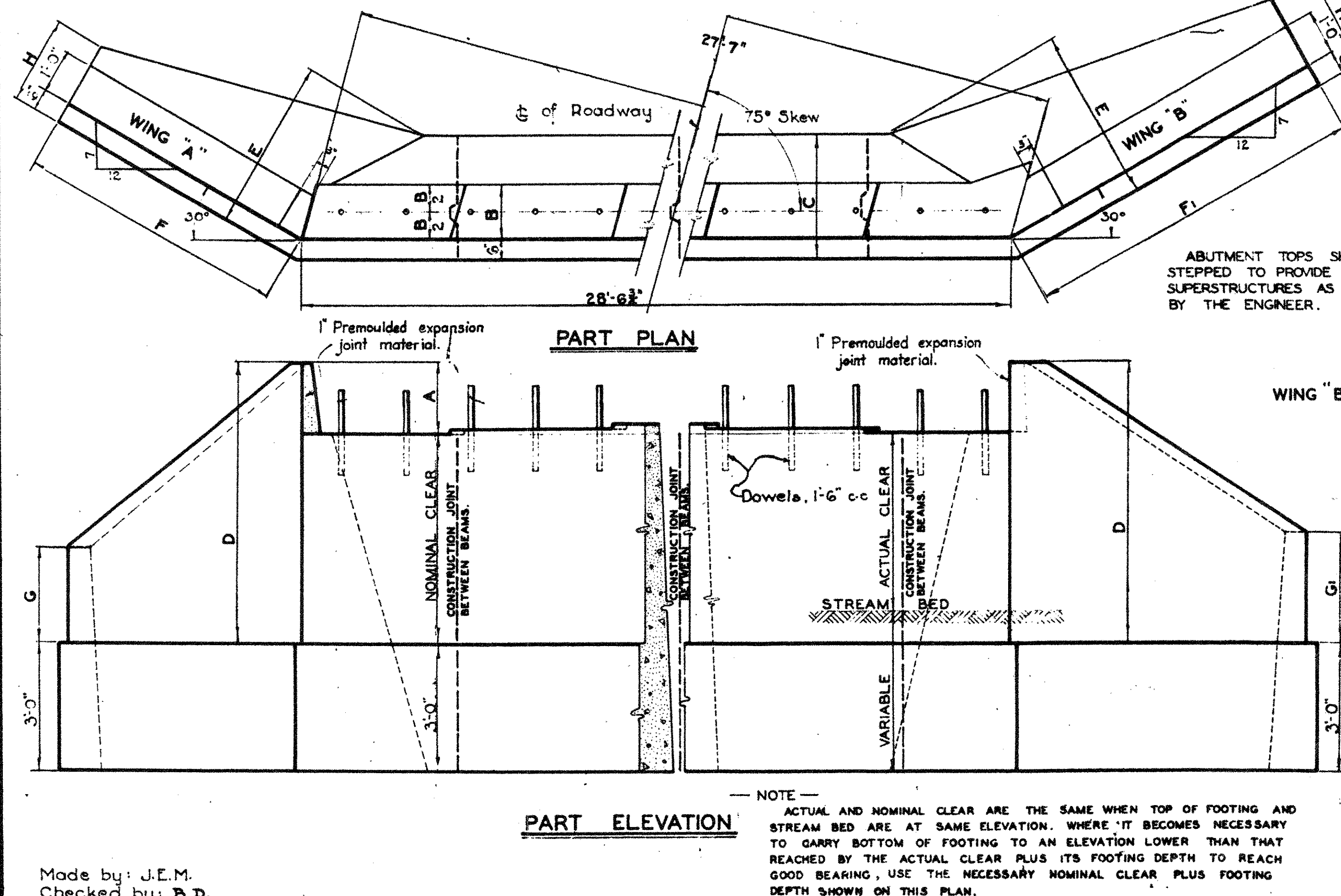


SPAN AND S-NO.	NOMINAL CLEAR	A	B	C	D	E	F	G	H	F ₁	G ₁	H ₁	B CON.	NOMINAL CLEAR												
															WING "A"						WING "B"					
															Wing Length	Wing Height Free End	Wing Base Free End	Wing Length	Wing Height Free End	Wing Base Free End	Wing Length	Wing Height Free End	Wing Base Free End	Wing Length	Wing Height Free End	Wing Base Free End
20'-0" S-195	3'-0"			2'-0"	4'-7"	2'-11"	4'-3"	2'-0"	2'-0"	5'-6"	2'-6"	2'-0"	.361	28.1	3'-0"											
	4'-0"			2'-4"	5'-7"	3'-5"	5'-3"	2'-6"	2'-0"	6'-9"	3'-0"	2'-0"	.455	36.8	4'-0"											
	5'-0"			2'-11"	6'-7"	3'-11"	6'-3"	2'-9"	2'-0"	8'-0"	3'-3"	2'-1"	.599	49.2	5'-0"											
	6'-0"			3'-6"	7'-7"	4'-4"	7'-3"	3'-0"	2'-0"	9'-3"	3'-9"	2'-5"	.764	64.0	6'-0"											
	7'-0"	1'-7 1/2"	1'-3"	4'-0"	8'-7"	4'-10"	8'-3"	3'-6"	2'-5"	10'-6"	4'-3"	2'-8"	.935	80.7	7'-0"											
	8'-0"			4'-5"	9'-7"	5'-3"	9'-3"	3'-9"	2'-5"	11'-9"	4'-6"	2'-10"	1.108	98.2	8'-0"											
	9'-0"			4'-11"	10'-7"	5'-8"	10'-8"	4'-3"	2'-6"	13'-0"	5'-0"	3'-1"	1.316	119.8	9'-0"											
	10'-0"			5'-4"	11'-7"	6'-1"	11'-6"	4'-6"	2'-10"	14'-3"	5'-6"	3'-4"	1.520	145.1	10'-0"											
	11'-0"			5'-9"	12'-7"	6'-6"	12'-6"	4'-9"	3'-0"	15'-6"	5'-9"	3'-6"	1.740	166.3	11'-0"											
22'-0" S-196	3'-0"			2'-0"	4'-8"	3'-0"	4'-3"	2'-0"	2'-0"	5'-9"	2'-6"	2'-0"	.389	29.8	3'-0"											
	4'-0"			2'-2"	5'-8"	3'-6"	5'-6"	2'-6"	2'-0"	7'-0"	3'-0"	2'-0"	.466	38.2	4'-0"											
	5'-0"			2'-10"	6'-8"	4'-0"	6'-6"	2'-9"	2'-0"	8'-0"	3'-6"	2'-3"	.623	51.6	5'-0"											
	6'-0"			3'-4"	7'-8"	4'-5"	7'-6"	3'-3"	2'-1"	9'-6"	3'-9"	2'-5"	.777	65.6	6'-0"											
	7'-0"	1'-8"	1'-6"	3'-10"	8'-8"	4'-10"	8'-6"	3'-6"	2'-3"	10'-6"	4'-3"	2'-8"	.950	81.7	7'-0"											
	8'-0"			4'-4"	9'-8"	5'-3"	9'-6"	3'-9"	2'-5"	11'-9"	4'-6"	2'-10"	1.141	99.9	8'-0"											
	9'-0"			4'-10"	10'-8"	5'-9"	10'-6"	4'-3"	2'-6"	13'-0"	5'-0"	3'-1"	1.351	121.8	9'-0"											
	10'-0"			5'-3"	11'-8"	6'-2"	11'-6"	4'-6"	2'-10"	14'-3"	5'-6"	3'-4"	1.560	144.3	10'-0"											
	11'-0"			5'-8"	12'-8"	6'-7"	12'-6"	4'-9"	3'-0"	15'-6"	5'-9"	3'-6"	1.784	168.6	11'-0"											
24'-0" S-197	3'-0"			2'-2"	5'-10"	3'-7"	5'-6"	2'-6"	2'-0"	7'-0"	3'-0"	2'-0"	.466	38.3	4'-0"											
	4'-0"			2'-10"	6'-10"	4'-0"	6'-6"	2'-9"	2'-0"	8'-3"	3'-6"	2'-3"	.623	51.6	5'-0"											
	5'-0"			3'-4"	7'-10"	4'-6"	7'-6"	3'-3"	2'-1"	9'-6"	3'-9"	2'-5"	.777	66.0	6'-0"											
	6'-0"			3'-10"	8'-10"	4'-11"	8'-6"	3'-6"	2'-3"	10'-6"	4'-3"	2'-8"	.950	82.6	7'-0"											
	7'-0"	1'-10"	1'-6"	4'-4"	9'-10"	5'-4"	9'-6"	3'-9"	2'-5"	12'-0"	4'-9"	3'-0"	1.141	101.8	8'-0"											
	8'-0"			4'-10"	10'-10"	5'-9"	10'-9"	4'-3"	2'-8"	13'-3"	5'-0"	3'-1"	1.351	123.2	9'-0"											
	9'-0"			5'-3"	11'-10"	6'-2"	11'-9"	4'-6"	2'-10"	14'-6"	5'-6"	3'-4"	1.560	146.0	10'-0"											
	10'-0"			5'-8"	12'-10"	6'-7"	12'-9"	4'-9"	3'-0"	15'-9"	5'-9"	3'-6"	1.784	170.8	11'-0"											
	11'-0"			6'-2"	13'-10"	7'-0"	13'-9"	5'-3"	3'-3"	17'-0"	6'-3"	3'-9"	2.046	199.8	12'-0"											
	12'-0"																									
26'-0" S-198	3'-0"			2'-2"	5'-11"	3'-7"	5'-6"	2'-6"	2'-0"	7'-3"	3'-0"	2'-0"	.466	38.7	4'-0"											
	4'-0"			2'-10"	6'-11"	4'-1"	6'-9"	3'-0"	2'-0"	8'-6"	3'-6"	2'-3"	.623	52.5	5'-0"											
	5'-0"			3'-4"	7'-11"	4'-6"	7'-9"	3'-3"	2'-1"	9'-9"	4'-0"	2'-7"	.777	67.4	6'-0"											
	6'-0"			3'-10"	8'-11"	4'-11"	8'-9"	3'-6"	2'-3"	11'-0"	4'-3"	2'-8"	.950	83.7	7'-0"											
	7'-0"	1'-11"	1'-6"	4'-4"	9'-11"	5'-4"	9'-9"	4'-0"	2'-7"	12'-0"	4'-9"	3'-0"	1.141	103.0	8'-0"											
	8'-0"			4'-10"	10'-11"	5'-10"	10'-9"	4'-3"	2'-8"	13'-3"	5'-0"	3'-1"	1.351	123.8	9'-0"											
	9'-0"			5'-3"	11'-11"	6'-3"	11'-9"	4'-6"	2'-10"	14'-6"	5'-6"	3'-4"	1.560	146.8	10'-0"											
	10'-0"			5'-8"	12'-11"	6'-8"	12'-9"	5'-0"	3'-1"	15'-9"	5'-9"	3'-6"	1.784	172.1	11'-0"											
	11'-0"			6'-2"	13'-11"	7'-1"	13'-9"	5'-3"	3'-3"	17'-0"	6'-3"	3'-9"	2.046	200.8	12'-0"											
	12'-0"																									
28'-0" S-199	3'-0"			2'-2"	6'-1"	3'-8"	5'-9"	2'-6"	2'-0"	7'-3"	3'-0"	2'-0"	.466	39.1	4'-0"											
	4'-0"			2'-10"	7'-1"	4'-1"	6'-9"	3'-0"	2'-0"	8'-6"	3'-6"	2'-3"	.623	52.9	5'-0"											
	5'-0"			3'-4"	8'-1"	4'-7"	7'-9"	3'-3"	2'-1"	9'-9"	4'-0"	2'-7"	.777	67.7	6'-0"											
	6'-0"			3'-10"	9'-1"	5'-0"	8'-9"	3'-6"	2'-3"	11'-0"	4'-3"	2'-8"	.950	84.1	7'-0"											
	7'-0"	2'-1"	1'-6"	4'-4"	10'-1"	5'-5"	9'-9"	4'-0"	2'-7"	12'-3"	4'-9"	3'-0"	1.141	103.9	8'-0"											
	8'-0"			4'-10"	11'-1"	5'-10"	10'-9"	4'-3"	2'-8"	13'-6"	5'-3"	3'-3"	1.351	125.7	9'-0"											
	9'-0"			5'-3"	12'-1"	6'-3"	11'-9"	4'-6"	2'-10"	14'-9"	5'-6"	3'-4"	1.560	147.2	10'-0"											
	10'-0"			5'-8"	13'-1"	6'-8"	13'-0"	5'-0"	3'-1"	16'-0"	6'-0"	3'-7"	1.784	174.3	11'-0"											
	11'-0"			6'-2"	14'-1"	7'-1"	14'-0"	5'-3"	3'-3"	17'-3"	6'-6"	3'-10"	2.046	203.7	12'-0"											
	12'-0"																									
30'-0" S-200	3'-0"			2'-10"	7'-2"	4'-2"	6'-9"	3'-0"	2'-0"	8'-9"	3'-6"	2'-3"	.623	53.5	5'-0"											
	4'-0"			3'-4"	8'-2"	4'-7"	7'-9"	3'-3"	2'-1"	10'-0"	4'-0"	2'-7"	.777	68.3	6'-0"											
	5'-0"			3'-10"	9'-2"	5'-0"	9'-0"	3'-9"	2'-5"	11'-3"	4'-6"	2'-10"	.950	86.1	7'-0"											
	6'-0"			4'-4"	10'-2"	5'-6"	10'-0"	4'-0"	2'-7"	12'-6"	4'-9"	3'-0"	1.141	105.4	8'-0"											
	7'-0"	2'-2"	1'-6"	4'-10"	11'-2"	5'-11"	11'-0"	4'-3"	2'-8"	13'-6"	5'-3"	3'-3"	1.351	126.6	9'-0"											
	8'-0"			5'-3"	12'-2"	6'-4"	12'-0"	4'-9"	3'-0"	14'-9"	5'-6"	3'-4"	1.560	149.7	10'-0"											
	9'-0"			5'-8"	13'-2"	6'-9"	13'-0"	5'-0"	3'-1"	16'-0"	6'-0"	3'-7"	1.784	174.8	11'-0"											
	10'-0"			6'-2"	14'-2"	7'-2"	14'-0"	5'-3"	3'-3"	17'-3"	6'-6"	3'-10"	2.046	204.3	12'-0"											
	11'-0"			6'-7"	15'-2"	7'-7"	15'-0"	5'-9"	3'-6"	18'-6"	6'-9"	4'-0"	2.302	235.0	13'-0"											
	12'-0"																									
32'-0" S-201	3'-0"			2'-8"	7'-3"	4'-3"	7'-0"	3'-0"	2'-0"	8'-9"	3'-6"	2'-3"	.631	54.6	5'-0"											
	4'-0"			3'-3"	8'-3"	4'-8"	8'-0"	3'-3"	2'-1"	10'-0"	4'-0"	2'-7"	.805	70.3	6'-0"											
	5'-0"			3'-9"	9'-3"	5'-1"	9'-0"	3'-9"	2'-5"	11'-3"	4'-6"	2'-10"	.981	88.1	7'-0"											
	6'-0"			4'-3"	10'-3"	5'-6"	10'-0"	4'-0"	2'-7"	12'-6"	4'-9"	3'-0"	1.175	107.2	8'-0"											
	7'-0"	2'-3 1/2"	1'-9"	4'-9"	11'-3"	6'-0"	11'-0"	4'-3"	2'-8"	13'-9"	5'-3"	3'-3"	1.388	129.4	9'-0"											
	8'-0"			5'-2"	12'-3"	6'-5"	12'-0"	4'-9"	3'-0"	15'-0"	5'-9"	3'-6"	1.600	153.6	10'-0"											
	9'-0"			5'-8"	13'-3"	6'-10"	13'-0"	5'-0"	3'-1"	16'-3"	6'-0"	3'-7"	1.848	179.8	11'-0"											
	10'-0"			6'-1"	14'-3"	7'-3"	14'-3"	5'-6"	3'-4"	17'-6"	6'-6"	3'-10"	2.092	209.7	12'-0"											
	11'-0"			6'-6"	15'-3"	7-8"	15'-3"	5-9"	3-6"	18'-9"	7'-0"	4'-1"	2.351	241.2	13'-0"											
	12'-0"																									
34'-0" S-202	3'-0"			2'-8"	7'-5"	4'-3"	7'-0"	3'-0"	2'-0"	9'-0"	3'-9"	2'-5"	.631	55.5	5'-0"											
	4'-0"			3'-3"	8'-5"	4'-9"	8'-0"	3'-3"	2'-1"	10'-3"	4'-0"	2'-7"	.805	71.0	6'-0"											
	5'-0"			3'-9"	9'-5"	5'-2"	9'-3"	3'-9"	2'-5"	11'-6"	4'-6"	2'-10"	.981	89.5	7'-0"											
	6'-0"			4'-3"	10'-5"	5'-7"	10'-3"	4'-0"	2'-7"	12'-9"	5'-0"	3'-1"	1.175	109.3	8'-0"											
	7'-0"	2'-5"	1'-9"	4'-9"	11'-5"	6'-0"	11'-3"	4'-6"	2'-10"	14'-0"	5'-3"	3'-3"	1.388	131.6	9'-0"											
	8'-0"			5'-2"	12'-5"	6'-5"	12'-3"	4'-9"	3'-0"	15'-3"	5'-9"	3'-6"	1.600	155.4	10'-0"											
	9'-0"			5'-8"	13'-5"	6'-10"	13'-3"	5'-0"	3'-1"	1																



APPROVED Dec 15, 1939

E.E. Moulden BRIDGE ENGINEER

NOTE

WHEN SIDEWALK IS REQUIRED, CONSTRUCT ADJACENT WING TOP LEVEL WITH TOP OF SIDEWALK USING WING DIMENSIONS CORRESPONDING TO THE PROPER "D" DIMENSION FOR THIS CONDITION.

FOR T-BEAM SPANS USE ABUTMENT SECTION WITH ABUTMENT TOP WIDTH AS INDICATED FOR THAT SUPERSTRUCTURE & SPAN FOR WINGS SELECT DIMENSIONS FOR PROPER "D" PLUS ITS FOOTING DEPTH REGARDLESS OF SPAN TO FIT ABUTMENT & SUPERSTRUCTURE.

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF HIGHWAYS

BRIDGE DIVISION.

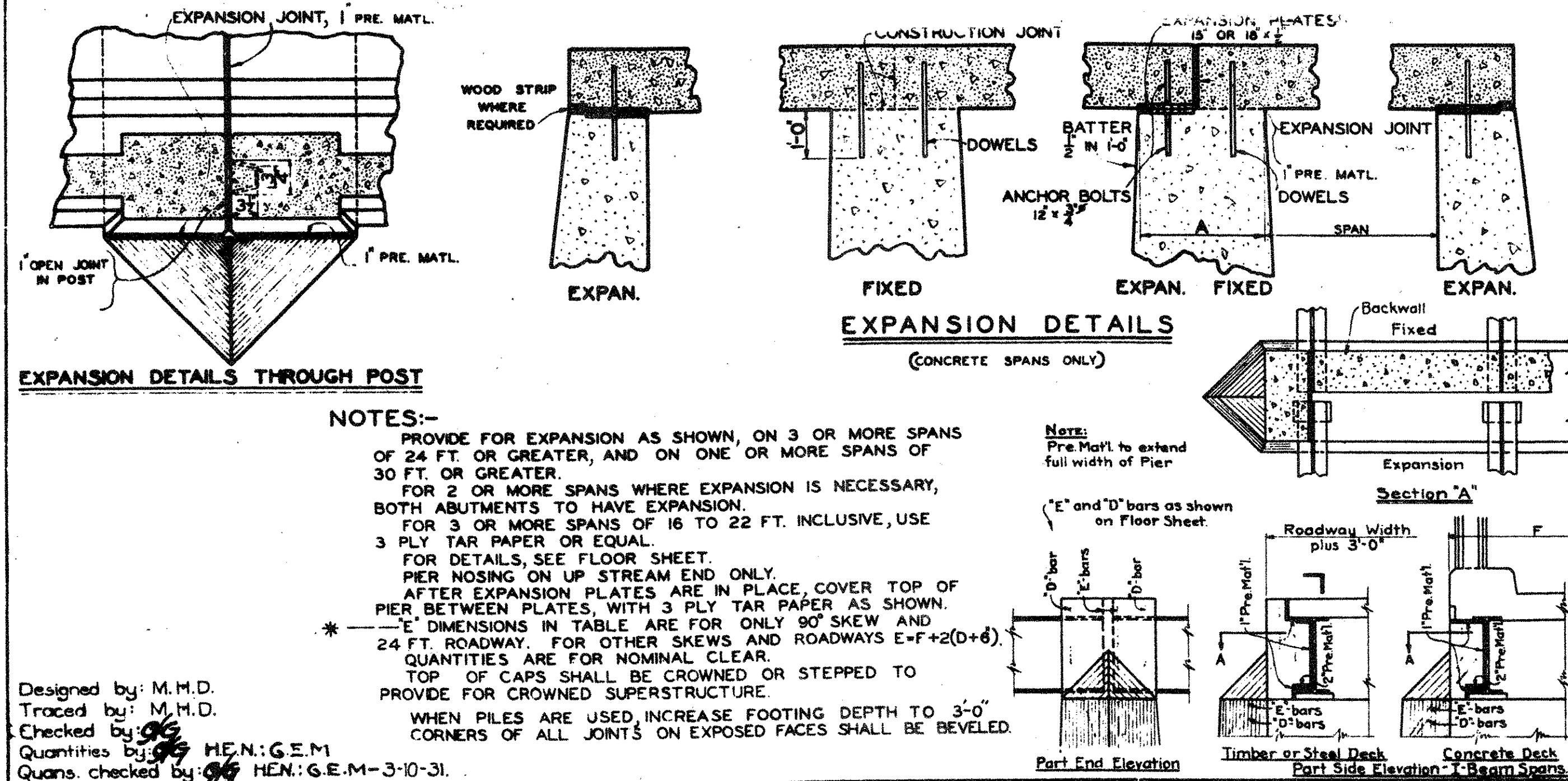
STANDARD ABUTMENTS

SPANS 20 TO 45 FEET

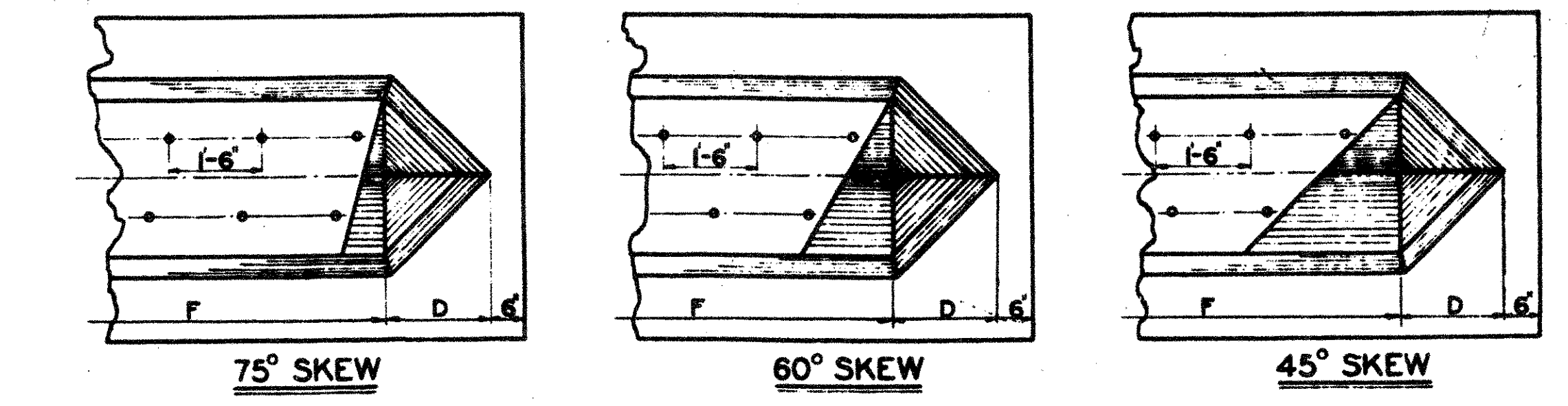
SKEW - 75

S-18175

SPAN		NOMINAL CLEAR	A	B	C	D	E*	CU. YDS. CLASS "B" CONCRETE																									
On & of Roadway	CONC.	Undergrade super-structure to top of footing.	Top	Base.	Footing.	Length of nose at top of footing.	Length of footing to rawly 90° skew.	C.Yds. B concrete per sq. foot of pier.	90° SKEW					75° SKEW					60° SKEW					45° SKEW									
									ROADWAYS					ROADWAYS					ROADWAYS					ROADWAYS									
									24'	30'	32'	40'	42'	50'	24'	30'	32'	40'	42'	50'	24'	30'	32'	40'	42'	50'	24'	30'	32'	40'	42'	50'	
SPANS 24' TO 46' INCL.		SPANS 12' TO 28' INCL.		N-6'	5'-0"	2'-11"	4'-11"	1'-6"	982	29.6	38.5	37.5	45.3	47.3	55.1	31.3	37.4	39.4	47.5	49.5	57.7	35.3	42.1	44.4	53.4	55.7	64.8	43.4	51.8	54.6	65.7	68.5	79.7
		6'-0"	3'-0"		5'-0"	1'-7"	3'-11"	1100	33.2	39.8	42.0	50.8	53.0	61.8	35.1	41.9	44.1	53.2	55.5	64.6	39.6	47.2	49.7	59.9	62.4	72.6	48.6	58.0	61.1	73.6	76.7	89	
		7'-0"	3'-1"		5'-1"	1'-8"	3'-2"	1221	36.8	44.2	46.6	56.4	58.9	68.6	38.6	46.5	49.0	59.1	61.7	71.8	43.9	52.4	55.2	66.5	69.3	80.6	54.0	64.3	67.6	81.6	85.1	98	
		8'-0"	3'-2"		5'-2"	1'-8"	3'-2"	1346	40.6	48.6	51.2	62.1	64.8	75.6	42.9	51.2	54.0	65.2	68.0	79.1	48.3	57.7	60.8	73.3	76.4	88.7	59.5	70.9	74.8	90.0	93.6	109	
		9'-0"	3'-3"		5'-3"	1'-9"	3'-2"	1477	44.4	53.3	56.2	68.0	71.0	82.8	46.9	56.0	59.1	71.3	74.3	86.6	53.0	63.1	66.5	80.1	83.5	97.2	65.2	77.7	81.8	98.5	102.7	119	
		10'-0"	3'-4"		5'-4"	1'-10"	3'-2"	1607	48.4	58.0	61.2	74.1	77.3	90.2	51.1	61.0	64.3	77.6	81.0	94.3	57.6	68.7	72.4	87.3	91.0	105.8	70.8	84.5	89.1	107.3	111.8	130	
		11'-0"	3'-5"		5'-5"	1'-10"	3'-2"	1741	52.4	62.9	66.4	80.3	83.8	97.7	55.3	66.1	69.7	84.2	87.7	102.2	62.4	74.5	78.5	94.6	98.6	114.7	76.8	91.6	96.5	116.2	121.1	140	
		12'-0"	3'-6"		5'-6"	2'-0"	3'-2"	1877	56.6	67.8	71.6	86.6	90.4	105.4	59.7	71.4	75.3	90.8	94.7	110.3	67.4	80.4	84.7	102.1	106.4	123.8	82.9	98.8	104.1	125.4	130.7	152	
		13'-0"	3'-7"		5'-7"	2'-1"	3'-2"	2017	60.8	72.9	77.0	93.1	97.2	113.3	64.2	76.8	80.9	97.7	101.8	118.6	72.4	86.4	91.1	109.7	114.4	133.1	89.1	106.2	111.9	134.8	140.5	163	
		14'-0"	3'-8"		5'-8"	2'-1"	3'-2"	2159	65.2	78.2	82.5	99.8	104.1	121.4	68.8	82.3	86.7	104.6	109.1	127.0	77.6	92.6	97.6	117.5	122.5	142.5	95.5	113.8	119.9	144.3	150.5	174	
		15'-0"	3'-9"		5'-9"	2'-1"	3'-2"	2311	69.7	83.5	88.1	106.6	111.2	129.7	73.5	87.8	92.6	111.7	116.5	135.6	82.9	98.9	104.2	125.6	130.9	152.2	101.9	121.5	128.0	154.1	160.7	186	
		16'-0"	3'-10"	5'-10"	2'-2"	3'-3"	2459	74.2	89.0	93.9	113.6	118.5	138.2	78.3	93.6	98.7	119.0	124.1	144.5	88.3	105.4	111.1	133.8	139.4	162.2	108.7	129.5	136.5	164.3	171.2	199		
		17'-0"	4'-0"	6'-0"	2'-3"	3'-3"	2611	78.9	94.6	99.8	120.7	126.0	146.8	83.2	99.4	104.8	126.5	131.9	153.5	93.9	112.0	118.0	142.1	148.2	172.3	115.4	137.6	145.0	174.5	181.9	211		
		18'-0"	4'-1"	6'-1"	2'-3"	3'-4"	2766	83.7	100.4	105.9	128.0	133.6	155.7	88.3	105.5	111.2	134.1	139.8	162.8	99.6	118.7	125.1	150.7	157.1	182.7	122.4	145.8	153.7	185.0	192.8	224		
		19'-0"	4'-1"	6'-1"	2'-4"	3'-4"	2926	88.6	106.2	112.1	135.5	141.3	164.7	93.4	111.6	117.6	141.9	147.9	172.2	105.4	125.6	132.4	159.4	166.2	193.2	129.5	154.4	162.6	195.7	204.0	237		
		20'-0"	4'-2"	6'-2"	2'-5"	3'-5"	325	38.6	46.2	48.7	58.9	61.4	71.5	40.9	48.8	51.4	61.9	64.5	75.0	46.4	55.1	58.0	69.7	72.7	84.4	57.1	67.9	71.5	85.8	89.4	105		
		7'-0"	3'-7"	5'-7"	1'-11"	3'-2"	1406	42.8	51.3	54.1	65.4	68.2	73.4	45.4	54.2	57.1	68.7	71.6	83.3	51.4	61.2	64.4	77.4	80.7	93.7	63.4	75.3	79.3	95.2	99.2	115		
		8'-0"	3'-8"	5'-8"	1'-11"	3'-2"	1549	47.2	56.5	59.6	72.0	75.1	87.5	50.0	59.7	62.8	75.7	78.9	91.8	56.6	67.3	70.9	85.3	88.8	103.2	69.8	82.9	87.3	104.9	109.3	126		
		9'-0"	3'-9"	5'-9"	2'-0"	3'-2"	1698	51.6	61.7	65.1	78.7	82.1	95.7	54.7	65.3	68.2	82.8	86.3	100.4	62.0	73.7	77.6	93.3	97.2	112.9	76.4	90.8	95.6	114.8	119.6	138		
		10'-0"	3'-10"	5'-10"	2'-1"	3'-2"	1848	56.2	67.2	70.9	85.7	89.4	104.2	59.6	71.1	74.9	90.2	94.0	109.3	67.3	80.2	84.5	101.5	105.8	122.3	83.1	98.8	104.0	124.9	130.1	151		
		11'-0"	4'-0"	6'-0"	2'-2"	3'-3"	2000	60.8	72.8	76.8	92.8	96.6	112.8	64.4	76.9	81.0	97.6	101.7	118.3	72.9	86.8	91.4	109.9	114.5	133.0	89.9	106.9	112.5	135.1	140.8	163		
		12'-0"	4'-1"	6'-1"	2'-3"	3'-3"	2155	65.6	78.5	82.8	100.0	104.3	121.6	69.5	82.9	87.3	105.2	109.7	127.5	78.6	93.5	98.5	118.4	123.4	143.4	96.9	115.2	121.3	145.6	151.8	176		
		13'-0"	4'-2"	6'-2"	2'-4"	3'-3"	2313	70.4	84.3	88.9	107.4	112.1	130.6	74.5	88.9	93.7	112.9	117.7	136.9	84.4	100.4	105.8	127.2	132.5	154.0	104.0	123.7	130.3	156.5	163.0	189		
		14'-0"	4'-3"	6'-3"	2'-4"	3'-4"	2474	75.4	90.2	95.2	115.0	120.0	139.8	79.9	95.2	100.3	120.9	126.0	146.5	90.4	107.5	113.2	136.1	141.8	164.7	111.4	132.4	139.4	167.4	174.4	202		
		15'-0"	4'-4"	6'-4"	2'-5"	3'-5"	2644	80.6	96.3	101.6	122.7	128.0	149.1	85.2	101.6	107.0	128.9	134.4	156.3	96.5	114.7	120.8	145.2	151.5	175.8	118.8	141.2	148.7	178.6	186.0	215		
		16'-0"	4'-5"	6'-5"	2'-6"	3'-5"	2811	85.6	102.5	108.1	130.6	136.2	158.7	90.7	108.1	113.9	137.2	143.0	166.3	102.6	122.0	128.5	154.5	161.0	187.0	126.4	150.3	158.2	190.0	198.0	229		
		17'-0"	4'-6"	6'-6"	2'-6"	3'-6"	2981	90.9	108.7	114.7	138.5	144.5	168.4	96.2	114.7	120.8	145.6	151.8	176.4	108.8	129.4	136.3	163.9	170.7	198.5	134.1	159.4	167.8	201.5	210.0	243		
		18'-0"	4'-7"	6'-7"	2'-7"	3'-6"	3155	96.3	115.3	121.7	146.9	153.2	178.5	102.1	121.8	128.3	154.5	161.0	187.2	115.4	137.4	144.7	173.8	181.1	210.4	142.2	169.0	178.0	213.7	222.7	258		
		19'-0"	4'-8"	6'-8"	2'-8"	3'-7"	3333	101.8	121.8	128.5	155.1	161.8	188.5	107.8	128.6	135.4	163.1	170.0	197.6	121.9	145.0	152.8	183.5	191.2	222.0	150.1	178.4	187.9	225.6	235.0	272		
		20'-0"	4'-9"	6'-9"	2'-8"	3'-7"	3510	107.4	128.5	135.5	163.6	170.7	198.8	113.8	135.6	142.9	172.0	179.2	208.4	128.7	153.0	161.1	193.5	201.7	234.2	158.4	188.1	198.1	237.8	247.8	287		
		21'-0"	4'-10"	6'-10"	2'-9"	3'-8"	3700	113.1	136.3	143.8	172.3	179.7	209.3	119.8	142.8	150.4	181.1	188.7															
		22'-0"	4'-10"	6'-10"	2'-9"	3'-8"	3900	119.1	143.3	151.3	181.3	189.3	220.3	126.8	150.8	158.8	191.3	199.3															



PIER NOSING					
NOMINAL CLEAR	6" x 6" x $\frac{3}{4}$ " D		18" x $\frac{3}{4}$ " BOLTS		TOTAL WEIGHT
	LENGTH	WEIGHT	NUMBER	WEIGHT	
5'	5'-0"	143.5	4	9.0	152.5
6'	6'-0"	172.2	5	11.3	183.5
7'	7'-0"	200.9	5	11.3	212.2
8'	8'-0"	229.6	6	13.5	243.1
9'	9'-0"	258.3	7	15.8	274.1
10'	10'-0"	287.0	7	15.8	302.8
11'	11'-0"	315.7	8	18.0	333.7
12'	12'-0"	344.4	9	20.3	364.7
13'	13'-0"	373.1	9	20.3	393.4
14'	14'-0"	401.8	10	22.5	424.3
15'	15'-0"	430.5	11	24.8	455.3
16'	16'-0"	459.2	11	24.8	484.0
17'	17'-0"	487.9	12	27.0	514.9
18'	18'-0"	516.6	13	29.3	545.9
19'	19'-0"	545.3	13	29.3	574.6
20'	20'-0"	574.0	14	31.5	605.5
21'	21'-0"	602.7	15	33.8	636.5
22'	22'-0"	631.4	15	33.8	665.2



F = LENGTH OF BODY (For Conc. Superstr. & Conc. Dk. I-Beams)								
2'-6" TOP					3'-0" TOP			
RDWY	90°	75°	60°	45°	90°	75°	60°	45°
24'	27'-7"	29'-2"	33'-3"	41'-6"	27'-7"	29'-4"	33'-7"	42'-0"
30'	33'-7"	35'-5"	40'-2"	50'-0"	33'-7"	35'-7"	40'-6"	50'-6"
32'	35'-7"	37'-6"	42'-6"	52'-9"	35'-7"	37'-11"	42'-9"	53'-3"
40'	43'-7"	45'-6"	51'-9"	64'-1"	43'-7"	45'-11"	52'-0"	64'-7"
42'	45'-7"	47'-10"	54'-1"	66'-11"	45'-7"	48'-0"	54'-4"	67'-5"
50'	53'-7"	56'-1"	63'-3"	78'-3"	53'-7"	56'-3"	63'-7"	78'-9"

COMMONWEALTH OF PENNSYLVANIA



DEPARTMENT OF HIGHWAYS

DRAWINGS
FOR
CONSTRUCTION
AND CONDEMNATION OF RIGHT OF WAY

ROUTE NO. 167 SECTION NO. 9

IN MONROE & PIKE COUNTY

MONROE.....From Sta. 666+75.00 To Sta. 674+59.00 Length 784.00 Ft. 0.15 Mi.
PIKE.....From Sta. 0+00.00 To Sta. 2+75.00 Length 274.79 Ft. 0.05 Mi.
Total Length 1058.79 Ft. 0.20 Mi.

SCALES { PLAN: 1 IN. = 50 FT.
PROFILE, HOR.: 1 IN. = 50 FT., VERT.: 1 IN. = 10 FT.

TOGETHER WITH CONDEMNATION OF RIGHT OF WAY FOR ALL OTHER INTERSECTING ROADS,
AS SHOWN ON DETAILED SHEETS COMPRISING THIS PLAN.

Project No. ER-13(3)
1244

DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECT.	APPL.	TOTAL SHEETS
4-0	MONROE	MIDDLE SMITHFIELD		167	9		3
	PIKE	LEHMAN					

COMMONWEALTH OF PENNSYLVANIA:
COUNTY OF DAUPHIN: SS

On this 9th day of April, A. D. 1956,
before me, a notary public, personally came
Joseph J. Lawler Secretary of the
Department of Highways of the Commonwealth
of Pennsylvania, who, in due form of law, acknowl-
edged the within plan, comprising

3 separate sheets or sections to be an
official plan of the Department of Highways of
the Commonwealth of Pennsylvania and desired
that the same be recorded as such, in accordance
with the provisions of Section 210 of the Act
approved June 1, 1945, P. L. 1242 as amended.

Witness my hand and notarial seal this 9th
day of April, 1956

B. J. Kemmerer
Notary Public
My commission expires the 1st day
of February, 1957

Recorded in the office for the recording of deeds, etc., in and
for the County of Pike
Pennsylvania, in Map Book
No. 1, Vol. 20, Page 20
Witness my hand and Seal of office this 9th day
of June, A. D. 1956

Calvin C. Roseman
Recorder
Received from William J. Smith

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DISTRICT ENGINEER

DATE

ESTABLISHED BY AUTHORITY OF LAW, AS AND FOR THE
WIDTH, LINES, LOCATION AND GRADES OF STATE HIGH-
WAY WITHIN THE STATIONS INDICATED AS SHOWN ABOVE.

RECOMMENDED March 1, 1956
Arthur J. Lawler
DISTRICT ENGINEER

RECOMMENDED April 3, 1956
Arthur J. Lawler
CHIEF ENGINEER

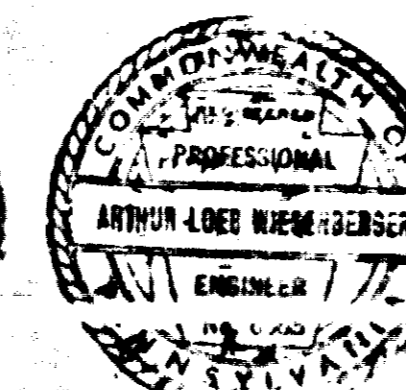
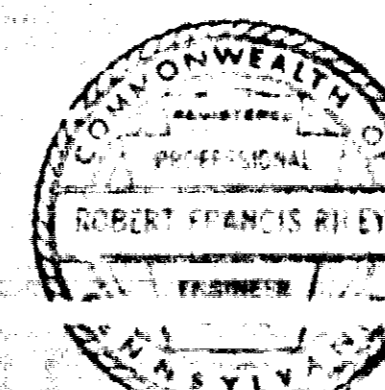
APPROVED April 3, 1956
Joseph J. Lawler
SECRETARY OF HIGHWAYS

APPROVED 47 1956
Wm. J. Smith
GOVERNOR

Recorded in the office for the recording of deeds, etc., in and
for the County of Monroe
Pennsylvania, in Map Book

No. 1, Vol. 1, Page 28
Witness my hand and Seal of office this 28th day
of June, A. D. 1956

Lloyd Buttz
Recorder
Kathryn Buttz Deputy
Received from William J. Smith



Test Hole No 1			
22' at 9 ft		762' 90"	
Old Ground		New	
200	Per	10	Class
121	"	"	\$93.54
112	"	"	\$93.66
130	"	"	\$93.54
132	"	"	\$92.84
016	"	"	\$93.72
029	"	"	\$93.56
032	"	"	\$93.17
019	"	"	\$92.70
016	"	"	\$93.54
018	"	"	\$92.36
009	"	"	\$92.84
013	"	"	\$97.84
030	"	"	\$97.34
105	"	"	\$96.20
125	"	"	\$95.04
032	"	"	\$94.72
012	"	"	\$94.63
064	"	"	\$93.96
000	"	"	\$93.96

Test Hole No. 2			
32' Pt. of Site 675+00			
Old Ground	Str.	Qty.	1944
0.36	Per 10 Blows	"	494.62
0.01	" "	"	494.66
0.05	" "	"	493.93
0.09	" 30 "	"	493.04
2.08	" 100 "	"	490.96
1.19	" 100 "	"	489.77
0.50	" 100 "	"	489.27
0.85	" 100 "	"	488.42
Gravel & Sand			
This Area has been Filled in with large Rocks			

Test Hole No. 3			
22' Lt. of Sta. 623+62			492.50
144	Per	Blebs	491.06
128	"	"	491.68
133	"	"	488.45
144	"	"	487.61
046	"	"	486.33
806	"	"	486.49
013	"	"	486.36
023	"	"	486.13
032	"	"	485.86
021	"	"	485.64
017	"	"	485.47
041	"	"	485.06
049	"	"	484.57
050	"	"	484.03
074	"	"	483.29
087	"	"	482.46
059	"	"	481.88
034	"	"	481.54
032	"	"	481.22

Test Hole No. 4		
32' Pt. of Str. 673, 73		
Old Ground	Flow	Flow
0.05	Per 10 Blows	121.35
0.05	" "	121.30
0.05	" "	123.25
0.06	" "	122.79
0.34	" "	122.45
0.40	" "	122.05
2.10	" 90 "	129.85
1.75	" 100 "	128.76

Rod descending to much
 Chuck Climbing
 Gravelly Sand

Test Hole No. 5			
22' Lt. of 510, 674-36			
Old Ground	ELV		
185	Per	NO	OWNS
0.34	"	"	"
0.51	"	"	"
0.13	"	"	"
0.67	"	"	"
1.02	"	"	"
0.80	"	"	"
0.50	"	"	"
0.20	"	"	"
0.06	"	"	"
1.36	"	100	"
0.00	"	30	"

There is 73 of Water

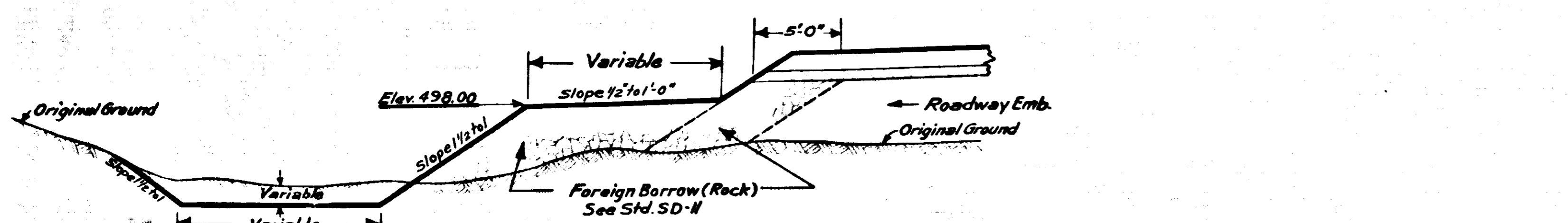
Test Hole No. 6		22' At Sho 674-40		Old Ground Elev 1193.34	
105	105	105	105	105	105
0.97	0.97	0.97	0.97	0.97	0.97
0.73	0.73	0.73	0.73	0.73	0.73
0.86	0.86	0.86	0.86	0.86	0.86
1.15	1.15	1.15	1.15	1.15	1.15
0.60	0.60	0.60	0.60	0.60	0.60
0.49	0.49	0.49	0.49	0.49	0.49
2.34	2.34	2.34	2.34	2.34	2.34
0.68	0.68	0.68	0.68	0.68	0.68
1.00	1.00	1.00	1.00	1.00	1.00
0.96	0.96	0.96	0.96	0.96	0.96
0.65	0.65	0.65	0.65	0.65	0.65
0.58	0.58	0.58	0.58	0.58	0.58
0.47	0.47	0.47	0.47	0.47	0.47
0.45	0.45	0.45	0.45	0.45	0.45
0.30	0.30	0.30	0.30	0.30	0.30
0.35	0.35	0.35	0.35	0.35	0.35

Test Hole No. 7			
2' Lt. of S.M. 0-37			
Old Ground		Elev 496.25	
1.05	Per	10	Blooms
0.30	"	"	"
0.35	"	"	"
0.60	"	"	"
0.20	"	"	"
0.45	"	"	"
0.43	"	"	"
0.34	"	"	"
0.18	"	"	"
0.40	"	"	"
0.30	"	"	"
0.35	"	30"	"
0.70	"	20	"
0.30	"	10	"
0.26	"	"	"
0.45	"	"	"
0.35	"	"	"
0.33	"	"	"
0.21	"	"	"
0.29	"	"	"

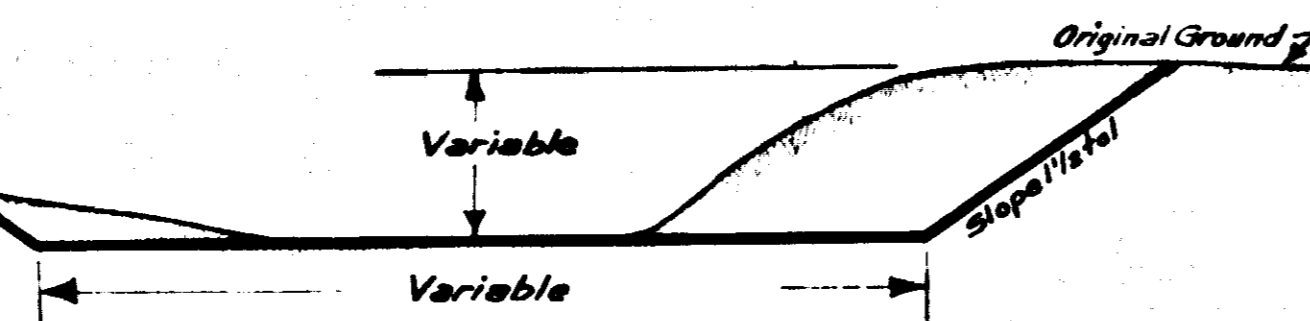
Test Hole No. 8			
22 FT. of STR 0-47			
Old Ground		Elev	
0.51	Fe	10	487.62
0.52	"	"	487.14
0.13	"	"	486.41
0.12	"	"	485.39
1.01	"	"	484.31
0.26	"	"	483.75
0.91	"	"	482.83
0.29	"	"	482.54
0.25	"	"	482.15
0.15	"	"	481.94
0.36	"	"	480.60
0.78	"	"	480.21
1.92	AO	"	479.25
1.51	"	"	477.78
0.78	"	"	477.00
0.51	"	"	476.49
0.00	"	30	476.49

Gravel & Sand

These Test were made with Standard P.D.N Test Sounding device S K 301 Weight of Ram 30" Average drop 30'. Rods used 3/4" Ø

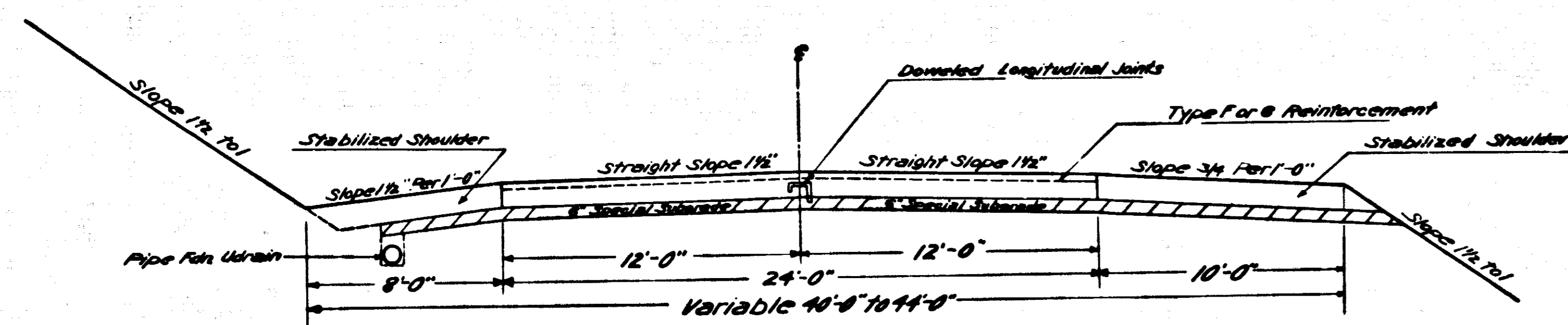


TYPICAL CHANNEL SECTION
Lt. of Sta. 674+02 (See X-Sections)



TYPICAL CHANNEL SECTION
Rt. of Sta. 674 + 02 (See X-Sections)

OVERALL LENGTH OF THIS PROJECT = 1058.79 LIN.FT.



9" UNIFORM REINFORCED CEMENT CONCRETE PAVEMENT

Sta. 666+75.00 to Sta. 673+07.40
Sta. 0+37.60 to Sta. 2+75.00

PUBLIC UTILITIES

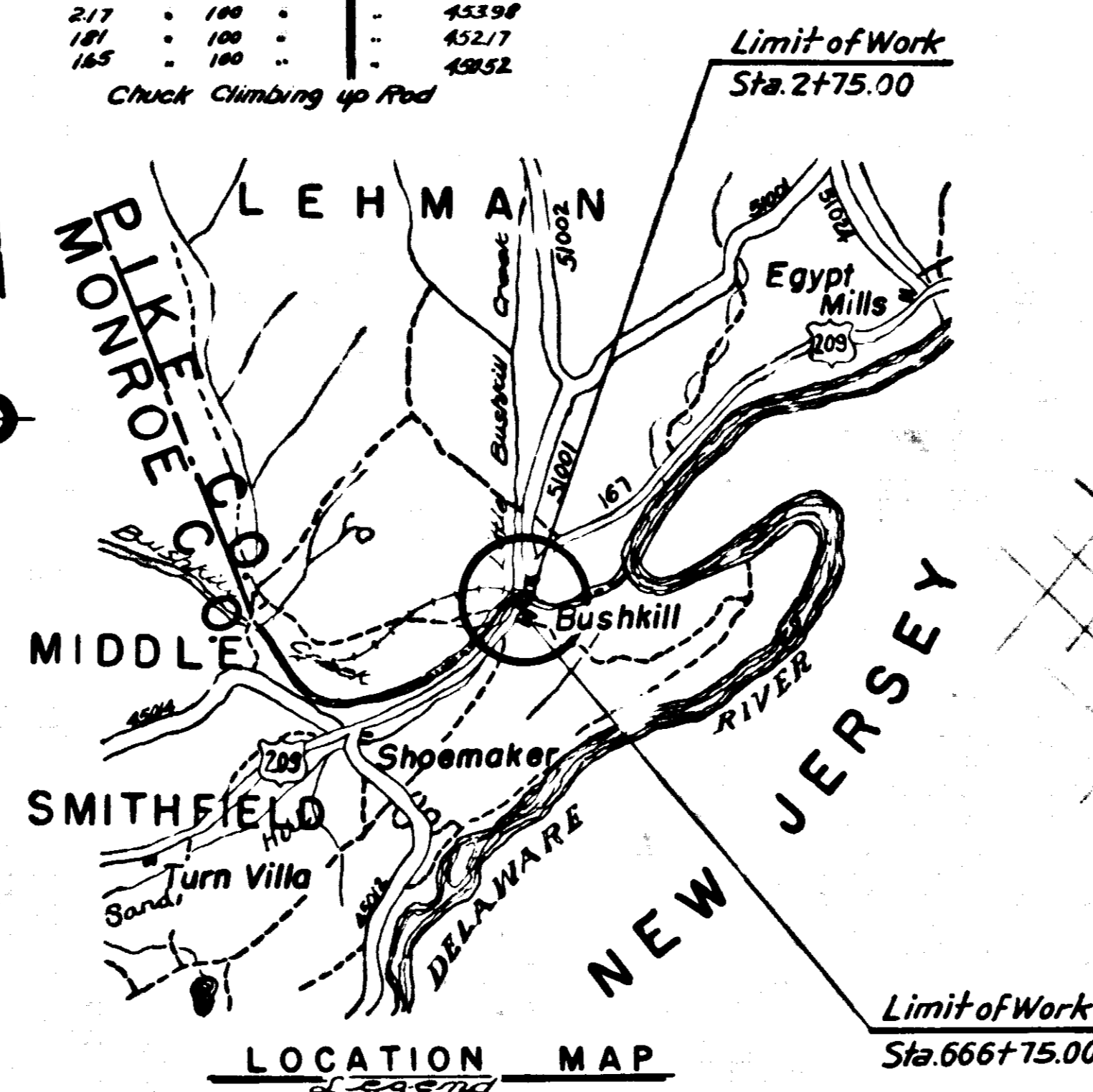
Bell Telephone Co. of Penna.
Scranton, Penna.
Penna. Power & Light Co.
Allentown, Penna.

CONSTRUCTION EQUALITIES

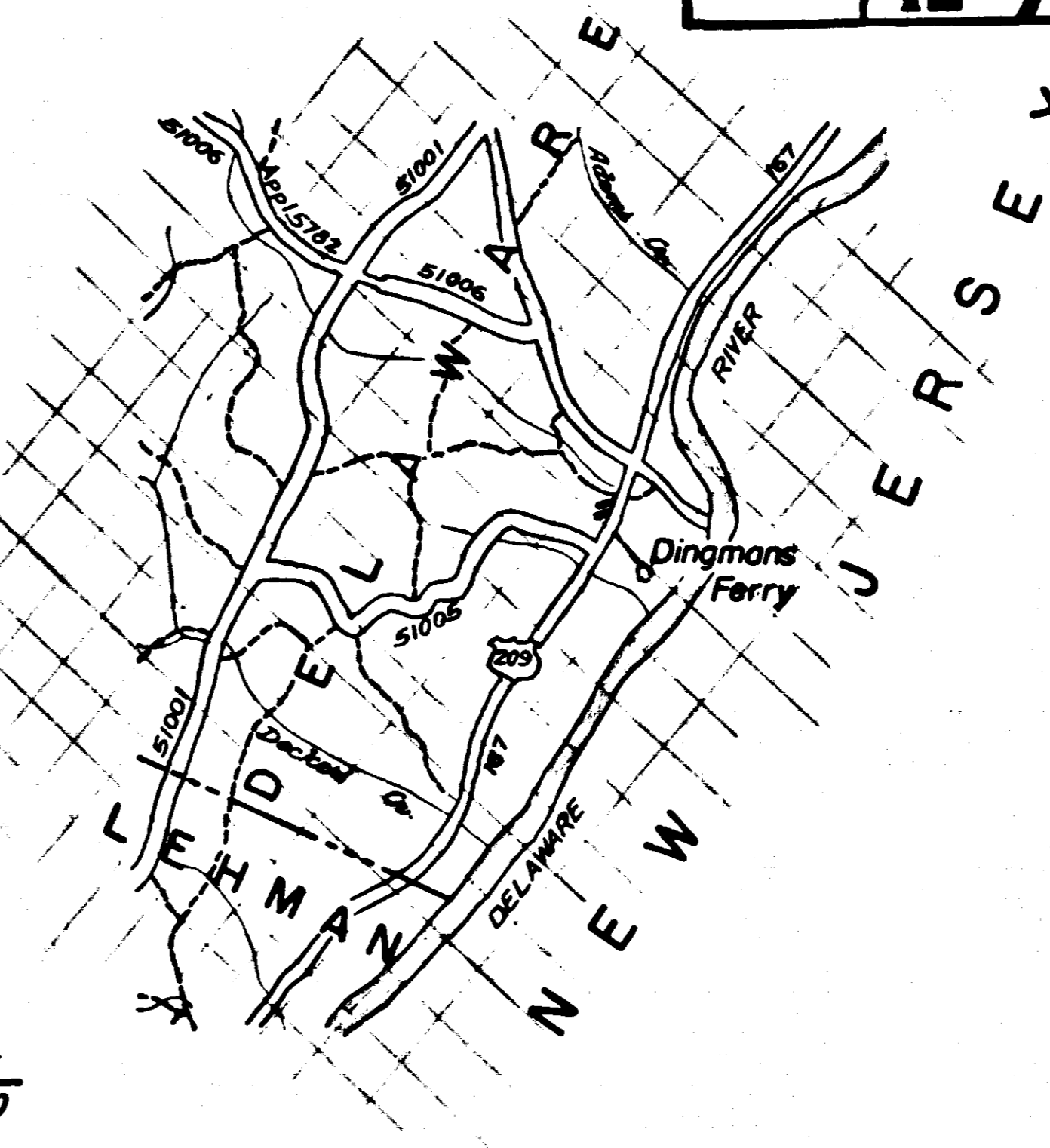
Sta. 674+59.00 BK = Sta. 0+00.00 Ahd.
Sta. 0+44.47 BK = Sta. 0+44.68 Ahd.

—GRADING SECTION —

THE FOLLOWING INFORMATION ON THE ESTIMATED AMOUNTS OF GRADING QUANTITIES HAS BEEN USED BY THE DEPARTMENT OF HIGHWAYS IN ITS PRELIMINARY ESTIMATE. FOR THIS PROJECT AND SHALL NOT BE TAKEN OR USED AS A WAIVER OF ANY PROVISIONS OF THE SPECIFICATIONS AND CONTRACT. QUANTITIES SHOWN HERE ARE APPROXIMATE.

[illegible]

LOCATION MAP



GENERAL NOTES

Legal Width of Right of Way:

Between Sta. 666+75.00 and Sta. 674+59.00 is variable fifty (50') feet to Sixty (60') feet. Established by construction plans of Route 167. Approved by Governor John S. Fisher, Aug. 1929.

Between Sta. 0+00.00 and Sta. 2+75.00 is variable: Fifty (50) to Forty-five (45) feet Established by the following construction plans:-

Route 167 approved by Governor John N. Fisher, Aug. 1929
Route 167 Second approved by Governor John N. James Aug. 1939

☒ *The Department reserves the right to alter in any or all of this work. The Contractor is hereby notified not to perform any such work, except grading which is within the Highway Right of Way, until so ordered in writing by the Engineer.*

Buildings and Structures marked [C] are to be removed or altered by the authority responsible for the payment of property damages, and such work is not a part of this Contract.

Specification Form 408 - Dated 1954

See Special Requirement in Proposal for Public Convenience and Safety.

For the purpose of determining the spacing of transverse expansion joints, this entire project will be considered as open country.

Construction Details, other than shown on these drawings shall conform to the attached Standard Sheets.

E-3.....Dec.1,1953
B-1.....Sept.15,1954
B-2.....April 6, 1954
SD-11.....Mar.24,1947
SD-14.....Dec.1,1953

RECORD OF STATIONS OF EXISTING ROAD TYPES

Adjacent to Sta 666+75.00 - Reinf. Cem. Conc. Pav't 20' Wide
Sta. 666+75.00 to Sta. 674+59.00 - Reinf. Cem. Conc. Pav't 20' Wide
Sta 0+00.00 to Sta 2+75.00 - Reinf. Cem. Conc. Pav't 22' Wide
Adjacent to Sta. 2+75.00 - Reinf. Cem. Conc. Pav't - 22' Wide

This is a Federal Project and as such is subject to inspection by Representatives of the Bureau of Public Roads.

Class BM-1 Asphaltic Cement shall be used in the Bituminous Surface Course ID-2.

Either crushed Stone, Slag or washed and crushed Gravel shall be used as a course Aggregate in the Bituminous Surface Course ID-2.

TRACED BY

FINAL BY

REQUIRED LIST

- Sta. 666+75 to Sta. 2+75
23.9 LF 6" Pipe Fdn. Udrain-Type A-Type II
779 LF Stabilized Shoulder - Item 8a
380 SF Special Subgrade
- Sta. 666+75 to Sta. 667+47 - Lt
66 LF 6" Pipe Fdn. Udrain-Type A-Type II
6 LF 6" Pipe Udrain Outlets
- Sta. 666+75 to Sta. 667+47 - Rt
66 LF 6" Pipe Fdn. Udrain-Type A-Type II
6 LF 6" Pipe Udrain Outlets
- Sta. 667+50
48 LF 18" R.C.C. Pipe
1 Type 4 Inlet Rt.
25 CXCL2 Exe. Pipe
25 CXCL2 Exe. - Outlet Ditch Lt.
- Sta. 667+52 to Sta. 668+40 - Lt
182 LF 6" Pipe Fdn. Udrain-Type A-Type II
6 LF 6" Pipe Udrain Outlets
- Sta. 667+52 to Sta. 668+40 - Rt
182 LF 6" Pipe Fdn. Udrain-Type A-Type II
6 LF 6" Pipe Udrain Outlets
- Sta. 667+50 - Drive Rt.
4 CX Sel. Mat'l Surf. - Max Depth 6"
8 CX CL1 Exe. - L-12' W-20'
- Sta. 668+50 - Lt
Removal of Temporary Bridge
and Approaches - Method 2
See Special Requirement in the Proposal
For Resurfacing Material. Item 8a. Lump
- Sta. 669+30 - Drive Rt.
6 CX Sel. Mat'l Surf. - Max Depth 6"
20 CX Emb. - L-36' W-10'
- Sta. 669+90 - Drive Rt.
8 CX Sel. Mat'l Surf. - Max Depth 6"
80 CX Emb. - L-47' W-10'
- Sta. 670+45 - Typ. Road Rt.
11 CX Sel. Mat'l Surf. - Max Depth 6"
13 CX Emb. - L-28' W-24'
- Sta. 670+50 - Drive Rt.
85 SX 1 1/2" Bit Surf. Crs. 10-2
89 SX 6" Cr. Aggr. Base Crs. - Type B
3 CX CL1 Exe. - 03 SX Subgrade
17 CX Emb. - L-38' W-30'
- Sta. 671+45 - Drive Rt.
85 SX 1 1/2" Bit Surf. Crs. 10-2
89 SX 6" Cr. Aggr. Base Crs. - Type B
4 CX CL1 Exe. - 03 SX Subgrade
16 CX Emb. - L-38' W-30'
- Sta. 663+50 to Sta. 668+38 - Lt
569 CX Emb. - Fill Pocket
- Sta. 671+75 - Drive Rt.
4 CX Sel. Mat'l Surf. - Max Depth 6"
6 CX Emb. - L-28' W-10'
- Sta. 672+40 - Drive Rt.
8 CX Sel. Mat'l Surf. - Max Depth 6"
30 CX Emb. - L-46' W-10'
- Sta. 0+35 to Sta. 2+75 - Lt
23.9 LF 6" Pipe Fdn. Udrain-Type A-Type II
6 LF 6" Pipe Udrain Outlets
- Sta. 0+48 to Sta. 2+75 - Rt
140 LF 6" Pipe Fdn. Udrain-Type A-Type II
70 LF 6" Pipe Udrain Outlets
- Sta. 1+00 - Drive Rt.
1 CX Sel. Mat'l Surf. - Max Depth 6"
L-13' W-10'
- Sta. 1+00 - Road Lt.
90 SX 2 1/2" Bit Surf. Crs. 10-2
93 SX 6" Cr. Aggr. Base Crs. - Type B
L-70 W-21 Au
- Sta. 1+35 - Drive Rt.
1 CX Sel. Mat'l Surf. - Max Depth 6"
L-13' W-10'
- Sta. 662+50 to Sta. 674+10 - Lt
518 CXCL2 Exe. - Channel Cleaning
- Sta. 668+75 to Sta. 670+10 - Lt
86 CX Emb. - Fill Pocket
- Sta. 669+50 to Sta. 672+50 - Lt
492 CX Emb. - Filling small channel

