

TYPICAL SECTIONS

TYPE T-35

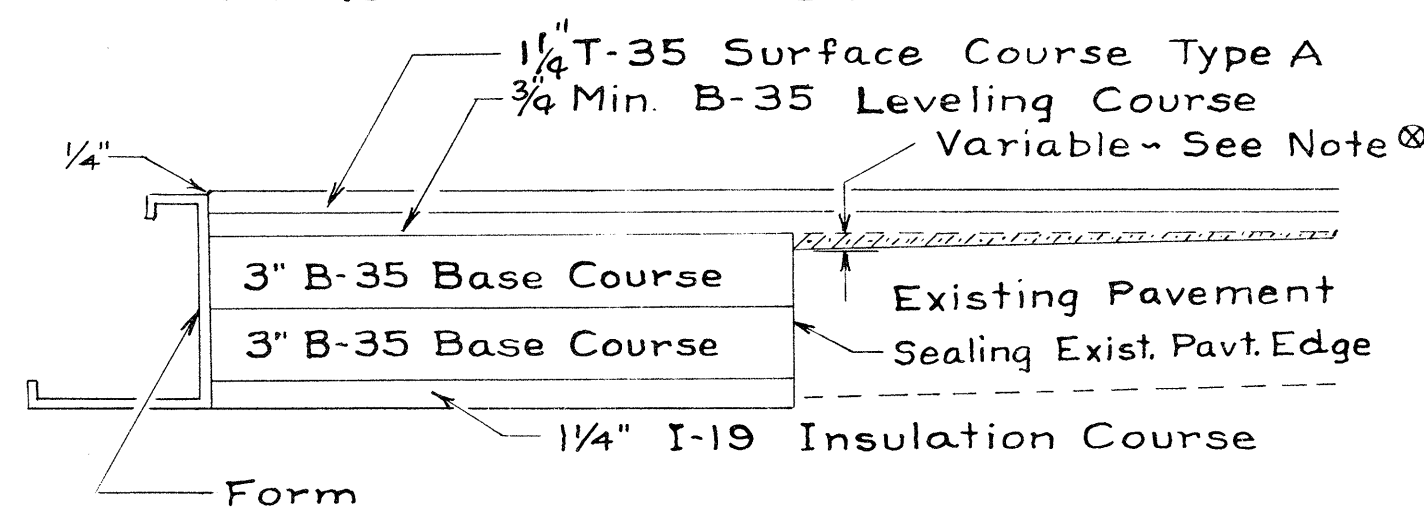
SCALE 3/8" = 1'

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR
10	OHIO		1942

LAKE COUNTY
S.H. 34 - SEC. A, B,
& C (PT.)

FORM & COURSE DETAIL

STA. 199+00 TO STA. 279+06



⊗ Variable depth to be not less than 1/4". Where the dimension ⊗ exceeds 1", the shaded portion of the leveling course shall be spread and compacted in a separate operation.

The forms shall be braced in a manner to prevent lateral and vertical movement.

GENERAL NOTES

TRAFFIC

Traffic shall be maintained at all times to the satisfaction of the Director. The item of "Maintaining Traffic" shall include furnishing lights, signs, barricades, and watchmen necessary to secure the unimpeded flow of traffic twenty four hours daily.

PROFILE

The profile of the proposed surface shall be approximately two inches above that of the existing pavement.

EARTHWORK

Watering embankment, benching, density requirements, and removal of sod from the shoulder will not be required for roadway sections to be widened, however, Items E-1 and E-4 shall include the thorough compaction of embankments in layers not exceeding 8 inches compacted thickness, and shall include any operations of grading necessary to finish the shoulders and slopes substantially to the line indicated on the typical sections. The provisions of Sec. E-1.12 will be waived providing the lines of slopes and berms have been finished in a uniform and sightly condition. No provisions of the specifications will be waived for embankments which support any portion of the new pavement or forms.

COMPACTION OF SUBGRADE

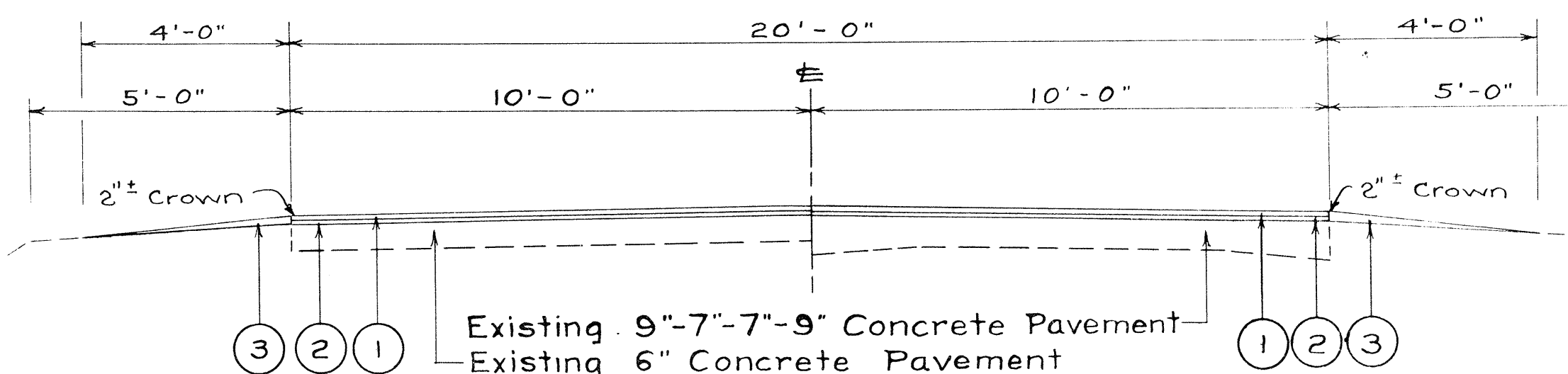
Loosening and watering of subgrade in cuts according to Sec. E-1.11 will not be required if density requirements can be met by additional rolling, however, if at any time the subgrade contains an excess of moisture as indicated by distortion under the roller, the subgrade shall be aerated by discing or other suitable means until the moisture content has been reduced sufficiently to permit recompaction to the density required by the specifications.

FORMS

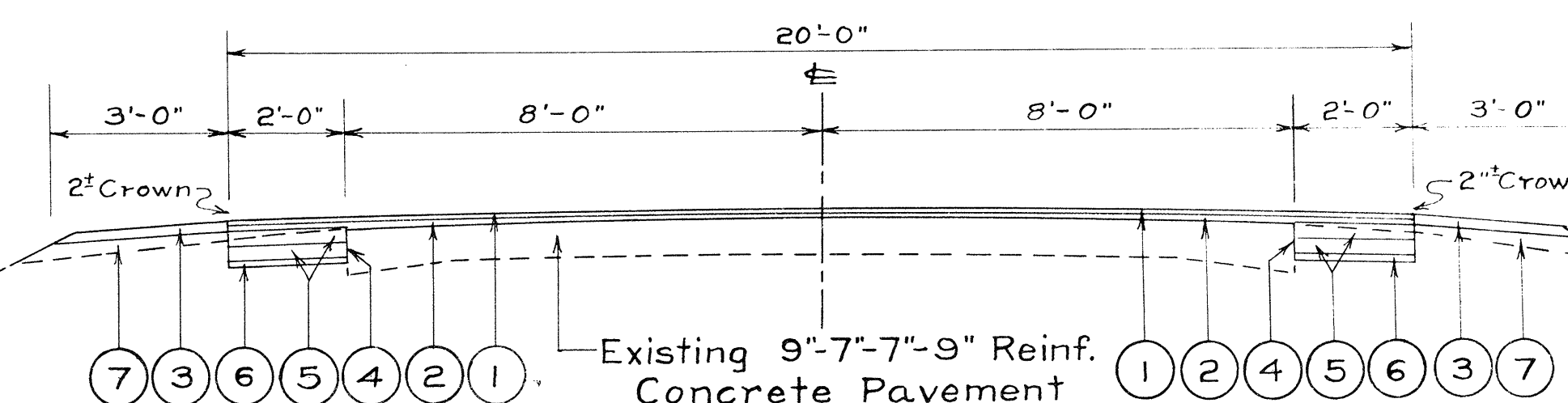
Side forms set and maintained to line and grade established by the engineer will be required between Sta. 199+00 to Sta. 279+06. Subgrade for forms shall be compacted to the density required for subgrade under widening.

SEALING EXISTING EDGES

Vertical edges of existing work, such as pavements, castings, curbs, etc., against which the new bituminous leveling & surface is to be placed, shall be painted or sealed with the same bituminous material as used in the mixture which shall be applied at a temperature between 300 deg. F. and 350 deg. F. before placing the mixture. The cost of such operations and material shall be included in the price bid for surface course.



STA. 0+00 TO STA. 199+00



STA. 199+00 TO STA. 279+06

(GENERAL NOTES CONTINUED)

FEATHER EDGING

Before placing the asphaltic concrete a paint coat of bituminous material meeting the requirements of Sec. M-5.1 shall be applied to the area of existing pavement under any area to be feather edged. Payment for the paint coat shall be included in the unit price bid for Item T-35.

SUPERELEVATION

Curves between Sta. 194+00 and Sta. 279+06 shall be superelevated in the amount specified on Sheet 5, using leveling material laid in courses not exceeding 3 inches in depth. Granulated slag shall be placed to raise the berms (for 3 feet outside the existing pavement) on the upper side of the superelevated curves to an elevation approximately 9/4 inches below the proposed surface of the T-35 Surface Course before placing the B-35 Base Courses.

Between Sta. 0+00 and Sta. 194+00 the surface of the new pavement on curves shall be approximately two inches above and substantially parallel to the surface of the existing pavement.

GENERAL SUMMARY

ITEM	DESCRIPTION	TOTAL	UNIT
E-1	Roadway Excavation - Unclassified	525	Cu. Yds.
E-4	Borrow	1394	Cu. Yds.
E-4	Borrow, Granulated Slag "Grade B", Compacted - Sup. Spec. M-103.12	87	Cu. Yds.
I-17	Traffic Bound Side Approaches	1074	Cu. Yds.
E-10	Sealing (only) of existing pavement edge	14186	Lin. Ft.
T-35	Asphaltic Concrete Surface Course - Type A	2184	Cu. Yds.
B-35	Asphaltic Concrete Leveling Course	2560	Cu. Yds.
B-35	Asphaltic Concrete Base Course	581	Cu. Yds.
I-19	1 1/4" Insulation Course	3486	Sq. Yds.

ITEMS

- ① T-35 1 1/4" Asphaltic Concrete Surface Course Type A
- ② B-35 3/4" Min. Asphaltic Concrete Leveling Course
- ③ I-17 Traffic Bound Side Approaches (Berms)
- ④ Sealing Edges of Existing Pavement Item E-10
- ⑤ B-35 2-3" Base Courses
- ⑥ I-19 1 1/4" Insulation Course
- ⑦ Embankment for Berms

CALCULATIONS

Sta. 0+00 to 199+00 and 199+00 to 279+06 = 19900 + 8006 = 27906 Lin. Ft.

T-35 1 1/4" Asphaltic Concrete Surface Course - Type A
 27906 x 20 ÷ 9 = 62013.3 Sq. Yds.
 Extra Areas (Sheets 3-5), 321 + 225 + 420 = 966.0
 62013.3 + 966.0 = 62979.3
 Deduct for narrow bridge (Sheet 5) = 90.0
 62979.3 - 90.0 = 62889.3 Sq. Yds.
 62889.3 x 1.25 ÷ 36 = Total T-35 = 2183.7 Cu. Yds.

B-35 3/4" Min. Asphaltic Concrete Leveling Course
 Same area as above 62889.3 x .75 ÷ 36 = 1310.2 Cu. Yds.
 Extra for inequalities, 150 x 5.3 (Miles) = 795
 Est. for superelevations, Sta. 194+00 to 279+06 = 455
 Total B-35 Leveling = 2560.2 Cu. Yds.

B-35 2-3" Asphaltic Concrete Base Courses
 8006 x 4 ÷ 9 = 3558.2 Sq. Yds.
 Deduction at Bridge Sta. 242+50±, 162 x 4 ÷ 9 = 72.0
 3558.2 - 72.0 = 3486.2 Sq. Yds.
 3486.2 ÷ 6 = Total B-35 Base = 581.0 Cu. Yds.

I-19 1 1/4" Insulation Course
 Same Area as B-35 Base Courses above = 3486.2 Sq. Yds.

E-1 Excavation
 Area of B-35 Base Courses above = 3486.2 Sq. Yds.
 Deduct for supererelevations, 1502 x 2 ÷ 9 = 333.8
 3486.2 - 333.8 = 3152.4 Sq. Yds.
 Av. 6" Depth, 3152.4 ÷ 6 = Total E-1 = 525 Cu. Yds.

E-4 Borrow
 (Av. 3' width each side by 4 inch depth, Sta. 199+00 to Sta. 279+06)
 [8006 - 162 (deducted at bridge)] x 6 ÷ 9 = 5229.3 Sq. Yds.
 5229.3 ÷ 9 = 581 Cu. Yds.
 Est. extra for supererelevations = 1018
 581 + 1018 = 1599
 1599 x 1.20 (including shrinkage) = 1919
 Less Excavation = 525
 Total E-4 = 1394 Cu. Yds.

E-4 Granulated Slag (Estimated) = 87 Cu. Yds.

I-17 Traffic Bound Side Approaches
 (Est. 1 cu. ft. per lin. ft.), 27906 x 1 ÷ 27 = 1034 Cu. Yds.
 Est. for Drives Sta. 199+00 to Sta. 279+06 = 40
 Total I-17 = 1074 Cu. Yds.

E-10 Sealing (only) of existing pavement edge
 Sta. 199+00 to Sta. 279+06 = [8006 - 162 at bridge] x 2 = 15688 Lin. Ft.
 Deductions for Supererelevations = 1502 Lin. Ft.
 Total E-10 = 14186 Lin. Ft.