

PAVEMENT CALCULATIONS

SECTIONS 'F&G' Begin Project Station 0+00  
End Project Station 364+28.58  
No Deductions  
Net Length 36,428.58 Lin. Ft.

SECTION 'H' Begin Project Station 480+16.62  
End Project Station 557+86.75  
No Deductions  
Net Length 7,770.13 Lin. Ft.

SECTIONS 'F&G'

ITEM E-1 Roadway Excavation (Unclassified)  
Avg. Depth 9/10 ft. - width 2 ft each side  
Computations  $36,428.58 \times 4 \times 9/10 \div 27 = 3240$  Cu. Yds.  
Use 3300 Cu. Yds.

ITEM E-4 Embankment for Berms.  
Avg. Fill 9/10 ft. - width 4 ft each side.  
Computations  $36,428.58 \times 8 \times 9/10 \div 27 = 6476$  Cu. Yds.  
Add 15% 972  
Total 7448 Cu. Yds.  
Deduct Roadway Excavation 3240  
Net Borrow (Contractor to furnish) 4208 Cu. Yds.  
Use 4300 Cu. Yds.

ITEM E-10 Sealing (only) Existing Pavement Edges (two sides)  
using bitum. material Sec. M-5.12 AE-3 applied at rate of .15 gal. per sq. yd.  
Computations -  $36,428.58 \times 2 = 72,857.16$  Lin. Ft.

ITEM I-19 1/4" Insulation Course 2 ft. widening - each side.  
Computations -  $36,428.58 \times 4 \div 9 = 16,190$  Sq. Yds.  
Add for curve widening 310.  
Total 16,500 Sq. Yds.

ITEM B-35 4" Asphaltic Concrete - 1st. Base Course.  
2 ft. widening - each side.  
Computations -  $36,428.58 \times 4 \times 1/2 \div 27 = 1800$  Cu. Yds.  
Add for curve widening 50.  
Total 1850 Cu. Yds.

3" Asphaltic Concrete - 2nd Base Course.  
2 ft. widening - each side  
Computations -  $36,428.58 \times 4 \times 3/2 \div 27 = 1350$  Cu. Yds.  
Add for curve widening 50  
Total 1400 Cu. Yds.  
Volume for 1st. Base Course = 1850 Cu. Yds.  
Volume for 2nd Base Course = 1400  
Total for Base Course 3250 Cu. Yds.

ITEM T-35 1" Asphaltic Concrete Surface Course (Type B)  
2 ft. widening - each side  
Computations -  $36,428.58 \times 4 \times 1/2 \div 27 = 448$  Cu. Yds.  
Add for curve widening 12.  
Add for Material used to overlap at edges of existing Bituminous Surface Course 50 Cu. Yds.  
Total 510 Cu. Yds.  
Use 525 Cu. Yds.

ITEM I-9 10"x8" Stone Underdrains (French Drain) No. 2  
Estimated 500 Lin. Ft. per mile  
 $500 \times 6.899 = 3449.5$  Lin. Ft. Use 3500 Lin. Ft.

SECTION 'H'

ITEM E-1 Roadway Excavation (Unclassified)  
Avg. Depth 9/10 ft. - width 2 ft each side.  
Computations  $7770.13 \times 4 \times 9/10 \div 27 = 691$  Cu. Yds.  
Use 700 Cu. Yds.

ITEM E-4 Embankment for Berms.  
Avg. Fill 9/10 ft. - width 4 ft each side.  
Computations  $7770.13 \times 8 \times 9/10 \div 27 = 1381$  Cu. Yds.  
Add 15% 207  
Total 1588 Cu. Yds.  
Deduct Roadway Excavation 691  
Net Borrow (Contractor to furnish) 897 Cu. Yds.  
Use 900 Cu. Yds.

ITEM E-10 Sealing (only) Existing Pavement Edges (two sides)  
using bitum. material Sec. M-5.12 AE-3 applied at rate of .15 gal. per sq. yd.  
Computations  $7770.13 \times 2 = 15,540.26$  Lin. Ft.

ITEM I-19 1/4" Insulation Course 2 ft. widening - each side.  
Computations -  $7770.13 \times 4 \div 9 = 3,454$  Sq. Yds.  
Add for curve widening 46.  
Total 3,500 Sq. Yds.

ITEM B-35 3" Asphaltic Concrete 1st. Base Course.  
2 ft. widening - each side.  
Computations -  $7770.13 \times 4 \times .25 \div 27 = 287.8$  Cu. Yds.  
Add for curve widening 12.2  
Total 300.0 Cu. Yds.

3" Asphaltic Concrete 2nd. Base Course  
2 ft. widening - each side  
Computations -  $7770.13 \times 4 \times .25 \div 27 = 287.8$  Cu. Yds.  
Add for curve widening 12.2  
Total 300.0 Cu. Yds.  
Volume for 1st. Base Course 300.0 Cu. Yds.  
Volume for 2nd. Base Course 300.0  
Total for Base Course 600.0 Cu. Yds.

ITEM T-35, 1" Asphaltic Concrete Surface Course (Type B)  
 $7770.13 \times 20 \times .083 \div 27 = 477.7$  Cu. Yds.  
Add for Curve Widening etc 10.0  
Total 487.7 Cu. Yds.  
Use 500.0 Cu. Yds.

ITEM B-35, 1" Minimum Thickness. Asphaltic Concrete Leveling Course  
 $7770.13 \times 20 \times .083 \div 27 = 477.7$  Cu. Yds.  
Add for Crown Reduction & Extra Leveling 75 Cu. Yds. per mile  $\times 1.471 = 110.3$  Cu. Yds.  
Total 588.0 Cu. Yds.  
Use 600.0 Cu. Yds.

ITEM T-30, Bituminous Prime Coat.  
using Bituminous Material Sec. M-5.12, AE-3 applied at rate of .15 gal. per sq. yd. and Sand Cover at rate of 4 to 7 lbs per sq. yd.  
 $(7770.13 \times 16) \div 9 = 13,813.6 \times .15 = 2072$  Gal's Use 2100 Gal's.

ITEM I-9 10"x8" Stone Underdrains (French Drain) No. 2  
Estimated 500 Lin. Ft. per mile.  
 $500 \times 1.471 = 735$  Lin. Ft. Use 750 Lin. Ft.

7770.13  
36428.58  
44198.71

GENERAL NOTES

TRAFFIC Traffic shall be maintained at all times to the satisfaction of the Division Engineer. The item of maintaining shall include furnishing lights, signs, barricades and watchmen necessary to secure the unimpeded flow of traffic twenty four (24) hours daily.

EARTHWORK All suitable material resulting from Roadway Excavation (Unclassified) together with the necessary Borrow shall be used to construct the Roadway Shoulders as indicated on the Typical Sections.

EMBANKMENT Watering embankments and density requirements as referred to in Paragraph E-1.05 of the General Specifications will not be required on this project.

PROFILE The inside edge elevation of the pavement widening (Sections 'F&G') shall approximate the elevation of the edge of the existing pavement. The Center Line elevation of the new Asphaltic Concrete Surface (Section 'H') shall be approximately 2" above that of the existing pavement.

FORMS Side Forms, set to line and grade established by the Engineer will be required.

PAVEMENT The designed depths of the Bituminous Concrete Courses shown on the plans are subject to adjustment according to the ratio of volume to weight as indicated in the Specification for the item.

GENERAL SUMMARY

ITEM NO.	ITEM	SECTIONS F&G	SECTION H	TOTAL	UNIT
<b>ROADWAY</b>					
E-1	Roadway Excavation (Unclassified)	3300	700	4000	Cu. Yds.
E-4	Borrow (Contractor to furnish)	4300	900	5200	Cu. Yds.
E-10	Sealing (only) existing pavement edges using bitum. material Sec. M-5.12, AE-3 at .15 gal. per sq. yd.	72,857.16	15,540.26	88,397.42	Lin. Ft.
I-9	10"x8" Stone Underdrains (French Drain) No. 2	3500	750	4250	Lin. Ft.
<b>PAVEMENT:</b>					
I-19	1/4" Insulation Course	16,500	3,500	20,000	Sq. Yds.
B-35	Asphaltic Concrete Base Course (laid in two courses)	3250	600	3850	Cu. Yds.
B-35	1" Minimum Thickness, Asphaltic Concrete Leveling Course		600	600	Cu. Yds.
T-35	1" Asphaltic Concrete Surface Course (Type B)	525	500	1025	Cu. Yds.
T-30	Bituminous Prime Coat (using Bituminous Material Sec. M-5.12, AE-3) As per plan		2100	2100	Gal's.
<b>Maintaining Traffic, including lights, signs, barricades and watchmen, twenty four (24) hour service</b>					
		Lump Sum	Lump Sum	Lump	Sum.