	
507.15	REINFORCING STEEL	3288 LB	3650 LB	62 LB	7000 LB	
514.10	WATER REPELLENT	6 GAL.	6 GAL.		12 GAL.	
524.20	JOINT SEALER, POLYURETHANE	0.2 GAL.	0.2 GAL.		0.4 GAL.	
613.13	STONE FILL-TYPE IV	84 C.Y	106 C.Y.	10 C.Y.	200 C.Y.	

BRIDGE NO. 1
ABUTMENT NO. 1

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
The Mattex Building, 431 Pine St., Burlington, VT 05401

SURVEYED BY PEA DATE
DRAWN BY JMM DATE
SQUAD LEADER
DESIGN FILE NO. 6829DET3 DATE PLOTTED 9/25/96
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY
PROJ. NO. 6829
SHEET 49 OF 132 SHEETS

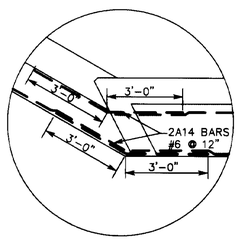


NOT IN CONTRACT

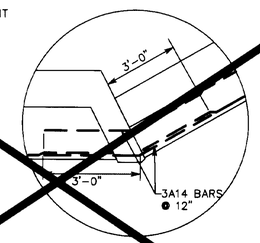
WINGWALL LEFT

PLAN

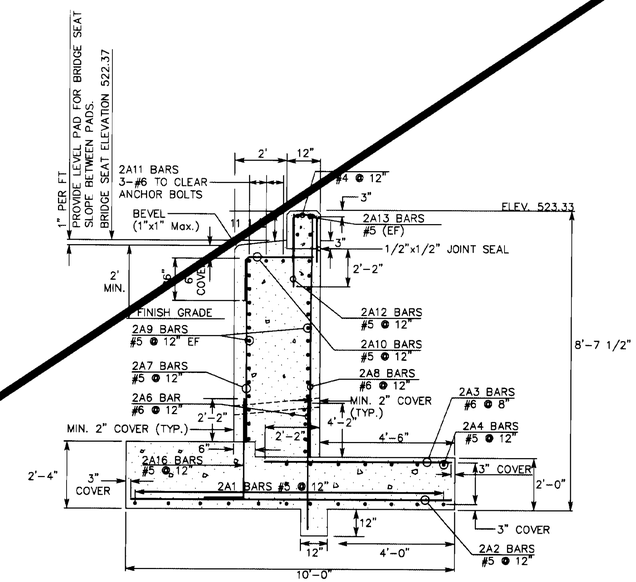
WINGWALL RIGHT



DETAIL A

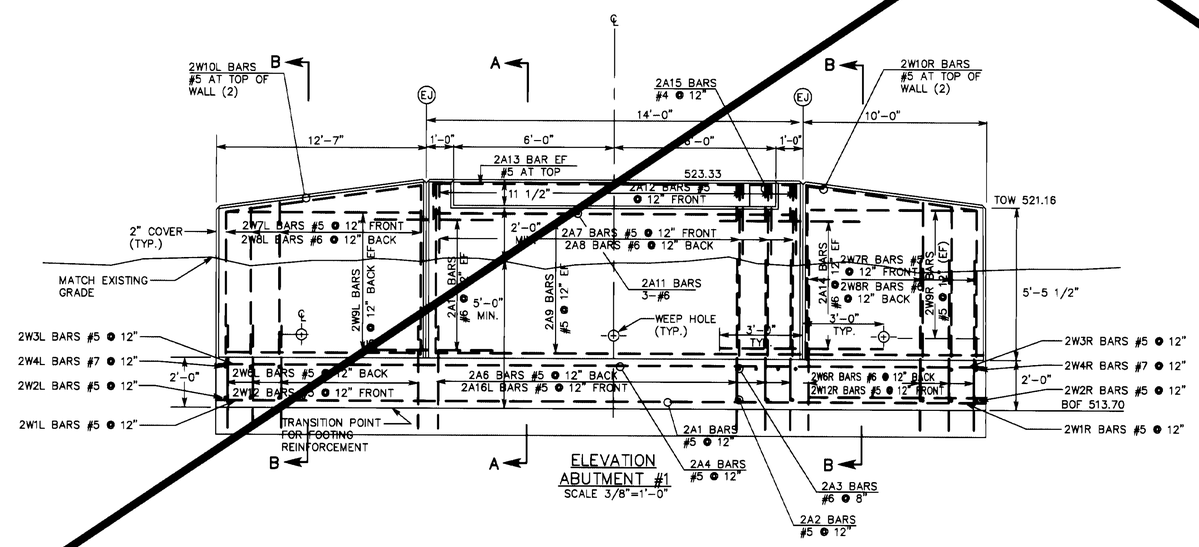


DETAIL B



DETAIL OF ABUTMENT
SECTION A–A
SCALE 3/8"=1'-0"

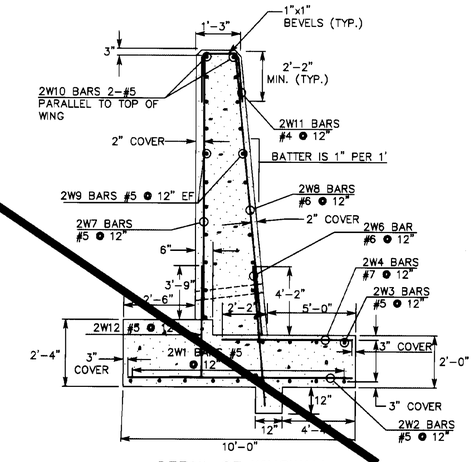
SEE ABUTMENT DRAINAGE DETAIL SHEET 38.



ELEVATION
ABUTMENT #1
SCALE 3/8"=1'-0"

WINGWALL LEFT

WINGWALL RIGHT

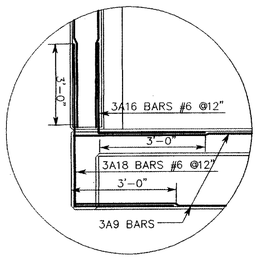


DETAIL OF WINGWALL
SECTION B–B
SCALE 3/8"=1'-0"

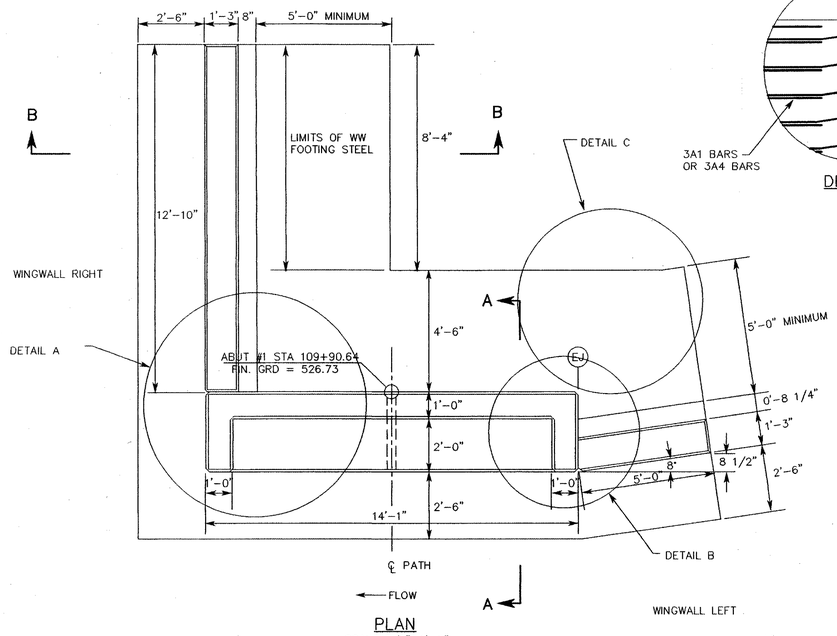
BRIDGE #1
ABUTMENT #2

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
The Mattex Building, 431 Pine St., Burlington, VT 05401

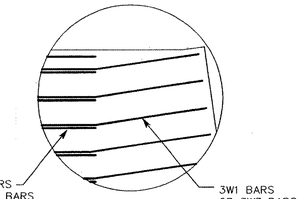
SURVEYED BY	PEA	DATE	
DRAWN BY	JMM	DATE	
SQUAD LEADER			
DESIGN FILE NO.	6829DET5	DATE PLOTTED	9/25/96
PROJ. NAME	WINOOSKI RIVER WEST BIKEWAY		
PROJ. NO.	6829		
SHEET 50	OF 132 SHEETS		



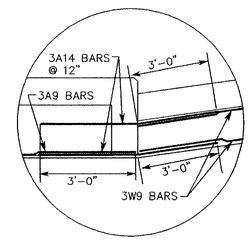
DETAIL A



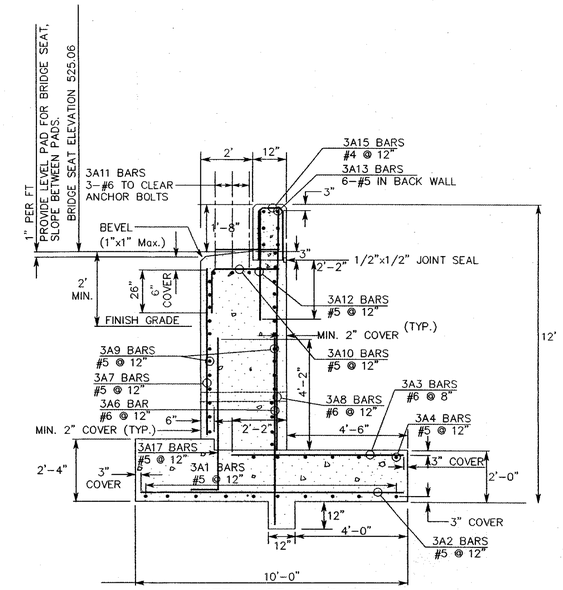
PLAN
SCALE 3/8"=1'-0"



DETAIL C

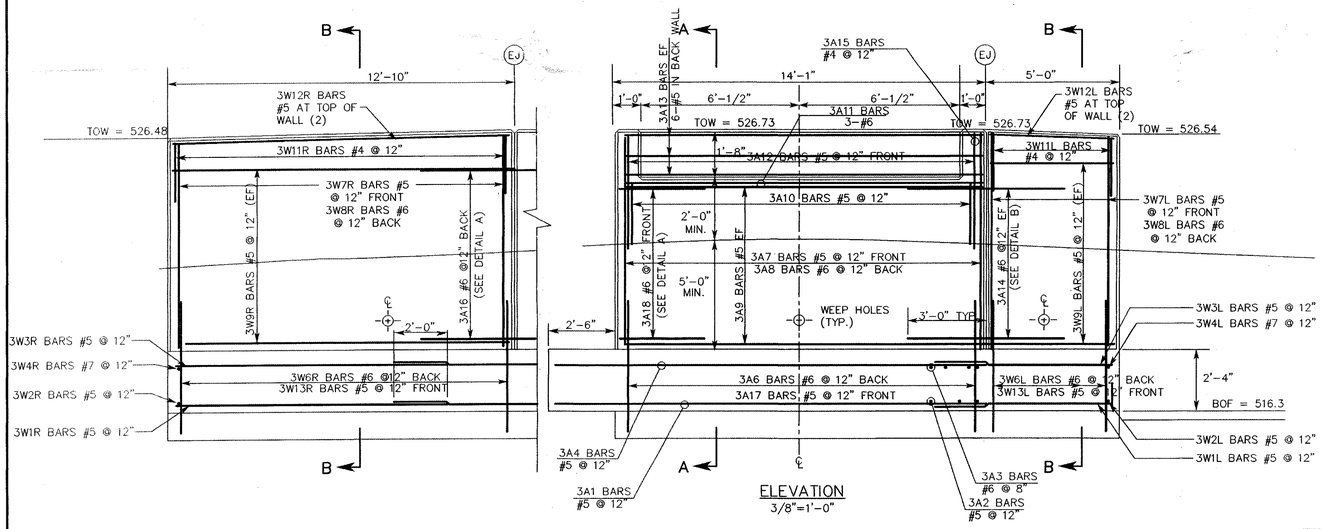


DETAIL B

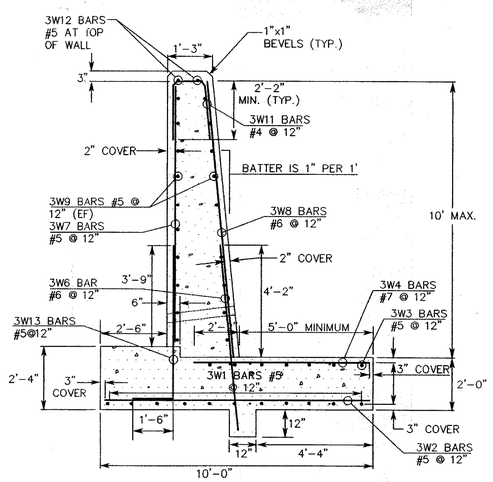


DETAIL OF ABUTMENT
SECTION A-A
SCALE 3/8"=1'-0"

SEE ABUTMENT DRAINAGE DETAIL SHEET 38.



ELEVATION
3/8"=1'-0"



DETAIL OF WINGWALL
SECTION B-B
SCALE 3/8"=1'-0"

BRIDGE NO. 2 SUBSTRUCTURE ESTIMATED QUANTITIES

ITEM	DESCRIPTION	NET ABUT 1	NET ABUT 2	0'RUN	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	0 C.Y.	39 C.Y.		39 C.Y.	
203.35	GRAVEL BACKFILL FOR SLOPE STABILIZATION	0 C.Y.	40 C.Y.		40 C.Y.	
204.25	STRUCTURE EXCAVATION	83 C.Y.	96 C.Y.		179 C.Y.	
204.30	GRANULAR BACKFILL FOR STRUCTURES	76 C.Y.	65 C.Y.		141 C.Y.	
501.25	CONCRETE, CLASS B	45.5 C.Y.	32 C.Y.		77.5 C.Y.	
507.15	REINFORCING STEEL	4013 LB	4687 LB		8700 LB	
514.10	WATER REPELLENT	6 GAL.	6 GAL.		12 GAL.	
524.20	JOINT SEALER, POLYURETHANE	1 GAL.	1 GAL.		2.0 GAL.	
602.20	DRY RUBBLE MASONRY	5 C.Y.	0 C.Y.		5 C.Y.	
613.13	STONE FILL-TYPE IV	0 C.Y.	200 C.Y.		200 C.Y.	
649.31	GEOTEXTILE UNDER STONE FILL	0 S.Y.	200 S.Y.		200 S.Y.	
649.61	GEOTEXTILE FOR FILTER CURTAIN	0 S.Y.	40 S.Y.		40 S.Y.	

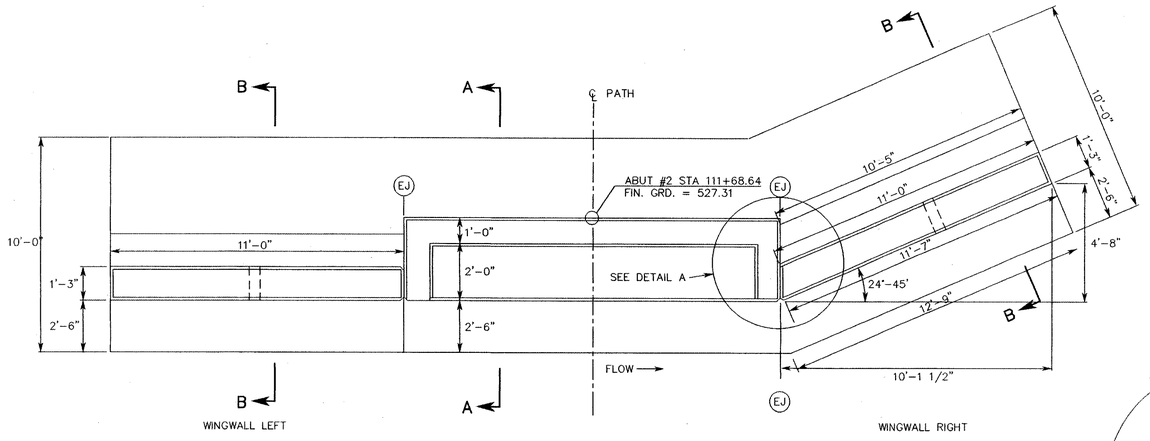
Rev'd 2/27/98, DFH, Changed dimensions of abutment to accept configuration of Steadfast Bridge bearing plates.

Rev'd 1/7/98, DFH, Changed Bars: 3A1, 3A4, 3A7, 3A8, 3A14, 3A18 3W1R, 3W2R, 3W3R, 3W11R, 3W1L, 3W3L

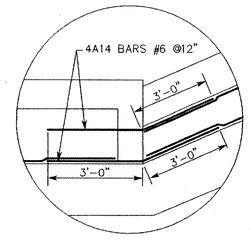
BRIDGE NO. 2
ABUTMENT NO. 1

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

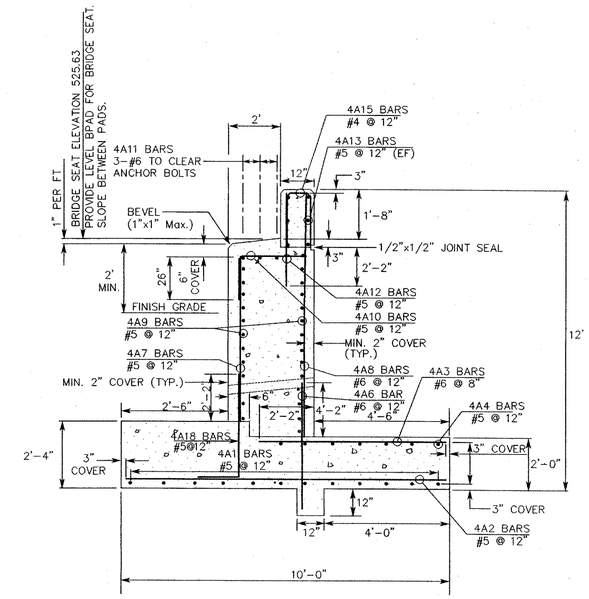
SURVEYED BY PEA DATE
DRAWN BY DFH DATE
SQUAD LEADER
DESIGN FILE NO. 6829DET2 DATE PLOTTED 4/9/97
PROJ. NAME WINOOSKI RIVER WEST BIKEWAY
PROJ. NO. 6829
SHEET 51 OF 132 SHEETS



PLAN
SCALE 3/8"=1'-0"

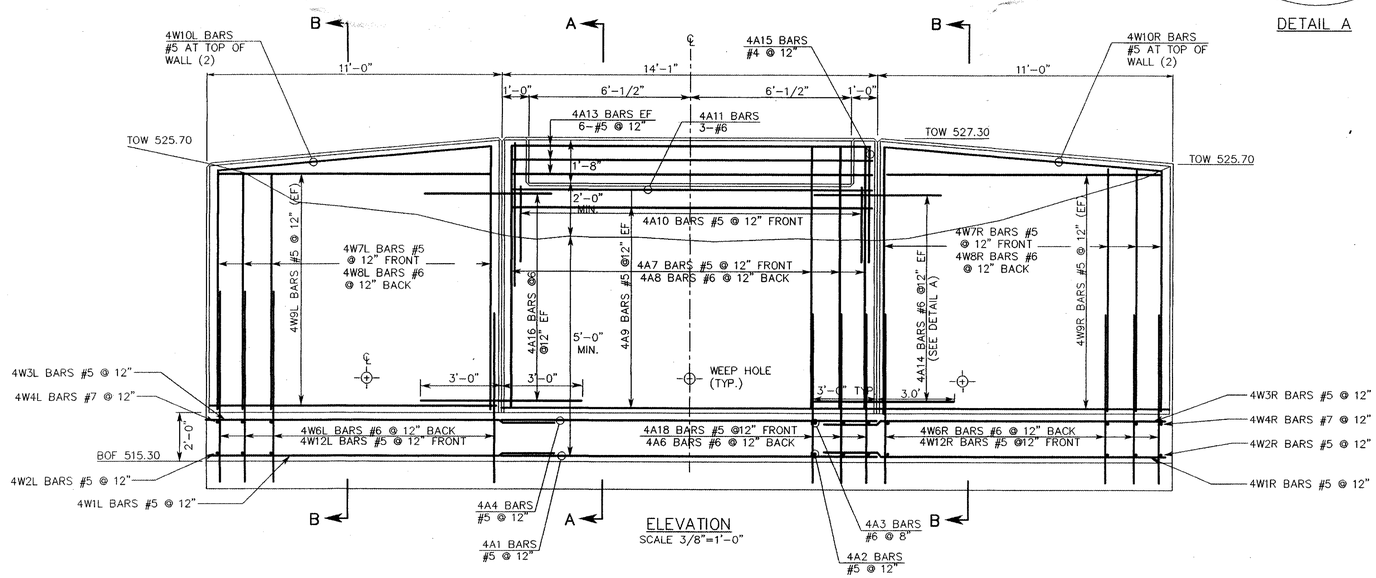


DETAIL A

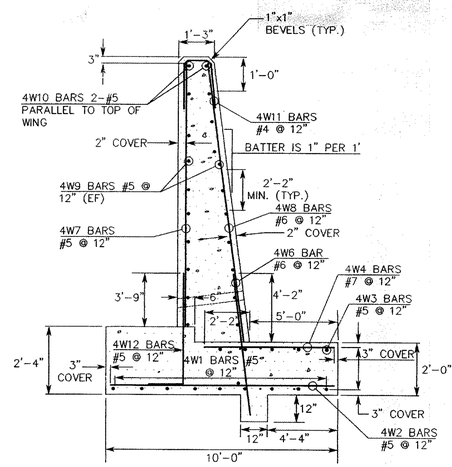


DETAIL OF ABUTMENT
SECTION A-A
SECTION A-A

SEE ABUTMENT DRAINAGE DETAIL SHEET 38.



ELEVATION
SCALE 3/8"=1'-0"



DETAIL OF WINGWALL
SECTION B-B
SCALE 3/8"=1'-0"

BRIDGE NO. 2
ABUTMENT NO. 2

FAX. (802)-658-3629 P.E.A. BUS. (802)-658-5588
PINKHAM ENGINEERING ASSOCIATES, INC.
50 Joy Drive, P.O. Box 2225, South Burlington, VT 05407

SURVEYED BY	PEA	DATE	
DRAWN BY	JMM	DATE	
SQUAD LEADER			
DESIGN FILE NO.	6829DET4	DATE PLOTTED	4/9/97
PROJ. NAME	WINOOSKI RIVER WEST BIKEWAY		
PROJ. NO.	6829		
SHEET 52 OF 132 SHEETS			

REV'D 3/2/98, DFH, Changed abutment dimensions to accept configuration of Steadfast Bridge bearing plates.

REV'D 1/7/98, DFH, CHANGED BARS: 4A14, 4A16, 4W6L, 4W12L, 4W1R, 4W3R

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				BRIDG NO. 1 – ABUTMENT NO. 1													
1	11	5	14'–0"	1A1			STRAIGHT					SPLICE WITH 1W1L BARS					
2	15	5	9'–6"	1A2			STRAIGHT										
3	21	5	6'–5"	1A3			STRAIGHT					SPLICE WITH 1W3L BARS					
4	7	5	14'–0"	1A4			STRAIGHT										
5	15	7	6'–11"	1A6			STRAIGHT										
6	15	5	4'–6"	1A7			STRAIGHT										
7	15	6	6'–3"	1A8			STRAIGHT										
8	14	5	13'–8"	1A9			STRAIGHT										
9	15	5	4'–10"	1A10	2	2'–2"	2'–8"					NONE					
10	3	6	13'–8"	1A11			STRAIGHT										
11	15	5	2'–10"	1A12			STRAIGHT										
12	4	5	13'–8"	1A13			STRAIGHT										
13	30	6	6'–0"	1A14			STRAIGHT										
14	15	4	2'–6"	1A15	2	11"	8"					11"					
15	8	5	5'–3"	1A16	2	1'–0"	4'–3"					NONE					
16																	
17																	
18																	
19				**BRIDGE NO.1 – ABUTMENT NO.1 – WINGWALL RIGHT**													
20	11	5	2'–10"	1W1R			STRAIGHT				SPLICE WITH 1A1 BARS						
21	9	5	9'–6"	1W2R			STRAIGHT										
22	8	5	7'–9"	1W3R			STRAIGHT				SPLICE WITH 1A3 BARS						
23	9	7	6'–11"	1W4R			STRAIGHT										
24	9	6	7'–3"	1W6R			STRAIGHT										
25	9	5	4'–6"	1W7R			STRAIGHT										
26	9	6	4'–10"	1W8R			STRAIGHT										
27	12	5	7'–10"	1W9R			STRAIGHT										
28	9	4	4'–6"	1W11R	2	1'–2"	2'–2"					1'–2"					
29	8	5	7'–4"	1W12R	17		5'–10"	1'–6"				NONE					
30																	
31																	
32																	
33																	
34				**BRIDGE NO.1 – ABUTMENT NO.1 – WINGWALL LEFT**													
35	11	5	7'–10"	1W1L			STRAIGHT				SPLICE WITH 1A1 BARS						
36	9	5	9'–6"	1W2L			STRAIGHT										
37	8	5	7'–0"	1W3L			STRAIGHT				SPLICE WITH 1A3 BARS						
38	9	7	6'–11"	1W4L			STRAIGHT										
39	9	6	7'–3"	1W6L			STRAIGHT										
40	9	5	4'–6"	1W7L			STRAIGHT										
41	9	6	4'–10"	1W8L			STRAIGHT										
42	12	5	7'–10"	1W9L			STRAIGHT										
43	9	4	4'–6"	1W11L	2	1'–2"	2'–2"					1'–2"					
44	9	5	7'–4"	1W12L	17		5'–10"	1'–6"				NONE					
45																	
46																	
47																	
48				**BRIDGE NO.1 – ABUTMENT NO.2**													
49	11	5	14'–0"	2A1			STRAIGHT					SPLICE WITH 1W1L BARS					
50	15	5	9'–6"	2A2			STRAIGHT										
51	15	6	6'–5"	2A3			STRAIGHT					SPLICE WITH 1W3L BARS					
52	7	5	14'–0"	2A4			STRAIGHT										
53	15	6	6'–11"	2A6			STRAIGHT										
54	15	5	4'–10"	2A7			STRAIGHT										
55	15	6	3'–3"	2A8			STRAIGHT										
56	16	5	13'–8"	2A9			STRAIGHT					SPLICE WITH 2A14 BARS					
57	15	5	4'–10"	2A10	2	2'–2"	2'–8"					NONE					
58	3	6	13'–8"	2A11			STRAIGHT										
59	15	5	3'–1"	2A12			STRAIGHT										
60	4	5	13'–8"	2A13			STRAIGHT										
61	30	6	6'–0"	2A14	19		3'–0"	3'–0"									
62	15	4	2'–6"	2A15	2	11"	8"					11"					
63	15	5	5'–3"	2A16	2	1'–0"	4'–3"					NONE					
64																	
65																	
66				**BRIDGE NO.1 – ABUTMENT NO.2 – WINGWALL RIGHT**													
67	11	5	12'–4"	2W1R			STRAIGHT				SPLICE WITH 2A1 BARS						
68	11	5	9'–6"	2W2R	▲		STRAIGHT										
69	8	5	9'–9"	2W3R			STRAIGHT				SPLICE WITH 2A3 BARS						
70	11	7	6'–11"	2W4R			STRAIGHT										
71	11	6	6'–11"	2W6R			STRAIGHT										
72	11	5	6'–0"	2W7R	▲		STRAIGHT										
73	11	6	6'–4"	2W8R	▲		STRAIGHT										
73	6	5	12'–1"	2W9R	▲		STRAIGHT										
74	2	5	12'–1"	2W10R	▲		STRAIGHT										
75	11	4	5'–3"	2W11R	2	1'–2"	2'–2"					1'–2"					
76	7	5	7'–4"	2W12R													
77																	
78																	
79																	
80																	
81																	
82																	

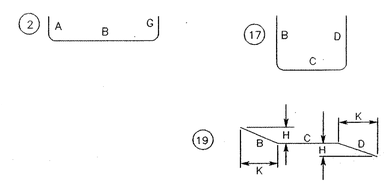
ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				BRIDGE NO.1 – ABUTMENT NO.2 – WINGWALL LEFT													
83	11	5	9'–9"	2W1L			STRAIGHT				SPLICE WITH 2A1 BARS						
84	11	5	9'–6"	2W2L			STRAIGHT										
85	8	5	9'–9"	2W3L			STRAIGHT				SPLICE WITH 2A3 BARS						
86	11	7	6'–11"	2W4L			STRAIGHT										
87	11	6	6'–11"	2W6L			STRAIGHT										
88	11	5	4'–10"	2W7L	▲		STRAIGHT										
89	11	6	5'–3"	2W8L	▲		STRAIGHT				SPLICE WITH 2A14 BARS						
90	15	5	9'–8"	2W9L			STRAIGHT										
91	2	5	9'–8"	2W10L			STRAIGHT										
92	11	4	4'–6"	2W11L	2	1'–2"	2'–2"					1'–2"					
93	7	5	7'–4"	2W12L	17		5'–10"	1'–6"				NONE					
94																	
95				**BRIDGE NO.2 – ABUTMENT NO.1**													
96	11	5	16'–4"	3A1			STRAIGHT					SPLICE WITH 3W1L BARS					
97	17	5	9'–6"	3A2			STRAIGHT										
98	26	6	6'–5"	3A3			STRAIGHT					SPLICE WITH 3W3L BARS					
99	7	5	16'–4"	3A4			STRAIGHT										
100	15	6	6'–11"	3A6			STRAIGHT										
101	15	5	5'–9"	3A7			STRAIGHT										
102	15	6	8'–2"	3A8			STRAIGHT										
103	15	5	13'–9"	3A9			STRAIGHT										
104	15	5	4'–10"	3A10	2	2'–2"	2'–8"					NONE					
105	3	6	13'–9"	3A11			STRAIGHT										
106	15	5	3'–7"	3A12			STRAIGHT										
107	4	5	13'–9"	3A13			STRAIGHT										
108	16	6	6'–0"	3A14	19		3'–0"	3'–0"	NONE				0'–5"		NONE		
109	15	4	4'–0"	3A15	2	1'–8"	8"					1'–8"					
110	8	6	6'–0"	3A16	2	3'–0"	3'–0"					NONE					
111	15	5	6'–11"	3A17	17		5'–11"	1'–0"				NONE					
112	7	6	9'–0"	3A18	2	5'–10"	3'–0"					NONE					
113																	
114				**BRIDGE NO.2 – ABUTMENT NO.1 – WINGWALL RIGHT**													
115	11	5	10'–1"	3W1R			STRAIGHT							SPLICE WITH 3A2 BARS			
116	9	5	9'–6"	3W2R			STRAIGHT										
117	8	5	10'–1"	3W3R	▲		STRAIGHT							SPLICE WITH 3A3 BARS			
118	9	7	7'–7"	3W4R			STRAIGHT										
119	14	6	6'–11"	3W6R			STRAIGHT										
120	14	5	7'–10"	3W7R	▲		STRAIGHT										
121	14	6	8'–2"	3W8R	▲		STRAIGHT										
122	18	5	12'–8"	3W9R	▲		STRAIGHT										
123	14	4	3'–3"	3W11R	2	1'–2"	0'–11"					1'–2"					
124	2	5	12'–8"	3W12R			STRAIGHT										
125	14	5	6'–10"	3W13R	2	1'–0"	5'–10"					NONE					
126				**BRIDGE NO.2 – ABUTMENT NO.1 – WINGWALL LEFT**													
127	10	5	6'–9"	3W1L	19	▲	2'–0"	4'–9"					0'–3"		NONE		SPLICE WITH 3A1 BARS
128	6	5	9'–6"	3W2L			STRAIGHT										
129	8	5	6'–9"	3W3L	19	▲	2'–0"	4'–9"					0'–3"		NONE		SPLICE WITH 3A4 BARS
130	10	7	6'–11"	3W4L			STRAIGHT										
131	9	6	6'–11"	3W6L			STRAIGHT										
132	6	5	7'–8"	3W7L	▲		STRAIGHT										
133	6	6	8'–0"	3W8L	▲		STRAIGHT										
134	18	5	4'–9"	3W9L	▲		STRAIGHT										
135	6	4	3'–3"	3W11L	2	1'–2"	0'–11"					1'–2"					
136	2	5	4'–9"	3W12L			STRAIGHT										
137	6	5	7'–4"	3W13L	17		5'–10"	1'–6"				NONE					
138				**BRIDGE NO.2 – ABUTMENT NO.2**													
139	11	5	14'–1"	4A1			STRAIGHT					SPLICE WITH 4W1 BARS					
140	15	5	9'–6"	4A2			STRAIGHT										
141	22	6	6'–5"	4A3			STRAIGHT					SPLICE WITH 4W3 BARS					
142	8	5	14'–1"	4A4			STRAIGHT										
143	15	6	6'–11"	4A6			STRAIGHT										
144	15	5	7'–4"	4A7			STRAIGHT										
145	15	6	9'–9"	4A8			STRAIGHT										
146	17	5	13'–9"	4A9			STRAIGHT					SPLICE WITH 4A14 BARS					
147	15	5	4'–10"	4A10	2	2'–2"	2'–8"					NONE					
148	3	6	13'–9"	4A11			STRAIGHT										
149	15	5	3'–7"	4A12			STRAIGHT										
150	6	5	13'–9"	4A13			STRAIGHT										
151	17	6	6'–0"	4A14	19		3'–0"	3'–0"					1'–3"		NONE		
152	15	4	4'–0"	4A15	2	1'–8"	8"					1'–8"					
153	17	6	6'–0"	4A16			STRAIGHT										
154	15	5	5'–3"	4A18	17		4'–3"	1'–0"				NONE					
155																	
156																	
157																	
158																	
159																	
160																	
161																	
162																	
163																	
164																	
165																	

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
				BRIDGE NO.2 – ABUTMENT NO.2 – WINGWALL LEFT													
166	11	5	12'–10"	4W1L				STRAIGHT			SPLICE WITH 4A1 BARS						
167	12	5	9'–6"	4W2L				STRAIGHT									
168	11	5	12'–9"	4W3L				STRAIGHT			SPLICE WITH 4A3 BARS						
169	12	7	6'–11"	4W4L				STRAIGHT									
170	12	6	6'–11"	4W6L				STRAIGHT									
171	12	5	9'–5"	4W7L	▲			STRAIGHT									
172	12	6	9'–9"	4W8L	▲			STRAIGHT									
173	11	5	10'–9"	4W9L				STRAIGHT									
174	2	5	10'–9"	4W10L				STRAIGHT									
175	12	4	3'–1"	4W11L	2	1'–2"	0'–11"					1'–2"					
176	12	5	7'–4"	4W12L	2	1'–6"	5'–10"					NONE					
177																	
178				**BRIDGE NO.2 – ABUTMENT NO.2 – WINGWALL RIGHT**													
179	11	5	14'–6"	4W1R	19	▲	2'–0"	12'–6"	SPLICE WITH 4A1 BARS				0'–10"		NONE		
180	12	5	9'–6"	4W2R				STRAIGHT									
181	8	5	13'–6"	4W3R	19	▲	2'–0"	12'–6"	SPLICE WITH 4A3 BARS				0'–10"		NONE		
182	13	7	6'–9"	4W4R				STRAIGHT									
183	12	6	6'–11"	4W6R				STRAIGHT									
184	13	5	9'–6"	4W7R	▲			STRAIGHT									
185	12	6	9'–9"	4W8R	▲			STRAIGHT									
186	19	5	11'–4"	4W9R				STRAIGHT									
187	2	5	11'–4"	4W10R				STRAIGHT									
188	13	4	2'–6"	4W11R	2	1'–2"	0'–11"					1'–2"					
189	13	5	7'–4"	4W12R	17		5'–10"	1'–6"				NONE					
190																	

ASTM STANDARD REINFORCING BARS

BAR SIZE DESIG-NATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	CROSS SEC-TIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	.375	.375	.11	1.178
#4	.668	.500	.20	1.571
#5	1.043	.625	.31	1.963
#6	1.502	.750	.44	2.355
#7	2.044	.875	.60	2.749
#8	2.670	1.000	.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.55	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

TYPICAL BAR BENDS



NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET–STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615–S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICE SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE"
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS.
5. "J" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45° DIMENSIONS "H" AND "K" MUST BE SHOWN.

★ DENOTES DIMENSION OR QUANTITY THAT MAY CHANGE DUE TO DELIVERED BRIDGE DIMENSIONS.
▲ DENOTES BARS TO BE CUT IN FIELD.
* DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
△ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.

FILE: 6829BRID

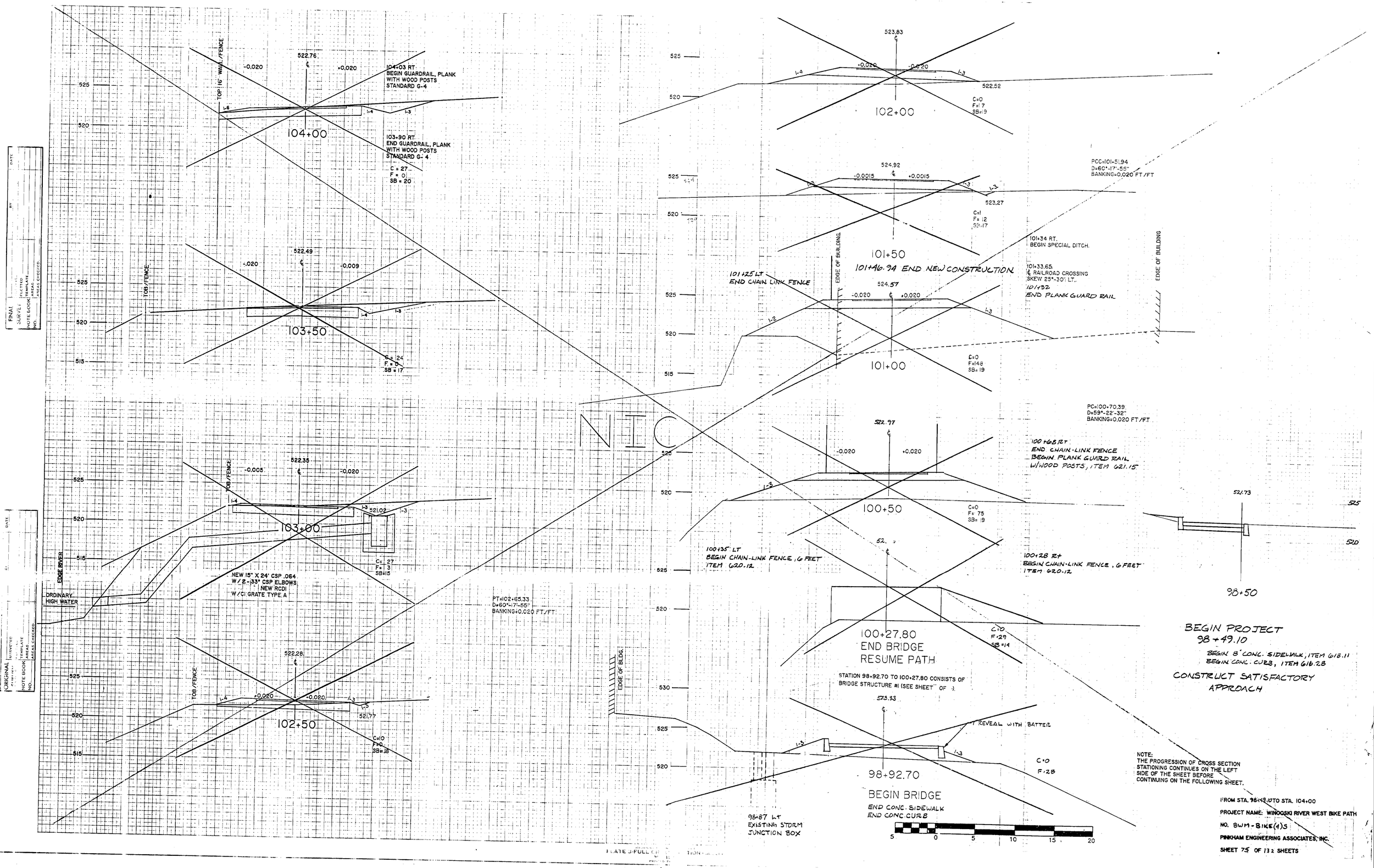
REV. NO.	MADE BY	DATE	DESCRIPTION
2	DFH	3/2/98	CHANGED BARS: 3A1, 3A2, 3A3, 3A4, 3A7, 3A9, 3A11, 3A12, 3A13, 3A14, 3A15, 3A16, 3A17, 3A18 4A1, 4A4, 4A6, 4A7, 4A9, 4A11, 4A12, 4A13, 4A14, 4A15, 4A16
1	DFH	1/7/98	CHANGED BARS: 3A1, 3A4, 3A7, 3A8, 3A14, 3A18, 3W1R, 3W2R, 3W3R, 3W11R 3W1L, 3W3L, 4A14, 4A16, 4W6L, 4W12L, 4W1R, 4W3R

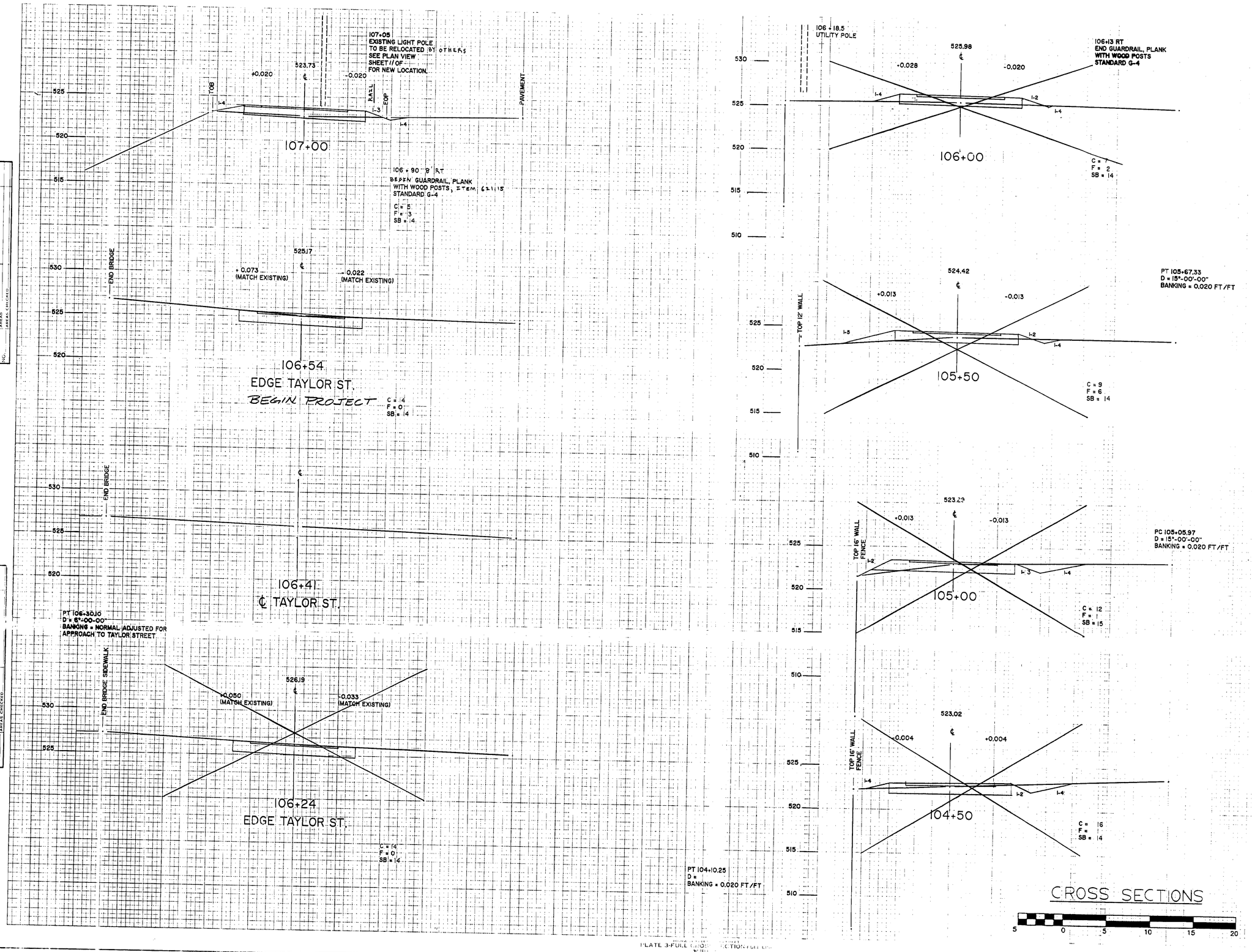
STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF MONTPELIER	BRIDGE NO.
	LOG STA.
HIGHWAY NO.	SURV. STA.

REINFORCING STEEL SCHEDULE

DESIGNED BY:	DRAWN BY:
CHECKED BY: DATE:	BRIDGE DESIGN SUPERVISOR DATE:
PROJECT WINOOSKI RIVER WEST BIKE PATH	PROJECT NO. 6829
BRIDGE SHEET NO.	SHEET 53 OF 132


NTS
104+00
522.76
-0.020
+0.020
TOP 16' WALL/FENCE
104+03 RT.
BEGIN GUARDRAIL, PLANK
WITH WOOD POSTS
STANDARD G-4
103+90 RT.
END GUARDRAIL, PLANK
WITH WOOD POSTS
STANDARD G-4
C = 27
F = 0
SB = 20
103+50
522.49
-.020
-0.009
TOB/FENCE
C = 24
F = 0
SB = 17
103+00
522.35
-0.005
-0.020
521.02
C= 27
F= 5
SB=15
NEW 15" X 24' CSP .064
W/2-33° CSP ELBOWS
NEW RCDI
W/CI GRATE TYPE A
ORDINARY
HIGH WATER
EDGE RIVER
102+50
522.28
+0.020
+0.020
521.77
C=0
F=0
SB=16
102+00
523.83
+0.020
-0.020
522.52
C=0
F=7
SB=9
101+50
524.92
-0.0015
+0.0015
523.27
C=1
F=12
SB=17
101+46.94 END NEW CONSTRUCTION
101+25 LT
END CHAIN LINK FENCE
EDGE OF BUILDING
524.57
-0.020
+0.020
101+00
C=0
F=48
SB=19
PCC=101+51.94
D=60°-17'-55"
BANKING=0.020 FT/FT
101+34 RT.
BEGIN SPECIAL DITCH.
101+33.65
℄ RAILROAD CROSSING
SKEW 25°-30' LT.
101+32
END PLANK GUARD RAIL
PC=100+70.39
D=59°-22'-32"
BANKING=0.020 FT/FT
522.97
-0.020
+0.020
100+50
C=0
F= 75
SB= 19
100+68 RT
END CHAIN-LINK FENCE
BEGIN PLANK GUARD RAIL
W/WOOD POSTS, ITEM 621.15
100+35 LT
BEGIN CHAIN-LINK FENCE, 6 FEET
ITEM 620.12
100+28 RT
BEGIN CHAIN-LINK FENCE, 6 FEET
ITEM 620.12
PT=102+65.33
D=60°-17'-55"
BANKING=0.020 FT/FT
100+27.80
END BRIDGE
RESUME PATH
C=0
F=29
SB=14
STATION 98+92.70 TO 100+27.80 CONSISTS OF
BRIDGE STRUCTURE #1 (SEE SHEET OF)
573.93
1' REVEAL WITH BATTER
98+92.70
BEGIN BRIDGE
END CONC. SIDEWALK
END CONC CURB
C=0
F=28
98+87 LT
EXISTING STORM
JUNCTION BOX
EDGE OF BLDG.
521.73
98+50
BEGIN PROJECT
98+49.10
BEGIN 8' CONC. SIDEWALK, ITEM 618.11
BEGIN CONC. CURB, ITEM 616.28
CONSTRUCT SATISFACTORY
APPROACH
NOTE:
THE PROGRESSION OF CROSS SECTION
STATIONING CONTINUES ON THE LEFT
SIDE OF THE SHEET BEFORE
CONTINUING ON THE FOLLOWING SHEET.
FROM STA. 98+49.10 TO STA. 104+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 75 OF 132 SHEETS
FINAL
SURVEY
NOTE BOOK
NO.
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY
ORIGINAL
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
PLATE 3-FULL



NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

CROSS SECTIONS

5 0 5 10 15 20

FROM STA. 104+50 TO STA. 107+00

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BWM-BIKE(4)S

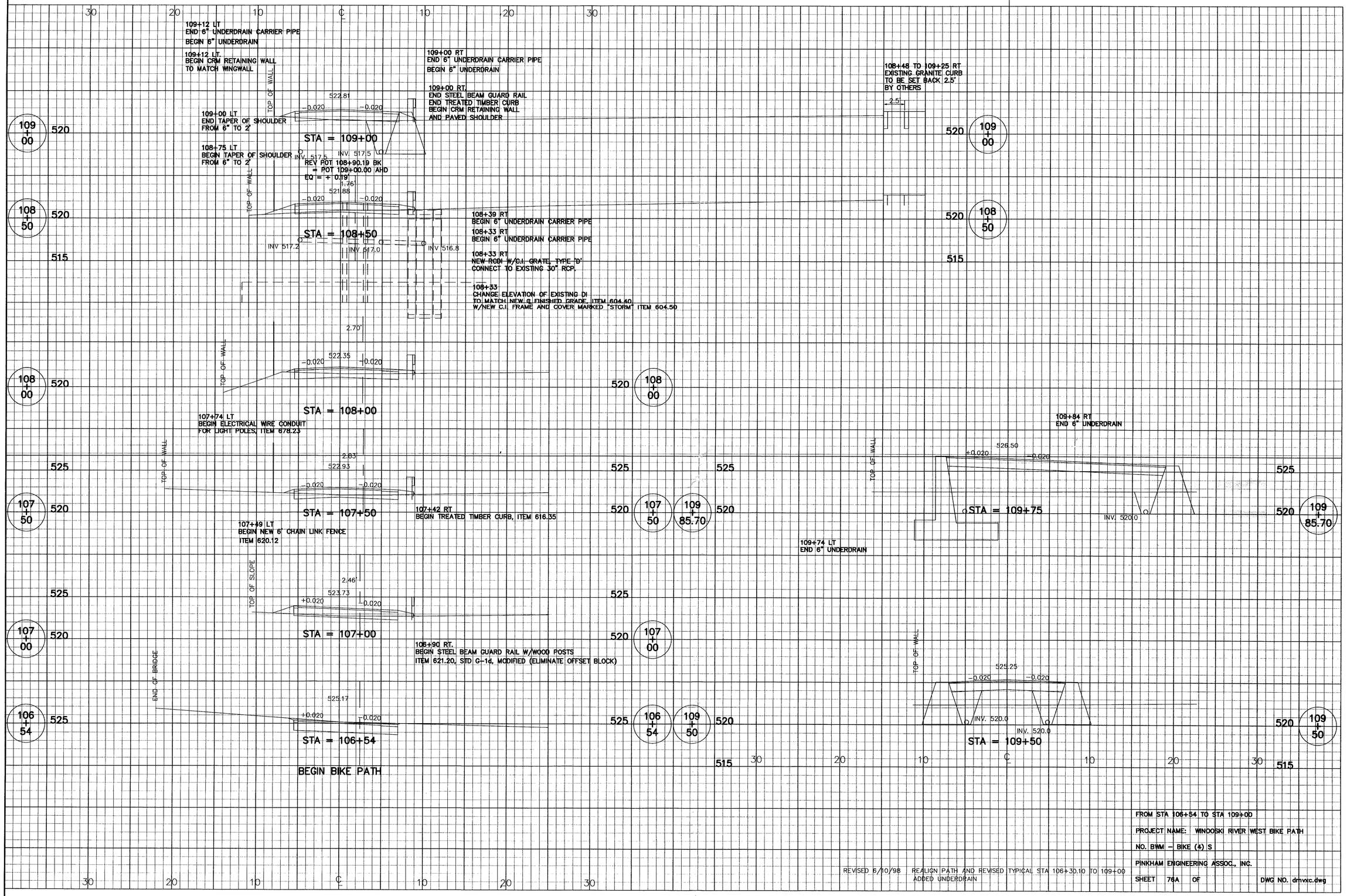
PINKHAM ENGINEERING ASSOCIATES, INC.

SHEET 76 OF 132 SHEETS

FINAL
SURVEY
NOTE BOOK
NO.
DATE
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL
SURVEY
NOTE BOOK
NO.
DATE
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

PLATE 3-FULL CROSS SECTIONS FOR LIN



FROM STA 106+54 TO STA 109+00

PROJECT NAME: WINDOOSKI RIVER WEST BIKE PATH

NO. BWM – BIKE (4) S

PINKHAM ENGINEERING ASSOC., INC.

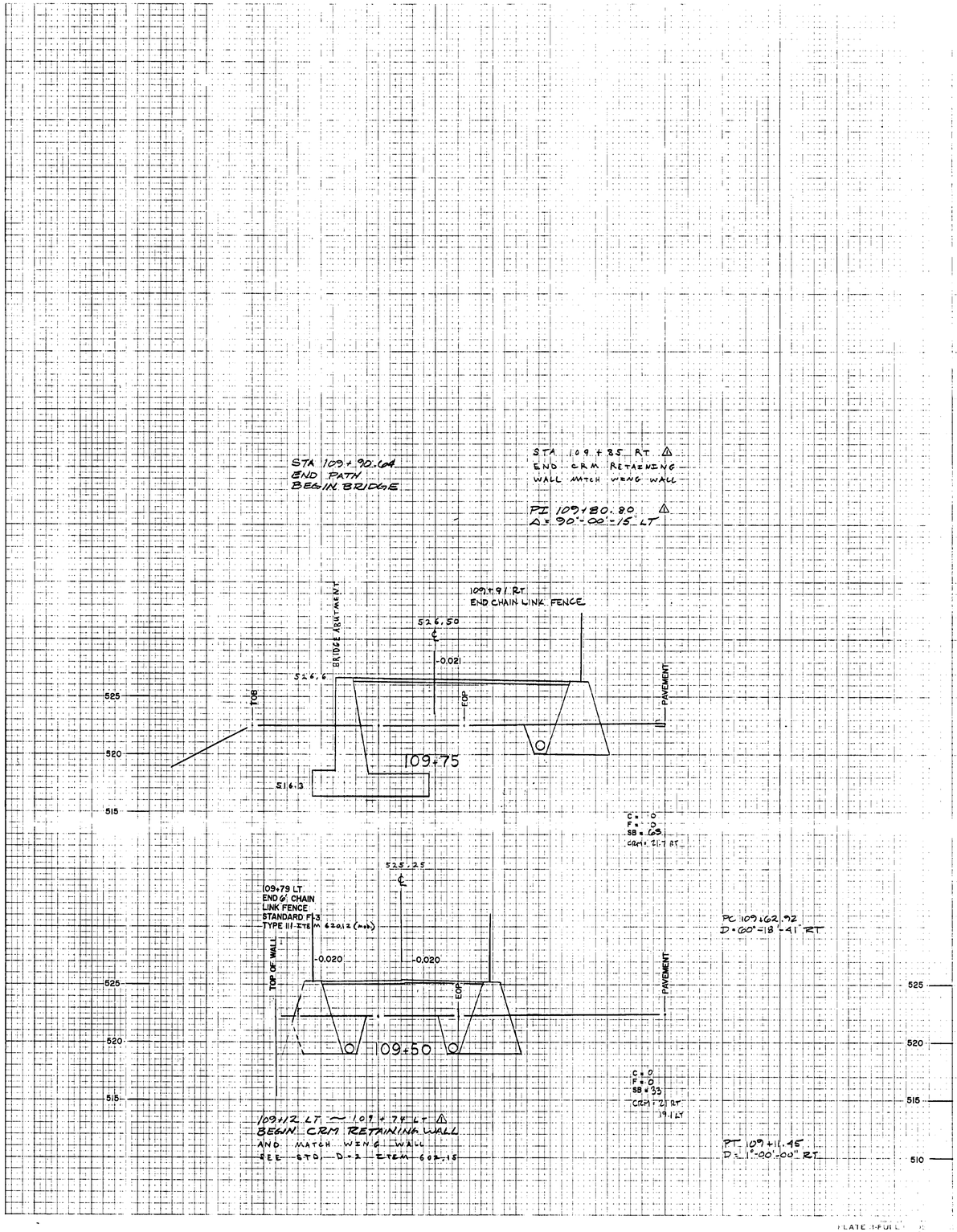
SHEET 76A OF

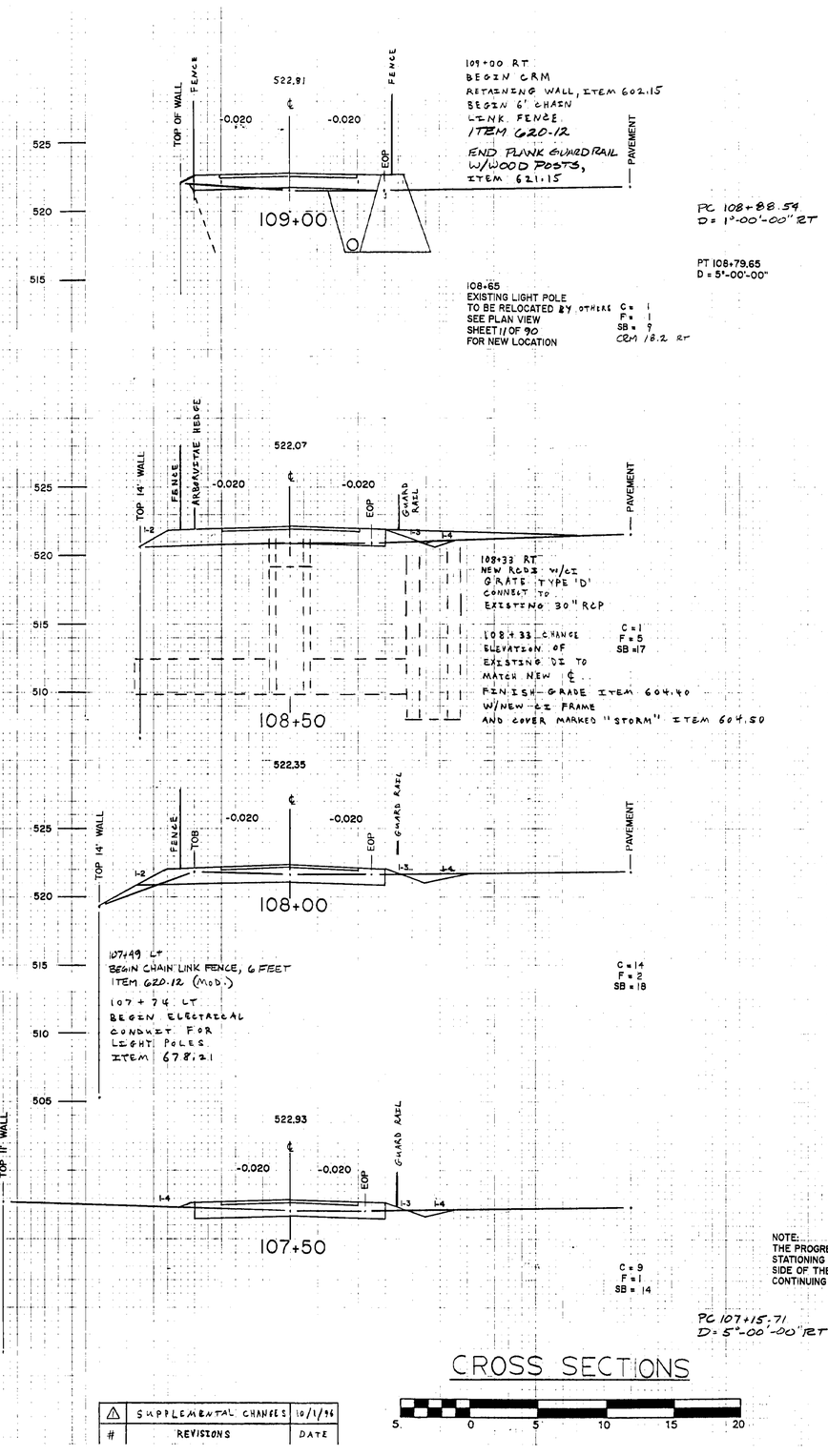
DWG NO. drnvxc.dwg

REVISED 6/10/98 REALIGN PATH AND REVISED TYPICAL STA 106+30.10 TO 109+00
ADDED UNDERDRAIN

FINAL SURVEY | SURVEYED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK NO.

ORIGINAL SURVEY | SURVEYED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK NO.





NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

CROSS SECTIONS

#	REVISIONS	DATE
1	SUPPLEMENTAL CHANGES	10/1/96

5 0 5 10 15 20

FROM STA. 107+50 TO STA. 109+94.70

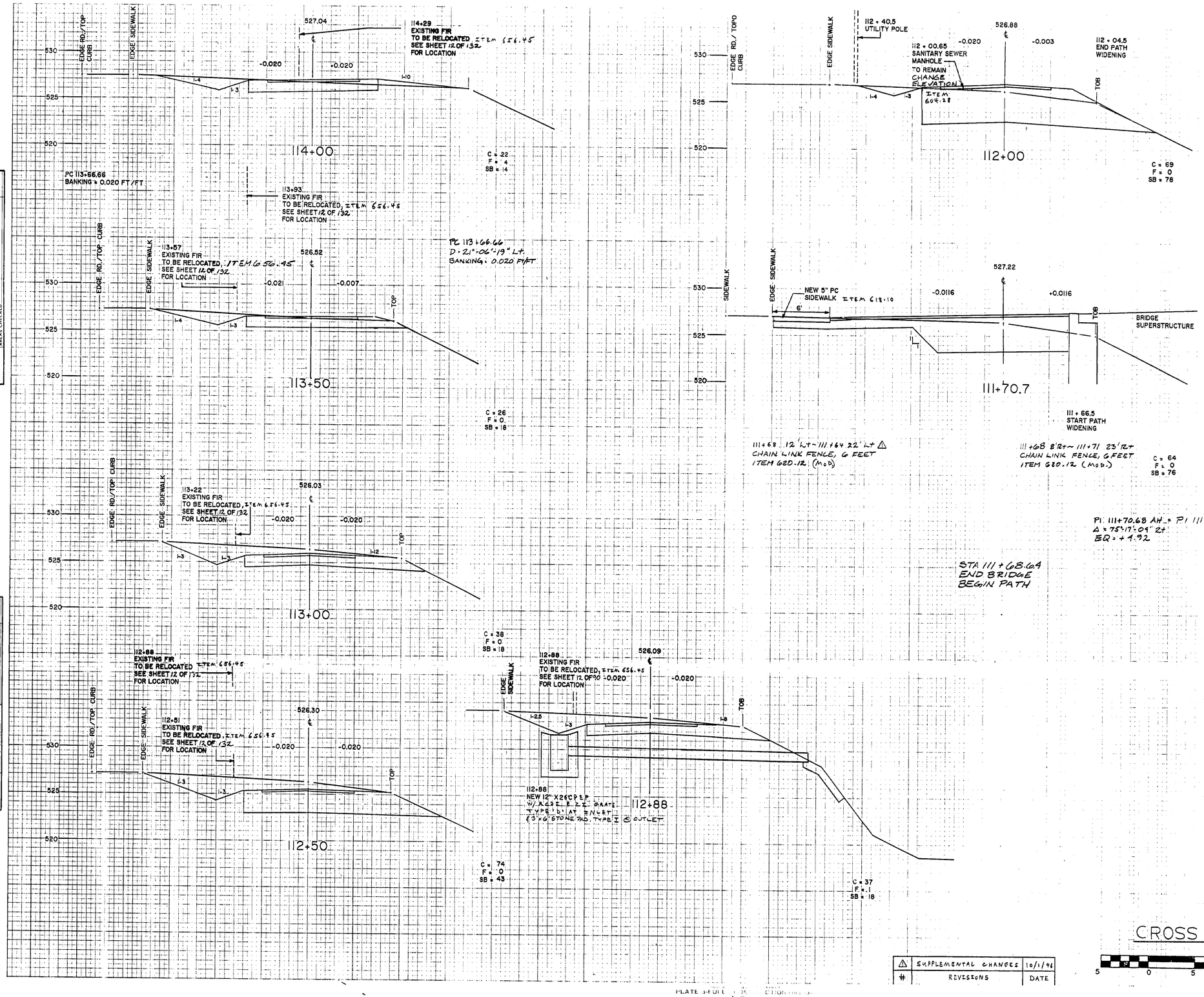
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BWM-BIKE(4)S

PINKHAM ENGINEERING ASSOCIATES, INC.

SHEET 77 OF 132 SHEETS

PLATE 1-FULL



NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

#	REVISIONS	DATE
△	SUPPLEMENTAL CHANGES	10/1/96

CROSS SECTIONS

5 0 5 10 15 20

FROM STA. 111+94.70 TO STA. 114+00

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BWM-BIKE(4)S

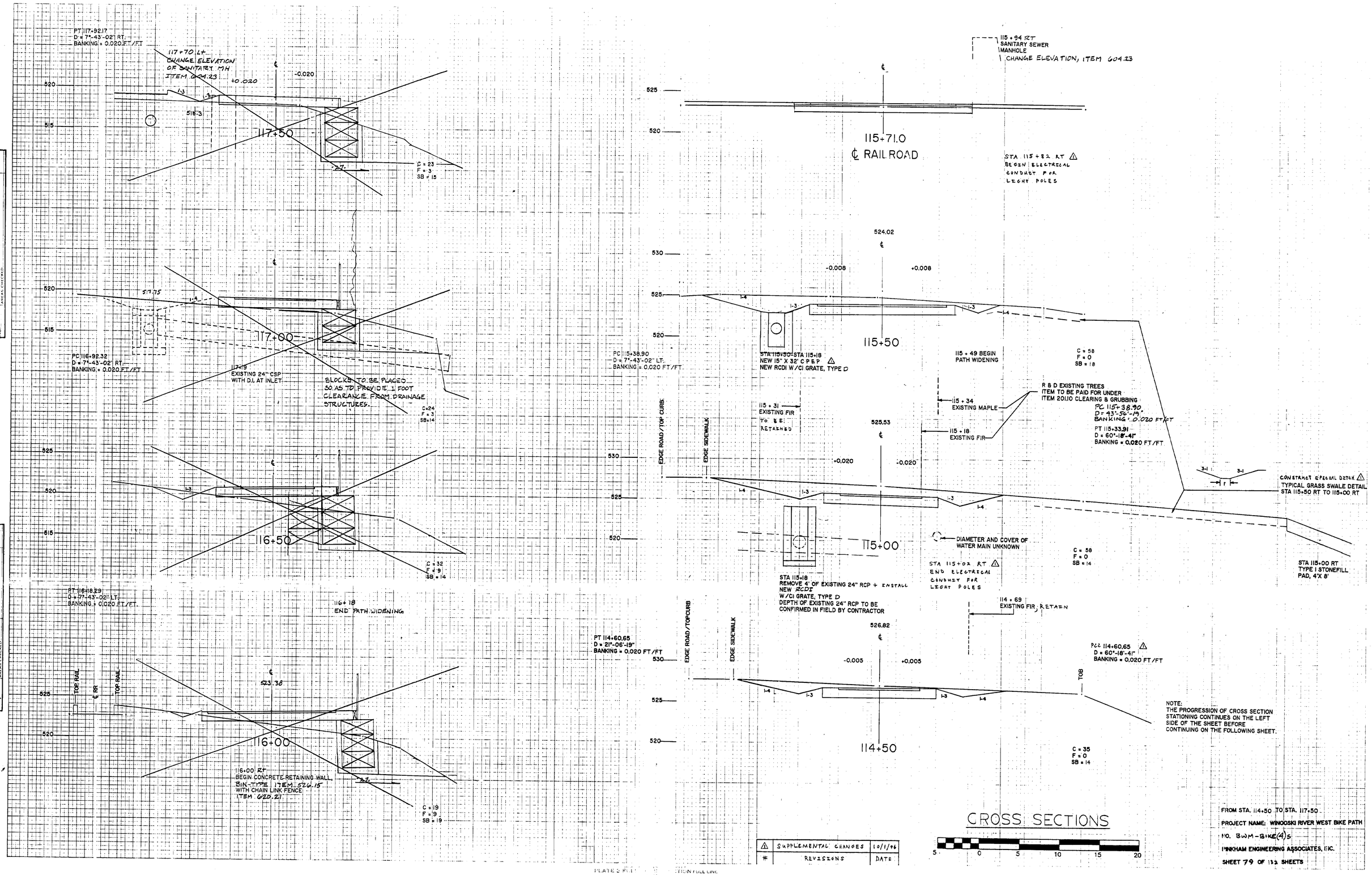
PINKHAM ENGINEERING ASSOCIATES, INC.

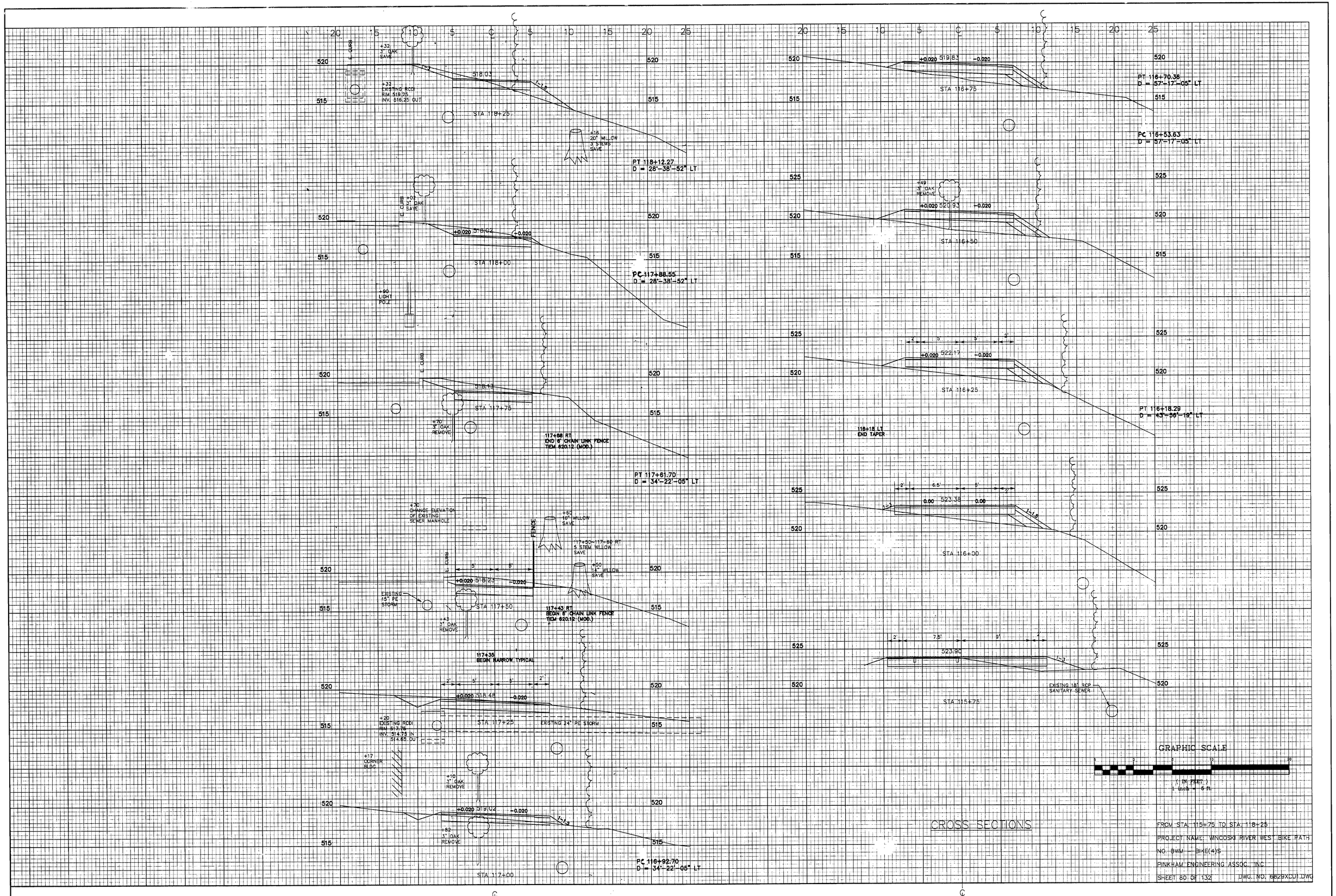
SHEET 78 OF 132 SHEETS

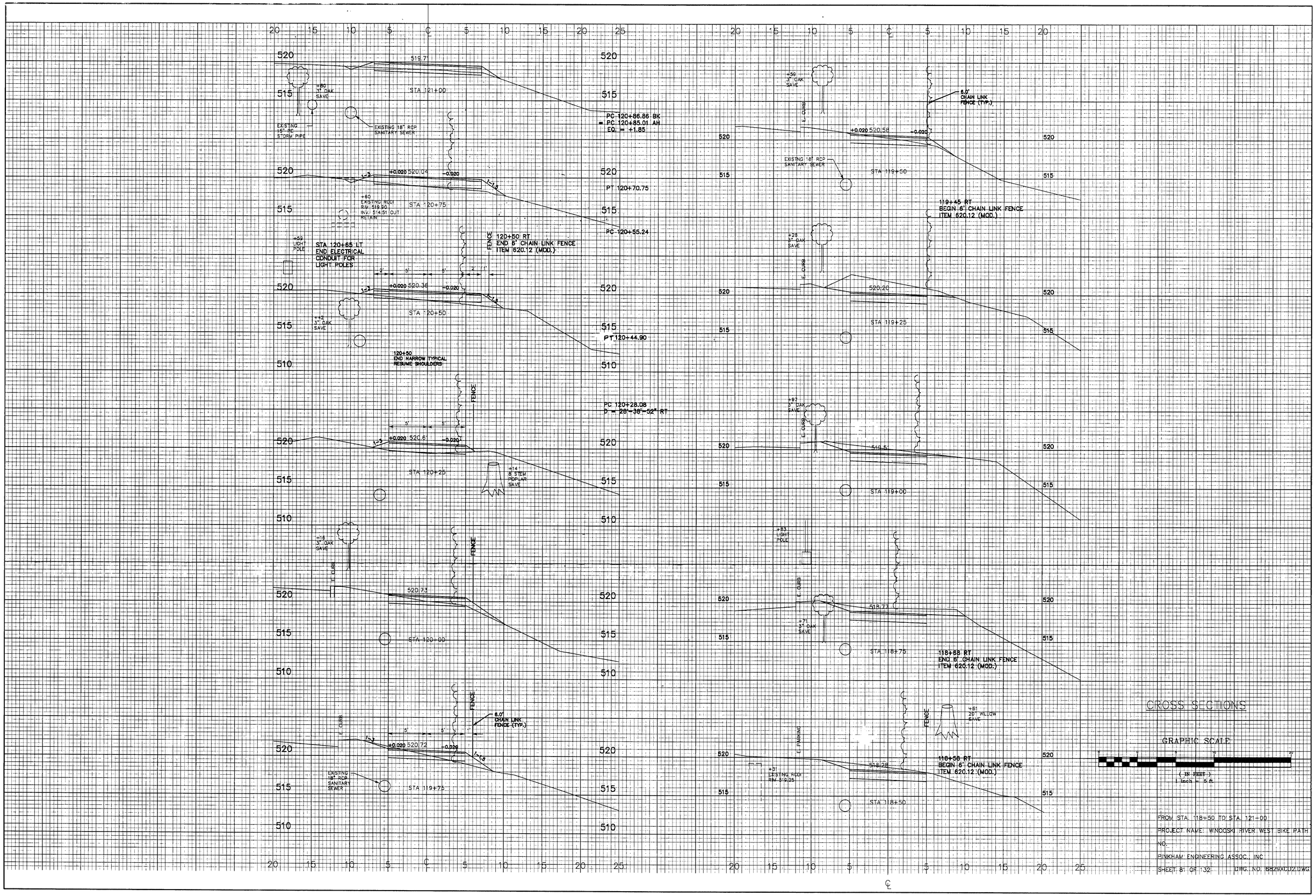
FINAL
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.

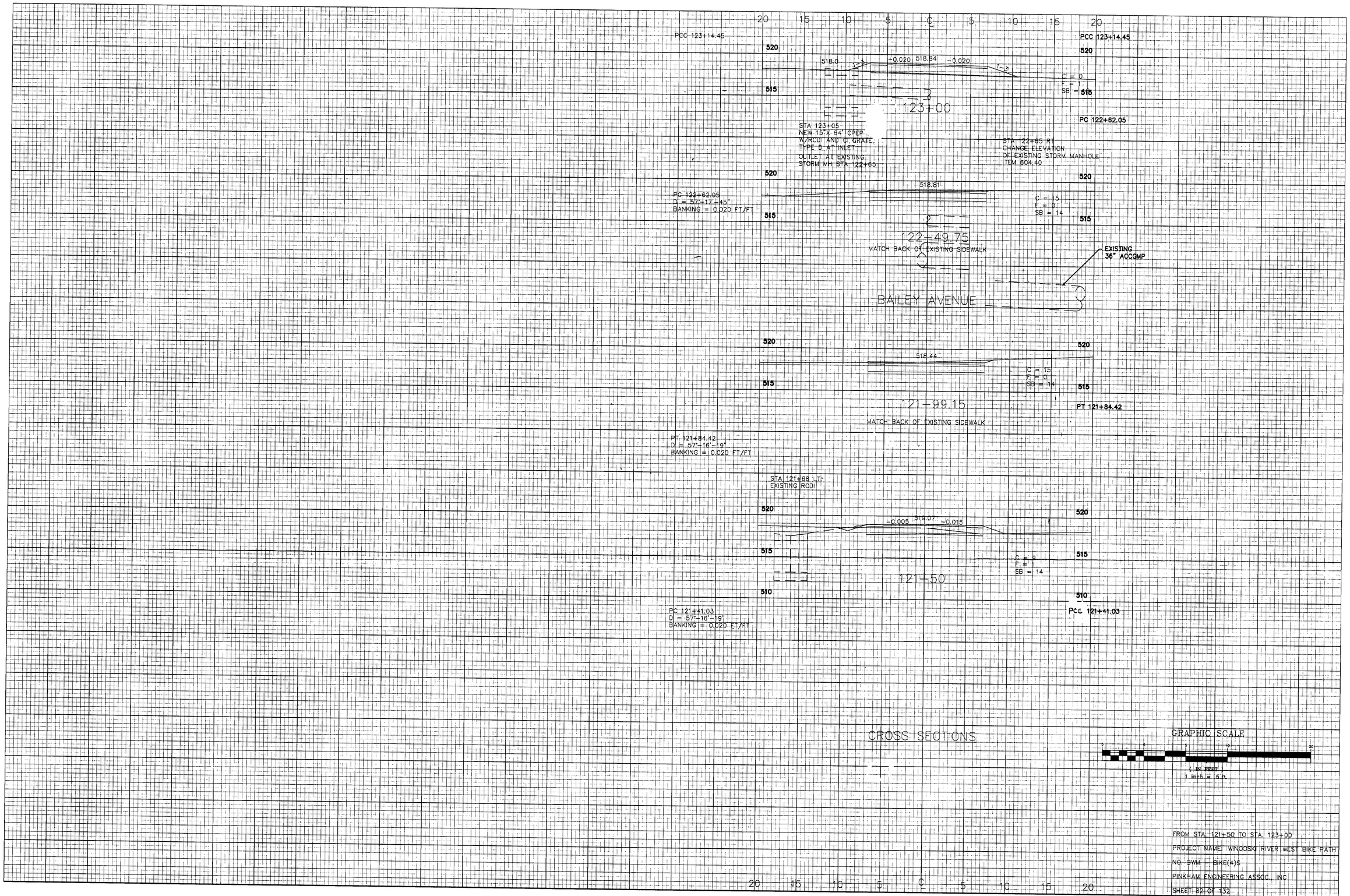
ORIGINAL
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

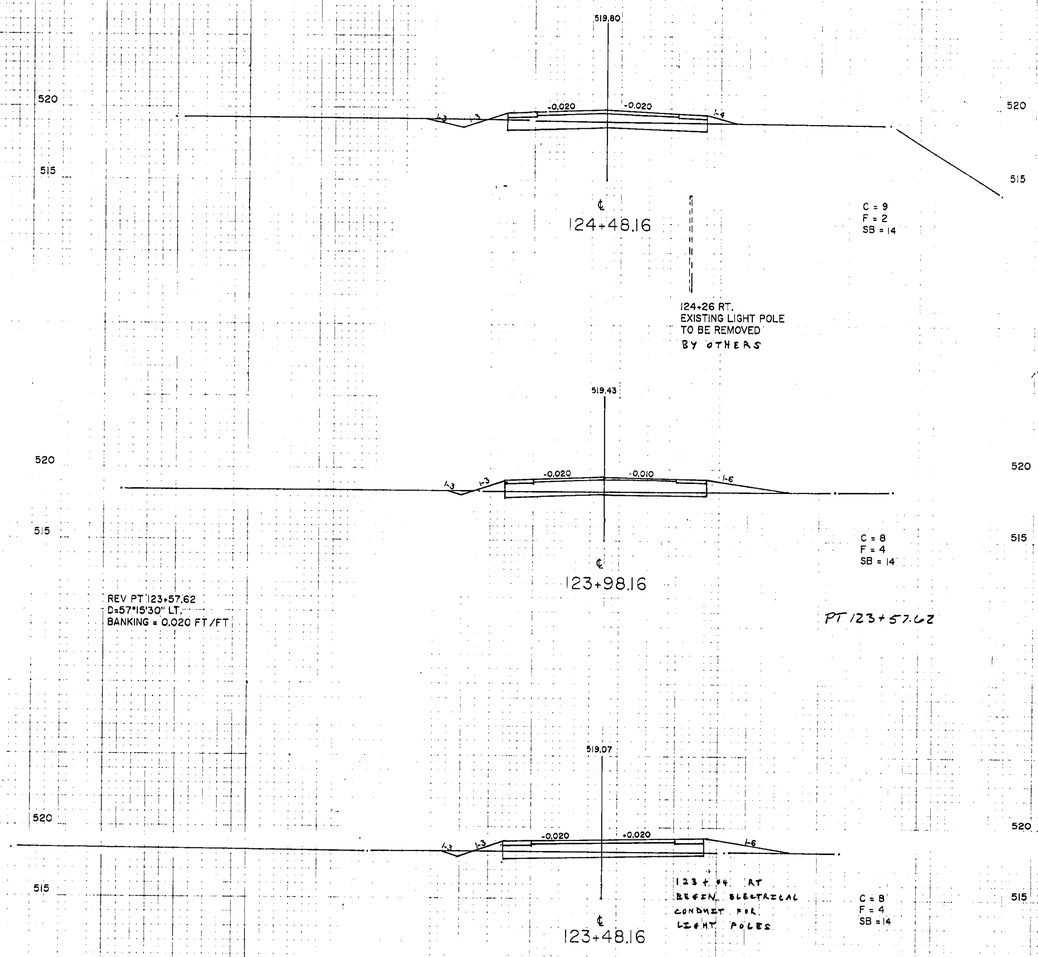
PLATE 3 FULL


PT 117+92.17
D = 7°-43'-02" RT.
BANKING = 0.020 FT./FT.
117+70 LT.
CHANGE ELEVATION
OF SANITARY MH
ITEM 604.23
+0.020
-0.020
117+50
C = 23
F = 3
SB = 15
517.75
117+00
PC 116+92.32
D = 7°-43'-02" RT.
BANKING = 0.020 FT./FT.
117+19
EXISTING 24" CSP
WITH D.I. AT INLET
BLOCKS TO BE PLACED
SO AS TO PROVIDE 1 FOOT
CLEARANCE FROM DRAINAGE
STRUCTURES.
C = 24
F = 3
SB = 14
116+50
C = 32
F = 9
SB = 14
PT 116+18.29
D = 7°-43'-02" LT.
BANKING = 0.020 FT./FT.
116+18
END PATH WIDENING
TOP RAIL
℄ RR
TOP RAIL
523.38
116+00
116+00 RT
BEGIN CONCRETE RETAINING WALL,
BIN-TYPE ITEM 526.15
WITH CHAIN LINK FENCE
ITEM 620.21
C = 19
F = 19
SB = 19
115 + 94 RT
SANITARY SEWER
MANHOLE
CHANGE ELEVATION, ITEM 604.23
115+71.0
℄ RAILROAD
STA 115+82 RT
BEGIN ELECTRICAL
CONDUIT FOR
LIGHT POLES
524.02
-0.008
+0.008
115+50
PC 115+38.90
D = 7°-43'-02" LT.
BANKING = 0.020 FT./FT.
STA 115+30-STA 115+18
NEW 15" X 32' C P E P
NEW RCDI W/CI GRATE, TYPE D
115 + 49 BEGIN
PATH WIDENING
C = 58
F = 0
SB = 18
R & D EXISTING TREES
ITEM TO BE PAID FOR UNDER
ITEM 201.10 CLEARING & GRUBBING
115 + 34
EXISTING MAPLE
PC 115+38.90
D = 43°-56'-19"
BANKING = 0.020 FT/FT
PT 115+33.91
D = 60°-18'-41"
BANKING = 0.020 FT/FT
115 + 31
EXISTING FIR
TO BE
RETAINED
525.53
115 + 18
EXISTING FIR
EDGE ROAD/TOP CURB
EDGE SIDEWALK
+0.020
-0.020
CONSTRUCT SPECIAL DITCH
TYPICAL GRASS SWALE DETAIL
STA 115+50 RT TO 115+00 RT
115+00
DIAMETER AND COVER OF
WATER MAIN UNKNOWN
C = 58
F = 0
SB = 14
STA 115+02 RT
END ELECTRICAL
CONDUIT FOR
LIGHT POLES
STA 115+00 RT
TYPE I STONEFILL
PAD, 4'X 8'
STA 115+18
REMOVE 4' OF EXISTING 24" RCP + INSTALL
NEW RCDI
W/CI GRATE, TYPE D
DEPTH OF EXISTING 24" RCP TO BE
CONFIRMED IN FIELD BY CONTRACTOR
114 + 69
EXISTING FIR, RETAIN
526.82
PT 114+60.65
D = 21°-06'-19"
BANKING = 0.020 FT/FT
-0.005
+0.005
PC 114+60.65
D = 60°-18'-41"
BANKING = 0.020 FT/FT
TOB
114+50
C = 35
F = 0
SB = 14
NOTE:
THE PROGRESSION OF CROSS SECTION
STATIONING CONTINUES ON THE LEFT
SIDE OF THE SHEET BEFORE
CONTINUING ON THE FOLLOWING SHEET.
CROSS SECTIONS
5 0 5 10 15 20
SUPPLEMENTAL CHANGES 10/1/96
REVISIONS DATE
FROM STA. 114+50 TO STA. 117+50
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE(4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 79 OF 132 SHEETS


+32 OAK SAVE
+32 EXISTING RCP RIM 519.25 INV. 516.25 OUT
518.03
STA 118+25
+16 20" WILLOW 3 STEMS SAVE
PT 118+12.27 D = 28°-38'-52" LT
+02 11" OAK SAVE
+0.020 518.02 -0.020
STA 118+00
PC 117+88.55 D = 28°-38'-52" LT
+90 LIGHT POLE
518.43
STA 117+75
+70 3" OAK REMOVE
117+68 RT END 6' CHAIN LINK FENCE ITEM 620.12 (MOD.)
PT 117+61.70 D = 34°-22'-05" LT
+70 CHANGE ELEVATION OF EXISTING SEWER MANHOLE
+60 10" WILLOW SAVE
117+50~117+60 RT 5 STEM WILLOW SAVE
+50 11" WILLOW SAVE
FENCE
+0.020 518.23 -0.020
STA 117+50
EXISTING 15" PE STORM
+43 3" OAK REMOVE
117+43 RT BEGIN 6' CHAIN LINK FENCE ITEM 620.12 (MOD.)
117+35 BEGIN NARROW TYPICAL
+0.020 518.48 -0.020
STA 117+25
EXISTING 24" PE STORM
+20 EXISTING RCDI RIM 517.75 INV. 514.75 IN 514.65 OUT
+17 CORNER BLDG.
+10 3" OAK REMOVE
+0.020 519.02 -0.020
+82 11" OAK REMOVE
STA 117+00
PC 116+92.70 D = 34°-22'-05" LT
+0.020 519.83 -0.020
STA 116+75
PT 116+70.38 D = 57°-17'-05" LT
PC 116+53.63 D = 57°-17'-05" LT
+49 3" OAK REMOVE
+0.020 520.93 -0.020
STA 116+50
522.17
STA 116+25
PT 116+18.29 D = 43°-56'-15" LT
118+18 LT END TAPER
523.38
STA 116+00
523.90
STA 115+75
EXISTING 18" RCP SANITARY SEWER
GRAPHIC SCALE
(1 IN FEET)
1 inch = 5 ft.
CROSS SECTIONS
FROM STA. 115+75 TO STA. 118+25
PROJECT NAME: WINCOSKI RIVER WEST BIKE PATH
NO. BWM - BIKE(4)S
PINKHAM ENGINEERING ASSOC., INC.
SHEET 80 OF 132
DWG. NO. 6829XCU1.DWG


STA 121+00
+80 3" OAK SAVE
EXISTING 15" RC STORM PIPE
EXISTING 18" RCP SANITARY SEWER
PC 120+86.86 BK = PC 120+85.01 AH EQ. = +1.85
PT 120+70.75
STA 120+75
+80 EXISTING RCOI RIM 519.90 INV. 514.51 OUT RETAIN
PC 120+55.24
+59 LIGHT POLE
STA 120+65 LT END ELECTRICAL CONDUIT FOR LIGHT POLES
120+50 RT END 6' CHAIN LINK FENCE ITEM 620.12 (MOD.)
STA 120+50
+42 3" OAK SAVE
PT 120+44.90
120+50 END NARROW TYPICAL RESUME SHOULDERS
PC 120+28.08 D = 28°-38'-52" RT
STA 120+25
+14 8" STEM POPLAR SAVE
+16 3" OAK SAVE
STA 120+00
6.0' CHAIN LINK FENCE (TYP.)
EXISTING 18" RCP SANITARY SEWER
STA 119+75
+59 3" OAK SAVE
6.0' CHAIN LINK FENCE (TYP.)
EXISTING 18" RCP SANITARY SEWER
STA 119+50
119+45 RT BEGIN 6' CHAIN LINK FENCE ITEM 620.12 (MOD.)
+25 3" OAK SAVE
STA 119+25
+97 3" OAK SAVE
STA 119+00
+83 LIGHT POLE
+71 3" OAK SAVE
STA 118+75
118+88 RT END 6' CHAIN LINK FENCE ITEM 620.12 (MOD.)
+61 20" WILLOW SAVE
118+58 RT BEGIN 6' CHAIN LINK FENCE ITEM 620.12 (MOD.)
+31 EXISTING RCOI RIM 519.25
STA 118+50
E. CURB
E. PARKING
FENCE
CROSS SECTIONS
GRAPHIC SCALE
(IN FEET)
1 inch = 5 ft.
FROM STA. 118+50 TO STA. 121+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO.
PINKHAM ENGINEERING ASSOC., INC.
SHEET 81 OF 132
DWG. NO. 6829XCUZ.DWG


20 15 10 5 ℄ 5 10 15 20
PCC 123+14.45
520
518.0
1:3
+0.020 518.84 -0.020
1:3
C = 0
F = 0
SB = 15
515
123+00
PC 122+62.05
STA 123+05
NEW 15"X 64' CPEP
W/RCD AND C. GRATE,
TYPE D AT INLET
OUTLET AT EXISTING
STORM MH STA 122+65
STA 122+65 RT
CHANGE ELEVATION
OF EXISTING STORM MANHOLE
ITEM 604.40
520
518.81
PC 122+62.05
D = 57'-17'-45"
BANKING = 0.020 FT/FT
C = 15
F = 0
SB = 14
515
122+49.75
MATCH BACK OF EXISTING SIDEWALK
EXISTING
36" ACCGMP
BAILEY AVENUE
520
518.44
C = 15
F = 0
SB = 14
515
121+99.15
PT 121+84.42
MATCH BACK OF EXISTING SIDEWALK
PT 121+84.42
D = 57'-16'-9"
BANKING = 0.020 FT/FT
STA 121+68 LT
EXISTING RCDI
520
-0.005 519.07 -0.015
C = 0
F = 0
SB = 14
515
121+50
510
PC 121+41.03
D = 57'-16'-9"
BANKING = 0.020 FT/FT
PCC 121+41.03
CROSS SECTIONS
GRAPHIC SCALE
(IN FEET)
1 inch = 5 ft.
FROM STA. 121+50 TO STA. 123+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM - BIKE(4)S
PINKHAM ENGINEERING ASSOC., INC
SHEET 82 OF 132
5829xc.dwg



CROSS SECTIONS

5 0 5 10 15 20

FROM STA. 123+48.16 TO STA. 124+48.16

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BWM-BIKE(4)S

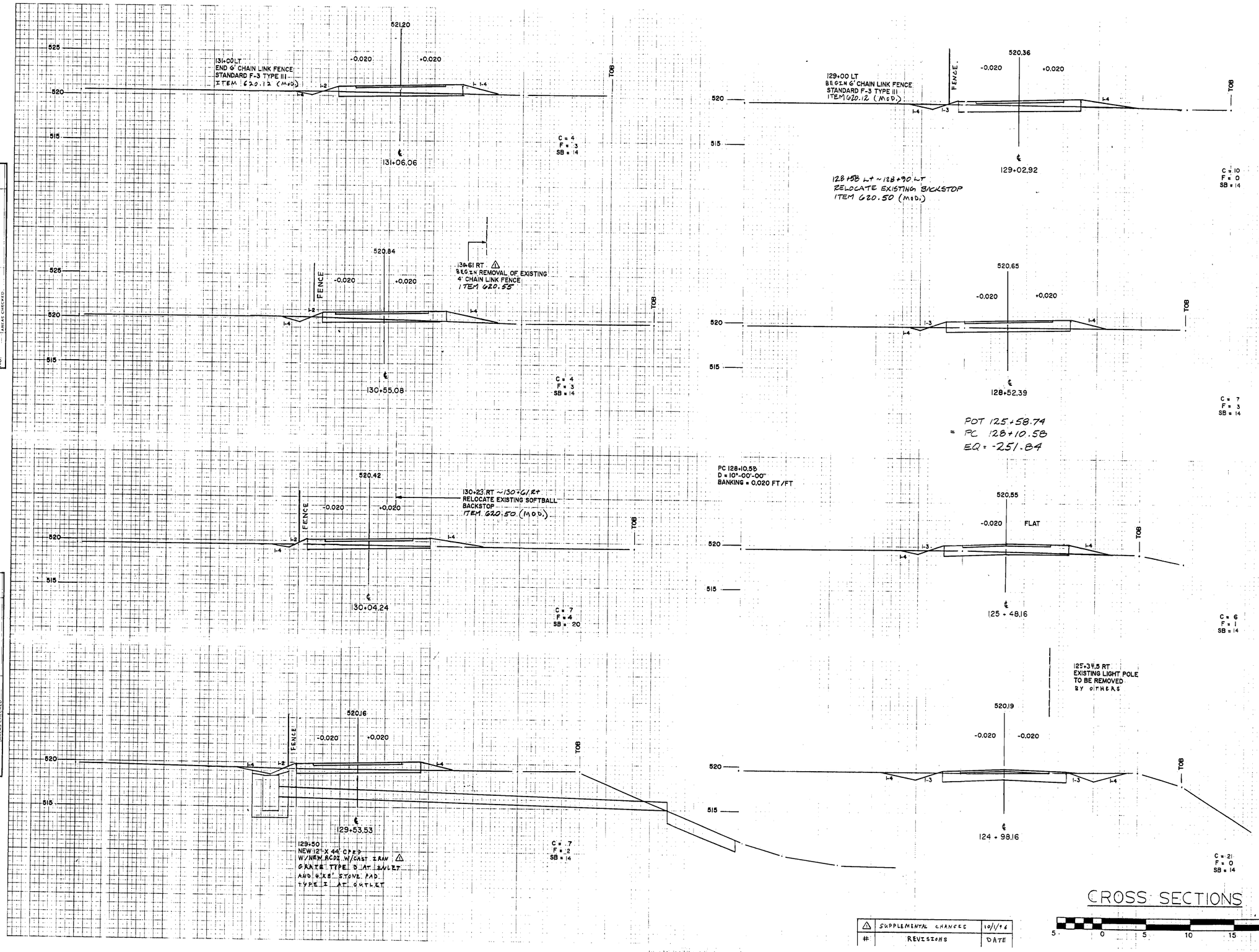
PINKHAM ENGINEERING ASSOCIATES, INC.

SHEET 83 OF 183 SHEETS

FINAL
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

NOTE ELEVATIONS
NO.



NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

CROSS SECTIONS

#	REVISIONS	DATE
△	SUPPLEMENTAL CHANGES	10/1/96

5 0 5 10 15 20

FROM STA. 124+98.16 TO STA. 131+06.06

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

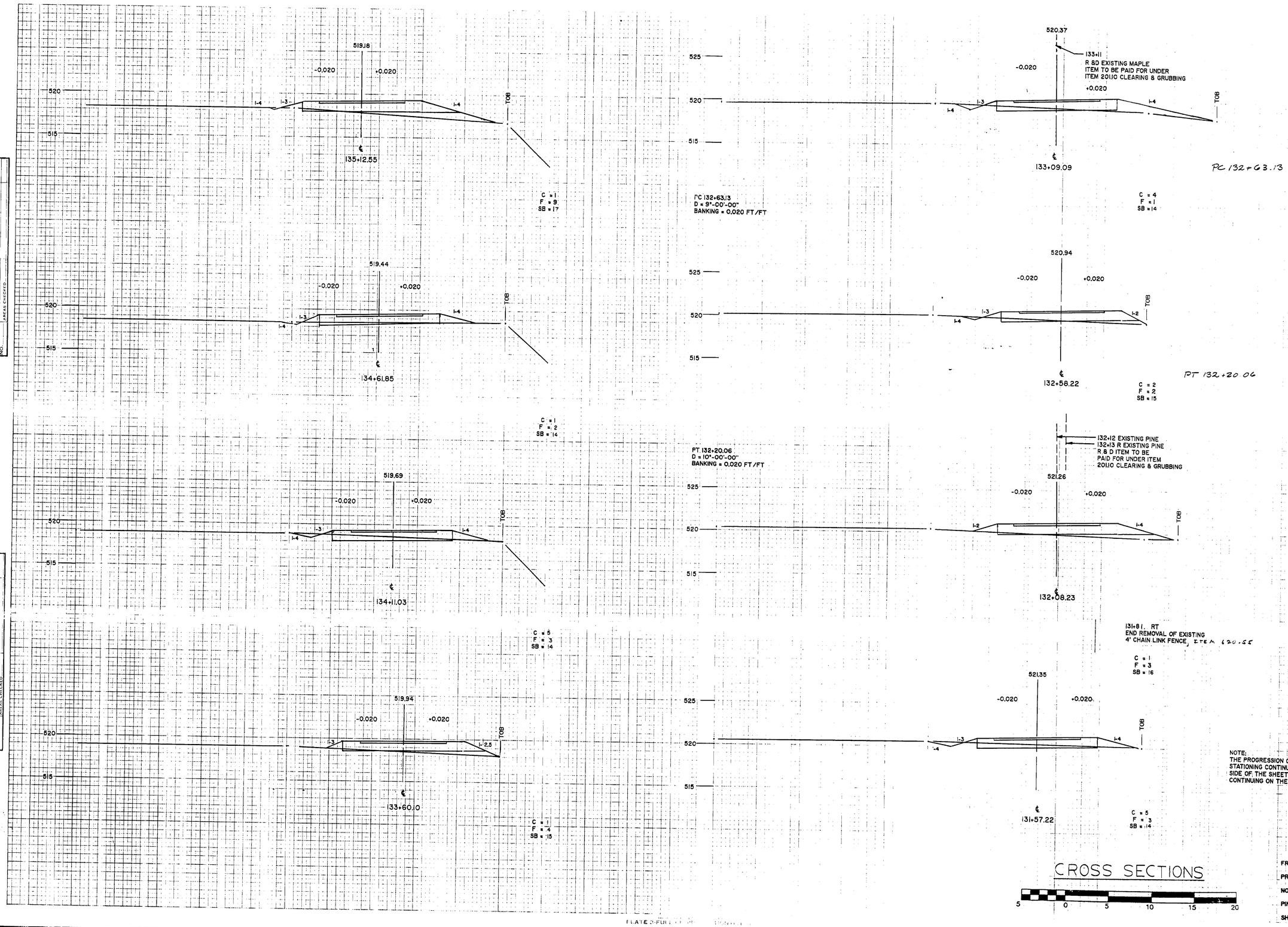
NO. BWM-BIKE(4)S

PINKHAM ENGINEERING ASSOCIATES, INC.

SHEET 84 OF 132 SHEETS

ORIGINAL SURVEY | SURVEYED | NOTE BOOK | TEMPLATE | AREAS | AREAS CHECKED | NO.

ORIGINAL SURVEY | SURVEYED | NOTE BOOK | TEMPLATE | AREAS | AREAS CHECKED | NO.



NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

CROSS SECTIONS

5 0 5 10 15 20

FROM STA. 131+50 TO STA. 135+00

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BWM - BIKE(4)S

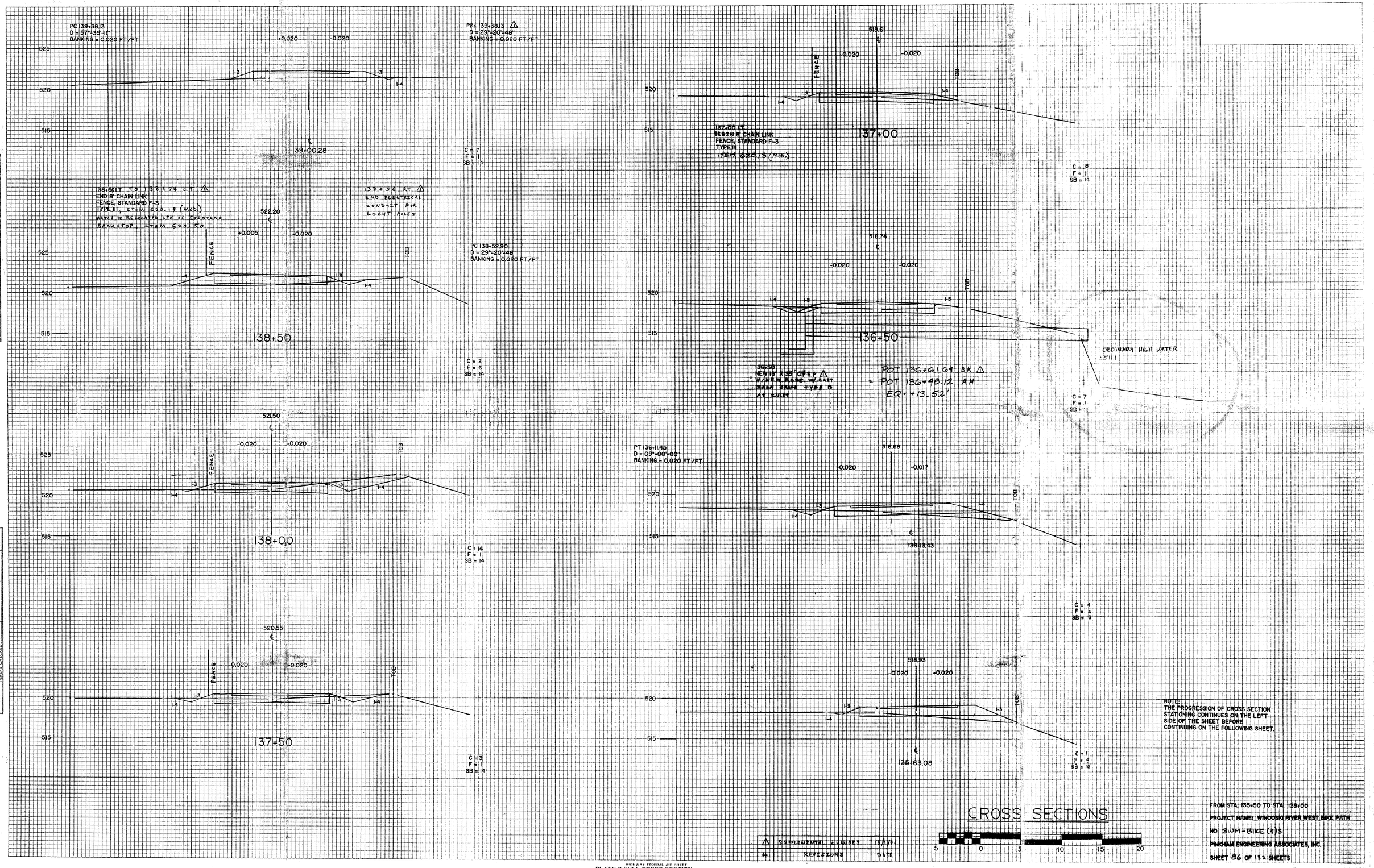
PINKHAM ENGINEERING ASSOCIATES, INC.

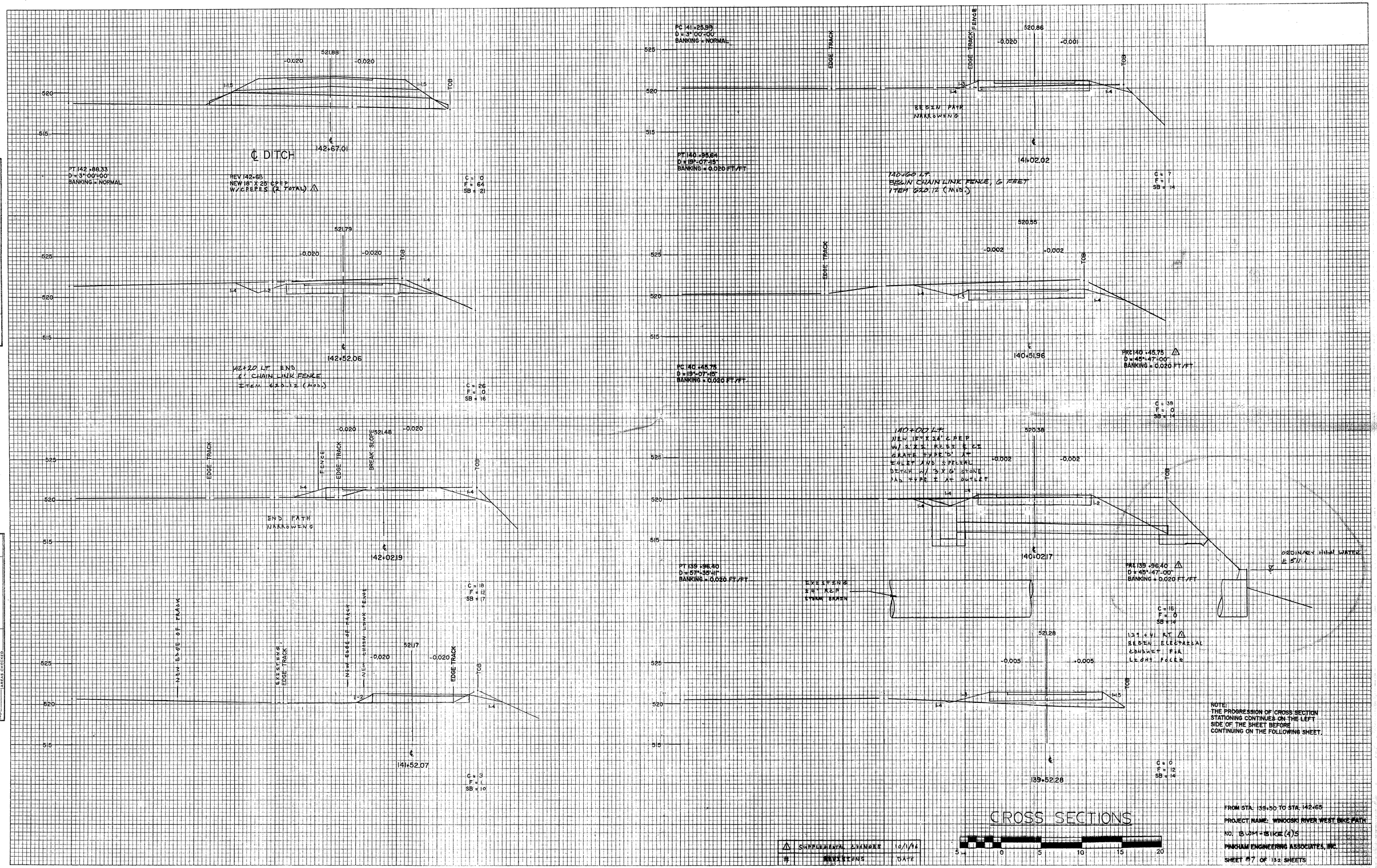
SHEET 85 OF 132 SHEETS

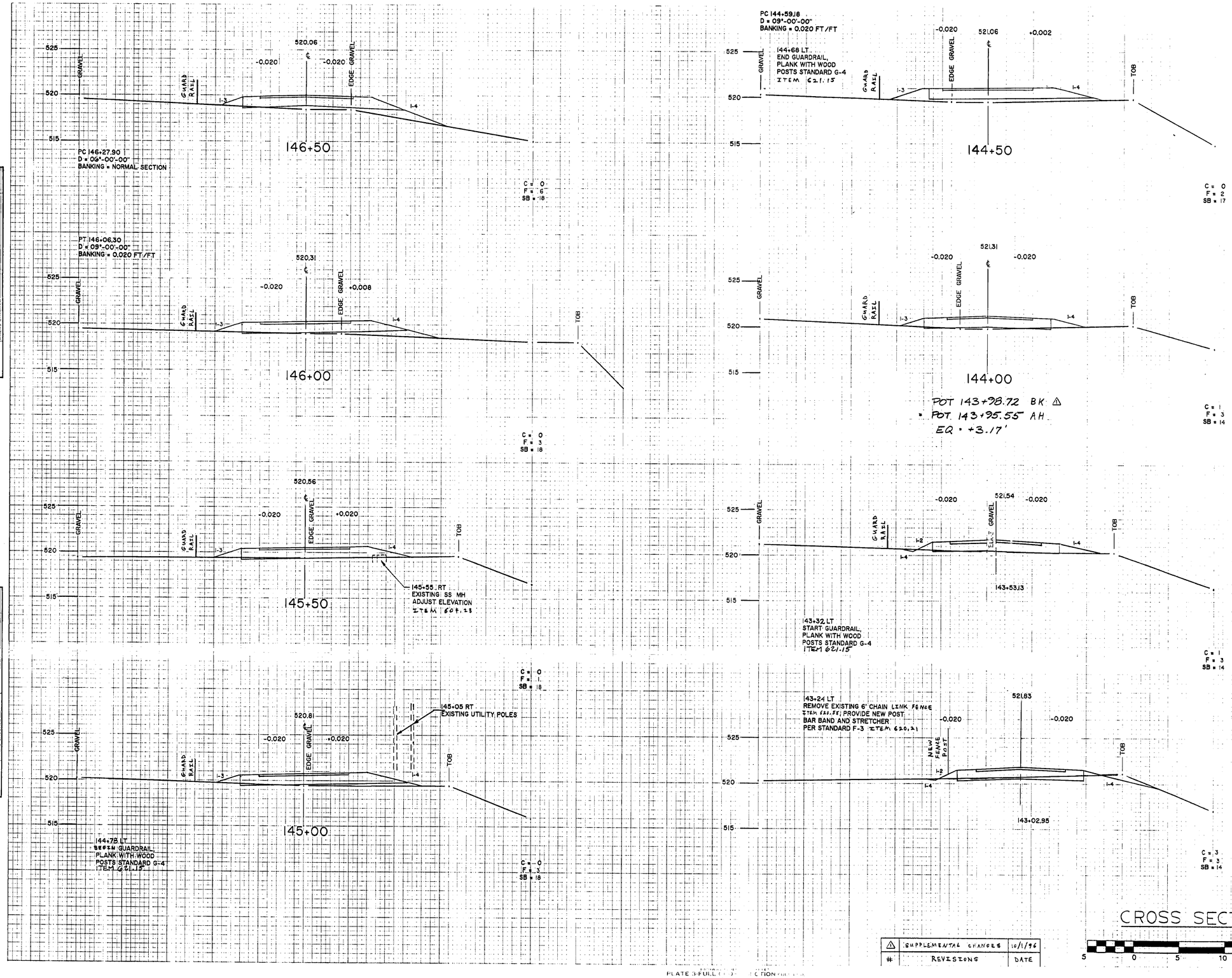
SURVEY: SURVEYED / TEMPLATE / NOTE BOOK / AREAS / NO. / AREAS CHECKED

ORIGINAL SURVEY: SURVEYED / TEMPLATE / NOTE BOOK / AREAS / NO. / AREAS CHECKED

PLATE 3-FULL


PC 139+38.13
D = 57°-35'-11"
BANKING = 0.020 FT/FT
+0.020
-0.020
525
520
515
℄
39+00.28
PK 139+38.13
D = 29°-20'-48"
BANKING = 0.020 FT/FT
C = 7
F = 1
SB = 14
138+60 LT TO 138+74 LT
END 8' CHAIN LINK
FENCE, STANDARD F-3
TYPE III, ITEM 620.19 (MOD.)
MAYBE TO RELOCATE USE OF EXISTING
BACKSTOP, ITEM 620.50
138+34 RT
END ELECTRICAL
CONDUIT FOR
LIGHT POLES
522.20
+0.005
-0.020
FENCE
TOB
38+50
PC 138+52.90
D = 29°-20'-48"
BANKING = 0.020 FT/FT
C = 2
F = 6
SB = 19
521.50
-0.020
-0.020
38+00
C = 14
F = 1
SB = 14
520.55
-0.020
+0.020
137+50
C = 13
F = 1
SB = 14
519.61
-0.020
-0.020
137+00
137+00 LT
8'-8 1/2" CHAIN LINK
FENCE, STANDARD F-3
TYPE III
ITEM 620.13 (MOD.)
C = 8
F = 1
SB = 14
518.74
-0.020
-0.020
36+50
36+50
NEW 180 A.S.D. GREY
WARREN BLADE W/LEAFS
FROM STATE TYPE D
AT SALEM
POT 136+61.64 BK
POT 136+48.12 AH
ER = +13.52'
ORDINARY HIGH WATER
+511.1
C = 7
F = 1
SB = 14
PT 136+11.45
D = 09°-00'-00"
BANKING = 0.020 FT/FT
518.68
-0.020
-0.017
136+13.43
C = 4
F = 4
SB = 18
518.93
-0.020
+0.020
136+63.08
C = 1
F = 4
SB = 16
NOTE:
THE PROGRESSION OF CROSS SECTION
STATIONING CONTINUES ON THE LEFT
SIDE OF THE SHEET BEFORE
CONTINUING ON THE FOLLOWING SHEET.
CROSS SECTIONS
5 0 5 10 15 20
FROM STA. 135+50 TO STA. 139+00
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BWM-BIKE (4)S
PINKHAM ENGINEERING ASSOCIATES, INC.
SHEET 86 OF 132 SHEETS
SUPPLEMENTAL CHANGES 8/1/74
REVISIONS DATE
FINAL SURVEY
ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE
HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
PRINTED IN U.S.A.


PT 142+88.33
D = 3°00'00"
BANKING = NORMAL
52.88
-0.020
-0.020
1:5
1:5
TOB
520
515
℄ DITCH
℄
142+67.01
REV 142+65
NEW 18" X 28' CPEP
W/CPEPES (2 TOTAL)
C = 0
F = 64
SB = 21
52.79
-0.020
-0.020
TOB
525
520
515
1:4
1:2
1:4
℄
142+52.06
142+20 LT END
6' CHAIN LINK FENCE
ITEM 620.12 (MOD.)
C = 26
F = 0
SB = 16
-0.020
-0.020
52.48
EDGE TRACK
FENCE
EDGE TRACK
BREAK SLOPE
TOB
525
520
515
1:4
1:4
BEGIN PATH
NARROWING
℄
142+02.19
C = 18
F = 18
SB = 17
NEW EDGE OF TRACK
EXISTING
EDGE TRACK
NEW EDGE OF TRACK
NEW CHAIN LINK FENCE
52.17
-0.020
-0.020
EDGE TRACK
TOB
525
520
515
1:2
1:4
℄
141+52.07
C = 3
F = 1
SB = 10
PC 141+25.99
D = 3°00'00"
BANKING = NORMAL
EDGE TRACK
EDGE TRACK
FENCE
520.86
-0.020
-0.001
TOB
525
520
515
1:3
1:4
1:4
BEGIN PATH
NARROWING
PT 140+95.64
D = 19°-07-19"
BANKING = 0.020 FT/FT
℄
141+02.02
140+60 LT
BEGIN CHAIN LINK FENCE, 6 FEET
ITEM 620.12 (MOD.)
C = 7
F = 1
SB = 14
520.55
-0.002
+0.002
EDGE TRACK
TOB
525
520
515
1:3
1:4
PC 140+45.75
D = 19°-07-19"
BANKING = 0.020 FT/FT
℄
140+51.96
PRC 140+45.75
D = 45°-47'-00"
BANKING = 0.020 FT/FT
C = 38
F = 0
SB = 14
140+00 LT
NEW 18" X 28' CPEP
W/ 2'X2' PRESTE & CI
GRATE TYPE 'D' AT
INLET AND SPECIAL
DITCH W/ 3'X6' STONE
PAD TYPE I AT OUTLET
520.38
+0.002
-0.002
TOB
525
520
515
1:4
1:4
1:2
℄
140+02.17
ORDINARY HIGH WATER
± 511.1
PT 139+96.40
D = 57°-35'-11"
BANKING = 0.020 FT/FT
EXISTING
18" RCP
STORM DRAIN
PRC 139+96.40
D = 45°-47'-00"
BANKING = 0.020 FT/FT
C = 15
F = 0
SB = 14
139+41 RT
BEGIN ELECTRICAL
CONDUIT FOR
LIGHT POLES
52.28
-0.005
+0.005
TOB
525
520
515
1:3
1:4
1:5
℄
139+52.28
C = 0
F = 12
SB = 14
NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.
CROSS SECTIONS
5 0 5 10 15 20
FROM STA. 139+50 TO STA. 142+65
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH
NO. BOPM-BIKE(4)S
PINGUAM ENGINEERING ASSOCIATES, INC.
SHEET 87 OF 132 SHEETS
SUPPLEMENTAL CHANGES 10/1/96
REVISIONS DATE
FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK NO.
BY
DATE
ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK NO.
BY
DATE



NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

CROSS SECTIONS

5 0 5 10 15 20

#	REVISIONS	DATE
△	SUPPLEMENTAL CHANGES	10/1/96

FROM STA. 143+00 TO STA. 146+50

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

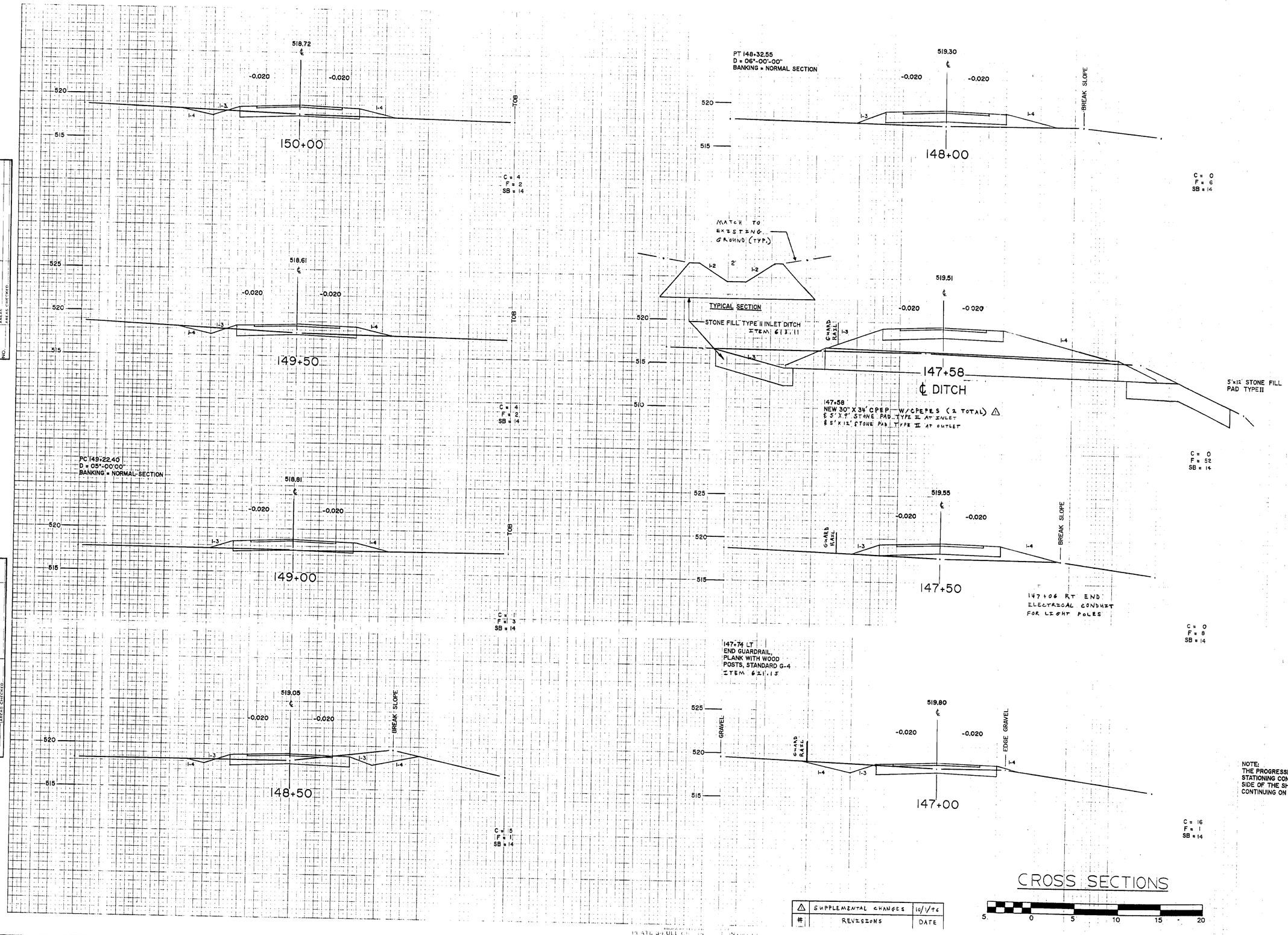
NO. BWM-BIKE(4)5

PINKHAM ENGINEERING ASSOCIATES, INC.

SHEET 88 OF 132 SHEETS

ORIGINAL SURVEY
FINAL CLOSURE
NOTE BOOK NO.
SURVEYED
PLOTTED
COMPUTED
TRAVERSE
AREAS CHECKED

PLATE 3-FULL (1) - SECTION



NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

CROSS SECTIONS

#	REVISIONS	DATE
△1	SUPPLEMENTAL CHANGES	10/1/76

5 0 5 10 15 20

FROM STA. 147+00 TO STA. 150+00

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

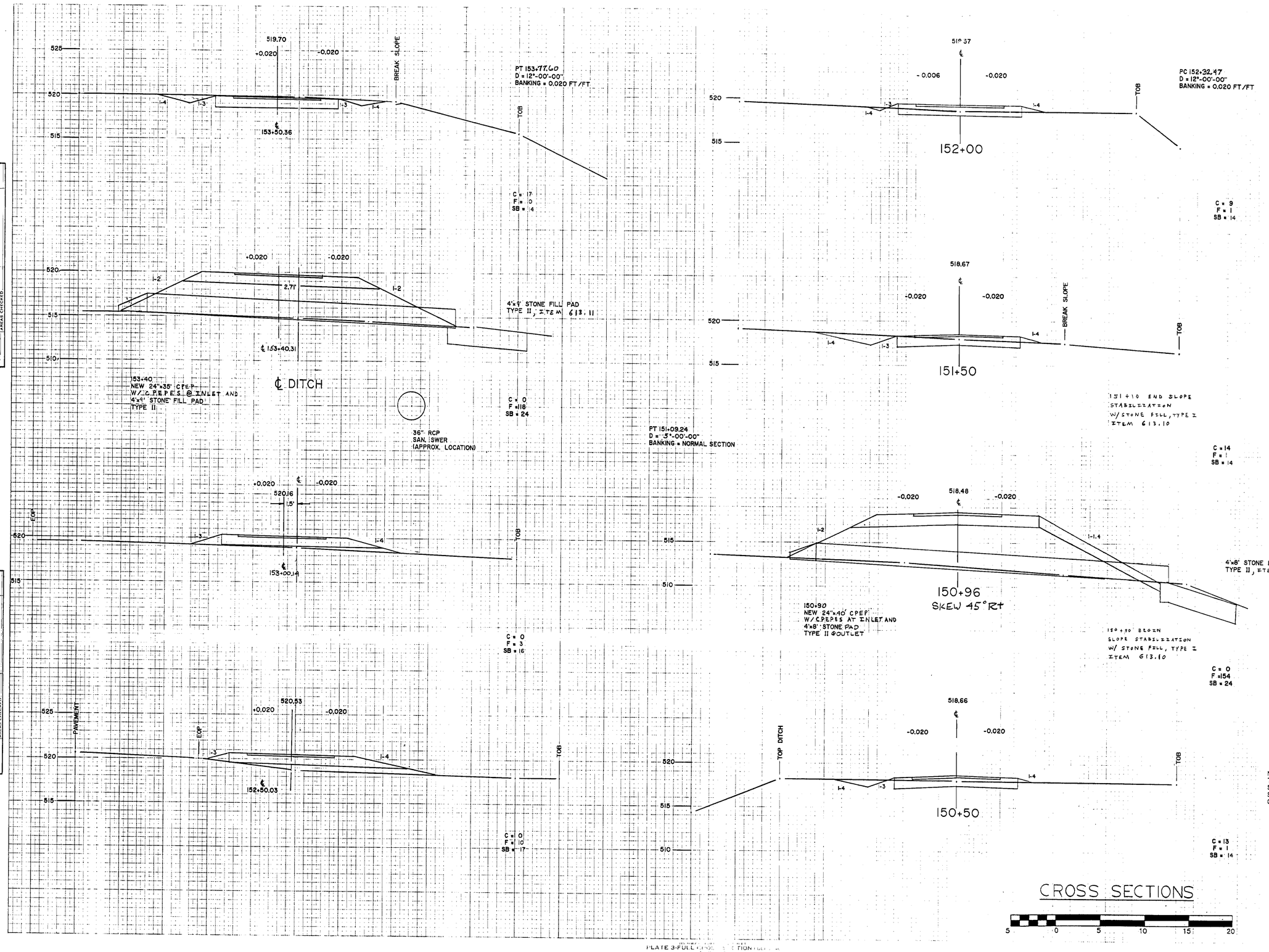
NO. BWM-BIKE(4)S

PINKHAM ENGINEERING ASSOCIATES, INC.

SHEET 89 OF 132 SHEETS

SURVEY
SURVEYED
PLOTTED
NOTE BOOK
AREAS
AREAS CHECKED
NO.

SURVEY
SURVEYED
PLOTTED
NOTE BOOK
AREAS
AREAS CHECKED
NO.



NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

FROM STA. 150+50 TO STA. 153+50

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BWM-BIKE(4)S

PINKHAM ENGINEERING ASSOCIATES, INC.

SHEET 90 OF 132 SHEETS

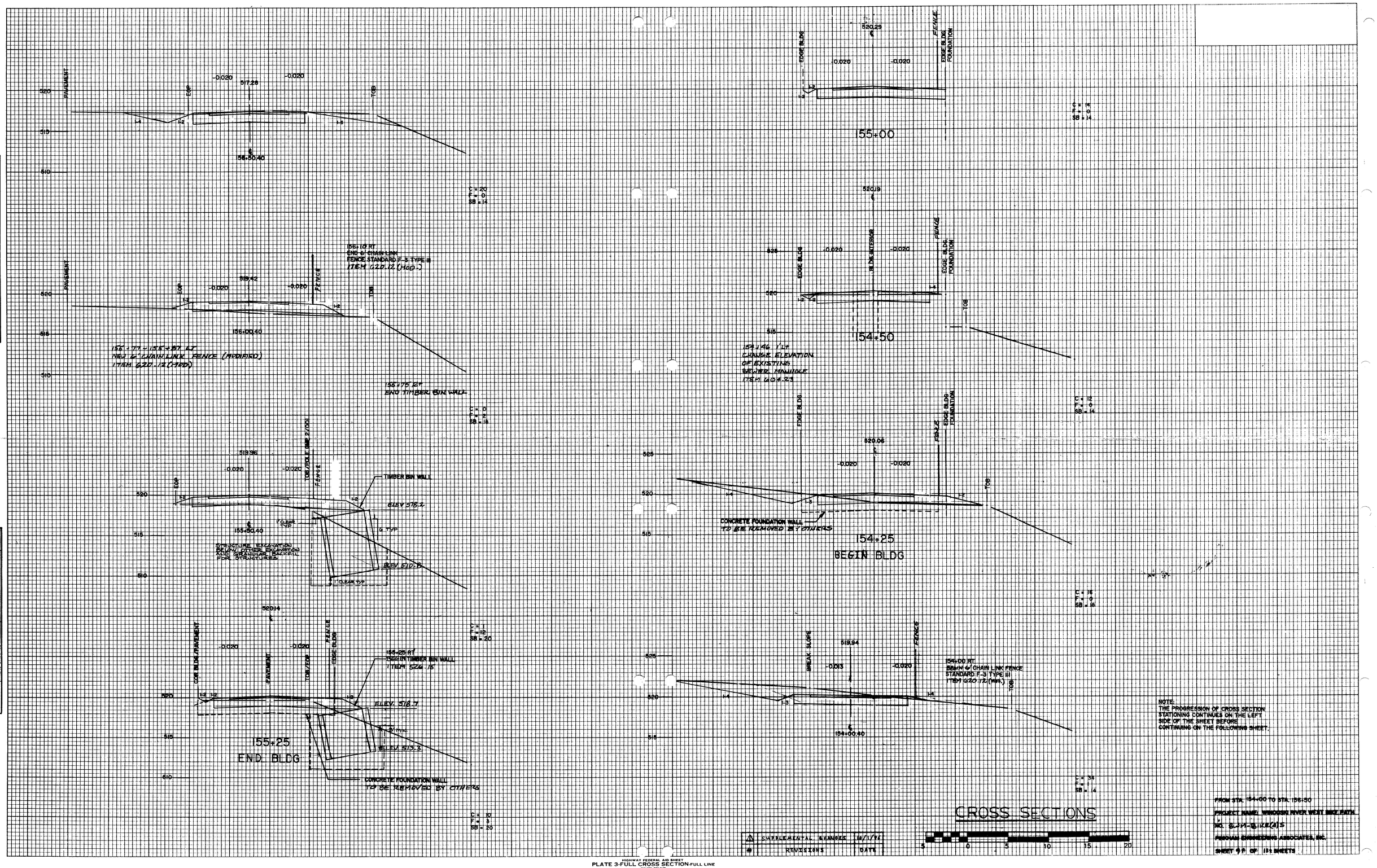
FINAL SURVEY — FIELDWORK, PLOTTED, NOTE BOOK, TEMPLATE, AREAS, AREAS CHECKED, NO.

ORIGINAL SURVEY — FIELDWORK, PLOTTED, NOTE BOOK, TEMPLATE, AREAS, AREAS CHECKED, NO.

PLATE 3-FULL CROSS SECTION

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		



NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

#	REVISIONS	DATE
1	SUPPLEMENTAL CHANGES	10/1/76

FROM STA. 154+00 TO STA. 158+50

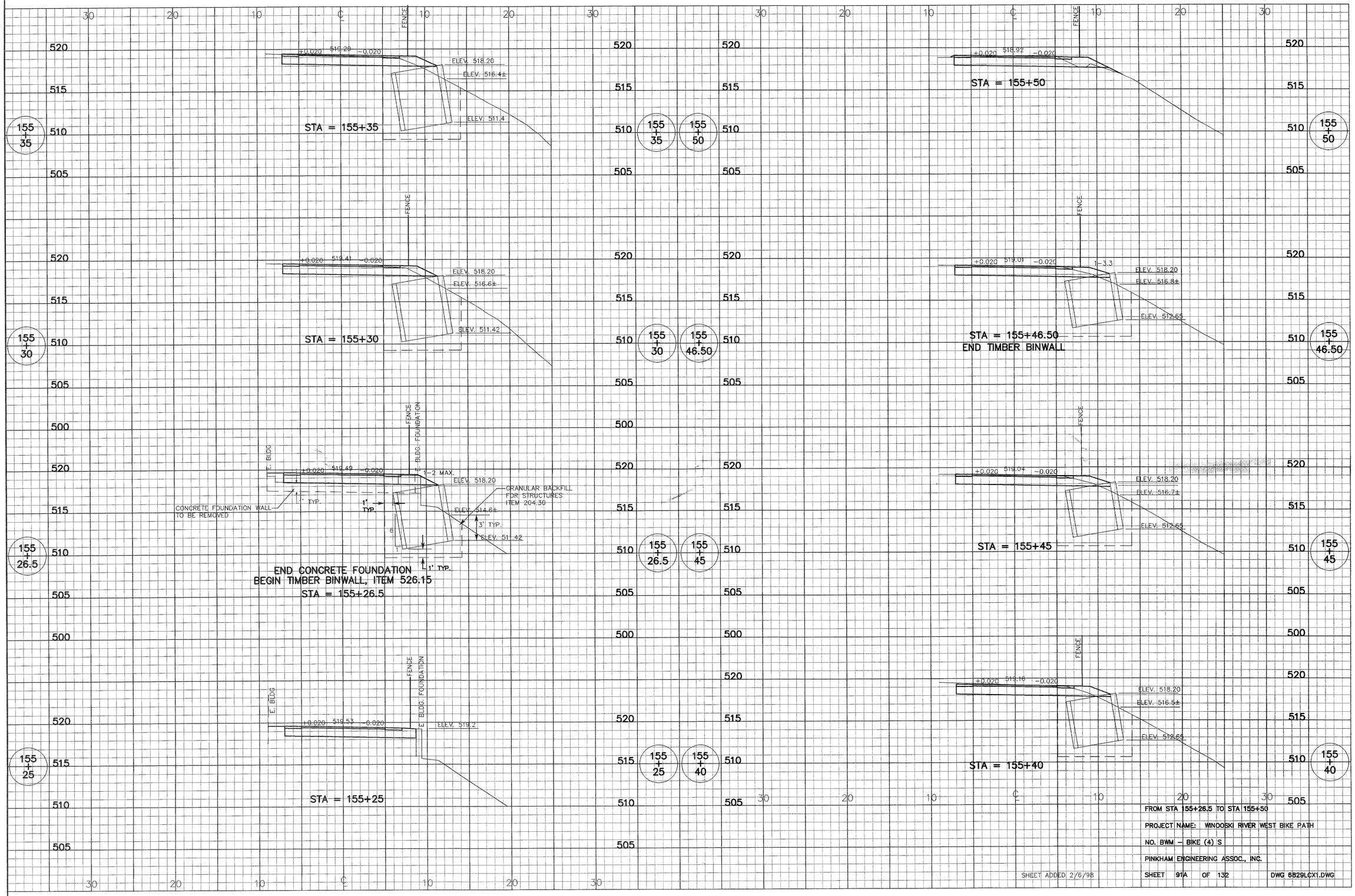
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BUM-BIKE(4)S

FRONTIER ENGINEERING ASSOCIATES, INC.

SHEET 9 OF 13 SHEETS

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
TELEDYNE
PRINTED IN U.S.A.



FROM STA 155+26.5 TO STA 155+50

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

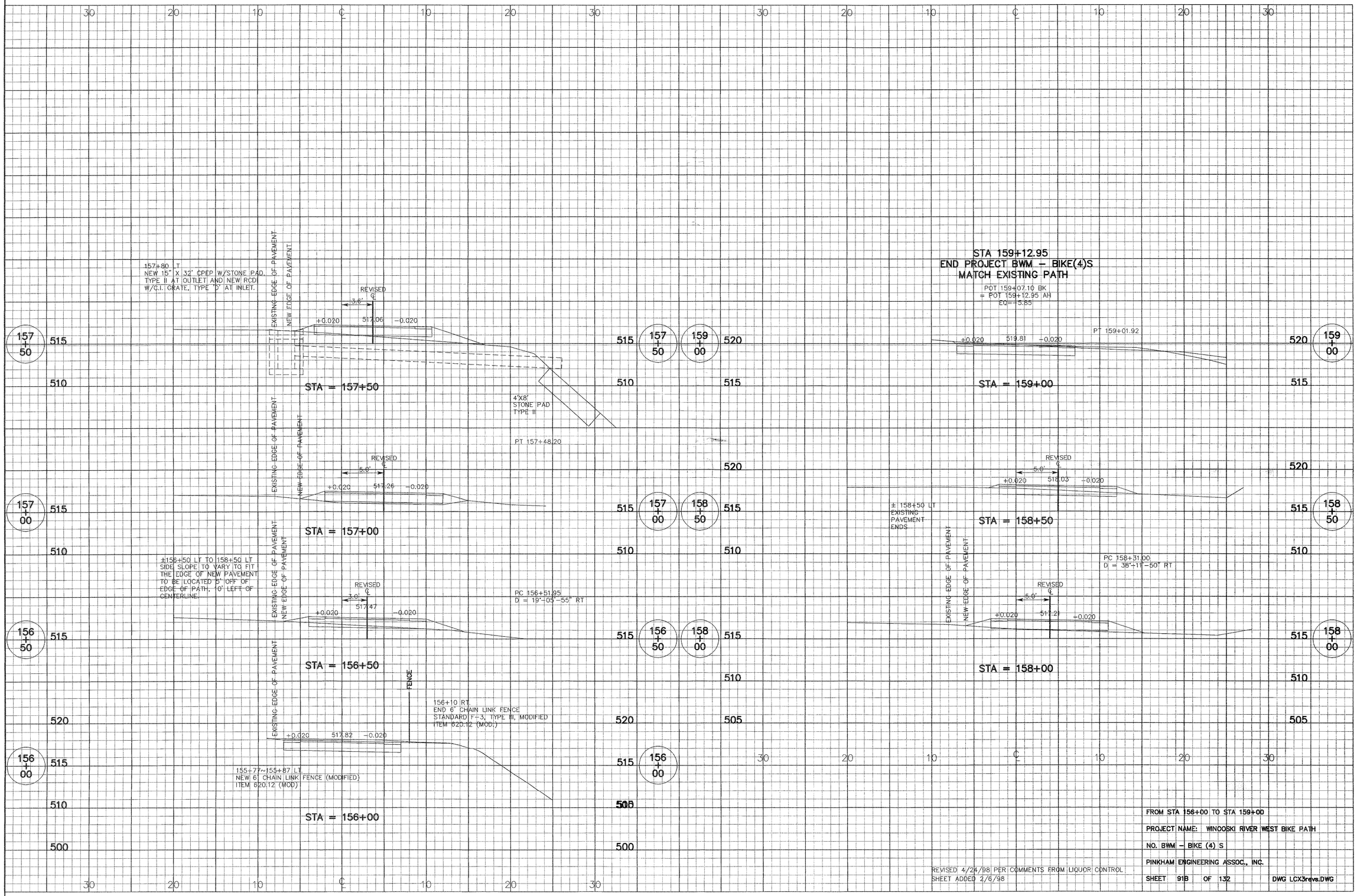
NO. BWM – BIKE (4) S

PINKHAM ENGINEERING ASSOC., INC.

SHEET ADDED 2/6/98

SHEET 91A OF 132

DWG 6829LCX1.DWG



REVISED 4/24/98 PER COMMENTS FROM LIQUOR CONTROL
SHEET ADDED 2/6/98

FROM STA 156+00 TO STA 159+00

PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BWM - BIKE (4) S

PINKHAM ENGINEERING ASSOC., INC.

SHEET 91B OF 132

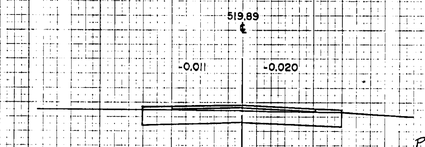
DWG LCX3revs.DWG

FINAL SURVEY
SURVEYED
PLOTTED
TRACED
AREAS CHECKED
NOTE BOOK
NO.

ORIGINAL SURVEY
SURVEYED
PLOTTED
TRACED
AREAS CHECKED
NOTE BOOK
NO.

STA 159+12.95
END PROJECT BWM-BIKE(4)S
MATCH EXISTING PATH

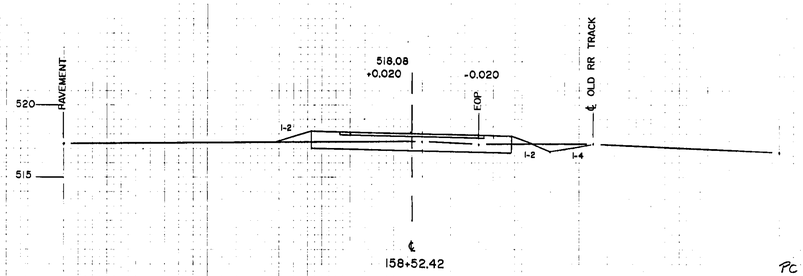
POT 159+09.54 BK
= POT 159+12.95 AH
EQ. = -3.41



PT 159+01.92 △

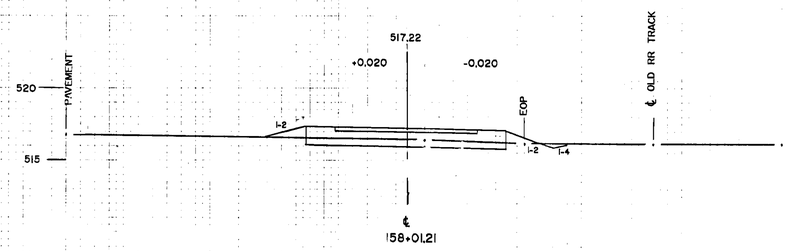
159+00

C = 14
F = 0
SB = 14

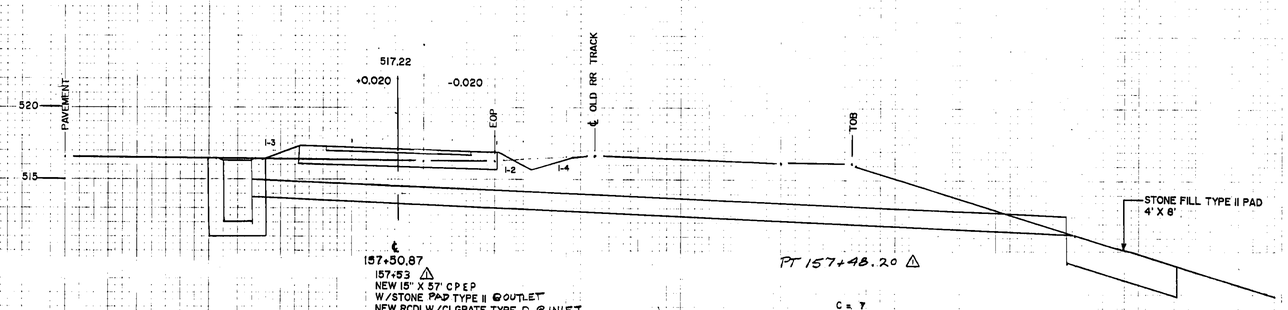


C = 9
F = 2
SB = 14

PC 158+31 △
D = 38°-11'-50" RT

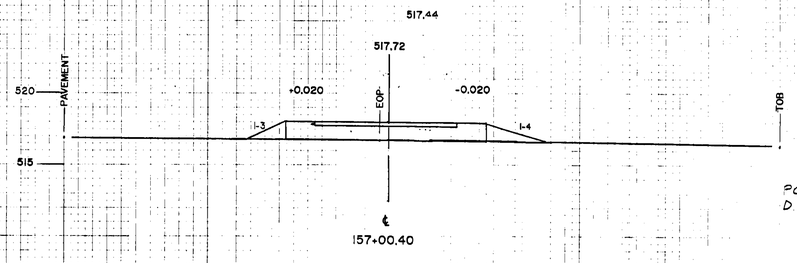


C = 8
F = 2
SB = 14



PT 157+48.20 △

C = 7
F = 1
SB = 14



PC 156+51.95 △
D = 19°-06'-55" RT

C = 0
F = 5
SB = 14

NOTE:
THE PROGRESSION OF CROSS SECTION STATIONING CONTINUES ON THE LEFT SIDE OF THE SHEET BEFORE CONTINUING ON THE FOLLOWING SHEET.

CROSS SECTIONS

5 0 5 10 15 20

#	REVISIONS	DATE
△	SUPPLEMENTAL CHANGES	10/1/96

FROM STA. 157+00 TO STA. 159+00

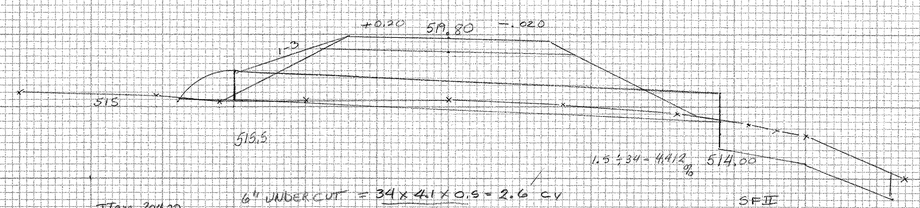
PROJECT NAME: WINOOSKI RIVER WEST BIKE PATH

NO. BWM-BIKE(4)S

PINKHAM ENGINEERING ASSOCIATES, INC.

SHEET 92 OF 132 SHEETS

PLATE 3-FULL CROSS SECTION



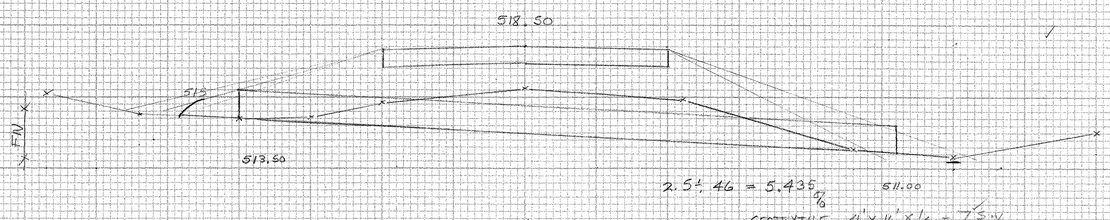
Item 204.20
7.1
2.6
9.7 cy

6" UNDERCUT = 34 x 4.1 x 0.5 ÷ 27 = 2.6 cy

153 + 40.5 SKEW 83° LT
NEW 24" x ~~25~~ 34' CPEP W/CPEPES @ INLET
TYPE II STONE FILL @ OUTLET

SF II
12 x 8 x 2 x 1/27 = 7.1 cy
TED 4-10-98

GEOTEXTILE
5' x 9' x 1/9 = 5 sy
TED 4-9-98

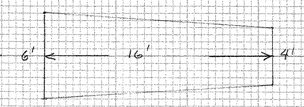


GEOTEXTILE 4' x 16' x 1/9 = 7 sy

℄
150 + 92
New 24" x ~~40~~ 46' CPEP W/CPEPES @ Inlet
TYPE II STONE PAD @ OUTLET

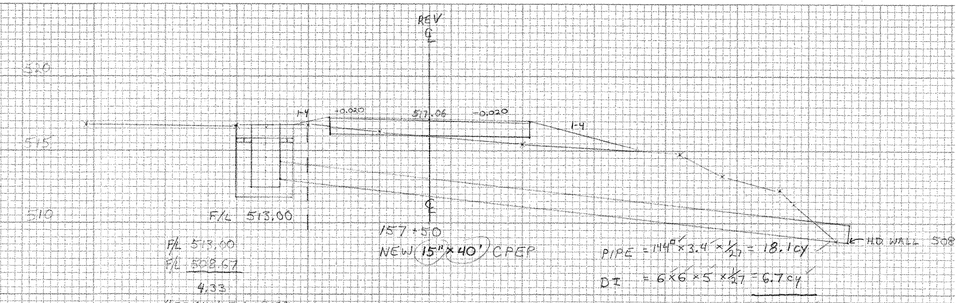
80 □' x 4.1' x 1/27 = 12.2 cy
TED 4-8-98

6" UNDERCUT PIPE
46 x 4.1 x 0.5 x 1/27 = 3.5



SF II 16 x 6+4/2 x 2 x 1/27 = 5.9 cy

ITEM 204.20 12.2
5.9
3.5
21.6 TED 4-10-98

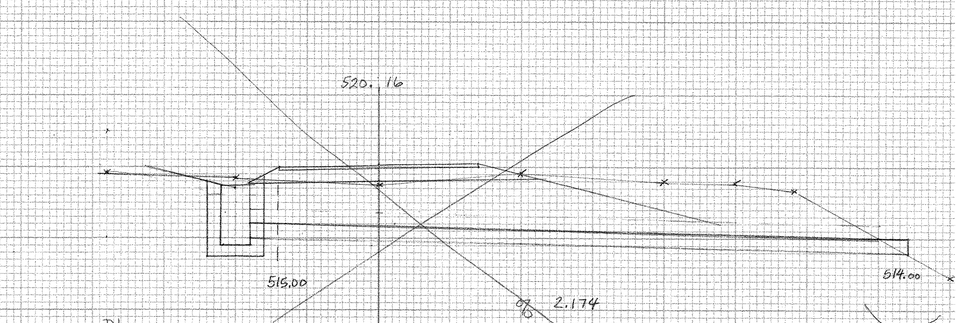


F/L 513.00
F/L 508.67
4.33
4.33 ÷ 40' = 1.0825%

157 + 50
NEW 15" x 40' CPEP

PIPE = 144□' x 3.4 x 1/27 = 18.1 cy
DI = 6 x 6 x 5 x 1/27 = 6.7 cy

T.E. 24.8 cy RLK 10/14/98
(11-22-98)

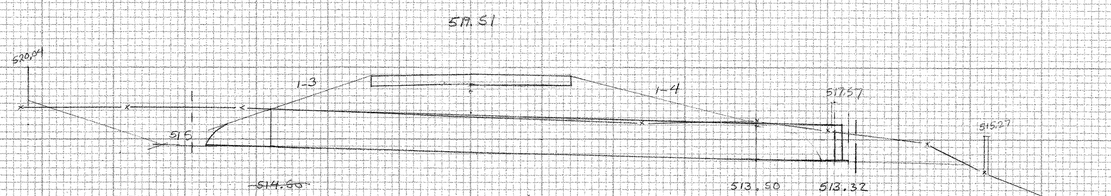


DI
6 x 6 x 5 x 1/27
= 6.67
TED 4-7-98

127 + 50 ℄
NEW 12" x 44' ~~46'~~ CPEP W/RCD1 @ INLET
STONE FILL II @ OUTLET

PIPE = 176□' x 3.1 x 1/27 = 4-17

PIPE ~~20.21~~
DI ~~6.67~~
T.E. SF ~~26.88~~ = 26.9 RLK



New 30" x ~~34~~ 40' CPEP / W CPEPES (2)
℄
147 + 58

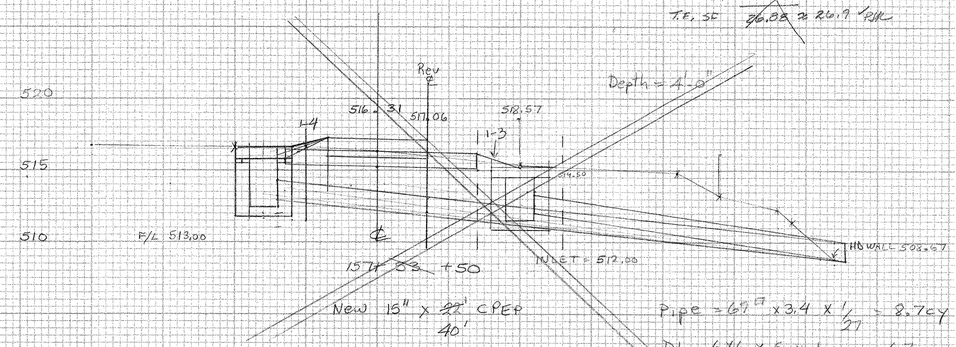
~~4.0 ÷ 34 = 2.941%~~
~~1.18 ÷ 40 = 2.95%~~
1.68 ÷ 40 = 4.2%

PIPE 113□' x 4.6' x 1/27 = 19.3 cy
TED 4-7-98

INCREASED OUTLET F/L 1'
INLET F/L 0.5'
(1+0.5)/2 x 40 x 4.6 x 1/27 = 5.1

ITEM 204.20 : 19.3
6.1
24.4 RLK 10/14/98

Item 204.20
Total Drainage Sheet #1 80.5 cy



157 + 53 + 50
New 15" x ~~22~~ 40' CPEP

F/L 513.00
F/L 508.67
4.33
4.33 ÷ 40' = 1.0825%

Pipe = 67□' x 3.4 x 1/27 = 8.7 cy
DI 6 x 6 x 5 x 1/27 = 6.7 cy
TED 4-7-98

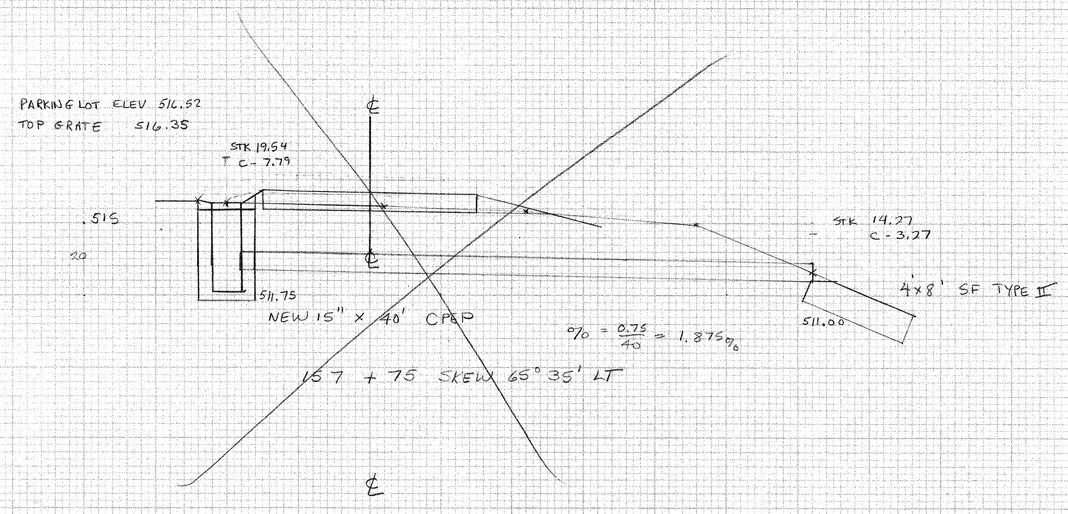
0 1 2 3 4 5
SCALE

MONTPELIER BWM-BK
DRAINAGE SHEET
SCALE 1" = 5'

PRINTED IN U.S.A.
"PERFECT" CROSS SECTION 10 X 10 — ONE INCH EUGENE DIETZGEN CO.
76 6511
PRINTED IN U.S.A.
"PERFECT" CROSS SECTION 10 X 10 — ONE INCH EUGENE DIETZGEN CO.

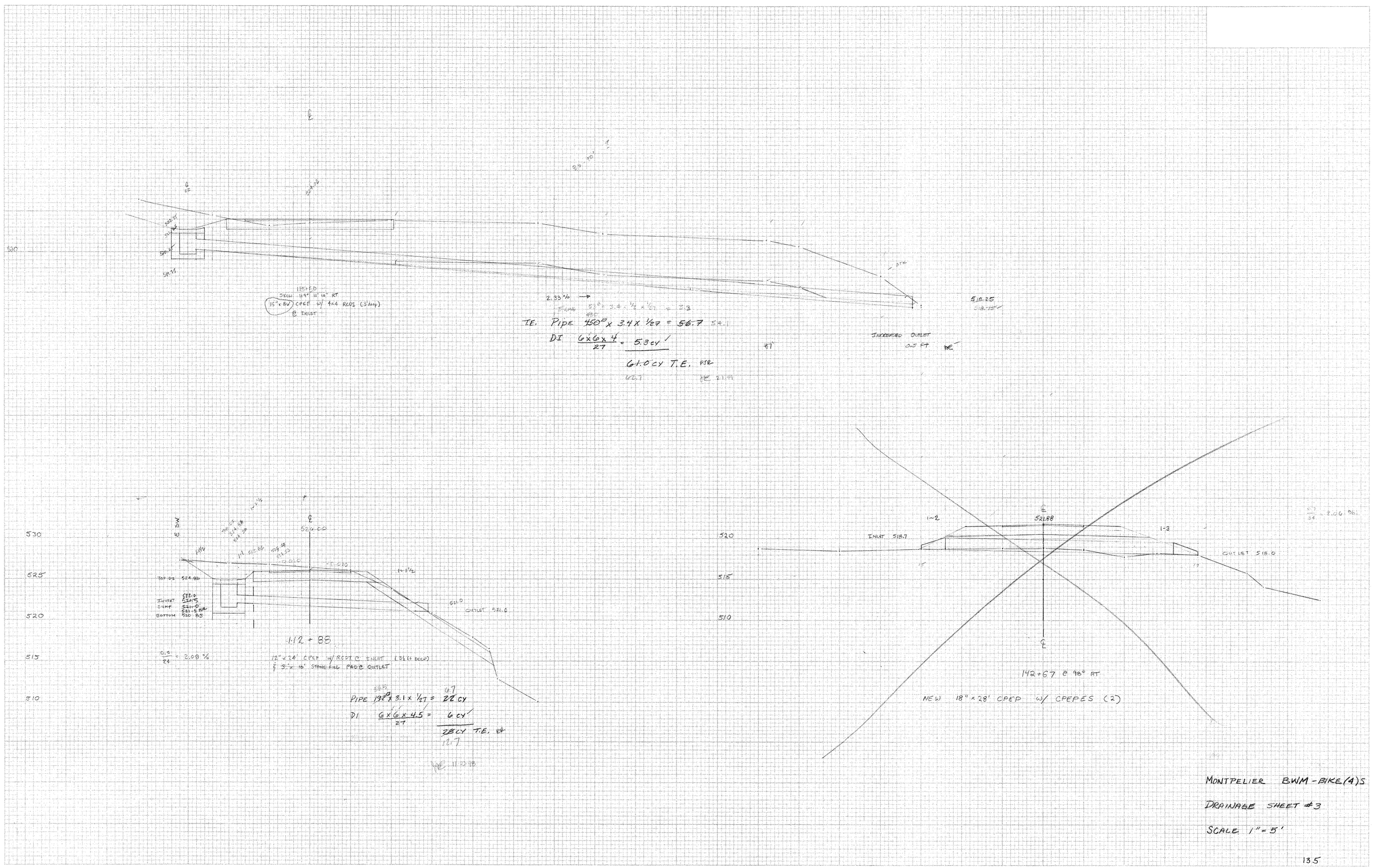
FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

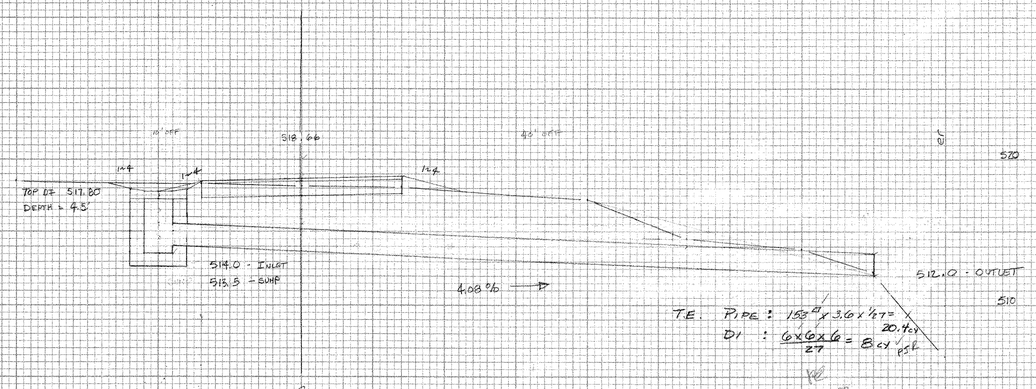
ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

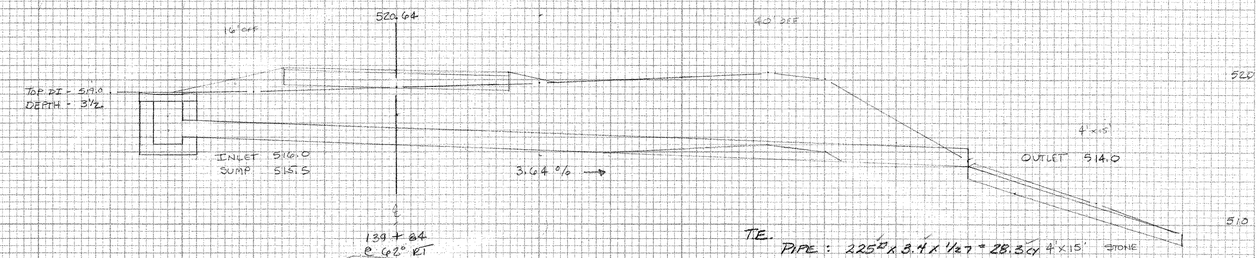


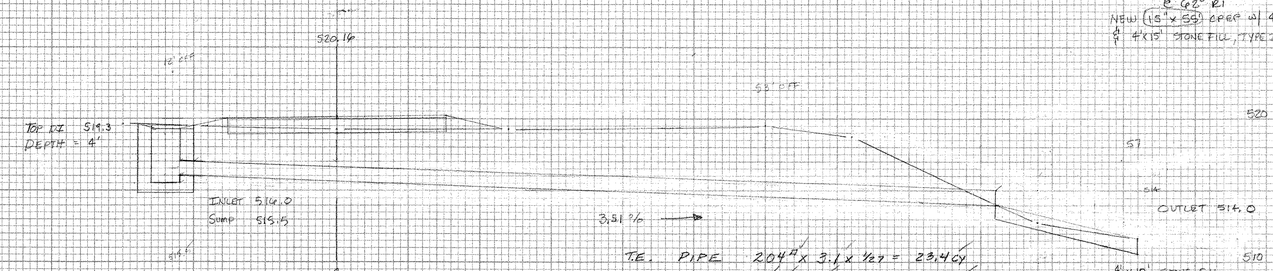
MONTPELIER BWM-BIKE (4)S
DRAINAGE SHEET # 2
SCALE 1" = 5'

Keuffel & Esser Company PLATE 3, CROSS SECTION 48 7056 Made in U.S.A.®


520
115+50
SKEW 119° 11' 16" RT
15" x 8W CPEP w/ 4x4 RCB's (3' deep)
@ INLET
2.33 % →
T.E. Pipe 450' x 3.4 x 1/27 = 56.7 57.1
DI 6x6x4/27 = 5.3 cy
61.0 cy T.E. PSE
62.1
5.10.25
5.8.75
INCREASED OUTLET
0.5 FT
530
525
520
515
510
524.80
521.0
OUTLET 521.0
112 + 85
0.5/24 = 2.08 %
12" x 24' CPEP w/ RCBT @ INLET (3.5 ft DEEP)
& 3' x 10' STONE FILL PADD QUTLET
Pipe 192' x 3.1 x 1/27 = 22 cy
DI 6x6x4.5/27 = 6 cy
28 cy T.E.
12.7
INLET 518.7
1-2
521.88
1-3
OUTLET 518.0
142+67 @ 90° RT
NEW 18" x 28' CPEP w/ CPEPES (2)
MONTPELIER BWM-BIKE(A)S
DRAINAGE SHEET #3
SCALE 1" = 5'
13.5







MONTPELIER BWM - BIKE (A)S
DRAINAGE SHEET #4
SCALE 1" = 5'

136

PLATE 3-FULL CROSS SECTION-FULL LINE
HIGHWAY FEDERAL AID SHEET
WILLIAMS BARNARD
PRINTED IN U.S.A.

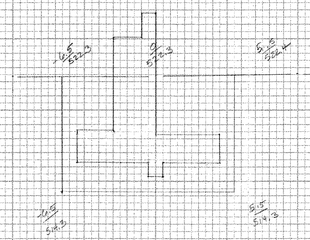
STATION	DISTANCE	AREA SF	VOLUME CF
10+37		90.00	
	6'		540.64
10+43		96.28	
	6'		588.48
10+49		99.28	
	BUTT		
10+49		161.45	
	11.5'		1855.24
10+60.5		161.20	
		TOTAL	3004.36

111.27 CY

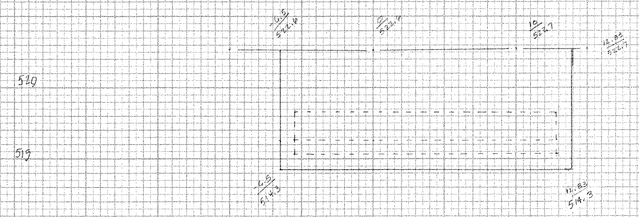
97.37 CY

TRANSFERRED TO BOX 2 PG 20

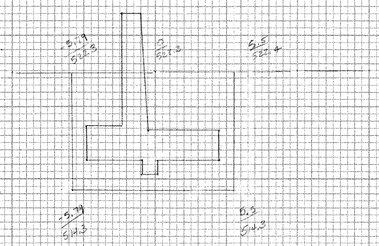
QUANTITIES 30 OCT 1980



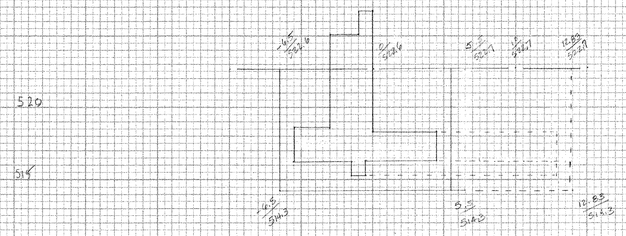
10+43



10+60.5



10+37



10+49

ORIGINAL TRACE
NOTE BOOK
STATE
DATE
BY
REVISED
CHECKED
DRAWN
TRACED
INDEXED
VERIFIED
VARIANCE
NOTE BOOK
STATE
DATE
BY
REVISED
CHECKED
DRAWN
TRACED
INDEXED
VERIFIED
VARIANCE
FINAL TRACE

ABUTMENT #1
STRUCTURE SECTIONS

SHEET 1 OF 3

1" = 5'-0"

137

FABRICATED 1979

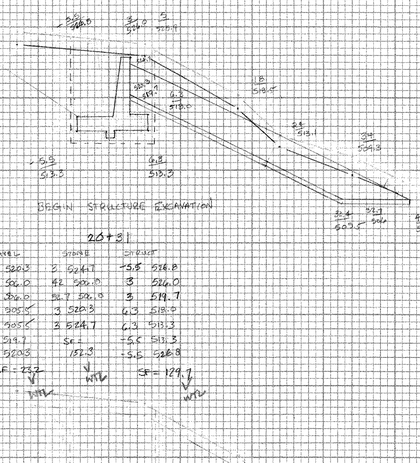
Kenfiel & Esser Company

PLATE 3. CROSS SECTION 48 TOPS Made in U.S.A.

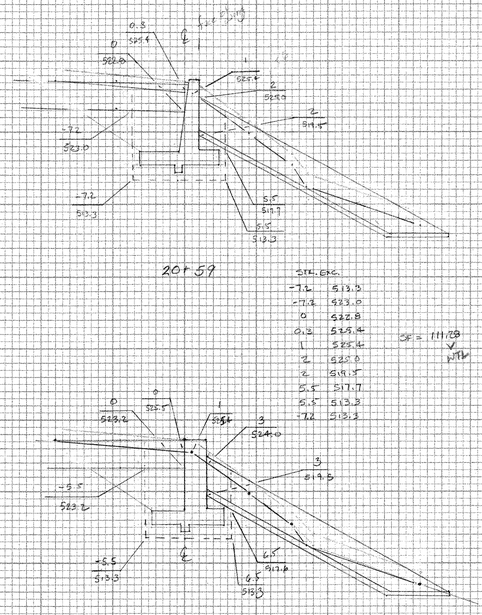
STATION	DISTANCE	ITEM 203.27 UNCL. CHAN. AREA, SF	VOLUME, CF	ITEM 203.35 GRAVEL FOR CHAN. AREA, SF	VOLUME, CF	ITEM 613.13 STONE FILL AREA, SF	VOLUME, CF	STONE FILL VOLUME, CF	ITEM 649.31 W IDTH, LF	FABRIC AREA, SF
20+62		185.8		22.8		140.6			40	
	29		5381.0		667.0			6247.0		1189
20+31		185.3		23.7		152.3			42	
	23		2993.8		501.4			3386.0		920
20+54		75.7		20.4		137.7			38	
	12		1111.2		250.2			1718.4		462
20+66		109.5		21.3		148.7			39	
	4	415		88.6				566.6		154
20+70		88.0		23.0		134.6			38	
			9903.0		1907.2			9867.0		2725
			366.8 CY		56.8 CY			365.8 CY		302.8 SY
		TRANSFER TO:	BK 3 PG 16		BK 3 PG 18			BK 3 PG 36		BK 3 PG 38

STATION	DISTANCE	ITEM 204.10 STR. EXC. AREA, SF	VOLUME, CF
20+29		129.7	
	29		3458.2
20+54		108.8	
	3		324.9
20+57		107.8	
	2		219.1
20+59		111.3	
	7		784.7
20+66		112.9	
	4		225.8
20+70		0	
			5012.7
			185.6 CY

QUANTITIES FIGURED
12 OCT 1989



UNCL CHAN		GRAVEL		STONE		STRUCT	
3	526.0	3	520.3	3	524.7	-5.5	526.8
5	525.9	22.7	526.0	42	526.0	3	526.0
18	518.5	42	526.0	26.7	526.0	3	519.7
24	513.1	42	525.5	3	520.3	6.3	518.0
34	509.2	32.4	525.5	3	524.7	6.3	513.3
42	506.0	3	519.7	SF =		-5.5	513.3
42	505.5	3	520.3	152.3		-5.5	526.8
32.4	505.5	SF = 22.2				SF = 129.7	
3	519.7						
3	526.0						
SF = 185.9							

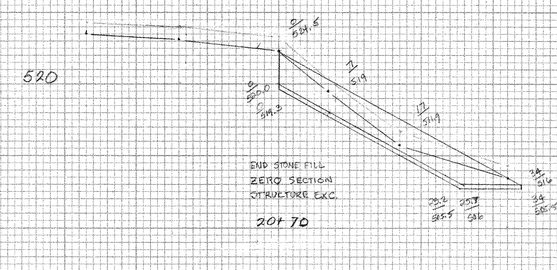


STR. EXC.	
-7.2	513.3
-7.2	523.0
0	522.8
0.3	525.4
1	525.4
2	525.0
2	519.5
5.5	517.7
5.5	513.3
-7.2	513.3

SF = 111.28

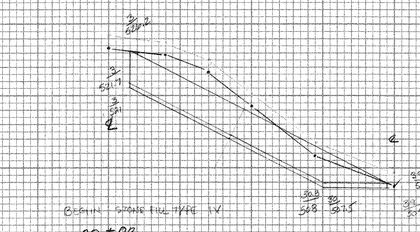
STR. EXC.	
-5.5	513.3
-5.5	523.2
0	525.2
0	525.5
1	525.5
3	524.0
3	519.5
6.5	517.6
6.5	513.3
-5.5	513.3

SF = 107.8

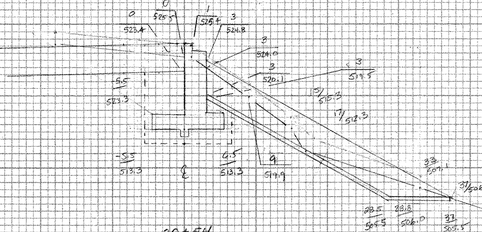


UNCL CHAN	
0	524.5
7	519.0
17	511.9
34	506.0
34	505.5
25.2	505.5
0	519.3
0	520.0
SF = 22.06	

GRAVEL		STONE	
0	520.5	0	524.5
25.7	520.0	34	506.0
34	506.0	25.7	506.0
34	505.5	0	520.0
25.2	505.5	0	524.5
0	519.3	SF = 134.6	
0	520.0		
SF = 22.06			

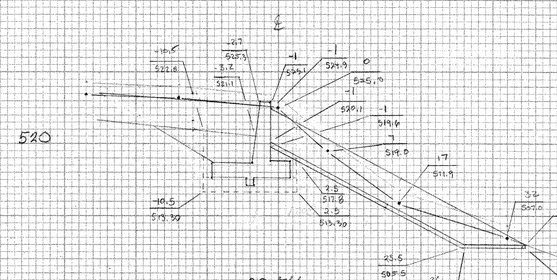


UNCL CHAN		GRAVEL		STONE	
0	526.2	3	521.7	3	526.2
8	525.8	28.3	526.0	26	506.0
14	523.3	25	506.0	22.2	506.0
20	518.5	22	505.5	3	521.7
25	511.8	26	505.5	3	526.2
26	506.0	3	521.1	SF = 1420.6	
29	505.5	3	521.7		
30	505.5	SF = 22.8			
3	521.0				
3	526.2				
SF = 185.0					



UNCL CHAN. EXC.	
3	524.0
9	519.9
15	515.3
17	512.3
33	506.0
37	506.0
37	505.5
28.5	505.5
3	519.5
3	524.0
SF = 75.7	

GRAVEL		STONE FILL		STRUCT. EXC.	
3	520.1	3	524.8	0	524.4
28.8	506.0	37	506.0	0	525.5
37	506.0	28.8	506.0	3	524.0
37	505.5	3	520.1	3	519.5
28.5	505.5	3	524.8	6.5	517.1
3	519.5			6.5	513.3
3	520.1	SF = 137.7		-5.5	513.3
				-5.5	523.3
SF = 20.4				0	523.4
		SF = 108.9			



UNCL CHAN. EXC.	
0	525.0
7	519.0
17	511.9
32	507.0
34.5	506.0
34.5	505.5
25.5	505.5
-1	519.9
-1	525.1
0	525.0
SF = 109.48	

GRAVEL		STONE FILL	
-1	520.1	-1	525.1
28	506.0	34.5	506.0
34.5	506.0	26	506.0
34.5	505.5	-1	520.1
25.5	505.5	-1	525.1
-1	519.9	SF = 148.68	
-1	520.1		
SF = 21.28			

STRUCT. EXC.	
-10.5	522.8
-3.2	521.1
-2.7	525.3
-1	525.1
-1	519.6
2.5	511.8
2.5	513.3
-10.5	513.3
-10.5	522.8
SF = 112.92	

APPURTENANT #2
STRUCTURE SECTIONS

SHEET 2 OF 3

138

1" = 10'

NO	MADE BY	WORK CHECKED
	MOLE BROOK	VERIFY
	JERMYN	INSTALL
	SCALE	SCHED
	DRAWN	CHECKED
	JAMES	
BL		DATE

NO	MADE BY	WORK CHECKED
	MOLE BROOK	VERIFY
	JERMYN	INSTALL
	SCALE	SCHED
	DRAWN	CHECKED
	JAMES	
BL		DATE

PLATE 3-FULL CROSS SECTION-FULL LINE
HIGHWAY NEBRASKA VIA SHEET
WILLIAMS NEBRASKA
PRINTED IN USA

STRUCTURE EXCAVATION

STATION	LEFT SIDE DISTANCE	AREA, SF	VOLUME, CF
109+12		30.22	
	5.1		193.68
109+63		39.65	
	8.5		337.03
109+71.5		39.65	
	2.5		100.75
109+74		40.95	
		SUBTOTAL	2372.46

87.84 cy

STATION	RIGHT SIDE DISTANCE	AREA, SF	VOLUME, CF
109+00		34.62	
	12		415.44
109+12		34.62	
	5.1		1893.88
109+63		89.65	
	BUTT		
109+63		104.65	
	8.5		864.32
109+71.5		98.72	
	BUTT		
109+71.5		40.30	
	2.5		102.38
109+74		41.60	
	13		540.80
109+87		41.60	
	BUTT		
109+87		79.70	
	6.5		517.01
109+93.5		79.38	
		SUBTOTAL	4333.83

160.5 cy

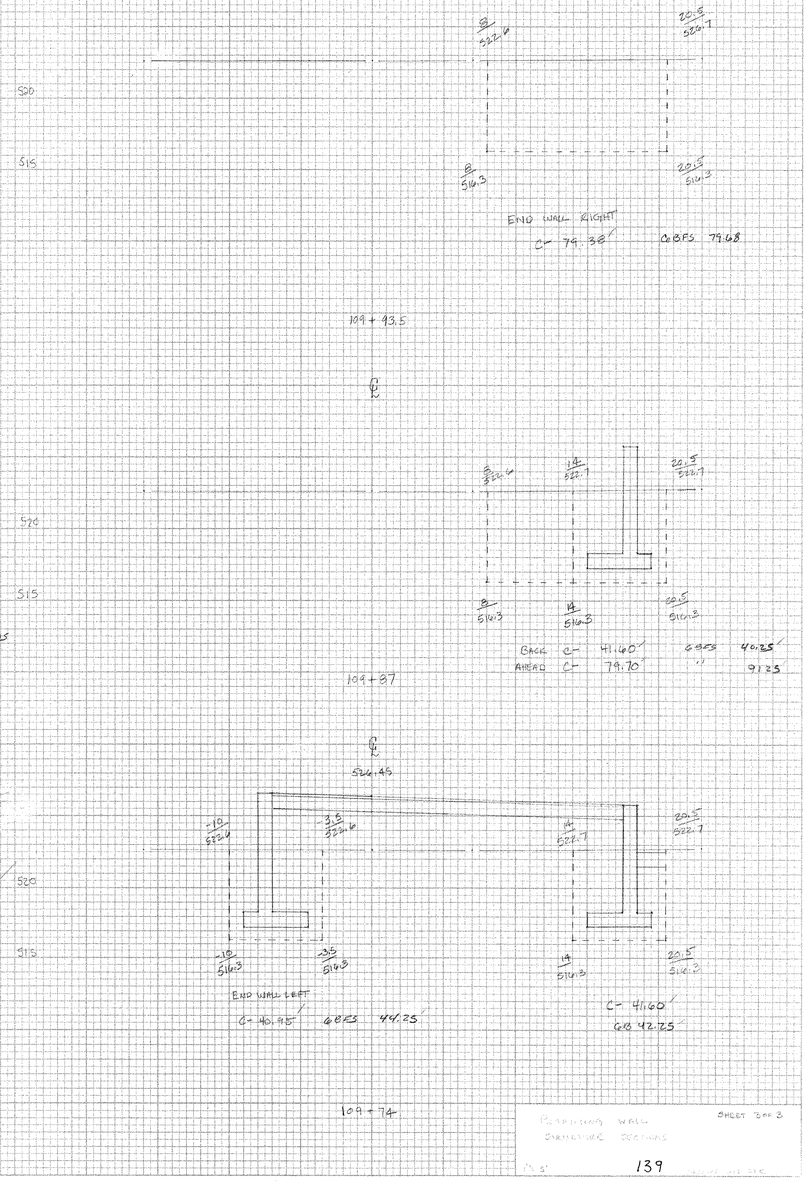
STRUCTURE LEFT 87.84
" RIGHT 160.5
248.34

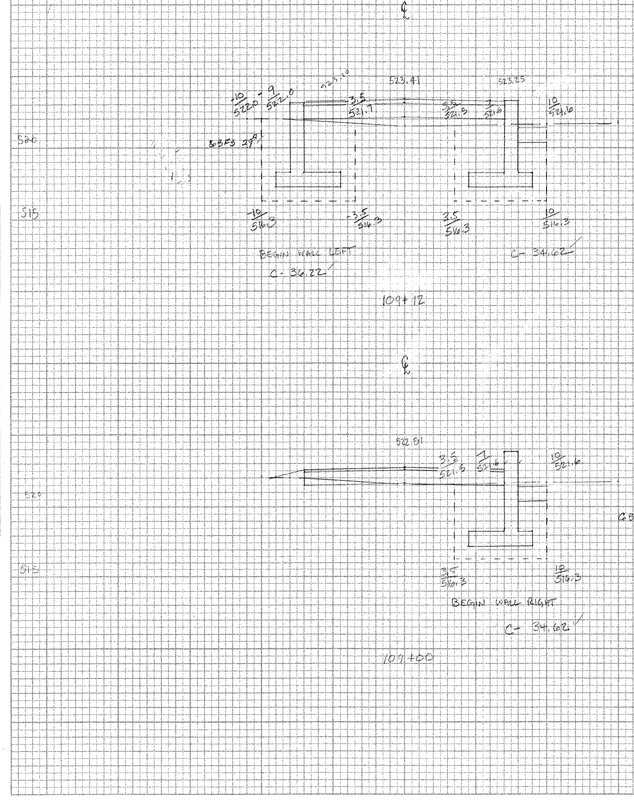
6-03-99

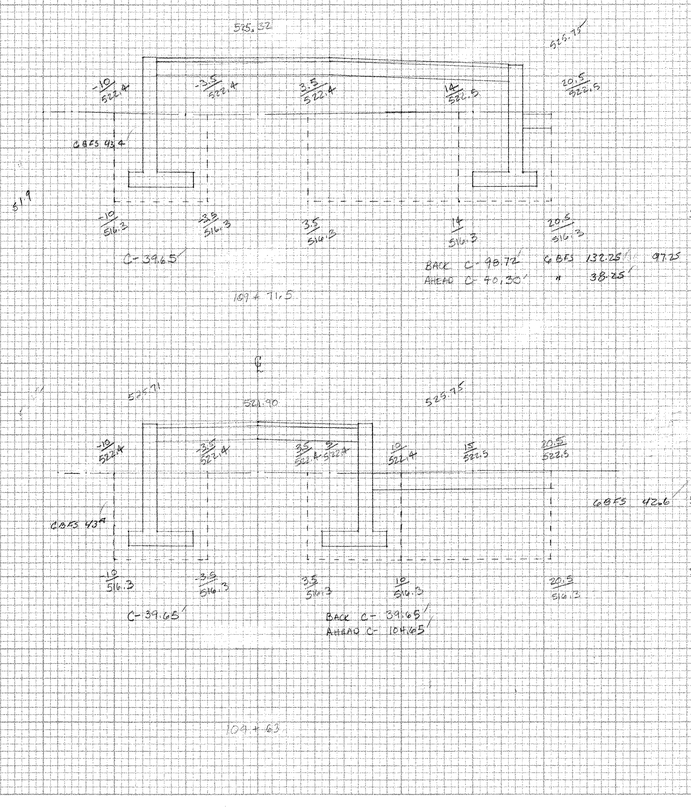
LT STATION	DIST	CBFS AREA	VOL
109+12		29	
	5.1		63.0
109+63		43	
	8.5		13.6
109+71.5		43.4	
	2.5		4.1
109+74		44.25	
			85.7 cy

RT STATION	DIST	AREA	VOL
109+00		36	
	12		14.4
109+12		29	
	5.1		67.6
109+63		42.6	
	BUTT		
109+63		42.6	
	8.5		12.7
109+71.5		38.25	
	BUTT		
109+71.5		32.25	
	2.5		8.1
109+74		42.25	
	13		19.8
109+87		40.25	
	BUTT		
109+87		91.25	
	6.5		20.5
109+93.5		79.68	
			143.2 cy

7/19/99





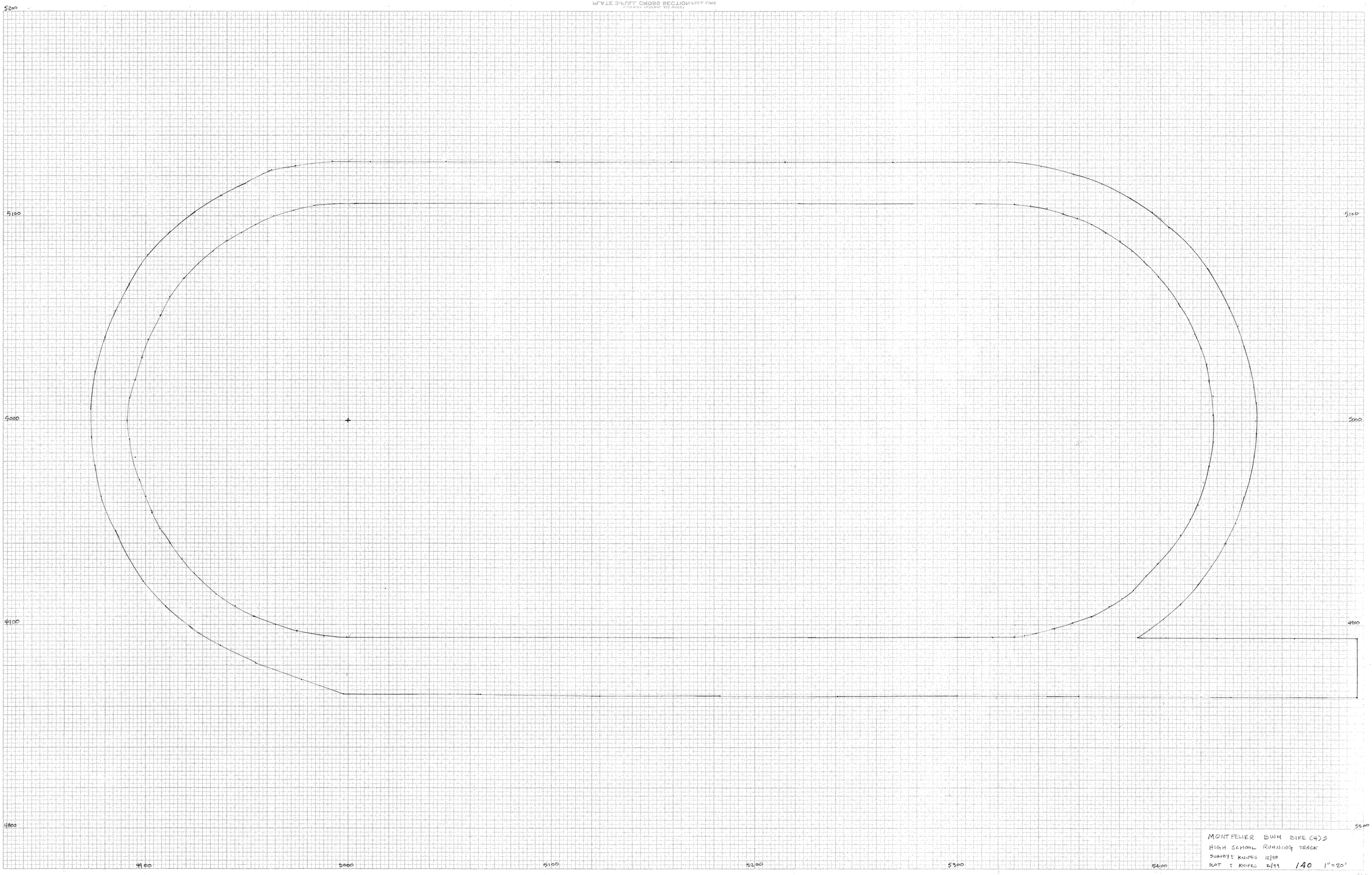


NO.	DATE	REVISIONS	BY

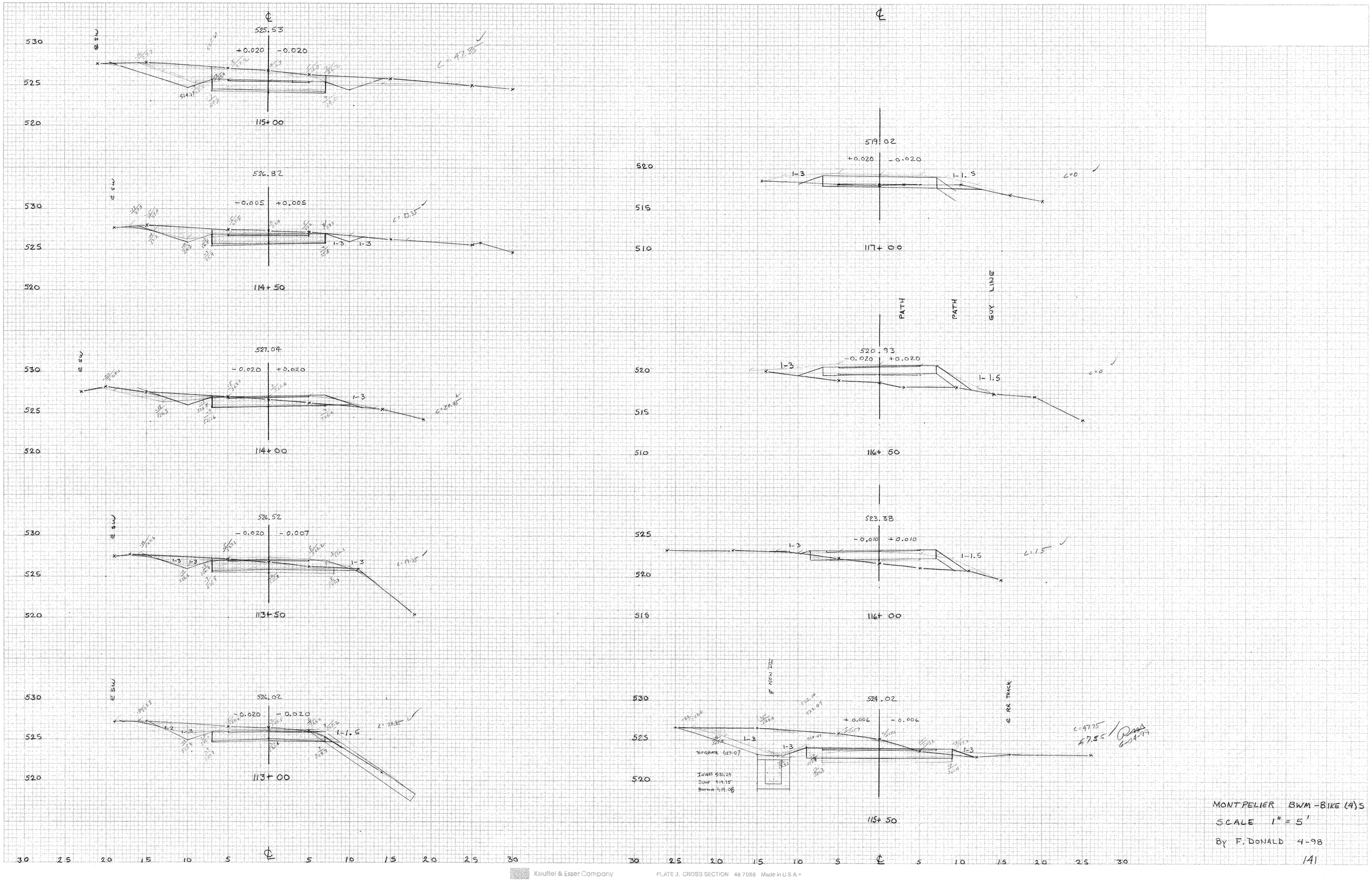
ORIGINAL
NOTE BOOK
STAGE
VARIOUS
PROJECT
STRUCTURE
ENGINEER
VE
STAGE
VARIOUS
PROJECT
STRUCTURE
ENGINEER
VE
STAGE
PLANS
NO. DATE REVISIONS BY
NOTE BOOK
VARIOUS
PROJECT
STRUCTURE
ENGINEER
VE
STAGE

BRIDGE WALL
SURVEYED SOUNDINGS

SHEET 3 of 3



MONTPELIER BWM BIKE (4) S
HIGH SCHOOL RUNNING TRACK
SURVEY: KNIPES 12/98
PLOT : KNIPES 2/99 140 1"=20'

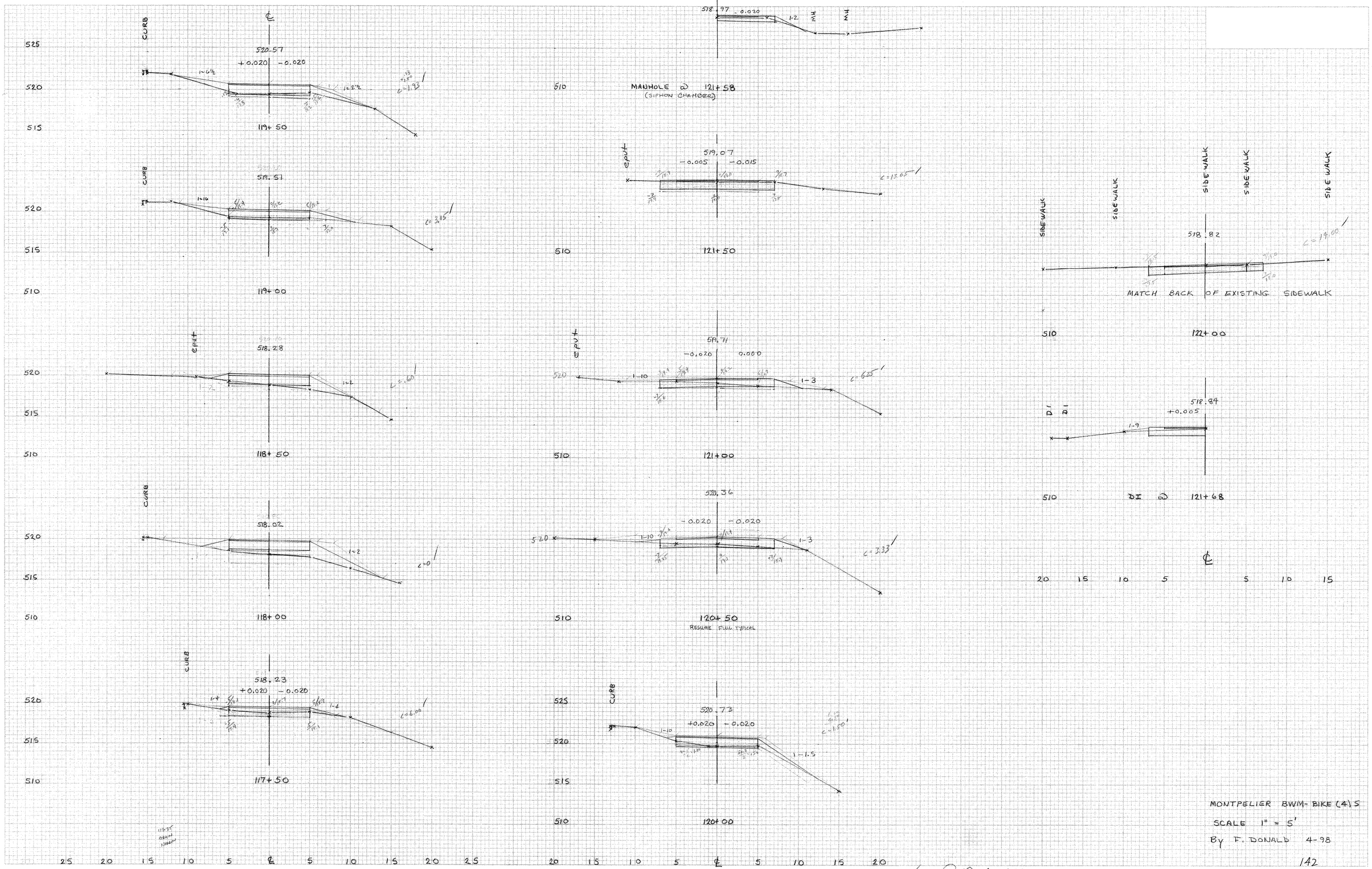


MONTPELIER BWM-BIKE (4)S

SCALE 1" = 5'

BY F. DONALD 4-98

141



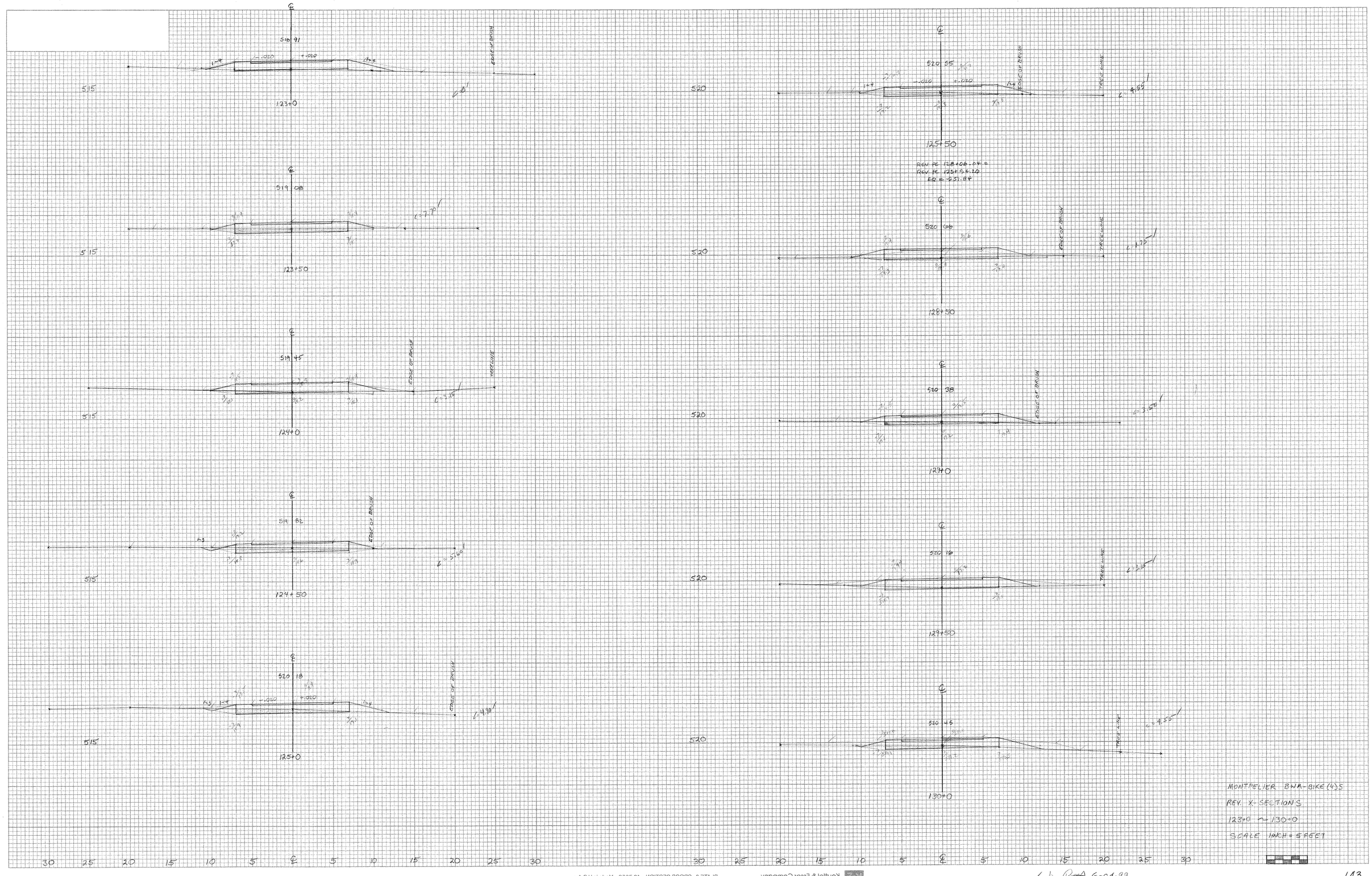
MONTPELIER BWM-BIKE (4) S

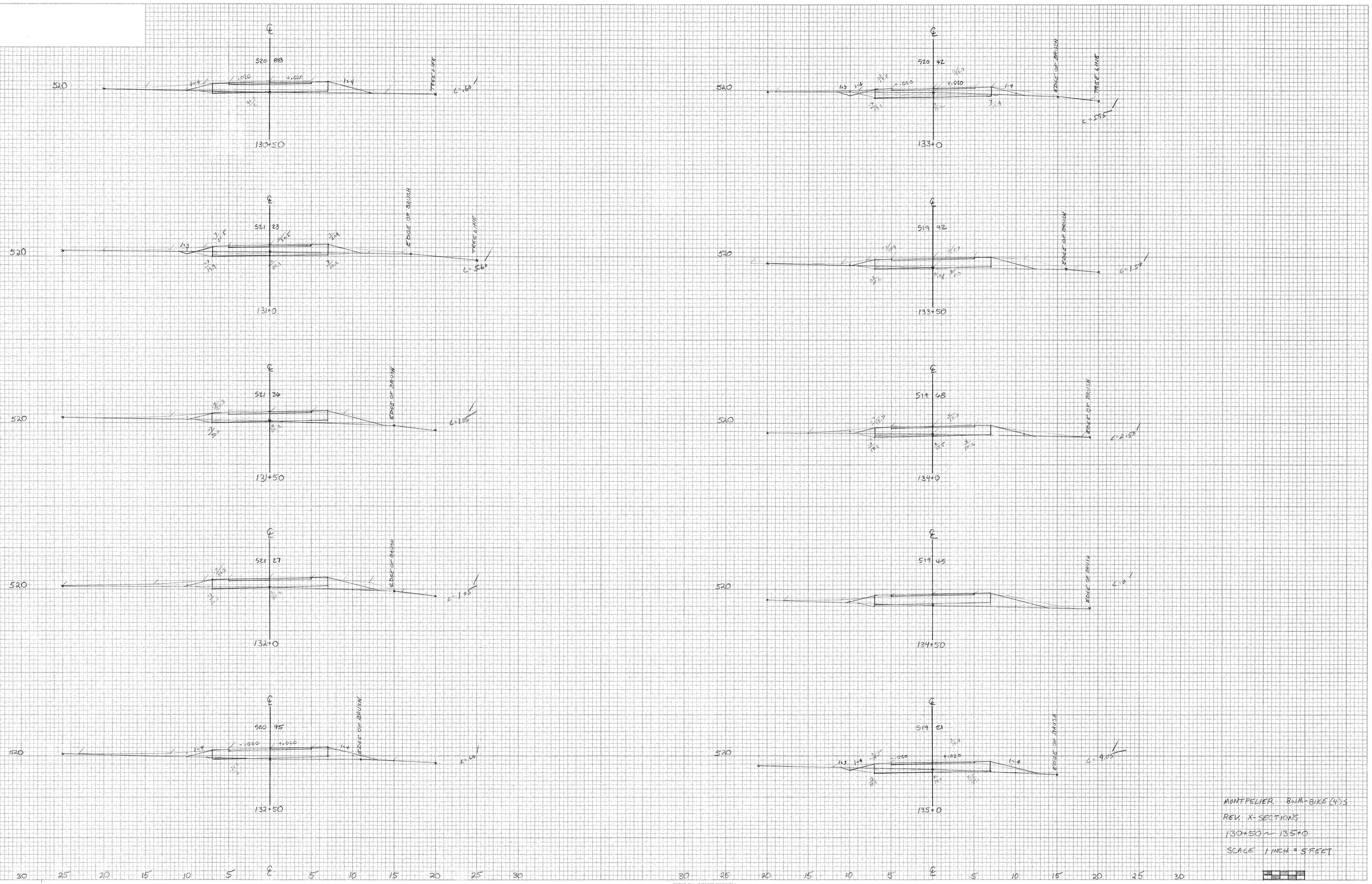
SCALE 1" = 5'

By F. DONALD 4-98

Keuffel & Esser Company PLATE 3. CROSS SECTION 48 7056 Made in U.S.A.®

/ by 6-24-99


515
519.91
123+0
EDGE OF BROW
515
519.08
123+50
515
519.45
124+0
EDGE OF BROW
TREE LINE
515
518.82
124+50
EDGE OF BROW
515
518.18
125+0
EDGE OF BROW
520
520.55
125+50
EDGE OF BROW
TREE LINE
REV PE 128+06.04 =
REV PE 125+54.20
EQ = -51.84
520
520.66
126+50
EDGE OF BROW
TREE LINE
520
520.38
127+0
EDGE OF BROW
520
520.16
127+50
TREE LINE
520
520.45
130+0
TREE LINE
MONTPELIER BWA-BIKE(4)S
REV. X-SECTIONS
123+0 ~ 130+0
SCALE 1INCH = 5FEET
30 25 20 15 10 5 ℄ 5 10 15 20 25 30
Kuttel & Esser Company
PLATE 3, CROSS SECTION 48 7058 Made in U.S.A.
✓ by 6-04-99
143



MONTPELIER BWM-BIKE (4) S
REV. X-SECTIONS
130+50 ~ 135+0
SCALE 1 INCH = 5 FEET

NO.	NOTE BOOK	PAGE	CHECKED	DATE

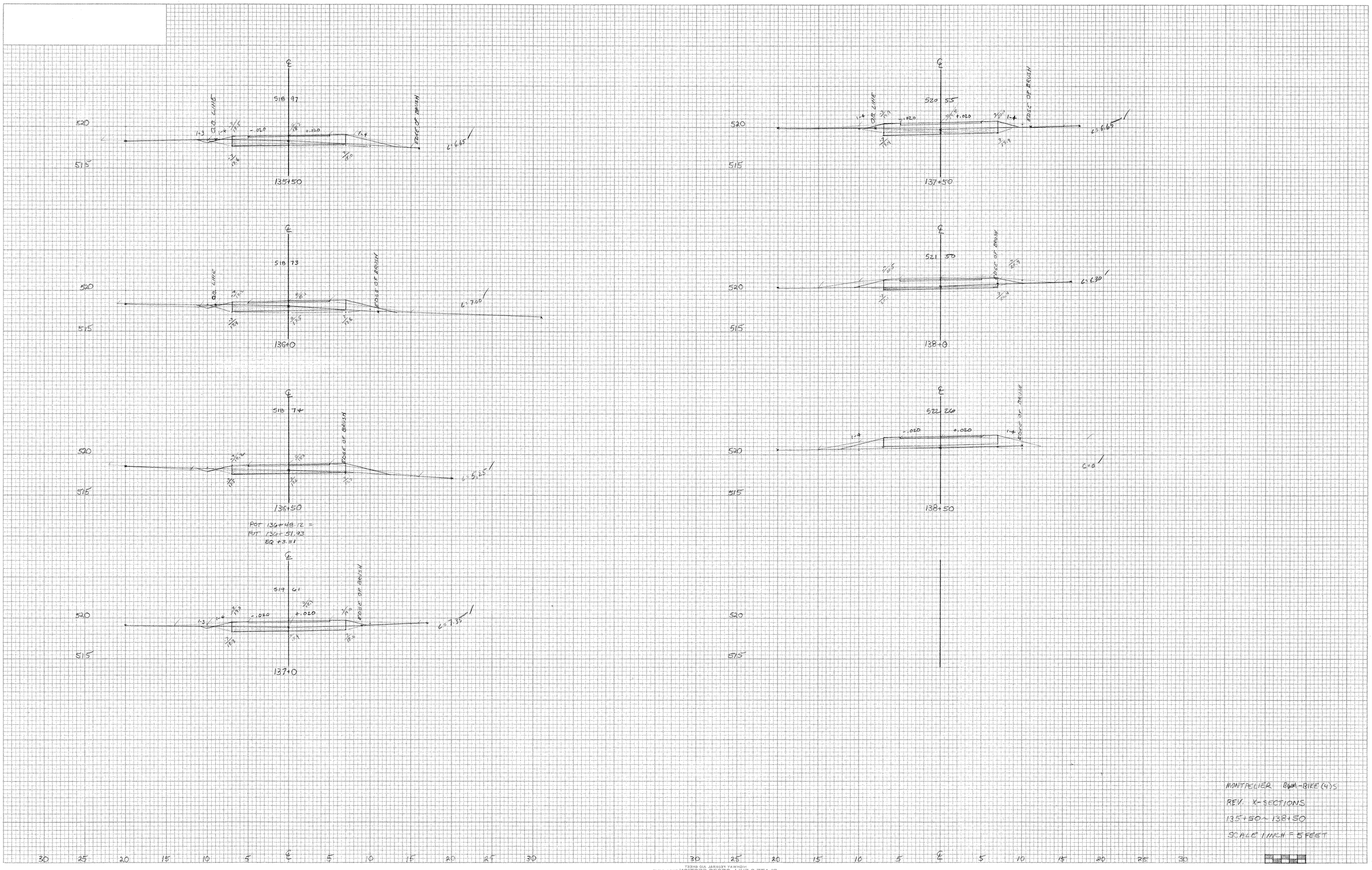
ORIGINAL SURVEY

NO.	NOTE BOOK	PAGE	CHECKED	DATE

ORIGINAL SURVEY

PLATE 3-FULL CROSS SECTION-FULL LINE
NATIONAL PARK SERVICE
HIGHWAY FEDERAL AID SHEET
PRINTED IN U.S.A.

J by Rma 6-07-99



MONTPELIER BWM-BIKE (4)S

REV. X-SECTIONS

135+50 ~ 138+50

SCALE 1 INCH = 5 FEET

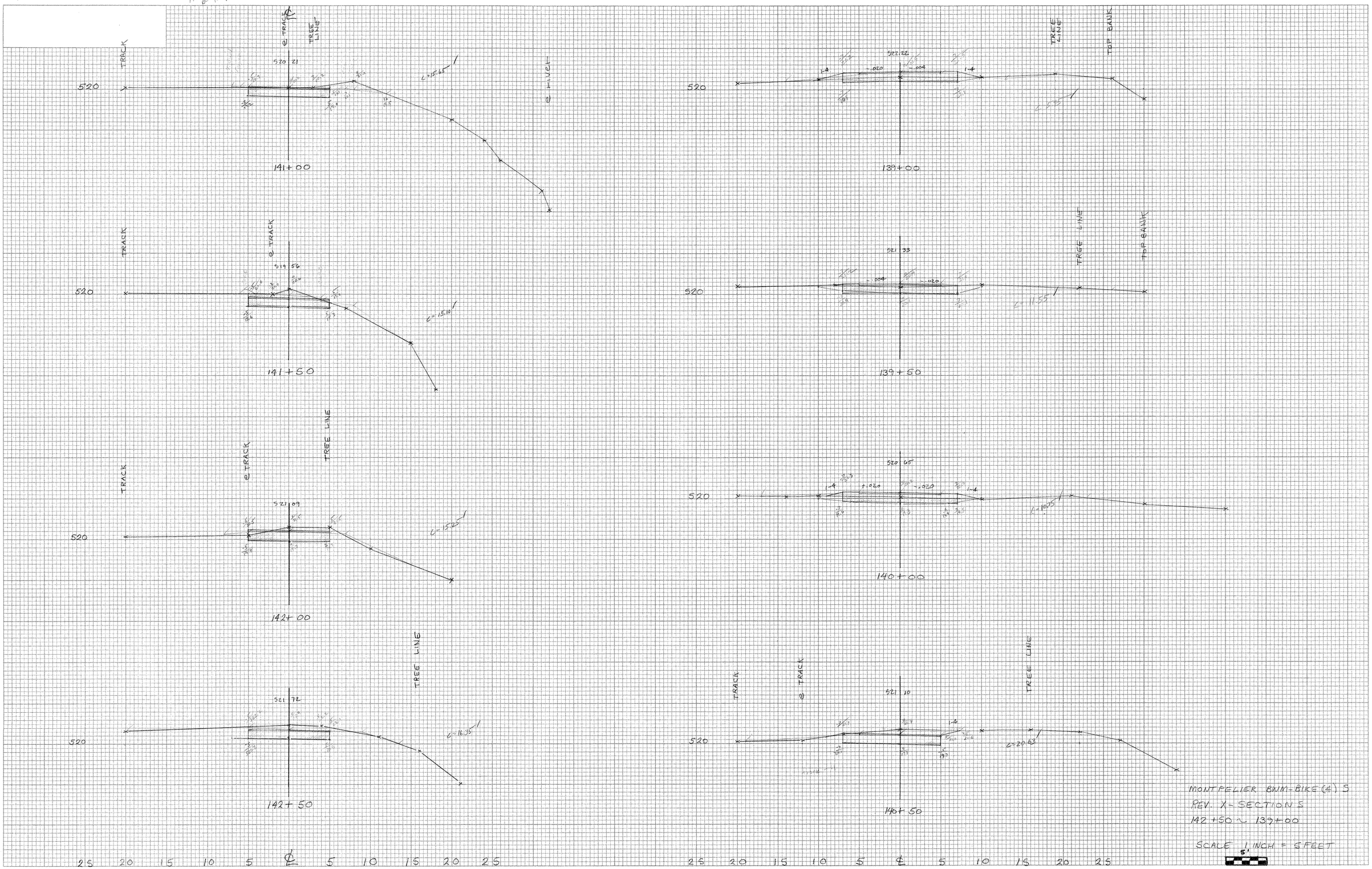
NO	DATE	REVISION	BY

NO. ____ DATE ____
NOTE BOOK ____ VERIFIED ____
SURVEY ____ DRAWN ____
PLOTTED ____ CHECKED ____
DESIGNED ____ VERIFIED ____

ORIGINAL SURVEY
DATE ____
SURVEYED ____
PLOTTED ____
DRAWN ____
CHECKED ____

HIGHWAY FEDERAL AID SHEET
PLATE 3-FULL CROSS SECTION-FULL LINE
NATIONAL PRINTERS
PRINTED IN U.S.A.

J by [illegible] 6-07-99



NO	REVISIONS	BY	DATE

WORK BOOK	JAMES YEARGIN
VERT.	CONTROL
HORIZ.	DETAILS
CHECKED	DRAWN

Keuffel & Esser Company PLATE 3, CROSS SECTION 46 7056 Made in U.S.A.®

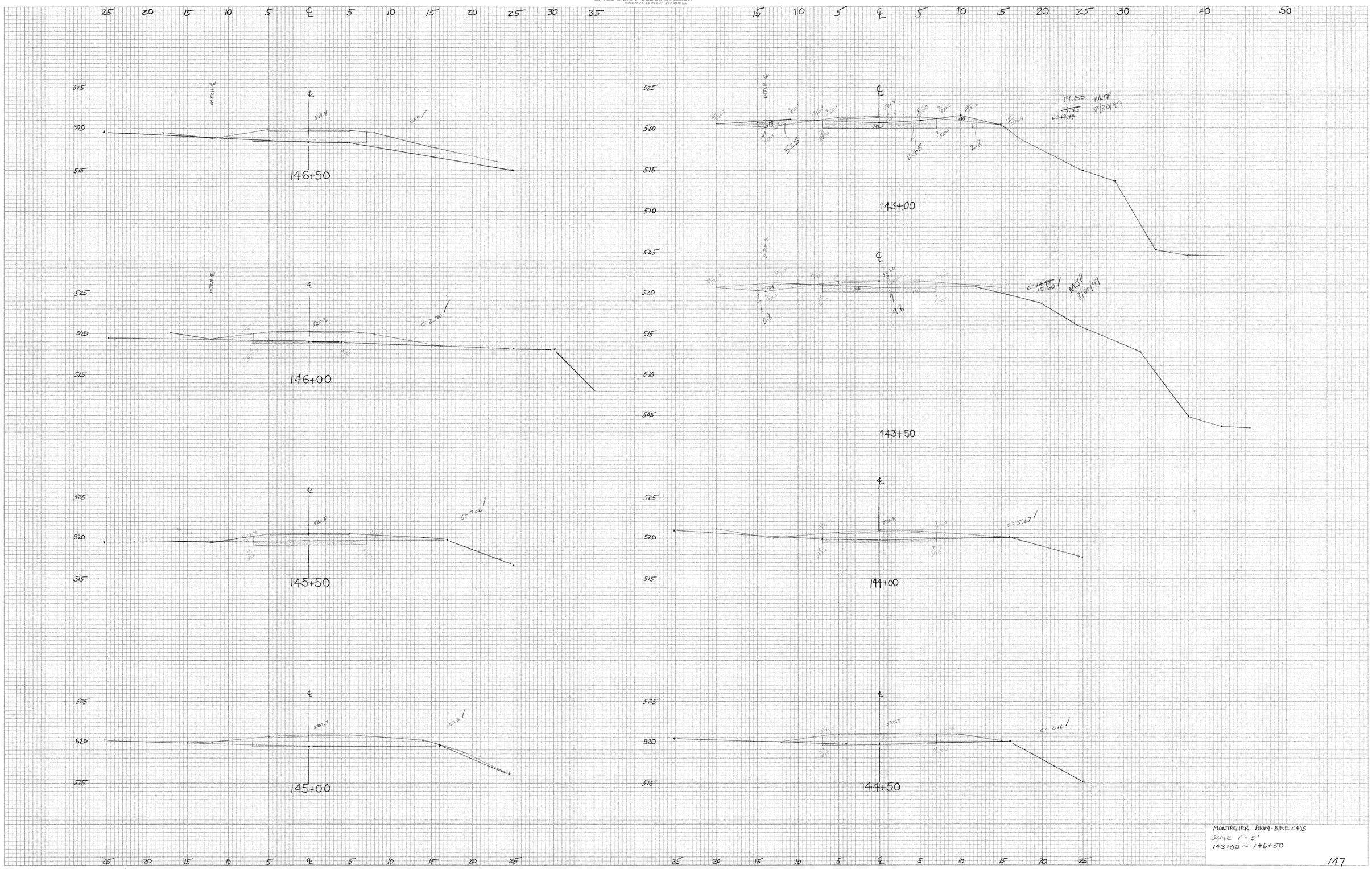
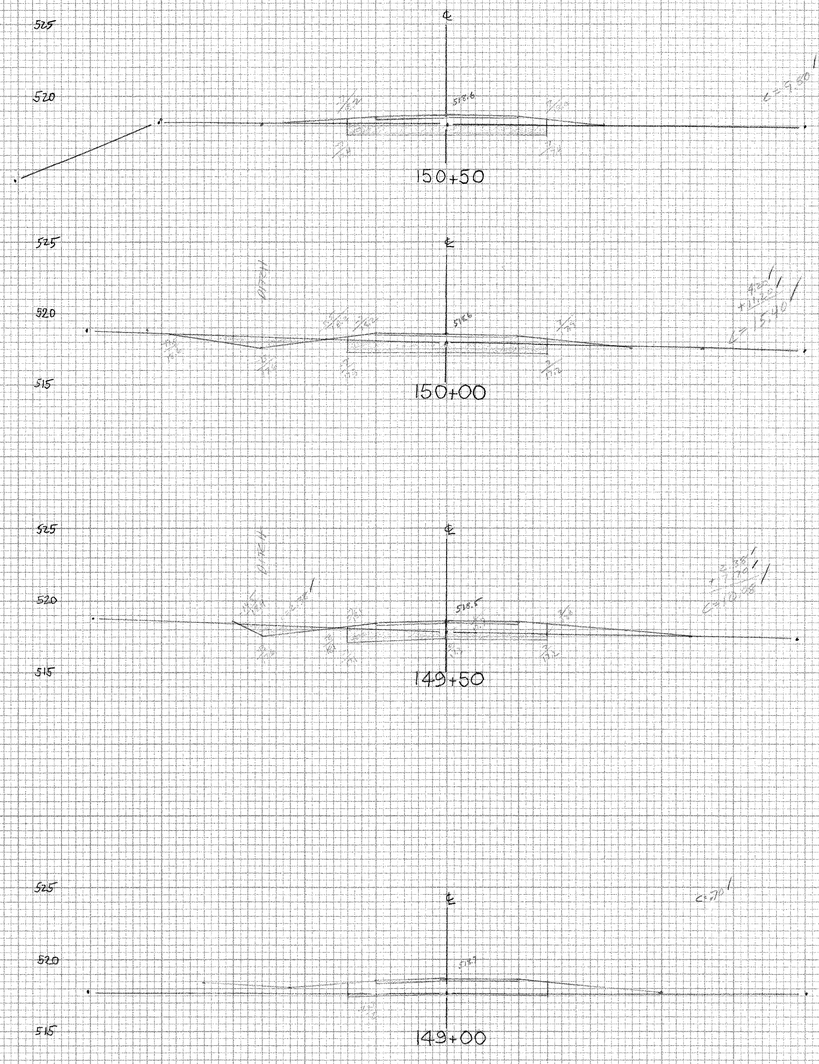
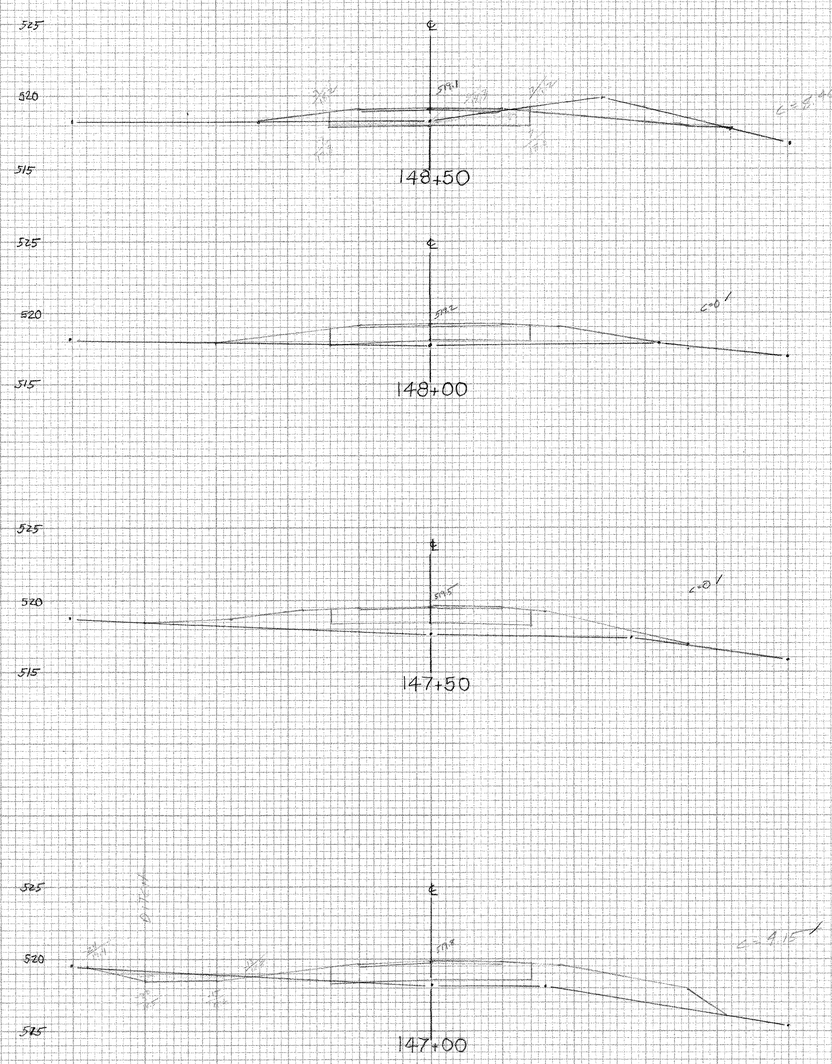

146+50
146+00
145+50
145+00
143+00
143+50
144+00
144+50
19.50 NLJR
~~19.75~~
c=19.47
9/20/99
c=2.70
c=1.02
c=0.7
c=5.67
c=2.16
c=1.60
NLJR
9/20/99
MONTPELIER BWM-BIKE (4)S
SCALE 1" = 5'
143+00 ~ 146+50

PLATE 3-LIGHT CROSS SECTION-LIGHT LINE
HIGHWAY FEDERAL AID PROJECT
MONTPELIER
BARRE CITY
VERMONT

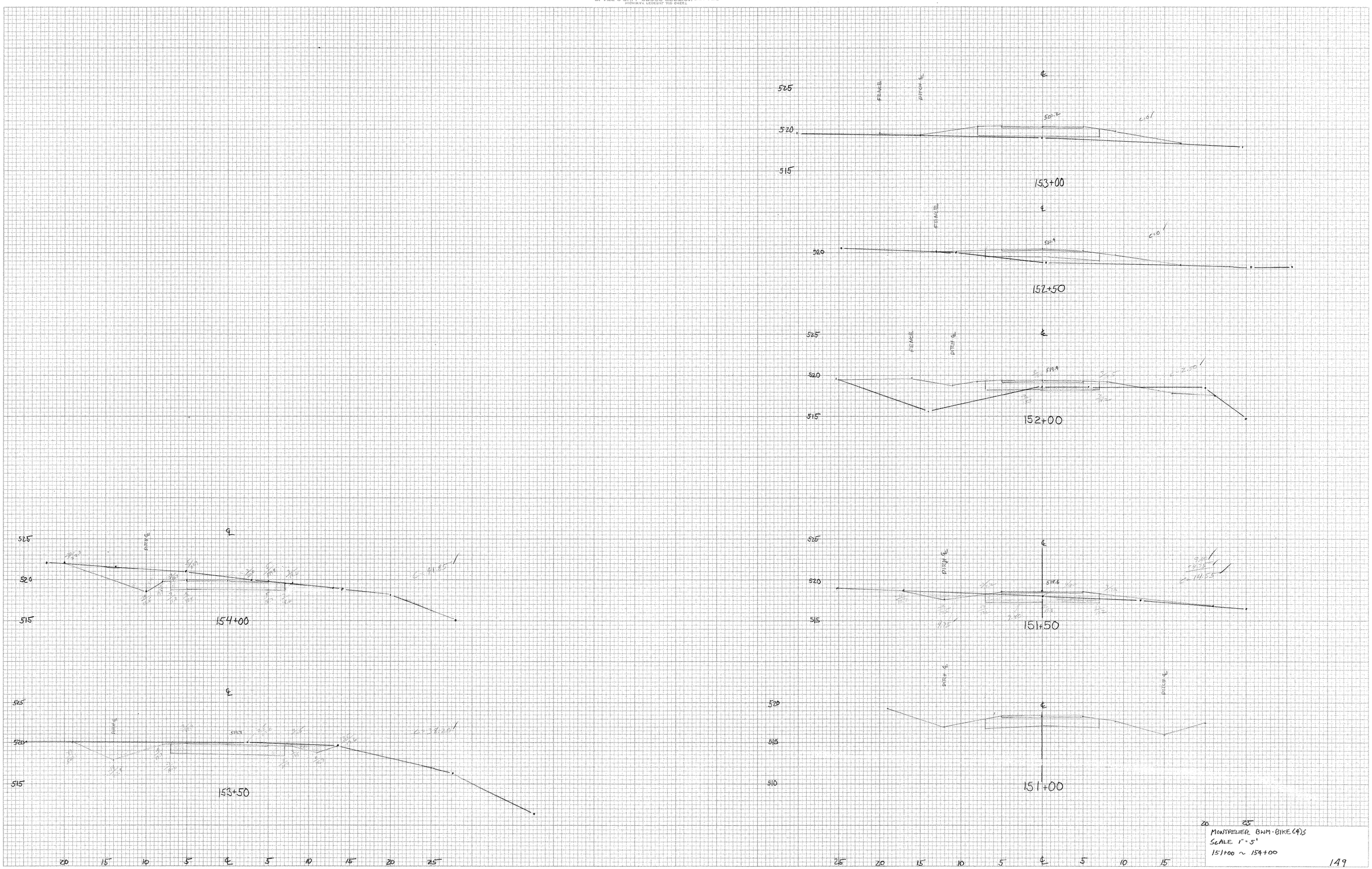




MONTPELIER BNM-BIKE(4)S
SCALE 1" = 5'
147+00 ~ 150+50

148

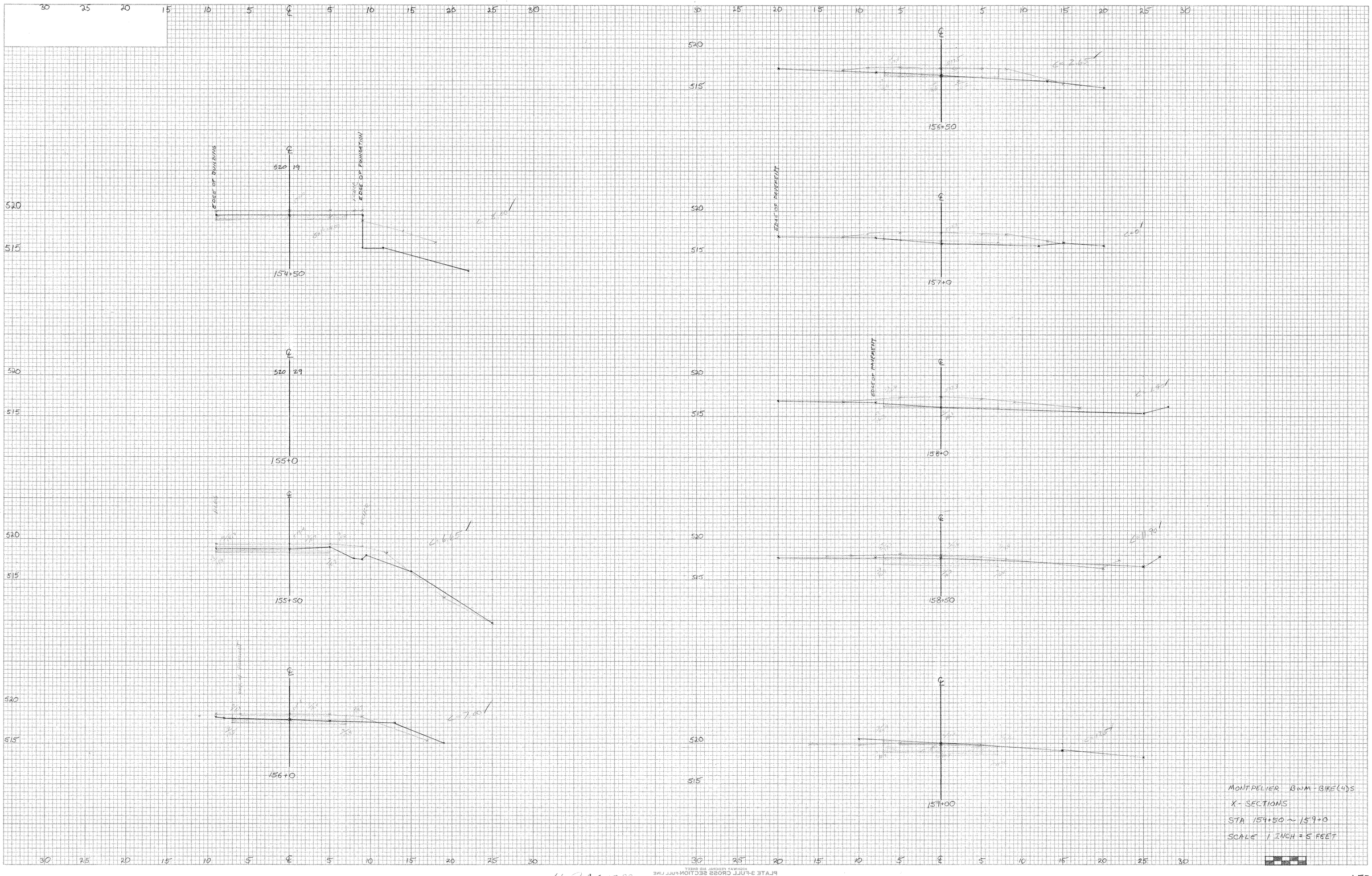
✓ by RM 6-07-99



MONTPELIER BWM-BIKE (49)S
SCALE 1" = 5'
151+00 ~ 154+00

149

✓ by RAA 6-07-77



MONTPELIER BWM-BKE(4)S

X-SECTIONS

STA 154+50 ~ 159+0

SCALE 1 INCH = 5 FEET

NO. | NOTE BOOK | PAGE | REVISIONS | DATE

ORIGINAL | JAN 1978 | DRAWN | DETAILED | TRACED | CHECKED | SCALE

NO. | NOTE BOOK | PAGE | REVISIONS | DATE

STAND | SCALE

6-07-77

PLATE 3-FULL CROSS SECTION-FULL LINE
NATIONAL PARKWAY
PARKED IN U.S.A.

150

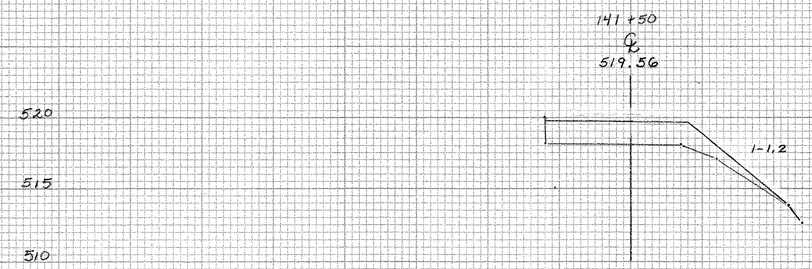
FINAL DRAINAGE SUMMARY

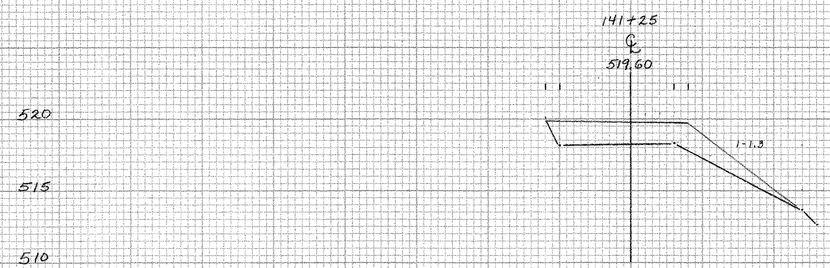
PREPARED BY KNIPES PROJECT MONTPELIER BWM
CHECKED BY _____ NO. BIKE (4) 5

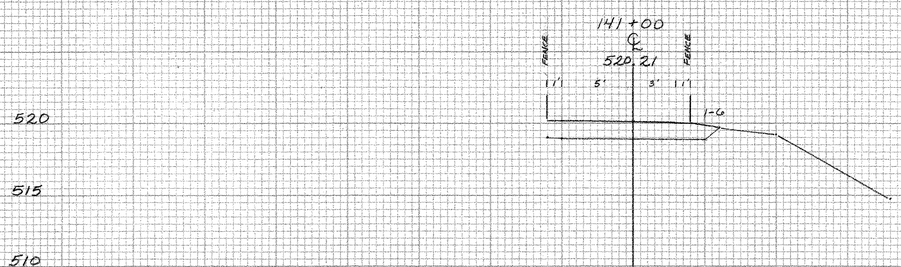
STATION	STATION	POSITION	ASKEW	DIR & PRESENT	DRAIN SURF. ft	PIPES 601.0905 12" CPEP	601.0910 15" CPEP	601.0915 18" CPEP	601.0920 24" CPEP	601.0925 30" CPEP	END SECTIONS 601.7015 18" CPEPES	601.7020 24" CPEPES	601.7025 30" CPEPES	DROP INLETS DEPTH OF DI	604.25 CONC. CLASS D	607.15 REINF. STEEL	604.50 C.I. COVER	604.51 C.I. GRATE TYPE D	CHANGING ELEVATIONS 604.23 CHANGE SLOPE SLEEVE	604.60 CHANGE SLOPE DI LOAM	TRENCH EXCAVATION 204.70 EARTH	204.71 ROCK	BACKFILL 203.32 GRAN. ROC.	204.30 GRAN. BACKFILL	STONE FILL 613.10 TYPES	613.11 TYPE II	614.31 GEOTEXT. UNDER STONE
108+33		RT		8			8							5	2.6	231		1			12.5						
108+33		℄		12																1							
112+01		LT		16															0								
112+88		℄		20	3	24								3 1/2	1.9	158		1			12.7						
115+50		℄	119' RT	25	3		86							3	1.7	150		1			62.7						
115+94		RT		36															1								
117+70		LT		40															1								
121+60		RT		42													1		1								
122+65		LT		44																1							
129+36		℄	66' RT	52	4	57								4	2.1	193		1		1	30.6				1		
134+40		℄		56	4			49						4 1/2	2.3	200		1			28.4						
139+84		℄	61' RT	60	4		56							3 1/2	1.9	158		1			37.1				1.8		
142+67		℄	98' RT	62	3			28			1										1.7				0.6		
145+55		RT		72															1								
147+58		℄		76	1					40			1								24.4					4.6	
150+92		℄	45' RT	80	1				46			1									21.6			3.5	3.0	6.0	7
153+40.5		℄	83' LT	84	1				34			1									9.7			2.0		7.1	5
154+46		LT		88															1								
157+50		RT		92	1		40							4	2.1	193		1			24.8					0	
						81	~~100~~ 187	77	80	40	1	2	1		~~12.9~~ 14.6	1283	1	7	5	3	~~266.2~~ 266.2	0	0	6.1	~~5.4~~ 6.4	89.7	12
TOTALS						81	~~100~~ 187	77	80	40	1	2	1		~~12.9~~ 14.6	1283	1	7	5	3	266.2	0	0	6.1	~~5.4~~ 6.4	89.7	12

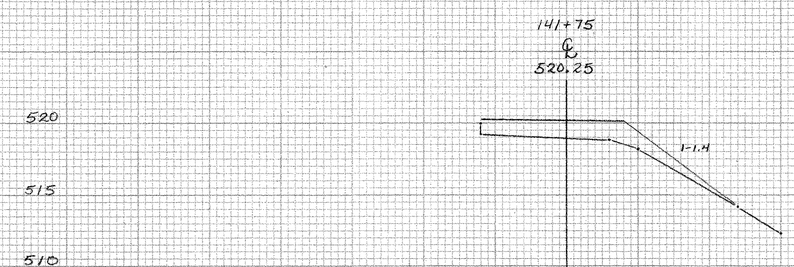
5/26/99 GPH

151









NOTE: SIDE SLOPES GREATER THAN 1:1.5 WILL HAVE TO BE COVERED WITH STONE FILL TO PREVENT SLOPE EROSION.

SCALE: 1" = 5'

FROM STATION 141+00 ~ 141+75
PROJECT NAME: MONTPELIER BIKE PATH
PROJECT NUMBER: STP BIKE (4) S
DATE: 9/28/98

FOR THE USE OF: TERRY BOYLE, LANDSCAPE ARCHITECT

"PERFECT" CROSS SECTION
10 X 10 = ONE INCH
EUGENE DIETZGEN CO.

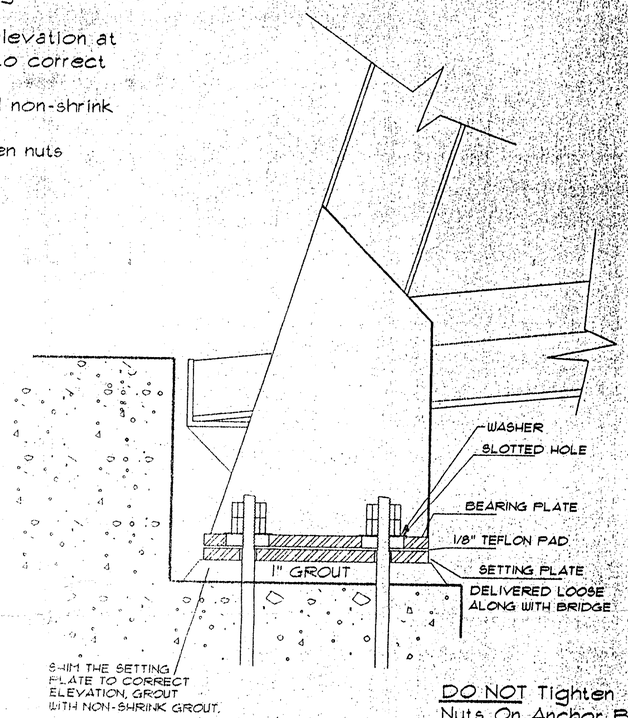
PRINTED IN U.S.A.

"PERFECT" CROSS SECTION
10 X 10 = ONE INCH
EUGENE DIETZGEN CO.

BRIDGE INSTALLATION

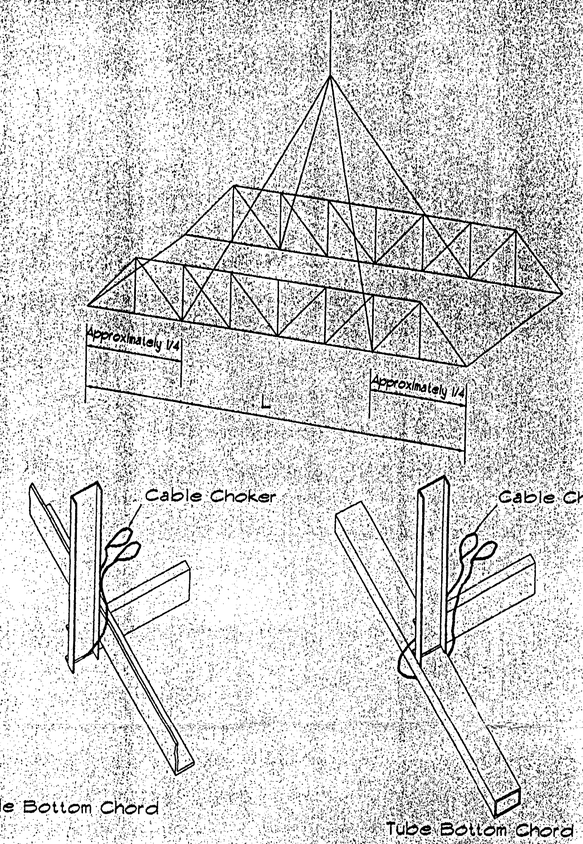
1. After anchor bolts are installed and checked for proper dimensions, place setting plate and shim to approximate elevation. (Shim with metal shims) Setting plates are delivered along with bridge.
2. Place teflon pads on setting plate. Bridges under 60' require teflon pads on one end only.
3. Set bridge in place. Check for proper elevation at abutment headwall. If neccessary adjust to correct height.
4. Grout under setting plate with approved non-shrink grout.
5. Bolt bridge to anchor bolts. Hand tighten nuts to allow for expansion and contraction.
6. Deforming bolt threads is recommended.

Typical Thermal Expansion And Contraction Due To A Seasonal Temperature Variation Of 120°F Is 1/8" Per 100' Of Bridge.



DO NOT Tighten Nuts On Anchor Bolts.

LIFTING INSTRUCTIONS



SPLICE BOLTS

Field connection bolts, if required, shall be ASTM A-325 or A-490 and shall be tightened by the "turn of the nut method" to obtain proper torque.

TURN OF THE NUT TIGHTENING

Bolts must be installed in all holes of the connection and brought to a snug-tight condition. Snug tight is defined as the tightness that exists when the plies of the joint are in firm contact. This may be attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. Snug tightening shall progress systematically from the most rigid part of the connection to the free edges. Then the bolts shall be tightened as neccessary until they are all tight and the connection is fully [illegible] following the rotation of bolts shall be [illegible] Section 8 of the AISC Manual of [illegible] Page 5-16, Table 5-1. There shall be no [illegible] turned by the wrench.

Anchor Bolts not by Steadfast Bridge Co.

Epoxy adhesive bolts in drilled holes are acceptable as a substitute.

Where splices are used the plates are "shop drilled" and "matched marked".
DO NOT mix plates as holes may not match. Keep plates in same orientation as shop bolted for shipment.

Place choker around floor beam or bottom chord of truss as shown. Attachment to top chord not recommended.
Under no circumstances should cable or chokers be attached to or rub against railings or toe plates.

For accurate lifting weight consult "Bill of materials" furnished on all shop drawings.

For larger bridges we recommend that professional steel erectors be consulted for unloading and installation.

Date Received: 11 22 96
☒ Approved ☐ Revise & Resubmit
☐ Approved as noted ☐ Not Approved
Comments:

Reviewed By: Dwg. Checked By:
Date: Signature:

FIELD USE

STEADFAST BRIDGES®
A DIVISION OF BILTOLAST PRODUCTS INC
P.O. BOX 806 FORT PAYNE, AL 35967
1-800-749-7515

AISC ACTIVE MEMBER

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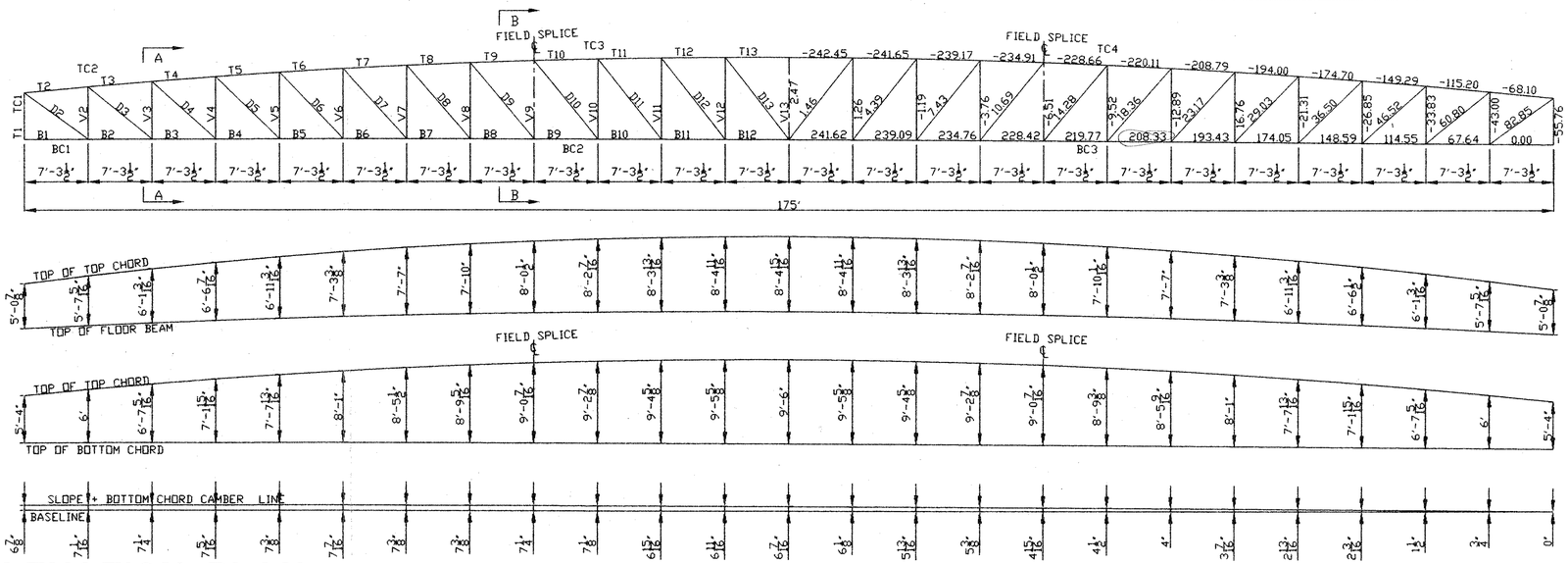
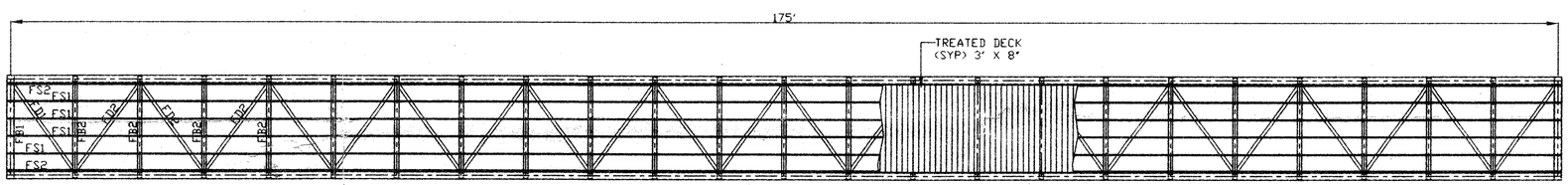


ELEVATION PLAN

1/8"=1'

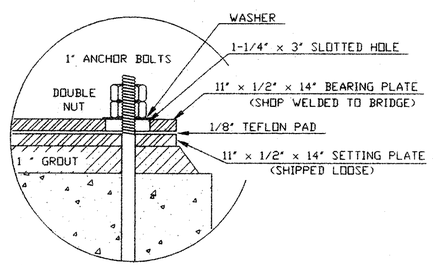
1

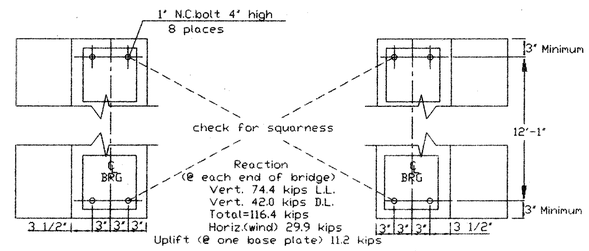


FLOOR PLAN

1/8"=1'

2



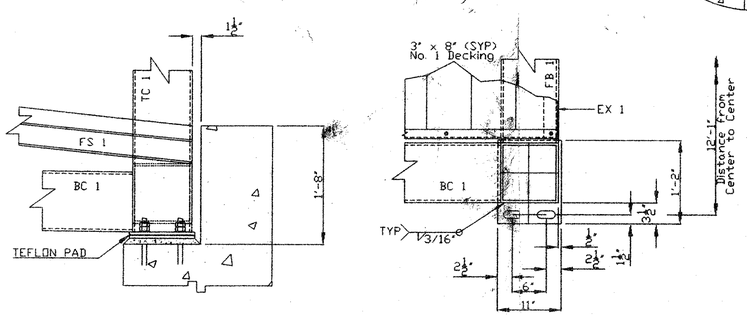


footing size to be designed by owner based on soil condition.

ABUTMENT PLAN

N.T.S.

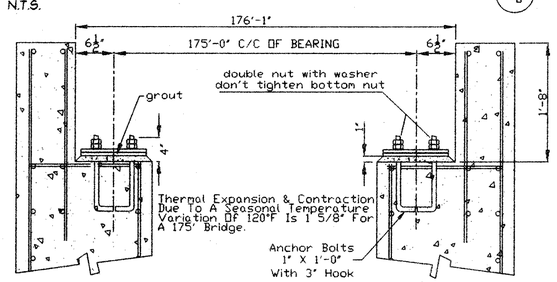
4



BEARING ASSEMBLY

1"=1'

3



ABUTMENT SECTION

N.T.S.

5

Date Received 1/22/98
☐ Approved ☐ Revise & Resubmit
☐ Approved as noted ☐ Not Approved
Comments: SEE LETTER TO D. PINKHAM
DATED 1/28/98
REVIEW AND APPROVAL OF THIS SHOP DRAWING BY THE ENGINEER IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND DESIGN INFORMATION SHOWN ON THE CONTRACT DRAWINGS. THE CONTRACTOR IS NOT RELIEVED OF THE ENTIRE RESPONSIBILITY FOR THE CORRECTNESS OF SUCH DRAWINGS, FOR CONFORMING TO THE PLANS & SPECIFICATIONS & THE INTENT OF THE CONTRACT.
PINKHAM ENGINEERING ASSOCIATES INC.
Reviewed By: DEH Checked By:
Date: 1/28/98 Signed:

STATE OF VERMONT
ROBERT G. GRAHAM, III
No. 7035
REGISTERED PROFESSIONAL ENGINEER

Robert G. Graham, III
1/8/98

STEADFAST BRIDGES®

A DIVISION OF BILTOLAST PRODUCTS INC.
119 40th St. NE FORT PAYNE, AL 35967-8139
1-800-749-7515

AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION FOUNDED 1921 ACTIVE MEMBER

BILL OF MATERIALS

JOB: 97825 FOR: MOUNTPELIER, VERMONT

Steel ASTM A588, (WX) A847, A606 (TS)

shop mark	DESCRIPTION	FEET	inches	weight per/foot	TOTAL	TOTAL LENGTH

GENERAL NOTES

1. All design stresses are in accordance with the specification of THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
2. Welding to conform with the AMERICAN WELDING SOCIETY D1.1 & D1.5 latest revision. Welding to be performed by experienced welders qualified in accordance with A.W.S. procedures. Welding electrodes to be ASTM E-80XX series.
3. All steel to be ASTM A-588, A-847 or ASTM A-606 'WEATHERING' steel with a minimum yield of 50,000 pounds per square inch.
4. Welds will be a minimum of 3/16" fillet unless shown otherwise.
5. Anchor bolts to be ASTM A-307 or threaded A-36 steel rods. Nuts on anchor bolts should be loosely 'hand tightened' so as to allow the bearing plates to slide on the setting plates or teflon pads, if called for. Place setting plate & teflon pads on shims, set bridge, and then grout under setting plates. (IF REQUIRED: Field connections bolts shall be ASTM A-325 or A-490 and shall be tighten by the turn of the nut method to obtain proper torque.)
6. Exposed steel surfaces to be sandblasted to STEEL STRUCTURES PAINTING COUNCIL #6 'commercial sandblast finish'. After cleaning, care shall be taken to keep surfaces free of oil, grease, concrete and any foreign matter to allow the weathering steel to rust evenly.
7. All wood to be #1 southern yellow pine with a CCA preservative treatment to .4pounds retention of preservative per cubic foot.
8. Hand rails and all other accessible surfaces to be ground smooth with no sharp edges or corners.
9. Location of anchor bolts and foundation details are for general arrangement purposes only. Actual foundation and substructure design, electrical grounding, and clearances (flood plain, roadway, and waterway) are the responsibility of others.

THIS BRIDGE IS DESIGNED BASED ON THE FOLLOWING CRITERIA.
(1) Dead load of 48 psf plus an evenly distributed live load of 85 psf.
(2) Dead load + concentrated load of 1,000 pounds/foot of width + impact.
(3) Wind load (approx. 120 mph.) calculated on the entire vertical surface as though fully enclosed.

APPROVAL ONLY

RECEIVED JAN 15 1998 STEADFAST

REV	DESCRIPTION	BY/DATE
B		
A		

PLACARD ATTACHED ON RIGHT END POST AT EACH END OF BRIDGE

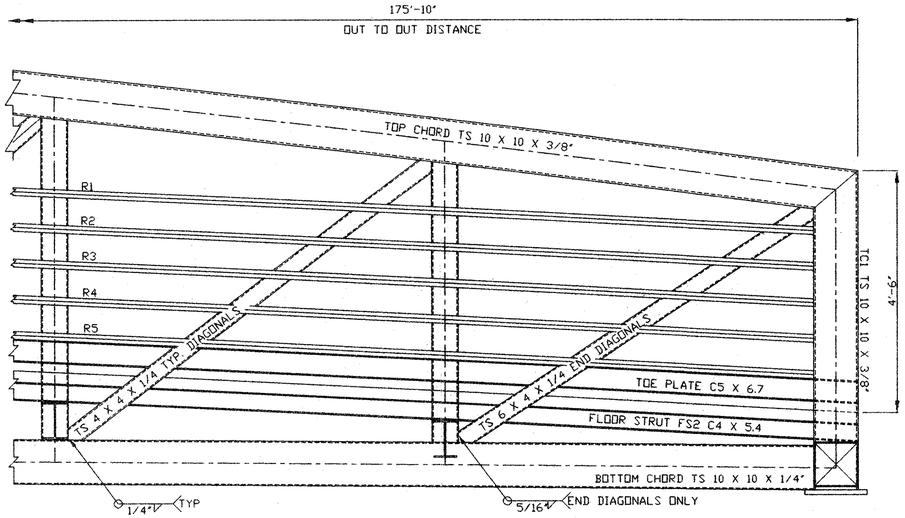
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS
BILTOLAST PRODUCTS INC
FORT PAYNE, ALABAMA
DATE OF MANUFACTURE
SERIAL #
4 3/4"
3 3/4"

JOB: 10' X 175' 'CAPSTONE'
FOR: STATE OF VERMONT
ADDRESS: WINOOSKI RIVER WEST BIKE TRAIL
WASHINGTON CO.
CITY OF MOUNTPELIER
ARCHITECT: P.E.A. INC.
CONTRACTOR: WINCO, INC.
DRAWN/BY 12/31/97 C.D.
CHECKED/BY
JOB#: 97825 SHEET: 1 OF 2

THIS BRIDGE STRUCTURE SHALL NOT BE FIELD MODIFIED IN ANY WAY WITHOUT PRIOR APPROVAL FROM THE ENGINEERING DEPT. OF STEADFAST BRIDGES.

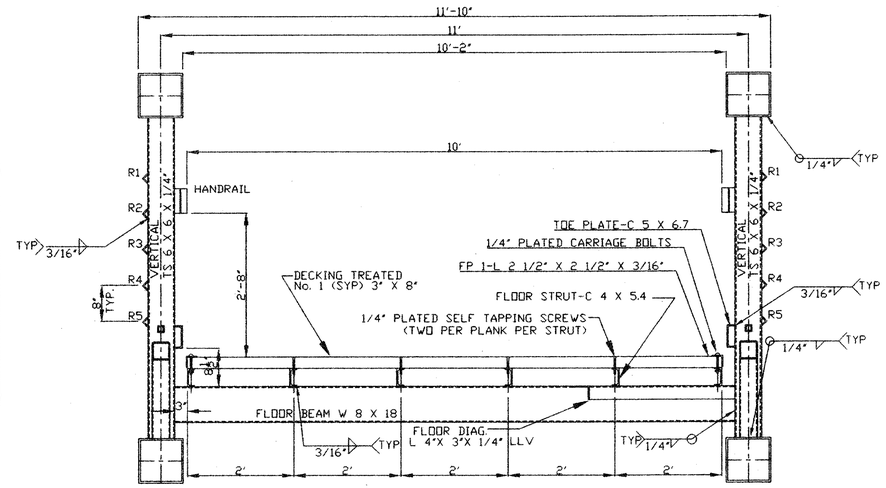
THESE DRAWINGS AND DESIGNS ARE THE PROPERTY OF BILTOLAST PRODUCTS INC. AND ARE NOT TO BE COPIED WITHOUT THEIR WRITTEN CONSENT

134



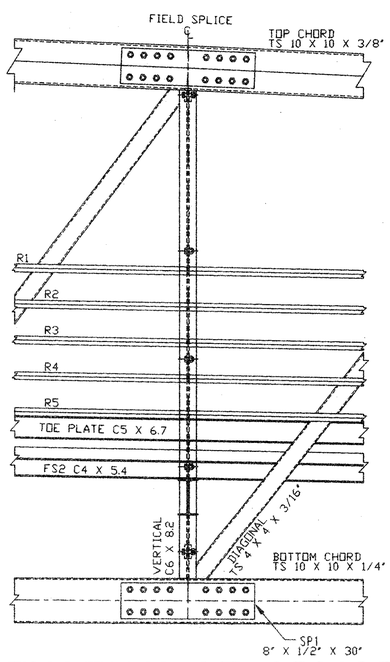
ELEVATION (1)

3/4" = 1'



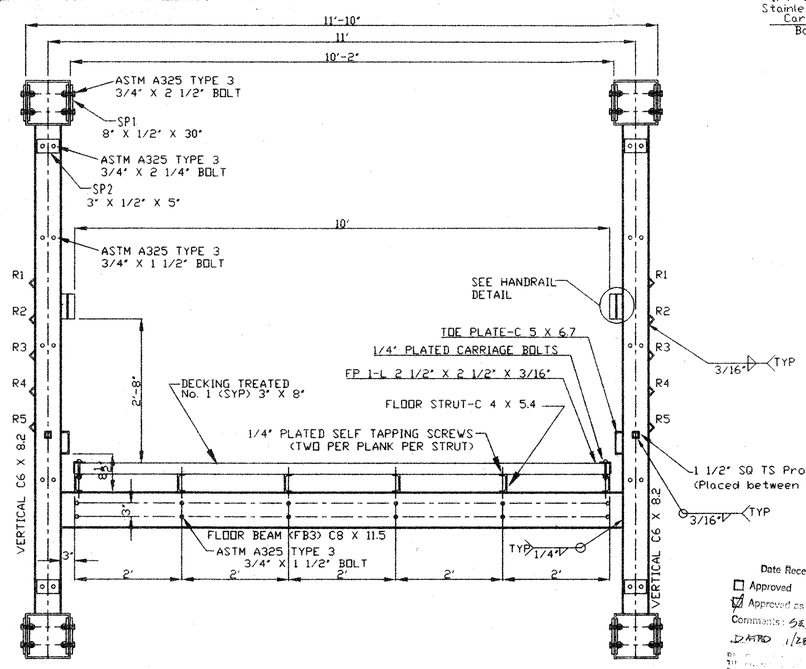
SECTION A-A (2)

3/4" = 1'



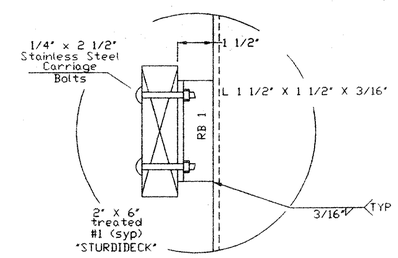
ELEVATION AT SPLICE (3)

3/4" = 1'



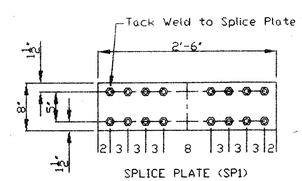
SECTION B-B AT SPLICE (4)

3/4" = 1'

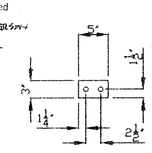


HAND RAIL DETAIL

APPROVAL ONLY



SPLICE PLATE (SP1)
8" X 1/2" X 30"
1 1/16" DIA. HOLE BOTTOM CHORD
1 1/8" DIA. HOLE TOP CHORD



SPLICE PLATE (SP2)
3" X 1/2" X 5"

Date Received 1/22/98
☐ Approved ☐ Revise & Resubmit
☑ Approved as noted ☐ Not Approved
Comments: SEE LETTER TO D. PETERSON DATED 1/28/98
PINKHAM ENGINEERING ASSOCIATES INC.
Reviewed By: DRL Checked By:
Date: 1/28/98 Signed:

STATE OF VERMONT ROBERT G. GRAHAM III 06/07/96 PROFESSIONAL ENGINEER
Robert G. Graham, III 1/8/98

STEADFAST BRIDGES®
A DIVISION OF BILTOLAST PRODUCTS INC.
119 40th St. NE FORT PAYNE, AL 35967-8139
1-800-749-7515

AISC MODERN INSTITUTE OF STEEL CONSTRUCTION FOUNDED 1921 ACTIVE MEMBER

BILL OF MATERIALS

JOB: 97825 FOR: MONTPELIER, VERMONT

Steel ASTM A588, (WX) A847, A606 (TS)

	shop no.	mark	DESCRIPTION	FEET	inches	weight per/foot	TOTAL	TOTAL LENGTH
	4	TC 1	TS 10"X 10"X 3/8"	6	1 1/2"	47.90	1174	25
	4	TC 2	TS 10"X 10"X 3/8"	58	11"	47.90	11288	236
	2	TC 3	TS10"X10" X 3/8"	58	4"	47.90	5588	117
	4	BC 1	TS10"X10" X 1/4"	57	11"	32.63	7559	232
	2	BC 2	TS10"X10" X 1/4"	58	3 7/8"	32.63	3806	117
	2	FB 1	TS10"X10" X 1/4"	10	2"	32.63	663	20
	20	FB 2	W 8 X 18	10	6"	18.00	3780	210
	2	EX 1	L 2 1/2" X 3/16"	9	11"	3.77	75	20
	4	FB 3	C 8" X 11.5	10	6"	11.50	483	42
	2	FD 1	L 4" X 3" X 1/4"	12	1"	5.80	140	24
	22	FD 2	L 4" X 3" X 1/4"	12	2"	5.80	1552	268
	4	FS 1	C 4 X 5.4	175	10"	5.40	3798	703
	2	FS 2	C 4 X 5.4	175	10"	5.40	1899	352
	2	FP 1	L 2 1/2" X 3/16"	175	10"	3.07	1080	352
	2	D2	TS 6" X 4" X 1/4"	7	11"	15.62	247	16
	4	D3	TS 4" X 4" X 1/4"	8	6 5/16"	12.21	415	34
	4	D4	TS 4" X 4" X 1/4"	9	0 1/4"	12.21	440	36
	4	D5	TS 4" X 4" X 1/4"	9	6"	12.21	464	38
	4	D6	TS 4" X 4" X 1/4"	9	11 7/16"	12.21	488	40
	4	D7	TS 4" X 4" X 1/4"	10	4 3/8"	12.21	501	41
	4	D8	TS 4" X 4" X 1/4"	10	8 13/16"	12.21	525	43
	4	D9	TS 4" X 4" X 1/4"	11	1 5/16"	12.21	537	44
	4	D10	TS 4" X 4" X 1/4"	11	4 7/16"	12.21	550	45
	4	D11	TS 4" X 4" X 1/4"	11	6 5/16"	12.21	562	46
	4	D12	TS 4" X 4" X 1/4"	11	8 1/8"	12.21	574	47
SKEW	4	D13	TS 4" X 4" X 1/4"	11	9 3/16"	12.21	574	47
3/4"	4	V2	TS 6" X 6" X 1/4"	5	2 9/16"	19.02	397	21
11/16"	4	V3	TS 6" X 6" X 1/4"	5	11 7/8"	19.02	456	24
5/8"	4	V4	TS 6" X 6" X 1/4"	6	8 5/16"	19.02	509	27
1/2"	4	V5	TS 6" X 6" X 1/4"	7	3 7/8"	19.02	557	29
7/16"	4	V6	TS 6" X 6" X 1/4"	7	10 7/8"	19.02	602	32
3/8"	4	V7	TS 6" X 6" X 1/4"	8	4 1/4"	19.02	636	33
5/16"	4	V8	TS 6" X 6" X 1/4"	8	9 1/16"	19.02	666	35
3/16"	8	V9	C 6" X 8.2	9	1"	8.20	596	73
3/16"	4	V10	TS 6" X 6" X 1/4"	9	4 1/8"	19.02	711	37
1/8"	4	V11	TS 8" X 6" X 1/4"	9	6 5/16"	22.42	854	38
1/16"	4	V12	TS 6" X 6" X 1/4"	9	7 9/16"	19.02	733	39
0"	4	V13	TS 8" X 6" X 1/4"	9	8"	22.42	867	39
	10	R1-R5	L 1 1/2" X 3/16"	175	10"	1.80	3165	1758
	2	PROT.	1 1/2"SQ TUBE	151	9"	2.25	683	0
	0	RB	RAIL BRACKETS	0	0"	0.00	0	0
	60	RB	L 1 1/2" X 3/16"	0	5"	1.80	45	0
	4	BP 1	PL 11" X 1/2"	1	2"	20.42	95	0
	4	BP 2	PL 11" X 1/2"	1	2"	20.42	95	0
	32	SP 1	PL 8" X 1/2" *A588	2	6"	20.42	1634	0
	16	SP 2	PL 3" X 1/2" *A588	0	5"	20.42	136	0
	141	PLATED	CARRIAGE BOLTS 1/4"	0	3 1/2"	0.22	9	41
	2329	SELF	TAPPING SCREWS	0	3 1/2"	0.21	143	679
	4	FRICT	ONLESS PADS 9" X	1	0"	0.00	0	4
	24	CONN.	BOLT ASTM 325 3/4"	0	1 1/2"	0.00	12	3
	16	CONN.	BOLT ASTM 325 3/4"	0	2 1/4"	0.00	10	3
	336	CONN.	BOLT ASTM 325 1"	0	2 1/2"	0.00	437	70
	2	TOE PL	C 5" X 6.7	176	1 5/8"	6.70	2360	352
						TOTAL	65171	
	291	NO. 1	TREATED(SYP)3 X 8"	10	0"	6.04	17432	0
	2	RAILS	TREATED 2" X 6"	175	10"	2.75	967	352
			TOTAL LIFTING WEIGHT				83570	

REV	DESCRIPTION	BY/DATE
B		
A		

PLACARD ATTACHED ON RIGHT END POST AT EACH END OF BRIDGE

JOB: 10' X 175' "CAPSTONE"
FOR: STATE OF VERMONT
ADDRESS: WINOOSKI RIVER WEST BIKE TRAIL
WASHINGTON CO,
CITY OF MOUNTPELIER
ARCHITECT: P.E.A. INC.
CONTRACTOR: WINCO, INC.
DRAWN/BY 1/02/98 C.O.
CHECKED/BY
JOB#: 97825 SHEET: 2 OF 2

THIS BRIDGE STRUCTURE SHALL NOT BE FIELD MODIFIED IN ANY WAY WITHOUT PRIOR APPROVAL FROM THE ENGINEERING DEPT. OF STEADFAST BRIDGES.

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