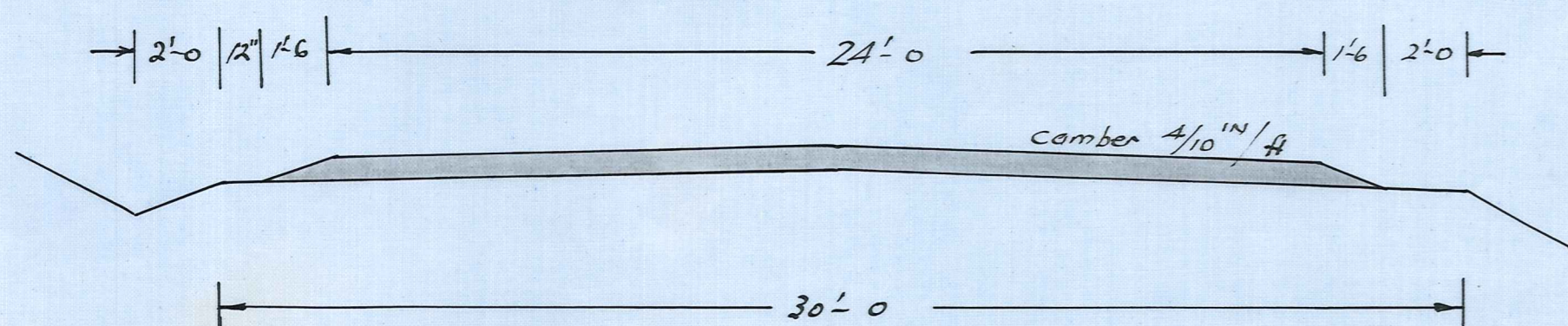
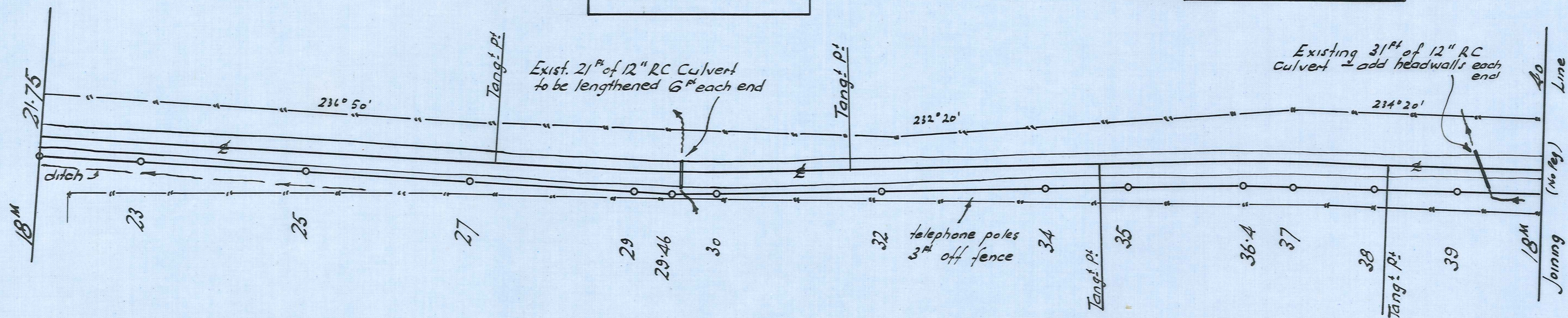


$\Delta = 4^{\circ}30'$   
 $SV = 50 \text{ mph}$   $AO = 2.16 \text{ ch}$   
 $R = 27.5 \text{ ch}$   $AX = 28.1 \text{ k}$   
 $SE = 0.55 \text{ m/ft}$   $EW = \text{Nil}$

$\Delta = 3^{\circ}00'$   
 $SV = 50 \text{ mph}$   $AO = 1.76 \text{ ch}$   
 $R = 33.7 \text{ ch}$   $AX = 1.5 \text{ k}$   
 $SE = 0.45 \text{ m/ft}$   $EW = \text{Nil}$

End of Existing Seal - Poolburn.



Typical X-Section to base course standard

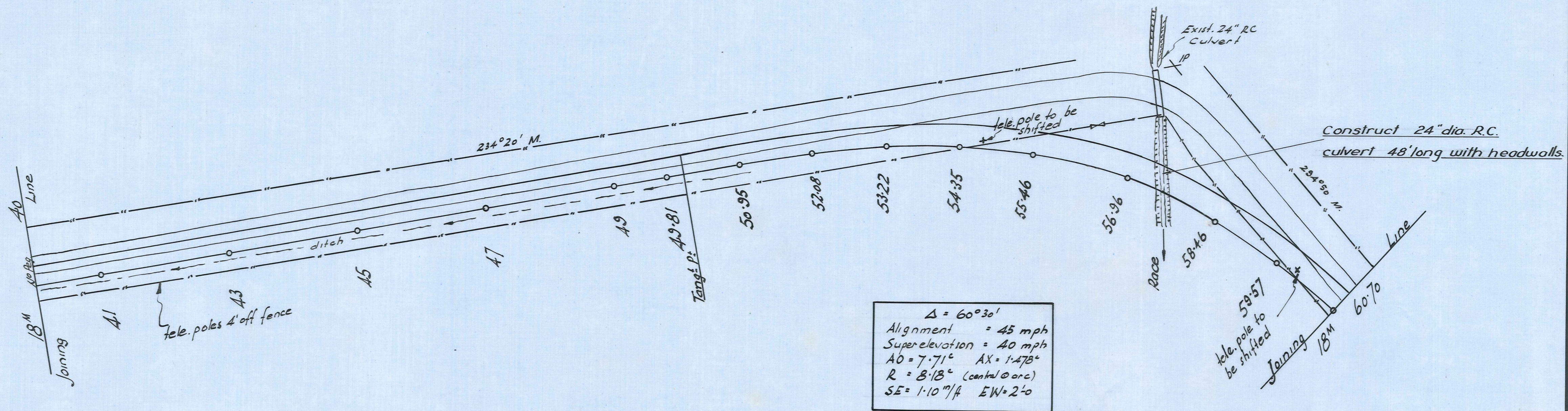
Cut to fill  
 ← 190 c yds  
 250 c yds → 18<sup>m</sup> 41  
 280 c yds → 18<sup>m</sup> 56  
 350 c yds → 18<sup>m</sup> 72  
 1020 c yds → unsuitable foundation 18<sup>m</sup> 40-18<sup>m</sup> 52 and waste  
 total 2090 c yds

130 c yds fill from cut

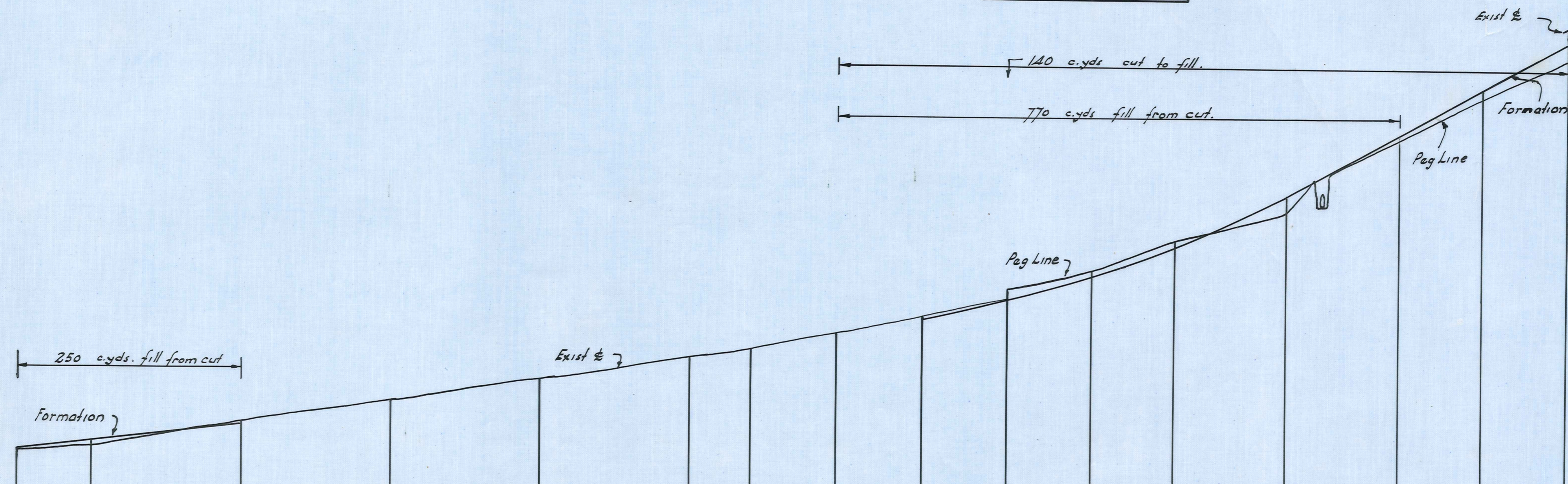
90 <sup>ft</sup> above datum															
Distance	18 <sup>m</sup> 21.75	23	25	27	29	29.46	30	32	34	35	36.4	37	38	39	18 <sup>m</sup> 40
Formation															
Level at Peg	100.99 on peg	101.8	104.0	105.8	107.7	108.29 on peg	108.4	109.4	116.6	119.2	123.47 on peg	115.85	120.5	117.8	119.3
Existing $\pm$	101.0	101.9	104.0	105.4	107.4	107.8	108.0	108.5	116.4	119.5	121.2	121.0	119.2	116.3	
Pilot Peg to New $\pm$	16'-0"	16'-0"	16'-0"	16'-0"	17'-0"	17'-9"	17'-3"	17'-5"	18'-7"	19'-2"	18'-10"	19'-8"	20'-0"	20'-0"	20'-0"
Grades	Existing Grades Satisfactory				1.15 ft per chain										
Alignment	Straight				50 mph transition		straight			50 mph transition		straight			

18m 21.75 - 18m 40

(Add 32 ch. to give true route mileage)



$\Delta = 60^{\circ}30'$   
 Alignment = 45 mph  
 Super-elevation = 40 mph  
 $A0 = 7.71^{\circ}$   $AX = 1.478^{\circ}$   
 $R = 8.13^{\circ}$  (central @ arc)  
 $SE = 1.10''/ft$   $EW = 2.0$



250 c.yds. fill from cut  
 Formation

110 ft above datum																			
Distance	18m 40	41	43	45	47	49	49.81	50.95	52.08	53.22	54.35	55.46	56.96	58.46	59.57	60.70			
Formation Level	119.3	120.45	122.75																
Level at Peg	118.98	118.98	122.24	124.92	128.98	131.98	133.74	136.02	138.64	141.39	143.92	147.98	151.63	161.55	167.47	168.05	173.71	175.0	
Existing £	-	119.7	123.1	126.0	129.1	132.0	133.4	135.4	137.8	140.3	143.92	147.98	151.63	161.55	167.47	168.05	173.71	176.9	
Pilot Peg to New £		20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.6	21.0	21.6	22.0	22.8	23.6	24.0	24.0	24.6		
Grades		1.15 ft/ch		Existing	Grades	Satisfactory				Vertical	Curves			5.63 ft/ch					
Alignment				Straight						40 mph Transition		Circular Arc		40 mph transition					

(Add 32ch. to give true route alignment) 18m 40-18m 60

VINCENT COUNTY COUNCIL

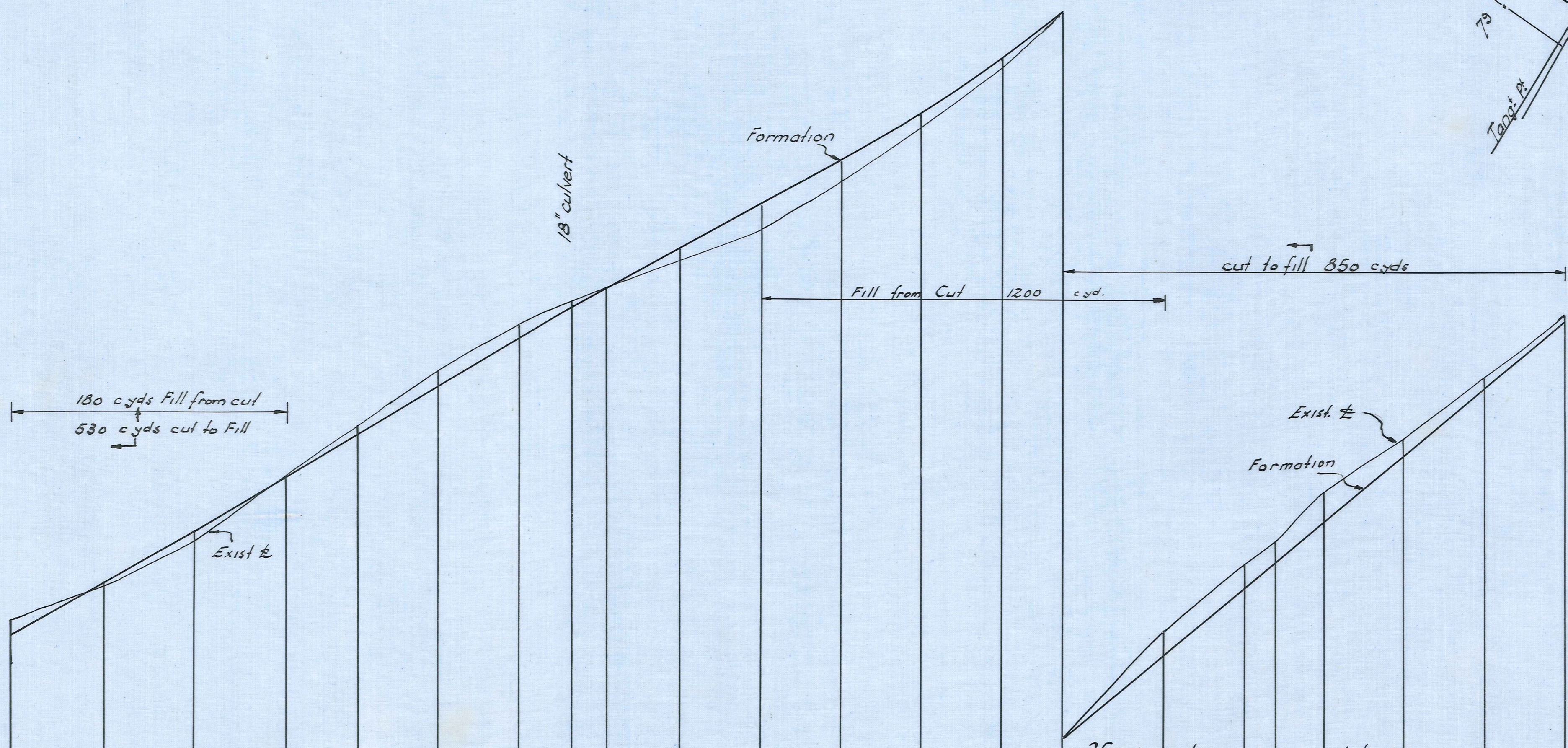
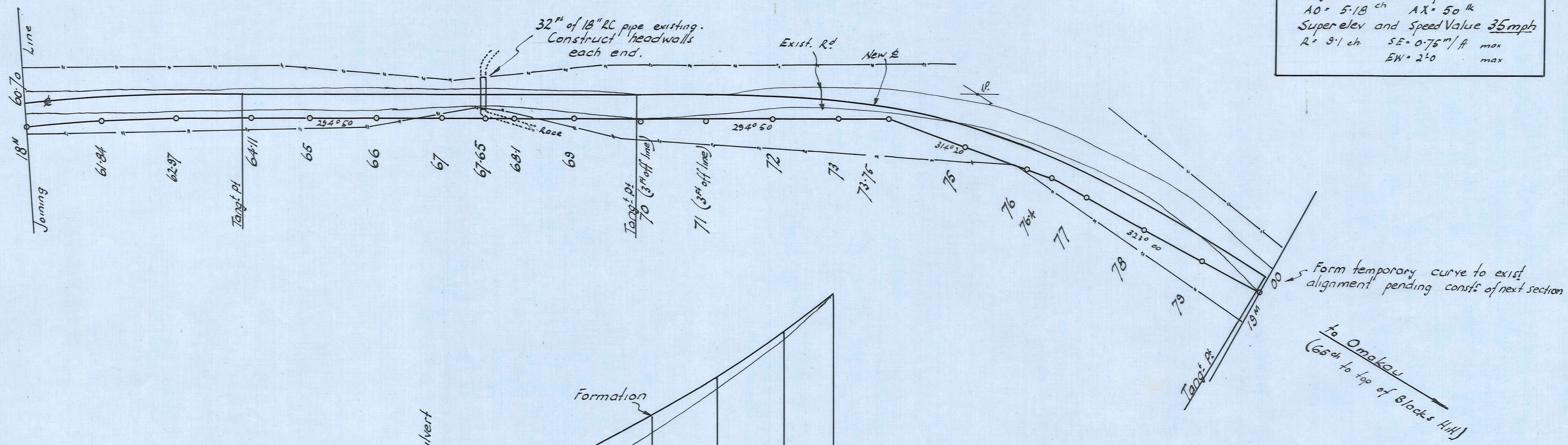
IDABURN-OMAKAU M.H.NO. 227.  
18M21 - 19M00

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

DESIGNED BY: *[Signature]* DATE: Sept. 11  
 CHECKED BY: *[Signature]* DATE: Oct. 1956  
 FILE NO. 544/3

2691/2.

$\Delta = 32^{\circ}00$   
 Alignment 45 mph  
 $A0 = 5.13$  ch  $AX = 50$  ft  
 Super elev and Speed Value 35 mph  
 $R = 9.1$  ch  $SE = 0.75$  ft/ft max  
 $EW = 2.0$  max



160 ft above datum	18m 60.70	61.84	62.97	64.11	65	66	67	67.65	68.1	69	70	71	72	73	73.75	75	76	76.4	77	78	79	19m 00
Distance	18m 60.70	61.84	62.97	64.11	65	66	67	67.65	68.1	69	70	71	72	73	73.75	75	76	76.4	77	78	79	19m 00
Formation Level	175.0	181.4	187.9	194.75	200.1	206.1	212.1	216.0	218.5	223.4	228.9	234.4	240.0	246.9	252.6	263.1	271.5	274.9	279.9	288.3	296.7	305.0
Level at Peg	172.7 (on peg)	176.65 (on peg)	183.06 (on peg)	190.30 (on peg)	196.8	205.1	211.0	214.98	215.9	221.4	226.2	232.0	240.9	247.4	254.34 (on peg)	266.6	275.7	279.32 (on peg)	283.3	290.0	297.5	305.4
Existing E	176.9	181.1	186.6	195.0	201.2	208.0	213.9	216.7	218.3	221.6	225.7	231.7	238.4	246.2	252.6	265.9	274.3	277.2	283.3	290.0	297.7	305.5
Pilot Peg to New E	24.6	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	27.9	23.0	18.3	11.6	21.0	21.6	20.0	22.0	23.0	21.0	17.0
Grades	5.63 ft/ch	6.0 ft per chain			5.5 ft per chain			Vertical Curve			8.4 ft / chain											
Alignment	40 mph transition			Straight			35 mph transition															

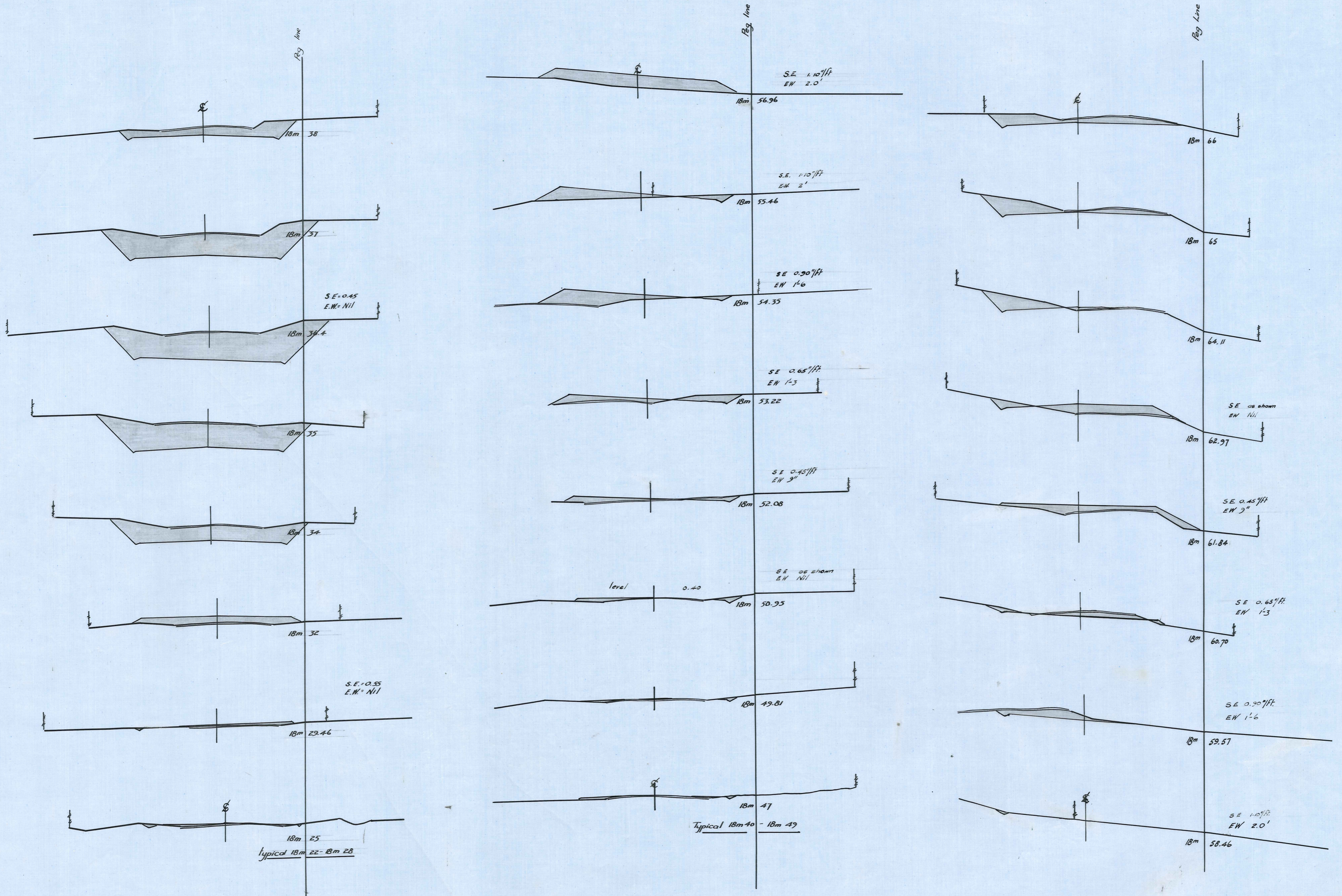
(Add 32 ch. to give true route mileage) 18m 60.70 - 19m 00

VINCENT COUNTY COUNCIL

IDABURN - OMAKAU M.H. NO. 227.  
18M 21 - 19M 00

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

DESIGNED BY: [Signature]  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 DATE: Sept '56  
 FILE NO: 2691/3



18<sup>m</sup> 21 - 18<sup>m</sup> 66  
 (Add 32 ch. to give true route mileage)

VINCENT COUNTY COUNCIL

IDABURN - OMAKAU M. H. NO. 227  
 18M 21-19M 00

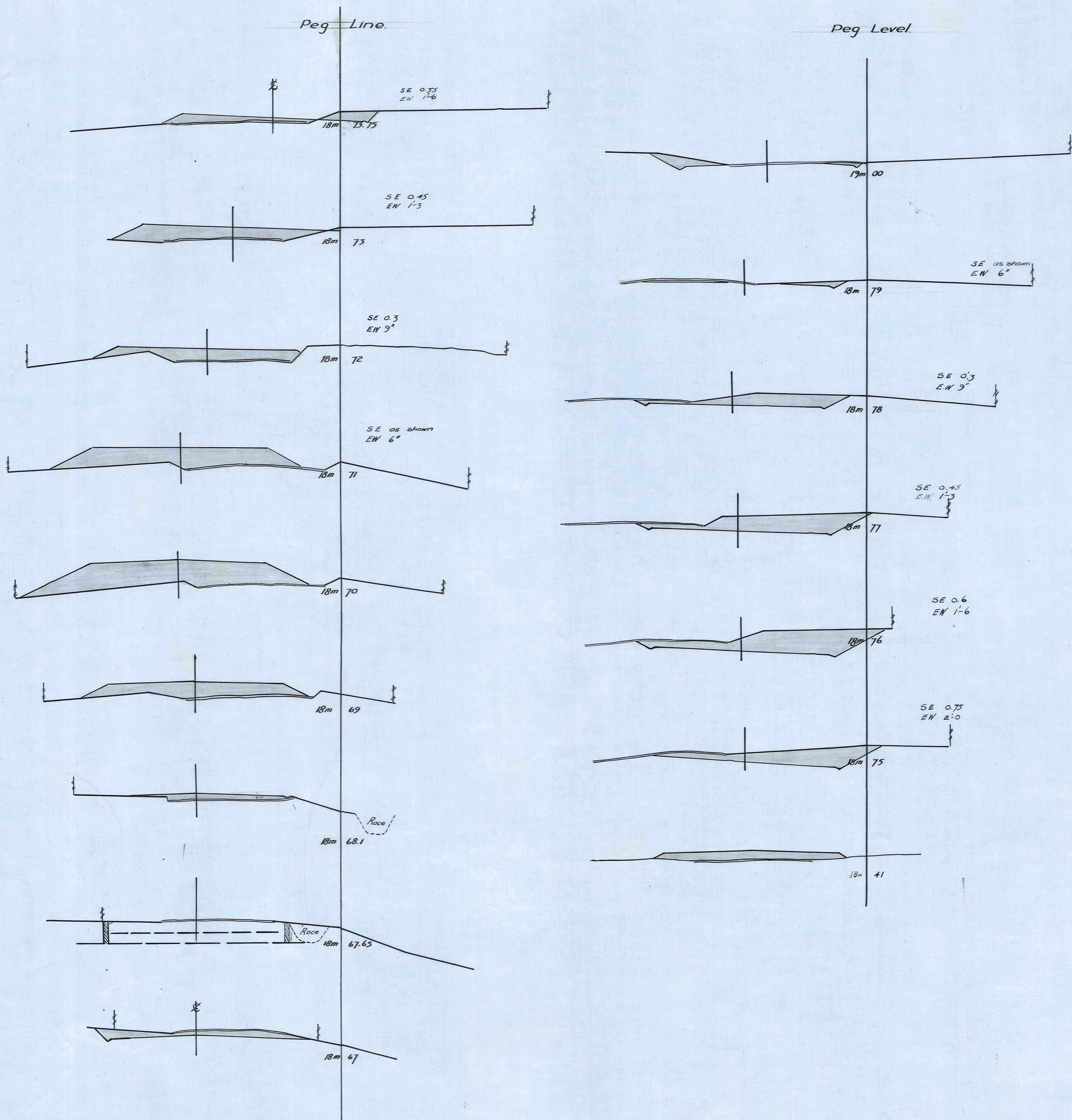
DUFFILL, WATTS & KING  
 CIVIL ENGINEERS AND SURVEYORS  
 DUNEDIN and INVERCARGILL

SURVEYED BY	DATE	JOB NO.
DRAWN	Sept 16	2691/4.
CALCULATIONS		
CHECKED	Oct 1906	
TRACED	9/10/10	

F.B.K. 03 FILE NO. 5413

Peg Line.

Peg Level.



18m 67 - 19m 00

(Add 32 ch. to give true route mileage.)

VINCENT COUNTY COUNCIL

IDABURN - OMAKAU M.H. NO. 227.  
18M 21 - 19M 00

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

SURVEYED BY	DATE	JOB NO.
DRAWN	Sept '56	2691/5.
CHECKED	Oct 1956	F.B.K. 138 FILE NO. S/4/5
TRACED		