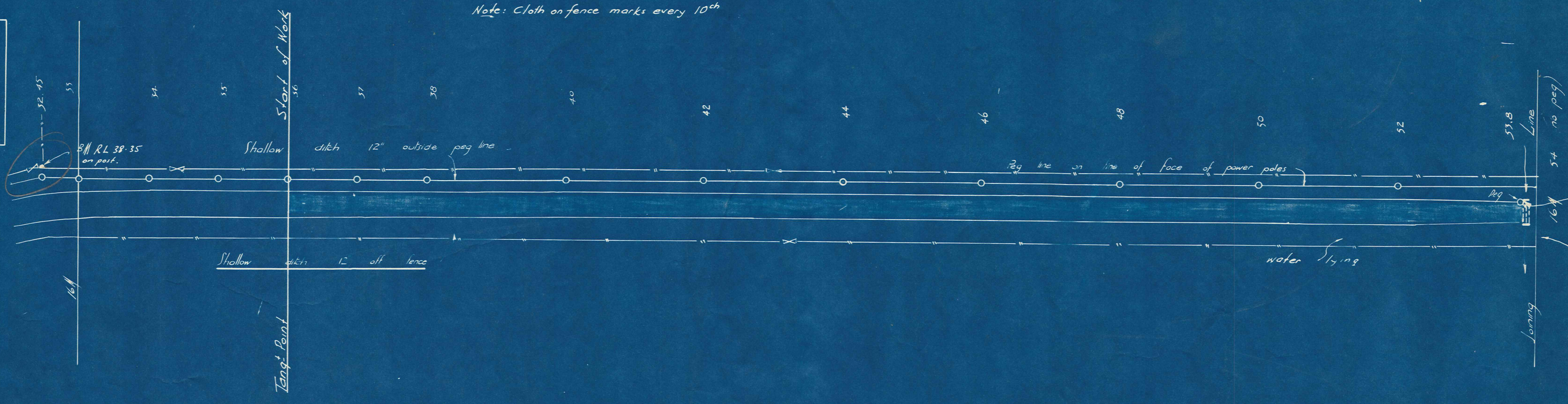
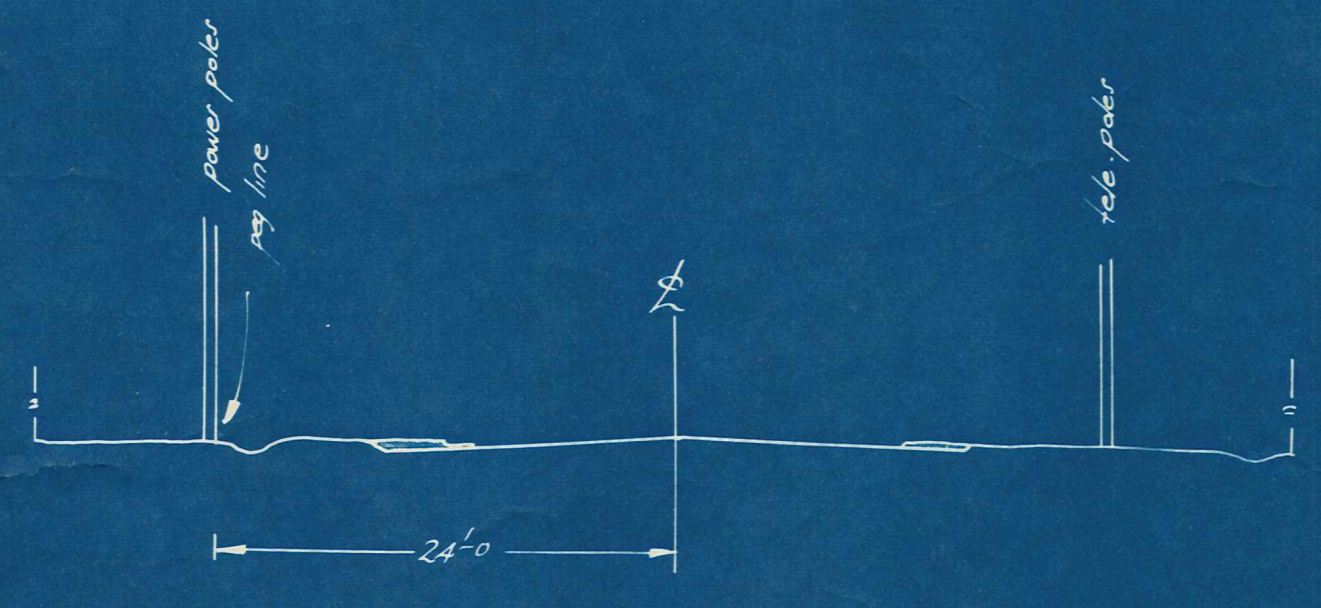


$\Delta = 12^{\circ} 20'$   
 $SV = 50 \text{ mph}$   
 $AO = 3.56 \text{ ch}$   
 $AX = 13.0 \text{ lk}$   
 $SE = 0.90 \text{ in/lk}$   
 $EW = 1.0$   
 $R = 16.6 \text{ ch}$

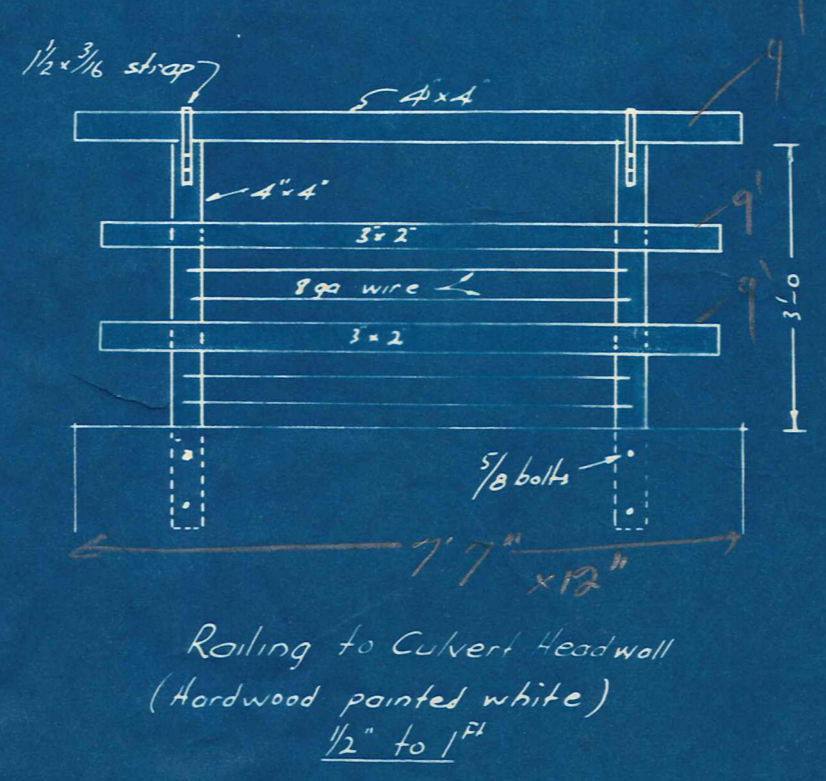
Note: Cloth on fence marks every 10<sup>th</sup>



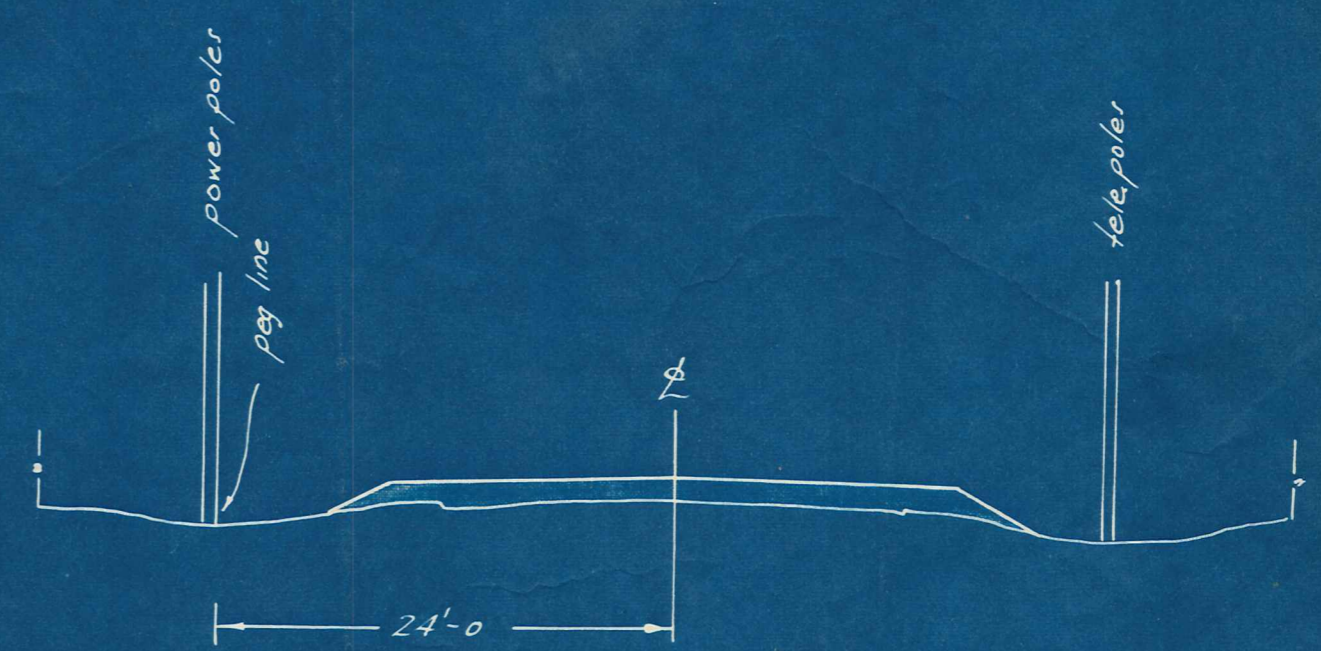
Existing twin 24" culvert to remain 22' between head walls, but erect timber railing with stock wires  
 on Conc. headwall RL 37.61  
 as an interim to clearing and deepening ditch down-stream dig a hole here and maintain clear, so as to avoid culvert silling up.



Typical X-Section  
16M36 - 16M44



Railing to Culvert Headwall  
(Hardwood painted white)  
1/2" to 1"



Typical X-Section  
16M44 - 16M54



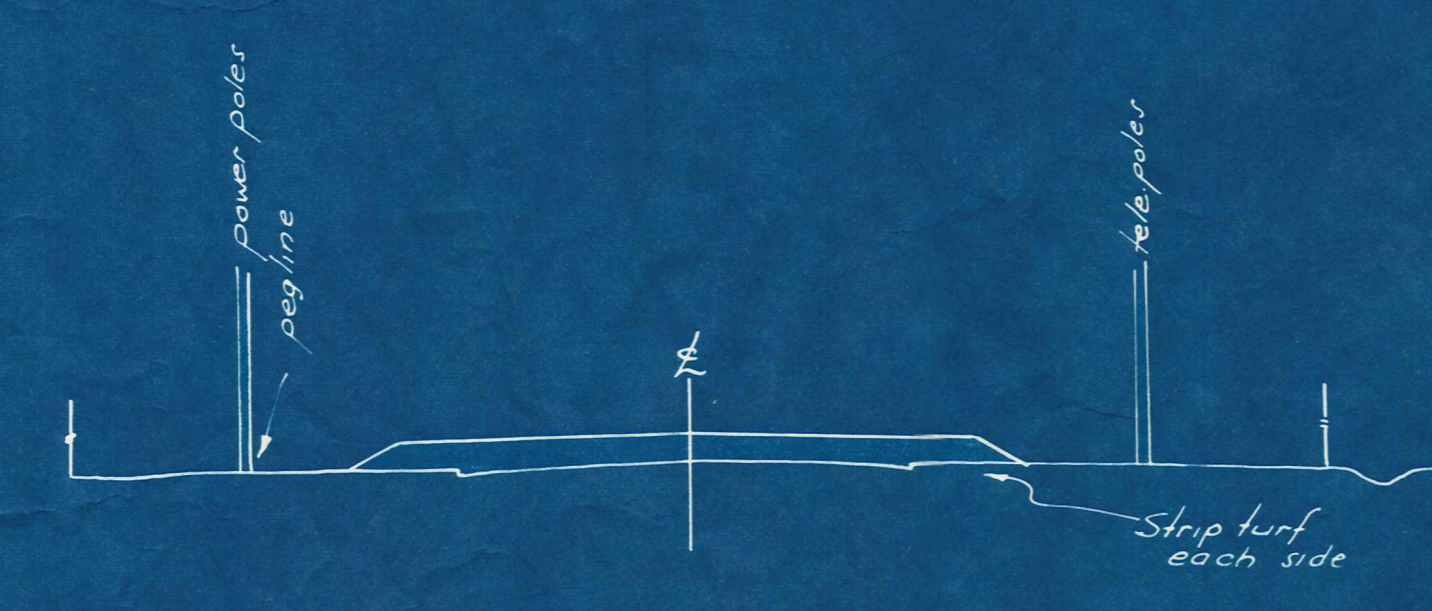
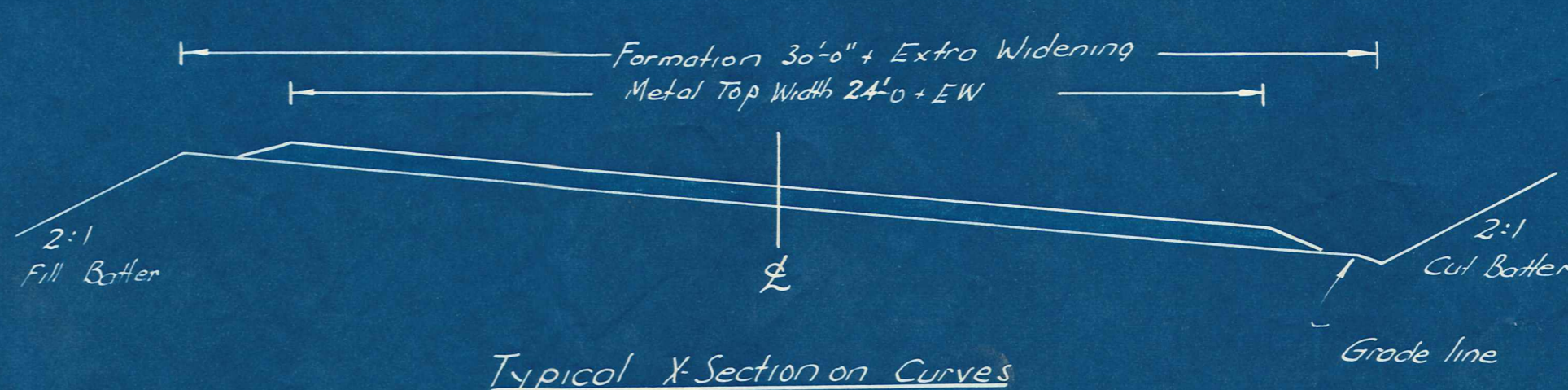
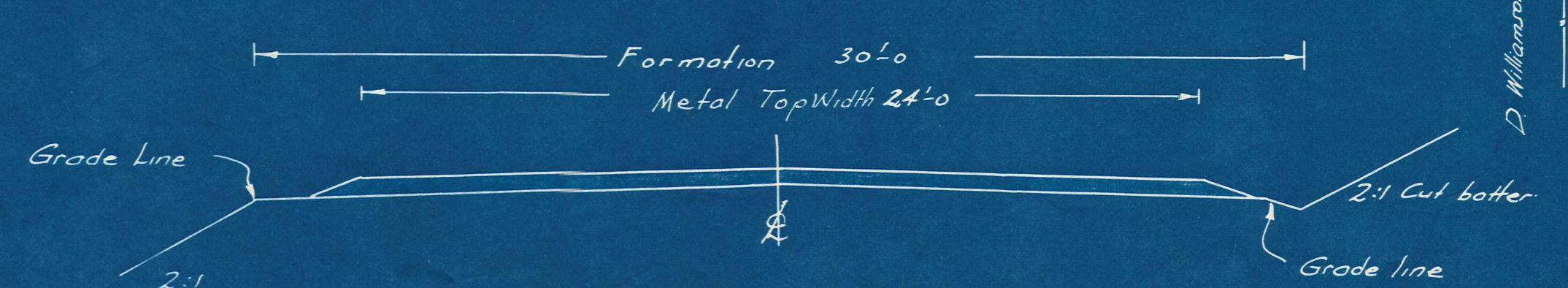
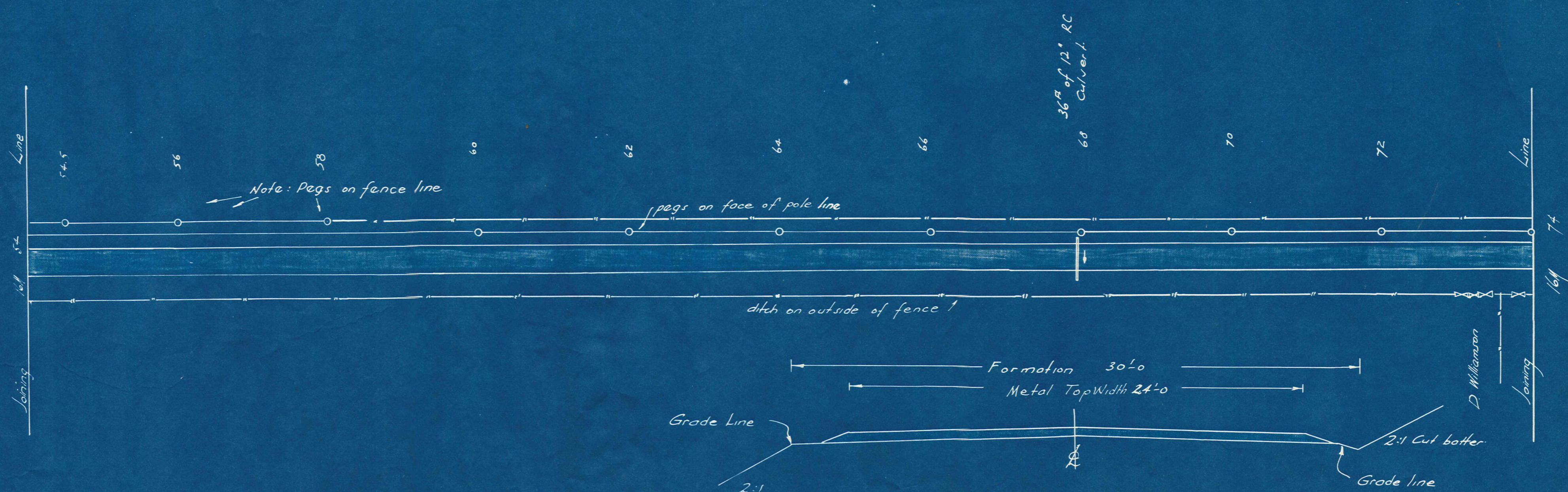
Start here

900 cyd truck measure Borrow to fill

	16M33	34	35	36	37	38	40	42	44	46	48	50	52	16M54	54	16M54
20 ft above Datum								Existing ±		New formation grade line						
Distance																
± left of Pilot Peg																
± right of Pilot Peg																
Formation Level				as		at	present									
Level of Peg	34.71	34.39	34.35	34.47	34.56	34.93	34.93	35.04	35.59	35.46	35.54	35.68	35.82	36.10	36.10	36.39
Grade				Existing		Grades		Satisfactory				0.07 ft per chain				
Alignment								straight								

Note: this represents a fill of 6" over exist road at culvert before adding Base Course

10" to 1" Vert  
 Scales: 1" to 1" Horiz



Typical X-Section of built-up areas

Note: this level represents 6" fill over exist. surface of Culvert before spreading Base Course

530 cyd truck measure Borrow to fill

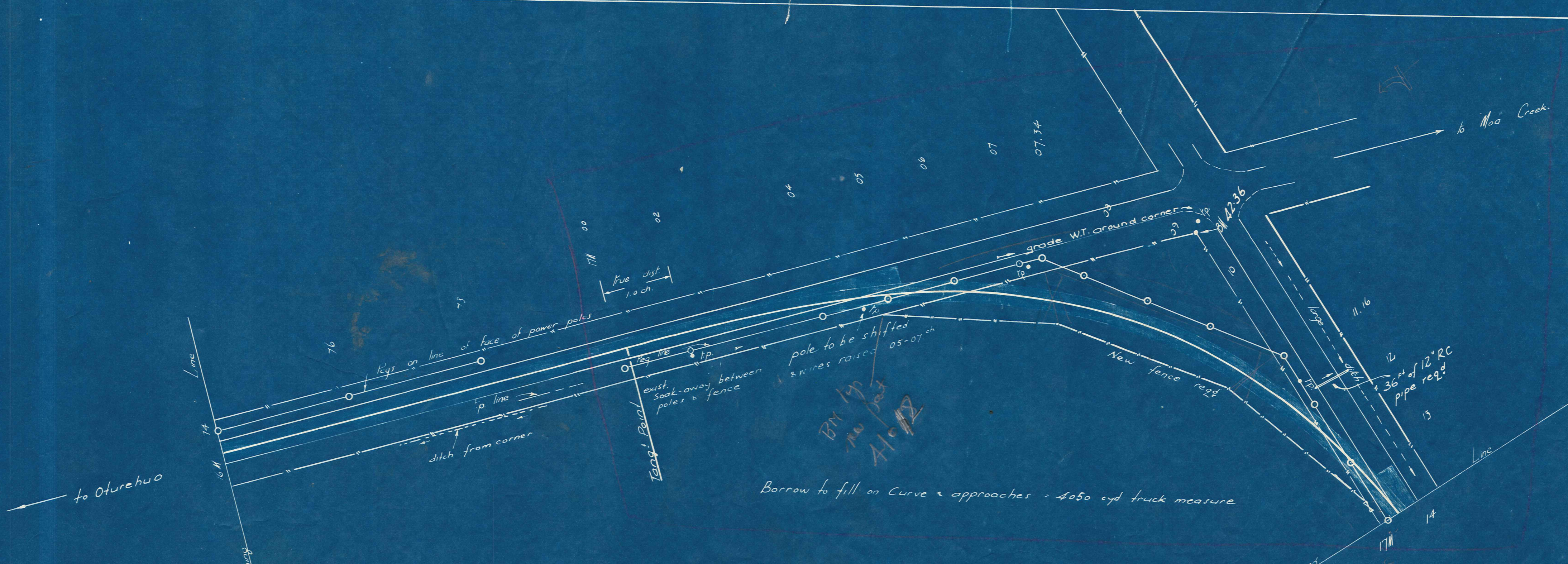
Exist.  $\phi$

720 cyd truck measure Borrow to fill

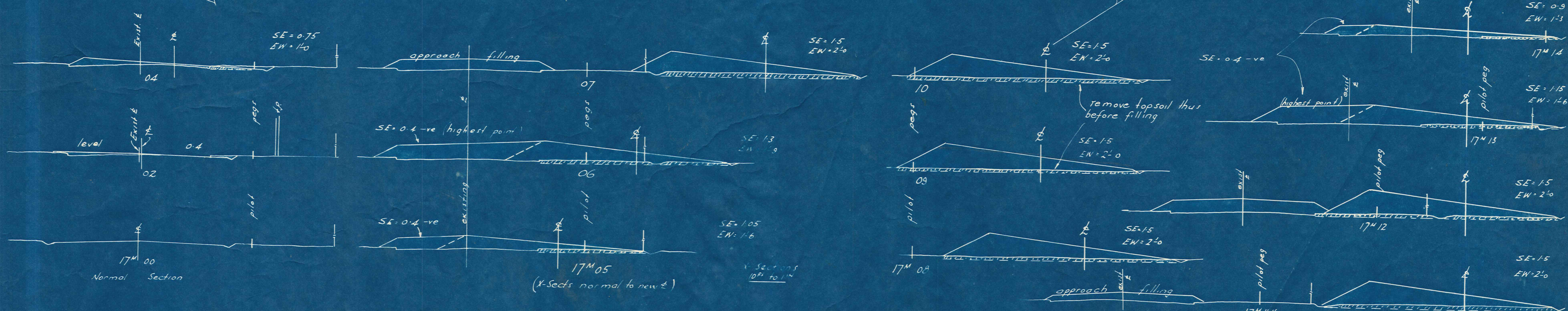
	New Formation										Inlet invert to be 34.75 Outlet " " " 34.50		
20' above Datum													
Distance	6.5	54.5	56	58	60	62	64	66	68	70	72	74	
$\pm$ Left of Peg													
$\pm$ Right of Peg	24.0	24.0	24.0	24.0	23.6	23.6	23.0	23.0	22.6	22.6	22.0	22.0	
Formation	36.10		35.85	35.60	35.35	35.10	35.65	36.20	36.30	36.40	36.50	36.60	
Level of Peg	34.36		34.88	34.66	34.97	35.61	35.64	36.22	36.04	34.89	35.54	36.41	
Grade	grade 0.125 ft/ch					exist. grade			grade 0.05 ft/ch				
Alignment	S t r a i g h t												

10' to 1" Vert  
Scales: 1ch to 1" Horiz

16M 54 - 16M 74



$\Delta = 71^{\circ} 30'$   
 $SV = 45 \text{ mph}$   
 $AO = 8.83$   
 $R = 8.15$   
 $SE = 1.5 \text{ in/ft}$   
 $EW = 2'-0"$   
 central  $\odot$  arc



	16M 74	76	78	17M 00	02	04	05	06	07	07.34	08	09	10	11.16	12	13	14
Distance																	
ft left of peg				19'-2"	18'-0"	18'-6"	4'-6"			07'-34"				11'-16"	12	2'-6"	13'-0"
ft right of peg	22'-0"	22'-6"	23'-0"														
Formation Level				37.20	37.30	37.50	37.60	37.70	37.80	37.90	37.90	38.00	37.90	38.12	37.70	37.60	37.50
Level of Peg	36.41	36.36	36.35	36.93	37.09	37.39	37.67	37.90	37.84	37.85	38.00	37.79	38.12	37.76	37.75		
Grade	existing grade satisfactory			grade 0.1 ft per chain							grade 0.1 ft per chain						
Alignment	Straight			45 mph transition				Circular Arc				45 mph trans.					

Scales: 10 ft to 1 in Vert  
 1 ch to 1 in Horiz

16M 74<sup>c</sup> - 17M 14<sup>c</sup>

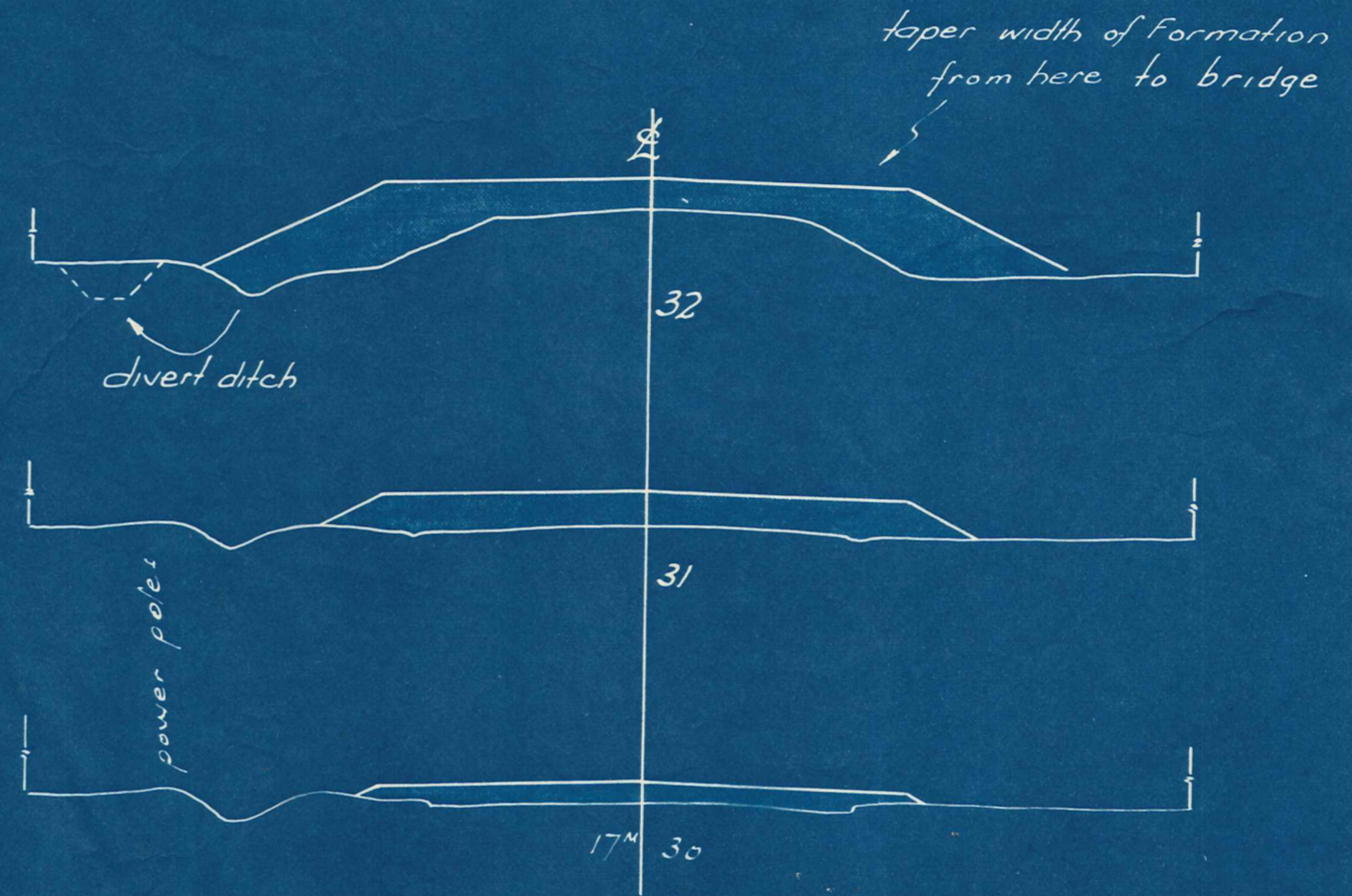
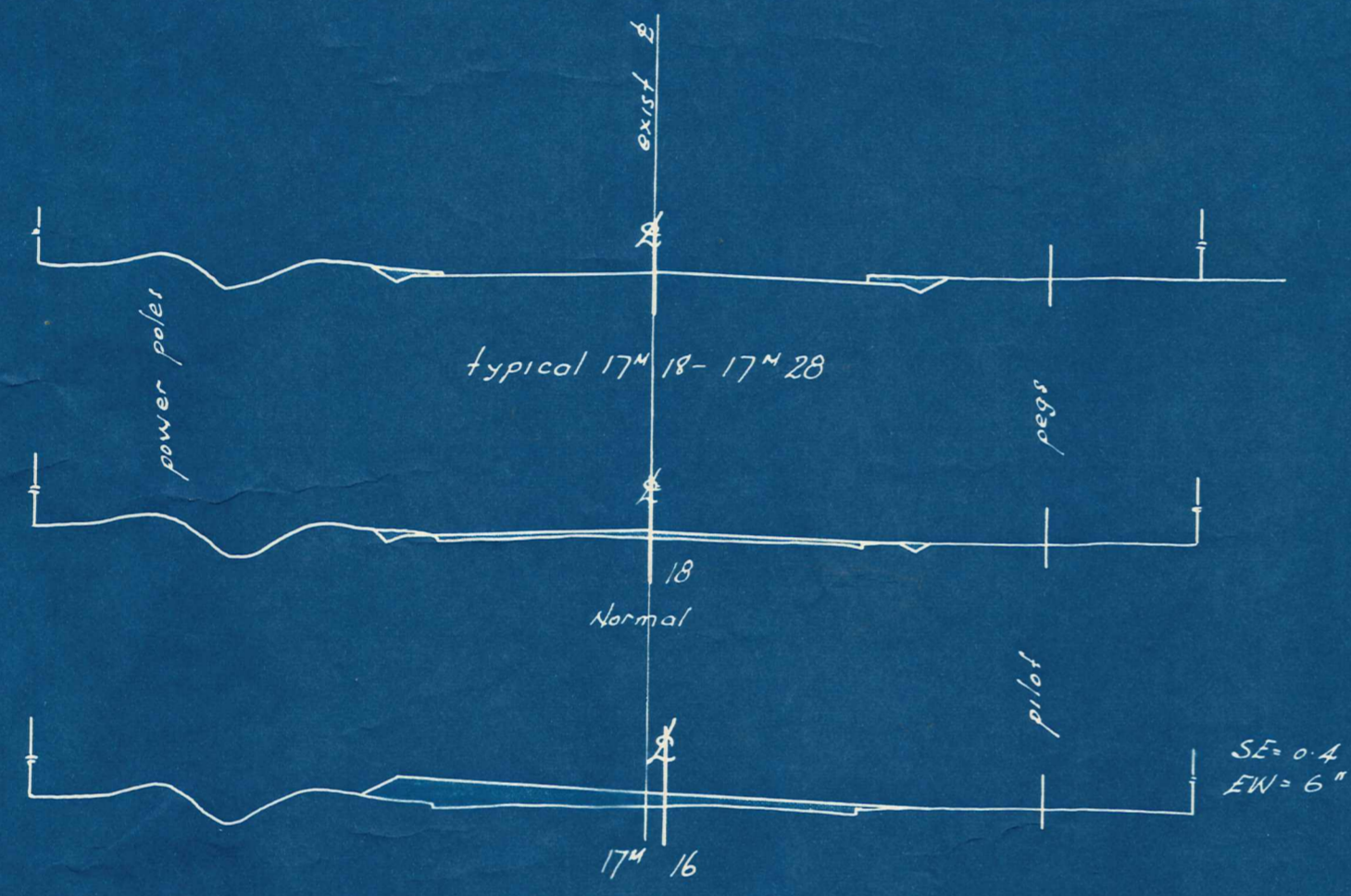
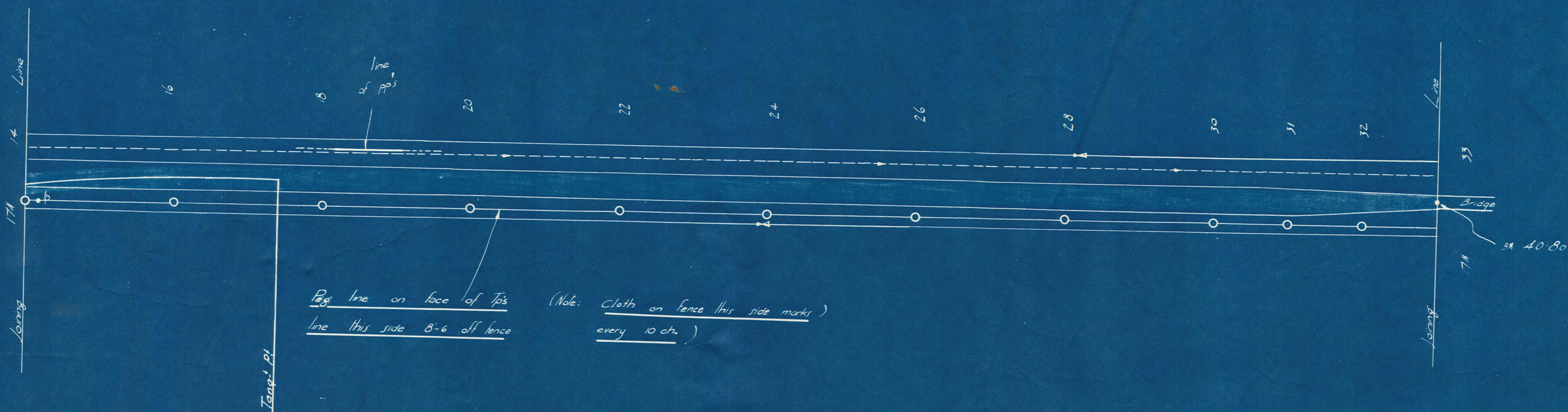
VINCENT COUNTY COUNCIL.

IDABURN - OMAKAU M.H. NO. 227. 16M36-17M 33.

DUFFILL, WATTS & KING  
 CIVIL ENGINEERS AND SURVEYORS  
 DUNEDIN and INVERCARGILL

NAME: [Signature]  
 DATE: 1/5/52  
 CHECKED: [Signature]  
 TRACED: [Signature]

JOB NO.  
 2813/3.  
 F.B.K. 138 FILE NO. 5/2/53



Station	14	16	18	20	22	24	26	28	30	31	32	33
20' above Datum												
Distance	17M											17M
± left of peg	18-0	21-6	22-6	"	"	"	"	"	"	"	"	17M
± right of peg												
Formation Level	37.50	37.30	37.10	36.90	36.70	36.50	36.30	36.10	37.00	36.70	36.21	40.30
Level of Peg	37.75	37.26	37.82	39.83	37.67	36.89	37.24	36.88	36.49	35.58	36.21	40.80
Grade	grade 0.1 ft per chain											
Alignment	45 mph transition						straight			Vertical Curves		

800 cfd truck measure Borrow to Fill

Bridge

wd thus

Scale: 10" to 1" Vert, 1" to 1" Horiz

VINCENT COUNTY COUNCIL

IDABURN - OMAKOU M. H. NO. 227. 16M3617M 33.

DUFFILL, WATTS & KING  
 CIVIL ENGINEERS AND SURVEYORS  
 DUNEDIN and INVERCARGILL

17m 14 — 17m 33

SUBMITTED BY: [Signature] DATE: Aug 57  
 DRAWN BY: [Signature]  
 CALCULATIONS BY: [Signature]  
 CHECKED BY: [Signature]  
 TRACED BY: [Signature]

JOB NO. 2813/4.  
 F.B.K. 138 FILE NO. 9/4/3