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STANDARD STRUCTURE SHEETS APPROVED BY THE CHIEF ENGINEER, VERMONT STATE DEPARTMENT OF HIGHWAYS

S 40 JUNE 10, 1950
S 46-45 JAN 16, 1950

STATE OF VERMONT
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY

SECONDARY PROJECT
TOWN OF BERKSHIRE
COUNTY OF FRANKLIN
VERMONT ROUTE 118
E. BERKSHIRE-MONTGOMERY ROAD

BEGINNING AT THE INTERSECTION OF VERMONT ROUTES 105 AND 118
IN THE HAMLET OF EAST BERKSHIRE AND EXTENDING SOUTHEASTERLY
1424.0 FEET

LENGTH OF ROADWAY 1,119.0 FEET = 0.212 MI.
LENGTH OF BRIDGE 305.0 FEET = 0.058 MI.
LENGTH OF PROJECT 1,424.0 FEET = 0.270 MI.

PROJECT NAME & NO.	TYPE
Berkshire Br. 333(3)	W. Beam, 30' Span, 2' 0" Dia. Spans, 100' Span, 2.3W/4'5'0"

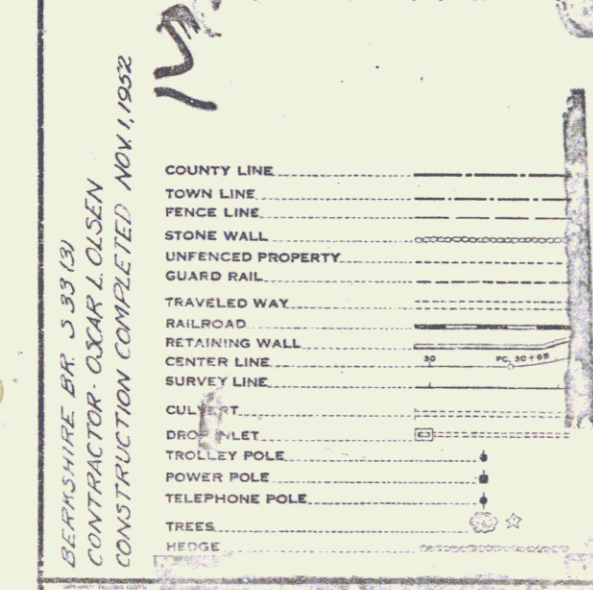
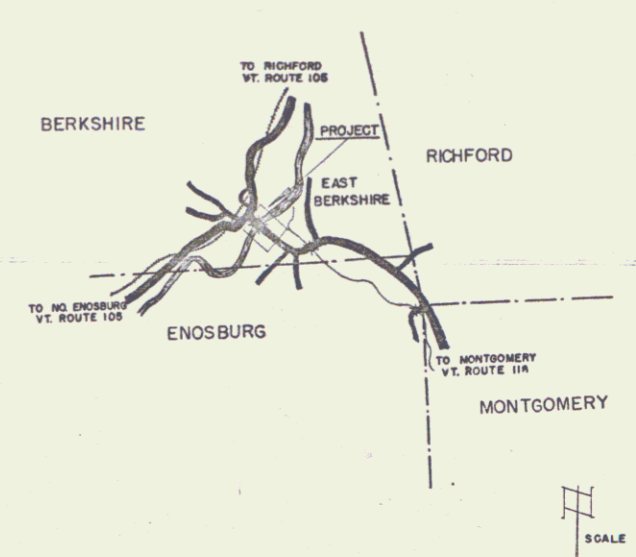
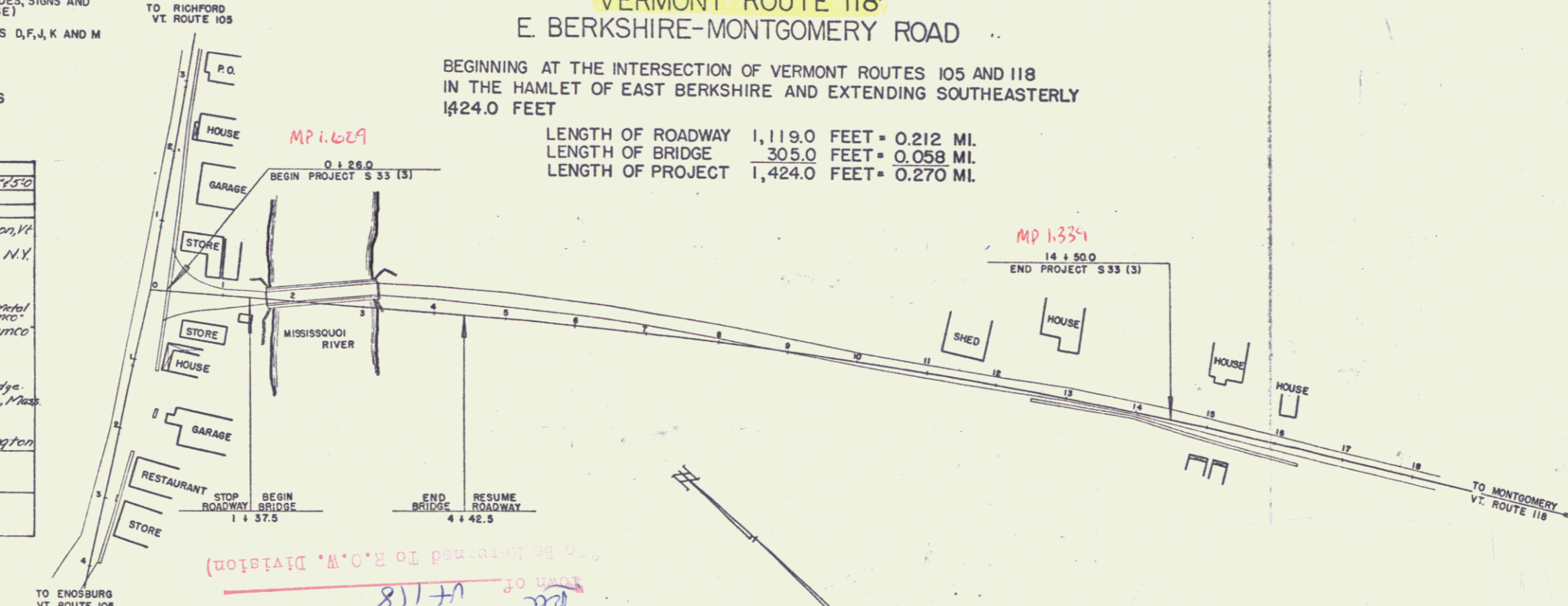
RECORD PLANS

MATERIALS

Course Aggregate	Swanton Lime Works & Nadeau-Johnson, W.
Fine Aggregate	Nadeau-Johnson, W.
Cement	Lehigh Portland Cement Co., Allentown, N.Y.
Un-treated timber piling	Arthur St. Crisp, Montgomery
Reinforcing Steel	W. H. Struck Steel, Burlington
Structural Steel	W. H. Struck Steel, Burlington
Galv. Metal Pipe	W. B. Pondy, St. Albans, N.E. Metal Arms Co.
6" Vit. Sewer Pipe	Reynolds & Son, Barre
Pile Shoes	W. H. Struck Steel Co.
Bridge Paving	Durham Steel Co.
Steel Beam Guard Rail	Durham Steel Co.
Gravel for Sub-base	Durham Steel Co.
Point	Waltham Point of Merit, Waltham, Mass.
Ref. Tar RT-5	Barrett Co., Malden, Mass.
Tar Bitum.	Koppers Products Co., Everett
Bit. Cons. Pav. 1	Eber-Mingella & W. F. Fearing Co., Burlington

Contractor: Oscar L. Olsen
Res. Engrs.: Fred W. Badger & H. F. Earle
Record Plans: J. F. W.

Contract Dated: Nov. 21, 1950
Construction Began: March 6, 1951
Construction Completed: Nov. 1, 1952



GROUND ELEVATION..... DATUM..... LINE.....

GRADE ELEVATION..... DATUM..... LINE.....

CURVE DATA

DEFLECTION ANGLE.....	Δ
DEGREE OF CURVE.....	D
RADIUS OF CURVE.....	R
TANGENT DISTANCE.....	T
LENGTH OF CURVE.....	L
EXTERNAL DISTANCE.....	E
POINT OF INTERSECTION.....	P. I.
POINT OF CURVE.....	P. C.
POINT OF TANGENT.....	P. T.
POINT ON TANGENT.....	P. O. T.

SCALES

TITLE	1" = 100'
TYPICAL	1" = 20'
PLAN	1" = 20'
PROFILE HORIZONTAL	1" = 20'
PROFILE VERTICAL	1" = 10'
CROSS SECTIONS	1" = 5' & 10'

APPROVED: 18 AUG. 1950
H. H. August
CHIEF ENGINEER

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

Pin # 00RS18

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISSIONER OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THE PLANS AND THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF 1948, AS APPROVED JULY 25, 1949, BY THE BUREAU OF PUBLIC ROADS INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE SUBMITTED WITH THE PLANS.

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER

APPROVED:

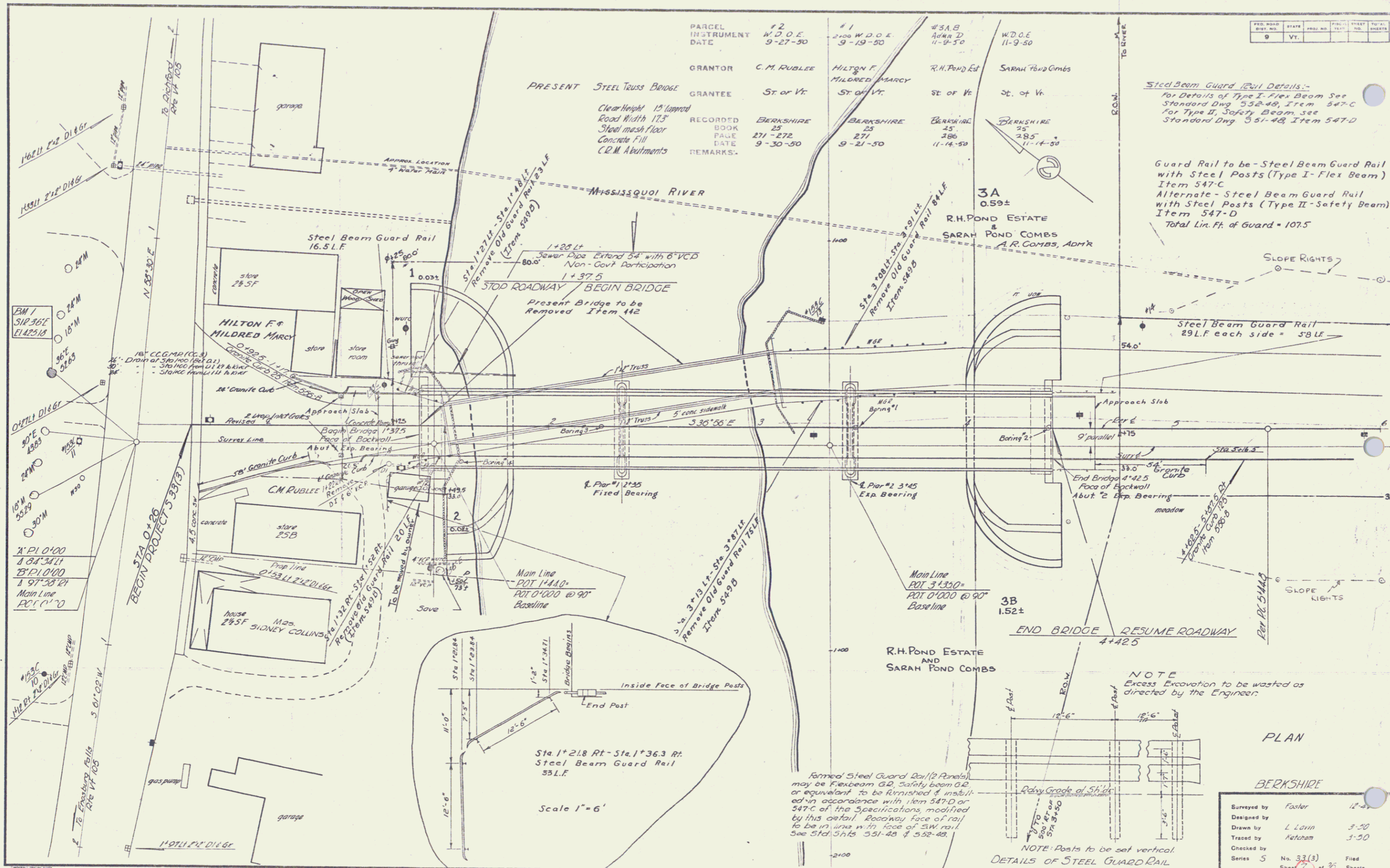
DIVISION ENGINEER DATE

APPROVED 18 AUG 1950
H. H. August
BRIDGE ENGINEER

APPROVED 18 AUG 1950
H. H. August
HIGHWAY ENGINEER

APPROVED 23 1950
R. C. Chace
DISTRICT HIGHWAY COMMISSIONER

SERIES 5 NO. 33 (3) FILED
SHEET 1 OF 36



PARCEL	#2	#1	#3A,B	W.D.O.E
INSTRUMENT	W.D.O.E	W.D.O.E	W.D.O.E	W.D.O.E
DATE	9-27-50	9-19-50	4-9-50	11-9-50
GRANTOR	C.M. RUBLEE	HILTON F. MILDRED MARCY	R.H. POND Est	SARAH POND COMBS
GRANTEE	St. of Vt.	St. of Vt.	St. of Vt.	St. of Vt.
RECORDED BOOK	BERKSHIRE 25	BERKSHIRE 25	BERKSHIRE 25	BERKSHIRE 25
PAGE	271-272	271	286	285
DATE	9-30-50	9-21-50	11-14-50	11-14-50
REMARKS				

Steel Beam Guard Rail Details:-
 For Details of Type I, Flex Beam See Standard Dwg 552-48, Item 547-C
 For Type II, Safety Beam see Standard Dwg 551-48, Item 547-D

Guard Rail to be - Steel Beam Guard Rail with Steel Posts (Type I - Flex Beam) Item 547-C
 Alternate - Steel Beam Guard Rail with Steel Posts (Type II - Safety Beam) Item 547-D
 Total Lin. Ft. of Guard = 107.5

NOTE
 Excess Excavation to be wasted as directed by the Engineer.

Formed Steel Guard Rail (2 Panels) may be Flexbeam G.R., Safety beam G.R. or equivalent to be finished & installed in accordance with Item 547-D or 547-C of the Specifications modified by this detail. Roadway face of rail to be in line with face of SW rail. See Std. Dwg. 551-48 & 552-48.

NOTE: Posts to be set vertical.
 DETAILS OF STEEL GUARD RAIL

Surveyed by	Foster	12-21
Designed by	L. Lovin	3-50
Drawn by	Natcham	3-50
Traced by		
Checked by		
Series	5	No. 33(3) of 36
Sheet		Filed

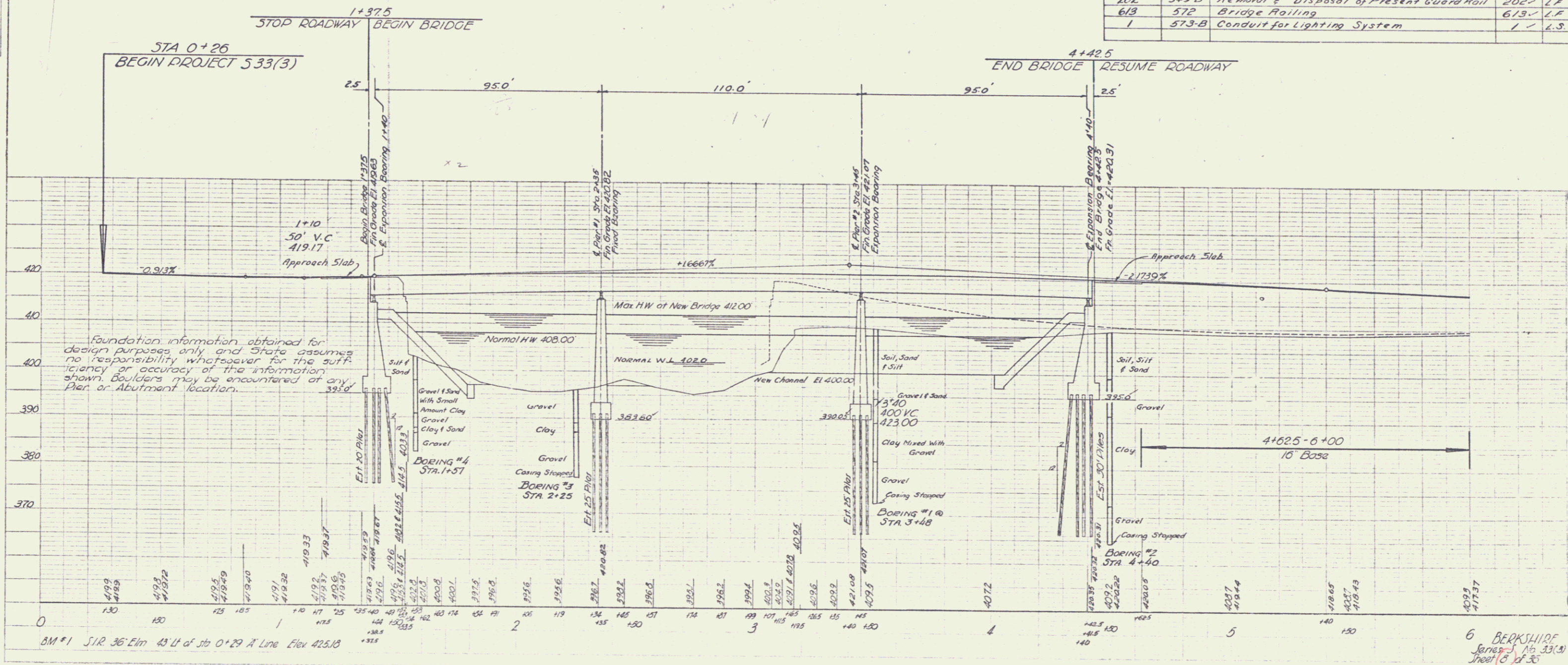
PLAN	DATE	BY
DATE BOOK	DATE	DATE
DATE	DATE	DATE

4-26	3-20
2-20	3-20
2-20	3-20

BRIDGE DATA		
	PRESENT	PROPOSED
Overall Span along @ Flood	163'	305'
Roadway width face to face of Curb	17.3'	30'
Clear Span along @ Flood	155'	297'
Clear Span Normal to Stream	152'	297'
Clear Hgt to top Bridge Seat	15'	17.2'
Max High Water Elev.	414'	412'
Normal High Water Elev.	410'	408'
Worway Area (Below Bridge Seat)	2770 ^{sq}	4205 ^{sq}
Normal to Stream	2460 ^{sq}	3419 ^{sq}
Normal to Stream	1850 ^{sq}	2775 ^{sq}
Stream Velocity	7 per Sec.	
Drift	None	
Scour	Light	

LIST OF SHEETS (FOR BRIDGE)	
11	Preliminary Information Sheet
12	Channel Plan (50 scale)
7	Plan (20 scale)
3	Profile
13	Bridge Plan & Elevation (Also Lighting Conduits)
14	Abutment No. 1
15	Piers Nos 1&2
16	Abutment No. 2
17	Superstructure (Also Lighting Conduits)
18	Details of Piling
19	Expansion Plate Details
20	Bearing Devises & Splice & Cover Plates
21	Approach Slabs
33-36	Channel Sections (4 sheets)
27	Standard Dwg. SB-2, Detail S.206
29	" " SB-20, Details A,F,U,K,M
25	" " SB-11, Barricades, Signs & Lights
5	Grade Sheet
4	Channel Earthwork Sheet

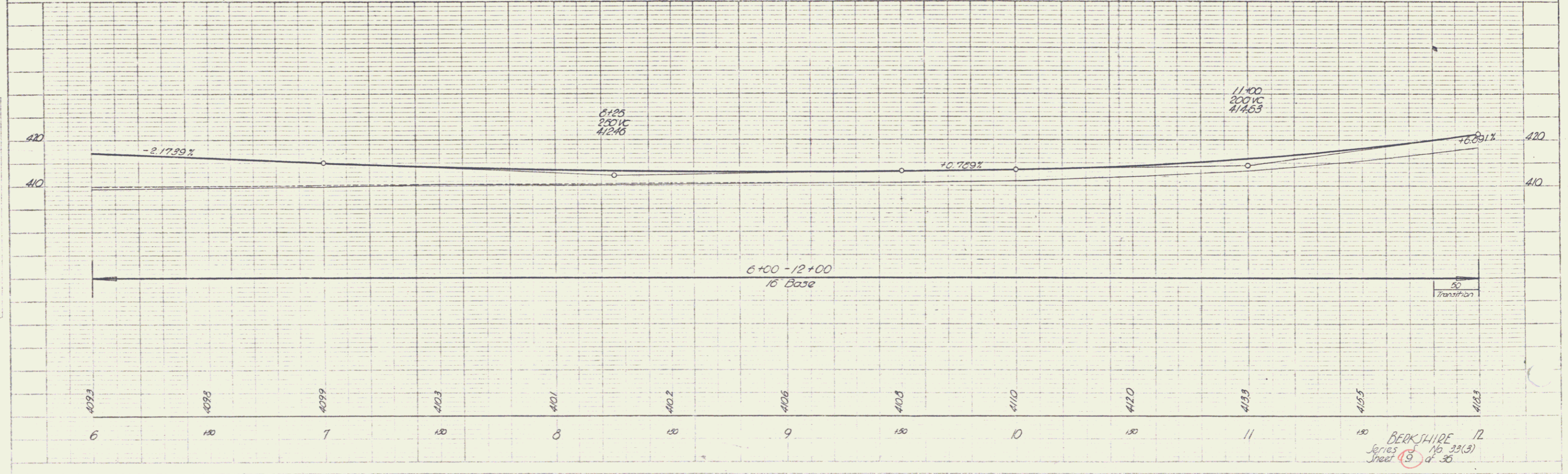
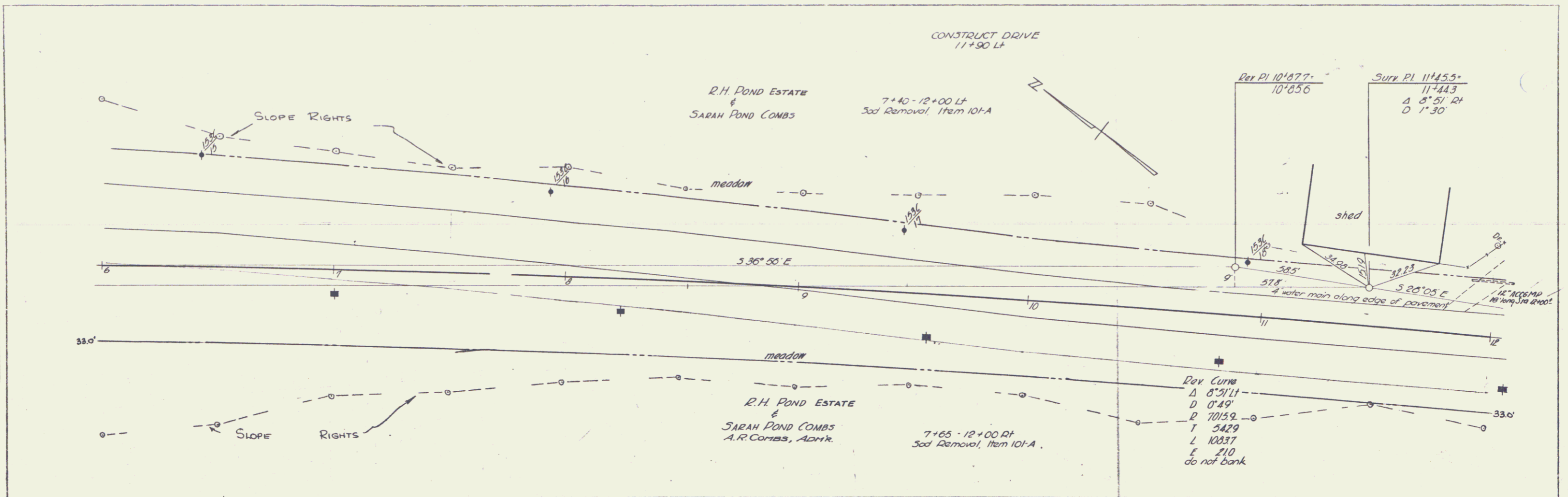
FINAL QUANTITIES		ESTIMATED QUANTITIES (FOR BRIDGE)	
NO	ITEM	QUANT	UNIT
12303	Channel Excavation	10400	C.Y.
741	Structure Excavation	750	C.Y.
1	Maint of Traffic for Bridge Projects	1	L.S.
127	381 Bit Conc. Pavement for Bridge Floors	428	Tons
601	401-B Concrete Class "B"	584	C.Y.
343	401-C Concrete Class "C"	320	C.Y.
114101	402 Reinforcing Steel	143,775	LBS.
781239	403-A Structural Steel for Superstructure (Exclusive of Piling)	773,780	LBS.
1	441 Temporary Bridge	1	L.S.
1	442 Removal of Present Superstructure	1	L.S.
1	501 Furnishing Equip. for Driving Piles	1	L.S.
2060	502A Untreated Timber Piling	4050	L.F.
1434	502A1 Cut-offs, Untreated Timber Piling	486	L.F.
639	526 Riprap for Bank Protection	845	C.Y.
743	521 Stone Fill (Modified)	775	C.Y.
91	407 Asphaltic Asbestos Coating	91	S.Y.
202	549-B Removal & Disposal of Present Guard Rail	202	L.F.
613	572 Bridge Piling	613	L.F.
1	573-B Conduit for Lighting System	1	L.S.



6 BERKSHIRE
Series 1, 16, 33(3)
Sheet 6 of 30

PLAN
 DATE 4-20
 DRAWN BY L. Lavin
 CHECKED BY J. Lavin
 TITLE 4 POWER
 SHEET NO. 12 OF 12
 PROJECT NO. 10010

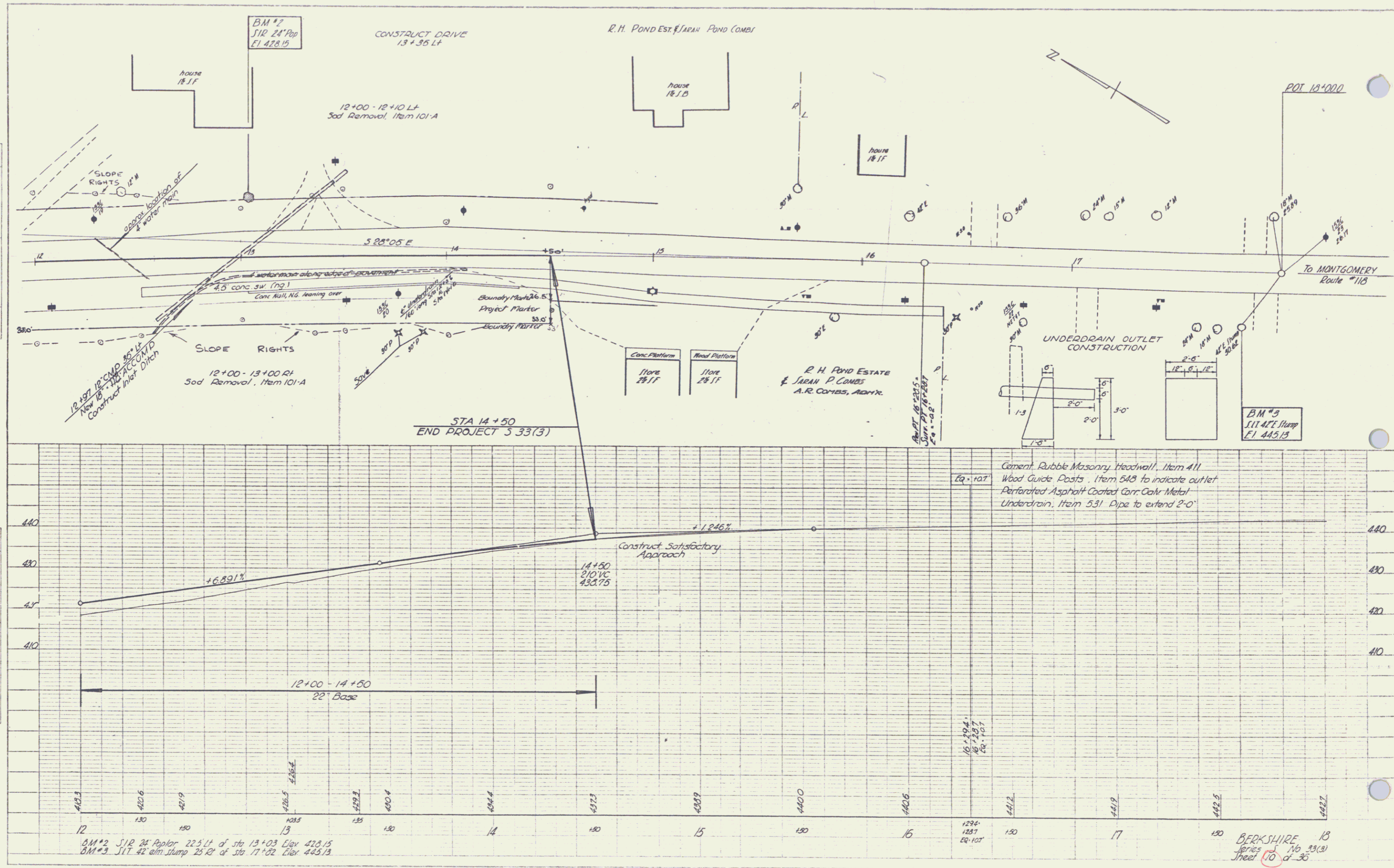
PROFILE
 DATE 4-20
 DRAWN BY L. Lavin
 CHECKED BY J. Lavin
 TITLE 4 POWER
 SHEET NO. 12 OF 12
 PROJECT NO. 10010



BERKSHIRE 12
 Series 10 33(3)
 Sheet 12 of 30

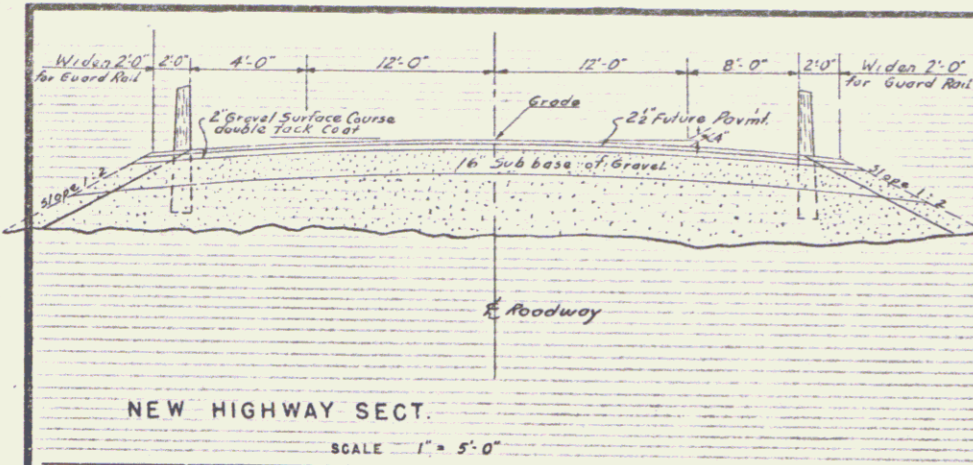
PLAN
 SHEET NO. 18
 DATE 3-28-38
 DRAWN BY L. L. LAMM
 CHECKED BY L. L. LAMM
 PROJECT NO. 13+03
 NOTE BOOK NO. 13+03
 PLAN NO. 18

PROPOSED
 SHEET NO. 18
 DATE 3-28-38
 DRAWN BY L. L. LAMM
 CHECKED BY L. L. LAMM
 PROJECT NO. 13+03
 NOTE BOOK NO. 13+03
 PLAN NO. 18



BERKSHIRE 18
 Series 116, 23(3)
 Sheet 10 of 30

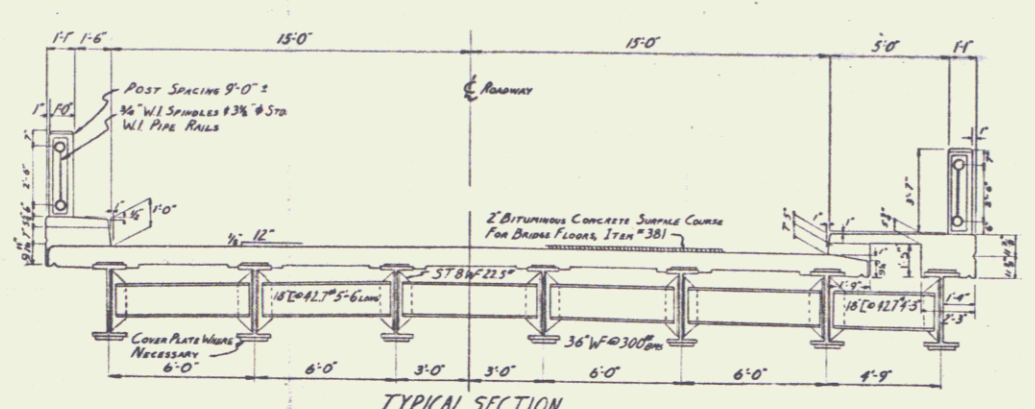
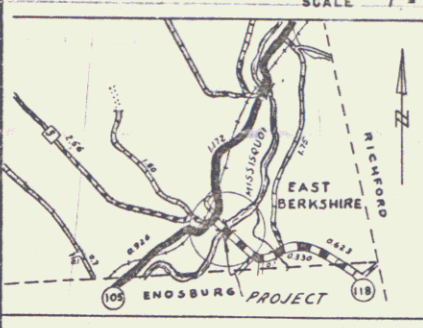
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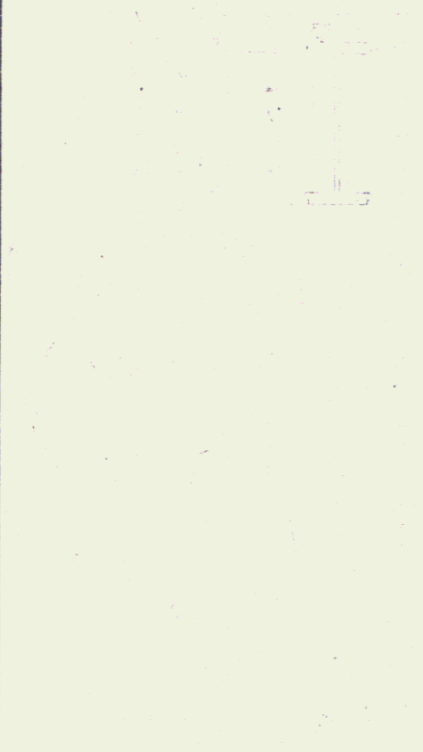
SEE PLAN & PROFILE SHEET

NEW HIGHWAY SECT.

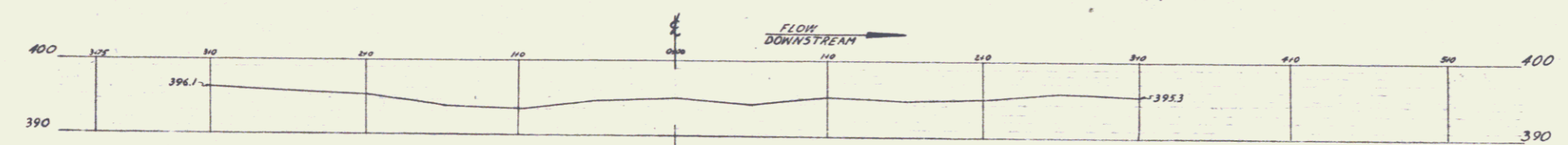
NEW HIGHWAY PROFILE ALONG E



TYPICAL SECTION
Scale 1/4"=1'-0"



PLAN
SCALE



PROFILE OF PROPOSED STREAM CHANNEL
SCALE
Horz 1"=50'
Vert 1"=10'

Highway No. 110 Name of Highway _____
 Structure No. 29 County FRANKLIN Town BERKSHIRE
 Approved _____ Date _____
 Bridge Engineer, Dist. No. 9

EXISTING STRUCTURE
 1. Posted loading of existing structure HA (4 Tons)
 2. Location and type of existing structure Log Sta. 82+30.0 Steel Truss Surface 811 Gridy Cons.
 3. Underclearance elevation of existing structure 41.0
 4. What disposition should be made of the existing structure and probable cost of removal Remove - \$1200.00
 5. Should existing structure be utilized to maintain traffic during construction of new structure No
 6. Should new temporary structure be built Yes
 7. Ordinary high water surface elevation of existing structure or structures up or down stream 41.0
 8. Extreme high water of existing structure 41.0
 9. Span and waterway area below ordinary high water surface elevation of existing structure or structures up or down stream Span 18'-0" Area 185.0 sq. ft.
 10. Type of foundation under existing abutments Same as at new site
 11. If existing structure is to be widened or extended, attach sketch containing complete data to prepare plans for widening or extending and to determine safe loading capacity, substructure, and superstructure.

NEW STRUCTURE
 1. Recommended type of structure Cast-in-place T Beam, Conc. Floor, 30" Roadway, 11" Walkway, 11" & 6" W.C.
 2. Recommended clear span or spans
 Measured parallel to & new highway 2-25'11" End Spans; 1-110'4" Center Span
 Measured at right angles to & stream " " " "
 3. Are there objections to a pier in the stream, answer yes or no No
 4. Ordinary high water elevation of new structure 40.8
 5. Ordinary elevation of water at new structure 40.5
 6. Extreme high water elevation of new structure 41.2
 7. Does stream reach its maximum high water elevation rapidly No Is ordinary rise rapid No
 8. Low water elevation at new structure 39.8
 9. Drainage area in acres above structure 365.000 Character of terrain Hilly
 10. Is stream ever dry No
 11. Velocity of stream at high water stage 7 FT. Per Sec.
 12. Recommended waterway area below ordinary high water elevation, measured at the tail of stream 8600
 13. Does erosion occur Yes
 14. Does stream carry light, medium or heavy drift and ice Light
 15. Should roadways be banked? If so, on what side Yes Both sides? Call Wall's Submitt
 16. Are sidewalks required? If so, on what side Yes Both sides? Call Wall's Submitt
 17. Recommended type of pavement Bituminous Conc. Pavement
 18. Traffic to be maintained under what item no. 2, 10 or two ways? One Probable cost \$20.00
 19. Probable cost of clearing and grubbing stream channel at structure site None
 20. Should provisions be made for public utilities Conduit for L.L. Other: Not required to date
 21. Estimated allowable load on foundations 20 tons Should piles be used? Yes Est. Lft. 20-25 ft
 Bridge designed for H-20 loading.

FOUNDATION INFORMATION
 Obtained for design purposes only and photo assumes no responsibility whatsoever for the sufficiency or accuracy of the information shown. Borehole may be accompanied by any, Plan, or other location.

Station	Soil	Depth (ft)	Remarks
420	On New	0	420
410	On New	0	410
400	Soil Sand & Silt	16	Silt Sand
390	Gravel & Sand	20	Gravel & Sand
380	Clay mixed with Gravel	20	Clay mixed with Gravel
370	Gravel	10	Gravel
360	Casing Stopped Hard packed Gravel	21	Casing Stopped Hard packed Gravel
350	Boring #1	21	350
	Boring #2	21	
	Boring #3	21	
	Boring #4	21	

PRELIMINARY INFORMATION SHEET

DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS

STATE OF VERMONT
 DEPT. OF HIGHWAYS

RECOMMENDED FOR APPROVAL:

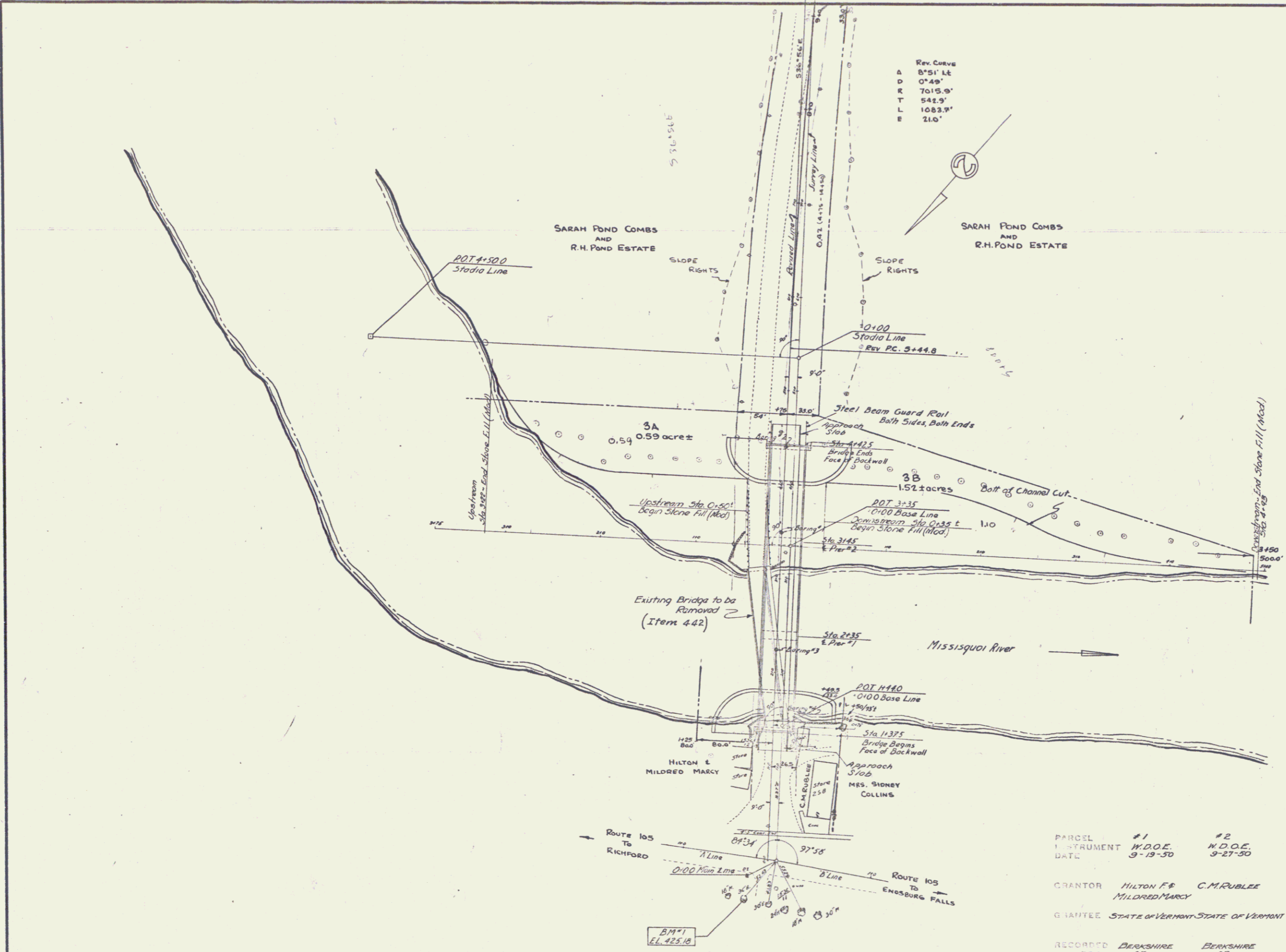
DISTRICT ENGINEER _____ DATE _____

APPROVED: _____

DIVISION ENGINEER _____ DATE _____

CORRECT April 3, 1950 APPROVED April 3, 1950
 W. J. [Signature] CHIEF ENGINEER
 BERKSHIRE
 5-33 (3)

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	Vt.				



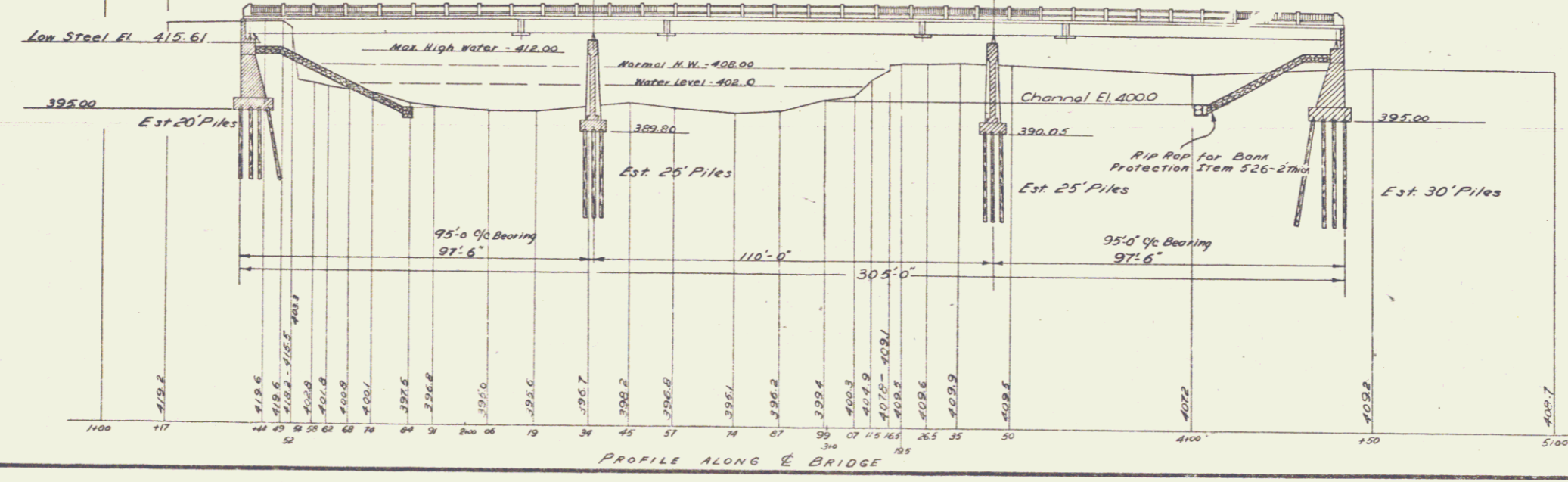
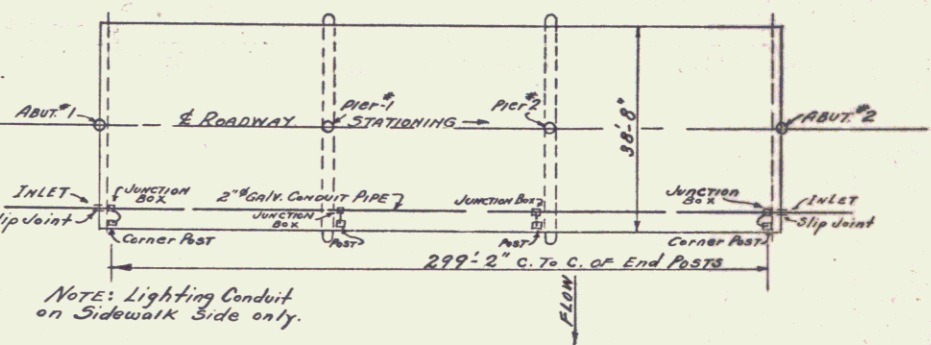
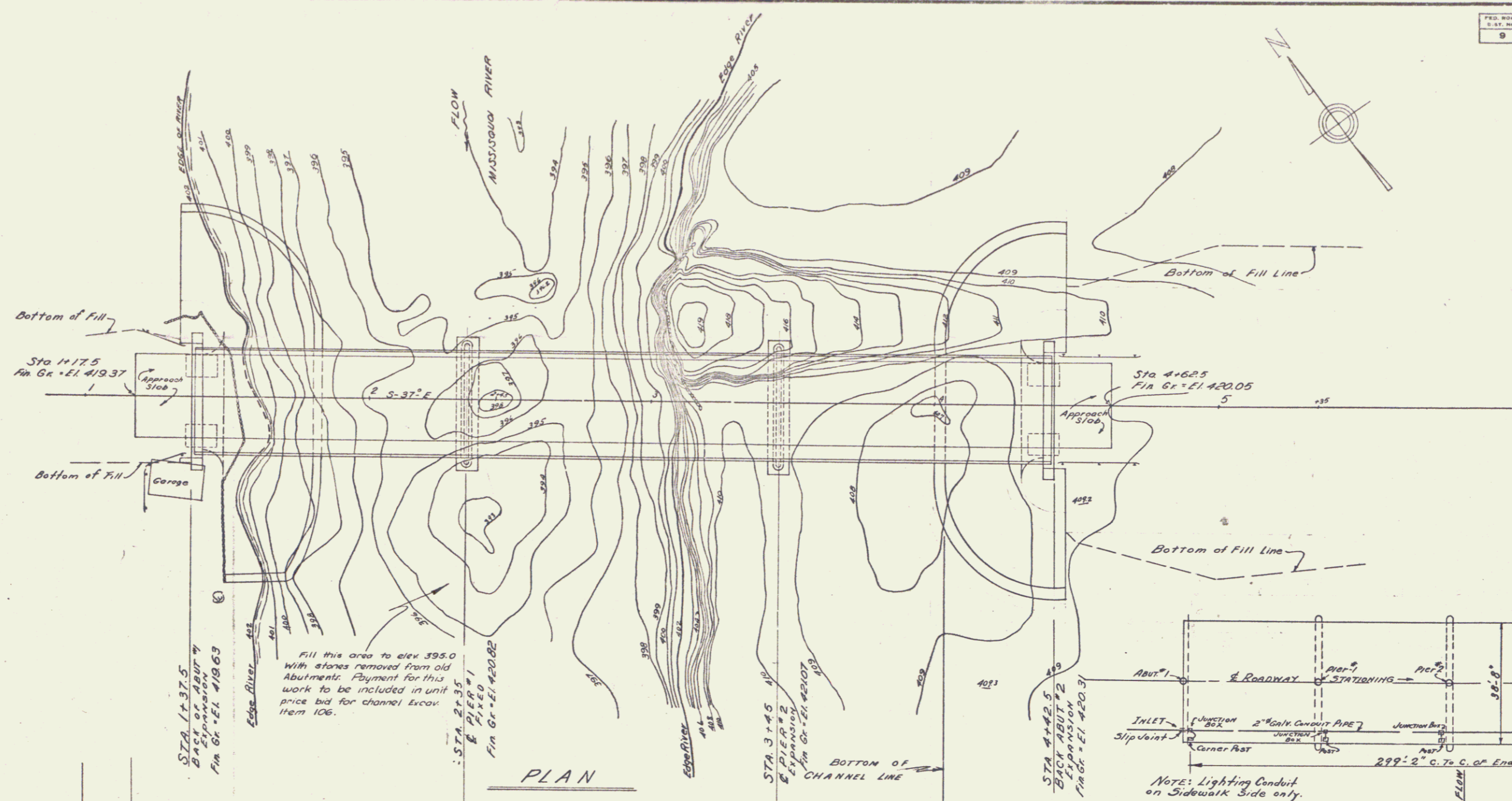
REV. CURVE
 A 8°51' Lt
 D 0°49'
 R 7015.9'
 T 542.9'
 L 1083.7'
 E 21.0'

PARCEL #	#1	#2	#3A&B
INSTRUMENT	W.D.O.E. 9-19-30	W.D.O.E. 9-27-30	W.D.O.E. 11-9-30
DATE			
GRANTOR	HILTON F & MILDRED MARCY	C.M. RUBLEE	SARAH POND COMBS
GRANTEE	STATE OF VERMONT STATE OF VERMONT STATE OF VERMONT		
RECORDED	BERKSHIRE 25	BERKSHIRE 25	BERKSHIRE 25
BOOK	271	271-72	225
PAGE	271	271-72	225
DATE	9-21-30	9-30-30	11-14-30
REMARKS			

CHANNEL PLAN
 BERKSHIRE 533(3)
 Scale = 1" = 50'

Surveyed by	B. FOSTER	Dec 4
Designed by		
Drawn by	E. BUSWELL	FA 50
Traced by	S.N.	
Checked by		
Series	S	No. 33(3)
Sheet	12	of 35
Filed		

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	Vt.				



BRIDGE PLAN & ELEVATION
BERKSHIRE
S-33 (3)

Surveyed by	FOSTER
Designed by	
Drawn by	H.A.C.
Traced by	N.A.C.
Checked by	S.N.
Series	5 No. 33 (3) Filed
	Sheet 13 of 16 Sheet's

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