FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	87N-0116-01	1999	51	110

GENERAL NOTE:

~~On surfacing projects the 150 mm 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. This work shall be paid under the bid item "Compaction of Earthwork (Type AA)(MR-)".~~

~~Over all structures, unless otherwise directed by the Engineer, where the top of the hubguard 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 75 mm 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 (________m^3/m^2) 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.~~

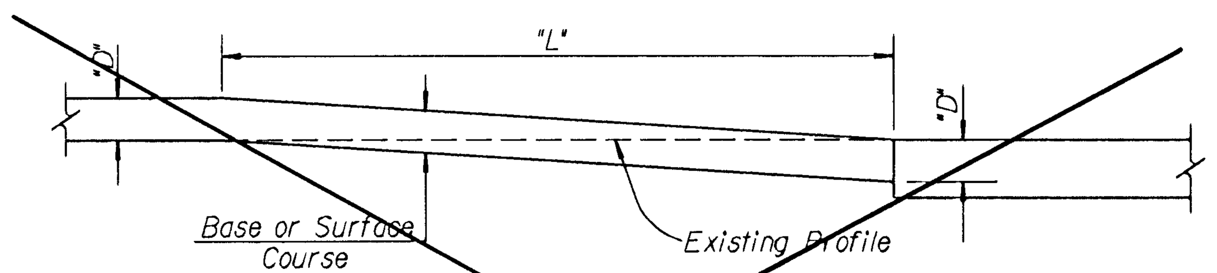
~~Quantities for aggregate for shoulders, AS-1, are calculated on the basis of 2 400 kg/m^3. Quantities for stabilized base course, AB-3, are calculated on the basis of 2 500 kg/m^3. Mass per m^3 includes moisture allowed by specification.~~

~~The base course shall be constructed to the plan thickness as shown.~~

~~Thicknesses indicated for all construction which is paid for on a mass 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 SS-1H 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/her. Quantities are included for these tacks calculated at the rate of 0.14 L/m^2.

Bituminous Material quantities are calculated on the basis of 1000 kg/m^3.



~~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, R.R. crossings, and at changes in thickness of base or surface courses. The ratio of $\frac{L}{D}$ shall be not less than 300 mm per mm thickness.~~

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

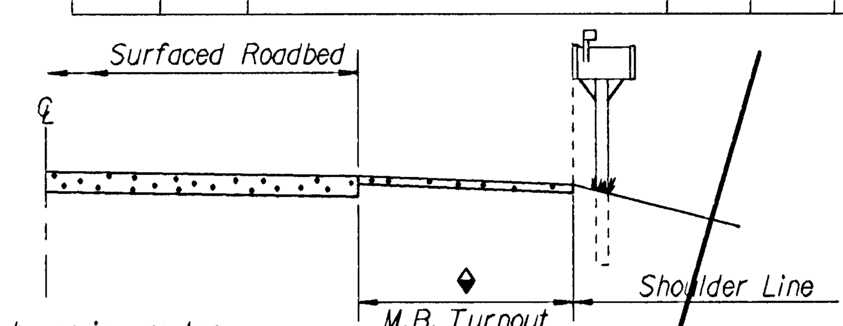
SUMMARY OF QUANTITIES

ITEM						TOTAL	UNITS
AGGREGATE FOR BITUMIOUS SURFACE COURSE (BM-2)						2899.0	metric ton
AGGREGATE FOR BITUMINOUS BASE COURSE (BM-2)						8291.1	metric ton
ASPHALTIC CEMENT (AC-10)						608.4	metric ton
TACK EMULSIFIED ASPHALT (SS-1H)						6.8	metric ton
PLANT MIX BITUMINOUS MIXTURE (COMMERCIAL GRADE)						1604.8	metric ton
FIELD OFFICE AND LAB (TYPE A)						1	EACH
SURFACING MATERIAL (AB-3)						18.70	m3

For Summary of Quantities by Station, see sheet 50.

Base Course Quantities have been increased for contingencies: 10%
Aggregate for bituminous mixtures are calculated on the basis of 2323 kg/m3 (mixed weight aggregate and asphalt).
Asphalt cement (AC-10) for bituminous surface and base courses is calculated at the rate of 5.75% of dry weight of aggregate.
Thicknessess indicated for all construction which is paid for on a weight of volume basis are approximate and may vary to correct uneveness encountered in placement operation.

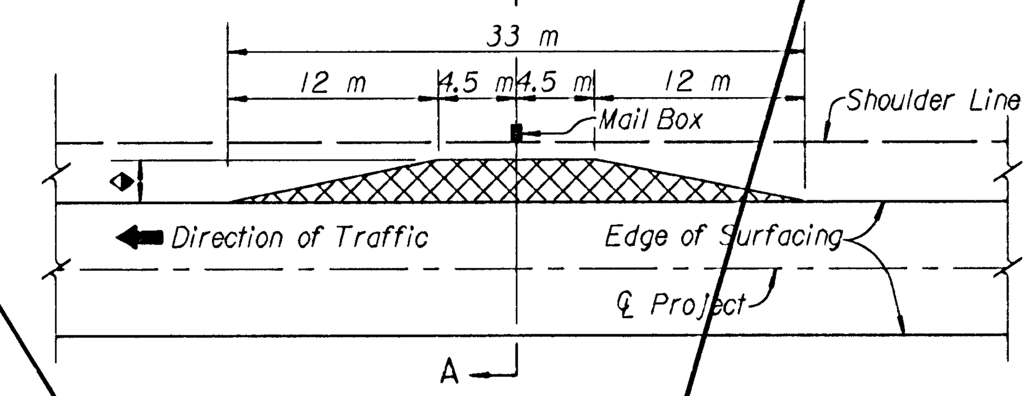
~~Note: For projects with stabilized shoulders, the face of the Mail Box to be in a vertical line with the top edge of the shoulder surfacing.~~



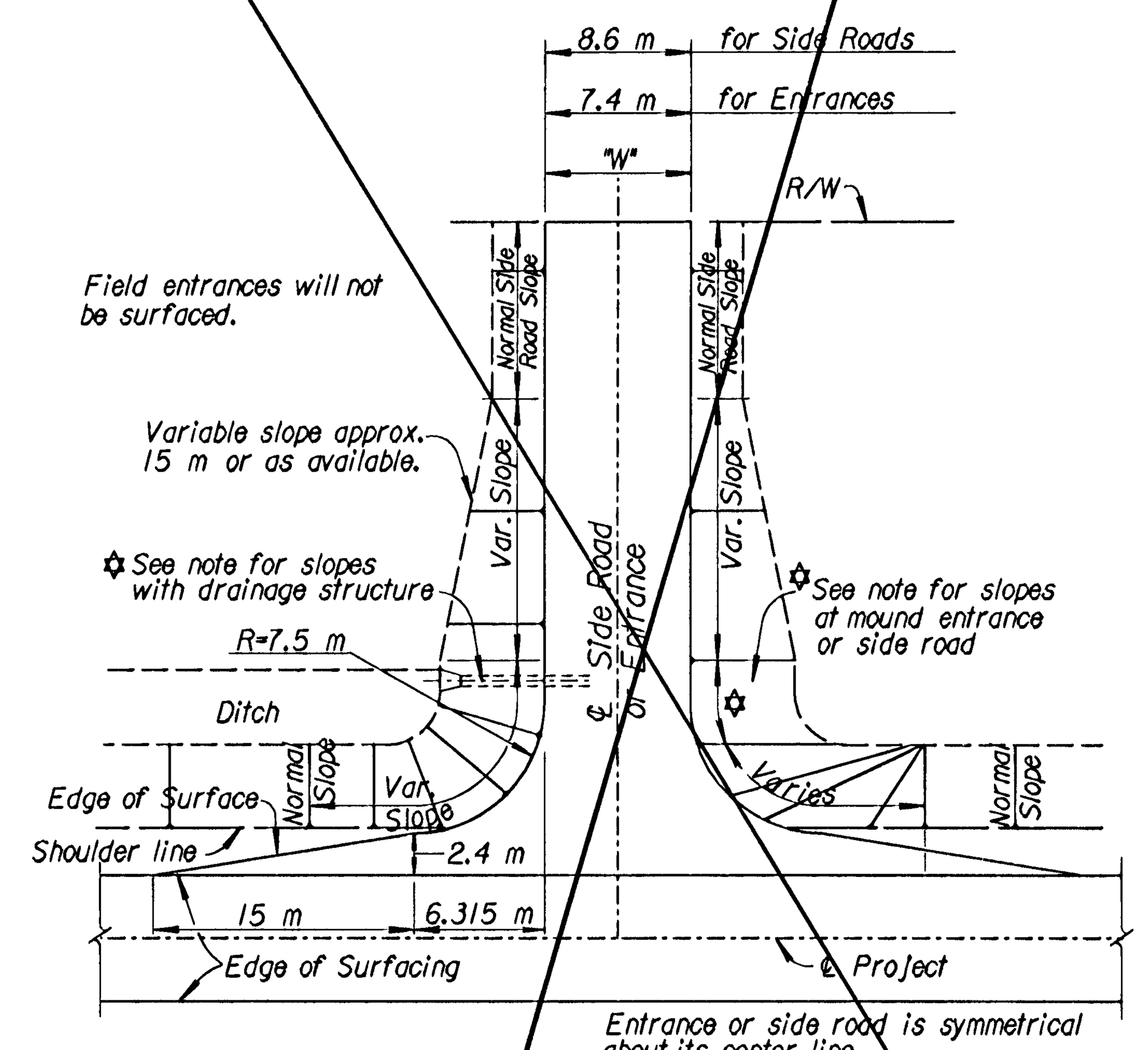
~~◆ Width shall be 2.4 m or shoulder width, whichever is greater.~~

~~SECTION A-A~~

~~Note: The face of Mail Box should be in a vertical line with the edge of the shoulder.~~



~~DETAIL FOR SURFACING OF MAIL BOX TURNOUTS~~



~~Entrance or side road is symmetrical about its center line.~~

~~FLARE OF SHOULDERS AT ENTRANCES AND SIDE ROADS~~

~~✡ Dimensions for mound entrances or sideroads and those with drainage structures shall be similar with the exception of side slopes within the project clear zone. These slopes shall be as follows:~~
~~Normal Slope (but not steeper than 1:6 at approximate ℄ of structure or appropriate clear zone width for entrances or sideroads containing drainage structures.~~
~~1 :8 Slope at the appropriate clear zone shall apply to all mound entrances and mound side roads to 3 m fill height. Normal Slope (but not steeper than 1:6) over 3 m fill height.~~

RATES OF APPLICATION

RATE	UNIT	ITEM		

† Computed at the rate of
†† Computed at the rate of

RECAPITULATION OF QUANTITIES

ITEM				TOTAL	UNIT
AGGREGATE FOR BITUMINOUS SURFACE COURSE (BM-2)				2899	metric ton
AGGREGATE FOR BITUMINOUS BASE COURSE (BM-2)				8291	metric ton
ASPHALTIC CEMENT (AC-10)				609	metric ton
TACK EMULSIFIED ASPHALT (SS-1H)				7	metric ton
PLANT MIX BITUMINOUS MIXTURE (COMMERCIAL GRADE)				1605	metric ton
FIELD OFFICE AND LAB (TYPE A)				1	EACH
SURFACING MATERIAL (AB-3)				19	m3

NO.	DATE	REVISIONS	BY	APP'D.
3	7/99	Rev. Quantities for Widening	W.N.J.	D.C.H.
2	12-26-96	Rev. units for tack rate	R.J.S.	J.O.B.
1	2-26-96	Type AA Compaction Bid Item	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES (Surfacing)

~~RD940 S1~~

FHWA APPROVAL	1-14-97	APP'D James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED B.N.B.
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. R.J.S.

Drawn By : $$USERNAME$$ Plotted : $$$$$SYTIME$$$$$$
File : $$$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$$