

CALCULATIONS

SUMMARY OF QUANTITIES

T-35 ASPHALTIC CONCRETE SURFACE COURSE

S.R. 528	STA 0 + 00	TO STA 2 + 04.78	=	204.78 × 21.5 × 5/8 + 27	=	17	CU. YDS.
S.R. 528	STA 2 + 04.78	TO STA 62 + 57.02	=	5015.24 × 24 × 5/8 + 27	=	464	CU. YDS.
S.R. 528	STA 62 + 57.02	TO STA 64 + 50	=	192.98 × 22 × 5/8 + 27	=	16	CU. YDS.
S.R. 307	STA 5 + 50	TO STA 5 + 75	=	25 × 19.5 × 5/8 + 27	=	2	CU. YDS.
S.R. 307	STA 5 + 75	TO STA 9 + 34.31	=	359.31 × 20 × 5/8 + 27	=	28	CU. YDS.
RIVER ROAD	STA 10 + 69.38	TO STA 13 + 50	=	280.62 × 20 × 5/8 + 27	=	22	CU. YDS.
RIVER ROAD	STA 13 + 50	TO STA 14 + 00	=	50 × 20.5 × 5/8 + 27	=	4	CU. YDS.
						TOTAL	553

B-35 ASPHALTIC CONCRETE LEVELING COURSE

SAME AS T-35 TOTAL 553 CU. YDS.

B-35 ASPHALTIC CONCRETE BASE COURSE

S.R. 528	STA 0 + 00	TO STA 2 + 04.78	=	204.78 × 22 × 1/4 + 27	=	42	CU. YDS.
S.R. 528	STA 2 + 04.78	TO STA 62 + 57.02	=	5015.24 × 24.5 × 1/4 + 27	=	1138	CU. YDS.
S.R. 528	STA 62 + 57.02	TO STA 64 + 50	=	192.98 × 22.5 × 1/4 + 27	=	40	CU. YDS.
S.R. 307	STA 5 + 50	TO STA 5 + 75	=	25 × 20 × 1/4 + 27	=	5	CU. YDS.
S.R. 307	STA 5 + 75	TO STA 9 + 34.31	=	359.31 × 20.5 × 1/4 + 27	=	68	CU. YDS.
RIVER ROAD	STA 10 + 69.38	TO STA 13 + 50	=	280.62 × 20.5 × 1/4 + 27	=	53	CU. YDS.
RIVER ROAD	STA 13 + 50	TO STA 14 + 00	=	50 × 21 × 1/4 + 27	=	10	CU. YDS.
						TOTAL	1293

T-30 BITUMINOUS PRIME COAT

S.R. 528	STA 0 + 00	TO STA 2 + 04.78	=	204.78 × 22 × 9 × .4	=	200	GALS.
S.R. 528	STA 2 + 04.78	TO STA 62 + 57.02	=	5015.24 × 24.5 × 9 × .4	=	5461	GALS.
S.R. 528	STA 62 + 57.02	TO STA 64 + 50	=	192.98 × 22.5 × 9 × .4	=	192	GALS.
S.R. 307	STA 5 + 50	TO STA 5 + 75	=	25 × 20 × 9 × .4	=	22	GALS.
S.R. 307	STA 5 + 75	TO STA 9 + 34.31	=	359.31 × 20.5 × 9 × .4	=	326	GALS.
RIVER ROAD	STA 10 + 69.38	TO STA 13 + 50	=	280.62 × 20.5 × 9 × .4	=	255	GALS.
RIVER ROAD	STA 13 + 50	TO STA 14 + 00	=	50 × 21 × 9 × .4	=	46	GALS.
						TOTAL	6502

B-19 AGGREGATE BASE COURSE

S.R. 528	STA 9 + 99	TO STA 2 + 04.78	=	204.78 × 23 × 2/3 + 27	=	116	CU. YDS.
S.R. 528	STA 2 + 04.78	TO STA 62 + 57.02	=	5015.24 × 25.5 × 2/3 + 27	=	3158	CU. YDS.
S.R. 528	STA 62 + 57.02	TO STA 64 + 50	=	192.98 × 23.5 × 2/3 + 27	=	112	CU. YDS.
ADDITIONAL FOR CUT SECTIONS ON S.R. 528							
S.R. 528	STA 12 + 50	TO STA 26 + 50	=	1400 × 2.16 + 27	=	112	CU. YDS.
S.R. 528	STA 47 + 72.50	TO STA 59 + 30	=	1157.5 × 2.16 + 27	=	93	CU. YDS.
S.R. 307	STA 5 + 50	TO STA 5 + 75	=	25 × 24.5 × 2/3 + 27	=	15	CU. YDS.
S.R. 307	STA 5 + 75	TO STA 9 + 34.31	=	359.31 × 25 × 2/3 + 27	=	222	CU. YDS.
RIVER ROAD	STA 10 + 69.38	TO STA 13 + 50	=	280.62 × 21 × 5/12 + 27	=	91	CU. YDS.
RIVER ROAD	STA 13 + 50	TO STA 14 + 00	=	50 × 21.5 × 5/12 + 27	=	17	CU. YDS.
						TOTAL	3936

I-22 SUBBASE

S.R. 528	STA 0 + 00	TO STA 2 + 04.78	=	204.78 × 24 × 1/2 + 27	=	91	CU. YDS.
S.R. 528	STA 2 + 04.78	TO STA 62 + 57.02	=	5015.24 × 26.5 × 1/2 + 27	=	2461	CU. YDS.
S.R. 528	STA 62 + 57.02	TO STA 64 + 50	=	192.98 × 24.5 × 1/2 + 27	=	88	CU. YDS.
ADDITIONAL FOR ROCK CUT							
S.R. 528	STA 29 + 00	TO STA 32 + 75	=	375 × 11.02 + 27	=	153	CU. YDS.
S.R. 528	APPROACH SLABS		=	50 × 26.5 × 1/2 + 27	=	25	CU. YDS.
S.R. 307	STA 5 + 50	TO STA 5 + 75	=	25 × 22.5 × 1/2 + 27	=	10	CU. YDS.
S.R. 307	STA 5 + 75	TO STA 9 + 34.31	=	359.31 × 23 × 1/2 + 27	=	153	CU. YDS.
RIVER ROAD	STA 10 + 69.38	TO STA 13 + 50	=	280.62 × 22 × 1/3 + 27	=	76	CU. YDS.
RIVER ROAD	STA 13 + 50	TO STA 14 + 00	=	50 × 22.5 × 1/3 + 27	=	14	CU. YDS.
						TOTAL	3071

I-18 STABILIZED CRUSHED AGGREGATE SHOULDERS

S.R. 528	STA 0 + 00	TO STA 2 + 04.78	=	204.78 × 8 × 1/2 + 27	=	30	CU. YDS.
S.R. 528	STA 2 + 04.78	TO STA 62 + 57.02	=	5015.24 × 8 × 1/2 + 27	=	743	CU. YDS.
S.R. 528	STA 62 + 57.02	TO STA 64 + 50	=	192.98 × 8 × 1/2 + 27	=	29	CU. YDS.
S.R. 528	APPROACH SLABS		=	50 × 8 × 1/2 + 27	=	7	CU. YDS.
S.R. 528	DEDUCT FOR INTERSECTIONS		=	509.66 × 4 × 1/2 + 27	=	-38	CU. YDS.
S.R. 528	DEDUCT FOR DRIVES & MAIL BOX APPROACHES		=		=	-75	CU. YDS.
S.R. 307	STA 5 + 50	TO STA 5 + 75	=	25 × 8 × 1/2 + 27	=	4	CU. YDS.
S.R. 307	STA 5 + 75	TO STA 9 + 34.31	=	359.31 × 8 × 1/2 + 27	=	53	CU. YDS.
						TOTAL	753

I-7 REINFORCED CONCRETE APPROACH SLABS T=13 INCH

S.R. 528		50 × 24 × 9	=	133	SQ. YDS.
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EXCAVATION, EMBANKMENT, TOPSOIL STOCKPILED & SEEDING QUANTITIES

SHEET No	LOCATION	STATION		EXCAVATION CUBIC YDS.	EMBANKMENT CUBIC YDS.	EMB.+18% CUBIC YDS.	L-1 TOPSOIL STOCKPILED CUBIC YDS.	SEEDING L-9 SQUARE YDS.	NO DEDUCTION FROM EMB.+18% FOR E-4 GRANULAR BORROW
		FROM	TO						
11	S.R. 528	0+00	10+00	1,565	15,920	18,786	0	7,803	
12		10+00	20+00	24,770	6,300	7,434	0	8,812	
13		20+00	30+00	15,694	1,217	1,436	0	6,624	
13		30+00	38+53	16,137	20,468	24,152	192	7,577	
14		47+36	50+00	17,282	0	0	0	3,367	
15		50+00	60+00	23,699	121	143	0	8,392	
15		60+00	64+50	1,379	341	402	0	2,794	
11	CONNECTING RD.#1	1+00	2+75	378	397	468	0	746	
17	GRISWOLD RD.	1+00	4+75	3,568	17	20	0	2639	
13	CONNECTING RD.#2	0+75	2+32.83	2,346	0	0	0	295	
18	S.R. 307	5+50	9+00	5068	4	5	0	2309	
18	RIVER RD	11+00	14+00	3,102	20	24	0	1715	
-	ADDITIONAL SEEDING AREAS FROM CONSTR. LIMITS TO R/WLINE	0+00	38+53					16,694	
-		47+36	64+50					6,767	
19	TURN-AROUNDS			19	1038	1224	0	724	
11-12-13-15-17	DRIVES			2837	251	296	0		
TOTALS				117,844	46,094	54,390	192	77,258	

L-9 AGRICULTURAL LIMING MATERIAL

77259 SQ. YD. (SEEDING) × 9 = 695331 SQ. FT.
 207 SQ. YD. (SO DING) × 9 = 3663 SQ. FT.
 AGR. LIM. MAT'L @ 100 lb. PER 1000 SQ. FT.
 = $\frac{698994 \times 100}{1000 \times 2000}$ = **34.95 TONS.**

MIXING CALCIUM CHLORIDE & CRUSHED AGGREGATE

= 802 Cu. Yds (I-18) @ 6" DEPTH = **4812 SQ. YDS.**

L-9 LIME FOR SHALE AREAS

1830 SQ. YD. (SHALE AREA) × 9 = 16470 SQ. FT.
 LIME FOR SHALE AREAS @ 10 TONS PER ACRE
 = $\frac{16470 \times 10}{43560}$ = **3.79 TONS**

M-10 CALCIUM CHLORIDE

CALCIUM CHLORIDE @ 2.1 lb. PER SQ. YD.
 = $\frac{4812 \times 2.1}{2000}$ = **5.05 TONS**

L-9 COMMERCIAL FERTILIZER

77666 SQ. YDS. (SEEDING) × 9 = 698994 SQ. FT.
 COMMERCIAL FERTILIZER @ 20 lb. PER 1000 SQ. FT.
 = $\frac{698994 \times 20}{1000 \times 2000}$ = **6.99 TONS**

L-3 PLACING STOCKPILED TOPSOIL (6" AVG. THICK.)

LOCATION	STATION FROM	STATION TO	SQ. YDS.
S.R. 528	29+00	32+75	604
CONNECTING RD.#2	0+24	2+32.83	378
TOTAL			982

E-11 WATER

SHEET No	ITEM	QUANTITY CU. YDS.	E-1 @ 0005 M-GAL. PER CU. YD.
9	EMB.+18%	53409	267
9	I-18	1189	6
9	I-22	3416	17
9	B-19	4360	22
TOTAL			312 M-GAL.

E-4 BORROW, USING GRANULAR MATERIAL

LOCATION	STATION FROM	STATION TO	CU. YDS.
S.R. 528	7+50	11+50	8500
TOTAL			8500

E-1 COMPACTED SUBGRADE

SHEET No	ITEM	E-1 SQ. YDS.
9	T-35 (647 CU. YDS @ 1 1/4")	18634
9	I-7 APPROACH SLABS	133
DEDUCT FOR ROCK CUT		-1524
TOTAL		17243

* DEDUCT FOR STRUCTURE STA 37 + 60.50 TO STA 47 + 97.50 = 1037 LIN. FT.