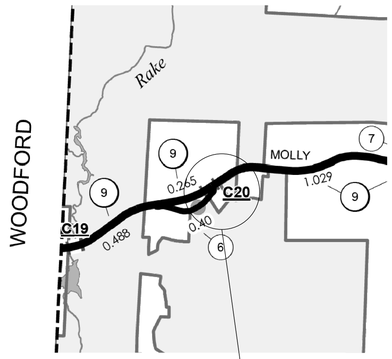
REVIEWER NOTES

1. TWO LANES OF TRAFFIC WILL BE MAINTAINED AT ALL TIMES. ONLY SHORT-TERM DURATION LANE CLOSURES WITH FLAGGERS WILL BE ALLOWED TO ASSIST CONSTRUCTION OPERATIONS DURING DAYTIME CONSTRUCTION HOURS. THE BRIDGE WILL BE CONSTRUCTED IN PHASES.
2. IN ORDER TO MAINTAIN THE EXISTING ROADWAY ALIGNMENT (WHICH MINIMIZES THE PROJECT LENGTH) AND PROVIDE 24 FEET MINIMUM ROADWAY WIDTH DURING PHASED CONSTRUCTION, A TEMPORARY WIDENED SHOULDER/EMBANKMENT IS REQUIRED DURING PHASE 1.
3. IT IS ANTICIPATED THAT CHANNEL RIGHTS WILL BE NECESSARY FOR THIS PROJECT. THE EXTENT OF RIGHTS REQUIRED WILL NOT BE KNOWN UNTIL FINAL DESIGN.
4. THERE ARE NO EXISTING OVERHEAD UTILITIES WITHIN THE PROJECT AREA.
5. A SIMPLIFIED PAVEMENT DESIGN WAS DONE FOR THIS PROJECT.
6. STRUCTURE TYPE IS A SINGLE SPAN STEEL GIRDER BRIDGE WITH INTEGRAL ABUTMENTS.
7. THE PROPOSED DESIGN WITHIN THE PROJECT LIMITS MEETS AASHTO SUPERELEVATION REQUIREMENTS. THE SUPERELEVATION WILL TRANSITION TO MATCH EXISTING IN THE APPROACHES. THE LIMITS OF CONSTRUCTION WOULD NEED TO BE EXTENDED SIGNIFICANTLY TO MEET AASHTO.
8. ORIGINAL BORINGS DONE IN 2015 ARE SHOWN BUT DID NOT GO TO DEPTH OF BEDROCK. ADDITIONAL BORINGS HAVE BEEN REQUESTED TO LOCATE BEDROCK TO AID IN DESIGN OF INTEGRAL ABUTMENTS.

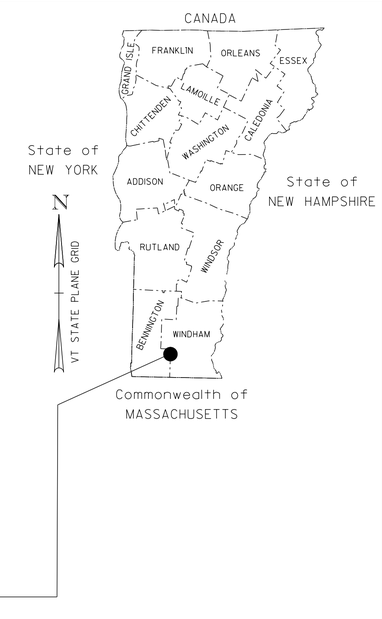
STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF SEARSBURG
COUNTY OF BENNINGTON



LOCATION MAP

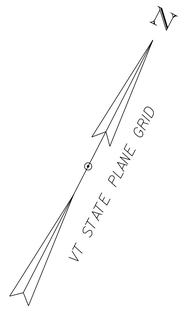


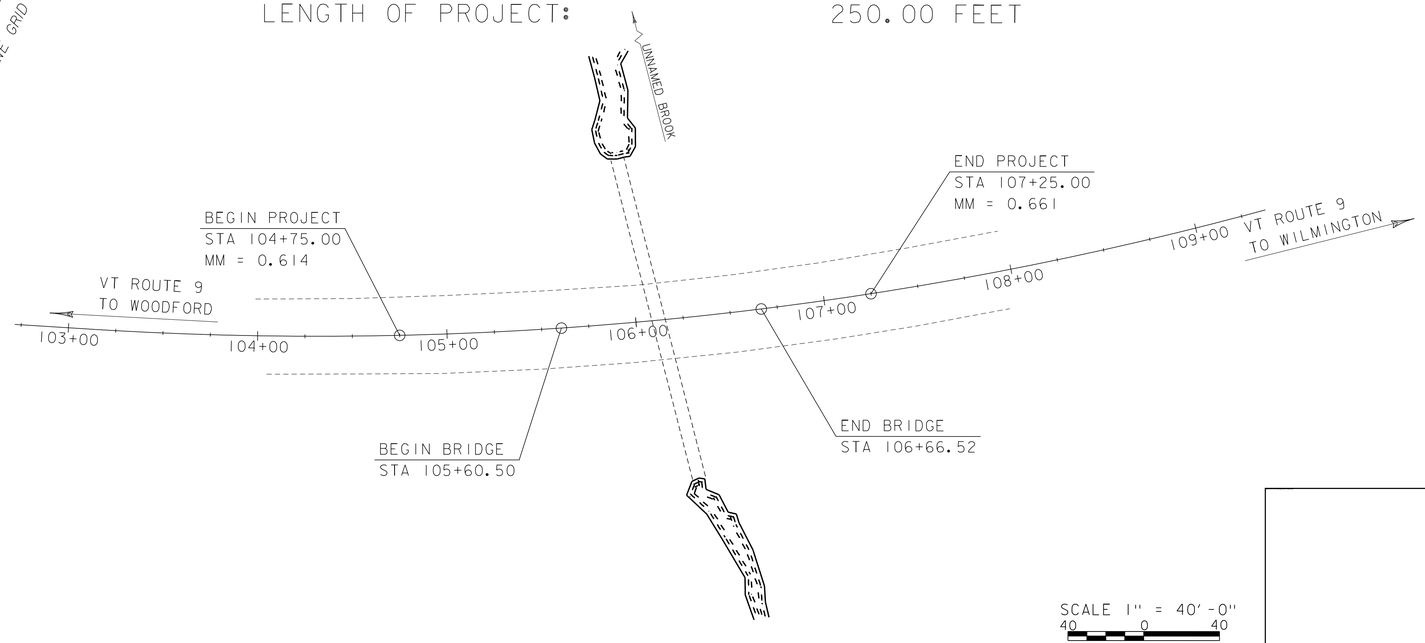
ROUTE NO : VT ROUTE 9, RURAL PRINCIPAL ARTERIAL, BRIDGE NO : 20

PROJECT LOCATION: APPROXIMATELY 1.208 MILES WEST OF THE INTERSECTION WITH VT ROUTE 8 AND EXTENDING EASTERLY APPROXIMATELY 0.047 MILE.

PROJECT DESCRIPTION: REPLACEMENT OF EXISTING CULVERT WITH A SINGLE SPAN STRUCTURE WITH RELATED APPROACH ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE:	106.02 FEET
LENGTH OF ROADWAY:	143.98 FEET
LENGTH OF PROJECT:	250.00 FEET





SCALE 1" = 40'-0"
40 0 40

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

PRELIMINARY PLANS
17-OCTOBER-2018

QUALITY ASSURANCE PROGRAM : LEVEL	2
SURVEYED BY :	VTRANS
SURVEYED DATE :	07/08/2014
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAVD83 (2011)

GM2 ASSOCIATES

GM2 Associates, Inc.
197 Loudon Road, Suite 310
Concord, NH 03301

Tel: 603-856-7854
Fax: 603-856-7855

DIRECTOR OF PROJECT DELIVERY

APPROVED _____ DATE _____

PROJECT MANAGER : N. WARK

PROJECT NAME : SEARSBURG
PROJECT NUMBER : BF 010-1(50)

SHEET 1 OF 32 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

PLAN SHEETS

STRUCTURES DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	2/9/2012
SD-502.00	CONCRETE DETAILS AND NOTES	10/10/2012
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	8/29/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/2/2011

HIGHWAY SAFETY AND DESIGN DETAIL

HSD-213.01	MILLED RUMBLE STRIPS (SHOULDER)	2/27/2017
HSD-213.02	MILLED RUMBLE STRIPS (CENTERLINE)	9/28/2017
HSD-400.01	SAFETY EDGE DETAIL	1/5/2018
HSD-621.01	POST AND BLOCKOUT DETAILS FOR STEEL BEAM GUARDRAIL, GALVANIZED	6/9/2015
HSD-621.06	GUARDRAIL TERMINAL LABEL DETAILS	2/27/2017

STANDARDS LIST

B-5	SLOPE GRADING, EMBANKMENTS, MUCK	6/1/1994
E-193	PAVEMENT MARKING DETAILS	8/18/1995
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	3/10/2017
G-19	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11/15/2002
S-363	THRIE BEAM TO STANDARD STEEL BEAM TRANSITION SECTION	2/2/2017
S-364A	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	2/2/2017
S-364B	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	2/2/2017
S-364C	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	2/2/2017
S-364D	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	2/2/2017
T-1	TRAFFIC CONTROL GENERAL NOTES	4/25/2016
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	8/6/2012
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	8/6/2012
T-28	CONSTRUCTION SIGN DETAILS	8/6/2012
T-29	CONSTRUCTION SIGN DETAILS	8/6/2012
T-30	CONSTRUCTION SIGN DETAILS	8/6/2012
T-31	CONSTRUCTION SIGN DETAILS	8/6/2012
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	8/6/2012
T-36	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING	8/6/2012
T-40	DELINEATORS AND MILEPOSTS	1/2/2013
T-42	BRIDGE NUMBER PLAQUE	4/9/2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	1/2/2013

FINAL HYDRAULIC REPORT

TRAFFIC MAINTENANCE NOTES

1. PHASED CONSTRUCTION: MAINTAIN TWO-WAY TRAFFIC ON EXISTING/PROPOSED STRUCTURE
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1.	DESIGN LIVE LOAD		HL-93
2.	FUTURE PAVEMENT	d_P:	2.5 INCH
3.	DESIGN SPAN	L:	103.00 FT
4.	MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5.	PRESTRESSING STRAND	f_y:	---
6.	PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7.	PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8.	CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	4.0 KSI
9.	CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10.	CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11.	CONCRETE, CLASS C	f'_c:	3.0 KSI
12.	REINFORCING STEEL	f_y:	60 KSI
13.	STRUCTURAL STEEL AASHTO M270 (WEATHERING)	f_y:	50 KSI
14.	NOMINAL BEARING RESISTANCE OF SOIL	q_n:	--- KSF
15.	SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	0.45
16.	NOMINAL BEARING RESISTANCE OF ROCK	q_n:	--- KSF
17.	ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
18.	PILE RESISTANCE FACTOR	ϕ:	---
19.	LATERAL PILE DEFLECTION	Δ:	--- INCH
20.	BASIC WIND SPEED	V_{3s}:	---
21.	MINIMUM GROUND SNOW LOAD	p_g:	---
22.	SEISMIC DATA	PGA: --- S_s:	---
		S_1:	---
23.			
24.			---
25.			---
26.			---

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY							
POSTING							
OPERATING							
COMMENTS:							

AS BUILT "REBAR" DETAIL

LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2017	3200	490	54	15.2	540
2037	3400	520	54	19.9	750

20 year ESAL for flexible pavement from 2017 to 2037 : 3,857,000

40 year ESAL for flexible pavement from 2017 to 2057 : 8,218,000

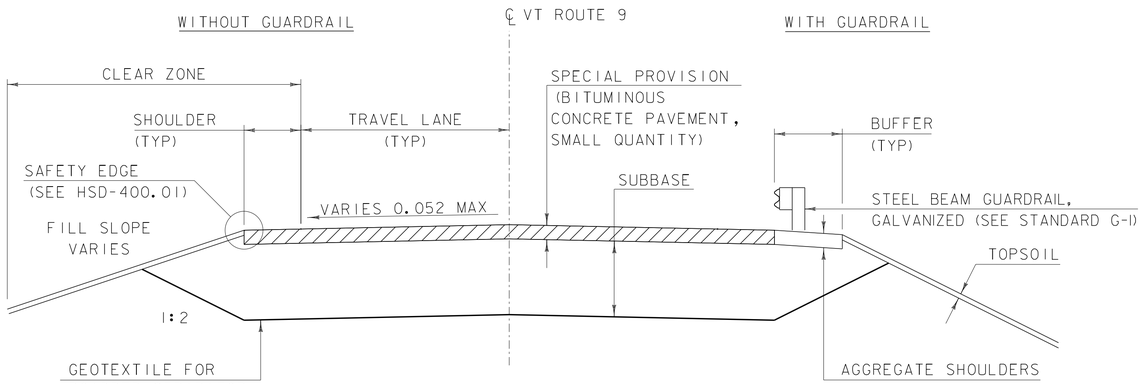
Design Speed : 50 mph

PROJECT NAME: **SEARSBURG**

PROJECT NUMBER: **BF 010-1(50)**

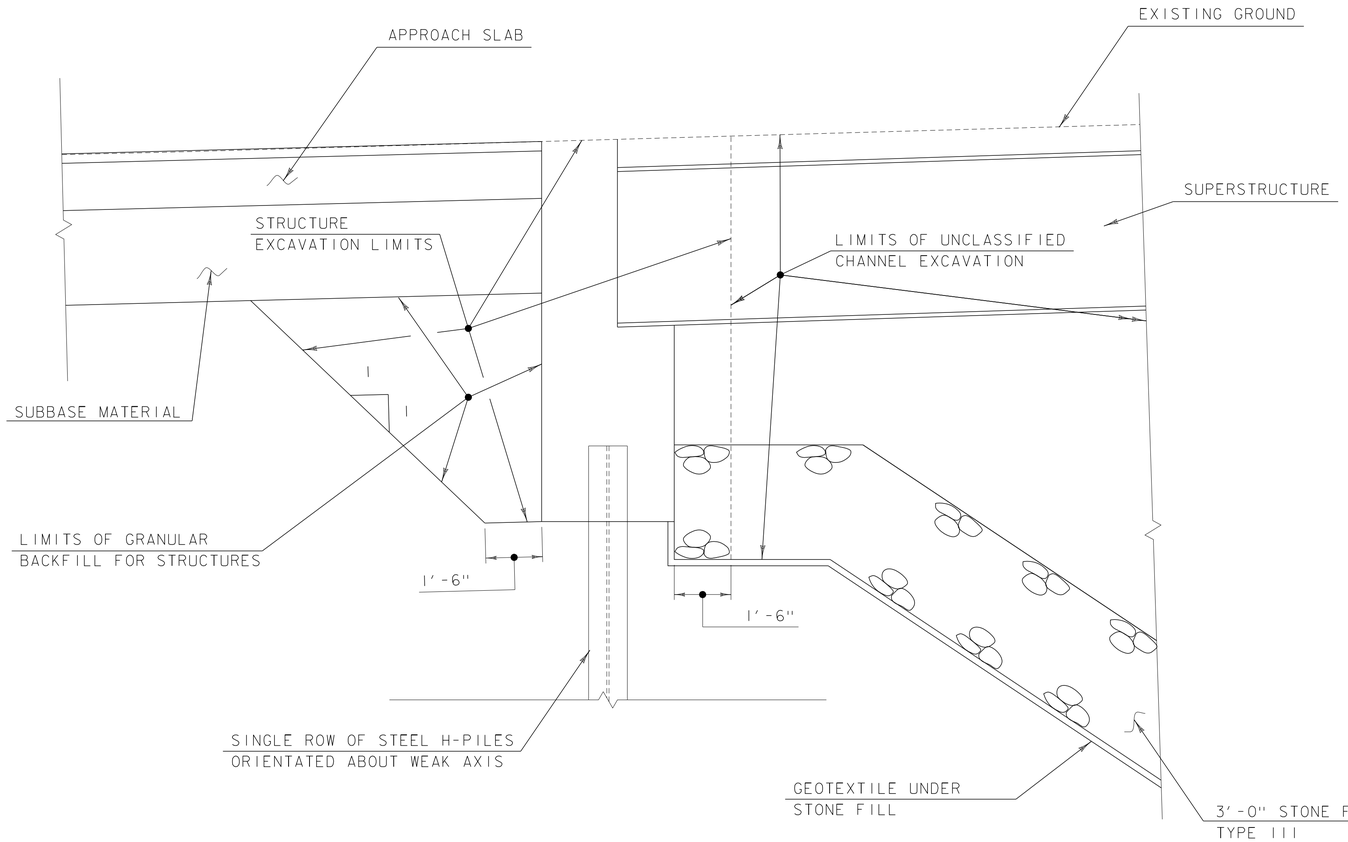
FILE NAME: **z13b332pi.dgn**
PROJECT LEADER: **T. LEVINS**
DESIGNED BY: **T. MANNING**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 10/17/2018
DRAWN BY: **T. MANNING**
CHECKED BY: **T. LEVINS**
SHEET 2 OF 32



ROADWAY TYPICAL SECTION

NOT TO SCALE



TYPICAL ABUTMENT EARTHWORK SECTION

NOT TO SCALE

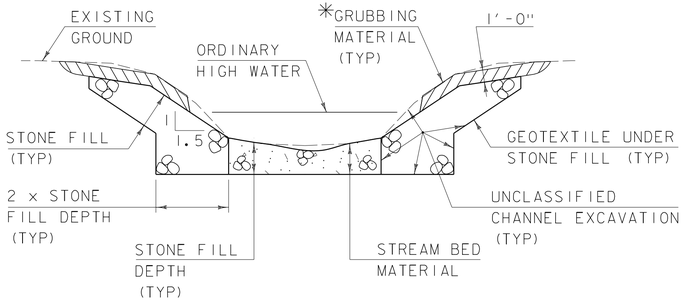
ROAD TYPICAL INFORMATION

	LEFT		RIGHT	
	WIDTH	SLOPE	WIDTH	SLOPE
TRAVEL LANE	12'-0"	VARIES	12'-0"	VARIES
SHOULDER	10'-0"	VARIES	10'-0"	VARIES
BUFFER	3'-7"	-0.060	3'-7"	-0.060
FILL SLOPE		1:1.75		1:1.75
CLEAR ZONE (CUT)	12'-0"		12'-0"	
CLEAR ZONE (FILL)	20'-0"		20'-0"	
CLEAR ZONE (GUARDRAIL)	4'-0"		4'-0"	

MATERIAL INFORMATION

	THICKNESS	TYPE
WEARING COURSE	1½"	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (TYPE IVS)
BINDER COURSE	1½"	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (TYPE IVS)
BASE COURSE #2	2½"	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (TYPE IIS)
BASE COURSE #1	2½"	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) (TYPE IIS)
SUBBASE	39"	SUBBASE OF DENSE GRADED CRUSHED STONE
STONE FILL	3'-0"	TYPE III
TOPSOIL	4"	TOPSOIL
STONE FILL, STREAM BED MATERIAL	3'-0"	SPECIAL PROVISION (E-STONE, TYPE II)

✳ WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.

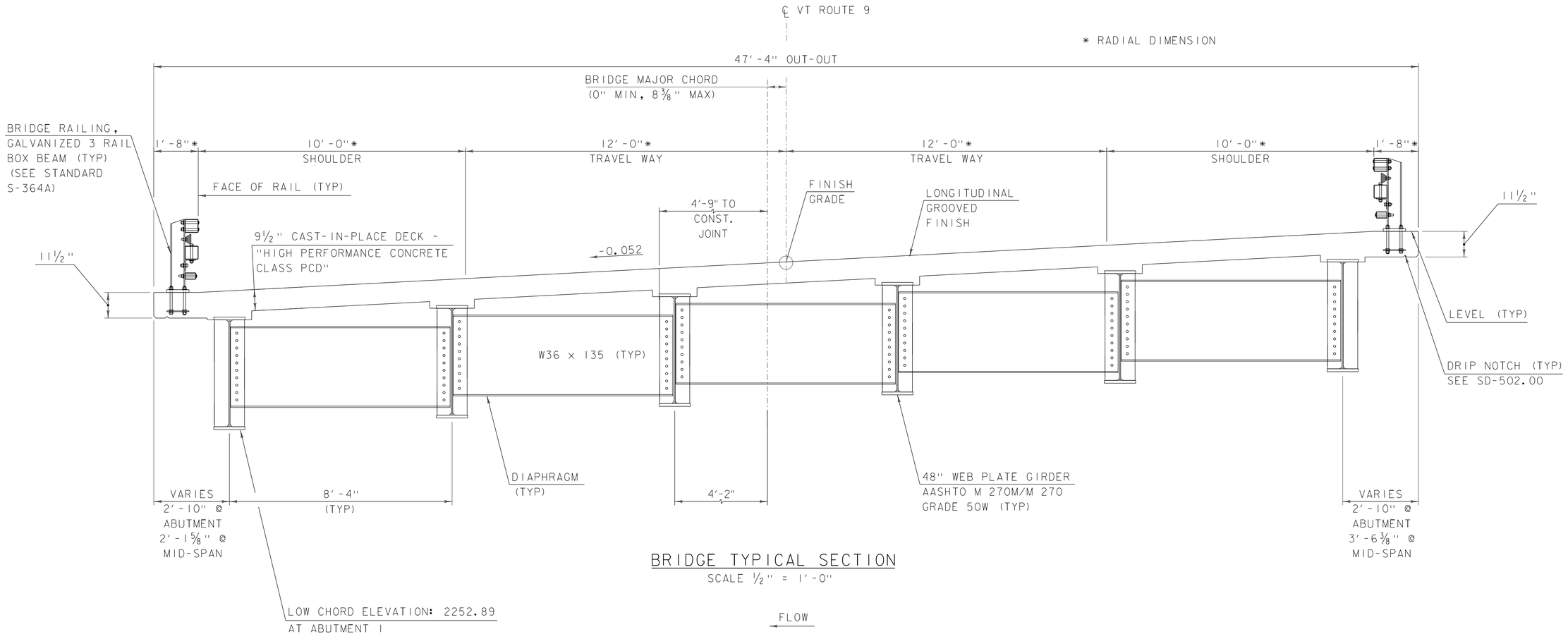


CHANNEL TYPICAL SECTION

NOT TO SCALE

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	BF 010-1(50)
FILE NAME:	zl3b332typ.dgn
PROJECT LEADER:	T. LEVINS
DESIGNED BY:	J. MERCER/T. MANNING
TYPICAL SECTIONS I	
PLOT DATE:	10/17/2018
DRAWN BY:	T. MANNING
CHECKED BY:	T. LEVINS
SHEET	3 OF 32

GM2 ASSOCIATES



BRIDGE TYPICAL SECTION

SCALE 1/2" = 1′-0"

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	BF 010-1(50)
FILE NAME:	zl3b332typ_bridge.dgn
PROJECT LEADER:	T. LEVINS
DESIGNED BY:	T. MANNING
TYPICAL SECTIONS 2	
PLOT DATE:	10/17/2018
DRAWN BY:	T. MANNING
CHECKED BY:	T. LEVINS
SHEET	4 OF 32

GM2 ASSOCIATES

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES				TOTALS		DESCRIPTIONS			
ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
710				710		CY	COMMON EXCAVATION	203.15	
		9870		9870		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
		640		640		CY	STRUCTURE EXCAVATION	204.25	
		145		145		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
		1		1		LS	COFFERDAM	208.40	
490				490		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
612				612		LF	MILLED RUMBLE STRIPS	213.10	
570				570		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
50				50		TON	AGGREGATE SHOULDERS	402.12	
9				9		CWT	EMULSIFIED ASPHALT	404.65	
1				1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
		158		158		CY	HIGH PERFORMANCE CONCRETE, CLASS PCD	501.37	
		222		222		CY	HIGH PERFORMANCE CONCRETE, CLASS PCS	501.38	
		1		1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	
		360		360		LF	STEEL PILING, HP 12 X 84	505.165	
		2		2		EACH	DYNAMIC PILE LOADING TEST	505.45	
		158260		158260		LB	STRUCTURAL STEEL, PLATE GIRDER	506.55	
		30570		30570		LB	REINFORCING STEEL, LEVEL I	507.11	
		4320		4320		LB	REINFORCING STEEL, LEVEL III	507.13	
		1		1		LS	SHEAR CONNECTORS (1248 - 8" x 7/8")	508.15	
		510		510		SY	LONGITUDINAL DECK GROOVING	509.10	
		45		45		GAL	WATER REPELLENT, SILANE	514.10	
		87		87		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
		87		87		LF	JOINT SEALER, HOT POURED	524.11	
		216		216		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	525.335	
		1		1		EACH	REMOVAL OF STRUCTURE (174 LF OF 84" CMP)	529.15	
		1280		1280		CY	STONE FILL, TYPE III	613.12	
325				325		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	
1				1		EACH	MANUFACTURED TERMINAL SECTION, TANGENT	621.51	
		4		4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	621.725	
700				700		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	
600				600		HR	UNIFORMED TRAFFIC OFFICERS	630.10	
1200				1200		HR	FLAGGERS	630.15	
			1	1		LS	FIELD OFFICE, ENGINEERS	631.10	
1000				1000		LS	TESTING EQUIPMENT, CONCRETE	631.16	
1000				1000		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	
1				1		DL	FIELD OFFICE COMMUNICATIONS (N.A.B.I.)	631.26	
1				1		LS	MOBILIZATION/DEMOBILIZATION	635.11	

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: zl3c268qs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: B. WILLIAMS
QUANTITY SHEET 1
PLOT DATE: 10/17/2018
DRAWN BY: B. WILLIAMS
CHECKED BY: T. LEVINS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES			TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	BRIDGE	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
700			700		LF	4 INCH WHITE LINE, WATERBORNE PAINT	646.201				
700			700		LF	4 INCH YELLOW LINE, WATERBORNE PAINT	646.2111				
	952		952		SY	GEOTEXTILE FOR ROADBED SEPARATOR	649.11				
		1490	1490		SY	GEOTEXTILE UNDER STONE FILL	649.31				
	416		416		SY	GEOTEXTILE FOR SILT FENCE	649.51				
	60		60		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
	40		40		LB	SEED	651.15				
	40		40		LB	SEED, WINTER RYE	651.17				
	330		330		LB	FERTILIZER	651.18				
	2		2		TON	AGRICULTURAL LIMESTONE	651.20				
	60		60		CY	TOPSOIL	651.35				
1810			1810		SY	GRUBBING MATERIAL	651.40				
	1		1		LS	EPSC PLAN	653.01				
	260		260		HR	MONITORING EPSC PLAN	653.02				
	1		1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	653.03				
	2		2		TON	HAY MULCH	653.10				
	2920		2920		SY	ROLLED EROSION CONTROL PRODUCT, TYPE II	653.21				
	89		89		CY	STABILIZED CONSTRUCTION ENTRANCE	653.35				
	935		935		LF	PROJECT DEMARCATION FENCE	653.55				
1			1		SF	TRAFFIC SIGNS, TYPE A	675.20				
16			16		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
1			1		EACH	DELINEATOR WITH STEEL POST	676.10				
1			1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
		310	310		CY	SPECIAL PROVISION (E-STONE TYPE E2)	900.608				
		42770	42770		LF	SPECIAL PROVISION (REINFORCING BAR, GFRP #6)	900.640				
1			1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645				
2			2		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.) (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650				
330			330		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13c268qs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: B. WILLIAMS
QUANTITY SHEET 2

PLOT DATE: 10/17/2018
DRAWN BY: B. WILLIAMS
CHECKED BY: T. LEVINS
SHEET 6 OF 32

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

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

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

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

COMMON TOPOGRAPHIC POINT SYMBOLS

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

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

PROPOSED GEOMETRY CODES

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

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

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

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

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

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

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

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

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

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

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

ARCHEOLOGICAL & HISTORIC

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

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

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

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332leg.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: VTRANS
LEGEND SHEET

PLOT DATE: 10/17/2018
DRAWN BY: VTRANS
CHECKED BY: T. LEVINS
SHEET 7 OF 32

GPS CONTROL POINTS

HVCTRL #1
B95032
NORTH = 142309.5030
EAST = 1502198.7350
ELEV. = 2226.510

WOODFORD, VT., ABOUT 9.5 MI (15.3 KM) EAST OF BENNINGTON, VT., ABOUT 7.5 MI (12.1 KM) WEST OF WILMINGTON, AND ABOUT 10.5 MI (16.9 KM) NORTH OF THE MASSACHUSETTS/VERMONT STATE LINE. TO REACH FROM THE INTERSECTION OF VT ROUTES 9 AND 8 IN SEARSBURG GO WEST ALONG VT ROUTE 9 FOR 2.1 MI (3.4 KM) TO THE MARK ON THE RIGHT ON THE WEST EDGE OF A GRASSY DRIVE, SOUTHEAST OF A 1.5 STORY WOOD FRAME HOUSE WITH ATTACHED GARAGE. THE MARK IS SET 4 CM (2 INCHES) BELOW GROUND SURFACE IN THE TOP OF A 30 CM (12 INCH) DIAMETER CONCRETE MONUMENT. IT IS 10.7 M (35.1 FT) NORTH OF AND ABOUT 0.5 M (1.6 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 9, 24.7 M (81.0 FT) SOUTHEAST OF POLE NO 354/664, 36.1 M (118.4 FT) WEST OF POLE NO 242/663, 30.9 M (101.4 FT) SOUTH OF THE SOUTHEAST CORNER OF HOUSE NO 9271 AND 7.2 M (23.6 FT) WEST OF THE CENTERLINE OF THE MOST EASTERLY ENTRANCE TO A CIRCULAR GRAVEL DRIVE.

HVCTRL #2
B95033
NORTH = 142547.4130
EAST = 1504504.3000
ELEV. = 2162.420

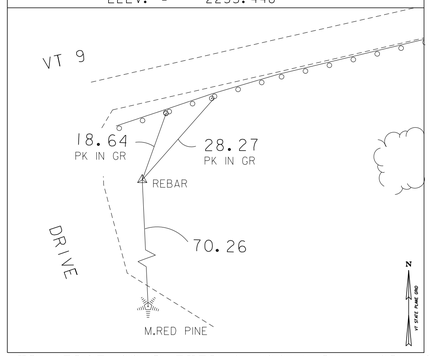
SEARSBURG, VT., ABOUT 10 MI (16.1 KM) EAST OF BENNINGTON, VT., ABOUT 7 MI (11.3 KM) WEST OF WILMINGTON, AND ABOUT 10.5 MI (16.9 KM) NORTH OF THE MASSACHUSETTS/VERMONT STATE LINE. TO REACH FROM THE INTERSECTION OF VT ROUTES 9 AND 8 IN SEARSBURG GO WEST ALONG VT ROUTE 9 FOR 1.6 MI (2.6 KM) TO THE MARK ON THE LEFT AT THE INTERSECTION OF THE EAST END OF AN OLD ROAD GRADE. THE MARK IS SET 2 CM BELOW GROUND SURFACE IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT POURED TO A DEPTH OF 1.5 METERS. IT IS 10.9 M (35.8 FT) SOUTH OF AND ABOUT 1 M (3.3 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 9, 41.4 M (135.8 FT) EAST OF POLE NO. 656, 42.7 M (140.1 FT) WEST OF POLE NO. 354/655, 7.1 M (23.3 FT) WEST OF THE CENTERLINE OF THE OLD ROAD GRADE, AND 0.5 M (1.6 FT) NORTH OF A FIBERGLASS WITNESS POST.

*GPS CONTROL PROVIDED BY VT GSU 2014

TRAVERSE TIES

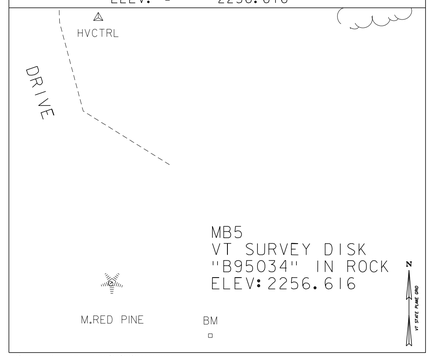
HVCTRL #5

NORTH = 143415.5554
EAST = 1506550.4048
ELEV. = 2255.448



BM #5

NORTH = 143331.6361
EAST = 1506580.0235
ELEV. = 2256.616



HVCRTL # 6

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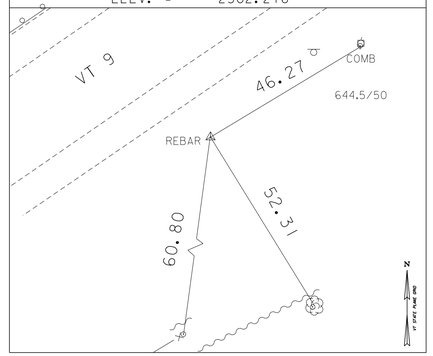
EAST = 1507399.5860
ELEV. = 2302.216



NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

*TRAVERSE COMPLETED 04/2014 BY L. ORVIS P.C. & H. MCGOWAN

ALIGNMENT TIES

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

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (2011)
ADJUSTMENT COMPASS

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: X13B332T1.DGN
PROJECT LEADER: T. LEVINS
DESIGNED BY: VTRANS
TIE SHEET

PLOT DATE: 10/17/2018
DRAWN BY: T. MANNING
CHECKED BY: T. LEVINS
SHEET 8 OF 32

STA 105+50, RT

STA 106+02, LT
STA 106+14, RT

UNNAMED BROOK

4 INCH WHITE LINE
STA 104+25.00 - 107+75.00, LT/RT

4 INCH YELLOW LINE
STA 104+25.00 - 107+75.00, CL-LT/RT

MILLED RUMBLE STRIPS
STA 104+25.00 - 105+40.50, CL-LT/RT
STA 106+86.52 - 107+75.00, CL-LT/RT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 104+04.0 - 107+48.9, RT
STA. 104+26.4 - 107+75.3, LT

VT STATE PLANE GRID

STATE RIGHT OF WAY

PC STA 103+14.11

MAINLINE STA 106+12.00=
CHANNEL STA 51+59.08
Δ = 98° LT

CHANNEL POE
STA. 53+00.00

53+00

HVCTRL 34

STA 106+75, LT

BEGIN APPROACH
STA 104+25.00

BEGIN PROJECT
STA 104+75.00

BEGIN BRIDGE
STA 105+60.50

END PROJECT
STA. 107+25.00

END APPROACH
STA. 107+75.00

103+00

VT ROUTE 9
TO WOODFORD

104+00

HVCTRL 32

CZ

SIGN VD-701 (VT 9 BR 20)

54+00

15" CONC PLUGGED

HVCTRL 33

105+00

TIE DIST=28.27

GRAVEL DRIVE

HVCTRL 5

106+00

107+00

108+00

VT ROUTE 9
TO WILMINGTON

109+00

HVCTRL 30

END BRIDGE
STA 106+66.52

55+00

EXISTING
84" CGMPP

MED RED PINE TIE
DIST=70.26

BENCHMARK 5
VT STATE SURVEY
DISK IN ROCK
"B95034"
ELEV. = 2256.62

EXISTING CULVERT DATA
84" CGMPP, 174' LONG
39 SQ FT WATERWAY
BUILT 1965
26' AVERAGE COVER

TEMPORARY CONSTRUCTION
LIMITS

3'-0" STONE FILL,
TYPE III (TYP)

PROJECT CONSTRUCTION
LIMITS

STATE RIGHT OF WAY

PI STA. 107+40.48 BK =
STA. 107+26.72 AHD

3'-0" E-STONE TYPE II (TYP)
(SEE SPECIAL PROVISION)

MAINLINE CURVE 1
PT STA. 111+53.09
DELTA = 25° 10' 10"
D = 3° 00' 00"
R = 1909.86'
T = 426.37'
L = 838.98'
E = 47.01'

50+00

CHANNEL POB
STA. 50+00.00

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW SIGN "A"	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	NEW SIGN POSTS SQUARE STEEL (in) 2.0 lb/ft 2.16	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	REMARKS	SIGN DETAIL DETAIL IN SHSM	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
105+50. RT	BRIDGE 20 VT-9	6	10	0.42			1	8			X		VD-701			T-42
106+75. LT	BRIDGE 20 VT-9	6	10	0.42			1	8			X		VD-701			T-42
								FT 16	FT	FT		EA				
TOTALS				SF 0.84						FT 16						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

SIGN LEGEND
N = NEW
R = REMOVE
S = SALVAGE
RET = RETAIN

SHSM = STANDARD HIGHWAY SIGNS AND MARKINGS (MUTCD) (APPROVED BY THE FHWA)

LAYOUT

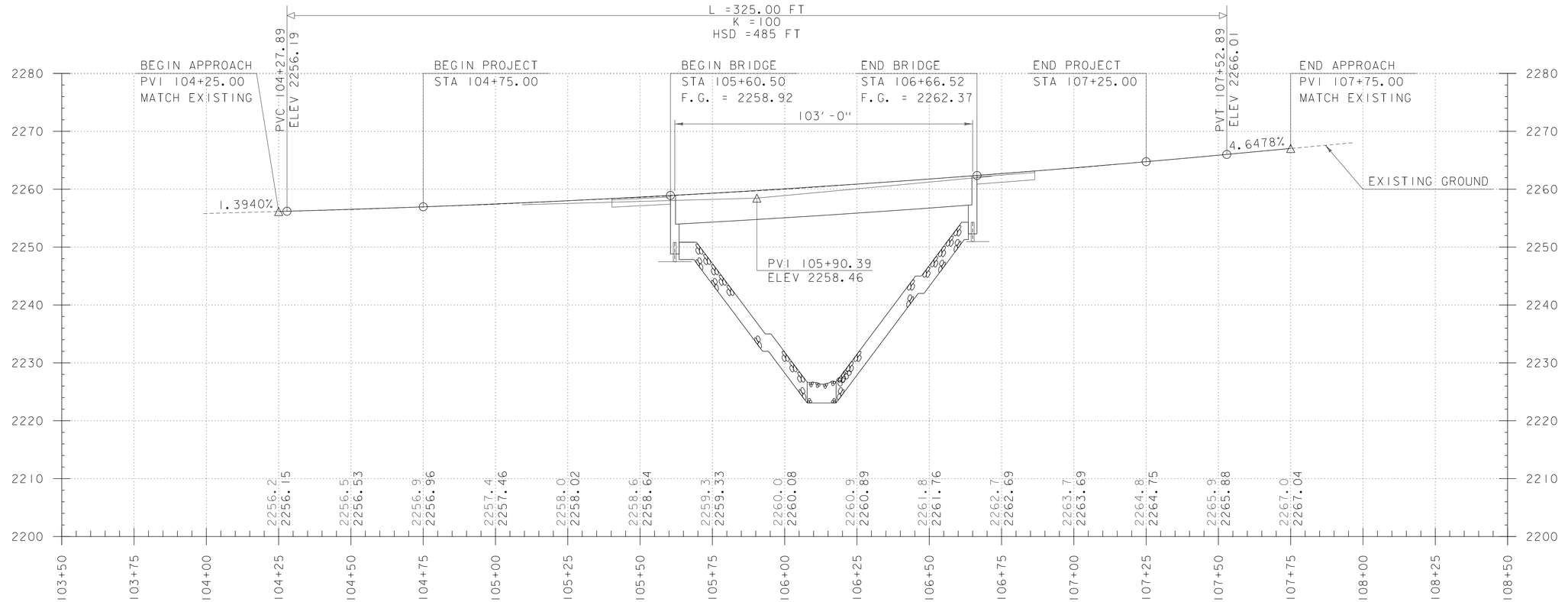
SCALE 1" = 20'-0"
20 0 20

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

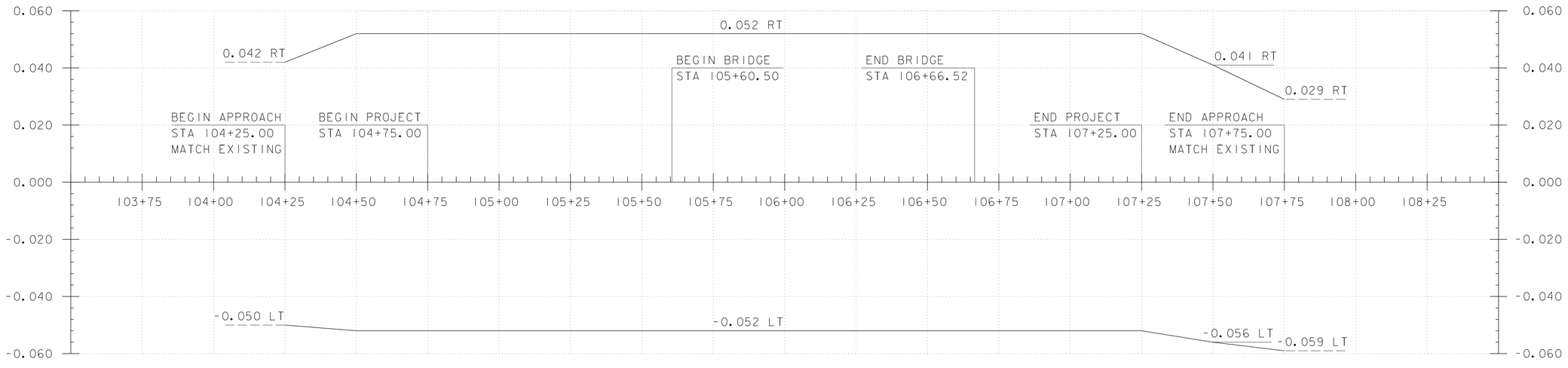
FILE NAME: z13b332bdr.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: J. MERCER
LAYOUT SHEET

PLOT DATE: 10/17/2018
DRAWN BY: J. MERCER
CHECKED BY: T. LEVINS
SHEET 9 OF 32



VT ROUTE 9 PROFILE

SCALE: HORIZONTAL 1"=20'-0"
VERTICAL 1"=10'-0"



BANKING DIAGRAM

SCALE: HORIZONTAL 1"=20'-0"
NO VERTICAL SCALE

NOTE:
ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG THE PROPOSED ALIGNMENT.

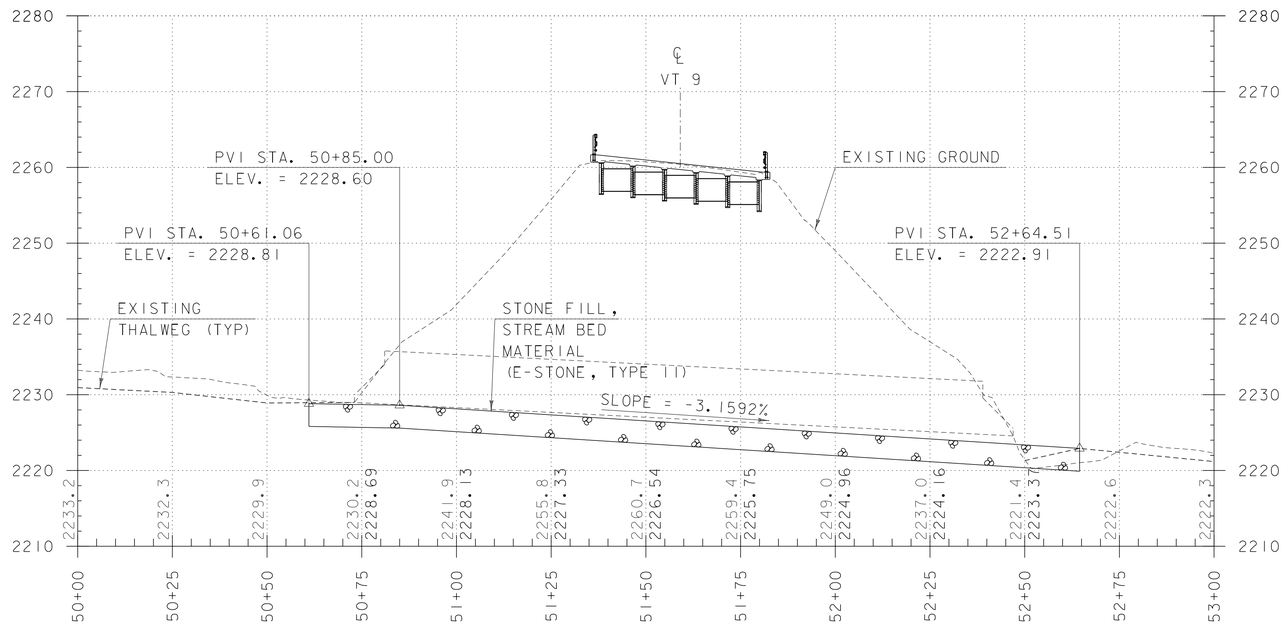
ELEVATIONS SHOWN TO THE NEAREST HUNDRETH ARE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332pro.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: J. MERCER
VT ROUTE 9 PROFILE & BANKING DIAGRAM

PLOT DATE: 10/17/2018
DRAWN BY: T. MANNING
CHECKED BY: T. LEVINS
SHEET 10 OF 32



CHANNEL PROFILE

SCALE: HORIZONTAL 1"=20'-0"
VERTICAL 1"=10'-0"

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	BF 010-1(50)
FILE NAME: z13b332pro.dgn	PLOT DATE: 10/17/2018
PROJECT LEADER: T. LEVINS	DRAWN BY: T. MANNING
DESIGNED BY: T. MANNING	CHECKED BY: T. LEVINS
CHANNEL PROFILE	SHEET 11 OF 32

GM2 ASSOCIATES

SOIL CLASSIFICATION

AASHTO	
A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
⊕	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

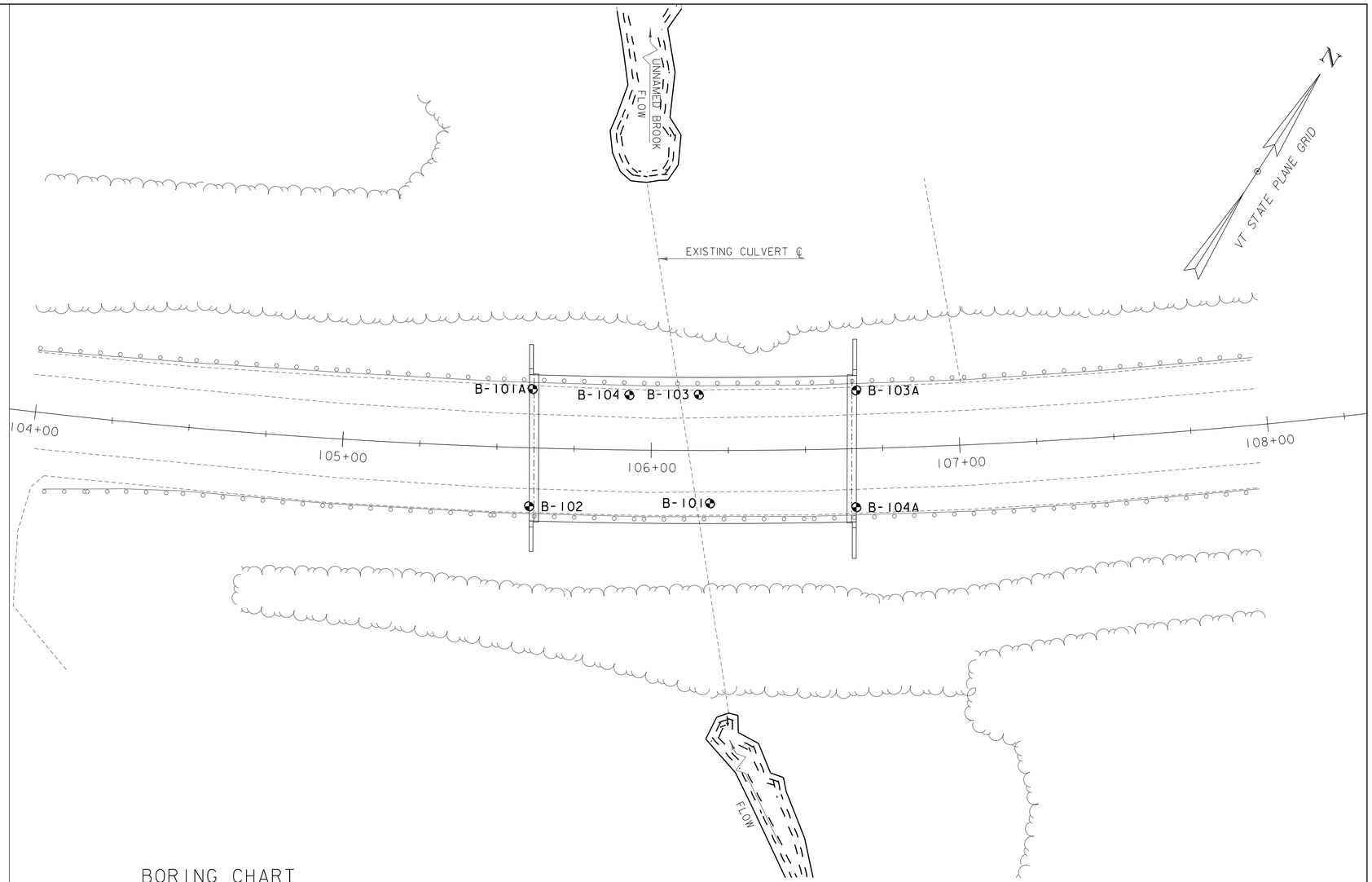
MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.



BORING CHART

HOLE NO.	STATION	OFFSET	GROUND ELEV.
B-101	106+19	17.2	2260.3
B-103	106+12	-18.0	2259.0
B-104	105+93	-17.8	2258.7

BORING LAYOUT

SCALE 1" = 20'-0"

20 0 20

* IF BEDROCK IS ENCOUNTERED IN B-101A AND B-104A, PROBES TO LOCATE BEDROCK SHALL BE DONE AT B-102 AND B-103A LOCATIONS.

GENERAL NOTES

1. The subsurface explorations shown herein were made between 09-15-15 and 09-22-15 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
7. Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

REQUESTED BORING CHART

HOLE NO.	STATION	OFFSET	NORTHING	EASTING
B-101A	105+61	-19.0	143510.63	1506684.01
*B-102	105+61	19.0	143474.23	1506694.91
*B-103A	106+66	-19.0	143543.17	1506782.73
B-104A	106+66	19.0	143507.42	1506795.61

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332bor_info.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: B. WILLIAMS
BORING INFORMATION SHEET

PLOT DATE: 10/17/2018
DRAWN BY: B. WILLIAMS
CHECKED BY: T. LEVINS
SHEET 12 OF 32

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

SEARSBURG
BF 010-1(50)
VT-9 BR #20

Boring No.: **B-101**
Page No.: 1 of 2
Pin No.: 13b332
Checked By: END

Boring Crew: JUDKINS, HOOK
Date Started: 9/15/15 Date Finished: 9/17/15
VTSPG NAD83: N 143483.83 ft E 1506741.41 ft
Station: 106+19 Offset: 17.20
Ground Elevation: 2260.3 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	C_E = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
09/17/15	27.3	Before Drilling.
09/17/15	7.9	After Drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.6 ft					
		A-1-b, SaGr, Lt/brn, Moist, Rec. = 10.0 ft	12-12-10-13 (22)	5.8	45.5	41.3	13.2
		Field Note:, Cleaned out Casing.					
5		A-2-4, GrSiSa, Lt/brn, Moist, Rec. = 1.3 ft	11-14-14-17 (28)	9.9	24.8	40.2	35.0
		Field Note:, Cleaned out Casing.					
10		A-4, GrSaSi, brn-gry, Moist, Rec. = 0.4 ft	5-6-10-17 (16)	11.4	29.0	32.7	38.3
		Field Note:, Cleaned out Casing.					
15		Field Note:, No Recovery.	R@1.5" (R)				
		Field Note:, Cleaned out Casing.					
20		A-2-4, SaSiGr, brn-gry, Moist, Rec. = 1.0 ft, Lab Note: Broken Rock was within sample.	21-16-15-11 (31)	10.0	37.4	29.8	32.8
		Field Note:, Cleaned out Casing.					
25		Field Note:, No Recovery.	15-8-6-5 (14)				
30		A-2-4, GrSaSi, brn-gry, MTW, Rec. = 0.9 ft	3-2-1-1 (3)	17.8	25.9	39.7	34.4
		A-1-b, SaGr, brn-gry, MTW, Rec. = 0.6 ft	1-4-5-4 (9)	12.9	49.4	31.7	18.9
		Field Note:, Cleaned out Casing.					
35		A-2-4, Sa with little (12.14%) organic material, blk, Moist, Rec. = 0.7 ft, Lab Note: Organic content determined using AASHTO T-267.	4-5-3-1 (8)	75.7	8.6	73.7	17.7
		A-4, SiSa with trace (<5%) organic material, Rec. = 1.1 ft, Lab Note: Organinc content determined visually.	2-13-20-24 (33)	22.0	10.3	52.1	37.6
		A-4, GrSaSi, brn, Moist, Rec. = 0.9 ft, Lab Note: Broken Rock was within sample.	33-22-25-19 (47)	16.4	25.1	27.8	47.1

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 SEARSBURG BF010-1(50).GPJ VERMONT AOT.GDT 11/19/15

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

SEARSBURG
BF 010-1(50)
VT-9 BR #20

Boring No.: **B-101**
Page No.: 2 of 2
Pin No.: 13b332
Checked By: END

Boring Crew: JUDKINS, HOOK
Date Started: 9/15/15 Date Finished: 9/17/15
VTSPG NAD83: N 143483.83 ft E 1506741.41 ft
Station: 106+19 Offset: 17.20
Ground Elevation: 2260.3 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	C_E = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
09/17/15	27.3	Before Drilling.
09/17/15	7.9	After Drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-4, SaGrSi, brn, Moist, Rec. = 0.4 ft, Lab Note: Broken Rock was within sample.	30-R@2.5" (R)	9.6	35.6	28.5	35.9
		A-4, SiSa, brn, Moist, Rec. = 1.3 ft	28-34-25-R@2.5" (59)	13.6	16.6	42.4	41.0
45		Field Note:, No Recovery.	R@0.0" (R)				
		A-2-4, SaGrSi, brn, Moist, Rec. = 1.2 ft	36-18-15-12 (33)	12.9	33.6	32.2	34.2
		A-2-4, GrSiSa, gold-brn, Moist, Rec. = 0.9 ft	9-8-9-49 (17)	15.4	22.7	51.6	25.7
50		Visual Description:, SaGr, gold-brn, Moist, Rec. = 0.1 ft, Lab Note: Visual Description only. Insufficient sample size for testing.	R@1.5" (R)	7.5			
		Field Note:, Cleaned out Casing.					
55		A-2-4, Sa, Lt/brn, Moist, Rec. = 0.3 ft	R@5.0" (R)	9.0	1.7	79.6	18.7
		Field Note:, Cleaned out Casing.					
60		Field Note:, No Recovery., Clean out barrel was full of cobbles and boulders. Hole stopped @ 60.0 ft	R@0.0" (R)				
65		Remarks: Hole Collapsed at 26.0 feet. 1.) Started using CME 45 Track rig at 44.0 feet. 2.) Added bentonite to drilling operation at 44.0 feet. 3.) Very hard drilling from 44.0 feet.					
70							
75							

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 SEARSBURG BF010-1(50).GPJ VERMONT AOT.GDT 11/19/15

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

SEARSBURG
BF 010-1(50)
VT-9 BR #20

Boring No.: **B-103**
Page No.: 1 of 1
Pin No.: 13b332
Checked By: END

Boring Crew: GARROW, NIETO
Date Started: 9/21/15 Date Finished: 9/21/15
VTSPG NAD83: N 143527.70 ft E 1506731.50 ft
Station: 106+12 Offset: -18.00
Ground Elevation: 2259.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	C_E = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
09/21/15		No W.T. to depth

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.63 ft					
		A-1-b, GrSa, Lt/brn, Moist, Rec. = 1.1 ft	7-8-9-9 (17)	6.0	40.6	47.6	11.8
		Field Note:, Cleaned out casing.					
5		A-4, GrSiSa, Lt/brn, Moist, Rec. = 1.6 ft	16-19-21-21 (40)	10.1	20.6	41.0	38.4
		Field Note:, Cleaned out casing.					
10		A-4, GrSaSi, Lt/brn, Moist, Rec. = 0.8 ft	12-13-18-16 (31)	11.5	27.4	34.4	38.2
		Field Note:, Cleaned out casing.					
15		A-2-4, GrSiSa, Lt/brn, Moist, Rec. = 0.9 ft	8-11-11-13 (22)	11.9	22.7	43.7	33.6
		Field Note:, Cleaned out casing.					
20		A-4, SiSa, Lt/brn-gry, Moist, Rec. = 1.5 ft	11-18-11-7 (29)	13.0	18.7	41.5	39.8
		Field Note:, Cleaned out casing.					
25		A-2-4, SiSaGr, Lt/brn, Moist, Rec. = 0.3 ft	8-R@4" (R)	9.9	37.4	36.8	25.8
		Field Note:, Cleaned out casing., Appears to be Cobbles.					
30		Field Note:, No Recovery, Appears to be Silt.	WR-WR-WR-10 (WR)				
		Cleaned out casing., 31.5 ft - 34.5 ft	R@1" (R)				
		Field Note:, No Recovery					
35		Hole stopped @ 34.0 ft					
		Remarks: Hole Collapsed at 31.9 feet. 1.) Hole stopped due to broken clean out barrel. 2.) Cleanout barrel remains in the ground.					
40							

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 SEARSBURG BF010-1(50).GPJ VERMONT AOT.GDT 11/19/15

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: zl3b332bor_info.dgn PLOT DATE: 10/17/2018
PROJECT LEADER: T. LEVINS DRAWN BY: T. MANNING
DESIGNED BY: T. MANNING CHECKED BY: T. LEVINS
BORING LOGS (1 OF 2) SHEET 13 OF 32

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

SEARSBURG
BF 010-1(50)
VT-9 BR #20

Boring No.: **B-104**
Page No.: 1 of 2
Pin No.: 13b332
Checked By: END

Boring Crew: GARROW, NIETO
Date Started: 9/22/15 Date Finished: 9/22/15
VTSPG NAD83: N 143524.11 ft E 1506715.80 ft
Station: 105+93 Offset: -17.80
Ground Elevation: 2258.7 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	C_E = 1.33

Groundwater Observations		
Date	Depth (ft)	Notes
09/22/15	26.4	W.T. after drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.65 ft					
30		A-1-b, SaGr, gry, Moist, Rec. = 0.5 ft	15-10-9-21 (19)	13.1	47.5	38.5	14.0
		A-1-a, SaGr, gry, Moist, Rec. = 0.8 ft, Lab Note: Broken Rock was within sample.	38-R@2.5" (R)	8.7	69.8	22.5	7.7
		Field Note:, Cleaned out casing.					
35		A-2-4, SiSaGr, gry-brn, Moist, Rec. = 0.8 ft, Field Note: Brown appears in thin alternating layers with thick gray layers. Lab Note: Broken Rock was within sample.	48-R@5" (R)	9.9	33.7	33.7	32.6
		A-2-4, SiGrSa, Lt/brn, Moist, Rec. = 1.4 ft, Lab Note: Broken Rock was within sample.	29-33-37-R@0" (70)	11.2	33.3	33.6	33.1
		A-1-a, Gr, Lt/brn, Moist, Rec. = 0.4 ft, Lab Note: Broken Rock was within sample.	R@5" (R)	8.6	68.2	18.7	13.1
		Field Note:, Cleaned out casing.					

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 SEARSBURG BF010-1(50).GPJ VERMONT AOT.GDT 11/19/15

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

SEARSBURG
BF 010-1(50)
VT-9 BR #20

Boring No.: **B-104**
Page No.: 2 of 2
Pin No.: 13b332
Checked By: END

Boring Crew: GARROW, NIETO
Date Started: 9/22/15 Date Finished: 9/22/15
VTSPG NAD83: N 143524.11 ft E 1506715.80 ft
Station: 105+93 Offset: -17.80
Ground Elevation: 2258.7 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	C_E = 1.33

Groundwater Observations		
Date	Depth (ft)	Notes
09/22/15	26.4	W.T. after drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, SiSaGr, Lt/brn, Moist, Rec. = 0.9 ft	24-23-14-13 (37)	10.1	50.5	29.4	20.1
		Field Note:, Cleaned out casing.					
		A-2-4, SiSaGr, Lt/brn-brn, Moist, Rec. = 0.7 ft, Lab Note: Broken Rock was within sample.	17-17-14-R@2.5" (31)	13.3	34.5	33.6	31.9
45		Field Note:, No Recovery	R@0" (R)				
		Field Note:, Cleaned out casing.					
		Field Note:, No Recovery, Appears to be sand and cobbles.	R@1" (R)				
		Field Note:, Cleaned out casing., Appears to be cobbles and Boulders.					
		Field Note:, No Recovery, Appears to be sand.	R@0" (R)				
50		Field Note:, Cleaned out casing., Appears to be cobbles and Boulders.					
		A-1-b, SaGr, Lt/brn, Moist, Rec. = 0.4 ft, Lab Note: Broken Rock was within sample.	R@5" (R)	13.4	47.5	34.9	17.6
55		A-3, Sa, Lt/brn, Moist, Rec. = 0.2 ft	R@2.5" (R)	29.8	3.6	90.4	6.0
60		Field Note:, No Recovery, Appears to be sand.	28-R@1" (R)				
		Hole stopped @ 60.6 ft					

Remarks:
Hole Collapsed at 60.6 feet.

1.) Changed to mud drilling from 50 feet.

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 SEARSBURG BF010-1(50).GPJ VERMONT AOT.GDT 11/19/15

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

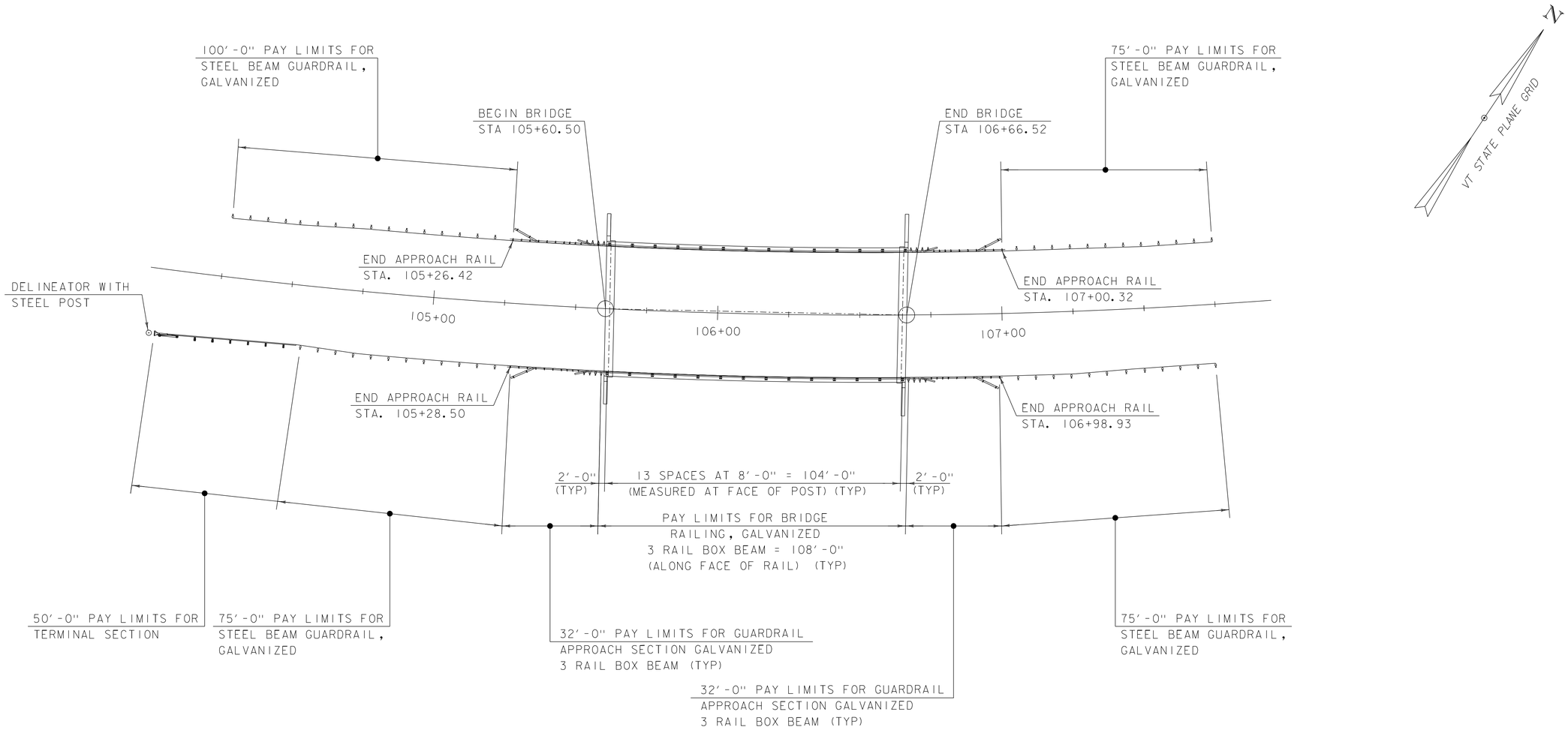
FILE NAME: zl3b332bor_info.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: T. MANNING
BORING LOGS (2 OF 2)

PLOT DATE: 10/17/2018
DRAWN BY: T. MANNING
CHECKED BY: T. LEVINS
SHEET 14 OF 32

STEEL BEAM GUARDRAIL, GALVANIZED
STA. 104+26.4 - 105+26.4, LT
STA. 104+53.5 - 105+28.5, RT
STA. 106+98.9 - 107+73.9, RT
STA. 107+00.3 - 107+75.3, LT

MANUFACTURED TERMINAL SECTION, TANGENT
STA. 104+04.0, RT

DELINEATOR WITH STEEL POST
STA. 104+02, RT (BLUE)



RAIL LAYOUT

SCALE 1" = 20'-0"
20 0 20

NOTE:

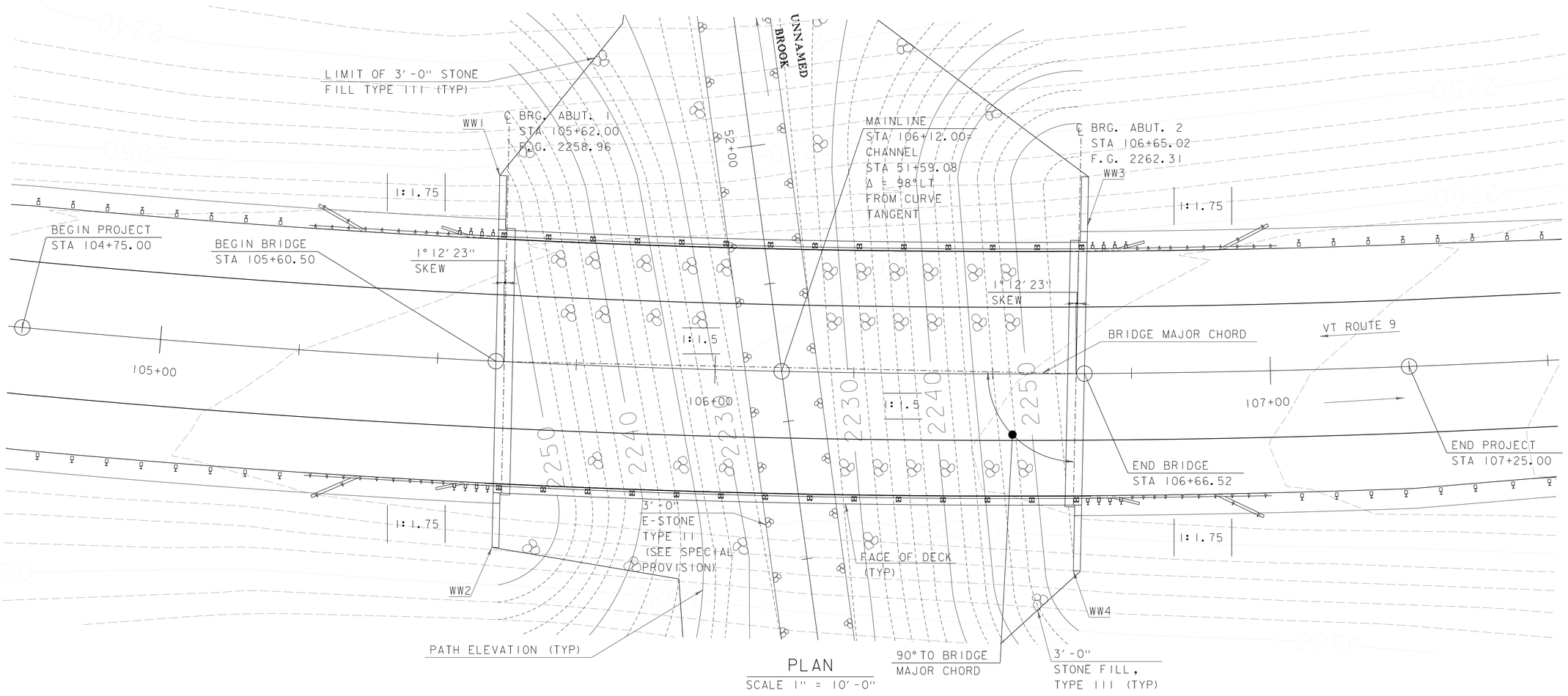
SEE STANDARDS G-1 AND G-19 FOR ADDITIONAL INFORMATION.

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

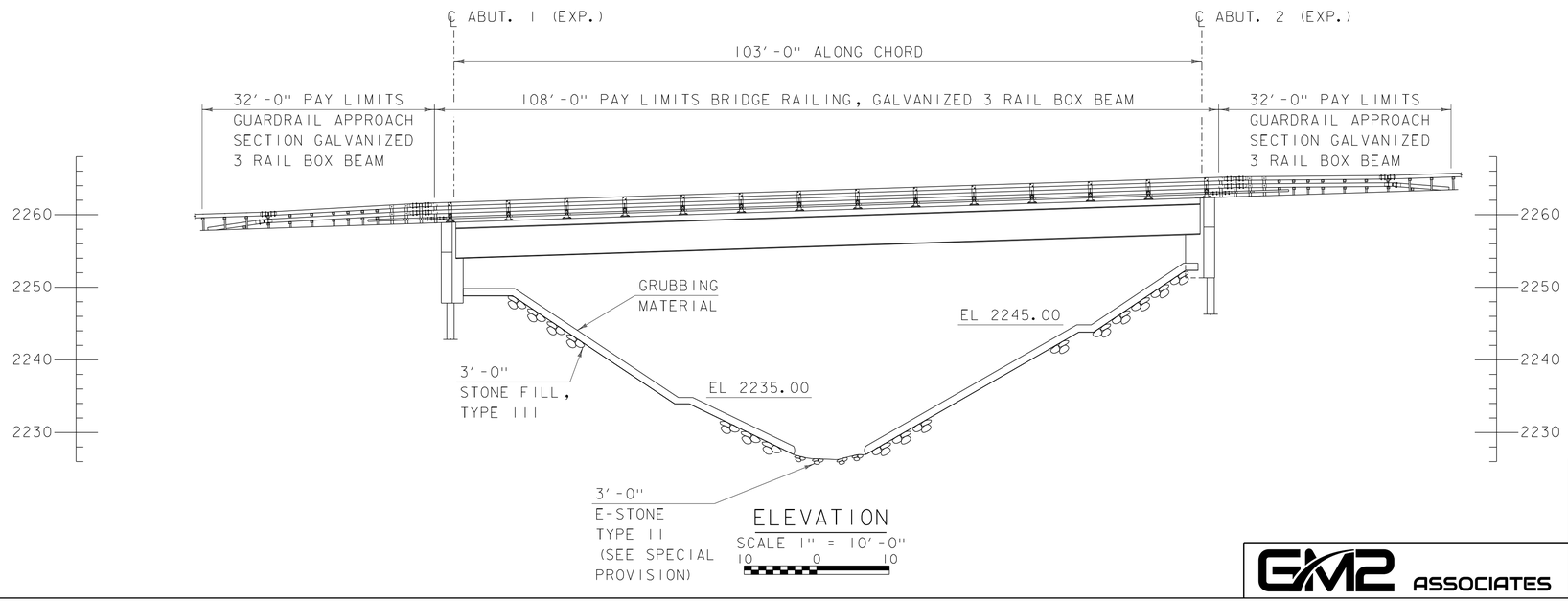
FILE NAME: z13b332rail.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: T. MANNING/J. MERCER
RAIL LAYOUT SHEET

PLOT DATE: 10/17/2018
DRAWN BY: T. MANNING
CHECKED BY: T. LEVINS
SHEET 15 OF 32



PLAN

SCALE 1" = 10'-0"



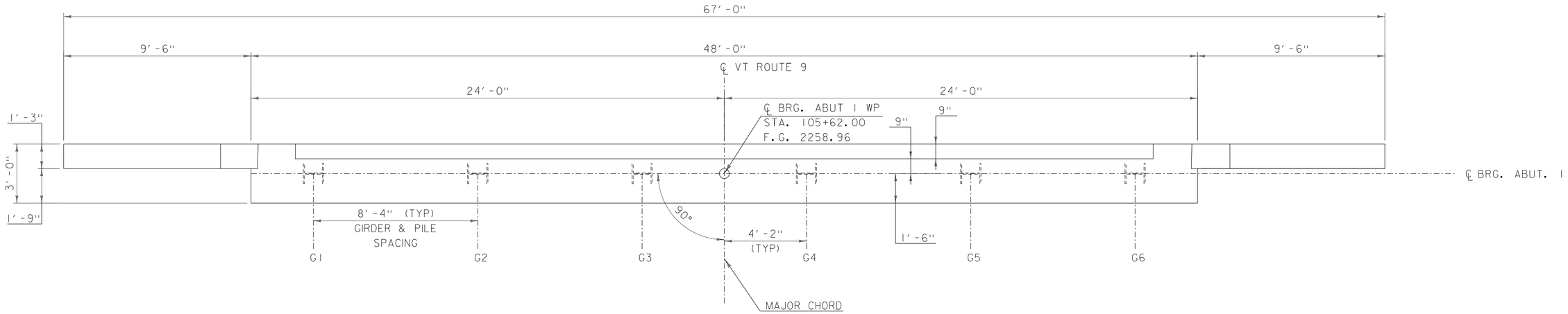
ELEVATION

SCALE 1" = 10'-0"

10 0 10

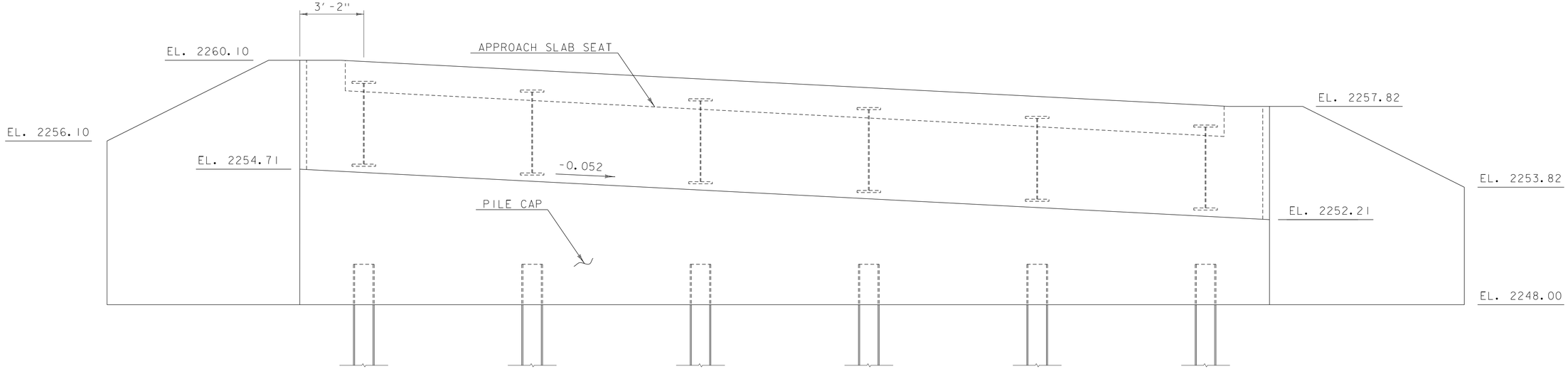
GM2 ASSOCIATES

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	BF 010-1(50)
FILE NAME: z13b332pe.dgn	PLOT DATE: 10/17/2018
PROJECT LEADER: T. LEVINS	DRAWN BY: T. MANNING
DESIGNED BY: T. MANNING	CHECKED BY: T. LEVINS
PLAN & ELEVATION	SHEET 16 OF 32



ABUTMENT 1 PLAN

SCALE 3/8″ = 10′-0″



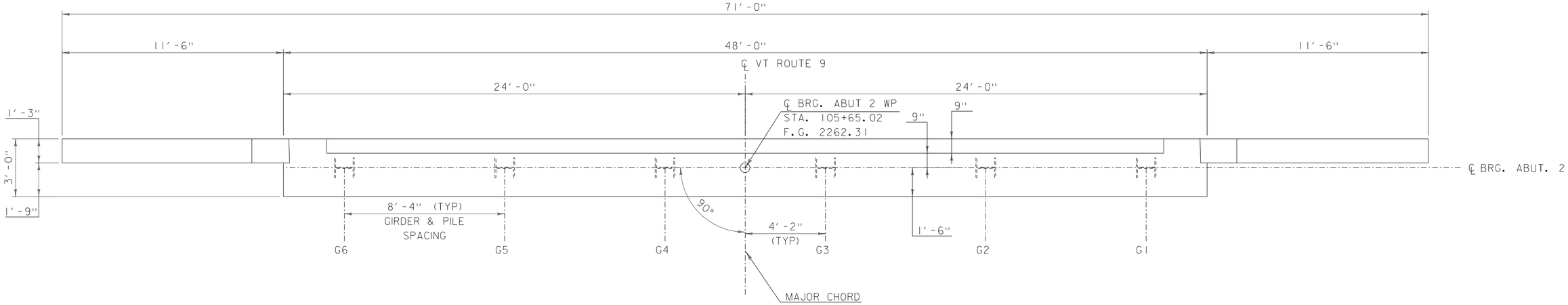
ABUTMENT 1 ELEVATION

SCALE 3/8″ = 10′-0″

NOTE: ELEVATIONS SHOWN ARE AT ℄ BEARING

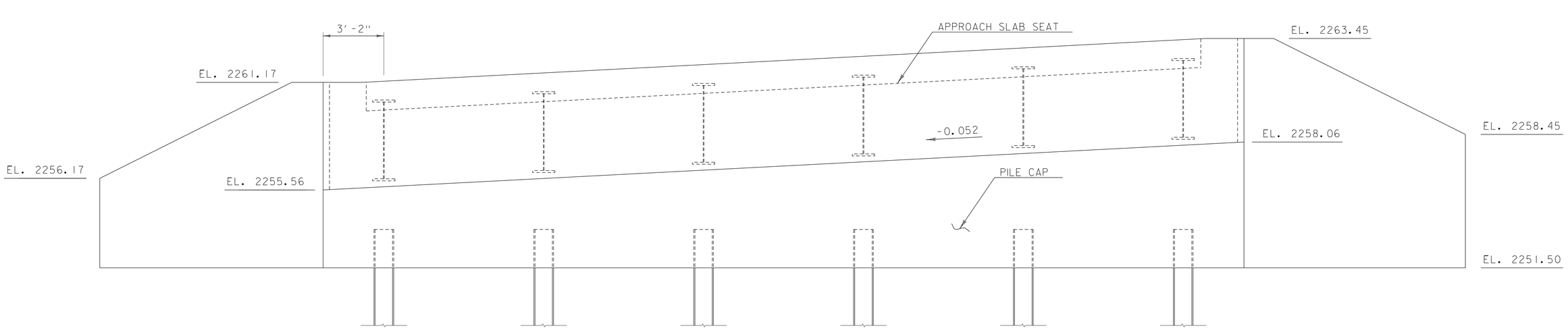
GM2 ASSOCIATES

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	BF 010-1(50)
FILE NAME:	z13b332sub.dgn
PROJECT LEADER:	T. LEVINS
DESIGNED BY:	T. MANNING
ABUTMENT 1 PILE CAP PLAN & ELEVATION	
PLOT DATE:	10/17/2018
DRAWN BY:	T. MANNING
CHECKED BY:	T. LEVINS
SHEET	17 OF 32



ABUTMENT 2 PLAN

SCALE 3/8" = 10'-0"



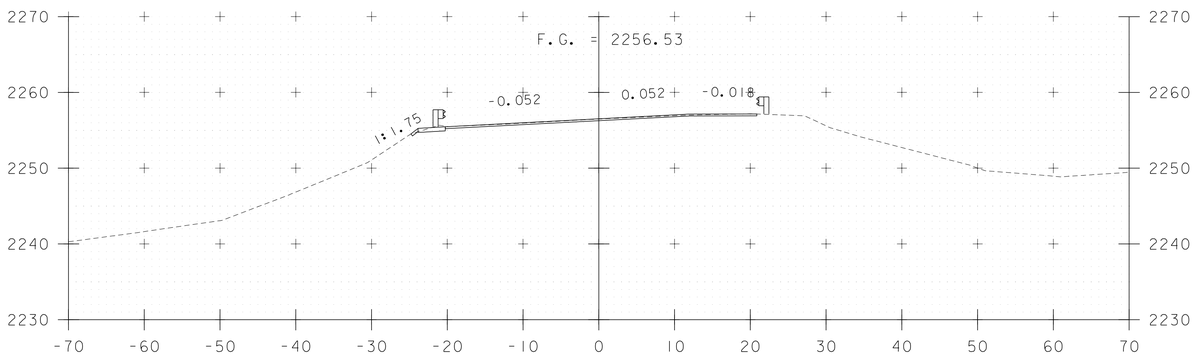
ABUTMENT 2 ELEVATION

SCALE 3/8" = 10'-0"

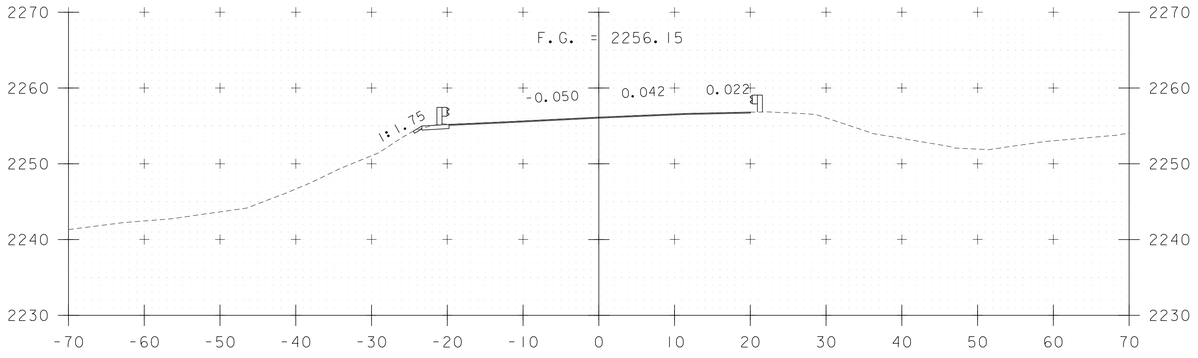
NOTE: ELEVATIONS SHOWN ARE AT ℄ BEARING

GM2 ASSOCIATES

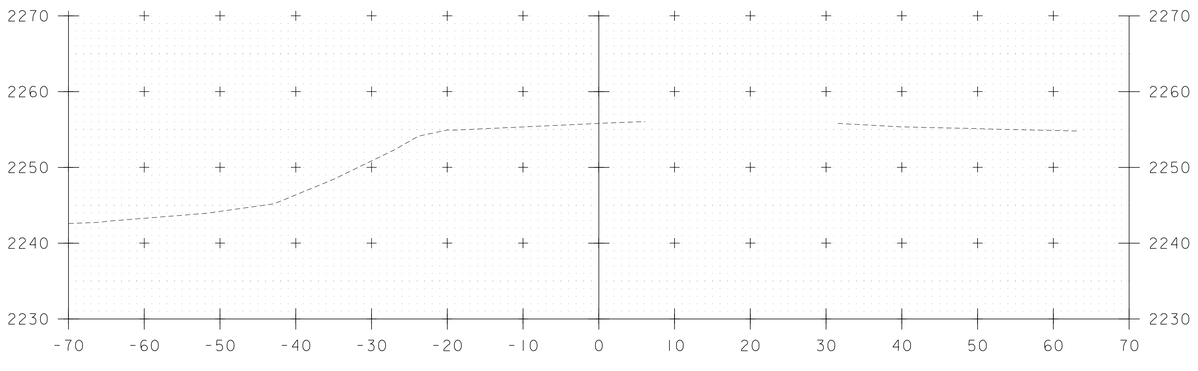
PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	BF 010-1(50)
FILE NAME:	zl3b332sub.dgn
PROJECT LEADER:	T. LEVINS
DESIGNED BY:	T. MANNING
ABUTMENT 2 PILE CAP PLAN & ELEVATION	
PLOT DATE:	10/17/2018
DRAWN BY:	T. MANNING
CHECKED BY:	T. LEVINS
SHEET	18 OF 32



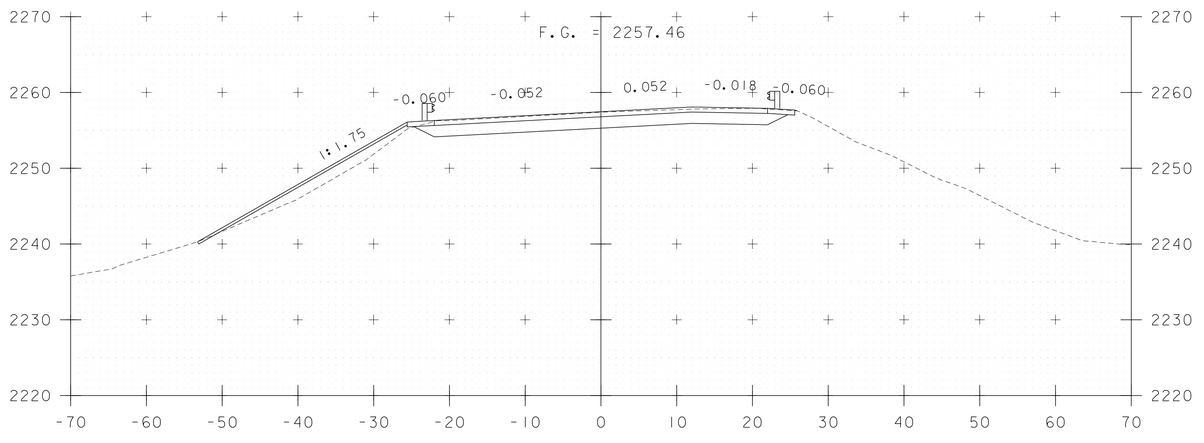
104+50



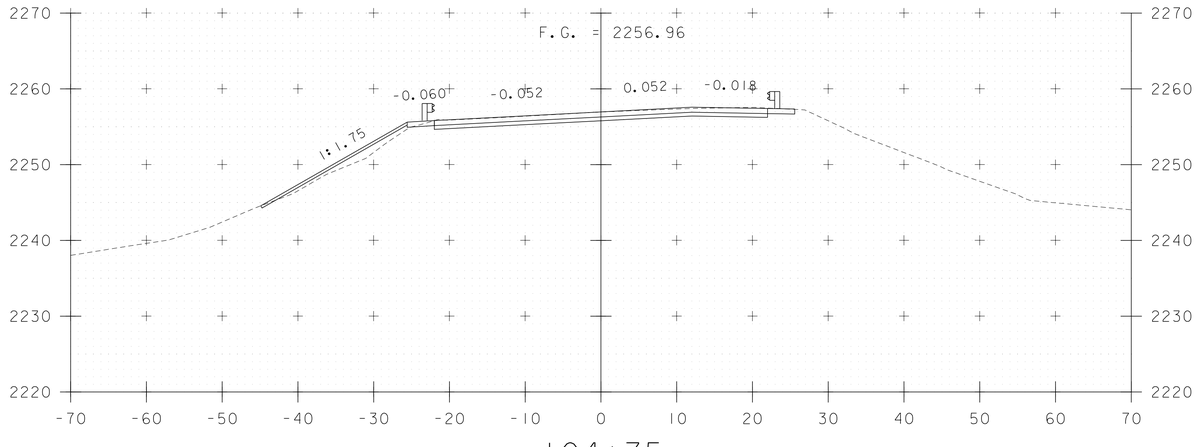
104+25
BEGIN APPROACH (MATCH EXISTING)



104+00



105+00



104+75
BEGIN PROJECT

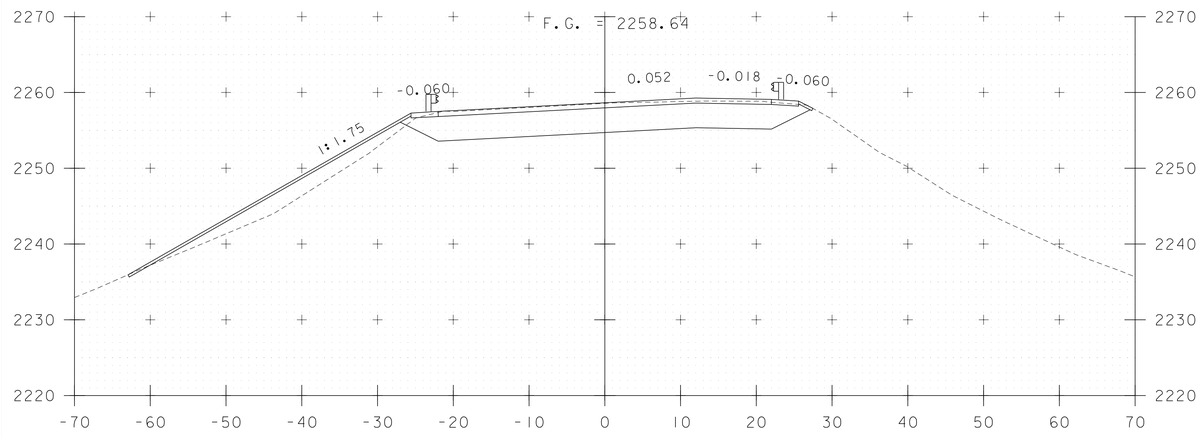
STA. 104+00 TO STA. 105+00

GM2 ASSOCIATES

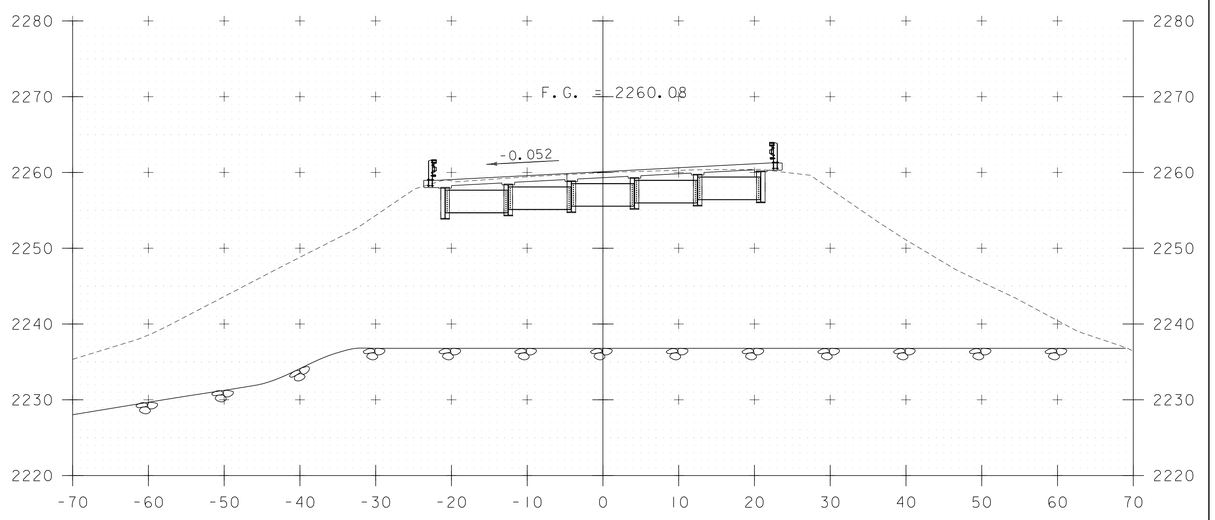
PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332xs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: J. MERCER
VT ROUTE 9 CROSS SECTIONS 1

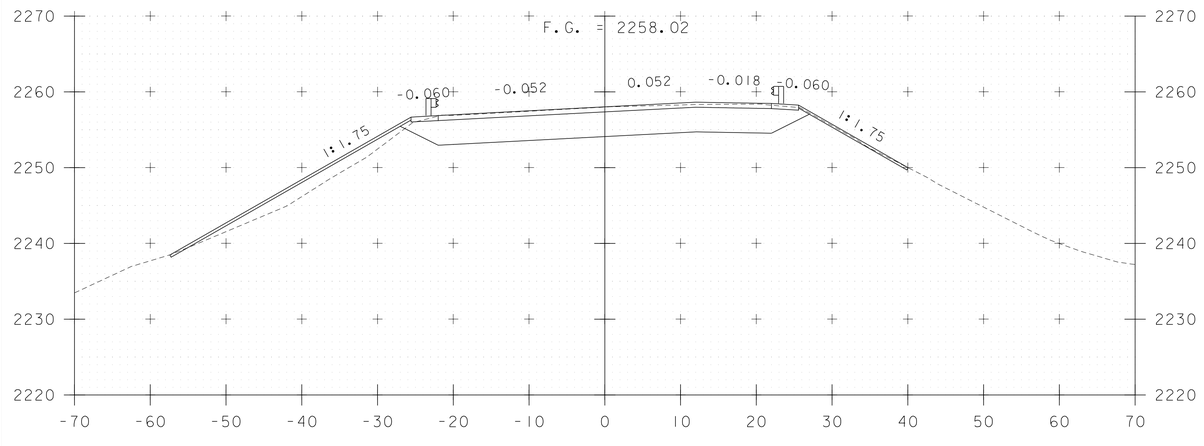
PLOT DATE: 10/17/2018
DRAWN BY: J. MERCER
CHECKED BY: T. LEVINS
SHEET 19 OF 32



105+50



106+00



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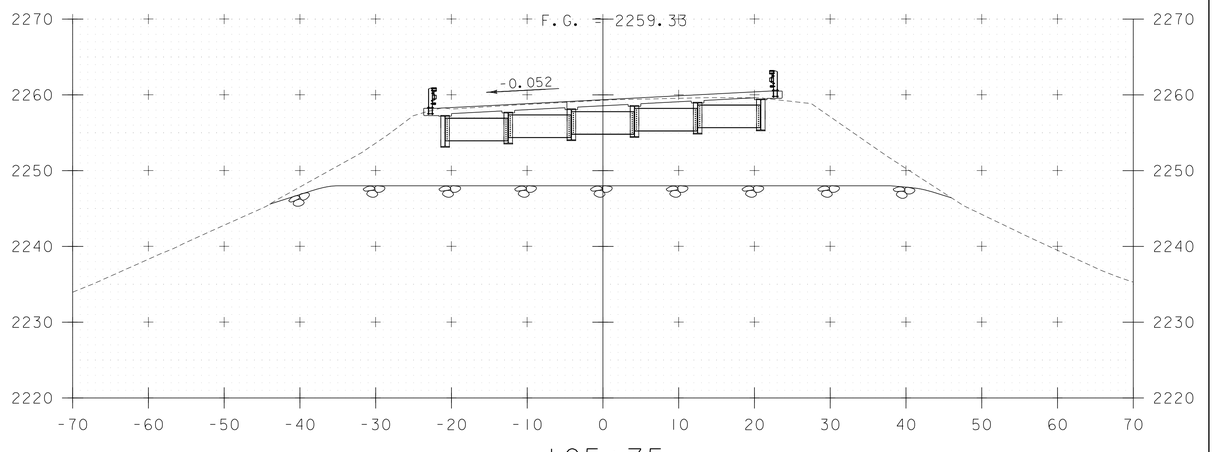


105+75
BEGIN BRIDGE @ 105+60.50

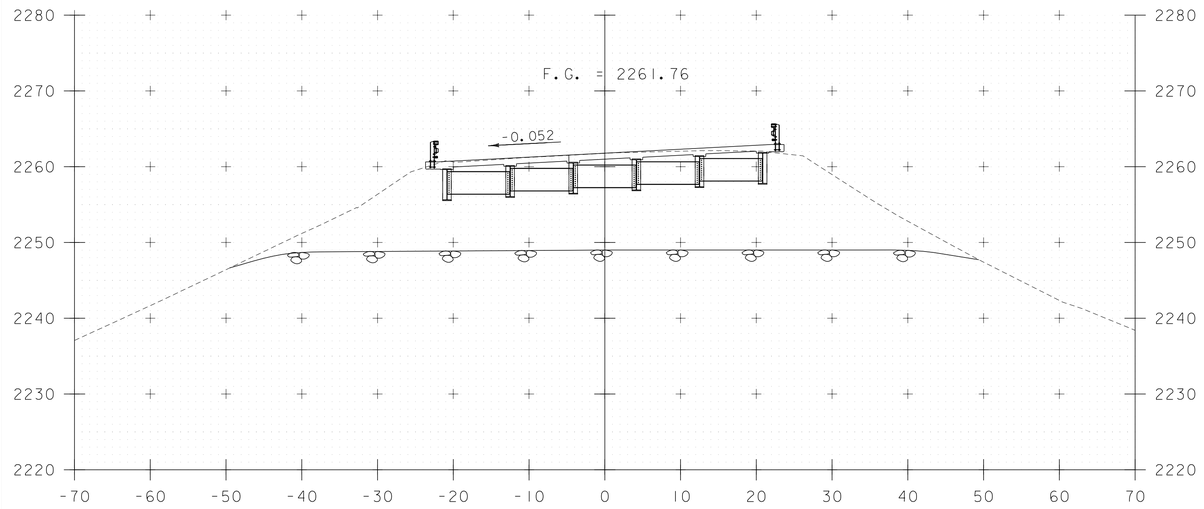
STA. 105+25 TO STA. 106+00

GM2 ASSOCIATES

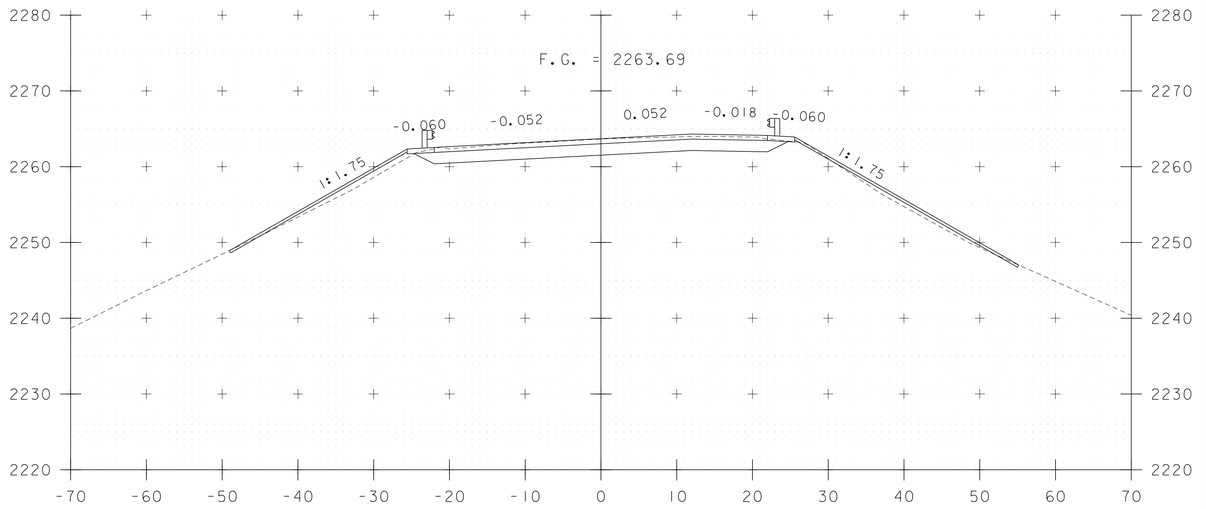
PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332xs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: J. MERCER
VT ROUTE 9 CROSS SECTIONS 2

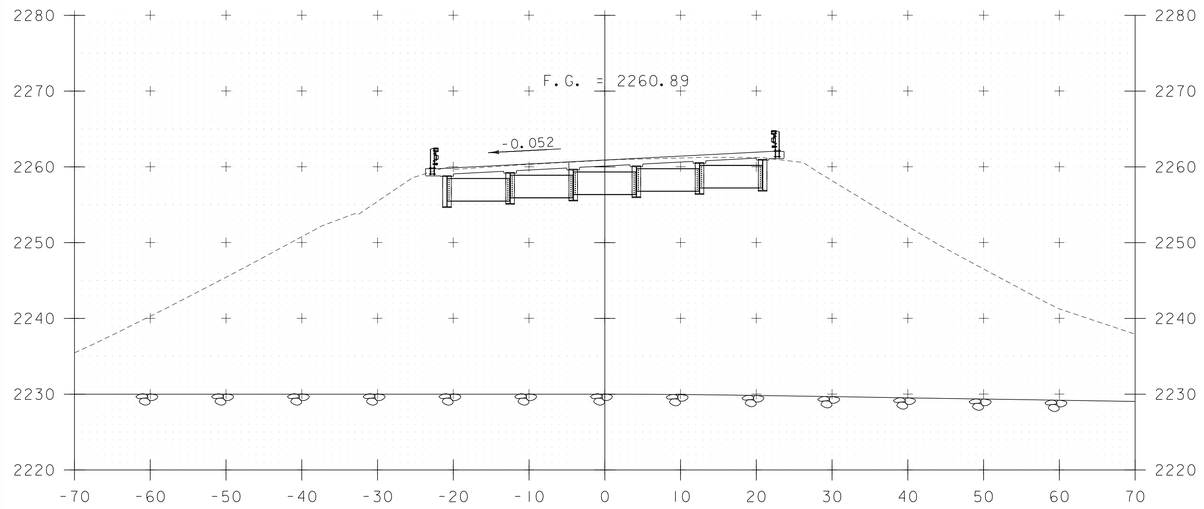
PLOT DATE: 10/17/2018
DRAWN BY: J. MERCER
CHECKED BY: T. LEVINS
SHEET 20 OF 32



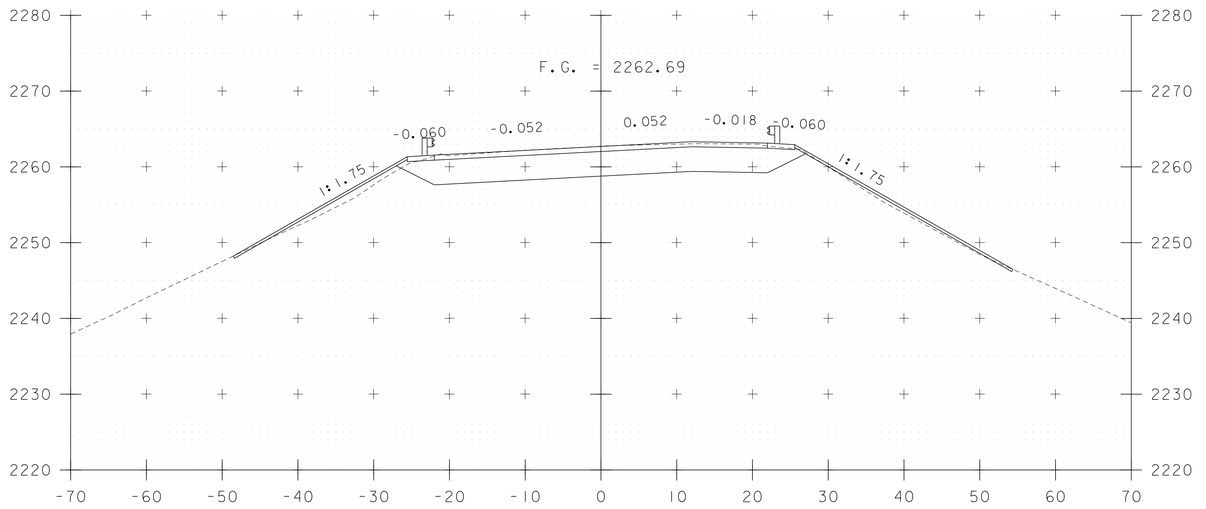
106+50



107+00



106+25



106+75
END BRIDGE @ 106+66.52

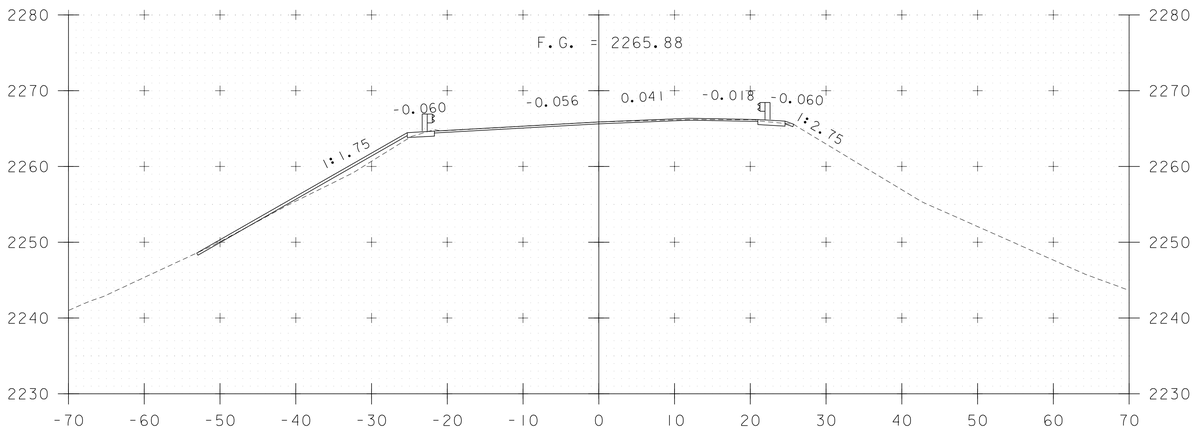
STA. 106+25 TO STA. 107+00

GM2 ASSOCIATES

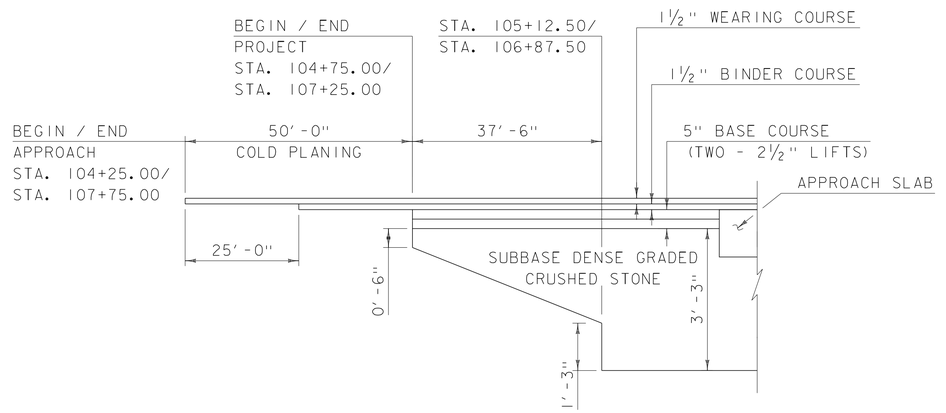
PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332xs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: J. MERCER
VT ROUTE 9 CROSS SECTIONS 3

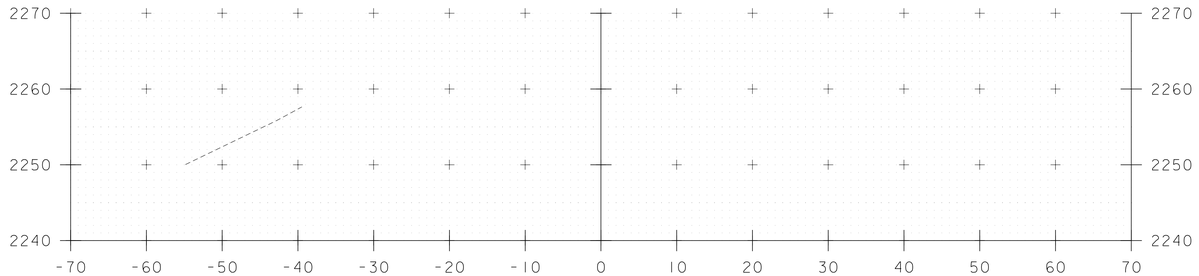
PLOT DATE: 10/17/2018
DRAWN BY: J. MERCER
CHECKED BY: T. LEVINS
SHEET 21 OF 32



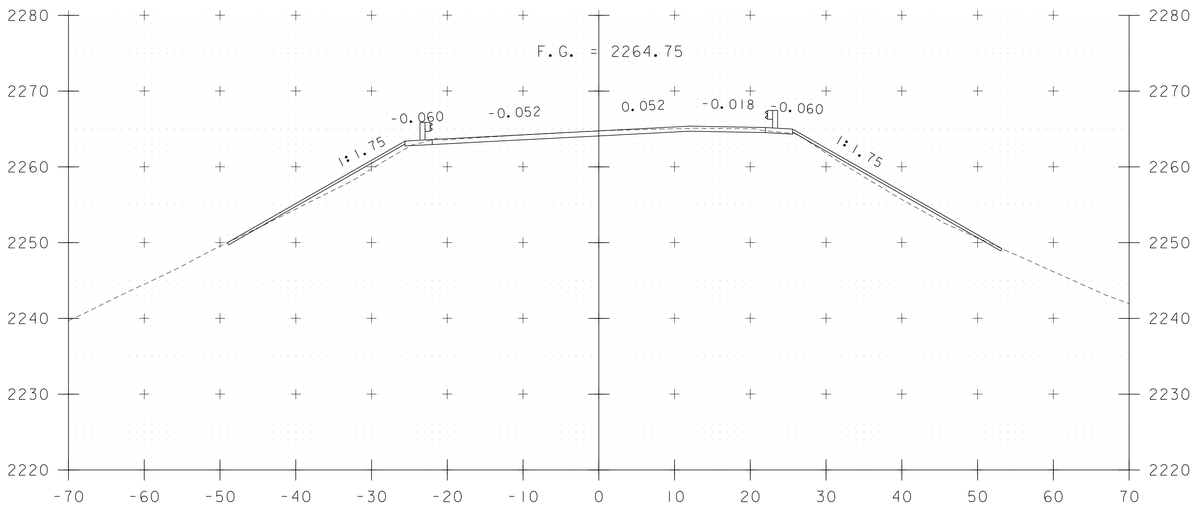
107+50



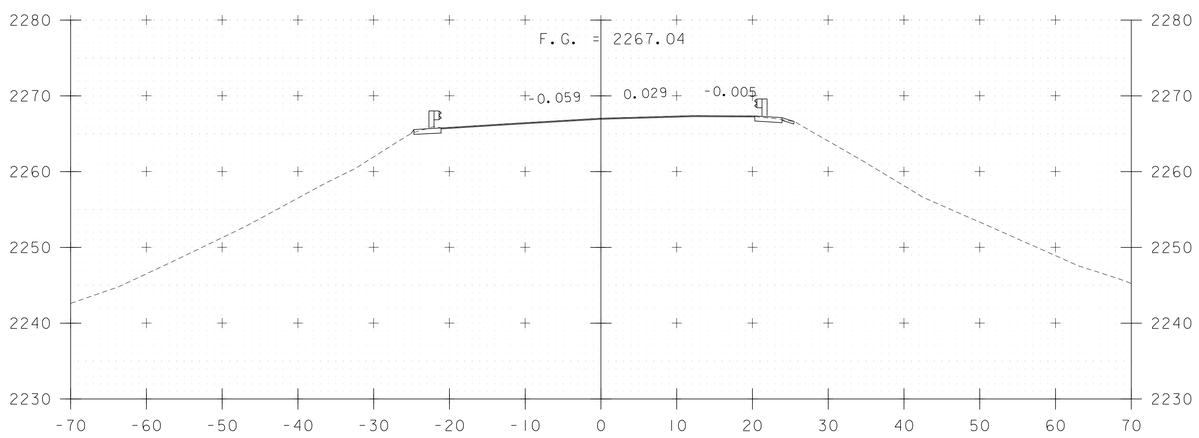
VT9 MATERIAL TRANSITION DETAIL



108+00



107+25
END PROJECT



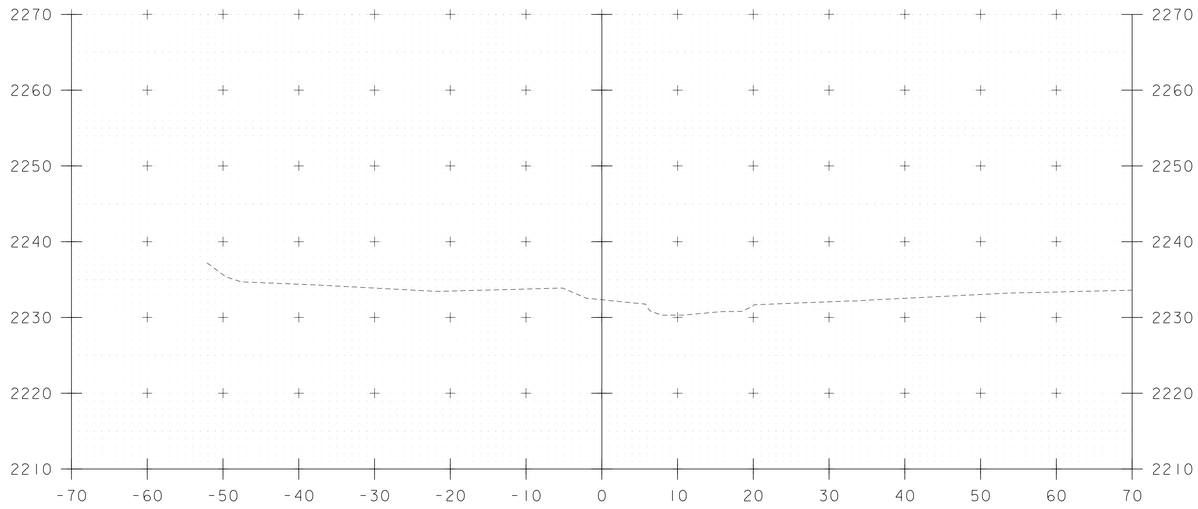
107+75
END APPROACH (MATCH EXISTING)

STA. 107+25 TO STA. 108+00

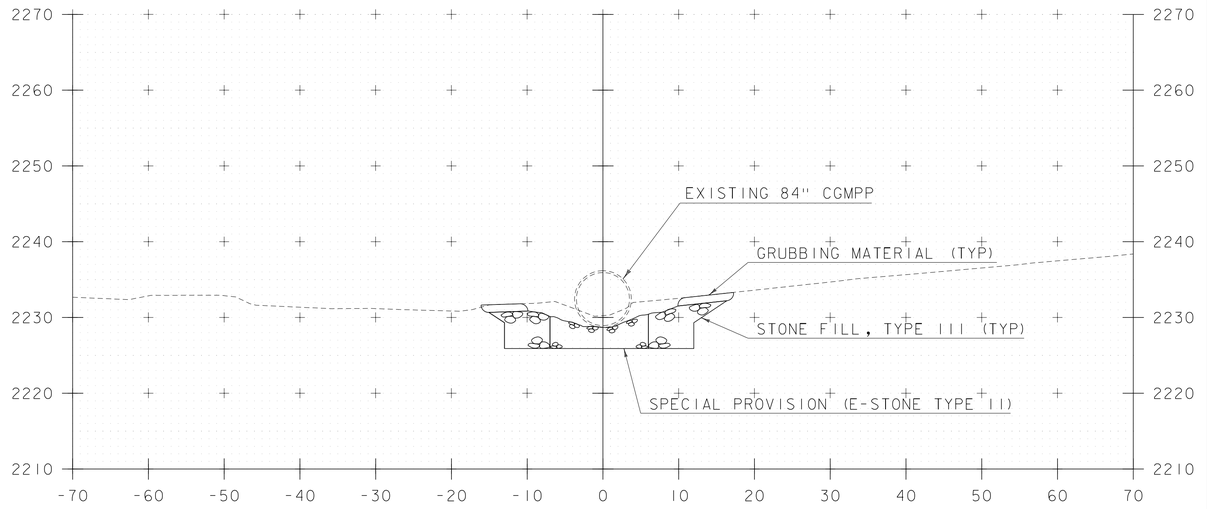
GM2 ASSOCIATES

PROJECT NAME: SEARSBURG	
PROJECT NUMBER: BF 010-1(50)	
FILE NAME: z13b332xs.dgn	PLOT DATE: 10/17/2018
PROJECT LEADER: T. LEVINS	DRAWN BY: J. MERCER
DESIGNED BY: J. MERCER	CHECKED BY: T. LEVINS
VT ROUTE 9 CROSS SECTIONS 4	SHEET 22 OF 32

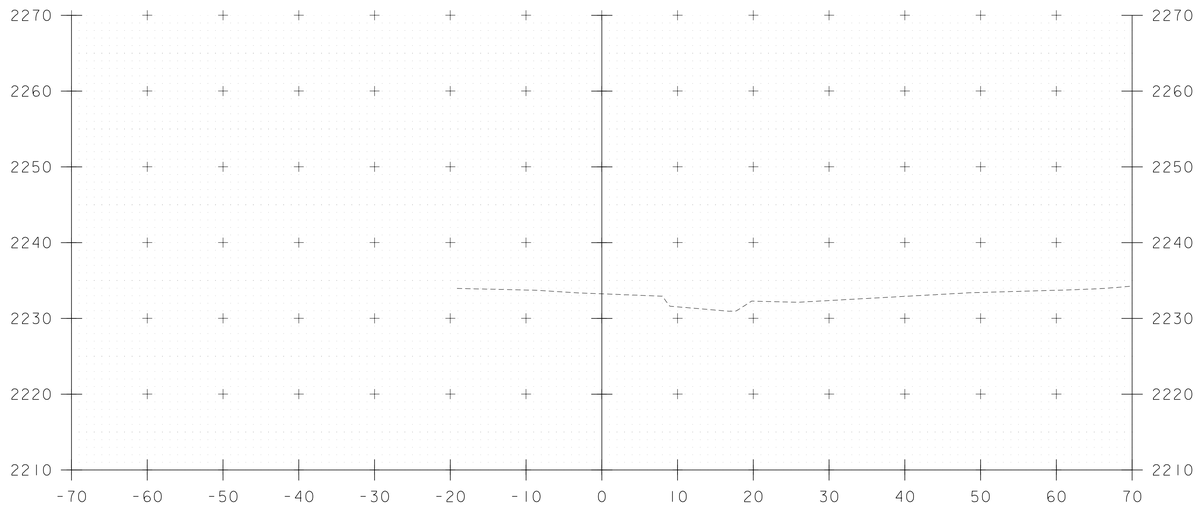
STA 50+61.06 BACK STATION
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN STONE FILL TYPE III
BEGIN SPECIAL PROVISION (E-STONE, TYPE II)
BEGIN GRUBBING MATERIAL



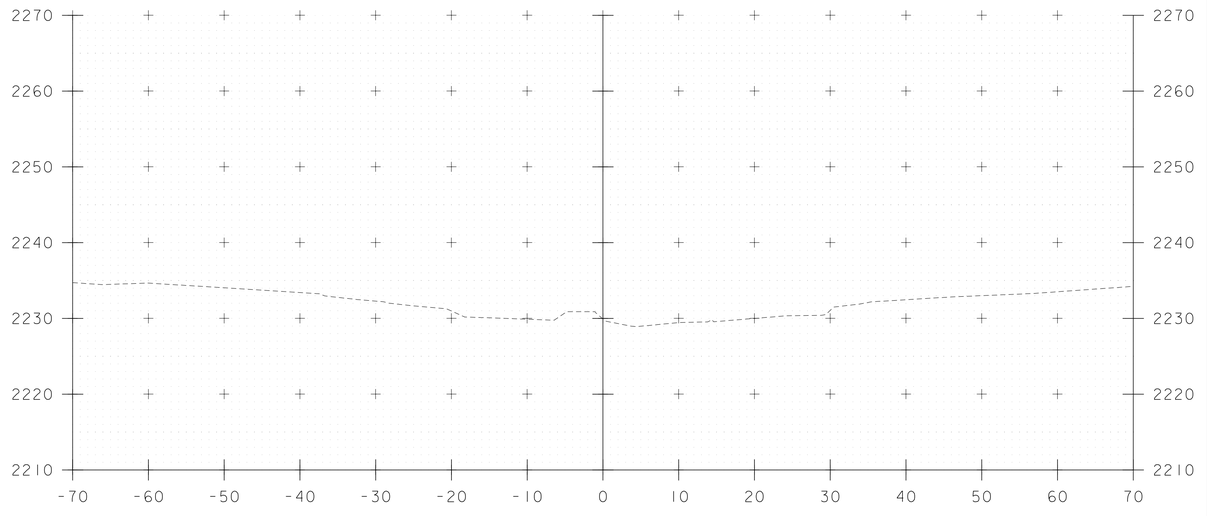
50+25



50+75



50+00



50+50

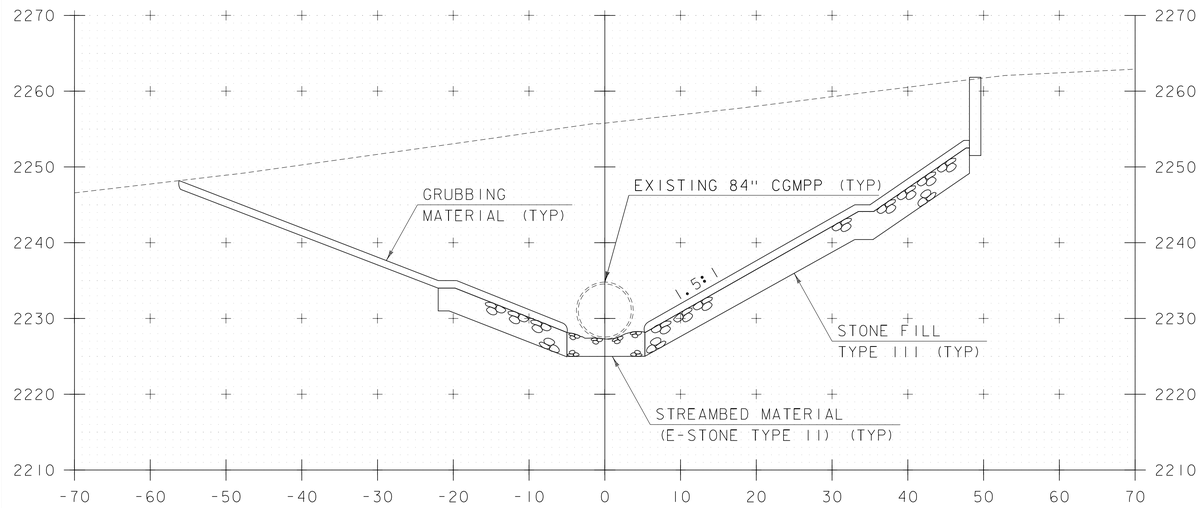
STA. 50+00 TO STA. 50+75

GM2 ASSOCIATES

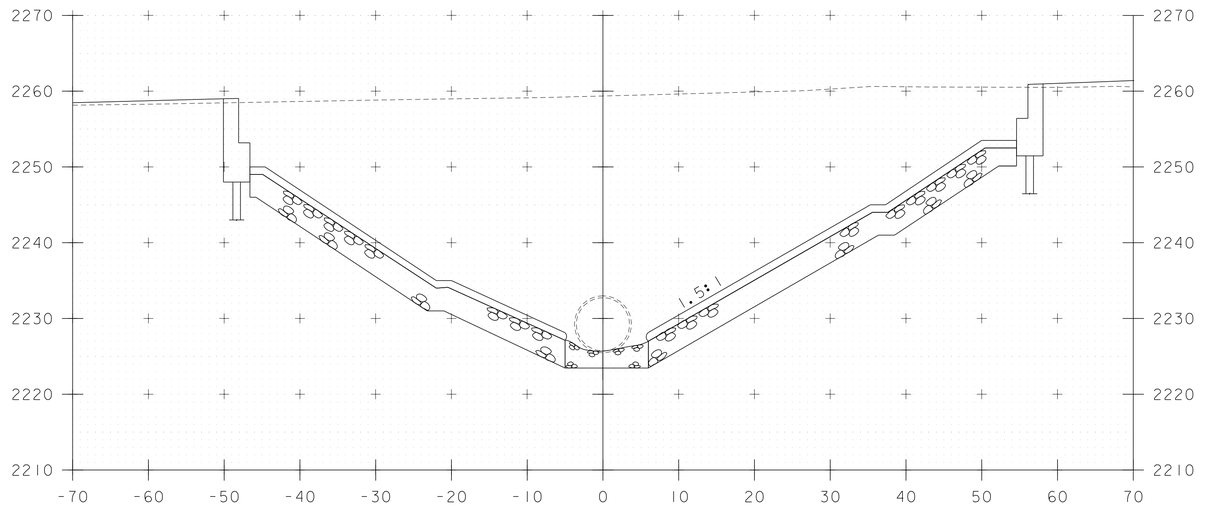
PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332xs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: B. WILLIAMS
CHANNEL CROSS SECTIONS 1

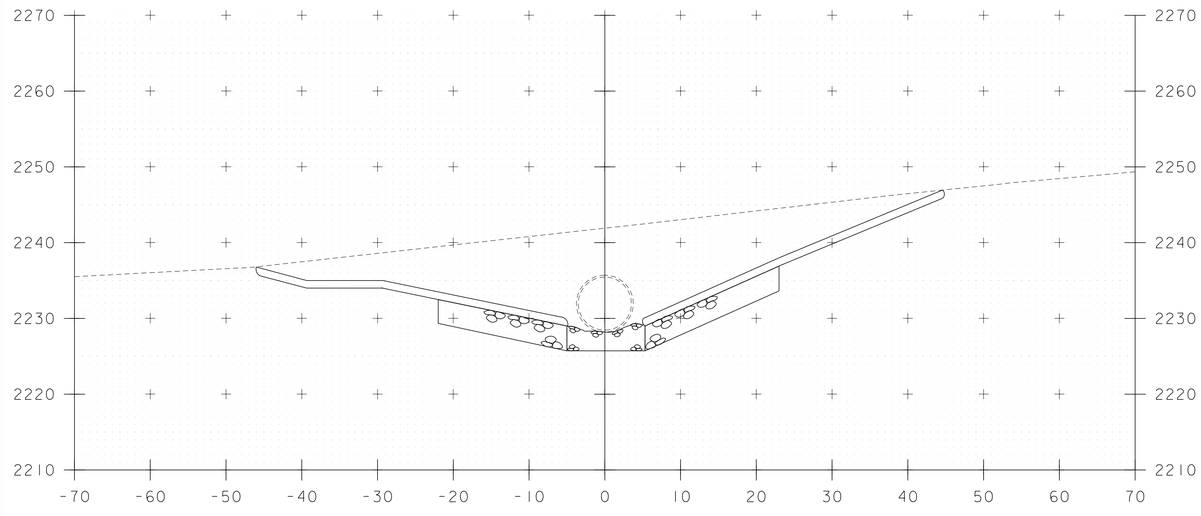
PLOT DATE: 10/17/2018
DRAWN BY: B. WILLIAMS
CHECKED BY: T. LEVINS
SHEET 23 OF 32



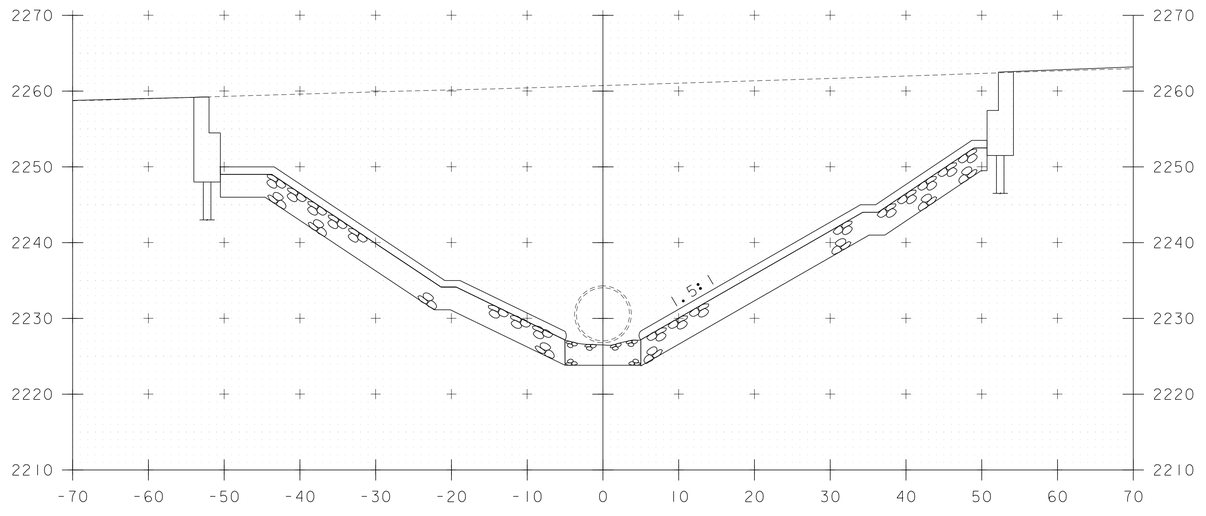
51+25



51+75



51+00



51+50

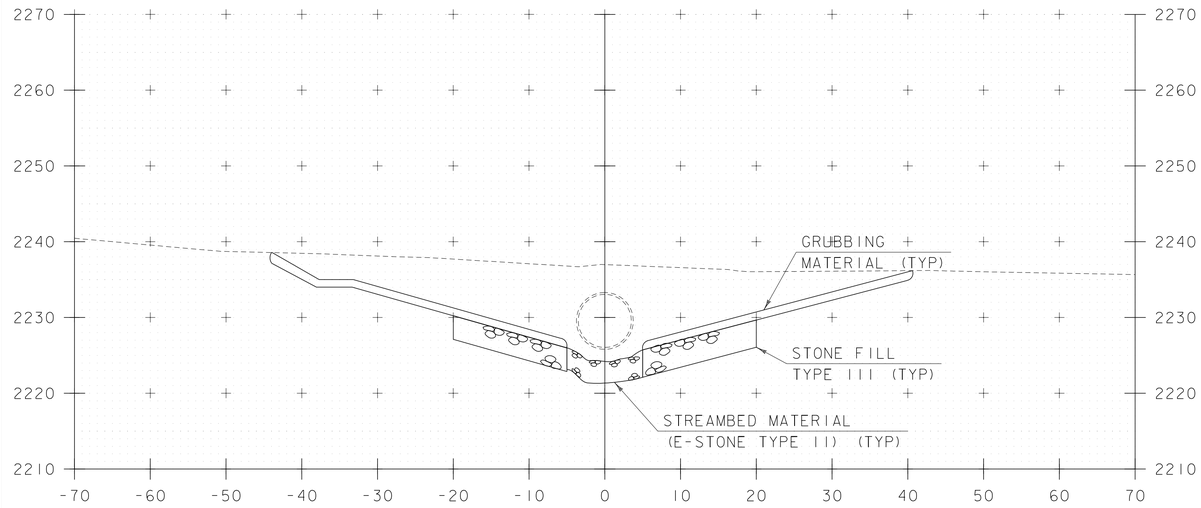
STA. 51+00 TO STA. 51+75

GM2 ASSOCIATES

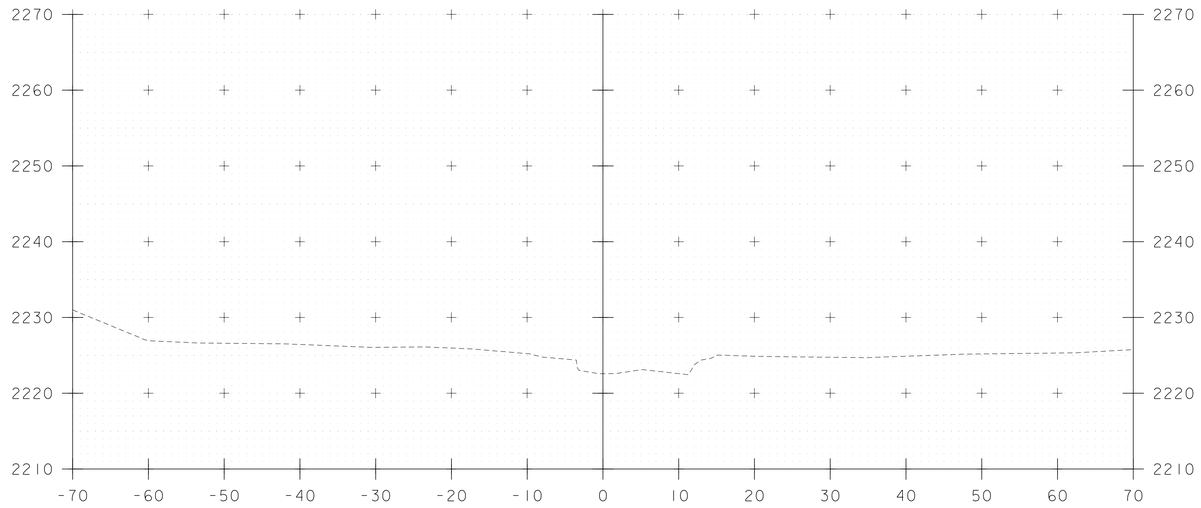
PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332xs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: T. MANNING
CHANNEL CROSS SECTIONS 2

PLOT DATE: 10/17/2018
DRAWN BY: T. MANNING
CHECKED BY: T. LEVINS
SHEET 24 OF 32

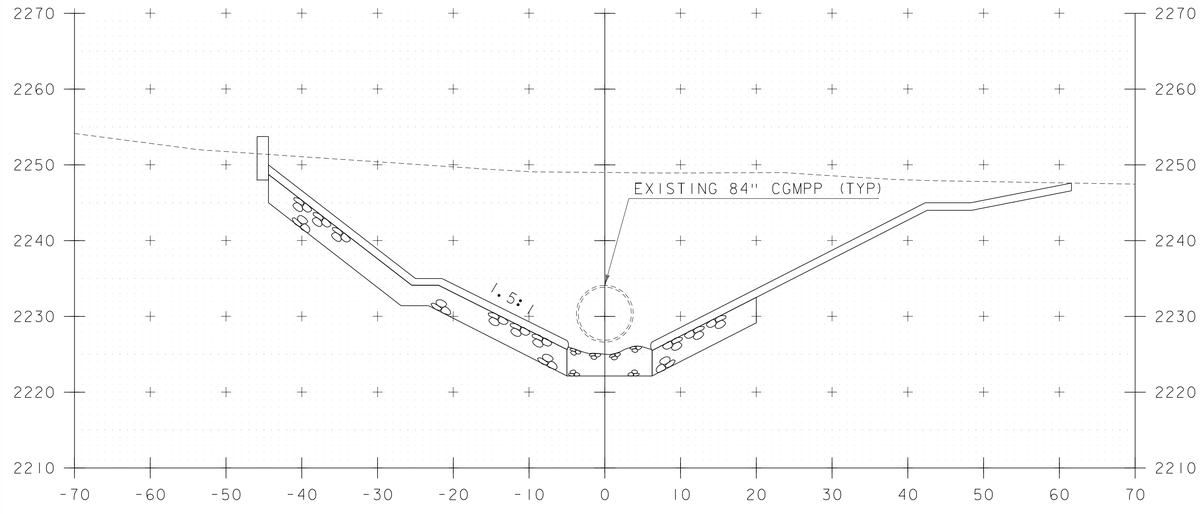


52+25

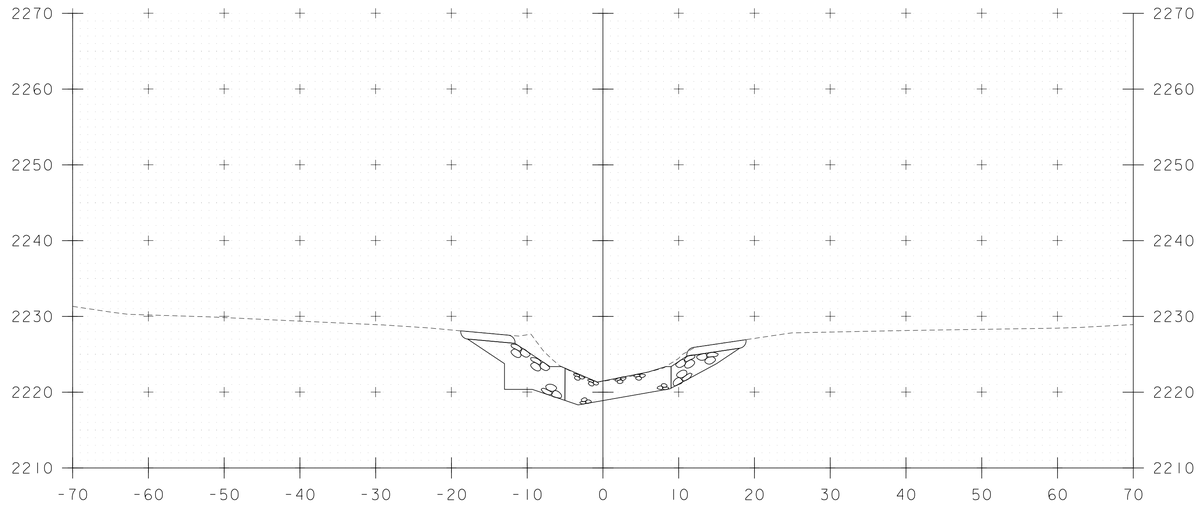


52+75

STA 52+64.51 AHEAD STATION
END UNCLASSIFIED CHANNEL EXCAVATION
END GEOTEXTILE UNDER STONE FILL
END STONE FILL TYPE III
END SPECIAL PROVISION (E-STONE TYPE E2)
END GRUBBING MATERIAL



52+00



52+50

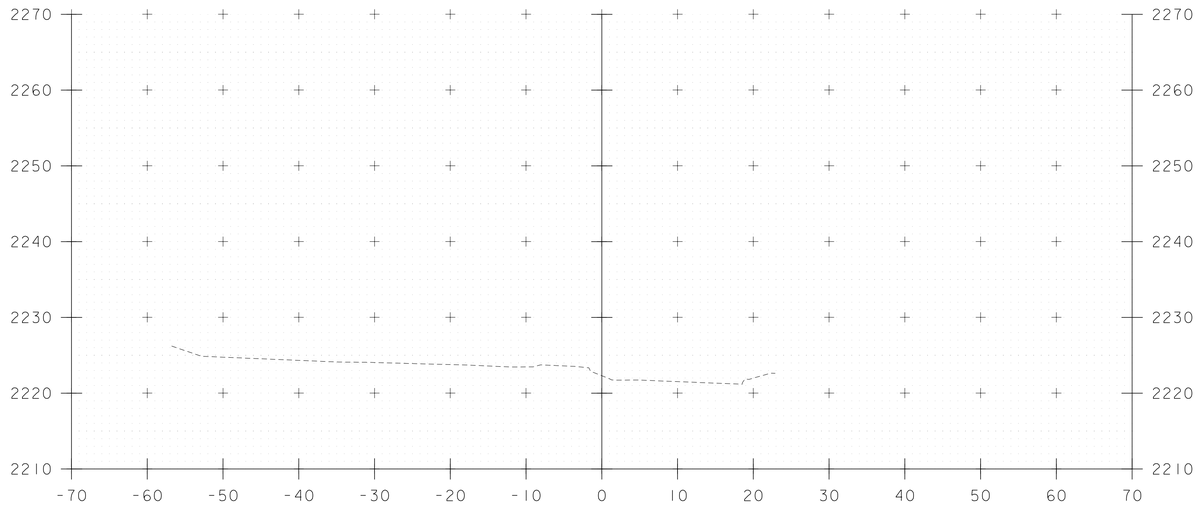
STA. 52+00 TO STA. 52+75

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332xs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: B. WILLIAMS
CHANNEL CROSS SECTIONS 3

PLOT DATE: 10/17/2018
DRAWN BY: B. WILLIAMS
CHECKED BY: T. LEVINS
SHEET 25 OF 32



53+00

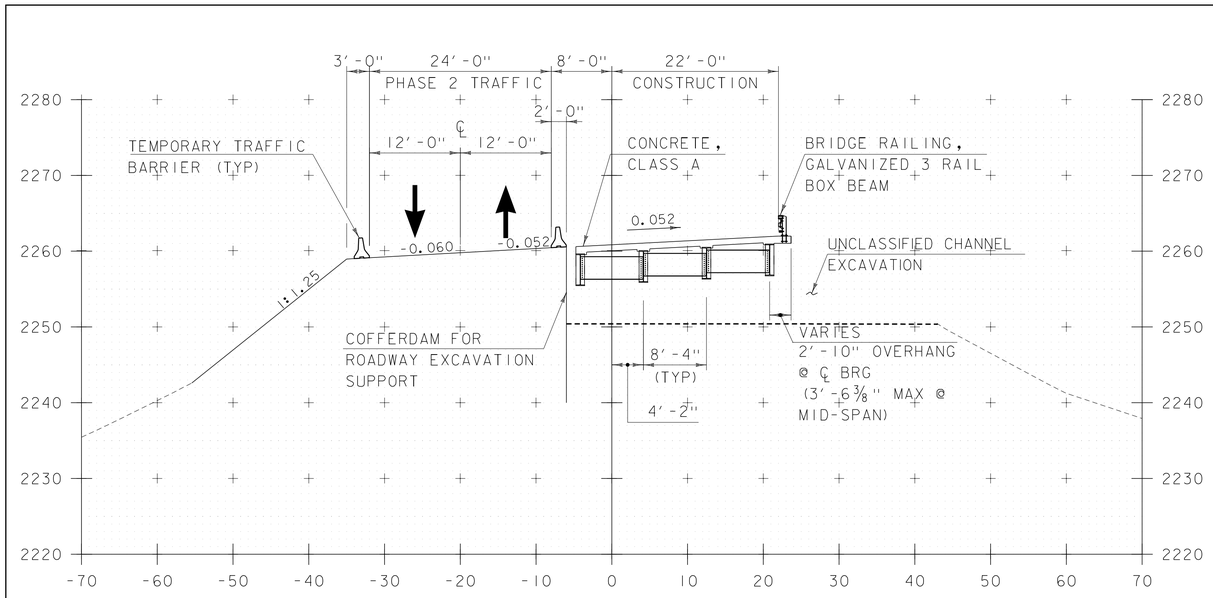
STA. 53+00 TO STA. 53+00

GM2 ASSOCIATES

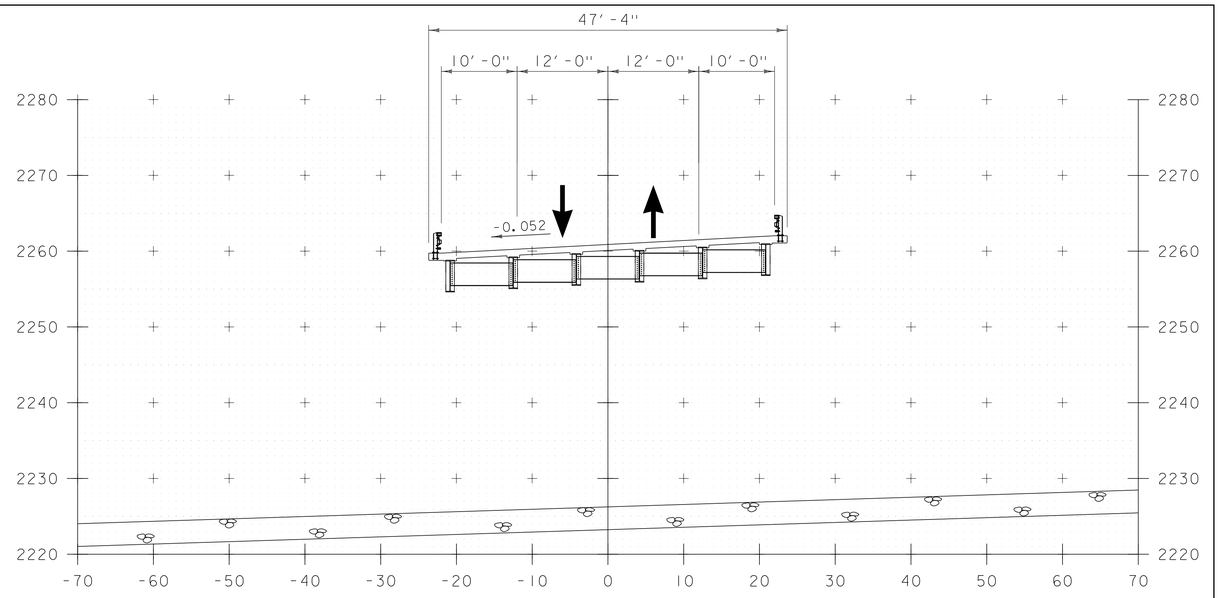
PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332xs.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: B. WILLIAMS
CHANNEL CROSS SECTIONS 4

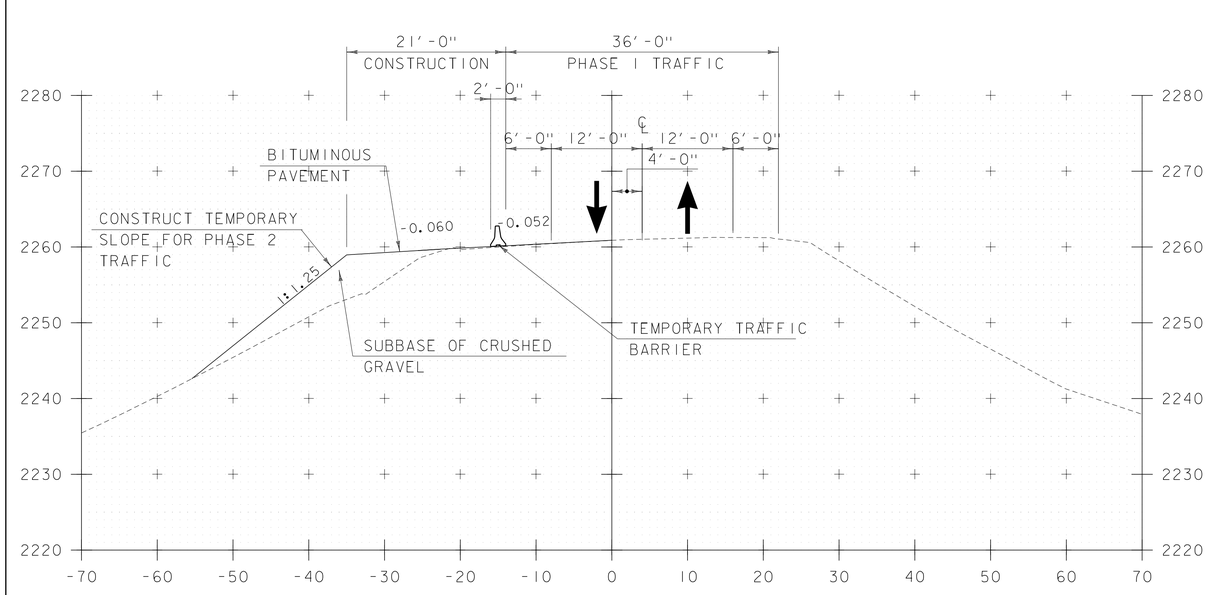
PLOT DATE: 10/17/2018
DRAWN BY: B. WILLIAMS
CHECKED BY: T. LEVINS
SHEET 26 OF 32



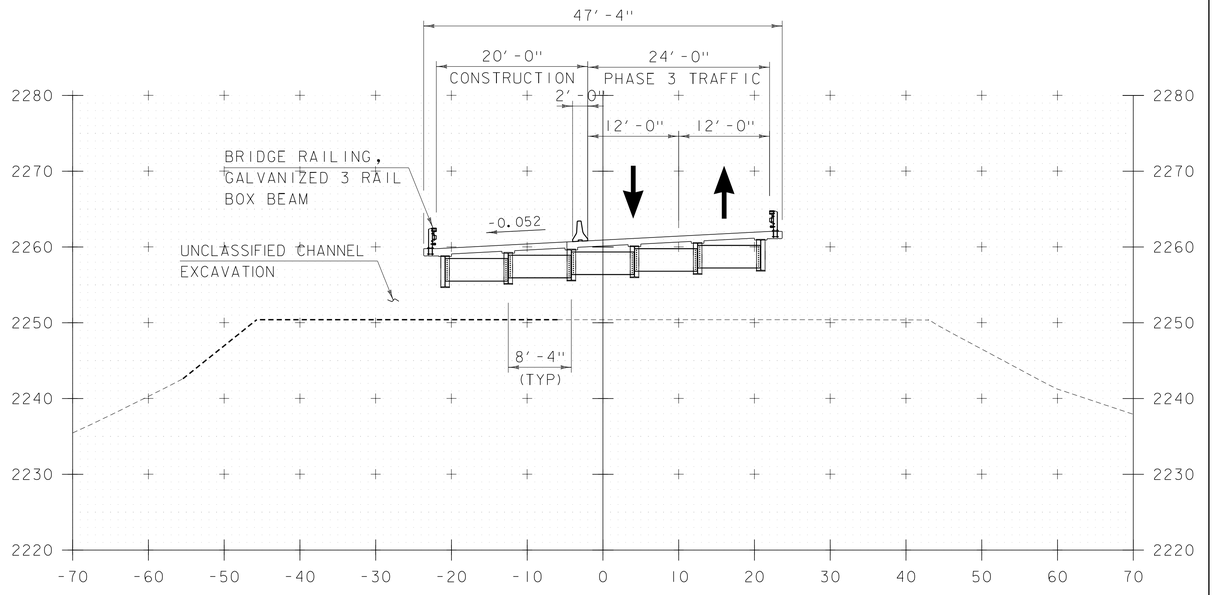
PHASE 2 DETAILS



FINAL



PHASE 1 DETAILS



PHASE 3 DETAILS

SCALE 1" = 10'-0"
10 0 10

GM2 ASSOCIATES

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	BF 010-1(50)
FILE NAME: z13b332xs_bridge.dgn	PLOT DATE: 10/17/2018
PROJECT LEADER: T. LEVINS	DRAWN BY: T. MANNING
DESIGNED BY: T. MANNING	CHECKED BY: T. LEVINS
VT ROUTE 9 PHASE CONSTRUCTION SECTIONS	SHEET 27 OF 32

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF THE EXISTING BRIDGE 20. BRIDGE 20 WILL BE REPLACED WITH A SINGLE SPAN STEEL GIRDER STRUCTURE, SPANNING 103 FEET OVER UNNAMED BROOK. IT IS LOCATED IN THE TOWN OF SEARSBURG, ON VT ROUTE 9 IN A RURAL AREA, APPROXIMATELY 1.1 MILES WEST OF THE INTERSECTION OF VT ROUTE 8.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 1.23 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST SEVEN TO EIGHT MONTHS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE AREA SURROUNDING THE PROJECT IS GRASS AND WOODS IN A RURAL SETTING.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE UNNAMED BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS MODERATELY SLOPED, SINUOUS, NARROW, WITH A CONFINED CHANNEL AT THE SITE. THE STREAM BED CONSISTS OF GRAVEL, COBBLES AND BOULDERS. THE TRIBUTARY AREA AT THE BRIDGE CROSSING IS 0.46 SQ. MI. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY SLOPES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES, TALL GRASS AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING CULVERT. UPON PROJECT COMPLETION, THE CHANNEL BANKS WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF BENNINGTON, VERMONT. SOILS ON THE PROJECT SITE ARE WILMINGTON-MUNDAL ASSOCIATION, UNDULATING, VERY STONY, 3% TO 8% SLOPES, "K" VALUE = 0.06 TO 0.60.THE SOIL IS CONSIDERED TO HAVE MODERATELY LOW TO MODERATELY HIGH EROSION POTENTIAL.

NOTE: "K" VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS
CRITICAL HABITATS: EXTREMELY HIGH WILDLIFE HABITAT CONNECTIVITY RATINGS
HISTORICAL OR ARCHEOLOGICAL AREAS: NONE
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NORTHERN LONG-EARED BAT, POTENTIAL FOR PLANT SPECIES OF SPECIAL CONCERN IN WETLANDS.
WATER RESOURCE: UNNAMED BROOK
WETLANDS: A LARGE CLASS II WETLAND COMPLEX ON SOUTH SIDE OF VT9. WETLANDS ALSO PRESENT DOWNSTREAM OF EXISTING STRUCTURE.

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORMWATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS THAT CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCE (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA
PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS
SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

GEOTEXTILE FOR SILT FENCE SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. FILTER CURTAINS SHALL BE INSTALLED ON THE INLET AND OUTLET ENDS OF THE CHANNEL RECONSTRUCTION AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF
DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE, IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

NONE ANTICIPATED.

1.4.7 CONSTRUCT PERMANENT CONTROLS
PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITHN PERMIT CONDITIONS.

NONE ANTICIPATED.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

NONE ANTICIPATED.

1.4.10 STABILIZE SOIL AT FINAL GRADE
EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES
DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

FILTER BAG(S) SHALL BE USED FOR DEWATERING.

1.4.12 INSPECT YOUR SITE
INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z13b332epscnarrative.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: T. MANNING
EPSC NARRATIVE

PLOT DATE: 10/17/2018
DRAWN BY: T. MANNING
CHECKED BY: T. LEVINS
SHEET 28 OF 32

WILMINGTON-MUNDAL ASSOCIATION, UNDULATING, VERY STONY
3% - 8% SLOPES
POTENTIALLY HIGHLY ERODIBLE
"K" VALUE = 0.06 - 0.60

N

VT STATE PLANE GRID

STATE RIGHT OF WAY

UNNAMED BROOK

VT ROUTE 9 TO WOODFORD

VT ROUTE 9 TO WILMINGTON

STATE RIGHT OF WAY

103+00

104+00

105+00

106+00

107+00

108+00

109+00

50+00

51+00

52+00

53+00

2230

2240

2250

2260

HVCTRL 32

HVCTRL 33

HVCTRL 34

HVCTRL 30

HVCTRL 5

15" CMP PLUGGED

FLOW

DI

TIE
DIST=18.64

TIE
DIST=28.27

GRAVEL DRIVE

MED RED PINE

TIE
DIST=70.26

BENCHMARK 5
VT STATE SURVEY
DISK IN ROCK
"B95034"
ELEV. = 2256.62

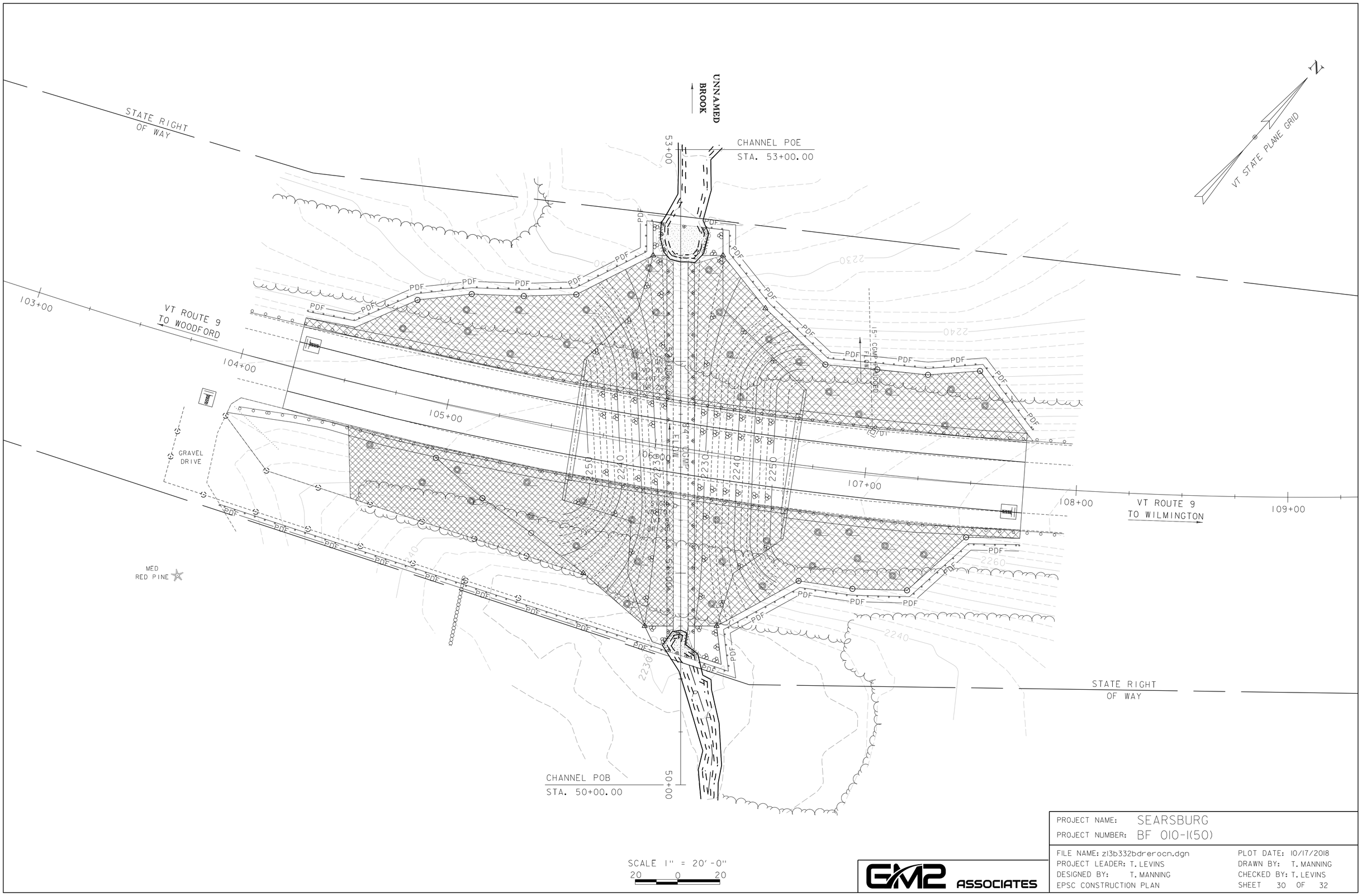
SCALE 1" = 20'-0"
20 0 20

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

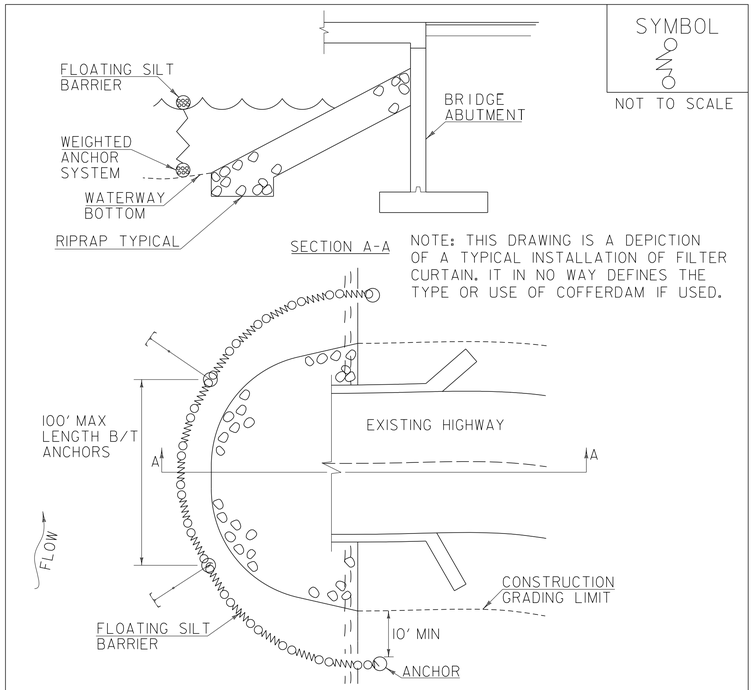
FILE NAME: z13b332resource.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: B. WILLIAMS
EXISTING CONSTRUCTION PLAN

PLOT DATE: 10/17/2018
DRAWN BY: B. WILLIAMS
CHECKED BY: T. LEVINS
SHEET 29 OF 32



GM2 ASSOCIATES

PROJECT NAME: SEARSBURG	
PROJECT NUMBER: BF 010-1(50)	
FILE NAME: z13b332bdrerocn.dgn	PLOT DATE: 10/17/2018
PROJECT LEADER: T. LEVINS	DRAWN BY: T. MANNING
DESIGNED BY: T. MANNING	CHECKED BY: T. LEVINS
EPSC CONSTRUCTION PLAN	SHEET 30 OF 32



SYMBOL

NOT TO SCALE

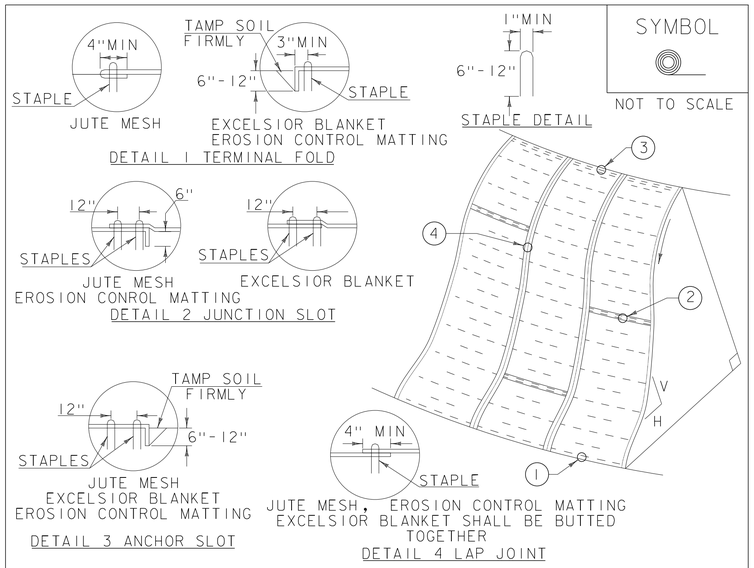
CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN.

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

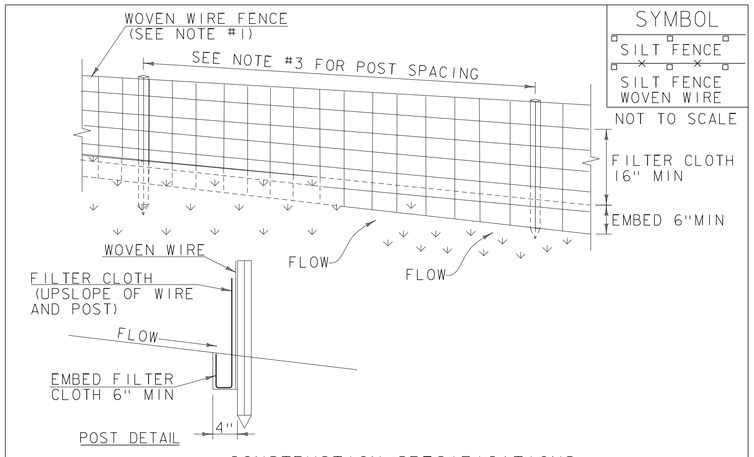
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS ~~FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR~~ PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51). ~~OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).~~

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

GM2 ASSOCIATES

PROJECT NAME:	SEARSBURG
PROJECT NUMBER:	BF 010-1(50)
FILE NAME:	z15b05lepsc_det1.dgn
PROJECT LEADER:	T. LEVINS
DESIGNED BY:	T. MANNING
EPSC DETAILS 1	
PLOT DATE:	10/17/2018
DRAWN BY:	T. MANNING
CHECKED BY:	T. LEVINS
SHEET	31 OF 32

VAOT LOW GROW/FINE FESCUE MIX						
	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
38%	57	95	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

VAOT RURAL AREA MIX						
	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
37.5%	22.5	45	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

GENERAL AMENDMENT GUIDANCE		
FERTILIZER	LIME	
10/20/10	AG LIME	PELLITIZED
500 LBS/AC	2 TONS/AC	1 TONS/AC

CONSTRUCTION GUIDANCE

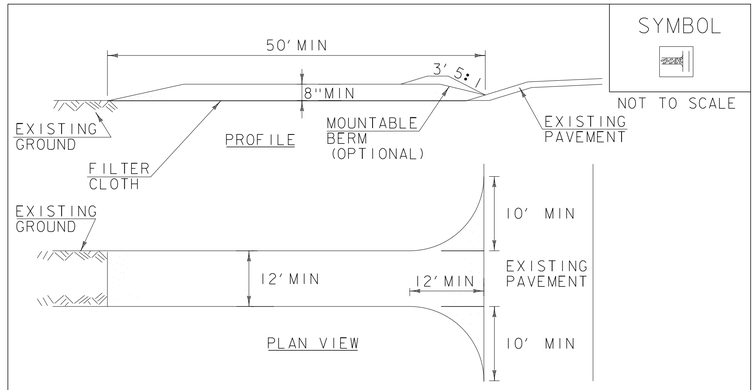
1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

REVISIONS	
JANUARY 12, 2015	WHF



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

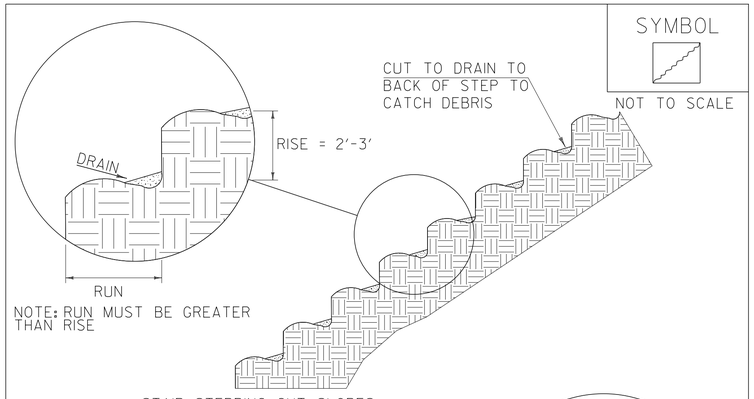
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

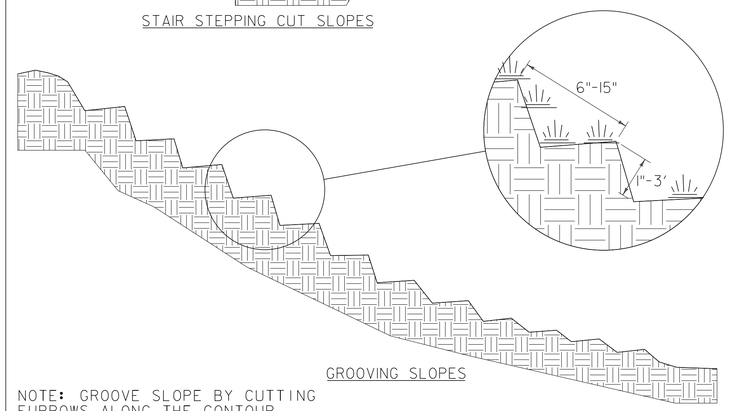
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



STAIR STEPPING CUT SLOPES



GROOVING SLOPES

NOTE: GROOVE SLOPE BY CUTTING FURROWS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND RETAIN LIME, FERTILIZER AND SEED.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SURFACE ROUGHENING

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF

GM2 ASSOCIATES

PROJECT NAME: SEARSBURG
PROJECT NUMBER: BF 010-1(50)

FILE NAME: z15b05lepsc_det2.dgn
PROJECT LEADER: T. LEVINS
DESIGNED BY: T. MANNING
EPSC DETAILS 2

PLOT DATE: 10/17/2018
DRAWN BY: T. MANNING
CHECKED BY: T. LEVINS
SHEET 32 OF 32