

GENERAL NOTE:

* * The 6" of Compaction Type AA, shown for the center portion on the roadbed, is for the purpose of restoring the original Compaction Type AA which may have been lost since grading operations. The exact locations of this Compaction Type AA, which will be required, is to be determined by the Engineer at the time of construction.

Over all structures, unless otherwise directed by the Engineer, where the top of the subgrade is level with or above the finished shoulder grade, the earth cover over the structure slab shall be removed and backfilled with _____ material as directed by the Engineer. The removal of this material will be subsidiary. The _____ material used to backfill over the structure shall be paid for at the prices shown in the contract.

The earth shoulders shall be compacted full depth (Type B-MR 90) except, when ordered by the Engineer, the top 3" shall be left uncompacted for seeding.

All side roads and house entrances shall be surfaced with _____ to the R/W line as indicated on the detail. All side roads and house entrances with existing asphalt surface shall be surfaced with _____ at least to the R/W line or to the end of construction, as directed by the Engineer. Each mailbox turnout (ON PROJECTS WHERE STABILIZED SHOULDERS ARE NOT SPECIFIED) shall be surfaced with _____ to the limits shown on the detail.

Surfacing material (SA- _____) shall be used for surfacing house entrances and side roads (_____ C.Y./SQ.YD.) beyond the limits of the asphalt surface to the limits of construction as determined by the Engineer.

The thickness of side road and entrance surfacing may be increased to the same thickness as the stabilized shoulder within the approximate limits of the shoulder.

On projects which specify both bituminous base and surface course materials, side roads, house entrances and mailbox turnouts may be surfaced with both materials at the contractor's option, with the approval of the Engineer.

The thickness of stabilized base course AB-3 is based on a standard density of 146 PCF. When the standard density of the material is less than 146 PCF, the rate of application shown shall be used, resulting in an increased thickness corresponding to the decrease in standard density. When the standard density of material is greater than 146 PCF, the rate of application shown shall be increased in the amount to provide a stabilized base course equal to the designed thickness.

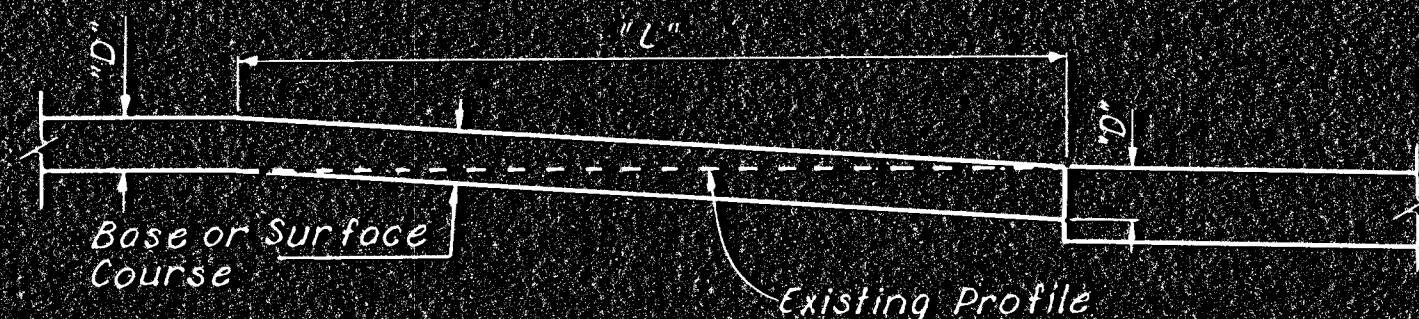
At locations where the crown grade should not be raised, such as curb and gutter sections, the base course shall be constructed to the plan thickness as shown and the "Rate of Application" shall be adjusted based on the standard density of the material being used.

Thicknesses indicated for all construction which is paid for on a weight or volume basis are approximate and may vary to correct for unevenness in the foundations or for other normal unevenness encountered in placement operations.

A tack coat of _____ shall be provided between each lift of all base courses and surface courses, and under the first lift of base or surface courses when they are placed on an existing bituminous, brick or concrete surface, when so ordered by the Engineer and at the rate designated by him. Quantities are included for these tacks calculated at the rate of 0.10 gal./sq.yd.

Bituminous Material quantities calculated on the basis of 8.328 Lbs. per gal..

See Sp. No. 250 for Subgrade Modification Quantities & Light Type Surface.



TYPICAL PROFILE AT GRADE CONTROL POINTS

The Contractor shall cut the subgrade in accordance with this profile at all grade control points, i.e., existing pavements, grade bridges and R.R. crossings, also at changes in thickness of base or surface courses. Corresponding dimensions of "D" and "L" shall be as given in the table below.

The work of cutting the subgrade and disposing of excess excavated material shall be subsidiary to other items in the contract.

TABLE OF DIMENSIONS

D	L	D	L	D	L	D	L	D	L	D	L
1'	25'	3"	75'	5"	125'	7"	175'	9"	225'	11"	275'
2"	50'	4"	100'	6"	150'	8"	200'	10"	250'	12"	300'

RECAPITULATION OF QUANTITIES

ITEM	96-87-044-1(13)							96-87-044-1(11)							Unit
	(P. I) (PHASE I)	(P. II) (PHASE I)	(P. I) (PHASE II)	(P. II) (PHASE II)	(P. I) (PHASE III)	Total (P. I)	Total (P. II)	(P. I) (PHASE I)	(P. II) (PHASE I)	(P. I) (PHASE II)	(P. II) (PHASE II)	Total (P. I)	Total (P. II)	Total (P. III)	
Aggregate for Bituminous Surface Course (BM-4)	895		11,961	2,299	2,833	15,659	2,299	17,938	3,683	1,046	3,683	1,046	4,729		Tons
Asphalt Cement (AC-5)	50		673	127	159	833	127	1,010	207	59	207	59	266		Tons
Emulsified Asphalt (RS-1H) or (CRS-1H)	1		3			9		9							Tons
Emulsified Asphalt (RS-1H)	2		20	5	6	28	5	33	8	2	8	2	10		Tons
Cover Material (CM-R, D, E, K or L)	8		57			64		64							Yds
Water (Emulsion Dilution)	1		1	1	1	1	1	1	1	1	1	1	1		M.Gal.
Manipulation (Bituminous Seal)	3.15		23.76			31.91		31.91							Sq.
Asphaltic Pavement Sampling	2		17	2	4	23	2	25	6	2	6	2	8		Each
Asphaltic Concrete Curb			182			182		182							Lin. Ft.
* Median Filler Material			5,003			5,003		5,003							Cu. Yds
Plant Mix Bituminous Mixture (Commercial Grade)	2353		123			2,976		2,976							Tons
* * Compaction Type AA (MR-0)															
			11,363	3,224	4,600	15,963	3,224	19,187	6,322	1,939	6,322	1,939	8,261		Cu. Yds

SUMMARY OF QUANTITIES

ITEM		(P. I) (PHASE I)		(P. II) (PHASE I)	(P. I) (PHASE II)			(P. II) (PHASE II)	(P. I) (PHASE III)	Total (P. I)	Total (P. II)	Total (P. III)	(P. I) (PHASE IV)	(P. II) (PHASE IV)	Total (P. IV)	Total (P. V)	Unit
		shoulders side-roads	detours R, B & C	side-roads	cut &-and side-roads	detour D	median shoulders	shoulders	shoulders				shoulders	shoulders			
Bituminous Surface Course																	
Ø	Aggregate for Bituminous Surface Course (BM-4)	211.12			1576.73		1410.53			3193.58	-	3193.58					Tons
	Asphalt Cement (AC-5)	11.88			83.74		79.38			180.00	-	180.00					Tons
	Emulsified Asphalt (RS-1H) or (CRS-1H)	1.05			1.85					2.90	-	2.90					Gals
	Manipulation (Bituminous Seal)	3.15			23.76					31.91	-	31.91					Sq. Yds
	Cover Material (CM-A, D, E, K or L)	7.60			56.36					64.16	-	64.16					M Gal
Water (Emulsion Dilution)																	
Asphaltic Concrete Curb (6")					181.88					181.88	-	181.88					Each
* Median Filler Material																	Tons
Ø Ø	Asphaltic Pavement Sampling						5			5	-	5					Each
	Plant Mix Bituminous Mixture (Commercial Grade)		2853.21				123.12			2,976.33	-	2,976.33					Tons

* to be used in the raised median on Meridian Ave.

RATES OF APPLICATION

RATE	UNIT	ITEM		
Bituminous Surface Course				
58.20	Tons	Agg. for Bituminous Surface Course (BM-4)	per sta.	4" Thick
3.23	Tons	Asphalt Cement (AC-5)	per sta.	4"
0.30	Gals.	Emulsified Asphalt (RS-1H) or (CRS-1H)	per Yd. ²	
0.009	Yd. ³	Cover Material (CM-R, D, E, K or L)	per Yd. ²	24" Top
Stabilized Shoulders				
34.74	Tons	Agg. for Bituminous Surface Course (BM-4)	10' to 12'	10'
1.955	Tons	Asphalt Cement (AC-5)	10' to 12'	10'
23.70	Tons	Agg. for Bituminous Surface Course (BM-4)	8' to 10'	8'
1.415	Tons	Asphalt Cement (AC-5)	8' to 10'	8'
22.66	Tons	Agg. for Bituminous Surface Course (BM-4)	6' to 8'	6'
1.275	Tons	Asphalt Cement (AC-5)	6' to 8'	6'
16.16	Tons	Agg. for Bituminous Surface Course (BM-4)	4' to 6'	4'
0.935	Tons	Asphalt Cement (AC-5)	4' to 6'	4'
10.57	Tons	Agg. for Bituminous Surface Course (BM-4)	2' to 4'	2'
0.595	Tons	Asphalt Cement (AC-5)	2' to 4'	2'
0.06	Gal.	Emulsified Asphalt (RS-1H)	per Yd. ²	
0.10	Gal.	Emulsified Asphalt (CRS-1H)	per Yd. ²	

φ Quantities have been increased for contingencies 15%

φφ Quantities have been increased for contingencies 8%

φ Includes 0.58 tons for Surface Prime

φφ Includes 7.60 tons for Surface Prime

Includes 1.88 tons for Surface Prime

φ Includes 2.41 tons for Surface Prime

φ Includes 3.13 tons for Surface Prime

φφ Includes 0.89 tons for Surface Prime

† Computed at the rate of 145 lbs./cu.ft. (Total Mix - Agg. & Asph.)

†† Computed at the rate of 6.0% of Dry Weight of Agg. at 136 lbs./cu.ft.

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KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
Bituminous Surfacing

SHEET NO.	OF	SCALE	APP.	DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CR.		DETAIL CR.		QUAN CR.		TRACE CR.	

Calculated By F. Courtel
Checked By G. Grant
Reviewed By R. Patter-son