FED. RD.	STATE	PROJECT	
2	OHIO	I-271-6(29)231	

SUM -271 - 2.98

1/510

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

SUM - 271 - 2.98
SUMMIT COUNTY
RICHFIELD TWP. — BOSTON TWP.

I - 271 - 6(29)231
LIMITED ACCESS
1967 SPECIFICATIONS

- LIMITED ACCESS -

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH PROVISIONS OF SECTION 5511.02 REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad
Power Poles
Telephone Poles
Power or Telephone Poles with guys
Tower Line
Trees or Stumps (existing)
Limited Access
Right of Way
Limited Access & Right of Way

Sheet No. 391, 392, 403, 436, & 457 revised 10-6-67 EBL
Sheet No. 1, 2, 476 & 481 revised 10-31-67 C.E.H.
Sheet Nos. 383, 384, 386, 392, 394, 398, 400 & 403 revised 12-28-67 WTF
Sheet No. 376 revised 12-29-67 EBL
Sheet Nos. 370, 377, 432 & 437 revised 2-23-68 EBL
Sheet Nos. 458 & 467 revised 3-29-68 EBL
Sheet No. 436 revised 4-12-68 EBL
Sheet Nos. 325, 425, 425A & 426 revised.
Sheet No. 430-A added. 10-1-70 C.P.D.

Sheets 376, 457 Revised As-Built 8-16-73

LINE DATA

BEGIN PROJECT - SUM - 271 - 2.98 STA. 156+00.00
END PROJECT - SUM - 271 - 2.98 STA. 421+49.75
NET LENGTH OF PROJECT = 26,549.75 LIN. FT. = 5.028 MILES
ADD FOR APPROACHES (Sheet No. 16) 16,304.09 LIN. FT.
TOTAL LENGTH OF WORK = 42,853.84 LIN. FT. = 8.116 MILES

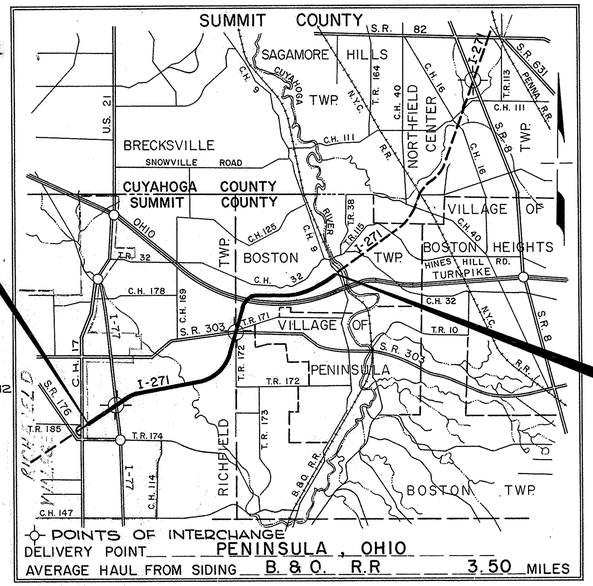
INDEX

TITLE SHEET	1
SCHEMATIC PLAN AND DESIGN DESIGNATION	2 - 4
TYPICAL SECTIONS	5 - 13
GENERAL NOTES	14 - 15
MAINTENANCE OF TRAFFIC	16, 16A
COMPUTATIONS	17 - 22, 22A
RECAPITULATION OF COMPUTATIONS	23
QUANTITY SUMMARY	24; 25A, 26 - 29
SUPERELEVATION DIAGRAMS AND TABLES	30 - 37
PLAN AND PROFILE I-271	38 - 68
CROSS SECTIONS I-271	69 - 197
PLAN AND PROFILE I-77	198 - 208
CROSS SECTIONS I-77	204-20c, 206A, 207, 208, 208A, 208B, 209-212
I-77 INTERCHANGE GEOMETRICS	213 - 214
I-77 INTERCHANGE CROSS SECTION LAYOUT	215
I-77 INTERCHANGE GRADING PLAN	216 - 218, 218A
I-77 INTERCHANGE INTERSECTION DETAILS	219 - 222
PLAN AND PROFILE RAMPS "A", "B", "C", & "D"	223 - 236
CROSS SECTIONS RAMPS "A", "B", "C", & "D"	237 - 261
PLAN AND PROFILE S.R. 303	261A, 262-264, 264A
SUPERELEVATION DIAGRAM AND TABLE	265
CROSS SECTIONS S.R. 303	266 - 272
SERVICE ROAD - PLAN AND PROFILE AND CROSS SECTIONS	273 - 275
TEMPORARY RUN - AROUND S.R. 303	276 - 281
S.R. 303 INTERCHANGE GEOMETRICS	282
S.R. 303 INTERCHANGE - CROSS SECTION LAYOUT	283
S.R. 303 INTERCHANGE - GRADING PLAN	284
S.R. 303 INTERCHANGE - INTERSECTION DETAILS	285 - 288
PLAN AND PROFILE - RAMPS "E", "F", "G", & "H"	289 - 294
CROSS SECTIONS - RAMPS "E", "F", "G", & "H"	295 - 300
STINE ROAD T.R. 171 - PLAN, PROFILE & CROSS SECTIONS	301 - 303
MAJOR ROAD TR. 172 - PLAN, PROFILE & CROSS SECTIONS	304 - 309
TURNPIKE PLAN, PROFILE AND CROSS SECTION	310
TEMPORARY RUN - AROUND - OHIO TURNPIKE	311 - 320
ROADWAY DETAILS	321-324, 322A
DRAINAGE DETAILS	325 - 326
STRUCTURES 20' SPAN AND UNDER	327 - 333, 333A, 334 - 344
LIGHTING PLANS	345 - 349, 352, 353, 350
SIGNING PLANS	354 - 356, 358 - 360, 362 - 364
STRUCTURES OVER 20' SPAN	365 - 391, 391-A, 398 - 424, 424-A, 425, 425-A, 426 - 469
RIGHT-OF-WAY	470 - 505, 505-A, 506 - 510

DELETED FROM PLAN - SHEETS 351, 357, 361

BEGIN PROJECT STA. 156+00

END PROJECT STA. 421+49.75



POINTS OF INTERCHANGE
DELIVERY POINT PENINSULA, OHIO
AVERAGE HAUL FROM SIDING B. & O. R.R. 3.50 MILES

LOCATION MAP

0 — 2
SCALE OF MILES

PORTION TO BE IMPROVED
STATE ROADS
OTHER ROADS

SCALE

PLAN 1" = 50'
PROFILE: HORIZONTAL 1" = 50'
PROFILE: VERTICAL 1" = 5' 8 1/2" = 10'
CROSS SECTIONS: HORIZONTAL & VERTICAL 1" = 10'

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT OF WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVED Clifton W. Turnbull
DATE 5-11-66 DIVISION / DEPUTY DIRECTOR

APPROVED C.H. Alfvater
DATE 9-28-66 ENGINEER OF BRIDGES

APPROVED R.D. Ricketts
DATE 9-28-66 ENGINEER OF LOCATION AND DESIGN

APPROVED R.E. Hurley
DATE 9-28-66 DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED T.H. Borrard
DATE 10-14-66 DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED R.W. Wilson
DATE 10-14-66 DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED
DATE FIRST ASSISTANT DIRECTOR

APPROVED P.E. Mashuda
DATE 10/14/66 DIRECTOR OF HIGHWAYS

PREPARED AND RECOMMENDED BY
BEISWENGER, HOCH & ARNOLD, CONSULTING ENGINEERS
AKRON - OHIO CLEVELAND

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

FILE NO.	SUMMIT COUNTY - SUM - 271 - 2.98
	DATE OF LETTING 196
	CONTRACT NO.

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BP-1	6-1-65	I-2	6-1-65	GR-5B	6-1-65		
BP-2	1-10-67	CB-5	6-1-65	GR-6	6-1-65	RB-1-55	2-2-55
BP-6	6-1-65	CB-6	6-1-65	MC-6	6-1-65		
F-1	6-1-65	CB-8	6-1-65	L-1	6-1-65		
F-2	6-1-65	MH-1	6-1-65	CB-4	6-1-65	SD-1-65 Sht. 1,2,3	11-8-65
F-3	10-1-66	MH-1A	8-1-66	FACI-1	6-1-65		
MC-3	5-1-66	CB 2-2-A&B	6-1-65	FACI-2	6-1-65		
HW-1	6-1-65	BP-7	1-1-66	BP-3	1-10-67		
HW-2	6-1-65	MC-5	6-1-65	MC-1	6-1-65	BR-1-65 Sht. 1	11-24-65
HW-3	6-1-65	GR-1	1-1-67	BP-5	6-1-65	HL-1	11-1-65
HW-5	6-1-65	GR-2	6-1-65	BP-4	1-10-67	HL-2	11-1-65
SP-53	6-30-61	GR-2A	1-1-67	AS-1-54	8-10-65	HL-3	11-1-65
MC-4	6-1-65	MH-2	6-1-65	MC-7	3-1-66	HL-4	1-1-66

SUPPLEMENTAL SPECIFICATIONS

801	1-1-67
806	1-1-67
808	1-15-67
811	1-1-67
819	1-1-67
816	8-6-65
825	1-1-67
828	1-1-67
1001	3-21-66

Rev. 10-31-67 C.E.H. Rev. 2-8-67 Rev. 7-28-67 Rev. 8-3-67

FED. RD.	STATE	PROJECT	
2	OHIO		

2/510

SUM - 271 - 2.98

DESIGN DESIGNATION

Current A.D.T. 1969	5,385
Design Year A.D.T. 1989	10,560
D.H.V.	1,160
D	55 %
T	4 %
V	70 M.P.H.

I-271-6(15)
END PROJECT
SUM-271-0.83
STA. 566+09.76

EQUATION
STA. 564+79.82 BACK =
STA. 154+70 AHEAD

S.R. 176

STA. 155+00

C.H. 17

Richfield Village
Richfield Township

555
560
565
160 N 56°58'24" E
170
180
190
200
210

(OLD U.S. 21)

BEGIN WORK

I-271-6(29) 231
S.L.M. 2.98
BEGIN PROJECT
STA. 156+00

BEGIN STA.

WORK 899+30

N 04°49'28" W 500

I.R. 77

885
850
835

WHEATLEY ROAD

MATCH LINE STA. 905+00

MATCH LINE STA. 945+00

END STA.

WORK 973+18

N 04°49'28" W 540

I.R. 77

530

SR 303

CROSS OVER STA. 970+50

370

N 04°49'28" W 920

I.R. 77

STA. 188+35.03 I-271 =
STA. 917+08.10 I-77
STRUCTURE Nº SUM-271-0358 LT. & RT.

STA. 911+71.66 I-77 =
STA. 187+47.87 RAMP "B"
STRUCTURE Nº SUM-271-0354

STA. 187+12.15

STA. 199+17.48 I-271 =
STA. 201+87.02 RAMP "B"
STRUCTURE Nº SUM-271-0378 LT. & RT.

RAMP "A"
RAMP "B"
RAMP "C"
RAMP "D"

2548
2548
1923
1923
2237
2237

F.A.C.I. SIGN

MATCH LINE STA. 945+00

940
930
910
920
210
200
190
180
170
160
150
140
130
120
110
100
90
80

EXIST. CROSS OVER STA. 928+25 TO BE REMOVED

P.C.C.

P.C.C.

P.C.

P.T.

P.T.

P.T.

P.T.

P.T. STA. 203+01.09

T.S.

S.C.

C.S.

S.T.

N 80°16'40" E

MATCH LINE STA. 210+00

F.A.C.I. SIGN RT.

MATCH LINE STA. 905+00

DESIGN SPEED = 70MPH
0000 = 1975 DDHV

℄-CURVE DATA (Nº 1)

P.I. STA. 195+17.76
Δ = 23° 18' 16"
D_c = 1° 28'
R = 3,906.53'
L = 1,588.94'
T = 805.61'
E = 82.20'

SCALE: 1" = 200'

SCHEMATIC PLAN

Rev. 10-31-67 C.E.H. Rev. 7-28-67

FED. RD.	STATE	PROJECT	
2	OHIO		

3
510

SUM - 271 - 2.98

MATCH LINE STA. 210+00

N·80°-16'-40"E

220

P.C. STA 223+28.27

P.T. STA. 231+40.75

230

240

N·68°-21'-41"E

250

260

℄ CROSS-OVER STA. 259+50

P.C. STA. 267+60.12

MATCH LINE STA. 270+00

℄ CURVE DATA (№2)

P.I. STA. 227+35.98

Δ = 11°-54'50"
D_c = 1°-28'
R = 3900.53'
L = 812.48'
T = 407.71'
E = 21.22'

DESIGN SPEED = 70 MPH

0000 = 1975 DDHV

N·80°-58'-33"W

F.A.C.I. SIGN STA. 35+67.58

P.C.

P.T.

P.C.

P.C.

PROP SERVICE RD.

℄ DRIVE

STA. 316+40.60 ℄ 271 STA. 500+00 REL. S.R. 303 № SUM-271-0602

STRUCTURE

RELOC. DRIVE

BEGIN WORK STA. 35+67.58

P.T.

RELOC

S.R. 303

P.C.

P.C.

S.C.

RAMP "G"

S.T. 305

310

C.S.

RAMP "F"

T.S.

S.C.

320

P.T.

2-PROPOSED CUL-DE-SAC

EXIST. STINE ROAD

EXIST. S.R. 303

RUN-AROUND

C.S.

RAMP "H"

S.T. 315

P.C.C.

P.T.

P.C.

20°-15'-05"W

RELOC. STINE RD.

60

END WORK STA. 61+00

P.T.

T.R. 171, N·70°-58'-07"E

STA. 330+00

MATCH LINE

P.T. STA. 300+72.34

℄ CURVE DATA (№3)

P.I. STA. 285+23.13

Δ = 48°-34'-45"
D_c = 1°-28'
R = 3900.53'
L = 3312.22'
T = 1763.01'
E = 379.40'

MATCH LINE STA. 270+00

280

290

300

N·19°-46'-56"E

P.C.

RELOC.

S.C.

C.S.

S.T. 305

310

RAMP "E"

S.T.

C.S.

S.C.

P.T.

MAJOR 55

N·68°-48'-12"E

P.C.C.

P.T.

N·18°-44'-57"E

ROAD

P.T. T.R. 172

60

STA. 58+60 S.R. 303
STA. 55+24.56 T.R. 171
STA. 58+28.90 T.R. 172

N·89°-44'-57"E

P.C.

FA.C.I SIGN STA. 65+36.03

P.T.

END WORK STA. 65+36.03

BEGIN WORK STA. 41+50

℄ R/W EXIST. MAJOR ROADWAY

N·0°-43'-29"W

EXIST. MAJOR ROADWAY

N·01°-52'-14"W

SCALE: 1" = 200'

SCHEMATIC PLAN

K.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

4/510

SUM -271 - 2.98

1045

1045

1008

1008

1008

1099

1099

RAMP "M" FUTURE

RAMP "L" FUTURE

RAMP "J" FUTURE

RAMP "K" FUTURE

RUNAROUND

TEMPORARY

P.C.C.

P.C.C.

P.C.C.

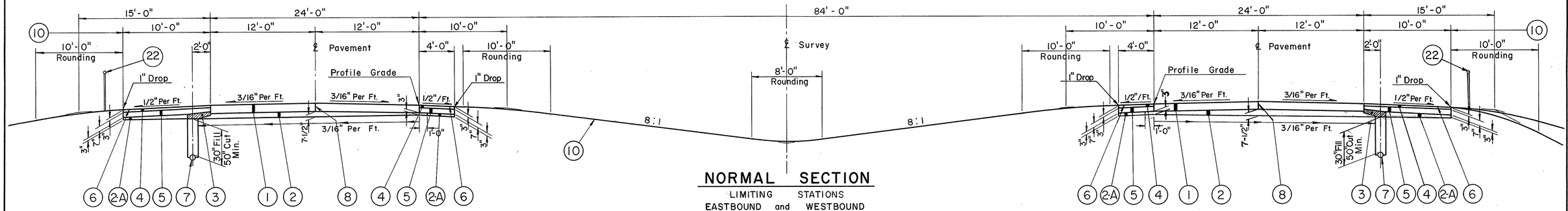
FED. RD.	STATE	PROJECT	
2	OHIO		

5
510

SUM - 271 - 2.98

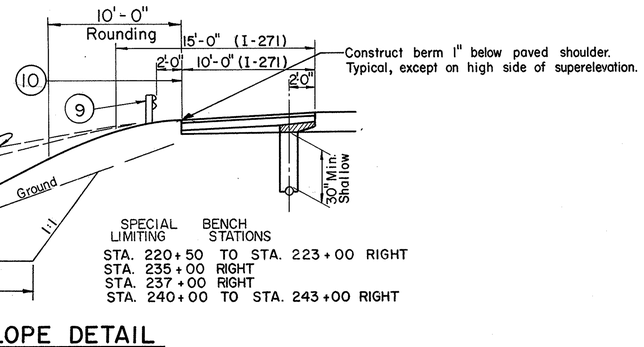
TYPICAL SECTIONS

TYPE 451



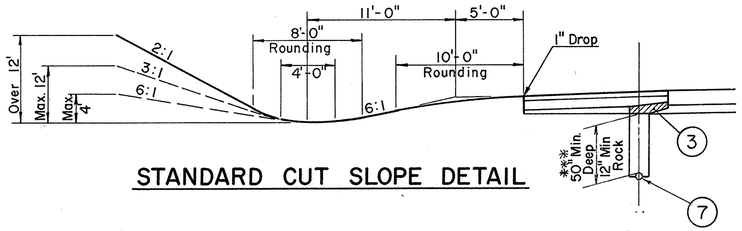
NORMAL SECTION

LIMITING STATIONS
EASTBOUND and WESTBOUND
STA. 156+00 to STA. 185+17.21 Lt. & Rt.

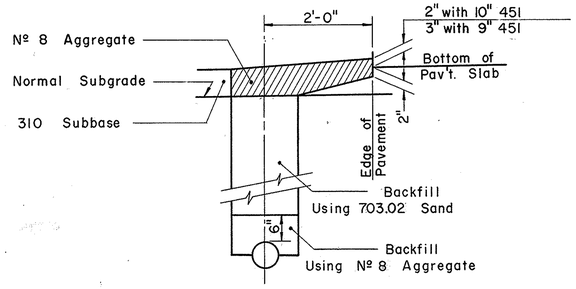


SPECIAL LIMITING BENCH STATIONS
STA. 220+50 TO STA. 223+00 RIGHT
STA. 235+00 RIGHT
STA. 237+00 RIGHT
STA. 240+00 TO STA. 243+00 RIGHT

STANDARD FILL SLOPE DETAIL



STANDARD CUT SLOPE DETAIL



SPECIAL DRAINAGE DETAIL

(1) 451 Reinforced Portland Cement Concrete Pavement. (10" Thickness)

(2) 310 (Variable Depth) Subbase, Grading A or B Modified as Per General Note.

(2A) 310 (Variable Depth) Subbase *

(3) Special Drainage Connection, Using №8 Aggregate. (See Detail This Sheet, and note in proposal).

(4) 301 3" Bituminous Aggregate Base 702.01 (85-100) or 702.09 RT 12 (See note in proposal).

(5) 304 (Variable Depth) Aggregate Base

(6) 409 Seal Coat Bituminous Material Applied at 0.30 Gal. / Sq. Yd.

409 Seal Coat Cover Aggregate, No. 8, Applied at 0.008 Cu. Yd. / Sq. Yd. (See note in Proposal).

(7) 605 6" Pipe Underdrain (707.06 or 707.12 Shall be used in Rock Cut.) **

(8) Standard Longitudinal Joint

(9) 606 Guard Rail, Type – 4.

(10) 659 Seeding and Mulching

(22) 620 Mono-Directional Delineators, Type A-1, Post Mounted. ****

Sequence of Operations: (1) Install pipe underdrain on outside shoulder. Installation of shallow underdrain in median may be deferred until 451 is placed. (2) Place Subbase to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present. (3) Construct 451 (4) Remove Subbase and any contaminated backfill over drain and replace with №8 Aggregate as shown. (5) Complete shoulder as shown.

** Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep Underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.

In rock cuts, Underdrains shall be 6" Item 605 Type 707.06 or 707.12 pipe with 12" of cover from bottom of subbase to crown of pipe.

Slopes Typical Unless Otherwise Shown on Cross Section.

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310

The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the edge of Shoulder.

**** For Spacing and Detail of Delineators See Sheet No. 324, 22-A

Rev. 2-8-67

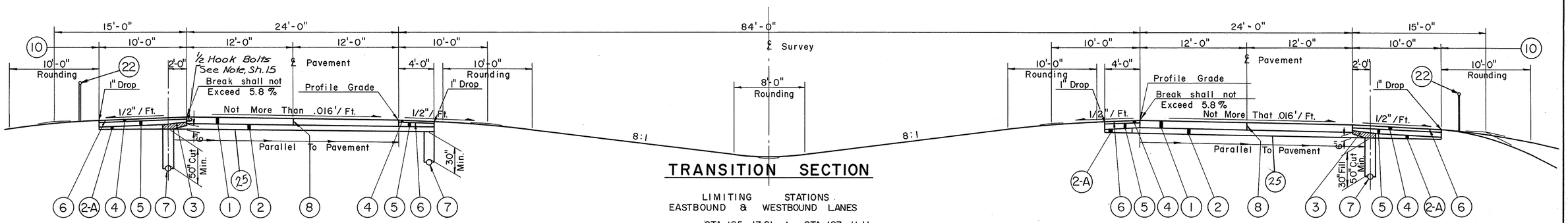
TYPICAL SECTIONS

TYPE 451

FED. RD.	STATE	PROJECT	
2	OHIO		

6/510

SUM - 271 - 2.98



The subgrade under the pavement and paved shoulders shall be stabilized with lime between the following stations:
Sta. 380+00 to Sta. 421 + 49.75 EBL
Sta. 382+00 to Sta. 421 + 97.75 WBL

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310

The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the edge of Shoulder.

TRANSITION SECTION

LIMITING STATIONS EASTBOUND & WESTBOUND LANES		
STA. 185 + 17.21	to	STA. 187 + 11.11
STA. 202 + 21.03	to	STA. 204 + 96.03
STA. 221 + 33.33	to	STA. 224 + 08.33
STA. 230 + 60.69	to	STA. 233 + 35.69
STA. 265 + 65.18	to	STA. 268 + 40.18
STA. 299 + 92.28	to	STA. 302 + 67.28
STA. 336 + 02.38	to	STA. 340 + 77.38
STA. 357 + 89.05	to	STA. 362 + 64.05
STA. 376 + 10.96	to	STA. 378 + 85.96
STA. 415 + 78.21	to	STA. 418 + 53.21
BRIDGE LIMITS		
STA. 187 + 11.11	to	STA. 191 + 09.72

(1) 451 Reinforced Portland Cement Concrete Pavement. (10" Thickness)

(2) 310 (Variable Depth) Subbase, Grading A or B Modified as Per General Note.

(2A) 310 (Variable Depth) Subbase *

(3) Special Drainage Connection, Using Nº 8 Aggregate. (See detail, sheet No.5 and note in proposal)

(4) 301 3" Bituminous Aggregate Base 702.01 (85–100) or 702.09 RT12 (See note in proposal)

(5) 304 (Variable Depth) Aggregate Base

(6) 409 Seal Coat Bituminous Material, Applied at 0.30 Gal. / Sq. Yd.

409 Seal Coat Cover Aggregate, No. 8, Applied at 0.008 Cu. Yd. / Sq. Yd. (See note in proposal)

(7) 605 6" Pipe Underdrain (707.06 or 707.12 shall be used in Rock Cut.)**

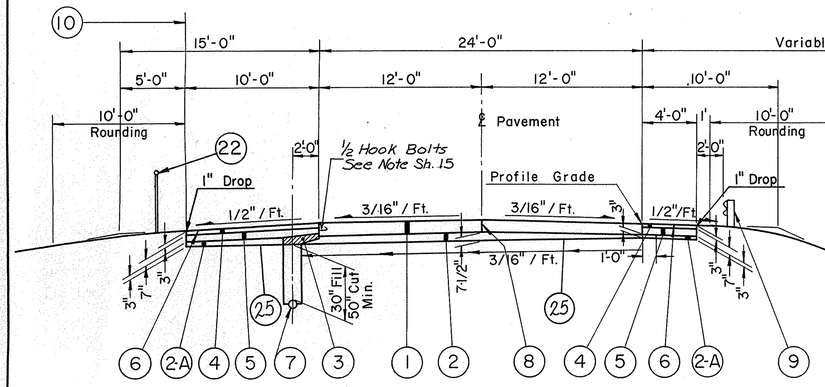
(8) Standard Longitudinal Joint

(9) 606 Guard Rail, Type – 4.

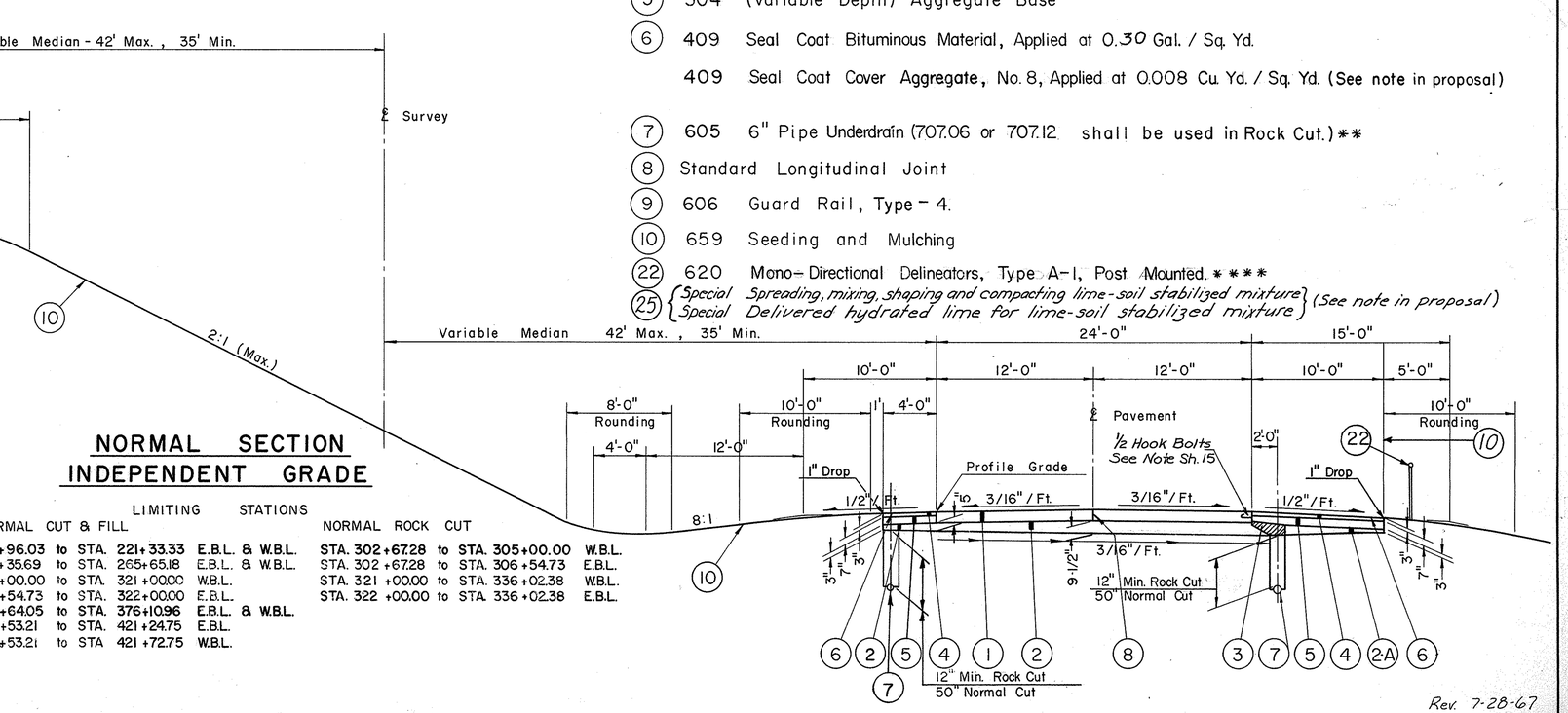
(10) 659 Seeding and Mulching

(22) 620 Mono–Directional Delineators, Type A–1, Post Mounted. ****

(25) {Special Spreading, mixing, shaping and compacting lime-soil stabilized mixture} {Special Delivered hydrated lime for lime-soil stabilized mixture} (See note in proposal)



NORMAL SECTION FILL & CUT



NORMAL SECTION — ROCK CUT

** Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep Underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.

In rock cuts, Underdrains shall be 6" Item 605 Type 707.06 or 707.12 pipe with 12" of cover from bottom of subbase to crown of pipe.

For Typical Slopes, Side Ditches And Drainage Details See Sheet No. 5 .

**** For Spacing and Detail of Delineator See Sheet No. 324&22-A.

NORMAL SECTION INDEPENDENT GRADE

LIMITING STATIONS NORMAL CUT & FILL				NORMAL ROCK CUT			
STA. 204+96.03	to	STA. 221+33.33	E.B.L. & W.B.L.	STA. 302+67.28	to	STA. 305+00.00	W.B.L.
STA. 233 +35.69	to	STA. 265+65.18	E.B.L. & W.B.L.	STA. 302 +67.28	to	STA. 306 +54.73	E.B.L.
STA. 305 +00.00	to	STA. 321 +00.00	W.B.L.	STA. 321 +00.00	to	STA. 336 +02.38	W.B.L.
STA. 306 +54.73	to	STA. 322+00.00	E.B.L.	STA. 322 +00.00	to	STA. 336 +02.38	E.B.L.
STA. 362 +64.05	to	STA. 376+10.96	E.B.L. & W.B.L.				
STA. 418 +53.21	to	STA. 421 +24.75	E.B.L.				
STA. 418 +53.21	to	STA 421 +72.75	W.B.L.				

Rev. 7-28-67
Rev. 3-8-67
Rev. 2-8-67

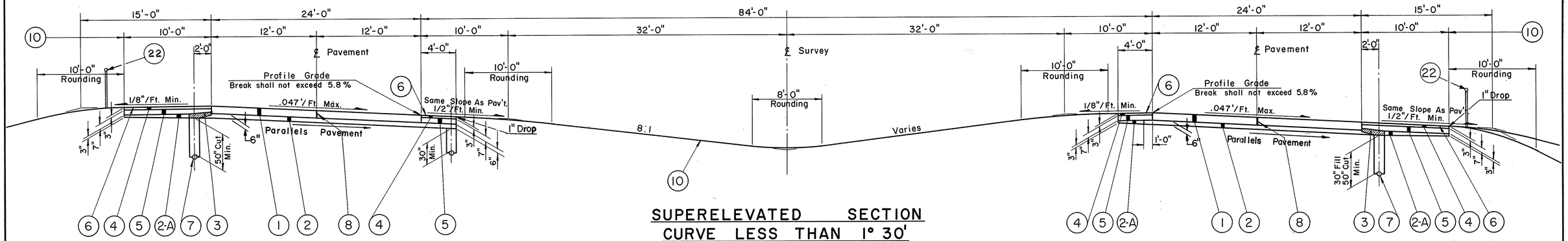
TYPICAL SECTIONS

TYPE 451

FED. RD.	STATE	PROJECT	
2	OHIO		

7/510

SUM - 271 - 2.98



SUPERELEVATED SECTION
CURVE LESS THAN 1° 30'

LIMITING STATIONS EASTBOUND AND WESTBOUND LANES		
STA. 191 + 09.72	to	STA. 198 + 14.18
STA. 199 + 92.23	to	STA. 202 + 21.03
STA. 224 + 08.33	to	STA. 230 + 60.69
STA. 268 + 40.18	to	STA. 299 + 92.28
STA. 378 + 85.96	to	STA. 415 + 78.21
BRIDGE LIMITS		
STA. 187 + 11.11	to	STA. 191 + 09.72
STA. 198 + 14.18	to	STA. 199 + 92.23

(1) 451 Reinforced Portland Cement Concrete Pavement (10" Thickness)

(2) 310 (Variable Depth) Subbase, Grading A or B Modified as Per General Note

(2-A) 310 (Variable Depth) Subbase *

(3) Special Drainage Connection, Using Nº 8 Aggregate (See Detail, Sheet No. 5 and note in proposal).

(4) 301 3" Bituminous Aggregate Base 702.01
(85-100) or 702.09 RT12 (See note in proposal)

(5) 304 (Variable Depth) Aggregate Base

(6) 409 Seal Coat Bituminous Material Applied at 0.30 Gal. / Sq. Yd.

409 Seal Coat Cover Aggregate No. 8 Applied at 0.008 Cu. Yd. / Sq. Yd.

For lime stabilization see Sheet 6

(7) 605 6" Pipe Underdrain (707.06 or 707.12 shall be used in Rock Cut.

(8) Standard Longitudinal Joint

(9) 606 Guard Rail, Type - 4.

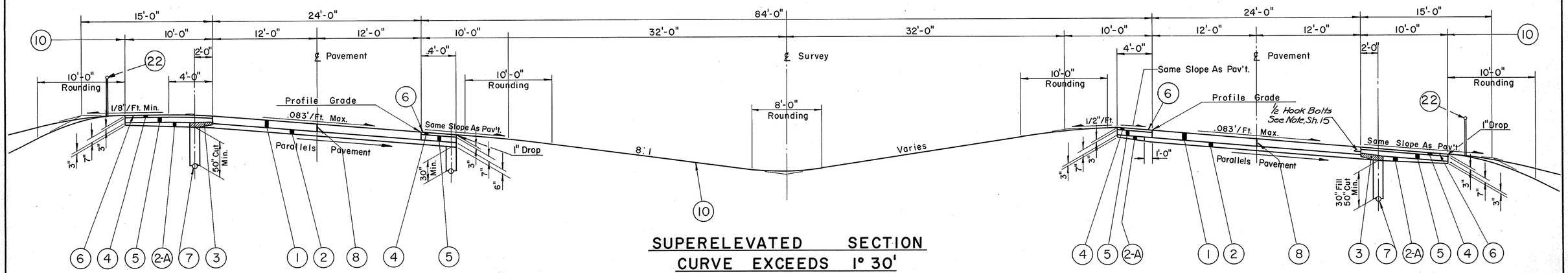
(10) 659 Seeding and Mulching.

(22) 620 Mono - Directional Delineators, Type A-1, Post Mounted. ****

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310.

The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the edge of Shoulder.

**** For Spacing and Detail of Delineators See Sheet No. 324 & 22-A



** Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep Underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.

In rock cuts, Underdrains shall be 6" Item 605—Type 707.06 or 707.12 pipe with 12" of cover from bottom of subbase to crown of pipe.

SUPERELEVATED SECTION
CURVE EXCEEDS 1° 30'

LIMITING STATIONS EASTBOUND LANE			WESTBOUND LANE		
STA. 340 + 77.38	to	STA. 345 + 91.02	STA. 340 + 77.38	to	STA. 345 + 88.12
STA. 348 + 53.73	to	STA. 357 + 89.05	STA. 348 + 55.38	to	STA. 357 + 89.05
BRIDGE LIMITS					
STA. 345 + 91.02	to	STA. 348 + 53.73	STA. 345 + 88.12	to	STA. 348 + 55.38

For Typical Slopes, Side Ditches, And Drainage Details, See Sheet No. 5.

Rev. 7-28-67
Rev. 3-8-67
Rev. 2-8-67

K.&E.

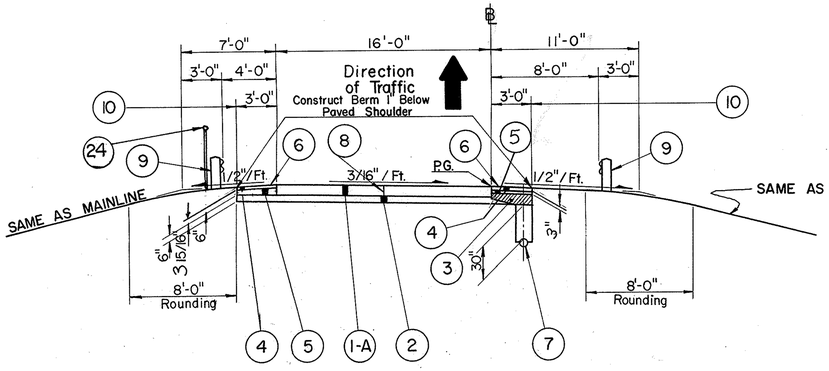
FED. RD.	STATE	PROJECT	
2	OHIO		

8
510

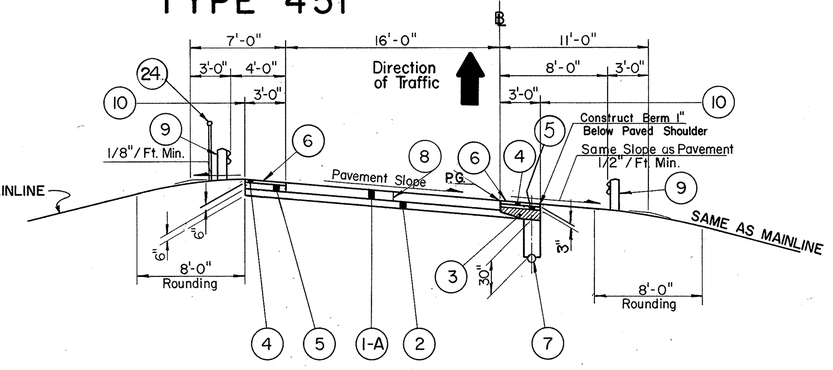
SUM - 271 - 2.98

TYPICAL SECTIONS

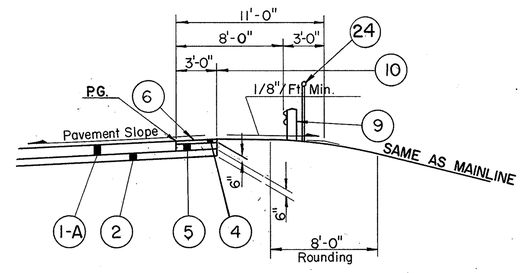
TYPE 451



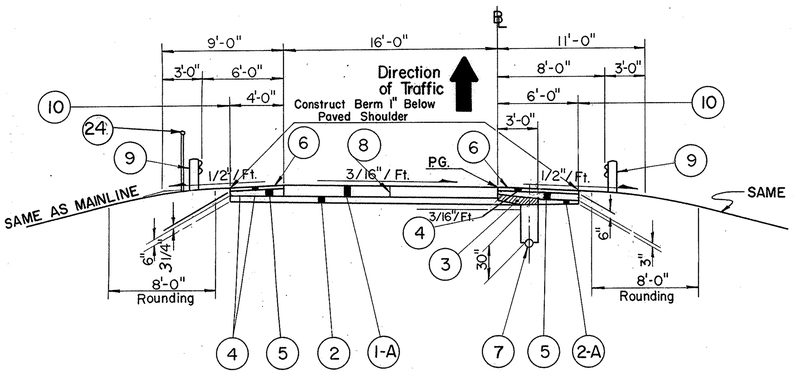
NORMAL RAMP SECTION
RAMP "C," "D," "E," "F," "G" & "H"



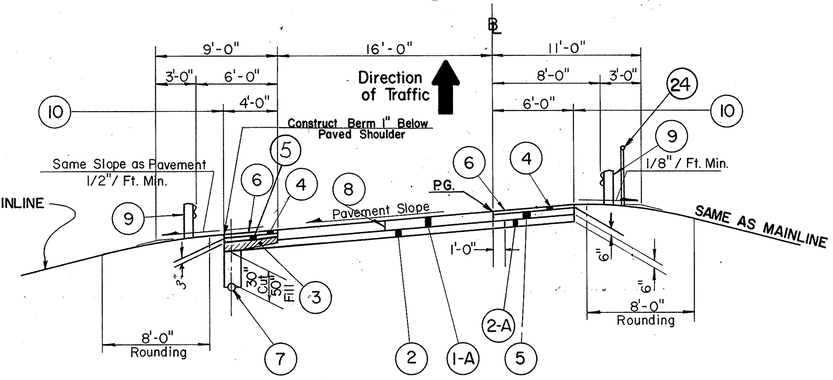
SUPERELEVATED RAMP SECTION



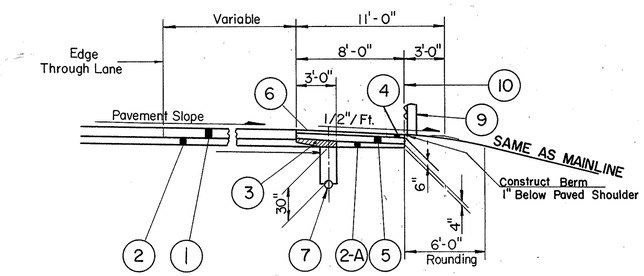
RAMP SHOULDER
SUPERELEVATED TO LEFT



NORMAL SECTION
ONE LANE DIRECTIONAL ROADWAY
RAMP "A" & RAMP "B"

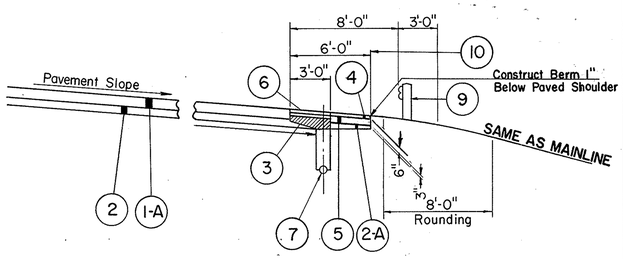


SUPERELEVATED SECTION
ONE LANE DIRECTONAL ROADWAY- RAMP "A" & "B"



SPEED CHANGE LANE

(1) 451 10" Reinforced Portland Cement Concrete Pavement.
(1-A) 451 9" Reinforced Portland Cement Concrete Pavement.
(2) 310 (Variable Depth) Subbase, Grading A or B Modified as Per General Note.
(2-A) 310 (Variable Depth) Subbase *
(3) Special Drainage Connection, Using Nº 8 Aggregate (See Sheet Nº 5 and note in proposal).
(4) 301 3" Bituminous Aggregate Base 702.01 (85-100) or 702.09 RT 12 (see note in proposal).
(5) 304 (Variable Depth) Aggregate Base.
(6) 409 Seal Coat Bituminous Material Applied at 0.30 Gal./Sq. Yd.
409 Seal Coat Cover Aggregate No. 8, Applied at 0.008 Cu. Yds./Sq. Yd. (see note in proposal).
(7) 605 6" Pipe Underdrain (707.06 or 707.12 shall be used in Rock Cut).
(8) Standard Longitudinal Joint
(9) 606 Guard Rail, TYPE- 4 *Modified As per plan*
(10) 659 Seeding and Mulching.
(24) 620 Mono- Directional Delineators, Type C-2 and C-3, Post Mounted.



ONE LANE DIRECTIONAL ROADWAY
SUPERELEVATED TO RIGHT
RAMP "A" & "B"

Sequence of Operations: (1) Install pipe underdrain on outside shoulder. (2) Place Subbase to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present. (3) Construct 451 (4) Remove Subbase and any contaminated backfill over drain and replace with Nº 6 Aggregate as shown. (5) Complete shoulder as shown.

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310.
The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the edge of Shoulder as shown.

** Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep Underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.

In rock cuts, Underdrains shall be 6" Item 605, Type 707.06 or 707.12 pipe with 12" of cover from bottom of subbase to crown of pipe.

For typical side slopes and ditch treatment see mainline typical sheet No. 5.

**** For spacing and details of delineators see sheet No. 324 & 22-A

RAMP TYPICALS

Rev. 7-28-67
Rev. 2-8-67

K. & E.

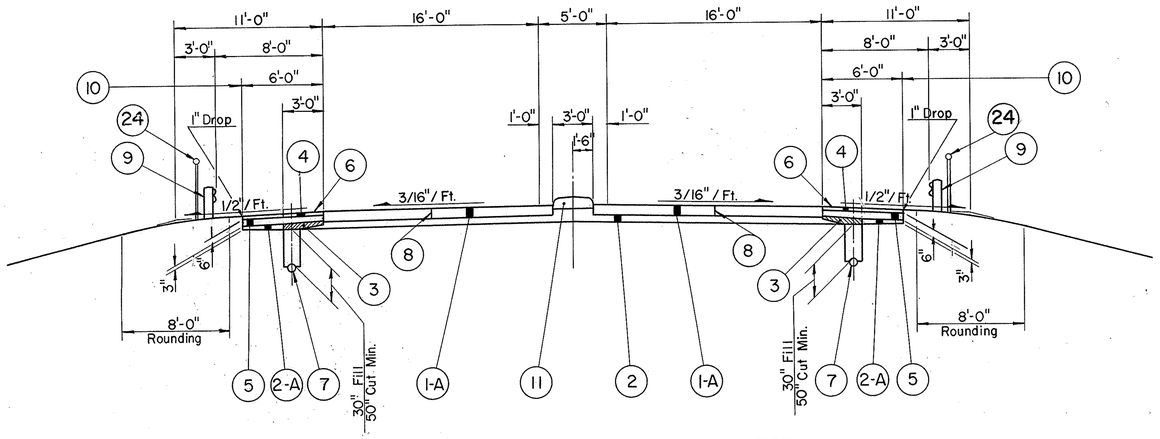
FED. RD.	STATE	PROJECT	
2	OHIO		

9 / 510

SUM - 271 - 2.98

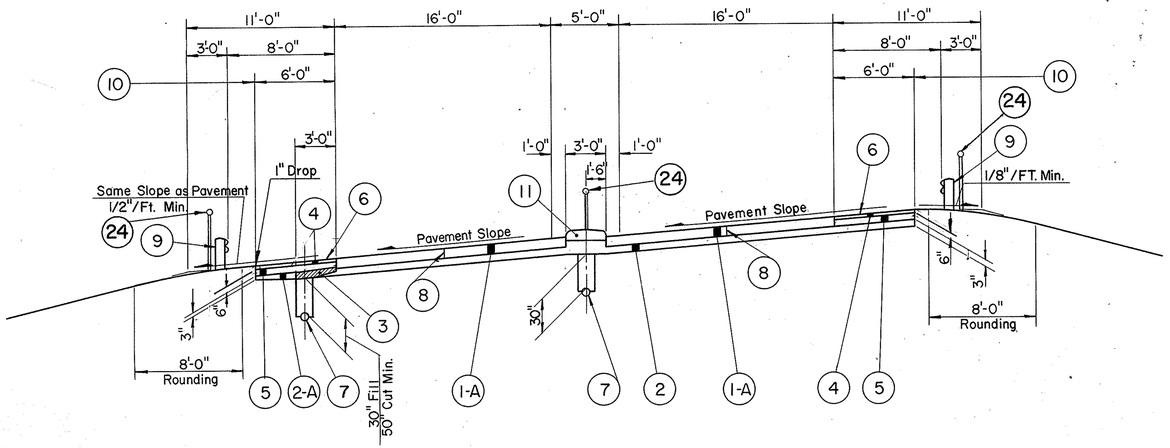
TYPICAL SECTIONS

TYPE 451



NORMAL TWO WAY RAMP SECTION

Ramp "H" & Ramp "E" ~
Ramp "G" & Ramp "F"



SUPERELEVATED TWO WAY RAMP SECTION

Ramp "H" & Ramp "E" ~
Ramp "G" & Ramp "F"

(1-A) 451 Reinforced Portland Cement Concrete Pavement. (9" Thickness)

(2) 310 (Variable Depth) Subbase, Grading A or B Modified as Per General Note.

(2-A) 310 (Variable Depth) Subbase *

(3) Special Drainage Connection, Using Nº 8 Aggregate. (See Sheet No. 5 and note in proposal).

(4) 301 3" Bituminous Aggregate Base 702.01 (85-100) or 702.09 RT12 (See note in proposal).

(5) 304 (Variable Depth) Aggregate Base

(6) 409 Seal Coat Bituminous Material Applied at 0.30 Gal./Sq. Yd.
409 Seal Coat Cover Aggregate, No. 8, Applied at 0.008 Cu. Yd. /Sq. Yd. (See Note in Proposal)

(7) 605 6" Pipe Underdrain (707.06 or 707.12 shall be used in Rock Cut) * *

(8) Standard Longitudinal Joint.

(9) 606 Guard Rail, Type-4 *Modified As Per Plan*

(10) 659 Seeding and Mulching.

(11) 612 Concrete Median

(24) 620 Mono-Directional Delineators, Type C-2 and C-3, Post Mounted. ****

* Subbase under Paved Shoulders shall meet the Grading Requirements of Regular Grading 310.
The limits for Regular Grading 310 are from the Underdrain Trench (or One Foot beyond the Slab Edge where underdrains are not used) to the edge of Shoulder.

* * Unless otherwise shown on plans, Underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep Underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.
In rock cuts, Underdrains shall be 6" Item 605 Type 707.06 or 707.12 pipe with 12" of cover from bottom of subbase to crown of pipe.

For Typical Slopes, Ditches, and Drainage Details, see Sheet No. 5.

**** For spacing and details of delineators see Sheet No. 324 & 22-A

Rev. 2-8-67

RAMP TYPICALS

Rev. 7-28-67

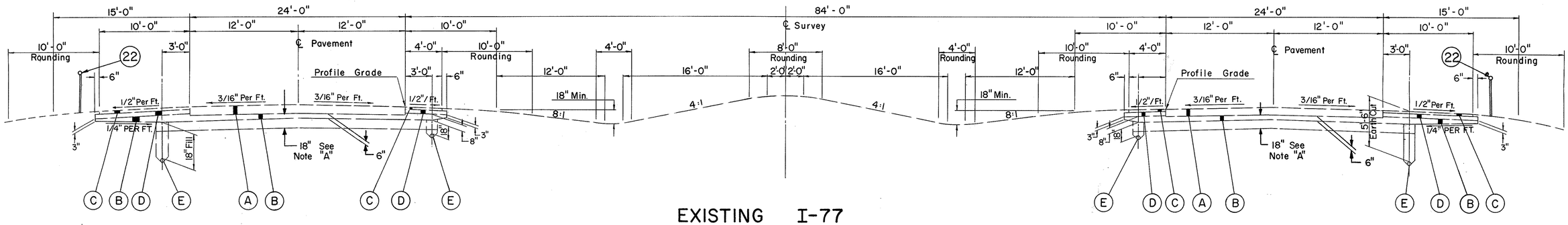
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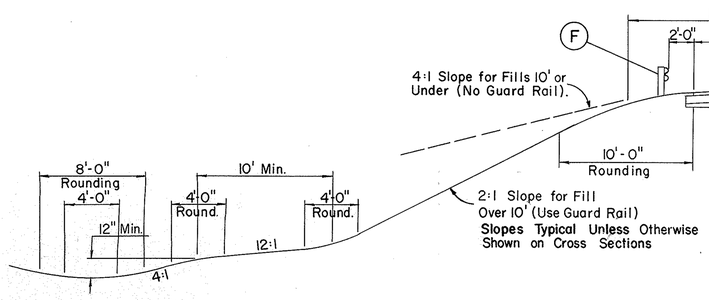
TYPICAL SECTIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

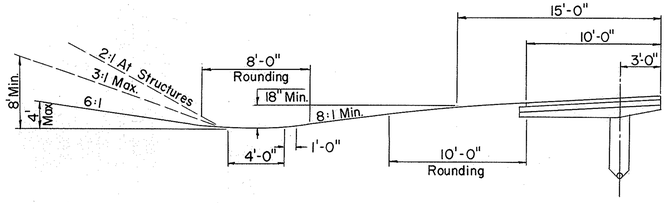
10/510

SUM. 271 – 2.98





STANDARD FILL SLOPE DETAIL

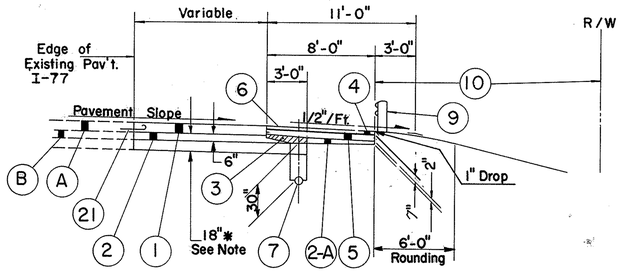


STANDARD CUT SLOPE DETAIL

* Subbase under paved shoulders shall meet the grading requirements of regular grading 310. The limits for regular grading 310 are from the underdrain trench (or one foot beyond the slab edge where underdrains are not used) to the edge of shoulder.

**** For spacing and details of delineators, see sheet No. 324 & 22-A

** Unless otherwise shown on plans, underdrains shall be laid parallel to profile grade with 30" of cover from bottom of subbase to crown of pipe. Where deep underdrains are called for, 50" cover from bottom of subbase to crown of pipe shall be provided.



SPEED CHANGE LANE

* Note: Subbase shall be 18" Depth Between Sta. 906+50 and Sta. 911+00 Right

Note "A"
Subbase 18" Depth Between Sta. 906+50 and Sta. 911+00 - Existing

A		Existing 10" Reinforced Portland Cement Concrete Pavement.
B		Existing Variable Depth Grandular Subbase.
C		Existing 3" Waterproofed Aggregate Base Course.
D		Existing 5" Stabilized Crushed Aggregate Base Course.
E		Existing 6" Pipe Underdrain
F		Existing Guard Rail Steel Beam Std. Type – 4
1	451	Reinforced Portland Cement Concrete Pavement (10" Thickness).
2	310	(Variable Depth) Subbase, Grading A or B Modified as per General Note.
2A	310	(Variable Depth) Subbase. *
3		Special Drainage Connection, using No. 8 Aggregate (See detail, sheet 5, and note in proposal).
4	301	3" Bituminous Aggregate Base 702.01 (85-100) or 702.09 RT12 (See note in proposal).
5	304	(Variable Depth) Aggregate Base.
6	409 409	Seal Coat Bituminous Material Applied at 0.30 Gal./Sq. Yd. Seal Coat Cover Aggregate, No. 8, Applied at 0.008 Cu. Yd./Sq. Yd. (See note in proposal).
7	605	6" Pipe Underdrain (707.06 or 707.12 shall be used in rock cut).**
8		Standard Longitudinal Joint.
9	606	Guard Rail, Type – 4, *Modified As per plan*
10	659	Seeding and Mulching
21		Standard Hook Bolts and Dowel Holes (5'-0" O.C.)(Payment to be included under Pertinent Item 451.
22	620	Mono-Directional Delineators, Type A-1, Post Mounted.****

Rev. 7-28-67
Rev. 2-8-67

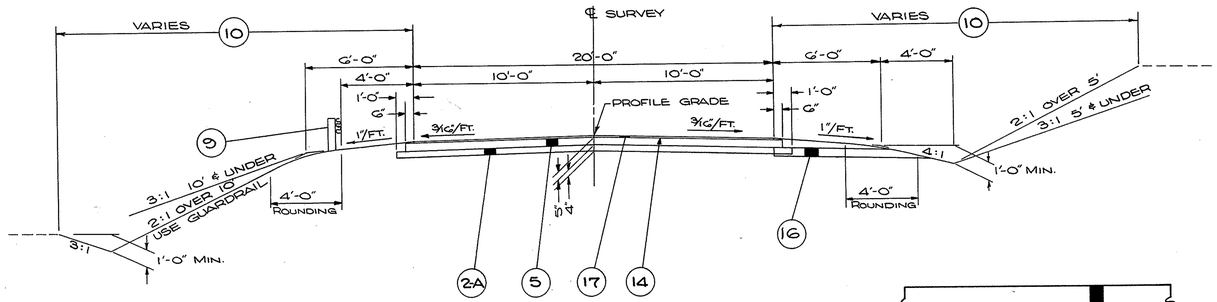
K.&E.

TYPICAL SECTIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

11
510

SUM - 271 - 2.98



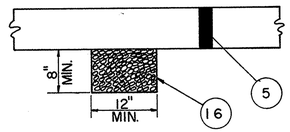
NORMAL SECTION

LIMITING STATIONS
T.R. 172 MAJOR ROAD

STA. 41+50.00 to STA. 58+00.70

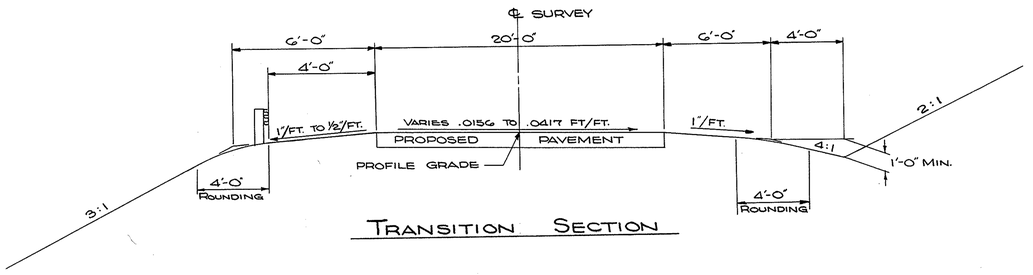
SERVICE ROAD

STA. 48+34.42 to STA. 53+46.71

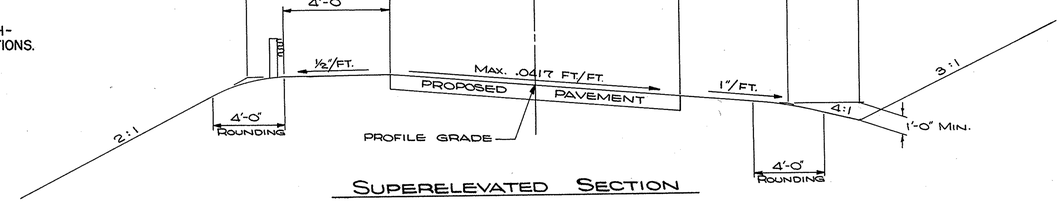


TYPICAL AGGREGATE DRAIN

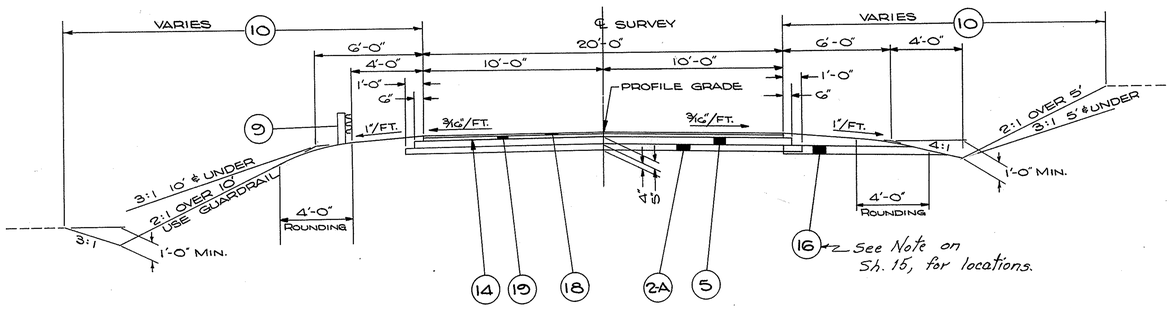
ITEM 605 AGGREGATE DRAINS SHALL BE PLACED, *AS DESCRIBED ON SHEET 15,* THROUGHOUT THE EMBANKMENT AND NORMAL CUT SECTIONS.



TRANSITION SECTION



SUPERELEVATED SECTION



NORMAL SECTION

LIMITING STATIONS
T.R. 171 STINE ROAD

STA. 55+51.06 to STA. 61+00.00

2A	310	(Variable Depth) Subbase
5	304	(Variable Depth) Aggregate Base Course
9	606	Guard Rail, Type-4 *Modified As Per Plan*
10	659	Seeding and Mulching
14	408	Bituminous Prime Coat, 702.00 , RT-2 or RT-3, Applied at the rate of 0.40 Gal. Per Square Yard.
16	605	Aggregate drains
17	404	2" Asphalt Concrete Applied in two 1" Courses (70-85)
18	404	1¼" Asphalt Concrete (70-85)
19	302	1¾" Asphalt Concrete (70-85)

Rev. 7-28-67
Rev. 8-9-67

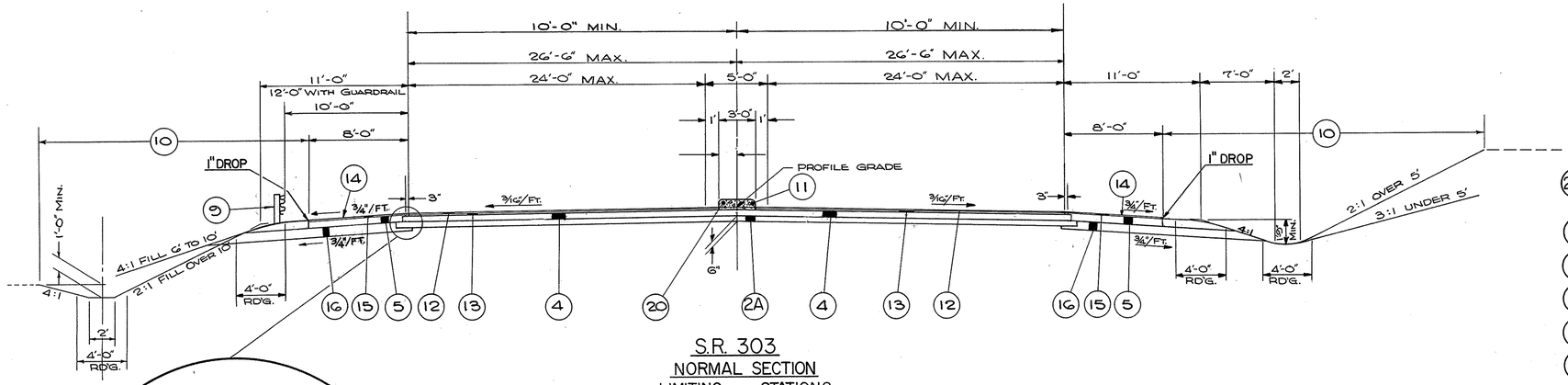
K & E

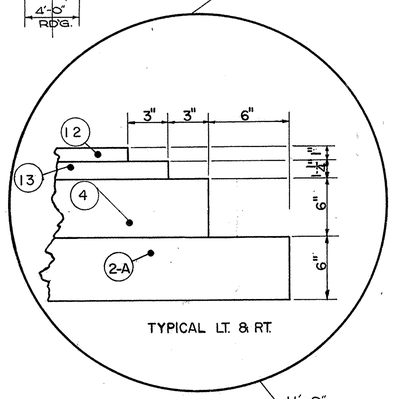
TYPICAL SECTIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

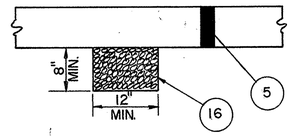
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SUM - 271 - 2.98





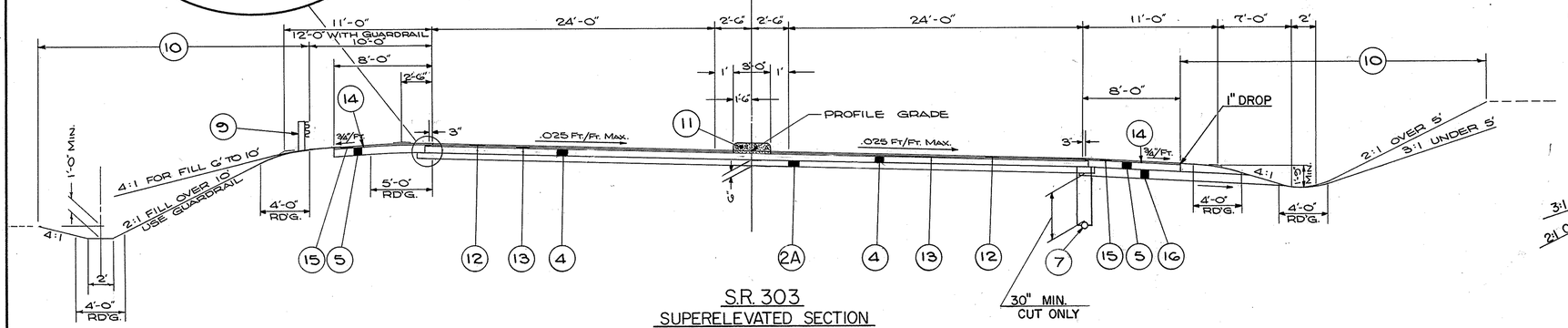
S.R. 303
NORMAL SECTION
LIMITING STATIONS
STA. 36+17.58 to STA. 37+92.58
STA. 51 +84.14 to STA. 63+05.00
BRIDGE LIMITS
BRIDGE NO. SUM.-271-0602
STA. 48+03.11 to STA. 51+84.14
CONCRETE MEDIAN LIMITS
STA. 41+00.00 to STA. 41+92.00
STA. 43+03.50 to STA. 48+03.11
STA. 51+84.14 to STA. 55+08.00
STA. 56+18.00 to STA. 57+92.00
TRAFFIC DIVIDER LIMITS
STA. 37+60.00 to STA. 40+00.00
STA. 59+05.00 to STA. 61+45.00



TYPICAL AGGREGATE DRAIN

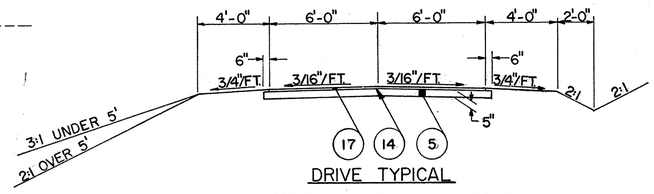
ITEM 605 AGGREGATE DRAINS SHALL BE PLACED, AS DESCRIBED ON SHEET 15, THROUGHOUT EMBANKMENT AND NORMAL CUT SECTIONS.

ITEM 605 PIPE DRAINS ARE REQUIRED ON LOW SIDE OF SUPERELEVATION CUT SECTIONS IN LIEU OF AGGREGATE DRAINS ON SR 303.



S.R. 303
SUPERELEVATED SECTION
LIMITING STATIONS
STA. 37+92.58 to STA. 48+03.11

2-A	310	Variable Depth Subbase,
4	301	6" Bituminous Aggregate Base 702.01 (85-100)or 702.09 RT12, *As per plan*
5	304	Variable Depth Aggregate Base
7	605	6" Pipe Underdrain
9	606	Guard Rail, Type-4, *Modified As Per Plan.*
10	659	Seeding and Mulching
11	612	Concrete Median
12	404	1" Asphalt Concrete (70-85)
13	302	1 1/4" Asphalt Concrete (70-85)
14	408	Bituminous Prime Coat, 702.09 , RT-2 or RT-3, Applied at the Rate of 0.40 Gal. Per Square Yard.
15	409	Seal Coat Bituminous Material, *702.09 RT-9 or RT-10 or 702.03 CBAE-3* Applied at the Rate of 0.30 Gal. Per Square Yard
	409	Seal Coat Cover Aggregate No.8 Applied at 0.008 Cu. Yd./Sq. Yd.
16	605	Aggregate Drains
17	404	2" Asphalt Concrete(Applied in two 1" Courses)(70-85).
20	613	Traffic Divider



DRIVE TYPICAL

DRIVE OFF SERVICE ROADS
STA. 48+75.50 LEFT
STA. 53+46.71 EXTENDED
DRIVE OFF SR-303
STA. 40+58.90 RIGHT
STA. 60+73.00 RIGHT
I-271 STA. 321+10.00 LEFT 164.81'
DRIVE OFF STINE ROAD TR 171
STA. 57+83.87 LEFT

Rev. 7-28-67
Rev. 2-8-67
Rev. 8-9-67

S.R. 303 TYPICAL SECTIONS

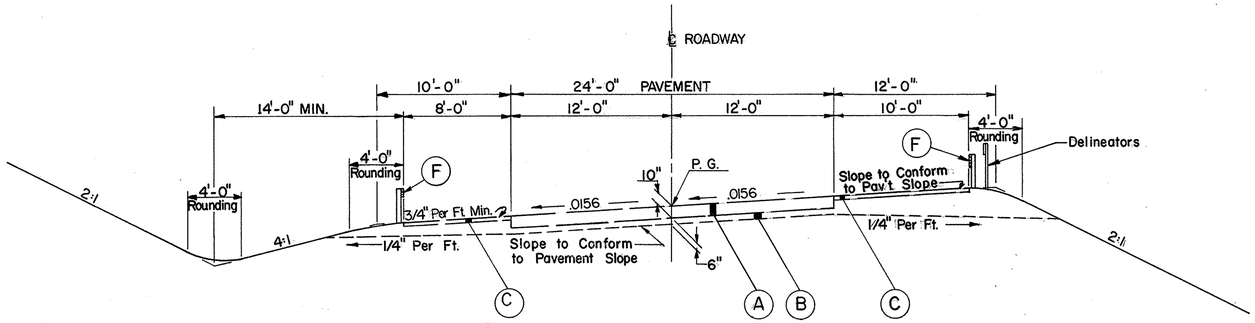
C.&E.

TYPICAL SECTIONS

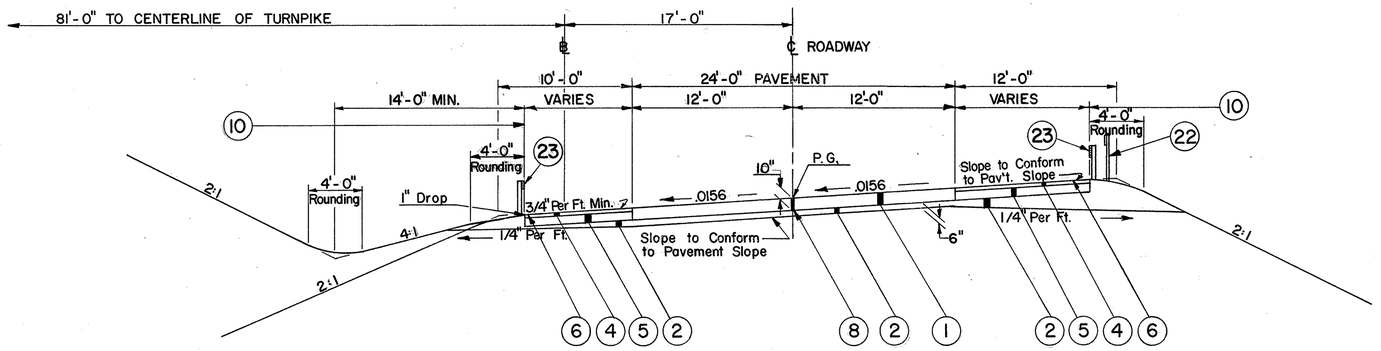
FED. RD.	STATE	PROJECT	
2	OHIO		

13
510

SUM. 271 – 2.98



EXISTING OHIO TURNPIKE



PROPOSED OHIO TURNPIKE

EASTBOUND LANE		
Bridge Limits		
Sta. 177+43.80	to	Sta. 182+01.80
Limiting Stations		
Sta. 176+93.80	to	Sta. 177+43.80
Sta. 182+01.80	to	Sta. 182+51.80

(A)		Existing 10" Reinforced Portland Cement Concrete Pavement.
(B)		Existing Variable Depth Grandular Subbase.
(C)		Existing 3" Waterproofed Aggregate Base Course.
(F)		Existing Guard Rail
(1)	451	Reinforced Portland Cement Concrete Pavement (10" Thickness).
(2)	310	(Variable Depth) Subbase, Grading A or B.
(4)	301	3" Bituminous Aggregate Base. 702.01 (85–100) or 702.09 RT12 (See note in proposal).
(5)	304	(Variable Depth Aggregate Base.
(6)	409	Seal Coat Bituminous Material Applied at 0.30 Gal. / Sq. Yd.
	409	Seal Coat Cover, Aggregate No. 8, Applied at 0.008 Cu. Yd. / Sq. Yd. (See Note in Proposal)
(8)		Standard Longitudinal Joint.
(10)	659	Seeding and Mulching.
(22)		Mono–Directional Delineators.
(23)	606	Guard Rail, Type 1, 4 Ropes

OHIO TURNPIKE TYPICAL

GENERAL NOTES

FED. RD.	STATE	PROJECT	
2	OHIO		

14
510

SUM - 271 - 2.98

ROUNDING OF CORNERS SHOWN ON CROSS-SECTIONS

THE ROUNDED CORNERS SHOWN ON STANDARD DRAWING MC-1, AS MODIFIED BY THE TYPICAL SECTIONS, APPLY TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

FIELD OFFICE

THE CONTRACTOR SHALL, IN ADDITION TO THE REQUIREMENTS OF 105.152, PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 400 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR FIELD OFFICE.

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 70 MILES PER HOUR.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO MAKES NO GUARANTEE AS TO THEIR ACCURACY OR COMPLETENESS.

ESTIMATED QUANTITIES

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

CONSTRUCTION LAYOUT STAKES

SEE NOTE IN PROPOSAL DESCRIBING THE WORK INCLUDED IN THIS LUMP SUM PAY ITEM.

RIGHT-OF-WAY FENCE

FOR LOCATION OF RIGHT-OF-WAY FENCE, SEE RIGHT-OF-WAY SHEETS.

ITEM 203 PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE IN PROOF ROLLING OF SUBGRADE FOR THE MAINLINE AND RAMP PAVEMENTS, AND FOR PAVED SHOULDERS, IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 801.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR THIS PURPOSE:

ITEM	203	93 HOURS	PROOF ROLLING

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER OR CALCIUM CHLORIDE FOR DUST CONTROL PURPOSES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616	CALCIUM CHLORIDE FOR DUST CONTROL	10 TONS
ITEM 616	WATER FOR DUST CONTROL	400 M. GALS.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS ON THIS PLAN INDICATE SPECIFIC WIDTHS AND DEPTHS OF PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED AND ALL OTHER SLOPED FOUNDATION AREAS SHALL BE BENCHED AS SET FORTH IN SECTION 203.09. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED BY THE PROVISIONS OF SECTION 203.09.

EMBANKMENT CONSTRUCTION STATION 252 + 00 AND STATION 257 + 00

SPECIAL CARE SHALL BE EXERCISED IN THIS AREA TO ASSURE STRICT COMPLIANCE WITH COMPACTION REQUIREMENTS OF THE GENERAL SPECIFICATIONS. DURING EMBANKMENT CONSTRUCTION OPERATIONS, THE ROADWAY SECTION SHALL BE MAINTAINED AT ALL TIMES IN SUCH SHAPE THAT NO CONCENTRATION OF SURFACE WATER WILL TAKE PLACE AND BE DISCHARGED IN A CONCENTRATED FLOW OVER THE SLOPES.

THE MOISTURE CONTENT OF ALL EMBANKMENT MATERIAL SHALL BE LESS THAN OPTIMUM AT THE TIME OF COMPACTION. EMBANKMENT MATERIAL PLACED ON FILL CONTAINING OR EXCEEDING OPTIMUM MOISTURE, WHETHER CAUSED BY RAIN OR FROM THE STATE OF THE MATERIAL AS RECEIVED SHALL BE AERATED BY DISCING, OR OTHER APPROVED METHODS FOR THE FULL DEPTH OF THE COURSE TO REDUCE THE MOISTURE CONTENT TO BELOW OPTIMUM AT THE TIME OF COMPACTION.

SPECIAL DITCHES

FOR SPECIAL DITCH GRADES, SEE CROSS-SECTIONS.

CONTRACTION AND EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS AND THE SPECIFICATIONS.

ITEM 310 SUBBASE, GRADING "A" OR "B", AS PER PLAN

MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING "A" OR "B" OF SECTION 310.02 EXCEPT THAT FOR EITHER GRADING, NO MORE THAN TEN PERCENT (10%) OF THE MATERIAL SHALL PASS A No. 200 SIEVE AFTER ALL OPERATIONS OF PLACING AND COMPACTING HAVE BEEN COMPLETED.

310 UNDER APPROACH SLABS

THE AREA BETWEEN THE BOTTOM SURFACE OF THE APPROACH SLAB AND THE SUBGRADE SHALL BE BACKFILLED WITH ITEM 310 SUBBASE, GRADING "A" OR "B", AS PER PLAN.

R/W MONUMENTS, FEDERAL PROJECT MARKERS, AND SECTION MARKERS

EXISTING R/W MONUMENTS, BENCH MARKS, FEDERAL PROJECT MARKERS AND SECTION MARKERS THAT WILL BE REMOVED BY CONSTRUCTION, SHALL BE PROTECTED BY THE CONTRACTOR AS PER SECTION 107.12 UNTIL THEY CAN BE WITNESSED, REFERENCED, AND RESET BY THE CONTRACTOR.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM

REPLACEMENT

THE CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE ANY ITEM NOT SPECIFICIALLY LISTED FOR REMOVAL THAT IS DAMAGED OR DESTROYED BY HIS OPERATIONS.

WELLS

ALL DUG WELLS LOCATED WITHIN THE RIGHT-OF-WAY LIMITS SHALL BE FILLED AS REQUIRED UNDER SEC. 202.06. ALL DRILLED WELLS SHALL HAVE THE CASING REMOVED TO A DEPTH OF THREE (3) FEET BELOW THE PROPOSED SUBGRADE IF LOCATED UNDER THE PROPOSED PAVEMENT OR TO A DEPTH OF THREE (3) FEET BELOW THE PROPOSED FINISHED SURFACE IF LOCATED OUTSIDE THE PROPOSED PAVEMENT AREA. THE CASING SHALL THEN BE CAPPED WITH CLASS "E" CONCRETE OR A STANDARD THREADED PIPE CAP. PAYMENT FOR ABANDONING DRILLED WELLS SHALL BE PAID FOR UNDER ITEM SPECIAL "DRILLED WELLS ABANDONED", AND PAYMENT FOR ABANDONING DUG WELLS SHALL BE PAID FOR UNDER ITEM 203, EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION.

PLUGGING GAS WELLS

THE GAS WELL LOCATED WITHIN THE LIMITS OF THE RIGHT-OF-WAY SHALL BE PLUGGED BY THE CONTRACTOR BEFORE ANY OTHER CONSTRUCTION IS STARTED IN THE VICINITY OF THE WELL. *All work shall be done in accordance with the requirements of the State of Ohio, Department of Natural Resources Division of Oil and Gas, Room 811, 65 South Front Street, Columbus Ohio.* ALL WORK CONNECTED WITH PLUGGING OF THE WELL MUST BE PERFORMED UNDER THE SUPERVISION OF A REPRESENTATIVE OF THE DIVISION OF *Oil and Gas.* THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE DIVISION *Oil and Gas.* AT LEAST 14 DAYS IN ADVANCE OF THE DATE ON WHICH HE INTENDS TO BEGIN WORK. *Recorded information regarding these wells & permits to plug the wells shall be obtained by the contractor at the Division of Oil and Gas.* PAYMENT FOR THE WORK SHALL BE MADE PER EACH UNDER "ITEM SPECIAL PLUGGING GAS WELL", WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, TOOLS AND EQUIPMENT, AND ALL INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

ADJACENT CONTRACTS

THE CONTRACTOR FOR THIS PROJECT SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CONTRACTORS FOR BOTH OF THE ADJACENT PROJECTS SO AS TO COMPLETE THE PROJECT IN AN ORDERLY FASHION AND WITHOUT ANY UNDUE DELAY OR INTERFERENCE TO THE OTHER CONTRACTORS.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT CERTAIN GRADING OPERATIONS WITHIN THIS PROJECT ARE TO BE PERFORMED BY THE CONTRACTOR FOR PROJECT 1-271-6 (15) [SUM-271-0.83] AND PROJECT 1-271-6 (20) 236 [SUM-271-7.65].

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS LYING WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEANING AND GRUBBING, EXCEPT THAT THOSE TREES AND STUMPS FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES	No. TREES	No. STUMPS
18"	4,028	40
30"	177	6
48"	31	2
60"	0	0

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING.

PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS

AFTER THE EXISTING PAVEMENT AS INDICATED ON THE PLANS HAS BEEN REMOVED, THE OLD ROADWAY SHALL BE GRADED TO THE LEVEL OF THE SURROUNDING GROUND, THE OLD DITCHES FILLED AND THE DISTURBED AREAS SLOPED TO DRAIN AND LEFT IN A NEAT CONDITION READY FOR SEEDING. SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 659 SEEDING AND MULCHING. PAYMENT FOR ALL OTHER WORK REQUIRED SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION.

GUARD RAIL, MODIFIED AS PER PLAN:-

Subsequent to the completion of the plans for this project, several modifications to the design and location of guard rail have become necessary in order to comply with recently inaugurated safety concepts as follows:

TYPE 4-

1. The post spacing for all Type 4 guard rail shall be at 6'-3" intervals with spacer blocks attached between the posts and rail element instead of 12'-6" spacing without spacer blocks as indicated on the plans.

2. All approach (entrance) ends of Type 4 guard rail on divided lane highways shall be constructed with the new guard rail approach end assemblies as detailed on plan page No. 322A. Where either end is adjacent to proposed bridges, the new bridge connector assembly will apply unless otherwise detailed on the plans. The exit (trailing) ends of Type 4 guard rail shall be as detailed on Standard Drawing GR-2A.

3. Type 4 guard rail terminals approaching existing bridges shall be located in the field so that the face of the rail will be in alignment with the face of the safety curb on the structure, unless otherwise detailed on the plans. Rail at exit end of existing structures shall be located so that the face of the rail will be in alignment with the bridge parapet, unless otherwise detailed on the plans.

4. Type 4 guard rail located on two-lane, two directional highways shall be constructed with the new guard rail approach end assemblies on both ends, except when one end is adjacent to or continues across a bridge.

TYPE 4 BARRIER DESIGN-

1. The post spacing for all Type 4 barrier design rail shall be at 6'-3" intervals with spacer blocks attached between the post and rail elements instead of 12'-6" spacing without spacer blocks as indicated on the plans.

2. All approach (entrance) ends of Type 4 barrier design rail shall be constructed with the new guard rail approach end assemblies as detailed on plan page No. 322A. Exceptions to this will occur where the median guard consists of a combination of Type 4 and barrier design as shown on Standard Drawings GR-5A and GR-5B.

BASIS OF PAYMENT-

Type 4 guard rail with post spacing at 6'-3", spacer blocks, and new approach end assemblies will be paid for as 606 Guard Rail, Type 4 modified as per plan, complete in place.

Type 4 barrier design with post spacing at 6'-3", spacer blocks, and new approach end assemblies will be paid for as 606 Guard Rail, Type 4 barrier design modified as per plan, complete in place.

CENTERLINE REFERENCE MONUMENTS, AS PER PLAN

MONUMENTS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE, CAST-IN-PLACE IN A CIRCULAR HOLE EIGHT (8) INCHES IN DIAMETER AND FORTY-FOUR (44) INCHES IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED AT A DEPTH OF TWO (2) INCHES BELOW GROUND LEVEL AND THE UPPER SIX (6) INCH PORTION OF THE CONCRETE SHALL BE FORMED. ONE-HALF (1/2) INCH STEEL RODS SIX (6) INCHES LONG SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK THE CENTERLINE AND STATION. PAYMENT SHALL BE PER ITEM 604 EACH CENTERLINE REFERENCE MONUMENTS, AS PER PLAN.

FOR LOCATIONS, SEE SHEETS No. 39 TO 64.

COOPERATION - TRAFFIC CONTROL DEVICES

A SEPARATE TRAFFIC CONTROL DEVICE CONTRACTOR MAY BE REQUIRED TO INSTALL OR ERECT TRAFFIC CONTROL DEVICES WITHIN CONTRACT WORK LIMITS PRIOR TO COMPLETION OF WORK BY THE CONTRACTOR.

THE CONTRACTOR SHALL COOPERATE WITH THE SEPARATE CONTRACTOR TO ARRANGE A SUITABLE WORK SCHEDULE, SUBJECT TO THE APPROVAL OF THE ENGINEER, TO PERMIT THE SEPARATE CONTRACTOR TO WORK AND OPERATE NECESSARY EQUIPMENT WITHIN WORK LIMITS TO CARRY OUT THE PROVISIONS OF HIS CONTRACT. THE ENGINEER SHALL NOTIFY THE CONTRACTOR A MINIMUM OF THIRTY (30) DAYS PRIOR TO ANY SCHEDULED WORK BY THE SEPARATE CONTRACTOR.

EACH CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE BY HIM, OR HIS AGENTS, TO THE WORK PERFORMED BY THE OTHER CONTRACTOR.

COMPENSATION FOR THE ABOVE COOPERATION, SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS CONSTRUCTION PROJECT.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS AT EACH OF THE FOLLOWING LOCATIONS:

1. I-77 RIGHT OF STATION 905 + 00.
2. I-77 LEFT OF STATION 945 + 00.
3. S. R. 303 RIGHT OF STATION 35 + 67.58.
4. S. R. 303 LEFT OF STATION 65 + 36.03.

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1 "CODE N-55(1)-120(2)" *modified by deleting reference to "Commerce" appearing in the lower left portion of the sign and inserting therein "Transportation".* THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

Rev. 7-28-67
Rev. 3-8-67
Rev. 2-8-67

GENERAL NOTES

FED. RD.	STATE	PROJECT	
2	OHIO		

15
510

SUM - 271 - 2.98

GENERAL NOTES

ITEM SPECIAL - CLEANING AND DISPOSAL OF SEPTIC TANKS

THIS ITEM SHALL INCLUDE CLEANING, BACKFILLING, AND REMOVAL OF ALL OR ANY PORTION OF EXISTING SEPTIC TANKS.

ALL SEPTIC TANKS LYING WITHIN THE PROPOSED RIGHT-OF-WAY LIMITS SHALL BE CLEANED AND EMPTIED. MATERIAL REMOVED FROM THESE TANKS SHALL BE CLASSIFIED AS UNSUITABLE AND DISPOSED OF OUTSIDE THE RIGHT-OF-WAY OR EASEMENT LINES.

WHEN THE SEPTIC TANKS ARE LOCATED ABOVE THE FINISHED PAVEMENT OR GROUND LINES, THEY SHALL BE ENTIRELY REMOVED AND DISPOSED OF IN ACCORDANCE WITH ITEM 202.02.

WHEN THE SEPTIC TANKS ARE LOCATED BELOW THE FINISHED PAVEMENT OR GROUND LINES, THE TOPS OF THE TANKS SHALL BE REMOVED, AND THE WALLS SHALL BE REMOVED TO A DEPTH OF THREE FEET (3') BELOW THE FINISHED SUBGRADE OR GROUND LINES. THE REMOVED MATERIAL SHALL BE DISPOSED OF AS EXPLAINED ABOVE. THE TANKS SHALL BE BACKFILLED WITH SUITABLE SOIL OR GRANULAR MATERIAL IN ACCORDANCE WITH ITEM 203.09.

THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID FOR EACH "ITEM SPECIAL-CLEANING AND DISPOSAL OF SEPTIC TANKS", WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR CLEANING, REMOVING AND DISPOSING OF EXCESS MATERIALS, BACKFILLING, AND FOR ALL LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM INCLUDING INCIDENTAL EXCAVATION.

PRIVATE SANITARY SEWER TAPS

WITHIN THE INTERSTATE LIMITED ACCESS RIGHT-OF-WAY:

NO PRIVATE SANITARY SEWER CONNECTIONS SHALL BE MADE TO CLOSED STORM SEWER SYSTEMS WITHIN THE LIMITED ACCESS RIGHT-OF-WAY.

PRIVATE SANITARY SEWERS MAY OUTLET AT OPEN DITCH PORTIONS OF THE PROPOSED HIGHWAY DRAINAGE SYSTEM IF THE PROPERTY OWNER OBTAINS WRITTEN APPROVAL OF THE EFFLUENT FROM THE LOCAL BOARD OF HEALTH. IF THE PROPERTY OWNER FAILS TO SHOW PROOF OF SATISFACTORY EFFLUENT FROM THE HEALTH BOARD, THE DRAIN SHALL BE PLUGGED AT THE RIGHT-OF-WAY LINE AND QUANTITIES SHALL BE NON-PERFORMED. COST OF PLUGGING DRAINS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION. COST OF OUTLETTING APPROVED EFFLUENT FLOW INTO ROADWAY DITCHES, AS DIRECTED BY THE ENGINEER, SHALL BE INCLUDED IN THE PERTINENT PIPE ITEM. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE "GENERAL SUMMARY" FOR THIS PURPOSE:

ITEM 603 6" CONDUIT TYPE B WITH CLASS "B" BEDDING 200 LIN.FT.

SIDE ROADS NOT WITHIN LIMITED ACCESS RIGHT-OF-WAY:

ALL EXISTING SANITARY DRAINS ENCOUNTERED DURING CONSTRUCTION OPERATION THAT ARE NOW OUTLETTING INTO THE HIGHWAY DRAINAGE SYSTEM MAY BE CONNECTED TO THE HIGHWAY DRAINAGE SYSTEM AS DIRECTED BY THE ENGINEER, PROVIDED THE PROPERTY OWNER OBTAINS WRITTEN APPROVAL OF THE EFFLUENT FROM THE LOCAL BOARD OF HEALTH. IF THE PROPERTY OWNER FAILS TO SHOW PROOF OF SATISFACTORY EFFLUENT FROM THE HEALTH BOARD, THE DRAIN SHALL BE PLUGGED AT THE RIGHT-OF-WAY LINE AND QUANTITIES SHALL BE NON-PERFORMED. COST OF PLUGGING DRAINS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION.

EXISTING CONSTRUCTION

WITHIN THE LIMITS OF THIS CONTRACT IT SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ANY WORK NECESSARY TO PROPERLY JOIN THE NEW AND EXISTING PAVEMENTS. THE PAYMENT FOR THIS ITEM SHALL BE INCLUDED UNDER THE APPLICABLE ITEM.

THE FOLLOWING IS A LIST OF THE UTILITIES WITHIN THE LIMITS OF THIS PROJECT:

EAST OHIO GAS COMPANY	AKRON, OHIO
OHIO EDISON COMPANY	AKRON, OHIO
CLEVELAND ELECTRIC ILLUMINATING CO.	CLEVELAND, OHIO
OHIO BELL TELEPHONE COMPANY	AKRON, OHIO
WESTERN RESERVE TELEPHONE COMPANY	HUDSON, OHIO
OHIO TURNPIKE COMMISSION	BEREA, OHIO

EROSION CONTROL

ITEMS 601, 660 AND 667 ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO REPLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK THE NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

WHERE 601 PAVED GUTTER IS CALLED FOR ON THE PLANS, AN EIGHTEEN (18") INCH SOD STRIP SHALL BE PLACED ALONG THE TOP OF CONCRETE ON BOTH SIDES, EXCEPT FOR THE LENGTHS SHOWN IN DITCHES UNDER BRIDGES, FOR FULL WIDTH OF SUPERSTRUCTURE MEASURED NORMAL TO SIDE DITCH.

PAYMENT WILL BE MADE UNDER PRICE BID FOR ITEM 660 SODDING.

EROSION CONTROL AT STANDARD No. 1,2, AND 3 HEADWALLS

AN EIGHTEEN (18") INCH WIDE SOD STRIP SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF THE HEADWALLS No. 1, NO. 2 AND No. 3 TO PREVENT EROSION. THE QUANTITY OF SODDING REQUIRED IS INCLUDED IN THE "ESTIMATED QUANTITIES" SHOWN ON EACH OF THOSE CULVERT DETAILS WHERE THESE HEADWALLS HAVE BEEN USED.

SEEDING (I-271)

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE RIGHT-OF-WAY FENCE LINES, BETWEEN THE RIGHT-OF-WAY LINES IN UNFENCED AREAS, AND WITHIN THE WORK LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT.

SEEDING (S.R.303)

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN LINES TEN FEET (10') OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS-SECTIONS, OR TO THE RIGHT-OF-WAY LINE IF SUCH LINE IS LESS THAN TEN FEET (10') FROM THE WORK LIMITS.

SEEDING (T.R.171 AND 172)

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS, AS SHOWN ON THE CROSS-SECTIONS.

SEEDING FORMULA

THE FOLLOWING SEED MIXTURE SHALL, IN LIEU OF THE MIXTURES LISTED IN SECTION 659.09, BE USED THROUGHOUT THE LIMITS OF THIS PROJECT:

70% KENTUCKY 31 FESCUE	5% REDTOP
20% KENTUCKY BLUEGRASS	5% ALSIKE CLOVER

COMMERCIAL FERTILIZER

COMMERCIAL FERTILIZER (12-12-12) AND AGRICULTURAL LIMING SHALL BE APPLIED IN ACCORDANCE WITH ITEM 659.

ITEM 605 AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS, EXCEPT WHERE ITEM 605 PIPE UNDERDRAINS HAVE BEEN PROVIDED.

AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

PAVEMENT INTERSECTIONS

THE ELEVATIONS APPEARING ON THE INTERSECTION DETAILS HAVE BEEN DETERMINED FROM FIELD SURVEY AND REFLECT THE CALCULATED ELEVATIONS REQUIRED TO PROVIDE A SMOOTH TRANSITION OF INTERSECTING GRADES.

THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER SHALL MAKE MINOR ELEVATION ADJUSTMENTS TO MEET EXISTING FIELD CONDITIONS.

PIPE BENDS AND BRANCHES

PIPE BENDS AND BRANCHES WHERE SHOWN THROUGHOUT THE PLANS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WITHIN THE LIMITS OF PROPOSED EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

HOOK BOLTS:-

Pavement edges which are adjacent to future speed change lanes at the Turnpike interchange shall be equiped with the female half of hook bolts, capped with tap bolts as per standard drawing BP-3, and heavily oiled. Bolts shall be spaced 30" on centers, (included for payment in the unit price bid for 451), and located in the following areas:

Sta. 327+00	to Sta. 332+60	Rt.
Sta. 330+50	to Sta. 340+80	Lt.
Sta. 348+00	to Sta. 358+50	Rt.
Sta. 356+00	to Sta. 365+00	Lt.

CONNECTIONS TO EXISTING PIPE

AT PLACES WHERE THE PLANS PROVIDE FOR PROPOSED DRAINAGE PIPE TO BE CONNECTED TO EXISTING PIPES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED PIPE. THE COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

SPRING DRAINS

REFERENCE IS MADE TO THE DETAILED DRAWING ON SHEET No. 325 SHOWING THE METHOD OF DRAINING ANY SPRING THAT MAY BE SHOWN ON THE PLAN OR ENCOUNTERED DURING CONSTRUCTION AS DETERMINED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 605 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 or 707.12 AS PER PLAN 300 L.F.
ITEM 605 AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN 30 L.F.

THE CONTRACTOR SHALL NOT ORDER MATERIALS FOR "SPRING DRAINS" UNTIL AUTHORIZED BY THE ENGINEER AND IN THE EVENT NO SPRINGS ARE ENCOUNTERED, THE ITEM SHALL BE NON-PERFORMED.

FARM DRAINS

ALL FARM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS AND WHICH CROSS THE ROADWAY SHALL BE REPLACED WITHIN THE RIGHT-OF-WAY LIMITS BY ITEM 603 CONDUIT TYPE B W/CLASS B BEDDING.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL TILE FIELDS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY TYPE E CONDUIT AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REQUIRED REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 603	6" CONDUIT TYPE "B" WITH CLASS "B" BEDDING	200 L.F.
ITEM 603	8" CONDUIT TYPE "B" WITH CLASS "B" BEDDING	200 L.F.
ITEM 603	6" CONDUIT TYPE "E"	200 L.F.
ITEM 603	8" CONDUIT TYPE "E"	200 L.F.
ITEM 603	6" CONDUIT TYPE "F"	50 L.F.
ITEM 603	8" CONDUIT TYPE "F"	50 L.F.
ITEM 601	DUMP ROCK CHANNEL PROTECTION	5 C.Y.

WHERE BENDS OR BRANCHES ARE REQUIRED IN CONJUNCTION WITH THE ABOVE QUANTITIES SUCH BENDS AND BRANCHES SHALL BE INCLUDED IN THE LIN. FT. PRICE BID FOR THE PERTINENT PIPE ITEM.

THE ABOVE ESTIMATED QUANTITIES SHALL NOT BE ORDERED WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.

Rev. 7-28-67

GENERAL NOTES

MAINTENANCE OF TRAFFIC

FED. RD.	STATE	PROJECT	
2	OHIO		

16/510

SUM - 271 - 2.98

PAYMENT FOR TEMPORARY ROADWAYS

PAYMENT FOR CONSTRUCTION, MAINTENANCE, AND SUBSEQUENT REMOVAL, WHENEVER REQUIRED, OF TEMPORARY ROADWAYS NOT SEPARATELY ITEMIZED UNDER ITEM 615, EXCEPT FOR FURNISHING AND PLACING OF ITEMS 616 CALCIUM CHLORIDE AND 410 TRAFFIC COMPACTED SURFACE TYPE A OR B, SHALL BE INCLUDED IN ITEM 614 LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC.

LIGHTS, SIGNS AND BARRICADES

THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENT OF 107.10, ON THIS PROJECT PERFORM THE FOLLOWING:

1. PROVIDE, ERECT AND MAINTAIN LIGHTS, SIGNS AND BARRICADES AT THE WORK LIMITS ON ALL INTERSECTING ROADS WHICH REMAIN OPEN TO TRAFFIC.
2. PROVIDE, ERECT AND MAINTAIN MOVABLE GATES ON INTERSECTING ROADS CLOSED TO TRAFFIC AT ALL POINTS WHERE LOCAL TRAFFIC MOVEMENT TERMINATES.

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING BARRICADES, GATES, LIGHTS, SIGNS AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "MAINTAINING TRAFFIC."

S. R. 303

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON S.R. 303 DURING THE CONSTRUCTION OF THE BRIDGE AND IMPROVEMENT OF THE ROADWAY BY MEANS OF A TEMPORARY RUNAROUND ROAD USING CLASS "B" PAVEMENT.

THE TEMPORARY RUNAROUND WILL BE BUILT TO THE LINES AND GRADES SHOWN ON SHEET NO. 276, 277 & 278 OF THE PLANS.

COST OF THE ABOVE SHALL BE INCLUDED IN ITEM 615 SQ.YDS. CLASS "B" TEMPORARY PAVEMENT AND ITEM 615 LUMP SUM TEMPORARY ROADS

MAJOR ROAD T.R. 172

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON EXISTING MAJOR ROAD DURING CONSTRUCTION OF RELOCATED MAJOR ROAD. THIS MAY BE DONE BY PROVIDING A TEMPORARY INTERSECTION WITH THE S.R.303 TEMPORARY RUNAROUND ROAD.

RELOCATED MAJOR ROAD SHALL BE CONSTRUCTED ONLY TO THE S.R. 303 TEMPORARY RUNAROUND ROAD AND A TEMPORARY INTERSECTION PROVIDED FOR MAINTAINING TRAFFIC. UPON COMPLETION AND OPENING TO TRAFFIC OF RELOCATED S.R. 303, THE MAJOR ROAD RELOCATION SHALL BE COMPLETED.

RELOCATED MAJOR ROAD MAY BE CLOSED TEMPORARILY TO TRAFFIC DURING COMPLETING OF THE INTERSECTION WITH RELOCATED S.R. 303 AND STINE ROAD.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614 MAINTAINING TRAFFIC".

STINE ROAD T.R. 171

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON EXISTING STINE ROAD DURING CONSTRUCTION OF RELOCATED STINE ROAD. RELOCATED STINE ROAD SHALL BE CONSTRUCTED ONLY TO STATION 56 + 00 WITH PERMANENT PAVEMENT. A TEMPORARY INTERSECTION SHALL BE CONSTRUCTED BETWEEN STATION 56 + 00 AND THE S.R. 303 TEMPORARY RUNAROUND ROAD. THIS SHALL BE MAINTAINED DURING CONSTRUCTION OF THE S.R. 303 STRUCTURE SUM 271-0602 AND APPROACHES.

RELOCATED STINE ROAD MAY BE TEMPORARILY CLOSED DURING THE CONSTRUCTION OF THE INTERSECTION WITH RELOCATED S,R.303 AND MAJOR ROAD.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614 MAINTAINING TRAFFIC."

I. R. 77

TWO-WAY TRAFFIC AND THE FOUR LANES OF PAVEMENT SHALL BE MAINTAINED ON I.R. 77 DURING THE CONSTRUCTION OF STRUCTURES SUM 271-0354 AND SUM 271 - 0358 AND APPROACHES.

A 16' VERTICAL CLEARANCE OVER INTERSTATE ROUTE I-77 SHALL BE MAINTAINED AT ALL TIMES. WHEN ALL WORK ON THE STRUCTURE IS COMPLETE, THE TEMPORARY GUARD RAIL WILL BE REMOVED AND THE MEDIAL AREA AND PAVED BERMS RESTORED TO THEIR ORIGINAL CONDITION. *PAYMENT FOR RESTORING THE MEDIAL AREA SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614 MAINTAINING TRAFFIC.*

TEMPORARY GUARD RAIL I-77

THE CONTRACTOR, IN ADDITION TO SECTION 615.04 OF THE SPECIFICATIONS, SHALL FURNISH, ERECT AND SUBSEQUENTLY REMOVE TEMPORARY GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP) FOR PROTECTION OF THE TRAVELING PUBLIC AND WORK AREA ADJACENT TO THE I.R. 77. THE GUARD RAIL SHALL BE POST OR BARREL MOUNTED, ERECTED PER STANDARD DRAWING GR-2A AT LOCATIONS SHOWN ON PLANS, A MINIMUM OF 8' FROM THE EDGE OF TRAVELED PAVEMENT. BARREL MOUNTED GUARD RAIL SHALL BE CONSTRUCTED USING DRUMS HALF FILLED WITH SAND AND PAINTED A BRIGHT YELLOW. GUARD RAIL ELEMENTS SHALL BE FIRMLY BOLTED A MINIMUM OF 27" FROM THE TOP OF RAIL TO THE PAVEMENT GRADE. THE ENDS OF EACH RUN SHALL BE FLARED SO THAT THE TERMINAL WILL BE LOCATED APPROXIMATELY 12' FROM THE EDGE OF THE PAVEMENT. CONSTRUCTION WILL BE SIMILAR TO THE FLARED ENDS SHOWN ON STANDARD DRAWING GR-6. GOOD QUALITY USED GUARD RAIL, APPROVED BY THE ENGINEER, MAY BE USED FOR THIS PURPOSE IN LIEU OF NEW RAIL ELEMENTS.

PAYMENT FOR FURNISHING, ERECTING, MAINTAINING AND REMOVING POST OR BARREL MOUNTED TEMPORARY GUARD RAIL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "ITEM 606 TEMPORARY GUARD RAIL, AS PER PLAN."

PARKING RESTRICTIONS I-77

WORKMEN SHALL NOT USE PAVED SHOULDERS OR THE MEDIAN AREA AT ANY TIME FOR PARKING OF THEIR VEHICLES.

TRANSPORTING MATERIALS AND PERSONNEL I-77

THE TRANSPORTING OF EXCAVATED MATERIAL ACROSS EXISTING INTERSTATE HIGHWAY I-77 FOR THE CONSTRUCTION OF ROADWAY EMBANKMENT WILL NOT BE PERMITTED.

THE CROSSING OF I-77 BY CONSTRUCTION PERSONNEL SHALL BE ACCOMPLISHED BY UTILIZING THE EXISTING WHEATLEY ROAD INTERCHANGE.

STRUCTURAL STEEL ERECTION I-77

DURING THE ERECTION OF STRUCTURAL STEEL, THE CONTRACTOR WILL BE PERMITTED TO TEMPORARILY CLOSE BOTH LANES OF ONE DIRECTIONAL TRAFFIC FOR THE PERIOD OF TIME NECESSARY TO PLACE ONE (1) BEAM IN THE INITIAL POSITION ON THE PIERS. BOTH LANES SHALL THEN BE RE-OPENED TO CLEAR THE TRAFFIC BEFORE PLACING THE NEXT BEAM. THIS PROCEDURE SHALL BE ADHERED TO IN THE PLACING OF ALL STRUCTURAL STEEL. THE MAXIMUM DURATION FOR TEMPORARY CLOSING OF BOTH LANES SHALL BE HELD TO FIFTEEN (15) MINUTES AT ANY ONE TIME.

TRAFFIC CONTROL AND CONSTRUCTION OPERATIONS I-77

WHEN WORK IS TO BE PERFORMED ADJACENT TO THE EXISTING PAVEMENT, THE CONTRACTOR WILL PROVIDE CONES OR BARRELS (SPACED IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES) FOR THE PROTECTION OF THE TRAVELING PUBLIC. DURING THIS PERIOD, TRAFFIC WILL BE REDUCED TO ONE (1) FOURTEEN FOOT LANE BY THE METHOD "CLOSING ONE LANE ON A FOUR LANE DIVIDED HIGHWAY." ALL FOUR LANES SHALL BE OPEN ON ALL HOLIDAYS AND WEEK ENDS. THE CONTRACTOR SHALL ALSO ARRANGE HIS OPERATIONS TO AVOID AN OPEN TRENCH ALONG THE TRAVELLED PAVEMENT EDGE ON ALL HOLIDAYS AND WEEK ENDS. THE ENTIRE OPERATION SHALL BE AS DIRECTED BY THE ENGINEER.

PAYMENT SHALL BE INCLUDED IN THE LUMP SUM BID FOR "ITEM 614 MAINTAINING TRAFFIC".

TEMPORARY CLOSING OF STREETS

WHERE ANY WORK CALLED FOR UNDER THIS PROJECT NECESSITATES THE TEMPORARY CLOSING OF EXISTING STREETS, THE CONTRACTOR SHALL PROSECUTE TO THE FULLEST EXTENT THE WORK SO AS TO REDUCE TO A MINIMUM THE LENGTH OF TIME THAT THE STREET CONCERNED SHALL BE CLOSED TO TRAFFIC.

ALTERNATE METHODS MAINTAINING TRAFFIC

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR MAINTAINING TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING, BY THE DIRECTOR OF HIGHWAYS.

TEMPORARY RUNAROUND DRAINAGE

THE CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE FOR THE TEMPORARY RUNAROUND WHETHER SHOWN OR NOT SHOWN ON THE PLANS. PAYMENT IS INCLUDED IN THE UNIT PRICE BID FOR ITEM 615 TEMPORARY ROADS

MAINTAINING LOCAL TRAFFIC

THE FOLLOWING QUANTITIES ARE INCLUDED FOR MAINTAINING TRAFFIC AND ARE TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 410, TRAFFIC COMPACTED SURFACE TYPE A OR B.....50 CU.YDS.
ITEM 616, CALCIUM CHLORIDE.....4 TONS
ITEM 410 TRAFFIC COMPACTED SURFACE TYPE C.....50 CU.YDS.

LINE DATA CALCULATIONS FOR ROADS AND APPROACHES

SUM 271 - 2.98

MAINLINE APPROACHES			
BEGIN WORK STA.	155 + 00		
BEGIN PROJECT STA.	156 + 00		
APPROACH LENGTH		100	LIN.FT.
END WORK STA.	421 + 97.75		
END PROJECT STA.	421 + 49.75		
APPROACH LENGTH		48	LIN.FT.
TOTAL LENGTH APPROACHES		148	LIN.FT.

S.R. 303

BEGIN WORK STA.	35 + 67.58		
END WORK STA.	65 + 36.03		
WORK LENGTH		2,968.45	LIN.FT.

T. R. 171 STINE ROAD

BEGIN WORK STA	55 + 51.06		
END WORK STA.	61 + 00.00		
WORK LENGTH		548.94	LIN.FT.

T. R. 172 MAJOR ROAD

BEGIN WORK STA.	41 + 50.00		
END WORK STA.	58 + 00.70		
WORK LENGTH		1,650.70	LIN.FT.

OHIO TURNPIKE

BEGIN WORK STA.	162+00		
END WORK STA.	198+00		
WORK LENGTH		3,600.00	LIN.FT.

I.R. 77

BEGIN WORK	899+30		
END WORK	973+18		
WORK LENGTH		7,388	LIN. FT.
SUBTOTAL APPROACHES + WORK		16,304.09	LIN.FT.

MAINTENANCE OF TRAFFIC

Rev. 8-9-67

MAINTENANCE OF TRAFFIC

OHIO TURNPIKE

FED. RD.	STATE	PROJECT	
2	OHIO		

16-A 510

SUM - 271 - 2.98

OHIO TURNPIKE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY UTILIZATION OF EXISTING AND TEMPORARY FACILITIES.

WESTBOUND TRAFFIC:

EXISTING TRAVELED LANES SHALL REMAIN OPEN. WORK SUCH AS ERECTION OF STEEL AND WORK ON THE DECK SUCH AS CONSTRUCTION OF FORMS, POURING CONCRETE, AND THE REMOVAL OF FORMS WILL NOT BE PERFORMED CLOSER THAN TEN (10) FEET FROM THE EDGE OF PAVEMENT.

EASTBOUND TRAFFIC:

EXISTING TRAVELED LANES SHALL BE CLOSED TO THE THROUGH TRAFFIC DURING THE CONSTRUCTION OF STRUCTURE SUM 271-0656. A TEMPORARY ROAD WITH CLASS "A" PAVEMENT SHALL BE CONSTRUCTED TO THE LINES AND GRADES SHOWN ON SHEETS 311-315 OF THE PLANS FOR MAINTAINING TRAFFIC.

THE OHIO TURNPIKE ROADWAYS SHALL BE THOROUGHLY CLEANED BEFORE TRAFFIC IS RETURNED TO THEM AFTER EACH CLOSURE. TEMPORARY ROADS SHALL BE THOROUGHLY BARRICADED WHEN NOT IN USE. CONSTRUCTION OF THE PIERS AND ABUTMENTS SHALL BE PERFORMED WITHOUT CLOSING THE ROADWAYS. THE WORK AREA SHALL BE PROTECTED BY GUARD RAIL AND FENCE AS DESCRIBED AND SHOWN ON THE PLANS. NO EARTHWORK OTHER THAN MATERIAL EXCAVATED FOR THE PIERS SHALL BE HAULED ALONG OR ACROSS THE TURNPIKE. THERE SHALL BE NO MOVEMENT AT ANY TIME OF THE CONTRACTOR'S WORKMEN, EQUIPMENT OR MATERIALS ACROSS TURNPIKE LANES THAT ARE OPEN TO TRAFFIC EXCEPT FOR WORK PERFORMED IN THOSE AREAS LISTED UNDER ACCESS TO WORK.

A 15' VERTICAL CLEARANCE OVER THE OHIO TURNPIKE SHALL BE MAINTAINED AT ALL TIMES. WHEN ALL WORK ON THE STRUCTURE IS COMPLETE, THE TEMPORARY RUNAROUND WILL BE REMOVED AND THE MEDIAL AREA AND PAVED BERMS RESTORED TO THEIR ORIGINAL CONDITION. DURING THE RE-CONSTRUCTION OF THE PAVED BERMS, TRAFFIC MAY BE RESTRICTED TO ONE LANE AT REDUCED SPEED FOR A MINIMUM PERIOD OF TIME. PAYMENT FOR MAINTAINING, CONSTRUCTING AND REMOVING THE RUNAROUND, BITUMINOUS TREATED SHOULDERS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 615 "TEMPORARY ROADS".

TEMPORARY ROAD

THE CONSTRUCTION AND USE OF THE TEMPORARY ROAD TO HANDLE EASTBOUND TRAFFIC SHALL NOT BE SCHEDULED TO REQUIRE CONNECTION TO OR DISCONNECTION FROM THE EASTBOUND ROADWAY OF THE OHIO TURNPIKE DURING THE PERIOD MAY 1 TO SEPTEMBER 14.

TRAFFIC MAY BE DIVERTED TO THE TEMPORARY ROAD FOR A PERIOD NOT TO EXCEED ONE YEAR FROM THE BEGINNING OF SUCH DIVERSION.

BEFORE ANY WORK IS DONE ON THE TEMPORARY ROAD WITHIN THE RIGHT-OF-WAY OF THE OHIO TURNPIKE, THE CONTRACTOR SHALL SUBMIT TO THE CHIEF ENGINEER OF THE OHIO TURNPIKE COMMISSION FOR HIS APPROVAL, A SEQUENCE AND TIME SCHEDULE OF PROPOSED OPERATIONS, INCLUDING A PLAN OF THE NECESSARY DRAINAGE MODIFICATIONS, AND A PLAN FOR ANY TEMPORARY BRIDGE OR STRUCTURE DEEMED NECESSARY BY THE CONTRACTOR TO PROVIDE ACCESS TO THE WORK SITE.

FOLLOWING COMPLETION OF THE TEMPORARY ROAD THE CONTRACTOR WILL NOT BE PERMITTED FURTHER OPERATIONS WITHIN THE LIMITS OF THE TEMPORARY ROADWAY THAT WILL IN ANY WAY INTERFERE WITH ITS USE FOR TURNPIKE TRAFFIC.

REMOVAL OF TEMPORARY ROADWAY EMBANKMENT

WHEN THE TEMPORARY TURNPIKE FACILITIES ARE NO LONGER NEEDED, THE CONTRACTOR SHALL REMOVE THEM EXCEPT SUCH PORTIONS OF THE EMBANKMENT INDICATED BY THE ENGINEER.

THE CONTRACTOR MAY PLACE THE TEMPORARY ROAD EMBANKMENT ON THE TURNPIKE EMBANKMENT FOR FLATTENING OF EXISTING SLOPES. THIS MAY BE PERFORMED IN LIEU OF RESTORING THE EXISTING TURNPIKE EMBANKMENT SLOPES TO THEIR ORIGINAL CONDITION.

THE TEMPORARY ROAD EMBANKMENT SHALL BE PLACED ON THE TURNPIKE SLOPES IN ACCORDANCE WITH SECTION 203 OF THE SPECIFICATIONS AND IN THE MANNER APPROVED BY THE ENGINEER AND THE CHIEF ENGINEER OF THE TURNPIKE COMMISSION.

THIS ALTERNATE METHOD OF REMOVING THE TEMPORARY ROAD EMBANKMENT SHALL BE DONE AT NO ADDITIONAL COST TO THE STATE OF OHIO.

PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "ITEM 615 TEMPORARY ROADS."

TEMPORARY STRUCTURE

THE CONTRACTOR SHALL CONSTRUCT A STRUCTURE UNDER THE TEMPORARY ROAD TO PROVIDE ACCESS TO THE WORK SITE. SUCH STRUCTURE SHALL PROVIDE A CLEAR ROADWAY WIDTH SUFFICIENT TO ACCOMMODATE THE TEMPORARY ROAD SECTION INCLUDING OUTSIDE BERMS AND GUARDRAIL. THE DESIGN OF ANY SUCH STRUCTURE SHALL BE BASED ON LOADINGS PERMITTED ON THE OHIO TURNPIKE AND SHALL BE SUBMITTED WITH DESIGN COMPUTATIONS TO THE CHIEF ENGINEER OF THE OHIO TURNPIKE COMMISSION FOR HIS APPROVAL NOT LESS THAN 15 DAYS BEFORE CONSTRUCTION OF THE TEMPORARY STRUCTURE IS PLANNED TO BEGIN, AND SUCH CONSTRUCTION SHALL NOT BEGIN UNTIL AFTER APPROVAL HAS BEEN RECEIVED.

THE CONTRACTOR SHALL MAINTAIN ALL PORTIONS OF THE STRUCTURE IN GOOD CONDITION AT ALL TIMES AND SHALL, UPON REQUEST OF THE CHIEF ENGINEER OF THE OHIO TURNPIKE COMMISSION, TAKE IMMEDIATE STEPS TO CORRECT ANY DEFICIENCIES NOTED. MAINTENANCE OF THE ROADWAY OVER THE STRUCTURE SHALL BE THE RESPONSIBILITY OF THE OHIO TURNPIKE COMMISSION IN ACCORDANCE WITH THE STIPULATIONS RELATING TO MAINTENANCE OF THE TEMPORARY ROAD.

PAYMENT SHALL BE AT THE CONTRACT LUMP SUM PRICE BID FOR ITEM 502 "TEMPORARY RUNAROUND BRIDGE."

TEMPOARY CHAIN LINK FENCE (WESTBOUND LANES)

TEMPORARY CHAIN LINK FENCE, MINIMUM HEIGHT 6', SHALL BE INSTALLED BEHIND THE GUARD RAIL OR A MINIMUM OF 10' FROM THE EDGE OF THE THROUGH PAVEMENT AS A PROTECTION TO TURNPIKE TRAFFIC. THE FENCE SHALL BE MAINTAINED IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETED, AT WHICH TIME THE FENCE SHALL BE REMOVED AND DISPOSED OF. GOOD QUALITY USED MATERIALS MAY BE FURNISHED FOR TEMPORARY FENCING. CUSTOMARY CONCRETE ENCASEMENT OF FENCE POSTS WILL NOT BE REQUIRED IF SATISFACTORY STABILITY CAN OTHERWISE BE OBTAINED.

THE FENCING SHALL BE OF SUFFICIENT LENGTH TO AFFORD PROTECTION THROUGHOUT CONSTRUCTION OPERATION AREAS. (TOTAL ESTIMATED MINIMUM LENGTH- 800 LIN.FT.) ALL MATERIALS, TYPE OF CONSTRUCTION LOCATIONS, AND CONDITION OF MAINTENANCE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. PAYMENT FOR ERECTION, MAINTENANCE AND REMOVAL OF TEMPORARY CHAIN LINK FENCE SHALL BE INCLUDED IN THE LUMP SUM BID FOR "ITEM 614 MAINTAINING TRAFFIC."

TEMPORARY GUARD RAIL

THE CONTRACTOR, IN ADDITION TO SECTION 615.04 OF THE SPECIFICATIONS, SHALL FURNISH, ERECT AND SUBSEQUENTLY REMOVE TEMPORARY GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP) GUARD RAIL FOR PROTECTION OF THE TRAVELING PUBLIC AND WORK AREA ADJACENT TO THE TURNPIKE. THE GUARD RAIL SHALL BE POST MOUNTED, ERECTED PER STANDARD DRAWINGS GR-2A AND GR-1 AT LOCATIONS SHOWN ON PLANS AND PLACED A MINIMUM OF 8' FROM THE TURNPIKE OR TEMPORARY PAVEMENT. PAVEMENT MOUNTED GUARD RAIL SHALL BE CONSTRUCTED USING STEEL POSTS 6B x 8.5 WELDED TO STEEL PLATES AND SECURED TO THE EXISTING PAVEMENT AS DETAILED ON SHEET No. 322 OF THE PLANS. REMOVAL OF THE PAVEMENT MOUNTED GUARD RAIL POSTS SHALL IMMEDIATELY BE FOLLOWED WITH THE SEALING OF ALL DRILL HOLES WITH A MOISTURE PROOF FILLER APPROVED BY THE ENGINEER. GUARD RAIL ELEMENTS SHALL BE FIRMLY BOLTED A MINIMUM OF 27" FROM THE TOP OF RAIL TO THE PAVEMENT GRADE. THE ENDS OF EACH RUN SHALL BE FLARED SO THAT THE TERMINAL POST WILL BE LOCATED APPROXIMATELY 12' FROM THE EDGE OF THE PAVEMENT. CONSTRUCTION WILL BE SIMILAR TO THE FLARED ENDS SHOWN ON STANDARD DRAWING GR-6. GOOD QUALITY USED GUARD RAIL, APPROVED BY THE ENGINEER, MAY BE USED FOR THIS PURPOSE IN LIEU OF NEW RAIL ELEMENTS.

PAYMENT FOR FURNISHING, ERECTING, MAINTAINING AND REMOVING THE TEMPORARY GUARD RAIL SHALL BE INCLUDED IN THE LUMP SUM BID FOR "ITEM 615 TEMPORARY ROADS," OR "ITEM 614 MAINTAINING TRAFFIC."

ACCESS

SPECIAL ARRANGEMENTS FOR ACCESS TO THE WORK SITE BY USE OF THE TURNPIKE FOR THE DELIVERY OF CONCRETE AND STEEL FOR THE STRUCTURES WITHIN THE RIGHT-OF-WAY OF THE OHIO TURNPIKE AND FOR PAVING MATERIAL FOR THE TEMPORARY ROAD, MAY BE MADE WITH THE CHIEF ENGINEER OF THE OHIO TURNPIKE COMMISSION; HOWEVER, SUCH ARRANGEMENTS WILL NOT INCLUDE U-TURN CONSIDERATIONS EXCEPT THOSE POSSIBLE OUTSIDE TOLL PLAZAS AND USE OF THE TURNPIKE WILL REQUIRE THE PAYMENT OF NORMAL TOLLS. ANY USE OF THE OHIO TURNPIKE FOR THIS PURPOSE SHALL BE DONE IN ACCORDANCE WITH THE "RULES AND REGULATIONS FOR THE CONTROL AND REGULATION OF TRAFFIC" ADOPTED BY THE OHIO TURNPIKE COMMISSION.

NOTICE

THE ENGINEER SHALL GIVE WRITTEN NOTICE TO THE CHIEF ENGINEER OF THE OHIO TURNPIKE COMMISSION AT THE COMMISSION'S OFFICE, 683 PROSPECT STREET, BEREA, OHIO, AT LEAST TWENTY-FOUR HOURS IN ADVANCE OF THE TIME THE CONTRACTOR INTENDS TO COMMENCE ANY WORK OR SUSPEND ANY WORK IN PROGRESS UPON OR OVER THE RIGHT-OF-WAY OF THE OHIO TURNPIKE.

WHENEVER ANY SUCH WORK, IN THE OPINION OF THE CHIEF ENGINEER OF THE OHIO TURNPIKE COMMISSION, MAY AFFECT THE SAFETY OF TRAFFIC USING THE OHIO TURNPIKE, THE METHOD OF DOING SUCH WORK SHALL, UPON REQUEST OF THE CHIEF ENGINEER, BE SUBMITTED TO HIM FOR HIS APPROVAL, WITHOUT WHICH THE WORK SHALL NOT BE COMMENCED OR PROSECUTED.

SAFETY AND CONTINUITY OF OPERATIONS OF TRAFFIC ON THE OHIO TURNPIKE SHALL BE OF FIRST IMPORTANCE AND AT ALL TIMES SHALL BE PROTECTED AND SAFEGUARDED. PROTECTION OF THIS TRAFFIC SHALL INCLUDE POSITIVE DUST CONTROL DURING GRADING OPERATIONS PARTICULARLY IN CONNECTION WITH THE CONSTRUCTION OF THE TEMPORARY ROAD.

THE OHIO TURNPIKE COMMISSION WILL FURNISH, ERECT, MAINTAIN AND REMOVE ALL BARRICADES, LIGHTS AND WARNING SIGNS, DELINEATORS, EDGE LINES AND LANE LINES REQUIRED FOR MAINTAINING AND PROTECTING TRAFFIC ON THE OHIO TURNPIKE AND THE TEMPORARY ROAD, EXCEPT TEMPORARY GUARDRAIL FOR TEMPORARY ROAD AS SHOWN ON THE PLANS. NO WORK MAY BE PERFORMED DURING THE PERIOD FROM MAY 1 TO SEPTEMBER 14 THAT WILL IN ANY WAY INTERFERE WITH THE FREE FLOW OF TRAFFIC USING THE OHIO TURNPIKE.

AT ANY TIME, WHEN IN THE OPINION OF THE CHIEF ENGINEER OF THE OHIO TURNPIKE COMMISSION, THE CONSTRUCTION WORK CAUSES A HAZARD TO OR INTERFERENCE WITH TRAFFIC ON THE OHIO TURNPIKE OR THE TEMPORARY ROAD, THE COMMISSION MAY PLACE AT THE SITE OF THE WORK, QUALIFIED WATCHMEN, FLAGMEN AND PATROLMEN TO PROTECT THE TRAVELING PUBLIC.

DURING THE PERIOD THAT TRAFFIC IS DIVERTED TO THE TEMPORARY ROAD, THE OHIO TURNPIKE COMMISSION WILL MAINTAIN, WITH ITS OWN FORCES, THE TEMPORARY ROAD AND APPURTENANCES, EXCEPT THAT

MAINTENANCE OF THE TEMPORARY BRIDGE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

MOVEMENT OF THE CONTRACTOR'S WORKMEN, EQUIPMENT OR MATERIALS ACROSS TURNPIKE LANES THAT ARE OPEN TO TRAFFIC WILL NOT BE PERMITTED EXCEPT FOR THE CONNECTION OF OR DISCONNECTION OF THE TEMPORARY ROAD.

ALL ROADWAY EXCAVATION AND ALL STRUCTURAL EXCAVATION RESULTING FROM OPERATIONS SOUTHERLY OF THE SOUTHERN EDGE OF THE WESTBOUND ROADWAY WILL BE REMOVED TO THE SOUTH. NO HAULING OF EXCAVATED MATERIALS WILL BE PERMITTED ALONG OR ACROSS TURNPIKE ROADWAYS THAT ARE OPEN TO TRAFFIC.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSPORTATION OF WORKMEN TO THE WORK AREA. WORKMEN EMPLOYED ON THE PROJECT WILL NOT BE PERMITTED TO PARK THEIR VEHICLES ON THE TURNPIKE RIGHT-OF-WAY. NEITHER WILL SPACE BE MADE AVAILABLE AT TURNPIKE INTERCHANGES FOR THE PARKING OF WORKMEN'S VEHICLES.

STATE AND FEDERAL INSPECTORS AND ENGINEERS TOGETHER WITH CONTRACTOR'S SUPERVISORY PERSONNEL MAY HAVE TOLL FREE VEHICULAR ACCESS OVER THE TURNPIKE TO THE WORK SITE DURING THE CONSTRUCTION BY ENTERING INTERCHANGE NO. 11 AND EXITING AT INTERCHANGE NO. 12.

ANY OF THE ABOVE-NOTED PERSONS NOT OCCUPYING A STATE OR FEDERAL VEHICLE, OR A MARKED CONTRACTOR'S VEHICLE, SHALL OBTAIN AN OPERATIONAL PASS THROUGH THE PROJECT ENGINEER ON THE JOB.

BRIDGES OVER WESTBOUND ROADWAY

THE COMMISSION WILL COOPERATE WITH THE CONTRACTOR IN THE ERECTION OF THE STEEL FOR THE BRIDGES OVER THE WESTBOUND ROADWAY AND WILL RESTRICT TRAFFIC TO ONE LANE FOR LIMITED PERIODS OF TIME SUBJECT, HOWEVER, TO ITS ERECTION DURING THE PERIOD FROM SEPTEMBER 14 TO APRIL 30. ALL MATERIAL AND EQUIPMENT SHALL BE REMOVED FROM THE TURNPIKE ROADWAY AT THE END OF THE WORK DAY AND PRIOR TO 2:00 P.M. ON A FRIDAY, AND THE PAVEMENT RESTORED TO NORMAL USE DURING DARKNESS AND AFTER 2:00 P.M. ON FRIDAY AND ALL DAY ON SATURDAYS AND SUNDAYS, OR AT ANY OTHER TIME DEEMED NECESSARY BY THE COMMISSION BECAUSE OF A HOLIDAY, ANTICIPATED EXTRAORDINARY TRAFFIC VOLUMES OR BECAUSE OF AN EMERGENCY.

PAYMENT FOR SERVICES PROVIDED BY THE OHIO TURNPIKE COMMISSION

THE OHIO DEPARTMENT OF HIGHWAYS SHALL REIMBURSE THE OHIO TURNPIKE COMMISSION FOR ALL COSTS TO PROVIDE WATCHMEN, FLAGMEN AND PATROLMEN TO PROTECT THE TRAVELING PUBLIC ON THE OHIO TURNPIKE AT THE CONSTRUCTION SITE AND FOR THE ERECTION, MAINTENANCE AND REMOVAL OF ALL BARRICADES, LIGHTS, WARNING SIGNS AND DELINEATORS AND FOR THE REPLACEMENT OF ANY DAMAGED BARRICADES, LIGHTS, WARNING SIGNS, EDGE LINES AND LANE LINES AND DELINEATORS.

OHIO TURNPIKE
MAINTENANCE OF TRAFFIC

MAIN LINE

FED. RD.	STATE	PROJECT	
2	OHIO		

17
510

SUM-271-2.98

SUM 271 - 2.98 LINE DATA:

BEGIN PROJECT: STATION 156 + 00.00

END PROJECT: STATION 421 + 49.75

END WORK: STATION 421 + 97.75

*STATION 421 + 73.75

LENGTH OF LINE 26,573.75 L.F.

NOTE: * INDICATES AN AVERAGE STATION TO BE USED IN QUANTITY CALCULATIONS.

STRUCTURES:

BEGIN BRIDGE No. SUM 271 - 0358 AT STATION 187 + 36.11
END BRIDGE No. SUM 271 - 0358 AT STATION 190 + 84.72

LENGTH = 348.61 L.F.

BEGIN BRIDGE No. SUM 271 - 0378 AT STATION 198 + 46.19
END BRIDGE No. SUM 271 - 0378 AT STATION 199 + 67.21

LENGTH 121.02 L.F.

BEGIN (LT) BRIDGE No. SUM 271 - 0658 AT STATION 346 + 13.12

BEGIN (RT) BRIDGE No. SUM 271-0658 AT STATION 346 + 16.02

*AVERAGE STATION 346 + 14.57

END (LT) BRIDGE No. SUM 271 - 0658 AT STATION 348 + 30.38

END (RT) BRIDGE No. SUM 271 - 0658 AT STATION 348 + 28.72

*AVERAGE STATION 348 + 29.55

LENGTH 214.98 L.F.

TOTAL LENGTH OF STRUCTURES 684.61 L.F.

TOTAL LENGTH OF APPROACHES 175.00 L.F.

NOTE: FOR ALL ITEMS HAVING A VARIABLE WIDTH AND/OR DEPTH, A CROSS SECTIONAL AREA HAS BEEN COMPUTED FROM THE TYPICAL SECTIONS.

LINEAL FEET OF 10' PAVED SHOULDER (LEFT SIDE)

●NOTE: STRUCTURES DEDUCTED

LOCATION	NORMAL SECTION	TRANSITION HIGH SIDE	FULL SUPERELEV. HIGH SIDE	TRANSITION LOW SIDE	FULL SUPERELEV. LOW SIDE
156 + 00 To 158 + 88.87	288.87				
170 + 88.87 To 185 + 17.21	1428.34				
185 + 17.21 To 186 + 60.03		142.82			
●195 + 60.03 To 202 + 21.03			539.98		
202 + 21.03 To 204 + 96.03		275.00			
204 + 96.03 To 221 + 33.33	1637.30				
221 + 33.33 To 224 + 08.33				275.00	
224 + 08.33 To 230 + 60.69					652.36
230 + 60.69 To 233 + 35.69				275.00	
233 + 35.69 To 265 + 65.18	3229.49				
265 + 65.18 To 268 + 40.18				275.00	
268 + 40.18 To 288 + 72.34					2032.16
300 + 72.34 To 302 + 67.28				194.94	
302 + 67.28 To 312 + 45.27	977.99				
321 + 45.27 To 336 + 02.38	1457.11				
336 + 02.38 To 340 + 77.38		475.00			
●340 + 77.38 To 357 + 89.05			1494.41		
357 + 89.05 To 362 + 64.05		475.00			
362 + 64.05 To 376 + 10.96	1346.91				
376 + 10.96 To 378 + 85.96				275.00	
378 + 85.96 To 415 + 78.21					3692.25
415 + 78.21 To 418 + 53.21				275.00	
418 + 53.21 To 421 + 97.75	344.54				

LINEAL FEET OF 10' PAVED SHOULDER (RIGHT SIDE)

156 + 00 To 167 + 60.48	1160.48				
176 + 58.71 To 17.21	858.50				
185 + 17.21 To 187 + 00				182.79	
190 + 56 To 198 + 14					758.00
210 + 53.11 To 221 + 33.33	1080.22				
221 + 33.33 To 224 + 08.33		275.00			
224 + 08.33 To 230 + 60.69			652.36		
230 + 60.69 To 233 + 35.69		275.00			
233 + 35.69 To 265 + 65.18	3229.49				
265 + 65.18 To 268 + 40.18		275.00			
268 + 40.18 To 298 + 54.73			3014.55		
307 + 54.73 To 319 + 00	1145.27				
331 + 00 To 336 + 02.38	502.38				
336 + 02.38 To 340 + 77.38				475.00	
●340 + 77.38 To 357 + 89.05					1498.97
357 + 89.05 To 362 + 64.05				475.00	
362 + 64.05 To 376 + 10.96	1346.91				
376 + 10.96 To 378 + 85.96		275.00			
378 + 85.96 To 415 + 78.21			3692.25		
415 + 78.21 To 418 + 53.21		275.00			
418 + 53.21 To 421 + 49.75	296.54				
TOTALS	20,330.34	2,742.82	9,393.55	2,702.73	8,633.74
GRAND TOTAL	43,803.18 L.F.				

NOTE: '8' WIDTH PAVED SHOULDERS ARE CONSTRUCTED ALONG THE ACCELERATION AND DECELERATION LANES. THE SUBBASE UNDER AN ACCELERATION OR DECELERATION LANE, SHALL BE THE SAME DEPTH AS THE ADJACENT MAIN LINE SUBBASE. IF THE MAIN LINE IS IN A TRANSITION SECTION, AN AVERAGE DEPTH HAS BEEN USED FOR CALCULATIONS.

LINEAL FEET OF 8' PAVED SHOULDERS

LOCATION	NORMAL SECTION	TRANSITION HIGH SIDE	FULL SUPERELEV. HIGH SIDE	TRANSITION LOW SIDE	FULL SUPERELEV. LOW SIDE
(RAMP "A") (ACC. LANE)	1200.00				
(RAMP "B") (DEC. LANE)	798.00				
(RAMP "C") (ACC. LANE)	557.00			275.00	254.00
(RAMP "D") (DEC. LANE)			478.00		
(RAMP "E") (DEC. LANE)	385.00	275.00	138.00		
(RAMP "F") (ACC. LANE)				86.00	114.00
(RAMP "G") (DEC. LANE)	798.00				
(RAMP "H") (ACC. LANE)	1200.00				
TOTALS	4938.00	275.00	616.00	361.00	1368.00
GRAND TOTAL	7558.00 L.F.				

LINEAL FEET OF 4' PAVED SHOULDERS (LEFT AND RIGHT)

156 + 00 To 185 + 17.21	5834.42				
185 + 17.21 To 187 + 36.11		218.90		218.90	
●190 + 84.72 To 202 + 21.03			1015.29		1015.29
202 + 21.03 To 204 + 96.03		275.00		275.00	
204 + 96.03 To 221 + 33.33	3274.60				
221 + 33.33 To 224 + 08.33		275.00		275.00	
224 + 08.33 To 230 + 60.69			652.36		652.36
230 + 60.69 To 233 + 35.69		275.00		275.00	
233 + 35.69 To 265 + 65.18	6458.98				
265 + 65.18 To 268 + 40.18		275.00		275.00	
268 + 40.18 To 299 + 92.28			3152.10		3152.10
299 + 92.28 To 302 + 67.28		275.00		275.00	
302 + 67.28 To 336 + 02.38	6670.20				
336 + 02.38 To 340 + 77.38		475.00		475.00	
●340 + 77.38 To 357 + 89.05			1496.69		1496.69
357 + 89.05 To 362 + 64.05		475.00		475.00	
362 + 64.05 To 376 + 10.96	2693.82				
376 + 10.96 To 378 + 85.96		275.00		275.00	
378 + 85.96 To 415 + 78.21			3692.25		3692.25
415 + 78.21 To 418 + 53.21		275.00		275.00	
418 + 53.21 To 421 + 73.75	641.08				
TOTALS	25,573.10	3,093.90	10,008.69	3,093.90	10,008.69
GRAND TOTAL	51,778.28 L.F.				

ITEM 451 - 10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

REMARKS	CALCULATION	QUANTITY
MAINLINE THRU LANES (48' WIDTH)		
LENGTH OF LINE MINUS BRIDGES & APPROACHES =25,714.14 L.F.	48 x 25,714.14 x 1/9	137,142.08
ACCELERATION & DECELERATION LANES		
(RAMPS "A", "F" & "H" ACC. LANES)(WIDTH VARIES 0' TO 25') (1200')	12.50 x 1200 x 1/9 x 3	5,000.00
(RAMP "C" ACC. LANE) (WIDTH VARIES 22.22 TO 0') (1064.11)	11.11 x 1064.11 x 1/9	1,313.58
(RAMPS "B", "D", "E" & "G") (100' TAPERS) (0' TO 12')	6.00 x 100 x 1/9 x 4	266.67
(RAMPS "B", "E" & "G")(100' BEYOND NOSE) (WIDTH VARIES 10' To 14')	12.00 x 100 x 1/9 x 3	400.00
(RAMP "D") (STA. 186 + 60.03 TO APP. SLAB) (WIDTH VARIES 10'to13.64)	11.82 x 91 x 1/9	119.51
(RAMPS "B", "E" & "G")(FROM THE TAPER TO THE NOSE) (700')	12.00 x 700 x 1/9 x 3	2,800.00
(RAMP "D") (FROM APP. SLAB TOTHE TAPER) (12' WIDTH)	12.00 x 320 x 1/9	426.67
(CURVED AREAS ON RAMPS "B", "E" & "G" PLANIMETERED)	12,456 S.F. x 1/9	1,384.00
(RAMPS "A", "C", "F" & "H") (TAPERED AREAS SURFACED WITH ITEM 409)	384 L.F. x 2 x 1/9 x 1/2	42.67
(RAMPS "B", "D", "E" & "G") (TAPERED AREAS SURFACED WITH ITEM 409)	66.67 L.F. x 2 x 1/9 x 1/2	7.41
	TOTAL	148,902.59 S.Y.

ITEM 301 - BITUMINOUS AGGREGATE BASE

MAIN LINE THRU LANES (3"DEPTH)		
(GRAND TOTAL 10' PAVED SHOULDER = 43,803.18 L.F.)	43,803.18 x 10 x 0.25 x 1/27	4,055.85
(AREAS WITH VARIABLE WIDTH ALONG ACC. LANES)	PLANIMETERED	26.00
(GRAND TOTAL 4' PAVED SHOULDER = 51,778.28 L.F.)	51,778.28 x 4 x 0.25 x 1/27	1,917.71
ACCELERATION AND DECELERATION LANES (8'PAVED SHOULDER)-		
(GRAND TOTAL 8' PAVED SHOULDER = 7558 L.F.	7558 x 8 x 0.25 x 1/27	559.85
	TOTAL	6,559.41 C.Y.

ITEM 304 - AGGREGATE BASE

MAIN LINE THRU LANES (VARIABLE DEPTH)		
(10' PAVED SHOULDER = 43,803.18 L.F.) (X-SECTION = 5.618 S.F.)	43,803.18 x 5.618 x 1/27	9,114.31
(AREAS WITH VARIABLE WIDTH ALONG ACC. LANES)	PLANIMETERED	147.00
(4' PAVED SHOULDER = 51,778.28 L.F.) (7" DEPTH)	51,778.28 x 0.5833 x 4 x 1/27	4,474.66
ACCELERATION & DECELERATION LANES (8' PAVED SHOULDER)		
(8' PAVED SHOULDER = 7558 L.F.)(X-SECTION = 1.875 S.F.)	7558 x 3.875 x 1/27	1,084.71
	TOTAL	29,055.51 C.Y.

NOTE: EXTRA DEPTH ITEM 310 SHALL BE PLACED IN THE FOLLOWING LOCATIONS:
STATION 302 + 67.28 TO STATION 305 + 00 W.B.L.
STATION 302 + 67.28 TO STATION 306 + 54.73 E.B.L.
STATION 321 + 00 TO STATION 336 + 02.38 W.B.L.
STATION 322 + 00 TO STATION 336 + 02.38 E.B.L.

ITEM 310 - SUBBASE, GRADING "A" OR "B", AS PER PLAN

REMARKS	CALCULATION	QUANTITY
(25,573.10 L.F. NORMAL SECTION)(24'WIDTH)(X-SECTION=12.75 S.F.)	25,573.10 x 12.75 x 1/27	12,076.19
(6,187.80 L.F. TRANSITION SECTION)(24' WIDTH)(X-SECTION= 12.375 S.F.)	6,187.80 x 12.375 x 1/27	2,836.08
(20,017.38 L.F. SUPERELEVATED SECTION)(24' WIDTH)(X-SECTION = 12.00 S.F.)	20,017.38 x 12.00 x 1/27	8,896.61
(25,573.10 L.F. NORMAL SECTION)(1' WIDTH)(X-SECTION = 0.25 S.F.)	25,573.10 x 0.25 x 1/27	236.79
(3,093.90 L.F. TRANSITION SECTION)(1' WIDTH)(X-SECTION = 0.360 S.F.)	3,093.90 x 0.36 x 1/27	41.25
(10,008.69 L.F. SUPERELEVATED SECTION)(1'WIDTH)(X-SECTION = 0.469 S.F.)	10,008.69 x 0.469 x 1/27	173.85
(3,093.90 L.F. TRANSITION SECTION)(WIDTH VARIES 1' TO 4') (X-SECTION= 1.125 S.F.)	3,093.90 x 1.125 x1/27	128.91
(10,008.69 L.F. SUPERELEVATED SECTION)(4' WIDTH)(X-SECTION = 2.00 S.F.)	10,008.69 x 2.00 x 1/27	741.38
(20,330.34 L.F. NORMAL SECTION)(2.58' WIDTH)(X-SECTION = 1.528 S.F.)	20,330.34 x 1.528 x 1/27	1,150.55
(2,742.82 L.F. TRANSITION SECTION)(2.58'WIDTH)(X-SECTION = 1.368 S.F.)	2,742.82 x 1.368 x 1/27	138.97
(9,393.55 L.F. SUPERELEVATED SECTION)(2.58'WIDTH)(X-SECTION = 1.208 S.F.)	9,393.55 x 1.208 x 1/27	420.27
(2,702.73 L.F. TRANSITION SECTION)(2.58' WIDTH)(X-SECTION = 1.410 S.F.)	2,702.73 x 1.410 x 1/27	141.14
(8,633.74 L.F. SUPERELEVATED SECTION)(2.58' WIDTH)(X-SECTION = 1.292 S.F.)	8,633.74 x 1.292 x 1/27	413.14
(UNDER ACC. & DEC. LANES)(ITEM 451 = 11,760.51 S.Y.)(AVE. DEPTH = 7")	11,760.51 x 1/5.143	2,286.70
(UNDER ACC. & DEC. LANE SHLDRS.)(3'WIDTH)(X-SECTION= 1.75 S.F.)	7,558 x 1.75 x 1/27	489.87
(AREAS WITH VARIABLE WIDTH ALONG ACC, LANES)	PLANIMETERED	121.00
(EXTRA DEPTH SUBBASE)(3,524.93 L.F.)(X-SECTION = 5.514 S.F.)	3,524.93 x 5.514 x 1/27	719.87
	TOTAL	31,012.57 C.Y.

ITEM 310 - SUBBASE

(20,330.34 L.F. NORMAL SECTION)(7.42' WIDTH)(X-SECTION = 2.995 S.F.)	20,330.34 x 2.995 x 1/27	2,255.16
(2,742.82 L.F. TRANSITION SECTION)(7.42' WIDTH)(X-SECTION = 2.769 S.F.)	2,742.82 x 2.769 x 1/27	281.29
(9,393.55 L.F. SUPERELEVATED SECTION)(7.42' WIDTH)(X-SECTION = 2.542 S.F.)	9,393.55 x 2.542 x 1/27	884.39
(2,702.73 L.F. TRANSITION SECTION)(7.42' WIDTH)(X-SECTION = 2.888 S.F.)	2,702.73 x 2.888 x 1/27	289.09
(8,633.74 L.F. SUPERELEVATED SECTION)(7.42' WIDTH)(X-SECTION = 2.781 S.F.)	8,633.74 x 2.781 x 1/27	889.28
(25,573.10 L.F. NORMAL SECTION)(3' WIDTH)(X-SECTION = 0.75 S.F.)	25,573.10 x 0.75 x 1/27	710.36
(3,093.90 L.F. TRANSITION SECTION)(WIDTH VARIES 3' TO 0')(X-SECTION = 0.375 S.F.)	3,093.90 x 0.375 x 1/27	42.97
(3,093.90 L.F. TRANSITION SECTION)(3'WIDTH)(X-SECTION = 0.891 S.F.)	3,093.90 x 0.891 x 1/27	102.10
(10,008.69 L.F. SUPERELEVATED SECTION)(3' WIDTH)(X-SECTION = 1.033 S.F.)	10,008.69 x 1.033 x 1/27	382.93
(7558 L.F. 8' SHOULDER)(5' WIDTH)(AVE. X-SECTION = 2.00 S.F.)	7,588 x 2.00 x 1/27	559.85
(EXTRA DEPTH SUBBASE)(3,524.93 L.F.)(X-SECTION = 0.618 S.F.)	3,524.93 x 0.618 x 1/27	80.68
(DEDUCTION FOR EXTRA DEPTH SUBBASE AREA)(3,524.93 L.F.)	3,524.93 x 0.75 x 1/27	- 97.91
	TOTAL	6,380.19 C.Y.

ITEM - SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE, AS PER PLAN

(20,330.34 L.F. NORMAL SECTION)(2.58' WIDTH)(X-SECTION = 1.418 S.F.)	20,330.34 x 1.418 x 1/27	1,067.72
(2,742.82 L.F. TRANSITION SECTION)(2.58' WIDTH)(X-SECTION = 1.302 S.F.)	2,742.82 x 1.302 x 1/27	132.26
(9,393.55 L.F. SUPERELEVATED SECTION)(2.58' WIDTH)(X-SECTION = 1.195 S.F.)	9,393.55 x 1.195 x 1/27	415.75
(2,702.73 L.F. TRANSITION SECTION)(2.58' WIDTH)(X-SECTION=1.345 S.F.)	2,702.73 x 1.345 x 1/27	134.64
(8,633.74 L.F. SUPERELEVATED SECTION)(2.58'WIDTH)(X-SECTION = 1.271 S.F.)	8,633.74 x 1.271 x 1/27	406.43
(7,558.00 L.F. 8' SHOULDER)(3' WIDTH)(AVE. X-SECTION = 1.600 S.F.)	7,558.00 x 1.600 x 1/27	447.88
	TOTAL	2,604.68 C.Y.

ITEM 409 - SEAL COAT COVER, AGGREGATE No. 8 (0.008 C.Y. PER S.Y.)

(ON PAVED SHOULDERS) (ITEM 301 WITH 3" DEPTH = 6025.56 C.Y.)	(6025.56 x 12 x 0.008)	578.5
(ON PAVED SHOULDERS) (ITEM 301 WITH 6" DEPTH = 1119.70 C.Y.)	(1119.70 x 6 x 0.008)	53.7
	TOTAL	632.2 C.Y.

ITEM 409 - SEAL COAT BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)

(ON PAVED SHOULDERS)(ITEM 301 WITH 3" DEPTH = 6025.56 C,Y.)	6025.56 x 12 x 0.3	21,692
(ON PAVED SHOULDERS) (ITEM 301 WITH 6"DEPTH = 1119.70 C.Y.)	1119.70 x 6 x 0.3	2,015
	TOTAL	23,707 GAL.

ITEM 203 - SUBGRADE PREPARATION

Deduct for Lime Stabilized Area		-34,400
(UNDER ITEM 451)(148,903 S.Y.)		148,903
(UNDER ITEM 301)(3" DEPTH) (6026 C.Y.)	6026 x 12	72,312
(UNDER ITEM 301)(6" DEPTH) (1120 C.Y.)	1120 x 6	6,720
(UNDER APPROACH SLABS)(1213 S.Y.)		1,213
	TOTAL	194,148 S.Y.

LIME STABILIZATION

Sta. 380+00 to Sta. 421+49.75 = 4,149.75'
Sta. 382+00 to Sta. 421+97.75 = 3,997.75'
8,147.50'

8,147.5 x 38 ÷ 9 = 34,400 Sq. Yd. Spreading, Mixing

34,400 x 27 ÷ 2000 = 464.4 ~ Use 465 Ton Delivered Hydrated Lime

Rev. 3-8-67 Rev. 2-8-67 COMPUTATIONS Rev. 7-28-67 Rev. 8-9-67

RAMPS

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

18
510

RAMP "A"

ITEM 451 - 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

LOCATION	REMARKS	CALCULATION	QUANTITY
170 + 88.87 To 173 + 88.87	(WIDTH VARIES 14' TO 16')	300 x 15 x 1/9	500.00
173 + 88.87 To 174 + 88.87	(WIDTH VARIES 16' TO 18')(LENGTH ALONG ℄ = 101.2)	101.2 x 17 x 1/9	191.16
174 + 88.87 To 177 + 48.95	(16' WIDTH) (LENGTH ALONG ℄ = 263.0)	263.0 x 16 x 1/9	467.56
177 + 48.95 To 179 + 48.95	(16' WIDTH) (LENGTH ALONG ℄ = 201.1	201.1 x 16 x 1/9	357.51
179 + 48.95 To 182 + 23.49	(16' WIDTH)	274.54 x 16 x 1/9	518.58
182 + 23.49 To 190 + 60.95	(16' WIDTH) (LENGTH ALONG ℄ = 835.1)	835.1 x 16 x 1/9	1484.62
190 + 60.95 To 193 + 12.56	(16' WIDTH)	251.61 x 16 x 1/9	447.31
193 + 12.56 To 195 + 12.56	(16' WIDTH) (LENGTH ALONG ℄ = 201.1)	201.1 x 16 x 1/9	357.51
195 + 12.56 To 198 + 14.15	(16'WIDTH) (LENGTH ALONG ℄ = 305.0)	305.0 x 16 x 1/9	542.22
198 + 14.15 To 199 + 14.15	(WIDTH VARIES 16' TO 18') (LENGTH ALONG ℄ = 100.2)	100.2 x 17 x 1/9	189.27
		TOTAL	5055.74 S.Y.

ITEM 301 - BITUMINOUS AGGREGATE BASE

170 + 88.87 To 173 + 88.87(LT)	(8' WIDTH) (3" DEPTH)	300 x 8 x 0.25 x 1/27	22.22
173 + 88.87 To 174 + 88.87 (LT)	(WIDTH VARIES 8' TO 6') (3" DEPTH)	100 x 7 x 0.25 x 1/27	6.48
174 + 88.87 To 198 + 14.15 (LT)	(6' WIDTH) (3" DEPTH) (LENGTH ALONG ℄ = 2323.0)	2323.0 x 6 x 0.25 x 1/27	129.06
198 + 14.15 To 199 + 14.15 (LT)	(WIDTH VARIES 6' TO 8') (3"DEPTH)	100 x 7 x 0.25 x 1/27	6.48
174 + 88.87 To 175 + 88.87 (RT)	(WIDTH VARIES 2' TO 4') (3" DEPTH)	100 x 3 x 0.25 x 1/27	2.78
175 + 88.87 To 199 + 14.15 (RT)	(4' WIDTH) (3' DEPTH) (LENGTH ALONG ℄ = 2336.6)	2336.6 x 4 x 0.25 x 1/27	86.54
		TOTAL	253.56 C.Y.

ITEM 304 - AGGREGATE BASE

NOTE: THE DEPTH IS VARIABLE UNDER THE 4' SHOULDER. A SQUARE FOOTAGE AREA HAS BEEN CALCULATED FOR THE VARIOUS DEPTHS. SEE TYPICAL SECTIONS.

Increase in 304 due to 3" reduction in 301 — 253.56

170 + 88.87 To 173 + 88.87 (LT)	(8' WIDTH) (X-SECTION = 1.25 S.F.)	300.00 x 1.2500 x 1/27	13.89
173 + 88.87 To 174 + 88.87 (LT)	(WIDTH VARIES 5' TO 3') (X-SECTION = 1.00 S.F.)	100.00 x 1.0000 x 1/27	3.70
174 + 88.87 To 181 + 25.00 (LT)	(3' WIDTH) (X-SECTION = 0.75 S.F.)	736.13 x 0.7500 x 1/27	20.45
181 + 25.00 To 191 + 60.00 (LT)	(6' WIDTH) (X-SECTION = 1.50 S.F.)	1035.00 x 1.50000 x 1/27	57.50
191 + 60.00 To 198 + 14.15 (LT)	(3' WIDTH) (X-SECTION = 0.75 S.F.)	654.15 x 0.7500 x 1/27	18.17
198 + 14.15 To 199 + 14.15 (LT)	(WIDTH VARIES 3' TO 5') (X-SECTION = 1.00 S.F.)	100.00 x 1.0000 x 1/27	3.70
173 + 88.87 To 174 + 88.87 (RT)	(WIDTH VARIES 2' TO 4') (X-SECTION = 0.75 S.F.)	100.00 x 0.7500 x 1/27	2.78
174 + 88.87 To 178 + 00.00 (RT)	(4' WIDTH) (X-SECTION = 1.00 S.F.)	311.13 x 1.0000 x 1/27	11.52
178 + 00.00 To 179 + 50.00 (RT)	(4' WIDTH) (X-SECTION = 0.7708 S.F.)	150.00 x 0.7708 x 1/27	4.28
179 + 50.00 To 180 + 25.00 (RT)	(4' WIDTH) (X-SECTION = 0.5416 S.F.)	75.00 x 0.5416 x 1/27	1.50
180 + 25.00 To 181 + 25.00 (RT)	(4' WIDTH) (X-SECTION = 0.6041 S.F.)	100.00 x 0.6041 x 1/27	2.24
191 + 50.00 To 192 + 75.00 (RT)	(4' WIDTH) (X-SECTION = 0.6041 S.F.)	125.00 x 0.6041 x 1/27	2.80
192 + 75.00 To 193 + 00.00 (RT)	(4' WIDTH) (X-SECTION = 0.5416 S.F.)	25.00 x 0.5416 x 1/27	0.50
193 + 00.00 To 194 + 50.00 (RT)	(4' WIDTH) (X-SECTION = 0.7708 S.F.)	150.00 x 0.7708 x 1/27	4.28
194 + 50.00 To 199 + 14.15 (RT)	(4' WIDTH) (X-SECTION = 1.00 S.F.)	464.15 x 1.0000 x 1/27	17.19
		TOTAL	418.06 C.Y.

ITEM 310 - SUBBASE, GRADING "A" OR "B", AS PER PLAN

UNDER ITEM 451	(5055.74 S.Y.) (6" DEPTH)	5055.74 S.Y. x 1/6	842.62
UNDER TYPE 7' & 8' CURB	(506 L.F.) (1'WIDTH) (6" DEPTH)	506.00 x 1 x 0.50 x 1/27	9.37
170 + 88.87 To 181 + 25 (LT)	(3' WIDTH) (X-SECTION = 1.50 S.F.)	1036.13 x 1.50 x 1/27	57.56
181 + 25 To 191 + 60 (LT)	(1' WIDTH) (X-SECTION = 0.4714 S.F.)	1035.00 x 0.4714 x 1/27	18.07
191 + 60 To 199 + 14.15 (LT)	(3' WIDTH) (X-SECTION = 1.50 S.F.)	754.15 x 1.50 x 1/27	41.90
174 + 88.87 To 175 + 88.87 (RT)	(WIDTH VARIES 2' TO 4') (X-SECTION = 1.50 S.F.)	100.00 x 1.50 x 1/27	5.56
175 + 88.87 To 199 + 14.15 (RT)	(4' WIDTH) (X-SECTION = 2.00 S.F.)	2325.28 x 2.00 x 1/27	172.24
		TOTAL	1147.32 C.Y.

ITEM 310 - SUBBASE

170 + 88.87 To 173 + 88.87 (LT)	(5' WIDTH) (X-SECTION = 1.888 S.F.)	300.00 x 1.888 x 1/27	20.98
173 + 88.87 To 174 + 88.87 (LT)	(WIDTH VARIES 5' TO 3') (X-SECTION = 1.5065 S.F.)	100.00 x 1.5065 x 1/27	5.58
174 + 88.87 To 181 + 25 (LT)	(3' WIDTH) (X-SECTION = 1.125 S.F.)	636.13 x 1.125 x 1/27	65.51
181 + 25 To 191 + 60 (LT)	(5' WIDTH) (X-SECTION = 1.7318 S.F.)	1035.00 x 1.7318 x 1/27	66.39
191 + 60 To 198 + 14.15 (LT)	(3' WIDTH) (X-SECTION = 1.125 S.F.)	654.15 x 1.125 x 1/27	27.26
198 + 14.15 To 199 + 14.15 (LT)	(WIDTH VARIES 3' TO 5') (X-SECTION = 1.5065 S.F.)	100.00 x 1.5065 x 1/27	5.58
		TOTAL	191.30 C.Y.

ITEM - SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE, AS PER PLAN

170 + 88.87 To 181 + 25 (LT)	(3' WIDTH) (X-SECTION = 1.880 S.F.)	1036.13 x 1.880 x 1/27	79.82
181 + 25 To 191 + 60 (RT)	(4' WIDTH) (X-SECTION = 2.3195 S.F.)	1035.00 x 2.3195 x 1/27	88.91
191 + 60 To 199 + 14.15 (LT)	(3' WIDTH) (X-SECTION = 1.880 S.F.)	754.15 x 1.880 x 1/27	52.51
		TOTAL	221.24 C.Y.

ITEM 409 - SEAL COAT COVER, AGGREGATE No. 8 (0.008 C.Y. PER S.Y.)

ON PAVED SHOULDERS 507.11 C.Y. ITEM 301 x 6 = 3043 S.Y.	3043 x 0.008	24.3
	TOTAL	24.3 C.Y.

ITEM 409 - SEAL COAT, BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)

ON PAVED SHOULDERS 507.11 C.Y. ITEM 301 x 6 = 3043 S.Y.	3043 x 0.3	912
	TOTAL	912 GAL.

ITEM 203 SUBGRADE PREPARATION

UNDER ITEM 451	(5056 S.Y.)		5056
UNDER ITEM 301	(507.11 C.Y.) (6" DEPTH)	507.11 x 6	3043
		TOTAL	8099 S.Y.

RAMP "B" - ITEM 451 9"

LOCATION	REMARKS	CALCULATION	QUANTITY
175 + 58.71 To 176 + 58.71	(WIDTH VARIES 18' TO 16')	100.00 x 17 x 1/9	188.89
176 + 58.71 To 181 + 21.25	(16' WIDTH) (LENGTH ALONG ℄ = 466.9)	466.9 x 16 x 1/9	830.04
181 + 21.25 To 185 + 56.11	(16'WIDTH)	434.86 x 16 x 1/9	773.08
189 + 28.13 To 191 + 46.19	(16' WIDTH) (LENGTH ALONG ℄ = 217.0)	217.0 x 16 x 1/9	385.78
191 + 46.19 To 205 + 07.48	(16' WIDTH) (LENGTH ALONG ℄ = 1346.1)	1346.1 x 16 x 1/9	2393.07
205 + 07.48 To 207 + 07.48	(16' WIDTH) (LENGTH ALONG ℄ = 198.9)	198.9 x 16 x 1/9	353.60
207 + 07.48 To 211 + 78.85	(16' WIDTH)	471.37 x 16 x 1/9	837.99
211 + 78.85 To 213 + 78.85	(16' WIDTH) (LENGTH ALONG ℄ = 200.8)	200.8 x 16 x 1/9	356.98
213 + 78.85 To 218 + 39.11	(16' WIDTH) (LENGTH ALONG ℄ = 464.1)	464.1 x 16 x 1/9	825.07
218 + 39.11 To 219 + 39.11	(WIDTH VARIES 18' TO 16') (LENGTH ALONG ℄ = 100.8)	100.8 x 17 x 1/9	190.40
219 + 39.11 To 222 + 39.11	(WIDTH VARIES 16' TO 14')	300.00 x 15 x 1/9	500.00
		TOTAL	7634.90 S.Y.

ITEM 301 - BITUMINOUS AGGREGATE BASE

175 + 58.71 To 176 + 58.71 (RT)	(WIDTH VARIES 8' TO 6') (3" DEPTH)	100.00 x 7 x 0.25 x 1/27	6.48
176 + 58.71 To 185 + 81.11 (RT)	(6'WIDTH) (3" DEPTH)	922.40 x 6 x 0.25 x 1/27	51.24
189 + 03.13 To 218 + 39.11 (RT)	(6' WIDTH) (3" DEPTH)	2935.98 x 6 x 0.25 x 1/27	163.11
218 + 39.11 To 219 + 39.11 (RT)	(WIDTH VARIES 6' TO 8') (3 "DEPTH)	100.00 x 7 x 0.25 x 1/27	6.48
219 + 39.11 To 222 + 39.11 (RT)	(8' WIDTH) (3 " DEPTH)	300.00 x 8 x 0.25 x 1/27	22.22
175 + 58.71 To 185 + 81.11 (LT)	(4' WIDTH) (3 " DEPTH)	1022.40 x 4 x 0.25 x 1/27	37.87
189 + 03.13 To 217 + 39.11 (LT)	(4'WIDTH) (3" DEPTH)	2835.98 x 4 x 0.25 x 1/27	105.04
217 + 39.11 To 218 + 39.11 (LT)	(WIDTH VARIES 4' TO 2') (3 " DEPTH)	100.00 x 3 x 0.25 x 1/27	2.78
		TOTAL	395.22 C.Y.

ITEM 304 - AGGREGATE BASE

NOTE: THE DEPTH IS VARIABLE UNDER THE 4' SHOULDER . A SQUARE FOOTAGE AREA HAS BEEN CALCULATED FOR VARIOUS DEPTHS.

Increase in 304 due to 3" reduction in 301 — 395.22

175 + 58.71 To 176 + 58.71 (RT)	(WIDTH VARIES 5' TO 3')(X-SECTION=1.005 S.F.)	100.00 x 1.00 x 1/27	3.70
176 + 58.71 To 184 + 25 (RT)	(3'WIDTH) (X-SECTION = 0.75 S.F.)	766.29 x 0.75 x 1/27	21.29
184 + 25 To 185 + 81.11 (RT)	(6' WIDTH) (X-SECTION = 1.50 S.F.)	156.11 x 1.50 x 1/27	8.67
189 + 03.13 To 210 + 75 (RT)	(6' WIDTH) (X-SECTION = 1.50 S.F.)	2171.87 x 1.50 x 1/27	120.66
210 + 75 To 218 + 39.11 (RT)	(3' WIDTH) (X-SECTION = 0.75 S.F.)	764.11 x 0.75 x 1/27	21.23
218 + 39.11 To 219 + 39.11 (RT)	(WIDTH VARIES 3' TO 5') (X-SECTION = 1.00 S.F.)	100.00 x 1.00 x 1/27	3.70
219 + 39.11 To 222 + 39.11 (RT)	(5'WIDTH) (X-SECTION = 1.25 S.F.)	300.00 x 1.25 x 1/27	13.89
175 + 58.71 To 184 + 25 (LT)	(4'WIDTH) (X-SECTION = 0.59 S.F.)	866.29 x 0.59 x 1/27	18.93
210 + 75 To 217 + 39.11 (LT)	(4'WIDTH) (X-SECTION = 0.65 S.F.)	664.11 x 0.65 x 1/27	15.99
217 + 39.11 To 218 + 39.11 (LT)	(WIDTH VARIES 4' TO 2') (X-SECTION=0.75 S.F.)	100.00 x 0.75 x 1/27	2.78
		TOTAL	626.06 C.Y.

ITEM 310 - SUBBASE, GRADING "A" OR "B", AS PER PLAN

UNDER ITEM 451	(7634.90 S.Y) (6" DEPTH)	7634.90 S.Y. x 1/6	1272.48
UNDER TYPE 7 & 8 CURB	(505 L.F) (1'WIDTH)(6" DEPTH)	505 x 1 x 0.50 x 1/27	9.35
175 + 58.71 To 185 + 81.11 (LT)	(4'WIDTH)(6" DEPTH)	1022.40 x 4 x 0.50 x 1/27	75.73
189 + 03.13 To 217 + 39.11 (LT)	(4' WIDTH) (6" DEPTH)	2835.98 x 4 x 0.50 x 1/27	210.07
217 + 39.11 To 218 + 39.11 (LT)	(WIDTH VARIES 4' TO 2') (6" DEPTH)	100.00 x 3 x 0.50 x 1/27	5.56
175 + 58.71 To 184 + 25 (RT)	(3' WIDTH) (6" DEPTH)	866.29 x 3 x 0.50 x 1/27	48.13
184 + 25 To 185 + 81.11 (RT)	(1' WIDTH) (X-SECTION = 0.4714)	156.11 x 0.4714 x 1/27	2.73
189 + 03.13 To 210 + 75 (RT)	(1' WIDTH) (X-SECTION = 0.4714)	2171.87 x 0.4714 x 1/27	37.92
210 + 75 To 222 + 39.11 (RT)	(3' WIDTH) (6" DEPTH)	1164.11 x 3 x 0.50 x 1/27	64.67
UNDER APPROACH SLABS	(50 L.F.)(16' WIDTH) (6" DEPTH)	50 x 16 x 0.50 x 1/27	14.81
		TOTAL	1741.45 C.Y.

ITEM 310 - SUBBASE

175 + 58.71 To 176 + 58.71 (RT)	(WIDTH VARIES 5' TO 3') (X-SECTION = 1.5065 S.F.)	100.00 x 1.5065 x 1/27	5.56
176 + 58.71 To 184 + 25 (RT)	(3' WIDTH) (X-SECTION = 1.0400 S.F.)	766.29 x 1.0400 x 1/27	29.52
184 + 25 To 185 + 81.11 (RT)	(5' WIDTH) (X-SECTION = 1.7318 S.F.)	156.11 x 1.7318 x 1/27	10.01
189 + 03.13 To 210 + 75 (RT)	(5'WIDTH) (X-SECTION = 2.500 S.F.)	2171.87 x 2.500 x 1/27	201.10
210 + 75 To 218 + 39.11 (RT)	(3'WIDTH) (X-SECTION = 1.1250 S.F.)	764.11 x 1.1250 x 1/27	31.84
218 + 39.11 To 219 + 39.11 (RT)	(WIDTH VARIES 3' TO 5') (X-SECTION = 1.5065 S.F.)	100.00 x 1.5065 x 1/27	5.58
219 + 39.11 To 222 + 39.11 (RT)	(5' WIDTH) (X-SECTION = 1.8880 S.F.)	300.00 x 1.8880 x 1/27	20.98
		TOTAL	304.59 C.Y.

ITEM - SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE, AS PER PLAN

175 + 58.71 To 184 + 25 (RT)	(3'WIDTH) (X-SECTION = 1.88 S.F.)	866.29 x 1.88 x 1/27	60.32
184 + 25 To 185 + 81.11 (LT)	(4' WIDTH) (X-SECTION = 2.3195 S.F.)	156.11 x 2.3195 x 1/27	134.11
189 + 03.13 To 210 + 75 (LT)	(4' WIDTH) (X-SECTION = 2.50 S.F.)	2171.87 x 2.50 x 1/27	201.10
210 + 75 To 222 + 39.11 (RT)	(3' WIDTH) (X-SECTION = 1.88 S.F.)	1164.11 x 1.88 x 1/27	81.05
		TOTAL	476.58 C.Y.

ITEM 409 - SEAL COAT COVER, AGGREGATE No. 6 (0.008 C.Y. PER S.Y.)

ON PAVED SHOULDERS 790.43 C.Y. ITEM 301 x 6 = 4743 S.Y.	4743 x 0.008	37.9 C.Y.
	TOTAL	37.9 C.Y.

ITEM 409 - SEAL COAT, BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)

ON PAVED SHOULDER 790.43 C.Y. ITEM 301 x6 = 4743 S.Y.	4743 x 0.3	1423 GAL.
	TOTAL	1423 GAL.

ITEM 203 SUBGRADE PREPARATION

UNDER ITEM 451	(7635 S.Y.)		7635
UNDER ITEM 301	(790.43 C.Y.) (6" DEPTH)	790.43 C.Y. x 6	4743
UNDER APPROACH SLABS	(50' L.F.) (16' WIDTH)	50 x 16 x 1/9	89
		TOTAL	12,467 S.Y.

RAMP "C"

ITEM 451 - 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

LOCATION	REMARKS	CALCULATION	QUANTITY
187 + 22.69 To 188 + 22.69	(WIDTH VARIES 18' TO 16')	100.00 x 17 x 1/9	188.89
188 + 22.69 To 189 + 22.69	(16' WIDTH) (LENGTH ALONG ℄ = 101.0)	101.0 x 16 x 1/9	179.56
189 + 22.69 To 193 + 53.11	(16' WIDTH) (LENGTH ALONG ℄ = 436.4)	436.4 x 16 x 1/9	775.82
193 + 53.11 To 194 + 53.11	(16' WIDTH) (LENGTH ALONG ℄ = 101.0)	101.0 x 16 x 1/9	179.56
194 + 53.11 To 195 + 53.11	(WIDTH VARIES 18' TO 16')	100.00 x 16 x 1/9	177.78
195 + 53.11 To 198 + 09	(WIDTH VARIES 16' TO 14.29)	255.89 x 15.145 x 1/9	430.61
		TOTAL	1932.22 S.Y.

ITEM 301 BITUMINOUS AGGREGATE BASE

187 + 22.69 To 188 + 22.69 (RT)	(WIDTH VARIES 8' TO 3') (3" DEPTH)	100.00 x 5.5 x 0.25 x 1/2	5.10
188 + 22.69 To 194 + 03.11 (RT)	(3' WIDTH) (3" DEPTH)	580.42 x 3 x 0.25 x 1/27	16.12
194 + 03.11 To 195 + 53.11 (RT)	(WIDTH VARIES 3' TO 8') (3" DEPTH)	150.00 x 5.5 x 0.25 x 1/27	7.64
195 + 53.11 To 198 + 34 (RT)	(8'WIDTH) (3" DEPTH)	280.89 x 8 x 0.25 x 1/27	20.81
187 + 22.69 To 194 + 03.11 (LT)	(3' WIDTH) (3" DEPTH)	680.42 x 3 x 0.25 x 1/27	18.90
194 + 03.11 To 194 + 53.11 (LT)	(WIDTH VARIES 3' TO 2') (3" DEPTH)	50 x 2.5 x 0.25 x 1/27	1.15
		TOTAL	69.72 C.Y.

ITEM 304 - AGGREGATE BASE

Increase in 304 due to 3" reduction in 301 — 69.72

187 + 22.69 To 188 + 22.69 (RT)	(WIDTH VARIES 5' TO 0') (3" DEPTH)	100.00 x 2.5 x 0.25 x 1/27	2.31
187 + 22.69 To 194 + 03.11 (LT)	(3' WIDTH) (3" DEPTH)	680.42 x 3 x 0.25 x 1/27	18.90
194 + 03.11 To 194 + 53.11 (LT)	(WIDTH VARIES 3' TO 2') (3" DEPTH)	50 x 2.5 x 0.25 x 1/27	1.16
194 + 03.11 To 195 + 53.11 (RT)	(WIDTH VARIES 0' TO 5') (3" DEPTH)	150 x 2.5 x 0.25 x 1/27	3.47
195 + 53.11 To 198 + 34 (RT)	(5' WIDTH) (3" DEPTH)	280.89 x 5 x 0.25 x 1/27	13.00
		TOTAL	108.56 C.Y.

ITEM 310 - SUBBASE GRADING "A" OR "B", AS PER PLAN

UNDER ITEM 451	(1932.22 S.Y.) (6" DEPTH)	1932.22 x 1/6	322.04
UNDER TYPE 7 & 8 CURBS	(505 L.F.) (1' WIDTH) (6" DEPTH)	505 x 1 x 0.50 x 1/27	9.35
UNDER ITEM 301 (LT SIDE)	(40.11 C.Y.) (6" DEPTH)		40.11
187 + 22.69 To 198 + 34 (RT)	(3' WIDTH) (6" DEPTH)	1111.31 x 3 x 0.50 x 1/27	61.74
		TOTAL	433.24 C.Y.

ITEM 310 - SUBBASE

187 + 22.69 To 188 + 22.69 (RT)	(WIDTH VARIES 5' TO 0') (X-SECTION = 0.944 S.F.)	100.00 x 0.944 x 1/27	3.50
194 + 03.11 To 194 + 53.11 (RT)	(WIDTH VARIES 0' TO 5') (X-SECTION = 0.944 S.F.)	150.00 x 0.944 x 1/27	5.24
194 + 53.11 To 198 + 34 (RT)	(8' WIDTH) (X-SECTION = 1.888 S.F.)	280.89 x 1.888 x 1/27	19.64
		TOTAL	28.38 C.Y.

ITEM - SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE, AS PER PLAN

187 + 22.69 To 198 + 34 (RT)	(3' WIDTH) (X-SECTION = 1.90 S.F.)	1111.31 x 1.90 x 1/27	78.20
		TOTAL	78.20 C.Y.

ITEM 409 - SEAL COAT COVER, AGGREGATE No. 8 (0.008 C.Y. PER S.Y.)

ON PAVED SHOULDERS 139.44 C.Y. ITEM 301 x 6 = 837 S.Y.	837 x 0.008	6.7
	TOTAL	6.7 C.Y.

ITEM 409 - SEAL COAT, BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)

ON PAVED SHOULDERS 139.44 C.Y. ITEM 301 x 6 = 837 S.Y.	837 x 0.3	251
	TOTAL	251 GAL.

ITEM 203 SUBGRADE PREPARATION

UNDER ITEM 451 (1932 S.Y.)			1932
UNDER ITEM 301 (139.44 C.Y.) (6" DEPTH)		139.44 C.Y. x 6	837
		TOTAL	2769 S.Y.

Rev. 2-8-67

COMPUTATIONS

RAMPS - CONT'D

SUM- -2.98

FED. RD.	STATE	PROJECT	
2	OHIO		

19/510

RAMP "D"

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 451 - 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT			
167 + 35 To 170 + 35	(WIDTH VARIES 14' TO 16')	300 x 15 x 1/9	500.00
170 + 35 To 171 + 35	(WIDTH VARIES 16' TO 18') (LENGTH ALONG ℄ = 101.1)	101.1 x 17 x 1/9	190.97
171 + 35 To 172 + 35	(16' WIDTH) (LENGTH ALONG ℄ = 101.8)	101.8 x 16 x 1/9	180.98
172 + 35 To 185 + 51.53	(16' WIDTH) (LENGTH ALONG ℄ = 351.5)	351.5 x 16 x 1/9	2402.67
185 + 51.53 To 186 + 51.53	(16' WIDTH) (LENGTH ALONG ℄ = 101.8)	101.8 x 16 x 1/9	180.98
186 + 51.53 To 187 + 53	(WIDTH VARIES 16' TO 18') (LENGTH ALONG ℄ = 102.6)	102.6 x 17 x 1/9	193.80
		TOTAL	3649.40 S.Y.
ITEM 301 BITUMINOUS AGGREGATE BASE			
167 + 35 To 170 + 35 (LT)	(8' WIDTH) (3" DEPTH)	300 x 8 x 0.25 x 1/27	22.22
170 + 35 To 171 + 85 (LT)	(WIDTH VARIES 8' TO 3') (3" DEPTH)	150 x 5.5 x 0.25x 1/27	7.64
171 + 85 To 186 + 51.53 (LT)	(3' WIDTH) (3" DEPTH)	1466.53 x 3 x 0.25 x 1/27	40.74
186 + 51.53 To 187 + 51.53 (LT)	(WIDTH VARIES 3' TO 8') (3" DEPTH)	100.00 x 5.5 x 0.25 x 1/27	5.09
187 + 51.53 To STRUCTURE (LT)	(8' WIDTH) (3" DEPTH) (25' LENGTH)	29 x 8 x 0.25 1/27	2.15
171 + 35 To 171 + 85 (RT)	(WIDTH VARIES 2' TO 3') (3" DEPTH)	50 x 2.5 x 0.25 x 1/27	1.16
171 + 85 To 187 + 51.53 (RT)	(3' WIDTH) (3" DEPTH)	1566.53 x 3 x 0.25 x 1/27	43.51
		TOTAL	122.51 C.Y.
ITEM 304 - AGGREGATE BASE	*Increase in 304 due to 3" reduction in 301*		122.51
171 + 35 To 171 + 85 (RT)	(WIDTH VARIES 2' TO 3') (0.25 DEPTH)	50 x 2.5 x 0.25 x 1/27	1.16
171 + 85 To 187 + 51.53 (RT)	(3' WIDTH) (0.25 DEPTH)	1566.53 x 3 x 0.25 x 1/27	43.51
		TOTAL	167.18 C.Y.
ITEM 310 - SUBBASE, GRADING "A" OR "B", AS PER PLAN			
UNDER ITEM 451	(3649.40 S.Y.) (6" DEPTH)	3649.40 x 1/6	608.23
UNDER TYPE 7 & 8 CURB	(501 L.F.) (1'WIDTH) (6" DEPTH)	501 x 1 x 0.50 x 1/27	9.28
UNDER ITEM 301 (RT SIDE)	(89.34 C.Y.) (6" DEPTH)		89.34
167 + 35 To STRUCTURE (LT)	(2045.5 L.F.) (3' WIDTH) (6" DEPTH)	2045.5 x 3 x 0.50 x 1/27	113.64
		TOTAL	820.49 C.Y.
ITEM 310 - SUBBASE			
167 + 35 To 170 + 35 (LT)	(5' WIDTH) (X-SECTION = 1.888 S.F.)	300 x 1.888 x 1/27	20.98
170 + 35 To 171 + 85 (LT)	(WIDTH VARIES 5' TO 0') (X-SECTION = 0.944 S.F.)	150 x 0.944 x 1/27	5.24
186 + 51.53 To STRUCTURE	(WIDTH VARIES 0' TO 5') (X-SECTION = 0.944 S.F.)	129 x 0.944 x 1/27	4.51
		TOTAL	30.73 C.Y.
ITEM - SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE, AS PER PLAN			
167 + 35 To STRUCTURE (LT)	(2045.5 L.F.) (3'WIDTH) (X-SECTION = 1.90 S.F.)	2045.5 x 1.90 x 1/27	143.94
		TOTAL	143.94 C.Y.
ITEM 409 - SEAL COAT COVER, AGGREGATE No. 8 (0.008 C.Y. PER S.Y.)			
ON PAVED SHOULDERS 245.02 C.Y. ITEM 301 x 6 = 1470 S.Y.		1470 S. Y. x 0.008	11.8
		OTAL	11.8 C.Y.
ITEM 409 - SEAL COAT, BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)			
ON PAVED SHOULDERS 245.02 C.Y. ITEM 301 x 6 = 1470 S.Y.		1470 x 0.3	441
		TOTAL	441 GAL.
ITEM 203 - SUBGRADE PREPARATION			
UNDER ITEM 451	(3649 S.Y.)		3649
UNDER ITEM 301	(245.02 C.Y.) (6" DEPTH)	245.02 C.Y. x 6	1470
		TOTAL	5119 S.Y.

RAMP "E"

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 451 - 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT			
306 + 53.07 To 307 + 53.07	(WIDTH VARIES 18' TO 16') (LENGTH ALONG ℄ = 100.6)	100.6 x 17 x 1/9	190.02
307 + 53.07 To 308 + 53.07	(16' WIDTH) (LENGTH ALONG ℄ = 101.3)	101.3 x 16 x 1/9	180.09
308 + 53.07 To 309 + 87.32	(16' WIDTH) (LENGTH ALONG ℄ = 136.5)	136.5 x 16 x 1/9	242.67
309 + 87.32 To 311 + 87.32	(16' WIDTH) (LENGTH ALONG ℄ = 201.7)	201.7 x 16 x 1/9	358.58
311 + 87.32 To 313 + 57.37	(16' WIDTH)	170.05 x 16 x 1/9	302.31
313 + 57.37 To 315 + 57.37	(16' WIDTH) (LENGTH ALONG ℄ = 204.0)	204.0 x 16 x 1/9	362.27
314 + 14.49 To 315 + 57.37	(TRANSITION AT MED.) (3' TO 1')	142.88 x 2 x 1/9	31.75
315 + 57.37 To 320 + 00.92	(34' WIDTH)	443.55 x 34 x 1/9	1675.63
319 + 68.5 To 320 + 00.92	(3'WIDTH)	32.42 x 3 x 1/9	10.81
RETURNS AT S.R. 303	(2412.94 S.F.)	2412.94 x 1/9	268.10
		TOTAL	3622.23 S.Y.
ITEM 301 - BITUMINOUS AGGREGATE BASE			
306 + 53.07 To 307 + 53.07 (RT)	(WIDTH VARIES 8' TO 3') (3" DEPTH)	100 x 5.5 x 0.25x 1/27	5.10
307 + 53.07 To 314 + 14.49 (RT)	(3' WIDTH) (3" DEPTH)	661.42 x 3 x 0.25 x 1/27	18.37
314 + 14.49 To 315 + 57.37 (RT)	(WIDTH VARIES 3' TO 6') (3" DEPTH)	142.88 x 4.5 x 0.25 x 1/27	5.96
315 + 57.37 To 319 + 43.55 (RT)	(6' WIDTH) (3" DEPTH)	386.18 x 6 x 0.25 x 1/27	21.45
ALONG RIGHT RETURN	(6'WIDTH) (3" DEPTH) (104 L.F.)	104 x 6 x 0.25 x 1/27	5.78
306 + 53.07 To 314 + 14.49 (LT)	(3' WIDTH) (3" DEPTH)	761.42 x 3 x 0.25 x 1/27	21.15
315 + 57.37 To 319 + 43.19 (LT)	(6' WIDTH) (3" DEPTH)	385.82 x 6 x 0.25 x 1/27	21.44
ALONG LEFT RETURN	(6' WIDTH) (3" DEPTH) (98 L.F.)	98 x 6 x 0.25 x 1/27	5.44
		TOTAL	104.69 C.Y.
ITEM 304 - AGGREGATE BASE	*Increase in 304 due to 3" reduction in 301*		104.69
306 + 53.07 To 307 + 53.07 (RT)	(WIDTH VARIES 5' TO 0') (3" DEPTH)	100 x 2.5 x 0.25 x 1/27	2.31
312 + 73 To 314 + 14.49 (RT)	(VARIABLE DEPTH) (X-SECTION = 0.54 S.F.)	141.49 x 0.54 x 1/27	2.83
314 + 14.49 To 315 + 57.37 (RT)	(WIDTH & DEPTH VARIES) (X-SECTION = 1.03 S.F.)	142.88 x 1.03 x 1/27	5.45
315 + 57.37 To 318 + 25 (RT)	(6' WIDTH) (3" DEPTH)	267.63 x 6 x 0.25 x 1/27	14.87
318 + 25 To 319 + 43 (RT)	(3' WIDTH) (3" DEPTH)	118 x 3 x 0.25 x 1/27	3.28
ALONG RIGHT RETURN	(6'WIDTH) (3" DEPTH) (104L.F.)	104 x 6 x 0.25 x 1/27	5.78
306 + 53.07 To 310 + 25 (LT)	3' WIDTH) (3" DEPTH)	371.93 x 3 x 0.25 x 1/27	10.31
310 + 25 To 312 + 68 (LT)	(VARIABLE DEPTH) (X-SECTION = 0.65 S.F.)	243.00 x 0.65 x 1/27	5.85
315 + 57.37 To 318 + 75 (LT)	(3' WIDTH) (3" DEPTH)	317.63 x 3 x 0.25 x 1/27	8.82
318 + 75 To 319 + 43.19 (LT)	(6' WIDTH) (3" DEPTH)	68.19 x 6 x 0.25 x 1/27	3.79
ALONG LEFT RETURN	(6' WIDTH) (3" DEPTH)	98 x 6 x 0.25 x 1/27	5.44
		TOTAL	173.42 C.Y.
ITEM 310 - SUBBASE, GRADING "A" OR "B", AS PER PLAN			
UNDER ITEM 451	(6" DEPTH)	2223 x 1/6	603.71
306 + 53.07 To 314 + 14.49 (LT&RT)	(6'WIDTH) (6" DEPTH)	761.42 x 6 x 0.50 x 1/27	84.60
314 + 14.49 To 315 + 57.37 (RT)	(WIDTH VARIES 3' TO 1') (6" DEPTH)	142.88 x 2 x 0.50 x 1/27	5.29
315 + 57.37 To 318 + 25 (RT)	(1' WIDTH) (6" DEPTH)	267.63 x 1 x 0.50 x 1/27	4.96
318 + 25 To 319 + 43 (RT)	(3' WIDTH) (6" DEPTH)	118 x 3 x 0.50 x 1/27	6.56
ALONG RIGHT RETURN	(1'WIDTH) (6" DEPTH)	104 x 1 x 0.50 x 1/27	1.93
315 + 57.37 To 318 + 75 (LT)	(3' WIDTH) (6" DEPTH)	317.63 x 3 x 0.50 x 1/27	17.65
318 + 75 To 319 + 43.19 (LT)	(1' WIDTH) (6" DEPTH)	68.19 x 1 x 0.50 x 1/27	1.26
ALONG LEFT RETURN	(1' WIDTH) (6" DEPTH)	98 x 1 x 0.50 x 1/27	1.81
UNDER CONC. MEDIAN	(3' WIDTH) (12" DEPTH) (411.13 L.F.)	411.13 x 3 x 1.00 x 1/27	45.68
		TOTAL	773.45 C.Y.
ITEM 310 - SUBBASE			
306 + 53.07 To 307 + 53.07 (RT)	(WIDTH VARIES 5' TO 0') (X-SECTION = 0.944 S.F.)	100 x 0.944 x 1/27	3.50
314 + 14.49 To 315 + 57.37 (RT)	(WIDTH VARIES 0' TO 5') (X-SECTION = 1.20 S.F.)	142.88 x 1.20 x 1/27	6.35
315 + 57.37 To 318 + 25 (RT)	(5' WIDTH) (X-SECTION = 2.12 S.F.)	267.63 x 2.12 x 1/27	21.01
318 + 25 To 319 + 43 (RT)	(3' WIDTH) (X-SECTION = 1.10 S.F.)	118 x 1.10 x 1/27	4.81
ALONG RIGHT RETURN	(5' WIDTH) (X-SECTION = 2.04 S.F.)	104 x 2.04 x 1/27	7.86
315 + 57.37 To 318 + 75 (LT)	(3' WIDTH) (X-SECTION = 1.10 S.F.)	317.63 x 1.10 x 1/27	12.94
318 + 75 To 319 + 43.19 (LT)	(5' WIDTH) (X-SECTION = 2.04 S.F.)	68.19 x 2.04 x 1/27	5.15
ALONG LEFT RETURN	(5' WIDTH) (X-SECTION = 2.04 S.F.)	98 x 2.04 x 1/27	7.40
		TOTAL	69.02 C.Y.
ITEM - SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE, AS PER PLAN			
306 + 53.07 To 312 + 73 (RT)	(3'WIDTH) (X-SECTION = 1.90 S.F.)	619.93 x 1.90 x 1/27	43.62
318 + 25 To 319 + 43 (RT)	(3'WIDTH) (X-SECTION = 1.83 S.F.)	118 x 1.83 x 1/27	8.00
312 + 68 To 314 + 14.49 (LT)	(3' WIDTH) (X-SECTION = 1.83 S.F.)	146.49 x 1.83 x 1/27	9.93
315 + 57.37 To 318 + 75 (LT)	(3' WIDTH) (X-SECTION = 1.90 S.F.)	317.63 x 1.90 x 1/27	22.35
		TOTAL	83.90 C.Y.
ITEM 409 - SEAL COAT COVER, AGGREGATE No. 8 (0.008 C.Y. PER S.Y.)			
ON PAVED SHOULDERS 209.38 C.Y. ITEM 301 x 6 = 1256 S.Y.		1256 x 0.008	10.0
		TOTAL	10.0 C.Y.
ITEM 409 - SEAL COAT, BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)			
ON PAVED SHOULDERS 209.38 C.Y. ITEM 301 x 6 = 1256 S.Y.		1256 x 0.3	377
		TOTAL	377 GAL.
ITEM 203 - SUBGRADE PREPARATION			
UNDER ITEM 451			3622
UNDER ITEM 301	(209.38 C.Y.) (6" DEPTH)	209.38 x 6	1256
UNDER CONC. MEDIAN	(3'WIDTH) (411.13 L.F.)	411.13 x 3 x 1/9	137
		TOTAL	5015 S.Y.

RAMP "F"

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 451 - 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT			
300 + 72.34 To 303 + 72.34	(WIDTH VARIES 14' TO 16')	300 x 15 x 1/9	500.00
303 + 72.34 To 304 + 72.34	(WIDTH VARIES 16' TO 18') (LENGTH ALONG ℄ = 100.6)	100.6 x 17 x 1/9	190.02
304 + 72.34 To 305 + 72.34	(16'WIDTH) (LENGTH ALONG ℄ = 101.1)	101.1 x 16 x 1/9	179.73
305 + 72.34 To 307 + 82.70	(16' WIDTH) (LENGTH ALONG ℄ = 235.8)	235.8 x 16 x 1/9	419.20
307 + 82.70 To 309 + 82.70	(16' WIDTH) (LENGTH ALONG ℄ = 201.7)	201.7 x 16 x 1/9	358.58
309 + 82.70 To 312 + 46.62	(16'WIDTH)	263.92 x 16 x 1/9	469.19
312 + 46.62 To 315 + 52.52	(34' WIDTH)	305.90 x 34 x 1/9	1155.62
315 + 19 To 315 + 52.52	(3' WIDTH)	33.52 x 3 x 1/9	11.17
RETURNS AT S.R. 303	(2412.92 S.F.)	2412.92 x 1/9	268.10
UNDER TYPE 2-A CURB	(0.50 WIDTH) (85 L.F.)	85 x 0.50 x 1/9	4.72
		TOTAL	3556.33 S.Y.
ITEM 301 - BITUMINOUS AGGREGATE BASE			
300 + 72.34 To 303 + 72.34 (LT)	(8' WIDTH) (3"DEPTH)	300 x 8 x 0.25 x 1/27	22.22
303 + 72.34 To 305 + 22.34 (LT)	(WIDTH VARIES 8' TO 3')	150 x 5.5 x 0.25x 1/27	7.62
305 + 22.34 To 311 + 46.62 (LT)	(3' WIDTH) (3" DEPTH)	624.28 x 3 x 0.25 x 1/27	17.34
311 + 46.62 To 312 + 46.62 (LT)	(WIDTH VARIES 3' TO 6') (3" DEPTH)	100 x 4.5 x 0.25 x 1/27	4.16
312 + 46.62 To 314 + 93.89 (LT)	(6' WIDTH) (3"DEPTH)	247.27 x 6 x 0.25 x 1/27	13.74
ALONG LEFT RETURN	(6' WIDTH) (3"DEPTH) (97 L.F.)	97 x 6 x 0.25x 1/27	5.39
304 + 72.34 To 305 + 22.34 (RT)	(WIDTH VARIES 2' TO 3') (3" DEPTH)	50 x 2.5 x 0.25x 1/27	1.15
305 + 22.34 To 311 + 00 (RT)	(3' WIDTH) (3"DEPTH)	577.66 x 3 x 0.25x 1/27	16.05
312 + 46.62 To 314 + 93.25 (RT)	(6' WIDTH) (3' DEPTH)	246.63 x 6 x 0.25x 1/27	13.70
ALONG RIGHT RETURN	(6' WIDTH) (3" DEPTH) (105 L.F.)	105 x 6 x 0.25x 1/27	5.83
		TOTAL	107.20 C.Y.
ITEM 304 - AGGREGATE BASE	*Increase in 304 due to 3" reduction in 301*		107.20
300 + 72.34 To 303 + 72.34 (LT)	(5' WIDTH) (3" DEPTH)	300 x 5 x 0.25 x 1/27	13.89
303 + 72.34 To 305 + 22.34 (LT)	(WIDTH VARIES 5' TO 0') (3" DEPTH)	150 x 2.5 x 0.25 x 1/27	3.47
309 + 70 To 311 + 46.62 (LT)	(3' WIDTH) (X-SECTION = 0.50 S.F.)	176.62 x 0.50 x 1/27	3.27
311 + 46.62 To 312 + 46.62 (LT)	(WIDTH VARIES 3' TO 6') (X-SECTION = 1.00 S.F.)	100 x 1.00 x 1/27	3.70
312 + 46.62 To 314 + 93.89 (LT)	(6' WIDTH) (3" DEPTH)	247.27 x 6 x 0.25 x 1/27	13.74
ALONG LEFT RETURN	(6' WIDTH) (3" DEPTH) (97 L.F.)	97 x 6 x 0.25 x 1/27	5.39
304 + 72.34 To 305 + 22.34 (RT)	(WIDTH VARIES 2' TO 3') (3" DEPTH)	50 x 2.5 x 0.25 x 1/27	1.16
305 + 22.34 To 309 + 80 (RT)	(3' WIDTH) (X-SECTION = 0.68 S.F.)	457.66 x 0.68 x 1/27	11.53
312 + 46.62 To 314 + 93 (RT)	(3' WIDTH) (3" DEPTH)	246.38 x 3 x 0.25 x 1/27	6.84
ALONG RIGHT RETURN	(6' WIDTH) (3" DEPTH) (105 L.F.)	105 x 6 x 0.25 x 1/27	5.83
		TOTAL	176.02 C.Y.
ITEM 310 - SUBBASE, GRADING "A" OR "B", AS PER PLAN			
UNDER ITEM 451	(3556.33 S.Y.)	3556.33 x 1/6	592.72
UNDER TYPES 7 & 8 CURBS	(542 L.F.) (1' WIDTH) (6" DEPTH)	542 x 1 x 0.50 x 1/27	10.04
300 + 72.34 To 311 + 46.62 (LT)	(3' WIDTH) (6" DEPTH)	1074.28 x 3 x 0.50 x 1/27	59.68
311 + 46.62 To 312 + 46.62 (LT)	(WIDTH VARIES 3' TO 1') (6" DEPTH)	100 x 2 x 0.50 x 1/27	3.70
312 + 46.62 To 314 + 93.89 (LT)	(1' WIDTH) (6" DEPTH)	247.27 x 1 x 0.50 x 1/27	4.58
ALONG LEFT RETURN	(1' WIDTH) (6" DEPTH) (97 L.F.)	97 x 1 x 0.50 x 1/27	1.80
304 + 72.34 To 305 + 22.34 (RT)	(WIDTH VARIES 2' TO 3') (3" DEPTH)	50 x 2.5 x 0.50 x 1/27	2.31
305 + 22.34 To 311 + 00 (RT)	(3' WIDTH) (6" DEPTH)	577.66 x 3 x 0.50 x 1/27	32.09
312 + 46.62 To 314 + 93.25 (RT)	(3' WIDTH) (6" DEPTH)	246.63 x 3 x 0.50 x 1/27	13.70
ALONG RIGHT RETURN	(1'WIDTH)(6" DEPTH) (105 L.F.)	105 x 1 x 0.50 x 1/27	1.94
UNDER CONCRETE MEDIAN	(3' WIDTH) (12" DEPTH) (272.38 L.F.)	272.38 x 3 x 1 x 1/27	30.26
		TOTAL	752.82 C.Y.
ITEM 310 - SUBBASE,			
300 + 72.34 To 303 + 72.34 (LT)	(5' WIDTH) (X-SECTION = 1.888 S.F.)	300 x 1.888 x 1/27	20.98
303 + 72.34 To 305 + 22.34 (LT)	(WIDTH VARIES 5' TO 0') (X-SECTION = 0.944 S.F.)	150 x 0.944 x 1/27	5.24
311 + 46.62 To 312 + 46.62 (LT)	(WIDTH VARIES 0' TO 5') (X-SECTION = 1.75 S.F.)	100 x 1.75 x 1/27	6.48
312 + 46.62 To 314 + 93.89 (LT)	(5' WIDTH) (X-SECTION = 2.10 S.F.)	247.27 x 2.10 x 1/27	19.23
ALONG LEFT RETURN	(5' WIDTH) (X-SECTION 1.73 S.F.)	97 x 1.73 x 1/27	6.22
312 + 46.62 To 314 + 93.25 (RT)	(3' WIDTH) (X-SECTION = 1.125 S.F.)	246.63 x 1.125 x 1/27	10.28
ALONG RIGHT RETURN	(5' WIDTH) (X-SECTION = 1.73 S.F.)	105 x 1.73 x 1/27	6.73
		TOTAL	75.16 C.Y.
ITEM - SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE, AS PER PLAN			
300 + 72 To 309 + 70 (LT)	(3' WIDTH) (X-SECTION = 1.88 S.F.)	898 x 1.88 x 1/27	62.53
309 + 80 To 311 + 00 (RT)	(3' WIDTH) (X- SECTION = 1.83 S.F.)	120 x 1.83 x 1/27	8.13
312 + 46.62 To 314 + 93 (RT)	(3' WIDTH) (X-SECTION= 1.88 S.F.)	246.38 x 1.88 x 1/27	17.16
		TOTAL	87.82 C.Y.
ITEM 409 - SEAL COAT COVER, AGGREGATE NO.8 (0.008 C.Y. PER S.Y.)			
ON PAVED SHOULDERS 214.40 C.Y. ITEM 301 x 6 = 1286 S.Y.		1286 x 0.008	10.3
		TOTAL	10.3 C.Y.
ITEM 409 - SEAL COAT, BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)			
ON PAVED SHOULDERS 214.40 C.Y. ITEM 301 x 6 = 1286 S.Y.		1286 x 0.3	386
		TOTAL	386 GAL.
ITEM 203 - SUBGRADE PREPARATION			
UNDER ITEM 451	(3556 S.Y.)		3556
UNDER ITEM 301	(214.40 C.Y.) (6" DEPTH)	214.40 x 6	1286
UNDER CONC. MED.	(3' WIDTH)(272.38 L.F.)	272.38 x 3 x 1/9	91
		TOTAL	4933 S.Y.

Rev. 2-8-67 COMPUTATIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

21/510

SUM-271-2.98

EXISTING I-77

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 451 - 10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT			
907 + 83.78 To 909 + 07.37 (RT)	(2' WIDTH)	123.59 x 2 x 1/9	27.46
909 + 07.37 To 912 + 38.51 (RT)	14' WIDTH)	331.14 x 14 x 1/9	515.11
909 + 07.37 To 912 + 38.51 (RT)	(CURVED AREA) (PLANIMETERED)	3327 S.F. x 1/9	369.67
912 + 38.51 To 913 + 38.51 (RT)	(WIDTH VARIES 14' TO 10')	100 x 12 x 1/9	133.33
911 + 36.23 To 915 + 81.98 (LT)	(WIDTH VARIES 12' TO 24')	445.75 x 18 x 1/9	891.50
930 + 77.34 To 931 + 77.34 (LT)	(WIDTH VARIES 10' TO 14')	100 x 12 x 1/9	133.33
931 + 77.34 To 936 + 40.44 (LT)	12'WIDTH)	463.10 x 12 x 1/9	617.47
931 + 77.34 To 936 + 40.44 (LT)	(CURVED AREA) (PLANIMETERED)	4307 S.F. x 1/9	478.56
936 + 40.44 To 938 + 77.34 (LT)	12' WIDTH)	236.90 x 12 x 1/9	315.87
938 + 77.34 To 939 + 60.67 (LT)	(WIDTH VARIES 12' TO 2')	87.33 x 7.5 x 1/9	67.92
939 + 60.67 To 939 + 77.34 (LT)	(2'WIDTH)	16.67 x 2 x 1/9	3.70
938 + 00 To 951 + 04 (RT)	(WIDTH VARIES 25' TO 2')	1104 x 13.5 x 1/9	1656.00
951 + 04 To 952 + 00 (RT)	(2' WIDTH)	96 x 2 x 1/9	21.33
		TOTAL	5231.25 S.Y.
ITEM 301 - BITUMINOUS AGGREGATE BASE			
182 + 69.62 To 183 + 93.23 (RT)	(WIDTH VARIES 8' TO 9.45') (3" DEPTH)	123.61 x 8.725 x 0.25 x 1/27	9.99
183 + 93.23 To 187 + 22.69 (RT)	(WIDTH VARIES 9.45' TO 8') (3" DEPTH)	329.46 x 8.725 x 0.25 x 1/27	26.61
911 + 36.23 To 915 + 81.98 (LT)	(8' WIDTH) (3" DEPTH)	445.75 x 8 x 0.25 x 1/27	33.02
915 + 81.98 To 918 + 81.98 (LT)	(WIDTH VARIES 9' TO 14.25') (3" DEPTH)	300 x 11.625 x 0.25 x 1/27	32.29
918 + 81.98 To 920 + 13 (LT)	(WIDTH VARIES 14.25' TO 20') (3" DEPTH)	PLANIMETERED	15.00
199 + 14.15 To 203 + 75.48 (LT)	(8' WIDTH) (3" DEPTH)	461.33 x 8 x 0.25 x 1/27	34.17
936 + 40.44 To 939 + 77.34 (LT)	(8' WIDTH) (3" DEPTH)	336.90 x 8 x 0.25 x 1/27	24.96
933 + 97 To 935 + 00 (RT)	(WIDTH VARIES 20' TO 14.25') (3" DEPTH)	PLANIMETERED	19.00
935 + 00 To 938 + 00 (RT)	(WIDTH VARIES 14.25' TO 10') (3" DEPTH)	300 x 12.125 x 0.25 x 1/27	33.68
938 + 00 To 950 + 00 (RT)	(8' WIDTH) (3" DEPTH)	1200 x 8 x 0.25 x 1/27	88.89
		TOTAL	317.61 C.Y.
ITEM 304 - AGGREGATE BASE	*Increase in 304 due to 3" reduction in 301*		217.64
182 + 69.62 To 183 + 93.23 (RT)	(WIDTH VARIES 8' TO 9.45') (3" DEPTH)	123.61 x 8.725 x 0.25 x 1/27	9.99
183 + 93.23 To 184 + 50 (RT)	(WIDTH VARIES 9.45' TO 9.20') (3" DEPTH)	56.77 x 9.325 x 0.25 x 1/27	4.90
184 + 50 To 187 + 22.69 (RT)	(WIDTH VARIES 9.20' TO 8') (X-SECTION = 1.92 S.F.)	272.69 x 1.92 x 1/27	19.39
911 + 36.23 To 911 + 45 (LT)	(8' WIDTH) (3" DEPTH)	8.77 x 8 x 0.25 x 1/27	0.65
911 + 45 To 915 + 81.98 (LT)	(8' WIDTH) (X-SECTION = 1.875 S.F.)	436.98 x 1.875 x 1/27	30.35
915 + 81.98 To 918 + 81.98 (LT)	(WIDTH VARIES 9' TO 14.25') (7" DEPTH)	300 x 11.625 x 0.5833 x 1/27	75.34
918 + 81.98 To 920 + 13 (LT)	(WIDTH VARIES 14.25' TO 20') (7" DEPTH)	PLANIMETERED	35.00
199 + 14.15 To 203 + 75.48 (LT)	(8' WIDTH) (X-SECTION = 1.875 S.F.)	461.33 x 1.875 x 1/27	32.04
936 + 40.44 To 938 + 79 (LT)	(8' WIDTH) (X-SECTION = 1.875.S.F.)	238.56 x 1.875 x 1/27	16.57
938 + 79 To 939 + 77.34 (LT)	(8' WIDTH) (3" DEPTH)	98.34 x 8 x 0.25 x 1/27	7.28
933 + 97 To 935 + 00 (RT)	(WIDTH VARIES 20' TO 14.25') (7" DEPTH)	PLANIMETERED	44.00
935 + 00 To 938 + 00 (RT)	(WIDTH VARIES 14.25' TO 10') (7" DEPTH)	300 x 12.125 x 0.5833 x 1/27	78.58
938 + 00 To 948 + 46 (RT)	(8' WIDTH) (X-SECTION = 1.875 S.F.)	1046 x 1.875 x 1/27	72.64
948 + 46 To 950 + 00 (RT)	(8'WIDTH) (3" DEPTH)	154 x 8 x 0.25 x 1/27	11.41
		TOTAL	655.78 C.Y.

NOTE: 18" OF SUBBASE SHALL BE PLACED UNDER RAMP "C" FROM STATION 909 + 07.38 TO STATION 911 + 00.

ITEM 310 - SUBBASE, GRADING "A" OR "B", AS PER PLAN			
UNDER ITEM 451	(5231.25 S.Y.) (6" DEPTH)	5231.25 x 1/6	871.88
UNDER TYPE 7 & 8 CURB	(1005 L.F.) (1'WIDTH) (6" DEPTH)	1005 x 1 x 0.50 x 1/27	18.61
UNDER ITEM 451	(3608 S.F.) (12" ADDITIONAL DEPTH)	3608 x 1 x 1/27	133.63
184 + 50 To 185 + 86 (RT)	(3' WIDTH) (18" DEPTH)	136 x 3 x 0.50 x 1/27	7.56
185 + 86 To 187 + 22.69 (RT)	(3' WIDTH) (6" DEPTH)	136.69 x 3 x 0.50 x 1/27	7.59
911 + 45 To 915 + 81.98 (LT)	(3' WIDTH) (6" DEPTH)	436.98 x 3 x 0.50 x 1/27	24.28
915 + 81.98 To 918 + 81.98 (LT)	(WIDTH VARIES 9' TO 14.25') (6" DEPTH)	300 x 11.625 x 0.50 x 1/27	64.58
918 + 81.98 To 920 + 13 (LT)	(WIDTH VARIES 14.25' TO 20') (6" DEPTH)	PLANIMETERED	30.00
199 + 14.15 To 203 + 75.48 (LT)	(3' WIDTH) (6" DEPTH)	461.33 x 3 x 0.50 x 1/27	25.63
936 + 40.44 To 938 + 79 (LT)	(3' WIDTH) (6" DEPTH)	238.56 x 3 x 0.50 x 1/27	13.25
933 + 97 To 935 + 00 (RT)	(WIDTH VARIES 20' TO 14.25') (6" DEPTH)	PLANIMETERED	38.00
935 + 00 To 938 + 00 (RT)	(WIDTH VARIES 14.25' TO 10') (6" DEPTH)	300 x 12.125 x 0.50 x 1/27	67.36
938 + 00 To 948 + 46 (RT)	(3' WIDTH) (6" DEPTH)	1046 x 3 x 0.50 x 1/27	58.11
		TOTAL	1360.48 C.Y.
ITEM 310 - SUBBASE,			
182 + 69.62 To 183 + 93.23 (RT)	(WIDTH VARIES 8' TO 9.45') (X-SECTION = 3.54 S.F.)	123.61 x 3.54 x 1/27	16.21
183 + 93.23 To 184 + 50 (RT)	(WIDTH VARIES 9.45' TO 9.20') (X-SECTION = 3.79 S.F.)	56.77 x 3.79 x 1/27	7.97
184 + 50 To 187 + 22.69 (RT)	(WIDTH VARIES 9.20' TO 8') (X-SECTION = 2.35 S.F.)	272.69 x 2.35 x 1/27	23.73
911 + 36.23 To 911 + 45 (LT)	(8'WIDTH) (X-SECTION = 3.33 S.F.)	8.77 x 3.33 x 1/27	1.08
911 + 45 To 915 + 81.98 (LT)	(5' WIDTH) (X-SECTION = 2.10 S.F.)	436.98 x 2.10 x 1/27	33.99
199 + 14.15 To 203 + 75.48 (LT)	5' WIDTH) (X-SECTION = 2.10 S.F.)	461.33 x 2.10 x 1/27	35.88
936 + 40.44 To 938 + 79 (LT)	(5' WIDTH) (X-SECTION = 2.10 S.F.)	238.56 x 2.10 x 1/27	18.55
938 + 79 To 939 + 77.34 (LT)	(8' WIDTH) (X-SECTION = 3.33 S.F.)	98.34 x 3.33 x 1/27	12.13
938 + 00 To 948 + 46 (RT)	(5' WIDTH) (X-SECTION = 2.10 S.F.)	1046 x 2.10 x 1/27	81.36
948 + 46 To 950 + 00 (RT)	(8' WIDTH) (X-SECTION = 3.33 S.F.)	154 x 2.10 x 1/27	11.98
		TOTAL	242.88 C.Y.
ITEM - SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE, AS PER PLAN			
184 + 50 To 187 + 22.69 (RT)	(3' WIDTH) (X-SECTION = 1.46 S.F.)	272.69 x 1.46 x 1/27	14.75
911 + 45 To 915 + 81.98 (LT)	(3' WIDTH) (X-SECTION = 1.46 S.F.)	436.98 x 1.46 x 1/27	23.63
199 + 14.15 To 203 + 75.48 (LT)	(3' WIDTH) (X-SECTION = 1.46 S.F.)	461.33 x 1.46 x 1/27	24.95
936 + 40.44 To 938 + 79 (LT)	(3' WIDTH) (X-SECTION = 1.46 S.F.)	238.56 x 1.46 x 1/27	12.90
938 + 00 To 948 + 46 (RT)	(3' WIDTH) (X-SECTION = 1.46 S.F.)	1046.00 x 1.46 x 1/27	56.56
		TOTAL	132.79 C.Y.

EXISTING I-77 - CONT'D.

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 409 - SEAL COAT COVER, AGGREGATE No. 8 (0.008 C.Y. PER S.Y.)			
ON PAVED SHOULDERS ITEM 301 with 6" DEPTH = 435.28 C.Y.		435.28 x 6 x 0.008	20.9
ON PAVED SHOULDERS ITEM 301 with 3" DEPTH = 99.97 C.Y.		99.97 x 12 x 0.008	9.6
		TOTAL	30.5 C.Y.
ITEM 409 - SEAL COAT, BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)			
ON PAVED SHOULDERS ITEM 301 with 6" DEPTH = 435.28 C.Y.		435.28 x 6 x 0.3	782
ON PAVED SHOULDERS ITEM 301 with 3" DEPTH = 99.97 C.Y.		99.97 x 12 x 0.3	360
		TOTAL	1142 GAL.
ITEM 203 - SUBGRADE PREPARATION			
UNDER ITEM 451	(5231 S.Y.)		5231
UNDER ITEM 301	(ITEM 301 with 6" DEPTH = 435.28 C.Y.)	435.28 x 6	2612
UNDER ITEM 301	(ITEM 301 with 3" DEPTH = 99.97 C.Y.)	99.97 x 12	1200
		TOTAL	9043 S.Y.

S.R. 303

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 404 - ASPHALT CONCRETE (1")			
35 + 67.58 To 36 + 17.58	(FEATHER AREA) (20' WIDTH)	50 x 20 x .08333 x 1/27	3.09
36 + 17.58 To 40 + 17.58	(WIDTH VARIES 20' TO 53')	400 x 36.5 x .08333 x 1/27	45.06
40 + 17.58 To 59 + 05	(53' WIDTH)	1887.42 x 53 x .08333 x 1/27	308.73
59 + 05 To 63 + 05	(WIDTH VARIES 53' TO 20')	400 x 36.5 x .08333 x 1/27	45.06
63 + 05 To 63 + 50	(FEATHER AREA) (20' WIDTH)	45 x 20 x .0833 x 1/27	2.78
	(DEDUCT FOR CONC. MED)(1089.47 L.F.)	1089.47 x 3 x .08333 x 1/27	- 10.09
	(DEDUCT FOR STRUCTURE) (381.03 L.F.)	381.03 x 53 x .08333 x 1/27	- 62.33
		TOTAL	332.30 C.Y.
ITEM 302 - 1-1/4" ASPHALTIC CONCRETE LEVELING COURSE			
36 + 17.58 To 40 + 17.58	(WIDTH VARIES 20.5' TO 53.5')	400 x 37 x 0.1042 x 1/27	57.12
40 + 17.58 To 59 + 05	(53.5' WIDTH)	1887.42 x 53.5 x 0.1042 x 1/27	389.70
59 + 05 To 63 + 05	(WIDTH VARIES 53.5' TO 20.5')	400 x 37 x 0.1042 x 1/27	57.12
	(DEDUCT FOR CONC. MED.)(1089.47 L.F.)	1089.47 x 3 x 0.1042 x 1/27	- 12.61
	(DEDUCT FOR STRUCTURE)(381.03 L.F.)	381.03 x 53.5 x 0.1042 x 1/27	- 78.67
		TOTAL	412.66 C.Y.
ITEM 301 - BITUMINOUS AGGREGATE BASE (6" DEPTH)			
36 + 17.58 To 40 + 17.58	(WIDTH VARIES 21' TO 54')	400 x 37.5 x 0.50 x 1/27	277.78
40 + 17.58 To 59 + 05	(54' WIDTH)	1887.42 x 54 x 0.50 x 1/27	1,887.42
59 + 05 To 63 + 05	(WIDTH VARIES 54' TO 21')	400 x 37.5 x 0.50 x 1/27	277.78
	(DEDUCT FOR STRUCTURE)(381.03 L.F.)	381.03 x 54 x 0.50 x 1/27	- 381.03
		TOTAL	2,061.95 C.Y.
ITEM 310 - SUBBASE			
36 + 17.58 To 40 + 17.58	(WIDTH VARIES 22' TO 55')	400 x 38.5 x 0.50 x 1/27	285.19
40 + 17.58 To 59 + 05	(55' WIDTH)	1887.42 x 55 x 0.50 x 1/27	1,922.37
59 + 05 To 63 + 05	(WIDTH VARIES 55' TO 22')	400 x 38.5 x 0.50 x 1/27	285.19
UNDER APPROACH SLABS	(336 S.Y.)	336 x 1/6	56.00
	(DEDUCT FOR STRUCTURE)(381.03 L.F.)	381.03 x 55 x 0.50 x 1/27	- 388.09
		TOTAL	2,160.66 C.Y.
ITEM 409 - SEAL COAT COVER, AGGREGATE No. 8 (0.008 C.Y. PER S.Y.)			
36 + 17.58 To 63 + 05 (LT & RT)	(2687.42 L.F.)(16' WIDTH)	2687.42 x 16 x 0.008 x 1/9	38.22
	(DEDUCT FOR STRUCTURE)(381.03 L.F.)	381.03 x 16 x 0.008 x 1/9	- 5.42
	(DEDUCT FOR INTERSECTIONS)(648 L.F.)	648 x 8 x 0.008 x 1/9	- 4.61
	(DEDUCT FOR MAILBOX APPROACHES) (591 S.F.)	591 x 0.008 x 1/9	- 0.53
		TOTAL	27.66 C.Y.
ITEM 409 - SEAL COAT BITUMINOUS MATERIAL (0.3 GAL. PER S.Y.)			
36 + 17.58 To 63 + 05 (LT & RT)	(27.66 C.Y. No. 8 Aggregate)	27.66 x 1/0.008 x 0.3	1037 GAL.
		TOTAL	1037 GAL.
ITEM 304 - 8" AGGREGATE BASE			
36 + 17.58 To 63 + 05 (LT & RT)	(2687.42 L.F.)(15' WIDTH)(8" DEPTH)	2687.42 x 15 x 0.6667 x 1/27	995.34
36 + 17.58 To 63 + 05 (LT & RT)	(4060 L.F.) (6" WIDTH) (1" DEPTH)	4060 x 0.50 x 0.0833 x 1/27	6.27
36 + 17.58 To 63 + 05 (LT & RT)	(4060 L.F.) (3" WIDTH) (1-1/4" DEPTH)	4060 x 0.25 x 0.1042 x 1/27	3.92
	(DEDUCT FOR STRUCTURE)	381.03 x 15 x 0.6667 x 1/27	- 141.12
	(DEDUCT FOR INTERSECTIONS)	553 x 7.5 x 0.6667 x 1/27	- 102.41
		TOTAL	762.02 C.Y.

S.R. 303 - CONT'D.

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 408 - BITUMINOUS PRIME COAT (0.40 GAL. PER S.Y.)			
36 + 17.58 To 63 + 05 (LT & RT)	(2687.43 L.F.) (16' WIDTH)	2687.42 x 16 x 1/9 x 0.40	1,911
	(DEDUCT FOR STRUCTURE)	381.03 x 16 x 1/9 x 0.40	- 271
	(DEDUCT FOR INTERSECTIONS)	553 x 8 x 1/9 x 0.40	- 197
		TOTAL	1,443 GAL.
ITEM 303 - SUBGRADE PREPARATION			
36 + 17.58 To 40 + 17.58	(WIDTH VARIES 36' TO 69')	400 x 52.5 x 1/9	2,333
40 + 17.58 To 59 + 05	(69' WIDTH)	1887.42 x 69 x 1/9	14,470
59 + 05 To 63 + 05	(WIDTH VARIES 69' TO 36')	400 x 52.5 x 1/9	2,333
	(DEDUCT FOR STRUCTURE)	331.03 x 69 x 1/9	-2,538
	(DEDUCT FOR INTERSECTIONS)	553 x 8 x 1/9	- 492
		TOTAL	16,106 S.Y.

SERVICE ROAD

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 404 - ASPHALT CONCRETE			
48 + 34.42 To 53 + 46.71 RETURNS AT S.R. 303	(20' WIDTH)(2" DEPTH) (608 S.F.)	512.29 x 20 x 0.1667 x 1/27	63.25
		608 x 0.1667 x 1/27	3.75
		TOTAL	67.00 C.Y.
ITEM 304 - AGGREGATE BASE			
UNDER ITEM 404	(5" DEPTH)	67.00 x 5"/2"	167.50
ADDITIONAL 6" WIDTH	(1030 L.F.)(5" DEPTH)	1030 x 0.50 x 0.4167 x 1/27	7.95
		TOTAL	175.45 C.Y.
ITEM 310-SUBBASE			
UNDER ITEM 404	(4" DEPTH)	67.00 x 4"/2"	134.00
ADDITIONAL 12" WIDTH	(1030 L.F.)(4" DEPTH)	1030 x 1.0 x 0.3333 x 1/27	12.72
		TOTAL	146.72 C.Y.
ITEM 408 - BITUMINOUS PRIME COAT (0.40 GAL. PER S.Y.)			
UNDER ITEM 404	67.00 C.Y. x 18 = 1206 S.Y.	1206 x 0.40	482
		TOTAL	482 GAL.
ITEM 203 - SUBGRADE PREPARATION			
UNDER ITEM 404	ITEM 404 = 67.00 C.Y.	67 x 18	1206
		TOTAL	1206 S.Y.

Rev. 2-8-67

COMPUTATIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

22
510

SUM-271-2.98

RELOC. STINE RD. C.H. 171

LOCATION	REMARKS	CALCULATIONS	QUANTITY
ITEM 404 - ASPHALT CONCRETE			
RETURNS AT S.R. 303	(526 S.F.) (1-1/4" DEPTH)	526 x 0.1042 x 1/27	2.03
55 + 51.06 To 61 + 00	(20' WIDTH) (1-1/4" DEPTH)	548.94 x 20 x 0.1042	42.36
CROSS-HATCHED AREA	(SEE PLAN & PROFILE)(2600 S.F.)	2600 x 0.1042 x 1/27	10.03
		TOTAL	54.42 C.Y.
ITEM 302 - ASPHALT CONCRETE			
RETURNS AT S.R. 303	(536 S.F.)(1-3/4" DEPTH)	536 x 0.1458 x 1/27	2.89
55 + 51.06 To 61 + 00	(20.5' WIDTH)(1-3/4" DEPTH)	548.94 x 20.5 x 0.1458 x 1/27	60.77
CROSS-HATCHED AREA	(SEE PLAN & PROFILE)(2600 S.F.)	2600 x 0.1458 x 1/27	14.04
		TOTAL	77.70 C.Y.
ITEM 304 - AGGREGATE BASE			
RETURNS AT S.R. 303	(546 S.F.)(5"DPETH)	546 x 0.4167 x 1/27	8.43
55 + 51.06 To 61 + 00	(21' WIDTH)(5" DPETH)	548.94 x 21 x 0.4167 x 1/27	177.91
CROSS-HARCHED AREA	(SEE PLAN & PROFILE)(2600 S.F.)	2600 x 0.4167 x 1/27	40.13
		TOTAL	226.47 C.Y.
ITEM 310 - SUBBASE			
RETURNS AT S.R. 303	(566 S.F.)(4" DEPTH)	566 x 0.3333 x 1/27	6.99
55 + 51.06 To 61 + 00	(22' WIDTH) (4" DEPTH)	548.94 x 22 x 0.3333 x 1/27	149.09
CROSS-HATCHED AREA	(SEE PLAN & PROFILE)(2600 S.F.)	2600 x 0.3333 x 1/27	32.10
		TOTAL	188.18 C.Y.
ITEM 408 - BITUMINOUS PRIME COAT (0.40 GAL. PER S.Y.)			
UNDER ITEM 302	77.70 C.Y. x 20.57 = 1598.29 S.Y.	1598.29 x 0.40	639
		TOTAL	639 GAL.
ITEM 203 - SUBGRADE PREPARATION			
UNDER ITEM 404	54.42 C.Y.	54.42 x 28.8	1567
		TOTAL	1567 S.Y.

CUL-DE-SAC AT EXIST. STINE RD.

LOCATION	REMARKS	CALCULATIONS	QUANTITY
ITEM 404 - ASPHALT CONCRETE			
	(R=37')(1-1/4" DEPTH)	$\pi \times 37^2 \times 0.1042 \times 1/27$	16.60
	(AREA @ ENTRANCE = 906 S.F.)	906 x 0.1042 x 1/27	3.50
		TOTAL	20.10 C.Y.
ITEM 302 - ASPHALT CONCRETE			
UNDER ITEM 404	(1-3/4" DEPTH)	20.10 x 1.4	28.14
ADDITIONAL 3" WIDTH	(1-3/4" DPETH) (267.09 L.F.)	267.09 x 0.250 x 0.1458 x 1/27	0.36
		TOTAL	28.50 C.Y.
ITEM 304 - AGGREGATE BASE			
UNDER ITEM 404	(5" DEPTH)	20.10 x 4	80.40
ADDITIONAL 6" WIDTH	(5" DEPTH) (267.09 L.F.)	267.09 x 0.50 x 0.4167 x 1/27	2.06
		TOTAL	82.46 C.Y.
ITEM 310 - SUBBASE			
UNDER ITEM 404	(4" DEPTH)	20.10 x 3.2	64.32
ADDITIONAL 12" WIDTH	(4" DEPTH) (267.09 L.F.)	267.09 x 1.0 x 0.3333 x 1/27	3.30
		TOTAL	67.62 C.Y.
ITEM 408 - BITUMINOUS PRIME COAT (0.40 GAL. PER S.Y.)			
UNDER ITEM 302	(28.50 C.Y. x 20.57 = 586 S.Y.)	586 x 0.40	234
		TOTAL	234 GAL.
ITEM 203 - SUBGRADE PREPARATION			
UNDER ITEM 404	20.10 C.Y.	20.10 x 28.8	579
		TOTAL	579 S.Y.

RELOC. MAJOR RD. C.H. 172

LOCATION	REMARKS	CALCULATION	QUANTITY
ITEM 404 - ASPHALT CONCRETE			
41 + 50 To 58 + 00.70	(20' WIDTH)(2" DEPTH)	1650.70 x 20 x 0.1667 x 1/27	203.79
RETURNS AT S.R. 303	(683 S.F.)(2" DEPTH)	683 x 0.1667 x 1/27	4.22
		TOTAL	208.01 C.Y.
ITEM 304 - AGGREGATE BASE			
41 + 50 To 58 + 00.70	(21'WIDTH)(5" DEPTH).	1650.70 x 21 x 0.4167 x 1/27	534.95
RETURNS AT S.R. 303	(701 S.F.)(5" DEPTH)	701 x 0.4167 x 1/27	10.82
		TOTAL	545.77 C.Y.
ITEM 310 - SUBBASE			
41 + 50 To 58 + 00.70	(22' WIDTH)(4" DEPTH)	1650.70 x 22 x 0.3333 x 1/27	448.34
RETURNS AT S.R. 303	(719 S.F.)(4" DEPTH)	719 x 0.3333 x 1/27	8.88
		TOTAL	457.22 C.Y.
ITEM 408 - BITUMINOUS PRIME COAT (0.40 GAL. PER S.Y.)			
UNDER ITEM 404	208.01 C.Y. x 18 = 3744.18 S.Y.	3744.18 x 0.40	1498
		TOTAL	1498 GAL.
ITEM 203 - SUBGRADE PREPARATION			
UNDER ITEM 404	208.01 C.Y.	208.01 x 18	3744
		TOTAL	3744 S.Y.

COMPUTATIONS

DELINEATORS

FED. RD.	STATE	PROJECT	
2	OHIO		

22-A 510

SUM-271-2.98

MAIN LINE SUM 271 - 2.98 (SHEET Nº2)

ITEM 620 DELINEATORS

LOCATION FROM	TO	SIDE	SPACING	TYPE A-1 POST	BRACKET
156 + 00	157 + 90	LT.	190	2	
176 + 00	186 + 00	LT.	200	6	
195 + 65	197 + 00	LT.	135	1	
197 + 00	199 + 00	LT.	200		1
199 + 00	211 + 00	LT.	200	6	
156 + 00	166 + 00	RT.	200	6	
177 + 00	185 + 00	RT.	200	5	
185 + 00	189 + 00	RT.	200		2
189 + 00	193 + 00	RT.	200	2	
		SUB-TOTAL		28	3

MAIN LINE SUM 271-2.98 (SHEET Nº3)

LOCATION FROM	TO	SIDE	SPACING	TYPE A-1 POST
211 + 00	287 + 00	LT.	200	38
306 + 00	312 + 00	LT.	200	4
321 + 45	323 + 00	LT.	155	1
323 + 00	331 + 00	LT.	200	4
210 + 50	296 + 50	RT.	200	43
308 + 00	314 + 00	RT.	200	4
		SUB-TOTAL		94

MAIN LINE SUM 271 - 2.98 (SHEET Nº4)

LOCATION FROM	TO	SIDE	SPACING	TYPE A-1 POST	BRACKET
331 + 00	345 + 00	LT.	200	7	
345 + 00	347 + 00	LT.	200		1
347 + 00	421 + 00	LT.	200	37	
331 + 05	333 + 00	RT.	195	1	
333 + 00	345 + 00	RT.	200	6	
345 + 00	349 + 00	RT.	200		2
349 + 00	421 + 00	RT.	200	36	
		SUB-TOTAL		87	3
		SUM 271 - 2.98 GRAND TOTAL		209	6

LOCATION FROM	TO	SIDE	SPACING	TYPE C-2 POST	BRACKET	TYPE C-3 POST
RAMP "A"						
157 + 90 (I-271)	158 + 90 (I-271)	LT.	100			1
158 + 90 (I-271)	170 + 90 (I-271)	LT.	100	12		
170 + 90	172 + 90	LT.	100	2		
172 + 90	173 + 70	LT.	80	1		
173 + 70	174 + 20	LT.	50	1		
174 + 20	175 + 20	LT. & RT.	50	3		
175 + 20	177 + 20	RT.	50	4		
177 + 20	178 + 00	RT.	80	1		
178 + 00	179 + 00	RT. & LT.	100	2		
179 + 00	193 + 00	LT.	100	14		
193 + 00	193 + 80	LT. & RT.	80	2		
193 + 80	194 + 30	RT.	50	1		
194 + 30	197 + 30	RT.	50	6		
197 + 30	198 + 10	RT. & LT.	80	2		
198 + 10	203 + 10	LT.	100	5		
935 + 75 (I-77)	939 + 75	LT.	100	4		
		SUB-TOTAL		60	0	1
RAMP "B"						
166 + 00 (I-271)	167 + 60 (I-271)	RT.	160	1		
167 + 60 (I-271)	170 + 60 I-271)	RT.	100	3		
170 + 60 (I-271)	185 + 60	RT.	100	15		
185 + 60	188 + 60	RT.	100		3	
188 + 60	189 + 60	RT.	100	1		
189 + 60	190 + 40	RT.	80	1		
190 + 40	190 + 90	RT.	50	1		
190 + 90	205 + 40	RT.	50	29		
205 + 40	206 + 20	RT.	80	1		
206 + 20	212 + 20	RT.	100	6		
212 + 20	213 + 20	RT. & LT.	100	2		
213 + 20	213 + 80	LT.	60	1		
213 + 80	216 + 80	LT.	60	5		
216 + 80	217 + 40	LT. & RT.	60	2		
217 + 40	221 + 40	RT.	100	4		
221 + 40	938 + 00 (I-77)	RT.	99.11	1		
938 + 00 (I-77)	949 + 00 (I-77)	RT.	100	11		
949 + 00 (I-77)	950 + 00 (I-77)	RT.	100			1
		SUB-TOTAL		84	3	1
RAMP "C"						
182 + 90	187 + 90	RT.	100	6		
187 + 90	188 + 70	RT.	80	1		
188 + 70	189 + 20	RT. & LT.	50	2		
189 + 20	193 + 20	LT.	50	8		
193 + 20	193 + 70	LT. & RT.	50	2		
193 + 70	194 + 50	RT.	80	1		
194 + 50	197 + 50	RT.	100	3		
197 + 50	199 + 50	RT.	100		2	
199 + 50	209 + 50 (I-271)	RT.	100	10		
209 + 50 (I-271)	210 + 50 (I-271)	RT.	100			1
		SUB-TOTAL		33	2	1
RAMP "D"						
910 + 00 (I-77)						1
910 + 00 (I-77)	915 + 00 (I-77)			5		
915 + 00 (I-77)	167 + 55	LT.	101.98	1		
167 + 55	169 + 55	LT.	100	2		
169 + 55	170 + 15	LT.	60	1		
170 + 15	170 + 45	LT.	30	1		
170 + 45	171 + 65	LT.	30	4		
171 + 65	171 + 95	LT. & RT.	30	2		
171 + 95	185 + 75	RT.	30	46		
185 + 75	186 + 05	RT. & LT.	30	2		
186 + 05	186 + 65	LT.	60	1		
186 + 65	187 + 65	LT.	100	1		
187 + 65	190 + 65	LT.	100		3	
190 + 65	191 + 65 (I-271)	LT.	100	1		
191 + 65 (I-271)	195 + 65 (I-271)	LT.	100	4		
		SUB-TOTAL		71	3	1

LOCATION FROM	TO	SIDE	SPACING	TYPE C-2 POST	BRACKET	TYPE C-3 POST
RAMP "E"						
296 + 50 (I-271)	298 + 50 (I-271)	RT.	200	1		
298 + 50 (I-271)	301 + 50 (I-271)	RT.	100	3		
301 + 50 (I-271)	306 + 50	RT.	100	5		
306 + 50	307 + 20	RT.	70	1		
307 + 20	307 + 60	RT.& LT.	40	2		
307 + 60	310 + 40	LT.	40	7		
310 + 40	311 + 10	LT. & RT.	70	2		
311 + 10	313 + 10	RT.	100	2		
313 + 10	313 + 70	RT.	60	1		
313 + 70	314 + 00	RT.	30	1		
314 + 00	315 + 50	RT.	30	5		
315 + 50	315 + 80	RT. & MED.	30	2		
315 + 80	317 + 30	RT. & MED.	30	10		
317 + 30	317 + 90	RT.LT.& MED.	60	3		
317 + 90	318 + 90	RT. & LT.	100	2		
		SUB-TOTAL		47	0	0
RAMP "F"						
287 + 00 (I-271)	288 + 75 (I-271)	LT.	175			1
288 + 75 (I-271)	300 + 75 (I-271)	LT.	100	12		
300 + 75	304 + 75	LT.	100	4		
304 + 75	305 + 45	LT.	70	1		
305 + 45	305 + 80	Lt.& RT.	35	2		
305 + 80	308 + 20	RT.	40	6		
308 + 20	308 + 90	RT. & LT.	70	2		
308 + 90	311 + 90	LT.	100	3		
311 + 90	312 + 50	LT.& ℄ Med.	60	2		
312 + 50	312 + 80	LT.& ℄ Med.	30	2		
312 + 80	313 + 10	LT.& ℄ Med.	30	2		
313 + 10	313 + 70	Lt.RT.&Med.	60	3		
313 + 70	314 + 70	Lt.& RT.	100	2		
		SUB-TOTAL		41	0	1
RAMP "G"						
(Ramp "F") 312 + 50	(Ramp "G") 307 + 45	℄ MED.	30	1		
(Ramp "G") 307 + 45	(Ramp "G") 311 + 95	RT.	30	15		
311 + 95	312 + 25	RT. & LT.	30	2		
312 + 25	312 + 85	LT.	30	2		
312 + 85	313 + 45	LT.	60	1		
313 + 45	321 + 45 (I-271)	LT.	100	8		
		SUB-TOTAL		29	0	0
RAMP "H"						
(Ramp "E") 315 + 80	(Ramp "H") 308 + 45	℄ MED.	29'	1		
(Ramp "H") 308 + 45	(Ramp "H") 309 + 65	℄ MED.	30	4		
309 + 65	313 + 85	LT.	30	14		
313 + 85	314 + 15	LT. & RT.	30	2		
314 + 15	314 + 45	RT.	30	1		
314 + 45	315 + 05	RT.	60	1		
315 + 05	319 + 05 (I-271)	RT.	100	4		
319 + 05 (I-271)	330 + 05 (I-271)	RT.	100	11		
330 + 05 (I-271)	331 + 05 (I-271)	RT.	100			1
		SUB-TOTAL		38	0	1
		ALL RAMPS GRAND TOTAL		403	8	6

COMPUTATIONS

RECAPITULATION

FED. RD.	STATE	PROJECT	
2	OHIO		

23
510

SUM-271-2.98

EARTHWORK ANALYSIS — ITEM 203

LOCATION	EXCAVATION CU.YDS.	EMBANK. CU.YDS.
156 + 00 TO 160 + 00	64,923	0
160 + 00 TO 170 + 00	43,396	10,896
170 + 00 TO 180 + 00 (Includes I-271 Extended)	3,806	128,101
180 + 00 TO 190 + 00 (Includes I-271 Extended)	45,506	27,185
190 + 00 TO 200 + 00	3,717	79,027
200 + 00 TO 210 + 00	57,717	6,175
210 + 00 TO 220 + 00	14,985	112,284
220 + 00 TO 230 + 00	30,785	296,839
230 + 00 TO 240 + 00	51,977	179,773
240 + 00 TO 250 + 00	190,955	52,814
250 + 00 TO 260 + 00	1,880	1,137,930
260 + 00 TO 270 + 00	113,494	17,166
270 + 00 TO 280 + 00	350,444	0
280 + 00 TO 290 + 00	296,571	0
290 + 00 TO 300 + 00	48,724	4,952
300 + 00 TO 310 + 00	81,892	408
310 + 00 TO 320 + 00	45,130	1,713
320 + 00 TO 330 + 00	181,239	0
330 + 00 TO 340 + 00	368,304	0
340 + 00 TO 350 + 00	99,161	44
350 + 00 TO 360 + 00	30,895	19,843
360 + 00 TO 370 + 00	699	182,206
370 + 00 TO 380 + 00	2,373	435,161
380 + 00 TO 390 + 00	209,697	7,526
390 + 00 TO 400 + 00	374,847	1,376
400 + 00 TO 421 + 97.75	14,524	104,859
RAMP "A"	43,243	1,263
RAMP "B" (Includes Ramp "B" Extended)	178,097	77,431
RAMP "C"	8,438	16,494
RAMP "D" (Includes Ramp "D" Extended)	132,667	8,055
RAMP "E"	5,182	29,755
RAMP "F"	35,469	48
RAMP "G"	12,666	0
RAMP "H"	10,493	263
EXIST. I-77 (Includes Exist. I-77 EXTENDED AND MEDIAN RESTORATION)	186,715	9,623
RELOC. S.R. 303 (Includes Reloc. S.R. 303 Extended)	39,407	50,524
SERVICE RD. AT RELOC. S.R. 303	117	4,144
RELOC. STINE ROAD	1,722	233
RELOC. MAJOR ROAD	5,856	3,149
DRIVEWAYS (SEE THIS SHEET)	498	381
CULVERTS SHEET Nos. (320-336)	3,005	0
FURNACE RUN CREEK	1,489	368
TOTALS	3,392,675	3,008,009

ITEM 203	EARTHWORK C.Y.
EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	3,392,675
EMBANKMENT	3,008,009

NOTE: ITEMS 304 AND 408 THRU DRIVEWAY AND MAILBOX APPROACHES (8' WIDTH) ARE INCLUDED WITH RELOC. S.R. 303.

DRIVEWAYS AND MAILBOX APPROACHES

LOCATION		ITEM 203 EARTHWORK		ITEM 304	ITEM 404	ITEM 408
DRIVEWAYS	MAILBOX APPROACHES	EXCAVATION C. Y.	EMBANKMENT C. Y.	AGGREGATE BASE-C. Y.	ASPHALT CONC.-C.Y.	BIT. PRIME COAT-Gal.
	S. R. 303 39 + 75 LT.	0	0	0	1.9	0
S.R. 303 40 + 58.90 RT.		171	13	40.6	17.5	108
SERVICE RD. 48 + 75.50 LT.		9	53	19.4	7.2	52
SERVICE RD. EXTD. 53 + 46.71		151	274	50.6	18.8	135
RELOC. STINE RD. 57 + 83.87 LT.	RELOC. STINE RD. 57 + 49.50 LT.	76	8	27.1	10.3	74
S. R. 303 60 + 73 RT.		0	33	7.6	5.3	22
	S. R. 303 61 + 16 LT.	0	0	0	1.7	0
I-271 321 + 10 (164.81 LT)		91	0	40.1	14.8	107
TOTALS		498	381	185.4	77.5	498

ROADWAY AND PAVEMENT

LOCATION	ITEM 203 SUBGRADE PREPARA. S.Y.	ITEM 301 BITUM. AGGREG. BASE C.Y.	ITEM 302 ASPH. CONC. (70-85) C.Y.	ITEM 304 AGGRE. BASE C.Y.	ITEM 310 SUBBASE GRAD."A" OR "B" AS PER PLAN C.Y.	ITEM 310 SUBBASE C.Y.	ITEM 404 ASPH. CONC. (70-85) C.Y.	ITEM 408 BITUM. PRIME COAT 702.03 RT RT-2 OR RT-3 GAL.	ITEM 409 SEAL COAT COVER AGGRE. No.8 C.Y.	ITEM 409 SEAL COAT BIT. MAT. AS PER PLAN GAL.	ITEM 409 SEAL COAT BIT. MAT. (707.03 CBAE-3) GAL.	ITEM 451 9" REIN. PORT. CEMENT CONC. PAVEM'T S.Y.	ITEM 451 10" REIN. PORT. CEMENT CONC. PAVEM'T S.Y.	ITEM SPEC. DRAIN. CONN. USING #8 AGGREG C.Y.
MAINLINE														
SUM 271-2.98	194,148	6,559		29,056	31,013	6,380			632	23,707			148,903	2,605
RAMP "A"	8,099	254		418	1,147	191			24	912		5,506		221
RAMP "B"	12,467	395		626	1,741	305			38	1,423		7,635		477
RAMP "C"	2,769	70		109	433	28			7	251		1,932		78
RAMP "D"	5,119	123		167	820	31			12	441		3,649		144
RAMP "E"	5,015	105		173	773	69			10	377		3,622		84
RAMP "F"	4,933	107		176	753	75			10	386		3,556		88
RAMP "G"	1,958	34		51	61	6			3	124		1,191		44
RAMP "H"	2,737	61		93	440	29			6	219		1,931		72
EXISTING I-77	9,043	318		656	1,360	243			31	1142			5,231	133
RELOC. S.R. 303	16,106	2,062	413	762		2,161	332	1,443	28		1037			
SERVICE RD. AT S.R. 303	1,206			175		147	67	482						
RELOC. STINE RD.	1,567		78	226		188	54	639						
CUL-DE-SAC AT EXIST. STINE RD.	579		29	82		68	20	234						
RELOC. MAJOR RD.	3,744			546		457	208	1,498						
DRIVEWAY (see this sheet)				185			78	498						
*THREE CROSS OVERS		128		317		254			12	457				
TOTALS	# 304,490	10,216	520	33,818	38,541	10,632	759	4,794	813	29 439	1037	29,022	154,134	3,946

DEDUCT 64,237 S.Y. FOR ROCK AREA & 34,400 S.Y. For Lime Stabilization – To Gen. Sum. 205,853 S.Y.

* CROSS OVER LOCATIONS
STA. 370+60 I-77
STA. 255+50 I-271
STA. 335+30 I-271

PAVEMENT MARKINGS

LOCATION	REMARKS	CALCULATIONS	QUANTITY
ITEM 621 - EDGE LINES (4")			
MAINLINE	LENGTH OF LINE = 26,573.75 L.F.	26,573.75 x 4 x 1/5280	20.132
ACC. LANES	ADD 528' FOR EACH ACC. LANE	528 x 4 x 1/5280	0.400
DEC. LANES	DEDUCT 100' FOR EACH DEC. LANE	100 x 4 x 1/5280	- 0.076
RAMP "A"	INCLUDES DEC. LANE (6051 L.F.)	6051 x 1/5280	1.146
RAMP "B"	INCLUDES ACC. LANE (10,161 L.F.)	10,161 x 1/5280	1.924
RAMP "C"	INCLUDES DEC. LANE (2,314 L.F.)	2,314 x 1/5280	0.438
RAMP "D"	INCLUDES ACC. LANE (4,211 L.F.)	4,211 x 1/5280	0.798
RAMP "E"	INCLUDES RETURNS (3150 L.F.)	3150 x 1/5280	0.597
RAMP "F"	INCLUDES RETURNS (3635 L.F.)	3635 x 1/5280	0.688
RAMP "G"	(1260 L.F.)	1260 x 1/5280	0.239
RAMP "H"	(1720 L.F.)	1720 x 1/5280	0.326
S.R. 303 (RELOC.)	(10,600 L.F.)	10,600 x 1/5280	2.008
		TOTAL	28.620 MI.
ITEM 621 - LANE LINES (6")			
MAINLINE	LENGTH OF LINE = 26,573.75 L.F.	26,573.75 x 2 x .375 x 1/5280	3.775
S.R. 303 (RELOC.)	(1887.42 L.F.)	1887.42 x 2 x .375 x 1/5280	0.268
		TOTAL	4.043 MI.
ITEM 621 - LANE LINES (4")			
DEC. LANES	(1380 L.F.)	1380 x .375 x 1/5280	0.098
ACC. LANES	(1460 L.F.)	1460 x .375 x 1/5280	0.104
		TOTAL	0.202 MI.
ITEM 621 - BARRIER LINES (4") S.R. 303			
S.R. 303 (RELOC.)	(1900 L.F.)	1900 x 1/5280	0.360
		TOTAL	0.360 MI.
ITEM 621 - CHANNELIZATION LINES (8")			
DEC. LANES	(3502 L.F.)	3502 x 1/5280	0.663
ACC. LANES	(1728 L.F.)	1728 x 1/5280	0.327
		TOTAL	0.990 MI.
ITEM 621 - STOP LINES			
MAJOR ROAD AND S.R. 303		LUMP	
RAMP "F" AND S.R. 303		LUMP	
RAMP "E" AND S.R. 303		LUMP	
STINE ROAD AND S.R. 303		LUMP	
SERVICE ROAD AND S.R. 303		LUMP	
ITEM 621 - CURB AND ISLAND MARKING			
DEC. LANES	(6 STANDARD TRAFFIC ISLANDS)	LUMP	
	(4,247 L.F. CURBING)	LUMP	
ITEM 621 - BROAD TRANSVERSE STRIPES			
	(6 STANDARD DEC. LANES)	LUMP	
	(6 STANDARD ACC. LANES)	LUMP	

SEEDING AND MULCHING — ITEM 659

LOCATION	SEEDING AND MULCHING S.Y.
156 + 00 TO 160 + 00	13,185
160 + 00 TO 170 + 00	24,610
170 + 00 TO 180 + 00	21,500
180 + 00 TO 190 + 00	17,200
190 + 00 TO 200 + 00	18,275
200 + 00 TO 210 + 00	23,970
210 + 00 TO 220 + 00	37,500
220 + 00 TO 230 + 00	54,420
230 + 00 TO 240 + 00	50,343
240 + 00 TO 250 + 00	51,800
250 + 00 TO 260 + 00	77,960
260 + 00 TO 270 + 00	38,937
270 + 00 TO 280 + 00	26,950
280 + 00 TO 290 + 00	23,740
290 + 00 TO 300 + 00	20,540
300 + 00 TO 310 + 00	20,005
310 + 00 TO 320 + 00	19,500
320 + 00 TO 330 + 00	21,610
330 + 00 TO 340 + 00	26,333
340 + 00 TO 350 + 00	19,184
350 + 00 TO 360 + 00	26,333
360 + 00 TO 370 + 00	39,606
370 + 00 TO 380 + 00	43,229
380 + 00 TO 390 + 00	36,630
390 + 00 TO 400 + 00	44,330
400 + 00 TO 410 + 00	14,407
410 + 00 TO 420 + 00	2 778
420 + 00 TO 421 + 97.75	486
I-77 INTERCHANGE (Includes Exist. I-77 & MEDIAN RESTORATION)	212467
(S.R. 303 INTERCHANGE) (Includes S.R. 303 & Service Rd.)	85,222
RELOC. STINE ROAD	14,082
RELOC. MAJOR ROAD	3,122
TOTALS	1,130,254

From Sh. 25 A
Seeding + Sodding
= 1,130,254 + 775 + 684 = 1,131,713 S.Y.

Commercial Fertilizer
1,131,713 SY X 0.00009 Ton/SY = 101.85 Tons

Agricultural Liming
1,131,713 SY X 0.00045 Ton/SY = 509.27 Tons

DELINEATORS — ITEM 620
SEE SHEET 22-A FOR LOCATIONS

MONO-DIRECTIONAL	TYPE	A-1	POST MOUNTED	209
"	"	A-1	BRACKET MOUNTED	6
"	"	C-2	POST MOUNTED	403
"	"	C-2	BRACKET MOUNTED	8
"	"	C-3	POST MOUNTED	6

Rev. 3-8-67
Rev. 2-8-67

RECAPITULATION

QUANTITY SUMMARY
ROADWAY

FED.RD.	STATE	PROJECT	
	OHIO		

24/510

SUM-271-2.98

TYPE CODE 7221
* TYPE CODE Y-005

ITEM	SHEET 17	14	15	16	16-A	23	39	40	41	42	43	44	45	46	47	48	49	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	SUB TOTAL ITEM	QUANTITY	UNIT	DESCRIPTION
201		LUMP																															201	LUMP	LUMP	CLEARING AND GRUBBING
202																																	202		SQ.YDS.	EXISTING PAVEMENT REMOVED AND DISPOSED OF
203						3,392,675																											203	3,392,675	CU.YDS.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203						3,008,009																											203	3,008,009	CU.YDS.	EMBANKMENT
203						205,853																											203	205,853	SQ.YDS.	SUBGRADE PREPARATION
203		93																															203	93	HOURS	PROOF ROLLING
410				50																													410	50	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE C
410				50																													410	50	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
502					LUMP																												502	LUMP	LUMP	TEMPORARY RUN-AROUND BRIDGE
604							1	1	1	1	1	2	1	1	1	3	2	2	1	1	1	2	1	1	2	3	1	2	1	1	2		604	36	EACH	MONUMENT ASSEMBLIES, CENTERLINE REFERENCE MONUMENTS, AS PER PLAN
606																																	604		LIN.FT.	GUARD RAIL, TYPE 4 USING STEEL POSTS
606																																	606		LIN.FT.	TEMPORARY GUARDRAIL, AS PER PLAN
606								100	450	300	1,377.5	460	1,862.5	3,000	3,000	350	2,000	300	1,000	1,000	800		387.5			650	400	2,000	1,950	300		750	606	23,037.5	LIN.FT.	GUARDRAIL, TYPE 4, MODIFIED AS PER PLAN
606																																	606		LIN.FT.	GUARDRAIL, TYPE 1 (FOUR ROPES), USING STEEL POSTS, TURNPIKE STANDARD.
606										150	300	150														162.5	137.5						606	900	LIN.FT.	GUARDRAIL, TYPE 4, BARRIER, MODIFIED AS PER PLAN
607																																	607		LIN.FT.	FENCE, TYPE 47
615																																	615		SQ.YDS.	CLASS-A, TEMPORARY PAVEMENT
615																																	615		SQ.YDS.	CLASS-B, TEMPORARY PAVEMENT
615				LUMP	LUMP																												615	LUMP	LUMP	TEMPORARY ROADS, AS PER PLAN
616		10		4																													616	14	TONS	CALCIUM CHLORIDE
616		400																															616	400	M.GALS.	WATER
620						209																											620	209	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE A-1, POST MOUNTED
620						6																											620	6	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE A-1, BRACKET MOUNTED
620						403																											620	403	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-2, POST MOUNTED
620						8																											620	8	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-2, BRACKET MOUNTED
620						6																											620	6	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-3, POST MOUNTED
621						28.62																											621	28.62	MILES	EDGE LINES (4" WIDTH)
621						4.04																											621	4.04	MILES	LANE LINES (6" WIDTH)
621						0.20																											621	0.20	MILES	LANE LINES (4" WIDTH)
621						0.36																											621	0.36	MILES	BARRIER LINES (4" WIDTH)
621						0.55																											621	0.55	MILES	CHANNELIZATION LINES (8" WIDTH)
621						LUMP																											621	LUMP	LUMP	STOP LINES
621						LUMP																											621	LUMP	LUMP	CURB AND ISLAND MARKING
621						LUMP																											621	LUMP	LUMP	BROAD TRANSVERSE STRIPES
656																																	656		M-SQ.FT	ROADSIDE CLEANUP
659						1,130,254																											* 659	1,130,254	SQ.YDS.	SEEDING AND MULCHING, AS PER PLAN
659						101.85																											* 659	101.85	TONS	COMMERCIAL FERTILIZER (12-12-12)
659						509.27																											* 659	509.27	TONS	AGRICULTURAL LIMING
660														42				233	167				25										* 660	467	SQ.YDS.	SODDING
660										91	82																						* 660	173	SQ.YDS.	SODDING FOR SPL. BERM & SLOPE PROTECTION - AS PER PLAN
667							354	2,079	406	154	325	1,223	656	125	125	1,099	48	1,156	991	2,652	1,426	61	382	542	250	368	960	167	48	1,099	2,314	373	* 667	19,383	SQ.YDS.	JUTE MATTING
SPECIAL													1																1				SPECIAL	2	EACH	PLUGGING GAS WELLS
SPECIAL									1																				1		1		SPECIAL	3	EACH	DRILLED WELLS ABANDONED
SPECIAL																													3				SPECIAL	3	EACH	CLEANING AND DISPOSING OF SEPTIC TANKS
Special	34,400																																Special	34,400	Sq. Yd.	Spreading, Mixing, Shaping and Compacting Lime - Soil Stabilized Mixture
Special	465																																Special	465	Ton	Delivered Hydrated Lime for Lime - Soil Stabilized Mixture

Rev. 8-9-67
Rev. 7-28-67
Rev. 3-8-67
Rev. 2-8-67

QUANTITY SUMMARY
ROADWAY

FED.RD.	STATE	PROJECT	
	OHIO		

25/510

SUM-271-2.98

TYPE CODE 7221
*TYPE CODE Y-005

ITEM	SHEET NUMBERS: 24	66	67	199	200	201	202	223	224	225	226	227	228	229	230	231	232	233	234	235	236	262	263	264	276	277	278	284	289	290	292	SUB TOTAL ITEM	QUANTITY	UNIT	DESCRIPTION
201	LUMP																															201	LUMP	LUMP	CLEARING AND GRUBBING
202				233																		1,863	1,900	1,900								202	5,856	SQ.YDS.	EXISTING PAVEMENT REMOVED AND DISPOSED OF
203	3,392,675																															203	3,392,675	CU.YDS.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203	3,008,009																															203	3,008,009	CU.YDS.	EMBANKMENT
203	205,853																															203	205,853	SQ.YDS.	SUBGRADE PREPARATION
203	93																															203	93	HOURS	PROOF ROLLING
410	50																															410	50	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE C
410	50																															410	50	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
502	LUMP																															502	LUMP	LUMP	TEMPORARY RUN-AROUND BRIDGE
604																						2	1	2								604	5	EACH	MONUMENT ASSEMBLIES
604	36																															604	36	EACH	CENTERLINE REFERENCE MONUMENTS, AS PER PLAN
606																																606		LIN.FT.	GUARD RAIL, TYPE 4, Using Steel Posts
606				250																												606	250	LIN.FT.	TEMPORARY GUARDRAIL, AS PER PLAN
606	23,037.5	1,155	445	7375		325	500	412.5				587.5	767.5	1307.5	175	500	50	712.5	325		225	475	1,075	375						712.5		606	34,200	LIN.FT.	GUARDRAIL, TYPE 4, MODIFIED AS PER Plan
606																																606		LIN.FT.	GUARDRAIL, TYPE 1 (FOUR ROPES) Using Steel Posts, Turnpike Standard
606	900																															606	900	LIN.FT.	GUARDRAIL, TYPE 4, BARRIER, DESIGN 5 MODIFIED AS PER PLAN
607																																607		LIN.FT.	FENCE, TYPE 47
615																																615		SQ.YDS.	CLASS-A, TEMPORARY PAVEMENT
615																									1,331	2,000	2,246					615	6,177	SQ.YDS.	CLASS-B, TEMPORARY PAVEMENT
615	LUMP																															615	LUMP	LUMP	TEMPORARY ROADS, AS PER PLAN
616	14																															616	14	TONS	CALCIUM CHLORIDE
616	400																															616	400	M.GALS.	WATER
620	209																															620	209	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE A-1, POST MOUNTED
620	6																															620	6	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE A-1, BRACKET MOUNTED
620	403																															620	403	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-2, POST MOUNTED
620	8																															620	8	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-2, BRACKET MOUNTED
620	6																															620	6	EACH	MONO-DIRECTIONAL DELINEATORS, TYPE C-3, POST MOUNTED
621	28.62																															621	28.62	MILES	EDGE LINES (4" WIDTH)
621	4.04																															621	4.04	MILES	LANE LINES (6" WIDTH)
621	0.20																															621	0.20	MILES	LANE LINES (4" WIDTH)
621	0.36																															621	0.36	MILES	BARRIER LINES (4" WIDTH)
621	0.55																															621	0.55	MILES	CHANNELIZATION LINES (8" WIDTH)
621	LUMP																															621	LUMP	LUMP	STOP LINES
621	LUMP																															621	LUMP	LUMP	CURB AND ISLAND MARKING
621	LUMP																															621	LUMP	LUMP	BROAD TRANSVERSE STRIPES
656																											61					656	61	M.SQ.FT.	ROADSIDE CLEANUP
659	1,130,254																															* 659	1,130,254	SQ.YDS.	SEEDING AND MULCHING, AS PER PLAN
659	101.85																															* 659	101.85	TONS	COMMERCIAL FERTILIZER, (12-12-12)
659	509.27																															* 659	509.27	TONS	AGRICULTURAL LIMING
660	467																															* 660	467	SQ.YDS.	SODDING
660	173												77										181									* 660	431	SQ.YDS.	SODDING FOR SPL. BERM & SLOPE PROTECTION- AS PER PLAN
667	19,383			327	632	308		166	1,500	521	131		234	738	972	108	142		292	577		369	397	594				105	546	132		* 667	28,174	SQ.YDS.	JUTE MATTING
SPECIAL	2																															SPECIAL	2	EACH	PLUGGING GAS WELLS
SPECIAL	3																												1			SPECIAL	4	EACH	DRILLED WELLS ABANDONED
SPECIAL	3																															SPECIAL	3	EACH	CLEANING AND DISPOSING OF SEPTIC TANKS
Special	34,400																															Special	34,400	Sq.Yd.	Spreading, Mixing, Shaping and Compacting Lime-Soil Stabilized Mixture
Special	465																															Special	465	Tons	Delivered Hydrated Lime for Lime-Soil Stabilized Mixture

Rev. 8-3-67
Rev. 7-28-67
Rev. 3-8-67

QUANTITY SUMMARY
ROADWAY

FED.RD.	STATE	PROJECT	
	OHIO		

25A 510

SUM-271-2.98

TYPE CODE 7221
*TYPE CODE Y-005

ITEM	25	293	294	301	304	305	310	312	313	314	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	481 Normal	481 100% Stab.	354
201	LUMP																													
202	5,896						1,488																							
203	3,352,675																													
203	3,008,009																													
203	205,853																													
203	93																													
410	50																													
410	50																													
502	LUMP																													
604	5			2	1	2																								
604	36																													
606							1175																							
606	250																													
606	34,200		3375			400																								500
606							100																							
606	900																													
607																											52,653	3272		
615								2733	2667	2901																				
615	6,177																													
615	LUMP																													
616	14																													
616	400																													
620	209																													
620	6																													
620	403																													
620	8																													
620	6																													
621	28.62																													
621	4.04																													
621	0.20																													
621	0.36																													
621	0.95																													
621	LUMP																													
621	LUMP																													
621	LUMP																													
656	61																													
659	1,130,254																													
659	101.85																													
659	509.27																													
660	467										7	6	6	6	6	9	132	108	8	7	5	7	7	10	15	5	4			
660	431						253																							
667	28,174	454	160		417	125										528										88				
SPECIAL	2																													
SPECIAL	4																													
SPECIAL	3																													
Special	34,400																													
Special	465																													

GRAND TOTAL ITEM	QUANTITY	UNIT	DESCRIPTION
201	LUMP	LUMP	CLEARING AND GRUBBING
202	7,384	SQ.YDS.	EXISTING PAVEMENT REMOVED AND DISPOSED OF
203	3,352,675	CU.YDS.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203	3,008,009	CU.YDS.	EMBANKMENT
203	205,853	SQ.YDS.	SUBGRADE PREPARATION
203	93	HOURS	PROOF ROLLING
410	50	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE C
410	50	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
502	LUMP	LUMP	TEMPORARY RUN-AROUND BRIDGE
604	10	EACH	STANDARD MONUMENT ASSEMBLY
604	36	EACH	CENTERLINE REFERENCE MONUMENT, AS PER PLAN
606	1175	LIN.FT.	GUARD RAIL, TYPE 4 USING STEEL Posts
606	250	LIN.FT.	TEMPORARY GUARDRAIL, AS PER PLAN
606	35,637.5	LIN.FT.	GUARDRAIL, TYPE 4, MODIFIED AS PER PLAN.
606	100	LIN.FT.	GUARDRAIL, TYPE 1, Four Ropes, Using Steel Posts, Turnpike Standard
606	900	LIN.FT.	GUARDRAIL, TYPE 4, BARRIER DESIGN, MODIFIED AS PER PLAN.
607	55,925	LIN.FT.	FENCE, TYPE 47
615	8,301	SQ.YDS.	CLASS-A, TEMPORARY PAVEMENT
615	6,177	SQ.YDS.	CLASS-B, TEMPORARY PAVEMENT
615	LUMP	LUMP	TEMPORARY ROADS, AS PER PLAN
616	14	TONS	CALCIUM CHLORIDE
616	400	M.GALS.	WATER
620	209	EACH	MONO-DIRECTIONAL DELINEATOR TYPE A-1, POST MOUNTED
620	6	EACH	MONO-DIRECTIONAL DELINEATOR TYPE A-1, BRACKET MOUNTED
620	403	EACH	MONO-DIRECTIONAL DELINEATOR TYPE C-2, POST MOUNTED
620	8	EACH	MONO-DIRECTIONAL DELINEATOR TYPE C-2, BRACKET MOUNTED
620	6	EACH	MONO-DIRECTIONAL DELINEATOR TYPE C-3, POST MOUNTED
621	28.62	MILES	EDGE LINES (4" WIDTH)
621	4.04	MILES	LANE LINES (6" WIDTH)
621	0.20	MILES	LANE LINES (4" WIDTH)
621	0.36	MILES	BARRIER LINES (4" WIDTH)
621	0.95	MILES	CHANNELIZATION LINES (8" WIDTH)
621	LUMP	LUMP	STOP LINES (24" WIDTH)
621	LUMP	LUMP	CURB AND ISLAND MARKING
621	LUMP	LUMP	BROAD TRANSVERSE STRIPES
656	61	M.SQ.FT.	ROADSIDE CLEANUP
* 659	1,130,254	SQ.YDS.	SEEDING AND MULCHING, AS PER PLAN
* 659	101.85	TONS	COMMERCIAL FERTILIZER (12-12-12)
* 659	509.27	TONS	AGRICULTURAL LIMING
* 660	823	SQ.YDS.	SODDING
* 660	684	SQ.YDS.	SODDING FOR SPL. BERM & SLOPE PROTECTION - AS PER PLAN
* 667	29,946	SQ.YDS.	JUTE MATTING
SPECIAL	2	EACH	PLUGGING GAS WELLS
SPECIAL	4	EACH	DRILLED WELLS ABANDONED
SPECIAL	3	EACH	CLEANING AND DISPOSING OF SEPTIC TANK
Special	34,400	Sq. Yd.	Spreading, Mixing, Shaping and Compacting Lime-Soil Stabilized Mixture
Special	465	Ton	Delivered Hydrated Lime for Lime-Soil Stabilized Mixture

Rev. 8-9-67
Rev. 7-28-67
Rev. 3-8-67

Rev. 7-28-67

ROADWAY QUANITITY SUMMARY Rev. 2-8-67

QUANTITY SUMMARY
PAVEMENT

FED.RD.	STATE	PROJECT	
	OHIO		

26 / 510

SUM-271-2.98

TYPE CODE 7221

ITEM	14	16	23	42	43	45	59	62	67	223	226	227	228	231	232	233	234	236	262	263	264	289	290	291	292	293	294	310	GRAND TOTAL ITEM	GRAND TOTAL QUANTITY	GRAND TOTAL UNIT	DESCRIPTION
301			10,216																								34	301	10,250	CU.YDS.	BITUMINOUS AGGREGATE BASE, 702.01 (85-100) OR 702.09 RT-12, As Per Plan
302			520																									302	520	CU.YDS.	ASPHALT CONCRETE (70-85)
304			33,818																								80	304	33,898	CU.YDS.	AGGREGATE BASE
310			38,541																								153	310	38,694	CU.YDS.	SUBBASE, GRADING A OR B, AS PER PLAN
310			10,632																									310	10,632	CU.YDS.	SUBBASE
404			759																									404	759	CU.YDS.	ASPHALT CONCRETE (70-85)
408			4,794																									408	4,794	GALS.	BITUMINOUS PRIME COAT, 702.09 RT-2 OR RT-3
409			813																								2	409	815	CU.YDS.	SEAL COAT COVER AGGREGATE Nº 8
409			29,439																								50	409	29,489	GALS.	SEAL COAT, BITUMINOUS MATERIAL, AS PER PLAN
409			1037																									409	1,037	GALS.	SEAL COAT, BITUMINOUS MAT'L., 702.09 RT-9 OR RT-11 OR 702.03 CBAE-3
451			29,022																									451	29,022	SQ.YDS.	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
451			154,134																								266	451	154,400	SQ.YDS.	10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
609																								85	90	85		609	260	LIN.FT.	CURB, STANDARD TYPE 2-A
609											139	129			136			138				135	90		138			609	905	LIN.FT.	CURB, STANDARD TYPE 6
609										111				100		91	71							89		68		609	530	LIN.FT.	CURB, STANDARD TYPE 7
609										395				404		449	430							450		421		609	2,549	LIN.FT.	CURB, STANDARD TYPE 8
611				241	572		267		143				89							336							133	611	1,781	SQ.YDS.	REINFORCED CONCRETE APPROACH SLABS (T=13")
612											25	280			26			25				27			26			612	157	SQ.YDS.	CONCRETE TRAFFIC ISLAND, 9"
612																			96	173	94		223		132			612	718	SQ.YDS.	CONCRETE MEDIAN, STANDARD
613																			21		21							613	42	EACH	TRAFFIC DIVIDER, STANDARD
SPECIAL			3,946																									SPECIAL	3,946	CU.YDS.	DRAINAGE CONNECTION USING Nº 8 AGGREGATE
																															~BUILDING REMOVALS~
202						LUMP																						202	LUMP	LUMP	PAR. 9-WL REMOVAL OF TWO STORAGE TANKS
202								LUMP																				202	LUMP	LUMP	PAR. 39-WL REMOVAL OF ONE 1-STORY FRAME RESIDENCE ONE FRAME SHED ONE COVERED PATIO
	LUMP																												LUMP	LUMP	FIELD OFFICE
	LUMP																												LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
614		LUMP																										614	LUMP	LUMP	MAINTAINING TRAFFIC

~STRUCTURE SUMMARY (OVER 20')

SUM-271-0354 SEE SHEET Nº 370
SUM-271-0358 Lt. SEE SHEET Nº 381
SUM-271-0358 Rt. SEE SHEET Nº 397A
SUM-271-0378 Lt. SEE SHEET Nº 408
SUM-271-0378 Rt. SEE SHEET Nº 416
SUM-271-0602 SEE SHEET Nº 432
SUM-271-0656 SEE SHEET Nº 441
SUM-271-0658 Lt. SEE SHEET Nº 451
SUM-271-0658 Rt. SEE SHEET Nº 461

LIGHTING SUMMARY SEE SHEET Nº 346
SIGNING SUMMARY SEE SHEET Nº 354

Rev. 7-28-67

Rev. 2-8-67 PAVEMENT QUANTITY SUMMARY

QUANTITY SUMMARY
DRAINAGE

FED.RD.	STATE	PROJECT	
	OHIO		

27
510

SUM-271-2.98

TYPE CODE 7221

ITEM	SHEET NUMBERS 15	16	39	40	41	42	43	44	45	46	47	48	49	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	198	199	200	SUB TOTAL ITEM	QUANTITY	UNIT	DESCRIPTION
202																									LUMP									202	LUMP	LUMP	EXISTING STRUCTURE REMOVED
202																																34		202	34	LIN. FT.	PIPE REMOVED 15" & UNDER
202							29												28															202	57	LIN. FT.	PIPE REMOVED OVER 15"
202						1																											1	202	2	EACH	CATCH BASIN REMOVED
202																																		202		LUMP	REMOVAL OF PORTIONS OF EXISTING STRUCTURES
503																																					
509																																					
511																																					
601	5		61	19	138	1	8		7	411	278	86	273	213	22	26	11		57				2	2		1		644					601	2,265	CU. YD.	DUMP ROCK CHANNEL PROTECTION
601																			163												425		601	588	LIN. FT.	PAVED GUTTER STANDARD TYPE 1-4
601														700	480																		601	1,180	LIN. FT.	PAVED GUTTER STANDARD TYPE 1 MODIFIED (8' WIDE), AS PER PLAN
601										127																							601	127	LIN. FT.	PAVED GUTTER STANDARD TYPE 2
602					0.5	4.5	0.4		0.5			0.8		0.6					0.7				0.3	0.3		0.3		0.3					602	9.2	CU. YD.	CONCRETE MASONRY
603																																	603		LIN. FT.	15" CONDUIT TYPE A 706.01, 706.02 OR 706.08 W/CL. B BEDDING
603																																	603		LIN. FT.	18" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603																																	603		LIN. FT.	24" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603																																	603		LIN. FT.	24" CONDUIT TYPE A 707.05 GAGE 12 W/CL. B BEDDING
603																																	603		LIN. FT.	30" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603																																	603		LIN. FT.	36" CONDUIT TYPE A 707.05 GAGE 10 W/CL. B BEDDING
603																																	603		LIN. FT.	36" CONDUIT TYPE A 707.05 GAGE 8 W/CL. B BEDDING
603																																	603		LIN. FT.	42" CONDUIT TYPE A 706.02 W/CL. B BEDDING
603																																	603		LIN. FT.	42" CONDUIT TYPE A 706.02 OR 707.05 GAGE 12 W/CL. B BEDDING
603																																	603		LIN. FT.	42" CONDUIT TYPE A 706.02 CL. V, 707.05 GAGE 10 W/CL. B BEDDING
603																																	603		LIN. FT.	48" CONDUIT TYPE A 706.02 CL. III W/CL. B BEDDING
603																																	603		LIN. FT.	48" CONDUIT TYPE A 707.05, 8 GA. SHOPELONGATED AND SHOP STRUTTED, W/CL. B BEDDING
603																																	603		LIN. FT.	54" CONDUIT TYPE A 706.02 CL. V, 707.05 GAGE 10 W/CL. B BEDDING
603																																	603		LIN. FT.	54" CONDUIT TYPE A 707.05 GAGE 12 W/CL. B BEDDING
603																																	603		LIN. FT.	60" CONDUIT TYPE A 707.03 GAGE 10-10 W/CL. B BEDDING
603																																	603		LIN. FT.	68"x43" CONDUIT TYPE A 706.04 CL. HE II W/CL. B BEDDING
603																																	603		LIN. FT.	33" CONDUIT TYPE A 706.02 OR 706.08 E.S. W/CL. "B" BEDDING
603	400					35	74	35			35	60										30											603	663	LIN. FT.	6" CONDUIT TYPE B W/CL. B BEDDING
603	200																																603	200	LIN. FT.	8" CONDUIT TYPE B W/CL. B BEDDING
603						36													129														603	105	LIN. FT.	12" CONDUIT TYPE B W/CL. B BEDDING
603									114	66		190		84					143	500	500		80	67								10	603	1,754	LIN. FT.	15" CONDUIT TYPE B W/CL. B BEDDING
603																										132							603	132	LIN. FT.	15" CONDUIT TYPE B 706.02 CL. IV W/CL. B BEDDING
603																					500												603	500	LIN. FT.	18" CONDUIT TYPE B W/CL. B BEDDING
603																												145					603	145	LIN. FT.	18" CONDUIT TYPE B 706.02 CL. IV W/CL. B BEDDING
603														98																			603	98	LIN. FT.	21" CONDUIT TYPE B W/CL. B BEDDING
603							197																										603	197	LIN. FT.	24" CONDUIT TYPE B 706.02 CL. V W/CL. B BEDDING
603							151																										603	151	LIN. FT.	12" CONDUIT TYPE C W/CL. B BEDDING
603						235			500							300	200										500						603	1,735	LIN. FT.	15" CONDUIT TYPE C W/CL. B BEDDING
603															300	700											300	100					603	1,400	LIN. FT.	18" CONDUIT TYPE C W/CL. B BEDDING
603						109								300	700							304											603	1,413	LIN. FT.	21" CONDUIT TYPE C W/CL. B BEDDING
603																																	603		LIN. FT.	24" CONDUIT TYPE C W/CL. B BEDDING
603							270																										603	270	LIN. FT.	24" CONDUIT TYPE C 706.02 CL. V W/CL. B BEDDING
603			400	1,000	250																												603	1,650	LIN. FT.	30" CONDUIT TYPE C W/CL. "B" BEDDING
603																																	603		LIN. FT.	12" CONDUIT TYPE D
603					135																												603	135	LIN. FT.	30" CONDUIT TYPE D W/CL. "B" BEDDING
603	200					20																											603	220	LIN. FT.	6" CONDUIT TYPE E
603	200																																603	200	LIN. FT.	8" CONDUIT TYPE E
603	50				20		20		30	20	15	45	5	25	10	10	10		30			70	10	25	15	10		20	20	30		26	603	516	LIN. FT.	6" CONDUIT TYPE F
603	50																																603	50	LIN. FT.	8" CONDUIT TYPE F
603						54	76																										603	130	LIN. FT.	12" CONDUIT TYPE F
603						84				10		267		75										29									603	465	LIN. FT.	15" CONDUIT TYPE F
604							1																										604	1	EACH	MANHOLE STANDARD Nº 1
604							1																										604	1	EACH	MANHOLE STANDARD Nº 2 W/OUT DROP PIPE
604																																	604		EACH	STANDARD Nº 2-28 CATCH BASIN
604																																	604		EACH	STANDARD Nº 2-6 MEDIAN INLET
604																																	604		EACH	STANDARD Nº 2-10 MEDIAN INLET
604					2	1								2					1	2	2												604	10	EACH	CATCH BASIN STANDARD Nº 4
604						2	2		2	1		3			2	2	1						1	1		1	2	1					604	21	EACH	CATCH BASIN STANDARD Nº 5
604						1	1												3														604	5	EACH	CATCH BASIN STANDARD Nº 6
604						2																1										2	604	5	EACH	CATCH BASIN STANDARD Nº 8
605	300																																605	300	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAINS, 707.06 OR 707.12 AS PER PLAN
605														1,042	3,033	2,806	200	1,181		1,500	2,323	2,245	1,756										605	16,086	LIN. FT.	6" SHALLOW PIPE UNDERDRAINS, 707.06 OR 707.12
605			900	2,149	2,149	300	1,528	400	1,545	2,234	2,033	210	1,995	441		200	1,724	300	442	500			850	2,048	2,035	265	100	400	1,320	461				605	24,386	LIN. FT.	6" SHALLOW PIPE UNDERDRAINS
605		800	1,100		1,186	30	2,500		1,063			2,341		866		50	1,098	682	1,449							2,748	2,900	2,403	1,229		45	691	605	23,181	LIN. FT.	6" DEEP PIPE UNDERDRAINS
605																																	605		LIN. FT.	AGGREGATE DRAINS
605	30																																605	30	LIN. FT.	AGGREGATE DRAINS, FOR SPRINGS, AS PER PLAN

Rev. 8-5-97

DRAINAGE QUANTITY SUMMARY

QUANTITY SUMMARY
DRAINAGE

FED. RD.	STATE	PROJECT	
	OHIO		

28
510

SUM-271-2.98

TYPE CODE 7221

ITEM	27	201	202	223	224	225	226	227	228	229	230	231	232	233	234	235	236	262	263	264	273	285	290	291	292	293	294	301	327	328	329
202	LUMP																		LUMP												
202	34	24													45			58	160												
202	57																			286											
202	2																														
202																															
503																															
509																															
511																															
601	2,265	4			1		1	20	27	5	26	2						2					3		1					13
601	588											220	40						115												
601	1,180																														
601	127																														
602	92	0.3			0.3		0.2			3.3		0.5						0.5	1.7				0.5		0.2			0.3	11.6	15.5	6.6
603																															
603																															
603																															
603																															338
603																															
603																															
603																														388	
603																															
603																													384		
603																															
603																															
603																															
603																															
603																															
603																															
603	669				25	25					25				30																
603	200																														
603	165						50					79						114					104		41						
603	1,754																											48			
603	132																														
603	500				84						58																				
603	145																														
603	98																														
603	197																														
603	151																														
603	1,735	13																													
603	1,400																														
603	1,413																														
603										157	95																				
603	270																														
603	1,650																														
603																		600		136	42							50			
603	135																														
603	220																														
603	200																														
603	516	20	10	10	10	10			20	10		10	10	10	20		10	40					50	20		10	30				
603	50																														
603	130																						53								
603	465																														
604	1									1																					
604	1																														
604																															2
604																		1					2		1						
604																		1													
604	10																														
604	21				1						2																				
604	5						1					2																			
604	5																														
605	300																														
605	16,086																							24	760	442	100				
605	24,386		500	520				591	751	550			220	745	536	100	292	271					1020	200			851				
605	23,181	914	383	149	1,032	1,018	164			470	1,000	1,023	180		265	300						547	93	28		130	100				
605																		468	360	630											
605	30																														

SUB TOTAL ITEM	QUANTITY	UNIT	DESCRIPTION
202	LUMP	LUMP	EXISTING STRUCTURE REMOVED
202	321	LIN. FT.	PIPE REMOVED 15" & UNDER
202	343	LIN. FT.	PIPE REMOVED OVER 15"
202	2	EACH	CATCH BASIN REMOVED
202		LUMP	REMOVAL OF PORTIONS OF EXISTING STRUCTURES
601	2,370	CU. YD.	DUMP ROCK CHANNEL PROTECTION
601	963	LIN. FT.	PAVED GUTTER STANDARD TYPE 1-4
601	1,180	LIN. FT.	PAVED GUTTER STANDARD TYPE 1 MODIFIED (8' WIDE), AS PER PLAN
601	127	LIN. FT.	PAVED GUTTER STANDARD TYPE 2
602	50.7	CU. YD.	CONCRETE MASONRY
603		LIN. FT.	15" CONDUIT TYPE A, 706.01, 706.02, OR 706.08 W/CL. B BEDDING
603		LIN. FT.	18" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603		LIN. FT.	24" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603	338	LIN. FT.	24" CONDUIT TYPE A 707.05 GAGE 12 W/CL. B BEDDING
603		LIN. FT.	30" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603		LIN. FT.	36" CONDUIT TYPE A 707.05 GAGE 10 W/CL. B BEDDING
603	388	LIN. FT.	36" CONDUIT TYPE A 707.05 GAGE 8 W/CL. B BEDDING
603		LIN. FT.	42" CONDUIT TYPE A 706.02 W/CL. B BEDDING
603		LIN. FT.	42" CONDUIT TYPE A 706.02 OR 707.05 GAGE 12 W/CL. B BEDDING
603	384	LIN. FT.	42" CONDUIT TYPE A 706.02 CL. V, 707.05 GAGE 10 W/CL. B BEDDING
603		LIN. FT.	48" CONDUIT TYPE A 706.02 CL. III W/CL. B BEDDING
603		LIN. FT.	48" CONDUIT TYPE A 707.05, 8GA. SHOP ELONGATED & SHOP STRUTTED, W/CL. B BEDDING
603		LIN. FT.	54" CONDUIT TYPE A 706.02 CL. V, 707.05 GAGE 10 W/CL. B BEDDING
603		LIN. FT.	54" CONDUIT TYPE A 707.05 GAGE 12 W/CL. B BEDDING
603		LIN. FT.	60" CONDUIT TYPE A 707.03 GAGE 10-10 W/CL. B BEDDING
603		LIN. FT.	68"x43" CONDUIT TYPE A 706.04 CL. HE II W/CL. B BEDDING
603		LIN. FT.	33" CONDUIT TYPE A 706.02 OR 706.08 ES. W/CL. "B" BEDDING
603	774	LIN. FT.	6" CONDUIT TYPE B W/CL. B BEDDING
603	200	LIN. FT.	8" CONDUIT TYPE B W/CL. B BEDDING
603	553	LIN. FT.	12" CONDUIT TYPE B W/CL. B BEDDING
603	1,802	LIN. FT.	15" CONDUIT TYPE B W/CL. B BEDDING
603	132	LIN. FT.	15" CONDUIT TYPE B 706.02 CL. IV W/CL. B BEDDING
603	642	LIN. FT.	18" CONDUIT TYPE B W/CL. B BEDDING
603	145	LIN. FT.	18" CONDUIT TYPE B 706.02 CL. IV W/CL. B BEDDING
603	98	LIN. FT.	21" CONDUIT TYPE B W/CL. B BEDDING
603	197	LIN. FT.	24" CONDUIT TYPE B 706.02 CL. V W/CL. B BEDDING
603	151	LIN. FT.	12" CONDUIT TYPE C W/CL. B BEDDING
603	1,748	LIN. FT.	15" CONDUIT TYPE C W/CL. B BEDDING
603	1,400	LIN. FT.	18" CONDUIT TYPE C W/CL. B BEDDING
603	1,413	LIN. FT.	21" CONDUIT TYPE C W/CL. B BEDDING
603	252	LIN. FT.	24" CONDUIT TYPE C W/CL. B BEDDING
603	270	LIN. FT.	24" CONDUIT TYPE C 706.02 CL. V W/CL. B BEDDING
603	1,650	LIN. FT.	30" CONDUIT TYPE C W/CL. B BEDDING
603	828	LIN. FT.	12" CONDUIT TYPE D
603	135	LIN. FT.	30" CONDUIT TYPE B W/CL. B BEDDING
603	220	LIN. FT.	6" CONDUIT TYPE E
603	200	LIN. FT.	8" CONDUIT TYPE E
603	816	LIN. FT.	6" CONDUIT TYPE F
603	50	LIN. FT.	8" CONDUIT TYPE F
603	183	LIN. FT.	12" CONDUIT TYPE F
603	465	LIN. FT.	15" CONDUIT TYPE F
604	2	EACH	MANHOLE STANDARD NO 1
604	1	EACH	MANHOLE STANDARD NO 2 W/OUT DROP PIPE
604	2	EACH	STANDARD NO 2-2B CATCH BASIN
604	4	EACH	STANDARD NO 2-6 MEDIAN INLET
604	1	EACH	STANDARD NO 2-10 MEDIAN INLET
604	10	EACH	CATCH BASIN STANDARD NO 4
604	24	EACH	CATCH BASIN STANDARD NO 5
604	8	EACH	CATCH BASIN STANDARD NO 6
604	5	EACH	CATCH BASIN STANDARD NO 8
605	300	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAINS, 707.06 OR 707.12 AS PER PLAN
605	17,412	LIN. FT.	6" SHALLOW PIPE UNDERDRAINS, 707.06 OR 707.12
605	31,539	LIN. FT.	6" SHALLOW PIPE UNDERDRAINS
605	31,643	LIN. FT.	6" DEEP PIPE UNDERDRAINS
605	1,458	LIN. FT.	AGGREGATE DRAINS
605	30	LIN. FT.	AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN

Rev. 8-9-67

DRAINAGE QUANTITY SUMMARY

QUANTITY SUMMARY
DRAINAGE

FED.RD.	STATE	PROJECT	
	OHIO		

29
510

SUM-271-2.98

TYPE CODE 7221

* TYPE CODE Y005
\# TYPE CODE X028

SHEET NUMBERS

ITEM	28	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	425
202	LUMP																
202	321																
202	343																
202	2																
202															LUMP		
																	1350
																	LUMP
																	490,128
																	3,342
601				45					17		14		43			14	326
601	2,370	10	15	22			24	17	14	62	46	8	24	12	23		380
601	963				395	307											
601	1,180																
601	127																
602	50.7	5.4	6.6	21.6	1.1	43	21.2	11.6	17.4	13	17.4	10.8	41.2	9.6	13.3	1.5	
603																	
603															122		
603												104		130			
603						248						86					
603	338	364	314														
603					148												
603										138							
603	388							422									
603									96								
603																58	
603	384																
603											84						
603							570										
603													132				
603													76				
603															14		
603				274													
603					115												
603	774																
603	200																
603	553																
603	1,802																
603	132																
603	642																
603	145																
603	98																
603	197																
603	151																
603	1,748																
603	1,400																
603	1,413																
603	252																
603	270																
603	1,650																
603	828																
603	135																
603	220																
603	200																
603	816																
603	50																
603	183																
603	465																
604	2				1												
604	1																
604	2																
604	4																
604	1																
604	10																
604	24																
604	8																
604	5				1												
605	300																
605	17,412																
605	31,530																
605	31,643																
605	1,458																
605	30																

GRAND TOTAL ITEM	QUANTITY	UNIT	DESCRIPTION
202	LUMP	LUMP	EXISTING STRUCTURE REMOVED
202	321	LIN. FT.	PIPE REMOVED 15" & UNDER
202	343	LIN. FT.	PIPE REMOVED OVER 15"
202	2	EACH	CATCH BASIN REMOVED
202	LUMP	LUMP	REMOVAL OF PORTIONS OF EXISTING STRUCTURES
503 #	1350	CU. YD.	UNCLASSIFIED EXCAVATION
503 #	LUMP	LUMP	COFFERDAMS, CRIBS AND SHEETING
509 #	490,128	LB.	REINFORCING STEEL
511 #	3,342	CU. YD.	CLASS C CONCRETE
601 *	459	SQ. YD.	RIPRAP, USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN
601 *	3,027	CU. YD.	DUMP ROCK CHANNEL PROTECTION
601 *	1,665	LIN. FT.	PAVED GUTTER STANDARD TYPE 1-4
601 *	1,180	LIN. FT.	PAVED GUTTER STANDARD TYPE 1 MODIFIED (8' WIDE), AS PER PLAN
601 *	127	LIN. FT.	PAVED GUTTER STANDARD TYPE 2
602	2854	CU. YD.	CONCRETE MASONRY
603	122	LIN. FT.	15" CONDUIT TYPE A 706.01, 706.02, OR 706.08 W/CL. B BEDDING
603	234	LIN. FT.	18" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603	334	LIN. FT.	24" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603	1,016	LIN. FT.	24" CONDUIT TYPE A 707.05 GAGE 12 W/CL. B BEDDING
603	148	LIN. FT.	30" CONDUIT TYPE A 706.02 OR 706.08 W/CL. B BEDDING
603	138	LIN. FT.	36" CONDUIT TYPE A 707.05 GAGE 10 W/CL. B BEDDING
603	810	LIN. FT.	36" CONDUIT TYPE A 707.05 GAGE 8 W/CL. B BEDDING
603	96	LIN. FT.	42" CONDUIT TYPE A 706.02 W/CL. B BEDDING
603	58	LIN. FT.	42" CONDUIT TYPE A 706.02 OR 707.05 GAGE 12 W/CL. B BEDDING
603	384	LIN. FT.	42" CONDUIT TYPE A 706.02 CL. V, 707.05 GAGE 10 W/CL. B BEDDING
603	84	LIN. FT.	48" CONDUIT TYPE A 706.02 CL. III W/CL. B BEDDING
603	570	LIN. FT.	48" CONDUIT TYPE A 707.05 8GA. SHOP ELONGATED & SHOP STRUTTED W/CL. B BEDDING
603	132	LIN. FT.	54" CONDUIT TYPE A 706.02 CL. V, 707.05 GAGE 10 W/CL. B BEDDING
603	76	LIN. FT.	54" CONDUIT TYPE A 707.05 GAGE 12 W/CL. B BEDDING
603	14	LIN. FT.	60" CONDUIT TYPE A 707.03 GAGE 10-10 W/CL. B BEDDING
603	274	LIN. FT.	68"x43" CONDUIT TYPE A 706.04 CL. HE II W/CL. B BEDDING
603	115	LIN. FT.	33" CONDUIT TYPE A 706.02 OR 706.08 E.S. W/CL. B BEDDING
603	774	LIN. FT.	6" CONDUIT TYPE B W/CL. B BEDDING
603	200	LIN. FT.	8" CONDUIT TYPE B W/CL. B BEDDING
603	553	LIN. FT.	12" CONDUIT TYPE B W/CL. B BEDDING
603	1,802	LIN. FT.	15" CONDUIT TYPE B W/CL. B BEDDING
603	132	LIN. FT.	15" CONDUIT TYPE B 706.02 CL. IV W/CL. B BEDDING
603	642	LIN. FT.	18" CONDUIT TYPE B W/CL. B BEDDING
603	145	LIN. FT.	18" CONDUIT TYPE B 706.02 CL. IV W/CL. B BEDDING
603	98	LIN. FT.	21" CONDUIT TYPE B W/CL. B BEDDING
603	197	LIN. FT.	24" CONDUIT TYPE B 706.02 CL. V W/CL. B BEDDING
603	151	LIN. FT.	12" CONDUIT TYPE C W/CL. B BEDDING
603	1,748	LIN. FT.	15" CONDUIT TYPE C W/CL. B BEDDING
603	1,400	LIN. FT.	18" CONDUIT TYPE C W/CL. B BEDDING
603	1,413	LIN. FT.	21" CONDUIT TYPE C W/CL. B BEDDING
603	252	LIN. FT.	24" CONDUIT TYPE C W/CL. B BEDDING
603	270	LIN. FT.	24" CONDUIT TYPE C 706.02 CL. V W/CL. B BEDDING
603	1,650	LIN. FT.	30" CONDUIT TYPE C W/CL. B BEDDING
603	828	LIN. FT.	12" CONDUIT TYPE D
603	135	LIN. FT.	30" CONDUIT TYPE B W/CL. B BEDDING
603	220	LIN. FT.	6" CONDUIT TYPE E
603	200	LIN. FT.	8" CONDUIT TYPE E
603	816	LIN. FT.	6" CONDUIT TYPE F
603	50	LIN. FT.	8" CONDUIT TYPE F
603	183	LIN. FT.	12" CONDUIT TYPE F
603	465	LIN. FT.	15" CONDUIT TYPE F
604	3	EACH	MANHOLE STANDARD Nº 1
604	1	EACH	MANHOLE STANDARD Nº 2 W/OUT DROP PIPE
604	2	EACH	STANDARD Nº 2-2B CATCH BASIN
604	4	EACH	STANDARD Nº 2-6 MEDIAN INLET
604	1	EACH	STANDARD Nº 2-10 MEDIAN INLET
604	10	EACH	CATCH BASIN STANDARD Nº 4
604	24	EACH	CATCH BASIN STANDARD Nº 5
604	8	EACH	CATCH BASIN STANDARD Nº 6
604	6	EACH	CATCH BASIN STANDARD Nº 8
605	300	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAINS, 707.06 OR 707.12 AS PER PLAN
605	17,412	LIN. FT.	6" SHALLOW PIPE UNDERDRAINS, 707.06 OR 707.12
605	31,530	LIN. FT.	6" SHALLOW PIPE UNDERDRAINS
605	31,643	LIN. FT.	6" DEEP PIPE UNDERDRAINS
605	1,458	LIN. FT.	AGGREGATE DRAINS
605	30	LIN. FT.	AGGREGATE DRAINS, FOR SPRINGS, AS PER PLAN

Rev. 8-9-67 Rev. 7-28-67 Rev. 3-30-67

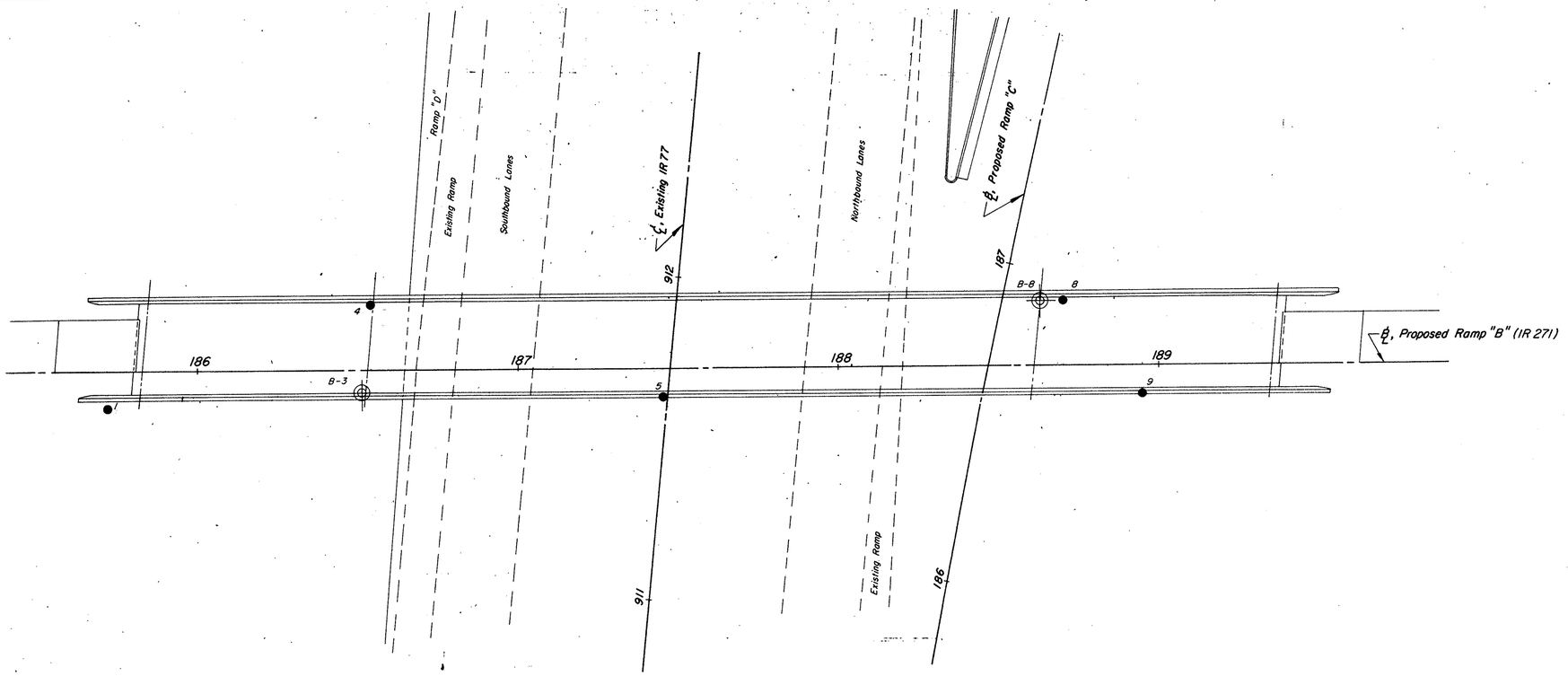
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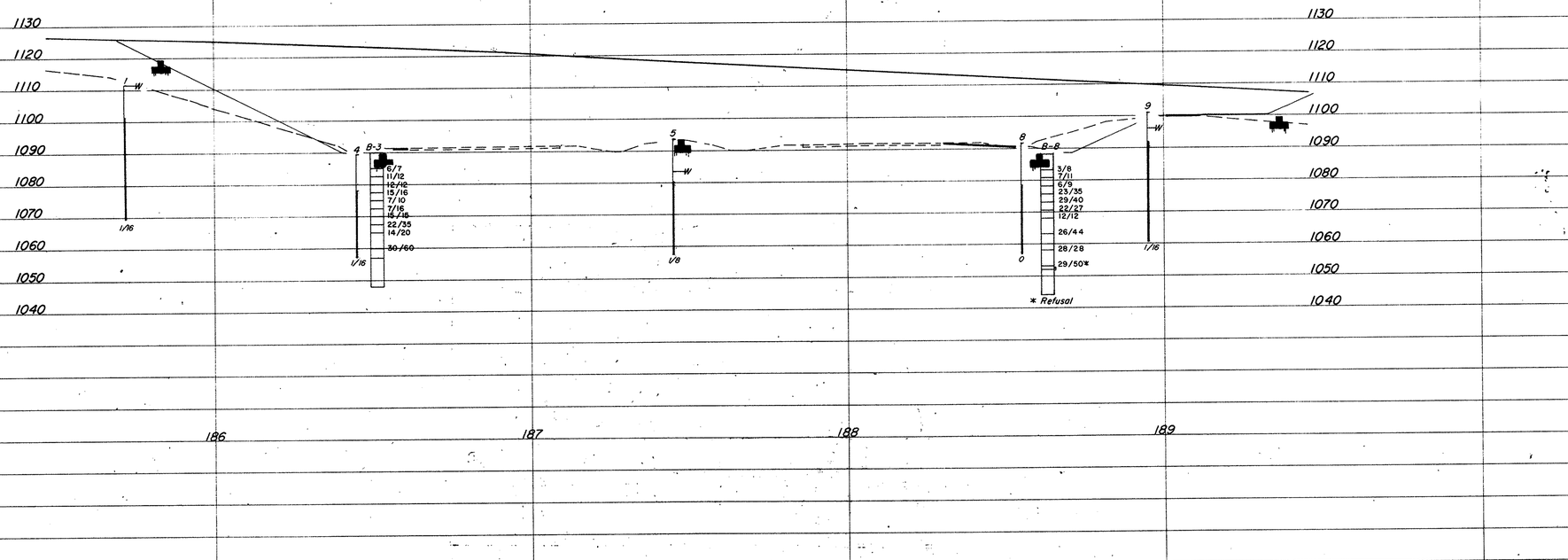
TE - 119
500 - 11 - 64

30/53

SUM-IR271-2.98

2/3





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0354
RAMP B (IR 271) OVER IR 77
SEC. SUM-IR271-2.98

PLAN AND PROFILE

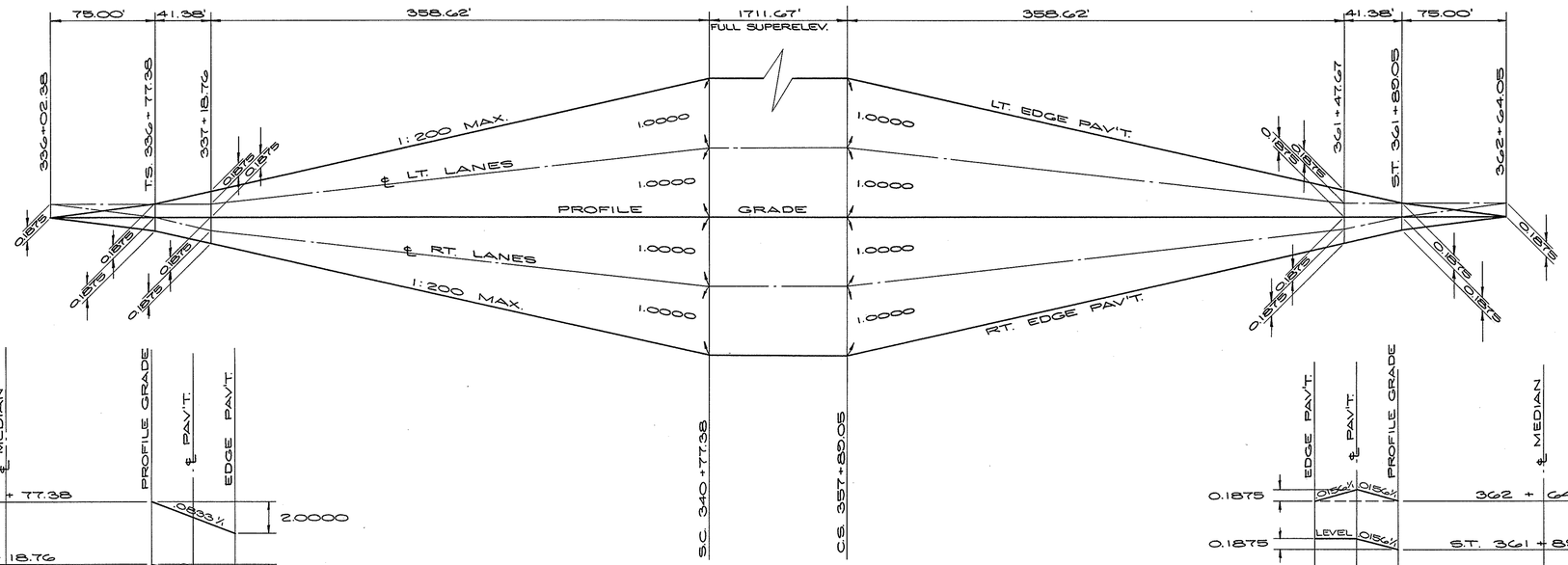
DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.C.	R.H.P.	R.D.R.	3/23/65

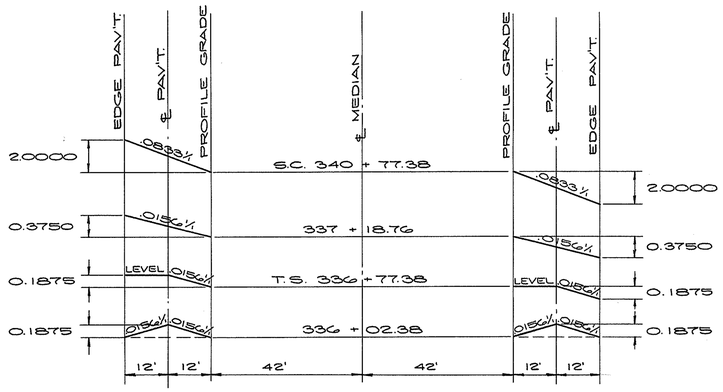
SUPERELEVATION DIAGRAMS

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98

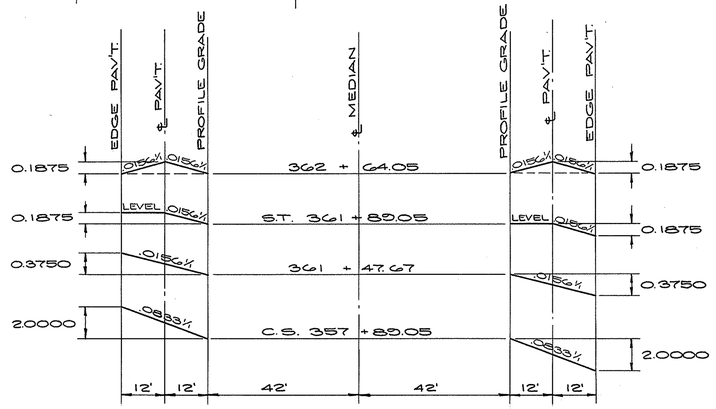
31
510





CURVE Nº 4

Δ = 63°-21'-00" RT.
D_c = 3°00'
e = 0.833⅓



SUPERELEVATION DIAGRAMS I-271 CURVE Nº 4

E.&E.

SUPERELEVATION TABLE

CURVE 1
Δ = 23° 18' 16" (RT.)
e = .047 FT. PER FT.

FED. RD.	STATE	PROJECT	
2	OHIO		

32
510

SUM - 271 - 2.98

WESTBOUND LANES

SPEED CHANGE LANE	WIDE-NING	LEFT EDGE	CROWN	PROFILE GRADE	STATION
1096.89	7.20	1096.55	1095.98	1095.42	195 + 00
1097.75	10.20	1097.27	1096.70	1096.14	194 + 75
1098.54	12.00	1097.98	1097.41	1096.85	194 + 50
1099.26	12.00	1098.70	1098.13	1097.57	194 + 25
1099.97	12.00	1099.41	1098.84	1098.28	194 + 00
1100.69	12.00	1100.13	1099.56	1099.00	193 + 75
1101.40	12.00	1100.84	1100.27	1099.71	193 + 50
1102.12	12.00	1101.56	1100.99	1100.43	193 + 25
1102.83	12.00	1102.27	1101.70	1101.14	193 + 00
1103.52	12.00	1102.99	1102.42	1101.86	192 + 75
1104.17	12.00	1103.70	1103.13	1102.57	192 + 50
1104.79	12.00	1104.42	1103.85	1103.29	192 + 25
		1105.13	1104.56	1104.00	192 + 00
		1105.85	1105.28	1104.72	191 + 75
		1106.56	1105.99	1105.43	191 + 50
		1107.28	1106.71	1106.15	191 + 25
		1107.99	1107.42	1106.86	191 + 00
		1108.71	1108.14	1107.58	190 + 75
		1109.42	1108.85	1108.29	190 + 50
		1110.14	1109.57	1109.01	190 + 25
		1110.85	1110.28	1109.72	190 + 00
		1111.57	1111.00	1110.44	189 + 75
		1112.28	1111.71	1111.15	189 + 50
		1113.00	1112.43	1111.87	189 + 25
		1113.71	1113.14	1112.58	189 + 00
		1114.43	1113.86	1113.30	188 + 75
		1115.14	1114.57	1114.01	188 + 50
		1115.85	1115.29	1114.73	188 + 25
		1116.55	1116.00	1115.44	188 + 00
		1116.76	1116.23	1115.67	187 + 92.21
		1117.19	1116.68	1116.16	187 + 75
		1117.80	1117.33	1116.87	187 + 50
		1118.40	1117.99	1117.59	187 + 25
		1118.70	1118.33	1117.95	187 + 12.15
		1118.99	1118.65	1118.30	187 + 00
		1119.59	1119.31	1119.02	186 + 75
		1120.19	1119.96	1119.73	186 + 50
		1120.62	1120.43	1120.24	186 + 32.09
		1120.79	1120.64	1120.45	186 + 25
		1121.38	1121.35	1121.16	186 + 00
		1121.57	1121.57	1121.38	185 + 92.21
		1122.02	1122.07	1121.88	185 + 75
		1122.67	1122.78	1122.59	185 + 50
		1123.33	1123.50	1123.31	185 + 25
		1123.53	1123.72	1123.53	185 + 17.21

EASTBOUND LANES

PROFILE GRADE	CROWN	RIGHT EDGE	WIDE-NING	SPEED CHANGE LANE
1095.39	1094.83	1094.26		
1096.13	1095.57	1095.00		
1096.85	1096.29	1095.72		
1097.57	1097.01	1096.44		
1098.28	1097.72	1097.15		
1099.00	1098.44	1097.87		
1099.71	1099.15	1098.58		
1100.43	1099.87	1099.30		
1101.14	1100.58	1100.01		
1101.86	1101.30	1100.73		
1102.57	1102.01	1101.44		
1103.29	1102.73	1102.16		
1104.00	1103.44	1102.87		
1104.72	1104.16	1103.59		
1105.43	1104.87	1104.30		
1106.15	1105.59	1105.02		
1106.86	1106.30	1105.73		
1107.58	1107.02	1106.45		
1108.29	1107.73	1107.16		
1109.01	1108.45	1107.88		
1109.72	1109.16	1108.59		
1110.44	1109.88	1109.31		
1111.15	1110.59	1110.02		
1111.87	1111.31	1110.74		
1112.58	1112.02	1111.45		
1113.30	1112.74	1112.17		
1114.01	1113.45	1112.88		
1114.73	1114.17	1113.60		
1115.44	1114.88	1114.31		
1115.67	1115.11	1114.54		
1116.16	1115.64	1115.12		
1116.87	1116.41	1115.94		
1117.59	1117.19	1116.78		
1117.95	1117.57	1117.20		
1118.30	1117.95	1117.61		
1119.02	1118.73	1118.45		
1119.73	1119.50	1119.27		
1120.24	1120.05	1119.86		
1120.45	1120.30	1120.11		
1121.16	1121.12	1120.94		
1121.38	1121.38	1121.19		
1121.88	1121.92	1121.74		
1122.59	1122.70	1122.51		
1123.31	1123.48	1123.29	1095.18	1.20
1123.53	1123.72	1123.53	1096.04	4.20

WESTBOUND LANES

SPEED CHANGE LANE	WIDE-NING	LEFT EDGE	CROWN	PROFILE GRADE	STATION
		1066.03	1066.22	1066.03	204 + 96.03
		1066.71	1066.85	1066.66	204 + 75
		1067.53	1067.60	1067.41	204 + 50
		1068.34	1068.35	1068.16	204 + 25
		1068.47	1068.47	106.28	204 + 21.03
		1069.20	1069.10	1068.91	204 + 00
		1069.86	1069.67	1069.48	203 + 81.15
		1070.06	1069.86	1069.66	203 + 75
		1070.93	1070.67	1070.41	203 + 50
		1071.80	1071.48	1071.16	203 + 25
		1072.63	1072.26	1071.88	203 + 01.09
		1072.67	1072.29	1071.91	203 + 00
		1073.53	1073.11	1072.66	202 + 75
		1074.40	1073.91	1073.41	202 + 50
		1075.27	1074.71	1074.16	202 + 25
		1075.41	1074.84	1074.28	202 + 21.03
		1076.04	1075.47	1074.91	202 + 00
		1076.79	1076.22	1075.66	201 + 75
		1077.54	1076.97	1076.41	201 + 50
		1078.29	1077.72	1077.16	201 + 25
		1079.04	1078.47	1077.91	201 + 00
		1079.79	1079.22	1078.66	200 + 75
		1080.54	1079.97	1079.41	200 + 50
		1081.29	1080.72	1080.16	200 + 25
		1082.04	1081.47	1080.91	200 + 00
		1082.79	1082.22	1081.66	199 + 75
		1083.53	1082.96	1082.40	199 + 50
		1084.28	1083.71	1083.15	199 + 25
		1085.02	1084.45	1083.89	199 + 00
		1085.75	1085.18	1084.62	198 + 75
		1086.49	1085.92	1085.36	198 + 50
		1087.22	1086.65	1086.09	198 + 25
		1087.95	1087.38	1086.82	198 + 00
		1088.68	1088.11	1087.55	197 + 75
		1089.39	1088.82	1088.26	197 + 50
		1090.12	1089.55	1088.99	197 + 25
		1090.83	1090.26	1089.70	197 + 00
		1091.55	1090.98	1090.42	196 + 75
		1092.26	1091.69	1091.13	196 + 50
		1092.98	1092.41	1091.85	196 + 25
		1093.69	1093.12	1092.56	196 + 00
	0	1094.41	1093.84	1093.28	195 + 75
1095.18	1.20	1095.12	1094.55	1093.99	195 + 50
1096.04	4.20	1095.84	1095.27	1094.71	195 + 25

EASTBOUND LANES

PROFILE GRADE	CROWN	RIGHT EDGE	WIDE-NING	SPEED CHANGE LANE
1058.69	1058.88	1958.69	11.60	1058.51
1059.52	1059.66	1059.47	12.04	1059.28
1060.51	1060.58	1060.39	12.56	1060.19
1061.50	1061.51	1061.32	13.09	1061.12
1061.66	1061.66	1061.47	13.17	1061.26
1062.49	1062.39	1062.20	13.61	1061.99
1063.24	1063.05	1062.86	14.00	1062.61
1063.48	1063.28	1063.08	14.13	1062.82
1064.47	1064.21	1063.95	14.69	1063.63
1065.46	1065.14	1064.82	15.17	1064.45
1066.41	1066.03	1065.66	15.67	1065.27
1066.45	1066.07	1065.69	15.69	1065.30
1067.44	1067.00	1066.57	16.21	1066.16
1068.43	1067.93	1067.44	16.73	1067.02
1069.42	1068.87	1068.34	17.25	1067.90
1069.58	1069.02	1068.49	17.33	1068.04
1070.41	1069.85	1069.28	17.77	1068.84
1071.40	1070.84	1070.27	18.29	1069.81
1072.39	1071.83	1071.26	18.81	1070.79
1073.38	1072.82	1072.25	19.34	1071.77
1074.37	1073.81	1073.24	19.87	1072.74
1075.36	1074.80	1074.23	20.40	1073.72
1076.35	1075.79	1075.22	20.93	1074.70
1077.34	1076.78	1076.21	21.46	1075.67
1078.31	1077.75	1077.18	21.99	1076.63
1079.27	1078.71	1078.14	22.52	1077.58
1080.23	1079.67	1079.10		
1081.17	1080.61	1080.04		
1082.09	1081.53	1080.96		
1083.01	1082.45	1081.88		
1083.92	1083.36	1082.79		
1084.81	1084.25	1083.68		
1085.69	1085.13	1084.56		
1086.57	1086.01	1085.44		
1087.43	1086.87	1086.30		
1088.28	1087.72	1087.15		
1089.11	1088.55	1087.98		
1089.94	1089.38	1088.81		
1090.75	1090.19	1089.62		
1091.56	1091.00	1090.43		
1092.34	1091.78	1091.21		
1093.13	1092.57	1092.00		
1093.89	1093.33	1097.76		
1094.65	1094.09	1093.52		

CURVE Nº 1
SUPERELEVATION TABLE

SUPERELEVATION TABLE

CURVE 2

Δ = 11° 54' 59" (LT.)
e = .047 FT. PER FT.

FED. RD.	STATE	PROJECT	
2	OHIO		

33
510

SUM - 271 - 2.98

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
998.03	998.60	999.16	227 + 25	977.17	977.73	978.30
998.78	999.35	999.91	227 + 00	977.91	978.47	979.04
999.53	1000.10	1000.66	226 + 75	978.65	979.21	979.78
1000.28	1000.85	1001.41	226 + 50	979.39	979.95	980.52
1001.03	1001.60	1002.16	226 + 25	980.13	980.69	981.26
1001.78	1002.35	1002.91	226 + 00	980.87	981.43	982.00
1002.53	1003.10	1003.66	225 + 75	981.61	982.17	982.74
1003.28	1003.85	1004.41	225 + 50	982.35	982.91	983.48
1004.03	1004.60	1005.16	225 + 25	983.09	983.65	984.22
1004.78	1005.35	1005.91	225 + 00	983.83	984.39	984.96
1005.53	1006.10	1006.66	224 + 75	984.57	985.13	985.70
1006.28	1006.85	1007.41	224 + 50	985.31	985.87	986.44
1007.03	1007.60	1008.16	224 + 25	986.05	986.61	987.16
1007.53	1008.10	1008.66	224 + 08.33	986.54	987.08	987.62
1007.82	1008.37	1008.91	224 + 00	986.79	987.32	987.85
1008.69	1009.17	1009.66	223 + 75	987.53	988.02	988.50
1009.55	1009.98	1010.41	223 + 50	988.27	988.70	989.13
1010.30	1010.67	1011.05	223 + 28.27	988.91	989.29	989.66
1010.42	1010.79	1011.16	223 + 25	989.01	989.38	989.75
1011.29	1011.60	1011.91	223 + 00	989.75	990.06	990.37
1012.16	1012.41	1012.66	222 + 75	990.50	990.75	991.00
1013.03	1013.22	1013.41	222 + 50	991.25	991.44	991.63
1013.08	1013.27	1013.46	222 + 48.21	991.31	991.50	991.69
1013.89	1014.08	1014.16	222 + 25	992.03	992.22	992.30
1014.47	1014.66	1014.66	222 + 08.33	992.54	992.73	992.73
1014.74	1014.93	1014.91	222 + 00	992.81	993.00	992.98
1015.56	1015.75	1015.66	221 + 75	993.61	993.80	993.71
1016.37	1016.56	1016.41	221 + 50	994.41	994.60	994.45
1016.91	1017.10	1016.91	221 + 33.33	994.96	995.15	994.96

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
980.84	981.03	980.84	233 + 35.69	959.09	959.28	959.09
981.13	981.32	981.16	233 + 25	959.41	959.60	959.44
981.82	982.01	981.91	233 + 00	960.15	960.34	960.24
982.51	982.70	982.66	232 + 75	960.89	961.08	961.04
982.90	983.09	983.09	232 + 60.69	961.31	961.50	961.50
983.17	983.36	983.41	232 + 50	961.63	961.82	961.87
983.81	984.00	984.16	232 + 25	962.37	962.56	962.72
983.91	984.10	984.29	232 + 20.81	962.49	962.68	962.87
984.44	984.67	984.91	232 + 00	963.11	963.35	963.58
985.07	985.37	985.66	231 + 75	963.85	964.14	964.44
985.70	986.06	986.41	231 + 50	964.59	964.94	965.30
985.94	986.31	986.69	231 + 40.75	964.86	965.24	965.61
986.34	986.75	987.16	231 + 25	965.33	965.74	966.15
986.97	987.44	987.91	231 + 00	966.07	966.54	967.01
987.60	988.13	988.66	230 + 75	966.81	967.34	967.87
987.96	988.53	989.09	230 + 60.69	967.23	967.79	968.36
988.28	988.85	989.41	230 + 50	967.55	968.11	968.68
989.03	989.60	990.16	230 + 25	968.29	968.85	969.42
989.78	990.35	990.91	230 + 00	969.03	969.59	970.16
990.53	991.10	991.66	229 + 75	969.77	970.33	970.90
991.28	991.85	992.41	229 + 50	970.51	971.07	971.64
992.03	992.60	993.16	229 + 25	971.25	971.81	972.38
992.78	993.35	993.91	229 + 00	971.99	972.55	973.12
993.53	994.10	994.66	228 + 75	972.73	973.29	973.86
994.28	994.85	995.41	228 + 50	973.47	974.03	974.60
995.03	995.60	996.16	228 + 25	974.21	974.77	975.34
995.78	996.35	996.91	228 + 00	974.95	975.51	976.08
996.53	997.10	997.66	227 + 75	975.69	976.25	976.82
997.28	997.85	998.41	227 + 50	976.43	976.99	977.56

CURVE Nº 2
SUPERELEVATION TABLE

SUPERELEVATION TABLE

CURVE 3

Δ = 48° 34' 45" (LT.)
e = .047 FT. PER FT.

FED. RD.	STATE	PROJECT	
2	OHIO		

34
510

SUM - 271 - 2.98

WESTBOUND LANES

SPEED CHANGE LANE	WIDE-NING	LEFT EDGE	CROWN	PROFILE GRADE	STATION
		1087.73	1088.30	1088.86	284 + 00
		1086.96	1087.53	1088.09	283 + 75
		1086.19	1086.76	1087.32	283 + 50
		1085.40	1085.97	1086.53	283 + 25
		1084.61	1085.18	1085.74	283 + 00
		1083.80	1084.37	1084.93	282 + 75
		1082.98	1083.55	1084.11	282 + 50
		1082.14	1082.71	1083.27	282 + 25
		1081.30	1081.87	1082.43	282 + 00
		1080.45	1081.02	1081.58	281 + 75
		1079.58	1080.15	1080.71	281 + 50
		1078.70	1079.27	1079.83	281 + 25
		1077.81	1078.38	1078.94	281 + 00
		1076.91	1077.48	1078.04	280 + 75
		1076.00	1076.57	1077.13	280 + 50
		1075.07	1075.64	1076.20	280 + 25
		1074.14	1074.71	1075.27	280 + 00
		1073.19	1073.76	1074.32	279 + 75
		1072.23	1072.80	1073.36	279 + 50
		1071.26	1071.83	1072.39	279 + 25
		1070.27	1070.84	1071.40	279 + 00
		1069.28	1069.85	1070.41	278 + 75
		1068.28	1068.85	1069.41	278 + 50
		1067.28	1067.85	1068.41	278 + 25
		1066.28	1066.85	1067.41	278 + 00
		1065.28	1065.85	1066.41	277 + 75
		1064.28	1064.85	1065.41	277 + 50
		1063.28	1063.85	1064.41	277 + 25
		1062.28	1062.85	1063.41	277 + 00
		1061.28	1061.85	1062.41	276 + 75
		1060.28	1060.85	1061.41	276 + 50
		1059.28	1059.85	1060.41	276 + 25
		1058.28	1058.85	1059.41	276 + 00
		1057.28	1057.85	1058.41	275 + 75
		1056.28	1056.85	1057.41	275 + 50
		1055.28	1055.85	1056.41	275 + 25
		1054.28	1054.85	1055.41	275 + 00
		1053.28	1053.85	1054.41	274 + 75
		1052.28	1052.85	1053.41	274 + 50
		1051.28	1051.85	1052.41	274 + 25
		1050.28	1050.85	1051.41	274 + 00
		1049.28	1049.85	1050.41	273 + 75
		1048.28	1048.85	1049.41	273 + 50
		1047.28	1047.85	1048.41	273 + 25
		1046.28	1046.85	1047.41	273 + 00
		1045.28	1045.85	1046.41	272 + 75
		1044.28	1044.85	1045.41	272 + 50
		1043.28	1043.85	1044.41	272 + 25
		1042.28	1042.85	1043.41	272 + 00
		1041.28	1041.85	1042.41	271 + 75
		1040.28	1040.85	1041.41	271 + 50
		1039.28	1039.85	1040.41	271 + 25
		1038.28	1038.85	1039.41	271 + 00
		1037.28	1037.85	1038.41	270 + 75
		1036.28	1036.85	1037.41	270 + 50
		1035.28	1035.85	1036.41	270 + 25
		1034.28	1034.85	1035.41	270 + 00
		1033.28	1033.85	1034.41	269 + 75
		1032.28	1032.85	1033.41	269 + 50
		1031.28	1031.85	1032.41	269 + 25
		1030.28	1030.85	1031.41	269 + 00
		1029.28	1029.85	1030.41	268 + 75
		1028.28	1028.85	1029.41	268 + 50
		1027.89	1028.46	1029.02	268 + 40.18
		1027.35	1027.88	1028.41	268 + 25
		1026.47	1026.94	1027.41	268 + 00
		1025.59	1026.00	1026.41	267 + 75
		1025.06	1025.43	1025.81	267 + 60.12
		1024.71	1025.06	1025.41	267 + 50
		1023.82	1024.12	1024.41	267 + 25
		1022.94	1023.18	1023.41	267 + 00
		1022.23	1022.42	1022.61	266 + 80.06
		1022.06	1022.25	1022.41	266 + 75
		1021.18	1021.37	1021.41	266 + 50
		1020.83	1021.02	1021.02	266 + 40.18
		1020.26	1020.45	1020.41	266 + 25
		1019.32	1019.51	1019.41	266 + 00
		1018.39	1018.58	1018.41	265 + 75
		1018.02	1018.21	1018.02	265 + 65.18

EASTBOUND LANES

PROFILE GRADE	CROWN	RIGHT EDGE	WIDE-NING	SPEED CHANGE LANE
1066.96	1067.52	1068.09		
1066.21	1066.77	1067.34		
1065.46	1066.02	1066.59		
1064.71	1065.27	1065.84		
1063.96	1064.52	1065.09		
1063.21	1063.77	1064.34		
1062.46	1063.02	1063.59		
1061.71	1062.27	1062.84		
1060.96	1061.52	1062.09		
1060.21	1060.77	1061.34		
1059.46	1060.02	1060.59		
1058.71	1059.27	1059.84		
1057.96	1058.52	1059.09		
1057.21	1057.77	1058.34		
1056.46	1057.02	1057.59		
1055.71	1056.27	1056.84		
1054.96	1055.52	1056.09		
1054.21	1054.77	1055.34		
1053.46	1054.02	1054.59		
1052.71	1053.27	1053.84		
1051.96	1052.52	1053.09		
1051.21	1051.77	1052.34		
1050.46	1051.02	1051.59		
1049.71	1050.27	1050.84		
1048.96	1049.52	1050.09		
1048.21	1048.77	1049.34		
1047.46	1048.02	1048.59		
1046.71	1047.27	1047.84		
1045.96	1046.52	1047.09		
1045.21	1045.77	1046.34		
1044.46	1045.02	1045.59		
1043.71	1044.27	1044.84		
1042.96	1043.52	1044.09		
1042.21	1042.77	1043.34		
1041.46	1042.02	1042.59		
1040.71	1041.27	1041.84		
1039.96	1040.52	1041.09		
1039.21	1039.77	1040.34		
1038.46	1039.02	1039.59		
1037.71	1038.27	1038.84		
1036.96	1037.52	1038.09		
1036.21	1036.77	1037.34		
1035.46	1036.02	1036.59		
1034.71	1035.27	1035.84		
1033.96	1034.52	1035.09		
1033.21	1033.77	1034.34		
1032.46	1033.02	1033.59		
1031.71	1032.27	1032.84		
1030.96	1031.52	1032.09		
1030.21	1030.77	1031.34		
1029.46	1030.02	1030.59		
1028.71	1029.27	1029.84		
1027.96	1028.52	1029.09		
1027.21	1027.77	1028.34		
1026.46	1027.02	1027.59		
1025.71	1026.27	1026.84		
1024.96	1025.52	1026.09		
1024.21	1024.77	1025.34		
1023.46	1024.02	1024.59		
1022.71	1023.27	1023.84		
1021.96	1022.52	1023.09		
1021.21	1021.77	1022.34		
1020.46	1021.02	1021.59		
1020.17	1020.73	1021.30		
1019.71	1020.24	1020.77		
1018.96	1019.43	1019.90		
1018.21	1018.62	1019.03		
1017.76	1018.14	1018.51		
1017.46	1017.81	1018.16		
1016.71	1017.00	1017.30		
1015.96	1016.19	1016.43		
1015.36	1015.55	1015.74		
1015.21	1015.40	1014.56		
1014.46	1014.65	1014.69		
1014.17	1014.36	1014.36		
1013.71	1013.90	1013.86		
1012.96	1013.15	1013.05		
1012.21	1012.40	1012.23		
1011.92	1012.11	1011.92		

WESTBOUND LANES

SPEED CHANGE LANE	WIDE-NING	LEFT EDGE	CROWN	PROFILE GRADE	STATION
		1113.07	1113.26	1113.07	302 + 67.28
		1113.10	1113.29	1113.14	302 + 50
		1113.14	1113.33	1113.24	302 + 25
		1113.15	1113.34	1113.32	302 + 00
		1113.15	1113.34	1113.34	301 + 92.28
		1113.12	1113.29	1113.39	301 + 75
		1113.06	1113.25	1113.44	301 + 52.40
		1113.06	1113.25	1113.45	301 + 50
		1113.00	1113.25	1113.50	301 + 25
		1112.92	1113.23	1113.54	301 + 00
		1112.82	1113.19	1113.56	300 + 75
	25	1112.81	1113.18	1113.56	300 + 72.34
	24.53	1112.71	1113.14	1113.57	300 + 50
	24.01	1112.59	1113.09	1113.58	300 + 25
	23.49	1112.48	1113.03	1113.57	300 + 00
	23.33	1112.45	1113.02	1113.56	299 + 92.28
1111.43	22.97	1112.42	1112.99	1113.55	299 + 75
1111.35	22.45	1112.38	1112.95	1113.51	299 + 50
1111.31	21.93	1112.34	1112.91	1113.47	299 + 25
1111.27	21.41	1112.28	1112.85	1113.41	299 + 00
1111.24	20.89	1112.22	1112.79	1113.35	298 + 75
1111.18	20.34	1112.14	1112.71	1113.27	298 + 50
1111.11	19.85	1112.04	1112.61	1113.17	298 + 25
1111.03	19.33	1111.94	1112.51	1113.07	298 + 00
1110.95	18.81	1111.83	1112.40	1112.96	297 + 75
1110.84	18.28	1111.70	1112.27	1112.83	297 + 50
1110.74	17.76	1111.57	1112.14	1112.70	297 + 25
1110.61	17.24	1111.42	1111.99	1112.55	297 + 00
1110.47	16.72	1111.26	1111.83	1112.39	296 + 75
1110.33	16.20	1111.09	1111.66	1112.22	296 + 50
1110.16	15.68	1110.90	1111.47	1112.03	296 + 25
1110.00	15.16	1110.71	1111.28	1111.84	296 + 00
1109.81	14.64	1110.50	1111.07	1111.63	295 + 75
1109.64	14.12	1110.30	1110.87	1111.43	295 + 50
1109.41	13.60	1110.05	1110.62	1111.18	295 + 25
1109.20	13.08	1109.81	1110.38	1110.94	295 + 00
1108.97	12.56	1109.56	1110.13	1110.69	294 + 75
1108.73	12.03	1109.30	1109.87	1110.43	294 + 50
1108.48	11.51	1109.02	1109.59	1110.15	294 + 25
1108.21	10.99	1108.73	1109.30	1109.86	294 + 00
1107.94	10.47	1108.43	1109.00	1109.56	293 + 75
1107.65	9.95	1108.12	1108.69	1109.25	293 + 50
1107.36	9.43	1107.80	1108.37	1108.93	293 + 25
1107.05	8.91	1107.47	1108.04	1108.60	293 + 00
1106.73	8.39	1107.12	1107.69	1108.25	292 + 75
1106.39	7.87	1106.76	1107.33	1107.89	292 + 50
1106.04	7.35	1106.39	1106.96	1107.52	292 + 25
1105.69	6.83	1106.01	1106.58	1107.14	292 + 00
1105.32	6.31	1105.62	1106.19	1106.75	291 + 75
1104.95	5.78	1105.22	1105.79	1106.35	291 + 50
1104.55	5.26	1104.80	1105.37	1105.93	291 + 25
1104.16	4.74	1104.38	1104.95	1105.51	291 +00
1103.74	4.22	1103.94	1104.51	1105.07	290 + 75
1103.32	3.70	1103.49	1104.06	1104.62	290 + 50
1102.88	3.18	1103.03	1103.60	1104.16	290 + 25
1102.42	2.66	1102.55	1103.12	1103.68	290 + 00
1101.97	2.14	1102.07	1102.64	1103.20	289 + 75
1101.49	1.62	1101.57	1102.14	1102.70	289 + 50
1101.01	1.10	1101.06	1101.63	1102.19	289 + 25
1100.52	0.58	1100.55	1101.12	1101.68	289 + 00
1100.02	0.06	1100.02	1100.59	1101.15	288 + 75
		1099.47	1100.04	1100.60	288 + 50
		1098.92	1099.49	1100.05	288 + 25
		1098.35	1098.92	1099.48	288 + 00
		1097.78	1098.35	1098.91	287 + 75
		1097.19	1097.76	1098.32	287 + 50
		1096.59	1097.16	1097.72	287 + 25
		1095.97	1096.54	1097.10	287 + 00
		1095.35	1095.92	1096.48	286 + 75
		1094.72	1095.29	1095.85	286 + 50
		1094.07	1094.64	1095.20	286 + 25
		1093.41	1093.98	1094.54	286 + 00
		1092.74	1093.31	1093.87	285 + 75
		1092.06	1092.63	1093.19	285 + 50
		1091.37	1091.94	1092.50	285 + 25
		1090.66	1091.23	1091.79	285 + 00
		1089.94	1090.51	1091.07	284 + 75
		1089.22	1089.79	1090.35	284 + 50
		1088.48	1089.05	1089.61	284 + 25

EASTBOUND LANES

PROFILE GRADE	CROWN	RIGHT EDGE	WIDE-NING	SPEED CHANGE LANE
1107.00	1107.19	1107.00		
1106.91	1107.10	1106.95		
1106.79	1106.98	1106.89		
1106.65	1106.84	1106.82		
1106.61	1106.80	1106.80		
1106.51	1106.70	1106.78		
1106.36	1106.55	1106.74		
1106.34	1106.53	1106.73		
1106.17	1106.42	1106.67		
1105.98	1106.29	1106.60		
1105.79	1106.16	1106.53	12.00	1106.89
1105.76	1106.14	1106.51	12.00	1106.88
1105.57	1106.00	1106.43	12.00	1106.86
1105.35	1105.84	1106.32	12.00	1106.80
1105.11	1105.64	1106.18	12.00	1106.72
1105.03	1105.58	1106.13	12.00	1106.68
1104.86	1105.42	1105.99	12.00	1106.54
1104.59	1105.15	1105.72	11.43	1106.26
1104.32	1104.88	1105.45	8.43	1105.85
1104.03	1104.59	1105.16	5.43	1105.42
1103.72	1104.28	1104.85	2.43	1104.96
1103.41	1103.97	1104.54		
1103.08	1103.64	1104.21		
1102.74	1103.30	1103.87		
1102.38	1102.94	1103.51		
1102.01	1102.57	1103.14		
1101.63	1102.19	1102.76		
1101.24	1101.80	1102.37		
1100.83	1101.39	1101.96		
1100.41	1100.97	1101.54		
1099.98	1100.54	1101.11		
1099.53	1100.09	1100.66		
1099.08	1099.64	1100.21		
1098.60	1099.16	1099.73		
1098.12	1098.68	1099.25		
1097.62	1098.18	1098.75		
1097.11	1097.67	1098.24		
1096.59	1097.15	1097.72		
1096.05	1096.61	1097.18		
1095.50	1096.06	1096.63		
1094.94	1095.50	1096.07		
1094.37	1094.93	1095.50		
1093.78	1094.34	1094.91		
1093.18	1093.74	1094.31		
1092.56	1093.12	1093.69		
1091.94	1092.50	1093.07		
1091.30	1091.86	1092.43		
1090.64	1091.20	1091.77		
1089.98	1090.54	1091.11		
1089.30	1089.86	1090.43		
1088.61	1089.17	1089.74		
1087.90	1088.46	1089.03		
1087.18	1087.74	1088.31		
1086.45	1087.01	1087.58		
1085.71	1086.27	1086.84		
1084.96	1085.52	1086.09		
1084.21	1084.77	1085.34		
1083.46	1084.02	1084.59		
1082.71	1083.27	1083.84		
1081.96	1082.52	1083.09		
1081.21	1081.77	1082.34		
1080.46	1081.02	1081.59		
1079.71	1080.27	1080.84		
1078.96	1079.52	1080.09		
1078.21	1078.77	1079.34		
1077.46	1078.02	1078.59		
1076.71	1077.27	1077.84		
1075.96	1076.52	1077.09		
1075.21	1075.77	1076.34		
1074.46	1075.02	1075.59		
1073.71	1074.27	1074.84		
1072.96	1073.52	1074.09		
1072.21	1072.77	1073.34		
1071.46	1072.02	1072.59		
1070.71	1071.27	1071.84		
1069.96	1070.52	1071.09		
1069.21	1069.77	1070.34		
1068.46	1069.02	1069.59		
1067.71	1068.27	1068.84		

CURVE Nº 3
SUPERELEVATION TABLE

SUPERELEVATION TABLE

CURVE 4

Δ = 63° 21' 00" (RT.)
e = .0833 FT. PER FT.

FED. RD.	STATE	PROJECT	
2	OHIO		

35
510

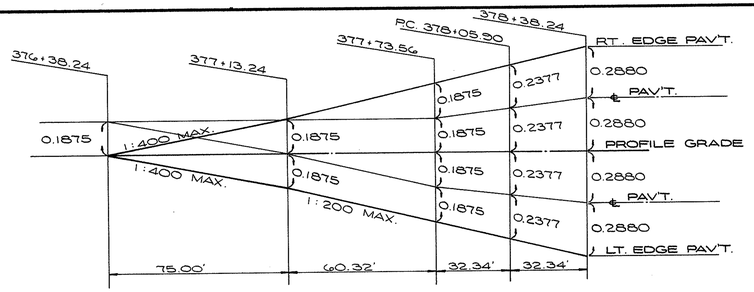
SUM - 271 - 2.98

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
1025.52	1024.52	1023.52	344 + 50	1023.52	1022.52	1021.52
1026.27	1025.27	1024.27	344 + 25	1024.27	1023.27	1022.27
1027.02	1026.02	1025.02	344 + 00	1025.02	1024.02	1023.02
1027.77	1026.77	1025.77	343 + 75	1025.77	1024.77	1023.77
1028.52	1027.52	1026.52	343 + 50	1026.52	1025.52	1024.52
1029.27	1028.27	1027.27	343 + 25	1027.27	1026.27	1025.27
1030.02	1029.02	1028.02	343 + 00	1028.02	1027.02	1026.02
1030.77	1029.77	1028.77	342 + 75	1028.77	1027.77	1026.77
1031.52	1030.52	1029.52	342 + 50	1029.52	1028.52	1027.52
1032.27	1031.27	1030.27	342 + 25	1030.27	1029.27	1028.27
1033.02	1032.02	1031.02	342 + 00	1031.02	1030.02	1029.02
1033.77	1032.77	1031.77	341 + 75	1031.77	1030.77	1029.77
1034.52	1033.52	1032.52	341 + 50	1032.52	1031.52	1030.52
1035.27	1034.27	1033.27	341 + 25	1033.27	1032.27	1031.27
1036.02	1035.02	1034.02	341 + 00	1034.02	1033.02	1032.02
1036.70	1035.70	1034.70	340 + 77.38	1034.70	1033.70	1032.70
1036.76	1035.76	1034.77	340 + 75	1034.77	1033.78	1032.78
1037.40	1036.46	1035.52	340 + 50	1035.52	1034.58	1033.64
1038.03	1037.15	1036.27	340 + 25	1036.27	1035.39	1034.51
1038.67	1037.84	1037.02	340 + 00	1037.02	1036.20	1035.37
1039.31	1038.54	1037.77	339 + 75	1037.77	1037.00	1036.23
1039.94	1039.23	1038.52	339 + 50	1038.52	1037.81	1037.10
1040.58	1039.92	1039.27	339 + 25	1039.27	1038.62	1037.96
1041.22	1040.62	1040.02	339 + 00	1040.02	1039.42	1038.82
1041.85	1041.31	1040.77	338 + 75	1040.77	1040.23	1039.69
1042.49	1042.00	1041.52	338 + 50	1041.52	1041.04	1040.55
1043.13	1042.70	1042.27	338 + 25	1042.27	1041.84	1041.41
1043.76	1043.39	1043.02	338 + 00	1043.02	1042.65	1042.28
1044.40	1044.09	1043.77	337 + 75	1043.77	1043.46	1043.14
1045.04	1044.78	1044.52	337 + 50	1044.52	1044.26	1044.00
1045.67	1045.47	1045.27	337 + 25	1045.27	1045.07	1044.87
1045.84	1045.65	1045.46	337 + 18.76	1045.46	1045.27	1045.08
1046.31	1046.21	1046.02	337 + 00	1046.02	1045.92	1045.73
1046.89	1046.89	1046.70	336 + 77.38	1046.70	1046.70	1046.51
1046.95	1046.96	1046.77	336 + 75	1046.77	1046.78	1046.59
1047.64	1047.71	1047.52	336 + 50	1047.52	1047.59	1047.40
1048.33	1048.46	1048.27	336 + 25	1048.27	1048.40	1048.21
1048.95	1049.14	1048.95	336 + 02.38	1048.95	1049.14	1048.95

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
997.02	996.02	995.02	354 + 00	993.69	992.69	991.69
997.77	996.77	995.77	353 + 75	994.57	993.57	992.57
998.52	997.52	996.52	353 + 50	995.44	994.44	993.44
999.27	998.27	997.27	353 + 25	996.31	995.31	994.31
1000.02	999.02	998.02	353 + 00	997.17	996.17	995.17
1000.77	999.77	998.77	352 + 75	998.02	997.02	996.02
1001.52	1000.52	999.52	352 + 50	998.87	997.87	996.87
1002.27	1001.27	1000.27	352 + 25	999.71	998.71	997.71
1003.02	1002.02	1001.02	352 + 00	1000.54	999.54	998.54
1003.77	1002.77	1001.77	351 + 75	1001.37	1000.37	999.37
1004.52	1003.52	1002.52	351 + 50	1002.19	1001.19	1000.19
1005.27	1004.27	1003.27	351 + 25	1003.00	1002.00	1001.00
1006.02	1005.02	1004.02	351 + 00	1003.81	1002.81	1001.81
1006.77	1005.77	1004.77	350 + 75	1004.61	1003.61	1002.61
1007.52	1006.52	1005.52	350 + 50	1005.40	1004.40	1003.40
1008.27	1007.27	1006.27	350 + 25	1006.19	1005.19	1004.19
1009.02	1008.02	1007.02	350 + 00	1006.97	1005.97	1004.97
1009.77	1008.77	1007.77	349 + 75	1007.74	1006.74	1005.74
1010.52	1009.52	1008.52	349 + 50	1008.51	1007.51	1006.51
1011.27	1010.27	1009.27	349 + 25	1009.27	1008.27	1007.27
1012.02	1011.02	1010.02	349 + 00	1010.02	1009.02	1008.02
1012.77	1011.77	1010.77	348 + 75	1010.77	1009.77	1008.77
1013.52	1012.52	1011.52	348 + 50	1011.52	1010.52	1009.52
1014.27	1013.27	1012.27	348 + 25	1012.27	1011.27	1010.27
1015.02	1014.02	1013.02	348 + 00	1013.02	1012.02	1011.02
1015.77	1014.77	1013.77	347 + 75	1013.77	1012.77	1011.77
1016.52	1015.52	1014.52	347 + 50	1014.52	1013.52	1012.52
1017.27	1016.27	1015.27	347 + 25	1015.27	1014.27	1013.27
1018.02	1017.02	1016.02	347 + 00	1016.02	1015.02	1014.02
1018.77	1017.77	1016.77	346 + 75	1016.77	1015.77	1014.77
1019.52	1018.52	1017.52	346 + 50	1017.52	1016.52	1015.52
1020.27	1019.27	1018.27	346 + 25	1018.27	1017.27	1016.27
1021.02	1020.02	1019.02	346 + 00	1019.02	1018.02	1017.02
1021.77	1020.77	1019.77	345 + 75	1019.77	1018.77	1017.77
1022.52	1021.52	1020.52	345 + 50	1020.52	1019.52	1018.52
1023.27	1022.27	1021.27	345 + 25	1021.27	1020.27	1019.27
1024.02	1023.02	1022.02	345 + 00	1022.02	1021.02	1020.02
1024.77	1023.77	1022.77	344 + 75	1022.77	1021.77	1020.77

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
969.10	969.29	969.10	362 + 64.05	962.29	962.48	962.29
969.56	969.71	969.52	362 + 50	962.80	962.95	962.76
970.37	970.46	970.27	362 + 25	963.71	963.80	963.61
971.18	971.21	971.02	362 + 00	964.62	964.65	964.46
971.54	971.54	971.35	361 + 89.05	965.02	965.02	964.83
972.02	971.96	971.77	361 + 75	965.53	965.47	965.28
972.88	972.71	972.52	361 + 50	966.44	966.27	966.08
972.97	972.78	972.59	361 + 47.67	966.52	966.33	966.14
973.75	973.51	973.27	361 + 25	967.35	967.11	966.87
974.61	974.32	974.02	361 + 00	968.26	967.96	967.67
975.47	975.12	974.77	360 + 75	969.17	968.82	968.47
976.34	975.93	975.52	360 + 50	970.08	969.67	969.26
977.20	976.73	976.27	360 + 25	970.99	970.53	970.06
978.06	977.54	977.02	360 + 00	971.90	971.38	970.86
978.93	978.35	977.77	359 + 75	972.81	972.23	971.65
979.79	979.16	978.52	359 + 50	973.72	973.08	972.45
980.65	979.96	979.27	359 + 25	974.63	973.94	973.25
981.52	980.77	980.02	359 + 00	975.54	974.79	974.04
982.38	981.57	980.77	358 + 75	976.45	975.65	974.84
983.24	982.38	981.52	358 + 50	977.36	976.50	975.64
984.11	983.19	982.27	358 + 25	978.27	977.35	976.43
984.97	984.00	983.02	358 + 00	979.18	978.20	977.23
985.35	984.35	983.35	357 + 89.05	979.58	978.58	977.58
985.77	984.77	983.77	357 + 75	980.09	979.09	978.09
986.52	985.52	984.52	357 + 50	981.00	980.00	979.00
987.27	986.27	985.27	357 + 25	981.91	980.91	979.91
988.02	987.02	986.02	357 + 00	982.82	981.82	980.82
988.77	987.77	986.77	356 + 75	983.73	982.73	981.73
989.52	988.52	987.52	356 + 50	984.64	983.64	982.64
990.27	989.27	988.27	356 + 25	985.55	984.55	983.55
991.02	990.02	989.02	356 + 00	986.46	985.46	984.46
991.77	990.77	989.77	355 + 75	987.37	986.37	985.37
992.52	991.52	990.52	355 + 50	988.28	987.28	986.28
993.27	992.27	991.27	355 + 25	989.19	988.19	987.19
994.02	993.02	992.02	355 + 00	990.10	989.10	988.10
994.77	993.77	992.77	354 + 75	991.01	990.01	989.01
995.52	994.52	993.52	354 + 50	991.91	990.91	989.91
996.27	995.27	994.27	354 + 25	992.80	991.80	990.80

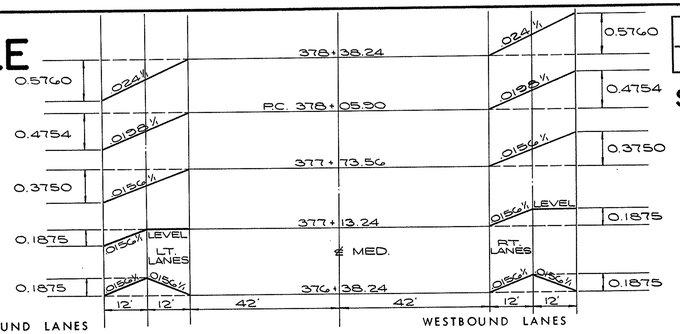
CURVE Nº 4
SUPERELEVATION TABLE



SUPERELEVATION TABLE

CURVE 5

Δ = 28° 53' 34" (LT.)
e = .024 FT. PER FT.



FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

36
510

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
908.94	909.23	909.52	382 + 50	899.44	899.73	900.02
909.69	909.98	910.27	382 + 25	900.19	900.48	900.77
910.44	910.73	911.02	382 + 00	900.94	901.23	901.52
911.19	911.48	911.77	381 + 75	901.69	901.98	902.27
911.94	912.23	912.52	381 + 50	902.44	902.73	903.02
912.69	912.98	913.27	381 + 25	903.19	903.48	903.77
913.44	913.73	914.02	381 + 00	903.94	904.23	904.52
914.19	914.48	914.77	380 + 75	904.69	904.98	905.27
914.94	915.23	915.52	380 + 50	905.44	905.73	906.02
915.69	915.98	916.27	380 + 25	906.19	906.48	906.77
916.44	916.73	917.02	380 + 00	906.94	907.23	907.52
917.19	917.48	917.77	379 + 75	907.69	907.98	908.27
917.94	918.23	918.52	379 + 50	908.44	908.73	909.02
918.69	918.98	919.27	379 + 25	909.19	909.48	909.77
919.44	919.73	920.02	379 + 00	909.94	910.23	910.52
920.19	920.48	920.77	378 + 75	910.69	910.98	911.27
920.94	921.23	921.52	378 + 50	911.44	911.73	912.02
921.29	921.58	921.87	378 + 38.24	911.79	912.08	912.37
921.74	922.00	922.27	378 + 25	912.19	912.46	912.72
922.36	922.60	922.84	378 + 05.90	912.76	913.00	913.24
922.56	922.79	923.02	378 + 00	912.94	913.17	913.40
923.39	923.58	923.77	377 + 75	913.69	913.88	914.07
923.43	923.62	923.81	377 + 73.56	913.73	913.92	914.11
924.22	924.41	924.52	377 + 50	914.44	914.63	914.74
925.05	925.24	925.27	377 + 25	915.19	915.38	915.41
925.43	925.62	925.62	377 + 13.24	915.54	915.73	915.73
925.87	926.06	926.02	377 + 00	915.94	916.13	916.09
926.68	926.87	926.77	376 + 75	916.69	916.88	916.78
927.49	927.68	927.52	376 + 50	917.44	917.63	917.47
927.87	928.06	927.87	376+38.24	917.79	917.98	917.79
	928.46	928.27	376+25	918.19		
	929.21	929.02	376+00	918.94		

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
885.69	885.98	886.27	390 + 25	876.19	876.48	876.77
886.44	886.73	887.02	390 + 00	876.94	877.23	877.52
887.19	887.48	887.77	389 + 75	877.69	877.98	878.27
887.94	888.23	888.52	389 + 50	878.44	878.73	879.02
888.69	888.98	889.27	389 + 25	879.19	879.48	879.77
889.44	889.73	890.02	389 + 00	879.94	880.23	880.52
890.19	890.48	890.77	388 + 75	880.69	880.98	881.27
890.94	891.23	891.52	388 + 50	881.44	881.73	882.02
891.69	891.98	892.27	388 + 25	882.19	882.48	882.77
892.44	892.73	893.02	388 + 00	882.94	883.23	883.52
893.19	893.48	893.77	387 + 75	883.69	883.98	884.27
893.94	894.23	894.52	387 + 50	884.44	884.73	885.02
894.69	894.98	895.27	387 + 25	885.19	885.48	885.77
895.44	895.73	896.02	387 + 00	885.94	886.23	886.52
896.19	896.48	896.77	386 + 75	886.69	886.98	887.27
896.94	897.23	897.52	386 + 50	887.44	887.73	888.02
897.69	897.98	898.27	386 + 25	888.19	888.48	888.77
898.44	898.73	899.02	386 + 00	888.94	889.23	889.52
899.19	899.48	899.77	385 + 75	889.69	889.98	890.27
899.94	900.23	900.52	385 + 50	890.44	890.73	891.02
900.69	900.98	901.27	385 + 25	891.19	891.48	891.77
901.44	901.73	902.02	385 + 00	891.94	892.23	892.52
902.19	902.48	902.77	384 + 75	892.69	892.98	893.27
902.94	903.23	903.52	384 + 50	893.44	893.73	894.02
903.69	903.98	904.27	384 + 25	894.19	894.48	894.77
904.44	904.73	905.02	384 + 00	894.94	895.23	895.52
905.19	905.48	905.77	383 + 75	895.69	895.98	896.27
905.94	906.23	906.52	383 + 50	896.44	896.73	897.02
906.69	906.98	907.27	383 + 25	897.19	897.48	897.77
907.44	907.73	908.02	383 + 00	897.94	898.23	898.52
908.19	908.48	908.77	382 + 75	898.69	898.98	899.27

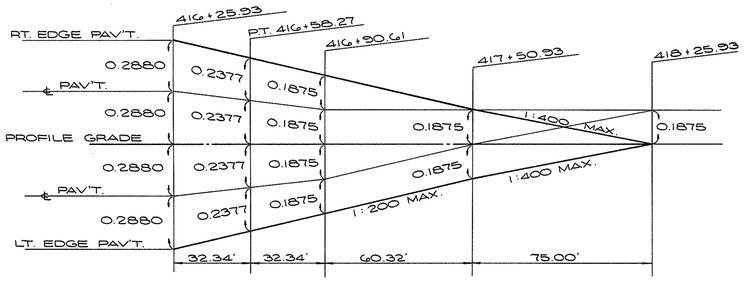
WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
862.44	862.73	863.02	398 + 00	852.94	853.23	853.52
863.19	863.48	863.77	397 + 75	853.69	853.98	854.27
863.94	864.23	864.52	397 + 50	854.44	854.73	855.02
864.69	864.98	865.27	397 + 25	855.19	855.48	855.77
865.44	865.73	866.02	397 + 00	855.94	856.23	856.52
866.19	866.48	866.77	396 + 75	856.69	856.98	857.27
866.94	867.23	867.52	396 + 50	857.44	857.73	858.02
867.69	867.98	868.27	396 + 25	858.19	858.48	858.77
868.44	868.73	869.02	396 + 00	858.94	859.23	859.52
869.19	869.48	869.77	395 + 75	859.69	859.98	860.27
869.94	870.23	870.52	395 + 50	860.44	860.73	861.02
870.69	870.98	871.27	395 + 25	861.19	861.48	861.77
871.44	871.73	872.02	395 + 00	861.94	862.23	862.52
872.19	872.48	872.77	394 + 75	862.69	862.98	863.27
872.94	873.23	873.52	394 + 50	863.44	863.73	864.02
873.69	873.98	874.27	394 + 25	864.19	864.48	864.77
874.44	874.73	875.02	394 + 00	864.94	865.23	865.52
875.19	875.48	875.77	393 + 75	865.69	865.98	866.27
875.94	876.23	876.52	393 + 50	866.44	866.73	867.02
876.69	876.98	877.27	393 + 25	867.19	867.48	867.77
877.44	877.73	878.02	393 + 00	867.94	868.23	868.52
878.19	878.48	878.77	392 + 75	868.69	868.98	869.27
878.94	879.23	879.52	392 + 50	869.44	869.73	870.02
879.69	879.98	880.27	392 + 25	870.19	870.48	870.77
880.44	880.73	881.02	392 + 00	870.94	871.23	871.52
881.19	881.48	881.77	391 + 75	871.69	871.98	872.27
881.94	882.23	882.52	391 + 50	872.44	872.73	873.02
882.69	882.98	883.27	391 + 25	873.19	873.48	873.77
883.44	883.73	884.02	391 + 00	873.94	874.23	874.52
884.19	884.48	884.77	390 + 75	874.69	874.98	875.27
884.94	885.23	885.52	390 + 50	875.44	875.73	876.02

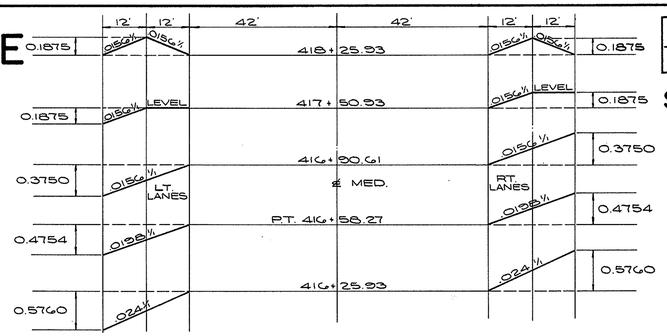
CURVE Nº 5
SUPERELEVATION TABLE

SUPERELEVATION TABLE

CURVE 5 (CONT'D.)

Δ = 28° 53' 34" (LT.)
e = .024 FT. PER FT.





PED. RD.	STATE	PROJECT	
2	OHIO		

37
510

SUM - 271 - 2.98

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
840.69	840.98	841.27	405 + 25	831.19	831.48	831.77
841.44	841.73	842.02	405 + 00	831.94	832.23	832.52
842.19	842.48	842.77	404 + 75	832.69	832.98	833.27
842.94	843.23	843.52	404 + 50	833.44	833.73	834.02
843.69	843.98	844.27	404 + 25	834.19	834.48	834.77
844.44	844.73	845.02	404 + 00	834.94	835.23	835.52
845.19	845.48	845.77	403 + 75	835.69	835.98	836.27
845.94	846.23	846.52	403 + 50	836.44	836.73	837.02
846.69	846.98	847.27	403 + 25	837.19	837.48	837.77
847.44	847.73	848.02	403 + 00	837.94	838.23	838.52
848.19	848.48	848.77	402 + 75	838.69	838.98	839.27
848.94	849.23	849.52	402 + 50	839.44	839.73	840.02
849.69	849.98	850.27	402 + 25	840.19	840.48	840.77
850.44	850.73	851.02	402 + 00	840.94	841.23	841.52
851.19	851.48	851.77	401 + 75	841.69	841.98	842.27
851.94	852.23	852.52	401 + 50	842.44	842.73	843.02
852.69	852.98	853.27	401 + 25	843.19	843.48	843.77
853.44	853.73	854.02	401 + 00	843.94	844.23	844.52
854.19	854.48	854.77	400 + 75	844.69	844.98	845.27
854.94	855.23	855.52	400 + 50	845.44	845.73	846.02
855.69	855.98	856.27	400 + 25	846.19	846.48	846.77
856.44	856.73	857.02	400 + 00	846.94	847.23	847.52
857.19	857.48	857.77	399 + 75	847.69	847.98	848.27
857.94	858.23	858.52	399 + 50	848.44	848.73	849.02
858.69	858.98	859.27	399 + 25	849.19	849.48	849.77
859.44	859.73	860.02	399 + 00	849.94	850.23	850.52
860.19	860.48	860.77	398 + 75	850.69	850.98	851.27
860.94	861.23	861.52	398 + 50	851.44	851.73	852.02
861.69	861.98	862.27	398 + 25	852.19	852.48	852.77

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
818.94	819.23	819.52	412 + 50	809.44	809.73	810.02
819.69	819.98	820.27	412 + 25	810.19	810.48	810.77
820.44	820.73	821.02	412 + 00	810.94	811.23	811.52
821.19	821.48	821.77	411 + 75	811.69	811.98	812.27
821.94	822.23	822.52	411 + 50	812.44	812.73	813.02
822.69	822.98	823.27	411 + 25	813.19	813.48	813.77
823.44	823.73	824.02	411 + 00	813.94	814.23	814.52
824.19	824.48	824.77	410 + 75	814.69	814.98	815.27
824.94	825.23	825.52	410 + 50	815.44	815.73	816.02
825.69	825.98	826.27	410 + 25	816.19	816.48	816.77
826.44	826.73	827.02	410 + 00	816.94	817.23	817.52
827.19	827.48	827.77	409 + 75	817.69	817.98	818.27
827.94	828.23	828.52	409 + 50	818.44	818.73	819.02
828.69	828.98	829.27	409 + 25	819.19	819.48	819.77
829.44	829.73	830.02	409 + 00	819.94	820.23	820.52
830.19	830.48	830.77	408 + 75	820.69	820.98	821.27
830.94	831.23	831.52	408 + 50	821.44	821.73	822.02
831.69	831.98	832.27	408 + 25	822.19	822.48	822.77
832.44	832.73	833.02	408 + 00	822.94	823.23	823.52
833.19	833.48	833.77	407 + 75	823.69	823.98	824.27
833.94	834.23	834.52	407 + 50	824.44	824.73	825.02
834.69	834.98	835.27	407 + 25	825.19	825.48	825.77
835.44	835.73	836.02	407 + 00	825.94	826.23	826.52
836.19	836.48	836.77	406 + 75	826.69	826.98	827.27
836.94	837.23	837.52	406 + 50	827.44	827.73	828.02
837.69	837.98	838.27	406 + 25	828.19	828.48	828.77
838.44	838.73	839.02	406 + 00	828.94	829.23	829.52
839.19	839.48	839.77	405 + 75	829.69	829.98	830.27
839.94	840.23	840.52	405 + 50	830.44	830.73	831.02

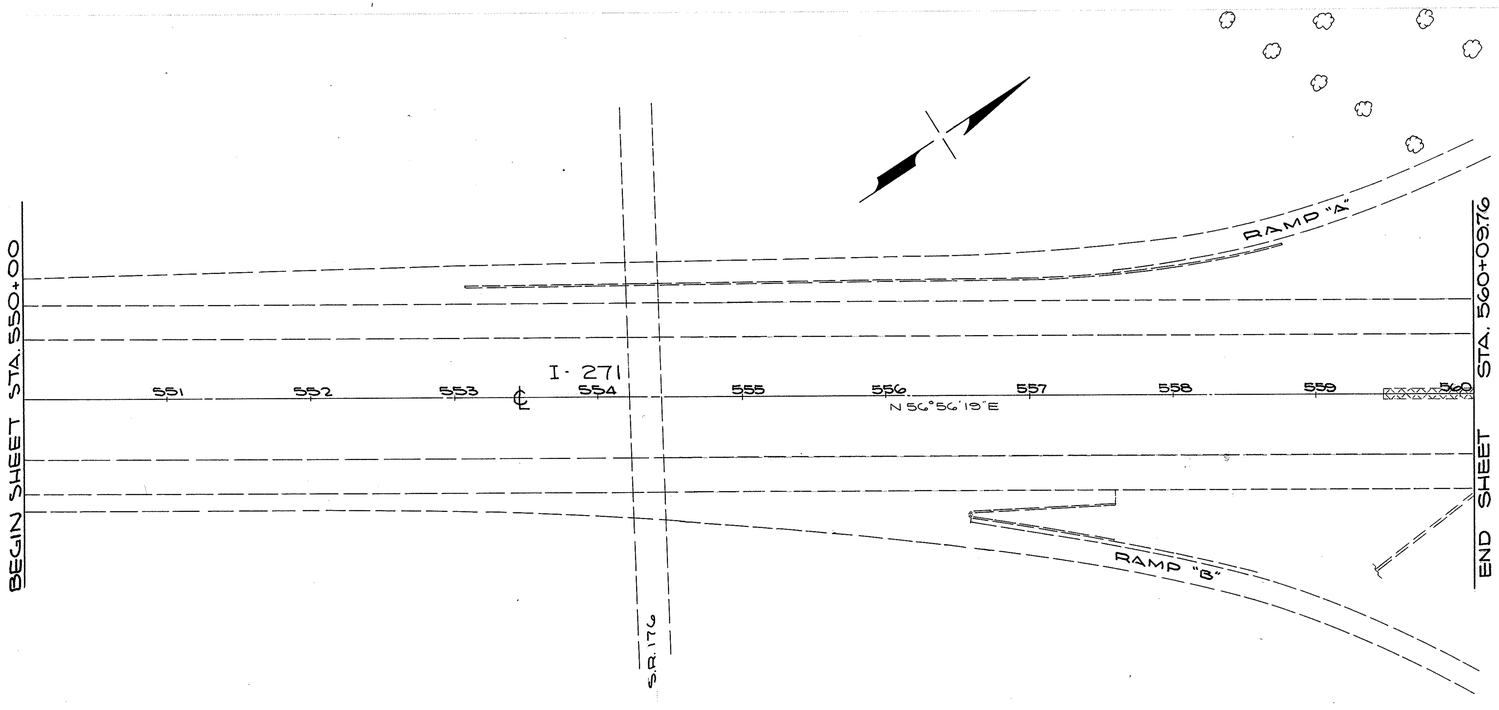
WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
802.24	802.43	802.24	418 + 25.93	792.16	792.35	792.16
802.27	802.46	802.27	418 + 25	792.19	792.38	792.19
802.96	803.15	803.02	418 + 00	792.94	793.13	793.00
803.64	803.83	803.77	417 + 75	793.69	793.88	793.82
804.30	804.49	804.49	417 + 50.93	794.41	794.60	794.60
804.33	804.52	804.52	417 + 50	794.44	794.63	794.63
805.00	805.19	805.27	417 + 25	795.19	795.38	795.46
805.67	805.86	806.02	417 + 00	795.94	796.13	796.29
805.92	806.11	806.30	416 + 90.61	796.22	796.41	796.60
806.35	806.56	806.77	416 + 75	796.69	796.90	797.11
806.79	807.03	807.27	416 + 58.27	797.19	797.43	797.67
807.02	807.27	807.52	416 + 50	797.44	797.69	797.94
807.66	807.95	808.24	416 + 25.93	798.16	798.45	798.74
807.69	807.98	808.27	416 + 25	798.19	798.48	798.77
808.44	808.73	809.02	416 + 00	798.94	799.23	799.52
809.10	809.39	809.68	415 + 78.21	799.60	799.89	800.18
809.19	809.48	809.77	415 + 75	799.69	799.98	800.27
809.94	810.23	810.52	415 + 50	800.44	800.73	801.02
810.69	810.98	811.27	415 + 25	801.19	801.48	801.77
811.44	811.73	812.02	415 + 00	801.94	802.23	802.52
812.19	812.48	812.77	414 + 75	802.69	802.98	803.27
812.94	813.23	813.52	414 + 50	803.44	803.77	804.02
813.69	813.98	814.27	414 + 25	804.19	804.48	804.77
814.44	814.73	815.02	414 + 00	804.94	805.23	805.52
815.19	815.48	815.77	413 + 75	805.69	805.98	806.27
815.94	816.23	816.52	413 + 50	806.44	806.73	807.02
816.69	816.98	817.27	413 + 25	807.19	807.48	807.77
817.44	817.73	818.02	413 + 00	807.94	808.23	808.52
818.19	818.48	818.77	412 + 75	808.69	808.98	809.27

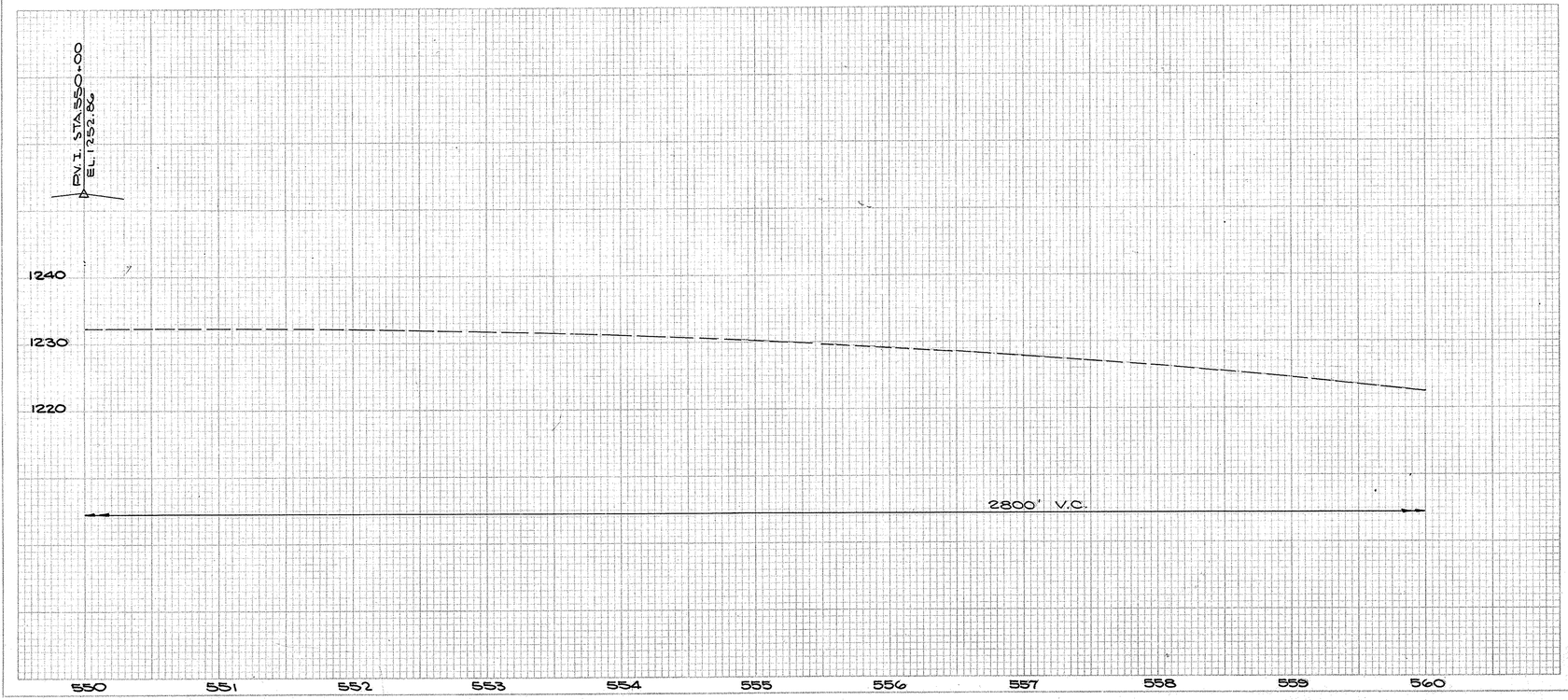
CURVE Nº 5
SUPERELEVATION TABLE

FED. HIG. DIVISION	STATE	PROJECT	
2	OHIO		

38
510

SUM - 271 - 2.98





ESTIMATED QUANTITIES

SEE SHEET NO.

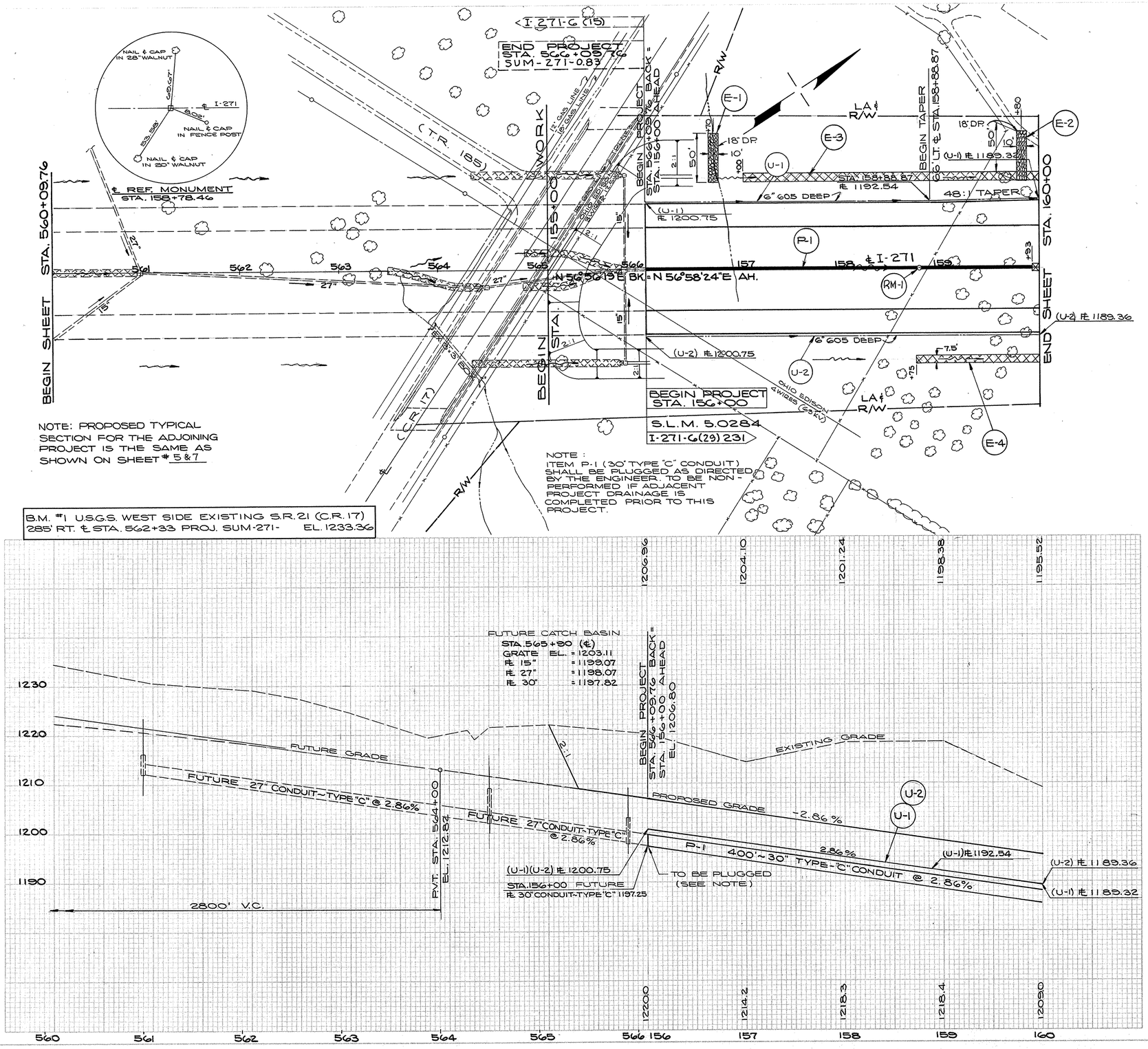
REF. NO.	STATION TO STATION	SIDE
	TOTALS	

I-271 STA. 550+00 TO STA. 560+09.76

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98

39
510



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMT. EACH	607 JUTE MATTING SQ.YDS.	605 UNDERDRAINS & PIPE UNDERDRAINS LIN. FT. DEEP	605 UNDERDRAINS & PIPE UNDERDRAINS LIN. FT.	609 CONDUIT-LIN.FT. TYPE "C" 30"	SEE SHEET NO.
U-1	156+00 160+00	LT.						325
U-2	156+00 160+00	RT.						325
E-1	156+70	LT.						
E-2	159+80	LT.						
E-3	157+00 160+00	LT.		250				
E-4	158+75 160+00	RT.		104				
RM-1	158+78.46	℄	1					
P-1	156+00 – 160+00	℄					400	
TOTALS			1	354	DEEP 400 400	800	400	

601 CLASSIFIED ROCK CHANNEL EXCAV. CU.YD.	30.6	30.6

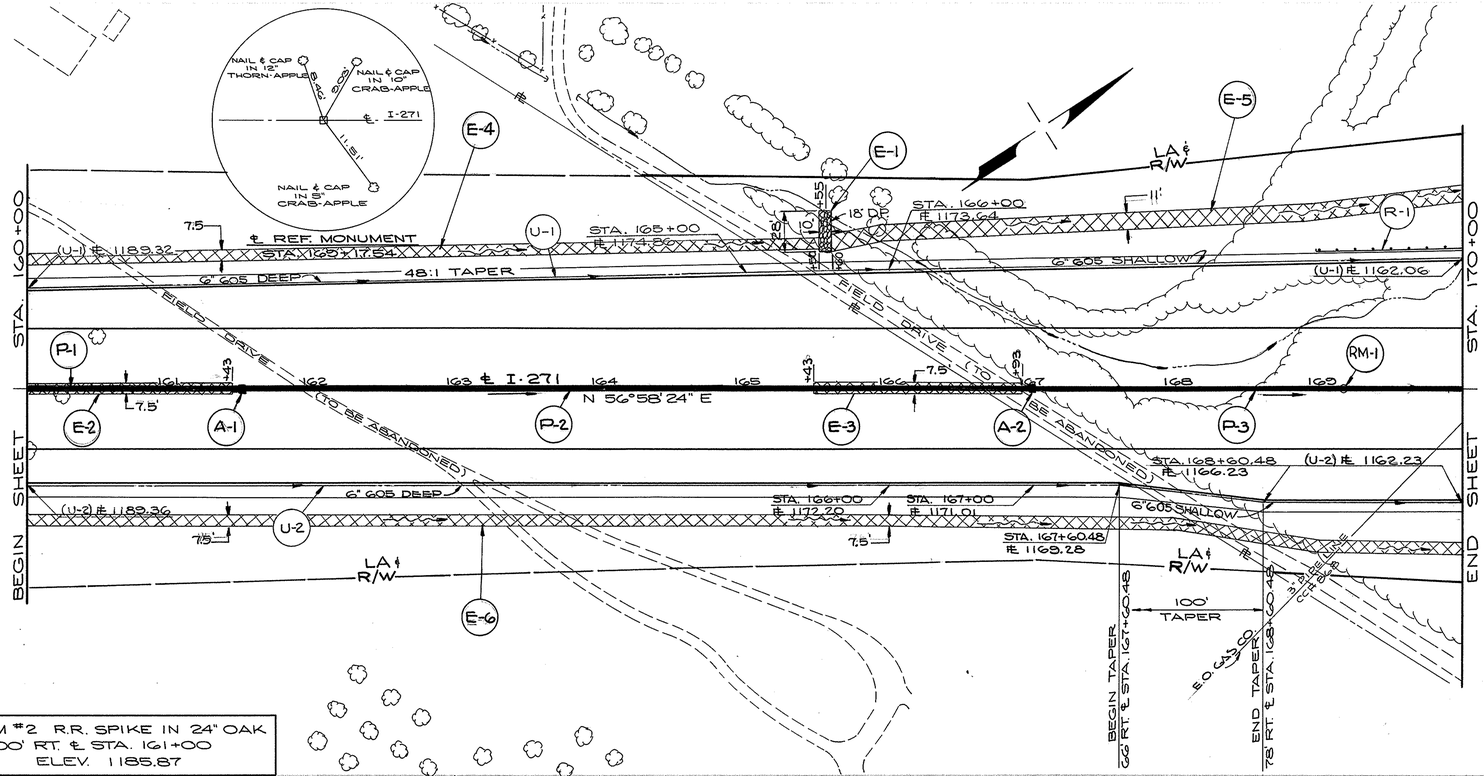
61.2

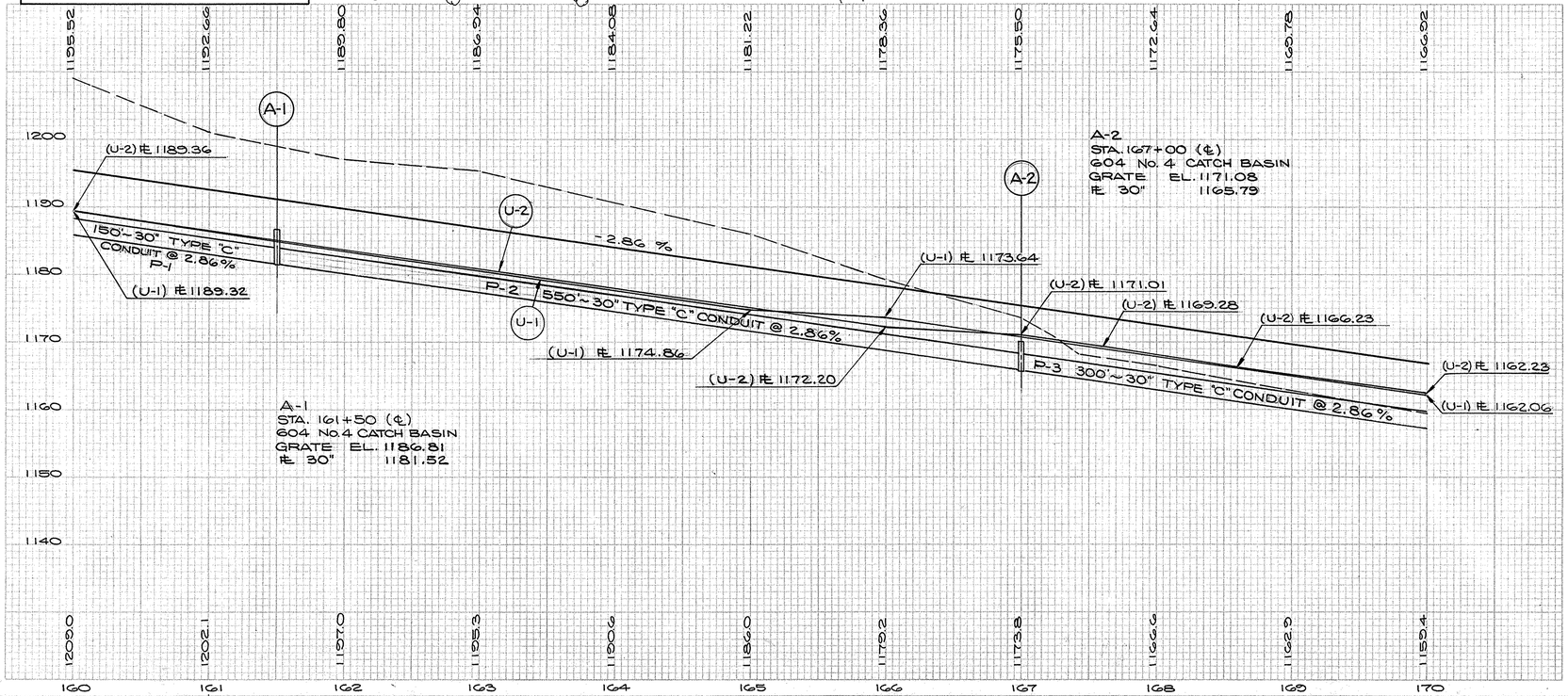
I-271 STA. 156+00 TO STA. 160+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

40
510

SUM -271-2.98





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 CATCH BASIN GRATE & FRAME TYPE-4 EACH	604 CATCH BASIN GRATE & FRAME TYPE-C EACH	605 UNDERDRAINS 6" PIPE UNDERDRAINS LIN. FT. DEEP	605 UNDERDRAINS 6" PIPE UNDERDRAINS LIN. FT. SHALLOW	607 DUMPED ROCK CHANNEL LINING CU.YDS.	608 JUTE MATTING SQ.YDS.	609 CONDUIT LIN. FT. TYPE C WITH BEDDING 30"	SEE SHEET NO.
U-1	160+00 170+00	LT.								
U-2	160+00 170+00	RT.								
E-1	165+55	LT.								325
E-2	159+93 161+43	℄				18.9				
E-3	165+43 166+93	℄					125			
E-4	160+00 165+50	LT.					125			
E-5	165+60 170+00	LT.					458			
E-6	160+00 170+00	RT.					538			
A-1	161+50	℄		1			833			
A-2	167+00	℄		1						
P-1	160+00 A-1	℄							150	
P-2	A-1 A-2	℄							550	
P-3	A-2 170+00	℄							300	
R-1	169+00 170+00	LT.						100		
RM-1	169+17.54	℄		1						
TOTALS			1	2	18.9	2079	2	100	1000	

I-271 STA. 160+00 TO STA. 170+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

41
510

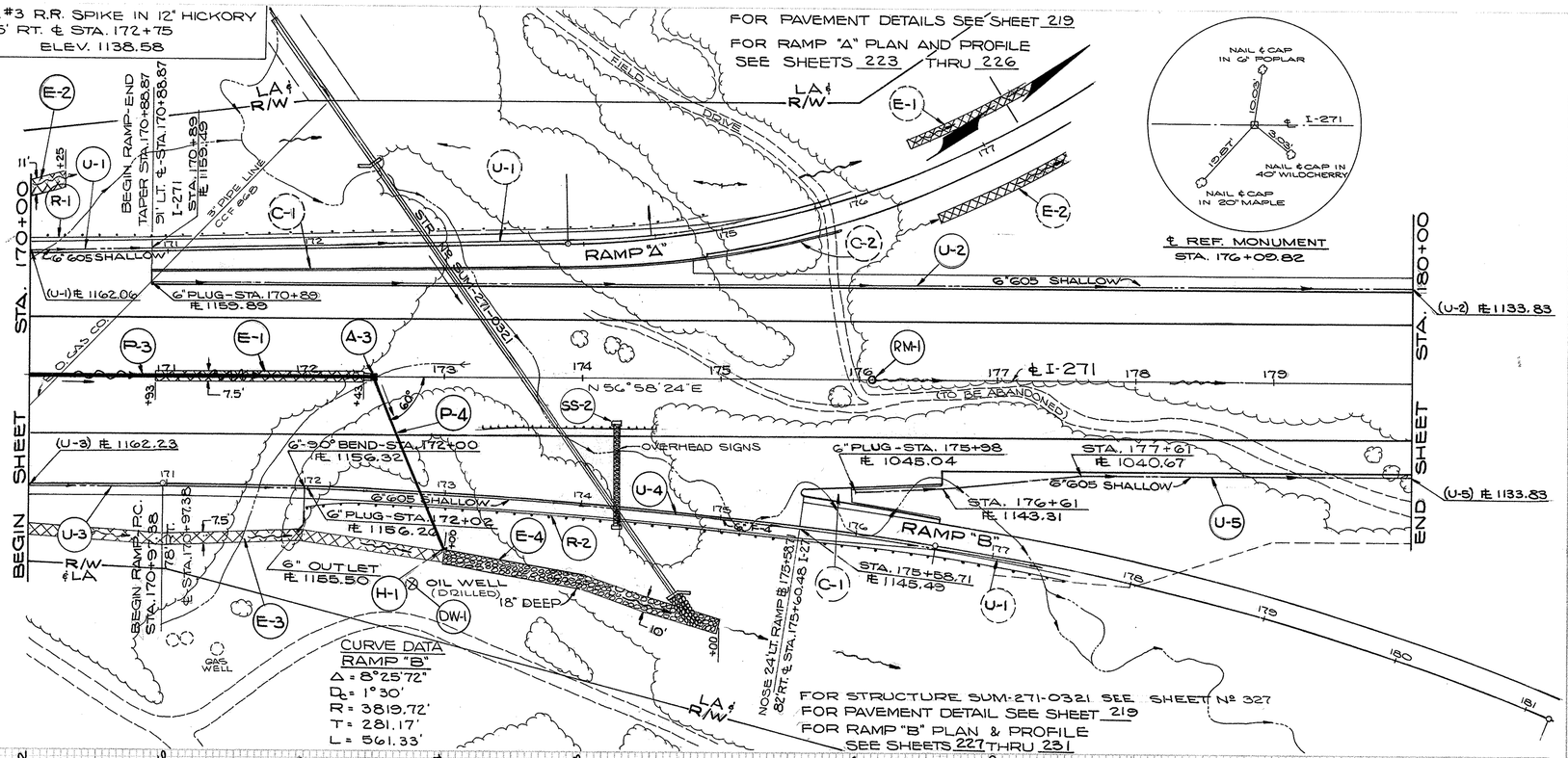
SUM - 271 - 2.98

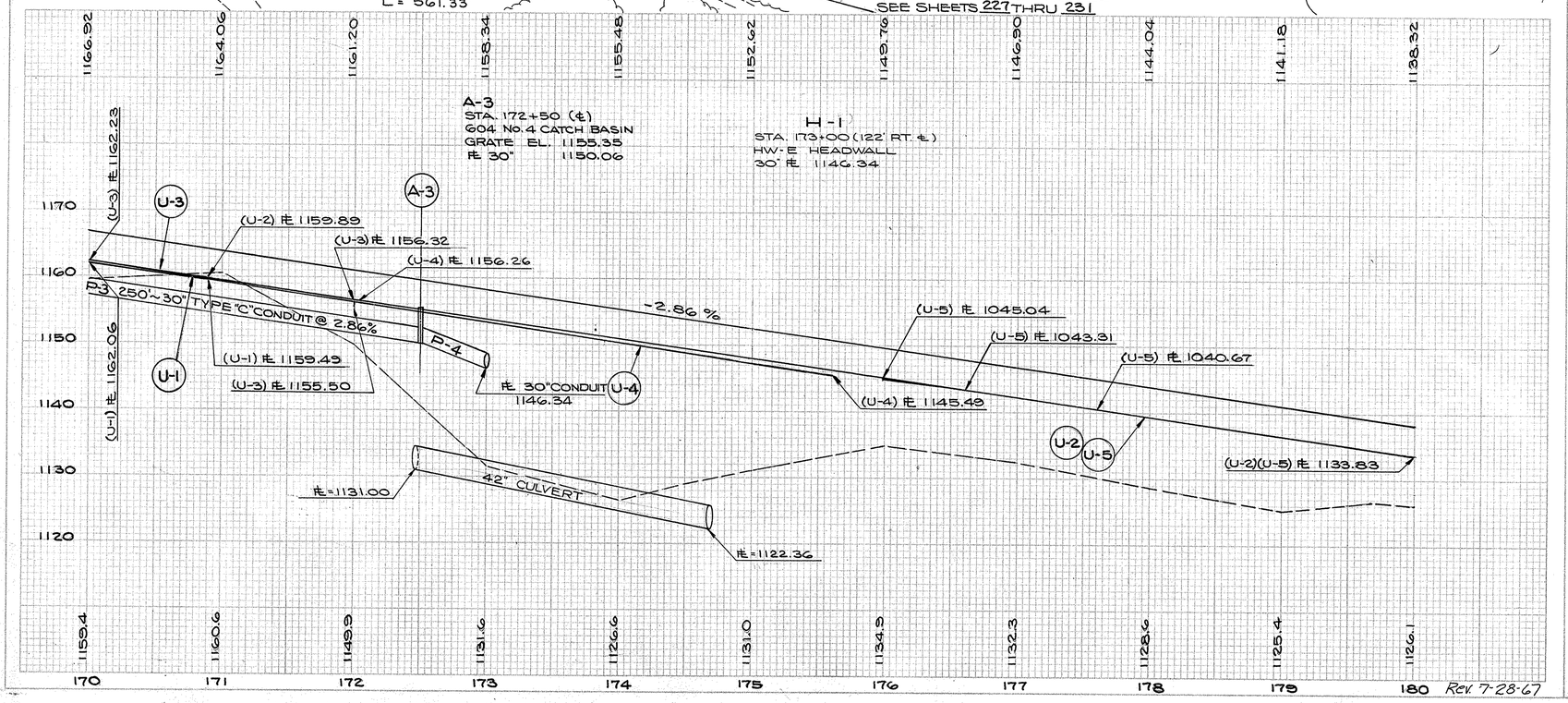
B.M.#3 R.R. SPIKE IN 12" HICKORY
675' RT. ℄ STA. 172+75
ELEV. 1138.58

FOR PAVEMENT DETAILS SEE SHEET 219
FOR RAMP "A" PLAN AND PROFILE
SEE SHEETS 223 THRU 226

NAIL & CAP IN 6" POPLAR
NAIL & CAP IN 40" WILDCHERRY
NAIL & CAP IN 20" MAPLE
105'
85°
135'
℄ I-271

℄ REF. MONUMENT
STA. 176+09.82





Rev 7-28-67

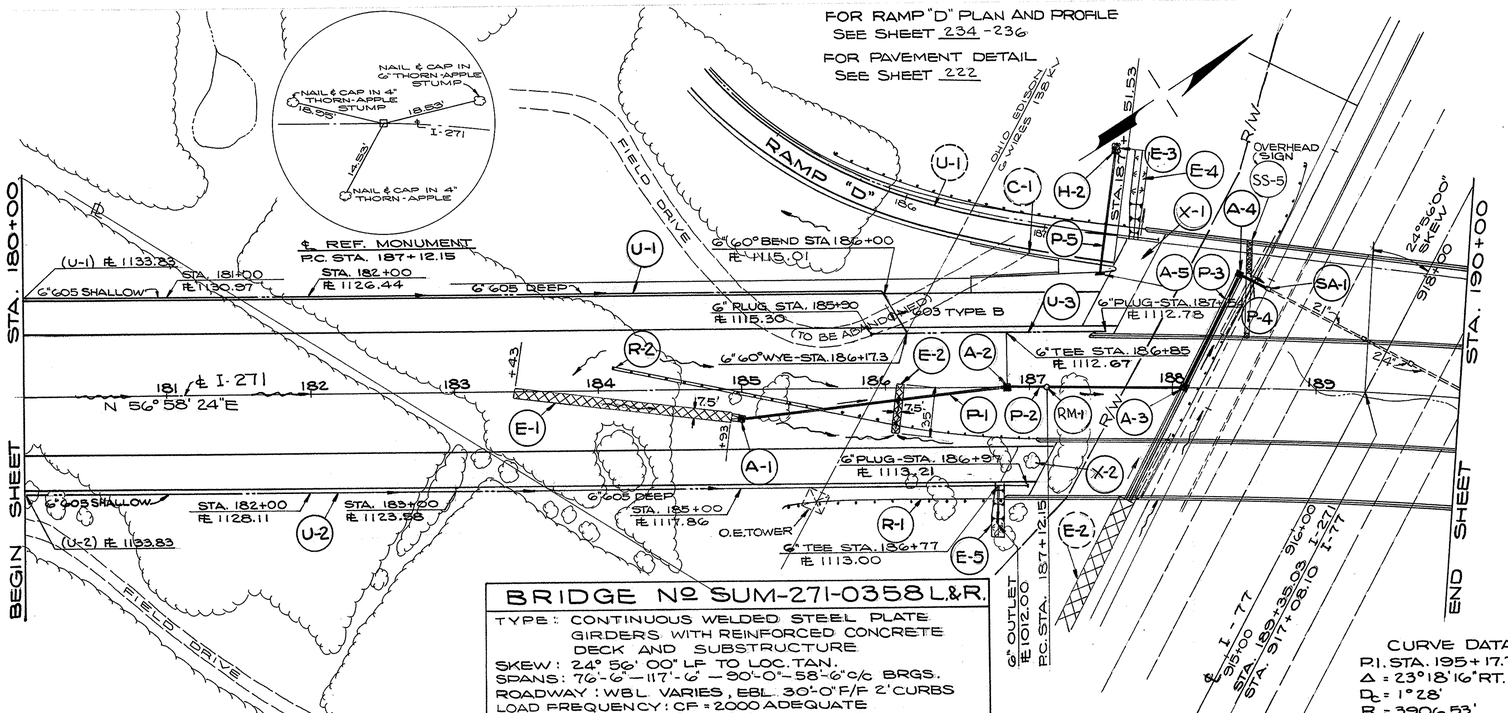
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMT. EACH	606 GUARD RAIL TYPE-4 LIN. FT.	SPECIAL DRILLED WELL ABAND. EACH	602 CONC. LIN. FT.	603 CONDUIT LIN. FT. TYPE B TYPE C TYPE E 6" 30" BEDDING	603 6" BENDS & BRANCHES W/CB EACH	603 UNDERDRAINS LIN. FT. 6" SHALLOW LOW	605 UNDERDRAINS LIN. FT. 6" DEEP	607 CATCH BASIN ROCK JUTE MASONRY PANEL MARTING EACH	609 CUYDS. CUYDS. Sq. YDS. Nº 4	SEE SHEET NO.
U-1	170+00	LT.							85				
U-2	170+89	LT.							911				73
U-3	170+00	RT.							200				
U-4	172+02	RT.						1	547				73
U-5	175+98	RT.							402				
A-3	172+50	℄					10					0.51	73
P-3	170+00	℄					10						
P-4	A-1	RT.										125	
	H-1	RT.					250					31	
H-1	173+00	125 RT ℄										250	
E-1	170+93	℄					135					137.9	
E-2	170+00	LT.											
E-3	170+00	RT.											
E-4	173+00	RT.											
RM-1	176+09.82	℄	1										355
R-1	170+01.5	LT.		87.5									
R-2	172+00	RT.		362.5									
SS-2	174+25	RT.											
DW-1	172+75	RT			1								
TOTALS			1	450	1		20	1	135	249	1	0.51	355
							250					137.9	
												406	
												1	

I-271 STA. 170+00 TO STA. 180+00

FOR RAMP "D" PLAN AND PROFILE
SEE SHEET 234 - 236

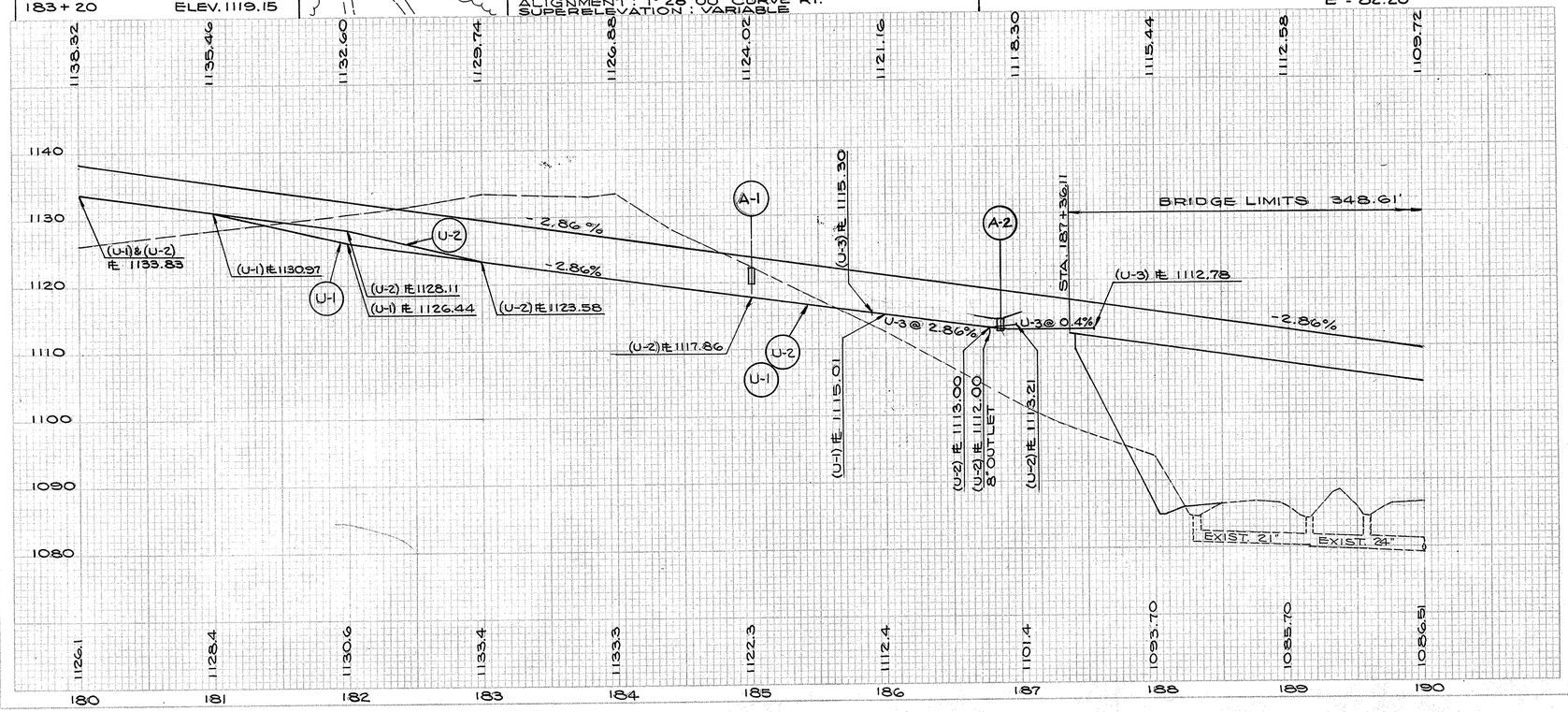
FOR PAVEMENT DETAIL
SEE SHEET 222



BRIDGE № SUM-271-0358 L&R.

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SKEW: 24° 56' 00" LF TO LOC. TAN.
SPANS: 76'-6"—117'-6"—90'-0"—58'-6" c/c BRGS.
ROADWAY: WBL VARIES, EBL 30'-0" F/F 2' CURBS
LOAD FREQUENCY: CF = 2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: 1° 28' 00" CURVE RT.
SUPERELEVATION: VARIABLE

B.M. #4 R.R. SPIKE IN CLUMP OF 12" ASH TREES 615' RT. ℄ STA. 183+20 ELEV. 1119.15



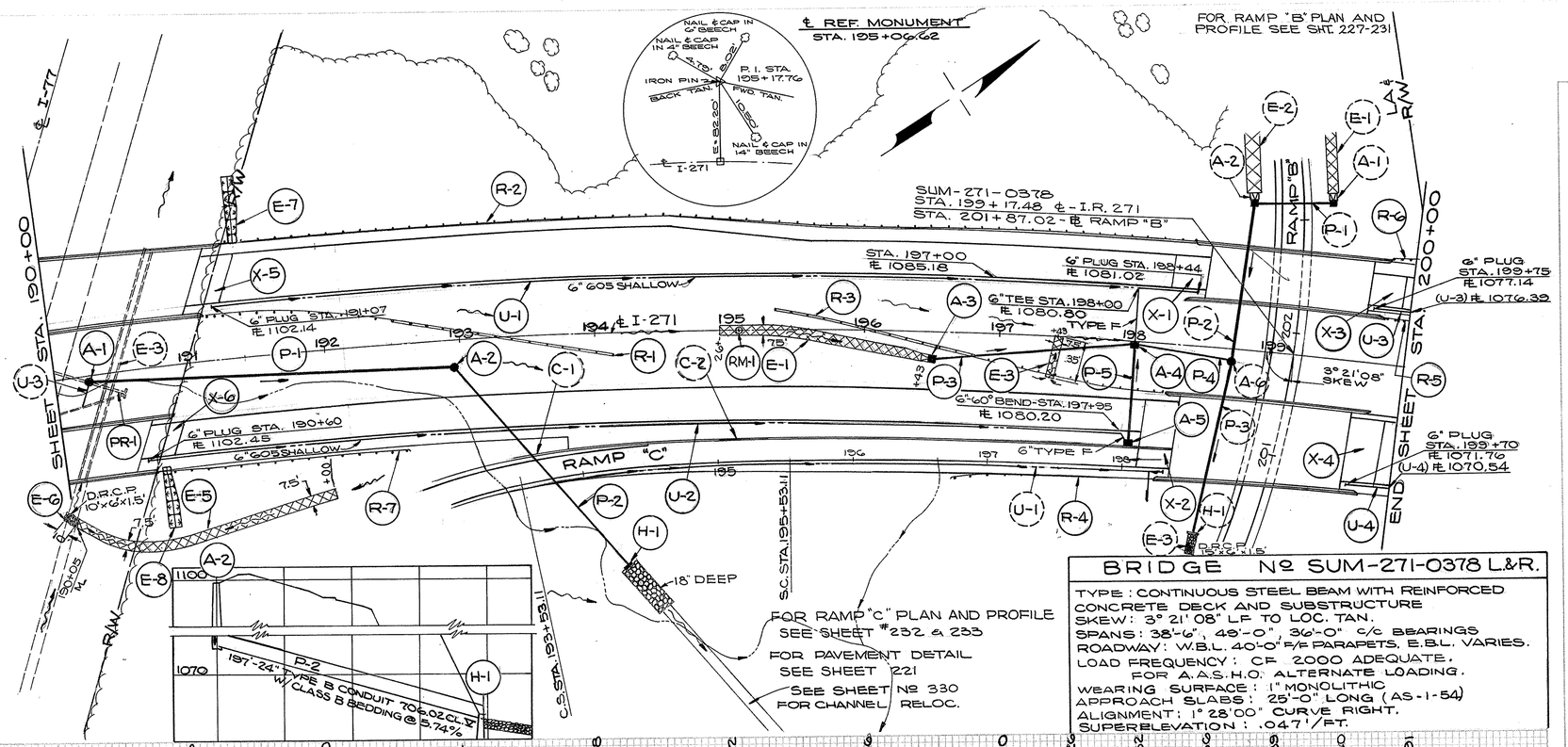
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMT. EACH	606 GUARD RAIL TYPE-4 LIN. FT.	611 REINF. CONC. APPRO. SLAB STD. BAR SQ. YD.	603 CONDUITS LIN. FT. TYPE F 6" 12"	15"	TYPE C W/CRADLE BEDDING 6" 12"	15" 21"	603 UNDERDRAINS LIN. FT. DEEP	SHALLOW	BENDS & BRANCHES 6"x6" TEE	202 CATCH BASIN TYPE F REMOVED EACH	604 EACH CATCH BASINS №6	№8	602 CONCRETE MASONRY CU. YDS.	601 DAMPED ROCK MASONRY CU. YDS.	607 JUTE MATTING SQ. YDS.	660 SPECIAL BERM EROSION PROTECTION SQ. YDS.	SEE SPECIAL SHEET NO.
U-1	180+00																			
U-2	180+00																			
U-3	185+90																			
P-1	A-1	RT.																		
P-2	A-2	℄																		
P-3	A-3	℄																		
P-4	A-4	LT.																		
P-5	SA-1	LT.																		
A-1	H-2																			
A-2	185+00	20 RT.																		
A-3	186+85	℄																		
A-4	(1-77) 916+52	115' LT.																		
A-5	(1-77) 917+40	117' LT.																		
H-1	187+50	73.5 LT.																		
H-2	(1-77) 916+96	116' LT.																		
	187+60	163.5 LT.																		
E-1	183+43	℄																		
E-2	184+93	℄																		
E-3	186+10	LT.																		
E-4	187+60	LT.																		
E-5	187+73	RT.																		
SA-1	(1-77) 917+40	LT.																		
RM-1	187+12.15	℄	1																	
R-1	185+33	RT.		150																
R-2	184+06	LT.		150	150															
X-1	187+36.11	LT.			172.3															
X-2	187+36.11	RT.			68.9															
SS-5	188+50.50	LT.																		
TOTALS			1	300	150	241.2	1186	300	2	35	36	235	109	20	54	84	1	2	2	1	2	2	1	2	2

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

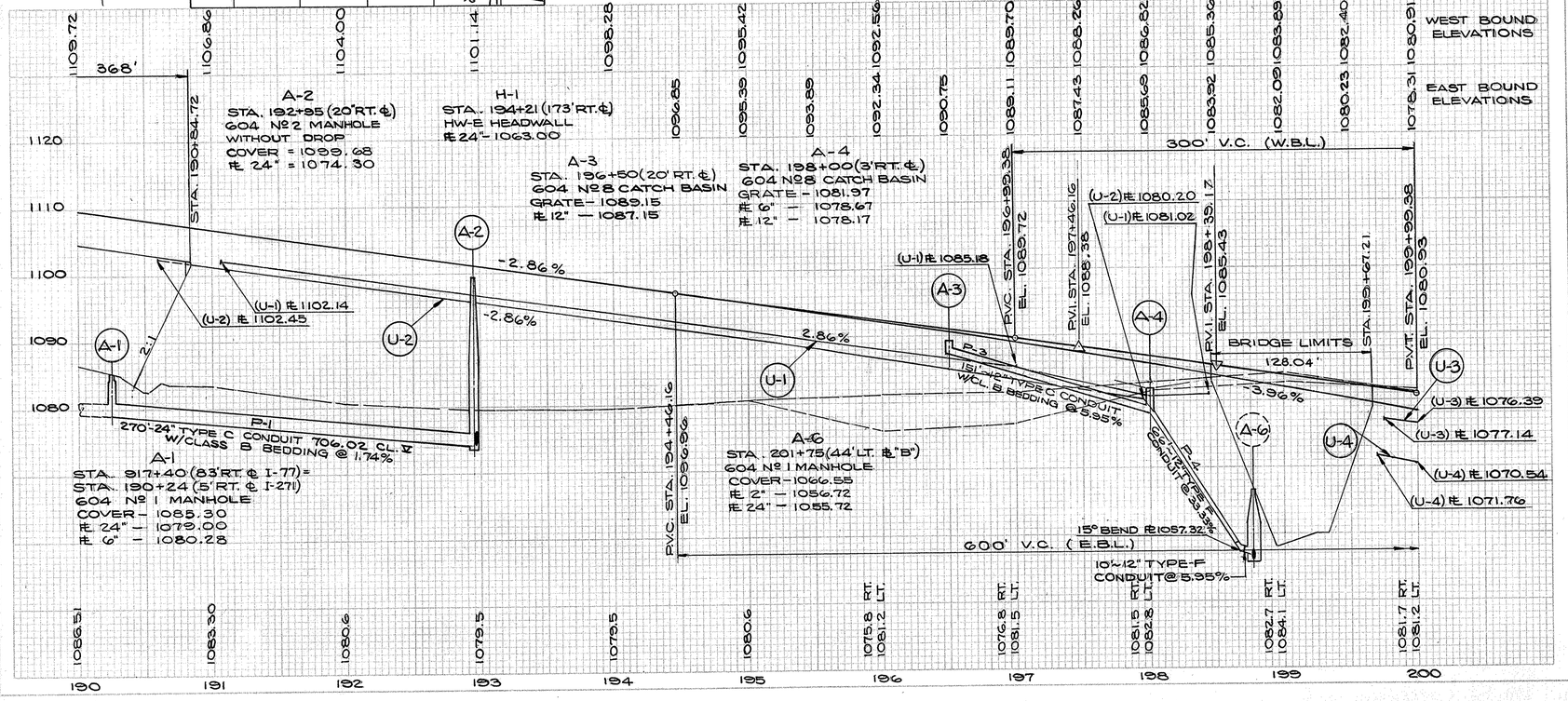
43
510

SUM - 271 - 2.98



BRIDGE Nº SUM-271-0378 L&R.

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SKEW: 3° 21' 08" LF. TO LOC. TAN.
SPANS: 38'-6", 49'-0", 36'-0" c/c BEARINGS
ROADWAY: W.B.L. 40'-0" F/F PARAPETS, E.B.L. VARIES.
LOAD FREQUENCY: CF 2000 ADEQUATE.
FOR A.A.S.H.O. ALTERNATE LOADING.
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25'-0" LONG (AS-1-54)
ALIGNMENT: 1° 28' 00" CURVE RIGHT.
SUPERELEVATION: .047'/FT.



ESTIMATED QUANTITIES

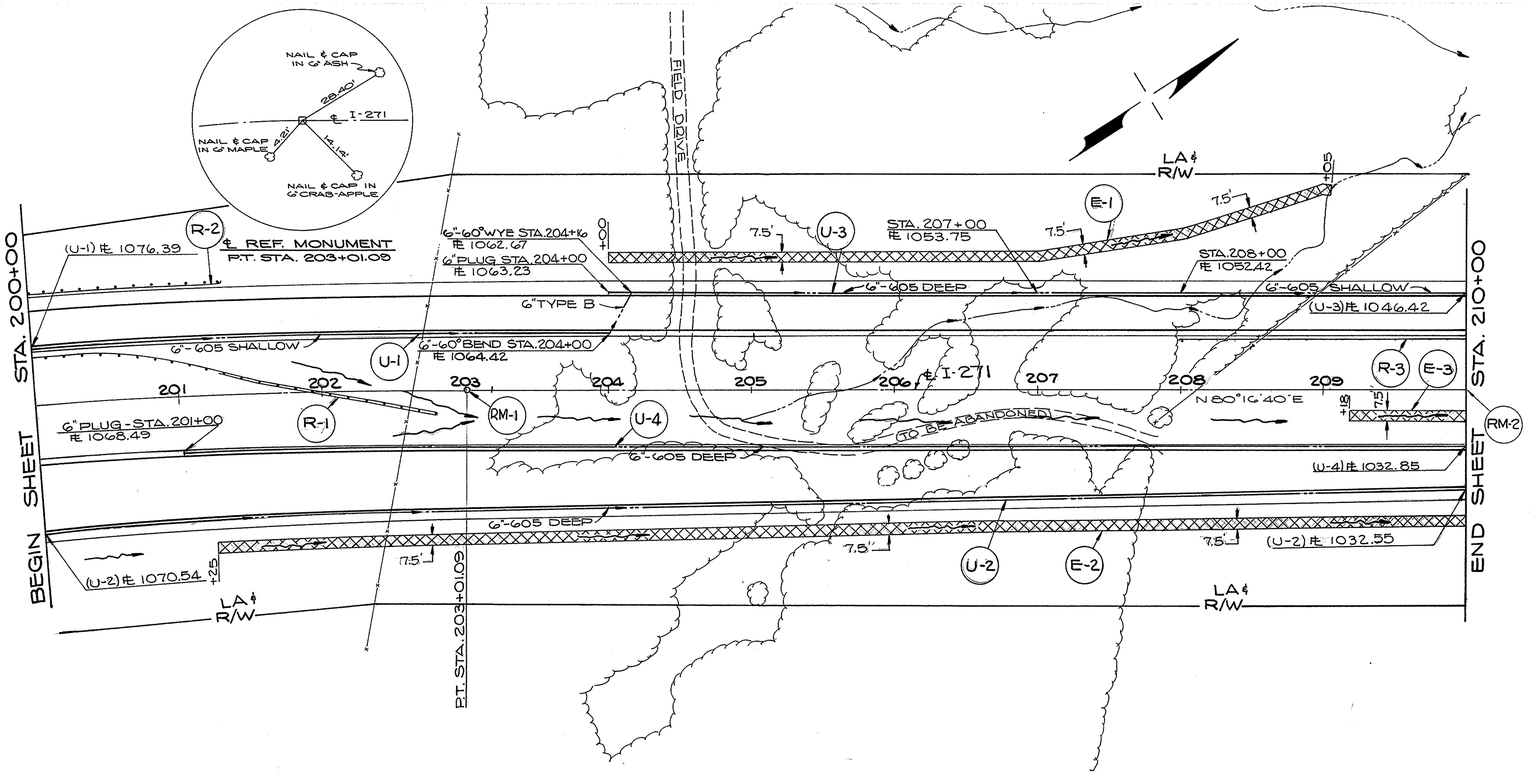
REF. NO.	STATION TO STATION	SIDE	604 EACH MANHOLE STD.	604 EACH MANHOLE DROP	604 EACH CATCH BASIN No.1	604 EACH CATCH BASIN No.2	604 EACH CATCH BASIN No.8	606 GUARD RAIL MOUNT. 4 LIN. FT.	606 GUARD RAIL APPROACH TERM. EACH	610 C.I.P. CONC. BARR. SQ. YD.	660 SOD SLOPE PROT. SQ. YD.	601 CONCRETE MASONRY CU. YDS.	602 CATCH BASIN No.8	602 JUTE MATTING SQ. YDS.	607 PIPE CHANNEL LIN. FT.	202 PIPE UNDERDRAINS LIN. FT. DEEP	202 PIPE UNDERDRAINS LIN. FT. SHALLOW	603 CONDUITS LIN. FT. TYPE-F 6"	603 CONDUITS LIN. FT. TYPE-B W/CL-B BEDDING 12" CL.A	603 CONDUITS LIN. FT. TYPE-B W/CL-B BEDDING 24" CL.A	603 CONDUITS LIN. FT. TYPE-C W/CL-B BEDDING 12"	603 CONDUITS LIN. FT. TYPE-C W/CL-B BEDDING 24" CL.A	605 UNDERDRAINS LIN. FT. DEEP	605 UNDERDRAINS LIN. FT. SHALLOW	605 UNDERDRAINS BENDS & BRANCHES EACH 45° BEND	605 UNDERDRAINS BENDS & BRANCHES EACH TEE	SEE SHEET NO.
U-1	191+07	LT.																										43
U-2	190+60	RT.																										81
U-3	199+75	LT.																										43
U-4	199+70	RT.																										43
P-1		RT.																										81
P-2	A-1	RT.																										
P-3	A-2	RT.																										
P-4	A-3	RT.																										
P-5	A-4	RT.																										
A-1	190+24	5'RT.																										
A-2	192+95	20'RT.																										
A-3	196+50	20'RT.																										
A-4	198+00	3'RT.																										
A-5	198+00	77'RT.																										
H-1	194+21	173'RT.																										
E-1	194+97	℄																										
E-2	196+50	RT.																										
E-3	197+43	℄																										
E-4	198+00	RT.																										
E-5	189+95	RT.																										
E-6	190+05	RT.																										
E-7	191+41	LT.																										
E-8	190+74	RT.																										
PR-1	190+24	RT.						150	1																			
RM-1	195+06.62	℄																										
R-1	191+18	RT.						150																				
R-2	191+38	LT.						700																				
R-3	195+30	RT.						150																				
R-4	196+69	RT.						150																				
R-5	199+80	LT.						20																				
R-6	200+00	LT.						20																				
R-7	192+55.5	RT.						187.5																				
X-1	198+46.19	LT.																										
X-2	198+46.19	RT.																										
X-3	199+67.21	LT.																										
X-4	199+67.21	RT.																										
X-5	190+84.72	LT.																										
X-6	190+84.72	RT.																										
TOTALS			1		1	1	1	1375	300	571.7	82	42 40	30	1328	1	30	768 735 25	74	197	151	270	20	76	1	1	1	74	197	29

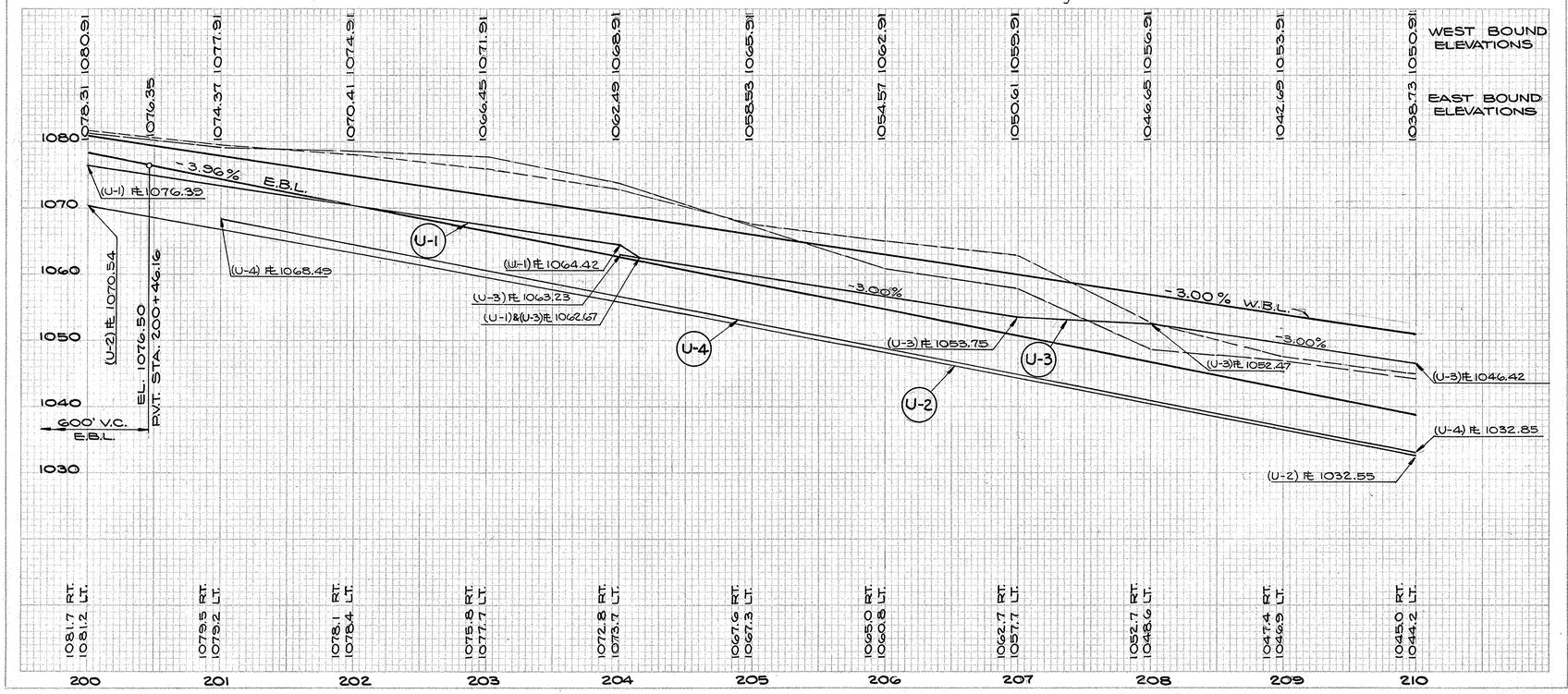
I-271 STA. 190+00 TO STA. 200+00

FED. R.D. DIVISION	STATE	PROJECT	
2	OHIO		

44
510

SUM -271-2.98

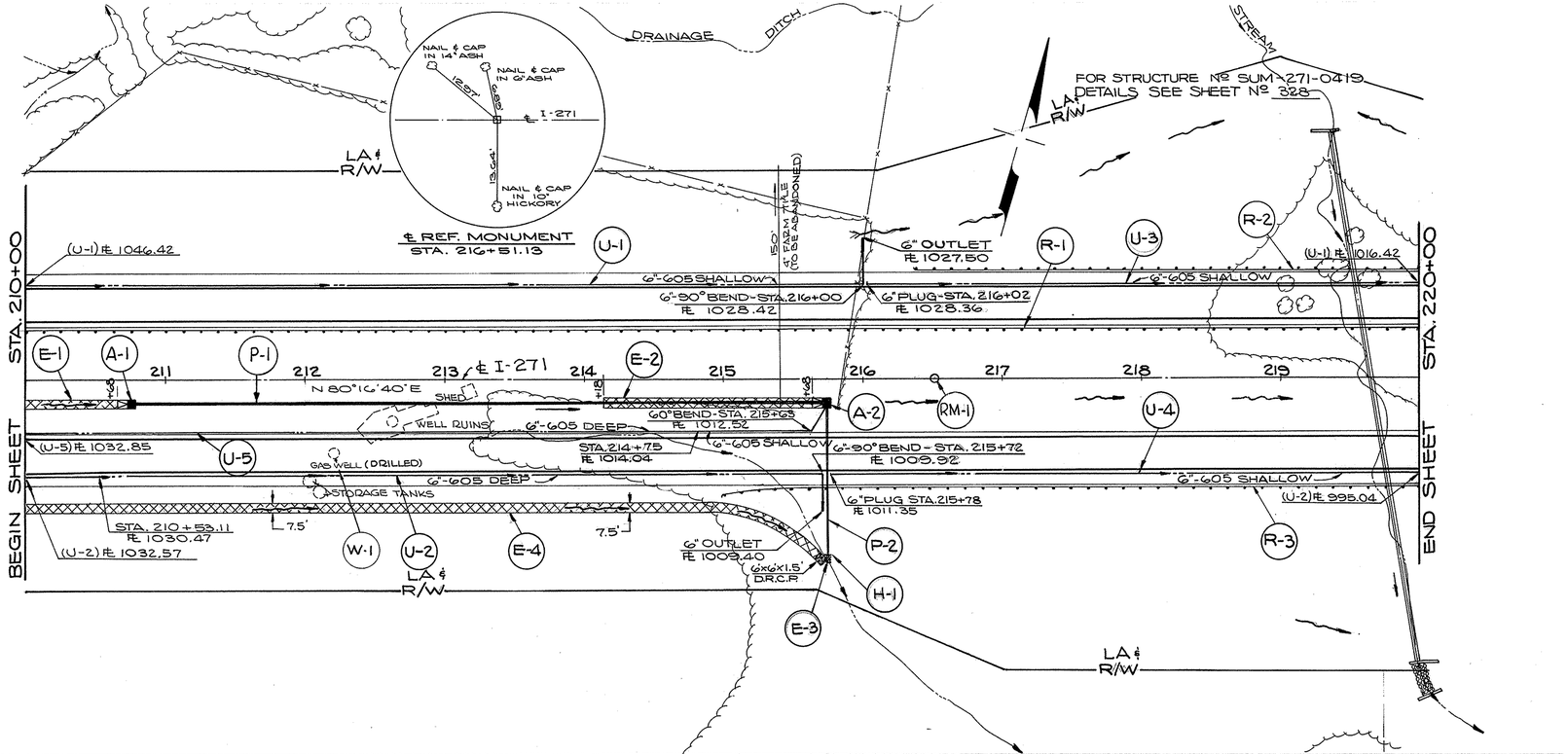


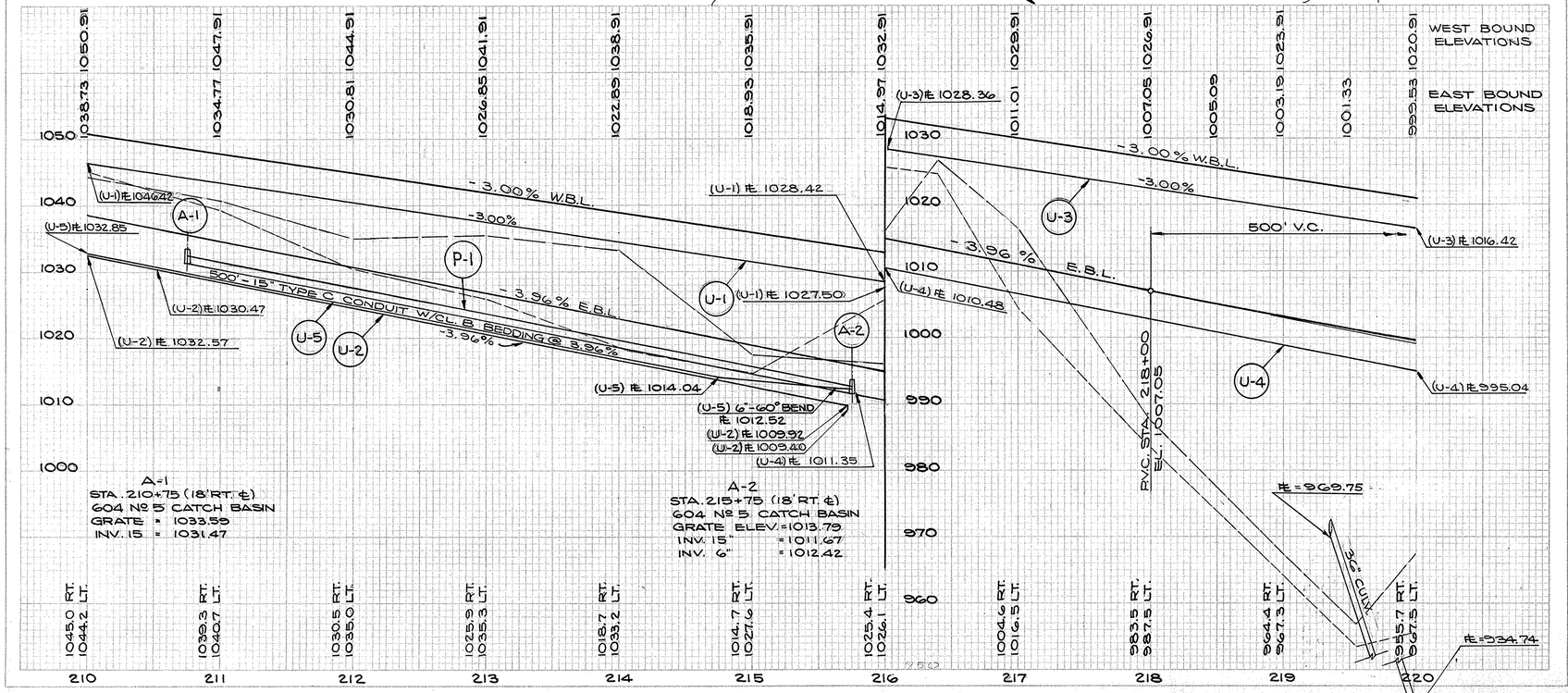


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMT. EACH	606 GUARD RAIL TYPE 4 LIN. FT. STD. BAR	605 6" UNDERDRAINS LIN. FT. DEEP SHAL-LOW	605 6" BENDS & BRANCHES EACH 60° BEND WYE	607 JUTE MATTING SQ. YD.
U-1	200+00 204+16	LT.			400	1	
U-2	200+00 210+00	RT.			1000		425
U-3	204+00 210+00	LT.			900	1	729
U-4	200+00 210+00	RT.					69
E-1	204+00 205+05	LT.					
E-2	201+25 210+00	RT.					
E-3	205+18 210+00	RT. & LT.	1				
RM-2	210+00			190 150			
R-1	200+00 202+75	RT.		130			
R-2	200+00 201+30	LT.		200			
R-3	208+00 210+00	LT. & ℄	1				
RM-1	203+01.09						
TOTALS			1	460 150	2500	400 1 1	1223

I-271 STA. 200+00 TO STA. 210+00





A-1
STA. 210+75 (18' RT. ℄)
604 Nº 5 CATCH BASIN
GRATE = 1033.59
INV. 15" = 1031.47

A-2
STA. 215+75 (18' RT. ℄)
604 Nº 5 CATCH BASIN
GRATE ELEV. = 1013.79
INV. 15" = 1011.67
INV. 6" = 1012.42

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMENT EACH	604 GUARD RAIL, TYPE MGS LIN. FT. STD.	SPECIAL PLUGGING GAS WELLS EACH	605 6" UNDERDRAINS LIN. FT: DEEP	605 6" UNDERDRAINS LIN. FT: SHALLOW	606 BENDS & BRANCHES W/CL B BEDDING 24" SQ. BEND	603 CONDUIT TYPE B W/CL B BEDDING 15"	603 CONDUIT TYPE C W/CL B BEDDING 15"	UN. FT. TYPE F 6"	UN. FT. TYPE F 8"	SEE SHEET NO.
U-1	210+00 ℄ 216+00	LT.											
U-2	210+00 ℄ 215+72	RT.											
U-3	216+02 ℄ 220+00	LT.											
U-4	215+78 ℄ 220+00	RT.											
U-5	210+00 ℄ 215+63	RT.											
P-1	A-1 ℄ A-2	℄											
P-2	A-1 ℄ H-1	RT.											
A-1	210+75	18' RT.											
A-2	215+75	18' RT.											
H-1	215+75	27' RT.											
E-1	210+00 ℄ 210+68	℄											
E-2	214+18 ℄ 215+68	℄											
E-3	215+75	RT.											
E-4	210+00 ℄ 215+75	RT.											
RM-1	216+51.13	℄	1										
R-1	210+00 ℄ 220+00	LT.		1000			588			500	10		45
R-2	216+33.5 ℄ 220+00	LT.		362.5			398						85
R-3	215+00 ℄ 220+00	RT.		500			422			114			
W-1	212+25	RT.			1		475	1	1				
TOTALS			1	1862.5	1		102						

601 DUMPED JUTE ROCK MATTING CHINK PROTECT. SQ.YDS.	602 CONC. MASONRY CU.YDS.	604 12 CATCH BASIN EACH Nº 5	606 BENDS & BRANCHES W/CL B BEDDING 24" SQ. BEND	603 CONDUIT TYPE B W/CL B BEDDING 15"	603 CONDUIT TYPE C W/CL B BEDDING 15"	UN. FT. TYPE F 6"	UN. FT. TYPE F 8"	SEE SHEET NO.
								45
								85
56								
125								
2.2	0.26	1						
2.0	2.2	1						
475								
	0.26							
		2	1	1	500	10		114
	0.52	2						
6.4								650
			1	2	114			
						500	30	

B.M. Nº 8 R.R. SPIKE IN 14" BEECH
35' LT. ℄ STA. 224+50 ELEV. 968.98

CISTERN
1 STY. FRAME HSE. GAR.
SEPT. TANK

FIELD DRIVE

LA℄ R/W

P.C. STA. 223+28.27

E-4 E-5 E-1 E-2 E-3

18" DEEP

8'

+75 +120

U-1 R-1 R-2 R-3 U-2 U-3 U-4 A-1 P-1 RM-1

(U-1) ℄ 1016.42

6"-605 SHALLOW

STA. 220+00

STA. 230+00

(U-1) ℄ 985.36

℄ REF. MON.
P.C. STA. 223+28.27

NAIL & CAP IN 4" DOGWOOD
NAIL & CAP IN 8" ASH
NAIL & CAP IN 6" DOGWOOD
308
271
154

CURVE DATA (Nº2)
P.I. STA. 227+35.98
Δ = 11° 54' 59" LT.
D_c = 1° 28'
R = 3906.53'
T = 407.71'
L = 812.48'
E = 21.22'

STRUCTURE - SUM-271-0429
SEE SHEET Nº 329

STRUCTURE - SUM-271-0437
SEE SHEET Nº 330

℄ I-271

N 80° 16' 40" E

221 222 223 224 225 226 227 228 229

+43 +93 7.5'

(U-3) ℄ 964.54

6" PLUG STA. 222+00
℄ 988.32

6"-45° WYE-STA. 228+78
℄ 968.15

6"-605 SHALLOW

6"-605 SHALLOW

6" WYE STA. 222+10
℄ 988.27

(U-2) ℄ 988.04

6" OUTLET
℄ 987.50

6" PLUG-STA. 228+97
℄ 968.25

6" PLUG-STA. 229+03
℄ 967.41

18' SOD STRIP

12'-4"-1.5" D.R.C.P.

RELOC. CREEK
CURVE Nº 2
P.I. 227+11.03
P.C. 223+28.27
P.T. 230+91.01
Δ = 11° 54' 59"
R = 3667.37'
D_c = 1° 33' 44"
Lc = 762.74'
T = 382.76'

RELOC. CREEK
CURVE Nº 1
B.T. STA. 221+50 (375' RT. ℄)
E.T. STA. 221+50 (225' RT. ℄)
Δ = 45° 00' 00"
R = 150'

4' 2'-6" 2' 2'-6"
SECTION A-A

223+28.27 225' RT. ℄

CREEK

D.R.C.P. 12'-4'-1.5'

LA℄ R/W

CURVE Nº 2

I-14 PAVED GUTTER, TYPE 2

℄ RELOC. CREEK

10'

12:1 2:1 10' 2:1

RELOC. CHANNEL TYPICAL

BEGIN SHEET

END SHEET

120'

CURVE Nº 1 P.T. P.C.

1020
1010
1000
990
980
970
960
950
940

1029.91 1017.9 1014.91 1011.91 1008.91 1005.91 1002.91 999.91 996.91 993.91 990.91

WEST BOUND ELEVATIONS

EAST BOUND ELEVATIONS

1029.53 1016.07 1002.81 988.75 986.79 983.83 980.87 977.91 974.95 971.99 969.03

℄ 1016.42

500' V.C.

-3.00 %

W.B.L.

(U-1) ℄ 985.36

℄ 995.04

P.V.I. STA. 220+50
EL. 997.15

(U-3) ℄ 988.32

(U-2) ℄ 988.27

(U-2) ℄ 987.50

P.V.C. STA. 223+00
EL. 989.75

-2.96 %

E.B.L.

A-1

(U-3) ℄ 968.25

(U-4) ℄ 967.41

U-4

(U-3) ℄ 968.15

(U-3) ℄ 968.06

(U-4) ℄ 964.54

℄ = 970.75

24" CULVERT

℄ = 950.62

24" CULVERT

℄ = 923.29

℄ = 913.43

955.7 RT. 967.5 LT.
976.8 RT. 988.4 LT.
972.7 RT. 985.3 LT.
967.3 RT. 978.2 LT.
964.7 RT. 976.9 LT.
947.8 RT. 961.8 LT.
957.2 RT. 974.7 LT.
957.4 RT. 971.2 LT.
951.0 RT. 965.3 LT.
940.0 RT. 944.4 LT.
919.4 RT. 942.3 LT.

220 221 222 223 224 225 226 227 228 229 230

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 CONDUIT LIN. FT. 6" UNDERDRAIN LIN. FT.	6" BENDS & BRANCHES TYPE B BEDDING 60°-90° BEND WYE	TYPE F 6" 15"	605 SHALLOW
U-1	220+00 - 230+00	LT.				1000
U-2	220+00 - 222+10	RT.				225
U-3	222+00 - 228+97	RT.				912
U-4	229+03 - 230+00	RT.				97
P-1	A-1 ~ E-2	RT.				
A-1	229+00 (18 RT. ℄ I-271)	RT.		1		
E-1	227+43 - 228+93	℄				
E-2	229+00 -	RT.				
E-3	220+25 - 221+30	RT.				
E-4	222+00 - 226+75	LT.				
E-5	227+20 - 230+00	LT.				
R-1	220+00 - 230+00	LT.		1	10	1000
R-2	220+00 - 230+00	RT.		1	10	1000
R-3	220+00 - 230+00	LT.				1000
DM-1	223+28.27	℄				
TOTALS				3	20	2234

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMT. EACH	606 GUARD RAIL TYPE 4 LIN. FT. STD.	607 JUTE MATTING SQ. YD.	660 SOD-DING SQ. YD.	661 RIPRAP ROCK CHANNEL TYPE 2 LIN. FT. CU. YDS.	604 CATCH BASIN TYPE C Nº 5
U-1	220+00 - 230+00	LT.			93			
U-2	220+00 - 222+10	RT.			93			
U-3	222+00 - 228+97	RT.				125		
U-4	229+03 - 230+00	RT.						
P-1	A-1 ~ E-2	RT.						
A-1	229+00 (18 RT. ℄ I-271)	RT.						
E-1	227+43 - 228+93	℄						
E-2	229+00 -	RT.						
E-3	220+25 - 221+30	RT.				42.3		
E-4	222+00 - 226+75	LT.					3	
E-5	227+20 - 230+00	LT.					77	
R-1	220+00 - 230+00	LT.					211	
R-2	220+00 - 230+00	RT.					120	
R-3	220+00 - 230+00	LT.						
DM-1	223+28.27	℄	1					1
TOTALS			1	3000			411	1

REF. NO.	STATION TO STATION	SIDE	605 UNDERDRAIN LIN. FT. SHALLOW
U-1	220+00 - 230+00	LT.	1000
U-2	220+00 - 222+10	RT.	225
U-3	222+00 - 228+97	RT.	912
U-4	229+03 - 230+00	RT.	97
P-1	A-1 ~ E-2	RT.	
A-1	229+00 (18 RT. ℄ I-271)	RT.	
E-1	227+43 - 228+93	℄	
E-2	229+00 -	RT.	
E-3	220+25 - 221+30	RT.	1000
E-4	222+00 - 226+75	LT.	1000
E-5	227+20 - 230+00	LT.	1000
R-1	220+00 - 230+00	LT.	
R-2	220+00 - 230+00	RT.	
R-3	220+00 - 230+00	LT.	
DM-1	223+28.27	℄	
TOTALS			2234

SEE SHEET NO.	667 JUTE MATTING SQ. YD.	660 SOD-DING SQ. YD.	661 RIPRAP ROCK CHANNEL TYPE 2 LIN. FT.	CU. YDS.	604 CATCH BASIN TYPE C Nº 5
93					
93					
	125				
		42.3			
			3		
			77		
			211		
			120		
			411	42.3	125
			127		1

REC. NO.	DATE	REVISION
2	OHIO	

46
510

SUM - 271 - 2.98

I-271 STA. 220+00 TO STA. 230+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

47
510

SUM - 271 - 2.98

CURVE DATA (№2)

P.I STA. 227+35.98
Δ = 11° 54' 59" LT.
D_c = 1° 28'
R = 3906.53'
T = 407.71'
L = 812.48'
E = 21.22'

BM № 9 RR SPIKE IN TOP OF 10" STUMP 131' LT. ℄ STA. 234+73 ELEV. 983.47

FOR STRUCTURE NO. SUM. 271-0456 DETAIL SEE SHEET NO. 331

1-STY FR. HSE.
SEPTIC TANK
WATER LINE
℄ WATER LINE
℄ PUMP
℄ SPRING
℄ SPRING

BEGIN SHEET STA. 230+00
END SHEET STA. 240+00

E-3 · E-4 · R-1 · R-2 · R-3 · E-1 · E-2 · A-1 · U-1 · U-2 · U-3 · U-4 · RM-1

18" DEEP · 8' · +00 · +41 · +25 · +50

P.T. STA. 231+40.75

6" OUTLET ℄ 979.00
6" PLUG - STA. 232+02 ℄ 979.89
6"-90° BEND - STA. 232+00 ℄ 979.95
6"-60° BEND STA. 232+75 ℄ 956.58
6" PLUG STA. 232+50 ℄ 957.15
6"-60° WYE STA. 232+92.3 ℄ 955.88
STA. 233+35.69 ℄ 954.60
STA. 230+00 ℄ 959.42

(U-1) ℄ 985.36 · (U-2) ℄ 979.89 · (U-3) ℄ 964.54 · (U-4) ℄ 957.15 · (U-2) ℄ 954.81 · (U-4) ℄ 941.78

6" 605 SHALLOW · 6" TYPE "B" 603 · 6" TYPE "E"

231 · 232 · 233 · 234 · 235 · 236 · 237 · 238 · 239

N 68° 21' 41" E

℄ REF. MONUMENT
P.T. STA. 231+40.75

P.T. 231+40.75 215' RT. ℄

NAIL & CAP IN 4" OAK · NAIL & CAP IN 6" OAK · NAIL & CAP IN 6" OAK · 84.8' · 19.7' · ℄ I-271

DROP 20 × 6 × 1.5'

SECTION "A-A"
4' · 2'-6" · 2' · 2'-6"

℄ RELOC. CHANNEL · LA R/W

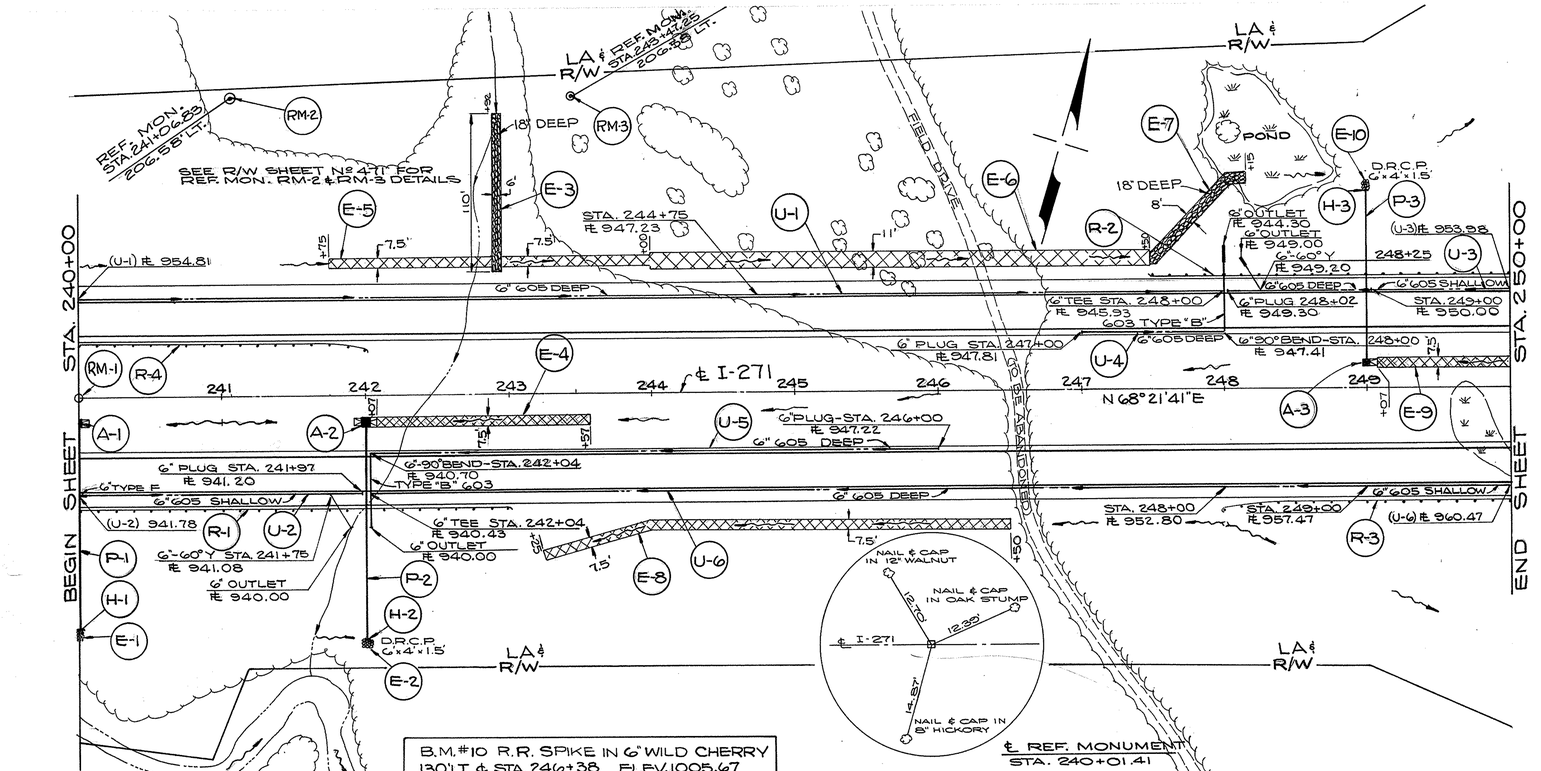
P.C. STA. 234+42 215' RT. ℄ · 150' R · 70' · 120' · P.T. STA. 235+36 235' RT. ℄

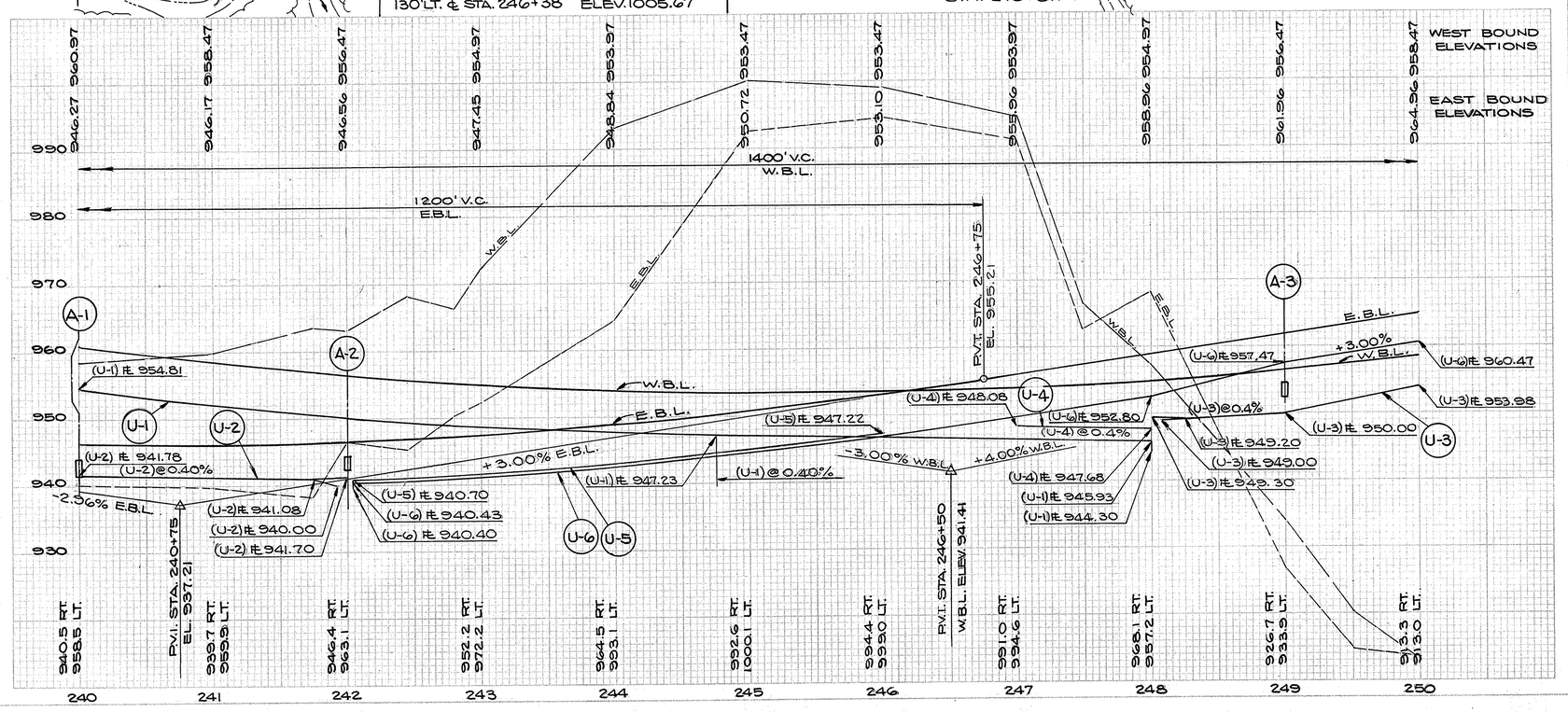
END WORK EXIST. CHANNEL · BEGIN WORK EXIST. CHANNEL

| | | |

DESIGN	STATE	PROJ.	SHEET NO.	TOTAL SHEETS
2	OHIO		48	510

SUM - 271 - 2.98





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 CONDUIT LIN. FT. TYPE F 15"	603 CONDUIT LIN. FT. W/CL B BEDDING 6" 15"	603 - EACH BENDS & BRANCHES TYPE F 15"	603 - EACH CONC. MASONRY TYPE F 15"	603 - EACH TYPE "B" 6"-15" BEND TEE BEND	601 ROCK EXCAV. CU. YDS.	607 JUTE MATTING SQ. YDS.	604 CATCH BASIN EACH No. 5	605 UNDERDRAINS & BENDS & TEES EACH 6" WYE TEE	605 UNDERDRAIN LIN. FT. DEEP BAU.	605 UNDERDRAIN LIN. FT. SHAL.	606 GUARD RAIL MONUMENT TYPE 4 EACH	606 GUARD RAIL MONUMENT TYPE 4 STD.
U-1	240+00	248+00 LT.		10											
U-2	240+00	241+97 RT.		15											
U-3	248+02	250+00 LT.		10											
U-4	247+00	248+00 RT.			1										
U-5	241+04	242+04 RT.					1								
U-6	242+04	250+00 RT.		10											
A-1	240+00		30	30				0.26	325	1	1	820	210		
A-2	242+00							0.26							
A-3	249+00							0.26							
H-1	240+00														
H-2	242+00														
H-3	249+00							1.6	125				215		
E-1	240+00							1.8	95				100		
E-2	242+00							40.7	526				330		
E-3	242+92												810		
E-4	242+07	℄													
E-5	241+75	LT.													
E-6	242+95	LT.													
E-7	247+50	LT.													
E-8	243+25	RT.													
E-9	249+07	RT.													
E-10	249+00	LT.													
P-1	A-1	RT.													
P-2	A-2	RT.													
P-3	A-3	LT.													
RM-1	H-3	℄												1	
RM-2	241+06.83	LT.												1	
RM-3	243+47.25	LT.												1	
R-1	240+00 - 243+00	RT.													300
R-2	247+50 - 250+00	LT.													250
R-3	248+00 - 250+00	RT.													250
R-4	240+00 - 242+00	LT.													200
TOTALS			67	60	2	2	2	0.78	854	1099	3	2341	210	3	950
			86	99											
			67	60	2	2	2								
			153	159	2	2	2								

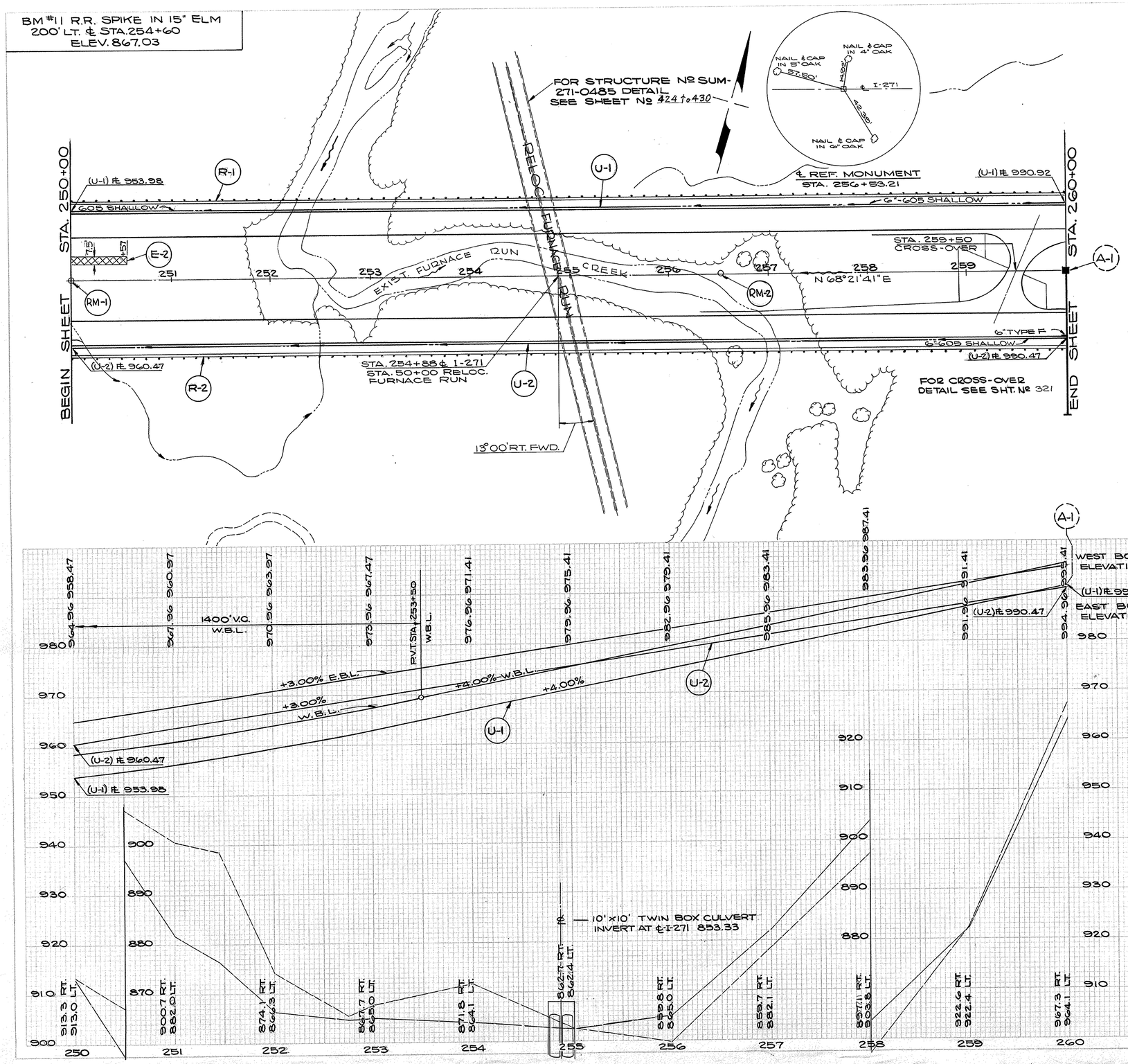
I-271 STA. 240+00 TO STA. 250+00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

49
510

SUM - 271 - 2.98

BM #11 R.R. SPIKE IN 15" ELM
200' LT. ℄ STA. 254+60
ELEV. 867.03



ESTIMATED QUANTITIES

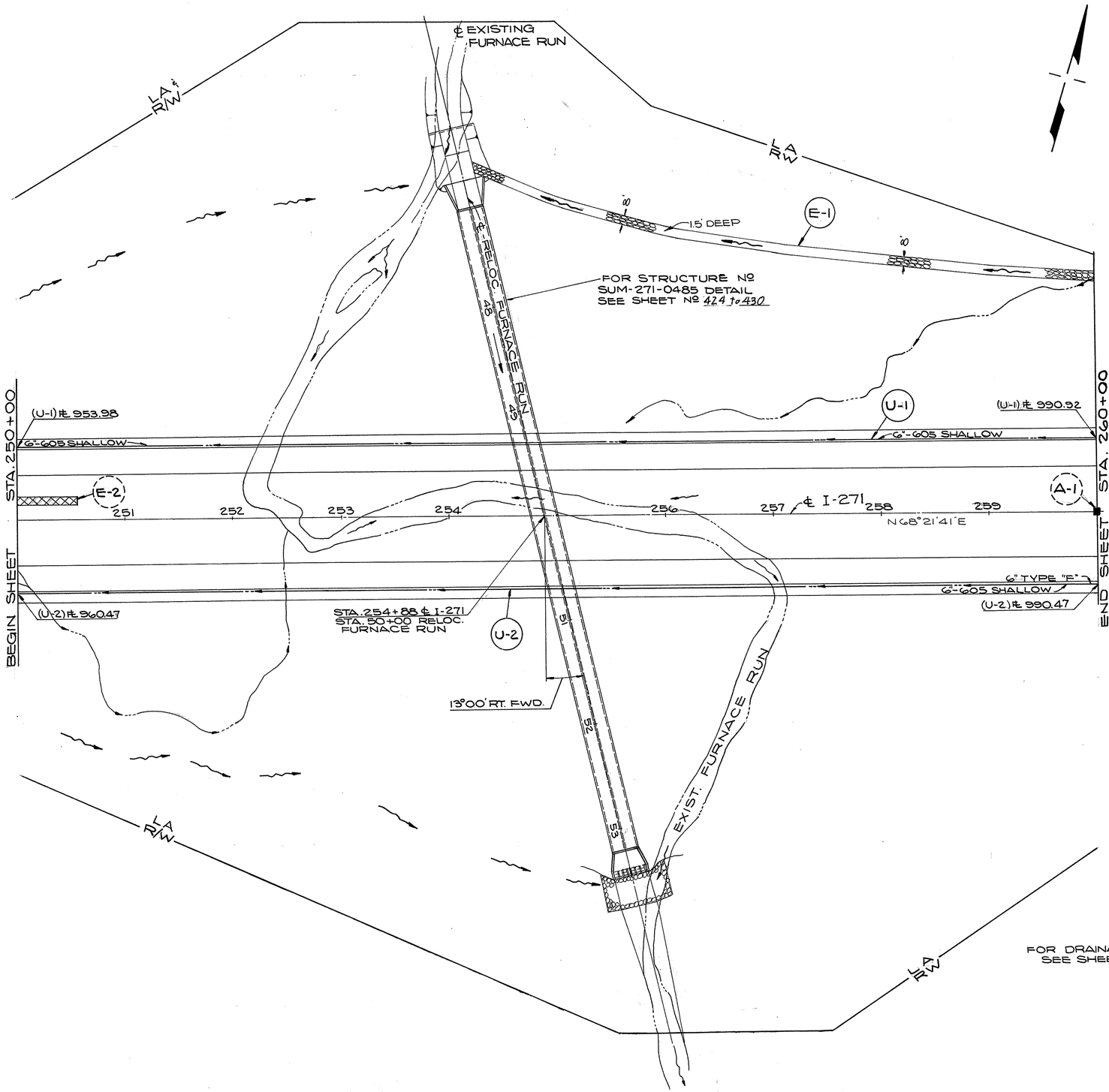
REF. NO.	STATION TO STATION	SIDE	603 6" UNDERDRAIN TYPE E LIN. FT.	605 SHALL.	605 1000	605 995	606 GUIDE RAIL-4 LIN. FT. STD.	607 JUTE MATTING SQ. YDS.	608 DUMPED ROCK RIP-RAP PROT. CU. YDS.	SEE SHEET NO.
U-1	250+00 - 260+00	LT.				5				
U-2	250+00 - 260+00	RT.								
E-1	254+50 - 260+00	LT.								
E-2	250+00 - 253+53	LT.								
RM-1	250+00	℄					1			
RM-2	256+53.21	℄					1			
R-1	250+00 - 260+00	LT.			1000					
R-2	250+00 - 260+00	RT.			1000					
	259+50	℄						6	47.5	50
	259+50	℄							273.3	
	259+50	℄								
	259+50	℄								
	259+50	℄								
TOTALS			1995	5	2000	5	2	6	47.5	273.3

I-271 STA. 250+00 TO STA. 260+00

FED. RD.	STATE	PROJECT	
2	OHIO		

50
510

SUM-271-2.98



NOTE : SEE SHEET Nº 424A FOR CHANNEL RELOCATION AND SECTIONS. CHANNEL EARTHWORK QUANTITIES TABULATED ARE INCLUDED IN ITEM 203 "EXCAVATION NOT INCLUDING EMBANKMENT."

FOR DRAINAGE QUANTITIES SEE SHEET Nº 49

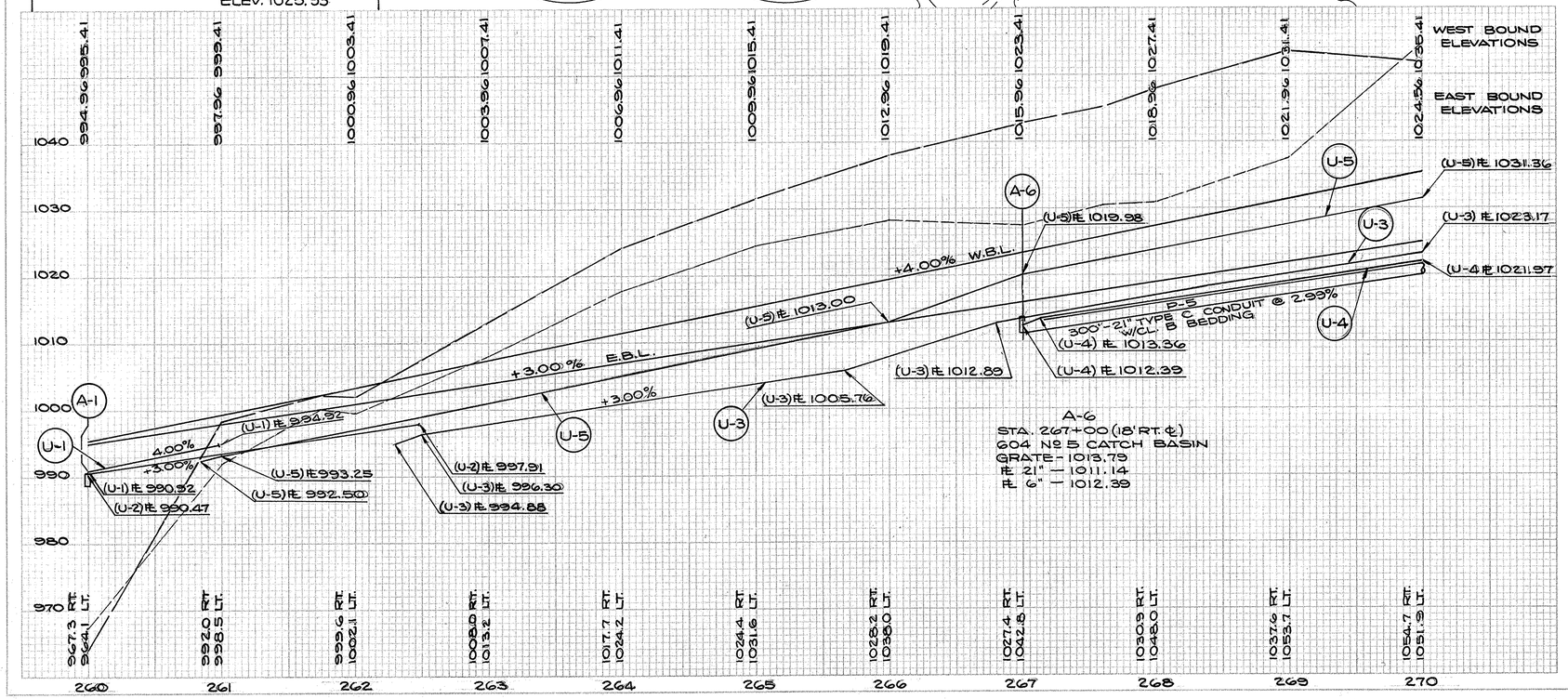
DRAINAGE PLAN
STA. 250+00 TO STA. 260+00

FOR SECTION "A"-"A" SEE SHEET Nº 325

CURVE DATA (N°3)
P.I. STA. 285+23.13
Δ = 48°34'45" LT.
D_C = 1°28'
R = 3906.53'
T = 1763.01
L = 3312.22'
E = 379.40'

EXISTING SWALE
LA R/W
"A" L "A"
DRIVE
FIELD
BEGIN SHEET
END SHEET
STA. 260+00
STA. 270+00
P.C. STA. 267+60.12
℄ I-271
N 68° 21' 41" E.
6" OUTLET ℄ 992.50
(U-1) ℄ 990.92
6"-60° BEND 261+00 ℄ 993.25
6"-605 SHALLOW
6" PLUG STA. 260+98 ℄ 994.92
6"-605 DEEP
STA. 267+00 ℄ 1020.02
STA. 266+00 ℄ 1013.00
(U-5) ℄ 1031.36
6"-605 707.06 OR 707.12
6" PLUG STA. 262+48 ℄ 997.91
6"-60° BEND STA. 262+50 ℄ 996.30
6" TYPE F
6"-605 SHALLOW
(U-2) ℄ 990.47
6"-60° BEND-STA. 267+13 ℄ 1013.36
30° SKEW
(U-4) ℄ 1021.97
(U-3) ℄ 1023.17
(TO BE ABANDONED)
STA. 265+65 ℄ 1005.76
STA. 266+80 ℄ 1012.89
6" OUTLET ℄ 994.88
18" DEEP
8'
14.5'
NAIL & CAP IN 10" OAK
NAIL & CAP IN 24" BEECH
NAIL & CAP IN 20" HICKORY
NAIL & CAP IN 4" PINE
NAIL & CAP IN 3" PINE
NAIL & CAP IN 6" APPLE
185.91'
22.50'
63.71'
150.0'
℄ REF. MONUMENT STA. 260+96.30
℄ REF. MONUMENT P.C. STA. 267+60.12

B.M. #12 R.R. SPIKE IN 18" WHITE BIRCH
148' LT. ℄ - STA. 263+73
ELEV. 1025.93

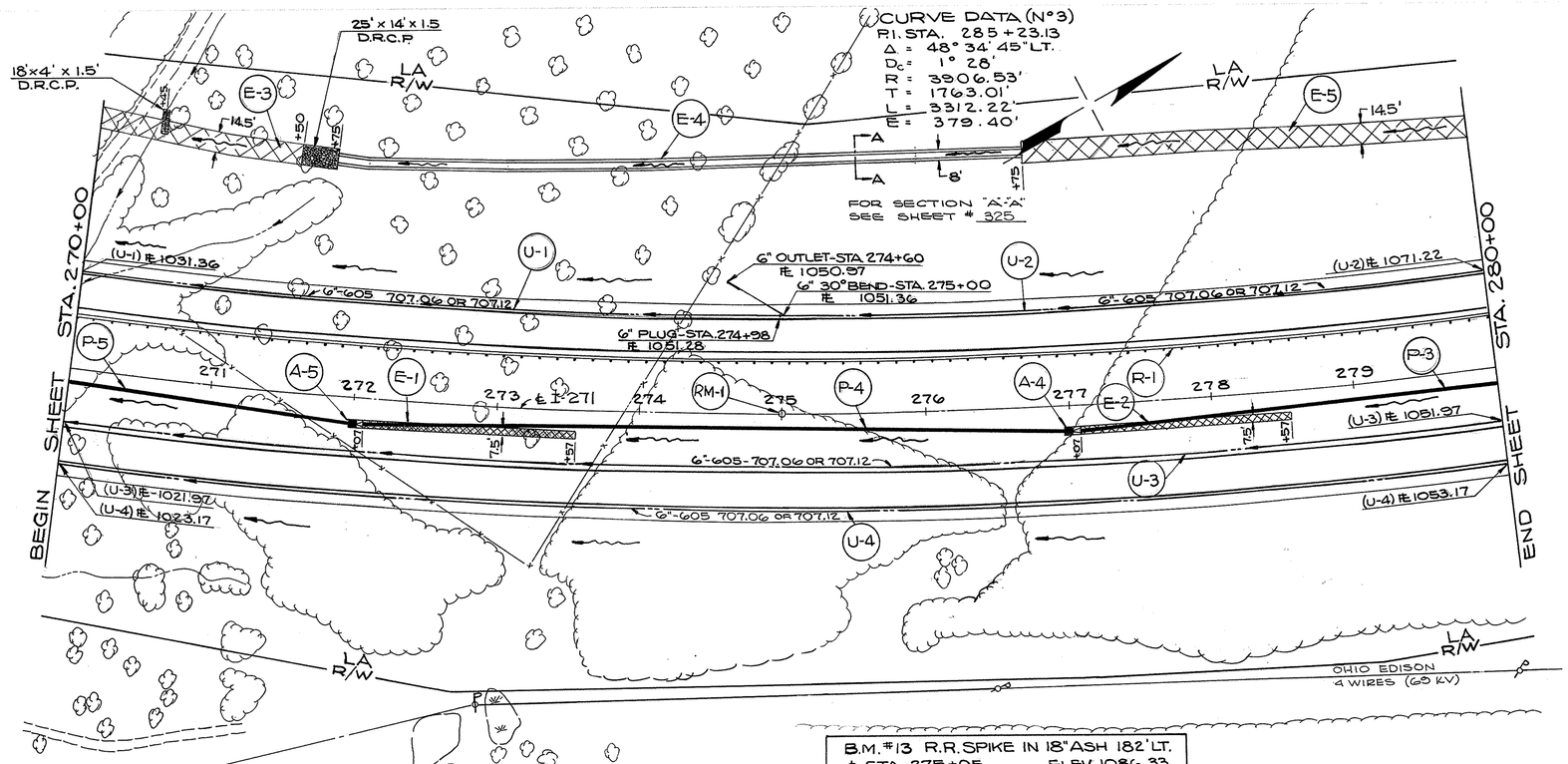


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 CONDUITS LIN. FT. 6" UNDERDRAINS LIN. FT.	6" BENDS & TYPE C BRANCHES W/CONC. EACH	15" 21" DEEP-SHAL.-707.06 LOW-707.12 BEND	603 TYPE B W/CONC. BEDDING LIN. FT.	603 TYPE C W/CONC. BEDDING LIN. FT.	603 TYPE F LIN. FT.	604 BENDS & BRANCHES EACH	604 CATCH BASIN EACH	604 MASONRY CHANNEL TYPE-1 PROT. LIN. FT.	602 CONC. PAVED DITCH TYPE-1 CU. YDS.	601 DUMPED RIPRAP CU. YDS. W.C.(6)	660 SOD-DING MATTING SQ. YD.	667 JUTE MATTING SQ. YDS.	SEE SHEET NO.
U-1	260+00 - 260+98	LT.						5								
U-2	260+00 - 262+48	RT.						10								
U-3	262+50 - 270+00	RT.						10								
U-4	267+73 - 270+00	RT.						75	2							
U-5	261+00 - 270+00	LT.								1						
P-1	A-1 ~ H-1	RT.								1						
P-5	A-6 ~ 270+00	℄										0.26				
P-6	A-6 ~ H-2	RT.										0.36				
A-1	260+00	℄														
A-6	267+00 (18' RT. ℄ I-271)	RT.														
H-1	260+00	RT.														
H-2	266+50	RT.														
E-1	260+07 - 261+57	℄														
E-2	260+00 -	RT.														
E-3	267+07 - 268+57	℄														
E-4	262+00 - 269+00	LT.														
E-5	260+00 - 262+00	LT.														
E-6	262+00 - 269+00	LT.														
E-7	269+00 - 270+00	LT.														
E-8	265+50 - 267+50	RT.														
RM-1	260+96.30	℄														
RM-2	267+60.12	℄														
R-1	260+00 - 261+00	LT.														
R-2	260+00 - 266+00	RT.														
TOTALS			2	6	2	84	98	300	2	1	25	75	2	2	0.62	2133	700	233	1156	
			346	445	1															128
			243	297	1															131
			520	100	300	1														
						84	98	300												
																125				
																125				
																734				
																	122.2	700	233	172
																				88.9

REV. NO. DIVISION	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO			52	510

SUM - 271 - 2.98



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 GUARD RAIL MOUNT. TYPE-4 EACH	604 GUARD RAIL TYPE-4 LIN. FT. STD.	605 UNDERDRAIN LIN. FT.	605 GABIONS & MATTRESS BRANCHES EACH	603 CONDUIT W/CL. B BEDDING 18" 21" 6"	603 CONDUIT TYPE C TYPE E	601 PAVED DITCH LIN. FT.	660 SOD-DING PROT. MOD. (8) CU. YDS.	SEE SHEET NO.	604 CATCH BASIN EACH Nº 5	667 JUTE MATTING SQ. YD.
U-1	270+00 - 274+98	LT.			498			10			52		
U-2	274+60 - 280+00	LT.			535						52		
U-3	270+00 - 280+00	RT.			1000		1				52		
U-4	270+00 - 280+00	RT.			1000						52		
P-3	A-4 - 280+00	RT.						300					
P-4	A-5 - A-4	RT.						500					
P-5	270+00 - A-5	RT.						200					
A-4	277+00 (18' RT. ℄ I-271)	RT.										1	125
A-5	272+00 (18' RT. ℄ I-271)	RT.										1	125
E-1	272+07 - 273+57	RT.											241
E-2	277+07 - 278+57	RT.											500
E-3	270+00 - 271+75	LT.							480	21.6	167		
E-4	271+75 - 276+75	LT.											
E-5	276+75 - 280+00 ℄	LT.											
RM-1	275+00		1										
R-1	270+00 - 280+00	LT.		1000					480	21.6	167	2	991
TOTALS			1	1000	3033		1	300	700	10			

I-271 STA. 270+00 TO STA. 280+00

FED. HIGHWAY DIVISION	STATE	PROJECT		SHEET NO.
2	OHIO			53 510

SUM - 271 - 2.98

CURVE DATA (Nº 3)
P.I. STA. 285 + 23.13
Δ = 48° 34' 45" LT.
D_c = 1° 28'
R = 3,906.53'
T = 1,763.01'
L = 3,312.22
E = 379.40

FIELD DRIVE

D.R.C.P. 30"x8'x1.5'

D.R.C.P. 35"x6'x1.5

LA R/W

BEGIN SHEET

STA. 280+00

STA. 290+00

END SHEET

BEGIN TAPER 66' LT. ℄ STA. 288+72.34

14.5' 8' +34 +00 6' +00 +35 14.5' E-3 14.5' 14.5' E-4 7.5' 7.5' 7.5'

(U-1) ℄ 1071.22

(U-1) ℄ 1096.33 +50

STA. 287+50 ℄ 1094.27

STA. 289+50 ℄ 1095.40

6"-605 DEEP

6"-605 707.06 OR 707.12

6"-605-707.06 OR 707.12

TO BE PERMANENTLY SEEDED

U-1 U-2 U-3 U-4 U-5

P-3 A-3 E-1 RM-1 P-2 A-2 E-2 R-1 P-1

281 282 283 284 285 ℄ I-271 286 287 288 289

(U-2) ℄ 1051.97

6"-605-707.06 OR 707.12

(U-4) ℄ 1053.11

6" PLUG - STA. 282+11 ℄ 1068.30

6"-60° BEND - STA. 282+13 ℄ 1068.36

6"-605-707.06 OR 707.12

6"-30° BEND - STA. 282+40 ℄ 1060.55

6" PLUG - STA. 282+38 ℄ 1060.45

STA. 282+00 6" OUTLET ℄ 1060.35

6" 7.5' 7.5' 7.5' 6"

(U-3) ℄ 1081.97

6"-605-707.06 OR 707.12

(U-5) ℄ 1083.17

7.5'

NAIL & CAP IN 4" OAK

NAIL & CAP IN 12" OAK

14.68'

℄ I-271

7.85'

NAIL & CAP IN 6" OAK

LA R/W

℄ REF. MONUMENT STA. 284 + 10.23

OHIO EDISON 4 WIRES (69 KV)

B.M. #14 R.R. SPIKE IN 15" SASSAFRAS 45' LT. ℄ STA. 286 +43 ELEV. 1113.88

WEST BOUND ELEVATIONS

EAST BOUND ELEVATIONS

1054.96 1057.96 1060.96 1063.96 1066.96 1069.96 1072.96 1075.96 1078.96 1081.96 1084.96

1075.27 1078.94 1082.43 1085.74 1088.86 1091.79 1094.54 1097.10 1099.48 1101.68 1103.68

1110 1100 1090 1080 1070 1060 1050

A-3
STA. 282+00 (18' RT. ℄)
604 Nº 5 CATCH BASIN
GRATE - 1058.74
℄ 18" — 1056.36
℄ 6" — 1057.36

+4.00%

W.B.L.

(U-1) ℄ 1071.22

(U-4) ℄ 1053.11

(U-5) ℄ 1060.20

(U-4) ℄ 1060.37

(U-5) ℄ 1060.43

(U-3) ℄ 1068.36

(U-2) ℄ 1068.30

(U-3) ℄ 1067.36

200'-18" TYPE "C" CONDUIT W/CL B BEDDING @ 3.00%

500'-18" TYPE "C" CONDUIT W/CL B BEDDING @ 3.00%

+3.00% E.B.L.

300'-15" TYPE "C" CONDUIT W/CL B BEDDING @ 2.94%

(U-1) ℄ 1094.27

(U-1) ℄ 1095.40

(U-1) ℄ 1096.33

(U-5) ℄ 1083.17

(U-3) ℄ 1081.97

A-2
STA. 287+00 (18' RT. ℄)
604 Nº 5 CATCH BASIN
GRATE - 1073.74
℄ 15" — 1071.61
℄ 18" — 1071.36

3000' V.C.
W.B.L.

1100.1 Rt. 1100.9 Lt. | 1102.0 Rt. 1104.6 Lt. | 1104.3 Rt. 1106.6 Lt. | 1106.7 Rt. 1106.8 Lt. | 1109.1 Rt. 1108.9 Lt. | 1111.5 Rt. 1111.6 Lt. | 1112.4 Rt. 1112.3 Lt. | 1111.8 Rt. 1112.6 Lt. | 1111.3 Rt. 1111.7 Lt. | 1108.5 Rt. 1108.7 Lt. | 1105.7 Rt. 1107.1 Lt.

(U-2) ℄ 1051.97

280 281 282 283 284 285 286 287 288 289 290

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMENT EACH	606 GUARD RAIL TYPE-4 LIN. FT. STD.	605 UNDERDRAINS LIN. FT. DEEP STD. 707.02	605 6" BENDS & TYPE "C" CONDUIT BEDDING EACH STD. 707.02	603 CONDUIT L.F. TYPE "C" BEDDING 15"	603 CONDUIT L.F. TYPE "C" BEDDING 18"	604 CATCH BASIN EACH Nº 5	607 6" TYPE DUMPED ROCK RIP RAP CHANNEL LINING SQ. YDS. CU. YDS.	SEE SHEET NO.
U-1	280+00 - 290+00	LT.			50	200	750			211	
U-2	280+00 - 282+11	RT.								810	53
U-3	282+00 - 290+00	RT.								238	53
U-4	280+00 - 282+38	RT.								797	53
U-5	282+00 - 290+00	RT.							1		
P-1	A-2 - 290+00	RT.						300			
P-2	A-3 - A-2	RT.						500			
P-3	280+00 - A-3	RT.					10	200			
A-2	287+00 (8' RT. ℄ I-271)	RT.								125	
A-3	282+00 (18' RT. ℄ I-271)	RT.								125	
E-1	282+07 - 283+57	RT.								1611	25.9
E-2	287+07 - 288+57	RT.								705	
E-3	280+00 - 290+00	LT.								83	
E-4	281+00 - 289+50	LT.									
E-5	289+00 - 290+00	RT.									
RM-1	284+16.23	℄	1								
R-1	280+00 - 290+00	LT.		1000							
TOTALS			1	1000	50	200	760	1000	2	2652	25.9

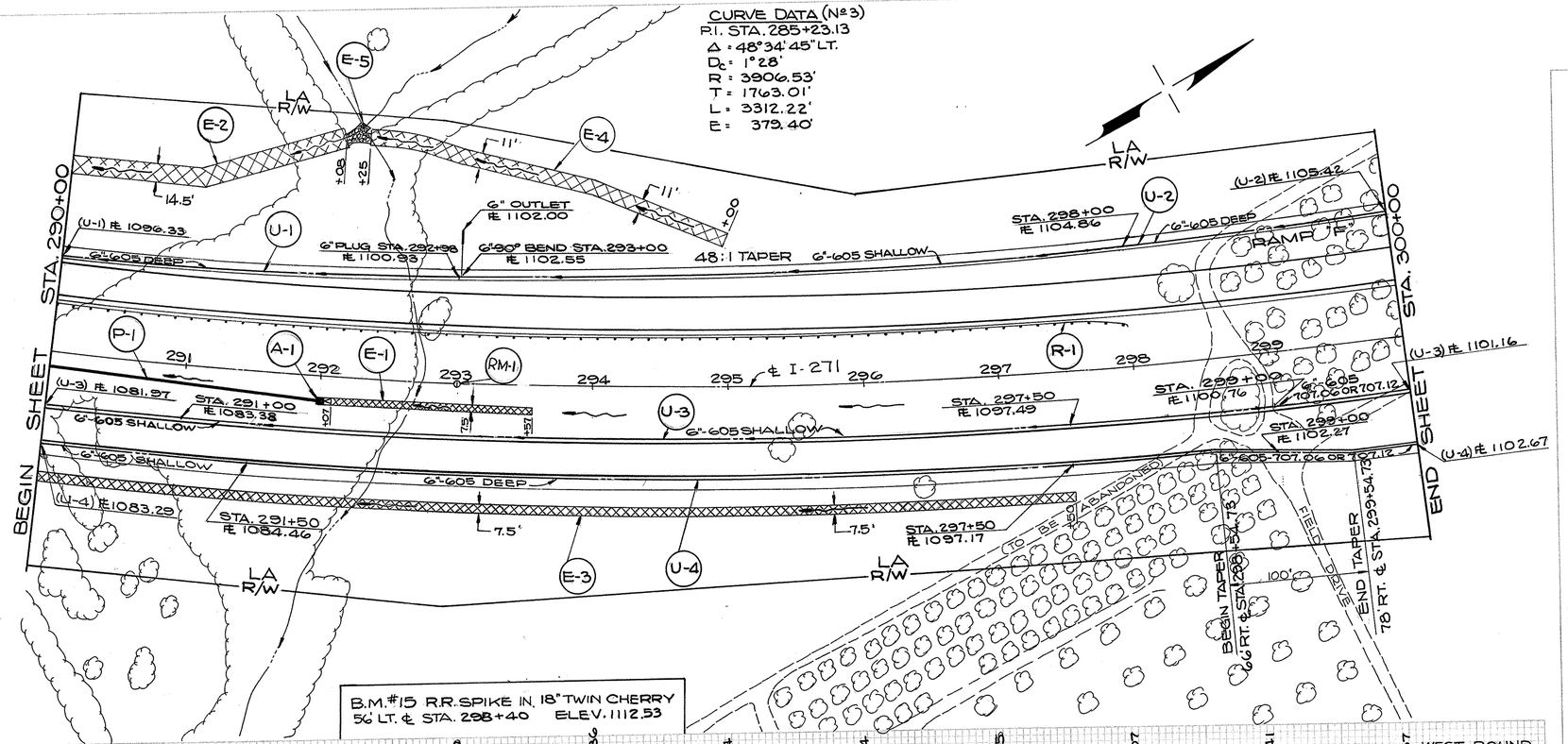
I-271 STA. 280+00 TO STA. 290+00

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

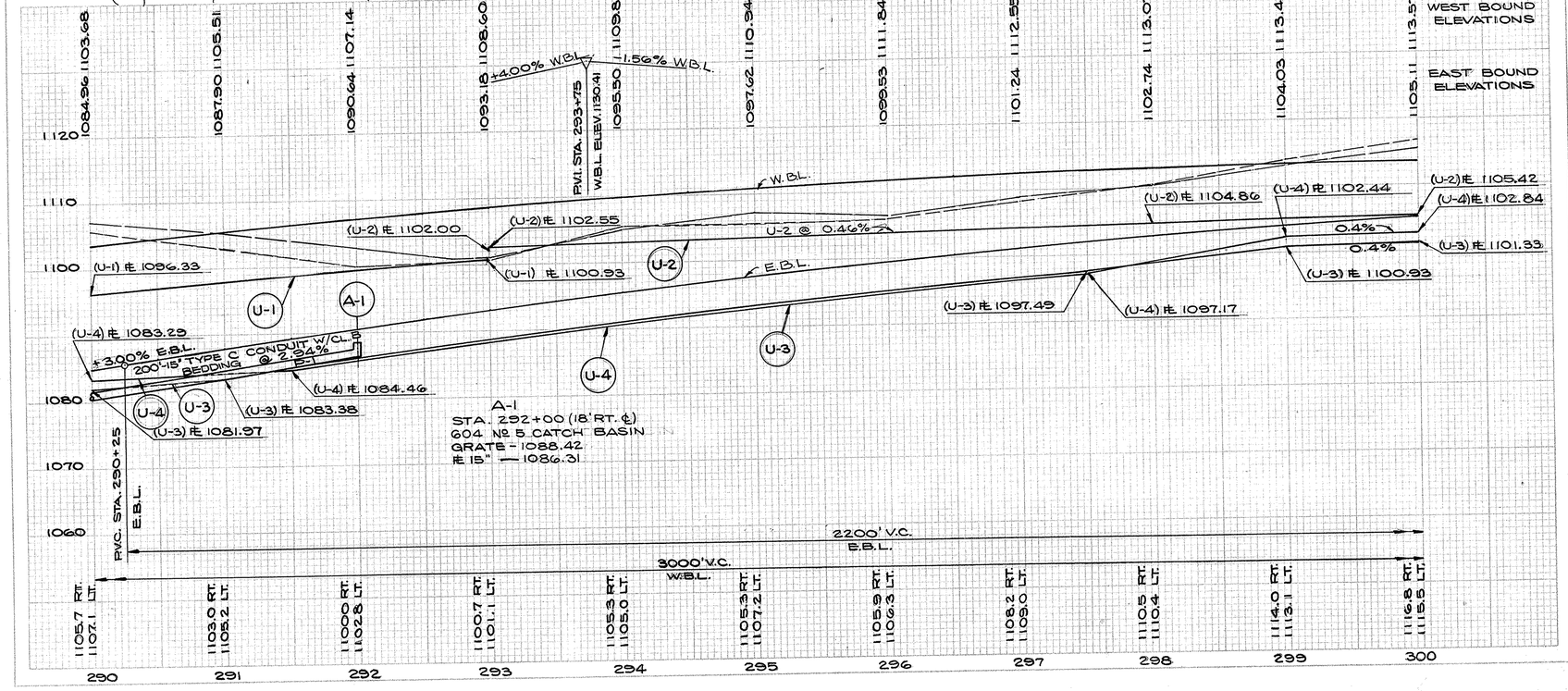
54
510

SUM -271 -2.98

CURVE DATA (№3)
P.I. STA. 285+23.13
Δ = 48°34'45" LT.
D_c = 1°28'
R = 3906.53'
T = 1763.01'
L = 3312.22'
E = 379.40'



B.M. #15 R.R. SPIKE IN 18" TWIN CHERRY
56' LT. ℄ STA. 298+40 ELEV. 1112.53



ESTIMATED QUANTITIES

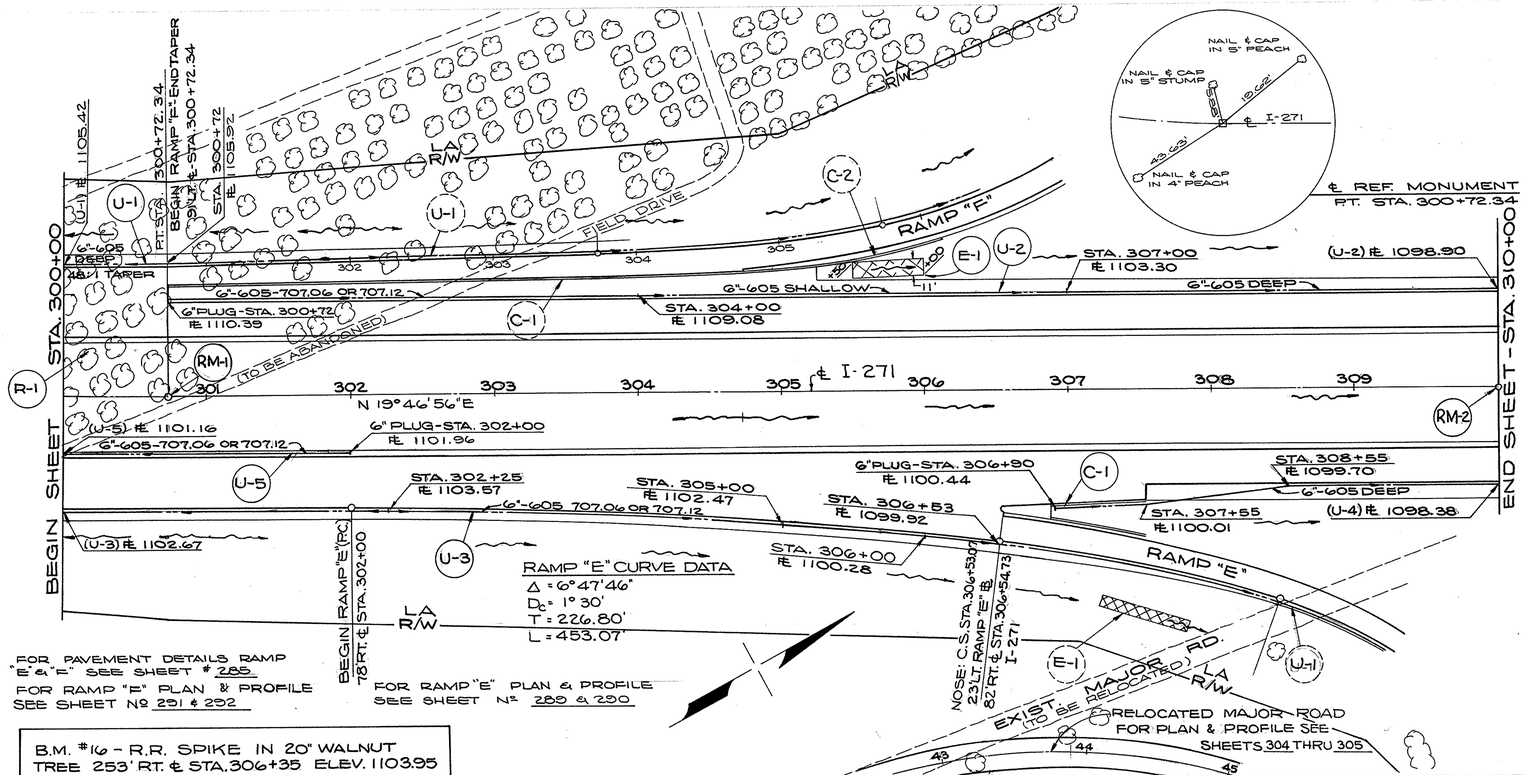
REF. NO.	STATION TO STATION	SIDE	604 GUARD RAIL MONUMT. TYPE-4 LIN. FT. EACH	604 GUARD RAIL MONUMT. TYPE-4 LIN. FT. STD.	605 6" UNDERDRAINS LIN. FT. DEEP	605 6" UNDERDRAINS LIN. FT. SHALLOW	606 GUARD RAIL REF. LIN. FT.
U-1	290+00 – 292+98	LT.			236		
U-2	293+00 – 300+00	LT.			200	524	
U-3	290+00 – 300+00	RT.			200	100	
U-4	290+00 – 300+00	RT.			600	300	1100
P-1	290+00 – A-1	RT.					
A-1	292+00 (18' RT. ℄ I-271)	RT.					
E-1	292+07 – 293+57	RT.					
E-2	290+00 – 292+08	LT.					
E-3	290+00 – 297+50	RT.					
E-4	292+25 – 295+00	LT.					
E-5	292+08 – 292+25	LT.					
RM-1	293+00	℄	1				
R-1	290+00 – 298+00	LT.		800			
TOTALS			1	800	1436	1724	200

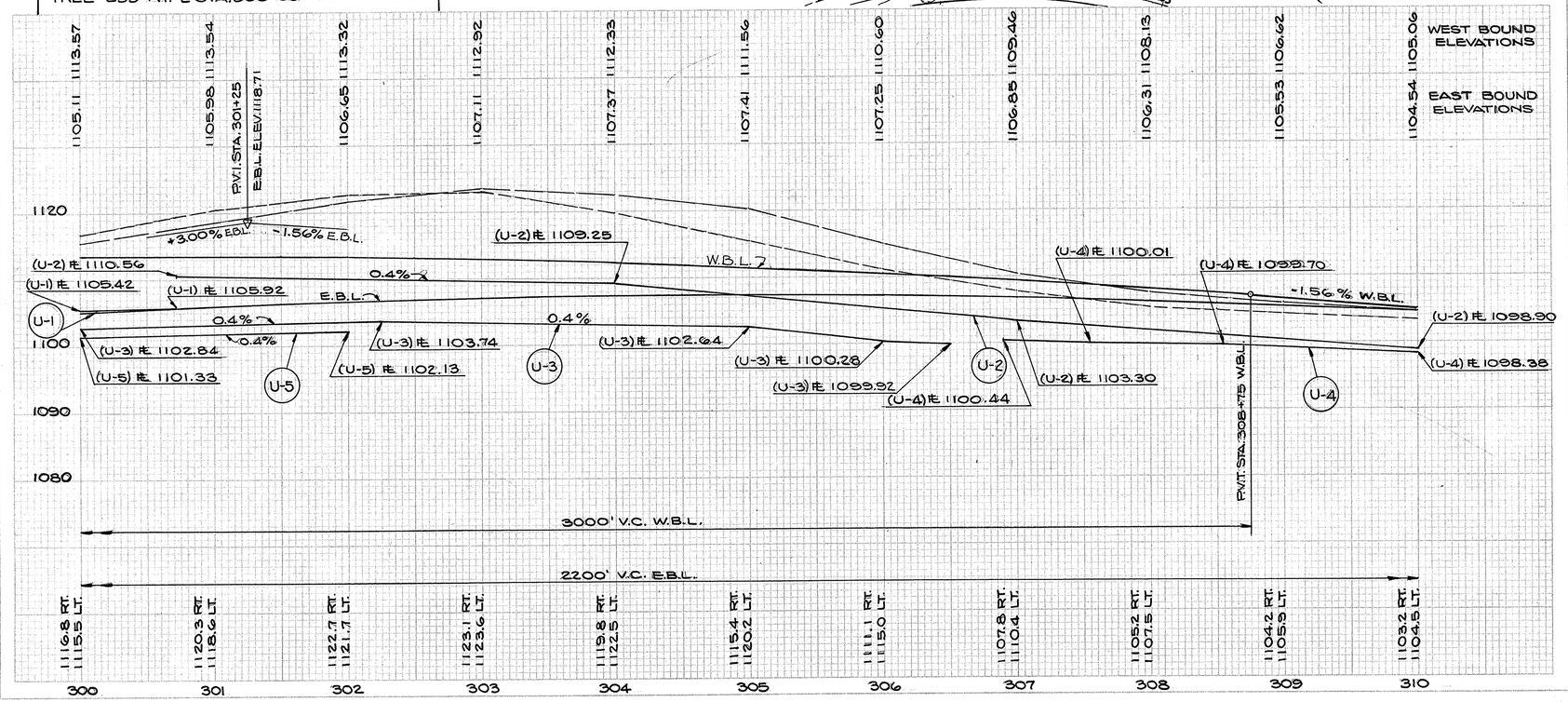
603 CONDUIT L.F.			
6" BENDS & WCL. B. BRANCHES EACH	PIPE, C. BEDDING	TYPE	6"
600	15"		10
			200

601 DUMPED RIP-RAP CHANNEL PROT. CUYDS.	607 JUTE MATTING SQ. YD.
N2 15	125
	346
	625
	330
1	11.1

604 CATCH BASIN EACH	606 GUARD RAIL LIN. FT. STD.
1	1 – 800

606 GUARD RAIL LIN. FT.	
SEE SHEET NO.	
54	
1	1 – 200
1	1 – 200
1	1 – 800
1	1 – 1426
1	1 – 200
1	1 – 800
1	1 – 800
1	1 – 800





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	605 6" UNDERDRAIN LIN. FT. DEEP SHAL. 707.12 707.06	604 REF. MONUMT. EACH
U-1	300+00-300+72.34	LT.	72	
U-2	300+72.34-310+00	LT.	300 300 328	
U-3	300+00-306+54.73	RT.	653	
U-4	306+90-310+00	RT.	310 200	
U-5	300+00-302+00	RT.		
E-1	305+50-306+00	LT.		1
RM-1	300+72.34	℄		1
RM-2	310+00	℄		
TOTALS				2

667 JUTE MATTING SQ. YDS. 682 300 1181

SEE SHEET NO.

61

61

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

56
510

SUM - 271 - 2.98

B.M.#17 CHISELED SQUARE ON E. CULVERT S.E. CORNER HEADWALL 132'LT. ℄ STA. 316+50 ELEV. 1100.69

FOR RELOCATED MAJOR ROAD PLAN AND PROFILE SEE SHEET 304 & 305

FOR RAMP "G" PLAN AND PROFILE SEE SHEET 293

FOR RAMP "G" PAVEMENT DETAIL SEE SHEET 288

CURVE DATA-RAMP "G"
Δ = 6°47'-46"
R = 3819.72'
T = 226.80'
L = 453.07'

NOSE: S.C. STA. 313+46.93 23'LT. ℄ RAMP "G"
STA. 313+45.27 I-271

STA. 313+46.93 ℄ 1092.47

RAMP "G"

STA. 311+45 ℄ 1098.02

STA. 312+45 ℄ 1097.41

6"-605 SHALLOW

(U-1) ℄ 1098.90

6"-605 DEEP

STA. 310+00

BEGIN SHEET

MAJOR RD.

N 19°46'56" E

℄ I-271

STA. 311+45

STA. 312+45

STA. 313+46.93

STA. 316+40.60 I-271
STA. 50+00 RELOC. S.R. 303

STA. 320+00

END SHEET

(U-3) ℄ 1084.21

STA. 318+00
1084.67

END RAMP - BEGIN TAPER - 318+00
78' LT. ℄ STA. 318+00 I-271

6"-605 DEEP 48:1 TAPER 6"-605 SHALLOW

6" PLUG-STA. 317+44
℄ 1086.96

6"-30° BEND-STA. 318+97
℄ 1088.45

(U-5) ℄ 1082.94

STA. 319+00
℄ 1084.47

(U-4) ℄ 1088.38

STA. 315+00
℄ 1091.10

6" TYPE F

RAMP "H"

STRUCTURE № SUM-271-0603
EXIST. 4'x3' BOX CULV.

65°58'01"

OHIO EDISON 2 WIRES 138 KV

WESTERN RESERVE TELEPHONE CO.

STID BELLISLE CABLE

OHIO EDISON 2 WIRES 12 KV

6" BEND-STA. 317+32
℄ 1087.14

6" OUTLET
℄ 1086.78

STILE

BIKE

SIDE

RELOC. S.R. 303

N 83°44'57" E

L = 1170'

R = 3819.72'

T = 585.60'

OHIO ED. CO. & WESTERN RES. TEL. CO.

END RAMP - BEGIN TAPER - 319+00
57' RT. ℄ STA. 319+00 I-271

PROPOSED CUL-DE-SAC.

FOR RELOCATED STINE ROAD PLAN & PROFILE SEE SHEET № 301

NAIL & CAP IN 16" STUMP
NAIL & CAP IN 14" PINE
NAIL & CAP IN 14" PINE
℄ I-271
S 55°50' E
S 66°50' E
S 46°10' E

℄ REF. MONUMENT
STA. 318+63.96

FOR STRUCTURE № SUM-271-0603 DETAIL SEE SHEET № 332

FOR RELOC. S.R. 303 PLAN AND PROFILE SEE SHEETS 262, 263 AND 264

FOR PAVEMENT DETAILS RAMP "H" SEE SHEET 288

FOR RAMP "H" PLAN AND PROFILE SEE SHEET 294

D.R.C.P. 10'x4'-1.5"

W. B. ELEV'S.

E. B. ELEV'S.

E.B. & W.B. ELEV'S.

1104.54 1105.06
1103.54 1103.50
1101.93 1101.94
1101.55 1101.55
1100.38
1098.82
1097.26
1095.70
1094.14
1092.58
1091.02
1089.46

(U-1) ℄ 1098.90
(U-1) ℄ 1098.02
(U-1) ℄ 1097.41
(U-1) ℄ 1096.81
U-1 @ 0.61%
EX. 18" V.C.P.
(U-4) ℄ 1098.38
(U-4) ℄ 1091.10
(U-4) @ 0.67%
(U-2) ℄ 1092.47
-1.56% W.B.L. & E.B.L.
68"x43" CULVERT
℄ = 1083.71
℄ = 1086.25
(U-2) ℄ 1086.75
(U-2) ℄ 1087.14
(U-3) ℄ 1086.96
(U-4) ℄ 1088.45
(U-4) ℄ 1088.35
(U-3) ℄ 1084.67
(U-3) ℄ 1084.21
0.46%
(U-5) ℄ 1084.47
(U-5) ℄ 1082.94
2200' V.C. E.B.L.
R.V.T. STA. 312+25 E.B.L.

1103.2 Rt.
1104.5 Lt.
1100.8 Rt.
1103.3 Lt.
1101.7
1101.9
1098.9
1096.8
1094.9
1095.2
1096.7
1094.8
1100.3
1093.5

1110
1100
1090
1080
1070

310 311 312 313 314 315 316 317 318 319 320

Rev. 7-28-67

ESTIMATED QUANTITIES

REP. NO.	STATION TO STATION	SIDE	605 UNDERDRAIN L.F. FT.	606 GUARD RAIL L.F. FT. STD.	607 JUTE MATTING SQ. YD. DEEP	602 CONC. MASONRY L.F. FT.	603 CONDUIT L.F. FT.	604 CATCH BASIN EACH	609 SUB-DRAINAGE L.F. FT.	610 SUB-DRAIN OUTLET EACH	611 DUMPED RIPRAP SQ. YD.	612 PLACED RIPRAP SQ. YD.	SEE SHEET NO.
			LOW		SHAL.	CU. YDS.	LIN. FT.	NO. G	LIN. FT.	NO. 4	LOW	HIGH	
U-1	310+00 – 313+42	Lt.	342										146
U-2	313+45.27 – 317+45	Lt.											146
U-3	317+44 – 320+00	Lt.											146
U-4	310+00 – 318+97	Rt.											147
U-5	319+00 – 320+00	Rt.											
P-1	A-1 – H-1	Rt.											
P-2	A-2 – H-2	Lt.											
P-3	A-3 – H-3	Rt.											
P-4	A-4 – H-4	Rt.											
P-5	317+53	Lt.											
A-1	315+00 (℄ I-271)	℄											
A-2	313+42.48 (75.89 Lt. ℄ I-271)	Lt.											
A-3	317+75 (77.78 Rt. ℄ I-271)	Rt.											
A-4	318+97.21 (76.04 Rt. ℄ I-271)	Rt.											
H-1	315+49.50 (129.50 Lt. ℄ I-271)	Lt.											
H-2	319+49.50 (129.50 Lt. ℄ I-271)	Rt.											
H-3	317+75 (Lt. 76.15 Rt. ℄ I-271)	Rt.											
H-4	318+97.21 (Lt. 76.04 Rt. ℄ I-271)	Rt.											
E-1	313+45 – 314+93	℄				125							
E-2	314+98 – 315+02	Rt.											
E-3	313+46.50 – 313+50.50	Lt.				257							
E-4	313+52 – 317+23	Lt.											
E-5	317+73 – 317+77	Rt.											
E-6	318+95 – 318+99	Rt.											
PR-1	313+10	Lt.											
RM-1	318+63.96	℄						1					
R-1	315+68.5 – 319+31	Lt.	342										
TOTALS			342			382	1449	442					

I-271 STA. 310+00 TO STA. 320+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

57
510

CURVE DATA
RELOC. DRIVE
Δ = 65°
R = 50'
T = 31.85'
L = 56.72'
P.C. STA. 0+00
P.T. STA. 0+56.72

SEE SHEET Nº 147 & 148 FOR RELOC. DRIVE CROSS-SECTIONS

P.C. STA. 0+00
P.T. STA. 0+56.72
I.C.A.B.L.T. ℄ STA. 321+10 I-271
I-271 S.B.
I-271 N.B.
STA. 2+46.00 175' LT. ℄ STA. 323+00 - I-271
℄ RELOC. DRIVE
2:00
R/W
LA
BEGIN TAPER 78' LT. ℄ STA. 320+45.27
END TAPER 66' LT. ℄ STA. 321+45.27
OHIO EDISON CO. 1-WIRE 12.5 KV
E-3
STA. 322+00 ℄ 1083.13
7.5'
+00
+50
6"-605 SHALLOW
6"-605-707.06 OR 707.12
U-1
NAIL & CAP IN 10" PINE
NAIL & CAP IN 12" W. CHERRY
NAIL & CAP IN 14" W. CHERRY
71.85'
57°02'
68.82'
℄ I-271
℄ REF. TIE STA. 325+20.15
(U-1) ℄ 1063.36
STA. 320+00
STA. 330+00
BEGIN SHEET
END SHEET
(U-1) ℄ 1084.21
321
322
323
+43
324
E-1
RM-1
+93
325
℄ I-271
326
1" PRIVATE GAS LINE G
327
P-1
328
+43
329
E-2
7.5'
N 19°46'56" E
2" TILE
A-1
A-2
1" PRIVATE GAS LINE
48:1 TAPER
6"-605 SHALLOW
(U-2) ℄ 1082.94
+00
STA. 323+00 ℄ 1081.08
7.5'
+00
U-2
(U-2) ℄ 1063.83
E-4
GAS REGULATOR BOX
LA R/W
PLUGGED

B.M. #18 R.R. SPIKE IN 15" WILD CHERRY
97' LT. ℄ STA. 329+26 ELEV. 1104.49

1089.46 1087.90 1086.29 1084.50 1082.54 1080.38 1078.07 1075.56 1072.88 1070.01 1067.02

STA. 2+46.00
0.50%
1100
0+00 1+00 2+00

℄ PROFILE RELOC. DRIVE
LT STA. 320+75 - 322+60

1100
1090
1080
1070
1060

-1.56%
0.46%
0.56%
U-1
U-2
(U-1) ℄ 1083.30
(U-1) ℄ 1084.21
(U-2) ℄ 1082.94
(U-2) ℄ 1081.25
P.V.I. STA. 325+25 ELEV. 1081.27
A-1 STA. 325+00 (℄)
604 Nº 4 CATCH BASIN
GR. ELEV. - 1075.97
INV. 15" - 1073.89
A-2 STA. 330+00 (℄)
604 Nº 4 CATCH BASIN
GR. ELEV. - 1062.60
INV. 15" - 1060.49
500'-15" TYPE C CONDUIT w/CLASS B BEDDING @ 2.68%
-3.00%
(U-1) ℄ 1063.36
(U-2) ℄ 1063.83
P.V.C. STA. 321+25
P.V.T. STA. 329+
800' V.C.

1089.5 1087.1 1096.5 1096.9 1098.0 1103.4 1102.2 1099.9 1099.5 1100.4 1101.2

320 321 322 323 324 325 326 327 328 329 330

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION		SIDE	604 REF. MONUMT. EACH	605 UNDERDRAINS LIN. FT.	608 CONDUITS LIN. FT.
U-1	320+00	330+00	LT.		SHALL. 707.06 LONG. 707.12	15" TYPE B BEDDING
U-2	320+00	330+00	RT.		200 800	
					300 700	
P-1	A-1	A-2	℄			500
A-1	325+00		℄			
A-2	330+00		℄			
E-1	323+43	324+93	℄			
E-2	328+43	329+93	℄			
E-3	322+50	324+00	LT.			
E-4	322+00	324+00	RT.			
RM-1	324+50		℄	1		
TOTALS				1	500 1500	500

SEE SHEET NO.	604 REF. MONUMT. EACH	604 JCT. BASIN MATTING EA. #4 C.B. SQ. YDS.	605 SHALL. 707.06 LONG. 707.12	605 200 800	605 300 700	608 15" TYPE B BEDDING	608 CONDUITS LIN. FT.
57							
		1					
		1					
			125				
			125				
			125				
			167				
2							542

Rev 8-9-67

I-271 STA. 320+00 TO STA. 330+00

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

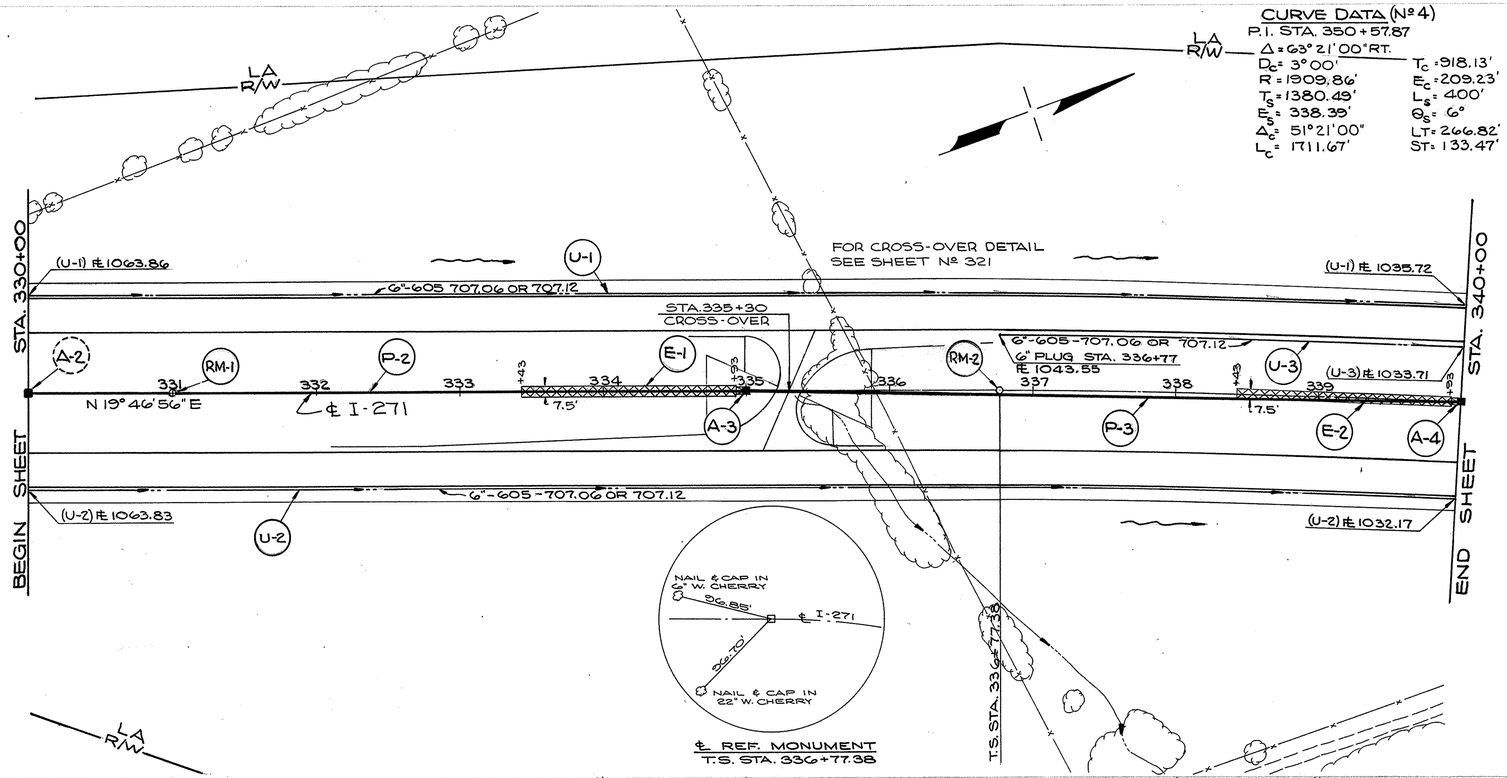
58
510

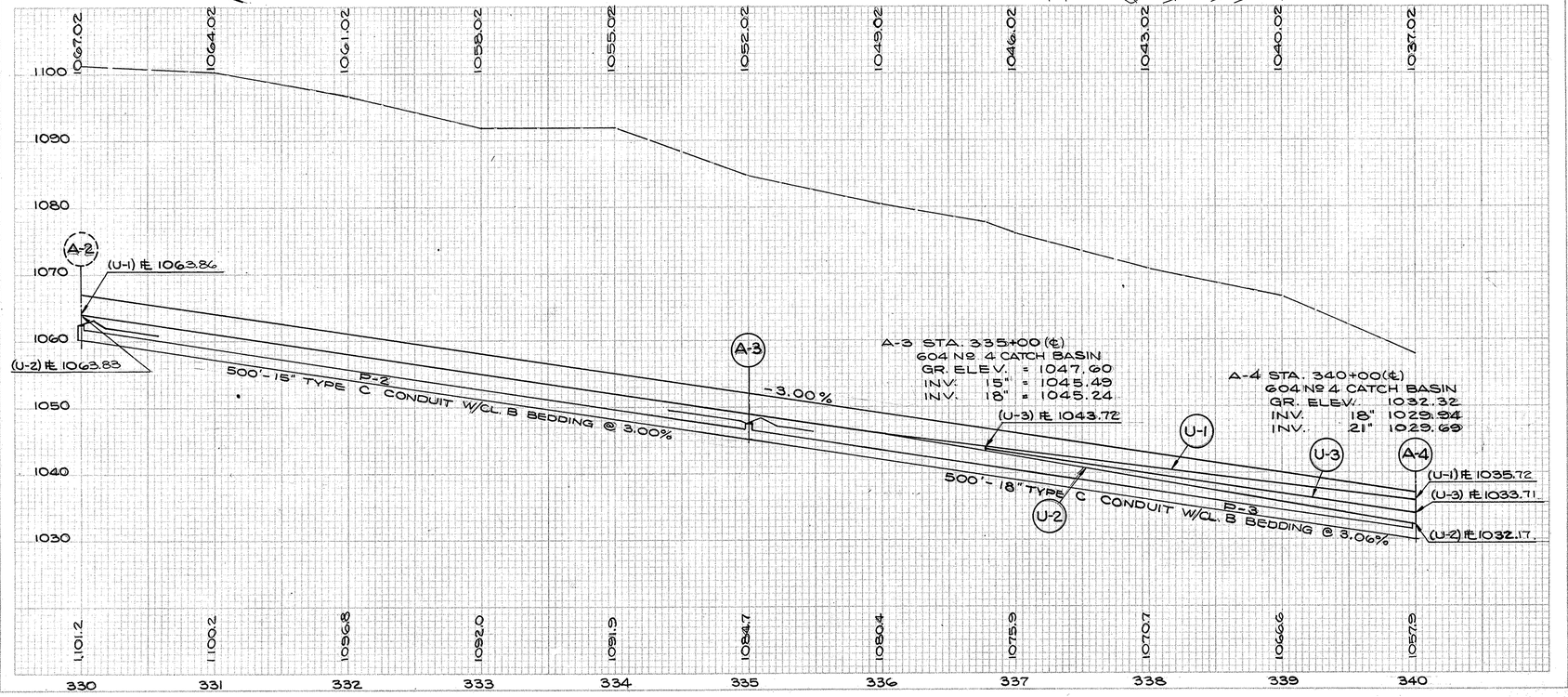
SUM - 271 - 2.98

CURVE DATA (Nº 4)

P.I. STA. 350+57.87

$\Delta = 63°21'00"$ RT.
$D_c = 3°00'$
$R = 1909.86'$
$T_S = 1380.49'$
$E_S = 338.39'$
$\Delta_c = 51°21'00"$
$L_c = 1711.67'$
$T_c = 918.13'$
$E_c = 209.23'$
$L_s = 400'$
$\theta_s = 6°$
$LT = 266.82'$
$ST = 133.47'$





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMT. EACH	604 CATCH BASIN Nº 4 EACH	604 JUTE MATTING SQ. YDS.	605 UNDERDRAINS L.IN. FT. 70% 72%	608 CONDUITS L.IN. FT. 12" TYPE B BEDDING	608 CONDUITS L.IN. FT. 15" TYPE B BEDDING	608 CONDUITS L.IN. FT. 18" TYPE B BEDDING	SEE SHEET NO.
U-1	330+00 - 340+00	LT.				1000			500	58
U-2	330+00 - 340+00	RT.				1000			500	58
U-3	336+77.38 - 340+00	LT.				323				
P-2	A-2 — A-3	℄ ℄		1	125					
P-3	A-3 — A-4	℄ ℄		1	125					
A-3	335+00	℄								
A-4	340+00	℄								
E-1	333+43 - 334+93	℄ ℄								
E-2	338+43 - 339+93	℄ ℄								
RM-1	331+00	℄								
RM-2	336+77.38	℄								
TOTALS			2	2	250	2323		500	500	

Rev. 8-9-67

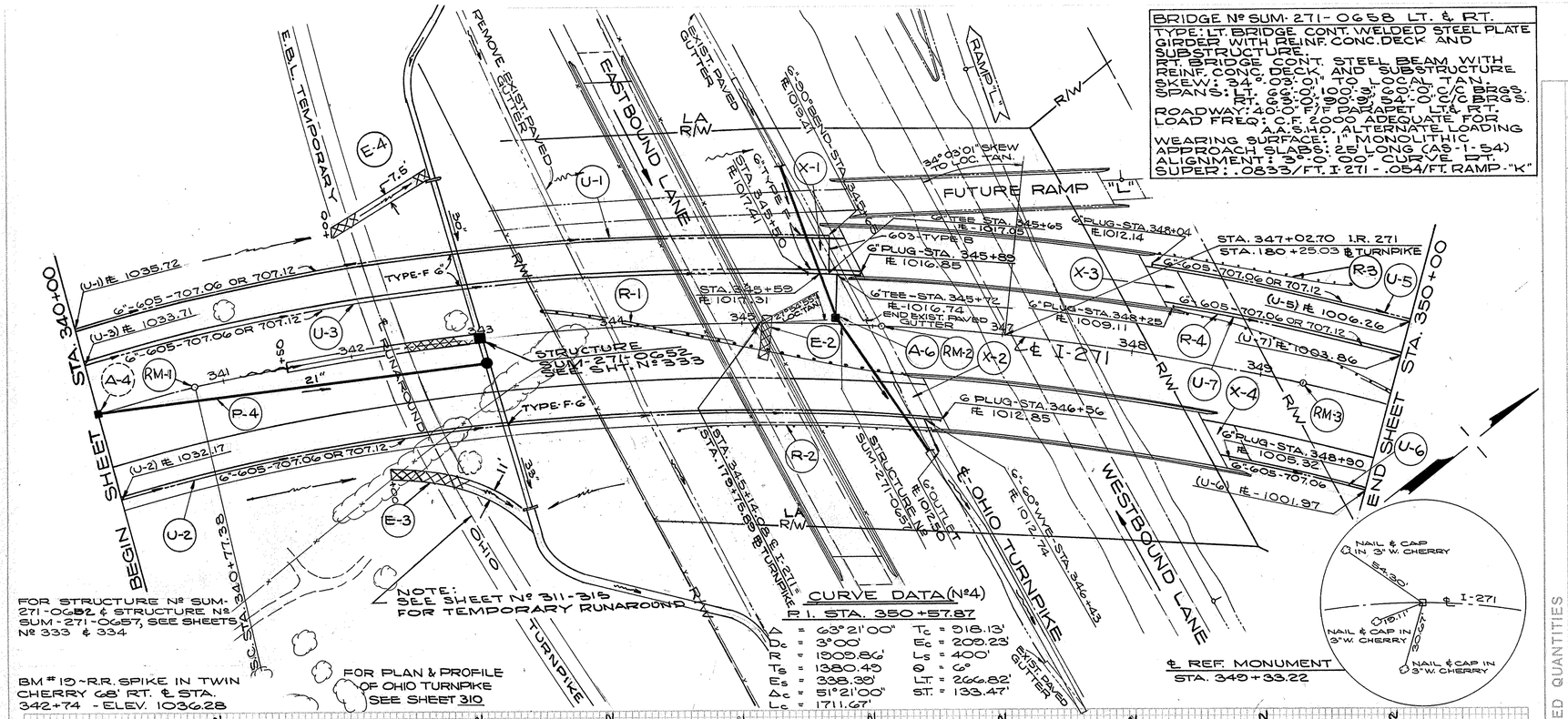
I-271 STA. 330+00 TO STA. 340+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

55
510

SUM-271-2.98

BRIDGE Nº SUM-271-0658 LT. & RT.
TYPE: LT. BRIDGE CONT. WELDED STEEL PLATE GIRDER WITH REINF. CONC. DECK AND SUBSTRUCTURE.
RT. BRIDGE CONT. STEEL BEAM WITH REINF. CONC. DECK AND SUBSTRUCTURE.
SKEW: 34°-03'-01" TO LOCAL TAN.
SPANS: LT. 98'-0", 100'-3", 100'-0" C/C BRGS.
RT. 98'-0", 90'-9", 54'-0" C/C BRGS.
ROADWAY: 40'-0" F/F PARAPET LT & RT.
LOAD FREQ.: C.F. 2000 ADEQUATE FOR AASHO ALTERNATE LOADING
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: 3°-0' 00" CURVE PT.
SUPER: .0833/FT. I 271 - .054/FT. RAMP "K"



FOR STRUCTURE Nº SUM-271-0652 & STRUCTURE Nº SUM-271-0657, SEE SHEETS Nº 333 & 334

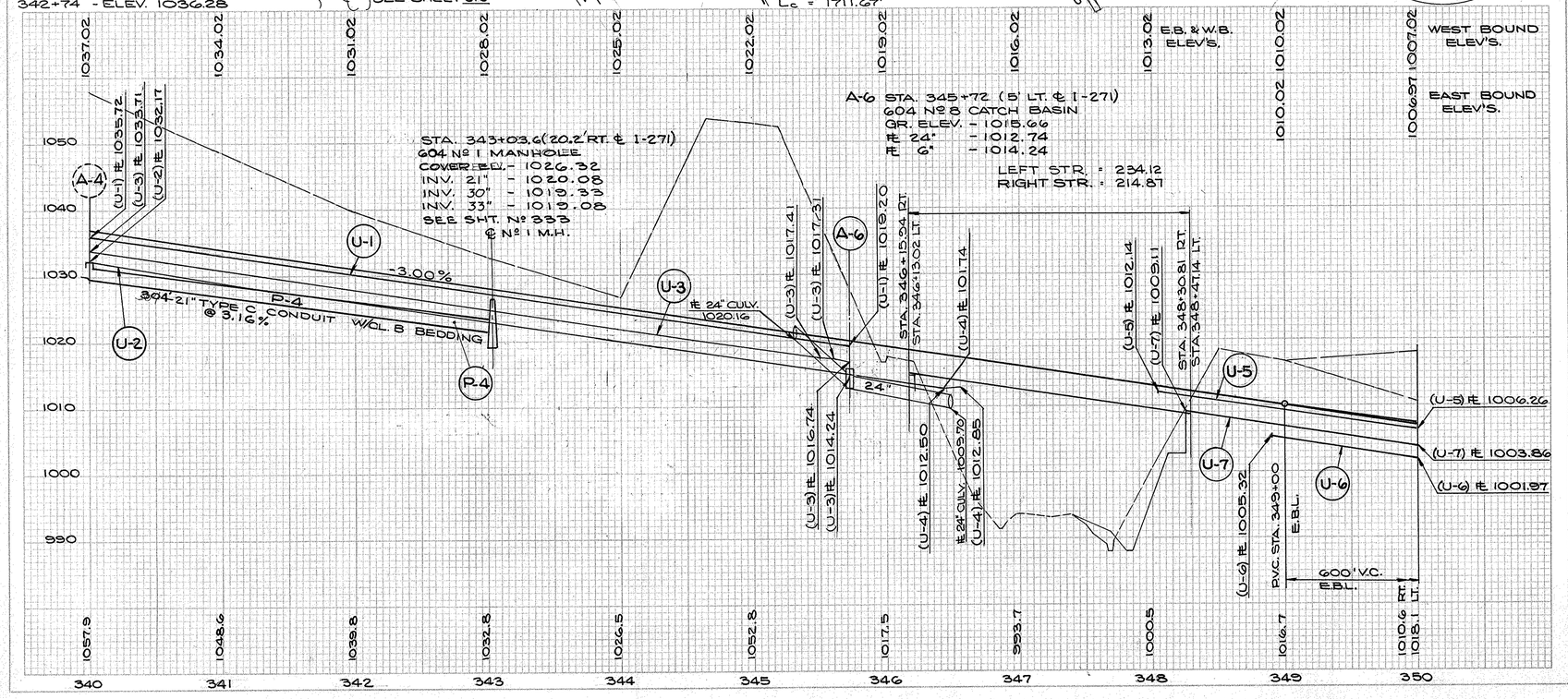
BM # 19 - R.R. SPIKE IN TWIN CHERRY 68' RT. ℄ STA. 342+74 - ELEV. 1036.28

NOTE: SEE SHEET Nº 311-318 FOR TEMPORARY RUNAROUND

FOR PLAN & PROFILE OF OHIO TURNPIKE SEE SHEET 310

CURVE DATA (Nº4)
P.I. STA. 350+57.87

Δ	= 63°21'00"	T_c	= 918.13'
D_c	= 3°00'	E_c	= 209.23'
R	= 1909.86'	L_s	= 400'
T_s	= 1380.49'	θ	= 6°
E_s	= 338.38'	L_H	= 2666.82'
D_p	= 51°21'00"	S_T	= 133.47'
L_c	= 1711.67'		



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REINF. CONC. MONUMENT EACH	604 GUARD RAIL 4 CABLE UN. FT. STD.	611 REINF. CONC. SLAB SQ.YD. BAR	603 CONDUITS LIN. FT. CL. BEDDING TYPE	6" BENDS & BRANCHES TYPE B	6" 21" 30" BEND TEE	604 CATCH BASIN EACH	607 JUTE MATTING SQ.YDS.	SEE SHEET NO.
U-1	340+00 - 345+65	LT.									59
U-2	340+00 - 346+56	RT.									
U-3	340+00 - 345+89	LT.									334
U-5	348+04 - 350+00	LT.									
U-6	348+90 - 350+00	RT.									
U-7	348+25 - 350+00	LT.									
P-4	340+00 - 343+03.6	RT.				304		1			
A-6	345+72	S/LT.							1		
E-1	341+50 - 343+00	℄								125	
E-2	345+20 - 345+18	RT.								28	
E-3	342+00 - 342+85	LT.								144	
E-4	342+77.38	℄	1							71	
RM-1	340+07.09	℄	1								
RM-2	346+07.09	℄	1								
RM-3	349+33.22	℄	1								
R-1	343+47 - 346+24	LT.&RT.		150	150						
R-2	344+50 - 346+50	RT.		200							
R-3	348+07 - 349+57	LT.		150							
R-4	348+37 - 350+00	LT.		150	125						
X-1	346+16.02	LT.			66.7						
X-2	346+16.02	RT.			66.7						
X-3	348+28.72	LT.			66.7						
X-4	348+28.72	RT.			66.7						
			3	650	625	2670			2	2245	
						30	304	70	1	1	348
										L	L

TOTALS

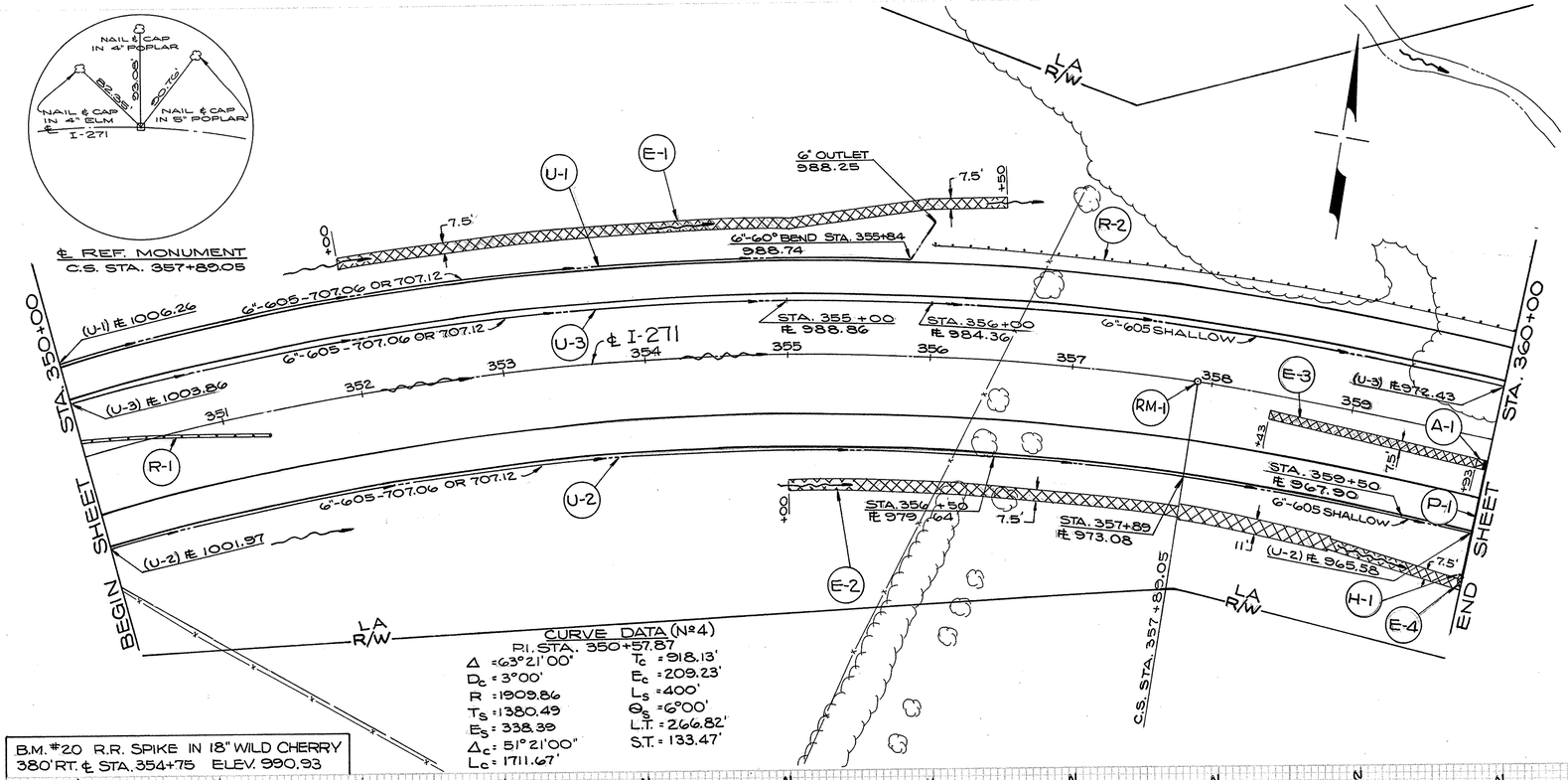
Rev. 8-9-67
Rev. 7-28-67

I-271 STA. 340+00 TO STA. 350+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

60
510

SUM - 271 - 2.98



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 GUARD RAIL MONUMT. STD. EACH	606 GUARD RAIL TYPE-4 BARRIER L.IN.FT.	606 GUARD RAIL TYPE-4 TYPE-B TERMINALS L.IN.FT.	605 UNDERDRAINS L.IN.FT. 6" SMAL. TO 12" LOW. TO 10"	605 6" BENDS & TYPE-B TERMINALS EACH 60° BEND	605 CONDUIT LIN.FT. TYPE 6" 8" 10" BEDDING 15"	607 JUTE MATTING SQ.YDS.	602 DUMPED ROCK MASONRY/CHANNEL CU.YDS.	602 CONCRETE CU.YDS.	601 CONCRETE BASIN EACH No.15	604 CURB EACH	SEE SHEET NO.
U-1	350+00-356+00	LT.												161
U-2	350+00-360+00	RT.												
U-3	350+00-360+00	LT.												
P-1	A-1 — H-1	RT.												
A-1	360+00(18' RT. ℄ I-271)	RT.												
H-1	360+00(98' RT. ℄ I-271)	RT.												
E-1	352+00-356+50	LT.												
E-2	355+00-360+00	RT.												
E-3	358+43-359+93	RT.												
E-4	359+98-360+02	RT.												
RM-1	357+89.05	℄	1											
R-1	350+00-351+30	℄		137.5										
R-2	356+00-360+00	LT.		400										
TOTALS			1	400	137.5									

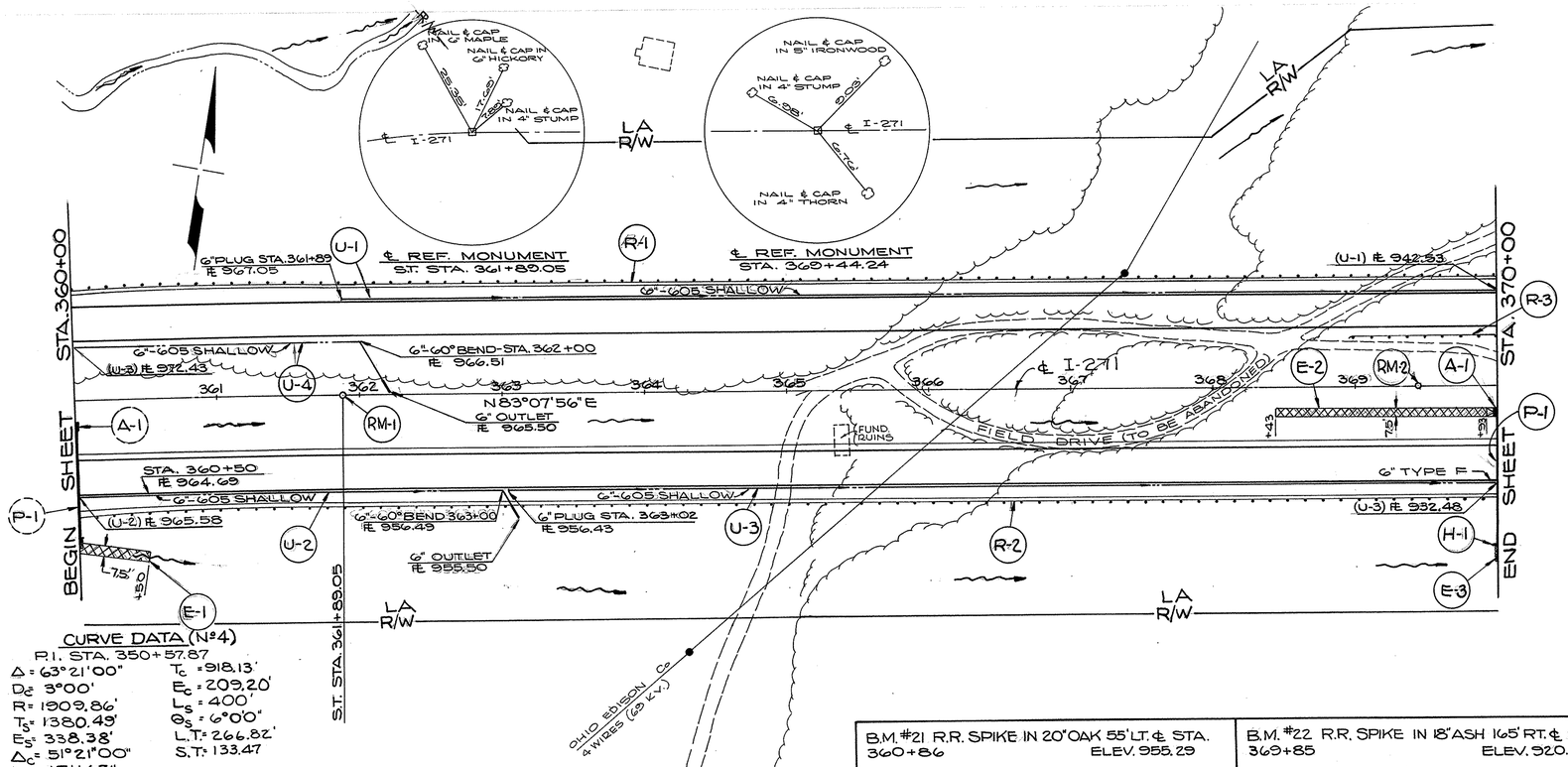
605 UNDERDRAINS L.IN.FT. 6" SMAL. TO 12" LOW. TO 10"	605 6" BENDS & TYPE-B TERMINALS EACH 60° BEND	605 CONDUIT LIN.FT. TYPE 6" 8" 10" BEDDING 15"	607 JUTE MATTING SQ.YDS.	602 DUMPED ROCK MASONRY/CHANNEL CU.YDS.	602 CONCRETE CU.YDS.	601 CONCRETE BASIN EACH No.15	604 CURB EACH	SEE SHEET NO.
								161
850 1756	1	80	375 460 125	2	0.26	1	960	

I-271 STA. 350+00 TO STA. 360+00

FED. RT. DIVISION	STATE	PROJECT
2	OHIO	

61
510

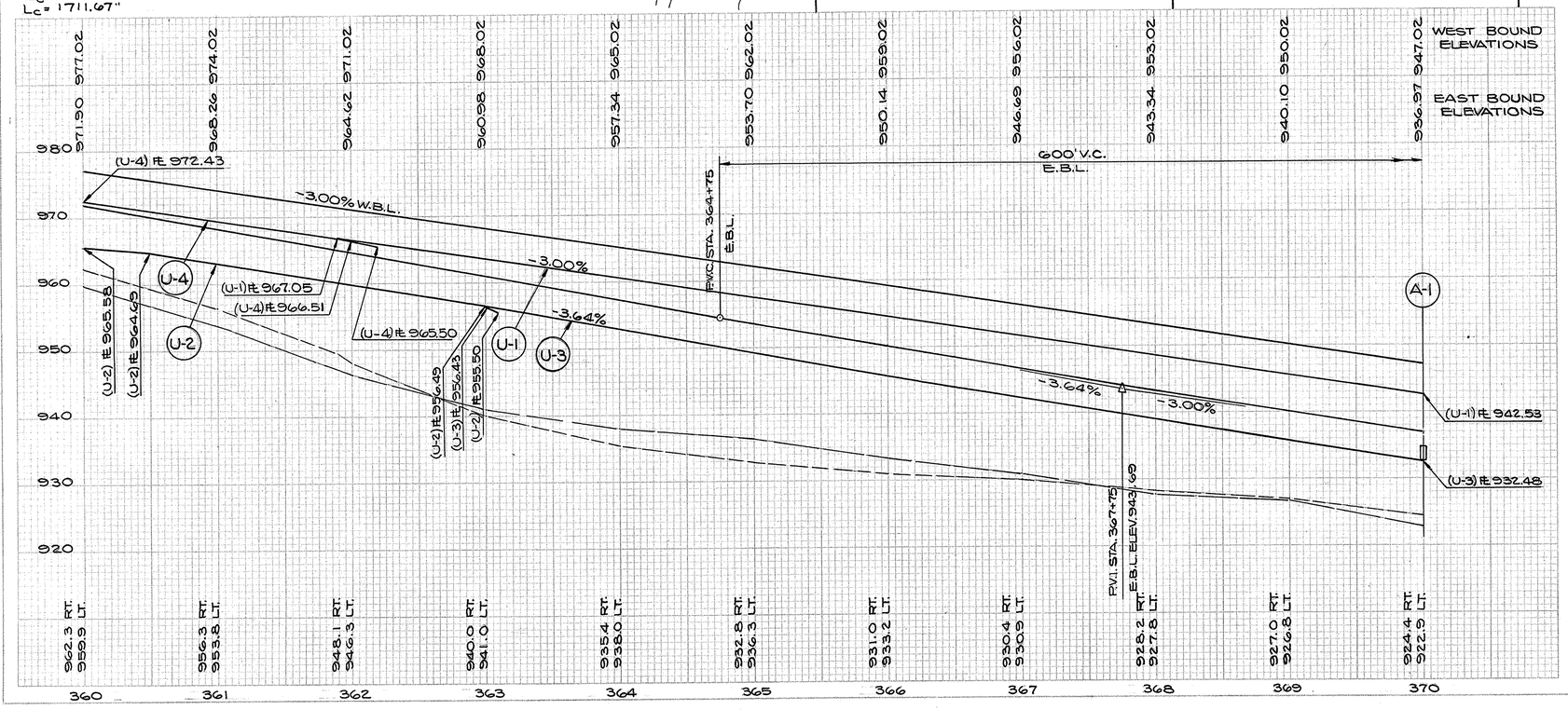
SUM - 271 - 2.98



CURVE DATA (№4)
P.I. STA. 350+57.87

Δ = 63°21'00"	T_c = 918.13'
D_c = 9°00'	E_c = 209.20'
R = 1909.86'	L_s = 400'
T_s = 1380.49'	Θ_s = 6°00"
E_s = 338.38'	L.T. = 266.82'
Δ_c = 51°21'00"	S.T. = 133.47
L_c = 1711.67'	

B.M. #21 R.R. SPIKE IN 20" OAK 55' LT. ℄ STA. 360+86 ELEV. 955.29	B.M. #22 R.R. SPIKE IN 18" ASH 165' RT. ℄ STA. 369+85 ELEV. 920.71



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 CONDUITS-LIN.FT. UNDER DRIVES	603 CONDUITS-LIN.FT. SHALL. DITCH	603 BENDS & WYES EACH 24" BEND	603 CONDUITS-LIN.FT.	603 BENDS & WYES EACH	603 CONDUITS-LIN.FT. TYPE B W/CL B BEDDING 15"	603 BENDS & WYES EACH 15"	603 CONDUITS-LIN.FT. TYPE F 6"	603 BENDS & WYES EACH TYPE F 6"	604 REF. MONUMT. TYPE-4 EACH	606 GUARD RAIL-LIN.FT. STD.
U-1	361+89 - 370+00	LT.		811	1					10	1		
U-2	360+00 - 363+10	RT.		312						5			
U-3	363+02 - 370+00	RT.		693						10	1		
U-4	360+00 - 362+20	LT.		232	1								
P-1	A-1 ~ H-1	RT.						67	2	29	2		
A-1	370+00(18 RT. ℄ I-271)	RT.											
H-1	370+00(112 RT. ℄ I-271)	RT.											
E-1	360+00 - 360+50	RT.											
E-2	368+43 - 369+93	RT.											
E-3	369+98 - 370+02	RT.											
RM-1	361+89.05	℄										1	
RM-2	369+44.24	℄										1	
R-1	360+00 - 370+00	LT.											1000
R-2	360+00 - 370+00	RT.											1000
TOTALS				2048	2			67	2	25	2	2	2000

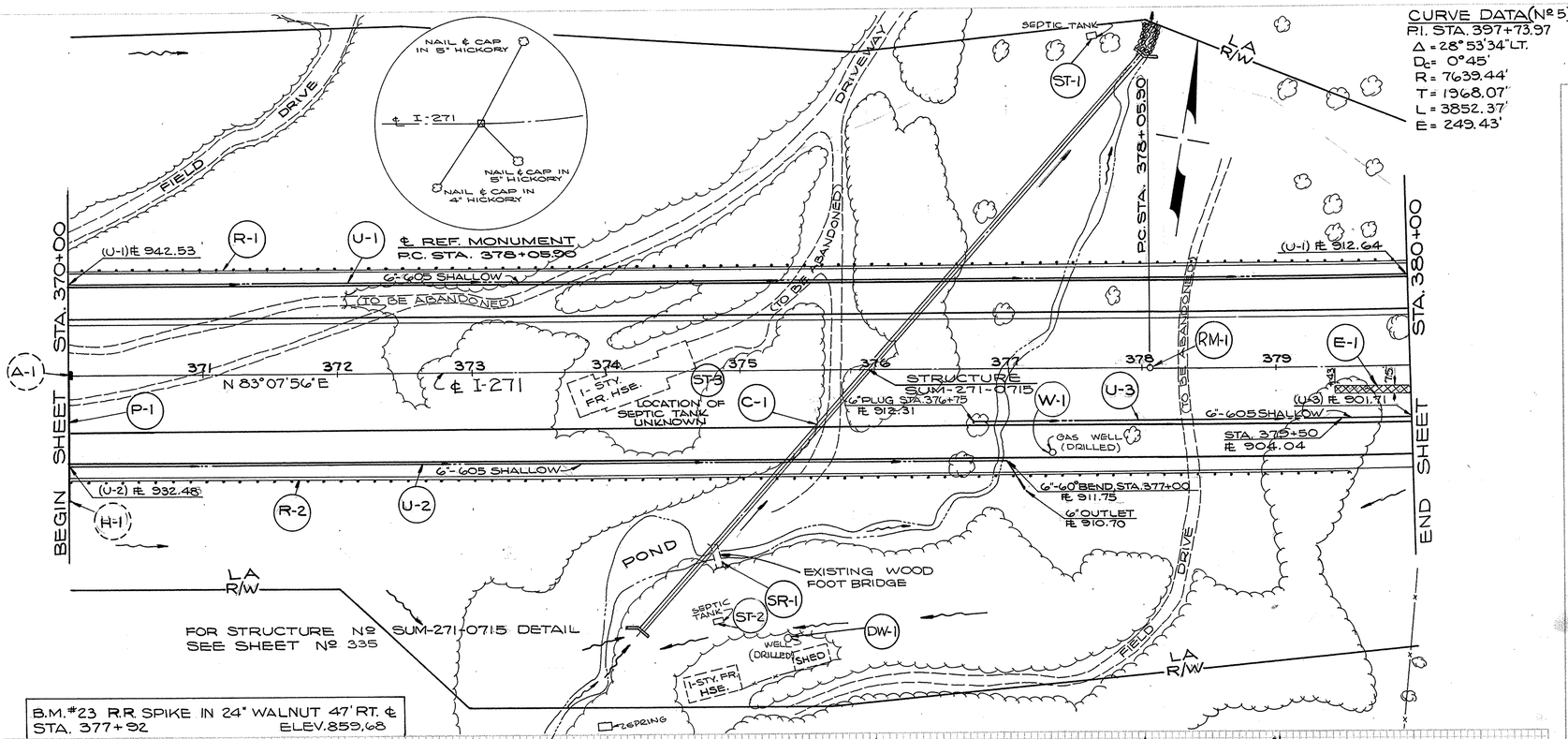
601 DUMPED ROCK MATTING CHANNEL CU.YDS.	607 FENCE SQ.YDS.	SEE SHEET NO.
		168
	42	
	125	
2.4		
0.26		
1		
2.4	167	
0.26	167	
1		
2	67	

I-271 STA. 360+00 TO STA. 370+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

62
510

SUM - 271 - 2.98



ESTIMATED QUANTITIES

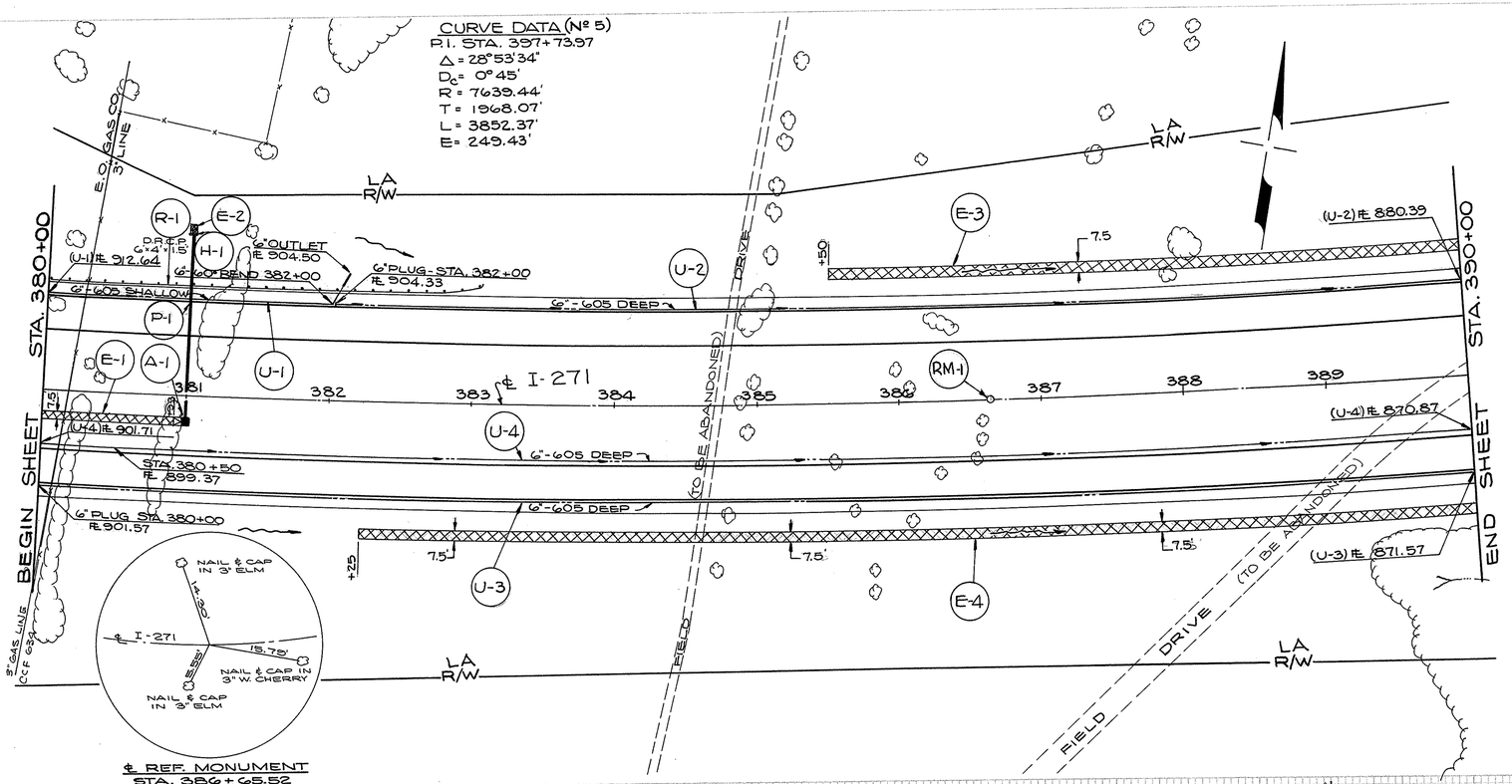
REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMT. EACH	604 GUARD DRILLED WELL TYPE-4 LIN. FT.	604 GUARD DRILLED WELL ABAND. STD. EACH	605 CONDUIT UNDERDRAINS LIN. FT.	605 CONDUIT UNDERDRAINS SHALLOW LIN. FT.	605 6" BENDS & BENCHES EACH 60° BEND	605 CONDUIT UNDERDRAINS TYPE F 3'	607 JUTE EXISTING STRUCTURES MATTING REMOVED SQ. YDS. LUMP	SPECIAL PLUGGING GAS WELLS	SPECIAL CLEAN & DISPOSE SEPTIC TANK EACH	SEE SHEET NO.
U-1	370+00 - 380+00	LT.				1000	710	1		48	LUMP		3
U-2	370+00 - 377+12	RT.				1000	325						
U-3	376+75 - 380+00	RT.											
E-1	375+43 - 380+00	RT.											
SR-1	374+80	RT.	1										
RM-1	378+05.90	℄											
R-1	370+00 - 380+00	LT.				1000							
R-2	370+00 - 379+50	RT.				950							
W-1	377+25	RT.											
ST-1	377+50	LT.											
ST-2	374+75	RT.											
ST-3	374+00 ±	℄											
DW-1	375+50	RT.			1								
TOTALS			1		1	2035	1035	1	15	48	1	1	3

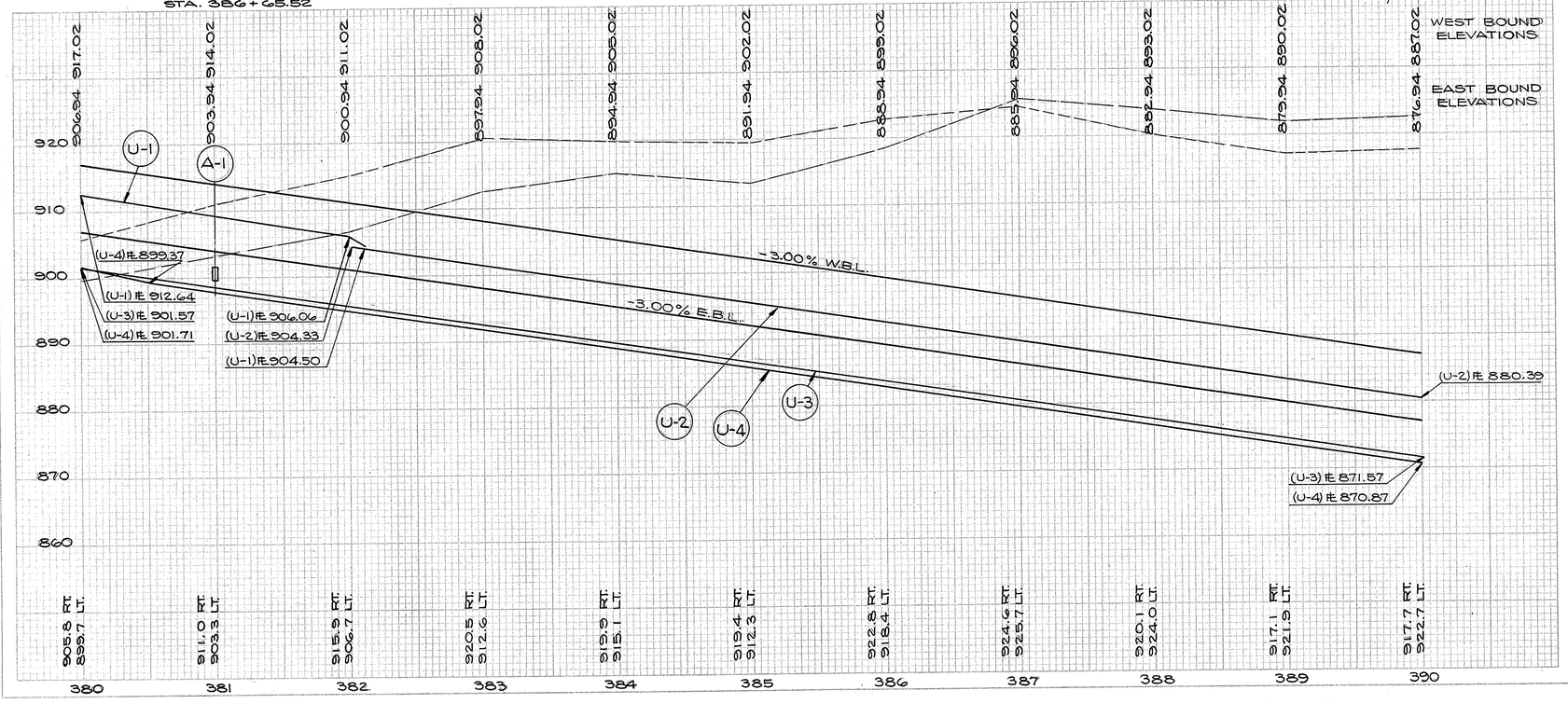
I-271 STA. 370+00 TO STA. 380+00

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

63
510

SUM - 271 - 2.98





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	602 CONCRETE DITCH LIN. FT.	603 CONDUITS LIN. FT. TYPE B W/CL 6" SCHED 40 PVC 706.02 CL. 1387	603 CONDUITS LIN. FT. TYPE F 6"	604 CATCH BASIN MASONRY EACH	604 REF. MONUMENT EACH	606 GUARD RAIL-4 LIN. FT. STD.	609 6" UNDERDRAINS LIN. FT. DEEP	609 6" UNDERDRAINS LIN. FT. SHALLOW 2:1	609 6" BENDS & BRANCHES EACH 60° BEND	609 6" BENDS & BRANCHES EACH 45° BEND	610 JUTE MATTING SQ. YDS.	667 DRESSED ROCK CHANNEL MATTING CU. YDS.	SEE SHEET NO.
U-1	380+00 - 382+13	LT.								798		1			
U-2	382+02 - 390+00	LT.								1000					182
U-3	380+00 - 390+00	RT.								950	50				
U-4	380+00 - 390+00	RT.													
P-1	A-1 ~ H-1	LT.			10										
A-1	381+00 (68' RT. ℄ I-271)	RT.				1							78	375	
H-1	381+00 (114' LT. ℄ I-271)	LT.											1.1	646	
E-1	380+00 - 380+93	RT.													
E-2	380+98 - 381+02	LT.													
E-3	385+50 - 390+00	LT.													
E-4	382+25 - 390+00	RT.													
RM-1	386+65.52	℄					1								
R-1	380+00 - 383+00	LT.	300										0.26	1099	
TOTALS			300		10	1	1			2748	265	1	1.1	1099	182

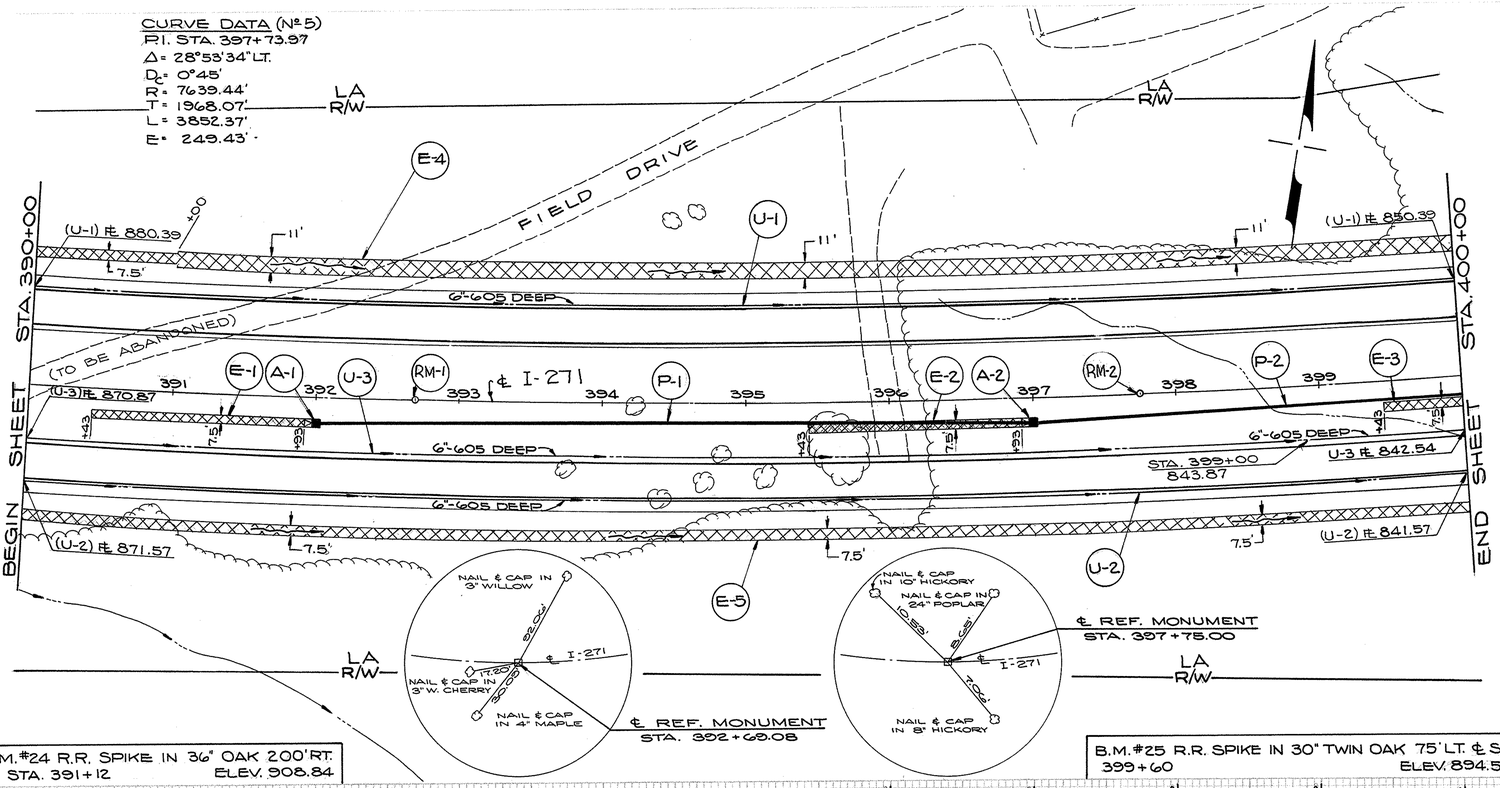
I-271 STA. 380+00 TO STA. 390+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

64
510

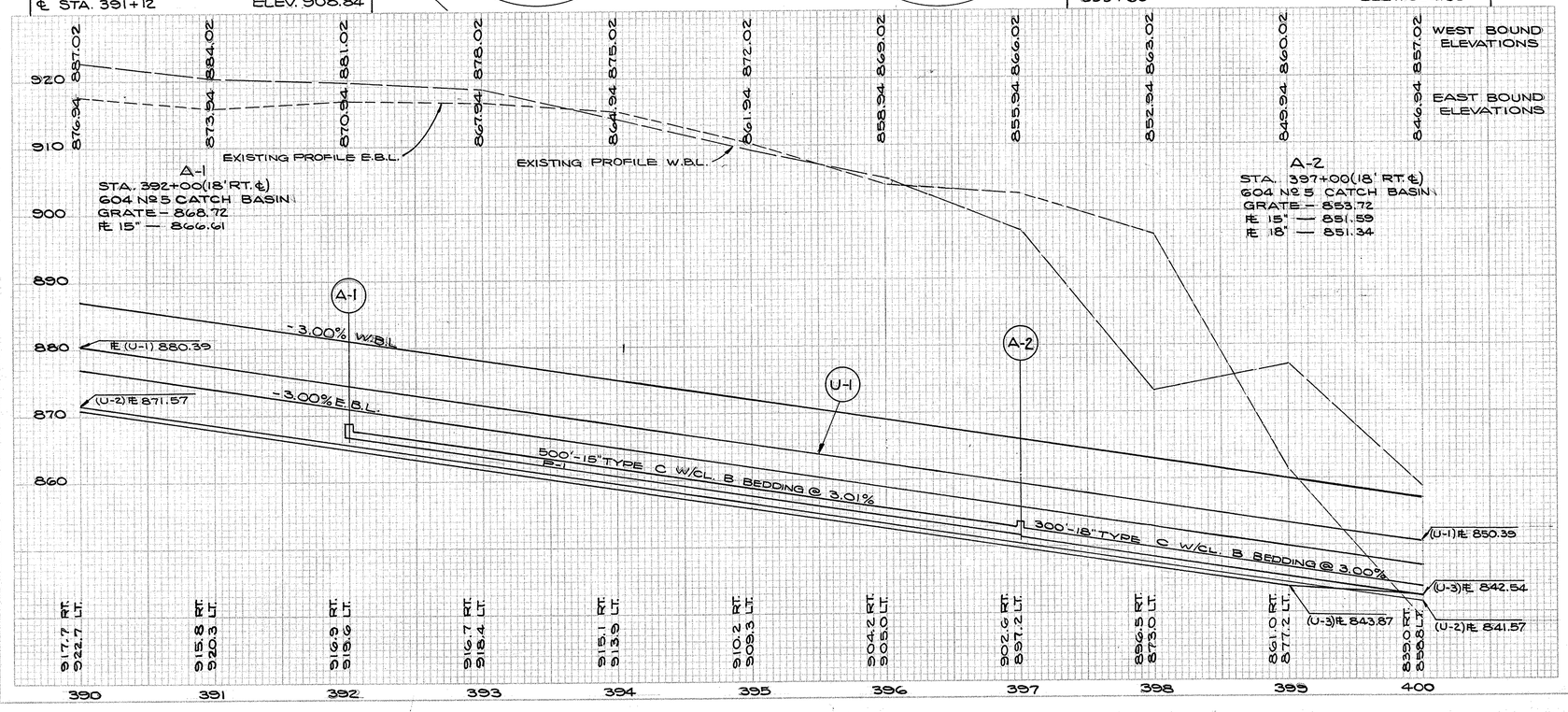
SUM - 271 - 2.98

CURVE DATA (№ 5)
P.I. STA. 397+73.97
Δ = 28°53'34" LT.
D_c = 0°45'
R = 7639.44'
T = 1968.07'
L = 3852.37'
E = 249.43'



B.M. #24 R.R. SPIKE IN 36" OAK 2.00' RT. ℄ STA. 391+12 ELEV. 908.84

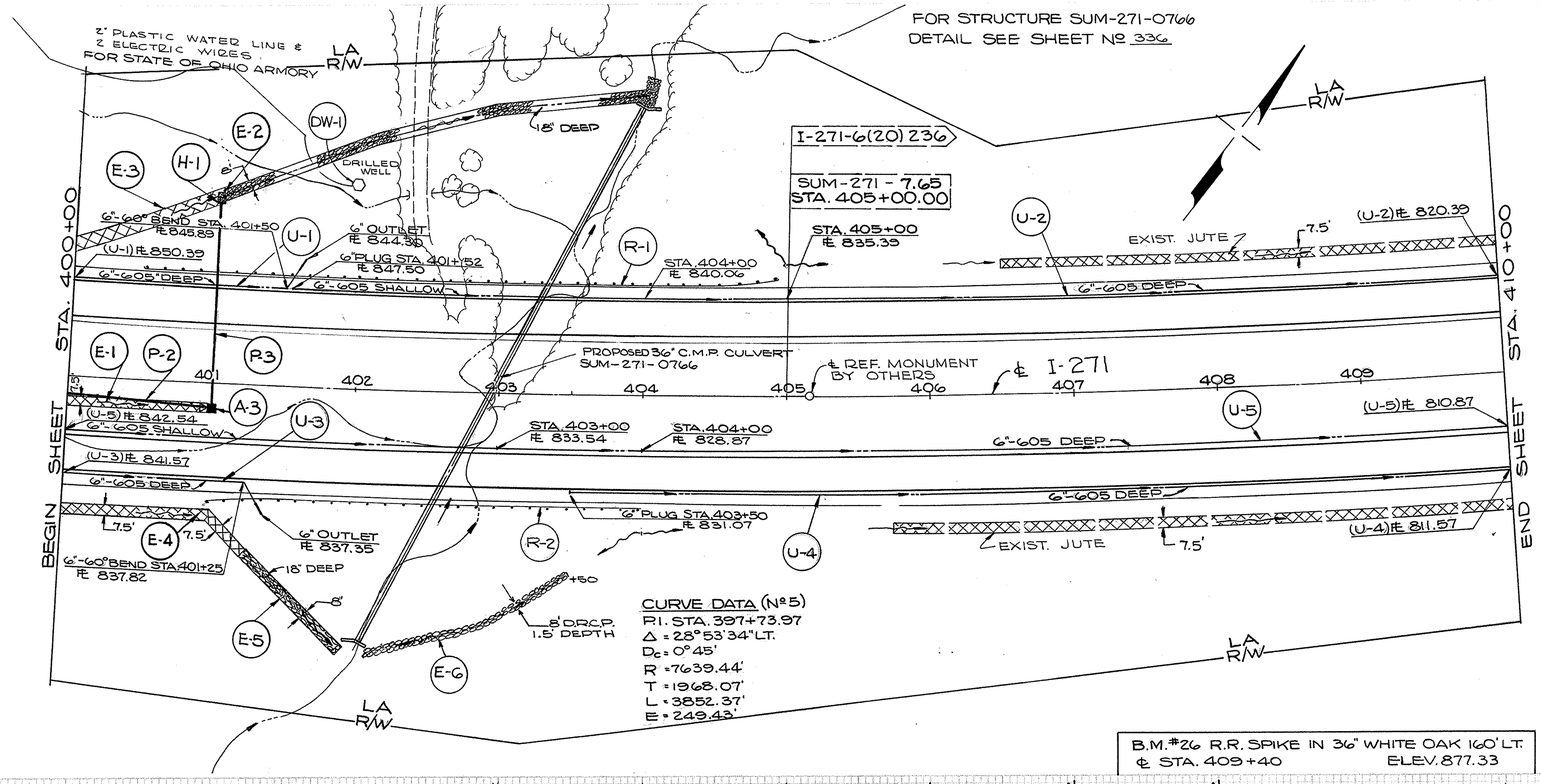
B.M. #25 R.R. SPIKE IN 30" TWIN OAK 75' LT. ℄ STA. 399+60 ELEV. 894.56

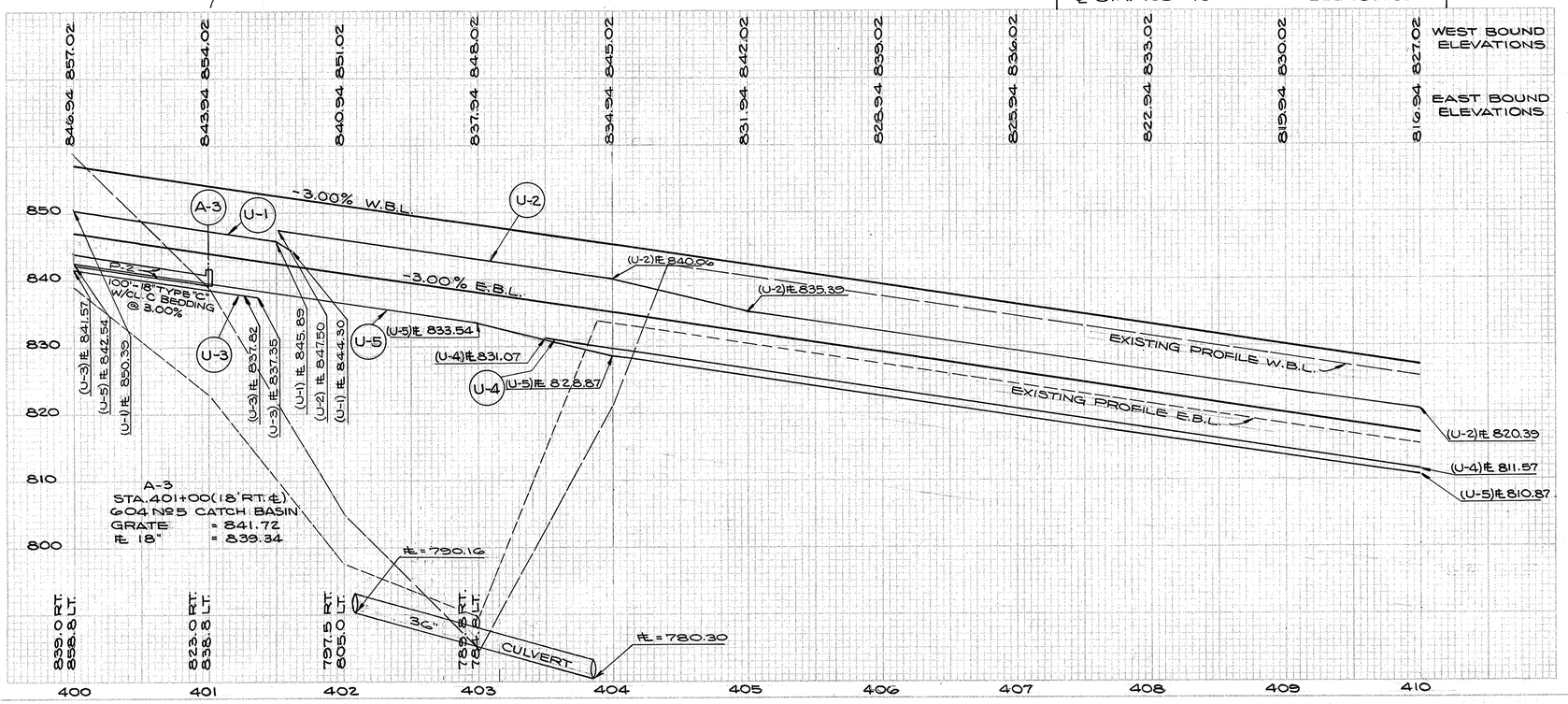


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	604 REF. MONUMT. EACH	605 6" UNDERDRAINS LIN. FT.	609 CONDUIT LIN. FT. TYPE B BEDDING. 15"	18"	647 JUTE MATTING SQ. YDS.	604 CATCH BASIN №5 EACH	SEE SHEET NO.
U-1	390+00 - 400+00	LT.		1000					64
U-2	390+00 - 400+00	RT.		1000					64
U-3	390+00 - 400+00	RT.		900	100				
P-1	A-1 ~ A-2	RT.			500		125	1	
P-2	A-2 ~ 400+00	RT.				300	125	1	
A-1	392+00 (18' RT. ℄ I-271)	RT.					48		
A-2	397+00 (18' RT. ℄ I-271)	RT.					1183		
E-1	390+45 - 391+93	RT.					833		
E-2	395+45 - 396+93	RT.							
E-3	399+45 - 400+00	RT.							
E-4	390+00 - 400+00	LT.							
E-5	390+00 - 400+00	RT.							
RM-1	392+69.08	℄	1						
RM-2	397+75.00	℄	1						
TOTALS			2	2900	100	500	300	2	2314

I-271 STA. 390+00 TO STA. 400+00





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 CONDUIT LIN. FT. 6" TYPE C W/C & BEDDING	603 CONDUIT LIN. FT. 12" TYPE C W/C & BEDDING (In 706.02 CL. "A")	603 CONDUIT LIN. FT. 18" TYPE C W/C & BEDDING	604 BENDS & BRANCHES EACH 6" Bend	605 6" UNDERDRAINS LIN. FT. DEEP SHALLOW	606 SPECIAL GUARD DRILLED WELL TYPE 4 MATERIAL LIN. FT. STD.	606 SPECIAL GUARD DRILLED WELL TYPE 4 MATERIAL EACH STD.	607 RIPRAP CLASS C CONCRETE BLOCK MASONRY PROT. CU. YDS.	607 RIPRAP CLASS C DUMPED MASONRY PROT. CU. YDS.	607 RIPRAP CLASS C MATTING SQ. YDS.	SEE SHEET NO.
U-1	400+00 - 401+42	LT.				1	165						
U-2	401+52 - 410+00	LT.					848						
U-3	400+00 - 401+38	RT.				1	140						
U-4	403+50 - 410+00	RT.					650						
U-5	400+00 - 410+00	RT.					600	400					
P-2	400+00 - A-3	RT.											
P-3	A-3 - H-1	LT.											
A-3	401+00 (18' RT. ℄ I-271)	RT.							1				
H-1	401+00 (127' LT. ℄ I-271)												
E-1	400+00 - 400+93	RT.	10										65 191
E-2	400+98 - 404+00	LT.											
E-3	400+00 - 401+50	LT.	10										
E-4	400+00 - 401+25	RT.											
E-5	401+25 - 401+95	RT.											
E-6	402+00 - 403+50	RT.											
R-1	400+50 - 405+00	LT.			450								
R-2	401+00 - 404+00	RT.			300								
DW-1	402+00	LT.				1							
TOTALS			20	145	750	1	2403	400	1	0.30	644.2	373	

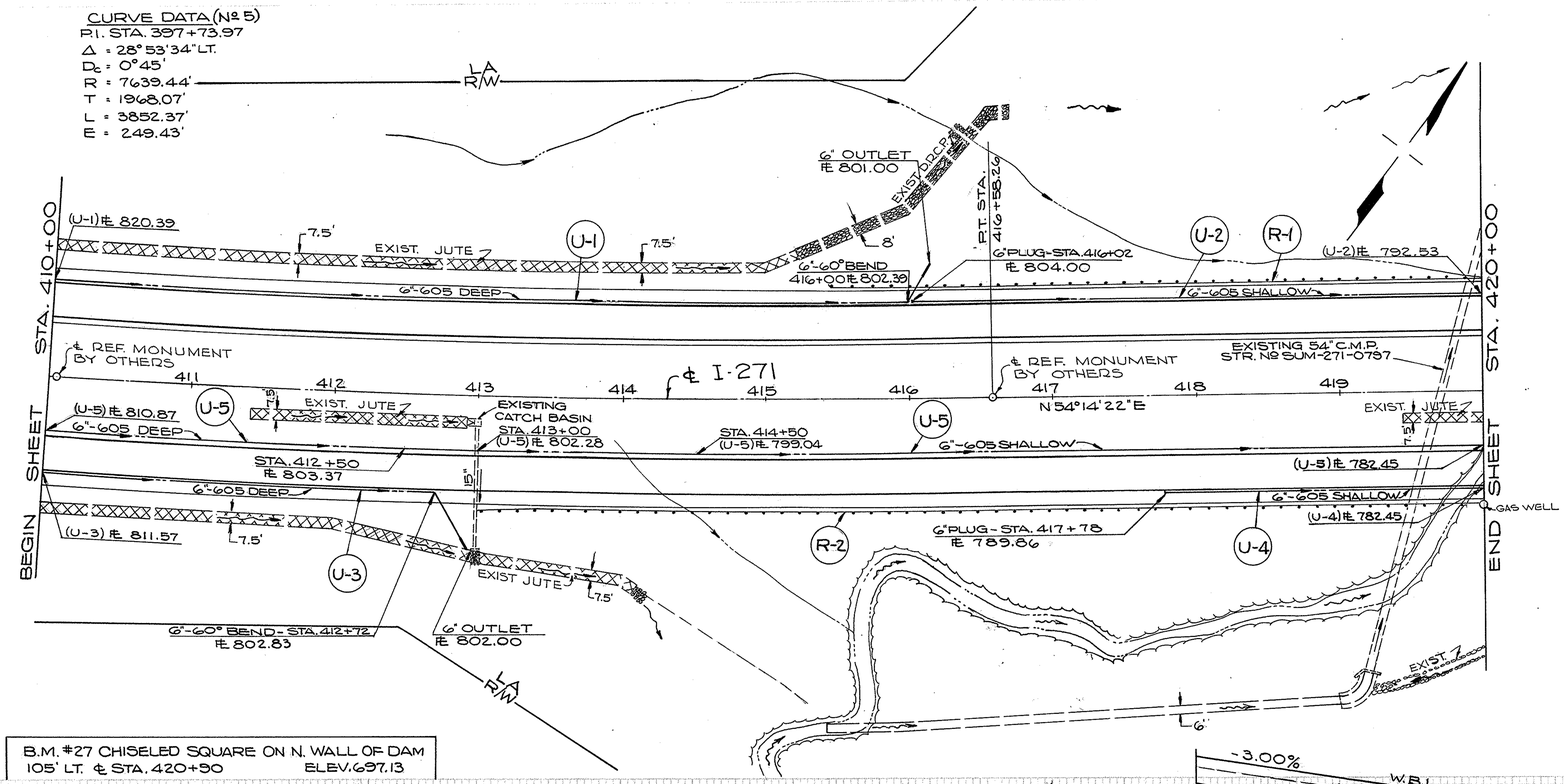
I-271 STA. 400+00 TO STA. 410+00

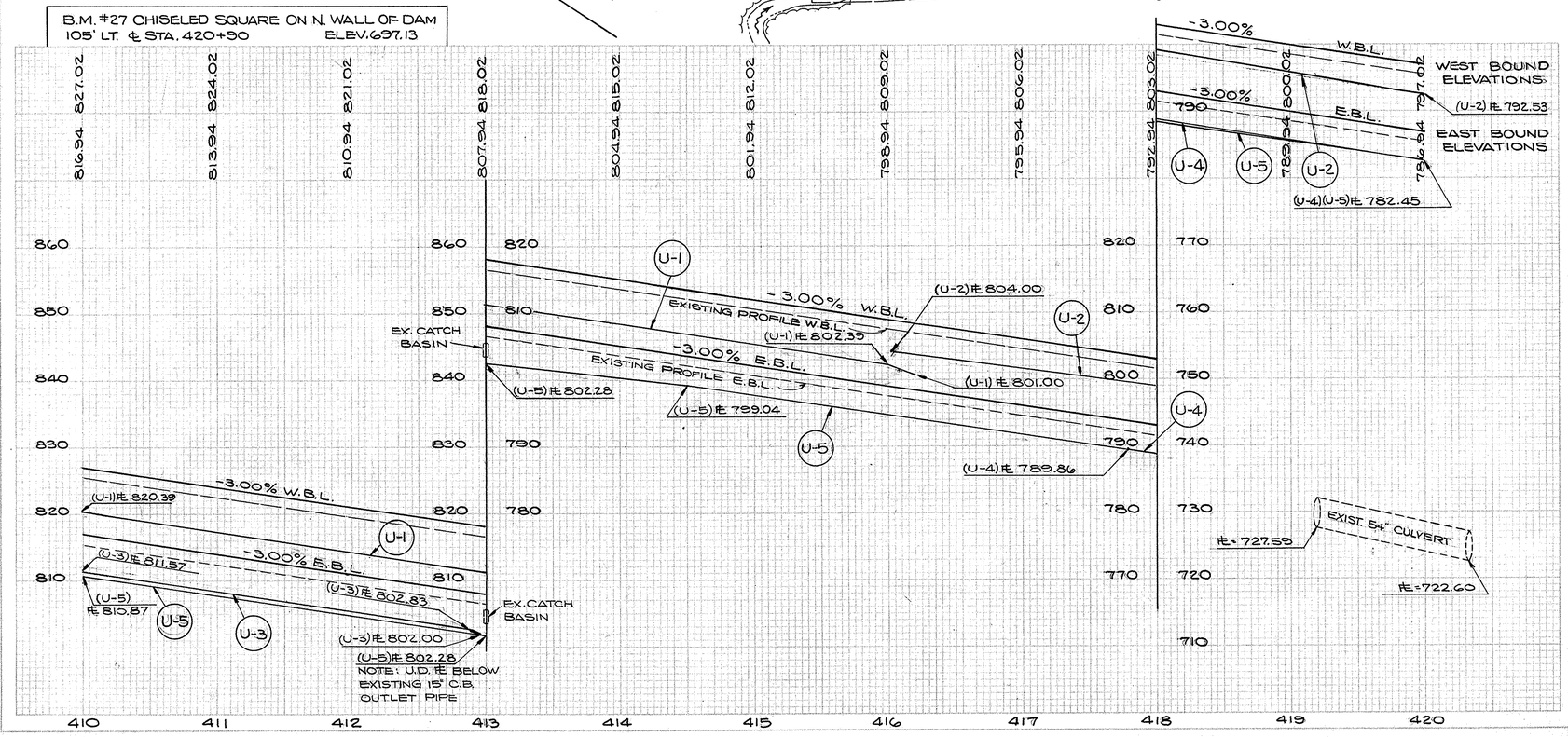
FED. HIS. DIVISION	STATE	PROJECT	
2	OHIO		

66
510

SUM - 271 - 2.98

CURVE DATA (№ 5)
P.I. STA. 397+73.97
Δ = 28°53'34" LT.
D_c = 0°45'
R = 7639.44'
T = 1968.07'
L = 3852.37'
E = 249.43'

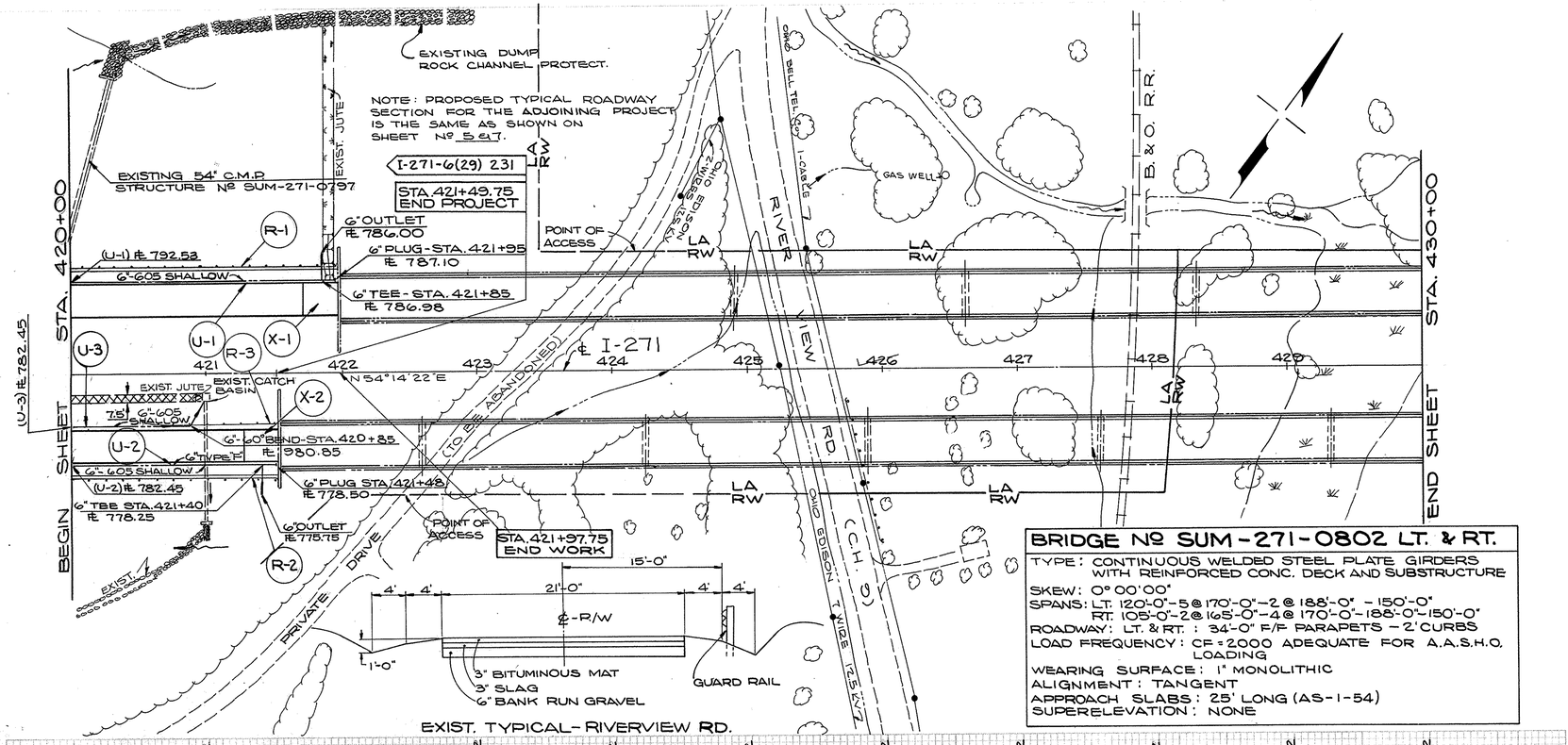




ESTIMATED QUANTITIES

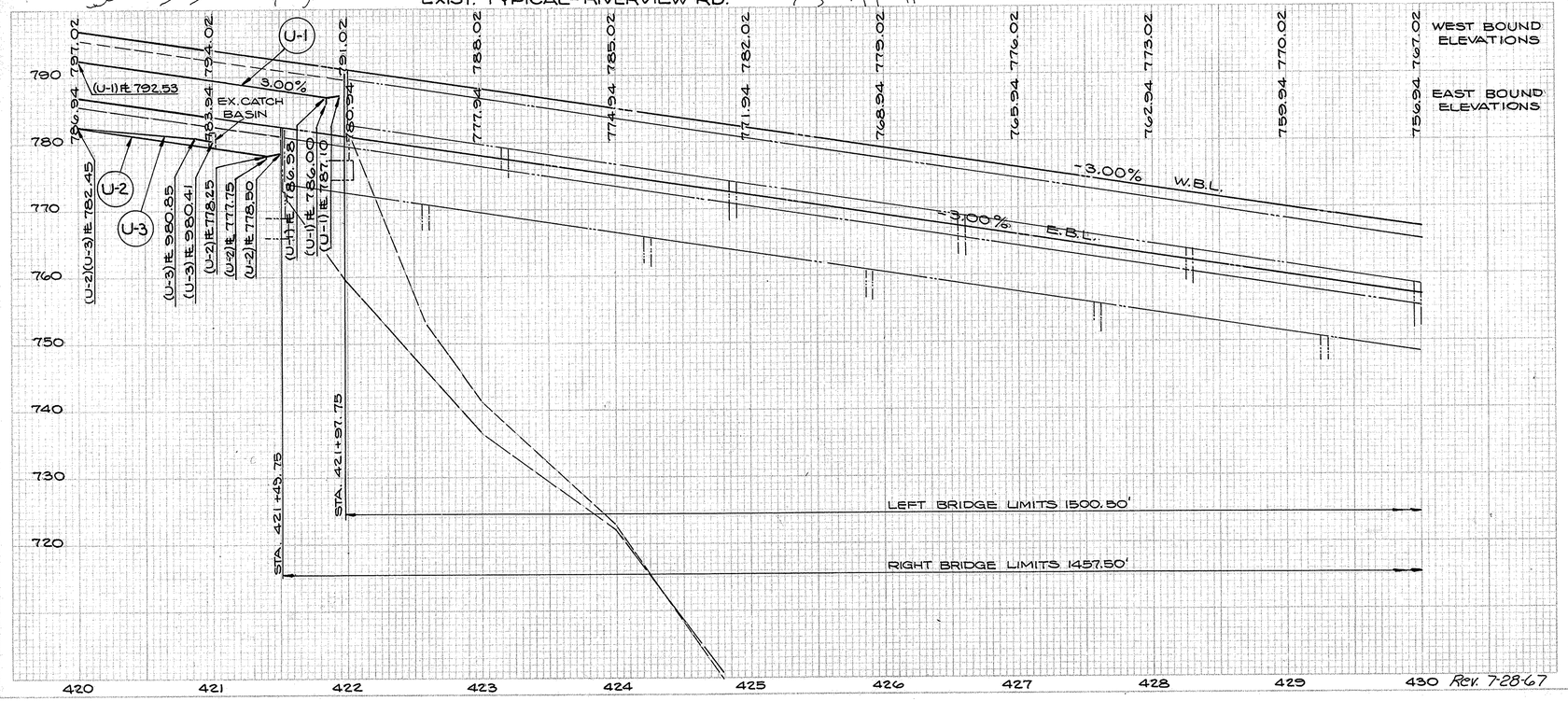
REF. NO.	STATION TO STATION	SIDE	6"UNDERDRAINS LIN. FT. DEEP	6"UNDERDRAINS LIN. FT. SHALLOW	6 BENDS & BRANCHES EACH 60° BEND	605 CONDUIT LIN. FT. TYPE F 6"	605 CONDUIT LIN. FT. TYPE F 10"	605 CONDUIT LIN. FT. TYPE F 20"	606 GUARD RAIL-4 LIN. FT. STD.
U-1	410+00 - 416+16	LT.	620	998	1				
U-2	416+02 - 420+00	LT.		309	1				
U-3	410+00 - 412+91	RT.		222					
U-4	417+78 - 420+00	RT.		300	700				
U-5	410+00 - 420+00	RT.							
R-1	415+50 - 420+00	LT.							455
R-2	413+00 - 420+00	RT.							700
TOTALS			620	1229	2	1320			1155

I-271 STA. 410+00 TO STA. 420+00



BRIDGE Nº SUM-271-0802 LT. & RT.

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONC. DECK AND SUBSTRUCTURE
SKEW: 0° 00' 00"
SPANS: LT. 120'-0"-5@170'-0"-2@188'-0" - 150'-0"
RT. 105'-0"-2@165'-0"-4@170'-0"-188'-0"-150'-0"
ROADWAY: LT. & RT. : 34'-0" F/F PARAPETS - 2' CURBS
LOAD FREQUENCY: CF = 2000 ADEQUATE FOR A.A.S.H.O. LOADING
WEARING SURFACE: 1" MONOLITHIC
ALIGNMENT: TANGENT
APPROACH SLABS: 25' LONG (AS-1-54)
SUPERELEVATION: NONE



Rev. 7-28-67

ESTIMATED QUANTITIES

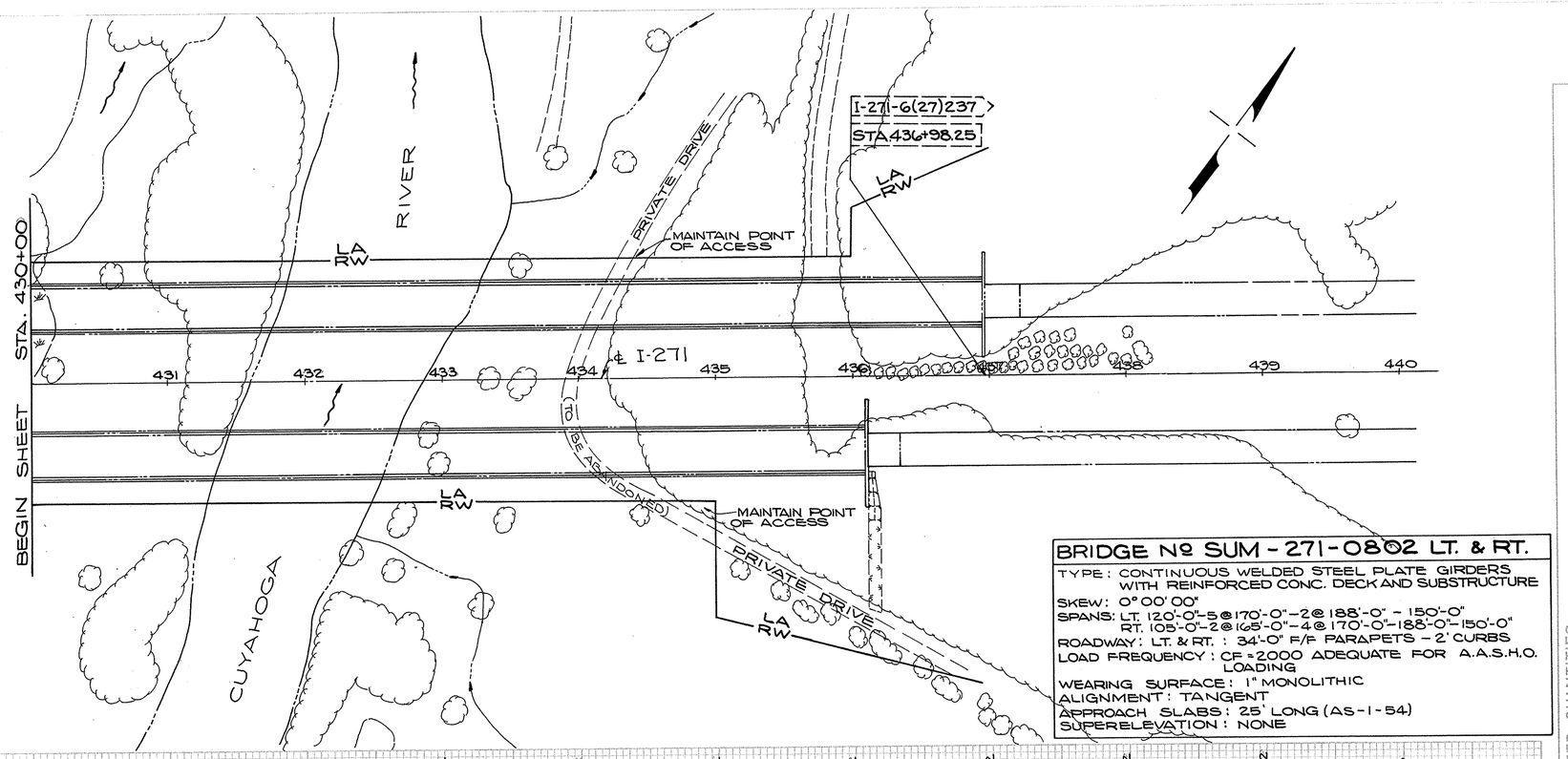
REF. NO.	STATION TO STATION	SIDE	606 GUARD RAIL TYPE 4 LIN. FT. STD.	G.I.L. REINF. CONC. APPRO. SQ. YD	603 CONDUIT - LIN. FT. TYPE F	603 CONDUIT - LIN. FT. 2" UNDER DRAINS LIN. FT.	603 BENDS & BRANCHES EACH 2" SWU	603 BENDS & BRANCHES EACH 4" SWU	603 BENDS & BRANCHES EACH 6" BEND TEE
U-1	420+00 - 421+95	LT.				205			1
U-2	420+00 - 421+50	RT.				152			1
U-3	420+00 - 421+00	RT.				110			1
X-1	421+97.75			66.7					
X-2	421+51.25			66.7					
R-1	420+00 - 421+95	LT.	195						
R-2	420+00 - 421+50	RT.	150						
R-3	420+50 - 421+50	RT.	100						
TOTALS			345	133	467	467	1	2	30

I-271 STA. 420+00 TO STA. 430+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

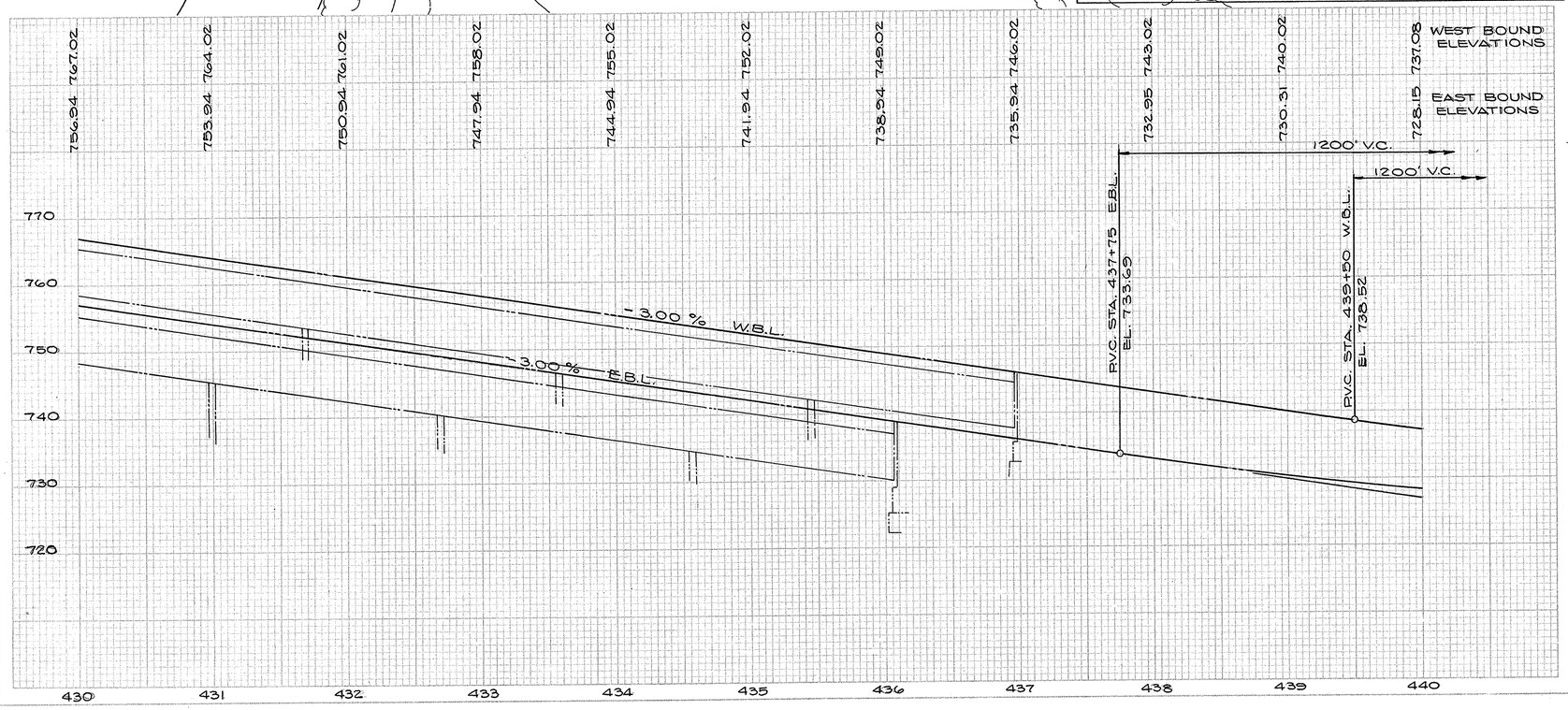
68
510

SUM - 271 - 2.98



BRIDGE Nº SUM - 271 - 0802 LT. & RT.

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONC. DECK AND SUBSTRUCTURE
SKEW: 0° 00' 00"
SPANS: LT. 120'-0"-5@170'-0"-2@188'-0", - 150'-0"
RT. 105'-0"-2@165'-0"-4@170'-0"-188'-0"-150'-0"
ROADWAY: LT. & RT. : 34'-0" F/F PARAPETS - 2' CURBS
LOAD FREQUENCY: CF = 2000 ADEQUATE FOR A.A.S.H.O. LOADING
WEARING SURFACE: 1" MONOLITHIC
ALIGNMENT: TANGENT
APPROACH SLABS: 25' LONG (AS-1-54)
SUPERELEVATION: NONE



ESTIMATED QUANTITIES

SEE SHEET NO.

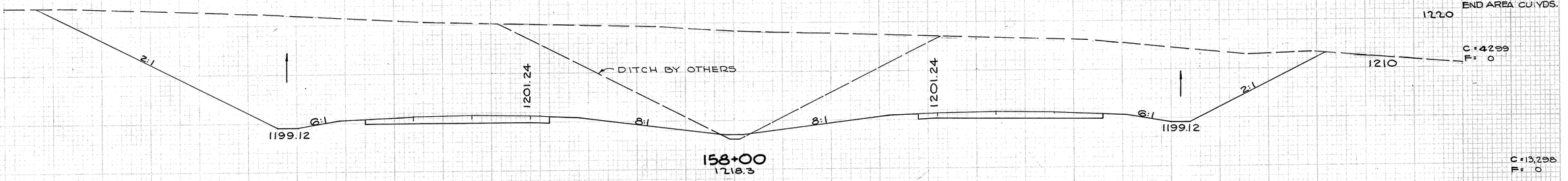
REF. NO.	STATION TO STATION	SIDE

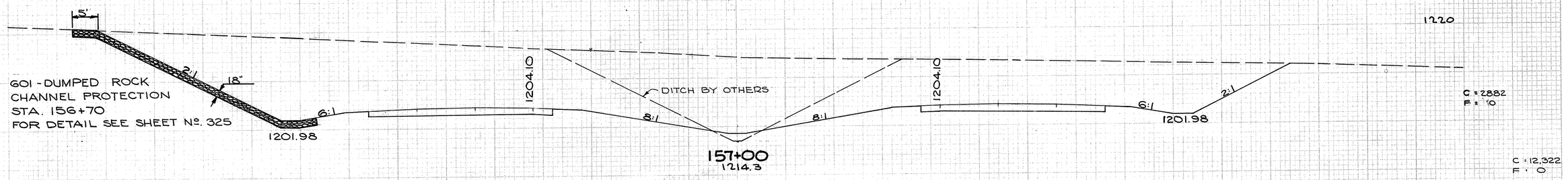
TOTALS

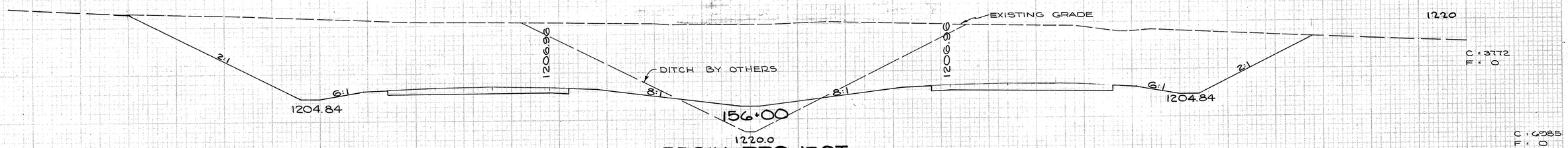
I-271 STA. 430+00 TO STA. 440+00

SUM· 271·2.98

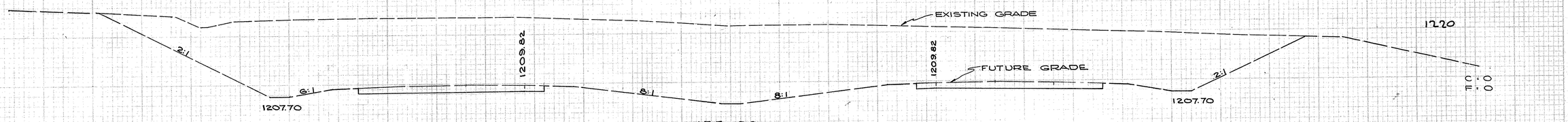
END AREA CU.YDS.



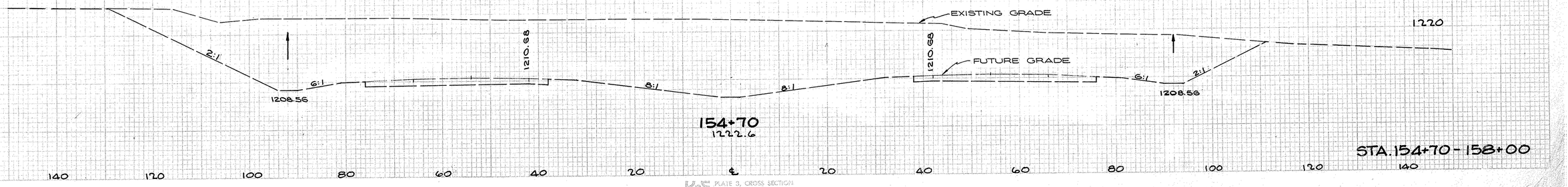




BEGIN PROJECT
BEGIN PAVEMENT



BEGIN WORK
BEGIN EARTHWORK



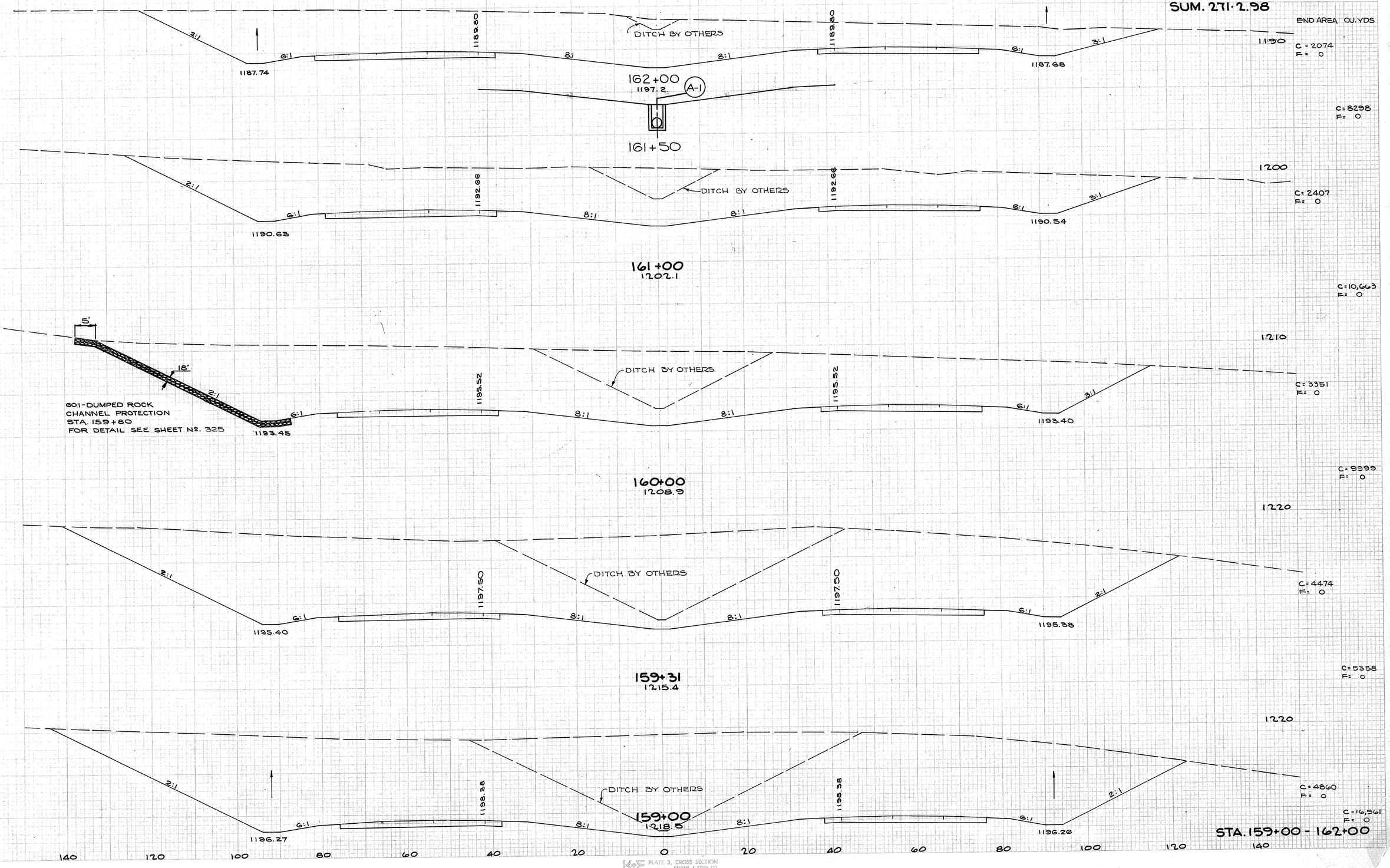
STA. 154+70 - 158+00

K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

70
510

SUM. 271·2.98

END AREA CU.YDS



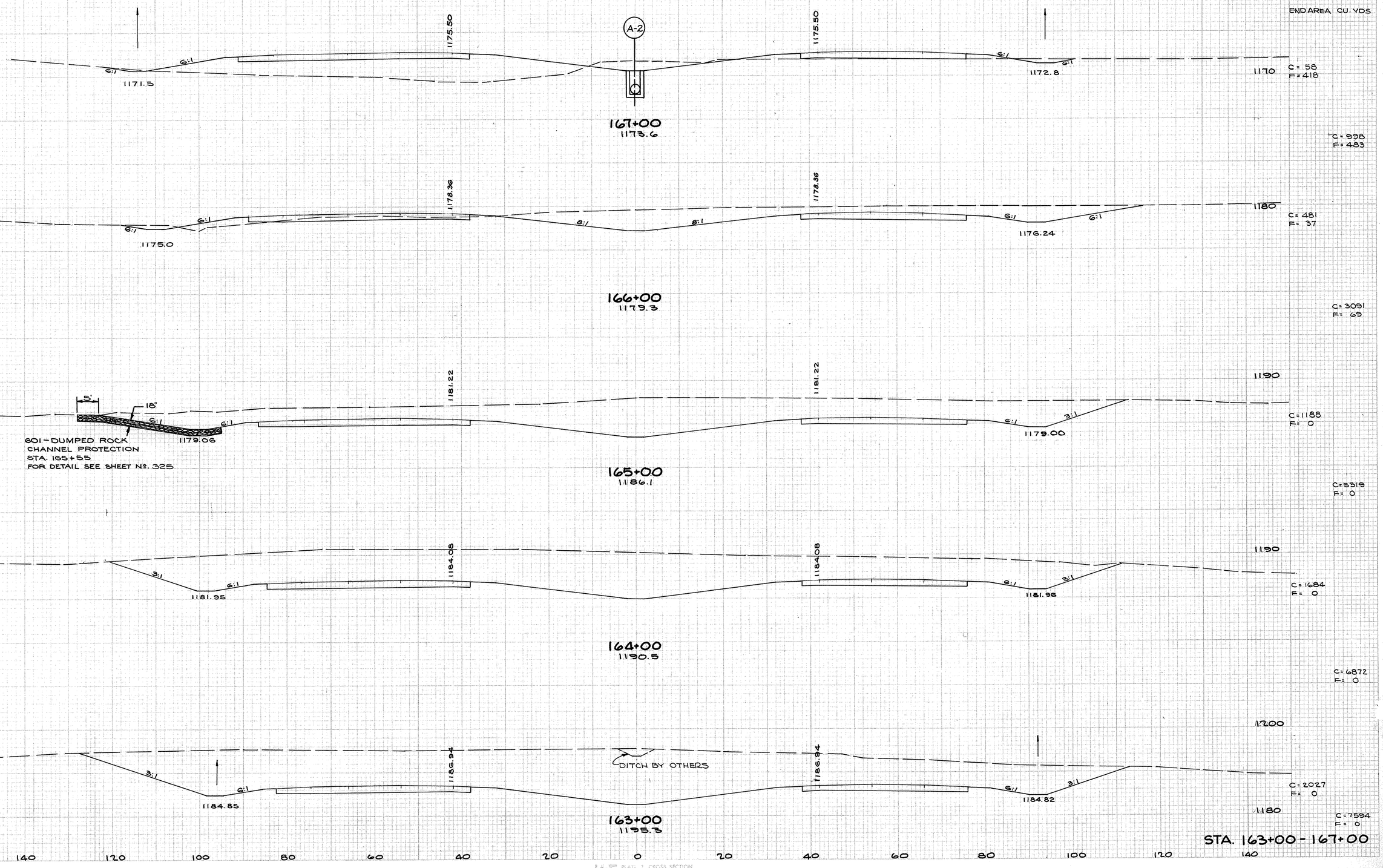
FINAL SURVEY
SURVEYED BY
DRAWN BY
NOTE BOOK
PAGES
LEVEL CHECKED BY
DATE
BY

ORIGINAL SURVEY
SURVEYED BY
DRAWN BY
NOTE BOOK
PAGES
LEVEL CHECKED BY
DATE
BY

SUM- 271-2.98

END AREA CU. YDS

71
510



1190
C=1188
F= 0

C=5319
F= 0

1190
C=1684
F= 0

C=6872
F= 0

1200
C=2027
F= 0

1180
C=7594
F= 0

C=998
F=483

1180
C=481
F= 37

C=3091
F= 69

STA. 163+00 - 167+00

ORIGINAL SURVEY
SUPERELEVATION DIAGRAM
NOTE BOOK
AREAS
CROSS SECTIONS
NO.
BY
DATE

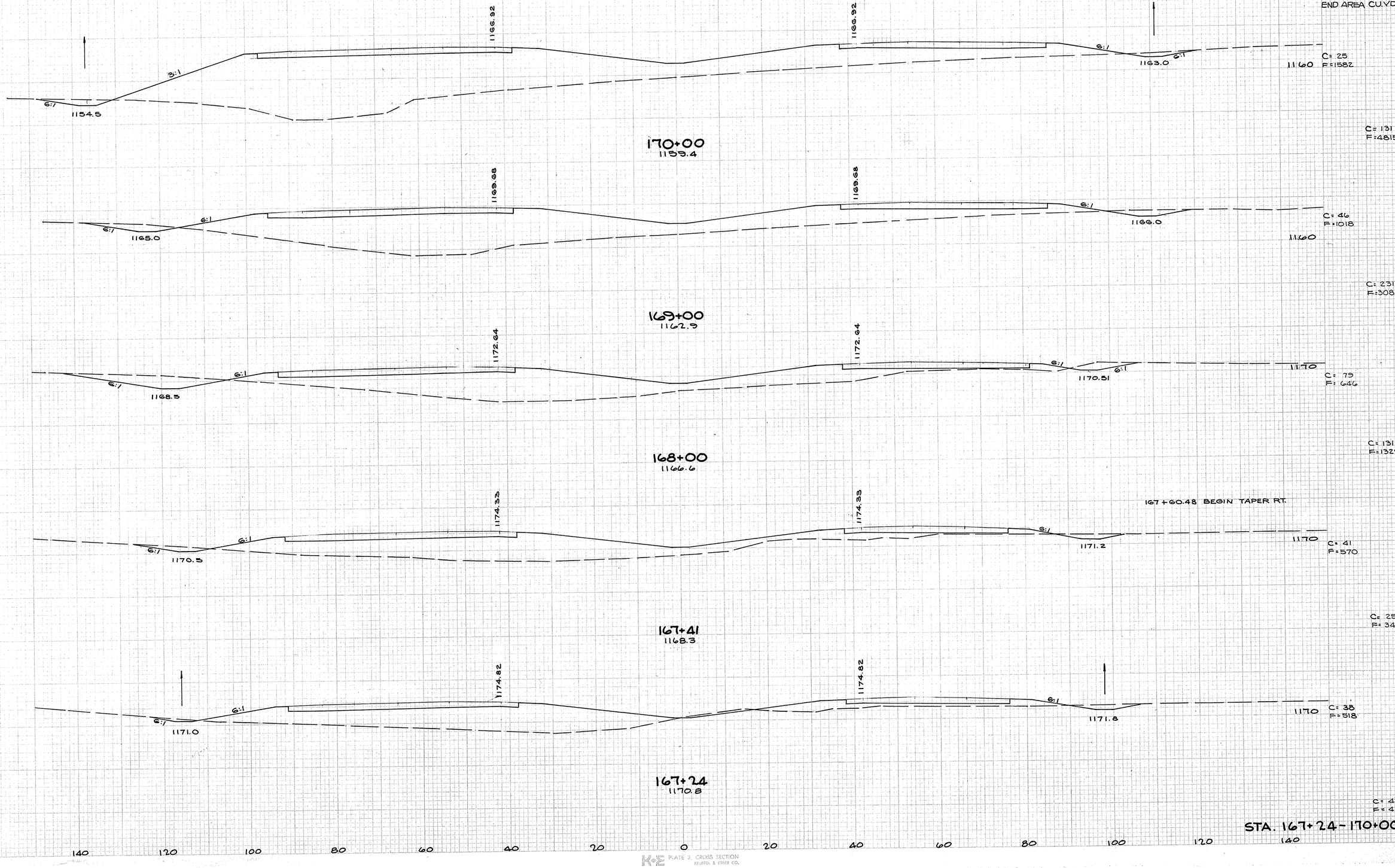
FINAL SURVEY
SUPERELEVATION DIAGRAM
NOTE BOOK
AREAS
CROSS SECTIONS
NO.
BY
DATE

K+E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

72
510

SUM·271·2.98

END AREA CU.YDS.



STA. 167+24 - 170+00

PLATE 3. CROSS SECTION
KEUFFEL & ESSER CO.

ORIGINAL SURVEY
SURVEYED
PLOTTED
NOTE BOOK
AREAS CHECKED
NO.
DATE
BY

FINAL SURVEY
SURVEYED
PLOTTED
NOTE BOOK
AREAS CHECKED
NO.
DATE
BY

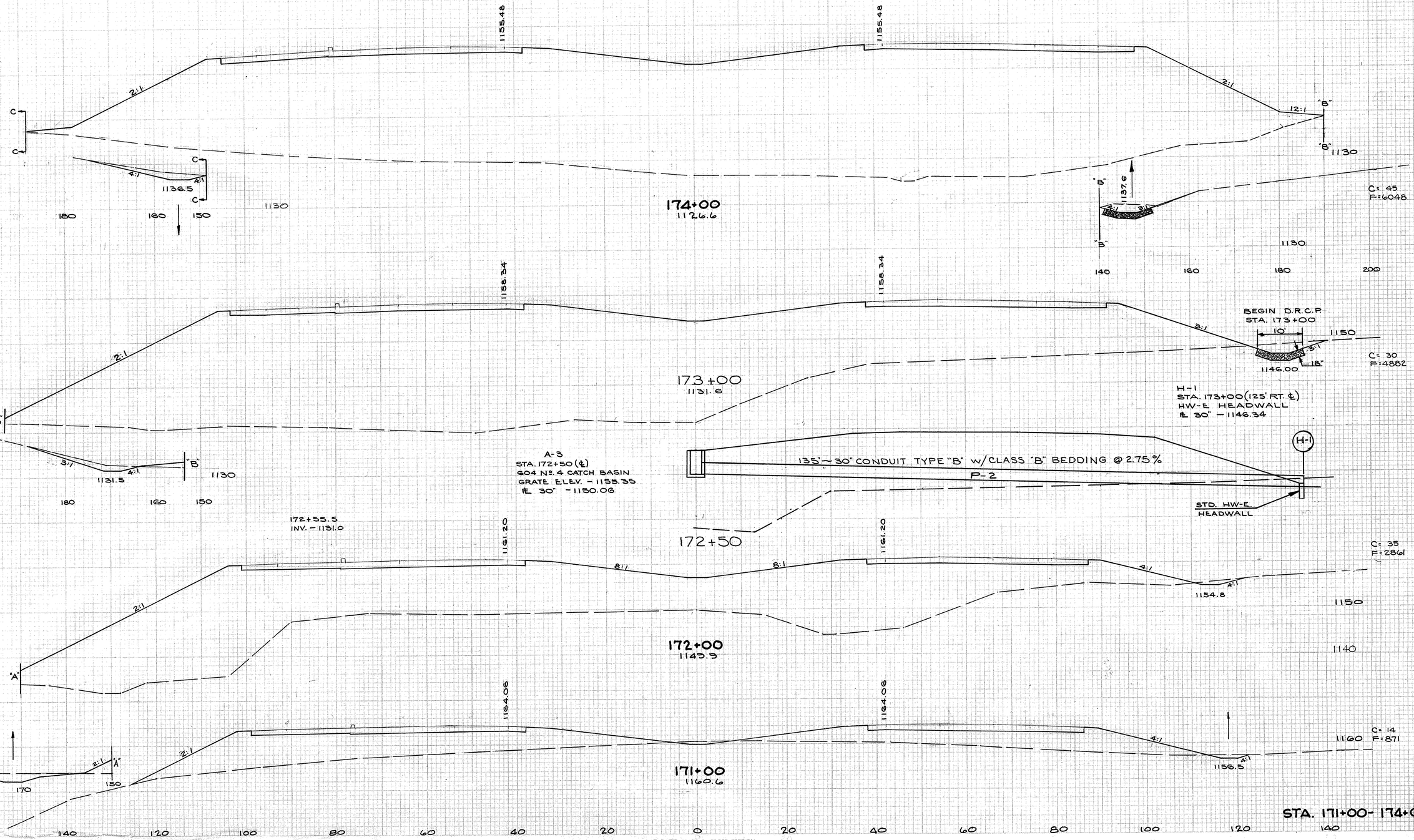
73
510

SUM · 271 · 2.98

END AREA CU.YDS.

FINAL SURVEY — DATE — BY — SURVEYED — PLOTTED — CHECKED — NOTE BOOK — SHEET — OF — AREAS CHECKED

ORIGINAL SURVEY — SURVEYED — PLOTTED — CHECKED — NOTE BOOK — SHEET — OF — AREAS CHECKED



STA. 171+00 - 174+00

74
510

SUM· 271·2.98

END AREA C.U. YDS

SEE RAMP "A"
STA. 176+91

6:1

1146.90

1146.90

1145.05

VARIES

SEE RAMP "B"
STA. 176+97

C= 0
F=3250

1130

177+00
1132.3

1149.76

1149.76

1149.83

VARIES

1145.59

SEE RAMP "A"
STA. 175+92

C= 0
F=11,915

C= 0
F=2684

INCLUDES RAMP "A" STA. 175+92 {C= 865
INCLUDES RAMP "B" STA. 175+98 {F=4820

1130

SEE RAMP "B"
STA. 175+98

176+00
1134.5

1150.26

1152.62

1152.62

1152.62

6:1

6:1

1147.00

174+97
RAMP "A"

C= 2078
F=18,152

END D.R.C.P.
STA. 175+00

2:1

2:1

1130

C= 257
F=4982

"B"

"B"

8:1

12:1

12"

2.5' (SEE CULVERT DETAIL SHEET-327)

1121.24

175+00
1131.0

150 160 180 200 220 240

1154.34

1154.34

1153.66

8:1

8:1

C= 419
F=11,911

2:1

2:1

"C"

1140

160 140

"C" 1140

1139.55

1130.50

150

12:1

4:1

18" D.R.C.P.

"A"

1130

"A"

C= 120
F=5738

170 180 200 220

174+40
1128.5

C= 122
F=5730

STA. 174+40-177+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

ORIGINAL SURVEY
SURVEY PLOTTED
PROFILE BOOK
NOTE BOOK
NO. DATE BY

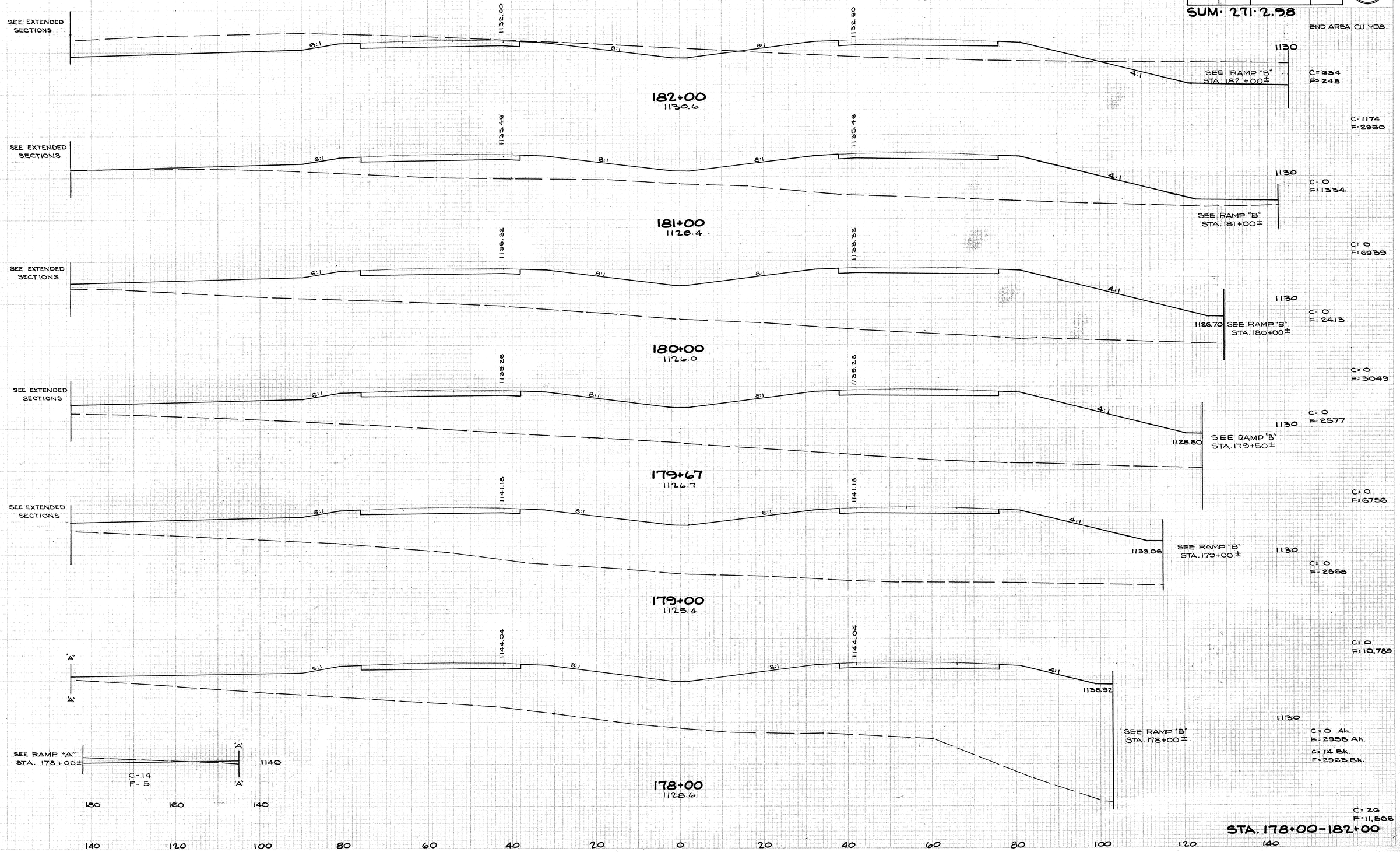
FINAL SURVEY
SURVEY PLOTTED
PROFILE BOOK
NOTE BOOK
NO. DATE BY

K+E PLATE 3, CROSS SECTION
ALBUFEL & ESSER CO.

75-510

SUM· 271·2.98

END AREA CU. YDS.



STA. 178+00-182+00

PLATE 3, CROSS SECTION

KEUFFEL & ESSER CO.

ORIGINAL SURVEY COMPLETED FEBRUARY 1964 NOTE BOOK PEDERSEN 1964 DRAWN CHECKED

FINAL SURVEY COMPLETED PEDERSEN 1964 NOTE BOOK PEDERSEN 1964 DRAWN CHECKED

SUM·271·2.98

76/510

END AREA CU.YDS.

SEE RAMP "D" STA. 185+00±

C
C

6:1 | 8:1 | 6:1 | 6:1 | 8:1 | 4:1

1125.79 | 1123.99 | 1122.74 | 1125.79

1130

SEE RAMP "B" STA. 184+00±

C = 1462
F = 4

SEE RAMP "D" STA. 184+00±

B
B

184+38
1128.2

C = 3105
F = 3

B
B

6:1 | 8:1 VARY | VARY | 8:1 | 4:1

1126.88 | 1125.56 | 1123.18 | 1126.88

1130

C = 2950
F = 0

SEE RAMP "B" STA. 184+00±

SEE RAMP "D" STA. 184+00

A
C-421
A

C = 2179
F = 0

184+00
1133.3

A
A

1127.43

6:1 | 8:1 | 8:1 | 4:1

1123.26 | 1127.43

1130

C = 3243 Ah.
F = 0 Ah.
C = 2822 Bk.
F = 0 Bk.

SEE RAMP "B" STA. 183+00±

183+81
1133.0

C = 7499
F = 0

SEE EXTENDED SECTIONS

1129.74 | 1129.74

6:1 | 8:1 | 8:1 | 4:1

1130

SEE RAMP "B" STA. 183+00±

C = 2177
F = 0

183+00
1133.3

C = 3370
F = 0

(NO EXT'D. SECTION)
SEE X-SECTION LAYOUT

1131.17 | 1131.17

6:1 | 8:1 | 8:1 | 4:1

1130

SEE RAMP "B" STA. 182+00±

C = 1463
F = 0

182+50
1131.3

C = 1842
F = 230

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STA. 182+50-184+38

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

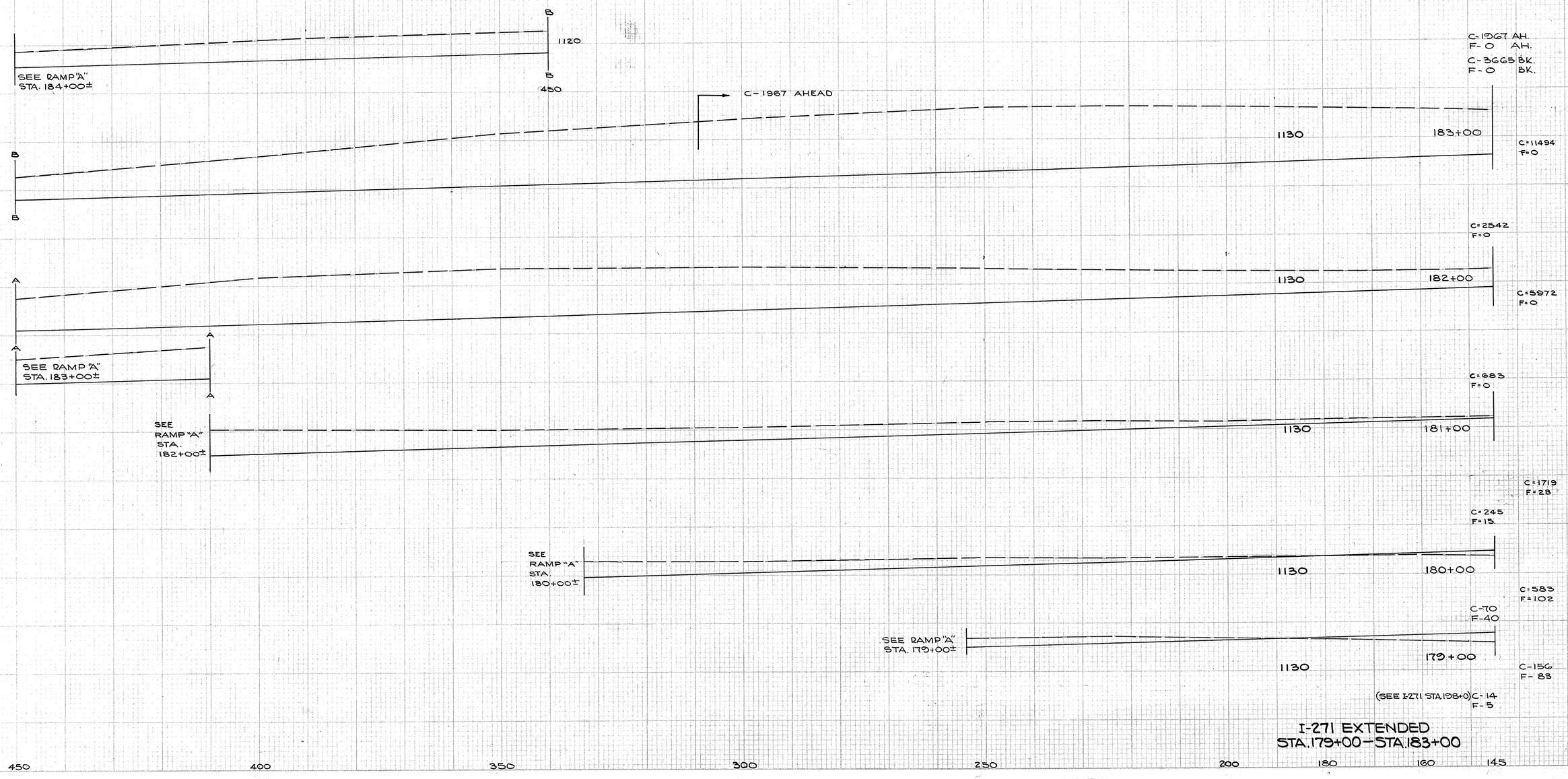
FINAL SURVEY — CENTERLINE PROFILE NOTE BOOK — DATE — BY — REVISIONS (MODS DIRECTED) — NO.

ORIGINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — DATE — BY — NO.

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

77
510

SUM·271·298



I-271 EXTENDED
STA. 179+00 – STA. 183+00

78/510

SUM · 271 · 2.98

END AREA CU.YDS.

SCALE:
VERT. – 1"=10'
HORIZ. – 1"=20'

A-1
STA. 185+00 (20' RT. ℄) I-271
604 No. 8 CATCH BASIN
GRATE = 1122.10
℄ 15" = 1119.95

186'–15" TYPE "C" CONDUIT
W/CLASS "B" BEDDING
@ 4.19 %

A-2
STA. 186+85 (℄) I-271
604 No. 8 CATCH BASIN
GRATE = 1114.31
℄ 6" = 1112.52
℄ 15" = 1112.16

49'–15" TYPE "C" CONDUIT
W/ CLASS "B" BEDDING
@ 4.19 %

CONCRETE COLLAR TO BE
INCLUDED IN COST OF PIPE

A-3
STA. 916+52 (115' LT. ℄) I-77
604 No. 5 CATCH BASIN
GRATE = 1084.36
℄ 15" = 1081.96
℄ 21" = 1081.71

25° BEND – TYPE "F"
℄ = 1110.10

73'–15" TYPE "F" CONDUIT
@ 41.80 %

25° BEND – TYPE "F"
℄ 1082.11

A-4
STA. 917+40 (117' LT. ℄) I-77
604 No. 5 CATCH BASIN
GRATE = 1083.41
℄ 6" = 1082.28
℄ 21" = 1081.03

SA-1
STA. 917+40 (94' LT. ℄) I-77
TO BE REMOVED
(TO INCLUDE 3'–21" TYPE "B" CONDUIT)

CONC. COLLAR
℄ 21" = 1080.84
(TO BE INCLUDED IN
COST OF BASIN REMOVAL)

7'–15" TYPE "F" CONDUIT
@ 2.14 %

88'–21" TYPE "C" CONDUIT
W/CLASS "B" BEDDING
@ 0.77 %

24'–21" TYPE "B" CONDUIT
W/CLASS "B" BEDDING @ 0.77 %

SEE RAMP "D"
STA. 186+92±

A-5
STA. 187+50 (79.60' LT. ℄) I-271
604 No. 6 CATCH BASIN
GRATE = 1118.00
℄ 12" = 1115.00

SEE I-77
STA. 915+00±

C = 27
F = 2540

H-2
STA. 187+60 (163.50' LT. ℄) I-271
HW-E HEADWALL
℄ 12" = 1094.37

STD. CONC. COLLAR TO BE
INCLUDED IN COST OF PIPE

25° BEND – TYPE "F"
℄ 1114.48

39'–12" TYPE "B" CONDUIT
W/CLASS "B" BEDDING @ 1.50 %

45'–12" TYPE "F-707.01" CONDUIT
W/CLASS "C" BEDDING
@ 50.00 %

9'–12" TYPE "F-707.01" CONDUIT
W/CLASS "C" BEDDING

25° BEND
TYPE "F"
℄ = 1094.46

D.R.C.P.
4'x4'x1.5'

SEE RAMP "D"
STA. 185+96±

SEE RAMP "B"
STA. 185+87

C = 0
F = 2151

C = 28
F = 4865

187+00
1101.4

C = 57
F = 2968

186+44
1107.1

SEE RAMP "D"
STA. 185+96

SEE RAMP "B"
STA. 185+56±

C = 70
F = 1491

C = 881
F = 3437

186+00
1112.4

SEE RAMP "D"
STA 185+00±

SEE RAMP "B"
STA. 185+00±

C = 406
F = 365

185+00
1122.3

C = 2145
F = 424

STA. 185+00 – 187+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

79
510

SUM-271-2.98

END AREA CU. YDS.

1107.99 1106.86 1106.86 1105.73

VARIES 2:1

C = 0
F = 3371
SEE RAMP "C"
STA. 191+34

4:1 4:1

1087.64

1100

1070

191+00

1110.85 1109.72 1109.72 1108.59

C = 0
F = 0

1090

1080

190+00

1113.71 1112.58 1112.58 1111.45

C = 0
F = 0

1100

C = 0
F = 0

1080

189+00

1116.55 1115.44 1115.44 1114.31

SEE RAMP "D"
STA. 187+92

VARIES

SEE RAMP "D"
STA. 168+00

1100

C = 167
F = 355

1090

C = 359
F = 5361

188+00

STA. 188+00-191+00

150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

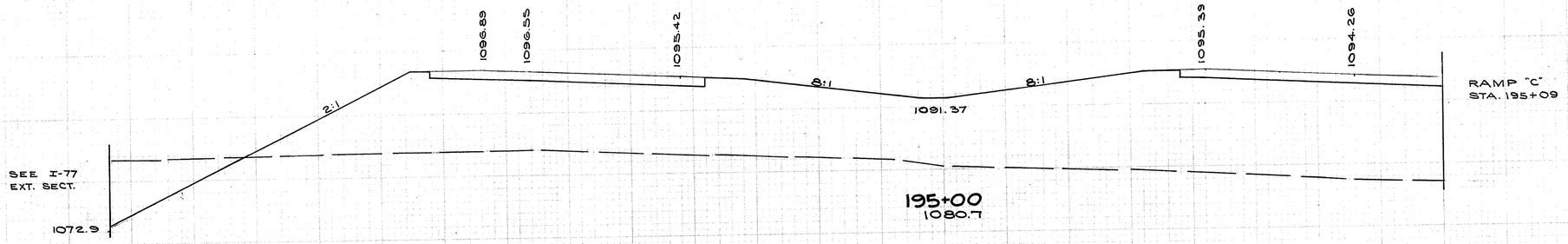
FINAL SURVEY
NOTE BOOK
NO.
DATE
BY
INSPECTED
PLOTTED
TEMPLATE
AREAS CHECKED

ORIGINAL SURVEY
NOTE BOOK
NO.
DATE
BY
SURVEYED
PLOTTED
TEMPLATE
AREAS CHECKED

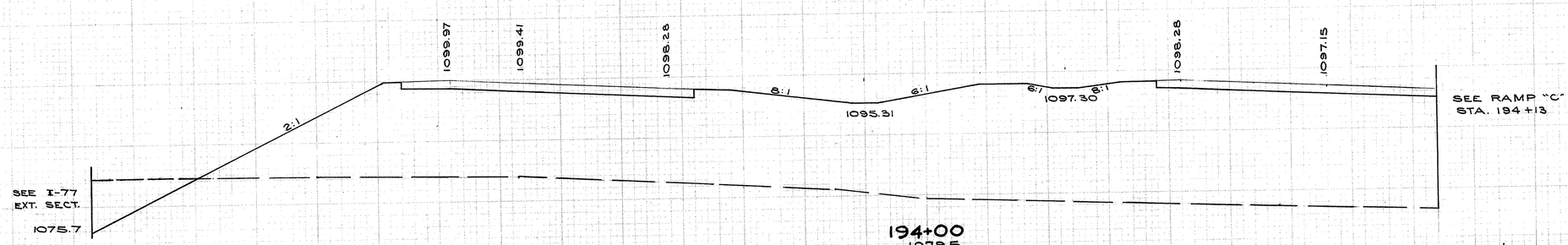
SUM·271-2.98

80/510

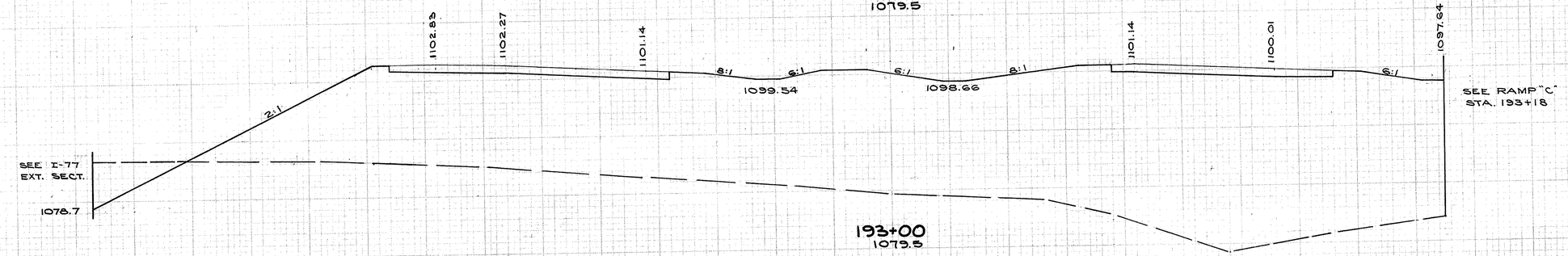
END AREA CU. YDS.



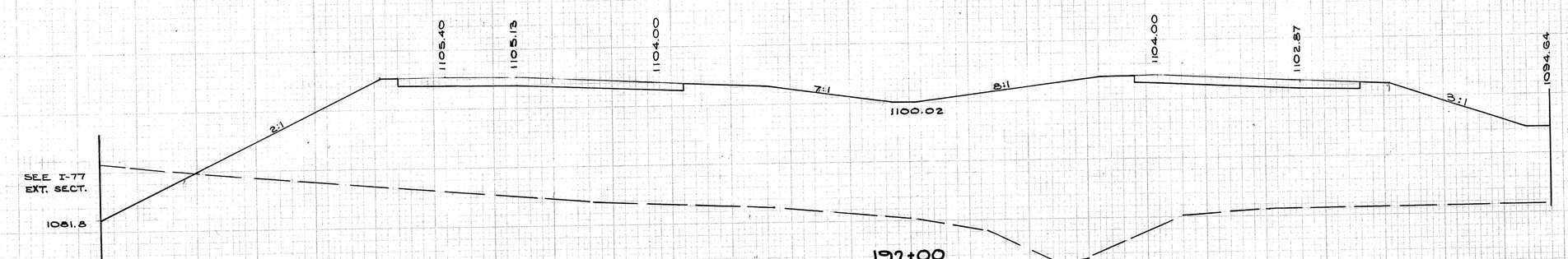
195+00
1080.7



194+00
1079.5



193+00
1079.5



192+00
1080.6

1080
C=144 AH.
F=3125 AH.
C=114 BK
F=2329 BK

1090
C=354
F=10,122

1070 C=77
F=3137

1060
C=261
F=13,750

1070 C=64
F=4288

C=259
F=16,124

1080
C=76
F=4419

1070
C=141
F=14,426

150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

STA. 192+00-195+00

PLATE 3, CROSS SECTION
KEVSTEL & KAISER CO.

FINAL SURVEY
NOTE ERASE DISPOSED

ORIGINAL SURVEY
SURVEY
NOTE BOOK
NO.
ERASE PHOTOED

81
510

SUM· 271·2.98

END AREA CU.YDS.

END BRIDGE - 199+67.21

1085.02 1083.68 1082.09 1080.96 1080.36

C=0
F=0

1080

1070

199+00
1083.6

A-4 STA. 198+00 (3' RT. ℄)
604 No. 8 CATCH BASIN
GR. ELEV. - 1081.97
INV. 6" - 1078.67
INV. 12" - 1078.17

A-6
STA. 198+00 (76.75' RT. ℄) I-271
604 No. 6 CATCH BASIN
GRATE - 1084.24
℄ 6" - 1080.15
℄ 12" - 1079.65

BEGIN BRIDGE - 198+46.19

1087.95 1086.82 1086.35 1085.69 1084.56

A-4 A-6

8:1 8:1 2:1

1082.22

P-5
74'-12" TYPE "B" CONDUIT
W/CLASS "B" BEDDING
@ 2.00%

SEE I-77 EXT'D. SECTIONS

1063.9

2:1

198+00
1081.9

SEE RAMP "B" EXT'D. SECTIONS

1080

1070

C=369
F=514

1090.83 1089.70 1089.23 1089.11 1087.98

8:1 8:1 7:1 6:1 8:1 2:1

1086.10 1088.63

SEE I-77 EXT'D. SECTIONS

1066.9

2:1

197+00
1078.5

SEE RAMP "B" EXT'D. SECTIONS

1080

1070

C=1213
F=4502

C=286
F=1917

1093.69 1092.56 1092.24 1092.34 1091.78 1091.21 1090.97 1090.27

8:1 6:1 6:1 8:1 2:1

1090.46 1090.36

SEE I-77 EXT'D. SECTIONS

1069.9

2:1

196+00
1078.3

1080

1070

C=876
F=8933

C=187
F=2907

SEE RAMP "B" EXT'D. STA. 199+00±

C=613
F=14,170

STA. 196+00-199+00

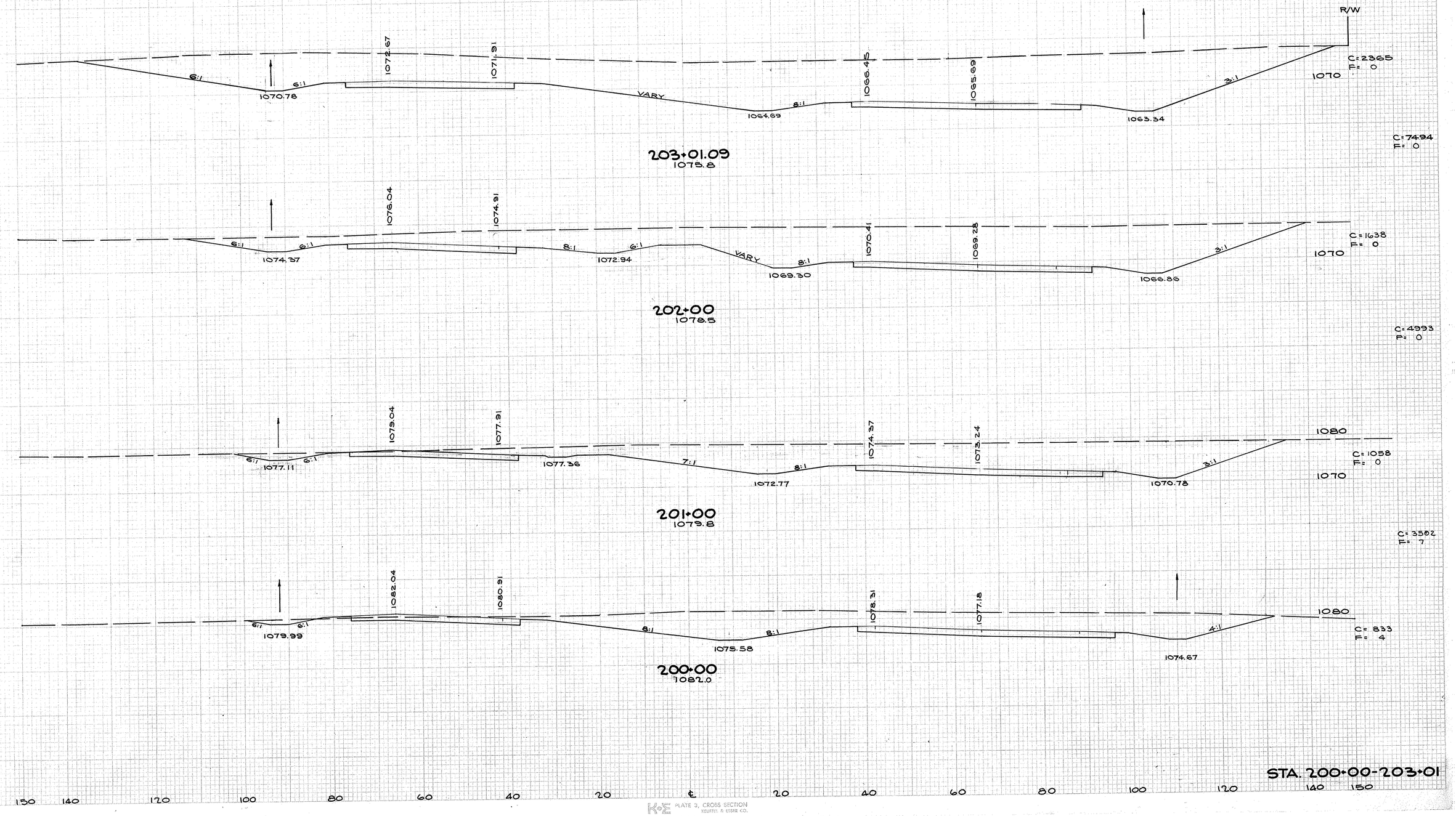
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K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

SUM · 271 · 2.98

82
510

END AREA CU. YDS.



ORIGINAL SURVEY PLOTTED
NOTE BOOK
NO.
SURVEYED
PLOTTED
COMPUTED
NOTE BOOK
PAGE
MAPS
LINEAR CHECKED

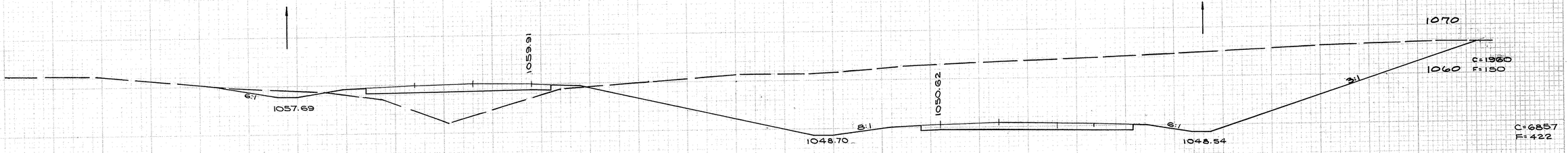
FINAL SURVEY PLOTTED
NOTE BOOK
NO.
SURVEYED
PLOTTED
COMPUTED
NOTE BOOK
PAGE
MAPS
AREAS CHECKED

DATE
BY

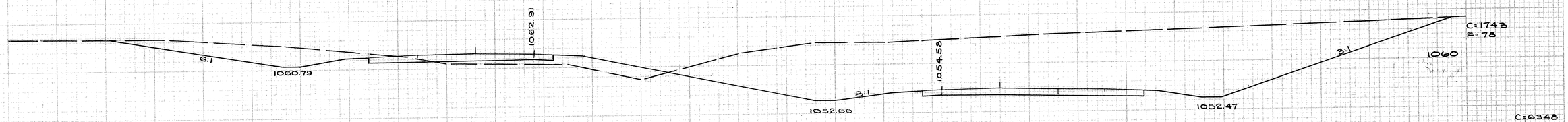
K+E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

SUM· 271·2.58

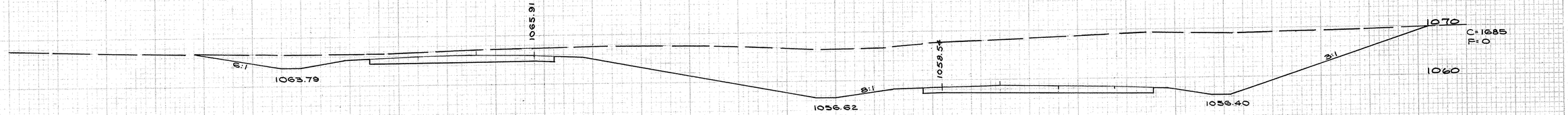
END AREA CU.YDS.



207+00
1061.5



206+00
1062.7



205+00
1067.1



204+00
1072.1

150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

STA. 204+00-207+00

K+E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
NOTE BOOK
JOB NO.
CHECKED
DATE
BY

FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
NOTE BOOK
JOB NO.
CHECKED
DATE
BY

84
510

SUM· 271· 2.98

END AREA CU. YDS.

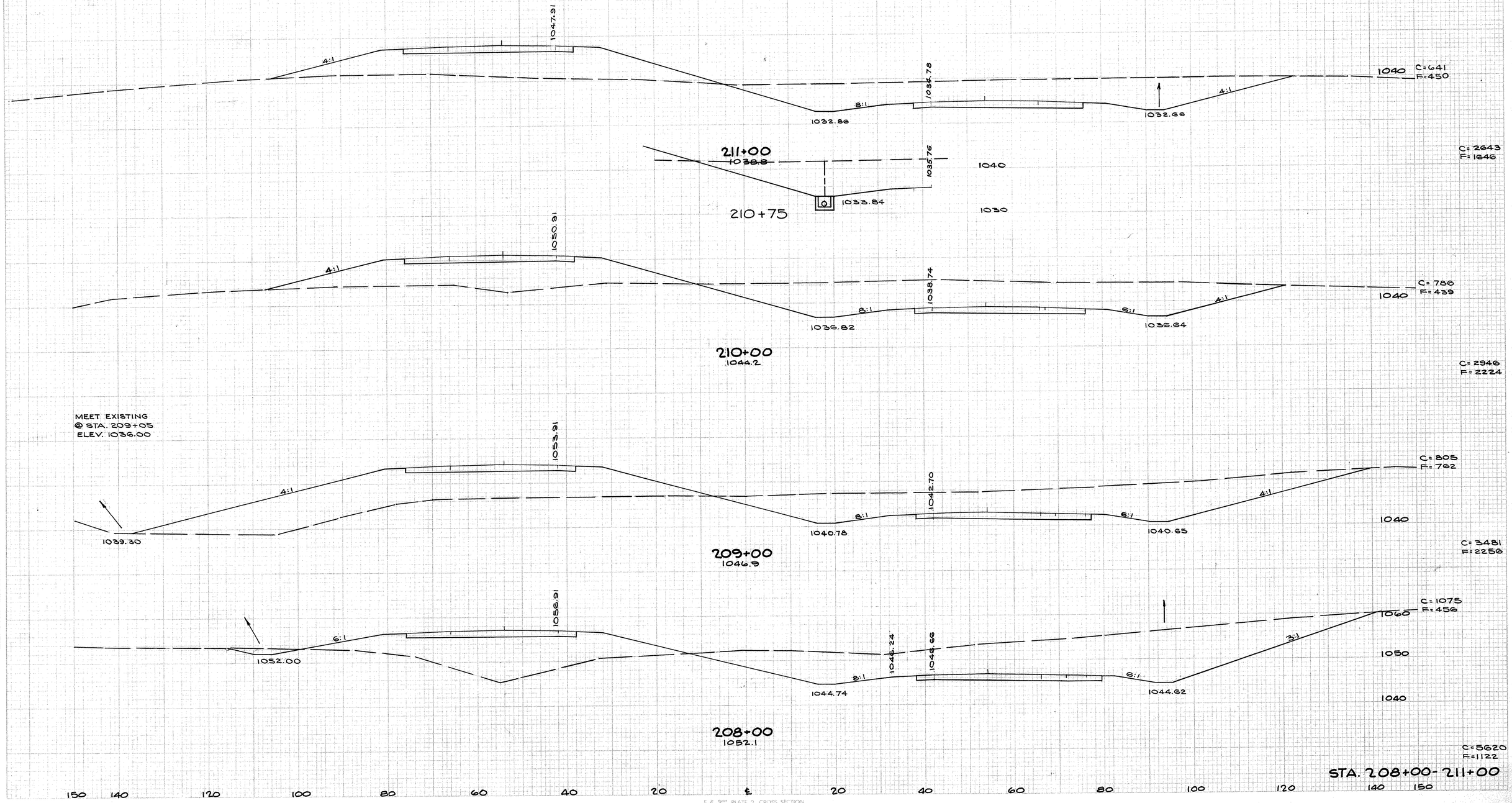


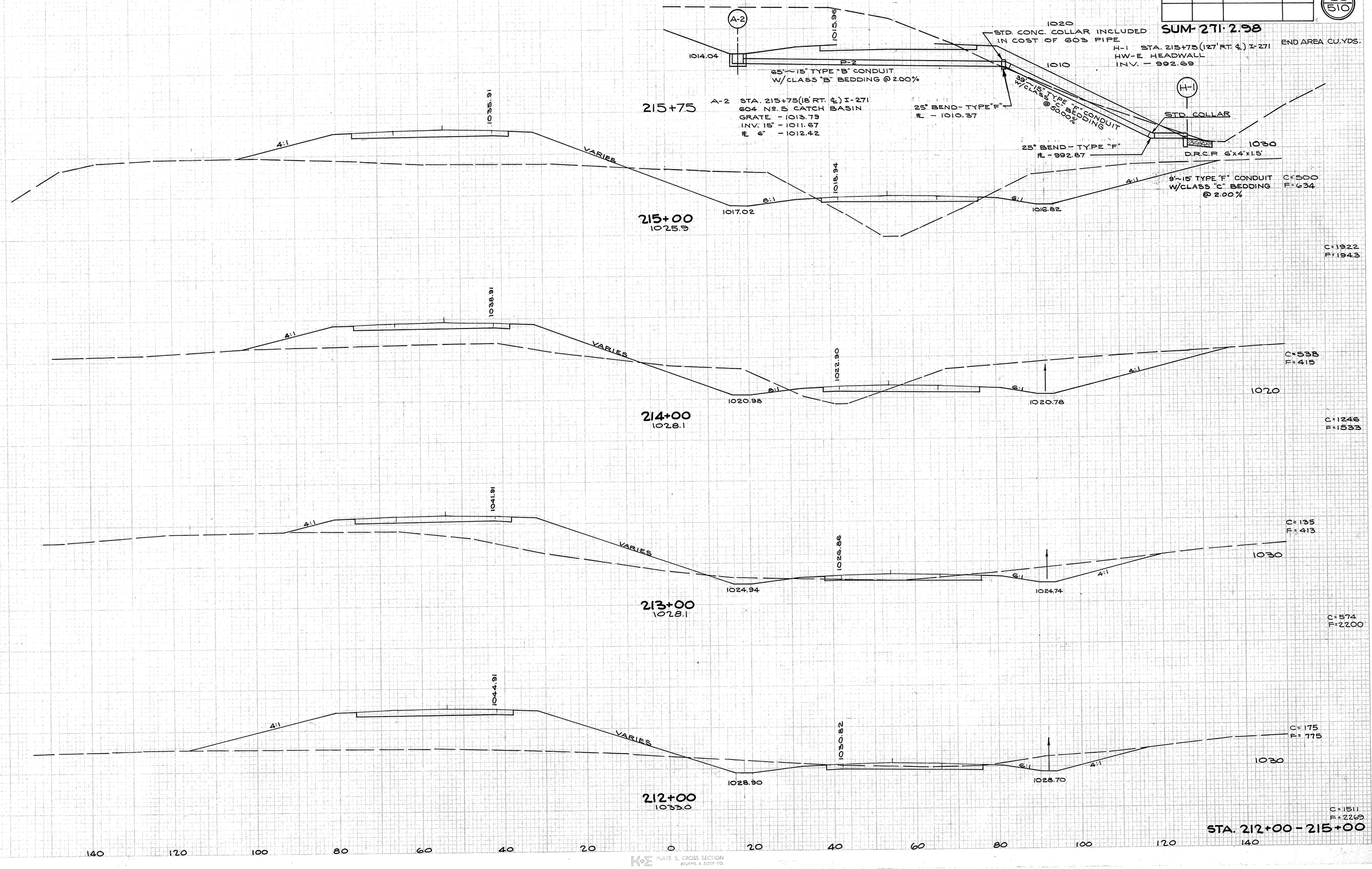
PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

FINAL SURVEY
ORIGINAL SURVEY

85/510

SUM-271-2.98

END AREA CU.YDS.



STA. 212+00 - 215+00

K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

FINAL SURVEY — ORIGINAL SURVEY — DATE — NOTE BOOK — PAGES — NO. — CONTROL — TOPOG. — AREAS PLOTTED — CHECKED

SUM·271·2.98

END AREA CU.YDS.

86
510

"A"

1026.91

2:1

VARIES

1007.06

8:1

1005.14

2:1

990

990.00

2:1

990

200 180 160

C = 14
F = 6796

218+00
985.4

1029.91

3:1

4:1

1019.00

VARIES

1010.60

1011.02

1010.39

8:1

1009.10

2:1

1010

C = 109
F = 15,887

217+00
1013.6

C = 45
F = 1621

1031.71

4:1

6:1

1026.00

VARIES

1013.40

8:1

1011.48

2:1

1030

C = 1776
F = 2123

216+40
1028.1

C = 1553
F = 290

12:1

1032.91

1030

4:1

6:1

1027.50

VARIES

1014.98

8:1

1013.06

2:1

1030

C = 2010
F = 485

1010

C = 1161
F = 365

216+00
1027.3

12:1

1000

C = 3076
F = 1850

STA. 216+00-218+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

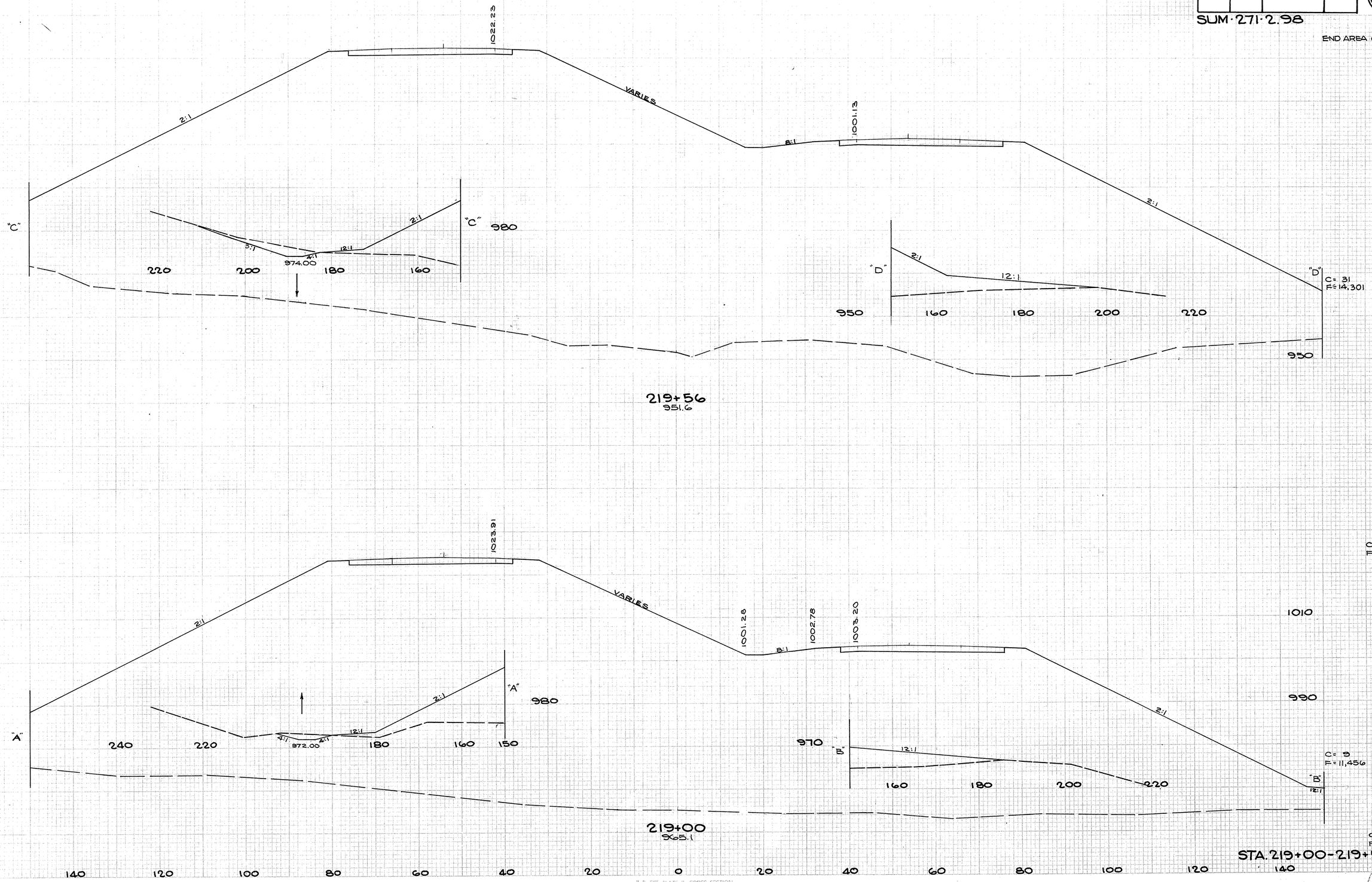
PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

FINAL SURVEY
ORIGINAL SURVEY
DATE
NOTE BOOK

87/510

SUM·271·2.98

END AREA CU.YDS.



STA. 219+00-219+56

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

88
510

SUM·271·2.98

ENDAREA CU.YDS.

221+00
981.9

220+58
973.3

220+00
958.1

STA. 220+00 - 221+00

VARIES

2:1

8:1

4:1

12:1

1001.00

1017.81

999.07

1018.17

997.46

1020.91

999.52

991.00

981.50

BENCH

CULVERT OUTLET

RELOC. CHANNEL

"A"

"B"

"C"

"D"

"E"

C=570
F=6493

C=606
F=11,603

C=209
F=8425

C=236
F=22,869

C=11
F=12,867

C=34
F=22,137

ORIGINAL SURVEY
SURVEYED
PLOTTED
NOTE BOOK
NO.
TEMPLATE
DRAWN
CHECKED
AREAS CHECKED
DATE

FINAL SURVEY
SURVEYED
PLOTTED
NOTE BOOK
NO.
DRAWN
CHECKED
AREAS CHECKED
DATE

89/510

SUM· 271· 2.98

END AREA CU. YDS.

FINAL SURVEY — DATE — BY — SURVEYED — PLOTTED — NOTE BOOK — REMARKS — CHECKED — ORIGINAL SURVEY — DRAWN — TRACED — CHECKED — AREAS CHECKED

1010 — 1011.05 — 2:1 — 993.50 — VARIES — 8:1 — 986.99 — 988.91 — 2:1 — 970

223+28 — 969.8 — 950 "C" — 940 — 160 — 180 — 2:1 — 200 — 220 — RELOC. CHANNEL — 12:1 — 2:1 — 989.75 — 923.60 — 240 — 260 — 280 — 950 — "C" — C=712 F=6576

1011.91 — 2:1 — 994.50 — VARIES — 8:1 — 987.83 — 970 — C=720 F=6888

1014.74 — 1014.93 — 1014.91 — 2:1 — 1000.50 — VARIES — 8:1 — 990.89 — 980

223+00 — 971.3 "B" — 950 — 940 — 930 — 150 — 2:1 — BENCH — 170 — 190 — 210 — RELOC. CHANNEL — 924.16 — 230 — 250 — 270 — "B" — C=677 F=6708

BEGIN D.R.C.P. STA. 222+00

222+00 — 978.5 — "A" — 950 — 940 — 930 — 150 — 2:1 — BENCH — 170 — 190 — 210 — RELOC. CHANNEL — 230 — 250 — 270 — "A" — C=260 F=5645

160 — 980 — C=1735 F=22,876

C=1537 F=22,478

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STA. 222+00 - 223+28

SUM·271·2.98

END AREA CU.YDS.

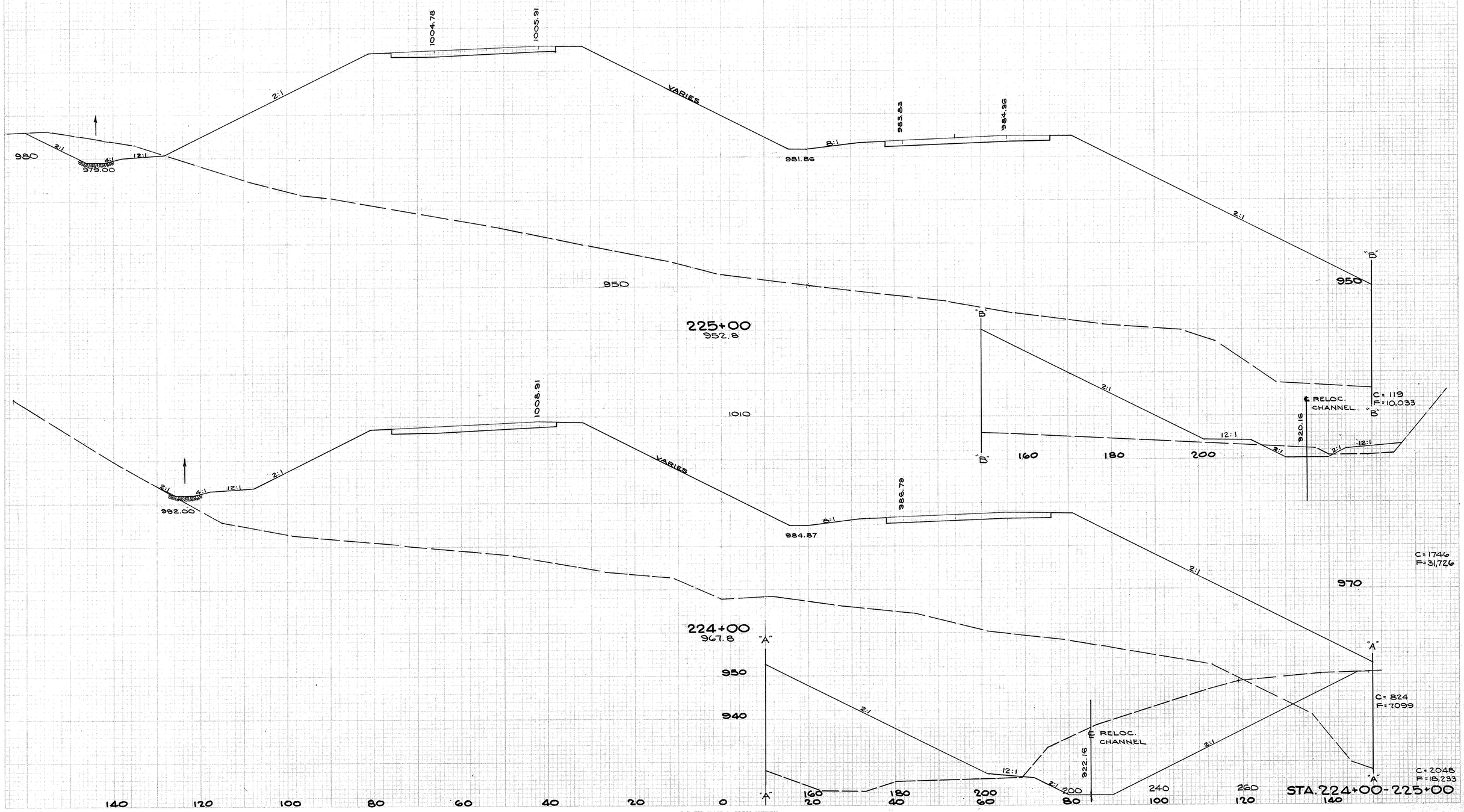


PLATE 3, CROSS SECTION

K&E KEUFFEL & ESSER CO.

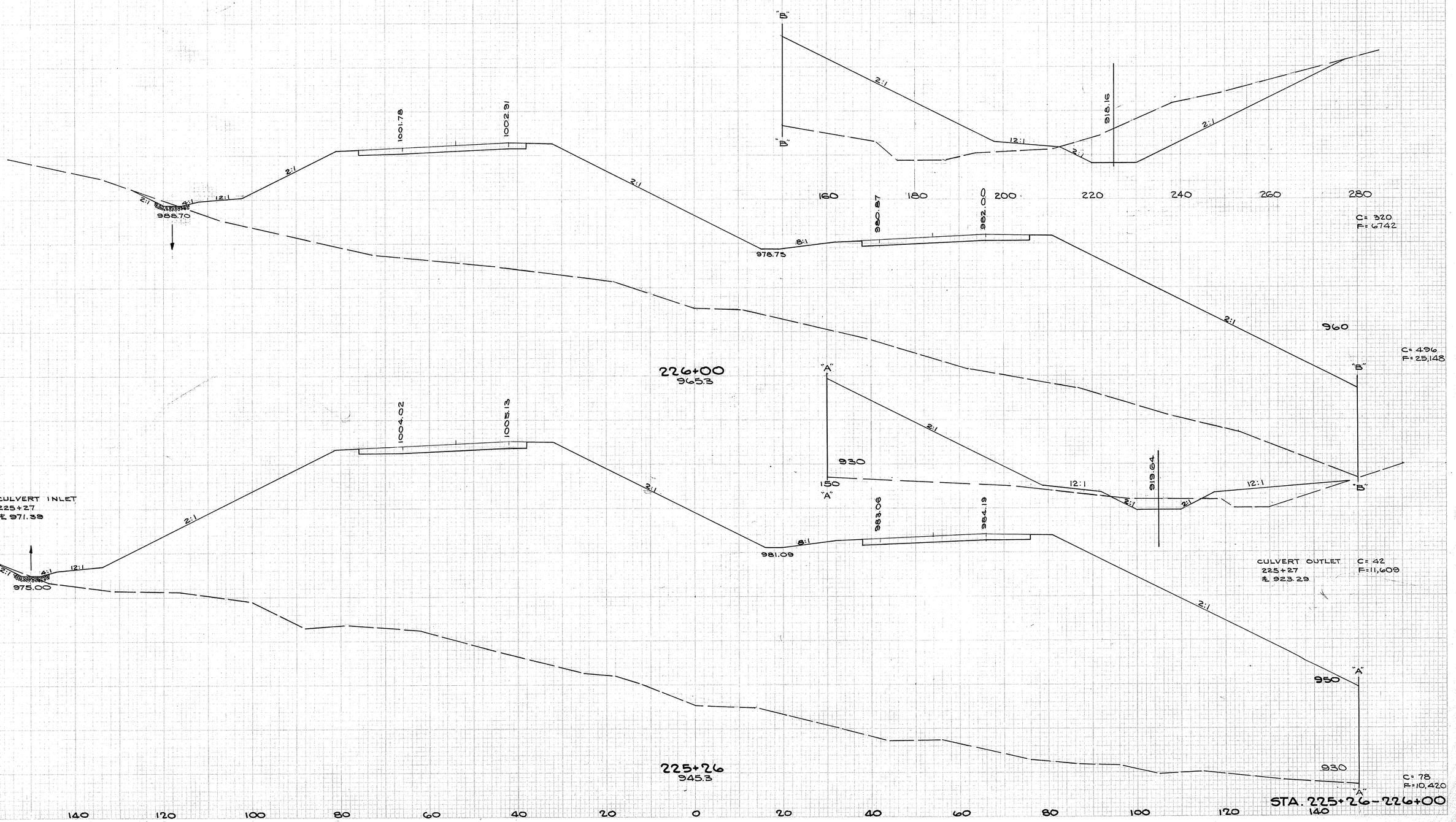
SUM 2712.98

END AREA CU.YDS.

91
510

FINAL SURVEY — APPVD. — DATE — BY — PROJECT — NOTE BOOK — SHEETS — NO. — REVISED — DATE — BY

ORIGINAL SURVEY — SURVEYED — DRAWN — TRACED — NOTE BOOK — SHEETS — NO. — REVISED — DATE — BY



STA. 225+26-226+00

K+E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

32
510

SUM: 271-2.98

END AREA CU. YDS.

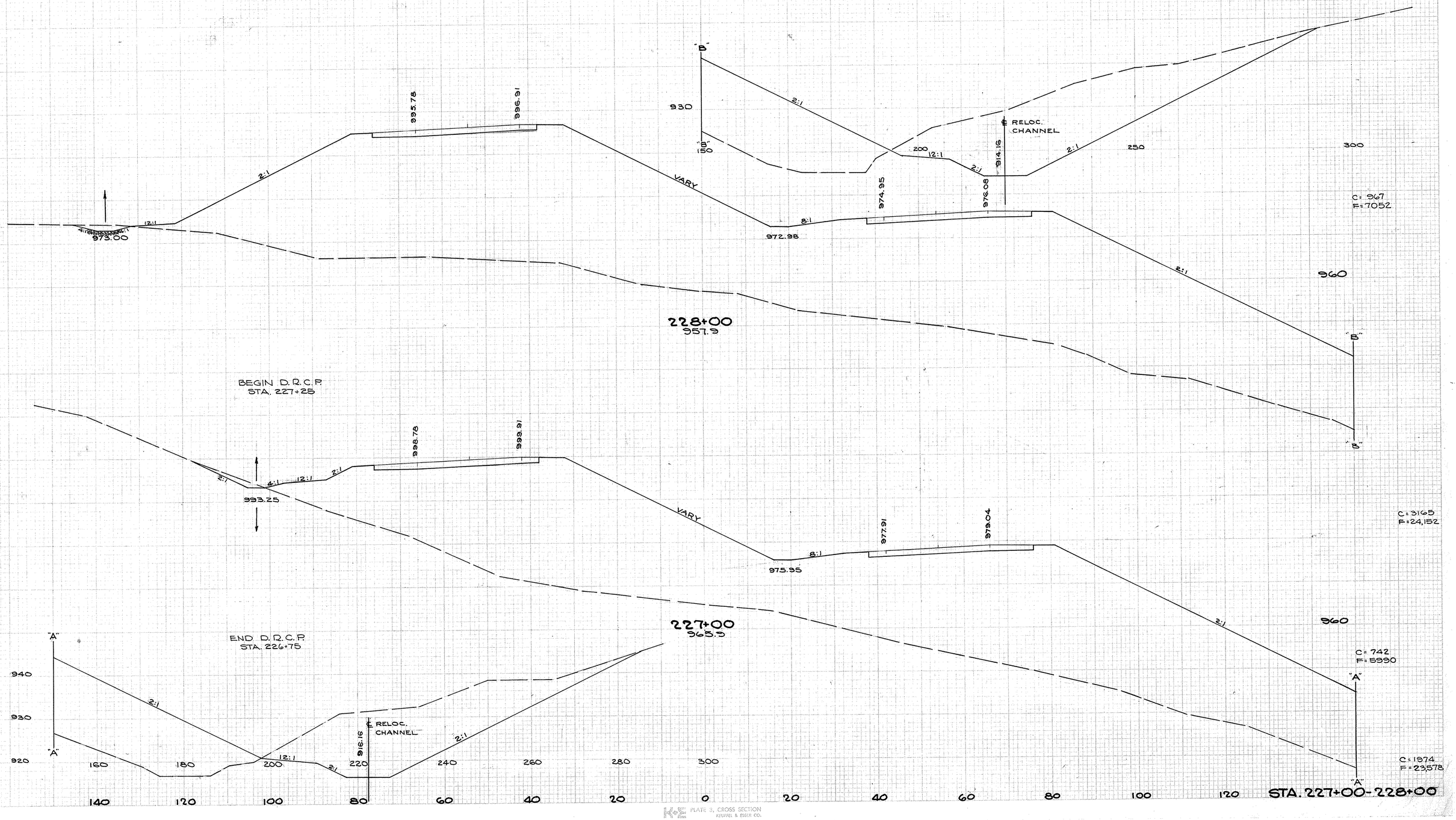


PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

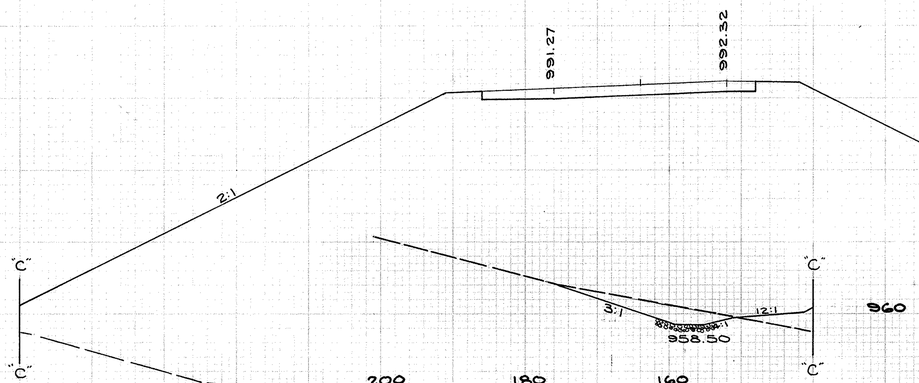
FINAL SURVEY
SURVEYED BY
DATE
NOTE BOOK
TEMPLATE
AREAS
CALCULATED BY
CHECKED BY

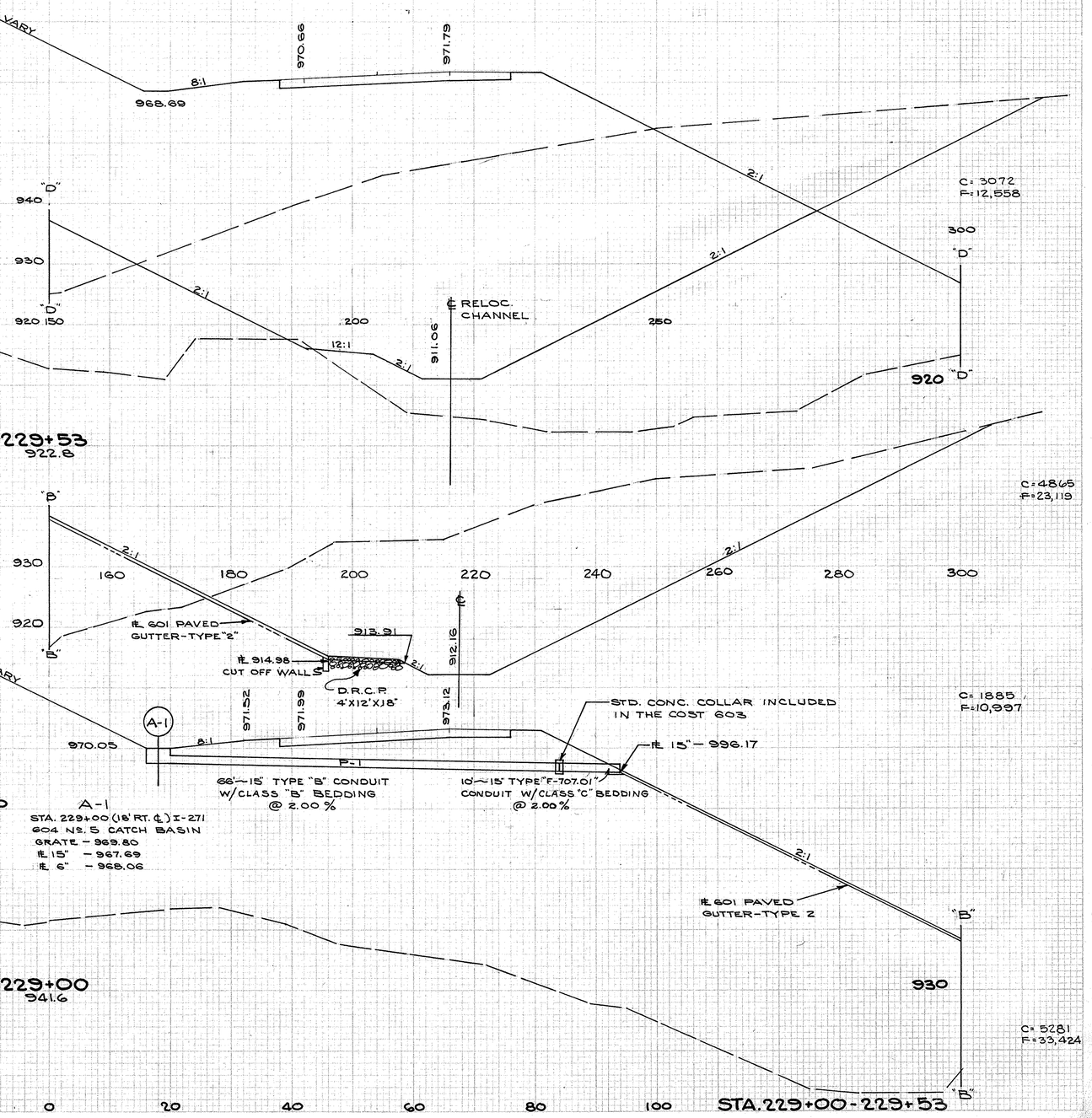
ORIGINAL SURVEY
SURVEYED BY
DATE
NOTE BOOK
TEMPLATE
AREAS
CALCULATED BY
CHECKED BY

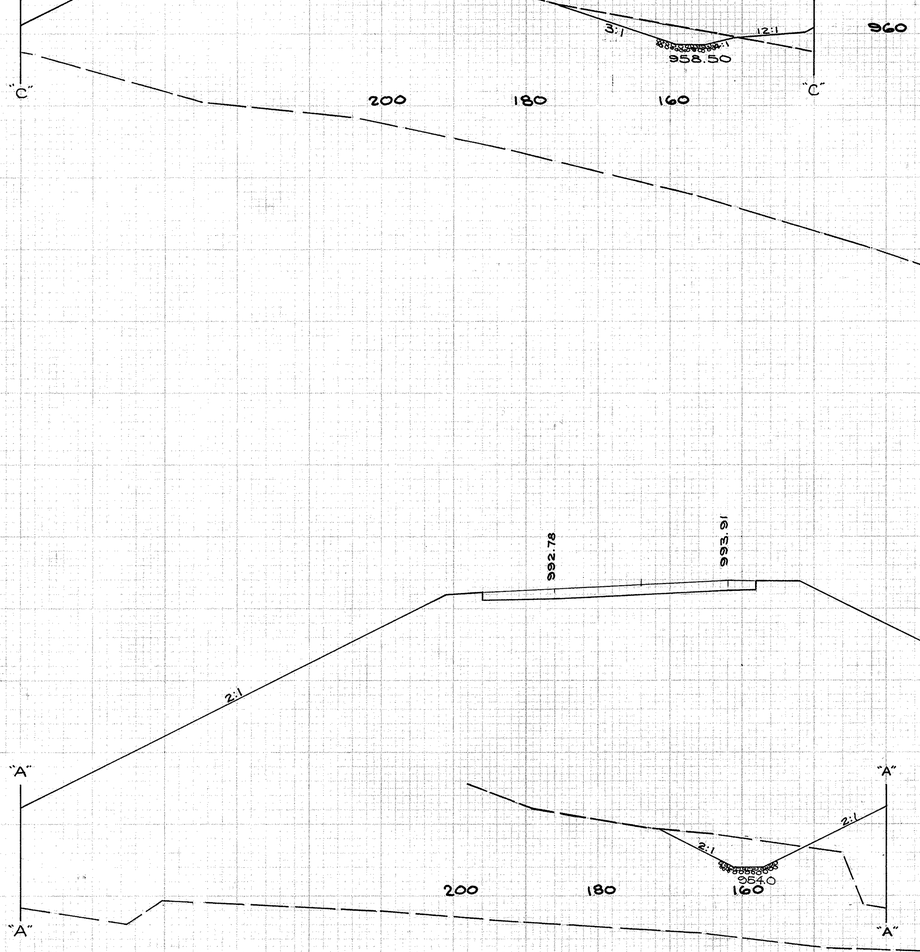
SUM·271·2.98

END AREA CU.YDS.

33
510







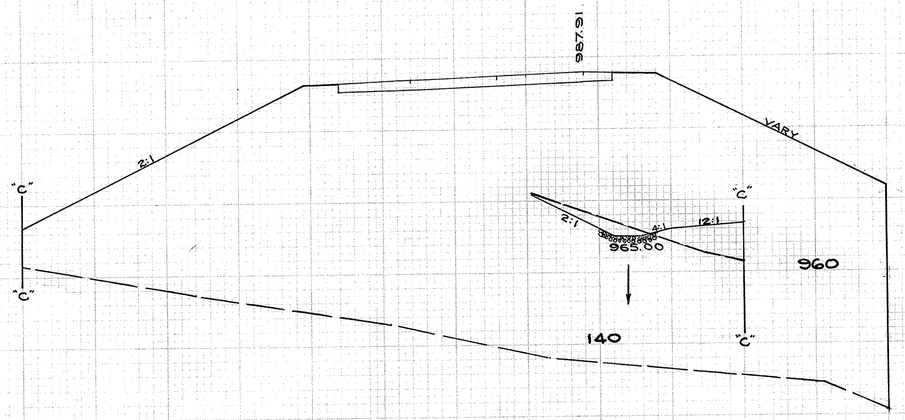
A-1
STA. 229+00 (18' RT. ℄) I-271
604 No. 5 CATCH BASIN
GRATE – 969.80
℄ 15" – 967.69
℄ 6" – 968.06

CULVERT INLET
STA. 228+96
℄ 950.62

229+00
941.6

STA. 229+00 - 229+53

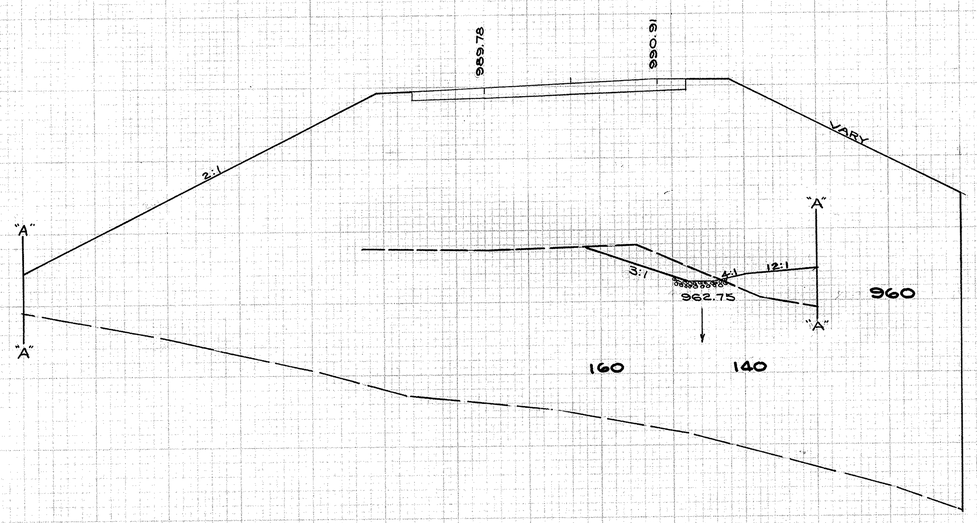
CU. YDS. END AREA



C = 20
F = 3,675

C = 83
F = 15,898

231+00 LT.
940.8



C = 25
F = 4,909

230+00 LT.
930.5

CULVERT OUTLET
STA. 229+77
℄ - 993.55

STA. 230+00 LT. - 231+00 LT.

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160

SUM · 271 · 2.98

34
510

ORIGINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / NOTE BOOK / AREAS / NO. / AREAS CHECKED / DATE

FINAL SURVEY — CHECKED / PLOTTED / TEMPLATE / NOTE BOOK / AREAS / NO. / AREAS CHECKED / DATE

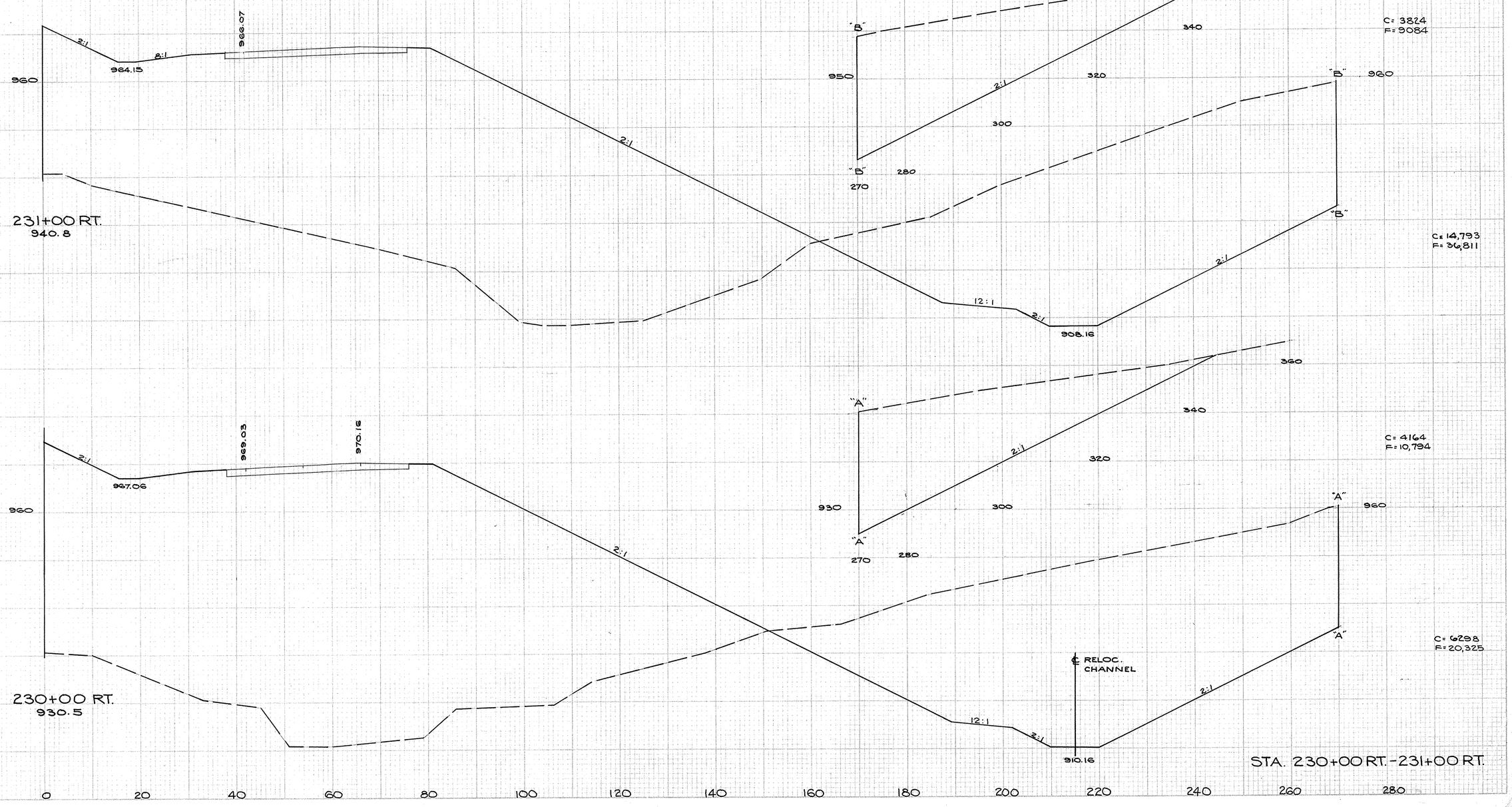
K+E PLATE 5, CROSS SECTION
KEUFFEL & ESSER CO.

FED. AID DIVISION	STATE	PROJECT		
2	OHIO			

35
510

SUM. 271 2.98

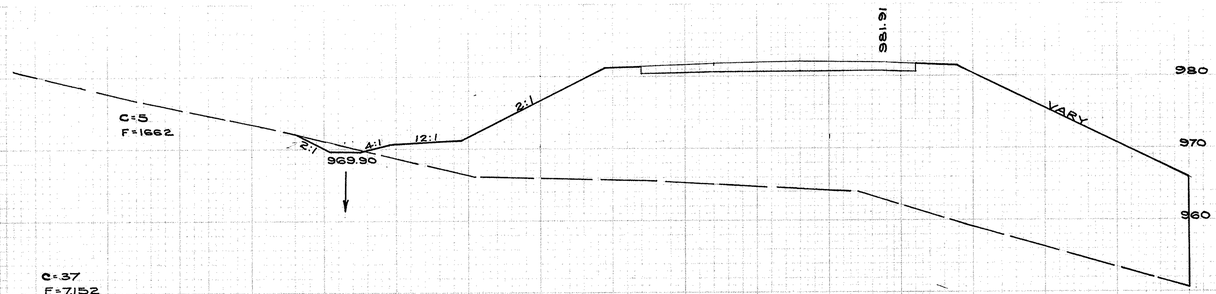
END AREA CU. YDS.
(LT. & RT.)



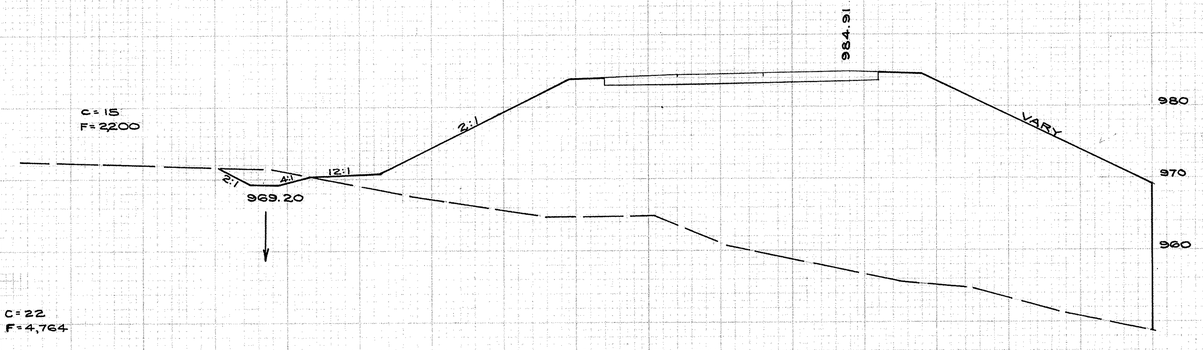
STA. 230+00 RT. - 231+00 RT.

SUM 271 2.98

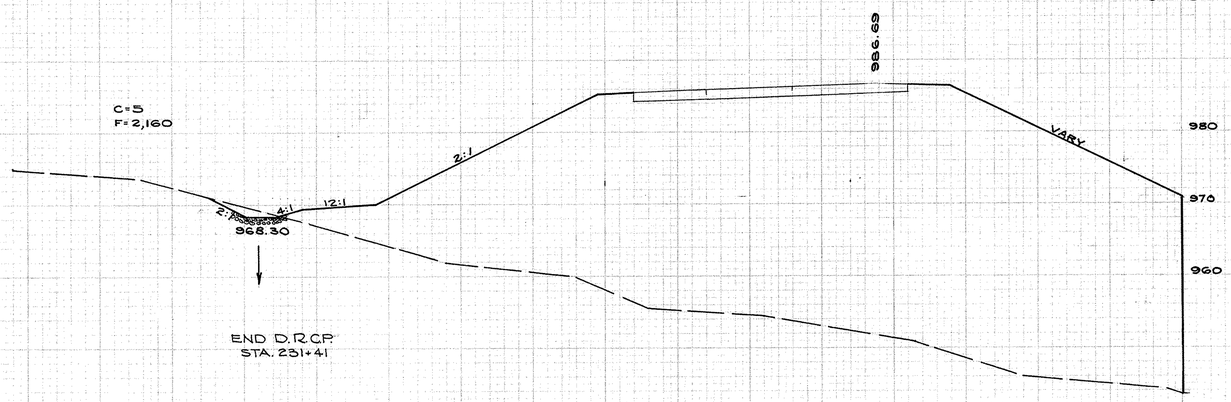
SG 510



233+00 LT.
950.8



232+00 LT.
948.8



231+41 LT.
943.5

STA. 231+41 LT. – 233+00 LT.

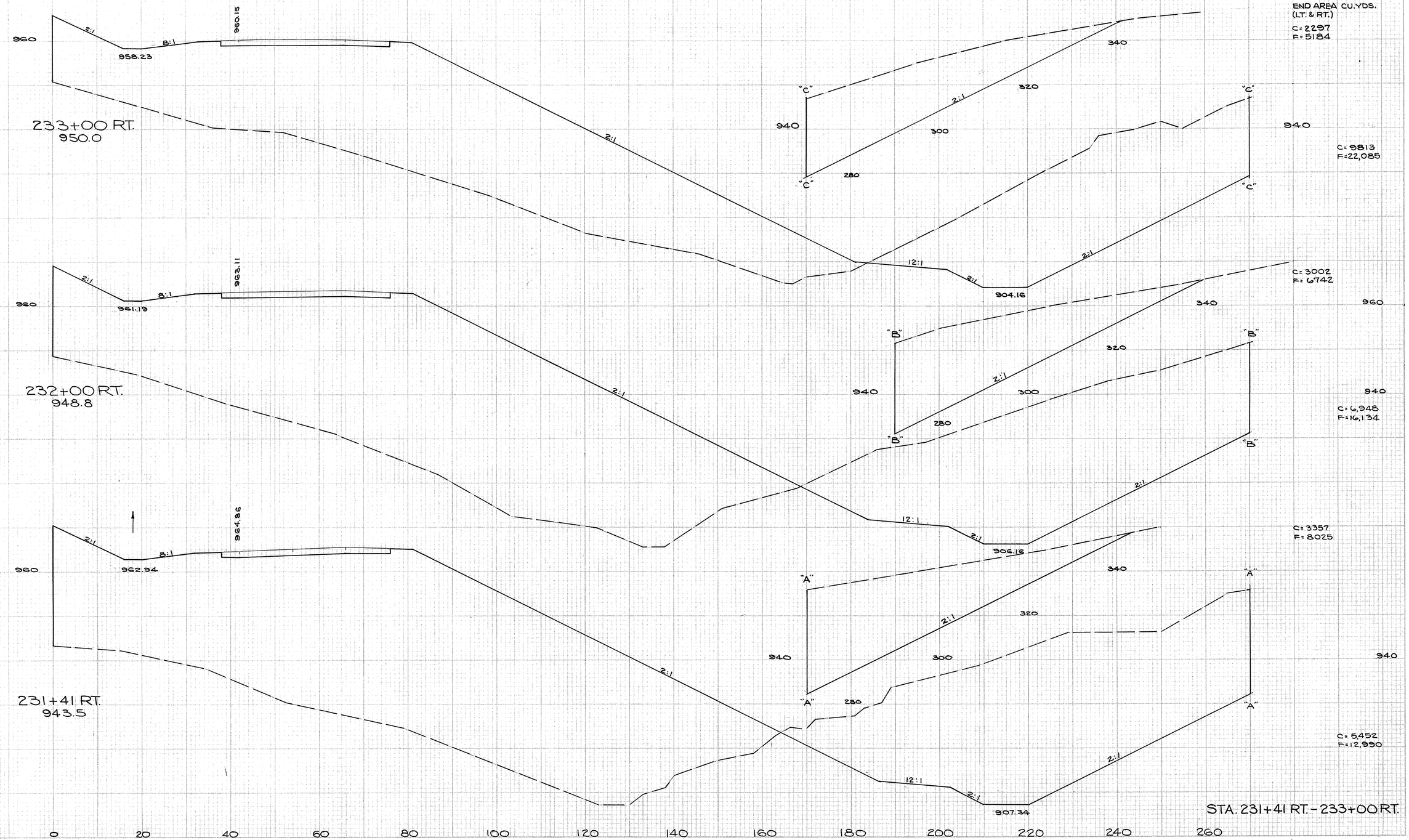
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

97
510

SUM. · 271 · 2.98



SUM 271 2.98

END AREA CU. YDS.

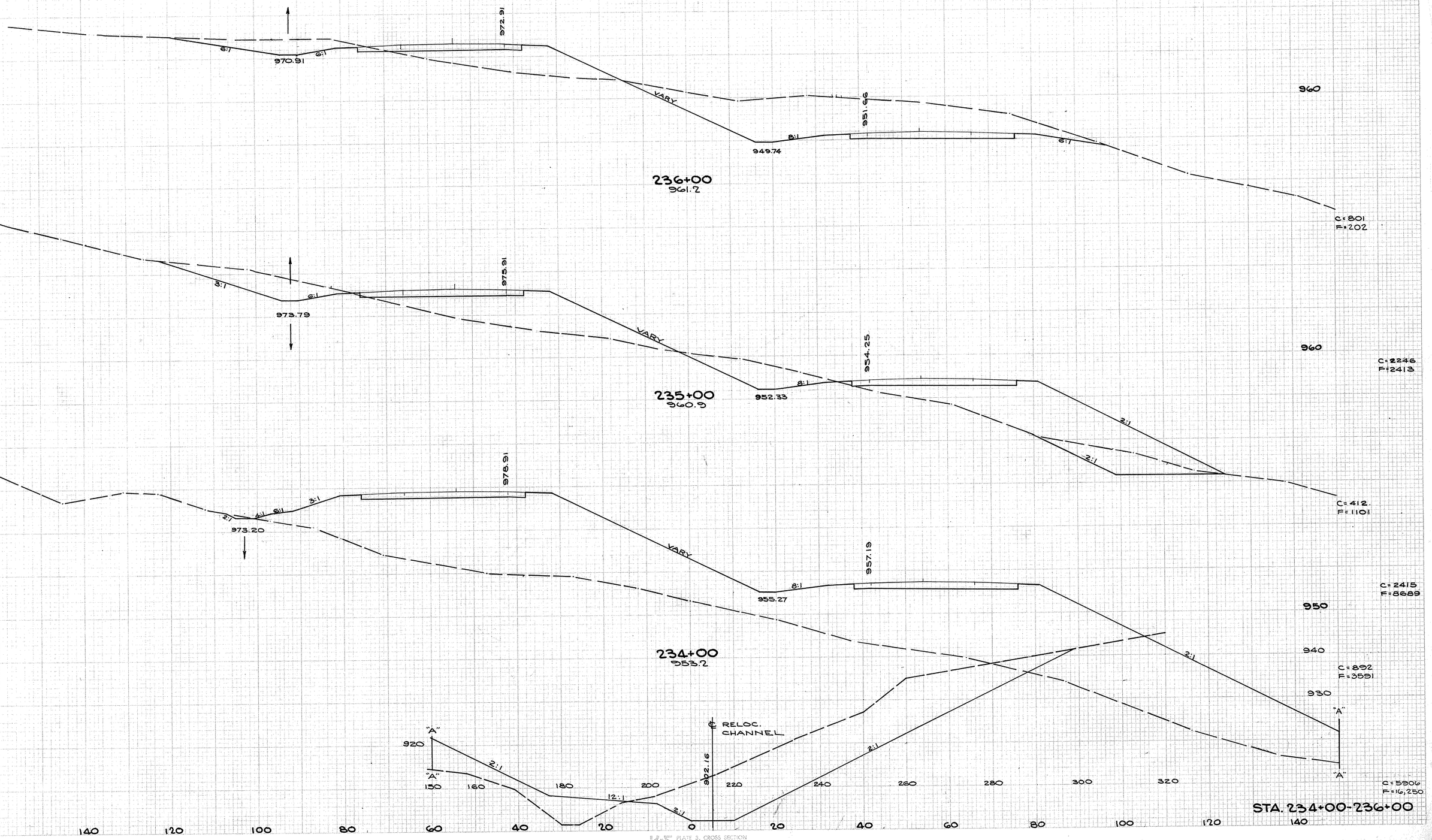


PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

SUM 271 2.98

END AREA CU. YDS.

DRCD ENDS
AT STA. 239+50

963.91

2:1

3:1 4:1 12:1

18" 950.00

VARY

946.88

8:1

944.96

910

"C"

2:1

12:1

C= 9
F=3862

940

CULVERT INLET
STA. 238+25
℄ – 931.04

239+00
942.1

966.91

2:1

VARY

947.97

8:1

946.05

"C"

CULVERT OUTLET
STA. 238+25
℄ –

C=237
F=25,056

"A"

"A"

"A"

"A"

2:1

2:1 12:1 2:1

18" 932.20

200 180 160 930

2:1

910

"B"

C=119
F=9668

238+00
911.1

"B"

900

2:1

12:1

2:1

2:1

160 180 200 220 240 260

966.91

960

2:1

3:1 4:1 12:1

16" 952.00

VARY

949.57

8:1

947.65

C=1165
F=23,498

940

D.R.C.P. STARTS
AT STA. 236+25

237+00
944.8

"A"

910

2:1

2:1

2:1

12:1

2:1

2:1

160 180 200 220 240 260

895.00

"A"

C=410
F=3021

C=2243
F=5969

STA. 237+00 – 239+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

PLATE 3, CROSS SECTION
KNAPPEN & ZIER CO.

SUM·271·2.98

END AREA CU.YDS.

100
510

FINAL SURVEY
SURVEYED
COMPILED
TEMPLATE
AREAS
PROFILE
NOTE BOOK
CHECKED
DATE
BY

ORIGINAL SURVEY
SURVEYED
COMPILED
TEMPLATE
AREAS
PROFILE
NOTE BOOK
CHECKED
DATE
BY

"B"

"B"

2:1

6:1

956.35

958.47

VARY

8:1

944.95

946.17

950

990

"B"

2:1

200 180 160

241+00
949.1

2:1

C=1288
F=1349

BENCH

950

958.47

2:1

6:1

958.85

VARY

A-1
STA. 240+00 (18' RT. ℄) I-271
605 No. 5 CATCH BASIN
GRATE — 944.10
INV. 15" — 941.99

A-1

946.27

944.35

8:1

P-1

℄ - 941.78

STD. CONC. COLLAR INCLUDED IN THE COST 603

25° BEND - TYPE "F"
℄ 15" — 939.18

67'-15" TYPE "B" CONDUIT
W/CLASS "B" BEDDING
@ 4.19%

H-1
STA. 240+00 (162.5' RT. ℄) I-271
HW-E HEADWALL
℄ 15" — 905.00

C=3128
F=5224

16'-15" TYPE "F-707.01" CONDUIT W/CLASS "C" BEDDING @ 50.00%

240+00
950.4

2:1

H-1

"A"

"A"

2:1

25° BEND - TYPE "F"
℄ 15" — 905.20

C=401
F=1472

910

900

"A" 10'-15" TYPE F-707.01 CONDUIT W/CLASS "C" BEDDING @ 2.00%

"A"

180

D.R.C.P.
7'X4'X1.5'

C=759
F=9878

140 160

STA. 240+00-241+00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

SUM·271·2.98

END AREA CU.YDS.

A-2
STA. 242+00 (18' RT. ℄) I-271
604 No. 5 CATCH BASIN
GRATE — 944.39
INV. 15" - 942.28

H-2
STA. 242+00 (69' RT. ℄) I-271
HW-E HEADWALL
INV. 901.80

242+00
950.9

241+73
952.0

954.35
956.47
956.47
946.14
946.56
944.64
954.86
956.98
946.41
944.72

VARY

STD. CONC. COLLAR INCLUDED IN THE COST 603

60'~15" TYPE "B" CONDUIT W/CLASS "B" BEDDING @ 2.00%

25° BEND - TYPE "F"
INV. - 941.08

60'~15" TYPE "F" CONDUIT @ 49.35%

9'~15" TYPE "F" CONDUIT @ 2.00%

25° BEND - TYPE "F"
INV. - 901.98

8'x4'x1.5' DUMPED ROCK

BENCH

C=3462
F=1683

C=3227
F=1760

C=2992
F=1836

C=5786
F=4306

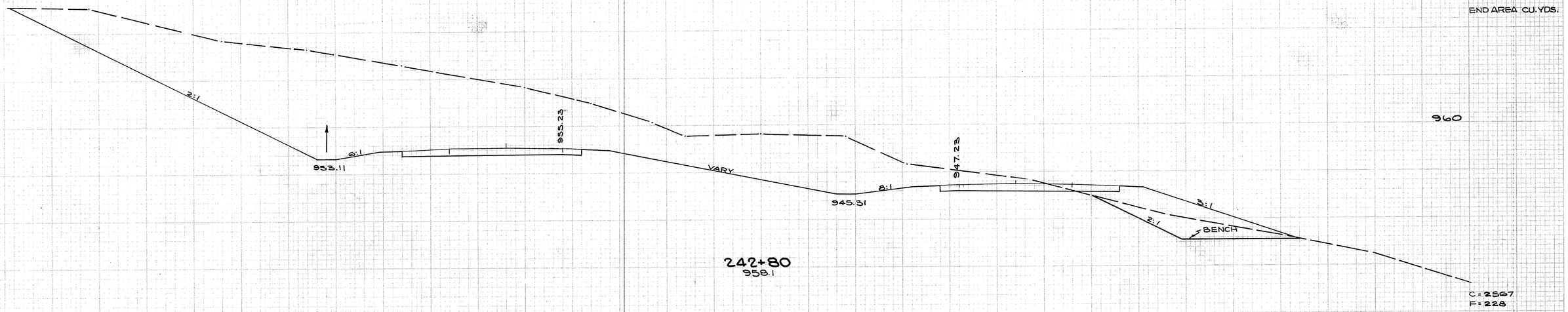
STA. 241+73 - 242+00

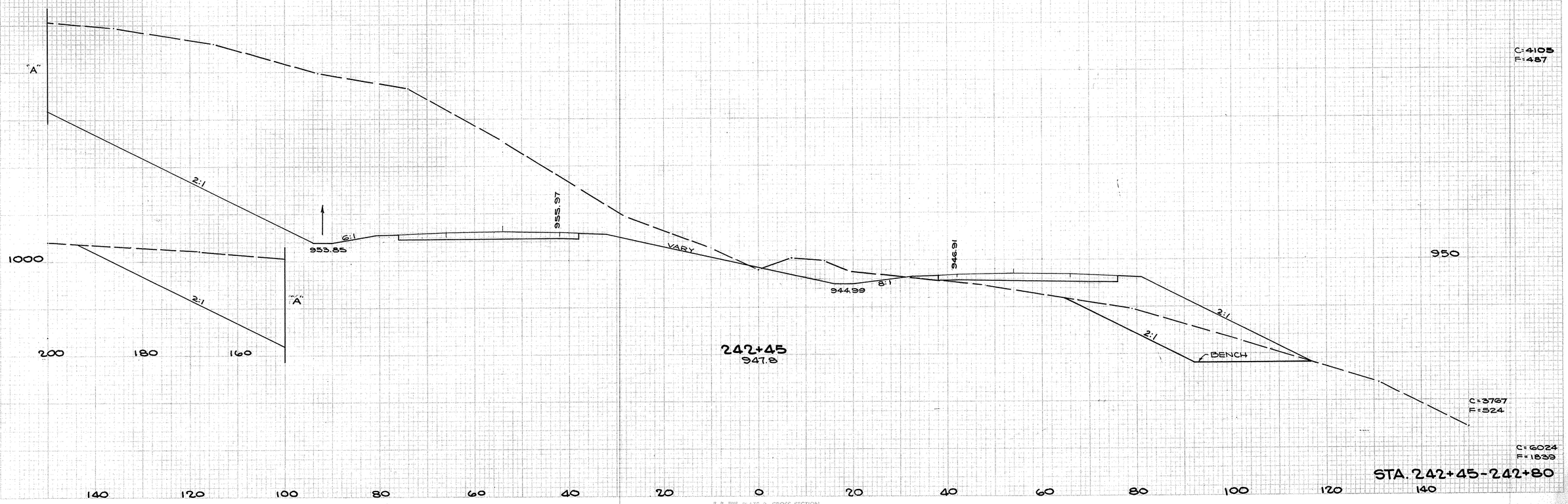
ORIGINAL SURVEY NOTE BOOK ENTRY
FINAL SURVEY NOTE BOOK ENTRY

102
510

SUM. 271-2.98

END AREA CU.YDS.





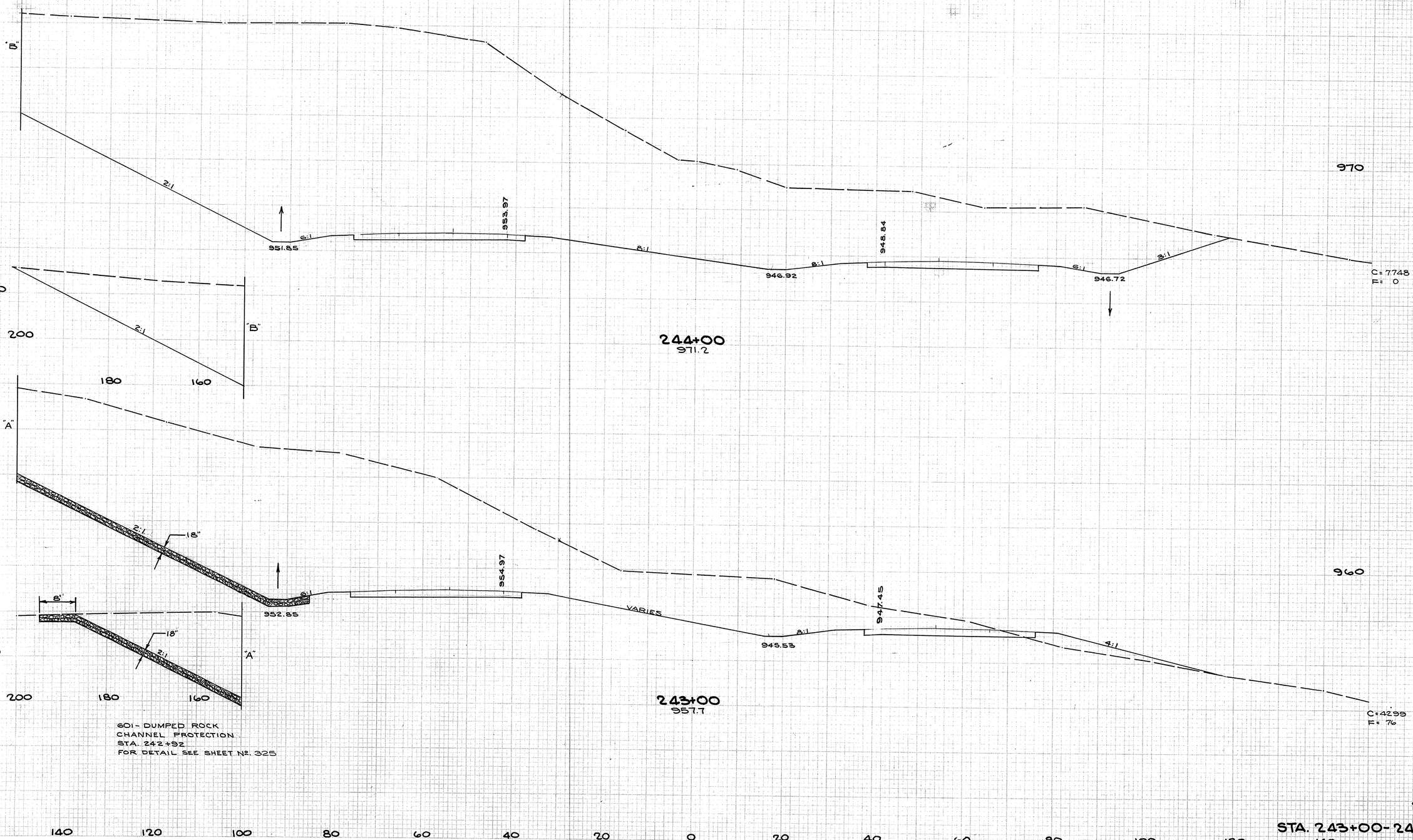
STA. 242+45-242+80

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

103
510

SUM · 271 · 2.98

END AREA CU. YDS.



STA. 243+00 - 244+00

PLATE 2, CROSS SECTION
K&E KOUFFEL & ESSER CO.

104
510

SUM 271 2.98

END AREA CU.YDS.

"C"

2:1

950.95

6:1

953.47

8:1

949.12

8:1

953.10

6:1

950.98

2:1

"B"

990

246+00
954.9

1000

"C"

2:1

C=13,299
F= 0

"B"

2:1

980

150

C=45,948
F= 0

1000

"A"

2:1

951.35

6:1

953.47

8:1

947.93

8:1

950.72

6:1

948.60

2:1

C=11,513
F= 0

950

245+00
956.2

"A"

2:1

C=35,668
F= 0.1

STA. 245+00 - 246+00

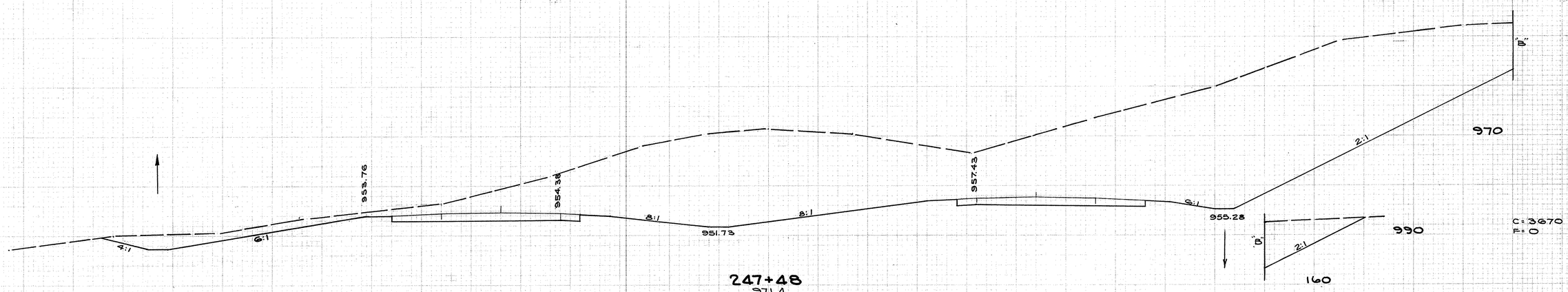
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

PLATE 2, CROSS SECTION
KEUFFEL & ESSER CO.

105
510

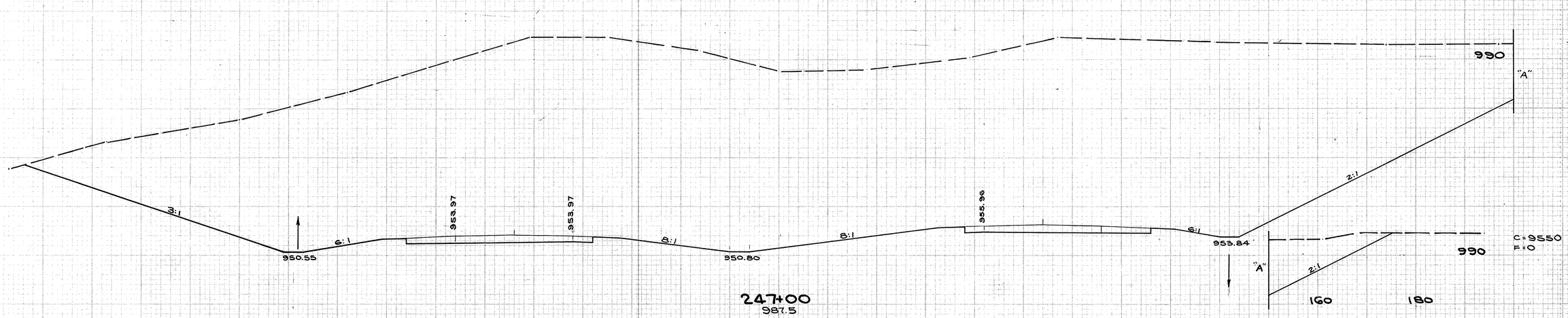
SUM·271·2.98

END AREA CU. YDS.



247+48
971.4

C=11,751
F=0



247+00
987.5

C=42,313
F=0

STA. 247+00-247+48

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

SUM·271·2.98

END AREA CU.YDS.

957.43 — 8:1 — 955.51 — VARIES — 963.49 — 963.49 — 962.86 — 2:1

"B" "B"

2:1

"A" "A"

C= 35
F=9400

920

249+51
915.8

"B" "B"

4:1 12:1 2:1

920.00

920

"A" "A"

12:1 4:1 3:1

932.55

930

180 160

160 180

C= 236
F=11,362

A-3
STA. 249+00 (18' LT. ℄) I-271
604 No. 5 CATCH BASIN
GRATE — 954.30
℄ 15" — 952.28

STD. CONC. COLLAR INCLUDED IN THE COST 603

956.47 — 8:1 — VARY — 961.96

P-3

63'~15" TYPE "B" CONDUIT W/CLASS "B" BEDDING @ 2.00%

I.U.D. ℄ — 950.10

25° BEND-TYPE "F"
℄ — 951.02

H-3
STA. 249+00 (137.5' LT. ℄)
602-HW-E HEADWALL
℄ — 927.85

2:1 P-3 74'~15" TYPE "F" CONDUIT @ 49.00%

2:1 4:1 12:1 2:1 3:1

926.85 937.00

D.R.C.P.
6'x4'x1.5'

25° BEND-TYPE "F"
℄ — 928.01

8'~15" TYPE "F" CONDUIT @ 2.00%

C= 215
F=2630

249+00
925.0

920

C= 2963
F=6500

954.35 954.97 954.97 — 8:1 — 952.80 — 8:1 — 956.96 — 8:1 — 956.84 — 3:1

C=1385
F= 880

960

248+00
964.3

4:1 928.00 3:1

C=4868
F=847

STA. 248+00-245+51

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

PLATE 3, CROSS SECTION

107
510

SUM· 271·2.98

END AREA CU.YDS.

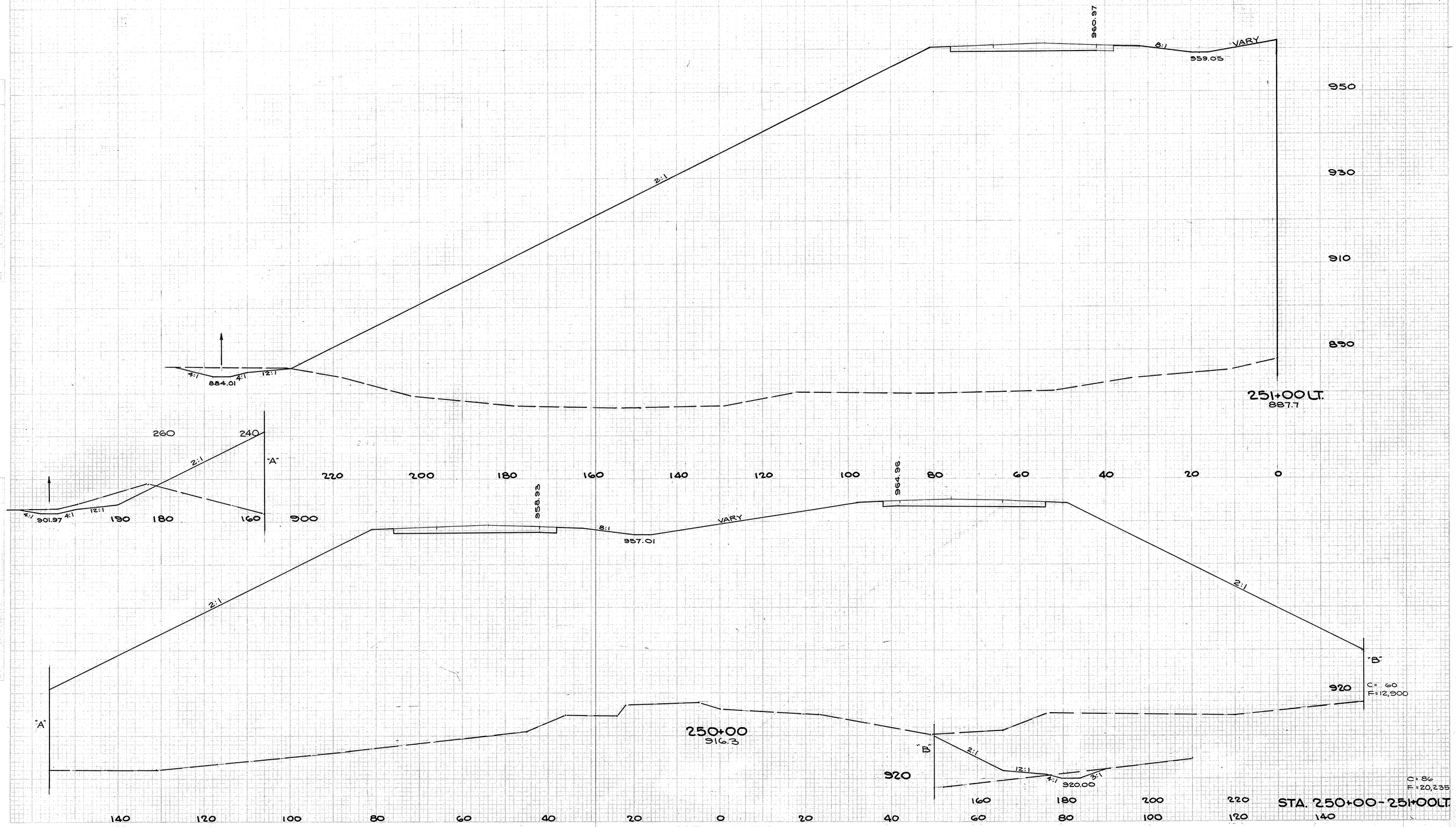


PLATE 2, CROSS SECTION
KEUFFEL & ESSER CO.

108
510

SUM·271·2.98

END AREA CU. YDS.
(LT. & RT.)

FINAL SURVEY
NOTE BOOK
NO.
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
DATE



103
510

SUM 271 2.98

END AREA CU. YDS.
(SEE SHEET 110)

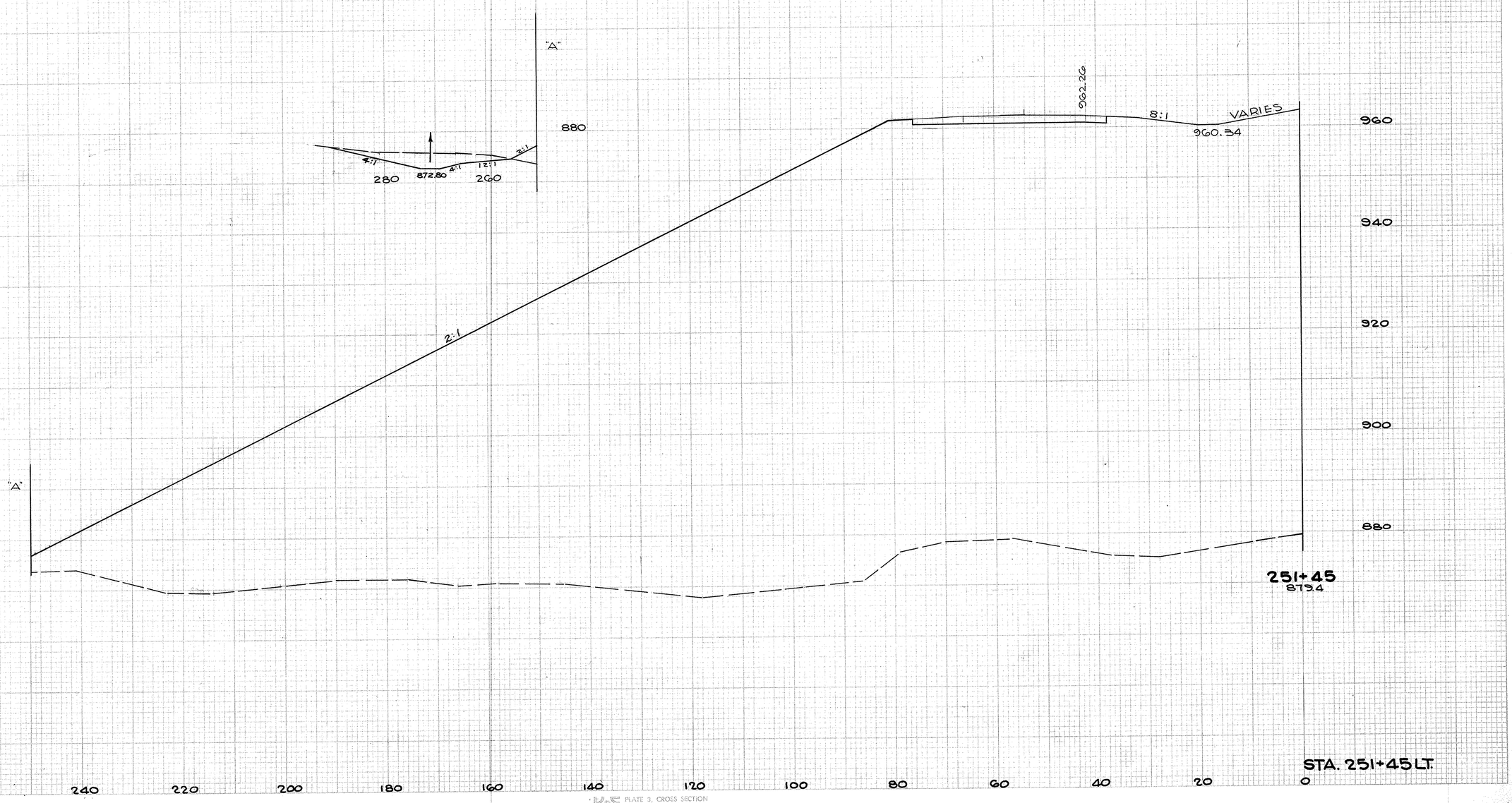


PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

110
510

SUM· 271· 2.98

END AREA CU.YDS.
(LT. & RT.)



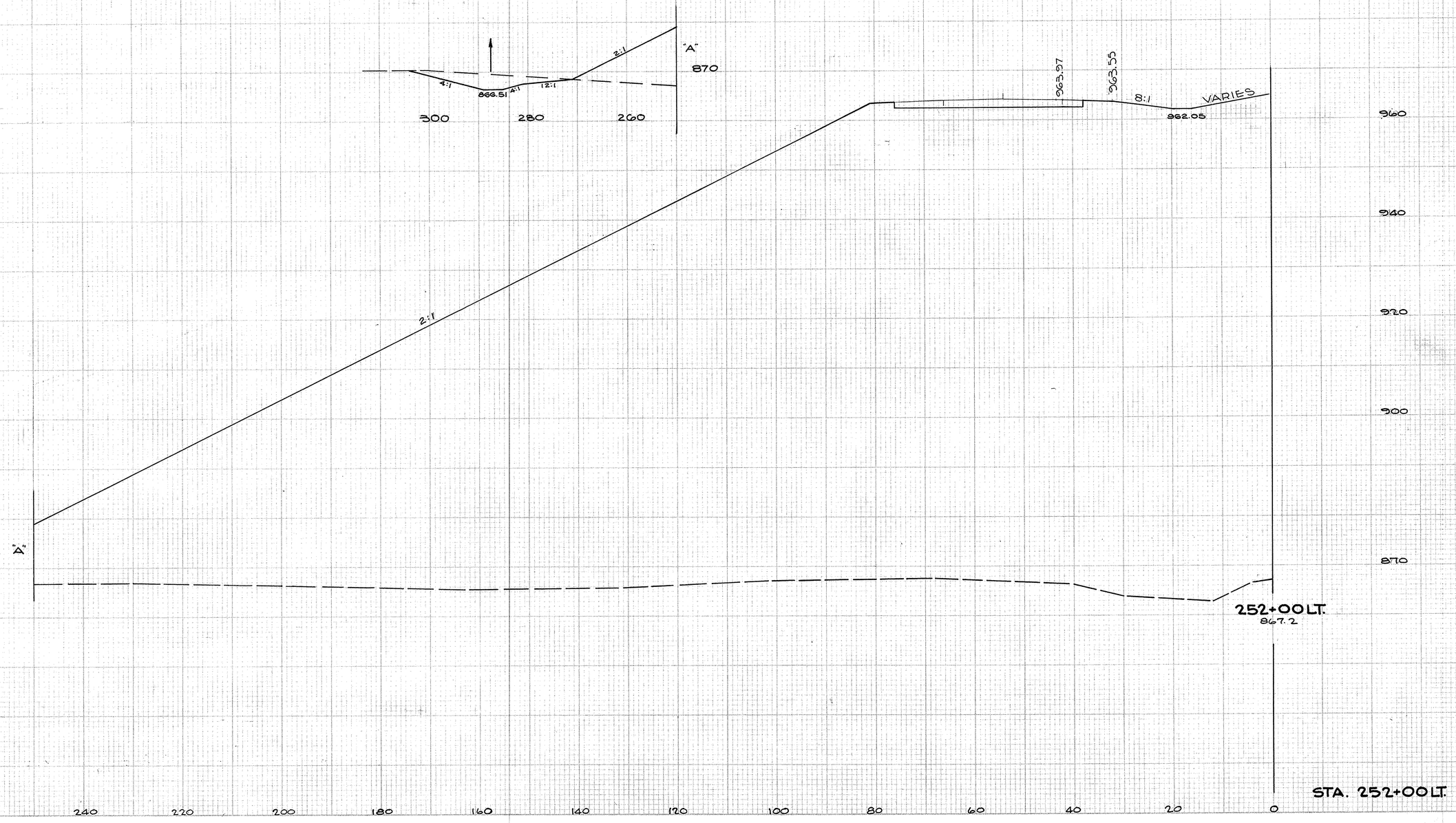
K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

111
510

SUM-271-2.98

END AREA CU. YDS.
(SEE SHEET 112)

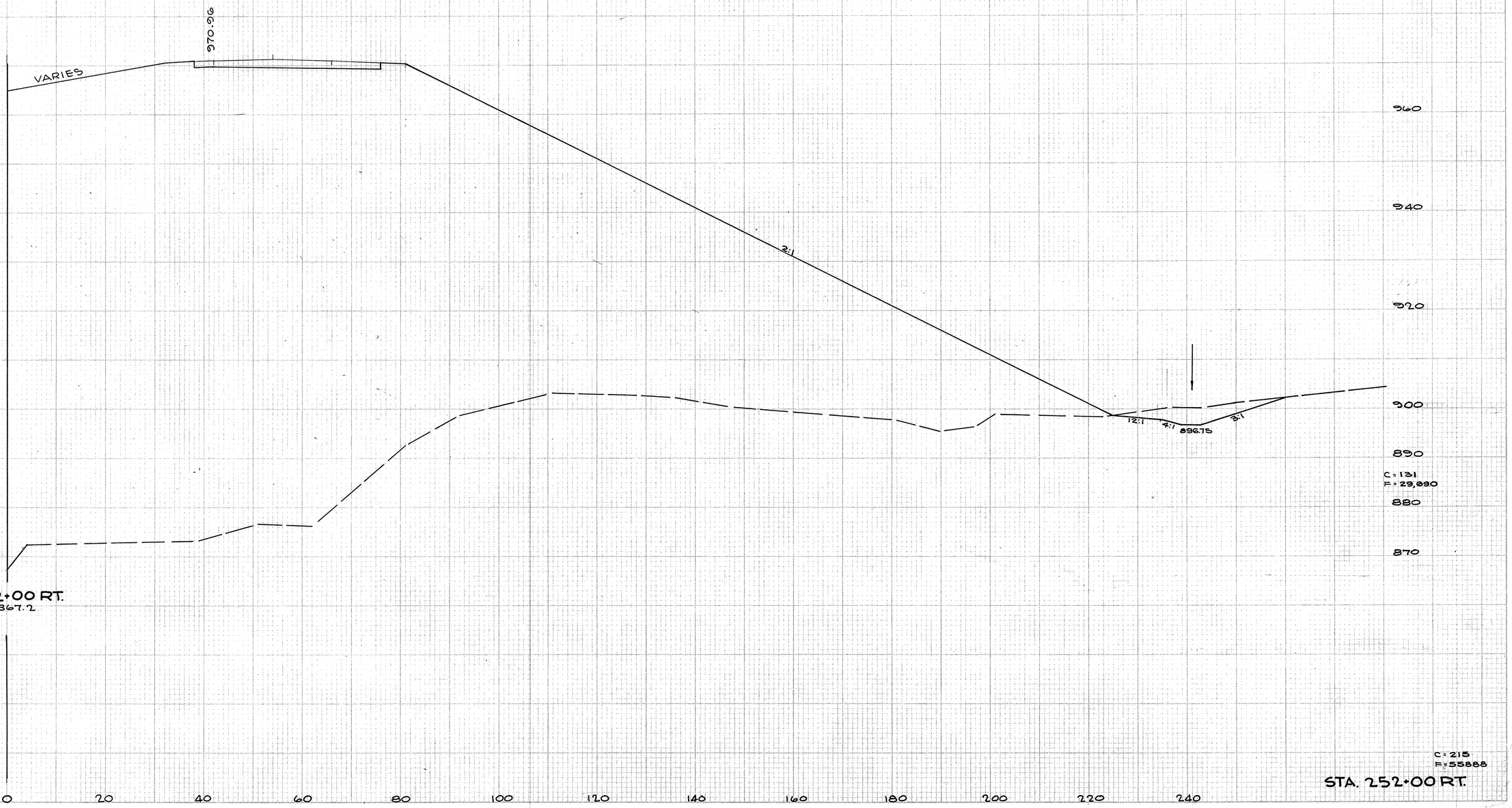


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

112
510

SUM-271-2.98

END AREA CU. YDS.

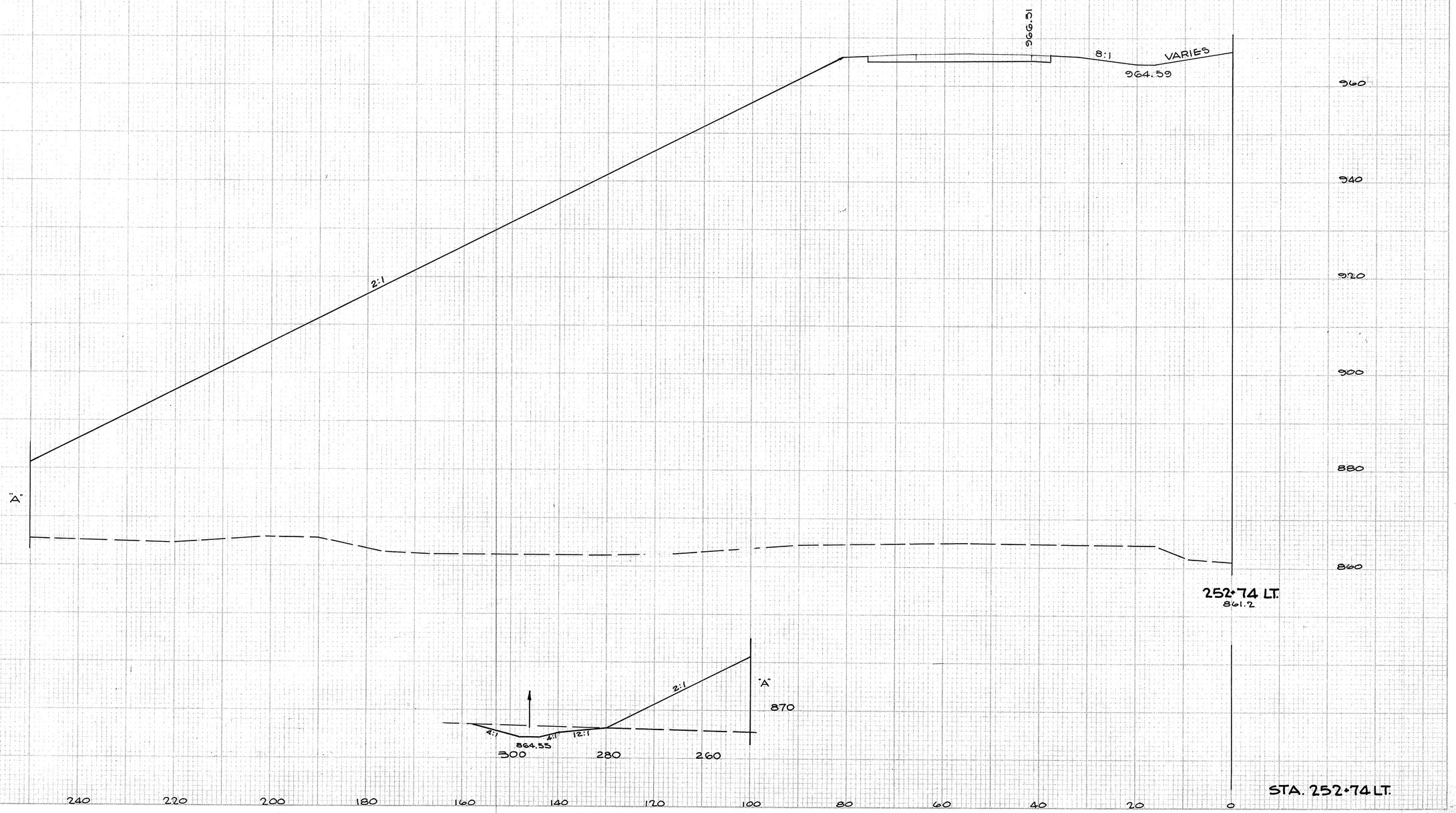


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

113
510

SUM-271-2.98

END AREA CU.YDS.
(SEE SHEET 114)

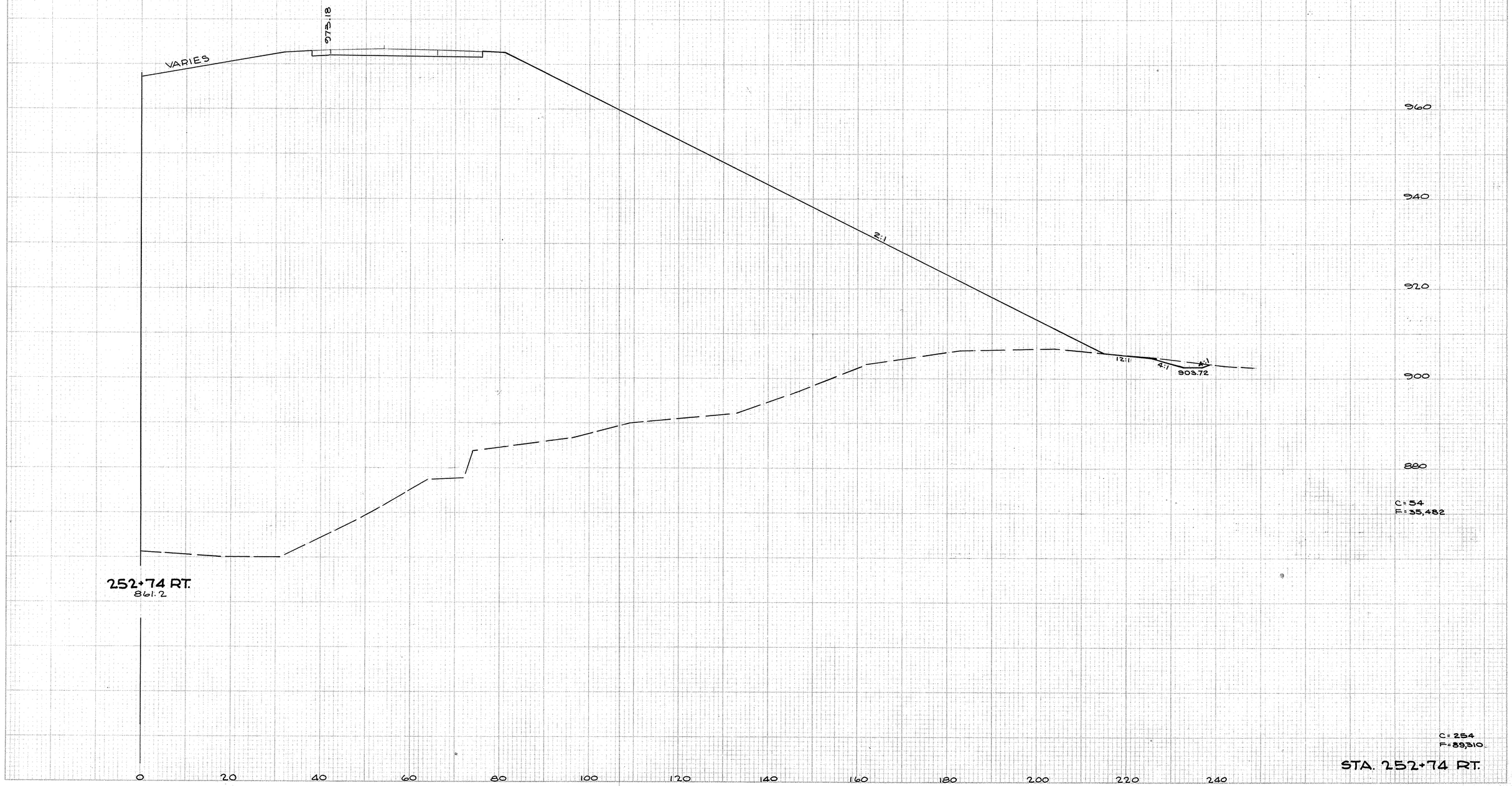


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

114
510

SUM-271-2.98

END AREA CU.YDS.
(LT. & RT.)

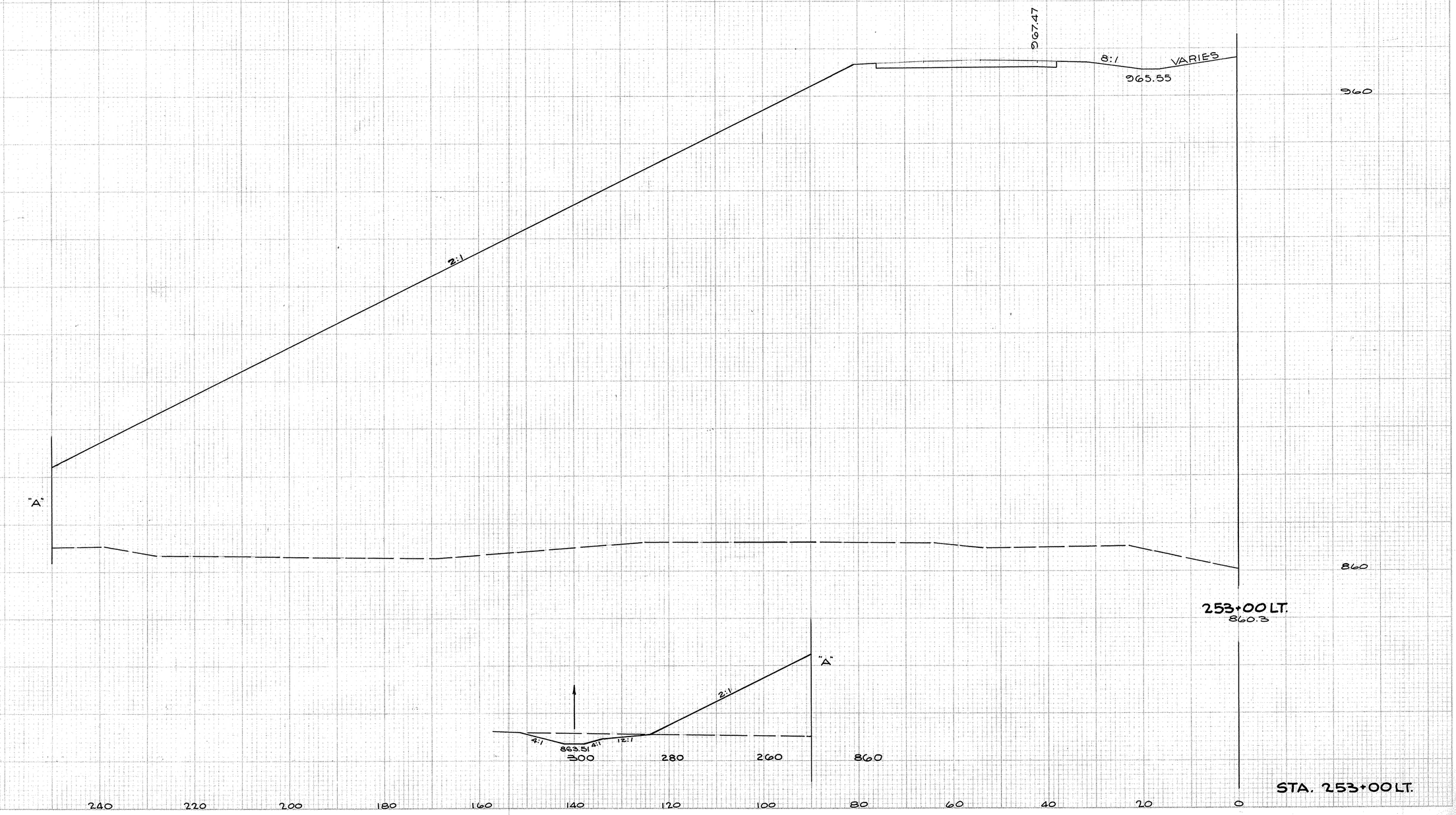


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

115
510

SUM·271·2.98

END AREA CU.YDS.
(SEE SHEET 116)

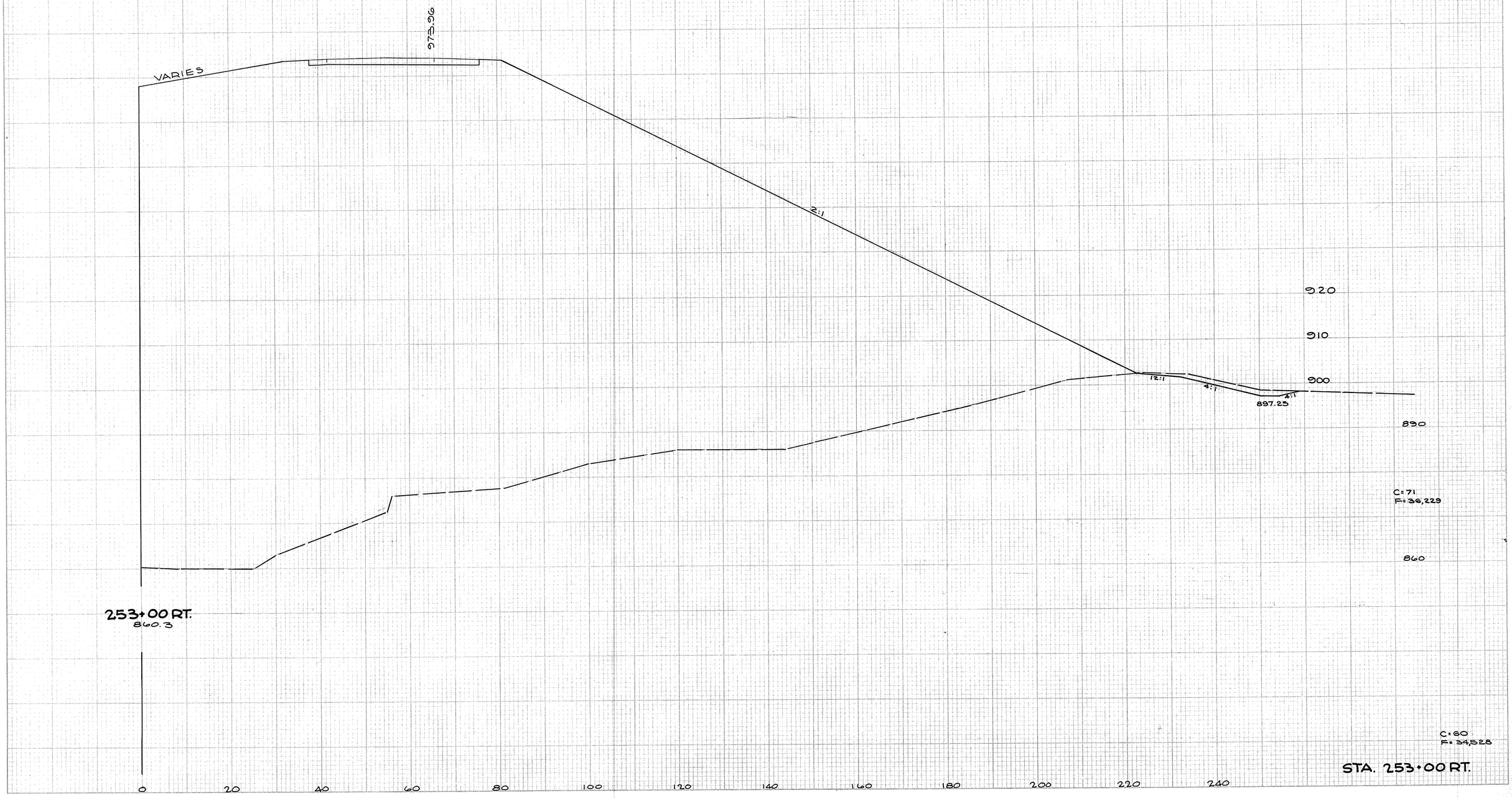


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

116
510

SUM-271-2.98

END AREA CU.YDS.
(LT.& RT.)



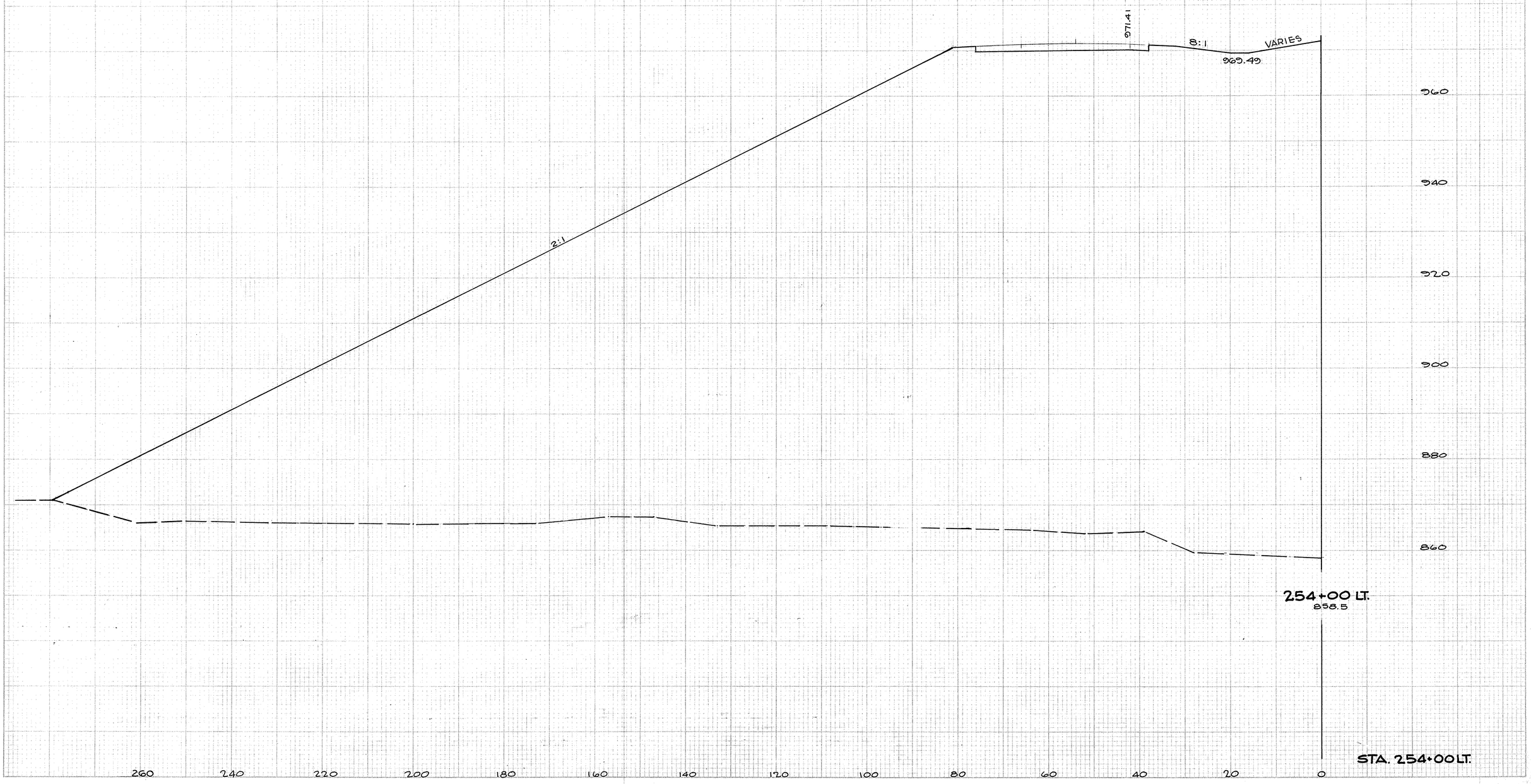
STA. 253+00 RT.

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

117
510

SUM-271-2.98

END AREA CU.YDS.
(SEE SHEET 118)

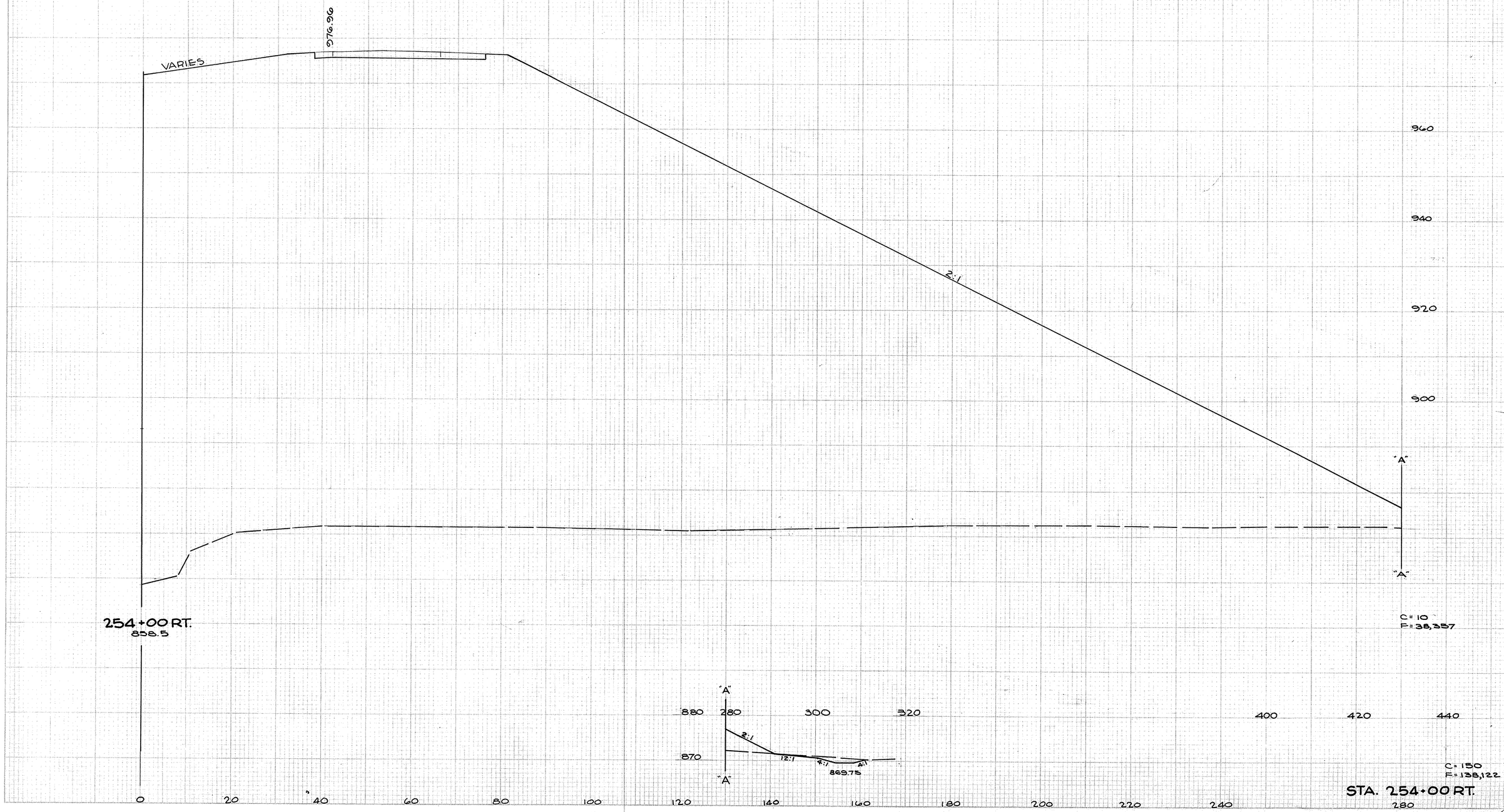


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

118
510

SUM-271-2.98

END AREA CU.YDS.
(LT. & RT.)

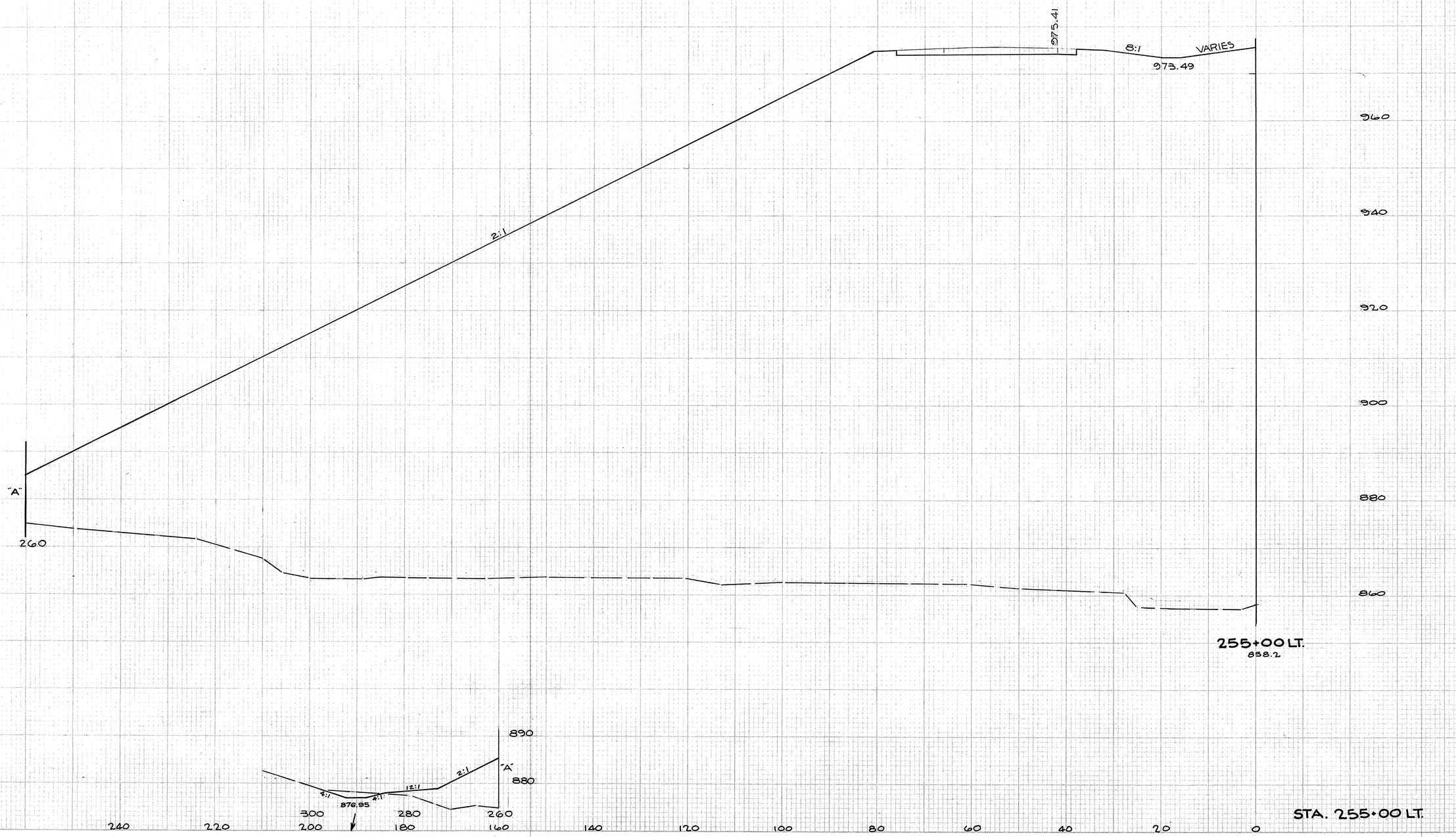


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

119
510

SUM-271-2.98

END AREA CU.YDS.
(SEE SHEET 120)

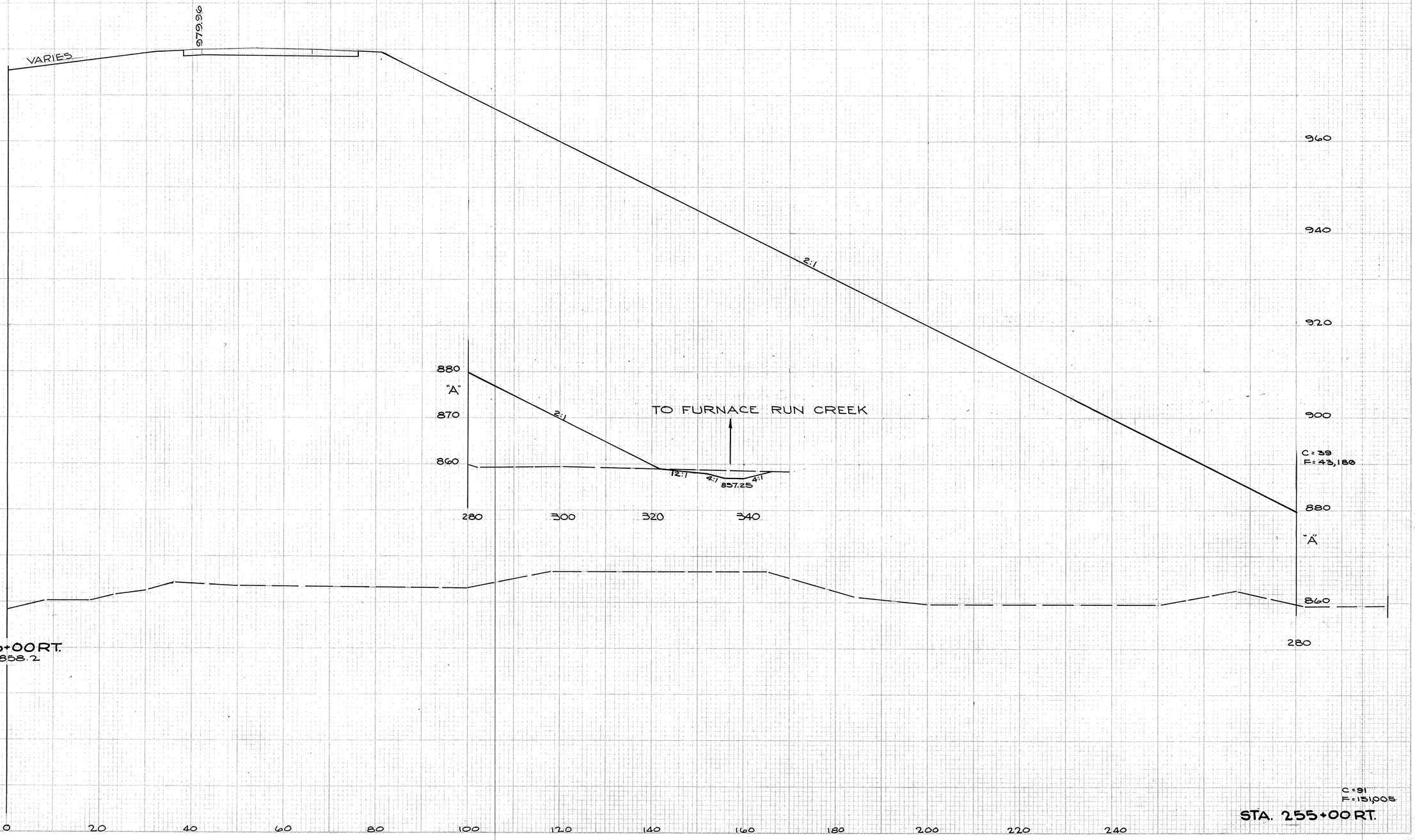


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

120
510

SUM-271-2.98

END AREA C.U.YDS.
(LT. & RT.)



STA. 255+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

121
510

SUM-271-2.98

END AREA CU. YDS.
(SEE SHEET 122)

979.41

8:1

8:1

977.02

2:1

4:1

895.07

4:1

12:1

980

960

940

920

900

880

860

860

256+00 LT.
856.1

STA. 256+00 LT.

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

122
510

SUM·271·2.98

END AREA C.U.YDS.
(LT. & RT.)

982.96

8:1

2:1

"A"

880

860

280 300 320 340

12:1 4:1 4:1

853.50

256+00 RT.
856.1

980

960

940

920

900

880

"A"

840

C=67
F=42,074

C=196
F=157,889.

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300

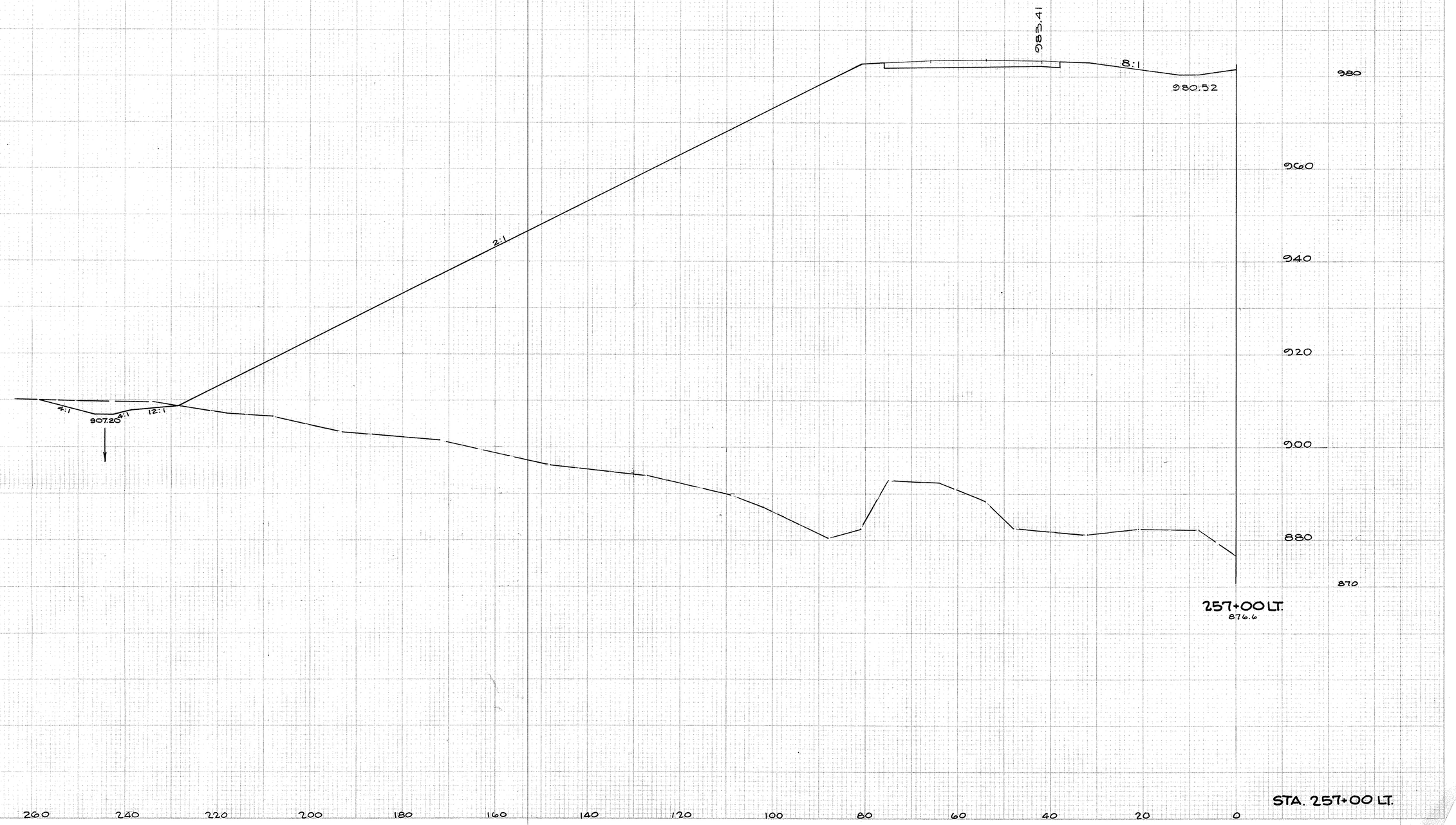
STA. 256+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

123
510

SUM-271-2.98

END AREA CU. YDS.
(SEE SHEET 124)

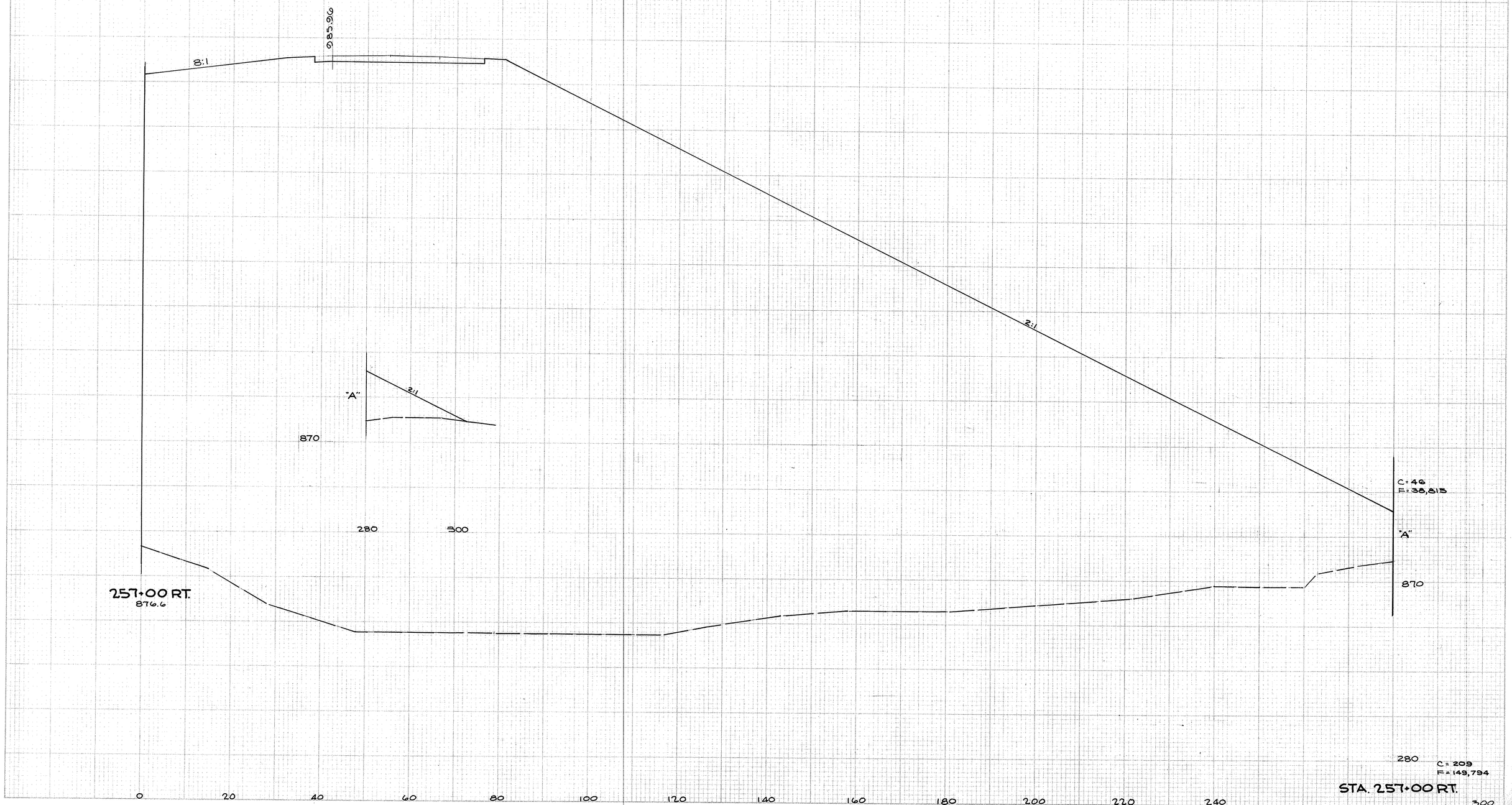


FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

124
510

SUM-271-2.98

END AREA CU. YDS.
(LT. & RT.)

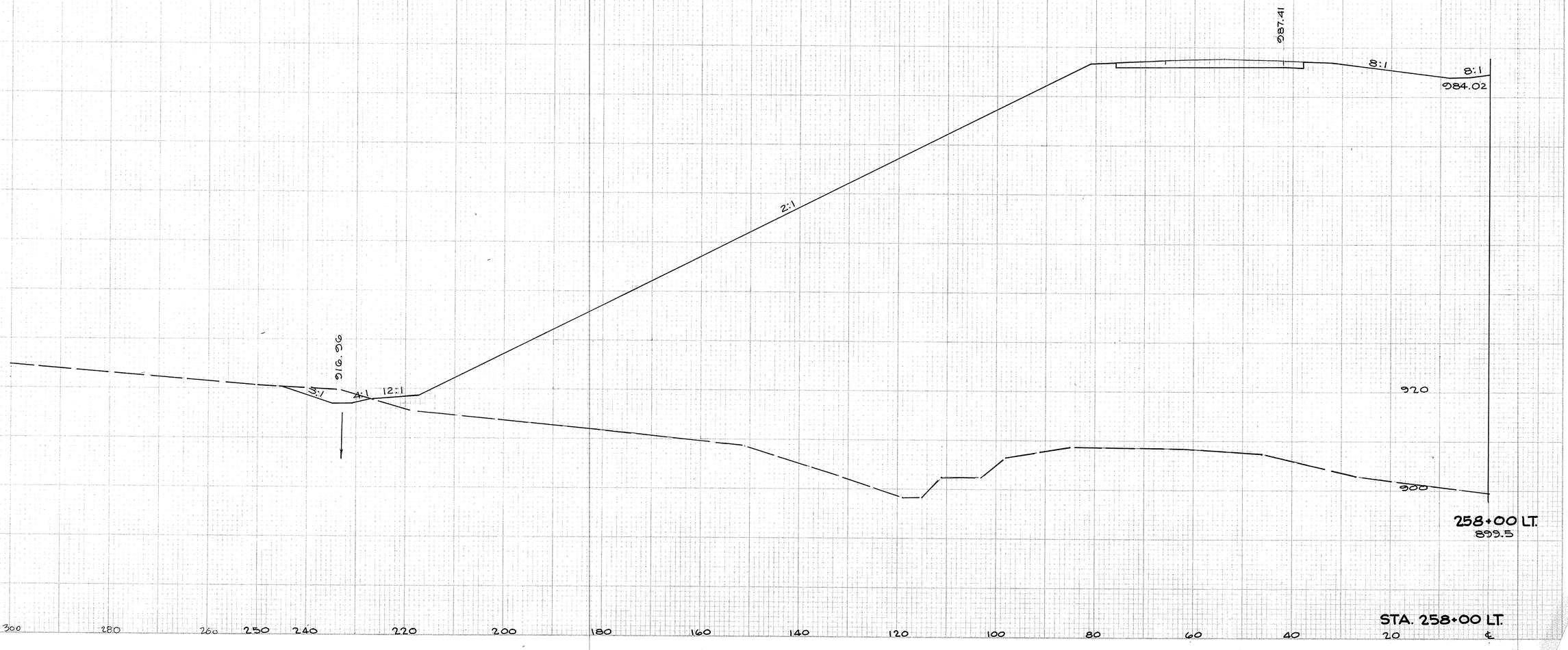


FED RD DIVISION	STATE	PROJECT	
2	OHIO		

125
510

SUM-271-2.98

END AREA CU.YDS.
(SEE SHEET 126)



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

126
510

SUM-271-2.98

END AREA CU.YDS.
(LT. & RT.)

880

"A" 2:1

300

988.96

8:1

2:1

C = 30
F = 27,811

900

890

258+00 RT.
839.5

℄ 20 40 60 80 100 120 140 160 180 200 220 240 250 300

880

"A"

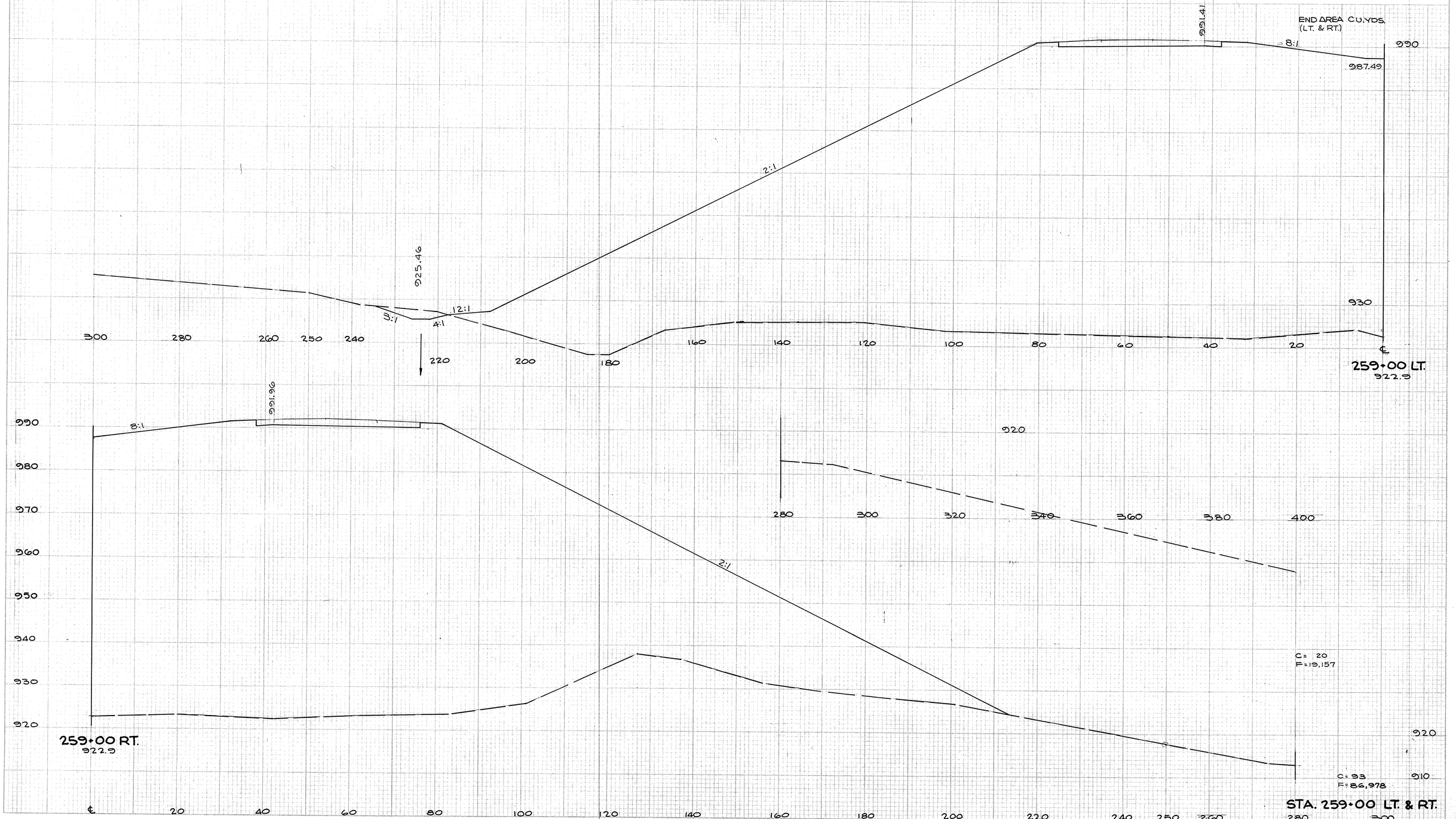
C = 141
F = 123,381

STA. 258+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

127
510

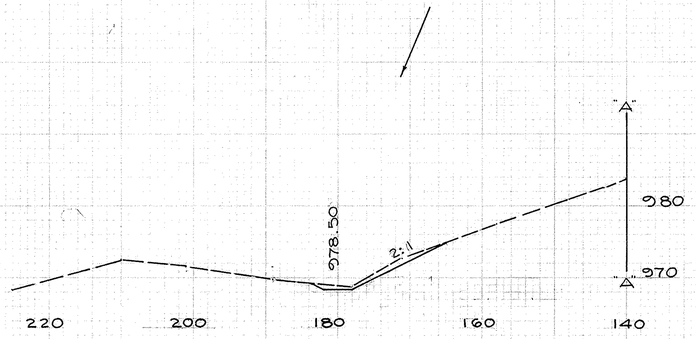
SUM·271·2.98

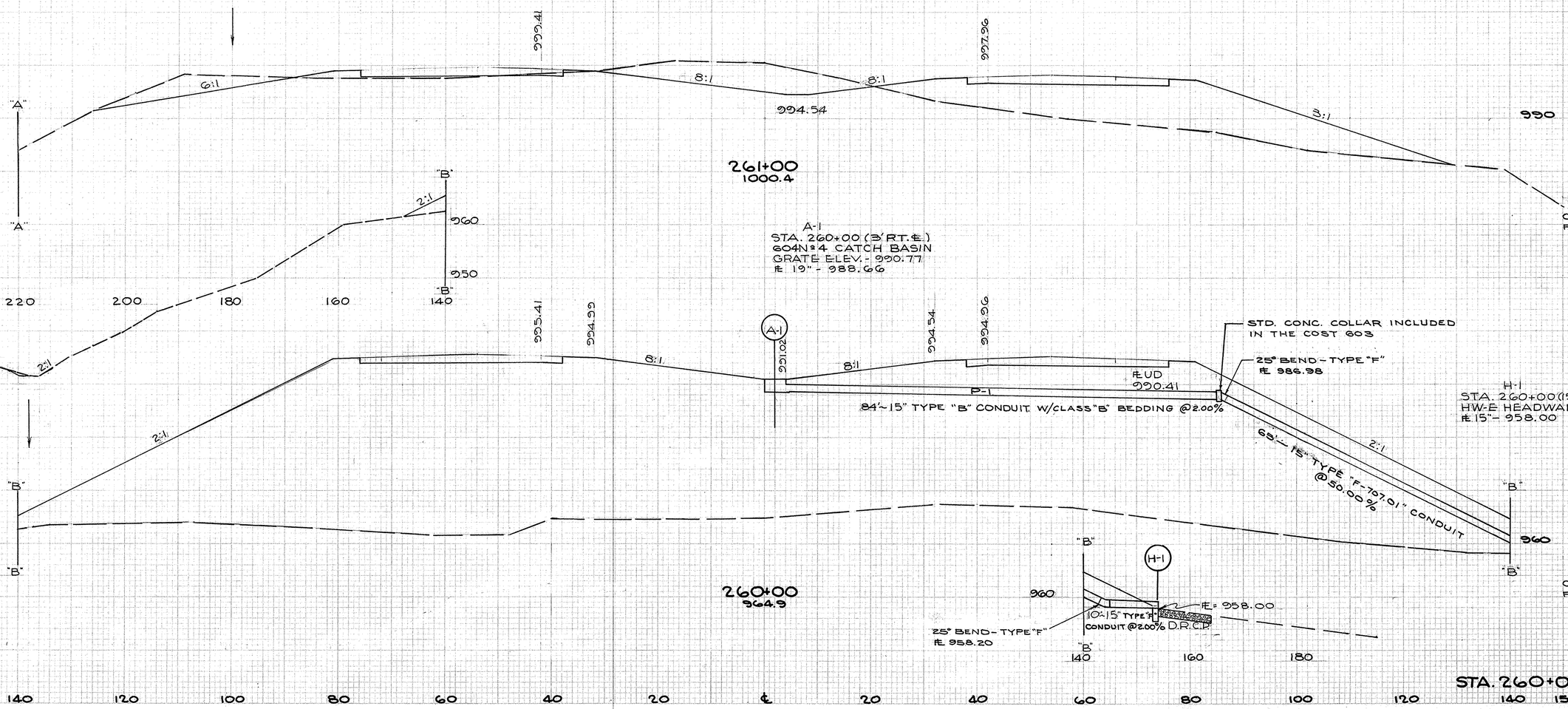


128
510

SUM· 271·2.98

END AREA CU. YDS.





STA. 260+00-261+00

FINAL SURVEY
ORIGINAL SURVEY
NOTE BOOK
NO.
DATE
STAFF
REVISED

SUM·271·2.98

END AREA CU.YDS

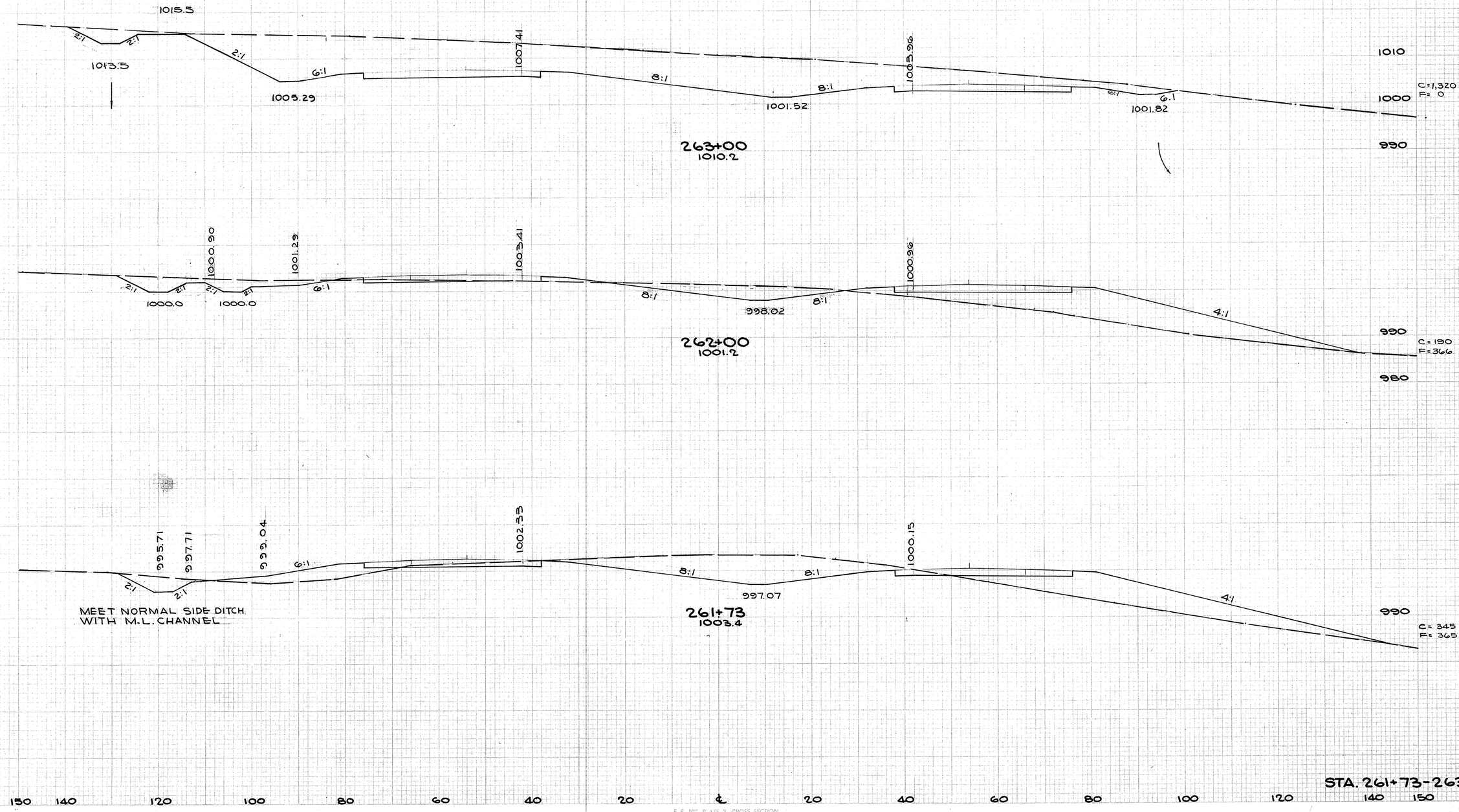


PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

130/510

SUM·271·2.98

END AREA CU.YDS.

A-6
STA. 267+00 (18' RT. ℄)
604 No. 5 CATCH BASIN
GRATE - 1013.79
FE 21" - 1011.14
FE 6" - 1012.39

H-2
STA. 266+50 (102' RT. ℄)
HW-E HEADWALL
FE 21" - 1005.80

P-6
98'-21" TYPE "B" CONDUIT W/CLASS "B" BEDDING @ 3.00%
FE U.D. - 1012.31

BEGIN D.R.C.P.
STA. 265+50
EXIST. CHANNEL

266+00
1033.7

265+00
1028.3

264+00
1021.3

STA. 264+00-266+00

C=3910
F=252

C=14,215
F=467

C=3766
F=0

C=12,226
F=0

C=2836
F=0

C=7696
F=0

FINAL SURVEY RECORD
NOTE BOOK PAGE
NO.

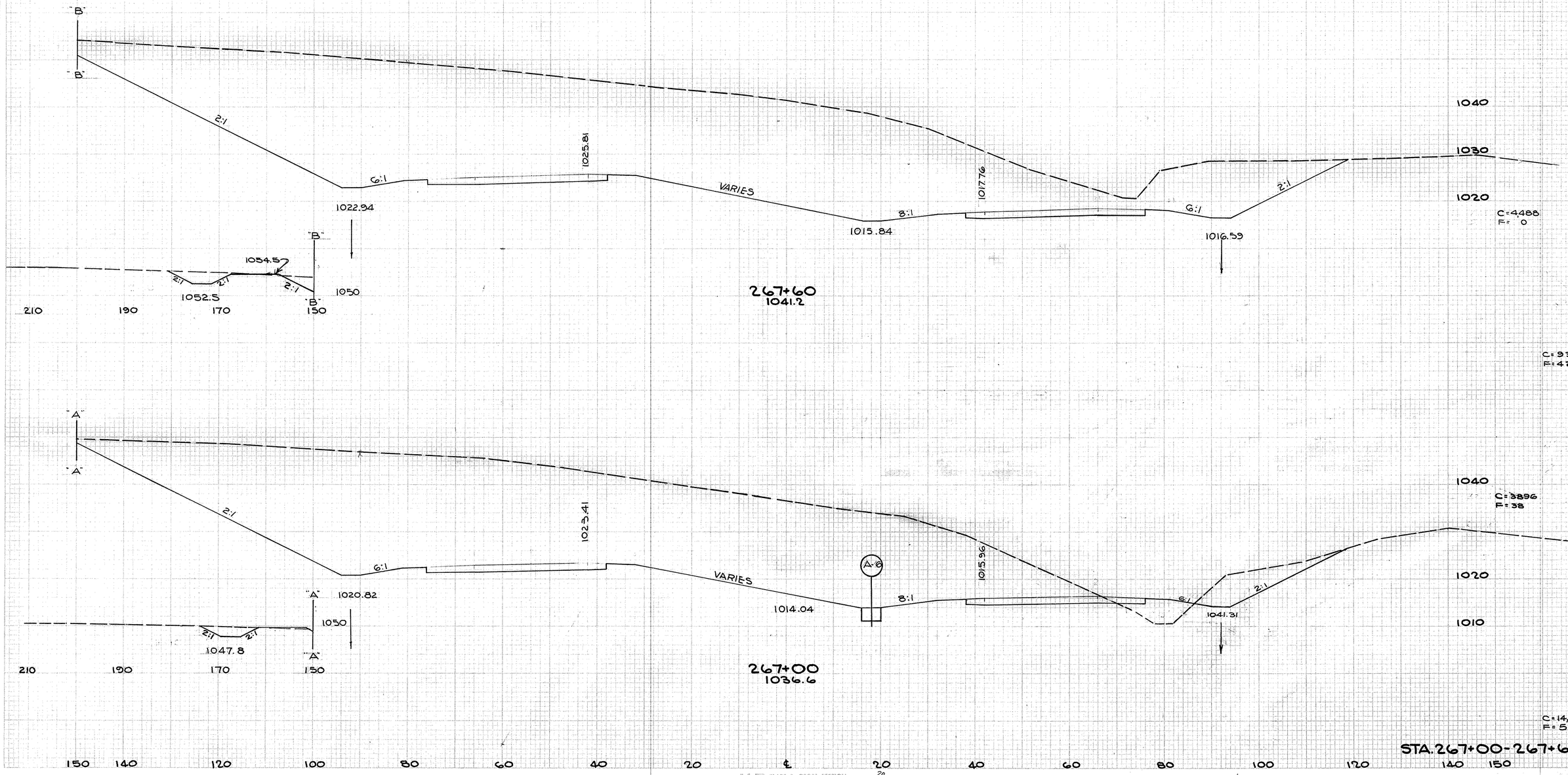
ORIGINAL SURVEY RECORD
NOTE BOOK PAGE
NO.

PLATE 3, CROSS SECTION
KLEINFELDER & FISHER CO.

SUM· 271·2.98

END AREA CU.YDS.

131
510



STA. 267+00-267+60

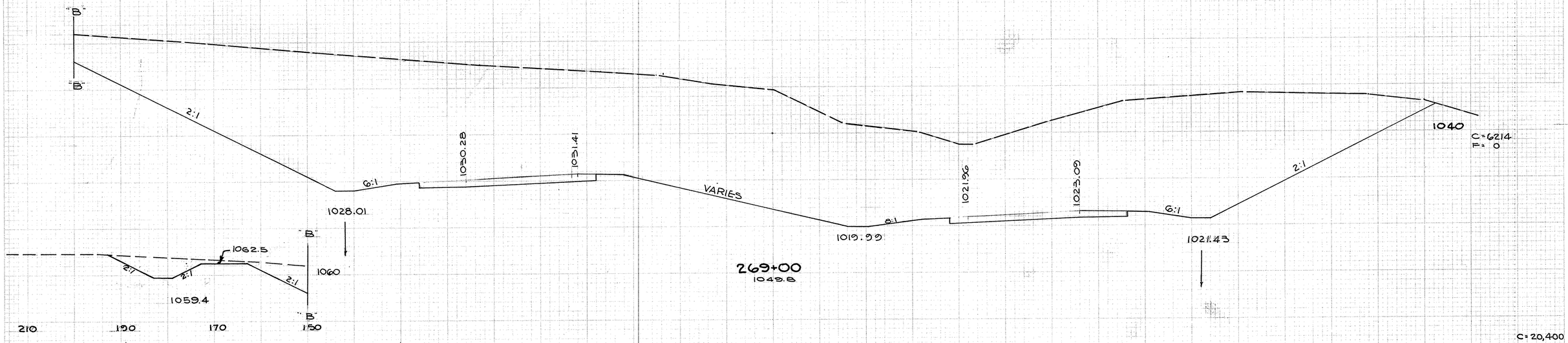
K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

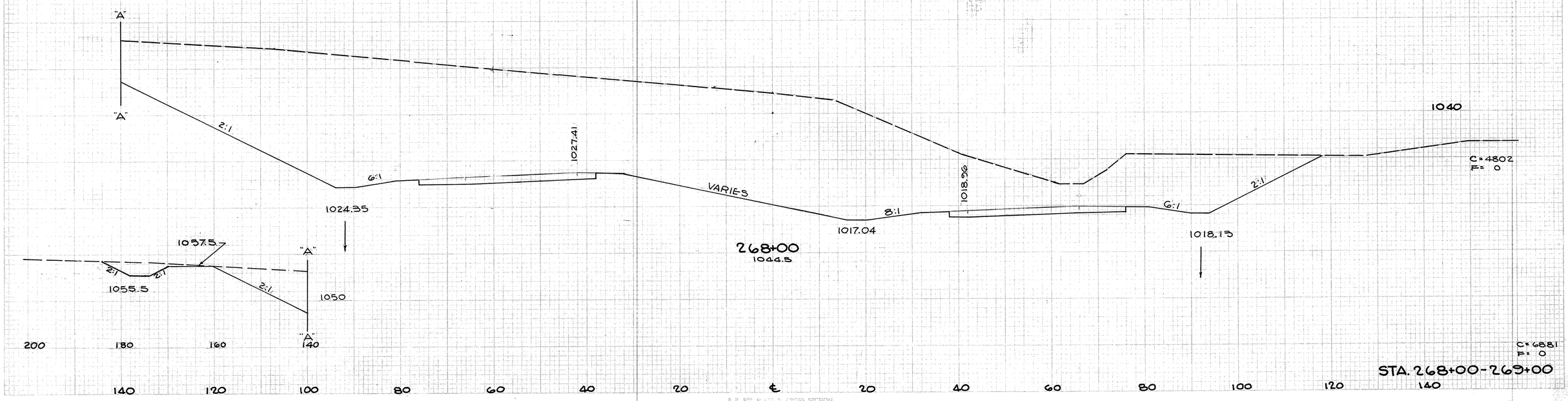
20

132
510

SUM · 271·2.98

END AREA CU.YDS.





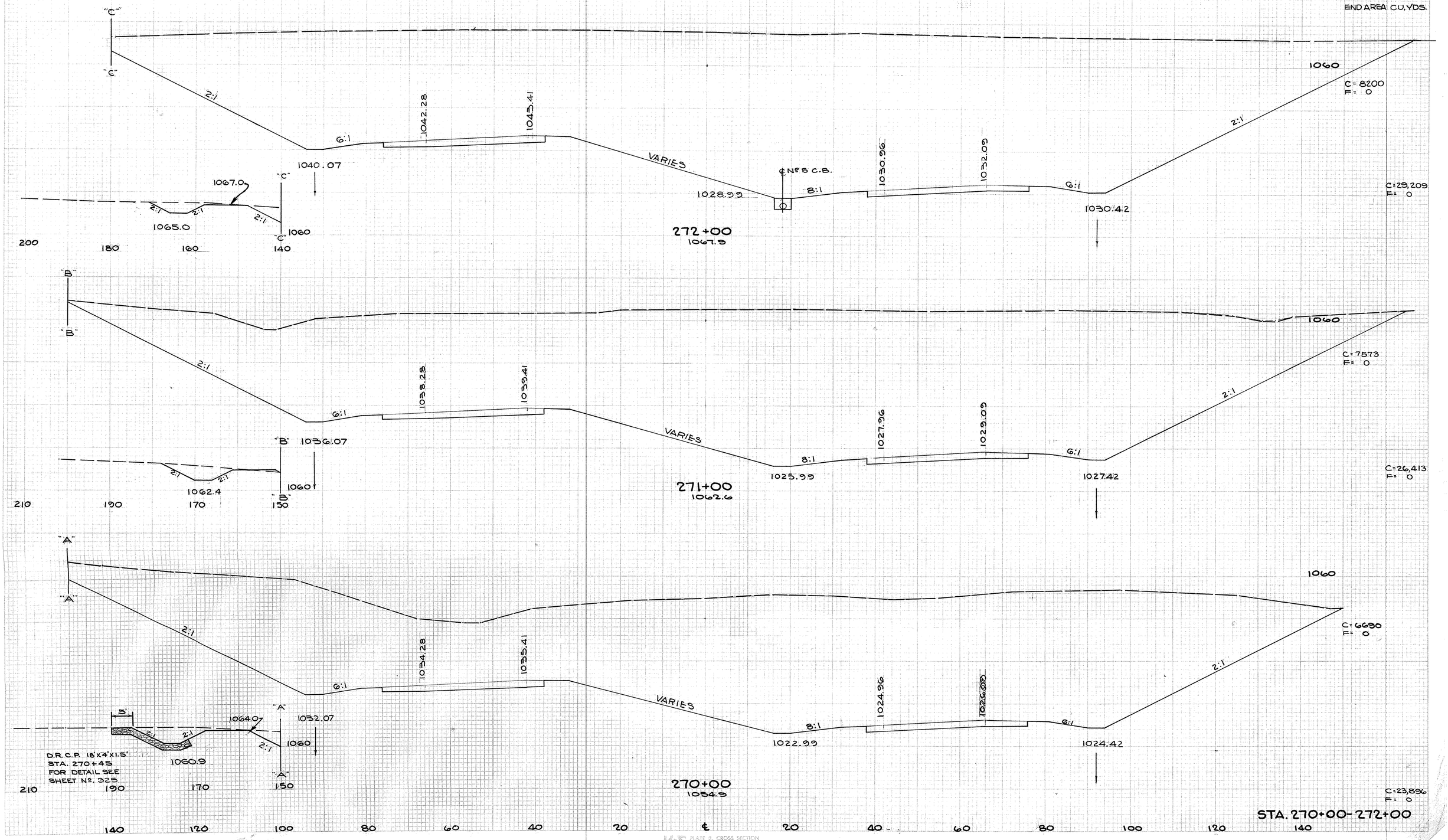
STA. 268+00-269+00

K&E PLATE 3, CROSS SECTION
KRUFFEL & ESSER CO.

133
510

SUM·271·2.98

END AREA CU.YDS.

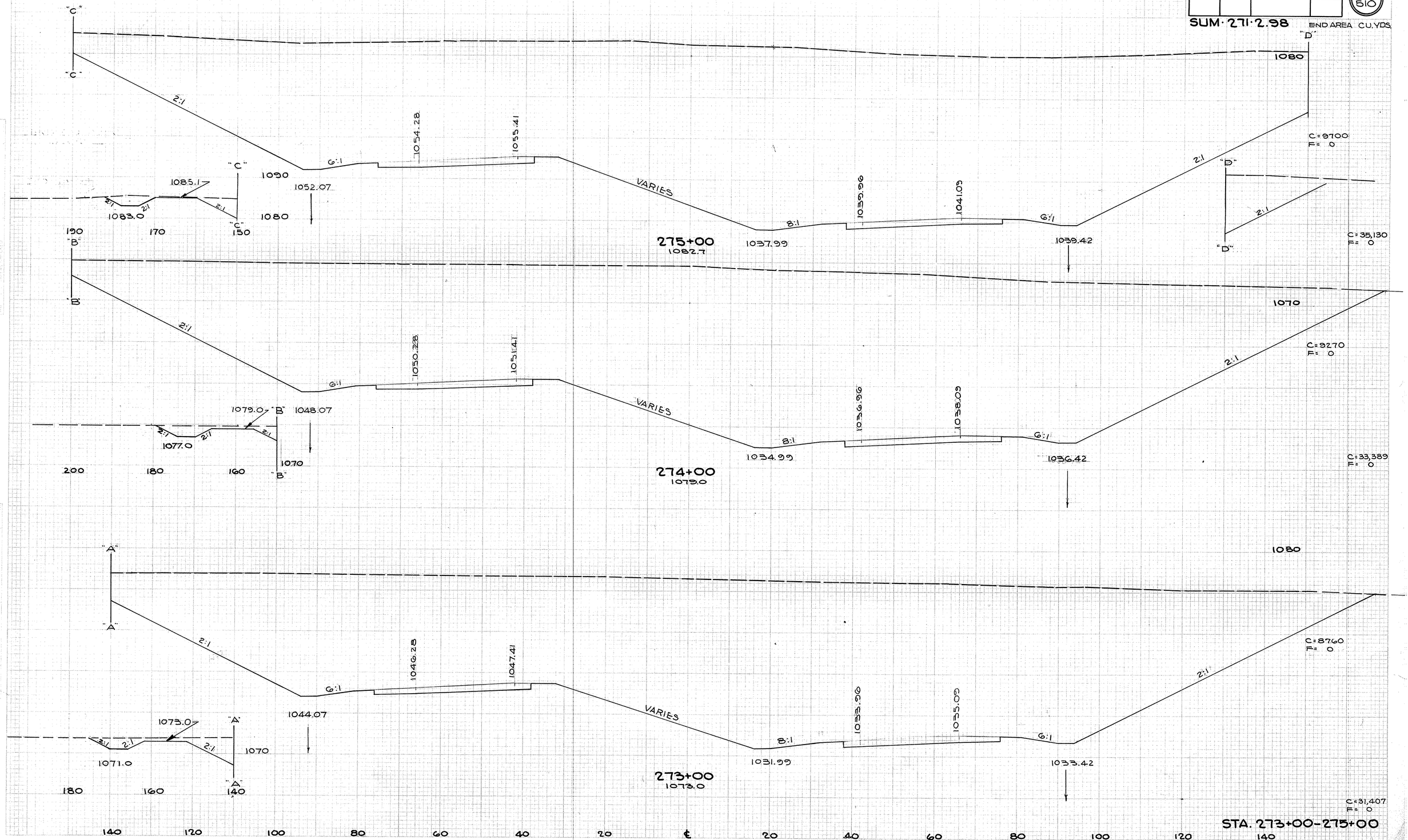


STA. 270+00-272+00

FINAL SURVEY
ORIGINAL SURVEY
NOTE SPACE FOR DATA
NO.

134/510

SUM · 271·2.98 END AREA CU.YDS.



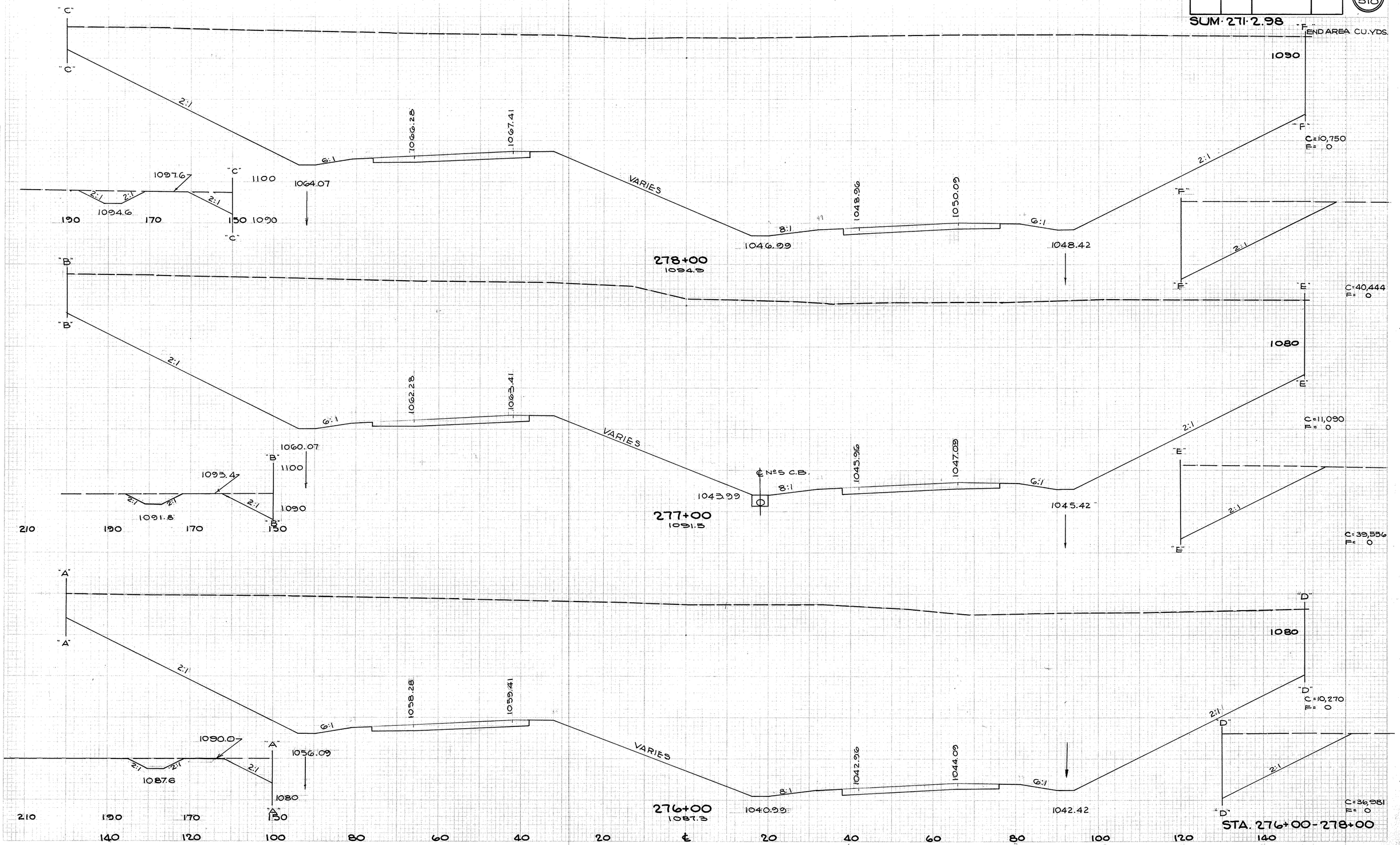
STA. 273+00-275+00

PLATE 3. CROSS SECTION.
KEUFFEL & ESSER CO.

135
510

SUM. 271. 2.98

END AREA CU.YDS.



STA. 276+00-278+00

K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

ORIGINAL SURVEY
FINAL SURVEY

SUM · 271·2.98

END AREA CU.YDS.

136/510

"C" 1099.67 "C"

2:1

"C" 5' 2:1 2:1 1096.6

I-10 D.R.C.P. 30'x8'x1.5'
STA. 281+34
FOR DETAIL SEE
SHEET No. 325

"C"

170 150

6:1 1077.81 1078.34 1075.60

VARIES

8:1 1057.96 1059.09 6:1 1056.04 1057.42

281+00
1103.8

"E" 1100 "E"

C=10,040
F= 0

2:1 "E" 2:1 "E"

"B" "B"

2:1

6:1 1074.14 1075.27 1071.93

1099.4 "B" 2:1 2:1 1096.4 "B" 1100

190 170 150

VARIES

8:1 1054.49 1054.96 1056.09 6:1 1053.04 1054.42

280+00
1100.0

"D" 1100 "D"

C=10,204
F= 0

2:1 "D" 2:1 "D"

"A" "A"

2:1

6:1 1070.21 1071.40 1068.06

1099.0 "A" 1100 2:1 2:1 1096.0 2:1 1090 "A"

180 160 140

VARIES

8:1 1051.96 1053.09 6:1 1050.04 1051.42

279+00
1097.5

"C" 1090 "C"

C=38,452
F= 0

C=10,560
F= 0

2:1 "C" 2:1 "C"

C=39,463
F= 0

160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

STA. 279+00-281+00

PLATE 3, CROSS SECTION
KNUPPEL & TISSUE CO.

137
510

SUM·271·2.98 END AREA CU.YDS.

"C" 1100 "C"

C=8800
F= 0

2:1 2:1 2:1 6:1 6:1 2:1

1097.8 1087.73 1088.86 1085.52 VARIES 1066.96 1068.09 1064.99 1066.42

8:1

284+00
1108.8

"C" 2:1 "C"

C=33,630
F= 0

"B" 1100 "B"

C=9,260
F= 0

2:1 6:1 6:1 2:1

1084.61 1085.74 1082.40 VARIES 1066.96 1065.99 1061.99 1063.42

8:1

283+00
1106.4

"B" 2:1 "B"

C=35,769
F= 0

5' 1.5' 2:1 2:1 1097.4

"B" "B"

160 140

I-10 D.R.C.P
STA. 283+00
35' X6' X1.5'
FOR DETAIL SEE SHEET Nº. 325

"A" 1100 "A"

C=10,055
F= 0

2:1 2:1 2:1 6:1 6:1 2:1

1097.0 1081.03 1082.43 1079.09 VARIES 1066.96 1062.09 1058.99 1059.92

℄ Nº 5 C.B

8:1

282+00
1105.3

"A" 2:1 "A"

C=37,213
F= 0

STA. 282+00-284+00

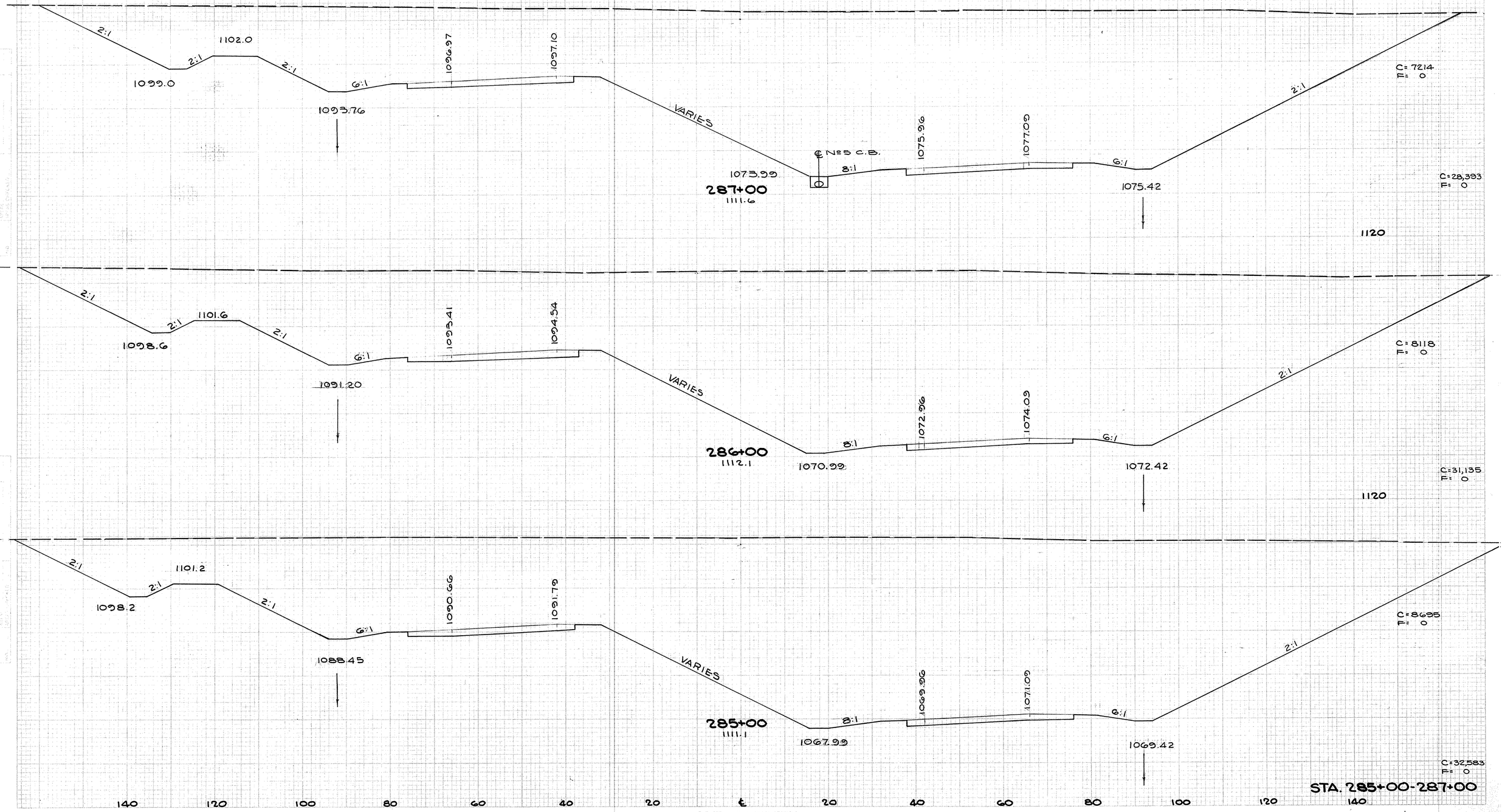
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

PLATE 5, CROSS SECTION
KELLFEL & LESSER CO.

138
510

SUM: 271-2.98

END AREA CU.YDS.



K+E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

				139 / 510

SUM· 271·2.98

END AREA CU.YDS.

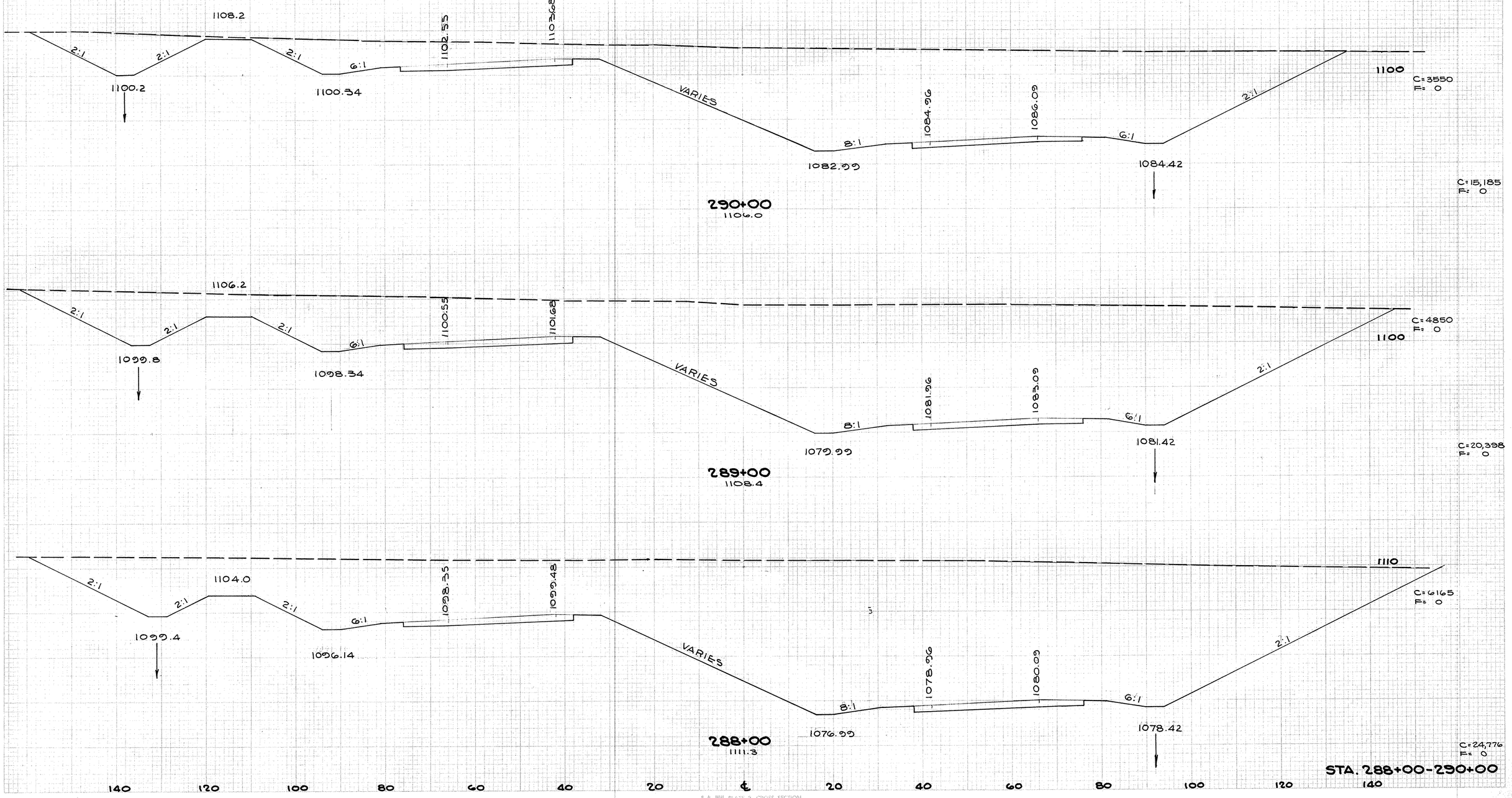
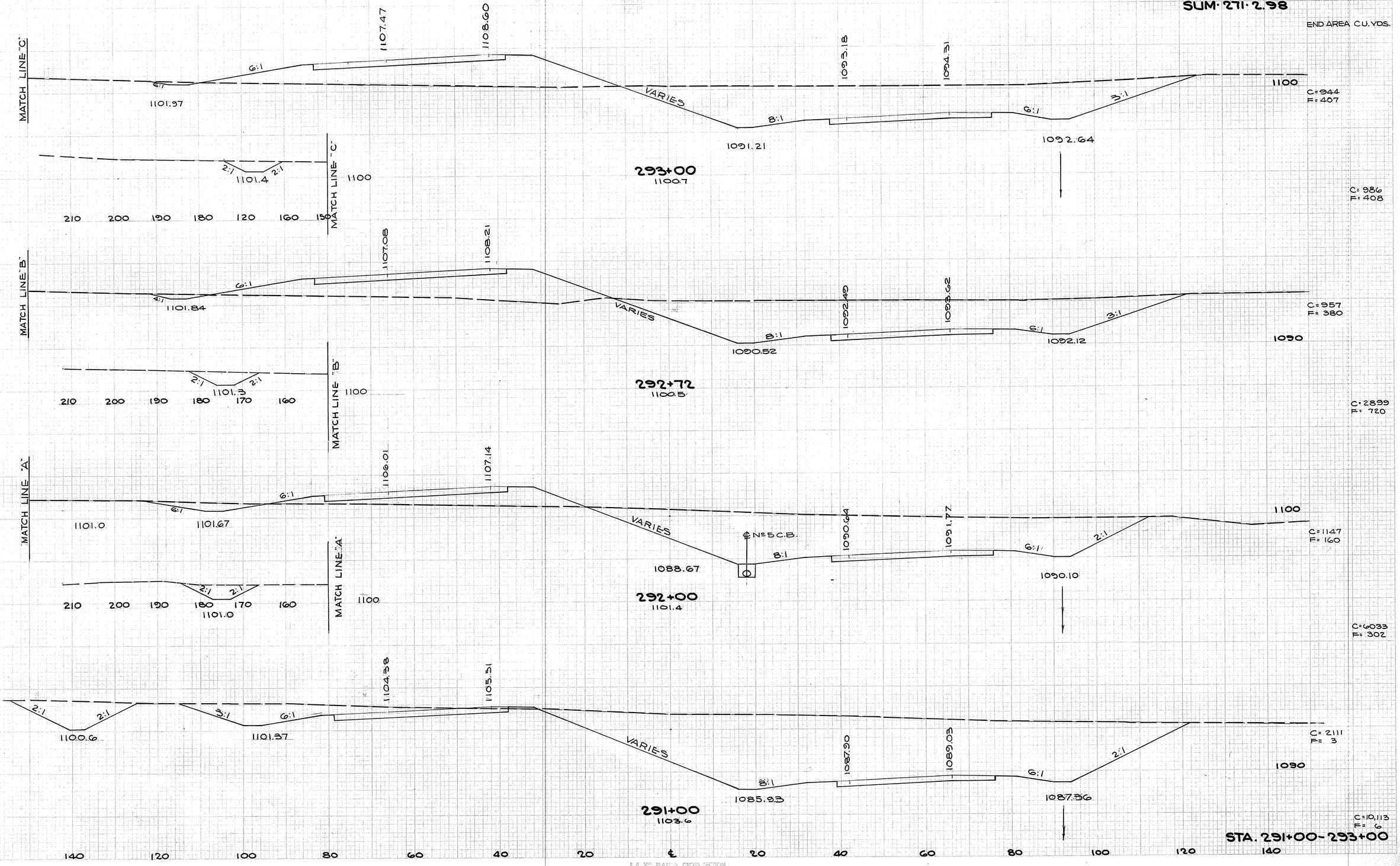


PLATE 3, CROSS SECTION
KOUFFUL & ESSER CO.

140
510

SUM· 271· 2.98

END AREA C.U.YDS.



STA. 291+00~293+00

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

141
510

SUM· 271· 2.98

END AREA C.U.YDS.

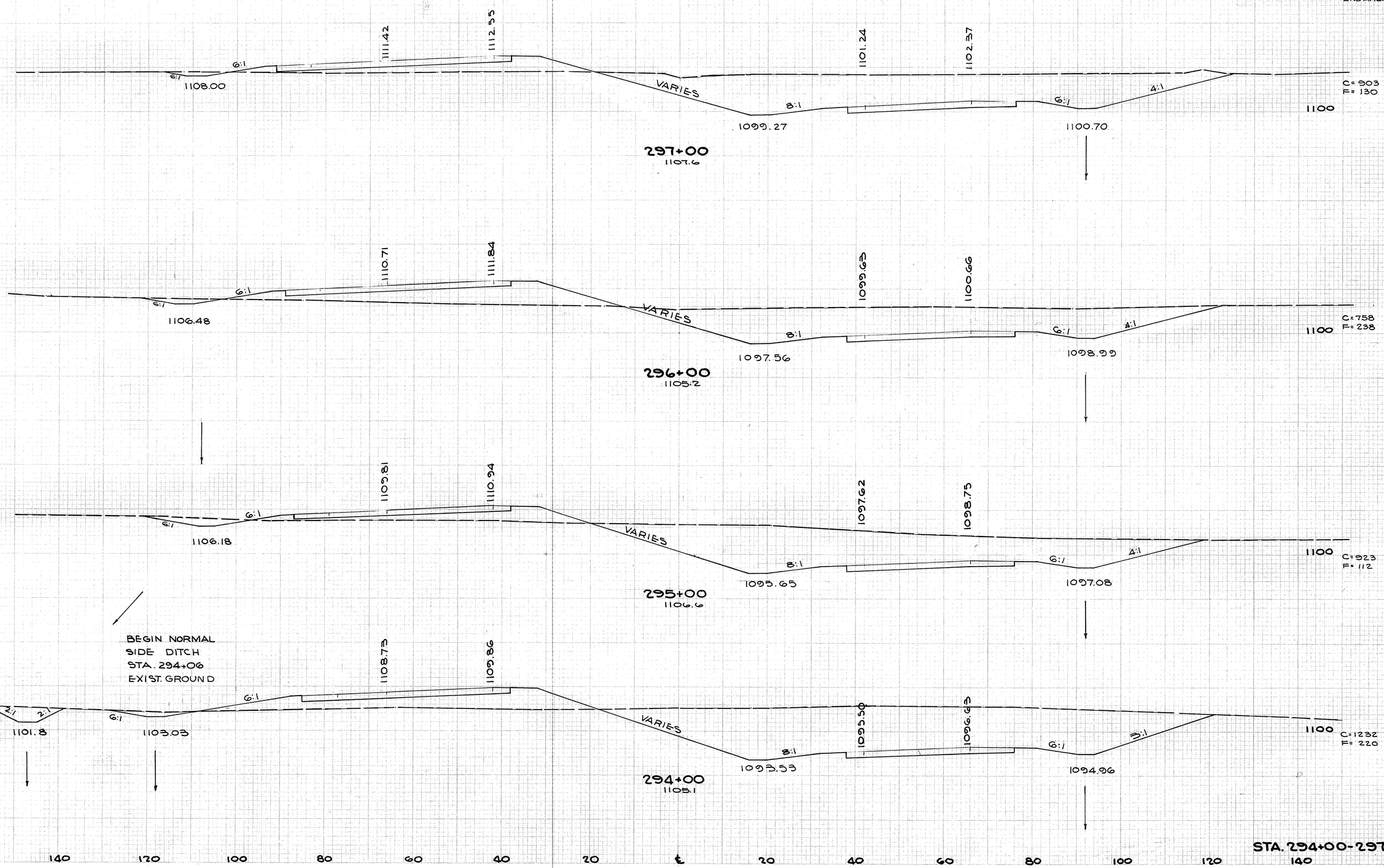
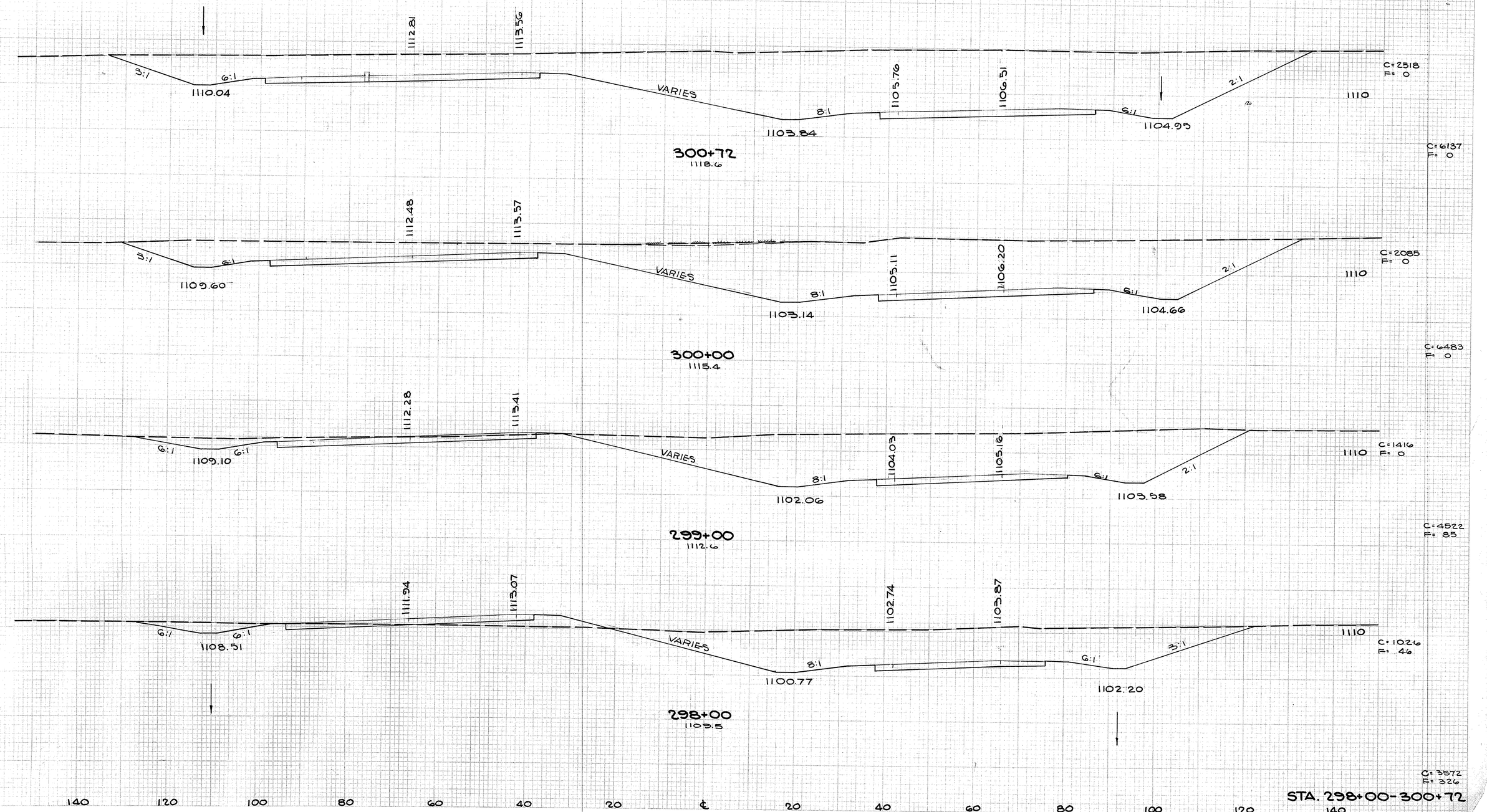


PLATE 5, CROSS SECTION
KEUFFEL & ESSER CO.

142
510

SUM· 271·2.98

END AREA CU.YDS.



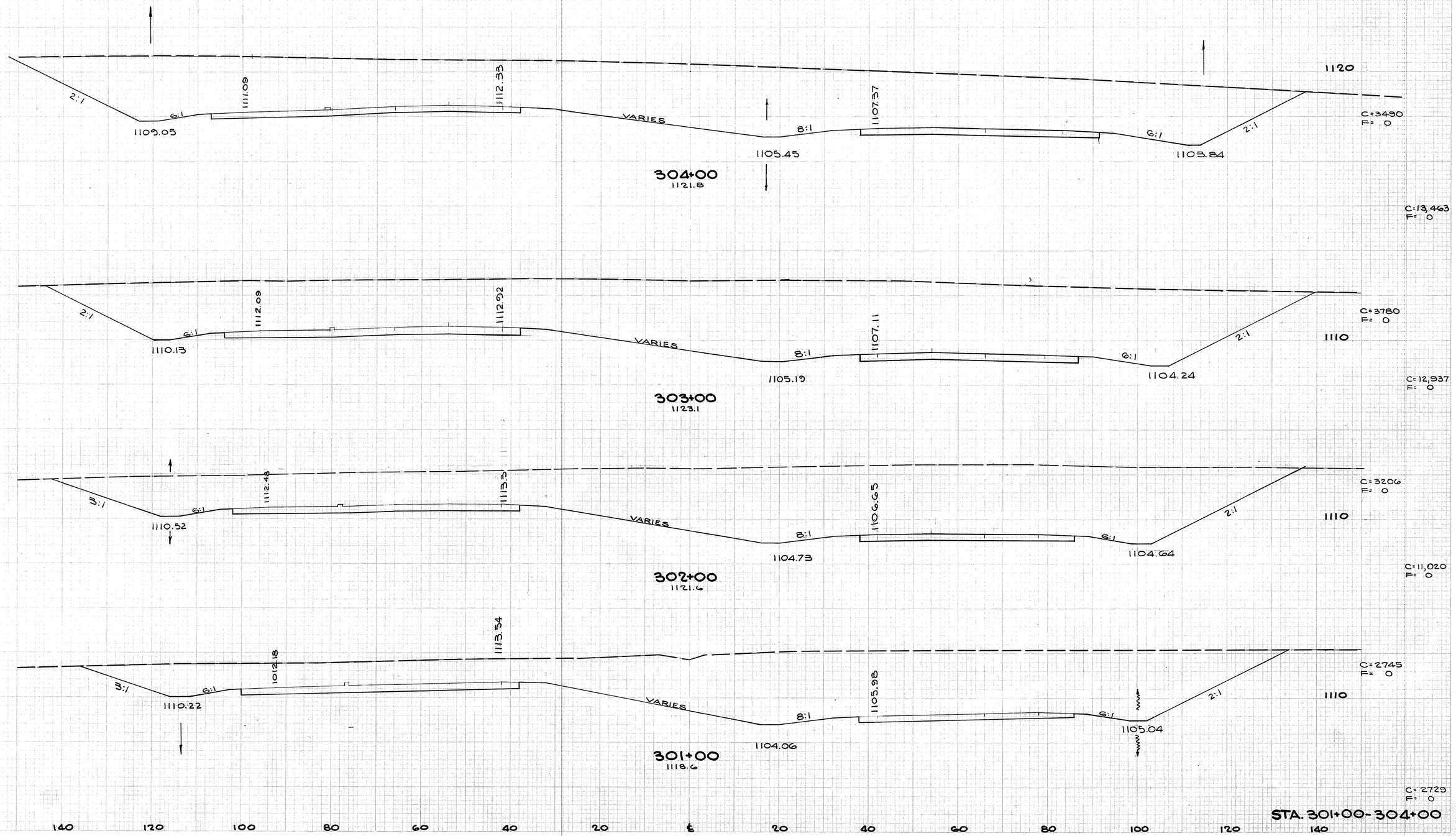
STA. 298+00-300+72

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

143
510

SUM·271·2.98

END AREA C.U.YDS.



STA. 301+00-304+00

144/510

SUM· 271·2.98

END AREA CU. YDS.

RAMP "F" STA 308+00

"B" "B" "B" "B"

1101.15 1108.13 1106.31

6:1 6:1 8:1 8:1 6:1 6:1

1106.01 1103.05

308+00
1103.8

RAMP "E"
307+96

1100
C= 505
F= 15

C=1926
F= 28

RAMP "F" STA 306+81

1109.46 1109.46 1106.88 1105.81

1107.32 6:1 8:1 8:1 6:1 6:1

1104.00 1102.64

C-535 AH. C-535 BK. C-100 BK.

C-535 AH.
F- 0 AH.
C-635 BK.
F- 0 BK.

1110

RAMP "E"
306+98

307+00
1108.1

C=5,380
F= 0

"A" "A" "A" "A"

2:1 2:1

C-2270 AH. C-957 BK. C-2270 BK.

VARIES

1110.60 1107.25

6:1 6:1 8:1 8:1 6:1 4:1

1105.86 1108.98 1104.76 1103.04

RAMP "F"
305+97

306+00
1112.8

C-2270 AH.
F- 0 AH.
C-3227 BK.
F= 0 BK.

1110

C=11,439
F= 0

1111.56 1107.41

2:1 6:1 8:1 8:1 6:1 3:1

1107.46 1105.52 1103.44

305+00
1117.8

C=2950
F= 0

1100

C=11,526
F= 0

STA. 305+00 - 308+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

PLATE 3, CROSS SECTION
KRUPPEL & DOSER CCL

SUM-271-2.98

SEE SR.303 EXTENDED

A-2
STA. 313+42.48 I-271 (79.89' LT. ℄)
604N° 6 CATCH BASIN
GRATE - 1099.36
℄ 12" — 1096.06
℄ 6" 1096.81

H-2
STA. 313+48.50 I-271 (129.50' LT. ℄)
HW-E. HEADWALL
℄ 12" 1094.96

D.R.C.P 10'x4'x1.5'

50'-12" TYPE "B" CONDUIT W/CLASS "B" BEDDING @ 2.20%

RAMP "G" STA. 312+07

RAMP "G" STA. 311+08

RAMP "G" STA. 313+02

RAMP "H" STA. 314+07

RAMP "H" STA. 313+22

RAMP "E" STA. 312+00
RAMP "H" STA. 311+70

RAMP "E" STA. 311+00

RAMP "F" STA. 309+60
RAMP "G" STA. 310+00

RAMP "F" STA. 310+00

RAMP "E" STA. 308+83

RAMP "F" STA. 309+60
RAMP "G" STA. 310+00

END AREA CU. YDS.

C=988
F= 0

C=2983
F= 74

C=623 AH.
F=40 AH.
C=480 BK
F=40 BK

C=3102
F= 93

C=1195
F= 10

C=3861
F= 98

C=890
F= 43

C=3093
F= 209

C=780
F= 70

C=2722
F= 241

C=690
F= 60

C=2213
F= 139

STA. 309+00-314+00

PLATE 3, CROSS SECTION
KUHNS & ESSER CO.

SUM-271-2.98

146
510

END AREA CU. YDS.

A-3
STA. 317+75 (77.78' RT ℄)
604 No. 6 CATCH BASIN
GRATE - 1092.71
℄ 12" — 1089.42

A-3 H-3 P-3
39-12" TYPE "B" CONDUIT
W/ CLASS "B" BEDDING
@ 1.00%
D.R.C.P
6'x4'x1.5'
H-3
STA. 317+75 (116.75' RT.℄)
HW-E. HEADWALL
℄ 12" - 1089.03
2:1
1089.00

1080

DIKE
1093.2
SEE CULVERT DETAIL
SHEET No. 332
6:1
1093.09
8:1
8:1
317+69
1097.4
1093.08
6:1
2:1
1089.05
C=1120
F= 0
1090

C=2473
F= 55

1094.01
2:1
2:1
2:1
1092.01
1090.02
6:1
1094.14
8:1
4:1
317+00
1096.7
4:1
8:1
2:1
C=815
F= 43
1090

C=3219
F= 441

2:1
1091.74
6:1
1095.70
8:1
4:1
317+00
1095.4
4:1
8:1
1095.70
4:1
SEE CULVERT DETAIL
C=923
F=195
1090

A-1 STA. 315+00 (℄)
604 No. 4 CATCH BASIN
GR. ELEV. 1092.84
INV. 15" 1090.73

C=3881
F=552

RELOC. S.R. 303
STA. 48+00
4:1
1092.14
6:1
1097.26
8:1
315+00
1094.9
A-1
1097.26
8:1
C-943 AH.
F-103 AH.
C-230 AH.
F- 0 AH.
C-943 BK.
F-103 BK.
SEE RAMP "H" 315+04
1095.37
H-1
C-1173 AH.
F-103 AH.
C=943 BK
F=103 BK
DITCH TO CHANNEL
P-1
℄ U.D. 1091.10
℄ U.D. 1091.54
143'-15" TYPE "B" CONDUIT W/ CLASS "B" BEDDING @ 2.00%
D.R.C.P
10'x4'x1.5'
1090

H-1
STA. 315+00 (143' RT. ℄)
HW-E. HEADWALL
℄ 15" - 1087.87

C=3576
F= 191

STA. 315+00 - 317+69

150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

SUM-271-2.98

147
510

ENDAREA CU.

164.81' TO ℄ I-271 (STA. 321+10)

1100.28

1100

℄ DRIVE
0+56.72

C-19
F-0

C-26
F-0

C-6
F-0

1100

℄ DRIVE
0+00
MEET EXIST.

3:1 6:1 8:1 8:1 6:1 3:1

1085.26

1087.40

321+00
1097.1

1087.40

1085.11

C=3155
F=0

1090

C=12,024
F=0

3:1 6:1 8:1 8:1 6:1 VARIES

1087.31

1089.46

320+00
1099.5

1089.46

1086.04

C=3338
F=0

END DIKE STA. 319+45
TOP ELEV. =1097.5

A-4
STA. 318+97.21 (76.04' RT ℄)
604 N° G CATCH BASIN
GRATE ELEV. - 1090.89
℄ 12" — 1087.60
℄ 6" — 1088.35

H-4
STA. 318+97.21 (116.04' RT. ℄)
HW.-E. HEADWALL
℄ 2" - 1087.00

C=10,898
F=0

A-4

H-4

DIKE
1097.0

2:1 6:1 8:1 8:1 6:1 3:1

1088.87

1091.02

319+00
1100.3

1091.02

1088.98

D-4
40'-12" TYPE "B" CONDUIT
W/CLASS "B" BEDDING
@ 1.50%

D.R.C.P.
5'x4'x1.5'

C=2547
F=0

1090

C=7328
F=0

DIKE
1096.0

SEE CULVERT DETAIL
SHEET N°. 332

2:1 6:1 8:1 8:1 6:1 3:1

1090.37

1092.58

318+00
1094.8

1092.58

1088.31

C=1410
F=0

1090

C=1056
F=0

DIKE
1094.0

JAR.

6:1 8:1 8:1 6:1 3:1

1092.90

317+79
1094.6

1092.90

1088.59

C=1305
F=0

1090

C=449
F=0

STA. 317+79 - 321+00

150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

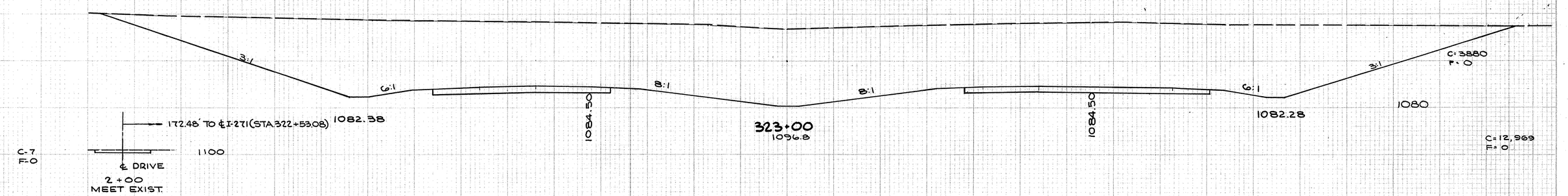
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

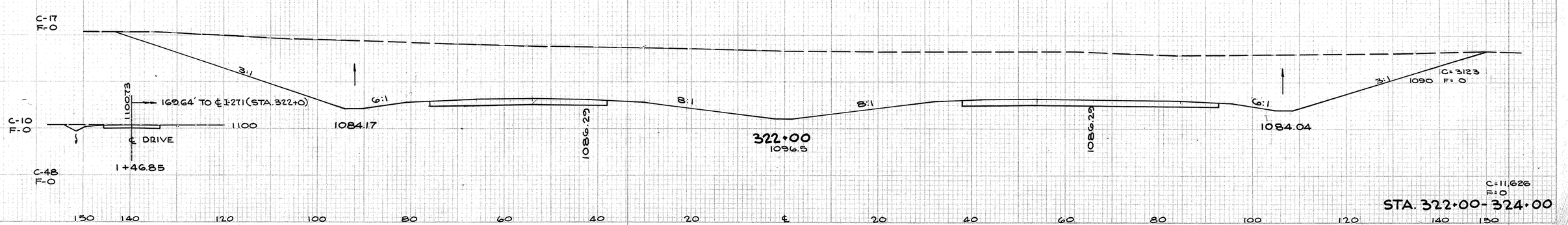
148
510

SUM·271·2.98

END AREA CU. YDS.







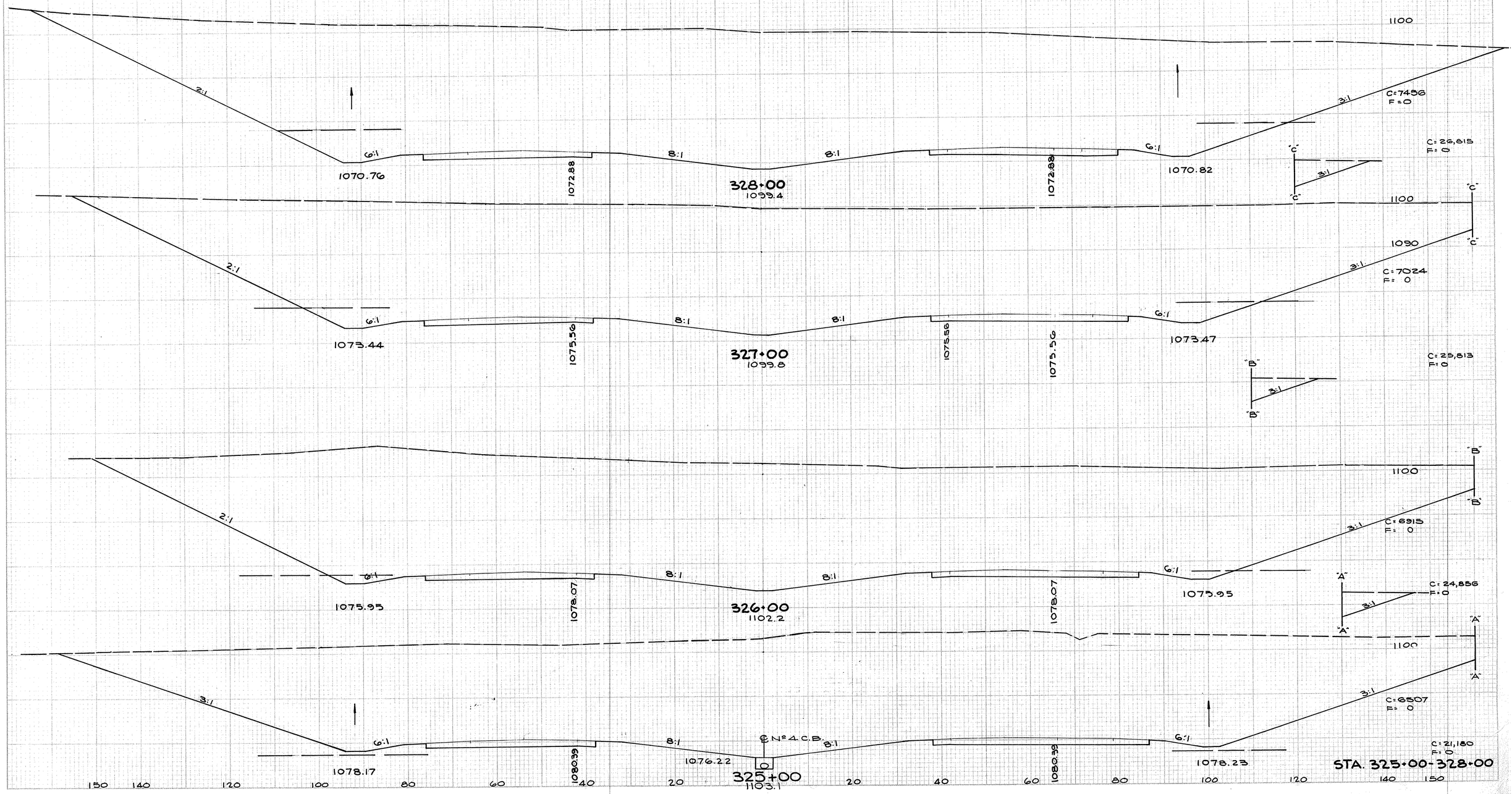
STA. 322·00-324·00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

145
510

SUM-271-2.98

END AREA CU. YDS.



STA. 325+00-328+00

FED. RD. DIV.NO.	STATE	PROJECT	
2	OHIO		

150
510

SUM·271·2.98

END AREA CU. YDS.

"C"
3:1
"C"

2:1
6:1
1061.90
1064.02
8:1
8:1
1063.60
331+00
1100.2
1064.02
6:1
1061.90
"C"
1090
C=10,527
F= 0
"C"
3:1
"B"
3:1
"B"
C= 37,491
F= 0

1100
"B"
2:1
6:1
1064.90
1067.02
8:1
℄ No 4 C.B.
8:1
330+00
1101.2
1067.02
6:1
1064.95
"B"
C=9718
F= 0
"B"
3:1
"A"
3:1
"A"
C= 33,880
F= 0

1100
"A"
2:1
6:1
1067.89
1070.01
8:1
8:1
329+00
1100.3
℄
1070.01
6:1
1067.98
"A"
C=8550
F=0
3:1
"A"
C= 29,641
F= 0

150 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 150

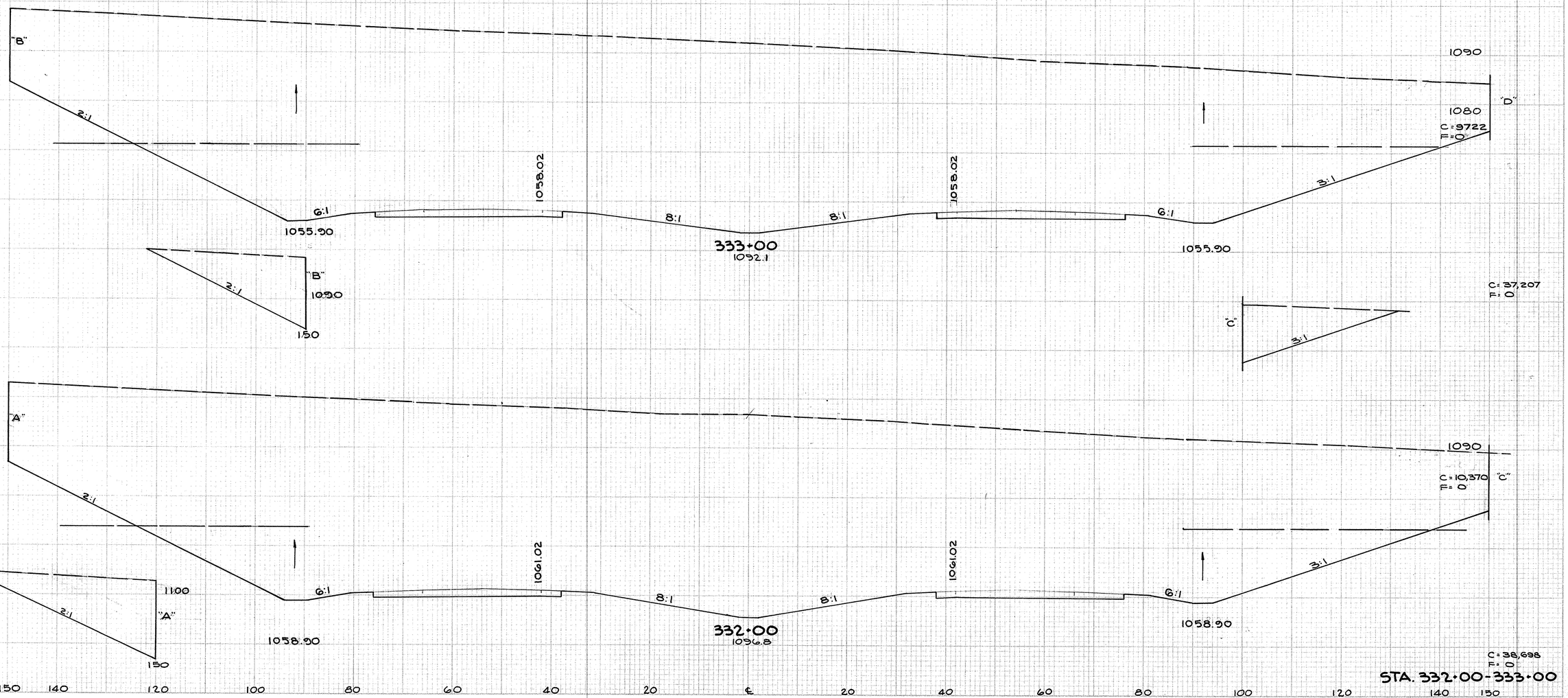
STA. 329+00 - 331+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

151
510

SUM·271·2.98

END AREA CU. YDS.

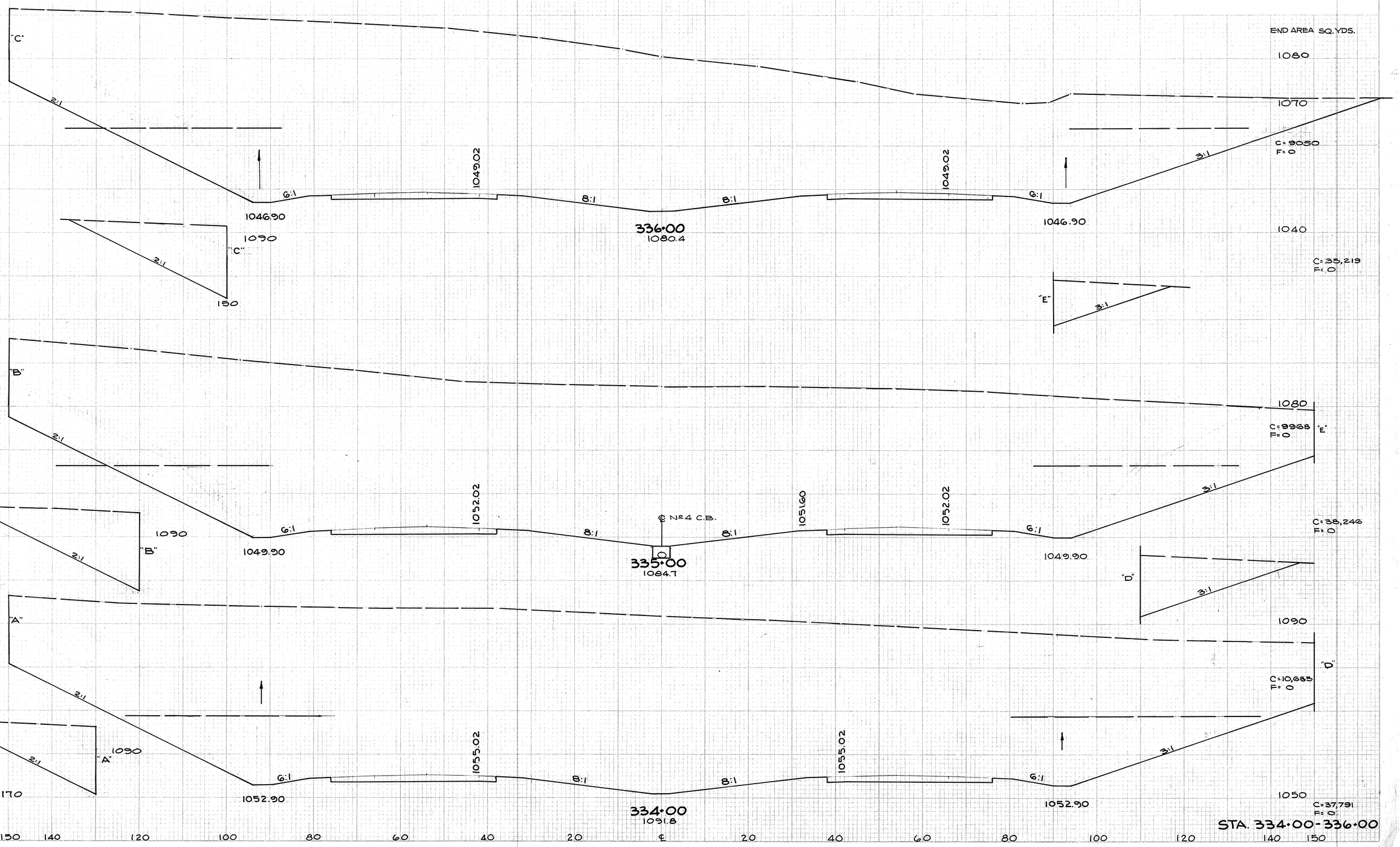


STA. 332·00-333·00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

152
510

SUM-271-2.98

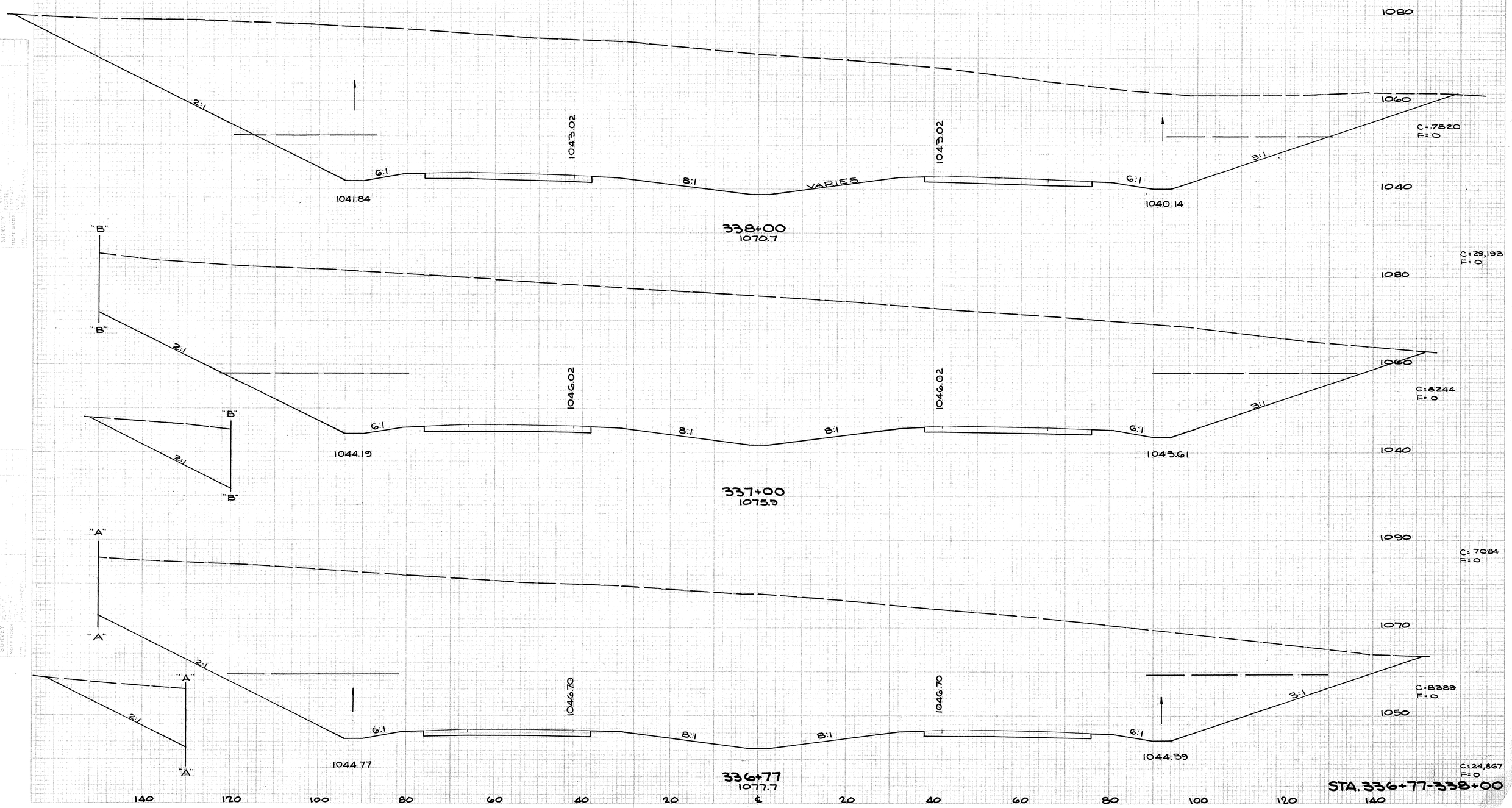


STA. 334·00-336·00

153/510

SUM·271·2.98

END AREA SQ.YDS.



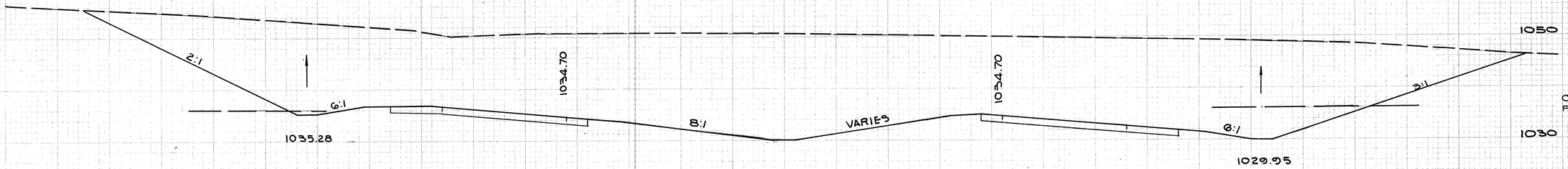
STA. 336+77-338+00

PLATE 3, CROSS SECTION
MURPHY & FISSER CO.

SUM·271·2.98

END AREA CU.YDS.

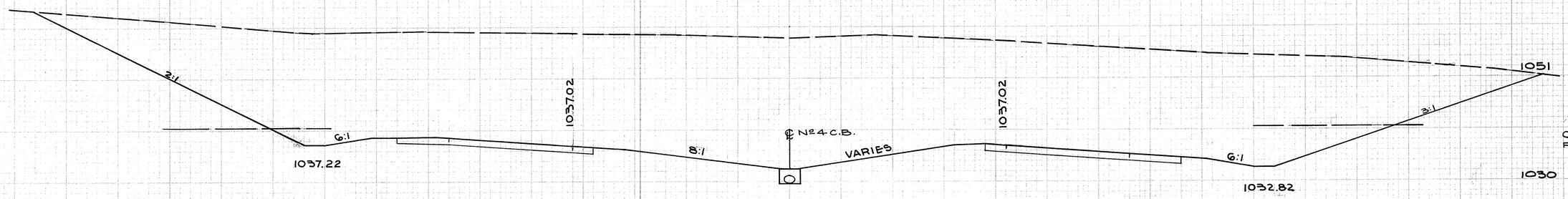
154
510



340+77
1050.6

C=4166
F=0

C=13,626
F=0



340+00
1057.9

C=5390
F=0

C=22,367
F=0



339+00
1066.6

C=6688
F=0

C=26,311
F=0

STA. 339+00 - 340+77

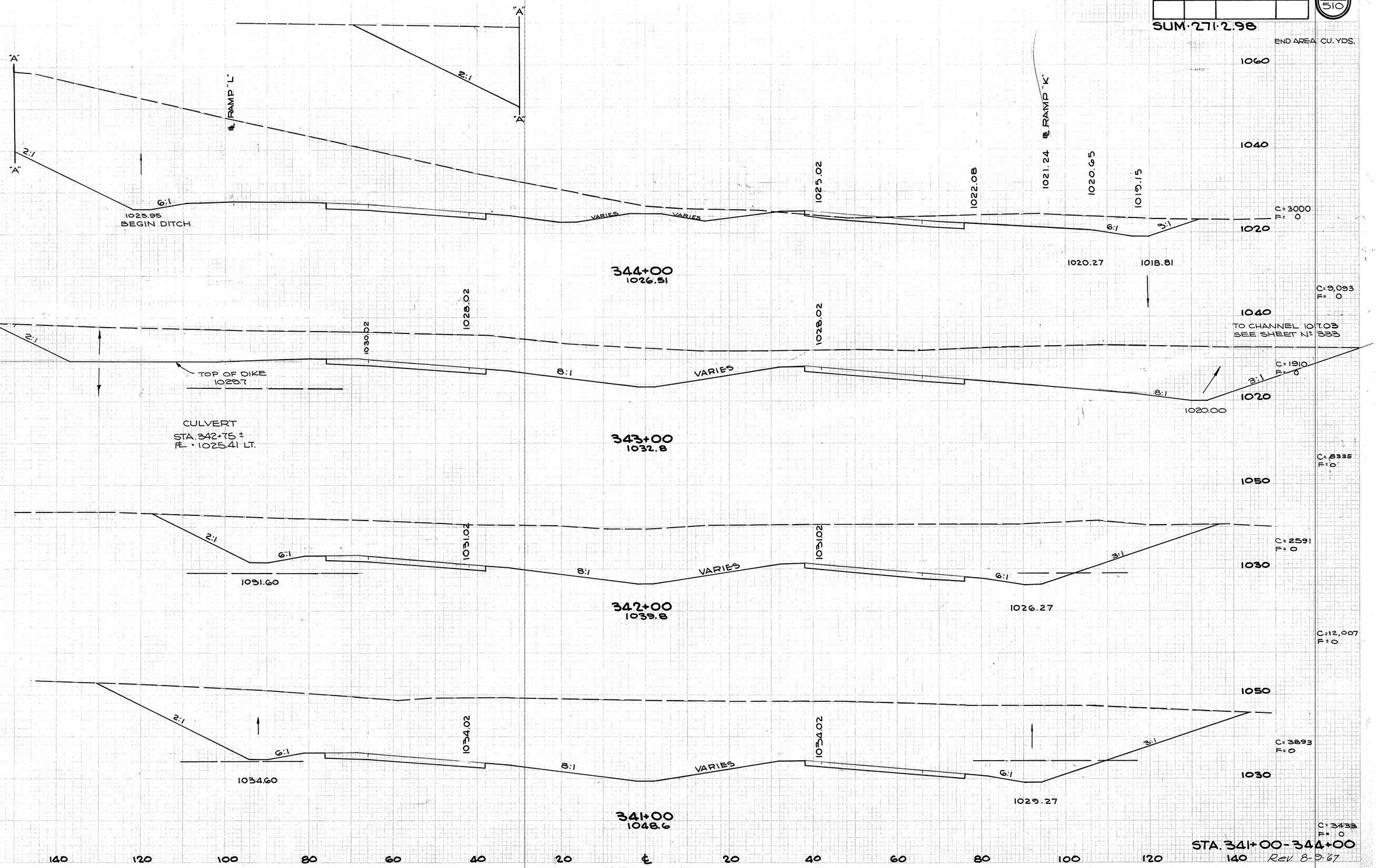
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

155
510

SUM·271·2.98

END AREA CU. YDS.



STA. 341+00-344+00

Rev. 8-9-67

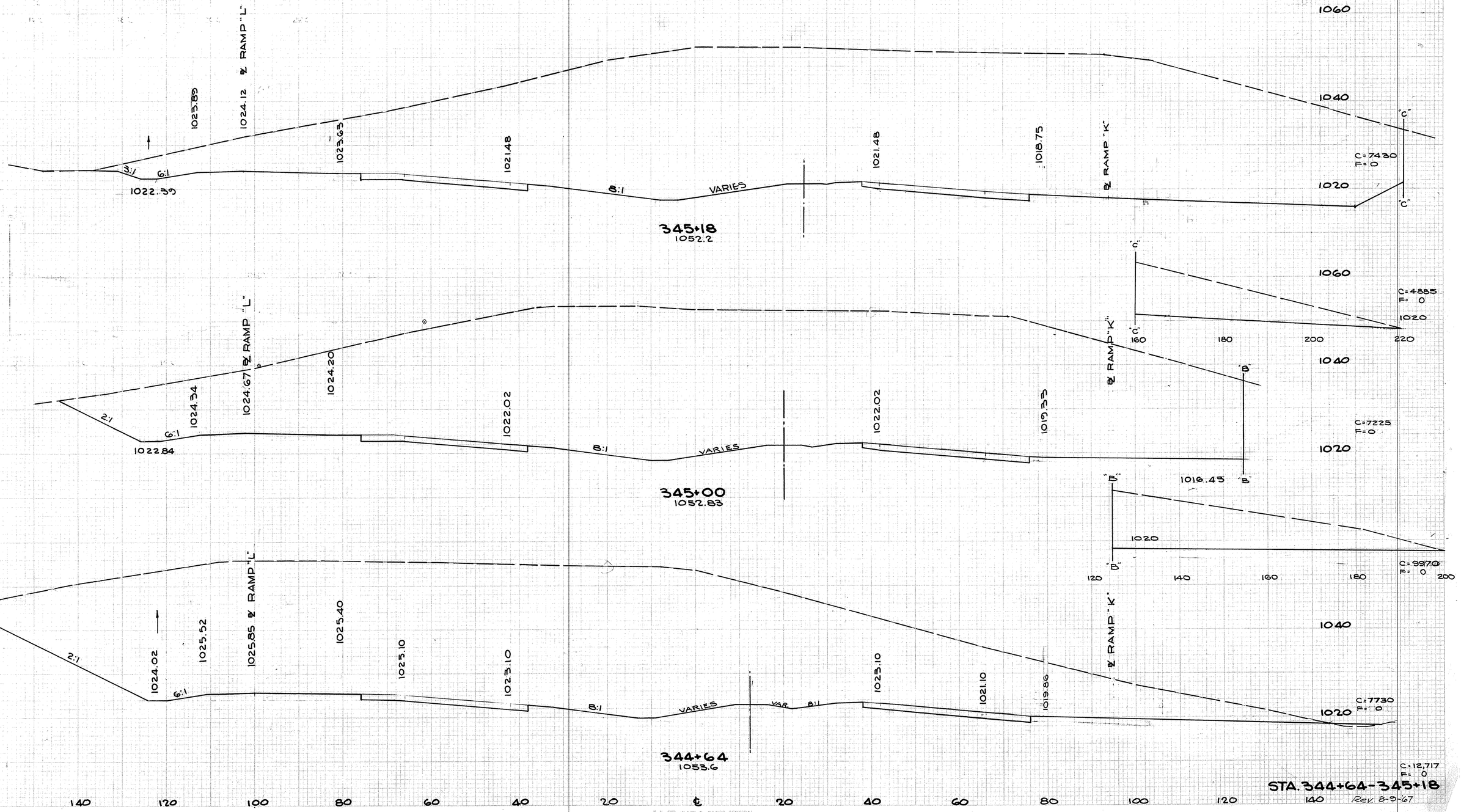
PLATE 5. CROSS SECTION

K&E KEUFFEL & ESSER CO.

SUM·271·2.98

END AREA CU. YDS.

156
510



STA. 344+64-345+18

Rev. 8-9-67

K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.

157
510

SUM·271·2.98

END AREA CU. YDS.

END BRIDGE - 348+30.81

3:1

1013.60

6:1

BRIDGE ABUT.

ABUT. BENCH
SEE SHEET Nº 450

348+00
1000.5

C-300
F-0

1000

C-834
F-0

980

ZERO SECTION
347+50

C-100
F-100

1010

990

C-0
F-0

347+00
993.8

"A"

FACE OF ABUTMENT

1040

BRIDGE SLOPE

"A"

C-0
F-0

ZERO SECTION
346+75

1050

"A"

BEGIN BRIDGE ~ 346+15.94

C-3743
F-18

1030

1019.02

1017.02

"A"

1014.20

BRIDGE ABUT. BENCH
SEE SHEET Nº 450

346+00
1017.5

1010

C-2695
F-13

990

C=15,375
F=20

STA. 346+00-348+00

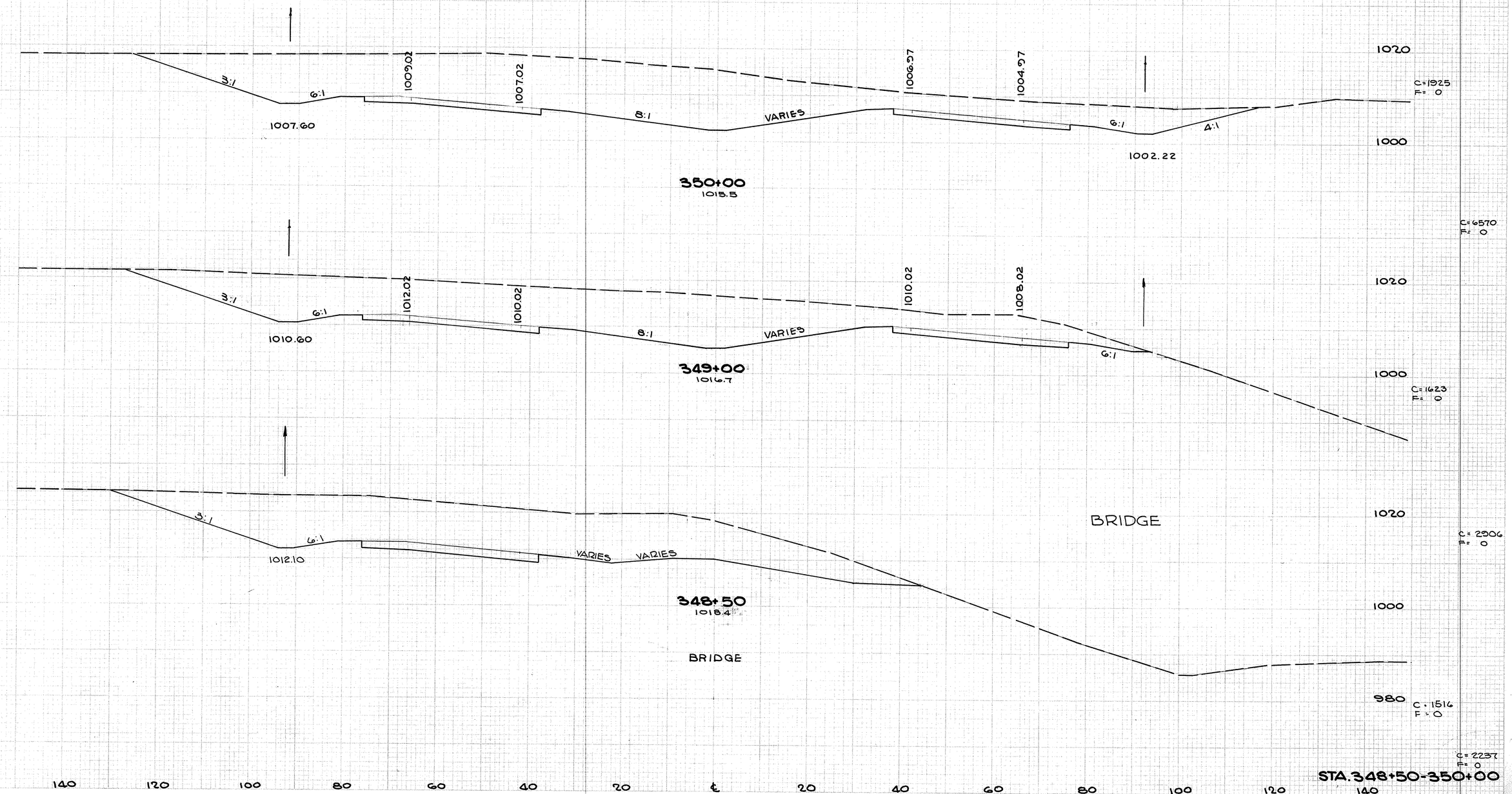
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

PLATE 3, CROSS SECTION
KRUEGER & ESSER CO.

158
510

SUM·271·2.98

END AREA CU.YDS.

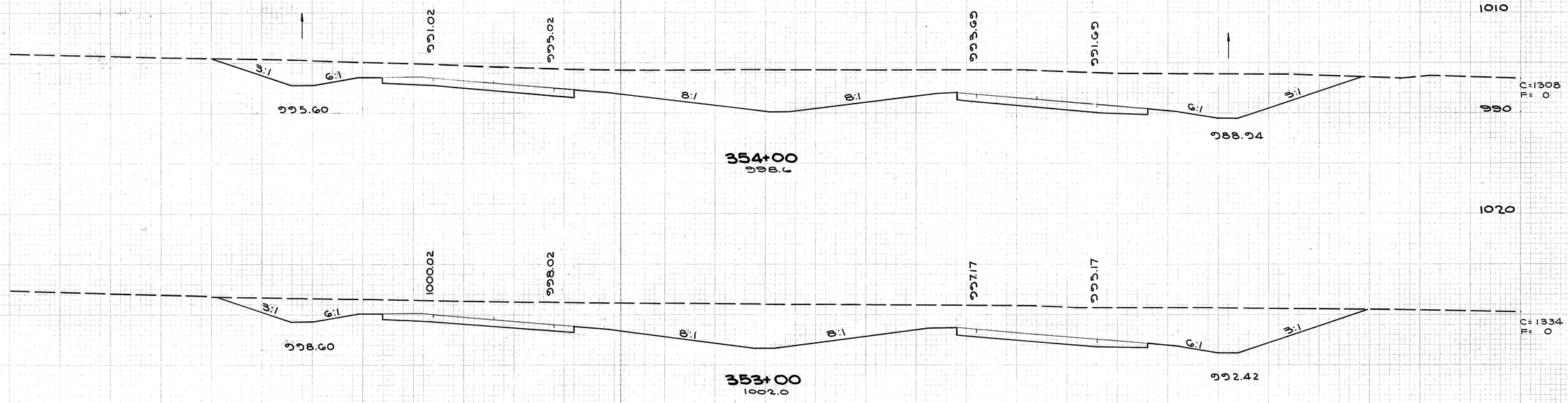


FINAL SURVEY
NOTE BOOK REFERENCE
ORIGINAL SURVEY
NOTE BOOK REFERENCE

159
510

SUM·271·2.98

END AREA CU. YDS.



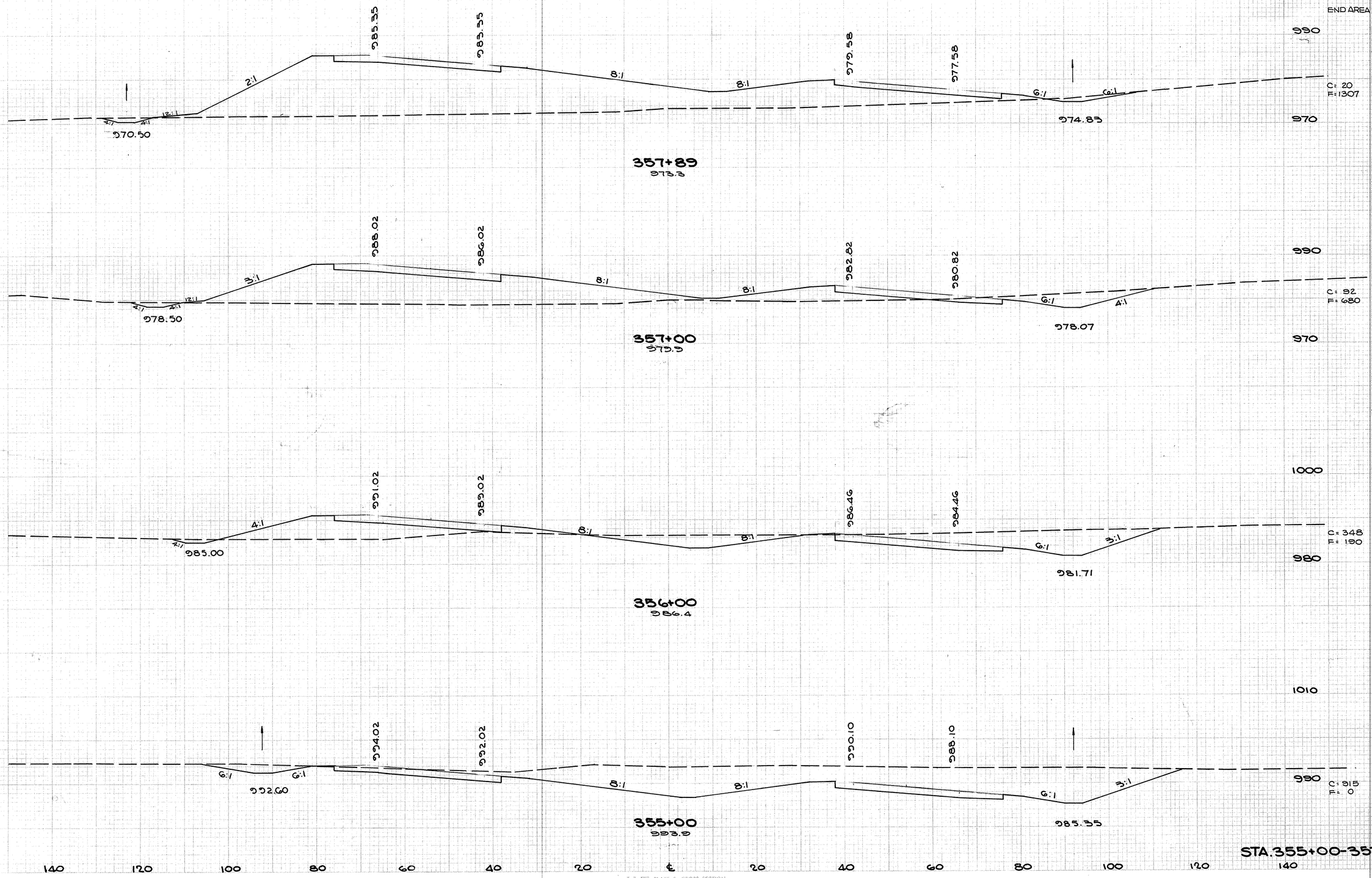
STA. 351+00-354+00

K&E PLATE 3. CROSS SECTION
KEUFFEL & ESSER CO.

160
510

SUM·271·2.98

END AREA CU. YDS.



STA.355+00-357+89

PLATE 3, CROSS SECTION
KUEPER & ESSER CO.

SUM· 271· 2.98

END AREA CU. YDS.

970

950

A-1
STA. 360+00 (18' RT. ℄)
604 N⁰ 5 CATCH BASIN
GRATE - 970.00
℄ 15" — 967.89

H-1
STA 360-00 (98' RT. ℄)
HW-E HEADWALL
℄ 15" — 965.50

977.02

A-1

971.90

VARIES

970.25

8:1

P-1

4:1

H-1

965.00

970

80'-15" TYPE "B" CONDUIT
w/ CLASS "B" BEDDING
@ 2.99%

℄ U.D. 965.58

4:1

D.R.C.P.
9'x4'x1.5'

C= 15
F= 2466

2:1

360+00
959.5

950

C= 50
F= 8022

980.02

975.54

2:1

8:1

8:1

973.72

6:1

6:1

971.01

980

C= 12
F= 1866

359+00
966.0

960

C= 63
F= 6033

983.02

979.18

2:1

8:1

8:1

990

C= 22
F= 1392

2:1

4:1

12:1

970.00

6:1

6:1

974.54

970

358+00
972.5

C= 9
F= 550

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

STA. 358+00-360+00

PLATE 3. CROSS SECTION.
KRAMER & ESSER CO.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

162
510

END AREA CU. YDS.

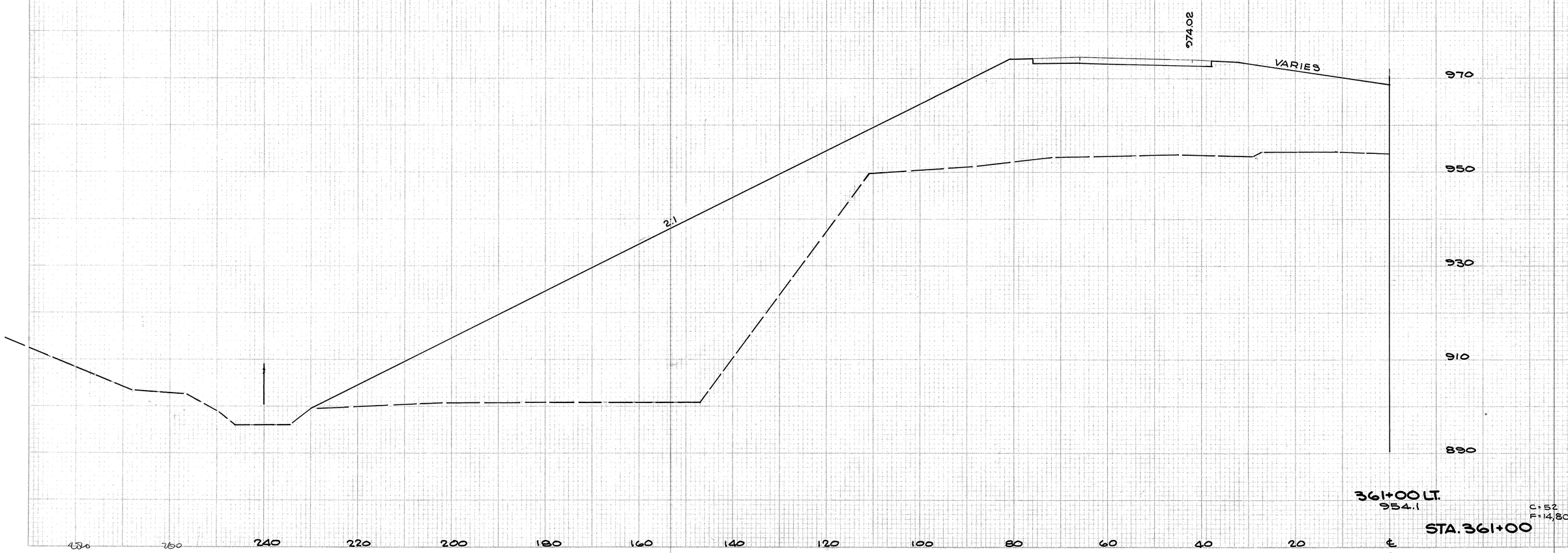


361+00 RT.
954.1

℄ 20 40 60 80 100 120 140

C: 13
F: 5530

970
950

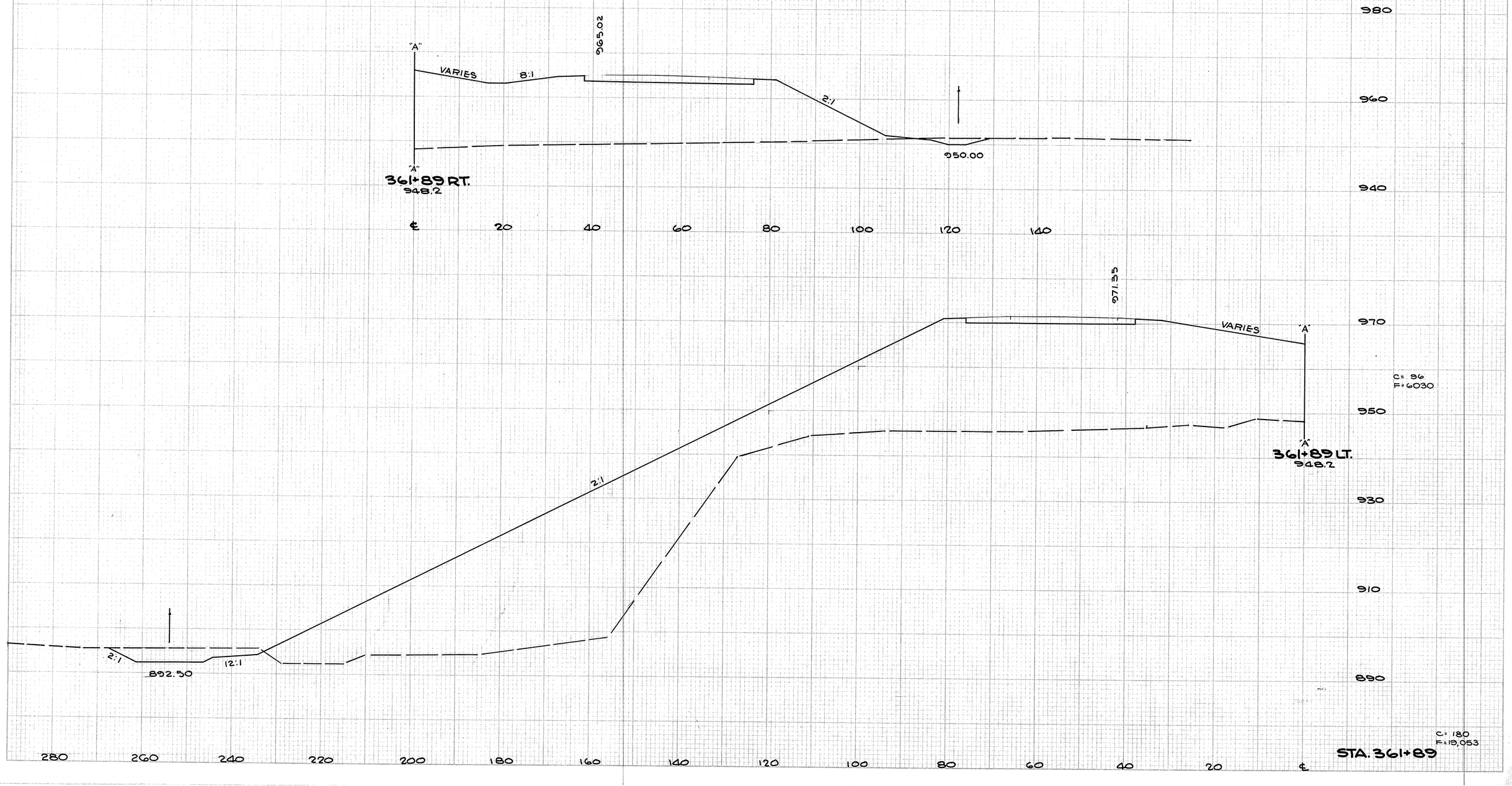


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

163
510

SUM-271-2.98

END AREA CU. YDS.

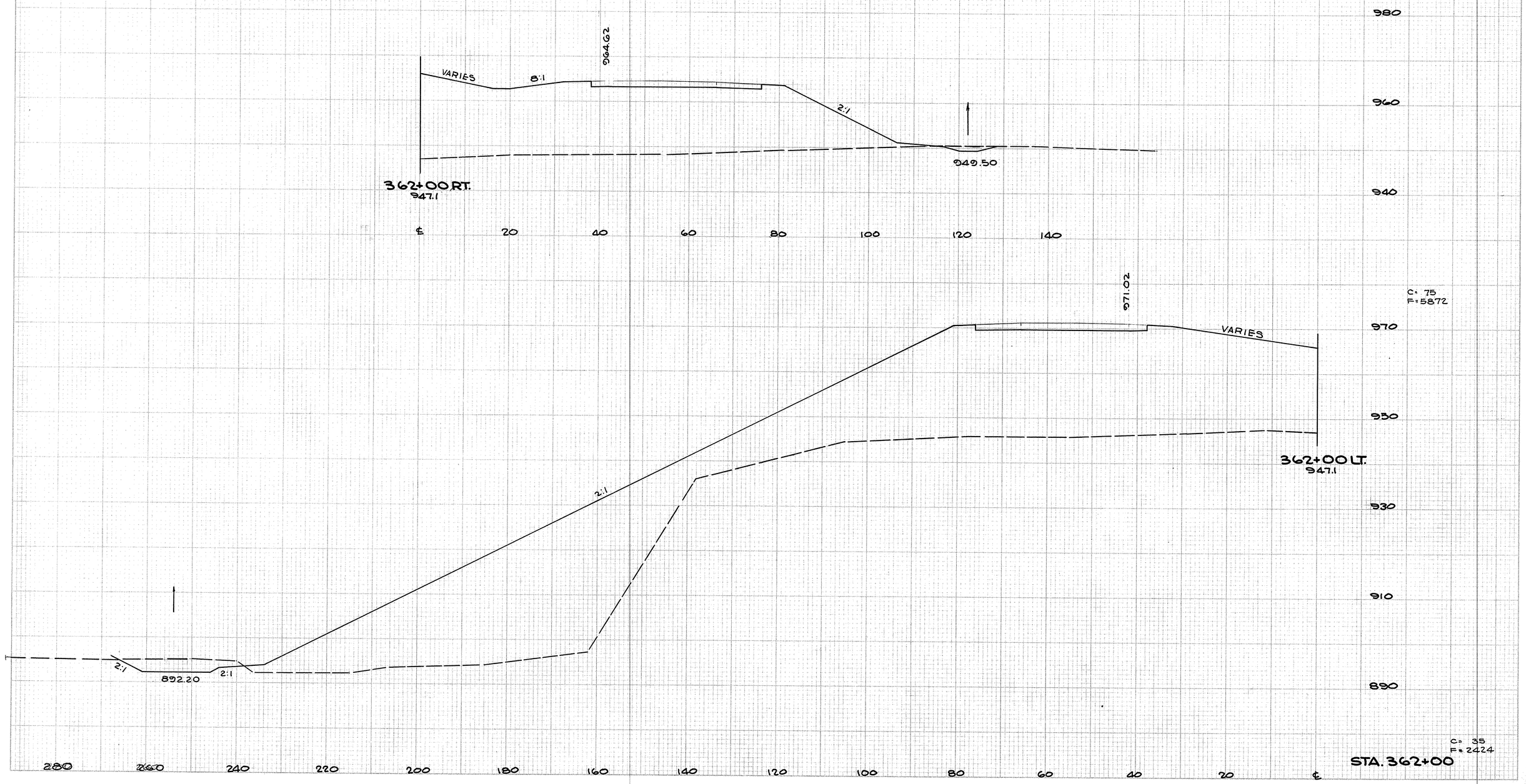


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

164
510

END AREA CU.YDS.

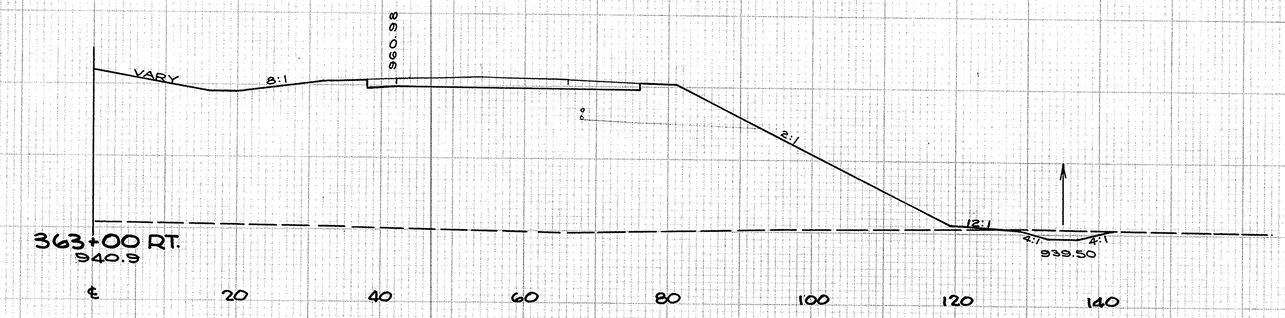


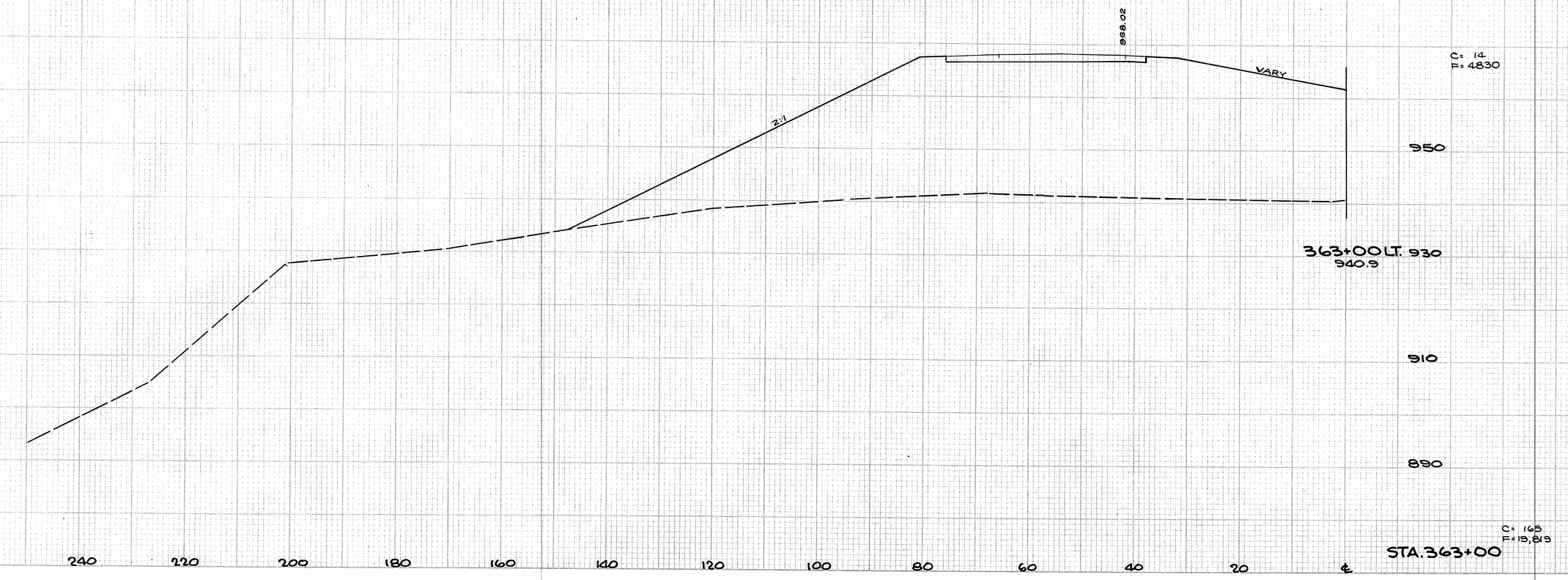
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

165
510

END AREA CU. YDS.



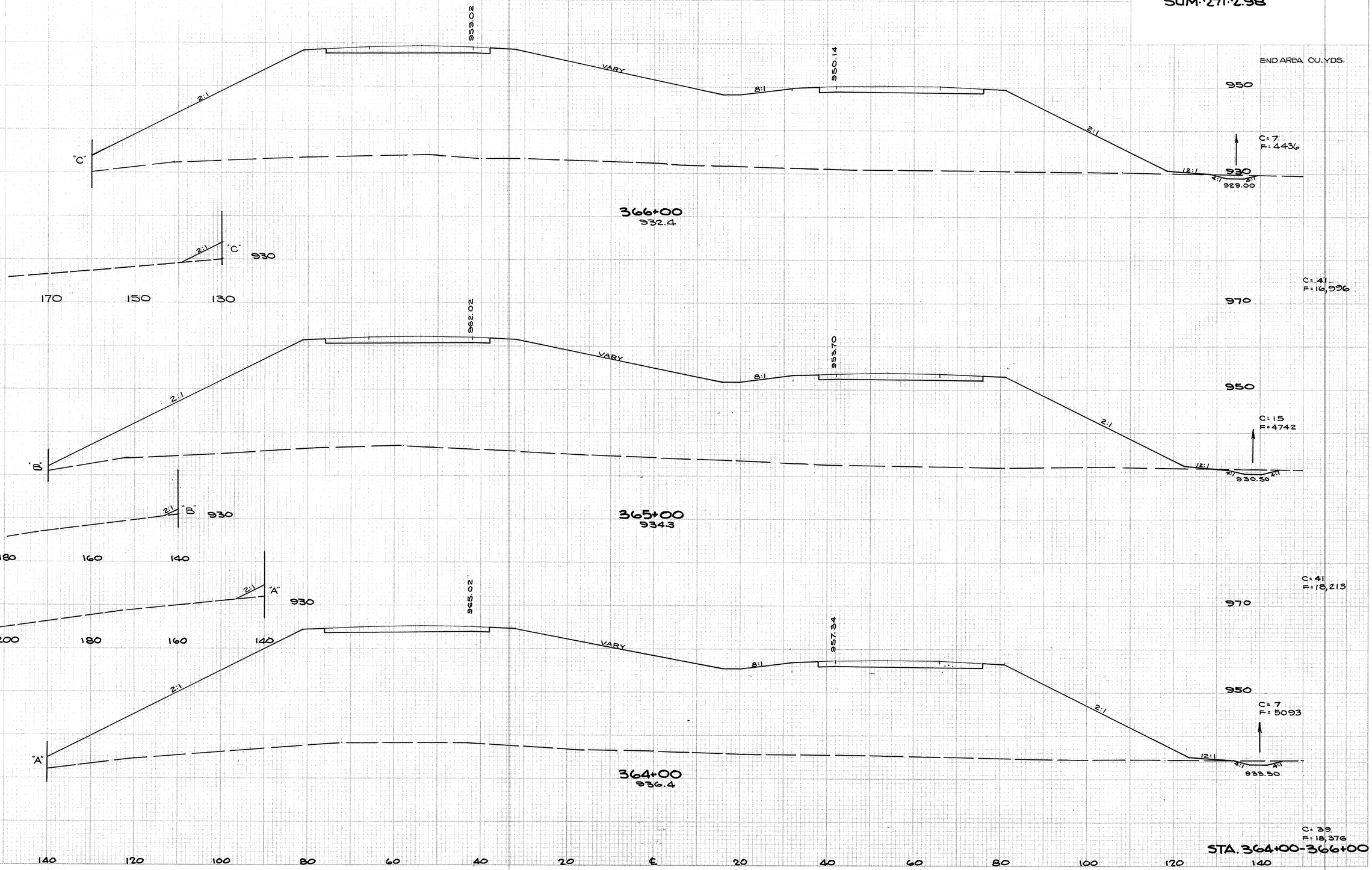


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

166
510

END AREA CU. YDS.



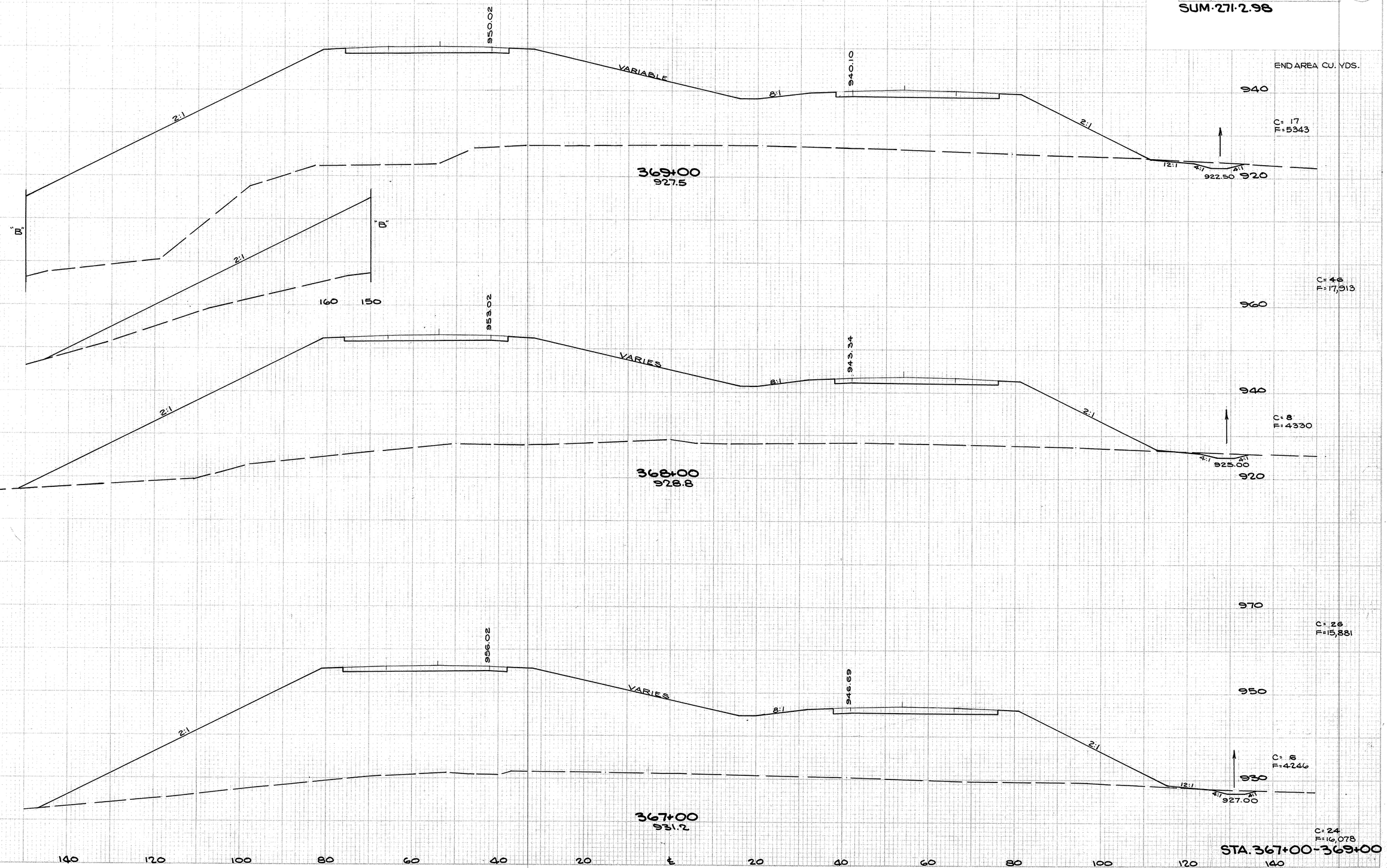
STA. 364+00-366+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

167
510

END AREA CU. YDS.



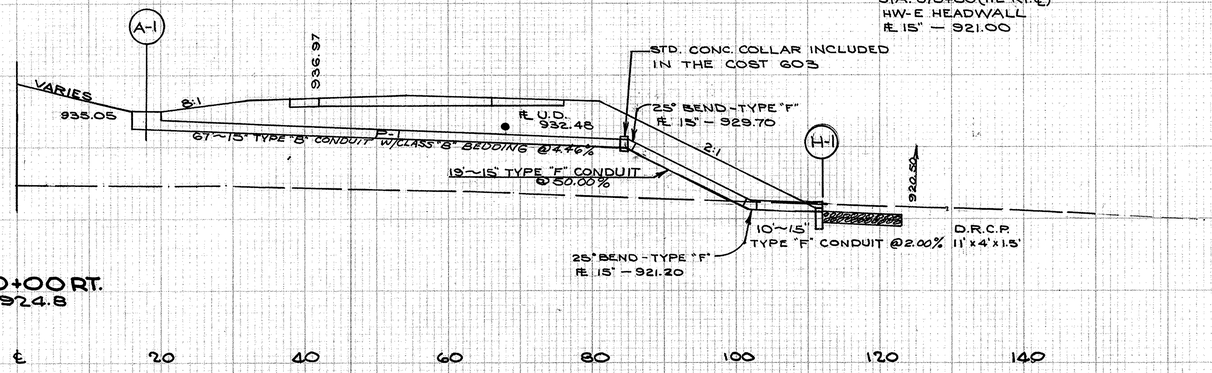
STA. 367+00-369+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

168
510

END AREA CU. YDS.



C: 10
F: 6886



C: 50
F: 22,646

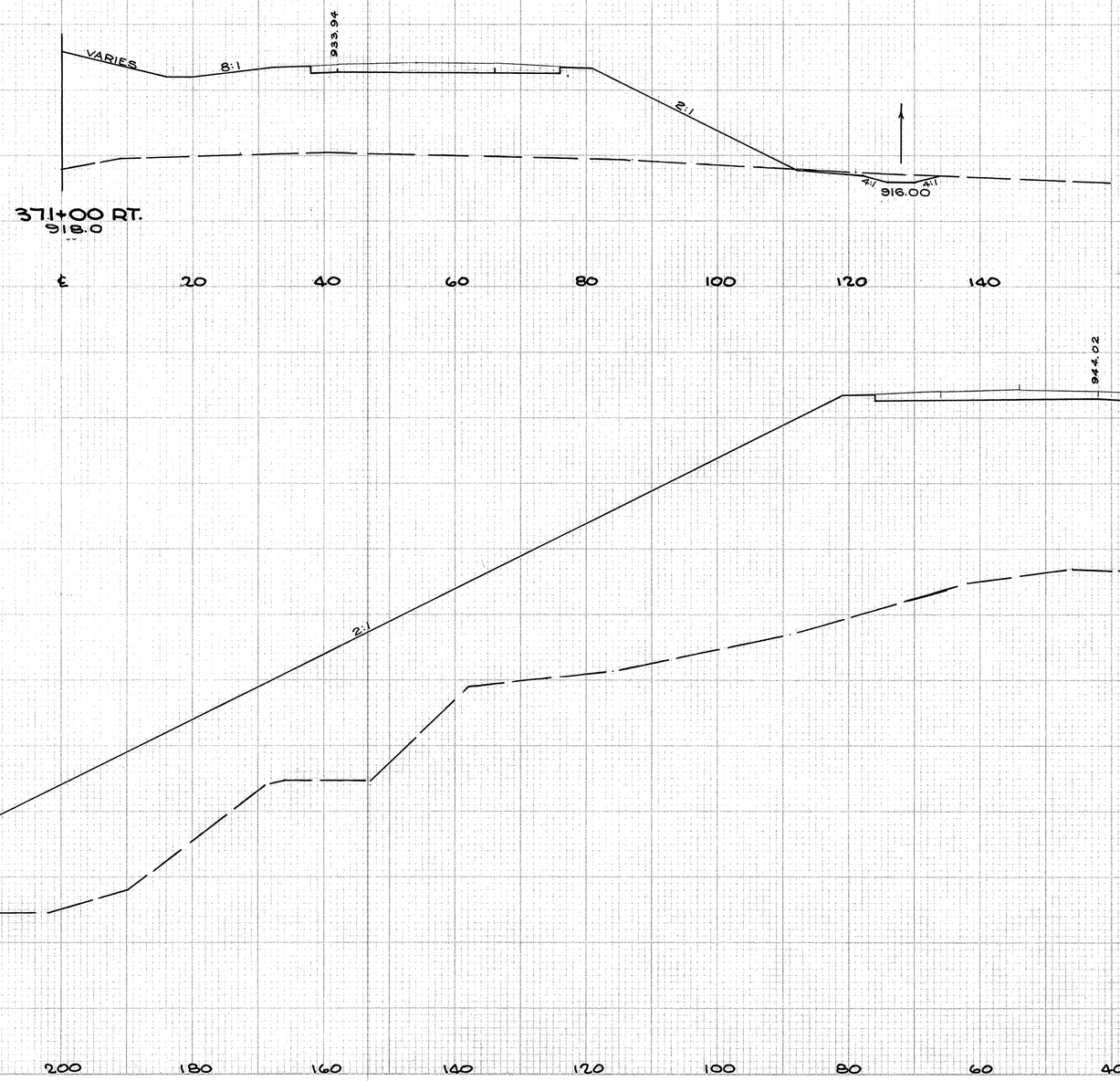
STA. 370+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

165
510

END AREA CU. YDS.

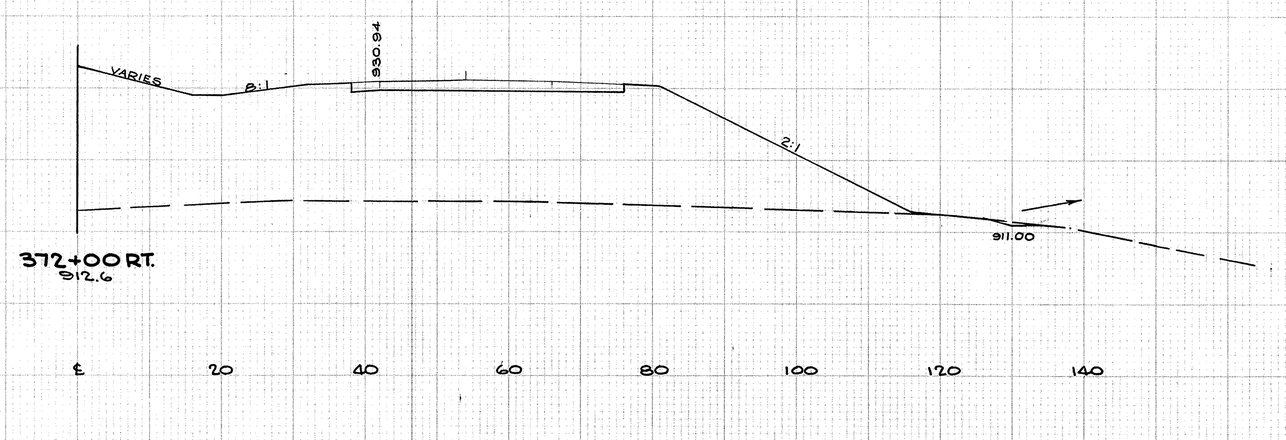


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

170
510

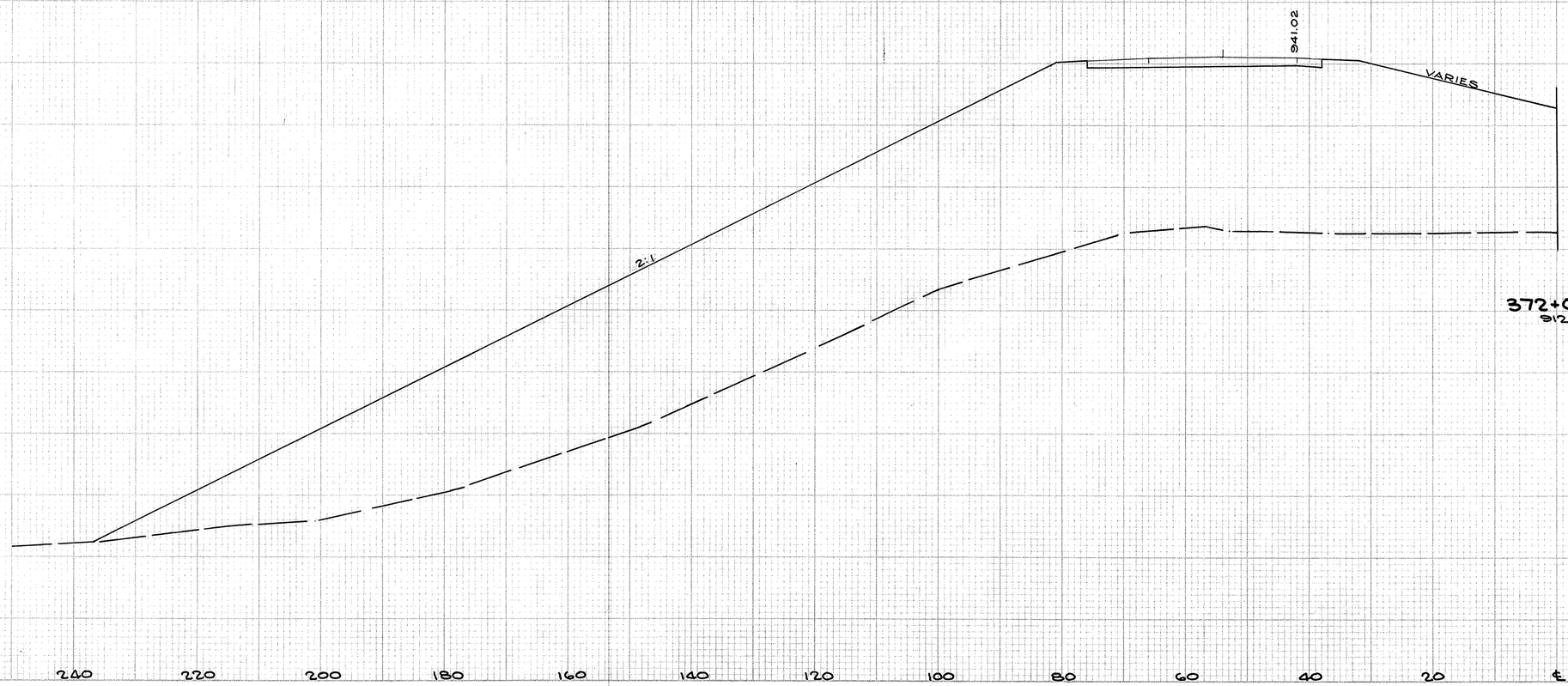
SUM-271-2.98

END AREA CU. YDS.



940
920
900

C= 2
F= 6810



940
920

C= 22
F= 24,685

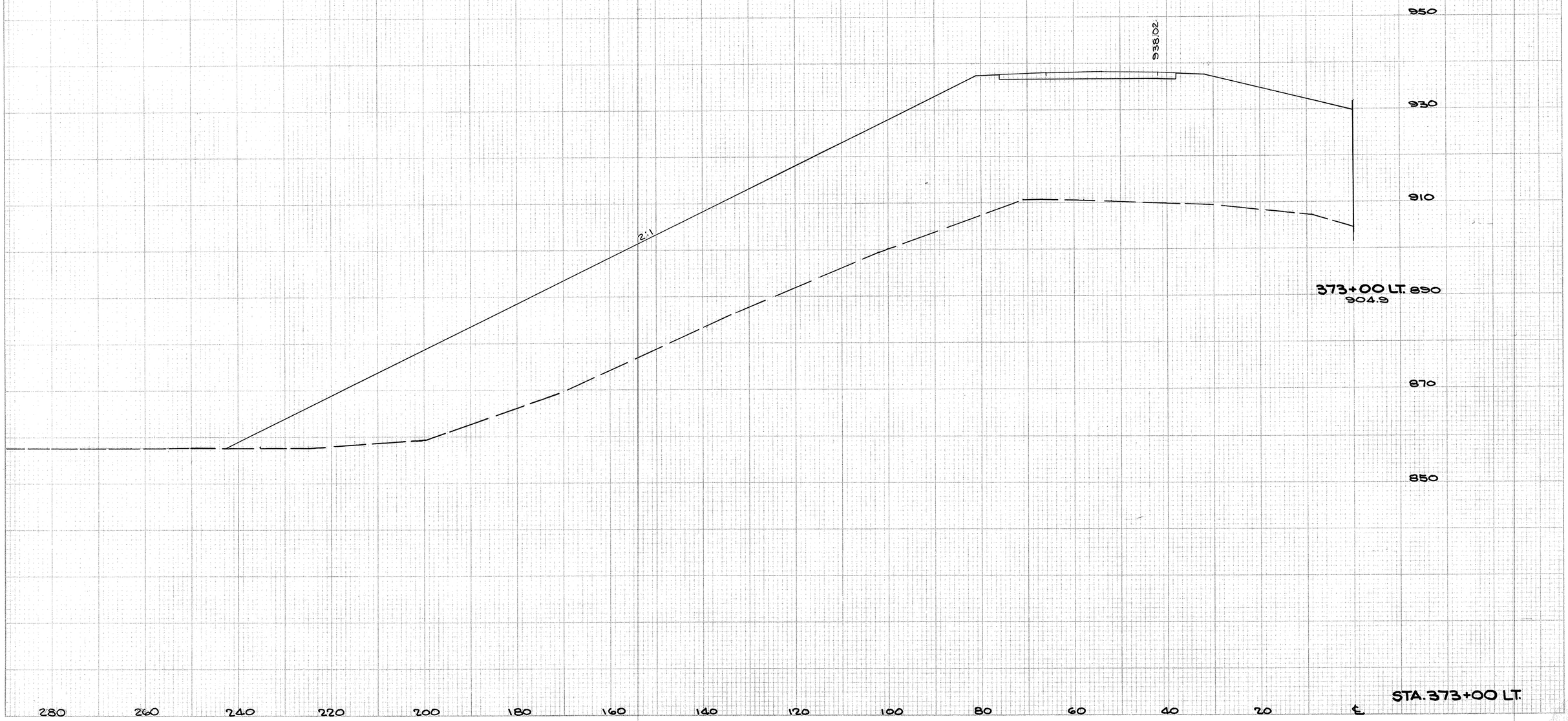
STA. 372+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

171
510

END AREA CU. YDS.
(SEE SHEET 172)

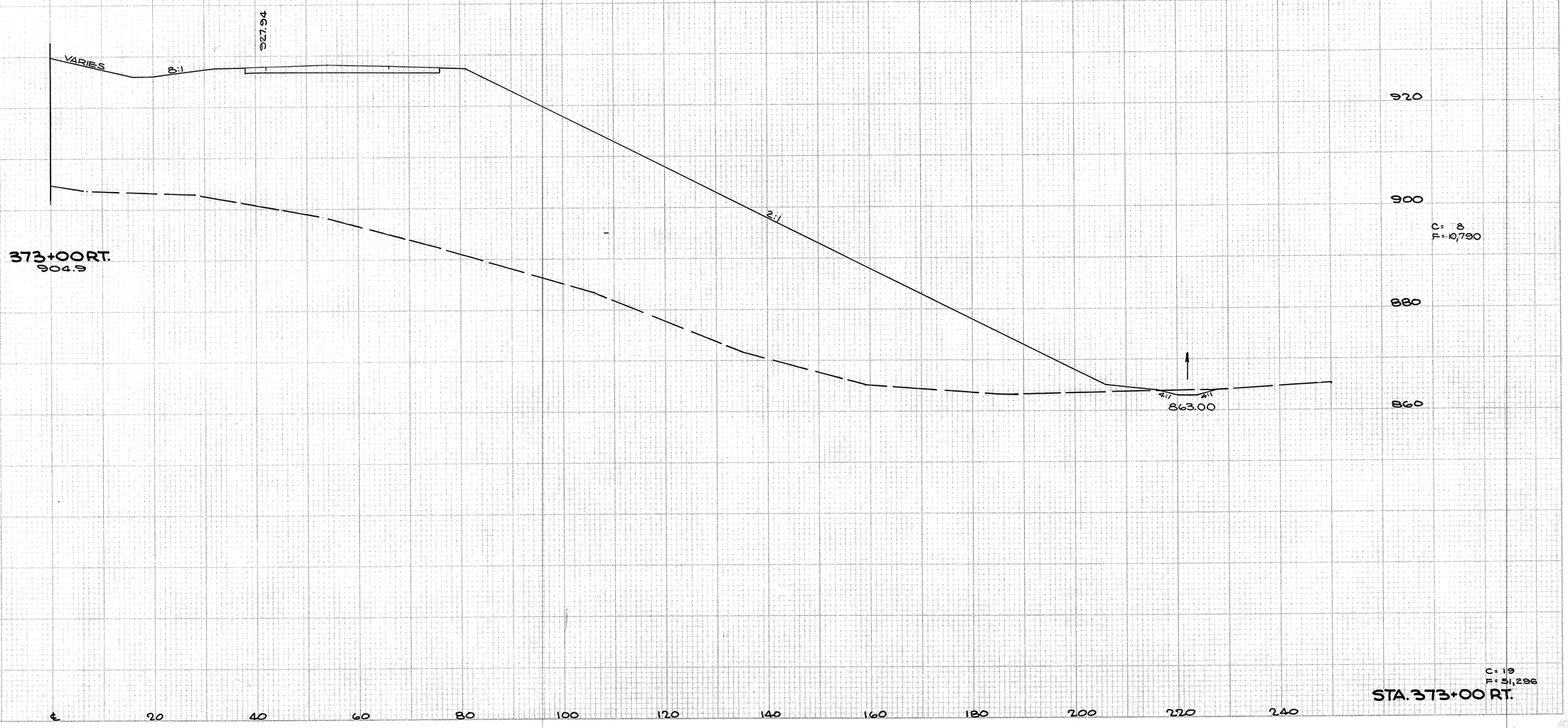


FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

172
510

SUM·271·2.98

END AREA CU. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

173
510

SUM-271-2.98

END AREA CU. YDS.
(S&E SHEET 174)

950

930

910

890

870

850

935.02

VARIES

2:1

374+00 LT.
885.4

280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄

STA. 374+00 LT.

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

174
510

SUM-271-2.98

END AREA CU.YDS.

950

930

910

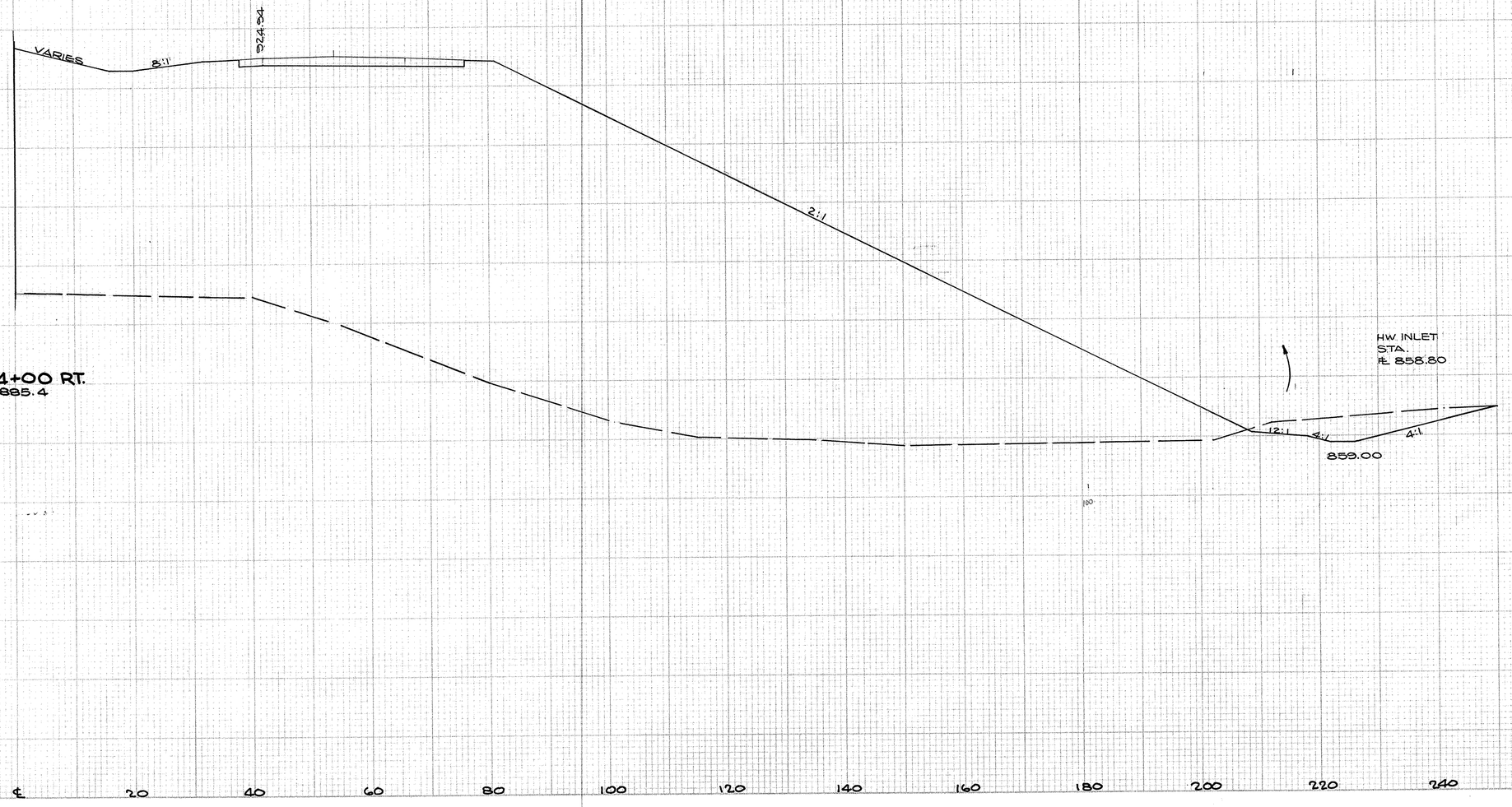
890

870

850

C= 106
F= 11,736

HW. INLET
STA.
℄ 858.80



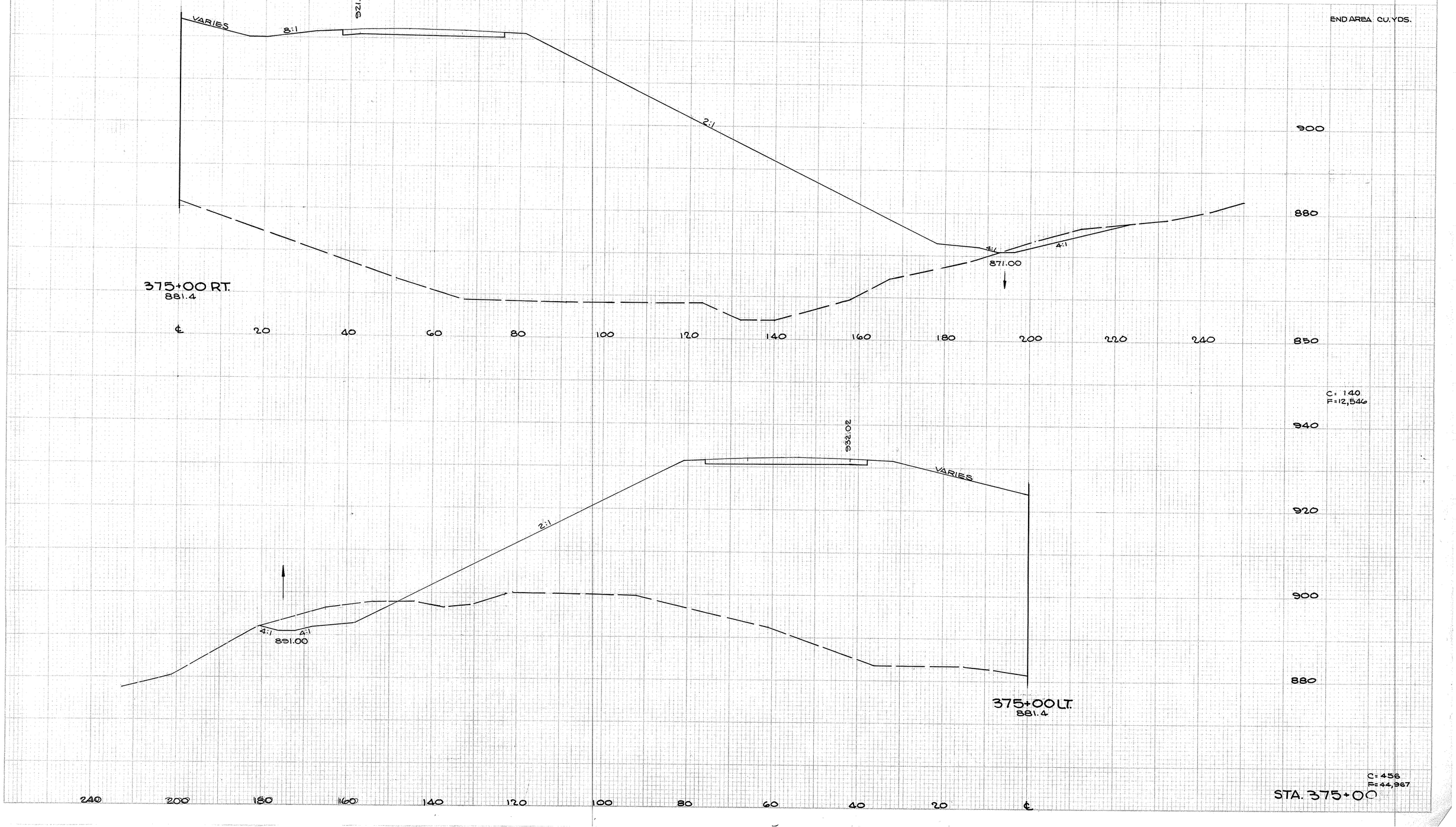
C= 211
F= 41,715

STA. 374+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

175
510

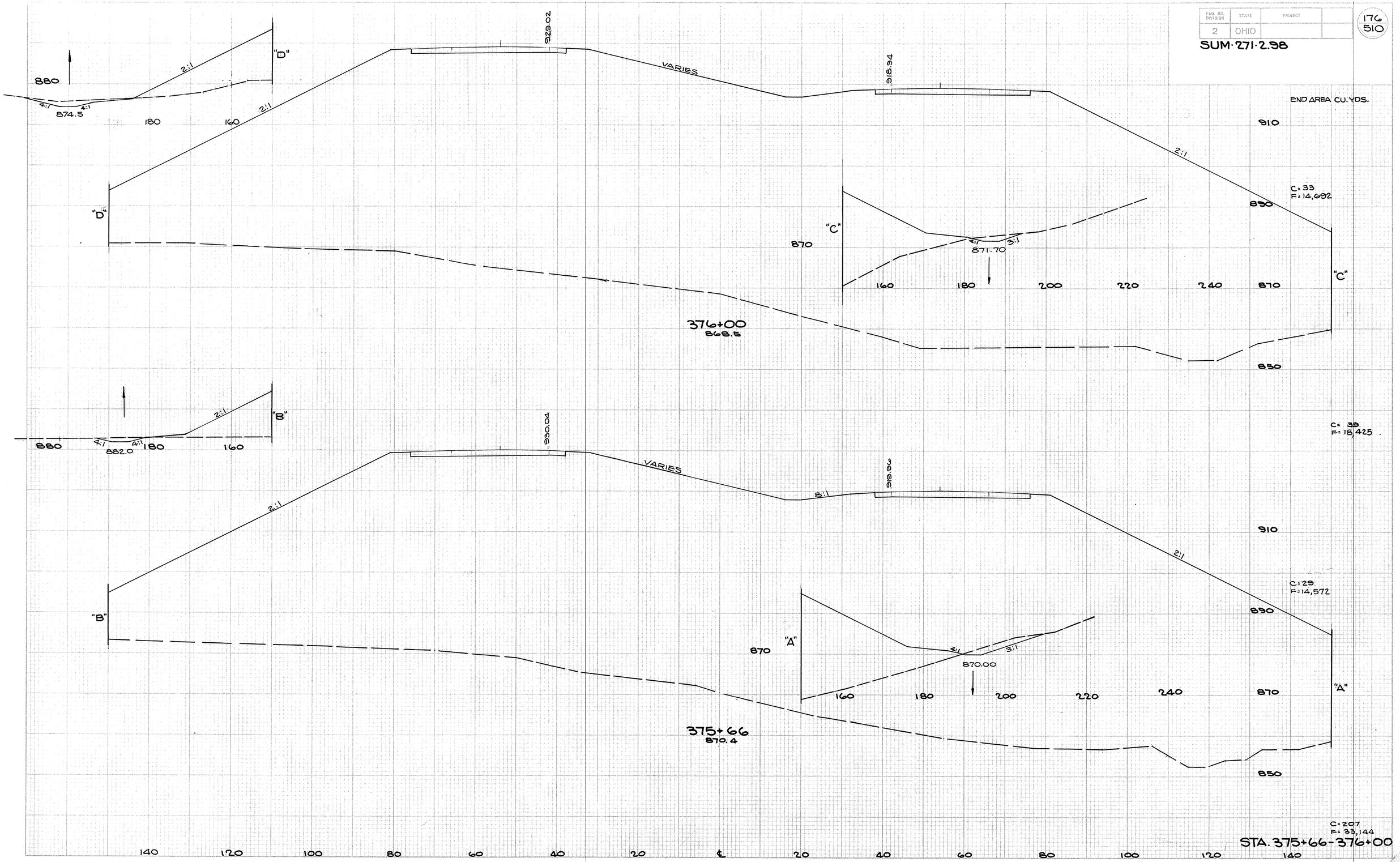
SUM. 271-2.98



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

176
510

SUM·271·2.98



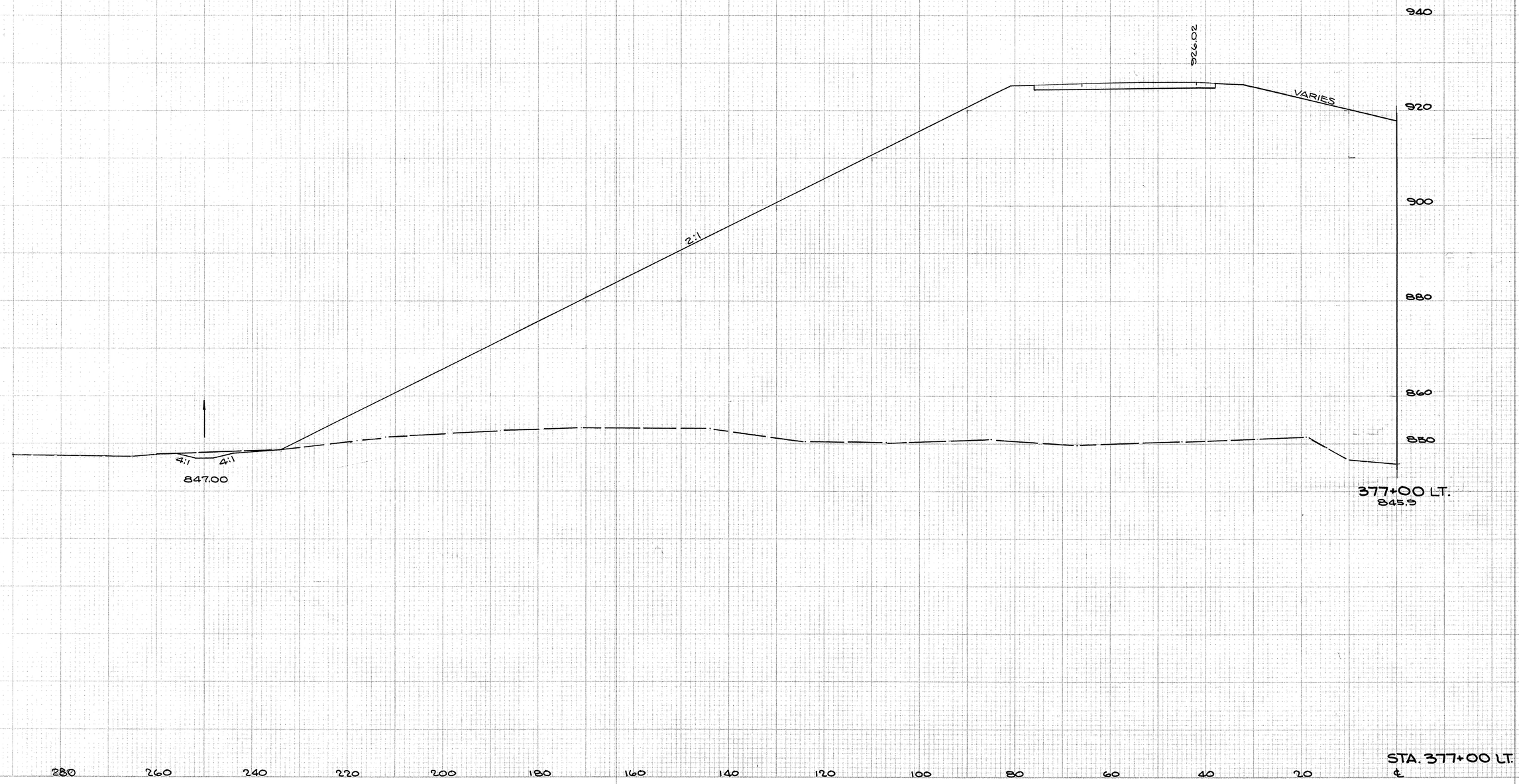
STA. 375+66-376+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

177
510

SUM-271-2.98

END AREA CU. YDS.
(SEE SHEET 178)

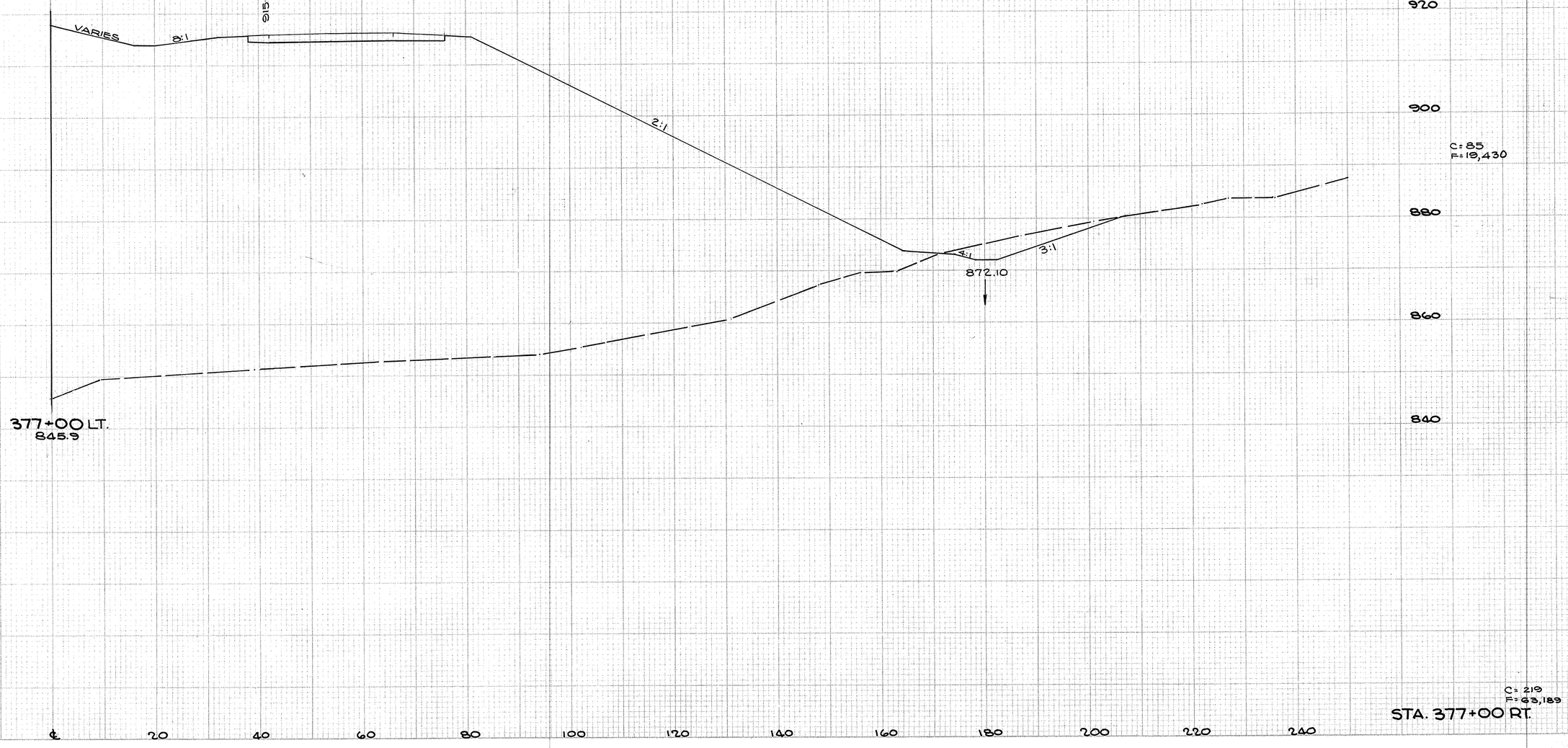


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

178
510

SUM·271·2.98

END AREA CU. YDS.



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

179
510

END AREA CU. YDS.
(SEE SHEET 180)

940
920
900
880
860
840

923.02

VARIES

2:1

378+00 LT.
859.90

3:1
4:1

840.11

CULVERT OUTLET
STA. 378 + 13±
℄ 840.84

280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄

STA. 378+00 LT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

180
510

SUM·271·2.98

END AREA CU. YDS.



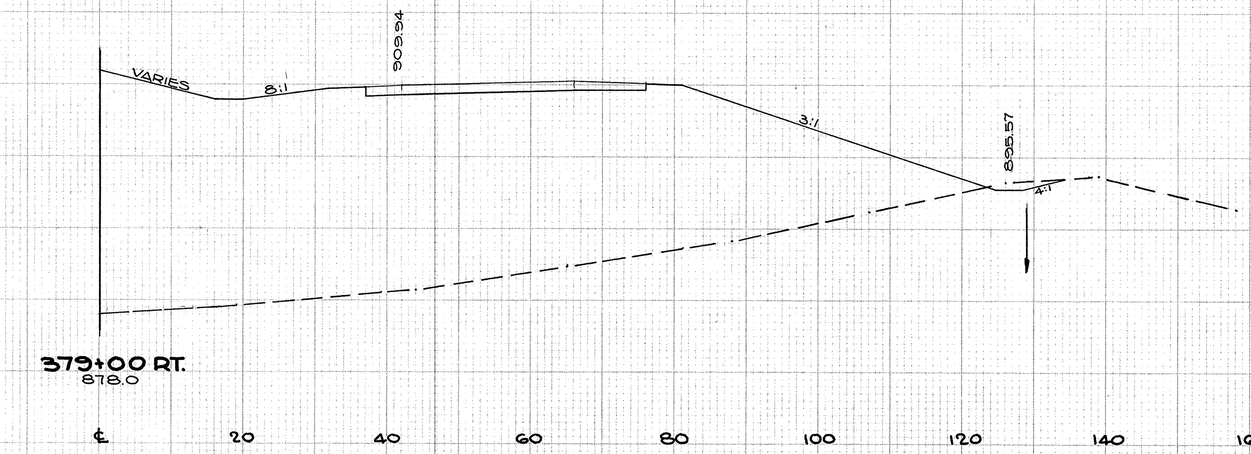
STA. 378+00 RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

181
510

SUM-271-2.98

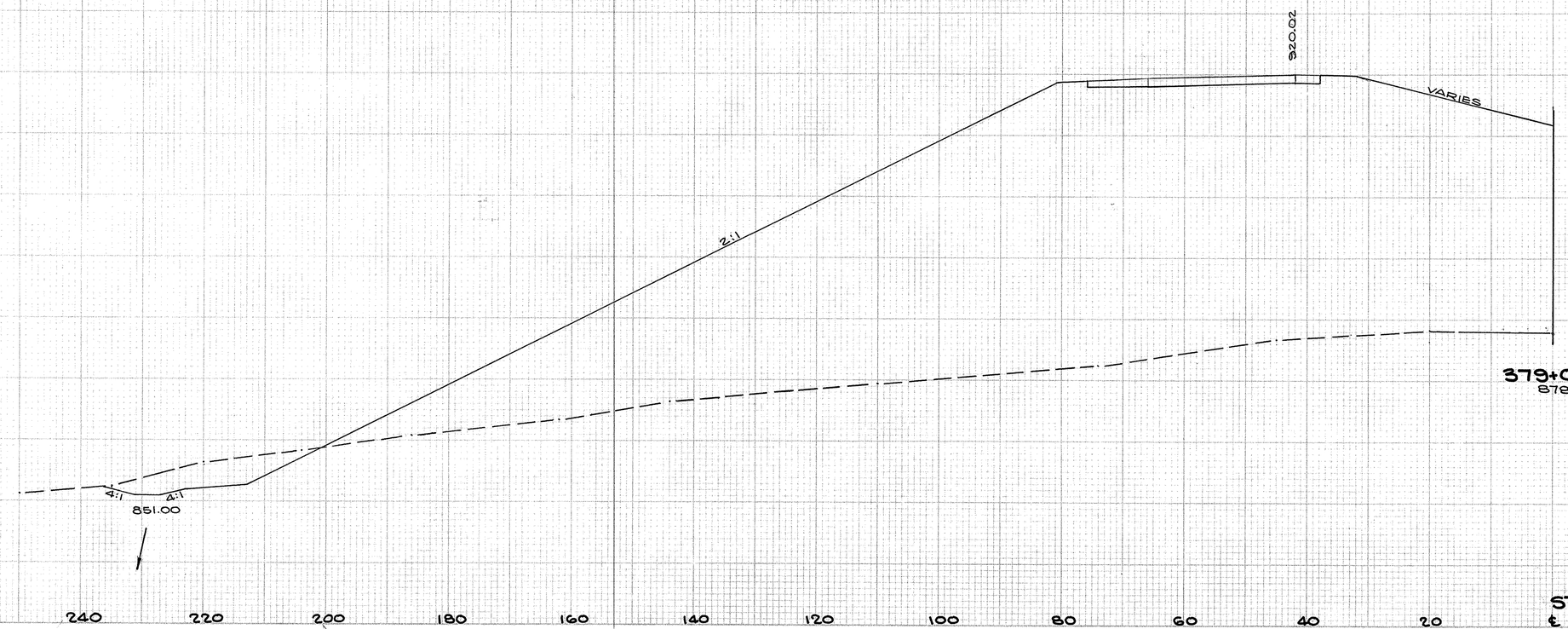
END AREA CU. YDS.



920
900
880
860

C = 110
F = 8,785

930



910
890
870
850

C = 359
F = 46,931

STA. 379+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

182
510

SUM·271·2.98

END AREA CU.YDS.

911.02

900

3:1

3:1

898.5

VARIES

8:1

903.94

6:1

899.51

2:1

910

C= 2340
F= 303

890

C= 8,676
F= 2,135

382+00
911.2

H-1
STA. 381+00 (114' LT. ℄)
HW-E HEADWALL
℄ 15" – 895.85

A-1
STA. 381+00 (18' RT. ℄)
604 Nº 5 CATCH BASIN
GRATE – 901.77
℄ 15" — 899.61

914.02

H-1

2:1

℄ U.D. 909.06

VARIES

A-1

903.94

8:1

902.02

6:1

902.51

2:1

910

C=1265
F=850

4:1

4:1

895.0

D.R.C.B
6'×4'×1.5'

B=1

132'~15" TYPE-B 706.02 CLASS IV CONDUIT
W/CLASS-B BEDDING @ 2.85%

890

890

381+00
906.8

890

C=2630
F=4830

917.02

VARIES

906.94

8:1

6:1

905.51

4:1

910

C= 155
F=1758

890

4:1

4:1

889.0

380+00
902.0

890

C= 491
F=19,524

STA. 380+00-382+00

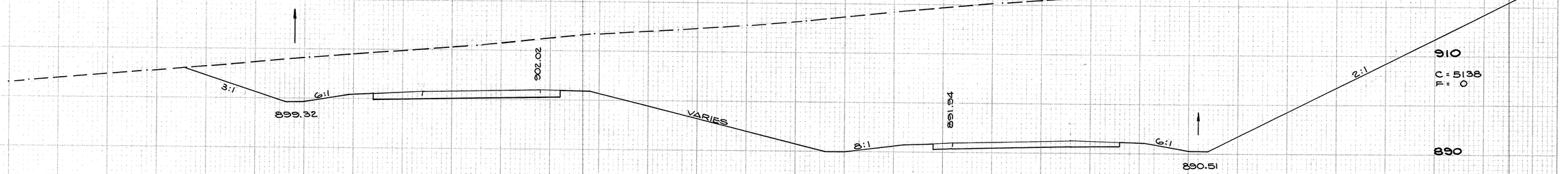
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

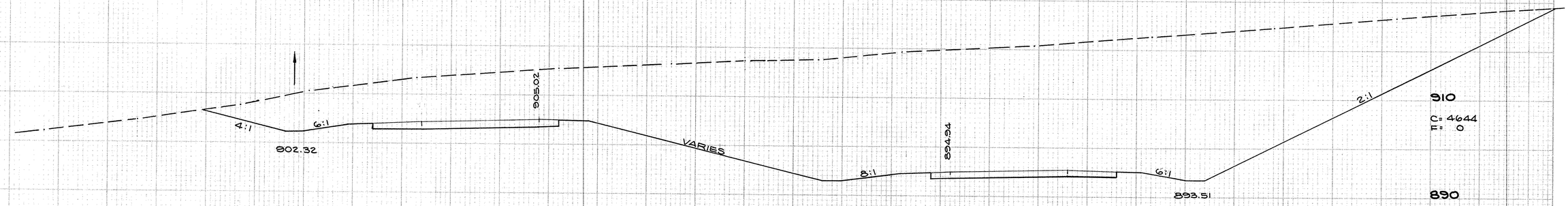
183
510

SUM·271·2.98

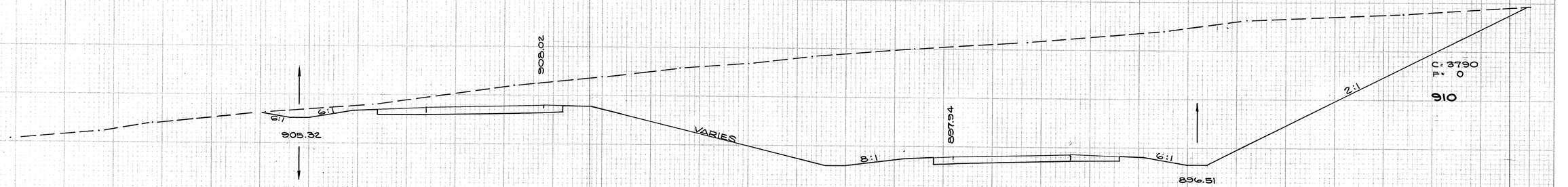
END AREA CU. YDS.



385+00
915.4



384+00
917.3



383+00
916.7

160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160

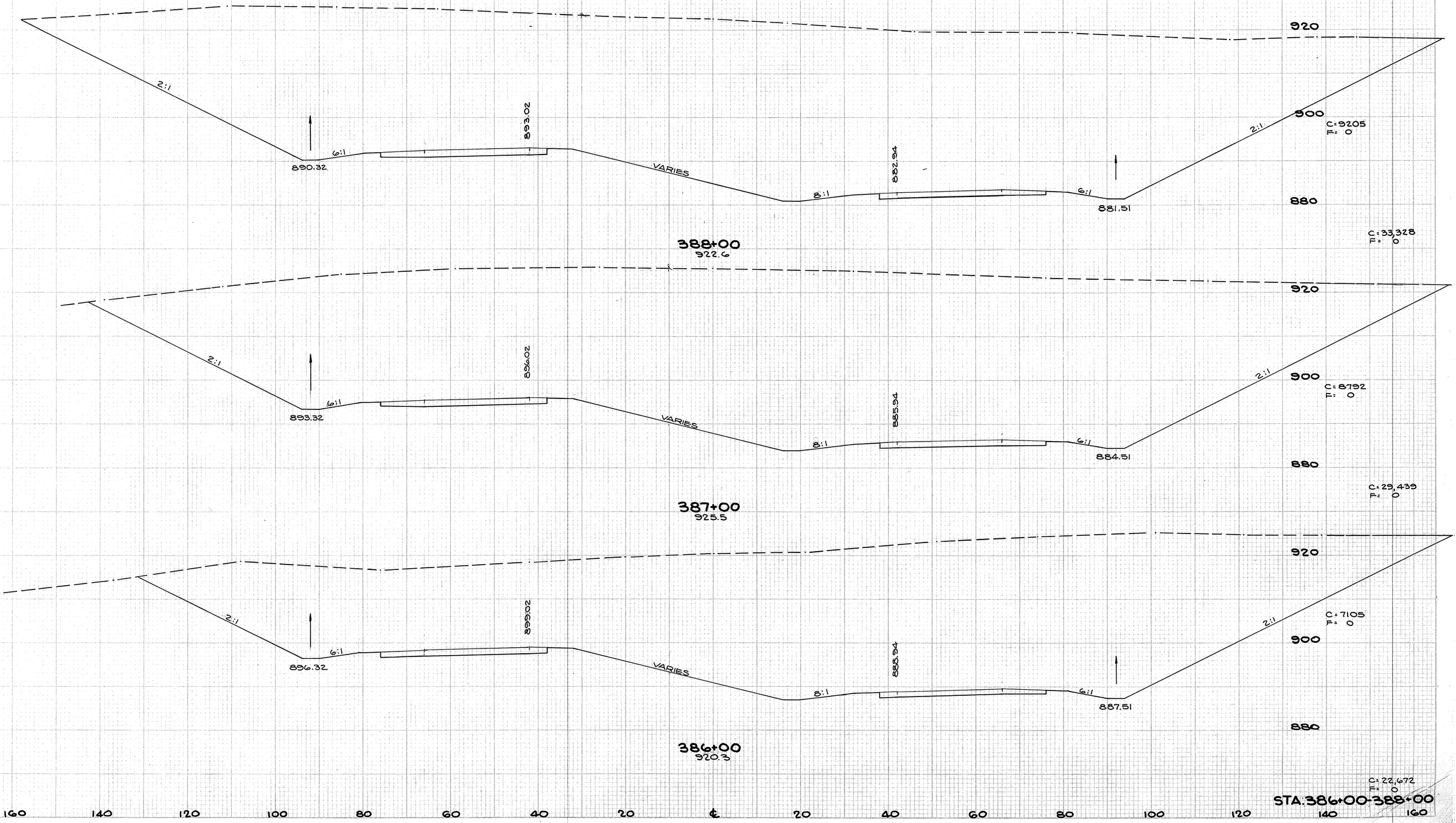
STA. 383+00 - 385+00

FED. RO. DIVISION	STATE	PROJECT	
2	OHIO		

184
510

SUM·271·2.98

END AREA CU.YDS.



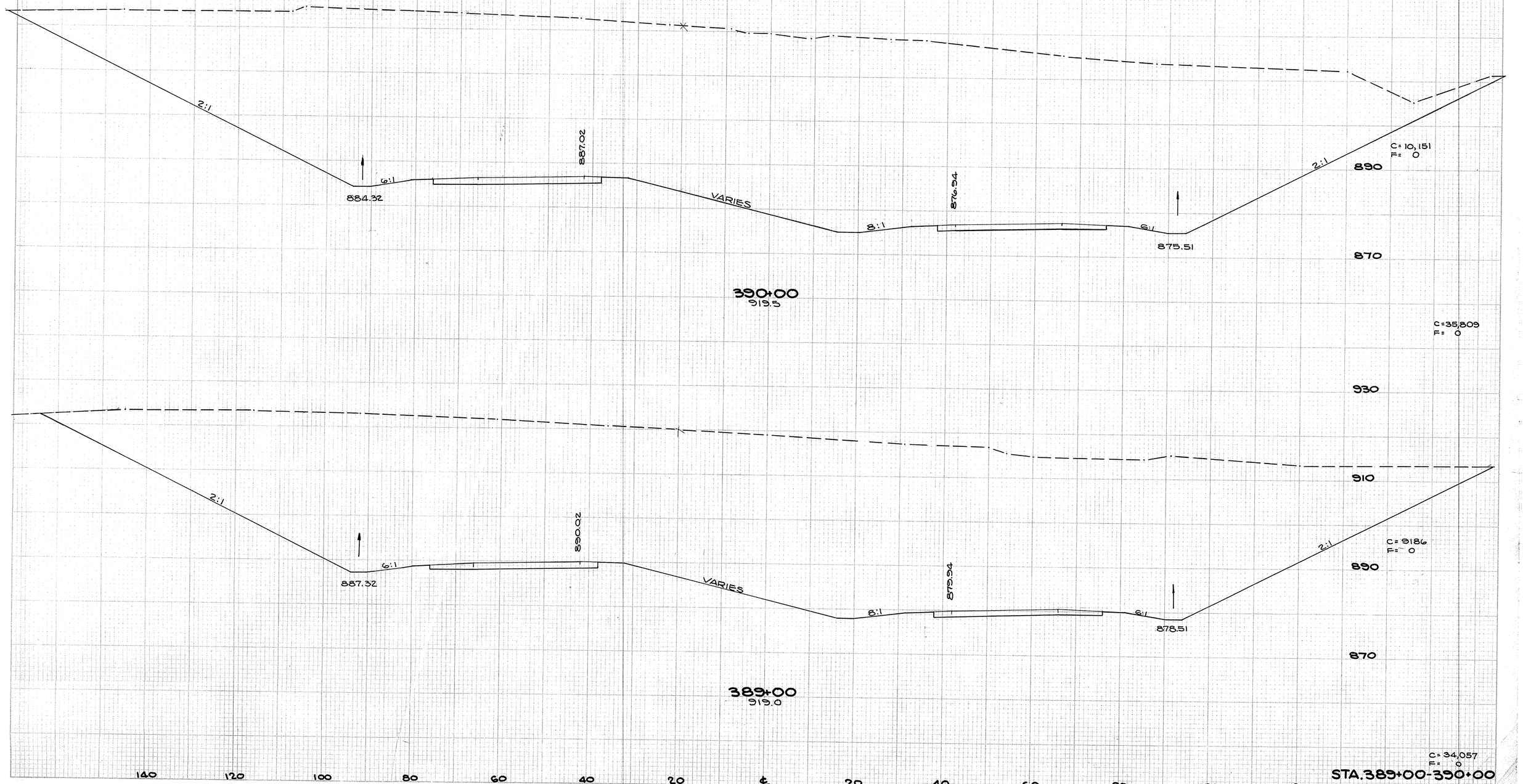
STA.386+00-388+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

185
510

SUM·271·2.98

END AREA CU. YDS.



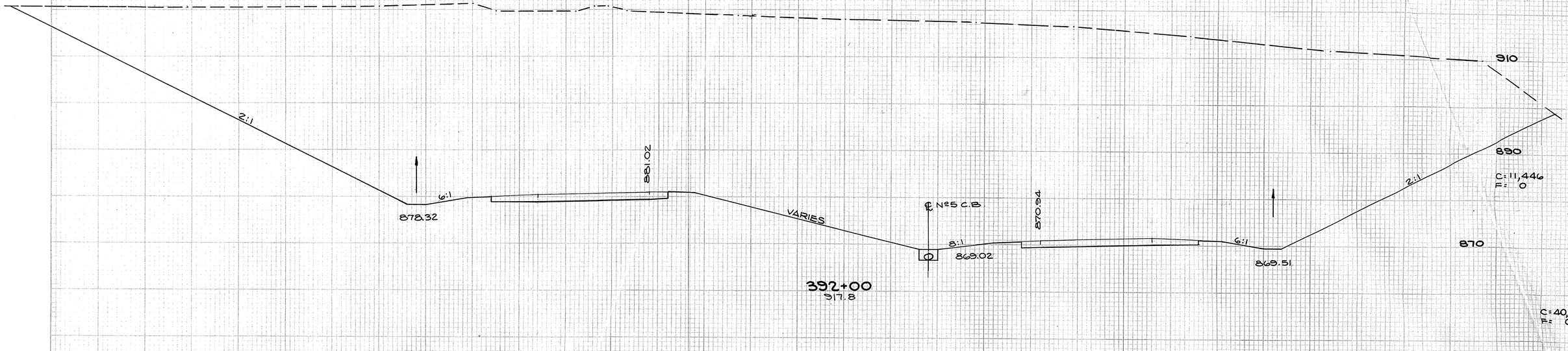
STA. 389+00-390+00

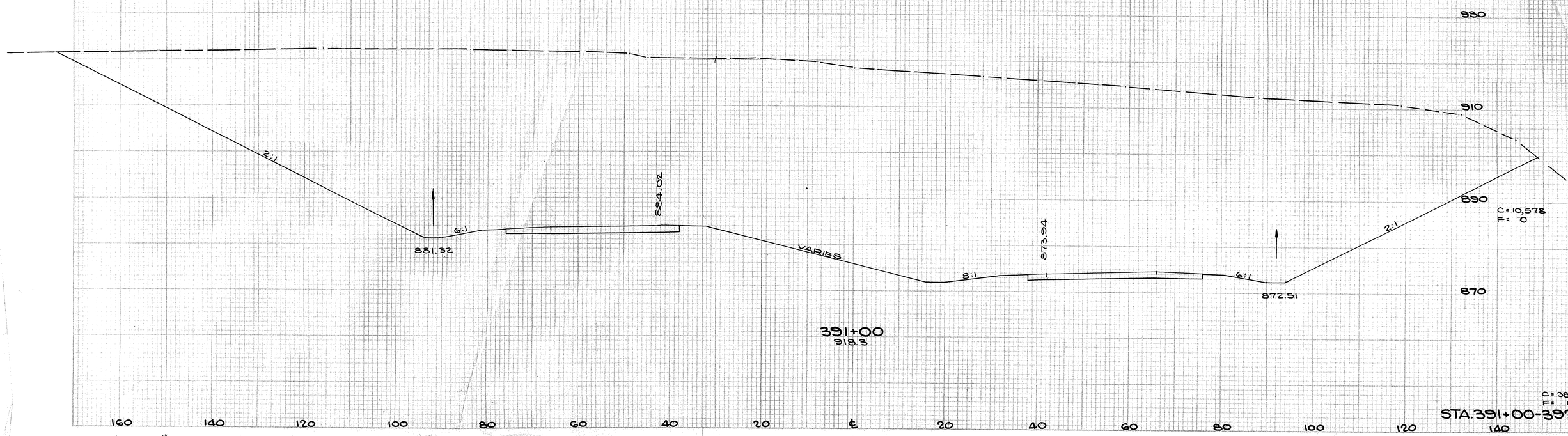
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

186
510

END AREA SQ.YDS.





STA.391+00-392+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

SUM-271-2.98

187
510

END AREA CU. YDS.

"E"
2:1
"E" 868.32
900
180 170 150
872.02
6:1
VARIES
8:1
861.94
6:1
860.51
2:1
890
870
C=10,608
F= 0

395+00
910.7

"C"
2:1
"C" 872.32
900
200 180 160
875.02
6:1
VARIES
8:1
864.94
6:1
863.51
2:1
910
890
870
C=42,046
F= 0

"D"
900
2:1
150 170 190
"D"
890
C=12,097
F= 0

394+00
915.1

"A"
2:1
"A"
910
190 170 150
878.02
6:1
875.32
VARIES
8:1
867.94
6:1
866.51
2:1
920
890
870
C=45,298
F= 0

"B"
900
2:1
150 170 190
"B"
890
C=12,364
F= 0

393+00
918.4

160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160

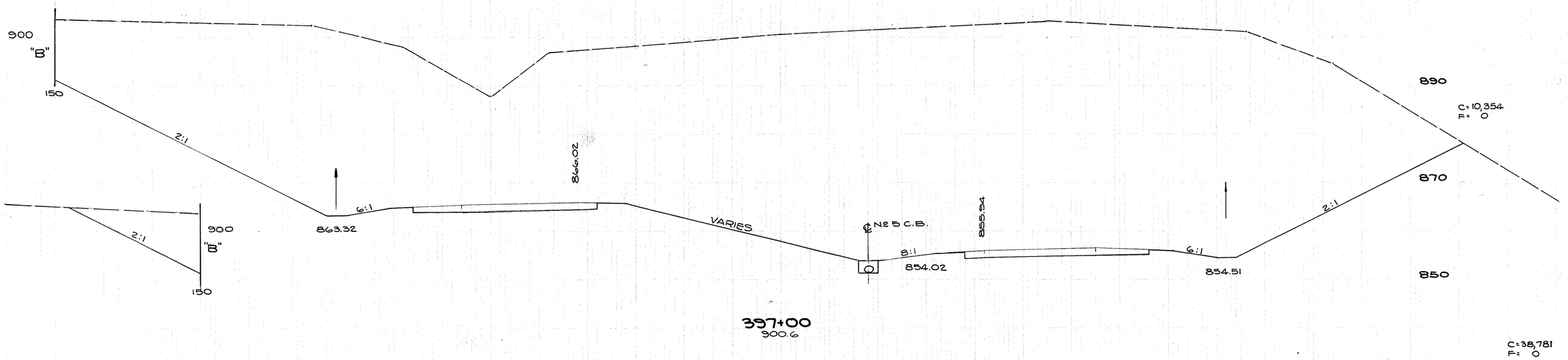
C=44,093
F= 0

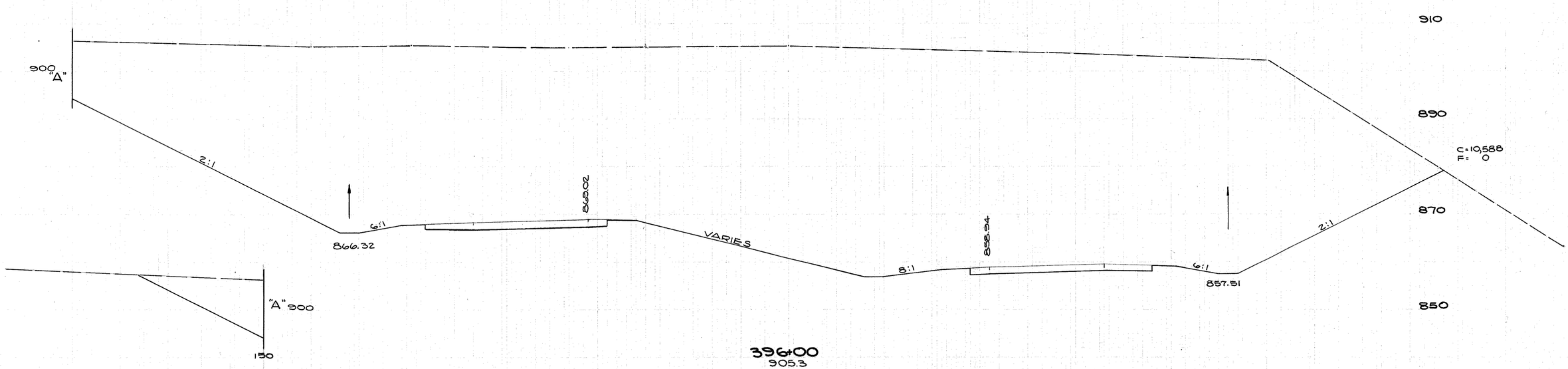
STA. 393+00-395+00

188
510

SUM. 271-2.98

END AREA CU. YDS.





C=38,781
F= 0

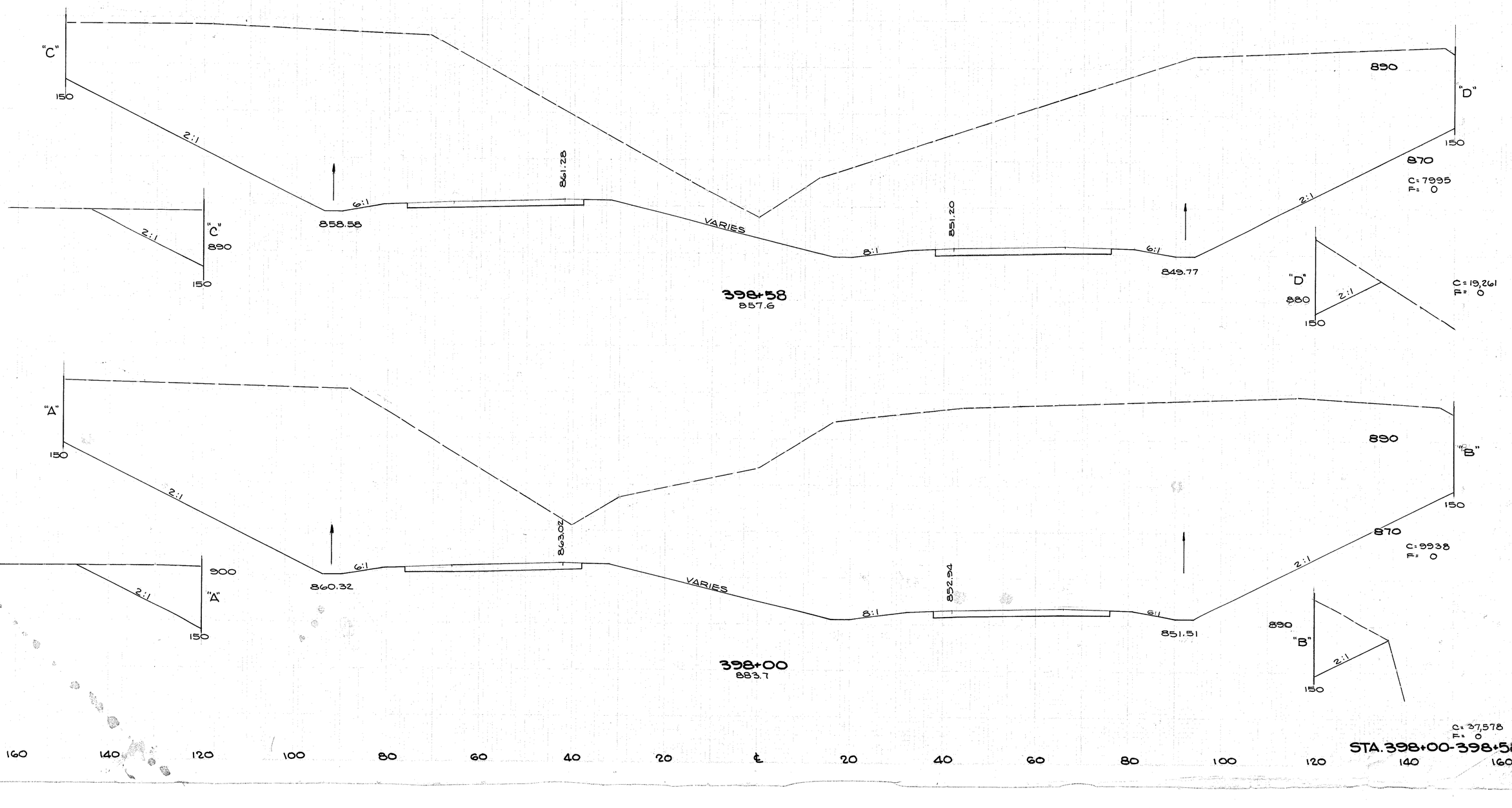
C= 39,252
F= 0

STA. 396+00-397+00

189
510

SUM·271·2.98

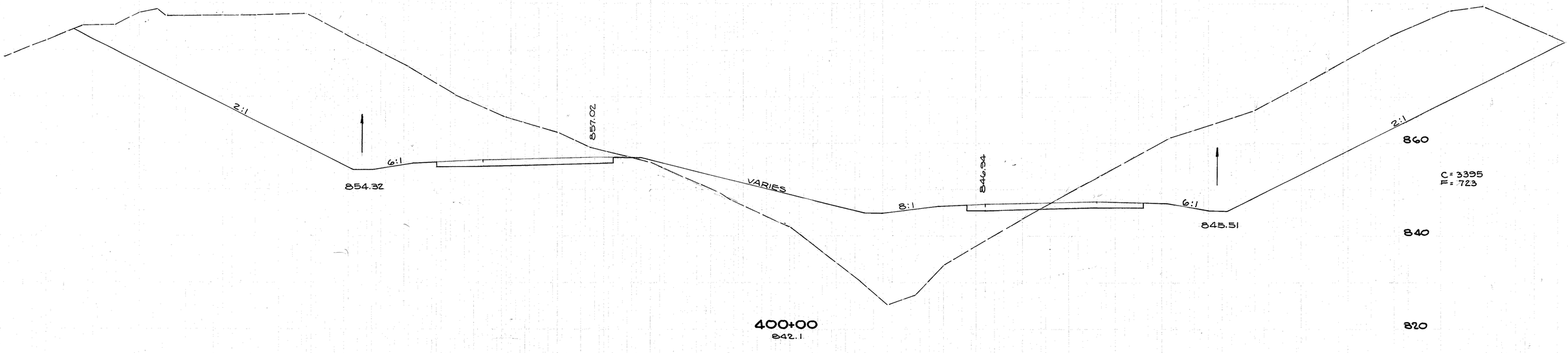
END AREA CU. YDS.



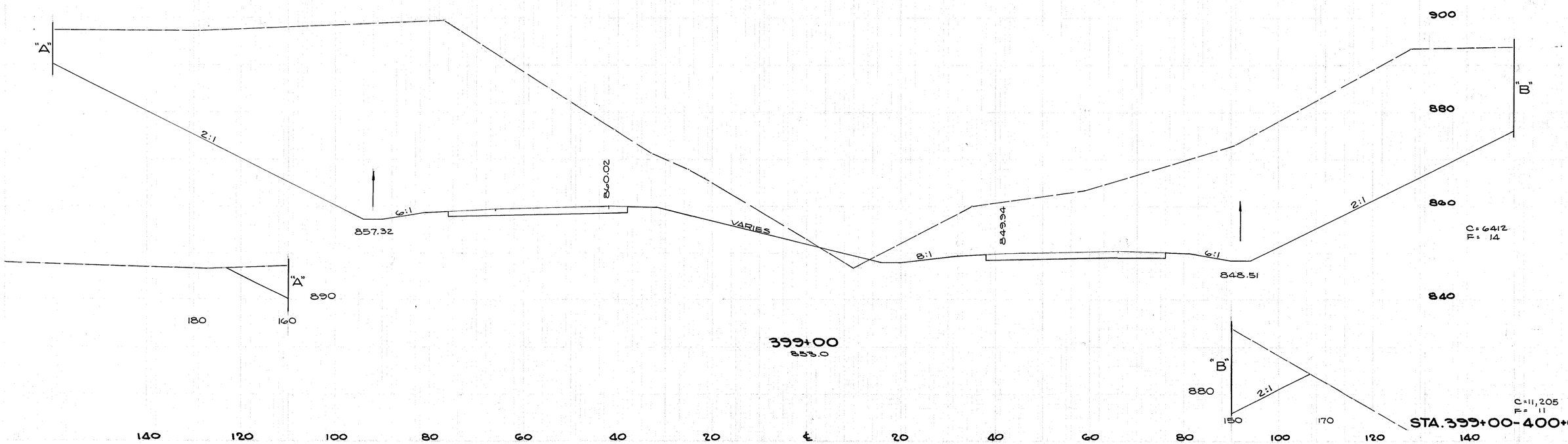
130
510

SUM· 271· 2.98

END AREA CU. YDS.

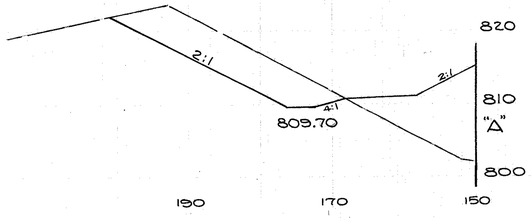


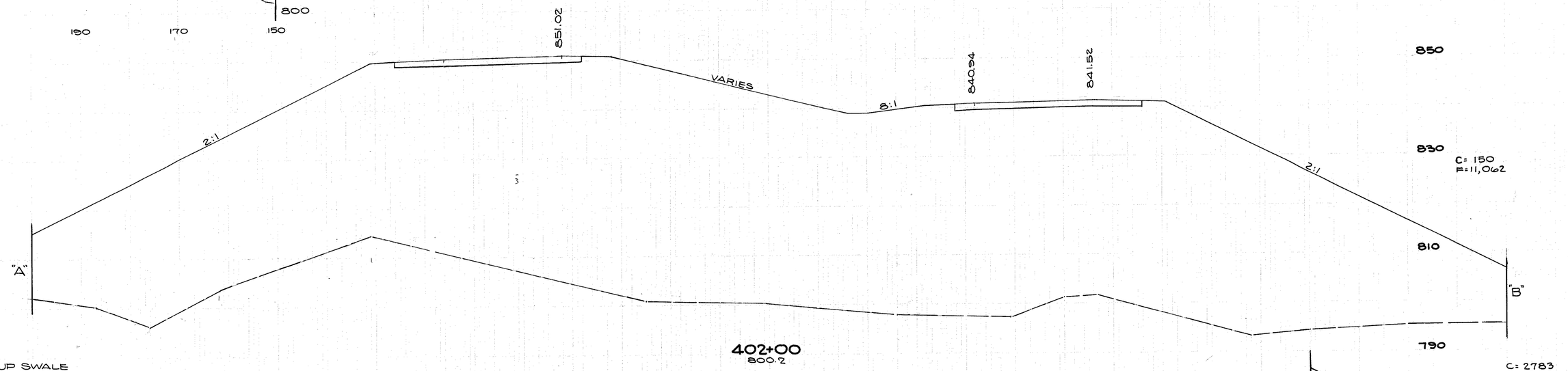
C = 18,161
F = 1,365



SUM·271·2.98

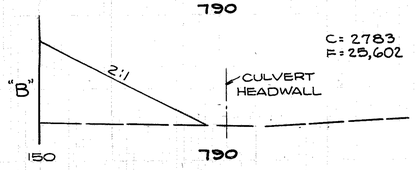
END AREA CU. YDS.





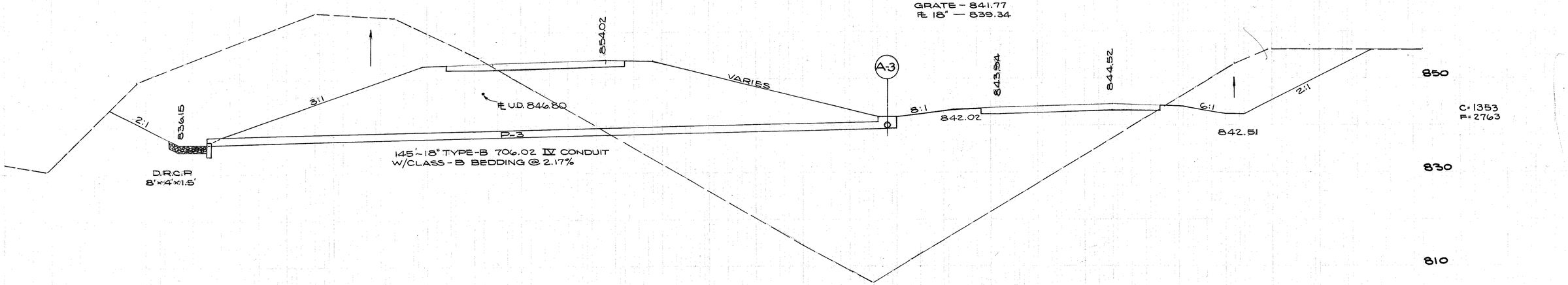
PICK UP SWALE
401+40± ELEV. 810.0± / 147± LT. ℄

H-1
STA. 401+00 (127' LT. ℄)
HW-E HEADWALL
℄ 18"~ 836.19



C= 2783
F= 25,602

A-3
STA. 401+00 (18' RT. ℄)
604 № 5 CATCH BASIN
GRATE – 841.77
℄ 18" — 839.34



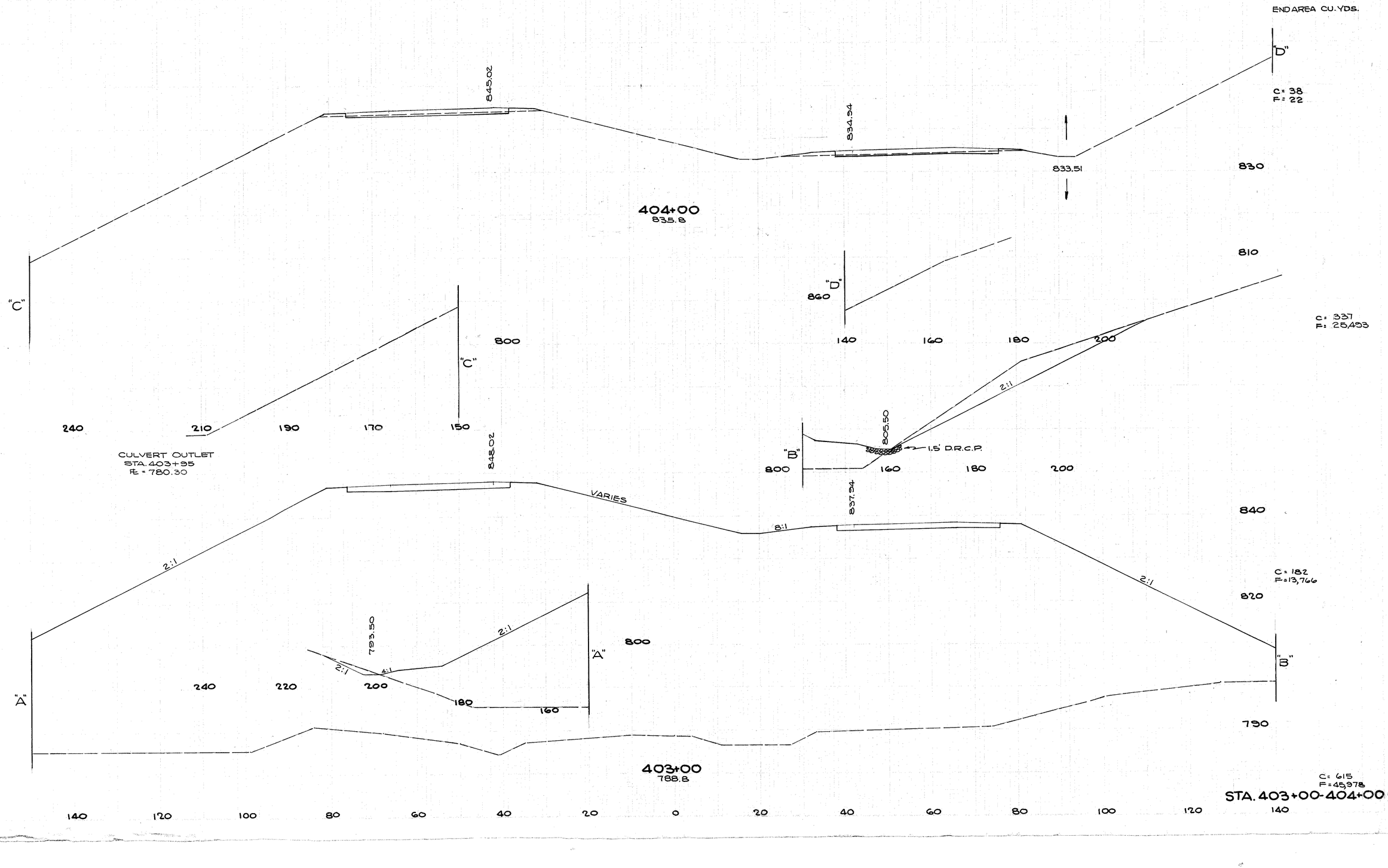
C= 1353
F= 2763

C= 8793
F= 6456

STA. 401+00-402+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

SUM·271·2.98


END AREA CU. YDS.
"D"
C = 38
F = 22
845.02
834.54
833.51
830
404+00
835.8
"C"
800
"C"
240
210
190
170
150
848.02
CULVERT OUTLET
STA. 403+95
FE = 780.30
"D"
860
810
140
160
180
200
C = 337
F = 25,403
805.50
1.5' D.R.C.P.
"B"
800
160
180
200
837.34
VARIES
8:1
2:1
840
C = 182
F = 13,766
820
"B"
793.50
2:1
4:1
2:1
"A"
800
"A"
240
220
200
180
160
790
403+00
788.8
C = 615
F = 45978
STA. 403+00-404+00
140
120
100
80
60
40
20
0
20
40
60
80
100
120
140

193
510

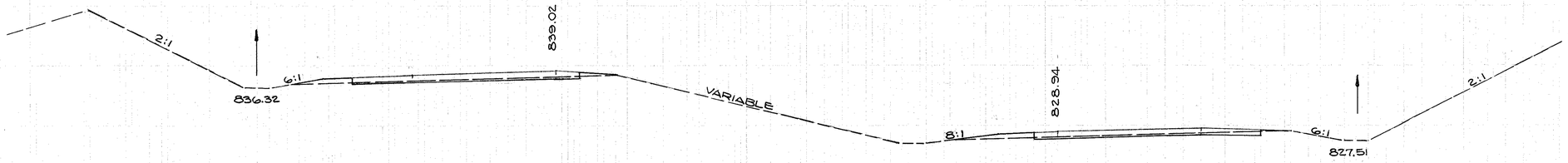
SUM-271-2.98

END AREA CU. YDS.

870

880

C = 31
F = 17



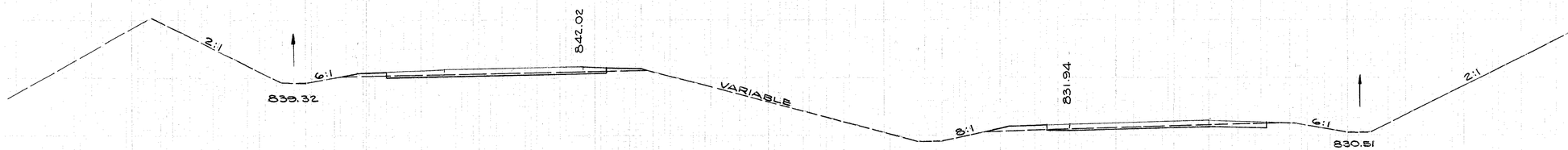
406+00
881.6

C = 111
F = 63

880

860

C = 29
F = 17



405+00
876.6

C = 124
F = 72

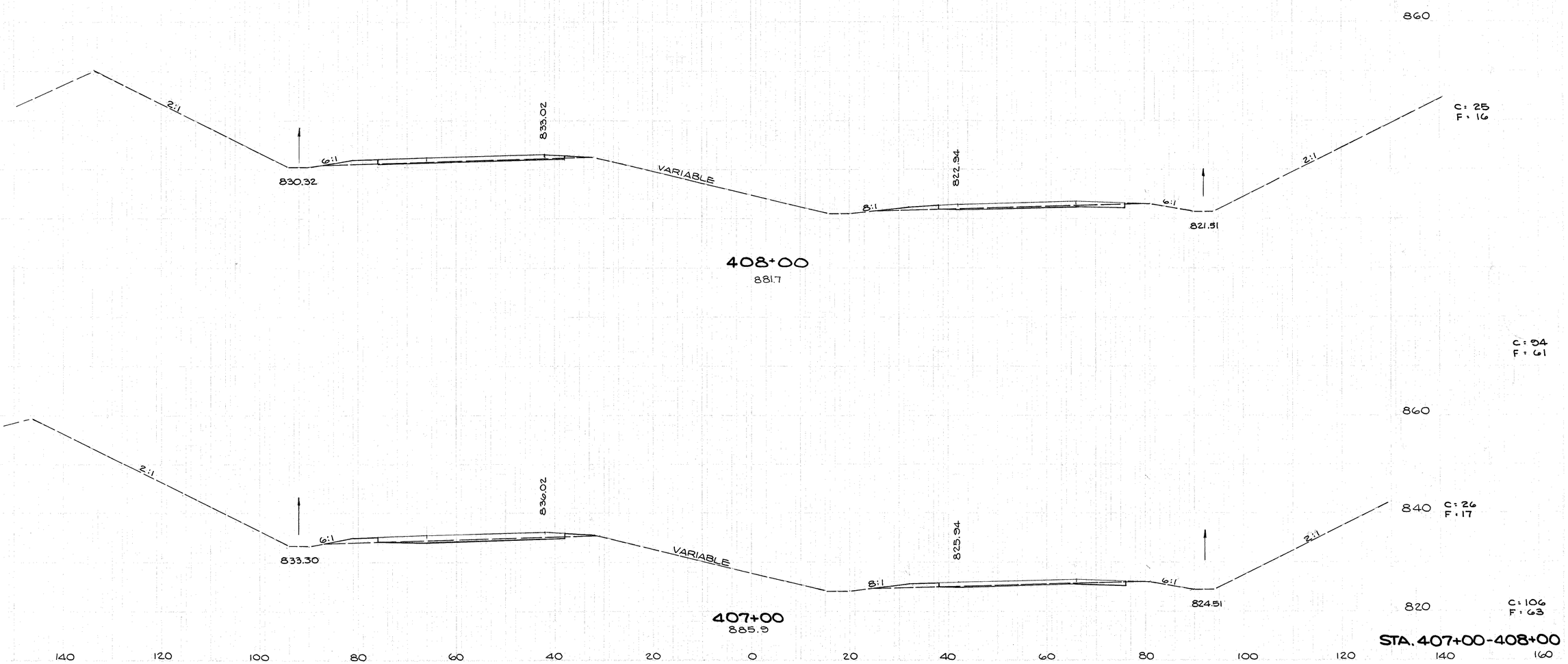
160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160

STA. 405+00-406+00

194
510

SUM-271-2.98

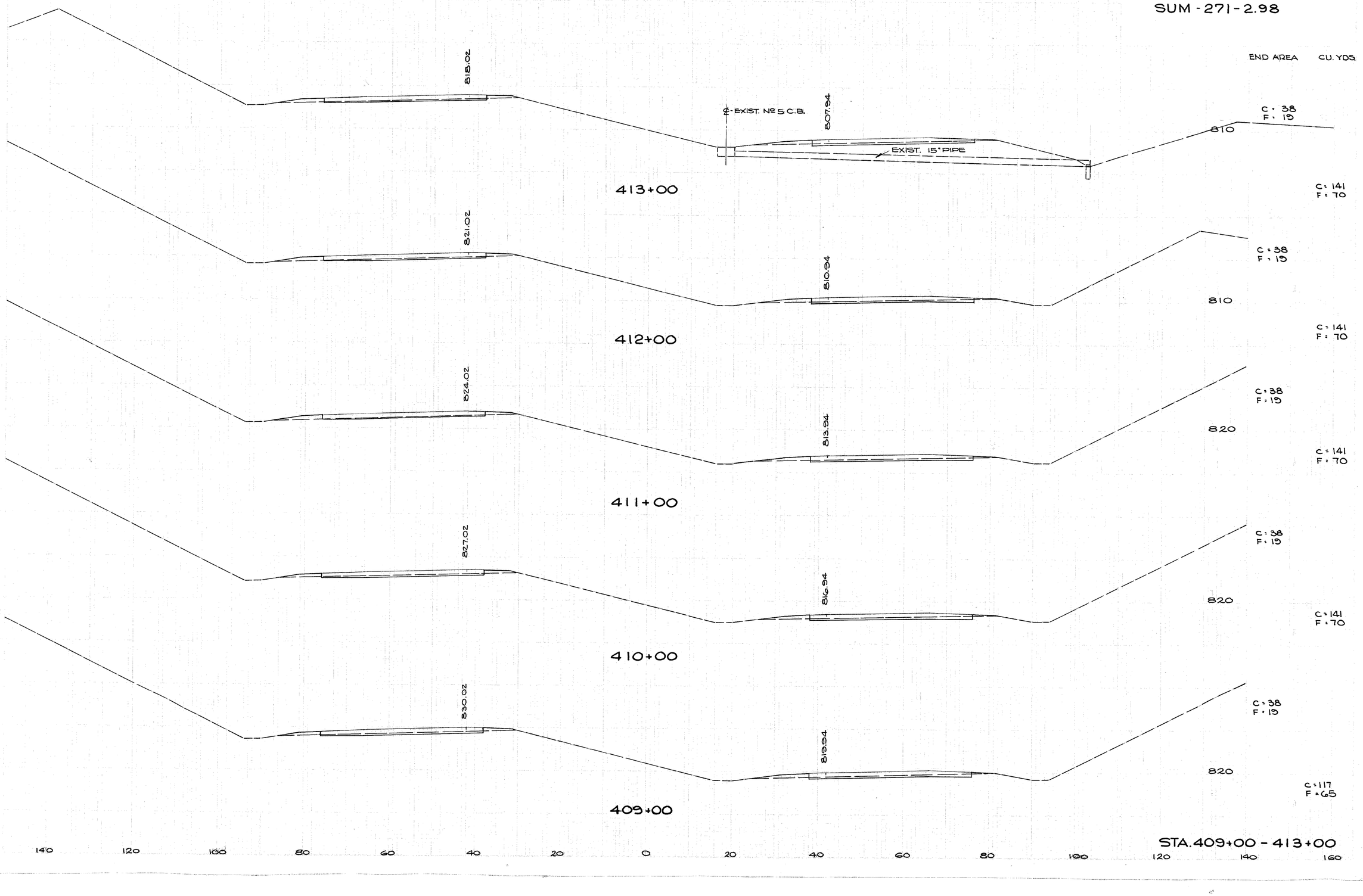
END AREA CU. YDS.



STA. 407+00-408+00

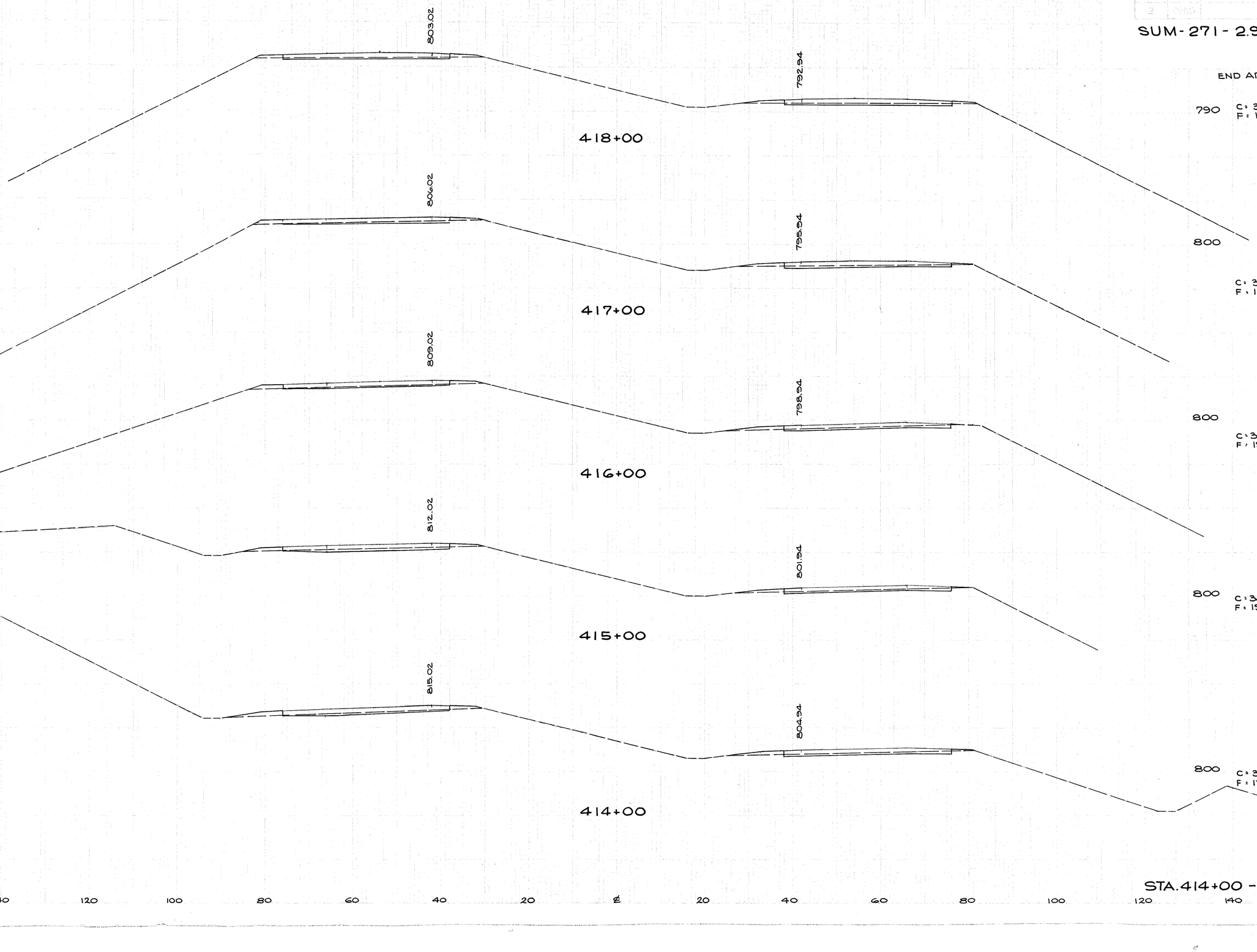
195
510

SUM - 271 - 2.98



196
510

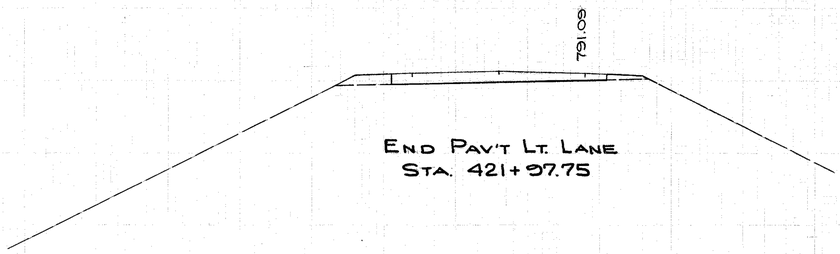
SUM-271-2.98

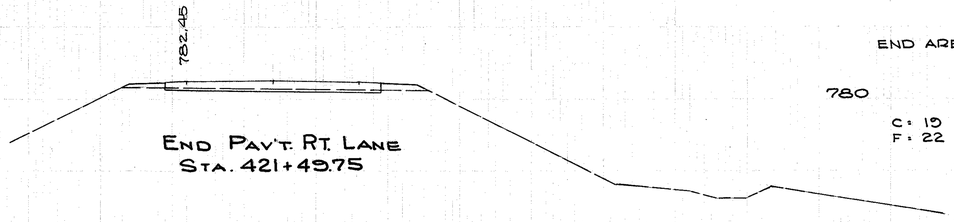


STA. 414+00 - 418+00

SUM-271-2.98

END AREA CU. YDS.





780
C: 19
F: 22

C: 34
F: 60



780 C: 6
F: 29

C: 24
F: 113

780 C: 7
F: 32

C: 30
F: 109

790 C: 9
F: 27

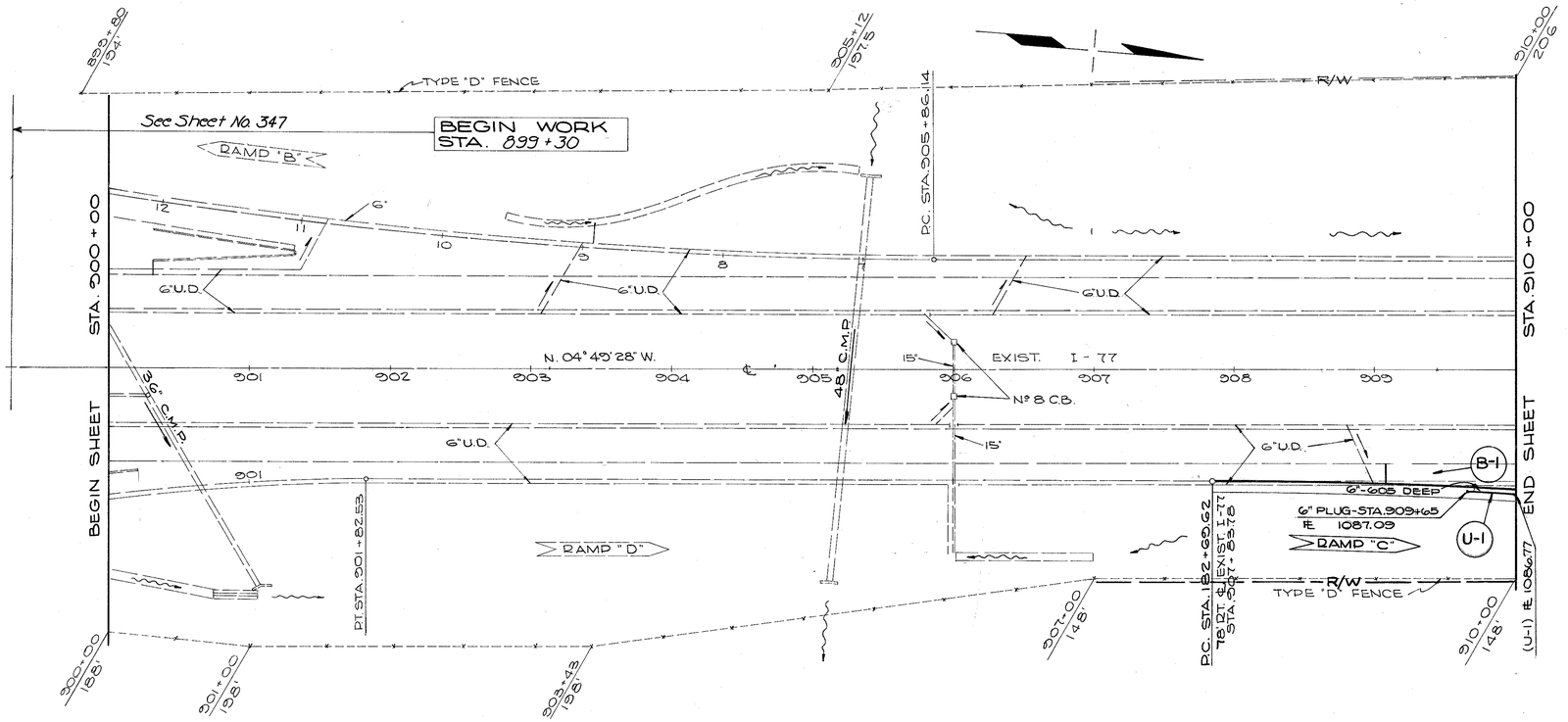
C: 87
F: 85

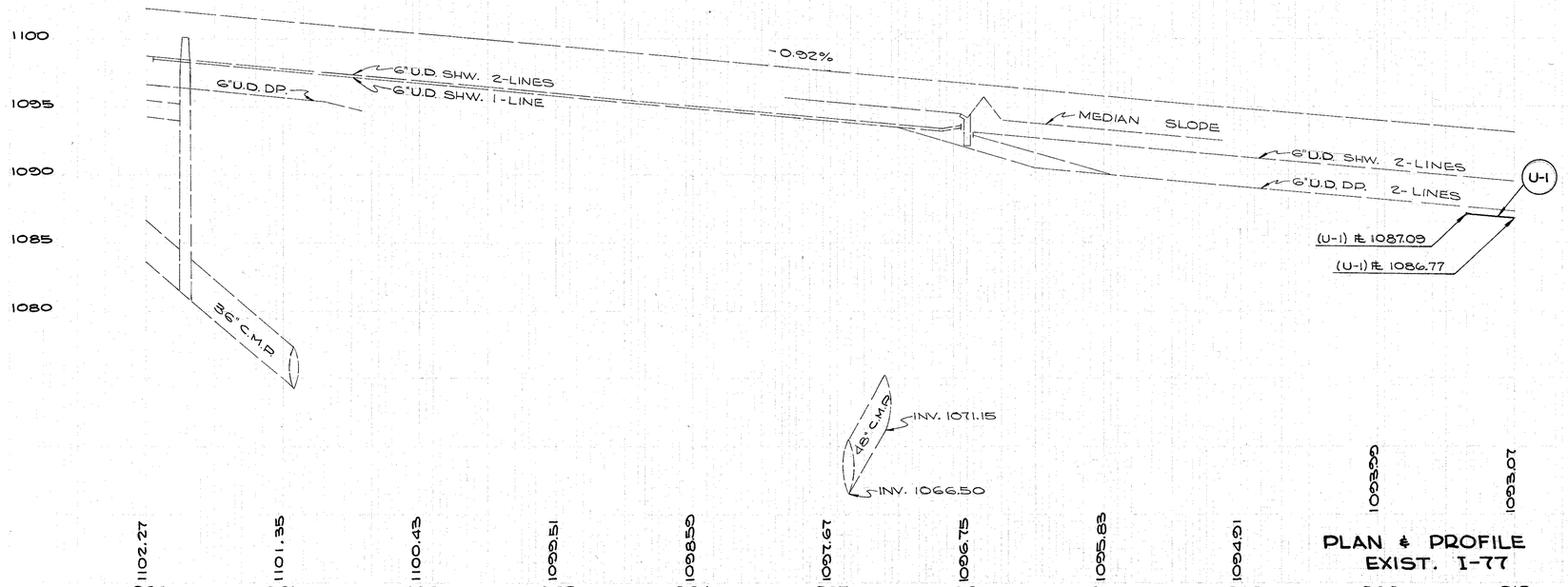
421+97.75 LT.
STA. 419+00 - 421+49.75 RT.

160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160

198
510

SUM - 271 - 2.98





PLAN & PROFILE
EXIST. I-77

605 6" UNDERDRAINS L.N. FT.
DEEP 45

U-1 909+65-910+00 RT.

45

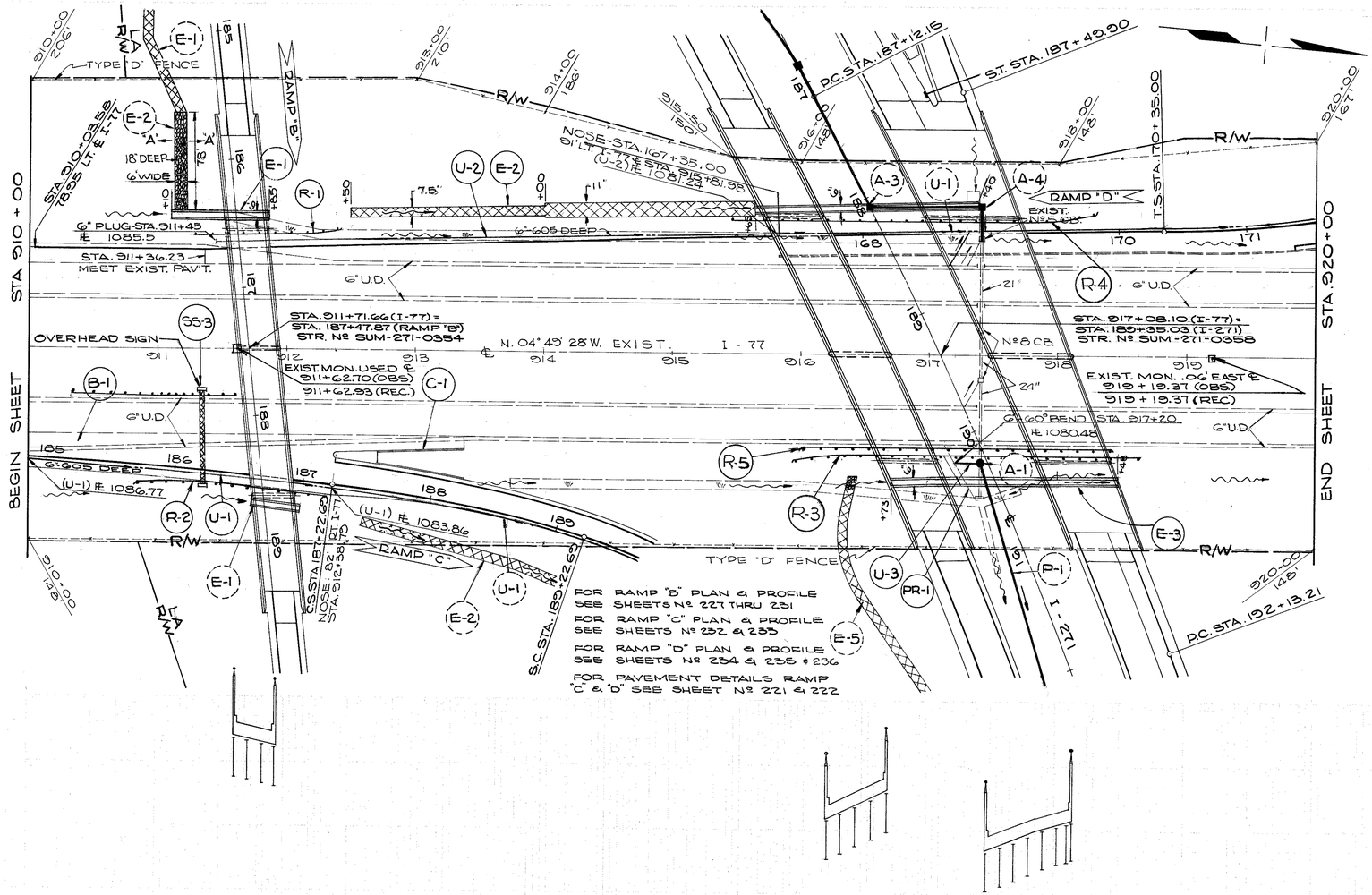
Rev 7-28-67

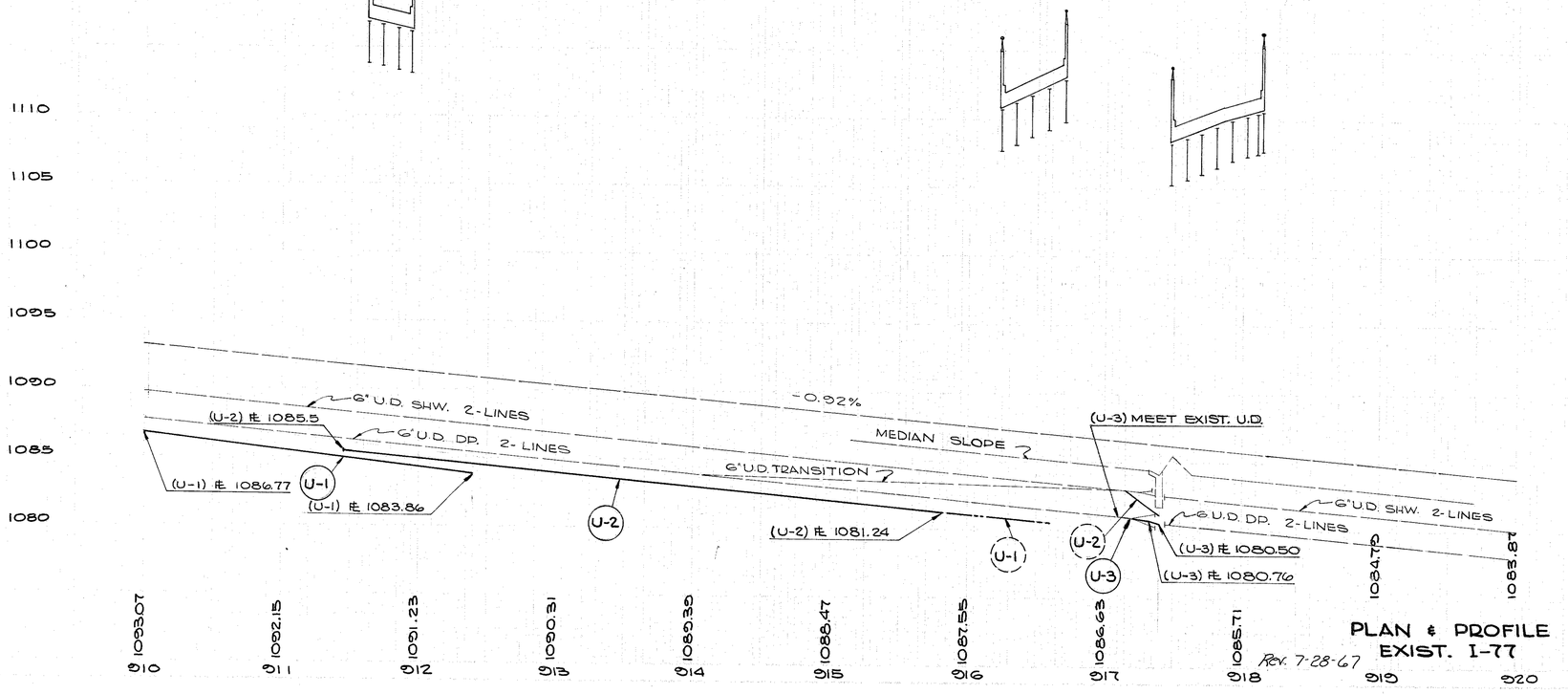
EXIST. I-77 STA. 900+00 TO STA. 910+00

NOTE:
EXIST. ℄ MONUMENT STA. 919+19.37 WAS USED FOR ESTABLISHING I-77 STATIONING ONLY.
EXIST. ℄ MONUMENTS ℄ STA. 911+68.70 AND STA. 955+10.66 WERE USED FOR RE-ESTABLISHING ℄ SURVEY I-77 ONLY.

199
510

SUM - 271 - 2.98



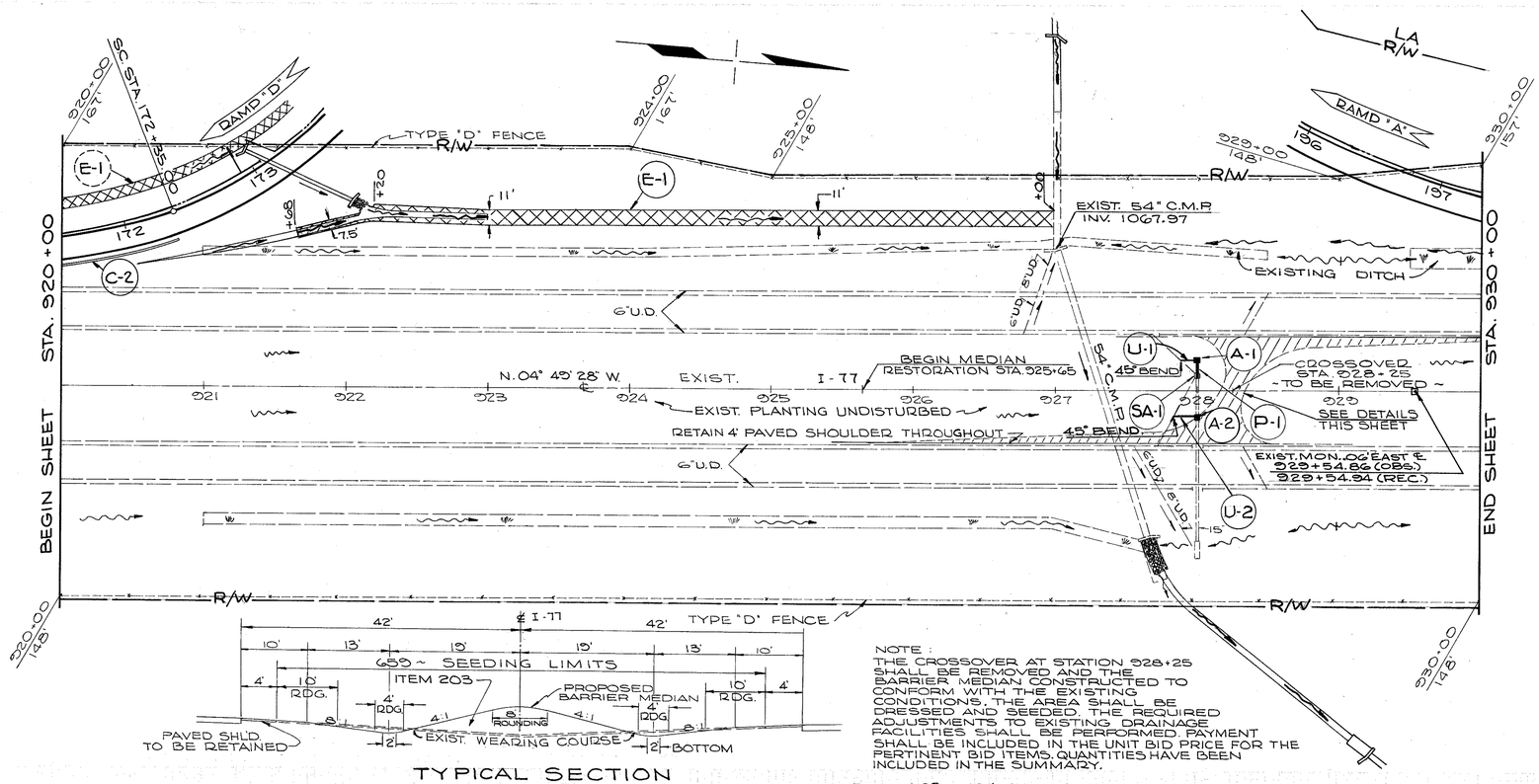


PLAN & PROFILE
EXIST. I-77
Rev. 7-28-67

			601 EXCAVATION CLASS "B" CU. YDS.	605 UNDERDRAINS LIN. FT.	606 GUARD RAIL TYPE 4 LIN. FT. STD.	607 EXIST. PAVT. REMOVED & DISP. OF SQ. YDS.	606 TEMP GUARD RAIL LIN. FT.	625 TOPSOIL SQ. YDS.	627 MULCHING SQ. YDS.	667 JUTE MATTING SQ. YDS.	601 PAVED GUTTER LIN. FT. TYPE 4	602 PIPE RCP CL. III LIN. FT. 12" OR OVER UNDER 18"
U-1	910+00-RAMP "B"-187+22.69	RT.										
U-2	911+45-RAMP "D"-167+35	LT.										
U-3	917+10 - 917+40	RT.										
E-1	911+10 - 911+85	LT.										
E-2	912+50 - 917+40	LT.										
E-3	916+73 - 918+48	RT.										
PR-1	917+10 - 917+38	RT.										
R-1	911+26 - 912+51	LT.	100									
R-2	910+83 - 912+20	RT.	100									
R-3	915+95 - 918+70	RT.	275									
R-4	915+45 - 918+32.5	LT.	287.5									
R-5	916+00 - 918+50	RT.					250					
B-1	910+00 - 913+50	RT.					233					
SS-3	911+35	RT										
			837.5	691		233	250			327	425	327

605 UNDERDRAINS LIN. FT.	BENDS & BRANCHS EACH 6"
DEEP	
233	-
438	-
20	-

EXIST. I-77 STA. 910+00 TO STA. 920+00



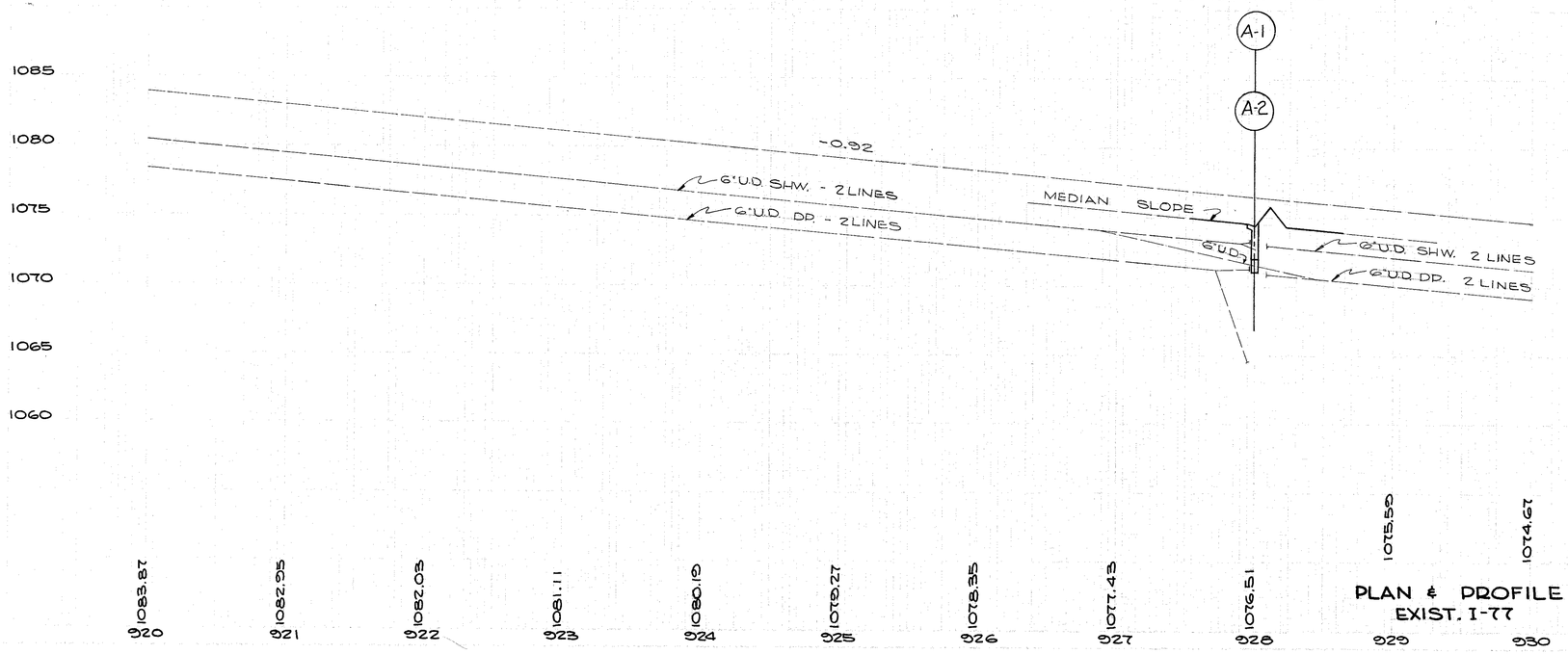
TYPICAL SECTION

CROSSOVER MEDIAN RESTORATION
LIMITING STA. 925+65 TO STA. 930+85

NOTE:
THE CROSSOVER AT STATION 928+25 SHALL BE REMOVED AND THE BARRIER MEDIAN CONSTRUCTED TO CONFORM WITH THE EXISTING CONDITIONS. THE AREA SHALL BE DRESSED AND SEEDED. THE REQUIRED ADJUSTMENTS TO EXISTING DRAINAGE FACILITIES SHALL BE PERFORMED. PAYMENT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE PERTINENT BID ITEMS. QUANTITIES HAVE BEEN INCLUDED IN THE SUMMARY.

ITEM 603 104 CU. YDS. EXCAVATION NOT INCLUDING EMBANKMENT
156 CU. YDS. EMBANKMENT

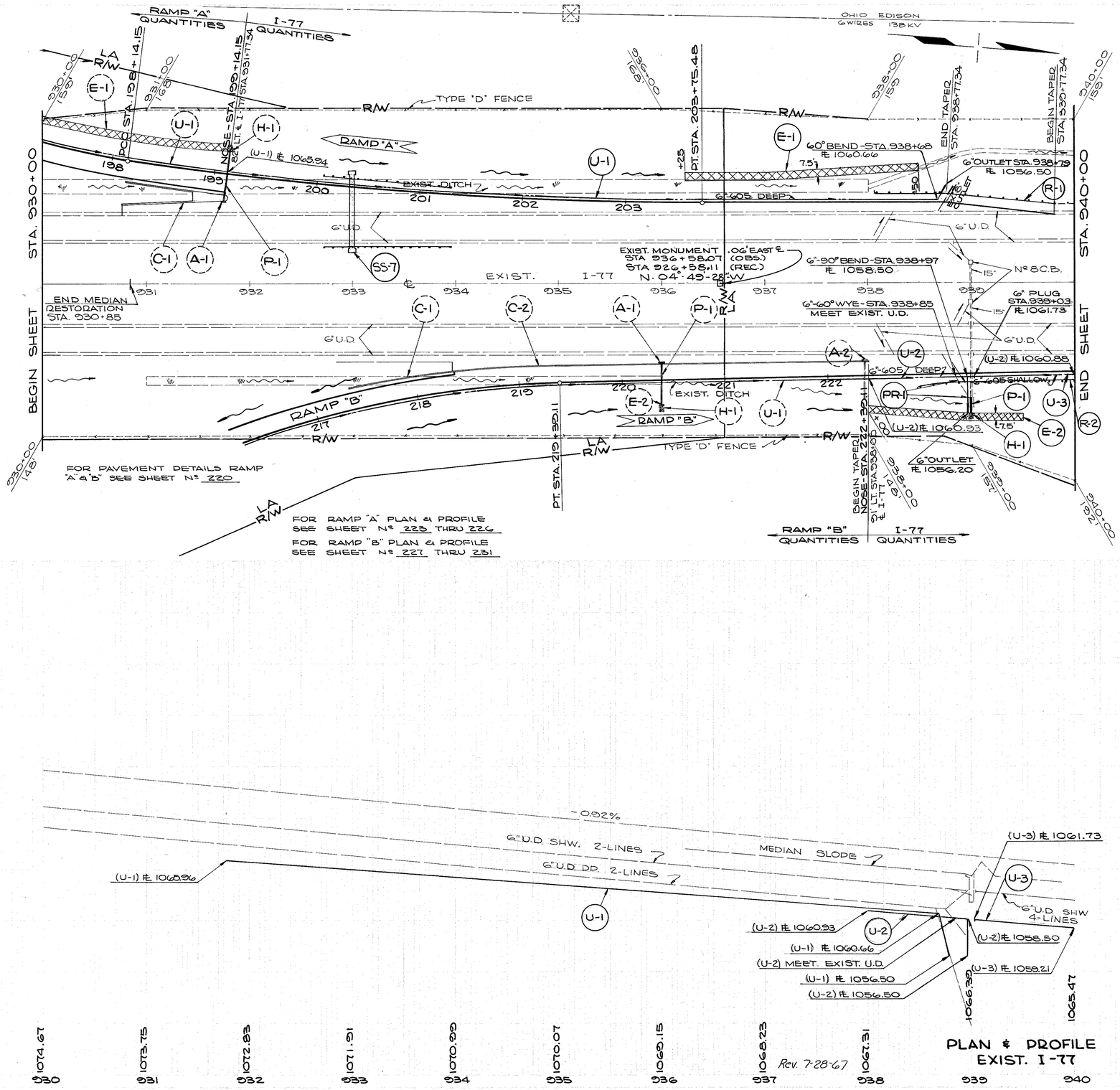
ITEM 659 3266 SQ. YDS. SEEDING & MULCHING



	667 JUTE MATTING SQ. YDS.	632
E-1	921+68 - 927+00 LT.	
P-1	A-1 THRU SA-1 LT.	
U-1	927+80 - 928+00 LT.	
U-2	927+84 - 928+00 RT.	
SA-1	928+00 (10' LT.)	
A-1	928+00 (15' LT.)	
A-2	928+00 (15' RT.)	

	202 CATCH BASIN REMOVED EACH	604 CATCH BASIN NºS EACH	603 TYPE "F" 6" EACH	BENDS AND BRANCHES EACH 6"	603 6" CONC. JOINT TYPE B WELDING 15"
E-1					
P-1	1				
U-1			10	1	10
U-2			1	1	
SA-1					
A-1		1			
A-2		1			
	1	2	26	2	10

EXIST. I-77 STA. 920+00 TO STA. 930+00

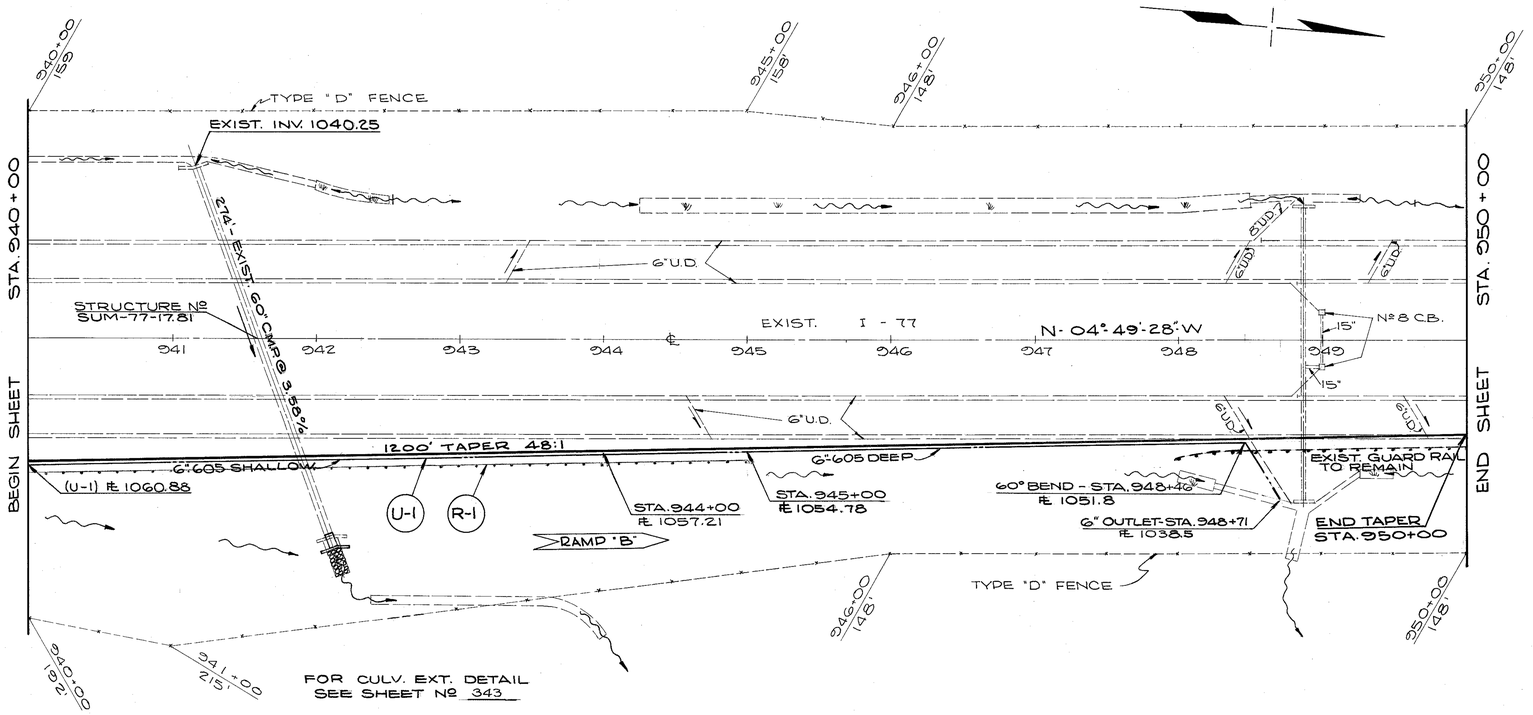


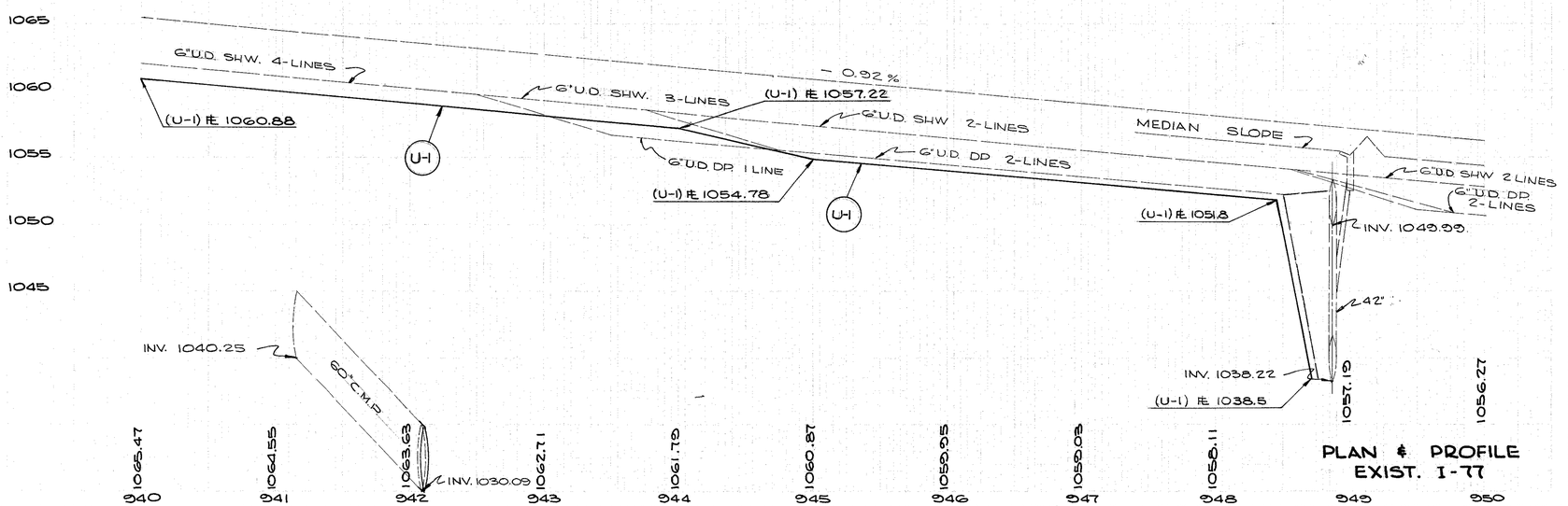
PLAN & PROFILE EXIST. I-77

Rev. 7-28-67

SUM -271 - 2.98

| | | |





PLAN & PROFILE
EXIST. I-77

605 UNDERDRAINS LIN. FT.	BENDS & BRANCHS EACH	603 CONDUITS LIN. FT. TYPE
DEEP	60° BEND	6"
SHALLOW		
383 500	1	0

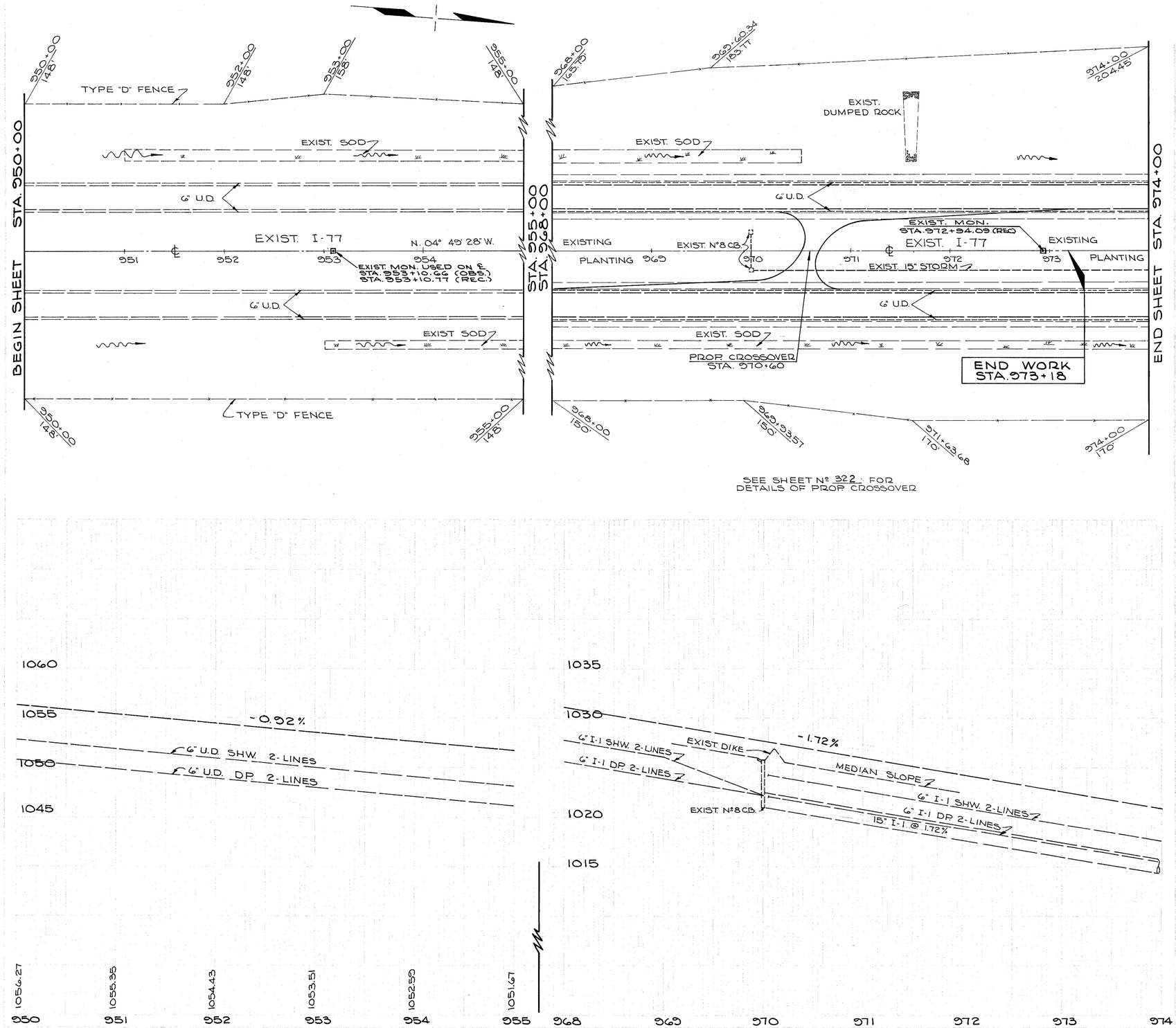
606 GUARD RAIL-4 LIN. FT. STD.	
U-1 940+00 - 948+46	RT. 500
R-1 940+00 - 945+00	RT. 500

0 - 383 500

500

EXIST. I-77 STA. 940+00 TO STA. 950+00

SUM - 271 - 2.98



EXIST. I-77 STA. 950+00 TO STA. 974+00

204
510

SUM - 271 - 2.98

END AREA CU. YDS.

TIES TO RAMP "B"
STA. 185+87

"A" "A"

160 150 140 1100

"A"

3:1 6:1

1089.06

912+00
1093.5

C-556
F-47

C-293
F-60

1090

6:1 BRIDGE SLOPE 2:1

1088.41

1110

"B"

1100

5'-0"

1090

601 DUMP ROCK.
CHANNEL PROTECTION 18"
STA. 911+17 SEE SHEET Nº 325

"B"

911+00
1094.6

1091.52

6:1 3:1

1089.56

1090

C-870
F-120

C-177 AHD.
F-5 AHD.
C-205 BK.
F-5 BK.

NOTE: STA. 910+03.58
BEGIN RAMP "D", TAPER (LT.)

VARIES

1092.81

VARIES

1090.85

1100

1090

C-484
F-16

910+03.58
1095.2

1093.72

BACK

VARIES

1100

1090

C-66 AHD.
F-4 AHD.
C-56 BK.
F-2 BK.

C-184
F-7

909+07.37
1096.4

1094.48

VARIES

1100

1090

C-47 AHD.
F-2 AHD.
C-14 BK.
F-2 BK.

C-3
F-2

908+00
1097.1

C-6
F-9

NOTE: STA. 907+83.78 = ZERO SECTION
BEGIN RAMP "C"

AN ADDITIONAL 12" OF SUBBASE SHALL
BE PLACED UNDER THE ITEM 451
WIDENING FROM STA. 909+07.37
TO STA. 911+00

C-2
F-3

1100

907+00
1098.0

1090

160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160

I.R. 77
STA. 907+00 - 912+00

205
510

SUM - 271 - 2.98

SEE RAMP "D"
STA. 168+00±

1087.28 ℄ RAMP "D"

SEE CROSS
SEC. LAYOUT

2:3:1

6:1

BACK

1085.32

TIES TO I-271
STA. 187+00

"E" 1100

3:1

150 140

"E"

3:1

1086.13

TIES TO I-271
STA. 186+44

3:1

"D" "D" 1100

TIES TO RAMP "B"
STA. 185+87

3:1

1086.54

3:1

"C" "C" 1100

C

3:1

1087.11

TIES TO RAMP "B"
STA. 185+87

3:1

"B" "B" 1100

150 140

3:1

1088.13

TIES TO RAMP "B"
STA. 185+87

"A" "A" 1100

160 150 140

1088.70

916+50
1089.2

915+81.98
RAMP "D" NOSE

915+00
1090.7

914+48.5

914+00
1091.7

913+00
1092.8

912+38.79
1093.2
RAMP "C" NOSE
℄

1090 "F"

SEE RAMP "C"
STA. 191+34

END AREA CU. YDS.
C - 217
F - 5

"F"

VARIES

1084.50

1080

C - 362
F - 6

SEE RAMP "C"
STA. 190+47

VARIES

1085.10

C - 70 AHD.
F - 0 AHD.
C - 190 BK.
F - 0 BK.

1080

C - 717
F - 5

1090

SEE RAMP "C"
STA. 189+69

1086.2

C - 282
F - 3

1080

C - 587
F - 6

1090

SEE CROSS SECTION
LAYOUT

1086.8

C - 334
F - 3

C - 563
F - 7

1090

SEE RAMP "C"
STA. 188+80

1087.7

C - 293
F - 5

C - 989
F - 37

C - 241
F - 15

1090

SEE RAMP "C"
STA. 187+83

C - 475
F - 24

C - 178 AHD.
F - 6 AHD.

AHEAD BACK

2% 1089.92

3:1

1090

C - 481 BK.
F - 6 BK.

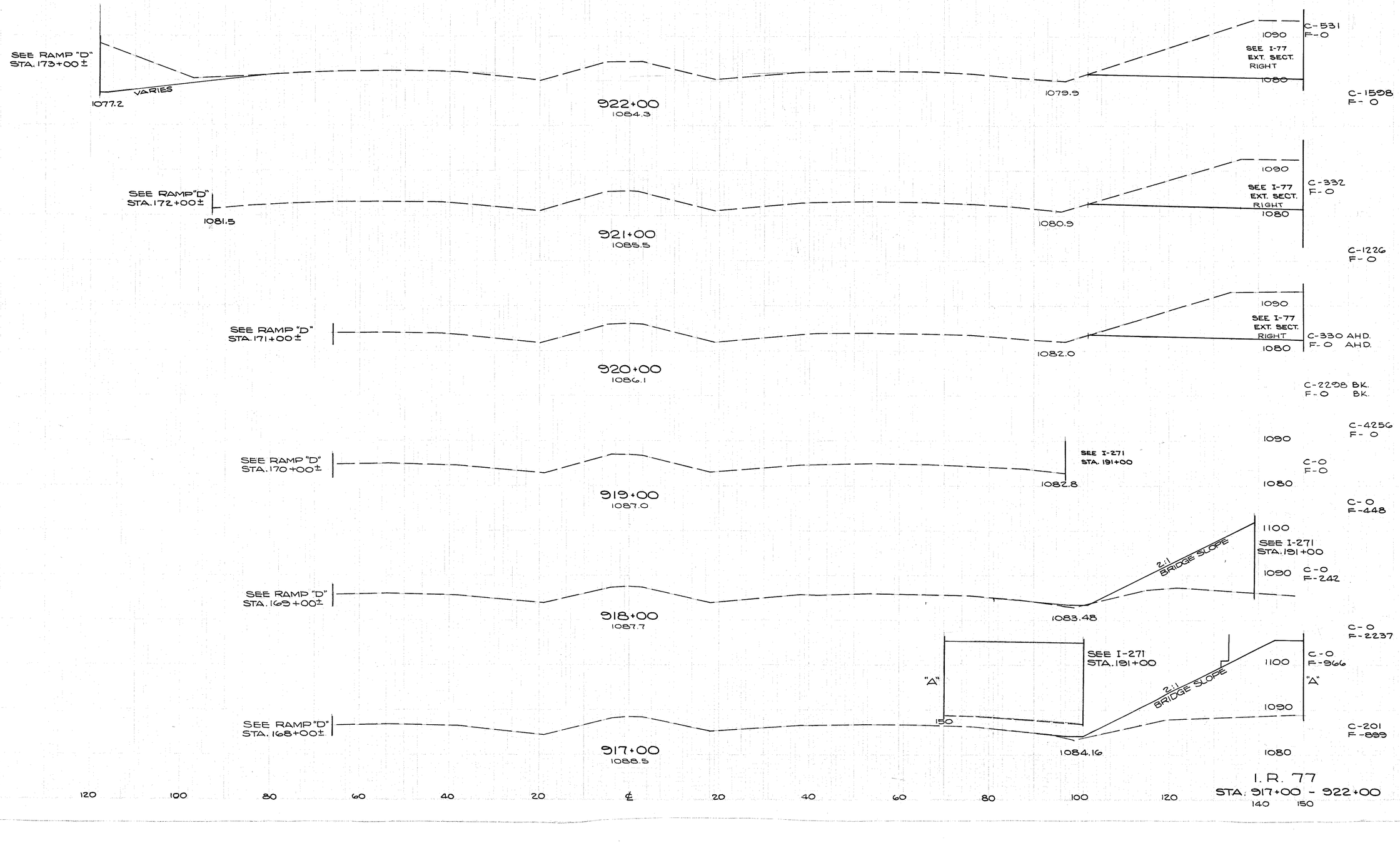
I. R. 77
STA. 912+38.79 - 916+50

160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160

206
510

SUM - 271 - 2.98

END AREA CU. YDS.



I. R. 77

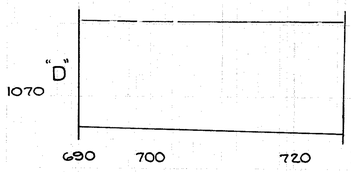
STA. 917+00 - 922+00

206A
510

SUM-271-2.98

END AREA CU.YDS.

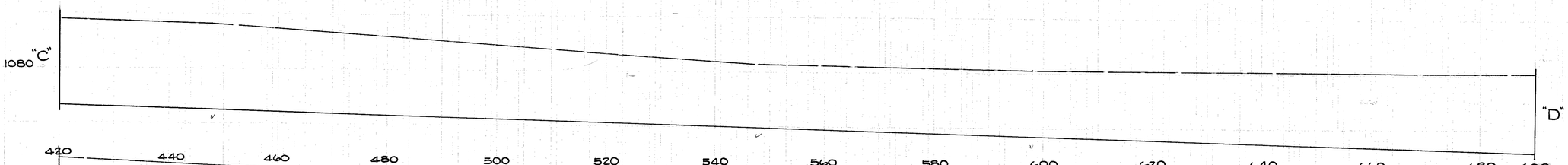
922+00 (CONT'D.)



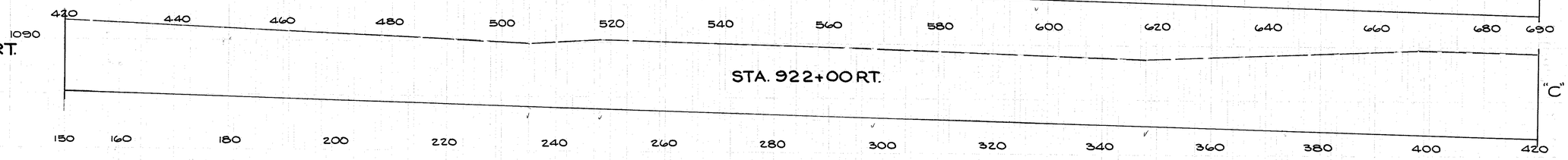
SEE RAMP "B" STA. 205+00±

C-28667 F-0

922+00 (CONT'D.)

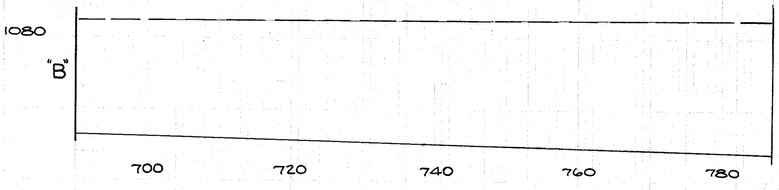


922+00 RT.



C-7667 F-0

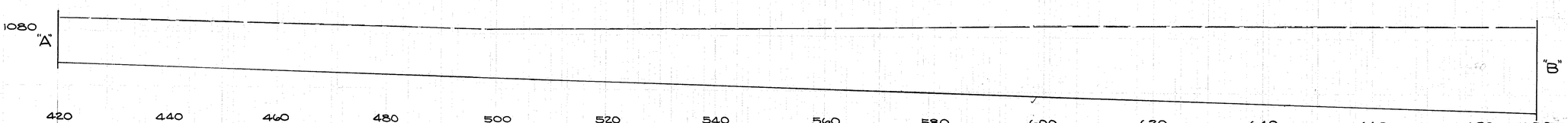
921+00 (CONT'D.)



TIES TO I-271 TOE OF SLOPE STA. 198+00±

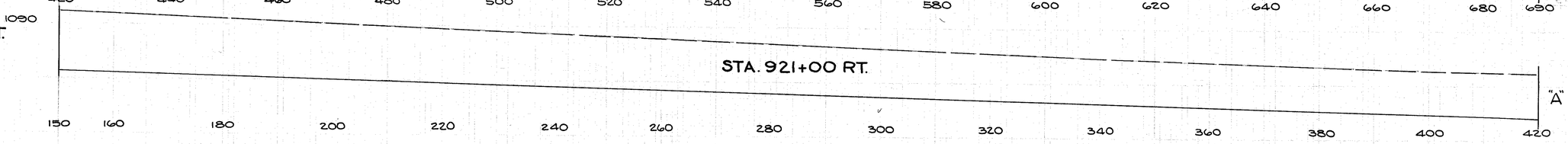
C-27548 F-0

921+00 (CONT'D.)



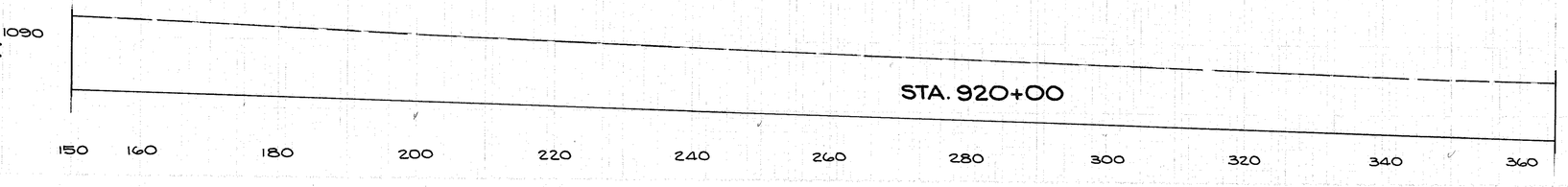
C-7209 F-0

921+00 RT.



C-16004 F-0

920+00 RT.

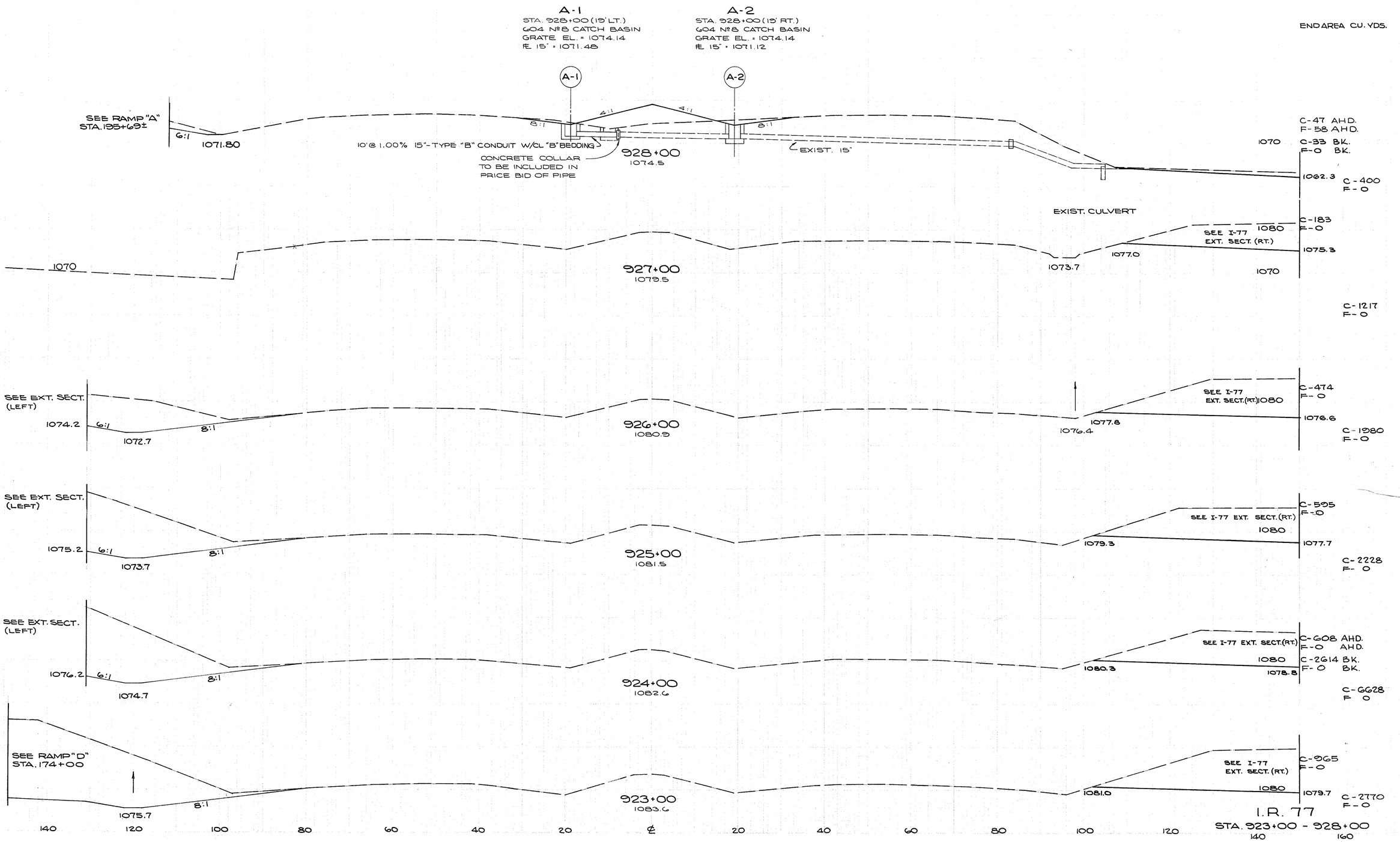


TIES TO I-271 TOE OF SLOPE STA. 194+00±

C-1968 F-0

I-77 EXTENDED SECTIONS (RT.)
STA. 920+00 - STA. 922+00

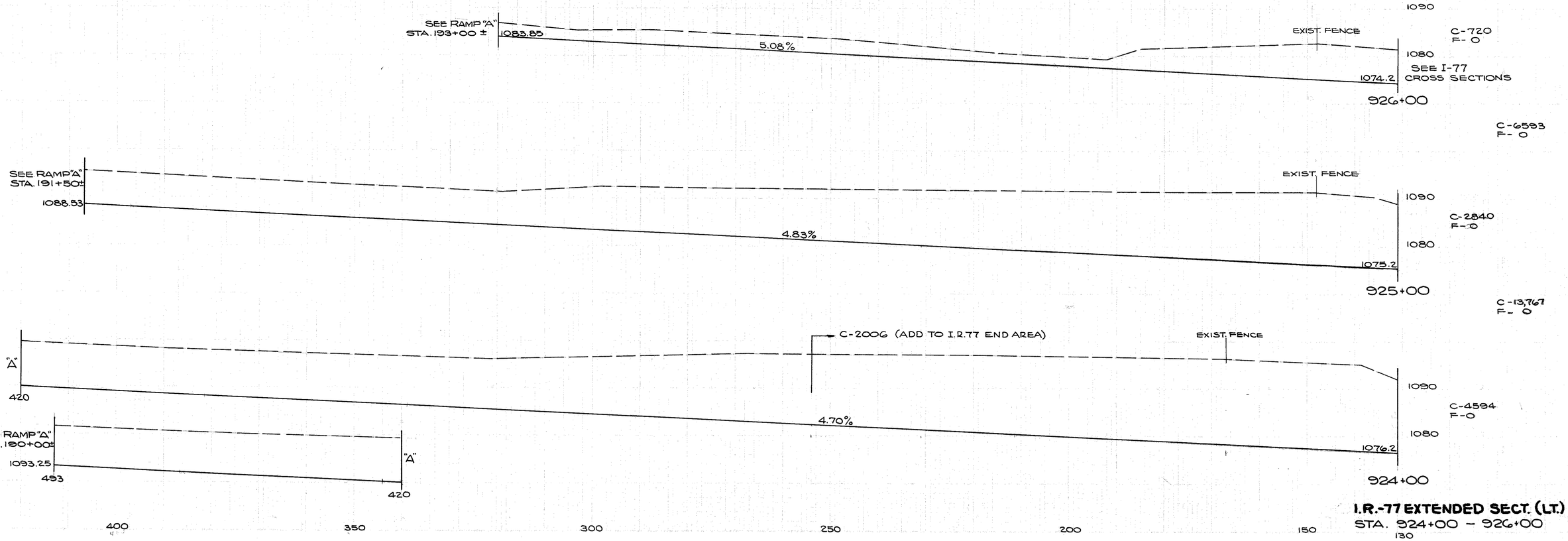
SUM - 271 - 2.98


A-1
STA. 928+00 (15' LT.)
604 No 8 CATCH BASIN
GRATE EL. = 1074.14
Ø 15" = 1071.48
A-2
STA. 928+00 (15' RT.)
604 No 8 CATCH BASIN
GRATE EL. = 1074.14
Ø 15" = 1071.12
END AREA CU. YDS.
SEE RAMP "A"
STA. 135+69±
6:1
1071.80
8:1
4:1
4:1
8:1
10' @ 1.00% 15"-TYPE "B" CONDUIT W/CL "B" BEDDING
CONCRETE COLLAR
TO BE INCLUDED IN
PRICE BID OF PIPE
928+00
1074.5
EXIST. 15"
C-47 AHD.
F-58 AHD.
1070
C-33 BK.
F-0 BK.
1062.3
C-400
F-0
EXIST. CULVERT
C-183
F-0
SEE I-77
EXT. SECT. (RT.)
1080
1075.3
1077.0
1073.7
1070
927+00
1079.5
1070
C-1217
F-0
SEE EXT. SECT.
(LEFT)
1074.2
6:1
1072.7
8:1
926+00
1080.5
1076.4
1077.8
SEE I-77
EXT. SECT. (RT.) 1080
C-474
F-0
1076.6
C-1980
F-0
SEE EXT. SECT.
(LEFT)
1075.2
6:1
1073.7
8:1
925+00
1081.5
1079.3
SEE I-77 EXT. SECT. (RT.)
1080
C-595
F-0
1077.7
C-2228
F-0
SEE EXT. SECT.
(LEFT)
1076.2
6:1
1074.7
8:1
924+00
1082.6
1080.3
SEE I-77 EXT. SECT. (RT.)
1080
C-608 AHD.
F-0 AHD.
C-2614 BK.
F-0 BK.
1078.8
C-6628
F-0
SEE RAMP "D"
STA. 174+00
1075.7
8:1
923+00
1083.6
1081.0
SEE I-77
EXT. SECT. (RT.)
1080
C-965
F-0
1079.7
C-2770
F-0
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140
160
I.R. 77
STA. 923+00 - 928+00

208
510

SUM. · 271 · 2.98

END AREA CU. YDS.



I.R.-77 EXTENDED SECT. (LT.)
STA. 924+00 – 926+00

208A
510

SUM-271-2.98

END AREA CU.YDS.

C-8513
F-0

1080
"C"
1070

SEE RAMP "B"
STA. 209+00 ±

420 440 460

925+00 RT.

1080

STA. 925+00 RT.

"C"

C-2854
F-0

150 160 180 200 220 240 260 280 300 320 340 360 380 400 420

924+00
(CONT'D.)

1080 "B"
1070

SEE RAMP "B"
STA. 208+00 ±

C-14009
F-0

420 440 460 480 500 520 540

924+00 RT.

1080

STA. 924+00 RT.

"B"

C-4711
F-0

150 160 180 200 220 240 260 280 300 320 340 360 380 400 420

1090
"A"

923+00
(CONT'D.)

1080

SEE RAMP "B"
STA. 206+00 ±

C-23103
F-0

420 440 460 480 500 520 540 560 580 600 620 640

1090

923+00 RT.

1080

STA. 923+00 RT.

"A"

C-7813
F-0

150 160 180 200 220 240 260 280 300 320 340 360 380 400 420

I-77 EXTENDED SECTIONS (RT.)
STA. 923+00 – STA. 925+00

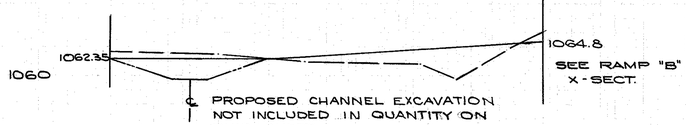
FED RD DIVISION	STATE	PROJECT	
2	OHIO		

208B
510

SUM-271-2.98

END AREA CU.YDS.

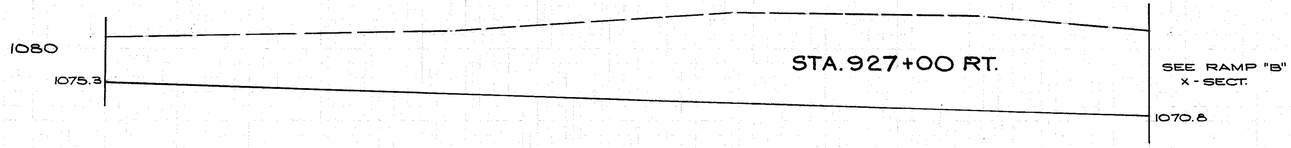
928+00 RT.



C-14
F-58

C-2850
F-107

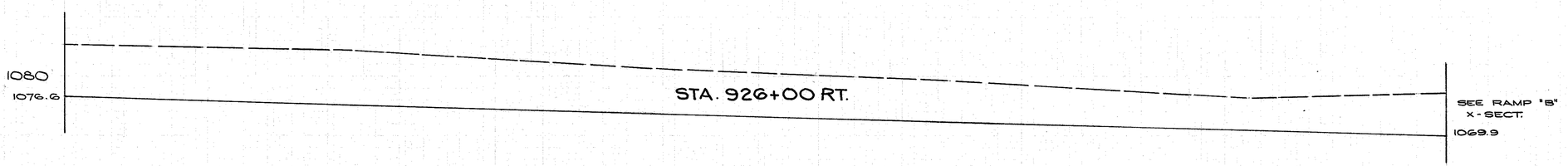
927+00 RT.



C-1525
F-0

C-6052
F-0

926+00 RT.



C-1743
F-0



I.R.-77 EXTENDED SECTIONS (RT)
STA. 926+00 to STA. 928+00

SUM. 271 2.98

END AREA CU. YDS.



C-246
F-5
1070

C-1311
F-9

C-462
F-0
1070

C-2230
F-0

C-742
F-0
1070

C-668
F-0

C-853
F-0
1070

C-2243
F-27

C-1713 AHD.
F-19 AHD.
C-16 BK.
F-7 BK.
1070

C-30
F-13

C-0
F-0
1070

C-167
F-0

C-90
F-0
1070

C 254
F 107

I. R. 77
STA. 929+00 - 934+00

210
510

SUM. ·271·2.98

END AREA CU. YDS.

END TAPER 939+77.34

940+00
1068.1

939+00
1068.5

938+00
1069.5

937+00
1070.4

936+00
1071.7

935+00
1072.4

1065.50
2:1
C-20
F-178
C-176
F-589

1066.41
1066.05
H-1
℄ U.D. 1060.07
2:1
2:1
EX. FENCE
C-75
F-140
15" INV. 1062.29
15" INV. 1061.88
EXISTING 15" R.C.P. @ 5.38%
PR-1 EXISTING HEADWALL & ONE SECTION OF PIPE TO BE REMOVED.
13'-15" TYPE "B" CONDUIT W/CLASS "B" BEDDING @ 5.38%
15" INV. 1057.15
D.R.C.P. 6'x4'x1.5'
H-1
STA. 939+00 (126' RT. ℄)
HW-E HEADWALL
℄ 15" - 1056.18
C-522
F-322

1067.29
1066.89
A-2
H-2
EX. FENCE
1063.35
4:1
6:1
6:1
3:1
P-2
39'-12" TYPE "B" CONDUIT W/CL. "B" BEDDING @ 1.50%
℄ U.D. 1060.95
D.R.C.P. 5'x4'x1.5'
C-207 AHD.
F-34 AHD.
C-30 BK.
F-26 BK.
1062.16
A-2
STA. 937+97.21 I-77 (76.04' RT. ℄)
604 Nº 6 CATCH BASIN
GRATE - 1067.13
℄ 12" - 1063.97
H-2
STA. 937+97.21 I-77 (114.50' RT. ℄)
HW-E HEADWALL
℄ 12" - 1063.38
C-211
F-56

3:1
8:1
1066.00
C-87
F-4

3:1
8:1
1066.89
A-1
H-1
NOTE: EARTHWORK CALCULATED WITH RAMP "B"
1064.80
3:1
P-1
40'-12" TYPE "B" CONDUIT W/CL "B" BEDDING @ 1.50%
℄ U.D. 1062.42
D.R.C.P. 5'x4'x1.5'
C-133
F-0
C-407
F-7
A-1
STA. 936+00 I-77 (78.84' RT. ℄)
604 Nº 6 CATCH BASIN
GRATE - 1068.79
℄ 12" - 1065.42
H-1
STA. 936+00 I-77 (119' RT. ℄)
HW-E HEADWALL
℄ 12" - 1064.82
C 474
F 11

2:1
6:1
1067.35
SEE RAMP "B" X-SECT.
C-123
F-6
C-683
F-20

1060

160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160

I. R. 77
STA. 935+00 - 940+00

211
510

SUM. · 271 · 298

END AREA CU. YDS.

945+00
1063.5

1060.90

8:1

6:1

1058.78

C-35
F-10

944+00
1064.4

1061.70

2:1

C-102
F-398

C-20
F-205

943+00
1065.2

1062.61

2:1

C-85
F-972

C-26
F-320

942+00
1066.1

1063.62

2:1

C-96
F-1200

C-26
F-333

941+00
1067.1

1064.50

2:1

C-85
F-972

C-20
F-192

C-74
F-685

1070
1060
1050
1040
1030

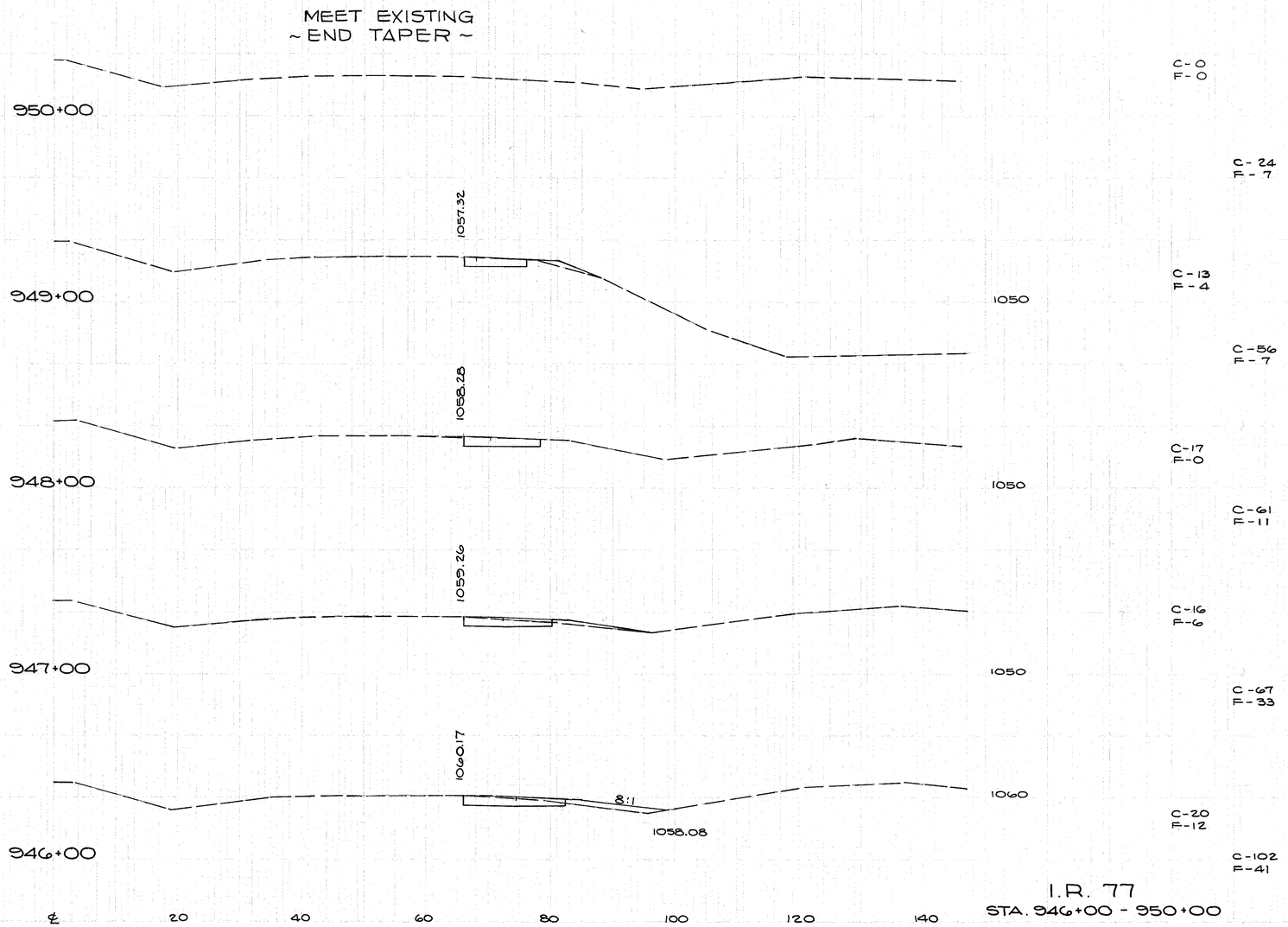
130 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200

I.R. 77
STA. 941+00 – 945+00

212
510

SUM. · 271 · 2.98

END AREA C.U.YDS.



C - 0
F - 0

C - 24
F - 7

C - 13
F - 4

C - 56
F - 7

C-17
F-0

C - 61
F - 11

C-16
F-6

C - 67
F - 33

C-20
F-12

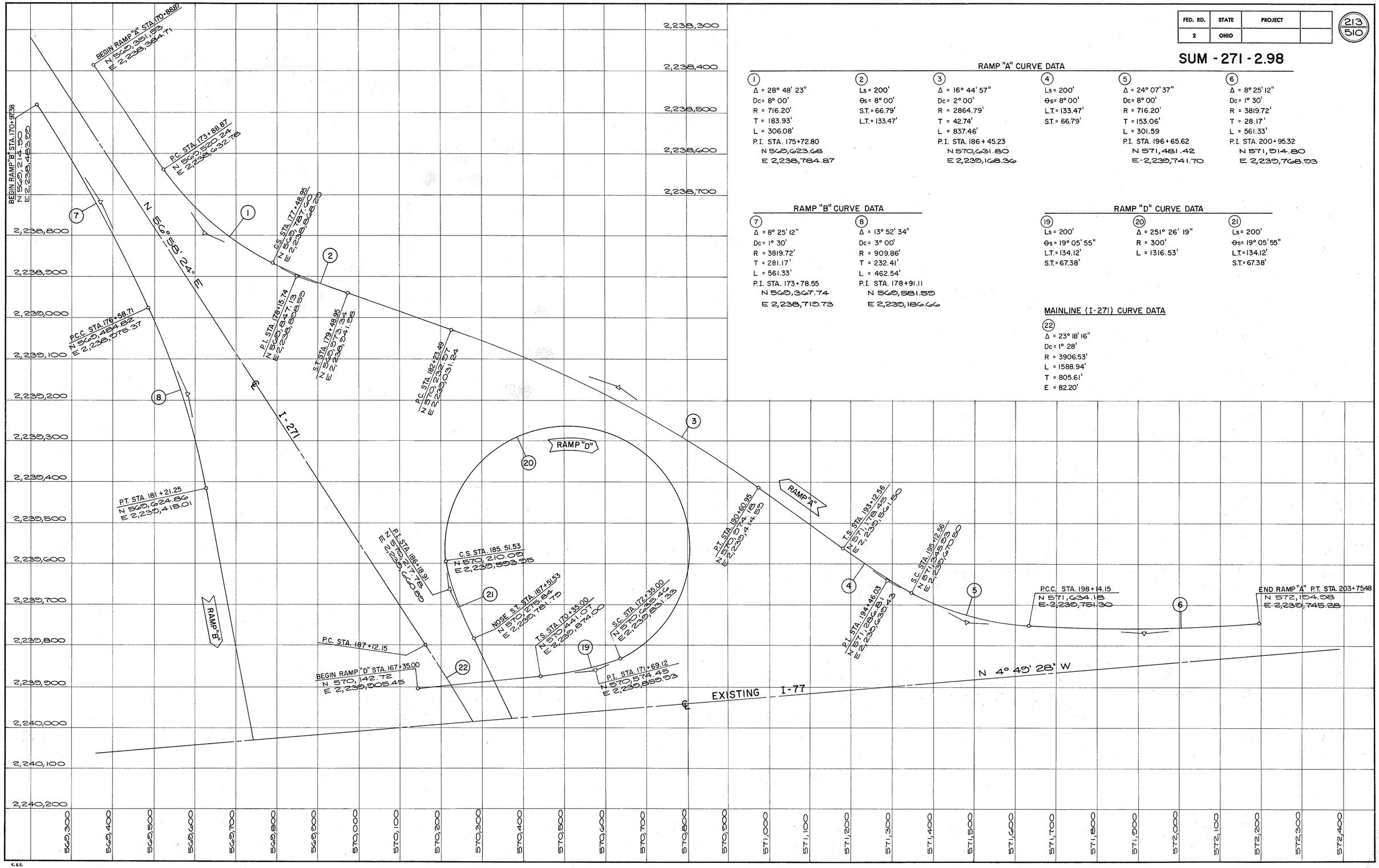
C - 102
F - 41

I.R. 77
STA. 946+00 - 950+00

FED. RD.	STATE	PROJECT	
2	OHIO		

213/510

SUM - 271 - 2.98



RAMP "A" CURVE DATA

(1)	(2)	(3)	(4)	(5)	(6)
Δ = 28° 48' 23"	Ls = 200'	Δ = 16° 44' 57"	Ls = 200'	Δ = 24° 07' 37"	Δ = 8° 25' 12"
Dc = 8° 00'	Θs = 8° 00'	Dc = 2° 00'	Θs = 8° 00'	Dc = 8° 00'	Dc = 1° 30'
R = 716.20'	S.T. = 66.79'	R = 2864.79'	L.T. = 133.47'	R = 716.20'	R = 3819.72'
T = 183.93'	L.T. = 133.47'	T = 42.74'	S.T. = 66.79'	T = 153.06'	T = 28.17'
L = 306.08'		L = 837.46'		L = 301.59	L = 561.33'
P.I. STA. 175+72.80		P.I. STA. 186+45.23		P.I. STA. 196+65.62	P.I. STA. 200+95.32
N 569,623.68		N 570,631.80		N 571,481.42	N 571,914.80
E 2,238,784.87		E 2,239,168.36		E 2,239,741.70	E 2,239,768.93

RAMP "B" CURVE DATA

(7)	(8)
Δ = 8° 25' 12"	Δ = 13° 52' 34"
Dc = 1° 30'	Dc = 3° 00'
R = 3819.72'	R = 909.86'
T = 281.17'	T = 232.41'
L = 561.33'	L = 462.54'
P.I. STA. 173+78.55	P.I. STA. 178+91.11
N 569,367.74	N 569,581.59
E 2,238,718.73	E 2,239,186.66

RAMP "D" CURVE DATA

(19)	(20)	(21)
Ls = 200'	Δ = 251° 26' 19"	Ls = 200'
Θs = 19° 05' 55"	R = 300'	Θs = 19° 05' 55"
L.T. = 134.12'	L = 1316.53'	L.T. = 134.12'
S.T. = 67.38'		S.T. = 67.38'

MAINLINE (I-271) CURVE DATA

(22)
Δ = 23° 18' 16"
Dc = 1° 28'
R = 3906.53'
L = 1588.94'
T = 805.61'
E = 82.20'

C. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

214
510

SUM - 271 - 2.98

RAMP "B" CURVE DATA

(9)
Ls = 200'
~~Θs~~ = 8° 00'
L.T.= 133.47'
S.T.= 66.79'

(10)
Δ = 108° 54' 12"
Dc = 8° 00'
R = 716.20'
T = 1002.29'
L = 1361.29'
P.I. STA. 201+48.48
N 570,146.61
E 2,241,368.11

(11)
Ls = 200'
~~Θs~~ = 8° 00'
L.T.= 133.47'
S.T.= 66.79'

(12)
Ls = 200'
~~Θs~~ = 6° 00'
L.T.= 133.41'
S.T.= 66.74'

(13)
Δ = 33° 36' 57"
Dc = 6° 00'
R = 954.93'
T = 288.46'
L = 520.26'
P.I. STA. 216+67.31
N 571,782.98
E 2,239,961.98

MAINLINE (I-271) CURVE DATA

(22)
Δ = 23° 18' 16"
Dc = 1° 28'
R = 3906.53'
L = 1588.94'
T = 805.61'
E = 82.20'

RAMP "C" CURVE DATA

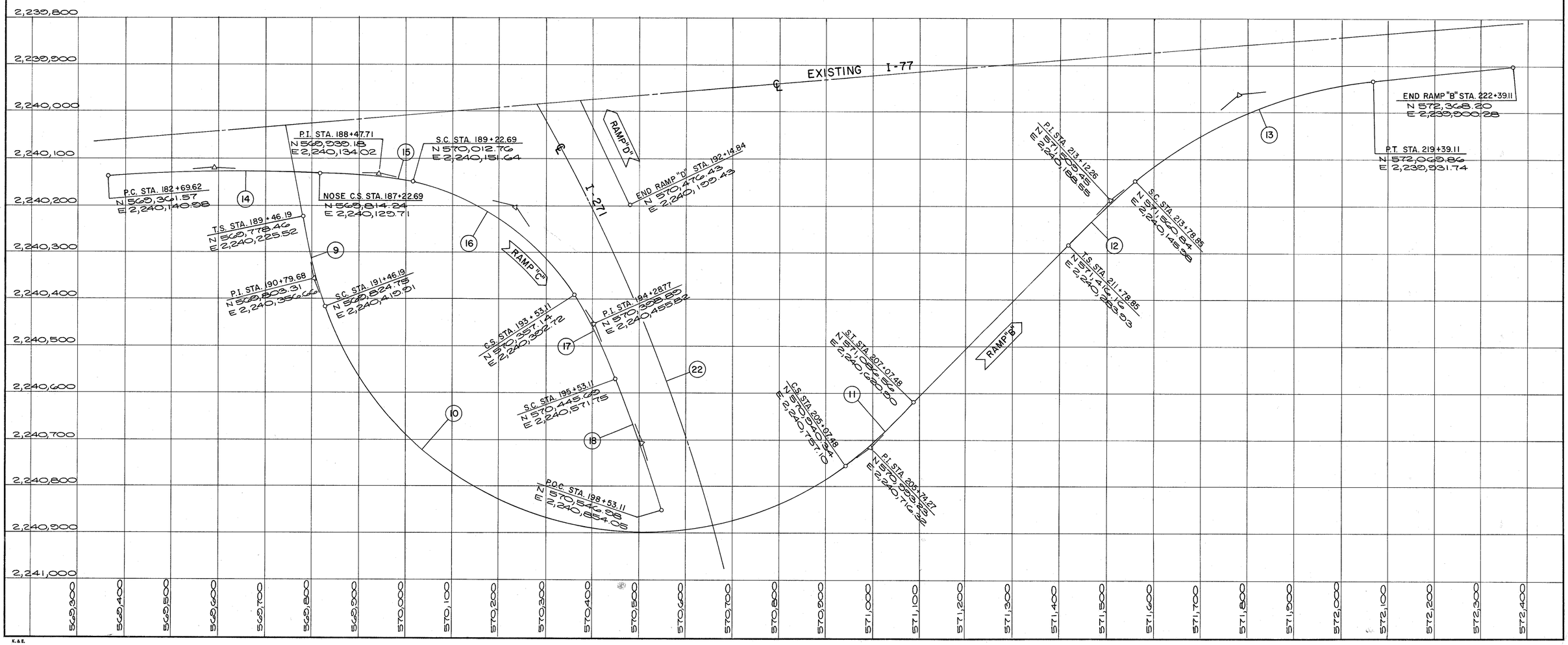
(14)
Δ = 6° 47' 46"
Dc = 1° 30'
R = 3819.72'
T = 226.80'
L = 453.07'
P.I. STA. 184+96.42
N 569,587.56
E 2,240,121.51

(15)
Ls = 200'
$\Delta_1 + \Delta_2$ = 11° 30'
T_1 = 125.02'
T_2 = 75.66'

(16)
Δ = 43° 02' 32"
Dc = 10° 00'
R = 572.96'
T = 225.94'
L = 430.42'
P.I. STA. 191+48.63
N 570,232.48
E 2,240,204.28

(17)
Ls = 200'
$\Delta_1 + \Delta_2$ = 11° 30'
T_1 = 75.66'
T_2 = 125.02

(18)
Δ = 4° 30' 00"
Dc = 1° 30'
R = 3819.72'
T = 150.08'
L = 300'
P.I. STA. 197+03.19
N 570,501.88
E 2,240,710.91

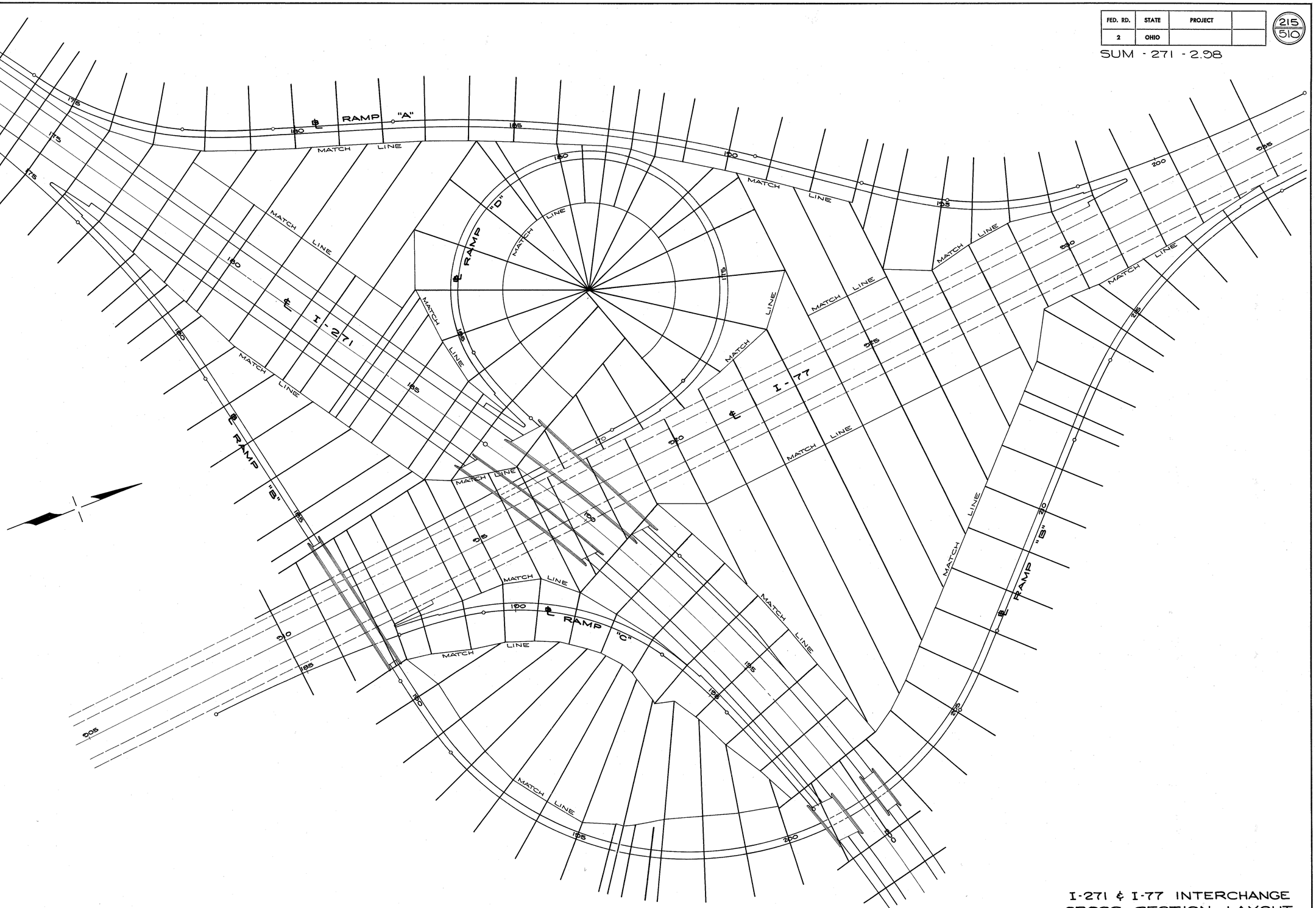


K. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

215
510

SUM - 271 - 2.98



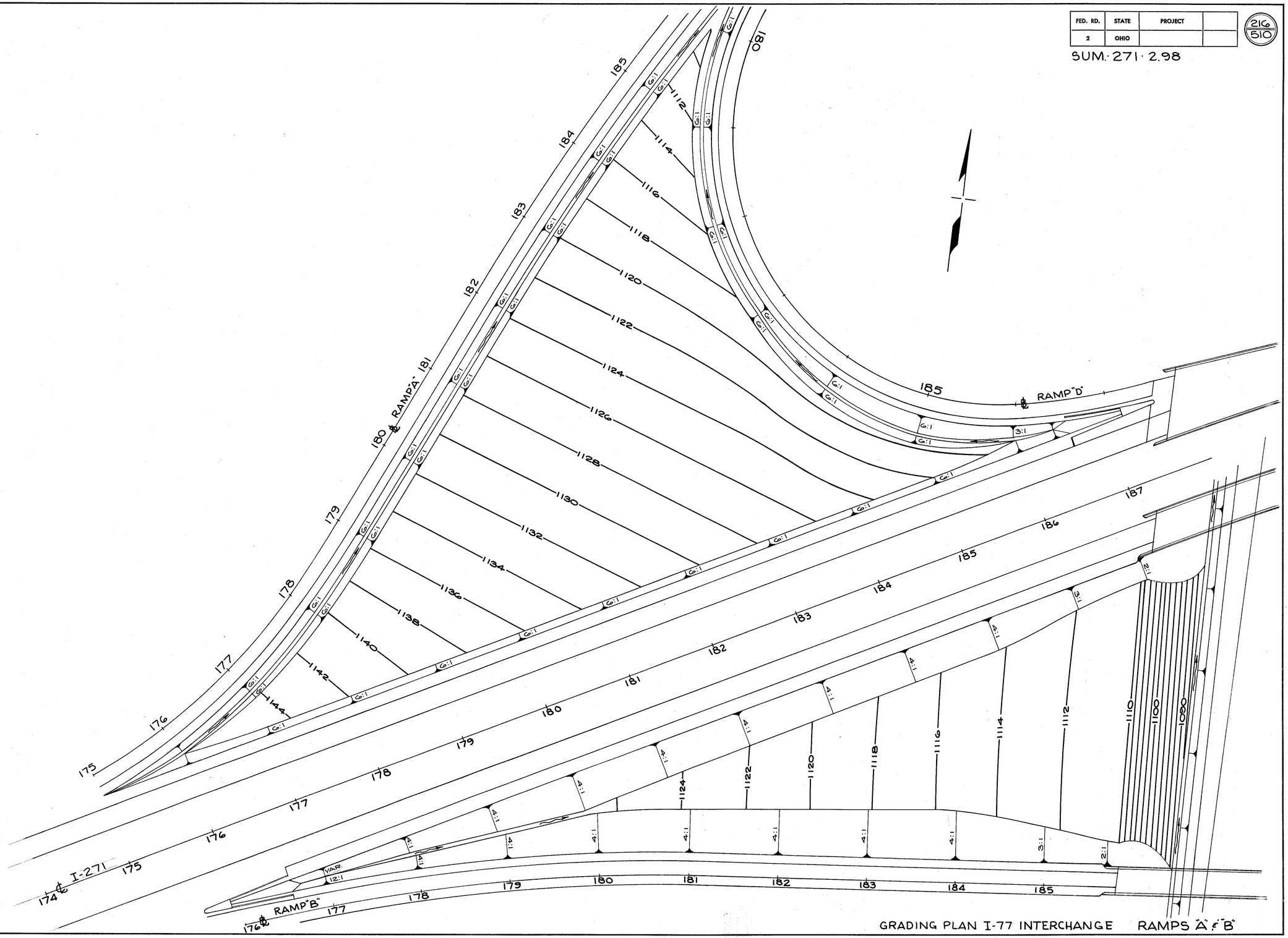
I-271 & I-77 INTERCHANGE
CROSS SECTION LAYOUT

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

216
510



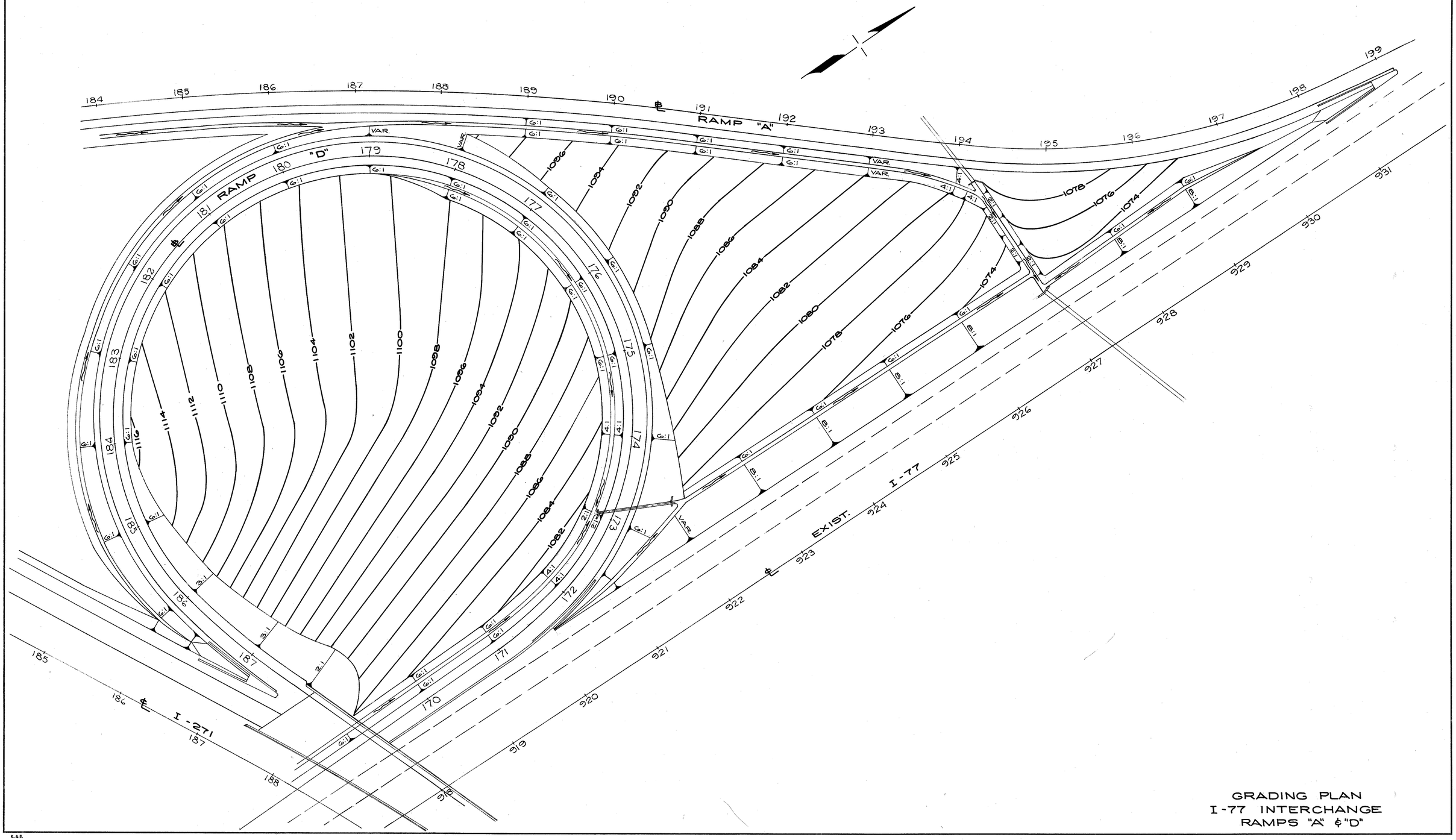
GRADING PLAN I-77 INTERCHANGE RAMPS "A" & "B"

C&E

FED. RD.	STATE	PROJECT	
2	OHIO		

217
510

SUM - 271 - 2.98

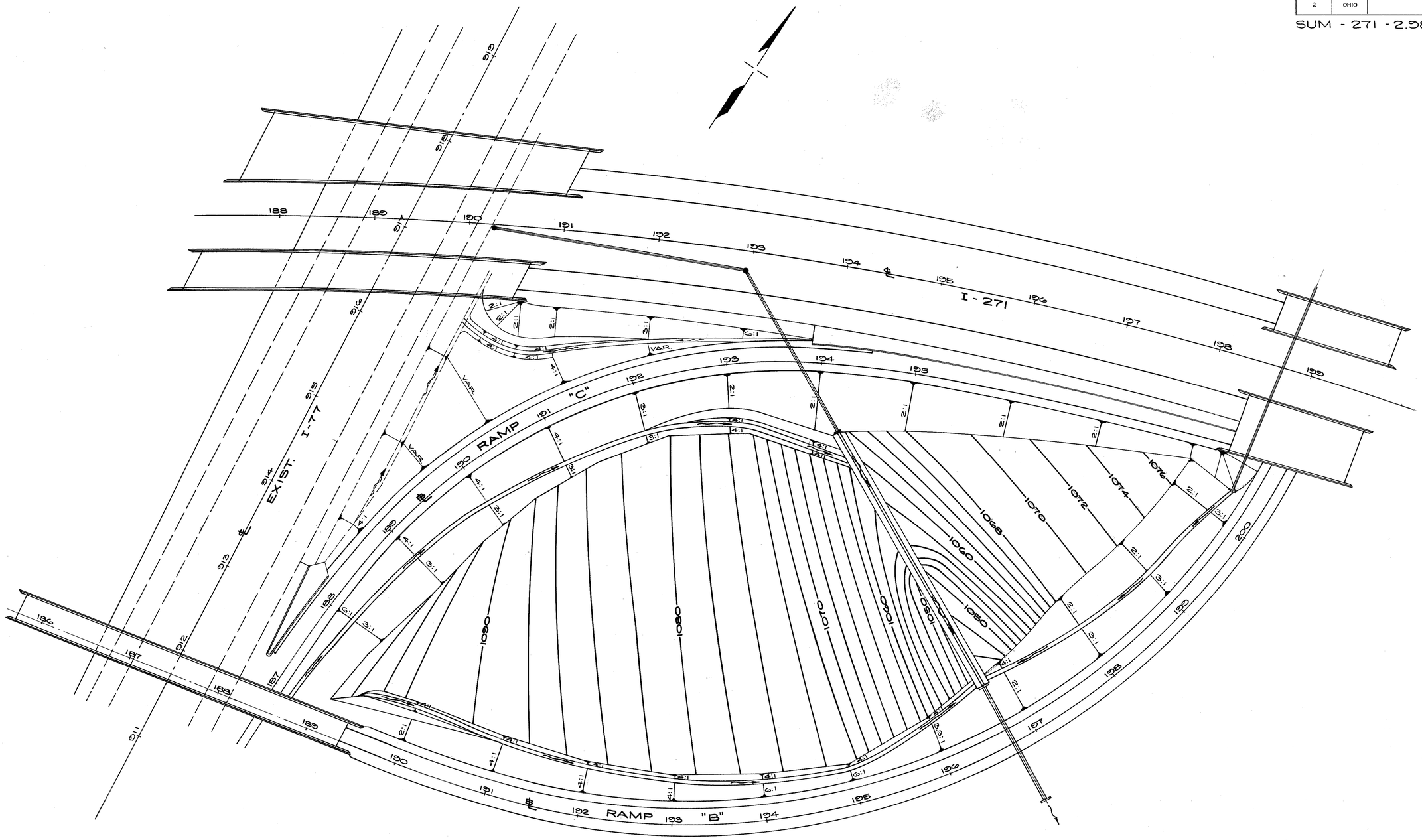


GRADING PLAN
I-77 INTERCHANGE
RAMPS "A" & "D"

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98

218
510



GRADING PLAN
I-77 INTERCHANGE
RAMPS "B" & "C"

FED. RD.	STATE	PROJECT	
2	OHIO		

218A
510

SUM - 271 - 2.98

EXIST I-77

EXIST. SLOPES

I-271 ℄

RAMP "B" ℄

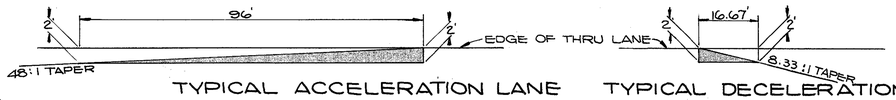
GRADING PLAN
I-77 INTERCHANGE
RAMP "B" & EXIST. I-77

KAE

FED. RD.	STATE	PROJECT	
2	OHIO		

219
510

SUM-271-2.98

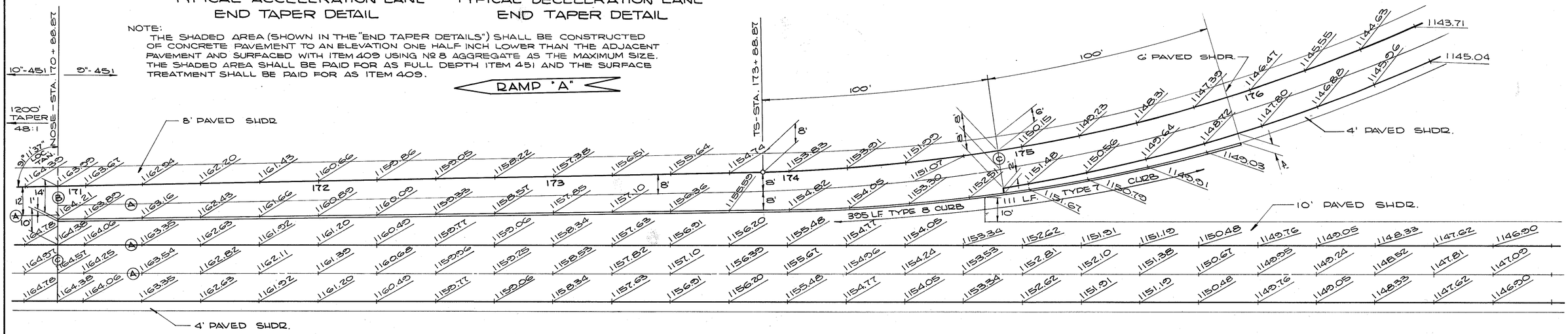


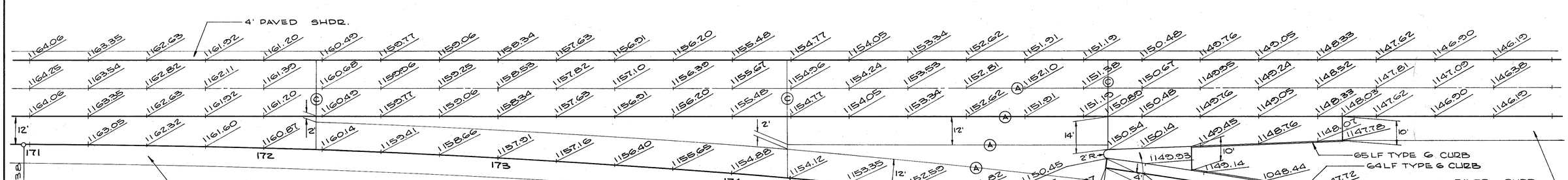
TYPICAL ACCELERATION LANE
END TAPER DETAIL

TYPICAL DECELERATION LANE
END TAPER DETAIL

NOTE:
THE SHADED AREA (SHOWN IN THE "END TAPER DETAILS") SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION ONE HALF INCH LOWER THAN THE ADJACENT PAVEMENT AND SURFACED WITH ITEM 409 USING № 8 AGGREGATE AS THE MAXIMUM SIZE. THE SHADED AREA SHALL BE PAID FOR AS FULL DEPTH ITEM 451 AND THE SURFACE TREATMENT SHALL BE PAID FOR AS ITEM 409.

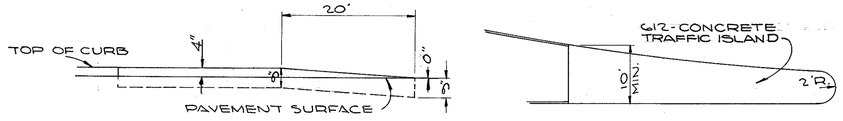
RAMP "A"





~SEE END TAPER~
BEGIN DECELERATION LANE
STA. 167+60.48

RAMP "B"



TYPICAL - EXIT NOSE DETAIL

JOINT LEGEND
(A) - STANDARD LONGITUDINAL JOINT
(B) - STANDARD EXPANSION JOINT
(C) - STANDARD CONTRACTION JOINT

INTERSECTION DETAILS
RAMPS "A" & "B"

Rev. 8-9-67

K.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

220
510

SUM-271-2.98

NOTE:
FOR TRAFFIC ISLAND CONSTRUCTION
SEE SHEET Nº 219

NOSE - STA. 199+14.15 (RAMP "A")
82 LT. ℄ STA. 931+77.34 (I-77)

PCC STA. 198+14.15

9"-451 10"-451

100'

6' PAVED SHDR.

612- CONCRETE TRAFFIC ISLAND

6'

198 199 200 201 202 203

RAMP "A"

NOTE:
END DECELERATION LANE
STA. 933+77.34 (I-77)
FOR END TAPER DETAIL
SEE SHEET Nº 219

8' PAVED SHDR.

PT. STA. 203+75.48 (RAMP "A")
STA. 936+40.44 (I-77)

PAVED SHDR.

70 LF TYPE 6 CURB

60 LF TYPE 6 CURB

PROVIDE TIE BARS
(5' ON CENTERS)

3 1/16"/FT.

930 931 932 ℄ 933 I-77 934 935 936

933 934 935 ℄ 936 I-77 937 938 939

100 LF TYPE 7 CURB

404 LF TYPE 6 CURB

4' PAVED SHDR

217 218 219 220 221 222

6' PAVED SHDR.

PT. STA. 219+39.11 (RAMP "B")
STA. 935+00 (I-77)

RAMP "B"

1200' TAPER (48:1)
FOR END TAPER DETAIL
SEE SHEET Nº 219

NOSE - STA. 222+39.11 (RAMP "B")
91' LT. ℄ STA. 938+00 (I-77)

10"-451 9"-451

10' 3 11/16"/FT.

JOINT LEGEND

- (A) - STANDARD LONGITUDINAL JOINT
- (B) - STANDARD EXPANSION JOINT
- (C) - STANDARD CONTRACTION JOINT
- (D) - EXPANSION BOLT JOINT

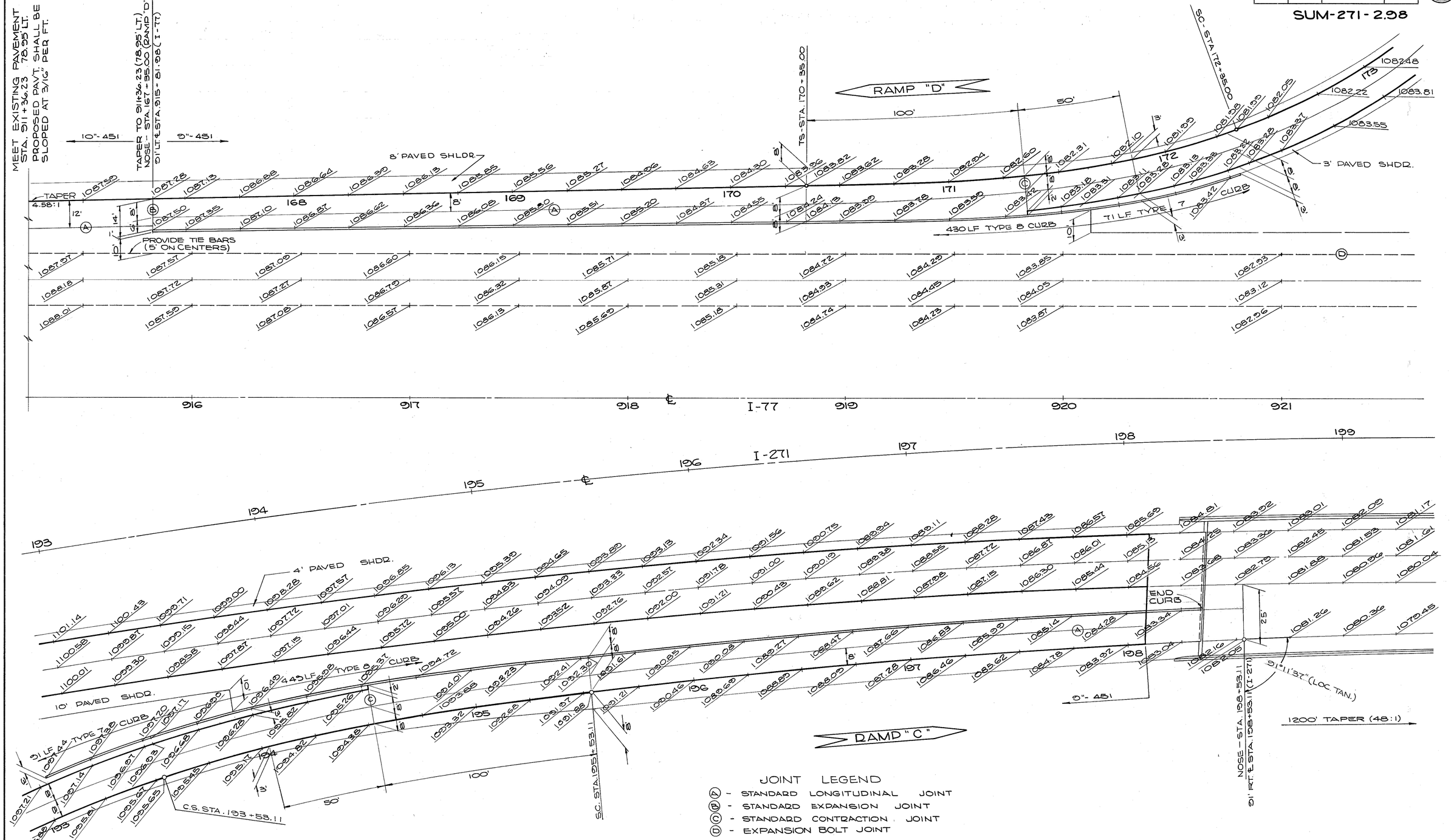
INTERSECTION DETAILS
RAMPS "A", "B" & I-77

K&E

FED. RD.	STATE	PROJECT	
2	OHIO		

221
510

SUM-271-2.98



JOINT LEGEND

- (A) - STANDARD LONGITUDINAL JOINT
- (B) - STANDARD EXPANSION JOINT
- (C) - STANDARD CONTRACTION JOINT
- (D) - EXPANSION BOLT JOINT

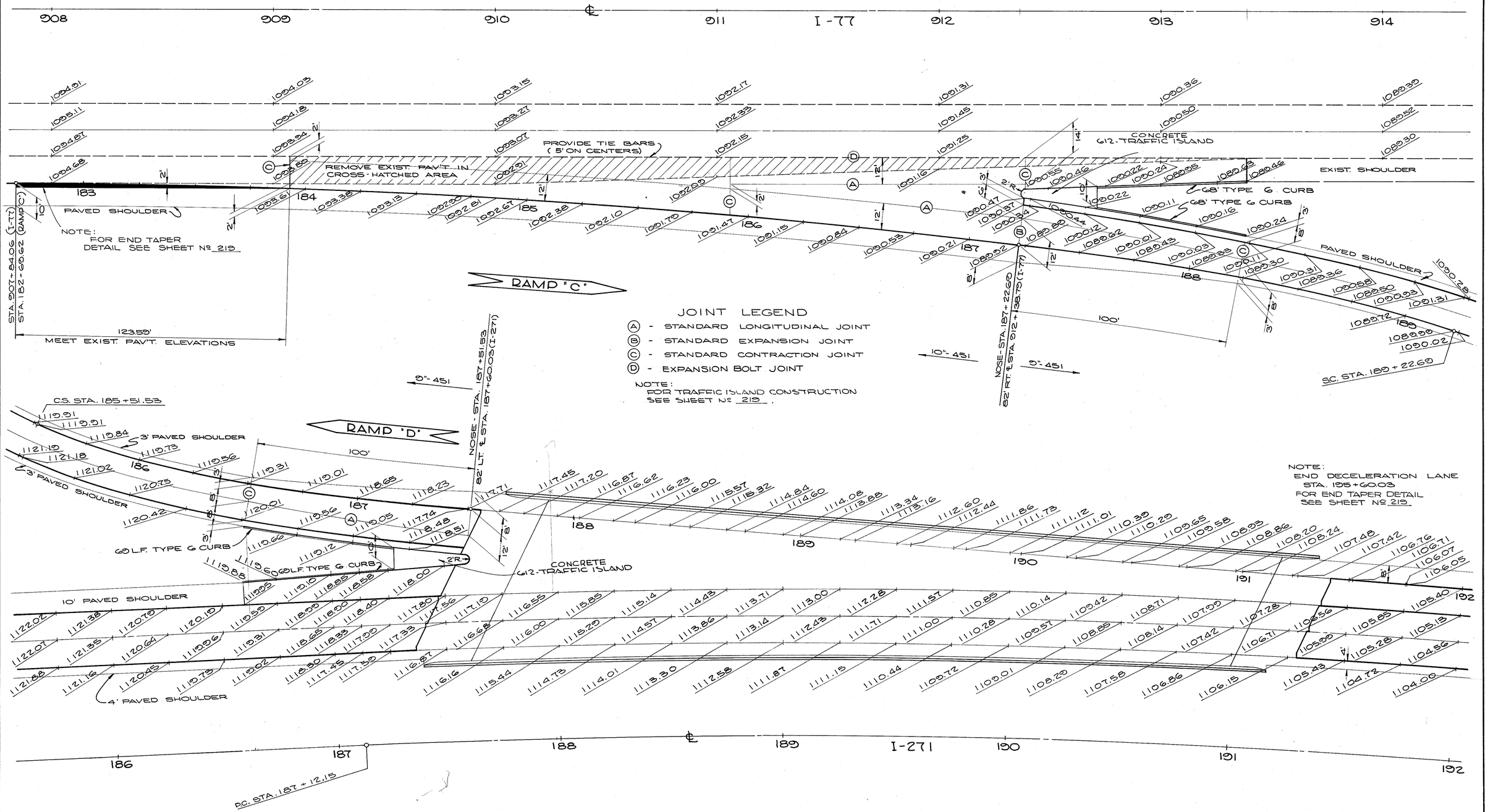
INTERSECTION DETAILS
RAMPS "C" & "D" (I-77 & I-271 INTCH.)

C&E

FED. RD.	STATE	PROJECT	
2	OHIO		

222/510

SUM-271-2.98

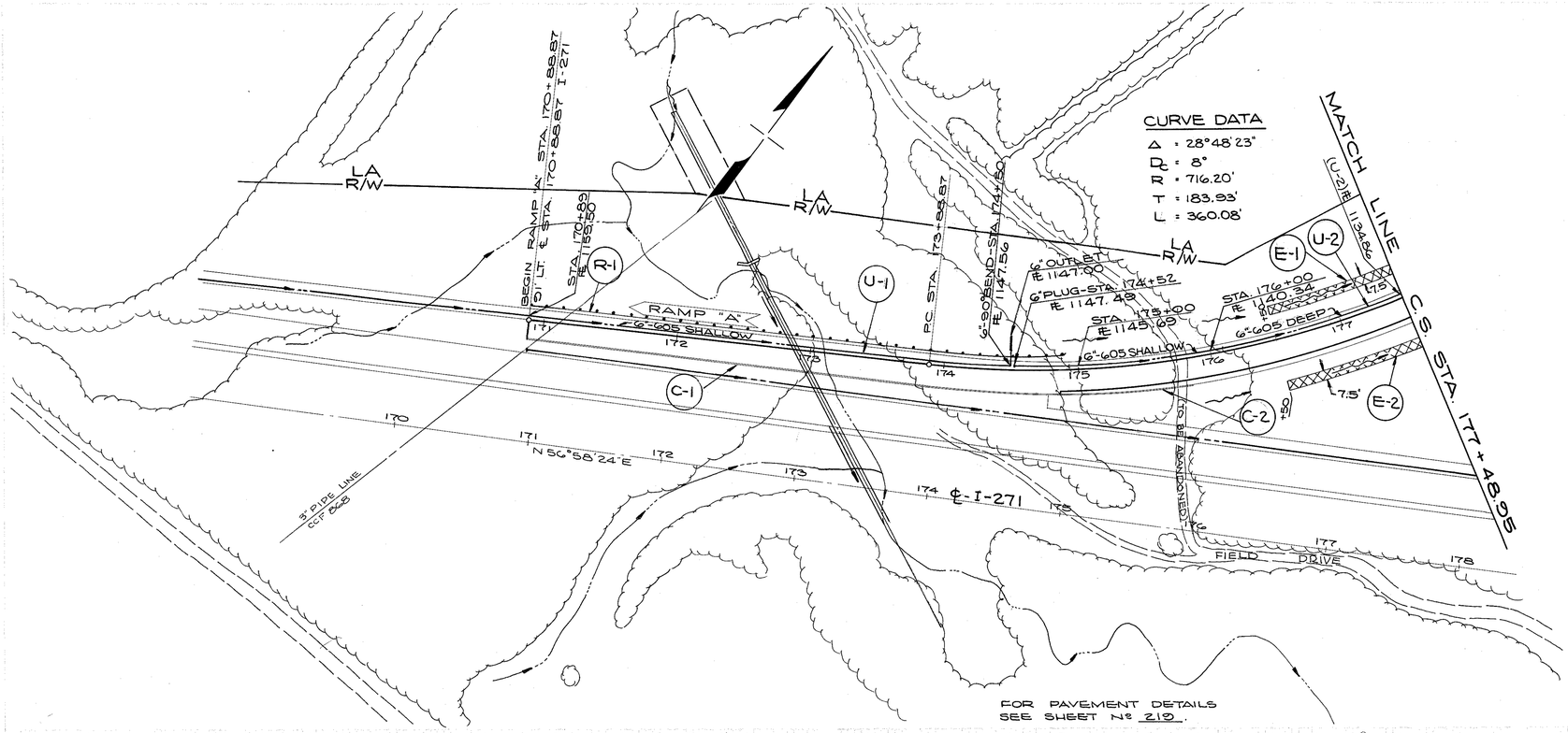


INTERSECTION DETAILS
RAMPS "C" & "D" (I-271 ~ I-77 INTCH.)

K. & E.

223
510

SUM - 271 - 2.98



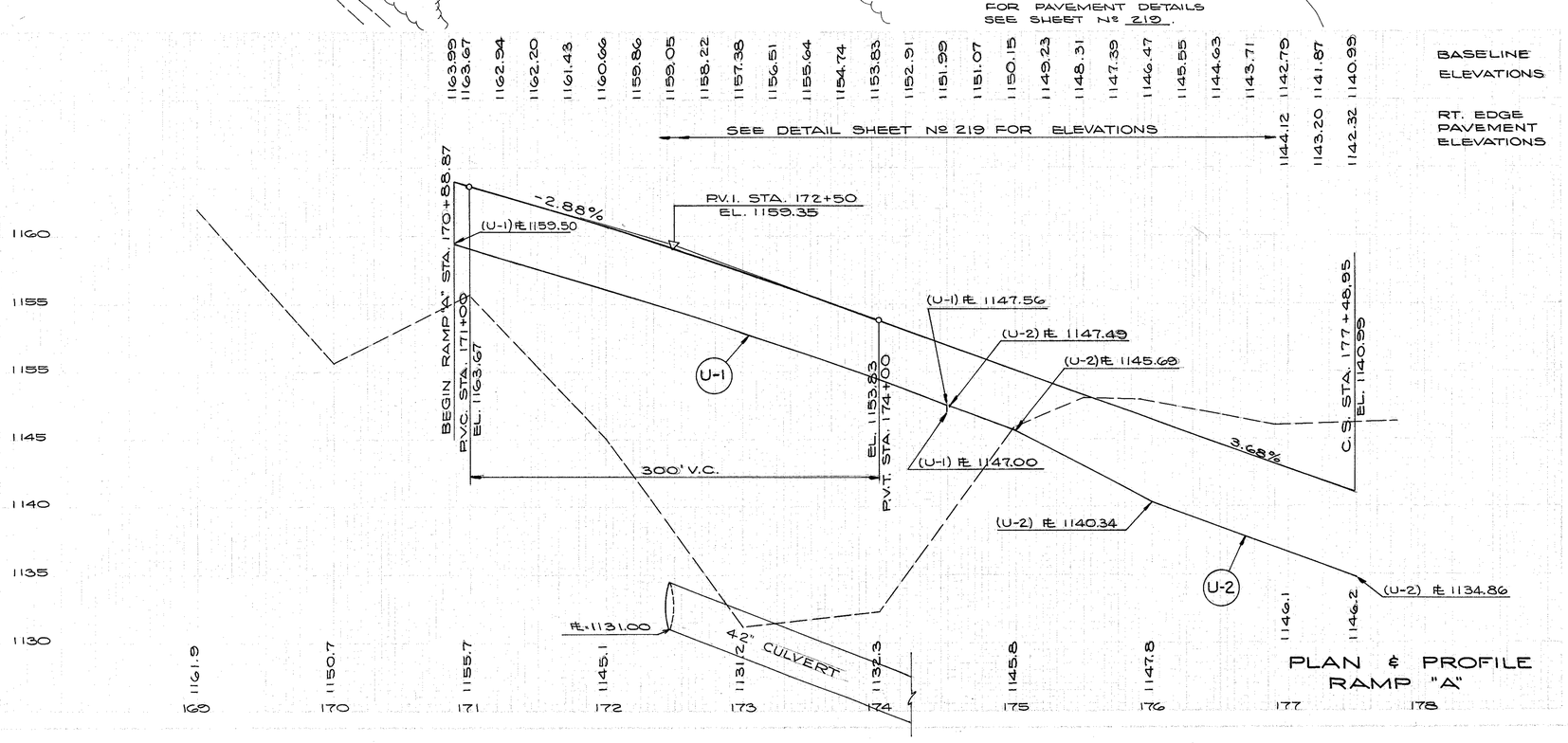
1163.95	1163.67	1162.94	1162.20	1161.43	1160.66	1159.86	1159.05	1158.22	1157.38	1156.51	1155.64	1154.74	1153.83	1152.91	1151.99	1151.07	1150.15	1149.23	1148.31	1147.39	1146.47	1145.55	1144.63	1143.71	1142.79	1141.87	1140.99

BASELINE ELEVATIONS

SEE DETAIL SHEET Nº 219 FOR ELEVATIONS

1144.12	1143.20	1142.32

RT. EDGE PAVEMENT ELEVATIONS



PLAN & PROFILE RAMP "A"

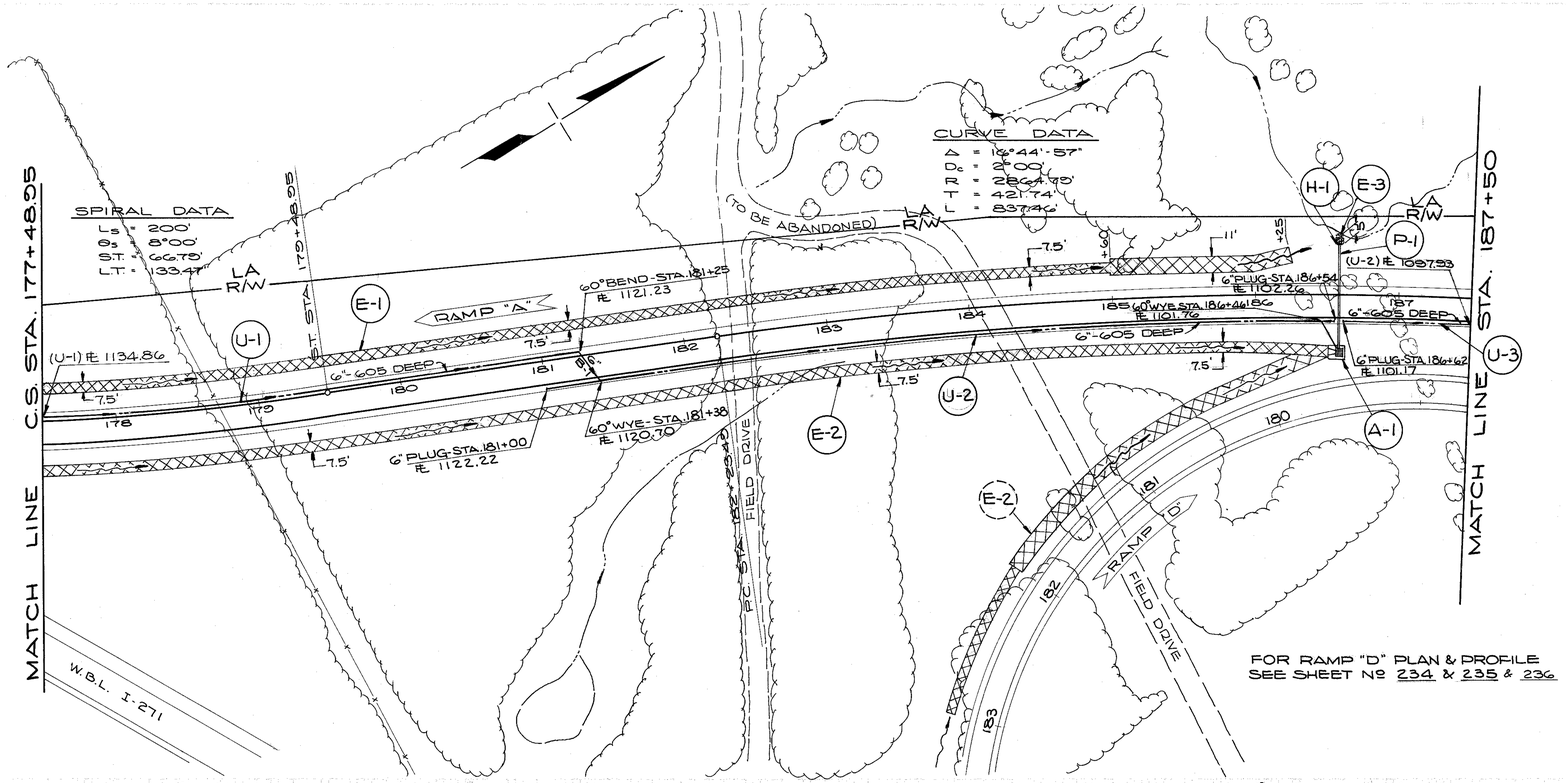
605 UNDERDRAINS (BENDS & BRANCHES EACH 90° BEND)	LIN. FT.	603 CONDUITS LIN. FT. TYPE E	667 JUTE MATTING SQ.YDS.
DEEP SHAL.	372	60	83
	149 148		83

606 GUARD RAIL TYPE 4 LIN. FT.	609 CURB TYPE LIN. FT.	609 CURB TYPE LIN. FT.
U-1 170+88.87 174+50		
U-2 174+52 177+48.95 LT.		
E-1 176+50 177+48.95 LT.		
E-2 176+50 177+48.95 RT.		
R-1 170+88.87-175+01.37 RAMP "A" 412.5		
C-1 170+88.87-174+83.87 RT.	395	111
C-2 174+83.87-175+94.87 RT.		

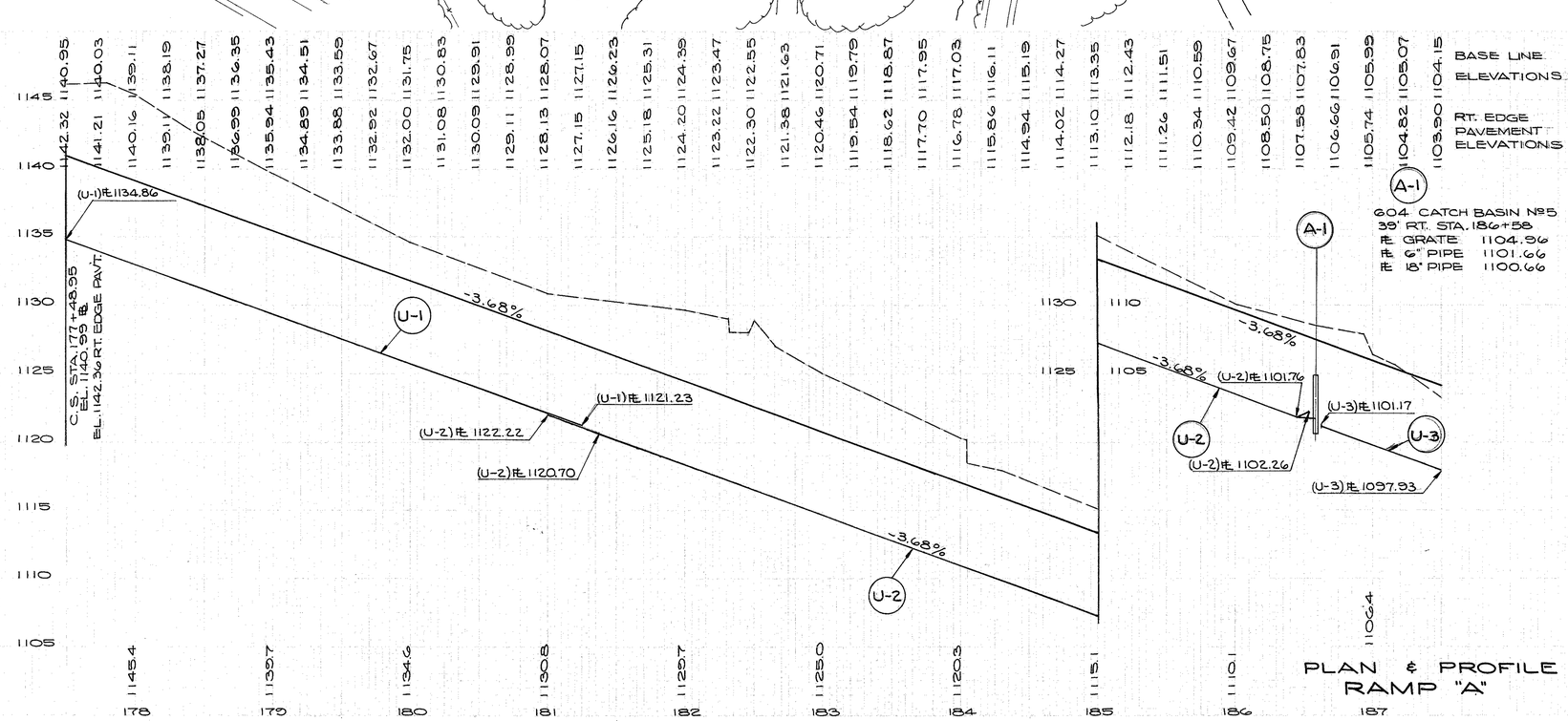
166
0
1
145 520
1
412.5 395 111

RAMP "A" STA. 169+00 TO STA. 178+00

SUM - 271 - 2.98



601 CONC. CHANNEL EROS. CU.YDS.	602 DUMP ROCK MASONRY EACH	603 6" PIPE SPECIALS TEE 18 WYE 60° EACH 60° WYE BEND	604 CATCH BASIN TYPE B EACH	605 CONDUITS & BONDS EACH 60° WYE BEND	605 LF 6" 18"	605 UNDERDRAINS LIN. FT.	607 JUTE MATTING SQ.YDS. DEEP
238	0.26	1	1	1	1	376	
						568	
84					10	38	
						779	
						761	
1.1							
1							
1.1	0.26	1	1	1	1		
25 84 10							
1540 1032							



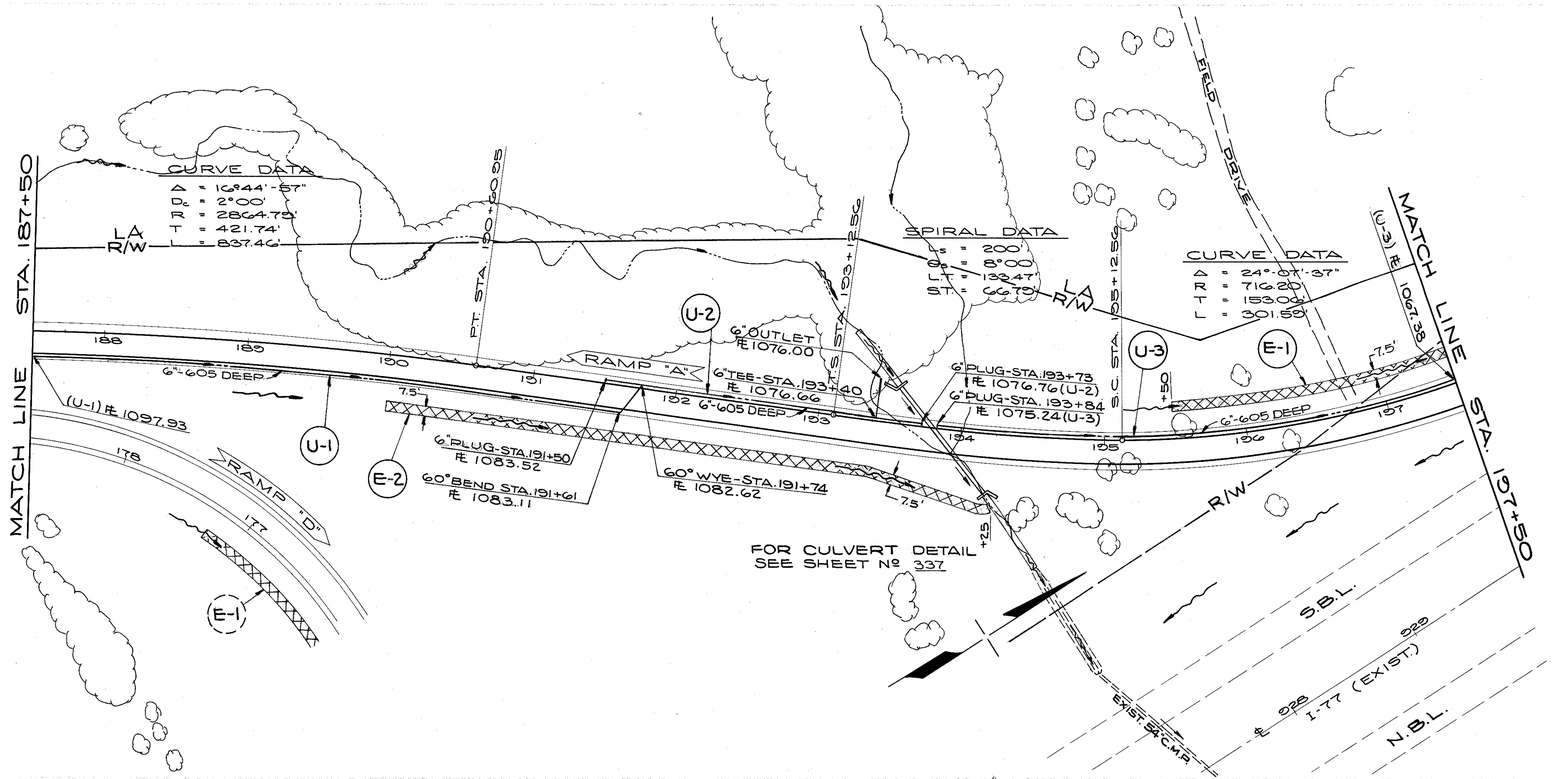
604 CATCH BASIN Nº5
39' RT. STA. 186+58
℄ GRATE 1104.96
℄ 6" PIPE 1101.66
℄ 18" PIPE 1100.66

U-1	177+48.95	LT.
U-2	181+00	RT.
U-3	186+58	RT.
E-1	177+48.95	LT.
E-2	181+25	LT.
E-3	186+50	RT.
A-1	186+58 (41.5' RT. ℄)	LT.
		RT.
P-1	186+58 (A-1 to H-1)	RT. & LT.
H-1	186+58 (40' LT. ℄)	LT.

RAMP "A" STA. 178+00 TO STA. 187+00

225
510

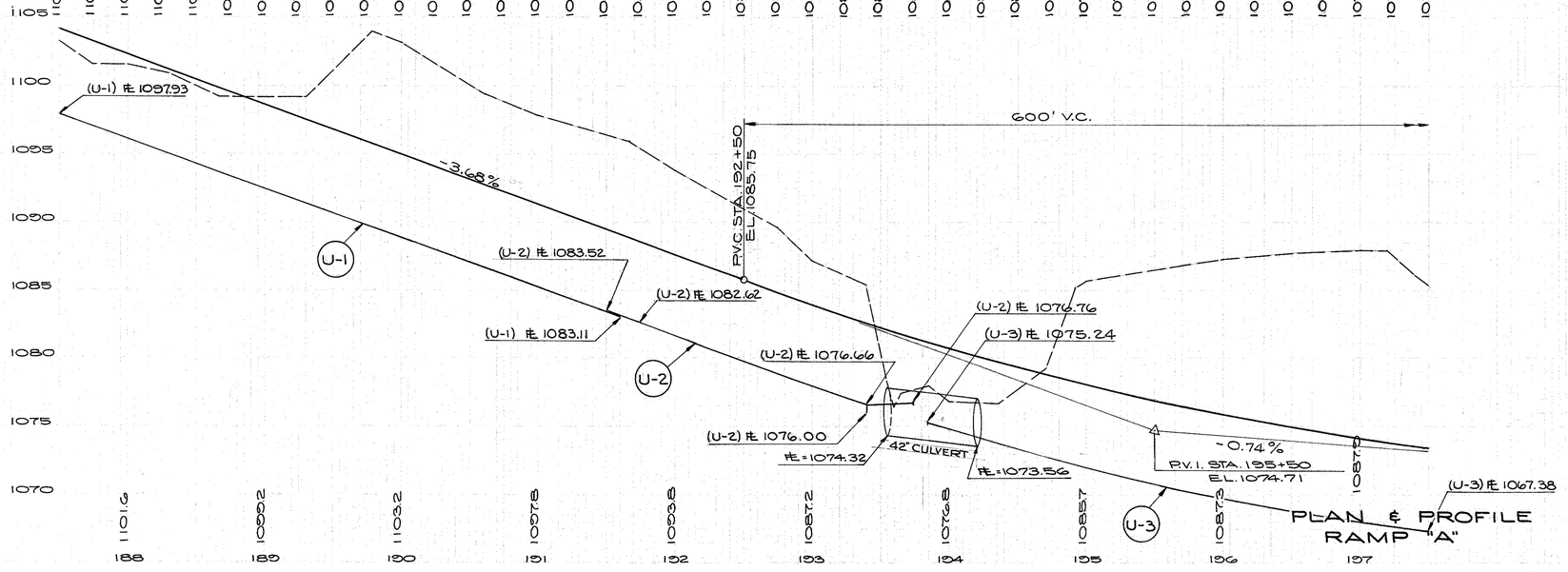
SUM - 271 - 2.98



BASELINE ELEVATIONS	RT. EDGE PAVEMENT ELEVATIONS
1103.90	1104.15
1102.98	1103.23
1102.06	1102.31
1101.14	1101.39
1100.22	1100.47
1099.30	1099.55
1098.38	1098.63
1097.46	1097.71
1096.54	1096.79
1095.62	1095.87
1094.70	1094.95
1093.78	1094.03
1092.86	1093.11
1091.97	1092.19
1091.12	1091.27
1090.26	1090.35
1089.40	1089.43
1088.55	1088.51
1087.69	1087.59
1086.83	1086.67
1085.97	1085.75
1085.10	1084.85
1084.23	1083.97
1083.45	1083.13
1082.77	1082.31
1082.12	1081.53
1081.50	1080.78
1080.92	1080.06
1080.36	1079.37
1079.84	1078.71
1079.35	1078.08
1078.82	1077.48
1078.24	1076.91
1077.70	1076.37
1077.20	1075.87
1076.73	1075.40
1076.28	1074.95
1075.86	1074.53
1075.42	1074.15
1075.00	1073.80
1074.54	1073.47

605 CONDUITS & PIPE SPECIALS			603
CONDUIT	TYPE	SIZE	LIN. FT.
W/CL. BEDD.	F	6"	25
		EACH	
		60° BEND	1

607 JUTE MATTING	6" UNDERDRAINS LIN. FT.	BENDS & BRANCHES EACH	TEE	018 1
SQ.YDS. DEEP				
411				
241				
366				
167				
354				

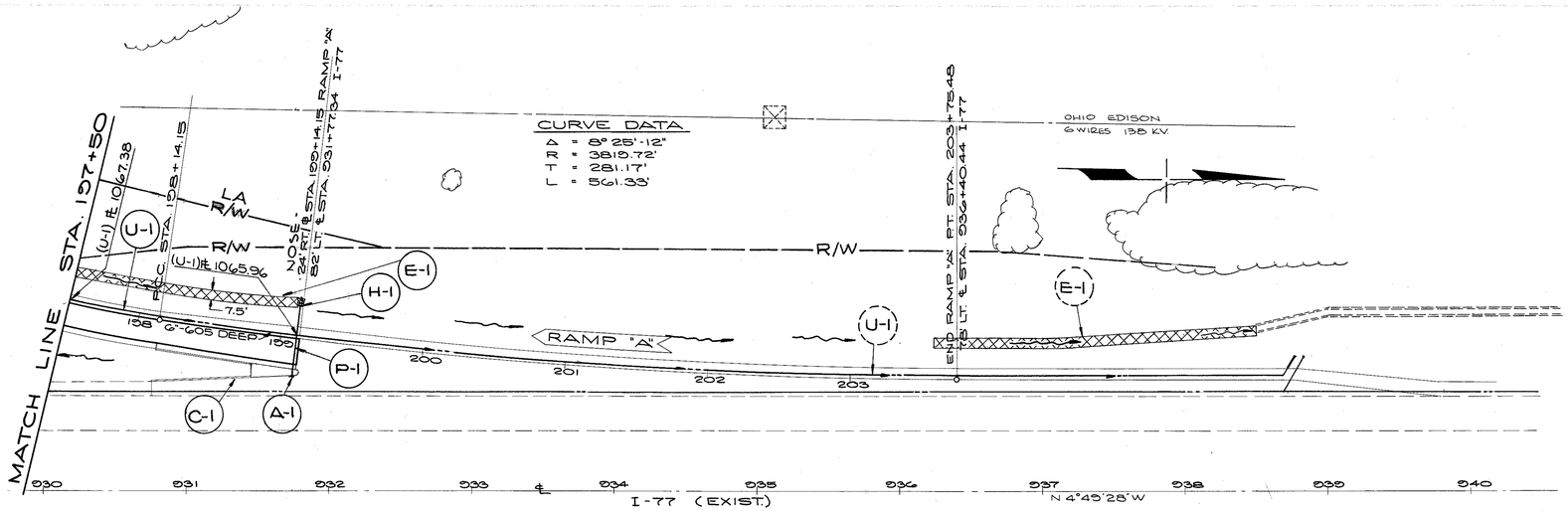


U-1	187+50	RT.
U-2	191+50	LT.
U-3	193+84	LT.
	191+74	RT.
	193+73	LT.
	197+50	LT.
E-1	195+50	LT.
E-2	190+00	RT.
	197+50	LT.
	194+25	RT.

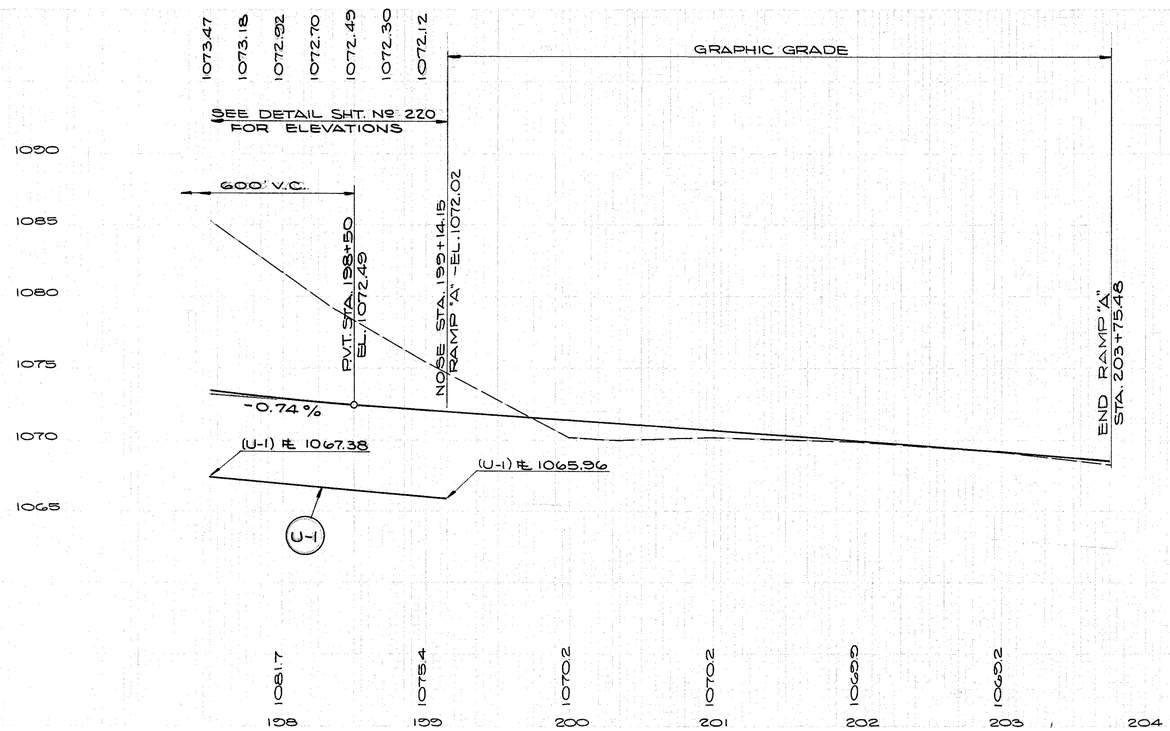
RAMP "A" STA. 188+00 TO STA. 197+00

521 1018

SUM - 271 - 2.98



FOR PAV'T. DETAIL EXIST. I-77 & RAMP "A" SEE SHEET Nº 220



BASELINE ELEVATIONS

RT. EDGE PAVEMENT ELEVATIONS

PLAN & PROFILE
RAMP "A"

| | | |

SUM - 271 - 2.98

FOR PAV'T. DETAIL I-271 & RAMP "B"
SEE SHEET Nº 219

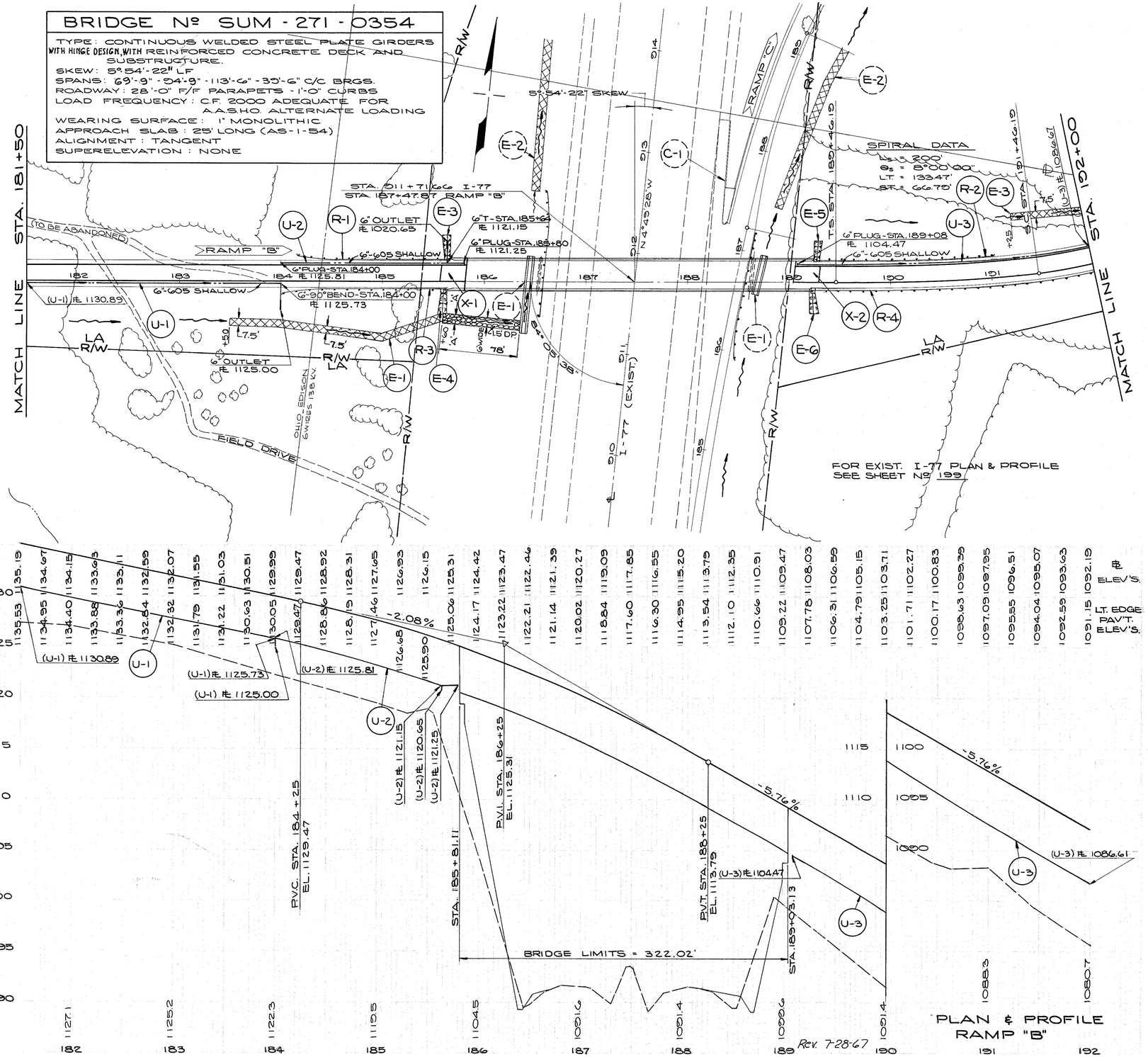
℄ ELEV'S.	LT. EDGE PAV'T. ELEV'S.
1150.00	1149.49
1149.49	1148.71
1148.71	1147.93
1147.93	1147.15
1147.15	1146.37
1146.37	1145.59
1145.59	1144.83
1144.83	1144.09
1144.09	1143.40
1143.91	1143.24
1143.24	1142.73
1142.61	1142.10
1142.00	1141.49
1141.44	1140.93
1140.90	1140.39
1140.38	1139.87
1139.86	1139.35
1139.34	1138.83
1138.82	1138.31
1138.30	1137.79
1137.78	1137.27
1137.26	1136.75
1136.71	1136.23
1136.13	1135.71
1135.53	1135.19

	605 6" UNDERDRAINS LIN. FT. DEEP/SHALLOW	612 CONC. TRAFF. ISLAND SQ. YDS.	609 CURB TYPE 6 LIN. FT.	606 GUARD RAIL TYPE 4 LIN. FT.	
U-1	175+58.71 – 181+50 RT.				591
R-1	175+58.71 – 181+46.5 RT.			587.5	587.5
C-1	175+57 – 176+59 RT.	28.3	125		125
E-1	177+95 – 178+40 RT.				28.3

RAMP "B" STA. 171+00 TO STA. 181+00

BRIDGE Nº SUM - 271 - 0354

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH HINGE DESIGN, WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 5°54'-22" LF
SPANS: 69'-9" - 94'-9" - 113'-6" - 30'-6" C/C BRGS.
ROADWAY: 28'-0" F/F PARAPETS - 1'-0" CURBS
LOAD FREQUENCY: C.F. 2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLAB: 25' LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE



PLAN & PROFILE
RAMP "B"

Rev. 7-28-67

| | | |

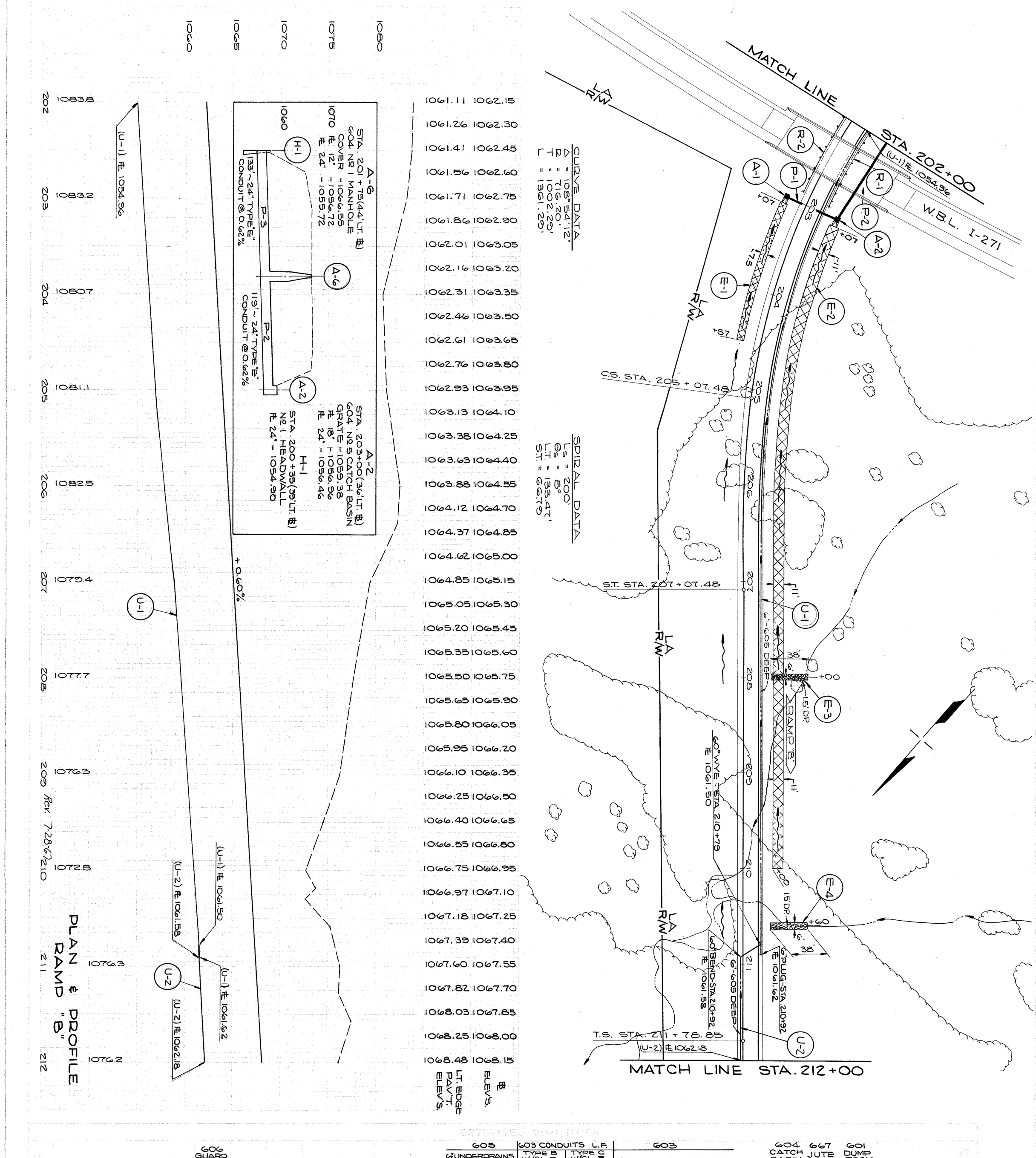
SUM-271-2.98

CURVE DATA
Δ = 108° 54' 12"
T = " = 716.20'
L = " = 1002.29
R = 1361.28

		601 DUMPED RIPRAP CLASS "B" CU.YDS.	602 CONC. MASONRY CU.YDS.	604 MAN-HOLE EACH	607 JUTE MATTING SQ.YDS.	605 UNDERDRAINS LIN. FT.	606 GUARD RAIL LIN. FT.
U-1	192+00						
A-6	202+00						
P-2	201+75						
A-6	202+00						
P-3	A-6						
H-1	200+35(99) LT. ℄ RAMP "B"						
E-1	192+00	1					
E-2	196+75		3.3		392		
E-3	200+20			1	346		
E-3	200+35						
R-1	192+00						
R-2	195+50						
R-3	199+87.5						

		603 CONDUITS - LIN. FT.						605 UNDERDRAINS LIN. FT.	606 GUARD RAIL LIN. FT.
		BENDS AND BRANCHES	TYPE G BEDDING	TYPE E					
U-1	192+00		24"	10					
A-6	202+00								
P-2	201+75								
A-6	202+00								
P-3	A-6								
H-1	200+35(99) LT. ℄ RAMP "B"								
E-1	192+00	TEE 1	24	10	133				
E-2	196+75								
E-3	200+20								
E-3	200+35								
R-1	192+00								
R-2	195+50								
R-3	199+87.5								

		601 DUMPED RIPRAP CLASS "B" CU.YDS.	602 CONC. MASONRY CU.YDS.	604 MAN-HOLE EACH	607 JUTE MATTING SQ.YDS.	605 UNDERDRAINS LIN. FT.	606 GUARD RAIL LIN. FT.
U-1	192+00						
A-6	202+00						
P-2	201+75						
A-6	202+00						
P-3	A-6						
H-1	200+35(99) LT. ℄ RAMP "B"						
E-1	192+00	1					
E-2	196+75		3.3		392		
E-3	200+20			1	346		
E-3	200+35						
R-1	192+00						
R-2	195+50						
R-3	199+87.5



CURVE DATA
Δ = 108° 54' 12"
R = 716.20'
T = 1002.29'
L = 1361.29'

SPIRAL DATA
Ls = 200'
Θs = 8°
L.T. = 133.47'
S.T. = 66.79

℄ ELEV'S.	LT. EDGE PAV'T. ELEV'S.
1061.11	1062.15
1061.26	1062.30
1061.41	1062.45
1061.56	1062.60
1061.71	1062.75
1061.86	1062.90
1062.01	1063.05
1062.16	1063.20
1062.31	1063.35
1062.46	1063.50
1062.61	1063.65
1062.76	1063.80
1062.93	1063.95
1063.13	1064.10
1063.38	1064.25
1063.63	1064.40
1063.88	1064.55
1064.12	1064.70
1064.37	1064.85
1064.62	1065.00
1064.85	1065.15
1065.05	1065.30
1065.20	1065.45
1065.35	1065.60
1065.50	1065.75
1065.65	1065.90
1065.80	1066.05
1065.95	1066.20
1066.10	1066.35
1066.25	1066.50
1066.40	1066.65
1066.55	1066.80
1066.75	1066.95
1066.97	1067.10
1067.18	1067.25
1067.39	1067.40
1067.60	1067.55
1067.82	1067.70
1068.03	1067.85
1068.25	1068.00
1068.48	1068.15

A-6
STA. 201+75(44' LT. ℄)
604 № 1 MANHOLE
COVER - 1066.55
1070 ℄ 12" - 1056.72
℄ 24" - 1055.72

A-2
STA. 203+00(36' LT. ℄)
604 № 5 CATCH BASIN
GRATE - 1059.38
℄ 18" - 1056.96
℄ 24" - 1056.46

H-1
STA. 200+35(39' LT. ℄)
№ 1 HEADWALL
℄ 24" - 1054.90

P-3
133'~24" TYPE "E"
CONDUIT @ 0.62%

P-2
119'~24" TYPE "E"
CONDUIT @ 0.62%

+0.60%

PLAN & PROFILE
RAMP "B"

				606 GUARD RAIL TYPE 4 LIN. FT.
U-1	202+00	210+92	LT.	
U-2	210+92	212+00	RT.	
P-1	A-1	A-2	℄	
P-2	202+00	A-2	LT.	
A-1	203+00(22' RT. ℄ RAMP "B")		RT.	
A-2	203+00(36' LT. ℄ RAMP "B")		LT.	
E-1	203+07	204+57	RT.	
E-2	203+07	210+00	LT.	
E-3	208+00		LT.	
E-4	210+60		LT.	
R-1	202+00	202+62.5	LT.	87.5
R-2	202+00	202+62.5	RT.	87.5
				175

605 6" UNDERDRAINS LIN. FT.		603 CONDUITS L.F. TYPE B W/CL. B BEDDING		TYPE C W/CL. B BEDDING	603 BENDS & BRANCHES	
DEEP	SHAL-LOW	6"	18"	24"	60° WYE	60° BEND
892		25			1	
108						1
			58			
				95		
1000		25	58	95	1	1

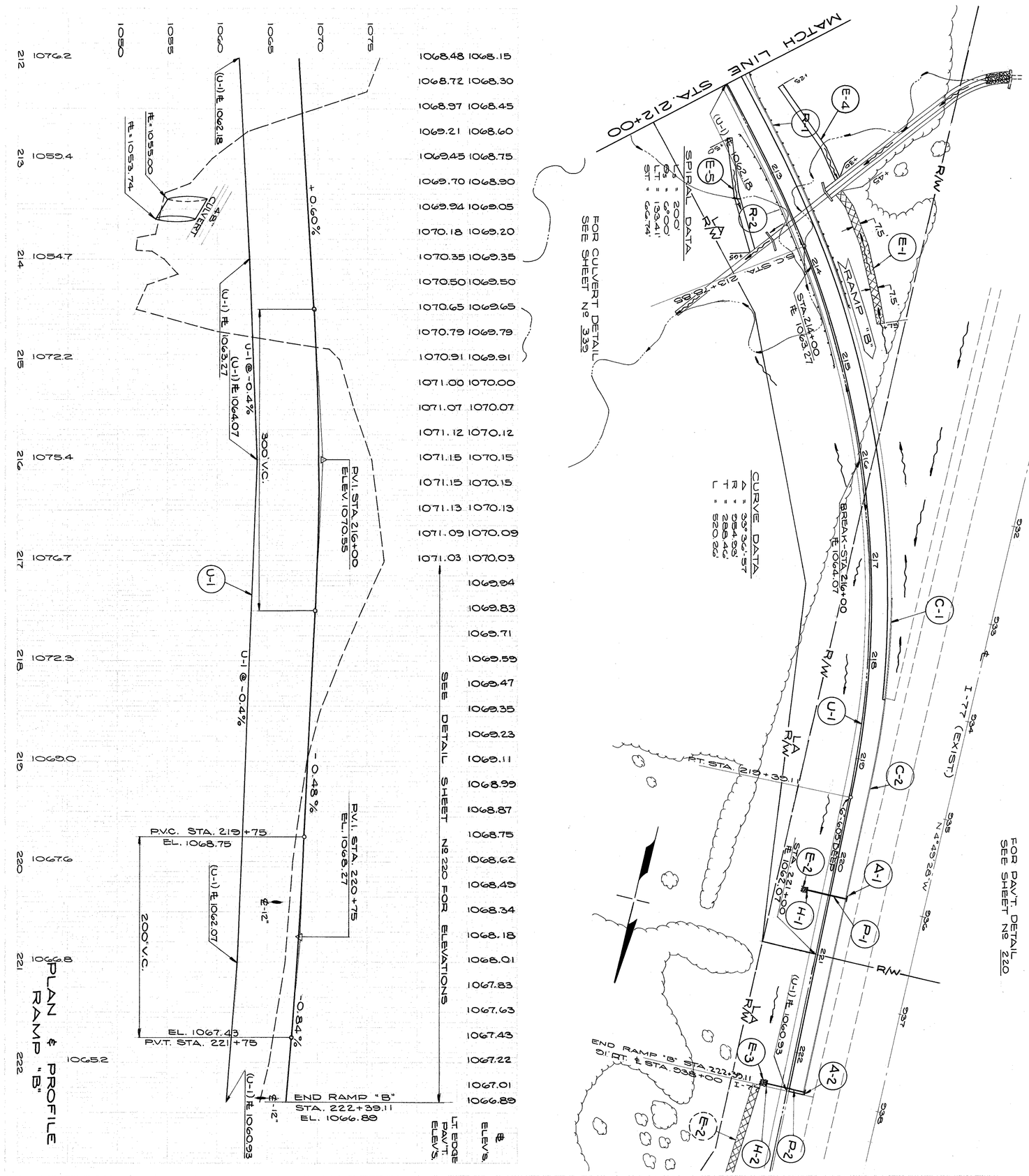
604 CATCH BASIN EACH #5	667 JUTE MATTING SQ. YDS.	601 DUMP ROCK CHANNEL PROT. CU. YD.	
			247
			230
1			
1			
	125		
	847		
		12.9	325
		13.3	325
2	972	26.2	

RAMP "B" STA. 202+00 TO STA. 212+00

Rev. 7-28-67

SUM - 271 - 2.98

230
510



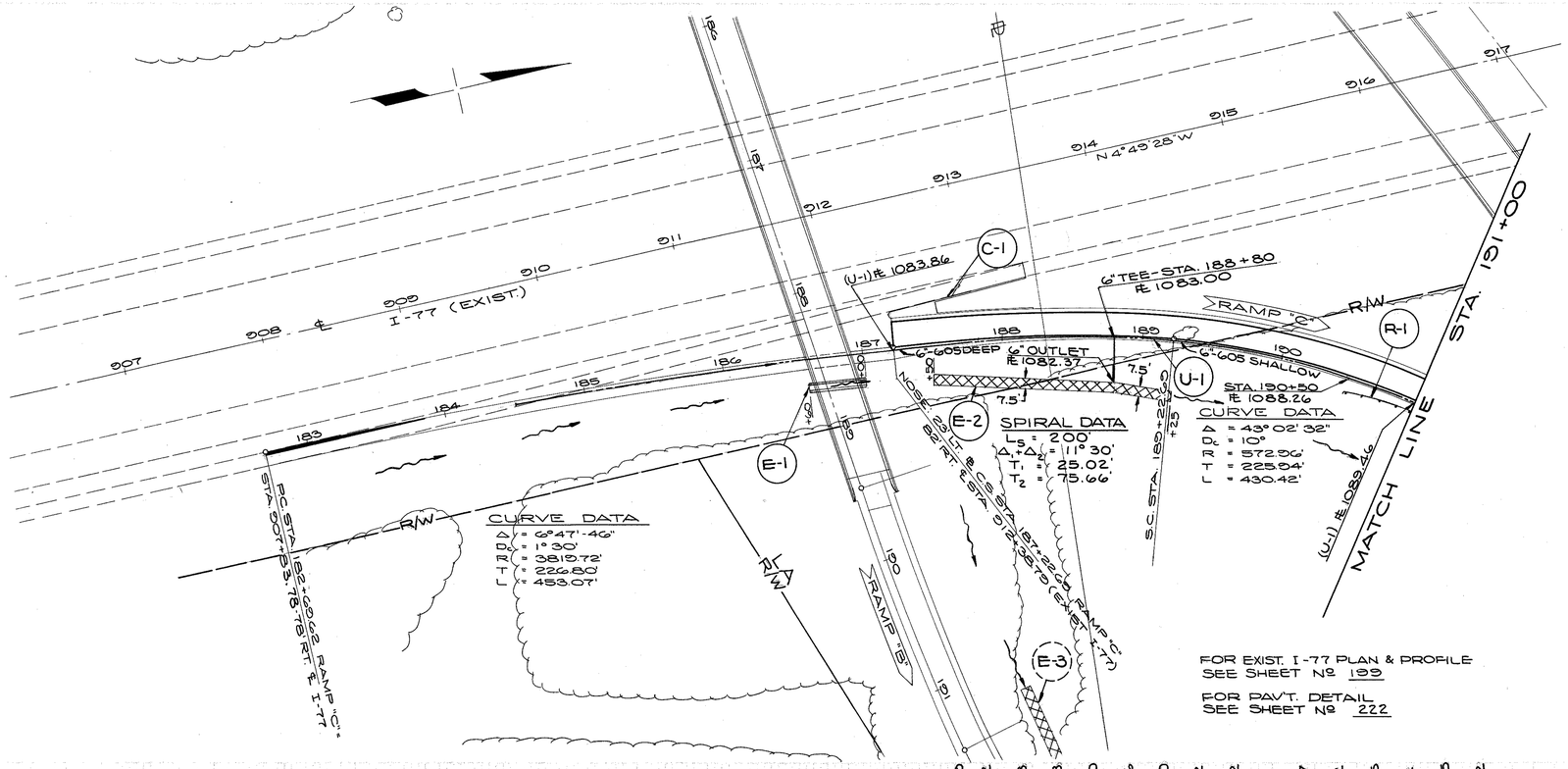
ESTIMATED QUANTITIES

				606 GUARD RAIL TYPE 4 LIN. FT.	608 CURB TYPE 7 LIN. FT.	608 CURB TYPE 8 LIN. FT.	605 6" UNDERDRAINS LIN. FT.	603 CONDUITS LIN. FT. TYPE B W/C.L. BEDDING	TYPE F	TYPE J	667 JUTE MATTING SQ. YDS.	604 CATCH BASIN EACH #6	602 CONC. MASONRY CU. YDS.	601 DUMPED ROCK CU. YDS.	601 PAVED GUTTER CHANNEL TYPE PROTECT 1-4 LIN. FT.
U-1	212+00	222+39.11	RT.				DEEP 1029	12" 40							210
P-1	A-1	H-1	RT.					39							210
P-2	A-2	H-2	RT.												
A-1	936+00 (78.84 RT. ℄ I-77)		RT.												
A-2	937+97.21 (76.04 RT. ℄ I-77)		RT.												
H-1	936+00 (115' RT. ℄ I-77)		RT.												
H-2	937+97.21 (114.50 RT. ℄ I-77)		RT.												
E-1	213+45	214+75	LT.									1			
E-2	935+98	936+02	RT.								0.26				
E-3	937+95.21	937+99.21	RT.								0.26				
E-4	212+25	213+30	LT.									1			
E-5	212+50	213+65	RT.									1			
R-1	212+00	214+50	LT.	250							108				105
R-2	212+50	215+00	RT.	250											115
C-1	217+39.11	218+39.11	RT.		100										220
C-2	218+39.11	222+39.11	RT.			404									220
				500	100	404	1029	79	10		108	2	0.52	2.2	220

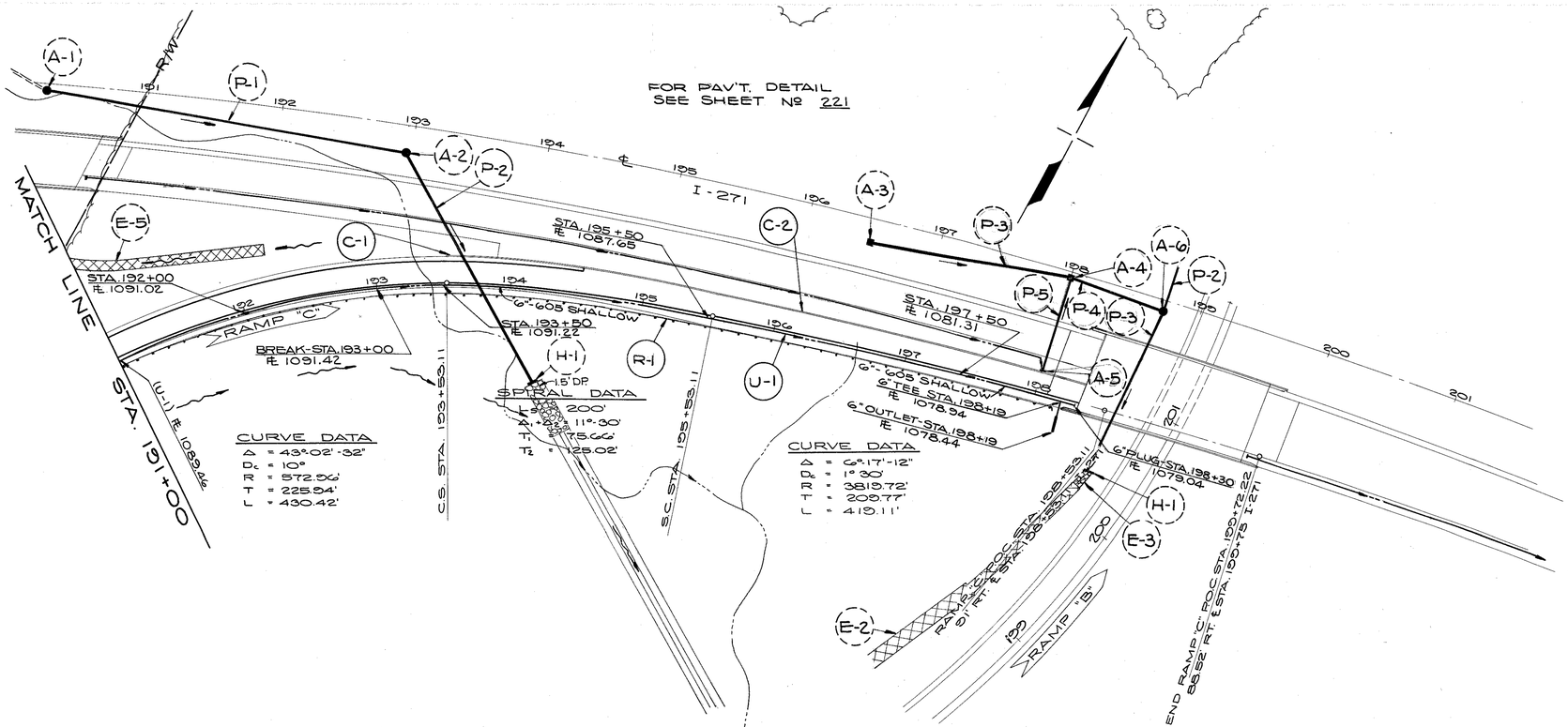
RAMP "B" STA. 212+00 TO STA. 222+00

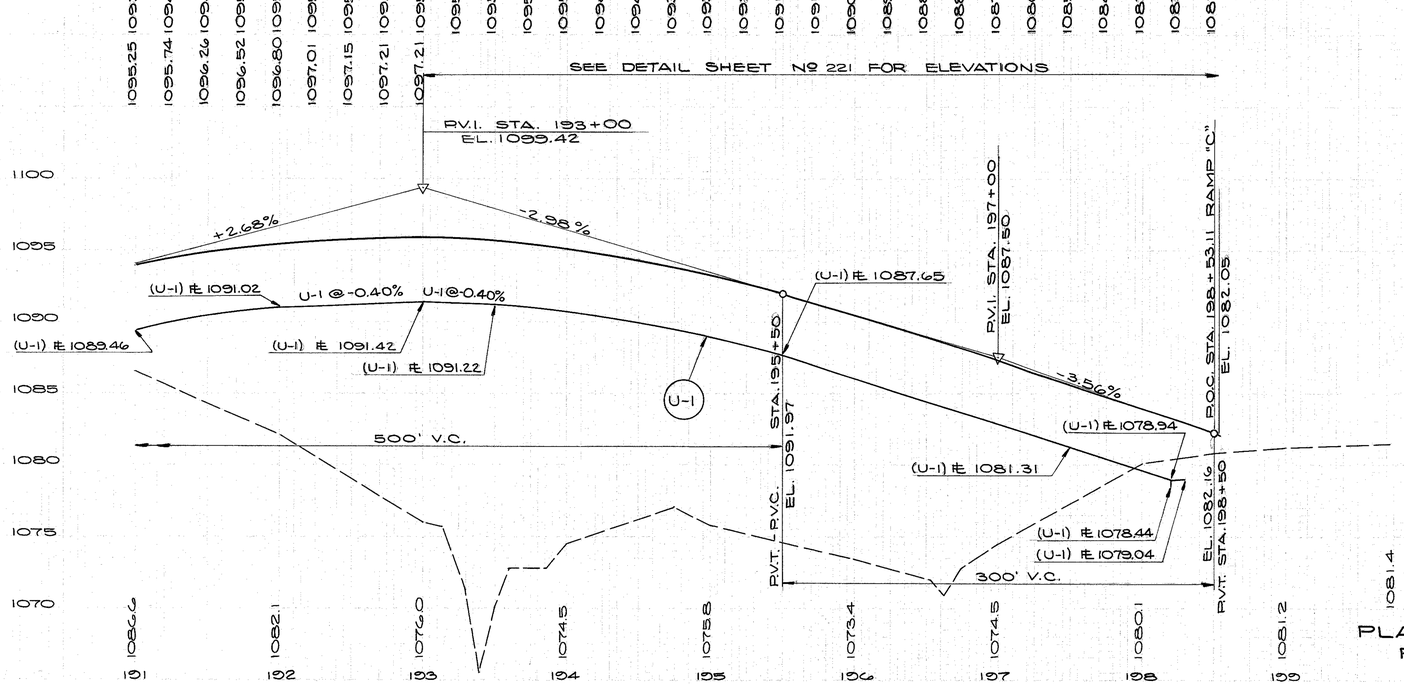
SUM - 271 - 2.98

231
510


I-77 (EXIST.)
N 4°45'28"W
(U-1) ℄ 1083.86
6" TEE - STA. 188+80
℄ 1083.00
RAMP "C"
R/W
C-1
R-1
U-1
E-1
E-2
E-3
6"GOS DEEP
6" OUTLET
℄ 1082.37
6"GOS SHALLOW
STA. 190+50
℄ 1088.26
7.5'
NOSE STA. 187+22.69 ℄ 1089.32
S.C. STA. 189+22.5
+25
CURVE DATA
Δ = 43°02'32"
D = 10°
R = 572.96'
L = 225.64'
T = 430.42'
SPIRAL DATA
Ls = 200'
Δ1 = Δ2 = 11°30'
T1 = 25.02'
T2 = 75.66'
CURVE DATA
Δ = 6°47'-46"
D = 1°30'
R = 3819.72'
T = 226.80'
L = 453.07'
P.C. STA. 182+69.62 RAMP "C"
STA. 507+85.78 RT. ℄ I-77
MATCH LINE STA. 191+00
FOR EXIST. I-77 PLAN & PROFILE
SEE SHEET Nº 199
FOR PAVT. DETAIL
SEE SHEET Nº 222

| | | |



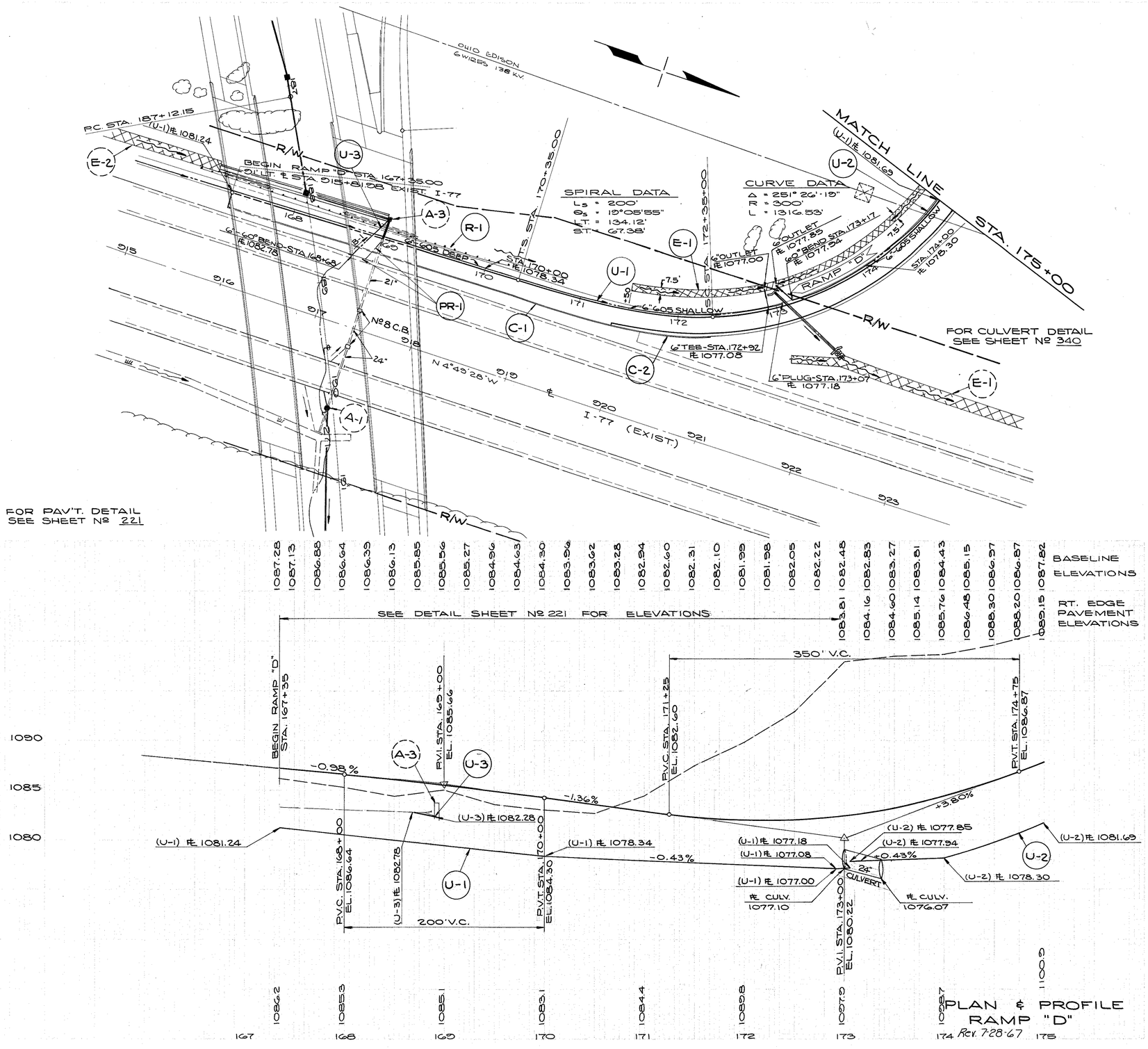


PLAN & PROFILE
RAMP "C"

BASELINE ELEVATIONS

LT. EDGE PAVEMENT ELEVATIONS

	603 CONDUITS - LIN. FT.					605 UNDERDRAINS LIN. FT.	BENDS & BRANCHES EACH	TYPE E	6"	10
						DEEP SHALLOW	TEE			
						745	1			10
	609 CURB TYPE 8 LIN. FT.	609 CURB TYPE 7 LIN. FT.								



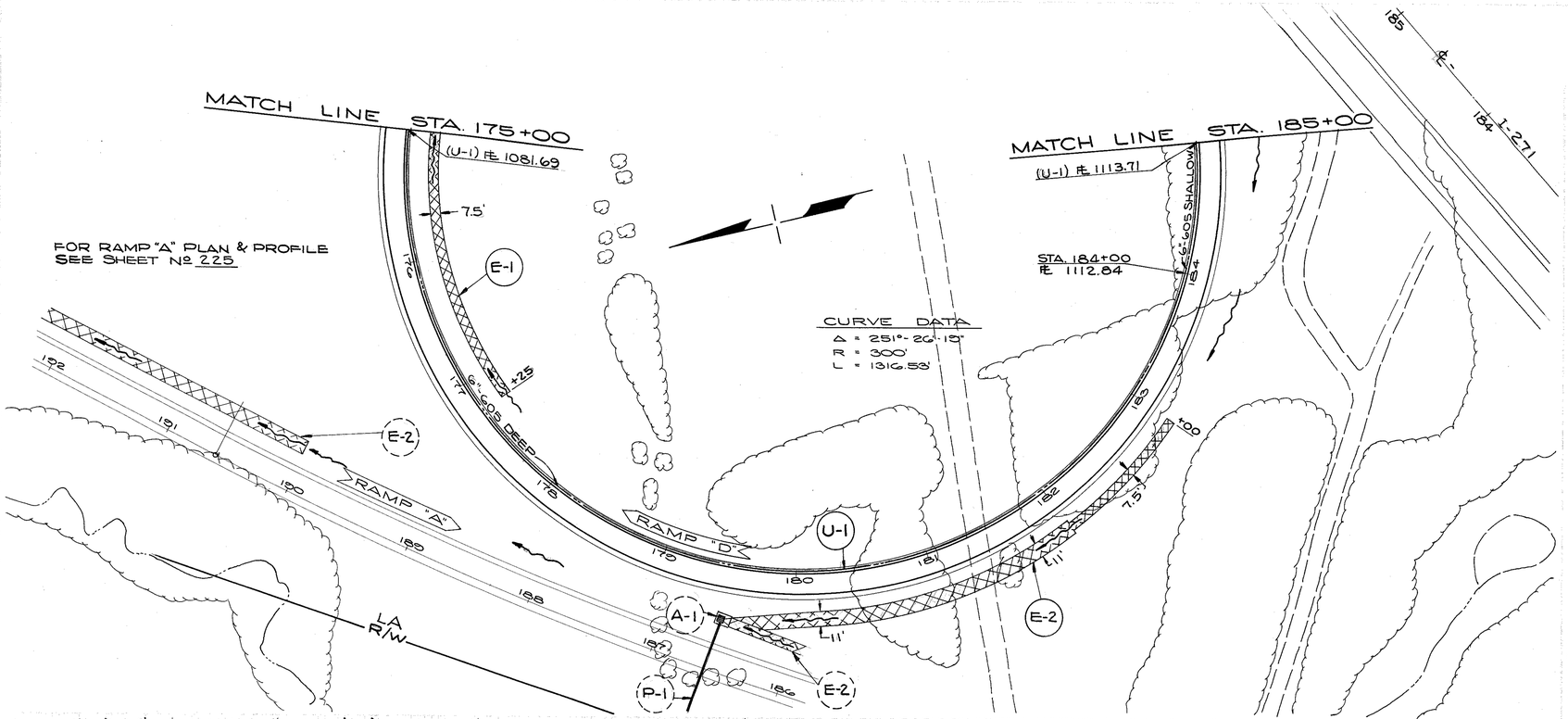
605 CONDUITS UNDERDRAINS LIN. FT.	606 PIPE SPECIALS EACH 60° BEND TEE	608 BENDS & BRANCHES EACH 60° BEND	CONDUITS UNDERDRAINS TYPE B WRAPPING	CONDUITS UNDERDRAINS TYPE B TYPE F	607 JUTE MATTING SQ.YDS.	DEEP SHALLOW
					667	
265	1		6'	8'	292	265
317				10		
195				10		
24		1				
	1		30			

609 CURB TYPE 7 LIN. FT.	609 CURB TYPE 8 LIN. FT.	606 GUARD RAIL 4 LINES	
			U-1 167+35 - 173+07 LT.
			U-2 173+04 - 175+00 LT.
			U-3 168+68 - 168+93 LT.
	430	71	E-1 171+50 - 175+00 LT.
			PR-1 168+68 - 168+90 LT.
			R-1 167+01 - 170+255 LT. 325
			C-1 167+35 - 171+65 RT.
			C-2 171+65 - 172+36 RT.

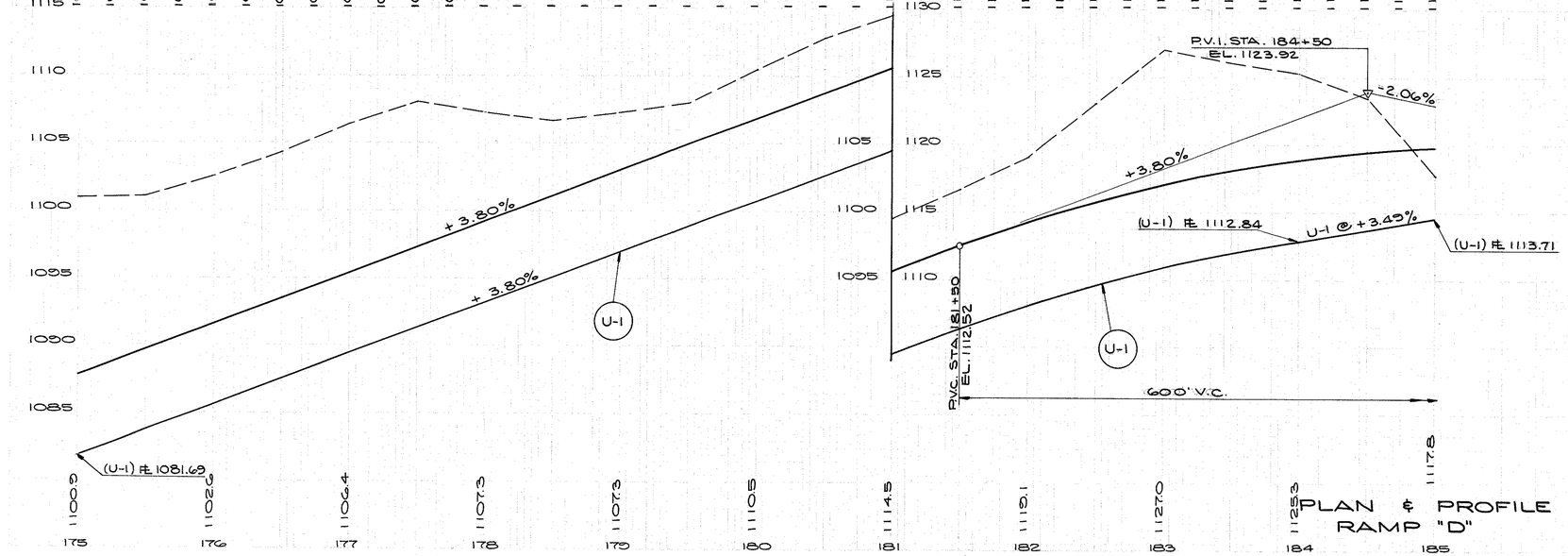
| 221 | 221 | ZOE REMOVED 15" UNDER L.R. | | | | |

235
510

SUM - 271 - 2.98



	175	176	177	178	179	180	181	182	183	184	185
BASELINE ELEVATIONS	1087.82	1088.77	1089.72	1090.67	1091.62	1092.57	1093.52	1094.47	1095.42	1096.37	1097.32
	1098.27	1099.22	1100.17	1101.12	1102.07	1103.02	1103.97	1104.92	1105.87	1106.82	1107.77
	1108.72	1109.67	1110.62	1111.57	1112.52	1113.44	1114.30	1115.10	1115.83	1116.51	1117.12
	1117.67	1118.17	1118.60	1118.97	1119.28	1119.52	1119.71	1119.84			
RT. EDGE PAVEMENT ELEVATIONS	1089.15	1090.10	1091.05	1092.00	1092.95	1093.90	1094.85	1095.80	1096.75	1097.70	1098.65
	1099.60	1100.55	1101.50	1102.45	1103.40	1104.35	1105.30	1106.25	1107.20	1108.15	1109.10
	1110.05	1111.00	1111.95	1112.90	1113.85	1114.77	1115.65	1116.43	1117.16	1117.84	1118.45
	1119.00	1119.50	1119.93	1120.30	1120.61	1120.85	1121.04	1121.17			



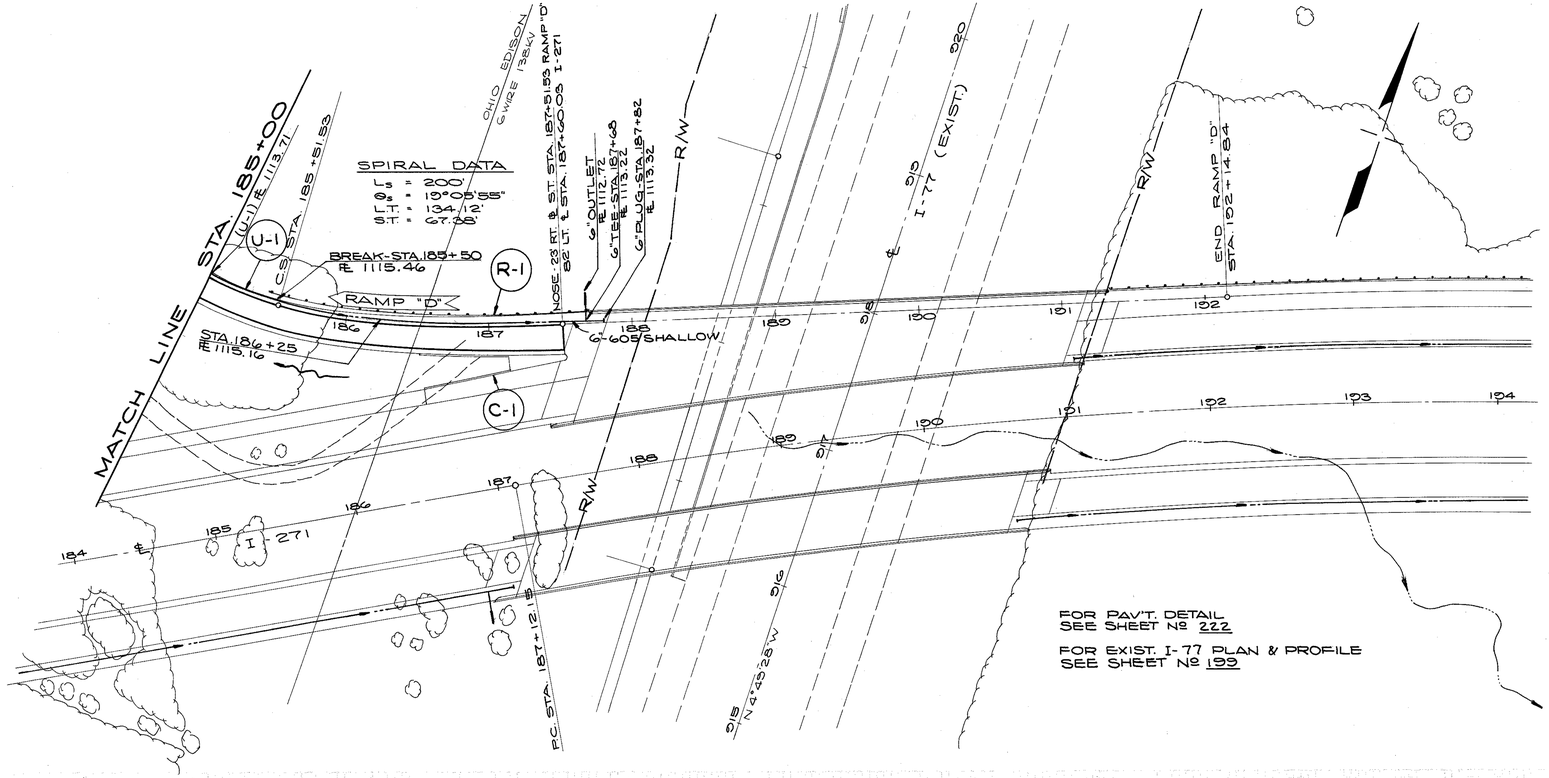
PLAN & PROFILE
RAMP "D"

605 UNDERDRAINS LIN. FT.	188
667 JUTE MATTING SQ.YDS.	389
DEEP SLOT 900	
SHALLOW 900	100

U-1 175+00 - 185+00 LT.
E-1 175+00 - 177+25 LT.
E-2 179+50 - 183+00 RT.

577 900 100

RAMP "D" STA. 175+00 TO STA. 185+00



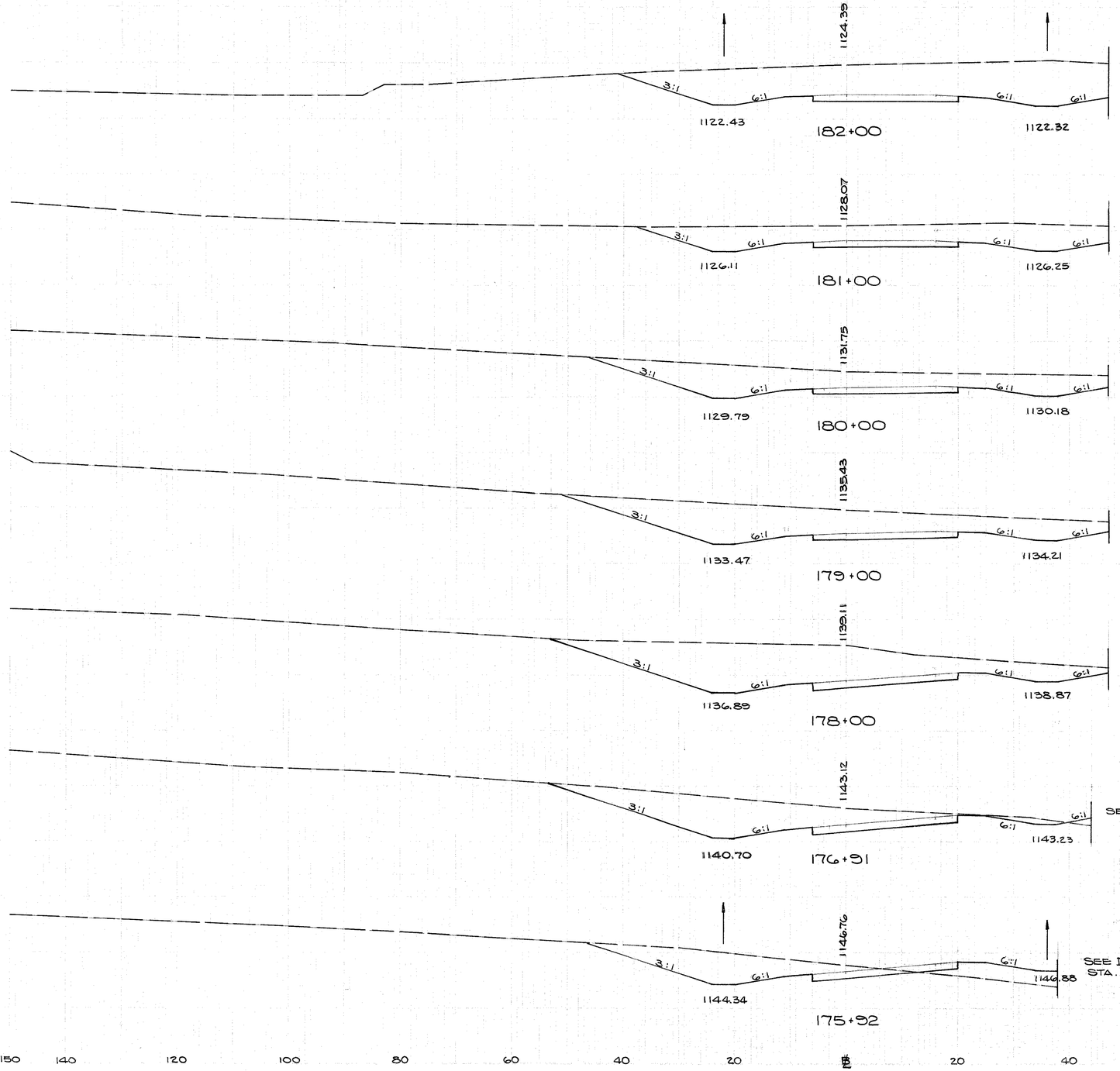
BASELINE ELEVATIONS

RT. EDGE PAVEMENT ELEVATIONS

| | | |

237
510

SUM. 271 2.98



END AREA CU. YDS.

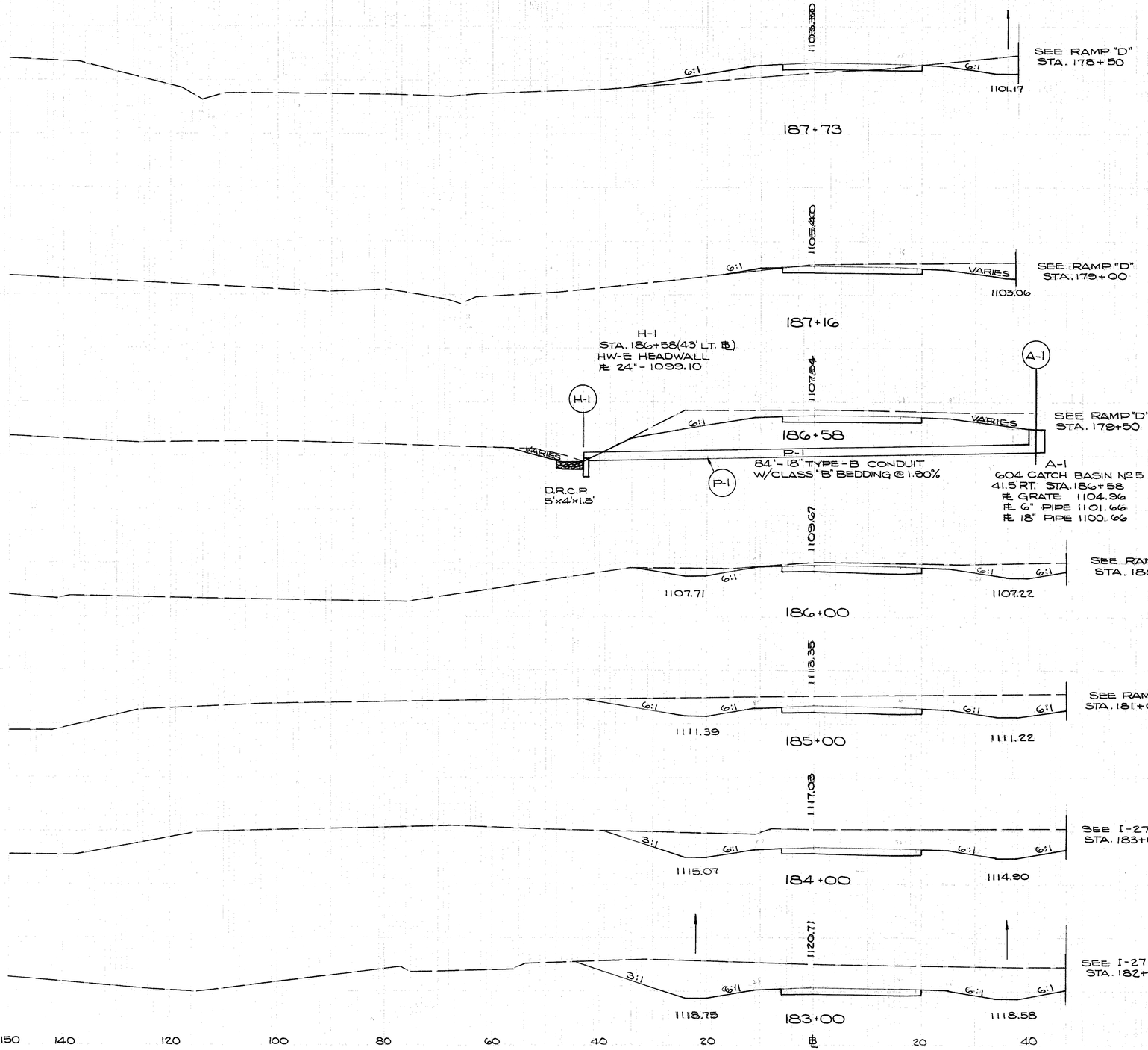
1130	C - 539 F - 0	
		C - 1598 F - 0
	C - 324 F - 0	
1130		
		C - 1241 F - 0
	C - 346 F - 0	
1130		
		C - 1437 F - 0
1140		
	C - 430 F - 0	
		C - 1726 F - 0
1140	C - 502 F - 0	
		C - 1659 F - 6
1140	C - 320 F - 3	
		C - 930 F - 106
	C - 187 F - 55	
1140		

RAMP "A"
STA. 175+92 - STA. 182+00

60

238
510

SUM · 271 · 2.98



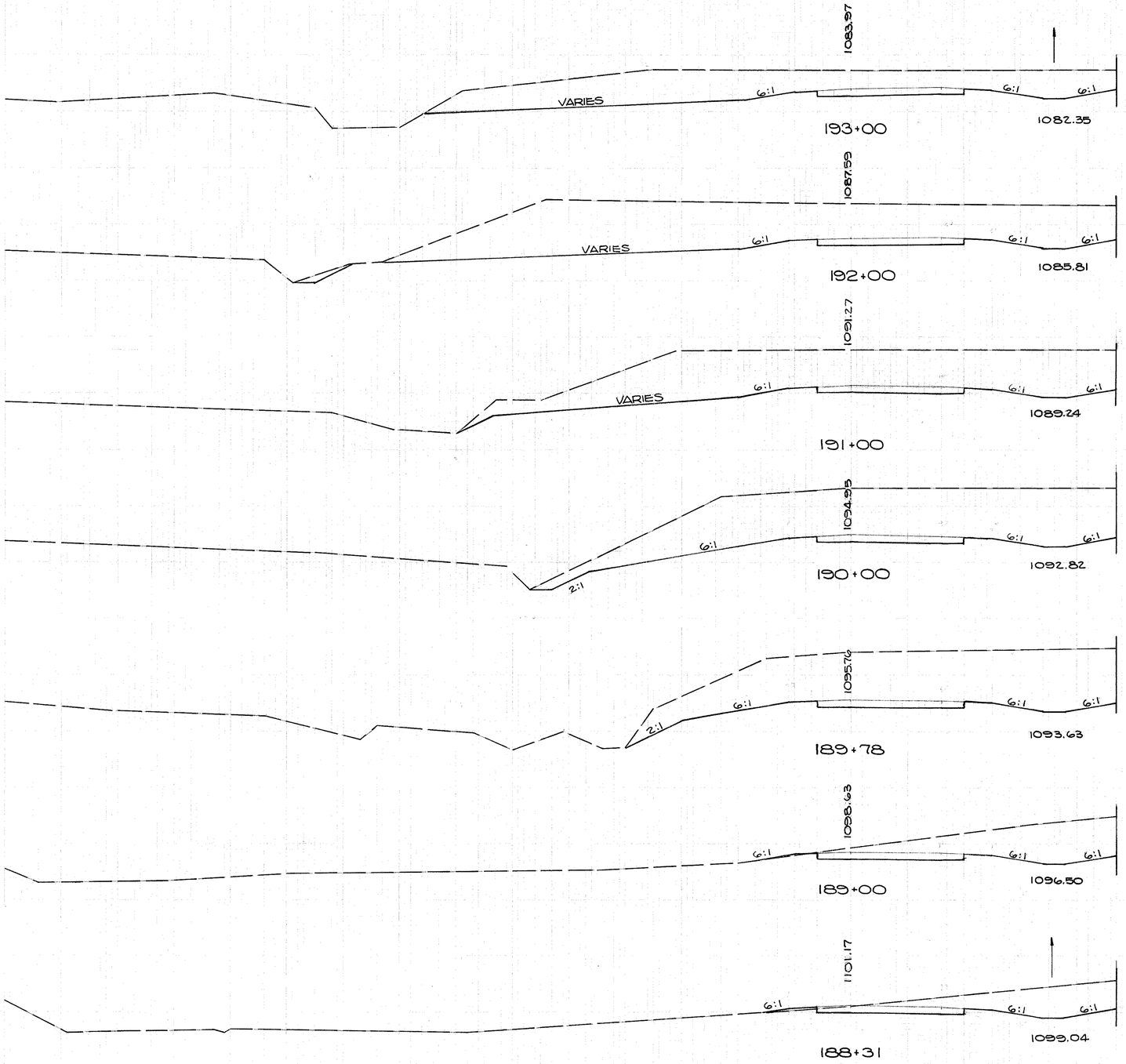
END AREA CU. YDS.

1100	C - 40 F - 48	
		C - 127 F - 55
1100	C - 80 F - 4	
		C - 258 F - 4
1110	C - 160 F - 0	
		C - 258 F - 0
1110	C - 117 F - 0	
		C - 717 F - 0
1120	C - 270 F - 0	
		C - 1172 F - 0
1120	C - 363 F - 0	
		C - 1563 F - 0
1120	C - 481 F - 0	
		C - 1889 F - 0

RAMP "A"
STA. 183+00 - STA. 187+73

239
510

SUM. · 271 · 2.98



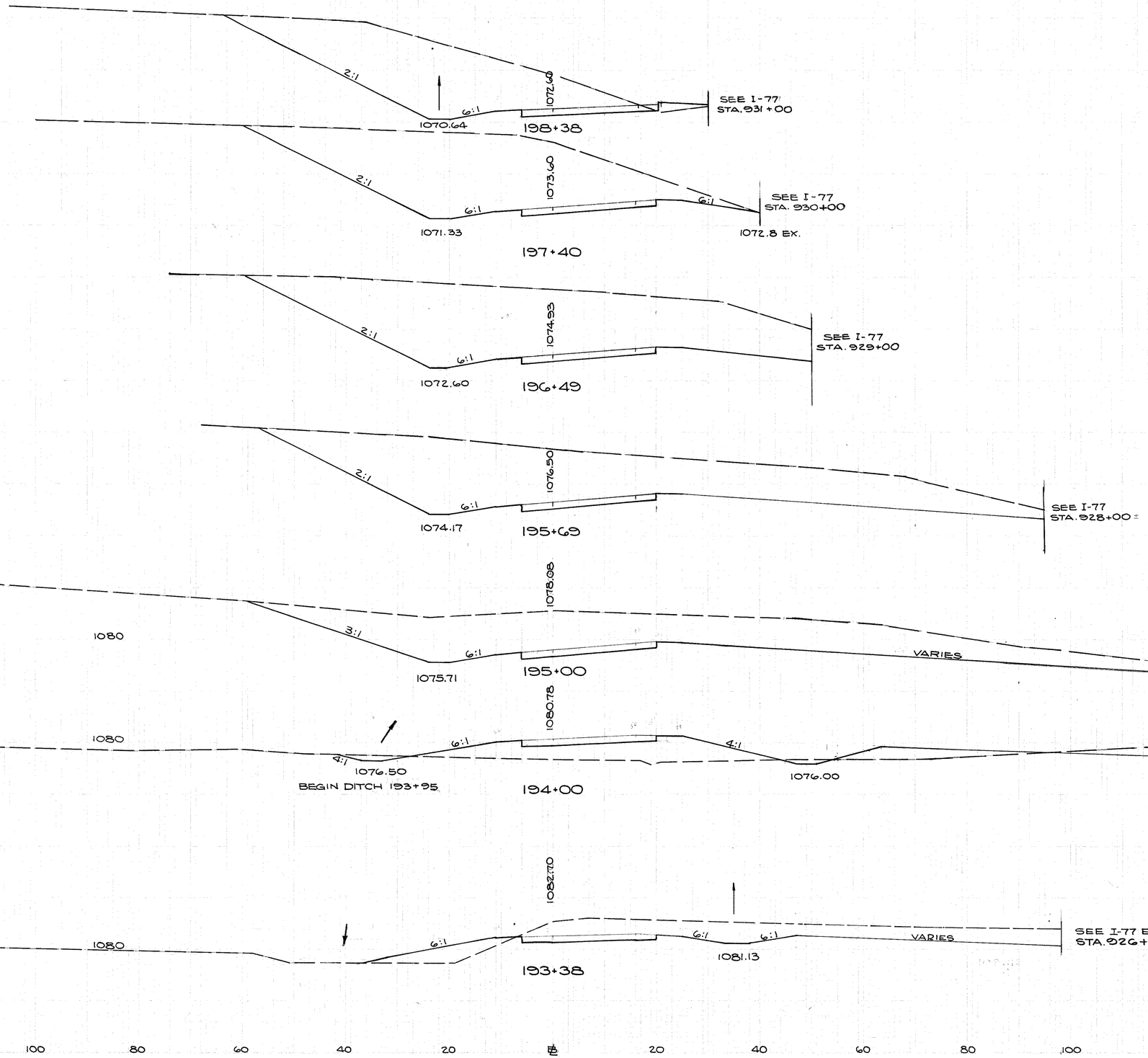
	ENDAREA CU. YDS.
SEE I-77 STA. 926+00±	C-557 F-0
1080	
	C-2802 F-0
SEE I-77 STA. 925+00±	C-956 F-0
1090	
	C-3206 F-0
SEE I-77 STA. 924+00±	C-775 F-0
1090	
	C-3124 F-0
SEE I-77 STA. 924+00±	C-912 F-0
1100	
	C-674 F-0
SEE RAMP "D" STA. 177+00±	C-743 F-0
1100	
	C-1431 F-3
SEE RAMP "D" STA. 177+00±	C-248 F-2
1100	
	C-538 F-6
SEE RAMP "D" STA. 178+00	C-173 F-3
1100	
	C-229 F-55

RAMP "A"

STA. 188+31 – STA. 193+00

240
510

SUM. · 271 · 2.98



END AREA CU. YDS.

C-687
F-12

C-2916
F-22

C-910
F-0

C-3507
F-0

C-1171
F-0

C-3502
F-0

C-1193
F-0

C-2818
F-3

C-1012
F-2

HEADWALL
SEE I-77
STA. 927+00

C-2489
F-552

1068 — INV. CULV.

SEE I-77
STA. 926+00

C-332
F-296

C-765
F-409

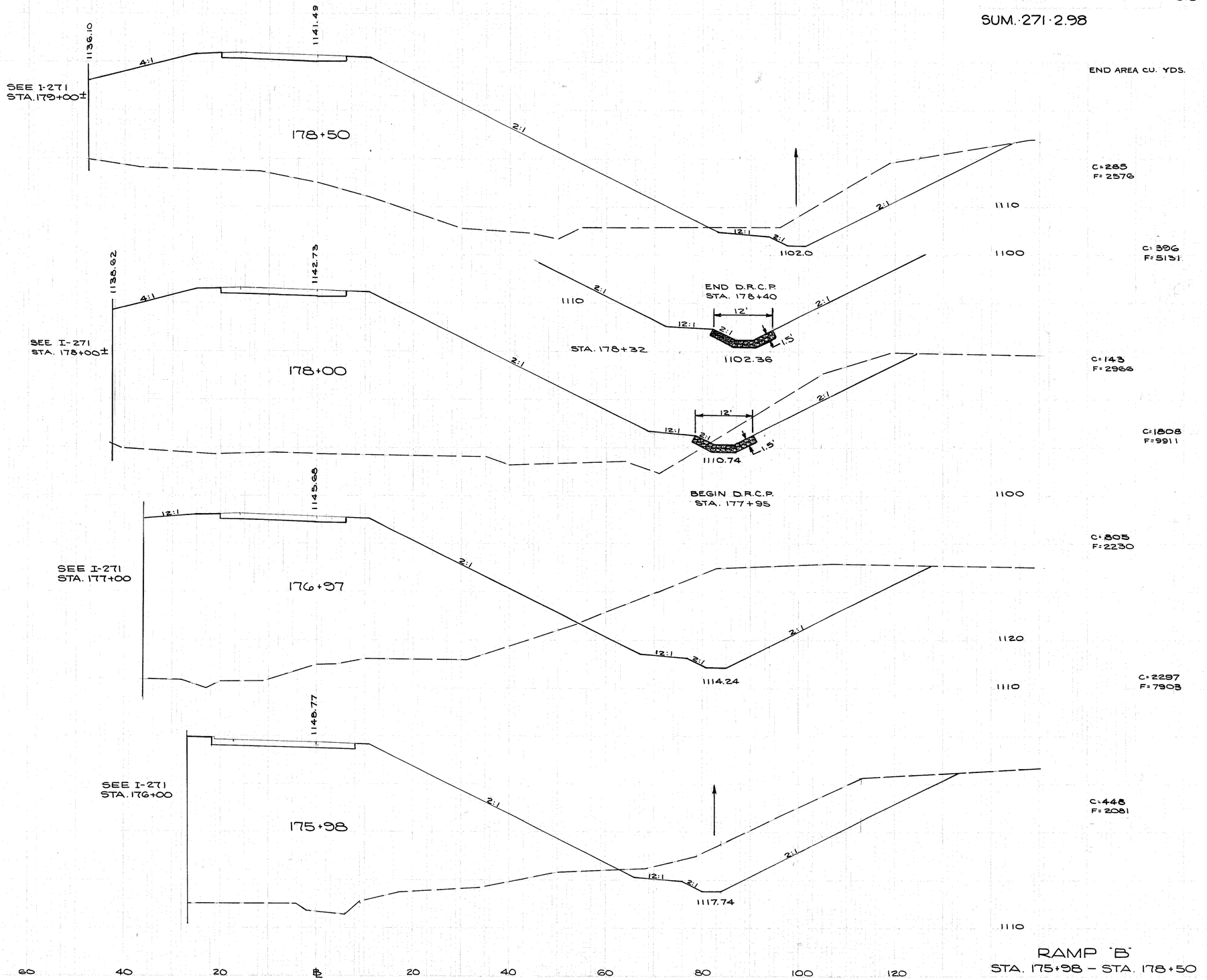
C-334
F-60

C-627
F-42

RAMP "A"
STA. 193+38 – 198+38

241
510

SUM. 271 2.98

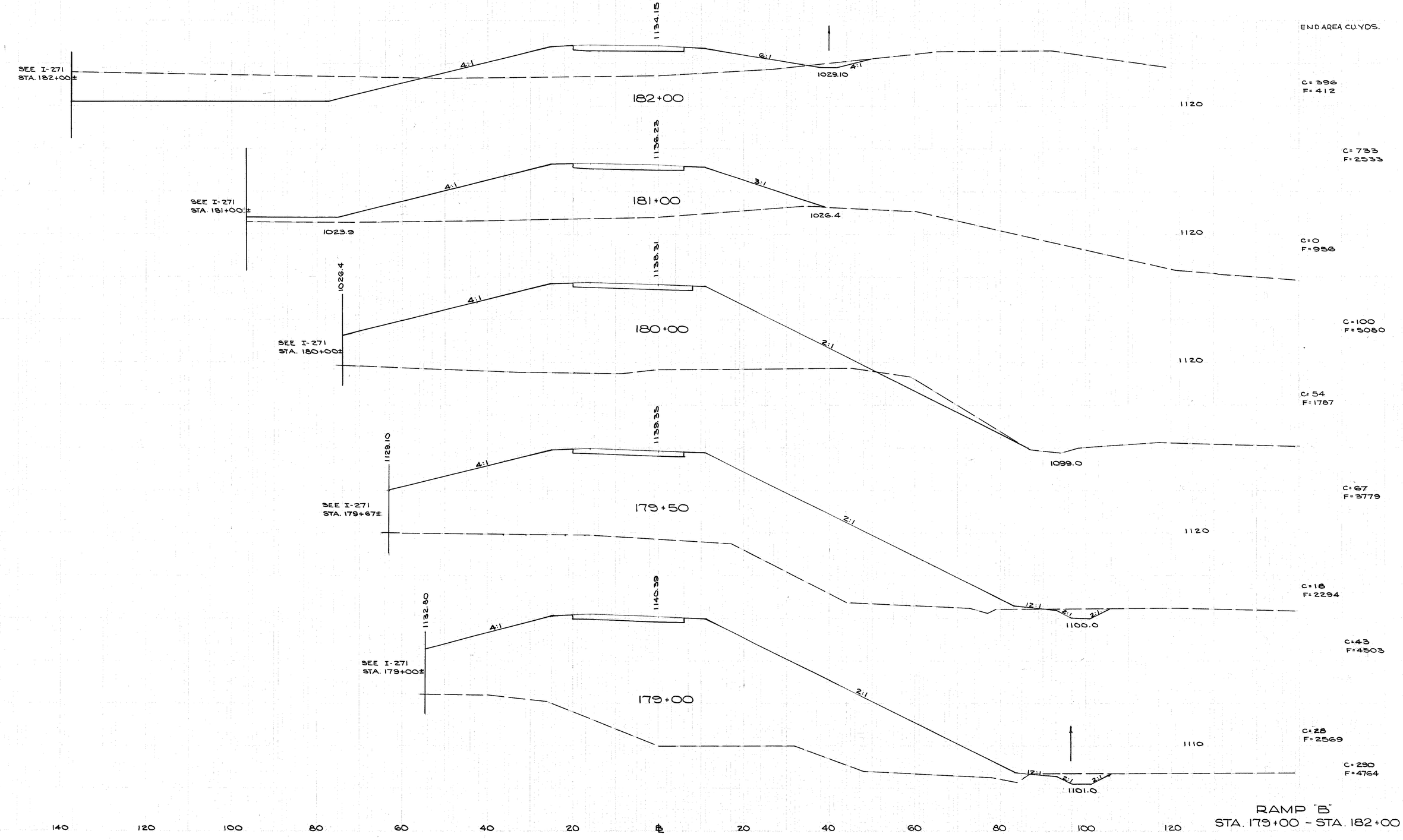


RAMP "B"
STA. 175+98 – STA. 178+50

242
510

SUM. ·271· 2.98

END AREA CU.YDS.

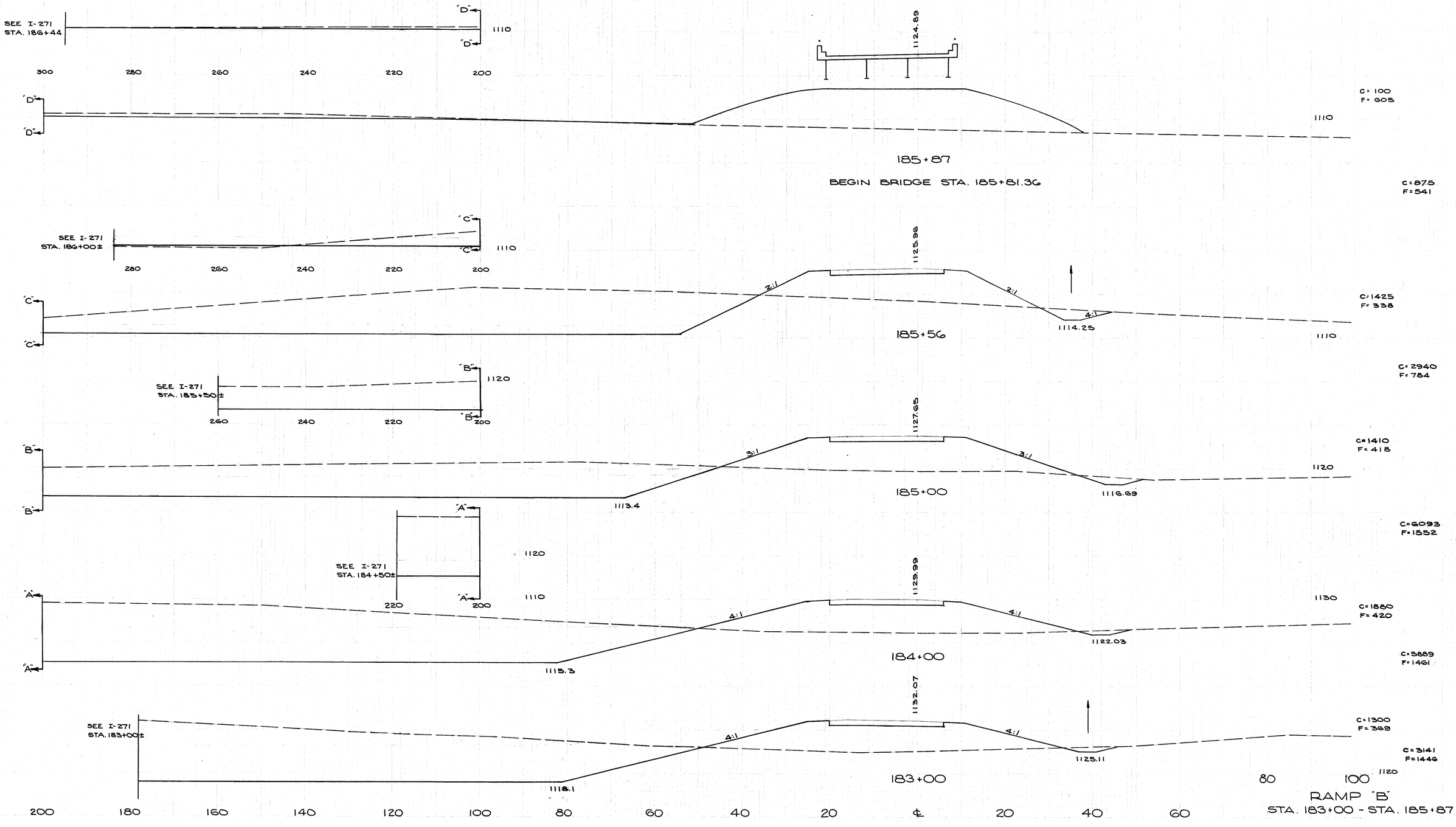


RAMP "B"
STA. 179+00 - STA. 182+00

243
510

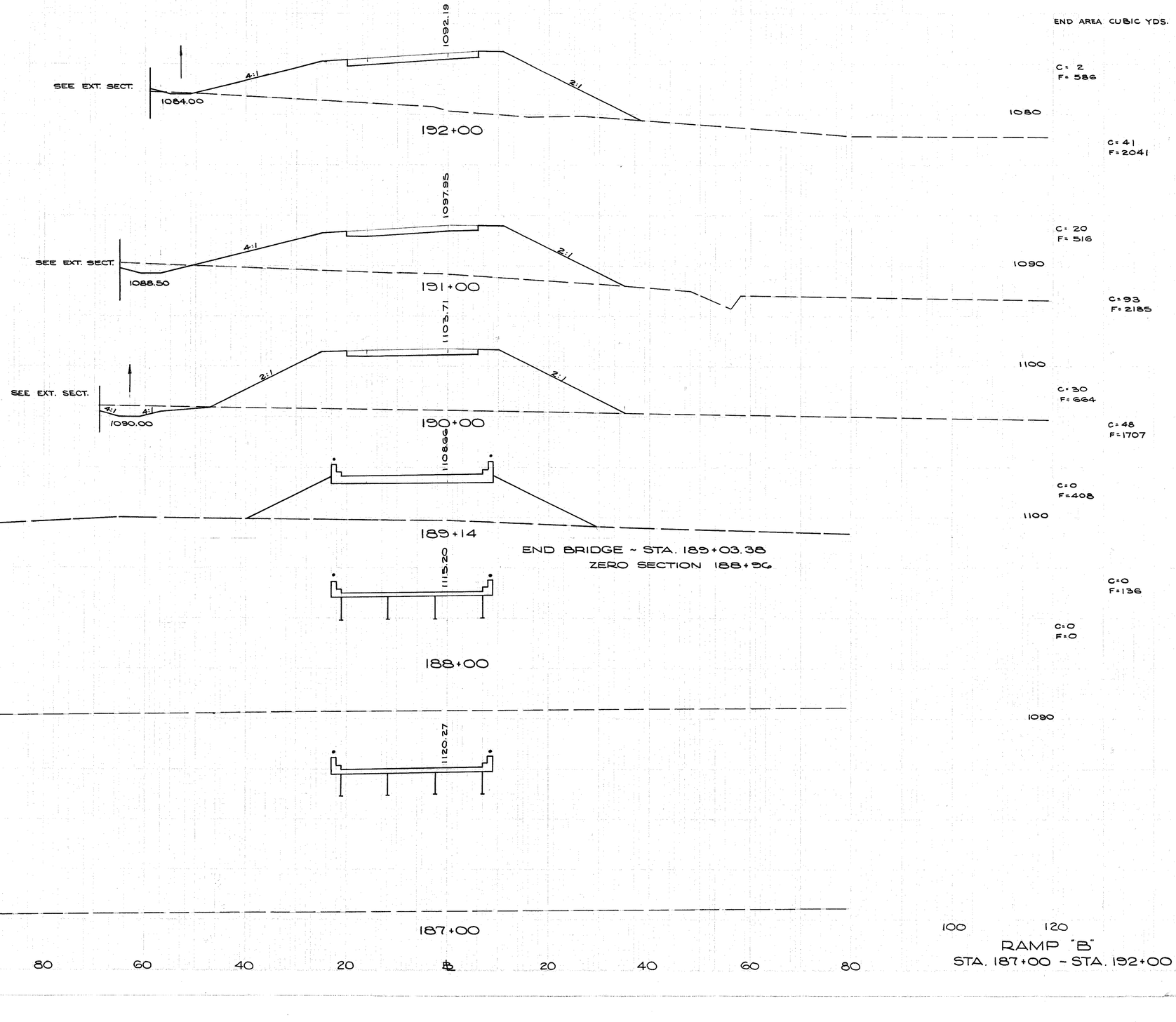
SUM. · 271 · 298

END AREA CUBIC YDS.



RAMP "B"
STA. 183+00 - STA. 185+87

SUM. · 271 · 2.98

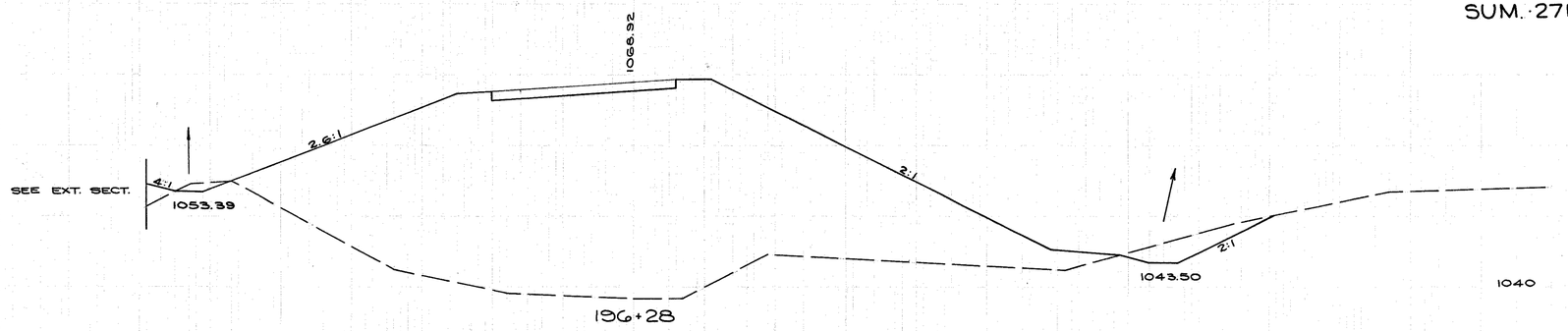


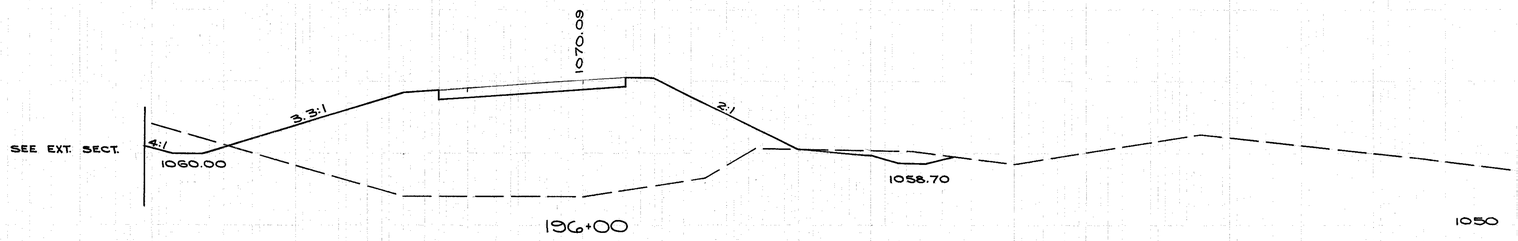
RAMP "B"
STA. 187+00 - STA. 192+00

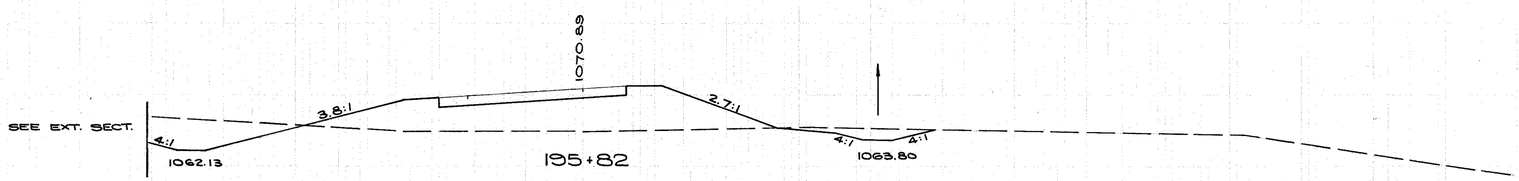
245
510

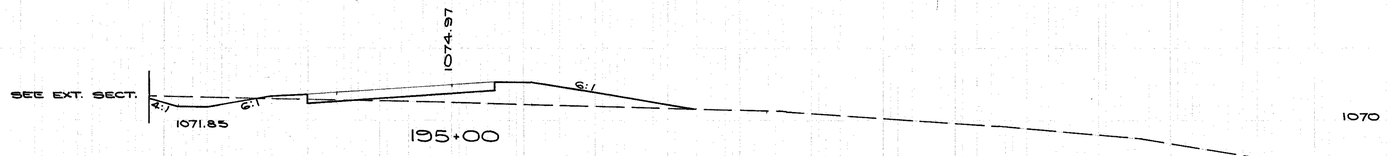
SUM. · 271 · 2.98

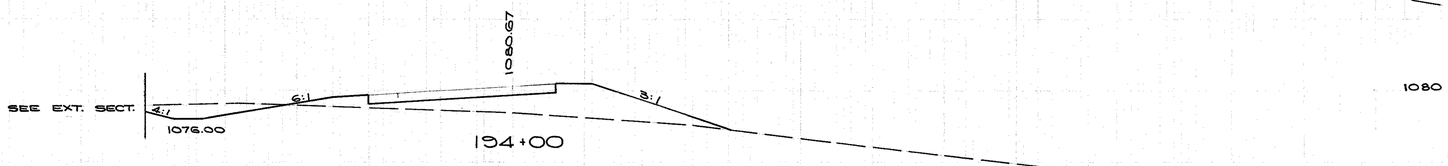
END AREA CUBIC YDS.

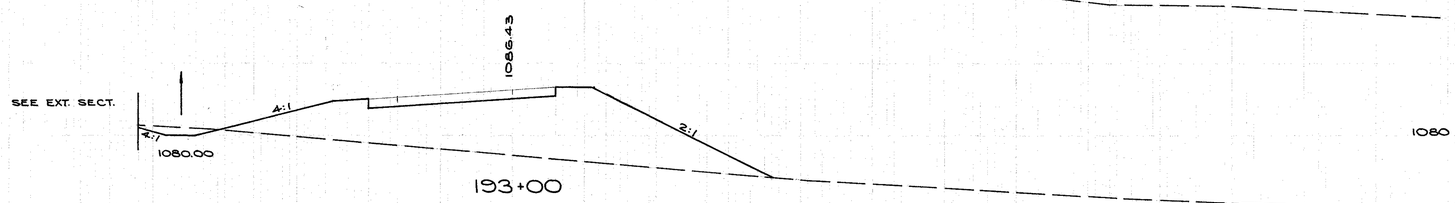










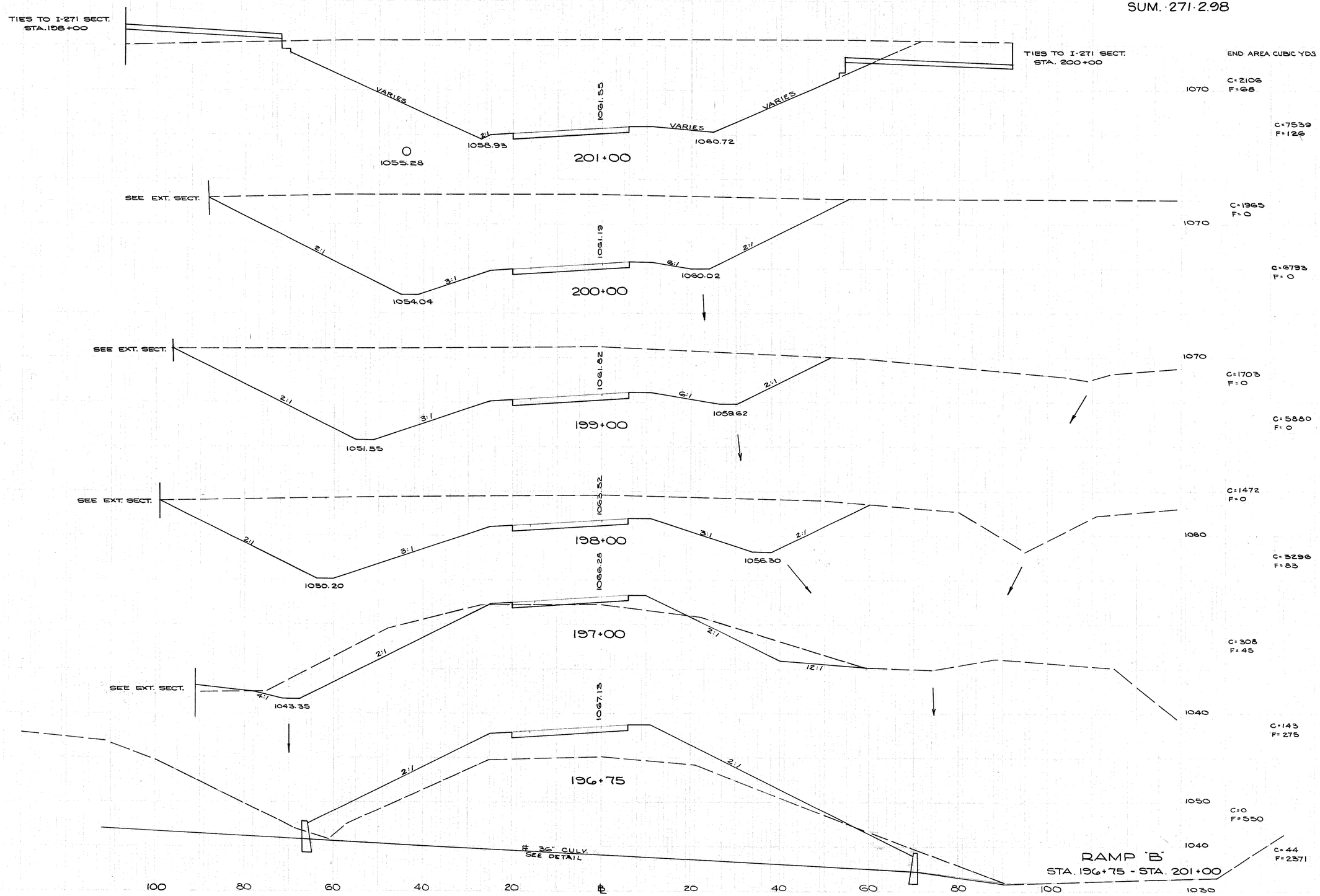


120 100 80 60 40 20 ℄ 20 40 60 80 100 120

RAMP "B"
STA. 193+00 - STA. 196+28

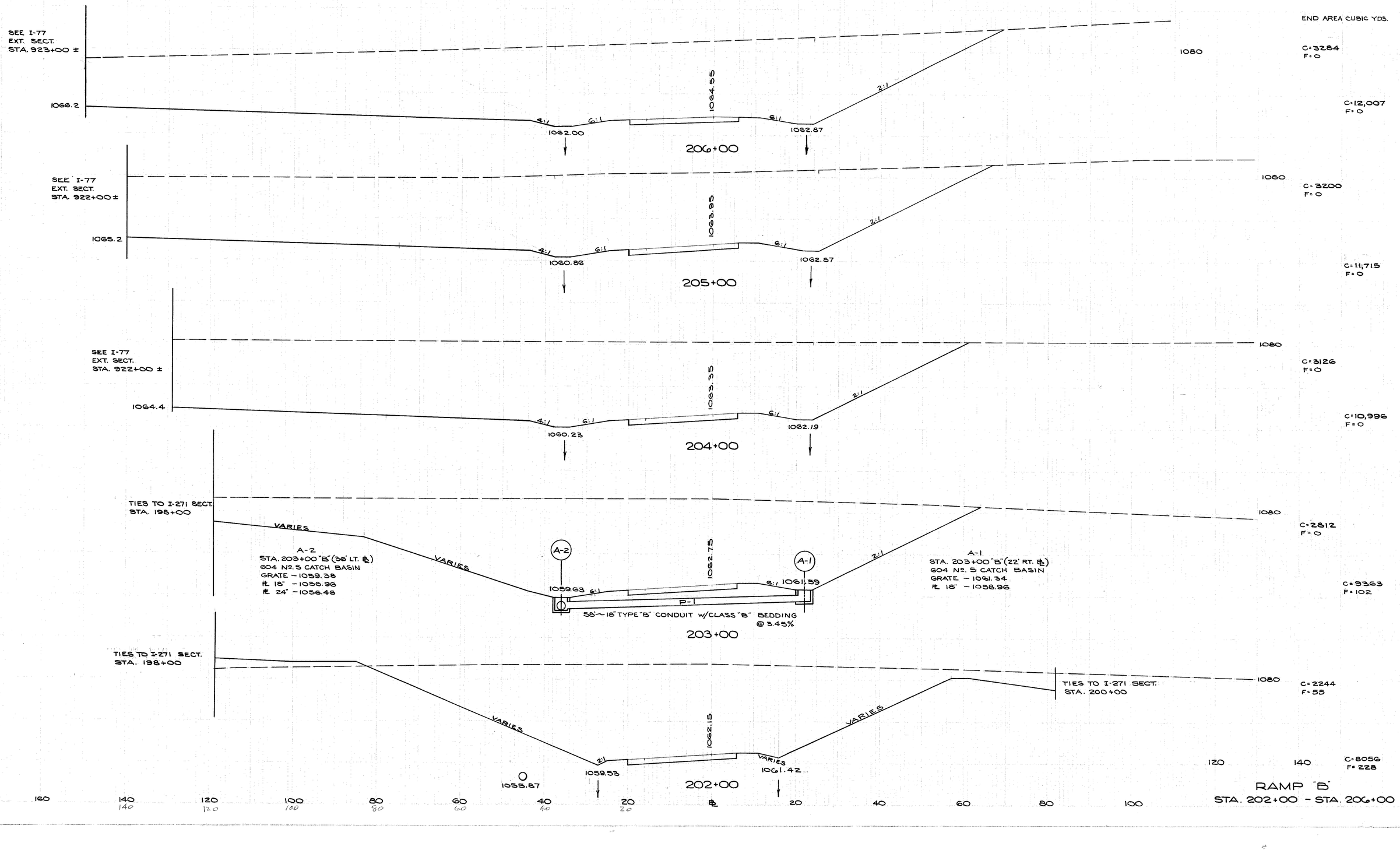
246
510

SUM. · 271 · 2.98

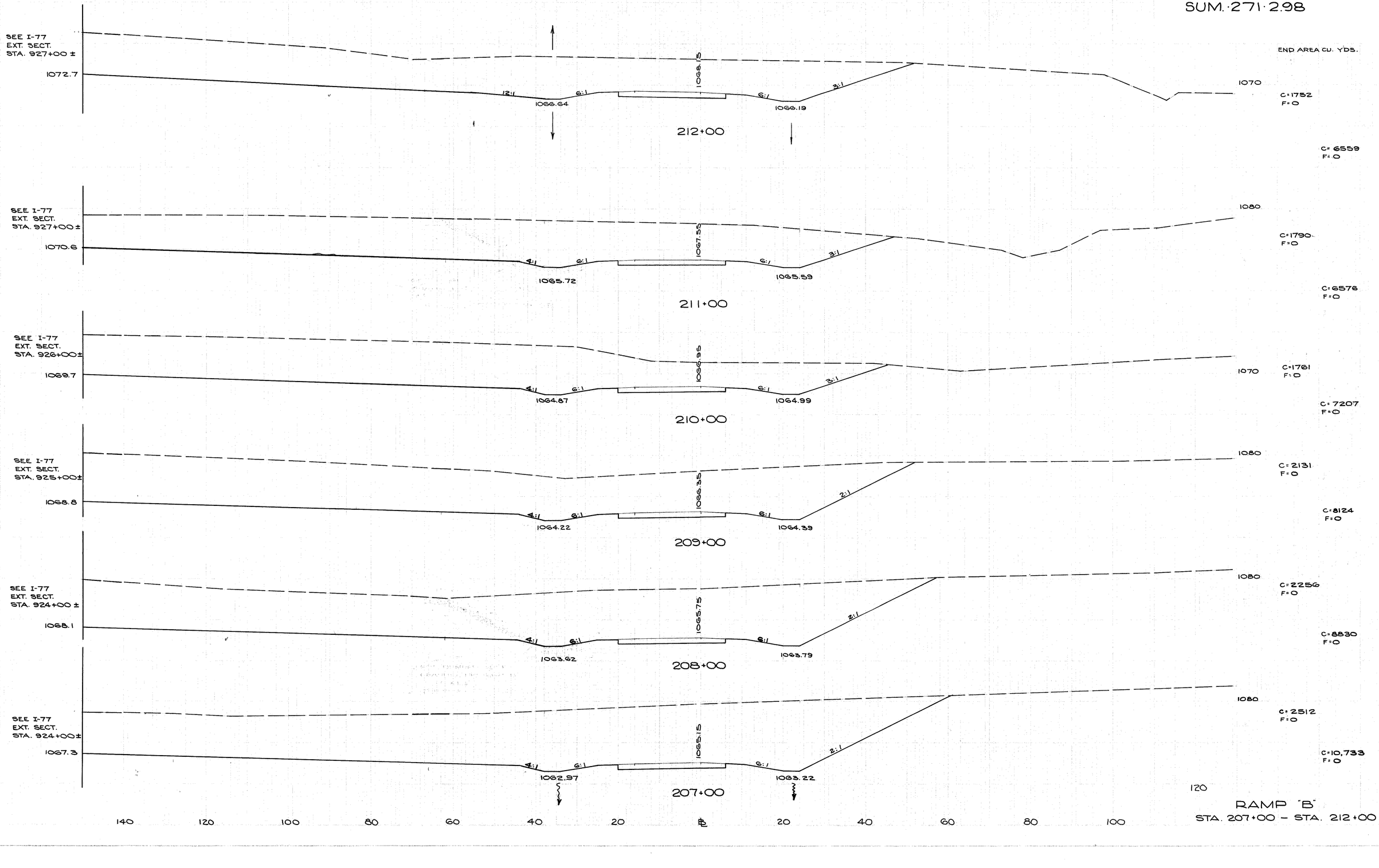


RAMP "B"
STA. 196+75 - STA. 201+00

SUM. · 271 · 2.98

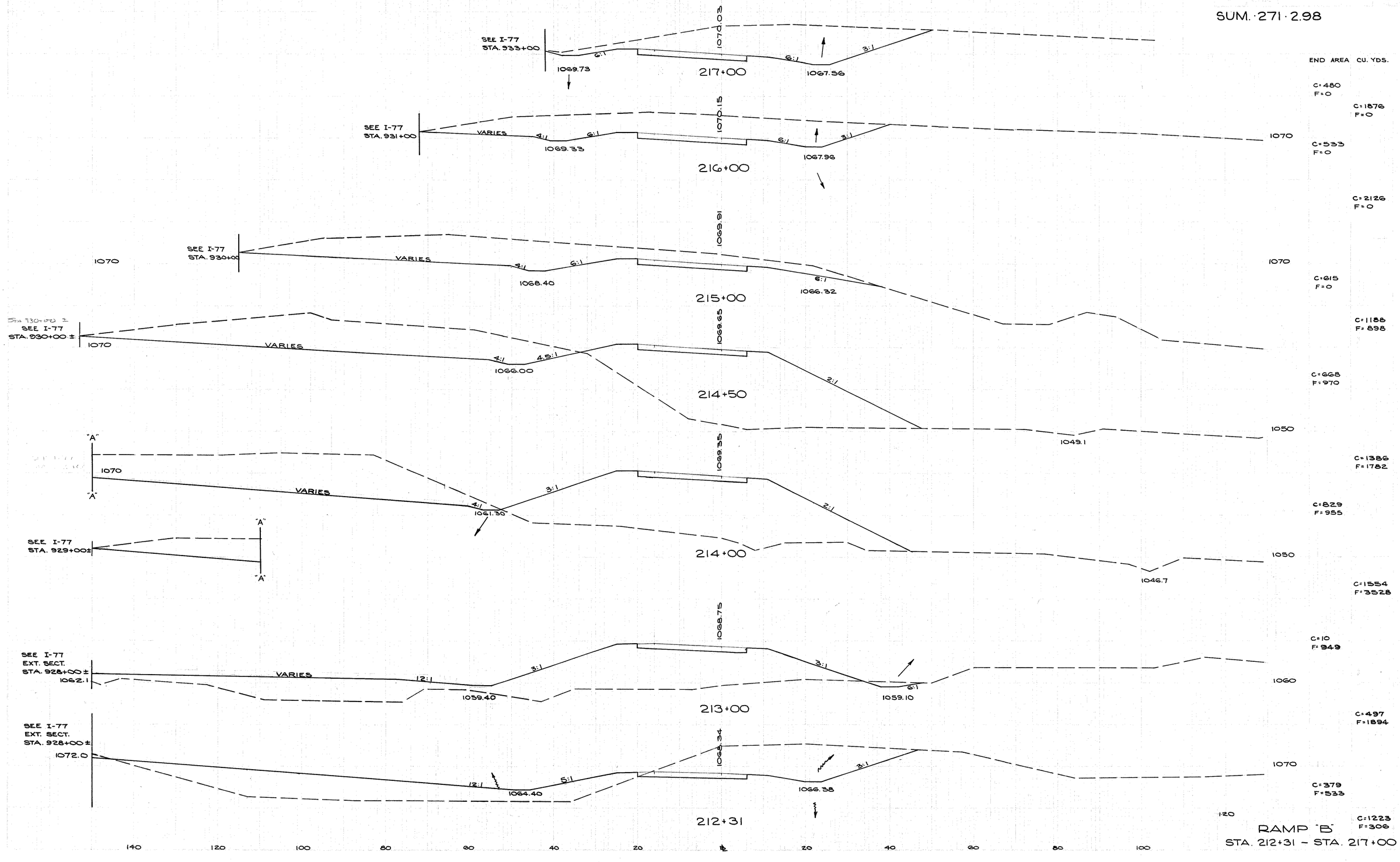

END AREA CUBIC YDS.
SEE I-77
EXT. SECT.
STA. 923+00 ±
1066.2
1062.00
1064.55
1062.87
206+00
1080
C=3284
F=0
C=12,007
F=0
SEE I-77
EXT. SECT.
STA. 922+00 ±
1065.2
1060.86
1063.95
1062.57
205+00
1080
C=3200
F=0
C=11,715
F=0
SEE I-77
EXT. SECT.
STA. 922+00 ±
1064.4
1060.23
1063.35
1062.19
204+00
1080
C=3126
F=0
C=10,996
F=0
TIES TO I-271 SECT.
STA. 198+00
VARIES
A-2
STA. 203+00 "B" (36' LT. ℄)
604 No. 5 CATCH BASIN
GRATE – 1059.38
℄ 18" – 1056.96
℄ 24" – 1056.46
1059.63
1062.75
A-1
1061.59
A-1
STA. 203+00 "B" (22' RT. ℄)
604 No. 5 CATCH BASIN
GRATE – 1061.34
℄ 18" – 1058.96
P-1
58'–18" TYPE "B" CONDUIT W/CLASS "B" BEDDING
@ 3.45%
203+00
1080
C=2812
F=0
C=9363
F=102
TIES TO I-271 SECT.
STA. 198+00
VARIES
1059.53
1062.15
1061.42
202+00
TIES TO I-271 SECT.
STA. 200+00
1080
C=2244
F=55
C=8056
F=228
1055.87
160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
RAMP "B"
STA. 202+00 – STA. 206+00

SUM. 271 2.98



RAMP "B"
STA. 207+00 – STA. 212+00

SUM. · 271 · 2.98



END AREA CU. YDS.

C=480
F=0

C=1876
F=0

C=533
F=0

C=2126
F=0

C=615
F=0

C=1188
F=898

C=668
F=970

C=1386
F=1782

C=829
F=955

C=1554
F=3528

C=10
F=949

C=497
F=1894

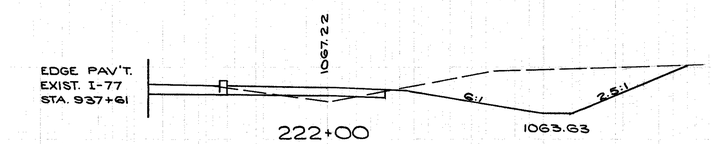
C=379
F=533

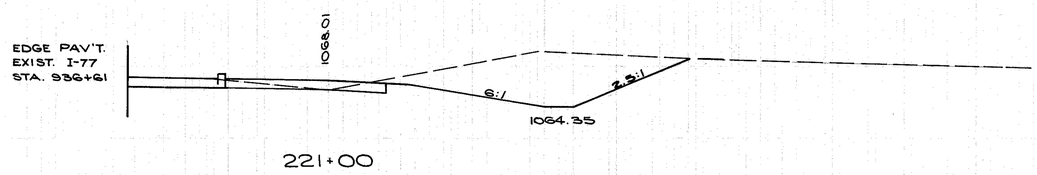
C=1223
F=306

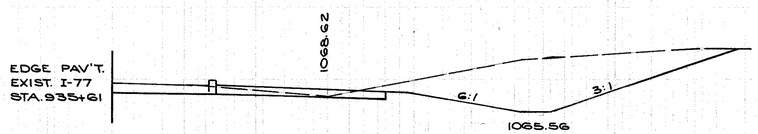
RAMP "B"
STA. 212+31 – STA. 217+00

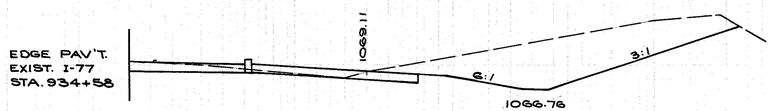
SUM. 271 2.98

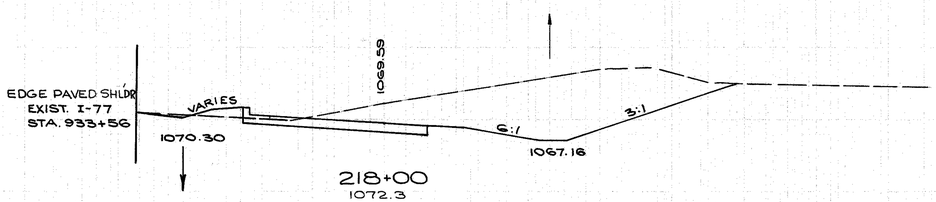
STA. 222+39.11 RAMP "B" =
STA. 938+00 I-77
SEE SHT. No. 210 FOR X-SECTION











40 20 ℄ 20 40 60 80 100

END AREA CU. YDS.

C = 167
F = 8

C = 253
F = 9

C = 183
F = 5

C = 767
F = 9

C = 231
F = 0

C = 874
F = 0

C = 241
F = 0

C = 891
F = 6

C = 240
F = 3

C = 1033
F = 17

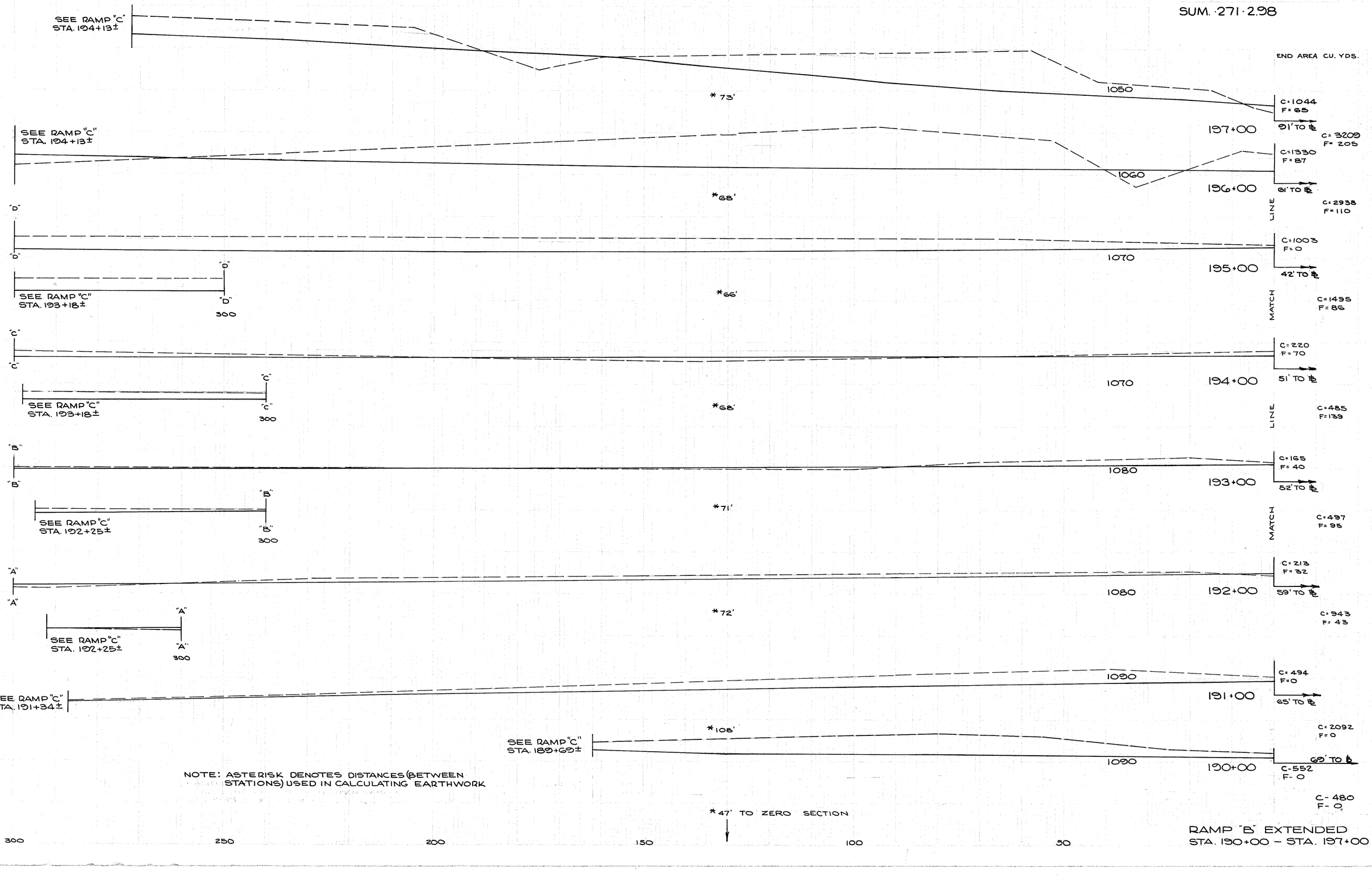
C = 318
F = 6

C = 1478
F = 11

RAMP "B"

STA. 218+00 - STA. 222+00

SUM. -271-2.98



NOTE: ASTERISK DENOTES DISTANCES (BETWEEN STATIONS) USED IN CALCULATING EARTHWORK

RAMP "B" EXTENDED
STA. 190+00 – STA. 197+00

252
510

SUM.·271·2.98

200+00
ZERO SECTION

C·0
F·176

*125' TO ZERO SECTION

SEE I-271
STA. 196+00±

C·0
F·76

1070

96' TO ℄

*85'

199+00

C·146
F·2015

SEE RAMP "C"
STA. 195+09±

C·93
F·1280

100 TO ℄

1060

198+00

C·1537
F·1710

*73'

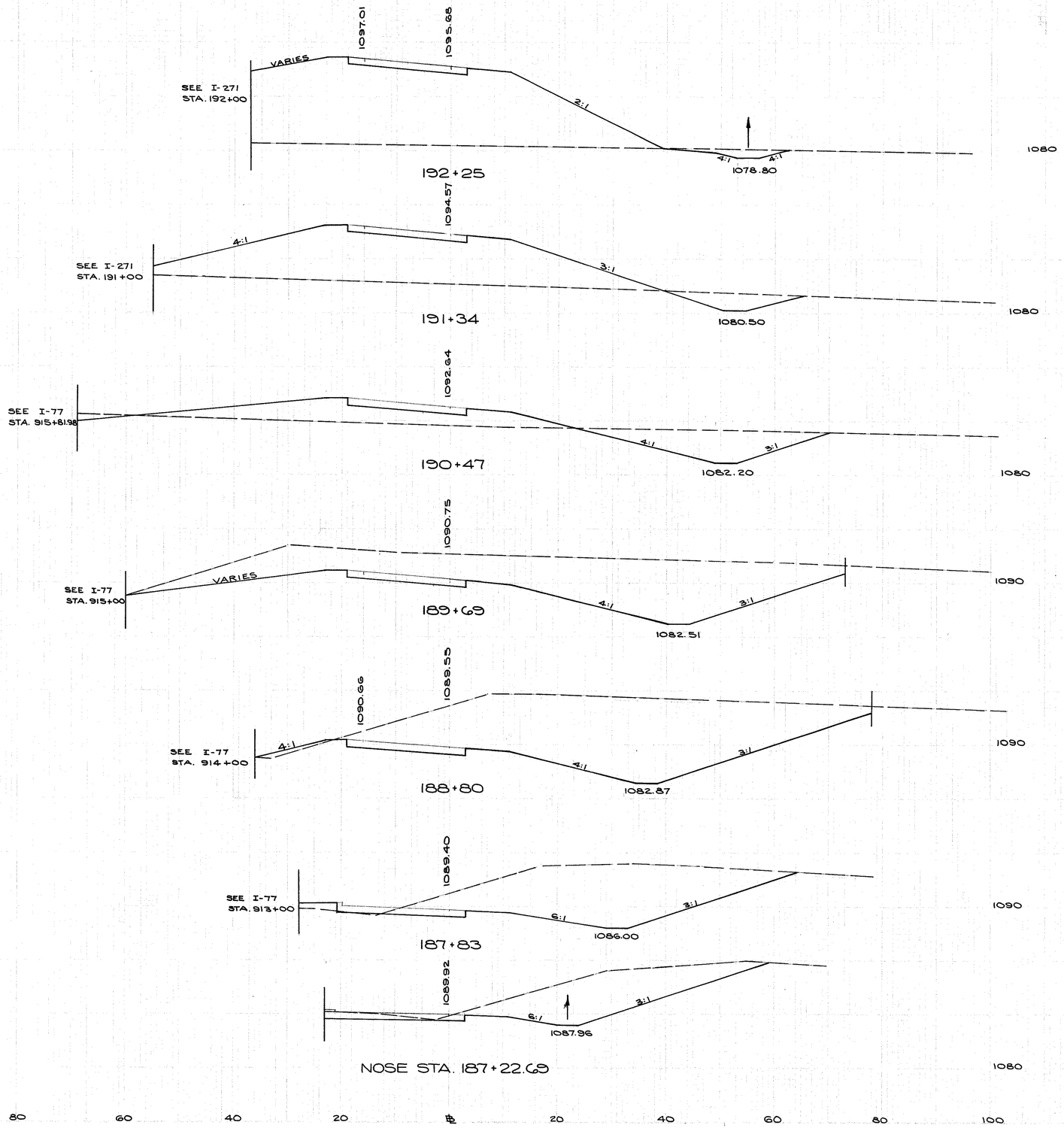
NOTE: * ASTERISK DENOTES DISTANCES (BETWEEN STATIONS) USED IN CALCULATING EARTHWORK

200 150 100 50

RAMP "B" EXTENDED
STA. 198+00 - STA. 200+00

253
510

SUM. 271-2.98



END AREA CU. YDS.

C=20
F=885

C=118
F=2514

C=50
F=607

C=342
F=1300

C=162
F=200

C=1377
F=289

C=791
F=0

C=2861
F=18

C=945
F=10

C=2608
F=34

C=507
F=9

C=905
F=10

C=303
F=0

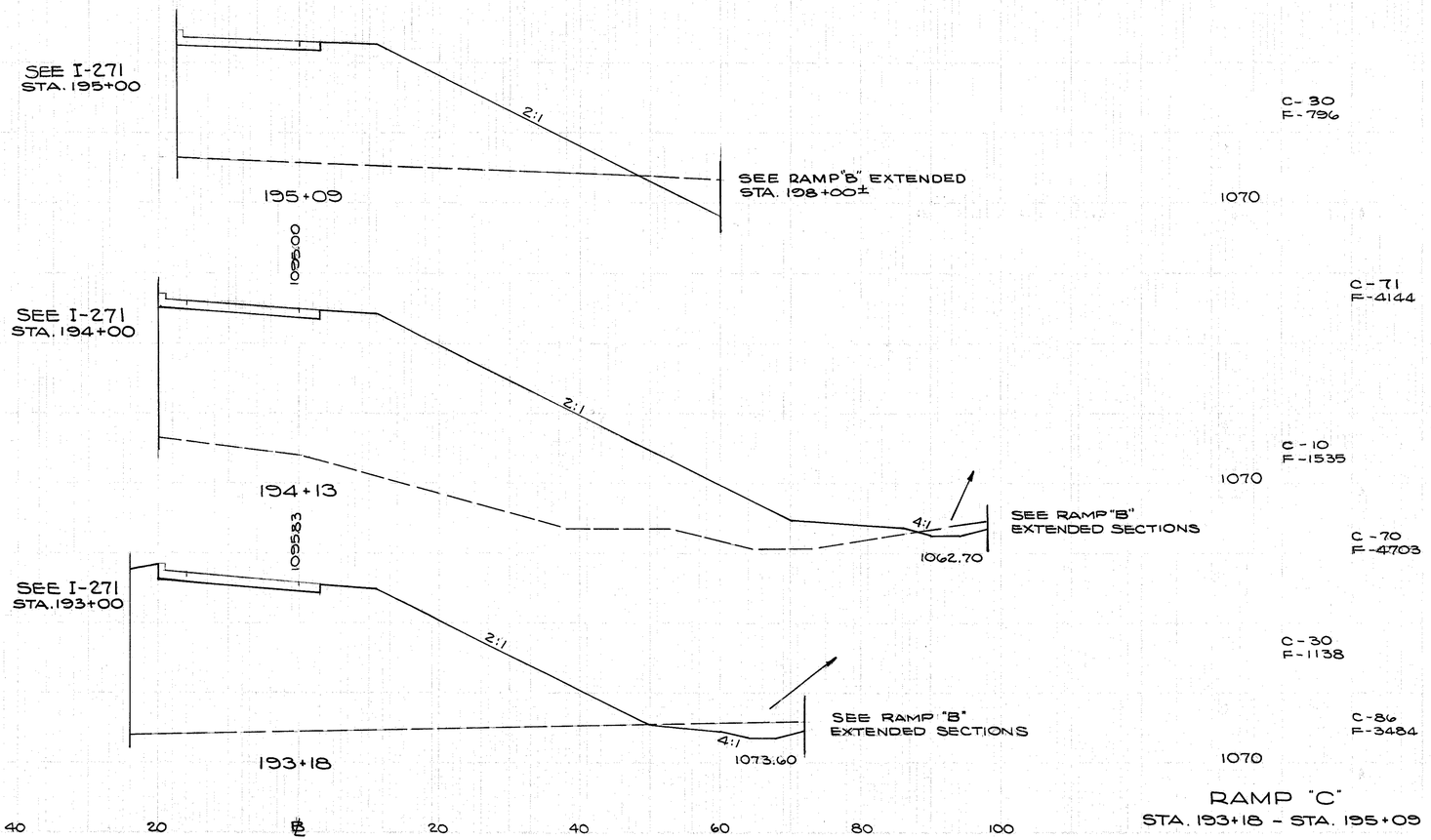
80 60 40 20 0 20 40 60 80 100

RAMP "C"
STA. 187+22.69 - STA. 192+25

254
510

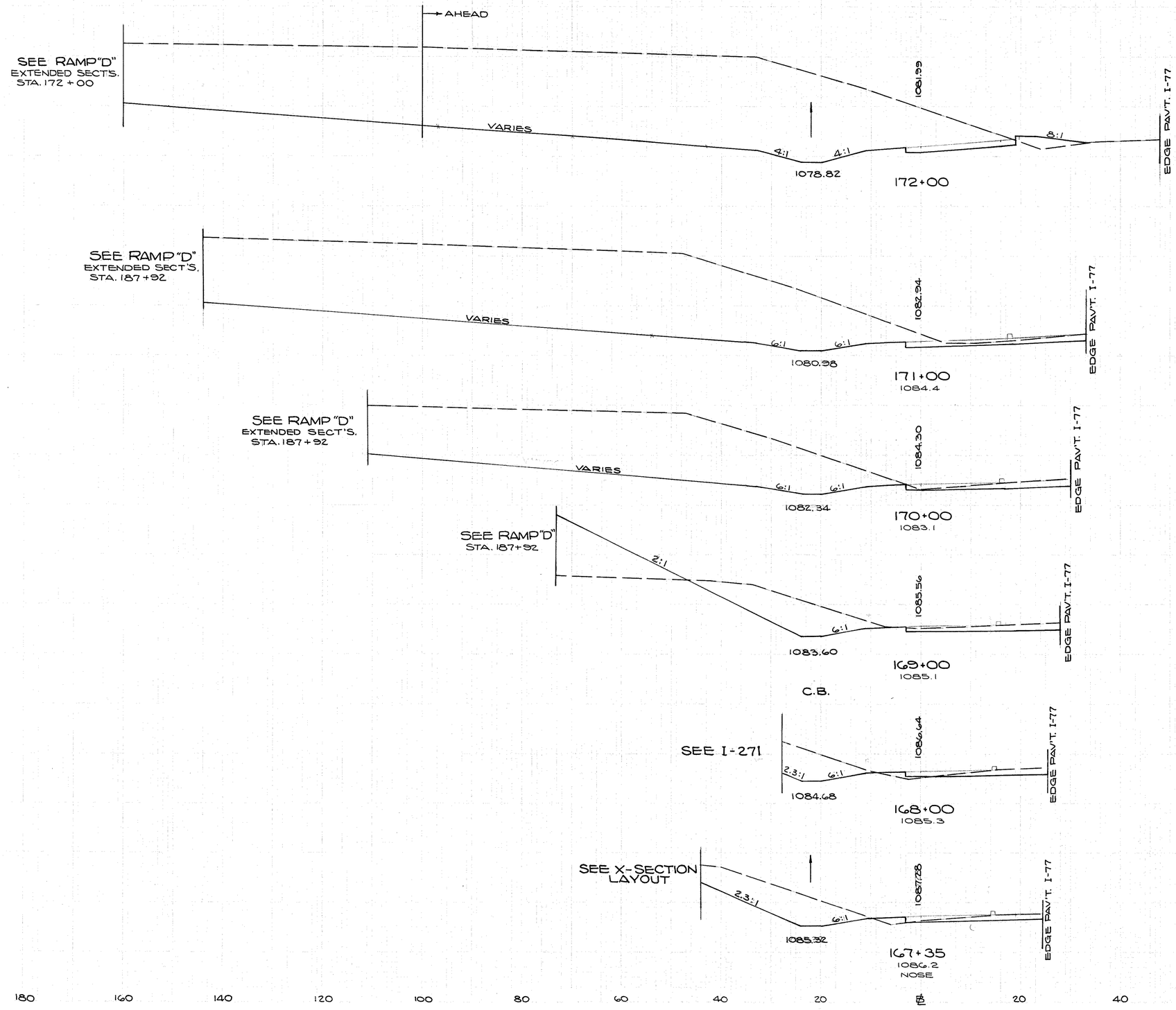
SUM. · 271 · 2.98

END AREA CU. YDS.



RAMP "C"
STA. 193+18 - STA. 195+09

SUM-271-2.98



END AREA CU. YDS.

1080
C - 1733 AHD.
F - 20 AHD.
C - 2567 BK.
F - 20 BK.

C - 8430
F - 37

C - 1985
F - 0

1080

C - 5763
F - 0

C - 1127
F - 0

1080

C - 2467
F - 304

C - 205
F - 164

1080

C - 565
F - 313

C - 100
F - 5

1080

C - 332
F - 14

1090

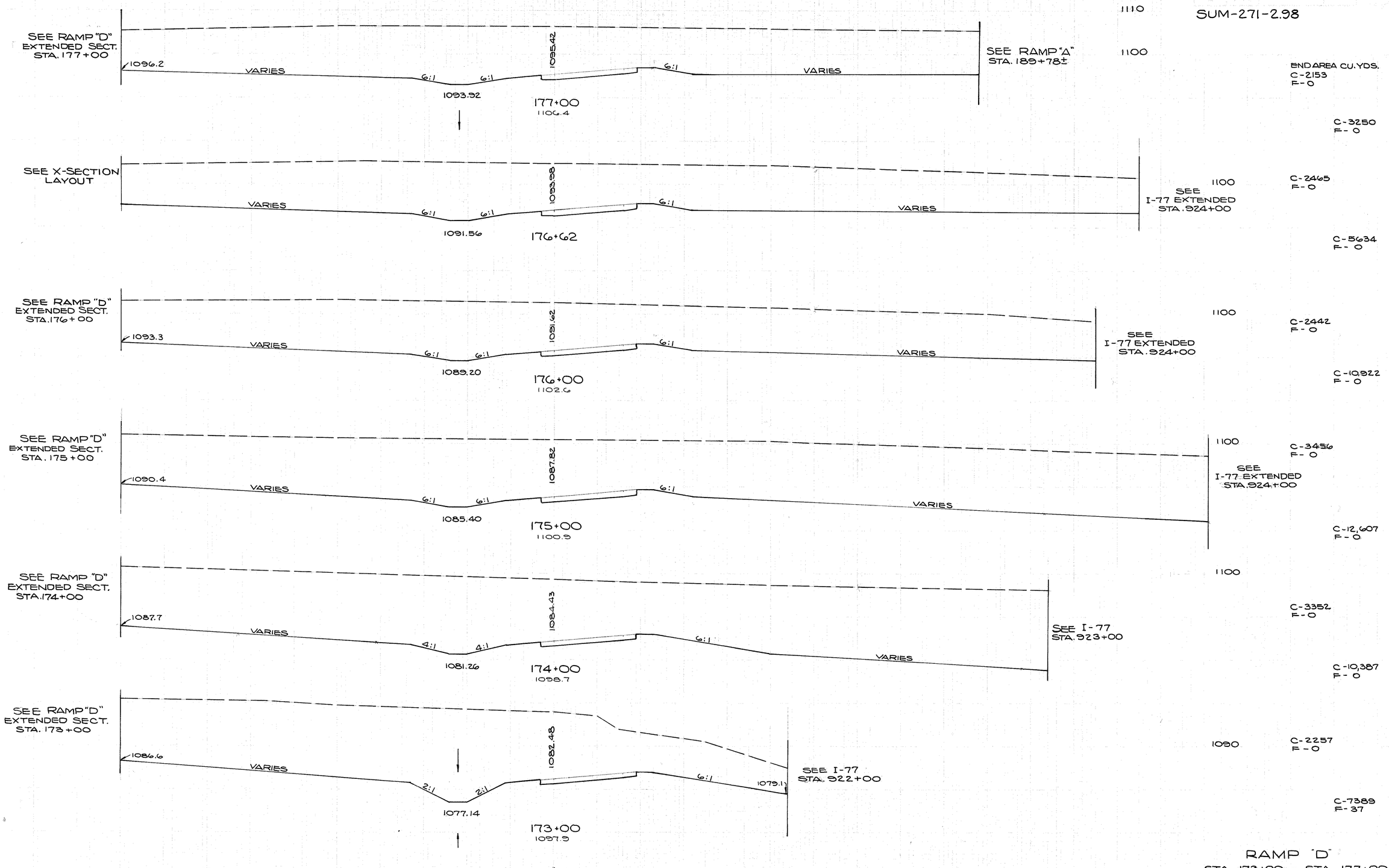
C - 176
F - 7

1080

180 160 140 120 100 80 60 40 20 ℄ 20 40 60

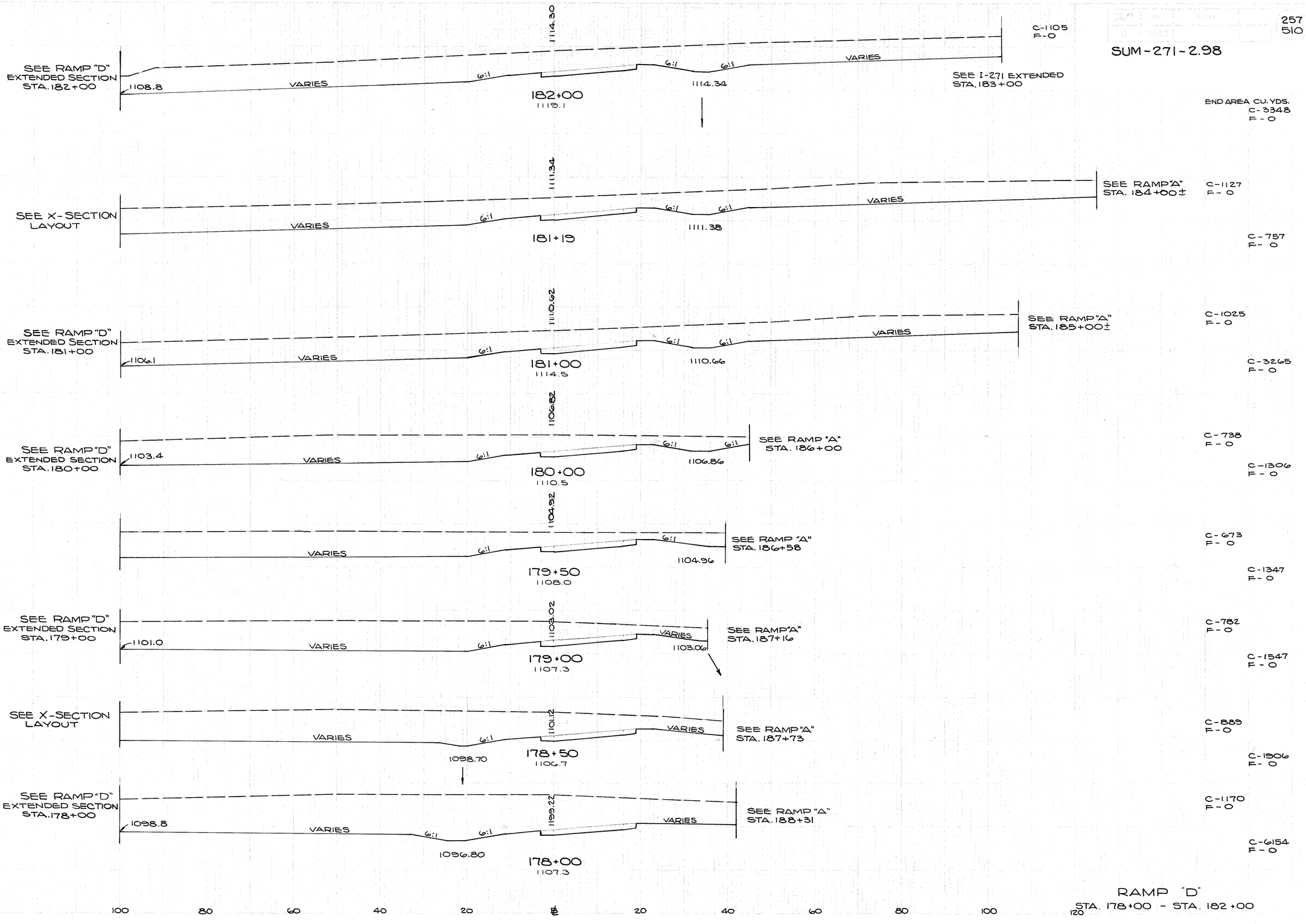
RAMP "D"
STA. 167+35 – STA. 172+00

SUM-271-2.98



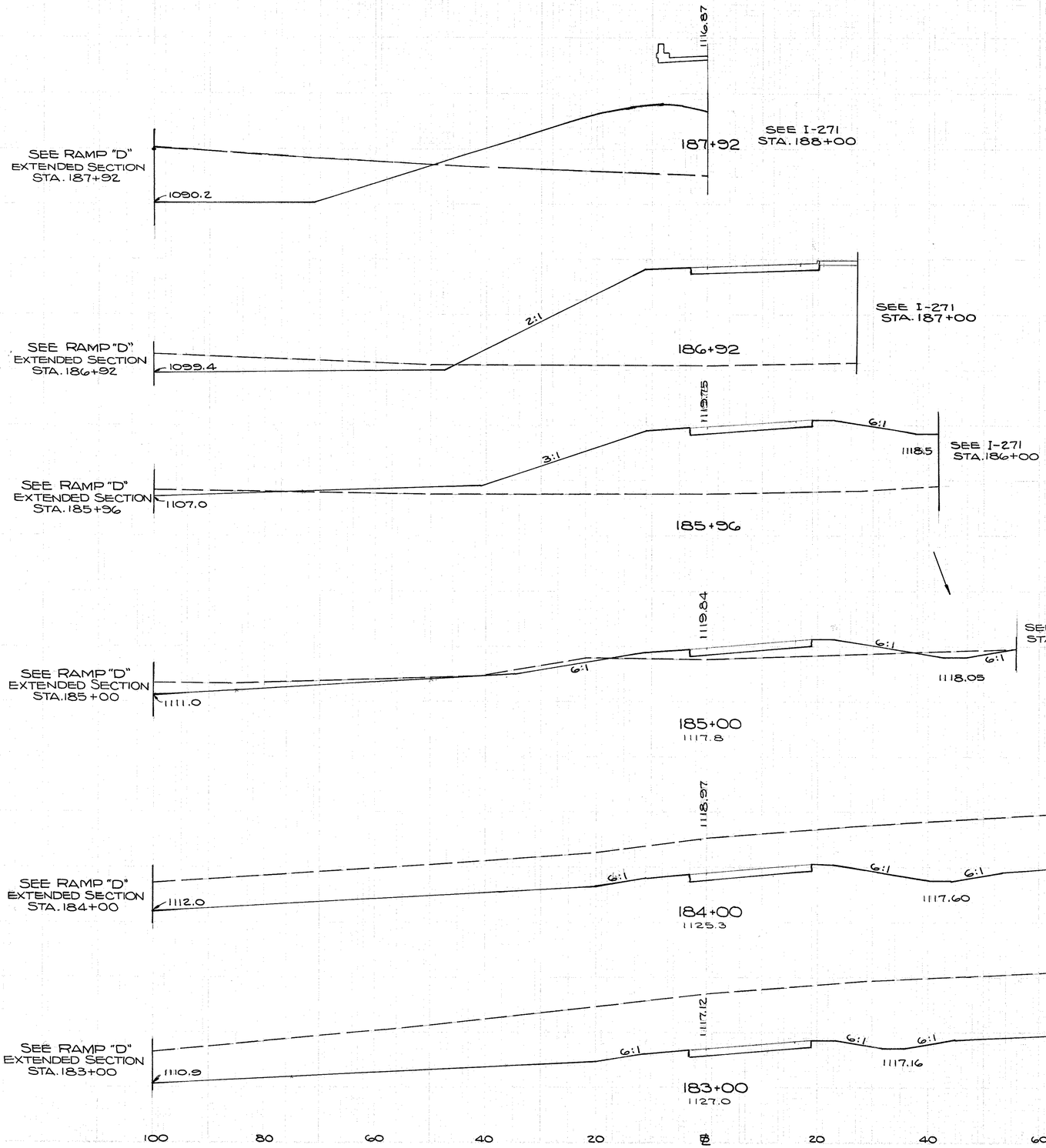
RAMP "D"
STA. 173+00 – STA. 177+00

SUM-271-2.98



RAMP "D"
STA. 178+00 - STA. 182+00

SUM-271-2.98



END AREA CU.YDS.

1100 C-352 F-394

C-861 F-2483

C-113 F-947

1100 C-228 F-3147

C-15 F-823

1100 C-172 F-1589

1120 C-82 F-71

1110 C-2744 F-131

C-1400 F-0

1120 C-6657 F-0

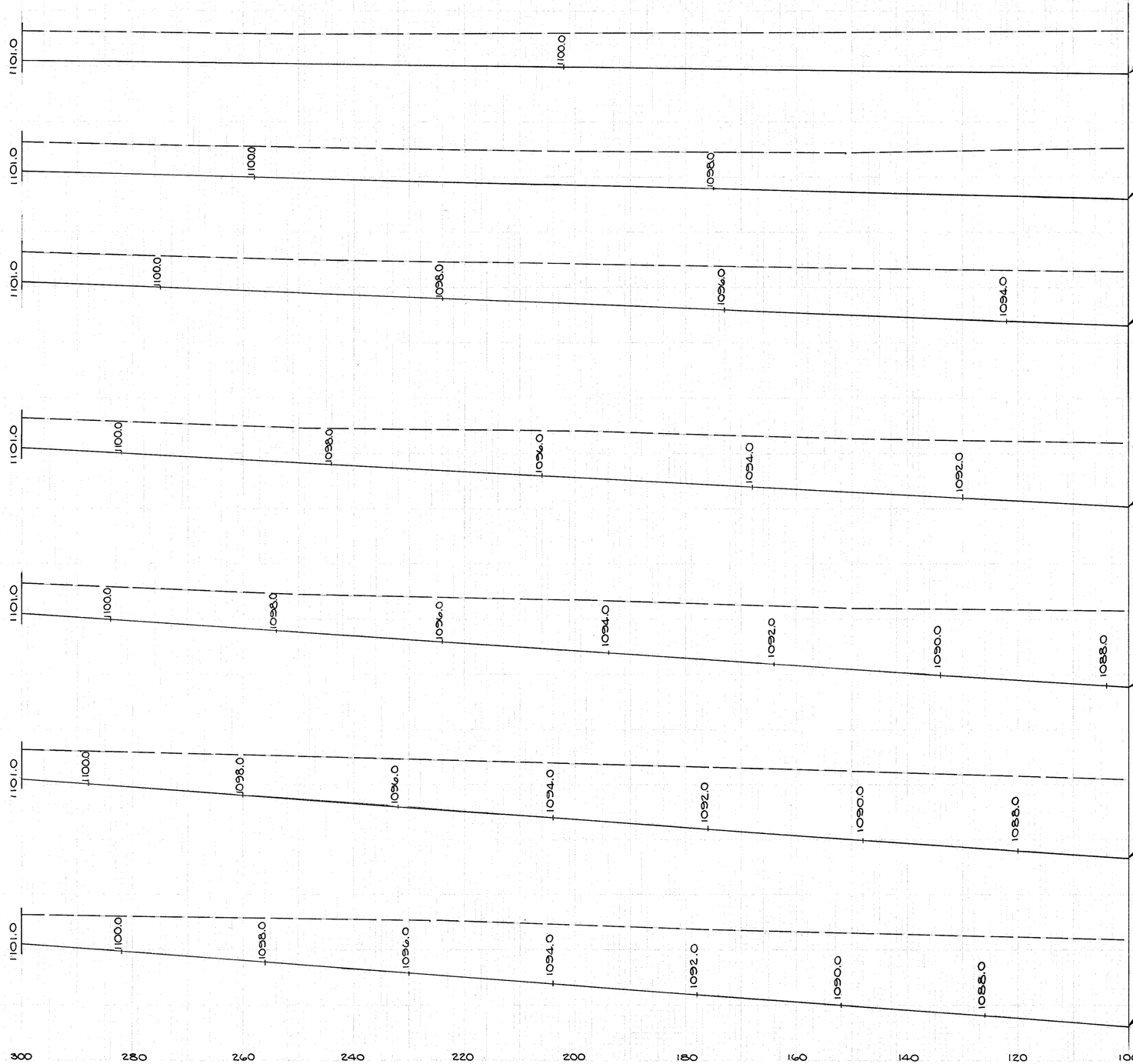
C-2185 F-0

1120 C-6111 F-0

RAMP "D"

STA. 183+00 – STA. 187+92

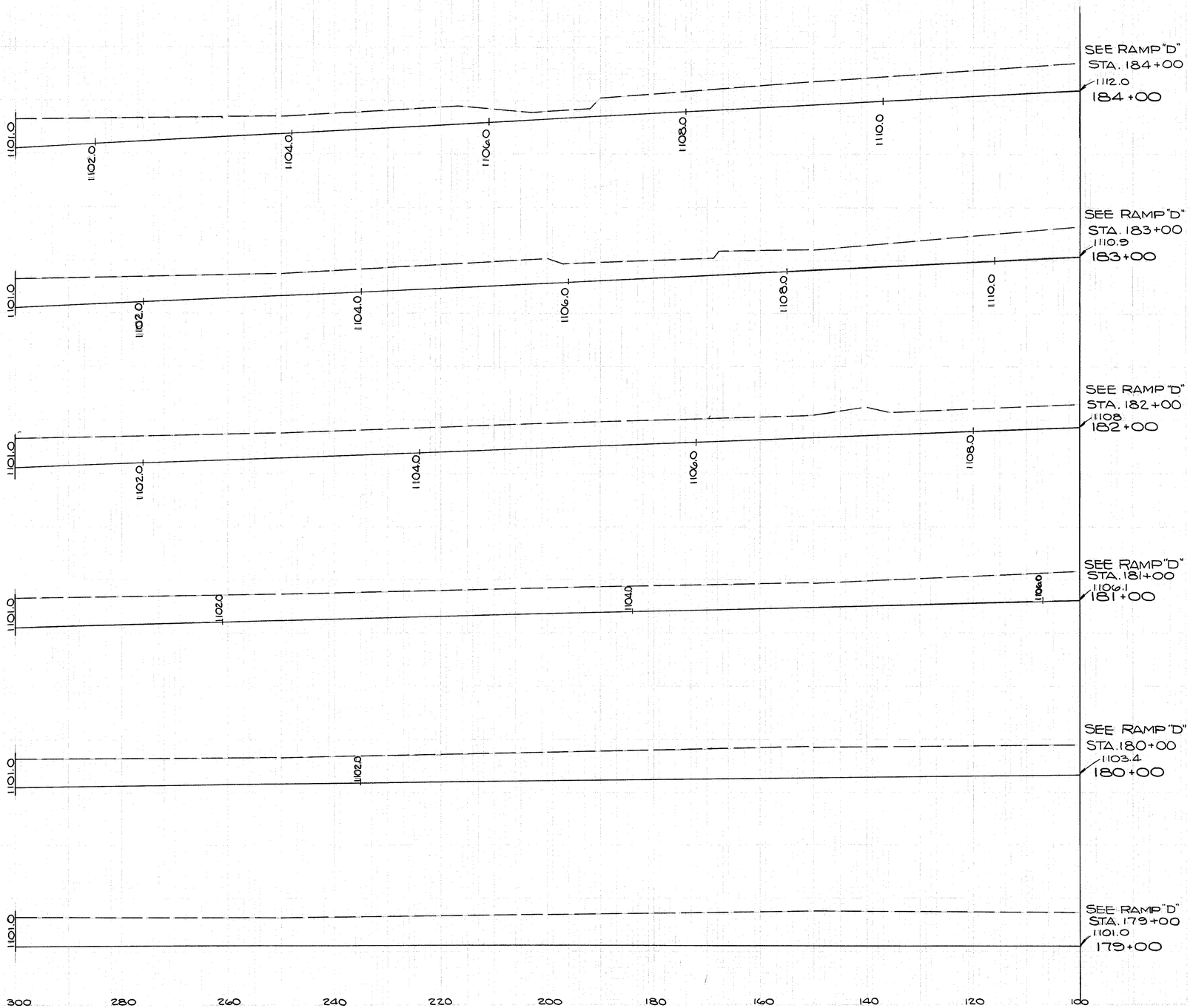
SUM. -271-2.98



RAMP "D" EXTENDED SECTIONS
STA. 172+00 - STA. 178+00
LOOP GRADING

260
510

SUM - 271 - 2.98

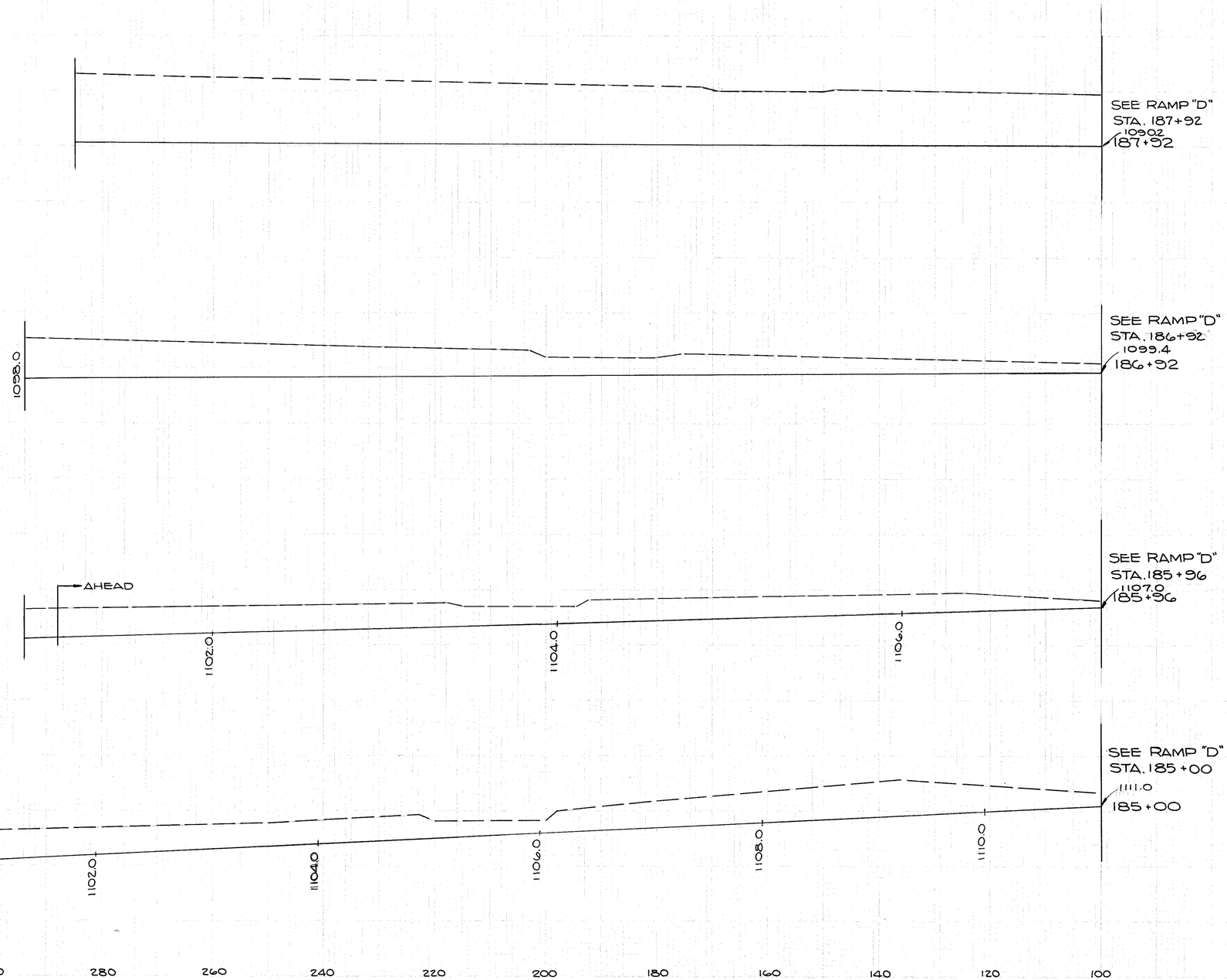


RAMP "D" EXTENDED SECTIONS
STA. 179+00 - STA. 184+00
LOOP GRADING

261
510

SUM-271-2.98

END AREA CU.YDS.



1090 C-1987 F-0

C-5237 F-0

1100 C-841 F-0

1090 C-1742 F-0

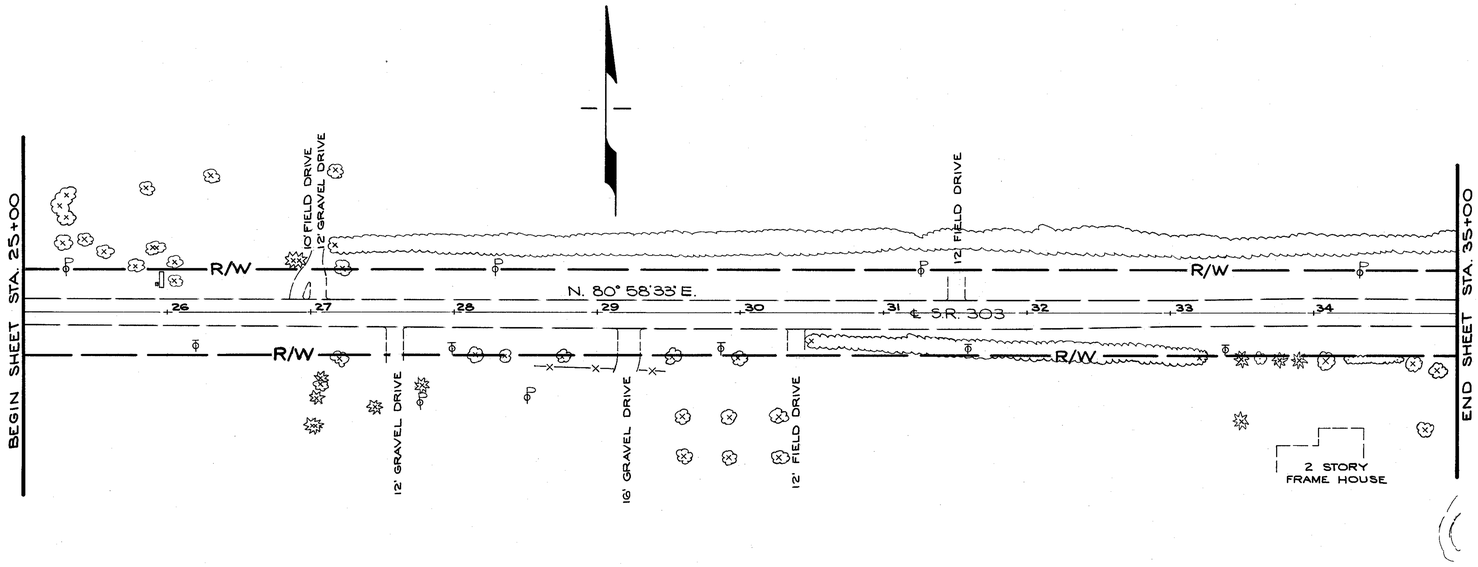
1110 C-727 F-0 } AHD.
C-757 F-0 } BK.

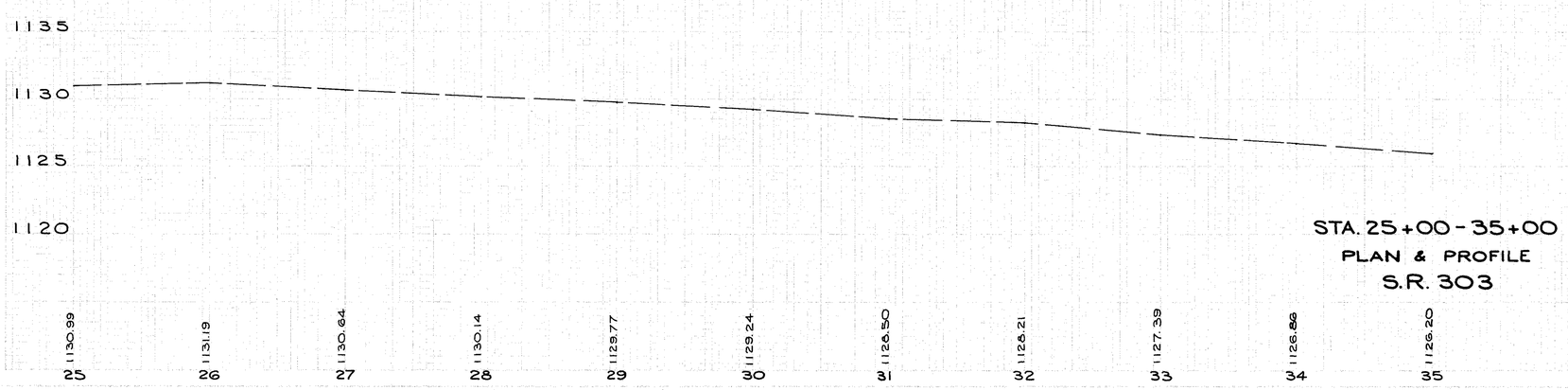
C-991 F-0

1110 C-916 F-0

C-1029 F-0

RAMP "D" EXTENDED SECTIONS
STA. 185+00 - STA. 187+92
LOOP GRADING (RAMP "D")





STA. 25+00 - 35+00
PLAN & PROFILE
S.R. 303

I-271

SUM-271-2.98

NOTE:
SEE SHEET Nº 273 FOR SERVICE RD.

NAIL & CAP W. SIDE POLE
℄ EXIST. 303
NAIL & CAP W. SIDE MAPLE
NAIL & CAP W. SIDE 36" ELM
P.K. SET P.O.T. 38+93.61
REFERENCE TIE P.O.T. 38+93.61 EXIST. 303

BEGIN 12" 603 TYPE "D" PIPES STA. 38+00 (34.5 LT. - EL. 1121.23) STA. 38+00 (35.5 RT. - EL. 1121.48)

BEGIN DIVIDERS 37+60

BEGIN SHEET STA. 35+00

STA. 35+67.58

BEGIN WORK

EXIST. R/W

N-80°-55'-33"-W

℄ MAIL BOX Nº 4 4 BOXES, STA. 38+75 LT.

BARN
SHED
SEPTIC TANK
LEECH BED
2-STY. FR. HSE
CISTERN
OLD PUMP
GRAVEL DRIVE
WELL

R/W
℄ SERVICE ROAD
LA R/W
OHIO EDISON CO. 3-WIRES 12.5 KV

6" DUCTILE IRON 35.43 EL. 1117.14
6"-90° SHALLOW BEND
6"-90° BEND EL. 1110.15

WESTERN RESERVE TEL. CO. (1 CABLE). OHIO BELL TEL. CO. (1 CABLE, 1 WIRE)

BEGIN TAPER STA. 36+17.58
50' FEATHER
400' TAPER - BOTH SIDES

S.R. 303 132' RUN-AROUND

4" TILE
DRIVE
60° WYE
1½ STY. FR. HSE.
GAR.
GRAVEL
SEPTIC TANK
LEECH BED
PC STA. 40+17.58

END 12" 603 TYPE "D" PIPES STA. 41+00 (51.0 LT. - EL. 1111.80) STA. 41+00 (44.5 RT. - EL. 1111.89)

RAMP "E"

S.R. 303 STA. 42+41.28 = RAMP "E" STA. 315+79.02

NAIL & CAP W. SIDE POLE
P.K. SET P.I. STA. 43+10.60
NAIL & CAP W. SIDE 12" MAPLE
EXIST. 303
NAIL & CAP W. SIDE POLE #GB107

RELOC. S.R. 303 ℄ CURVE DATA
Δ = 8°46'24"
D = 1°30'
R = 3819.72'
T = 293.02'
L = 584.89'

NOTE:
FOR INTERSECTION DETAILS OF SERVICE RD. AND DRIVEWAYS WITH RELOC. S.R. 303, SEE SHT. Nº 274
FOR RAMP "E" PLAN AND PROFILE SEE SHEETS 291 AND 292
FOR PAVEMENT DETAILS SEE SHEET 287
FOR S.R. 303 RUN-AROUND DETAILS SEE SHEET 276 & 277

T.B.M. CONC. NAIL IN TELEPHONE POLE 10' RT. RELOC. S.R. 303 STA. 43+50 ELEV. 1109.08

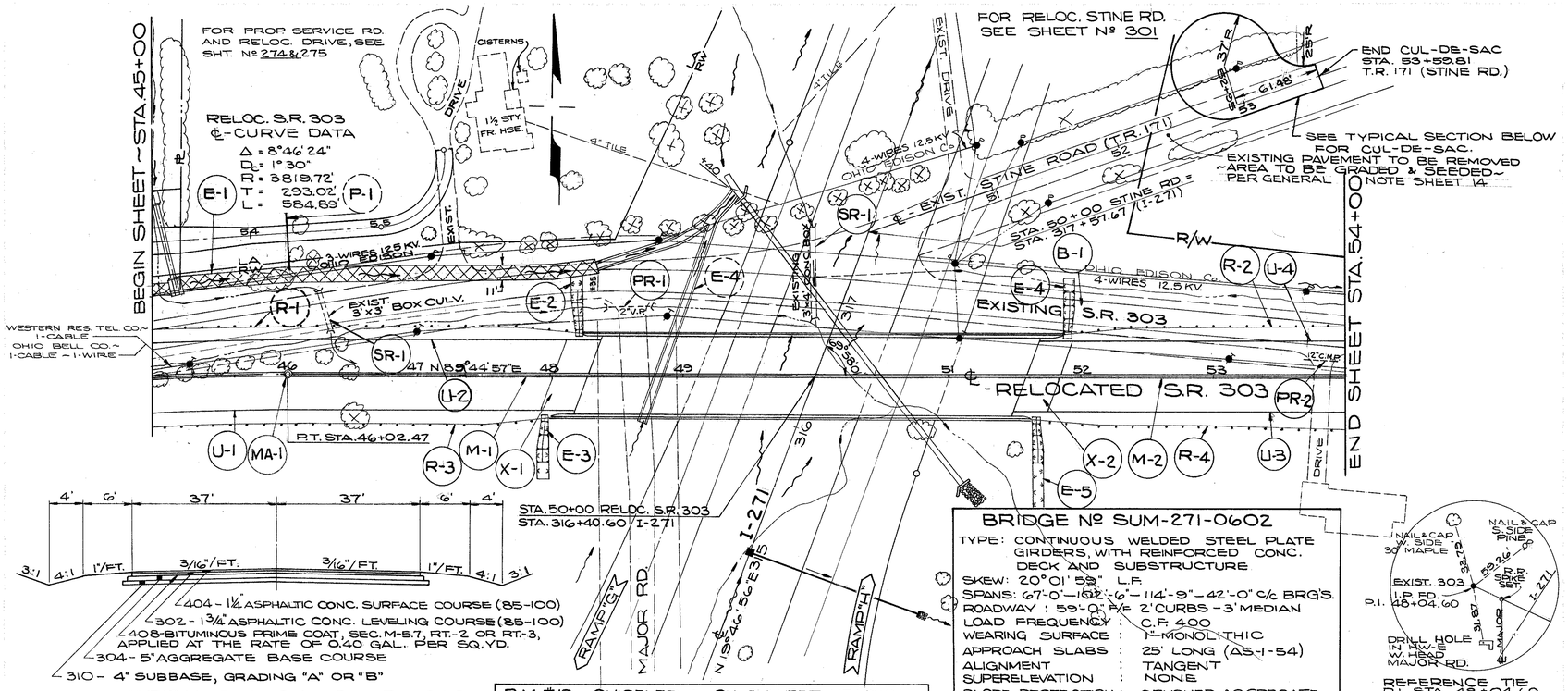
REFERENCE TIE P.I. 43+10.60 EXIST. 303

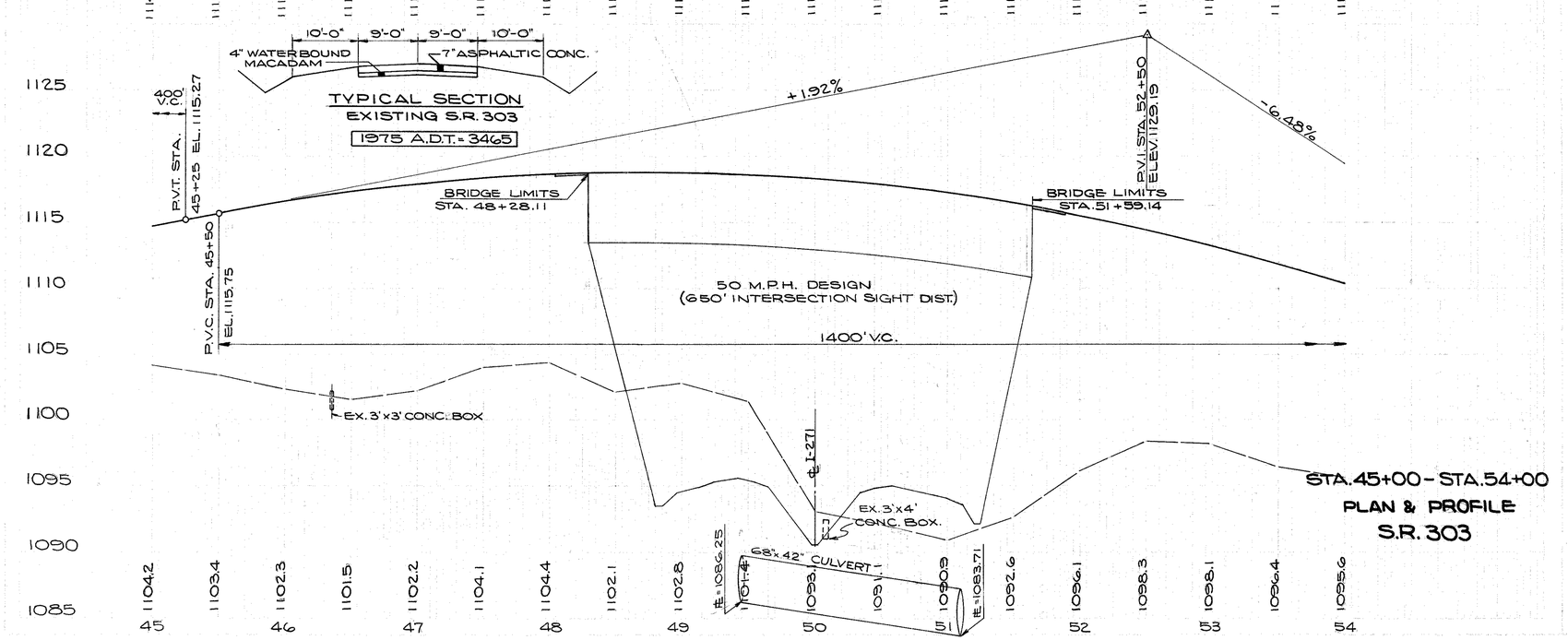
END SHEET STA. 45+00

	202 PIPE REMOVED LIN. FT.	601 DUMPROCK PROTECT CU. YD.	604 INLETS EACH UNDER	606 CONC. MASONRY CU. YD.	607 JUTE MATTING SQ. YD.	605 6" UNDERDRAINS LIN. FT.	603 CONDUIT TYPE B W/CL. B BEDDING 12" AGG.	603 CONDUIT TYPE D 12"	L.F. BENDS AND BRANCH EACH 6" TYPE F	L.F. BENDS AND BRANCH EACH 6" TYPE D	604 MON. ASSEMBLY EACH	606 GUARD RAIL TYPE 4 LIN. FT.	612 EXIST. TRAFFIC CONC. DIVIDER REMOVED & DISP. OF SQ. YDS.	613 MEDIAN EACH	202 EXIST. PVMT. REMOVED SQ. YDS.
U-1															
U-2															
U-3															
U-4															
P-1															
P-2															
P-3															
P-4															
P-5															
A-1															
A-2															
H-1															
H-2															
E-3															
E-4															
E-5															
E-6															
MA-1															
MA-2															
PR-1															
PR-2															
R-1															
R-2															
T-1															
M-1															
M-2															
B-1															
SHLW 271															
	202	601	604	606	607	605	603	603			604	606	612	613	202

| | | | | | | | | | | | | | | |

SUM-271-2.98





STA. 45+00 - STA. 54+00
PLAN & PROFILE
S.R. 303

202	PIPE REMOVED	LIN. FT.		397	397
601	CL. A CONC.	CU. YD.		115	115
602	SPECIAL PIPE	SQ. YD.		34	34
607	CONC. GUTTER	LIN. FT.		43	43
607	REMOVED STRUCT. BERM & GUTTER	LIN. FT.		40	40
607	MASONRY MATTING	SQ. YD.		64	64
609	CURB & GUTTER TYPE 4	LIN. FT.		397	397
610	SEEDING	ACRE		0.86	0.86
611	EXISTING PAVEMENT REMOVED & DISP. OF	SQ. YDS.		2	2
612	CONC. MEDIAN	SQ. YDS.		35	35
612	CONC. APPR. SLAB	SQ. YDS.		21	21
612	CONC. PAVEMENT	SQ. YDS.		104	104
604	MON. ASSEMBLY	EACH	LUMP	LUMP	1
606	GUARD RAIL	LIN. FT.		181	181
605	UNDERDRAINS	LIN. FT.		115	115
	4" DIA.			162	162
	6" DIA.			36	36
	8" DIA.			90	90
	12" DIA.			72	72
607	FENCE	LIN. FT.		1772	1772
608	CONC. WALK	SQ. FT.		3360	3360
609	CURB TYPE 2	LIN. FT.		1900	1900
610	SEEDING	ACRE	LUMP	LUMP	1
611	EXCAVATION	CU. YDS.		1075	1075
611	EMBANKMENT	CU. YDS.		173	173
611	EXCAVATION UNDER	SQ. YDS.	LUMP	3360	3360
611	EMBANKMENT UNDER	SQ. YDS.	LUMP	1900	1900
612	CONC. PAVEMENT	SQ. YDS.		360	360

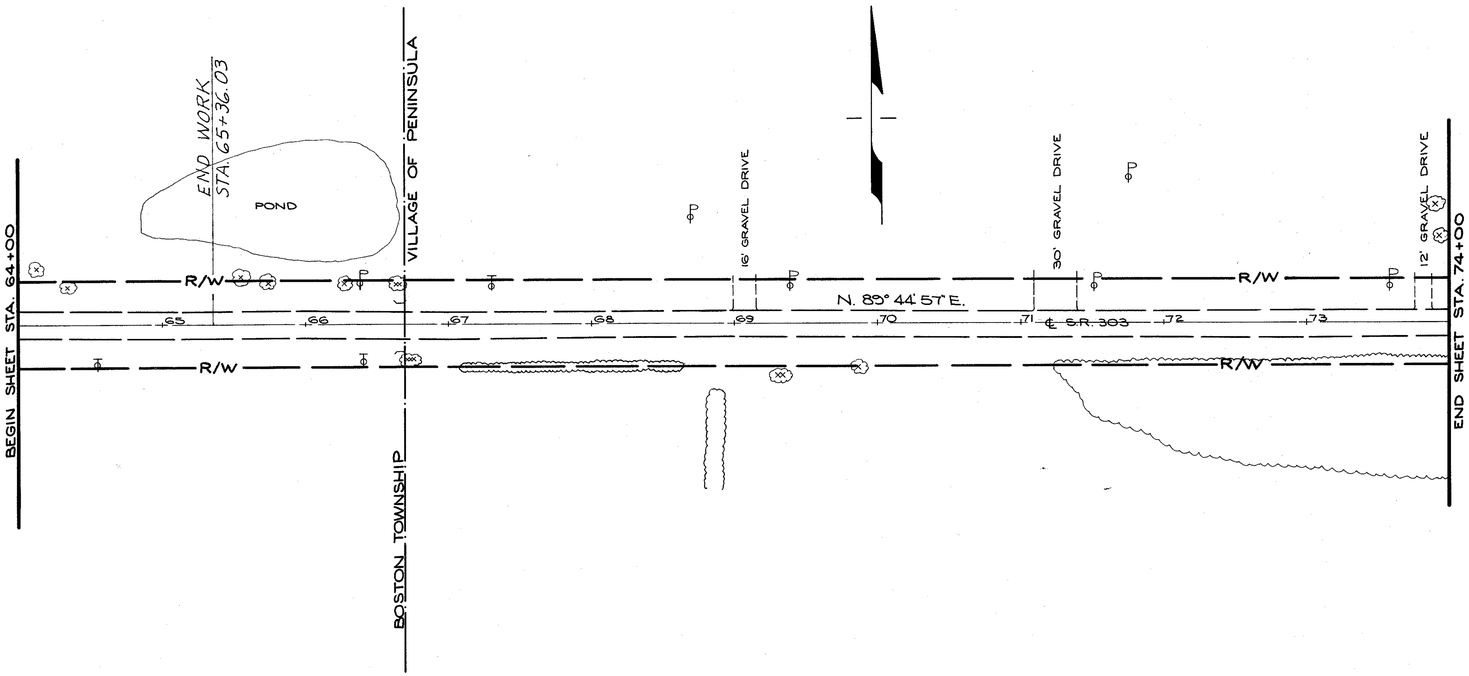
U-1	45+75 TO 47+75	Rt.			
U-2	47+00 TO 47+50	Lt.			
U-3	52+00 TO 54+00	Rt.			
U-4	52+25 TO 53+75	Lt.			
SR-1	46+26 TO 46+34	Lt.			
SR-2	50+02 TO 50+02	Lt.			
E-1	45+00 TO 49+40	Lt.			
E-2	48+23	Lt.			
E-3	47+97	Rt.			
E-4	51+90	Lt.			
E-5	51+66	Rt.			
H-1	46+90 TO 46+91	Lt.			
H-2	47+41 TO 47+62	Lt.			
PR-1	48+42 TO 48+77	Lt.			
PR-2	53+48 TO 53+93	Lt.			
PR-3	50+01 TO 51+05	Lt.			
R-1	45+00	Lt.	325		
R-2	51+87.5	Lt.	212.5		
R-3	45+00	Rt.	300		
R-4	51+62.5	Rt.	237.5		
M-1	45+00	℄		101	
M-2	51+84.14	℄		72	
X-1	48+03.11	℄			168.0
X-2	51+89.14	℄			168.0
B-1	45+00	℄			
	54+00				
MA-1	46+02.47	℄			1

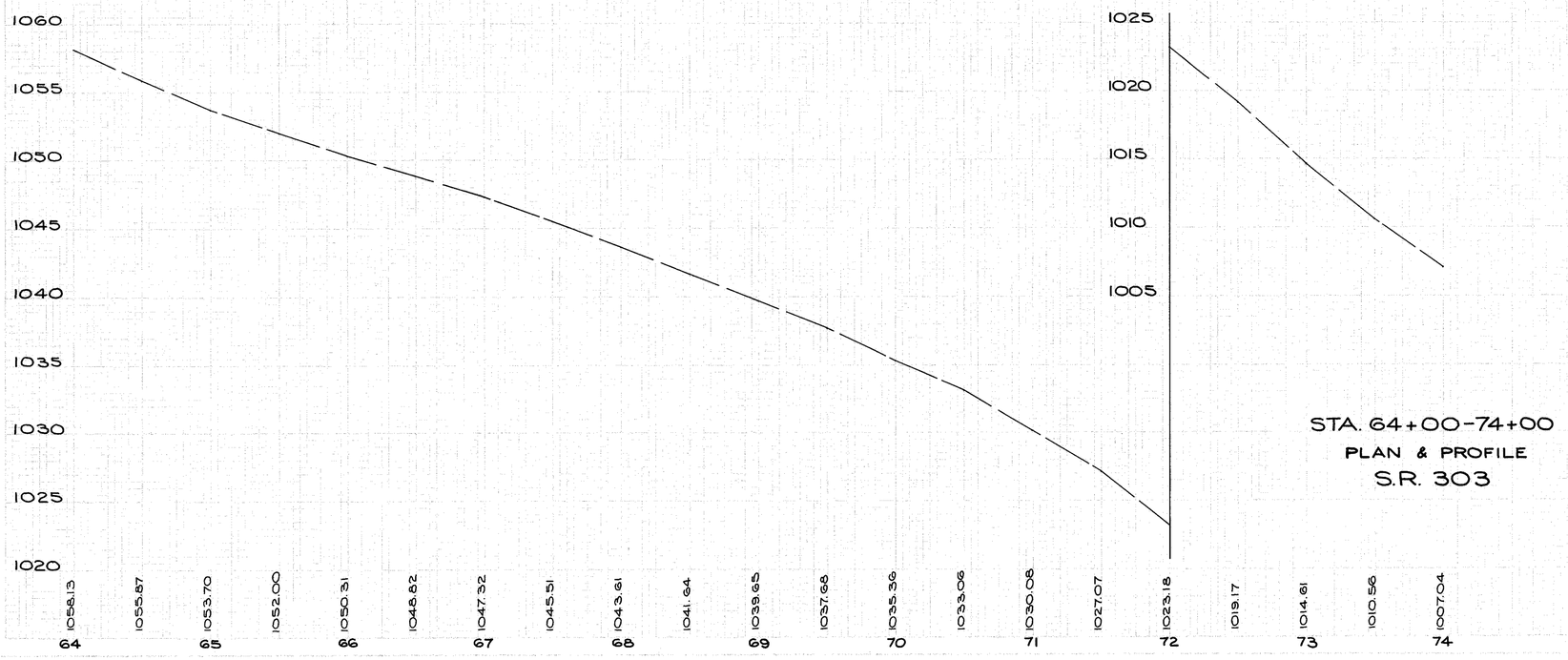
S.R. 303 STA. 45+00 TO STA. 54+00

SUM-271-2.98

STA. 54+00 – STA. 64+00
PLAN & PROFILE
S.R. 303

| | | |





STA. 64+00-74+00
PLAN & PROFILE
S.R. 303

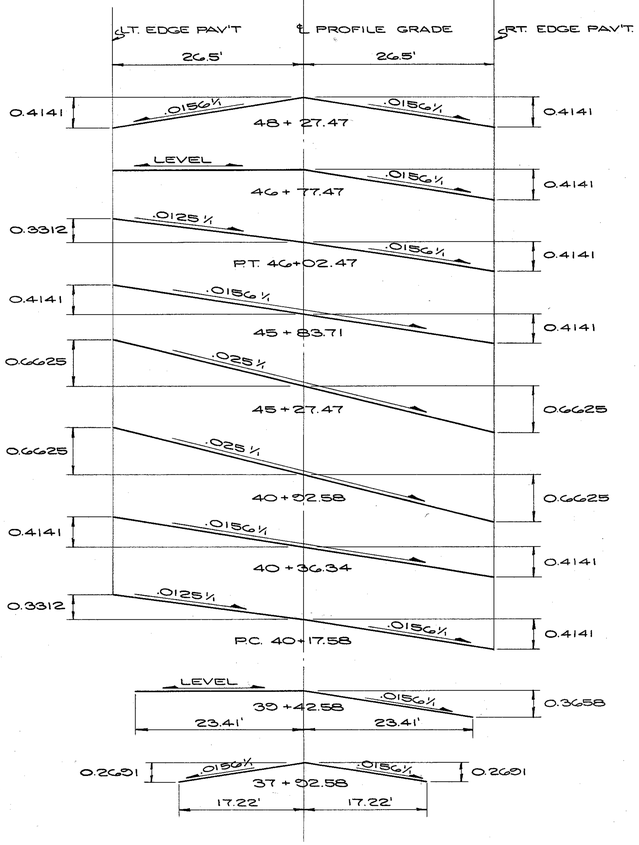
SUPERELEVATION DIAGRAMS & TABLES

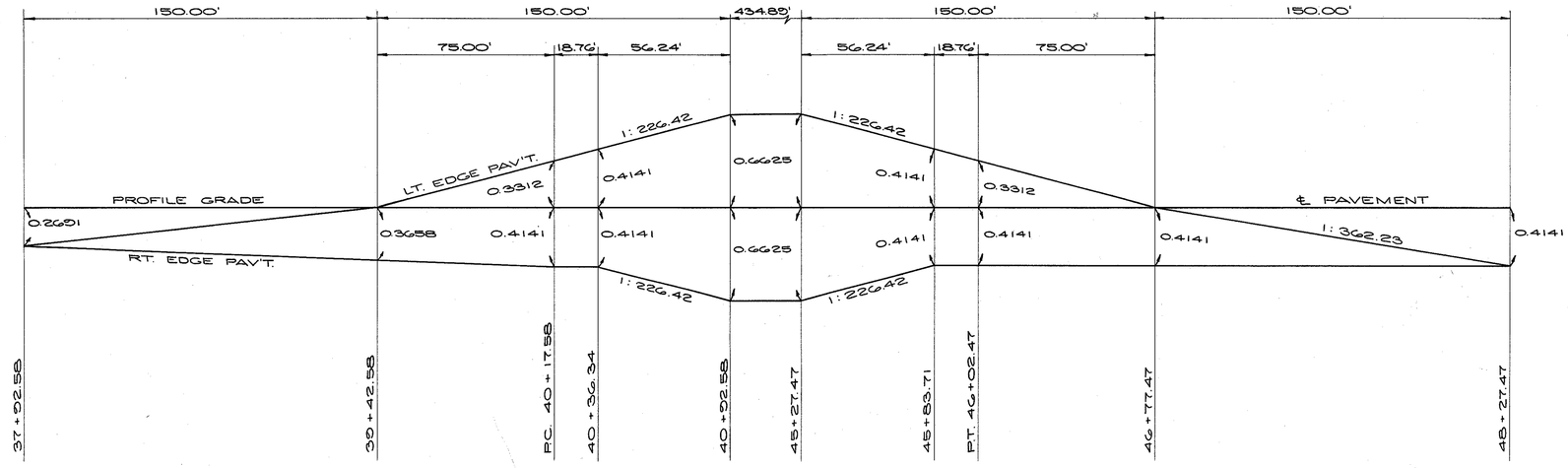
RELOCATED S.R. 303

FED. RD.	STATE	PROJECT	
2	OHIO		

265/510

SUM - 271 - 2.98

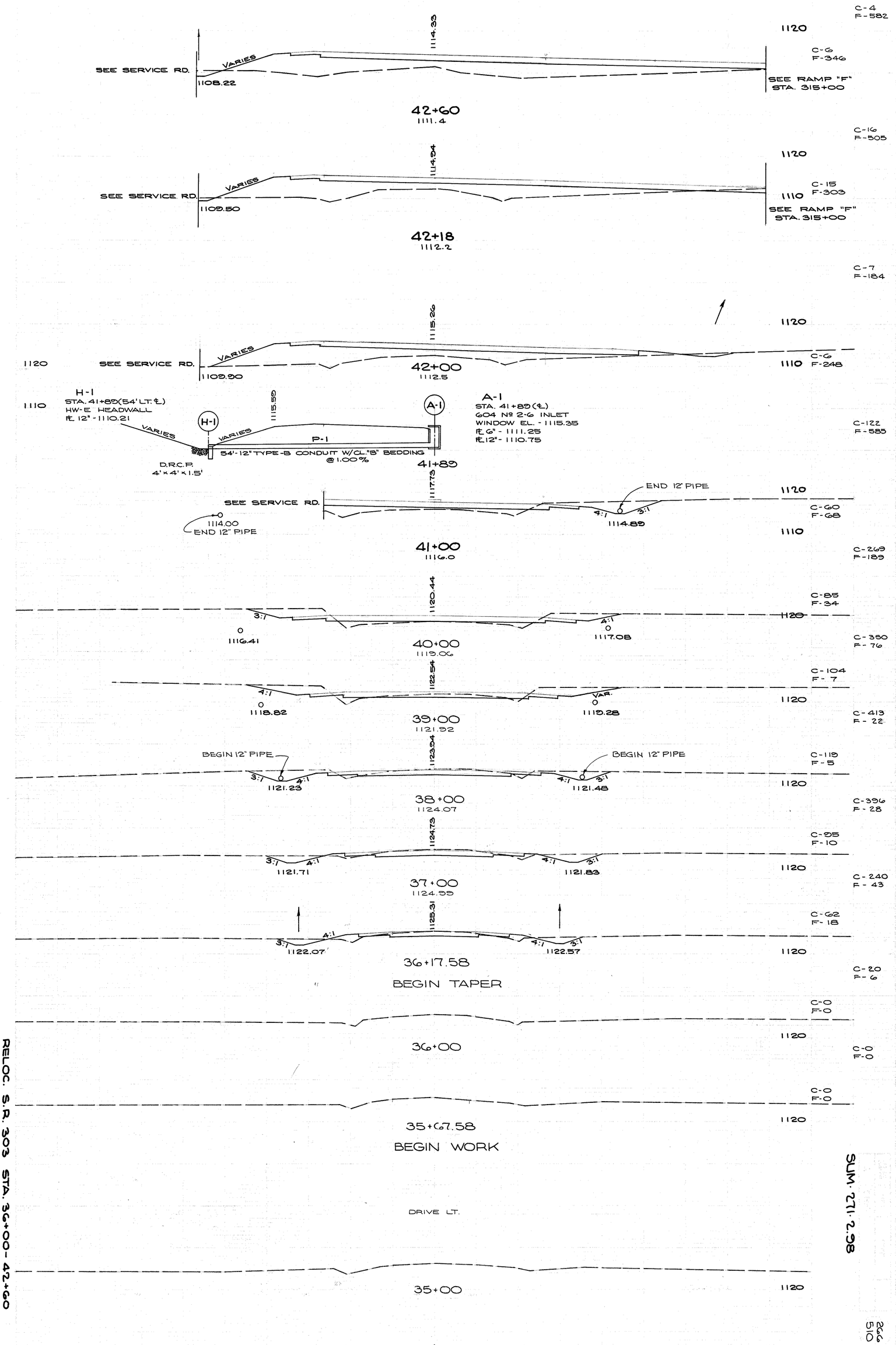




STATION	LEFT EDGE PAVEMENT	℄ PROFILE GRADE	RIGHT EDGE PAVEMENT
42 + 50	1115.11	1114.45	1113.79
42 + 25	1115.48	1114.82	1114.16
42 + 00	1115.92	1115.26	1114.60
41 + 75	1116.44	1115.78	1115.12
41 + 50	1117.03	1116.37	1115.71
41 + 25	1117.69	1117.03	1116.37
41 + 00	1118.38	1117.73	1117.08
40 + 92.58	1118.57	1117.94	1117.30
40 + 75	1119.01	1118.43	1117.85
40 + 50	1119.60	1119.13	1118.66
40 + 36.34	1119.92	1119.51	1119.07
40 + 25	1120.17	1119.81	1119.39
40 + 17.58	1120.33	1120.00	1119.59
40 + 00	1120.69	1120.44	1120.04
39 + 75	1121.16	1121.03	1120.64
39 + 50	1121.63	1121.58	1121.21
39 + 42.58	1121.77	1121.74	1121.39
39 + 25	1122.05	1122.08	1121.73
39 + 00	1122.44	1122.54	1122.20
38 + 75	1122.81	1122.96	1122.64
38 + 50	1123.14	1123.33	1123.02
38 + 25	1123.43	1123.66	1123.37
38 + 00	1123.68	1123.94	1123.67
37 + 92.58	1123.75	1124.02	1123.75
37 + 75	1123.92	1124.18	1123.92
37 + 50	1124.14	1124.38	1124.14
37 + 25	1124.33	1124.56	1124.33
37 + 00	1124.52	1124.73	1124.52
36 + 75	1124.71	1124.90	1124.71
36 + 50	1124.90	1125.08	1124.90
36 + 25	1125.10	1125.26	1125.10
36 + 17.58	1125.25	1125.31	1125.25

STATION	LEFT EDGE PAVEMENT	℄ PROFILE GRADE	RIGHT EDGE PAVEMENT
48 + 50	1118.40	1118.81	1118.40
48 + 27.47	1118.36	1118.77	1118.36
48 + 25	1118.35	1118.76	1118.35
48 + 00	1118.31	1118.67	1118.26
47 + 75	1118.27	1118.55	1118.14
47 + 50	1118.19	1118.39	1117.98
47 + 25	1118.06	1118.19	1117.78
47 + 00	1117.89	1117.95	1117.54
46 + 77.47	1117.71	1117.71	1117.30
46 + 75	1117.69	1117.68	1117.27
46 + 50	1117.49	1117.37	1116.96
46 + 25	1117.25	1117.02	1116.61
46 + 02.47	1117.01	1116.68	1116.27
46 + 00	1116.97	1116.63	1116.22
45 + 83.71	1116.78	1116.37	1115.96
45 + 75	1116.66	1116.21	1115.76
45 + 50	1116.31	1115.75	1115.19
45 + 27.47	1115.96	1115.32	1114.66
45 + 25	1115.91	1115.27	1114.61
45 + 00	1115.49	1114.83	1114.17
44 + 75	1115.12	1114.46	1113.80
44 + 50	1114.82	1114.16	1113.50
44 + 25	1114.60	1113.94	1113.28
44 + 00	1114.45	1113.79	1113.13
43 + 75	1114.38	1113.72	1113.06
43 + 50	1114.38	1113.72	1113.06
43 + 25	1114.45	1113.79	1113.13
43 + 00	1114.60	1113.94	1113.28
42 + 75	1114.82	1114.16	1113.50

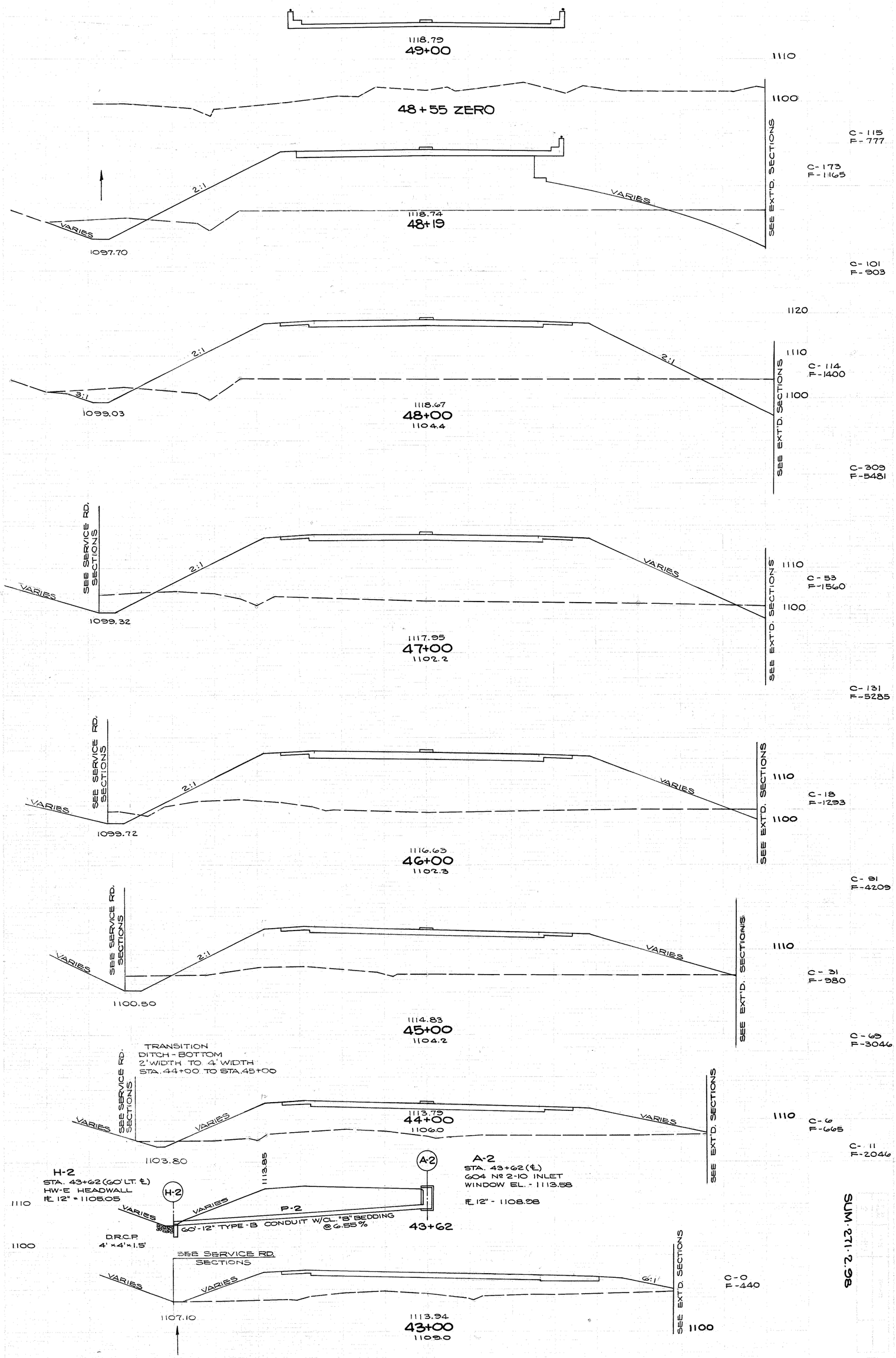
K.S.E.



RELOC. S.R. 303 STA. 36+00 - 42+60

SUM. 271. 2.98

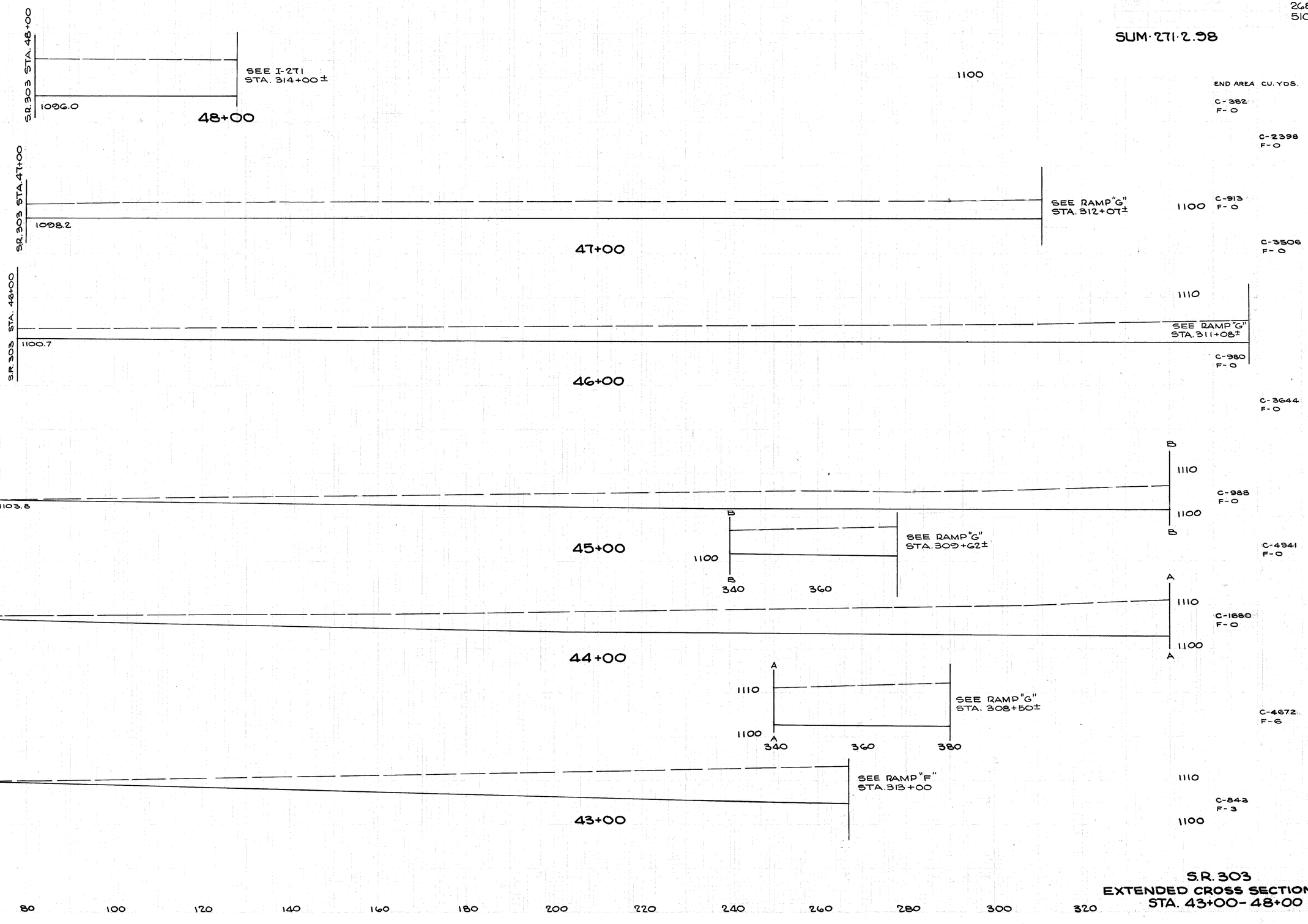
END AREA CU. YDS.



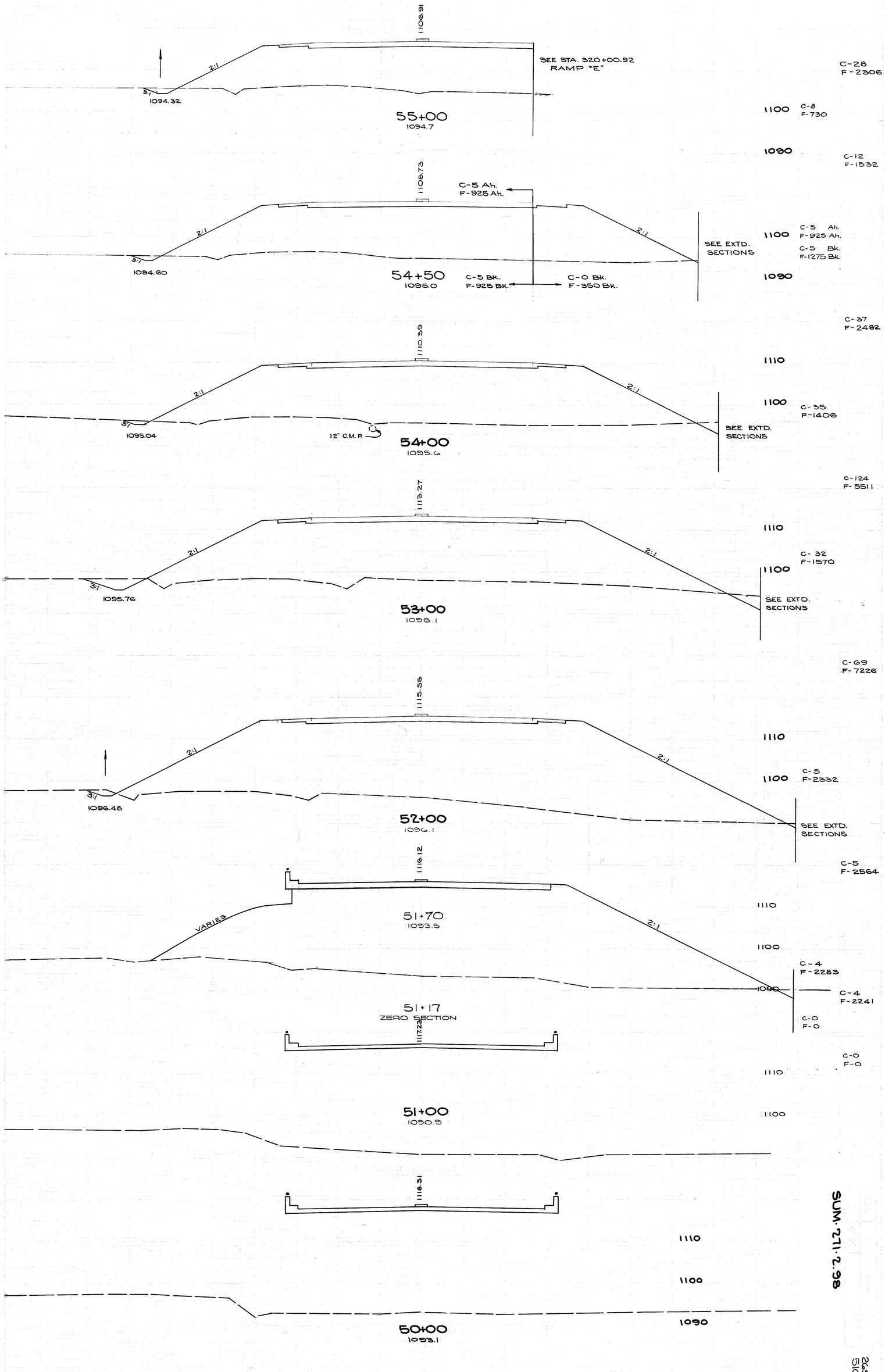
RELOC. S.R. 303 STA. 43+00 - 49+00

SUM. 211. 2.98

SUM·271·2.98



S.R. 303
EXTENDED CROSS SECTIONS
STA. 43+00 - 48+00



RELOC. S.R. 303 STA. 50+00 - 55+38

SUM-211-2.98

SUM·271·298

END AREA CU.YDS.

1090
54+50
C-150
F-330
SEE RAMP "E"
STA. 316+00
C-417
F-519

1090
"C"
SEE RAMP "E"
STA. 315+00±
1090
54+00
C-300
F-230
"C"

"B"
1090
SEE RAMP "H"
STA. 309+81±
C-2370
F-426
370 380
1090
53+00
"B"
C-380
F-0

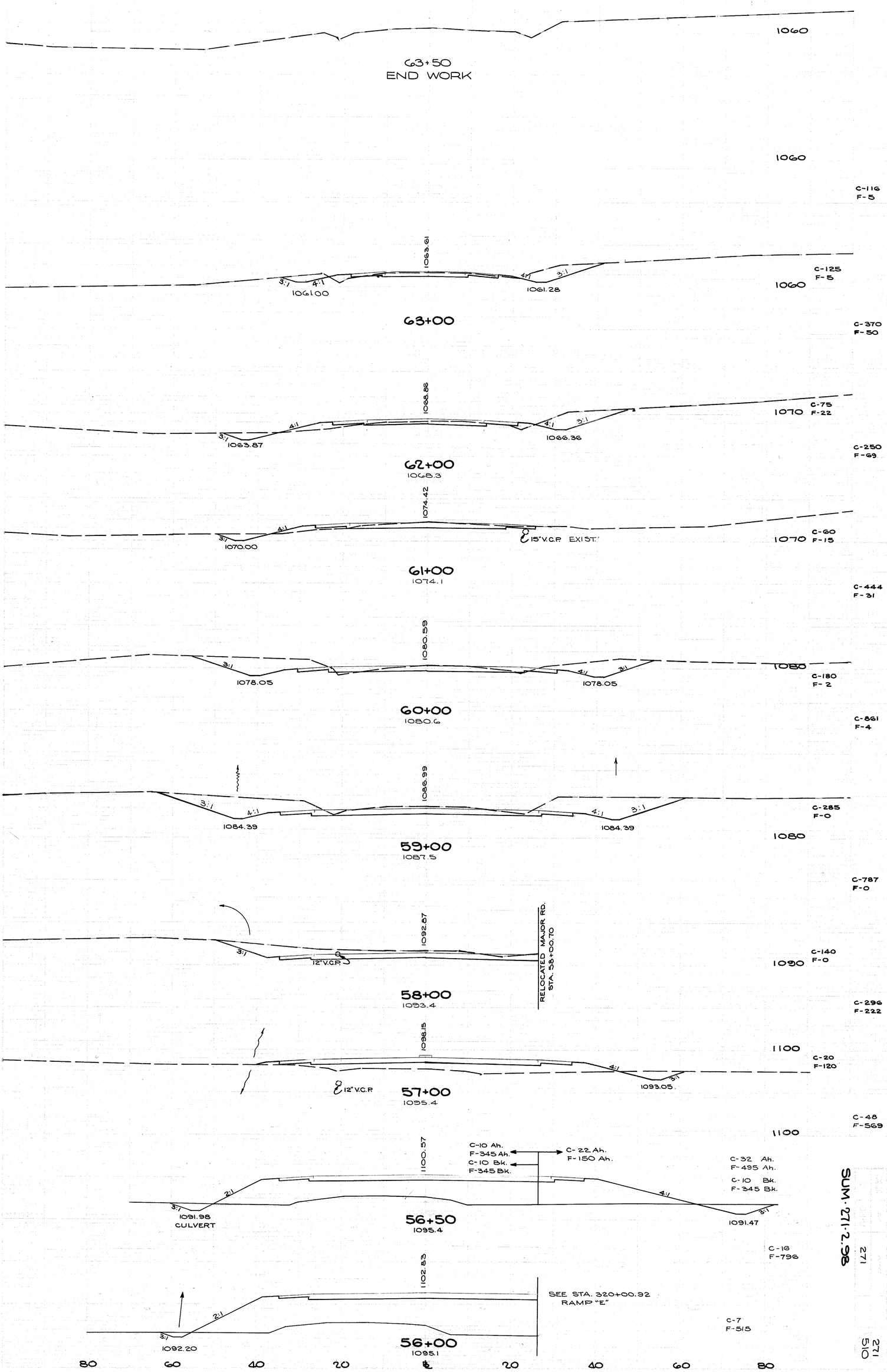
"A"
1090
SEE RAMP "H"
STA. 311+70±
C-4639
F-0
370 380
1090
52+00
"A"
C-1525
F-0

PROPOSED CHANNEL
EXCAVATION NOT INCLUDED ON THIS SHEET
SEE SHEET 332

SEE I-271
STA. 316+00
1090
51+00
SEE RAMP "H"
STA. 312+70
C-6689
F-0
C-2087
F-0

S.R. 303 EXTENDED SECTIONS
STA. 51+00 - 55+00

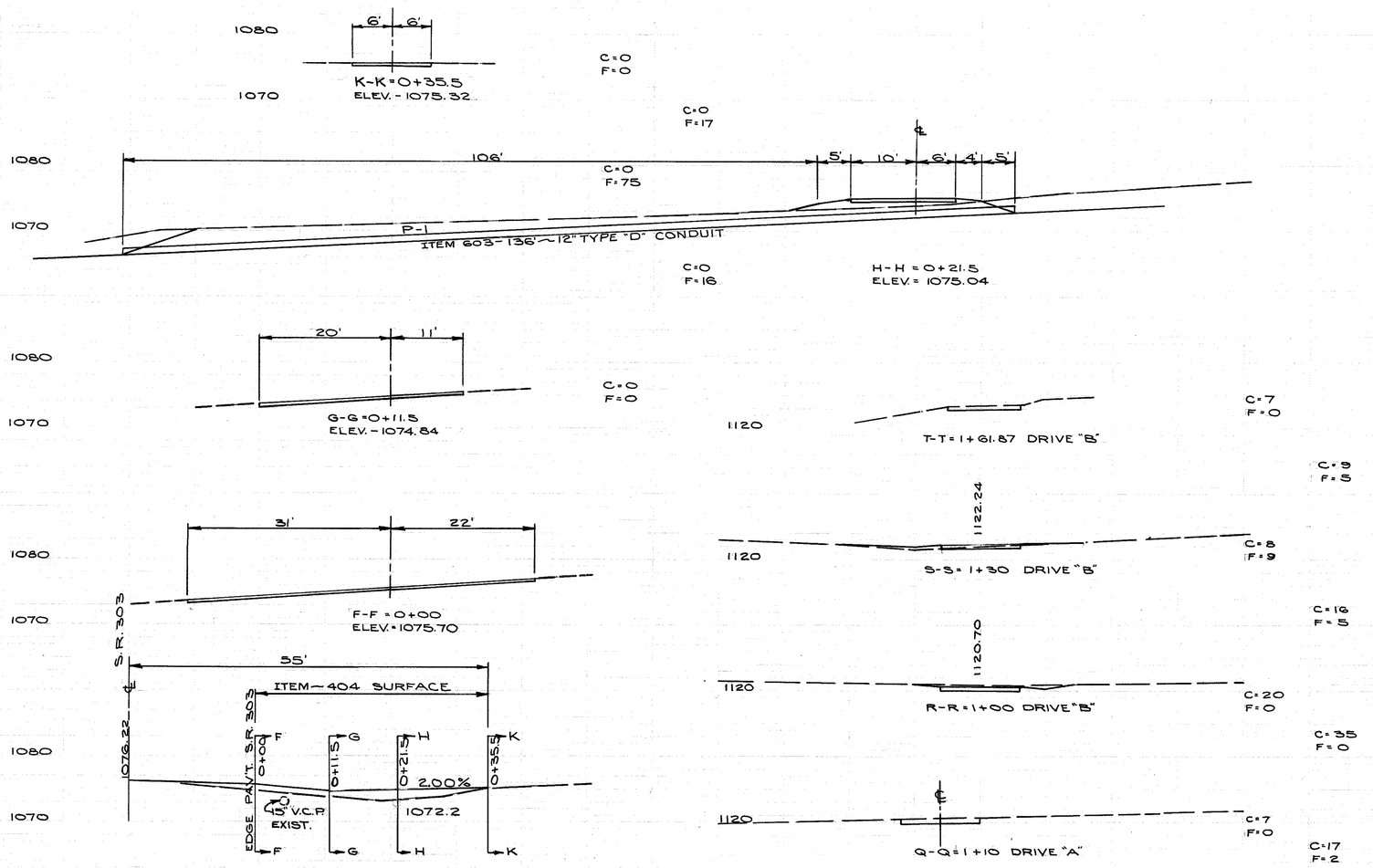
80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380



RELOC. S.R. 303 STA. 56+00 - 63+50

SUM-271-2.98

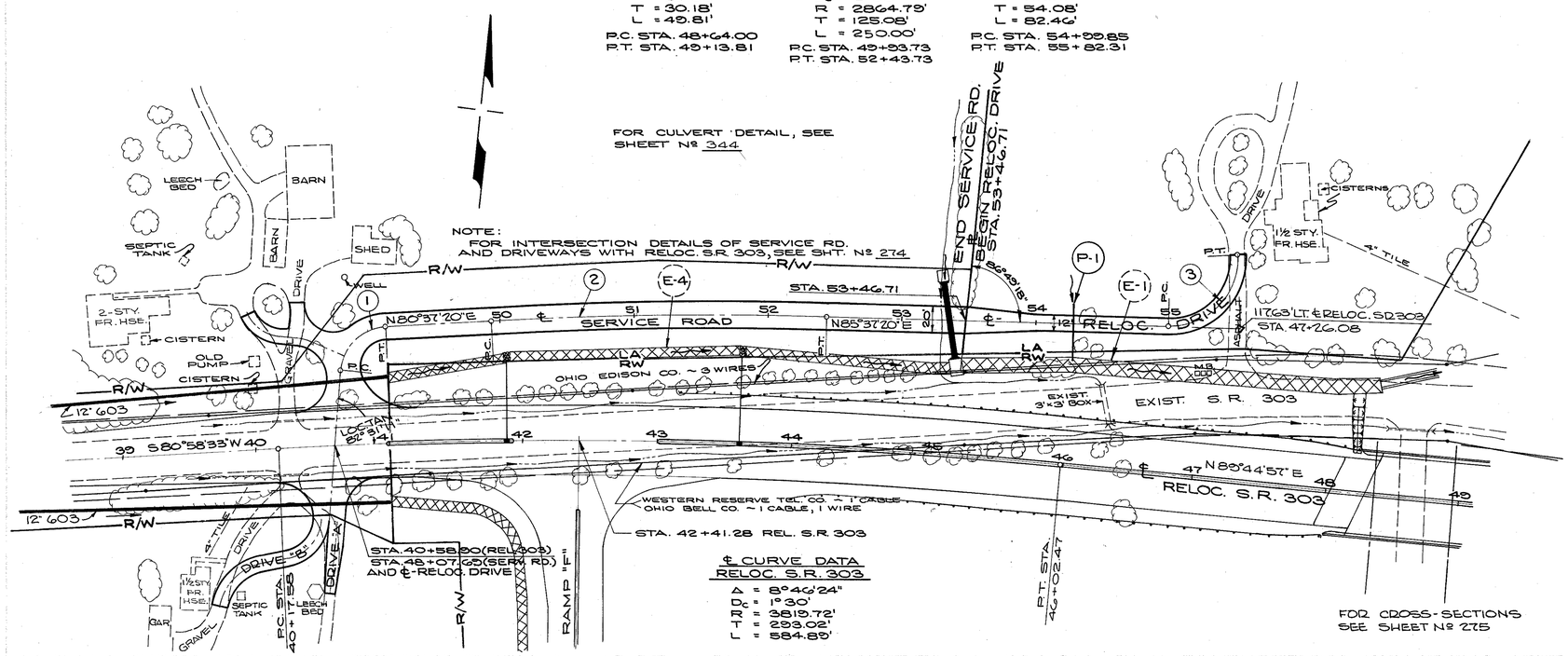
271
510

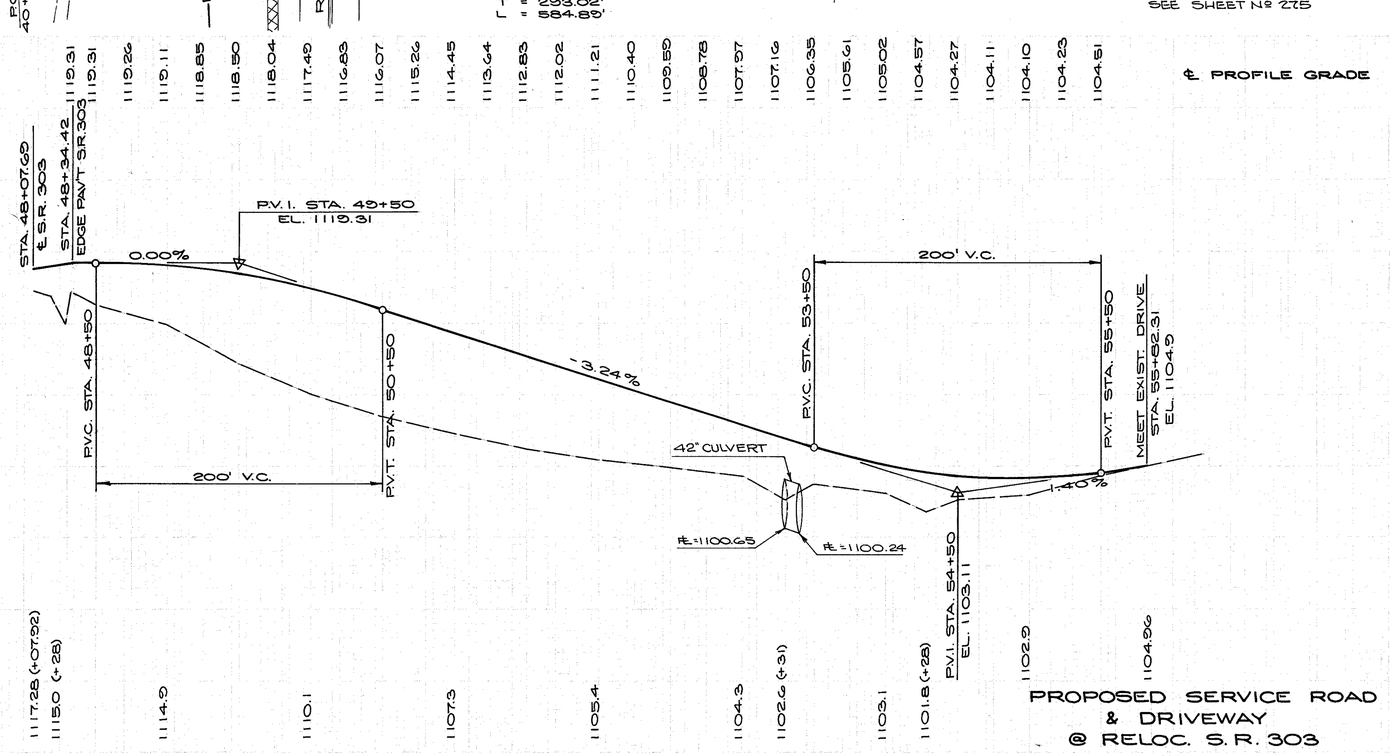


DRIVEWAY SECTIONS
STA. 40+25 & 60+70
RELOC. S.R. 303

SUN 27 1 298

CURVE Nº 1	CURVE Nº 2	CURVE Nº 3
Δ = 81°32'47"	Δ = 5°00'00"	Δ = 94°29'19"
R = 35.00'	D_c = 2°00'	R = 50.00'
T = 30.18'	R = 2864.79'	T = 54.08'
L = 49.81'	T = 125.08'	L = 82.46'
P.C. STA. 48+64.00	L = 250.00'	P.C. STA. 54+99.85
P.T. STA. 48+13.81	P.C. STA. 49+93.73	P.T. STA. 55+82.31
	P.T. STA. 52+43.73	





603 CONDUIT-LIN. FT.
TYPE "D"
12"
42

42

PROPOSED SERVICE ROAD & DRIVEWAY @ RELOC. S. R. 303

SERVICE RD. STA. 48+00 TO STA. 56+00

FED. RD.	STATE	PROJECT	
2	OHIO		

274/510

SUM - 271 - 2.98

⑥ ℄ CURVE DATA
PROPOSED DRIVE
Δ = 58°57'22"
R = 29.00'
T = 16.39'
L = 29.84'

① ℄ CURVE DATA
SERVICE ROAD
Δ = 81°32'47"
R = 35.00'
T = 30.18'
L = 49.81'

⑤ ℄ CURVE DATA
PROPOSED DRIVE
Δ = 17°41'05"
R = 31.00'
T = 4.82'
L = 9.57'

④ RETURN CURVE DATA
SERV. RD. & PROP. DRIVE
Δ = 153°16'12"
R = 25.00'
T = 105.22'
L = 66.88'

③ RETURN CURVE DATA
SERVICE ROAD
Δ = 118°17'57"
R = 20.00'
T = 33.48'
L = 41.29'

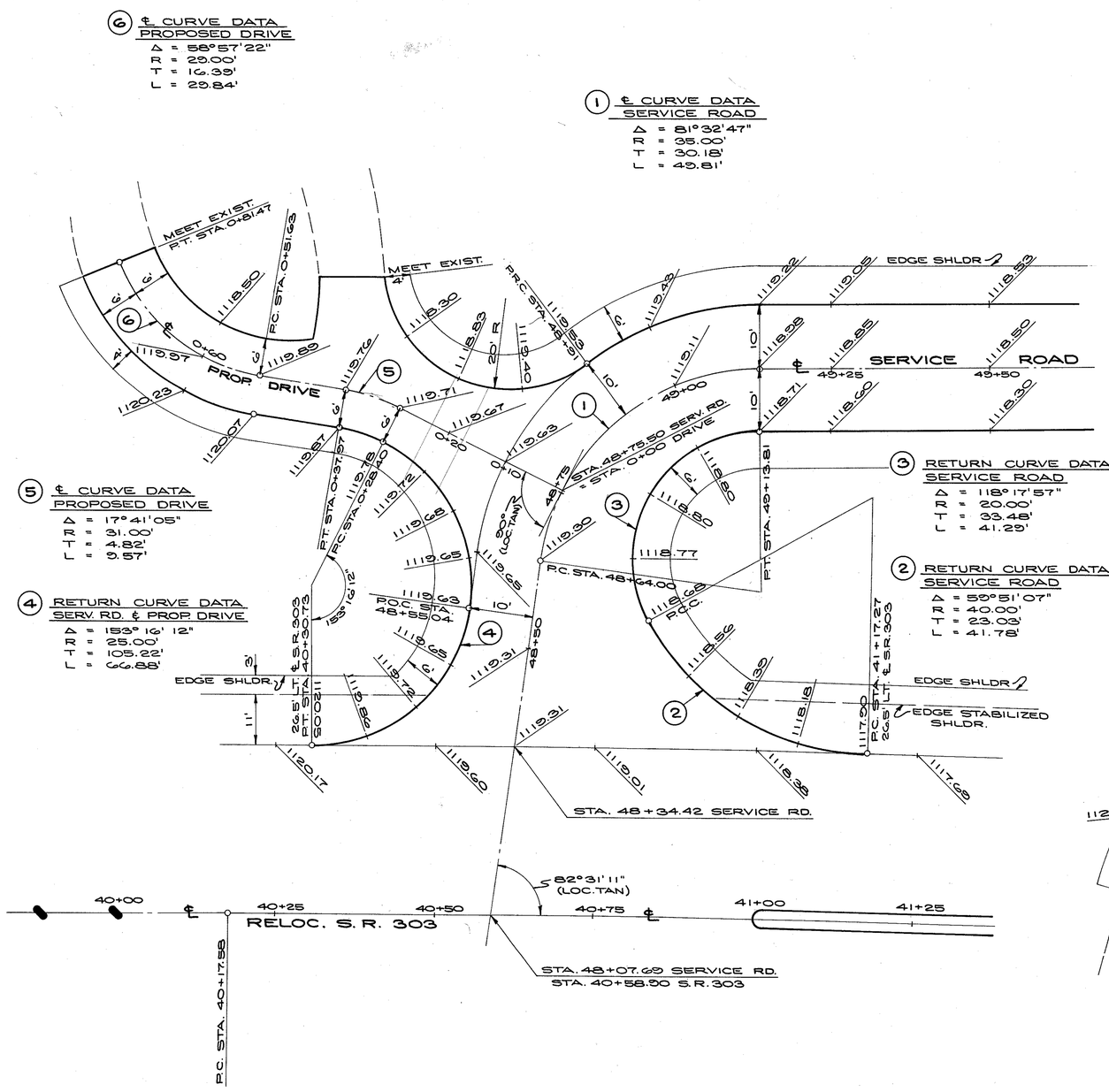
② RETURN CURVE DATA
SERVICE ROAD
Δ = 59°51'07"
R = 40.00'
T = 23.03'
L = 41.78'

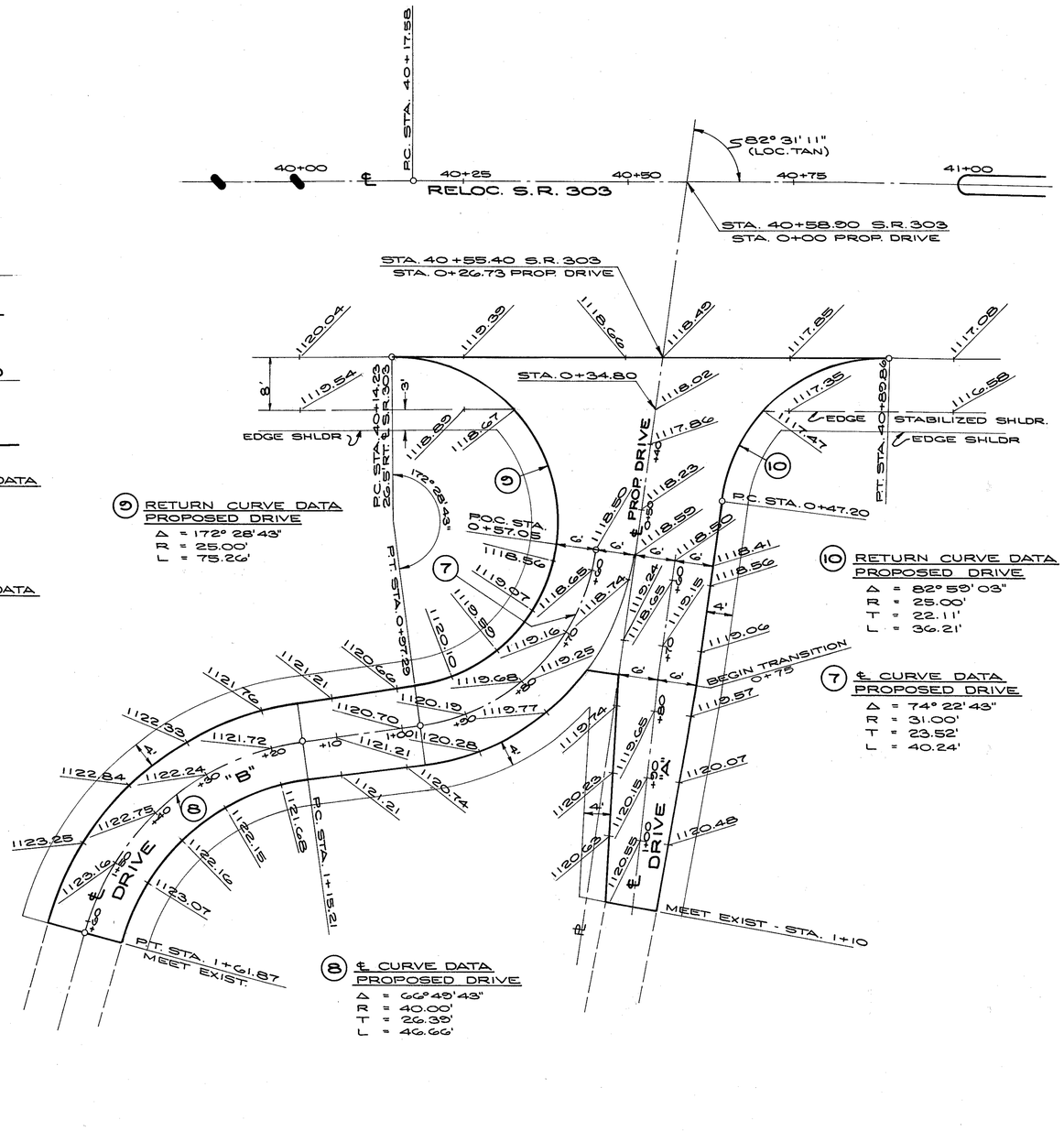
⑨ RETURN CURVE DATA
PROPOSED DRIVE
Δ = 172°28'43"
R = 25.00'
L = 75.26'

⑩ RETURN CURVE DATA
PROPOSED DRIVE
Δ = 82°59'03"
R = 25.00'
T = 22.11'
L = 36.21'

⑦ ℄ CURVE DATA
PROPOSED DRIVE
Δ = 74°22'43"
R = 31.00'
T = 23.52'
L = 40.24'

⑧ ℄ CURVE DATA
PROPOSED DRIVE
Δ = 66°49'43"
R = 40.00'
T = 26.38'
L = 46.66'

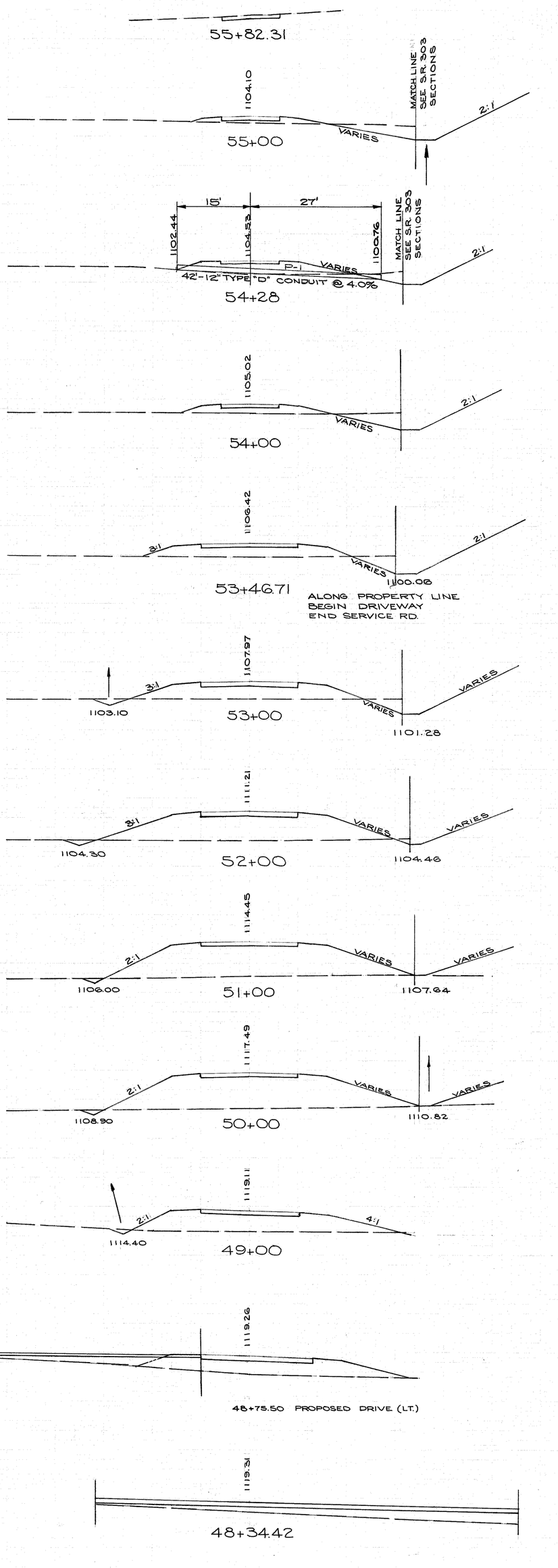




SERVICE ROAD & DRIVEWAY
DETAILS WITH REL. S.R. 303

KAE

END AREA CU. YDS.



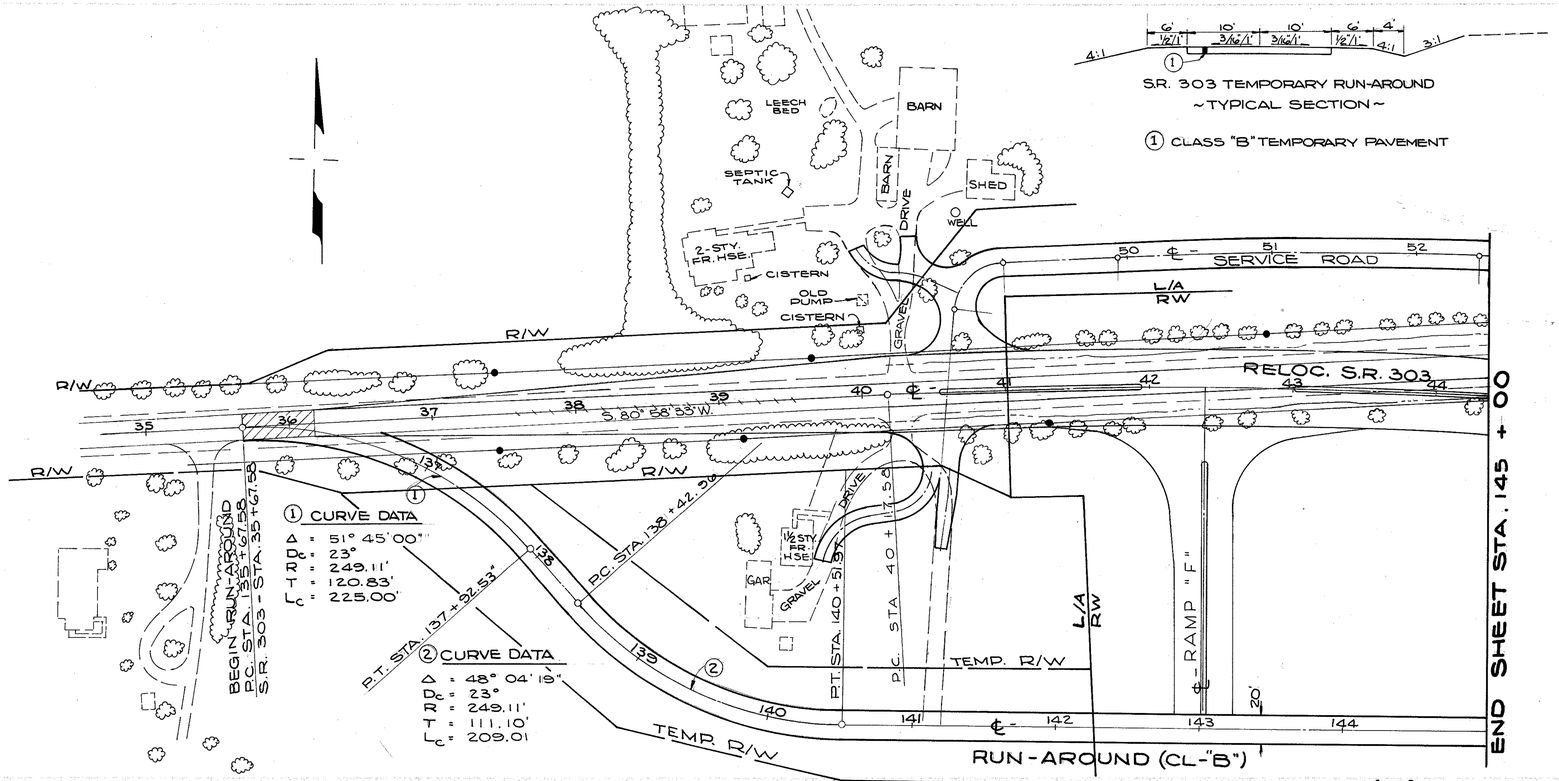
SERVICE RD. & DRIVE

60 40 20 ℄ 20 40 60

2	ROAD NO. DIVISION
OHIO	STATE
	PROJECT

SUM-271-2.98

215
510

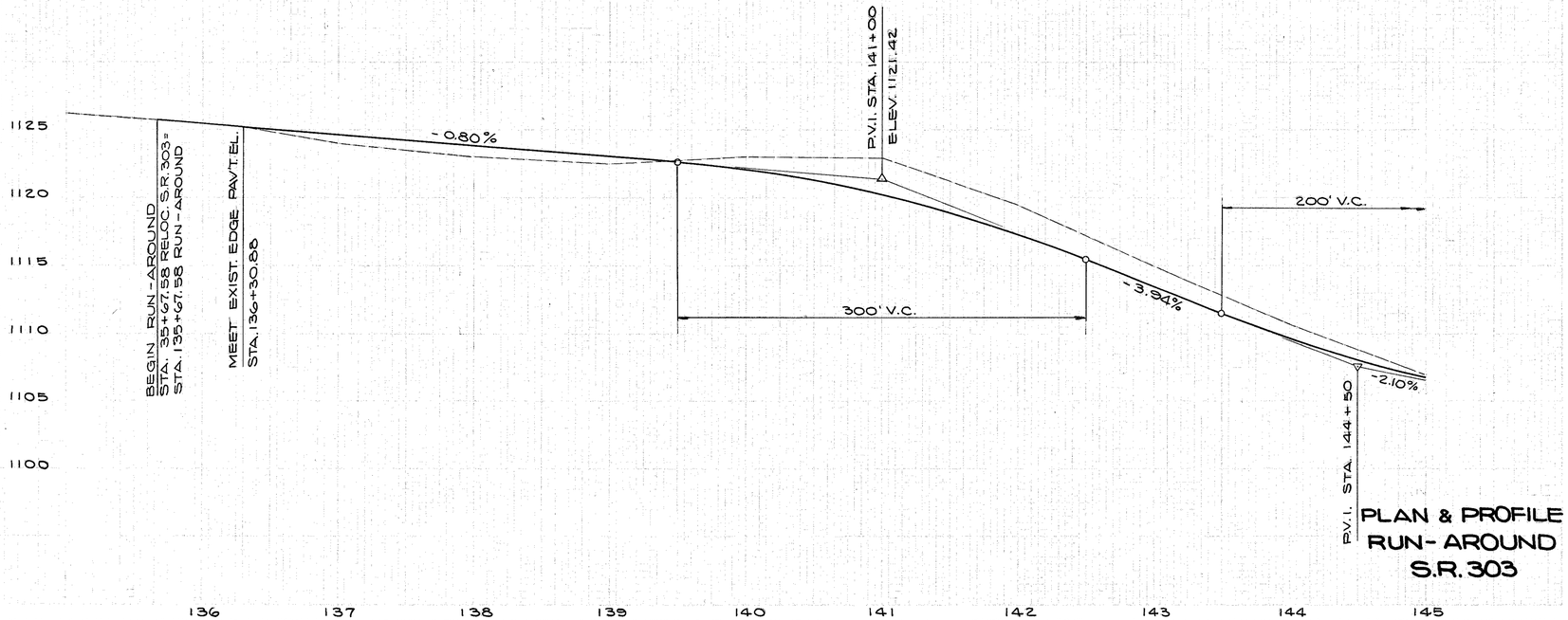


4:1 6' 1½':1' 10' 3/16":1' 10' 3/16":1' 6' 1½':1' 4' 4:1 3:1

① CLASS "B" TEMPORARY PAVEMENT

SR. 303 TEMPORARY RUN-AROUND
~TYPICAL SECTION~

1125.02 1124.62 1124.22 1123.82 1123.42 1123.02 1122.62 1122.39 1122.09 1121.73 1121.30 1120.80 1120.24 1119.62 1118.93 1118.17 1117.35 1116.47 1115.51 1113.54 1111.57 1110.61 1109.72 1108.88 1108.09 1107.36 1106.70



PLAN & PROFILE
RUN-AROUND
S.R. 303

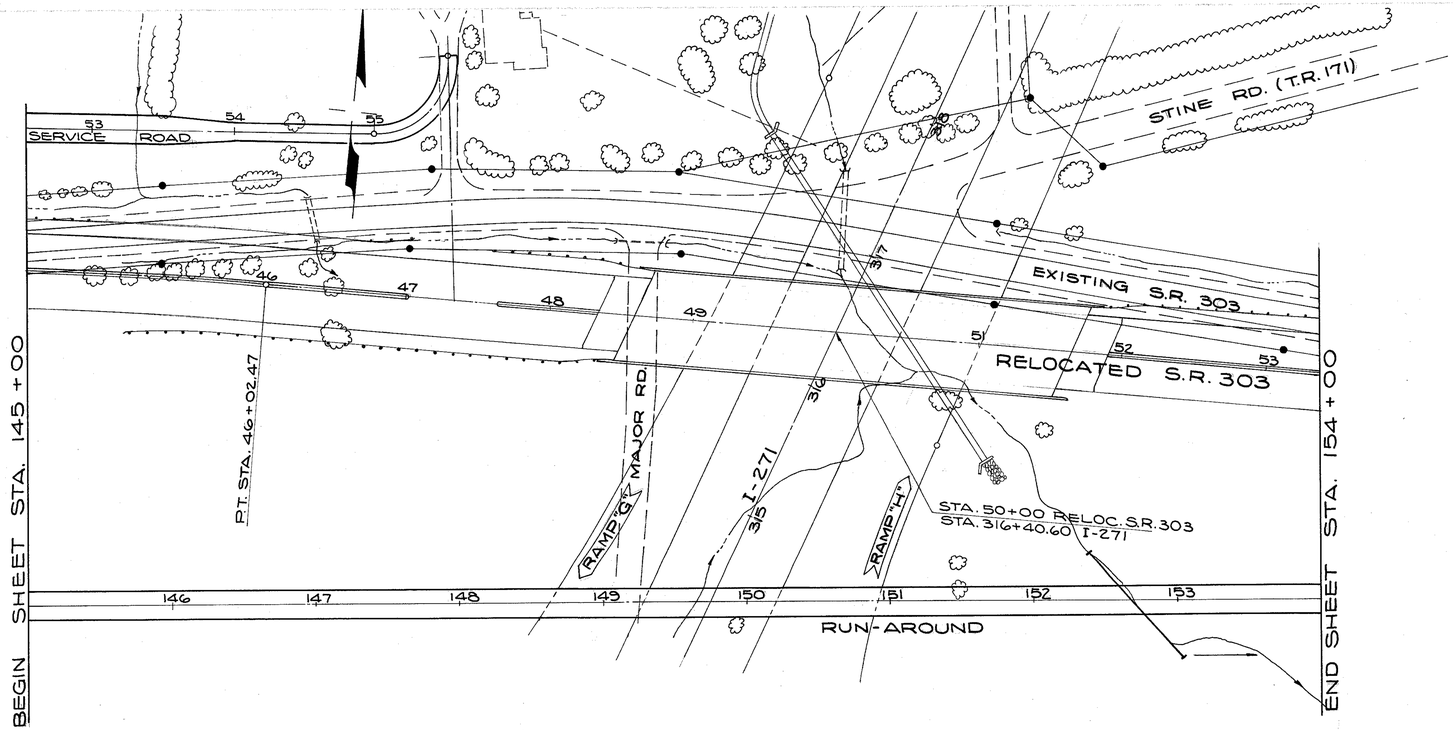
615 CLASS-B TEMP. PAVEMENT SQ. YDS. 1931

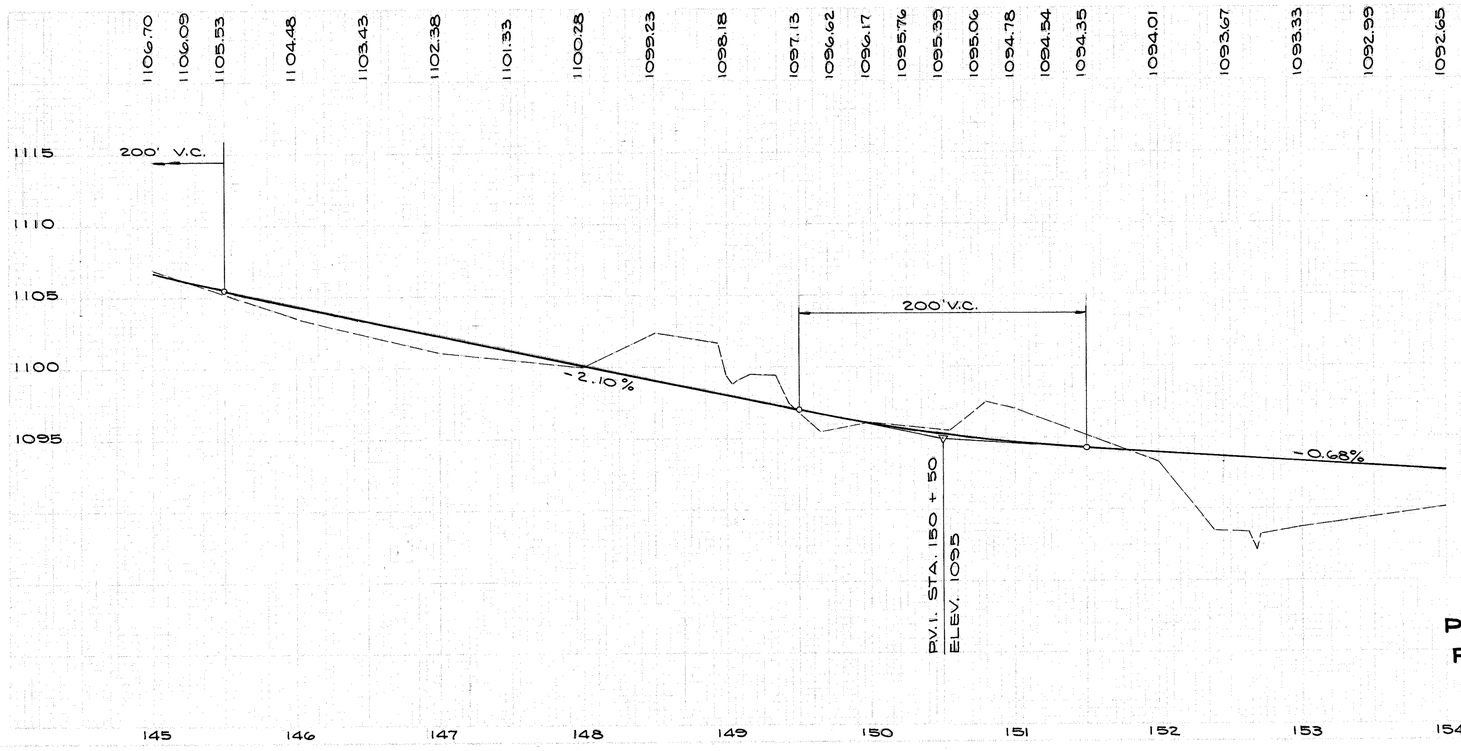
136+30.38 – 145+00

1931

RUN-AROUND-S.R. 303 STA. 136+00 TO STA. 145+00

SUM - 271 - 2.98





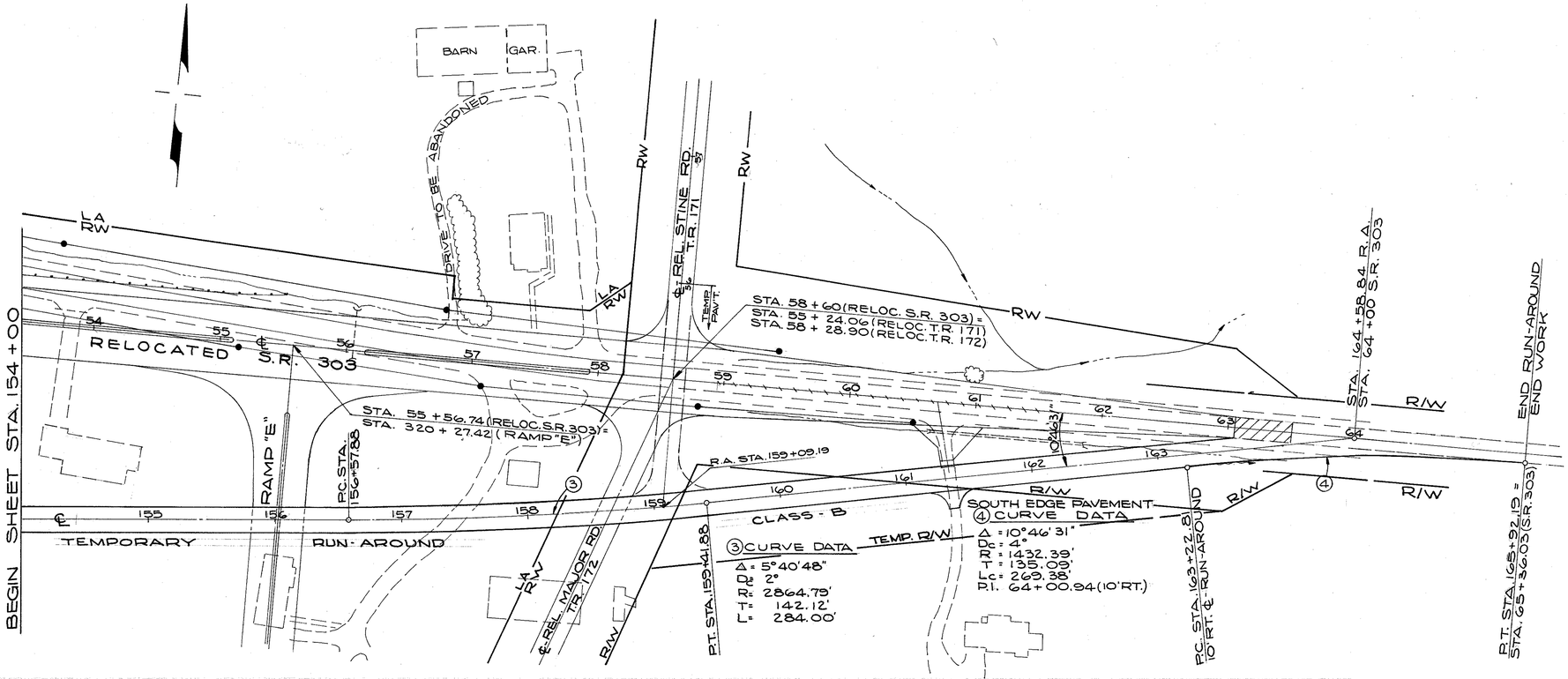
PLAN & PROFILE
RUN-AROUND
S.R. 303

615 CLASS-B TEMP. PAVEMENT	SQ.YDS.	2000
145+00 ~ 154+00		2000

RUN-AROUND-S.R.303 STA.145+00 TO STA.154+00

278
510

SUM-271-2.98

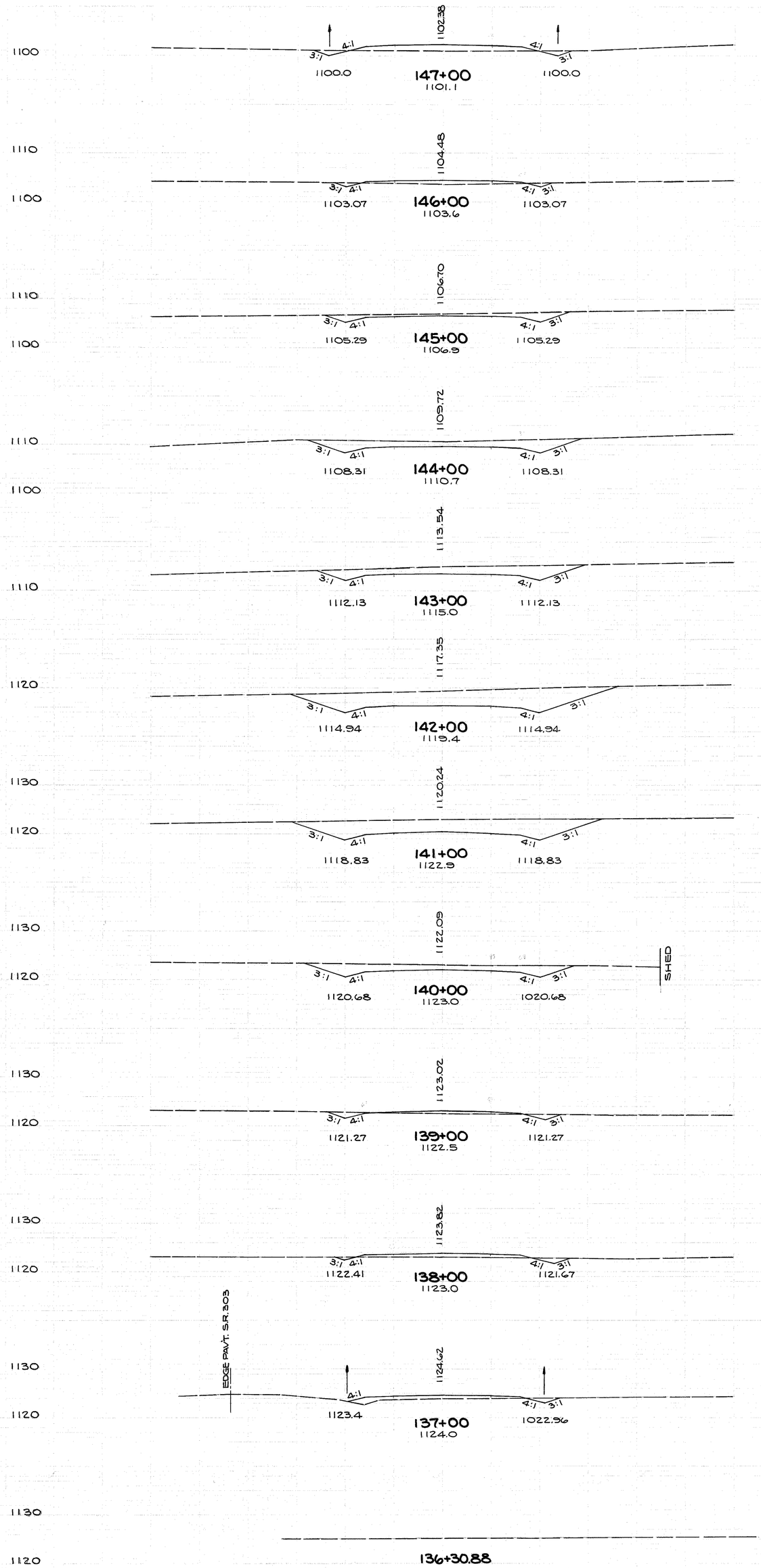


PLAN & PROFILE
RUN-AROUND
S.R. 303

REF. NO.	STATION TO STATION	SIDE	615 CLASS-B TEMP. PAVEMENT SQ.YDS.
	154+00 - 164+10.70		2246

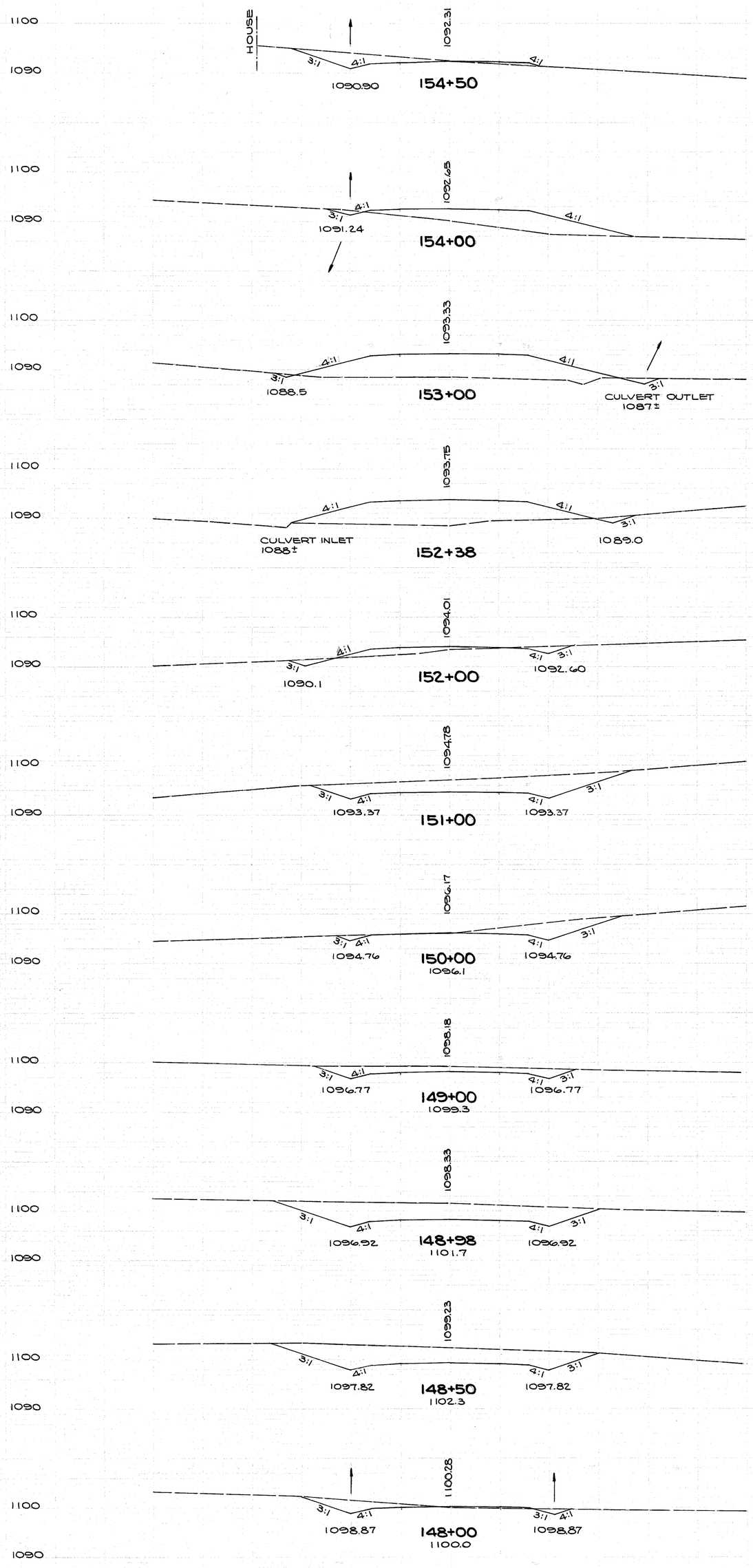
2246

RUN-AROUND-S.R. 303 STA. 154+00 TO STA. 164+00



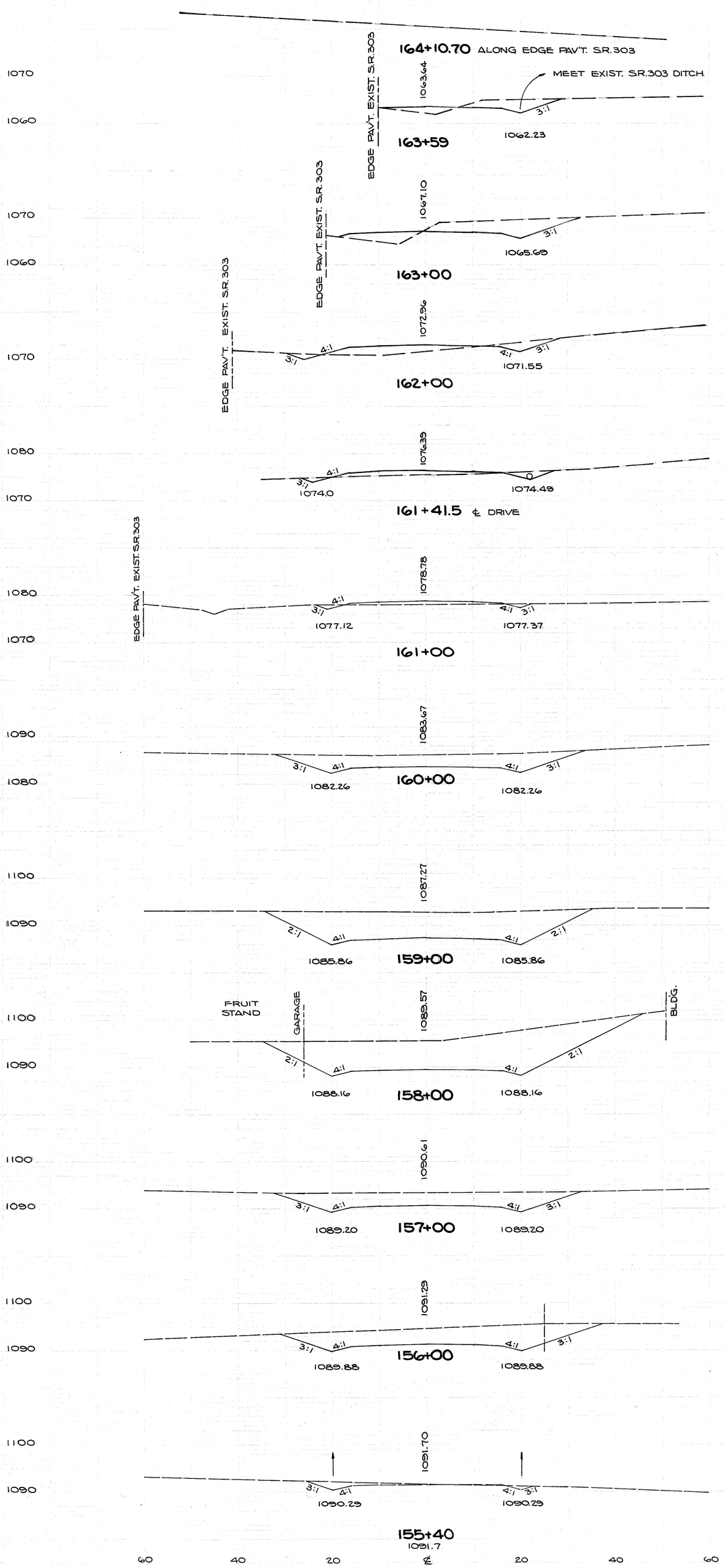
S.R. 303 RUN-AROUND
STA. 136+30.88 TO STA. 147+00

SUM-271-2.98



S.R.303 RUN-AROUND
STA.148+00 TO STA.154+50

SUM-271-2.98



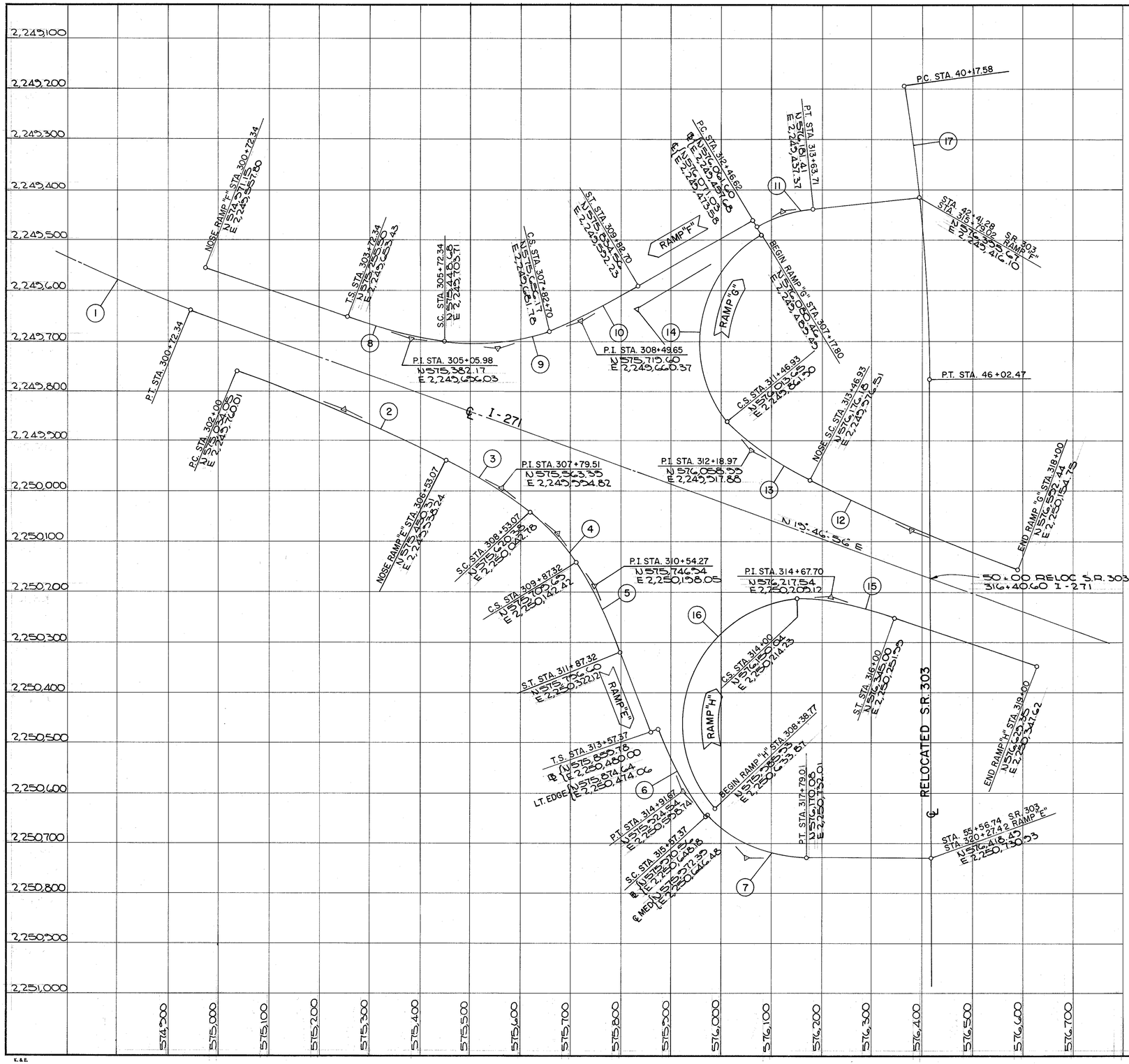
S.R.303 RUN-AROUND
STA.155+40 TO STA.164+10.70

SUM-271-2.98

FED. RD.	STATE	PROJECT	
2	OHIO		

282/510

SUM - 271 - 2.98



MAIN LINE CURVE DATA

(1)
Δ = 23° 18' 16"
Dc = 1° 28'
R = 3906.53'
L = 1588.94'
T = 805.61'
E = 82.20'

RAMP "E" CURVE DATA

(2)
Δ = 6° 47' 46"
Dc = 1° 30'
R = 3819.72'
T = 226.80'
L = 453.07'
P.I. STA. 304 + 26.80
N 575,247.47
E 2,249,836.77

(3)
Ls = 200'
Δ1 + Δ2 = 13° 30'
T1 = 126.44'
T2 = 74.49'

(4)
Δ = 16° 06' 36"
Dc = 12° 00'
R = 477.46'
T = 67.57'
L = 134.25'
P.I. STA. 309 + 20.64
N 575,672.08
E 2,250,086.28

(5)
Ls = 200'
Θs = 12° 00'
L.T. = 133.64'
S.T. = 66.95'

(6)
Ls = 200'
Θs = 21° 08' 32"
L.T. = 134.30'
S.T. = 67.54'

(7)
Δ = 47° 17' 49"
R = 268.5'
T = 117.58'
L = 221.64'
P.I. STA. 316 + 74.95
N 576,052.50
E 2,250,732.53

RAMP "F" CURVE DATA

(8)
Ls = 200'
Θs = 12° 00'
L.T. = 133.64'
S.T. = 66.95'

(9)
Δ = 25° 14' 36"
R = 477.46'
T = 106.91'
L = 210.36'
P.I. STA. 304 + 79.25
N 575,554.88
E 2,249,715.58

(10)
Ls = 200'
Θs = 12° 00'
L.T. = 133.64'
S.T. = 66.95'

(11)
Δ = 24° 59' 10"
R = 268.50'
T = 59.49'
L = 117.09'
P.I. STA. 313 + 06.11
N 576,122.21
E 2,249,443.25

RAMP "G" CURVE DATA

(12)
Δ = 6° 47' 46"
Dc = 1° 30'
R = 3819.72'
T = 226.80'
L = 453.07'
P.I. STA. 315 + 73.73
N 576,379.01
E 2,250,077.55

(13)
Ls = 200'
Δ1 + Δ2 = 24° 25' 06"
T1 = 72.04'
T2 = 131.04'

(14)
Δ = 98° 20' 55"
R = 250'
T = 289.37'
L = 429.13
P.I. STA. 310 + 07.17
N 575,831.53
E 2,249,637.03

RAMP "H" CURVE DATA

(15)
Ls = 200'
Θs = 22° 55' 06"
L.T. = 134.47'
S.T. = 67.70'

(16)
Δ = 128° 37' 27"
R = 250'
T = 519.74'
L = 561.23'
P.I. STA. 313 + 58.51
N 575,631.77
E 2,250,253.47

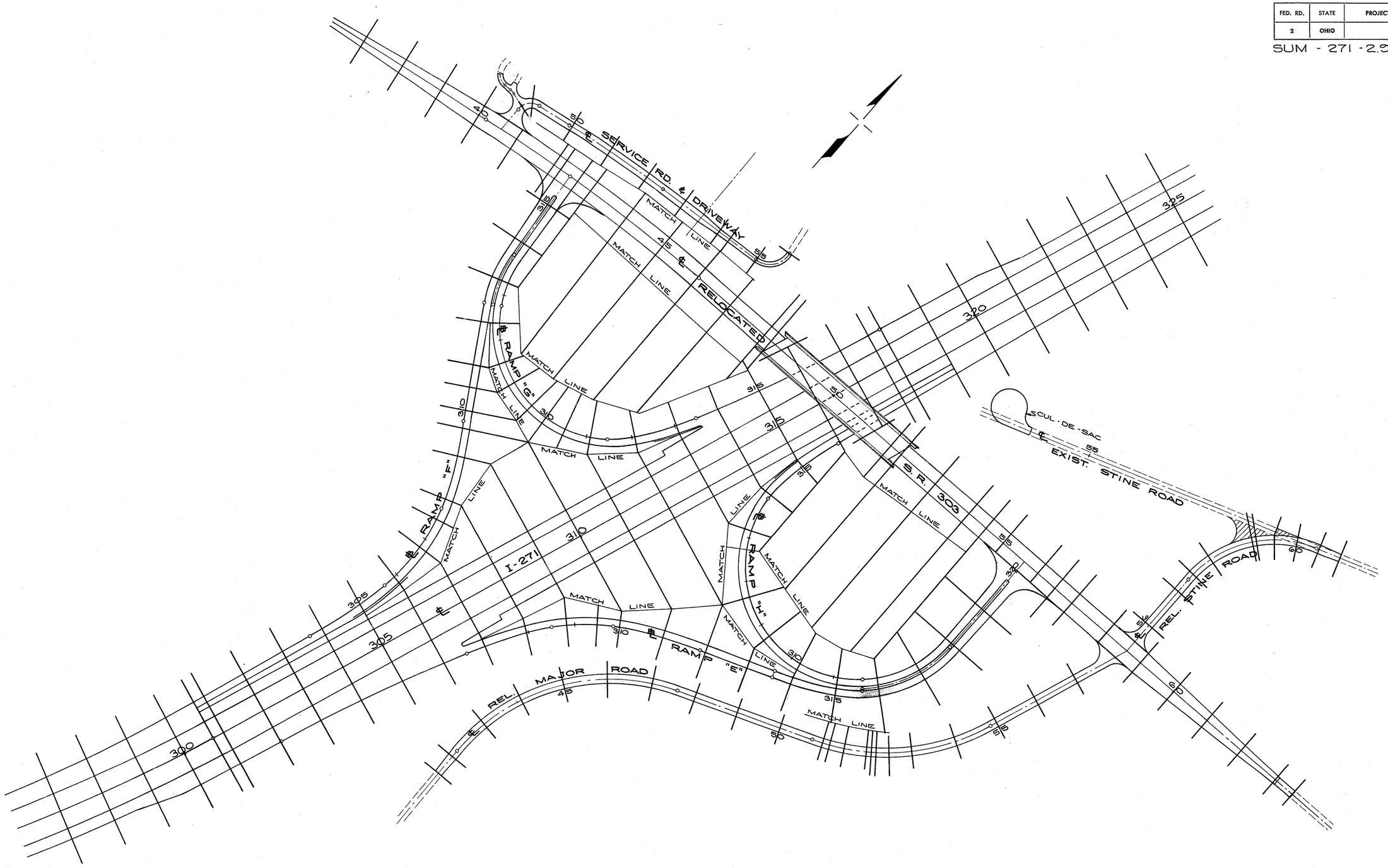
RELOCATED S.R. 303 CURVE DATA

(17)
Δ = 8° 46' 24"
Dc = 1° 30'
R = 3819.72'
T = 293.02'
L = 584.89'

FED. RD.	STATE	PROJECT	
2	OHIO		

283
510

SUM - 271 - 2.98



I-271 & RELOC. S.R. 303 INTERCHANGE
CROSS SECTION LAYOUT

FED. RD.	STATE	PROJECT	
2	OHIO		

284
510

SUM-271-2.98

GRADING PLAN
S.R. 303 INTERCHANGE

FED. RD.	STATE	PROJECT	
2	OHIO		

285
510

SUM-271-2.98

NOTE:
FOR END TAPER DETAIL
SEE SHEET Nº 215

TAPER (48:1)

1200' TAPER (48:1)

STA. 300+72.34

NOSE

10'-451

9'-451

88°48'23"

4' PAVED SHDR.

8' PAVED SHDR.

TS. STA. 303+72.34

100'

50'

RAMP "F"

SC. STA. 305+72.34

3' PAVED SHDR.

89 LF TYPE 7 CURB

453 LF TYPE 8 CURB

10' PAVED SHDR.

PT. I-271 STA. 300+72.34

301 302 303 ℄ I-271 304 305 306

303 304 305 ℄ I-271 306 307 308

NOSE - 82' RT. ℄ STA 306+54.73 I-271

NOSE - STA. 306+53.07 23' LT. ℄

612 - CONC. TRAFFIC ISLAND

10'-451

9'-451

67 LF. TYPE 6 CURB

68 LF TYPE 6 CURB

3' PAVED SHDR.

S.C. STA. 308+53.07

R.C. STA. 302+00

8' PAVED SHDR.

RAMP "E"

I-271

301

I-271 PT. STA. 300+72.34

BEGIN DECELERATION LANE - STA. 298+54.73
FOR END TAPER DETAIL
SEE SHEET Nº 215

4' PAVED SHDR.

8' PAVED SHDR.

R.C. STA. 302+00

JOINT LEGEND

- (A) - STANDARD LONGITUDINAL JOINT
- (B) - STANDARD EXPANSION JOINT
- (C) - STANDARD CONTRACTION JOINT

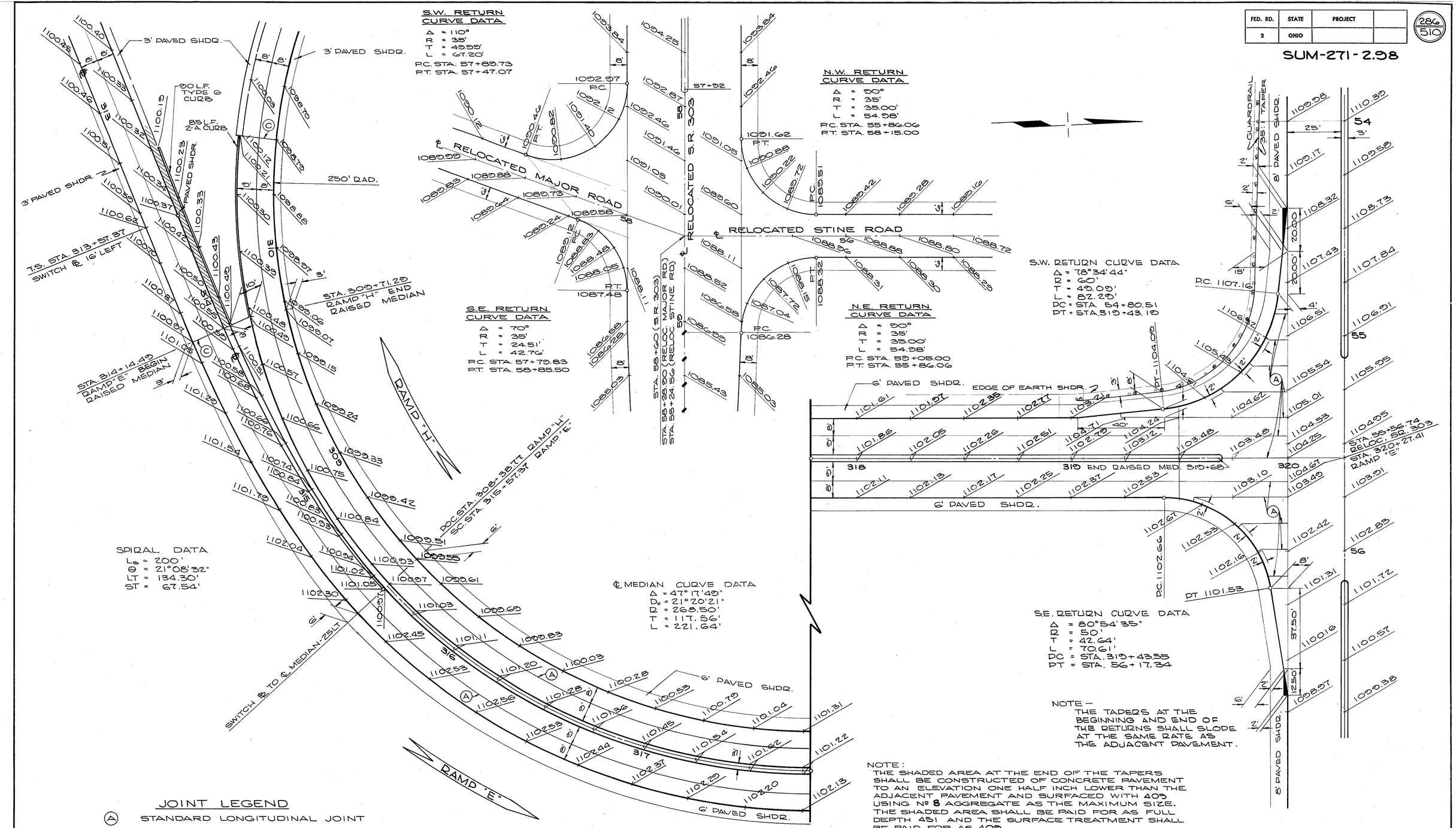
NOTE:
FOR TRAFFIC ISLAND CONSTRUCTION
SEE SHEET Nº 215.

INTERSECTION DETAILS RAMPS "E" & "F"

FED. RD.	STATE	PROJECT	
2	OHIO		

286 / 510

SUM-271-2.98


S.W. RETURN CURVE DATA
Δ = 110°
R = 35'
T = 49.98'
L = 67.20'
P.C. STA. 57+89.73
P.T. STA. 57+47.07
N.W. RETURN CURVE DATA
Δ = 90°
R = 35'
T = 35.00'
L = 54.98'
P.C. STA. 55+86.06
P.T. STA. 58+15.00
S.E. RETURN CURVE DATA
Δ = 70°
R = 35'
T = 24.51'
L = 42.76'
P.C. STA. 57+79.83
P.T. STA. 58+85.50
N.E. RETURN CURVE DATA
Δ = 90°
R = 35'
T = 35.00'
L = 54.98'
P.C. STA. 59+05.00
P.T. STA. 55+86.06
S.W. RETURN CURVE DATA
Δ = 78°34'44"
R = 60'
T = 49.09'
L = 82.29'
PC = STA. 54+80.51
PT = STA. 310+43.19
S.E. RETURN CURVE DATA
Δ = 80°54'35"
R = 50'
T = 42.64'
L = 70.61'
PC = STA. 319+43.55
PT = STA. 56+17.34
℄ MEDIAN CURVE DATA
Δ = 47°17'49"
Dc = 21°20'21"
R = 268.50'
T = 117.56'
L = 221.64'
SPIRAL DATA
Ls = 200'
Θ = 21°08'32"
LT = 134.30'
ST = 67.54'
RELOCATED MAJOR ROAD
RELOCATED STINE ROAD
RELOCATED S.R. 303
STA. 58+60 (S.R. 303)
STA. 56+28.90 (RELOC. MAJOR RD.)
STA. 55+24.56 (RELOC. STINE RD.)
RAMP "H"
RAMP "E"
3' PAVED SHDR.
6' PAVED SHDR.
8' PAVED SHDR.
90 L.F. TYPE G CURB
85 L.F. 2-A CURB
250' RAD.
T.S. STA. 313+57.37
SWITCH & 16' LEFT
STA. 309+71.29 RAMP "H" END RAISED MEDIAN
STA. 314+14.43 RAMP "E" BEGIN RAISED MEDIAN
SWITCH ℄ TO ℄ MEDIAN-25' LT
EDGE OF EARTH SHDR.
GUARDRAIL
35:1 TAPER
END RAISED MED. 319+68
STA. 55+56.74 RELOC. SR. 303
STA. 320+27.41 RAMP "E"
PC. 1107.16
PT 1104.09
PC. 1102.66
PT 1101.53
PC 1089.51
P.T. 1091.62
P.C. 1086.28
P.T. 1087.48
P.C. 1092.97
P.T. 1090.46
P.C. 1089.51
P.T. 1091.62
P.C. 1086.28
P.T. 1088.32
P.C. 1090.46
P.T. 1089.64
P.C. 1092.97
P.T. 1090.46
P.C. 1089.51
P.T. 1091.62
P.C. 1086.28
P.T. 1088.32
P.C. 1089.64
P.T. 1087.48

FED. RD.	STATE	PROJECT	
2	OHIO		

287/510

SUM-271-2.98

JOINT LEGEND

Ⓐ - STANDARD LONGITUDINAL JOINT
Ⓒ - STANDARD CONTRACTION JOINT

NOTE -
THE SHADED AREA AT THE END OF THE TAPERS SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION ONE HALF INCH LOWER THAN THE ADJACENT PAVEMENT AND SURFACED WITH 409 USING Nº 6 AGGREGATE AS THE MAXIMUM SIZE. THE SHADED AREA SHALL BE PAID FOR AS FULL DEPTH 451 AND THE SURFACE TREATMENT SHALL BE PAID FOR AS 409.

℄ MEDIAN CURVE DATA
Δ = 24°59'10"
D = 26.830'
T = 59.49'
L = 117.09'

S.W. RETURN CURVE DATA
Δ = 77°13'28"
D = 60'
T = 47.92'
L = 80.87'
PC = STA. 41+63.21
PT = STA. 314+93.80

S.E. RETURN CURVE DATA
Δ = 81°50'24"
D = 50'
T = 43.34'
L = 71.42'
PC = STA. 314+93.25
PT = STA. 43+03.30

NOTE -
THE TAPERS AT THE BEGINNING AND END OF THE RETURNS SHALL SLOPE AT THE SAME RATE AS THE ADJACENT PAVEMENT (.025/1).

1058

INTERSECTION DETAILS
RAMP "F" ℄ SR 303

C. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

288 / 510

SUM-271-2.98

NOTE:
FOR TRAFFIC ISLAND CONSTRUCTION
SEE SHEET Nº 215 .

C.S. STA. 311+46.93

3' PAVED SHDR.

612 - CONC. TRAFFIC ISLAND

NOSE S.C. STA. 313+46.93 (29' RT. ℄ RAMP "G")
℄ LT. ℄ STA. 313+45.27 (I-271)

9'-45'

10'-45'

100'

RAMP "G"

END DECELERATION LANE
STA. 321+45.27
FOR END TAPER DETAIL
SEE SHEET Nº 215

P.T. STA. 318+00

8' PAVED SHDR.

3' PAVED SHDR

70 L.F. TYPE 6 CURB
68 L.F. TYPE 6 CURB

10' PAVED SHDR.

4' PAVED SHDR.

312 313 314 ℄ 315 I-271 316 317 318

314 315 316 ℄ 317 I-271 318 319

4' PAVED SHDR.

10' PAVED SHDR

421 L.F. TYPE 8 CURB

68' L.F. TYPE 7 CURB

3' PAVED SHDR.

3' PAVED SHDR

C.S. STA. 314+00

ST. STA. 316+00

RAMP "H"

END RAMP - BEGIN TAPER
91' RT. ℄ STA. 319+00 (I-271)

85°46'23"

8' PAVED SHDR.

9'-45'

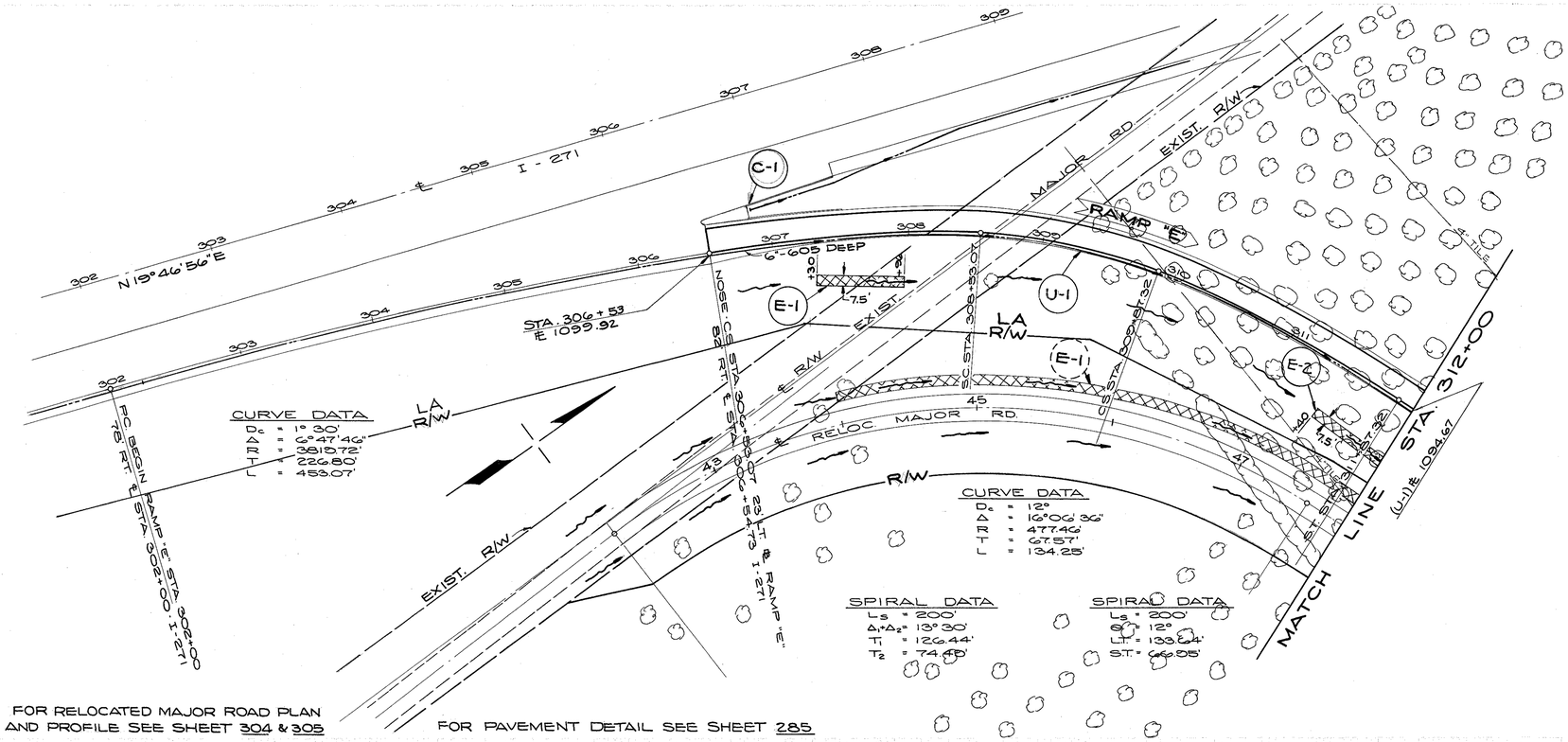
10'-45'

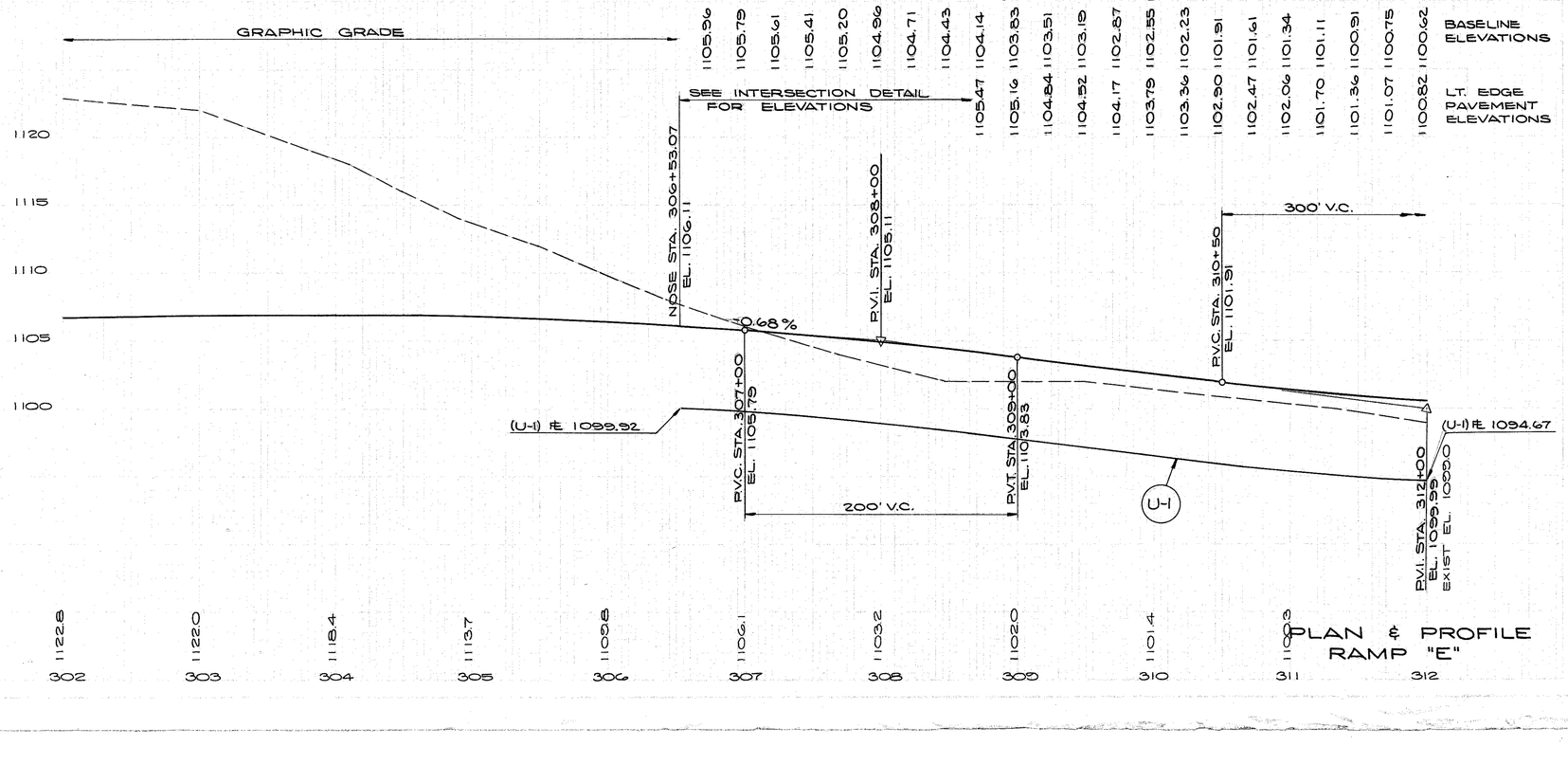
1200' TAPER (48:1)
FOR END TAPER DETAIL
SEE SHEET Nº 215

JOINT LEGEND

(A) - STANDARD LONGITUDINAL JOINT
(B) - STANDARD EXPANSION JOINT
(C) - STANDARD CONTRACTION JOINT

INTERSECTION DETAILS RAMPS "G" & "H"





BASELINE ELEVATIONS	LT. EDGE PAVEMENT ELEVATIONS
1105.36	1105.79
1105.61	1105.41
1105.20	1104.96
1104.71	1104.43
1104.14	1105.47
1103.83	1105.16
1103.51	1104.84
1103.19	1104.52
1102.87	1104.17
1102.55	1103.79
1102.23	1103.36
1101.91	1102.90
1101.61	1102.47
1101.34	1102.06
1101.11	1101.70
1100.91	1101.36
1100.75	1101.07
1100.62	1100.82

PLAN & PROFILE
RAMP "E"

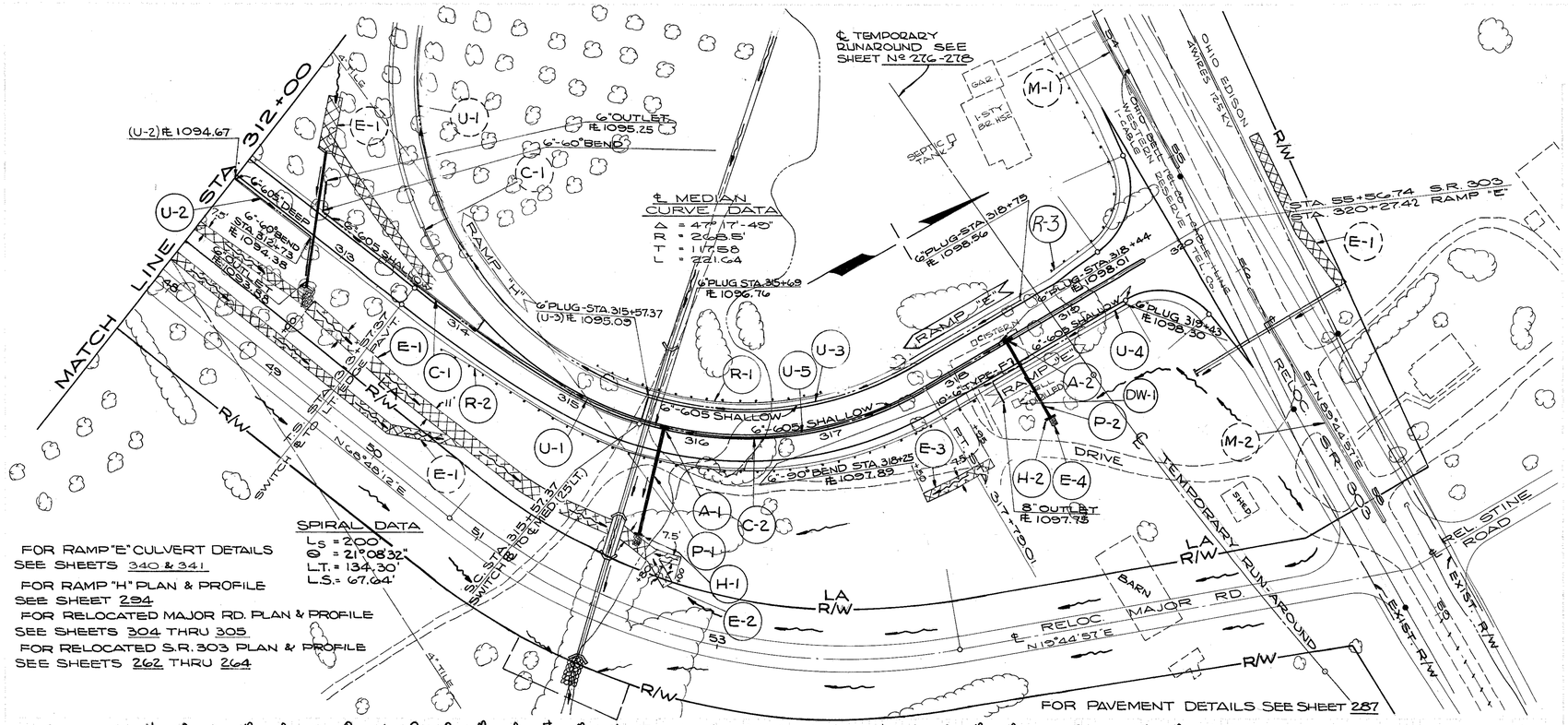
	605 UNDERDRAINS LIN. FT. DEEP/SHAL-LOW	609 CURB TYPE J LIN. FT.	612 CONC. TRAFFIC ISLAND LIN. FT.	667 JUTE MATTING SQ YDS.
U-1 306+53.07 – 312+00 RT.	547			54 51
E-1 307+30 – 307+96 RT.				
E-2 311+40 – 312+00 RT.				
C-1 306+52 – 307+52 RT.		135	27.1	

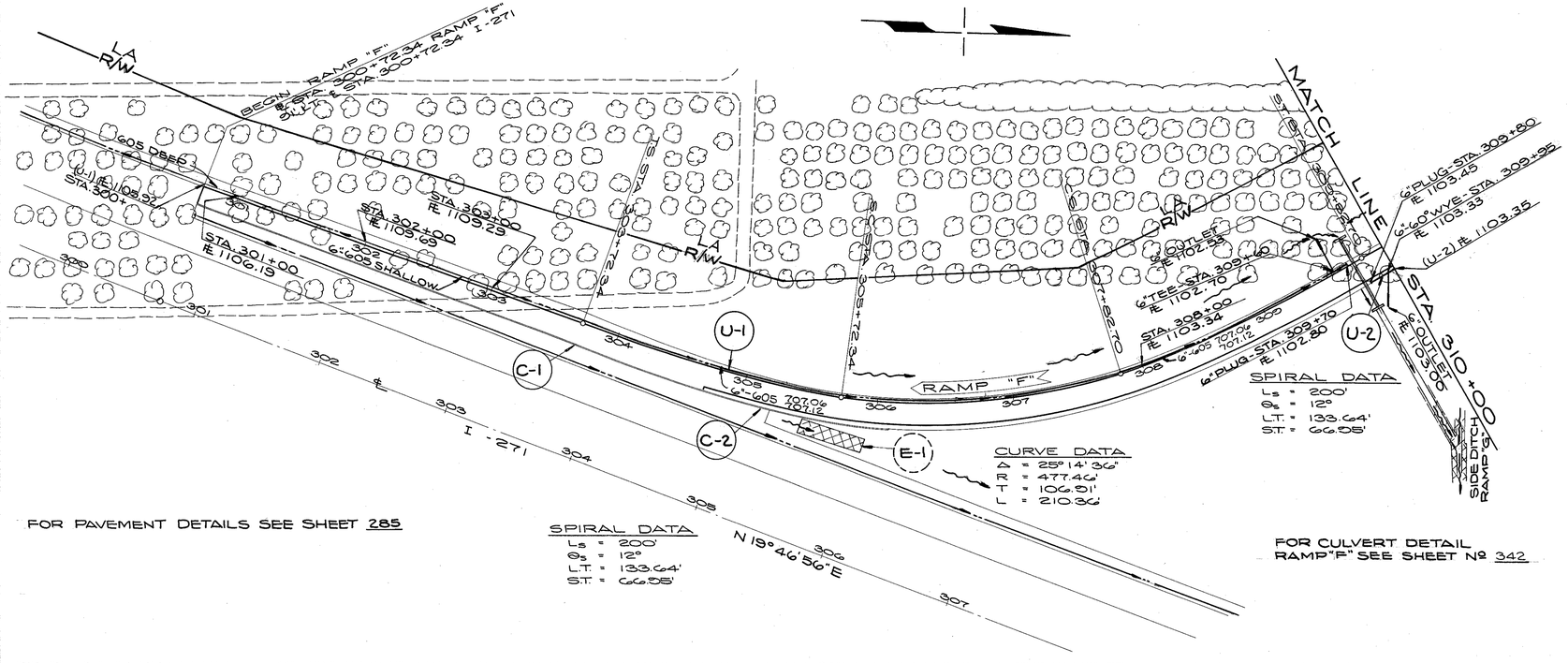
RAMP "E" STA. 302+00 T… 2+00

285

105

547 67 27.1 135

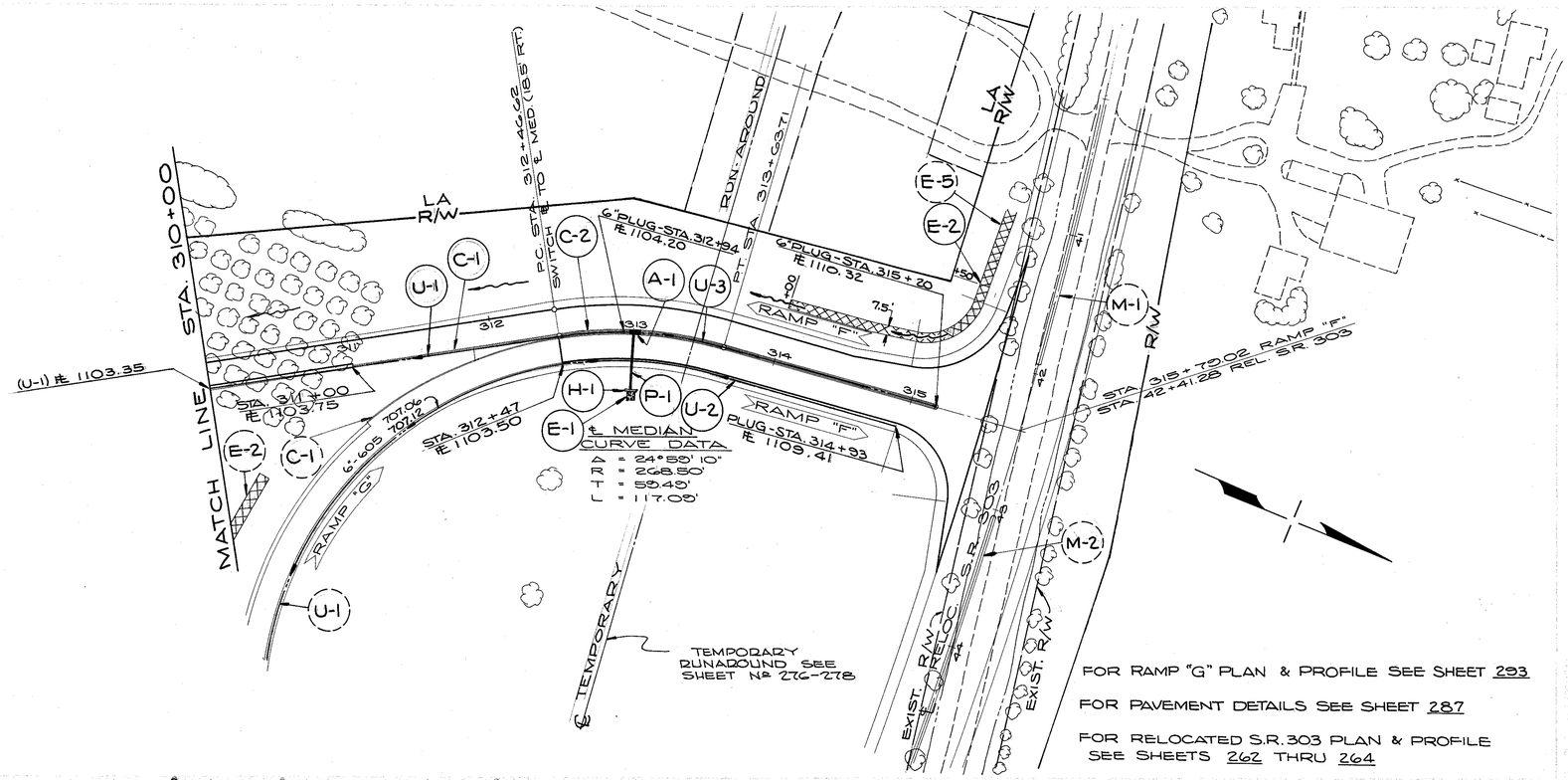

MATCH LINE STA. 312+00
(U-2) ℄ 1094.67
6" OUTLET ℄ 1095.25
6"-60° BEND
6"-60° BEND STA. 312+73 ℄ 1094.98
6"-60° BEND STA. 312+73 ℄ 1095.56
6"-60° DEEP
6"-60° SHALLOW
6"-60° SHALLOW
6"-60° SHALLOW



605 UNDERDRAINS LIN. FT.	605 BEND & BANDLUS EACH	603 CONDUITS LIN. FT. TYPE F
28	2.00	687 37 1

		609 CURB TYPE B LIN. FT.	609 CURB TYPE F LIN. FT.
U-1	300+72.34 – 309+70 LT.		
U-2	309+80 – 310+00 RT.		
C-1	300+72.34 – 305+23.34 RT.	453	89
C-2	305+23.34 – 306+09.34 RT.		

RAMP "F" STA. 300+00 TO STA. 310+00



FOR RAMP "G" PLAN & PROFILE SEE SHEET 293

FOR PAVEMENT DETAILS SEE SHEET 287

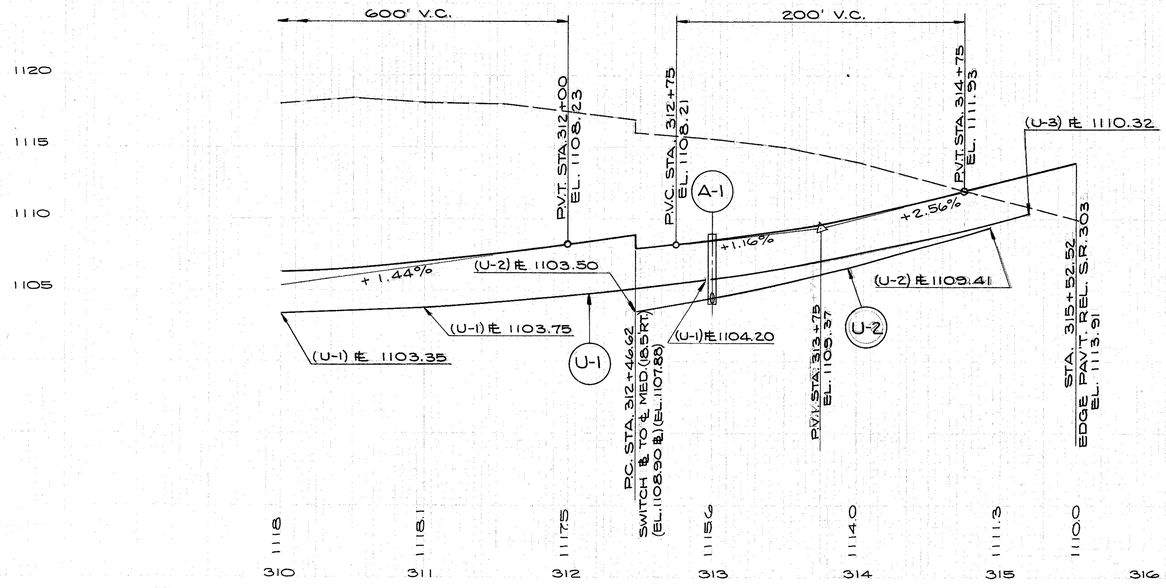
FOR RELOCATED S.R. 303 PLAN & PROFILE SEE SHEETS 262 THRU 264

BASELINE ELEVATIONS

310	311	312	313	314	315	316
1106.30	1106.44	1106.61	1106.80	1107.03	1107.28	1107.57
1107.88	1108.23	1108.59	1107.92	1108.21	1108.52	1108.88
1109.28	1109.72	1110.21	1110.74	1111.31	1111.93	1112.57
1113.21	1113.85					

℄ MEDIAN ELEVATIONS

SEE INTERSECTION DETAIL FOR RT. EDGE PAVT. ELEV'S.



PLAN & PROFILE
RAMP "F"

604	602	601	667
Nº 2-6 MED. INLET EACH	MASONRY CONC. CU.YDS.	DUMPED ROCK CU.YDS.	JUTE MATTING SQ.YDS.
1	0.23	1.3	132
1	0.23	1.3	132

298

41

605 6" UNDERDRAINS LIN. FT.	603 CONDUITS - LIN. FT. TYPE B WCL. BEDDING 12"
707.04	
707.12	
254	
246	
220	

608 6-12 CURB CONC. TYPE MEDIAN 2-A LIN. FT.	SQ. YDS.
85	131.7
85	131.7

760

U-1 310+00 - 312+34 RT.
U-2 312+46.62 - 314+93 RT
U-3 313+00 - 315+20 ℄

P-1 A-1 — H-1 RT.

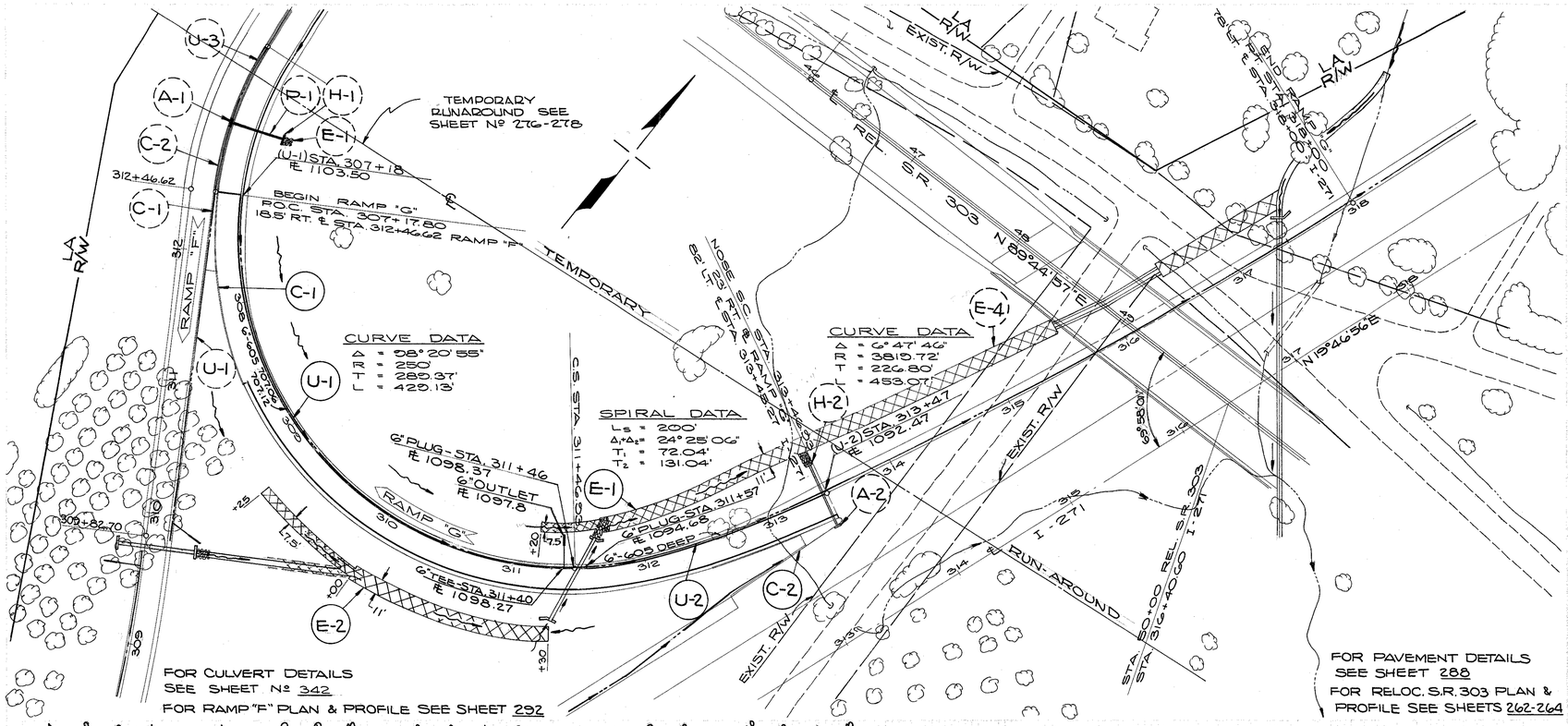
A-1 313+00 (℄ RAMP "E") ℄

H-1 313+00 (41' RT. ℄ RAMP "E") RT.

E-1 312+98 - 313+02 RT.
E-2 314+00 - 41+50 (℄ S.R. 303) LT.

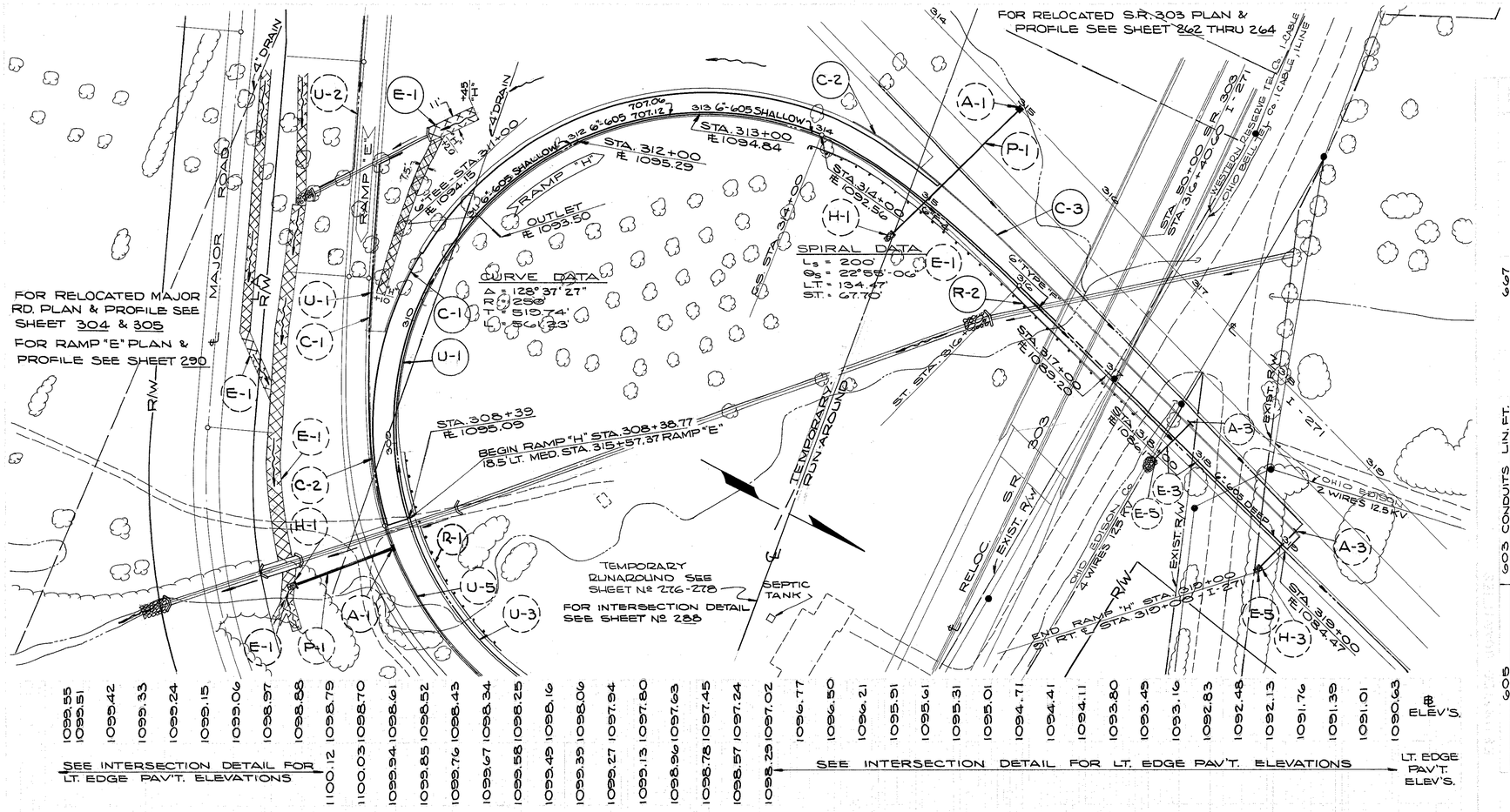
C-1 311+00 - 311+85 RT.
C-2 311+85 - 315+25

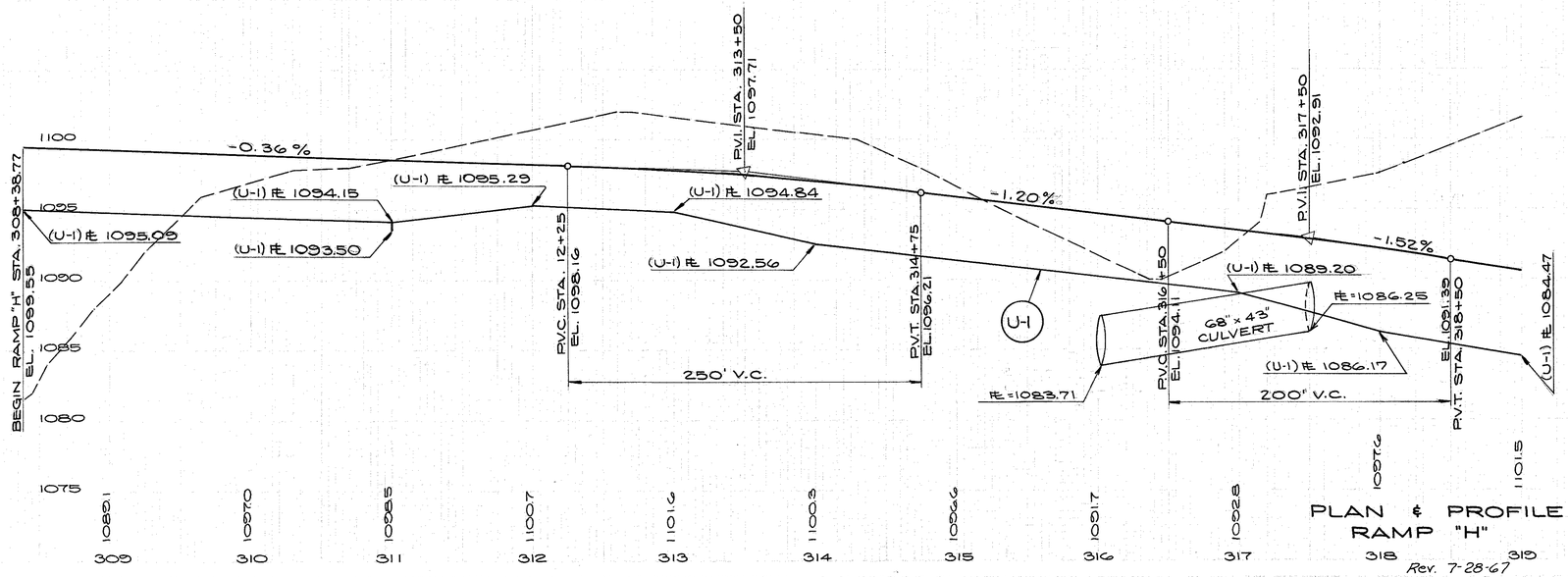
RAMP "F" STA. 310+00 TO STA. 316+00



BASELINE ELEVATIONS

| | | |

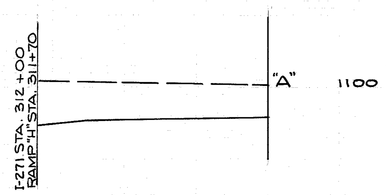




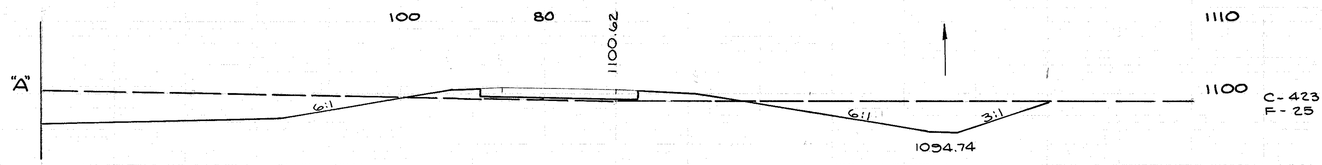
		607 JUTE MATTING SQ. YDS.	603 CONDUITS LIN. FT.		605			609 CURB TYPE 2-4 LIN. FT.	609 CURB TYPE 7 LIN. FT.	609 CURB TYPE 9 LIN. FT.	606 GUARD RAIL 4 TYPE 4 LIN. FT.
			TYPE	℄	BENDS & BANDAGES EACH	6" UNDERDRAINS LIN. FT.	DEEP SHALLOW 707.06 707.12 TEE				
U-1	308+38.77 - 319+00 RT.	160					100 857 100 1				
E-1	310+10 311+45 LT.		30	1			100 857 100 1				
R-2	313+95 317+32.5 RT.							85	68	421	
C-1	309+71.25 - 310+50 LT.										
C-2	314+17 - 314+85 LT.										
C-3	314+85 - 319+00 LT.										
		160	30	1		20	100 857 100 1	85	68	421	312.5

RAMP "H" STA 312+00 TO STA. 319+00

END AREA CU. YDS.



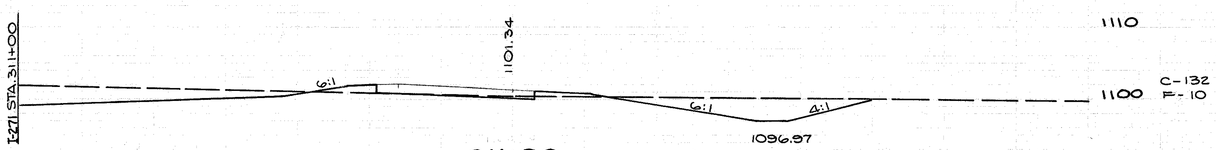
C-1065
F- 74



C-423
F- 25

312+00
1099.0

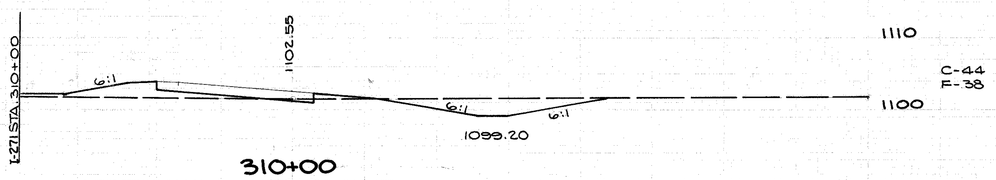
C-1028
F- 65



C-132
F- 10

311+00
1100.4

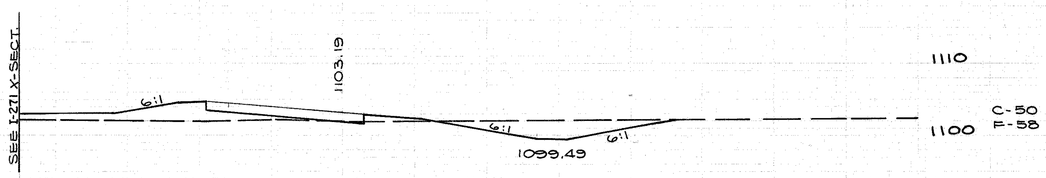
C-326
F- 89



C-44
F-38

310+00
1101.5

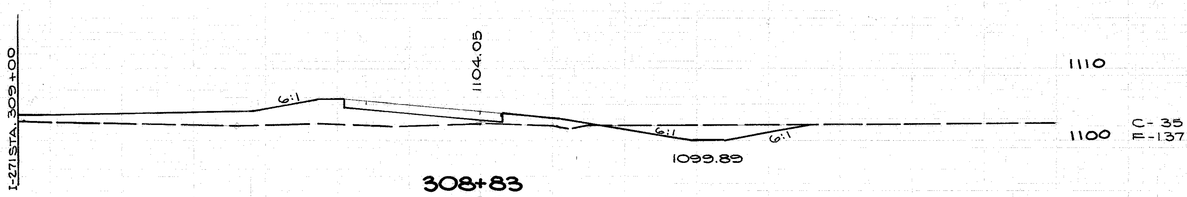
C-87
F-89



C-50
F-58

309+50
1102.0

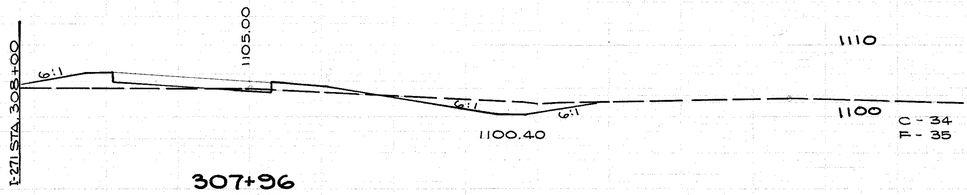
C-105
F-242



C- 35
F-137

308+83
1102.3

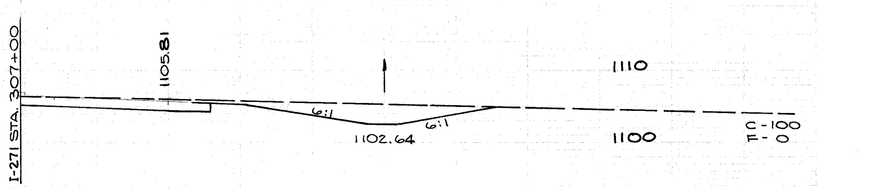
C-111
F-277



C - 34
F - 35

307+96
1103.9

C-243
F-64



C - 100
F - 0

306+98
1106.1

SUM-271-2.98

RAMP "E" STA. 307+00-312+00

80 60 40 20 ℄ 20 40 60 80

END AREA CU. YDS.

SEE S.R. 303
STA. 54+50

D — 1100 — D
100 — 80

D — C-0, F-1950 — D

SECT. TAKEN ALONG EDGE PAV'T. 26.5' RT. ℄ RELOC. S.R. 303

1090

320+00.92

SEE S.R. 303 EXTD.
STA. 54+50

C — 1090 — C
100 — 80

C-157
F-5427

1102.79

1100 C-84
F-954

C — 4:1 — 4:1 — 3:1 — 1090 — C

1091.21

A-2
STA. 318+50(℄)
604 Nº 2-6 MED. INLET
WINDOW-1102.09
℄ 12"— 1098.68

H-2
STA. 318+50(68' RT. ℄)
HW-E HEADWALL
℄ 12" - 1091.71

319+00
1093.0

A-2

C-196
F-3407

1100

P-2 — ℄ U.D. 1097.91 — 4:1 — H-2 — 3:1 — 1090

68'-12" TYPE-B CONDUIT W/CLASS-B BEDDING@10.29%

1091.01

D.R.C.P.
5'x4'x1.5'

SEE S.R. 303 EXTD.
STA. 54+50

B — 1090 — B
100 — 80

1101.86

1100
C- 22
F-886

B — 4:1 — 4:1 — 3:1 — 1090 — B

1090.81

318+00
1092.7

C-122
F-4344

SEE S.R. 303 EXTD.
STA. 54+50

A — 1090 — A
100 — 80

1101.45

1100

A — 4:1 — 2:1 — 4:1 — 3:1 — 1090 — A

C- 44
F-1460

1086.55

317+00
1087.8

1101.11

1100 C-144
F-6741

SEE S.R. 303 EXTD.
STA. 54+50

2:1 — 2:1

1090
C- 34
F-2180

1080

4:1 — 4:1

1076.50

316+00
1079.2

1100.84

C-335
F-5981

1100
C- 147
F-1050

SEE S.R. 303
EXTD.
STA. 54+00±

4:1 — 2:1

1090
SEE MAJOR RD.
X-SECTIONS

4:1

1082.77

C-876
F-2544

315+00
1087.5

A-1
STA. 315+75(℄)
604 Nº 2-6 MED. INLET
WINDOW-1100.86
℄ 6" - 1096.78
℄ 12" - 1096.28

STD. CONC. COLLAR INCLUDED IN THE COST - 603

603 PIPE SPECIAL
25° BEND TYPE-F
℄ 1095.48

RAMP "H" STA. 309+81

1100.50

INCLUDES RAMP "H" { C-326 AH. F-324 AH.
STA. 309+81 C- 57 BK. F-207 BK.

A-1

1100

P-1 — 4:1 — 4:1

36'-12" TYPE-B CONDUIT W/CL-B BEDDING @2.22%

44'-12" TYPE "F" CONDUIT @ 80%

2:1

1090.66

C-387
F-411

315+75

314+00
1095.3

1080

603 PIPE SPECIAL
25° BEND TYPE-F
℄ 1075.98

3'-12" TYPE "F"

CONDUIT
@ 2.00%

H-1

D.R.C.P.
6'x4'x1.5'

1075.45

H-1
STA. 315+75(84' RT. ℄)
HW-E HEADWALL
℄ 12" - 1075.80

RAMP "H" STA. 310+70

1100.46

1100 — C-152, F-15

6:1 — 4:1 — 2:1

1092.51

313+00
1090.2

RAMP "E" STA. 313+00-320+

SUM-271-2.98

80 60 40 20 ℄ 20 40 60 80

296
510

SUM·271·2.98

END AREA CU. YDS.

C-3141 F-0 | C-4084 F-0 | C-4369 F-0 | C-1693 F-0 | C-2586 F-0 | C-3200 F-0

C-2220 F-0 | C-1456 F-0 | C-903 F-0 | C-925 F-0 | C-1100 F-0 | C-957 F-0

1120 / 1110 / 1100

I-271 STA. 310+00
RAMP "G" STA. 310+00

"A"

1110 / 1100

100 120 140 160

309+60
1117.4

309+00
1117.5

308+00
1117.7

307+50
1116.9

306+81
1118.3

305+97
1120.1

I-271 STA. 309+00

I-271 STA. 308+00

SEE I-271 X-SECT.

I-271 STA. 307+00

I-271 STA. 306+00

1108.98

VARIES

1106.14 | 1106.06 | 1106.28 | 1106.58 | 1107.17 | 1108.26

6:1 / 2:1

1102.53 | 1103.06 | 1103.95 | 1104.16 | 1104.75 | 1105.86

309+75
CULVERT INVERT
EL. 1102.28
DITCH EL. 1102.40

0 20 40 60 80

RAMP "F" STA. 305+97-309+60

END AREA CU. YDS.

271

SUM· 271-2.98

298
510

C-1111
F-46
C-50
F-26
1120
1110

C-2696
F-0
C-550
F-0
1120
1110
1100

C-4215
F-0
C-906
F-0
1120
1110
1100

C-2944
F-0
C-1370 AHD.
F-0 AHD.
C-628 BK.
F-0 BK.
1120
1090

C-8962
F-0
C-2224
F-0
C-14440
F-0
C-3204
F-0
1120
1110
1100
1120
1110

C-2020
F-0
1120
1110
1100

SEE S.R.303 EXTENDED STA.43+00

1109.58

6:1

1112.57

315+00

1111.3

6:1

1111.95

3:1

SEE S.R.303 EXTENDED STA.43+00

1109.24

6:1

1110.21

314+00

1114.0

6:1

1109.44

3:1

H-1
STA. 313+00(41' RT.℄)
HW-E HEADWALL
℄ 12" — 1103.54

SEE S.R.303 EXTENDED STA.43+00

4:1

1103.42

(H-1)

6:1

(A-1)

41'-12" TYPE 'B' CONDUIT
WL-B BEDDING
@ 1.30%

℄ EUD 1102.70

D.R.C.P.
6'x4'x1.5'

1108.52

313+00

1115.6

6:1

1108.38

2:1

A-1
STA. 313+00(℄)
604.N42-6 MED. INLET
WINDOW - 1108.35
℄ 6" — 1104.27
℄ 12" — 1104.07

SEE S.R.303EXT'D. X-SECT.

1103.37

6:1

1102.23

1107.33

1108.23

312+00

1117.5

6:1

1106.80

2:1

RAMP "G" STA. 308+50

1103.33

6:1

1105.07

2:1

1107.03

311+00

1118.4

RAMP "G" STA. 309+00

1103.37

6:1

1101.36

6:1

1104.00

2:1

1106.61

310+50

1118.4

RAMP "G" STA. 309+62

1100.7

"A"

1110

1100

100

80

6:1

1102.93

2:1

1106.30

310+00

1118.0

℄

RAMP "F" STA. 310+00-315+00

SUM. 271. 2.98

END AREA CU. YDS.

C-887 F-0 | C-143 F-0 | C-1650 F-0 | C-361 F-0 | C-1277 F-0 | C-539 F-0 | C-1460 F-0 | C-650 F-0 | C-1243 F-0 | C-927 F-0 | C-1938 F-0 | C-840 F-0 | C-1597 F-0 | C-900 F-0 | C-2554 F-0 | C-825 F-0 | C-742 F-0

1090 1100 1110 1100 1110 1100 1110 1100 1110 1100 1120 1110 1100

RAMP "G" STA. 307+62-313+02

END AREA C.U. YDS.

SUM-271-2.98

C-230 F-0
C-1428 F-0
C-565 F-0
C-1850 F-0
C-610 F-0
C-921 F-0
C-346 F-0
C-2089 F-0
C-782 F-0
C-2672 F-37
C-661 F-20
C-1533 F-226
C-265 F-117

1100
1090

SEE S.R. 303 EXTD. STA. 51+00
SEE S.R. 303 EXTD. STA. 52+00±
SEE S.R. 303 EXTD. STA. 53+00±
SEE S.R. 303 EXTD. STA. 51+00

4:1
6:1

1095.86
1096.34
1097.65
1097.36
1098.36
1098.72
1099.04

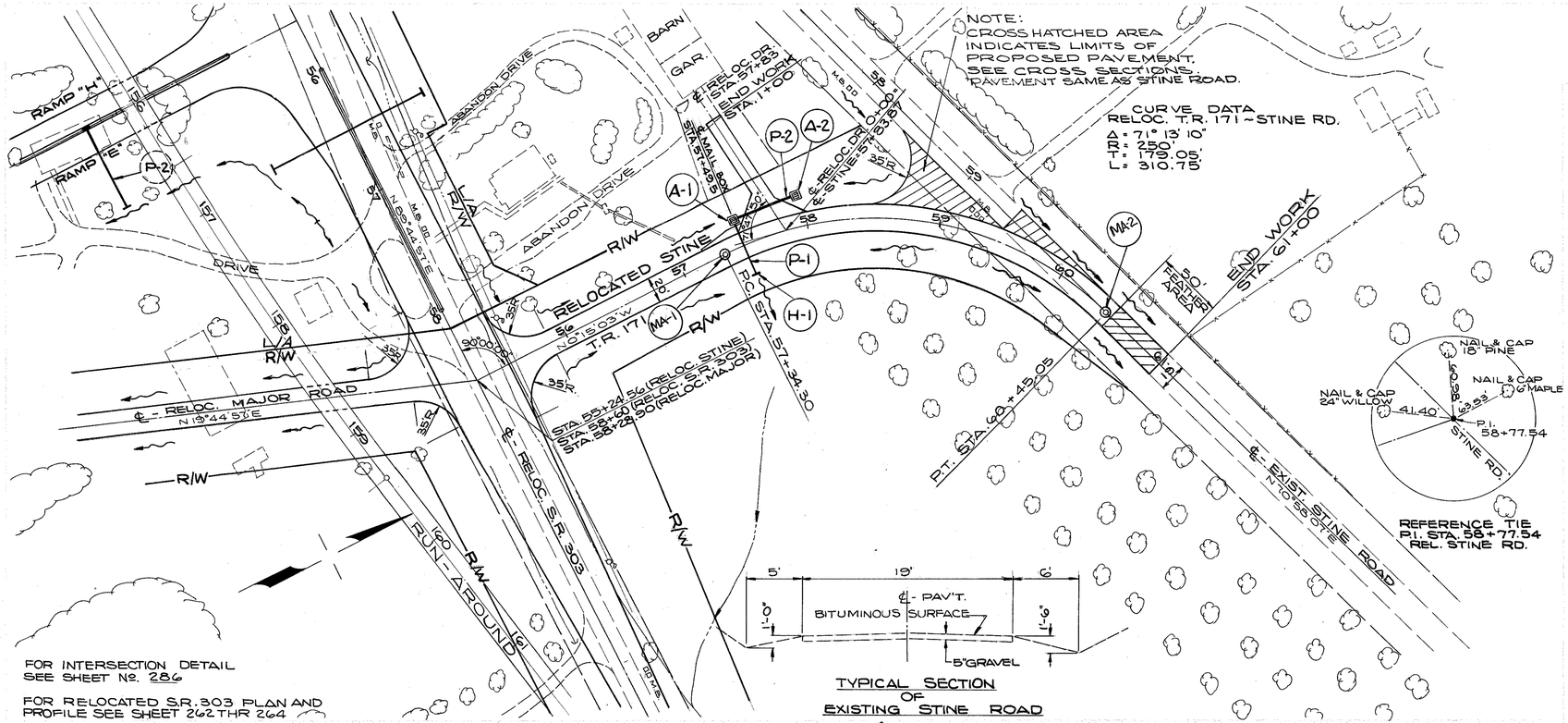
315+04
1095.5
314+07
1100.5
313+22
1101.4
312+70
1101.9
311+70
1100.1
310+70
1098.0
309+81
1095.5

1-271 STA. 315+00
1-271 STA. 314+00
1-271-STA. 313+00
SEE I-271 X-SECT.
1-271 STA. 312+00 RAMP "F" STA. 312+00
RAMP "E" STA. 313+00
SEE RAMP "E" STA. 314+00

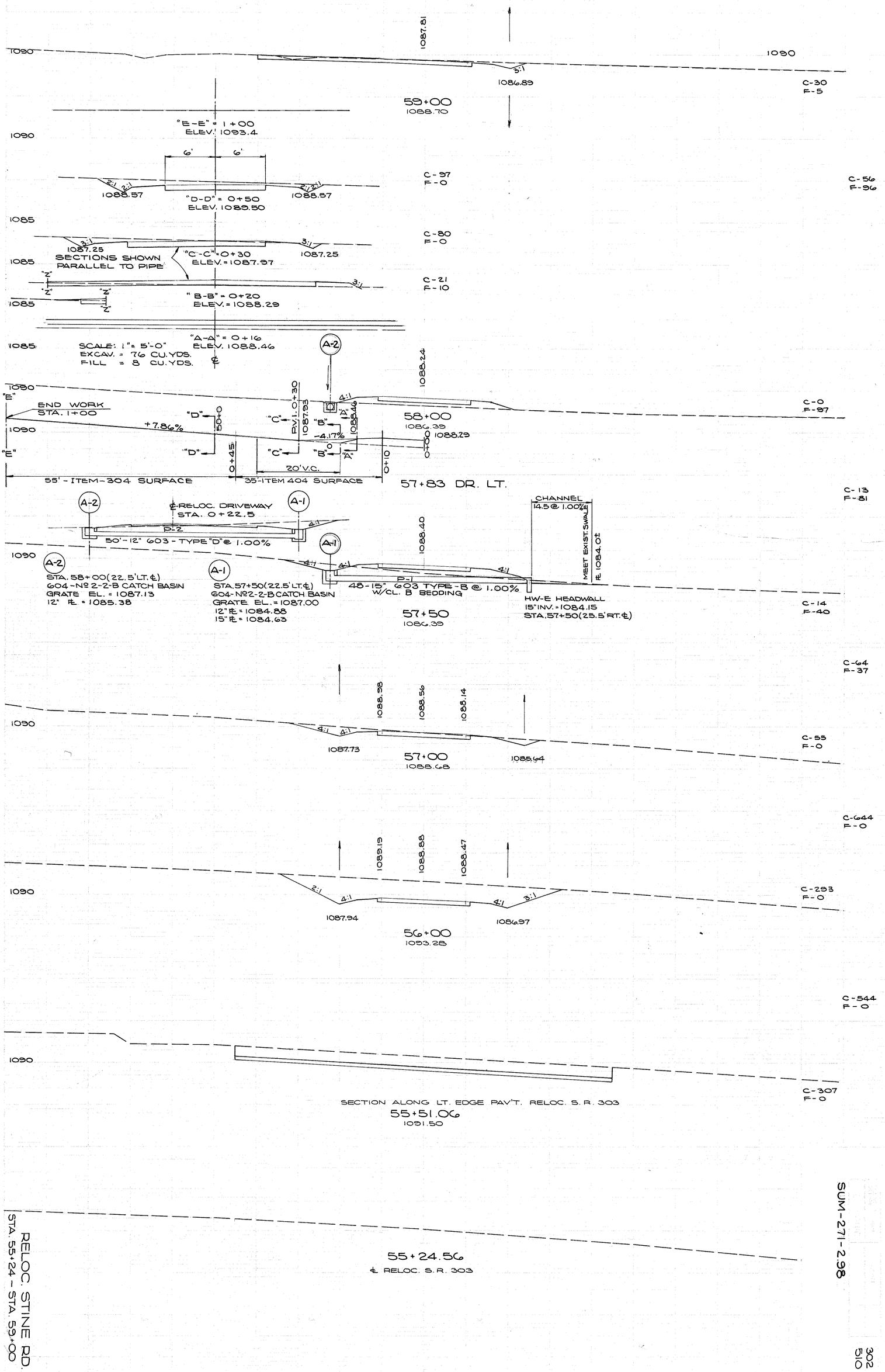
1095.5
1094.40
1094.4

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 310

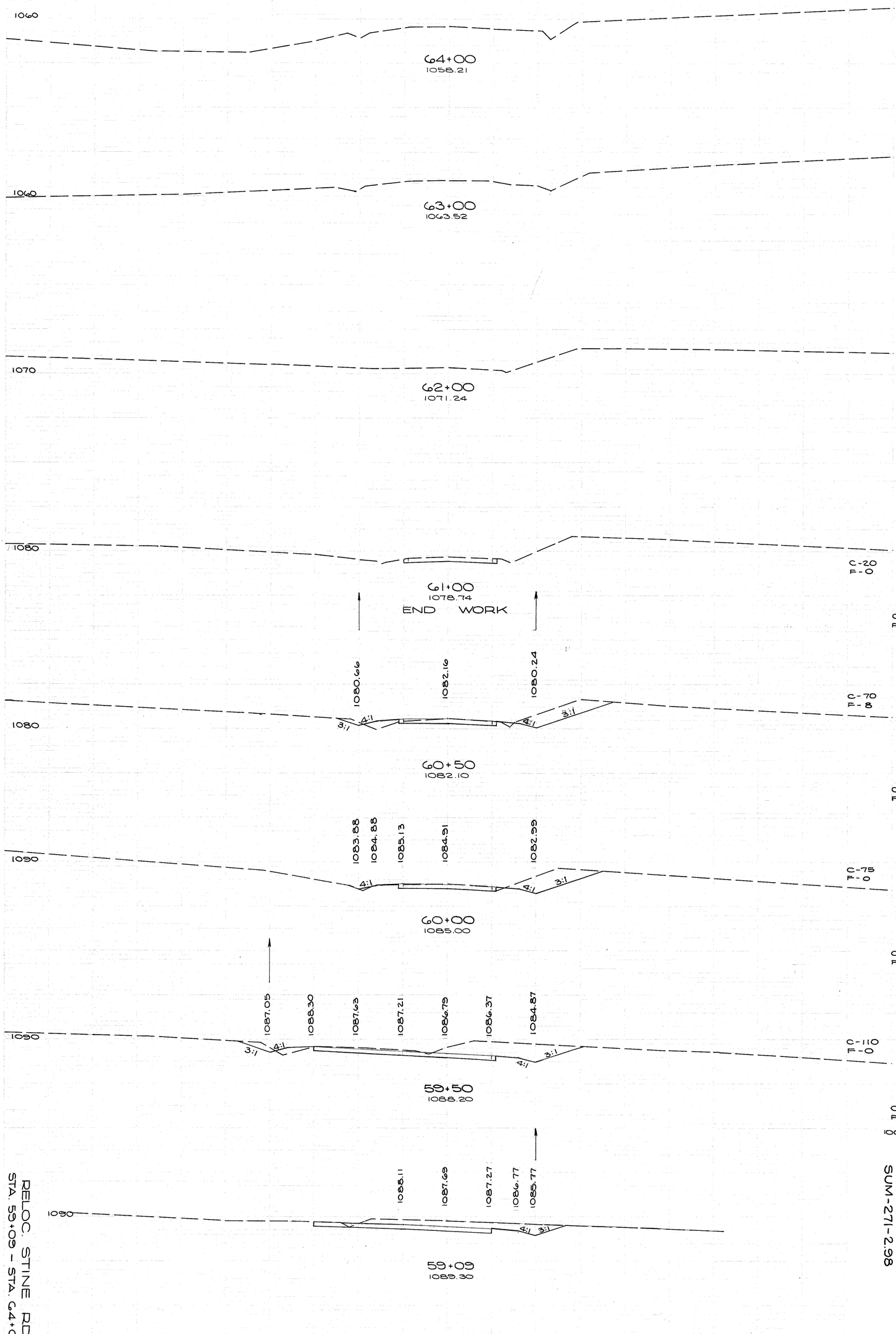
RAMP "H" STA. 309+81-315+04


RAMP "H"
RAMP "E"
P-2
ABANDON DRIVE
BARN
GAR.
℄ RELOC. DR.
STA. 57+83
END WORK
STA. 1+00
A-2
A-1
P-2
℄ RELOC. DR.
℄ STINE RD. STA. 57+83.87
MA-2
MA-1
P-1
H-1
R/W
RELOCATED STINE
T.R. 171
N 01°51'03" W
P.C. STA. 57+34.30
P.T. STA. 60+45.05
END WORK
STA. 61+00
EXIST. 50' ASPH. LEAD
℄ - EXIST STINE ROAD
T.R. 171 ~ STA. 55+06.12
℄ - RELOC. MAJOR ROAD
N 13°44 51" E
℄ - RELOC. S.R. 303
RUN - AROUND
DRIVE
L/A
R/W
STA. 55+24.56 (RELOC. STINE)
STA. 58+60 (RELOC. S.R. 303)
STA. 58+28.50 (RELOC. MAJOR)
NOTE:
CROSS HATCHED AREA INDICATES LIMITS OF PROPOSED PAVEMENT. SEE CROSS SECTIONS. PAVEMENT SAME AS STINE ROAD.
CURVE DATA
RELOC. T.R. 171 ~ STINE RD.
Δ = 71° 13' 10"
R = 250'
T = 179.05'
L = 310.75'
NAIL & CAP 18" PINE
NAIL & CAP 6" MAPLE
NAIL & CAP 24" WILLOW
41.40
63.53
63.58
P.I. 58+77.54
STINE RD.
REFERENCE TIE
P.I. STA. 58+77.54
REL. STINE RD.
5'
19'
6'
1'-0"
1'-6"
℄ - PAV'T.
BITUMINOUS SURFACE
5" GRAVEL
TYPICAL SECTION OF EXISTING STINE ROAD
FOR INTERSECTION DETAIL SEE SHEET No. 286
FOR RELOCATED S.R. 303 PLAN AND PROFILE SEE SHEET 262 THR 264

| | | |

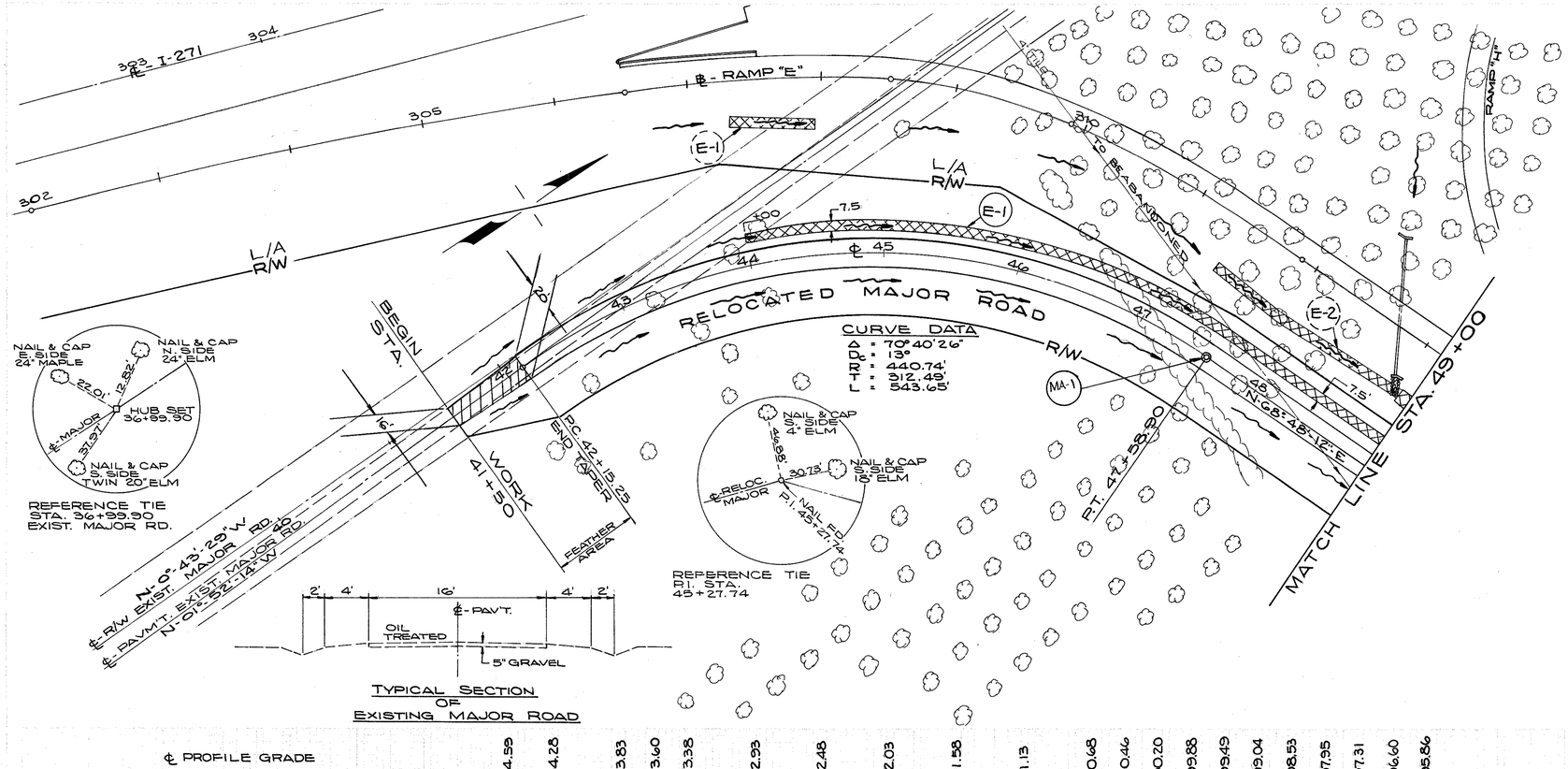

ENDAREA CU.YDS.
1087.81
1090
1086.89
3:1
C-30
F-5
59+00
1088.70
"E-E" = 1+00
ELEV. 1093.4
6'
6'
2:1
2:1
1088.57
"D-D" = 0+50
ELEV. 1089.50
1088.57
C-97
F-0
C-56
F-56
1085
3:1
1087.25
"C-C" = 0+30
ELEV. = 1087.97
1087.25
C-80
F-0
SECTIONS SHOWN
PARALLEL TO PIPE
"B-B" = 0+20
ELEV. = 1088.29
C-21
F-10
"A-A" = 0+16
ELEV. 1088.46
SCALE: 1" = 5'-0"
EXCAV. = 76 CU.YDS.
FILL = 8 CU.YDS.
A-2
1088.24
END WORK
STA. 1+00
+7.86%
"D"
"C"
"B"
"A"
RV 1.0+30
1087.93
-4.17%
1088.46
58+00
1086.39
1088.29
0+00
0+10
0+45
20' V.C.
55'-ITEM-304 SURFACE
35'-ITEM 404 SURFACE
57+83 DR. LT.
C-0
F-97
A-2
A-1
℄ RELOC. DRIVEWAY
STA. 0+22.5
P-2
50'-12" 603-TYPE "D" @ 1.00%
1088.40
CHANNEL
14.5 @ 1.00%
MEET EXIST. SWALE
℄ 1084.0±
C-13
F-81
A-2
STA. 58+00 (22.5' LT. ℄)
604-№2-2-B CATCH BASIN
GRATE EL. = 1087.13
12" ℄ = 1085.38
A-1
STA. 57+50 (22.5' LT. ℄)
604-№2-2-B CATCH BASIN
GRATE EL. = 1087.00
12" ℄ = 1084.88
15" ℄ = 1084.63
P-1
48-15" 603 TYPE-B @ 1.00%
W/CL. B BEDDING
HW-E HEADWALL
15" INV. = 1084.15
STA. 57+50 (25.5' RT. ℄)
57+50
1086.39
C-14
F-40
C-64
F-37
1088.98
1088.56
1088.14
1087.73
57+00
1088.68
1085.64
C-55
F-0
C-644
F-0
1089.13
1088.88
1088.47
2:1
4:1
4:1
3:1
1087.94
1086.97
56+00
1053.28
C-293
F-0
C-544
F-0
C-307
F-0
SECTION ALONG LT. EDGE PAV'T. RELOC. S.R. 303
55+51.06
1091.50
55+24.56
℄ RELOC. S.R. 303
RELOC. STINE RD.
STA. 55+24 - STA. 59+00
SUM-271-2.98
100
80
60
40
20
℄
20
40
60
80
302
510

END AREA CU. YDS.



RELOC. STINE RD.
STA. 59+09 – STA. 64+00

SUM-271-2.98



℄ PROFILE GRADE

LEFT EDGE PAV'T. ELEVATIONS

RIGHT EDGE PAV'T. ELEVATIONS

| | | |

FOR PLAN & PROFILE S.R. 303
SEE SHEETS Nº 262 TO 264

MATCH LINE STA. 49+00

RAMP "H"

RAMP "E"

4" TILE

N 66°48'12" E 50

E-1

E-2

E-3

R-1

R-2

MA-1

MA-2

P.C. STA. 50+75.57

CURVE DATA
Δ = 49°03'15"
Dc = 12°
R = 477.46'
T = 217.86'
L = 408.78'

T. R. 172

RELOCATED MAJOR ROAD

N 15°-44'-57" E

P.I. STA. 54+84.45

RUN-AROUND LA

WELL (DRILLED)

1½ STY FR. HSE

2½ STY FR. HSE

BARN

SILO

CHIMNEY

OHIO BELL TEL. CO. 1-TRACK, 1-CABLE, 1-LINE

OHIO EDISON 7.5 KV

EXIST. R/W

R/W

℄ - RELOC. STINE RD.
N 0°-15'-03" W

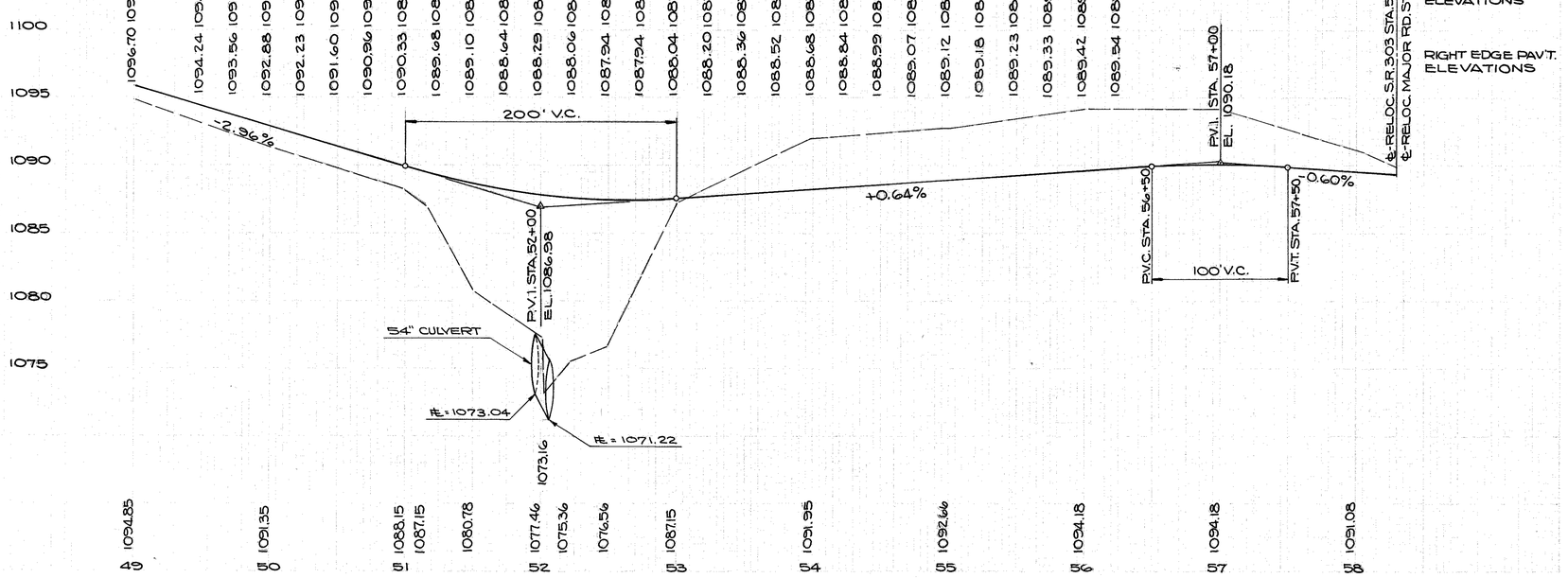
℄ - RELOC. S.R. 303
N 89°-44'-57" E

STA. 56+28.90 (REL. MAJOR)
STA. 56+60 (REL. S.R. 303)
STA. 55+24.56 (REL. STINE)

REFERENCE TIE
STA. 52+99.73
REL. MAJOR RD.
NAIL & CAP W. SIDE 6" MAPLE
HUB SET @ P.I.
NAIL & CAP S. SIDE 18" MAPLE
NAIL & CAP W. SIDE 6" MAPLE
25.18'
5.89'
13.56'

REFERENCE TIE
STA. 55+28.90
REL. MAJOR RD.
NAIL & CAP E. SIDE POLE
PK. SET 56+28.90
NAIL & CAP E. SIDE 10" PINE
MAJOR RD.
S 34°52' W 28.90'
S 51°30' E 5.30'

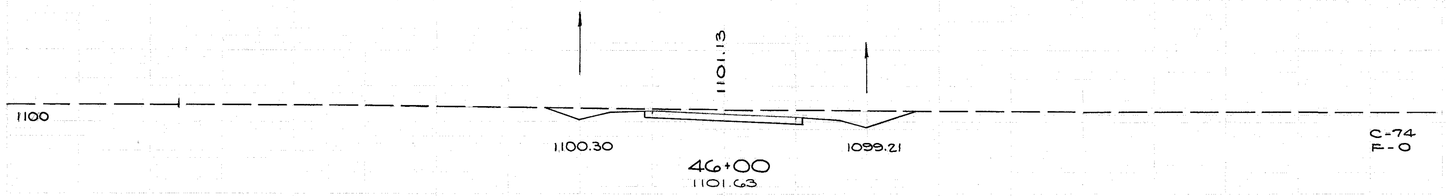
FOR INTERSECTION DETAIL
SEE SHEET Nº 286
FOR CULVERT DETAIL RELOC.
MAJOR ROAD SEE SHEET Nº 341



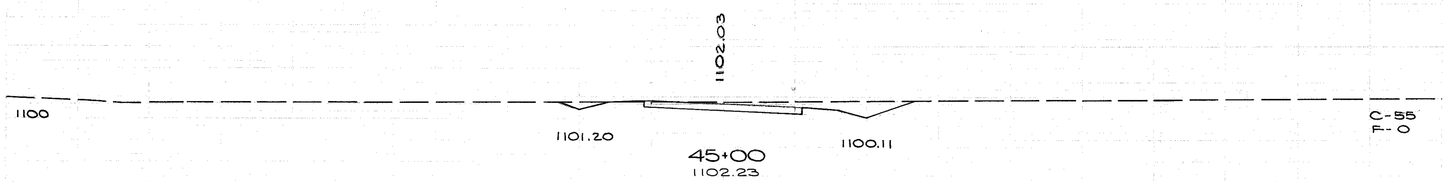
			G06 GUARD RAIL TYPE 4 WEST STD.	G04 MON. ASSEM. EACH	G07 JUTE MATTING SQ.YDS.
E-1	49+00 - 50+50	LT.			
R-1	51+00 - 53+00	LT.	200'		
R-2	51+00 - 53+00	RT.	200'		
				1	
MA-1	50+75.57	℄		1	
MA-2	54+84.45	℄		1	
					125
					2
					400

STA. 49+00 TO STA. 58+00, T. R. 172 RELOCATED MAJOR ROAD

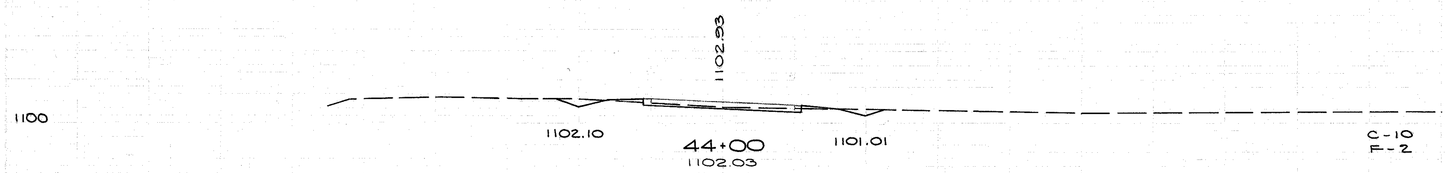
ENDAREA CU.YDS.



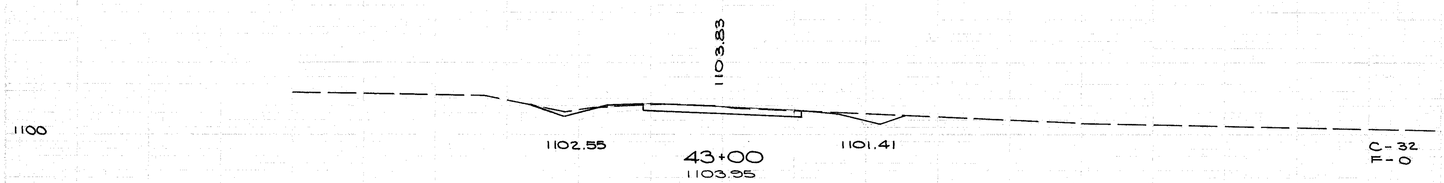
C-239
F-0



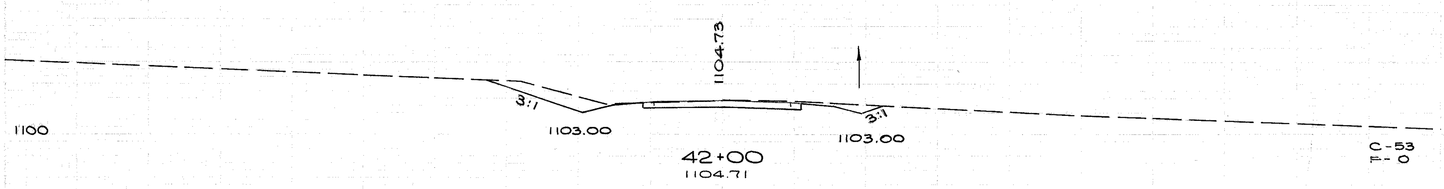
C-120
F-4



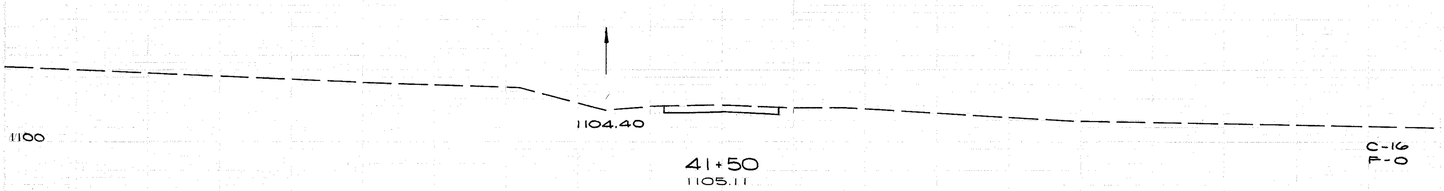
C-78
F-4

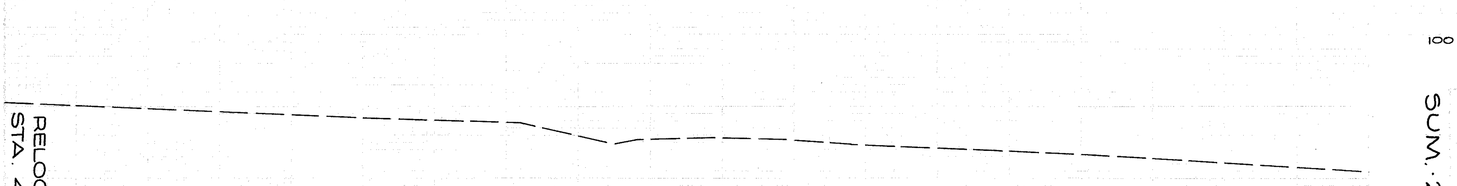


C-157
F-0



C-64
F-0





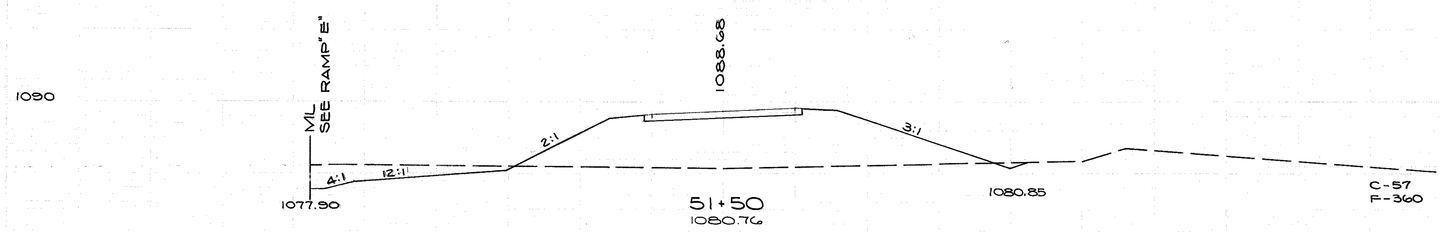
RELOC. MAJOR RD.
STA. 41+00 - 46+00

SUM. 271.98

306
510

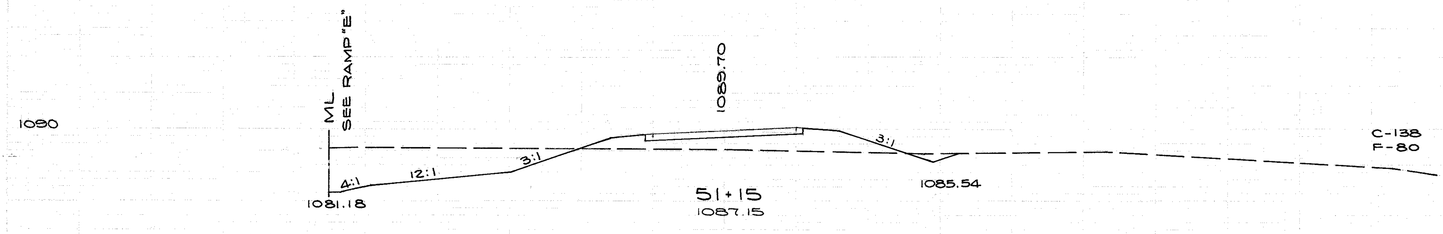
100 80 60 40 20 ℄ 20 40 60 80

END AREA CU. YDS.



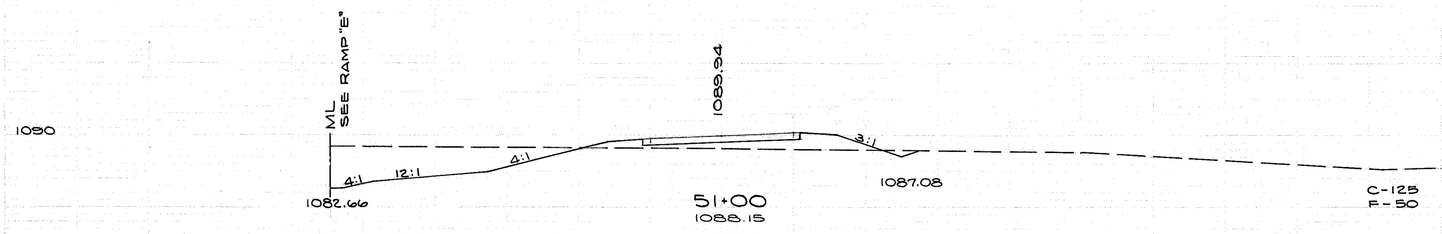
C-57
F-360

C-126
F-285



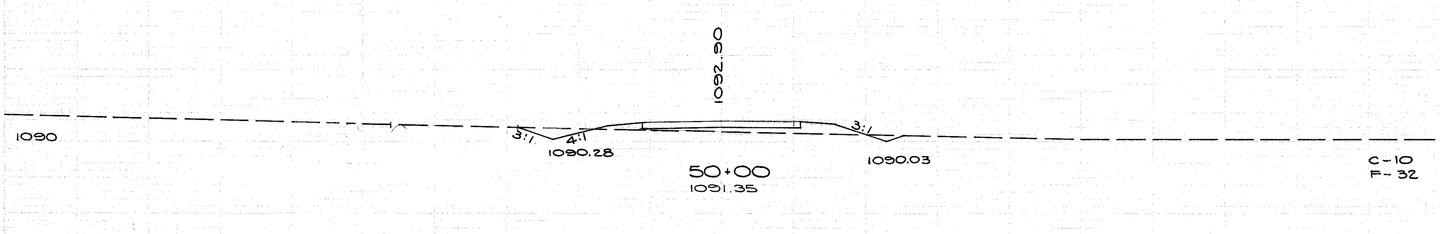
C-138
F-80

C-73
F-36



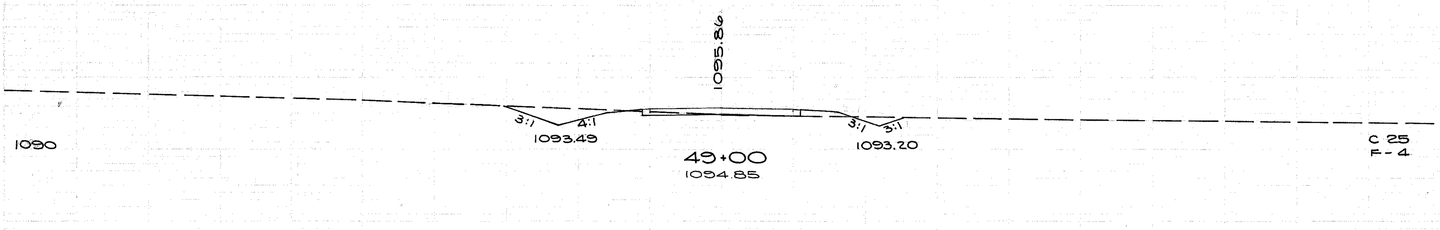
C-125
F-50

C-250
F-152



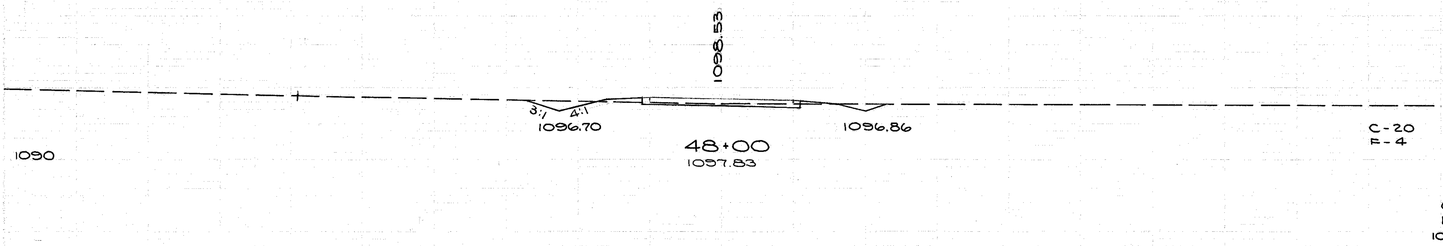
C-10
F-32

C-65
F-67



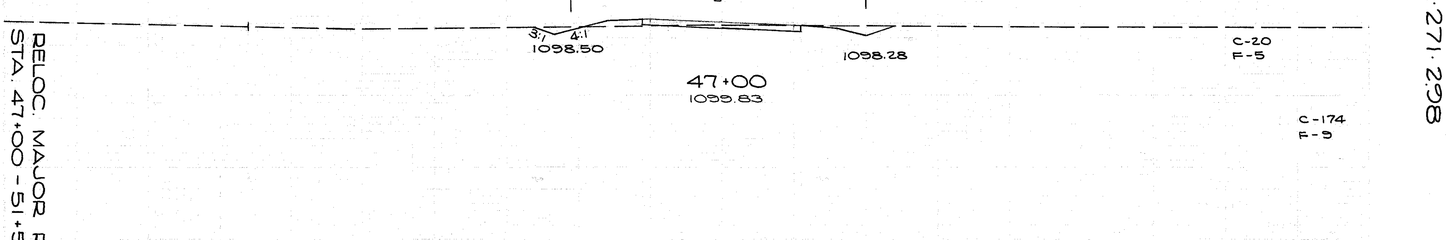
C 25
F-4

C-83
F-15



C-20
F-4

C-74
F-17
100



C-20
F-5

C-174
F-5

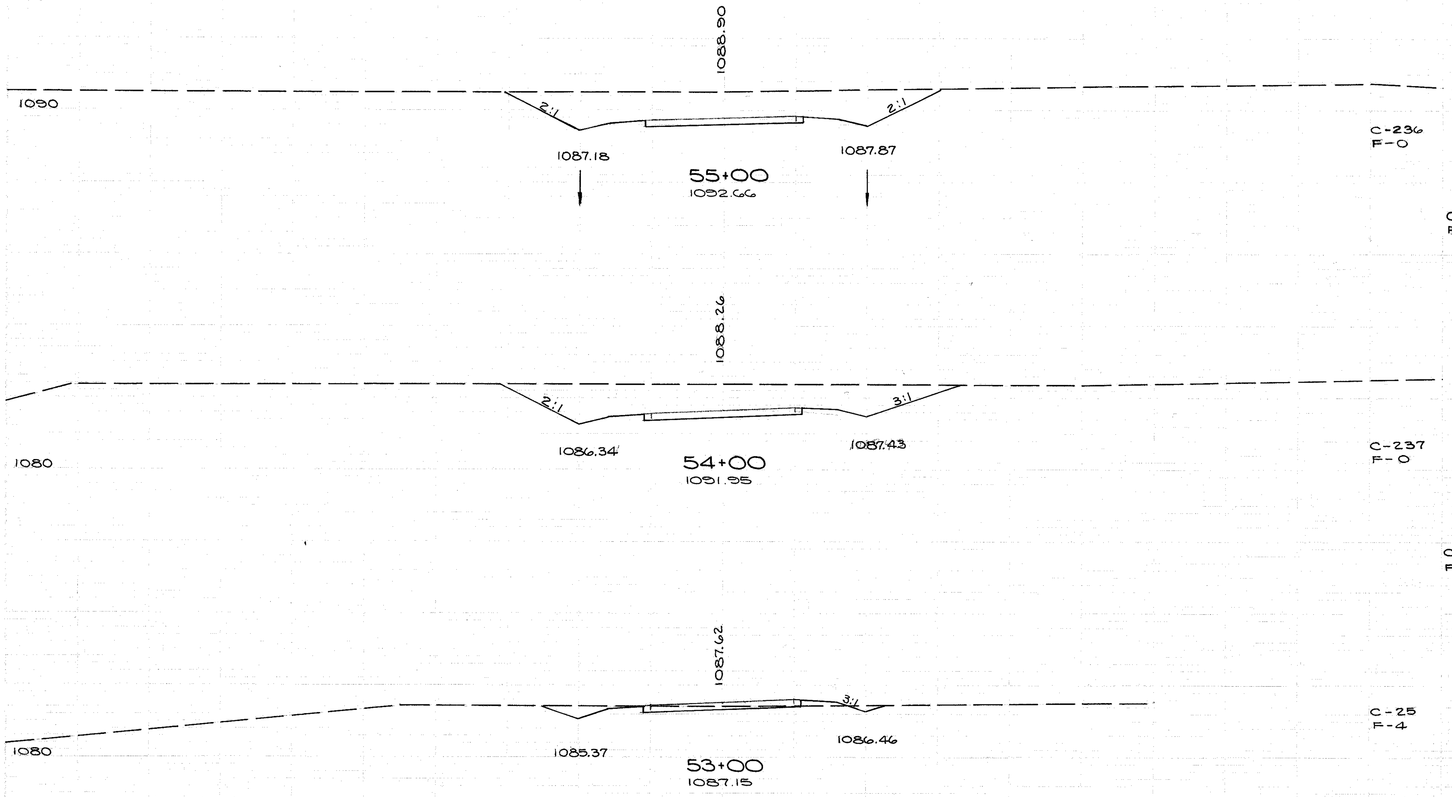
SUM: 271.298

RELOC. MAJOR RD.
STA. 47+00 - 51+50

100 80 60 40 20 0 20 40 60 80

307
510

ENDAREA CU. YDS.



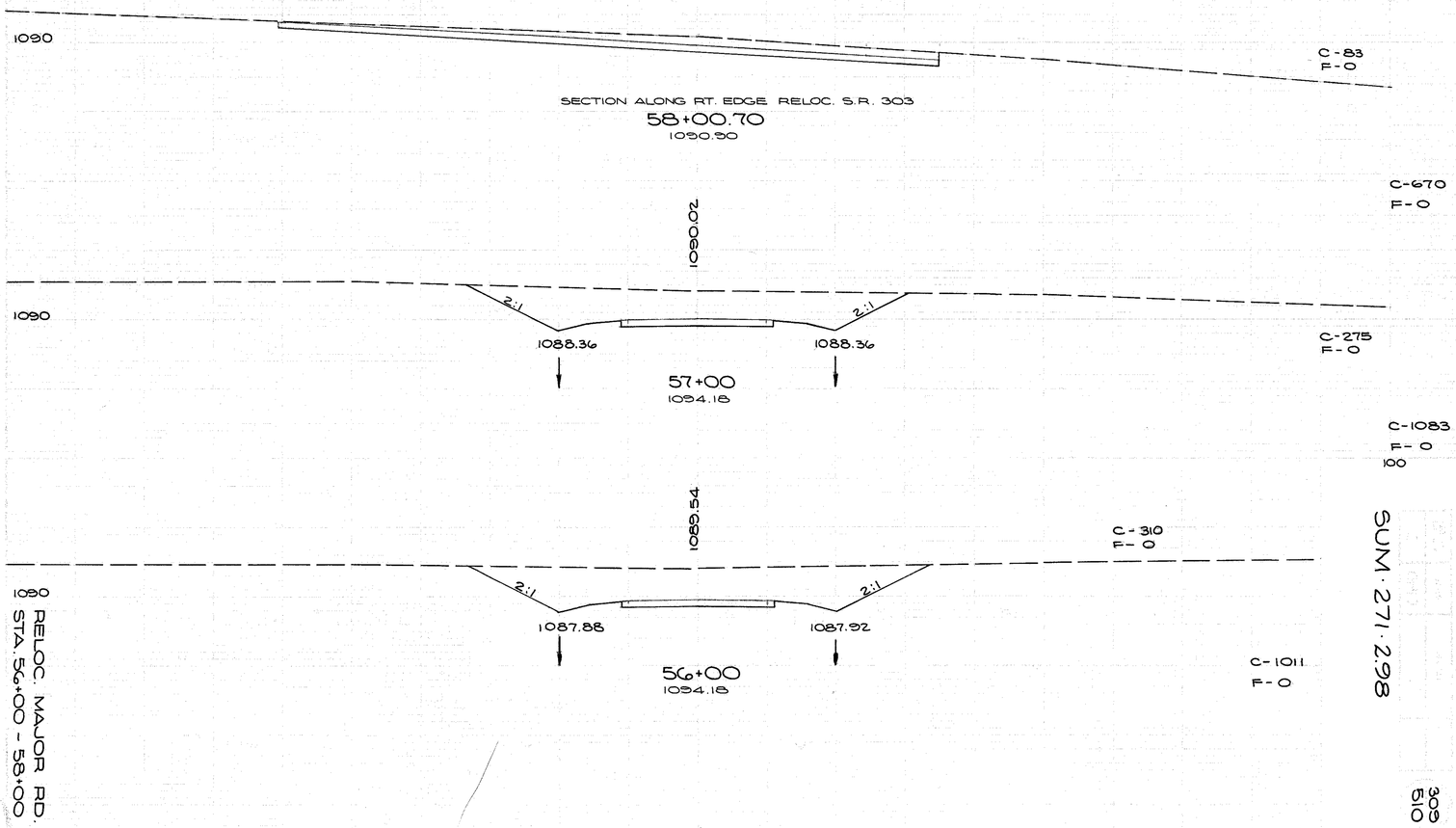
RELOC. MAJOR RD.
STA. 52+00 - 55+00

SUM: 271 · 298

100 80 60 40 20 ℄ 20 40 60 80

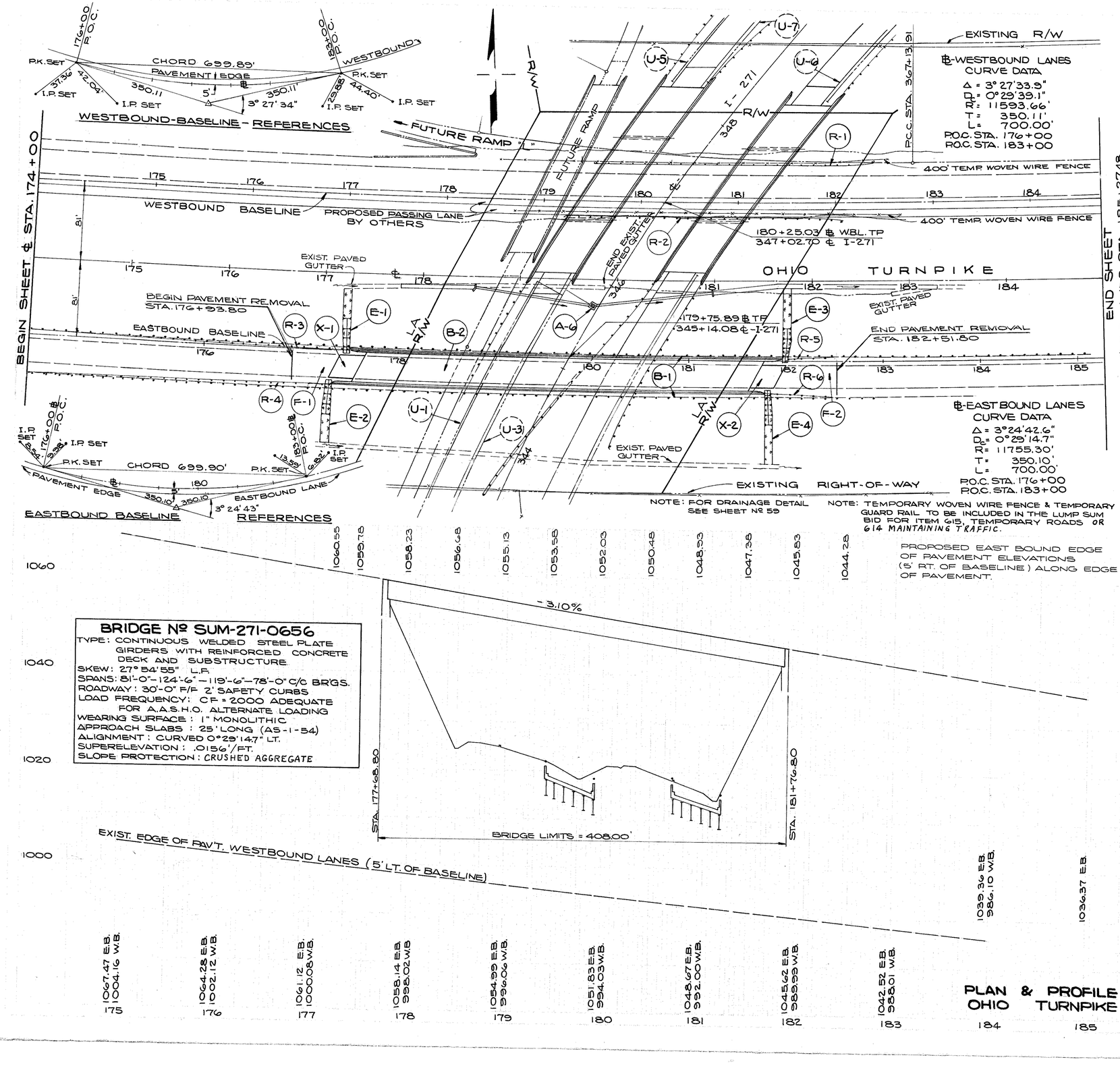
308
510

ENDAREA CU. YDS.



SUM 271.298

303
510



BRIDGE Nº SUM-271-0656

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 27° 54' 55" L.F.
SPANS: 81'-0"-124'-6"-119'-6"-78'-0" C/C BR'GS.
ROADWAY: 30'-0" F/F 2' SAFETY CURBS
LOAD FREQUENCY: C.F. = 2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: CURVED 0° 29' 14.7" LT.
SUPERELEVATION: .0156'/FT.
SLOPE PROTECTION: CRUSHED AGGREGATE

BEGIN SHEET ℄ STA. 174+00

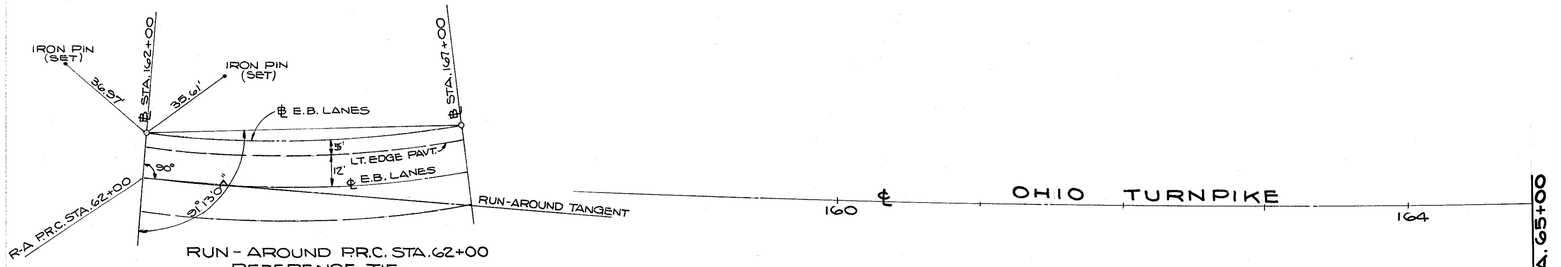
END SHEET
℄ E.B. LANES STA. 185+27.48
STA. 185+00
℄ W.B. LANES STA. 184+72.65

NOTE: FOR TEMPORARY RUN-AROUND SEE SHEET Nº 311 TO 315.

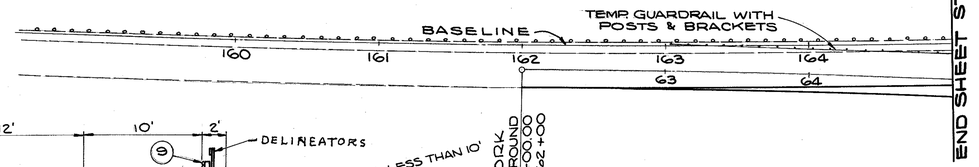
SUM-271-2.98

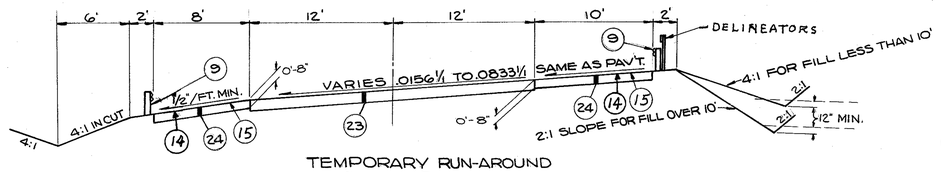
| | | |

SUM-271-2.98



RUN - AROUND P.R.C. STA. 62+00
REFERENCE TIE





TEMPORARY RUN-AROUND
TYPICAL SECTION

(23) 615 CLASS-A, TEMPORARY PAVEMENT

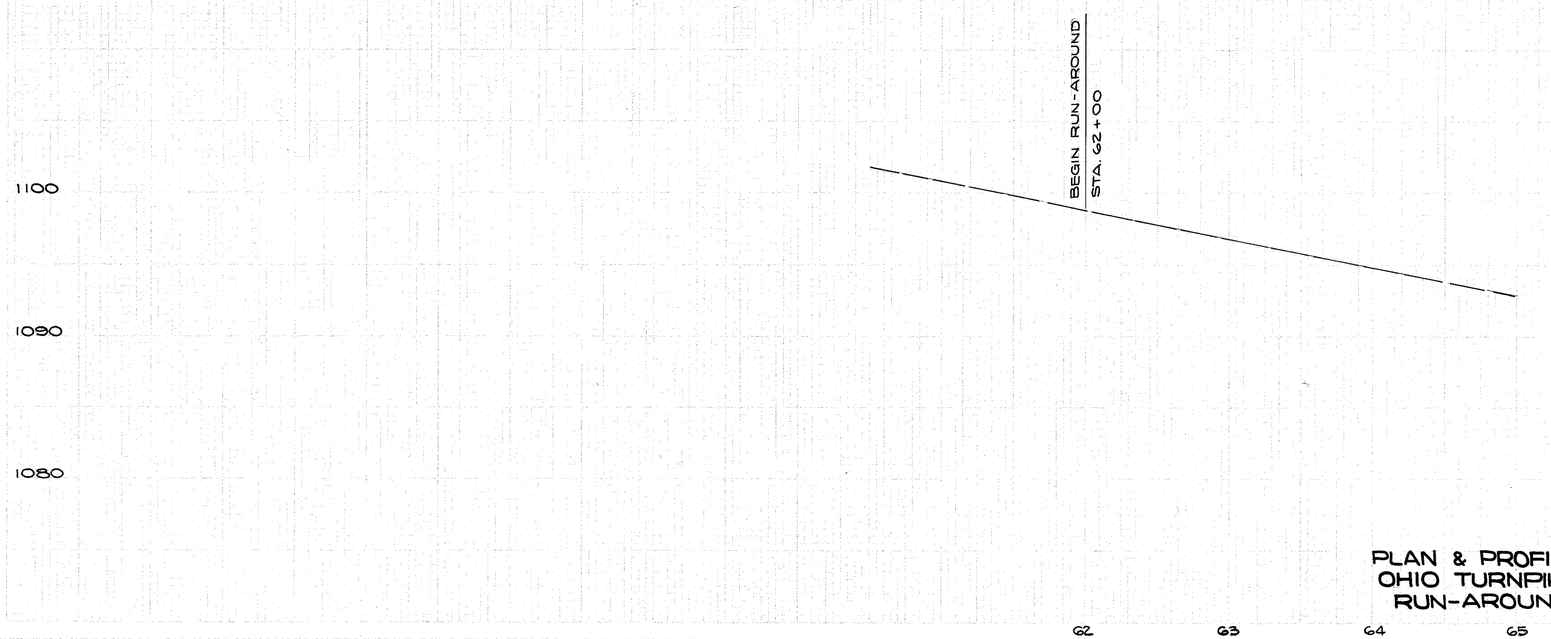
(24) 411 8"STABILIZED CRUSHED AGGREGATE

(9) 606 GUARDRAIL, TYPE 4

THESE ITEMS INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 615, "TEMPORARY ROADS"

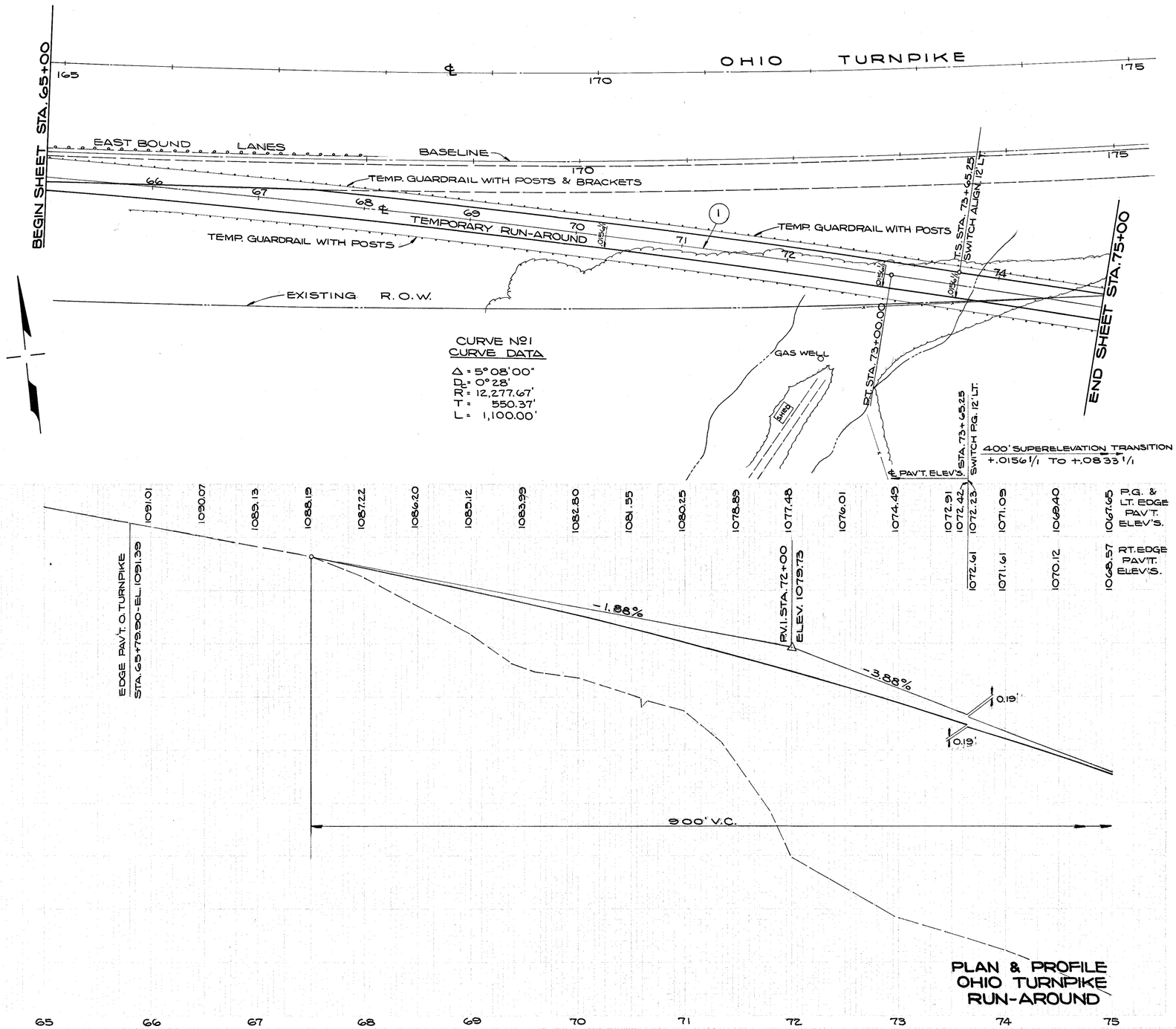
(15) 409 SEAL COAT BITUMINOUS MATERIAL APPLIED AT 0.3 GAL./SQ. YD., 702.09 RT-8 OR RT9, OR 702.03 CBAE-3
409 SEAL COAT COVER AGGREGATE, Nº 8, APPLIED AT 0.008 CU.YD./SQ.YD.

(14) 408 BITUMINOUS PRIME COAT, 702.09 RT-2 OR RT-3 APPLIED AT THE RATE OF 0.40 GAL. PER S.Y.



PLAN & PROFILE
OHIO TURNPIKE
RUN-AROUND

SUM-271-2.98



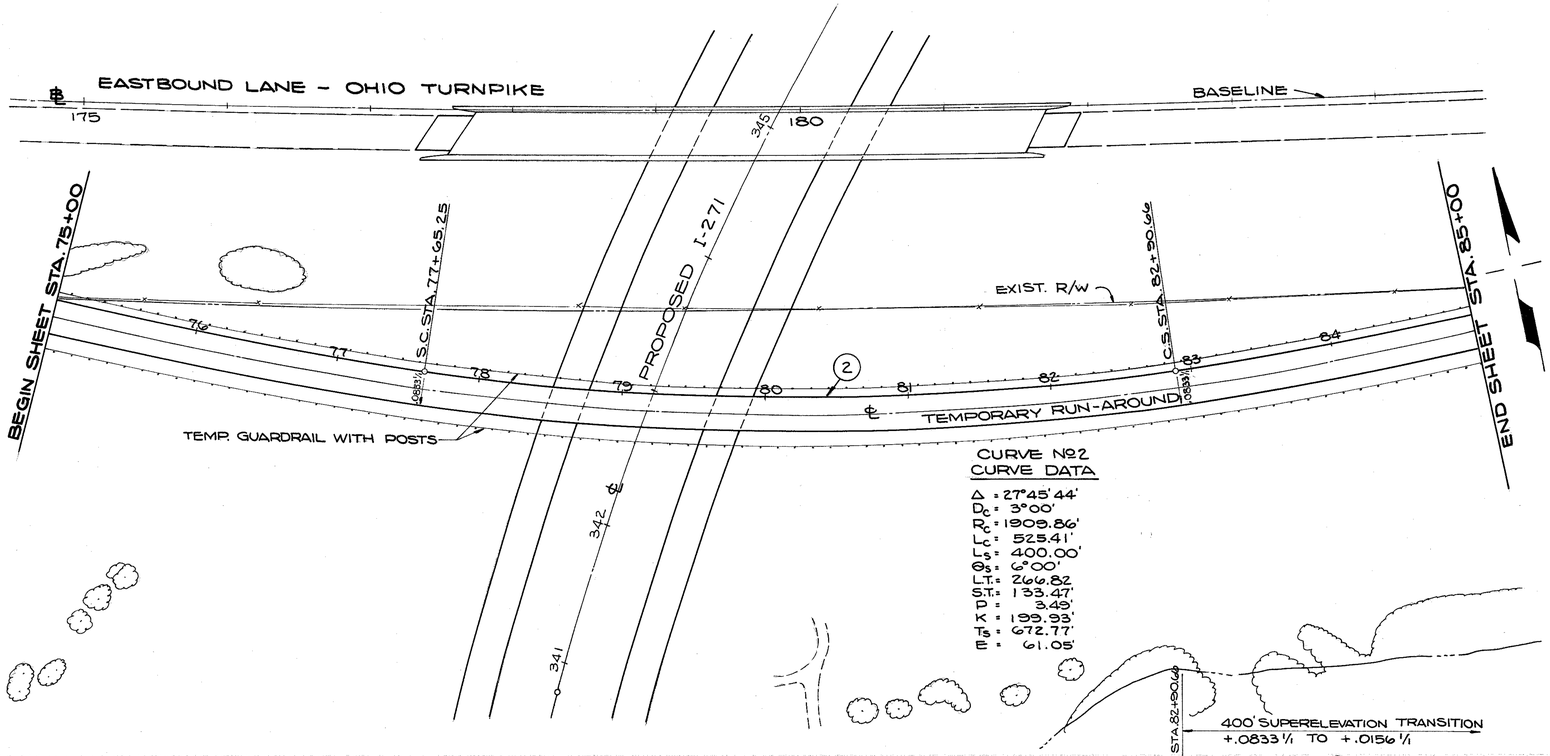
PLAN & PROFILE
OHIO TURNPIKE
RUN-AROUND

615 CLASS A TEMP PAVEMENT SQ.YDS.	2733
62+00 - 75+00	

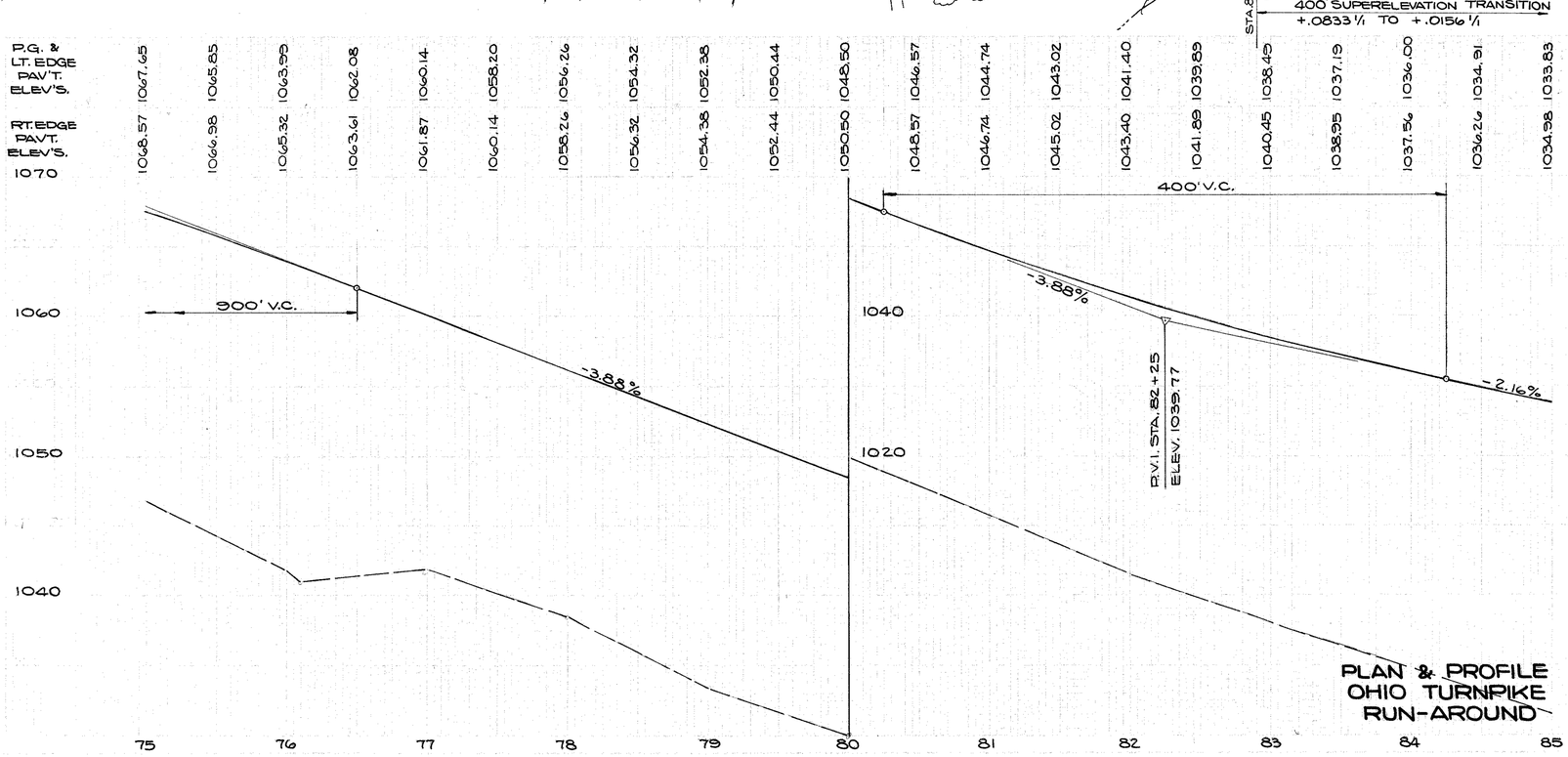
2733

313
510

SUM-271-2.98



P.G. & LT. EDGE PAV'T. ELEV'S.	1067.65	1065.85	1063.99	1062.08	1060.14	1058.20	1056.26	1054.32	1052.38	1050.44	1048.50	1046.57	1044.74	1043.02	1041.40	1039.89	1038.45	1037.19	1036.00	1034.91	1033.83	
RT. EDGE PAV'T. ELEV'S.	1068.57	1066.98	1065.32	1063.61	1061.87	1060.14	1058.26	1056.32	1054.38	1052.44	1050.50	1048.57	1046.74	1045.02	1043.40	1041.89	1040.45	1038.95	1037.56	1036.26	1034.98	



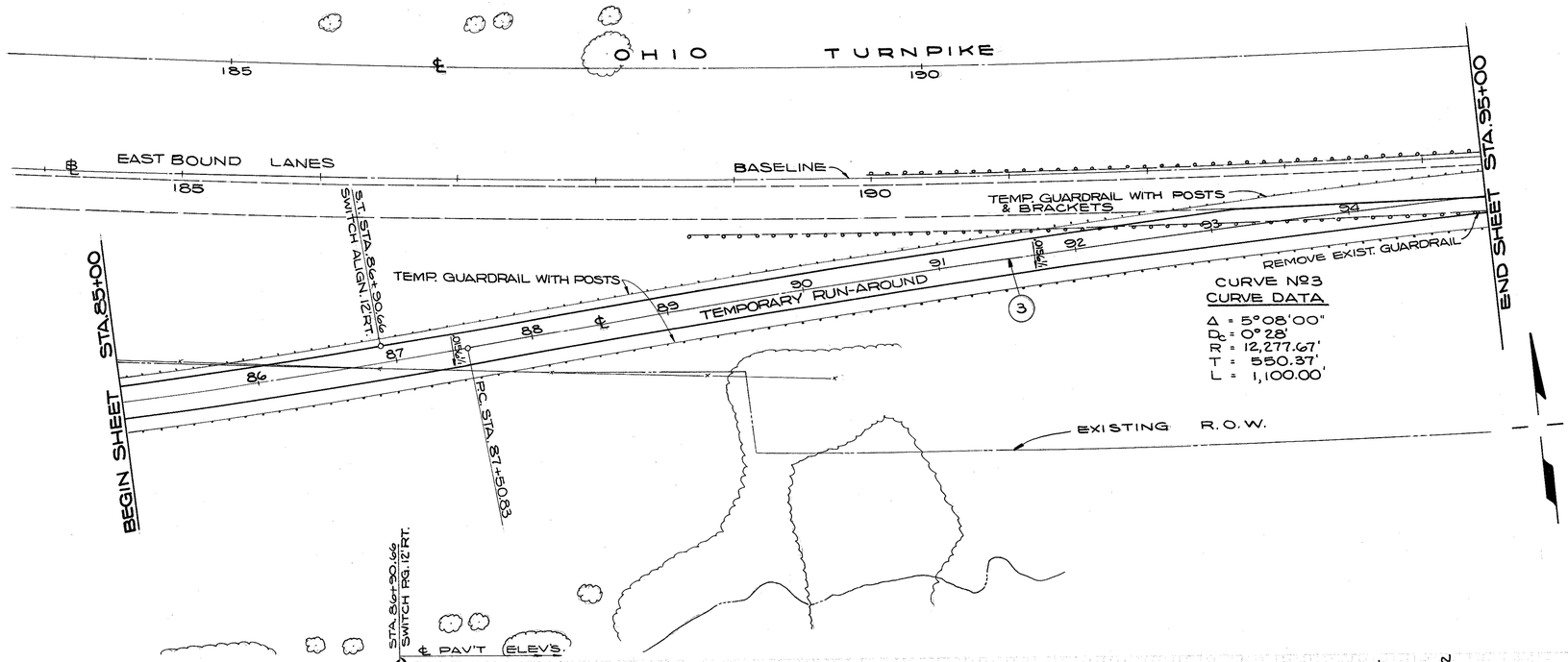
PLAN & PROFILE
OHIO TURNPIKE
RUN-AROUND

615 CLASS-A TEMP. PAVEMENT SQ. YDS. 2667

75+00 - 85+00

2667

SUM-271-2.98

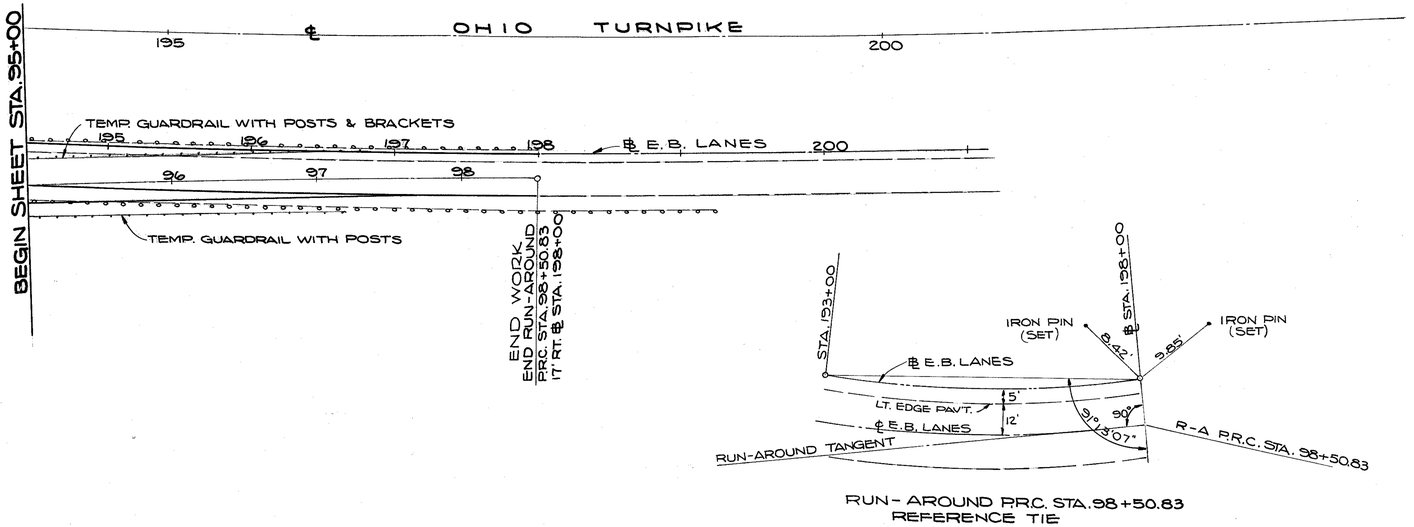


PLAN & PROFILE
OHIO TURNPIKE
RUN-AROUND

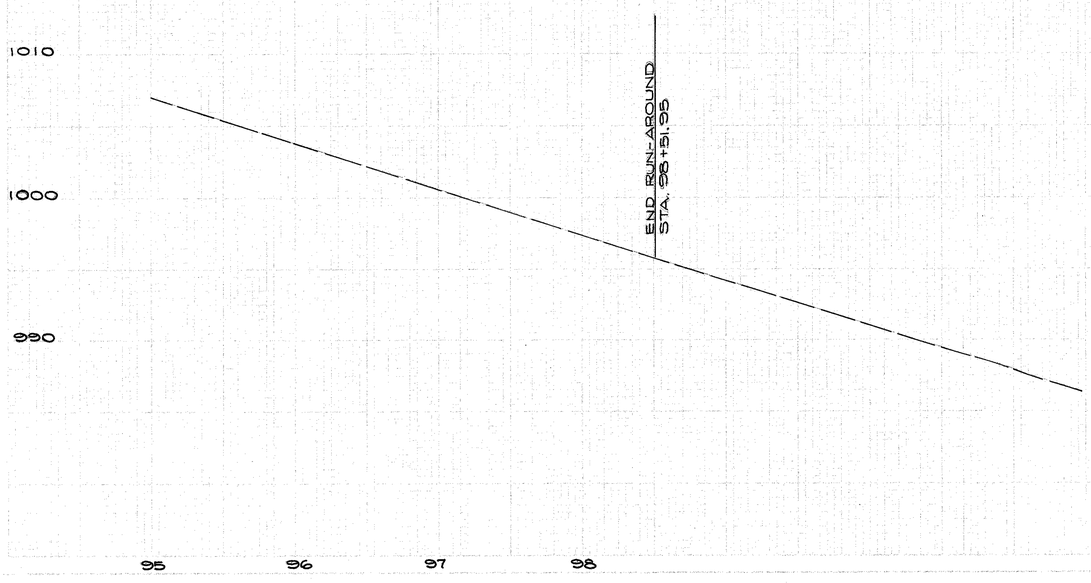
4.15 CLASS A TEMP PAVEMENT	SQ. YDS.
85+00 - 98+50.83	2901

2901

SUM-271-2.98



RUN-AROUND P.R.C. STA. 98+50.83
REFERENCE TIE

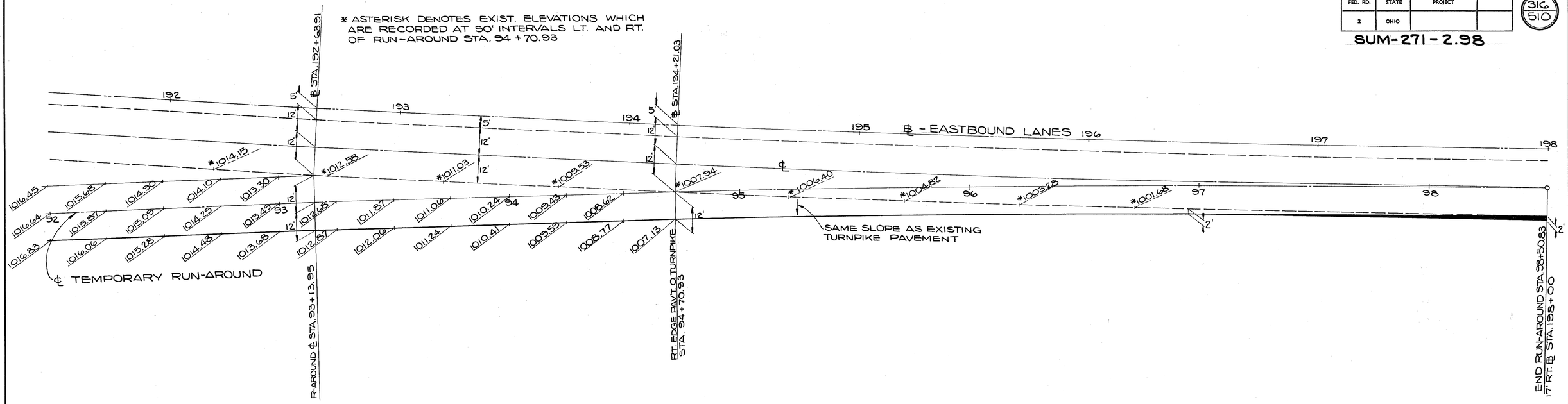


PLAN & PROFILE
OHIO TURNPIKE
RUN-AROUND

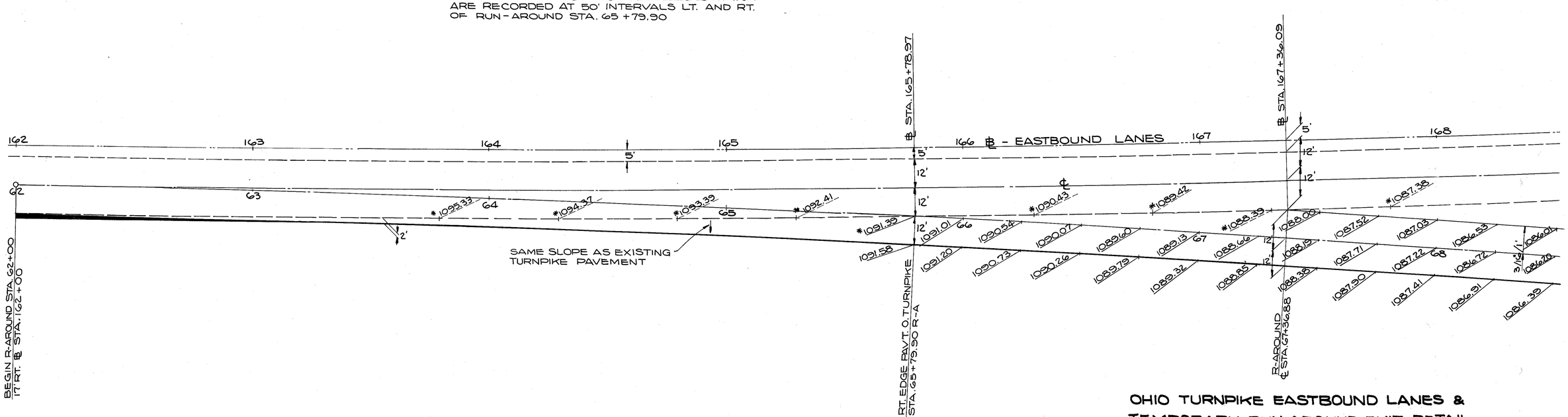
FED. RD.	STATE	PROJECT	
2	OHIO		

316
510

SUM-271-2.98



OHIO TURNPIKE EASTBOUND LANES &
TEMPORARY RUN-AROUND ENTRANCE DETAIL



OHIO TURNPIKE EASTBOUND LANES &
TEMPORARY RUN-AROUND EXIT DETAIL

K & E - AKRON

SUM-271 - 2.98

62+00 BEGIN WORK

℄ EXIST. PAV'T.

63+00

℄ EXIST. PAV'T.

64+00

℄ EXIST. PAV'T.

65+00

℄ EXIST. PAV'T.

66+00

1091.01

1091.20

℄ EXIST. PAV'T.

67+00

1089.13

1089.32

VARIES

4:1

1:2

℄ EXIST. PAV'T.

68+00

1087.22

1087.41

VARIES

4:1

EDGE EXIST. PAV'T.

1087.03

69+00

1085.12

1085.31

4:1

1:2

EDGE EXIST. PAV'T.

1084.93

70+00

1082.80

1082.99

4:1

EDGE EXIST. PAV'T.

1082.61

71+00

1080.25

1080.44

4:1

EDGE EXIST. PAV'T.

1080.06

72+00

1077.48

1077.67

2:1

1:2

EDGE EXIST. PAV'T.

1077.29

1060 1070 1080 1090 1100 1110

0 20 40 60 80

OHIO TURNPIKE RUN-AROUND
STA. 62+00 TO STA. 72+00

318
510

SUM-271-2.98

OHIO TURNPIKE RUN-AROUND
STA. 73+00 TO STA. 81+00

SUM-271-2.98

OHIO TURNPIKE RUN-AROUND
STA. 82+00 TO STA. 89+00

320
510

SUM-271-2.98

"B" "A"

160 160

150 150

940 950

"B" "A"

2:1 2:1 2:1 2:1 2:1 2:1 2:1 2:1 2:1 2:1 2:1

120 100 80 60 40 20 ℄ 20 40

98+50.83 END WORK

98+00 97+00 96+00 95+00 94+00 93+00 92+00 91+00 90+00

℄ EXIST. PAV'T. ℄ EXIST. PAV'T. ℄ EXIST. PAV'T. ℄ EXIST. PAV'T. ℄ EXIST. PAV'T. EDGE EXIST PAV'T. EDGE EXIST. PAV'T. EDGE EXIST PAV'T. EDGE EXIST. PAV'T.

1010.43 1013.68 1016.83 1016.64 1016.95 1019.81 1019.62 1019.43 1022.60 1022.41 1022.22

1.4

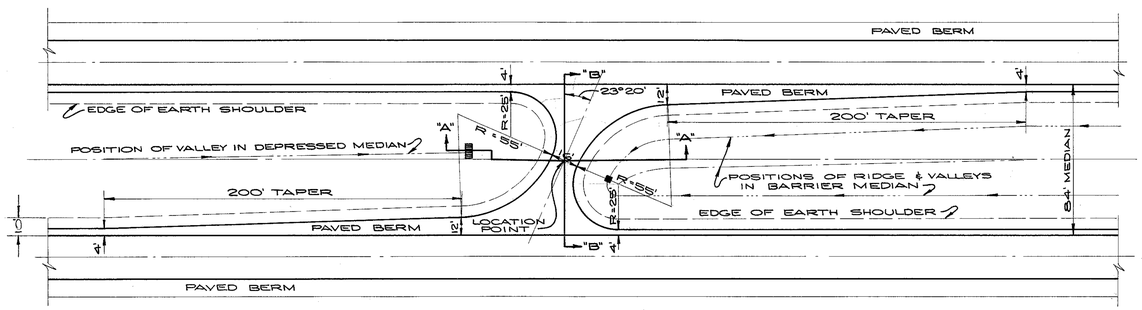
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OHIO TURNPIKE RUN-AROUND
STA. 90+00 TO STA. 98+50.83

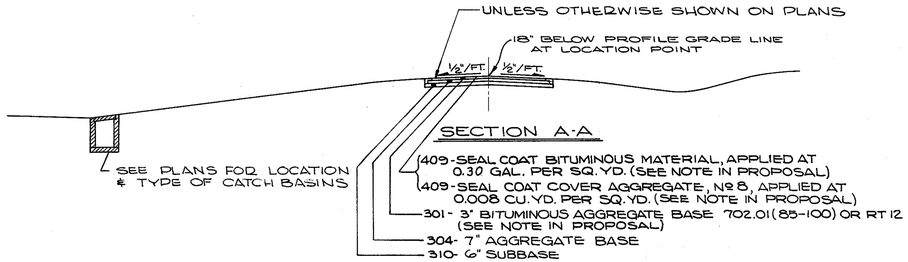
FED. RD.	STATE	PROJECT	
2	OHIO		

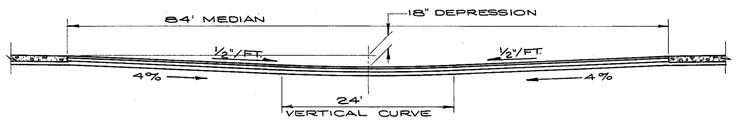
SUM -271 -2.98

321
510



TYPICAL CROSSOVER





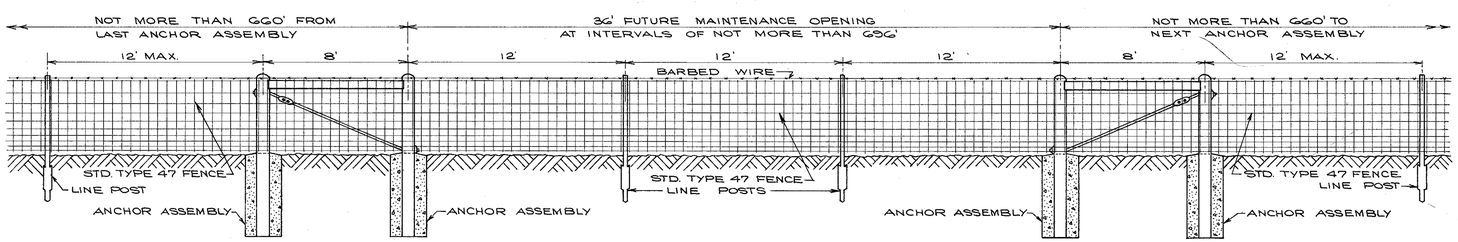
SECTION B-B

NOTE

SPECIAL TERMINALS SHALL BE PROVIDED AT THE BEGINNING AND END OF EACH FENCE OPENING AS SHOWN ON THE ATTACHED TYPICAL DETAILS. WHERE FENCE IS DISCONTINUED BECAUSE OF DEPTH OF CUT OR HEIGHT OF FILL, AN END ASSEMBLY SHALL BE PROVIDED IN THE FENCE LINE AND FROM THE END POST FENCING SHALL BE CONSTRUCTED PERPENDICULAR TO THE CENTER LINE OF THE HIGHWAY, TERMINATING IN THE FILL SLOPE OR AT THE TOP OF THE CUT SLOPE. WHERE FENCE IS TO BE DISCONTINUED BECAUSE OF THE INCLINATION OF THE EXISTING GROUND, TERMINALS MAY BE CONSTRUCTED AS PROVIDED ABOVE IF ROADSIDE SLOPE IS AT LEAST ONE ON TWO IN CUT OR FILL, OR SIMILAR TERMINALS MAY BE CONSTRUCTED IN THE FENCE LINE; SUBSTITUTING FULL END ANCHOR ASSEMBLIES FOR END POSTS.

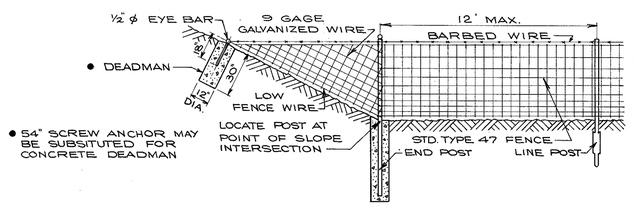
TERMINALS FOR THE PERPENDICULAR CLOSURES DESCRIBED SHALL CONSIST OF AN ENCASED END POST AT EACH END. CLOSURES OR FREE ENDS OCCURRING IN THE MAIN FENCE LINES SHALL TERMINATE IN STANDARD END ANCHOR ASSEMBLIES.

WHERE DEEP CHANNELS ARE LOCATED PARALLEL TO FREEWAY, THE FENCE SHALL BE LOCATED ON THE BENCH BETWEEN THE MAIN FACILITY AND THE CHANNEL. DEEP CHANNEL IS DEFINED AS A DITCH DEEPER THAN THREE FEET BELOW THE EDGE OF THE SHOULDER IN CUT; OR IF LOCATED AT THE TOE OF A FILL SLOPE WHICH DOES NOT OTHERWISE REQUIRE GUARD RAIL, DEEPER THAN THREE FEET IN EXISTING GROUND MEASURED FROM FLOW LINE TO TOP OF BACKSLOPE. AT LEAST ONE FUTURE MAINTENANCE OPENING SHALL BE PROVIDED IN THE FENCE AND WHERE THE LENGTH OF FENCE EXCEEDS 1800 FEET, FUTURE MAINTENANCE OPENINGS SHALL BE PROVIDED AT INTERVALS NOT IN EXCESS OF 656 FEET.



FUTURE MAINTENANCE OPENING

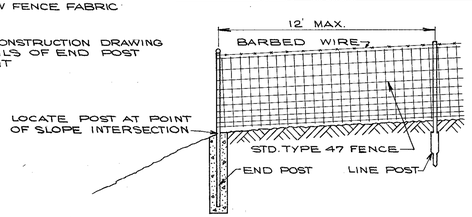
AT LOCATIONS WHERE CHANNELS ARE LOCATED IN CHANNEL EASEMENTS, AND FENCING IS PROVIDED BETWEEN THE CHANNEL AND A FREEWAY, AT LEAST ONE MAINTENANCE OPENING SHALL BE PROVIDED AS INDICATED ABOVE, AND OTHERS AT INTERVALS OF 656 FEET IF THE LENGTH OF THE PARALLEL CHANNEL EXCEEDS 1800 FEET.



FENCE TERMINAL AT TOE OF DEEP FILL SLOPE

NOTE:
BARBED WIRE SHALL NOT BE INSTALLED BELOW FENCE FABRIC

SEE STANDARD CONSTRUCTION DRAWING No. F-4 FOR DETAILS OF END POST AND ENCASEMENT



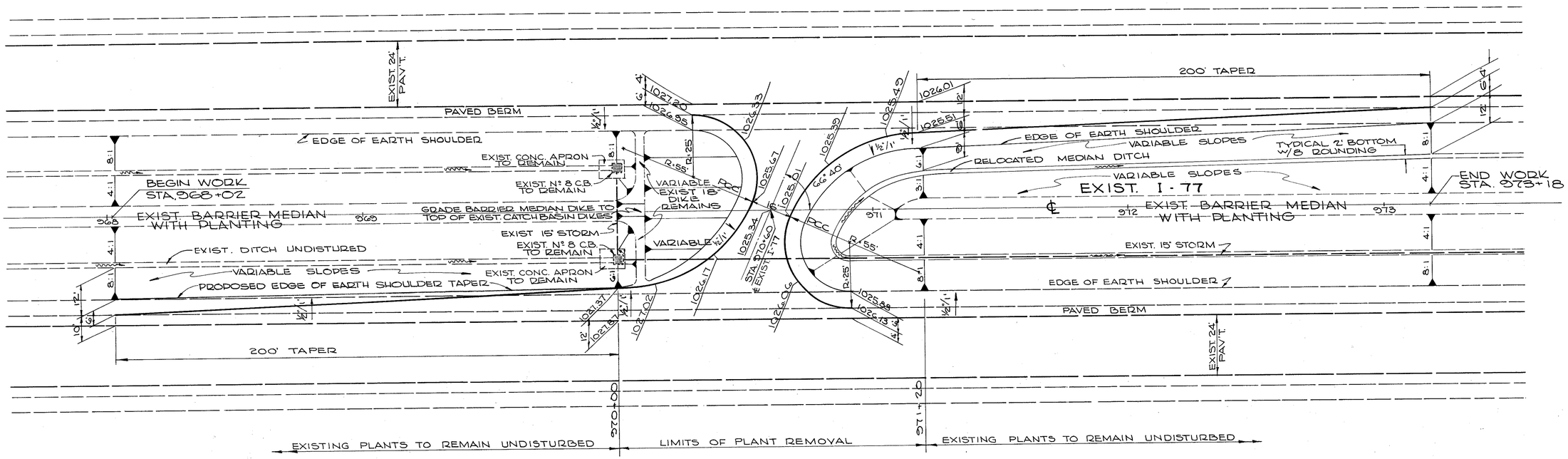
FENCE TERMINAL AT TOE OF DEEP CUT SLOPE

ROADWAY DETAILS

FED. RD.	STATE	PROJECT	
2	OHIO		

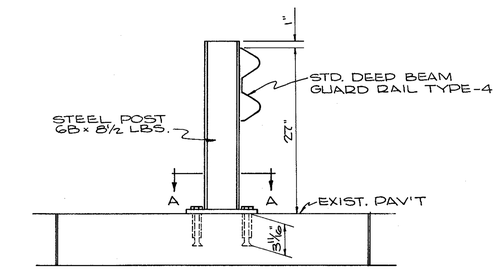
322
510

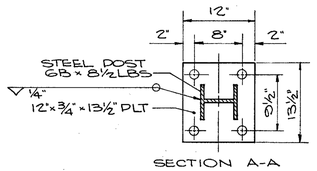
SUM-271-2.98



NOTE:— ELEVATIONS ARE RECORDED AT 25' INTERVALS THE CONTRACTOR SHALL ADJUST ELEVATIONS AT THE DIRECTION OF THE ENGINEER TO MEET FIELD CONDITIONS SO AS TO PROVIDE A SMOOTH TRANSITION THROUGH EXISTING PAVED SHOULDERS, CROSSOVER MATERIALS SHALL BE AS PER TYPICAL SECTION SHOWN ON SHEET Nº 321

CROSSOVER DETAIL STA. 970+60 I-77





SECTION A-A

TEMPORARY GUARDRAIL DETAIL FOR TURNDIKE PAVEMENT

ANCHOR BOLTS SHALL BE ⅞" DRILLED IN PLACE AND CAPABLE OF DEVELOPING A PULLOUT RESISTANCE OF NOT LESS THAN 18,000 LBS. SAMPLES SHALL BE PROVIDED FOR LABORATORY TESTING, AND IN ADDITION, THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE FIELD PULLOUT TESTS AT SIX (6) LOCATIONS DESIGNATED BY THE ENGINEER, STRESSING EACH SUCH ANCHOR TO NOT LESS THAN 12,000 LBS.

IF ANCHOR BOLTS USED ARE OF SUCH CHARACTER AS TO RESULT IN AN OPEN ANNULAR SPACE BETWEEN THE BOLT AND THE CONCRETE, SUCH SPACE SHALL BE FILLED TO PREVENT THE ENTRANCE OF MOISTURE. THIS FILLER WILL BE SUBJECT TO APPROVAL OF THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 615 "TEMPORARY ROADS"

ROADWAY DETAILS

K & E - AKRON

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

322-A
510

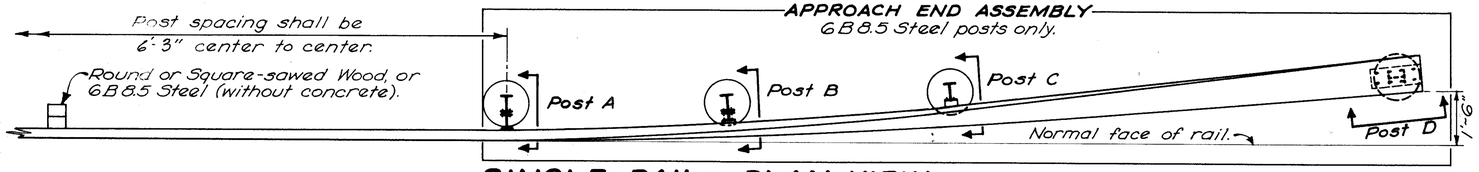
SUM-27/-2.98

NOTES

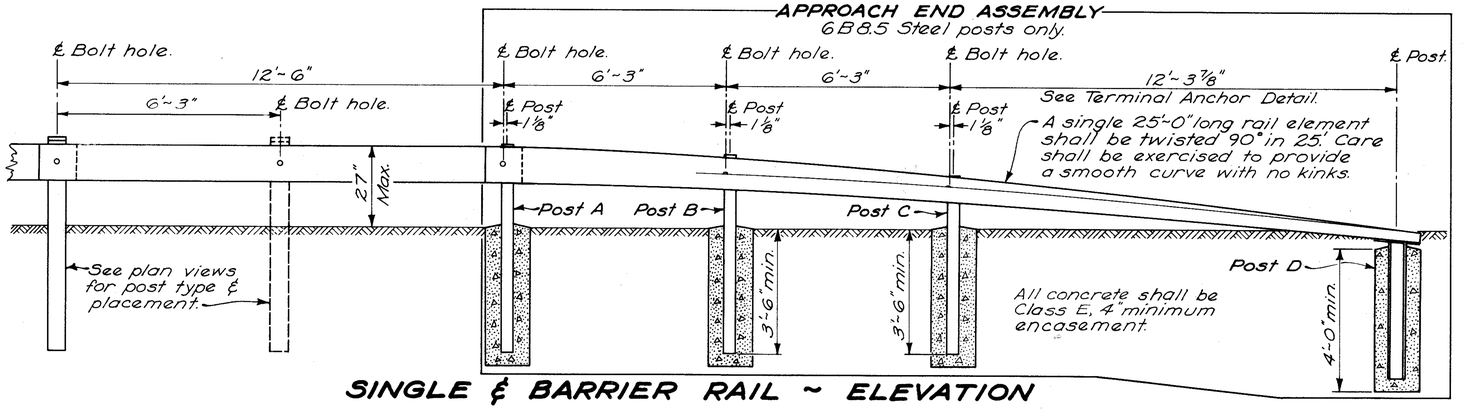
For details not shown, see Standard Drawings GR-1 and GR-2A.

All steel parts shall be galvanized in accordance with ASTM A123, A153 or A525, whichever may apply.

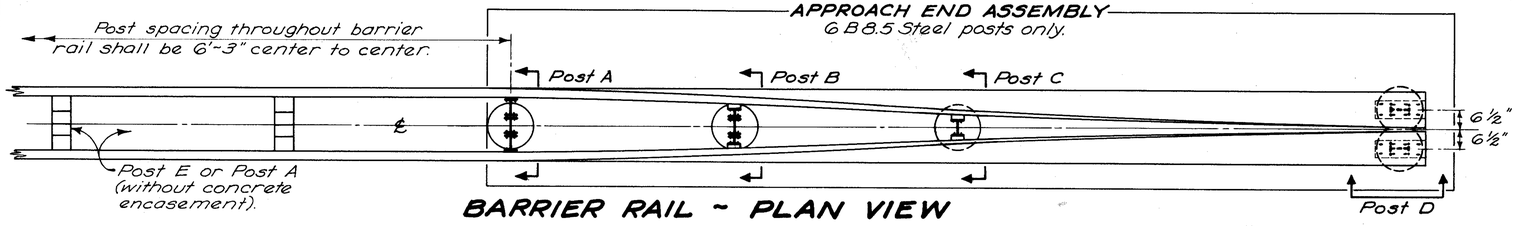
This drawing shall govern where a conflict arises.



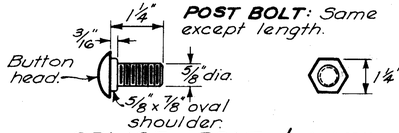
SINGLE RAIL ~ PLAN VIEW



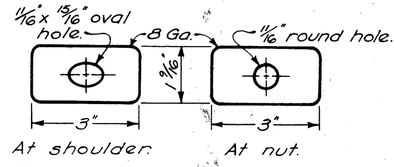
SINGLE & BARRIER RAIL ~ ELEVATION



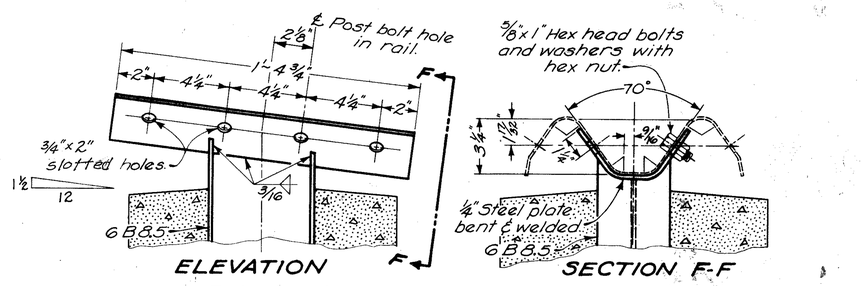
BARRIER RAIL ~ PLAN VIEW



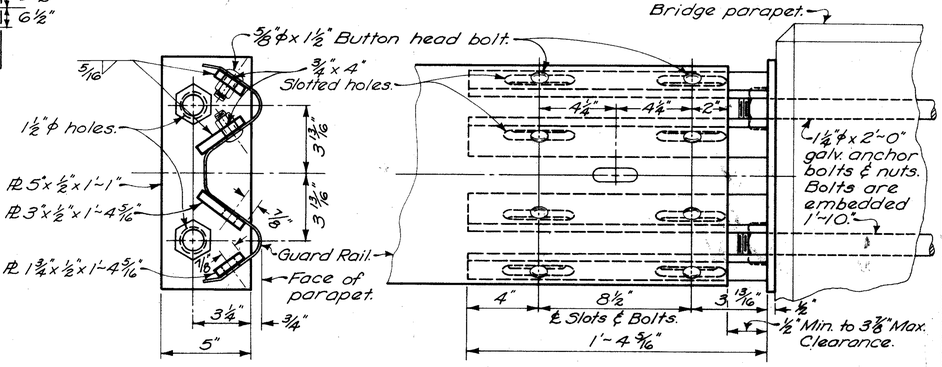
SPLICE BOLT & NUT



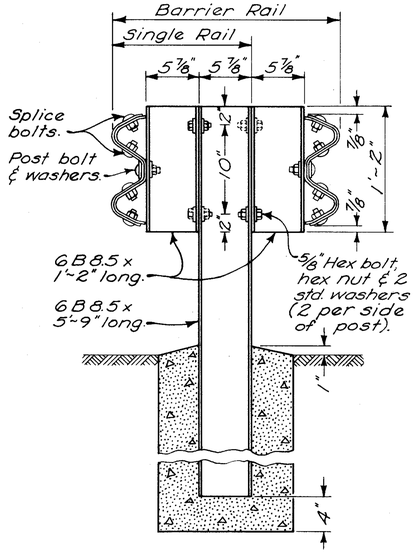
POST BOLT WASHERS



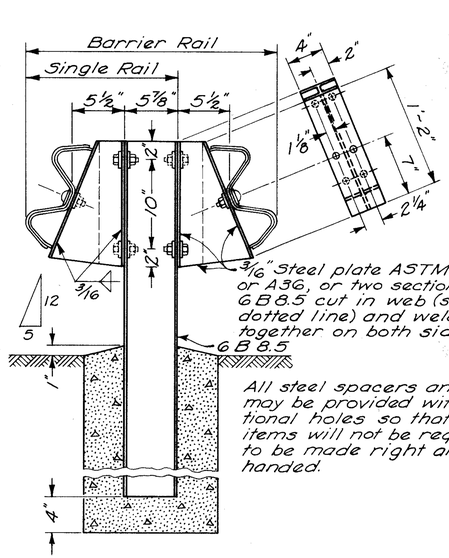
TERMINAL ANCHOR DETAIL



GUARD RAIL ~ BRIDGE CONNECTOR



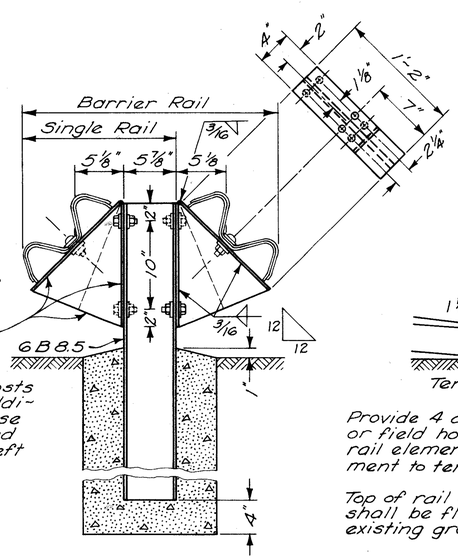
POST A



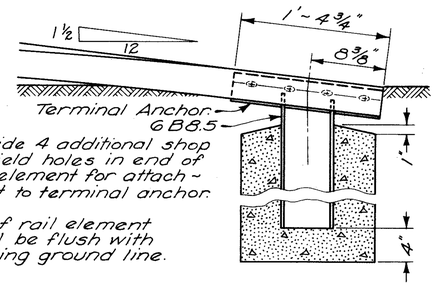
3/16" Steel plate ASTM A7 or A36, or two sections of 6 B 8.5 cut in web (see dotted line) and welded together on both sides.

All steel spacers and posts may be provided with additional holes so that these items will not be required to be made right and left handed.

POST B



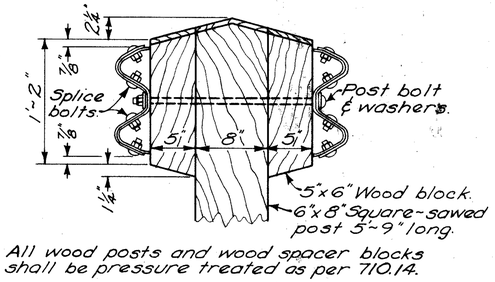
POST C



Provide 4 additional shop or field holes in end of rail element for attachment to terminal anchor.

Top of rail element shall be flush with existing ground line.

POST D



All wood posts and wood spacer blocks shall be pressure treated as per 710.14.

POST E

This sheet added 7-28-67

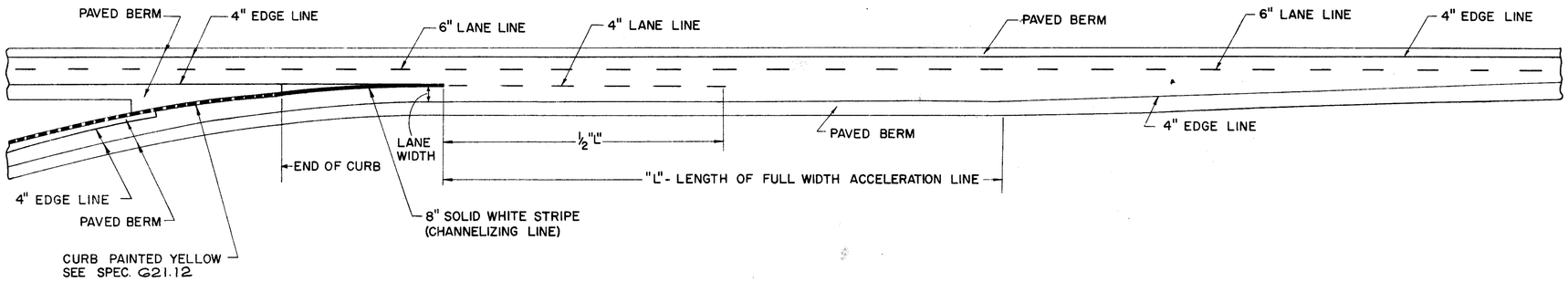
GUARD RAIL ~ APPROACH END ASSEMBLY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

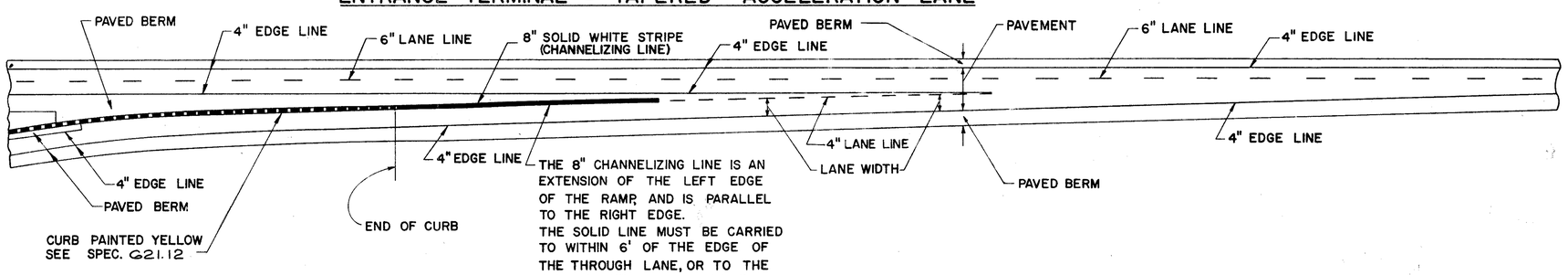
323
510

SUM - 271 - 298

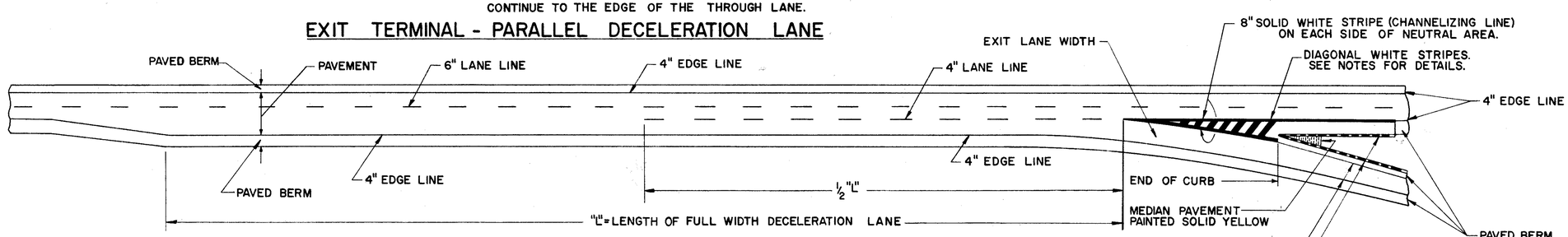
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



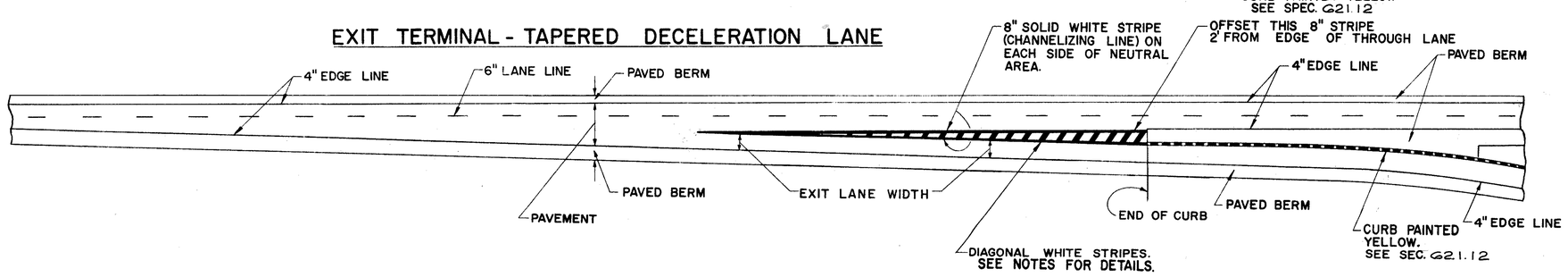
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



EXIT TERMINAL - PARALLEL DECELERATION LANE



EXIT TERMINAL - TAPERED DECELERATION LANE



NOTES

EDGE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO SPECIFICATION No. G21 AND DEFINED IN SECTION G21.06 .

LANE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO SPECIFICATION No. G21 AND DEFINED IN SECTION G21.07 .

CHANNELIZING LINES SHALL BE CONTINUOUS WHITE BEADED STRIPES 8" IN WIDTH PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO SPECIFICATION No. G21 AND DEFINED IN SECTION G21.09 .

DIAGONAL STRIPES IN EXIT RAMP MARKINGS SHALL BE 2' WIDE WHITE BEADED STRIPES SET AT A 45° ANGLE TO THE CENTER LINE OF THE THROUGH PAVEMENT AND SLANTED IN THE DIRECTION OF THE FLOW OF TRAFFIC ON SAID PAVEMENT. SPACE BETWEEN THE 2' DIAGONAL STRIPES SHALL BE 6' AS MEASURED PARALLEL TO THE CENTER LINE OF THE THROUGH PAVEMENT. PAINT ON THE DIAGONAL STRIPES SHALL BE APPLIED AT THE RATE OF ONE GALLON TO EACH 100 SQUARE FEET AND GLASS BEADS SHALL BE APPLIED AT THE RATE OF SIX POUNDS PER GALLON OF PAINT. DIAGONAL WHITE STRIPES SHALL BE PLACED BETWEEN THE TWO 8" WHITE CHANNELIZING LINES AT EXIT RAMPS AS SHOWN TO CONFORM TO SPECIFICATION No. G21 AND DEFINED IN SECTION G21.11.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

PAVEMENT MARKING

PM-1

DATE
7-17-61
4-6-62
3-15-65

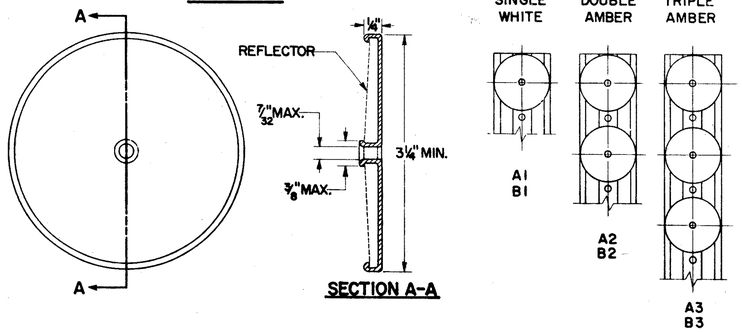
APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

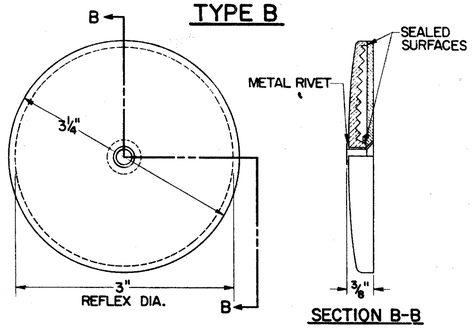
324
510

SUM - 271 - 2.98

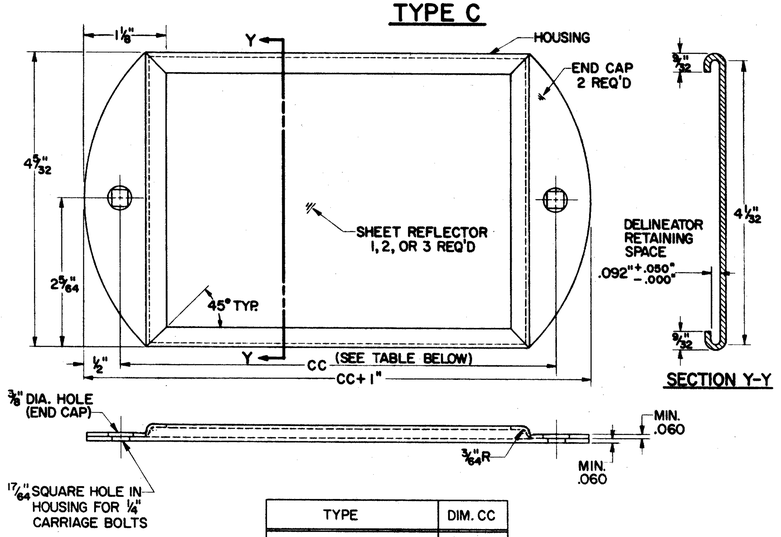
TYPE A



TYPE B

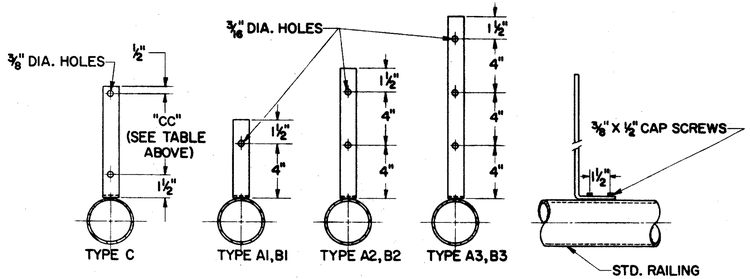


TYPE C

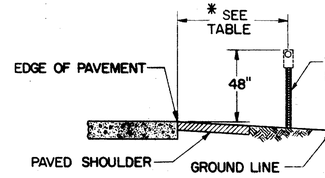


TYPE	DIM. CC
C1 - SINGLE WHITE	6"
C2 - DOUBLE AMBER	11"
C3 - TRIPLE AMBER	16"

ALL BRACKETS 1/4" X 1 1/4" STAINLESS STEEL



BRIDGE RAIL BRACKET

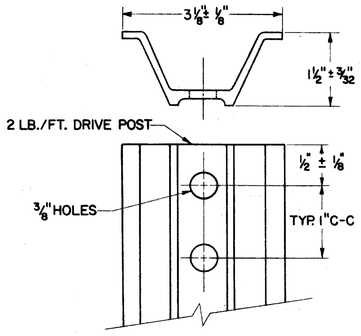


LATERAL PLACEMENT OF DELINEATORS

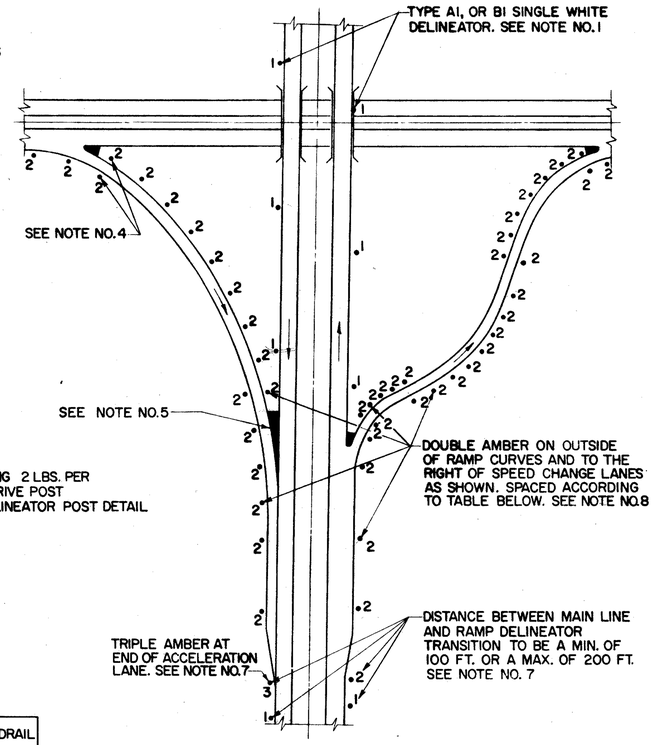
* TABLE

TYPE DELINEATOR	NO GUARDRAIL	GUARDRAIL
SINGLE WHITE	12'-6"	6" OUTSIDE
DOUBLE AMBER RIGHT SIDE	** 8'-6"	6" OUTSIDE
DOUBLE AMBER LEFT SIDE	4'-6"	6" OUTSIDE
TRIPLE AMBER	12'-6"	6" OUTSIDE

** THIS DIMENSION SHALL VARY ON SPEED CHANGE LANES TO MAINTAIN MINIMUM DISTANCE OF 2'-6" FROM EDGE OF PAVED SHOULDER.



DELINEATOR POST



TYPICAL DELINEATOR PLACEMENT

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

RADII, FT. FROM	RADII, FT. TO	SPACING ON CURVE	* TRANSITION SPACING	
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325	———	30'	60'	100'

* SUCH AS 40' TO 70' TO 100' OR 100' TO 80' TO 50' OR ANY OTHER COMBINATION SHOWN ABOVE.

NOTES

1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES, BEGINNING AT STA. +00, +25, +50, OR +75.
2. DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH SPECIFICATION NO. 620
3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM 620 DELINEATORS".
4. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
5. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM
6. WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.
7. RAMP DELINEATOR AT END OF ACCELERATION & BEGINNING OF DECELERATION LANES TO BE A MAXIMUM OF 5' FROM POINT OF TANGENCY AT MAIN LINE.
8. ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15, +20 AND SO ON.
9. DELINEATORS ARE NOT TO BE PLACED IN SECTIONS OF ROADWAY THAT ARE LIGHTED.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

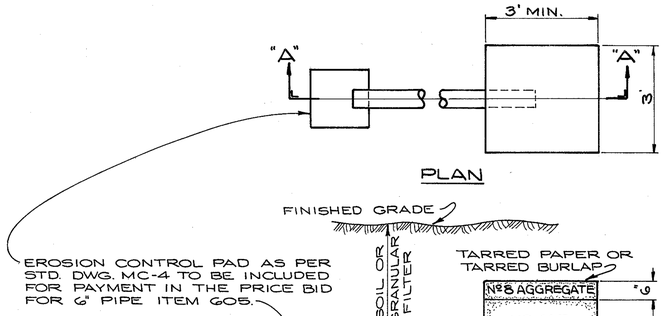
DELINEATOR DETAILS	620	DATE 9-25-62 3-15-62

APPROVED Robert E. Lowe
ENGINEER OF TRAFFIC

FED. RD.	STATE	PROJECT	
2	OHIO		

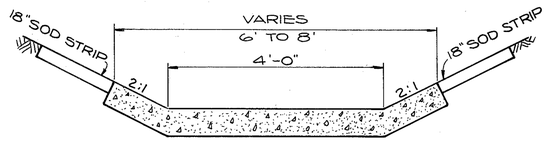
SUM-271-298

325
510

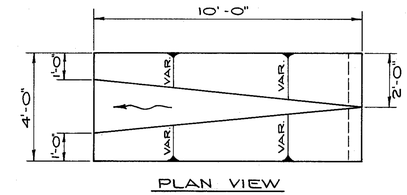


NOTE:
AGGREGATES, TARRED PAPER OR TARRED BURLAP, AND NECESSARY EXCAVATION FOR SPRING DRAINS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID PER LIN. FT FOR "ITEM 605, AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN."
THE 6" PIPE 707.06 OR 707.12 SHALL BE COVERED WITH GRANULAR FILTER MATERIAL [605.03(c)] TO A HEIGHT OF ONE(1) FOOT ABOVE THE TOP OF THE PIPE. THE REMAINDER OF THE BACKFILL FOR THIS ITEM SHALL BE SOIL OR GRANULAR FILTER BACKFILL PLACED IN ACCORDANCE WITH 603.08.
SPRING DRAINS SHALL BE BUILT IN REASONABLY CLOSE CONFORMITY WITH THE DETAIL SHOWN ABOVE. THE LENGTHS AND EXACT LOCATIONS OF THE DRAINS SHALL BE DETERMINED BY THE ENGINEER.
SEE NOTE ON SHEET Nº 15

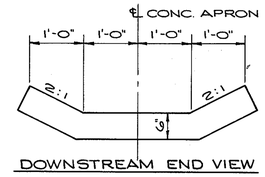
SPRING DRAIN DETAIL



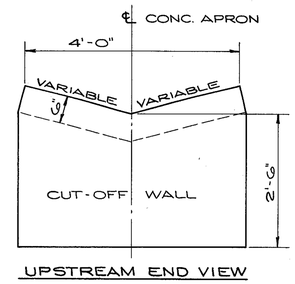
STD. TYPE I - MODIFIED
PAVED GUTTER



PLAN VIEW



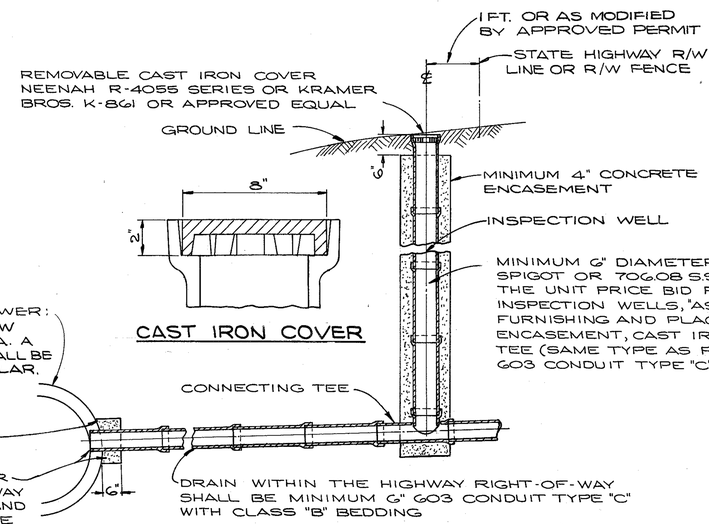
DOWNSTREAM END VIEW



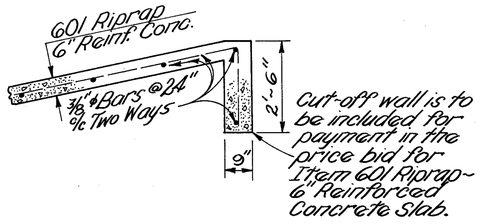
UPSTREAM END VIEW

CONCRETE APRON

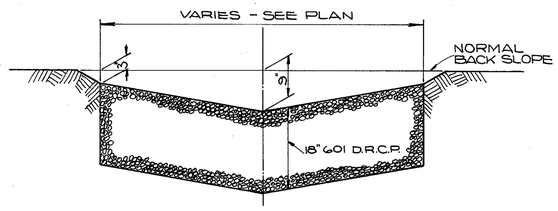
FOR STD. Nº 2-2A CATCH BASIN TO BE INCLUDED IN UNIT PRICE BID FOR ITEM 604 STANDARD Nº 2-2A C.B.



INSPECTION WELL



DETAIL & CUT-OFF WALL



SECTION 'A'-'A'

BACK SLOPE PROTECTION

For Revised Detail of Cut-off Wall at Inlet End of Box Culvert see Sheet 430-A, added 10-1-70. C.P.D.

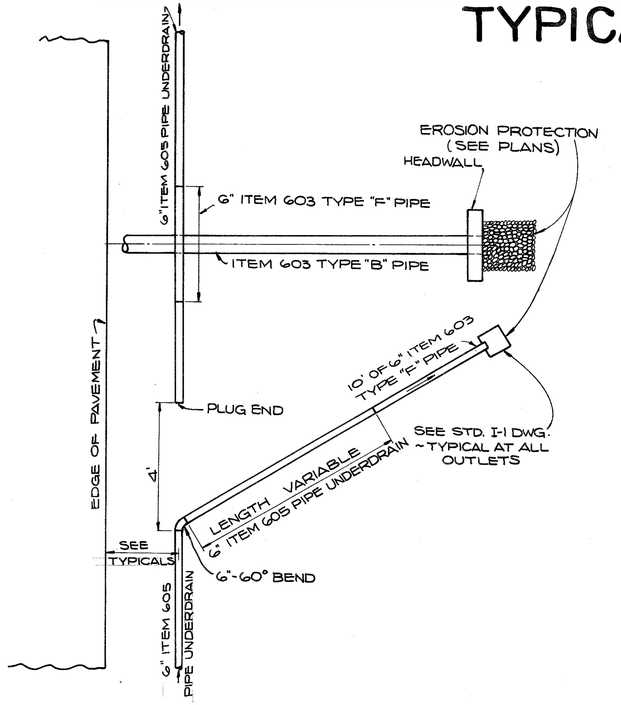
DRAINAGE DETAILS

TYPICAL DETAILS OF UNDERDRAIN OUTLETS

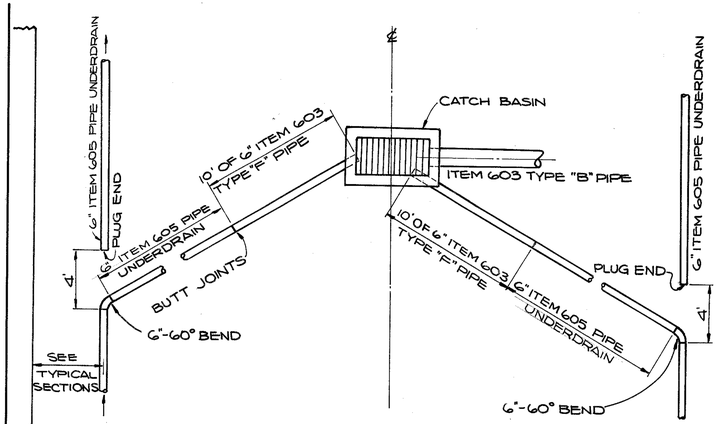
FED. RD.	STATE	PROJECT	
2	OHIO		

326
510

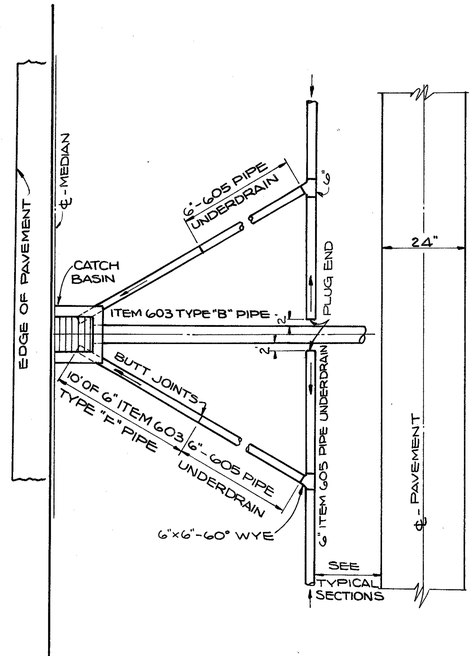
SUM-271-298

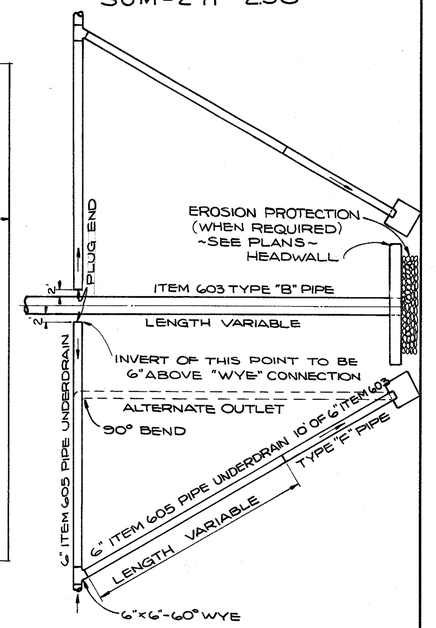


UNDERDRAIN OUTLET - DETAIL "A"

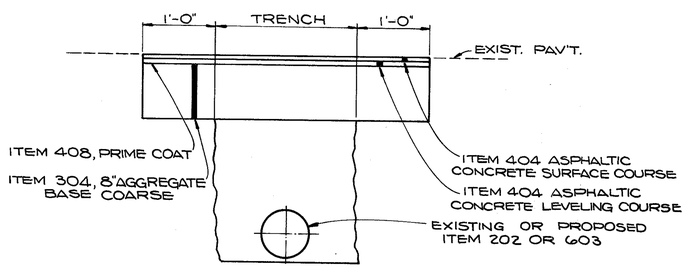


UNDERDRAIN OUTLET - DETAIL "B"



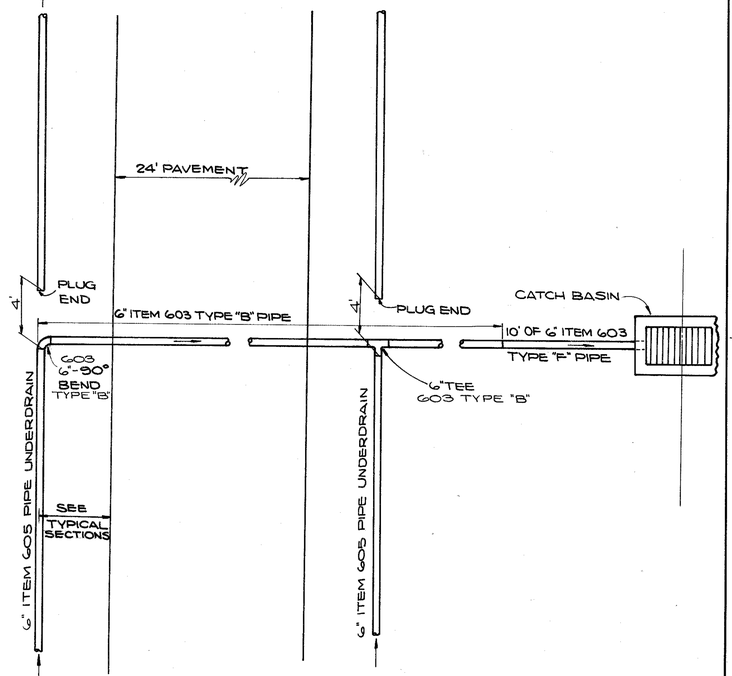


UNDERDRAIN OUTLET - DETAIL "C"

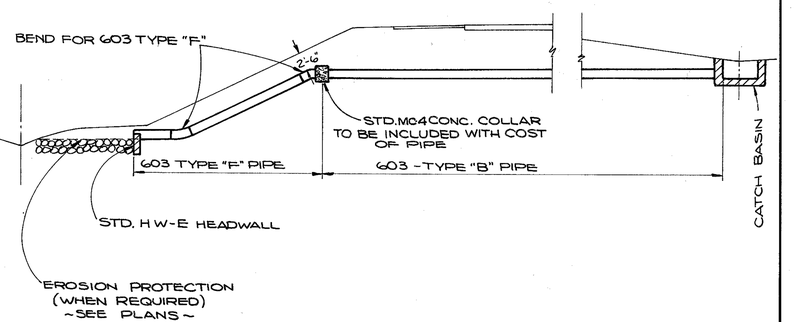


PAVEMENT REPLACEMENT DETAIL FOR ITEM 603 & 202

COST OF RESTORATION OF EXISTING PAVEMENT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 603 OR ITEM 202



UNDERDRAIN OUTLET - DETAIL "D"



NOTES

WHEN 601 DUMPED ROCK CHANNEL PROTECTION IS CALLED FOR IN THE PLANS, IT SHALL BE PLACED A MINIMUM OF 18" IN DEPTH.

PIPE BENDS, WYES, TEES, ETC. WITHOUT PERFORATIONS WILL BE PERMITTED FOR ALL 605 ITEM FITTINGS.

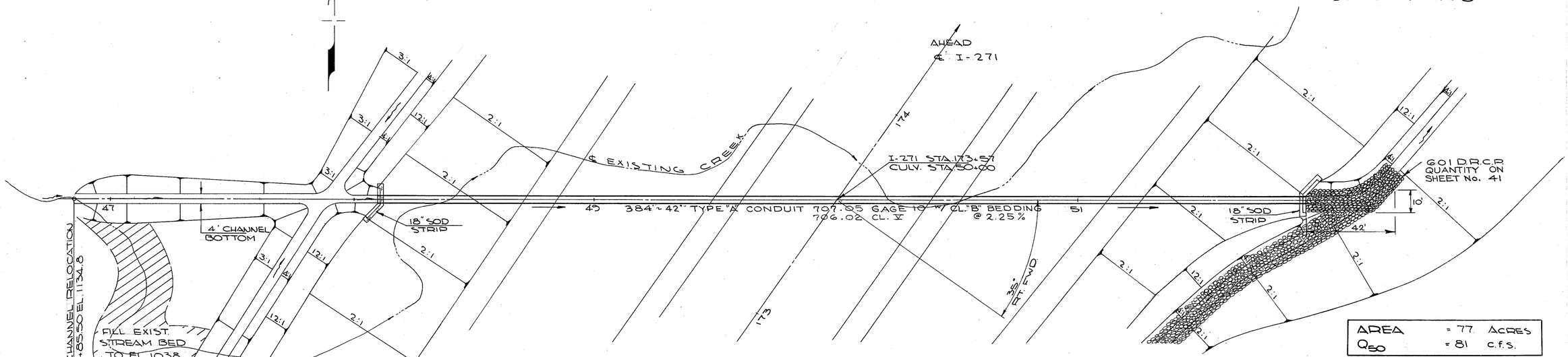
MEDIAN OUTLET DETAIL IN HIGH FILL

STRUCTURE Nº SUM-271-0321

FED'RD	STATE	PROJECT	
2	OHIO		

327/510

SUM-271-2.98



PLAN
SCALE: 1"= 20'-0"

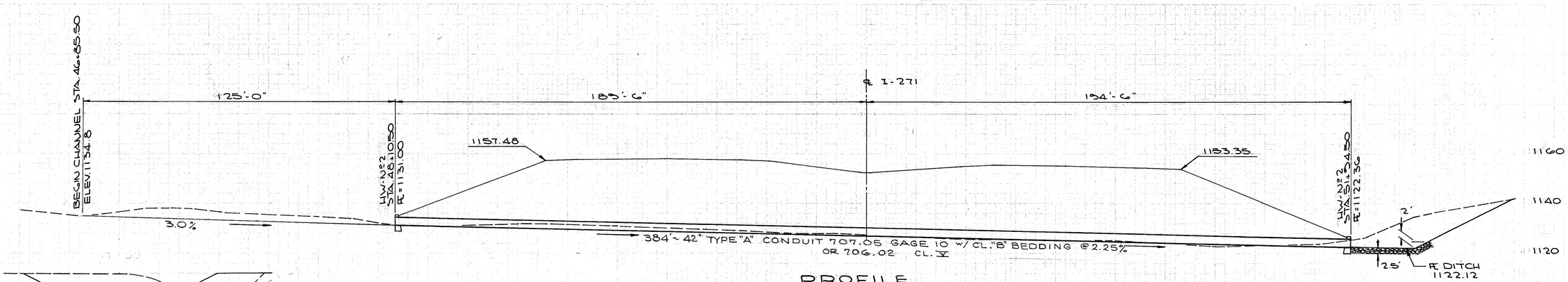
ESTIMATED QUANTITIES

603 - 42" TYPE "A" CONDUIT 707.05 706.02 CL. V - W/CL."B" BEDDING	GAGE - 10, OR = 384 LIN. FT.
602 - CONCRETE MASONRY	= 11.6 CU. YDS.
660 - SODDING	= 7 SQ. YDS.
203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	= 107 CU. YDS.

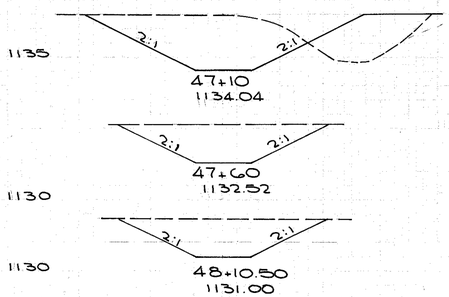
AREA	= 77 ACRES
Q_{50}	= 81 c.f.s.

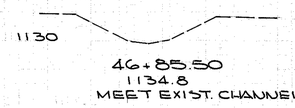
CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE 10 OR 706.02 CL. V W/ CL."B" BEDDING
SIZE - 42" X 384'
SKEW - 35° RT. FWD.
WORK REQ'D - BUILD NEW 42" DIA. CONDUIT AS SHOWN



PROFILE
SCALE: 1"= 20'-0"





CHANNEL SECTIONS
SCALE: 1"= 5'-0"

STA.	END AREA	CU. YDS.
48+10.50	6	
		23
47+60	19	
		62
47+10	48	
		22
46+85.50	0	
TOTAL		107

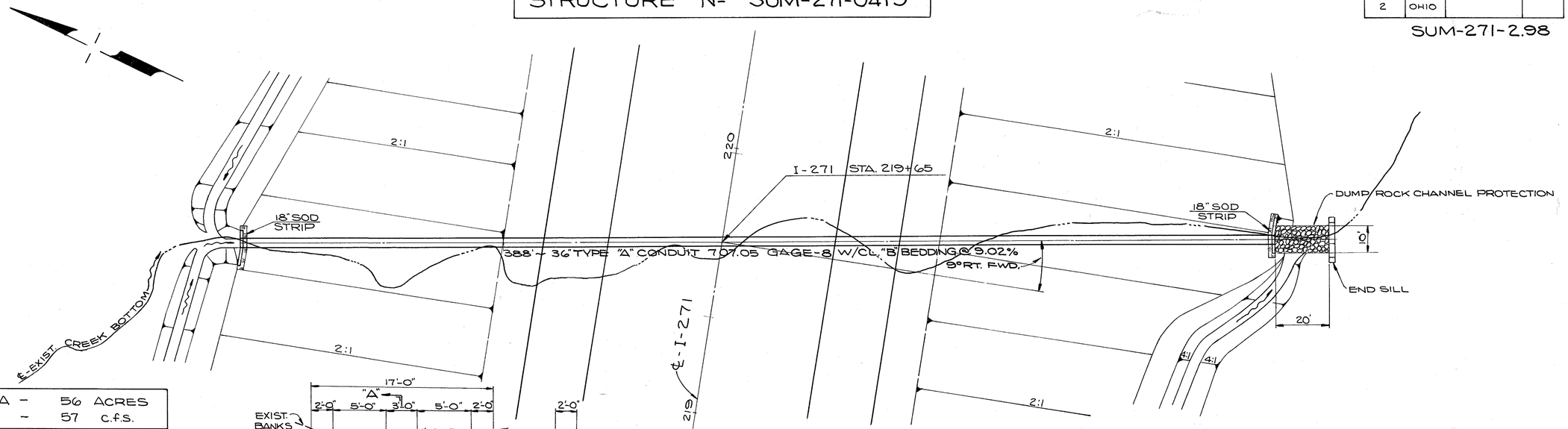
STR. Nº SUM-271-0321
CULVERT DETAIL
STA. 173+57

STRUCTURE Nº SUM-271-0419

FED. RD.	STATE	PROJECT	
2	OHIO		

328
510

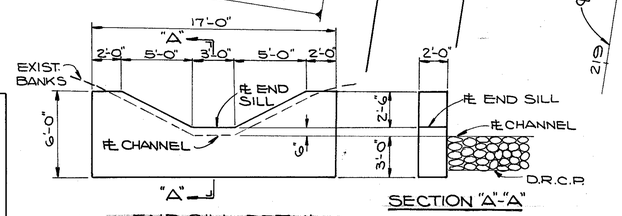
SUM-271-2.98



AREA	-	56 ACRES
Q_{50}	-	57 c.f.s.

ESTIMATED QUANTITIES

603 - 36" TYPE "A" CONDUIT 707.05 GAGE - 8 W/CL. "B" BEDDING	= 388 LIN. FT.
602 - CONCRETE MASONRY	= 15.5 CU. YDS.
660 - SODDING	= 6.2 SQ. YDS.
601 - DUMPED ROCK CHANNEL PROT.	= 18.5 CU. YDS.



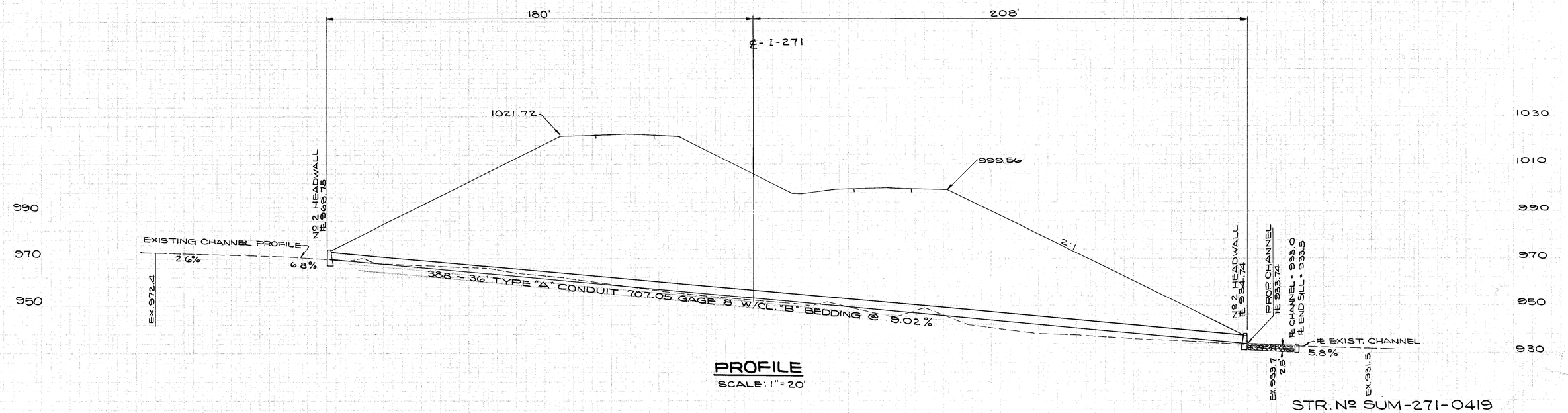
END SILL DETAIL
SCALE: 1" = 5' 602 - MASONRY = 5.5 CU. YDS.

SECTION "A"-"A"

PLAN
SCALE: 1" = 20'

CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE-8
SIZE: 36" x 388' W/CL. "B" BEDDING
SKEW: 9° RT. FWD.
WORK REQ'D.: BUILD NEW 36" DIA. CONDUIT AS SHOWN



PROFILE
SCALE: 1" = 20'

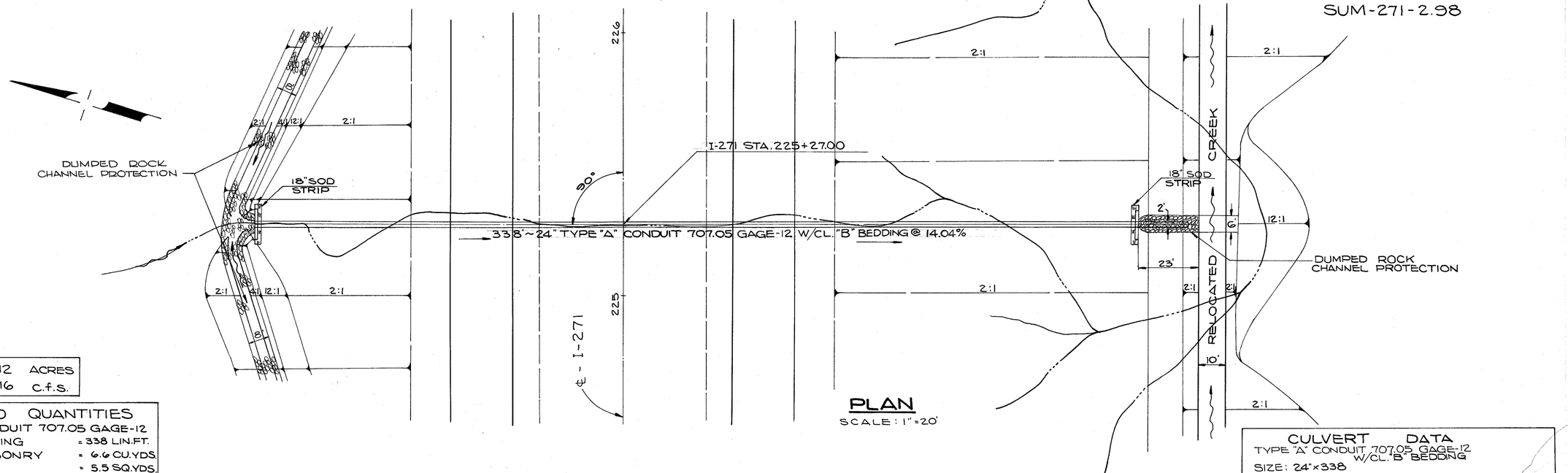
STR. Nº SUM-271-0419
CULVERT DETAIL
STA. 219 + 65 I-271

STRUCTURE Nº SUM-271-0429

FED.RD.	STATE	PROJECT	
2	OHIO		

329/510

SUM-271-2.98



PLAN
SCALE: 1" = 20'

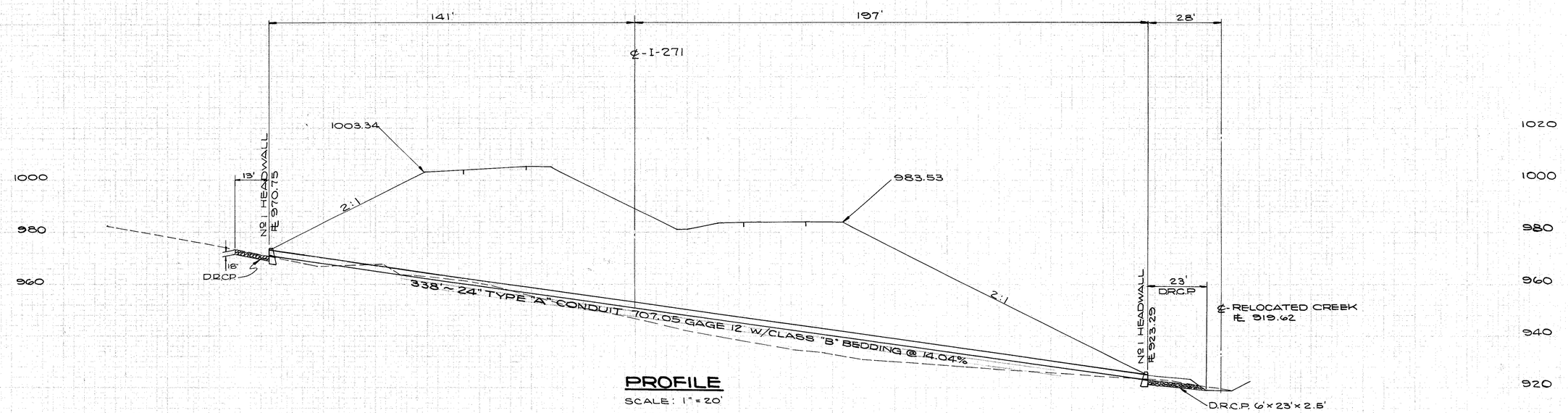
AREA - 12 ACRES
Q_{50} - 16 c.f.s.

ESTIMATED QUANTITIES

603 - 24" TYPE "A" CONDUIT 707.05 GAGE-12 W/CL. "B" BEDDING	= 338 LIN.FT.
602 - CONCRETE MASONRY	= 6.6 CU.YDS.
660 - SODDING	= 5.5 SQ.YDS.
601 - DUMPED ROCK CHANNEL PROT.	= 12.8 CU.YDS.

CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE-12 W/CL. "B" BEDDING
SIZE: 24"×338
SKEW: NONE
WORK REQ'D.: BUILD NEW 24" DIA. CONDUIT AS SHOWN



PROFILE
SCALE: 1" = 20'

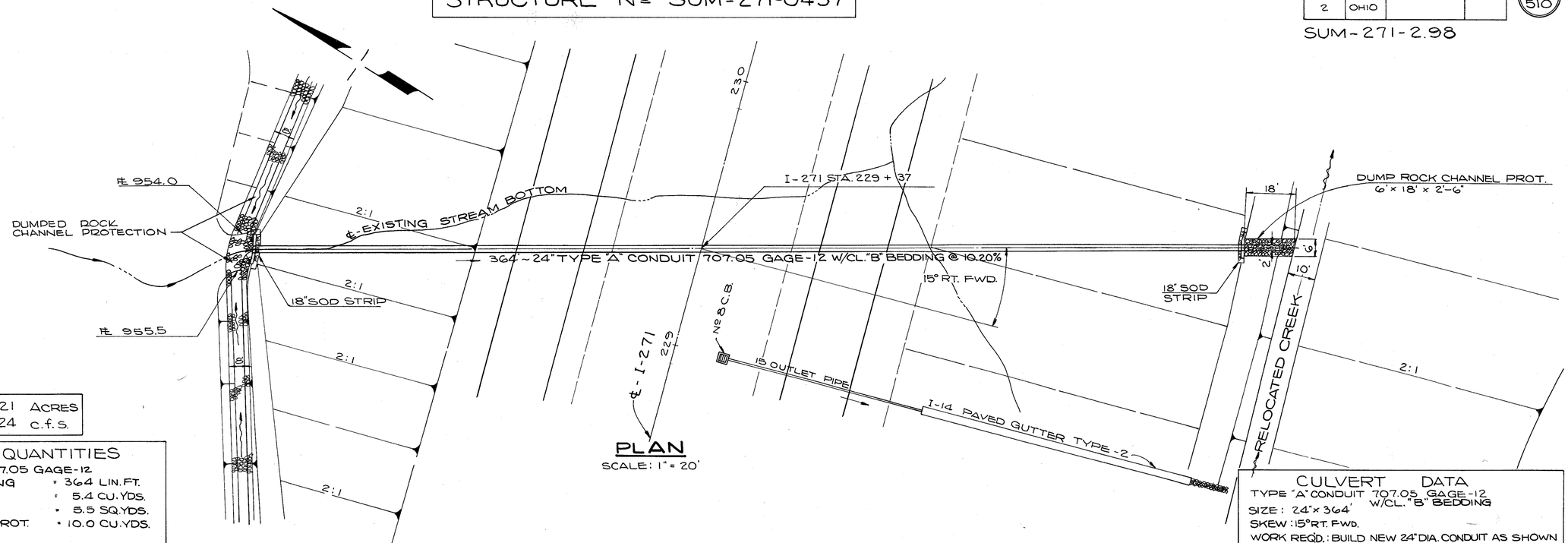
STR. Nº SUM-271-0423
CULVERT DETAIL
STA. 225+27.00 I-271

STRUCTURE Nº SUM-271-0437

FED.RD.	STATE	PROJECT	
2	OHIO		

330
510

SUM-271-2.98



PLAN
SCALE: 1" = 20'

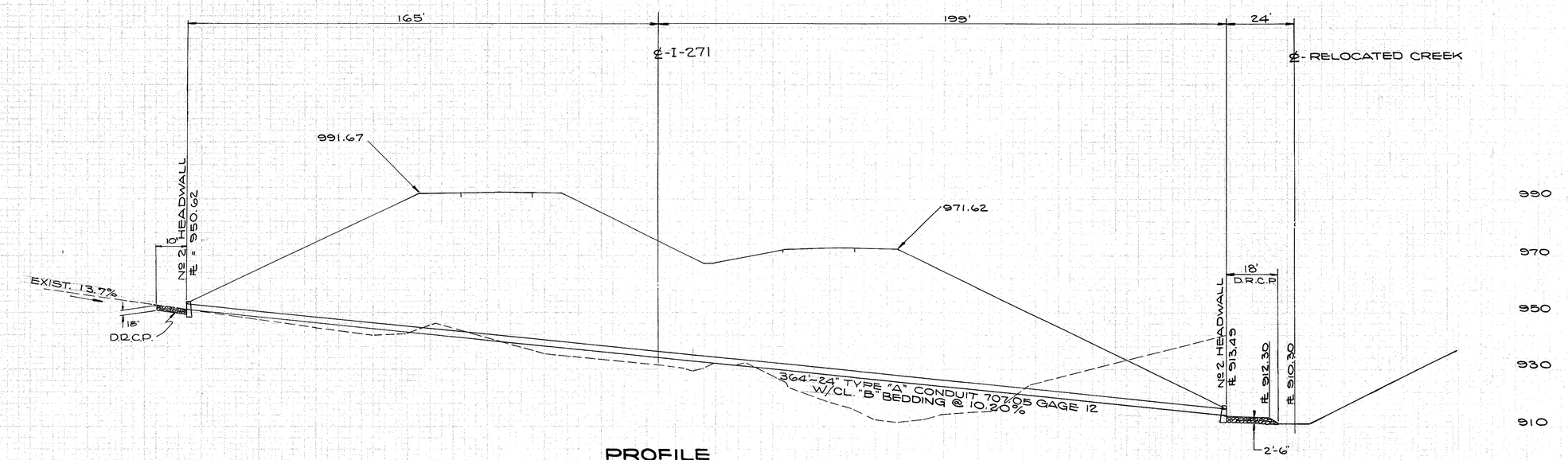
AREA	= 2.1	ACRES
Q_{50}	= 24	c.f.s.

ESTIMATED QUANTITIES

603-24" TYPE "A" CONDUIT 707.05 GAGE-12 W/CL."B" BEDDING	= 364 LIN.FT.
602-CONCRETE MASONRY	= 5.4 CU.YDS.
660-SODDING	= 5.5 SQ.YDS.
601-DUMPED ROCK CHANNEL PROT.	= 10.0 CU.YDS.

CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE-12 W/CL."B" BEDDING
SIZE: 24"×364'
SKEW: 15° RT. FWD.
WORK REQD.: BUILD NEW 24" DIA. CONDUIT AS SHOWN



PROFILE
SCALE: 1" = 20'

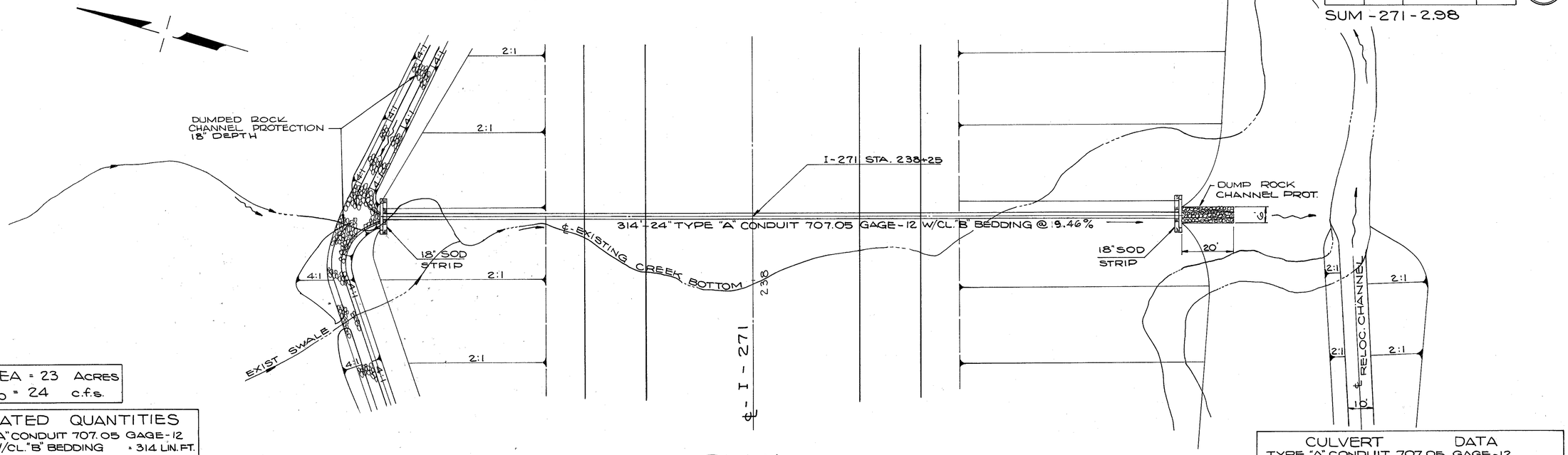
STR. Nº SUM-271-0437
CULVERT DETAIL
STA. 229+37.00 I-271

STRUCTURE Nº SUM - 271 - 0456

FED. RD.	STATE	PROJECT	
2	OHIO		

331
510

SUM - 271 - 2.98



PLAN
SCALE: 1" = 20'

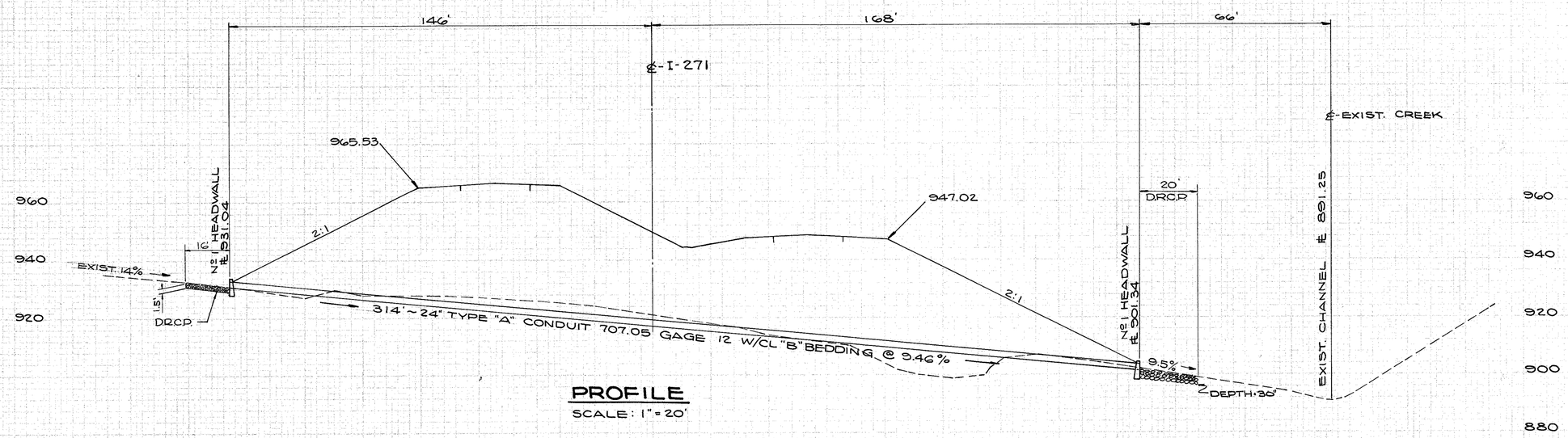
AREA = 23 ACRES
Q_{50} = 24 c.f.s.

ESTIMATED QUANTITIES

603 - 24" TYPE "A" CONDUIT 707.05 GAGE - 12 W/CL."B" BEDDING	= 314 LIN. FT.
602 - CONCRETE MASONRY	= 6.6 CU.YDS.
660 - SODDING	= 5.5 SQ.YDS.
601 - DUMPED ROCK CHANNEL PROT.	= 14.8 CU.YDS

CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE-12 W/CL."B" BEDDING
SIZE: 24"x314'
SKEW: NONE
WORK REQ'D.: BUILD NEW 24" DIA. CONDUIT AS SHOWN



PROFILE
SCALE: 1" = 20'

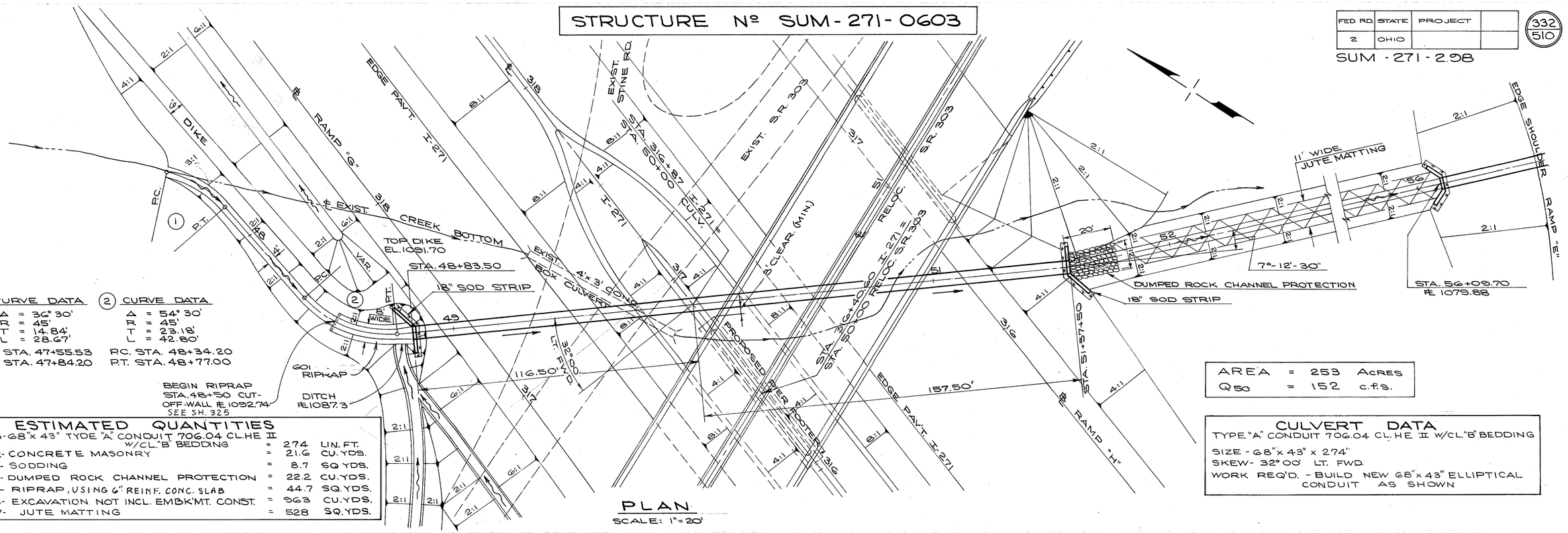
STR. Nº SUM-271-0456
CULVERT DETAIL
STA. 238 + 25.00 I-271

STRUCTURE Nº SUM-271-0603

FED RD	STATE	PROJECT	
2	OHIO		

332/510

SUM-271-2.98



PLAN
SCALE: 1"=20'

① CURVE DATA	② CURVE DATA
Δ = 36° 30'	Δ = 54° 30'
R = 45'	R = 45'
T = 14.84'	T = 23.18'
L = 28.67'	L = 42.80'
P.C. STA. 47+55.53	P.C. STA. 48+34.20
P.T. STA. 47+84.20	P.T. STA. 48+77.00

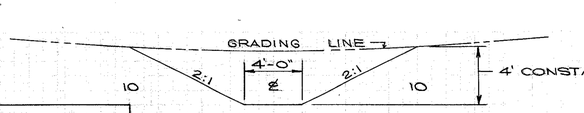
ESTIMATED QUANTITIES

603-68"x 43" TYDE "A" CONDUIT 706.04 CL.HE II W/CL."B" BEDDING	=	274	LIN. FT.
602- CONCRETE MASONRY	=	21.6	CU. YDS.
660- SODDING	=	8.7	SQ YDS.
601- DUMPED ROCK CHANNEL PROTECTION	=	22.2	CU. YDS.
601- RIPRAP, USING 6" REINF. CONC. SLAB	=	44.7	SQ. YDS.
203- EXCAVATION NOT INCL. EMBK'MT. CONST.	=	963	CU. YDS.
667- JUTE MATTING	=	528	SQ. YDS.

AREA	= 253	ACRES
Q50	= 152	c.f.s.

CULVERT DATA

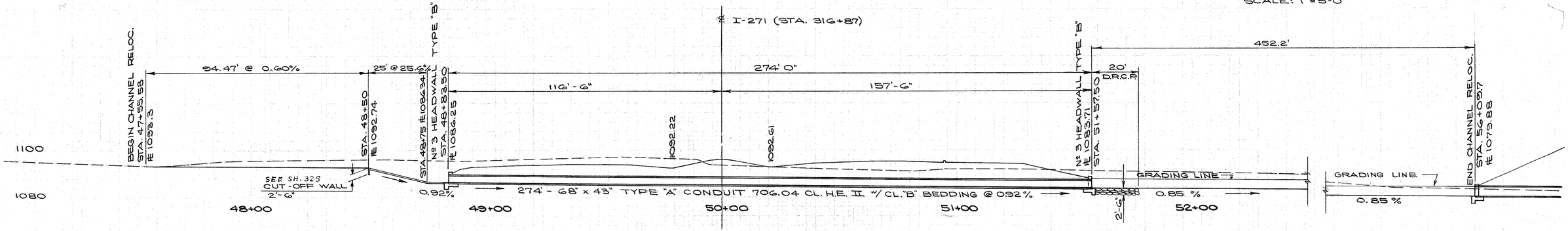
TYPE "A" CONDUIT 706.04 CL. HE II W/CL."B" BEDDING
SIZE - 68"x 43" x 274"
SKEW - 32° 00' LT. FWD
WORK REQ'D. - BUILD NEW 68"x 43" ELLIPTICAL CONDUIT AS SHOWN



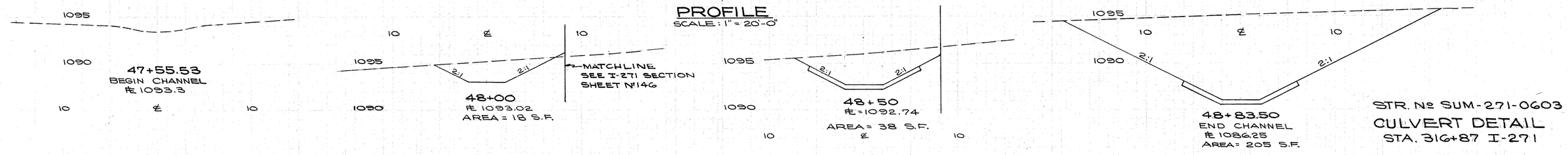
TYPICAL SECTION
PROPOSED CHANNEL
STA. 51+57.50 To STA. 56+09.7
SCALE: 1"=5'-0"

CHANNEL EXCAVATION

STA. 47+55.53 TO STA. 48+83.50 = 217 CU. YDS.
STA. 51+57.50 TO STA. 56+09.7 = 746 CU. YDS.



PROFILE
SCALE: 1"=20'-0"



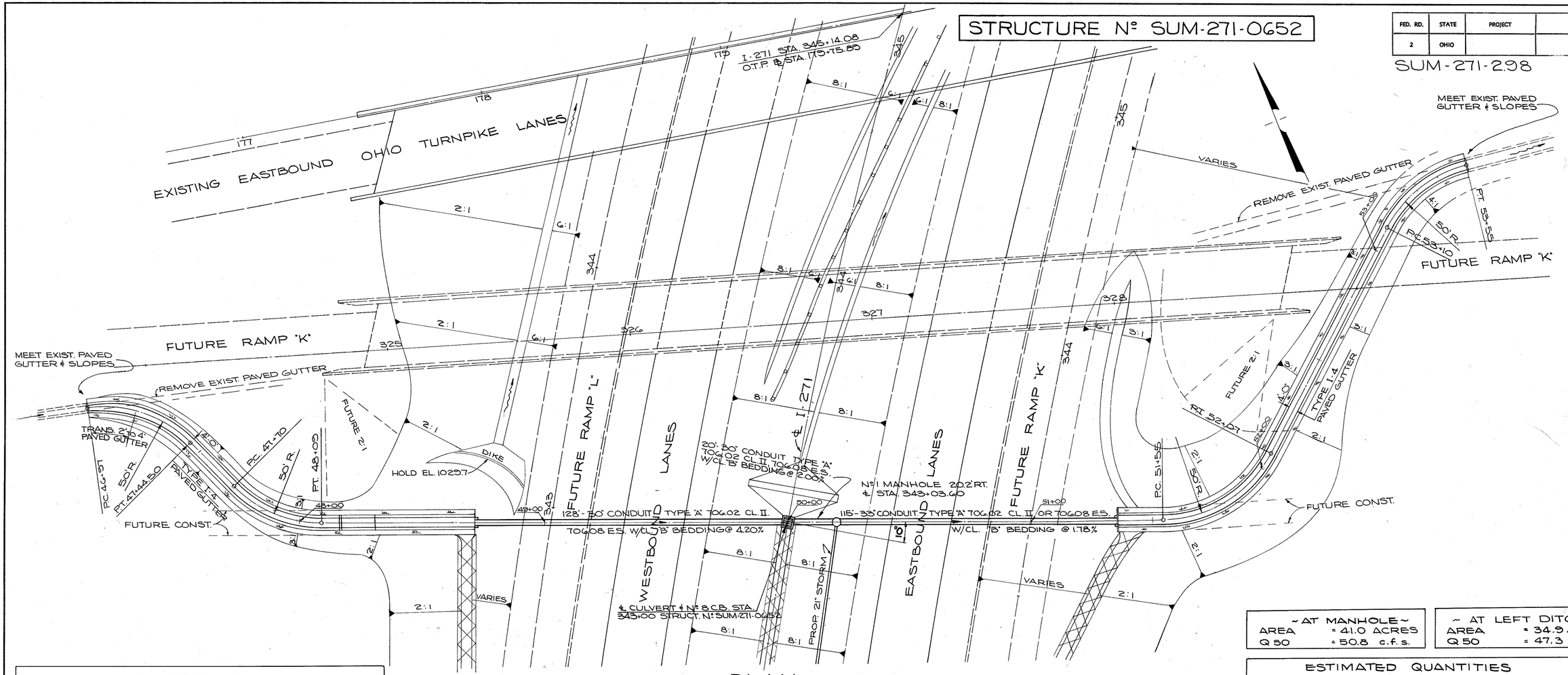
STR. Nº SUM-271-0603
CULVERT DETAIL
STA. 316+87 I-271

STRUCTURE Nº SUM-271-0652

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

333/510



PLAN
SCALE : 1" = 20'-0"

~ AT MANHOLE ~		~ AT LEFT DITCH ~	
AREA	= 41.0 ACRES	AREA	= 34.9 ACRES
Q 50	= 50.8 c.f.s.	Q 50	= 47.3 c.f.s.

CULVERT DATA

TYPE - 603 CONDUIT TYPE "A" 706.02 CLASS II, 706.08 E.S. W/CL."B" BEDDING

SIZE - 30"x148' & 33"x115'

SKEW - 10° RT. FWD. (LOC. TAN.)

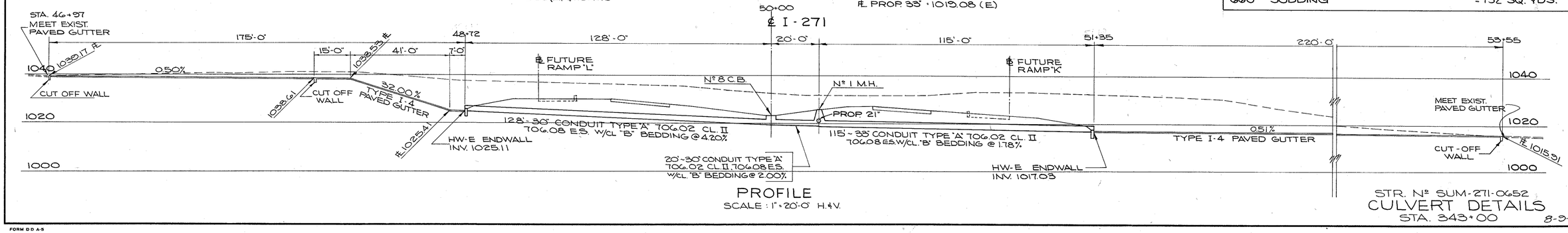
WORK REQ'D. - BUILD PIPE CULVERT, Nº 8 CATCH BASIN, Nº 1 MANHOLE AS SHOWN & PAVED GUTTER.

ESTIMATED QUANTITIES

603	30" CONDUIT TYPE "A" 706.02 CLASS II, 706.08 E.S. W/CL."B" BEDDING	= 148 LIN. FT.
603	33" CONDUIT TYPE "A" 706.02 CLASS II, OR 706.08 E.S. W/CL."B" BEDDING	= 115 LIN. FT.
602	CONCRETE MASONRY	= 1.10 CU. YDS.
601	PAVED GUTTER, STD. TYPE 1-4	= 395 LIN. FT.
604	MANHOLE STANDARD Nº 1	= 1 EACH
604	CATCH BASIN STANDARD Nº 8	= 1 EACH
660	SODDING	= 132 SQ. YDS.

STA. 343+00 ℄ I-271
604 Nº 8 CATCH BASIN
GRATE = 1023.13
℄ 30"(E&W) = 1019.73

STA. 343+03.6 (20.2' RT. ℄ I-271)
604 Nº 1 MANHOLE
COVER = 1026.32
℄ PROP 21" = 1020.08 (S.)
℄ PROP 30" = 1019.33 (W.)
℄ PROP 33" = 1019.08 (E.)



PROFILE
SCALE : 1" = 20'-0" H. & V.

STR. Nº SUM-271-0652
CULVERT DETAILS
STA. 343+00
8-9-'67

FORM D D A-5

FED. RD.	STATE	PROJECT	
2	OHIO		

338-A
510

SUM-271-2.98

53+55
℄ = 1015.91

53+50
℄ = 1015.93

53+00
℄ = 1016.15

52+50
℄ = 1016.44

52+00
℄ = 1016.70

51+50
℄ = 1016.95

51+35
℄ = 1017.03

℄ I-271 =
STA. 50+00

48+72
℄ = 1025.11

48+50
℄ = 1030.21

48+00
℄ = 1038.65

47+50
℄ = 1038.90

MEET EXIST.

46+57
℄ = 1039.17

1.2

2:1

3:1

3:1

3:1

1015 1015 1020 1020 1030 1025 1020 1015 1030 1025 1040 1035 1030 1040 1040 1040 1035

30 20 10 0 10 20 30

STR. Nº SUM-271-0652

X-SECTIONS STA. 46+57 TO STA. 53+55

STRUCTURE Nº SUM - 271 - 0657

FED. RD.	STATE	PROJECT	
2	OHIO		

334/510

SUM - 271 - 2.98

ESTIMATED QUANTITIES

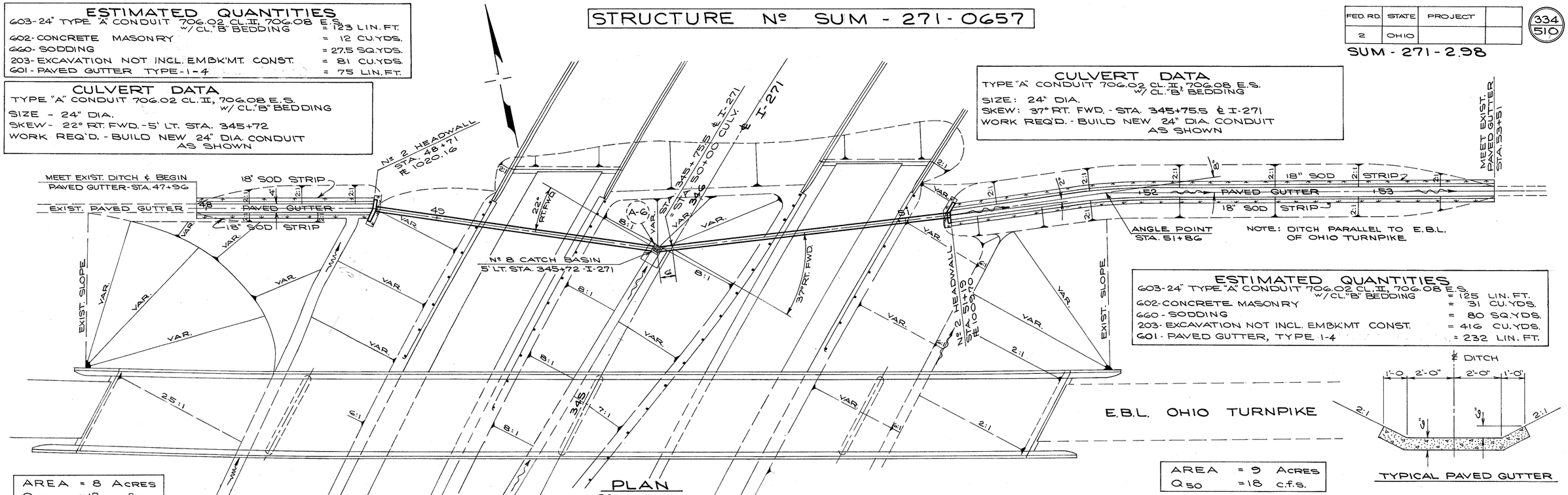
603 - 24" TYPE "A" CONDUIT 706.02 CL. II, 706.08 E.S. w/ CL. "B" BEDDING	= 123 LIN. FT.
602 - CONCRETE MASONRY	= 12 CU. YDS.
660 - SODDING	= 27.5 SQ. YDS.
203 - EXCAVATION NOT INCL. EMBK'MT. CONST.	= 81 CU. YDS.
601 - PAVED GUTTER TYPE - 1 - 4	= 75 LIN. FT.

CULVERT DATA

TYPE "A" CONDUIT 706.02 CL. II, 706.08 E.S. w/ CL. "B" BEDDING
SIZE - 24" DIA.
SKEW - 22° RT. FWD. - 5' LT. STA. 345+72
WORK REQ'D. - BUILD NEW 24" DIA. CONDUIT AS SHOWN

CULVERT DATA

TYPE "A" CONDUIT 706.02 CL. II, 706.08 E.S. w/ CL. "B" BEDDING
SIZE: 24" DIA.
SKEW: 37° RT. FWD. - STA. 345+75.5 ℄ I-271
WORK REQ'D. - BUILD NEW 24" DIA. CONDUIT AS SHOWN

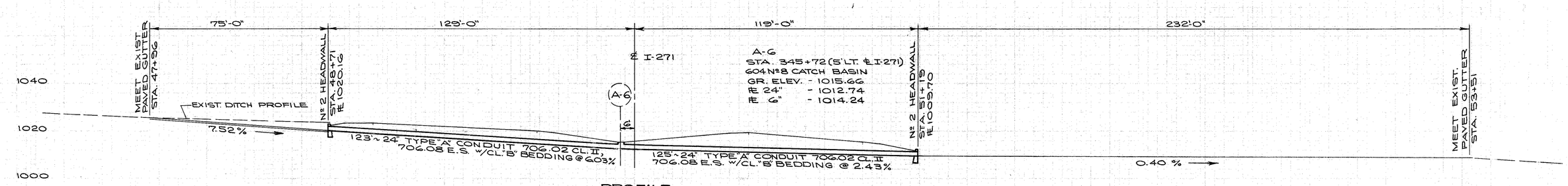


PLAN
SCALE: 1" = 20'-0"

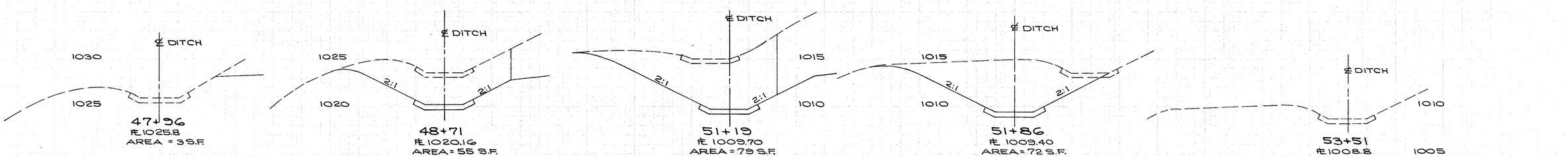
AREA = 8 ACRES
Q50 = 17 c.f.s.

ESTIMATED QUANTITIES

603 - 24" TYPE "A" CONDUIT 706.02 CL. II, 706.08 E.S. w/ CL. "B" BEDDING	= 125 LIN. FT.
602 - CONCRETE MASONRY	= 31 CU. YDS.
660 - SODDING	= 80 SQ. YDS.
203 - EXCAVATION NOT INCL. EMBK'MT CONST.	= 416 CU. YDS.
601 - PAVED GUTTER, TYPE 1-4	= 232 LIN. FT.



PROFILE
SCALE: 1" = 20'



DITCH SECTIONS
SCALE: 1" = 5'

AREA = 9 ACRES
Q50 = 18 c.f.s.

TYPICAL PAVED GUTTER

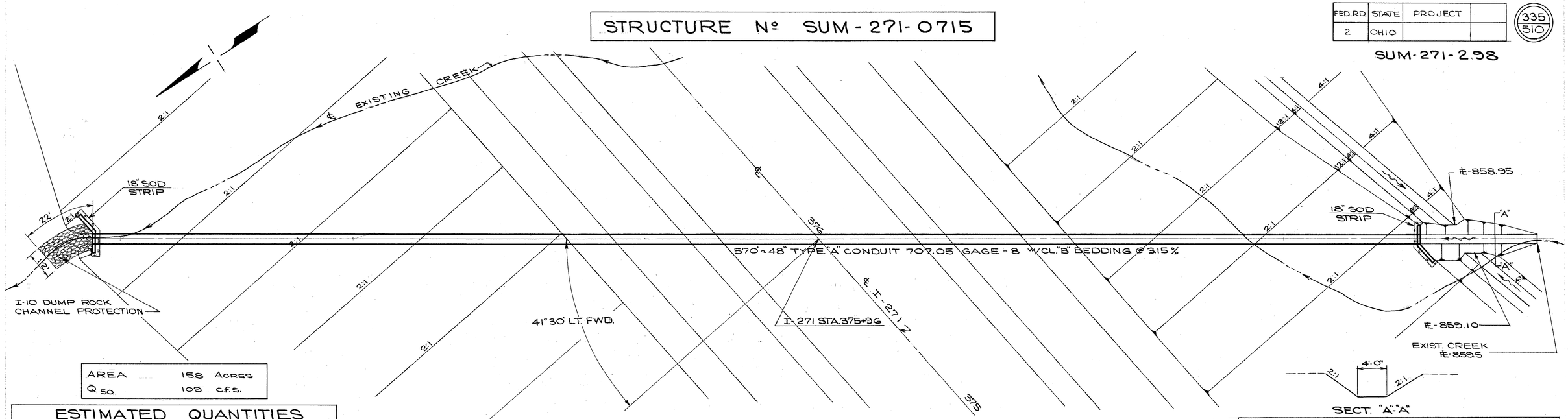
STR. Nº SUM - 271 - 0657
CULVERT DETAILS
STA. 345+75.5 I-271

STRUCTURE Nº SUM-271-0715

FED.RD.	STATE	PROJECT	
2	OHIO		

335
510

SUM-271-2.98



SECT. "A"-"A"

AREA	158	ACRES
Q_{50}	109	C.F.S.

ESTIMATED QUANTITIES

603 - 48" TYPE "A" CONDUIT 707.05 GAGE-8 W/CL."B" BEDDING SHOP ELONGATED & FIELD STRUTTED = 570 LIN. FT.

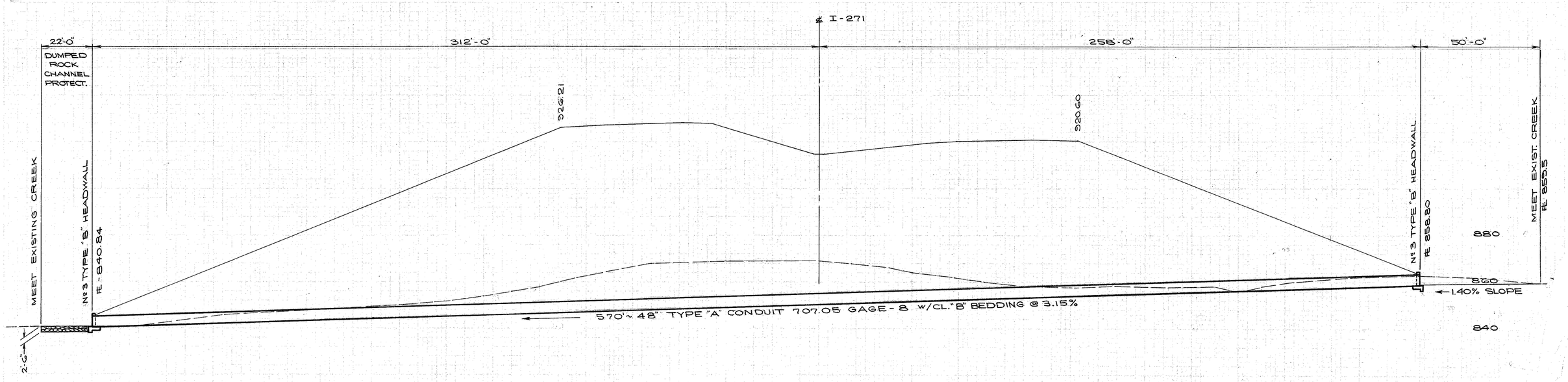
602 - CONCRETE MASONRY	=	21.2 CU. YDS.
660 - SODDING	=	8.0 SQ YDS.
601 - DUMPED ROCK CHANNEL PROT.	=	24.4 CU. YDS.
203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	=	30.0 CU. YDS.

PLAN
SCALE: 1" = 20'

CULVERT DATA

TYPE: "A" CONDUIT 707.05 GAGE-8 W/CL."B" BEDDING, SHOP ELONGATED & SHOP STRUTTED

SIZE: 48" x 570'
SKEW: 41° 30' LT. FWD.
WORK REQ'D.: BUILD NEW 48" DIA. CONDUIT AS SHOWN.



PROFILE
SCALE - 1" = 20'

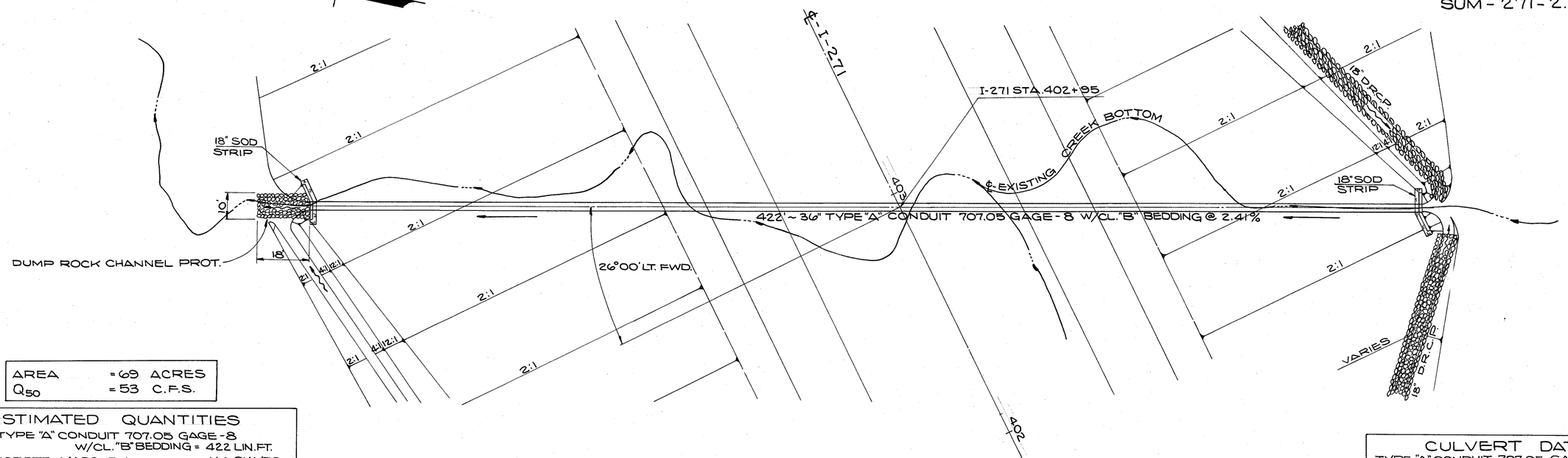
STR. Nº SUM-271-
CULVERT DETA
STA. 375+96

STRUCTURE Nº SUM-271-0766

FED.RD.	STATE	PROJECT	
2	OHIO		

336/510

SUM-271-2.98



PLAN
SCALE: 1"=20'-0"

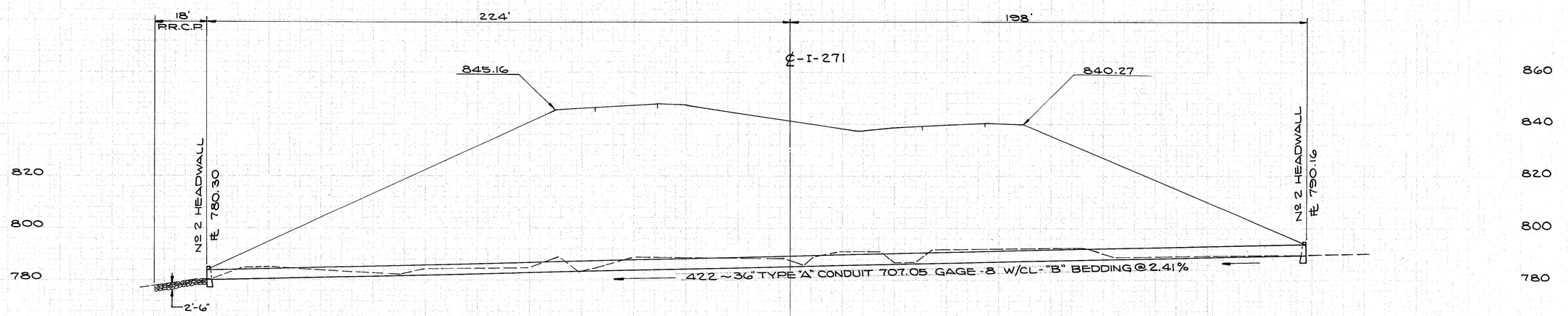
AREA	=69 ACRES
Q_{50}	=53 C.F.S.

ESTIMATED QUANTITIES

603~36" TYPE "A" CONDUIT 707.05 GAGE-8 W/CL."B" BEDDING = 422 LIN.FT.
602~CONCRETE MASONRY = 11.6 CU.YDS.
660~SODDING = 6.5 SQ.YDS.
601~DUMPED ROCK CHANNEL PROT. = 16.7 CU.YDS.

CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE-8
SIZE: 36"x422' W/CL."B" BEDDING
SKEW 26° LT. FWD.
WORK REQ'D.-BUILD NEW 36" DIA. CONDUIT AS SHOWN



PROFILE
SCALE: 1"=20'-0"

STR. Nº SUM-271-0766
CULVERT DETAILS
STA. 402+95

FED. RD.	STATE	PROJECT	
2	OHIO		

337
510

SUM - 271 - 2.98

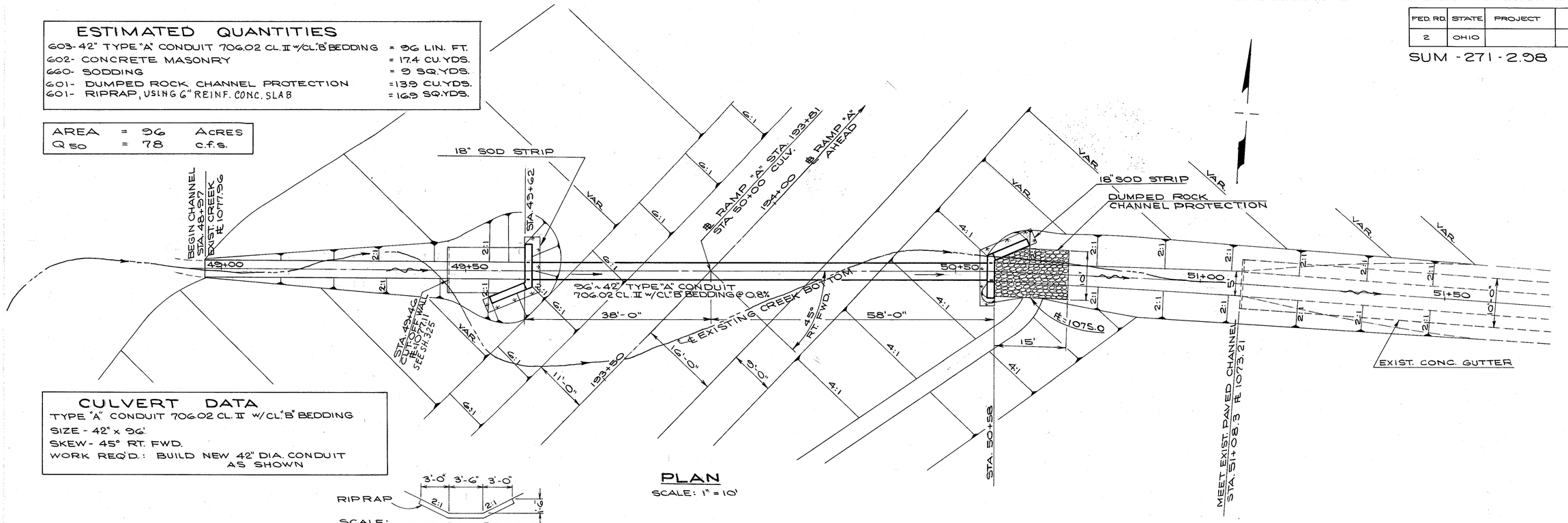
ESTIMATED QUANTITIES

603- 42" TYPE "A" CONDUIT 706.02 CL. II w/CL."B" BEDDING	= 96 LIN. FT.
602- CONCRETE MASONRY	= 17.4 CU. YDS.
660- SODDING	= 9 SQ. YDS.
601- DUMPED ROCK CHANNEL PROTECTION	= 139 CU. YDS.
601- RIPRAP, USING 6" REINF. CONC. SLAB	= 169 SQ. YDS.

AREA	= 96	ACRES
Q 50	= 78	c.f.s.

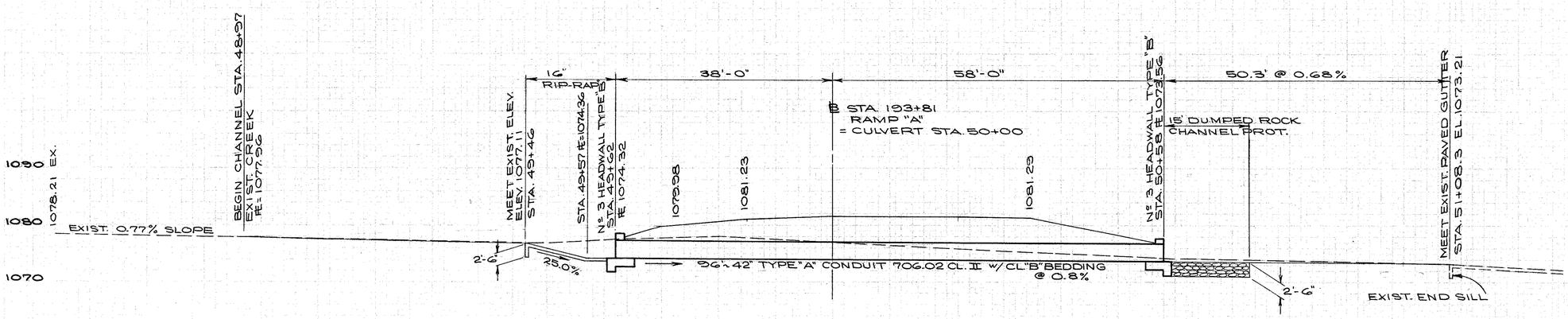
CULVERT DATA

TYPE "A" CONDUIT 706.02 CL. II w/CL."B" BEDDING
SIZE - 42" x 96'
SKEW - 45° RT. FWD.
WORK REQ'D.: BUILD NEW 42" DIA. CONDUIT AS SHOWN



PLAN
SCALE: 1" = 10'

SCALE: 1" = 5'-0"
TYPICAL SECTION
STA. 49+46 TO 49+62



PROFILE
SCALE: 1" = 20'

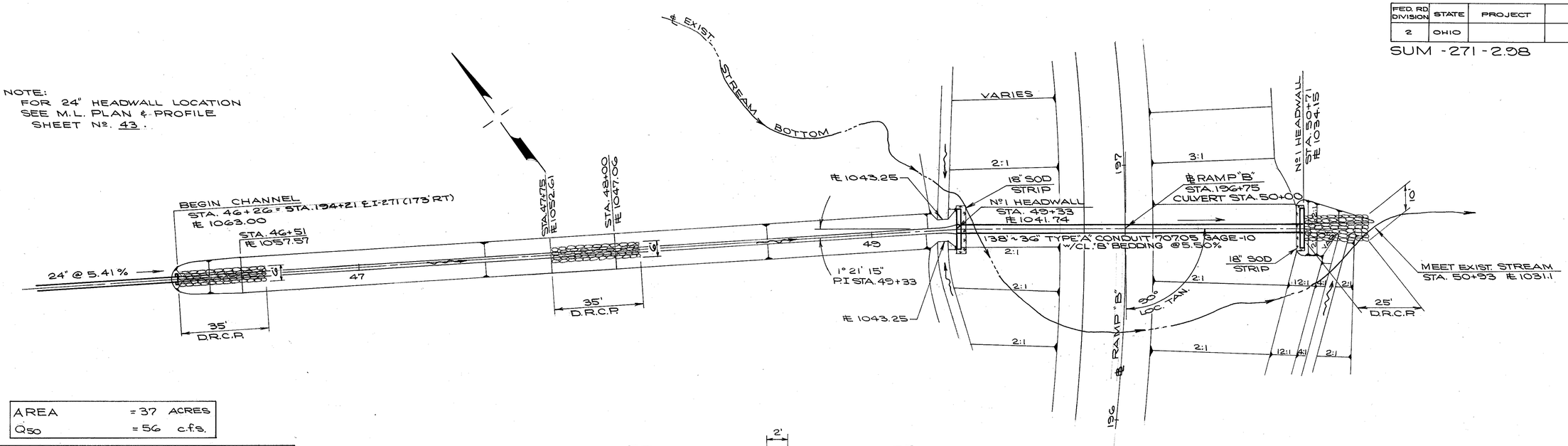
CULVERT DETAIL
RAMP "A" STA. 193+81

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

338
510

SUM -271-2.98

NOTE:
FOR 24" HEADWALL LOCATION
SEE M.L. PLAN & PROFILE
SHEET Nº. 43.



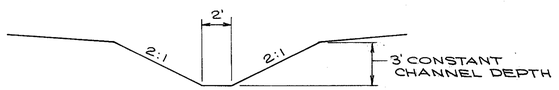
AREA	= 37 ACRES
Q50	= 56 c.f.s.

ESTIMATED QUANTITIES

603-	36" TYPE "A" CONDUIT 707.05 GAGE-10 w/CL."B" BEDDING	= 138 LIN.FT.
602-	CONCRETE MASONRY	= 13.0 CU.YDS.
660-	SODDING	= 72 SQ.YDS.
601-	DUMPED ROCK CHANNEL PROT.	= 62.0 CU.YDS.
203-	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	= 270 CU.YDS.

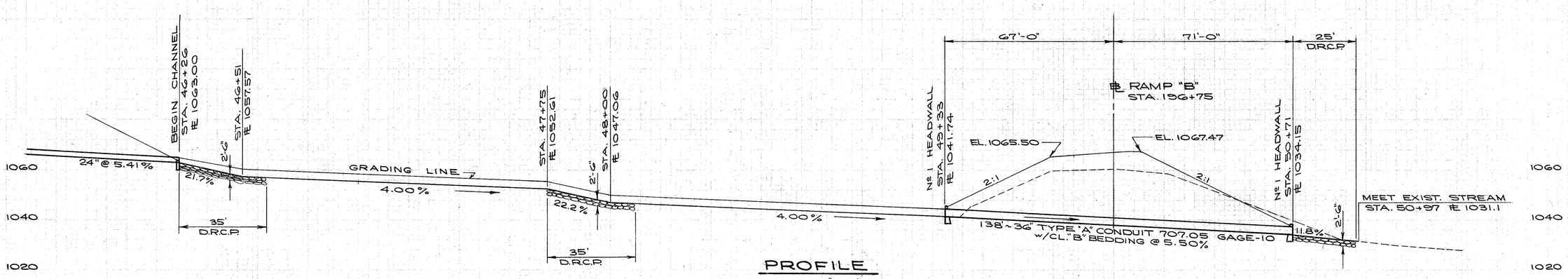
CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE-10 w/CL."B" BEDDING
SIZE: 36"x138'
SKEW: NONE
WORK REQ'D. BUILD NEW 36" DIA. CONDUIT AS SHOWN



TYPICAL CHANNEL SECTION
STA. 46+29 TO STA. 49+33
SCALE: 1" = 5'-0"

PLAN
SCALE: 1" = 20'-0"



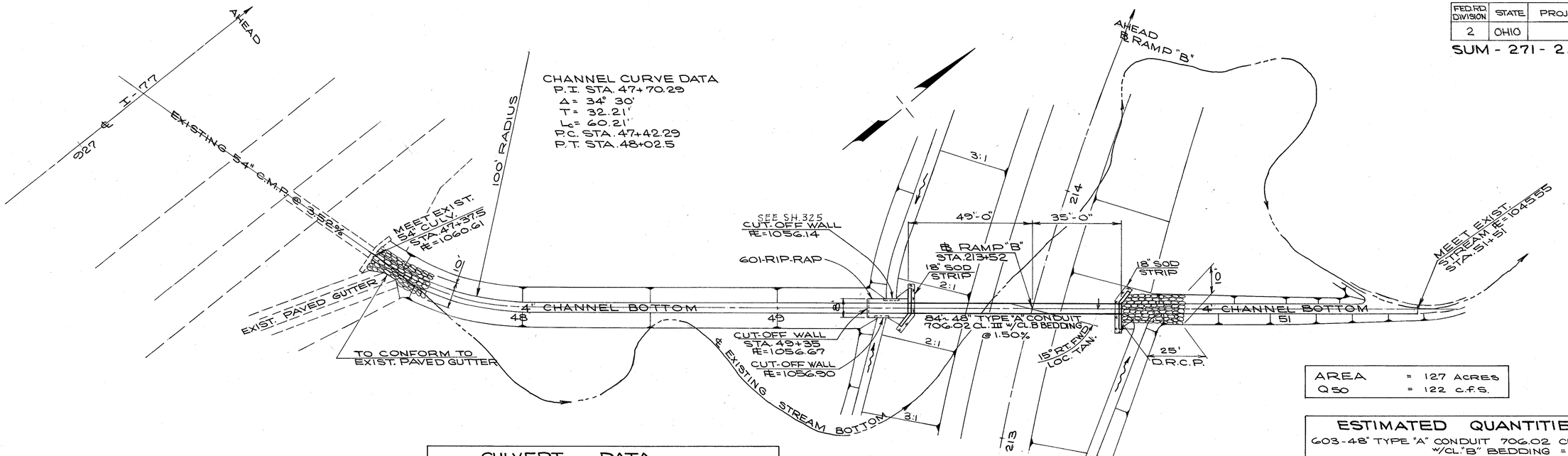
PROFILE
SCALE: 1" = 20'

CULVERT DETAIL
RAMP "B" STA. 196+75

FED.RD. DIVISION	STATE	PROJECT	
2	OHIO		

339
510

SUM - 271 - 2.98



CULVERT DATA

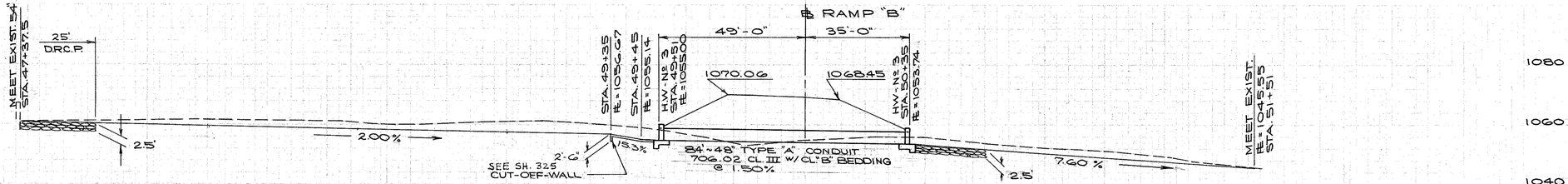
TYPE - "A" CONDUIT 706.02 CL. III w/ CL. "B" BEDDING
SIZE - 48" x 84'
SKEW - 15° RT FWD.
WORK REQ'D. - BUILD NEW 48" DIA. CONDUIT AS SHOWN

PLAN
SCALE: 1" = 20'-0"

AREA	= 127 ACRES
Q50	= 122 C.F.S.

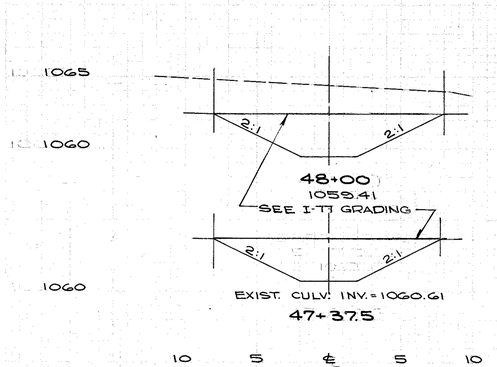
ESTIMATED QUANTITIES

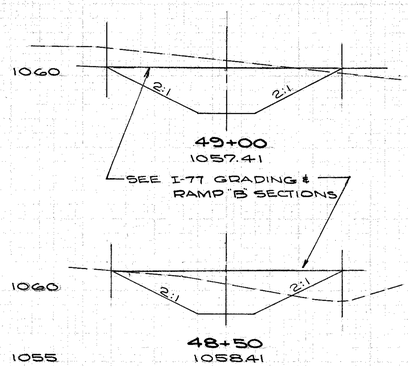
603 - 48" TYPE "A" CONDUIT 706.02 CL. III w/CL. "B" BEDDING	= 84 LIN. LT.
602 - CONCRETE MASONRY	= 17.4 CU. YDS.
660 - SODDING	= 7 SQ. YDS.
601 - DUMPED ROCK CHANNEL PROT.	= 46 CU. YDS.
203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	= 293 CU. YDS.
601 - RIPPAP, USING 6" REINF. CONC. SLAB	= 14.3 SQ. YDS.

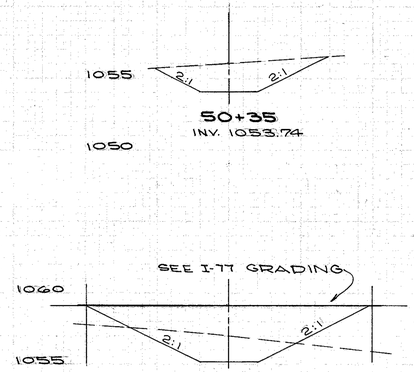


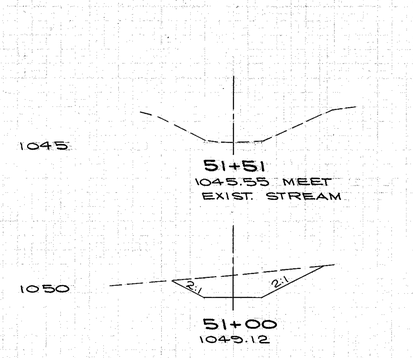
PROFILE
SCALE: 1" = 20'-0"

STA.	END AREA	CU. YDS.
47+37.5	30	
		69
48+00	30	
		56
48+50	30	
		56
49+00	30	
		64
49+51	30	
		——
50+35	16	
		36
51+00	12	
		12
51+51	0	
TOTAL		293









CHANNEL SECTIONS
SCALE: 1" = 5'-0"

CULVERT DETAIL
RAMP "B" STA. 213+52

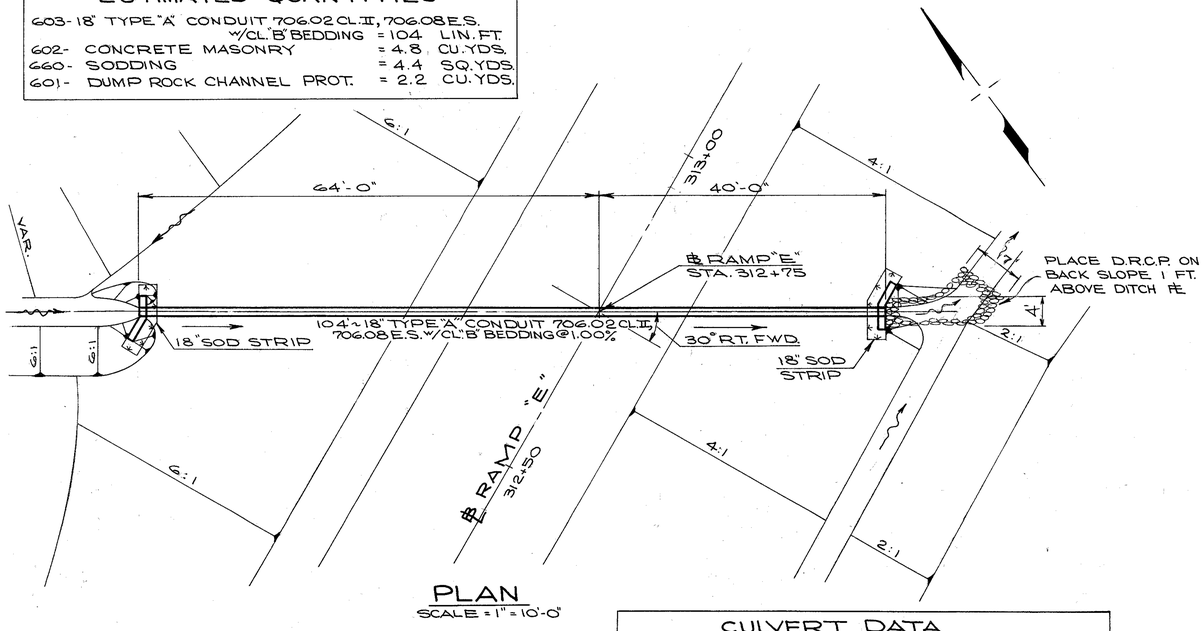
FED.RD. DIVISION	STATE	PROJECT	
2	OHIO		

340
510

SUM. 271-2.98

ESTIMATED QUANTITIES

603- 18" TYPE "A" CONDUIT 706.02 CL.II, 706.08 E.S. w/CL."B" BEDDING	= 104	LIN. FT.
602- CONCRETE MASONRY	= 4.8	CU. YDS.
660- SODDING	= 4.4	SQ. YDS.
601- DUMP ROCK CHANNEL PROT.	= 2.2	CU. YDS.

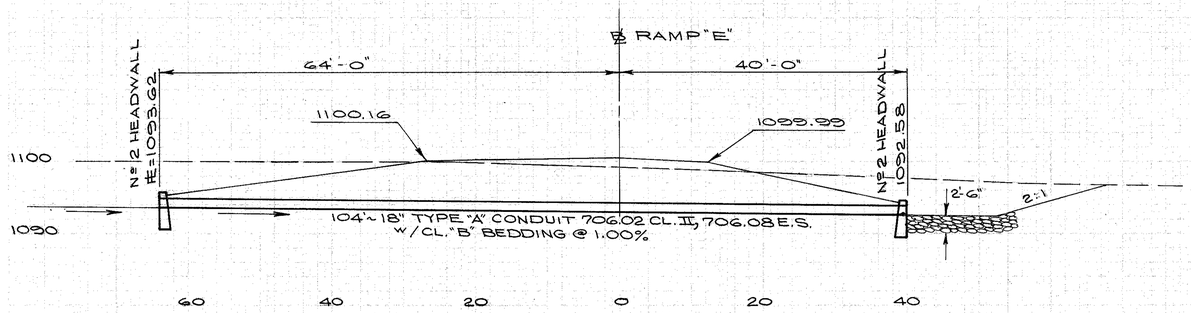


PLAN
SCALE = 1" = 10'-0"

AREA	= 3	ACRES
Q_{50}	= 9	c.f.s.

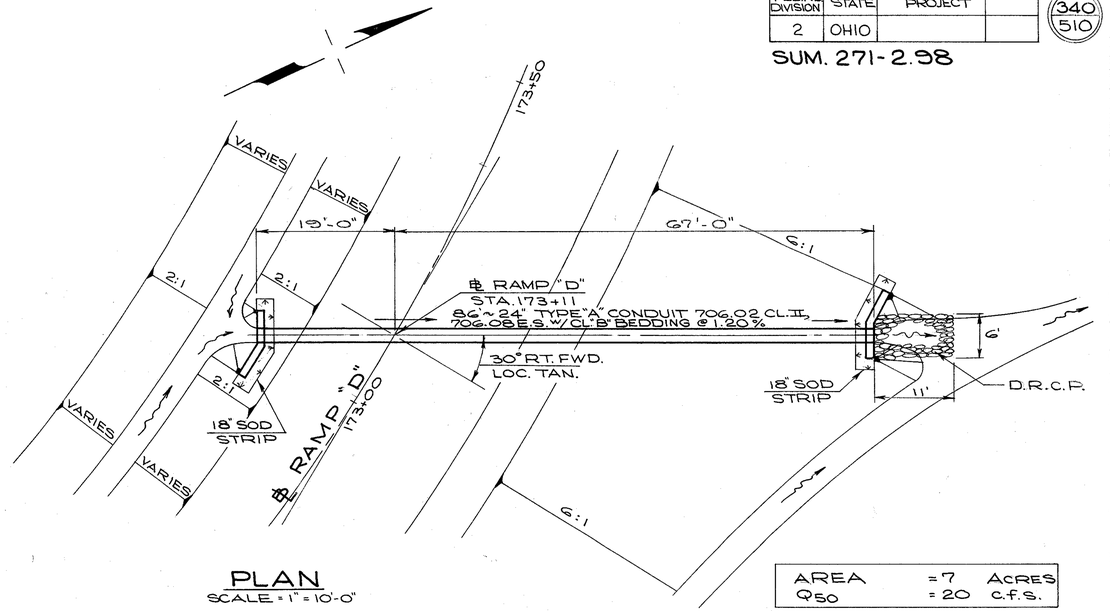
CULVERT DATA

TYPE "A" CONDUIT 706.02 CL.II, 706.08 E.S. w/CL."B" BEDDING
SIZE - 18" X 104'
SKEW - 30° RT. FWD.
WORK REQ'D - BUILD NEW 15" DIA. CONDUIT AS SHOWN



PROFILE
SCALE: 1" = 10'-0"

RAMP "E"



PLAN
SCALE = 1" = 10'-0"

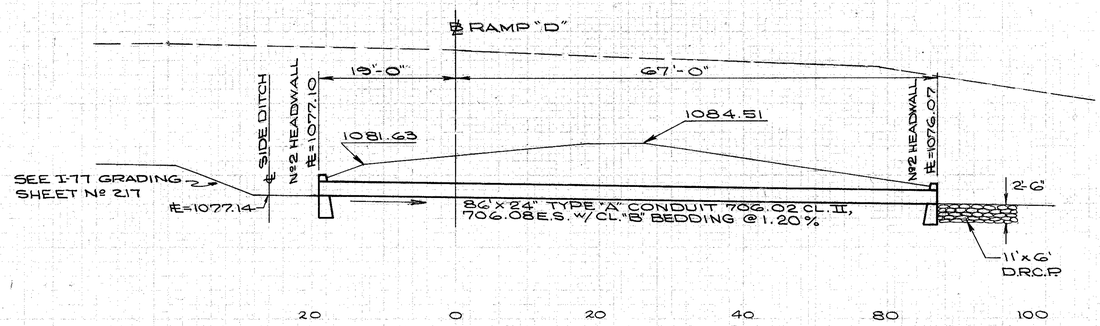
AREA	= 7	ACRES
Q_{50}	= 20	c.f.s.

ESTIMATED QUANTITIES

603- 24" TYPE "A" CONDUIT 706.02 CL.II, 706.08 E.S. w/CL."B" BEDDING	= 86	LIN. FT.
602- CONCRETE MASONRY	= 6.0	CU. YDS.
660- SODDING	= 5.7	SQ. YDS.
601- DUMPED ROCK CHANNEL PROT.	= 5.5	CU. YDS.

CULVERT DATA

TYPE "A" CONDUIT 706.02 CL.II, 706.08 E.S. w/CL."B" BEDDING
SIZE - 24" x 86'
SKEW - 30° RT. FWD.
WORK REQ'D - BUILD NEW 24" DIA. CONDUIT AS SHOWN.



PROFILE
SCALE: 1" = 10'-0"

RAMP "D"

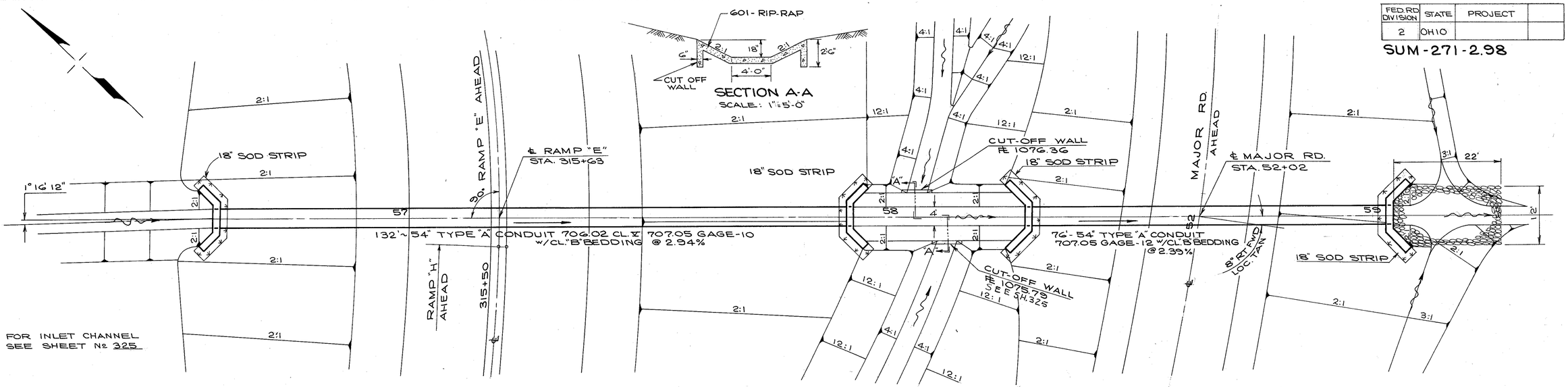
CULVERT DETAILS

RAMP "E" STA. 312+75
RAMP "D" STA. 173+11

FED.RD DIVISION	STATE	PROJECT	
2	OHIO		

341
510

SUM-271-2.98



CULVERT DATA

TYPE "A" CONDUIT 706.02 CL.V, 707.05 GAGE-10 w/CL."B" BEDDING
SIZE - 54" x 132'-0"
SKEW - NONE
WORK REQ'D - BUILD 54" DIA. CONDUIT AS SHOWN.

AREA	= 261	Ac.
Q_{50}	= 157	c.f.s.

ESTIMATED QUANTITIES

603 - 54" TYPE "A" CONDUIT 706.02 CL.V, 707.05 GAGE-10 w/CL."B" BEDDING	= 132 LIN. FT.
602 - CONCRETE MASONRY	= 20.6 CU. YDS.
660 - SODDING	= 7.4 SQ. YDS.
601 - RIP RAP, USING 6" REINF. CONC. SLAB	= 43.5 SQ. YDS.
203 - EXCAVATION NOT INCL. EMBKMT. CONST	43.9 CU. YDS.

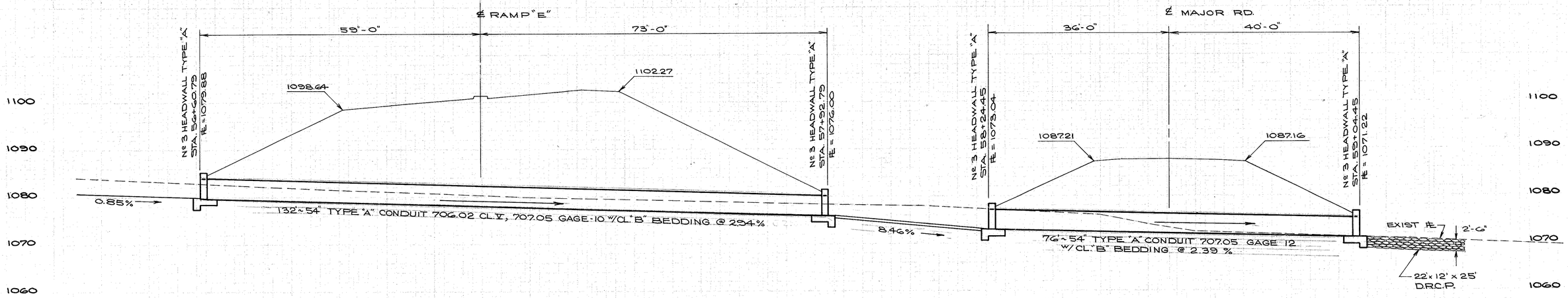
CULVERT DATA

TYPE "A" CONDUIT 707.05 GAGE-12 w/CL."B" BEDDING
SIZE - 54" x 76'-0"
SKEW - 8° RT. FWD.
WORK REQ'D BUILD NEW 54" DIA. CONDUIT AS SHOWN.

AREA	= 269	Ac.
Q_{50}	= 159	c.f.s.

ESTIMATED QUANTITIES

603 - 54" TYPE "A" CONDUIT 707.05 GAGE-12 w/CL."B" BEDDING	= 76 LIN. FT.
602 - CONCRETE MASONRY	= 20.6 CU. YDS.
660 - SODDING	= 7.4 SQ. YDS.
601 - DUMPED ROCK CHANNEL PROT.	= 24.4 CU. YDS.



PROFILE
SCALE: 1"=10'-0"

CULVERT DETAILS
RAMP "E" STA. 315+63
MAJOR RD. STA. 52+02

FED.RD DIVISION	STATE	PROJECT	
2	OHIO		

342/510

SUM-271-2.98

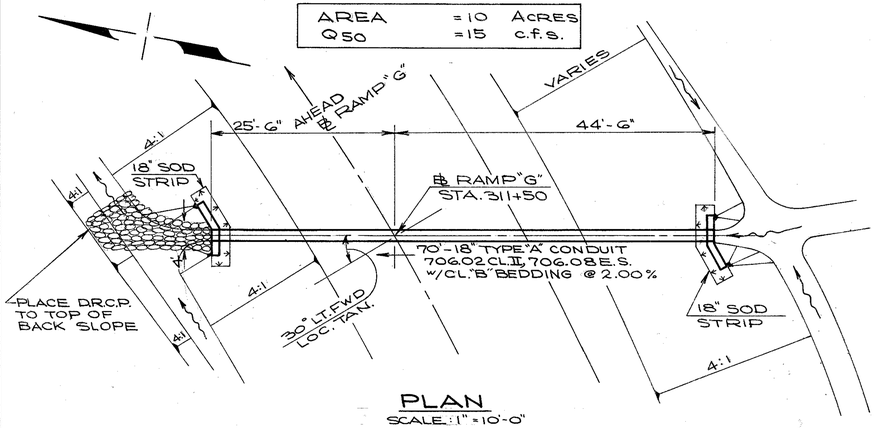
ESTIMATED QUANTITIES

603-18" TYPE "A" CONDUIT 706.02 CL II 706.08 E.S. w/CL "B" BEDDING	= 60	LIN. FT.
602- CONCRETE MASONRY	= 4.8	CU. YDS.
660- SODDING	= 4.2	SQ. YDS.
601- DUMPED ROCK CHANNEL PROT.	= 6.3	CU. YDS.

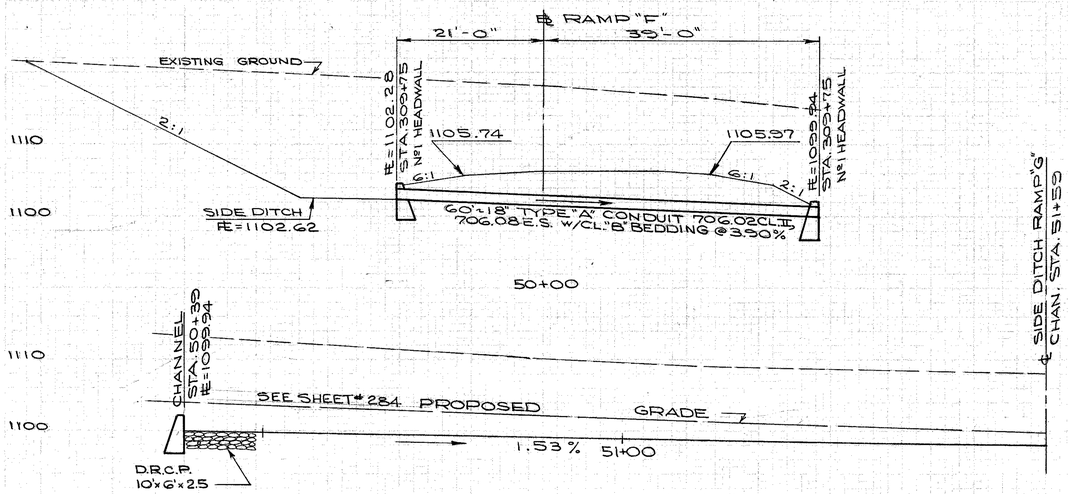
CULVERT DATA

TYPE "A" CONDUIT 706.02 CL. II, 706.08 E.S. w/CL. "B" BEDDING
SIZE - 18" x 70'
SKEW - 30° LT. FWD.
WORK REQ'D - BUILD NEW 18" DIA. CONDUIT AS SHOWN

AREA	= 10	ACRES
Q50	= 15	c.f.s.



PLAN
SCALE: 1" = 10'-0"



ESTIMATED QUANTITIES

603-18" TYPE "A" CONDUIT 706.02 CL. II 706.08 E.S., w/CL. "B" BEDDING	= 60	LIN. FT.
602- CONCRETE MASONRY	= 4.8	CU. YDS.
660- SODDING	= 5	SQ. YDS.
601- DUMPED ROCK CHANNEL PROT.	= 5.5	CU. YDS.
203- EXCAVATION NOT INCL. EMBK'MT. CONST.	= 90	CU. YDS.
667- JUTE MATTING	= 88	SQ. YDS.

CULVERT DATA

TYPE "A" CONDUIT 706.02 CL. II, 706.08 E.S. w/CL. "B" BEDDING
SIZE - 18" x 60'
SKEW - NONE
WORK REQ'D - BUILD NEW 18" DIA. CONDUIT AS SHOWN

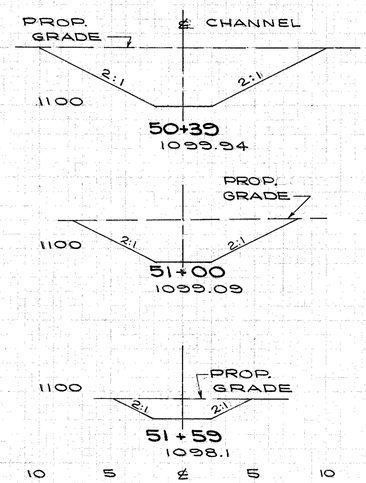
AREA	= 7	ACRES
Q50	= 11	c.f.s.



PLAN
SCALE: 1" = 10'-0"

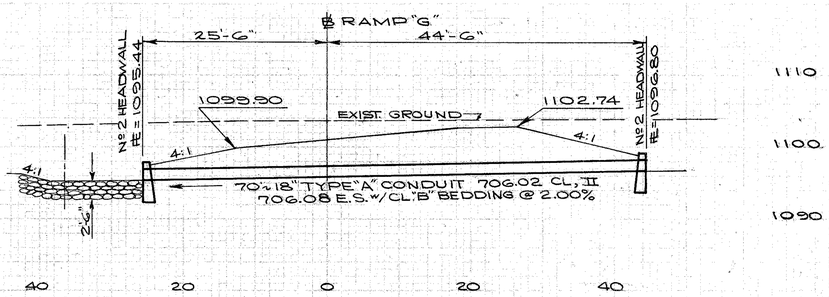
PROFILE
SCALE: 1" = 10'-0"

RAMP "F"



STA.	END AREA	CU. YDS.
0+00	11	
		36
0+65	19	
		54
1+20	34	
TOTAL		90

CHANNEL SECTIONS
SCALE: 1" = 5'-0"

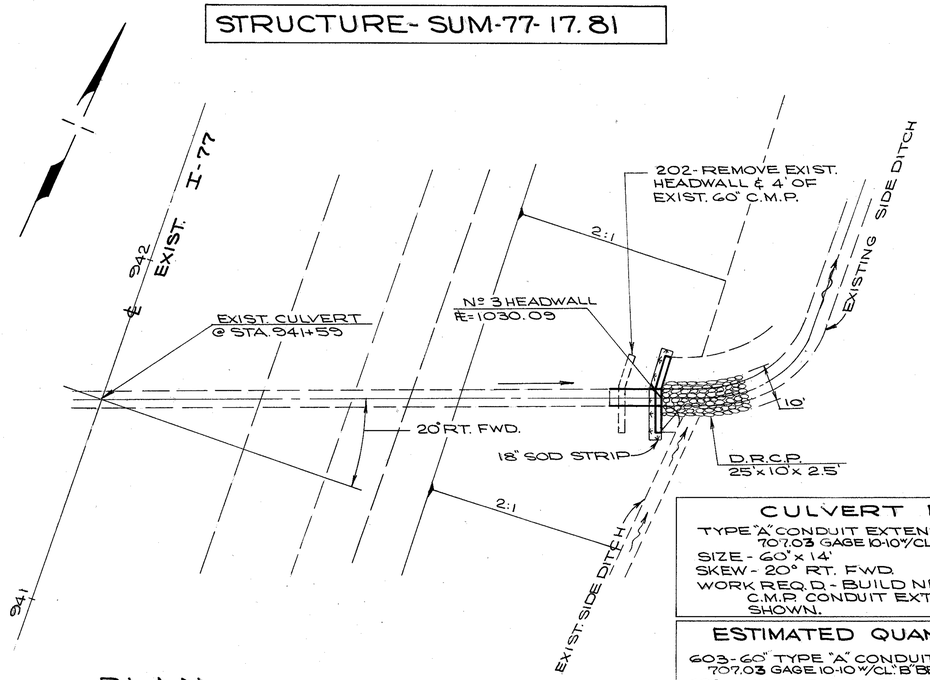


PROFILE
SCALE: 1" = 10'-0"

RAMP "G"

CULVERT DETAILS
RAMP "F" STA. 309+75
RAMP "G" STA. 311+50

STRUCTURE- SUM-77-17.81



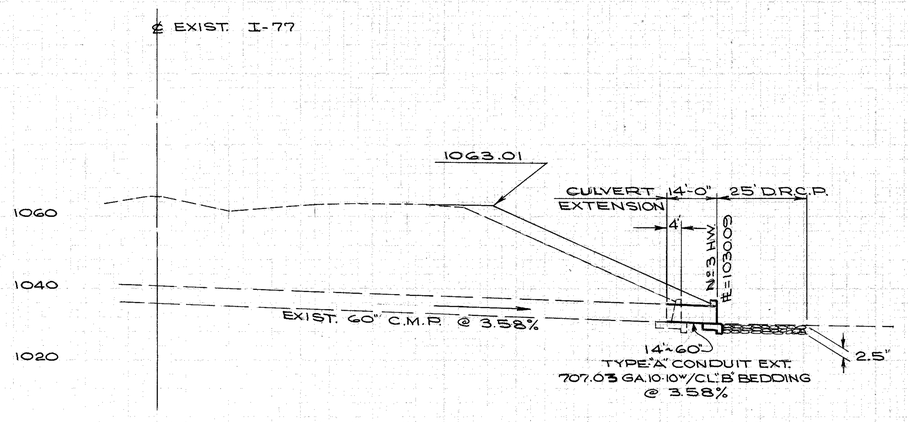
PLAN
SCALE: 1" = 20'-0"

CULVERT DATA

TYPE "A" CONDUIT EXTENSION 707.03 GAGE 10-10"/CL. 'B' BEDDING
SIZE - 60" x 14'
SKEW - 20° RT. FWD.
WORK REQ.D - BUILD NEW 60" DIA. C.M.P. CONDUIT EXTENSION AS SHOWN.

ESTIMATED QUANTITIES

603-	60" TYPE "A" CONDUIT EXTENSION 707.03 GAGE 10-10"/CL. 'B' BEDDING	= 14 LIN.FT.
602-	CONCRETE MASONRY	= 12.8 C.Y.
660-	SODDING	= 4 S.Y.
601-	DUMPED ROCK CHAN. PROT.	= 23 C.Y.
202-	REMOVAL OF PORTIONS OF EXISTING STRUCTURES	= LUMP

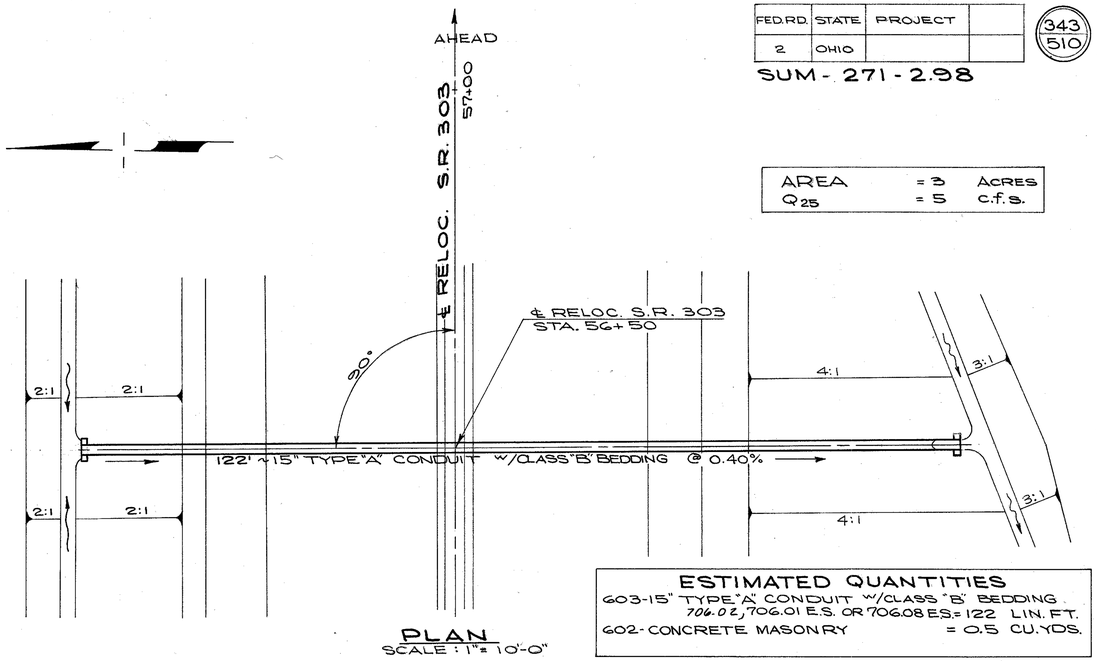


PROFILE
SCALE 1"=20'-0"

FED.RD.	STATE	PROJECT	
2	OHIO		

343
510

SUM-271-2.98



PLAN
SCALE: 1"=10'-0"

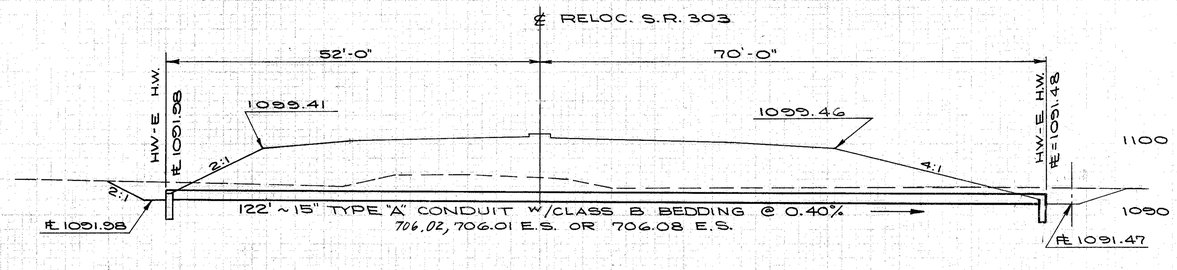
AREA	= 3	ACRES
Q_{25}	= 5	c.f.s.

ESTIMATED QUANTITIES

603-15" TYPE "A" CONDUIT w/CLASS "B" BEDDING 706.02, 706.01 E.S. OR 706.08 E.S. = 122 LIN. FT.
602- CONCRETE MASONRY = 0.5 CU.YDS.

CULVERT DATA

TYPE-"A" CONDUIT 706.01 E.S. 706.08 E.S. w/CL. "B" BEDDING
SIZE - 15" x 122'
SKEW - NONE
WORK REQ'D. - BUILD NEW 15" DIA. CONDUIT AS SHOWN



PROFILE
SCALE 1"=10'-0"

CULVERT DETAILS
EXIST. I-77 STA. 941+59
RELOC. S.R. 303 STA. 56+50

FED.RD	STATE	PROJECT	
2	OHIO		

344
510

SUM - 271 - 2.98

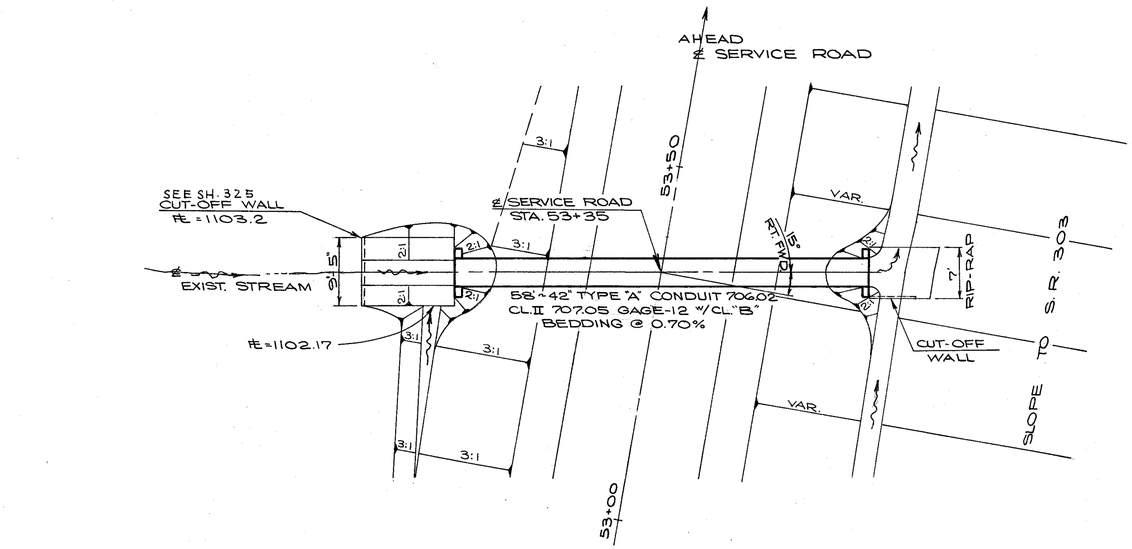
AREA	= 75	ACRES
Q_{25}	= 55	c.f.s.

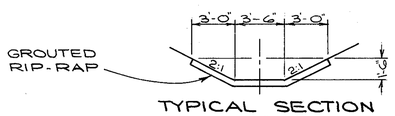
ESTIMATED QUANTITIES

603 - 42" TYPE "A" CONDUIT 706.02 CL.II 707.05 GAGE-12 W/CL."B" BED'G = 58 LIN. FT.
602 - CONCRETE MASONRY = 1.52 CU.YDS.
601 - RIP-RAP, USING 6" REINF. CONC. SLAB = 13.6 SQ.YD.
203 - EXCAVATION NOT INCLUDING EMBKMT CONST= 3 CU.YDS.

CULVERT DATA

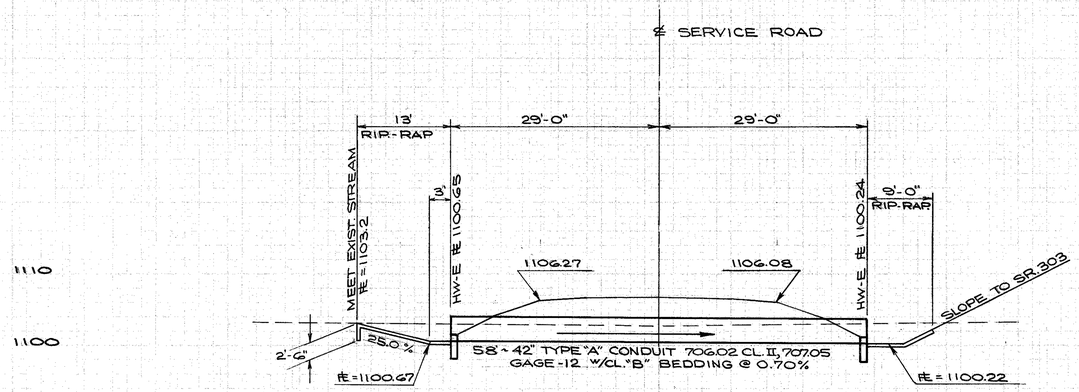
TYPE - "A" CONDUIT 706.02 CL.II, 707.05 GAGE-12 W/CL."B" BEDDING
SIZE - 42" x 58'
SKEW - 10° RT. FWD.
WORK REQ'D - BUILD NEW 42" DIA. CONDUIT AS SHOWN.





TYPICAL SECTION
SCALE: 1" = 5'-0"

PLAN
SCALE: 1" = 10'-0"



PROFILE
SCALE: 1" = 10'-0"

80 60 40 20 0 20 40 60

CULVERT DETAIL
SERVICE ROAD
STA. 53+35

FED. RD.	STATE	PROJECT	
2	OHIO	I-271	

345/510

SUM-271-2.98

LIGHTING NOTES

GENERAL

THIS SPECIFICATION SUPPLEMENTS THE STATE OF OHIO CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED JANUARY 1, 1965, FOR THE MATERIALS USED, AND FOR THE INSTALLATION OF LIGHTING UNITS ON FREEWAY INTERCHANGE.

THE LOCATION OF LIGHTING UNITS, SERVICE POLE, CONDUIT, CIRCUIT CABLES, PULL BOXES AND GROUNDS SHALL BE AS INDICATED ON THE PLANS.

THROUGHOUT THESE PLANS THE USE OF TRADE NAMES FOR ELECTRICAL LIGHTING EQUIPMENT IS MEANT TO BE DESCRIPTIVE ONLY. COMPARABLE PRODUCTS OF OTHER ELECTRICAL FIRMS ARE ACCEPTABLE IF ACCESSORIES AND MAIN MEMBERS ARE COMPATIBLE WITH ONE ANOTHER AND SERVE THE INTENDED PURPOSE.

MATERIALS AND EQUIPMENT

ALL BOLTS, NUTS, STUDS, SHIMS, WASHERS, SCREWS, CONDUIT STRAPS, AND SIMILAR FASTENINGS AND FITTINGS SHALL BE OF AN APPROVED CORROSION RESISTING MATERIAL SUCH AS SILCONE-BRONZE, OR SHALL BE IRON OR STEEL TREATED IN AN APPROVED MANNER SUCH AS HOT DIP GALVANIZING TO MAKE IT CORROSION-RESISTANT.

ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW, SHALL BE OF THE BEST QUALITY AND WORKMANSHIP, SHALL BE THE BEST STANDARD PRODUCT OF A MANUFACTURER REGULARLY ENGAGED IN PRODUCING THIS TYPE OF MATERIAL OR EQUIPMENT, AND OF THE LATEST APPROVED DESIGN.

LIGHTING DESIGN

THE LIGHTING DESIGN IS BASED ON 0.8 TO 1.1 FOOT-CANDLE AVERAGE INITIAL VALUE ON THE ROADWAY, BRIDGE, AND RAMPS.

THE LIGHTING WILL BE MERCURY VAPOR, USING A MULTIPLE SYSTEM, SINGLE PHASE 480 VOLT CIRCUIT WITH ONE LEG GROUNDED.

TESTS

TESTS SHALL BE PERFORMED AS SPECIFIED IN SECTION 625.22.

SERVICE POLE

CONTRACTOR SHALL FURNISH AND INSTALL AT THE LOCATIONS SHOWN, A SERVICE POLE,

SECONDARY CIRCUIT CONTACTORS, WITH PHOTO-CELL CONTROL, GROUNDING, THE 2" CONDUIT, AND 18" PULL BOX FOR TERMINATION OF THE DUCT-CABLE LIGHT FEEDERS.

ELECTRIC SIGN SERVICES

AT EACH LOCATION ON PLANS WHERE AN ELECTRICALLY LIGHTED SIGN IS INDICATED, THE ROADWAY LIGHTING CONTRACTOR SHALL FURNISH AND INSTALL A 18" FIBER PULL BOX, LOCATED GENERALLY TEN (10) FEET BEYOND THE SIGN SUPPORT IN THE DIRECTION OF TRAFFIC. THE ROADWAY LIGHTING CKT. CABLES SHALL BE SPLICED IN THIS PULL BOX EACH WITH AN UNFUSED "Y" TYPE IV KIT. TAPE SEAL UNUSED TAP CONNECTION, UNTIL IT CAN BE USED.

THE SIGN LIGHTING CONTRACTOR WILL FURNISH CONDUIT AND #6 WIRE FROM PULL BOX TO AND INTO SIGN FOUNDATION, AND CONNECT SIGN INTO THE CIRCUIT, AS PART OF SIGN LIGHTING CONTRACT.

SUPER-STRUCTURE GROUNDING

GROUND CABLE SHALL BE 1/0, 7-STRAND, SOFT ANNEALED BARE COPPER CABLE ENCASED IN OUTSIDE COLUMN OF STRUCTURE AT A FIXED PIER (FIXED PIER FOR EACH BRIDGE STRUCTURE IS LISTED IN THE TABLE ON DRAWING "LIGHTING DETAILS-STRUCTURES.") ON BRIDGES INDICATED IN TABLE, EXOTHERMIC WELD GROUND CABLE TO THE STEEL SHELL OF ONE OF THE CAST-IN-PLACE CONCRETE PILES. ON BRIDGE SUM 271-0602 SPIRAL COIL 25' OF THE 1/0 GRD. CABLE UNDER THE PIER FOOTING FLAT TO THE EARTH, AND COVER WITH TWO (2) LAYERS OF TAR PAPER TO SEPARATE FROM THE CONCRETE WHEN POURED.

EXTEND CABLES UP IN ONE CONTINUOUS LENGTH THRU PIER CAP WITH SUFFICIENT LENGTH AND EXOTHERMIC WELD TO OUTSIDE STEEL GIRDER OR BEAM OF THE SUPER-STRUCTURE.

EACH LIGHT POLE STANDARD, SIGN STRUCTURE, GALVANIZED CAST JUNCTION BOXES, AND THE GALVANIZED STEEL CONDUIT SECTIONS SHALL BE GROUNDED TO THE STEEL SUPER-STRUCTURE AS INDICATED ON THE PLANS, AND ACCORDING TO SECTION 625.20.

WIRE—CABLE—DUCT-CABLE IDENTIFICATION

ALL CIRCUIT & GROUND CABLES (EXCEPT STRUCTURE GROUNDING SYSTEM WIRES) AND DUCT-CABLE SHALL BE IDENTIFIED IN EACH PULL BOX, MANHOLE, PARAPET OR CURB JUNCTION BOX (TYPE "A" or "B" BRIDGE RACEWAY BOXES), ETC. TAGS SHALL BE CIRCULAR IN SHAPE, 1 3/8" to 1 1/2" NOMINAL DIA. & MINIMUM .031" THICK COPPER OR BRASS. USE STEEL LETTERING DIES, 1/4" MINIMUM SIZE OR THE EQUIVALENT ENGRAVING PROCESS TO MARK THE TAG. IT SHALL BE SECURELY ATTACHED WITH AN AWG #16 OR LARGER BARE COPPER WIRE. MARKING OF TAGS SHALL CONSIST OF AN ABBREVIATION FOR THE GROUND WIRES "GR'D" & CIRCUIT WITH NUMBER OR LETTER "CKT. A", ETC.

IDENTIFICATION BY AN APPROVED BANDING METHOD WILL BE CONSIDERED AS AN ALTERNATE; ALSO APPROVED PLASTIC TAGS IN LIEU OF ABOVE METAL TAGS.

CABLES IN CIRCUIT BREAKER & SAFETY SWITCH ENCLOSURES SHALL BE TAGGED WITH PLASTIC TAGS OR BANDED IN AN APPROPRIATE MANNER SO AS NOT TO REDUCE ELECTRIAL CLEARANCES FROM LIVE CONDUCTORS & LIVE PARTS TO GROUND.

COST SHALL BE INCLUDED WITH BID ITEM FOR WIRE, CABLE OR DUCT-CABLE.

CONDUIT (METAL)

CONDUIT AND FITTINGS SHALL BE TYPE II OR III RIGID FERROUS METAL HOT DIPPED GALVANIZED AFTER THREADING

All conduit installed under existing pavement, paved berms or paved areas shall be bored or jacked in place without cutting or disturbing the paving. Unit price bid includes all materials, labor, equipment, excavation, backfill and compaction.

PULL BOXES

18" DIAMETER FIBER PULL BOXES SHALL BE FABRICATED FROM A FIBER TUBE, 0.37" MINIMUM WALL THICKNESS IMPREGNATED WITH A BLACK BITUMINOUS COMPOUND TO MAKE IT WATERPROOF. TUBE SHALL MEET THE FEDERAL SPEC. No. WC 581 FOR CONSTRUCTION AND CHEMICAL TESTS. THE PULL BOX SHALL HAVE A TOP OF 3/8" THICK CAST IRON PAINTED WITH ASPHALTUM, WITH THE WORD "ELECTRIC" IMPRINTED AND A BOLT FASTENING AS INDICATED.

BOTTOM OF THE TUBE SHALL BE LEFT OPEN, SET OVER A 6 INCH BED OF AGGREGATE TO ALLOW FOR DRAINING. CONTRACTOR SHALL CUT ONLY NECESSARY SIZE AND LENGTH OF SLOTS FOR DUCT-CABLE, OR HOLE FOR CROSS OVER CONDUIT, AS DETERMINED FOR EACH LOCATION; TOP OF BOX PROJECTION AND LOCATIONS ARE AS DETAILED ON THE PLANS.

DUCT-CABLE, CABLE AND WIRE

DUCT-CABLE SHALL BE FURNISHED IN 1-1/2" NOMINAL SIZE WITH TWO (2) SINGLE CONDUCTORS AS SPECIFIED, 7-STRAND 600 VOLT COPPER CONDUCTORS, CROSS LINKED FILLED POLYETHYLENE INSULATED TYPE GENERAL ELECTRIC CABLE No. S1-580 73 OR APPROVED EQUIVALENTS AS MANUFACTURED BY ROME, SIMPLEX, PHELPS-DODGE, KAISER, OR OTHER MANUFACTURERS APPROVED PRODUCT. DUCT SHALL BE BLACK POLYETHYLENE PLASTIC CONFORMING TO THE OVERALL DIAMETER OF IPS SCHEDULE CONDUIT, SHALL BE FLEXIBLE ENOUGH FOR EASY COILING AND UNCOILING AT 14° F. AND SHALL CONFORM TO ASTM SPECS. D-2104 SCHEDULE 40, TYPE II GRADE 3, OR TYPE III.

CONTRACTOR SHALL LAY NOT PULL THE DUCT-CABLE IN THE TRENCH.

CABLE USED IN BRIDGE STRUCTURES IN CROSS OVER CONDUIT AND THE 2" CONDUIT UP SLOPES AT BRIDGES, SHALL BE THE SAME SIZE AND SPECIFICATION AS FURNISHED IN THE DUCT-CABLE. POLE AND BRACKET CABLE SHALL BE SINGLE CONDUCTOR, No. 10 GAUGE, CODED, 600 VOLT, -STRANDED COPPER - INSULATION TYPE THHN/THWN - UL 90°C.

CABLE INSTALLATION AND TERMINATION

THE DIRECT BURIAL DUCT-CABLE, AND THE CABLES PULLED THRU THE BRIDGE CONDUIT OR IN CONDUIT CROSS OVERS AT RAMPS, SHALL BE CONTINUOUS FROM BASE TO BASE OF STANDARDS, OR FROM PULL BOX TO PULL BOX. NO SPLICES IN CABLES WILL BE PERMITTED, EXCEPT IN LIGHTING STANDARD BASES, AND IN PULL BOXES. THE DETAILS ON DRAWINGS SHOW METHODS AND CONNECTIONS THAT ARE REQUIRED.

THE CABLE TERMINATIONS AND SPLICES SHALL BE MADE IN THE POLE BASES AND PULL BOXES, USING FACTORY MANUFACTURED INSULATED CONNECTOR KITS. CONTRACTOR SHALL SIZE THE KITS TO MAKE A FIT ON THE CABLE HE FURNISHES. THE KITS SHALL BE SEPARATE PAY ITEMS IN QUANTITY TABLES. WATER PROOF

LIGHT POLES
- UNFUSED "Y" TYPE III
- FUSED "Y" TYPE II
- WITH - 6 AMP. FUSE
- GRD'G. - COMPRESSION TYPE CONNECTOR

FIBER PULL BOX
- UNFUSED "Y" TYPE IV
- STRAIGHT TYPE I

TRENCHING AND BACKFILLING

CONTRACTOR SHALL DO ALL EXCAVATION OF EVERY DESCRIPTION TO THE DIMENSIONS AND LEVELS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. EXCAVATION MAY BE ACCOMPLISHED WITH MECHANICAL TRENCHING AND BORING EQUIPMENT, EXCEPT THAT CONTRACTOR MAY NOT USE A TRENCHER THAT PRODUCES SUCH LIFTING FORCE AS TO DESTROY THE EDGE, OR UNDER-MINE THE PAVED BERM, WHEN TRENCHES ARE IN FRONT OF GUARD RAIL, AS SHOWN IN PLAN-1 ON DRAWING DETAIL.

WHERE GUARD RAIL IS ENCOUNTERED THE TRENCHING IN GENERAL SHOULD BE DONE IN FRONT OF RAIL. EXCEPT THAT THE ALTERNATE TRENCH ALIGNMENT SHALL BE USED WHEN GUARD RAIL IS WITHIN 1' OF PAVED SHOULDER OR WHEN CURB IS USED. WALLS OF TRENCHES SHALL BE ESSENTIALLY VERTICAL, AND BOTTOMS SMOOTH, AND FREE FROM LARGE AGGREGATES.

CAREFUL BACKFILLING OF TRENCHES IS ESSENTIAL TO PREVENT DAMAGE TO THE CABLE DUCT. BACKFILL AND TAMP MATERIAL IN TRENCH BY LAYERS, IN ACCORDANCE WITH SEC. 625.12. LEAVE TOP OF BACKFILL LEVEL WITH AND IN SAME CONDITION AS SPECIFIED FOR CONDITION OF THE PAVING SHOULDER CONSTRUCTION, AND SATISFACTORY TO THE ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:
2,000 L.F. — ALTERNATE TRENCH 4'-6" DEEP

ALUMINUM TRANSFORMER BASE ATA AS PER PLAN

CAST ALUMINUM TRANSFORMER BASES, TYPE AT-A, AS DETAILED ON SHEET 350, SHALL BE PROVIDED ON EACH ROADWAY LIGHTING UNIT ON THIS PROJECT

LUMINAIRES AND LAMPS

LUMINAIRES SHALL BE FURNISHED WITH 2" SLIPFITTER, ALL COMPLETELY ASSEMBLED, AND SOCKET IN POSITION TO EFFECT EITHER IES-ASA TYPE II OR TYPE III DISTRIBUTION. BALLAST SHALL BE A HIGH-POWER FACTOR REGULATING, OR CONSTANT WATTAGE TYPE RATED FOR USE WITH 400 WATT MERCURY LAMP, 240/480 VOLTS ± 13% REGULATION. CONNECT BALLAST FOR 480 VOLTS.
LUMINAIRES SHALL BE GENERAL ELECTRIC COMPANY FORM M-400, WESTINGHOUSE TYPE OV-25, LINE MATERIAL COMPANY UNISTYLE, OR AN APPROVED EQUAL.
MERCURY LAMPS SHALL BE CLEAR TYPE ASA CODE H33 ICD RATED FOR 16,000 HOUR LIFE. THEY SHALL BE GENERAL ELECTRIC COMPANY "BONUS LINE", WESTINGHOUSE "LIFEGUARD", SYLVANIA "BANNER LINE", OR AN APPROVED EQUAL.

LIGHTING POLES

THE POLES SHALL BE OF SUCH DESIGN AS TO MAKE A COMPLETE WIRING RACEWAY AFTER THEY HAVE BEEN ASSEMBLED AND ERECTED. THEY SHALL BE EQUIPPED WITH A "J" HOOK PLACED INSIDE AND ABOVE THE ARM ATTACHMENT TO HOLD A BRONZE CABLE GRIP WHICH SHALL KEEP THE POLE AND BRACKET WIRE FROM BEARING AND CHAFING ON THE ATTACHMENT WHERE THEY TURN OUT THE ARM.
THE BRIDGE POLE THAT IS SHOWN TO BE INSTALLED, SHALL BE MOUNTED ON THE BRIDGE PARAPET WALL PROJECTION, WITH ELECTRICAL CONNECTIONS AS NOTED ON SHEET NO. 352.

ALL POLES SHALL BE PLACED SO THEIR BRACKET ARMS ARE NORMALLY AT RIGHT ANGLES TO THE CENTERLINE OF THE ROADWAY, AND CAREFULLY PLUMBED TO BE IN VERTICAL ALIGNMENT. EACH LIGHT POLE, AND THE CIRCUIT GROUND CABLE SHALL BE GROUNDED AT EACH LOCATION.

ALL POLE HARDWARE SHALL BE EITHER STAINLESS STEEL, GALVANIZED STEEL, OR SILICONE-BRONZE.

THE FOLLOWING SPECIFICATIONS FOR THE LIGHTING POLES ARE SUPPLEMENTARY TO SECTION 625.05 AND 713.01, INDICATING THE SPECIFIC ITEMS PERTAINING TO THIS PROJECT:

A. SHAFTS

1. SHAFTS SHALL BE 11 GAUGE TAPERED STEEL TUBES.
2. SHAFTS SHALL BE FITTED WITH CAST STEEL ANCHOR BASES
3. SHAFTS SHALL HAVE A 4"x10" HANDHOLE WITH BOLT ON COVER AND CAPTIVE CHAIN.
4. SHAFTS SHALL CONFORM TO THE MINIMUM REQUIREMENTS FOR DEFLECTION AND PERMANENT SET AS TABULATED FOR THE RESPECTIVE POLE SIZES IN THE FOLLOWING TABLE:

MOUNTING HEIGHT	DESIGN Nº	POLE SIZE	GA.	ARM LENGTH	ANCHOR BOLT CIRCLE	PROJ.° ABOVE BASE	ELASTIC DEFL. RATE IN. PER 100 LB.	AT 2/3 YIELD STR. LOAD 18" DOWN LB.	AT 2/3 YIELD STR. TOTAL DEFL. IN.	AT 2/3 YIELD STR. PERM. SET IN.	AT YIELD STRENGTH LOAD 18" DOWN LB.	AT YIELD STRENGTH TOTAL DEFL. IN.	AT YIELD STRENGTH PERM. SET IN.
32'-6"	11A15B32.5	9"x4.87"x29'-6"	11	15'	12.5"	3"	2.16	659	14.73	.50	989	24	2.64
30'-0"	11A10B30	8"x4.22"x27'-0"	11	10'	11"	2 5/8"	2.37	568	13.96	.50	852	22.71	2.52
32'-6"	11A10B32.5	8"x3.87"x29'-6"	11	10'	11"	2 5/8"	3.32	517	17.66	.50	776	28.84	3.08

B. BRACKET ARMS

BRACKET ARMS AND THEIR SHAFT ATTACHMENTS SHALL CONFORM TO SECTION 713.01, 6 AND BE SUPPLIED WITH 2" FITTER.

C. ANCHOR BOLTS AND SHIMS

1. FOUR HIGH-GRADE STEEL ANCHOR BOLTS FITTED WITH HEX NUTS SHALL BE FURNISHED FOR EACH POLE. EACH ANCHOR BOLT SHALL HAVE AN "L" BEND AT THE BOTTOM AND BE THREADED AT THE TOP END. THREADED ENDS AND NUT SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-153 WITH THE BOLT GALVANIZING EXTENDING 1" TO 4" BEYOND THREADS.

2. SHIMS FOR PLUMBING POLE SHALL BE OF GALVANIZED STEEL.

D. GALVANIZING

THE STEEL POLES AND ARMS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 713.01, 8.

Rev. 7-28-67
Rev. 2-8-67

LIGHTING NOTES

GENERAL LIGHTING QUANTITIES

FED. RD.	STATE	PROJECT	
2	OHIO		

346
510

SUM-271-2.98

LINE Nº	ITEM	STRUCTURES SUM-271- 0354	0358 RT	0358 LT	0378 RT	0378 LT	0602	0658 LEFT	ROADWAY TYPE CODE 7221 NORMAL	NORMAL	100% STATE	NORMAL	SUB TOTALS NORMAL	SUB TOTALS 100% STATE	ROADWAY TOTAL	ITEM	UNIT	DESCRIPTION
SHEET Nº		347	347	347	347	347	348	349	349	347	348	348				SHEET Nº		
1	625									29		16	45		45	625	EA.	LIGHT POLE W/15' BRACKET ARM - DESIGN 11A15 B32.5
2				1													EA.	LIGHT POLE W/10' BRACKET ARM - DESIGN 11A10 B 30
3										34		16	50		50		EA.	LIGHT POLE FOUNDATION 6' DEEP
4										5		2	7		7		EA.	LUMINAIRE TYPE II W/ 400 W. INTEGRAL BALLAST
5				1						29		14	43		43		EA.	LUMINAIRE TYPE III W/ 400 W. INTEGRAL BALLAST
6				1						34		16	50		50		EA.	MERCURY VAPOR LAMP 400 W.
7										5		2	7		7		EA.	LIGHT POLE W/10' BRACKET ARM - DESIGN 11A10B32.5
8										34		16	50		50		EA.	GROUND ROD UNIT
9										35		16	51		51		EA.	PULL BOX, ROUND FIBER 18" I.D.
10										1			1		1		EA.	GLARE SHIELD
11										17,200		7300	24,500		24,500		L.F.	TRENCH 24" DEEP
12										1,000		1000	2,000		2,000		L.F.	ALTERNATE TRENCH 4'-6" DEEP
13		370	395	380	160	160	730	270	20	300		240	560		560		L.F.	CONDUIT 2" RIGID FERROUS METAL TYPE II OR III
14																		
15										460	130	470	930	130	1,060		L.F.	CONDUIT 3" RIGID FERROUS METAL TYPE II OR III
16									2	2	2	2	6	2	8		EA.	MARKER
17			810	860	325	325	830			1560		1160	2720		2720		L.F.	CIRCUIT CABLE 600 V. 1/C Nº 4
18				80						3080		1670	4750		4,750		L.F.	POLE AND BRACKET CABLE 600 V. 1/C Nº 10
19										16,170		7680	23,850		23,850		L.F.	DUCT-CABLE 600 V. TWO INSULATED 1/C Nº 4
20										1170			1170		1,170		L.F.	DUCT-CABLE 600V. TWO INSULATED 1/C Nº 2
21										30		20	50		50		EA.	CONNECTOR KIT TYPE I
22				1						35		18	53		53		EA.	CONNECTOR KIT TYPE II
23				1						35		18	53		53		EA.	CONNECTOR KIT TYPE III
24				2			6			26		14	40		40		EA.	CONNECTOR KIT TYPE IV
25												LUMP	LUMP		LUMP		LUMP	SERVICE POLE, SR 303 INTERCHANGE
26										LUMP			LUMP		LUMP		LUMP	SERVICE POLE, IR 77 INTERCHANGE
27																		
28																		
29		1	1	1	1	1	1	1									EA.	STRUCTURE GROUNDING SYSTEM
30		1	1	4			3	1									EA.	STRUCTURE JUNCTION BOX 24"x10"x8"
31										80			80		80		L.F.	CONDUIT 3", RIGID FERROUS METAL - BORED OR JACKED UNDER PAVEMENT
32		1	1	3			3	1									SET	STRUCTURE LIGHT POLE ANCHOR BOLTS "L" TYPE
33										LUMP		LUMP	LUMP		LUMP		LUMP	CIRCUIT & LIGHT POLE IDENTIFICATION
										300			300		300		L.F.	CIRCUIT CABLE 600V 1/c No. 2
34																		
35																		
36										34		16	50		50	625	EA.	ALUMINUM TRANSFORMER BASES AT-A FOR LIGHT POLES, AS PER PLAN
37																		

Rev. 7-28-67
Rev. 2-8-67

LIGHTING SUMMARY

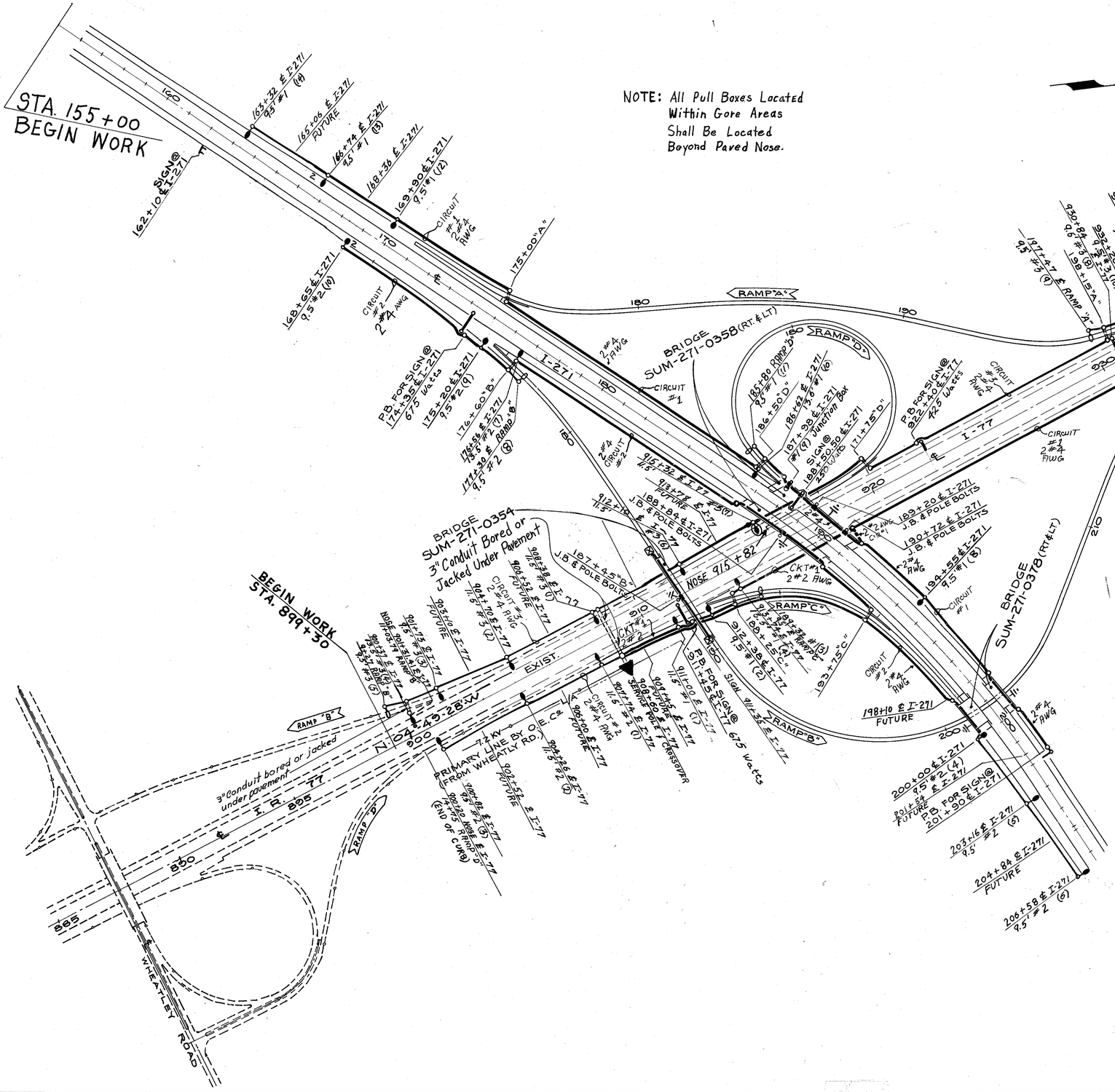
K&E

FED. RD.	STATE	PROJECT	
2	OHIO		

347
510

SUM-271-2.98

NOTE: All Pull Boxes Located Within Gore Areas Shall Be Located Beyond Paved Nose.


STA. 155+00
BEGIN WORK
SIGN@ 162+10 ℄I-271
163+32 ℄I-271 9.5"#1 (14)
165+08 ℄I-271 FUTURE
166+74 ℄I-271 9.5"#1 (15)
168+38 ℄I-271
169+90 ℄I-271 9.5"#1 (12)
CIRCUIT #1 2#4 AWG
168+65 ℄I-271 9.5 #2 (14)
CIRCUIT #2 2#4 AWG
175+00"A"
RAMP "A"
P.B. FOR SIGN@ 174+35 ℄I-271 675 Watts
175+20 ℄I-271 9.5 #2 (9)
176+60"B"
176+84 ℄I-271 9.5 #2 (1)
177+38 ℄ RAMP "A" 9.5 #2 (8)
BRIDGE SUM-271-0358 (RT. & LT)
I-271
CIRCUIT #1
2#4 AWG
RAMP "D"
185+80 RAMP "D" 9.5"#1 (11)
186+50"D"
186+84 ℄I-271 9.5"#1 (6)
187+38 ℄I-271 #1 (8) Junction Box
SIGN@ 188+50.50 ℄I-271 250 Watts
171+75"D"
915+32 ℄I-77 11.5 #1
918+78 ℄I-77 FUTURE #3 (11)
912+78 ℄I-77 11.5 #1
188+84 ℄I-271 J.B. & POLE BOLTS
915+82
NOSE
CKT #1 2#2 AWG
CKT #2 2#2 AWG
907+73 ℄I-77 11.5 #3 (3)
907+92 ℄I-77 11.5 #3 (5)
907+51 ℄I-77 FUTURE
907+10 ℄I-77 11.5 #3 (2)
907+32 ℄I-77 11.5 #3 (7)
907+73 ℄I-77 11.5 #3 (6

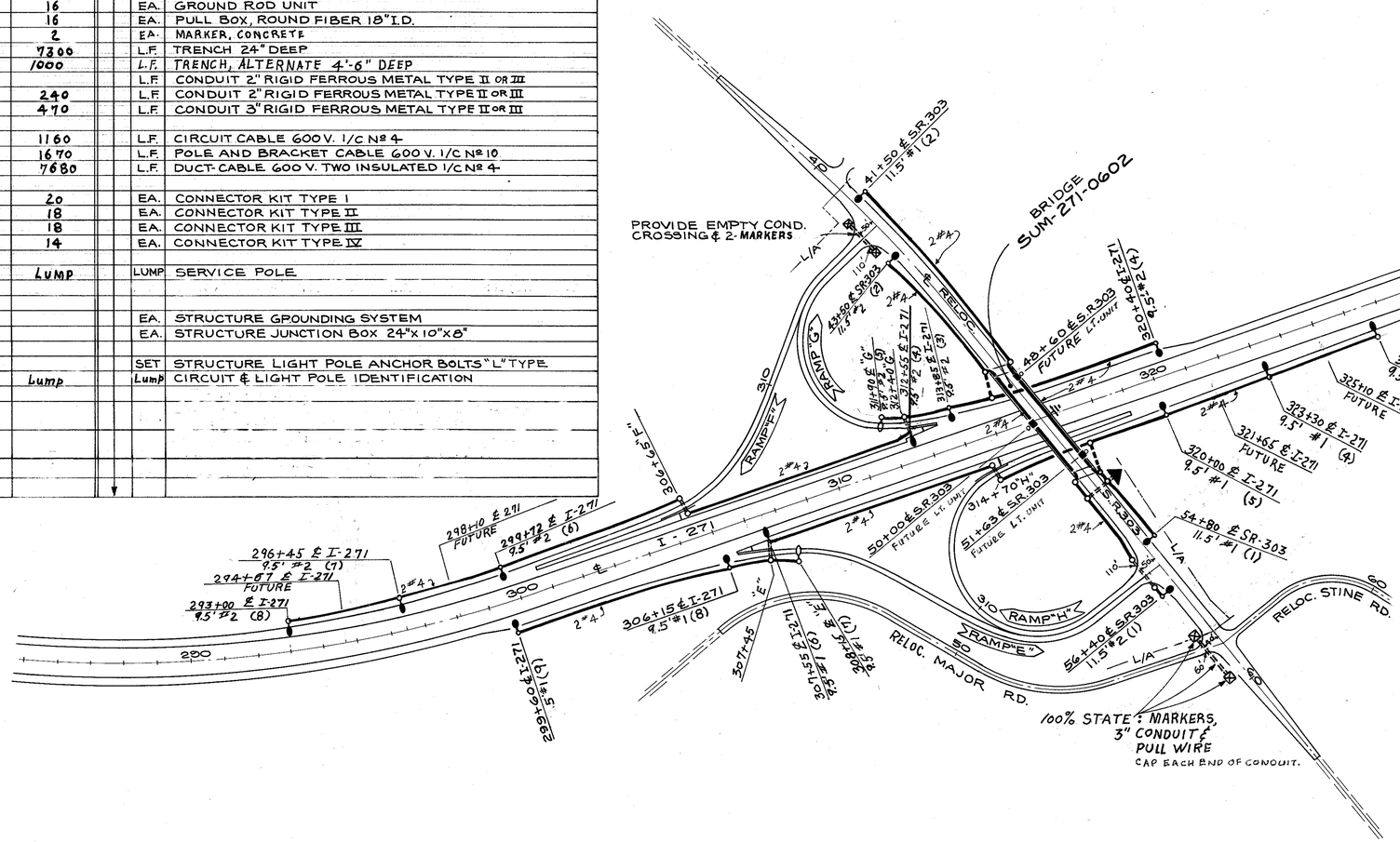
FED. RD.	STATE	PROJECT	
2	OHIO		

348
510

SUM-271-2.98

LIGHTING QUANTITIES (THIS SHEET)

LINE Nº	STRUCTURE SUM-271-0602	ROADWAY 100% STATE	ROADWAY NORMAL	ITEM	UNIT	DESCRIPTION
1			16	625	EA.	LIGHT POLE W/15' BRACKET ARM-DESIGN-11A15B32.5 CIRCULAR CROSS-SECTION
2			2		EA.	LIGHT POLE W/10' BRACKET ARM-DESIGN-11A10B32.5 CIRCULAR CROSS-SECTION
3			16		EA.	LIGHT POLE FOUNDATION 24"x24"x6' DEEP
4			2		EA.	LUMINAIRE TYPE II W/ 400 W. INTEGRAL BALLAST
5			14		EA.	LUMINAIRE TYPE III W/ 400 W. INTEGRAL BALLAST
6			16		EA.	MERCURY VAPOR LAMP 400 W.
7						
8			16		EA.	GROUND ROD UNIT
9			16		EA.	PULL BOX, ROUND FIBER 18" I.D.
10		2	2		EA.	MARKER, CONCRETE
11			7300		L.F.	TRENCH 24" DEEP
12			1000		L.F.	TRENCH, ALTERNATE 4'-6" DEEP
13	660				L.F.	CONDUIT 2" RIGID FERROUS METAL TYPE II OR III
14	70		240		L.F.	CONDUIT 2" RIGID FERROUS METAL TYPE II OR III
15		130	470		L.F.	CONDUIT 3" RIGID FERROUS METAL TYPE II OR III
16						
17	830		1160		L.F.	CIRCUIT CABLE 600 V. 1/C Nº 4
18			1670		L.F.	POLE AND BRACKET CABLE 600 V. 1/C Nº 10
19			7680		L.F.	DUCT-CABLE 600 V. TWO INSULATED 1/C Nº 4
20						
21			20		EA.	CONNECTOR KIT TYPE I
22			18		EA.	CONNECTOR KIT TYPE II
23			18		EA.	CONNECTOR KIT TYPE III
24	6		14		EA.	CONNECTOR KIT TYPE IV
25						
26			Lump		LUMP	SERVICE POLE
27						
28						
29	1				EA.	STRUCTURE GROUNDING SYSTEM
30	3				EA.	STRUCTURE JUNCTION BOX 24"x10"x8"
31						
32	3				SET	STRUCTURE LIGHT POLE ANCHOR BOLTS "L" TYPE
33			Lump		Lump	CIRCUIT & LIGHT POLE IDENTIFICATION
34						
35						
36						
37						



LEGEND

- DESIGN 11A15B32.5 LIGHT POLE W/15' ARM III DISTR. (ROADWAY)
- DESIGN 11A10B32.5 LIGHT POLE W/10' ARM II DISTR. (RAMP)
- DESIGN 11A10B30 LIGHT POLE W/10' ARM III DISTR. (BRIDGE)
- GLARE SHIELD
- FUTURE POLE ON BRIDGE (PULL BOX & POLE BOLTS, ETC. INSTALLED)
- SIGN ON BRIDGE (PULL BOX & ENTRY COND., ETC. INSTALLED)

320+00 ℄ I-271 — STATIONING DESIGNATION OF LIGHT, ALIGNED AT 90° NORMAL TO ℄ OF ROADWAY.

11.5'*1(3) — DESIGNATION OF LIGHT, *11.5' INDICATES THE OFFSET FROM EDGE OF PAVEMENT, #1 THE CKT. Nº, (3) THE POLE Nº.

——— LIGHTING CKT. CABLE, 2/C DUCT-CABLE ALONG ROADWAY & RAMP. 2-1/C CABLES (PAIR) ACROSS RAMP IN 3" CONDUIT, OR THRU BRIDGE IN 2" CONDUIT.

- - - - - LIGHTING CKT. CABLE, 2-1/C (PAIR) IN 2" GALV. STL. CONDUIT TYPE II or III FOR PROTECTION UP SLOPE AT BRIDGE.

- ⊠ MARKER
- o 18" FIBER PULL BOX
- ==== 3" GALVANIZE STEEL CONDUIT TYPE II or III
- ⊣⊢ STRUCTURE GROUND (GRD.)
- ⊠ MARKER
- ▲ SERVICE POLE
- —L/A— L/A LINE

SIGNS

* INDICATES OFFSET - BUT LOCATE ℄ OF FOUNDATION BACK OF GUARD RAIL OR LINE OF GUARD RAIL AS PER SHEET 350

Rev. 7-28-67
Rev. 2-8-67

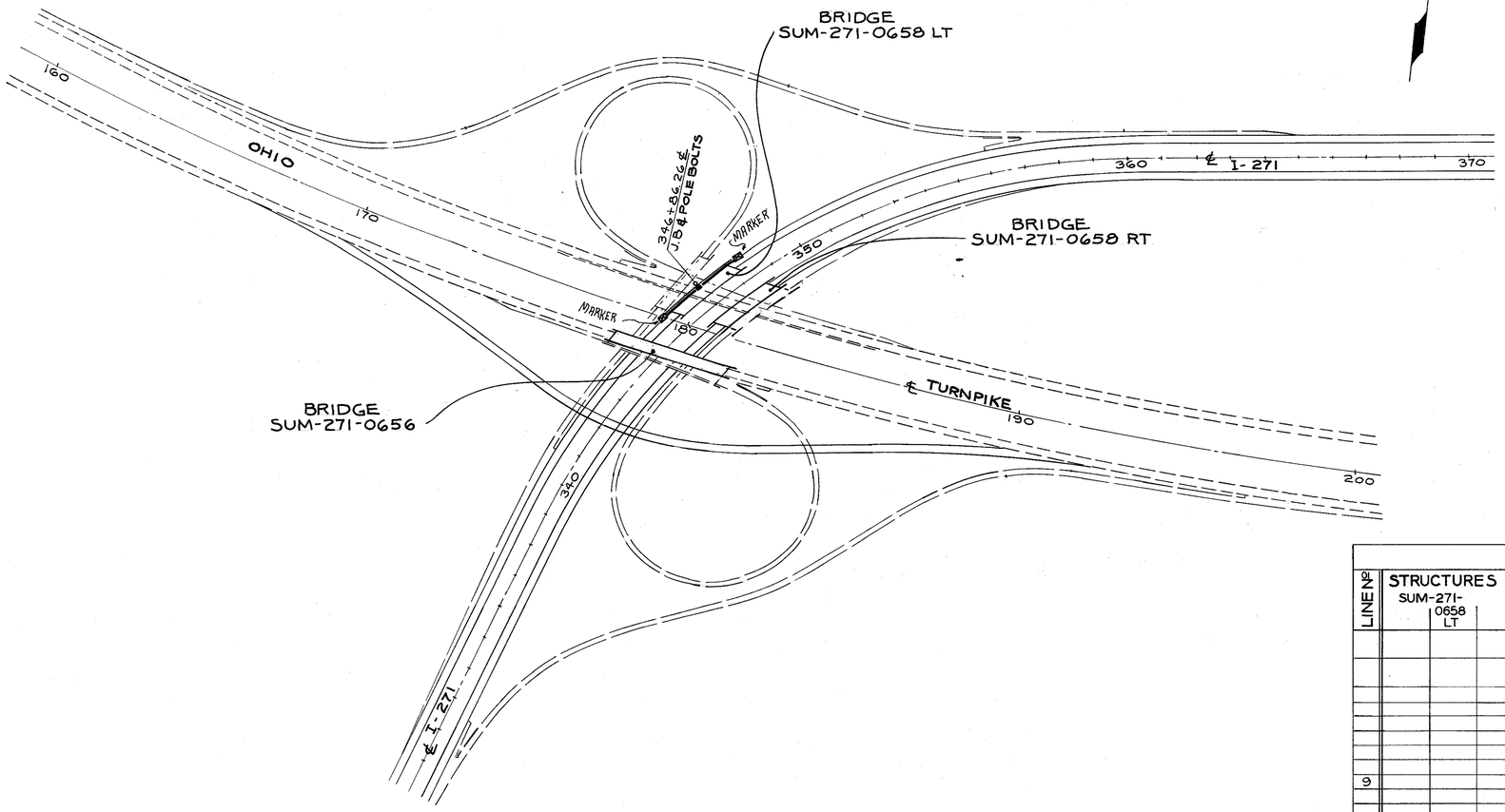
RELOC. S.R. 303 LIGHTING PLAN

KAE

FED. RD.	STATE	PROJECT	
2	OHIO		

343
510

SUM-271-298



LIGHTING QUANTITIES (THIS SHEET)

LINE Nº	STRUCTURES SUM-271-0658 LT	ROADWAY SHEET TOTAL	ITEM	UNIT	DESCRIPTION
9		2	625	EA.	MARKER
13	230		625	L.F.	CONDUIT 2" RIGID FERROUS METAL TYPE II OR III
14	40	20	625	L.F.	CONDUIT 2" RIGID FERROUS METAL TYPE II OR III
29	1		625	EA.	STRUCTURE GROUNDING SYSTEM
30	1		625	EA.	STRUCTURE JUNCTION BOX 24"x10"x8"
32	1		625	SET	STRUCTURE LIGHT POLE ANCHOR BOLTS "L" TYPE

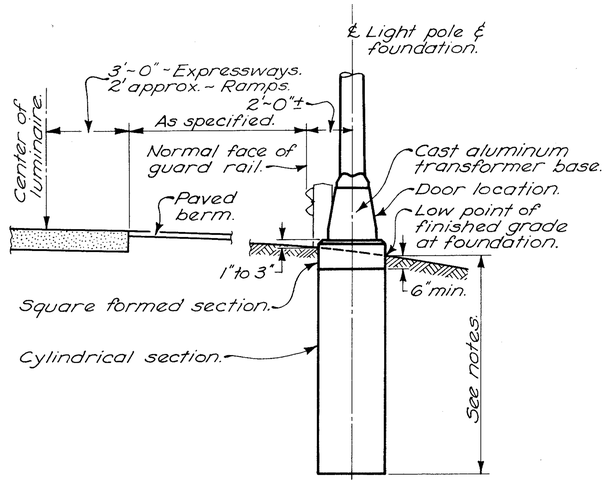
ACROSS OHIO TURNPIKE - LIGHTING PLAN

K & E - AKRON

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

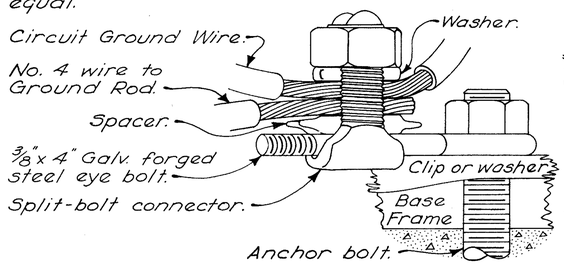
350
510

SUM-271-2.98

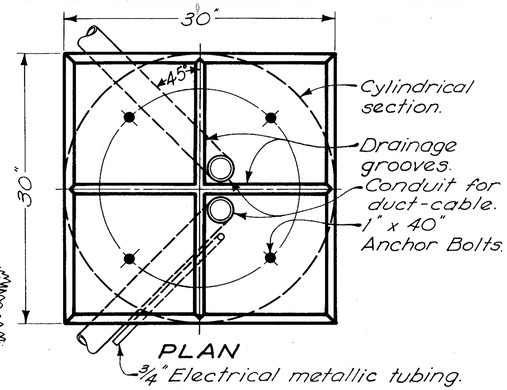


LOCATION OF POLE WITH ALUMINUM TRANSFORMER BASE

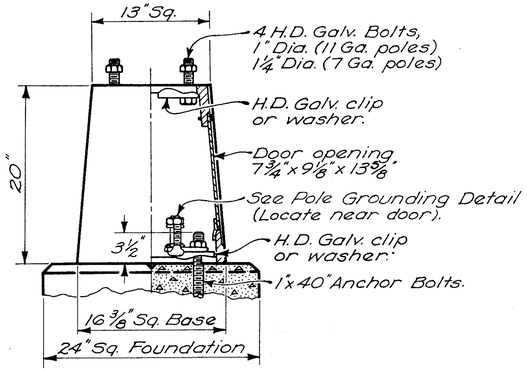
NOTE: Split-bolt Connector shall be made of tin plated copper alloy with tin plated spacer. Acceptable models are: Blackburn #10HPS, Burndy #KSU-25, Line Material #DK-5B-10, Kearney #118109-02 or an approved equal.



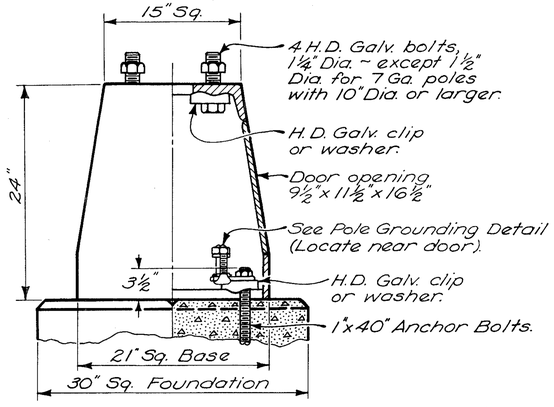
POLE GROUNDING DETAIL



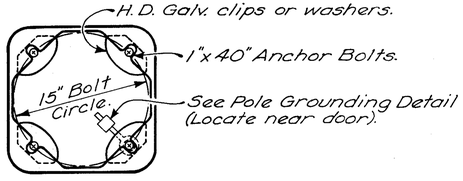
PLAN



ELEVATION

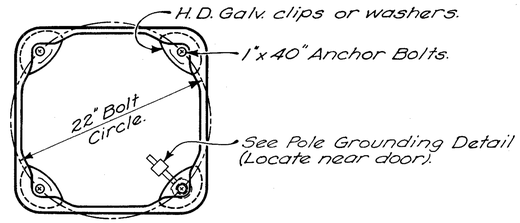


ELEVATION



BASE FRAME

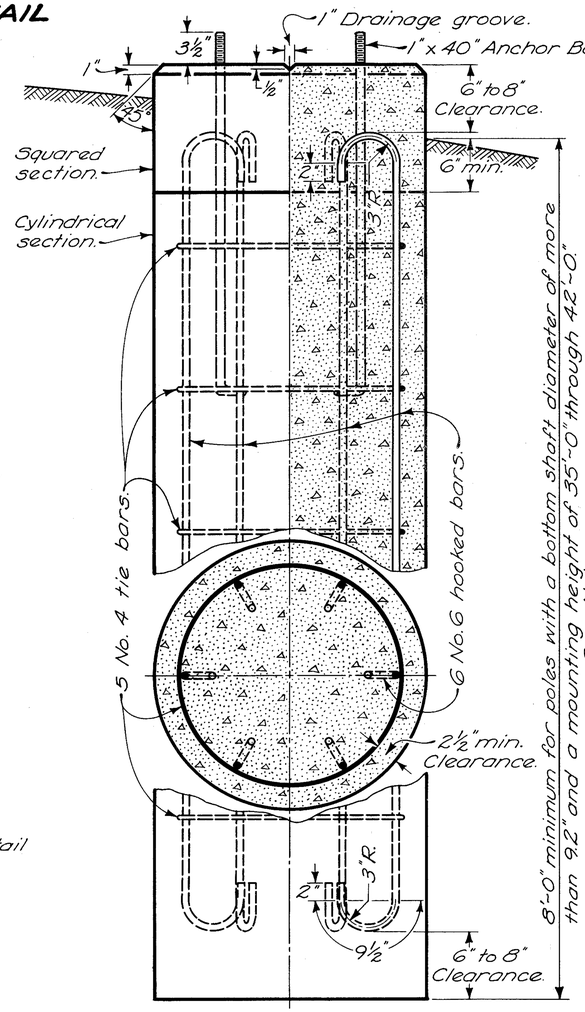
BASE AT-A



BASE FRAME

BASE AT-B

CAST ALUMINUM TRANSFORMER BASES



ELEVATION

30" FOUNDATION

NOTES

FOUNDATION: Foundations for light poles shall be poured-in-place concrete (vibrated and spaded 511.09). Each foundation must meet minimum depths as specified, but additional depth may be required by the Engineer because of existing soil conditions. The 30" foundation (detailed hereon) shall be used for light poles having a bottom shaft diameter of more than 9.2" through 11." The 24" foundation (detailed on Standard Drawing HL-1) shall be used for all light poles having a bottom shaft diameter of 6.0" through 9.2".

Rotate reinforcing bars to clear conduit.

Drainage grooves on foundation top, as detailed hereon, shall be required on all foundations even though they do not appear on Standard Drawing HL-1.

ALUMINUM TRANSFORMER BASES: All bases shall be cast from ASTM B-26 or B-108 Alloy SG 70A-T6.

Base AT-A shall be used with anchor base poles of 6" through 9.2" diameter inclusive. Base AT-B shall be used for anchor base poles above 9.2" through 11" diameter. A pole with 37'-6" shaft and 18' arm is max. size for use with Base AT-B.

The transformer bases shall be capable of resisting the following moments in foot pounds applied to the top of the base without collapsing or rupturing.

Base Height	Moment-Foot Pounds
20"	40,000
24"	52,000

Both the bottom of the cast steel pole base and the top of the aluminum transformer base shall be coated or painted with a heavy film of zinc rich paint (Federal Specification TT-P-641-Type II) to reduce galvanic action between the two dissimilar metals.

PAYMENT: 30" Light Pole Foundations shall be paid for at the unit price bid per each foundation.

Aluminum base complete with hardware, eye bolt and connector, zinc rich paint, and installation shall be paid for at the unit price bid for each transformer base

Issued: 3-29-67

This sheet added 7-28-67

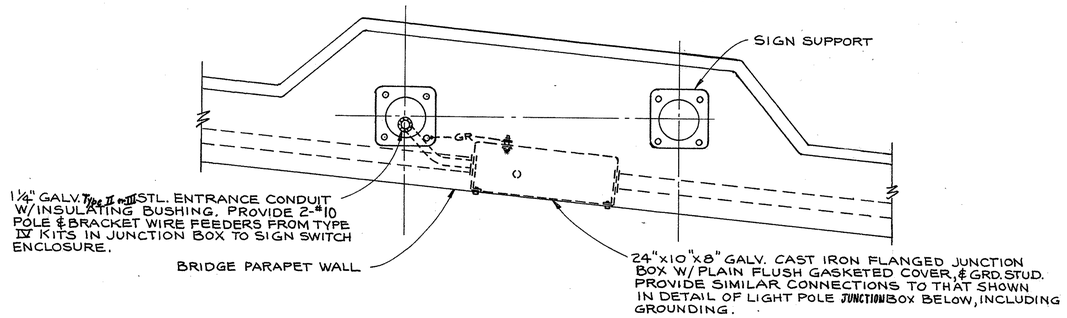
Design Services Sketch No. RL-SK-153

ALUMINUM TRANSFORMER BASE DETAIL

FED. RD.	STATE	PROJECT	
2	OHIO		

352
510

SUM-271-2.98

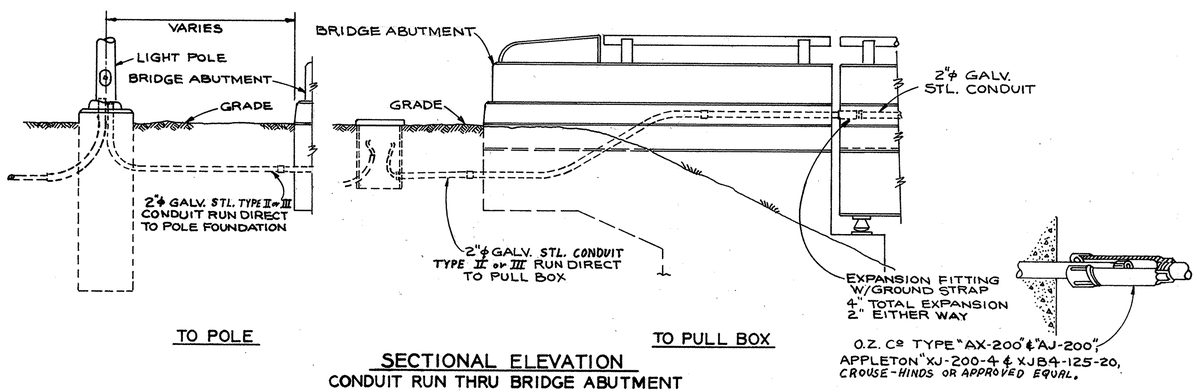


BRIDGE SUM-271-0358 (LT)

DETAIL-MTG. OF BRIDGE SIGN

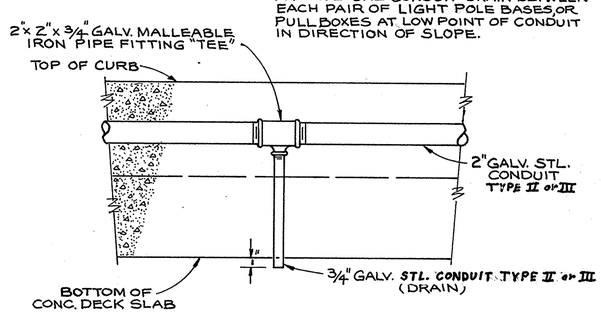
SCALE 1"= 1'-0"

TABLE-STRUCTURE GROUNDING		
BRIDGE Nº	TYPE STRUCTURE	GROUNDING DETAILS
SUM-271-0354	WELDED STEEL PLATE GIRDER	WELD 1/0 GRD. CABLE TO STEEL SHELL OF CAST-IN-PLACE CONC. PILE @ PIER #2 ℄ OF I-77.
SUM-271-0358(RT)	WELDED STEEL PLATE GIRDER	WELD 1/0 GRD. CABLE TO STEEL SHELL OF CAST-IN-PLACE CONC. PILE @ PIER #2 ℄ OF I-77
SUM-271-0358(LT)	WELDED STEEL PLATE GIRDER	WELD 1/0 GRD. CABLE TO STEEL SHELL OF CAST-IN-PLACE CONC. PILE @ PIER #2 ℄ OF I-77
SUM-271-0378(RT)	STEEL BEAM	WELD 1/0 GRD. CABLE TO STEEL SHELL OF CAST-IN-PLACE CONC. PILE @ PIER #2
SUM-271-0378(LT)	STEEL BEAM	WELD 1/0 GRD. CABLE TO STEEL SHELL OF CAST-IN-PLACE CONC. PILE @ PIER #2
SUM-271-0602	WELDED STEEL PLATE GIRDER	SPIRAL COIL 25' OF 1/0 GRD. CABLE UNDER SPREAD FOOTER OF PIER #2 ℄ OF I-271
SUM-271-0658(LT)	WELDED STEEL PLATE GIRDER	SPIRAL COIL 25' OF 1/0 GRD. CABLE UNDER SPREAD FOOTER OF PIER #1



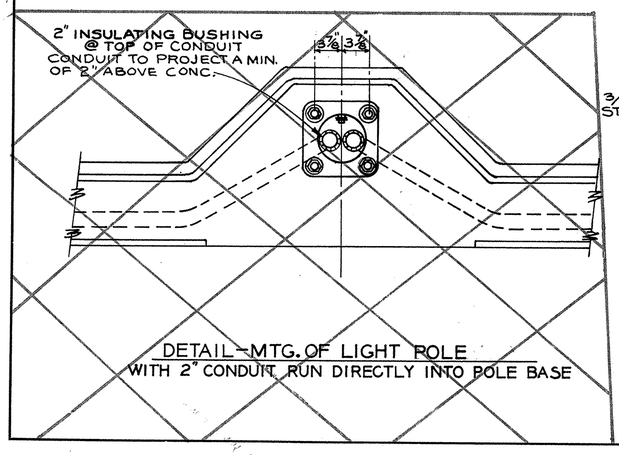
SECTIONAL ELEVATION
CONDUIT RUN THRU BRIDGE ABUTMENT

PROVIDE ONE CONDUIT DRAIN BETWEEN EACH PAIR OF LIGHT POLE BASES OR PULL BOXES AT LOW POINT OF CONDUIT IN DIRECTION OF SLOPE.

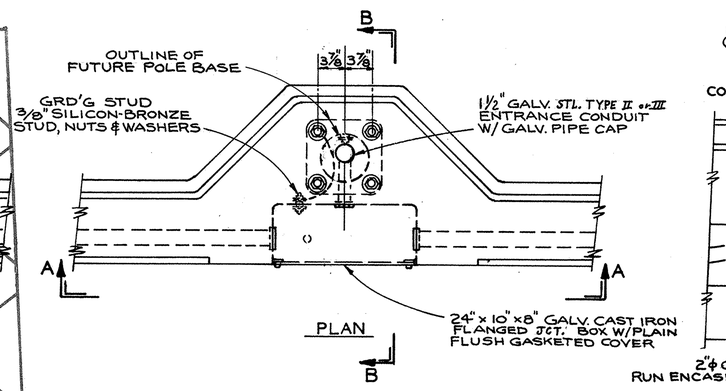


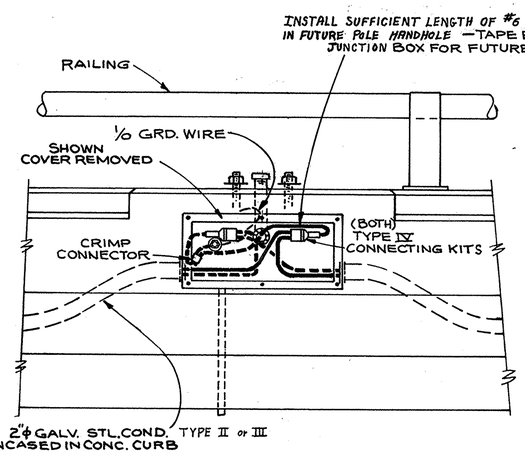
CONDUIT DRAIN

NOTE:
FOR BRIDGE POLE AT STA. 187+98-I-271 INSTALL CIRCUIT CABLES DIRECTLY INTO POLE HANDHOLE AND MAKE CONNECTIONS WITH ONE (1) TYPE II AND ONE (1) TYPE III CABLE CONNECTOR KITS.

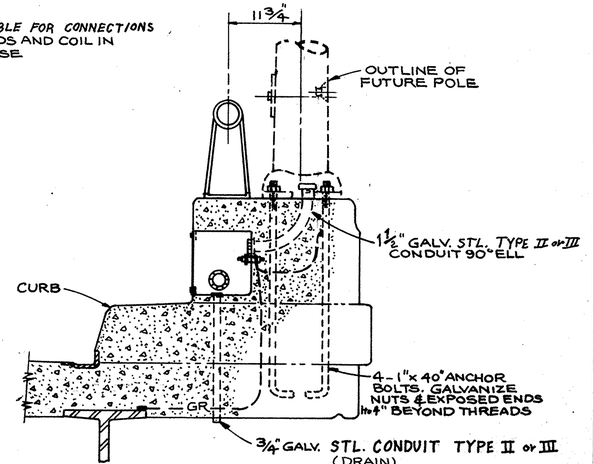


DETAIL-MTG. OF LIGHT POLE
WITH 2" CONDUIT RUN DIRECTLY INTO POLE BASE





ELEVATION A-A
SHOWING CIRCUIT CABLE CONNECTIONS AT FUTURE LIGHT POLE LOCATIONS.



SECTION B-B

DETAIL-MTG. OF JUNCTION BOX & POLE BOLTS
SCALE 1"= 1'-0"

NOTE: FOR DETAILS NOT SHOWN ON THIS SHEET REFER TO STANDARD DRAWING HL-4

LIGHTING DETAILS-STRUCTURES

LIGHTING-SERVICE POLE

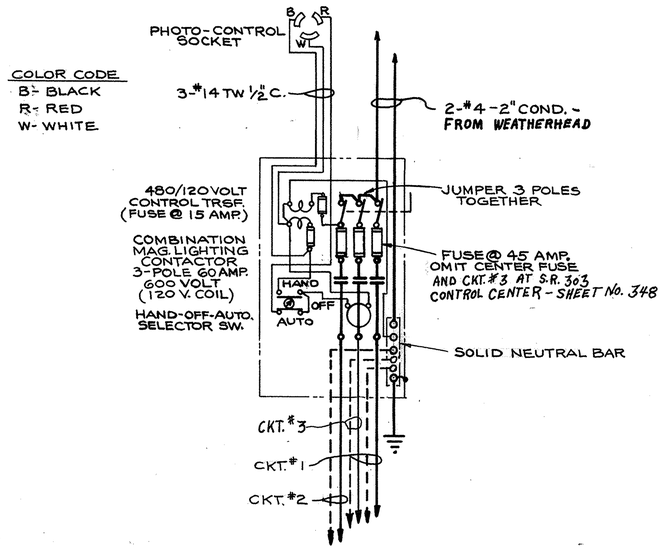
FED. RD.	STATE	PROJECT	
2	OHIO		

353
510

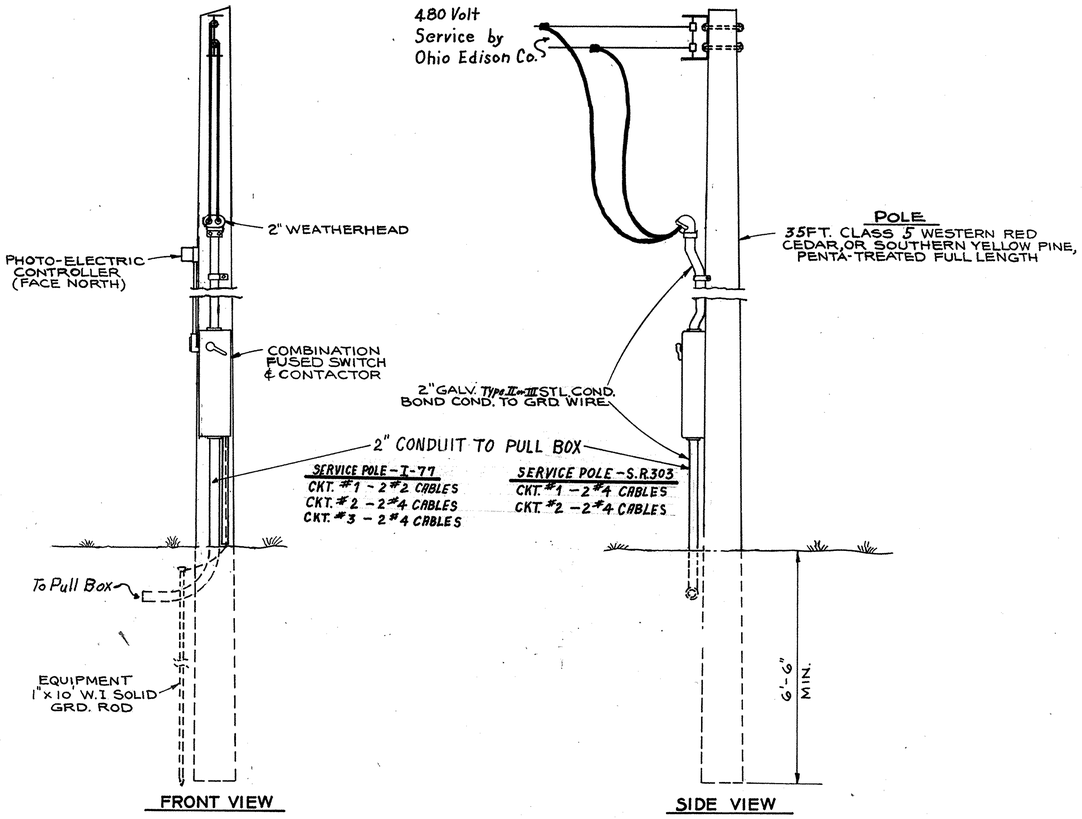
SUM-271-2.98

1. COMBINATION FUSED SWITCH & LIGHTING CONTACTOR SHALL BE 3-POLE 60 AMP. 600 VOLT, W/ H.O.A. SELECTOR SWITCH, FUSED CONTROL TRSF., 120 V. COIL, NEMA IV ENCLOSURE OF STAINLESS STEEL (AISI Nº302 OR 303). MOUNT CASE TO POLE WITH 3/16" x 2" GALV. STL. STRAPS USING ALL CORROSION-PROOF HDWE., & SEAL ALL CONDUITS TO PREVENT INGRESS OF WATER. COMB. SWITCH & CONTACTOR SHALL BE G.E. Cº, COLUMBUS ELECTRIC WK'S, SQ. D Cº CLASS 8903 TYPE W939FA610, OR AN APPROVED EQUAL.
2. EACH LIGHTING CONTACTOR SHALL HAVE A SEPARATE MOUNTED PHOTO-ELECTRIC CONTROLLER FOR IT'S AUTOMATIC OPERATION. CONTROLLER SHALL BE NORMALLY CLOSED, CLOSED AT NIGHT, W/ FACTORY SET TURN-ON FOR 3 FOOT-CANDLES, BE FAIL SAFE, AND HAVE BUILT-IN TIME DELAY TO AVOID ERRONEOUS OPERATION. PHOTO-ELECTRIC CONTROLLER SHALL BE FISHER-PIERCE SERIES 6600A, G.E. Cº CAT. 402.6200 SERIES, TORK MODEL 2000 SERIES, OR AN APPROVED EQUAL. A HAND-OFF-AUTO. (H.O.A.) SELECTOR SWITCH IN MAIN CONTACTOR ENCLOSURE WILL PROVIDE MANUAL OPERATION OF LIGHTING AS WELL.
3. ALL POLE HARDWARE SHALL BE HOT-DIPPED GALVANIZED. CONSTRUCTION PRACTICES AND ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE OHIO EDISON Cº (O.E. Cº). THE CONTRACTOR SHALL PREPARE A LAYOUT DRAWING WITH DIMENSIONS, TYPICAL FOR THE LIGHTING CONTROL STATION HE INTENDS TO INSTALL, AND SUBMIT SAME TO THE DIRECTOR & THE O.E. Cº. APPROVAL OF THE DRAWING(S) SHALL BE OBTAINED FROM THE DIRECTOR, BEFORE ANY MATERIALS ARE PROCURED, OR THE FABRICATION IS BEGUN.
4. THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS FOR POWER WITH THE OHIO EDISON Cº.
5. PAYMENT FOR ITEM 625 "SERVICE POLE" WILL BE MADE AT A LUMP SUM. PRICE. INCLUDED IS POLE FURNISHED AND SET IN PLACE (GUYED WHERE REQUIRED) WITH EQUIPMENT AS FOLLOWS: WEATHERHEAD AND 2" GALV. ALLOY STL. CONDUIT W/ CABLE FEEDER, COMBINATION FUSED SWITCH & LIGHTING CONTACTOR W/ACCESSORIES, PHOTO-CONTROLLER W/ SOCKET & MTG BRACKET CONDUIT COLOR-CODED WIRE AND CONNECTIONS, 2" GALV. Type II or III STL. CONDUIT & CABLE TO PULL BOX, GRD. ROD AND ALL HDWE. & CONNECTIONS SHOWN.

CONTRACTOR SHALL FIELD DETERMINE THE BEST ORIENTATION FOR MOUNTING THE EQUIPMENT ON THE POLE TO SUIT THE PARTICULAR LOCATION AND FACILITATE THE CONNECTION OF *480 Volt* SERVICE BY THE OHIO EDISON Cº.
AT LOCATIONS WHERE THERE IS A R/W FENCE, THE POLE MUST BE AT LEAST 3 FT, BUT NOT MORE THAN 5 FT. INSIDE THE FENCE. IF NECESSARY AND/OR REQUESTED BY O.E. Cº A 3/8" 7-STRAND GALV. DOWN GUY, INSULATOR, GUARD, AND ANCHOR MUST BE FURNISHED AND INSTALLED.



WIRING DIAGRAM
1ϕ 480 V. MULTIPLE LIGHTING CIRCUIT



POLE MT'D LIGHTING *CONTROL* STATION

GENERAL NOTES

FED. RD.	STATE	PROJECT	
2	OHIO		

354 / 510

SUMMIT COUNTY
SUM-271-2.98

606 GUARDRAIL
Guardrail installed in the median for sign support protection will be located with face guardrail twelve(12') feet laterally from left edge of pavement.

MATERIALS-GENERAL

MATERIALS TO BE FURNISHED MAY BE SPECIFIED IN THE PLANS BY A GIVEN MANUFACTURER'S CATALOG NUMBER OR TYPE. THIS IS FOR DESCRIPTIVE PURPOSES ONLY AND THE CONTRACTOR MAY ASSUME THAT APPROVED EQUAL MATERIALS MAY BE FURNISHED.

TRAFFIC SIGN ERECTION

THE CONTRACTOR SHALL ERECT SIGN PANELS FURNISHED BY OTHERS AS NOTED ON THE SCHEMATIC SIGNING LAYOUT SHEET No. 355 THE PANELS SHALL BE MOUNTED ON THE BRACKETS OR BEAM SUPPORTS PROVIDED IN THE PLANS.

A SCHEDULE FOR SIGN ERECTION SHALL BE SUBMITTED TO THE ENGINEER, BUREAU OF TRAFFIC, 450 EAST TOWN STREET, COLUMBUS, OHIO, 60 CALENDAR DAYS PRIOR TO THE START OF ANY SCHEDULED ERECTION WORK. THE SCHEDULE SHALL INCLUDE PROPOSED DATES, TIME, SIGN NUMBERS AND DELIVERY POINT.

THE PRICE BID PER SQUARE FOOT FOR "ITEM SS 816, SIGN ERECTION BY TYPE, AS PER PLAN," SHALL INCLUDE ALL NECESSARY EQUIPMENT, MANPOWER, AND TOOLS TO ERECT THE SIGNS NOTED. ALL SIGN MATERIAL AND ACCESSORIES WILL BE FURNISHED AND TRANSPORTED TO A DESIGNATED DELIVERY POINT, ON OR NEAR THE SUBJECT PROJECT, BY OTHERS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HANDLING AND STORAGE OF THE SIGN PANELS AND ACCESSORIES FROM THE TIME OF ARRIVAL AT THE DELIVERY POINT.

816 Overhead Sign Support, By Type

All component parts of the overhead sign supports shall be steel, except for the truss and components for the number 7 series which shall be aluminum. For specific details and materials, see sheet numbers 358 through 360.

Cost of furnishing and installing the sign brackets and the fixture support arm, length "G," with mounting holes and hardware shall be included in the contract unit price for overhead sign supports.

Modifying supplemental specification 816 Switch Enclosure Mounting Brackets including mounting bolts and drilled holes shall be furnished and installed under payment for 816 Overhead Sign Support Structures at the contract price per overhead sign support, by type.

Payment for this item shall be made at the contract unit price bid for each overhead sign support, by type, installed in place and accepted, which price shall be full compensation for furnishing all anchor bolts, 2" and ¾" E.M.T. conduit ells (For installation under 816 concrete for overhead sign support foundations), and for furnishing and installing each overhead sign support structure shown on sheet 356 including fixture support arms, switch enclosure mounting bracket, sign brackets, and all component parts necessary to make a complete workable installation ready for sign erection, installation of disconnect switch and enclosure, ground rod and wire connections and sign wiring.

Erection of these supports shall be accomplished in a manner meeting the requirements of supplemental specification 816.

ALTERNATE DESIGNS FOR OVERHEAD SIGN SUPPORTS
If the contractor desires to furnish an alternate design for overhead sign supports, the alternate designs must be submitted to the State at least 21 days prior to opening of bids. The bidder will be notified as to acceptance or rejection of alternate design at least 7 days before bids are to be opened. Alternate designs must utilize tubular structural members. Submissions shall be made to Ohio Dept. of Highways, Bureau of Traffic, 450 East Town Street, Columbus, Ohio 43215

CERTIFICATION AND APPROVAL OF SIGN SUPPORTS AND LIGHTING ITEMS

THE CONTRACTOR SHALL SUBMIT THROUGH PROPER CHANNELS THE DRAWINGS, INFORMATION OR SAMPLES AS REQUIRED BELOW:

(A) SIX (6) COPIES OF THE FOLLOWING:

SHOP DRAWINGS AND MATERIAL LISTS FOR APPROVAL

1. OVERHEAD SIGN SUPPORTS
2. SIGN LIGHTING DETAILS
3. CATALOG CUTS, DESCRIPTIONS OR SAMPLES OF FABRICATOR'S STANDARD ITEMS AS SHOWN IN THE PLANS OR THEIR EQUAL FOR APPROVAL.

(B) CERTIFICATIONS OR SAMPLES FOR ALL MATERIALS WHICH HAVE BEEN APPROVED ABOVE UNDER ITEM (A) SHALL BE IN POSSESSION OF THE CONTRACTOR PRIOR TO ANY PURCHASE OR INSTALLATION.

625 ELECTRICAL - GENERAL

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY MATERIAL, LABOR AND FACILITIES REQUIRED TO COMPLETE THE ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE DESIGNS, DIMENSIONS AND DETAILS SHOWN IN THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

ALL MATERIAL, WORKMANSHIP AND CONSTRUCTION METHODS, EXCEPT AS MODIFIED HEREIN, SHALL CONFORM TO THE GENERAL REQUIREMENTS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, CONSTRUCTION AND MATERIALS SPECIFICATIONS, JANUARY 1, 1965.

625 GROUND ROD UNIT

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING GROUND ROD AND WIRE WITH CONDUIT AS DETAILED AND SPECIFIED ON SHEET No. 362

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT CONTRACT UNIT PRICE PER EACH, WHICH SHALL INCLUDE ALL LABOR, TOOLS, MATERIALS AND EQUIPMENT REQUIRED FOR THE COMPLETE ITEM OF WORK.

625 DISCONNECT SWITCH WITH TYPE "Y" OR "Z" ENCLOSURE

THE BASIS FOR PAYMENT FOR THIS ITEM SHALL BE ON A UNIT BID BASIS, COMPLETE AND ACCEPTED.

THE ITEM SHALL INCLUDE FURNISHING OF A 30 AMP. 600 VOLT FUSED DISCONNECT SWITCH OF TYPE AND MAKE AS INDICATED ON SHEET 362 AND SHALL BE MOUNTED IN A NEMA (4) STAINLESS STEEL ENCLOSURE TYPE "Y" OR "Z" AND ATTACHED TO EACH SIGN SUPPORT BY MEANS OF A MOUNTING BRACKET AS DESCRIBED ON THIS SHEET.

ERECTION OF OVERHEAD SPAN TYPE SIGN SUPPORTS (7 SERIES)
In all cases, span type overhead sign supports and signs shall be erected concurrently. At no time shall the box trusses be erected without the sign being in place within eight (8) hours.

816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS, BY TYPE
Foundations shall be constructed in the manner called for under supplemental specification 816. Concrete shall be class C.
Payment for installation only of the 2" galvanized steel and the ¾" E.M.T. conduit ells will be included in this item. Payment for furnishing this conduit is included in the unit price bid for overhead sign supports.
Payments for this item shall be per cubic yard based on approved plan dimensions or dimensions as modified by the engineer in lieu of plan quantities as specified in supplemental specifications 816.

625 TRANSFORMER TYPE

THIS TYPE OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING TRANSFORMERS AS DETAILED AND SPECIFIED ON SHEET No. 362

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT CONTRACT UNIT PRICE PER EACH, WHICH SHALL INCLUDE ALL LABOR, TOOLS, MATERIAL AND EQUIPMENT REQUIRED FOR THIS COMPLETE ITEM OF WORK.

625 BALLAST TYPE

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING ALL BALLAST TYPES A THROUGH D AS DETAILED AND SPECIFIED ON SHEET No. 363

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE PER EACH FURNISHED TO THE JOB.

625 FIXTURES WITH LAMP TYPE

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING ALL LIGHT FIXTURES AND LAMPS, TYPES AND SIZES AS SPECIFIED ON SHEET No. 363

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE PER EACH FURNISHED TO THE JOB.

625 SIGNS WIRED, COMPLETE:
This item shall consist of the completion of the electrical sign lighting system for each illuminated sign.
Work shall include installation of light fixtures and ballasts, and furnishing and installing of all rigid and flexible conduit, condulets, junction boxes, cable, fasteners, hardware, and all other items required to energize the sign lighting system. See details on sheets (EI-1 & 2, ES-3A).
The cost of furnishing and installing cable, cable grips, cablesplice units, and necessary fasteners from the disconnect switch to the signs (or between signs within sign support members shall be included in this item of work.
Basis of payment shall be at the contract unit price per each sign wired which price shall include all labor, materials, tools, equipment and other incidentals to provide a complete and accepted item of work.
Illuminated signs requiring two (2) ballasts shall be considered as an equivalent of two (2) separate signs for determination of payment quantities.

625 SIGN SERVICE
This item shall consist of the completion of the electrical system and components connecting the connectors in the pull box (included within the roadway lighting quantities) with the primary side of the disconnecting switch.
Work will include the furnishing and installing (including trenching and backfilling) of the 2" galvanized steel conduit and couplings from the pull box to the conduit ell in the sign support foundation.
This item will also include the furnishing and installing of the 1/c 600 V. service wire from the connectors to the disconnect switch.
Basis of payment for this item shall be at contract unit price per each, which shall include all labor, material, and equipment required to complete this item of work.

TYPE CODE 7221

From Sheet No. 356	ITEM	QUANT.	UNIT	DESCRIPTION
1312	815	1312	Sq.Ft.	Sign Erection, Overhead Guide Signs, as per plan
1	816	1	Each	Overhead Sign Support No. 7.4, Design 2, 78' Span
1	816	1	Each	Overhead Sign Support No. 7.4, Design 2, 79' Span
1	816	1	Each	Overhead Sign Support No. 7.4, Design 1, Mod. 65.43' Span
1	816	1	Each	Overhead Sign Support No. 7.5, Design 1, 78' Span
28.2	816	28.2	Cu.Yds.	Concrete Foundation For Overhead Sign Supports, as per plan
⊗ 500	606	(500)	Lin.Ft.	Guard Rail, Type 4 MODIFIED as per plan ⊗
2	625	2	Each	72" Lighting Fixtures With HO Lamps
10	625	10	Each	72" Lighting Fixtures With SHO Lamps
6	625	6	Each	96" Lighting Fixtures With SHO Lamps

⊗ QUANTITY CARRIED TO SHEET No. 25A.

Sheet No. 356	ITEM	QUANT.	UNIT	DESCRIPTION
1	625	1	Each	Sign Ballasts, Type B
7	625	7	Each	Sign Ballasts, Type D
1	625	1	Each	Transformers, Type IV
2	625	2	Each	Transformers, Type V
1	625	1	Each	Transformers, Type VI
4	625	4	Each	30 Amp. Fusible Disconnect Switch With Enclosure, Type Z
4	625	4	Each	Ground Rod Units
4	625	4	Each	Sign Wiring Complete

REVISED 7-28-67

GENERAL SUMMARY
SIGNING NOTES

FED. RD.	STATE	PROJECT	
2	OHIO		

355
510

SUM - 271 - 2.98

RAMP "A"
RAMP "B"
RAMP "C"
RAMP "D"

(77) NORTH Cleveland RIGHT LANE
STA. 182+00
Sign Support By Others

(271) SOUTH Columbus
⑤(B) 14'x75'

(77) NORTH Erie, Pa.
STA. 174+25
B16 No. 74 Design No. 2
⑤(A) 14'x75'

(77) SOUTH Akron
B16 No. 74
STA. 188+50.50
Design No. 1

(77) NORTH Wheatley Rd.
STA. 922+50
Sign Support By Others
⑤(B) 17'x75'

(77) NORTH Wheatley Rd. - I-76 EXIT
STA. 933+00
B16 No. 23 Design No. 1
⑤(B) 17'x90'

(77) SOUTH Akron
⑤(B) 12'x75'

(77) SOUTH Columbus
⑤(B) 16'x75'

(77) SOUTH Columbus RIGHT LANE
STA. 946+00
Sign Support By Others
⑤(B) 12'x85'

(77) NORTH Cleveland
STA. 191+35
B16 No. 74 Design No. 2
③ 15'x95'

(271) NORTH Erie, Pa.
③ 15'x75'

(77) SOUTH Akron RIGHT LANE
STA. 202+00
④ 12'x85'
Sign Support By Others

0 200 400 600
SCALE

REVISED 7-28-67

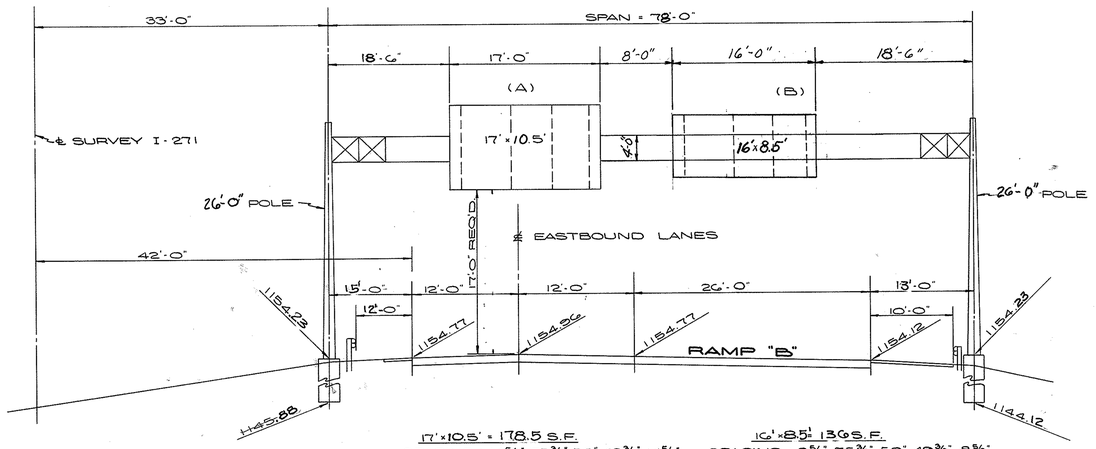
I-77 SIGNING PLAN

FED. RD.	STATE	PROJECT	
2	OHIO		

356
510

SUM - 271 - 2.98

2

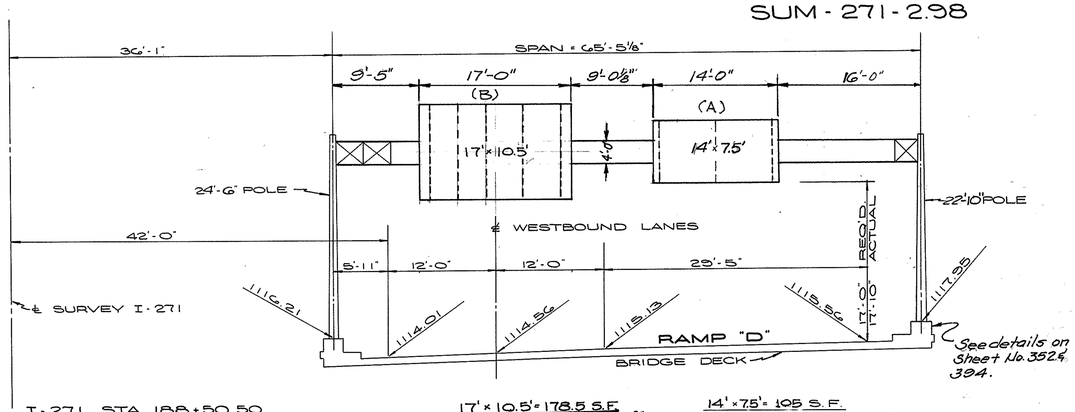


I-271 STA. 174+25
EASTBOUND LANES
SS 816 Nº 7.4 DESIGN Nº 2 MODIFIED

17'x10.5' = 178.5 S.F.
SPACING: 14⅝", 75⅜", 50", 49⅜", 14⅝"
Nº OF BRACKETS = 4
HEIGHT = 10.5'; TYPE Ya

16'-8.5' 136 S.F.
SPACING: 8⅝", 75⅜", 50", 49⅜", 8⅝"
Nº OF BRACKETS = 4
HEIGHT = 8.5'; TYPE Ya

5

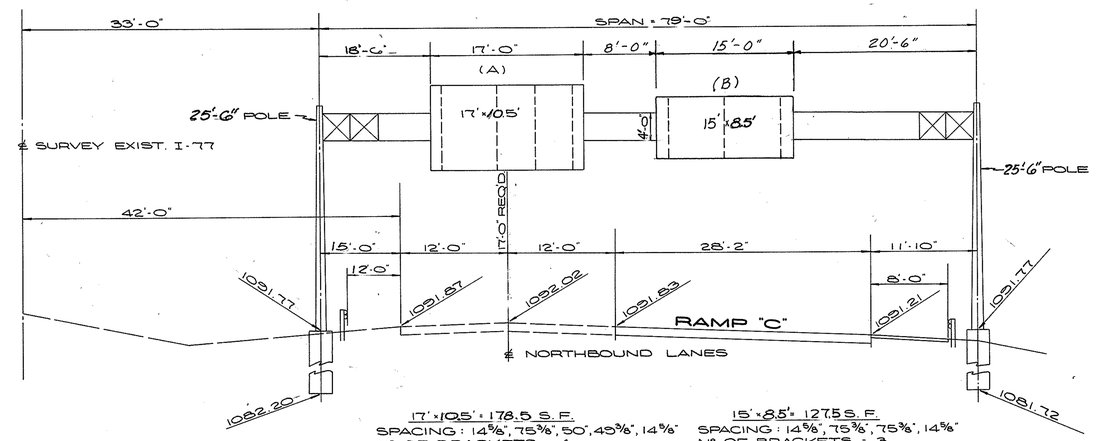


I-271 STA. 188+50.50
WESTBOUND LANES
SS 816 Nº 7.4 DESIGN Nº 1 (MODIFIED)

17'x10.5'=178.5 S.F.
SPACING: 14⅝", 38", 37⅜", 50", 49⅜", 14⅝"
Nº OF BRACKETS = 5
HEIGHT = 10.5' TYPE Ya

14'x7.5'= 105 S.F.
SPACING: 8⅝", 75⅜", 75⅜", 8⅝"
Nº OF BRACKETS = 5
HEIGHT = ; TYPE Ya

3

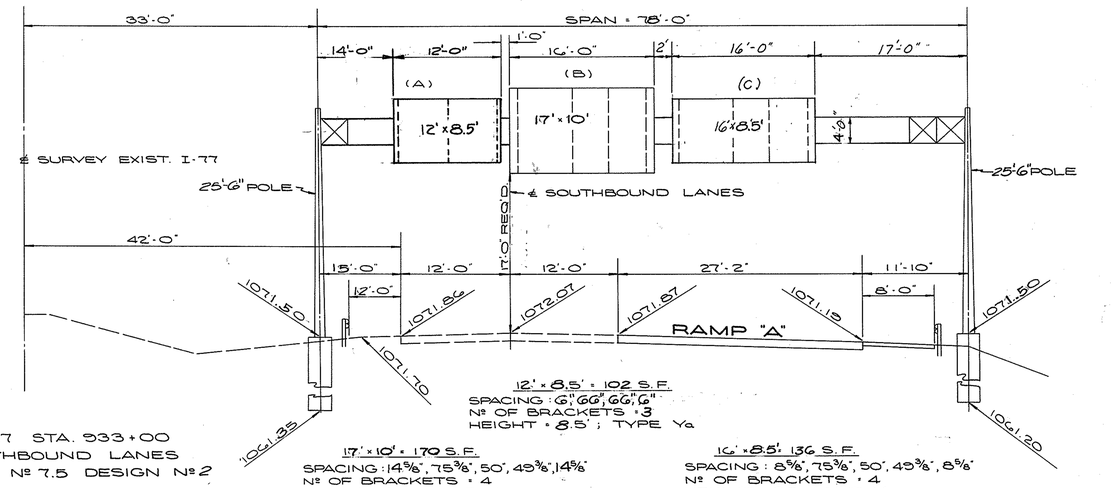


I-77 STA. 911+35
NORTHBOUND LANES
SS 816 Nº 7.4 DESIGN Nº 2

17'x10.5' = 178.5 S.F.
SPACING: 14⅝", 75⅜", 50", 49⅜", 14⅝"
Nº OF BRACKETS = 4
HEIGHT = 10.5'; TYPE Ya

15'x8.5' = 127.5 S.F.
SPACING: 14⅝", 75⅜", 75⅜", 14⅝"
Nº OF BRACKETS = 3
HEIGHT = 8.5'; TYPE Ya

7



I-77 STA. 933+00
SOUTHBOUND LANES
SS 816 Nº 7.5 DESIGN Nº 2

12'x8.5' = 102 S.F.
SPACING: 6", 66", 66", 6"
Nº OF BRACKETS = 3
HEIGHT = 8.5'; TYPE Ya

17'x10' = 170 S.F.
SPACING: 14⅝", 75⅜", 50", 49⅜", 14⅝"
Nº OF BRACKETS = 4
HEIGHT = 10'; TYPE Ya

16'x8.5' 136 S.F.
SPACING: 8⅝", 75⅜", 50", 49⅜", 8⅝"
Nº OF BRACKETS = 4
HEIGHT = 8.5'; TYPE Ya

REF. Nº	LOCATION	SIGN	LENGTH LIN. FT.	SIGN HEIGHT LIN. FT.	AREA SQ. FT.	SPAN LIN. FT.	SS 816 OVERHEAD SIGN SUPPORTS Nº 7.4 DESIGN Nº 2	Nº 7.4 DESIGN Nº 1 (MOD.)	Nº 7.5 DESIGN Nº 2	SS 816 CONCRETE FOR SIGN SUPPORT CU. YDS.	606 GUARDRAIL TYPE-4 LIN. FT. as per plan	FIXTURE & LAMP 72" HO	96" HO	72" SHO	96" SHO	BALLAST RATING WATTS	BALLAST TYPE A	B	C	D	625 TRANSFORMERS OUTPUT K.V.A.	TYPE IV EACH	TYPE V EACH	TYPE VI EACH	30 AMP DISCONNECT SWITCH ENCLOSURE (EACH)	Z	GROUND ROD & WIRE CONNECT EACH	SIGNS WIRED COMPLETE	SIGN	LOCATION	REF. Nº
2	I-271 STA. 174+25 EASTBOUND LANES	A	17	10.5	178.5	78	1			9.3	125 (Sh. 41)			1	1	425				1	1.50		1			1	1	1	A	I-271 STA. 174+25 EASTBOUND LANES	2
		B	16	8.5	136									1	1	425				1									B		
3	EXIST. I-77 STA. 911+35 NORTHBOUND LANES	A	17	10.5	178.5	79	1			9.3	125 - (Sh. 199)			1	1	425				1	1.50		1			1	1	1	A	EXIST. I-77 STA. 911+35 NORTHBOUND LANES	3
		B	15	8.5	127.5									2		425				1									B		
5	I-271 STA. 188+50.50 WESTBOUND LANES	A	14	7.5	105	65.43		1		—	—	2				250		1			1.00	1				1	1	1	A	I-271 STA. 188+50.50 WESTBOUND LANES	5
		B	17	10.5	178.5									1	1	425				1									B		
7	EXIST. I-77 STA. 933+00 SOUTHBOUND LANES	A	12	8.5	102	78				9.6	250 - (Sh. 201)			2		425				1	2.00			1		1	1	1	A	EXIST. I-77 STA. 933+00 SOUTHBOUND LANES	7
		B	17	10.0	170				1					1	1	425				1									B		
		C	16	8.5	136									1	1	425				1									C		
TOTALS					1312.0		2	1	1	28.2	500	2		10	6			1		7		1	2	1		4	4	4			

REVISED 7-28-67

OVERHEAD SIGN SUPPORT DETAILS & SUB SUMMARY

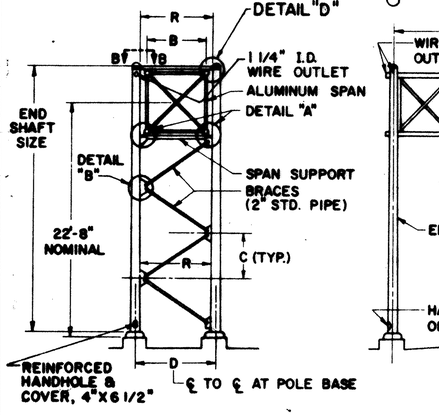
K & E - AKRON

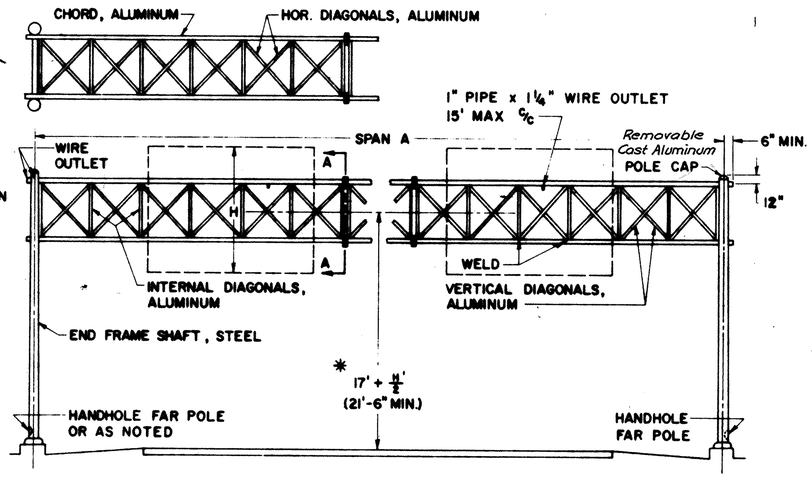
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

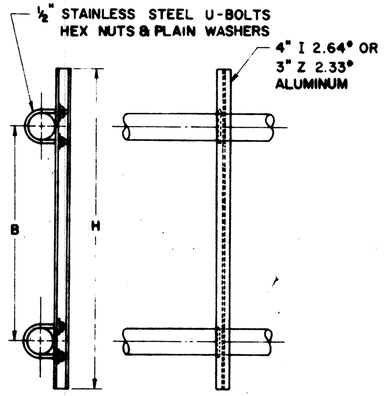
358 / 510

SUM-271-2.98

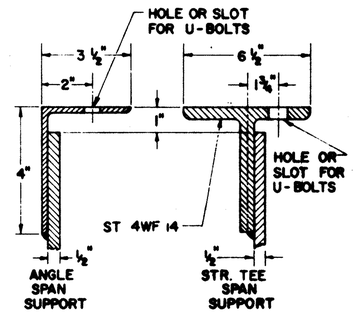
DIRECTION OF TRAFFIC







SIGN BRACKET



SECTION D-D

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. 711.02

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

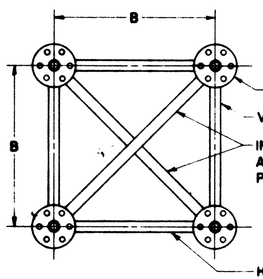
*BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

*FOUNDATION ELEVATION

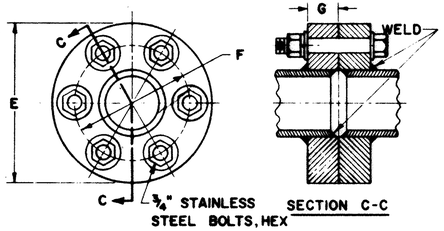
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

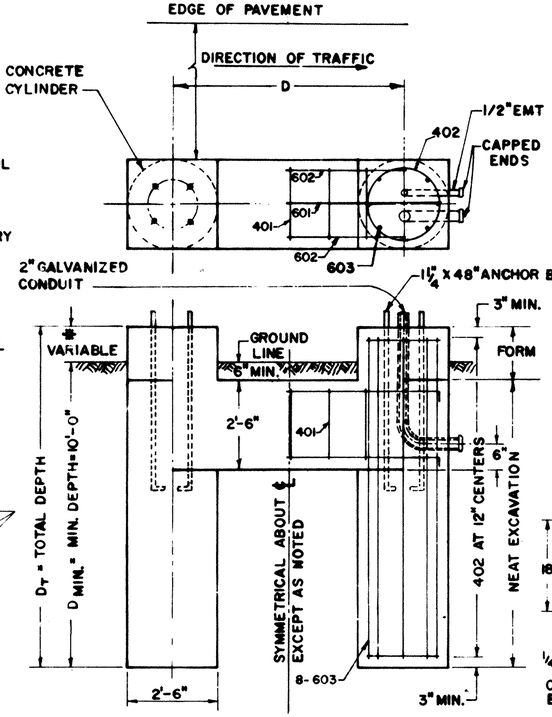


SECTION A-A



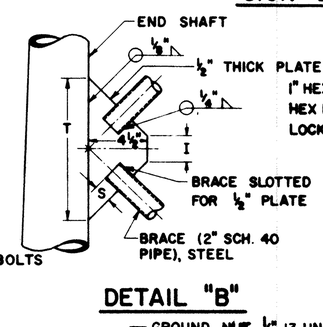
CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL

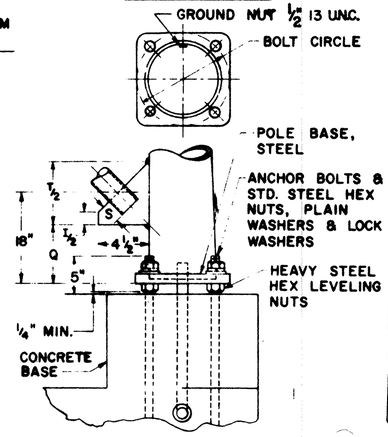


FOUNDATION DETAIL

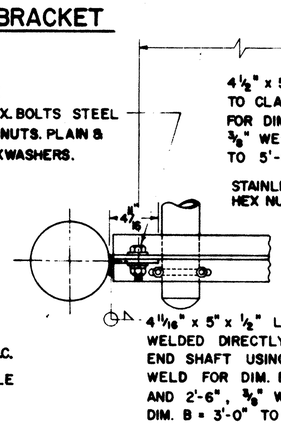
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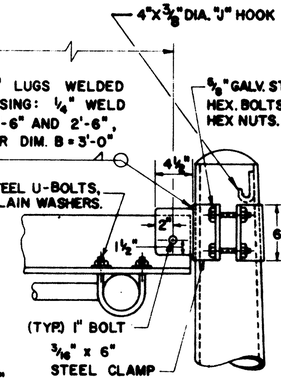
DETAIL "B"



POLE BASE DETAIL

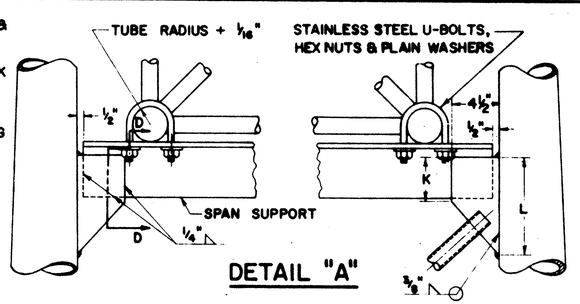


VIEW B-B



DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)



DETAIL "A"

LOWER SPAN SUPPORT

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' THRU 70'	3'-0"	4'-11 3/4"	4'-5"	9 1/4"	8"X4.5"X 25"-0", 3GA	5'-10 3/16"	7 7/16"	1 3/8"	3 1/2"	4 3/4"	8"	12"	6 5/8"	3'-9"	1 1/2"	10"	5/8"	3'-3 5/8"	11"	SPLIT TEE 3'—8"	4 3/4"X .188"	1.900"X .145"	1.660"X .140"
2	71' THRU 80'	4'-0"	4'-10 1/4"	5'-7"	9 1/4"	8"X6.22"X25'-6", 3GA	6'-7 1/8"	7 7/16"	1 3/8"	5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5/8"	4'-5 5/8"	11"	SPLIT TEE 4'—10"	4 3/4"X .188"	1.900"X .145"	
3	81' THRU 86'	4'-0"	4'-10 1/4"	5'-7"	11"	8"X6.22"X25'-6", 3GA	6'-7 1/8"	8 1/2"	1 1/2"	5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5/8"	4'-5 5/8"	11"	SPLIT TEE 4'—10"	5 1/2"X .250"	2" X .188"	1.900"X .145"
4	86' THRU 110'	5'-0"	4'-8 1/2"	6'-7"	11"	8"X6.18"X26'-0", 3GA	7'-3 1/4"	8 1/2"	1 1/2"	—	3 1/2"	7 3/4"	12"	7 1/4"	5'-11"	1 3/4"	11 1/4"	3/4"	5'-5 5/8"	11"	SPLIT TEE 5'—10"	5 1/2"X .250"	2 1/2"X .188"	2 1/2"X .188"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	8'—6"	102
402	12"C/C	7'—6"	103
601	4	D+4'—0"	101
602	8	D+2'—0"	101
603	32	D_T — 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

816 No. 7.5

DATE: 5-2-62, 7-25-62, 4-20-64, 6-20-66, 2-27-67, 7-28-67

APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

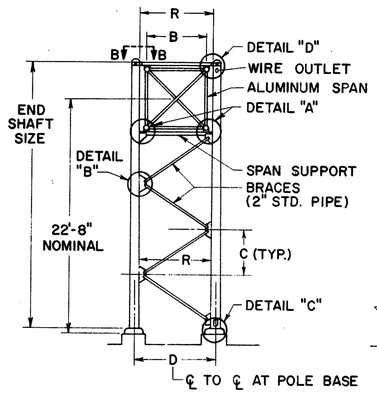
500 SQ. FT. SIGN AREA

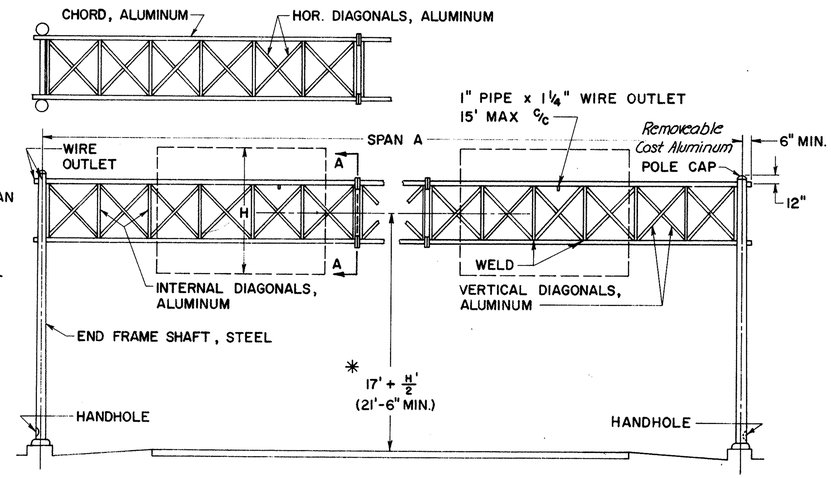
OVERHEAD SIGN SUPPORT, 816 NO. 7.5

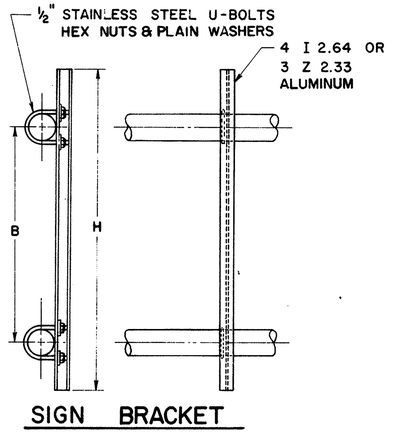
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

359
510

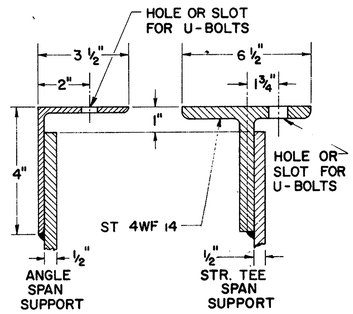
SUM.-271-2.98







SIGN BRACKET



SECTION D-D

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH 711.02

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD ¼" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

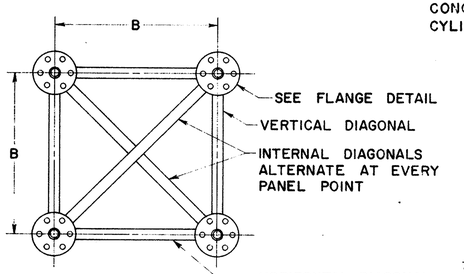
COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

*FOUNDATION ELEVATION

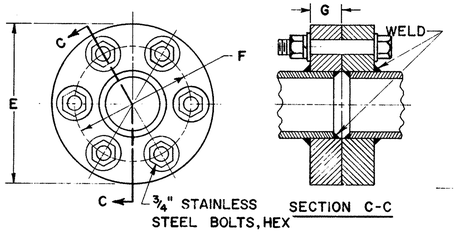
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

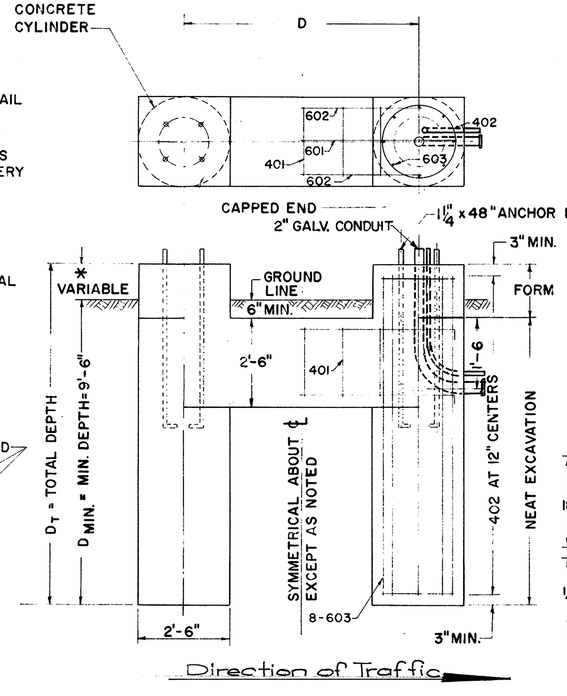


SECTION A-A



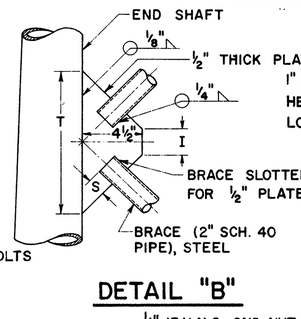
CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

FLANGE DETAIL

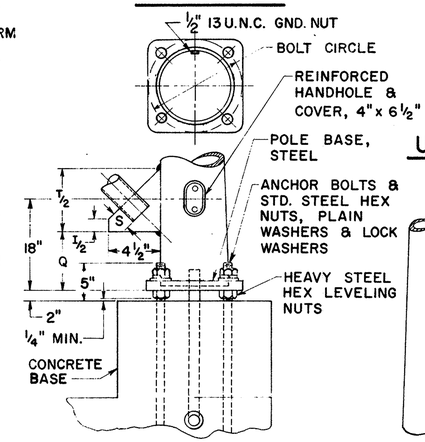


FOUNDATION DETAIL

(RIGHT HAND SHOWN — LEFT HAND OPPOSITE)

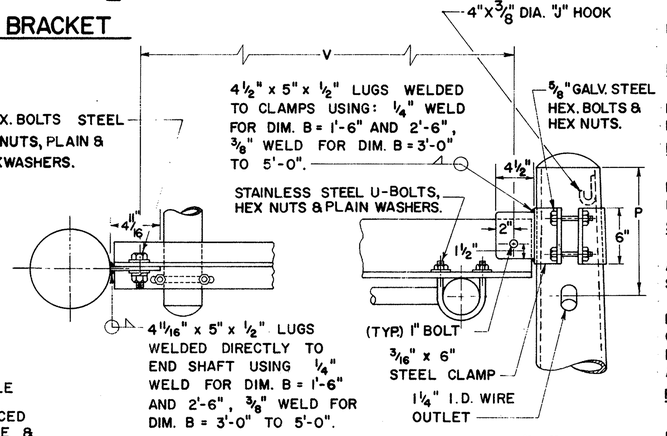


DETAIL "B"



DETAIL "C"

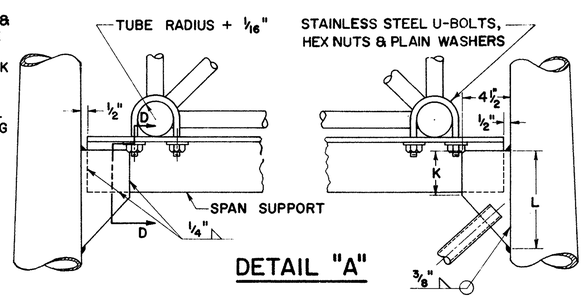
POLE BASE DETAIL



VIEW B-B

DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

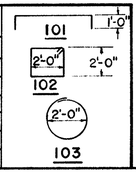


DETAIL "A"

LOWER SPAN SUPPORT

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' thru 75'	3'-0"	4'-11¾"	4'-5"	9¼"	8"x4.5"x25'-0", 3 GA.	5'-10 13/16"	7 7/16"	1⅜"	3½"	4¾"	8"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-3⅝"	11"	SPLIT TEE 3'-8"	4¾" x .188"	1.900" x .145"	1.660" x .140"
2	76' thru 85'	4'-0"	4'-10¼"	5'-7"	9¼"	8"X6.22"x25'-6" 3 GA.	6'-7⅛"	7 7/16"	1⅜"	⅝"	4⅞"	7¾"	12'	6¼"	4'-10"	1½"	9½"	⅝"	4'-4⅝"	11"	SPLIT TEE 4'-10"	4¾" x .188"	2" x .188"	1.900" x .145"
3	86' thru 90'	4'-0"	4'-10¼"	5'-7"	11"	8"X6.22"x25'-6" 3 GA.	6'-7⅛"	8½"	1½"	⅝"	4⅞"	7¾"	42"	6¼"	4'-10"	1½"	9½"	⅝"	4'-4⅝"	11"	SPLIT TEE 4'-10"	5½" x .250"	2" x .188"	1.900" x .145"
4	91' thru 110'	5'-0"	4'-8½"	6'-7"	11"	8"X6.18"x26'-0", 3 GA.	7'-3¼"	8½"	1½"	—	3½"	7¾"	12"	7¼"	5'-10"	1¾"	11¼"	¾"	5'-4⅝"	11"	SPLIT TEE 5'-10"	5½" x .250"	2½" x .188"	2½" x .188"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	8'-6"	102
402	12"C/C	7'-6"	103
601	4	D+ 4'-0"	101
602	8	D+ 2'-0"	101
603	32	D_T - 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

816 No.7.4

DATE 5-2-62, 7-25-62, 5-6-64, 7-28-67

APPROVED Robert E. Conner
ENGINEER OF TRAFFIC

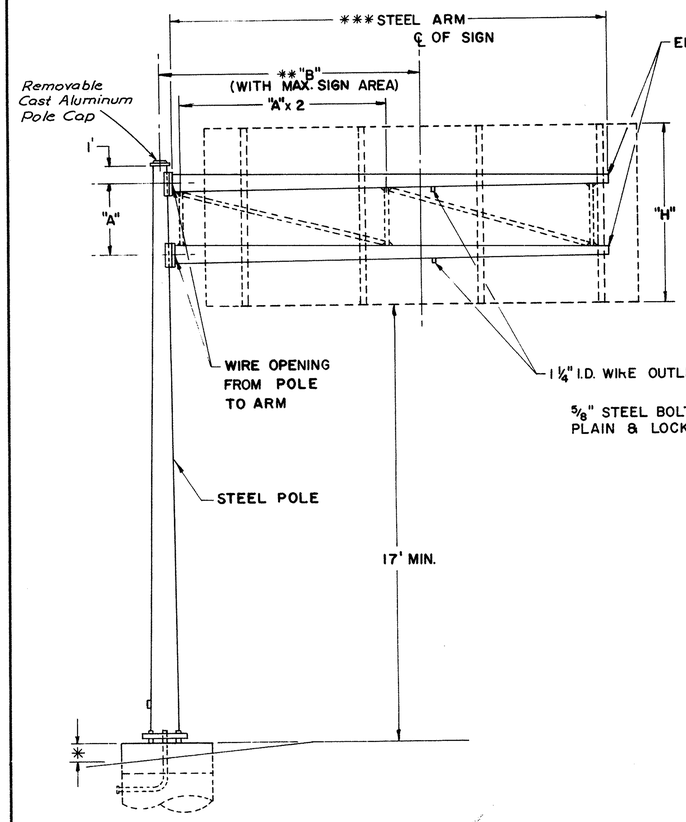
400 SQ. FT. SIGN AREA

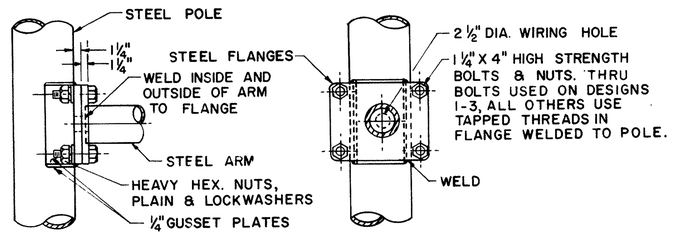
OVERHEAD SIGN SUPPORT, 816 NO.7.4

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

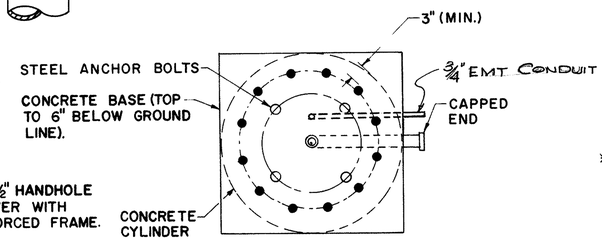
360
510

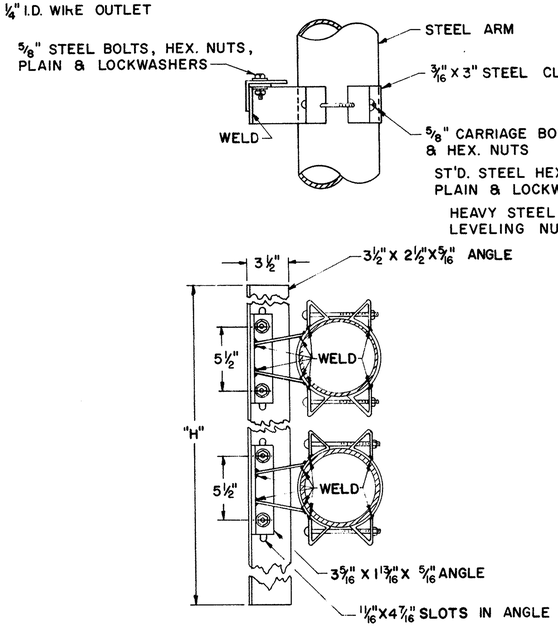
SUM.-271-2.98

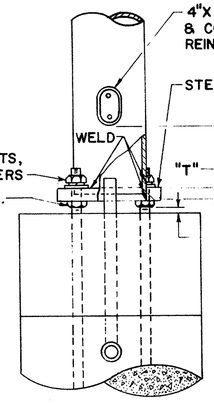


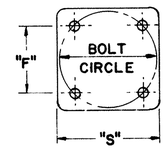


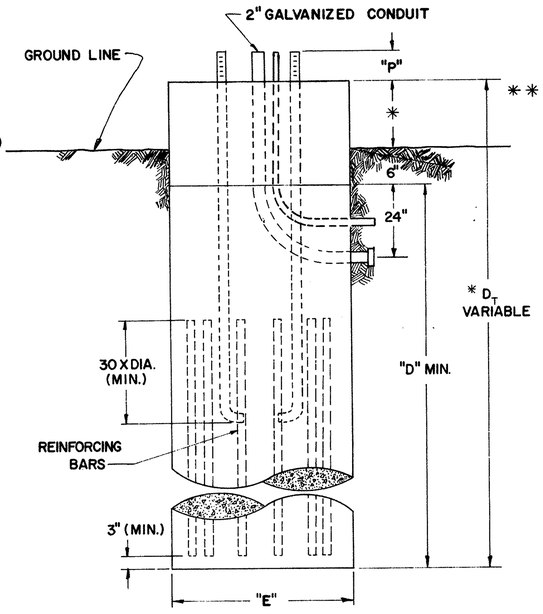
ARM ATTACHMENT











Direction of Traffic

FOUNDATION DETAIL

NOTES

FABRICATION - ALL PORTIONS OF THE SIGN SUPPORT, INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. 713.04.

* FOUNDATION - THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.

** ERECTION - VALUES OF "B" MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM ℄ OF POLE TO ℄ OF SIGN DOES NOT EXCEED THE MAX. SIGN AREA TIMES "B".

*** ARMS 20' LONG OR LONGER ARE TO BE TRUSS TYPE WITH 3" X 3" X ⅜" ANGLES WELDED TO GUSSET PLATES.

MATERIAL - STEEL POLE BASES, FLANGES, AND END CAPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A 193 GRADE B7 AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS - THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL - REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

SIGN ATTACHMENT DETAIL

POLE DETAIL

DESIGN NO.	POLE SIZE	*** ARM SIZE	DIM A	DIM ** B	DIM "D" MIN.	DIM E	DIM F	DIM P	DIM S	DIM T	BOLT CIRCLE	ANCHOR BOLT SIZE	MAX SIGN AREA	REINF. BARS SIZE	REINF. BARS NO.
1	3 Ga, 12" X 8.78" X 23'-0"	7Ga, 6.9" X 4.66" X16'-0"	4'	12'	9'	3'-0"	11 5/16"	7¾"	17"	2"	16"	1¾" X 90"	80	¾"	12
2	3 Ga, 12" X 8.78" X 23'-0"	7 Ga, 8" X 5.2" X 20'-0"	4'	16'	9'	3'-0"	11 5/16"	7¾"	17"	2"	16"	1¾" X 90"	80	¾"	12
3	3 Ga, 15" X 11.5" X 25'-0"	7 Ga, 8.3" X 6.06" X 16'-0"	4'	12'	11'	3'-0"	15½"	8⅜"	23"	2"	22"	2" X 96"	120	1"	12
4	3 Ga, 16" X 12.5" X 25'-0"	3 Ga, 9.2" X 6.40" X 20'-0"	4'	16'	11'	3'-0"	16 5/16"	8⅜"	24½"	2"	23½"	2" X 96"	120	1"	12
5	0 Ga, 18" X 14.36" X 26'-0"	7 Ga, 11" X 7.92" X 22'-0"	6'	14'	13'	3'-0"	18"	9⅜"	26½"	2½"	25½"	2¼" X 120"	180	1⅛"	12
6	0 Ga, 18" X 14.36" X 26'-0"	7 Ga, 12.5" X 8.86" X 26'-0"	6'	18'	13'	3'-0"	18"	9⅜"	26½"	2½"	25½"	2¼" X 120"	180	1⅛"	12
7	2 PLY 7 Ga, 18" X 14.36" X 26'-0"	7 Ga, 12.5" X 9.14" X 24'-0"	6'	14'	15'	3'-0"	18"	9¾"	26½"	2½"	25½"	2½" X 144"	240	1¼"	12
8	2 PLY ¼", 18" X 14.36" X 26'-0"	3 Ga, 12.5" X 8.58" X 28'-0"	6'	18'	15'	3'-0"	18"	11¼"	26½"	3"	25½"	3" X 144"	240	1¼"	12

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORT

816
No. 12.24

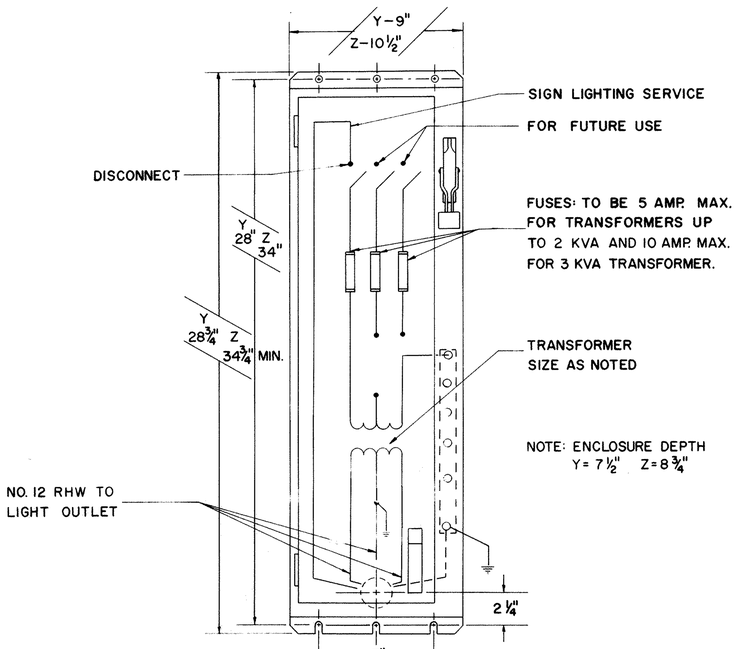
DATE
8-18-61
4-11-62
7-28-67

APPROVED Robert E. Comer
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

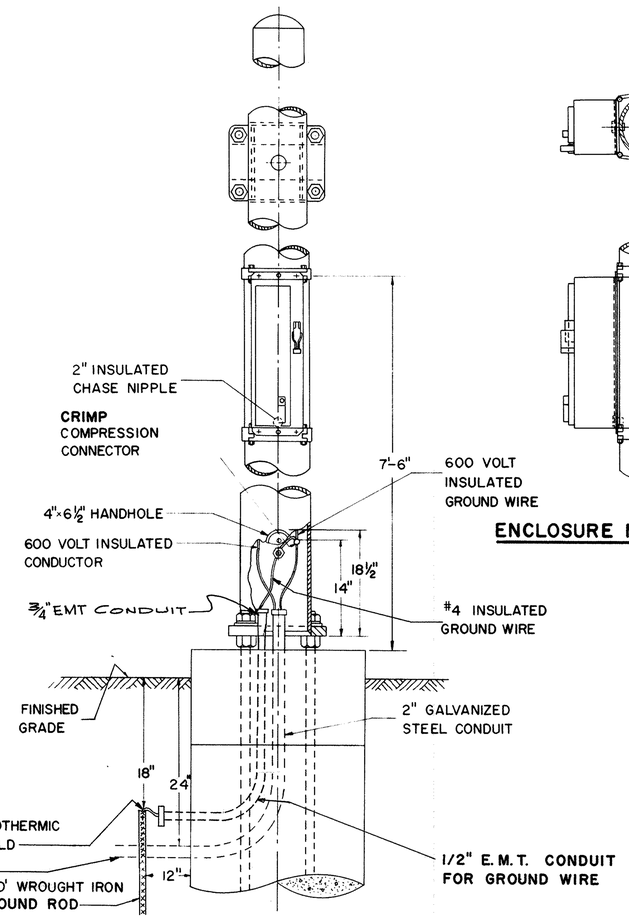
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510

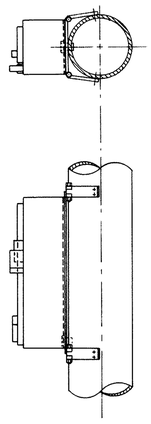
SUM.-271-2.98



TYPICAL ENCLOSURE DETAIL

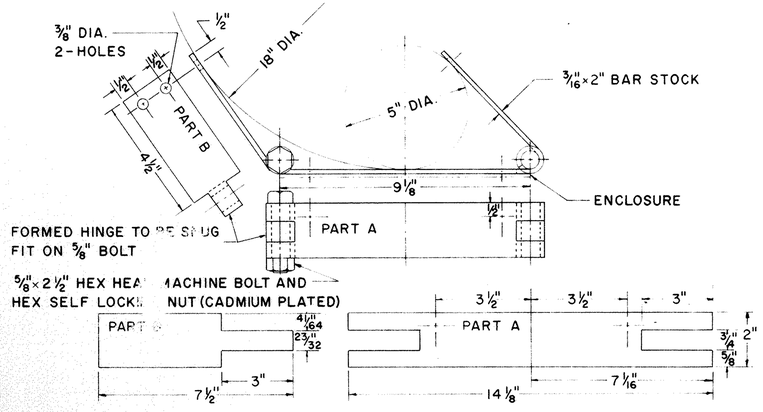
480 VOLT SIGN LIGHTING SERVICE



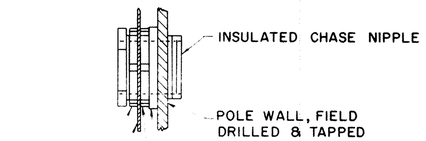


ENCLOSURE MOUNTING DETAIL

SIGN SUPPORT DETAIL FOR ILLUMINATED SIGNS



ENCLOSURE MOUNTING BRACKET



INSULATED CHASE NIPPLE ASSEMBLY DETAIL

INSULATED CHASE NIPPLE AS MANUFACTURED BY THOMAS BETTS, APPLETON OR STEEL CITY OR EQUAL.

NOTES

GENERAL

DETAILS OF THIS SHEET SHALL APPLY TO EACH OVERHEAD SIGN STRUCTURE TO SUPPORT EXTERNALLY ILLUMINATED SIGNS.

SERVICE

ELECTRIC SERVICE SHALL ENTER THROUGH A 2" GALVANIZED RIGID STEEL CONDUIT INSTALLED IN STRUCTURE FOUNDATION AS PER DETAIL. SIGN SERVICE OR CIRCUITRY SHALL BE CONTROLLED AS REQUIRED BY THE SYSTEM DESIGN AT THE PRIMARY SOURCE.

SERVICE CONDUCTORS SHALL BE THE SIZE AND TYPE AS SPECIFIED.

COMBINATION SWITCH AND TRANSFORMER

(TYPE Y OR Z ENCLOSURE REQUIRED AS PER SCHEDULE ON THIS SHEET)

THIS COMBINATION SHALL BE A 30 OR 60 AMPERE 600 VOLT SWITCH WITH A .25 TO 3.0 KVA TRANSFORMER. THE COMBINATION AND ENCLOSURE SHALL BE AS SQUARE D CLASS 9421, COLUMBUS ELECTRIC WORKS CLASS 101, PANALS INCORPORATED–CLASS 9400, OR APPROVED EQUAL.

TRANSFORMER

THE TRANSFORMER SHALL BE DRY TYPE SINGLE FACE 240/480 VOLT PRIMARY 120/240 VOLT SECONDARY, THE TYPE AND CAPACITY AS SPECIFIED IN DETAILED SCHEDULE ON THIS SHEET.

ENCLOSURE

THE ENCLOSURE SHALL BE NEMA #4 WATER TIGHT .063 GAGE STAINLESS STEEL ASTA 302–303. A DISCONNECT HANDLE SHALL BE FLANGE MOUNTED AND CAPABLE OF BEING LOCKED IN EITHER POSITION. THE ENCLOSURE SHALL BE EQUIPPED WITH A DOOR LOCKING MECHANISM WITH A DEFEATER THAT NECESSITATES TWO HANDS TO OPERATE MECHANISM WITH THE SWITCH IN OFF POSITION. SPACE FOR A 2" INSULATED CHASE NIPPLE SHALL BE PROVIDED APPROXIMATELY 2 ¼" ABOVE THE CENTER LINE OF THE LOWER MOUNTING SLOT. THIS ENCLOSURE AND STRUCTURE SHALL BE FIELD DRILLED AND TAPPED FOR THE REQUIRED NIPPLE AS SHOWN ON THE DETAIL ON THIS SHEET.

THIS ENCLOSURE SHALL BE FLANGE MOUNTED ON BRACKETS WITH 5/16–18×¾" HEX HEAD CADMIUM PLATED MACHINE BOLTS. ENCLOSURES SHALL BE TYPE Y OR Z AS SPECIFIED AND DIMENSIONED ON THIS SHEET.

ENCLOSURE MOUNTING BRACKET

THE ENCLOSURE MOUNTING BRACKET SHALL BE FABRICATED THEN GALVANIZED BEFORE ASSEMBLY. THE BRACKET SHALL BE FIELD MOUNTED WITH 5/16 HEX HEAD SELF TAPPING CADMIUM PLATED SCREWS. THE SIGN SUPPORT SHALL BE FIELD DRILLED, AS PER DETAIL.

WIRE AND CABLE

ALL WIRE AND CABLE UP TO AND INCLUDING #4 SHALL COMPLY WITH FAA TYPE A SPECIFICATIONS, #2 OR LARGER WIRE OR CABLE SHALL BE G.E. 58006 OR ANACONDA AP–10711, OR EQUAL. ALL WIRE AND CABLE SHALL BE 600 VOLT.

GROUNDING

EACH SIGN SUPPORT OR STRUCTURE SHALL BE GROUNDED WITH A #4 RUBBER INSULATION AND NEOPRENE JACKETED CONDUCTOR. THE GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE SWITCH THEN TO THE COMPRESSION CONNECTOR IN THE SIGN SUPPORT THEN TO A 1"×10' WROUGHT IRON GROUND ROD. GROUND CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO GROUND ROD AND THEN TAPED WITH PLASTIC ELECTRICAL TAPE AT EACH EXPOSED PORTION OF CONDUCTOR. THE WELDED CONNECTION AND TAPED PORTION SHALL BE PAINTED 2 COATS OF INSULATING ENAMEL.

TRANSFORMERS

TYPE	MANUFACTURERS G.E.	MANUFACTURERS JEFFERSON	OUTPUT K.V.A.	SWITCH TRANSFORMER ENCLOSURE
I	9T51Y7	244–241	.25	Y
II	9T51Y8	244–251	.50	Y
III	9T51Y9	244–261	.75	Y
IV	9T51Y10	244–401	1.00	Z
V	9T51Y11	244–411	1.50	Z
VI	9T51Y12	244–421	2.00	Z
VII	9T51Y13	244–431	3.00	Z

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ELECTRICAL SIGN SERVICE DETAILS 480 VOLT SYSTEM

ES-3A

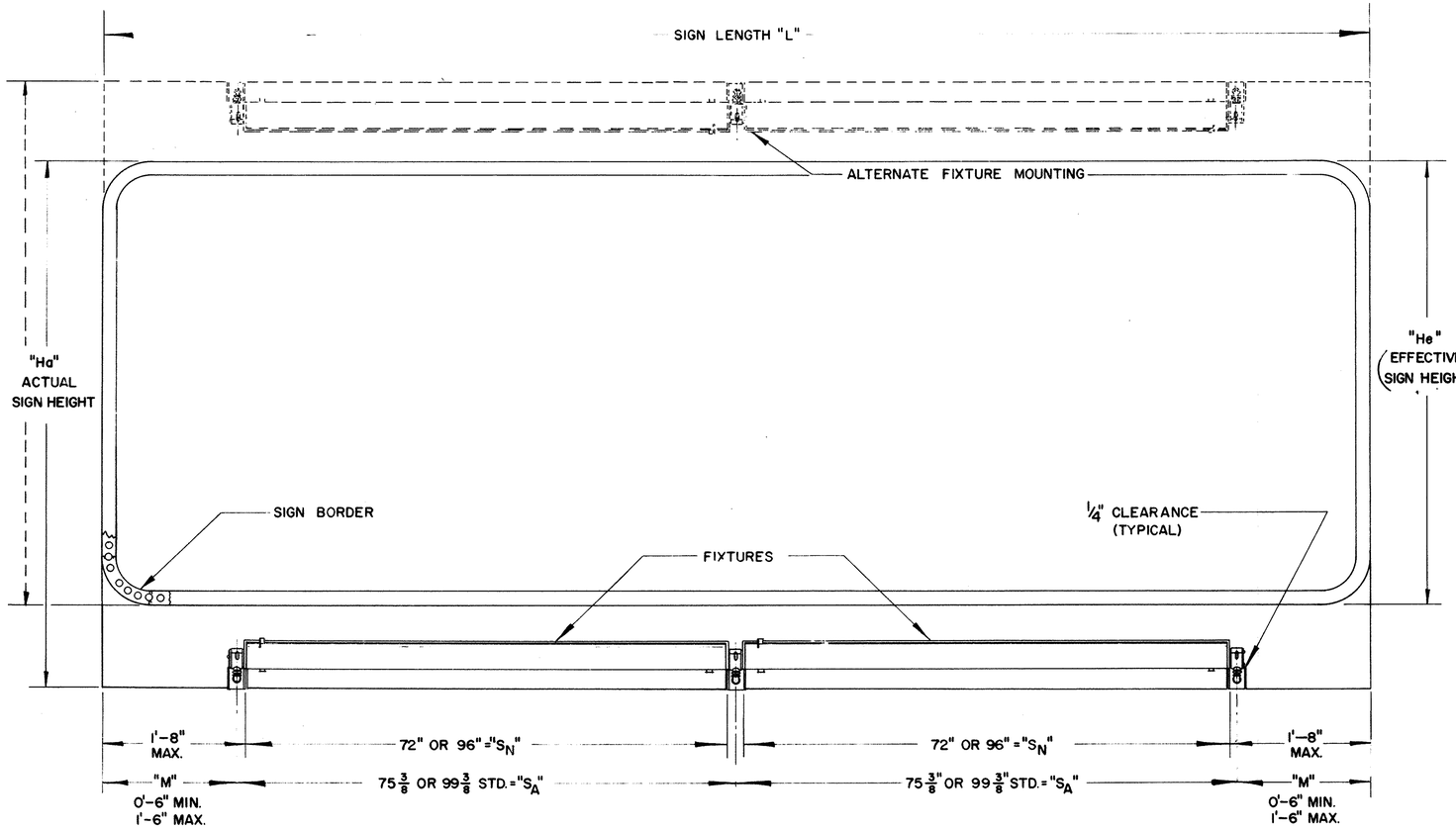
DATE. 6-18-64 7-28-67

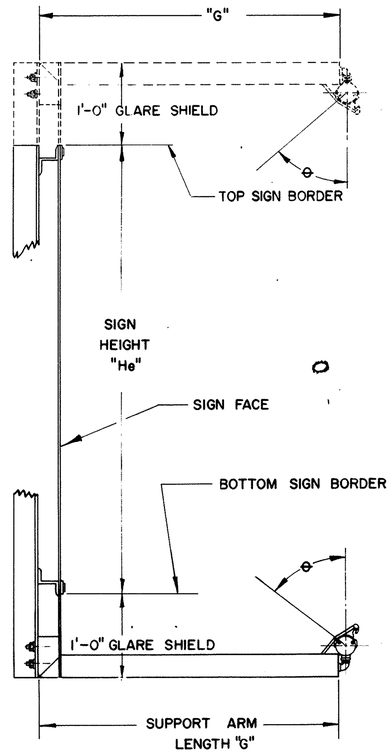
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

363
510

SUM.-271-2.98





SIGN LIGHTING NOTES

SIGN ILLUMINATION

SIGN ILLUMINATION SHALL BE BY ATTACHED FLUORESCENT FIXTURES AS SHOWN ON ILLUMINATED SIGN DETAIL SHEETS.

LAMPS

LAMPS SHALL BE TYPE F72 OR F96-T12/CW/HO AS MANUFACTURED BY WESTINGHOUSE, GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS TO A MAXIMUM HEIGHT OF 6'-6". LAMP TYPE SHALL BE F72 OR F96-T12/CW/SHO AS MANUFACTURED BY WESTINGHOUSE, F72 OR F96-PG17/CW AS MANUFACTURED BY GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS THAT ARE 7'-0" OR GREATER IN HEIGHT.

LAMP FIXTURES

LIGHTING FIXTURES SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS OR WITH HIGH QUALITY CORROSION RESISTANT FINISH. ALL FIXTURES SHALL BE SPECIFICALLY DESIGNED FOR OUTDOOR SIGN LIGHTING SERVICE. MAJOR COMPONENTS SHALL INCLUDE WEATHERPROOF CAST ALUMINUM MOUNTING HUBS DESIGNED TO SECURELY LOCK THE FIXTURES AT ANY ANGLE THROUGH 360 DEGREES. INDICATORS IN 10 DEGREE INCREMENTS SHALL BE STAMPED OR CAST INTO THE HUB TO FACILITATE PROPER AIMING OF THE FIXTURE. FINAL ADJUSTMENT OF FIXTURE SHALL BE DONE AT NIGHT UNDER THE PROJECT ENGINEER'S DIRECTION.

THE BODY DESIGN OF THE FIXTURE SHALL PROVIDE AN ASYMMETRIC SPECULAR ALZAK REFLECTOR TO GIVE A HIGH LEVEL OF UNIFORM ILLUMINATION AND SHALL PROVIDE A WIREWAY FROM END TO END. WHEN ADJACENT FIXTURES ARE WIRED TOGETHER THROUGH THE WIREWAY, WIRE BETWEEN FIXTURES SHALL BE ENTIRELY ENCLOSED.

EXTERIOR FINISH OF THE FIXTURE BODY SHALL BE INTERSTATE GREEN COLOR, HEAT RESISTANT BAKED ENAMEL AS # 8950 UNIVERSAL PAINT AND VARNISH INC., OR EQUIVALENT BY MIDWESTERN COLOR WORKS, OR APPROVED EQUAL. REFLECTOR, LAMP AND SOCKETS SHALL BE PROTECTED BY A HINGED DOOR OF CLEAR ACRYLIC PLASTIC WITH ALUMINUM OR STAINLESS STEEL FRAME AND NEOPRENE GASKETING.

BALLASTS

BALLASTS FOR FIXTURES SHALL BE WEATHER-PROOF OUTDOOR TYPE FOR A 120 VOLT 60 CYCLE SYSTEM AND SHALL PROVIDE LAMP STARTING AT AN AMBIENT TEMPERATURE OF -20°F. BALLASTS SHALL BE MOUNTED ON SIGN BRACKET ONLY. WIRING SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT THE SIGN MAY BE REMOVED WITHOUT DISTURBING THE ELECTRICAL WIRING.

EFFECTIVE SIGN HEIGHT "H"	SUPPORT ARM LENGTH "G"	APPROX. AIMING ANGLE ⊖
3'-0" to 5'-0"	2'-9"	25°
5'-0" to 6'-6"	3'-3"	25°
7'-0" to 10'-0"	4'-3"	17°
10'-6" to 13'-0"	5'-9"	23°

"L" SIGN LENGTH	NO. OF FIXTURES			He=3'-0" to 6'-6" LAMP=T12/cw/ho			He=7'-0" to 13'-0" LAMP=T12/cw/sho		
	72	96		BALLAST NO.	BALLAST TYPE	WATTAGE PER SIGN	BALLAST NO.	BALLAST TYPE	WATTAGE PER SIGN
6'-0" to 7'-0"	1			1	A	190	1	C	250
8'-0" to 9'-0"	1			1	A	190	1	C	250
10'-0" to 11'-0"		1		1	A	190	1	C	250
12'-0" to 13'-0"	2			1	B	250	1	D	425
14'-0" to 15'-0"	2			1	B	250	1	D	425
16'-0" to 17'-0"	1	1		1	B	250	1	D	425
18'-0" to 19'-0"		2		1	B	250	1	D	425
20'-0" to 21'-0"	3			2	A&B	440	2	C&D	675
22'-0" to 23'-0"	2	1		2	A&B	440	2	C&D	675
24'-0" to 25'-0"	1	2		2	A&B	440	2	C&D	675
26'-0" to 27'-0"			3	2	A&B	440	2	C&D	675

BALLASTS

TYPE	MANUFACTURERS		WATTAGE
	G.E.	JEFFERSON	
A	GG 3583	257-151	190
B	GG 3535	257-171	250
C	GG 3585	257-231	250
D	GG 3588	257-181	425

BALLASTS SHALL BE GENERAL ELECTRIC, JEFFERSON AS SPECIFIED ABOVE OR EQUAL.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ELECTRICAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

EI-2

DATE
10-31-63
5-6-64
10-29-64

APPROVED Fred C Yeatts
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

364
510

SUM.-271-2.98

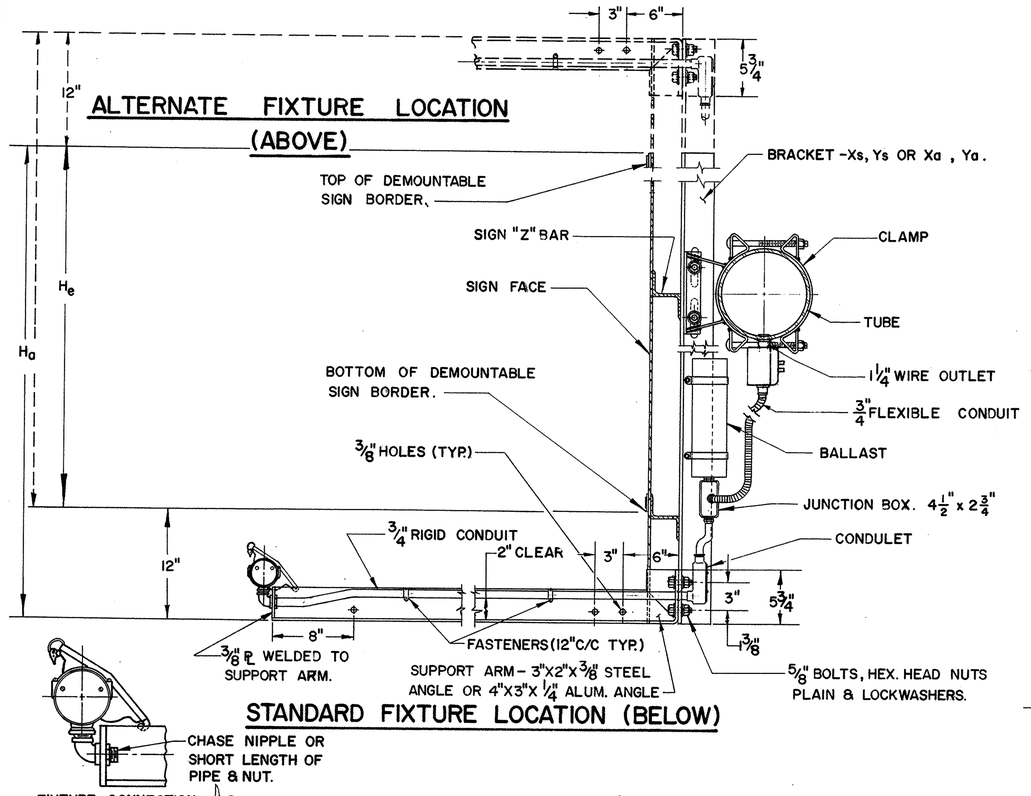
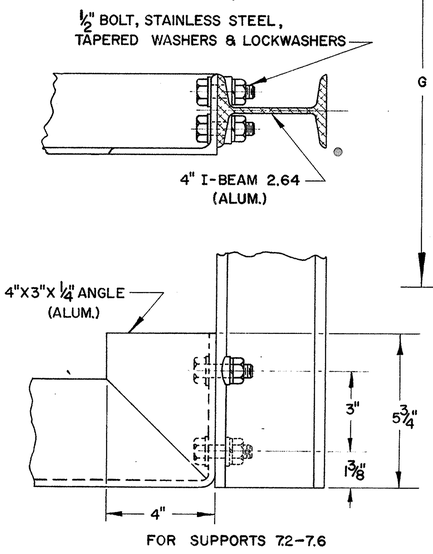


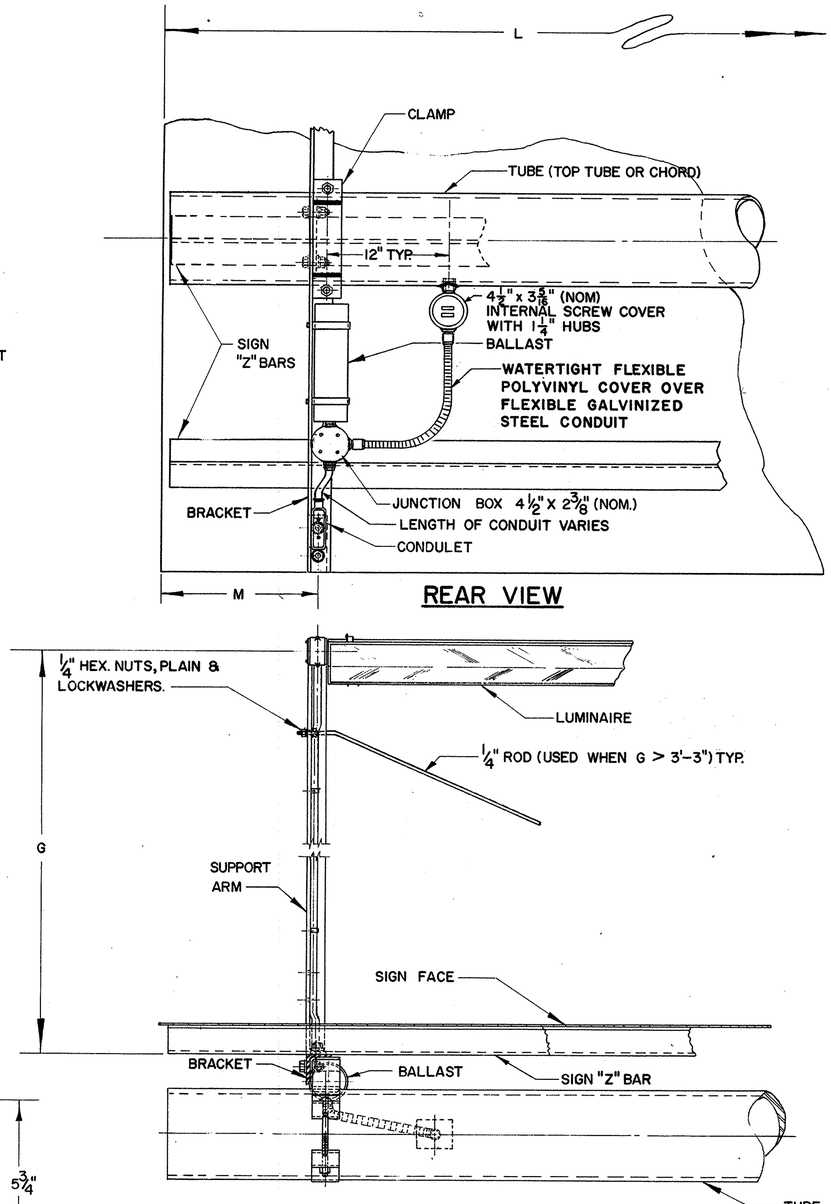
TABLE III.	
L	K
6'-0"	7 11/16"
7'-0"	1 11/16"
12'-0"	9 5/8"
13'-0"	3 3/8"

ALTERNATE FIXTURE CONNECTIONS FOR SIGN 6', 7', 12' & 13' IN LENGTH.

DETAIL A.



DETAIL B.



FABRICATION — ALL STRUCTURAL COMPONENTS SHOWN ON THIS SHEET SHALL CONFORM TO SUPPLEMENT SPECIFICATIONS I-129.

MATERIALS — THE MATERIALS USED IN THE COMPONENTS SHOWN ON THIS SHEET SHALL BE IN CONFORMANCE WITH THE MATERIALS USED IN THE SIGN SUPPORT.

TABLE I.

"L" SIGN LENGTH		NUMBER OF FIXTURES		"M" EDGE DISTANCE				NO. BALLAST
				A		B		
A	B	75 3/8"	99 3/8"	LT.	RT.	LT.	RT.	
6'-0"	7'-0"	1		6"	6"	6"	6"	1
8'-0"	9'-0"	1		10 3/16"	10 1/4"	16 3/16"	16 1/4"	1
10'-0"	11'-0"		1	10 3/16"	10 1/4"	16 3/16"	16 1/4"	1
12'-0"	13'-0"	2		6"	6	6	6	1
14'-0"	15'-0"	2		8 5/16"	8 5/16"	14 5/16"	14 5/16"	1
16'-0"	17'-0"	1	1	8 5/16"	8 5/16"	14 5/16"	14 5/16"	1
18'-0"	19'-0"		2	8 5/16"	8 5/16"	14 5/16"	14 5/16"	1
20'-0"	21'-0"	3		7"	6 7/8"	13	12 7/8"	2
22'-0"	23'-0"	2	1	7"	6 7/8"	13	12 7/8"	2
24'-0"	25'-0"	1	2	7"	6 7/8"	13	12 7/8"	2
26'-0"	27'-0"		3	7"	6 7/8"	13	12 7/8"	2

Sn= Nominal Fixture Length, 72" & 96" respectively.
Sa= Actual Fixture Length, for mounting purposes, 75 3/8" and 99 3/8" respectively. (Slight variation for different manufacturers.)
M= Distance from edge of sign to ℄ of notch, min. 6". When the length of the sign minus 1'-0" is less than the sum of the actual fixture lengths, an offset "K" is used. For additional details see detail A and table III.

TABLE II

MAX. BRACKET SPACING FOR EXTERNALLY ILLUMINATED SIGNS

ACTUAL SIGN HEIGHT "Ha"	SUPPORT TYPES			
	9.12, 11.08, 13.2, 7.2	9.24, 10.48, 12.24, 14.5, 15.8, 7.2 to 7.6		
	SINGLE TUBE DOUBLE TUBE LESS 36" C/C	DOUBLE TUBE		
		C/C 36"-42"	C/C 48"-54"	C/C 60"-72"
	MAXIMUM BRACKET SPACING			
to 5'-0"	6'-4" with X 8'-4" with Y	8'-4" with X	8'-4" with X	8'-4" with X
5'-6" to 8'-0"	6'-4" with Y	4'-2" with X 6'-4" with Y	6'-4" with X 8'-4" with Y	8'-4" with X
8'-6" to 10'-0"	3'-2" with X 4'-2" with Y	6'-4" with Y	6'-4" with Y	8'-4" with Y
10'-6" to 12'-0"	———	4'-2" with Y	6'-4" with Y	6'-4" with Y
12'-6" to 14'-0"	———	3'-2" with Y	3'-2" with Y	4'-2" with Y

Ha= ACTUAL SIGN HEIGHT
He= EFFECTIVE SIGN HEIGHT
BRACKET SIZE: Xs = 3½" X 2½" X 5/16" — L @ 6.1 LB. STEEL } 9.12, 10.48, 11.08,
Ys = 4" X 3 1/16" X ¼" — Z @ 8.2 LB. STEEL } 12.24, 14.5 & 15.8
Xa = 3" X 2 1/16" X ¼" — Z @ 2.33 LB. ALUM. } 7.2 Thru 7.6
Ya = 4" X 2 2/32" X 3/16" — I @ 2.64 LB. ALUM.

WHEN MAX. ALLOWABLE SPACING IS LESS THAN ACTUAL FIXTURE LENGTHS, Sa, ADDITIONAL STANDARD BRACKETS MUST BE FURNISHED, EQUAL IN HEIGHT TO "Ha".

SUPPORTS 7.2 THROUGH 7.6 SHALL HAVE AN ALUMINUM FIXTURE ARM, 4"X3"X¼" ANGLE. SEE DETAIL B. BOLTS AND ACCESSORIES SHALL BE STAINLESS STEEL.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

STRUCTURAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

EI-1

DATE 10-16-63, 5-6-64, 10-29-64

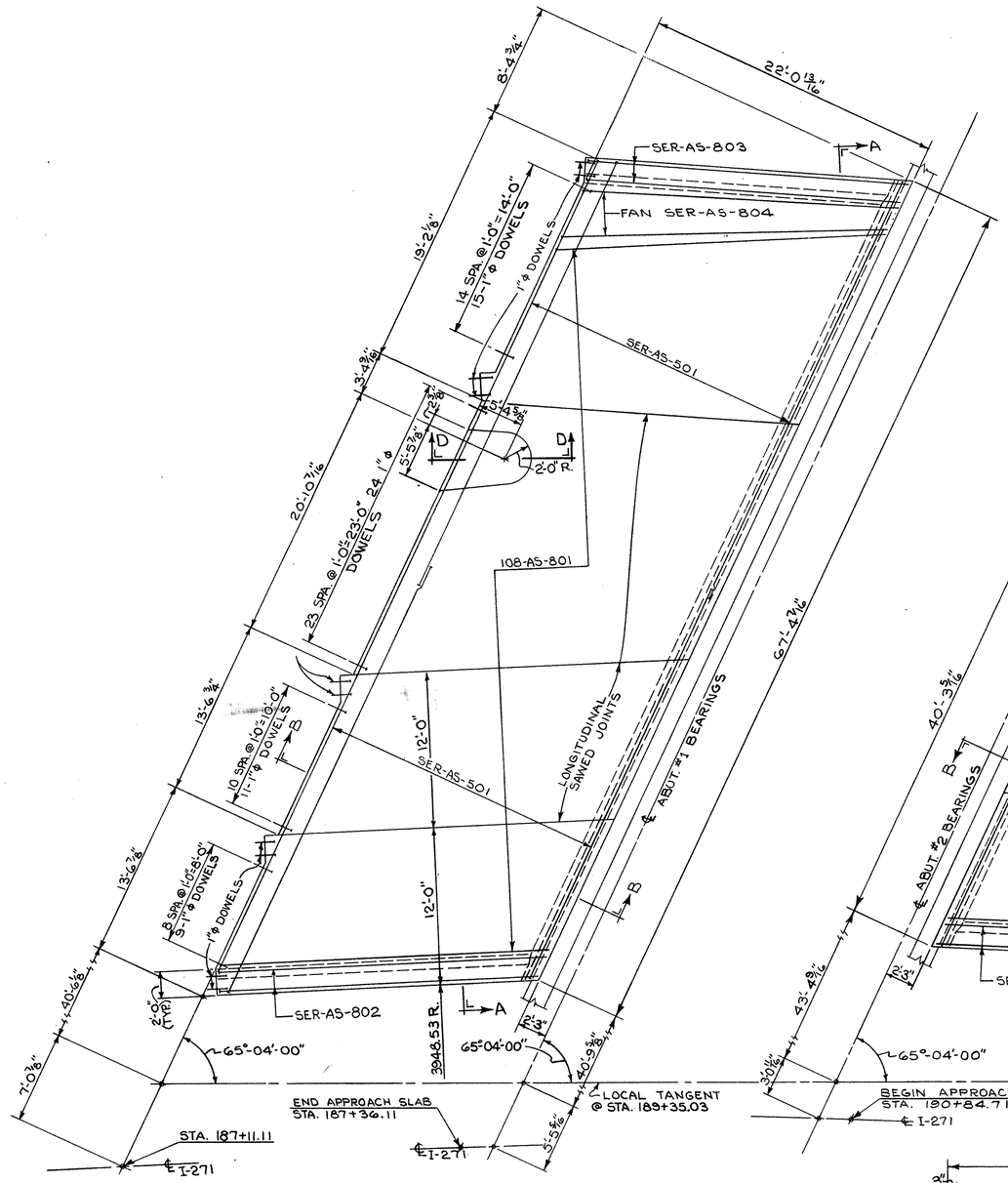
APPROVED Fred C Talbot
ENGINEER OF TRAFFIC

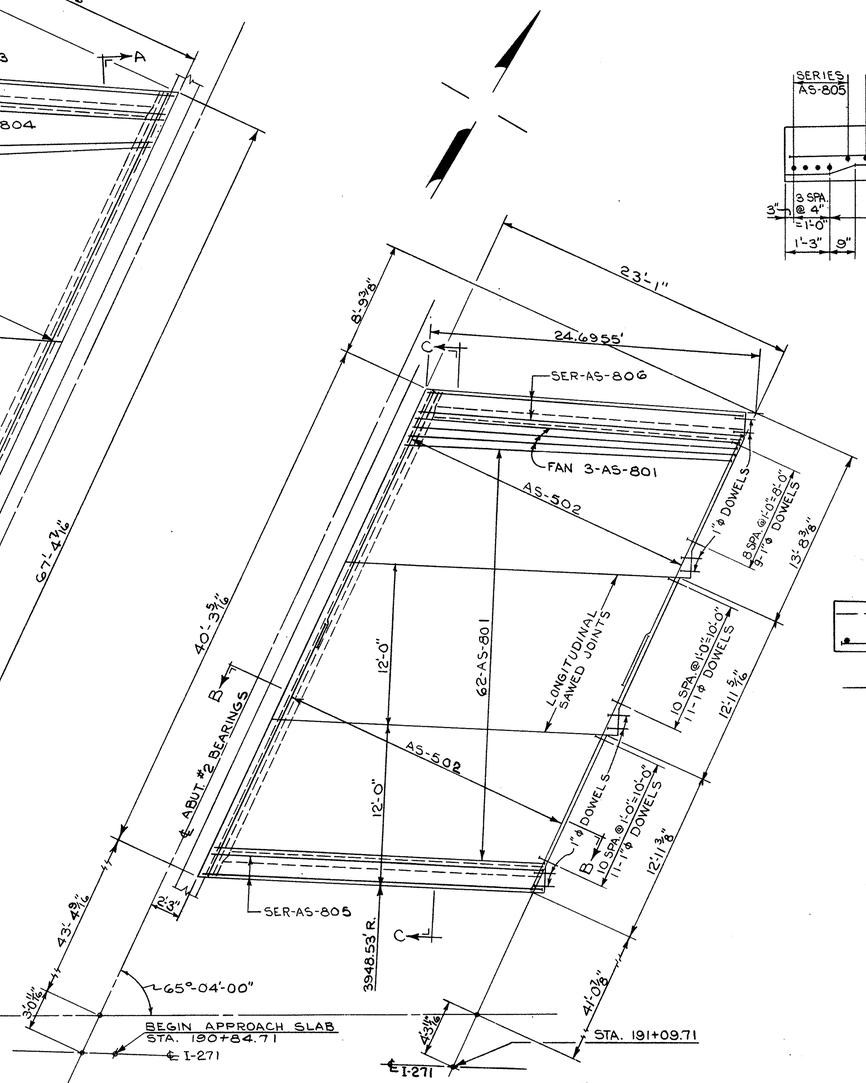
STRUCTURAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

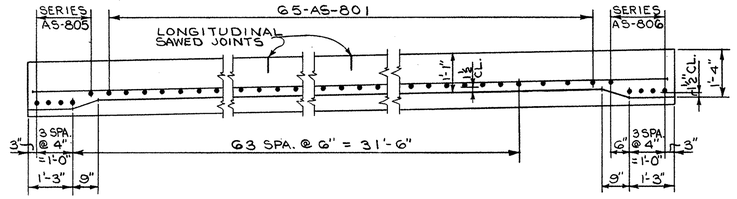
FED. RD.	STATE	PROJECT	
2	OHIO		

365
510

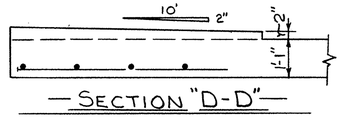
SUM. 271-2.98







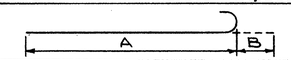
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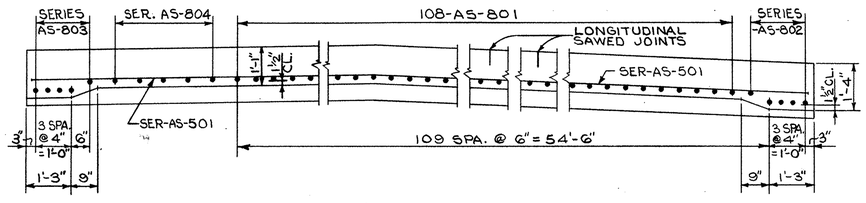


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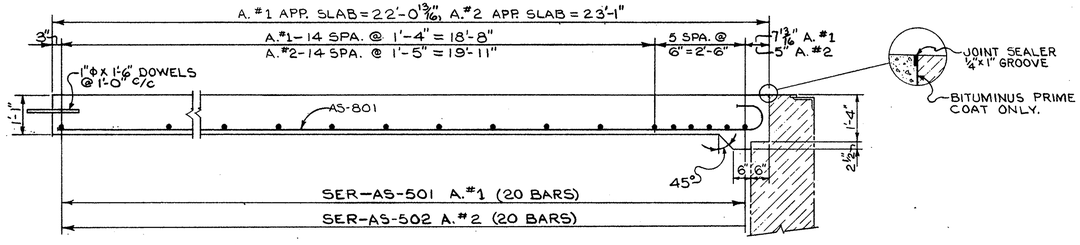
REINFORCING STEEL LIST

MARK	No. REQ'D	LENGTH	SHP	A	B	WEIGHT
SERIES AS-501	2 SETS OF 20=40	34'-4"-35'-11" @ INCR. OF 1"	ST.			1,465
AS-502	40	20'-9"	ST.			866
AS-801	173	25'-8"	BNT.	24'-7"	1'-1"	11,856
SERIES AS-802	1 SET OF 5	24'-8"-25'-5" @ INCR. OF 2"	BNT.	23'-8" TO 24'-4"	1'-1"	335
SERIES AS-803	1 SET OF 5	24'-8"-25'-4" @ INCR. OF 2"	BNT	23'-7" TO 24'-3"	1'-1"	334
SERIES AS-804	1 SET OF 5	24'-8"-25'-8" @ INCR. OF 3"	BNT.	23'-7" TO 24'-7"	1'-1"	336
SERIES AS-805	1 SET OF 5	25'-8"-26'-4" @ INCR. OF 2"	BNT.	24'-7" TO 25'-3"	1'-1"	347
SERIES AS-806	1 SET OF 5	24'-7"-25'-3" @ INCR. OF 2"	BNT.	23'-6" TO 24'-2"	1'-1"	333
108 1" DIA. x 1'-6" DOWELS						433
TOTAL (2 APPROACH SLABS = 16,305 LBS.						





SECTION "A-A"



SECTION "B-B"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

APPROACH SLAB DETAILS

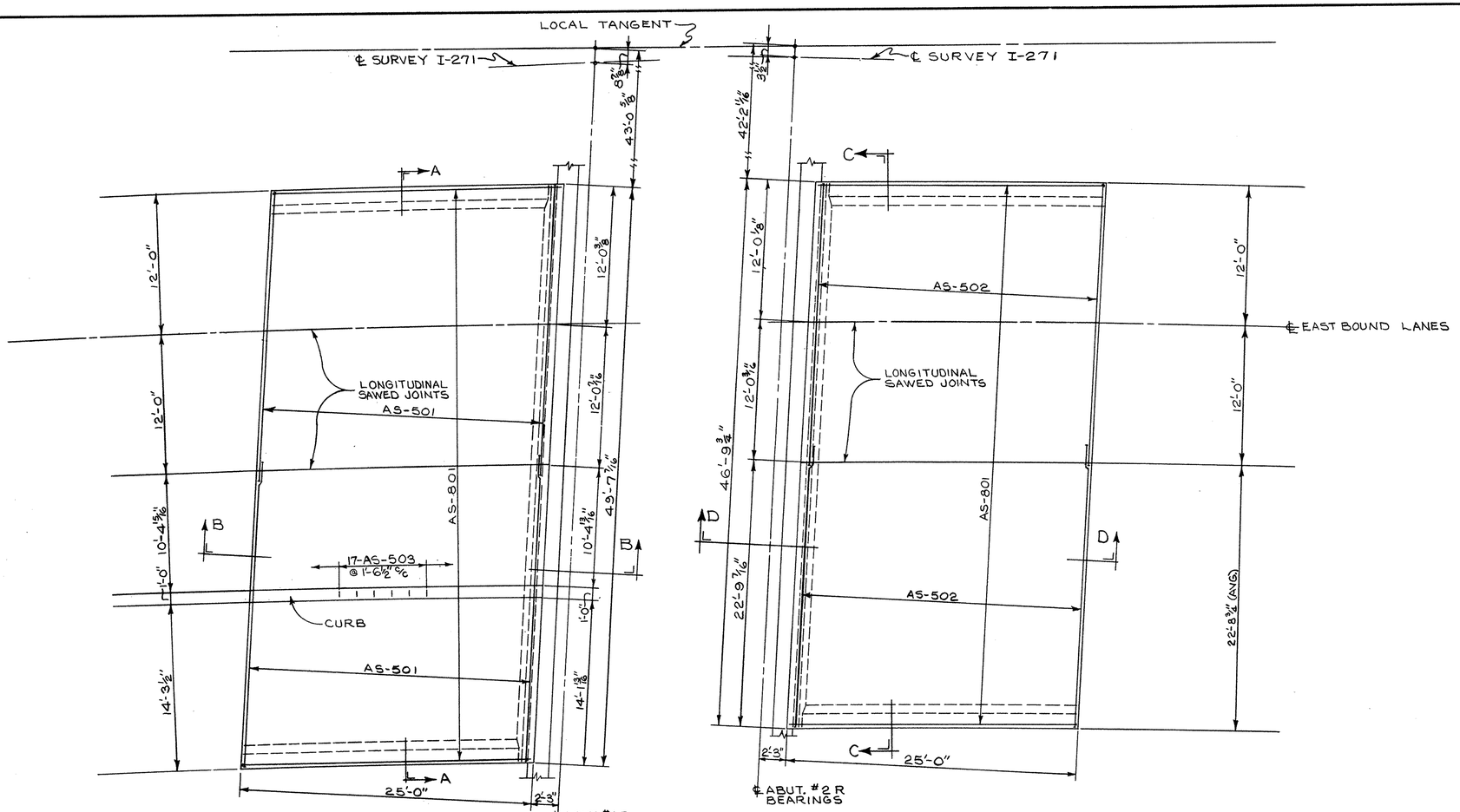
BRIDGE NO. SUM-271-0358 L
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPW	BMR		4/1/66	RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

366
510

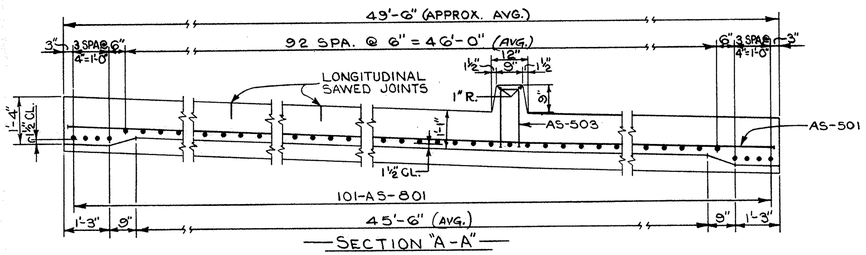
SUM-271-2.98



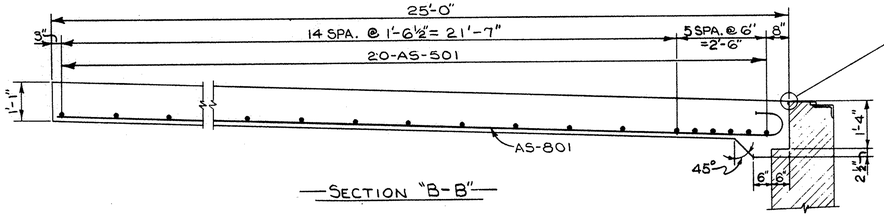
REINFORCING STEEL LIST

MARK	Nº REQ'D	LENGTH	SHAPE	A	B	WEIGHT
AS-501	40	25'-6"	ST.			1,064
AS-502	40	24'-1"	ST.			1,005
AS-503	17	3'-3"	1	5"	1'-6"	58
AS-801	196	25'-7"	2	24'-6"	1'-1"	13,388

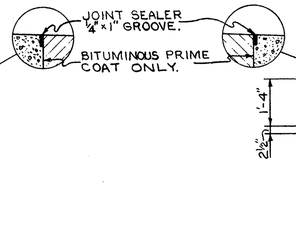
TOTAL (2 APPROACH SLABS) = 15,515 LBS.

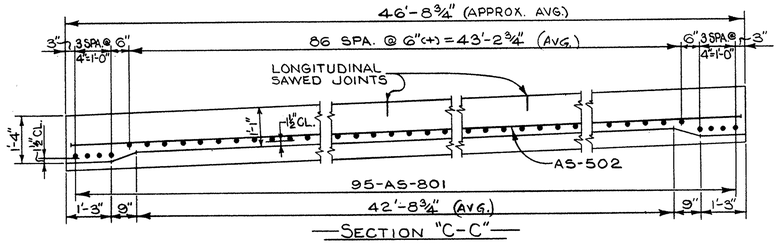


—SECTION "A-A"—

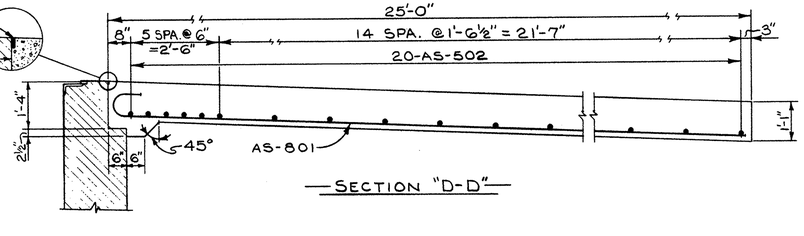


—SECTION "B-B"—





—SECTION "C-C"—



—SECTION "D-D"—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

APPROACH SLAB DETAILS

BRIDGE NO. SUM-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CAS	BMR		H.G.H.	RDH	4-21-66	

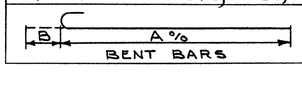
FED. RD.	STATE	PROJECT	
2	OHIO		

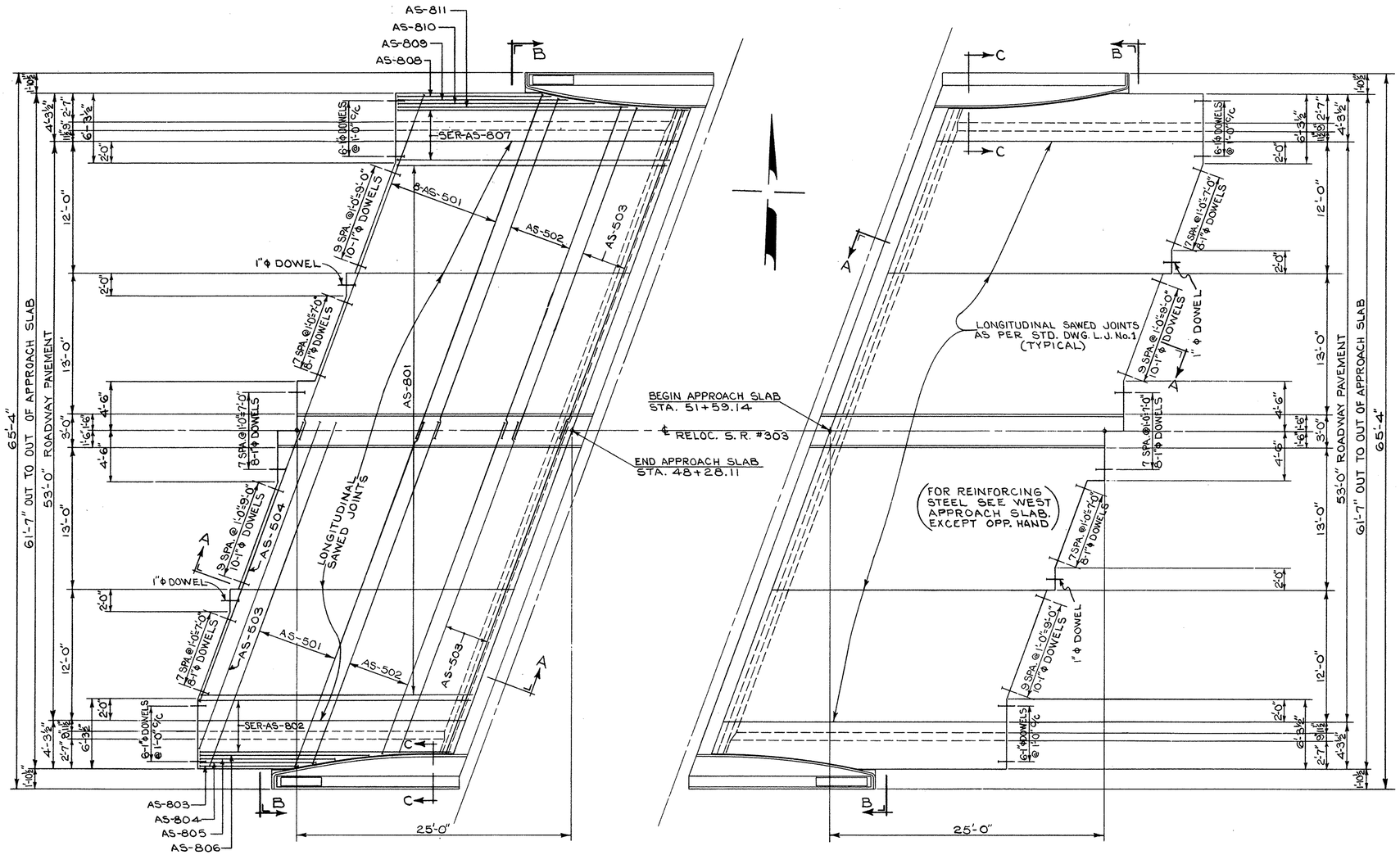
367
510

SUM-271-2.98

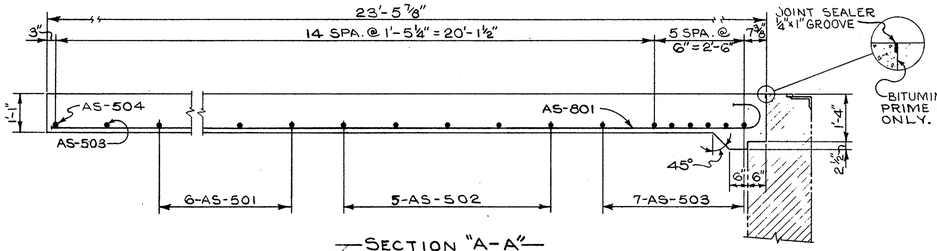
REINFORCING STEEL LIST

MARK	No. REQ'D.	LENGTH	SHP.	A	B	WEIGHT
AS-501	28	33'-5"	ST.			976
AS-502	20	33'-2"	ST.			692
AS-503	30	32'-0"	ST.			1,001
AS-504	2	27'-0"	ST.			56
AS-801	196	25'-7"	BNT.	24'-6"	1'-1"	13,388
SERIES -AS-802	2 SETS OF 11 = 22	23'-10"-25'-6" @ INCR. OF 2"	BNT.	22'-3" TO 24'-5"	1'-1"	1,449
AS-803	2	9'-0"	ST.			48
AS-804	2	10'-8"	ST.			57
AS-805	2	12'-3"	ST.			65
AS-806	2	15'-3"	ST			81
SERIES AS-807	2 SET OF 11 = 22	25'-8"-27'-4" @ INCR. OF 2"	BNT.	24'-7" TO 26'-3"	1'-1"	1,557
AS-808	2	14'-0"	ST.			75
AS-809	2	15'-5"	ST.			82
AS-810	2	18'-0"	ST.			96
AS-811	2	21'-0"	ST.			112
116 1" DIA. X 1'-6" DOWELS						465
TOTAL (2 APPROACHES) = 20,200 LBS.						

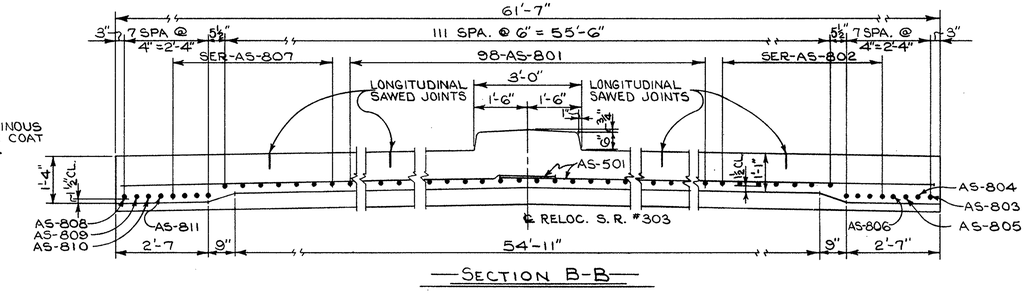




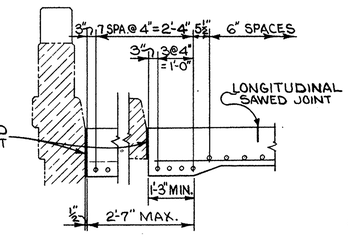
PLAN



SECTION "A-A"



SECTION B-B



SECTION "C-C"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

APPROACH SLAB DETAILS

BRIDGE NO. SUM-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316+40.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	BMR		H.G.H.	RDH	4-21-66	

STRUCTURAL GENERAL NOTES

FED. RD.	STATE	PROJECT	
2	OHIO		

368
510

SUM.-271-2.98

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 9/1/57, TOGETHER WITH CURRENT REVISIONS THEREOF.

DESIGN LOADING - SEE SITE PLANS

CONCRETE CLASS C	BASIC UNIT STRESS 1,333 p.s.i.
CONCRETE CLASS E	BASIC UNIT STRESS 1,133 p.s.i.
STRUCTURAL STEEL	ALL STRUCTURAL STEEL SHALL BE ASTM A 36, ASTM A 36-BASIC UNIT STRESS 20,000 p.s.i.
REINFORCING STEEL	ASTM A 15, A 16, A 160, DEFORMED, INTERMEDIATE OR HARD GRADE. BASIC UNIT STRESS 20,000 p.s.i. EXCEPT, SPIRAL REINFORCEMENT MAY BE PLAIN, STRUCTURAL GRADE WITH BASIC UNIT STRESS OF 18,000 p.s.i.

REFERENCE

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

BR-1-65	SHEET 1 REVISED	11/24/65
RB-1-55	REVISED	2/2/59
SD-1-65	SHEETS 1, 2, AND 3 DATED	11/8/65
AS-1-54	REVISED	8/10/65
808	SUPPLEMENTAL SPEC. DATED	1-13-67
811	SUPPLEMENTAL SPEC. DATED	1-1-67
825	SUPPLEMENTAL SPEC. DATED	1-1-67
828	SUPPLEMENTAL SPEC. DATED	1-1-67

SLAB DEPTH OVER BEAMS OR GIRDERS

THE DIMENSION SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP FLANGE OF THE BEAMS OR TO THE TOP OF THE GIRDER WEBS IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED UPON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER OR BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES, AS PER ITEM 511.19 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

SLAB THICKNESS

SLAB THICKNESS SHOWN INCLUDES 1" FOR MONOLITHIC WEARING SURFACE.

PILES

PILES SHALL BE 12" CAST-IN-PLACE CONCRETE AND SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY AS FOLLOWS:

BRIDGE No.	CAPACITY IN TONS PER PILE ABUTMENTS	PIERS
SUM 271-0354	35	40
SUM 271-0358 R&L	35	40
SUM 271-0378	35	40

FOUNDATION BEARING PRESSURE

FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF "A" TONS PER SQ.FT.

BRIDGE No.	"A" ABUT.	PIERS
SUM 271-0602		6
SUM 271-0656	2.5	2.5
SUM 271-0658	2.0	2.5

EXCAVATION QUANTITY- SUM 271-0658 L & R

EXCAVATION QUANTITY FOR THE ABUTMENTS, IN ADDITION TO THAT OUTLINED IN SEC 503.10, INCLUDES THE REMOVAL OF MATERIAL BOUNDED BY THE PROPOSED BENCH, BY THE FRONT VERTICAL PLANE DESCRIBED IN SEC. 503.10 AND BY THE FINISHED SLOPE OF THE CUT.

EXCAVATION QUANTITY - SUM 271-0358 L&R, SUM 271-0354, SUM 271-0602

EXCAVATION QUANTITY INCLUDES THE REMOVAL OF FILL MATERIAL REQUIRED FOR CONSTRUCTION OF THE ABUTMENTS.

EXCAVATION QUANTITY

EXCAVATION QUANTITY FOR THE PIERS INCLUDES THE REMOVAL OF MATERIAL REQUIRED FOR CONSTRUCTION OF THE PIERS.

DECK SLAB HAUNCH

A TYPICAL HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.

MACHINE FINISH SUM-271-0358 L.&R., SUM-271-0378 L. & R.

AT THE CONTRACTORS OPTION THE CONCRETE DECK MAY BE FINISHED BY THE USE OF A FINISHING MACHINE.

MACHINE FINISH SUM-271-0354, SUM-271-0602, SUM-271-0656, SUM-271-0658 L.&R.

THE CONCRETE DECK SHALL BE FINISHED BY THE USE OF A FINISHING MACHINE.

ERECTION PROCEDURE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL 3 PRINTS SHOWING HIS PROPOSED ERECTION PROCEDURE FOR ALL GIRDER BRIDGES.

POROUS BACKFILL

POROUS BACKFILL 1'-6" THICK, FULL LENGTH OF ABUTMENTS, SHALL EXTEND UP TO THE UNDERSIDE OF THE APPROACH SLAB, OR TO THE FINISHED GROUND SURFACE UNLESS OTHERWISE SHOWN. EXCAVATION THEREFORE, IN EXCESS OF THAT REQUIRED FOR CONSTRUCTION OF THE ABUTMENT, SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICE PER CU. YD. PAID FOR POROUS BACKFILL.

PROCEDURE SUM 271-0358 L&R AND SUM 271-0602

THE EMBANKMENT SHALL BE PLACED AND COMPACTED UP TO THE FINISHED SPILL-THRU SLOPE AND TO THE LEVEL OF THE SUBGRADE FOR A DISTANCE OF 200 FEET BACK OF THE ABUTMENTS, AFTER WHICH EXCAVATION SHALL BE MADE FOR THE ABUTMENTS AND FOR PIERS THAT ARE SET IN THE FILLED AREA, AND PILES DRIVEN.

EMBANKMENT PROCEDURE SUM 271-0354

THE EMBANKMENT SHALL BE PLACED AND COMPACTED UP TO THE FINISHED SPILL-THRU SLOPE AND TO THE LEVEL OF THE SUBGRADE AFTER WHICH EXCAVATION SHALL BE MADE FOR THE ABUTMENTS (AND PILES DRIVEN).

FOUNDATION MATERIAL - SUM 271-0485

FOUNDATION MATERIAL OF APPROXIMATELY UNIFORM BEARING CAPACITY IS CONTEMPLATED. SPOTS OF SOFT EARTH SHALL BE REMOVED AND BE REPLACED WITH THOROUGHLY COMPACTED GRANULAR MATERIAL.

EMBANKMENT - SUM 271-0485

EMBANKMENT SHALL BE PLACED SYMMETRICALLY ON BOTH SIDES OF THE CULVERT AFTER THE TOP SLAB IS IN PLACE. EMBANKMENT OVER THE BARREL SHALL BE PLACED IN HORIZONTAL LAYERS SIMULTANEOUSLY WITH THAT ON EACH SIDE OF CULVERT.

FOOTINGS - SUM-271-0602

THE PIER FOOTINGS SHALL EXTEND A MINIMUM OF 3' INTO UNDISTURBED SHALE OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

PILES - SUM-271-0602

PILES SHALL BE DRIVEN TO FIRM CONTACT WITH SHALE. IF THE LENGTH OF PENETRATION IS APPROXIMATELY EQUAL TO THE DEPTH TO ROCK ACCORDING TO THE BRIDGE FOUNDATION INVESTIGATION REPORT, THE FIRM CONTACT SHALL BE CONSIDERED AS ATTAINED WHEN THE CAPACITY ACCORDING TO THE FORMULA IN ITEM 507.05 IS NOT LESS THAN THE FOLLOWING VALUE FOR A PILE HAMMER OF THE INDICATED ENERGY RATING:

FOR THE ABUTMENT PILES

55 TONS PER PILE USING A 7,000 FT. LB. HAMMER.
50 TONS PER PILE USING AN 11,000 FT. LB. HAMMER
45 TONS PER PILE USING A 15,000 FT. LB. OR GREATER HAMMER.

IF THE ENERGY RATING OF THE HAMMER IS BETWEEN THE RATINGS AS SHOWN ABOVE, THE REQUIRED FORMULA CAPACITY SHALL BE DETERMINED BY INTERPOLATION. THE DESIGN LOAD IS 35 TONS PER PILE FOR THE ABUTMENT PILES.

MAINTENANCE OF TRAFFIC

FOR DETAILS OF MAINTENANCE OF TRAFFIC AT THE TURNPIKE, SEE SHEET 16 A.

Rev. 2-8-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

STRUCTURAL GENERAL NOTES

PROJECT SUM. 271-2.98

SUMMIT COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	BMR			PHH	4-24-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

369
510

SUM-271-2.98

NOSE: STA. 187+35.00 ℄ RAMP "D"
91' LT. ℄ STA 915+91.98

STA 911+71.66 ℄ EXIST. I-77 =
STA 187+47.87 BL RAMP "B"

RAMP "D"

RAMP "B" EXISTING

℄ SOUTHBOUND LANES

℄ NORTHBOUND LANES

5°-54'-22" SKEW

PT. OF MIN. VERT. CLEARANCE:

RAMP "C"
HORIZ. CLEARANCE: 10.00' REQ'D; 10.12' ACTUAL

84°-05'-38"

NOSE: 23' LT. ℄ S. STA. 187+22.69 82' RT. ℄ STA. 912+38.51 ℄ RAMP "C"

END PAV. GUTT. STA. 187+00

HORIZ. CLEARANCE:
10.00' REQ'D; 10.10' ACTUAL

2.083'/100' TAPER

END PAV. GUTT. STA. 911+85

28½" PARAPETS

FUTURE LIGHT POLE
STA. 187+45.00

℄ HINGES

SLOPE PROTECTION

SLOPE PROTECTION

℄ RAMP "B"

94'-9"

113'-6"

39'-6"

BEGIN PAVED GUTTER
STA. 186+81.11

BEGIN PAVED GUTTER STA 911+10

BEGIN APPROACH SLAB
STA. 189+03.13

END APPROACH SLAB
STA. 185+81.11

PAVED GUTTER

5' 8" VARIES

12'-0" 12'-0"

85'-0" MEDIAN

43' 42'

24'-0"

VARIES

℄ I-77 (EXIST)

RAMP "D" EXISTING

EL. 1090.49
EL. 1090.50

EL. 1090.96
EL. 1090.98

EL. 1091.43
EL. 1091.45

EL. 1091.88
EL. 1091.89

EL. 1092.33
EL. 1092.33

EL. 1092.81
EL. 1092.80

⊗ INDICATE EXISTING GRADE AT ℄ SOUTHBOUND LANES.

⊗ INDICATE EXISTING GRADE AT ℄ NORTHBOUND LANES.

EXISTING PROFILE

VERTICAL CLEARANCE:
DESIGN = 16.50' : ACTUAL = 16.42'

AVERAGE ESTIMATED PAY LENGTH FOR PILES
(12" ϕ CAST-IN-PLACE REINF. CONC. PILES.)
ABUTMENT "1" — 40'
ABUTMENT "2" — 25'
PIERS "1, 2 & 3" — 20'

EL. 1126.15 · STA. 185+81.11 · EL. 1124.42 · EL. 1125.31 · P.G. EL. 1123.47 · EL. 1122.46 · EL. 1120.27 · EL. 1117.65 · EL. 1115.20 · PVT. STA. 188+25.00 · EL. 1113.79 · EL. 1112.35 · EL. 1109.47 · STA. 189+03.13 · EL. 1106.59

-2.08% · 5.76% · 400' V.C.

BRIDGE LIMITS = 322.02

PROPOSED PROFILE GRADE

℄ HINGES

BRIDGE RAILING TYPE 1

℄ RAMP "B" EXISTING PROFILE

EL. 1111.55

EL. 1117.58

2:1 INSLOPE

EL. 1102.10

EL. 1096.07

EL. 1085.00

EL. 1085.00

EL. 1084.50

1100

1080

186+00 187+00 188+00 189+00

CURVE DATA

℄ RAMP "C"

P.C. STA. 182+69.62 ℄ RAMP "C"
78' RT ℄ STA. 907+83.78
D_C = 1°-30'-00
R = 3819.72'

PROPOSED STRUCTURE

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH HINGE DESIGN, WITH REINFORCED CONC. DECK AND SUBSTRUCTURE.
SKEW: 5°-54'-22" LF.
SPANS: 69'-9" - 94'-9" - 113'-6" - 39'-6" ℄ BRGS.
ROADWAY: 28'-0" ℄ PARAPETS - 1'-0" CURBS
LOAD FREQUENCY: CF 2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLAB: 25' LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE
SLOPE PROTECTION: CRUSHED AGGREGATE

TRAFFIC COUNT: 5850 - 1975 ADT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

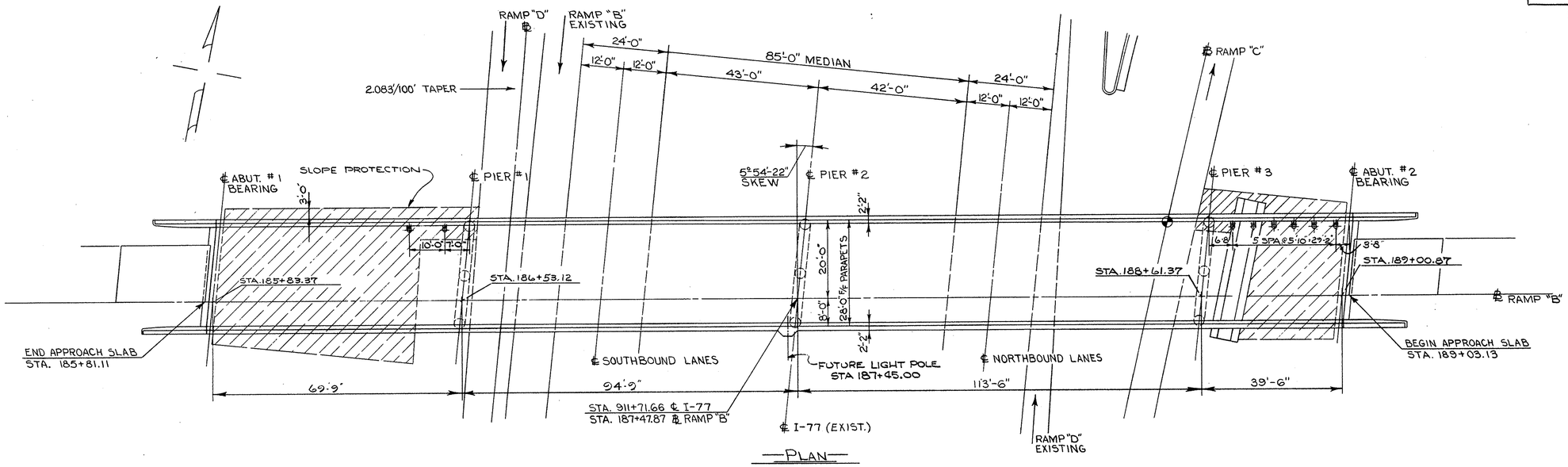
BRIDGE NO. SUM-271-0354
RAMP "B" (I 271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 TO STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	B.M.R. VENESSY		CW.	RBH	4-21-66	

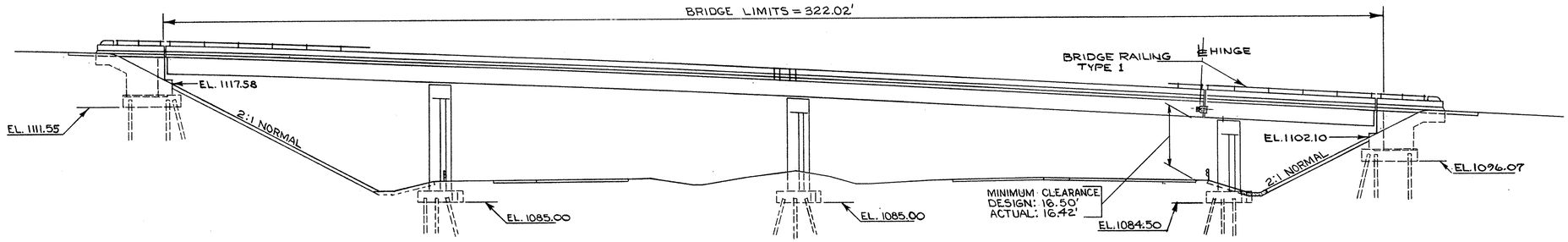
FED. RD.	STATE	PROJECT	
2	OHIO		

370
510

SUM.-271-2.98



—PLAN—



—ELEVATION—

—ESTIMATED QUANTITIES—

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
503	427	CU. YDS.	UNCLASSIFIED EXCAVATION		212	215	
505	LUMP	SUM	FIRST TEST PILE				LUMP
507	1,850	LIN. FT.	12"ϕ CAST-IN-PLACE REINF. CONC. PILES		650'	1200'	
509	130,363	LBS.	REINFORCING STEEL	88,649	10,971	30,743	
511	325	CU. YDS.	CLASS "C" CONC. SUPERSTRUCTURE	325			
511	88	CU. YDS.	CLASS "E" CONC. ABUT. ABOVE FOOTINGS		88		
511	76	CU. YDS.	CLASS "C" CONC. PIERS ABOVE FOOTINGS			76	
511	140	CU. YDS.	CLASS "E" CONC. PIERS & ABUT. FOOTINGS		59	81	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
	377,267			377,267			
513	373,755	LBS.	STRUCTURAL STEEL	373,755			
514	373,755	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	373,755			
516	30	LIN. FT.	PREFORMED ELASTIC JOINT SEALER AND LUBRICANT ADHESIVE (705.11)	30			
517	703.39	LIN. FT.	BRIDGE RAILING TYPE 1	637.67	65.72		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
518	26	CU. YDS.	POROUS BACKFILL		26		
518	8	EACH	SCUPPERS (INCLUDING SUPPORTS)	8			
518	44	LIN. FT.	6" PERFORATED HELICAL C.M.P. 707.06, INCLUDING SPECIALS		44		
518	48	LIN. FT.	6" HELICAL C.M.P. 707.06 NON-PERFORATED		48		
601	415	SQ. YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		415		
625			LIGHTING QUANTITIES - SEE SHEET 346				
808	325	Units	WATER RED. SET RETARDING ADMIXTURE	325			
825	1275	SQ. YDS.	CONCRETE SURFACE TREATMENT				1275
828	53	LIN. FT.	JOINT SEALER (end dam)	53			

SEE SHEET NO. 368 FOR GENERAL NOTES

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

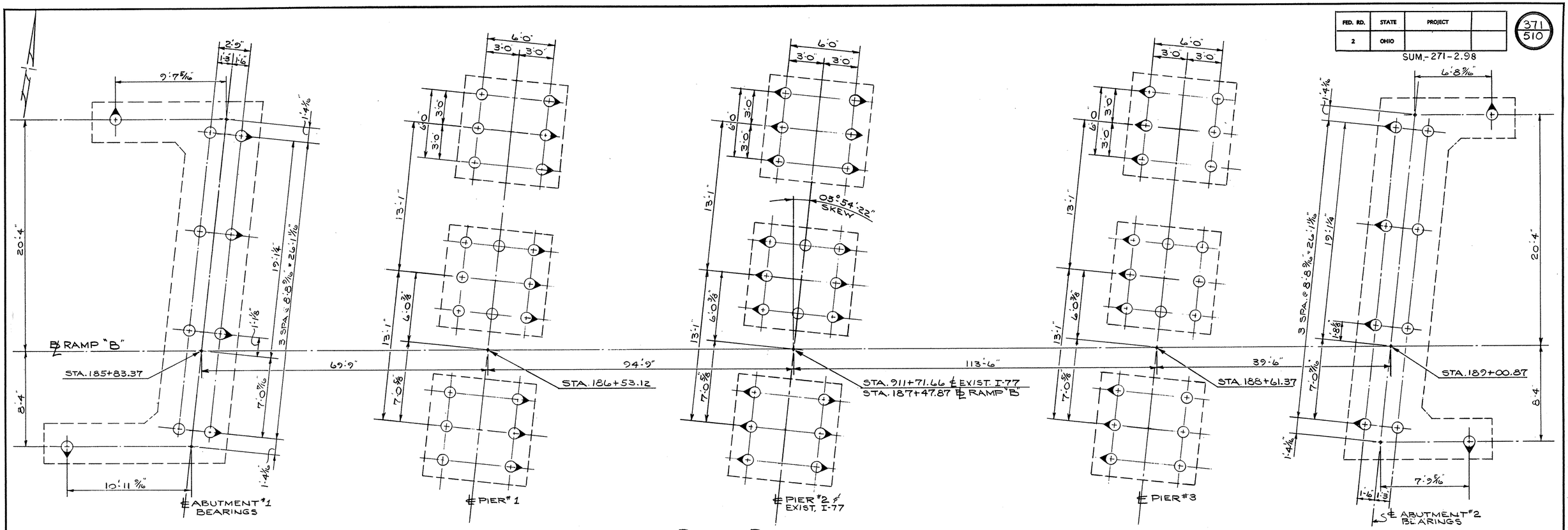
BRIDGE NO. SUM-271-0354
RAMP "B" (I-271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	BMR		OCW	RBH	4-21-66	2-28-68

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

371
510



— PILING PLAN —

* INDICATES DIRECTION OF 1:4 BATTER OF PILES.
ALL PILES TO BE 12" ϕ CAST-IN-PLACE REINF. CONCRETE

— PILE CUT-OFF ELEVATIONS —

ABUTMENT #1 = EL. 1113.55
PIER #1 - - - - = EL. 1086.00
PIER #2 - - - - = EL. 1086.00
PIER #3 - - - - = EL. 1085.50
ABUTMENT #2 = EL. 1096.07

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
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PILING PLAN

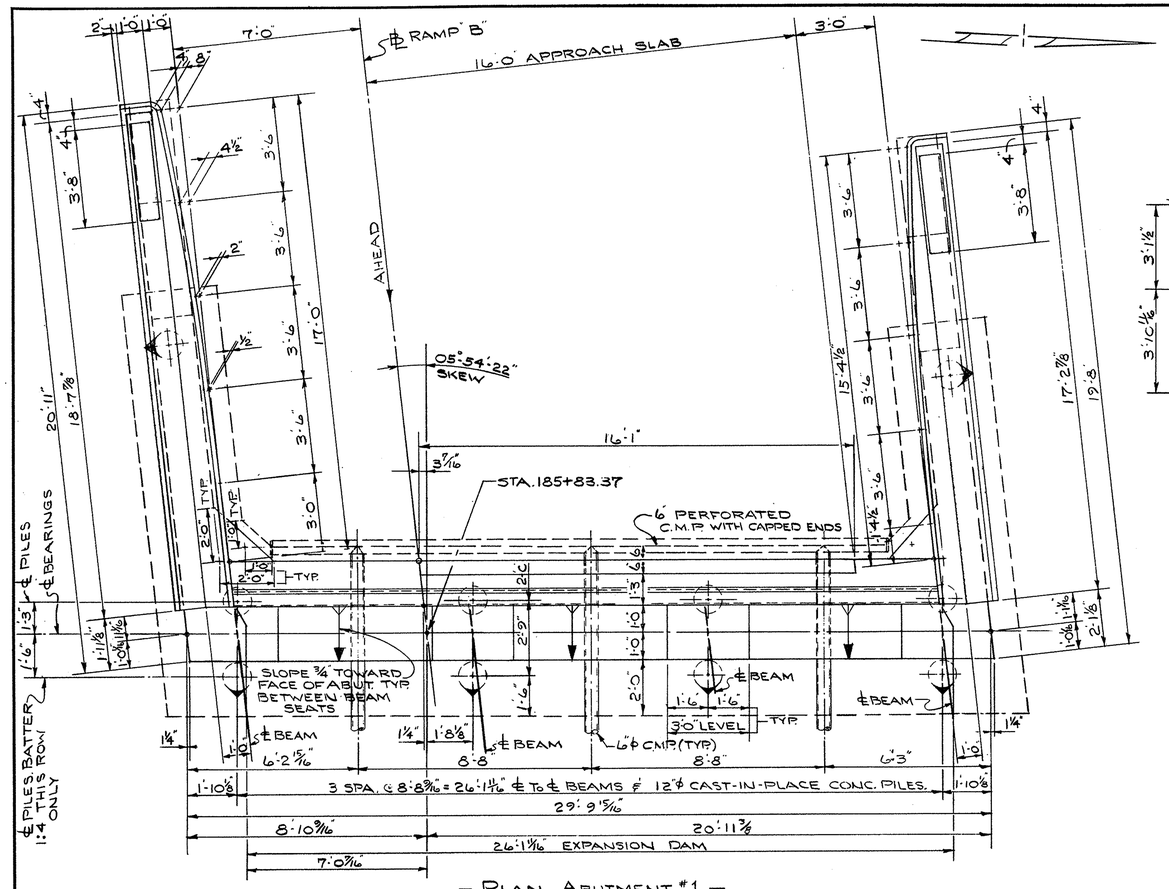
BRIDGE NO. SUM-271-0354
RAMP "B" (I 271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JNP		aw	RHH	4-21-66	

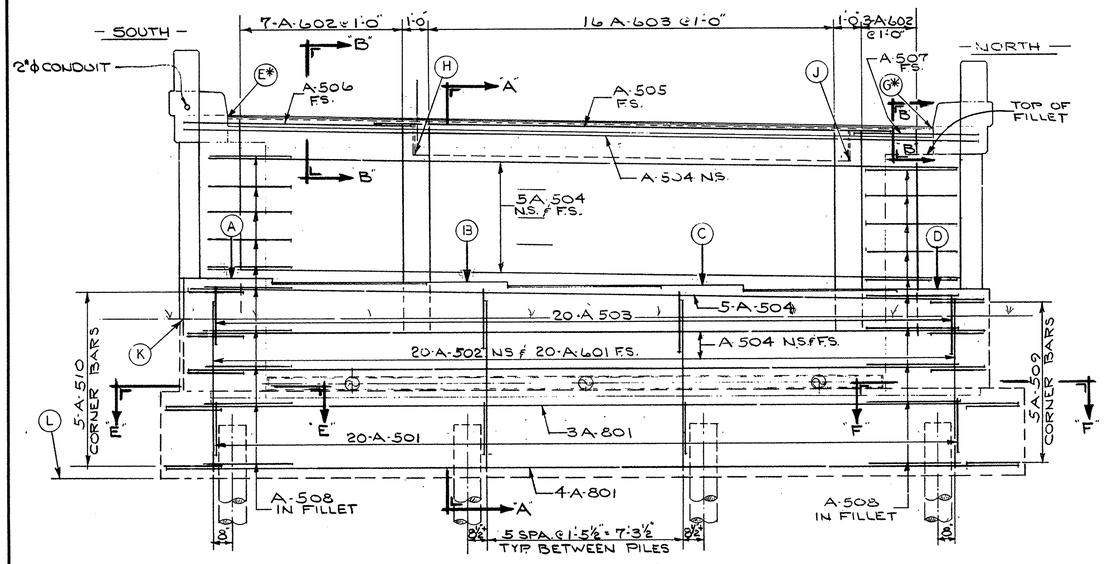
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FED. RD.	STATE	PROJECT	
2	OHIO		

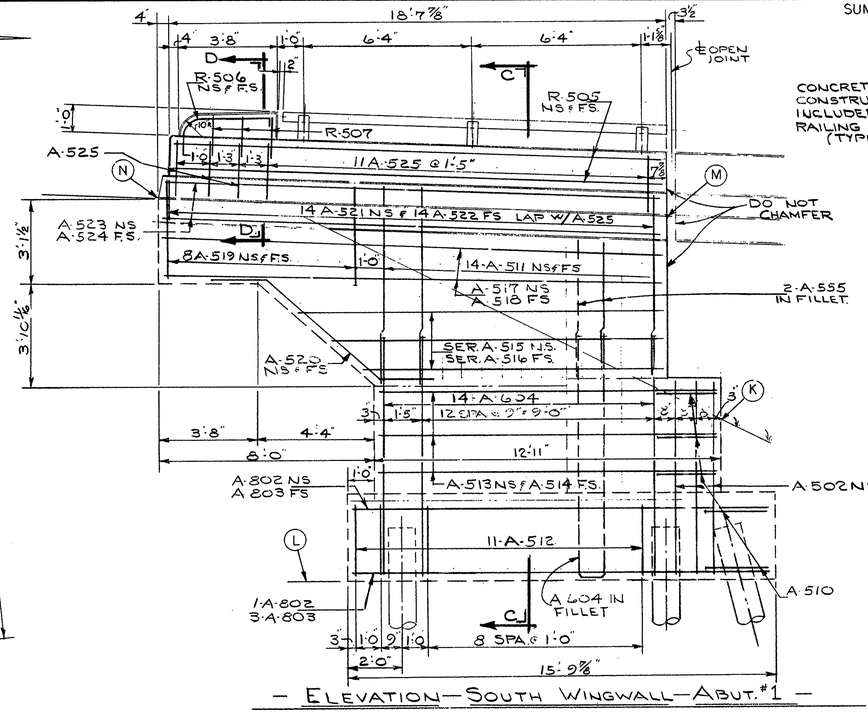
372
510



— PLAN ABUTMENT #1 —

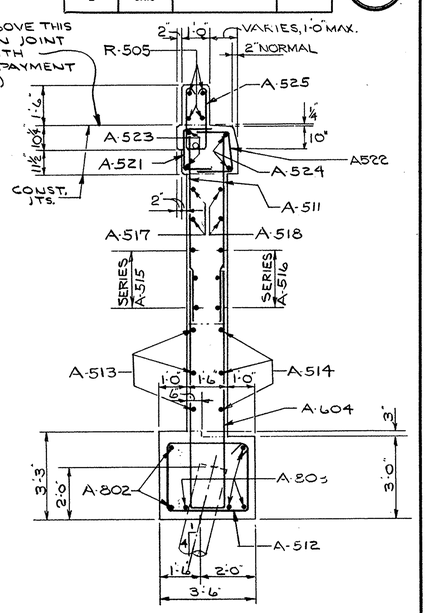


— ELEVATION ABUTMENT #1 —

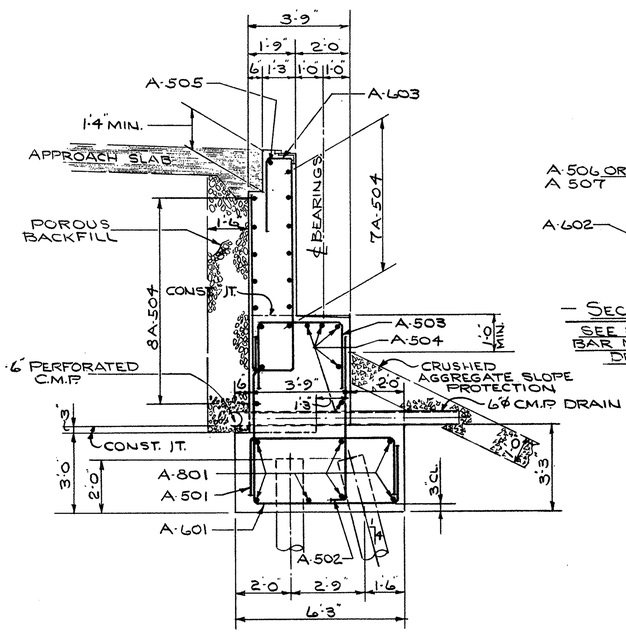


— ELEVATION — SOUTH WINGWALL — ABUT. #1 —

CONCRETE ABOVE THIS CONSTRUCTION JOINT INCLUDED WITH RAILING FOR PAYMENT (TYPICAL.)

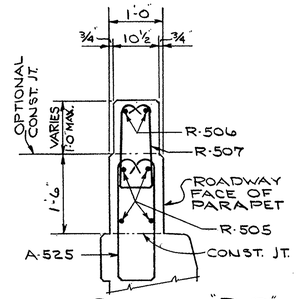


— SECTION C-C —



— SECTION "A-A" —

— SECTION "B-B" —
SEE SECTION A-A FOR BAR NOS. DIMENSIONS & DETAILS NOT SHOWN



— SECTION "D-D" —

— ELEVATIONS —

	ABUT. #1
A	1119.08
B	1118.92
C	1118.75
D	1118.58
E*	1125.09
F	——
G*	1124.59
H	1123.48
J	1123.48
K	1117.58
L	1111.55
M	1125.17
N	1125.85

* = INDICATES ELEVATIONS GIVEN TO HEEL OF L

SEE SHEET #374 FOR NORTH WINGWALL DETAILS AND SECTIONS "E-E" & "F-F"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT #1 DETAILS

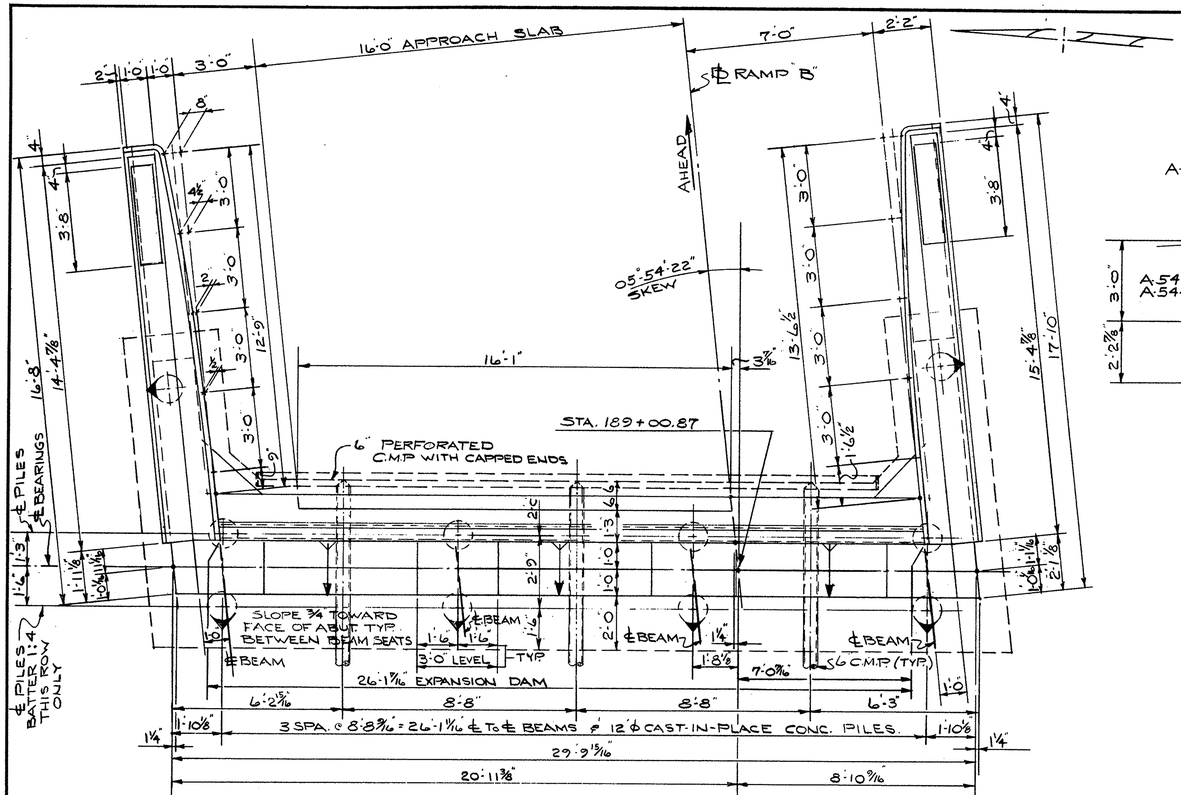
BRIDGE NO. SUM-271-0354
RAMP "B" (I-271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	WP			BDH	4-21-66	

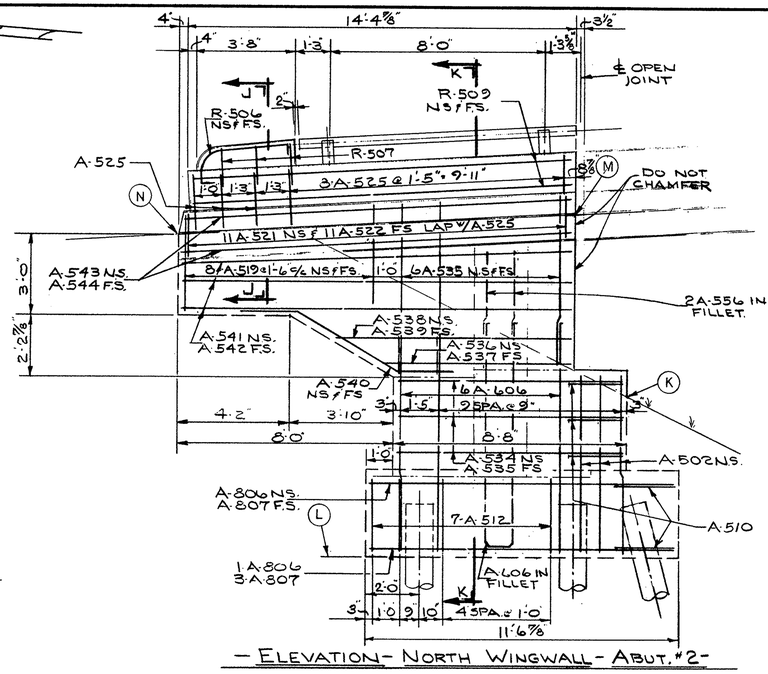
FED. RD.	STATE	PROJECT	
2	OHIO		

373
510

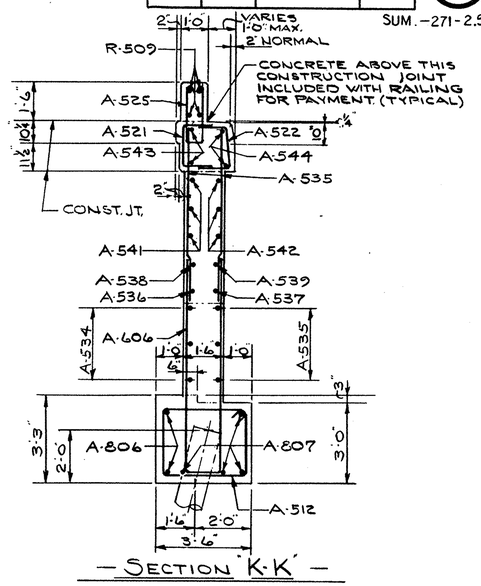
SUM.-271-2.98



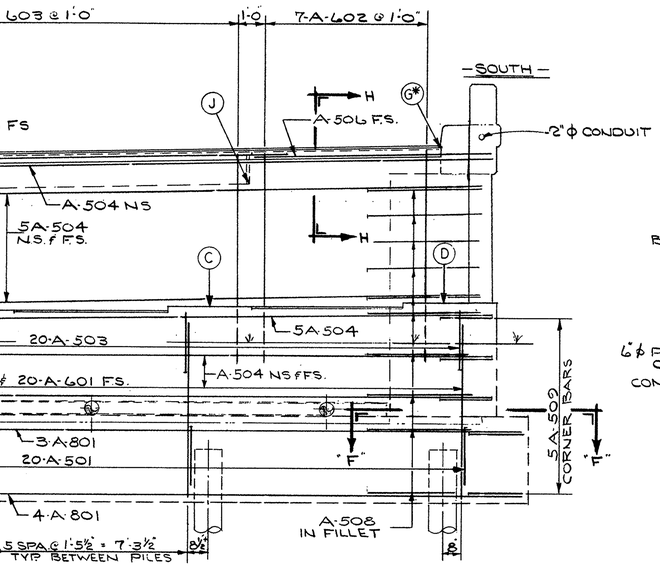
— PLAN — ABUTMENT # 2 —



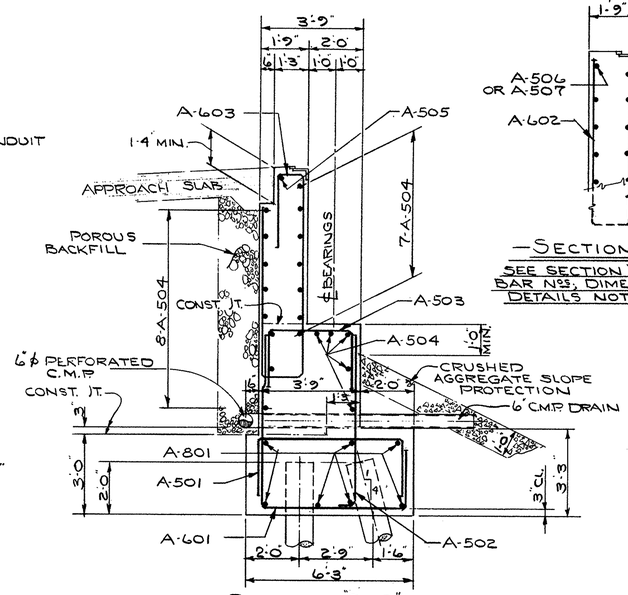
— ELEVATION — NORTH WINGWALL — ABUT. # 2 —



— SECTION "K-K" —



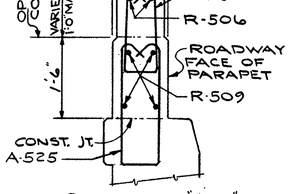
— ELEVATION — ABUTMENT # 2 —



— SECTION "G-G" —

— SECTION "H-H" —

SEE SECTION "G-G" FOR BAR NOS., DIMENSIONS & DETAILS NOT SHOWN



— SECTION "J-J" —

—ELEVATIONS—

	ABUT # 2
A	1103.10
B	1103.29
C	1103.48
D	1103.66
E*	1108.85
F	———
G*	1109.41
H	1107.63
J	1107.63
K	1102.10
L	1096.07
M	1108.93
N	1108.08

*- INDICATES ELEVATIONS GIVEN TO HEEL OF ℄

SEE SHEET # 374 FOR SOUTH WINGWALL DETAILS AND SECTIONS "E-E" & "F-F"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT # 2 DETAILS

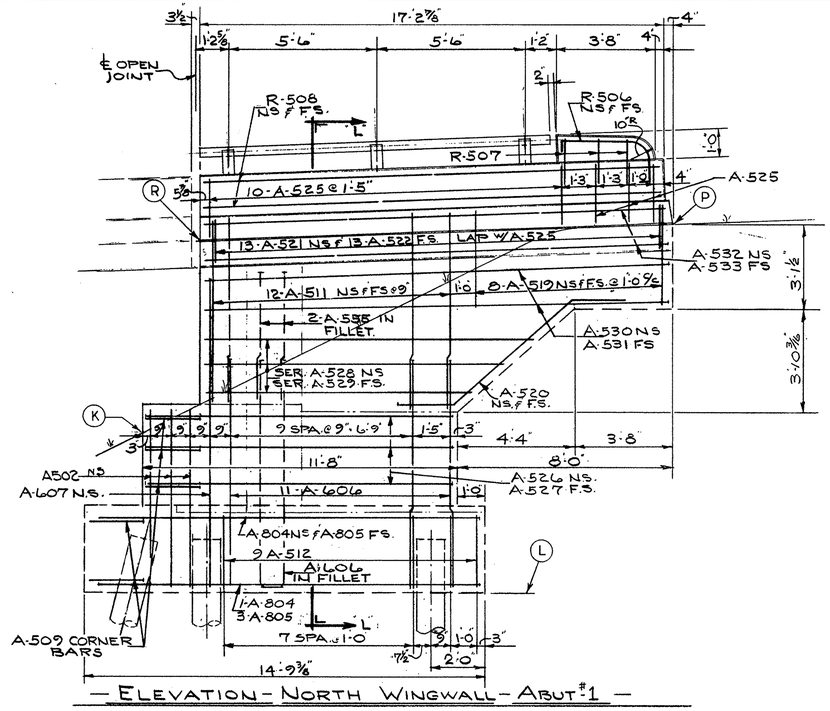
BRIDGE NO. SUM-271-0354
RAMP "B" (I-271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JNP		CWH	RDH	4-27-66	

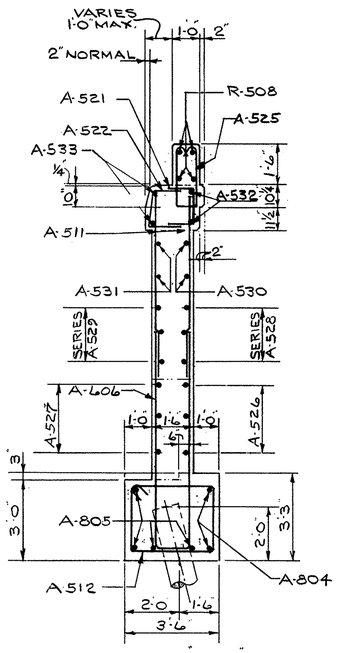
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

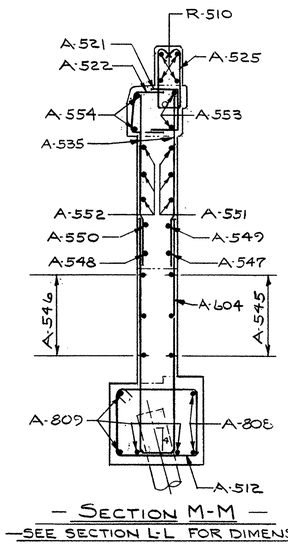
374
510



— ELEVATION - NORTH WINGWALL - ABUT #1 —

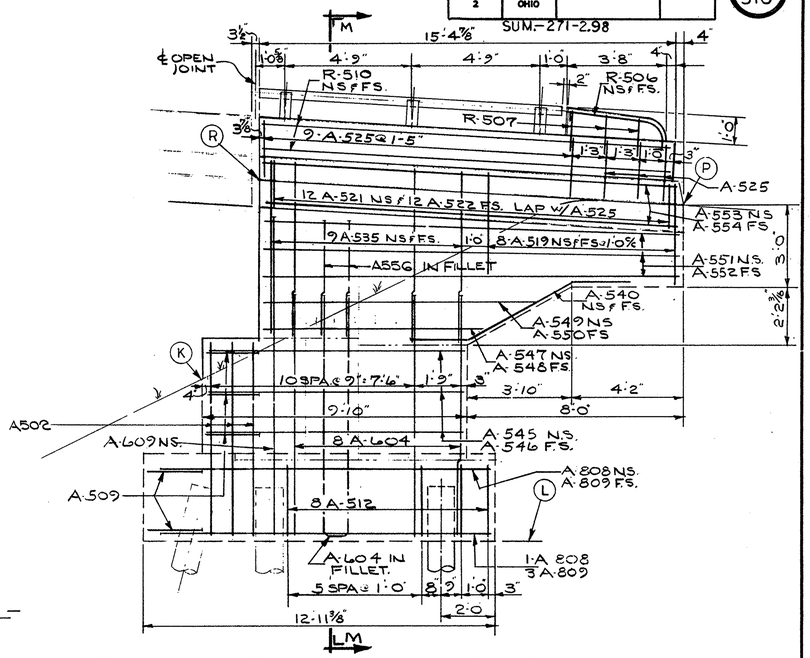


— SECTION - L-L" —

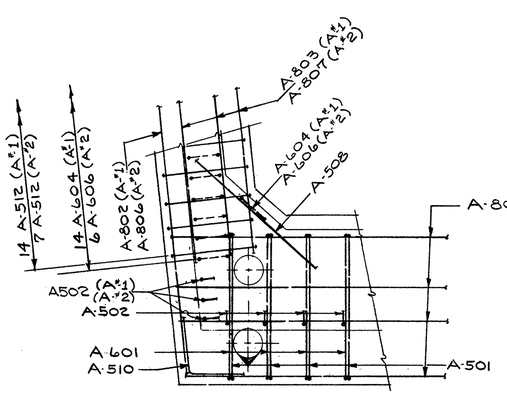


— SECTION M-M —

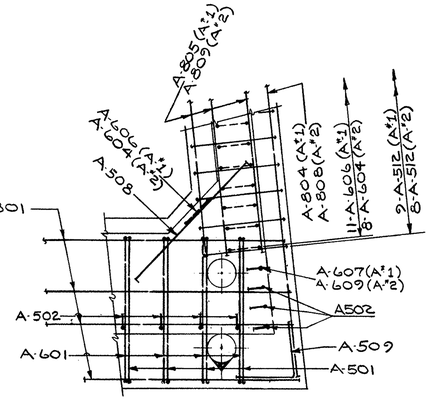
—SEE SECTION L-L FOR DIMENSION —



— ELEVATION - SOUTH WINGWALL - ABUT #2 —



— SECTION "E-E" —



— SECTION "F-F" —

— ELEVATIONS —

	ABUT. #1	ABUT. #2
K	1117.58	1102.10
L	1111.55	1096.07
P	1125.30	1108.59
R	1124.67	1109.49

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT #1 & #2 DETAILS

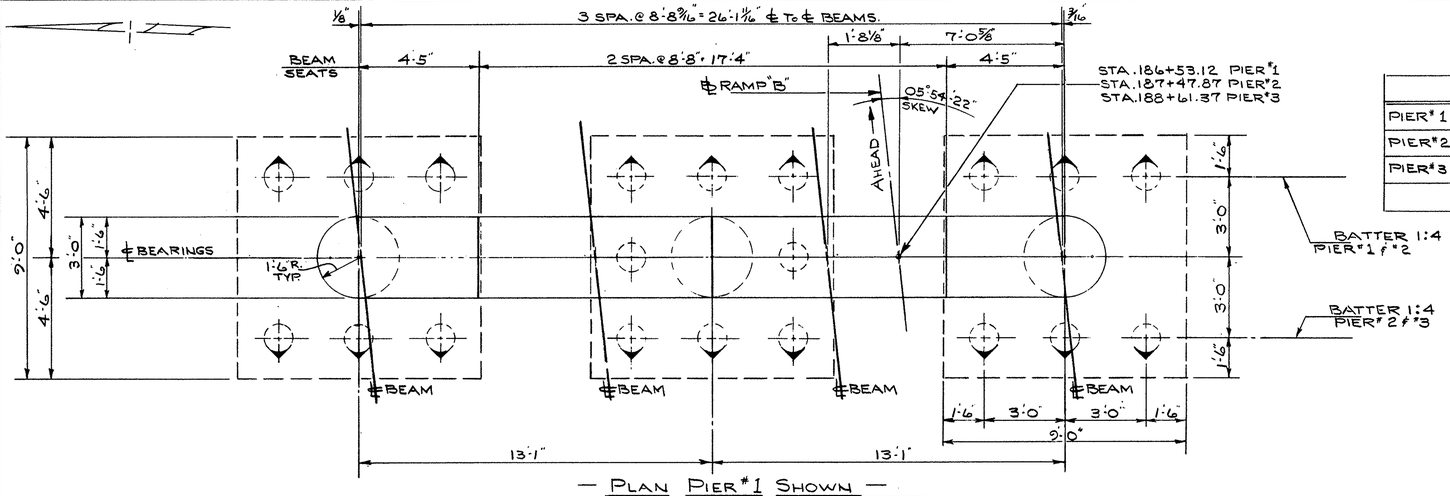
BRIDGE NO. SUM.-271-0354
RAMP 'B' (I-271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JNP			RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

375
510

SUM.-271-2.98

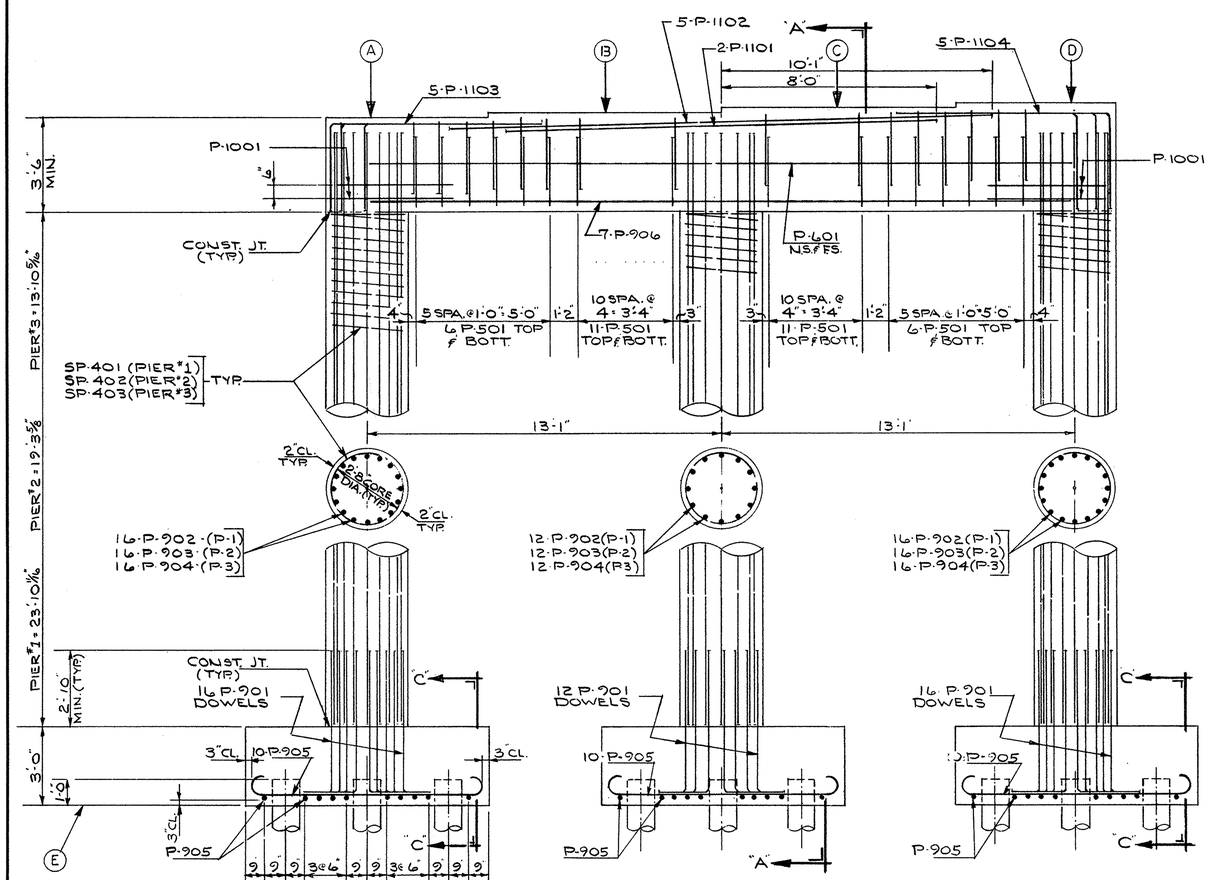


— PLAN PIER #1 SHOWN —

— PIER #2 & #3 SIMILAR EXCEPT AS SHOWN —

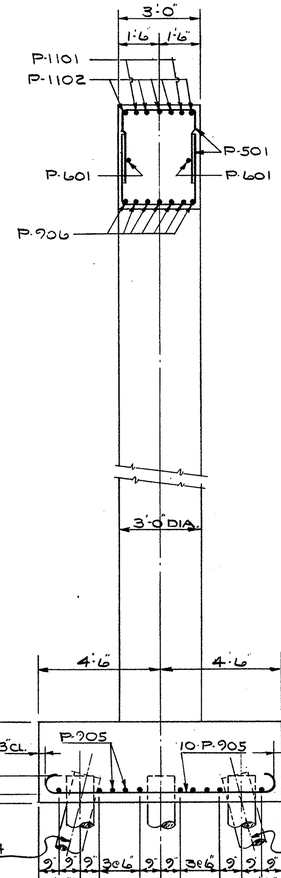
— ELEVATIONS —

	A	B	C	D	E	
PIER #1	1115.39	1115.56	1115.73	1115.91	1085.00	
PIER #2	1110.80	1110.98	1111.16	1111.34	1085.00	
PIER #3	1104.86	1105.04	1105.22	1105.42	1084.50	

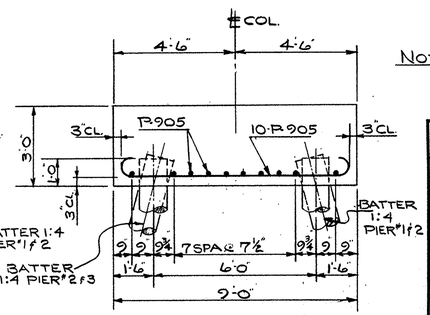


— ELEVATION — PIER # 1 SHOWN —

— PIER #2 & #3 SIMILAR EXCEPT AS SHOWN OR NOTED —



— SECTION "A-A" —



— SECTION "C-C" —

NOTE: ALL PILES TO BE 12" ϕ CAST-IN-PLACE REINFORCED CONCRETE.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

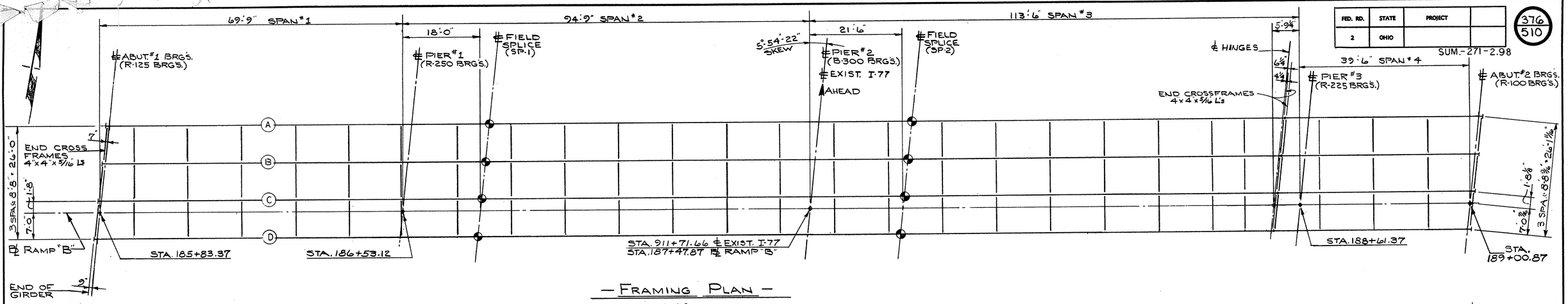
BRIDGE NO. SUM-271-0354
RAMP "B" (I-271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	NF			EDH	4-21-66	

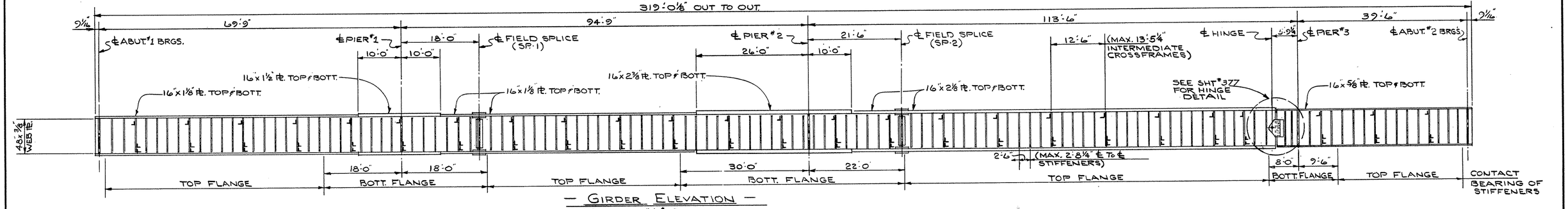
FED. RD.	STATE	PROJECT	
2	OHIO		

376
510

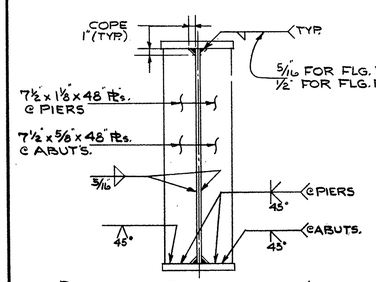
SUM.-271-2.98



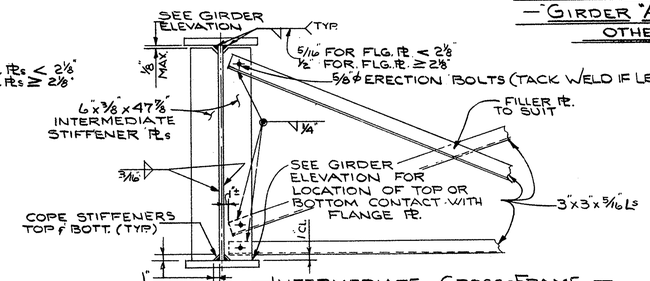
— FRAMING PLAN —



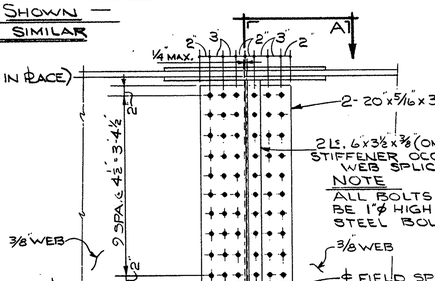
— GIRDER ELEVATION —
— GIRDER "A" SHOWN —
OTHERS SIMILAR



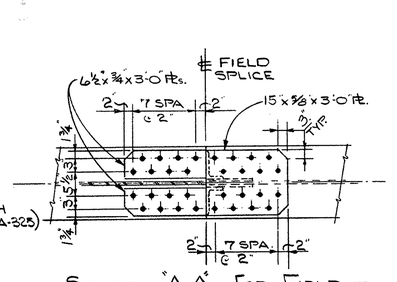
BEARING STIFFENERS AT ABUTMENTS & PIERS



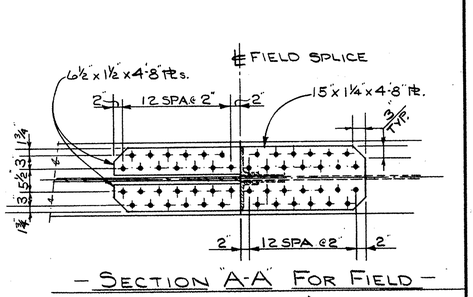
— INTERMEDIATE CROSS-FRAME —
— AND STIFFENER DETAIL —



— ELEVATION FIELD SPLICE "SP-1" & "SP-2" —

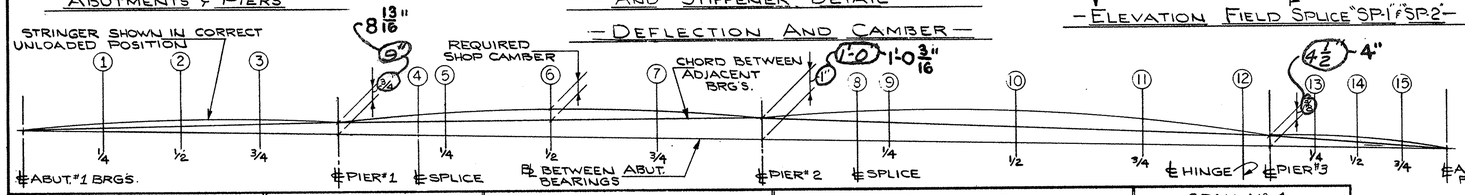


— SECTION "A-A" FOR FIELD —
— SPLICE (SP-1) —



— SECTION "A-A" FOR FIELD —
— SPLICE (SP-2) —

— DEFLECTION AND CAMBER —



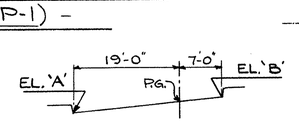
SPAN	SPAN Nº 1						SPAN Nº 2								SPAN Nº 3										SPAN Nº 4					
LOCATION	① ¼ POINT		② ½ POINT		③ ¾ POINT		④ SPLICE POINT		⑤ ¼ POINT		⑥ ½ POINT		⑦ ¾ POINT		⑧ SPLICE POINT		⑨ ¼ POINT		⑩ ½ POINT		⑪ ¾ POINT		⑫ HINGE POINT		⑬ ¼ POINT		⑭ ½ POINT		⑮ ¾ POINT	
BEAM	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C	A℄D	B℄C
DEFLECTION DUE TO WEIGHT OF STEEL	.072"	.072"	.086"	.086"	.044"	.044"	.025"	.025"	.037"	.037"	.047"	.047"	-.016"	-.016"	.136"	.136"	.176"	.176"	.312"	.312"	.248"	.248"	.012"	.012"	-.001"	-.001"	.005"	.005"	.006"	.006"
DEFLECTION DUE TO REMAINING DEAD LOAD	.240"	.265"	.288"	.318"	.146"	.161"	.084"	.093"	.124"	.137"	.157"	.174"	-.053"	-.059"	.452"	.496"	.590"	.650"	1.04"	1.150"	.827	.910"	.032"	.035"	-.004"	-.004"	.016"	.018"	.020"	.022"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	.510"	.510"	.675"	.675"	.510"	.510"	.767"	.767"	.925"	.925"	1.230"	1.230"	.925"	.925"	.144	.144	.120"	.120"	.020"	.020"	0	0	0	0	0	0	0	0	0	0
REQUIRED SHOP CAMBER	1 13/16"	7/8"	1 11/16"	1 11/16"	¾"	¾"	7/8"	7/8"	1 1/16"	1 1/8"	1 7/16"	1 7/16"	7/8"	7/8"	¾"	¾"	7/8"	15/16"	1⅜"	1½"	1 1/16"	1⅛"	1/16"	1/16"	0	0	0	0	0	0

— ELEVATION TABLE —

STATION	EL. "A"	PROFILE GRADE	EL. "B"
186+00	1124.15	1124.42	1124.56
+25	1123.20	1123.47	1123.61
+50	1122.17	1122.46	1122.58
+75	1121.11	1121.40	1121.52
187+00	1119.98	1120.27	1120.39
+25	1118.79	1119.09	1119.20
+50	1117.55	1117.85	1117.96
+75	1116.31	1116.55	1116.72
188+00	1115.01	1115.20	1115.42
+25	1113.58	1113.79	1113.99
+50	1112.05	1112.35	1112.46
+75	1110.63	1110.91	1111.04
189+00	1109.19	1109.47	1109.60

ELEVATIONS 'A' & 'B' ARE ELEVATIONS BEFORE CONCRETE IS PLACED.

PROFILE GRADE IS FINISHED PAVEMENT ELEV.



SEE SHEET # 377 FOR SHOP WELDS FOR FLANGE & WEB PLATE.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
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FRAMING PLAN

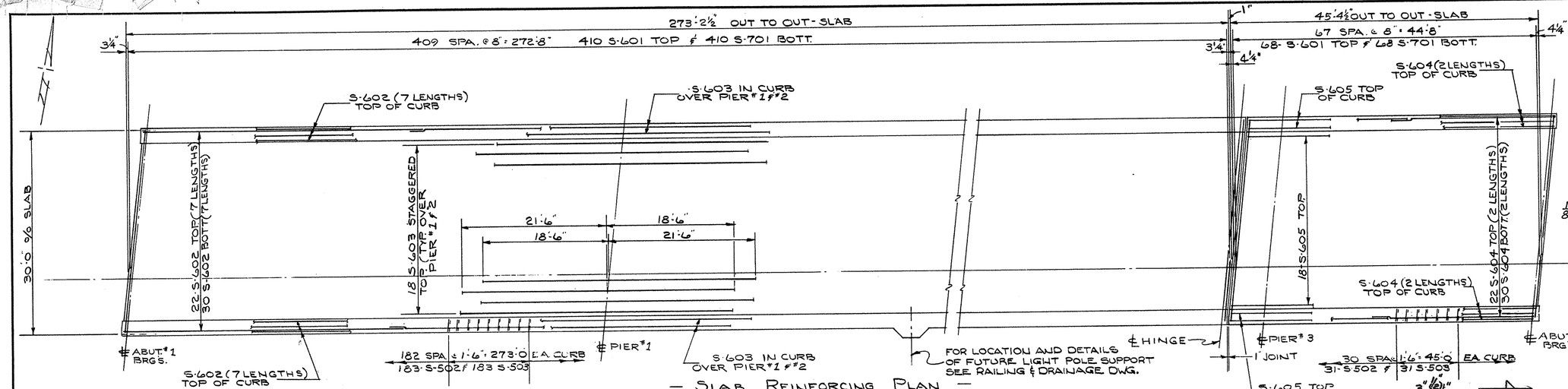
BRIDGE NO. SUM-271-0354
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SUMMIT COUNTY
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DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	MP		aw	EBH	4-21-66	12-29-67

8-16-73 Revised As-Built

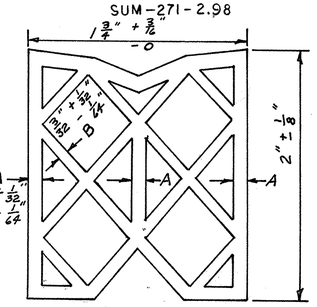
FED. RD.	STATE	PROJECT	
2	OHIO		

377
510

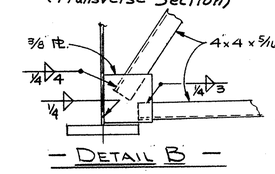


— SLAB REINFORCING PLAN —

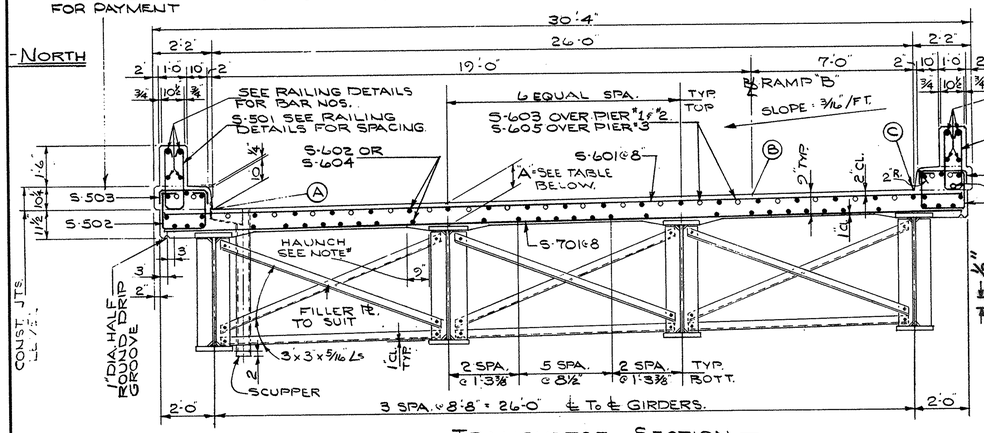
SUM-271-2.98



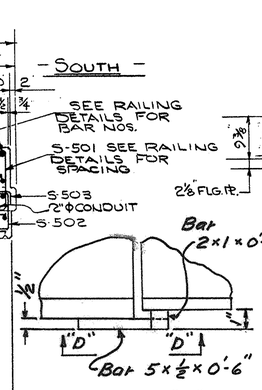
PREFORMED ELASTIC JOINT SEALER
(Transverse Section)



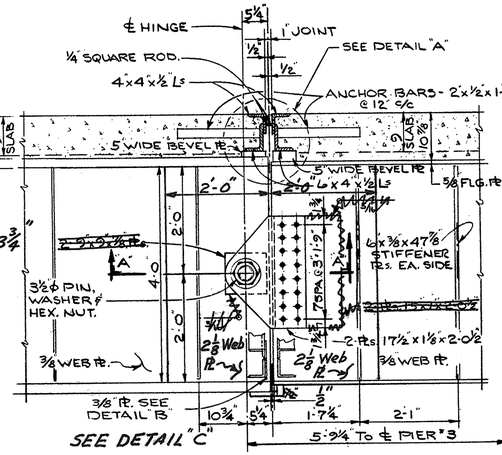
— DETAIL B —



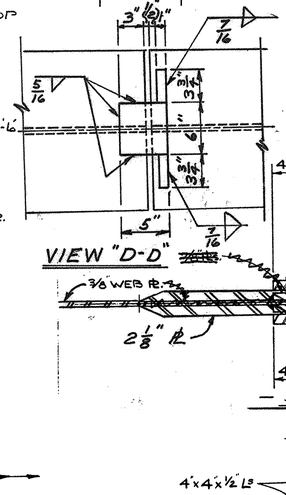
— TRANSVERSE SECTION —

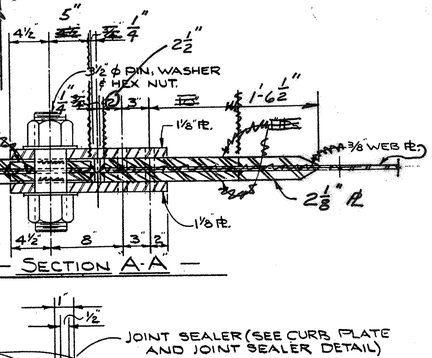


DETAIL "C"



— HINGE DETAIL —

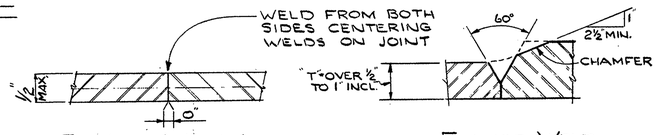




— SECTION A-A —

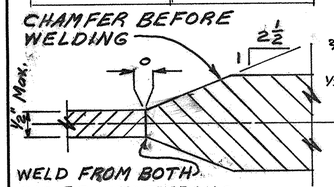
— SLAB THICKNESS OVER ℄ GIRDERS —

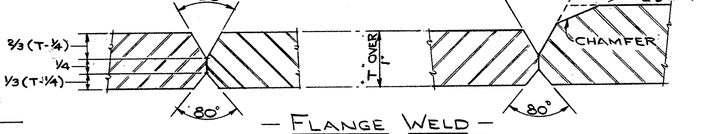
DIMENSION "A"	THICKNESS OF FLANGE PLATE
9⅛	2⅜
9⅜	2⅛
10"	1½
10⅜	1⅛
10⅞	⅝



— TYPICAL WELD —

— FLANGE WELD —





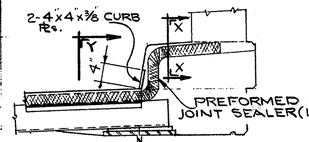
— FLANGE WELD —

ALL OF THE ABOVE FULL PENETRATION WELDS SHALL BE BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE. BUTT WELDS ON FLANGE PLATES SHALL BE GROUND FLUSH, FINISH GRINDING BEING PARALLEL TO THE DIRECTION OF STRESS.

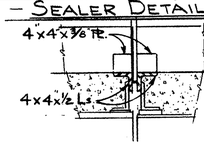
TRANSITION WELD — JOINT PREPARATION FOR SUBMERGED ARC WELDMENTS —

* ELEV. A & C ARE ELEVATIONS BEFORE DECK CONCRETE HAS BEEN PLACED

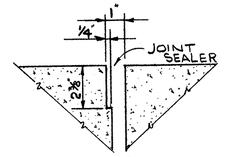
STATION	(ELEVATIONS) SEE TRANSVERSE SECTION * A	PROFILE GRADE B	* C
186+00	1124.15	1124.42	1124.54
+25	1123.20	1123.47	1123.61
+50	1122.17	1122.46	1122.57
+75	1121.11	1121.40	1121.52
187+00	1119.99	1120.27	1120.40
+25	1118.80	1119.09	1119.19
+50	1117.56	1117.85	1117.97
+75	1116.32	1116.56	1116.73
188+00	1115.01	1115.20	1115.42
+25	1113.60	1113.79	1114.00
+50	1112.09	1112.35	1112.48
+75	1110.61	1110.91	1111.02
189+00	1109.17	1109.47	1109.58



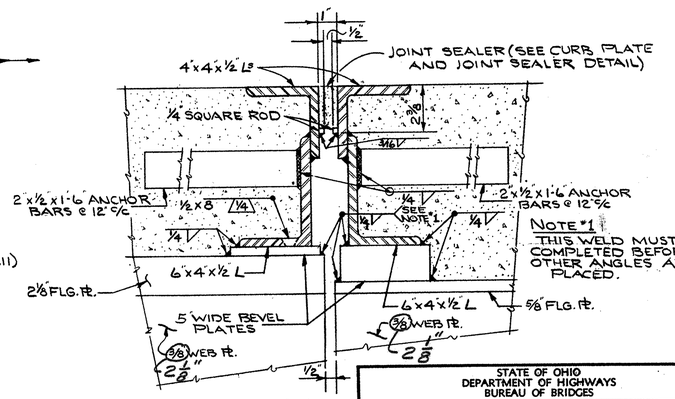
— CURB PLATE AND JOINT — SEALER DETAIL —



— SECTION Y-Y —



— SECTION X-X —



— DETAIL A —

SEE STD. DWG. SD-1-65 SHEET 1 FOR WELDING OF ANGLES.

NOTE #1
THIS WELD MUST BE COMPLETED BEFORE OTHER ANGLES ARE PLACED.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SLAB REINFORCING & FRAMING DETAILS

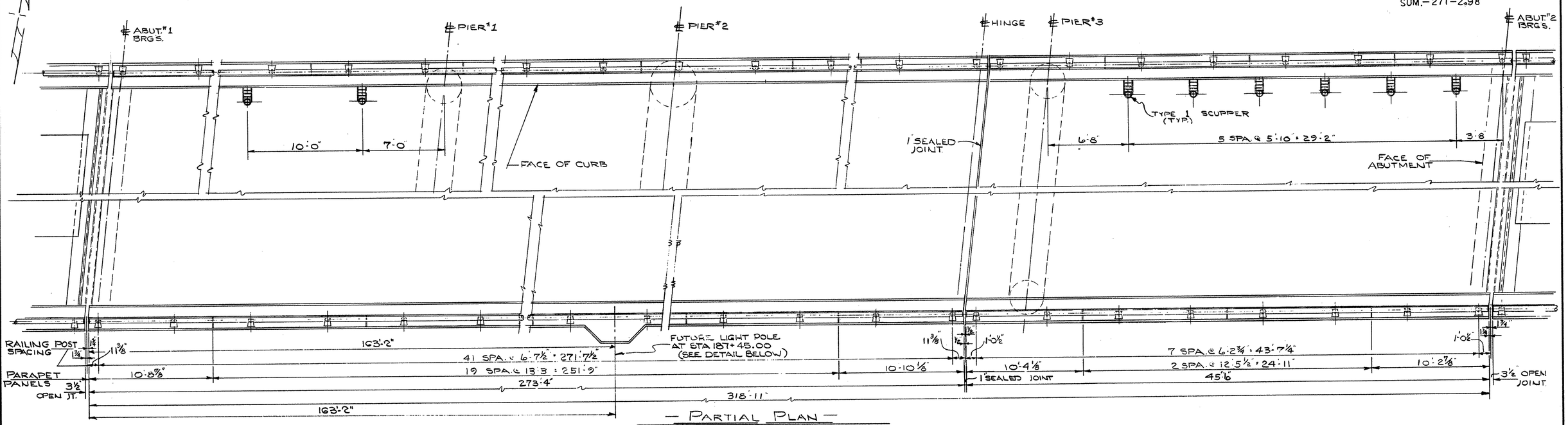
BRIDGE NO. SUM.-271-0354
RAMP "B" (I-271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JNP		RDH	RDH	4-21-66	2-23-68

FED. RD.	STATE	PROJECT	
2	OHIO		

378
510

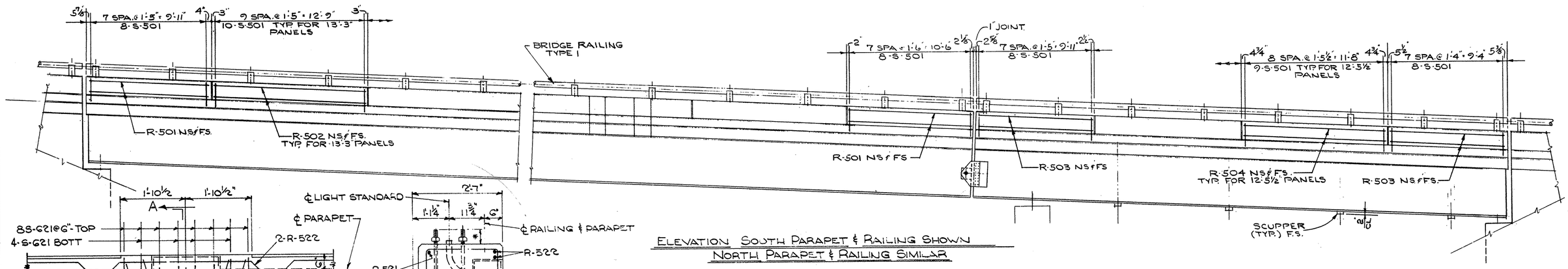
SUM.-271-2.98



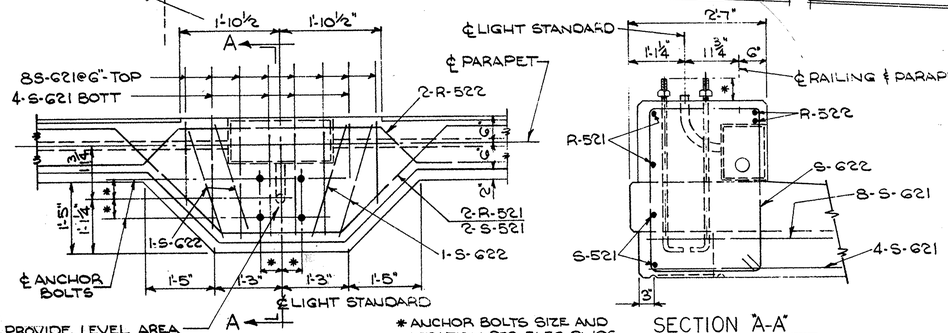
— PARTIAL PLAN —

— SCUPPERS & BULB L IN NORTH GUTTER ONLY —

— SOUTH RAILING POSTS & PARAPET DIMENSIONED, NORTH RAIL & PARAPET SIMILAR —



ELEVATION SOUTH PARAPET & RAILING SHOWN
NORTH PARAPET & RAILING SIMILAR



PLAN TYPE-I

* ANCHOR BOLTS SIZE AND LOCATION PER ELEC. DWGS. INCLUDE WITH ITEM 625 FOR PAYMENT.

SECTION "A-A"

LIGHT POLE DETAILS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE NO. SUM-271-0354
RAMP "B" (I 271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JNP		aw	RDH	9-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

379
510

SUM-271-2,98

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
ABUTMENT #1 & #2									
A-501	40	8'-4"	3	5'-5"	1'-7"				348
A-502	52	7'-0"	1	6"	6'-7"				380
A-503	40	7'-6"	3	3'-5"	2'-2"				301
A-504	40	29'-5"	ST.						1182
A-505	2	19'-3"	ST.						39
A-506	2	8'-0"	ST.						17
A-507	2	4'-0"	ST.						8
A-508	40	6'-0"	ST.						250
A-509	10	3'-11"	16	2'-0"	2'-0"	2½"			41
A-510	10	3'-11"	17	2'-0"	2'-0"	2½"			41
A-511	52	6'-9"	ST.						366
A-512	35	11'-9"	14	2'-7"	3'-2"	5"			429
A-513	3	12'-6"	ST.						39
A-514	3	10'-8"	ST.						33
SERIES OF A-515	1 SET OF 3 BARS	11'-3" TO 13'-9"	ST.					1'-2"	39
SERIES OF A-516	1 SET OF 3 BARS	11'-4" TO 13'-8"	ST.					1'-2"	39
A-517	2	18'-7"	ST.						39
A-518	2	18'-8"	ST.						39
A-519	64	3'-6"	ST.						234
A-520	4	9'-7"	11	2'-0"	5'-9"	2'-0"	3'-11"		40
A-521	50	3'-2"	3	1'-5"	1'-0"				165
A-522	50	3'-0"	18	1'-0"	1'-5"	2"	10"		156
A-523	2	18'-6"	ST.						39
A-524	2	18'-8"	19	18'-7"	4'-7"	3'-6"			39
A-525	50	5'-7"	5	8"	2'-2"	5"			291
A-526	3	11'-4"	ST.						35
A-527	3	9'-2"	ST.						29
SERIES OF A-528	1 SET OF 3 BARS	9'-11" TO 12'-3"	ST.					1'-2"	34
SERIES OF A-529	1 SET OF 3 BARS	9'-10" TO 12'-2"	ST.					1'-2"	39
A-530	2	17'-2"	ST.						35
A-531	2	17'-3"	ST.						36
A-532	2	17'-0"	ST.						35
A-533	2	17'-1"	19	17'-0"	3'-0"	3'-6"			36
A-534	3	8'-4"	ST.						26
A-535	33	6'-4"	ST.						218
A-536	1	7'-1"	ST.						7
A-537	1	7'-0"	ST.						7
A-538	1	8'-9"	ST.						9
A-539	1	8'-8"	ST.						9
A-540	4	8'-4"	11	2'-0"	4'-5"	2'-0"	2'-3"		35
A-541	3	14'-5"	ST.						48
A-542	3	14'-4"	ST.						45
A-543	2	14'-3"	ST.						30
A-544	2	14'-4"	19	14'-3"	2'-3"	3'-0"			30
A-545	3	9'-5"	ST.						29
A-546	3	7'-5"	ST.						23
A-547	1	8'-0"	ST.						8
A-548	1	8'-1"	ST.						9
A-549	1	9'-9"	ST.						10
A-550	1	9'-10"	ST.						10
A-551	3	15'-5"	ST.						48
A-552	3	15'-4"	ST.						48
A-553	2	15'-3"	ST.						32
A-554	2	15'-2"	19	15'-1"	3'-1"	3'-0"			31
A-555	4	5'-4"	ST.						22
A-556	4	4'-11"	ST.						21
A-601	40	14'-3"	4	6'-6"	5'-5"	2'-7"			856
A-602	20	17'-2"	3	1'-5"	8'-0"				516
A-603	32	19'-2"	7	6'-8"	1'-5"	8'-0"	11"		921
A-604	24	18'-9"	3	1'-2"	8'-11"				676

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
ABUTMENT #1 & #2 CONT'D.									
A-605	OPEN								—
A-606	19	17'-9"	3	1'-2"	8'-5"				507
A-607	1	11'-9"	1	6"	11'-4"				17
A-608	OPEN								—
A-609	1	12'-3"	1	6"	11'-10"				18
A-801	14	31'-5"	ST.						1174
A-802	2	15'-4"	ST.						82
A-803	4	11'-0"	ST.						117
A-804	2	14'-5"	ST.						77
A-805	4	9'-8"	ST.						103
A-806	2	11'-2"	ST.						60
A-807	4	6'-10"	ST.						73
A-808	2	12'-6"	ST.						67
A-809	4	7'-10"	ST.						84
ABUTMENT #1 & #2 TOTAL = 10,971 LBS.									
PIER #1, #2 & #3									
P-501	204	7'-9"	3	2'-8"	2'-8"				1649
P-601	6	26'-2"	ST.						236
P-901	132	6'-4"	1	1'-0"	5'-7"				2842
P-902	44	26'-10"	ST.						4014
P-903	44	22'-3"	ST.						3329
P-904	44	16'-10"	ST.						2518
P-905	180	11'-0"	2	1'-3"	8'-6"				6732
P-906	21	26'-2"	ST.						1868
P-1001	12	10'-0"	9	3'-2"	3'-8"	1'-2⅜"			516
P-1101	6	16'-0"	ST.						510
P-1102	15	20'-2"	ST.						1607
P-1103	15	10'-11"	1	3'-4"	7'-10"				870
P-1104	15	11'-5"	1	3'-10"	7'-10"				910
SPIRAL = 3142									
PIER #1, #2 & #3 TOTAL = 30,743 LBS									
SLAB									
S-501	480	5'-7"	5	3"	2'-2"	5"			2795
S-502	428	4'-11"	15	7½"	1'-4"	1'-6"			2195
S-503	428	2'-6"	3	1'-6"	7½"				1116
S-521	2	11'-8"	22	2'-0"	2'-0"	2'-5"	2'-10"		24
S-601	478	29'-9"	ST.						21359
S-602	406	40'-8"	ST.						24799
S-603	44	40'-0"	ST.						2644
S-604	116	23'-6"	ST.						4094
S-605	22	12'-0"	ST.						397
S-621	12	5'-6"	ST.						99
S-622	4	9'-11"	14	2'-10"	2'-0"	4"			60
S-701	478	29'-9"	ST.						27067
SLAB TOTAL = 88,649* LBS.									

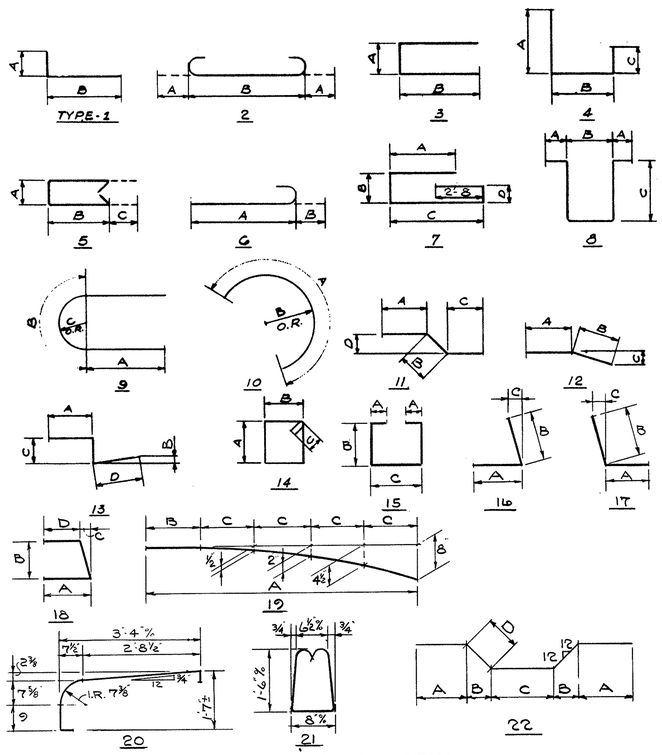
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
RAILING ⊗									
R501	16	10'-5"	ST.						
R502	152	12'-11"	ST.						
R503	16	9'-10"	ST.						
R504	16	12'-1"	ST.						
R505	4	18'-4"	ST.						
R506	8	5'-4"	20						
R507	12	4'-2"	21						
R508	4	16'-10"	ST.						
R509	4	14'-0"	ST.						
R510	4	15'-0"	ST.						
R521	2	11'-8"	22	2'-0"	2'-0"	2'-3"	2'-10"		
R522	2	11'-4⅝"	22	3'-0"	8"	3'-9"	11⅜16		
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	1	5'-6"	ST.						
RE-601	3	6'-0"	ST.						
RE-701	2	6'-3"	ST.						
RE-801	1	6'-6"	ST.						
RE-901	2	6'-10"	ST.						
RE-1001	1	7'-3"	ST.						
RE-1101	1	7'-9"	ST.						

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	3	2'-8"	23 10⁹⁄₁₆"	4½"	67	1107
SP-402	3	2'-8"	19'-3⅜"	4½"	55	909
SP-403	3	2'-8"	13'-10⅝"	4½"	40	661
SPACERS	36					465
TOTAL SPIRALS						3142 LBS

GRAND TOTAL 130,363 LBS

⊗ RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.66 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.66 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR. AND P-1001 IS A NO. 10 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

REINFORCING SCHEDULE

BRIDGE NO. SUM-271-0354
RAMP "B" (I-271) OVER I-77
SUMMIT COUNTY
STA. 185+81.11 To STA. 189+03.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JNP			RBH 9-21-66		

FED. RD.	STATE	PROJECT	
2	OHIO		

380
510

SUM-271-2.98

CURVE DATA

℄ SURVEY I-271

P.I. STA. 195+17.76
Δ = 23°-18'.16"
D_c = 1°-28'-00"
R = 3906.53'
L = 1588.94'
T = 805.61'

PROPOSED STRUCTURE

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 24°-56'-00" I.F. TO LOC. TAN.
SPANS: 76'-6" - 117'-6" - 90'-0" - 58'-6" ℄ BRGS.
ROADWAY: W.B.L. VARIABLE; EB L. 33'-0" W 0'-6" CURBS
LOAD FREQUENCY: CF = 2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
WEARING SURFACE: 1 MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54 & SPECIAL)
ALIGNMENT: 1°-28'-00" CURVE RT.
SUPERELEVATION: VARIABLE
SLOPE PROTECTION: CRUSHED AGGREGATE.

TRAFFIC: I-271 - 12,500 A.D.T. -1975.
I-77 - 18,000 A.D.T. -1975.

AVERAGE ESTIMATED PAY LENGTH FOR 12" CAST INPLACE REINFORCED CONCRETE PILES
ABUT. #1 L & R = 35 FT.
PIERS = 25 FT.
ABUT. #2 L & R = 35 FT.

VERTICAL CLEARANCE:
DESIGN = 15.00'
ACTUAL = 16.62'

Revised 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

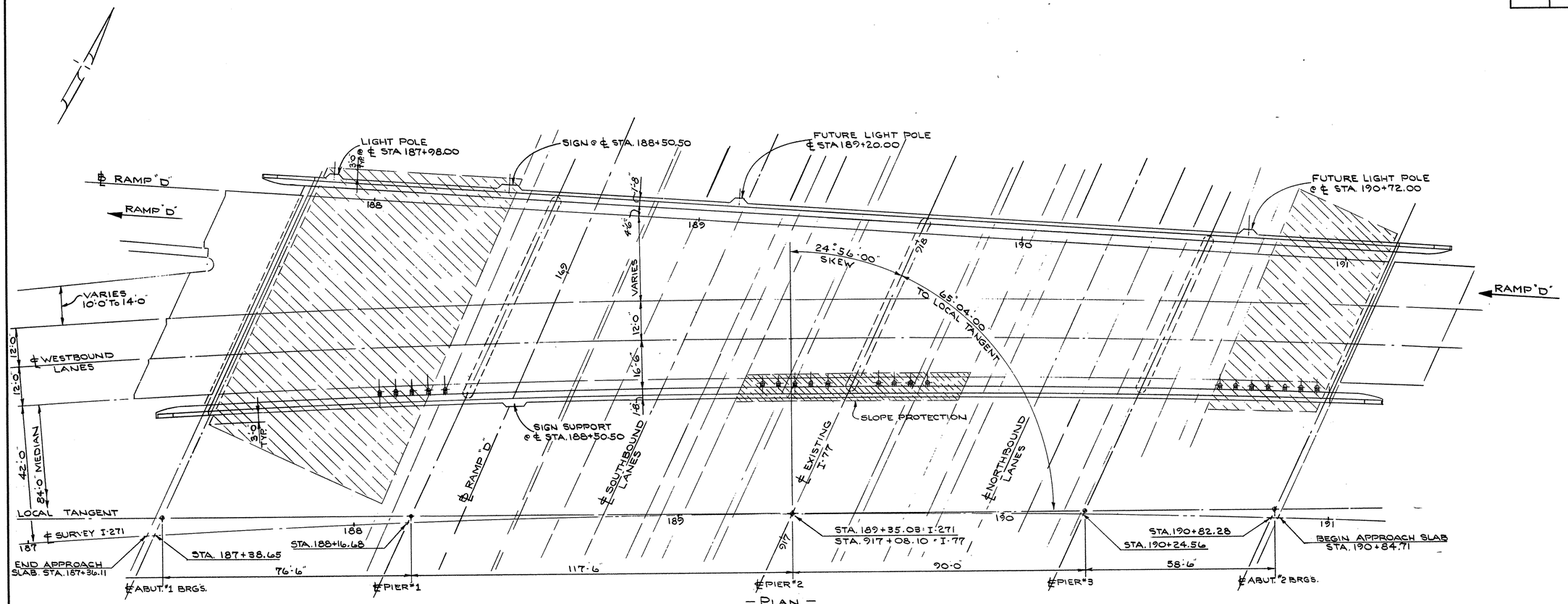
BRIDGE NO. SUM-271-0358 L & R
I-271 OVER I-77
SUMMIT - COUNTY
STA. 187+36.11 TO STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	KENNEDY		AW	RDH	4-21-66	

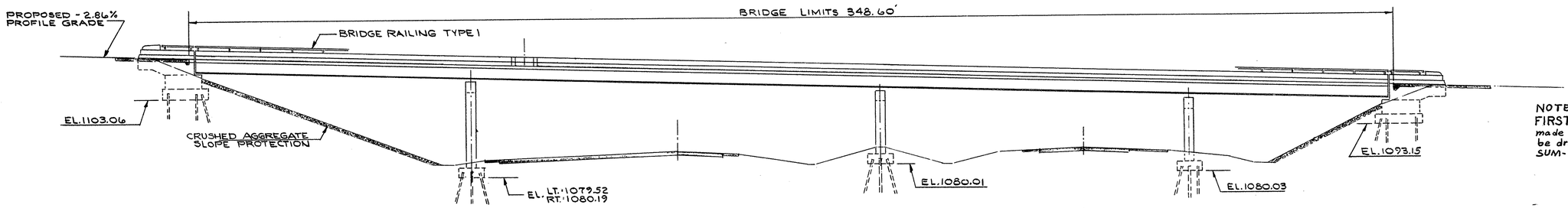
FED. RD.	STATE	PROJECT	
2	OHIO		

381
510

SUM-271-2.98



— PLAN —



— ELEVATION —

NOTE:
FIRST TEST PILE *Payment will be made for only one first test pile. It may be driven at either SUM-271-0358L or SUM-271-0358R.*

— ESTIMATED QUANTITIES — (LEFT STRUCTURE)

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN
503	778	CU.YDS.	UNCLASSIFIED EXCAVATION		393	385	
505	LUMP	SUM	FIRST TEST PILE				
507	4110	LIN.FT.	12"ϕ CAST-IN-PLACE REINF. CONC. PILES		1260	2850	
509	274,151	LBS.	REINFORCING STEEL	186,610	19,978	67,563	
511	646	CU.YDS.	CLASS "C" CONC. SUPERSTRUCTURE	646			
511	178	CU.YDS.	CLASS "E" CONC. ABUTS. ABOVE FTG'S.		178		
511	142	CU.YDS.	CLASS "C" CONC. PIERS ABOVE FTG'S.			142	
511	247	CU.YDS.	CLASS "E" CONC. PIER & ABUT. FTG'S.		115	132	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN
512	9.75	LIN.FT.	WATERPROOF PREMOLDED SEALING STRIP		9.75		
513	705,117	LBS.	STRUCTURAL STEEL.	705,117			
514	705,117	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	705,117			
517	752.56	LIN.FT.	BRIDGE RAILING TYPE 1	678.34	74.22		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN
518	67	CU.YDS.	POROUS BACKFILL		67		
518	21	EACH	SCUPPERS (INCLUDING SUPPORTS)	21			
518	116	LIN.FT.	6" PERFORATED HELICAL C.M.P. 707.06 INCLUDING SPECIALS		116		
518	88	LIN.FT.	6" HELICAL C.M.P. 707.06 NON-PERFORATED		88		
601	945	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		945		
625			LIGHTING QUANTITIES SEE SHEET 346				
808	646	Units	WATER RED. SET RET. ADMIXTURE	646			
825	2552	SQ.YDS.	CONCRETE SURFACE TREATMENT				2552
828	121	LIN.FT.	JOINT SEALER (end dam)		121		

SEE SHEET 368 FOR GENERAL NOTES

Rev. 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

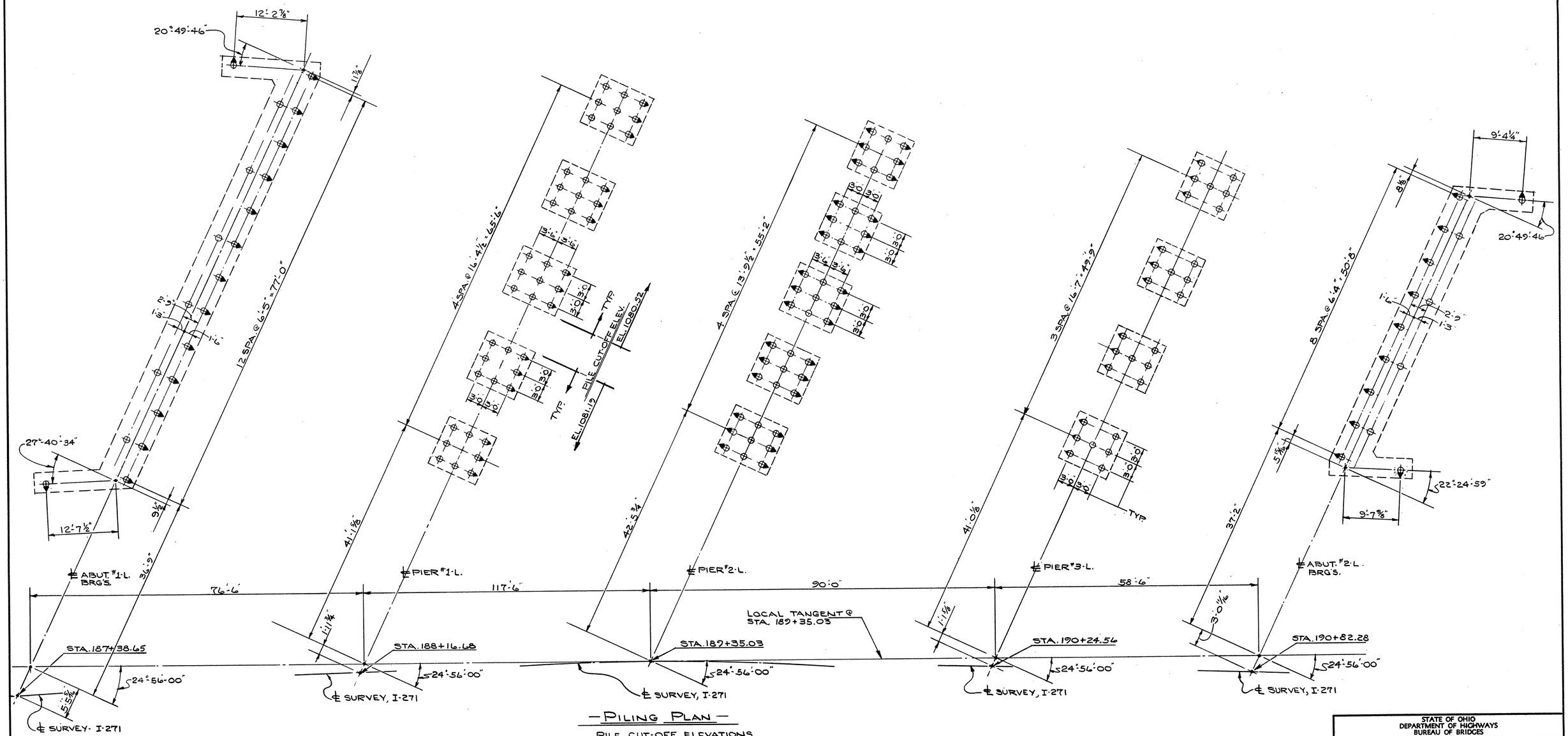
BRIDGE № SUM-271-0358-L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 To STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.W.	J.N.P.		[illegible]	R.B.H.	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

382
510

SUM. 271-2.98



— PILING PLAN —

PILE CUT-OFF ELEVATIONS

ABUTMENT #1-L.	1105.06
PIER #1-L.	SEE PLAN
PIER #2-L.	1081.01
PIER #3-L.	1081.03
ABUTMENT #2-L	1095.15

⊖ INDICATES 1:4 BATTER

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PILING PLAN

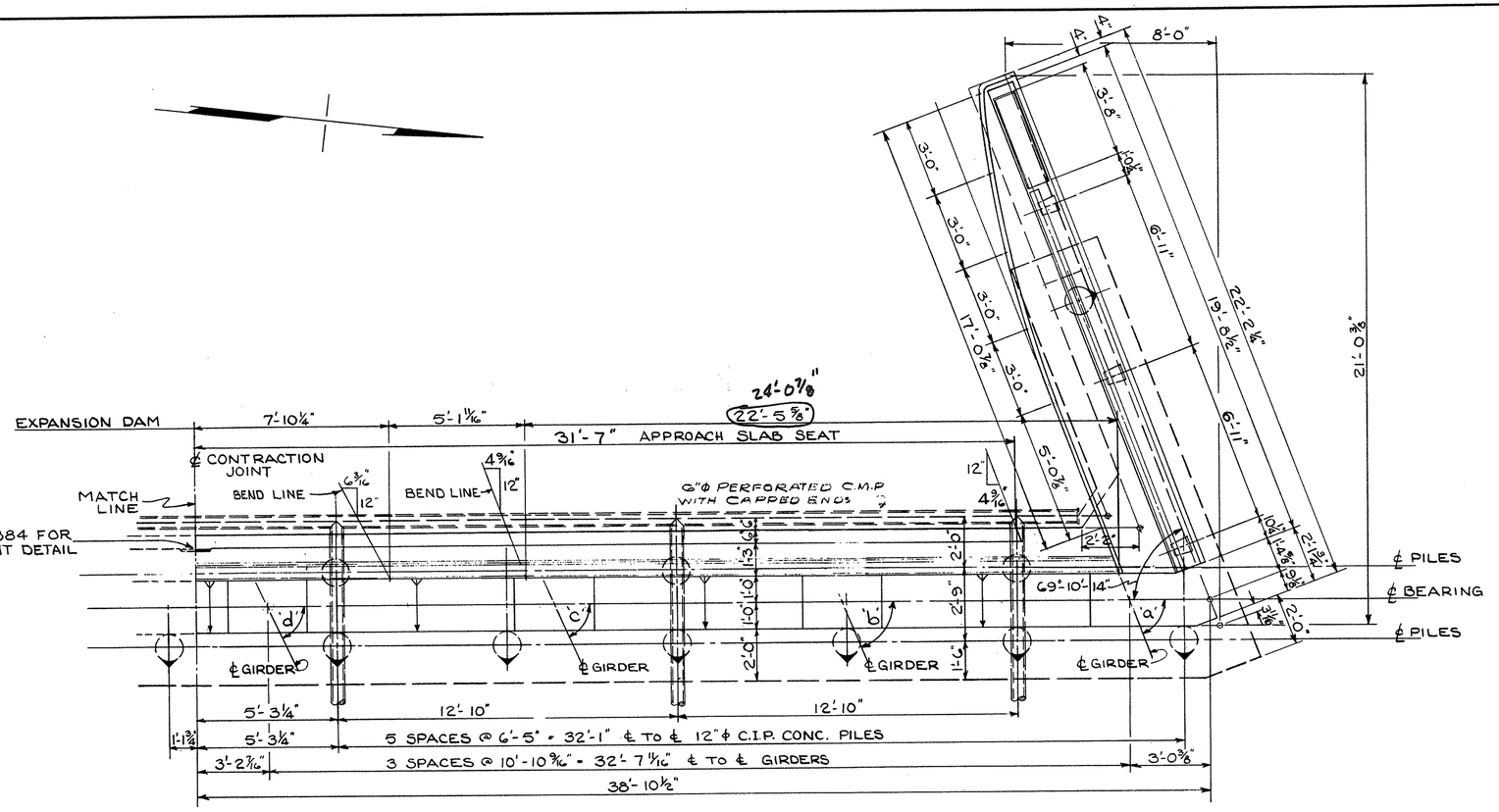
BRIDGE NO. SUM.-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MW	JNP		[illegible]	RDH	4-21-66	

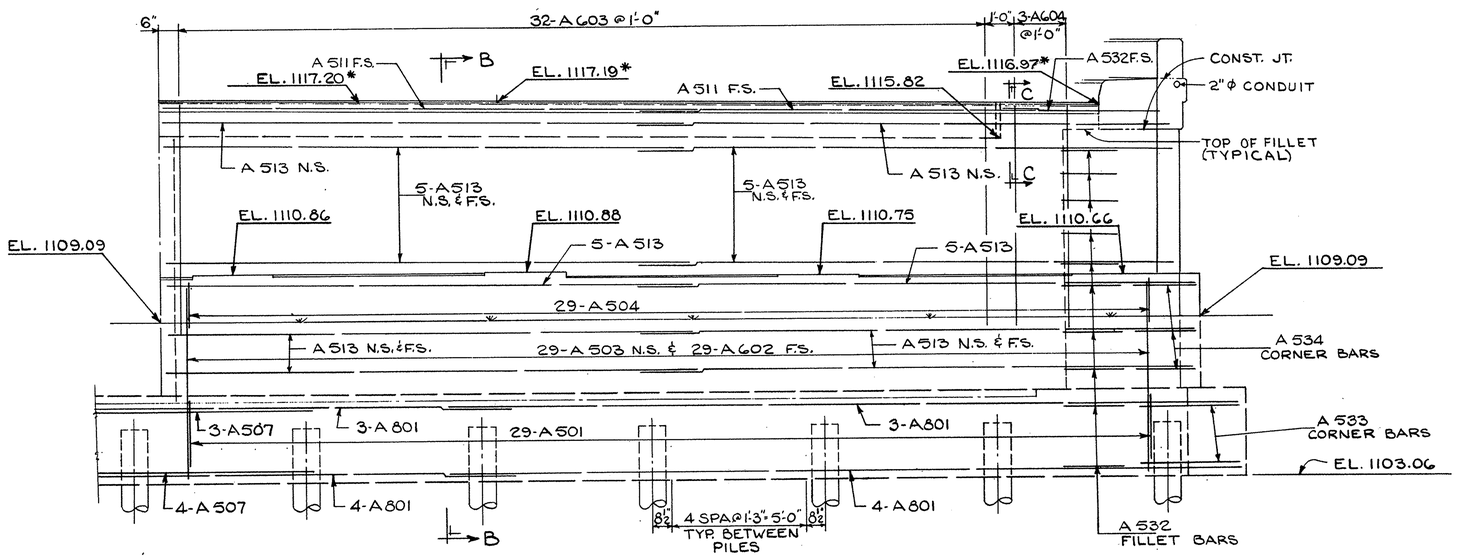
FED. RD.	STATE	PROJECT	
2	OHIO		

383
510

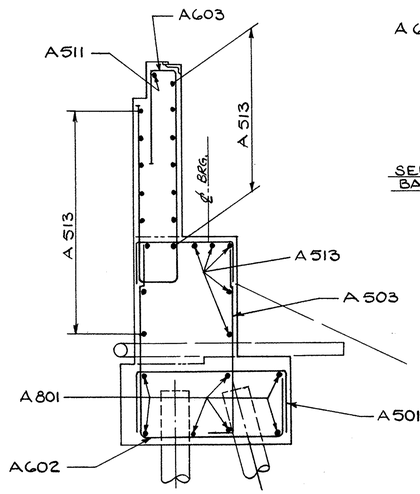
SUM.-271-2.98



PLAN ~ ABUTMENT # 1-LEFT ~ NORTH HALF

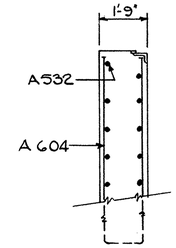


ELEVATION ~ ABUTMENT # 1-LEFT ~ NORTH HALF



SECTION 'B-B'

SEE SECTION 'A-A' SHEET № 384 FOR DETAILS NOT SHOWN.



SECTION 'C-C'

SEE SECTIONS 'A-A' & 'B-B' FOR BAR NUMBERS NOT SHOWN.

TABLE "A"

TABLE OF ANGLES
a = 69°-10'-14"
b = 67°-22'-35"
c = 65°-40'-26"
d = 64°-28-24"
e = 63°-12'-13"

REV 12-28-67

* INDICATES ELEVATION GIVEN TO HEEL OF ANGLE

WORK THIS SHEET WITH SHEET #384 & #385

REVISED 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO.1 DETAIL (N. SIDE)

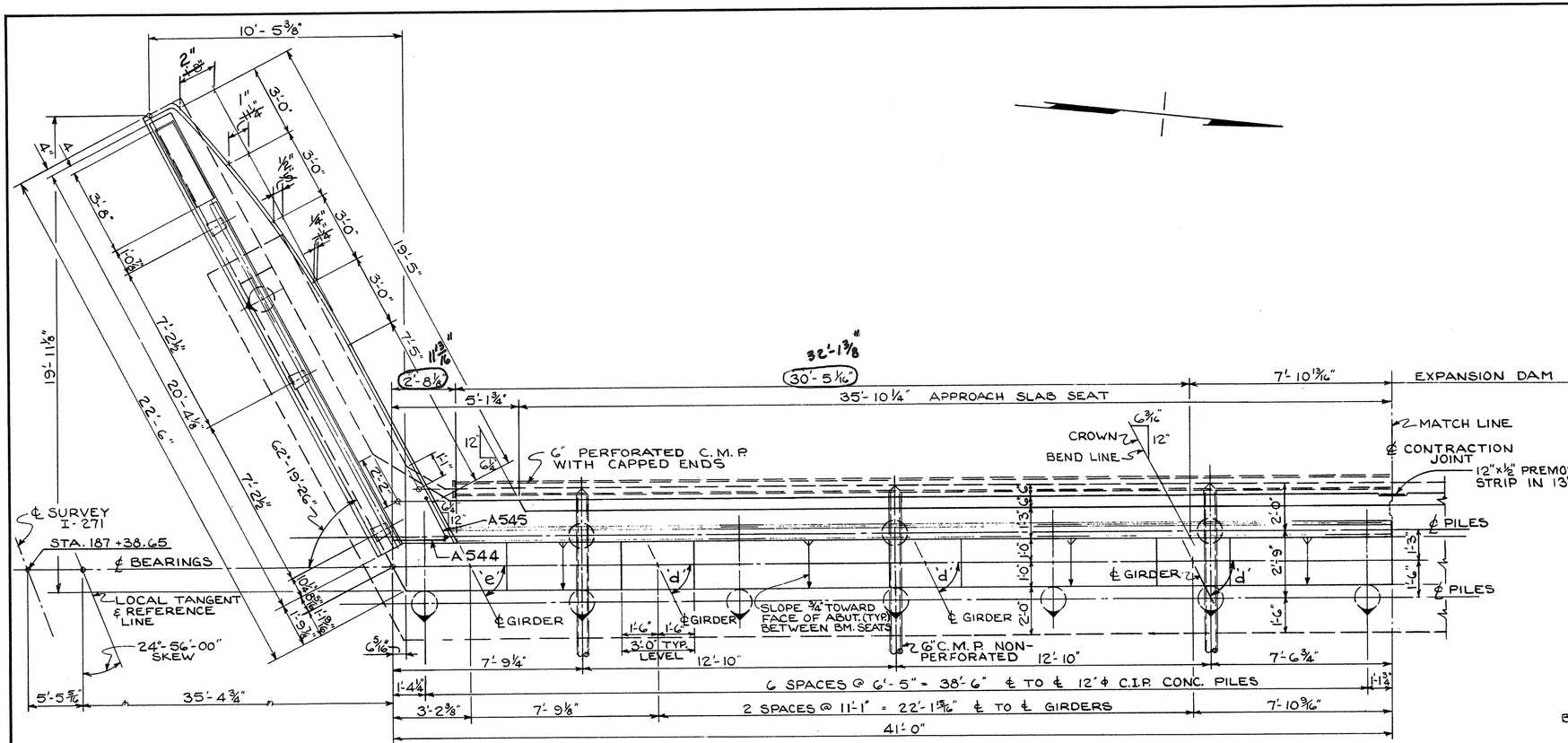
BRIDGE NO. SUM.-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.W.	J.F.P.		[illegible]	R.B.H.	4-21-66	

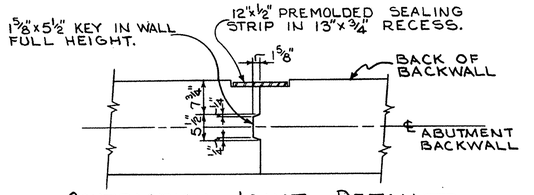
FED. RD.	STATE	PROJECT	
2	OHIO		

384
510

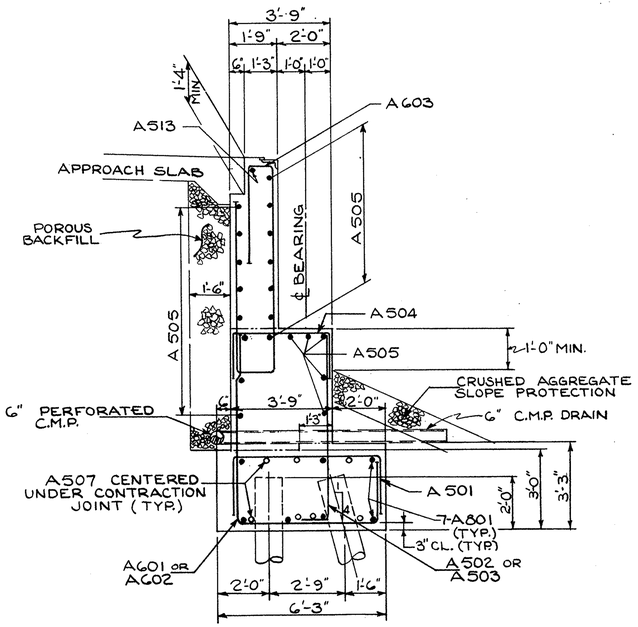
SUM.-271-2.98



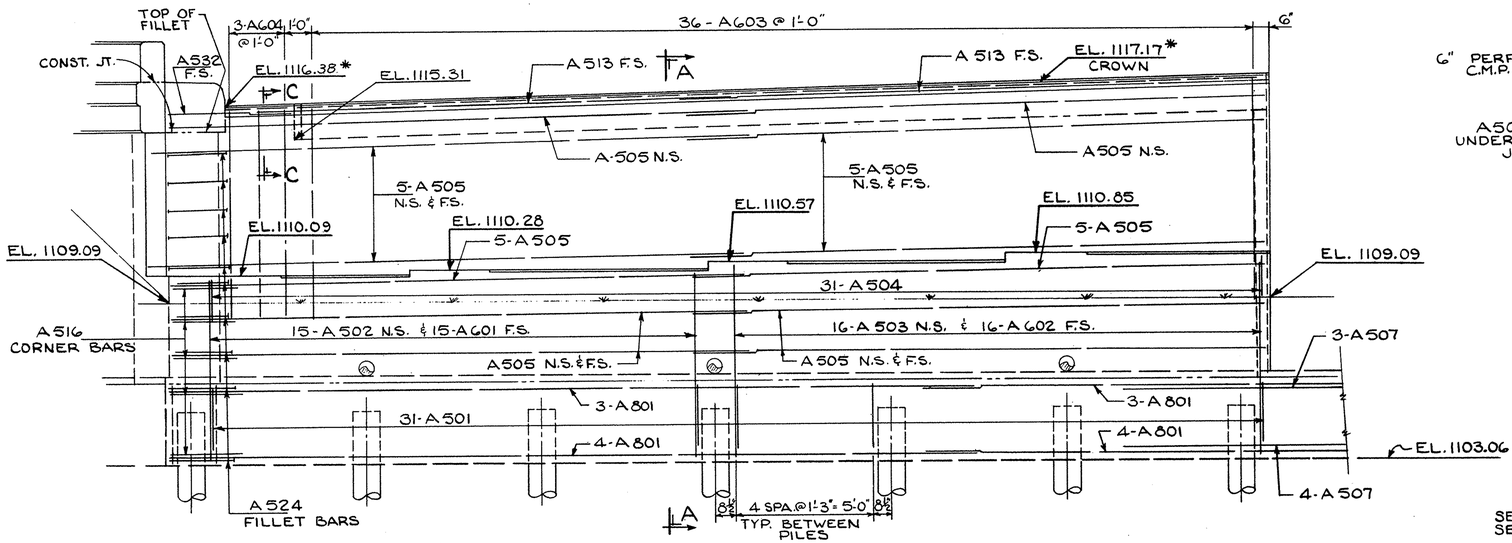
PLAN ~ ABUTMENT #1 LEFT ~ SOUTH HALF



CONTRACTION JOINT DETAIL



SECTION 'A-A'



ELEVATION ~ ABUTMENT #1 LEFT ~ SOUTH HALF

* INDICATES ELEVATION GIVEN TO HEEL OF ANGLE

REV. 12-28-67

SEE SHEET No. 383 FOR SECTION 'C-C' & TABLE 'A'

WORK THIS SHEET WITH SHEET #383 & #385

REVISED 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers
Akron, Ohio

ABUTMENT NO.1 DETAIL (S. SIDE)

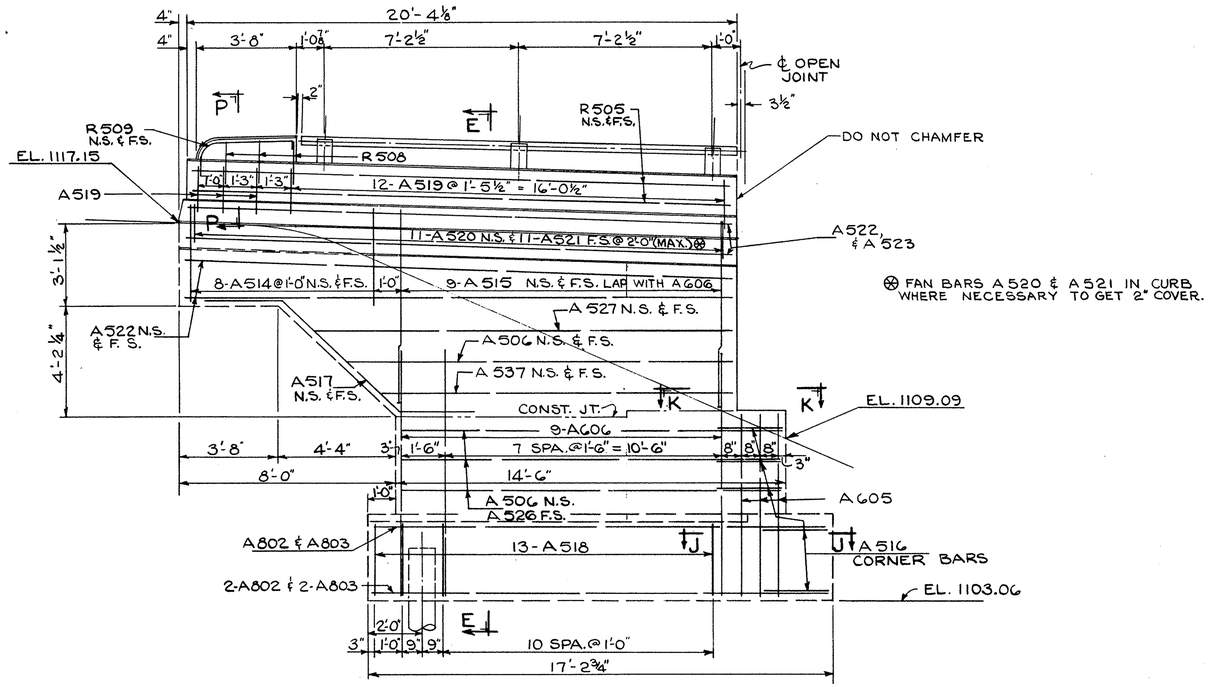
BRIDGE NO. SUM-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JFP		GAW 3/17/66	RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

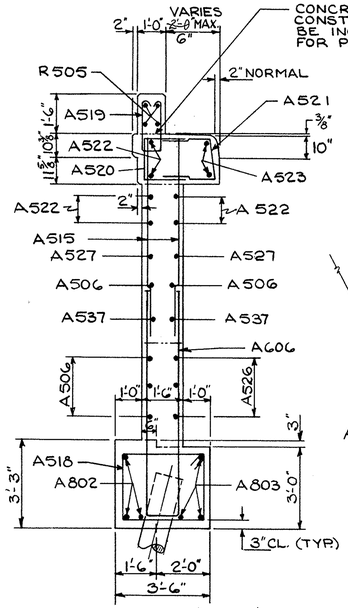
SUM.-271-2.98

385
510

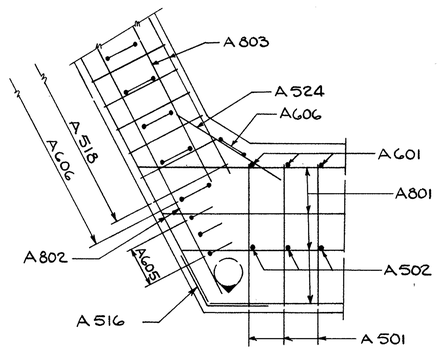


ELEVATION ~ SOUTH WINGWALL ~ ABUT. # 1-L

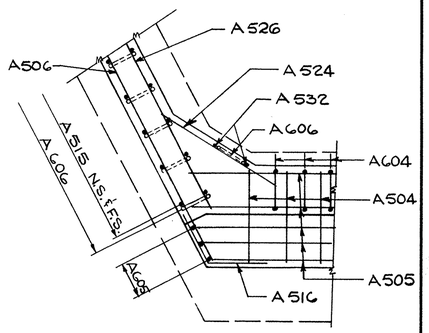
⊗ FAN BARS A 520 & A 521 IN CURB WHERE NECESSARY TO GET 2" COVER.



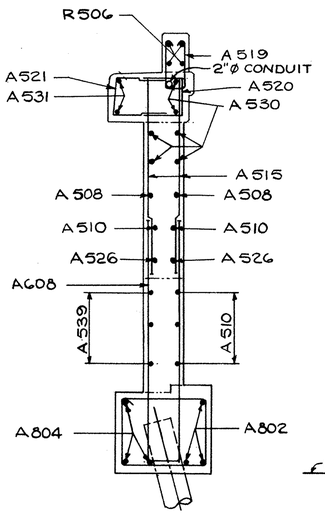
SECTION 'E-E'



SECTION 'J-J'

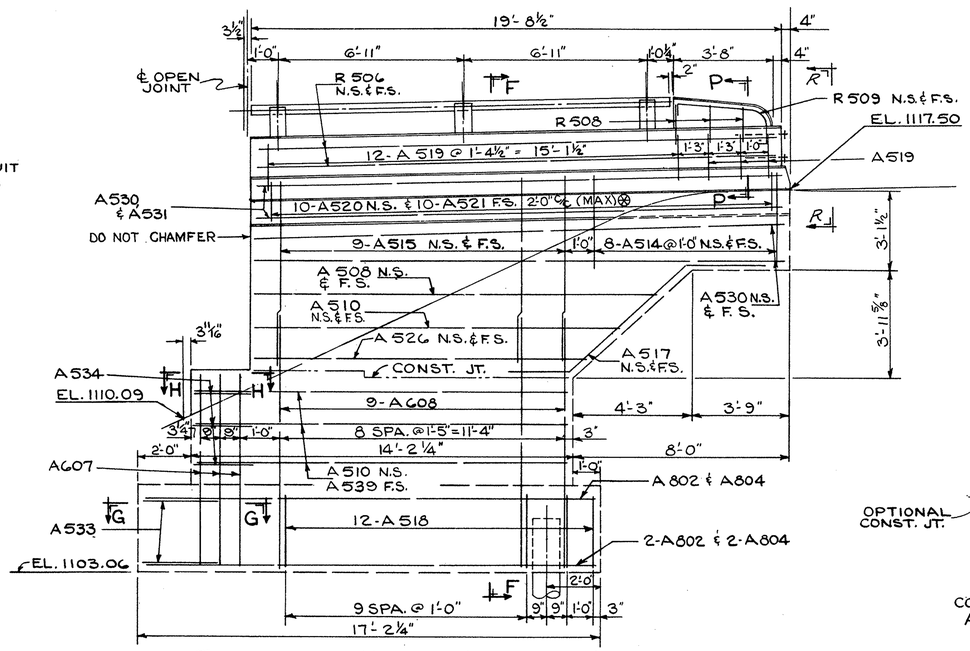


SECTION 'K-K'

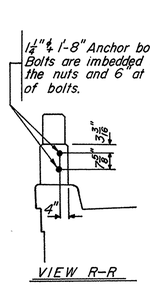


SECTION 'F-F'

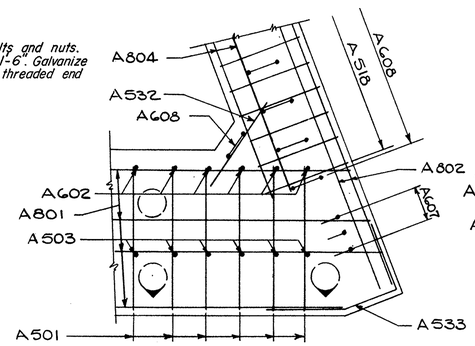
SEE SECTION 'E-E' FOR DETAILS NOT SHOWN



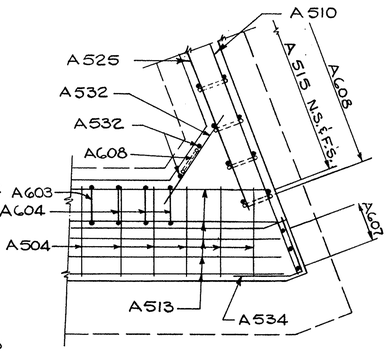
ELEVATION ~ NORTH WINGWALL ~ ABUT. #1-L



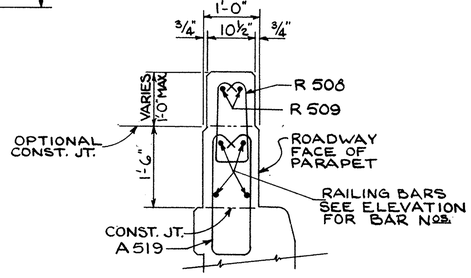
VIEW R-R



SECTION 'G-G'



SECTION 'H-H'



SECTION 'P-P'

WORK THIS SHEET WITH SHEET #383 & #384

REVISED 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO.1 LT.

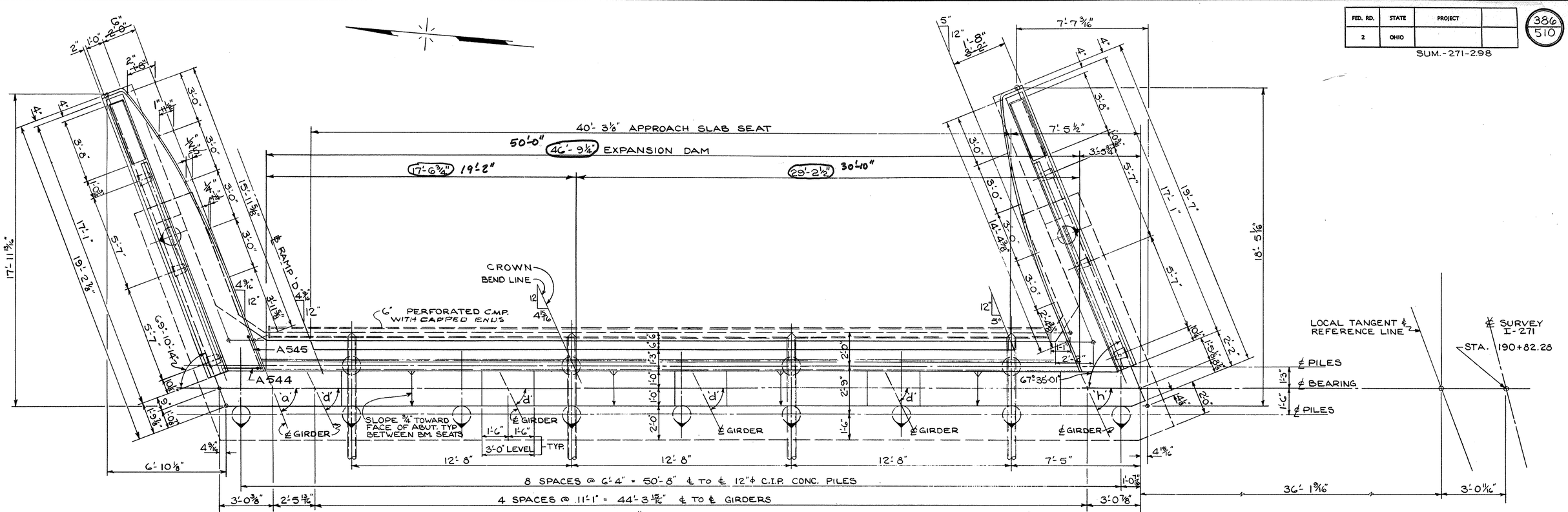
BRIDGE NO. SUM-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.W.	J.F.P.		C.W. 3/27/66	R.D.H.	4-21-66	

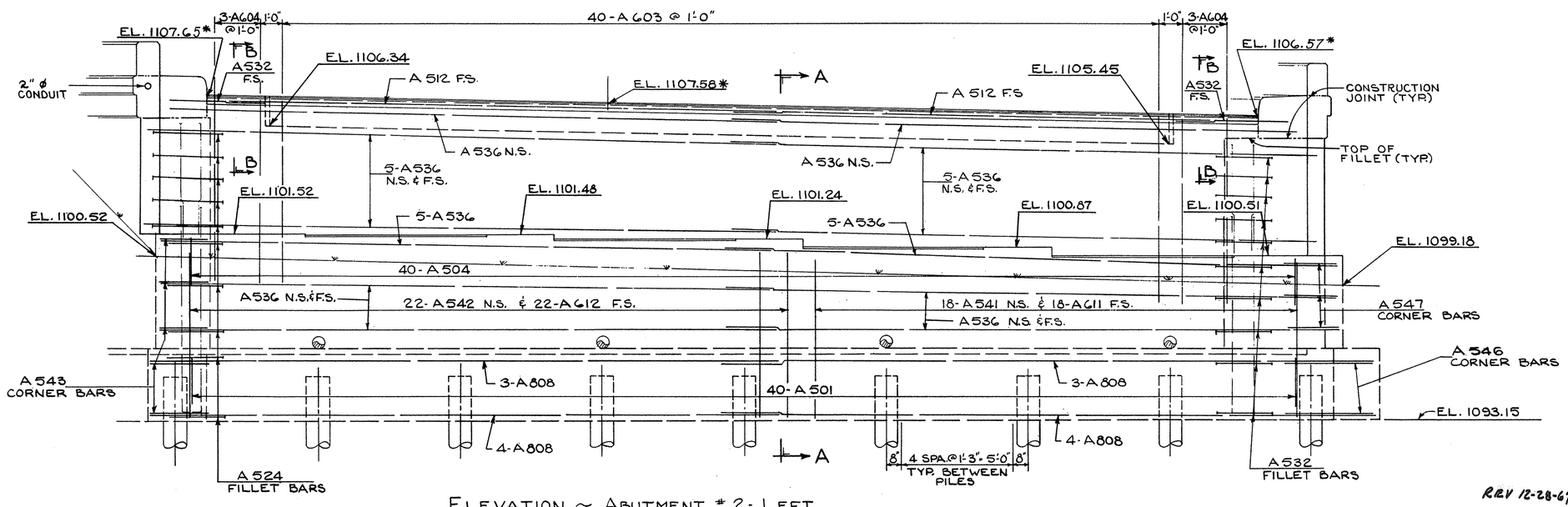
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

386
510



PLAN ~ ABUTMENT # 2-LEFT



ELEVATION ~ ABUTMENT # 2-LEFT

TABLE 'A'

TABLE OF ANGLES
a = 69°-10'-14"
d = 64°-28'-24"
h = 66°-56'-02"

SEE SHEET No. 387 FOR SECTIONS 'A-A', 'B-B'

REV 12-28-67

* INDICATES ELEV. GIVEN TO HEEL OF ANGLE

Revised 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO. 2 LT.

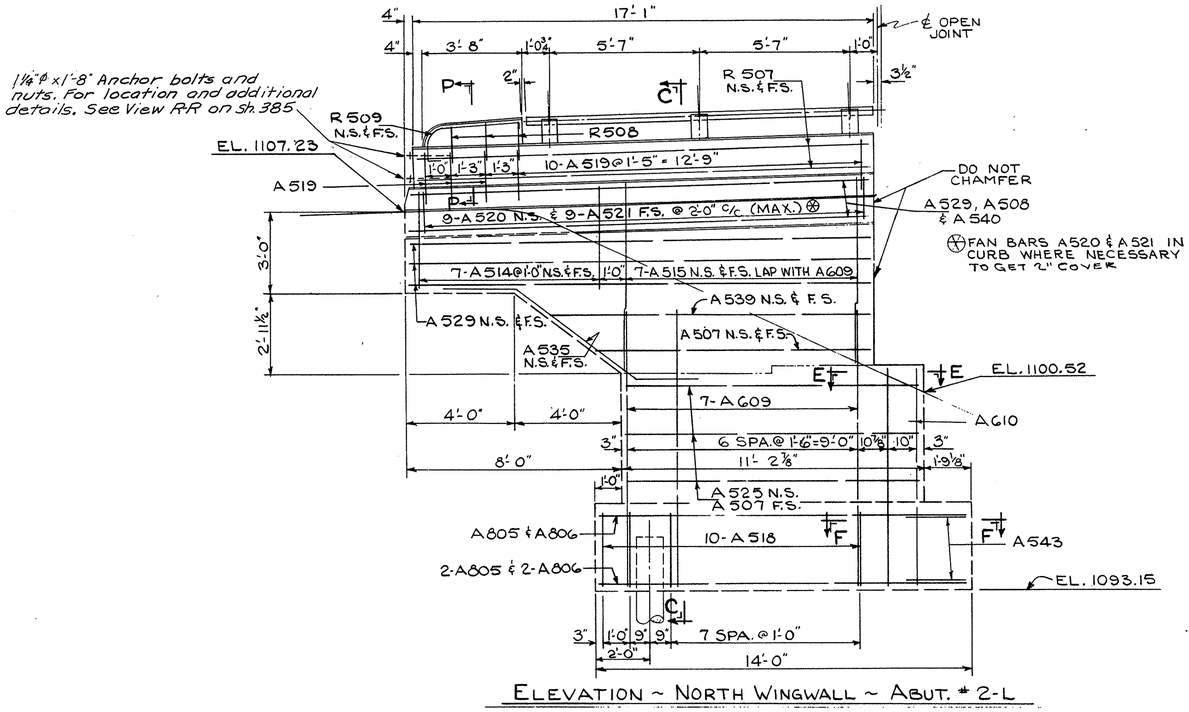
BRIDGE NO. SUM.-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JFP		3/15/66	RBH	4-21-66	

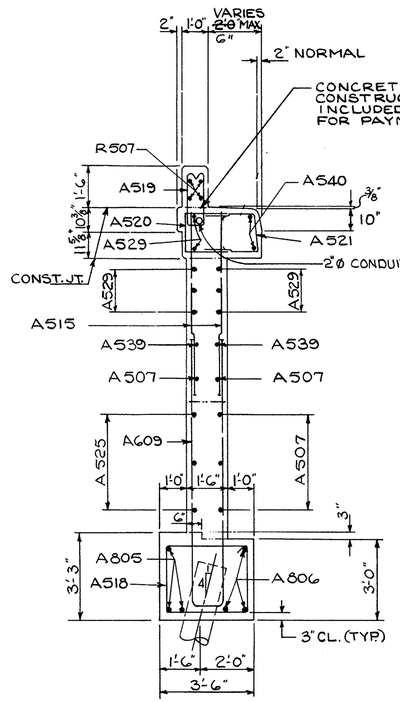
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

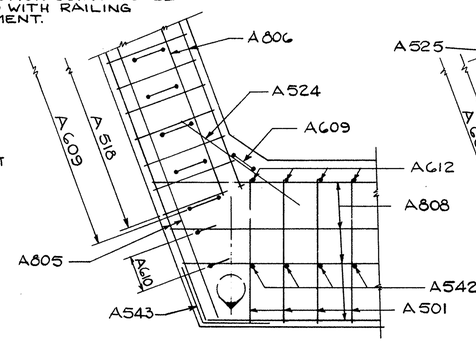
387
510



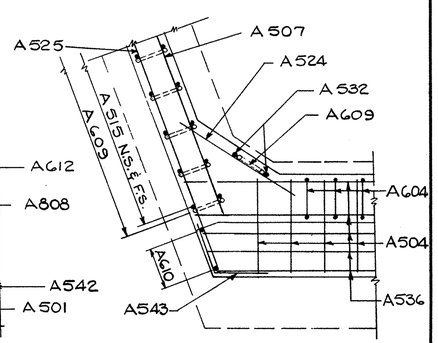
ELEVATION ~ NORTH WINGWALL ~ ABUT. # 2-L



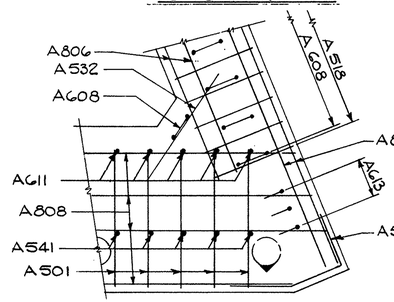
SECTION 'C-C'



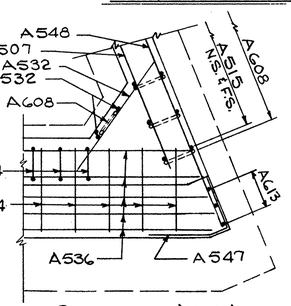
SECTION 'F-F'



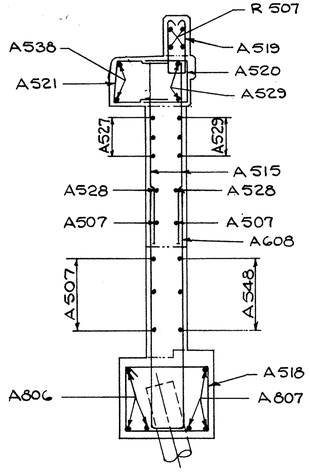
SECTION 'E-E'



SECTION 'H-H'

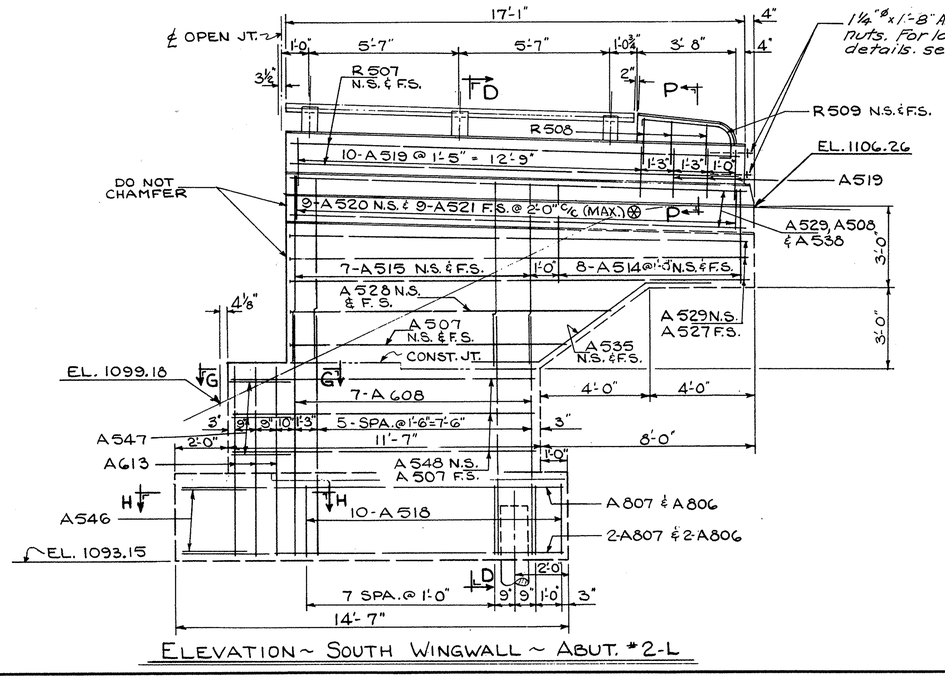


SECTION 'G-G'



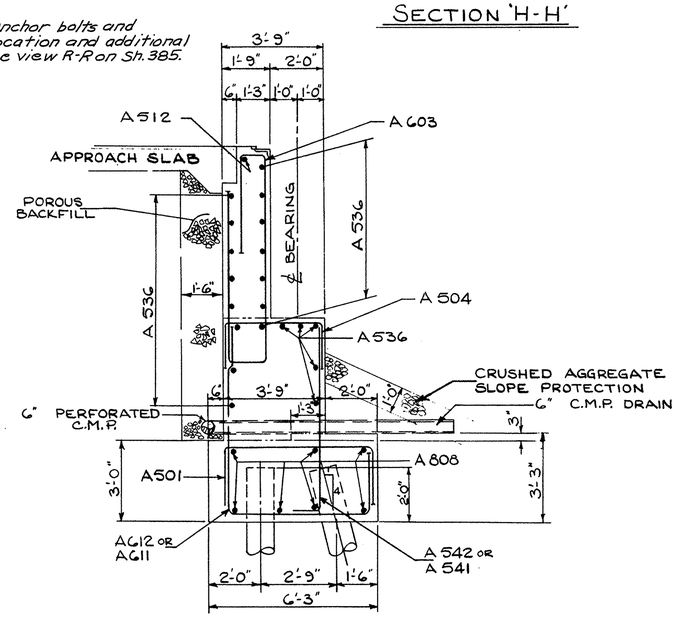
SECTION 'D-D'

SEE SECTION 'C-C' FOR DETAILS NOT SHOWN

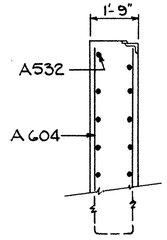


ELEVATION ~ SOUTH WINGWALL ~ ABUT. #2-L

1⅛"ø x 1'-8" Anchor bolts and nuts. For location and additional details, see view R-R on Sh. 385.



SECTION 'A-A'



SECTION 'B-B'

SEE SECTION 'A-A' FOR BAR NUMBERS NOT SHOWN

SEE SHEET No. 385 FOR SECTION 'P-P'

Revised 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO. 2 LT. (DETAILS)

BRIDGE NO. SUM.-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JFP		3/31/66	RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

388
510

SUM.-271-2.98

— PLAN PIER #1-L —

— ELEVATION —

— SECTION "A-A" —

— SECTION "B-B" —

— SECTION "C-C" —

— SECTION "D-D" —

ALL PILES TO BE 12"ϕ CAST-IN-PLACE REINFORCED CONCRETE PILES.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER NO. 1 LT. DETAILS

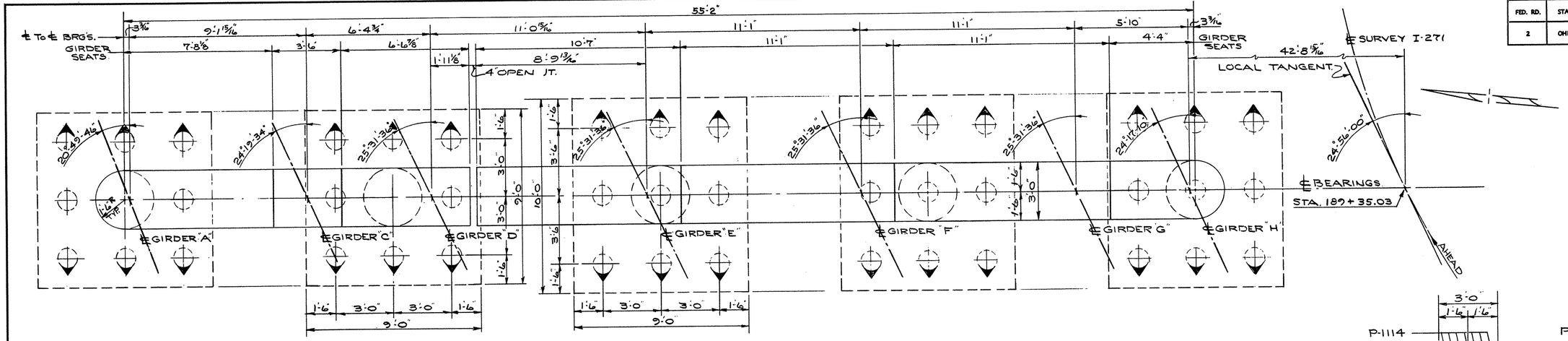
BRIDGE NO. SUM.-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JP		3/21/66	RDH	4-21-66	

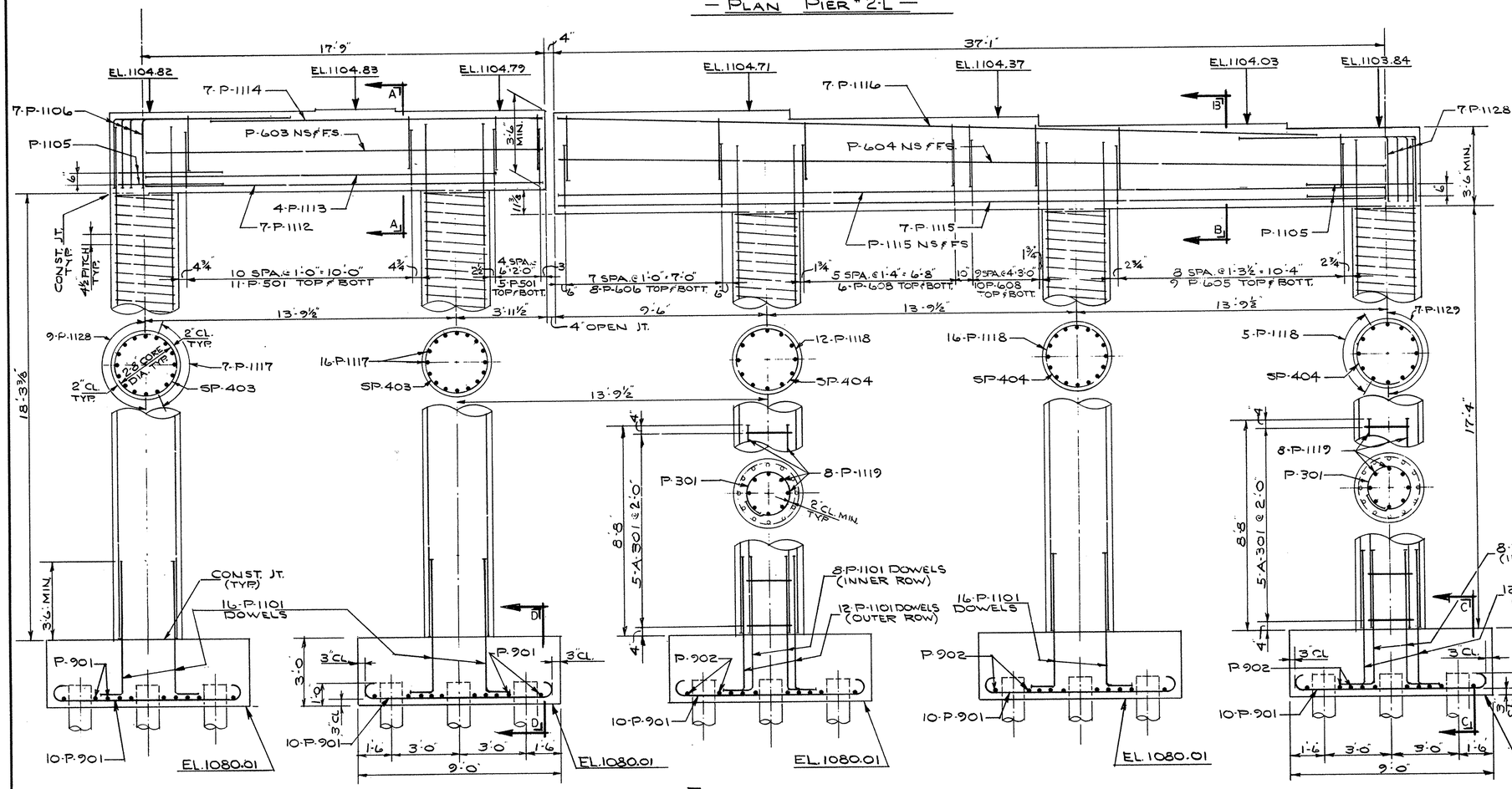
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

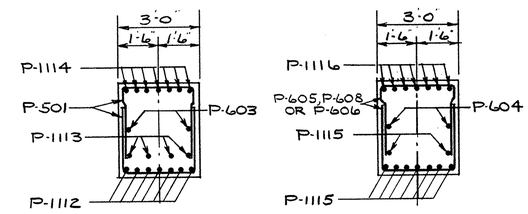
389
510



— PLAN PIER #2-L —

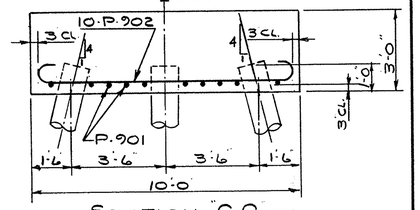


— ELEVATION —

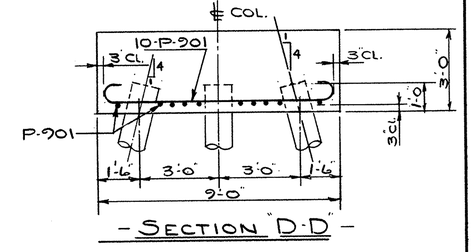


— SECTION "A-A" —

— SECTION "B-B" —



— SECTION "C-C" —



— SECTION "D-D" —

ALL PILES TO BE 12" ϕ CAST-IN-PLACE REINFORCED CONCRETE PILES.

◀ INDICATES DIRECTION OF 1:4 BATTER OF PILES.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER NO. 2 LT. DETAILS

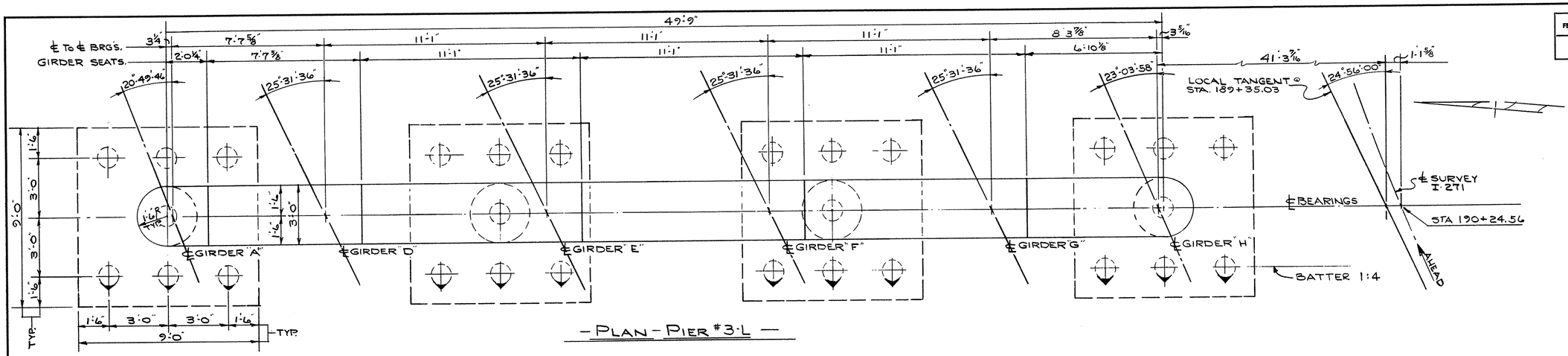
BRIDGE NO. SUM-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JP		3/10/66	RDH	4-21-66	

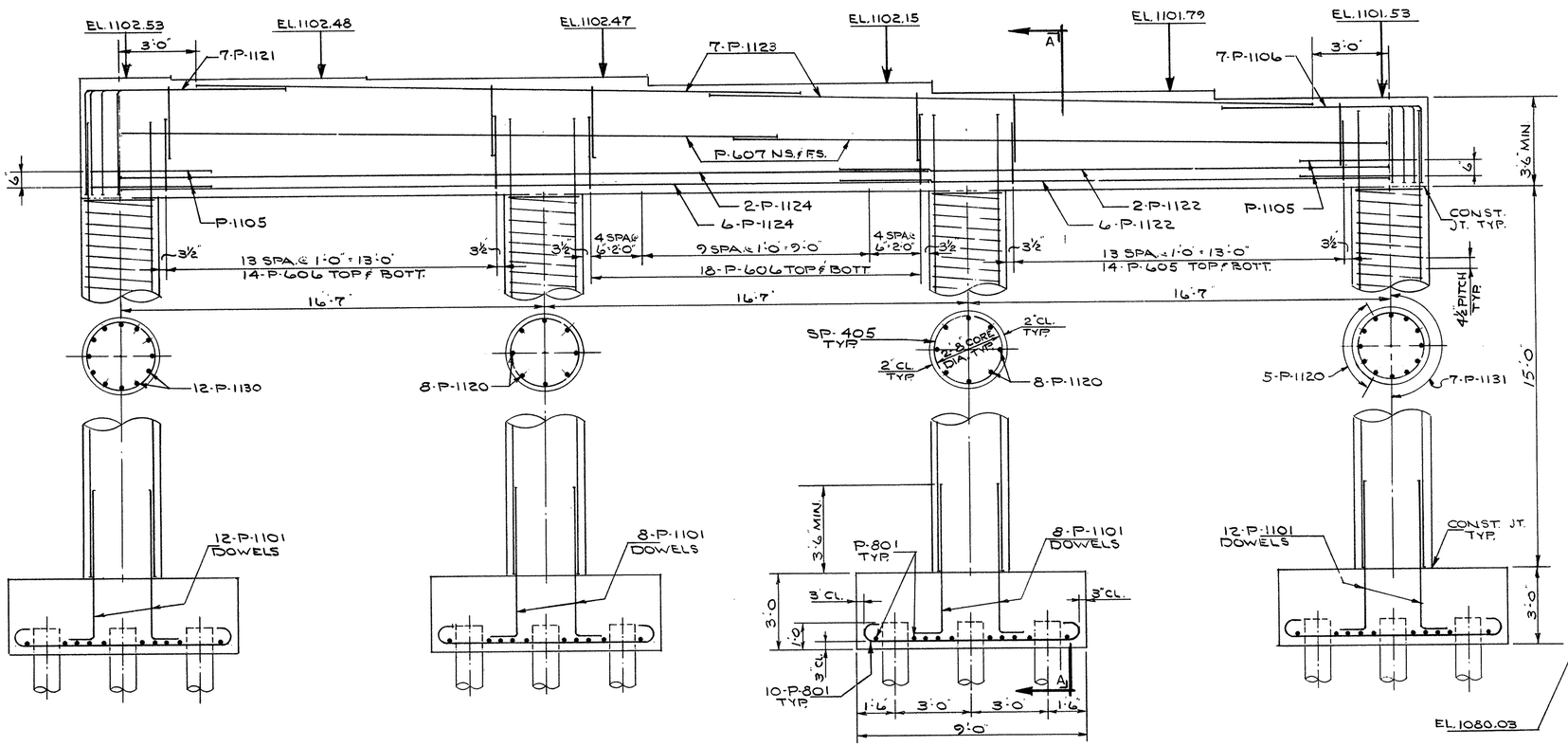
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

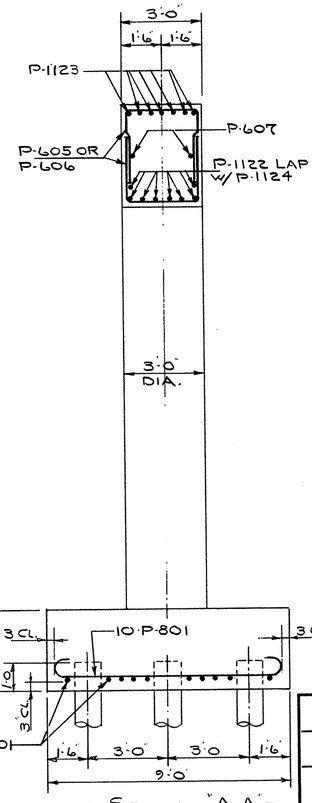
390
510



— PLAN — PIER #3-L —



— ELEVATION —



— SECTION "A-A" —

ALL PILES TO BE 12"ϕ CAST-IN-PLACE REINFORCED CONCRETE PILES.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER NO.3 LT. DETAILS

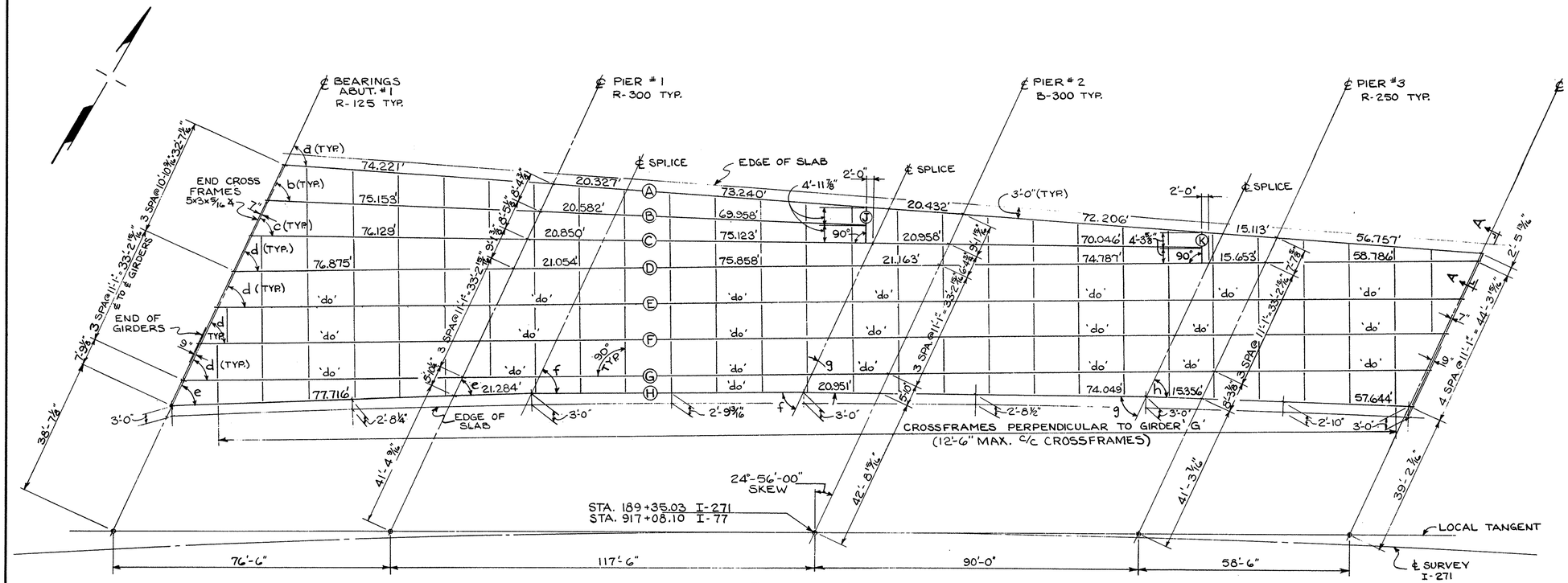
BRIDGE NO. SUM.-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JP		8/21	RBA	9-21-66	

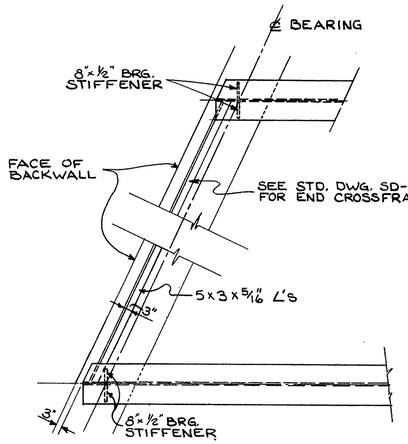
FED. RD.	STATE	PROJECT	
2	OHIO		

391
510

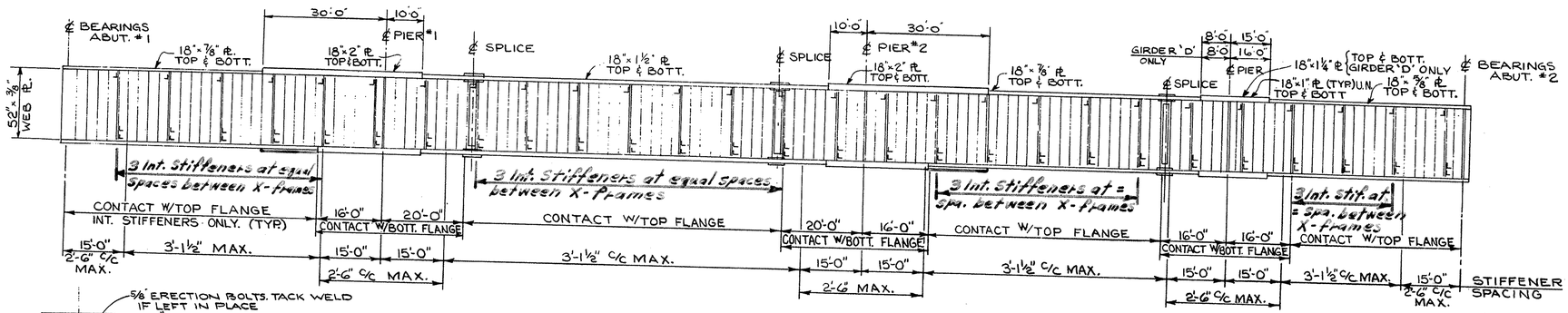
SUM. 271-2.98



FRAMING PLAN

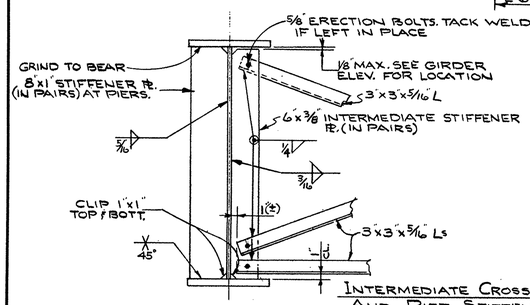


ABUTMENT BEARING STIFFENER DETAIL

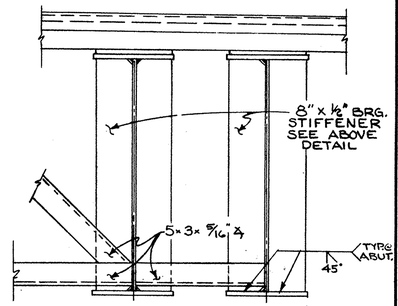


GIRDER ELEVATION

GIRDER H SHOWN ~ GIRDERS A, D, E, F, & G SIMILAR



INTERMEDIATE CROSSFRAME AND STIFFENER, AND PIER STIFFENER DETAILS.



SECTION ~ A-A

TABLE OF ANGLES

a	69°-10'-14"	e	63°-12'-13"
b	67°-22'-35"	f	64°-28'-24"
c	65°-40'-26"	g	65°-42'-50"
d	64°-28'-24"	h	66°-56'-02"

NOTE:

REFER TO SHEET Nº 403 FOR WELDING DETAILS NOT SHOWN.

WORK THIS SHEET WITH SHEET #392, #393 & #394

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

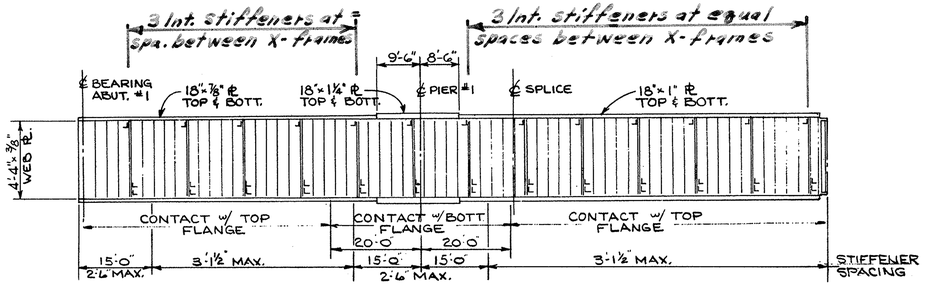
FRAMING PLAN
BRIDGE NO. SUM.-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JFP		3/29/66	RBH	4-21-66	10-6-67

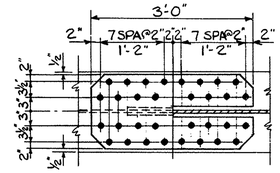
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

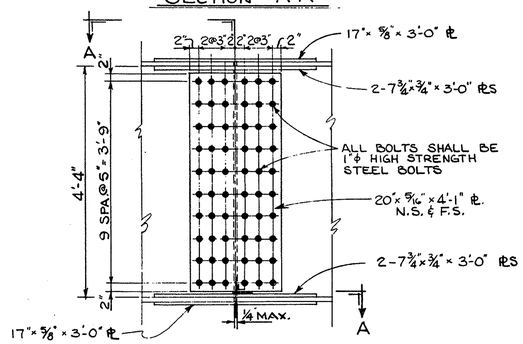
392
510



ELEVATION ~ GIRDER 'B'



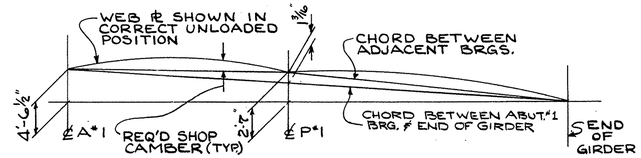
SECTION ~ A-A



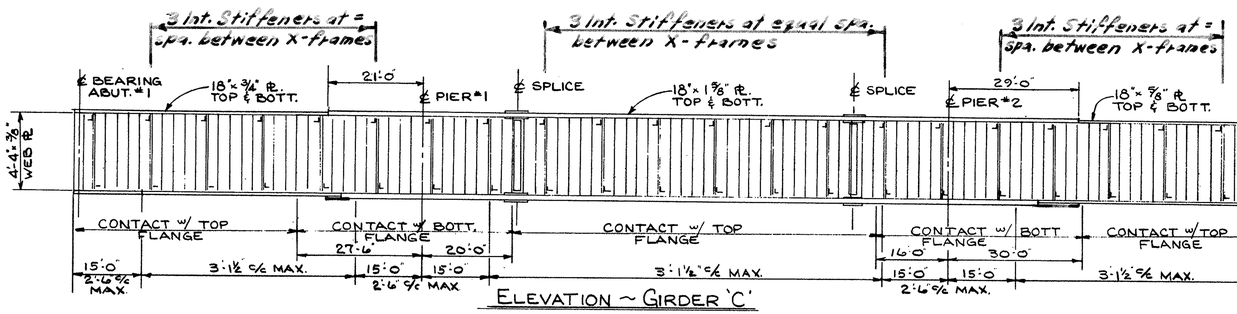
FIELD SPLICE DETAIL
GIRDER 'B'

DEFLECTION & CAMBER - GIRDER 'B'

LOCATION	SPAN #1			SPAN #2			
	¼ PT.	½ PT.	¾ PT.	SPLICE	¼ PT.	½ PT.	¾ PT.
DEFLECT. DUE TO WT. OF STEEL	.057"	.064"	.025"	.066"	.072"	.142"	.117"
DEFLECT. DUE TO REMAINING D.L.	.296"	.336"	.131"	.299"	.333"	.648"	.533"
ADJUSTMENT FOR VERT. CURVE	—	—	—	—	—	—	—
REQ'D SHOP CAMBER	3/8"	3/8"	3/16"	3/8"	7/16"	13/16"	5/8"



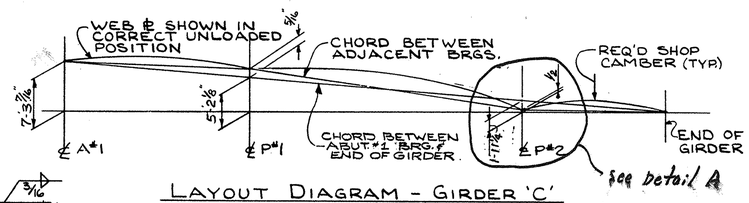
LAYOUT DIAGRAM - GIRDER 'B'
DIMENSIONS ARE GIVEN TO BOTTOM OF WEB ℄



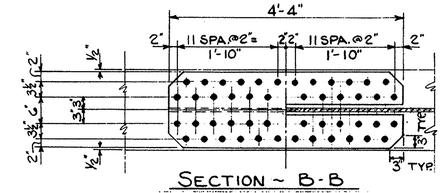
ELEVATION ~ GIRDER 'C'

DEFLECTION & CAMBER - GIRDER 'C'

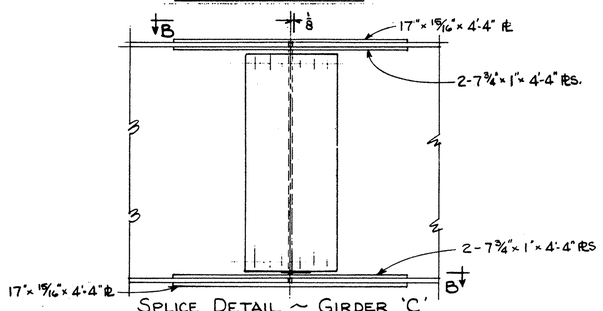
LOCATION	SPAN #1			SPAN #2					SPAN #3		
	¼ PT.	½ PT.	¾ PT.	SPLICE #1	¼ PT.	½ PT.	¾ PT.	HEADER	SPLICE #2	¼ PT.	½ PT.	¾ PT.
DEFLECT. DUE TO WT. OF STEEL	.046"	.036"	-.009"	.147"	.204"	.324"	.230"	.185"	.158"	-.043"	-.010"	.013"
DEFLECT. DUE TO REMAIN. D.L.	.174"	.134"	-.035"	.553"	.766"	1.216"	.870"	.695"	.592"	-.163"	-.037"	.049"
ADJUST. FOR VERTICAL CURVE	—	—	—	—	—	—	—	—	—	—	—	—
REQ'D SHOP CAMBER	¼"	3/16"	-1/16"	11/16"	1"	1 9/16"	1⅛"	⅞"	¾"	-3/16"	-1/16"	1/16"



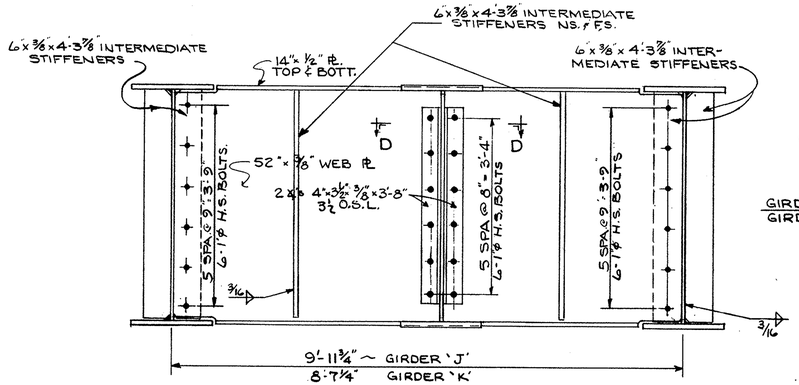
LAYOUT DIAGRAM - GIRDER 'C'
DIMENSIONS ARE GIVEN TO BOTTOM OF WEB ℄.



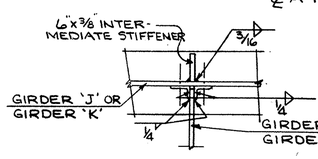
SECTION ~ B-B



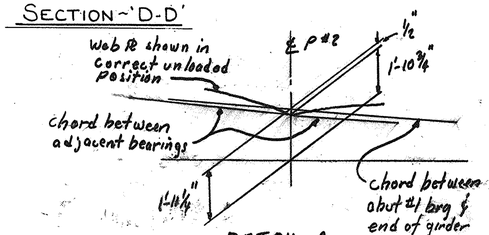
SPLICE DETAIL ~ GIRDER 'C'
FOR DETAILS NOT SHOWN SEE SPLICE DETAIL GIRDER 'B'



ELEVATION ~ GIRDER 'J' & 'K'



SECTION ~ 'D-D'



DETAIL A

ALL BOLTS - 1⅛ H.S. BOLTS (A-325) -
Rev 12-28-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN DETAILS

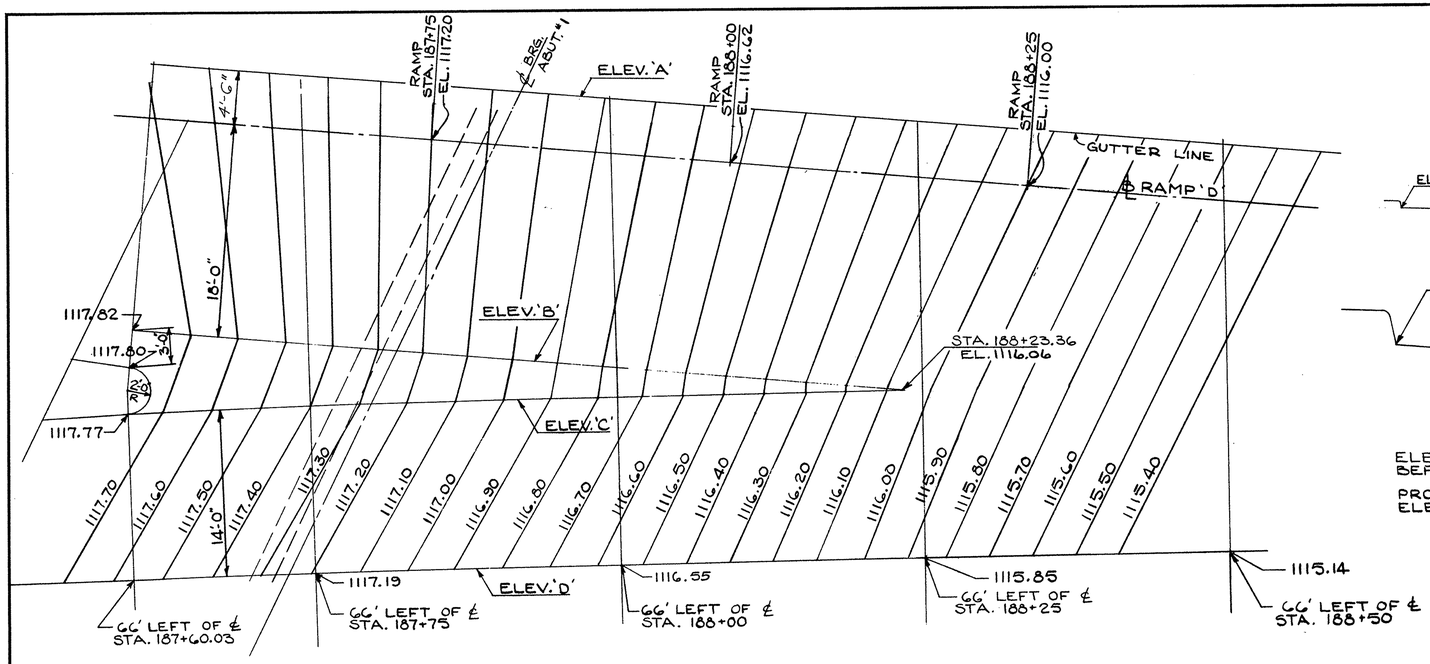
BRIDGE NO. SUM.-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N W	JFP		3/21/68	EDH 4-21-66		10-5-67

FED. RD.	STATE	PROJECT	
2	OHIO		

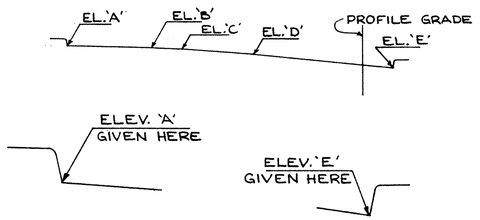
SUM.-271-2.98

393
510



PART PAVEMENT CONTOUR MAP

ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS



ELEVATIONS 'A' THRU 'E' ARE ELEVATIONS BEFORE CONCRETE IS PLACED

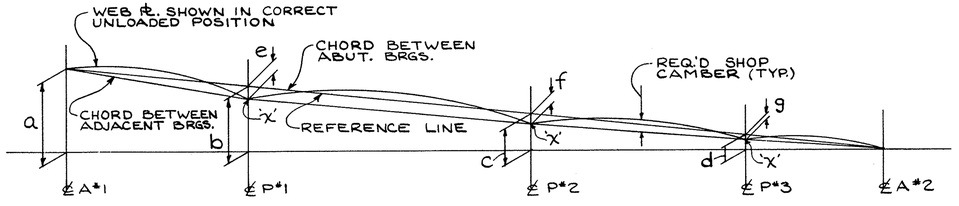
PROFILE GRADE IS FINISHED PAVEMENT ELEVATION

ELEVATION TABLE

STATION	PROFILE GRADE	ELEV.'A'	ELEV.'B'	ELEV.'C'	ELEV.'D'	ELEV.'E'
187+75	1116.16				1117.19	1115.98
188+00	1115.44	1116.91	1116.79	1116.78	1116.57	1115.25
+25	1114.73	1116.29			1115.85	1114.52
+50	1114.01	1115.63			1115.14	1113.82
+75	1113.30	1114.93			1114.48	1113.16
189+00	1112.58	1114.22			1113.79	1112.46
+25	1111.87	1113.51			1113.07	1111.71
+50	1111.15	1112.73			1112.30	1110.94
+75	1110.44	1111.93			1111.57	1110.23
190+00	1109.72	1111.17			1110.86	1109.53
+25	1109.01	1110.48			1110.16	1108.81
+50	1108.29	1109.72			1109.42	1108.08
+75	1107.58	1109.00			1108.73	1107.39
191+00	1106.86	1108.28			1108.00	——

DEFLECTION & CAMBER

LOCATION	SPAN #1												SPAN #2																				SPAN #3								SPAN #4								SPAN #2 SPAN #3 HEADERS		
POINT	¼ PT.				½ PT.				¾ PT.				SPLICE #1				¼ PT.				½ PT.				¾ PT.				SPLICE #2				¼ PT.				½ PT.				¾ PT.				SPLICE #3				¼ PT.				½ PT.				¾ PT.						
GIRDER	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	D	E-G	H	A	A	D
DEFLECTION DUE TO WT. OF STEEL	.040	.054	.052	.052	.025	.040	.044	.044	-.010	-.005	-.007	-.007	.151	.125	.128	.128	.202	.168	.171	.171	.336	.270	.275	.275	.222	.167	.171	.171	.151	.110	.116	.116	-.014	.017	.006	.006	.066	.081	.059	.059	.069	.069	.049	.049	.050	.046	.033	.033	.032	.014	.025	.025	.060	.038	.052	.052	.049	.035	.044	.044	.210	.067	.052
DEFLECTION DUE TO REMAINING D.L.	.146	.186	.200	.208	.090	.160	.169	.175	-.040	-.016	-.025	-.026	.549	.435	.490	.510	.738	.582	.650	.675	1.224	.930	1.050	1.090	.808	.573	.650	.675	.549	.390	.442	.460	-.054	.061	.022	.023	.240	.281	.225	.234	.252	.238	.189	.196	.180	.162	.125	.130	.118	.047	.097	.101	.218	.132	.198	.206	.177	.122	.167	.173	.765	.245	.178
ADJUSTMENT FOR VERT. CURVE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
REQUIRED SHOP CAMBER	3/16"	¼"	¼"	¼"	⅛"	3/16"	¼"	¼"	-1/16"	0"	0"	0"	11/16"	3/16"	5/8"	5/8"	13/16"	¾"	13/16"	⅞"	1 3/16"	1 3/16"	1 5/16"	1 3/8"	1"	¾"	13/16"	⅞"	1 1/16"	½"	9/16"	9/16"	-1/16"	1/16"	0"	0"	5/16"	3/8"	5/16"	5/16"	5/16"	5/16"	¼"	¼"	¼"	3/16"	⅛"	3/16"	⅛"	1/16"	⅛"	⅛"	¼"	3/16"	¼"	¼"	¼"	3/16"	3/16"	¼"	1"	5/16"	¼"



NOTE: ALL DIMENSIONS ARE TO BOTTOM OF WEB ℄.

LAYOUT DIAGRAM

FOR GIRDERS 'A' & 'D' THRU 'H'

GIRDER	a	b	c	d	e *	f *	g *
A	9'-3 3/8"	7'-2½"	4'-0 5/16"	1'-7"	+ 2 3/16"	+ 1⅛"	+ 7/16"
D	9'-5⅞"	7'-4 7/16"	4'-1⅜"	1'-7 1/16"	+ ⅜"	- ¼"	- ¼"
E	9'-6⅛"	7'-4⅝"	4'-1½"	1'-7½"	- 5/16"	- 1 3/16"	- 3/16"
F	9'-5¾"	7'-4 5/16"	4'-1 5/16"	1'-7 1/16"	-1"	- 1⅛"	- 1⅛"
G	9'-6 5/8"	7'-5"	4'-1 11/16"	1'-7 3/16"	- 1 5/16"	- 2"	- 1 3/16"
H	9'-8¾"	7'-6¼"	4'-2 1/16"	1'-7⅜"	- ¼"	- 3/16"	- ⅛"

* '+' INDICATES THAT POINT 'x' IS ABOVE THE REFERENCE LINE

'-' INDICATES THAT POINT 'x' IS BELOW THE REFERENCE LINE

SEE SHEET № 392 FOR LAYOUT DIAGRAMS OF GIRDERS 'B' & 'C'

REVISED 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

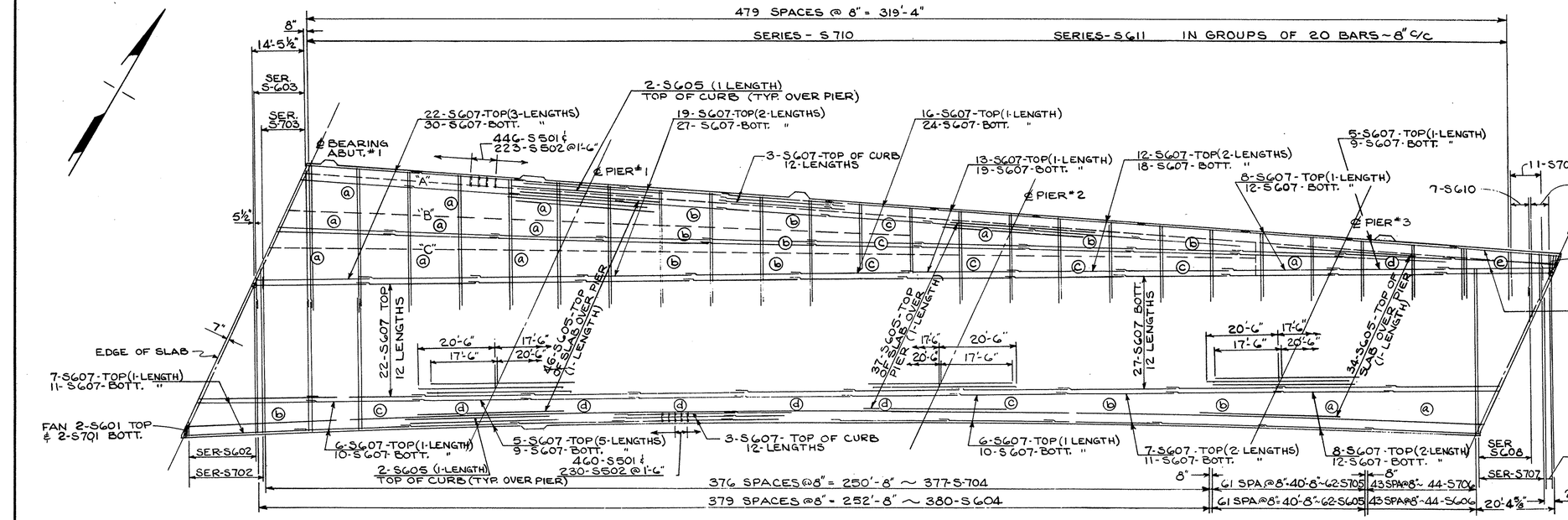
DEFLECTION—CAMBER AND BLOCKING DIAGRAM
BRIDGE NO. SUM-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.W.	J.F.P.		3/1/66	R.B.H.	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM. 271-2.98

394
510



SLAB REINFORCING PLAN

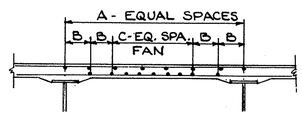
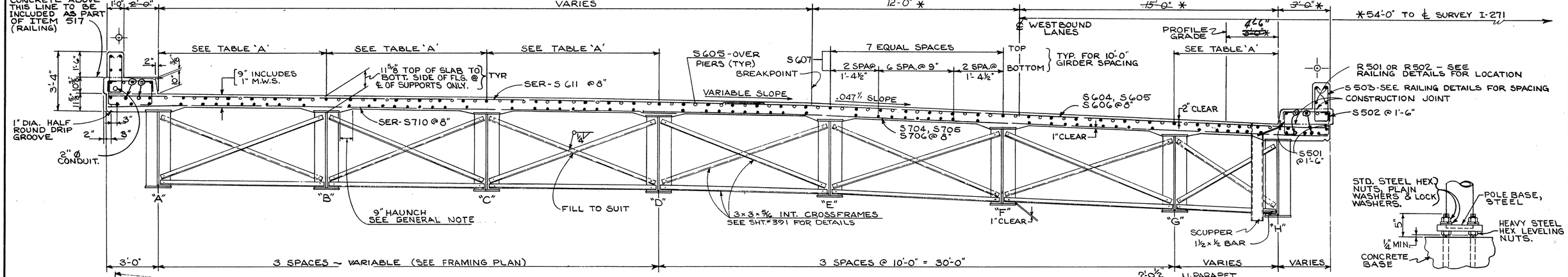


TABLE 'A'

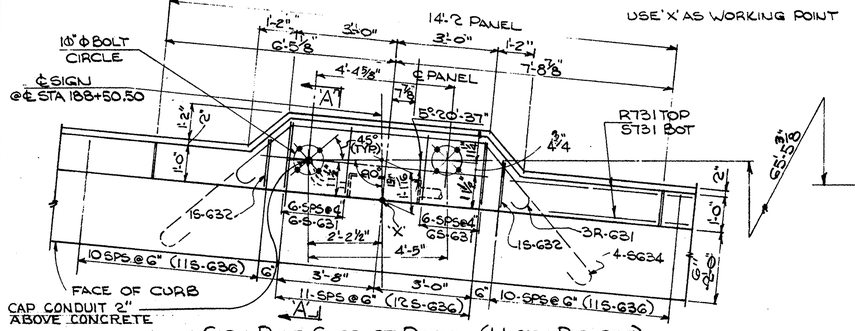
SPECIAL LONGITUDINAL BAR SPACING			
PANEL	A	B	C
a	7	1'-3"	6
b	6	1'-0"	5
c	5	10"	4
d	4	8"	3
e	2	0	3

NOTE:
DIMENSIONS GIVEN ARE PERPENDICULAR TO GIRDER 'D'. TRANSVERSE STEEL IS TO BE PLACED PERPENDICULAR TO GIRDER 'D'.

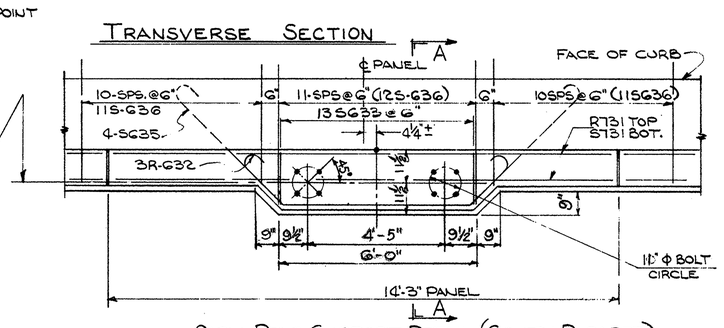
*DENOTES RADIAL DIMENSIONS.



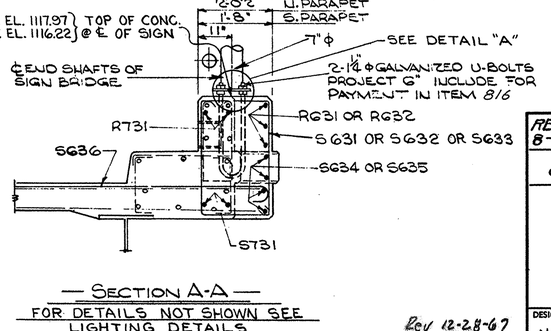
— DETAIL "A" —



SIGN POLE SUPPORT DETAIL (NORTH PARAPET)



SIGN POLE SUPPORT DETAIL (SOUTH PARAPET)



— SECTION A-A —
FOR DETAILS NOT SHOWN SEE LIGHTING DETAILS

Rev 12-28-67

Revised 7-28-67

REVISED 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers
Akron, Ohio

SLAB DETAILS

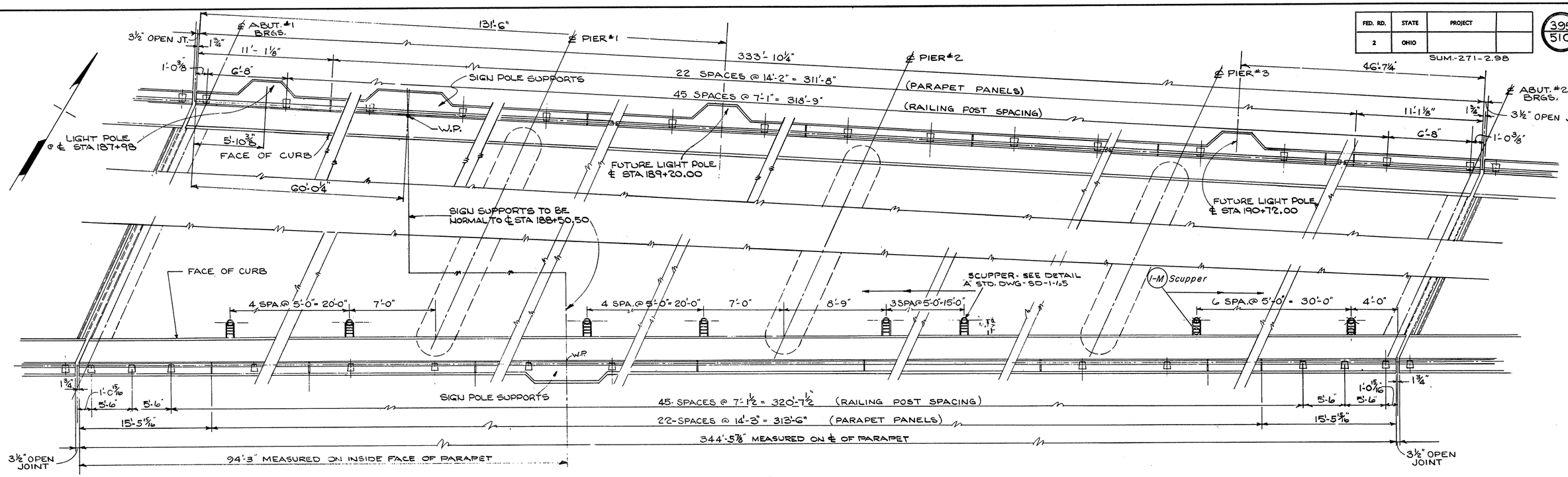
BRIDGE NO. SUM-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N W	JFP		9/21/66	RDH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

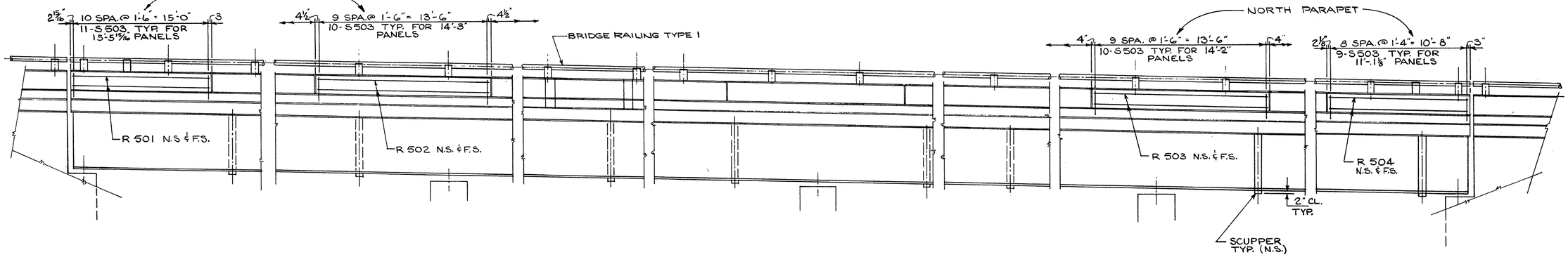
SUM.-271-2.98

395
510



– PLAN ~ LEFT STRUCTURE –
SCUPPERS IN SOUTH GUTTER ONLY

Scuppers: For Scuppers marked (I-M), see Type I Scupper – Modified, Sh 405.



ELEVATION ~ LEFT STRUCTURE
SOUTH PARAPET & RAILING SHOWN
NORTH PARAPET & RAILING SIMILAR EXCEPT AS NOTED

SEE SHT 394 FOR SIGN POLE SUPPORT DETAILS

FOR LIGHT POLE SUPPORT DETAILS SEE RAILING & DRAINAGE DWG. FOR BRIDGE SUM-271-0354

REVISED 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE NO. SUM-271-0358 L.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JFP		3/17	EBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

396
510

ABUTMENTS 1 & 2

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INC.	WEIGHT LBS.
A 501	100	8'-4"	3	5'-5"	1'-7"				869
A 502	15	7'-6"	1	1'-0"	6'-7"				117
A 503	45	8'-0"	1	1'-0"	7'-1"				375
A 504	100	7'-2"	3	3'-5"	2'-0"				747
A 505	40	21'-3"	ST						887
A 506	5	14'-2"	ST						74
A 507	17	10'-0"	ST						177
A 508	2	15'-0"	ST						31
A 510	5	13'-10"	ST						67
A 512	2	22'-2"	ST						46
A 513	42	19'-9"	ST						866
A 514	64	3'-6"	ST						234
A 515	64	6'-10"	ST						456
A 516	5	4'-0"	12	2'-0"	2'-0"	1'-9"			21
A 517	2	10'-0"	11	2'-0"	6'-0"	2'-0"	4'-3"		42
A 518	45	12'-0"	14	2'-7"	3'-2"	6"			563
A 519	56	5'-6"	5	8"	2'-2"	6"			321
A 520	39	2'-10"	3	1'-5"	10"				115
A 521	39	3'-0"	15	1'-0"	1'-5"	10"	2"		122
A 522	6	20'-4"	ST						127
A 523	2	20'-6"	16	20'-5"	9'-1"	3'-0"			43
A 524	20	6'-0"	ST						125
A 525	3	10'-10"	ST						33
A 526	5	12'-4"	ST						65
A 527	5	15'-9"	ST						82
A 528	2	12'-0"	ST						25
A 529	16	17'-1"	ST						285
A 530	6	19'-6"	ST						122
A 531	2	19'-4	16	19'-3"	6'-8"	3'-0"			40
A 532	30	5'-0"	ST						156
A 533	2	5'-7"	19	2'-0"	1'-9"	7			11
A 534	3	4'-6	19	2'-0"	8"	3"			15
A 535	4	9'-0"	11	2'-0"	5'-0"	2'-0"	3'-0"		38
A 536	40	27'-1"	ST						1130
A 537	2	13'-4"	ST						28
A 538	2	16'-8"	16	16'-7"	4'-0"	3'-0"			35
A 539	5	11'-7"	ST						60
A 540	2	16'-6"	16	16'-5"	5'-4"	3'-0"			34
A 541	18	7'-10"	1	1'-0"	6'-11"				147
A 542	22	8'-7"	1	1'-0"	7'-8"				197
A 543	5	4'-0"	12	2'-0"	2'-0"	1'-10½			21
A 544	2	3'-3"	1	1'-4"	2'-0				7
A 545	2	4'-5"	3	2'-0"	1'-4"				9
A 546	2	5'-10"	19	2'-0"	2'-0"	9½			13
A 547	3	4'-6"	19	2'-0"	8"	3½			15
A 548	3	11'-3"	ST						35
A 601	15	14'-4"	4	6'-7"	5'-5"	2'-7"			323
A 602	45	14'-10	4	7'-1"	5'-5"	2'-7"			1003
A 603	108	19'-3"	7	6'-9"	1'-5"	8'-0"	11"		3123
A 604	12	17'-2"	3	1'-5"	8'-0"				309
A 605	3	7'-3	1	1'-0"	6'-4"				33
A 606	10	18'-11"	3	1'-2"	9'-0"				284
A 607	3	8'-1"	1	1'-0"	7'-2"				36
A 608	18	19'-9"	3	1'-2"	9'-5"				534
A 609	8	21'-5"	3	1'-2"	10'-3"				257
A 610	2	8'-10"	1	1'-0"	7'-11"				27
A 611	18	14'-8"	4	6'-11"	5'-5"	2'-7"			397
A 612	22	15'-5"	4	7'-8"	5'-5"	2'-7"			509
A 613	3	7'-10"	1	1'-0"	6'-11"				36
A 801	21	29'-0"	ST						1626
A 802	6	16'-10"	ST						270
A 803	3	13'-0"	ST						104
A 804	3	12'-0"	ST						96
A 805	3	13'-8"	ST						109
A 806	6	9'-8	ST						155
A 807	3	14'-3"	ST						114
A 808	21	28'-7"	ST						1603
TOTAL ABUTMENTS 1 & 2									19,978 LBS.

PIERS 1, 2 & 3

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INC.	WEIGHT LBS.
P 301	22	7'-2"	20						59
P 501	54	7'-5"	3	2'-8"	2'-6"				418
P 502	20	7'-9"	3	2'-8"	2'-8"				162
P 601	2	38'-10"	ST						117
P 602	2	26'-0"	ST						78
P 603	2	17'-7"	ST						53
P 604	2	36'-11"	ST						111
P 605	134	7'-9"	3	2'-8"	2'-8"				1560
P 606	80	8'-5"	3	2'-8"	3'-0"				1011
P 607	4	25'-10"	ST						155
P-608	32	8'-1"	3	2'-8"	2'-10"				389
P 801	80	10'-8"	2	1'-1"	8'-6"				2278
P 901	140	11'-0"	2	1'-3"	8'-6"				5236
P 902	60	12'-0"	2	1'-3"	9'-6"				2448
P 903	7	22'-4"	ST						532
P1101	216	7'-0"	1	1'-0"	6'-3"				8033
P1102	16	11'-0"	ST						935
P1103	33	25'-0"	ST						4383
P1104	23	23'-6"	ST						2872
P1105	12	10'-6"	9	3'-6"	3'-6"	1'-2⅛			699
P1106	28	10'-10"	1	3'-3"	7'-10"				1612
P1107	9	38'-10"	ST						1056
P1108	7	38'-7"	1	3'-0"	35'-10"				1435
P1109	7	19'-0"	1	2'-9"	16'-6"				706
P1110	7	26'-0"	ST						967
P1111	4	20'-0"	ST						425
P1112	7	17'-7"	ST						654
P1113	4	15'-6"	ST						329
P1114	7	14'-6"	ST						539
P1115	9	36'-11"	ST						1765
P1116	7	36'-0"	ST						1339
P1117	23	21'-3"	ST						2597
P1118	33	20'-4"	ST						3565
P1119	16	8'-8"	ST						737
P1120	23	18'-0"	ST						2200
P1121	7	11'-10"	1	4'-3"	7'-10"				440
P1122	8	21'-8"	ST						921
P1123	14	23'-8"	ST						1760
P1124	8	31'-8"	ST						1346
P-1125	7	24'-1"	1	1'-0"	25'-4"				970
P-1126	9	24'-7"	1	1'-0"	23'-10"				1175
P-1127	9	22'-3"	1	1'-0"	21'-6"				1064
P-1128	7	6'-6"	1	1'-0"	5'-9"				242
P-1129	7	21'-4"	1	1'-0"	20'-7"				793
P-1130	12	19'-0"	ST.						1211
P-1131	7	18'-9"	1	1'-0"	18'-0"				697
								SPIRALS =	4689
TOTAL PIERS (INCLUDING SPIRALS) 67,563 LBS.									

SUPERSTRUCTURE

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INC.	WEIGHT LBS.
S 501	906	2'-1"	3	1'-4"	C"				1969
S 502	453	1'-9"	3	1'-0"	6"				827
S 503	480	5'-7"	5	8"	2'-2"	5			2795
S521	6	11'-5"	21	2'-0"	11'-11½	2'-3"	2'-8½		71
S601	5	5'-0"	ST						38
SERIES OF S 602	1 SET OF 26 BARS	VARIES 39'-8 TO 6'-4"	ST					1'-4"	899
SERIES OF S 603	1 SET OF 22 BARS	VARIES 37'-3 TO 8'-11"	ST					1'-5"	763
S 604	380	35'-6"	ST						20,262
S 605	191	38'-0"	ST						10902
S 606	44	38'-9"	ST						2,561
S 607	1278	30'-9"	ST						59,026
SERIES OF S 701	5	5'-0"	ST						51
SERIES OF S702	1 SET OF 29 BARS	VARIES 44'-0" TO 6'-8"	ST					1'-4"	1502
SERIES OF S703	1 SET OF 19 BARS	VARIES 32'-5 TO 7'-0"	ST					1'-5"	765
S704	377	40'-8"	ST						31,337
S705	62	43'-2"	ST						5470
S706	44	44'-1"	ST						3965
SERIES OF S707	1 SET OF 27 BARS	VARIES 43'-6 TO 7'-6"	ST					1'-4"	1407
SERIES OF S708	1 SET OF 6 BARS	VARIES 10'-3" TO 6'-0"	ST					1'-5"	66
S709	11	7'-0"	ST						157
SERIES OF S710	24 SETS OF 20 BARS	VARIES 33'-0" TO 8'-1"	ST					1'-1"	20,154
S731	4	17'-0"	ST						139
TOTAL SUPERSTRUCTURE 186,610 LBS.									

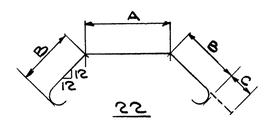
RAILING ⊗

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INC.	WEIGHT LBS.
R501	8	15'-2"	ST						1765
R502	88	13'-11"	ST						1339
R503	88	13'-10"	ST						2597
R504	8	10'-9"	ST						3565
R505	4	20'-0"	ST						737
R506	4	19'-4"	ST						2200
R507	8	16'-9"	ST						440
R508	12	4'-2"	18	SEE DIAGRAM					921
R509	8	5'-4"	17	SEE DIAGRAM					1760
R521	6	11'-5"	21	2'-0"	1'-11½	2'-3"	2'-8½		1346
R522	6	11'-0"	21	3'-0"	6⅝	3'-9"	9"		970
RG31	12	10'-0"	22	5'-2"	1'-10"	8"			1175
RG32	3	9'-0"	22	5'-2"	1'-4"	8			1064
R731	4	13'-10"	ST						242

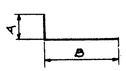
SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP 401	3	2'-8"	22'-0"	4½"	62	1025
SP 402	2	2'-8"	20'-6"	4½"	58	639
SP 403	2	2'-8"	18'-3⅜	4½"	52	573
SP 404	3	2'-8"	17'-4"	4½"	49	810
SP 405	4	2'-8"	15'-0"	4½"	43	947
SPACERS						695
TOTAL SPIRALS						4689 #

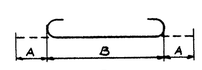
GRAND TOTAL 274,151 LBS



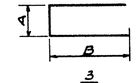
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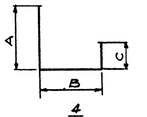
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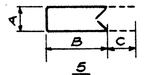
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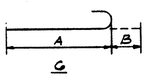
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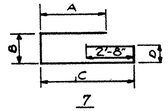
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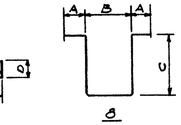
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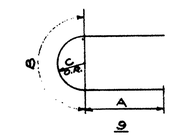
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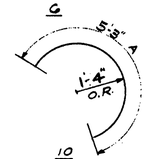
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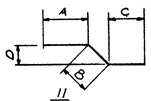
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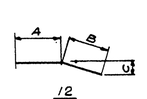
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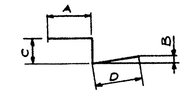
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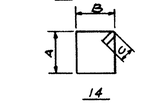
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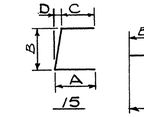
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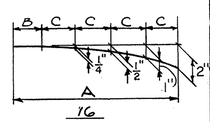
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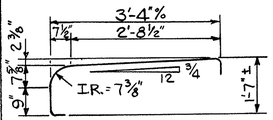
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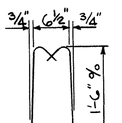
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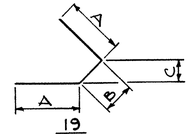
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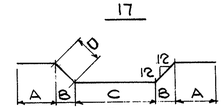
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REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

REPLACEMENT BARS

MARK	NºREQD.	LENGTH	TYPE
RE-301	1	2'-2"	20
RE-401	1	5'-3"	10
RE-501	1	5'-6"	ST.
RE-601	7	6'-0"	ST.
RE-701	4	6'-3"	ST.
RE-801	1	6'-6"	ST.
RE-901	1	6'-10"	ST.
RE-1001		7'-3"	ST.
RE-1101	3	7'-9"	ST.

⊗RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT

REVISED 7-28-67

REVISED 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
AKRON, OHIO

REINFORCING SCHEDULE

BRIDGE NO. SUM.-271-0358 L.

I-271 OVER I-77

SUMMIT COUNTY

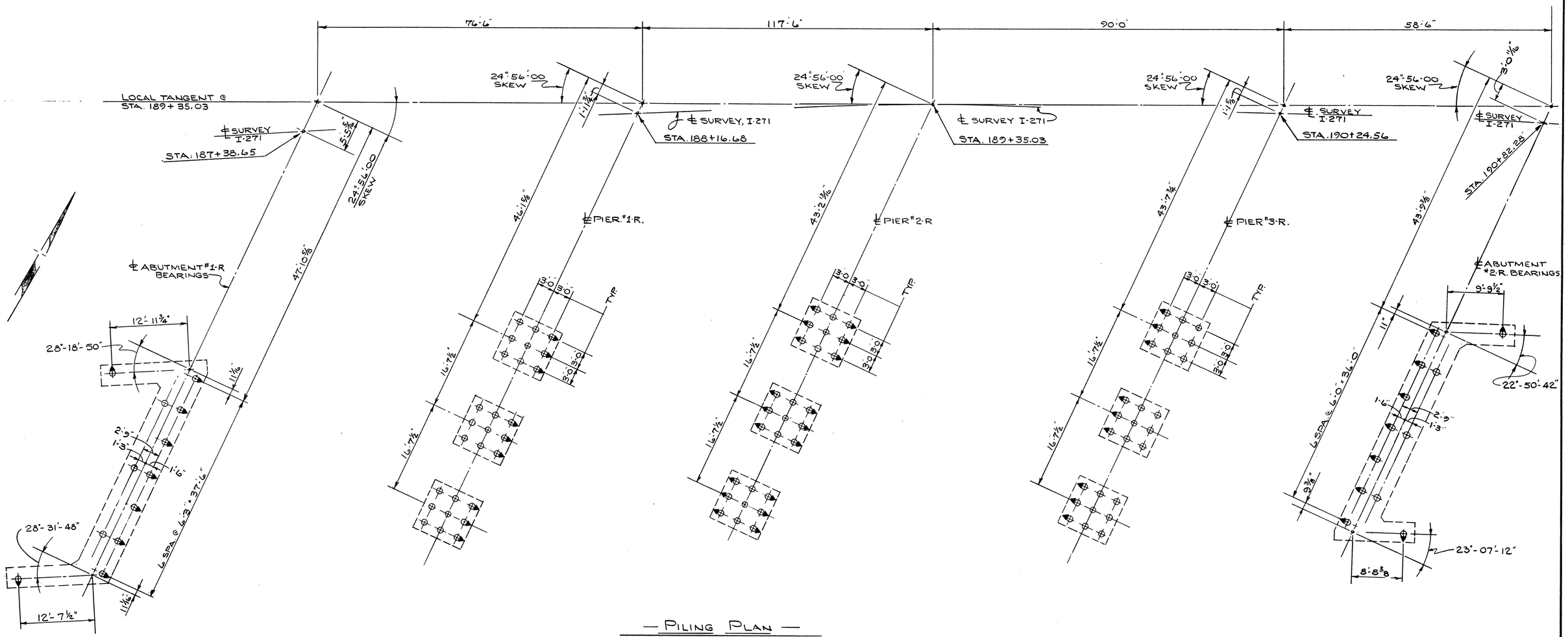
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JFP		4/26/66	[illegible]	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

397
510

SUM.-271-2.98



— PILING PLAN —

PILE CUT-OFF ELEVATIONS

ABUTMENT #1-R	1106.04
PIER #1-R	1081.97
PIER #2-R	1082.84
PIER #3-R	1082.26
ABUTMENT #2-R	1095.25

ALL PILES TO BE 12℄ CAST-IN-PLACE REINFORCED CONCRETE PILES.
℄ INDICATES DIRECTION OF 1:4 BATTER OF PILES.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PILING PLAN

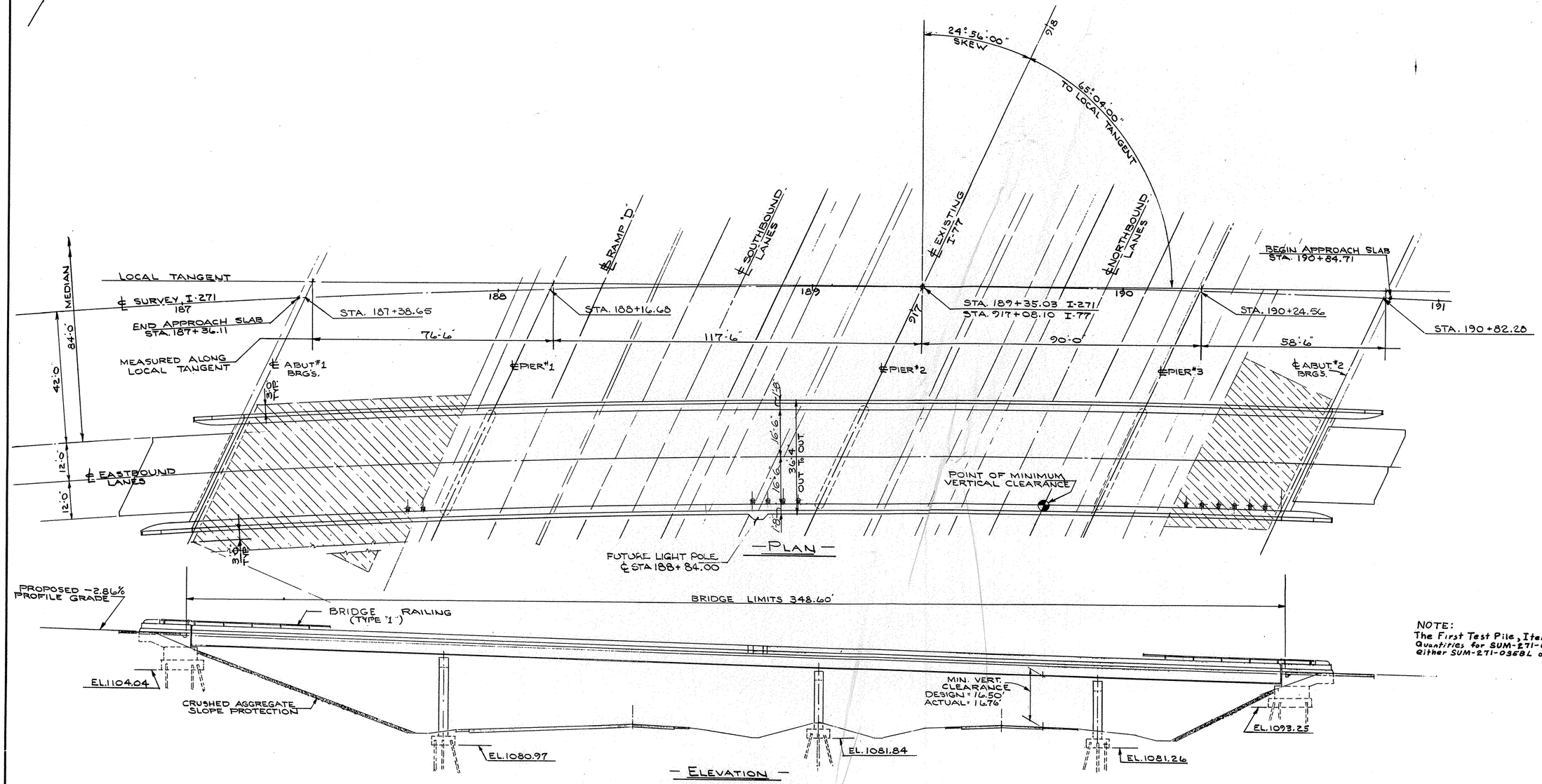
BRIDGE NO. SUM-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N W	LNP		3/1/66	RJH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

397A
510

SUM.-271-2.98



NOTE:
The First Test Pile, Item 505 in the Estimated Quantities for SUM-271-0358L may be driven at either SUM-271-0358L or SUM-271-0358R.

— ESTIMATED QUANTITIES (RIGHT STRUCTURE)

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
503	513	CU.YDS.	UNCLASSIFIED EXCAVATION		278	235	
507	2870	LIN. FT.	12"ϕ CAST-IN-PLACE REIN. CONC. PILES		840	2030	
509	164,368	LBS.	REINFORCING STEEL	111,556	12,972	39,840	
511	419	CU. YDS.	CLASS 'C' CONC. SUPERSTRUCTURE	419			
511	121	CU. YDS.	CLASS 'E' CONC. ABUTS ABOVE FTG'S.		121		
511	85	CU. YDS.	CLASS 'C' CONC. PIERS ABOVE FTG'S.			85	
511	157	CU. YDS.	CLASS 'E' CONC. PIER & ABUT. FTGS.		76	81	
513	399,784	LBS.	STRUCTURAL STEEL	399,784			
514	399,784	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	399,784			
517	767.03	LIN. FT.	BRIDGE RAILING TYPE 1	692.72	74.31		
518	35	CU. YDS.	POROUS BACKFILL		35		
518	12	EACH	SCUPPERS (INCLUDING SUPPORTS)	12			
518	64	LIN. FT.	6"- PERFORATED HELICAL C.M.P. 707.06 INCLUDING SPECIALS		64		
518	55	LIN. FT.	6" HELICAL C.M.P. 707.06 NON-PERFORATED		55		
601	677	SQ. YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		677		
625			LIGHTING QUANTIES, SEE SHEET 346				
808	419	Units	WATER RED. SET RET. ADMIXTURE	419			
825	1516	SQ.YDS.	CONCRETE SURFACE TREATMENT				1630
828	67	LIN. FT.	JOINT SEALER (end dam)		67		

SEE SHEET 368 FOR GENERAL NOTES

Revised 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

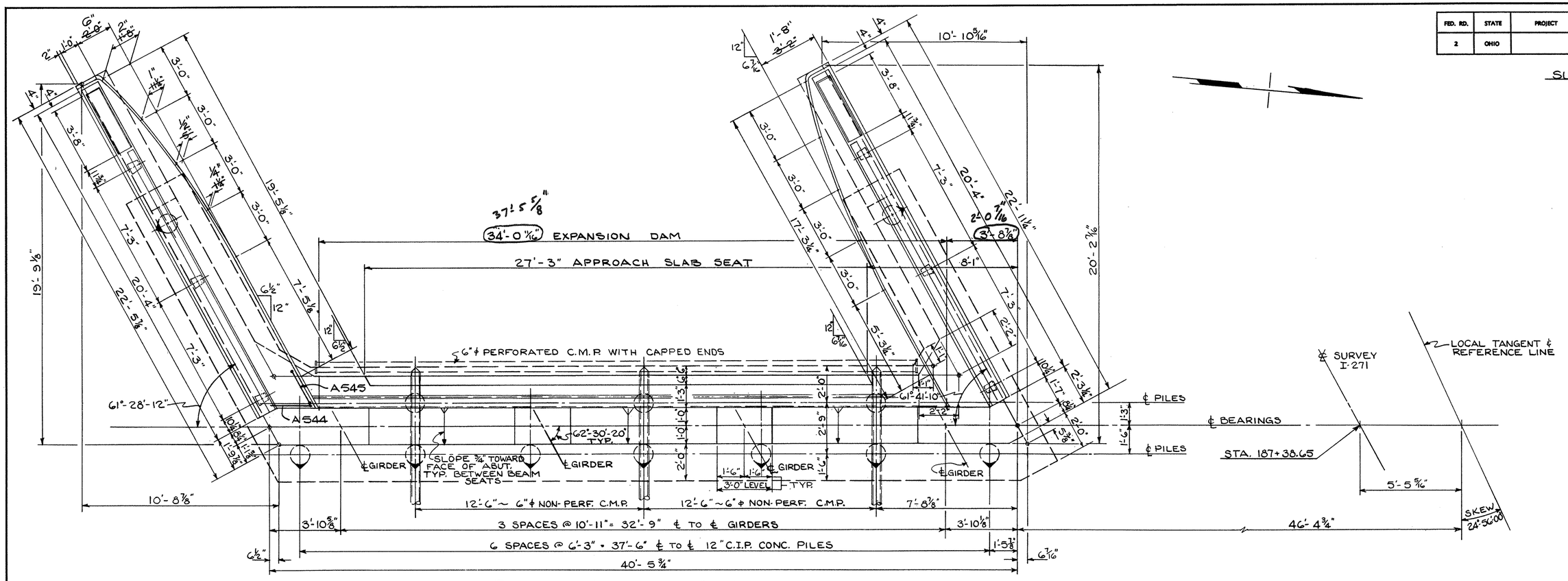
BRIDGE NO. SUM-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.W.	J.N.P.		CWM 3&4/66	R.D.H.	4-21-66	

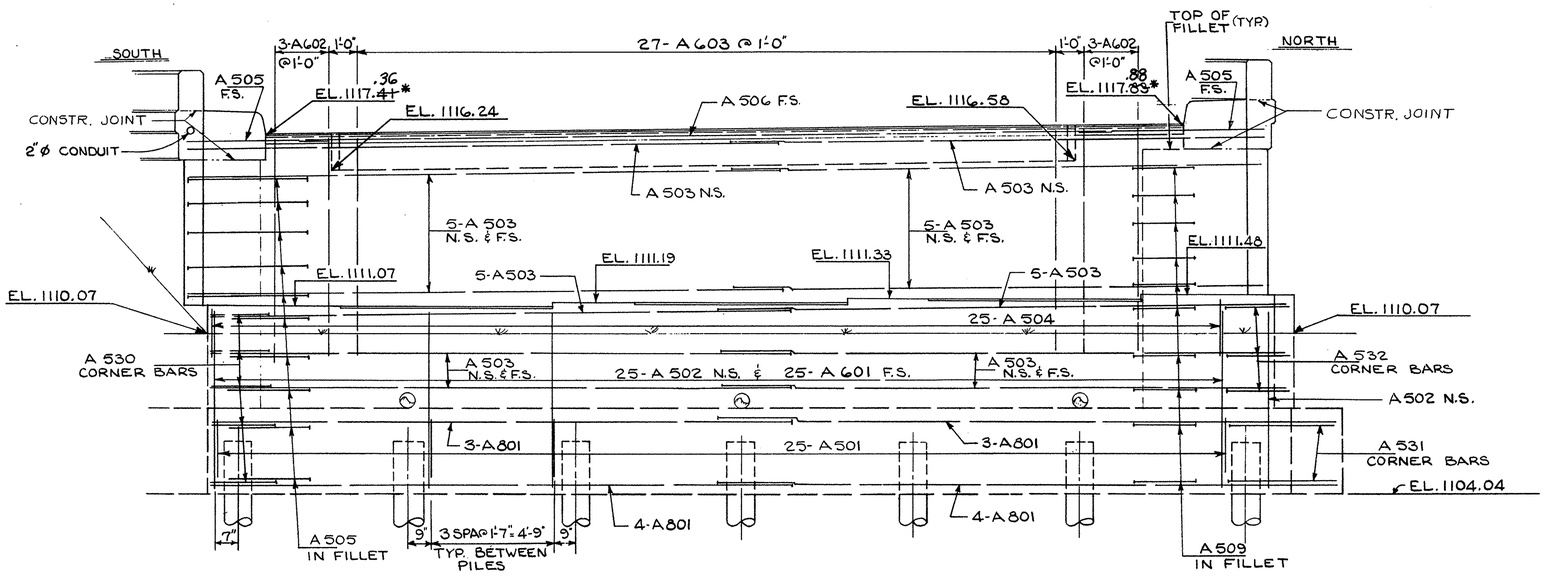
FED. RD.	STATE	PROJECT	
2	OHIO		

398
510

SUM. 271-2.98



PLAN ~ ABUTMENT #1 RIGHT



ELEVATION ~ ABUTMENT #1 RIGHT

* INDICATES ELEVATION GIVEN TO HEEL OF ANGLE

REVISED 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO.1

BRIDGE NO. SUM-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N W	JFP		3/21/66	RBH	4-21-66	

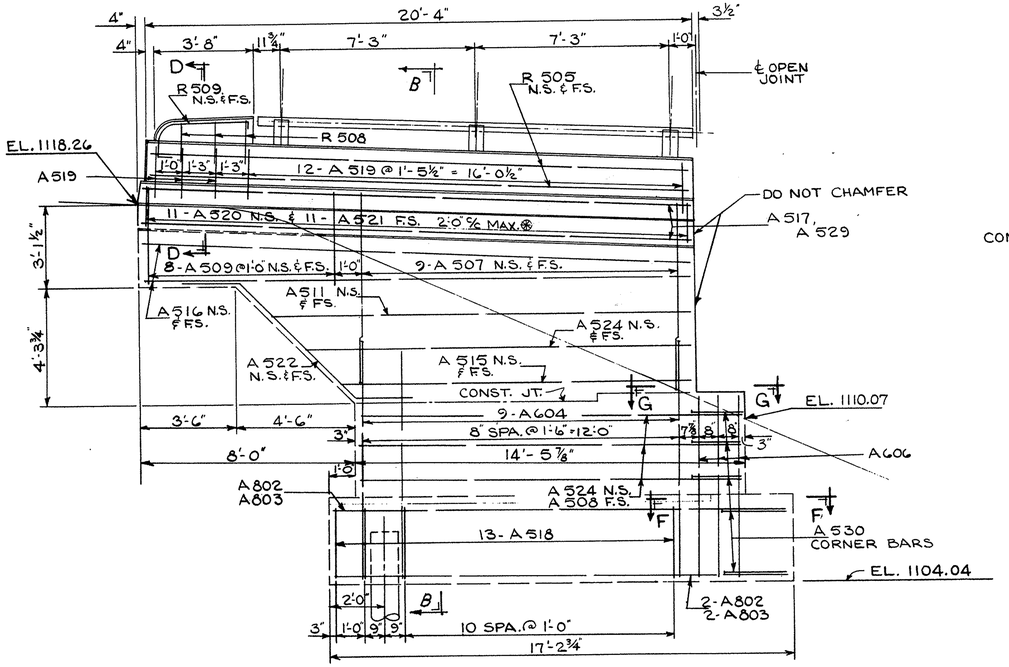
Rev 12-28-67

FED. RD.	STATE	PROJECT	
2	OHIO		

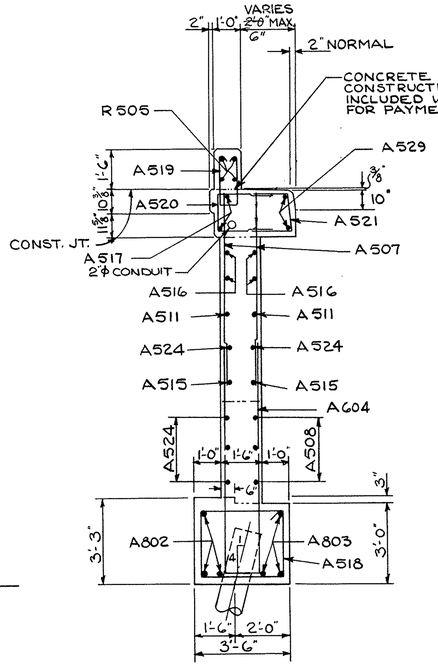
399
510

SUM-271-2.98

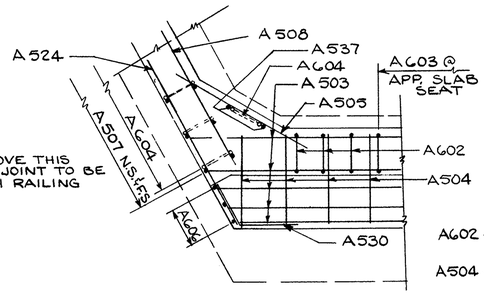
FAN BARS A 520 & A 521 IN CURB WHERE NECESSARY TO GET 2" COVER



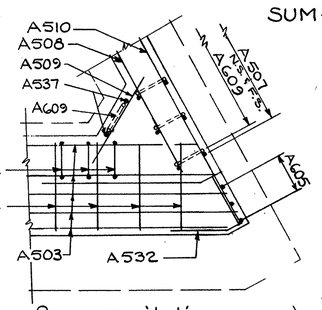
ELEVATION ~ SOUTH WINGWALL ~ ABUT. # 1-R



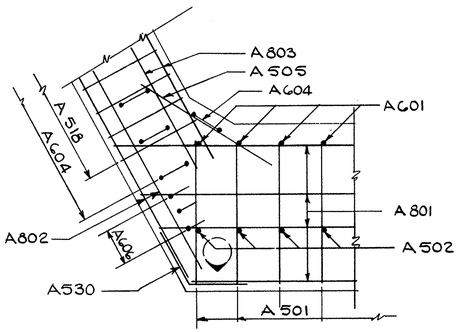
SECTION 'B-B'



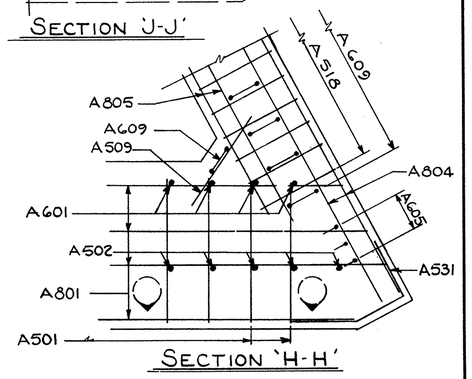
SECTION 'G-G'



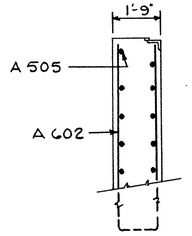
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SECTION 'F-F'

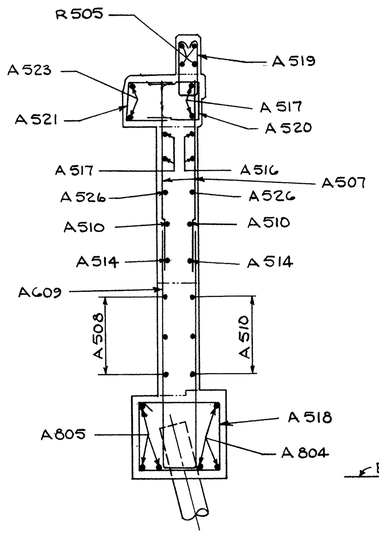


SECTION 'H-H'



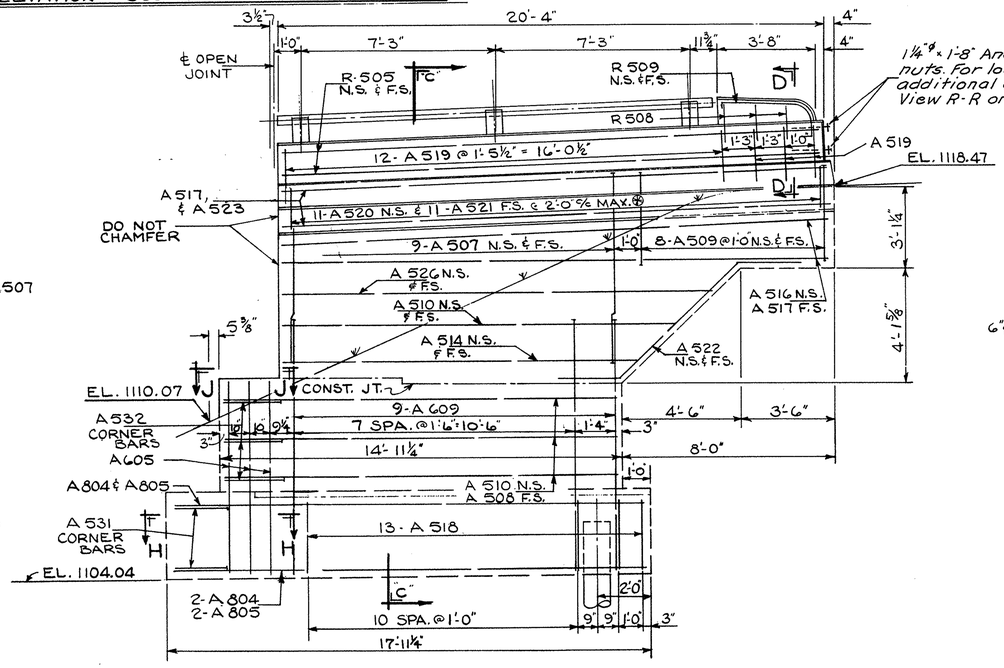
SECTION 'E-E'

SEE SECTION 'A-A' FOR DETAILS NOT SHOWN

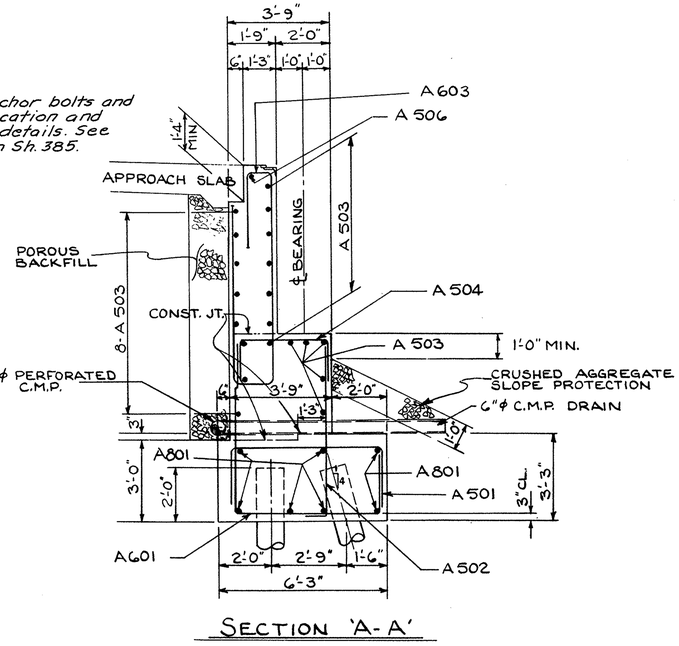


SECTION 'C-C'

SEE SECTION 'B-B' FOR DETAILS NOT SHOWN



ELEVATION ~ NORTH WINGWALL ~ ABUT. # 1-R



SECTION 'A-A'

SEE SHEET No. 401 FOR SECTION 'D-D'

Rev. 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO. 1 DETAILS

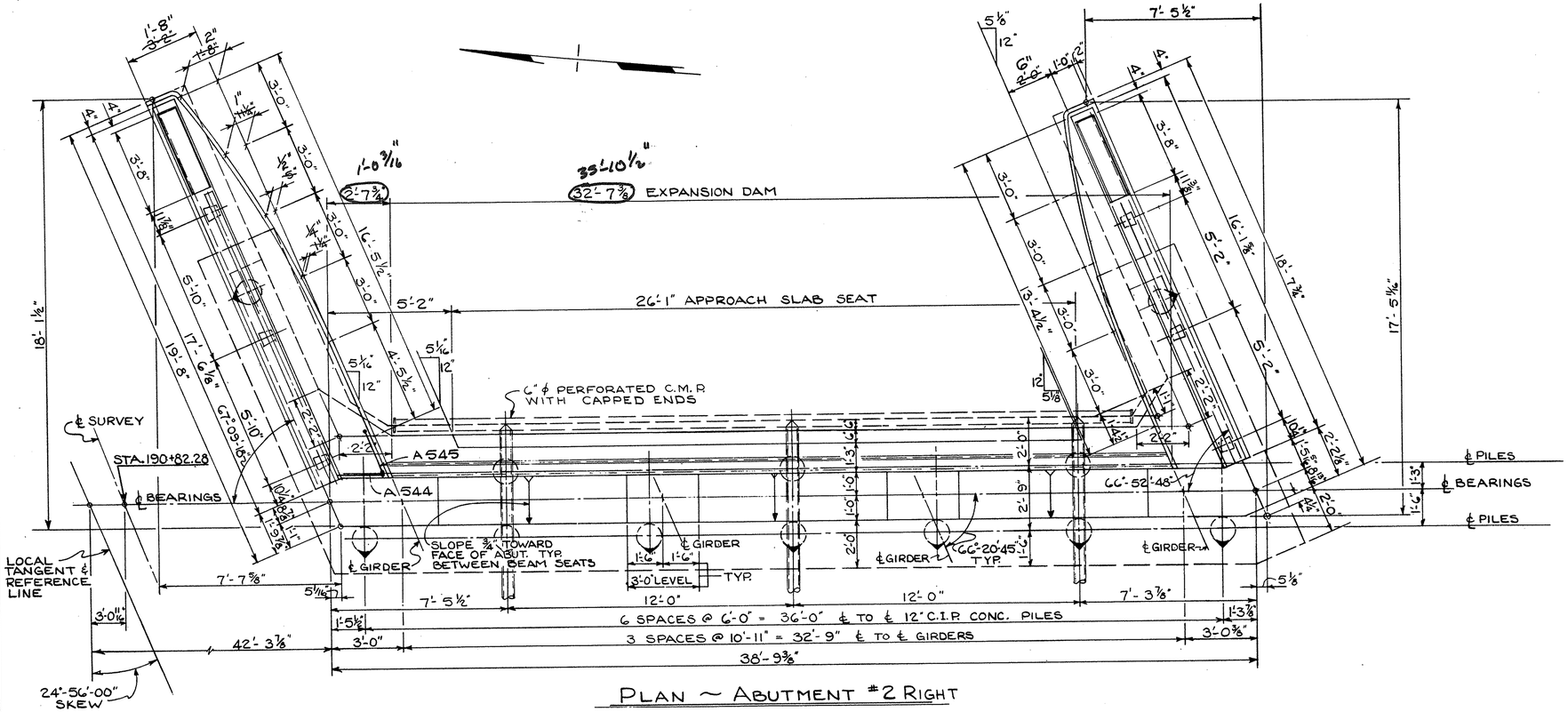
BRIDGE NO. SUM-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N W	JFP		3/15/66	RDH	4-21-66	

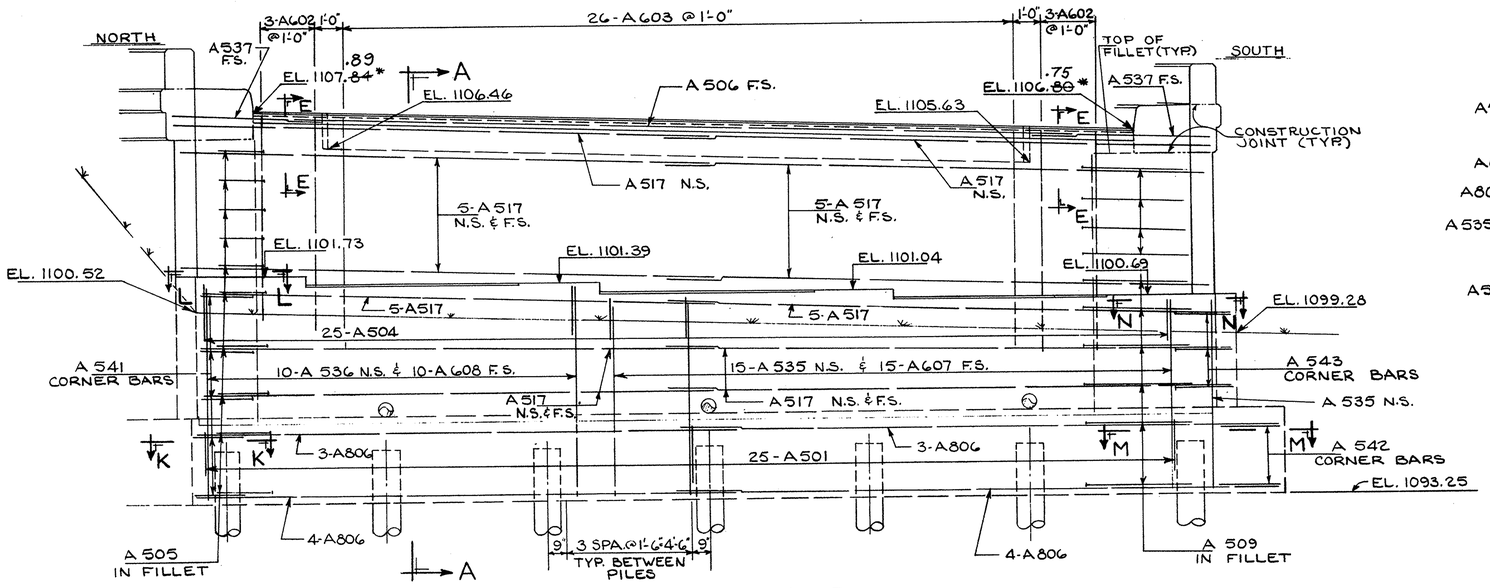
FED. RD.	STATE	PROJECT	
2	OHIO		

400
510

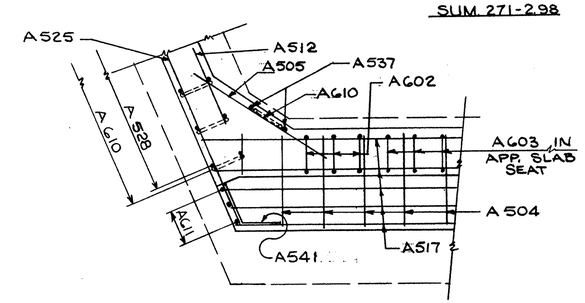
SUM. 271-2.98



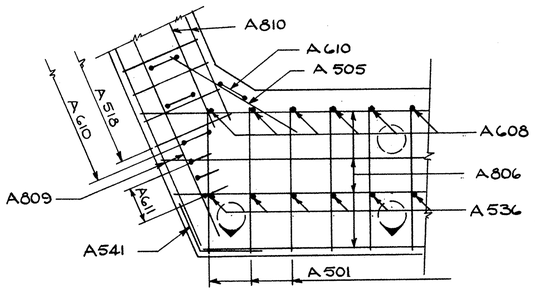
PLAN ~ ABUTMENT #2 RIGHT



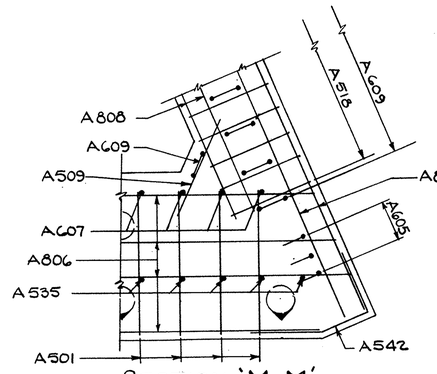
ELEVATION ~ ABUTMENT #2 RIGHT



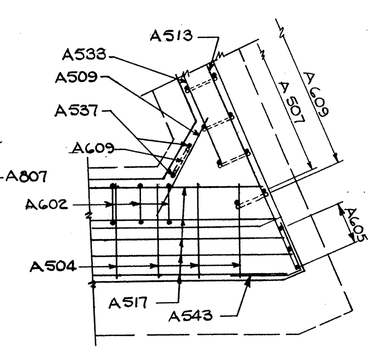
SECTION 'L-L'



SECTION 'K-K'



SECTION 'M-M'



SECTION 'N-N'

SEE SHEET No. 401 FOR SECTIONS 'A-A' & 'E-E'

* INDICATES ELEVATION GIVEN TO HEEL OF ANGLE

Revised 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO.2

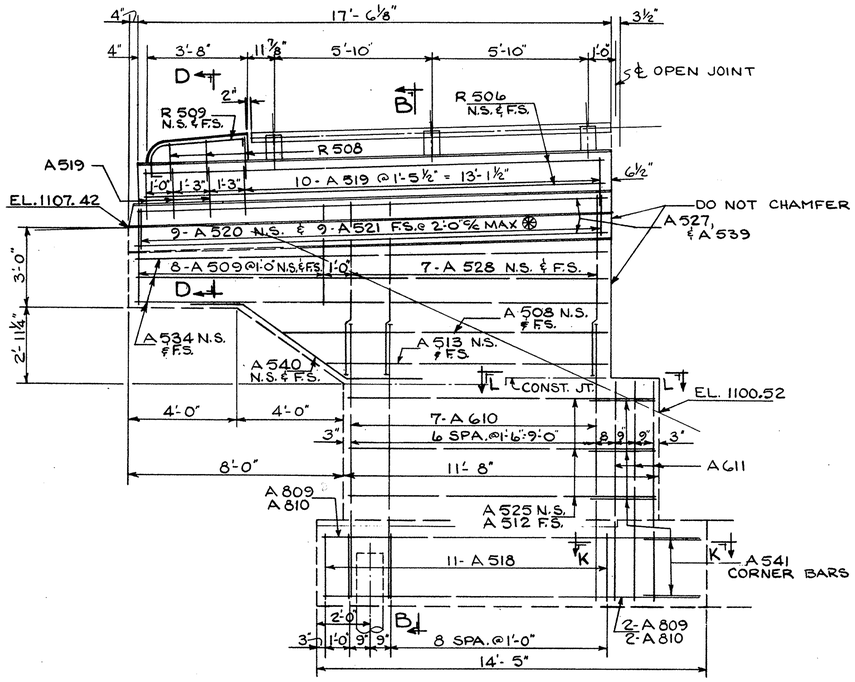
BRIDGE NO. SUM-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MW	JFP		2-21-66	RSH	4-21-66	12-28-67

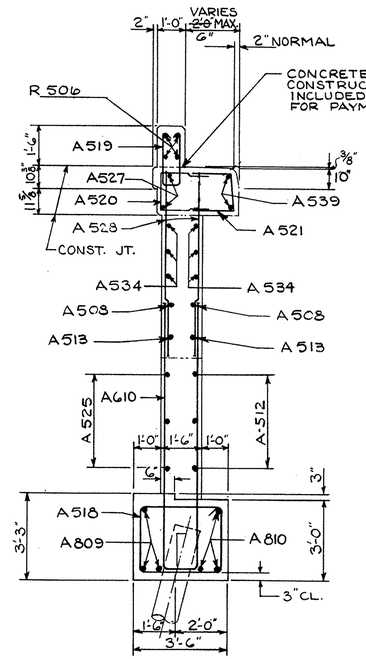
FED. RD.	STATE	PROJECT	
2	OHIO		

401
510

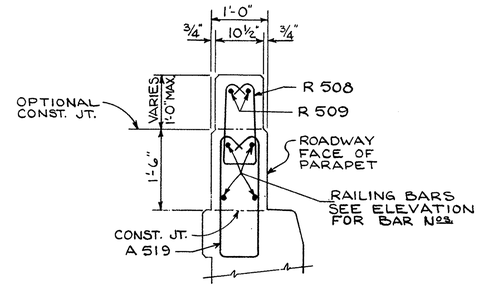
SUM.-271-2.98



ELEVATION ~ NORTH WINGWALL - ABUT. #2-R

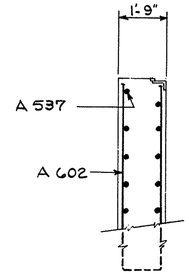


SECTION 'B-B'



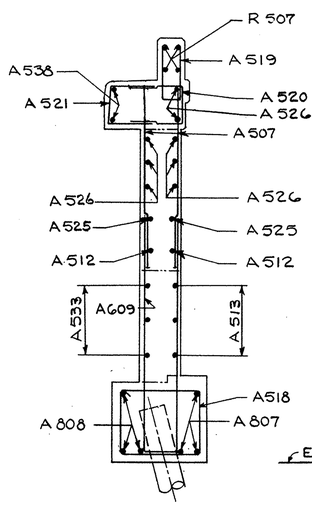
SECTION 'D-D'

⊛ FAN BARS A-520 & A-521 IN CURB WHERE NECESSARY TO MAINTAIN 2" CLEAR



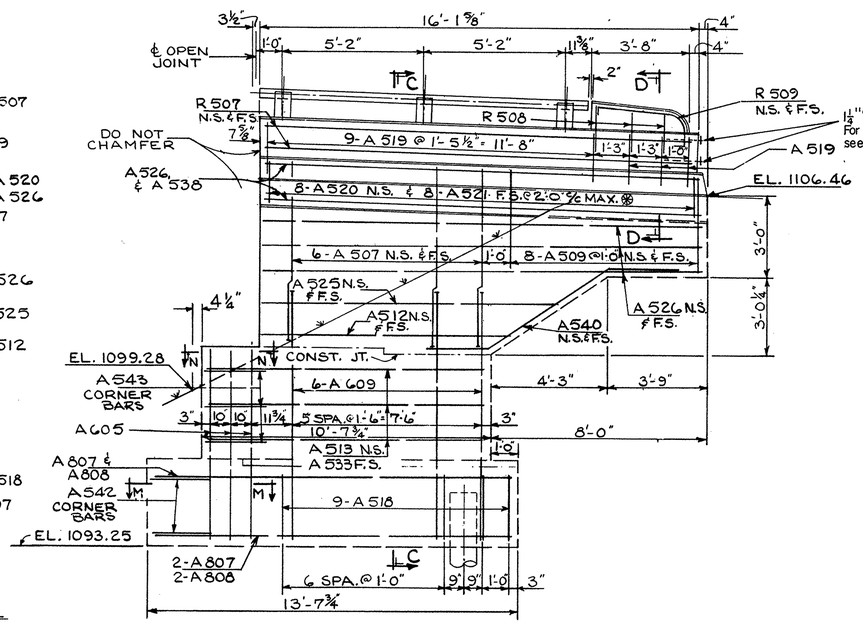
SECTION 'E-E'

SEE SECTION 'A-A' FOR DETAILS NOT SHOWN

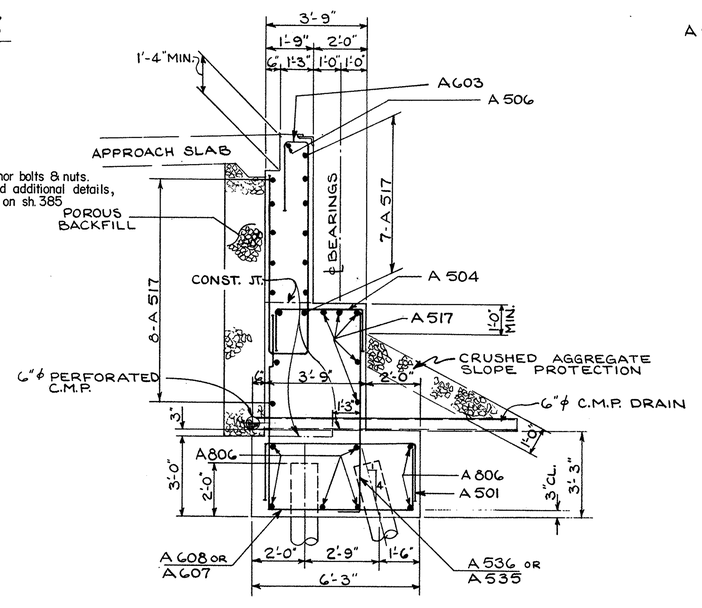


SECTION ~ 'C-C'

SEE SECTION 'B-B' FOR DIMENSIONS NOT SHOWN



ELEVATION ~ SOUTH WINGWALL ~ ABUT. #2-R



SECTION 'A-A'

REVISED 8-9-67	STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES
	BEISWENGER, HOCH & ARNOLD Consulting Engineers Akron, Ohio

ABUTMENT NO.2 DETAILS

BRIDGE NO. SUM-271-0358 R.

I-271 OVER I-77

SUMMIT COUNTY

STA.187+36.11 to STA.190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JFP		3/11	RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

402
510

SUM.-271-2.98

℄ SURVEY
I-271

STA.188+16.68 P*1-R
STA.189+35.03 P*2-R
STA.190+24.56 P*3-R

36'-3"
3 SPA.@ 10'-11" = 32'-9"
1'-6" 3" 3" 1'-6"

9'-0"
4'-6" 4'-6"
1'-6" 3'-0" 3'-0" 1'-6"

℄ PIER

9'-0"
4'-6" 3'-0" 1'-6"
3'-0" 1'-6"
4'-6" 3'-0" 1'-6"

1'-6" 1'-6"

℄ GIRDER ℄ GIRDER ℄ GIRDER ℄ GIRDER

BATTER 1:4 THIS ROW PILES
PIER #1 & #2 ONLY

℄ PILES

℄ PILES

BATTER 1:4 THIS ROW PILES
PIER #2 & #3 ONLY

1'-1¾" P*1-R
0'-0" P*2-R
1'-1⅜" P*3-R

43'-2 13/16" PIER*2-R & 43'-7¾" PIER*3-R
46'-1⅜" PIER*1-R

2'-0" 10'-11" 10'-11" 9'-5"

LOCAL TANGENT
℄ STA. 189+35.03

PLAN

ELEVATION TABLE

PIER Nº	J	K	L	M	N
1-R	1108.58	1108.26	1107.95	1107.64	1080.97
2-R	1105.16	1104.83	1104.50	1104.17	1081.84
3-R	1102.78	1102.44	1102.10	1101.76	1081.26

6 P-1117 — J — K — A — L — 6 P-1101 — 2 P-1102 — M — 6 P-1113

P-1106 — PITCH (TYP) 4½" — P-1106 — 3'-6" MIN.

7 P-1107

P-601 N.S.& F.S.

14 P-1114 P*1-R
14 P-1115 P*2-R
14 P-1116 P*3-R

1'-6" 3" 6 SPA.@ 1'-4" = 8'-0" 11½" 10 SPA.@ 5'-4·2" 3" 1'-6" 1'-6" 3" 10 SPA.@ 5'-4·2" 11½" 6 SPA.@ 1'-4" = 8'-0" 3" 1'-6"

18 P-502 TOP & BOTT. 18-P-501 TOP & BOTT.

SP-401 P*1-R
SP-402 P*2-R
SP-403 P*3-R
(TYPICAL)

2'-8" 2'-8" 2"

4-P-1111 (TYP. EXT. COLS.) 4-P-1111

6-P-1103-P*1-R
6-P-1104 P*2-R
6-P-1105 P*3-R

8-P-1108 P*1-R
8-P-1109 P*2-R
8-P-1110 P*3-R

16'-7½" 16'-7½"

12 P-1108 P*1-R
12 P-1109 P*2-R
12 P-1110 P*3-R

18 P-1112 (TYP. EXT. COLS.)

12 P-1112

12 P-801 EA. WAY

N

6" 1'-0" 8 1'-8" 4 @ 5" 1'-8" 8 8 1'-8" 4 @ 5" 1'-8" 8 1'-0" 6"
1'-6" 3'-0" 3'-0" 1'-6"
9'-0"

A

ELEVATION

3'-0"
1'-6" 1'-6"
℄

P-501 OR P-502
P-1102
P-601

P-1101
P-1107

3'-0" DIA.

20'-2" PIER*1-R
15'-10" PIER*2-R
14'-0" PIER*3-R

CONSTRUCTION JOINTS

3'-0"
CL 1'-0"
3"

6" 1'-0" 8 1'-8" 4 SPA.@ 5'-1·8" 8 8 1'-8" 4 SPA.@ 5'-1·8" 8 1'-0" 6"
1'-6" 3'-0" 3'-0" 1'-6"
9'-0"

SECTION A-A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

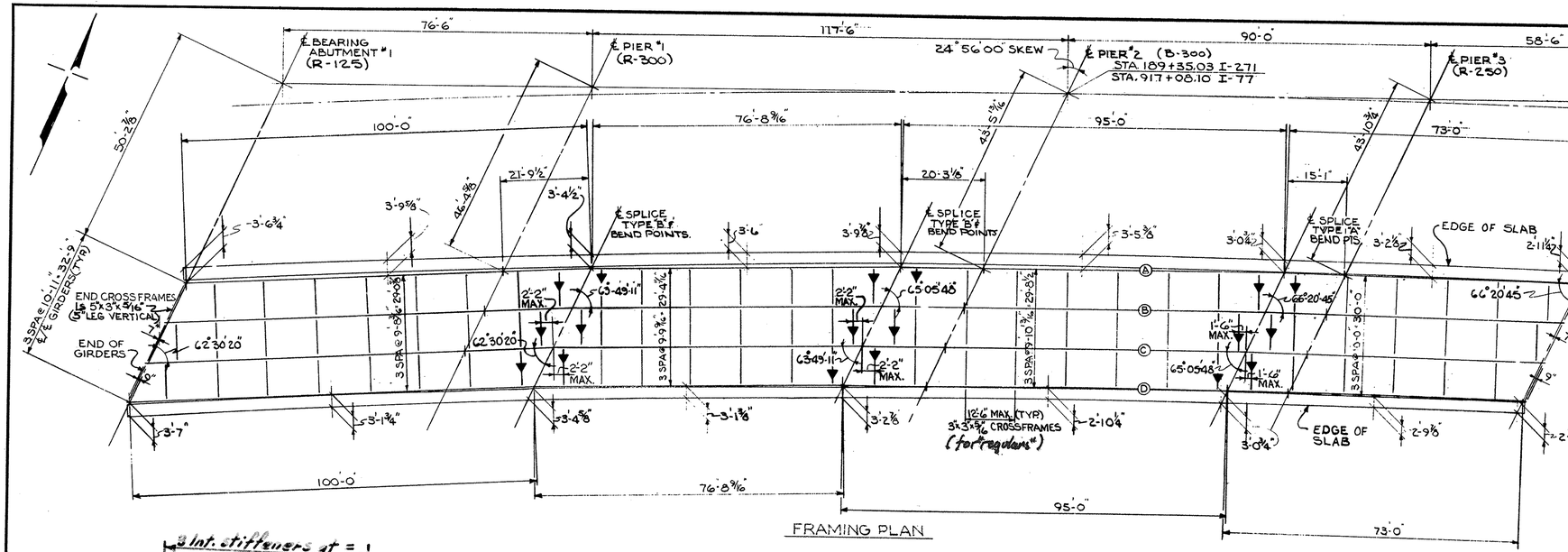
BRIDGE NO. SUM.-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NPV	JLH		3/25/66	RDH	4-21-66	

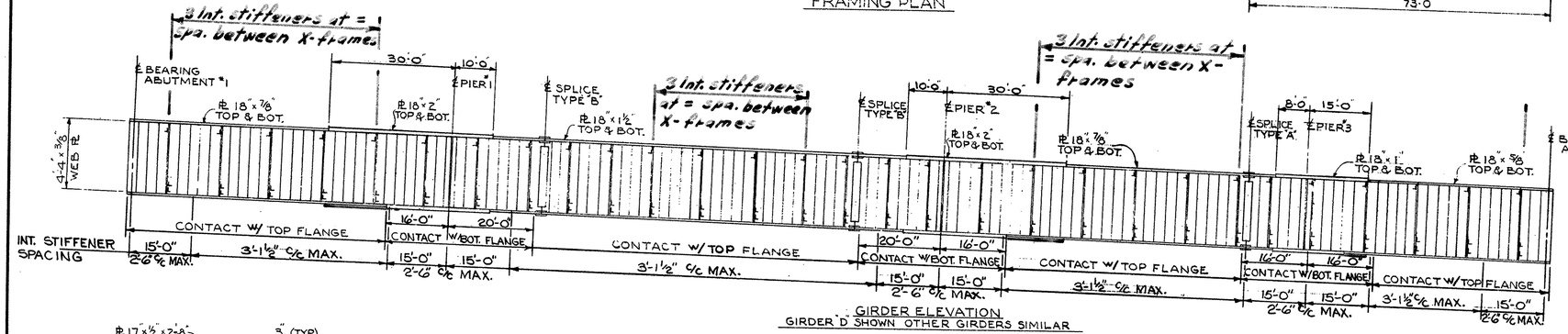
FED. RD.	STATE	PROJECT	
2	OHIO		

403
510

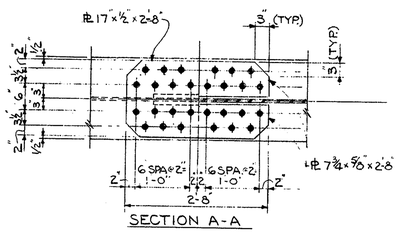
SUM.-271-298



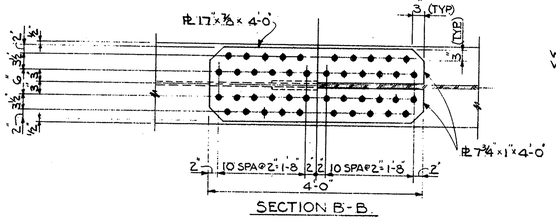
FRAMING PLAN



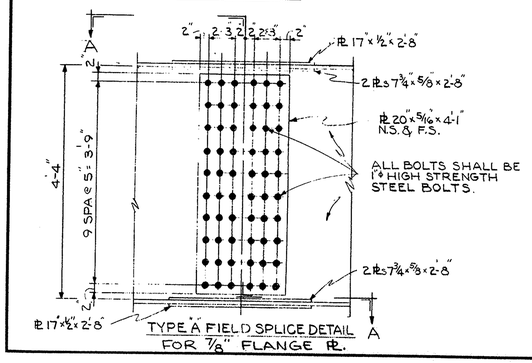
GIRDER ELEVATION
GIRDER 'D' SHOWN OTHER GIRDERS SIMILAR



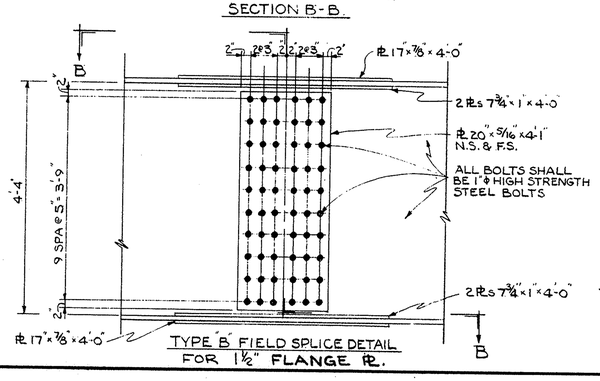
SECTION A-A



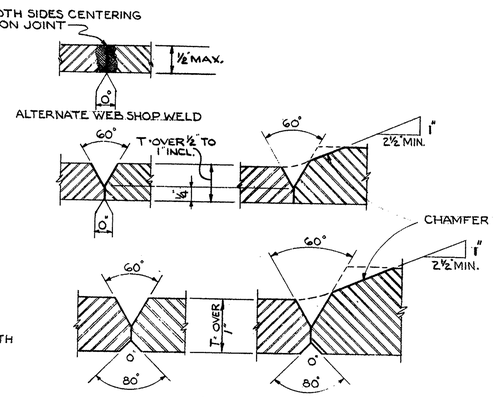
SECTION B-B



TYPE 'A' FIELD SPLICE DETAIL FOR 7/8" FLANGE PL.

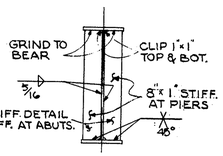


TYPE 'B' FIELD SPLICE DETAIL FOR 1 1/2" FLANGE PL.

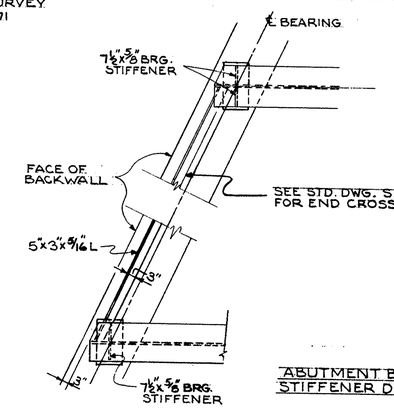


FLANGE WELD DETAIL

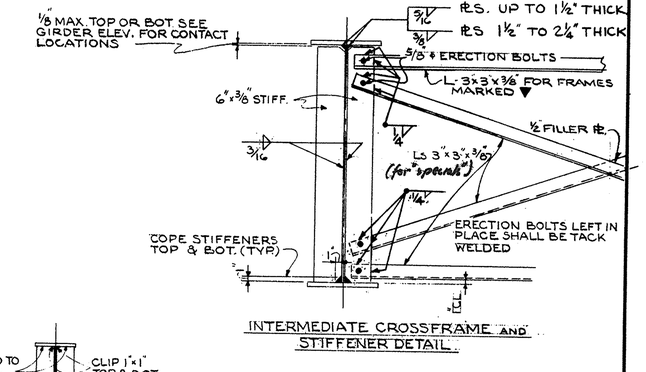
ALL OF THE ABOVE FULL PENETRATION WELDS SHALL BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE. BUTT WELDS ON GIRDER FLANGE PLATES SHALL BE GROUND FLUSH, THE FINISH GRINDING BEING PARALLEL TO THE DIRECTION OF STRESS.



BEARING STIFFENER DETAIL



ABUTMENT BEARING STIFFENER DETAIL



INTERMEDIATE CROSSFRAME AND STIFFENER DETAIL

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN

BRIDGE NO. SUM-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

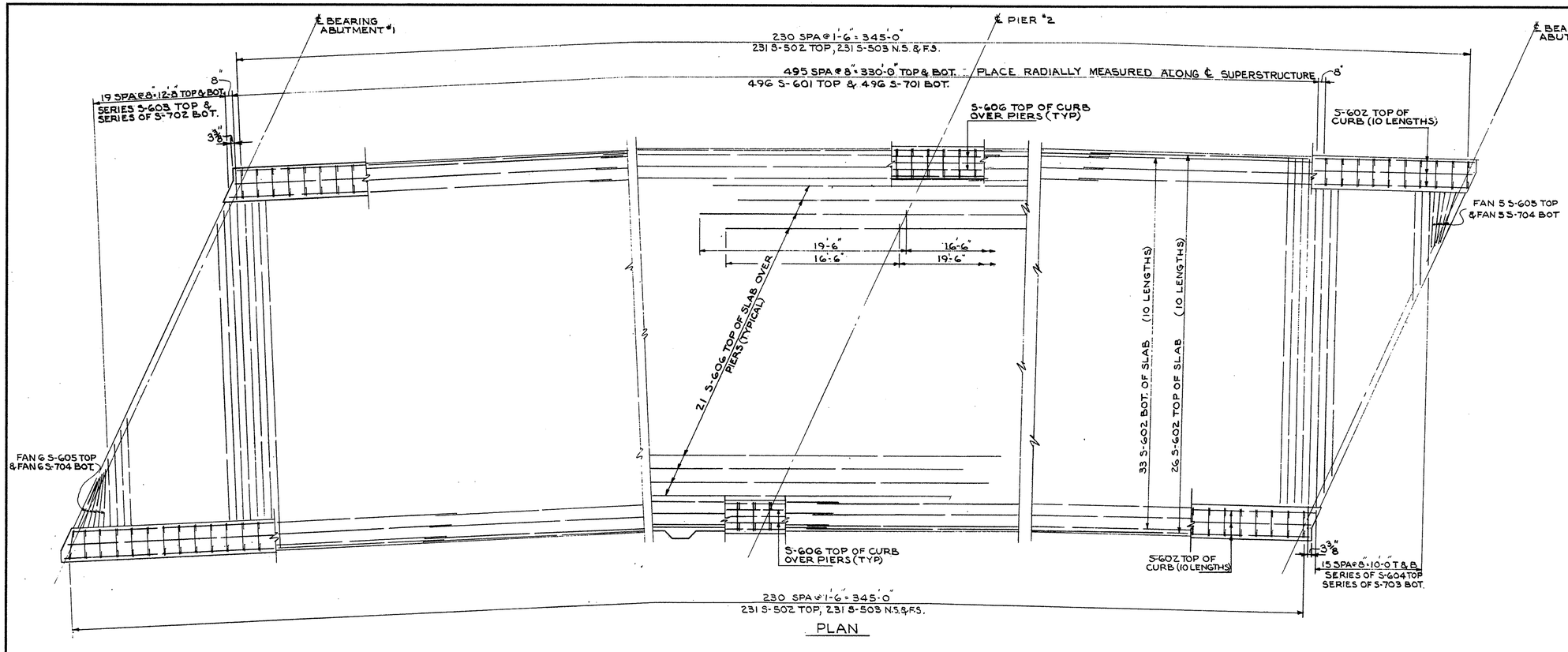
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JLH		3/6/66	RDA	9-21-66	10-5-67

Rev. 12-28-67

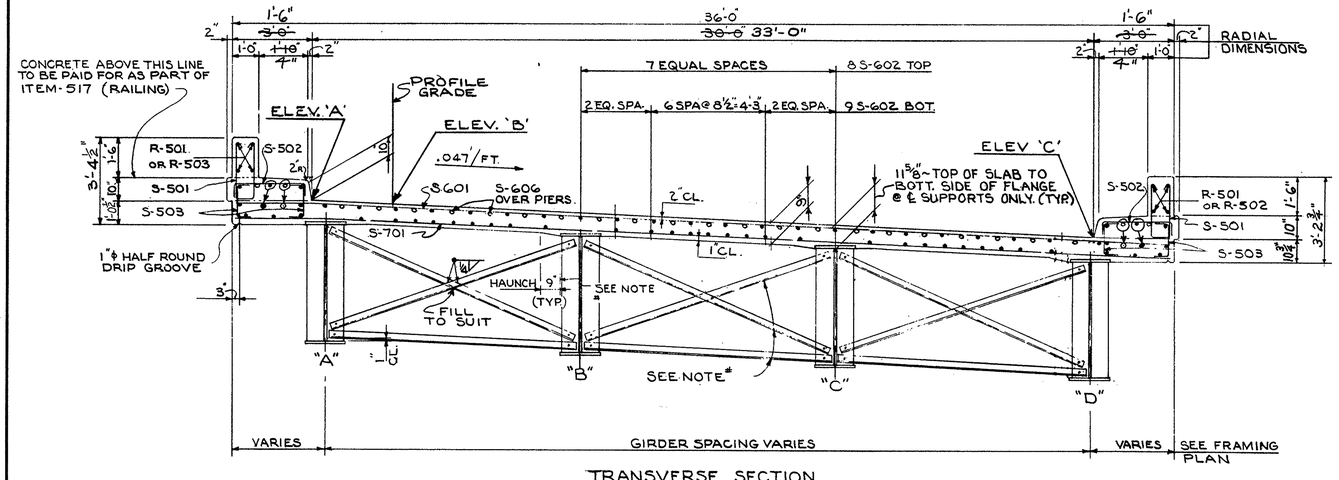
FED. RD.	STATE	PROJECT	
2	OHIO		

404
510

SUM.-271-2.98



PLAN

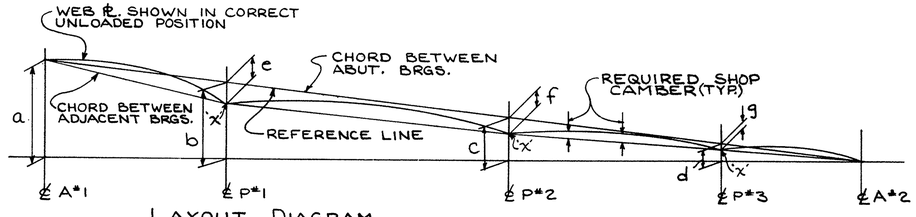


TRANSVERSE SECTION

ELEVATION TABLE

STATION	ELEV. 'A'	ELEV. 'B'	ELEV. 'C'
187+25	1117.76	1117.59	1116.62
+50	1117.08	1116.87	1115.87
+75	1116.36	1116.16	1114.91
188+00	1115.66	1115.44	1114.14
+25	1114.99	1114.73	1113.46
+50	1114.31	1114.01	1112.76
+75	1113.58	1113.30	1112.01
189+00	1112.87	1112.58	1111.24
+25	1112.07	1111.87	1110.53
+50	1111.37	1111.15	1109.83
+75	1110.67	1110.44	1109.11
190+00	1109.94	1109.72	1108.38
+25	1109.23	1109.01	1107.68
+50	1108.52	1108.29	1106.95

ELEVATION 'B' IS THE FINISHED GRADE ELEVATION OR PROFILE GRADE.
ELEVATIONS 'A' & 'C' ARE ELEVATIONS BEFORE CONCRETE IS PLACED



LAYOUT DIAGRAM

GIRDER	a	b	c	d	e*	f*	g*
A	9'-10 3/4"	7'-7 13/16"	4'-2 7/8"	1'-7 15/16"	+3/16"	+1/16"	0"
B	10'-1"	7'-9 9/16"	4'-3 7/8"	1'-8 5/16"	-1 3/16"	-1 1/16"	-5/16"
C	10'-3 9/16"	7'-11 9/16"	4'-4 15/16"	1'-8 3/4"	-2 1/16"	-1 9/16"	-5/8"
D	10'-6 5/16"	8'-1 11/16"	4'-6 1/8"	1'-9 1/4"	-4 7/16"	-2 1/2"	-1"

NOTE: ALL DIMENSIONS ARE TO BOTTOM OF WEB ℄.

* '+' INDICATES THAT POINT 'X' IS ABOVE THE REFERENCE LINE.
* '-' INDICATES THAT POINT 'X' IS BELOW THE REFERENCE LINE.

DEFLECTION & CAMBER

LOCATION	SPAN # 1						SPAN # 2										SPAN # 3										SPAN # 4					
	1/4 PT.		1/2 PT.		3/4 PT.		SPLICE #1		1/4 PT.		1/2 PT.		3/4 PT.		SPLICE #2		1/4 PT.		1/2 PT.		3/4 PT.		SPLICE #3		1/4 PT.		1/2 PT.		3/4 PT.	
GIRDER	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.
DEFLECT. DUE TO WT. OF STEEL	.052"	.052"	.044"	.044"	-.007"	-.007"	.128"	.128"	.171"	.171"	.275"	.275"	.171"	.171"	.116"	.116"	.006"	.006"	.059"	.059"	.049"	.049"	.033"	.033"	.025"	.025"	.052"	.052"	.044"	.044"		
DEFLECT. DUE TO REMAINING D.L.	.208"	.200"	.175"	.169"	-.026"	-.025"	.510"	.490"	.675"	.650"	1.090"	1.050"	.675"	.650"	.460"	.442"	.028"	.022"	.234"	.225"	.196"	.189"	.130"	.125"	.101"	.097"	.206"	.198"	.173"	.167"		
ADJUST. FOR VERTICAL CURVE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
REQUIRED SHOP CAMBER	1/4"	1/4"	1/4"	1/4"	0"	0"	5/8"	5/8"	7/8"	13/16"	1 3/8"	1 5/16"	7/8"	13/16"	9/16"	9/16"	0"	0"	5/16"	5/16"	1/4"	1/4"	3/16"	1/8"	1/8"	1/8"	1/4"	1/4"	1/4"	3/16"		

Revised 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SLAB REINFORCING DETAILS

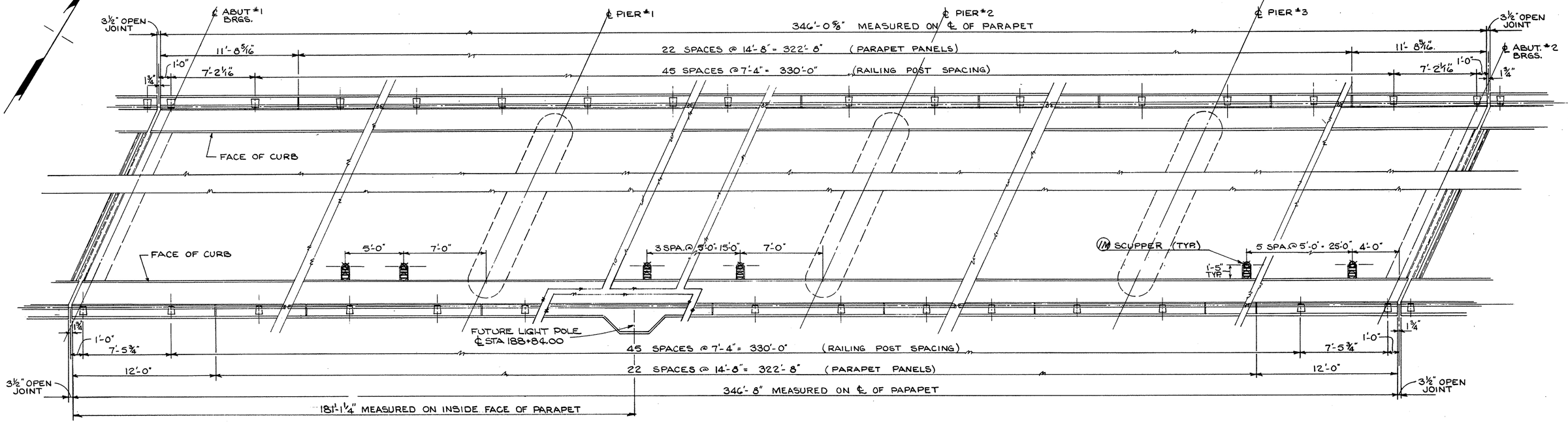
BRIDGE NO. SUM-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NW	JLH		9/21/66	RBH	4-21-66	

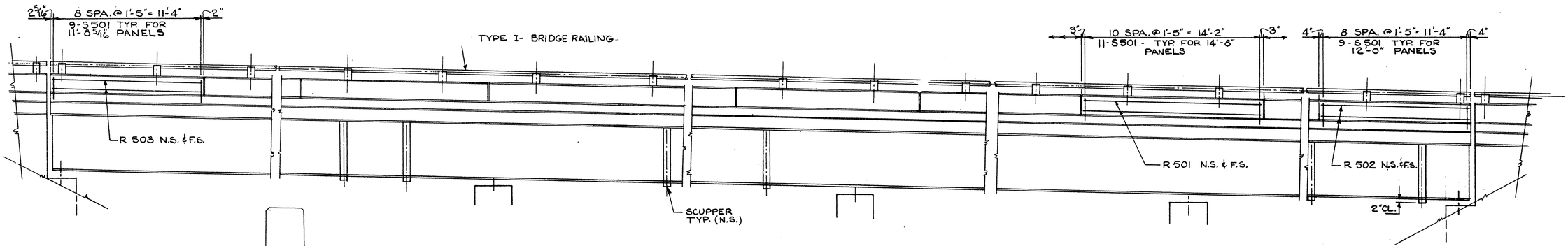
FED. RD.	STATE	PROJECT	
2	OHIO		

405
510

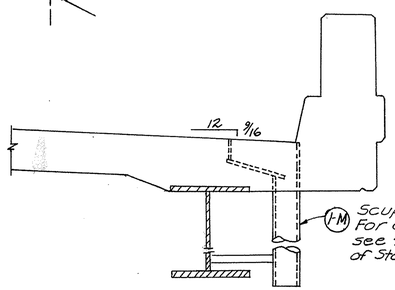
SUM.-271-2.98



PLAN ~ RIGHT STRUCTURE
SCUPPERS IN SOUTH GUTTER ONLY



ELEVATION ~ RIGHT STRUCTURE
SOUTH PARAPET & RAILING SHOWN
NORTH PARAPET & RAILING SIMILAR EXCEPT AS NOTED



LOW SIDE CURB DETAIL
WITH SCUPPER

NOTE:
FOR LIGHT POLE SUPPORT DETAILS SEE RAILING & DRAINAGE DWG. FOR BRIDGE No SUM-271-0354

Revised 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE NO. SUM.-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N W	J F P		2/20/66	RH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

406/510

SUM.-271-2.98

ABUTMENTS 1 & 2

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INC.	WEIGHT LBS.
A501	50	8'-4"	3	5'-5"	1'-7"				435
A502	26	7'-0"	1	6"	6'-7"				190
A503	40	21'-0"	ST.						876
A504	50	7'-6"	3	3'-5"	2'-2"				391
A505	22	6'-0"	ST.						138
A506	1	30'-0"	ST.						31
A507	48	7'-1"	ST.						355
A508	8	12'-4"	ST.						103
A509	74	3'-6"	ST.						270
A510	5	14'-7"	ST.						76
A511	2	15'-6"	ST.						32
A512	5	9'-4"	ST.						49
A513	2	10'-4"	ST.						22
A514	2	13'-4"	ST.						28
A515	1	13'-0"	ST.						14
A516	6	20'-4"	ST.						127
A517	46	20'-0"	ST.						960
A518	46	12'-0"	14	2'-7"	3'-2"	6"			576
A519	55	5'-6"	5	8"	2'-2"	6"			316
A520	39	2'-10"	3	1'-5"	10"				115
A521	39	3'-0"	15	1'-0"	1'-5"	10"	2"		122
A522	4	9'-10"	11	2'-0"	6'-0"	2'-0"	4'-4"		41
A523	2	19'-10"	16	19'-9"	7'-9"	3'-0"			41
A524	5	14'-2"	ST.						74
A525	5	11'-0"	ST.						57
A526	8	15'-10"	ST.						132
A527	2	17'-3"	ST.						36
A528	14	6'-7"	ST.						96
A529	2	20'-3"	16	20'-2"	8'-2"	3'-0"			42
A530	5	4'-0"	12	2'-0"	2'-0"	1'-9"			21
A531	2	5'-9"	19	2'-0"	2'-0"	11⅛"			12
A532	3	4'-5"	19	2'-0"	8"	3¾"			14
A533	3	8'-0"	ST.						25
A534	6	17'-6"	ST.						110
A535	16	7'-5"	1	6"	7'-0"				124
A536	10	8'-2"	1	6"	7'-9"				86
A537	8	5'-0"	ST.						42
A538	2	15'-8"	16	15'-7"	3'-7"	3'-0"			33
A539	2	17'-3"	16	17'-2"	5'-2"	3'-0"			36
A540	4	8'-8"	11	2'-0"	5'-0"	2'-0"	3'-0"		36
A541	5	4'-0"	12	2'-0"	2'-0"	1'-10"			21
A542	2	5'-9"	19	2'-0"	2'-0"	9½"			12
A543	3	4'-5"	19	2'-0"	8"	3"			14
A544	2	3'-3"	1	1'-4"	2'-0"				7
A545	2	4'-5"	3	2'-0"	1'-4"				9
A601	25	14'-4"	4	6'-7"	5'-5"	2'-7"			538
A602	12	17'-2"	3	1'-5"	8'-0"				309
A603	53	19'-3"	7	6'-9"	1'-5"	8'-0"	11"		1532
A604	10	19'-1"	3	1'-2"	9'-1"				287
A605	6	7'-11"	1	1'-0"	7'-0"				71
A606	3	7'-6"	1	1'-0"	6'-7"				34
A607	15	14'-9"	4	7'-0"	5'-5"	2'-7"			332
A608	10	15'-6"	4	7'-9"	5'-5"	2'-7"			233
A609	17	19'-5"	3	1'-2"	9'-3"				496
A610	8	21'-5"	3	1'-2"	10'-3"				257
A611	3	9'-0"	1	1'-0"	8'-1"				41
A801	14	22'-6"	ST.						841
A802	3	16'-6"	ST.						132
A803	3	13'-0"	ST.						104
A804	3	17'-6"	ST.						140
A805	3	12'-0"	ST.						96
A806	14	21'-6"	ST.						804
A807	3	13'-3"	ST.						106
A808	3	9'-0"	ST.						72
A809	3	14'-0"	ST.						112
A810	3	11'-0"	ST.						88
TOTAL ABUTMENTS 1 & 2									12,972

PIERS 1, 2 & 3

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INC.	WEIGHT LBS.
P 501	108	7'-5"	3	2'-8"	2'-6"				835
P 502	108	7'-11"	3	2'-8"	2'-9"				892
P601	6	33'-3"	ST						300
P801	216	10'-10"	2	1'-1"	8'-8"				6248
P1101	18	28'-1"	ST.						2686
P1102	6	16'-0"	ST.						510
P1103	6	24'-3"	1	1'-0"	23'-6"				773
P1104	6	19'-11"	1	1'-0"	19'-2"				635
P1105	6	18'-1"	1	1'-0"	17'-4"				576
P1106	12	10'-6"	9	3'-6"	3'-6"	1'-2⅛"			669
P1107	21	33'-3"	ST.						3,710
P1108	20	23'-2"	ST.						2462
P1109	20	18'-10"	ST.						2,001
P1110	20	17'-0"	ST.						1,806
P1111	24	8'-0"	ST.						1020
P1112	144	7'-0"	1	1'-0"	6'-3"				5356
P1113	18	10'-6"	1	3'-4"	7'-5"				1,004
P1114	14	24'-0"	ST.						1785
P1115	14	19'-8"	ST.						1,463
P1116	14	17'-10"	ST.						1,326
P1117	18	10'-9"	1	3'-7"	7'-5"				1,028
SPIRALS =									2,755
TOTAL PIERS (INCLUDING SPIRALS)									39,840

SUPERSTRUCTURE

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INC.	WEIGHT LBS.
S 501	520	5'-9"	S	8"	2'-2"	6"			3119
S 502	402	1'-9"	3	1'-0"	6"				843
S 503	924	2'-1"	3	1'-4"	6"				2008
S521	2	11'-5"	21	2'-0"	1'-11½"	2'-3"	2'-8½"		24
S601	496	35'-8"	ST.						26,571
S602	650	36'-3"	ST.						35,554
SERIES OF S603	1 SET OF 20 BARS	VARIES 33'-9" TO 9'-4⅞"	ST.					1'-3⅜"	648
SERIES OF S604	1 SET OF 16 BARS	VARIES 33'-4⅞" TO 9'-6"	ST.					1'-7⅛"	516
S605	11	8'-0"	ST.						132
S606	75	36'-0"	ST.						4,055
S621	12	5'-6"	ST						99
S622	4	10'-5"	14	2'-10"	2'-2"	6"			63
S701	496	35'-8"	ST.						36,160
SERIES OF S702	1 SET OF 20 BARS	VARIES 33'-9" TO 9'-4⅞"	ST.					1'-3⅜"	882
SERIES OF S703	1 SET OF 16 BARS	VARIES 33'-4⅞" TO 9'-6"	ST					1'-7⅛"	702
S704	11	8'-0"	ST.						180
TOTAL SUPERSTRUCTURE									111,556

⊗RAILING

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	INC.	WEIGHT LBS.
R501	176	14'-4	ST						
R502	8	11'-8"	ST						
R503	8	11'-4"	ST						
R504		OPEN							
R505	8	20'-0"	ST						
R506	4	17'-2"	ST						
R507	4	15'-9"	ST						
R508	12	4'-2"	18	SEE DIAGRAM					
R509	8	5'-4"	17	SEE DIAGRAM					
R521	2	11'-5"	21	2'-0"	1'-11½"	2'-3"	2'-8½"		
R522	2	11'-0"	21	3'-0"	6⅝"	3'-9"	9"		

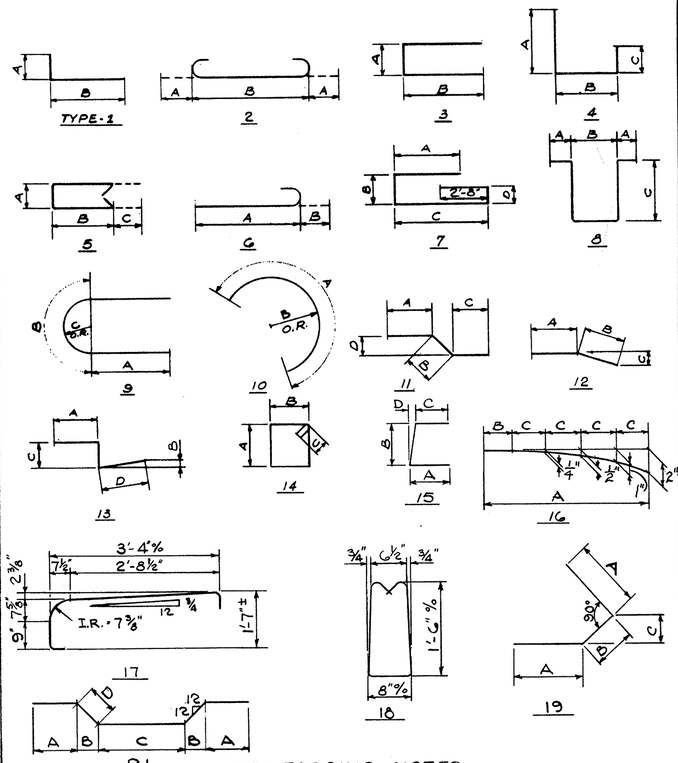
REPLACEMENT BARS

RE-401	1	5'-3"	10	5'-3"	1'-4"
RE-501	1	5'-6"	ST.		
RE-601	4	6'-0"	ST.		
RE-701	2	6'-3"	ST.		
RE-801	1	6'-6"	ST.		
RE-901	—	6'-10"			
RE-1001	—	7'-3"			
RE-1101	2	7'-9"	ST.		

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP 401	3	2'-8"	20'-2"	4½"	57	942
SP 402	3	2'-8"	15'-0"	4½"	45	744
SP 403	3	2'-8"	14'-0"	4½"	40	661
SPACERS						408
TOTAL SPIRALS						2755

GRAND TOTAL 164,368 LBS



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.

ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.90 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.90 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

⊗RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

Revised 8-9-67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
AKRON, OHIO

REINFORCING SCHEDULE
BRIDGE NO. SUM.-271-0358 R.
I-271 OVER I-77
SUMMIT COUNTY
STA. 187+36.11 to STA. 190+84.72

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N W	JFP		4/21/66	RHH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

407
510

SUM-271-2.98

CURVE DATA

℄ SURVEY I 271
PI STA. 195+17.76
Δ = 23°-18'-16"
Dc = 1° 28'-00"
R = 3906.53'
L = 1588.94'
T = 805.61'

℄ RAMP "B"
BC STA. 191+46.19
CS STA. 205+07.48
Dc = 8°00'-00"
R = 716.20'

℄ RAMP "C"
POC STA. 198+53.11
POC STA 199+72.22
Dc = 1° 30'-00"
R = 3,819.72'

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 32° 21'-06" LF. TO LOC. TAN.
SPANS: 38'-6", 49'-0", 30'-0" @ BEARINGS
ROADWAY: WBL. 40'-0" F/F PARAPETS, EBL VAR.
LOAD FREQUENCY: CF=2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
WEARING SURFACE: 1" MONOLITHIC.
APPROACH SLABS: 25'-0" LONG. (33-1/-84): L (SPECIAL)-R
ALIGNMENT: 1° 28'-00" CURVE RT.
SUPERELEVATION: .047'/FT.
SLOPE PROTECTION: CRUSHED AGGREGATE.

TRAFFIC: I-271 - 16,000 A.D.T. 1975
"RAMP "B" 5,850 A.D.T. 1975

AVERAGE PAY LENGTH FOR PILES
(12" ϕ CAST-IN-PLACE REINF. CONC. PILES.)
ABUTMENTS = 28'
PIERS ——— = 20'

Ⓔ VERTICAL CLEARANCE
DESIGN - 15.00'
ACTUAL - 15.00'

HORIZONTAL CLEARANCE
Ⓐ DESIGN - 8'-0 ACTUAL - 12.65'
Ⓑ DESIGN 10'-0 ACTUAL 10.00'

* MEASURED ALONG LOCAL TANGENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

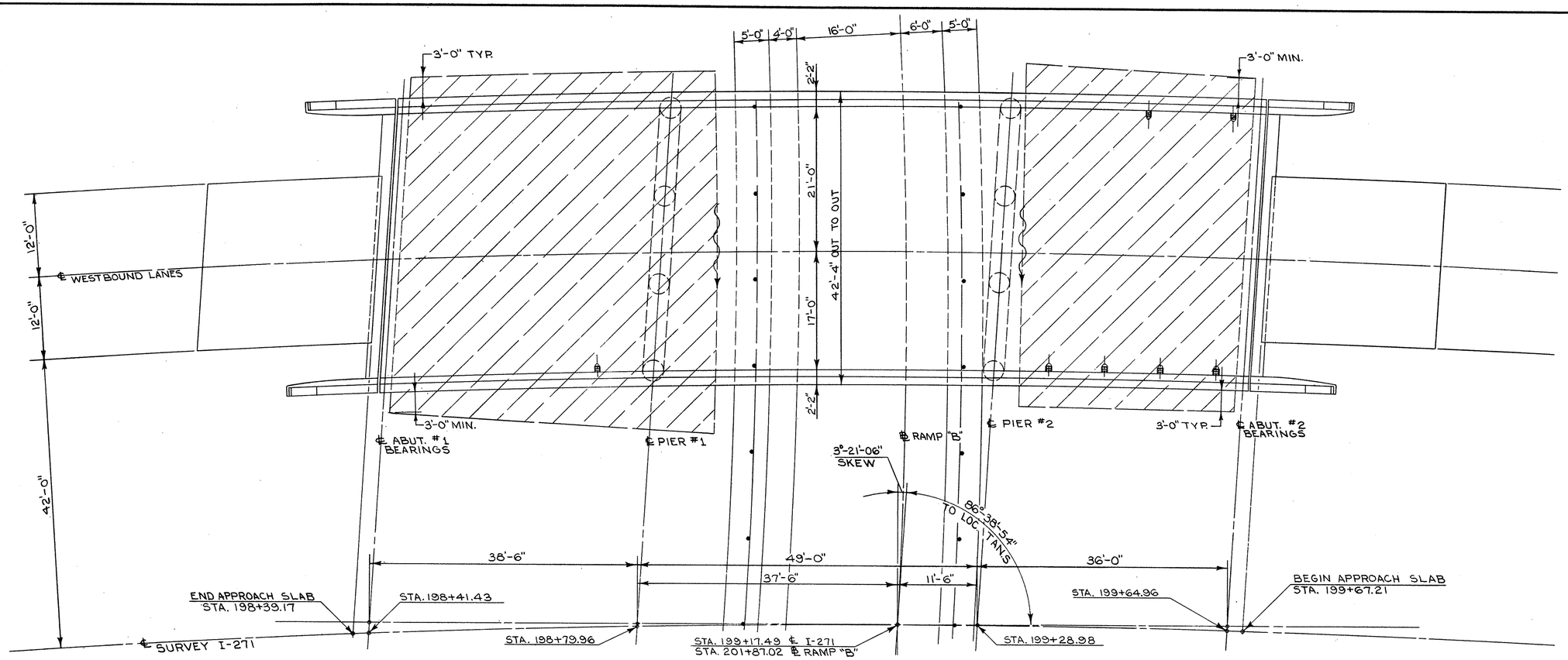
BRIDGE NO. SUM-271-0378 L & R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CLS	ROSE		H.G.H.	ROH	4-21-66	

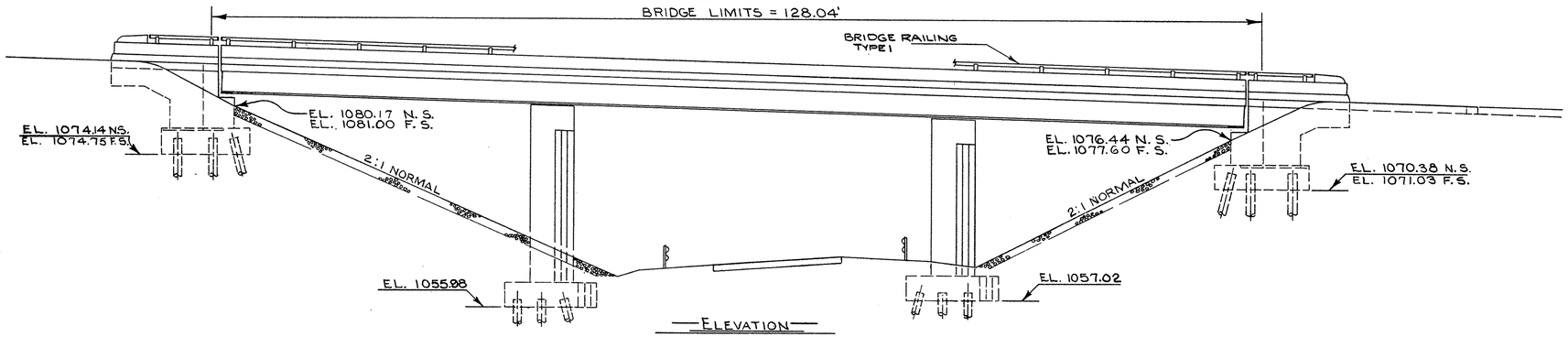
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

408
510



PLAN



ELEVATION

Note:
FIRST TEST PILE. PAYMENT WILL BE MADE FOR ONLY ONE FIRST TEST PILE. ITEM 505. IT MAY BE DRIVEN AT EITHER SUM.-271-0378-L OR SUM-271-0378-R.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
503	428	CU. YD.	UNCLASSIFIED EXCAVATION		244	184	
505	LUMP	SUM	FIRST TEST PILE				LUMP
507	1664	LIN. FT.	12"ϕ CAST-IN-PLACE REINF. CONCRETE PILES		880	784	
509	85,567	LBS.	REINFORCING STEEL	46,850	12,160	26,557	
511	164	CU. YD.	CLASS "C" CONCRETE SUPERSTRUCTURE	164			
511	93	CU. YD.	CLASS "E" CONCRETE ABUTS. ABOVE FTGS.		93		
511	69	CU. YD.	CLASS "C" CONCRETE PIERS ABOVE FTGS.			69	
511	136	CU. YD.	CLASS "E" CONCRETE PIERS & ABUT. FTGS.		72	64	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
513	104,364	LBS.	STRUCTURAL STEEL	104,364			
514	104,364	LBS.	FIELD PAINTING OF STRUCT. STEEL	104,364			
517	298.57	LIN. FT.	BRIDGE RAILING TYPE I	249.90	48.67		
518	30	CU. YD.	POROUS BACKFILL		30		
518	7	EACH	SCUPPERS, INCLUDING SUPPORTS	7			

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
518	70	LIN. FT.	6"ϕ PERFORATED HELICAL C.M.P. 707.06, INCLUDING SPECIALS.		70		
518	63	LIN. FT.	6"ϕ HELICAL C.M.P. 707.06 NON-PERFORATED		63		
601	483	SQ. YD.	CRUSHED AGGREGATE SLOPE PROTECTION		483		
625			LIGHTING QUANTITIES, SEE SHEET 346				
808	164	Units	WATER REDUCING, SET RETARDING ADMIXTURE	164			
825	703	SQ. YDS.	CONCRETE SURFACE TREATMENT				703
828	77	LIN. FT.	JOINT SEALER (end dam)	77			

SEE SHEET Nº 368 FOR GENERAL NOTES.

STATE OF OHIO
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GENERAL PLAN & ELEVATION

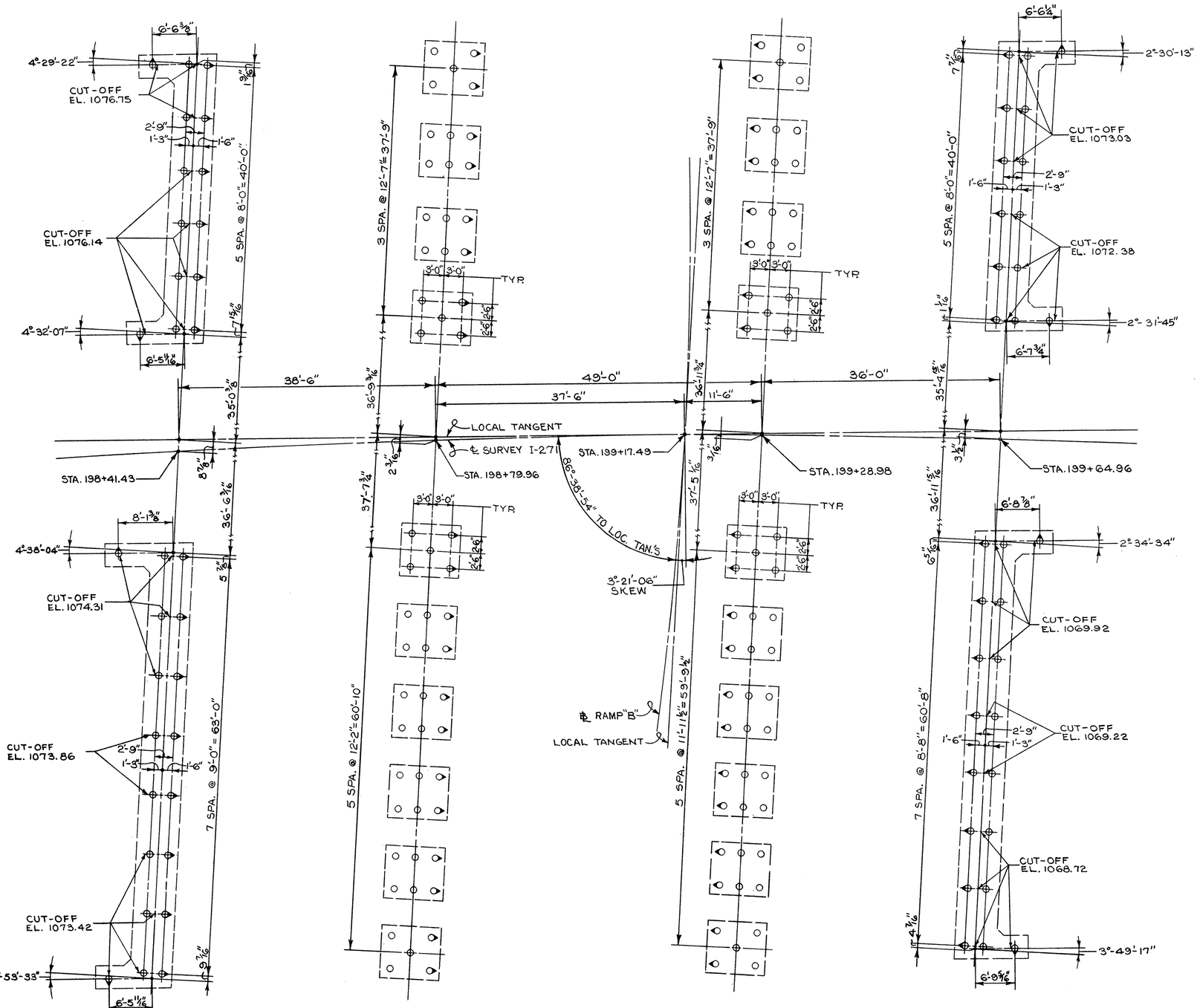
BRIDGE NO. SUM-271-0378 L.
I-271 OVER RAMP "B" (I 271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CLS	BMR		H.G.H.	RDH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

409
510

SUM-271-2.98



PILING PLAN

ALL PILES TO BE 12"ϕ CAST IN PLACE REINFORCED CONCRETE PILES.
◁ INDICATES DIRECTION OF 1:4 BATTER OF PILES.

PILE CUT-OFF ELEVATIONS

ABUTMENT #1 L	SEE PLAN
ABUTMENT #1 R	SEE PLAN
PIER #1 L	1056.98
PIER #1 R	1055.50
PIER #2 L	1058.02
PIER #2 R	1056.96
ABUTMENT #2 L	SEE PLAN
ABUTMENT #2 R	SEE PLAN

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
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PILING PLAN

BRIDGE NO. SUM-271-0378 L. & R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CLS	BMR		H.G.H.	EDH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

410
510

LOCAL TANG. @STA 199+17.49

℄ WESTBOUND LANES

℄ SURVEY I-271

STA 198+41.43

℄ BEARINGS

86°38'54"

12'-0 7/16"

2 9/16"

¾ SLOPE TO FACE OF ABUTMENT BETWEEN BEAM SEATS (TYP)

6' PERFORATED CMP WITH CAPPED ENDS

86°24'06" TYP FOR ALL BEAMS

℄ BEAM

36'-4¼"

53'-5 1/16"

5'-10¾" 15'-0" 15'-0" 5'-10¾"

2'-1 15/16" 2'-1 13/16" 9'-4¾" 7'-4 1/8" 2'-0 5/8" 9'-4¾" 9'-4¾" 2'-0 13/16" 1'-7 9/16"

℄ TO ℄ BRGS.

5-PILE SPACES @ 8'-0" = 40'-0"

℄ TO ℄ 6" CMP

41'-9½"

43'-9½"

1'-0"

PLAN ABUTMENT 1~ LEFT STRUCTURE

CONCRETE ABOVE THIS LINE TO BE PAID FOR AS PART OF ITEM 517 (RAILING)

VARIES 1'-0" MAX.

A524 A527 A526 A528 A525 A530 A525 CONST. JT. A534 A609 A535 CONST. JOINT A536 A538 A817 A818

SECTION 'C-C'

2 R508 R503 3 A524 @ 1'-2" EL. 1085.71 R507 2 R503 7-A524 @ 1'-5" A525 N.S. A526 F.S. EL. 1085.32 6 SPS @ 8'-0" 7-A527 N.S. & 7-A528 F.S. 16 SPS @ 9" 9-A530 N.S. & F.S. 8-A529 N.S. & F.S. 2-A540 A525 N.S. & F.S. A534 N.S. & F.S. 4-A535 N.S. & 4-A536 F.S. EL. 1080.17 A539 CORNER BARS 3-A610 N.S. @ 9" 9-A609 A-817 N.S. A-818 F.S. 10-A538 @ 1'-0" A539 CORNER BARS EL. 1074.14 1-A817 3-A818 F.S.

ELEVATION SOUTH W.W.-ABUT #1-LEFT STRUCTURE

VARIES 1'-0" MAX.

R503 A524 A525 A526 A528 A527 A525 A530 A534

SECTION D-D

13'-0" R507 R503 R508 A525 N.S. A526 F.S. 7-A524 @ 1'-5" EL. 1086.45 3-A524 @ 1'-2" EL. 1086.82 6 SPS @ 2'-0" 7-A527 N.S. & 7-A528 F.S. 16 SPS @ 9" 9-A530 N.S. & F.S. A534 N.S. & F.S. 2-A540 A525 N.S. & F.S. EL. 1081.00 A541 CORNER BARS 8-A529 N.S. & F.S. 4-A535 N.S. & 4-A536 F.S. 3-AG12 N.S. @ 9" 9-AG11 A819 N.S. A820 F.S. A538 A820 A819 N.S. A541 CORNER BARS 10-A538 @ 1'-0" 3-A820 F.S. EL. 1074.75

ELEVATION NORTH W.W. ABUT #1-LEFT STRUCTURE

38'-1⅜"

29'-1 1/16"

5'-0 3/16" ROUNDING

4'-0 1/8" EXPANSION ANGLE

6-AG04 @ 1'-0" 1'-0" 24-AG05 @ 1'-0" 10-AG04 @ 1'-0"

A507 N.S. A509 F.S.

3-A507 N.S. & F.S.

*EL. 1085.22 A511 F.S.

EL. 1086.34* EL. 1086.51* EL. 1086.52* A510 F.S. EL. 1086.57* EL. 1085.32

CONST. JT. (TYP.)

2" ℄ CONDUIT (THIS SIDE ONLY)

EL. 1084.25 EL. 1081.38 5-A507 EL. 1081.80 EL. 1082.22 5-A508 EL. 1082.64 EL. 1082.51

A546 FILLET BARS

26-A505 UNDER BRG SEATS

13-A502 N.S. & 13-AG01 F.S. 6-A503 N.S. & 6AG02 F.S. 7-A504 N.S. & 7AG03 F.S.

A539 CORNER BARS

EL. 1081.00

A546 FILLET BARS

A541 CORNER BARS

27-A501 TOP OF FOOTING

A506 N.S. & F.S.

A507 N.S. & F.S.

3-A802 4-A801 3-A803 4-A804 EL. 1074.75

9" 10" 4-SPS @ 1'-7" = 6'-4" 10"

TYPICAL SPACING

*INDICATES ELEVATIONS GIVEN TO HEEL OF ANGLE

ELEVATION ABUTMENT #1~LEFT STRUCTURE

3'-9" 2'-0" 1'-9" 1'-0" 1'-0" 1'-3" 6" 1'-6" POROUS BACKFILL CRUSHED AGGREGATE SLOPE PROTECTION A509 A507 A507 N.S. & F.S. AG05 A505 CONST. JT. A508 A507 6" CMP AG02 A539 CORNER BARS A506 2'-0" 1'-3" 3'-3" A802 A501 2'-0" 6" 6" CMP CONST. JOINT A801 EL. 1074.14 1'-6" 2'-9" 2'-0" 6'-3"

SECTION A-A

A510 OR A511 AG04

SECTION 'B-B'

1'-0" ¾ 10¾ ¾ R508 R507 R503 OR R504 A524 1'-6" VARIES

SECTION T-T

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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Consulting Engineers — Akron, Ohio

ABUTMENT #1 DETAILS

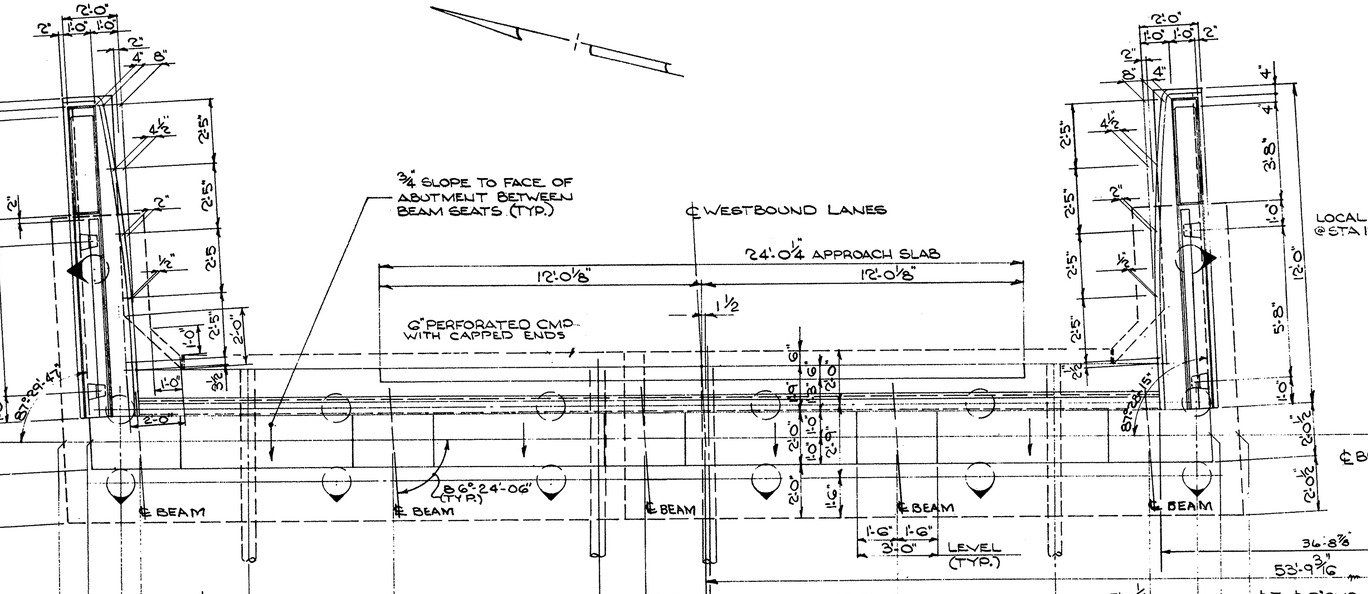
BRIDGE NO. SUM.-271-0378 L.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 to STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CLS	JWJ		H.G.H.	RDH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

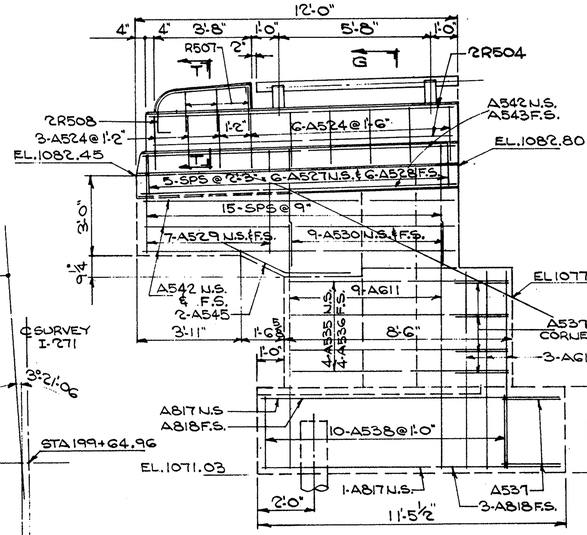
SUM.-271-2.98

411
510



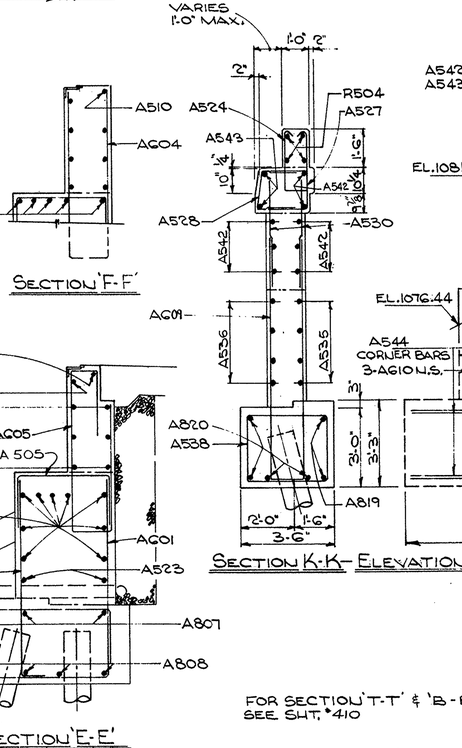
PLAN ABUTMENT #2 - LEFT STRUCTURE

ELEVATION ABUTMENT #2 - LEFT STRUCTURE



ELEVATION NORTH W.W. ABUT. #2 LEFT STRUCTURE

SECTION G-G'



SECTION K-K - ELEVATION: SOUTH W.W. ABUT #2 LEFT STRUCTURE

FOR SECTION 'T-T' & 'B-B' SEE SHT #410

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
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ABUTMENT #2 DETAILS

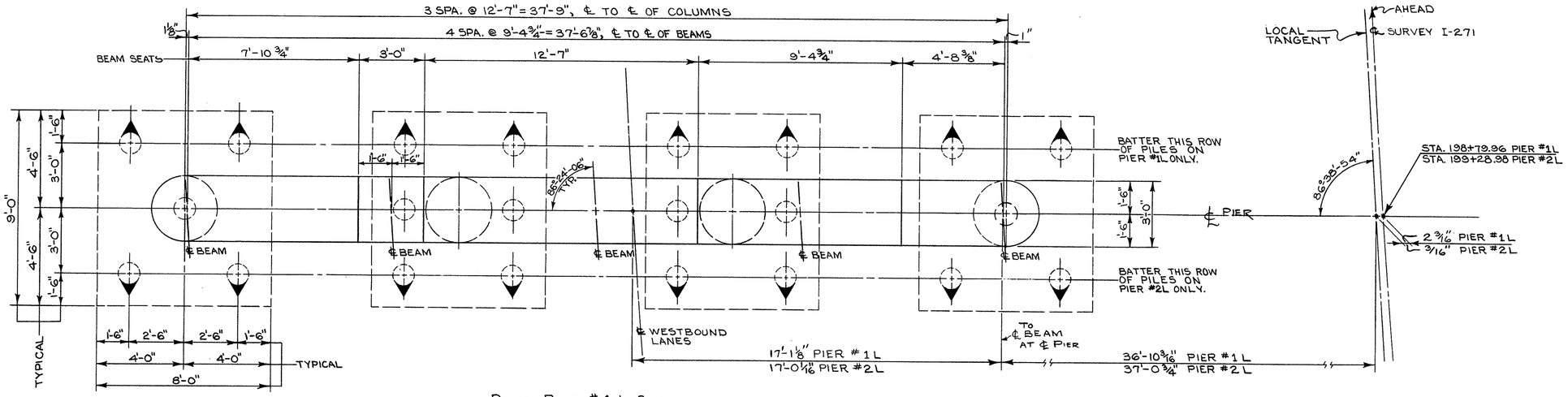
BRIDGE NO. SUM-271-0378 L.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 to STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CH	JWW		H.G.H.	RDH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

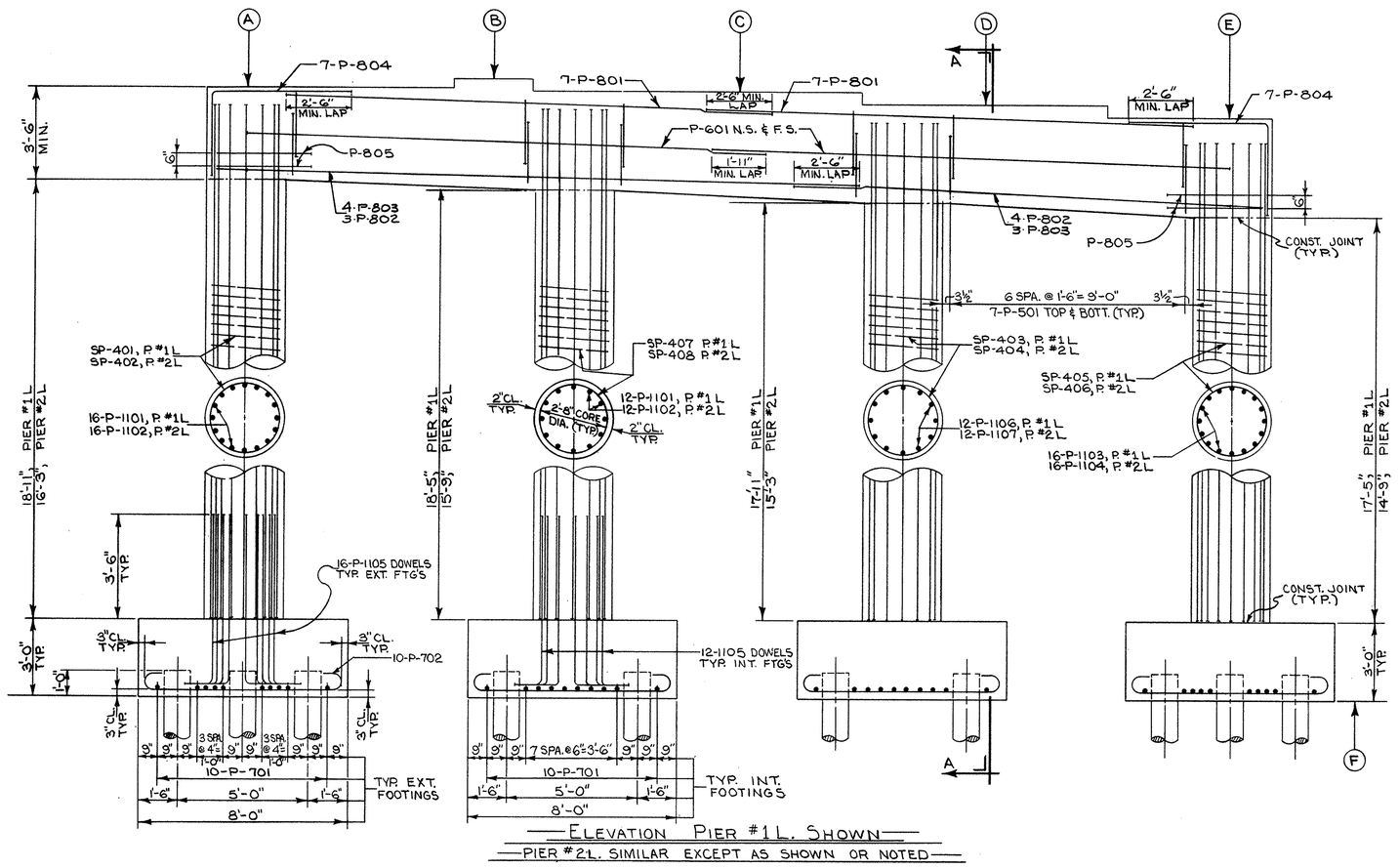
412
510



PLAN PIER #1 L. SHOWN
PIER #2L. SIMILAR EXCEPT AS SHOWN OR NOTED

ELEVATION TABLE

	PIER #1 L	PIER #2L
A	1081.40	1079.77
B	1081.53	1079.89
C	1081.10	1079.47
D	1080.68	1079.04
E	1080.26	1078.62
F	1055.98	1057.02



ELEVATION PIER #1L. SHOWN
PIER #2L. SIMILAR EXCEPT AS SHOWN OR NOTED

SECTION "A-A"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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PIER DETAILS

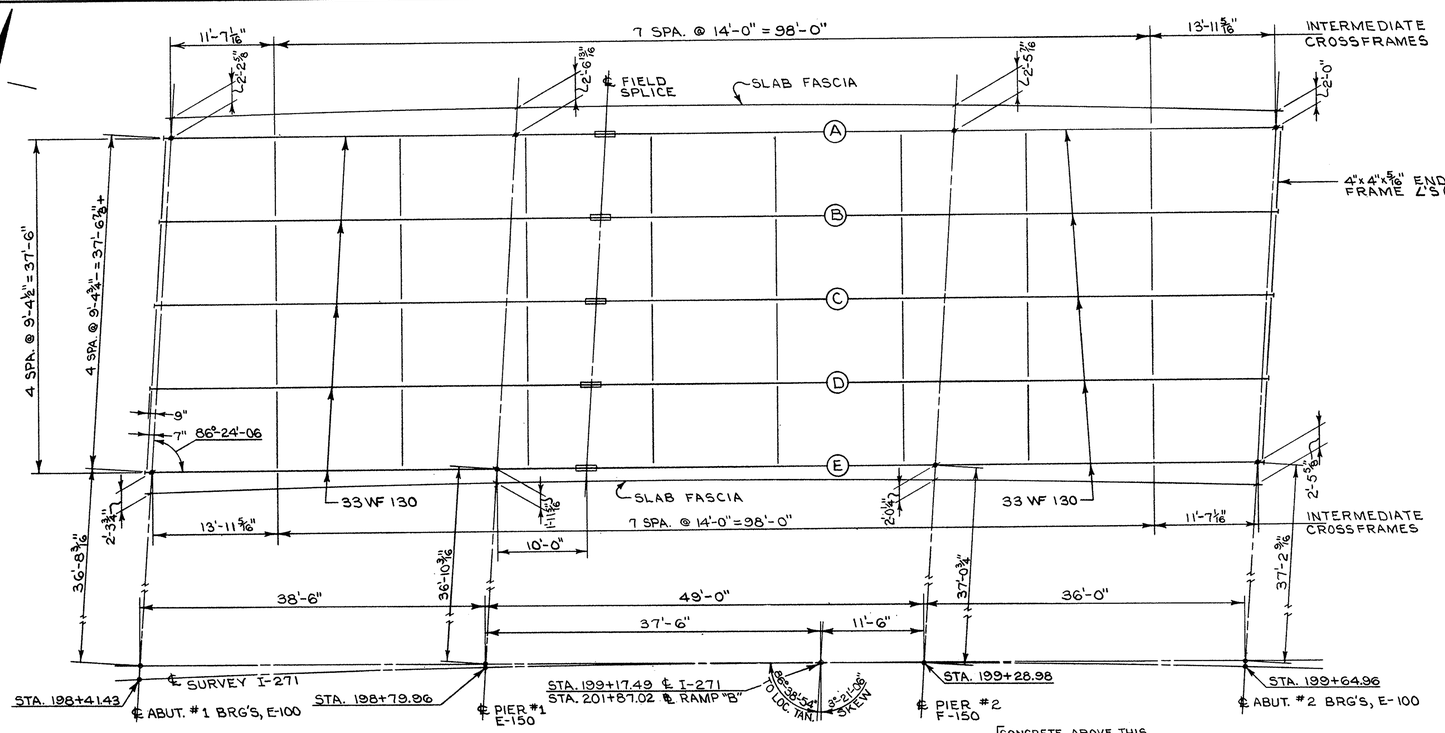
BRIDGE NO. SUM-271-0378 L.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CES	BMR		H.G.H.	RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

413
510

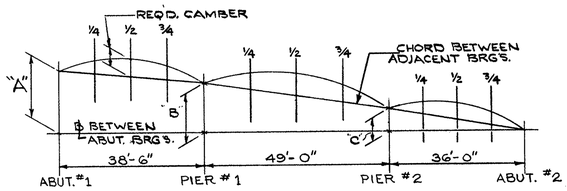
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—FRAMING PLAN—

—DEFLECTION & CAMBER TABLE—

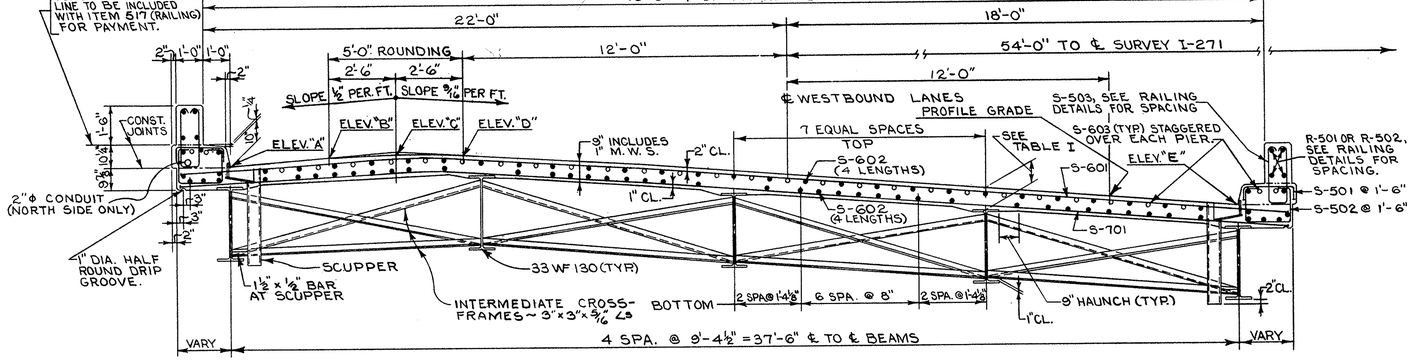
LOCATION	SPAN # 1						SPAN # 2								SPAN # 3					
BEAMS	1/4 PT.		1/2 PT.		3/4 PT.		SPLICE PT.		1/4 PT.		1/2 PT.		3/4 PT.		1/4 PT.		1/2 PT.		3/4 PT.	
	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.
DEFLECTION DUE TO WEIGHT OF STEEL	.01"	.01"	.01"	.01"	—	—	.01"	.01"	.01"	.01"	.02"	.01"	.01"	.01"	—	—	.01"	.01"	.01"	.01"
DEFLECTION DUE TO REMAINING DEAD LOAD	.09"	.06"	.10"	.07"	.05"	.04"	.08"	.06"	.09"	.06"	.17"	.12"	.10"	.07"	.03"	.02"	.06"	.04"	.06"	.04"
ADJUSTMENT REQ'D. FOR VERT. CURVE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
REQ'D. SHOP CAMBER	1/8"	1/16"	1/8"	1/16"	1/16"	1/16"	1/16"	1/16"	1/8"	1/16"	3/16"	1/8"	1/8"	1/16"	0"	0"	1/16"	1/16"	1/16"	1/16"



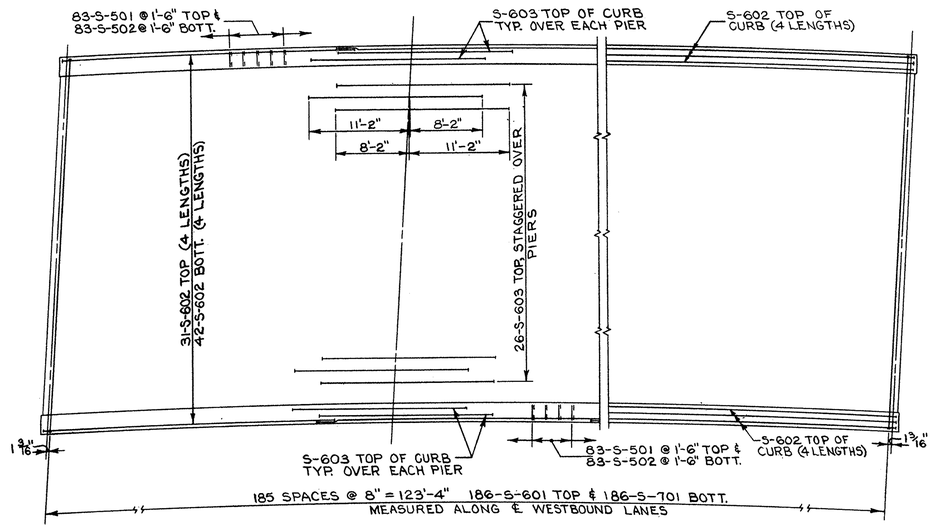
—LAYOUT DIAGRAM—

—BEAM LAYOUT DIMENSIONS—

BEAMS	DIM. "A"	DIM. "B"	DIM. "C"
A	3'-7"	2'-5 11/16"	1'-0 5/8"
B	3'-7 1/8"	2'-5 3/4"	1'-0 5/8"
C	3'-7 1/4"	2'-5 13/16"	1'-0 11/16"
D	3'-7 3/8"	2'-5 7/8"	1'-0 11/16"
E	3'-7 7/16"+	2'-5 15/16"	1'-0 3/4"



—TRANVERSE SECTION—



—PARTIAL SLAB REINFORCING PLAN—

—ELEVATION TABLE—

STA.	PROFILE GRADE	ELEV."A"	ELEV."B"	ELEV."C"	ELEV."D"	ELEV."E"
198+50	1085.36	1086.33	1086.50	1086.55	1086.50	1085.12
198+75	1084.62	1085.60	1085.77	1085.82	1085.76	1084.38
199+00	1083.89	1084.87	1085.04	1085.09	1085.03	1083.66
199+25	1083.15	1084.12	1084.29	1084.34	1084.28	1082.91
199+50	1082.40	1083.37	1083.54	1083.59	1083.54	1082.13

—TABLE I ~ SLAB THICKNESS OVER BEAMS, AT ℄ OF BEARINGS—

BEAM	ABUT. 1	PIER 1	PIER 2	ABUT. 2
A	9 3/8"	9 1/2"	9 1/2"	9 1/4"
B	9 7/16"	9 5/16"	9 5/16"	9 9/16"
C	"	"	"	"
D	"	"	"	"
E	"	"	"	"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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FRAMING & SLAB DETAILS

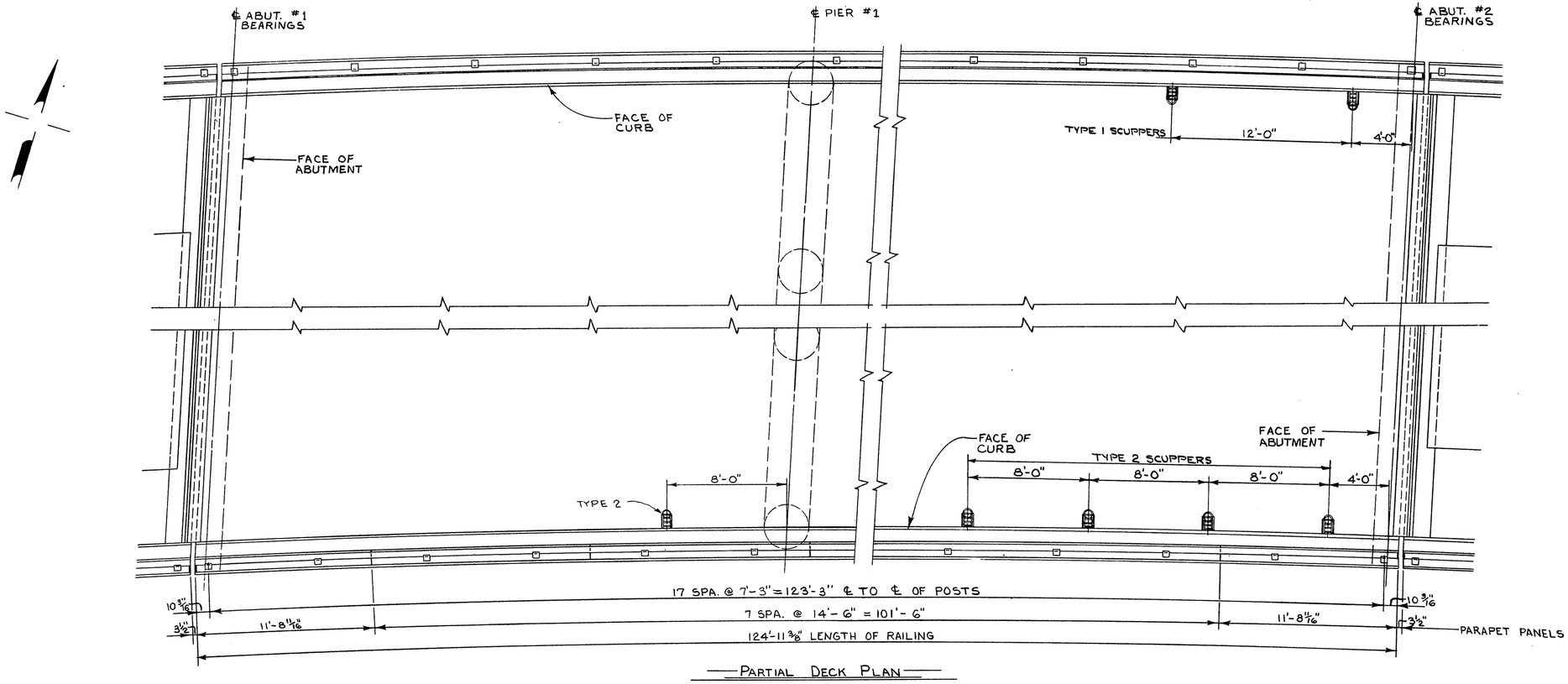
BRIDGE NO. SUM-271-0378 L.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WS	BMR		H.G.H.	RBA	4-21-66	

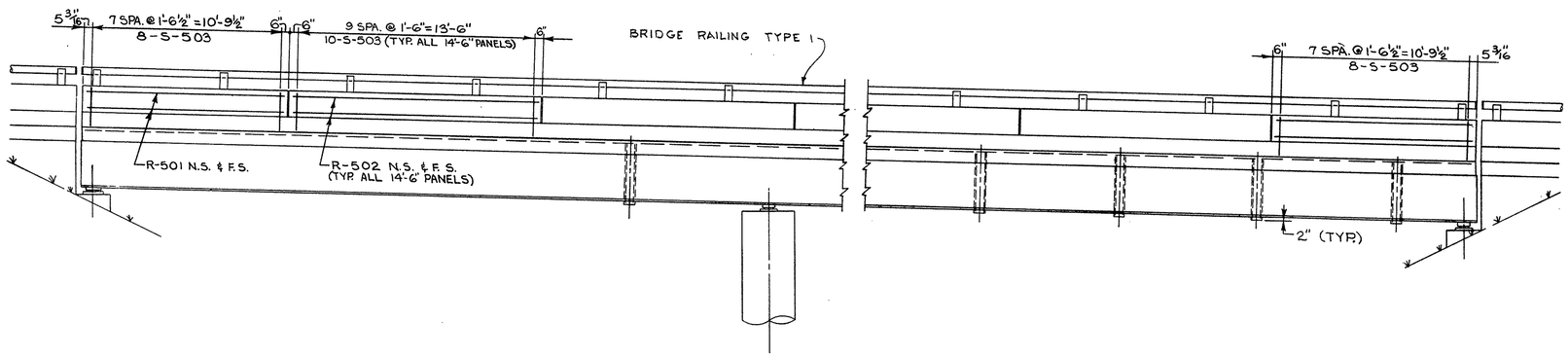
FED. RD.	STATE	PROJECT	
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SUM-271-2.98

414
510



—PARTIAL DECK PLAN—



—ELEVATION—SOUTH PARAPET SHOWN—
—NORTH PARAPET SIMILAR—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE NO. SUM-271-0378 L.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CLS	BMR		H.G.H.	RSH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

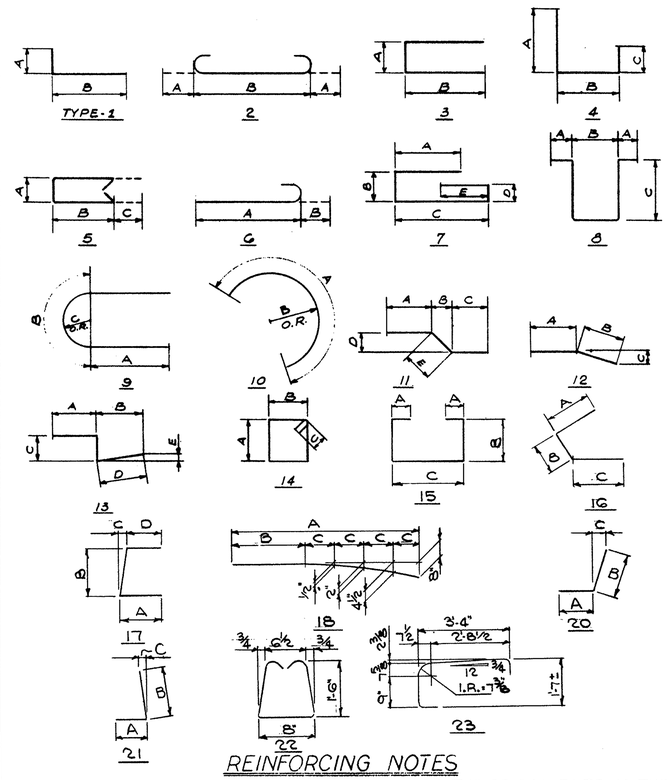
SUM.-271-2.98

415
510

MARK	NO. REQ'D		LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
	N°1	N°2	ABUTMENTS 1 & 2 (LEFT)							
A501	27	27	9'-2"	3	5'-4"	2'-0"				516
A502	13	12	7'-9"	1	1'-0"	6'-10"				202
A503	6		8'-7"	1	1'-0"	7'-8"				54
A504	7	13	8'-1"	1	1'-0"	7'-2"				169
A505	26	26	7'-3"	3	3'-5"	2'-0"				393
A506	2		28'-9"	ST						60
A507	16	16	41'-4"	ST						1,380
A508	5		22'-0"	ST						115
A509	1	1	27'-0"	ST						56
A510	1	1	10'-6"	ST						22
A511	1	1	6'-2"	ST						13
A512		1	8'-9"	1	1'-0"	7'-10"				9
A513		5	21'-9"	ST						114
A514										
A515										
A516										
A517										
A518										
A519										
A520										
A521										
A522										
A523		2	20'-10"	ST						44
A524	20	18	5'-7"	5	8"	2'-2"	5"			221
A525	12		12'-6"	ST						157
A526	4		12'-6"	18	12'-5"	1'-9	2'-8			52
A527	14	12	4'-1"	3	1'-4"	1'-6"				111
A528	14	12	4'-3"	17	1'-8"	1'-4"	2"	1'-6"		115
A529	32	28	3'-4"	ST						209
A530	36	36	4'-5"	ST						332
A531										
A532										
A533										
A534	4		9'-5"	6T						39
A535	8	8	8'-2"	ST						136
A536	8	8	6'-9"	ST						113
A537		6	3'-11"	20	2'-0"	2'-0"	1"			25
A538	20	20	11'-4	14	2'-7"	3'-0"	4"			473
A539	6		3'-11"	20	2'-0"	2'-0"	1⅞"			25
A540	4		7'-4"	12	5'-4"	2'-0"	1'-0⅛"			31
A541	6		4'-0"	21	2'-0"	2'-0"	1⅞"			25
A542		16	11'-6"	ST						192
A543		4	11'-8	18	11'-6"	1'-10"	2'-5"			49
A544		6	3'-11"	21	2'-0"	2'-0"	1"			25
A545		4	5'-6"	12	3'-6"	2'-0"	1'-0"			23
A546	18	18	6'-3"	ST.						235
AG01	13	12	14'-8"	4	6'-10"	5'-4"	2'-9"			548
AG02	6		15'-6"	4	7'-8"	5'-4"	2'-9"			139
AG03	7	13	14'-11"	4	7'-2"	5'-4	2'-9"			448
AG04	16	16	13'-6"	3	1'-5"	6'-2"				649
AG05	24	24	15'-6"	7	4'-10"	1'-5"	6'-2"	11"	2'-6"	1,106
AG06		1	15'-8	4	7'-10"	5'-4"	2'-9"			24
AG07										
AG08										
AG09	9	9	18'-11"	3	1'-2"	9'-0"				512
AG10	3	3	6'-9"	ST						61
AG11	9	9	19'-3"	3	1'-2"	9'-4"				521
AG12	3	3	7'-1"	ST						64
AG13										
AG14										
AG15										

MARK	NO. REQ'D		LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
	N°1	N°2								
A801	4		33'-6"	12	30'-0"	3'-6"	2'-5 1/16			358
A802	3		32'-3"	ST						258
A803	3		12'-6"	ST						100
A804	4		14'-11"	ST						159
A805		4	23'-0"	ST						246
A806		3	21'-0"	ST						168
A807		3	24'-6"	ST						196
A808		4	25'-3"	12	21'-9"	3'-6"	2'-5 1/16			270
A809										
A810										
A811										
A812										
A813										
A814										
A815										
A816										
A817	2	2	10'-10"	ST						116
A818	4	4	8'-4"	ST						178
A819	2	2	11'-2"	ST						119
A820	4	4	8'-8"	ST						185
A821										
A822										
A823										
			TOTAL ABUTMENTS 1 & 2 (LEFT)							12,160
			PIERS 1 & 2 (LEFT)							
P501	42	42	7'-7"	3	2'-8"	2'-6"				664
PG01	4	4	19'-10"							238
P701	40	40	10'-2"	2	10"	8'-6"				1,663
P702	40	40	9'-2"	2	10"	7'-6"				1,499
P801	14	14	19'-8"	ST						1,470
P802	7	7	16'-10"	ST						629
P803	7	7	23'-6"	ST						879
P804	14	14	8'-6"	1	3'-4	5'-4"				636
P805	4	4	8'-9"	9	2'-6"	3'-9"	1'-2 3/8"			187
P1101	28		21'-11"	ST						3,261
P1102		28	19'-3"	ST						2,864
P1103	16		21'-1"	ST						1,732
P1104		16	18'-4"	ST						1,559
P1105	56	56	7'-0"	1	1'-0	6'-3"				4,166
P1106	12		21'-6"	ST.						1,370
P1107		12	18'-10"	ST.						1,201
			SPIRALS							2,479
			TOTAL PIERS 1 & 2, INCLUDING SPIRALS = 26,557							

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
		SUPERSTRUCTURE							
S501	166	2'-3"	3	1'-6"	6"				390
S502	166	4'-8"	15	6"	1'-4"	1'-6"			808
S503	172	5'-7"	5	8"	2'-2"	5"			1,002
SG01	186	41'-8"	ST						11,641
SG02	316	32'-6"	ST						15,426
SG03	60	19'-4	ST						1,742
ST01	186	41'-8"	ST						15,841
		TOTAL SUPERSTRUCTURE = 46,850							
		RAILING*							
R501	16	11'-4"	ST						
R502	56	14'-2"	ST						
R503	8	12'-4"	ST						
R504	8	11'-4"	ST						
R505									
R506									
R507	12	4'-2"	22						
R508	8	5'-4	23						
		REPLACEMENT BARS							
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	1	5'-6"	ST.						
RE-601	2	6'-0"	ST.						
RE-701	1	6'-3"	ST.						
RE-801	1	6'-6"	ST.						
RE-901	—	6'-10"	—						
RE-1001	—	7'-3"	—						
RE-1101	1	7'-9"	ST.						



SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP401	1	2'-8"	18'-11"	4½	53	292
SP402	1	2'-8"	16'-3"	4½	46	253
SP403	1	2'-8"	17'-11	4½	51	281
SP404	1	2'-8"	15'-3"	4½	44	243
SP405	1	2'-8"	17'-5"	4½	50	276
SP406	1	2'-8"	14'-9"	4½	42	231
SP407	1	2'-8"	18'-5"	4½	52	287
SP408	1	2'-8	15'-9"	4½	45	249
SPACERS	32					367
				TOTAL SPIRALS		2,479

GRAND TOTAL 85,567 LBS

REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.66 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.66 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

*RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

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BUREAU OF BRIDGES

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REINFORCING SCHEDULE

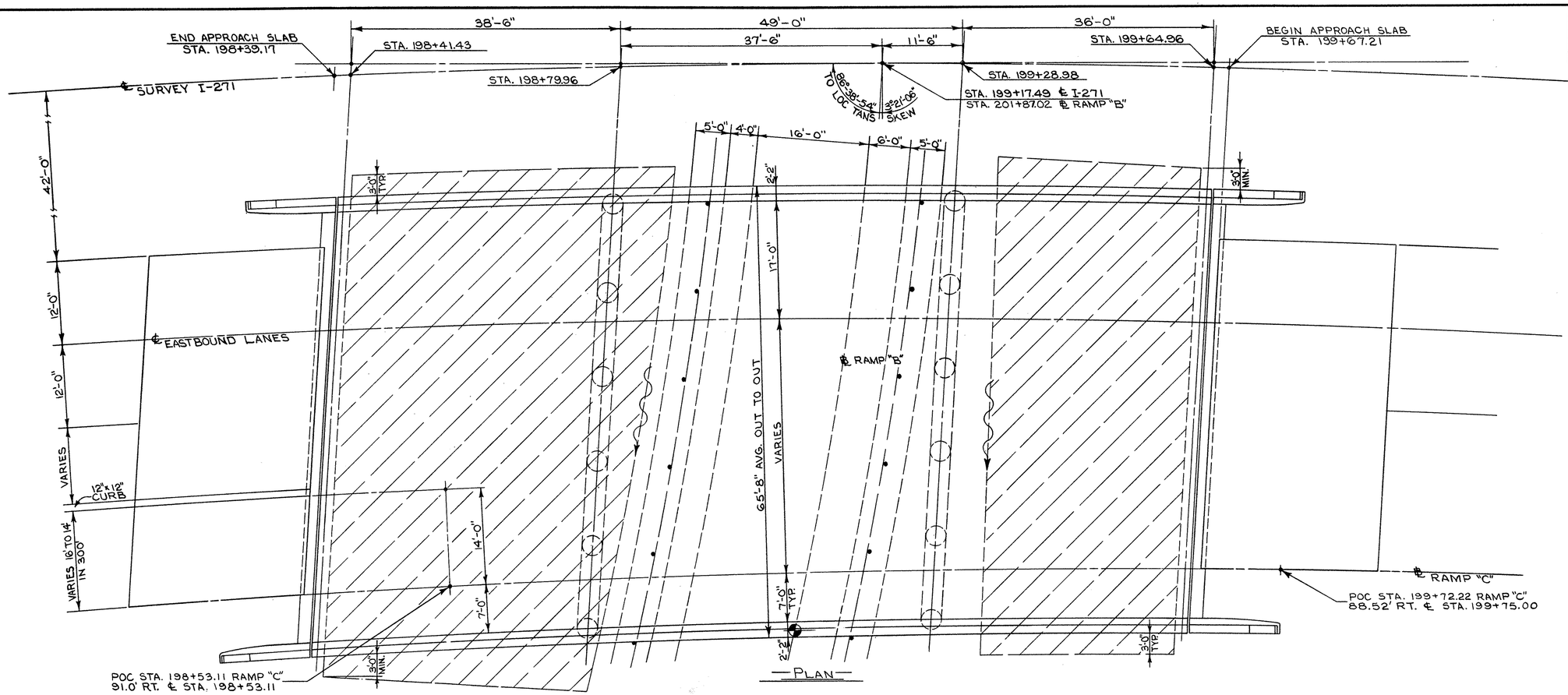
BRIDGE NO. SUM.-271-0378 L.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 to STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CBS	B.M.R		H.G.H.	RBH	4-21-66	

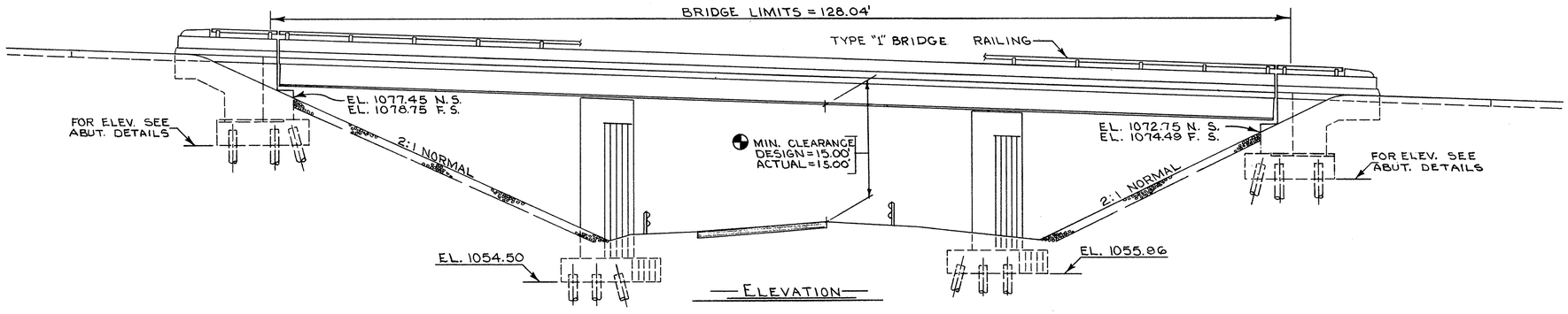
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

416
510



—PLAN—



—ELEVATION—

NOTE:
FIRST TEST PILE: ITEM 505 IN THE ESTIMATED QUANTITIES FOR SUM-271-0378-L, MAY BE DRIVEN AT EITHER SUM-271-0378-L OR SUM.-271-0378-R.

SEE SHEET No 368 FOR GENERAL NOTES.

—ESTIMATED QUANTITIES—

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
503	639	CU. YD.	UNCLASSIFIED EXCAVATION		335	304	
507	2,368	LIN. FT.	12"ϕ CAST-IN-PLACE REINF. CONC. PILES		1,008	1,360	
509	122,563	LBS.	REINFORCING STEEL	70,474	16,443	35,646	
511	246	CU. YD.	CLASS "C" CONC. SUPERSTRUCTURE	246			
511	131	CU. YD.	CLASS "E" CONC. ABUTS. ABOVE FTG'S.		131		
511	98	CU. YD.	CLASS "C" CONC. PIERS ABOVE FTG'S.			98	
511	201	CU. YD.	CLASS "E" CONC. PIER & ABUT. FOOTINGS		105	96	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
512	17	LIN. FT.	PREMOLDED SEALING STRIP		17		
513	152,803	LBS.	STRUCTURAL STEEL	152,803			
514	152,803	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	152,803			
517	298.80	LIN. FT.	BRIDGE RAILING TYPE 1	250.13	49.67		
518	49	CU. YD.	POROUS BACKFILL		49		
518	8	EACH	SUPPERS, INCLUDING SUPPORTS	8			

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
518	114	LIN. FT.	6"ϕ PERFORATED HELICAL C.M.P. 707.06, INCLUDING SPECIALS.		114		
518	102	LIN. FT.	6"ϕ HELICAL C.M.P. 707.06, NON-PERFORATED		102		
601	659	SQ. YD.	CRUSHED AGGREGATE SLOPE PROTECTION		659		
625			LIGHTING QUANTITIES—SEE SHEET 346				
808	246	Units	WATER REDUCING, SET RETARDING ADMIXTURE	246			
825	1109	SQ. YDS.	CONCRETE SURFACE TREATMENT				1109
828	121	LIN. FT.	JOINT SEALER (end dam)	121			

STATE OF OHIO
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BUREAU OF BRIDGES

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GENERAL PLAN & ELEVATION

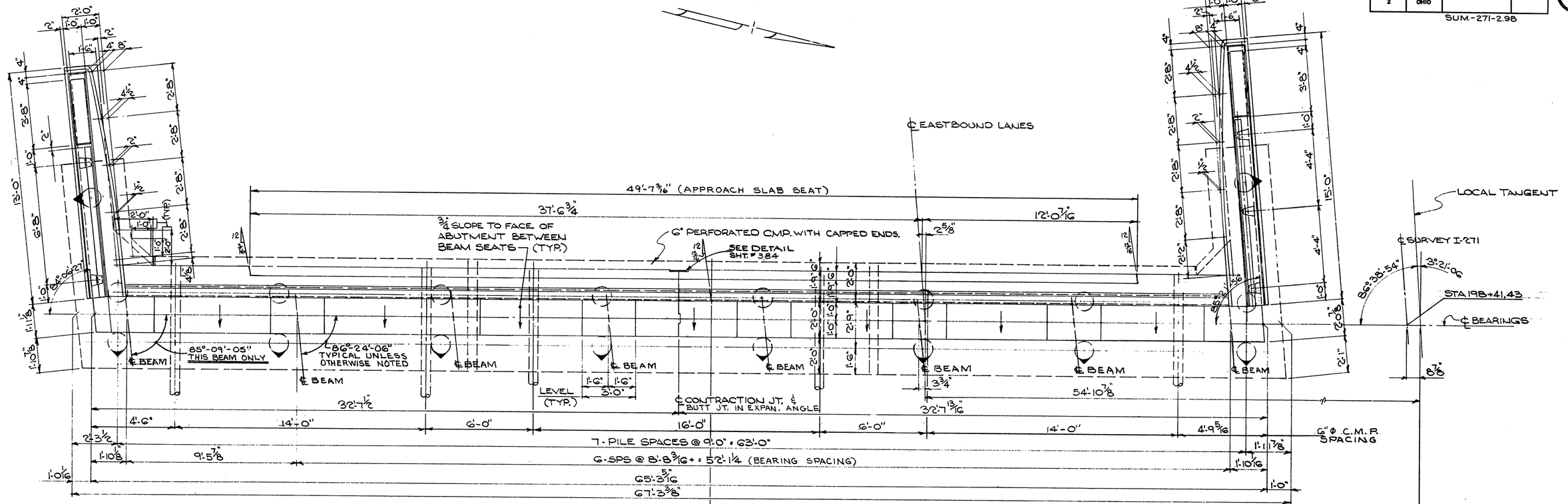
BRIDGE NO. SUM-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CCS	BMR		H.G.H.	RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

417
510



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT #1 DETAILS

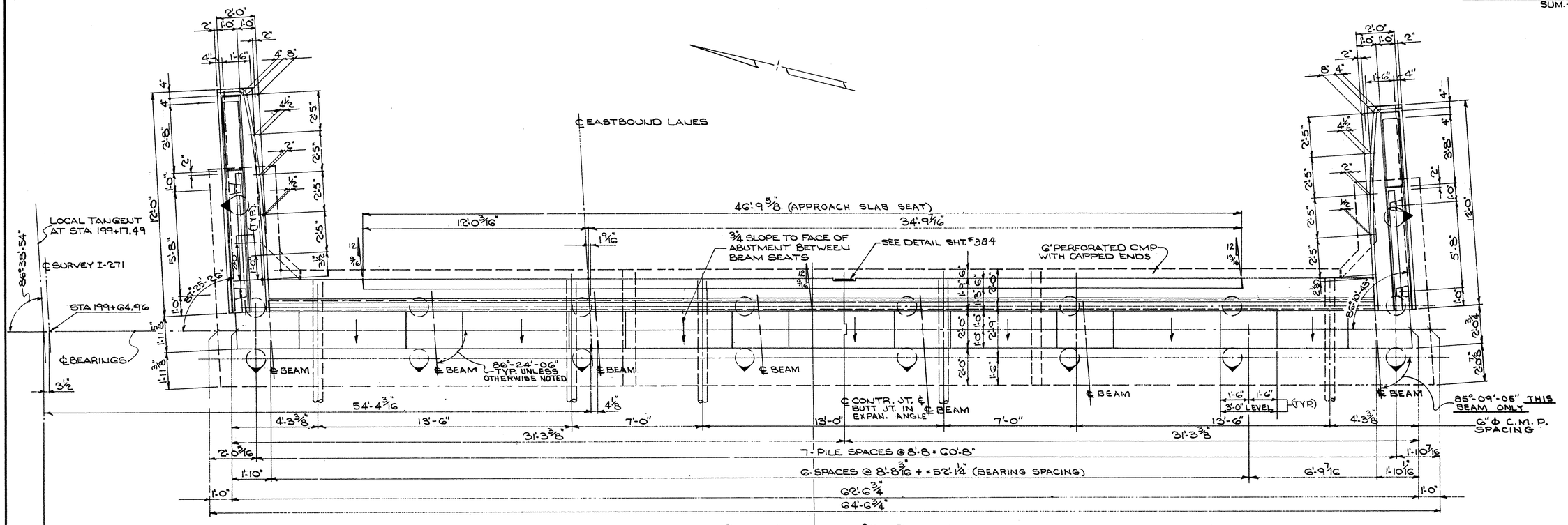
BRIDGE NO. SUM.-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 to STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CLS	JWW		H.G.H.	RDH	4-21-66	

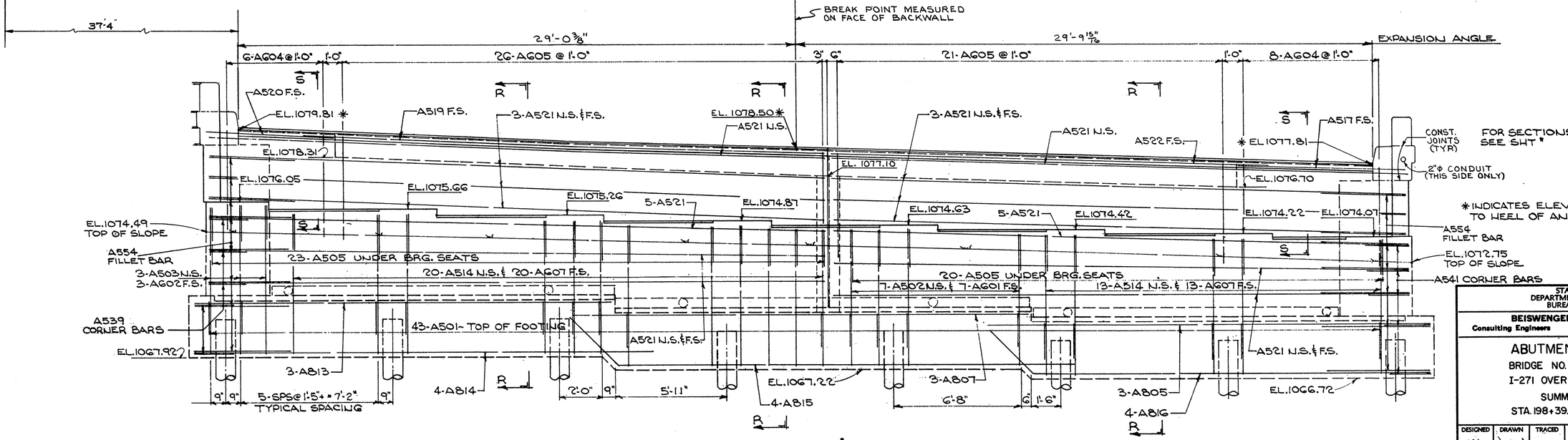
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

418
510



PLAN ABUTMENT #2 ~ RIGHT STRUCTURE



ELEVATION ABUTMENT #2 ~ RIGHT STRUCTURE

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT #2 DETAILS

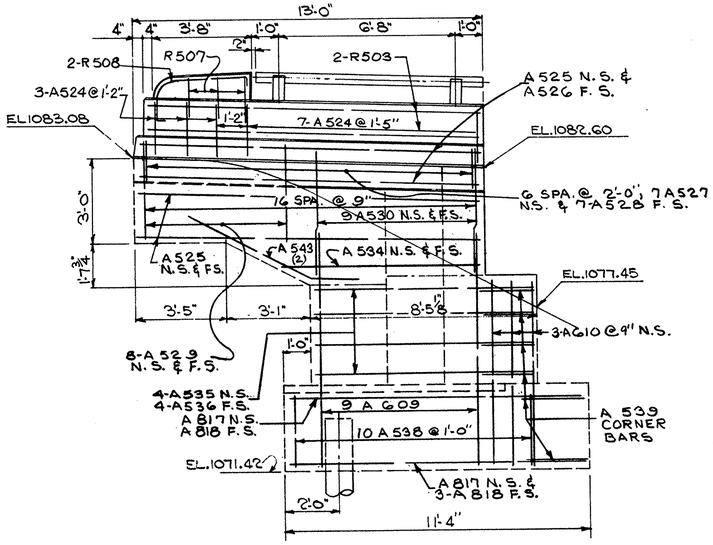
BRIDGE NO. SUM-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 to STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CAS	JWW		H.G.H.	EBH	4-21-66	

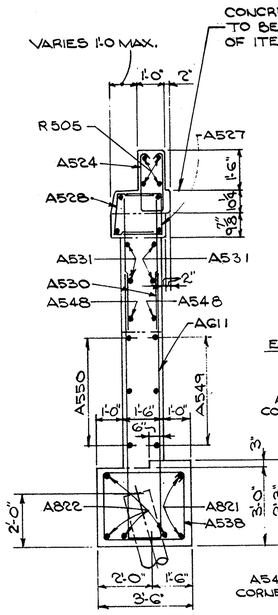
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-2.98

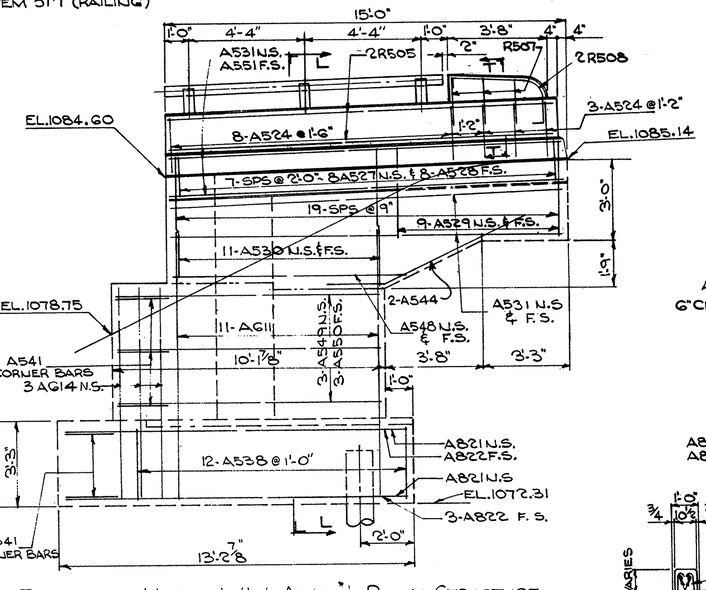
419
510



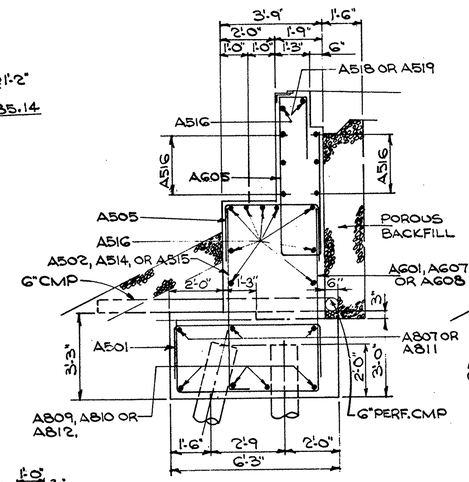
ELEVATION SOUTH W.W. ABUT.#1 RIGHT STRUCTURE



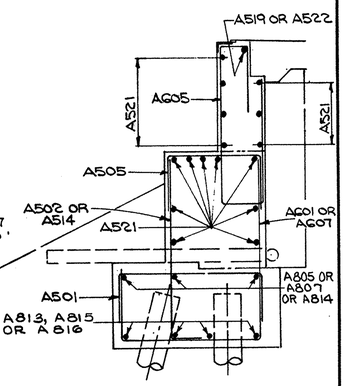
SECTION 'L-L'



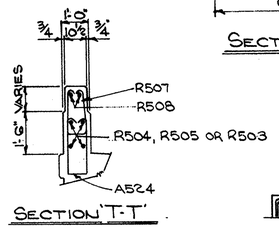
ELEVATION NORTH W.W. ABUT.#1 RIGHT STRUCTURE



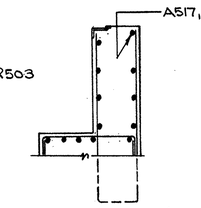
SECTION 'P-P'



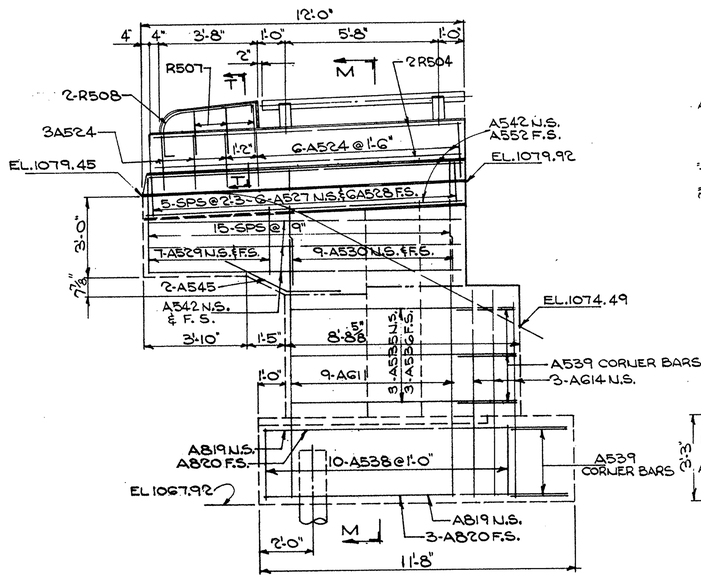
SECTION 'R-R'
FOR DETAILS AND DIMENSIONS NOT SHOWN SEE SECTION 'P-P'



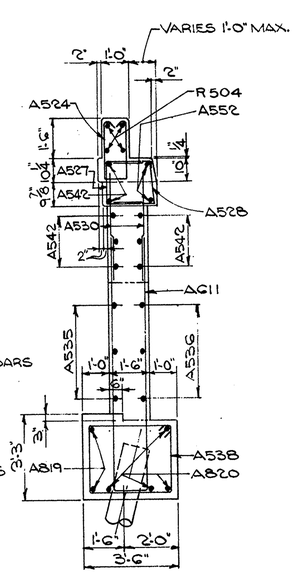
SECTION 'T-T'



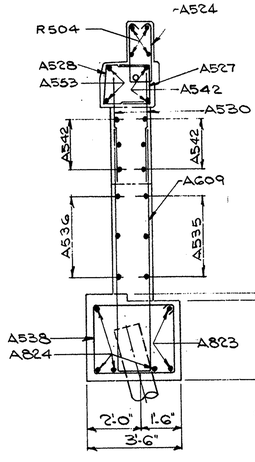
SECTION 'S-S'



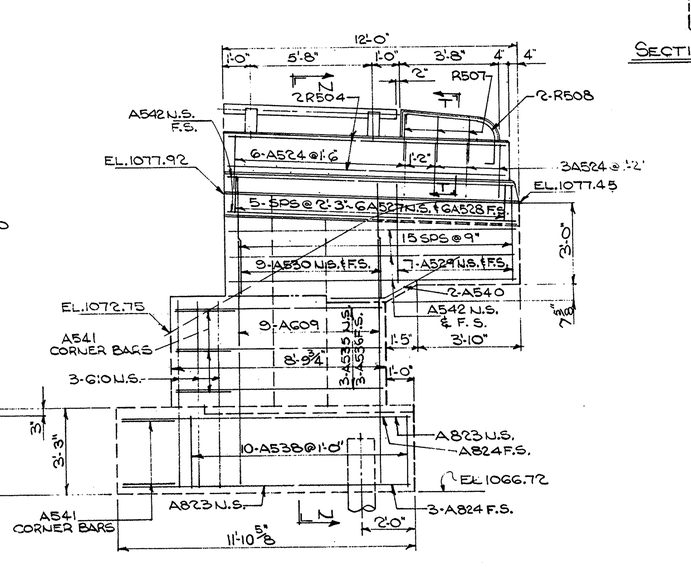
ELEVATION NORTH W.W. ABUT.#2 RIGHT STRUCTURE



SECTION 'M-M'



SECTION 'N-N'



ELEVATION SOUTH W.W. ABUT.#2 RIGHT STRUCTURE

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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ABUTMENT DETAILS #1 & #2

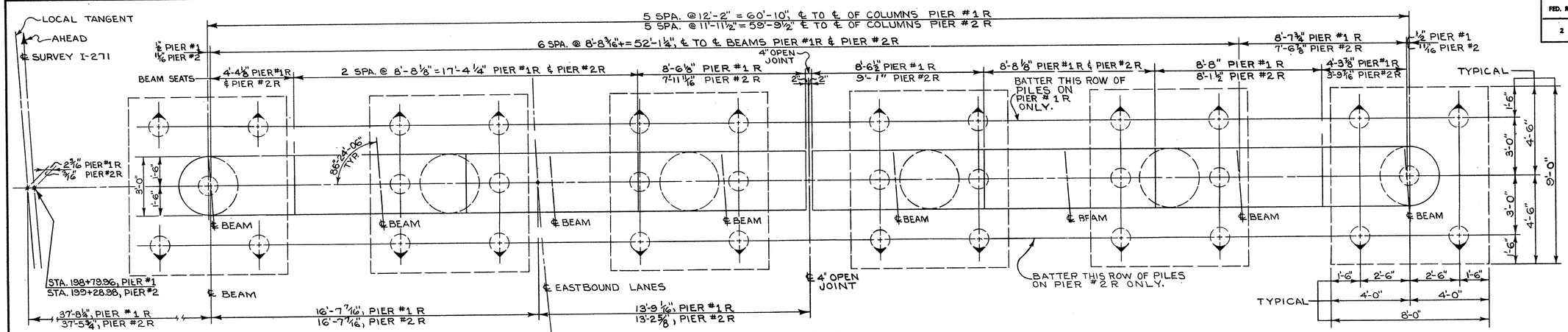
BRIDGE NO. SUM.-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 to STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ds	JWW		H.G.H.	RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

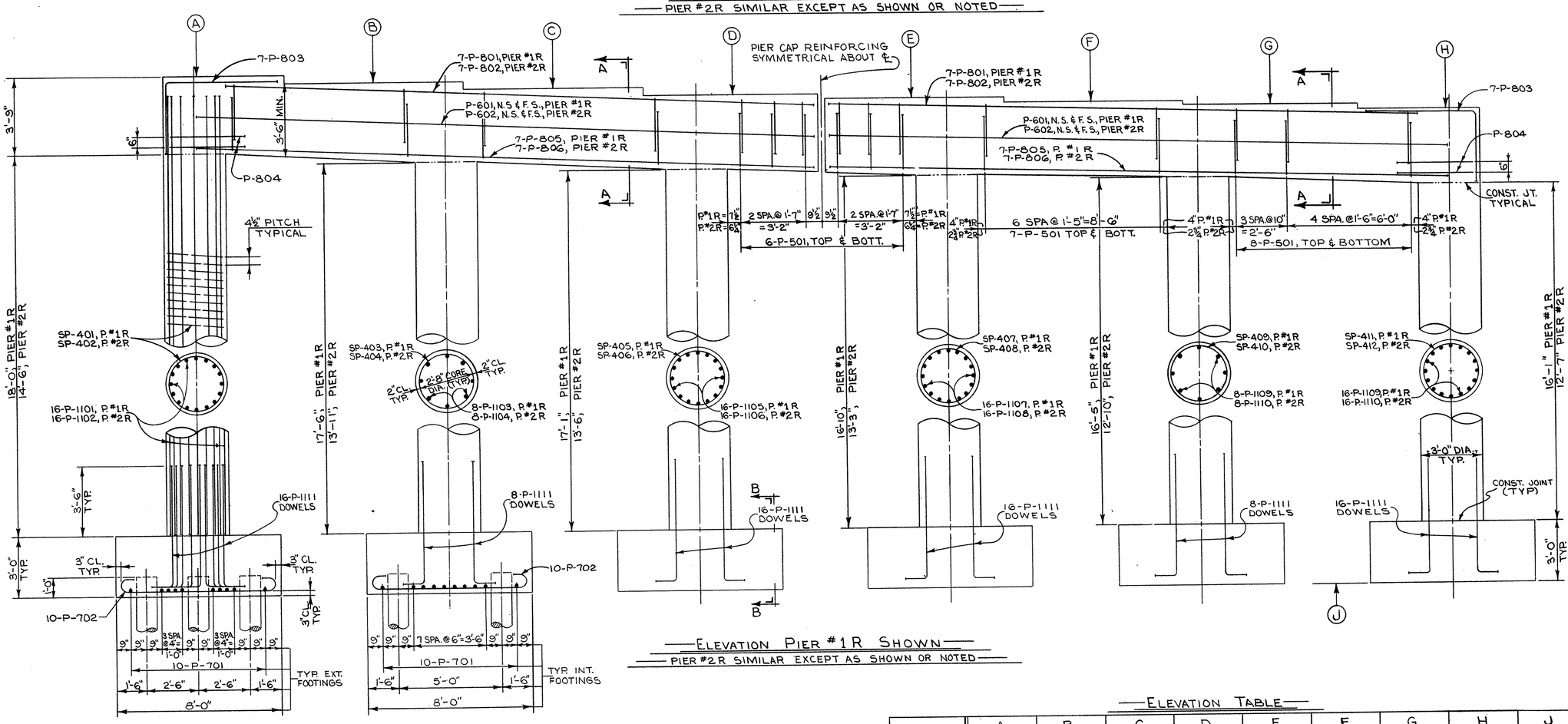
SUM-271-2.98

420
510



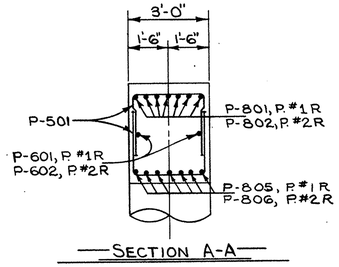
PLAN PIER #1R SHOWN

PIER #2R SIMILAR EXCEPT AS SHOWN OR NOTED

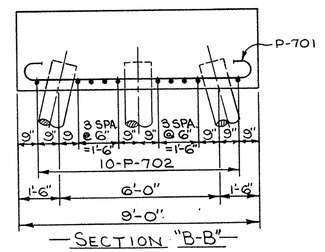


ELEVATION PIER #1R SHOWN

PIER #2R SIMILAR EXCEPT AS SHOWN OR NOTED



SECTION A-A



SECTION "B-B"

ELEVATION TABLE

	A	B	C	D	E	F	G	H	J
PIER #1 R	1079.25	1078.86	1078.48	1078.09	1077.85	1077.66	1077.47	1077.27	1054.50
PIER #2 R	1077.21	1076.82	1076.43	1076.04	1075.80	1075.60	1075.41	1075.23	1055.96

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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PIER DETAILS

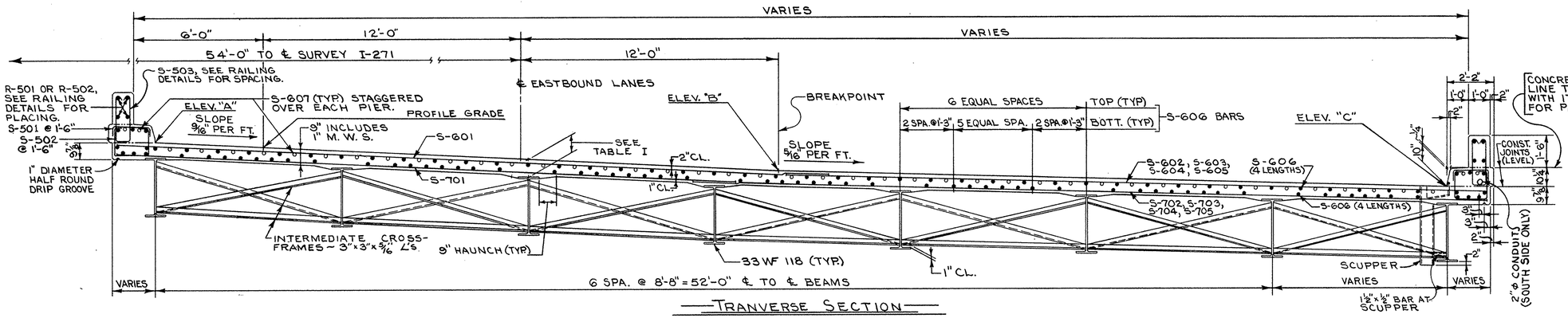
BRIDGE NO. SUM-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CLS	BMR		H.G.H.	RBH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

421/510

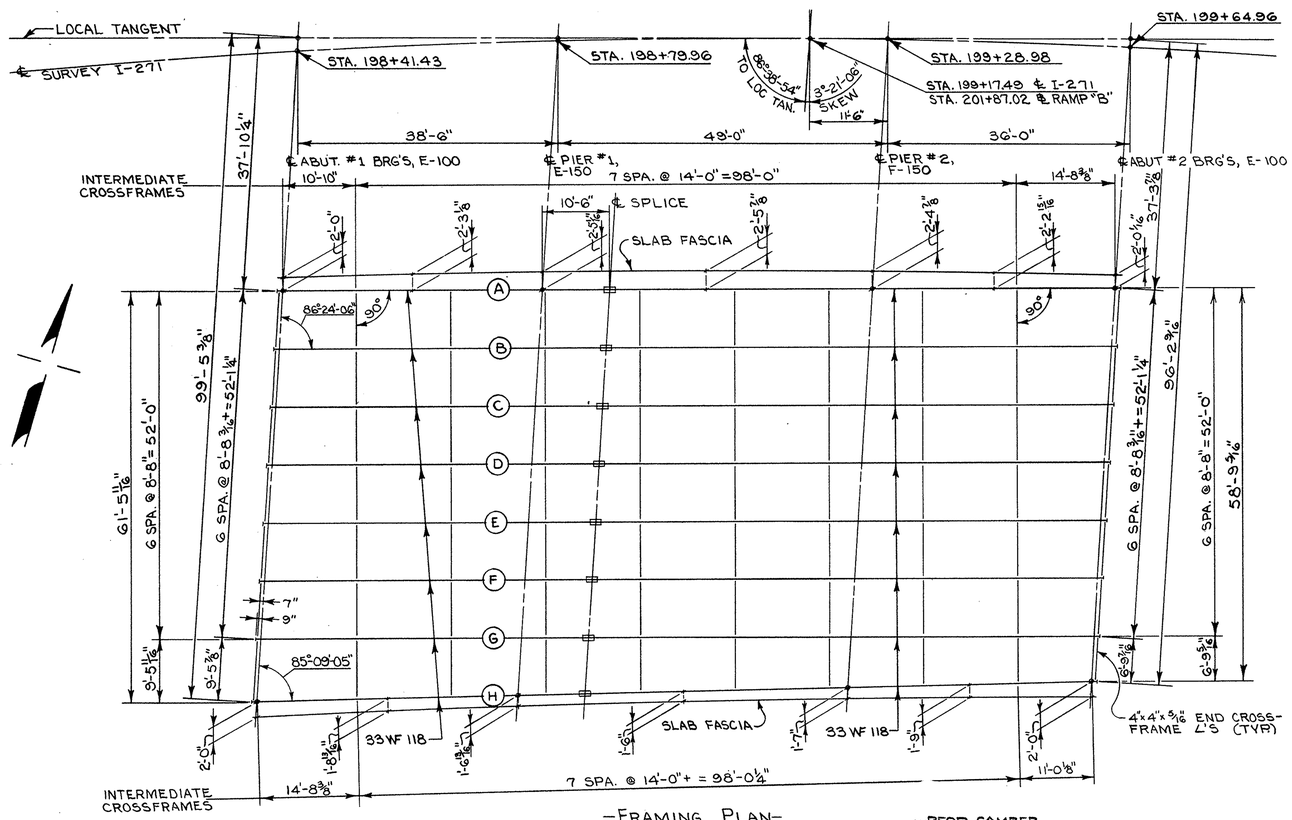
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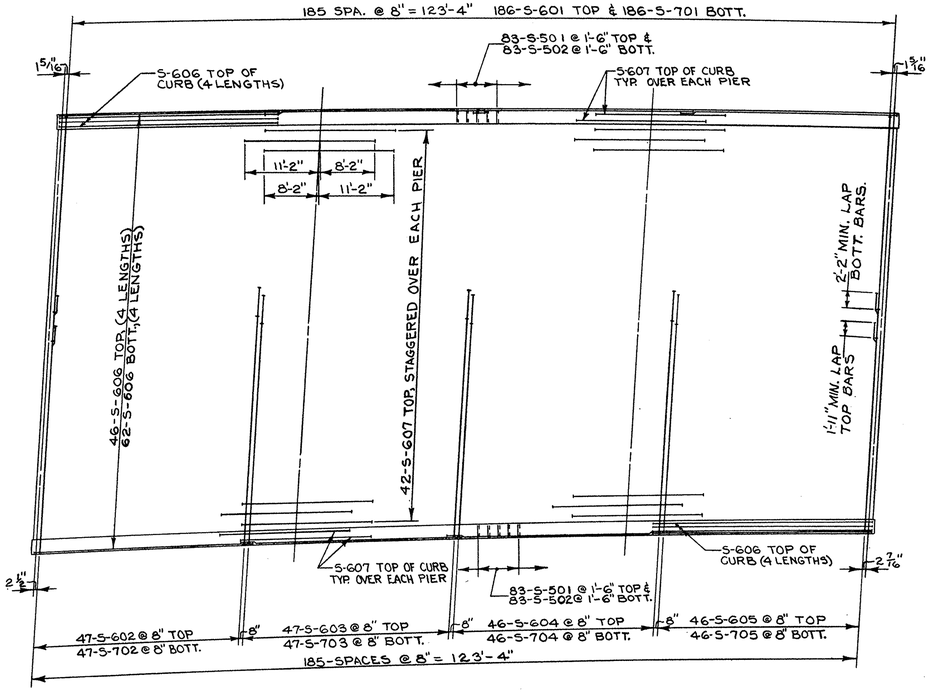
TRANVERSE SECTION

ELEVATION TABLE

STA.	PROFILE GRADE	ELEV. "A"	ELEV. "B"	ELEV "C"
198+50	1083.92	1084.17	1082.80	1081.99
198+75	1083.01	1083.25	1081.88	1081.08
199+00	1082.09	1082.34	1080.97	1080.19
199+25	1081.17	1081.41	1080.04	1079.27
199+50	1080.23	1080.47	1079.10	1078.34



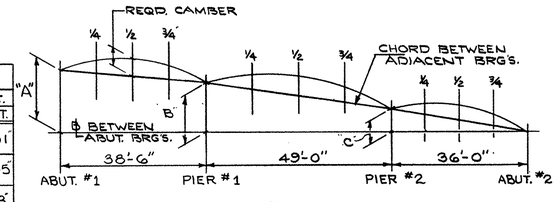
FRAMING PLAN



SLAB REINFORCING PLAN

DEFLECTION & CAMBER TABLE

LOCATION	SPAN # 1						SPAN # 2								SPAN # 3					
BEAMS	¼ PT.		½ PT.		¾ PT.		SPLICE PT.		¼ PT.		½ PT.		¾ PT.		¼ PT		½ PT.		¾ PT.	
	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.
DEFLECTION DUE TO WEIGHT OF STEEL	.01"	.01"	.01"	.01"	—	—	.01"	.01"	.01"	.01"	.02"	.01"	.01"	.01"	—	—	.01"	.01"	.01"	.01"
DEFLECTION DUE TO REMAINING DEAD LOAD	.09"	.06"	.11"	.07"	.05"	.04"	.07"	.03"	.11"	.07"	.18"	.13"	.11"	.08"	.03"	.02"	.07"	.06"	.06"	.05"
ADJUSTMENT REQ'D. FOR VERTICAL CURVE.	.03"	.04"	.04"	.04"	.03"	.04"	.04"	.02"	.05"	.05"	.07"	.07"	.05"	.05"	.03"	.03"	.04"	.04"	.03"	.03"
REQ'D. SHOP CAMBER	.12"	.10"	.15"	.11"	.08"	.08"	.12"	.06"	.16"	.12"	.25"	.20"	.16"	.13"	.06"	.05"	.12"	.11"	.10"	.09"



LAYOUT DIAGRAM

BEAM LAYOUT DIMENSIONS

BEAMS	DIM. "A"	DIM. "B"	DIM. "C"
A	4'-7¼"	3'-2 7/16"	1'-4 3/16"
B	4'-7⅜"	3'-2½"	1'-4½"
C	4'-7½"	3'-2 9/16"	1'-4½"
D	4'-7⅝"	3'-2 5/8"+	1'-4 9/16"
E	4'-7¾"	3'-2¾"	1'-4⅝"
F	4'-7⅞"	3'-2 13/16"+	1'-4⅝"
G	4'-8"	3'-2 15/16"	1'-4 11/16"
H	4'-7⅜"	3'-2½"	1'-4½"

TABLE I - SLAB THICKNESS OVER BEAMS, AT ℄ BEARINGS

BEAM	ABUT. 1	PIER 1	PIER 2	ABUT. 2
A THRU D	9 9/16"	9 5/16"	9 5/16"	9 9/16"
E THRU H	9 5/16"	9 9/16"	9 9/16"	9 5/16"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING & SLAB DETAILS

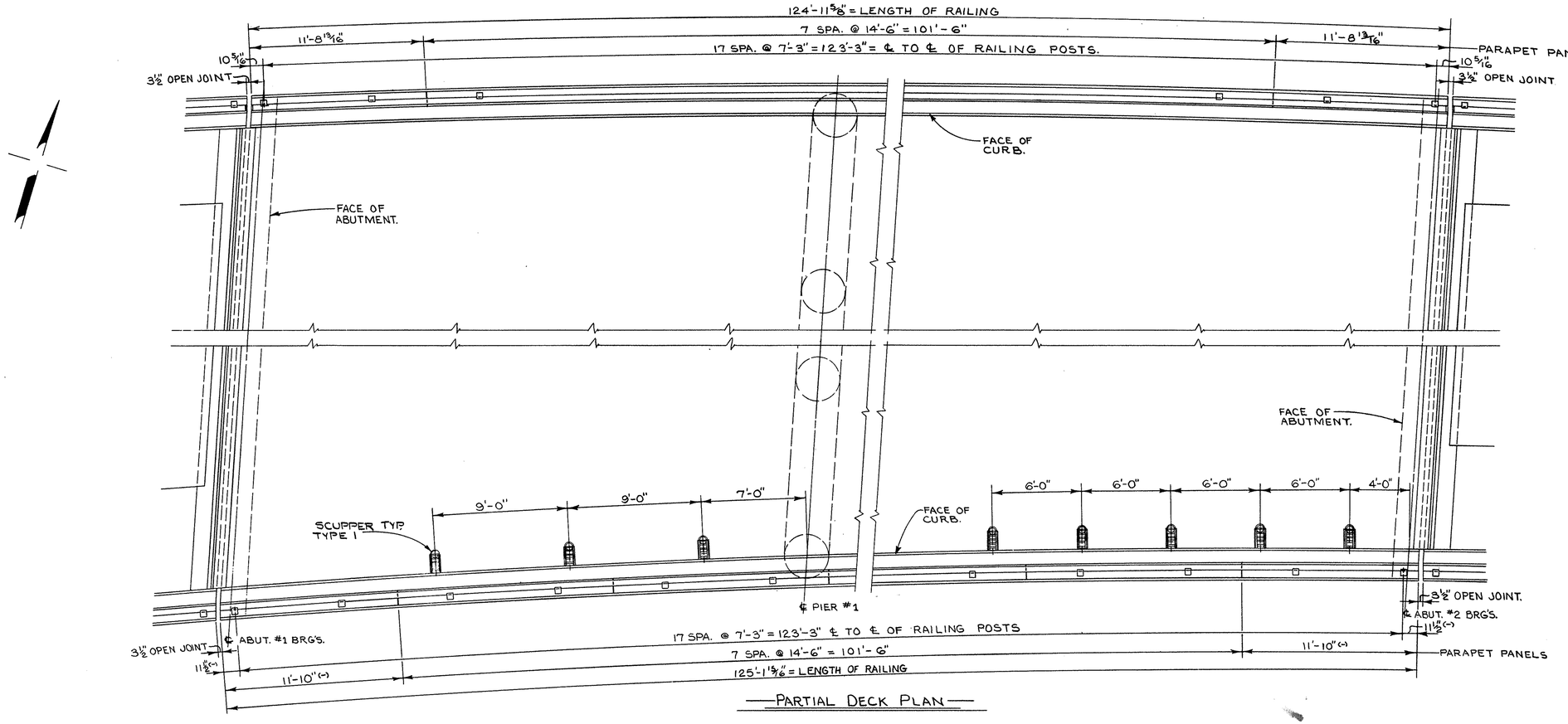
BRIDGE NO. SUM-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WA	BMR		H.G.H.	RBH	4-21-66	

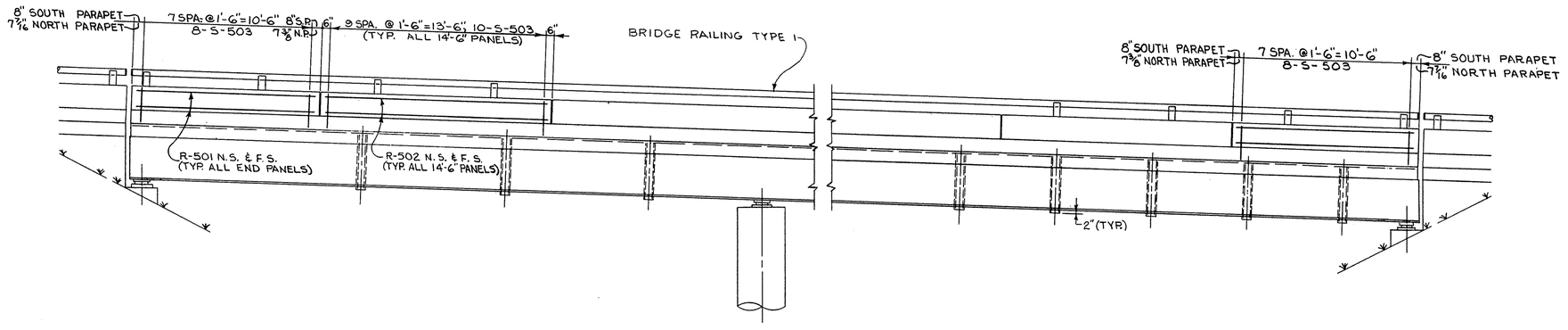
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

422
510



PARTIAL DECK PLAN



ELEVATION SOUTH PARAPET SHOWN
NORTH PARAPET SIMILAR EXCEPT WHERE NOTED

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE NO. SUM-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 TO STA. 199+67.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CW	BMR		H.G.H.	RDH	4-21-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

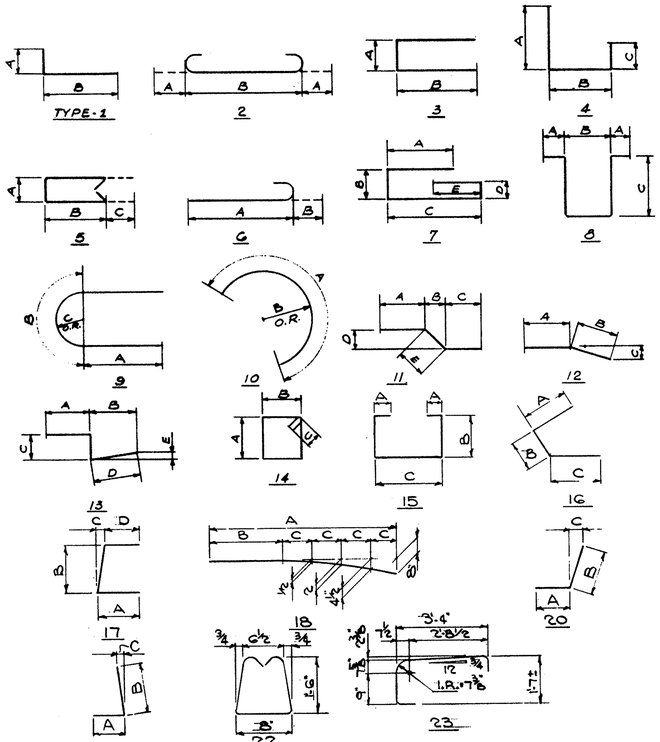
423/510

SUM.-271-2.98

MARK	NO. REQ'D		LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
	N°1	N°2	ABUTMENTS 1 & 2 RIGHT							
A501	44	43	9'-2"	3	5'-4	2'-0"				832
A502	29	7	7'-9"	1	1'-0"	6'-10"				291
A503		3	8'-7"	1	1'-0"	7'-8				27
A504										
A505	44	43	7'-3"	3	3'-5"	2'-0"				658
A506										
A507										
A508										
A509										
A510										
A511										
A512										
A513										
A514	7	33	7'-11"	1	1'-0"	7'-0"				330
A515	8		8'-5"	1	1'-0"	7'-6"				70
A516	32		32'-2"	ST						1,074
A517	1	1	8'-6"	ST						18
A518	1		25'-8"	ST						27
A519	1	1	27'-4"	ST						57
A520	1	1	6'-6"	ST						14
A521		32	30'-10"	ST						1,029
A522		1	22'-10"	ST						24
A523										
A524	21	18	5'-7"	5	8"	2'-2"	5"			227
A525	6		12'-6"	ST						78
A526	2		12'-7"	18	12'-6"	1'-10"	2'-8"			26
A527	15	12	4'-1"	3	1'-4"	1'-6"				115
A528	15	12	4'-3"	17	1'-8"	1'-4	2"	1'-6"		120
A529	34	28	3'-4	ST						216
A530	40	36	4'-5"	ST						350
A531	6		14'-6"	ST						91
A532										
A533										
A534	2		7'-5"	ST						16
A535	4	6	8'-2"	ST						68
A536	4	6	6'-9"	ST						56
A537										
A538	22	20	11'-4"	14	2'-7"	3'-0"	4"			497
A539	6	5	3'-11"	20	2'-0"	2'-0"	1 7/8"			45
A540		2	5'-3"	12	3'-3"	2'-0"	9 3/4"			11
A541	5	5	4'-0"	21	2'-0"	2'-0"	1 7/8"			42
A542		16	11'-6"	ST						192
A543	2		7'-0"	12	5'-0"	2'-0"	11 1/4"			15
A544	2		8'-0"	12	6'-0"	2'-0"	10 3/8"			17
A545		2	5'-3"	12	3'-3"	2'-0"	10 1/4"			11
A546										
A547										
A548	2		8'-10"	ST						19
A549	3		9'-9"	ST						31
A550	3		7'-9"	ST						24
A551	2		14'-6"	18	14'-5"	3'-9"	2'-8"			30
A552		2	11'-7"	18	11'-6"	1'-10"	2'-5"			24
A553		2	11'-6"	18	11'-5"	1'-9"	2'-5"			24
A554	16	16	6'-3"	ST						209
AG01	29	7	14'-8"	4	6'-10	5'-4"	2'-9"			793
AG02		3	15'-6"	4	7'-8"	5'-4	2'-9"			70
AG03										
AG04	14	14	13'-6"	3	1'-5"	6'-2"				568
AG05	50	47	15'-6"	7	4'-10"	1'-5"	6'-2"	11"	2'-8"	2,258
AG06										
AG07	7	33	14'-10"	4	7'-0"	5'-4"	2'-9"			891
AG08	8		15'-4"	4	7'-6"	5'-4	2'-9"			184
AG09	9	9	19'-1"	3	1'-2	9'-1"				516
AG10	3	3	6'-10"	ST						62
AG11	11	9	21'-1"	3	1'-2"	10'-1"				633
AG12										
AG13										
AG14	3	3	7'-9"	ST						70

MARK	NO. REQ'D		LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
	N°1	N°2								
A801										
A802										
A803										
A804										
A805		3	23'-0"	ST						184
A806										
A807	6	3	24'-6"	ST						589
A808										
A809	4		24'-9"	12	21'-3"	3'-6"	2'-5 1/16			265
A810	4		28'-0"	12	24'-6"	3'-6"	2'-5 1/16			299
A811	3		22'-2"	ST						178
A812	4		25'-0"	ST						267
A813		3	21'-8	ST						174
A814		4	23'-8	ST						253
A815		4	27'-6"	12	24'-0"	3'-6"	2'-5 1/16			294
A816		4	23'-11"	12	20'-5"	3'-6"	2'-5 1/16			256
A817	2		10'-10"	ST						58
A818	4		8'-4"	ST						89
A819		2	11'-2"	ST						60
A820		4	8'-8"	ST						93
A821	2		12'-9"	ST						68
A822	4		10'-3"	ST						110
A823		2	11'-4"	ST						61
A824		4	8'-10"	ST						95
TOTAL ABUTMENTS 1 & 2 (RIGHT) = 16,443										
PIERS 1 & 2 (RIGHT)										
P501	72	72	7'-5"	3	2'-8"	2'-6"				1,114
PG01	4		30'-3"	ST						182
PG02		4	29'-8"	ST						178
P701	60	60	10'-2"	2	10"	8'-6"				2,494
P702	60	60	9'-2"	2	10"	7'-6"				2,249
P801	14		28'-8"	ST						1,072
P802		14	28'-2"	ST						1,053
P803	14	14	8'-6"	1	3'-4"	5'-4"				636
P804	4	4	8'-9"	9	2'-6"	3'-9"	1'-2 3/8			187
P805	14		30'-2"	ST						1,128
P806		14	29'-8"	ST						1,109
P1101	16		21'-3"	ST						1,807
P1102		16	17'-9"	ST						1,509
P1103	8		20'-9"	ST						443
P1104		8	17'-2"	ST						367
P1105	16		20'-3"	ST						1,722
P1106		16	16'-9"	ST						1,424
P1107	16		20'-0"	ST						1,700
P1108		16	16'-6"	ST						1,403
P1109	24		19'-6"	ST						2,487
P1110		24	16'-0"	ST						2,040
P1111	80	80	7'-0"	1	1'-0"	6'-3"				5,951
SPIRALS TOTAL										3,391
TOTAL PIERS 1 & 2 (INCLUDING SPIRALS) = 35,646										

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
SUPERSTRUCTURE									
S501	166	2'-3"	3	1'-6"	6"				390
S502	166	4'-8"	15	6"	1'-4"	1'-6"			808
S503	172	5'-7"	5	8"	2'-2"	5"			1,002
SG01	186	32'-11"	ST						9,196
SG02	47	34'-0"	ST						2,400
SG03	47	32'-9"	ST						2,312
SG04	46	32'-1"	ST						2,217
SG05	46	31'-7"	ST						2,182
SG06	456	32'-7"	ST						22,317
SG07	92	19'-4"	ST						2,672
S701	186	28'-7"	ST						10,867
S702	47	38'-6"	ST						3,699
S703	47	37'-3"	ST						3,579
S704	46	36'-7"	ST						3,440
S705	46	36'-1"	ST						3,393
TOTAL SUPERSTRUCTURE = 70,474									
RAILING ●									
R501	16	11'-4	ST						
R502	56	14'-2"	ST						
R503	4	12'-4"	ST						
R504	8	11'-4"	ST						
R505	4	14'-4"	ST						
R506									187
R507	12	4'-2"	22						
R508	8	5'-4"	23						
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	1	5'-6"	ST.						
RE-601	3	6'-0"	ST.						
RE-701	2	6'-3"	ST.						
RE-801	1	6'-6"	ST.						
RE-901	—	6'-10"	—						
RE-1001	—	7'-3"	—						
RE-1101	2	7'-9"	ST.						



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509 ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.66 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.66 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D		CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
	N°1	N°2					
SP401	1		2'-8"	18'-0"	4 1/2	51	281
SP402		1	2'-8"	14'-6"	4 1/2	42	232
SP403	1		2'-8"	17'-6"	4 1/2	50	276
SP404		1	2'-8"	13'-11"	4 1/2	40	220
SP405	1		2'-8"	17'-1"	4 1/2	49	270
SP406		1	2'-8"	13'-6"	4 1/2	39	215
SP407	1		2'-8"	16'-10"	4 1/2	48	265
SP408		1	2'-8"	13'-3"	4 1/2	39	215
SP409	1		2'-8	16'-5"	4 1/2	47	259
SP410		1	2'-8	12'-10"	4 1/2	37	204
SP411	1		2'-8	16'-1"	4 1/2	46	254
SP412		1	2'-8	12'-7"	4 1/2	37	204
SPACERS	24	24					496
TOTAL SPIRALS							3,391

GRAND TOTAL 122,563 LBS

● RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
AKRON, OHIO

REINFORCING SCHEDULE

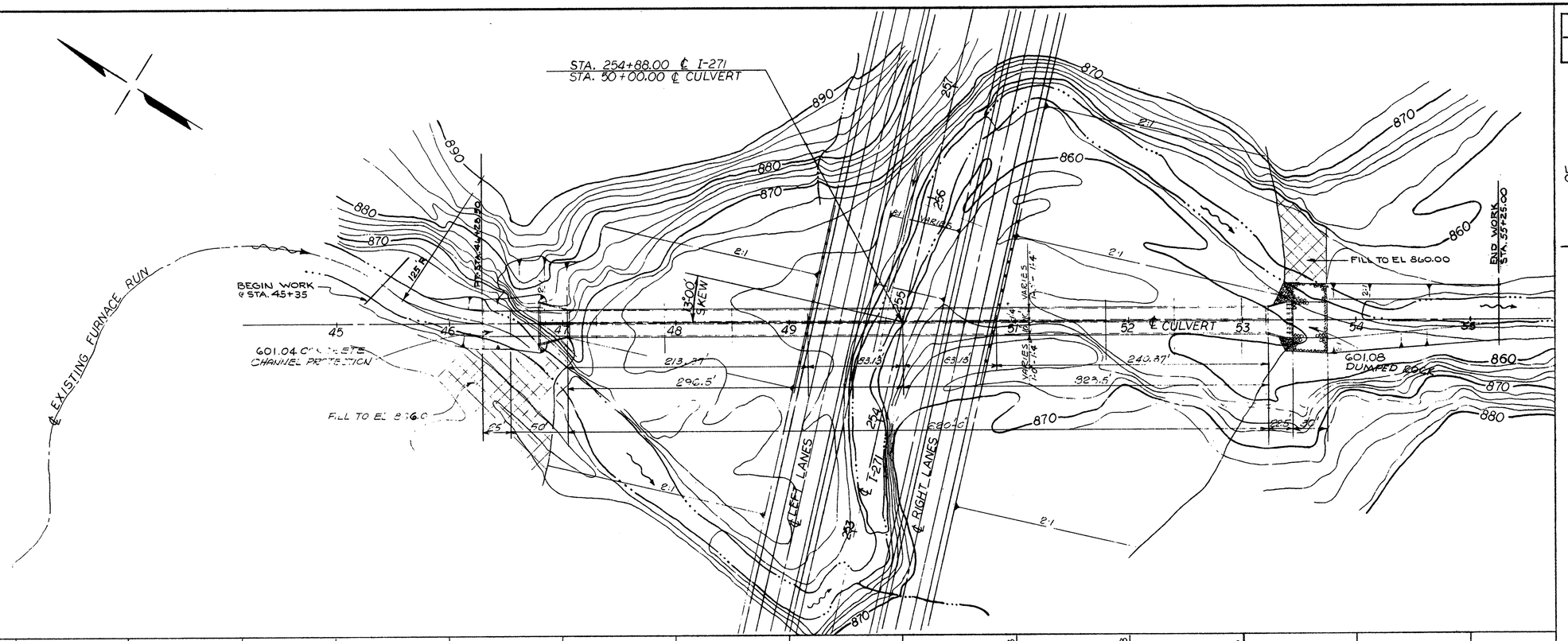
BRIDGE NO. SUM.-271-0378 R.
I-271 OVER RAMP "B" (I-271)
SUMMIT COUNTY
STA. 198+39.17 to STA. 199+67.21

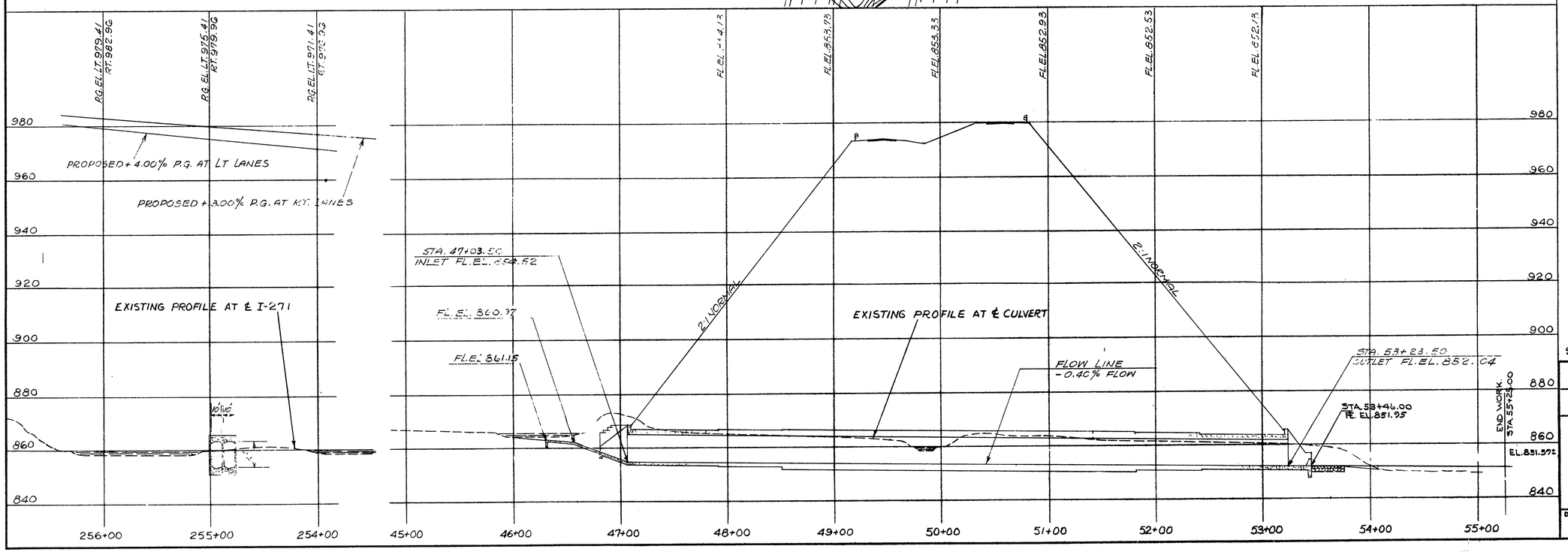
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WS	BMR		H.G.H.	RBH	4-21-66	

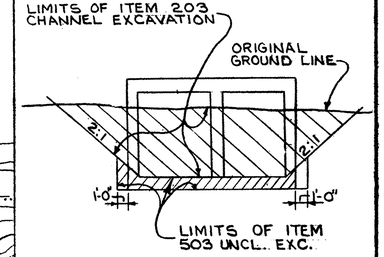
FED. RD.	STATE	PROJECT	
2	OHIO		

424
510

SUM-271-2.98







EXISTING STRUCTURE DATA

RELOCATED U.S.-21

10,500' UPSTREAM.
TYPE : CONTINUOUS STEEL BEAM WITH REINF. CONC. DECK AND SUBSTRUCTURE
SKEW: 30° 00'-00"
SPANS: 48'-0"- 60'-0"- 48'-0"
OPENING: 355 SQ. FT.

BRUSH RD.

10,000' UPSTREAM
TYPE : REINF. CONC. SLAB BRIDGE WITH REINF. CONC. SUBSTRUCTURE.
SKEW: 0°-00'-00"
SPANS: 30'-0"- 30'-0"- 30'-0"
OPENING: 195 SQ. FT.

PROPOSED STRUCTURE

TYPE: 10'x10' TWIN REINF. CONC. BOX CULVERT
LENGTH: 620'
SPAN: 10'
HEIGHT: 10'
SKEW: 13°00'-00"
HEIGHT OF FILL: 117' MAX.
SLOPE: 0.40%
50 YR. EST. HIGH WATER EL. **867.00±**
DRAINAGE AREA: 7318 ACRES, 11.43 SQ. MI.
50 YR. FREQUENCY: 3,000 C.F.S.

SCALE - HORIZ. : 1" = 50'
VERT. : 1" = 20'

SEE SHEET NO. 368 FOR GENERAL NOTES

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN
10'x10' TWIN CONCRETE BOX CULVERT
STRUCTURE NO. SUM-271-0485
UNDER I-271
SUMMIT COUNTY
STA. 254+88.00

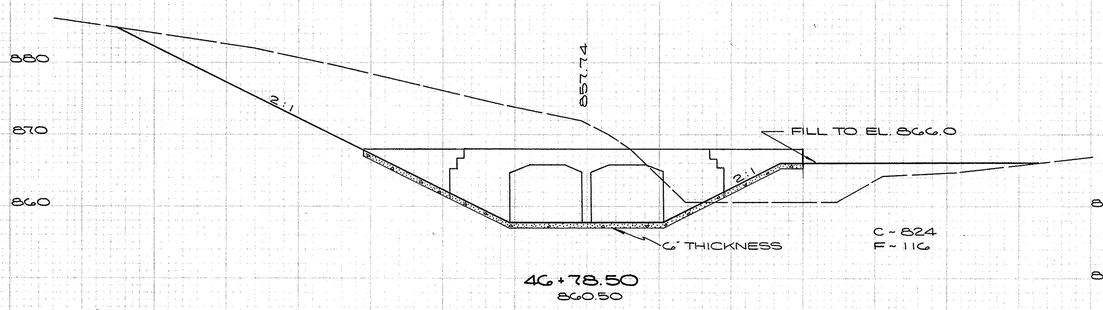
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FED. RD.	STATE	PROJECT	
2	OHIO		

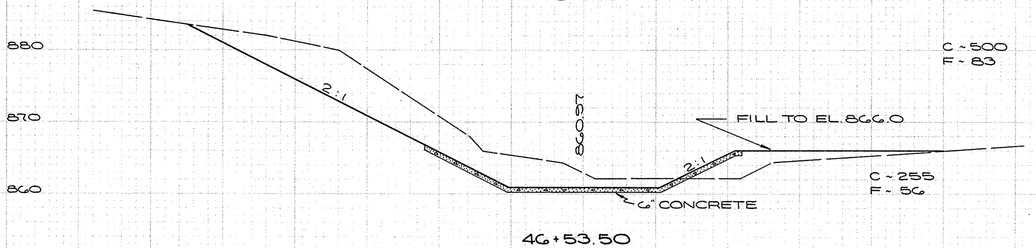
424-A
510

SUM - 271 - 2.98

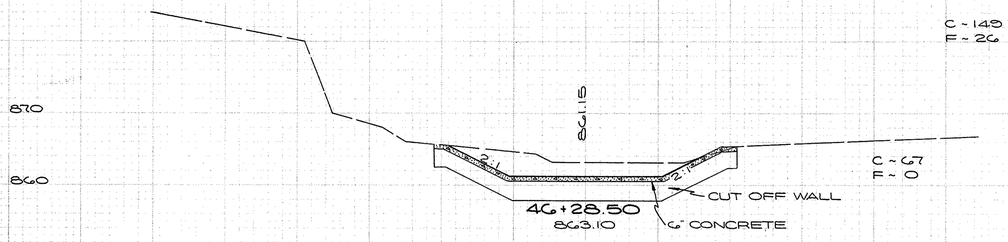
END AREA | CU. YDS.



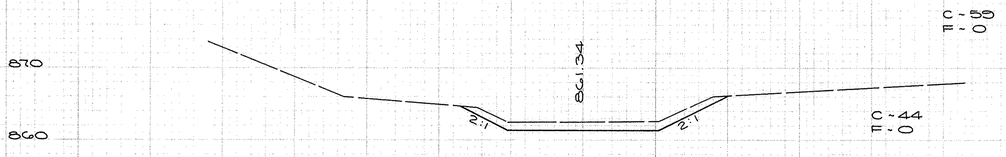
46+78.50
860.50



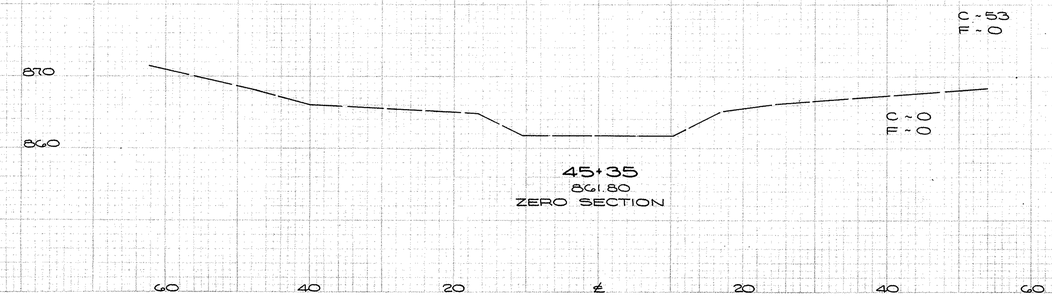
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862.10



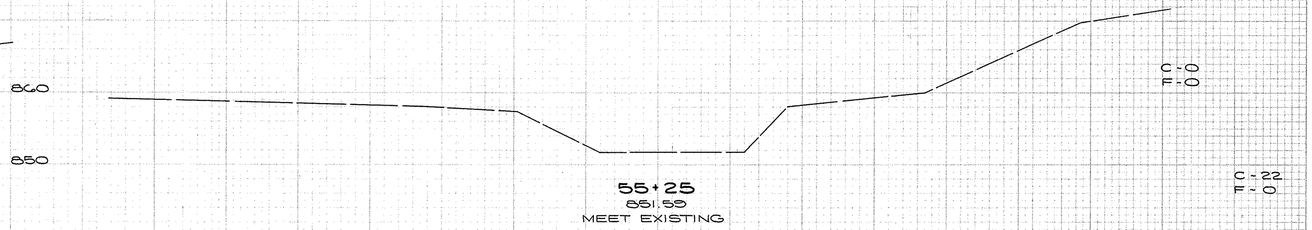
46+28.50
863.10



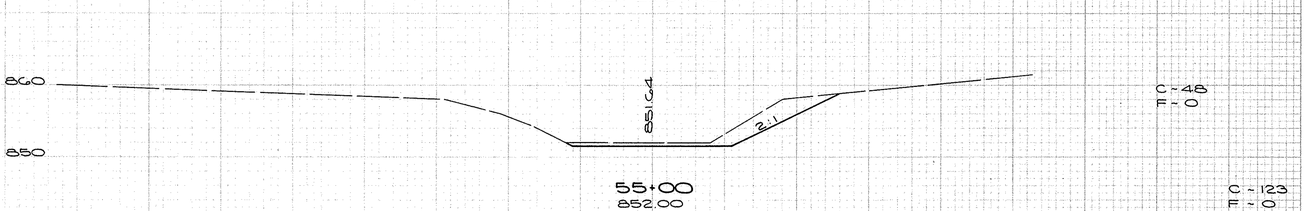
46+00
862.60



45+35
861.80
ZERO SECTION



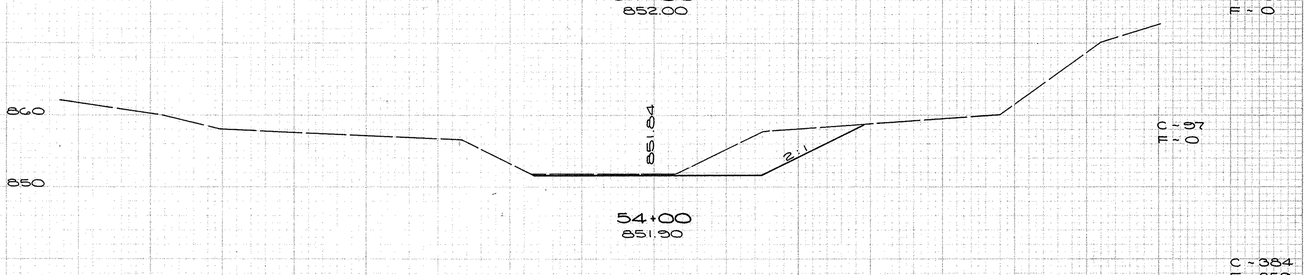
55+25
851.59
MEET EXISTING



55+00
852.00

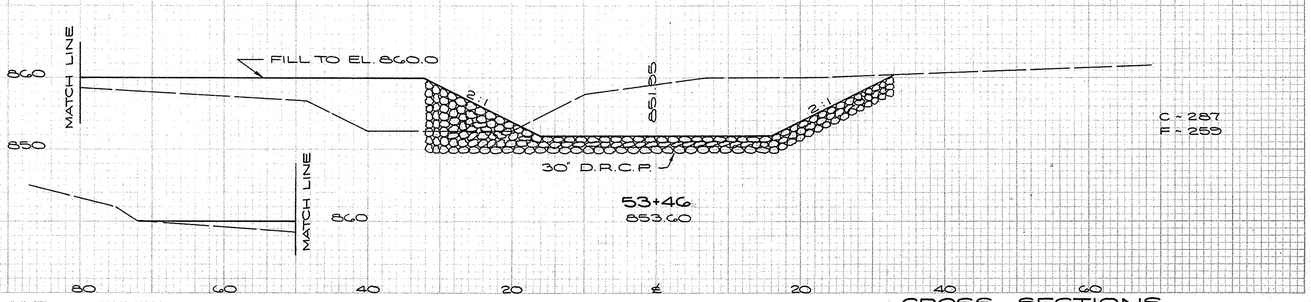


54+50
852.00



54+00
851.90

END D.R.C.P. STA. 53+76



53+46
853.60

60 40 20 0 20 40 60 80 60 40 20 0 20 40 60

PLATE 3, CROSS SECTION
EQUITIS & ESSER CO.

CROSS SECTIONS RELOC. FURNACE RUN

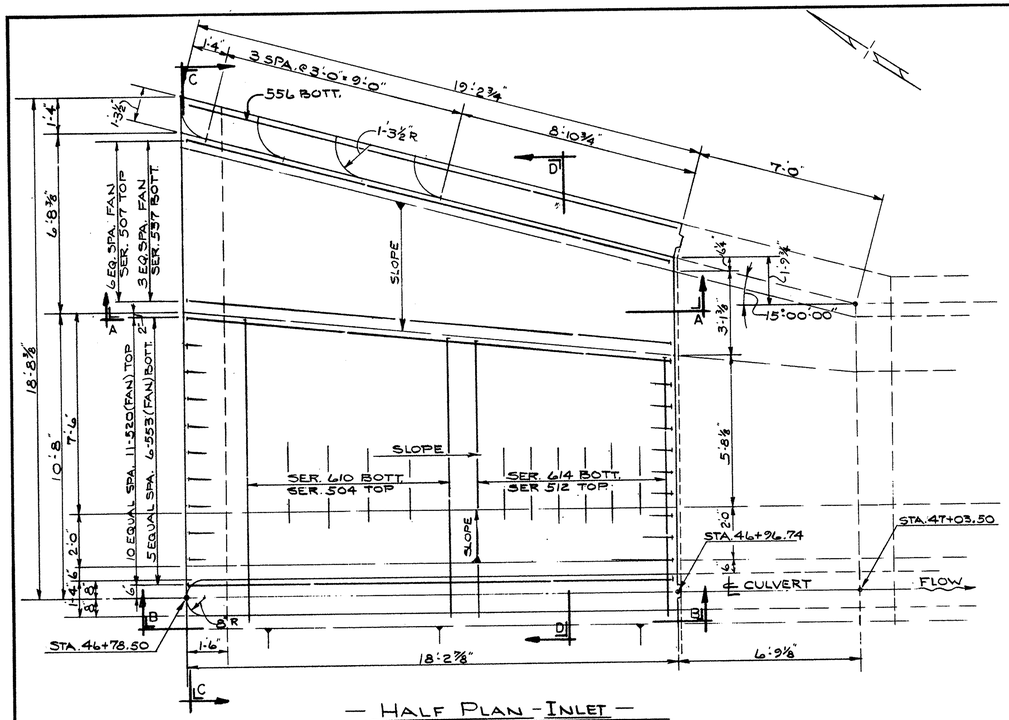
FINAL SURVEY — CONVERTED, PLOTTED, NOTE BOOK, NO., TRAVERSE, AREAS, CHECKED, DATE

ORIGINAL SURVEY — PLOTTED, NOTE BOOK, NO., TRAVERSE, AREAS, CHECKED

FED. RD.	STATE	PROJECT	
2	OHIO		

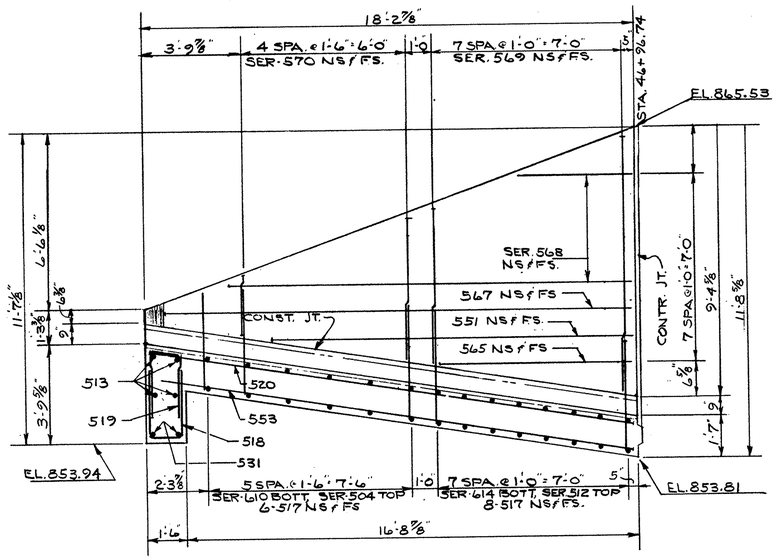
425
510

SUM-271-2.98

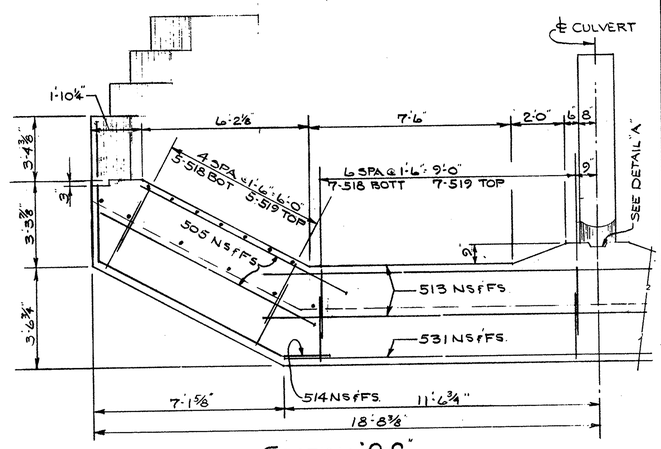


— HALF PLAN - INLET —

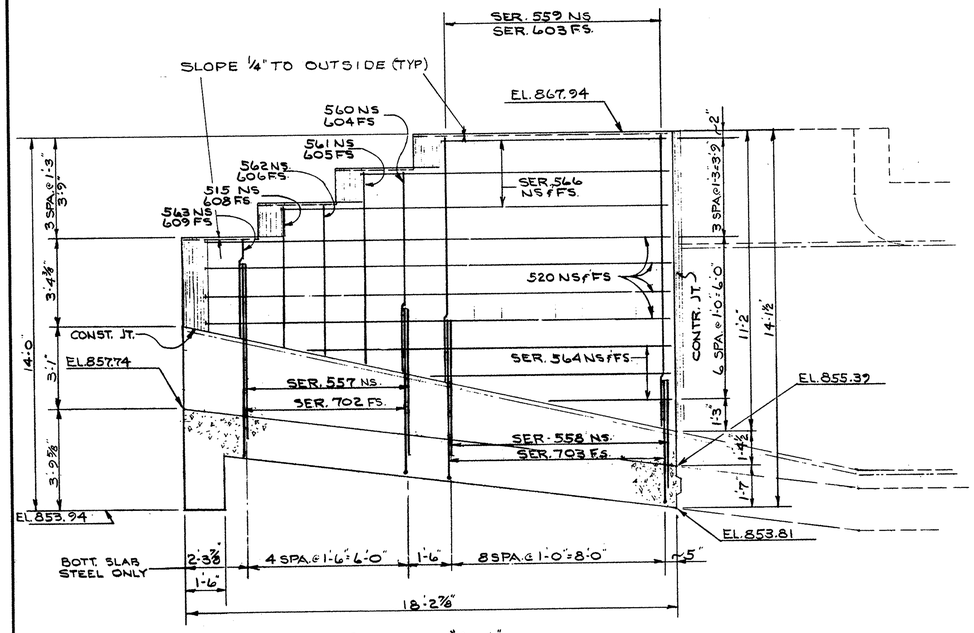
SYMMETRICAL ABOUT ℄ CULVERT.



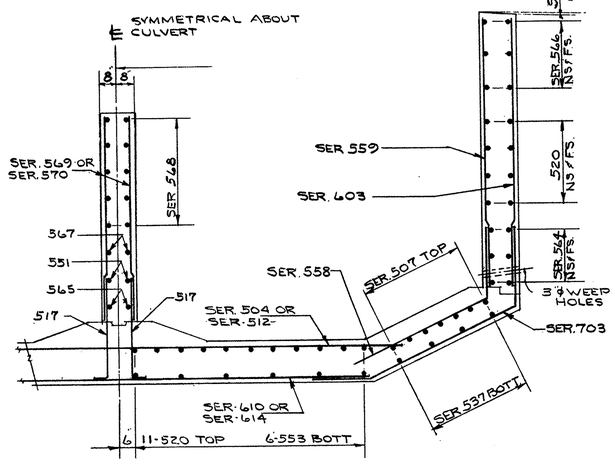
— SECTION "B-B" —



— SECTION "C-C" —



— SECTION "A-A" —



— SECTION "D-D" —

* Quantities carried to Sheet 29

ESTIMATED QUANTITIES *

ITEM	TOTAL	UNIT	DESCRIPTION
503	LUMP	SUM	COFFERDAMS, CRIBS, & SHEETING
503	1350	CU. YDS.	UNCLASSIFIED EXCAVATION
509	490,128	LBS.	REINFORCING STEEL
511	3342	CU. YDS.	CLASS 'C' CONCRETE
601	326	SQ. YDS.	RIPRAP, USING 6" REINF. CONC. SLAB
601	380	CU. YDS.	DUMPED ROCK CHANNEL PROTECTION

Refer to Sheet 430-A for "Inlet and Riprap Repair" 10-1-70

- INLET END -

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

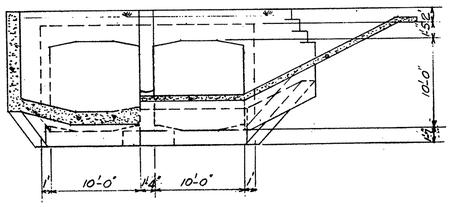
TWIN 10'x10' CONC. BOX CULVERT
STRUCTURE Nº SUM 271-0485
UNDER I-271
SUMMIT COUNTY
STA. 254+88.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WA	JP		DW	RDH	4-21-66	

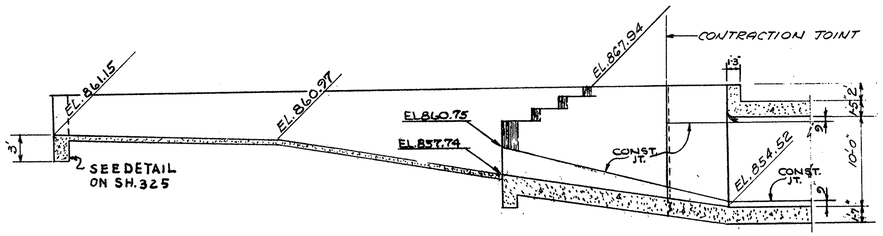
FED. RD.	STATE	PROJECT	
2	OHIO		

425-A
510

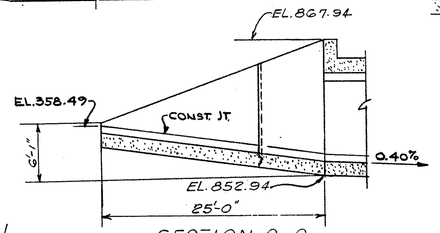
SUM-271-2.98



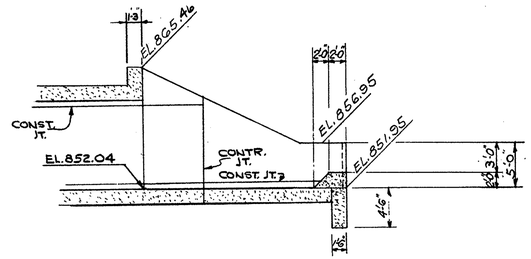
SECTION D-D



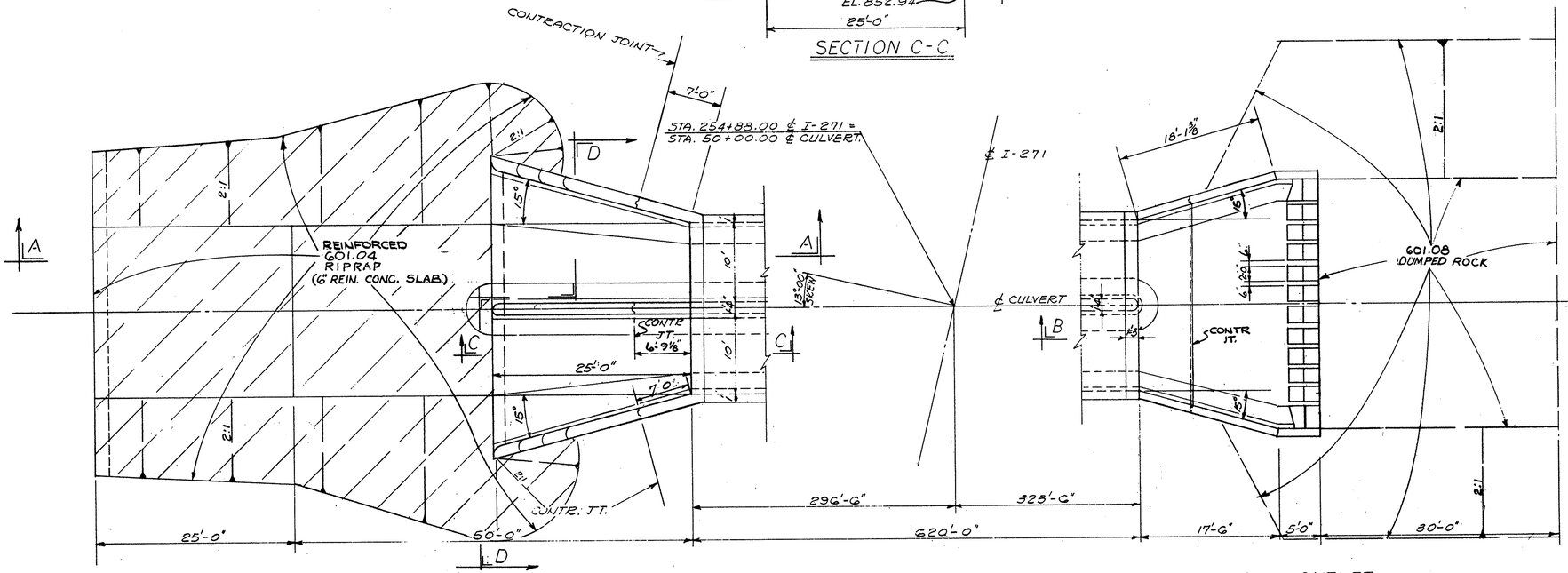
SECTION A-A



SECTION C-C



SECTION B-B



PLAN-INLET

PLAN - OUTLET

Refer to Sheet 430-A for "Inlet and Riprap Repair." 10-1-70

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

10'x10' TWIN CONC. BOX CULVERT

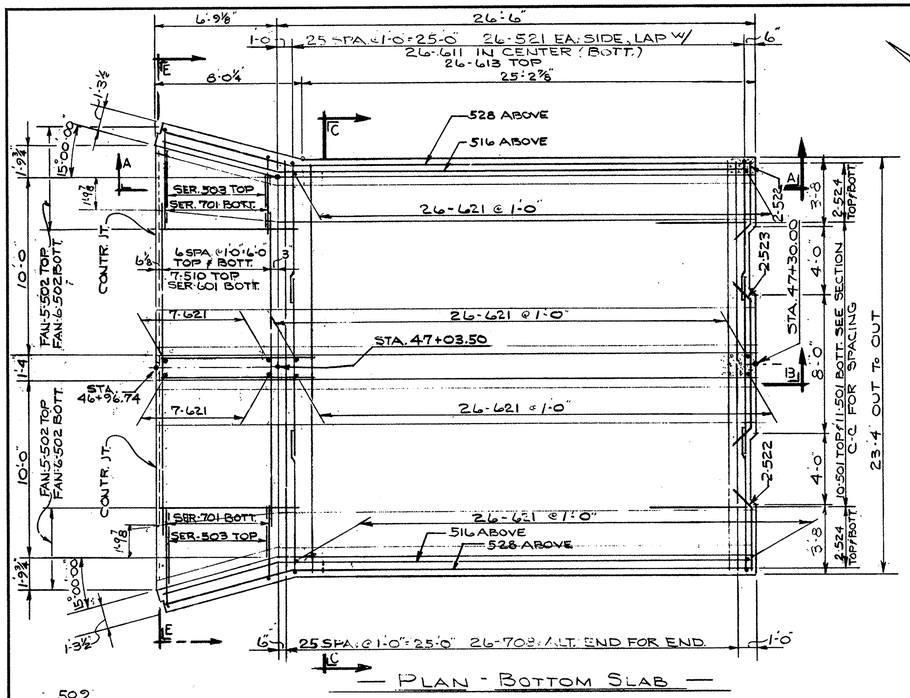
STRUCTURE NO. SUM-271-0485
UNDER I-271
SUMMIT COUNTY
STA 254+88.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
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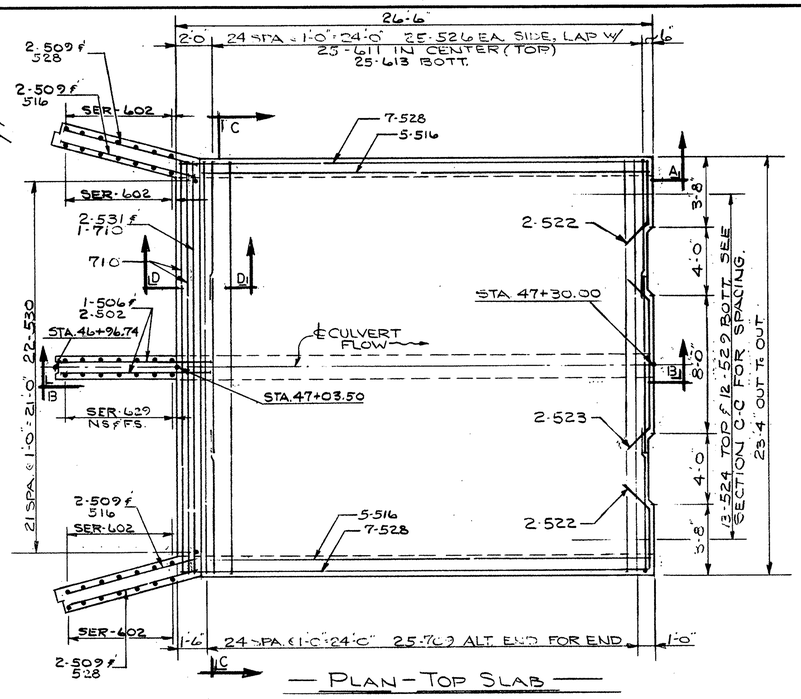
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

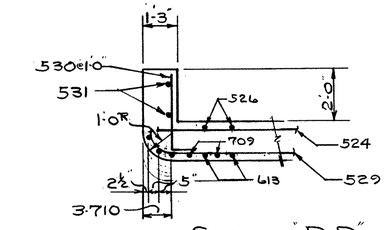
426
510



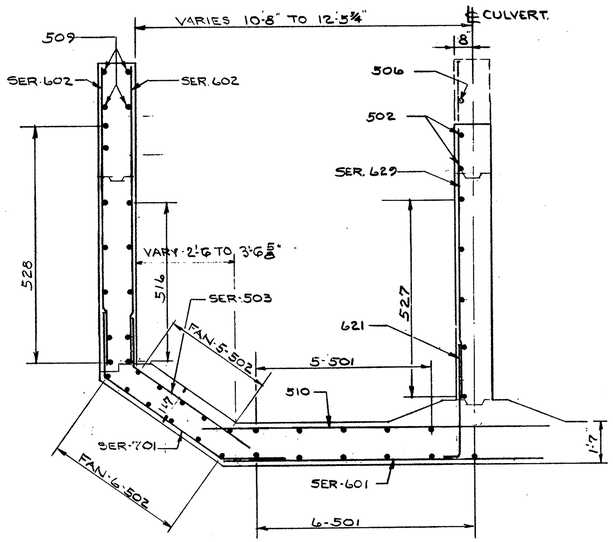
— PLAN - BOTTOM SLAB —



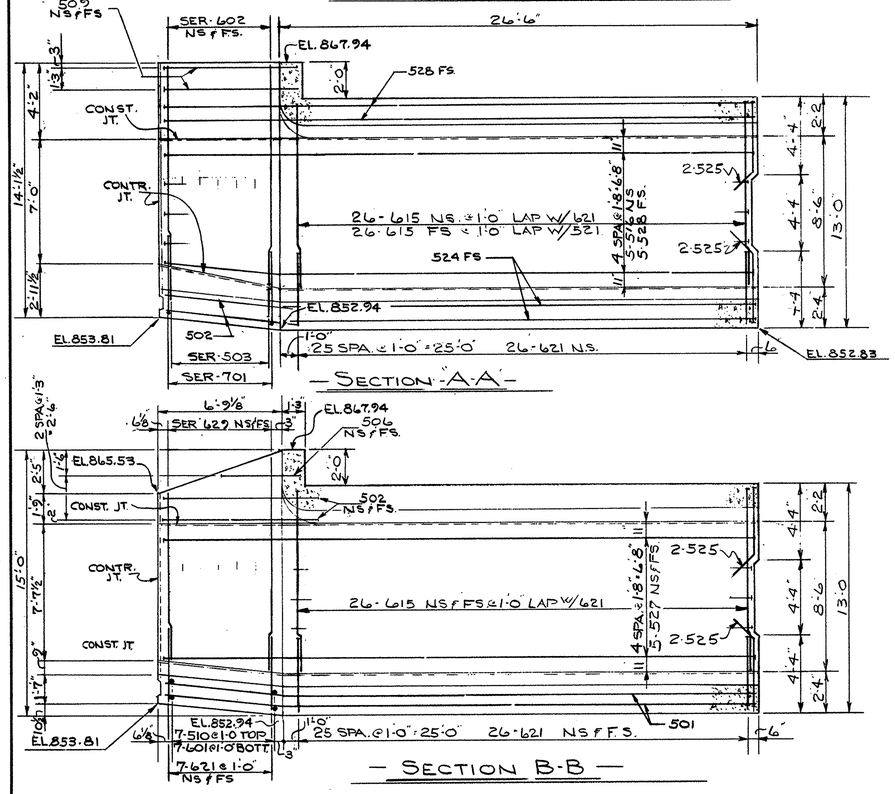
— PLAN - TOP SLAB —



— SECTION D-D —

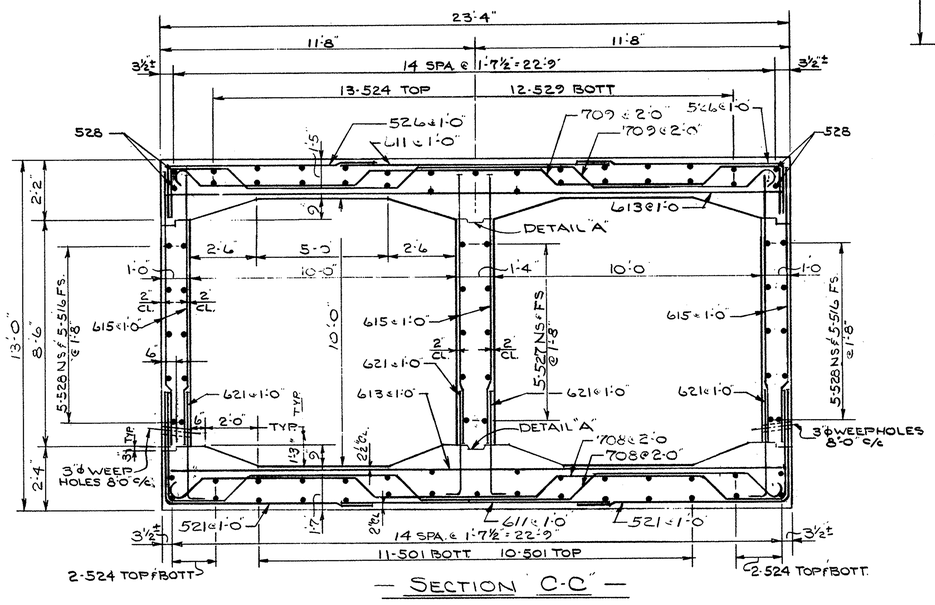


— SECTION E-E (PARTIAL)
SYMMETRICAL ABOUT ℄ OF CULVERT



— SECTION A-A —

— SECTION B-B —



— SECTION C-C —

Refer to sheet 430-A for "Inlet and Riprap Repair" 10-1-70

— INLET END —

SEE SHEET 427 FOR DETAIL "A"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

TWIN 10' x 10' CONC. BOX CULVERT

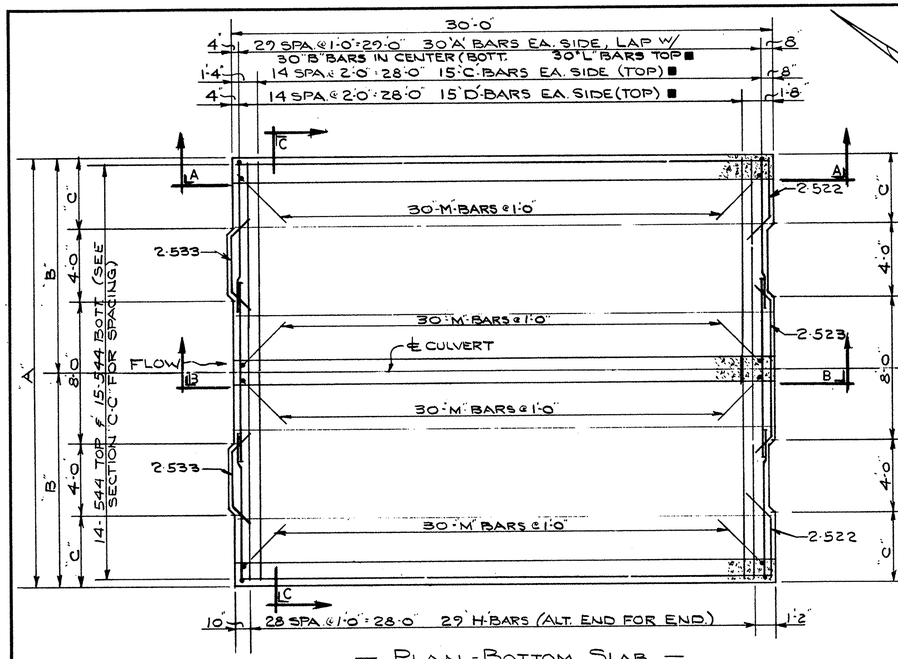
STRUCTURE № SUM-271-0485
UNDER I-271
SUMMIT COUNTY
STA. 254+88.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWS	JP		CW	RDH	4-21-66	

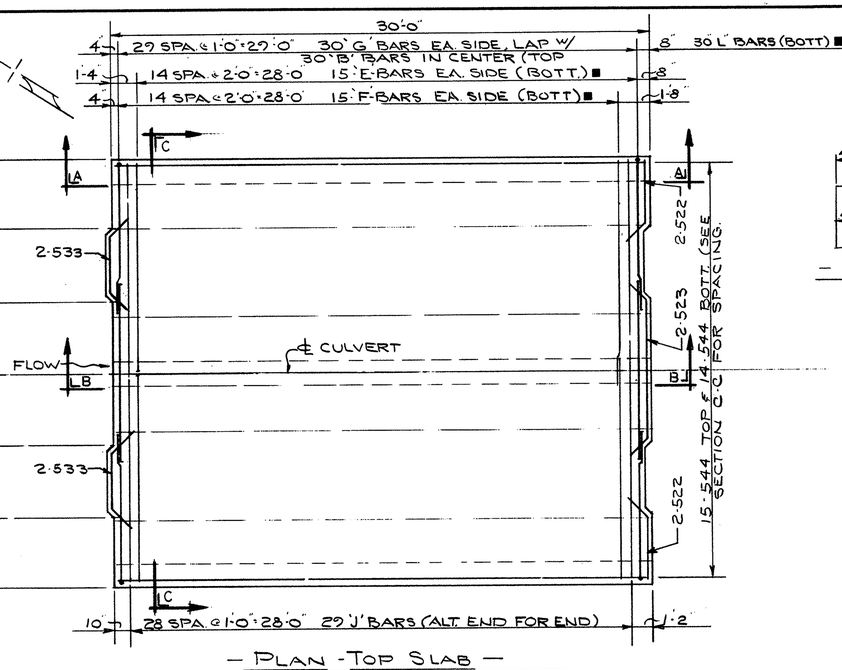
FED. RD.	STATE	PROJECT	
2	OHIO		

427
510

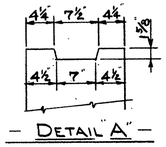
SUM.-271-2,98



— PLAN - BOTTOM SLAB —
— 1 UNIT SHOWN —



— PLAN - TOP SLAB —
— 1 UNIT SHOWN —



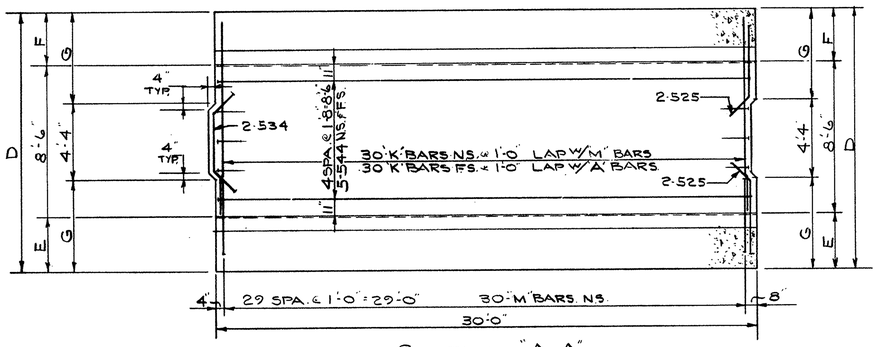
— DETAIL 'A' —

— TABLE OF DIMENSIONS —

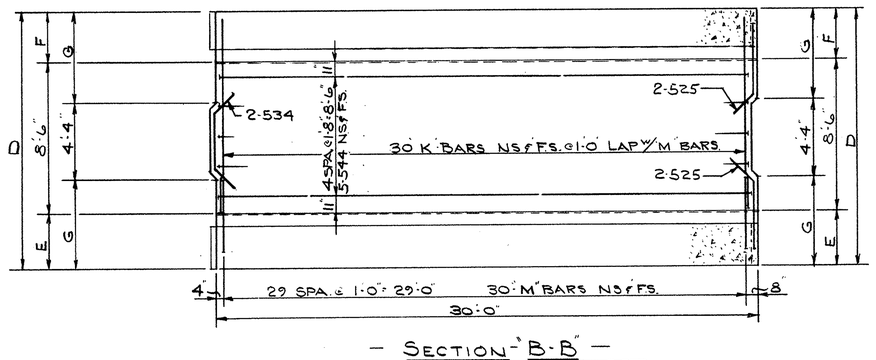
DIMENSION	SECTION I 9 UNITS	SECTION II 4 UNITS	SECTION III 4 UNITS	SECTION IV 2 UNITS
A	24'-0"	23'-8"	23'-4"	23'-4"
B	12'-0"	11'-10"	11'-8"	11'-8"
C	4'-0"	3'-10"	3'-8"	3'-8"
D	14'-6"	14'-0"	13'-6"	13'-0"
E	3'-1"	2'-10"	2'-7"	2'-4"
F	2'-11"	2'-8"	2'-5"	2'-2"
G	5'-1"	4'-10"	4'-7"	4'-4"
H	1'-4"	1'-2"	1'-0"	1'-0"
J	2'-4"	2'-1	1'-10"	1'-7"
K	2'-2"	1'-11	1'-8"	1'-5"

— TABLE OF REINFORCING STEEL —

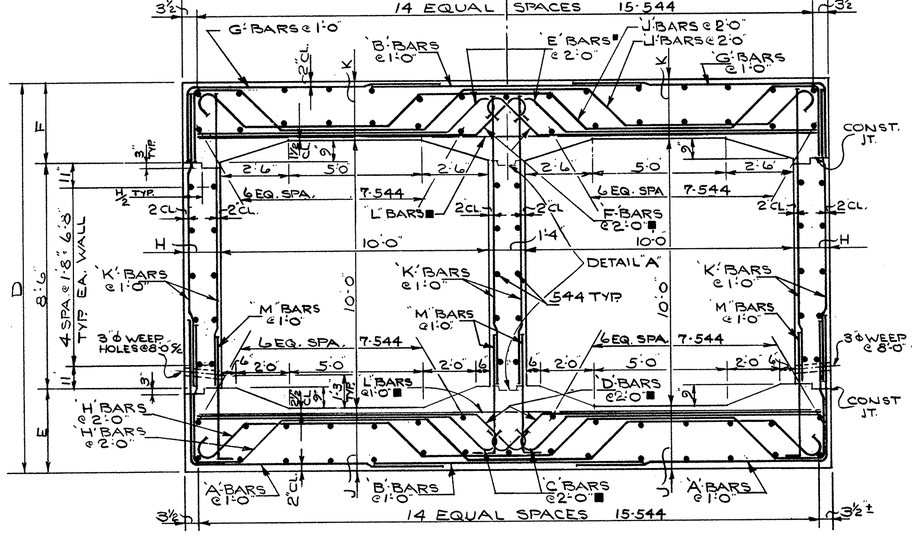
BAR	SECTION I 9 UNITS	SECTION II 4 UNITS	SECTION III 4 UNITS	SECTION IV 2 UNITS
	BAR MARK	BAR MARK	BAR MARK	BAR MARK
'A'	802	712	617	521
'B'	1101	1001	901	611
'C'	902	803	713	—
'D'	903	804	714	—
'E'	904	805	715	—
'F'	905	806	716	—
'G'	807	717	622	526
'H'	1004	1002	906	708
'J'	1005	1003	907	709
'K'	625	624	623	615
'L'	—	—	—	613
'M'	618	619	620	621



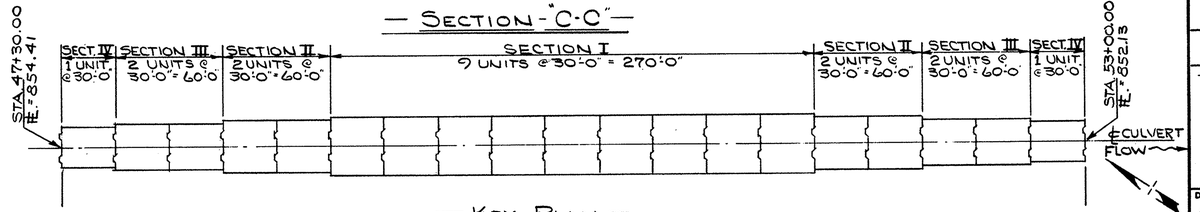
— SECTION "A-A" —



— SECTION "B-B" —



— SECTION "C-C" —



— KEY PLAN —

■ INDICATES
'L' BARS IN SECTION IV ONLY
'C', 'D', 'E', 'F' BARS IN SECTIONS I, II & III ONLY.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

TWIN 10 10 CONC BOX CULVEPT

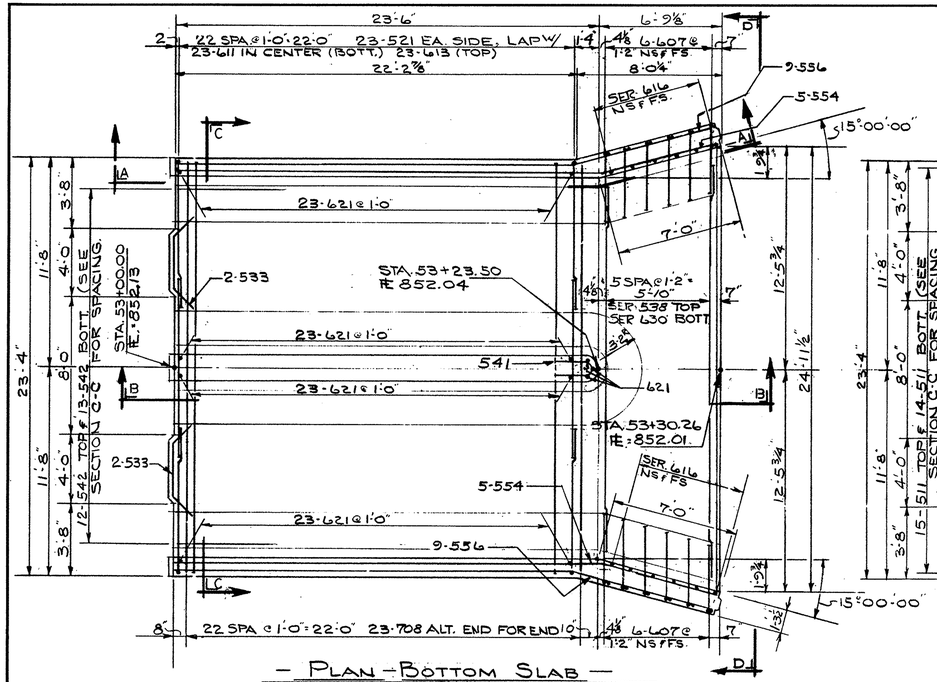
STRUCTURE № SUM-271-0485
UNDER I-271
SUMMIT COUNTY
STA. 254+88.00

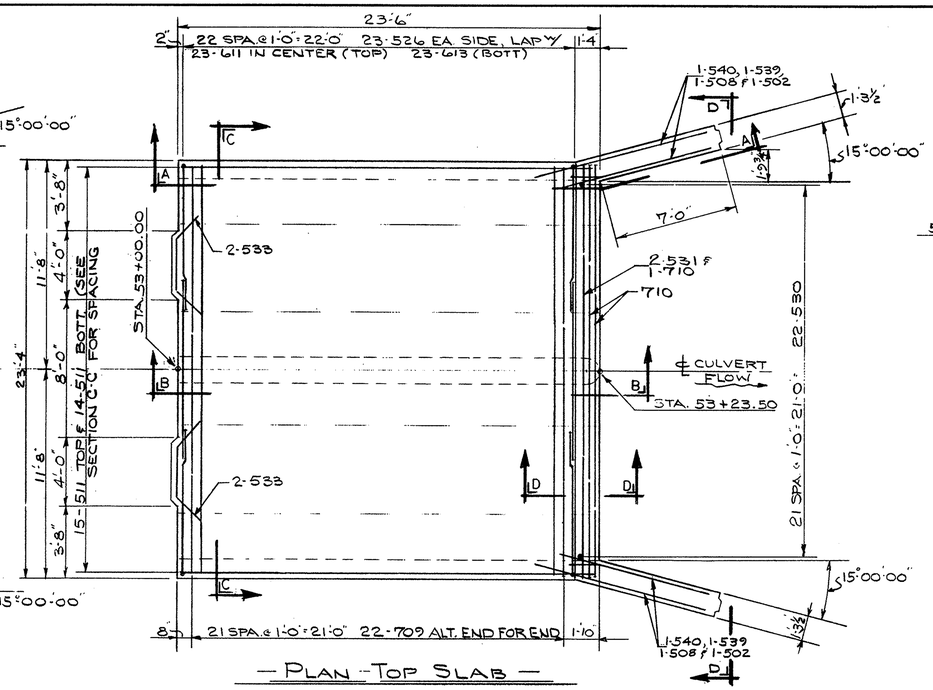
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CBS	JP		CW	RBH	4-21-66	

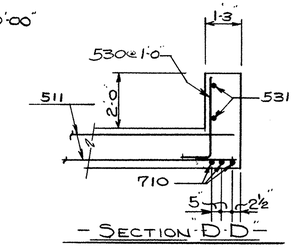
FED. RD.	STATE	PROJECT	
2	OHIO		

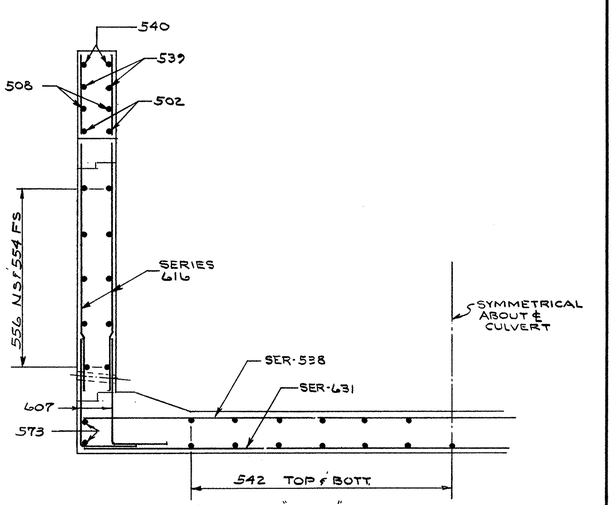
428
510

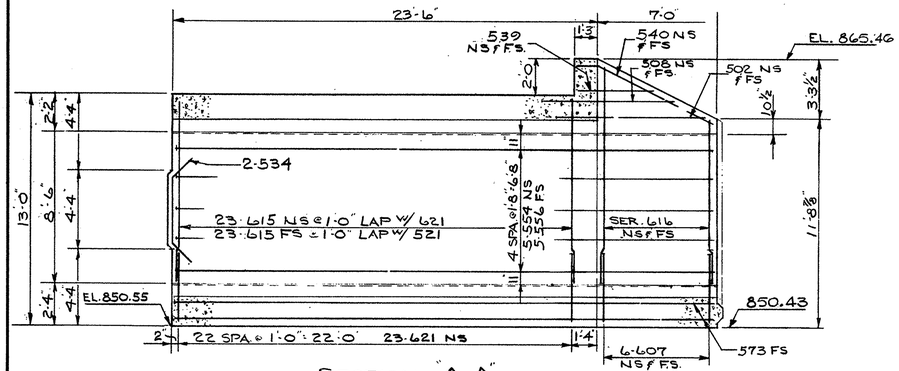
SUM.-271-2.98

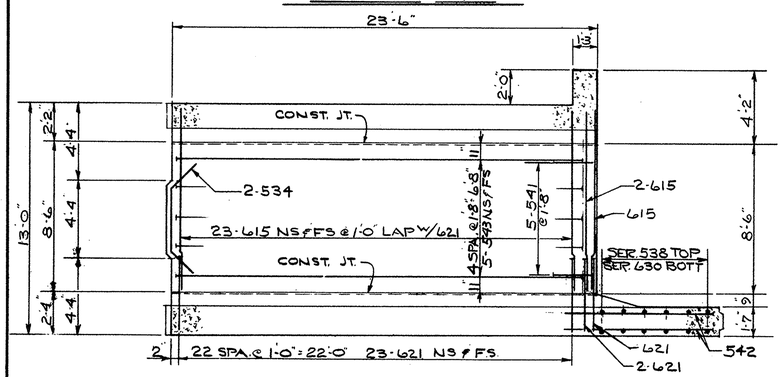


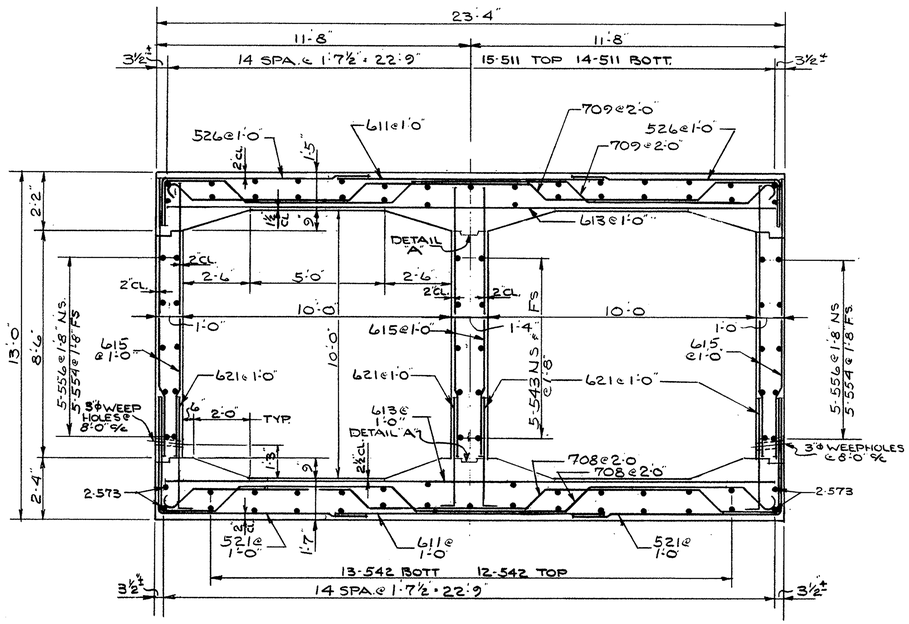












SEE SHEET # 427 FOR DETAIL 'A'

— OUTLET END —

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

TWIN 10'x10' CONC. BOX CULVERT

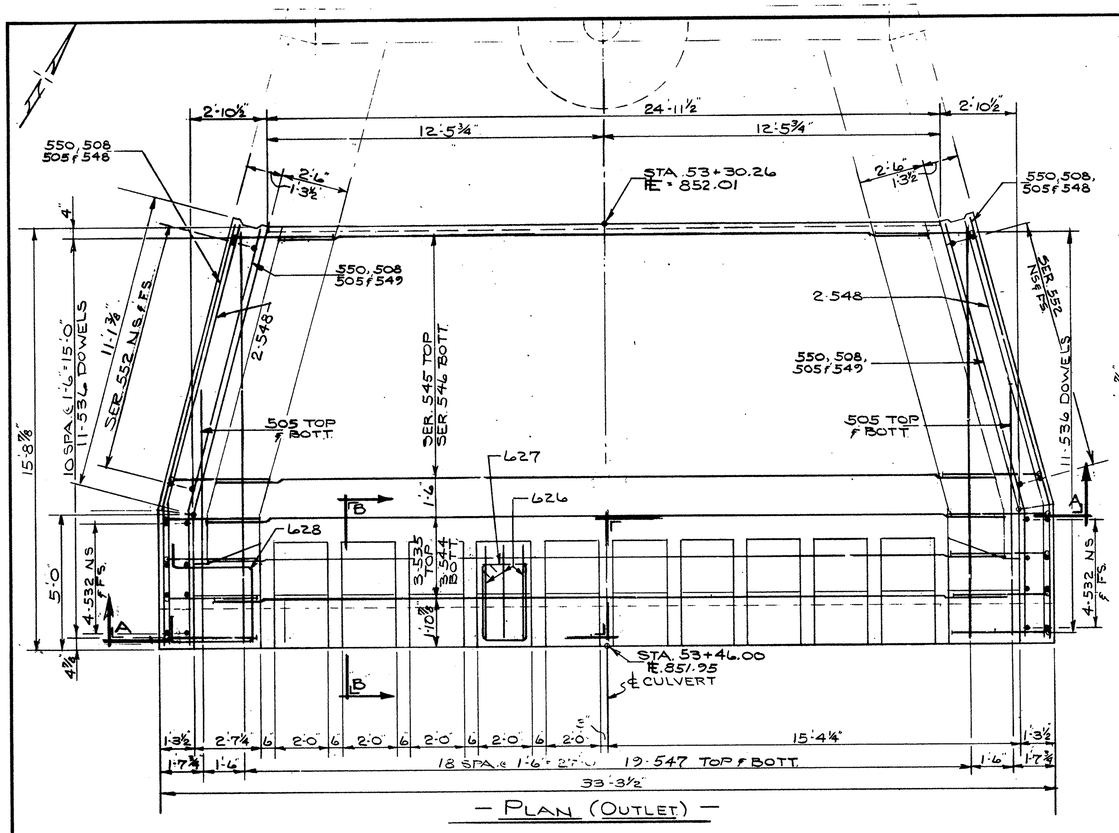
STRUCTURE Nº SUM.-271-0485
UNDER I-271
SUMMIT COUNTY
STA. 254+88.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CH	JP		DW	RDH	4-21-66	

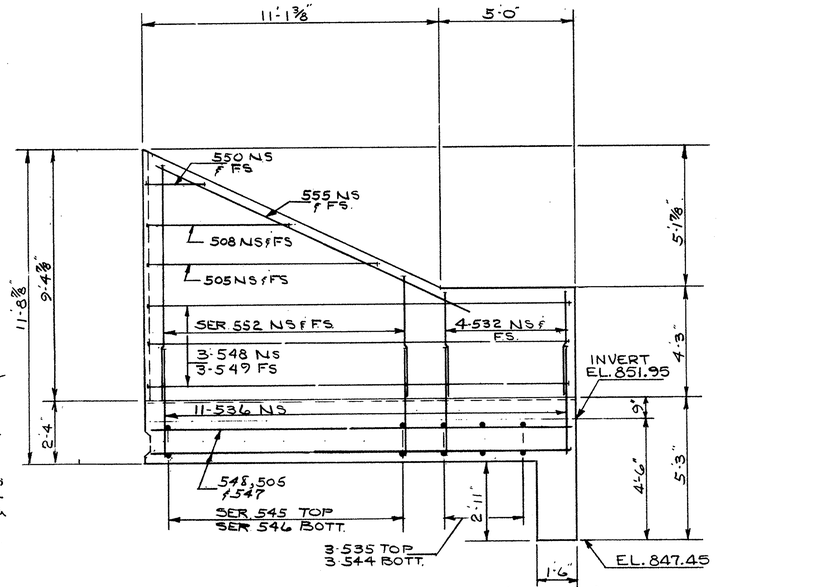
FED. RD.	STATE	PROJECT	
2	OHIO		

429
510

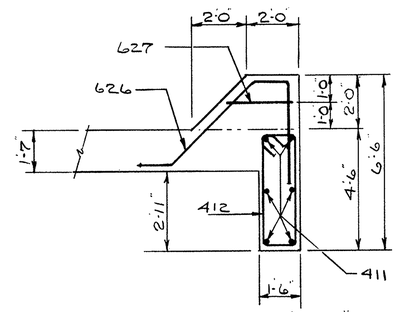
SUM-271-2,98



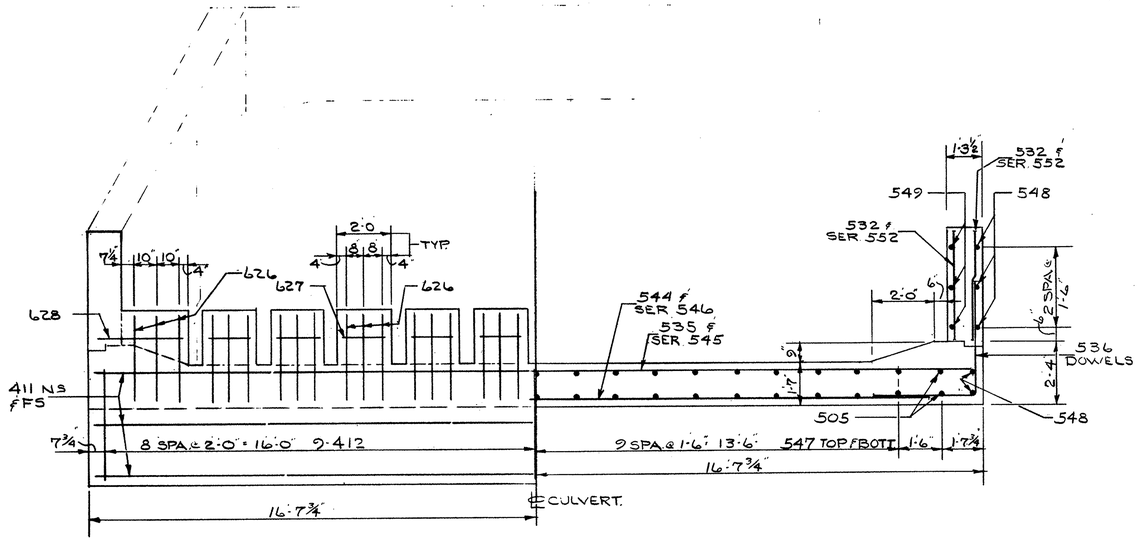
— PLAN (OUTLET) —



— ELEVATION WEST WINGWALL (OUTLET) SHOWN — (DEV)
— EAST WINGWALL (OUTLET) SIMILAR EXCEPT OPPOSITE HAND. — (DEV)



— SECTION B-B —



— SECTION "A-A" —

— OUTLET END —

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

TWIN 10'x10' CONC. BOX CULVERT

STRUCTURE Nº SUM-271-0485
UNDER I-271
SUMMIT COUNTY
STA. 254+88.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CS	NP		aw	RDH	4-21-66	

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
401 THRU 410	OPEN								—
411	6	32'-11"	ST.						132
412	17	11'-0"	2	4'-2"	1'-2"	4"			125
501	21	32'-7"	3	26'-1"	6'-6"	10⅛"			714
502	30	8'-0"	ST.						250
SERIES OF 503	2 SETS OF 7 = 14 BARS	6'-11" TO 5'-11"	3	2'-0"	5'-0" TO 4'-0" INC. 2"	2'-0" TO 1'-3" C INC. 1½"		2"	94
SERIES OF 504	1 SET OF 8 BARS	26'-9½" TO 28'-3"	ST.					3½"	172
505	16	9'-0"	ST.						150
506	2	4'-6"	ST.						9
SER. 507	2 SETS OF 7	18'-0 TO 19'-0"	ST.					2"	270
508	8	6'-0"	ST.						50
509	8	7'-8"	ST.						64
510	7	20'-4"	ST.						148
511	29	23'-2"	ST.						701
SERIES OF 512	1 SET OF 8 BARS	24'-7" TO 25'-1½"	ST.					2½"	216
513	4	24'-10"	ST.						104
514	4	16'-0"	13	6'-4"	7'-0"	7'-10"	3'-6"		67
515	2	5'-2"	ST.						11
516	10	32'-10"	3	26'-0"	6'-10"	1'-9"			342
517	28	4'-7"	4	1'-0"	3'-8"				134
518	24	5'-11"	14	1'-2"	2'-6"				148
519	24	5'-9"	15	1'-2"	2'-6"	2'-4"	2"		144
520	38	18'-0"	ST.						713
521	218	11'-9"	4	3'-9"	8'-1"				2672
522	160	4'-10"	3	3'-5"	1'-6"	1'-0¾"			807
523	80	10'-8"	5	7'-10"	1'-6"				890
524	21	25'-11"	ST.						548
525	240	5'-6"	3	4'-1"	1'-6"	1'-0¾"			1377
526	216	9'-11"	4	1'-11"	8'-1"				2234
527	10	32'-8"	ST.						341
528	14	32'-9"	3	25'-0"	7'-9"	2'-0"			478
529	12	26'-3"	6	25'-0"	1'-3"	9⅝"			329
530	44	3'-11"	4	1'-0"	3'-0"				180
531	6	23'-0"	ST.						144
532	16	4'-1"	ST.						68
533	160	6'-0"	5	3'-2"	1'-6"				1001
534	120	6'-4"	5	3'-6"	1'-6"				793
535	3	32'-11"	ST.						103
536	22	7'-5"	4	3'-9"	3'-9"				170
SERIES OF 537	2 SETS OF 4 = 8 BARS	17'-6" TO 18'-6"	ST.					4"	150
SERIES OF 538	1 SET OF 6 BARS	23'-0½" TO 26'-2"	ST.					7½"	154
539	4	3'-0"	ST.						13
540	4	8'-2"	3	7'-6"	8"	3½"			34
541	5	4'-5"	7	1'-7"	1'-3"	10½"			23
542	25	29'-11"	ST.						780
543	10	22'-8"	ST.						236
544	1675	29'-8"	ST.						51828
SERIES OF 545	1 SET OF 7 BARS	27'-5" TO 32'-3½"	ST.					9¾"	218
SERIES OF 546	1 SET OF 7 BARS	24'-4" TO 29'-4"	ST.					10"	196
547	38	15'-5"	ST.						611
548	10	15'-11"	3	11'-0"	4'-11"	1'-4"			166
549	6	15'-9"	3	10'-11"	4'-10"	1'-5"			99
550	4	2'-5"	ST.						10
551	2	12'-0"	ST.						25
SERIES OF 552	4 SETS OF 7 = 28 BARS	4'-6" TO 8'-9"	ST.					8½"	193
553	12	17'-6"	ST.						219
554	10	29'-10"	3	23'-0"	6'-10"	1'-9"			311
555	4	13'-6"	ST.						56
556	14	29'-9"	3	22'-0"	7'-9"	2'-0"			434
SERIES OF 557	2 SETS OF 5 = 10 BARS	9'-8" TO 8'-4"	3	8'-9" TO 6'-8"	1'-9"	1'-7"		4"	94
SERIES OF 558	2 SETS OF 9 = 18 BARS	8'-0" TO 6'-8"	3	6'-4" TO 5'-0"	1'-9"	1'-7"		2"	138
SERIES OF 559	2 SETS OF 9 = 18 BARS	9'-1" TO 10'-9"	ST.					2½"	186

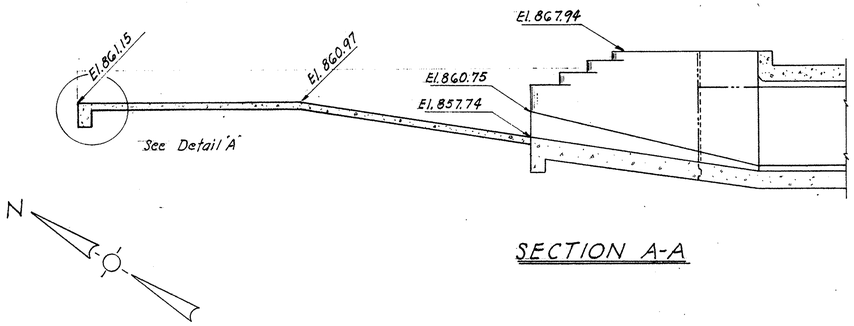
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
560	2	7'-6"	ST.						16
561	2	7'-2"	ST.						15
562	2	5'-7"	ST.						12
563	2	3'-8"	ST.						8
SERIES OF 564	4 SETS OF 3 = 12 BARS	14'-10" TO 5'-6"	ST.					4'-8"	127
565	2	4'-1"	ST.						9
SERIES OF 566	4 SETS OF 3 = 12 BARS	9'-1" TO 15'-1"	ST.					3'-0"	151
567	2	17'-5"	ST.						36
SERIES OF 568	2 SETS OF 5 = 10 BARS	4'-3" TO 14'-11"	ST.					2'-8"	100
SERIES OF 569	2 SETS OF 8 = 16 BARS	5'-6" TO 9'-6"	ST.					6"	125
SERIES OF 570	2 SETS OF 5 = 10 BARS	2'-1" TO 5'-1"	ST.					9"	37
SERIES OF 601	1 SET OF 7 BARS	17'-8" TO 16'-5"	ST.					2½	179
SERIES OF 602	4 SETS OF 7 = 28 BARS	10'-10½" TO 12'-8"	ST.					2¾"	486
SERIES OF 603	2 SETS OF 9 = 18 BARS	9'-1" TO 10'-9"	ST.					2½"	268
604	2	7'-6"	ST.						23
605	2	7'-2"	ST.						22
606	2	5'-7"	ST.						17
607	24	6'-0"	4	2'-0"	4'-1"				216
608	2	5'-2"	ST.						16
609	2	3'-8"	ST.						11
SER. 610	1 SET OF 6 BARS	23'-9½" TO 25'-3"	ST.					3½"	221
611	217	10'-0"	ST.						3259
612	OPEN								—
613	217	23'-0"	ST.						7496
SER. 614	1 SET OF 8 BARS	23'-9" TO 22-1½"	ST.					2½"	275
615	657	10'-5"	ST.						10,279
SERIES OF 616	4 SETS OF 6 = 24 BARS	9'-8¼" TO 12'-6"	ST.					6¾"	400
617	240	12'-8"	4	4'-4"	8'-5"				4566
618	1080	5'-9"	4	1'-0"	4'-10"				9327
619	480	5'-6"	4	1'-0"	4'-7"				3965
620	480	5'-3"	4	1'-0"	4'-4"				3785
621	453	5'-0"	4	1'-0"	4'-1"				3402
622	240	10'-6"	4	2'-2"	8'-5"				3,785
623	720	10'-8"	ST.						11,535
624	720	10'-11"	ST.						11,806
625	1620	11'-2"	ST.						27,171
626	86	10'-5"	9	1'-0"	4'-5"	1'-7"	3'-8"		563
627	10	8'-6"	2	2'-7"	1'-8"	4"			128
628	2	10'-11"	10	2'-7"	3'-5"	1'-0"			33
SERIES OF 629	2 SETS OF 7 = 14 BARS	9'-4" TO 12'-4"	ST.					6"	228
SER 630	1 SET OF 6 BARS	23'-10½" TO 27'-0"	ST.					7½"	229
SERIES OF 701	2 SETS OF 7 = 14 BARS	9'-3" TO 8'-0½"	13	2'-4"	4'-8" TO 3'-5" @ INC. 2½"	5'-1" TO 3'-8½" @ INC. 2¾"	2'-0" TO 1'-3" @ 1½ INC.	2¾"	247
SERIES OF 702	2 SETS OF 5 = 10 BARS	12'-8" TO 11'-6"	13	2'-9"	7'-1" TO 6'-3" @ INC. 2½"	8'-1" TO 6'-11" @ INC. 3½"	3'-0" TO 2'-0" @ 1½ INC.	3½"	247
SERIES OF 703	2 SETS OF 9 = 18 BARS	11'-3" TO 9'-9"	13	2'-9"	6'-0½" TO 4'-8" @ INC. 2"	6'-8" TO 5'-2" @ INC. 2¼"	2'-9" TO 2'-1" @ 1" INC.	2¼"	386
704	OPEN								—
705	OPEN								—
706	OPEN								—
707	OPEN								—
708	107	28'-9"	12	22'-8"	4'-4"	1'-9¼"	10"±		6288
709	105	26'-2"	12	22'-7"	1'-11"	1'-8"	10"±		5616
710	6	24'-8"	16	23'-0"	10"				303
711	OPEN								—
712	240	13'-4"	4	4'-7"	8'-11"				6541
713	120	12'-6"	11	9'-7"	2'-2"	10"±			3066
714	120	13'-3"	11	10'-4"	2'-2"	10"±			3250
715	120	12'-4"	11	9'-7"	2'-0"	10"±			3025
716	120	13'-1"	11	10'-4"	2'-0"	10"±			3209
717	240	11'-1"	4	2'-5"	8'-10"				5437

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
801	OPEN								—
802	540	14'-0"	4	4'-10"	9'-4"				20,185
803	120	13'-3"	11	9'-9"	2'-6½"	1'-1±"			4245
804	120	14'-0"	11	10'-6"	2'-6½"	1'-1±"			4486
805	120	13'-2"	11	9'-9"	2'-5"	1'-1±"			4219
806	120	13'-11"	11	10'-6"	2'-5"	1'-1±"			4459
807	540	11'-10"	4	2'-8"	9'-4"				17,061
901	240	10'-0"	ST.						8160
902	270	14'-0"	11	9'-11"	2'-11"	1'-3±"			12852
903	270	14'-9"	11	10'-8"	2'-11"	1'-3±"			13,541
904	270	13'-11"	11	9'-11"	2'-10"	1'-3±"			12775
905	270	14'-8"	11	10'-8"	2'-10"	1'-3±"			13464
906	116	30'-4"	12	23'-0"	5'-3"	2'-0¼"	1'-3±"		11,963
907	116	27'-1"	12	23'-0"	2'-2"	2'-0¼"	1'-3±"		10682
1001	240	10'-0"	ST.						10327
1002	116	31'-5"	12	23'-4"	5'-10"	2'-2"	1'-5±"		15,682
1003	116	27'-1"	12	23'-4"	2'-5"	2'-2"	1'-5±"		13,519
1004	261	32'-5"	12	23'-8"	6'-1"	2'-5"	1'-5±"		36,407
1005	261	28'-10"	12	23'-8"	2'-8"	2'-5"	1'-5±"		32,382
1101	540	10'-0"	ST.						28690

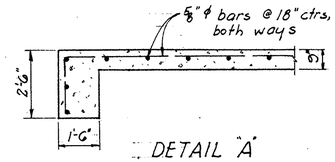
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

430-A
510

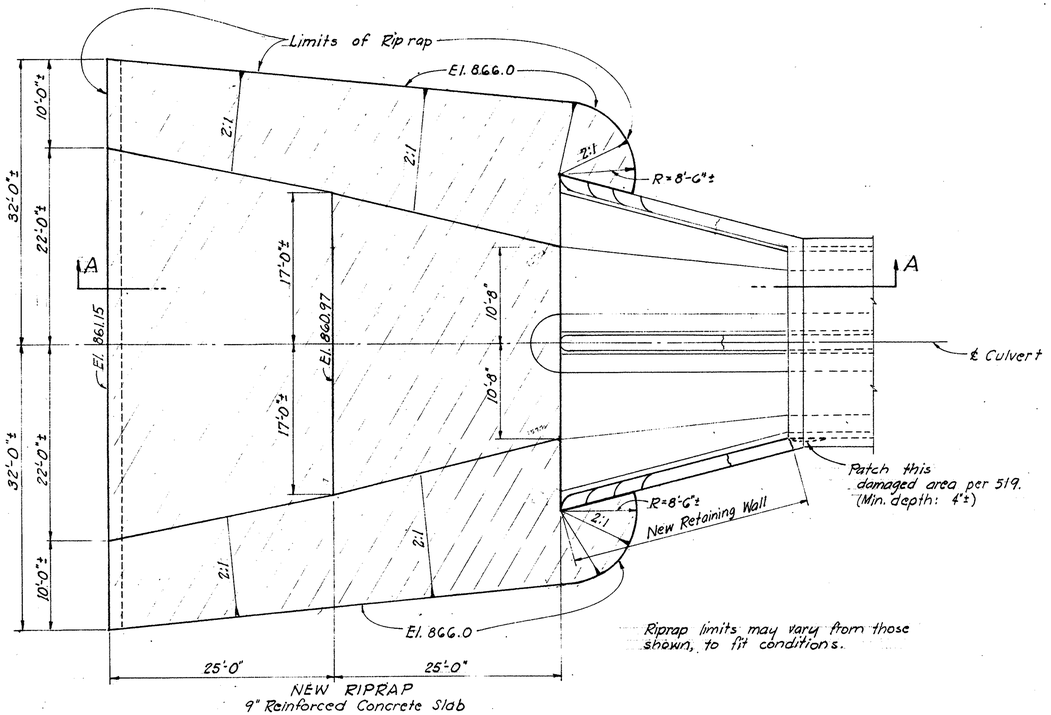
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SECTION A-A



DETAIL "A"
Where splices are required, lap 5/8" ϕ bars 1'-7".



PLAN - INLET

NOTES:

The Contractor shall remove and replace (as per the original plans) the damaged wingwalls on the west side of the culvert inlet.
The horizontal limit of concrete removal shall be the construction joint between the wall and the floor slab.
The vertical limit shall be the junction of the wall with the box.
Care shall be taken so that the vertical dowel bars extending from the floor slab are preserved. At least 1'-7" of each horizontal bar extending beyond the vertical removal limit shall be preserved.
The 6" reinforced concrete riprap at the inlet end of the box culvert, shall be completely removed, and replaced with a 9" reinforced slab as shown on this sheet.
The damaged area on the west face of the box culvert, near the inlet, shall be patched as per 519.
Contraction joints open ½" or more shall be filled with mortar.
Cracks in the east wingwall shall be repaired, by sufficient removal to sound concrete for patching per 519.
Cracks in the Center Wall near the first joint shall be repaired as per 519.
Any additional damaged areas shall be repaired, at the discretion of the Engineer.

This Sheet added 10-1-70

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

INLET AND RIPRAP REPAIR
STRUCTURE NO. SUM-271-0485
UNDER I-271

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	CPD					

FED. RD.	STATE	PROJECT	
2	OHIO		

431
510

SUM-271-298

EXISTING GROUND AT ℄ I-271

EL. 1093.36

EL. 1094.14

EL. 1094.92

EL. 1095.70

EL. 1096.48

PROPOSED - 1.56% PROFILE GRADE AT I-271

FLAG POLE

SLOPE PROTECTION

STA 316+40.60 I-271 =
STA 50+00 RELOC. S.R.-303

℄ RAMP "G"

℄ WESTBOUND LANES

℄ EASTBOUND LANES

EXIST. 4.5'+3' CONC. BOX CULVERT

20°-01'-59" SKEW

32°-00'-00" SKEW

EXISTING TAPER

NOSE: ℄ RAMP "H" STA. 315+00.00 - 020.33 BK.

RAMP "H"

12" PIPE

EXISTING S.R.-303

END APPROACH SLABS
STA. 48+28.11

FUTURE LIGHT POLE
STA 48+00.00

FUTURE LIGHT POLE
STA 51+23.00

BEGIN APPROACH SLABS
STA. 51+59.14

RELOCATED S.R.-303

℄ RAMP "G" CURVE DATA

PT. STA. 78' LT. ℄ STA. 318+00.00
Δ = 1°30'-00"
R = 3819.72'
L = 453.07'

BEGIN PAVED GUTTER STA. 315+60

EXISTING MAJOR RD.

HORZ. CLEARANCE: 10.00 REQ'D, 10.08' ACTUAL

℄ SURVEY I-271

PT. OF MIN. VERT. CLEARANCE:

HORIZ. CLEARANCE: 10.00 REQ'D, 10.06' ACTUAL

DUMPED ROCK CHANNEL PROTECTION

34' MEDIAN

VARIABLE

12' 12'

8'

4'-1"

67'-0"

℄ C.B. = 102'-6"

114'-9"

42'-0"

16" PIPE

ST. STA. 316+00.00 ℄ RAMP "H"

PROPOSED STRUCTURE

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS, WITH REINFORCED CONC. DECK AND SUBSTRUCTURE.
SKEW: 20° 01' 59" LF.
SPANS: 67'-0"-102'-6"-114'-9"-42'-0" c/c. BRGS.
ROADWAY: 59'-0" F/F 2' CURBS, 3' MEDIAN
LOAD FREQUENCY: CF 400

WEARING SURFACE: 1" MONOLITHIC.
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: TANGENT.
SUPERELEVATION: NONE
SLOPE PROTECTION: CRUSHED AGGREGATE.

TRAFFIC: I-271 - 16,000 - 1975 ADT.
S.R.-303 - 3425 - 1975 ADT.

VERTICAL CLEARANCE:
DESIGN = 16.50'
ACTUAL = 16.61'

AVERAGE ESTIMATED PAY LENGTH FOR 10 BP 42 STEEL H PILES
ABUTS = 15 FT.

EL. 1118.67 · EL. 1118.81 · EL. 1118.79 · EL. 1118.63 · EL. 1118.31 · EL. 1117.85 · EL. 1117.23 · EL. 1116.47 · EL. 1115.55 · EL. 1113.79

STA. 48+28.11

STA. 51+59.14

PVI STA. 52+50

+1.92% · -6.48% · 1400' V.C.

BRIDGE LIMITS = 331.03'

PROPOSED PROFILE GRADE

BRIDGE RAILING TYPE 1

EL. 1105.08 · EL. 1111.72 · EL. 1108.54 · EL. 1102.50

2 NORMAL

EXISTING GROUND AT ℄ RELOC. S.R.-303

EL. 1088.75 · EL. 1089.00 · EL. 1088.00

48+00 · 49+00 · 50+00 · 51+00 · 52+00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

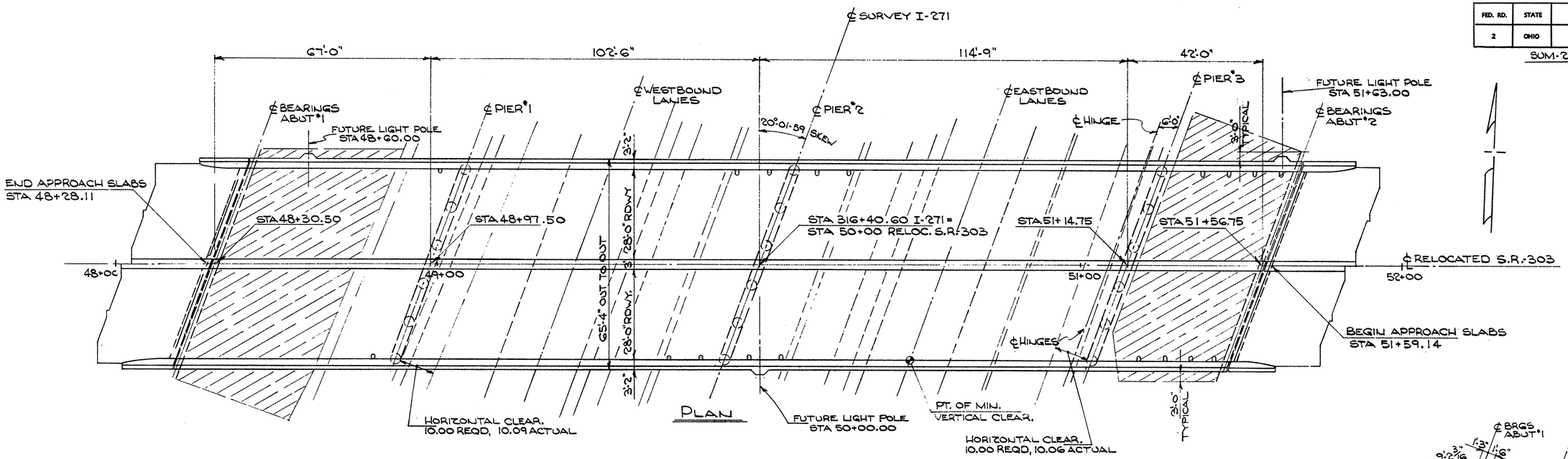
BRIDGE NO. SUM-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316+40.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.F.P.	ROSE J.K.		H.G.H.	RBH	4-22-66	

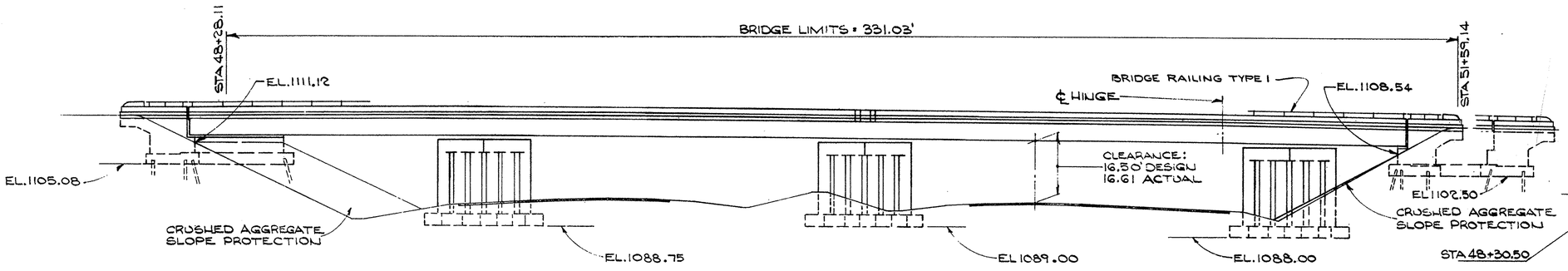
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

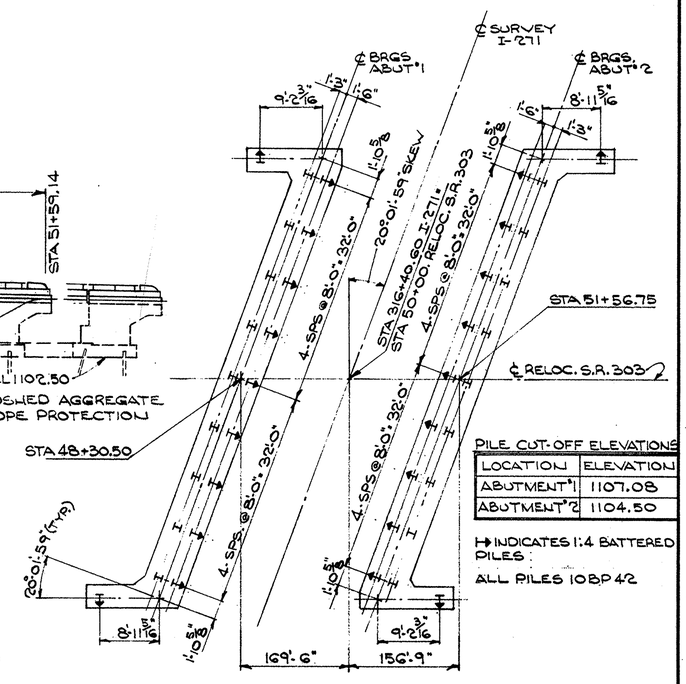
432
510



PLAN



ELEVATION



PILING PLAN

PILE CUT-OFF ELEVATIONS

LOCATION	ELEVATION
ABUTMENT #1	1107.08
ABUTMENT #2	1104.50

→ INDICATES 1:4 BATTERED PILES:
ALL PILES 10BP42

SEE SHEET NO. 368 FOR GENERAL NOTES

Estimated Quantities

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN
503	733	CU.YDS.	UNCLASSIFIED EXCAVATION		377	356	
505	LUMP	SUM	FIRST TEST PILE				LUMP
507	600	LIN.FT.	10 BP 42 BEARING PILES		600		
509	249,208	LBS	REINFORCING STEEL	177,231	20,398	51,579	
511	671	CU.YDS.	CLASS 'C' CONC. SUPERSTRUCTURE	671			
511	158	CU.YDS.	CLASS 'E' CONC. ABUTS. ABOVE FTGS.		158		
511	154	CU.YDS.	CLASS 'C' CONC. PIERS ABOVE FTGS.			154	
511	243	CU.YDS.	CLASS 'E' CONC. PIER & ABUT. FTGS.		115	128	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN
512	23.66	LIN.FT.	PREMOLDED SEALING STRIP		23.66		
	740,596			740,596			
513	137,084	LBS	STRUCTURAL STEEL	137,084			
514	137,084	LBS	FIELD PAINT STRUCTURAL STEEL	137,084			
	740,596			740,596			
516	67	LIN.FT.	PREFORMED ELASTIC JOINT SEALER & LUBRICANT ADHESIVE (705.11)	67			
517	722.09	LIN.FT.	BRIDGE RAILING TYPE I	655.42	66.67		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN
518	66	CU.YDS.	POROUS BACKFILL		66		
518	18	EACH.	SCUPPERS (INCLUDING SUPPORTS)	18			
518	122.75	LIN.FT.	6" PERFORATED HELICAL C.M.P. 707.06 INCLUDING SPECIALS.		122.75		
518	82.50	LIN.FT.	6" HELICAL C.M.P. 707.06 NON-PERFORATED		82.50		
601	760	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		760		
625			LIGHTING QUANTITIES - SEE SHEET 346				
808	671	Units	WATER RED. SET RETARDING ADMIXTURE	671			
825	2648	SQ.YDS.	CONCRETE SURFACE TREATMENT				2648
828	126	LIN.FT.	JOINT SEALER (End Dam)	126			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRIDGE NO. SUM. 271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316+40.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JWW		M.G.H.	RDH	4-22-66	2-23-68

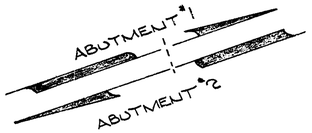
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

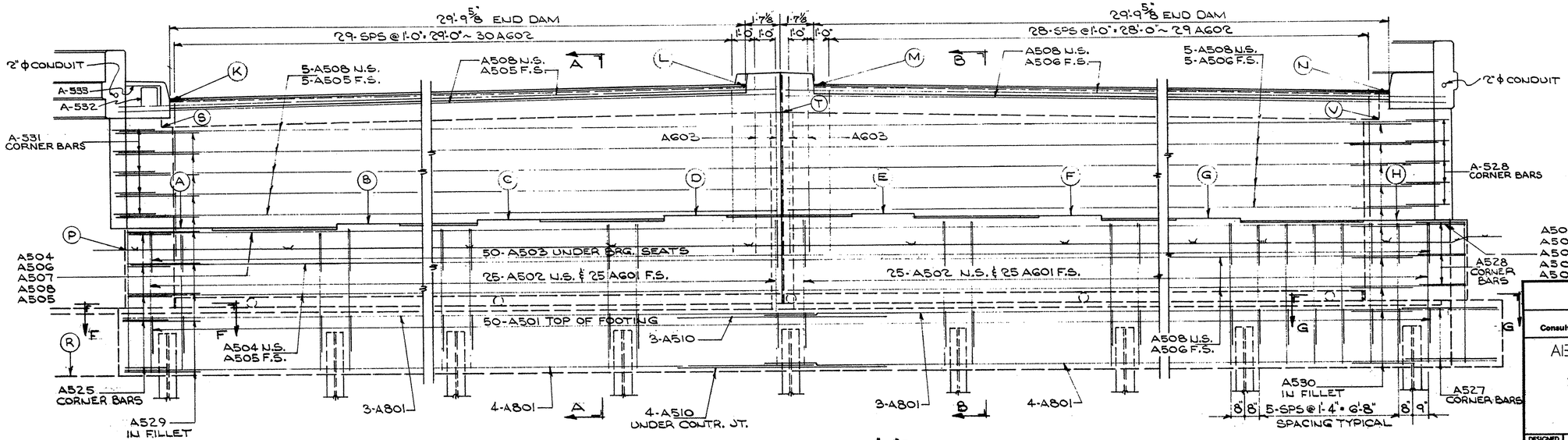
433
510

	ELEVATION TABLE																
	A	B	C	D	E	F	G	H	K *	L *	M *	N *	P	R	S	T	V
ABUTMENT #1	1112.12	1112.26	1112.40	1112.54	1112.55	1112.42	1112.30	1112.17	1118.21	1118.67	1118.68	1118.26	1111.12	1105.08	1116.92	1117.43	1117.00
ABUTMENT #2	1109.54	1109.73	1109.91	1110.10	1110.15	1110.07	1109.99	1109.91	1115.61	1116.23	1116.25	1115.99	1108.54	1102.50	1114.39	1115.03	1114.76

* INDICATES ELEVATION GIVEN TO HEEL OF ANGLE



PLAN ABUTMENTS #1 & #2



ELEVATION ABUTMENTS #1 & #2

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO. 1 & 2 DETAILS

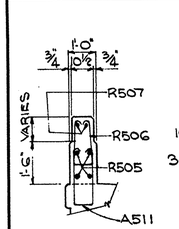
BRIDGE NO. SUM-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316+40.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
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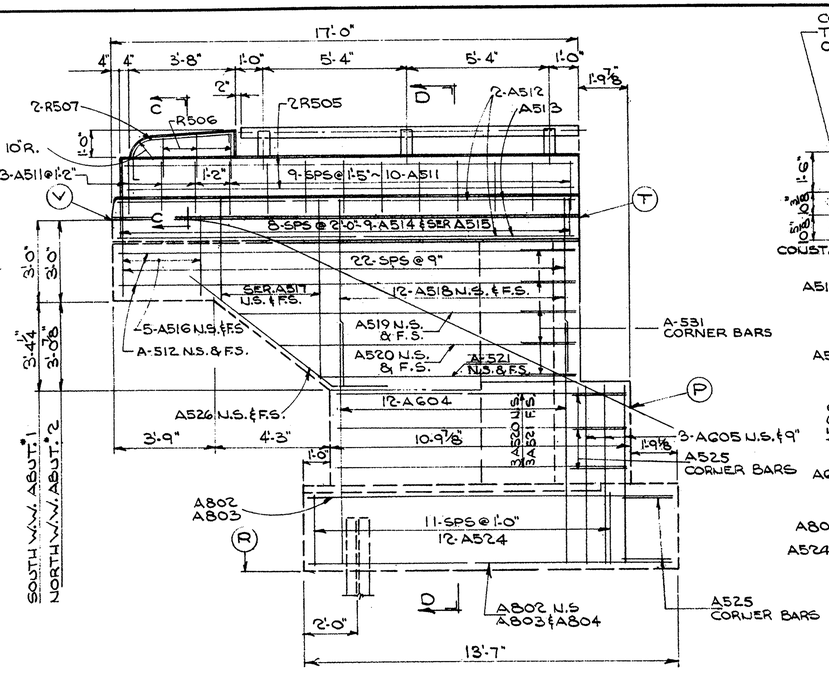
FED. RD.	STATE	PROJECT	
2	OHIO		

434
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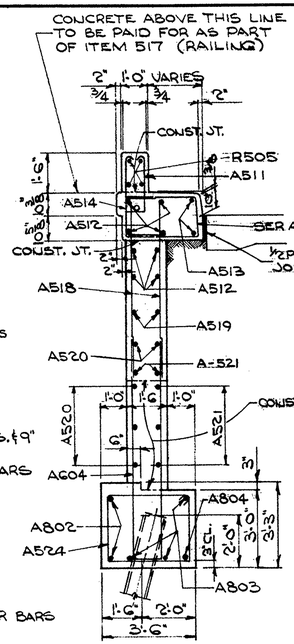
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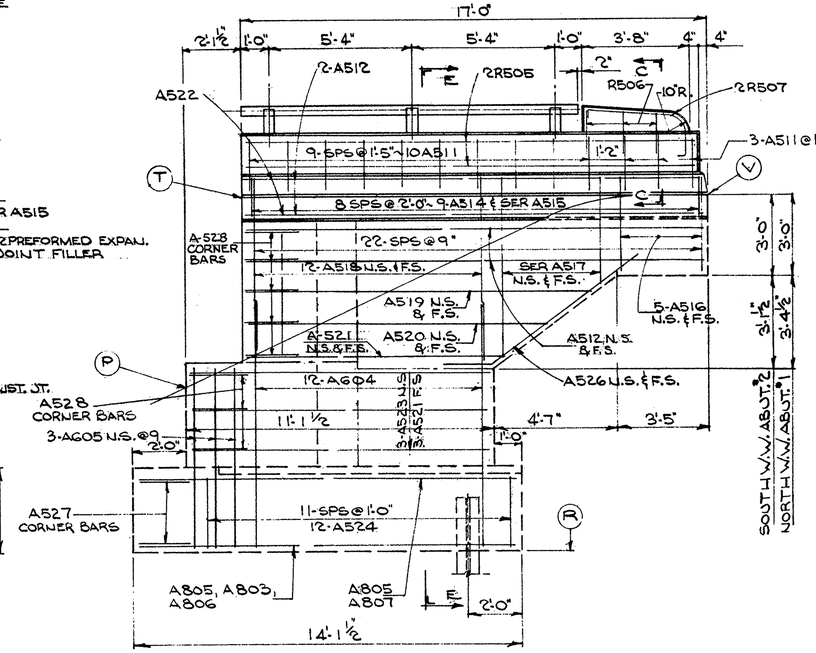
SECTION 'C-C'



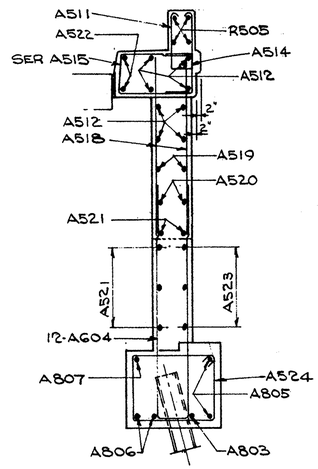
ELEVATION SOUTH WINGWALL ABUT.°1
ELEVATION NORTH WINGWALL ABUT.°2



SECTION 'D-D'

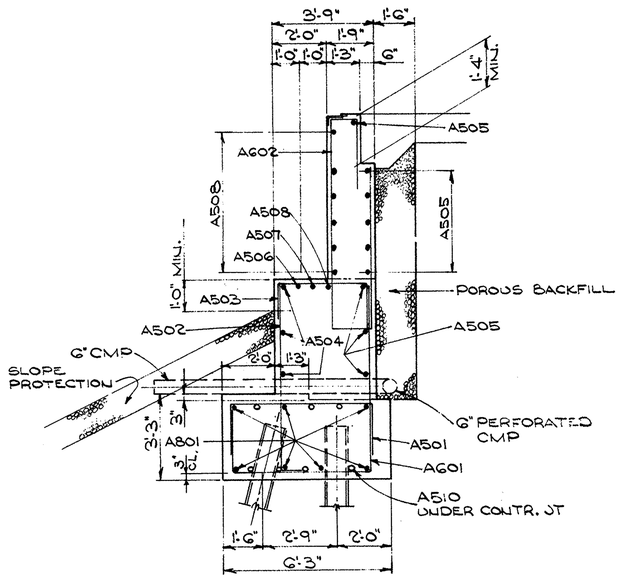


ELEVATION NORTH WINGWALL ABUT.°1
ELEVATION SOUTH WINGWALL ABUT.°2

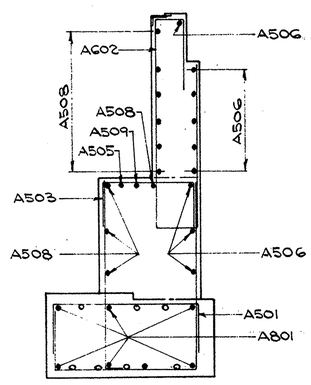


SECTION 'E-E'
SEE SECTION D-D FOR FURTHER DETAIL

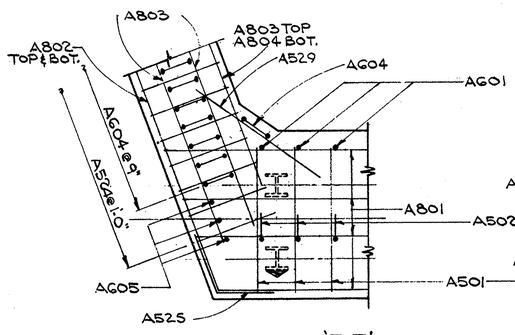
	ELEVATION TABLE			
	P	R	T	V
SOUTH W.W. ABUT°1	1111.12	1105.08	1118.28	1118.22
NORTH W.W. ABUT°1	1111.27	1105.08	1118.34	1118.30
SOUTH W.W. ABUT°2	1108.69	1102.50	1116.07	1115.78
NORTH W.W. ABUT°2	1108.54	1102.50	1115.67	1115.36



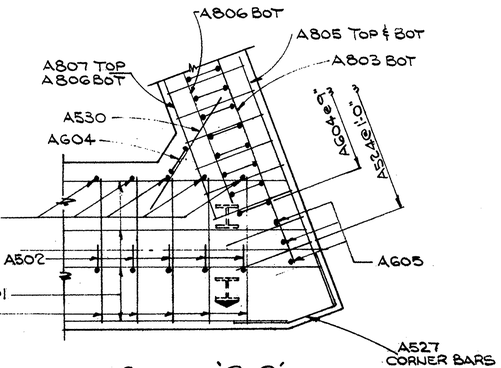
SECTION 'A-A'



SECTION 'B-B'
SEE SECTION 'A-A' FOR FURTHER DETAILS



SECTION 'F-F'



SECTION 'G-G'

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT NO. 1 & 2 DETAILS

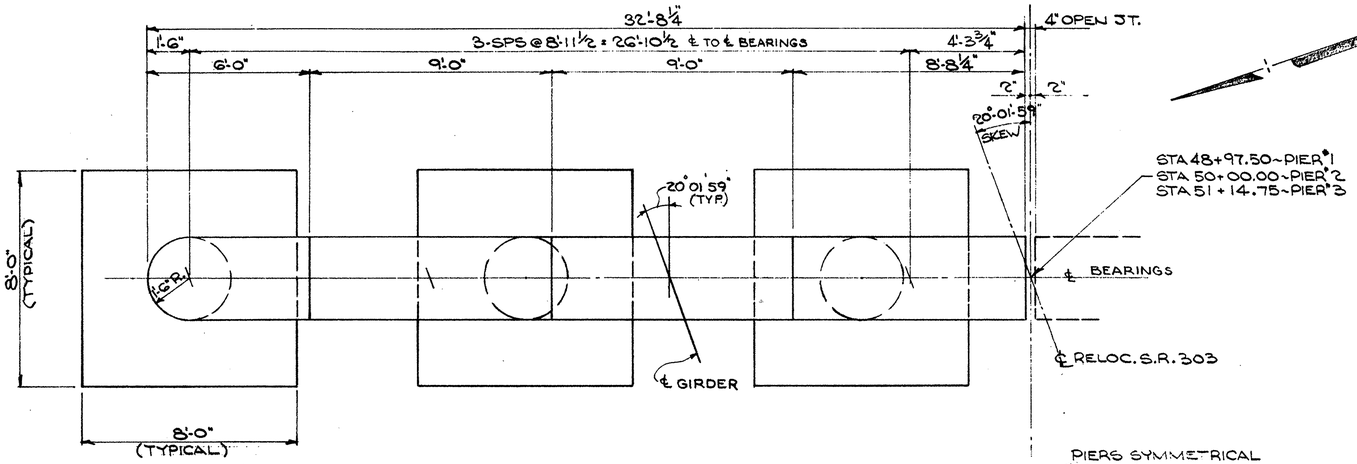
BRIDGE NO. SUM.-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316+40.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JWW		H&H	JDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

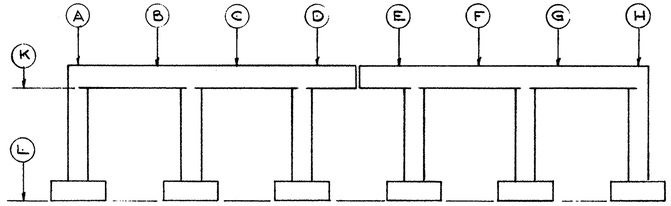
435/510

SUM.-271-2.98



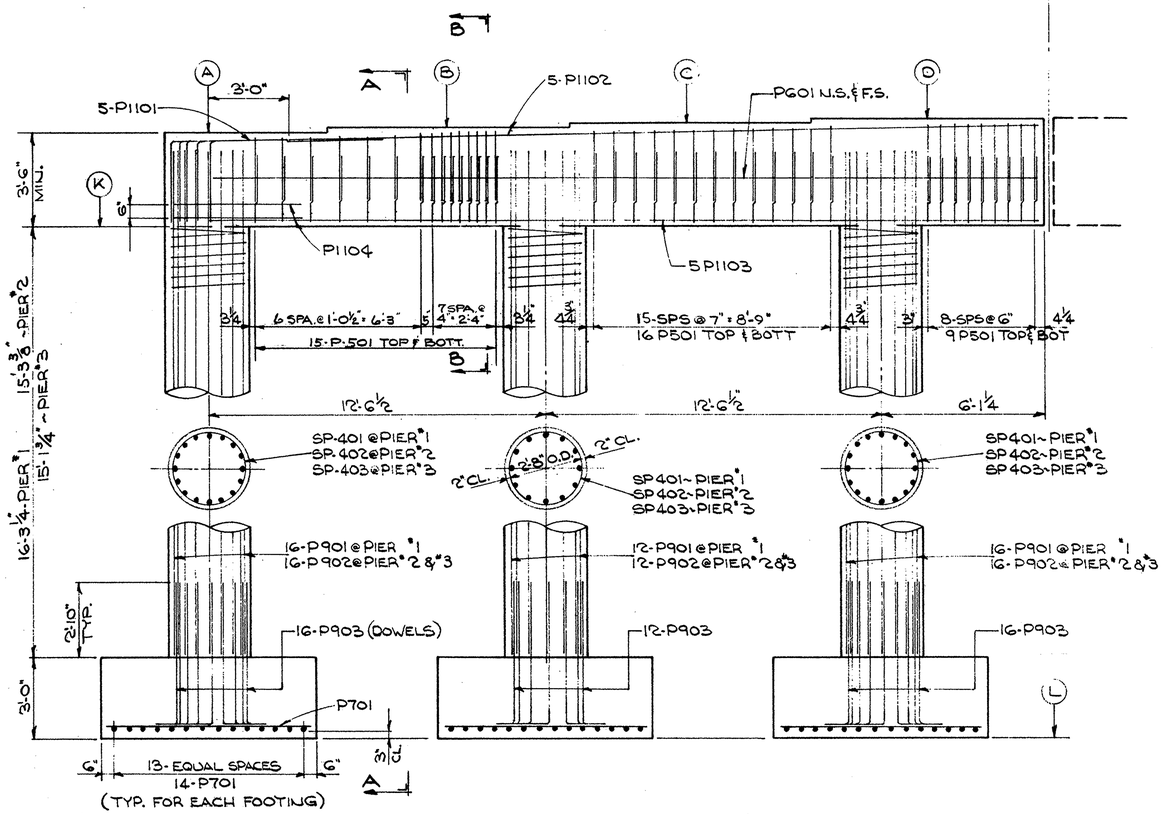
PARTIAL PLAN PIERS 1, 2, & 3

PIERS SYMMETRICAL ABOUT THIS LINE EXCEPT AS SHOWN

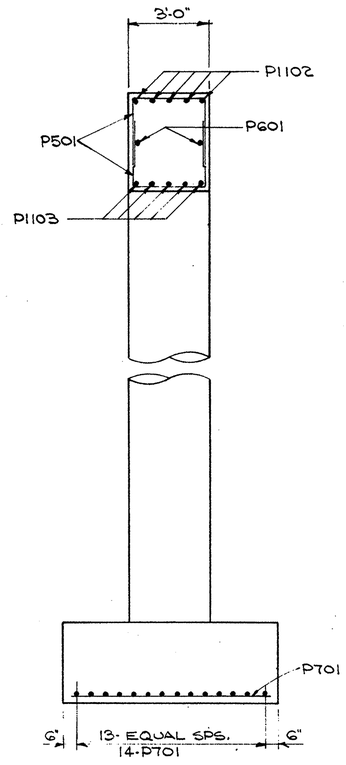


KEY PLAN PIERS"1"2 & "3

	ELEVATION TABLE									
	A	B	C	D	E	F	G	H	K	L
PIER"1	1111.52	1111.65	1111.79	1111.93	1111.93	1111.81	1111.68	1111.55	1108.02	1088.75
PIER"2	1110.78	1110.94	1111.09	1111.25	1111.27	1111.16	1111.05	1110.94	1107.28	1089.00
PIER"3	1109.65	1109.83	1110.01	1110.19	1110.23	1110.14	1110.06	1109.97	1106.15	1088.00



PARTIAL ELEVATION PIERS 1, 2, & 3



SECTION "A-A"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER NO. 1, 2, & 3 DETAILS

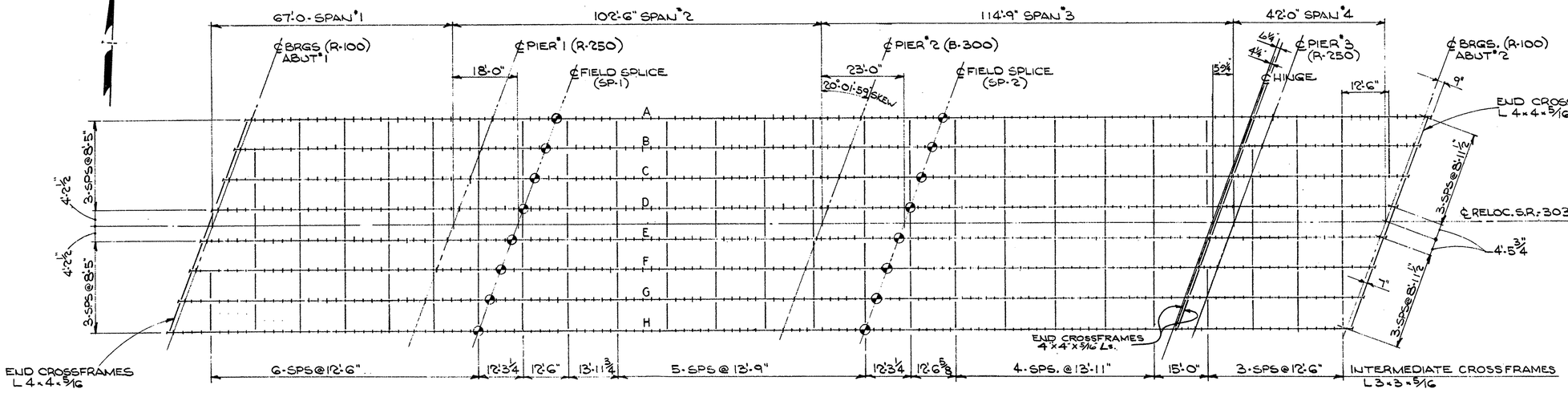
BRIDGE NO. SUM-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316 + 4060

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JWW		H.G.H.	EDH	4-22-66	

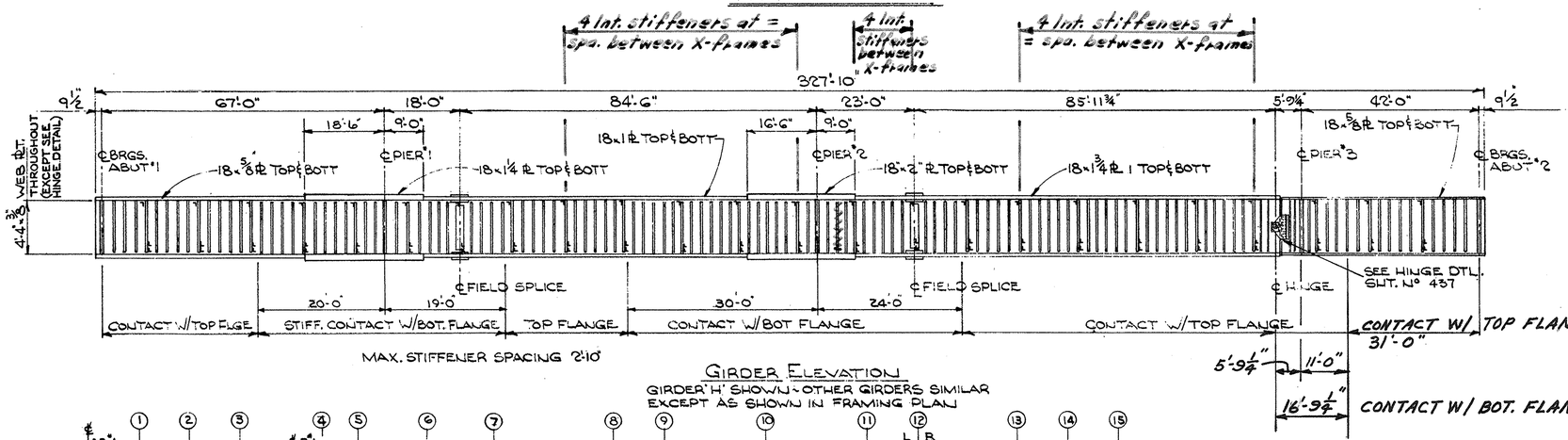
FED. RD.	STATE	PROJECT	
2	OHIO		

436
510

SUM.-271-2.98



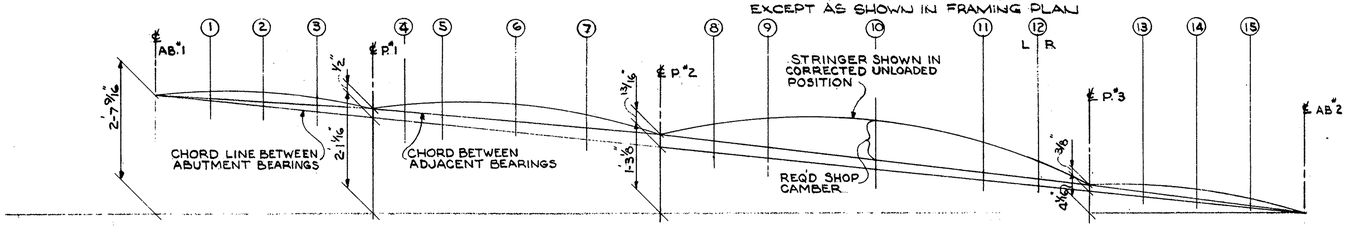
FRAMING PLAN



MAX. STIFFENER SPACING 2'-10"

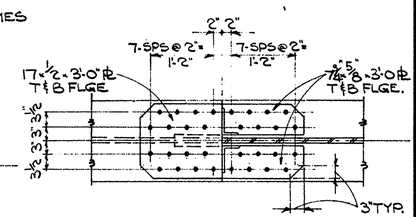
GIRDER ELEVATION

GIRDER 'H' SHOWN - OTHER GIRDERS SIMILAR EXCEPT AS SHOWN IN FRAMING PLAN

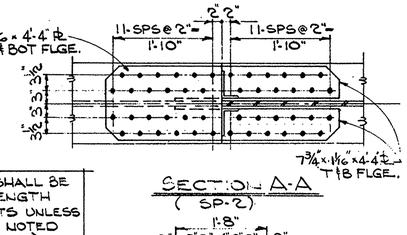


NOTE: ALL ELEV. ARE TO BOT. OF WEB.

LOCATION	SPAN #1						SPAN #2								SPAN #3										SPAN #4					
	1/4 PT. (1)		1/2 PT. (2)		3/4 PT. (3)		SPLICE PT. (4)		1/4 PT. (5)		1/2 PT. (6)		3/4 PT. (7)		SPLICE PT. (8)		1/4 PT. (9)		1/2 PT. (10)		3/4 PT. (11)		HINGE LEFT (12)	HINGE RIGHT (12)	1/4 PT. (13)		1/2 PT. (14)		3/4 PT. (15)	
BEAM	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G	A&H	B-G
DEFLECTION DUE TO WEIGHT OF STEEL	.060	.060	.066	.066	.024	.024	.052	.052	.080	.080	.104	.104	.026	.026	.126	.126	.159	.159	.286	.286	.230	.230	.000	.000	.006	.006	.002	.002	.008	.008	.008	.008
DEFLECTION DUE TO REMAINING DEAD LOAD	.237	.214	.260	.235	.095	.086	.208	.188	.315	.285	.412	.372	.105	.095	.50	.453	.630	.570	1.135	1.030	.915	.830	.000	.000	.024	.022	.008	.007	.033	.030	.030	.028
ADJUSTMENT REQ'D FOR VERTICAL CURVE	.31	.31	.41	.41	.31	.31	.55	.55	.71	.71	.945	.945	.710	.710	.76	.76	.89	.89	1.19	1.19	.89	.89	.24	.24	.24	.24	.12	.12	.16	.16	.12	.12
REQUIRED SHOP CAMBER	5/8"	5/8"	3/4"	3/4"	7/16"	7/16"	13/16"	13/16"	1 1/8"	1 1/16"	1 9/16"	1 7/16"	7/8"	7/8"	1 3/8"	1 3/8"	1 11/16"	1 5/8"	2 3/8"	2 1/2"	2 1/16"	1 15/16"	1/4"	1/4"	1/4"	1/4"	1/8"	1/8"	3/16"	3/16"	1/8"	1/8"

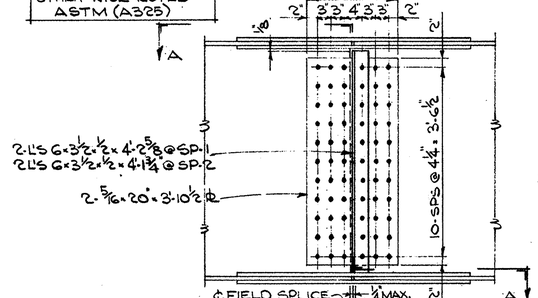


SECTION 'A-A' (@ SP-1)

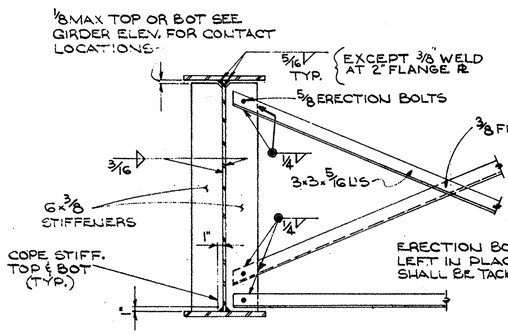


SECTION A-A (SP-2)

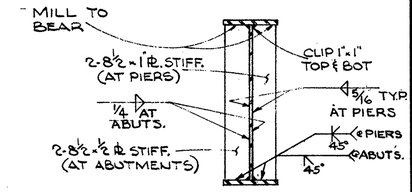
ALL BOLTS SHALL BE 1" ϕ HIGH STRENGTH STEEL BOLTS UNLESS OTHER WISE NOTED ASTM (A325)



FIELD SPLICE DETAIL



INTERMEDIATE CROSSFRAME AND STIFFENER DETAIL



BEARING STIFFENER DETAIL

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

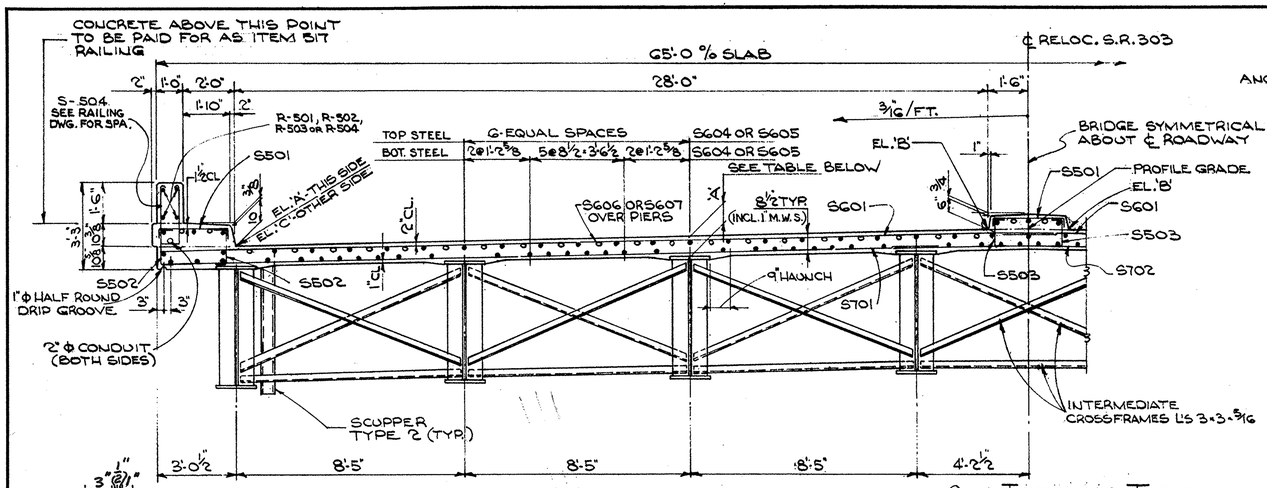
BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

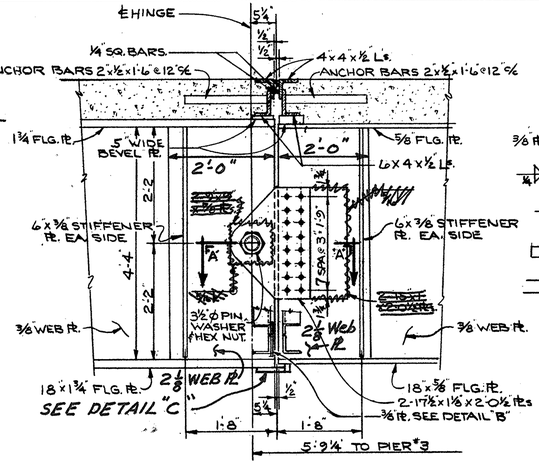
FRAMING PLAN

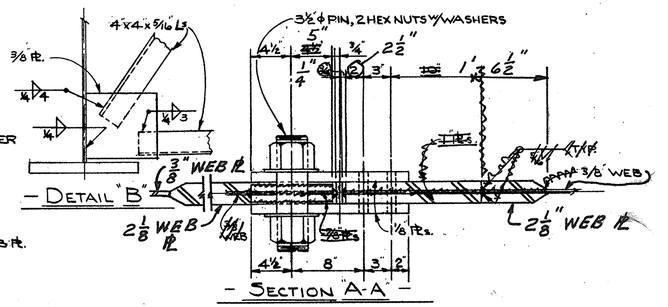
BRIDGE NO. SUM.-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316 + 40.60

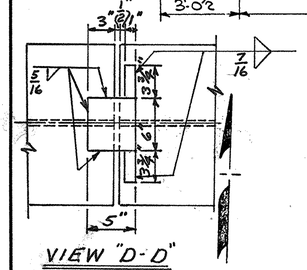
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JWW		H.G.H.	RBH	4-22-66	11-6-67 4-12-68

CONCRETE ABOVE THIS POINT TO BE PAID FOR AS ITEM 511 RAILING





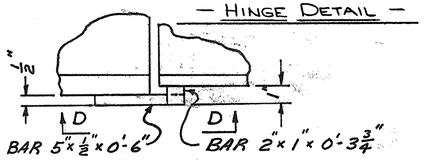


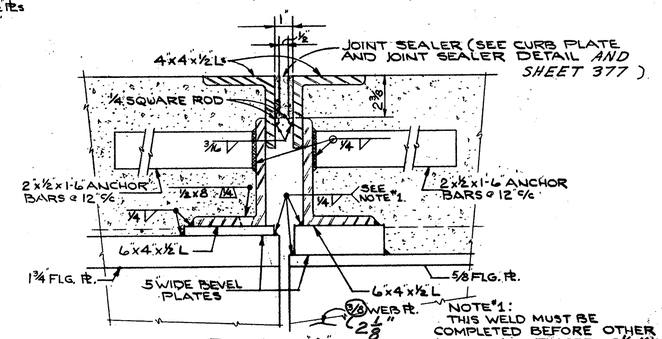


HALF TRANSVERSE SECTION
(LOOKING UP STATION)

SLAB THICKNESS TABLE

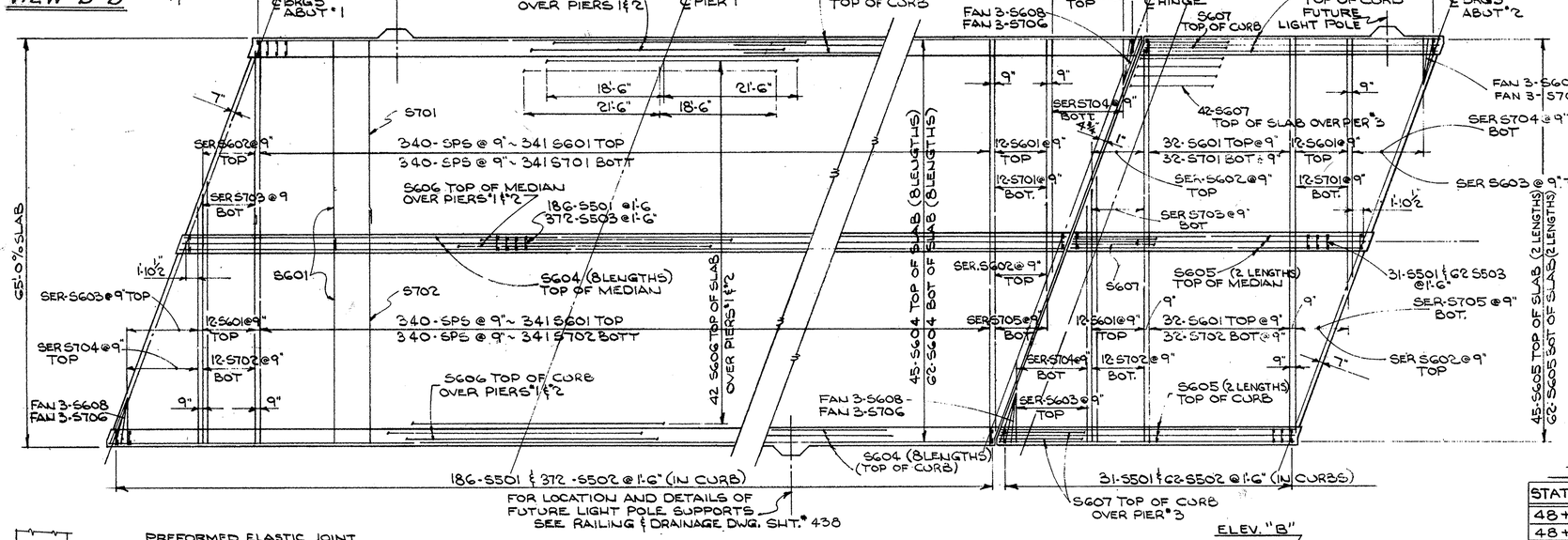
DIMENSION 'A'	FLANGE THICKNESS
9⅞"	¾"
9⅜"	1¼"
9⅝"	1"
8⅝"	2"
8⅞"	1¾"
10"	⅝"



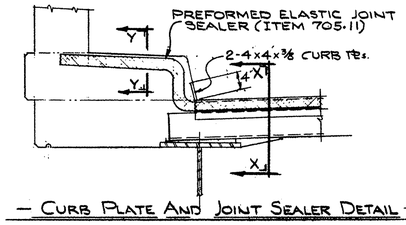


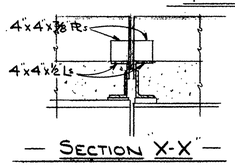
ALL OF THE ABOVE FULL PENETRATION WELDS SHALL BE BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE. BUTT WELDS ON BEAM AND GIRDER FLANGE PLATES SHALL BE GROUND FLUSH FINISH GRINDING BEING PARALLEL TO THE DIRECTION OF STRESS

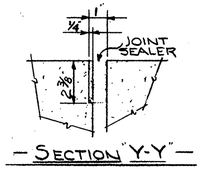
JOINT PREPARATION FOR SUBMERGED ARC WELDMENTS

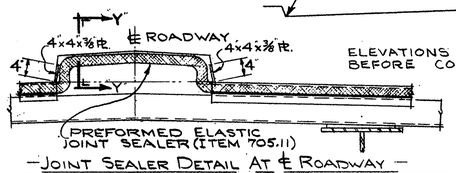


PARTIAL SLAB REINFORCING PLAN











ELEVATIONS "A", "B" & "C" ARE ELEVATIONS BEFORE CONCRETE IS PLACED.

— ELEVATION TABLE —

STATION	ELEV. "A"	ELEV. "B"	ELEV. "C"
48+25	—	—	1118.31
48+50	1118.36	1118.79	1118.38
48+75	1118.39	1118.79	1118.37
49+00	1118.34	1118.75	1118.35
49+25	1118.29	1118.72	1118.31
49+50	1118.21	1118.62	1118.20
49+75	1118.06	1118.45	1118.03
50+00	1117.86	1118.27	1117.87
50+25	1117.67	1118.10	1117.73
50+50	1117.49	1117.91	1117.51
50+75	1117.22	1117.61	1117.20
51+00	1116.86	1117.23	1116.78
51+25	1116.41	1116.82	1116.41
51+50	1115.10	1115.51	—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SLAB REINFORCING & FRAMING DETAILS

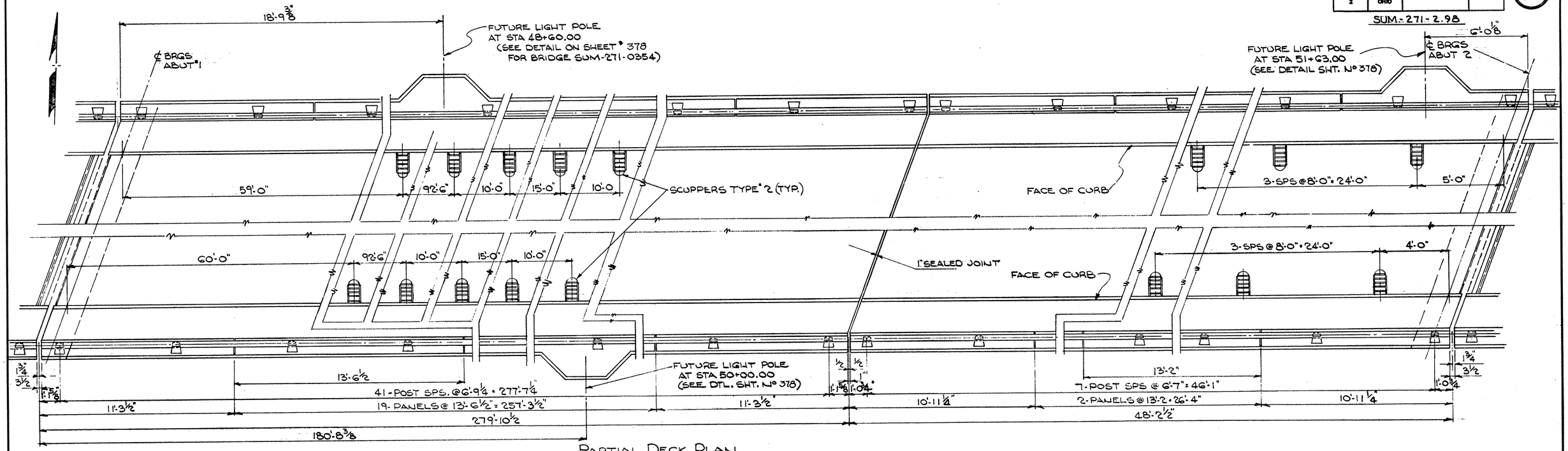
BRIDGE NO. SUM.-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316 + 40.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JWW		H.G.H.	RBH	4-22-66	2-23-68

FED. RD.	STATE	PROJECT	
2	OHIO		

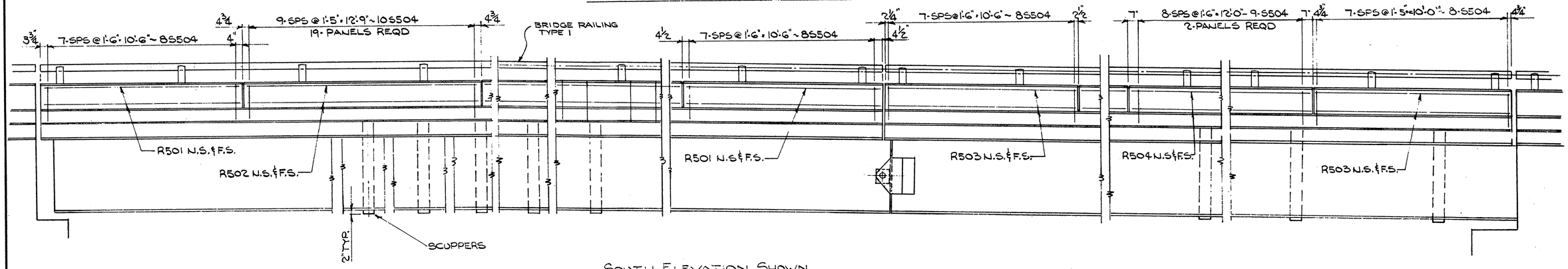
438
510

SUM.-271-2.98



PARTIAL DECK PLAN

SOUTH RAILING & PARAPET DIMENSIONED
NORTH RAILING & PARAPET SIMILAR



SOUTH ELEVATION SHOWN
NORTH ELEVATION SIMILAR

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE NO. SUM.-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316+40.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JWW		H.G.H.	RBH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

439/510

SUM.-271-2.98

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
ABUTMENTS 1 & 2									
A501	100	10'-6"	3	5'-9"	2'-6"				1095
A502	100	7'-6"	1	1'-0"	6'-7"				782
A503	100	7'-2"	3	3'-5"	2'-0"				747
A504	6	33'-4"	ST						209
A505	20	34'-6"	ST						720
A506	20	33'-7"	ST						700
A507	2	33'-10"	ST						71
A508	34	34'-0"	ST						1206
A509	2	34'-3"	ST						71
A510	14	10'-0"	ST						146
A511	52	5'-7"	5	8	2'-2"	5"			303
A512	32	16'-6"	ST						551
A513	4	17'-1"	16	3'-1"					71
A514	36	3'-2"	3	1'-5"	1'-0"				119
SERIES A515	4 SETS OF 9 = 36 BARS	VARIES 3'-0 TO 6'-4"	18	1'-5"	VARIES 1'-0 TO 2'-8			5"	175
A516	40	3'-6"	ST						146
SERIES A517	8 SETS OF 6 = 48 BARS	VARIES 3'-2 TO 6'-1	ST					7"	232
A518	96	6'-5"	ST						643
A519	8	12'-2"	ST						102
A520	14	10'-6"	ST						153
A521	20	8'-8"	ST						181
A522	4	15'-8"	16	1'-8					65
A523	6	10'-9"	ST						67
A524	48	11'-4"	14	2'-7	3'-0"	4"			567
A525	10	4'-0"	21	2'-0"	2'-0"	8¼			42
A526	8	9'-0"	12	7'-0"	2'-0"	1'-2"			75
A527	4	5'-10"	17	2'-0"	8¼				24
A528	16	4'-4"	17	6"	8¼				73
A529	20	5'-9"	ST						120
A530	20	5'-0"	ST						104
A531	10	3'-10"	1	2'-0	2'-0"				40
A532	2	3'-9"	3	2'-0	1'-0				8
A533	2	3'-0"	1	1'-0"	2'-2"				6
A601	100	14'-2"	4	6'-7"	5'-4"	2'-6"			2127
A602	118	19'-0"	7	6'-7"	1'-5	7'-11"	11"		3367
A603	8	19'-6"	7	6'-7"	1'-5	8'-5"	11"		239
A604	52	18'-11"	3	1'-2"	9'-0"				1478
A605	12	6'-7"	ST						119
A801	28	36'-6"	ST						2729
A802	4	13'-0"	ST						139
A803	8	11'-6"	ST						246
A804	2	9'-9"	ST						52
A805	4	13'-7"	ST						145
A806	4	8'-7"	ST						92
A807	2	10'-6"	ST						56
TOTAL ABUTMENTS 1 & 2 20,398 #									
PIERS 1 2 & 3									
P501	480	7'-10"	3	2'-8"	2'-9"				3922
P601	12	31'-0"	ST						559
P701	504	7'-6"	ST						7726

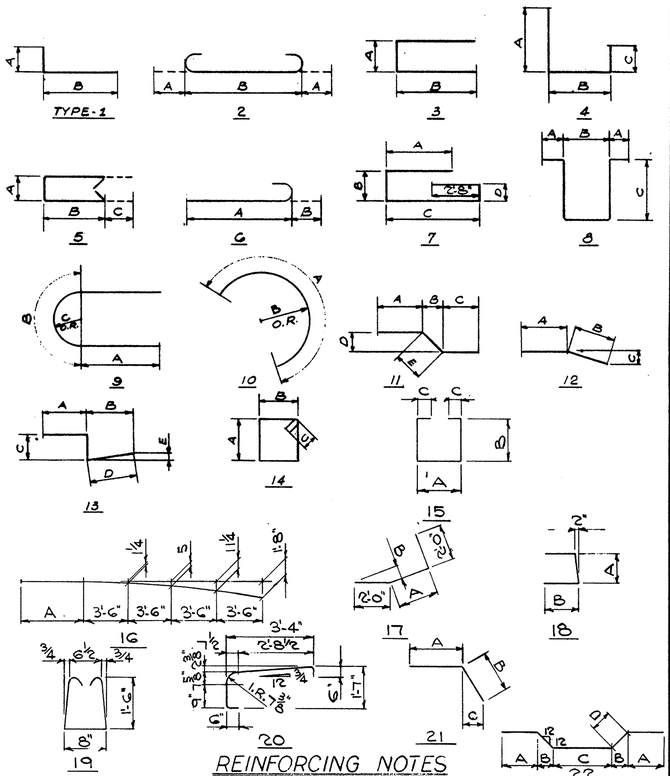
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
P901	88	19'-3"	ST						5760
P902	176	18'-3"	ST						10,921
P903	264	6'-4"	1	1'-0	5'-7"				5685
P1101	30	10'-10"	1	3'-3"	7'-10"				1727
P1102	30	28'-0"	ST						4463
P1103	30	31'-0"	ST						4941
P1104	12	10'-9"	9	3'-6"	3'-9 1/8	1'-2 3/8			685
								SPIRALS	5,190
TOTAL PIERS 1,2, & 3 (INC. SPIRALS) = 51,579									
SUPERSTRUCTURE									
S501	651	2'-11"	3	2'-6"	4"				1981
S502	868	2'-1"	3	1'-4"	6"				1886
S503	434	1'-9"	3	1'-0"	6"				792
S504	480	5'-7"	5	8"	2'-2"	5"			2794
S521	6	11'-8"	22	2'-0	2'-0"	2'-3	2'-10"		73
S601	794	33'-4"	ST						39,753
SERIES S602	4 SETS OF 12 = 48 BARS	VARIES 9'-10 3/4 TO 16'-3 1/4	ST					2'-0 3/4	1531
SERIES S603	4 SETS OF 16 = 64 BARS	VARIES 8'-3 3/4 TO 16'-3 1/4	ST					2'-0 3/4	1965
S604	928	36'-8"	ST						51,108
S605	232	24'-10"	ST						8,654
S606	92	40'-0"	ST						5,528
S607	46	12'-0"	ST						829
S608	12	8'-4"	ST						150
S621	36	5'-6	ST						298
S622	12	9'-11"	14	2'-10"	2'-0"	4"			179
S701	397	29'-3"	ST						23,735
S702	397	37'-8	ST						30,565
SERIES S703	2 SETS OF 12 = 24 BARS	VARIES 5'-9 3/4 TO 6'-2 3/4						2'-0 3/4	841
SERIES S704	4 SETS OF 16 = 64 BARS	VARIES 8'-3 3/4 TO 16'-3 1/4						2'-0 3/4	3111
SERIES S705	2 SETS OF 12 = 24 BARS	VARIES 14'-2 3/4 TO 16'-3 1/4						2'-0 3/4	1254
S706	12	8'-4"	ST						204
TOTAL SUPERSTRUCTURE 177,231#									

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	WEIGHT LBS.
RAILING									
R501	16	10'-11"	ST						
R502	152	13'-2"	ST						
R503	16	10'-7"	ST						
R504	16	12'-10"	ST						
R505	16	16'-4"	ST						
R506	12	4'-2"	19						
R507	8	5'-4"	20						
R521	6	11'-8"	22	2'-0"	2'-0"	2'-3	2'-10"		
R522	6	11'-4 5/8	22	3'-0"	8"	3'-9"	11 5/16		
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	2	5'-6"	ST						
RE-601	6	6'-0"	ST						
RE-701	4	6'-3"	ST						
RE-801	1	6'-6"	ST						
RE-901	2	6'-10"	ST						
RE-1001	-	7'-3"	-						
RE-1101	1	7'-9"	ST						

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP401	6	2'-8"	16'-3 1/4"	4 1/2	46	1520
SP402	6	2'-8"	15'-3 3/8"	4 1/2	44	1454
SP403	6	2'-8"	15'-1 3/4"	4 1/2	44	1454
SPACERS	72					762
TOTAL SPIRALS						5,190 #

GRAND TOTAL 249,208 LBS



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509 ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.66 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.66 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

@ RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH, & ARNOLD
AKRON, OHIO

REINFORCING SCHEDULE

BRIDGE NO. SUM.-271-0602
I-271 UNDER RELOCATED S.R.-303
SUMMIT COUNTY
STA. 316 + 40.60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFP	JWW		H.G.H.	RDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

440
510

PROPOSED STRUCTURE OVER W.B.L. OF OHIO TURNPIKE
BRIDGE NO. SUM-271-0658 L & R

SUM-271-2.98

CURVE DATA

℄ E.B. TURNPIKE	℄ I-271
Δ = 3°24'-42.6"	Δ = 63°-21'-00"
D_c = 0°29'-14.7"	D_c = 3°00'-00"
R = 11755.30'	R = 1909.86'
T = 350.10'	L_c = 1711.67'
L = 700.00'	T_s = 1380.49'
P.O.C. STA. 176+00.00	E_s = 338.39'
P.O.C. STA. 183+00.00	L_s = 400.00'
	θ_s = 6°00'-00"
	LT = 266.82'
	ST = 133.47'
	P.I. STA. 350+57.87

BASE LINE 5' LT.
EDGE OF PAV'T E.B.L.

LOCAL TAN. AT ℄ STA. 179+75.39

℄ E.B.L. OF TURNPIKE
BEGIN APPROACH SLABS
STA. 181+76.85

MEASURED ALONG LOCAL TANGENT

℄ RAMP "L"

P.O.C. STA. 340+77.38-91' LT.
P.C.C. ℄ STA. 343+77.38
D_c = 2°52'-00"
R = 1998.69'
L_c = 416.26'
T = 208.38'
P.T. STA. 344+93.64
T.S. STA. 348+12.53

PROPOSED STRUCTURE

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONC. DECK AND SUBSTRUCTURE.
SKEW: 27°-54'-55" L.F. TO LOC. TAN.
SPANS: 81'-0" - 124'-6" - 119'-6" - 78'-0" c/c BRGS.
ROADWAY: 30'-0" f/f 2'-0" SAFETY CURBS.
LOAD FREQUENCY: CF=2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: CURVED 0°29-14.7" LT.
SUPERELEVATION: .015 ℄/FT.
SLOPE PROTECTION: CRUSHED AGGREGATE

TRAFFIC: 9825 - 1975 - A.D.T. E.B.L. TURNPIKE
15,540 - 1975 - A.D.T. I-271

EXISTING PROFILE AT ℄ I-271

EXISTING PROFILE AT ℄ E.B.L. OF OHIO TURNPIKE

PROPOSED - 3.10% PROFILE GRADE

BRIDGE LIMITS = 408.05'

BRIDGE RAILING TYPE 1

VERTICAL CLEARANCE 24.28' CONTROLLED AT W.B.L. OF OHIO TURNPIKE

CRUSHED AGGREGATE SLOPE PROTECTION

EL. 1060.55 MEET EXISTING
EL. 1059.78
STA. 177+68.80
EL. 1058.23
EL. 1056.68
EL. 1055.13
EL. 1053.58
EL. 1052.03
EL. 1050.48
EL. 1048.93
EL. 1047.38
STA. 181+76.85
EL. 1045.83
EL. 1043.80
EL. 1051.10 N.S.
EL. 1050.95 F.S.
EL. 1038.35 F.S.
EL. 1039.60 N.S.
EL. 1031.10
EL. 1018.50
EL. 1014.00
EL. 1011.44
178+00
179+00
180+00
181+00
182+00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

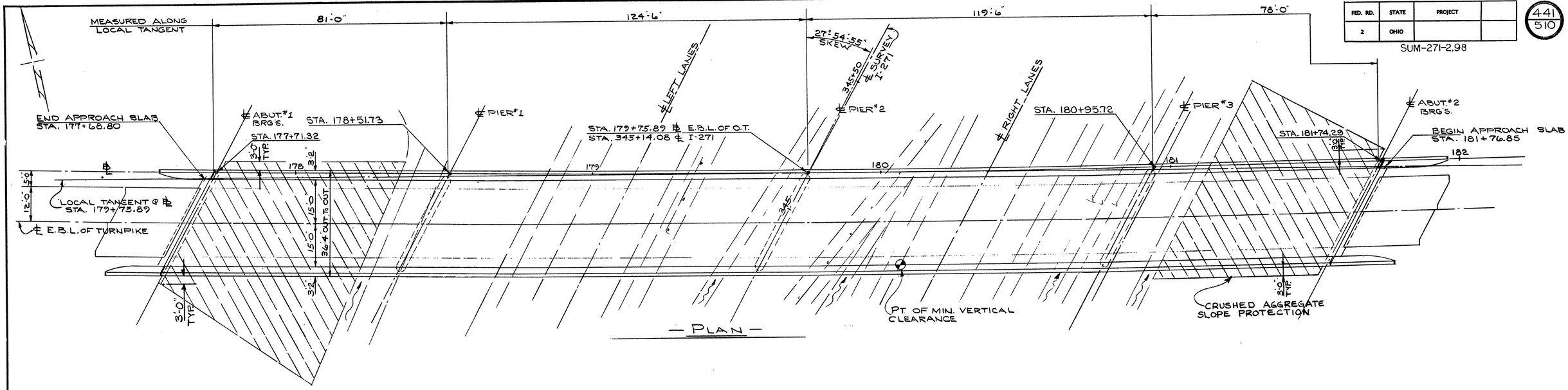
BRIDGE NO. SUM-271-0656
I-271 UNDER E.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ROSE JK		RWH	RWH	4-22-66	

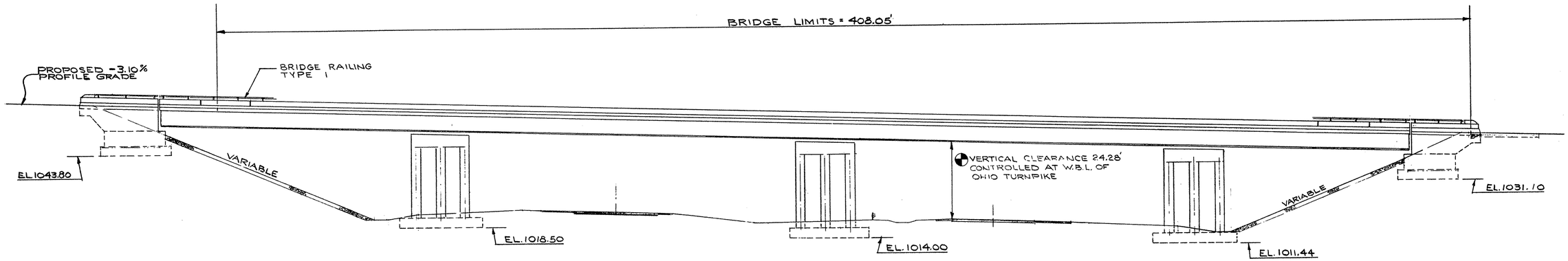
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2,98

441
510



— PLAN —



— ELEVATION —

— ESTIMATED QUANTITIES — (Participation: 79.9% Normal, 20.1% State)

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
503	700	CU.YDS.	UNCLASSIFIED EXCAVATION		356	344	
509	201,364	LBS.	REINFORCING STEEL	131,311	11,685	58,368	
511	492	CU.YDS.	CLASS C CONC. SUPERSTRUCTURE	492			
511	164	CU.YDS.	CLASS E CONC. ABUTS ABOVE FTG'S.		164		
511	121	CU.YDS.	CLASS C CONC PIERS ABOVE FTGS.			121	
511	189	CU.YDS.	CLASS E CONC. PIER & ABUT. FTG'S.		52	137	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
513	547,239	LBS	STRUCTURAL STEEL	547,239			
514	547,239	LBS	FIELD PAINTING OF STRUCT. STEEL	547,239			
517	886.08	LIN.FT.	BRIDGE RAILING TYPE 1	808.83	77.25		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
518	12	EACH	SCUPPERS (INCLUDING SUPPORTS)	12			
518	50	CU.YDS.	POROUS BACKFILL		50		
518	105	LIN.FT.	6" HELICAL C.M.P. 707.06 NON-PERF.		105		
518	66	LIN.FT.	6" PERFORATED HELICAL C.M.P. 707.06 INCLUDING SPECIALS		66		
601	805	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		805		
806	492	Units	WATER RED. SET RETARDING ADMIXTURE	492			
825	1,902	SQ.YDS.	CONCRETE SURFACE TREATMENT				1902
828	68	LIN.FT.	JOINT SEALER (end dam)	68			

SEE SHEET NO. 368 FOR GENERAL NOTES

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

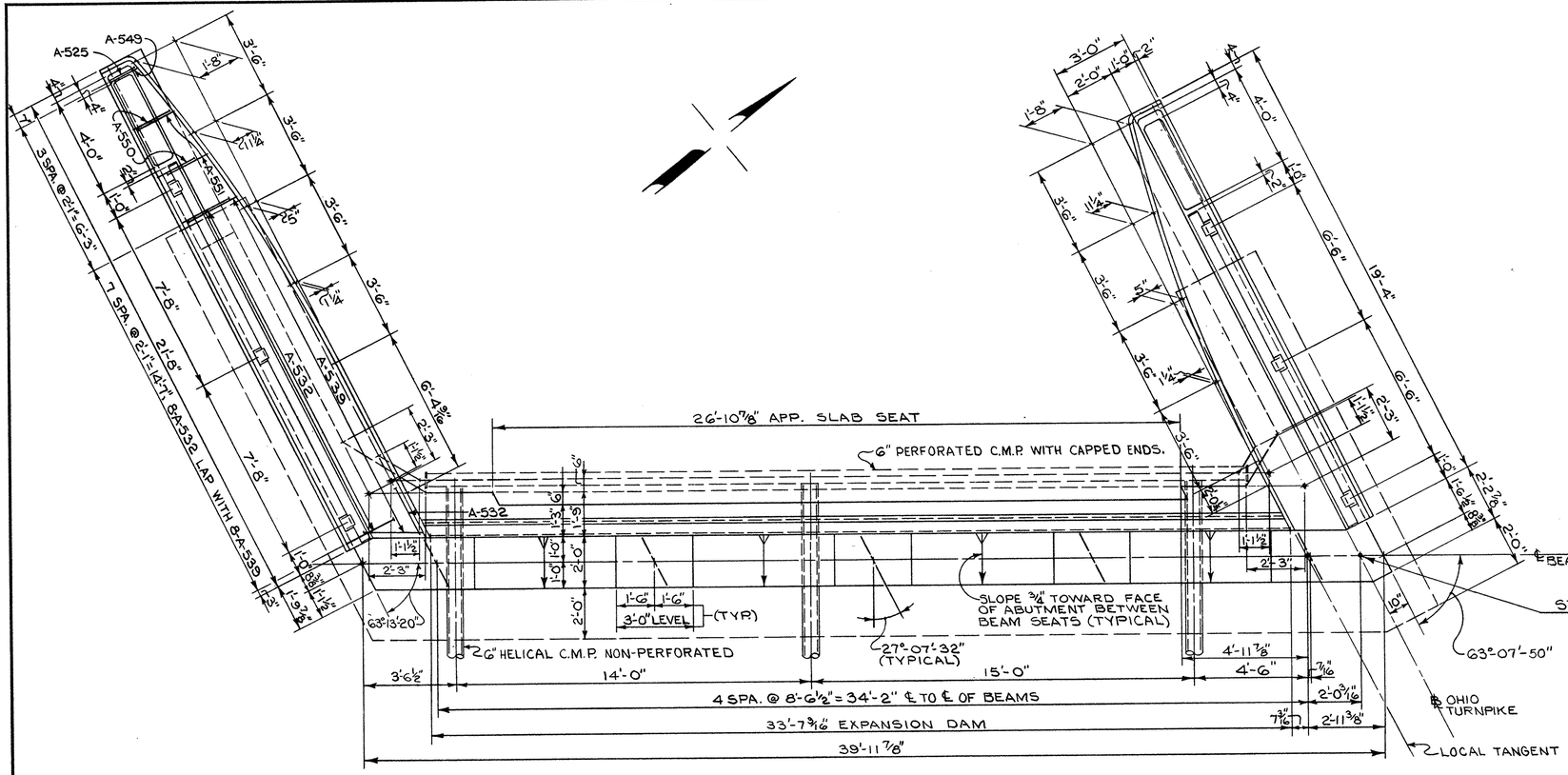
BRIDGE NO. SUM-271-0656
I-271 UNDER E.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	LNP		[illegible]	RDH	4-22-66	

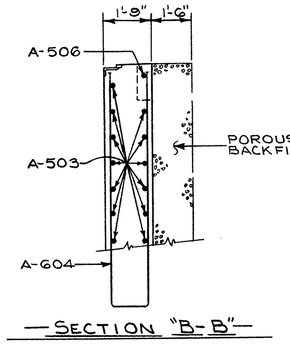
FED. RD.	STATE	PROJECT	
2	OHIO		

442
510

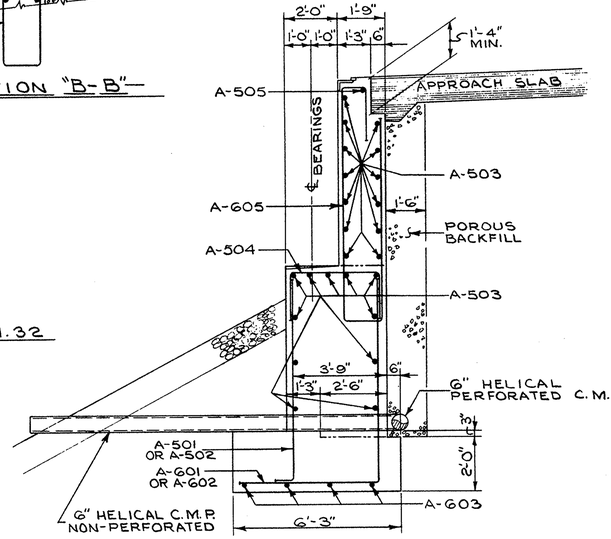
SUM-271-2.98



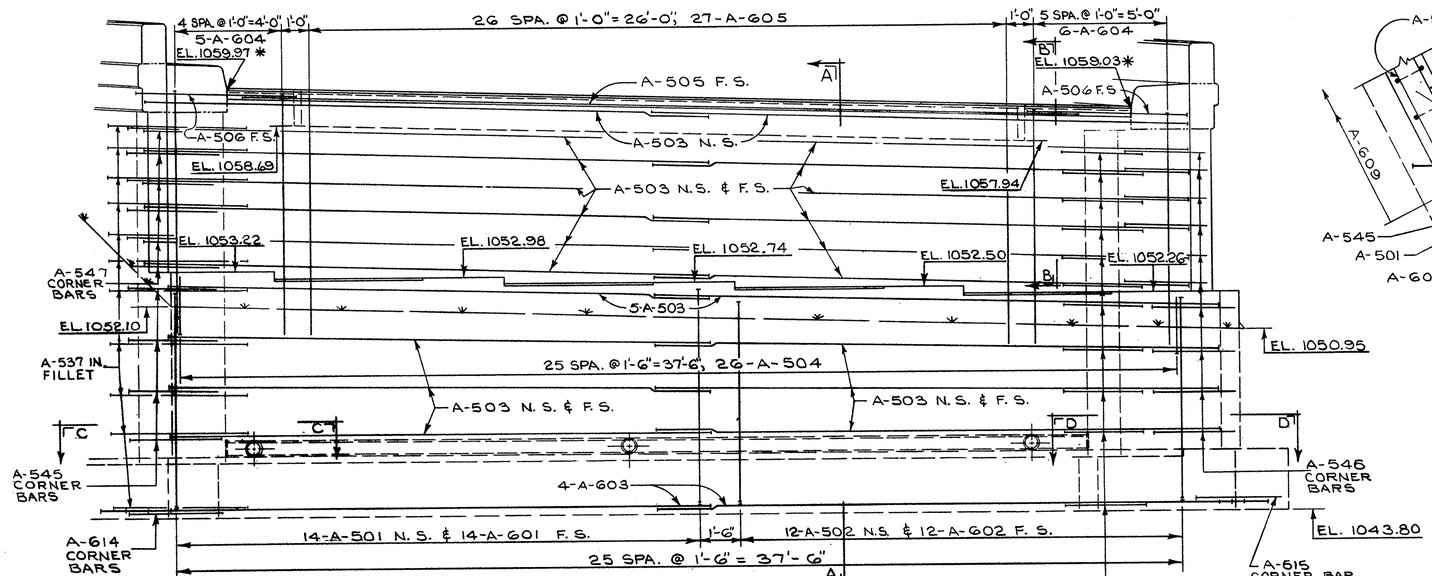
— PLAN — ABUTMENT #1 —



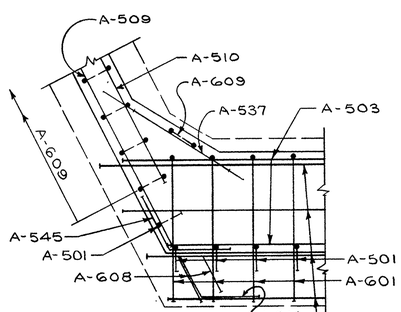
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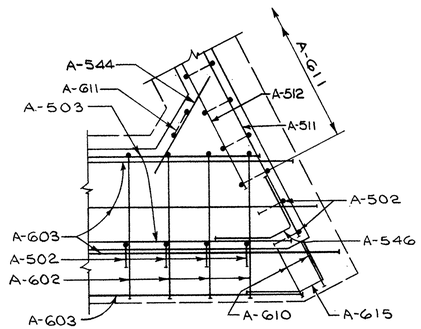
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— ELEVATION — ABUTMENT #1 —



— SECTION "C-C" —



— SECTION "D-D" —

*INDICATES ELEVATION AT HEEL OF ANGLE.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT #1

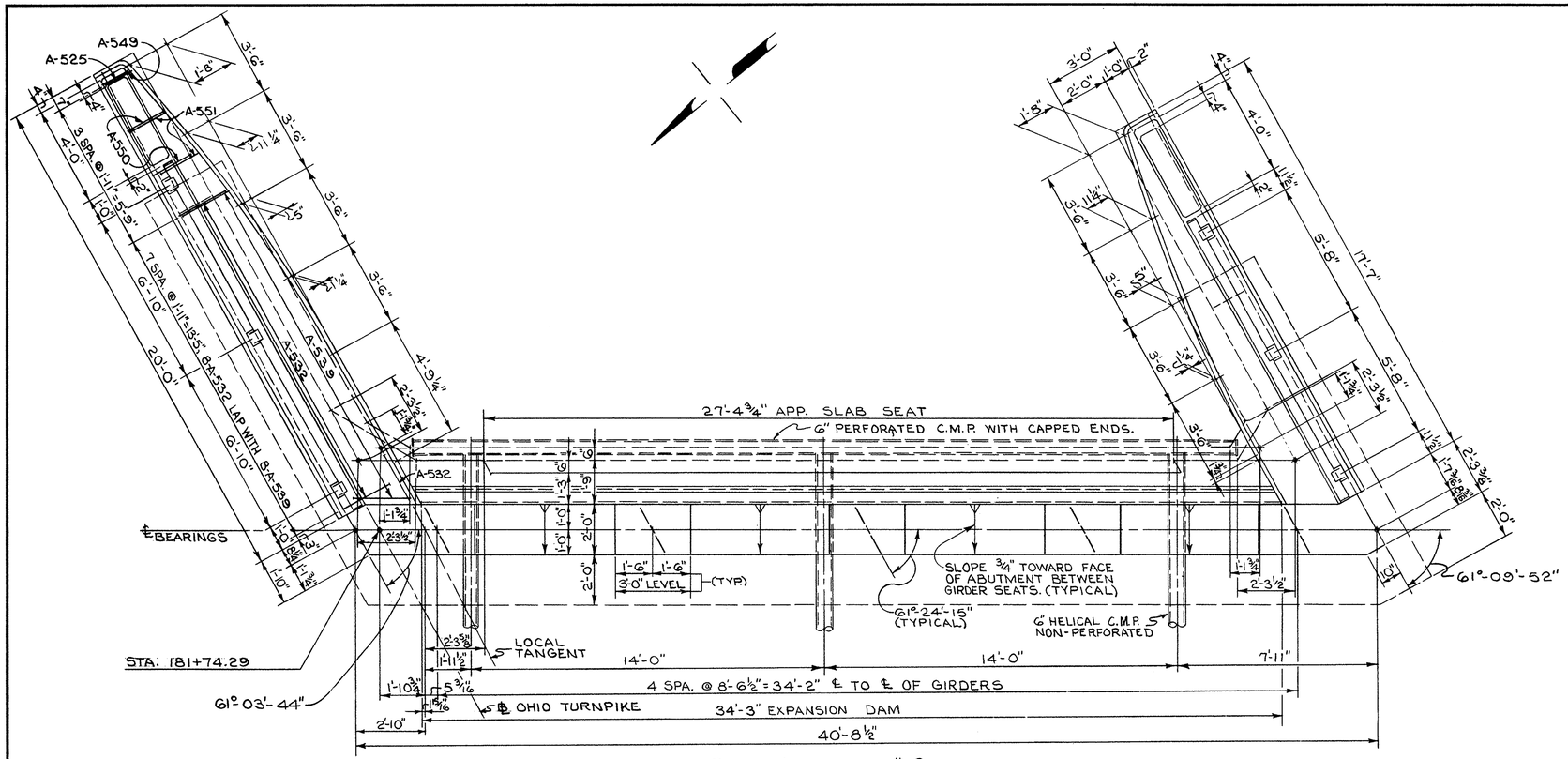
BRIDGE NO. SUM-271-0656
I-271 UNDER E.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RDH	4-22-66	

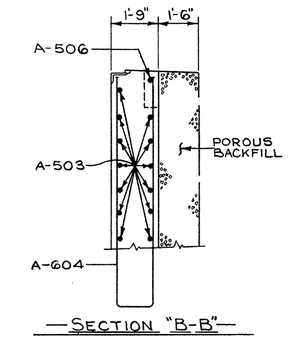
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

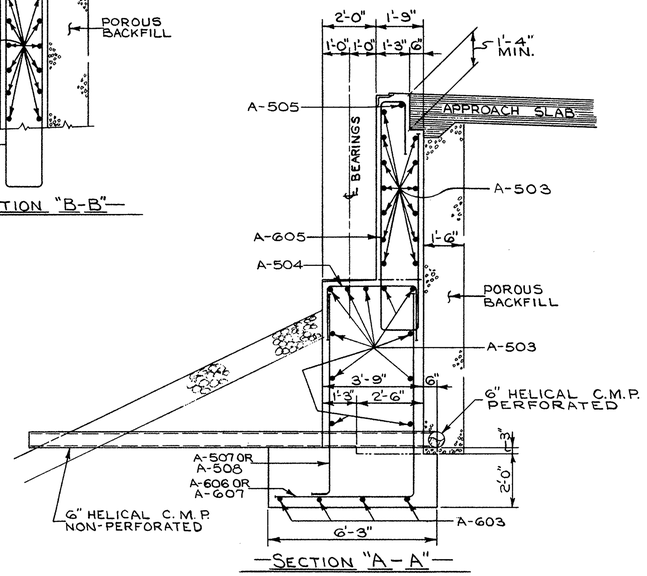
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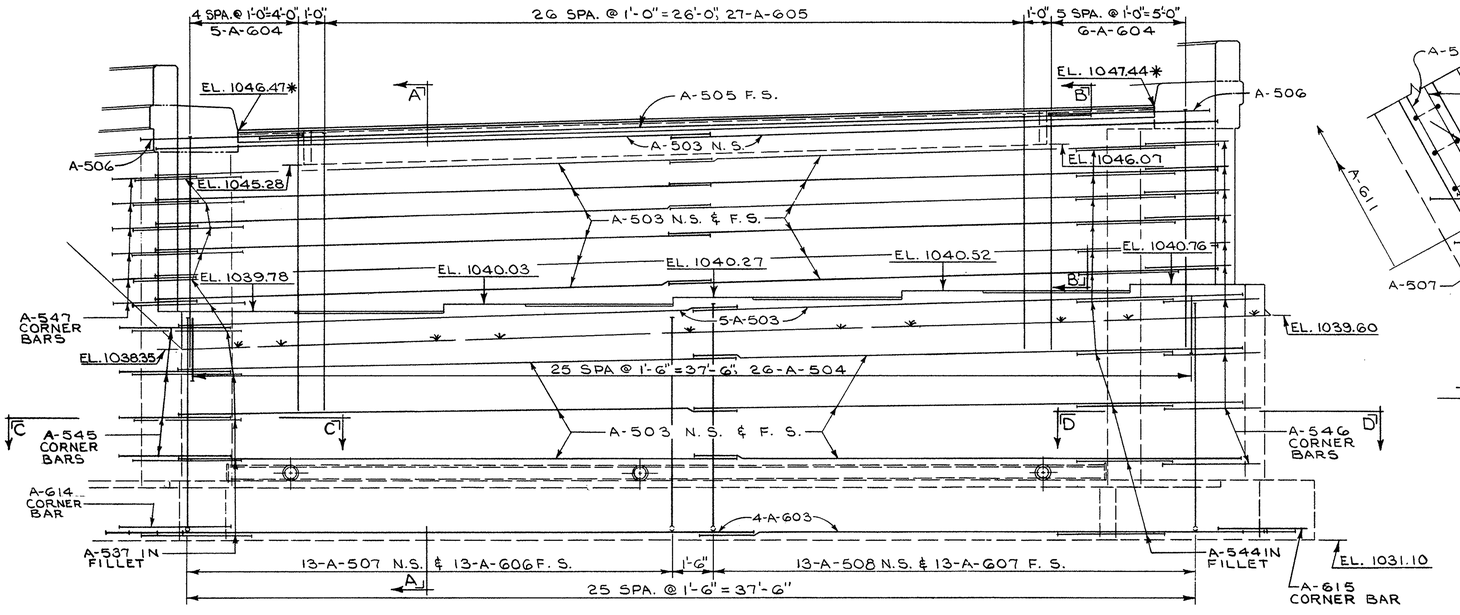
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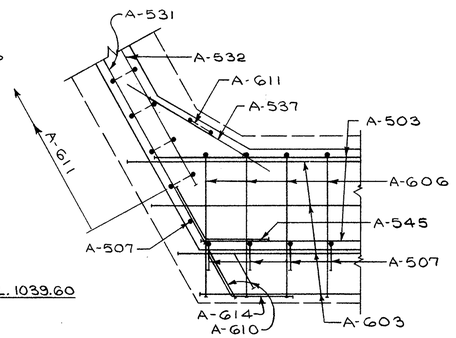
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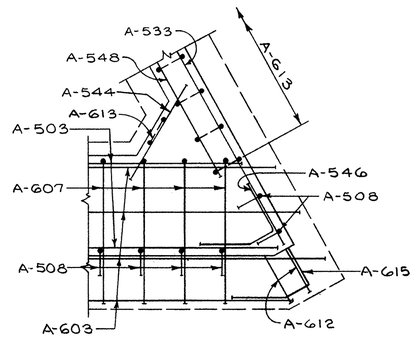
—SECTION "A-A"—



—ELEVATION—ABUTMENT #2—



—SECTION "C-C"—



—SECTION D-D—

✱ INDICATES ELEVATION AT HEEL OF ANG.E.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT #2

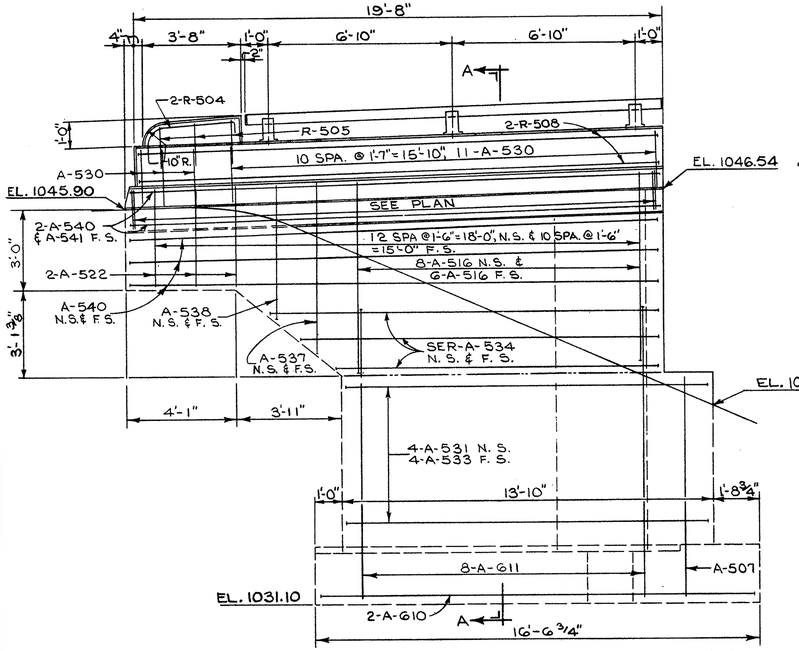
BRIDGE NO. SUM-271-0656
I-271 UNDER E. B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RBH	4-22-66	

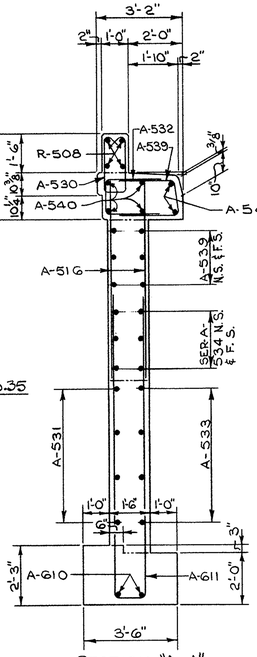
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

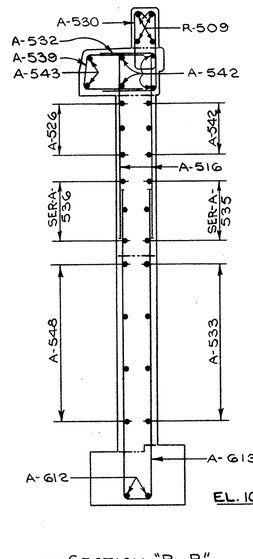
444
510



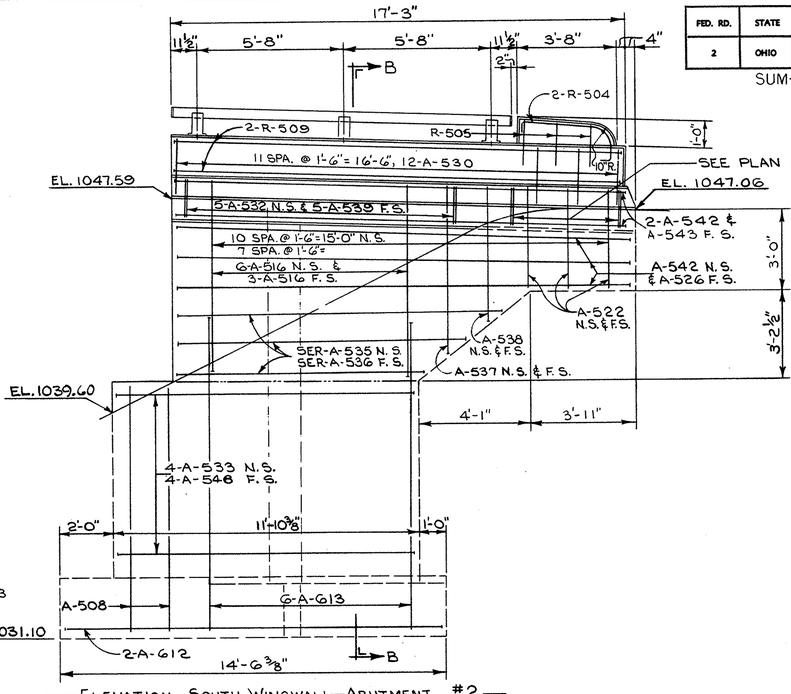
—ELEVATION—NORTH WINGWALL—ABUTMENT #2—



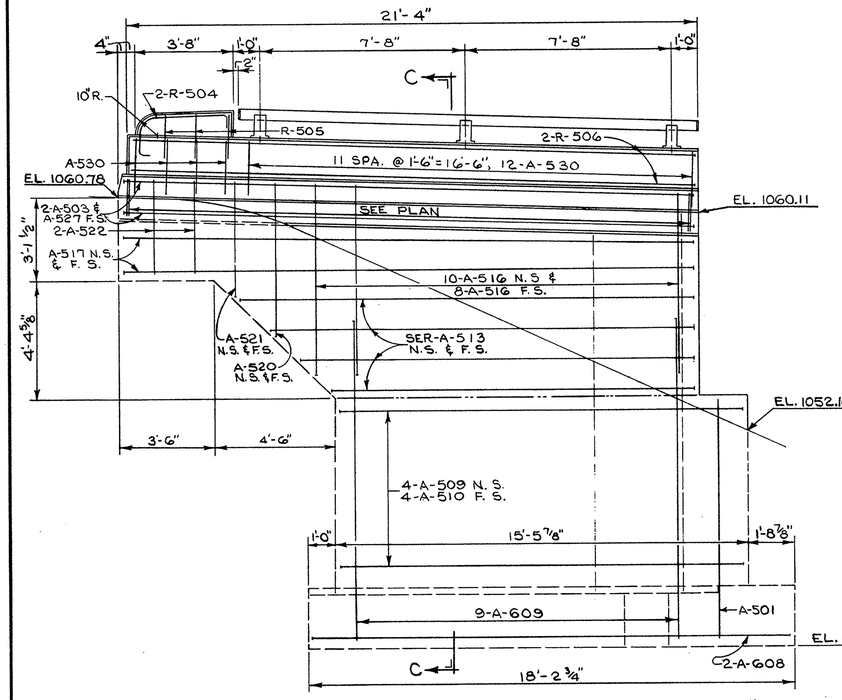
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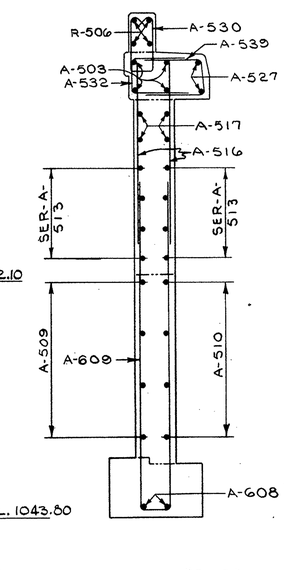
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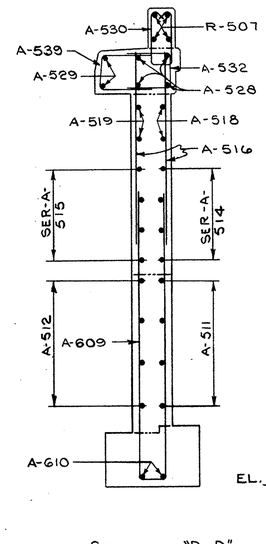
—ELEVATION—SOUTH WINGWALL—ABUTMENT #2—



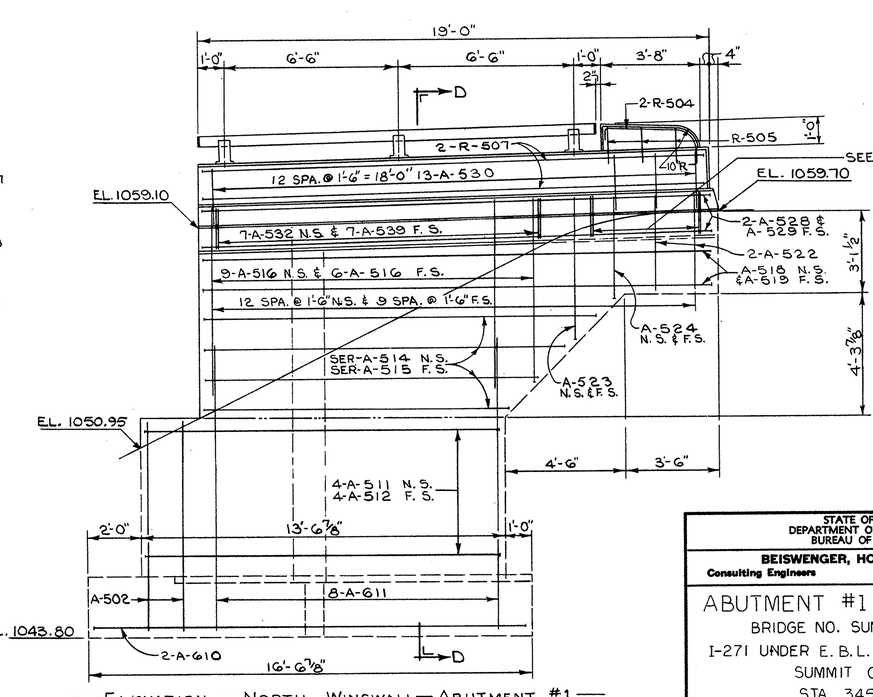
—ELEVATION—SOUTH WINGWALL—ABUTMENT #1—



—SECTION "C-C"—



—SECTION "D-D"—



—ELEVATION—NORTH WINGWALL—ABUTMENT #1—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT #1 & #2 DETAILS

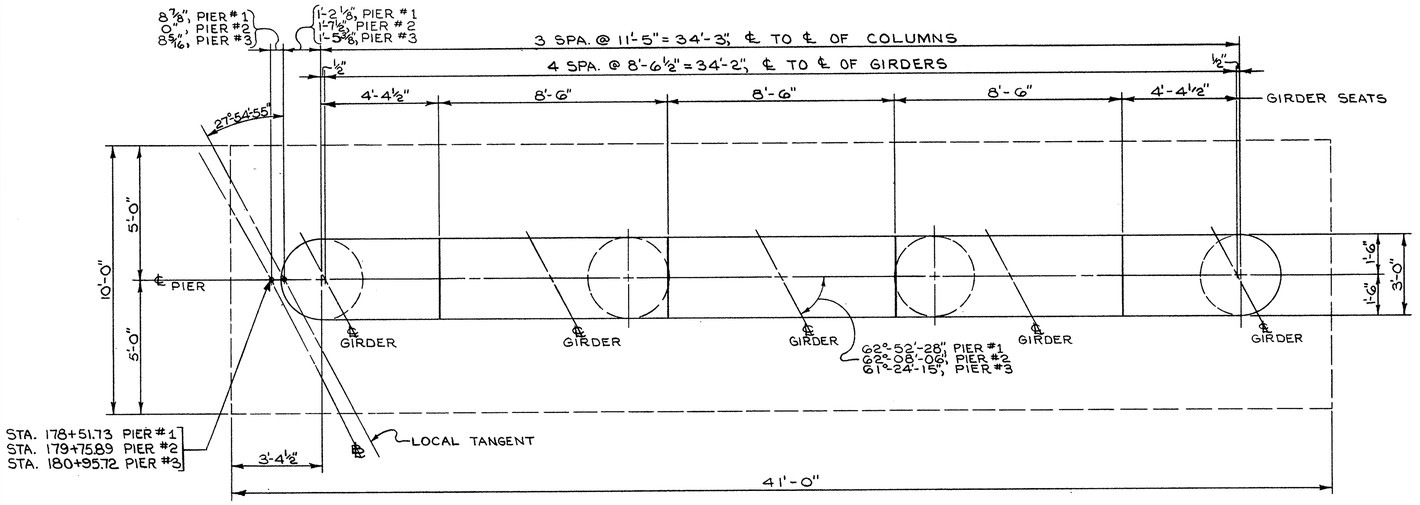
BRIDGE NO. SUM-271-0656
I-271 UNDER E.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		[illegible]	RBH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

445
510

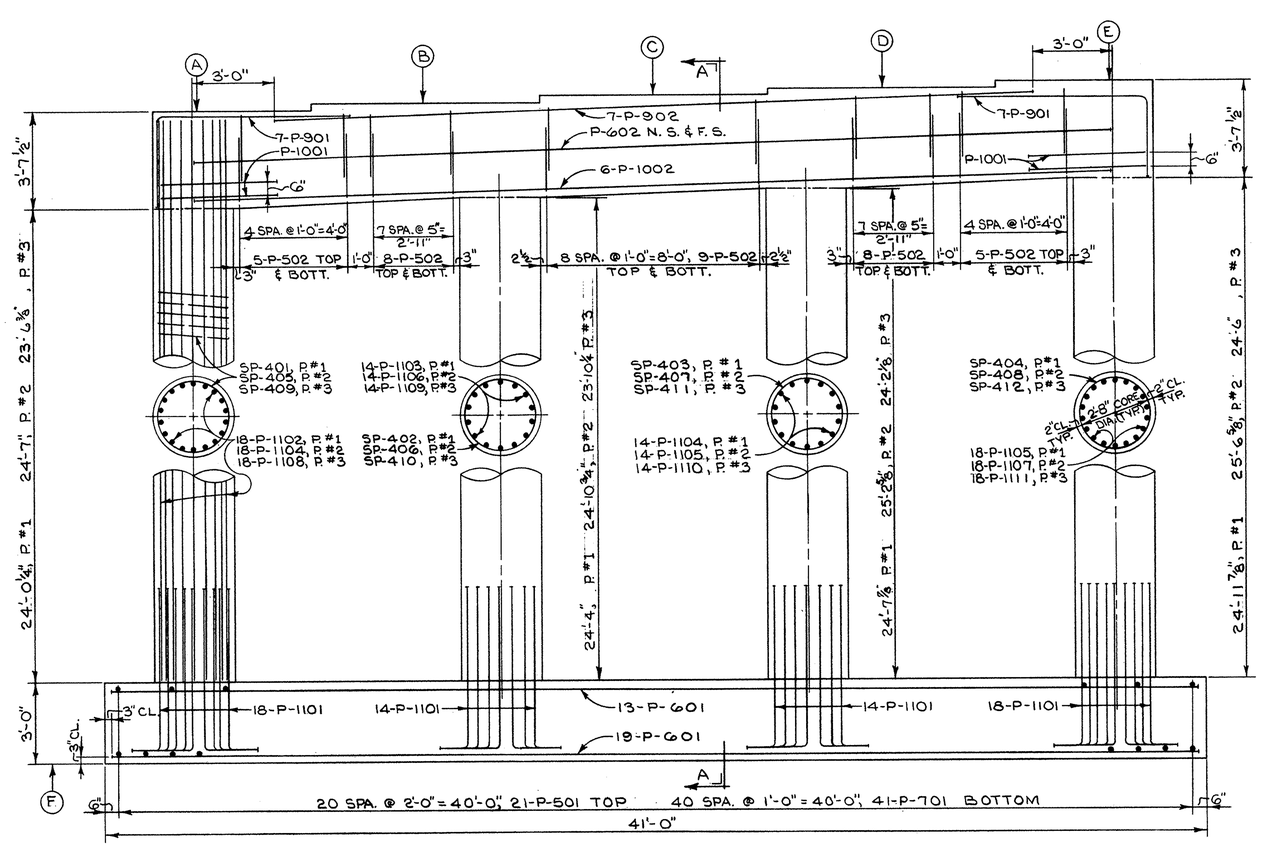
SUM 271 2.98



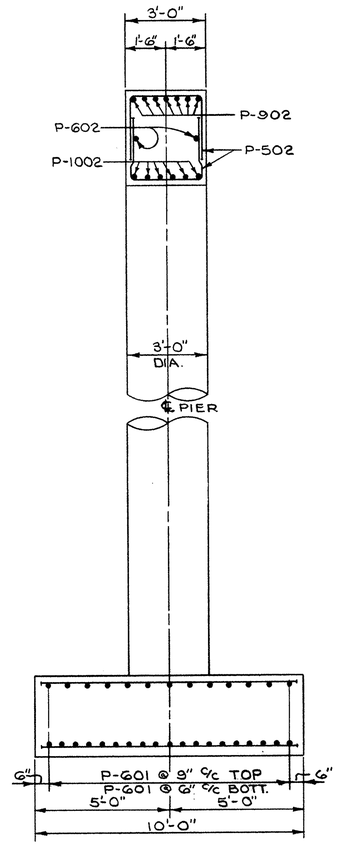
—PLAN—PIER #1—SHOWN—
—PIERS #2 & #3—SIMILAR—EXCEPT AS SHOWN OR NOTED—

—ELEVATION TABLE—

	PIER #1	PIER #2	PIER #3
A	1049.14	1045.20	1041.59
B	1049.38	1045.44	1041.83
C	1049.62	1045.69	1042.07
D	1049.86	1045.93	1042.32
E	1050.10	1046.17	1042.56
F	1018.50	1014.00	1011.44



—ELEVATION—PIER #1—SHOWN—
—PIERS #2 & #3—SIMILAR—EXECPT AS SHOWN OR NOTED—



—SECTION "A-A"—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

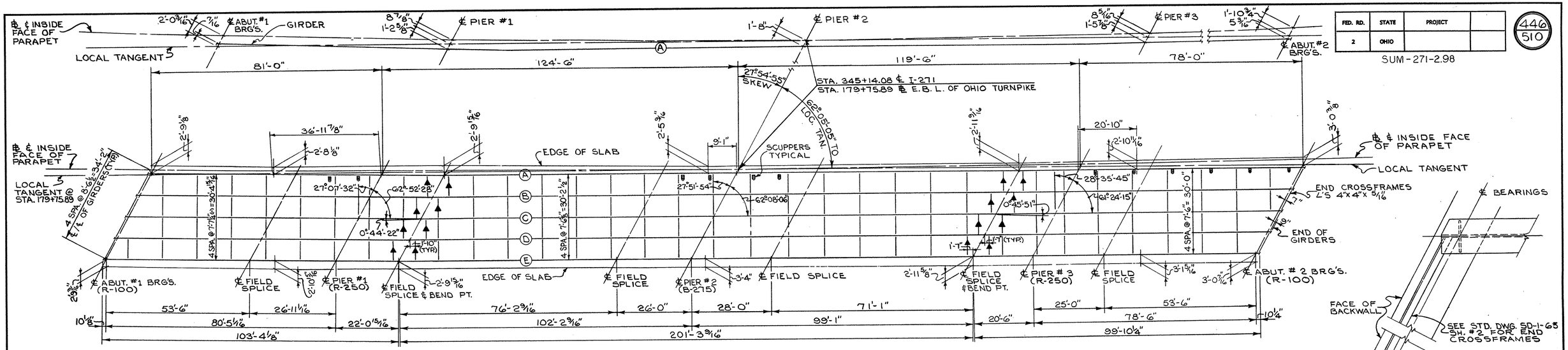
BRIDGE NO. SUM-271-0656
I-271 UNDER E.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			EDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

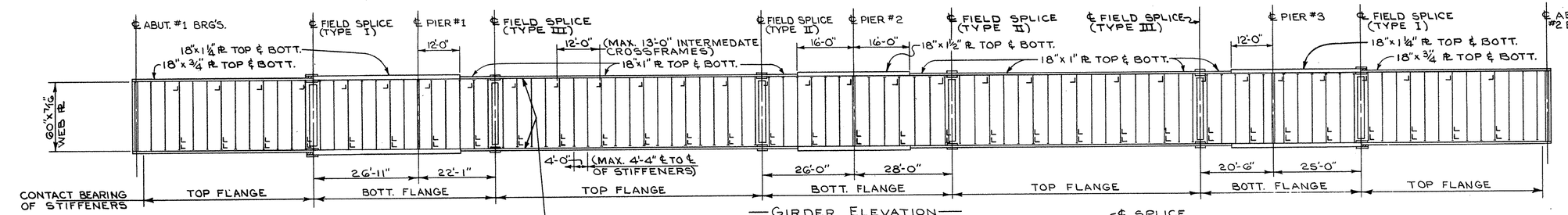
446/510

SUM-271-2.98



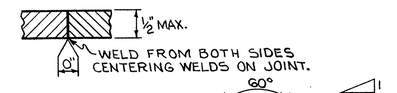
—FRAMING PLAN—

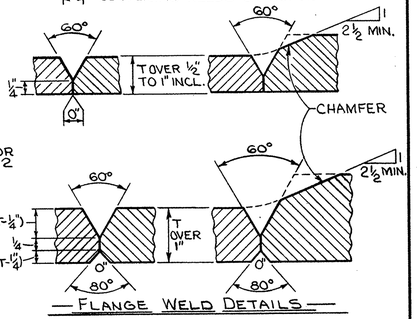
▲—SEE SH. #447 FOR DETAILS OF CROSSFRAMES



—GIRDER ELEVATION—

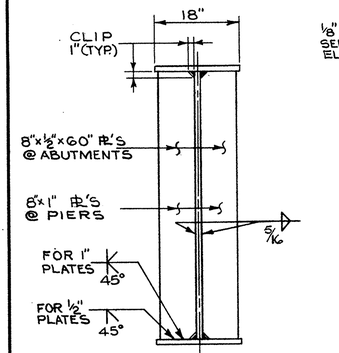
—ABUTMENT BEARING—
—STIFFENER DETAIL—



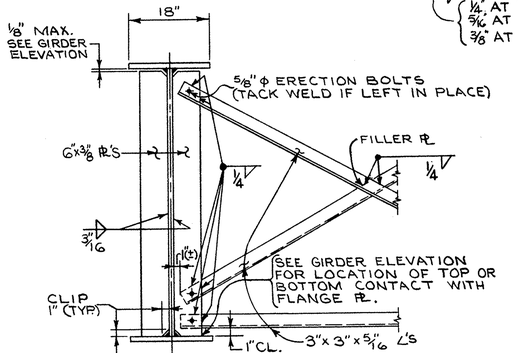


—FLANGE WELD DETAILS—

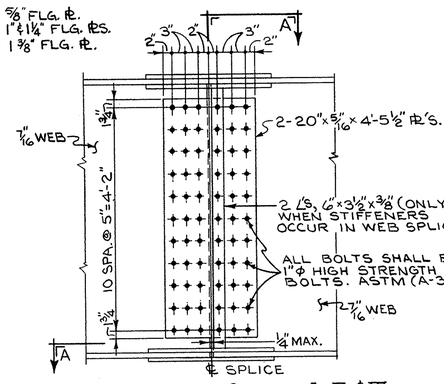
ALL OF THE ABOVE FULL PENETRATION WELDS SHALL BE BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE. BUTT WELDS ON GIRDER FLANGE PLATES SHALL BE GROUND FLUSH, THE FINISH GRINDING BEING PARALLEL TO THE DIRECTION OF STRESS.



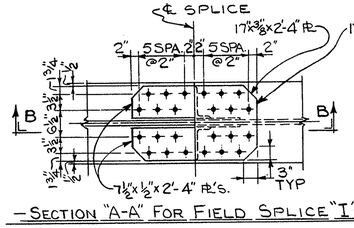
—BEARING STIFFENERS AT ABUTMENTS & PIERS—



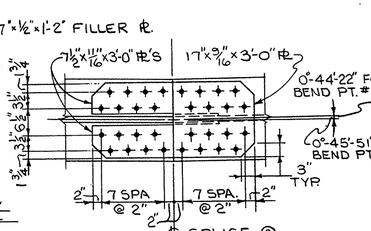
—INTERMEDIATE CROSS-FRAME ℄ STIFFENER DETAIL—



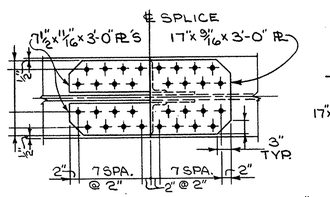
—ELEVATION FIELD SPLICE I, II, & III—



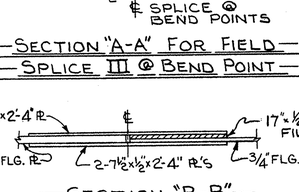
—SECTION "A-A" FOR FIELD SPLICE "I"—



—SECTION "A-A" FOR FIELD SPLICE III @ BEND POINT—



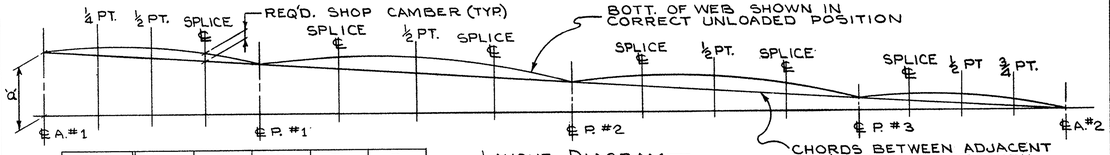
—SECTION "A-A" FOR FIELD SPLICE "II"—



—SECTION "B-B"—

—DEFLECTION AND CAMBER—

SPANS	SPAN Nº 1			SPAN Nº 2			SPAN Nº 3			SPAN Nº 4		
LOCATION	¼ POINT	½ POINT	SPLICE POINT	SPLICE POINT	½ POINT	SPLICE POINT	SPLICE POINT	½ POINT	SPLICE POINT	SPLICE POINT	½ POINT	¾ POINT
DEFLECTION DUE TO WEIGHT OF STEEL	.057"	.053"	.024"	.123"	.292"	.138"	.098"	.220"	.096"	.022"	.053"	.053"
DEFLECTION DUE TO REMAINING DEAD LOAD	.189"	.176"	.080"	.410"	.975"	.460"	.325"	.737"	.320"	.075"	.174"	.177"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0	0	0	0	0	0	0	0	0	0	0	0
REQUIRED SHOP CAMBER	¼"	¼"	⅛"	½"	1¼"	⅝"	7/16"	15/16"	7/16"	⅛"	¼"	¼"



—LAYOUT DIAGRAM—

GIRDER	A	B	C	D	E
'a'	12'-5 3/4"	12'-5 3/4"	12'-5 5/8"	12'-5 5/8"	12'-5 1/2"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN & DETAILS

BRIDGE NO. SUM-271-0656

I-271 UNDER E.B.L. OF OHIO TURNPIKE

SUMMIT COUNTY

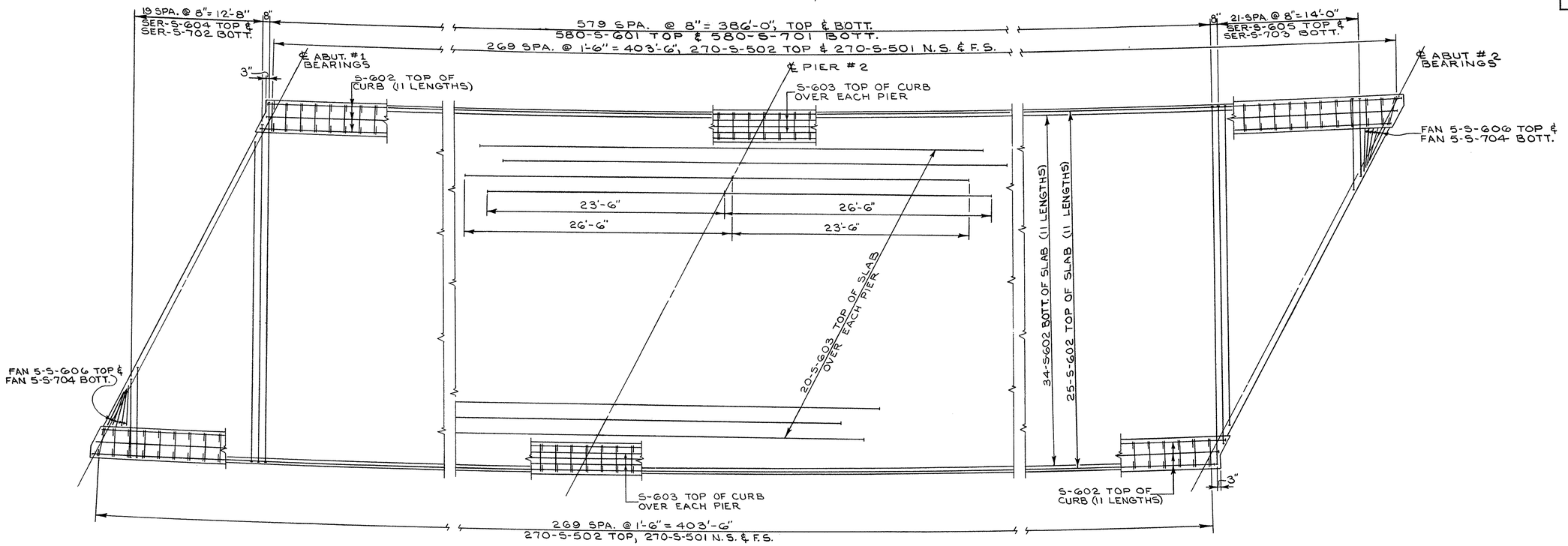
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RDH	4-22-66	

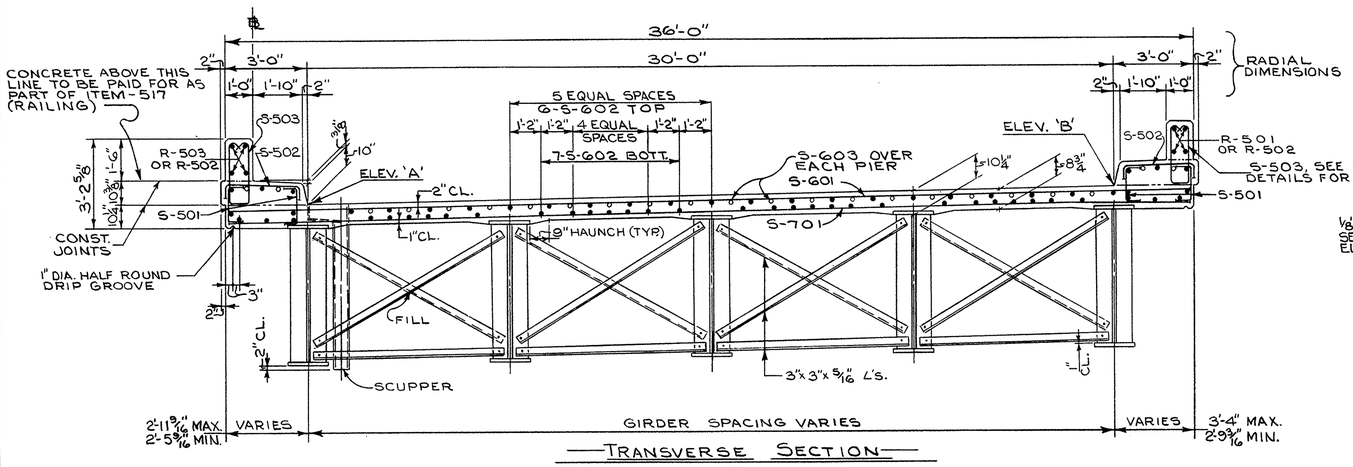
FED. RD.	STATE	PROJECT	
2	OHIO		

447
510

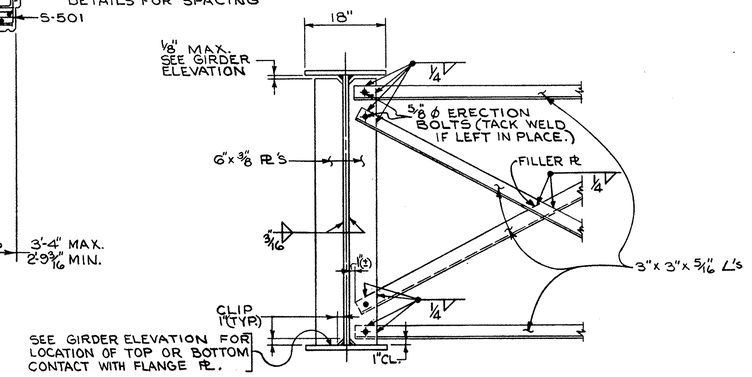
SUM-271-2.98



—SLAB REINFORCING PLAN—



—TRANSVERSE SECTION—



—CROSS-FRAME DETAIL @ BEND POINTS—
—SHOWN BY ▲ IN FRAMING PLAN—

STATION	PROFILE GRADE	ELEV. A *	ELEV. B *
177+75	1059.01	1058.97	1059.45
178+00	1058.23	1058.20	1058.67
+25	1057.46	1057.42	1057.88
+50	1056.68	1056.63	1057.12
+75	1055.91	1055.90	1056.39
179+00	1055.13	1055.16	1055.63
+25	1054.36	1054.38	1054.83
+50	1053.58	1053.57	1054.01
+75	1052.81	1052.76	1053.24
180+00	1052.03	1052.01	1052.50
+25	1051.26	1051.27	1051.74
+50	1050.48	1050.49	1050.94
+75	1049.71	1049.69	1050.13
181+00	1048.93	1048.88	1049.36
+25	1048.16	1048.12	1048.60
181+50	1047.38	1047.35	1047.81

*ELEVATION TOP OF SLAB BEFORE CONCRETE IS IN PLACE.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SLAB DETAILS

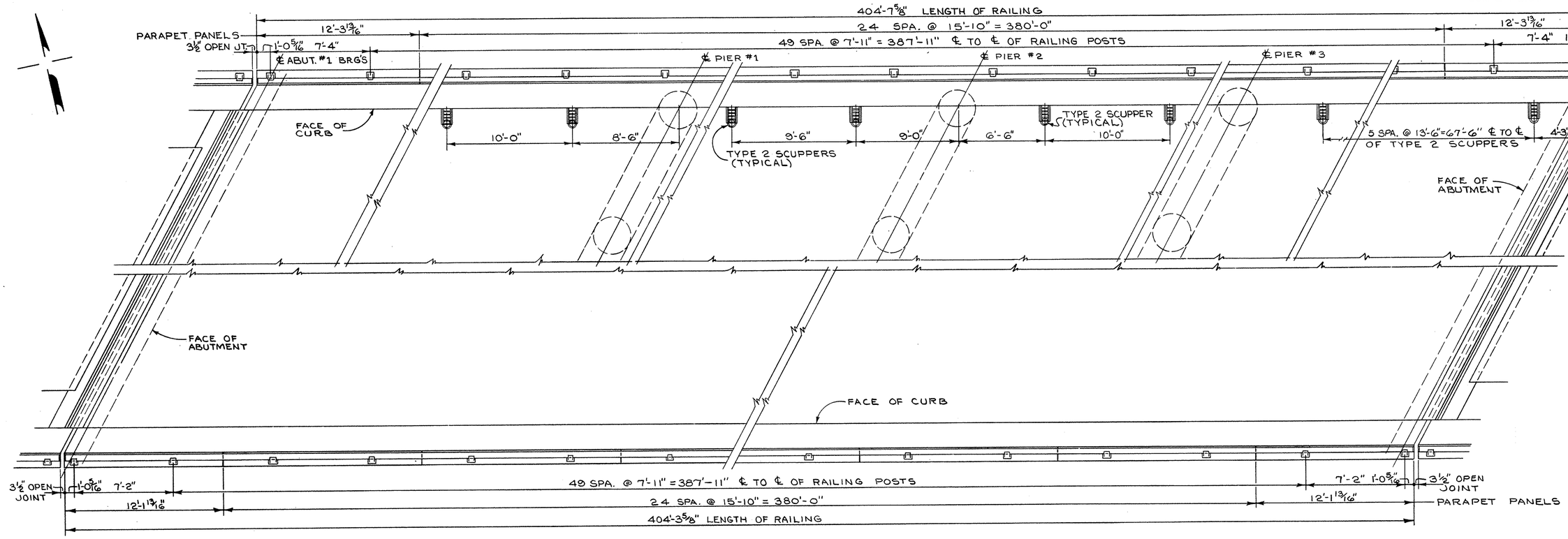
BRIDGE NO. SUM-271-0656
I-271 UNDER E. B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RDH	4-22-66	

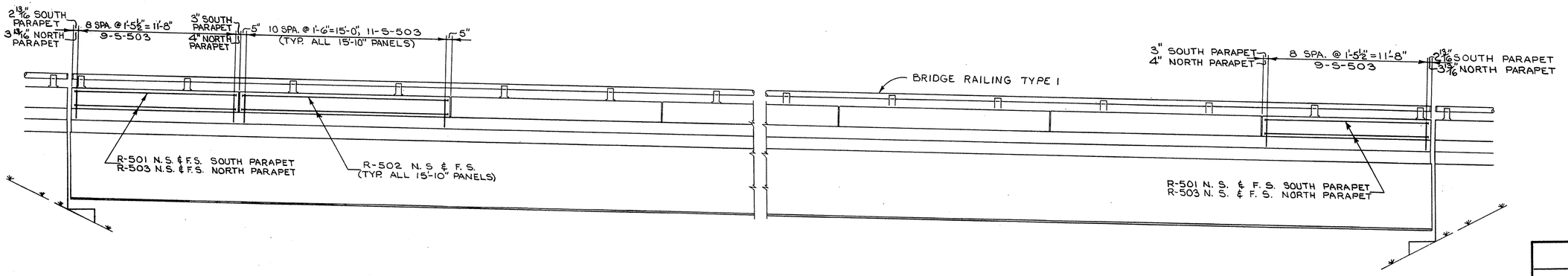
FED. RD.	STATE	PROJECT	
2	OHIO		

448
510

SUM-271-2.98



—PARTIAL DECK PLAN—



—ELEVATION—SOUTH PARAPET SHOWN—
—NORTH PARAPET SIMILAR—EXCEPT WHERE NOTED—

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE NO. SUM-271-0656
I-271 UNDER E. B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			BHH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

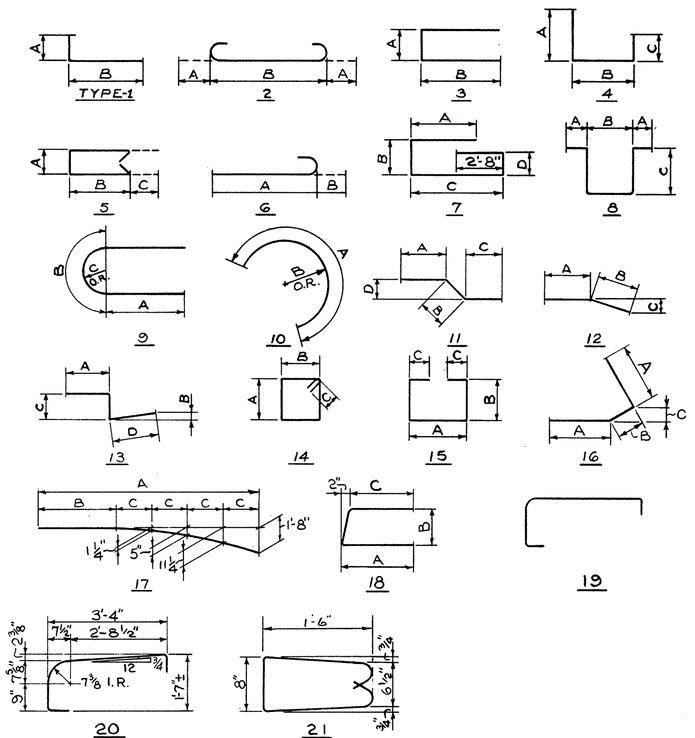
449
510

SUM-271-2.98

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
ABUTMENT #1 & #2									
A-501	15	9'-5"	1	1'-0"	8'-6"				147
A-502	14	8'-11"	1	1'-0"	8'-0"				130
A-503	100	21'-1"	ST.						2,199
A-504	52	6'-8"	3	3'-5"	1'-3"				362
A-505	2	30'-10"	ST.						64
A-506	4	6'-0"	ST.						25
A-507	14	9'-1"	1	1'-0"	8'-2"				133
A-508	15	9'-7"	1	1'-0"	8'-8"				150
A-509	4	15'-1"	ST.						63
A-510	4	12'-7"	ST.						52
A-511	4	13'-3"	ST.						55
A-512	4	10'-9"	ST.						45
SERIES OF A-513	2 SETS OF 4 BARS	13'-5" TO 17'-1"	ST.					1'-2"	127
SERIES OF A-514	1 SET OF 4 BARS	11'-2" TO 14'-8"	ST.					1'-2"	54
SERIES OF A-515	1 SET OF 4 BARS	7'-8" TO 11'-2"	ST.					1'-2"	39
A-516	56	7'-0"	ST.						409
A-517	4	21'-3"	ST.						89
A-518	2	18'-8"	ST.						39
A-519	2	15'-4"	ST.						32
A-520	2	5'-10"	ST.						12
A-521	2	4'-3"	ST.						9
A-522	20	3'-6"	ST.						73
A-523	2	5'-4"	ST.						11
A-524	2	3'-8"	ST						8
A-525	4	2'-9"	3	1'-4"	10"				11
A-526	3	13'-9"	ST.						43
A-527	2	22'-1"	17	22'-	8'-0"	3'-6"			46
A-528	4	18'-6"	ST.						77
A-529	2	17'-11"	17	17'-10"	3'-10"	3'-6"			37
A-530	55	5'-7"	5	8"	2'-2"	5"			320
A-531	4	13'-6"	ST.						56
A-532	29	3'-3"	3	1'-4"	2'-1"				98
A-533	8	11'-6"	ST.						96
SERIES OF A-534	2 SETS OF 3 = 6 BARS	11'-8" TO 8'-2"	ST.					1'-3"	65
SERIES OF A-535	1 SET OF 3 BARS	9'-2" TO 11'-10"	ST.					1'-4"	33
SERIES OF A-536	1 SET OF 3 BARS	6'-0" TO 8'-8"	ST.					1'-4"	23
A-537	26	6'-2"	ST.						167
A-538	4	4'-10"	ST.						20
A-539	27	5'-1"	18	2'-3"	1'-4"	2'-1"			143
A-540	8	19'-6"	ST.						163
A-541	2	20'-6"	17	20'-5"	6'-5"	3'-6"			43
A-542	7	17'-1"	ST.						125
A-543	2	16'-2"	17	16'-1"	2'-1"	3'-6"			34
A-544	22	4'-6"	ST.						103
A-545	8	4'-6"	12	2'-3"	2'-3"	1'-1"			38
A-546	20	4'-5"	16	2'-0"	8"	4"			92
A-547	12	3'-11"	1	2'-0"	2'-0"				49
A-548	4	8'-0"	ST.						33
A-549	4	2'-11"	18	1'-0"	1'-4"	10"			12
A-550	8	3'-9"	3	1'-4"	1'-4"				31
A-551	8	3'-11"	18	1'-6"	1'-4"	1'-4"			33
A-601	14	13'-10"	1	5'-5"	8'-6"				291
A-602	12	13'-4"	1	5'-5"	8'-0"				240
A-603	16	22'-6"	ST.						541
A-604	22	19'-2"	3	1'-5"	9'-0"				633
A-605	54	21'-0"	7	7'-6"	1'-5"	9'-0"	11"		1,703
A-606	13	13'-6"	1	5'-5"	8'-2"				264
A-607	13	14'-0"	1	5'-5"	8'-8"				273
A-608	2	17'-10"	ST.						54
A-609	10	24'-11"	3	1'-2"	12'-0"				374
A-610	4	16'-2"	ST.						97
A-611	18	22'-5"	3	1'-2"	10'-9"				606
A-612	2	14'-2"	ST.						43
A-613	6	24'-3"	3	1'-2"	11'-8"				219
A-614	2	4'-6"	12	2'-3"	2'-3"	1'-1¾"			14
A-615	2	4'-10"	16	2'-0"	1'-0"	6"			15
ABUTMENT #1 & #2 TOTAL = 11,685 LBS.									

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
PIERS #1, #2 & #3									
P-501	63	9'-6"	ST.						624
P-502	210	7'-11"	3	2'-8"	2'-8"				1,734
P-601	96	40'-6"	ST.						5,840
P-602	6	34'-3"	ST.						309
P-701	123	9'-6"	ST.						2,388
P-901	42	10'-1"	1	3'-2"	7'-2"				1,440
P-902	21	28'-3"	ST.						2,017
P-1001	12	9'-10"	9	3'-2"	3'-6"	1'-2⅛"			508
P-1002	18	34'-3"	ST.						2,653
P-1101	192	6'-11"	1	1'-0"	6'-2½"				7,056
P-1102	18	27'-5"	ST.						2,622
P-1103	14	27'-8"	ST						2,058
P-1104	32	27'-11"	ST.						4,746
P-1105	32	28'-5"	ST.						4,831
P-1106	14	28'-3"	ST.						2,101
P-1107	18	29'-0"	ST.						2,773
P-1108	18	27'-6"	ST.						2,562
P-1109	14	27'-3"	ST.						2,037
P-1110	14	27'-6"	ST.						2,046
P-1111	18	27'-10"	ST.						2,662
SPIRALS = 5351									
PIERS #1, #2 & #3 TOTAL = 58,368 LBS.									
SLAB									
S-501	1,080	2'-4"	3	1'-4"	7½"				2,625
S-502	540	3'-6"	3	2'-6"	7½"				1,971
S-503	564	5'-7"	5	8"	2'-2"	5"			3,284
S-601	580	35'-8"	ST.						31,071
S-602	715	38'-6"	ST.						41,346
S-603	72	50'-0"	ST.						5,407
SERIES OF S-604	1 SET OF 20 BARS	8'-0" TO 33'-4"	ST.					1'-4"	620
SERIES OF S-605	1 SET OF 22 BARS	7'-11½" TO 33'-4"	ST.					1'-2½"	682
S-606	10	7'-0"	ST.						105
S-701	580	35'-8"	ST.						42,284
SERIES OF S-702	1 SET OF 20 BARS	8'-0" TO 33'-4"	ST.					1'-4"	845
SERIES OF S-703	1 SET OF 22 BARS	7'-11½" TO 33'-4"	ST.					1'-2½"	928
S-704	10	7'-0"	ST.						143
SLAB TOTAL = 131,311 LBS.									

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
RAILING ⊗									
R-501	8	11'-9"	ST.						
R-502	192	15'-6"	ST.						
R-503	8	11'-11"	ST.						
R-504	8	5'-4"	20						
R-505	12	4'-2"	21						
R-506	4	21'-0"	ST.						
R-507	4	18'-8"	ST.						
R-508	4	19'-4"	ST.						
R-509	4	16'-11"	ST.						
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	1	5'-6"	ST.						
RE-601	5	6'-0"	ST.						
RE-701	3	6'-3"	ST.						
RE-801	–	6'-6"	ST.						
RE-901	1	6'-10"	ST.						
RE-1001	1	7'-3"	ST.						
RE-1101	2	7'-9"	ST.						



SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D.	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	1	2'-8"	24'-0¼"	4½"	67	370
SP-402	1	2'-8"	24'-4"	4½"	68	376
SP-403	1	2'-8"	24'-7⅞"	4½"	69	381
SP-404	1	2'-8"	24'-11⅞"	4½"	70	386
SP-405	1	2'-8"	24'-7"	4½"	69	381
SP-406	1	2'-8"	24'-10¾"	4½"	70	387
SP-407	1	2'-8"	25'-2⅝"	4½"	70	387
SP-408	1	2'-8"	25'-6⅝"	4½"	71	391
SP-409	1	2'-8"	23'-6⅜"	4½"	66	365
SP-410	1	2'-8"	23'-10¼"	4½"	67	370
SP-411	1	2'-8"	24'-2⅛"	4½"	68	376
SP-412	1	2'-8"	24'-6"	4½"	69	381
SPACERS	48					800
TOTAL SPIRALS						5351

GRAND TOTAL 201,364 LBS.

REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.

ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPROX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

⊗RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

REINFORCING SCHEDULE

BRIDGE NO. SUM-271-0656

I-271 UNDER E. B. L. OF OHIO TURNPIKE

SUMMIT COUNTY

STA. 345+14.08

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

450
510

SUM-271-298

CURVE DATA

℄ W.B.L. OF TURNPIKE

Δ = 3°-27'-33.9"
D_c = 0°-29'-39.1"
R = 11593.66'
T = 350.11'
L = 700.00'
P.O.C. STA. 176+00.00
P.O.C. STA. 183+00.00

℄ I-271

Δ = 68°-21'-00"
D_c = 3°-00'-00"
R = 1909.86'
L_c = 1711.67'
T_s = 1380.49
L_s = 400.00'
θ_s = 6°00'-00"
LT. = 266.82'
ST = 133.47'
P.I. STA. 350+57.87

℄ RAMP "K"

S.C. STA. 343+00.00
D_c = 3°09'-00"
R = 1818.91'
P.O.C. STA. 91' RT. ℄ STA. 346+00.00

℄ RAMP "L"

P.O.C. STA. 340+77.38
91' LT. ℄ S.C. STA. 340+77.38
D_c = 2°52'-00"
R = 1998.69'
L_c = 416.26
T = 208.88'
PT. STA. 344+93.64
T.S. STA. 348+12.53

NOSE: 45' LT. ℄ W.B.L. OF TURNPIKE STA. 178+24.34 AND 23' RT. S.C. STA. 342+61.50 ℄ RAMP "L"
D_c = 2°00'-00"
R = 2864.79'
P.O.C. STA. 367+13.90
℄ RAMP "L" 41' LT. STA. 182+30.37 ℄ W.B.L. OF TURNPIKE.

PROPOSED STRUCTURE

TYPE: LT. STRUCTURE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

RT. STRUCTURE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW: 34°-03'-01" TO LOC. TAN.
SPANS: LT. STR.: 66'-0"-100'-3"-60'-0" % BEGS.
RT. STR.: 63'-0"-90'-9"-54'-0" % BEGS.
ROADWAY: 40'-0" F/F PARAPET LT. & RT. STR.
LOAD FREQUENCY: CF=2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
WEARING SURFACE: 1" MONOLITHIC.
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: 3°-00'-00" CURVE RT.
SUPERELEVATION: .083 3/4" FT. RAMP "K" .054" FT.
SLOPE PROTECTION: CRUSHED AGGREGATE

P.V.I. STA. 352+00
EL. 1001.02
-3.00%
-3.64%
600' V.C.

TRAFFIC: 15,080 - 1975 - A.D.T. I-271
10,295 - 1975 - A.D.T. - W.B.L. TURNPIKE.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

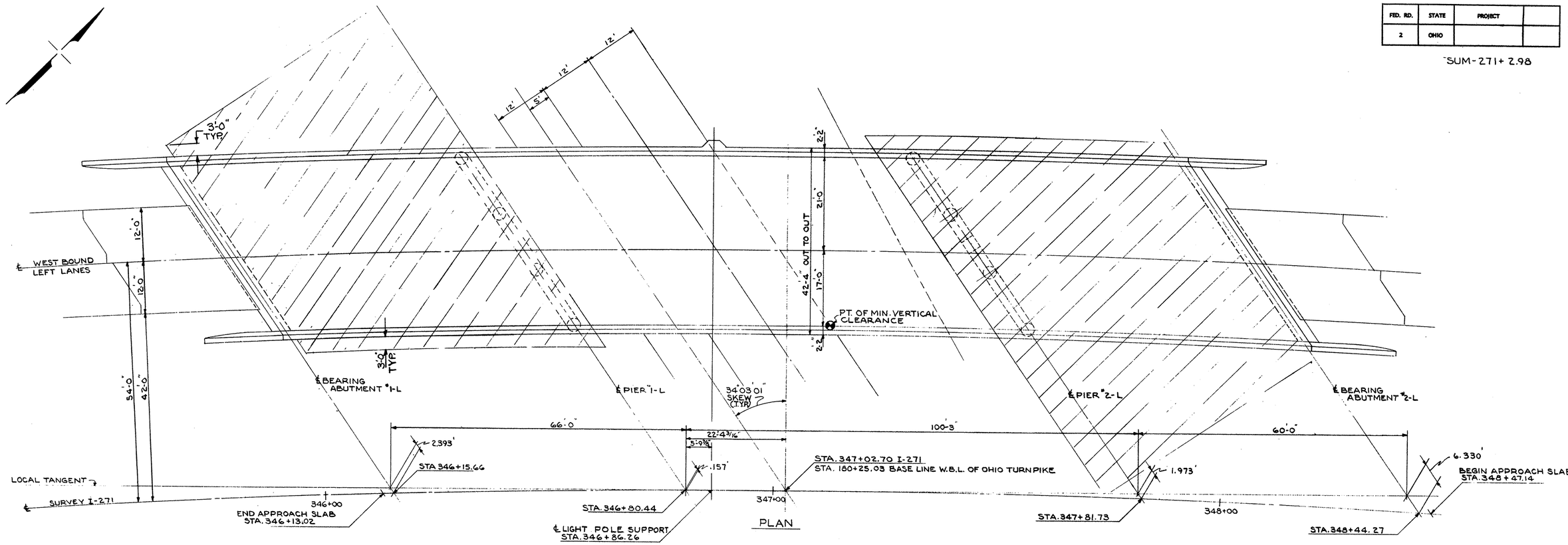
BRIDGE NO. SUM-271-0659 LT. & RT.
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.02 TO STA. 348+47.14 LT. STR.
STA. 346+15.94 TO STA. 348+30.81 RT. STR.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	ROSE JK		H.G.H.	RBH	4-22-66	

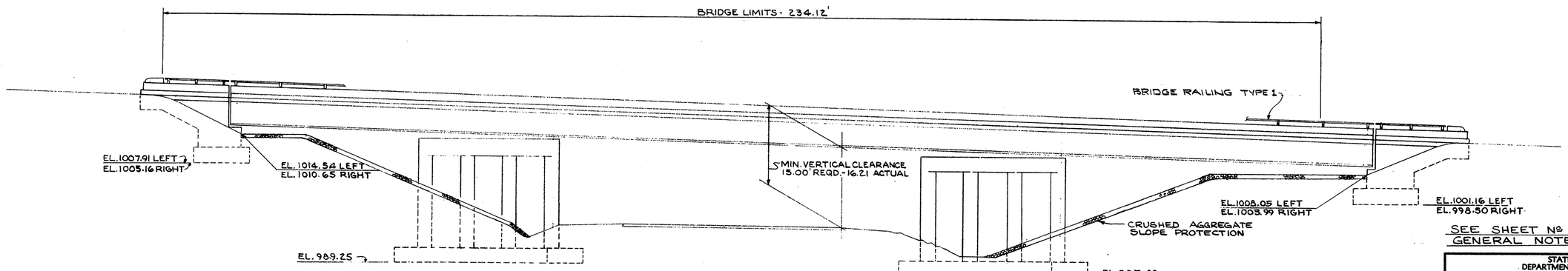
FED. RD.	STATE	PROJECT	
2	OHIO		

451
510

"SUM-271+ 2.98



PLAN



ELEVATION

(Participation: 89.5% Normal, 10.5% State)

SEE SHEET Nº 368 FOR GENERAL NOTES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S	PIERS	GEN
503	608	CU.YD.	UNCLASSIFIED EXCAVATION		354	254	
509	131,381	LBS	REINFORCING STEEL	87,009	13,790	30,582	
511	286	CU.YD.	CLASS 'C' CONC. SUPERSTRUCTURE	286			
511	163	CU.YD.	CLASS 'E' CONC. ABUT'S ABOVE FOOTINGS		163		
511	76	CU.YD.	CLASS 'C' CONC. PIERS ABOVE FOOTINGS			76	
511	143	CU.YD.	CLASS 'E' CONC. PIER & ABUT. FOOTINGS		65	78	
512	21	LIN.FT.	WATERPROOFING, PREMOLDED SEALING STRIP		21		
513	307,302	LBS	STRUCTURAL STEEL	307,302			
514	307,302	LBS	FIELD PAINTING OF STRUCTURAL STEEL	307,302			
517	538.28	LIN.FT.	BRIDGE RAILING TYPE I	454.78	83.50		
518	57	CU.YD.	POROUS BACKFILL		57		
518	8	EACH	SCUPPERS (INCLUDING SUPPORTS)	8			
518	270	LIN.FT.	6" HELICAL C.M.P. 707.06 NON-PERF.		270		
518	86	LIN.FT.	6" PERF. HELICAL C.M.P. 707.06 INC. SPECIALS		86		
601	926	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		926		
625			LIGHTING QUANTITIES SEE SHEET 346				
808	286	Units	WATER REDUCING SET RETARDING ADMIXTURE	286			
825	1,266	SQ.YDS.	CONCRETE SURFACE TREATMENT				1266
828	92	LIN.FT.	JOINT SEALER (end dam)	92			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

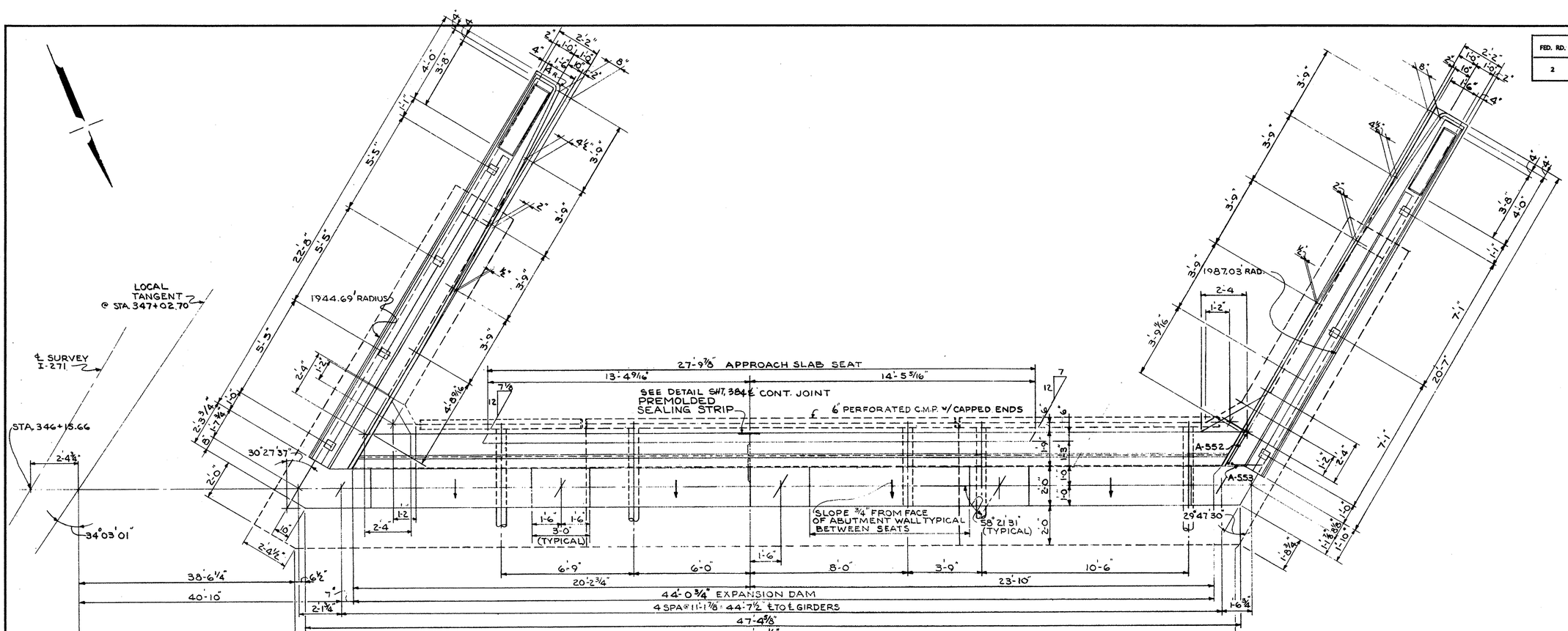
LEFT STRUCTURE
BRIDGE Nº SUM-271-0658 LEFT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.02 TO STA. 348+47.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BHC	JLH		H.G.H.	BHA	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

452
510

SUM-271-2.98



SEE SHEET Nº 453 FOR SECTIONS 'E-E' & 'F-F'

* INDICATES ELEVATION GIVEN TO HEEL OF ANGLE

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº1

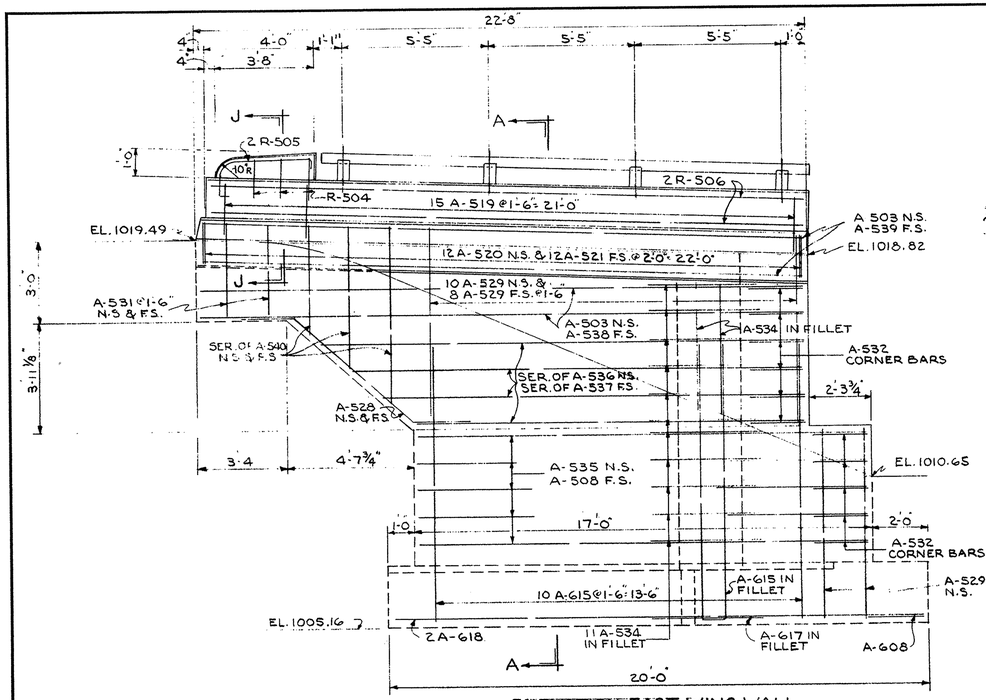
LEFT STRUCTURE
BRIDGE Nº SUM.-271-0658 LEFT
I-271 OVER W.B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.02 TO STA. 348+47.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WMC	JLH		H.G.H.	RDH	4-22-66	

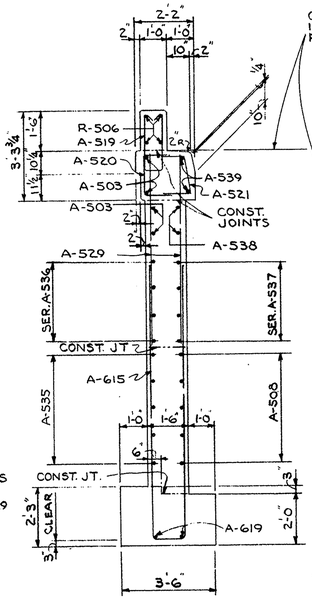
FED. RD.	STATE	PROJECT	
2	OHIO		

453
510

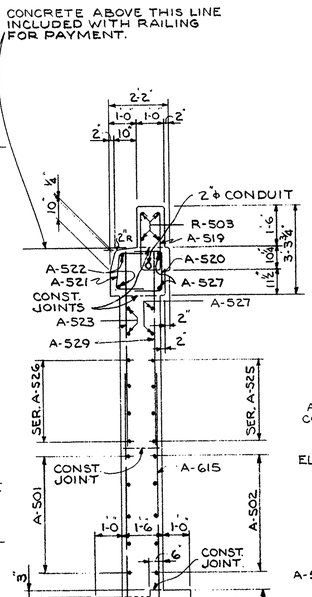
SUM.-271- 2.98



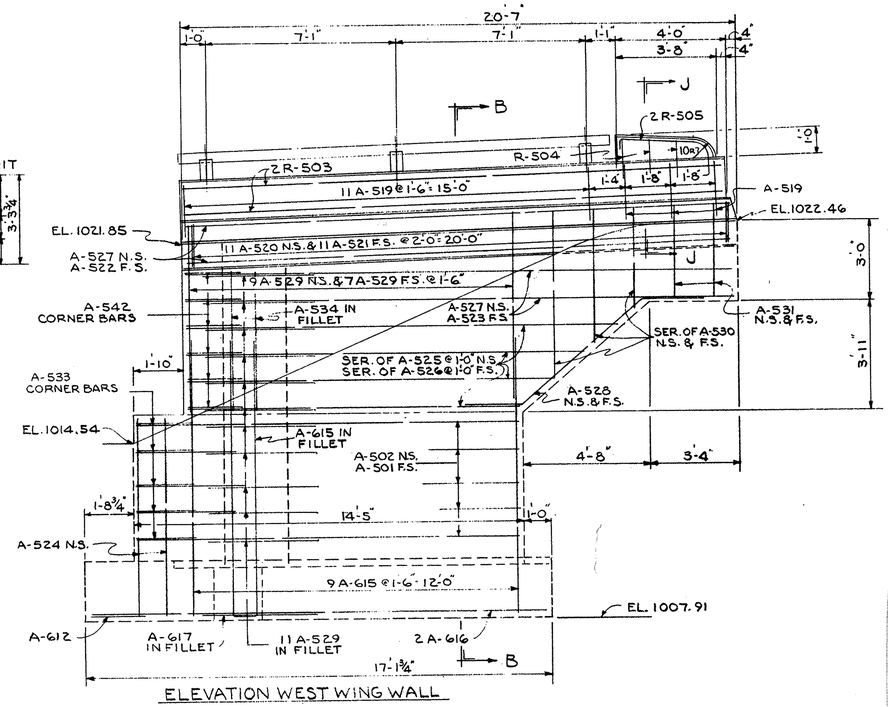
ELEVATION EAST WING WALL



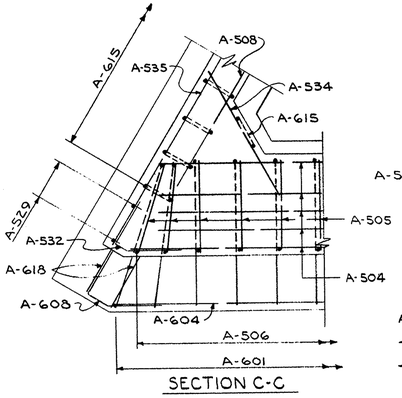
SECTION A-A



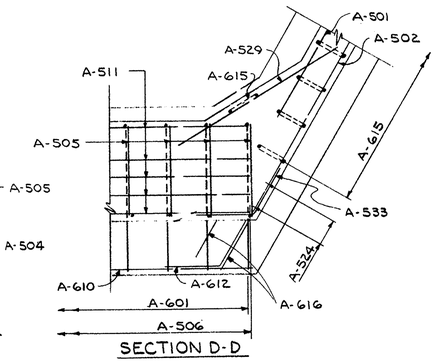
SECTION B-B



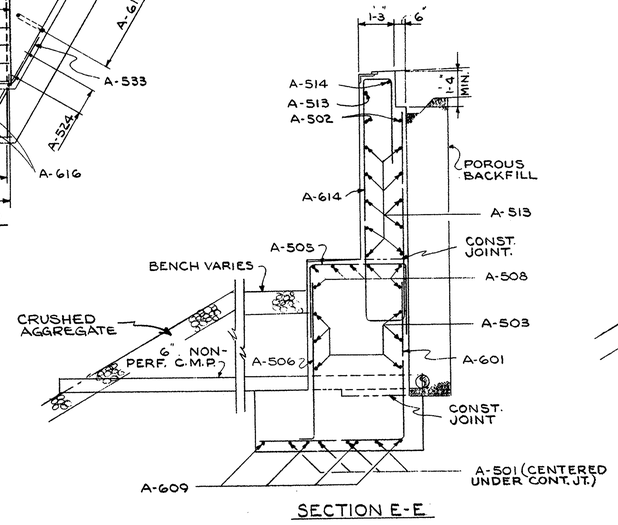
ELEVATION WEST WING WALL



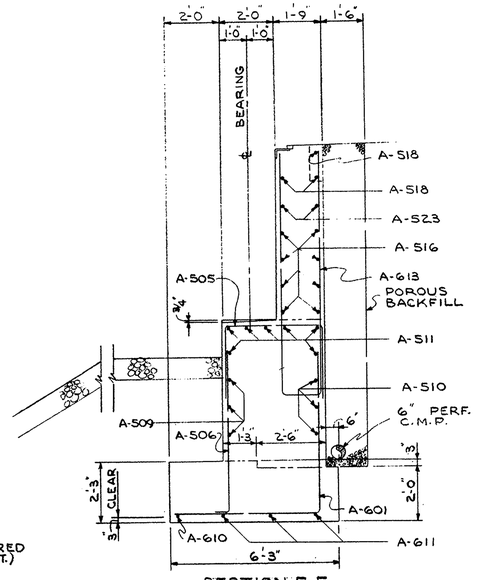
SECTION C-C



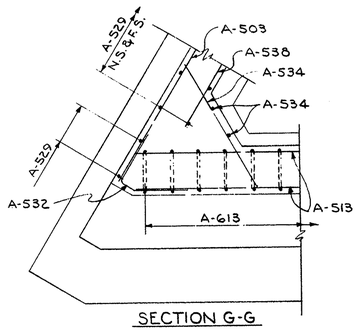
SECTION D-D



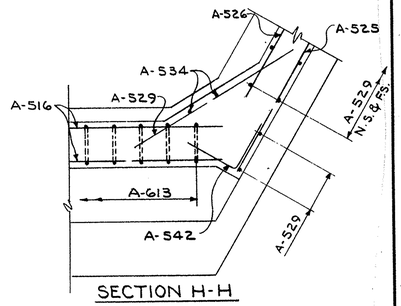
SECTION E-E



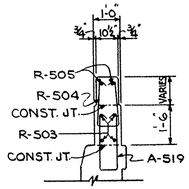
SECTION F-F



SECTION G-G



SECTION H-H



SECTION J-J

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº1 DETAILS

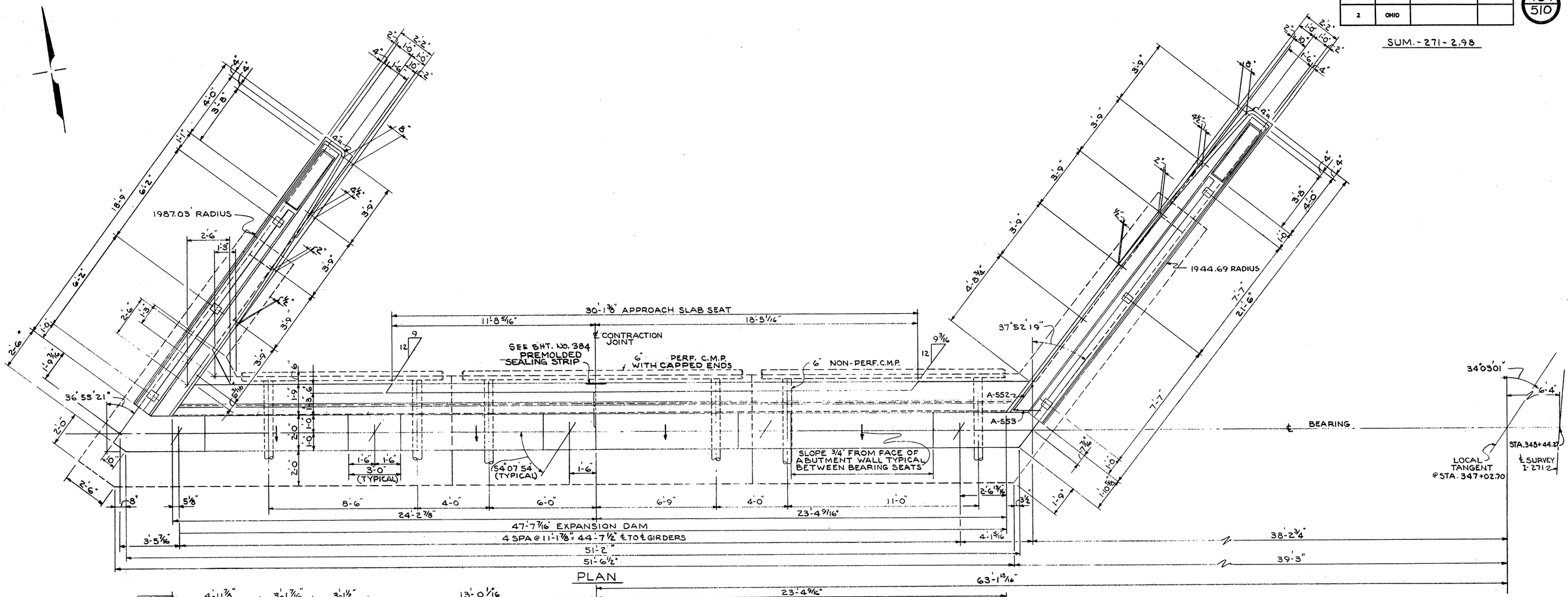
LEFT STRUCTURE
BRIDGE Nº SUM-271-0658 LEFT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.02 TO STA. 348+47.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JLH		H.G.H.	RDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

454
510

SUM.-271-2.98



SEE SHEET No. 455 FOR SECTIONS 'G-G' & 'H-H'

* INDICATES ELEVATION GIVEN TO HEEL OF ANGLE

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT No. 2

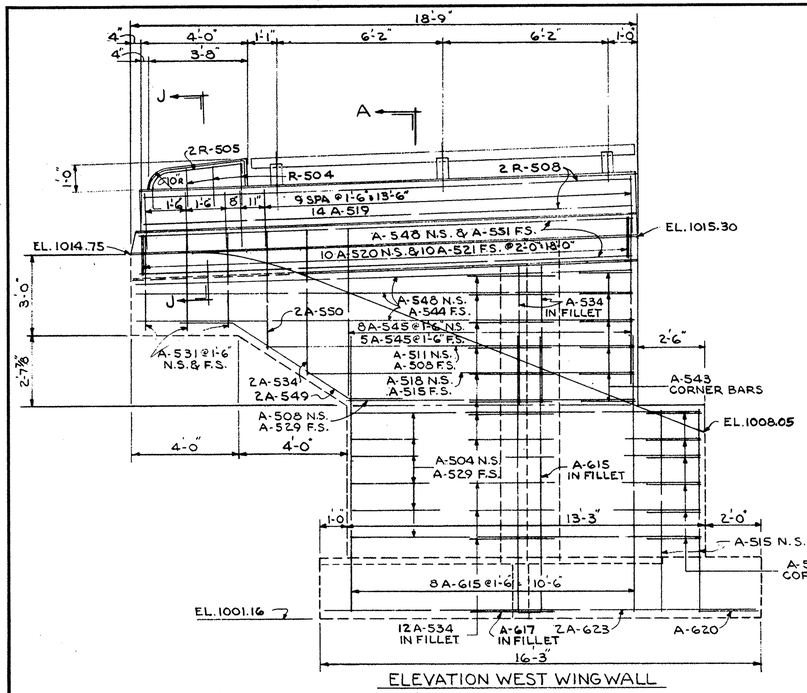
LEFT STRUCTURE
BRIDGE No. SUM.-271-0658 LEFT
I-271 OVER W.B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.02 TO STA. 348+47.14

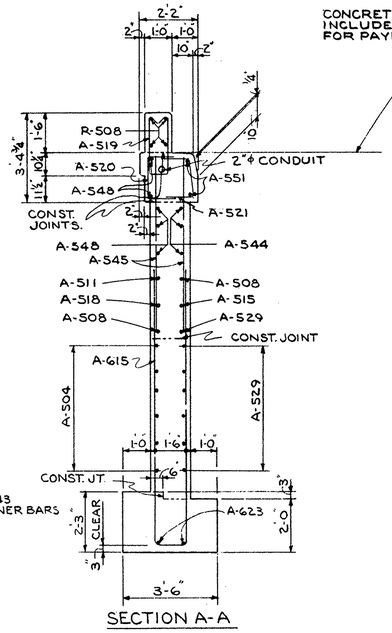
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JLH		H.G.H.	[illegible]	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

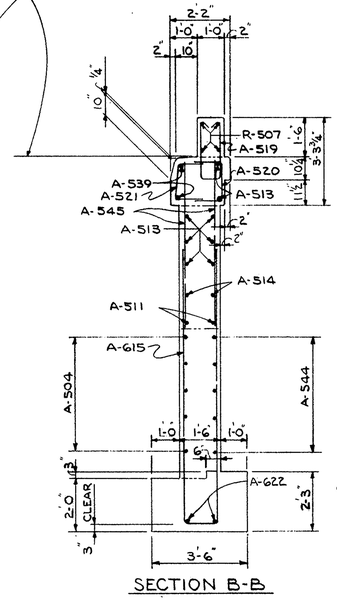
455
510

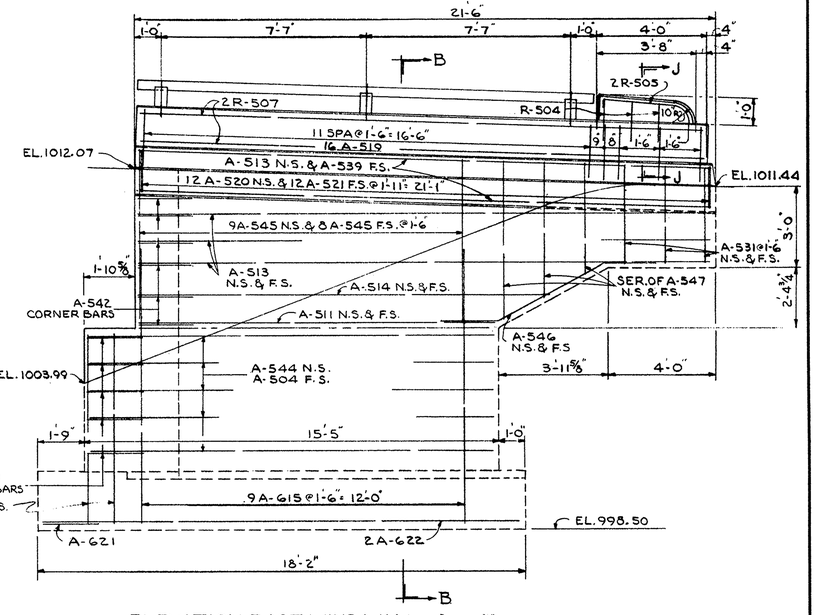
SUM.-271-2.98

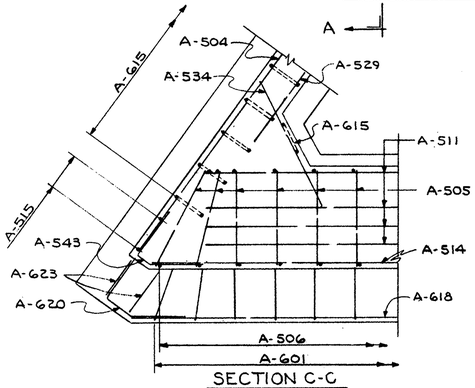


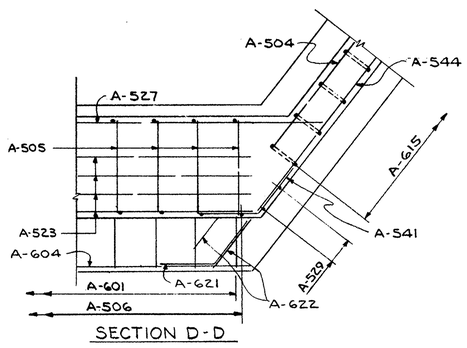


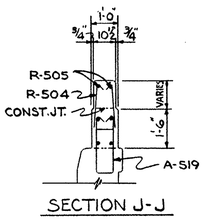
CONCRETE ABOVE THIS LINE INCLUDED WITH RAILING FOR PAYMENT.

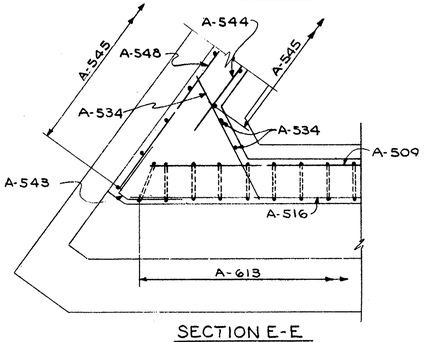


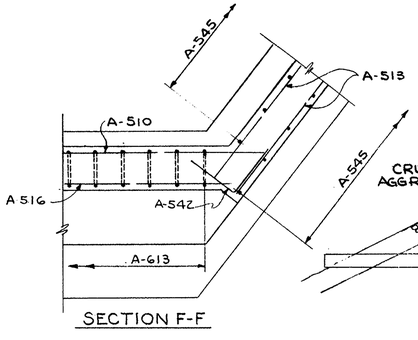


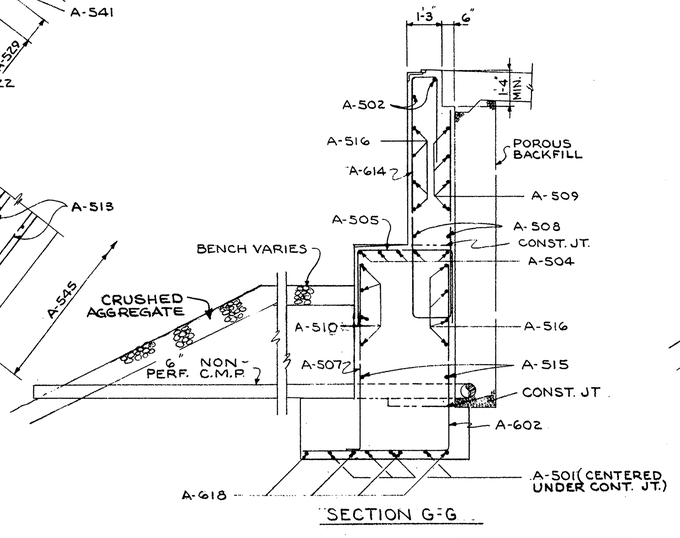


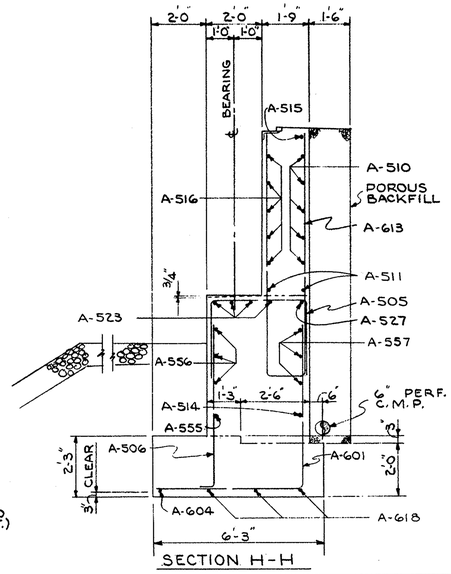












STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº2 DETAILS

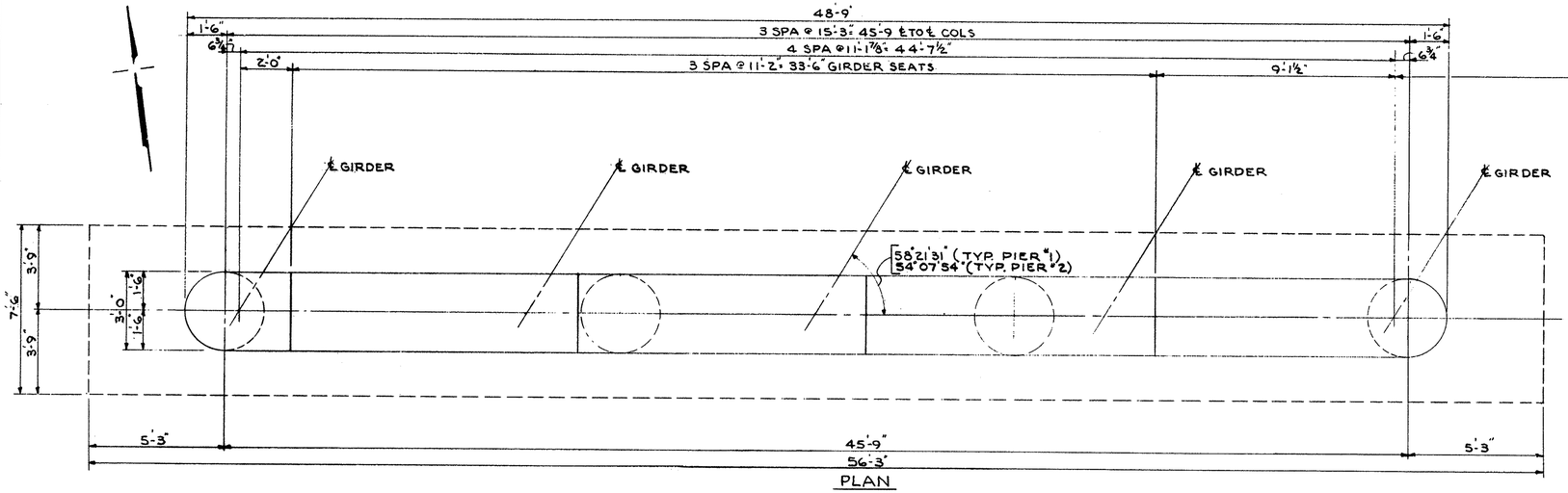
LEFT STRUCTURE
BRIDGE Nº SUM-271-0658 LEFT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.02 TO STA. 348+47.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JLH		H.G.H.	[illegible]	4-22-66	

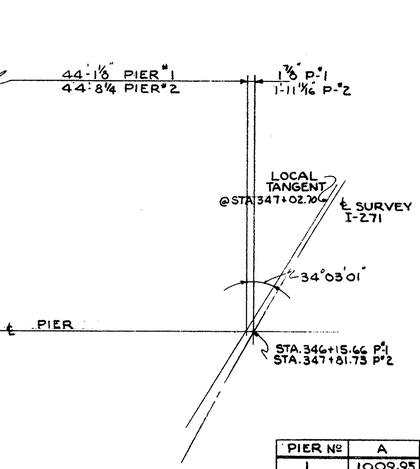
FED. RD.	STATE	PROJECT	
	OHIO		

456
510

SUM-271-2.98

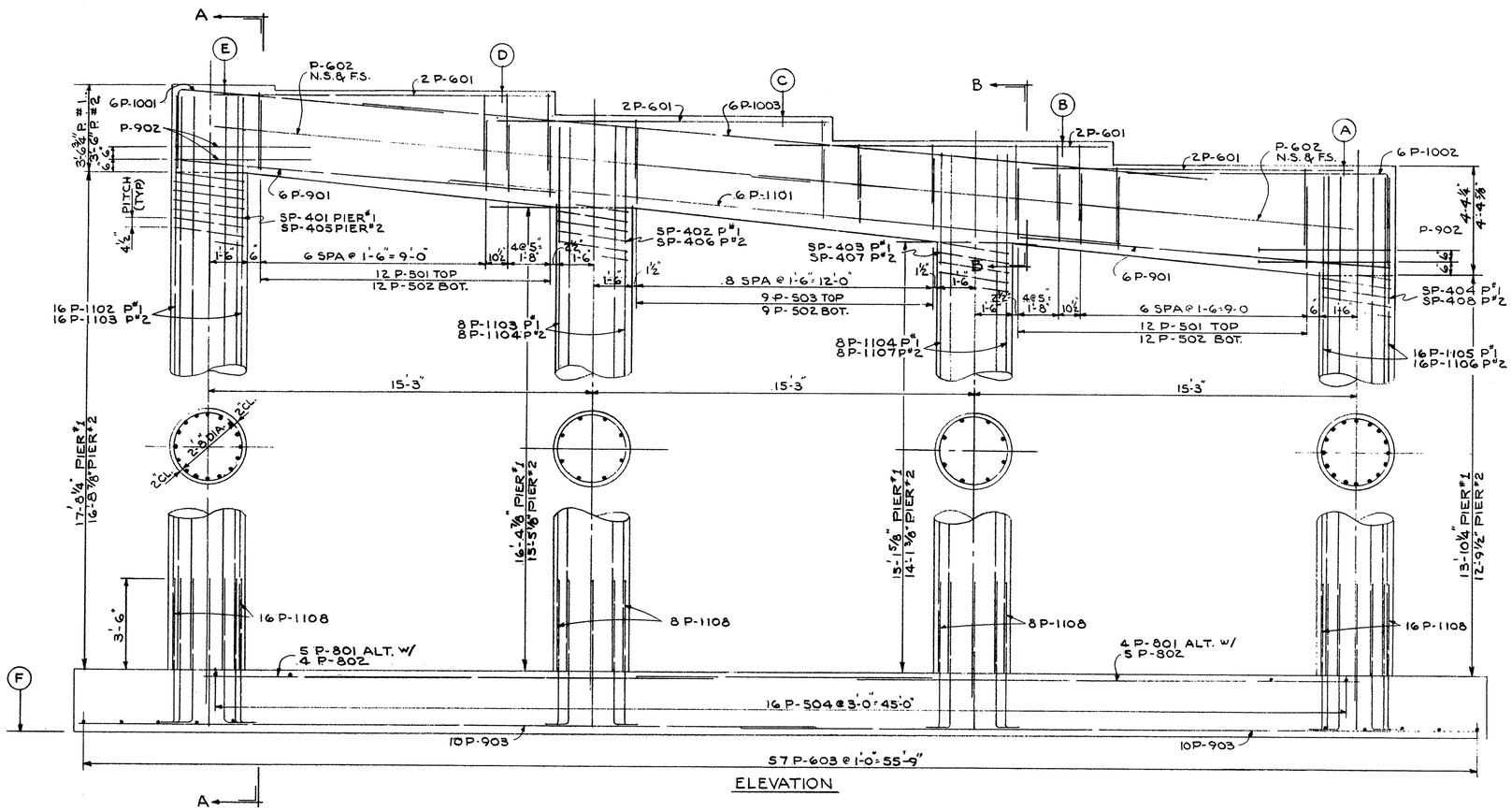


PLAN

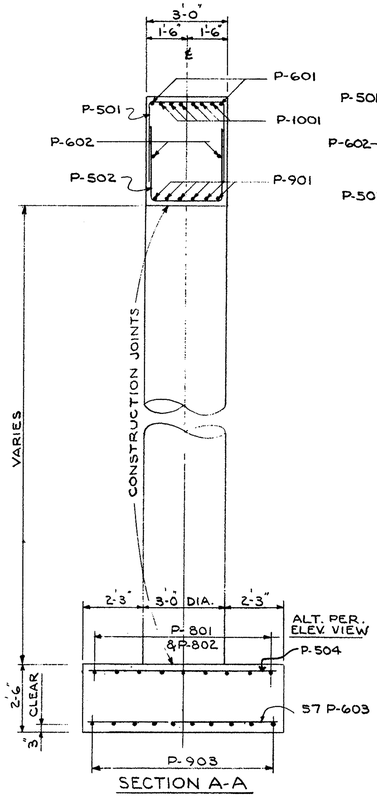


ELEVATIONS

PIER №	A	B	C	D	E	F
1	1009.95	1010.92	1011.88	1012.81	1013.00	989.25
2	1007.01	1007.99	1008.97	1009.91	1010.11	987.40



ELEVATION



SECTION B-B

SECTION A-A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIERS

LEFT STRUCTURE
BRIDGE № SUM-271-0658 LEFT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.02 TO STA. 348+47.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JLH		H.G.H.	RDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

457/510

SUM.-271-2.98

⊗ NOTE: DIMENSIONS GIVEN FOR SCUPPERS ARE FROM CURB TO ℄ OF GIRDER.

PLAN

GIRDER ELEVATION (TYPICAL)

GIRDER A SHOWN
GIRDER B, C, D, & E SIMILAR

* As fabricated, 18" x 1½" flange plates were extended to field splices, eliminating shop splices between 1½" and 1¼" plates.

SECTION A-A

FIELD SPLICE DETAIL

ABUTMENT BEARING STIFFENER DETAIL

INTERMEDIATE CROSSFRAME AND STIFFENER DETAIL

BEARING STIFFENER DETAIL

— DETAIL "A" —

WELD BOTH SIDES CENTERING WELDS ON JOINT

FLANGE WELD DETAIL

ALL FULL PENETRATION WELDS SHALL BE BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE. BUTT WELDS ON GIRDER FLANGE PLATES SHALL BE GROUND FLUSH. THE FINISH GRINDING BEING PARALLEL TO THE DIRECTION OF STRESS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN

LEFT STRUCTURE
BRIDGE No SUM-271-0658 LEFT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA 346+13.02 TO STA. 348+47.14

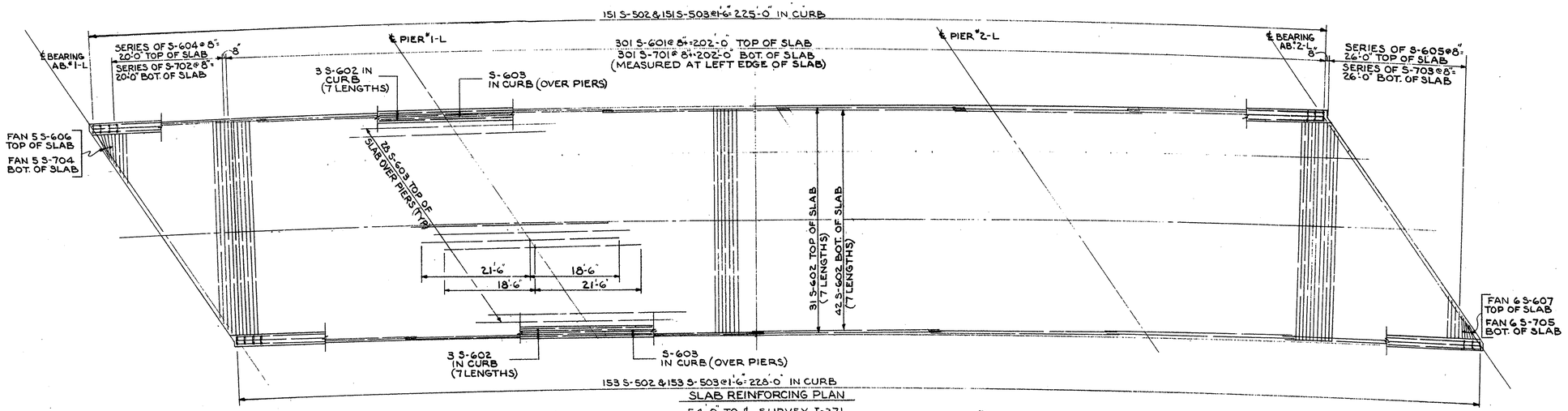
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BHC	JLH		H.G.H.	EDH	4-22-66	10-5-67

8-16-73 Revised As-Built

FED. RD.	STATE	PROJECT	
2	OHIO		

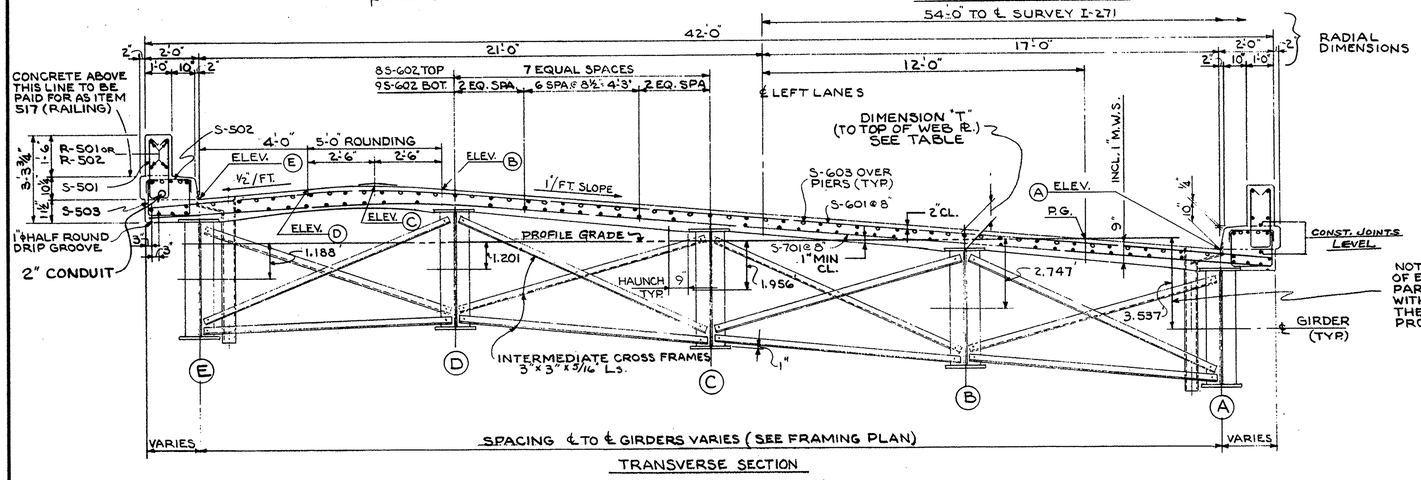
458
510

SUM-271-2.98



SLAB REINFORCING PLAN

54'-0" TO ℄ SURVEY I-271



TRANSVERSE SECTION

NOTE: ENTIRE LENGTH OF EACH GIRDER LINE IS PARALLEL TO PROFILE GRADE, WITH ℄s OF GIRDERS AT THESE DISTANCES BELOW PROFILE GRADE.

SLAB THICKNESS (DIMENSION 'T')

LOCATION	'T'	GIRDER	MAXIMUM 'T'	MAXIMUM LOCATION	MINIMUM 'T'	MINIMUM LOCATION
ABUT. #1	11 7/16"	A	12⅞"	ABUT. #2	11¼"	STA. 346+22.40
ABUT. #1	11 9/16"	B	12¼"	ABUT. #2	11¼"	STA. 346+22.40
ABUT. #2	11 11/16"	C	11⅞"	ABUT. #1	11⅛"	STA. 346+22.40
ABUT. #2	11 ½"	D	12¼"	ABUT. #1	11¼"	STA. 347+63.30
ABUT. #2	11 15/16"	E	12⅛"	STA. 347+63.30	11¼"	ABUT #1

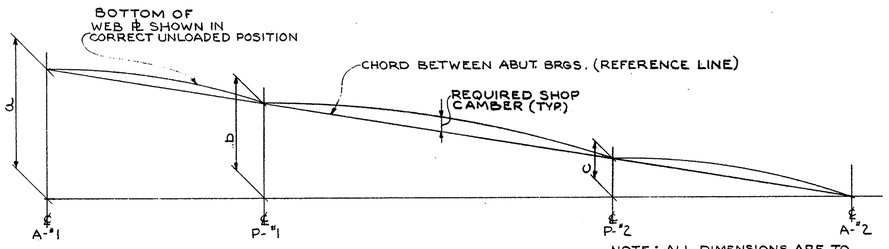
ELEVATION TABLE

STATION	A	P.G.	B	C	D	E
345+75	~	1019.77	~	~	1021.87	1021.71
346+00	1018.61	1019.02	1021.03	1021.16	1021.13	1020.96
346+25	1017.86	1018.27	1020.28	1020.41	1020.38	1020.21
346+50	1017.10	1017.52	1019.54	1019.66	1019.63	1019.48
346+75	1016.37	1016.77	1018.81	1018.94	1018.90	1018.75
347+00	1015.64	1016.02	1018.05	1018.18	1018.15	1017.99
347+25	1014.87	1015.27	1017.28	1017.41	1017.39	1017.21
347+50	1014.10	1014.52	1016.52	1016.65	1016.62	1016.46
347+75	1013.35	1013.77	1015.77	1015.90	1015.87	1015.71
348+00	1012.62	1013.02	~	~	~	~

ELEV. AT P.G. IS THE FINISHED GRADE ELEVATION.
ELEV. A, B, C, D, & E ARE ELEVATIONS BEFORE CONCRETE IS POURED.

DEFLECTION & CAMBER

LOCATION	SPAN №1						SPAN №2										SPAN №3					
	¼ PT.		½ PT.		¾ PT.		SPLICE		¼ PT.		½ PT.		¾ PT.		SPLICE		¼ PT.		½ PT.		¾ PT.	
GIRDER	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.
DEFLECT. DUE TO WEIGHT OF STEEL	.024"	.024"	.016"	.016"	-.012"	-.012"	.065"	.065"	.079"	.079"	.135"	.135"	.083"	.083"	.061"	.061"	-.018"	-.018"	-.001"	-.001"	.009"	.009"
DEFLECT. DUE TO REMAINS D.L.	.090"	.101"	.060"	.067"	-.046"	-.052"	.220"	.270"	.301"	.339"	.515"	.580"	.315"	.355"	.210"	.260"	-.070"	-.078"	-.003"	-.003"	.035"	.039"
ADJUST. FOR VERT. CURVE	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
REQD. SHOP CAMBER.	⅛"	⅛"	1/16"	1/16"	- 1/16"	- 1/16"	5/16"	⅜"	⅜"	7/16"	5/8"	11/16"	⅜"	7/16"	¼"	⅜"	- 1/16"	- ⅛"	-0"	-0"	1/16"	1/16"



NOTE: ALL DIMENSIONS ARE TO BOTTOM OF WEB ℞.

LAYOUT DIAGRAM
(DIMENSIONS IN FEET)

GIRDER	a	b	c
A	6.635'	4.745'	1.805'
B	6.603'	4.722'	1.796'
C	6.572'	4.700'	1.788'
D	6.541'	4.678'	1.779'
E	6.511'	4.656'	1.771'

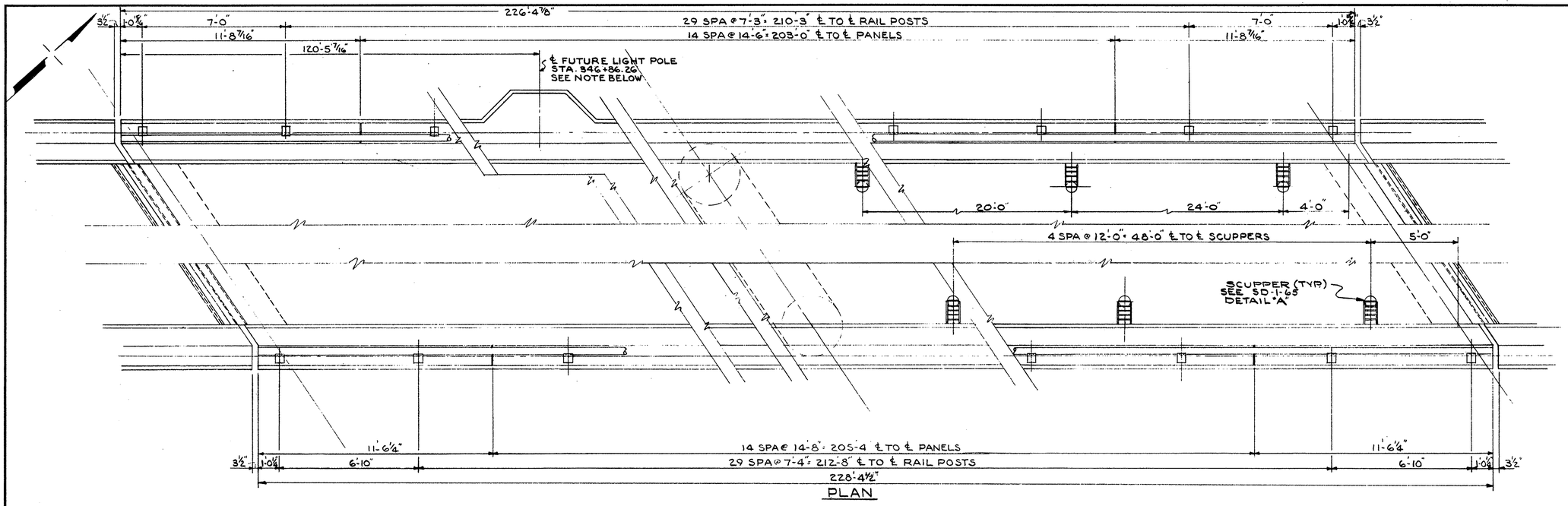
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
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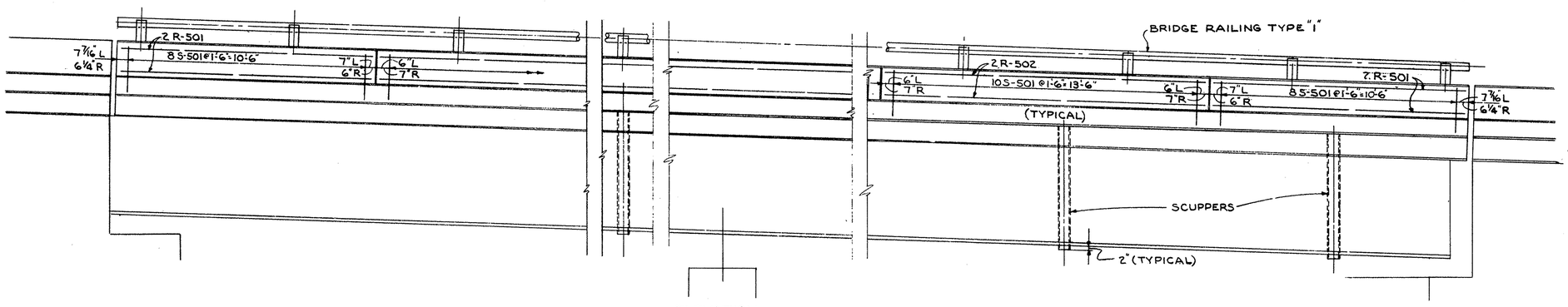
SLAB REINFORCING PLAN

LEFT STRUCTURE
BRIDGE № SUM-271-0658 LEFT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA 346+13.02 TO STA. 348+47.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WHC	JLH		H.G.H.	RDH	4-22-66	3-29-68



PLAN



ELEVATION

NOTE:
SEE RAILING & DRAINAGE DRAWING, BRIDGE Nº SUM.-271-0354, FOR LIGHT POLE SUPPORT DETAILS

FED. RD.	STATE	PROJECT	
2	OHIO		

459
510

SUM.-271-2.98

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

LEFT STRUCTURE
BRIDGE Nº SUM-271-0658 LEFT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA 346+13.02 TO STA. 348+47.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BHC	JLH		H.G.H.	RBH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

460
510

SUM-271-2.98

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
ABUTMENT #1 & #2									
A-501	15	10'-0"	ST.						156
A-502	16	14'-0"	ST.						234
A-503	10	22'-0"	ST.						230
A-504	22	12'-9"	ST.						293
A-505	67	8'-8"	3	3'-5"	2'-3"				606
A-506	44	6'-5"	1	6"	6'-0"				294
A-507	21	7'-5"	1	6"	7'-0"				162
A-508	25	10'-9"	ST.						280
A-508	7	24'-6"	ST.						179
A-510	12	26'-6"	ST.						332
A-511	19	13'-3"	ST.						263
A-512	2	7'-11"	1	6"	1'-6"				17
A-513	20	21'-0"	ST.						438
A-514	6	15'-3"	ST.						95
A-515	6	7'-8"	ST.						48
A-516	21	25'-3"	ST.						553
A-517	2	16'-0"	ST.						33
A-518	4	12'-0"	ST.						50
A-519	59	5'-7"	5	8"	2'-2"	5"			344
A-520	45	3'-2"	3	1'-5"	1'-0"				149
A-521	45	3'-0"	16	1'-0"	1'-5"	10"			141
A-522	2	20'-10"	17	20'-10"	5'-8"	3'-9"			44
A-523	10	17'-8"	ST.						184
A-524	2	7'-3"	ST.						15
SERIES OF A-525	1 SET OF 4 BARS	12'-4" TO 15'-10"	ST.					1'-2"	59
SERIES OF A-526	1 SET OF 4 BARS	9'-10" TO 13'-4"	ST.					1'-2"	48
A-527	7	20'-3"	ST.						148
A-528	4	9'-10"	11	2'-0"	6'-0"	2'-0"	3'-11"		41
A-529	56	6'-11"	ST.						404
SERIES OF A-530	2 SETS OF 3 = 6 BARS	3'-9" TO 6'-3"	ST.					1'-3"	31
A-531	20	3'-6"	ST.						73
A-532	11	4'-6"	22	2'-0"	8"	2'-0"	1'-2"		52
A-533	5	3'-11"	23	2'-0"	2'-0"	1'-2 1/4"			20
A-534	33	5'-2"	ST.						178
A-535	5	16'-8"	ST.						87
SERIES OF A-536	1 SET OF 4 BARS	14'-6" TO 18'-0"	ST.					1'-2"	68
SERIES OF A-537	1 SET OF 4 BARS	11'-6" TO 15'-0"	ST.					1'-2"	55
A-538	2	19'-0"	ST.						40
A-539	4	21'-9"	17	21'-9"	6'-7"	3'-9"			91
SERIES OF A-540	2 SETS OF 3 = 6 BARS	4'-0" TO 6'-6"	ST.					1'-3"	33
A-541	5	3'-11"	23	2'-0"	2'-0"	1'-2 3/4"			20
A-542	12	3'-11"	3	2'-0"	2'-0"				49
A-543	12	4'-7"	22	2'-0"	8"	2'-0"	1'-2 1/2"		57
A-544	7	15'-0"	ST.						110
A-545	30	6'-2"	ST.						193
A-546	2	8'-5"	11	2'-0"	4'-7"	2'-0"	2'-4"		17
SERIES OF A-547	2 SETS OF 3 = 6 BARS	4'-2" TO 6'-0"	ST.					11"	32
A-548	5	18'-5"	ST.						96
A-549	2	8'-8"	11	2'-0"	4'-10"	2'-0"	2'-8"		18
A-550	2	4'-5"	ST.						9
A-551	2	17'-8"	17	17'-8"	2'-6"	3'-9"			37
A-552	2	3'-5"	3	1'-8"	1'-0"				7
A-553	2	2'-5"	1	1'-0"	1'-6"				5
A-554	2	10'-3"	ST						21
A-555	1	14'-8"	ST						15
A-556	3	23'-8"	ST						74
A-557	3	26'-3"	ST						82
A-601	44	11'-4"	1	5'-5"	6'-0"				749
A-602	21	12'-4"	1	5'-5"	7'-0"				389
A-603	2	13'-4"	1	5'-5"	8'-0"				40
A-604	5	16'-8"	ST.						125
A-605	3	15'-8"	ST.						71
A-606	4	4'-11"	23	2'-0"	3'-0"	2'-1 1/2"			30
A-607	4	5'-2"	23	2'-0"	3'-3"	2'-3 1/2"			31
A-608	1	4'-10"	22	2'-0"	1'-0"	2'-0"	1'-2		7
A-609	4	20'-2"	ST.						121
A-610	1	12'-3"	ST.						18

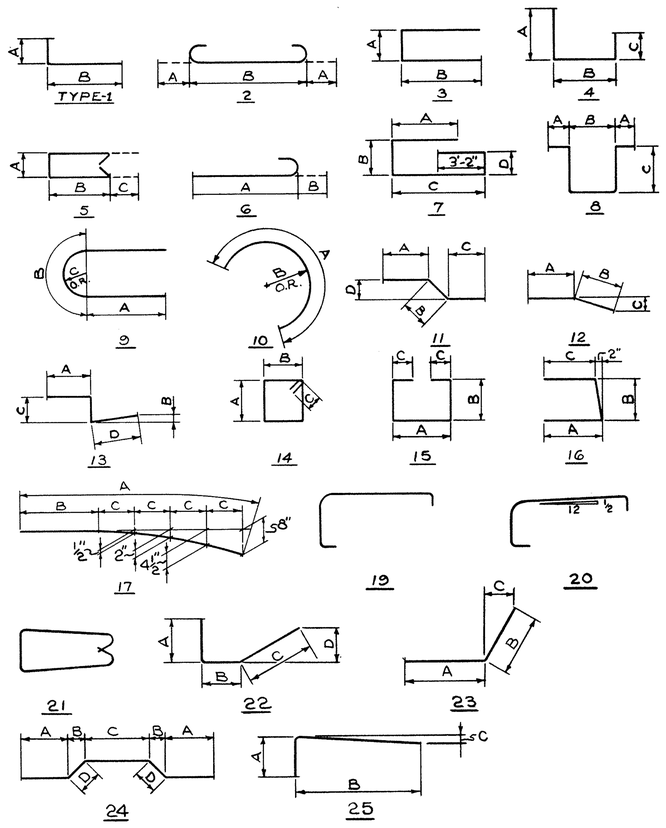
MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
ABUTMENT #1 & #2 CONT'D									
A-611	3	13'-8"	ST.						62
A-612	1	3'-11"	23	2'-0"	2'-0"	1'-2 1/4			6
A-613	38	19'-2"	3	1'-5"	9'-0"				1,094
A-614	59	21'-6"	7	7'-6"	1'-5"	9'-0"	11"		1,905
A-615	39	21'-5"	3	1'-2"	10'-3"				1,255
A-616	2	17'-4"	ST.						52
A-617	3	6'-11"	ST.						31
A-618	8	18'-4"	ST.						220
A-619	8	4'-11"	23	2'-0"	3'-0"	2'-1 1/2"			59
A-620	1	4'-10"	22	2'-0"	1'-0"	2'-0"	1'-2 1/2"		7
A-621	1	3'-11"	23	2'-0"	2'-0"	1'-2 3/4"			6
A-622	2	17'-10"	ST.						54
A-623	2	15'-11"	ST.						48
ABUTMENT #1 & #2 TOTAL = 13,790 LBS.									
SLAB									
S-501	312	5'-7"	5	8"	2'-2"	5"			1,817
S-502	304	2'-3"	3	1'-6"	6"				713
S-503	304	4'-8"	15	1'-6"	1'-4"	6"			1,480
S-521	2	15'-4"	24	3'-10"	2'-0"	2'-3"	2'-10"		32
S-601	301	41'-8"	ST.						18,838
S-602	555	34'-3"	ST.						28,448
S-603	64	40'-0"	ST.						3,845
SERIES OF S-604	1 SET OF 31 BARS	6'-0" TO 41'-0"	ST.					1'-2"	1,094
SERIES OF S-605	1 SET OF 40 BARS	5'-3" TO 41'-0"	ST.					11"	1,389
S-606	5	5'-0"	ST.						38
S-607	6	4'-3"	ST.						38
S-621	12	5'-6"	ST.						99
S-622	4	9'-11"	14	2'-10"	2'-0"	4"			60
S-701	301	41'-8"	ST.						25,635
SERIES OF S-702	1 SET OF 31 BARS	6'-0" TO 41'-0"	ST.					1'-2"	1,489
SERIES OF S-703	1 SET OF 40 BARS	5'-3" TO 41'-0"	ST.					11"	1,891
S-704	5	5'-0"	ST.						51
S-705	6	4'-3"	ST.						52
SLAB TOTAL = 87,009 LBS.									
PIERS #1 & #2									
P-501	48	8'-5"	3	2'-8"	3'-0"				421
P-502	66	7'-11"	3	2'-8"	2'-9"				545
P-503	18	7'-1"	3	2'-8"	2'-4"				133
P-504	32	7'-2"	ST.						239
P-601	16	13'-4"	ST.						320
P-602	8	23'-10"	ST.						286
P-603	114	7'-2"	ST						1227
P-801	18	29'-0"	ST.						1,394
P-802	18	19'-6"	ST.						937
P-901	24	15'-0"	ST.						1,224
P-902	8	11'-5"	9	4'-0"	3'-5"	1'-2"			311
P-903	40	29'-5"	ST.						4,001

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
P-1001	12	13'-3"	25	3'-0"	10'-6"	10"			684
P-1002	12	13'-3"	1	3'-0"	10'-6"				684
P-1003	12	33'-6"	ST.						1,730
P-1101	12	24'-6"	ST						1562
P-1102	16	20'-9"	ST						1764
P-1103	24	19'-7"	ST						2497
P-1104	16	18'-5"	ST						1566
P-1105	16	17'-2"	ST						1459
P-1106	16	16'-6"	ST						1403
P-1107	8	17'-6"	ST						744
P-1108	96	6'-3"	1	1'-0"	5'-9"				3188
SPIRALS									2,263
PIER #1 & #2 TOTAL INCLUDING SPIRALS = 30,582 LBS.									
RAILING ⊗									
R-501	16	11'-2"	ST.						
R-502	112	14'-2"	ST.						
R-503	4	19'-11"	ST.						
R-504	12	4'-2"	21	SEE STD. DWG. BR-1-65 FOR DIMENSIONS					
R-505	8	5'-4"	20						
R-506	4	22'-0"	ST.						
R-507	4	20'-10"	ST.						
R-508	4	18'-1"	ST.						
R-521	2	15'-4"	24	3'-10"	2'-0"	2'-3"	2'-10"		
R-522	2	15'-0 5/8"	24	4'-10	8"	3'-9"	11 5/16"		
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	1	5'-6"							
RE-601	4	6'-0"							
RE-701	2	6'-3"							
RE-801	1	6'-6"							
RE-901	1	6'-10"							
RE-1001	1	7'-3"							
RE-1101	1	7'-9"							

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D.	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	1	2'-8"	17'-8 1/4"	4 1/2"	50	276
SP-402	1	2'-8"	16'-4 7/8"	4 1/2"	47	259
SP-403	1	2'-8"	15'-1 5/8"	4 1/2"	43	237
SP-404	1	2'-8"	13'-10 1/4"	4 1/2"	40	221
SP-405	1	2'-8"	16'-8 7/8"	4 1/2"	48	265
SP-406	1	2'-8"	15'-5 1/8"	4 1/2"	44	243
SP-407	1	2'-8"	14'-1 3/8"	4 1/2"	41	226
SP-408	1	2'-8"	12'-9 1/2"	4 1/2"	37	204
SPACERS	32					332
TOTAL SPIRALS						2,263 LBS.

GRAND TOTAL 131,381 LBS.



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.

ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPROX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

⊗RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

REINFORCING SCHEDULE

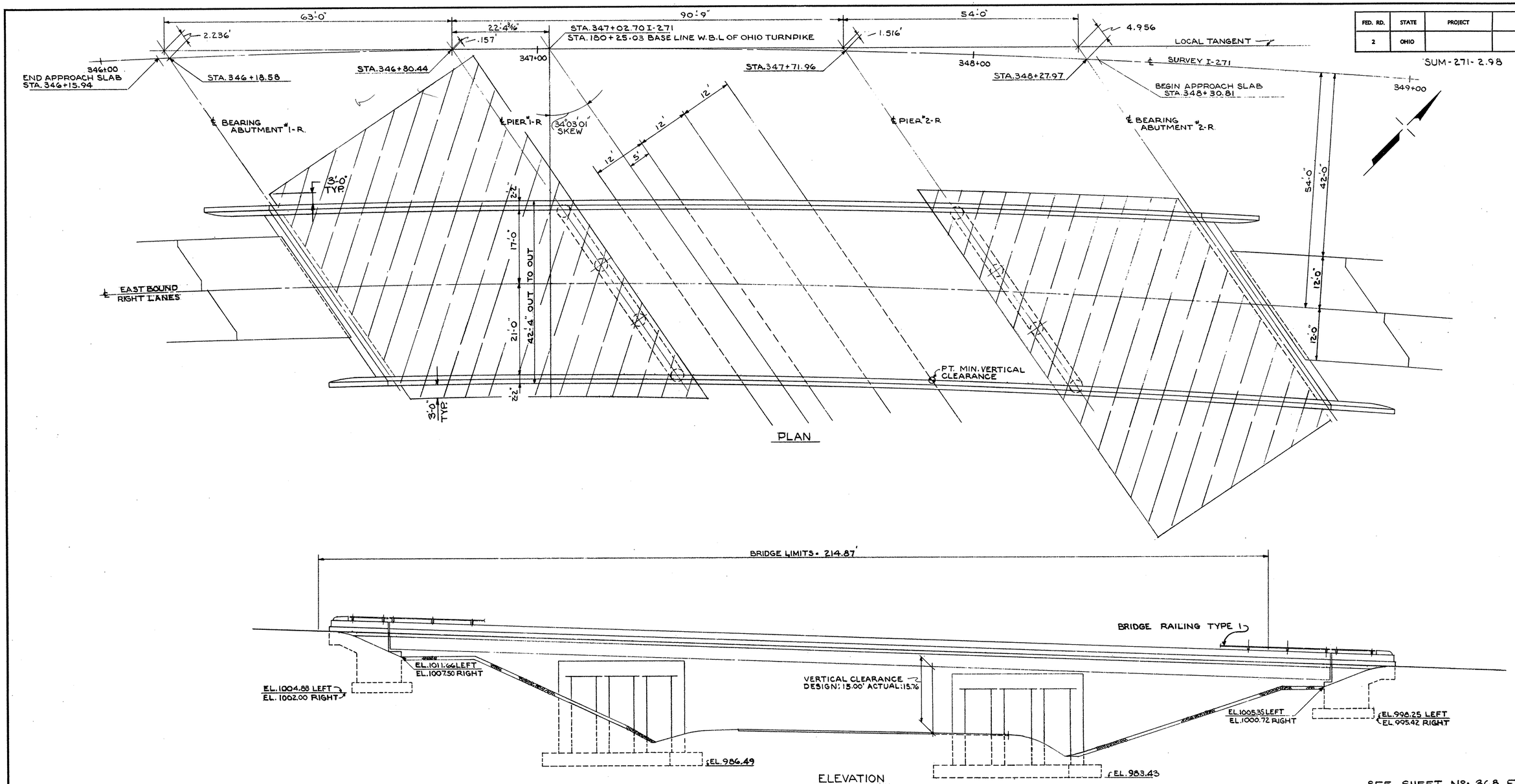
LEFT STRUCTURE
BRIDGE NO. SUM-271-0658 L.
I-271 OVER W. B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.02 TO STA. 348+47.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WHC	BMR		H.G.H.	EDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

461
510

SUM-271-2.98



SEE SHEET Nº. 368 FOR GENERAL NOTES

(Participation: 94.8% Normal, 5.2% State)

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS	PIERS	GEN.
503	519	CU.YD.	UNCLASSIFIED EXCAVATION		328	191	
509	125,296	LBS	REINFORCING STEEL	83,031	12,293	29,972	
511	295	CU.YD.	CLASS 'C' CONC. SUPERSTRUCTURE	295			
511	146	CU.YD.	CLASS 'E' CONC. ABUTS. ABOVE FOOTINGS		146		
511	76	CU.YD.	CLASS 'C' CONC. PIERS ABOVE FOOTINGS			76	
511	137	CU.YD.	CLASS 'E' CONC. PIER & ABUTMENT FOOTINGS		68	69	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN.
512	18	LIN.FT.	WATERPROOFING, PREMOLDED SEALING STRIP		18		
513	308,510	LBS	STRUCTURAL STEEL	308,510			
514	308,510	LBS	FIELD PAINTING OF STRUCTURAL STEEL	308,510			
517	503.28	LIN.FT.	BRIDGE RAILING TYPE 1	428.95	74.33		
518	48	CU.YD.	POROUS BACKFILL		48		
518	8	EACH	SCUPPERS (INCLUDING SUPPORTS)	8			

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
518	83	LIN.FT.	6" PERFORATED HELICAL C.M.P. 707.06, INCLUDING SPECIALS		83		
518	158	LIN.FT.	6" HELICAL C.M.P. 707.06 NON-PERF.		158		
601	810	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		810		
808	295	Units	WATER REDUCING SET RETARDING ADMIXTURE	295			
825	1,110	SQ.YDS.	CONCRETE SURFACE TREATMENT				1110
828	95	LIN.FT.	JOINT SEALER (end dam)	95			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION
RIGHT STRUCTURE

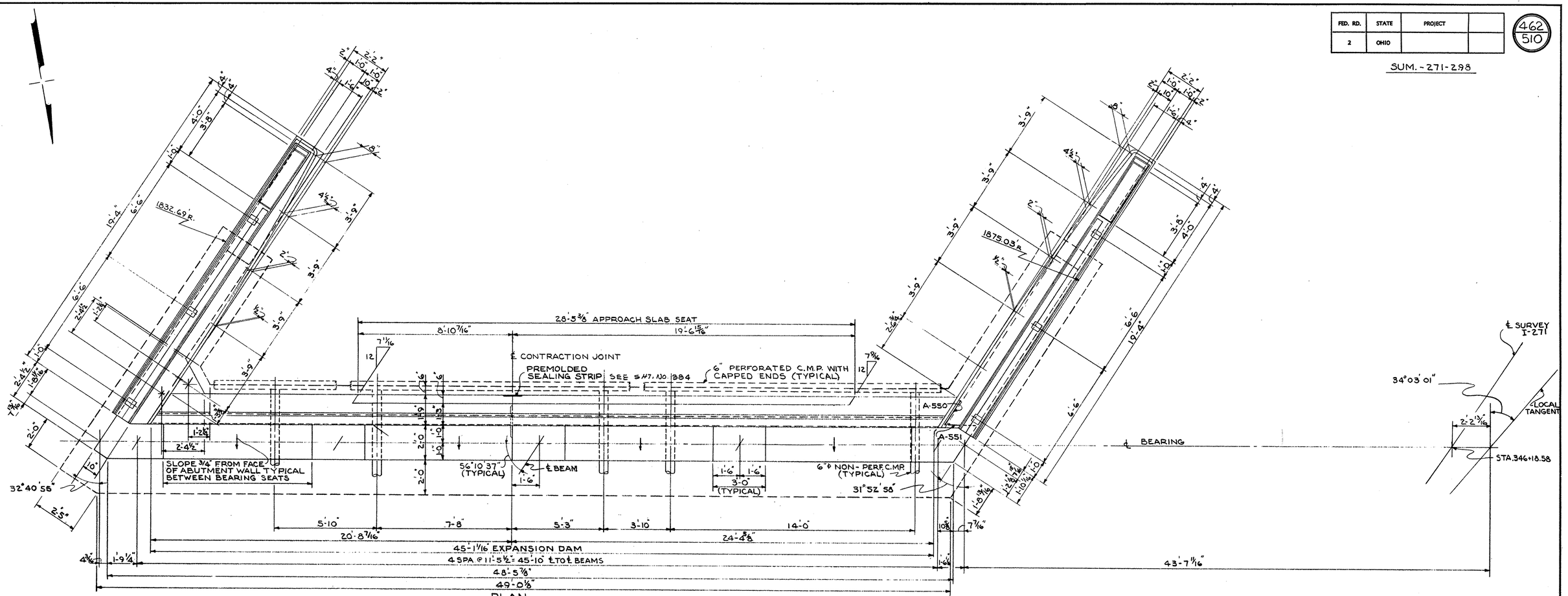
BRIDGE Nº SUM.-271-0658 RIGHT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+15.94 TO STA 348+30.81

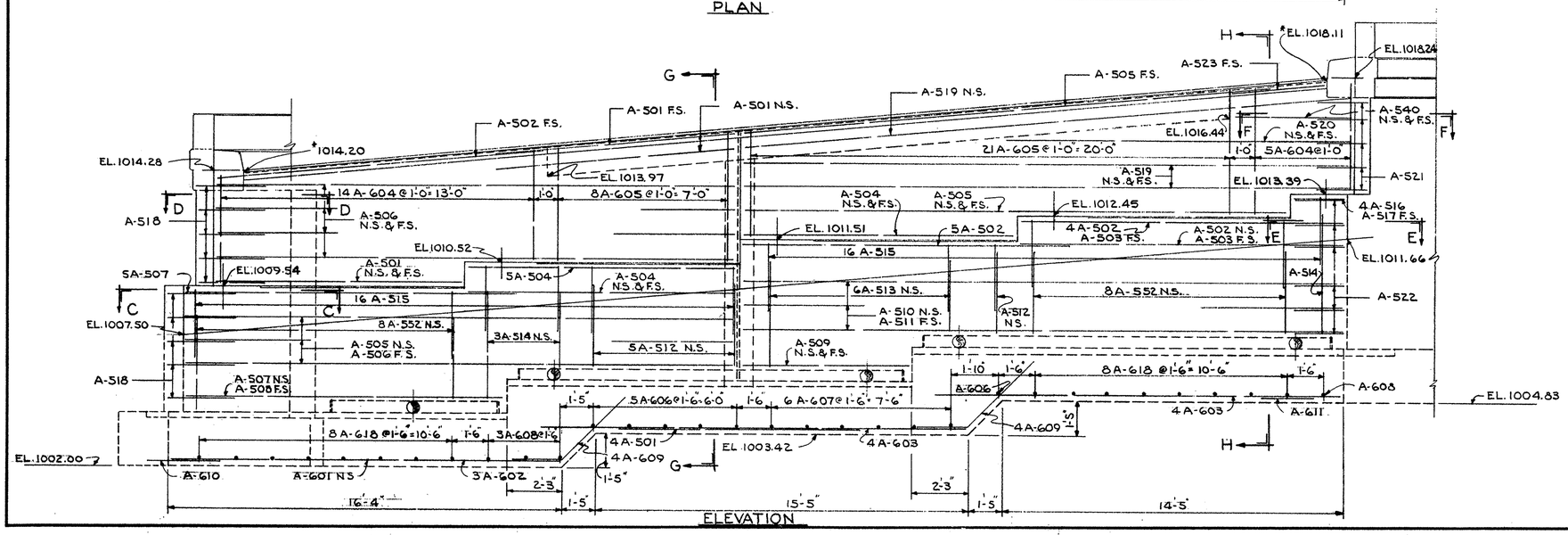
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GHC	JLH		H.G.H.	RDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

462
510

SUM.-271-2.98





SEE SHEET No. 463 FOR SECTIONS 'G-G' & 'H-H'

* ELEVATION GIVEN TO HEEL OF ANGLE

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

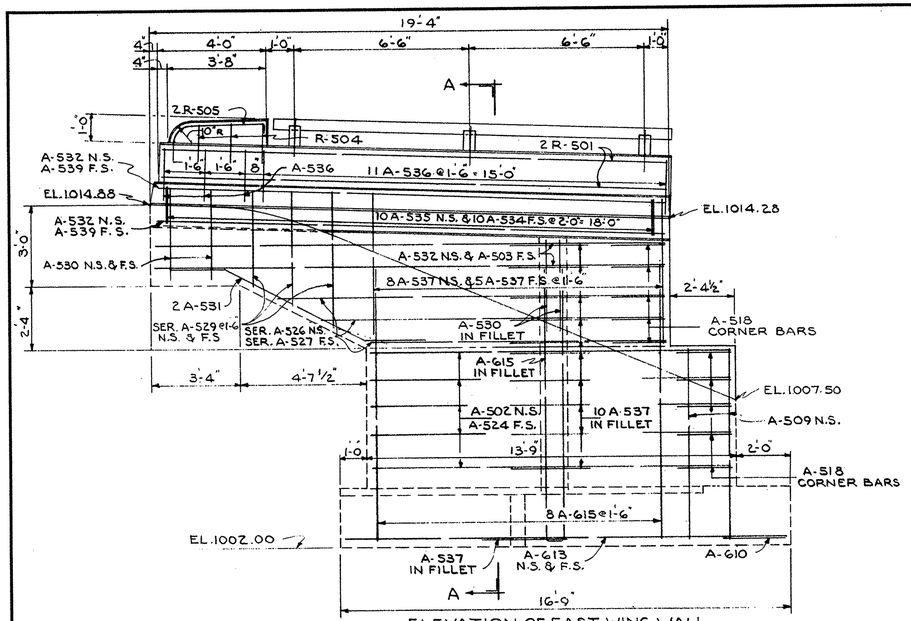
ABUTMENT No. 1

RIGHT STRUCTURE
BRIDGE No. SUM.-271-0658 RIGHT
I-271 OVER W.B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+15.94 TO STA. 348+30.81

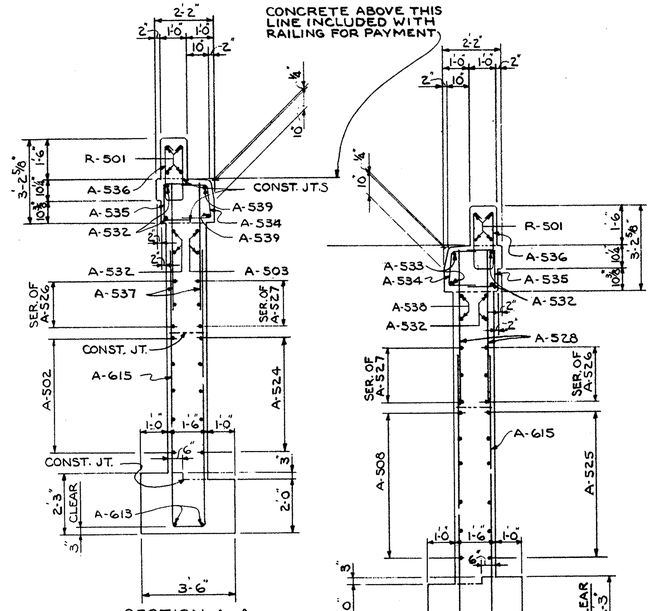
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BHC	JLH		H.G.H.	RBH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

463
510



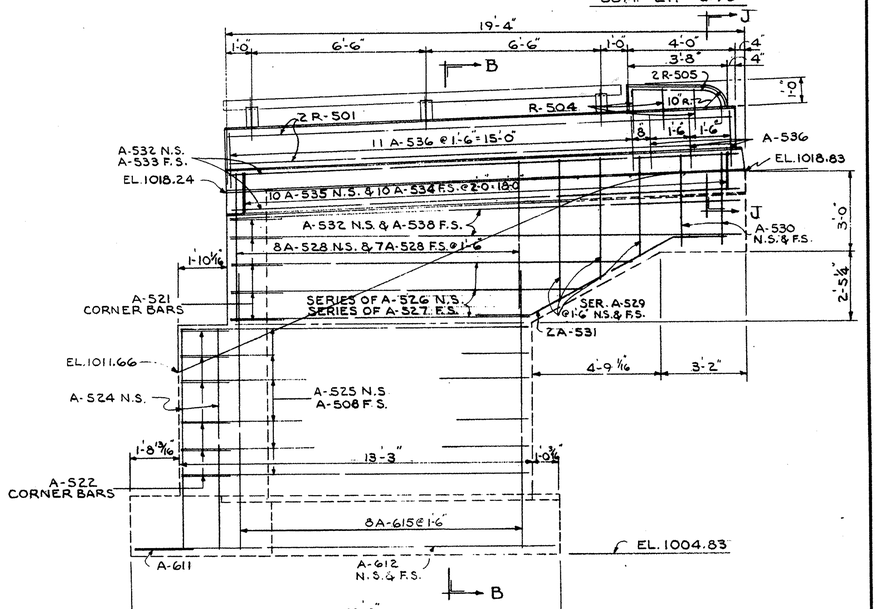
ELEVATION OF EAST WING WALL



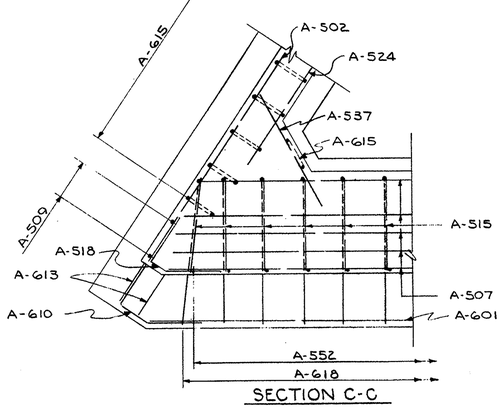
SECTION A-A

SECTION B-B

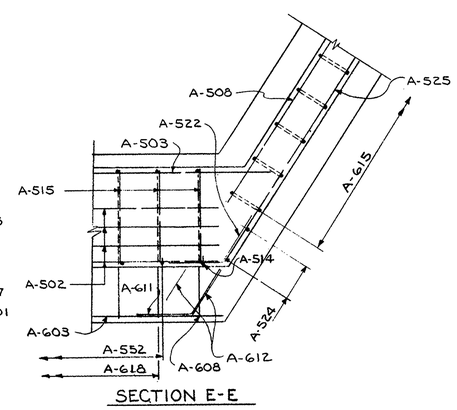
SUM.-271-2.98



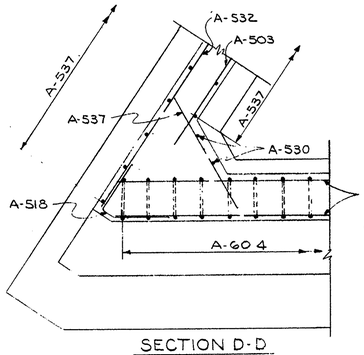
ELEVATION OF WEST WING WALL



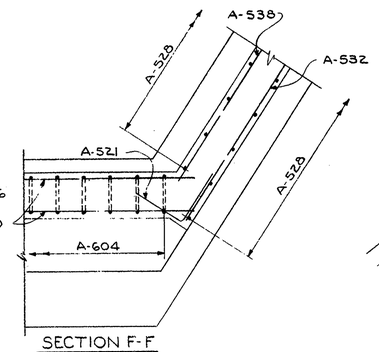
SECTION C-C



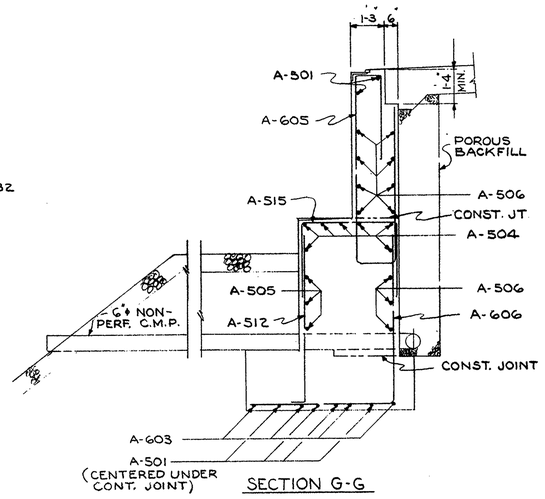
SECTION E-E



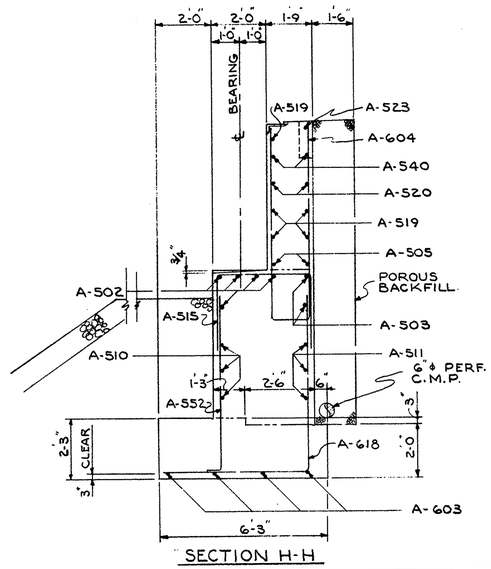
SECTION D-D



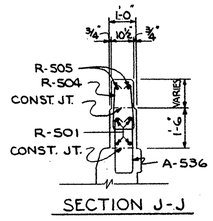
SECTION F-F



SECTION G-G



SECTION H-H



SECTION J-J

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº1 DETAILS

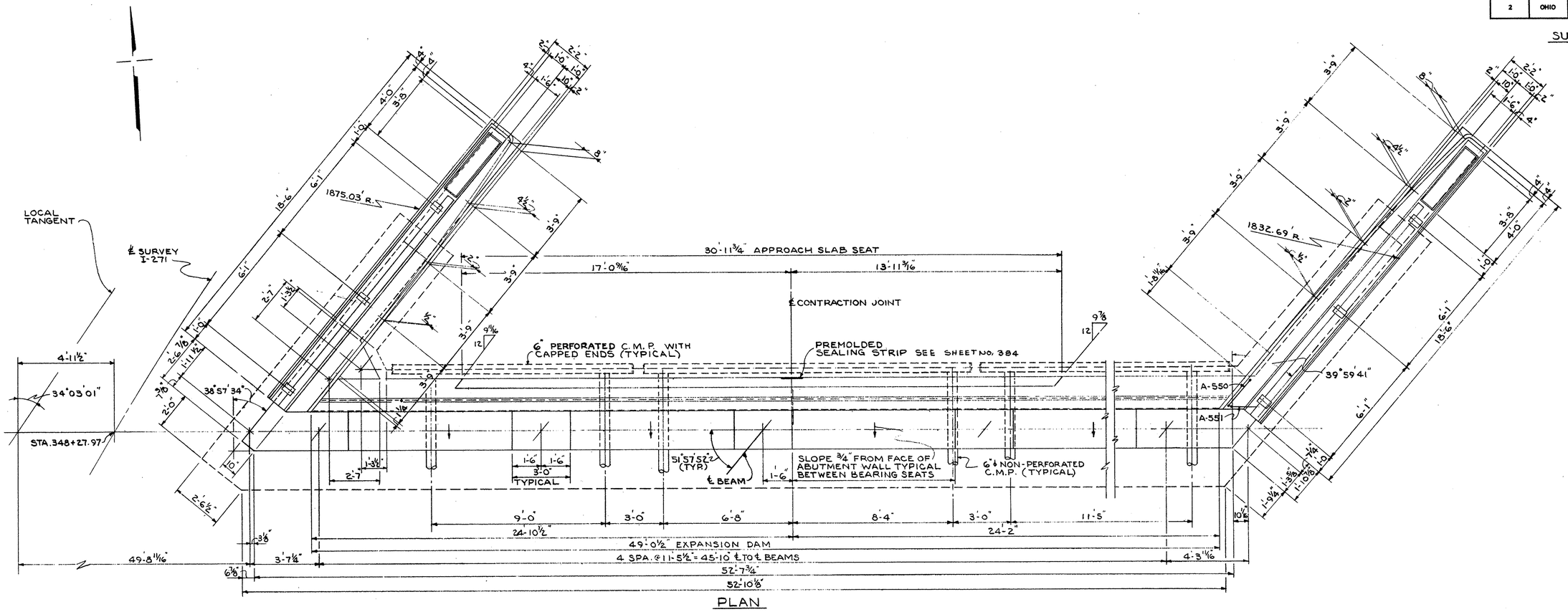
RIGHT STRUCTURE
BRIDGE Nº SUM-271-065.8 RIGHT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+15.94 TO STA. 348+30.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	JLH		H.G.H.	RBH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

464
510

SUM.-271-2.98



SEE SHEET No. 465 FOR SECTIONS 'G-G' & 'H-H'

* ELEVATION GIVEN TO HEEL OF ANGLE

STATE OF OHIO
DEPARTMENT OF HIGHWAYS-
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT No2

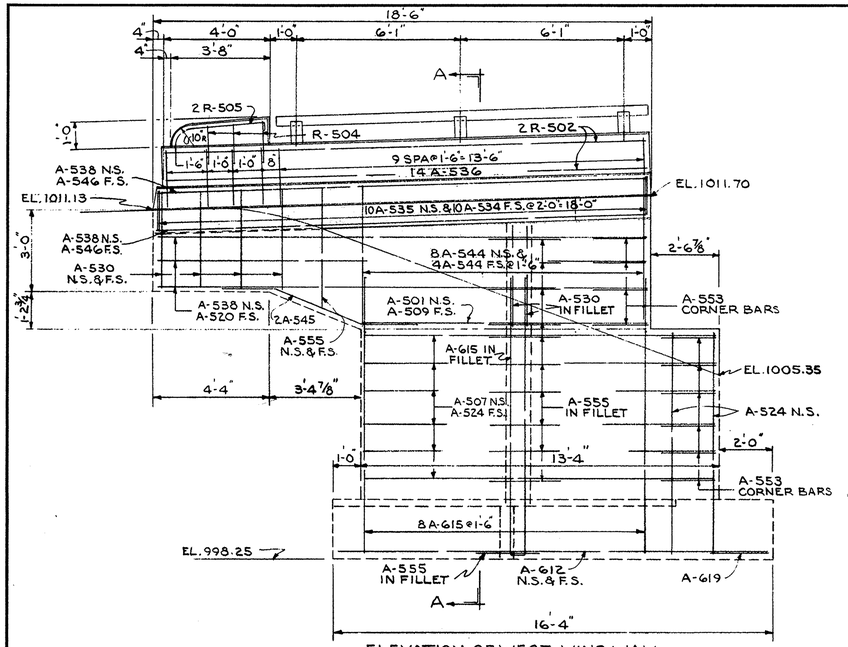
RIGHT STRUCTURE
BRIDGE No SUM.-271-0658 RIGHT
I-271 OVER W.B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA 346+15.94 TO STA. 348+30.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JLH		H.G.H.	RDH	4-22-66	

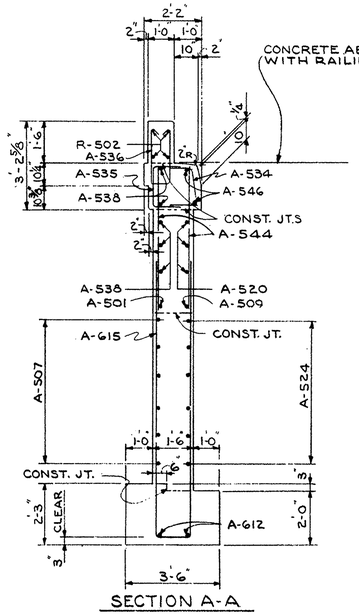
FED. RD.	STATE	PROJECT	
2	OHIO		

465
510

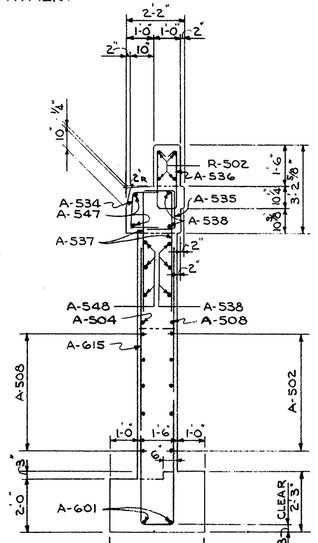
SUM.-271-2.98



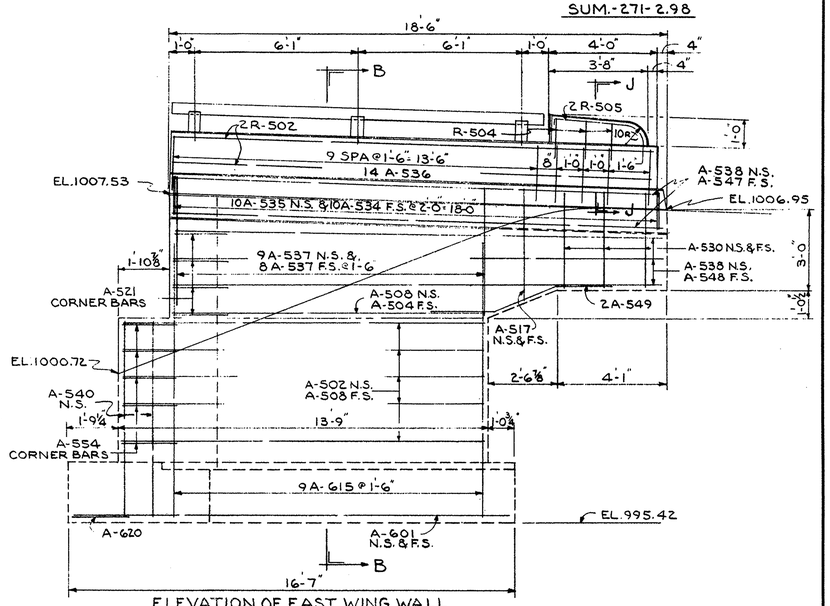
ELEVATION OF WEST WING WALL



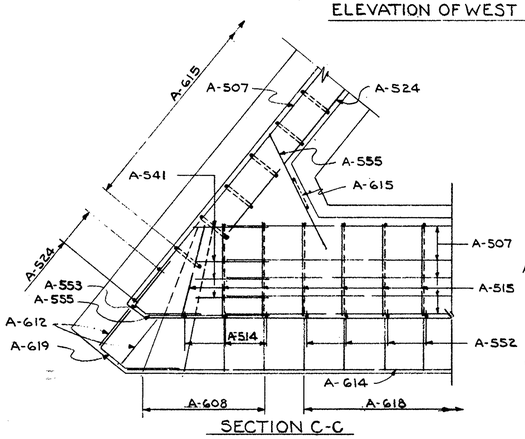
SECTION A-A



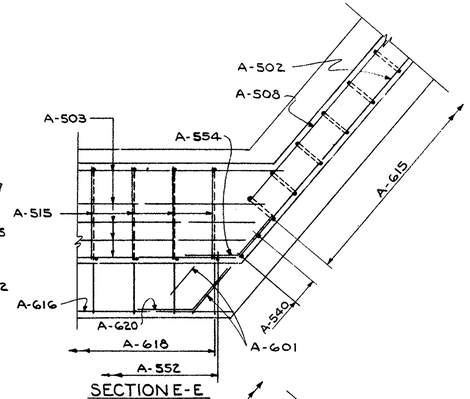
SECTION B-B



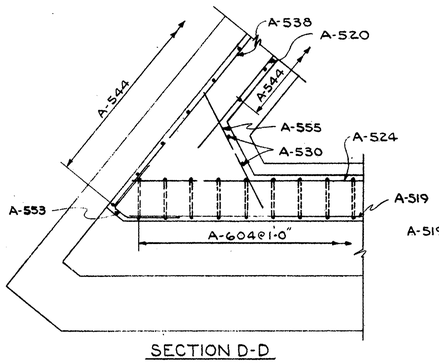
ELEVATION OF EAST WING WALL



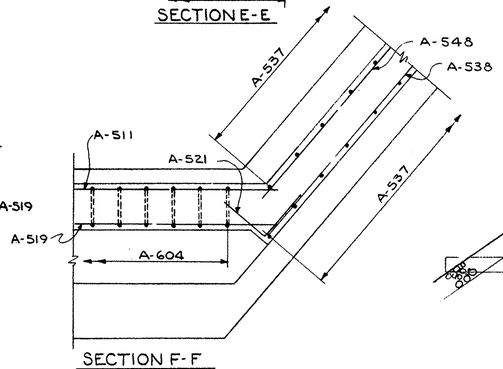
SECTION C-C



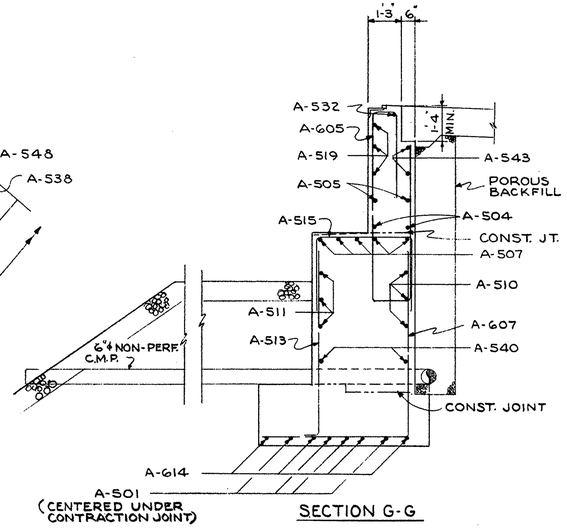
SECTION E-E



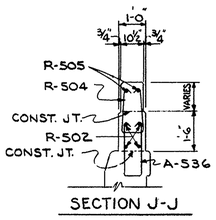
SECTION D-D



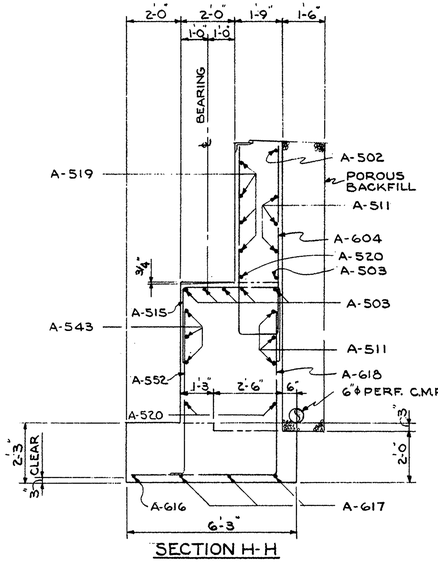
SECTION F-F



SECTION G-G



SECTION J-J



SECTION H-H

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

ABUTMENT Nº2 DETAILS

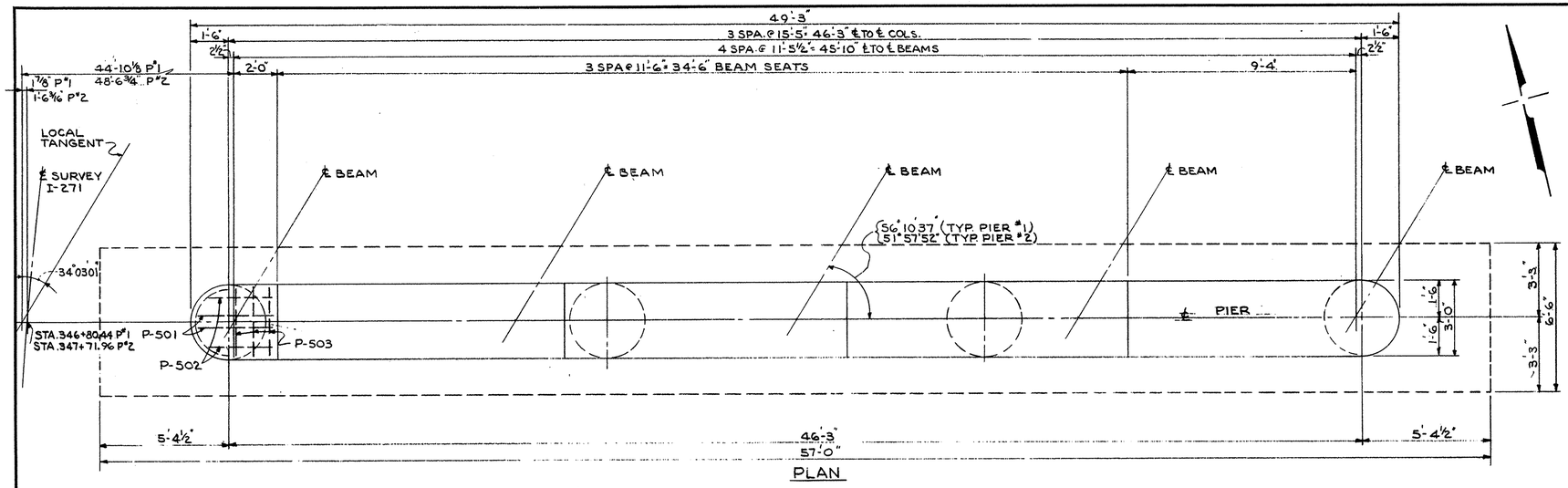
RIGHT STRUCTURE
BRIDGE Nº SUM-271-0658, RIGHT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+15.94 TO STA. 348+30.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JLH		H.G.H.	RBH	4-22-66	

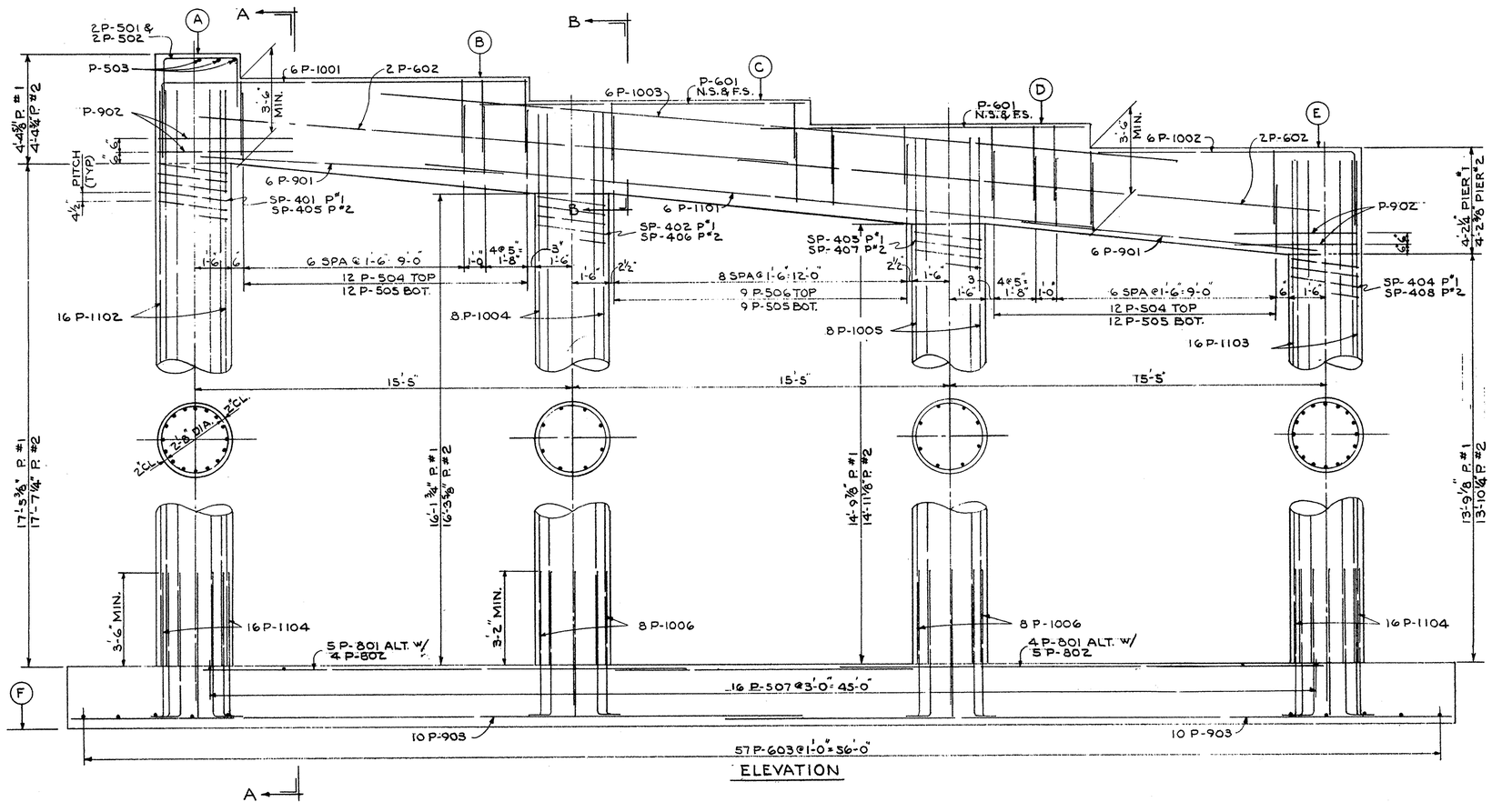
FED. RD.	STATE	PROJECT	
2	OHIO		

466
510

SUM-271-2.98

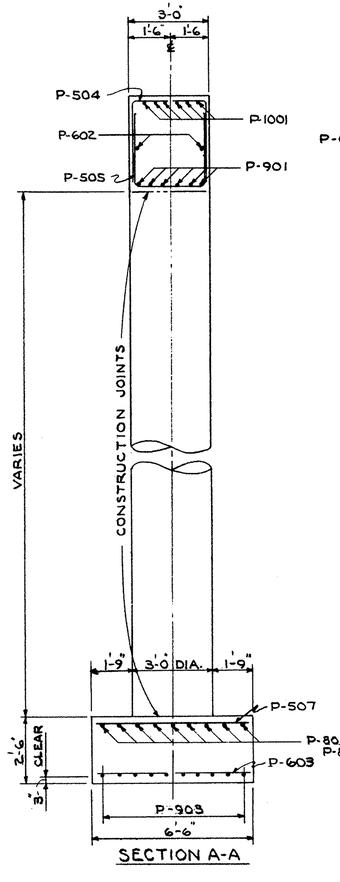


PLAN

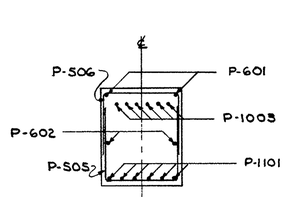


ELEVATIONS

PIER Nº	A	B	C	D	E	F
1	1010.83	1009.88	1008.92	1007.93	1006.93	986.49
2	1007.94	1006.97	1006.00	1004.99	1003.98	983.43



SECTION A-A



SECTION B-B

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIERS

RIGHT STRUCTURE
BRIDGE Nº SUM-271-0658 RIGHT
I-271 OVER W. B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+13.94 TO STA 348+30.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JLH		H.G.H.	ROW	4-22-66	

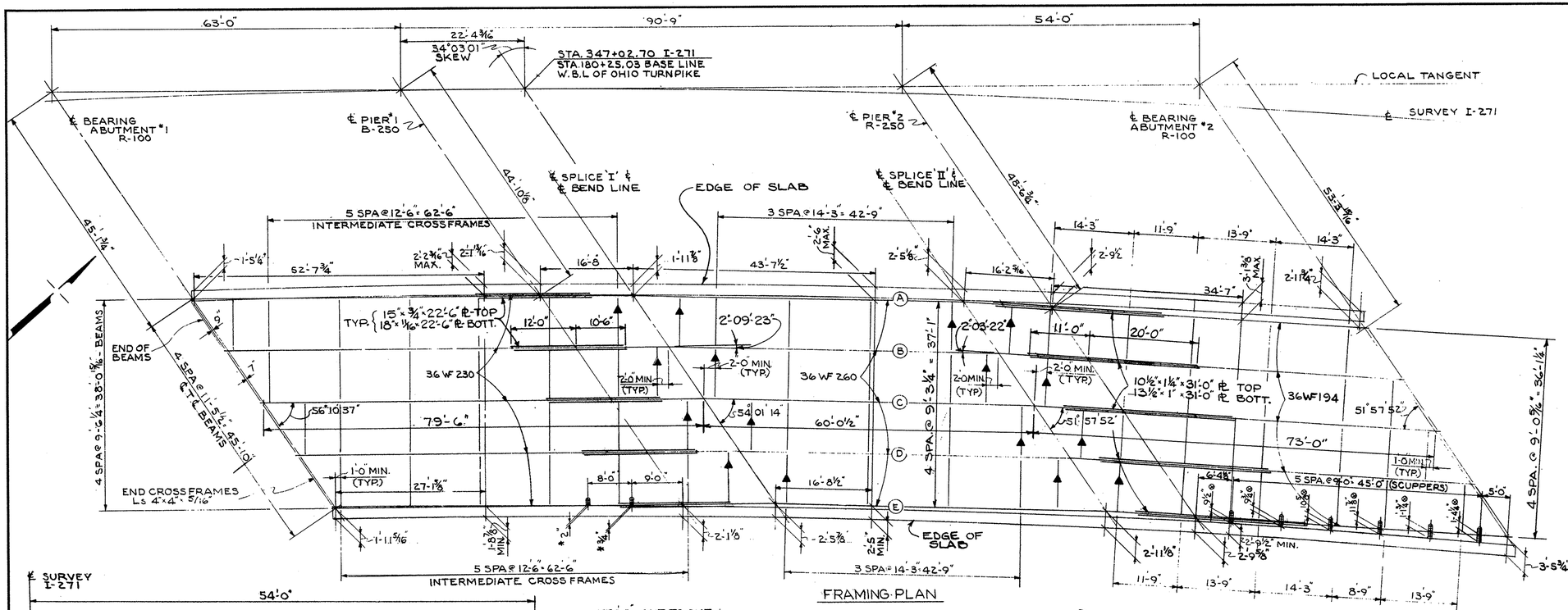
FED. RD.	STATE	PROJECT	
2	OHIO		

467
510

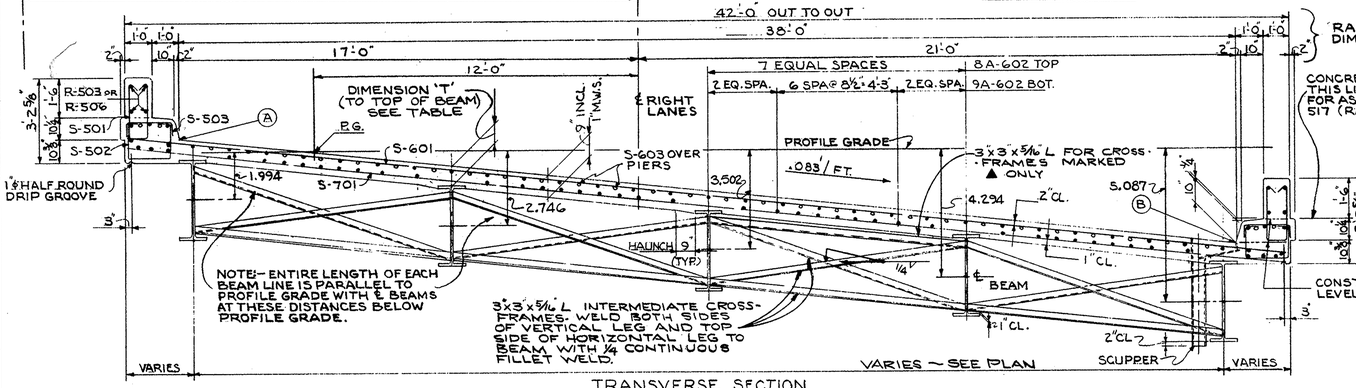
SUM-271-2.98

⊕ NOTE - DIMENSIONS GIVEN FOR SCUPPERS ARE FROM CURB TO ℄ OF BEAM } SCUPPERS PER DETAIL "A" ON STD. DWG. SD-1-65

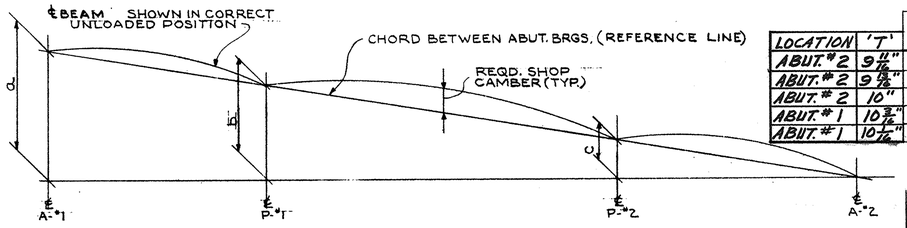
* NOTE - ON THESE 2 SCUPPERS, ℄ BEAM IS BEYOND CURB BY THE DIMENSION GIVEN. USE TYPE 1 SCUPPER ON STD. DWG. SD-1-65.



FRAMING PLAN



TRANSVERSE SECTION



DIMENSIONS.

BEAM	a	b	c
A	6.503'	4.581'	1.738'
B	6.537'	4.604'	1.747'
C	6.569'	4.627'	1.756'
D	6.602'	4.650'	1.765'
E	6.636'	4.674'	1.774'

NOTE: ALL DIMENSIONS ARE TO ℄ OF BEAM.

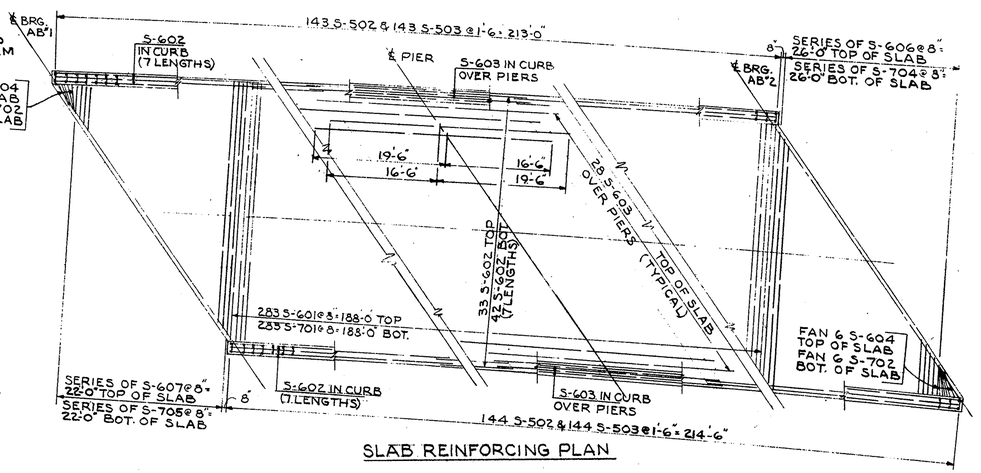
SLAB THICKNESS ~ DIMENSION 'T'

LOCATION	'T'
ABUT. #2	9 11/16"
ABUT. #2	9 1/16"
ABUT. #2	10"
ABUT. #1	10 3/16"
ABUT. #1	10 11/16"

BEAM	MAXIMUM 'T'	MAXIMUM LOCATION	MINIMUM 'T'	MINIMUM LOCATION
A	11 9/16"	ABUT. #1	9 9/16"	STA. 348+35.54
B	10 7/8"	ABUT. #1	9 9/16"	STA. 348+35.54
C	10 5/16"	ABUT. #1	9 5/8"	STA. 346+95.13
D	10 5/8"	ABUT. #2	9 7/8"	STA. 346+95.13
E	11 5/16"	ABUT. #2	9 7/8"	STA. 346+95.13

DEFLECTION & CAMBER

LOCATION	SPAN № 1						SPAN № 2										SPAN № 3					
	1/4 PT.		1/2 PT.		3/4 PT.		SPLICE		1/4 PT.		1/2 PT.		3/4 PT.		SPLICE		1/4 PT.		1/2 PT		3/4 PT	
BEAM	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.
DEFLECT. DUE TO WEIGHT OF STEEL	.050"	.050"	.050"	.050"	.009"	.009"	.096"	.096"	.127"	.127"	.212"	.212"	.134"	.134"	.071"	.071"	-.016"	-.016"	.008"	.008"	.017"	.017"
DEFLECT. DUE TO REMAINING D.L.	.209"	.181"	.209"	.181"	.038"	.033"	.509"	.350"	.538"	.465"	.896"	.770"	.566"	.490"	.378"	.260"	.065"	.059"	.034"	.029"	.074"	.064"
ADJUSTMENT FOR VERT. CURVE	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
REQD. SHOP CAMBER	1/4"	1/4"	1/4"	1/4"	1/16"	1/16"	5/8"	7/16"	5/8"	5/8"	1 1/8"	1"	11/16"	5/8"	7/16"	5/16"	-1/16"	-1/16"	0"	0"	1/8"	1/16"



SLAB REINFORCING PLAN

ELEVATION TABLE

STATION	A	PG.	B
346+75	1017.20	1016.77	1014.03
347+00	1016.44	1016.02	1013.28
347+25	1015.72	1015.27	1012.52
347+50	1015.01	1014.52	1011.80
347+75	1014.23	1013.77	1011.09
348+00	1013.44	1013.02	1010.32
348+25	1012.69	1012.27	1009.52
348+50	1011.94	1011.52	1008.77
348+75	~	1010.77	1008.03

ELEV. AT P.G. IS THE FINISHED GRADE ELEVATION. ELEV. AT 'A' & 'B' ARE ELEVATIONS BEFORE CONCRETE IS POURED.

SEE SHEET No. 468 FOR FIELD SPLICE DETAILS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN & SLAB DETAILS

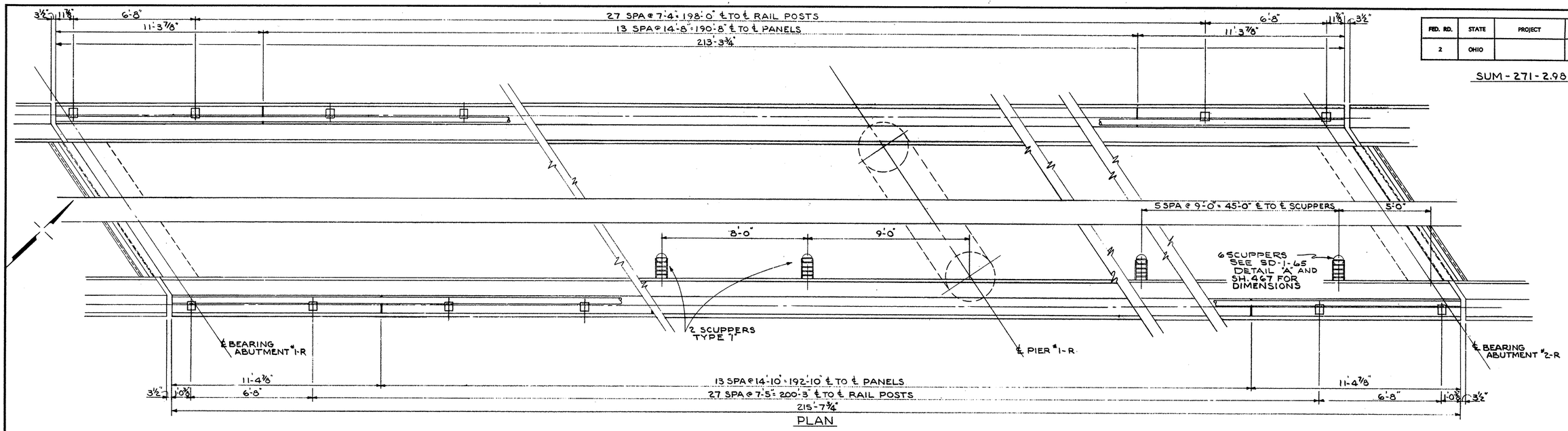
RIGHT STRUCTURE.
BRIDGE № SUM-271-0658 RIGHT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+15.94 TO STA. 348+30.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RVC	JLH		HGH	RDH	4-28-66	5-29-68

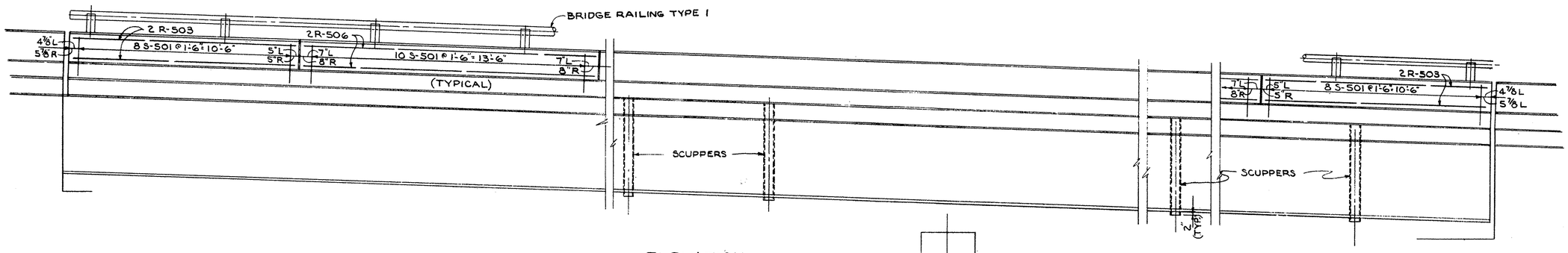
FED. RD.	STATE	PROJECT	
2	OHIO		

468
510

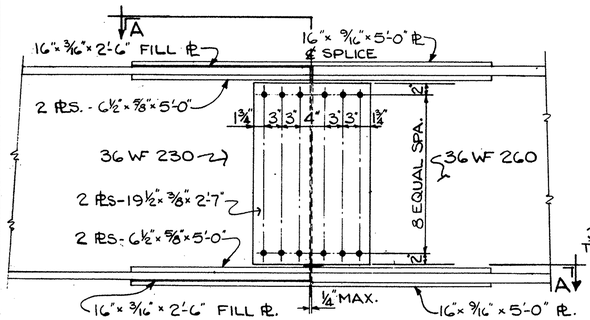
SUM - 271 - 2.98



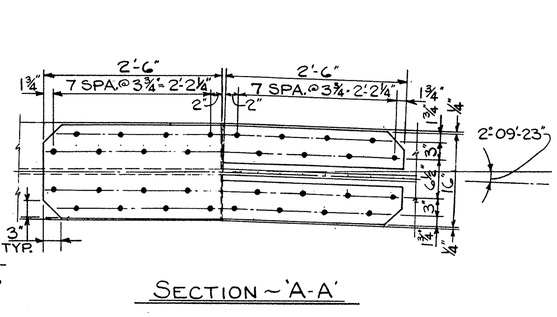
PLAN



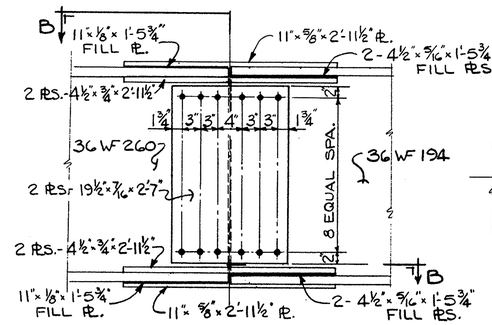
ELEVATION



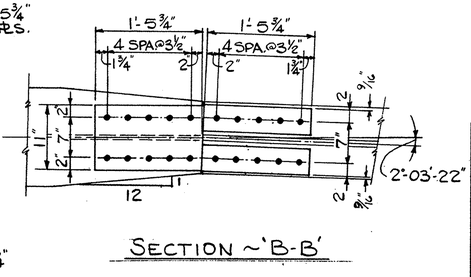
FIELD SPLICE 'I' DETAIL



SECTION ~ 'A-A'



FIELD SPLICE 'II' DETAIL



SECTION ~ 'B-B'

SEE STD. DWG. SD-1-65 SHEET 3 FOR SPLICE DETAILS NOT SHOWN

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

RIGHT STRUCTURE
BRIDGE Nº SUM-271-0658 RIGHT
I-271 OVER W.B.L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA 346+15.94 TO STA. 348+30.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JLH		H.G.H.	RDH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

469
510

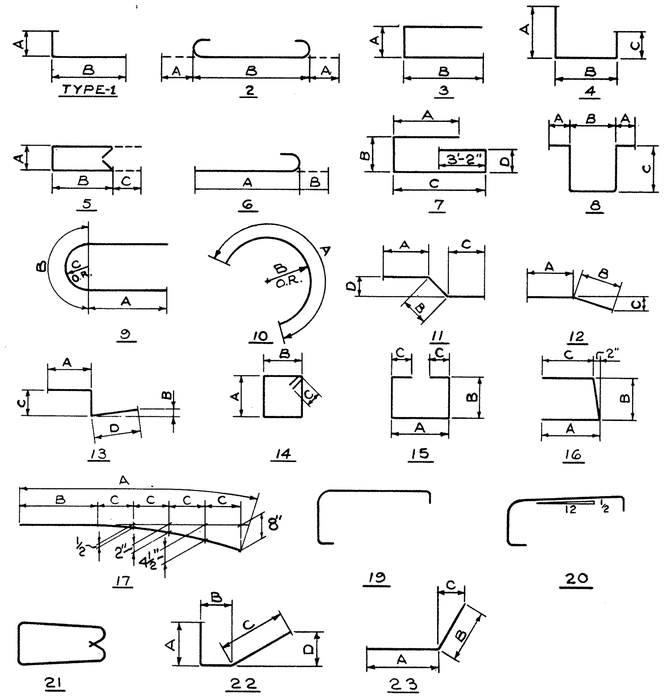
MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
ABUTMENT #1 & #2									
A-501	13	10'-0"	ST.						136
A-502	24	13'-5"	ST.						336
A-503	10	15'-6"	ST.						162
A-504	19	11'-0"	ST.						218
A-505	8	22'-6"	ST.						188
A-506	11	21'-6"	ST.						247
A-507	22	13'-0"	ST.						298
A-508	13	11'-9"	ST.						159
A-509	5	6'-10"	ST.						36
A-510	6	25'-0"	ST.						156
A-511	12	27'-0"	ST.						338
A-512	10	6'-5"	1	6"	6'-0"				67
A-513	13	7'-5"	1	6"	7'-0"				101
A-514	10	7'-11"	1	6"	7'-6"				83
A-515	66	8'-2"	3	3'-5"	2'-6"				562
A-516	4	2'-0"	ST.						8
A-517	3	4'-0"	ST.						13
A-518	10	4'-6"	22	2'-0"	8"	2'-0"	1'-1"		47
A-519	12	26'-1"	ST.						326
A-520	9	14'-4"	ST.						135
A-521	9	3'-11"	1	2'-0"	2'-0"				37
A-522	6	3'-11"	23	2'-0"	2'-0"	1'-1"			25
A-523	1	6'-0"	ST.						6
A-524	19	8'-4"	ST.						165
A-525	6	12'-11"	ST.						81
SERIES OF A-526	2 SETS OF 3 = 6 BARS	11'-0" TO 15'-0"	ST.					2'-0"	81
SERIES OF A-527	2 SETS OF 3 = 6 BARS	10'-0" TO 14'-0"	ST.					2'-0"	75
A-528	15	5'-6"	ST.						86
SERIES OF A-529	4 SETS OF 3= 12 BARS	3'-8" TO 5'-2"	ST.					9"	55
A-530	26	3'-6"	ST.						95
A-531	4	9'-10"	11	2'-0"	6'-0"	2'-0"	2'-9"		41
A-532	9	18'-10"	ST.						177
A-533	2	19'-7"	17	18'-7"	4'-5"	3'-9"			41
A-534	40	2'-11"	16	1'-0"	1'-4"	10"			122
A-535	40	3'-1"	3	1'-4"	1'-0"				129
A-536	56	5'-7"	5	8"	2'-2"	5"			326
A-537	41	4'-11"	ST.						210
A-538	12	17'-10"	ST.						223
A-539	2	18'-4"	17	18'-4"	3'-2"	3'-9"			38
A-540	6	7'-2"	ST.						45
A-541	5	2'-8"	ST.						14
A-542	2	16'-0"	ST.						33
A-543	5	24'-5"	ST.						127
A-544	12	5'-3"	ST.						66
A-545	2	7'-6"	11	2'-0"	3'-8"	2'-0"	1'-4"		16
A-546	2	17'-4"	17	17'-4"	2'-2"	3'-9"			36
A-547	2	18'-0"	17	18'-0"	3'-10"	3'-9"			40
A-548	3	16'-10"	ST.						53
A-549	2	6'-7"	11	2'-0"	2'-9"	2'-0"	1'-1"		14
A-550	2	3'-5"	3	1'-8"	1'-0"				7
A-551	2	2'-5"	1	1'-0"	1'-6"				5
A-552	33	6'-11"	1	6"	6'-6"				238
A-553	10	4'-6"	22	2'-0"	8"	2'-0"	1'-3"		47
A-554	5	3'-11"	23	2'-0"	2'-0"	1'-3"			21
A-555	15	4'-6"	ST						70
A-601	3	16'-2"	ST.						73
A-602	3	14'-7"	ST.						66
A-603	8	17'-8"	ST.						212
A-604	40	15'-2"	3	1'-5"	7'-0"				911
A-605	60	17'-8"	7	5'-8"	1'-5"	7'-0"	11"		1,592
A-606	10	11'-4"	1	5'-5"	6'-0"				170
A-607	13	12'-4"	1	5'-5"	7'-0"				241
A-608	11	12'-10"	1	5'-5"	7'-6"				212
A-609	16	5'-8"	12	3'-9"	2'-0"	1'-5"			136
A-610	1	5'-0"	22	2'-0"	1'-2"	2'-0"	1'-1"		8
A-611	1	3'-11"	23	2'-0"	2'-0"	1'-1"			6
A-612	4	15'-8"	ST.						94
A-613	2	16'-5"	ST.						49
A-614	8	19'-0"	ST.						228

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
ABUTMENT #1 & #2 CONT'D.									
A-615	35	21'-5"	3	1'-2"	10'-3"				1126
A-616	1	16'-9"	ST.						25
A-617	3	18'-3"	ST.						82
A-618	33	11'-10"	1	5'-5"	6'-6"				587
A-619	1	5'-0"	22	2'-0"	1'-2"	2'-0"	1'-3"		8
A-620	1	3'-11"	23	2'-0"	2'-0"	1'-3"			6
ABUTMENT #1 & #2 TOTAL = 12,293 LBS.									
SLAB									
S-501	292	5'-7"	5	8"	2'-2"	5"			1,700
S-502	287	4'-8"	15	1'-6"	1'-4"	6"			1,397
S-503	287	2'-3"	3	1'-6"	8"				674
S-601	283	41'-8"	ST.						17,711
S-602	567	32'-6"	ST.						27,678
S-603	64	36'-0"	ST.						3,461
S-604	11	5'-0"	ST.						83
S-605		OPEN							
SERIES OF A-606	1 SET OF 40 BARS	5'-5" TO 41'-2"	ST.					11"	1,399
SERIES OF A-607	1 SET OF 34 BARS	5'-5" TO 41'-2"	ST.					1'-1"	1,190
S-701	283	41'-8"	ST.						24,102
S-702	11	5'-0"	ST.						113
S-703		OPEN							
SERIES OF S-704	1 SET OF 40 BARS	5'-5" TO 41'-2"	ST.						1,904
SERIES OF S-705	1 SET OF 34 BARS	5'-5" TO 41'-2"	ST.					1'-1"	1,619
SLAB TOTAL = 83,031 LBS.									
PIERS #1 & #2									
P-501	4	6'-11"	3	3'-8"	2'-0"				29
P-502	4	6'-5"	3	2'-8"	2'-0"				27
P-503	6	2'-8"	ST.						17
P-504	48	8'-5"	3	2'-8"	3'-0"				421
P-505	66	7'-11"	3	2'-8"	2'-9"				545
P-506	18	7'-1"	3	2'-8"	2'-4"				133
P-507	32	5'-8"	ST.						189
P-601	8	13'-4"	ST.						160
P-602	8	24'-1"	ST.						289
P-603	114	6'-2"	ST.						1,056
P-801	18	29'-2"	ST.						1,402
P-802	18	20'-0"	ST.						961
P-901	24	12'-6"	ST.						1,020
P-902	8	12'-2"	9	4'-0"	4'-2¼"	1'-4"			331
P-903	40	29'-10"	ST.						4,057
P-1001	12	16'-3"	1	3'-0"	13'-6"				839
P-1002	12	13'-3"	1	3'-0"	10'-6"				684
P-1003	12	33'-6"	ST.						1,730
P-1004	16	19'-6"	ST.						1,342
P-1005	16	18'-4"	ST.						1,262
P-1006	32	5'-9"	1	6"	5'-6"				792

MARK	NO. REQ'D.	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCR.	WEIGHT LBS.
PIERS #1 & #2 CONT'D.									
P-1101	12	28'-0"	ST						1,785
P-1102	32	20'-10"	ST						3,542
P-1103	32	17'-6"	ST						2,974
P-1104	64	6'-1"	1	6"	5'-10"				2,068
SPIRALS									2,315
PIERS #1 & #2 TOTAL INCLUDING SPIRALS = 29,972 LBS.									
RAILING®									
R-501	8	18'-8"	ST.						
R-502	8	17'-10"	ST.						
R-503	16	10'-11"	ST.						
R-504	12	4'-2"	21	SEE	STD.	DWG.	BR-1-65		
R-505	8	5'-4"	20	SEE	STD.	DWG.	BR-1-65		
R-506	104	14'-4"	ST.						
REPLACEMENT BARS									
RE-401	1	5'-3"	10	5'-3"	1'-4"				
RE-501	1	5'-6"							
RE-601	3	6'-0"							
RE-701	2	6'-3"							
RE-801	1	6'-6"							
RE-901	1	6'-10"							
RE-1001	1	7'-3"							
RE-1101	1	7'-9"							

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D.	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	1	2'-8"	17'-5 3/8"	4½"	50	276
SP-402	1	2'-8"	16'-1 3/4"	4½"	46	254
SP-403	1	2'-8"	14'-9 1/8"	4½"	43	237
SP-404	1	2'-8"	13'-9 1/8"	4½"	40	221
SP-405	1	2'-8"	17'-7¼"	4½"	50	276
SP-406	1	2'-8"	16'-3 3/8"	4½"	46	254
SP-407	1	2'-8"	14'-11⅛"	4½"	43	237
SP-408	1	2'-8"	13'-10¼"	4½"	40	221
SPACERS	32					339
TOTAL SPIRALS						2,315
GRAND TOTAL 125,296 LBS.						



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPROX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

®RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

REINFORCING SCHEDULE

RIGHT STRUCTURE
BRIDGE NO. SUM-271-0658 R.
I-271 OVER W. B. L. OF OHIO TURNPIKE
SUMMIT COUNTY
STA. 346+15.94 TO STA. 348+30.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	BMR		H.G.H.	RBH	4-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98

470
510

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

SUM - 271 - 2.98
SUMMIT COUNTY
RICHFIELD & BOSTON TOWNSHIPS

I - 271 - 6(29) 231
LIMITED ACCESS
1965 SPECIFICATIONS

- LIMITED ACCESS -

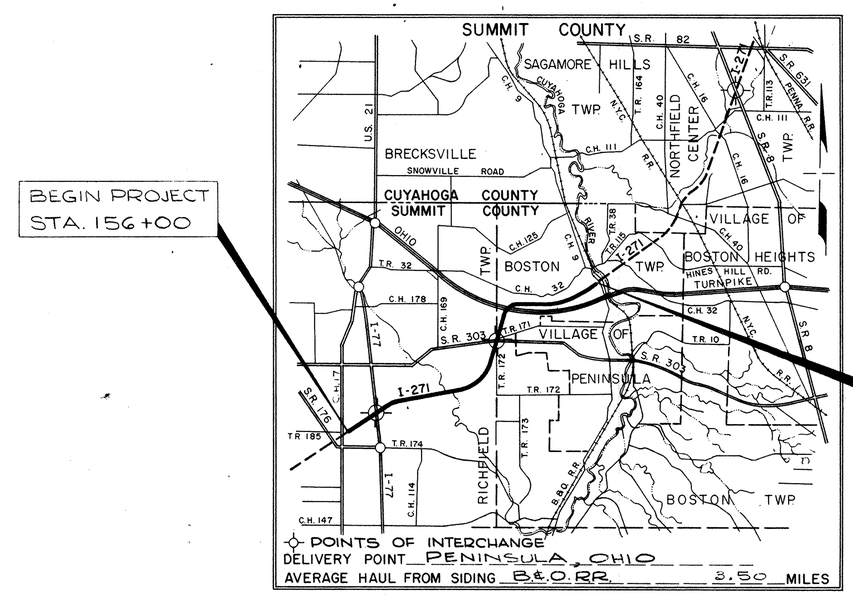
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH PROVISIONS OF SECTION 5511.02 REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad
Power Poles
Telephone Poles
Power or Telephone Poles with guys
Tower Line
Trees or Stumps (existing)
Limited Access — LA
Right of Way — RW
Limited Access & Right of Way — LA RW

~ INDEX OF SHEETS ~

1-2-3-4-5	CENTERLINE PLATS
6-7-8	PROPERTY MAPS
9	SUMMARY SHEET
10	KEY MAP (I-77 INTERCHANGE)
11	STA. 560+00 TO STA. 165+00
12	STA. 165+00 TO STA. 180+00
13-14-15-16-17	I-271 INTERCHANGE WITH INTERSTATE 77 (STA. 180+00 TO STA. 200+00 - I-271) (STA. 924+00 TO STA. 940+00 - I-77)
18	STA. 200+00 TO STA. 215+00
19	STA. 215+00 TO STA. 230+00
20	STA. 230+00 TO STA. 245+00
21	STA. 245+00 TO STA. 260+00
22	STA. 260+00 TO STA. 275+00
23	STA. 275+00 TO STA. 290+00
24	KEY MAP (S.R. 303 INTERCHANGE)
25	STA. 290+00 TO STA. 305+00
26-27-28-29	I-271 INTERCHANGE WITH S.R. 303 (STA. 305+00 TO STA. 320+00 - I-271) (STA. 35+00 TO STA. 65+00 - RELOC. S.R. 303)
30	KEY MAP (OHIO TURNPIKE INTERCHANGE)
31	STA. 320+00 TO STA. 336+00
32-33-34-35 35-A	I-271 INTERCHANGE WITH OHIO TURNPIKE (STA. 336+00 TO STA. 360+00 - I-271) (STA. 161+00 TO STA. 196+00 - OHIO TURNPIKE)
36	STA. 360+00 TO STA. 375+00
37	STA. 375+00 TO STA. 390+00
38	STA. 390+00 TO STA. 405+00
39	STA. 405+00 TO STA. 420+00
40	STA. 420+00 TO STA. 435+00



BEGIN PROJECT STA. 156+00

END PROJECT STA. 421+49.75

⊹ POINTS OF INTERCHANGE
DELIVERY POINT PENINSULA, OHIO
AVERAGE HAUL FROM SIDING B&O RR. 3.50 MILES

LOCATION MAP

SCALE OF MILES 0 — 2

PORTION TO BE IMPROVED
STATE ROADS
OTHER ROADS

PLAN — 1" = 50'
PROFILE: HORIZONTAL — 1" = 50'
PROFILE: VERTICAL — 1" = 5' & 1" = 10'
CROSS SECTIONS: HORIZONTAL & VERTICAL — 1" = 10'

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT OF WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DIVISION DEPUTY DIRECTOR

APPROVED _____
DATE _____ ENGINEER OF BRIDGES

APPROVED _____
DATE _____ ENGINEER OF LOCATION AND DESIGN

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED _____
DATE _____ FIRST ASSISTANT DIRECTOR

APPROVED _____
DATE _____ DIRECTOR OF HIGHWAYS

PREPARED AND RECOMMENDED BY
BEISWENGER, HOCH & ARNOLD, CONSULTING ENGINEERS
AKRON OHIO CLEVELAND

FILE NO.	SUMMIT COUNTY ~ SUM-271-2.98
	DATE OF LETTING _____ 1965
	CONTRACT NO. _____

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BT-70-71	11-15-60	I-81 Nº2	2-1-63	I-15 Nº5-B	2-1-63	CSB-2-56 Sht. 2&3	2-2-56
BT-TR	3-2-53	I-8CB,Nº5	2-1-63	I-15 Nº6	2-1-63	RB-1-55	2-2-55
DR-1	1-3-55	I-8CB,Nº6	2-1-63	I-21-23	3-10-64	FAC-1-1	2-25-64
F-1	2-1-63	I-8CB,Nº8	2-1-63	L-1	4-1-50	FAC1-2	2-25-64
F-2	2-1-63	I-8MH Nº1	2-1-63	L-2	4-1-50	SD-1-63 Sht. 1-4	11-12-63
F-3	2-1-63	I-81 Nº1	2-1-63	L-3	4-1-50	CSB-2-63 Sht. 1	11-12-63
G-70T	4-1-64	I-8CB, 2-2-A&B	2-1-63	L-3A	4-1-50	FSB-1-62	1-15-63
HW-1	8-1-63	I-12	2-1-63	L-4 Nº1	7-1-55	A-1 Sht. 1,2&3	5-23-63
HW-2	8-1-63	I-14C	1-22-52	R-1-1	6-1-64		
HW-3	8-1-63	I-15 Nº1	11-15-60	T-35	7-2-56		
HW-E	2-1-63	I-15 Nº2-A	8-17-60	T.J.	9-12-60		
SP-53	6-30-61	I-15 Nº2-B	6-1-57	AS-1-54	7-5-63		
	11-15-60	I-15 Nº4	12-1-54	AR-1-57	4-2-62		

SUPPLEMENTAL SPECIFICATIONS

GE - 101.04	5-22-59
S-101	7-12-62
I-212	6-23-61
I-128	4-5-61
L-120	1-2-62
M-106.11	1-26-61
M-206.14	7-15-49
S-307	10-1-64
F-235	10-28-58

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

_____ DIVISION ENGINEER

_____ DATE

TNN 11-2-65 RWD

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 352, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

FED. RD.	STATE	PROJECT	
2	OHIO		

47/510

1/40

SUM - 271 - 2.98
RIGHT-OF-WAY SHEET

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

SCALE IN FEET 0 100 200 400 600 800

BEGIN ACQUISITION SUM-271-2.98 STA. 166+66.45

BEGIN PROJECT SUM-271-2.98 STA. 156+00

℄ SURVEY I-271

PRESENT ℄ OF C.H. 17
FORMER ℄ OF C.H. 17
WHERE ℄ FORMER ℄ & ℄ SURVEY I-271 COINCIDE

WHEATLEY ROAD (S.R. 176)

PRESENT ℄

FORMER ℄

INTERSTATE 77

EXISTING RAMP 1

EXISTING RAMP 2

RAMP A

RAMP B

RAMP C

RAMP D

RAMP E

BEARING BREAK

N 01°13'09" E

87°11'10"

N 01°12'46" W

N 56°58'24" E

N 80°16'37" E

N 80°16'40" E

R/W MON. FD. & USED

0°33'(ROADWAY PLANS)
179°26'41"(OBS.)
179°27'(RECORD)

P.K. SET

180°25'55"(OBS.)
180°28'(RECORD)

MON. FD. & USED

PRESENT ℄ OF C.H. 17

OLD ℄ OF C.H. 17 & RR

REF. TIE

CONC. NAIL S.W. SIDE 4" PEACH
MON. FD. LEANING E
CONC. NAIL N.W. SIDE POLE # RF 55
HUB SET

CONC. NAIL S.E. SIDE 15" APPLE
CONC. NAIL N.W. SIDE 5" MAPLE
R/W MON. FD.

3/8" STEEL ROD
2" BELOW GROUND
UPPER ℄ TO BE FORMED
CLASS "C" CONCRETE
36"
6" MIN
NOTE MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 158+78.46
P.O.T. STA. 165+17.54
P.O.T. STA. 176+09.82
P.C. STA. 187+12.15
P.O.C. STA. 195+06.62 (MIDDLE ORDINATE)
P.T. STA. 203+01.09
P.O.T. STA. 210+00

MON. USED E & W (OBS.) 953+70.66 953+0.77 (REC.)
MON. USED N & S (OBS.) (OBS.) MON. 06°E 939+19.37 (REC.) 939+54.54 (REC.)
MON. USED E & W (OBS.) 911+62.70 911+62.53 (REC.)
MON. 06°E 936+58.07
936+58.11 (REC.)
RAMP "E" 922+39.1 RT OF 936.00
RAMP "A" 170+86.81 RT OF 170+50.81
RAMP "A" 170+86.81 LT OF 170+86.81
RAMP "B" 170+91.38 RT OF 170+91.38
RAMP "D" 167+35 91' LT OF 915+81.98
RAMP "D" 181+91.53 65' LT OF 181+40.03
SET I.P. 911+15.31
N 4° 49' 28" W
579.44'
N 56° 58' 24" E
6°47'52" 68°04' TO LOC. TAN
P.C. STA 187+12.15
P.I. STA 195+17.76
P.T. STA 203+01.09
RAMP "C" 182+42.53 RT OF 911+62.70
RAMP "C" 187+47.85 911+71.66 L=71 510
RAMP "C" 182+42.53 78 FT OF 911+62.70
RAMP "E" 922+39.1 69.52 FT OF 936+58.11
LOT 1 TRACT 3
LOT 1C TRACT 6
LOT 1 LOT 3
LOT 1 LOT 2
330
340
350
360
370
380
390
400
410
420
430
440
450
460
470
480
490
500
510
520
530
540
550
560
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610
620
630
640
650
660
670
680
690
700
710
720

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT-OF-WAY SHEET 2/40

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

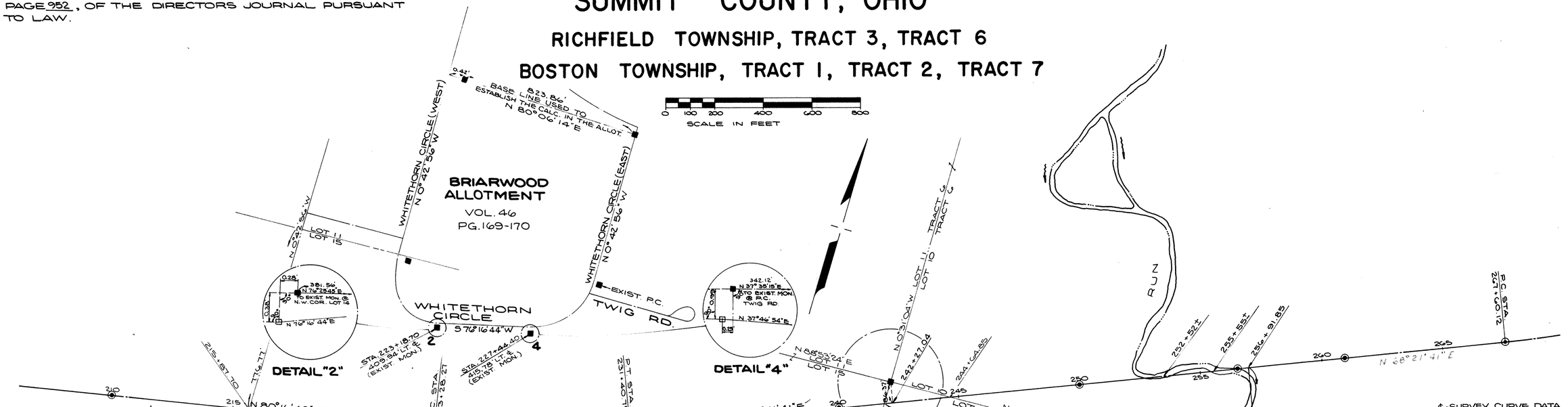
CENTER LINE SURVEY PLAT

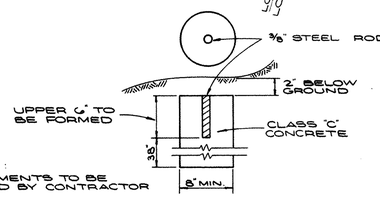
SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7





NOTE:
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:

MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION

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MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 210+00 – (MONUMENT DUPLICATED ON CENTER LINE SURVEY PLAT 1 OF 5.)
P.O.T. STA. 216+51.13
P.C. STA. 223+28.27
P.T. STA. 231+40.75
P.O.T. STA. 240+01.41
P.O.T. STA. 250+00
P.O.T. STA. 256+53.21
P.O.T. STA. 260+96.30
P.C. STA. 267+60.12
STA. 241+06.83 – 206.58' LT.
STA. 243+47.25 – 206.58' LT.

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

□ CORRECTED POSITION OF MONUMENT USING THE RECORD PLAT AND CALCULATED FROM THE BASE LINE.
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

DETAIL OF REFERENCE MONUMENTS TO BE SET

RECEIVED FOR RECORD
NOV 5 1965

TRANSFER NOT NECESSARY
NOV - 5 1965
C. L. Bower, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.

BY Ryan E. McCoy
DATE 10-15-65

RECEIVED FOR RECORD _____ 1965

RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS.

_____
RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Shewhall
CLIFTON M. SHEWHALL

DATE _____ DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: MARCH 24, 1965

RIGHT-OF-WAY COMPLETION DATE: OCT. 15, 1965

STATE OF OHIO RYAN E. McCOY 6324 REGISTERED SURVEYOR
SURVEYORS SEAL

CENTERLINE SURVEY PLAT 2 OF 5

FED. RD.	STATE	PROJECT	
2	OHIO		

473/510

3/40

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

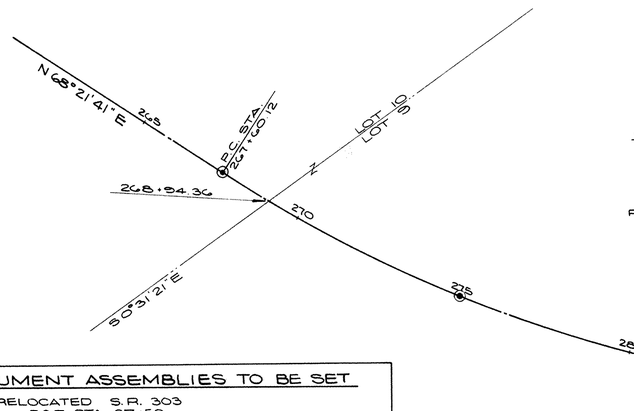
RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

~ LIMITED ACCESS ~

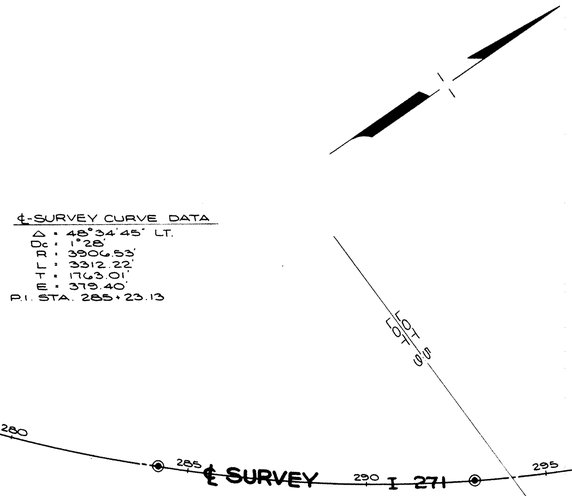
THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

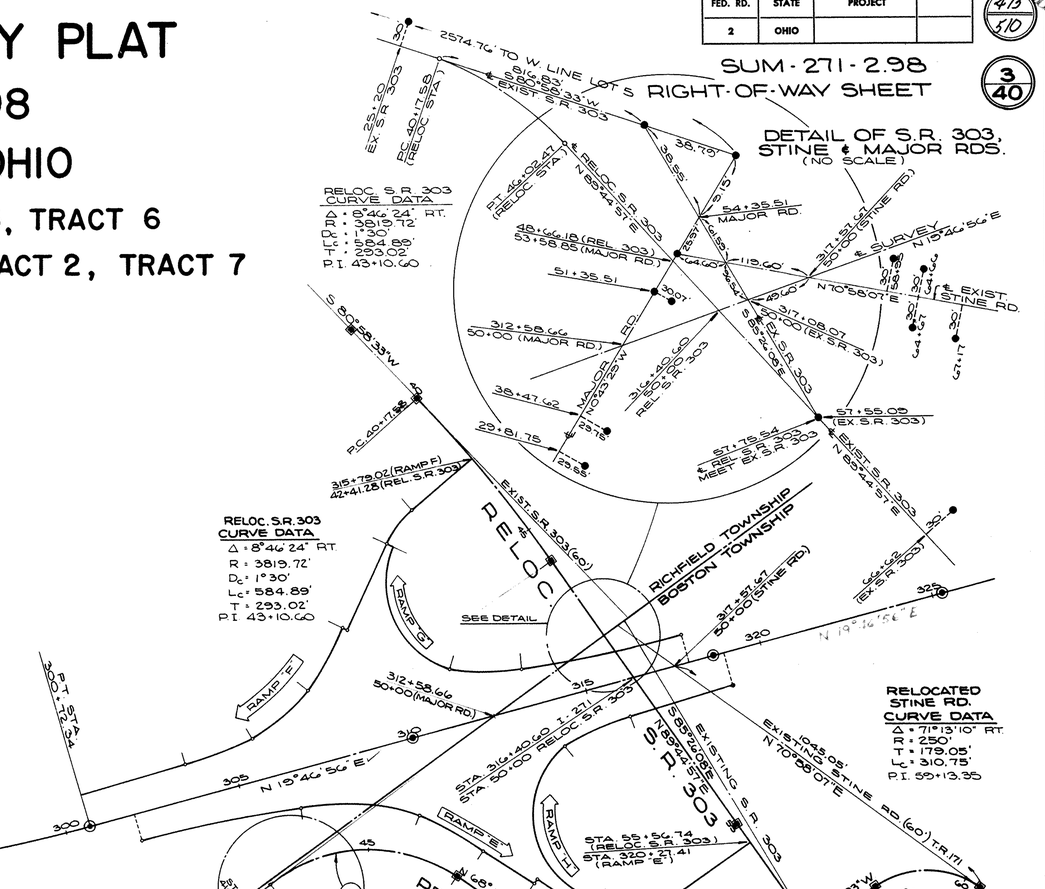
0 100 200 400 600 800
SCALE IN FEET



℄-SURVEY CURVE DATA
Δ = 48°34'45" LT.
Dc = 1°28'
R = 3906.53'
Lc = 3312.22'
T = 1762.01'
E = 319.40'
P.I. STA. 285+23.13

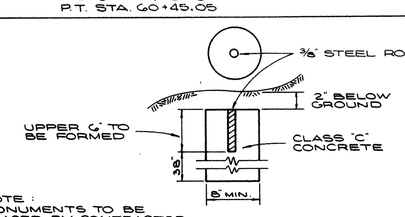
P.I. STA 285+23.13





MONUMENT ASSEMBLIES TO BE SET

RELOCATED S.R. 303
P.O.T. STA. 37+50
P.C. STA. 40+17.58
P.T. STA. 46+02.47
P.O.T. STA. 55+00
P.O.T. STA. 58+60
RELOCATED MAJOR RD. (T.R. 172)
P.T. STA. 47+58.90
P.C. STA. 50+75.87
P.T. STA. 54+84.65
RELOCATED STINE RD. (T.R. 171)
P.C. STA. 57+34.30
P.T. STA. 60+45.05



NOTE:
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

MONUMENTS TO BE SET (THIS SHEET)

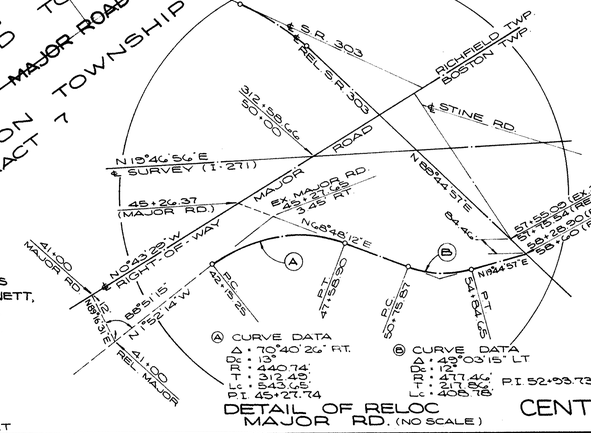
P.C. STA. 267+60.12 - (MONUMENT DUPLICATED ON CENTER LINE SURVEY PLAT 2 OF 5)
P.O.C. STA. 275+00
P.O.C. STA. 284+16.23 - MIDDLE ORDINATE
P.O.C. STA. 293+00
P.T. STA. 300+72.34
P.O.T. STA. 310+00
P.O.T. STA. 318+63.96
P.O.T. STA. 325+29.15

RECEIVED FOR RECORD
NOV 5 1968
At ... o'clock ... M
Recording ...
Vol. ... Page ...
... Recorder
Summit County, Ohio

TRACT 6 RICHFIELD TOWNSHIP
~~℄ OF RIGHT-OF-WAY MAJOR ROAD (60') T.R. 172~~
TRACT 7 BOSTON TOWNSHIP

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

● EXISTING IRON PIN FOUND
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET
▣ MONUMENT ASSEMBLIES TO BE SET



Ⓐ CURVE DATA
Δ = 70°40'26" RT.
Dc = 13°
R = 440.74'
T = 312.48'
Lc = 543.65'
P.I. 45+27.74

Ⓑ CURVE DATA
Δ = 43°03'15" LT
Dc = 12°
R = 477.46'
T = 217.52'
Lc = 405.76'
P.I 52+93.73

DETAIL OF RELOC MAJOR RD. (NO SCALE)

TRANSFER NOT NECESSARY
NOV - 5 1968
C. L. Bower, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Eugene E. McCoy
DATE 18-15-68

RECEIVED FOR RECORD _____ 1965
RECORDED: VOL____, PAGE____, OF THE SUMMIT COUNTY RECORDS.
_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY _____ CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE: OCT. 15, 65

SURVEYORS SEAL
STATE OF OHIO
HOWARD PAUL HUNTLEY
REGISTERED SURVEYOR

CENTERLINE SURVEY PLAT 3 OF 5

E.E.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

474/510

SUM-271-2.98
RIGHT-OF-WAY SHEET

4/40

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

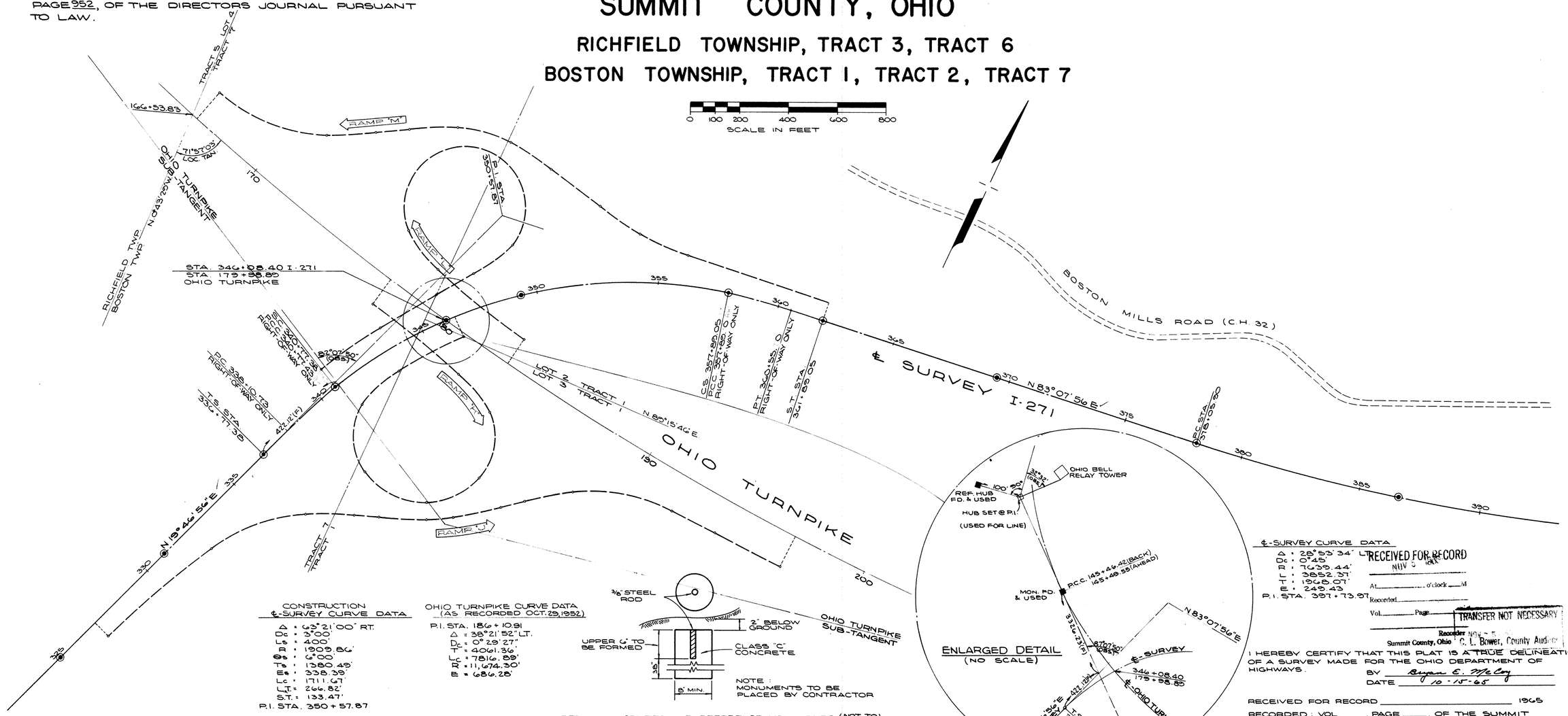
SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.



CONSTRUCTION ℄-SURVEY CURVE DATA

Δ = 63°21'00" RT.
Dc = 3°00'
Lc = 1200'
R = 1909.86'
θs = 6°00'
Ts = 1380.49'
Es = 338.39'
Lc = 1711.67'
L.T. = 266.82'
S.T. = 133.47'
P.I. STA. 350+57.87

OHIO TURNPIKE CURVE DATA (AS RECORDED OCT. 29, 1952)

P.I. STA. 186+10.91
Δ = 38°21'52" LT.
Dc = 0°29'27"
T = 4061.36'
Lc = 7816.89'
R = 11,674.30'
E = 686.28'

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

SUBSTITUTE CURVE DATA FOR RIGHT-OF-WAY ONLY

R = 2546.76'
Dc = 2°14'59"
Lc = 264.70'
Δ = 6°00' RT.
T = 133.47'
P.C. 338+10.73
P.C.C. 340+77.43
P.I. 339+44.20

RELOCATED STINE RD. CURVE DATA

Δ = 71°13'10" RT.
R = 250'
T = 179.05'
Lc = 310.75'
P.I. 55+13.35

NOTES:
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS.

MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 325+29.15 - (MONUMENT DUPLICATED ON CENTER LINE SURVEY PLAT 3 OF 5)
P.O.T. STA. 331+00
T.S. STA. 336+77.38
S.C. STA. 340+77.38
P.O.C. STA. 346+08.40 - (INTERSECTION OF I-271 WITH OHIO TURNPIKE)
P.O.C. STA. 349+33.22
C.S. STA. 357+89.05
S.T. STA. 361+89.05
P.O.T. STA. 369+44.24
P.C. STA. 378+05.90
P.O.C. STA. 386+65.52

F FIELD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

℄-SURVEY CURVE DATA

Δ = 28°53'34" LT.
Dc = 0°45'
R = 7639.44'
L = 3852.37'
T = 1968.07'
E = 249.43
P.I. STA. 397+73.97

RECEIVED FOR RECORD
NOV 5 1965
At ____ o'clock ____ M
Recorder
Vol. ____ Page ____
TRANSFER NOT NECESSARY
Recorder NOV 5
Summit County, Ohio C. L. Bower, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE 9-10-65

RECEIVED FOR RECORD _____ 1965
RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS.
_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY _____
CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

STATE OF OHIO BRYAN E. McCOY 7800 REGISTERED SURVEYOR
SEAL

PRELIMINARY SUBMITTAL: MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE: OCT. 15, 65

CENTERLINE SURVEY PLAT 4 OF 5

E.S.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

475 / 510

SUM-271-2.98
RIGHT-OF-WAY SHEET

5 / 40

~ LIMITED ACCESS ~

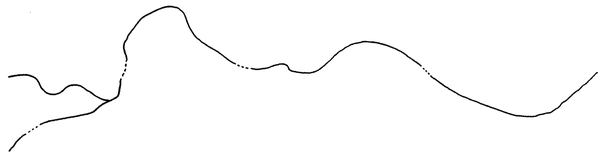
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CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6
BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7



0 100 200 400 600 800
SCALE IN FEET

RIVERVIEW RD. DETAIL

OCCUPATION CURVE DATA	ROWY PLANS CURVE DATA
Δ = 31°12'05" RT.	Δ = 31°13' RT.
T = 106.71'	T = 106.71'
Dc = 14°59'38"	Dc = 15°
R = 382.17'	Lc = 208.11'
Lc = 208.12'	R = 381.97'
P.I. 75+74.19	P.I. 75+73.45

MAINLINE CURVE DATA
Δ = 28°53'34" LT.
Dc = 0°45'
R = 7639.44'
Lc = 3852.37'
T = 1968.01'
E = 249.4'
P.I. STA. 397+73.97

NOTE:
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:
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MONUMENTS TO BE SET (THIS SHEET)

P.O.C. STA. 386+65.52 - (MONUMENT DUPLICATED ON CENTER LINE SURVEY PLAT 4 OF 5)
P.O.C. STA. 382+69.08
P.O.C. STA. 397+75 - MIDDLE ORDINATE
P.O.C. STA. 405+15.58
P.O.C. STA. 410+05.22
P.T. STA. 416+58.27
P.O.T. STA. 438+00

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

085 OBSERVED MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

TRANSFER NOT NECESSARY
NOV - 5 1965
C. L. Bower, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE 10-15-65

RECEIVED FOR RECORD _____ 1965
RECORDED: VOL. _____, PAGE _____, OF THE SUMMIT COUNTY RECORDS.
_____
RECORDER

RECEIVED FOR RECORD
_____
_____
_____
_____
Summit County, Ohio

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE: OCT. 15, 1965

STATE OF OHIO BRYAN E. McCOY 6400 REGISTERED SURVEYOR
SURVEYORS SEAL

CENTERLINE SURVEY PLAT 5 OF 5

K.&E.

PROPERTY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

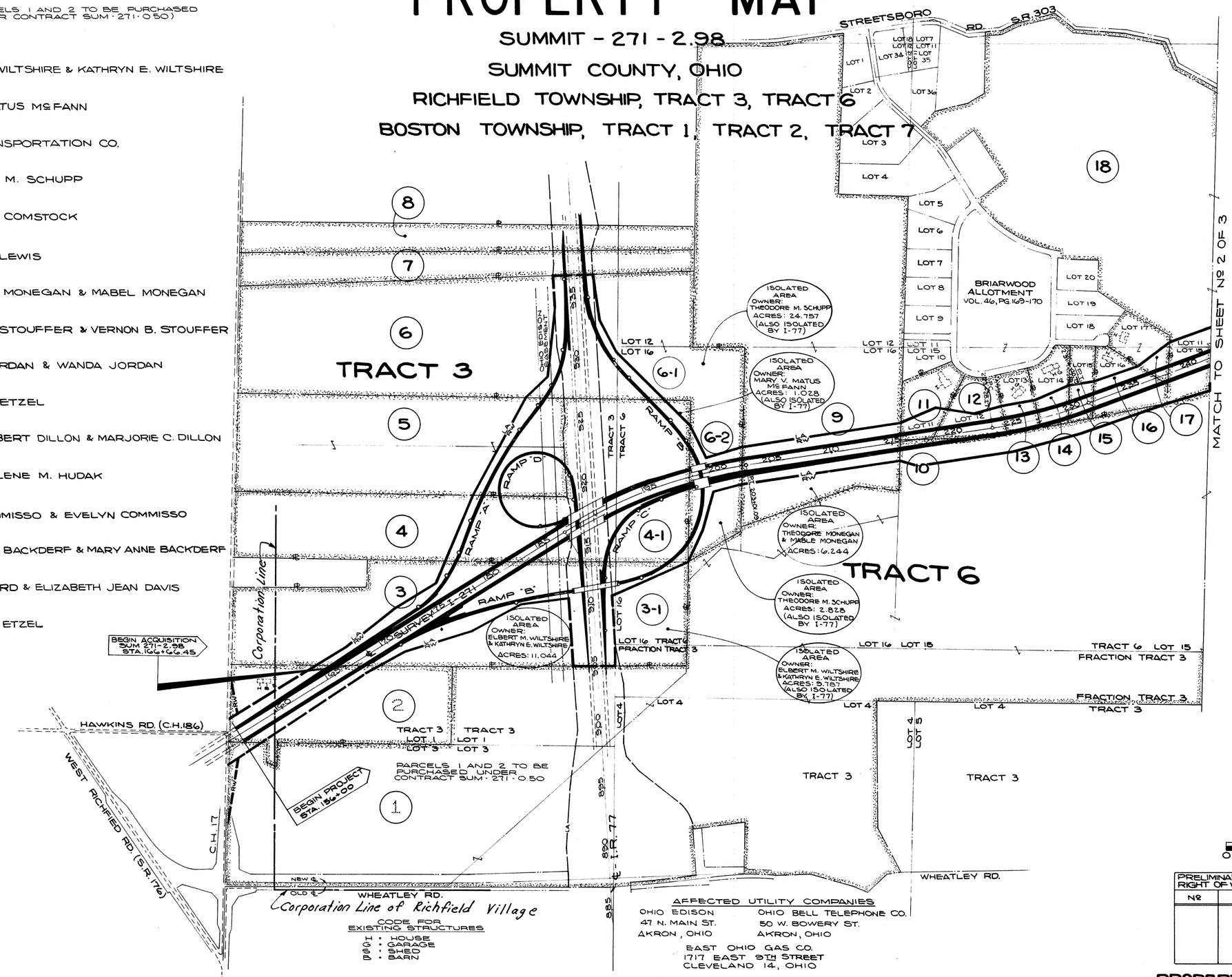
FED. RD.	STATE	PROJECT	
2	OHIO		

476/510

SUM-271-2.98

RIGHT OF WAY SHEET 6/40

1. GORDON A. STOUFFER & VERNON B. STOUFFER (PARCELS 1 AND 2 TO BE PURCHASED UNDER CONTRACT SUM-271-0.50)
2. PEMCO, INC.
3 & 3-1. ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE
4 & 4-1. MARY V. MATUS McFANN
5. LYONS TRANSPORTATION CO.
6, 6-1, 6-2. THEODORE M. SCHUPP
7. BERTHA M. COMSTOCK
8. METTIE E. LEWIS
9. THEODORE MONEGAN & MABEL MONEGAN
10. GORDON A. STOUFFER & VERNON B. STOUFFER
11. ALBERT JORDAN & WANDA JORDAN
12. WILLIAM C. ETZEL
13. WILLIAM ROBERT DILLON & MARJORIE C. DILLON
14. JOHN & ARLENE M. HUDAK
15. JAMES COMMISSO & EVELYN COMMISSO
16. RICHARD H. BACKDERF & MARY ANNE BACKDERF
17. JOHN RICHARD & ELIZABETH JEAN DAVIS
18. WILLIAM C. ETZEL



Corporation Line of Richfield Village

CODE FOR EXISTING STRUCTURES
H : HOUSE
G : GARAGE
S : SHED
B : BARN

AFFECTED UTILITY COMPANIES

OHIO EDISON, 47 N. MAIN ST., AKRON, OHIO
OHIO BELL TELEPHONE CO., 50 W. BOWERY ST., AKRON, OHIO
EAST OHIO GAS CO., 1717 EAST 9TH STREET, CLEVELAND 14, OHIO

GRAPHIC SCALE
0 400' 800' 1200' 1600'

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

№	REVISIONS	MADE BY	DATE

Rev. 10-31-67 C.E.H.

PROPERTY MAP SHEET № 1 OF 3

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

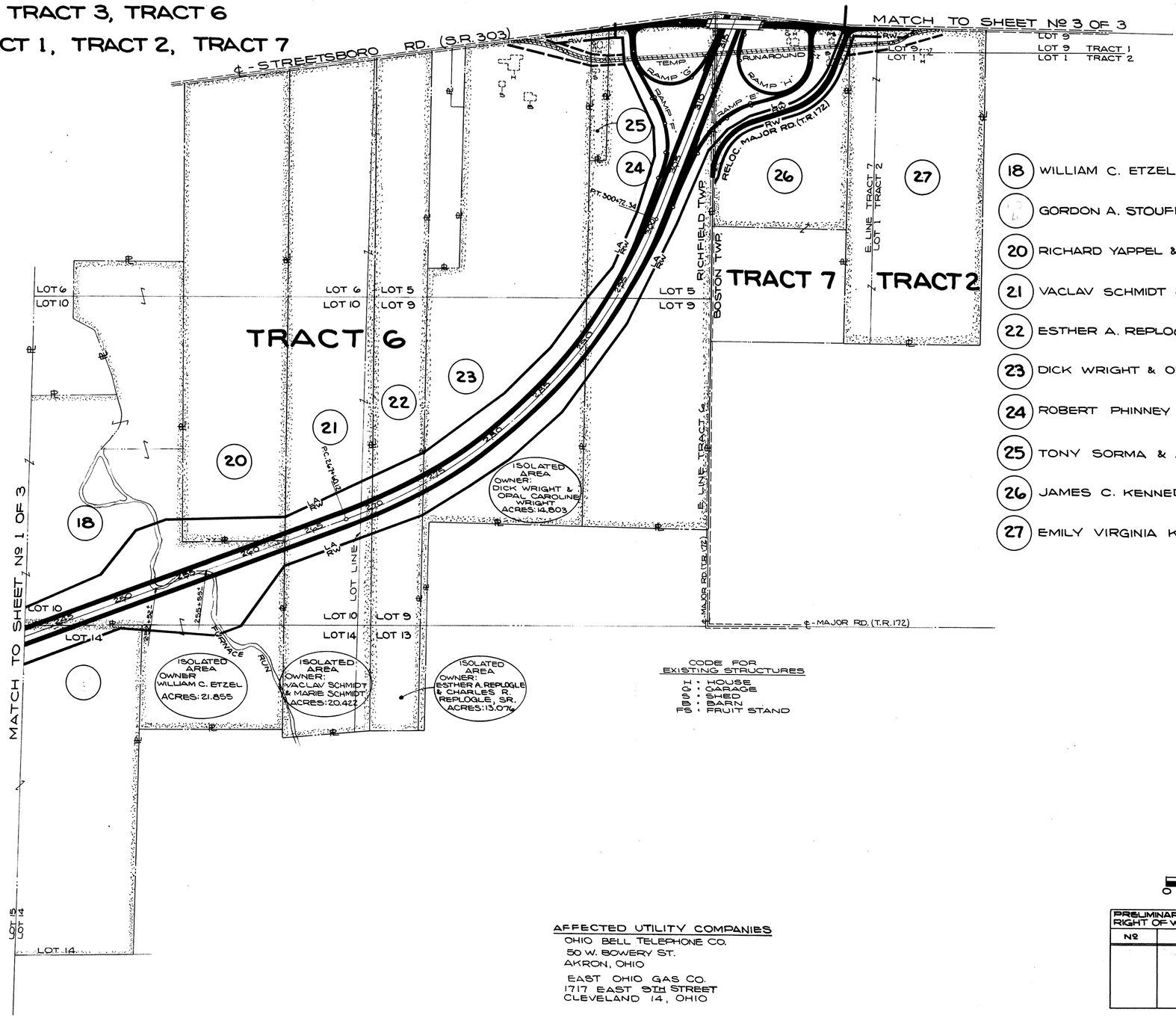
PROPERTY MAP

FED. RD.	STATE	PROJECT	
2	OHIO		

477 / 510

SUM-271-2.98

RIGHT OF WAY SHEET 7 / 40



18 WILLIAM C. ETZEL

GORDON A. STOUFFER & VERNON B. STOUFFER

20 RICHARD YAPPEL & LENA YAPPEL

21 VACLAV SCHMIDT & MARIE SCHMIDT

22 ESTHER A. REPLOGLE & CHARLES R. REPLOGLE, SR.

23 DICK WRIGHT & OPAL CAROLYN WRIGHT

24 ROBERT PHINNEY

25 TONY SORMA & ANN Y. SORMA

26 JAMES C. KENNEDY

27 EMILY VIRGINIA KENNEDY

CODE FOR EXISTING STRUCTURES

H : HOUSE
G : GARAGE
S : SHED
B : BARN
FS : FRUIT STAND

AFFECTED UTILITY COMPANIES

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS CO.
1717 EAST 9TH STREET
CLEVELAND 14, OHIO

GRAPHIC SCALE

0 400' 800' 1200' 1600'

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

PROPERTY MAP SHEET Nº 2 OF 3

K. & E.

PROPERTY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

FED. RD.	STATE	PROJECT	
2	OHIO		

478/510

SUM-271-2.98

RIGHT OF WAY SHEET 8/40

28 ROBERT PHINNEY

29 LLOYD L. BIGELOW

30 FRED L. ROLLER & EDITH ROLLER

31 ELDEN N. McVEY & CLAUDIA W. McVEY

32 JENNIE BIGELOW

33 LAURA MANCZ

34 HENRY G. BENDER

35 & 35-1 BERNARD PRUSSAK, OWNER; ANNA J. PRUSSAK, LIFE ESTATE

36 FRANCIS HAWKSWELL Et. Al.

37 HAZEL HOFFMAN

38 FRANCIS HAWKSWELL

39 FRANCIS HOAG & MARION HOAG

40 THEOPHILE PRUSAK & SOPHIE PRUSAK

41 & 41-1 HARRY R. HORVITZ, WILLIAM D. HORVITZ & FRANCIS E. KANE CO-EXECUTORS OF THE ESTATE OF S.A. HORVITZ

42 THE STATE OF OHIO

43 FIRST METHODIST CHURCH OF BEDFORD, OHIO

44 STATE OF OHIO TURNPIKE COMMISSION

END PROJECT SUM-271-2.98 STA. 421+49.75

BEGIN PROJECT SUM-271-7.65 STA. 405+00

C.H.3

RIVER

C. & P. R.R.

CUYAHOGA

OHIO

RAILROAD

ISOLATED AREA OWNER: HENRY G. BENDER ACRES: 3.085

ISOLATED AREA OWNER: THE STATE OF OHIO ACRES: 0.808

ISOLATED AREA OWNER: HENRY G. BENDER ACRES: 17.998

ISOLATED AREA OWNER: JENNIE BIGELOW ACRES: 3.857

ISOLATED AREA OWNER: THEOPHILE PRUSSAK & SOPHIE PRUSSAK ACRES: 11.129

ISOLATED AREA OWNER: FRANCIS HAWKSWELL ET AL ACRES: 3.306

ISOLATED AREA OWNER: FRANCIS HOAG & MARION HOAG ACRES: 0.626

BOSTON MILLS RD. (C.H.32)

OHIO TURNPIKE

TRACT 1

TRACT 2

TRACT 5

TRACT 6

TRACT 6

RICHFIELD TWP.

BOSTON TWP.

E. LINE TR. 5 & W. LINE TR. 7

E. LINE TR. 7 & W. LINE TR. 6

TRACT 7

TRACT 3

RAMP L

RAMP M

RAMP K

RAMP J

TEMPORARY RUNAROUND

LA RW

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8

RECOSTINE RD. (T.R.T.1) STINE RD. (T.R.T.1)

℄ - STREETSBORO RD. (S.R.303)

MATCH TO SHEET Nº 2 OF 3

END ACQUISITION SUM-271-2.98 STA. 425+49.26

BEGIN ACQUISITION SUM-271-7.65 STA. 425+49.26

GRAPHIC SCALE

0 400' 800' 1200' 1600'

AFFECTED UTILITY COMPANIES

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS CO.
1717 EAST 9TH STREET
CLEVELAND 14, OHIO

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	REVISED PCL. 35WL & 35-1-WL		6-14-66

PROPERTY MAP SHEET Nº 3 OF 3

C.S.E.

SUMMARY OF RIGHT-OF-WAY REQUIRED

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

479/510

RIGHT OF WAY SHEET 9/40

TOTAL NUMBER OF OWNERS WITH STRUCTURES TO BE TAKEN 5

TOTAL NUMBER OF AFFECTED OWNERS 36

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORRECTION (ACRES)	TO BE ACQUIRED LAND (ACRES)	TO BE ACQUIRED PORTION RD. OCCUPIES	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	PARTICIPATION FUNDS	SHEET Nº	REMARKS
1 WL 1 WD	GORDON A. STOUFFER AND VERNON B. STOUFFER	3113	500	—	—	—	—	—	—	—		11 11	PARCEL PURCHASED UNDER CONTRACT SUM-271-0.50
2 WL 2 WD	PEMCO, INC., A CORPORATION	4031	249	—	—	—	—	—	—	—		11-12 11	PARCEL PURCHASED UNDER CONTRACT SUM-271-0.50
3 WL 3-1 WL 3 X	ELBERT M. WILTSHIRE AND KATHRYN E. WILTSHIRE	2227	490	71.93	66.962	17.461 1.860 0.055	4.030 2.940	—	19.84	11.044(LL) 9.787(LL)		11-12-13-14 13-15 12	3 WL HAS 4.030 AC OCCUPIED BY I-77 3-1 WL HAS 2.940 AC OCCUPIED BY I-77 (PCL 3-1 WL PREVIOUSLY ISOLATED BY I-77) 3 X - RELOCATE A WATER COURSE FROM A PROPOSED CULVERT
4 WL 4-1 WL	MARY V. MATUS McFANN	2524	28	113.761	64.15	10.997 20.416	4.976 4.594	—	22.139 1.028(LL)	—		12-13-14 13-14-15-17	4 WL HAS 4.976 AC OCCUPIED BY I-77 (ALSO PREVIOUSLY OCCUPIED BY I-77) 4-1 WL HAS 4.594 AC OCCUPIED BY I-77
5 WL	LYONS TRANSPORTATION CO.	3702 3772	479 661	49.611	49.353	9.614	—	—	39.739	—		14-16	
6 WL 6-1 WL 6-2 WL 6-1 X	THEODORE M. SCHUPP	3171	244	96.92	—	1.390 3.626 5.192 0.0534	3.638 3.373 —	—	52.116 (SEE 6-2 WL) 24.757(LL)	— — 2.828(LL)		16 17 15-17-18 17	6 WL HAS 3.638 AC OCCUPIED BY I-77 6-1 WL HAS 3.373 AC OCCUPIED BY I-77 6-1 WL & 6-2 WL PREV. ISOLATED BY I-77 6-1 X - RELOCATE A WATER COURSE FROM A PROPOSED CULVERT
7	BERTHA M. COMSTOCK	1531	253	—	—	—	—	—	—	—		—	NOT REQUIRED
8	METTIE E. LEWIS	2159	645	—	—	—	—	—	—	—		—	NOT REQUIRED
9 WL	THEODORE MONEGAN AND MABEL MONEGAN	1819	505	119.19	—	9.086	—	3	103.86	6.244(LL)		18-19	
10 WL 10 X	GORDON A. STOUFFER AND VERNON B. STOUFFER	3113	500	388.40	—	5.668 6.055	—	—		379.86	FUNDS	18-19-20 19-20	10 X - CHANNEL RELOCATION
11 WL	ALBERT JORDON AND WANDA JORDON	3817	336	4.96	—	1.533	—	—	3.427	—		19	LOT 11 BRIARWOOD ALLOTMENT
12 WL	WILLIAM C. ETZEL	1936	662	5.05	—	2.934	—	—	2.116	—		19	LOT 12 BRIARWOOD ALLOTMENT
13 WL	WILLIAM ROBERT DILLON AND MARJORIE C. DILLON	3294	167	2.98	—	1.479	—	—	1.501	—		19	LOT 13 BRIARWOOD ALLOTMENT
14 WL	JOHN AND ARLENE M. HUDAK	3901	350	3.95	—	1.637	—	—	2.313	—		19-20	LOT 14 BRIARWOOD ALLOTMENT
15 WL	JAMES COMMISSO AND EVELYN COMMISSO	3903	253	2.81	—	1.381	—	—	1.429	—		19-20	LOT 15 BRIARWOOD ALLOTMENT
16 WL	RICHARD H. BACKDERF AND MARY ANNE BACKDERF	3405	471	5.33	—	3.964	—	—	1.366	—		20	LOT 16 BRIARWOOD ALLOTMENT
17 WL	JOHN RICHARD AND ELIZABETH JEAN DAVIS	3402	488	4.04	—	0.813	—	—	3.227	—		20	LOT 17 BRIARWOOD ALLOTMENT
18 WL	WILLIAM C. ETZEL	1936	662	290.26	183.2381	26.701	—	—	134.6821	21.855(LL)		20-21-22	
20 WL	RICHARD YAPPEL AND LENA YAPPEL	2332	226	62.30	—	2.352	—	—	59.948	—		21-22	
21 WL	VACLAV SCHMIDT AND MARIE SCHMIDT	775	245	75.00	—	5.855	—	—	48.719	20.422(LL)		22	
22 WL	ESTHER A. REPLOGLE AND CHARLES R. REPLOGLE, SR.	2319	495	45.45	—	3.858	—	—	28.516	13.076(LL)		22-23	
23 WL 23 WD 23 T	DICK WRIGHT AND OPAL CAROLYN WRIGHT	2651	197	90.735	—	14.559 0.146 0.535	0.241	—	60.986	14.803(LL)		22-23-25 27-29 27-29	23 T - TEMPORARY RUNAROUND
24 WL 24 WD 24-1 T 24 T	ROBERT PHINNEY	4329	360	78.91	—	24.230 0.035 0.0685 0.213	1.185 0.030 — —	—	14.701	38.729		23-25-26-27-29 27-29 27-29 27-29	24-1 T RECONSTRUCT DRIVE 24 T - TEMPORARY RUNAROUND
25 WD 25-1 T 25 T	TONY SORMA & ANN V. SORMA	3826	117	3.0	—	0.0609 0.1395 0.229	0.0913 — —	—	2.8478	—		27-29 27-29 27-29	25-1 T RECONSTRUCT DRIVE 25 T TEMPORARY RUNAROUND
26 WL 26 WD 26 T 26 X	JAMES C. KENNEDY	1541	573	55.12	—	12.056 2.828 0.013 0.078	1.302 0.258 — —	6	—	38.676		26-27-28 25-26-28 26-28 26	26 T - TEMPORARY RUNAROUND 26 X - RELOC. A WATER COURSE FROM A PROPOSED CULVERT
27 WD 27 T	EMILY VIRGINIA KENNEDY	1541	576	55.12	—	0.367 0.390	0.329 —	—	—	54.424		26-28 26-28	27 T - TEMPORARY RUNAROUND
28 WL 28 WD 28 T	ROBERT PHINNEY	4329	360	14.32	—	0.410 1.197 0.083	0.744 0.559 —	—	—	11.410		26-27-28 26-28 28	28 T - RECONSTRUCT DRIVE ALSO OWNER OF PCL 24 WL
29 WL 29 WD 29 T 29-1 T 29-2 T	LLOYD L. BIGELOW	2625	107	117.542	90.042	7.048 0.139 0.094 0.210 0.392	0.482 0.081 — — —	—	82.050 (INCLUDES 17.05 AC PREVIOUSLY ISOLATED BY OHIO TURNPIKE)	0.162	FUNDS	27-28-31 28 32-34 28-31 27	29 T - TEMPORARY RUNAROUND 29-1 T - RELOCATE DRIVEWAY 29-2 T - CONSTRUCT SERVICE RD.
30 WL 30 WD 30 T	FRED L. ROLLER AND EDITH ROLLER	2872	262	109.353	—	0.215 1.006 0.085	0.293 0.362 —	—	107.477	—		27-29 27-29 27-29	30-T - RELOCATE DRIVEWAY
31	ELDEN N. McVEY AND CLAUDIA W. McVEY	3313	248	—	—	—	—	—	—	—		28-31	NOT REQUIRED
32 WL 32 T	JENNIE BIGELOW	3576	666	64.8541	63.8541	32.966 0.544	—	—	3.269	27.6191	H	28-31-32-35 32-34	32 T - TEMPORARY RUNAROUND
33 WL	LAURA MANCZ	1600 3053	404 629	70.46	50.26	2.203	—	—	—	48.057		35-35A	
34 WL	HENRY G. BENDER	4018 2155	227 426	74.102	72.592	36.283	—	—	18.311	17.998(LL)		33-34-35-35A-36	3.085 AC OF THE LEFT RESIDUE IS ISOLATED (15.226 AC NOT ISOLATED)
35 WL	BERNARD PRUSSAK, OWNER; ANNA J. PRUSSAK, LIFE ESTATE	3489	573	4.008	—	0.844	—	—	3.164	—	TYPE	33-34	
35-1 WL		1858	737	29.73	17.753	0.150	—	—	17.603	—			
36 WL	FRANCES HAWKSWELL, ET. AL.	4202	617	6.60	—	1.959	—	2	1.335	3.306(LL)		35A-36-37	
37 WL	HAZEL HOFFMAN	4202	616	1.0	1.003	1.003	—	—	—	—	PARCELS	36-37	
38 WL	FRANCES HAWKSWELL	3888	426	1.0	—	1.00	—	1	—	—		36-37	
39 WL	FRANCIS HOAG & MARION HOAG	3888	432	1.0	—	0.374	—	—	—	0.626(LL)		36-37	
40 WL	THEOPHILE PRUSSAK AND SOPHIE PRUSSAK	1742	547	43.136	—	8.01	—	—	23.997	11.129(LL)		37	
41 WL 41-1 WL	HARRY R. HORVITZ, WILLIAM D. HORVITZ, AND FRANCES E. KANE, CO-EXECUTORS OF THE ESTATE OF S.A. HORVITZ	3412	555	134.52	—	9.713 4.098	—	—	5.144	115.565		37-38 38-39	
42 WL	STATE OF OHIO	1540 1540	411 413	25.257	—	8.969	—	—	15.48	0.808(LL)	ALL	38-39	
43 WL 43 T 43 WA	FIRST METHODIST CHURCH OF BEDFORD, OHIO	2633	31	56.31	—	16.863 0.052 —	0.123 — —	3	29.774	9.55		39-40 40 40	ADVANCE PURCHASE TO BE MADE ON THIS PROPERTY 43-T - RELOCATE DRIVEWAY 43 WA - REMOVE SWIMMING POOL
44 AERIAL 44 WL 44-1 WL 44 T 44-1 T	OHIO TURNPIKE COMMISSION STATE OF OHIO					1.245 1.848 0.753 10.071 10.783	——	——				32-33-35 32-33 33-35 32-33-34 32-33-35-35A	
29-1 WL	LLOYD L. BIGELOW	2625	107	117.542	90.042	0.080			82.050	0.162		34	

LL = LANDLOCKED

PRELIMINARY SUBMITTAL : MARCH 24, 1965

RIGHT OF WAY COMPLETION DATE : OCTOBER 15, 65

DATE OF PREPARATION		
REV.	DATE	DESCRIPTION
2	3-11-66	Revised TBA's & Residues for P.I.s
		29-WL, 29-T, 32-WL, 32-T added P.I. 29-1 WL
3	6-14-66	Revised P.I. 35 WL & 35-1 WL

KEY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

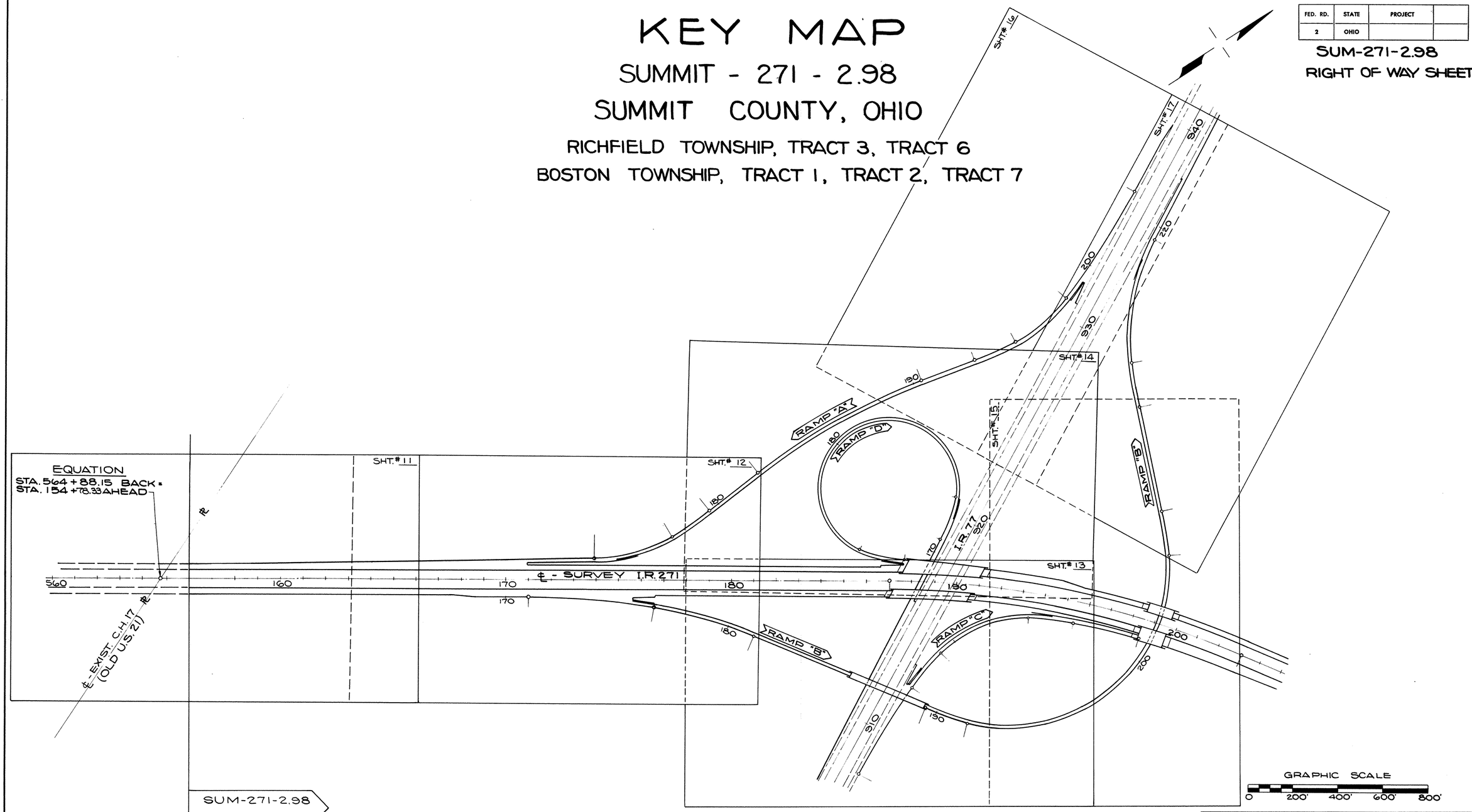
BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

FED. RD.	STATE	PROJECT	
2	OHIO		

480/510

SUM-271-2.98

RIGHT OF WAY SHEET 10/40



SUM-271-2.98

BEGIN PROJECT
STA. 156 + 00

GRAPHIC SCALE

0 200' 400' 600' 800'

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

KEY MAP

STA. 154+72.18 TO STA. 205+00

INTERCHANGE WITH I.R. 77

FED. RD.	STATE	PROJECT	
2	OHIO		

481
510

SUM-271-2.98
RIGHT-OF-WAY SHEET

40

LEGEND

LA RW	LIMITED ACCESS RIGHT-OF-WAY (PROPOSED)
RW	PROPOSED AERIAL EASEMENT LINE
RW	SIDE ROAD RIGHT-OF-WAY (PROPOSED)
LA RW	LIMITED ACCESS AS PROPOSED UNDER PREVIOUS CONTRACT ALL PROPOSED EASEMENTS NOT INCLUDED ABOVE
	CONSTRUCTION LIMITS
	EXISTING RIGHT-OF-WAY (SIDE ROADS)
	EXISTING PROPERTY LINES
	FORMER PROPERTY OR LOT LINE
	EXISTING & PROPOSED FENCE
	POLE FOR OHIO EDISON POWER LINES
	POLE FOR OHIO BELL TELEPHONE LINES
	POLE FOR OHIO EDISON & OHIO BELL TELEPHONE LINES
	TREE REMOVAL - TEMPORARY PARCELS

THE TICK MARKS REPRESENT THE COUNT AS BEING LEFT OR RIGHT OF THE CENTER LINE SURVEY AND LOCATED BETWEEN THE CORRESPONDING 100 FOOT STATIONS

Quant-ty Summary Type 47 Fence		
Sheet No	Variable Participation	100% State
11	2013	
12	2927	
13	1083	
14	1068	
15	1312	
16	1045	
17	1245	
18	2976	
19	2040	
20	1833	
21	1608	
22	2880	
23	2994	
25	2998	
26	2392	
27	2067	
31	3222	25
32	1479	53
33	1933	436
34	390	729
35		1060
35A		989
36	3335	
37	3031	
38	3009	
39	3253	
40	1128	
GRAND TOTALS	52,633	5,272

END PROJECT SUM-271-0.50 EQUATION STA. 566+09.82 = STA. 156+00

BEGIN PROJECT SUM-271-2.98 STA. 156+00

ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE
3 WL — TBA : 17.461 AC; PRO. : 4.030 AC; TOTAL : 21.491 AC

PEMCO INC., A CORPORATION
(PARCEL TO BE PURCHASED UNDER CONTRACT SUM-271-0.50)

GORDON A. STOUFFER & VERNON B. STOUFFER
(PARCEL TO BE PURCHASED UNDER CONTRACT SUM-271-0.55)

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

TRACT 3
SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 3 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

HAWKINS ROAD (T.R. 185) TO BE ABANDONED

℄ - SURVEY (I-271)

EQUATION: N 56°58'19" E BACK + N 56°58'24" E AHEAD

Richfield Village

Richfield Township

CONSTRUCTION LIMITS

516 LIN. FT. R/W FENCE

1097 LIN. FT. R/W FENCE

EXIST. R/W

TREE ROW

SHED

BARN

CISTERN

WOVEN WIRE FENCE

OHIO EDISON 3 WIRES 12.5 KV

OHIO EDISON & OHIO BELL TEL. 183

12" GAS LINE T.P.L. № 1

16" GAS LINE T.P.L. № 2

8" TO 10" APPLE ORCHARD

10" TO 12" APPLE ORCHARD

1-15" WALNUT

17-6" TO 8" APPLE

12" ELM

6" MAPLE

15-APPLE

10"APPLE

6"CHERRY

6"MAPLE

6"-10" CHERRIES

10 APPLES

1-24" WALNUT

19-6" TO 8" APPLE

20" WALNUT

10" WALNUT

18" APPLE

6" TO 15" ELMS

54+72.18
564+88.15
565+15.54
564+70.82
565+11.00
364+25
33

374+55 CS

376+53.84

220.32'

N 88°16'37" E 150

1656 CS

164+33.28
147.43

206.73'
N 57°25'40" E

N 56°58'24" E

N 88°16'37" E 313.25

N 88°16'37" E (417.4)

N 0°13'09" E

N 0°12'26" W

S 0°43'23" E 141.04

N 0°43'23" W 141.04

62.20'
N 88°16'37" E

RW MON. FD

RW MON. FD & USED

RW MON. FD & USED

0.24'

0.21'

0.13'

0.50'

0.25'

0.30'

0.40'

0.70'

0.85'

0.90'

1.00'

1.35'

1.50'

1.80'

2.00'

2.10'

2.20'

2.30'

2.40'

2.50'

2.60'

2.70'

2.80'

2.90'

3.00'

3.10'

3.20'

3.30'

3.40'

3.50'

3.60'

3.70'

3.80'

3.90'

4.00'

4.10'

4.20'

4.30'

4.40'

4.50'

4.60'

4.70'

4.80'

4.90'

5.00'

5.10'

5.20'

5.30'

5.40'

5.50'

5.60'

5.70'

5.80'

5.90'

FED. RD.	STATE	PROJECT	
2	OHIO		

482/510

SUM-271-2.98

RIGHT OF WAY SHEET 12/40

MATCH TO R/W SHEET 10 OF 40

MATCH TO R/W SHEETS 13 & 14 OF 40

BEGIN SHEET

END SHEET – STA. 180+00 (MAINLINE)

STA. 165+00

STA. 180+00 (RAMP "A")

STA. 180+00 (RAMP "B")

END ACQUISITION
SUM-271-0.50
EQUATION
STA. 5776+76.27
STA. 166+66.45

BEGIN ACQUISITION
SUM-271-2.98
STA. 166+66.45

MARY V. MATUS Mc FANN
4 WL
T.B.A. = 10.997 Ac
P.R.O. = 4.976 Ac
TOTAL = 15.973 Ac

ELBERT M. WILTSHIRE &
KATHRYN E. WILTSHIRE
3 WL
T.B.A. = 17.461 Ac
P.R.O. = 4.030 Ac
TOTAL = 21.491 Ac

3 X
T.B.A. = 0.055 Ac

PEMCO INC.
A CORPORATION
2 WL

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH
(LL)

GORDON A. STOUFFER
&
VERNON B. STOUFFER

℄ SURVEY (I-271) N 56°58'24" E

STRUCTURE Nº SUM-271-032J

TO N.W. PROP. COR. 1834.44'

N 89°09'54" E

496.59' TO ℄ SURVEY RD.

1861.4' TO N.E. PROPERTY CORNER

N 21°42'45" E 516.22

N 56°58'24" E 324.73

N 50°41'46" E 503.02

N 51°29'40" E 266.73

N 55°50'05" E 230.63

N 71°44'33" E 255.98

N 63°22'51" E 232.23

N 85°16'37" E 803.13

S 24°01'36" E 648.0

S 29°12'45" E 178.85

CONSTRUCTION LIMITS

(1,458 LIN. FT. R/W FENCE)

(14.69 LIN. FT. R/W FENCE)

LA RW

RAMP "A"

RAMP "B"

DRIVE TO BE ABANDONED (FIELD)

DRIVE TO BE ABANDONED

C.S. STA. 177+58.16

P.C. STA. 173+88.87

P.C.C. STA. 170+58.71

NOISE STA. 170+88.87

STA. 171+82.87 274.93

STA. 172+35.27

STA. 171+37

STA. 173+57 50.00' L CULV

STA. 170+21.70

GAS WELL

STORAGE TANKS

OIL WELL

3" E.O.G. PIPE LINE CCF 868

CCF 880

CCF 880

641.52 (DEED)
641.45 (CALC.)
S 0°19'57" E

WOODS

FIELD

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	ADDED GAS LINE	C.B.	6-4-65

STA. 165+00 TO STA. 180+00

• PROPOSED MONUMENTS

6-12"-15" W. CHERRY 2-12"-15" APPLE 6-12"-15" W. CHERRY
4-12"-18" MAPLE
2-12"-15" APPLE
3-12" HICKORY 1-18" BEECH
2-24" MAPLE 4-12" ASH
1-12" WILLOW
4-12" ASH 1-24" HICKORY 1-18" APPLE 1-24" ELM 1-12" APPLE
PINE GROVE 1-36" MAPLE 1-24" CHERRY
2-12" POPLAR 2-12" APPLE
1-12" POPLAR 2-12" CHERRY 2-12" APPLE
1-12" APPLE 1-12" CHERRY 2-12" POPLAR
3-12" APPLE 2-12" CHERRY
2-12" APPLE 1-12" MAPLE 1-15" MAPLE
4-20" HICKORY 4-12" POPLAR 1-12" APPLE 1-12" BEECH
3-12" W. CHERRY
1-12" MAPLE
3-12" APPLE 1-12" MAPLE
2-12" ELM
1-18" CHERRY 1-12" APPLE 1-12" ELM
1-12" POPLAR
15-12" MAPLE 1-12" SYCAMORE 1-12" POPLAR 1-12" HICKORY 1-15" ELM 1-15" OAK
3-12" POPLAR 1-20" MAPLE 2-20" CHERRY 1-15" MAPLE 1-15" POPLAR 3-12" HICKORY 7-12" ELM
OIL WELL

MATCH TO R/W SHEET 12 OF 40

MATCH TO R/W SHEET 14 OF 40

MATCH TO R/W SHEET 15 OF 40

FED. RD.	STATE	PROJECT	
2	OHIO		

483
510

SUM-271-2.98

RIGHT OF WAY SHEET 13 / 40

BEGIN SHEET STA. 180+00 (MAINLINE)

STA. 180+00 (RAMP "B")

STA. 193+00 (MAINLINE) END SHEET

STA. 194+00 (RAMP "B")

MARY V. MATUS McFANN
4 WL

ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE
3 WL

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

℄ SURVEY (I-271)

℄ SURVEY CURVE DATA
P.I. STA. 195 + 17.76
Δ = 23°18'16" RT.
D_c = 1°28'
R = 3906.53'
L_c = 1588.94'
T = 805.61'
E = 82.20'

℄ EXIST. I-77

RAMP "B"

RAMP "C"

TRACT 3
TRACT 6

LOT 1
LOT 16

OHIO EDISON CO. 38 KV 6 WIRES

OHIO EDISON EASEMENT LINE

DRIVE TO BE ABANDONED

EXISTING LIMITED ACCESS R/W

CONSTRUCTION LIMITS (550 LIN. FT. R/W FENCE)

NEGOTIATED AS AN EASEMENT UNDER CONT. SUM. U.S. 21-15.55

MATCH LINE "A-A" STA. 907+00

MARY V. MATUS McFANN
4-1 WL
TBA : 20.416 Ac
PRO. : 4.584 Ac
TOTAL : 25.010 Ac

ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE
3-1 WL
TBA : 1.860 Ac
PRO. : 2.940 Ac
TOTAL : 4.800 Ac

WOODS

(LL)

2-15" APPLE
1-20" MAPLE
1-18" MAPLE
2-12" APPLE

2-15" APPLE
3-12" MAPLE
3-12" POPLAR

2-15" APPLE
3-20" CHERRY
1-34" SYCAMORE
1-24" CHERRY

3-20" CHERRY
6-15" CHERRY

1-12" CHERRY
6-12" ELM
1-12" MAPLE

1-15" OAK
3-18" BEECH

2-12" ELM
4-12" BEECH
1-15" MAPLE

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL	DATE : MARCH 24, 1965
RIGHT OF WAY COMPLETION	DATE : OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE

NOTE: ▨ LAND, SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

◉ = PROPOSED MONUMENTS

M.L. STA. 180+00 TO STA. 193+00 - S. OF ℄

FED. RD.	STATE	PROJECT	
2	OHIO		

484/510

SUM-271-2.98

RIGHT OF WAY SHEET 14/40

MATCH TO R/W SHEETS 16 & 17 OF 40

GRAPHIC SCALE

0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

NOTE: ▨ LAND SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

1-15" CHERRY
1-15" APPLE
2-12" POPLAR

2-24" APPLE

2-12" CHERRY

STA. 190+50 (RAMP "A")

℄ L.A. RW (1,068 LIN. FT. R/W FENCE)

RAMP "D"

LYONS TRANSPORTATION CO., A CORPORATION
5 WL
TBA .9614 Ac

RAMP "A"

N 2°42'45" E
576.22'
℄ CONSTRUCTION LIMITS

N 2°42'45" E
806.78'

182+32.32
647.04'

185

180

2714.54' TO PROPERTY CORNER
760'
N 89°21'51" E
LANE TO BE ABANDONED

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

℄ SURVEY CURVE DATA
P.I. STA. 195 + 17.76
Δ = 23°18'16" RT.
D_c = 1°28'
R = 3906.53'
L_c = 1588.94'
T = 805.61'
E = 82.20'

P.C. STA. 182+23.49

LANE TO BE ABANDONED

WOODS

MARY V. MATUS McFANN
4 WL

C.S. STA. 185+51.53

185

S.T. STA. 187+51.33

P.C. STA. 187+12.15

℄ SURVEY (I-271)

185

N 56°58'24" E

19°22'45"

STA. 185+97.0

189+35.03 I-271
911+08.10 I-77

32°11'30"

182+57.15

138+02.10 PROP. COR.

ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE
3 WL

BEGIN SHEET
STA. 180+00 (MAINLINE)

N 89°09'54" E
496.59' TO RAMP ℄

2331.03' TO PROPERTY CORNER

MATCH TO R/W SHEET 12 OF 40

MATCH TO R/W SHEET 13 OF 40

OHIO EDISON CO. 138 KV & WIRES

OHIO EDISON EASEMENT

S.C. STA. 172 + 35.00

100'

630'

T.S. STA. 170 + 35.00

173+11.8 RAMP "D"
80.00' CULV.

924+00
170

STA. 924+00 (I-77)

175

170'

150'

℄ EXIST. I-77

EXISTING LIMITED ACCESS LINE

NEGOTIATED AS AN EASEMENT UNDER CONT. SUM. U.S. 2-15.55

1-8" ASH
1-12" ASH
5-12"-18" HICKORY

1-15" ELM
2-12" BEECH
2-15" POPLAR

503.62'
N 4°49'28" W

920'
N 4°49'28" W

333.55'
N 4°49'28" W

38.43'
N 16°32'51" W

189+64.62
918+50.38
(100.00')

189+41.29
918+00.00
(147.74')
(50')

0.04'

WOOD RD.
918+70.32'

918+83.93

MARY V. MATUS McFANN
4-1 WL

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 & TRACT 6
RANGE 12 WEST
TOWNSHIP 4
NORTH

1 TRACT 3
TRACT 6

STA. 193+00 (MAINLINE)
END SHEET

MATCH TO R/W SHEET 15 OF 40

M.L. STA. 180+00 TO STA. 193+00 - N. OF ℄

FED. RD.	STATE	PROJECT	
2	OHIO		

485 / 510

SUM-271-2.98

RIGHT OF WAY SHEET 15 / 40

MATCH TO R/W SHEETS 13 & 14 OF 40

MATCH TO R/W SHEETS 16 & 17 OF 40

ELBERT M. WILTSHIRE &
KATHRYN E. WILTSHIRE

3-1 WL

STA. 194+00 (RAMP "B")

BEGIN SHEET — STA. 193+00 (MAINLINE)

℄ - EXIST. I-77

EXISTING LIMITED ACCESS LINE ℄

STA. 324+00 (I-77)

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

(LL)

N66°36'09"E

N 89°09'54" E

433.43' TO I-77 ℄ LINE

IRON FD. & USED

195+82.29
457 Gt

(768 LIN. FT. R/W FENCE)

N41°01'32"E

MARY V. MATUS McFANN

4-1 WL

C.S. STA. 193+53.11

N 50°58'24"E

N 57°02'06"W

℄ PAVED CHANNEL

S.C. STA. 195+53.11

195

RAMP "C"

℄ - SURVEY (I-271)

P.I. STA. 195+17.76

LOT 1
LOT 16
TRACT 3
TRACT 6

MARY V. MATUS McFANN

4-1 WL

TBA : 20.416 Ac
PRO : 4.594 Ac
TOTAL : 25.01 Ac

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

WOODS

6-2 WL

S 0°03'53"E

632.50'

198+00
550'

N 58°50'18"E
502.99'

N 5°23'44"E

CONSTRUCTION LIMITS

430.16'

LA R/W

RAMP "B"

200

198+21.72
298'

℄ SURVEY CURVE DATA
P.I. STA. 195+17.76
Δ = 23°18'16" RT.
D_c = 1°28'
R = 3906.53'
L_c = 1588.94'
T = 805.61'
E = 82.20'

(LL)

THEODORE M. SCHUPP

6-2 WL

TBA • 5.192 Ac

POC. STA. 199+72.22
88.52' RT. 199+75

200+00
160'

END SHEET — STA. 200+00 (MAINLINE)

IRON PIN FD.
IN 28" BEECH

(CALC. FROM FIELD TIE)
58.23' TO ℄ SURVEY
N 10°17'42"E
492.42' TO ℄ SURVEY

410'

C.S. STA. 205+07.48

S.T. STA. 207+07.48

205

S 0°03'53"E

604.35'

200+00
120'

264.47'
S 30°08'56"E

320.45'

(544 LIN. FT. R/W FENCE)

LA R/W

N 42°05'14"W

199+28.69
354.34'

(LL)

(LL)

STA. 208+00 (RAMP "B")

℄ - EXIST. I-77

594.47' TO ℄ I-77
N 89°22'48"E

IRON FD. & USED

7-12" ELM
5-12" BEECH
1-12" MAPLE

2-15" ELM
9-12" MAPLE
1-12" MAPLE
2-24" STUMP
1-18" OAK
1-12" HICKORY

1-15" MAPLE
1-12" BEECH
13-12" ELM

1-24" MAPLE
2-24" BEECH
2-12" BEECH
3-20" BEECH
8-12" ELM
1-12" MAPLE

8-12" ELM
1-20" BEECH
2-12" BEECH

3-15" BEECH
1-12" BEECH
1-36" STUMP
3-15" STUMP

1-20" BEECH
2-24" BEECH
2-15" MAPLE
3-15" CHERRY

2-12-18" OAK
2-18" BEECH

1-15" MAPLE
1-15" OAK
1-15" POPLAR
1-18" BEECH
3-12-15" HICKORY

1-36" BEECH
1-15" HICKORY
1-24" STUMP
1-12" STUMP
2-15" BEECH

2-15" BEECH
2-15" OAK
3-12" OAK
1-15" ELM

2-15" HICKORY
1-24" STUMP
1-18" BEECH
2-15" ELM

3-15" HICKORY
2-18" STUMP
1-15" POPLAR
4-15" OAK

3-15" POPLAR
1-12" STUMP
2-24" BEECH
6-15" POPLAR
3-18" STUMP

NOTE: ▨ LAND, SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

◉ PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO.	REVISIONS	MADE BY	DATE

STA. 193+00 TO STA. 200+00

C.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

486/510

SUM-271-2.98

RIGHT OF WAY SHEET 16/40

MATCH TO R/W SHEET 14 OF 40

GRAPHIC SCALE

0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

NOTE: ▨ LAND SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

THEODORE M. SCHUPP
6 WL
TBA : 1.390 Ac
PRO : 3.638 Ac
TOTAL : 5.028 Ac

LYONS TRANSPORTATION CO.
A CORPORATION
5 WL

PROPERTY LINE AS PER CONTRACT SUM. U.S. 21-15.55

STA. 924+00 (I-77)

STA. 190+50 (RAMP "A")

2524.64' TO PROPERTY CORNER
N 89° 22' 48" E

N 27° 26' 51" E

CONSTRUCTION LIMITS

Ft. STA. 150+60.55

506.78'

(88+153.38 (1103.46'))

STA. 193+12.56

LA RW

N 43° 40' 01" E
251.67'

254.20'

193+50.68

193+81 ℄ RAMP "A"
50.00 CULV.

CHANNEL CURVE DATA
P.I. STA. 50+77
Δ : 47° 30'
D : 400
R : 1433'
L : 331.42'

96' x 42"

P.C.

P.T.

198 S.C. STA. 195+12.56

P.I. 38+51 (1154.51')
T : 928.86 (255')

FIELD DRIVE

OHIO EDISON EASEMENT LINE

100'

OHIO EDISON CO. 138 KV
6 WIRES

OHIO EDISON EASEMENT LINE

P.C.C. STA. 198+14.15

N 4° 32' 51" E
521.97'
(1,045 LIN. FT. R/W FENCE)

LA RW

193+25.89 (1034.16')
534+00 (170')

260'

CONSTRUCTION LIMITS

P.T. STA. 203+75.48

193+67 AS (1080.41')
540+00 (170')

938+00

320'

261'

(190+51.64 (701.13'))
224+00 (170')

101.38'

(190+89.77 (785.50'))
525+00 (150')

N 6° 29' 08" E

197'

N 4° 49' 28" W

203'

201'

N 10° 32' 00" W

300'

N 4° 46' 28" W

193+54.81 (1135.47')
531+00 (170')

51 LA

926+97.09 (I-77 PLANS)
926+97.00 (CALC. AS PER I-71 PLANS)
181.40 24' (50.6 Dia)

NEGOTIATED AS AN EASEMENT
UNDER CONTRACT SUM. U.S. 21-1555

NEGOTIATED AS AN EASEMENT
UNDER CONTRACT SUM. U.S. 21-15.55

193+17.70 (1135.53')
529+00 (150')

273'

138.41'

78' LT. 938+49.44

926+85.37

912+03

MON. FD. 923+54.86

0.04'

925

930

℄ - EXIST. I-77
N 4° 49' 28" W

935

80°

STA. 935+14

MON. FD. 936+58.07

0.04'

936+60

940

S 85° 10' 32" W

MATCH TO R/W SHEET 17 OF 40

I-77 STA. 924+00 TO STA. 940+00-W. OF ℄

FED. RD.	STATE	PROJECT	
2	OHIO		

487/510

SUM-271-2.98

RIGHT OF WAY SHEET 17/40

MATCH TO R/W SHEET 16 OF 40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

STA. 924+00 (I-77)

925 930 935 940

℄ - EXIST. I-77

326+65.97

N 4°49'28"W

90 LA — NEGOTIATED AS AN EASEMENT UNDER CONT. SUM. U.S. 21-15.55

EXISTING LIMITED ACCESS LINE

1333.55'

91 LA — NEGOTIATED AS AN EASEMENT UNDER CONT. SUM. U.S. 21-15.55

RAMP "B"

N 4°49'28"W

585.06

150

220

380

LA RW

326+60

336+71.48

150°

EXIST. LIMITED ACCESS LINE

STA. 222+39.11
END RAMP "B"
91 RT. 938+

P.T. STA. 219+39.11

362.22'

N 11°00'53"W

LA RW

329.54 RP (1230.50')
333.00 (1150')

326+25.97 (1158.04')
336+25

CONSTRUCTION LIMITS

N 28°34'26"W
273.13

213.52 @ RAMP "B"
50°00' CURVE

215

P.C. STA. 218+52.82

198+83.33 (1160.10')
330.50 (300')

LOT 1
LOT 16
LOT 12

195+94.74
1131.32

196+41.35
1175.82

196+56.22

TRACT 3
TRACT 6

LOT 1
LOT 16

MARY V. MATUS Mc FANN

4-1 WL

THEODORE M. SCHUPP

6-1 WL

TBA : 3.426 Ac
PRO. : 3.373 Ac
TOTAL : 6.999 Ac

664.30

N 89°22'48"E

195+05.16
1105.55

6-1 X

0.0534 Ac

P.T. STA. 1+78.65

N (1,249 LIN. FT. R/W FENCE)

210

548.63
548.48

LA RW

N 42°05'14"W

197+09.23
672.22

395.45

(LL)

STA. 208+00 (RAMP "B")

894.47' TO ℄ OF I-77

604.95' TO SUB-TAN
S 0°03'53"E

HUB FD. & USED

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

(LL)

THEODORE M. SCHUPP

6-1 WL

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 12 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

S 65°10'32"W

PROPERTY LINE AS PER CONT. SUM. U.S. 21-15.55

MATCH TO R/W SHEET 15 OF 40

NOTE: ▨ LAND SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
NO	REVISIONS	MADE BY	DATE

I-77 STA. 924+00 TO STA. 940+00 - E. OF ℄

C & E

FED. RD.	STATE	PROJECT	
2	OHIO		

488
510

SUM-271-2.98

RIGHT OF WAY SHEET 18 40

MATCH TO R/W SHEET 15 OF 40

MATCH TO R/W SHEET 19 OF 40

1-20"POPLAR
3-15"POPLAR
6-15"POPLAR

3-18"STUMP
1-18"BEECH
4-15"OAK

1-18"BEECH
1-15"HICKORY
1-24"BEECH
4-12"MAPLE
3-12"BEECH
3-18"BEECH
3-15"ELM

1-18"APPLE
2-12"HICKORY
1-15"ELM

1-15"STUMP

1-15"OAK

2-12"APPLE

1-15"APPLE

3-15"POPLAR

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

THEODORE M. SCHUPP

6-2 WL

THEODORE MONEGAN &
MABEL MONEGAN

9 WL

WOODS

STA. 200+00

STA. 215+00

200+00
120'

LA RW

N 72°15'10"E
300.52

CONSTRUCTION LIMITS

202.69
150.02'

(ELIM. FROM DEED)
375.74' TO PROP CORNER

℄

1322.82'

LA RW

N 80°16'40"E

(1,508 LIN. FT. R/W FENCE)

215+00
150'

SUB-TAN. N 80°16'40"E

152.32'
152.32'

202+62.11

19°27'40"
(LOC. TAN.)

304.04'

205

LANE TO BE ABANDONED

℄-SURVEY (I-271)

N 80°16'40"E

210

STA. 212+20

STA. 212+62

SHED

5'

RUINS OF WELL

GAS WELL

STORAGE TANKS

BEGIN SHEET

END SHEET

CONSTRUCTION LIMITS

LA RW

(1,468 LIN. FT. R/W FENCE)

200+00
160'

224.04'
N 74°52'04"E

202.39'
145.43'

P.T. STA. 203+01.09

1328.27'

N 80°16'40"E

215+00
150'

WOODS

(LL)

(LL)

THEODORE MONEGAN &
MABEL MONEGAN

9 WL

T.B.A. = 5.086 AC

492.42'

N 0°17'42"E

(CALC. FROM FIELD TIE)
534.23' TO ℄-SURVEY

68°30'(CALC)
70°00'(DEED)

1-15"SYCAMORE
1-20"ASH
3-12"CHERRY

1-12"HICKORY
1-15"CHERRY
4-12"ELM

308° 21' 02"(CALC)
309° 40'(DEED)

END

BEGIN

4" FARM TILE

N 68°18'33"E

1000.6'(DEED)

211+35.31
277.67'

N 83°20'25"W

386.8'(DEED)

82°37'25"(CALC)
82°50'(DEED)

N 0°42'56"W
351.53' TO ℄-SURVEY

GRAPHIC SCALE

0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
NO	REVISIONS	MADE BY	DATE

℄ SURVEY
CURVE DATA
P.I. STA. 195+17.76
Δ = 23°18'16" RT.
D_c = 1° 28'
R = 3906.53'
L_c = 1588.94'
T = 805.61'
E = 82.20'

1-12"OAK
1-12"CHERRY
1-12"HICKORY
2-20"BEECH

5-12"ELM
5-20"STUMP
1-15"HICKORY
2-12"HICKORY
2-12"BEECH
3-15"STUMP

IRON PIN FD.
IN 28"BEECH

6-12"ELM

1-12"APPLE

3-12"APPLE

GORDAN A. STOUFFER &
VERNON B. STOUFFER

10 WL

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

PROPOSED MONUMENTS

STA. 200+00 TO STA. 215+00

FED. RD.	STATE	PROJECT	
2	OHIO		

489/510

SUM-271-2.98

RIGHT OF WAY SHEET 19/40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

BRIARWOOD ALLOTMENT
VOL. 46, PG. 169-170

EXISTING R/W

WHITETHORN CIRCLE (50')

N 63°13'52"E 432.51'(PLAT)

N 0°42'56"W 776.77' TO LOT COR 475.64'(PLAT)

THEODORE MONEGAN & MABLE MONEGAN
9 WL

LOT 11
ALBERT JORDAN & WANDA JORDAN
11 WL
T.B.A. = 1.533 AC

LOT 12
WILLIAM C. ETZEL
12 WL
T.B.A. = 2.934 AC

LOT 13
WILLIAM ROBERT DILLON & MARJORIE C. DILLON
13 WL
T.B.A. = 1.479 AC

LOT 14
JOHN & ARLENE M. HUDAK
14 WL
T.B.A. = 1.637 AC

GORDON A. STOUFFER & VERNON B. STOUFFER
10 WL
T.B.A. = 5.668 AC

10 X
6.055 AC

1 I.P. FD. (SEE DETAIL)
2 MON. FD. (SEE DETAIL)
3 WOODEN RAIL FENCE
4 MON. FD. (SEE DETAIL)
5 I.P. FD. (SEE DETAIL)
6 I.P. FD. (SEE DETAIL)
7 I.P. FD. (SEE DETAIL)
8 I.P. FD. (SEE DETAIL)
9 I.P. FD. (SEE DETAIL)
10 I.P. FD. (SEE DETAIL)

121.03'(PLAT)
260.00'(PLAT)
500.00'(PLAT)
N 76°16'44"E
N 13°43'16"W
N 0°42'56"W 633.36'(PLAT)
N 64°46'45"E 1552 LIN. FT. R/W FENCE 998.41'
N 80°16'40"E 1322.82'
N 64°47'45"E 300.24'
N 73°06'16"E 256.48'
N 78°32'53"E 260.21'
N 83°01'23"E 209.95'
S 83°01'23"E 579.41'(PLAT)
N 25°05'22"E
N 87°16'44"E 255.0'(PLAT)
N 80°16'40"E 508 LIN. FT. R/W FENCE 275'
S 75°55'42"E 548.72'
N 80°16'40"E 534.34'
N 80°16'40"E 353.27'
N 78°29'47"E 887.59'
N 87°16'44"E 514.61'(PLAT)
N 76°16'44"E 260.00'(PLAT)
N 73°00'25"E 526.48'
N 83°20'25"W
N 18°43'20"W 362'
N 0°42'56"W 210.00'

STA. 215+00
STA. 220
STA. 223+28.27 P.C.
STA. 225
STA. 227+23.82 P.T.
STA. 230

EXISTING 1 STY FR. HSE
SEPTIC TANK
DRAIN TILE
STORAGE TANKS
DRILLED WATER WELL
CISTERN
GAR.
1 STY FR. HSE
SEPTIC TANK
SEPTIC TANK
PROJECT
WOODEN RAIL FENCE
FENCE
CONSTRUCTION LIMITS
LA RW
STRUCTURE No SUM-271-0429
STRUCTURE No SUM-271-0430
STRUCTURE No SUM-271-0431
STRUCTURE No SUM-271-0432
ABANDONED
TO BE ABANDONED
DRIVE
WOODS
WOODS
OIL WELL
RELOCATED CHANNEL
TWIG RD.
WHITETHORN CIRCLE W.
WHITETHORN CIRCLE E.
50' ST.
BRIARWOOD ALLOTMENT VOL. 46 PG. 169-170
823.86' N 80°06'14"E BASE LINE
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14
LOT 15
LOT 16
LOT 16
LOT 15
(LL)
396.50'(CALC.) 411.4'(DEED)
391.53'
157.15'
BEGIN SHEET
MATCH TO R/W SHEET 18 OF 40
END SHEET
MATCH TO R/W SHEET 20 OF 40

2-18"MAPLE 1-12"MAPLE 2-12"POPLAR 1-12"W.CHERRY 1-18"APPLE 1-15"MAPLE 2-10"OAK 1-12"OAK
2-12"POPLAR 1-12"HICKORY 2-15"MAPLE
2-15"MAPLE 1-15"OAK
2-12"ELM 1-12"W.CHERRY 2-12"MAPLE 1-12"POPLAR
1-12"ELM 1-15"CHERRY 3-15"MAPLE 5-12"MAPLE
4-15"MAPLE
4-15"MAPLE 4-18"BEECH 8-18"OAK 1-12"HICKORY 3-24"OAK
3-18"OAK
10-18"BEECH 1-18"ELM
2-18"ELM 12-18"BEECH 1-18"OAK 10-12"BEECH
7-15"MAPLE 6-18"BEECH 1-15"W.CHERRY 3-12"BEECH
1-24"MAPLE 1-24"OAK 2-18"ELM 1-18"BEECH 7-15"MALE
2-12"HICKORY 1-15"BEECH 10-15"MAPLE 1-24"MAPLE 1-24"MAPLE
13-15"OAK 5-15"ASH 1-24"OAK 2-MAPLE 1-CHERRY 2-12"HICKORY 2-15"BEECH 2-12"BEECH
WOODS
1-12"BEECH 16-12"ELM 5-12"OAK 1-12"CHERRY
1-15"MAPLE 1-15"OAK 14-12"OAK
3-12"HICKORY 1-12"BEECH 10-11"ELM 3-12"CHERRY
1-30"OAK 6-12"HICKORY 2-20"BEECH 3-15"OAK
1-12"HICKORY 1-12"BEECH 6-12"OAK 6-12"ELM 6-24"BEECH 30"OAK
6-24"OAK 4-24"BEECH 3-12"ELM 5-12"BEECH
12-18"BEECH 6-20"OAK
3-15"BEECH 9-24"BEECH 4-12"OAK 4-20"OAK
10-12"BEECH 3-36"BEECH 1-20"ELM 16-18"BEECH
7-15"OAK 4-20"BEECH 8-20"OAK 4-12"BEECH

2-15+00 150
2-16+41.41 150
2-17+00 210
2-18+59.62 150
2-19+00 230
2-19+98.30 200.35
2-19+98.65 200.00 CULV.
2-20+00 140
2-21+31.77 159.51'
2-21+65 200.00 CULV.
2-22+00 140
2-22+60.23 140.00
2-23+28.27 P.C.
2-23+68.27 P.T.
2-24+66.36
2-25+22.71 225.00
2-25+65 200.00 CULV.
2-26+30.91
2-27+26.41
2-27+23.82 P.T.
2-27+79.84 50.00 CULV.
2-28+18.29 P.C.
2-30+00
2-30+79
2-31+25 225.00
2-32+25 225.00
2-33+00 210.00
2-33+50 210.00
2-34+00 210.00
2-34+50 210.00
2-35+00 210.00
2-35+50 210.00
2-36+00 210.00
2-36+50 210.00
2-37+00 210.00
2-37+50 210.00
2-38+00 210.00
2-38+50 210.00
2-39+00 210.00
2-39+50 210.00
2-40+00 210.00
2-40+50 210.00
2-41+00 210.00
2-41+50 210.00
2-42+00 210.00
2-42+50 210.00

FED. RD.	STATE	PROJECT	
2	OHIO		

490
510

SUM-271-2.98

RIGHT OF WAY SHEET 20/40

MATCH TO R/W SHEET 19 OF 40

MATCH TO R/W SHEET 21 OF 40

BEGIN SHEET

END SHEET

STA. 230+00

STA. 245+00

TWIG RD. 50'

EXISTING R/W

N 89°17'04"E

200.00' (PLAT)

60' (PLAT)

9-15"MAPLE
12-15"OAK

15-15"OAK
3-18"MAPLE

6-12"OAK
6-12"MAPLE
5-15"OAK

5-15"OAK
2-36"BEECH
2-15"MAPLE
3-12"BEECH

2-15"BEECH
1-36"MAPLE
8-18"HICKORY
2-24"BEECH
5-15"OAK

SEPTIC TANK

1 STY. FR. HSE.

4-15"OAK
2-15"MAPLE
3-15"POPLAR
2-24"OAK

8-12"OAK
4-18"OAK
3-15"MAPLE

1-12"BEECH
12-15"OAK
1-24"OAK
2-15"MAPLE

6-12"OAK
6-18"MAPLE
3-12"MAPLE

4-24"OAK
15-15 OAK

1-24"MAPLE
3-18"OAK
9-18"MAPLE
2-36"MAPLE
3-15"BEECH

1 STY. BR. HSE.

GAR

CISTERN

15-15"OAK
3-15"POPLAR

10-15"OAK
3-36"OAK
3-15"MAPLE

Δ = 34°02'11"
CH = 23.27'
ARC = 28.70'
R = 90.00'

LOT 15

JOHN & ARLENE M. HUDAK

14 WL

LOT 16

JAMES COMMISSO & EVELYN COMMISSO

15 WL

T.B.A. = 1.381 AC

RICHARD H. BACKDERF & MARY ANNE BACKDERF

16 WL

T.B.A. = 3.964 AC

LOT 17

JOHN RICHARD & ELIZABETH JEAN DAVIS

17 WL

T.B.A. = 0.813 AC

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 11 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

WILLIAM C. ETZEL

18 WL

T.B.A. = 26.701 AC

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 10 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

3-12"OAK
1-18"BEECH
1-15"W.CHERRY
16-18"MAPLE

8-15"MAPLE
1-18"OAK
4-24"BEECH
3-12"OAK
3-13"ELM

1 STY. FR. HSE.

WATER LINE

PUMP

SPRING

SPRING BOX & PUMP

SEPTIC TANK

N 62° 42' 06" W
419.75' (PLAT)

N 88°53'24"E

N 67°56'46"E
305.67'

N 40°52'25"E
231.41'

N 69°37'13"E
404.21'

N 64°47'45"E
330.24'

N 89°44'45"E
201.31'

N 0°42'56"W
587.17'(PLAT)

N 0°42'56"W
633.34'(PLAT)

N 60°17'35"W
587.50'(PLAT)

N 0°21'56"W
250

N 0°42'56"W
232.49.88
149.25'

P.T. STA. 231+40.75

1513 LIN. FT. R/W FENCE

CONSTRUCTION LIMITS

WOODS

℄ SURVEY CURVE DATA
Δ = 11°54'58" LT.
D = 1°28'
R = 3906.53'
T = 812.48'
L = 407.71'
E = 21.22'
P.I. 227+35.98

℄ SURVEY (I-271)
N 68° 21' 41" E

235

240

SUMMIT COUNTY STRUCTURE No. 27-1056

BRIARWOOD ALLOTMENT
VOL. 46, PG. 169-170

I.P. FD. (SEE DETAIL)

I.P. FD. (SEE DETAIL)

(ANGLE BREAK)

205.27'(PLAT)

183.29'(PLAT)
N 76°16'44"E

N 75°46'44"E
436.42'(PLAT)
775.90'(CALC.)
792.0'(ETZEL'S DEED)
509.68'(STOUFFER'S DEED)

N 68°21'52"E
768.58'

℄ RELOCATED CHANNEL

GORDON A. STOUFFER & VERNON B. STOUFFER

10 WL

10 X

LA RW

CONSTRUCTION LIMITS

369.03'
N 55°46'25"E

887.59'
N 78°25'47"E

231+40.75

350

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 15 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

1-20"BEECH
14-15"OAK
1-20"OAK
6-12"OAK

2-12"HICKORY
2-20"BEECH
9-15" OAK

3-20"OAK
5-12" OAK

4-12"BEECH
10-12"OAK
1-12"HICKORY

5-12"OAK
4-12"BEECH
4-24"OAK

6-12"OAK
2-24"OAK
6-20"BEECH
8-18"OAK
6-12" BEECH

1-18"CHERRY
5-20"POPLAR
4-12" BEECH
3-12"OAK
5-18"OAK
3-24"BEECH

1-24"HICKORY
12-15"OAK
3-12" ELM
1-12" STUMP

7-20"OAK
15-12" OAK
1-20"BEECH
1-15" CHERRY

34-18"OAK
7-20"OAK

1-36"ASH
33-18"OAK
11-12" OAK
1-15"HICKORY

10-12"OAK
5-15"BEECH
2-20"OAK
1-12"HICKORY
14-15"OAK

2-12"HICKORY
36-12"OAK
2-15"BEECH
1-20"BEECH

5-20"OAK
3-12"HICKORY
27-12"OAK
3-15"POPLAR
1-20"BEECH

1-20"BEECH
27-15"OAK
1-24"OAK

320 LIN. FT. R/W FENCE

GORDON A. STOUFFER & VERNON B. STOUFFER

T.B.A. = 2.872 AC

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 14 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

WOODS

LOT 11

LOT 15

LOT 10

LOT 14

I.P. RD. (SEE DETAIL)

I.P. FD. (SEE DETAIL)

I.P. FD. (SEE DETAIL)

I.P. F

FED. RD.	STATE	PROJECT	
2	OHIO		

49/510

SUM-271-2.98

RIGHT OF WAY SHEET 21/40

MATCH TO R/W SHEET 20 OF 40

MATCH TO R/W SHEET 22 OF 40

STA. 245+00

STA. 260+00

BEGIN SHEET

END SHEET

480 LIN. FT. R/W FENCE

1 - 24" MAPLE
4 - 15" OAK
10 - 15" MAPLE
1 - 36" BEECH
2 - 36" OAK

2 - 24" MAPLE
12 - 15" MAPLE

1 - 15" W.CHERRY
4 - 18" STUMP
10 - 15" MAPLE
1 - 24" MAPLE

N 68°56'46"E 969.67

N 36°55'55"E 421.90

249+00
240

LA RW

CONSTRUCTION LIMITS

WOODS

FURNACE RUN

FILL AND GRADE

3 - 12" OAK
10 - 12" MAPLE

4 - 15" STUMP
10 - 12" OAK

4 - 15" STUMP
10 - 15" MAPLE
1 - 12" MAPLE

4 - 15" W.CHERRY
1 - 15" STUMP
10 - 15" MAPLE

18 WL

WILLIAM C. ETZEL

T.B.A. ± 26.701 AC

250 ℄-SURVEY (I-271)

N 68°21'41"E

LOT 10
LOT 14

877.98 (CALC.)
877.80 (D)

N 88°19'19"E

LANE TO BE ABANDONED

780.15'

520 LIN. FT. R/W FENCE

N 68°21'41"E

245+00
191.25

249+00
191.25

150.20'

250+52.28
213.35

1.46'

280.37.27
252.20

GORDON A. STOUFFER &
VERNON B. STOUFFER

T.B.A. ± 2.872 AC

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 14 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

35 - 15" OAK
4 - 12" HICKORY

6 - 12" HICKORY
1 - 20" ELM
53 - 12" OAK

10 - 12" OAK
1 - 12" BEECH
1 - 12" HICKORY
4 - 20" OAK

11 - 12" OAK
6 - 12" ELM

20 - 12" OAK

TO S. LINE OF LOT 14
248.60'(D)
N 0°31'04"W

(LL)

WILLIAM C. ETZEL

TYPE I FUNDS

GRAPHIC SCALE

0 50 100 150 200

8 - 12" ELM
2 - 12" OAK

12 - 15 OAK
2 - 15 HICKORY

11 - 12" OAK
1 - 12" CHERRY

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE : OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

● - IRON PIN. FD.
◉ - PROPOSED MONUMENTS

N 68°21'41"E
240

252.60
420

N 68°21'41"E

255.00
425

S 10°46'20"E
178.42

N 1°28'35"W
3.03

10 - 18" OAK
12 - 12" OAK
256+05.03
423.88

1 - 12" CHERRY
2 - 12" MAPLE
3 - 12" BEECH
17 - 15" OAK

1 - 12" SYCAMORE
9 - 15" OAK
8 - 12" OAK
4 - 12" BEECH

255+80.78
382.92

122.15'
344.30' (OCCUP.)
344.77' (OCCUP.) ℄-RT

RICHARD YAPPEL &
LENA YAPPEL

20 WL

1 - 18" OAK
9 - 15" OAK
1 - 24" OAK

T.B.A. ± 2.952 AC

645.33'
N 87°20'51"E

STA. 255+47.72
268.31' LT.

CONSTRUCTION LIMITS

772.67'(OCCUP.)
775.50'(D)

N 88°21'28"E

620' x 10' x 10' TWIN BOX CULVERT

STA. 252+52±

STA. 255+55±

STA. 254+68

1255

N 68°21'41"E

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 10 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

WOODS

FURNACE RUN

CONSTRUCTION LIMITS

FIELD DRIVE

15 - 12" OAK
1 - 15" CHERRY

10 - 12" SYCAMORE
20 - 12" ELM

9 - 12" OAK

43 - 12" OAK
2 - 12" BEECH

S 87°41'05"E
564.05'

LOT 10
LOT 14

N 88°19'19"E

200'

N 68°21'41"E.

255.50
480

556.25
N 34°05'32"E

257.50
480

LA RW

STA. 245+00 TO STA. 260+00

FED. RD.	STATE	PROJECT	
2	OHIO		

492/510

SUM-271-2.98

RIGHT OF WAY SHEET 22/40

MATCH TO R/W SHEET 21 OF 40

MATCH TO R/W SHEET 23 OF 40

2-15" MAPLE
5-18" BEECH
7-12" OAK

2-18" BEECH
11-18" OAK
1-12" BEECH
7-12" OAK

2-18" STUMP
12-12" OAK
14-15" OAK
2-12" BEECH
2-24" OAK

~PINE GROVE~
100 TO 125 TREES
PER 100 FT.
(THRU STA. 268)

3-8" PINE
10-10" POPLAR

1-18" OAK
1-15" HICKORY
1-12" OAK
2-36" OAK
8-12" PINE

1-12" BEECH
4-12" ELM
2-18" ELM
1-24" ELM

~APPLE ORCHARD~
42 TREES
(THRU STA. 274)

2-15" ELM
6-12" APPLE

RICHARD YAPPEL &
LENA YAPPEL
20 WL
T.B.A. = 2.352 Ac

VACLAV SCHMIDT &
MARIE SCHMIDT
21 WL
T.B.A. = 5.859 Ac

ESTHER A. REPLOGLE
& CHARLES R. REPLOGLE SR.
22 WL
T.B.A. = 3.858 Ac

DICK WRIGHT & OPAL
CAROLYN WRIGHT
23 WL

WILLIAM C. ETZEL
18 WL

WOODS

BEGIN SHEET

END SHEET

STA. 260+00

STA. 275+00

LA RW

645.33'
N 87°20'51" E

2+22.00
172.40

136.00'
N 68°21'41" E

2+43.36
172.40

718.46'
N 68°25'58" E

420.52'

1550 LIN. FT. R/W FENCE

CONSTRUCTION LIMITS

3543.40 (OCCUP.) TO ℄ S.R. 303
3545.15 (DEED)
N 1°25'03" W

3415.55' TO ℄ S.R. 303
S 0°31'21" E

2210+65.73
322.69

2215+14.07
201.44

3256.75' TO ℄ S.R. 303
2335.53
N 0°46'27" W

772.67 (OCCUP.)
775.50 (D)
N 88°21'28" E

180

175.53'

2+73.8
1.3

STA. 262+70.0
1.27 LT.

262+72.51

265

℄ - SURVEY (I-271)
N 68°21'41" E

268+94.36

(LANE TO BE ABANDONED)

3358.95' TO ℄ S.R. 303
243.41'

263+67.66

270

P.C. STA. 267+60.12

181.73'

STA. 272+92

STA. 273+83.60

1551.40' TO PROP. COR.
230.78

3 GUY WIRES

441.27'
N 86°11'40" E

400.06'

268+39.18
1.51

272+79.71
201.25

OHIO EDISON
4 WIRES (69 KV)

MARKED STONE FD.
270.78' RT. OF STA. 272+94.25

1134.54' TO PROP. COR.

1564.20 TO PROP. COR.
N 0°46'27" W

1480.79' TO PROP. COR.
N 1°25'03" W

556.95'
N 34°03'32" E

291
271.25

(LL)

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 10 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

VACLAV SCHMIDT &
MARIE SCHMIDT

LOT 10 3337.84 LOT 9
S 0°31'21" E

LOT 10 LOT 14 LOT 9 LOT 13

1467.01' TO PROP. COR.
N 1°24'32" W

LOT 14 LOT 13

TALL MON. FD. & USED

℄ SURVEY
CURVE DATA
P.I. STA. 285+23.13
Δ = 48°34'45" LT.
D_c = 1°28'
R = 3906.53'
L_c = 3312.22'
T = 1763.01'
E = 379.40'

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 9 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

DELAWARE COMPANY

2-APPLE
2-12" MAPLE
1-12" MAPLE

13-20" OAK
4-20" BEECH
10-12" OAK
6-12" BEECH

13-20" OAK
4-20" BEECH
10-12" OAK
6-12" BEECH

1-20" MAPLE
12-15" OAK
2-18" BEECH
1-12" ELM
3-18" HICKORY

~PINE GROVE~
60 TREES PER 100 FT.
(THRU STA. 267)

4-12" MAPLE
5-12" OAK
4-12" BEECH

1-12" HICKORY
1-18" CHERRY
2-12" MAPLE
1-18" HICKORY

1-20" CHERRY
1-18" MAPLE
1-12" MAPLE
2-20" OAK

2-12" MAPLE

● IRON PIN FD.
◉ PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
NO	REVISIONS	MADE BY	DATE

STA. 260+00 TO STA. 275+00

FED. RD.	STATE	PROJECT	
2	OHIO		

493 / 510

SUM-271-2.98

RIGHT OF WAY SHEET 23 / 40

MATCH TO R/W SHEET 22 OF 40

MATCH TO R/W SHEET 25 OF 40

ESTHER A. REPLOGLE
& CHARLES R. REPLOGLE SR.

22 WL

1-18"BEECH
8-24"OAK
1-18"ELM
4-12"OAK

14-12"OAK

3-15"STUMP
5-18"OAK
1-18"BEECH
4-12"OAK
1-15"HICKORY
1-18"ELM

2-18"STUMP
3-15"ELM
4-12"OAK
7-18"OAK

10-12"OAK
5-15"OAK

3-15"OAK
4-15"ELM
3-12"MAPLE
5-12"ELM

3-18"ELM
1-36"OAK
6-12"OAK

6-12"OAK
3-15"OAK
2-24"OAK

1-18"WALNUT
1-12"CHERRY
2-15"OAK

3-12"OAK

DICK WRIGHT &
OPAL CAROLYN WRIGHT

23 WL

T.B.A. = 14.559

22 WL

325% 73 TO ℄ S.R. 303 FROM ℄ I-271
NO 46° 21' W

STA. 275+14.07
201.44

LA RW

744.82'
N 52°01'57"E
1421 LIN. FT. R/W FENCE

283+00
155

LA RW
475.91'
N 43°54'44"E

286+00
150

457.50'
N 33°22'21"E

STA. 290+00

CONSTRUCTION LIMITS

WOODS

WOODS

STA. 276+47

STA. 279+97

280

℄ SURVEY (I-271)

STA. 283+41

285

LANE TO BE ABANDONED

194'

212'

264'

STA. 289+92.94

234.57'
TO ℄ S.R. 303

N 0°55'27" W
217.00

542.97'

ROBERT PHINNEY

24 WL

CONSTRUCTION LIMITS

LA RW
N 34°15'10"E
284.40'

287+79.09
111.43

1351.25' TO PROP. COR.
1359.85' TO PROF. COR.

BEGIN SHEET

441.27'
N 56°11'40"E

277+00
150

LA RW
315.45'
N 55°06'00"E

525.66'
N 40°30'35"E
1573 LIN. FT. R/W FENCE

280+00
205

OHIO EDISON
4 WIRES (69 KV)

285+00
205

END SHEET

(LL)

℄ SURVEY
CURVE DATA

P.I. STA. 285+23.13
Δ = 48°34'45" LT.
D_C = 1°28'
R = 3906.53'
L_C = 3312.22'
T = 1763.01'
E = 379.40'

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 9 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

2-20"MAPLE
5-12"CHERRY

2-12" MAPLE

2-12"HICKORY
2-12"ELM
1-12"BEECH
2-12"MAPLE

4-18"BEECH
4-12"MAPLE
4-12"ELM
1-12"HICKORY

3-20"BEECH
3-12"HICKORY
1-12"CHERRY
11-12"OAK
1-20"MAPLE

3-12"HICKORY
8-18"OAK
2-12"BEECH
1-12"CHERRY
9-12"ELM

10-12"OAK
7-12"ELM
1-20"MAPLE
1-12"MAPLE
1-12"HICKORY

4-20"OAK
1-24"MAPLE
2-12"HICKORY
19-12"OAK

8-18"OAK
5-12"MAPLE
4-12"HICKORY
4-20"MAPLE
1-15"BEECH
3-20"OAK

6-12"MAPLE
2-20"MAPLE
1-24"OAK
13-12"OAK

14-12"OAK
12-18"MAPLE
2-20"OAK

5-12"MAPLE
2-20"OAK
21-12"OAK

2-12"MAPLE

2-12"APPLE
1-12"MAPLE
2-12"HICKORY
2-18"ELM
1-24"ELM

◉ PROPOSED MONUMENTS

4-12"OAK
1-12"HICKORY

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE

STA. 275+00 TO STA. 290+00

FED. RD.	STATE	PROJECT	
2	OHIO		

494/510

SUM-271-2.98

RIGHT OF WAY SHEET 24/40

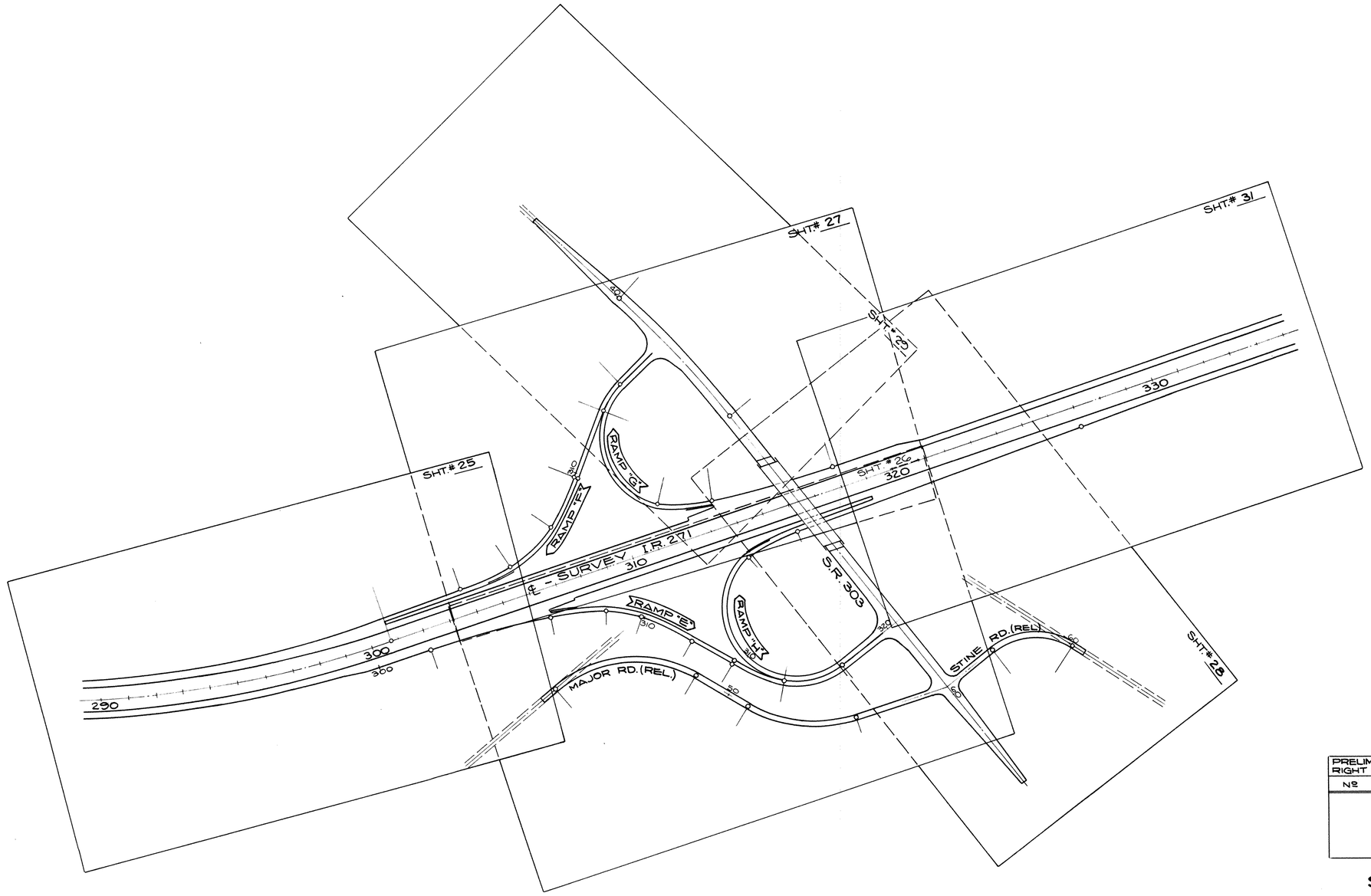
KEY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7



GRAPHIC SCALE

0 200' 400' 600' 800'

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE

KEY MAP
STA. 290+00 TO STA. 335+00
INTERCHANGE WITH S.R. 303

K. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

495 510

SUM-271-2.98

RIGHT OF WAY SHEET 25 40

2-12"ELM
1-12"CHERRY
7-24"OAK
6-15"OAK

8-24"OAK
8-12"MAPLE
6-12"ELM

1-15"CHERRY

DICK WRIGHT &
OPAL CAROLYN WRIGHT
23 WL

LOT 5
LOT 6

℄ N 0° 55' 27" W 2365.67' TO ℄ S.R. 303

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

ROBERT PHINNEY
24 WL
TBA : 24.230 Ac
PRO. : 1.185 Ac
TOTAL : 25.415 Ac

STA. 290+00

457.50'
N 33°22'27" E

292+80.52
192.30'

LA RW

310.25'
N 38°45'38" E

1455 LIN. FT. R/W FENCE

296+00
140'

454.63'
N 21°55'10" E

CONSTRUCTION LIMITS

300+72.34
150'

FT. STA. 300+72.34

LA RW

303+72.84
150'

SC STA. 303+72.84

428.71'
N 15°40'10" E

305+00
150'

STA. 305+00

FIELD DRIVE

PEACH ORCHARD
~130 TREES
6 TO 8" TO BE REMOVED

RAMP "F"

304

302

340

WOODS

23 WL

292+92.34

℄-SURVEY (I-271)

295

300

N 19°46'56" E

FIELD DRIVE TO BE ABANDONED

N 19°46'56" E SUB-TANGENT

RAMP "E"

303

304

542.97'
N 34°15'10" E

LA RW

24 WL

CONSTRUCTION LIMITS

803.72'
N 24°44'08" E

1555 LIN. FT. R/W FENCE

293+00
165'

LA RW

300+72.34
159'

P.C. STA. 302+00

628.45'
N 21°44'34" E

FIELD DRIVE

FIELD DRIVE

ROBERT PHINNEY

EXIST. R/W LINE

MAJOR RD.

26 WD

N 20°36'32" E
70.62'

℄ R/W (LOT) T.R. 72'

℄ EXIST. PAVT.

41.50'
15'

℄ GRAPHIC SCALE

0 50 100 150 200

TYPE 1 FUNDS

BEGIN SHEET
MATCH TO R/W SHEET 23 OF 40

END SHEET
MATCH TO R/W SHEETS 26 & 27 OF 40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 9 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

℄ SURVEY CURVE DATA
P.I. STA. 285+23.13
Δ = 48°34'45" LT.
D_c = 1°28'
R = 3906.53'
L_c = 3312.22'
T = 1763.01'
E = 379.40'

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

4-12"MAPLE

1-18"POPLAR
1-15"MAPLE
3-12"ELM

2-20"ELM

1-12"CHERRY
34-APPLE

LOT 5
LOT 9

PROPOSED MONUMENTS

EAST LINE LOT 57

RICHFIELD TWP. LINE

BOSTON TWP.

N 0°43'29" W

35+47.62
29.75'

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

STA. 290+00 TO STA. 305+00

FED. RD.	STATE	PROJECT	
2	OHIO		

196
510

SUM-271-2.98

RIGHT OF WAY SHEET 26 / 40

MATCH TO R/W SHEET 25 OF 40

MATCH TO R/W SHEET 27 OF 40

MATCH TO R/W SHEET 31 OF 40

MATCH TO R/W SHEET 28 OF 40

BEGIN SHEET STA. 305+00

END SHEET STA. 320+00

ROBERT PHINNEY
24 WL

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

JAMES C. KENNEDY
26 WL · 26 WD · 26 X

ROBERT PHINNEY
28 WL

ROBERT PHINNEY
28 WL

NOTE: FOR CALCULATIONS OF INTERSECTION BELOW, SEE R/W SHEET 28 OF 40.

26 WL
T.B.A. = 12.054 Ac
P.R.O. = 1.302 Ac
TOTAL = 13.358 Ac

26 WD
T.B.A. = 2.828 Ac
P.R.O. = 0.258 Ac
TOTAL = 3.086 Ac

26 X
0.078 Ac

26 T
0.013 Ac

N 19°46'56"E

℄-SURVEY

℄-R/W MAJOR RD.

EXIST. R/W LINE

EXIST. PAVMT.

BOSTON TWP. LINE

TRACT 6 / TRACT 7

(T.R.172)

(60')

(1-271)

RICHFIELD TWP.

1554 LIN. FT. R/W FENCE & N 21°44'34"E 628.45

NOSE C.S. STA. 306+55.07

S.C. STA. 308+53.07

C.S. STA. 309+87.32

N 39°59'55"E

N 1°52'14"W

N 20°36'32"E

MAJOR RD. (RELOC.) T.R. 172

R/W

R = 395.74'

42 + 15.25
45.0°

P.C. 42+15.25

EXIST. PAVMT.

R/W CURVE DATA
Δ = 70°40'26" RT.
R = 395.74'
T = 280.59'
Lc = 488.13'
CH. LGTH. = 457.78'
CH. BRG. = N 33°27'59"E

RELOCATED MAJOR RD. ℄-CURVE DATA
Δ = 70°40'26" RT.
Dc = 13°
R = 440.74'
T = 312.49'
Lc = 543.65'
P.I. STA. 45+27.74

P.T. 47+58.90
45.0°

8"-10" APPLE ORCHARD

RAMP "E"

RAMP "H"

TEMPORARY

4" TILE

SEE DETAIL, LOWER LEFT, THIS SHEET, FOR AN UNRECORDED DIVISION OF THIS PROPERTY

STA. 50+00 RELOC. S.R. 303
STA. 316+40.60 I-271

317+08.07
50+00 (S.R. 303)

317+57.67
50+00
STINE RD.

EXIST. STREETSBORO RD. (S.R. 303)

RELOC. S.R. 303

STINE RD.

OHIO EDISON 1 WIRE (12.5 KV)

OHIO EDISON (12.5 KV)

WESTERN RESERVE TEL. CO. 1-CABLE
OHIO BELL TELEPHONE CO. 1-CABLE, 1 LINE

RUNAROUND

STA. 55+54.74 (RELOC. S.R. 303)
STA. 320+27.41 (RAMP "E")

STA. 56+60 (REL. S.R. 303)
55+28.90 (RELOC. MAJOR)

CONSTRUCTION LIMITS

EXIST. R/W LINE

LA-R/W CURVE DATA
Δ = 49°03'15" LT.
R = 439.46'
T = 200.52'
Lc = 376.24'
CH. LGTH. = 364.86'
CH. BRG. = N 44°16'35"E

R/W CURVE DATA
Δ = 49°03'15" LT.
R = 522.46'
T = 238.40'
Lc = 447.30'
CH. LGTH. = 433.77'
CH. BRG. = N 44°16'35"E

RELOCATED MAJOR RD. ℄-CURVE DATA
Δ = 49°03'15" LT.
Dc = 12°
R = 477.46'
T = 217.86'
Lc = 408.78'

P.T. STA. (RAMP "E") 317+78.00

52+02 RELOC. MAJOR RD.
58+64.45 CULVERT

54+84.65

N 19°44'57"E 330.42'

N 19°44'57"E 261.66'

N 19°44'57"E 291.46'

N 89°44'57"E

S 89°59'04"E

SEE SHEET 28 OF 40

1-12" MAPLE
20-APPLE
4-12" CHERRY

25-APPLE

39-APPLE

2-20" MAPLE

18-12" PINE

1-20" WILLOW

2-12" PINE

℄-STINE RD.

℄-W. STREETSBORO RD. S.R. 303

℄-MAJOR RD.

PCL. "A"	PCL. "B"	PCL. "C"	PCL. "D"	PCL. "E"	PCL. "F"
151.32'	151.32'	151.32'	157'	185'	
265.18'					265.63'
151.04'	151.04'	151.04'	156.73'	184.66'	250.83'

• IRON PIN FOUND

UNREC. PROPERTY DIVISION
FOR
J.C. & K. KENNEDY
BY
GEHRES & KINGSLEY, SURVEYORS
MARCH – APRIL, 1959

DETAIL OF UNRECORDED DIVISION OF LAND

◉ PROPOSED MONUMENTS
▣ PROPOSED MONUMENT ASSEMBLIES

GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
NO	REVISIONS	MADE BY	DATE

MATCH TO R/W SHEET 28 OF 40

M.L. STA. 305+00 TO STA. 320+00-E. OF ℄

FED. RD.	STATE	PROJECT	
2	OHIO		

497/510

SUM-271-2.98

RIGHT OF WAY SHEET 27/40

MATCH TO R/W SHEET 29 OF 40

NOTE: FOR DETAILS & CALCULATIONS OF PARCELS 23T, 24WD, 24-1T 24T, 25WD, 25T, 25-1T, 30WD, SEE RIGHT-OF-WAY SHEET 29 OF 40.

DICK WRIGHT & OPAL CAROLYN WRIGHT
23 WD

TONY SORMA & ANN Y. SORMA
25 T | 25 WD | 25-1 T
SEE SHEET 29

ROBERT PHINNEY
24 WL | 24 WD | 24 T | 24-1 T
SEE SHEET 25 | SEE SHEET 29

FRED L. ROLLER & EDITH ROLLER
30 WL T.B.A. = 0.215 AC; P.R.O. = 0.293 AC; TOTAL = 0.508 AC
30 WD T.B.A. = 1.006 AC; P.R.O. = 0.362 AC; TOTAL = 1.368 AC
30 T 0.085 AC

R/W CURVE DATA
Δ = 5°00'
R = 2504.79'
T = 126.83'
Lc = 253.49'
Ch = 253.41
Ch. Brg. N 83°07'20" E

LLOYD L. BIGELOW
29 WL T.B.A. = 7.048 AC; P.R.O. = 0.482 AC; TOTAL = 7.530 AC
29-2 T 0.392 AC

PROPOSED MONUMENTS
PROPOSED MONUMENT ASSEMBLIES

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

RECORD OF SURVEY (I-271)

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7

EXIST. S.R. 303 (CONSULTANTS SURVEY) CURVE DATA
Δ = 13°35'19" RT.
Dc = 5°
T = 136.53'
Lc = 271.78'
P.C. STA. 46+68.07
P.T. STA. 48+39.85
P.I. STA. 48+04.60

EXIST. S.R. 303 (ROADWAY PLANS) CURVE DATA
Δ = 13°50' RT.
Dc = 5°
T = 135.16'
Lc = 270.0'

RELOC. S.R. 303 CURVE DATA
Δ = 8°46'24" RT.
Dc = 1°30'
R = 3819.72'
T = 293.02'
Lc = 584.89'
P.I. STA. 43+10.60

LA/RW CURVE DATA
Δ = 7°53'38"
T = 1178.94'
Lc = 81.14'
R = 1642.00'
Ch = 161.85'
Ch. Brg. N 84°55'22" E

MATCH TO R/W SHEET 25 OF 40

MATCH TO R/W SHEET 31 OF 40

MATCH TO R/W SHEET 26 OF 40

M.L. STA. 305+00 TO STA. 320+00 W. OF ℄

BEGIN SHEET STA. 305+00

END SHEET STA. 320+00

FED. RD.	STATE	PROJECT	
2	OHIO		

498/510

SUM-271-2.98

RIGHT OF WAY SHEET 28/40

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 7 TRACT 1
RANGE II WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE II WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 8 TRACT 1
RANGE II WEST
TOWNSHIP 4 NORTH

LLOYD L. BIGELOW — 29 WL
JENNIE BIGELOW — 32 WL
ELDEN N. McVEY & CLAUDIA W. McVEY — 31
RICHARD H. BIGELOW & JANE A. BIGELOW
ROBERT PHINNEY — 28 WL — TBA: 0.410 Ac, PRO: 0.744 Ac, TOTAL: 1.154 Ac
JAMES C. KENNEDY — 26 WL
EMILY VIRGINIA KENNEDY — 27 WD — TBA: 0.367 Ac, PRO: 0.329 Ac, TOTAL: 0.696 Ac

29-1 T — TBA: 0.139 Ac, PRO: 0.081 Ac, TOTAL: 0.220 Ac
29 WD — TBA: 0.083 Ac
28 T — 0.410 Ac
27 T — 0.390 Ac
26 T — 0.230 Ac

SUM-271-2.98 RW
℄-SURVEY (I-271)
℄-RELOC. STINE RD.
℄-RELOC. S.R. 303
℄-RELOC. MAJOR RD.
RELOC. STINE RD. (T.R. 171)
EXIST. R/W LINE
CONSTRUCTION LIMITS
PROP. R/W FENCE
GRAVEL DRIVE
BOARD FENCE
WOVEN WIRE FENCE
WOOD RAIL FENCE
OHIO EDISON 12.5 KV
OHIO BELL TELEPHONE CO. CABLE LINE
WESTERN RESERVE TEL. CO. CABLE LINE
EAST LINE TRACT 7 / WEST LINE TRACT 1
TRACT 1 / TRACT 2

RELOC. STINE RD. CURVE DATA
Δ = 71°13'10" RT.
R = 250'
T = 179.05'
Lc = 310.75'
P.I. STA. 58+13.35

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE

◉ PROPOSED MONUMENTS
■ PROPOSED MONUMENT ASSEMBLIES

MATCH TO R/W SHEET 26 OF 40

AUXILIARY SHEET (E. OF ℄-STA. 320+00)

C. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

499/510

SUM-271-2.98

RIGHT OF WAY SHEET 29/40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

LOT 1
LOT 5

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

FRED L. ROLLER &
EDITH ROLLER

30 T — 0.085 AC

30 WD — TBA : 1.000 AC; PRO : 0.360 AC; TOTAL : 1.368 AC

30 WL — TBA : 0.215 AC; PRO : 0.293 AC; TOTAL : 0.508 AC

MATCH TO R/W SHEET 27 OF 40

MATCH TO R/W SHEET 27 OF 40

ROBERT PHINNEY

24 WD — TBA : 0.035 AC; PRO : 0.030 AC; TOTAL : 0.065 AC

24 T — 0.213 AC

24-1 T — 0.0685 AC

TONY SORMA &
ANN Y. SORMA

25 WD — TBA : 0.0609 AC; PRO : 0.0913 AC; TOTAL : 0.1522 AC

25 T — 0.229 AC

25-1 T — 0.1395 AC

DICK WRIGHT &
OPAL CAROLYN WRIGHT

23 WD — TBA : 0.146 AC; PRO : 0.241 AC; TOTAL : 0.387 AC

23 T — 0.535 AC

TEMPORARY RUNAROUND CURVE DATA

(1) Δ = 51°45' RT; Dc = 23°; R = 249.11'; T = 120.83'; Lc = 225.00'; PI 136+88.41

(2) Δ = 48°04'15" LT; Dc = 23°; R = 249.11'; T = 111.10'; Lc = 209.01'; PI 135+54.06

RELOC. S.R. 303 CURVE DATA

Δ = 8°46'24" RT; Dc = 1°30'; R = 3819.72'; T = 293.02'; Lc = 584.89'; PC STA 40+17.58 (RELOC.); PC STA 39+87.77 (EXIST.)

■ PROPOSED MONUMENT ASSEMBLIES

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE

AUXILIARY SHEET (W. OF ℄ - STA. 320+00)

FED. RD.	STATE	PROJECT	
2	OHIO		

500
510

SUM-271-2.98
RIGHT OF WAY SHEET

30
40

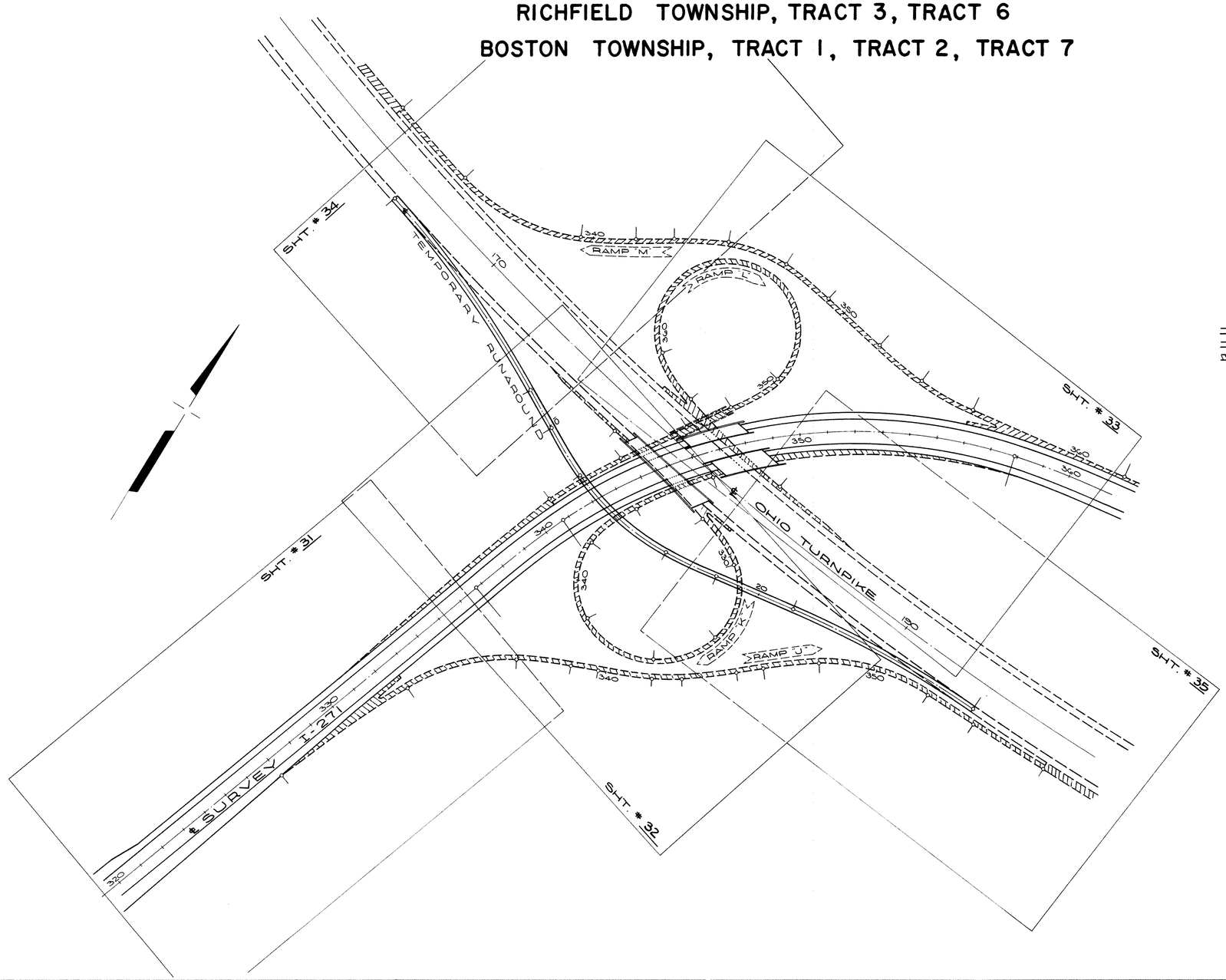
KEY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7



LEGEND

PROPOSED CONSTRUCTION
EXISTING CONSTRUCTION
FUTURE CONSTRUCTION

GRAPHIC SCALE

0 200 400 600 800

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE : OCTOBER 15, 1965

Nº	REVISIONS	DATE	MADE BY

KEY MAP

STA. 320+00 TO STA. 360+00
INTERCHANGE WITH
OHIO TURNPIKE

C.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

501
510

31
40

SUM 271 2.98
RIGHT-OF-WAY SHEET

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

RICHFIELD TOWNSHIP — E. LINE TRACT 6
BOSTON TOWNSHIP — W. LINE TRACT 7

2-12" APPLE
1-12" APPLE
2-15" MAPLE
3-15" CHERRY
1-12" CHERRY
1-12" ELM

SHED
WIRE FENCE
SHED
WOODEN FOOT BRIDGE
EXIST. CR. REL. 0.7
STONE & CONC. CULV.
CHERRY & APPLE ORCHARD (8 TO 16 TREES)
SPLIT RAIL FENCE
PICKET FENCE
OUT HOUSE
BAR
WIRE FENCE
FIELD DRIVE
1 STY FR HSE
CONC. PAD
6 PINE
4 PINE
320+50 220
321+00 220
320+00 200
323+00 150
323+00 (GG) 150
N 19°46'56" E 200
50 FT
2390
29-1 T
0.210 AC
LA RW
LLOYD L. BIGELOW
TBA = 7.048 AC
PRO = 0.482 AC
TOTAL = 7.530 AC
29 WL
N 16°42'39" E 1228.66
1604 LIN. FT. R/W FENCE
CONSTRUCTION LIMITS
OPEN FIELD
29 WL
5 CHERRY
℄ RELOC. DRIVE
250.36
8 CHERRY
8 APPLE
8 APPLE
EXIST. GRAVEL DRIVE
14 APPLE
OHIO EDISON WIRE (12.5 KV)
323+00 (GG) 150
N 1°15'02" W
19-6-10" MAPLES
326+65.60
2" PRIVATE GAS LINE
60.36
2-15" MAPLES
3-15" CHERRIES
4" TILE
PRIVATE GAS LINE
325
℄ SURVEY (I-271)
330
N 19°46'56" E
335
32 WL
T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(ELIGIBLE FOR FEDERAL PARTICIPATION)
635,628 Sq. Ft. (14.596 Ac.)
REGULATOR BOX
742.52
N 15°02' W 464.4'
CONSTRUCTION LIMITS
213.87
320+00 100
LA RW
788.24'
N 23°30'04" E
Meet Existing Fence
53+42.20
0.12 PINE R/W
7-12" PINE
24-12" PINE
2-12" MAPLE
SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH
STONE ROAD
N 70°58'01" E
EXISTING R/W LINE
EXISTING R/W LINE
54
TRITT (CO.)
54
231.92
54+69.22
335.72 (DI)
335.22 (OCC)
N 17°32'32" W
305.0 (OCC)
ELDEN N. McVEY & CLAUDIA W. McVEY
SEPTIC TANK
31
2½ STY FR HSE
8-12" PINES
224.08
226.79 (OCC)
N 19°30'54" E
(FUTURE CONSTRUCTION)
RAMP "L"
ELIGIBLE FOR FEDERAL PARTICIPATION
INELIGIBLE FOR FEDERAL PARTICIPATION
Limit of Federal Participation
32 WL
T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION
RIGHT SIDE ℄, 706,233 Sq. Ft. (16.21 Ac.)
529.74'
N 33°04'20" E
LA RW
TYPE 47 R/W FENCE
JENNIE BIGELOW
32 WL
T.B.A. 32.966 AC
335+00 400
597.27'
N 10°43'35" E
7-12" CHERRY
3-20" CHERRY
MATCH LINE STA. 336+50
1718.70 (D)
1713.00' (OCC.) TO STONE
1718.70 (D)
(OCC.) TO TURNPIKE RIGHT-OF-WAY
(LL)
332+26.89
451.13
(INELIGIBLE FOR FEDERAL PART. ON LEFT SIDE ℄ 94,138 Sq. Ft. (2.16 Ac.)
FUTURE CONSTRUCTION LIMITS
Limit of Federal Participation
INELIGIBLE FOR FEDERAL PARTICIPATION
RAMP "L"
(FUTURE CONSTRUCTION)

TYPE I FUNDS
GRAPHIC SCALE
0 50 100 150 200

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : OCTOBER 15, 1965

№	REVISIONS	DATE	MADE BY
1	Revised TBA Pcl 32-WL	5-18-66	
	Participation Limits Added	11-23-66	
2	Added Eligibility and Ineligibility Breakdown Pcl. 34-WL	12-16-66	Lee
3	Revised Eligibility Breakdown Pcl 34-WL	12-21-66	Lee
4	Revised Gas Line on Pcls 29½ 32WL	8-24-67	Irish
5	Revised Fence	8-31-67	Irish

● = IRON PIN FOUND
◉ = PROPOSED MONUMENTS

STA. 320+00 TO STA. 336+00

MATCH TO R/W SHEETS 26 & 27 OF 40
BEGIN SHEET STA. 320+00

END SHEET STA. 332+00
MATCH TO R/W SHEET 32 OF 40

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

502
510

32
40

SUM-271-2.98
RIGHT-OF-WAY SHEET

MATCH TO R/W SHEET 34 OF 40

MATCH TO R/W SHEET 33 OF 40

MATCH TO R/W SHEET 35 OF 40

MATCH TO R/W SHEET 31 OF 40

OHIO TURNPIKE
I-76

EASTBOUND LANES

EXISTING EASTBOUND LANES

TEMPORARY

RAMP "L"

CONSTRUCTION

FUTURE

RUNAROUND

RAMP "K"

RAMP "J"

(FUTURE CONSTRUCTION)

EXISTING LIMITED ACCESS (OHIO TURNPIKE)
PROPOSED LIMITED ACCESS (I-271)

PROPERTY OF
THE STATE OF OHIO

OHIO TURNPIKE COMMISSION
STATE OF OHIO

44 WL | 44 Aerial | 44 T | 44-1 T

T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION
RIGHT SIDE ℄ 706,233 Sq. Ft. (16.21 Ac)

T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(ELIGIBLE FOR FEDERAL PARTICIPATION
635,628 Sq. Ft. (14.596 Ac.)

T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION
(LEFT SIDE ℄ 94,138 Sq. Ft. (2.16 Ac.)

T.B.A. 10.071 Ac.

T.B.A. 1.848 Ac.

T.B.A. 10.783 Ac.

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 3 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 4 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

JENNIE BIGELOW
32 T | 32 WL

LLOYD L. BIGELOW
29 T | 29 WL
SEE SH'T. 34

29.1 WL

TEMPORARY RUNAROUND CURVE DATA
Δ = 12°45'
R = 3819.72'
Dc = 1°30'
Lc = 850'

TEMPORARY RUNAROUND CURVE DATA
Ls = 200'
Θs = 6°
LT = 199.41'
ST = 66.74'
P = 1.744'
K = 99.964'
Ts = 426.08'
Lc = 427.45'
Δ = 37°38'50"

CONSTRUCTION ℄ SURVEY CURVE DATA
Δ = 63°21'00" RT
Dc = 3°00'
Ls = 400'
R = 1909.86'
Θs = 6°00'
Ts = 1380.48'
Es = 338.39'
Lc = 1711.67'
L.T. = 2666.82'
S.T. = 1333.47'
Δc = 51°21'00"
Tc = 918.13'
Ec = 209.29'
P.I. STA. 350+57.87

SUBSTITUTE CURVE DATA FOR RIGHT-OF-WAY ONLY
Dc = 2°54'6.76"
R = 1971.46'
Lc = 206.70'
T = 103.47'
P.C. 338+10.73
P.T. 340+17.43
P.C.I. 357+89.10
P.T. 360+55.80

CURVE DATA
Δ = 38°21'52" LT.
Dc = 0°29'27"
T = 400.41'
L = 781.69'
R = 11,674.30'
E = 686.28

TURNPIKE STA 112+12.42 ℄

STONE FD

WOODS

8 MAPLE

12-12 MAPLE

3-8 MAPLES

BRUSH
LIGHT WOODS

TREE ROW

EXIST. R/W FENCE

EXIST. WIRE FENCE

TYPE 47 FENCE

2 PRIVATE GAS LINE

NOTE: TEMPORARY RUNAROUND AS SHOWN IS NOT CORRECT. SEE PLAN & PROFILE SHEETS OF RUNAROUND FOR CORRECT LOCATION AND GEOMETRICS.

Limit of Federal Participation

FUTURE CONSTRUCTION LIMITS

WEST LINE TRACT 7
EAST LINE TRACT 1

℄ SURVEY (I-271)

℄ S.C. STA 340+77.38

℄ T.S STA 336+77.38

MATCH LINE STA. 336+00

MATCH LINE STA. 336+50

INELIGIBLE FOR FEDERAL PARTICIPATION | ELIGIBLE FOR FEDERAL PARTICIPATION

ELIGIBLE FOR FEDERAL PARTICIPATION | INELIGIBLE FOR FEDERAL PARTICIPATION

2-12" CHERRIES
3-20" CHERRIES

Note: Parcels 44-WL, and part of 32-WL are Eligible for Federal Participation, Parcels 29-1-WL, 32-T, 44-T, 44-1T, and part of 32-WL are Ineligible for Federal Participation.

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	DATE	MADE BY
1	Revised Areas and take lines P.I. 32-WL & P.I. 32-T	3-12-66	GF
	Participation Limits Added	11-16-66	
2	Added Eligibility and Ineligility Breakdown Pcl. 32-WL	12-16-66	Lee
3	Revised Eligibility Breakdown Pcl. 32-WL	12-21-66	Lee
4	Revised Fence	8-3-67	SHK

INTERCHANGE
INTERSTATE 271 &
OHIO TURNPIKE
STA. 336+00 (I-271) TO TURNPIKE INTERSECTION

◉ PROPOSED MONUMENTS

E.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

503
510

33
40

SUM-271-2.98
RIGHT OF WAY SHEET

MATCH TO R/W SHEET 36 OF 40

MATCH TO R/W SHEET 34 OF 40

Note: Parcels 44-WL, 44-1WL, 44-Aer., and part of 34-WL are Eligible for Federal Participation, Parcels 35-WL, 35-1WL, 44-T, 44-1T, and part of 34 WL, are Ineligible for Federal Participation.

BERNARD PRUSSAK, OWNER; ANNA J. PRUSSAK, LIFE ESTATE

35 WL
T.B.A. 0.844 Ac.

35-1 WL
T.B.A. 0.154 Ac.

F.A. REED

748 I. (CALC) TO PROP CORNER

552.50' (CALC) TO PROP CORNER

N 83°51'12" E 240

350+54.32 (D)
350+54.32
188.48
I.P. FD. & USED

N 69°18'52" E 257.82

350+52.01
CBE

TYPE 47 Fence

570.45'
S 64°51'5 E

FUTURE CONSTRUCTION LIMITS

WOODS

RAMP "M"

(FUTURE CONSTRUCTION)

ABANDONED OIL WELL

INELIGIBLE FOR FEDERAL PARTICIPATION

ELIGIBLE FOR FEDERAL PARTICIPATION

IRON PIN ROUND 30' SOUTH OF E. BOSTON MILLS RD

30' OFFSET LINE

IRON PIN AT PROPERTY CORNER

I.P. FD.

STONE FD.

207.65'
S 65°51'47" E

TYPE 47 Fence

357+27.86
184.79

N 65°51'47" E 238.87

MATCH LINE "A-A" (SEE BELOW)

5-18" OAK
1-12" MAPLE

5-18" OAK

1-15" ELM
1-15" CHERRY
1-12" HICKORY
8-15" OAK
9-12" OAK

MATCH LINE STA. 360+00

452.96' TO PROP CORNER
N 61°13'00" W
347+82.94
167.62

242.02' (D)

320+03.77
CBE

HENRY G. BENDER
34 WL
T.B.A. 1,580,487 Sq.Ft. (36.283 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION)
715,220. Sq. Ft.
16.423 Ac.

CONSTRUCTION CENTERLINE SURVEY CURVE DATA
Δ : 63°21'00" RT
Dc : 3°00'
Ls : 400'
R : 1909.86'
Es : 66.00'
Te : 1380.49'
Es : 238.39'
Lc : 1711.67'
LT : 266.82'
ST : 133.47'
Δc : 51°21'00"
Tc : 518.13'
Ec : 209.23'
P.I. STA. 350+57.87

1739 LIN. FT. R/W FENCE
Limit of Federal Participation
CONSTRUCTION LIMITS

SUBSTITUTE CURVE DATA FOR RIGHT-OF-WAY ONLY
R : 2546.76'
Dc : 2°14.59'
Lc : 266.70'
Δ : 6°00'
T : 133.47'
PC 338+10.73
PCC 340+77.43
PCC 357+65.10
PT 360+55.80

SURVEY

I-271

HENRY G. BENDER
34 WL
T.B.A. 1,580,487 Sq.Ft. (36.283 Ac)
(ELIGIBLE FOR FEDERAL PARTICIPATION)
865267 Sq. Ft.
19.86 Ac.

357+89.05
140.64

N 83°07'56" E

HENRY G. BENDER
34 WL

(LL)

Gas Well

359+00
330.38

329.10 LA R/W

N 83°07'56" E

MATCH LINE STA. 360+00

MATCH LINE A-A

MATCH LINE "A-A"

PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

BETWEEN TRACT LINE & LA
CH BRG. N 78°48'08" W
CH LGTH. 417
R : 11,429.30'
Lc : 417

CH BRG. S 77°28'11" E
CH LGTH. 1505.47
Lc : 1504.57
R : 11,429.30'

176.10 (245.35 Bl.)
340+24.33 (345.35 Bl.)

347+52.81 (215.41)
179+00 (245)

EXIST LIMITED ACCESS (OHIO TURNPIKE)
PROPOSED LIMITED ACCESS (I-271)

CH BRG. S 78°04'49" E
CH LGTH. 283.92'
Lc : 283.92'
R : 11,429.30'

347+00 (160')
179+13.65 (165.52')

179+04.26
245

N 19°46'56" E

TRACT LINE TRACT 7 TO TRACT 1

WEST EAST

N 83°07'56" E

350+57.87

CH BRG. S 80°01'08" E
CH LGTH. 489.40
R : 11,429.30'

345+11.48
181+78.55 (245')

350

T.B.A. 0.753 Ac.

44-1 WL

MEET EXISTING FENCE
134.92
N 64°30'25" E

OHIO TURNPIKE CURVE DATA
Δ : 38°21'52" LT.
Dc : 0°29'27"
Lc : 4001.36'
R : 11,674.30'
E : 686.26'
P.I. STA. 186+10.91

1920.53' (D) TO PROPERTY CORNER ALONG TURNPIKE LIMITED ACCESS LINE

EXISTING LIMITED ACCESS LINE

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

(CALC FROM DEED)
111.65 (USED)

112.93
(CALC FROM DEED)

FORMER LIMITED ACCESS LINE

TURNPIKE COMM

N 0°29'14" W

44 T
T.B.A. 10.071 Ac.

OHIO TURNPIKE COMMISSION
STATE OF OHIO

344+43.34 (345.07)
176+10

176 177 178

44 Aerial
T.B.A. 1.245 Ac.

S 77°41'02" E
347.01

RW

N 36°40'56" E (CBE)
345.50 (LSO)
178.38 (210.05)

EXISTING WESTBOUND LANES

℄ WESTBOUND LANES

LA R/W

LOT 2
LOT 3

347+25 (150)
181+85.78 (11.64)

44 WL

182 183 184 185 186 187 188

OHIO TURNPIKE

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 3 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

44-1 T

188+44.30

MATCH TO R/W SHEET 32 OF 40

STA. 346+08.40 I-271
STA. 179+98.85 OHIO TURNPIKE

Gas Well

1-12" CHERRY
12-12" ELM

PRELIMINARY SUBMITTAL DATE	MARCH 24, 1965		
RIGHT-OF-WAY COMPLETION DATE	OCTOBER 15, 1965		
№	REVISIONS	DATE	MADE BY
1	Added distance to Lot Corner	11-10-65	
2	Revised Pcl. 35WL & 35-1WL	6-14-66	
3	ABANDONED OIL WELL LOCATED Pcl 34 WL	10-7-66	HCS (BHA)
4	Gas Well Located Pcl. 34 WL	11-7-66	Tullis
	Participation Limits Added	11-23-66	
5	Added Eligibility and Ineligibility Breakdown For Pcl. 34-WL	12-15-66	Lee
	6. Rev. Fence	8-9-67	

INTERCHANGE
INTERSTATE 271 & OHIO TURNPIKE
TURNPIKE INTERSECTION TO STA. 360+00 (I-271)

Revised Eligibly Breakdown Pcl. 34-WL 12-21-66 Lee
Added Eligibility and Ineligibility Breakdown For Pcl. 34-WL 12-15-66 Lee

K.B.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

504
510

34
40

SUM-271-2.98
RIGHT-OF-WAY SHEET

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 4 TRACT 5
RANGE 12 WEST
TOWNSHIP 4 NORTH

MATCH THIS AREA TO LOWER RIGHT HAND SECTION ~THIS SHEET~

TEMPORARY RUNAROUND CURVE DATA
Δ = 12°45'
R = 3819.72'
Dc = 1°30'
Lc = 850.0'

P.R.C. STA. 0+00
BEGIN RUNAROUND

TRACT 5
TRACT 7
EAST LINE
WEST LINE
LOT 4
LOT LINE EXTENDED
S 88°23'46" W

PROPOSED TEMPORARY R/W (I-271)
EXISTING LIMITED ACCESS (O.T.)
BRG. = S 73°57'28" E
CH. = 660.72'
CUR. = 5°59'35"
R. = 11,654.30'

170.00 (220.0 M)
41.35 (1863.84 M)

TEMPORARY RUNAROUND

EXISTING EASTBOUND LANES

OHIO TURNPIKE
COMMISSION OF
STATE OF
OHIO
44
T

OHIO TURNPIKE
BRG. = S 73°33'48" E
CH. = 1508.54'
CUR. = 5°10'00"
R. = 1124.30'
TO STA 161+00

EXISTING WESTBOUND LANES

166+53.83 (TURNPIKE STA.)
N 0°43'29" W
78°51'03" (LOC. TAN.)
121

RICHFIELD TOWNSHIP
BOSTON TOWNSHIP

TRACT 5

335

EXIST. R/W FENCE

MEET EXISTING FENCE

344°53'19" (LT.) (CB = 33°26'41" RT.)
(CB = 344°09'01" (LT.) 123.26')
(CB = 14°17'24" 123.45')

85.05

N 1°04'44" W

Gas Well

HENRY G. BENDER
34
WL

Gas Well

NOTE: TEMPORARY RUNAROUND AS SHOWN IS NOT CORRECT. SEE PLAN & PROFILE SHEETS OF RUNAROUND FOR CORRECT LOCATION AND GEOMETRICS.

℄-OHIO TURNPIKE
CURVE DATA
P.I. STA. 186+10.91
Δ = 38°21'52" LT.
Dc = 0°29'27"
T = 4061.36'
L = 7816.89'
R = 11,674.30'
E = 686.28'

TYPE "T" FENCE

CONSTRUCTION LIMITS

(FUTURE CONSTRUCTION)
RAMP "M"

RAMP "L"

EXISTING LIMITED ACCESS
BRG. = S 73°57'28" E
CH. = 660.72'
CUR. = 5°59'35"
R. = 11,654.30'

PROPOSED TEMPORARY R/W (I-271)
EXIST R/W FENCE
44
T

P.R.C. STA. 0+00
BEGIN RUNAROUND

220'
N 20°02'32" E

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 4 TRACT 5
RANGE 12 WEST
TOWNSHIP 4 NORTH

PROPERTY OF
THE STATE OF OHIO

EXISTING EASTBOUND LANES

OHIO TURNPIKE
BRG. = S 73°33'48" E
CH. = 1508.54'
CUR. = 5°10'00"
R. = 1124.30'

EXISTING WESTBOUND LANES

EXISTING LIMITED ACCESS

EXIST R/W FENCE

(FUTURE CONSTRUCTION)
RAMP "M"

166+53.83
N 0°43'29" W
78°51'03" (LOC. TAN.)

TRACT 5, LOT 4
TRACT 7

MATCH THIS AREA TO UPPER LEFT HAND SECTION ~THIS SHEET~

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

LLOYD L. BIGELOW
29 T — 0.094Ac
29 WL — 0.08Ac
29-1 WL
29 WL

GAS WELL IN PAR. 29 T IS NOT TO BE DISTURBED.

EXIST R/W FENCE

29 T

WELL

228.5'
24.1'
10.1'
S 88°23'46" W
343°48' CH. 42.4'
STORAGE TANK
G. SUR.
343.0'
N 1°50'00" W 723.7' (CALC.) TO
34+51.86
63.2'01"
JENNIE BIGELOW
32 T — 0.544Ac
32 WL
(LL)
S 88°50'02" E 377.22'
366°36'53"
381.3'
300 LIN. FT. FENCE
0°50'
32 T — 0.544 Ac
32 WL

EAST LIMITED ACCESS (OHIO TURNPIKE)
PROPOSED LIMITED ACCESS (I-271)
BRG. = S 73°33'48" E
CH. = 1508.54'
CUR. = 5°10'00"
R. = 1124.30'

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 17
RANGE 11 WEST
TOWNSHIP 4 NORTH

PROPERTY OF
THE STATE OF OHIO

34
WL
TB.A 1,580,487 Sq. Ft (36.283 Ac)
(INELIGIBLE FOR FEDERAL PARTICIPATION
715,220 Sq. Ft (16.423 Ac.)

WOODS

348°02'12" 84.7'
N 81°15'00" W
242.02'(D)
345
452.36' TO PROP. CORNER
N 8°45' W 151.5'
35-1 WL
748.11' (CALC.) TO PROPERTY CORNER
N 8°45'36" W
35 WL

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	DATE	MADE BY
1	Revised 32-WL and added R.I.C.P.-1-WL	3/21/66	JL
2	Revised Pcl. 35-WL & 35-1-WL	6/19/66	GMA
3	OIL WELL LOCATED Pcl. 34-WL	10-4-66	HCS (BHA)
4	Gas Well Located Pcl. 34-WL	11-7-66	Tullis
5	Added Eligibility and Ineligibility Breakdown For Pcl. 34-WL	12-15-66	Lee

6 Revised Eligibility Breakdown Pcl 34-WL 12-21-66 Lw
7. Rev. Fence 8-9-67

BERNARD PRUSSAK, OWNER; ANNA PRUSSAK, LIFE ESTATE

INTERCHANGE
INTERSTATE 271 & OHIO TURNPIKE
OHIO TURNPIKE STA. 161+00 TO STA. 175+00

MATCH TO R/W SHEETS 32 & 33 OF 40

FED. RD.	STATE	PROJECT	
2	OHIO		

505
510

SUM-271-2.98

RIGHT-OF-WAY SHEET

35
40

MATCH TO R/W SHEETS 32 & 33 OF 40

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

(LL)

CH BRG = S 80°01'08" E
CH LGTH = 489.46'
R = 11,429.30'
Lc = 489.51'

655.87' LA RW N 65°29'56" E

350+68.07 (1546.42)
184+00 (245)

1920.93' TO PROPERTY CORNER ALONG TURNPIKE LIMITED ACCESS LINE

44-1 WL

134.52' N 64°30'25" E

RW

382+86.65 (1148.79)
345+25 (130')

44 Aerial

LA RW

345' N 25°45' E

N 4°27'16" E
430.85' (M & S SURVEY)
430.85' (DEED)
431.76' (M & S SURVEY)
(CALC FROM DEED)

EXISTING LIMITED ACCESS LINE

EXIST R/W FENCE

FORMER RE

198.23' 35 245

111.85 (USED)
112.93 (CALC FROM DEED)

FORMER PROPERTY LINE

1605.00' (D) TO PROPERTY CORNER
N 85°15'46" E

LOT 2
LOT 3

[752.2' (D) MANCZ
[701.2' (D) NAU
[706.1' (M) DEED

EXISTING WESTBOUND LANES

WESTBOUND LANES

PROPERTY OF
THE STATE OF OHIO

LOT 2
LOT 3

348+65.27 (325.94')
184+00

183 185 190 195

OHIO TURNPIKE

CH BRG = S 84°40'53" E
CH LGTH = 1399.13'
Lc = 1400.05'
R = 11,474.30'

44-1 T

OHIO TURNPIKE COMMISSION
STATE OF OHIO

T.B.A. = 10.783 Ac

134.2' (TURNPIKE COMM.)
N 0°28'14" W

185+44.90

4 OHIO EDISON CO. WIRES

OHIO TURNPIKE
CURVE DATA
Δ = 38°21'52" LT.
Dc = 0°25'27"
T = 4061.36'
L = 7816.89'
R = 11,474.30'
E = 686.28'
P.I. STA. 186+10.91

END RUNAROUND
P.R.C. STA. 28+85.22
(17' RT. & STA.

EASTBOUND LANES

EXISTING EASTBOUND LANES

NOTE: TEMPORARY RUNAROUND AS SHOWN IS NOT CORRECT. SEE PLAN & PROFILE SHEETS OF RUNAROUND FOR CORRECT LOCATION AND GEOMETRICS

TEMPORARY RUNAROUND
CURVE DATA
Δ = 11°15'
R = 3815.72'
Dc = 1°30'
Lc = 750'

TEMPORARY RUNAROUND

(FUTURE CONSTRUCTION)

CH BRG = S 81°32'34" E
CH LGTH = 836.26'
Lc = 836.43'
R = 11,854.30'

351+33.38 (816.11')
188+70.96 (220)

1702.09' (D) TO PROPERTY CORNER ALONG TURNPIKE LIMITED ACCESS LINE
1689.82' (CALC)

44-1 T

CH BRG = S 79°29'14.5" E
CH LGTH = 1686.54'
R = 11,854.30'
Lc = 1689.76'

ST 183+31.18

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 3 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

CH BRG = S 85°01'06" E
CH LGTH = 636.75'
Rc = 636.83'
R = 11,954.30'

CONSTRUCTION LIMITS (FUTURE)

EXISTING LIMITED ACCESS LINE (O.T.)

636.35' (D) ALONG TURNPIKE LIMITED ACCESS LINE

361+32.10 (1117.29')
198+00 (280)

361+28.56 (1136.98')
198+00 (300)

N 3°32'20" E

CH BRG = S 87°22'50" E
CH LGTH = 307.67'
Lc = 307.71'
R = 11,574.30'

EXIST R/W FENCE

TYPE 47 FENCE

353+64.86 (1057.52')
191+00 (350)

1556.43'
S 88°46'41" E

LA RW

CH BRG = S 88°07'01" E
CH LGTH = 615.35'
R = 11,574.30'
Lc = 615.42'

LOT 3
LOT 4

JENNIE BIGELOW

32 WL

T.B.A. 1,435,999 S.F. (32.966 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION)
(Right side ℄ 706,233 Sq. Ft. (16.21 Ac.))

RAMP "J"

RAMP "K"

350+74.65 (866.85')
188+78.09 (265')

33 WL

237.22'

WOODS

345

335

347+78.52
1053.75'

1833.30' TO PROPERTY CORNER

LA RW 264.23'

CONSTRUCTION LIMITS (FUTURE)

N 64°25'08" E 493.54'

RALPH EARL WEAVER & MARTHA C. WEAVER

33 WL

T.B.A. = 2.203 Ac

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 4 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

MATCH LINE STA. 197+00

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : OCTOBER 15, 1965

No	REVISIONS	DATE	MADE BY
1.	REVISED BEARING & Distance R13ZWL	5/16/66	[illegible]
2	name changed Pcl 33 WL	8/16/66	[illegible]
3	Added Eligibility and Ineligility Breakdown For Parcel 32-WL	12-16-66	Lee
4	Revised Eligibility Pcl. 32.WL	12-21-66	Lee
5.	Revised Fence	8-9-67	SMK

INTERCHANGE
INTERSTATE 271 & OHIO TURNPIKE

TURNPIKE STA. 183+00 TO 197+00

505A
510

SUM - 271 - 2.98

RIGHT OF WAY SHEET

35A
40

HENRY G. BENDER

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

FRANCIS HAWKSWELL Et. Al.

(LL)

(LL)

EXIST. R/W FENCE

FORMER ℄

(605.00 (D)
1797.20 (MANCZ DEED)
1761.20 (OT DEED)
1761.20 (P)

LOT 2
LOT 3

OHIO TURNPIKE
CURVE DATA
Δ = 38°21'52" LT
Dc = 0°25'27"
T = 4061.36'
L = 7816.68'
Rc = 11,674.30'
E = 686.28'
PI STA 186+10.91

EXISTING WESTBOUND LANES

℄ WESTBOUND LANES

MATCH LINE STA. 197+00

CH BRG = S 84°40'53" E
CH LGTH = 1399.13'
Rc = 1400.00'
R = 11,674.30'

198.00 (OT)
364+77.68 (I-271)
1881.18' (I-271)

200

℄ OHIO TURNPIKE

203+88

62°

294+87
35' LT

205

EXISTING 150' x 12' C.M.P.

EXISTING 24" & 30" R.C.C.P.

54°9'54" (D)
510.40' (OT DEED)

PROPERTY OF THE
STATE OF OHIO

℄ EASTBOUND LANES

EXISTING EASTBOUND LANES

(FUTURE CONSTRUCTION)

360

365

RAMP "U"

S. 42°14'E

295

44-1
T

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 3 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

300
205.46'
E
Z

198.00 (300) OT
324+77.68 (I-271)
1881.18' (I-271)

615.41'

S 85°46'41" E
1556.49'

CH BRG = S 86°07'01" E
CH LGTH = 615.35'
R = 11,574.30'
Lc = 615.42'

LOT 3
LOT 4

LA
RW

FUTURE CONSTRUCTION LIMITS

MEET EXISTING FENCE

367+39.28 (1210.75')
201.00 (280')

525.60'

EXIST. R/W FENCE

206+13.29 (280') OT
372+61.94 (1265.86') I-271

EXISTING LIMITED ACCESS (OHIO TURNPIKE)
PROPOSED LIMITED ACCESS (I-271)

367+36.74 (1230.59')
201.00 (300')

CH. BRG = N 89°59'05" E
CH. LGTH. = 525.56'
R = 11,954.30'
Lc = 525.60'

TYPE 47 FENCE

539.54'

206+12.87 (333.54') OT
372+50.58 (1325.16') I-271

℄ S. 42°14'E

33
WL

RALPH EARL WEAVER & MARTHA C WEAVER

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 4 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE OCTOBER 15, 1965

Nº	REVISIONS	DATE	MADE BY
1	Name changed Rel 33 WL	4-1-67	W.I.
2	Revised Fence	8-9-67	SAK

INTERCHANGE
INTERSTATE 271 & OHIO TURNPIKE

TURNPIKE STA. 197+00 TO 207+00

FED. RD.	STATE	PROJECT	
2	OHIO		

506
510

SUM-271-2.98

RIGHT OF WAY SHEET 36 40

MATCH TO R/W SHEET 33 OF 40

MATCH TO R/W SHEET 37 OF 40

BEGIN SHEET

END SHEET

STA. 360+00

STA. 375+00

3-12"BEECH
3-12"MAPLE
7-12"OAK
7-18"OAK

2-12"MAPLE
8-24"OAK
6-15"OAK

1-15"CHERRIE
3-12"MAPLE
2-24"OAK
20-15"OAK

4-18"OAK
9-12"OAK

12-18"OAK
13-12"OAK

8-24"OAK
8-15"OAK

7-18"OAK
1-24"OAK

2-12"HICKORY
3-12"OAK

11-12"OAK
4-12"HICKORY
1-12"MAPLE
11-20"OAK

16-15"OAK
8-24"OAK

4-12"MAPLE
2-15"HICKORY
7-18"OAK
1-36"OAK

9-12"MAPLE
7-20"OAK

3-15"HICKORY
3-15"OAK

BOSTON MILLS ROAD C.H. 32 (60')

250.0' TO ANGLE PT.
N 00°01'03"W

571.35' TO ANGLE POINT
(ROADWAY PLANS)

224.30' (D)
N 14°58'02"W

N 01°20'56"W

EXISTING R/W

N 83°30'02"W 134.73'

232.57' (D) TO PROPERTY CORNER
N 76°15'56"E
ANGLE POINT

665.77' (D) TO ℄
N 66°21'32"E
(ROADWAY PLANS)

10-15"OAK
1-24"OAK

2-18"MAPLE
5-15"HICKORY
5-15"OAK

362+00
325

320.10' LA RW N 83°07'56"E

345+21.32"E
192.09'

363+20
175

WELL

HENRY G. BENDER

34 WL

1 STY FR CABIN

50'

363+00
250

N 8°45'40"E
348.41'

N 86°39'10"E
335.24'

LA RW

WOODS

368+00
175

N 40°15'44"E
125'

1805 LIN. FT. R/W FENCE

CONSTRUCTION LIMITS

34 WL

WOODS

TBA. 1,580,487 Sq. Ft. (36.283 Ac.)
ELIGIBLE FOR FEDERAL PARTICIPATION
865,267 Sq. Ft. (19.86 Ac)

GAS WELL

372+30.88
104.54'

154.35'
24°46'(D)
240' TO ℄

FRANCIS HAWKSWELL Et. Al.
36 WL
(SEE BELOW)

N 42°42'31"E
378.28' (D)
379.96' (OCC.) TO PROPERTY CORNER

HAZEL HOFFMAN
TBA. 1.003 Ac
37 WL

LANE TO BE ABANDONED

℄ SURVEY (I-271)
STA. 366+41.20

365

370

N 83°07'56"E

40.45'

RUINS

372+81.67

1 STY FR HSE

372+16.18
24.34'

FRANCES HAWKSWELL
TBA. 1.00 Ac

38 WL

374+47.43
64.08'

N 42°44'21"E
378.53' (D)
379.68' (OCC.) TO PROP. CORNER

N 71°40'58"E
121.35' (D)
121.80' (OCC.)

N 71°40'58"E
178.84'
179.50' (OCC.)

N 48°12'29"E
84.45' (D)
84.80' (OCC.)

29.61' (DEED)
29.73' (SURV.)
N 41°37'44"E

373+49.37
144.08'

36 WL

SEE BELOW

N 70°55'56"E
34.40'

374+37.70
170.67'

374+08.74
191.33'

SEPTIC TANK (L)

370.40'

374+01.44
25.70'

374+02.30
247.22'

1 STY FR HSE

N 83°07'56"E

SPRING

373+00
250

372+00.76
160'

133.37'
54°32'42"E

FRANCIS HOAG
& MARION HOAG

39 WL

TBA. 0.374 Ac

(LL)

N 23°23'00"W
720.51' (D) TO PROPERTY CORNER

179.30' TO PROPERTY CORNER
N 87°36'04"W

1-12"BEECH
8-12"POPLAR
2-18"OAK
6-12"HICKORY
3-12"MAPLE
5-18"POPLAR
4-12"OAK

FRANCIS HAWKSWELL,
HAZEL HOFFMAN, FRANCIS & MARION HOAG

36 WL

TBA. 1.359 Ac

5-12"OAK
6-18"OAK
7-15"POPLAR

5-12"ELM
5-12"POPLAR
1-20"OAK
8-12"OAK

3-12"OAK
5-12"ELM

4-12"OAK
8-15"OAK
6-12"ELM

1-18"OAK
7-12"HICKORY
23-12"OAK
2-12"CHERRY

7-12"ELM
32-12"OAK
2-20"OAK
1-12"HICKORY

5-20"OAK
7-12"HICKORY
10-12"ELM
26-12"OAK

4-12"ELM
15-12"OAK
7-12"HICKORY
4-20"OAK
2-12"CHERRY

21-12"OAK
3-12"CHERRY
5-12"HICKORY
5-18"OAK

(LL)

WOODS

CONSTRUCTION LIMITS
Type 47 Fence
1395.87'
N 83°07'56"E

LA RW

S.T. STA 361+89.05

OHIO EDISON
4 WIRES (69 KV)

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

● = IRON PIN FOUND
◉ PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE
1	GAS WELL LOCATED Pcl 34-WL	HCS(BHA)	10-4-66
2	Added Eligibility and Ineligibility Breakdown for Pcl 34-WL	Lee	12-15-66
3	Names added Pcl 36 WL	IRICK	2-24-67
4.	Revised Fence	SMK	8-9-67

STA. 360+00 TO STA. 375+00

FED. RD.	STATE	PROJECT	
2	OHIO		

507/510

SUM-271-2.98

RIGHT OF WAY SHEET 37/40

MATCH TO R/W SHEET 36 OF 40

STA. 375+00

4-18" HICKORY
3-12" POPLAR
4-18" OAK

2-12" POPLAR
2-12" OAK
1-18" HICKORY
1-12" MAPLE
2-15" WALNUT
1-12" PINE

1-12" WALNUT

438.40' (ROADWAY PLANS)

415.07' (D)

N 62°21' 32"E 655.77' TO ANGLE PT. (ROADWAY PLANS)

N64° 15' 58"E 344.72' (D)

223.50' TO ANGLE POINT (D)

12" HICKORY

3-12" PINE
3-15" OAK

2-12" BEECH
6-12" ELM

6" PINES

10" PINES

12" ELMS

8" PINES

2 STY. FR. HSE.

BARN

6" PINE

SHED

2-8" PINES

SPRING

SEPTIC TANK

HAZEL HOFFMAN,
FRANCIS & MARION HOAG,
& FRANCIS HAWKSWELL.

36 WL

WOODS

N 73° 53' 58" W

30'

30'

℄

EXISTING R/W LINE

BOSTON MILLS RD. (C.H. 32)

60'

2,00.14' (D)
201.85' (OCCUP.)

N 64°46' 32"E 602.59' TO BEARING BREAK

EXISTING R/W LINE

1-12" HICKORY
5-12" OAK

STA. 390+00

N 62° 42' 31" E 315.96' TO PROP. COR. 318.28' (D)

375+84.91 237.51

N 77° 16' 04" E 42.15

375+48.74 243.86

LA RW

N 78° 14' 16" E (D) 315.48

381+00 1.40

N 78° 21' 11" E 410.99

(1,501 LIN. FT. R/W FENCE)

CONSTRUCTION LIMITS

385+11.63 1.40

385.51 (OCC.)

N 70° 22' 18" E 306.39

LA RW

HAZEL HOFFMAN

37 WL

36 WL

N 62° 44' 26" E 377.48 (DC) 376.70 PROP. COR. 377.37 (D)

375+65.37 108.44

405.84 (D) 247.08

STRUCTURE NO. SUM-271-0715

P.C. STA. 378+05.91

(LANE TO BE ABANDONED)

STA. 377+33

N 83° 07' 56" E

FRANCES HAWKSWELL

38 WL

375+96 50'-00" CULV.

OLD GAS WELL

380

82°50'

STA. 380+16.80

℄ - SURVEY (I-271)

384+89.67

1.85

(LANE TO BE ABANDONED)

41 WL

191.63'

N 1°00' 40" W

BEGIN SHEET

MATCH TO R/W SHEET 38 OF 40

END SHEET

STA. 390+00

N 71° 56' 03" E

N 70° 19' 56" E (D) 902.11' (D)

376+97.04 134.27

FRANCIS HOAG & MARION HOAG

39 WL

LIGHT WOODS

40 WL

WELL

PATIO

(ABANDONED) GAS LINE E.O.G. CF 634

CONSTRUCTION LIMITS

555.81'
N 77° 25' 52" E

LA RW

Type 47 Fence (D)
N 77° 25' 52" E

305.54'

385+51.04 201.04

FIELD DRIVE

(TO BE ABANDONED)

HARRY HORVITZ

41 WL

TBA - 9.713 Ac

1-20" OAK
7-12" ELM
1-15" CHERRY

N 83° 07' 56" E

375+68.16 250'

WOODS

(LL)

N 2° 23' 52" E 283.84' (D)

(LL)

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

THEOPHILE PRUSAK & SOPHIE PRUSAK

40 WL

TBA - 8.01 Ac

179.30' TO PROP. COR. (D)

S 87° 37' 04" W

(LL)

CORNER (DEED)

320.92' TO PROPERTY

1-12" BEECH

1-12" CHERRY
2-15" HICKORY

2-12" ELM
3-12" POPLAR

1-10" WALNUT

1-20" OAK
2-20" OAK
12-12" POPLAR

℄ SURVEY CURVE DATA

P.I. STA. 397 + 73.97
Δ = 28°53'34" LT.
D_c = 0° 45'
R = 7639.44'
L_c = 3852.37'
T = 1968.07'
E = 249.43'

● = IRON PIN FOUND
◉ = PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE
1	NAMES ADDED Pcl. 36WL	IRICK	2-24-67
2	ADDED LEADER LINE Pcl. 40 & 41	IRICK	3-30-67
3	Revised Fence	SMK	8-9-67

STA. 375+00 TO STA. 390+00

FED. RD.	STATE	PROJECT	
2	OHIO		

508
510

SUM-271-2.98

RIGHT OF WAY SHEET 38 40

BOSTON MILLS ROAD C.H. 32 (60')

BEARING BREAK

N 64° 46' 32" E
602.55' TO PROPERTY CORNER

164.40

335.60' (D)
N 64° 44' 02" E

2 EXISTING R/W

2 EXISTING R/W

333.91' (D) TO ANGLE BREAK
N 44° 24' 52" E
(CALC FROM DEED)

PARKING AREA

OUTHOUSE

SHED

BARN

N 88° 56' 05" E

742.90' TO PROPERTY CORNER (D)
900.00' TO PROPERTY CORNER (D)

THE STATE OF OHIO

42 WL

3-24" BEECH
1-24" OAK
4-15" BEECH
3-18" OAK

9-15" BEECH
9-15" OAK
2-8" POPLAR

WAREHOUSE & MAINTENANCE BLDG.

1 STY. BLOCK BLDG

1 STY. BLOCK BLDG

STORAGE AREA

HARRY HORVITZ

41 WL

TBA · 97.13 Ac

WOODS

THE STATE OF OHIO

42 WL

TBA · 89.65 Ac

3-12" OAK
13-18" OAK
1-12" BEECH

7-18" OAK
4-12" OAK

1-15" BEECH
10-18" OAK
1-12" POPLAR
11-12" OAK

3-15" BEECH
6-18" OAK
6-12" OAK

3-8" BEECH
1-36" OAK
1-12" BEECH
6-18" OAK

2-24" POPLAR
2-15" BEECH
8-24" OAK
1-12" ELM
3-12" OAK

4-18" POPLAR
5-18" OAK
3-15" BEECH

MON. FD.

156.0'

STA. 390+00

335+00.78
209.82'

N 70° 22' 18" E
950.39'

LA RW

CONSTRUCTION LIMITS

N 70° 22' 18" E
388.57'

339+00
3.00

N 60° 57' 05" E
550.51'

2 PLASTIC WATER LINES
& 2 ELECTRIC WIRES

LA RW

(1,468 LIN FT R/W FENCE)

STA. 405+00

DRILLED WELL

(TO BE ABANDONED)

41 WL

42 WL

WOODS

141.5

STRUCTURE 2-C
SUM-271-3.36
42+35 RT

BEGIN PROJECT
SUM-271-7.65
STA. 405+00

395

392+88.03

141.48 (CALC)

℄ - SURVEY (I-271)

400

STA 402+00

402+35
50.00 CULV

405+04.15

MATCH TO R/W SHEET 37 OF 40

BEGIN SHEET

390+00
200

LA RW

WOODS

839.88
N 71° 05' 06" E

Type 47 Fence

CONSTRUCTION LIMITS

396+41.62
131.38

133.53

396+18.83
159.68

S 88° 22' 52" W
(450.00')
(47.51' (D) (CALC)

515.23
N 71° 05' 06" E

LA RW

HARRY HORVITZ

41 WL

4-20" OAK
4-18" BEECH
7-12" BEECH
1-15" POPLAR

1-20" POPLAR

310.42 L.I.E.
N 71° 05' 06" E
TO PROPERTY CORNER

422+17.78
225.52'

41-1 WL

657.47
N 55° 57' 38" E

END SHEET

HARRY HORVITZ

41-1 WL

(LL)

474.30'
(182.0')
(180.00')

MATCH TO R/W SHEET 39 OF 40

CENTERLINE SURVEY
CURVE DATA

PI STA. 387+13.97
Δ = 26° 53' 34" LT
Dc = 0° 45'
R = 7639.44'
Lc = 3852.37'
T = 1968.07'
E = 249.43'

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

5-12" BEECH
2-20" OAK
4-15" OAK

1-20" CHERRY
4-20" OAK
1-20" MAPLE
3-12" OAK

1-18" BEECH
6-20" OAK
1-20" POPLAR
4-12" BEECH
2-12" OAK

5-12" BEECH
3-12" OAK
1-20" OAK

3-12" OAK

1-12" BEECH
4-20" OAK
1-15" CHERRY
3-12" OAK

3-20" OAK
22-12-18" OAK

10-18" OAK
13-12" OAK

1-18" BEECH
1-12" BEECH
18-15"-20" OAK

3-18" OAK
2-20" POPLAR
4-12" BEECH
1-12" CHERRY
5-20" OAK
5-18" BEECH

6-12" BEECH
5-18" OAK
2-24" POPLAR
7-12" OAK
1-15" BEECH

2-20" POPLAR
1-15" CHERRY
2-12" POPLAR
2-15" OAK

■ = MONUMENT FOUND
◉ = PROPOSED MONUMENTS

PRELIMINARY SUBMITTAL	DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION	DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	Added Leader line R.L. 41 WL	Irick	3-30-67
2	Rev. Fence	SMK	8-9-67

STA. 390+00 TO STA. 405+00

FED. RD.	STATE	PROJECT	
2	OHIO		

509
510

SUM-271-2.98

RIGHT OF WAY SHEET 39 40

3-18"BEECH
1-24"OAK
3-15"OAK

10-15"OAK

9-15"OAK
1-24"OAK

1-12"CHERRY
1-15"OAK
1-24"OAK

2-24"OAK
2-12"APPLE
1-12"OAK
4-15"ASH

1-24"OAK
5-15"OAK

1-24"BEECH
4-15"OAK
3-15"POPLAR

2-18"CHERRY
2-24"OAK
3-12"BEECH
4-18"OAK
2-24"BEECH

2-12"BEECH
6-24"OAK
2-24"BEECH
1-18"STUMP
5-12"POPLAR

8-12"OAK
1-12"MAPLE
1-15"PINE
10-12"POPLAR
1-24"POPLAR

4-12"PINE
10-12"POPLAR
14-15"OAK

5-12"POPLAR
2-18"OAK
1-12"BEECH
3-12"OAK

4-15"POPLAR
7-15"OAK
2-12" PINE

8-15"OAK
1-15"OAK
7-12" PINE
1-12"BEECH
1-15"CHERRY
4-12"OAK

THE STATE OF OHIO

42 WL

1205.68 TO PROPERTY CORNER (OCC)
1205.62 (D)
N 20°14'06" E

℄ SURVEY CURVE DATA
P.I. STA. 397+73.97
Δ = 28°53'34" LT.
Dc = 0°45'
R = 7639.44'
Lc = 3852.37'
T = 1968.07'
E = 249.43'

FIRST METHODIST CHURCH OF BEDFORD, OHIO

43 WL

TBA = 16.863 Ac
PRO = 0.123 Ac
TOTAL = 16.986 Ac

417+00
320

LA RW
N 54°14'22" E
650.00

MON. FD.

42 WL
THE STATE OF OHIO

154.6'

ACC. 400.07
73.44

MON. FD.

LA RW
N 55°21'44" E
826.04'
(1,627 LIN. FT. R/W FENCE)

CONSTRUCTION LIMITS

HEAVY TIMBER

N 5°45'39" E
140.05'

416+00
220

PT STA. 416+38.26

STA. 405+00

STA. 420+00

224.33'(CALC.)
N 1°42'11" E
TO PROPERTY CORNER (OCC)
100.00' (D)

41-1 WL

365.11' (OCC.)

405+06.15

418

℄ - SURVEY (I-271)

415

N 54°14'22" E

419+72

409.75'

PT
100'
320'

CONSTRUCTION LIMITS

TYPE 47 FENCE

957.47
N 55°57'36" E

LA RW

412.47
(42.86)

156.93' TO PROPERTY CORNER (D)
156.93' TO PROPERTY CORNER (D)
N 68°56'05" E
380.00'

43 WL
(SEE ABOVE)

430'-54' TYPE 4" STRUCTURE No. SUM-271-0.97

GAS WELL

HEAVY TIMBER

415+56.45
308.52

LA RW
N 52°56'21" E
346.55

419+100
340.0

N 43°32'18" E
405.51'

2-12"OAK

7-12"OAK
1-18"OAK
1-12"WALNUT
1-20"HICKORY

HARRY HORVITZ

41-1 WL
TBA = 4.008Ac

GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

1-12"CHERRY
1-15"OAK
1-12"WALNUT
1-20"HICKORY

5-18"OAK
11-12"OAK
1-12"HICKORY

6-18"OAK
4-12"OAK

1-18"OAK
2-12"POPLAR

3-12"POPLAR
1-12"CHERRY
8-12"OAK
1-18"POPLAR

5-12"OAK
1-12"CHERRY
1-24"OAK
3-18"POPLAR
1-12"HICKORY

5-15"OAK
8-18"POPLAR
1-20"BEECH
1-20"OAK

3-15"OAK
1-15"POPLAR
1-20"BEECH
1-24"PINE
2-15"PINE
1-24"OAK

7-12" PINE
8-12"BEECH
4-12"OAK
1-12" POPLAR

4-12"ELM
1-20"ELM
2-12"POPLAR
4-12"OAK

3-15"OAK
2-12"OAK
7-12"PINE
1-20"OAK

1-12"OAK
4-20"OAK
2-15"OAK
6-12"PINE

■ = MONUMENT FOUND
◉ = PROPOSED MONUMENTS

STA. 405+00 TO STA. 420+00

Rev. 8-9-67

MATCH TO R/W SHEET 38 OF 40

BEGIN SHEET

END SHEET

MATCH TO R/W SHEET 40 OF 40

FED. RD.	STATE	PROJECT	
2	OHIO		

510
510

SUM-271-2.98

RIGHT OF WAY SHEET 40 40

MATCH TO R/W SHEET 39 OF 40

BEGIN SHEET

STA. 420+00

1-18" BEECH
2-12" CHERRY
1-12" ELM

3-15" OAK
10-24" OAK
3-24" BEECH
3-12" PINE

4-12" APPLE
4-15" CHERRY
8-15" OAK
1-12" BEECH
4-12" POPLAR

FIRST METHODIST CHURCH
OF BEDFORD, OHIO

TBA : 16.863 AC
PRO : 0.123 AC
TOTAL : 16.986 AC

43 WL
43 WA

OCCUPATION CURVE DATA
Δ : 31°12'05" RT.
T : 106.71
D : 14°59'36"
R : 382.17
Lc : 208.12
P.I. STA. 75+74.19

ROADWAY CURVE DATA
Δ : 31°13' RT.
T : 106.71
D : 15°
Lc : 208.11
R : 381.97
P.I. STA. 75+73.45

425+95.97
599.99'
Lot 1
Lot 2
Tract 1
Tract 1

1 STY FR CAMP HSE

18" ELM

OCCUPATION SURVEY P.I. 76+15.50 R/W MON. FD ROADWAY PLANS USED

N 54° 14' 22" E
LA RW
650.00'

GRAVEL DRIVE

SWIMMING POOL

KIDDIE POOL

BATH HOUSE

TO BE ABANDONED

WOODS

TUB SET AT INTERSECTION OF TANGENTS

OHIO EDISON
2 WIRES (12.5 KV)

3-18" WILLOWS

LA RW
S 35° 45' 38" W
232.83'

END WORK
SUM.-271-2.98
STA. 421+97.75

POINT OF ACCESS FOR FIRST METHODIST CHURCH ACCESS UNDER BRIDGE ONLY. STA. 424+16 LT. 16' WIDTH

OCCUPATION SURVEY P.C. 14+00.45
P.C. 14+00.74 ROADWAY PLANS

SPRING BOX

DAM

430' 54" TYPE SUM-271-0.97 STRUCTURE No

423+50
87.17

N 54° 14' 22" E

179.03
146.20

RAILROAD COMMUNICATION LINES

LIGHT WOODS

GAS WELLS

18" ELM

6" PINE

8" PINE

WOODS

WELL

1 STY FR RIVERVIEW INN

GAB.

425+18.26

N 54° 14' 22" E

43 WL (FOR ACREAGE SEE ABOVE)

STA. 425+49.26 ℄ I-271
STA. 12+99.30 ℄ R/W CH 9

℄ SURVEY

GRAVEL PARKING AREA

SEPTIC TANK

10" ELM

6" PINE

8" PINE

2-6" PINES

8" ELM

6" PINE

6" PINES

RIVER

430

435

STA. 420+00

℄ GAS WELL

LA RW

338.69'
N 54° 14' 22" E
310.99'

425+38.69
87.17'

WOODS

LIGHT BRUSH

4" PINE

1 STY FR. HSE.

2" HICKORY

WELL

GAR

GRAVEL

8" PINE

4" PINE

6" PINE

OHIO BELL TELEPHONE CO. 1-CABLE

B. & O. R.R.

EXIST R/W

RD 25 FT (C.H. 9)

43T

T.BA. 0.052 AC
PICNIC AREA

322.00
87.17'

422+00
87.17'

N 54° 14' 22" E
75'

422+12.83
87.17'

LA RW

1128 LIN. FT. 8" WIRE FENCE

POINT OF ACCESS FOR FIRST METHODIST CHURCH ACCESS UNDER BRIDGE ONLY. STA. 422+52 RT 16' WIDTH

SHED
BACKSTOP

END ACQUISITION
SUM-271-2.98
STA. 425+49.26

BEGIN ACQUISITION
SUM-271-7.65
STA. 425+49.26

RW MON. FD

70+34.15

END PROJECT
SUM-271-2.98
STA. 421+49.25

OHIO EDISON
7 WIRES (12.5 KV)

CUYAHOGA

E. LINE LOT 2 TRACT 1

S. & W. LINE LOT 45

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

FIRST METHODIST CHURCH
OF BEDFORD, OHIO

43 WL (FOR ACREAGE SEE ABOVE)

ROADWAY PLANS
CURVE DATA
Δ = 35°36' LT.
T = 184.15'
Lc = 356.33'
Dc = 10°
(CORROBORATED BY CONSULTANTS SURVEY)
P.I. STA. 68+61.97

6-12" PINE
3-15" OAK
1-20" ELM
2-12" POPLAR
1-20" OAK

1-12" PINE
3-20" OAK
1-20" MAPLE
12-12" OAK
3-24" OAK

3-12" BEECH
1-15" OAK
16-12" CHERRY
4-12" OAK

83.78' (D)
N 56° 32' 37" E
WALTER A. BURTON & PAULINE M. BURTON
33.43' TO CORNER
N 31° 23' W
N 31° 23' W (D)
N 31° 23' W (CC)
30.33'
N 31° 23' W (D)
N 31° 23' W (CC)
448.21' (CC)
P.I. IRON FD & USED 68+61.97

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

● = IRON PIN FOUND
■ = MONUMENT FOUND

GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE

STA. 420+00 TO STA. 435+00

E.S.E.

TNW 11-7-65 RWD

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 352, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

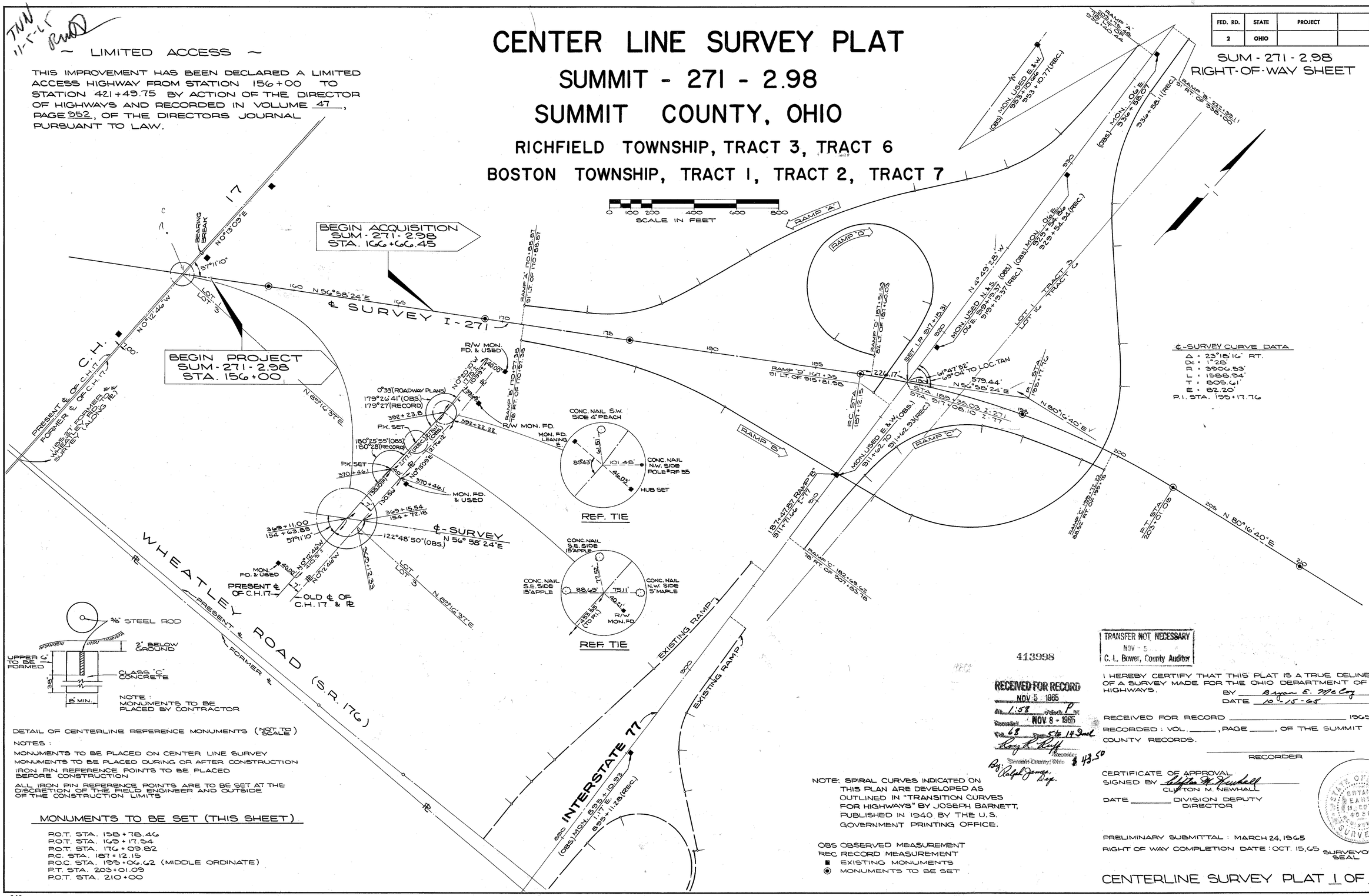
BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98
RIGHT-OF-WAY SHEET

1/40

SCALE IN FEET 0 100 200 400 600 800



NOTE:
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES:

MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION

ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 158+78.46
P.O.T. STA. 169+17.54
P.O.T. STA. 176+09.82
P.C. STA. 187+12.15
P.O.C. STA. 195+06.62 (MIDDLE ORDINATE)
P.T. STA. 203+01.09
P.O.T. STA. 210+00

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

OBS OBSERVED MEASUREMENT
REC RECORD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

413998

TRANSFER NOT NECESSARY
NOV - 5
C. L. Bower, County Auditor

RECEIVED FOR RECORD
NOV 5 1965
at 1:58 o'clock P M.
Recorded NOV 8 - 1965
in 68 Page 5 to 14 Incl.
Roy R. Ruff
Recorder
Summit County, Ohio
Fee $ 43.50
By: Ralph James, Dep.

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE 10-15-65

RECEIVED FOR RECORD _____ 1965
RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS.
_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCT. 15, 65

STATE OF OHIO BRYAN EARL McCOY 7836 REGISTERED SURVEYOR
SURVEYORS SEAL

CENTERLINE SURVEY PLAT 1 OF 5

C.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98
RIGHT-OF-WAY SHEET 2/40

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

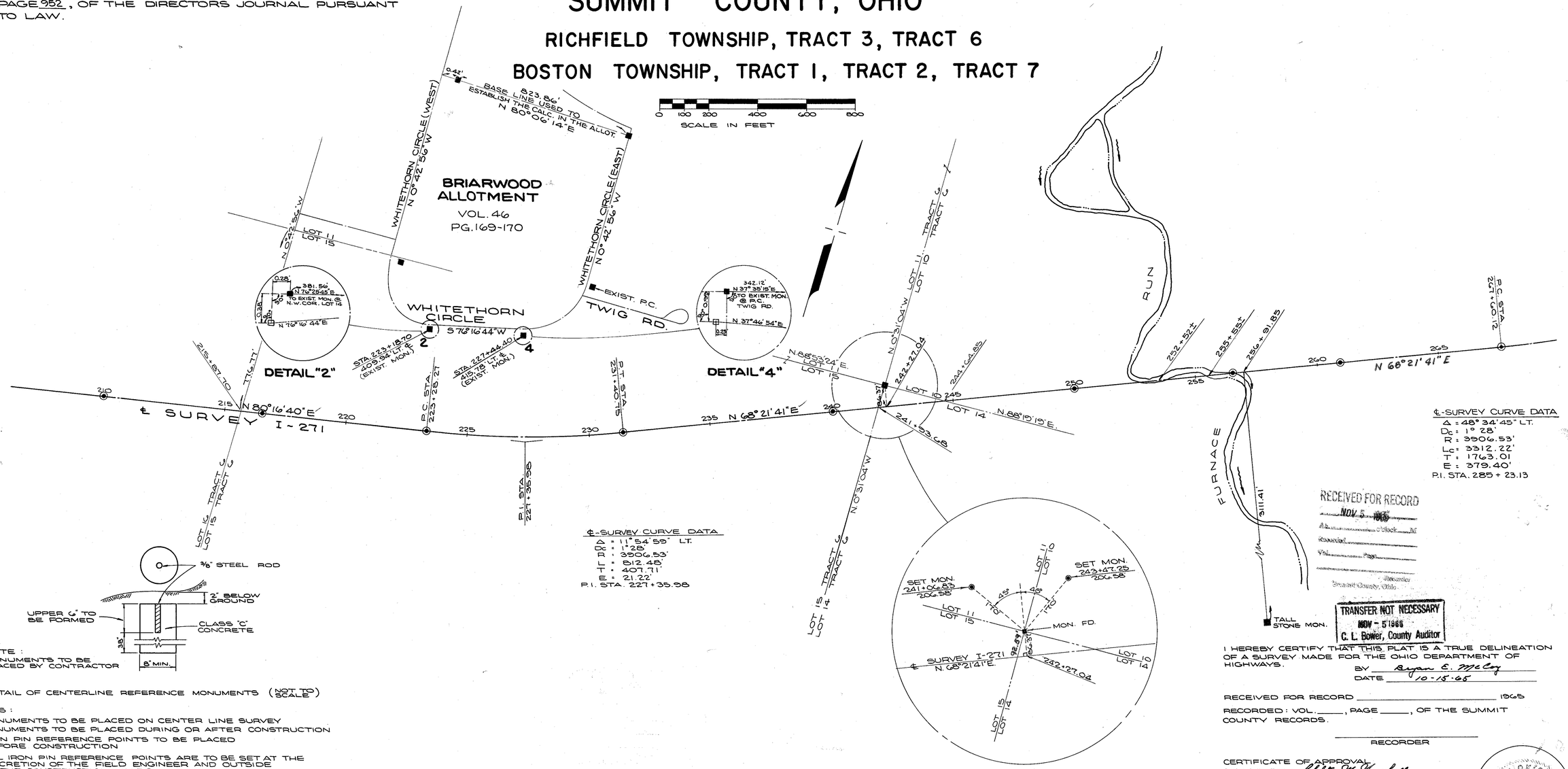
SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.



℄-SURVEY CURVE DATA
Δ = 48° 34' 45" LT.
Dc = 1° 28'
R = 3906.53'
Lc = 3312.22'
T = 1763.01
E = 379.40'
P.I. STA. 285 + 23.13

℄-SURVEY CURVE DATA
Δ = 11° 54' 59" LT.
Dc = 1° 28'
R = 3906.53'
Lc = 812.48'
T = 407.71'
E = 21.22'
P.I. STA. 227+35.98

NOTE :
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES :
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION

ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS.

MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 210+00 – (MONUMENT DUPLICATED ON CENTER LINE SURVEY PLAT 1 OF 5.)
P.O.T. STA. 216+51.13
P.C. STA. 223+28.27
P.T. STA. 231+40.75
P.O.T. STA. 240+01.41
P.O.T. STA. 250+00
P.O.T. STA. 256+53.21
P.O.T. STA. 260+96.30
P.C. STA. 267+60.12
STA. 241+06.83 ~ 206.58' LT.
STA. 243+47.25 ~ 206.58' LT.

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

□ CORRECTED POSITION OF MONUMENT USING THE RECORD PLAT AND CALCULATED FROM THE BASE LINE.
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

DETAIL OF REFERENCE MONUMENTS TO BE SET

RECEIVED FOR RECORD
NOV 5 1965
Recorder
Summit County, Ohio

TRANSFER NOT NECESSARY
NOV - 5 1965
C. L. Bower, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE 10-15-65

RECEIVED FOR RECORD _____ 1965
RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS.
_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : OCT. 15, 1965

STATE OF OHIO BRYAN EARL McCOY 4036 REGISTERED SURVEYOR
SURVEYORS SEAL

CENTERLINE SURVEY PLAT 2 OF 5

FED. RD.	STATE	PROJECT	
2	OHIO		

3/40

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

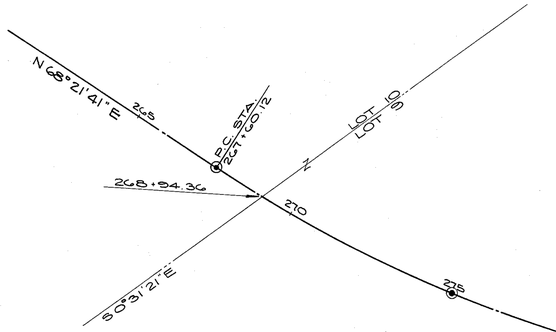
RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

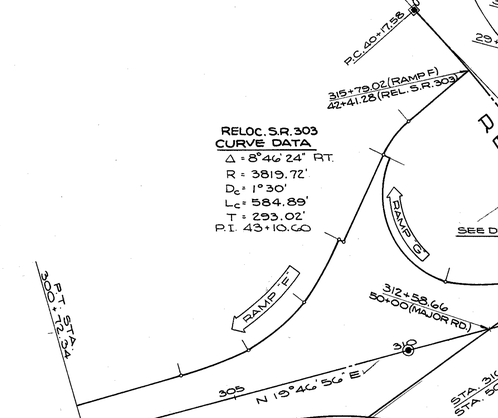
0 100 200 400 600 800
SCALE IN FEET



℄ SURVEY CURVE DATA
Δ = 48°34'45" LT.
Dc = 1°28'
R = 3900.53'
Lc = 3312.22'
T = 1763.01'
E = 379.40'
P.I. STA. 285+23.13

P.I. STA 285+23.13

TRACT 6
RICHFIELD TOWNSHIP
~~OF RIGHT-OF-WAY~~ ~~MAJOR ROAD (60') T.R. 172~~
BOSTON TOWNSHIP
TRACT 7

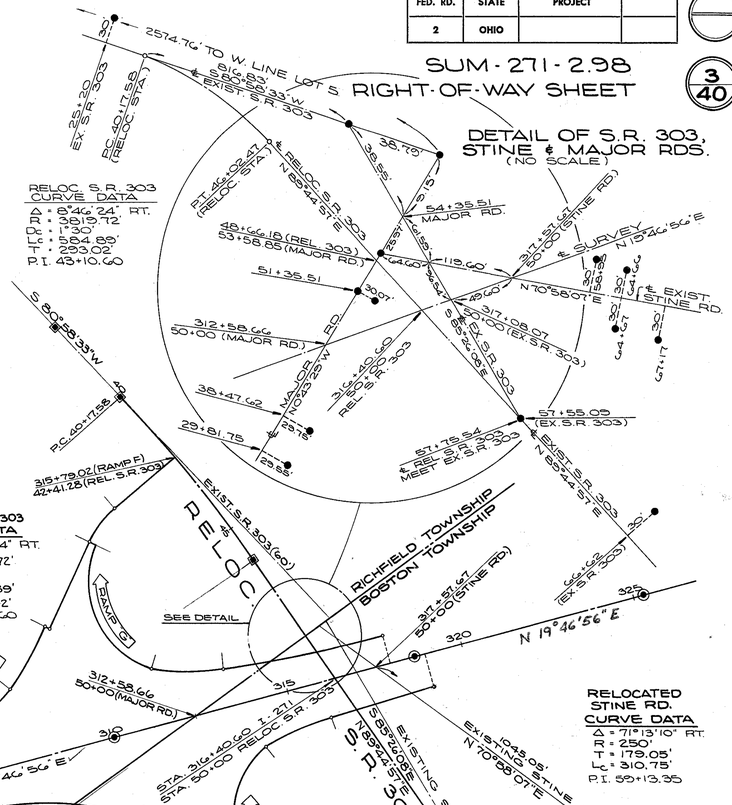


RELOC. S.R. 303 CURVE DATA
Δ = 8°46'24" RT.
R = 3819.72'
Dc = 1°30'
Lc = 584.89'
T = 293.02'
P.I. 43+10.60

RELOCATED STINE RD. CURVE DATA
Δ = 71°13'10" RT.
R = 250'
T = 179.05'
Lc = 310.75'
P.I. 55+13.35

Ⓐ CURVE DATA
Δ = 70°40'26" RT.
Dc = 13°
R = 440.74'
T = 312.45'
Lc = 543.65'
P.I. 45+27.74

Ⓑ CURVE DATA
Δ = 49°03'15" LT.
Dc = 12°
R = 477.46'
T = 247.62'
Lc = 408.78'
P.I. 52+93.73



TRANSFER NOT NECESSARY
NOV - 5 1965
C. L. Bower, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE 18-15-65

RECEIVED FOR RECORD _____ 1965
RECORDED: VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS.
RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : OCT. 15, 65

STATE OF OHIO BRYAN EARL McCOY 4936 REGISTERED SURVEYOR SURVEYORS SEAL

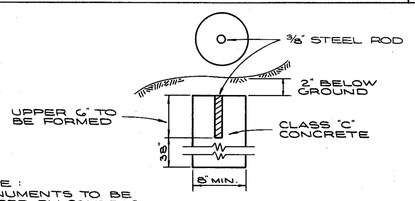
RECEIVED FOR RECORD
NOV 5 1965
At ____ o'clock ____ M
Recorded ____
Vol. ____ Page ____
Recorder
Summit County, Ohio

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

● EXISTING IRON PIN FOUND
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET
▣ MONUMENT ASSEMBLIES TO BE SET

MONUMENT ASSEMBLIES TO BE SET

RELOCATED S.R. 303
P.O.T. STA. 37+50
P.C. STA. 40+17.58
P.T. STA. 46+02.47
P.O.T. STA. 55+00
P.O.T. STA. 58+60
RELOCATED MAJOR RD. (T.R. 172)
P.T. STA. 47+58.90
P.C. STA. 50+75.87
P.T. STA. 54+84.65
RELOCATED STINE RD. (T.R. 171)
P.C. STA. 57+24.30
P.T. STA. 60+45.05



NOTE :
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES :
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

MONUMENTS TO BE SET (THIS SHEET)

P.C. STA. 267+60.12 - (MONUMENT DUPLICATED ON CENTER LINE SURVEY PLAT 2 OF 5)
P.O.C. STA. 275+00
P.O.C. STA. 284+16.23 - MIDDLE ORDINATE
P.O.C. STA. 293+00
P.T. STA. 300+12.34
P.O.T. STA. 310+00
P.O.T. STA. 318+63.96
P.O.T. STA. 325+29.15

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98
RIGHT-OF-WAY SHEET

4
40

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

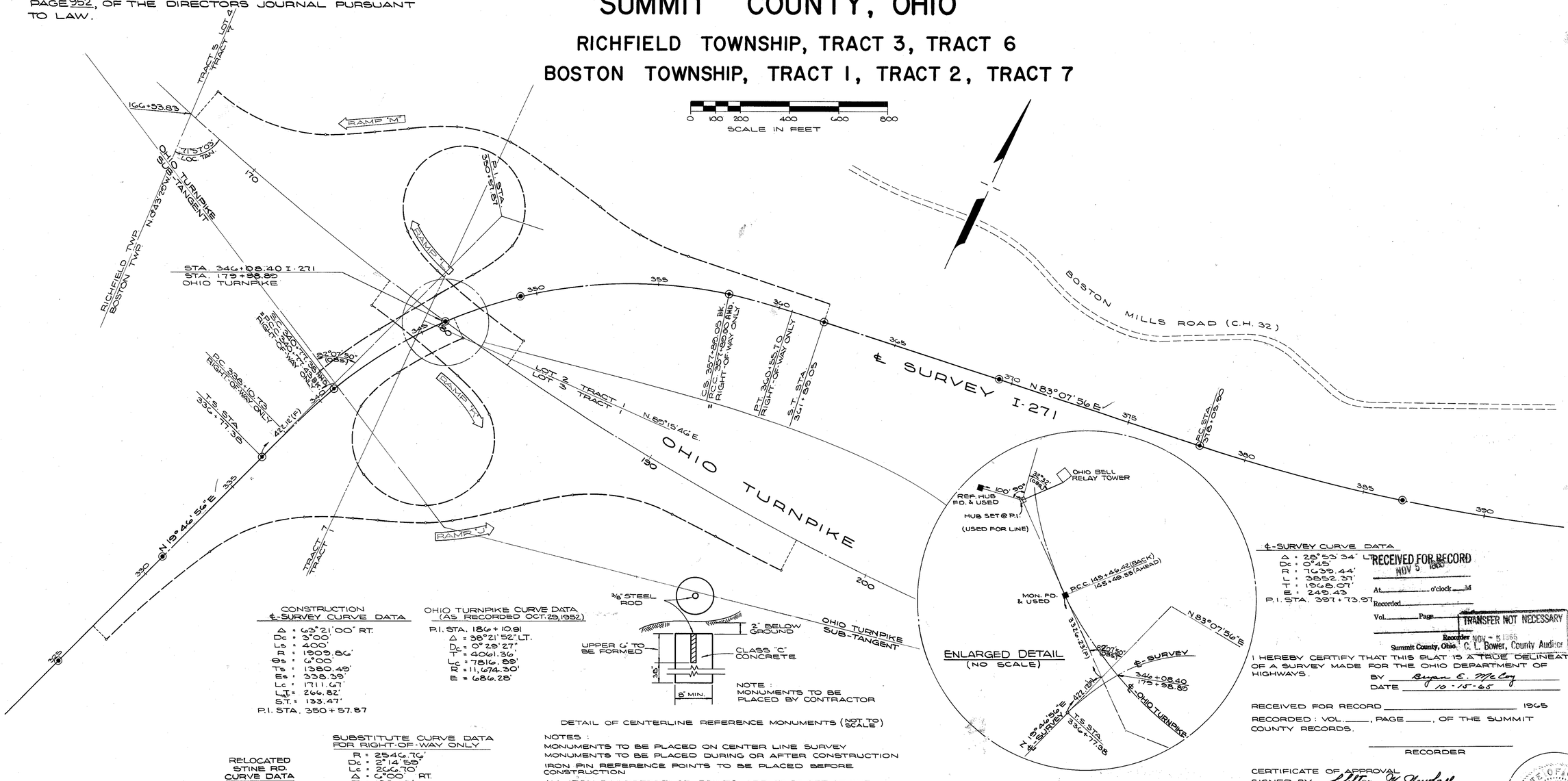
RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

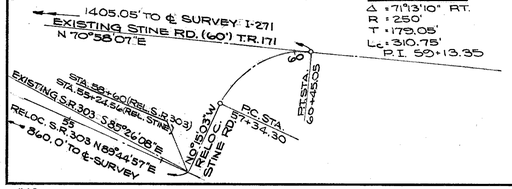
BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

SCALE IN FEET: 0 100 200 400 600 800





RELOCATED STINE RD. CURVE DATA

Δ = 71°13'10" RT.
R = 250'
T = 179.05'
L = 310.75'
P.I. 59+13.35

CONSTRUCTION ℄ SURVEY CURVE DATA

Δ = 63°21'00" RT.
Dc = 3°00'
Ls = 400'
R = 1909.86'
Θs = 6°00'
Ts = 1380.49'
Es = 338.39'
Lc = 1711.67'
L = 266.82'
S.T. = 133.47'
P.I. STA. 350+57.87

OHIO TURNPIKE CURVE DATA (AS RECORDED OCT. 29, 1952)

P.I. STA. 186+10.91
Δ = 38°21'52" LT.
Dc = 0°29'27"
T = 4061.36'
Lc = 7816.89'
R = 11,674.30'
E = 686.28'

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

SUBSTITUTE CURVE DATA FOR RIGHT-OF-WAY ONLY

R = 2546.76'
Dc = 2°14'55"
Lc = 246.70'
Δ = 6°00' RT.
T = 133.47'
P.C. 338+10.73 P.I. 339+44.20
P.C.C. 340+77.43 BK. = 340+71.38 AHD.
Δ = 51°21'00" RT.
T = 918.12' P.I. 349+95.51
E = 209.23'
P.C.C. = 357+89.10 P.I. 359+22.57
P.T. = 360+55.80

NOTES :
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS.

MONUMENTS TO BE SET (THIS SHEET)

P.O.T. STA. 325+29.15 - (MONUMENT DUPLICATED ON CENTER LINE SURVEY PLAT 3 OF 5)
P.O.T. STA. 331+00
T.S. STA. 336+77.38
S.C. STA. 340+77.38
P.O.C. STA. 346+08.40 - (INTERSECTION OF I-271 WITH OHIO TURNPIKE)
P.O.C. STA. 349+33.22
C.S. STA. 357+89.05
S.T. STA. 361+89.05
P.O.T. STA. 362+44.24
P.C. STA. 378+05.90
P.O.C. STA. 386+65.52

F FIELD MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

℄ - SURVEY CURVE DATA

Δ = 28°53'34" LT.
Dc = 0°45'
R = 7638.44'
L = 3852.37'
T = 1968.07'
E = 249.43
P.I. STA. 387+73.97

RECEIVED FOR RECORD
NOV 5 1965
At ____ o'clock ____ M
Recorded
Vol. ____ Page ____
Recorder
Summit County, Ohio C. L. Bower, County Auditor

TRANSFER NOT NECESSARY
NOV - 5 1965

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE 10-15-65

RECEIVED FOR RECORD _____ 1965
RECORDED : VOL. ____, PAGE ____, OF THE SUMMIT COUNTY RECORDS.
_____ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

STATE OF OHIO BRYAN E. McCOY 4936 REGISTERED SURVEYOR

PRELIMINARY SUBMITTAL : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : OCT. 15, 65 SURVEYORS SEAL

CENTERLINE SURVEY PLAT 4 OF 5

K & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT-OF-WAY SHEET

5/40

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 2.98

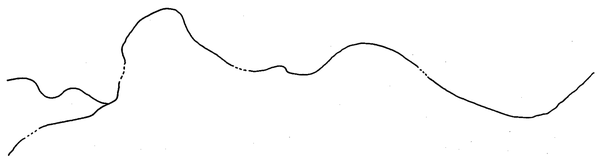
SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

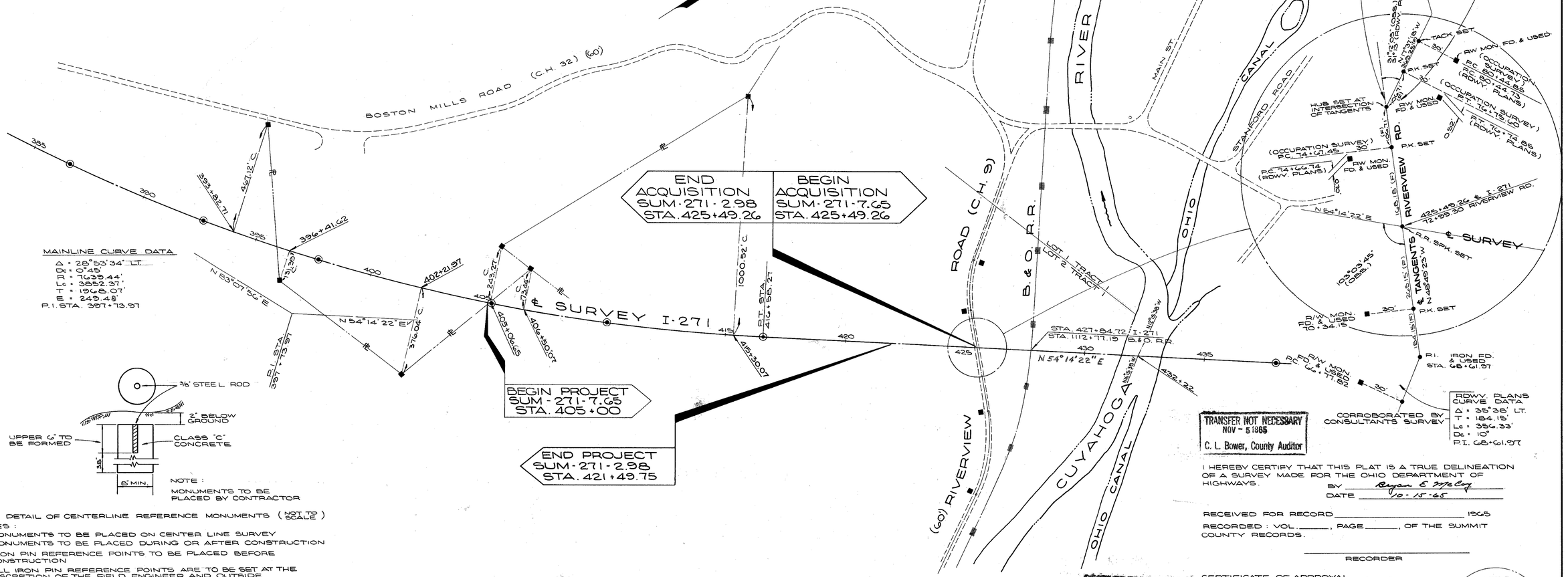
BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 156+00 TO STATION 421+49.75 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.



0 100 200 400 600 800
SCALE IN FEET



NOTE :
MONUMENTS TO BE PLACED BY CONTRACTOR

DETAIL OF CENTERLINE REFERENCE MONUMENTS (NOT TO SCALE)

NOTES :
MONUMENTS TO BE PLACED ON CENTER LINE SURVEY
MONUMENTS TO BE PLACED DURING OR AFTER CONSTRUCTION
IRON PIN REFERENCE POINTS TO BE PLACED BEFORE CONSTRUCTION
ALL IRON PIN REFERENCE POINTS ARE TO BE SET AT THE DISCRETION OF THE FIELD ENGINEER AND OUTSIDE OF THE CONSTRUCTION LIMITS

MONUMENTS TO BE SET (THIS SHEET)

P.O.C. STA. 386+65.52 - (MONUMENT DUPLICATED ON CENTER LINE SURVEY PLAT 4 OF 5)
P.O.C. STA. 392+69.08
P.O.C. STA. 397+75 - MIDDLE ORDINATE
P.O.C. STA. 405+15.58
P.O.C. STA. 410+05.22
P.T. STA. 416+58.27
P.O.T. STA. 438+00

RIVERVIEW RD. DETAIL

TRANSFER NOT NECESSARY
NOV - 5 1965
C. L. Bower, County Auditor

CORROBORATED BY CONSULTANTS SURVEY

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E McCoy
DATE 10-15-65

RECEIVED FOR RECORD _____ 1965
RECORDED : VOL. _____, PAGE _____, OF THE SUMMIT COUNTY RECORDS.

_____
RECORDER

NOTE: SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

RECEIVED FOR RECORD
NOV 5 1965
Recorder
Summit County, Ohio

OBS OBSERVED MEASUREMENT
■ EXISTING MONUMENTS
◉ MONUMENTS TO BE SET

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : OCT. 15, 1965

STATE OF OHIO
BRYAN EARL McCOY
4936
REGISTERED
SURVEYOR
SURVEYORS SEAL

CENTERLINE SURVEY PLAT 5 OF 5

K & E

PROPERTY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 6/40

94 GORDON A. STOUFFER & VERNON B. STOUFFER
(PARCELS 1 AND 2 TO BE PURCHASED UNDER CONTRACT SUM-271-0.50)

93 PEMCO, INC.

3 & 3-1 ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE

4 & 4-1 MARY V. MATUS McFANN

5 LYONS TRANSPORTATION CO.

6 6-1 6-2 THEODORE M. SCHUPP

7 BERTHA M. COMSTOCK

8 METTIE E. LEWIS

9 THEODORE MONEGAN & MABEL MONEGAN

10 VERNON B. STOUFFER

11 ALBERT JORDAN & WANDA JORDAN

12 WILLIAM C. ETZEL

13 WILLIAM ROBERT DILLON & MARJORIE C. DILLON

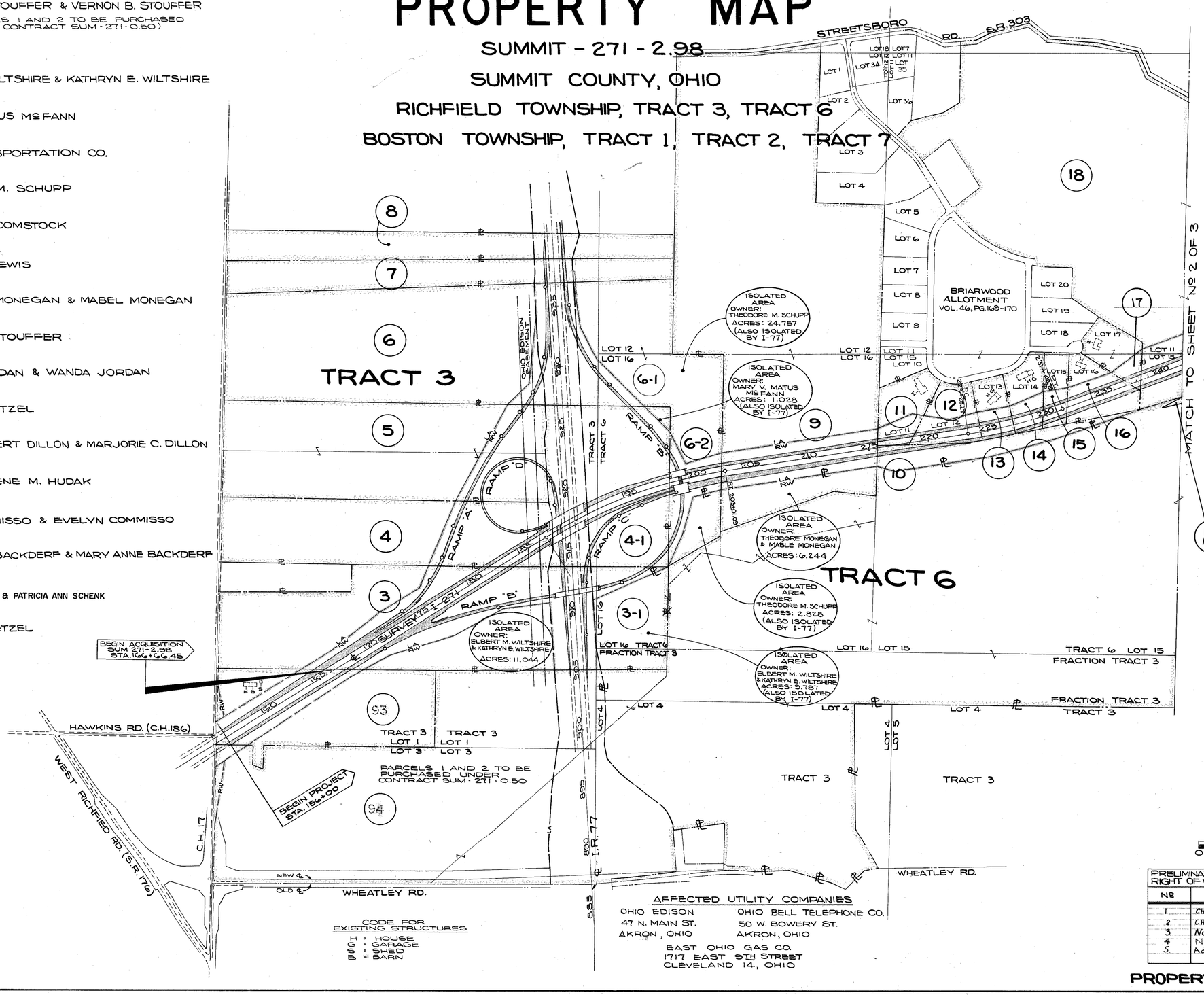
14 JOHN & ARLENE M. HUDAK

15 JAMES COMMISSO & EVELYN COMMISSO

16 RICHARD H. BACKDERF & MARY ANNE BACKDERF

17 ARTHUR D. SCHENK & PATRICIA ANN SCHENK

18 WILLIAM C. ETZEL



NOTE: PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-1, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FOR I-271.

10 AX MEADOWS DEVELOPMENT CORPORATION aka MEADOWS DEVELOPMENT CORP., an OHIO CORPORATION

CODE FOR EXISTING STRUCTURES
H = HOUSE
G = GARAGE
S = SHED
B = BARN

AFFECTED UTILITY COMPANIES

OHIO EDISON
47 N. MAIN ST.
AKRON, OHIO

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS CO.
1717 EAST 9TH STREET
CLEVELAND 14, OHIO

GRAPHIC SCALE
0 400' 800' 1200' 1600'

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	CHANGED PCL. 1-WL TO 94-WL	Lee	12-20-66
2	CHANGED PCL 2-WL TO 93-WL	Lee	12-20-66
3	Name Change Pcl. 17-WL	Lee	3-17-67
4	Name Change Pcl. 10-WL	Lee	8-25-67
5.	Added Pcl 10A-X Per Change Order	White	11-13-69

PROPERTY MAP SHEET Nº 1 OF 3

C&E

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

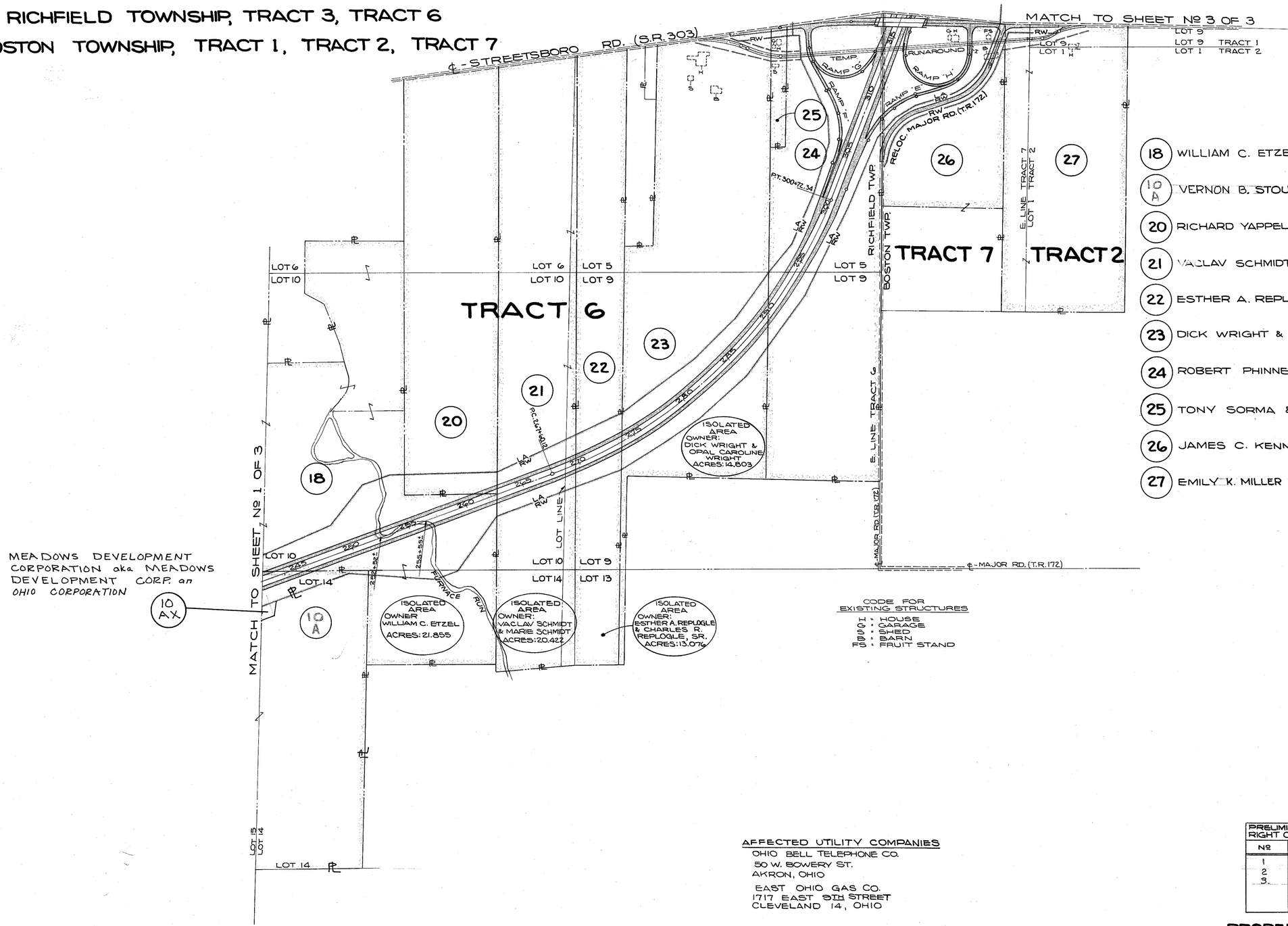
BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

PROPERTY MAP

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 7/40



18 WILLIAM C. ETZEL

10 A VERNON B. STOUFFER

20 RICHARD YAPPEL & LENA YAPPEL

21 VACLAV SCHMIDT & MARIE SCHMIDT

22 ESTHER A. REPLOGLE & CHARLES R. REPLOGLE, SR.

23 DICK WRIGHT & OPAL CAROLYN WRIGHT

24 ROBERT PHINNEY

25 TONY SORMA & ANN Y. SORMA

26 JAMES C. KENNEDY

27 EMILY K. MILLER f.k.a. EMILY VIRGINIA KENNEDY

NOTE: PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-1, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FROM I-271. *From Previous owners.*

CODE FOR EXISTING STRUCTURES

HOUSE
GARAGE
SHED
BARN
FS : FRUIT STAND

GRAPHIC SCALE

0 400' 800' 1200' 1600'

AFFECTED UTILITY COMPANIES

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS CO.
1717 EAST 9TH STREET
CLEVELAND 14, OHIO

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	Changed Pcl. 19 to 10 A.		11-9-65
2	NAME CHANGE PCL. 27	LEE White	4/8/69
3.	Added Pcl. 10 AX per Change Order		11-13-69

PROPERTY MAP SHEET Nº 2 OF 3

K & E

PROPERTY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 8/40

28 ROBERT PHINNEY

29 LLOYD L. BIGELOW

30 FRED L. ROLLER & EDITH ROLLER

31 ELDEN N. McVEY & CLAUDIA W. McVEY

32 JENNIE BIGELOW

33 LAURA MANCZ

34 HENRY G. BENDER

35 & 35-1 BERNARD PRUSSAK, OWNER; ANNA J. PRUSSAK, LIFE ESTATE

36 WL *FRANCES HAWKSWELL, HAZEL HOFFMAN, FRANCES HOAG & MARION HOAG*

37 HAZEL HOFFMAN

38 FRANCIS HAWKSWELL

39 FRANCIS HOAG & MARION HOAG

40 THEOPHILE PRUSAK & SOPHIE PRUSAK

41 & 41-1 HARRY R. HORVITZ, WILLIAM D. HORVITZ & FRANCIS E. KANE CO-EXECUTORS OF THE ESTATE OF S.A. HORVITZ

42 THE STATE OF OHIO

43 FIRST METHODIST CHURCH OF BEDFORD, OHIO

44 STATE OF OHIO TURNPIKE COMMISSION

END PROJECT SUM-271-2.98 STA. 421+49.75

BEGIN PROJECT SUM-271-7.65 STA. 405+00

ISOLATED AREA OWNER: HENRY G. BENDER ACRES: 3.085

ISOLATED AREA OWNER: HENRY G. BENDER ACRES: 17.998

ISOLATED AREA OWNER: THE STATE OF OHIO ACRES: 0.808

ISOLATED AREA OWNER: JENNIE BIGELOW ACRES: 3.857

ISOLATED AREA OWNER: FRANCIS HAWKSWELL ET. AL. ACRES: 3.306

ISOLATED AREA OWNER: FRANCIS HOAG & MARION HOAG ACRES: 0.626

ISOLATED AREA OWNER: THEOPHILE PRUSSAK & SOPHIE PRUSSAK ACRES: 11.129

RES. 5.097AC

OHIO TURNPIKE 14.20AC

BOSTON MILLS RD. (C.H. 32)

RAMP 'M'

RAMP 'L'

RAMP 'K'

RAMP 'J'

TEMPORARY RUNAROUND

TS Overpass

STINE RD. (T.R. 171)

RIVERVIEW RD.

CUYAHOGA

OHIO

C.H. 32

B & O R.R.

TRACT 1

TRACT 2

TRACT 5

TRACT 6

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8

RICHFIELD TWP. / BOSTON TWP.

E. LINE TR. 5 / W. LINE TR. 7

E. LINE TR. 6 / W. LINE TR. 7

E. LINE W. LINE LOTS 2-9

Limits of Federal Participation

NOTE

E = Eligibe For Federal Participation

I = Ineligibe For Federal Participation

END ACQUISITION SUM-271-2.98 STA. 425+49.26

BEGIN ACQUISITION SUM-271-7.65 STA. 425+49.26

MATCH TO SHEET Nº 2 OF 3

℄ - STREETSBORO RD. (S.R. 303)

AFFECTED UTILITY COMPANIES

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

EAST OHIO GAS CO.
1717 EAST 9TH STREET
CLEVELAND 14, OHIO

GRAPHIC SCALE

0 400' 800' 1200' 1600'

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	REVISED PCL. 35WL & 35-1-WL		6-14-66
2	ADDED R/W & RESIDUE AREA Pcl. 40 WL		8-25-66
3	ADDED NAMES Pcl. 36 WL	IRICK	2-23-67
4	Added Limits of Federal Participation & Funding Flags	Lee	1-24-68

PROPERTY MAP SHEET Nº 3 OF 3

K & E

SUMMARY OF RIGHT-OF-WAY REQUIRED

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 9/40

TOTAL NUMBER OF OWNERS WITH STRUCTURES TO BE TAKEN 5

TOTAL NUMBER OF AFFECTED OWNERS 36

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR-ECTION (ACRES)	TO BE ACQUIRED LAND (ACRES)	TO BE ACQUIRED PORT-ION RD. OCCU-PIES	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE OF FUND-ING	SHEET Nº	REMARKS
94 WL	GORDON A. STOUFFER AND VERNON B. STOUFFER	3113	500	—	—	—	—	—	—	—	I	11 11	PARCEL PURCHASED UNDER CONTRACT SUM-271-0.50
93 WL	PEMCO, INC., A CORPORATION	4031	249	—	—	—	—	—	—	—		11-12 11	PARCEL PURCHASED UNDER CONTRACT SUM-271-0.50
3WL 3-1WL 3X	ELBERT M. WILTSHIRE AND KATHRYN E. WILTSHIRE	2227	490	71.93	66.962	17.461 1.860 0.055	4.030 2.940	—	19.84 —	11.044(LL) 9.787(LL)		11-12-13-14 13-15 12	3WL HAS 4.030 AC OCCUPIED BY I-77 3-1WL HAS 2.940 AC OCCUPIED BY I-77 (PCL. 3-1WL PREVIOUSLY ISOLATED BY I-77) 3X-RELOCATE A WATER COURSE FROM A PROPOSED CULVERT
4WL 4-1WL	MARY V. MATUS McFANN	2524	28	113.761	64.15	10.997 20.416	4.976 4.594	—	22.139 1.028(LL)	—		12-13-14 13-14-15-17	4WL HAS 4.976 AC OCCUPIED BY I-77 (ALSO PREVIOUSLY OCCUPIED BY I-77) 4-1WL HAS 4.594 AC OCCUPIED BY I-77
5WL	LYONS TRANSPORTATION CO.	3702 3772	479 661	49.611	49.353	9.614	—	—	39.739	—		14-16	
6WL 6-1WL 6-2WL 6-1X	THEODORE M. SCHUPP	3171	244	96.92	—	1.390 3.626 5.192 0.0534	3.638 3.373 — —	—	52.116 (SEE 6-2WL) 24.757(LL)	— — 2.828(LL)		16 17 15-17-18 17	6WL HAS 3.638 AC OCCUPIED BY I-77 6-1WL HAS 3.373 AC OCCUPIED BY I-77 6-1WL & 6-2WL PREV. ISOLATED BY I-77 6-1X-RELOCATE A WATER COURSE FROM A PROPOSED CULVERT
7	BERTHA M. COMSTOCK	1531	253	—	—	—	—	—	—	—		—	NOT REQUIRED
8	METTIE E. LEWIS	2159	645	—	—	—	—	—	—	—		—	NOT REQUIRED
9WL	THEODORE MONEGAN AND MABEL MONEGAN	1819	505	119.19	—	9.086	—	3	103.86	6.244(LL)		18-19	
10WL 10X 10AWL	VERNON B. STOUFFER	3113 1904	500 151	421.97	—	5.668 6.055 2.872	—	—		413.43		18-19-20 19-20 21	10X-CHANNEL RELOCATION
11WL	ALBERT JORDON AND WANDA JORDON	3817	336	4.96	—	1.533	—	—	3.427	—		19	LOT 11 BRIARWOOD ALLOTMENT
12WL	WILLIAM C. ETZEL	1936	662	5.05	—	2.934	—	—	2.116	—		19	LOT 12 BRIARWOOD ALLOTMENT
13WL	WILLIAM ROBERT DILLON AND MARJORIE C. DILLON	3294	167	2.98	—	1.479	—	—	1.501	—		19	LOT 13 BRIARWOOD ALLOTMENT
14WL	JOHN AND ARLENE M. HUDAK	3901	350	3.95	—	1.637	—	—	2.313	—		19-20	LOT 14 BRIARWOOD ALLOTMENT
15WL	JAMES COMMISSO AND EVELYN COMMISSO	3903	253	2.81	—	1.381	—	—	1.429	—		19-20	LOT 15 BRIARWOOD ALLOTMENT
16WL	RICHARD H. BACKDERF AND MARY ANNE BACKDERF	3405	471	5.33	—	3.964	—	—	1.366	—		20	LOT 16 BRIARWOOD ALLOTMENT
17WL	ARTHUR D. SCHENK & PATRICIA ANN SCHENK	4470	538	4.04	—	0.813	—	—	3.227	—		20	LOT 17 BRIARWOOD ALLOTMENT
18WL	WILLIAM C. ETZEL	1936	662	290.26	183.2381	26.701	—	—	134.6821	21.855(LL)		20-21-22	
20WL	RICHARD YAPPEL AND LENA YAPPEL	2332	226	62.30	—	2.352	—	—	59.948	—		21-22	
21WL	ESTATE of VACLAV SCHMIDT, INCOMPETENT, DECEASED & MARIE SCHMIDT, INCOMPETENT.	775	245	75.00	—	5.859	—	—	48.719	20.422(LL)		22	
22WL	ESTHER A. REPLOGLE AND CHARLES R. REPLOGLE, SR.	2319	495	45.45	—	3.858	—	—	28.516	13.076(LL)		22-23	
23WL 23WD 23T	DICK WRIGHT AND OPAL CAROLYN WRIGHT	2651	197	90.735	—	14.559 0.146 0.535	0.241	—	60.986	14.803(LL)		22-23-25 27-29 27-29	23T-TEMPORARY RUNAROUND
24WL 24WD 24-1T 24T	ROBERT PHINNEY	4329	360	78.91	—	24.230 0.035 0.0685 0.213	1.185 0.030 — —	—	14.701	38.729		23-25-26-27-29 27-29 27-29 27-29	24-1T RECONSTRUCT DRIVE 24T-TEMPORARY RUNAROUND
25WD 25-1T 25T	TONY SORMA & ANN Y. SORMA	3826	117	3.0	—	0.0609 0.1385 0.229	0.0913 — —	—	2.8478	—		27-29 27-29 27-29	25-1T RECONSTRUCT DRIVE 25T TEMPORARY RUNAROUND
26WL 26WD 26T 26X	JAMES C. KENNEDY	1541	573	55.12	—	12.056 2.828 0.013 0.078	1.302 0.258 — —	6	—	38.676		26-27-28 25-26-28 26-28 26	26T-TEMPORARY RUNAROUND 26X-RELOC. A WATER COURSE FROM A PROPOSED CULVERT
27WD 27T	EMILY K. MILLER f.k.a. EMILY VIRGINIA KENNEDY	1541	576	55.12	—	0.367 0.390	0.329 —	—	—	54.424	I	26-28 26-28	27T-TEMPORARY RUNAROUND
					—		—						

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORR-ECTION (ACRES)	TO BE ACQUIRED LAND (ACRES)	TO BE ACQUIRED PORT-ION RD. OCCU-PIES	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	TYPE OF FUND-ING	SHEET Nº	REMARKS
28WL 28WD 28T	ROBERT PHINNEY	4329	360	14.32	—	0.410 1.197 0.083	0.744 0.559 —	—	—	11.410	I I I	26-27-28 26-28 28	28T-RECONSTRUCT DRIVE ALSO OWNER OF PCL 24WL
29WL 29WD 29T 29-1T 29-2T	LLOYD L. BIGELOW	2625	107	117.542	90.042	7.048 0.139 0.094 0.210 0.392	0.482 0.081 — — —	—	82.050 (INCLUDES 17.05 AC PREVIOUSLY ISOLATED BY OHIO TURNPIKE)	0.162	I I S I I	27-28-31 28 32-34 28-31 27	29T-TEMPORARY RUNAROUND 29-1T-RELOCATE DRIVEWAY 29-2T-CONSTRUCT SERVICE RD.
30WL 30WD 30T	FRED L. ROLLER AND EDITH ROLLER	2872	262	109.353	—	0.215 1.006 0.085	0.293 0.362	—	107.477	—	I I I	27-29 27-29 27-29	30-T-RELOCATE DRIVEWAY
31	ELDEN N. MEVEY AND CLAUDIA W. MEVEY	3313	248	—	—	—	—	—	—	—	I	28-31	NOT REQUIRED
32WL 32T	JENNIE BIGELOW	3576	666	64.8541	63.8541	32.966 0.544	—	—	3.269	27.6191	I&S S	28-31-32-35 32-34	Pcl. 32-WL TBA= 1,435,999 Sq. Ft. (32.966 Ac.) 635,628 S.F. (14.595 Ac.) Elig. for Federal Participation 706,233 S.F. (16.21 Ac.) Ineligible on right side ℄ 94,138 S.F. (2.16 Ac.) Ineligible on left side ℄ 32-T-TEMPORARY RUNAROUND
33WL	RALPH EARL WEAVER & MARTHA C. WEAVER	4524	430	70.46	50.26	2.203	—	—	—	48.057	S	35-35A	865,267 S.F. (19.86 Ac) ELIGIBLE FOR FEDERAL PARTICIPATION 715,220 S.F. (16.423 Ac.) INELIGIBLE FOR FEDERAL PARTICIPATION 3.085 Ac. OF THE LEFT RESIDUE IS ISOLATED (15.226 Ac. NOT ISOLATED
34WL	HENRY G. BENDER	4018 2155	227 426	74.102	72.592	36.283	—	—	18.311	17.998(LL)	I&S	33-34-35-35A-36	
35WL 35-1WL	BERNARD PRUSSAK, OWNER; ANNA J. PRUSSAK, LIFE ESTATE	3489 1858	573 737	4.008 29.73	— 17.753	0.844 0.150	—	—	3.164 17.603	—	S S	33-34	
36WL	FRANCES HAWKSWELL, HAZEL HOFFMAN, FRANCES HOAG & MARIAN HOAG	4202	617	6.60	—	1.959	—	2	1.335	3.306(LL)	I	35A-36-37	
37WL	HAZEL HOFFMAN	4202	616	1.0	1.003	1.003	—	—	—	—	I	36-37	
38WL	FRANCES HAWKSWELL	3888	426	1.0	—	1.00	—	1	—	—	I	36-37	
39WL	FRANCIS HOAG & MARION HOAG	3888	432	1.0	—	0.374	—	1	—	0.626(LL)	I	36-37	
40WL	THEOPHILE PRUSSAK AND SOPHIE PRUSSAK	1742	547	43.136	24.236	8.01	—	—	5.097	11.129(LL)	I	37	
41WL 41-1WL	HARRY R. HORVITZ, WILLIAM D. HORVITZ, AND FRANCES E. KANE, CO-EXECUTORS OF THE ESTATE OF S.A. HORVITZ	3412	555	134.52	—	9.713 4.098	—	—	5.144	115.565	I I	37-38 38-39	
42WL	STATE OF OHIO	1540 1540	411 413	25.257	—	8.969	—	—	15.48	0.808(LL)	I	38-39	
43WL 43T 43WA	FIRST METHODIST CHURCH OF BEDFORD, OHIO	2633	31	56.31	—	16.863 0.052 —	0.123 — —	3	29.774	9.55	I I I	39-40 40 40	ADVANCE PURCHASE TO BE MADE ON THIS PROPERTY 43-T-RELOCATE DRIVEWAY 43WA-REMOVE SWIMMING POOL
44AERIAL 44WL 44-1WL 44T 44-1T	OHIO TURNPIKE COMMISSION STATE OF OHIO					1.245 1.848 0.753 10.071 10.783	— —	—			I I I S S	32-33-35 32-33 33-35 32-33-34 32-33-35-35A	
29-1WL	LLOYD L. BIGELOW	2625	107	117.542	90.042	0.080			82.050	0.162	S	34	
10AX	MEADOWS DEVELOPMENT CORPORATION aka MEADOWS DEVELOPMENT CORP., AN OHIO CORPORATION	4954 4907	619 379	31330		0.40Ac				313.30		20	Channel Relocation See Note

NOTE: I = INTERSTATE FUNDING
S = STATE FUNDING
I&S = PART INTERSTATE & PART STATE FUNDING, SEE BREAKDOWN IN REMARKS COLUMN.
PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-1, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FOR I-271.

LL = LANDLOCKED

Name Change Pcl. 10A-X 11-13-69 White

Pcl 10A-X Added 10-24-69

NAME CHANGE PCL. 27-WD & T. Lee 4/8/68

Changed Pcl. 33-WL from "I" Funds to "S" Funds 1-24-68 Lee

PRELIMINARY SUBMITTAL: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 65 Lee
Revised Deed Area & Residues Revised Name Pcl. 10 8-25-67
Added Buildings Pcl. 39WL 32-67 Lee
Name Change Pcl 17-WL 3-27-67 Lee
Revised-
6 11-15-66 Name Pcl. 21WL

REV	DATE	DESCRIPTION
8	2-23-67	ADDED NAMES ON Pcl. 36 WL IRICK
7	2-20-67	Revised Funding Data Lee
6	1-24-67	Revised Funding Pcl. 29-WL Lee
5	1-6-67	Revised Funding Pcl. 33-WL Lee
4	12-21-66	Revised Federal Participation Pcl 34-WL & 32-WL
3	12-19-66	Added Eligibility and Ineligibility Breakdown for Pcls 34-WL & 32-WL Lee
2	12-19-66	CHANGED Pcl. 2-WL To Pcl. 93 WL Lee
1	12-19-66	CHANGED Pcl. 1-WL To Pcl. 94 WL Lee

DATE OF PREPARATION

REV	DATE	DESCRIPTION
1	11-9-65	Changed Pcl. 19WL to 10AWL.
2	3-11-66	Revised TBA's & Residues for Pcls 29-WL, 29-T, 32-WL, 32-T added Pcl. 29-1WL
3	6-14-66	Revised Pcl. 35 WL & 35A-WL
4	8-16-66	Name changed Pcl 33WL
5	8-25-66	ADDED R AN RES. AREA IN Pcl 43WL BY W.I

KEY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

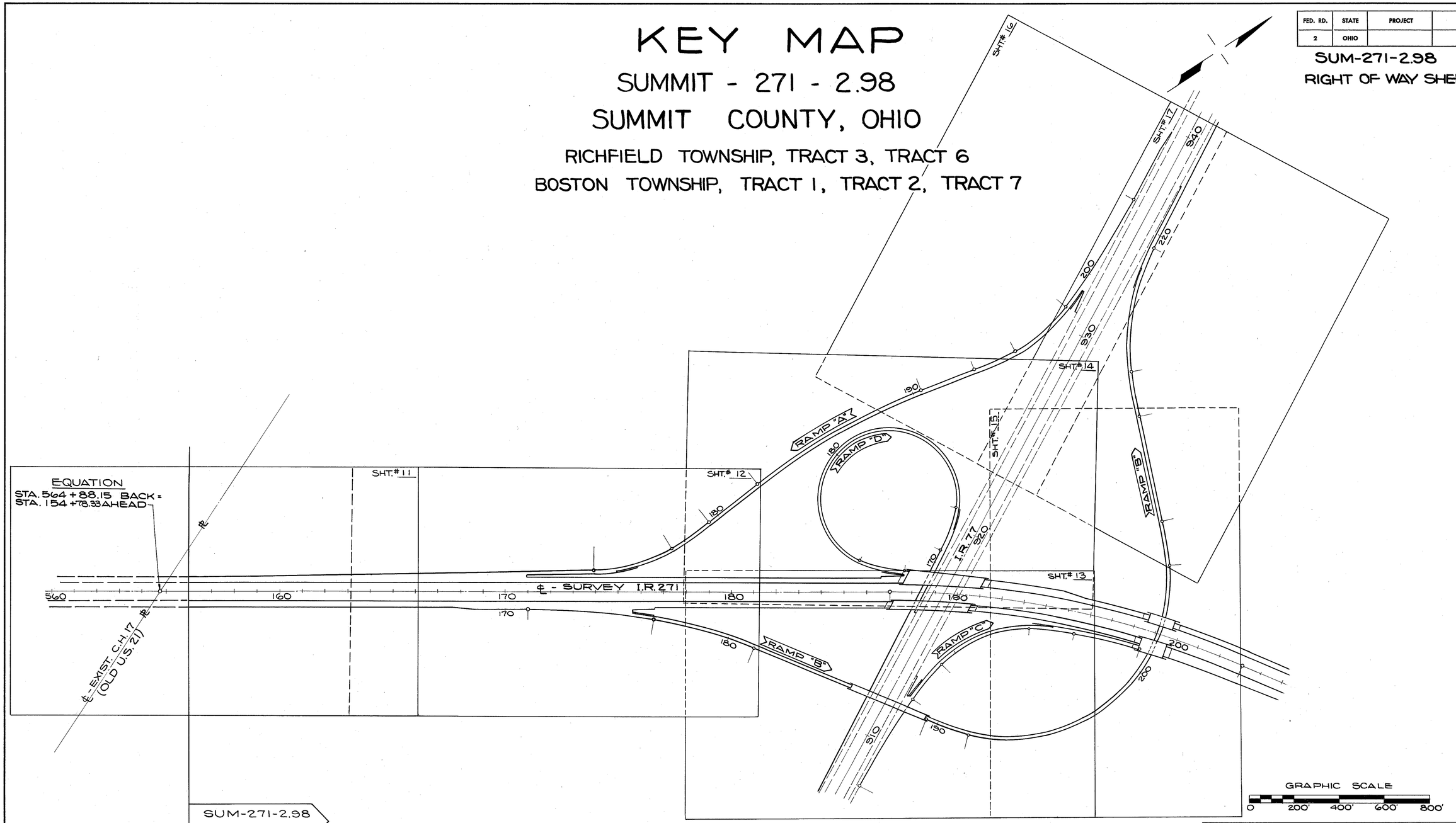
RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 10/40



PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE

KEY MAP
STA. 154+72.18 TO STA. 205+00
INTERCHANGE WITH I.R.77

E.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT-OF-WAY SHEET

11 / 40

LEGEND

LA RW	LIMITED ACCESS RIGHT-OF-WAY (PROPOSED)
RW	PROPOSED AERIAL EASEMENT LINE
RW	SIDE ROAD RIGHT-OF-WAY (PROPOSED)
LA RW	LIMITED ACCESS AS PROPOSED UNDER PREVIOUS CONTRACT
	ALL PROPOSED EASEMENTS NOT INCLUDED ABOVE
	CONSTRUCTION LIMITS
	EXISTING RIGHT-OF-WAY (SIDE ROADS)
	EXISTING PROPERTY LINES
	FORMER PROPERTY OR LOT LINE
	EXISTING & PROPOSED FENCE
	POLE FOR OHIO EDISON POWER LINES
	POLE FOR OHIO BELL TELEPHONE LINES
	POLE FOR OHIO EDISON & OHIO BELL TELEPHONE LINES
	TREE REMOVAL - TEMPORARY PARCELS

THE TREES, AS SHOWN, REPRESENT THE COUNT AS BEING LEFT OR RIGHT OF THE CENTER LINE SURVEY AND LOCATED BETWEEN THE CORRESPONDING 100 FOOT STATIONS.

Quantity Summary Type 47 Fence		
Sheet No.	Normal Participation	100% State
11	2013	
12	2927	
13	1083	
14	1068	
15	1312	
16	1045	
17	1245	
18	2976	
19	2040	
20	1833	
21	1000	
22	2880	
23	2994	
25	2998	
26	2392	
27	2067	
31	3222	25
32	1479	53
33	1933	436
34	390	729
35		1040
35A		989
36	3335	
37	3031	
38	3009	
39	3253	
40	1128	
GRAND TOTAL	52,653	3,272

END PROJECT SUM-271-0.50 EQUATION STA. 566+09.82 = STA. 156+00

BEGIN PROJECT SUM-271-2.98 STA. 156+00

STA. 560+00 TO STA. 165+00

MATCH TO R/W SHEET 12 OF 40

END SHEET

STA. 165+00

ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE
3 WL
T.B.A. = 17.461 AC
PRO. = 4.030 AC
TOTAL = 21.491 AC

PEMCO INC., A CORPORATION
(PARCEL TO BE PURCHASED UNDER CONTRACT SUM-271-0.50)

GORDON A. STOUFFER & VERNON B. STOUFFER
(PARCEL TO BE PURCHASED UNDER CONTRACT SUM-271-0.50)

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

TRACT 3
SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 3 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

HAWKINS ROAD (T.R. 185) (TO BE ABANDONED)

NEW & OF C.H. 17 (ROADWAY PLANS 193) (FORMER U.S. 21)

℄ - SURVEY (I-271)

EXIST. R/W

RW MON. FD.

RW MON. FD. & USED

BEARING EQUATION
BACK N 56°58'19" E
AHEAD N 56°58'24" E

N 56°58'24" E

N 89°16'37" E 1417.47

N 89°16'37" E 313.25

N 89°16'31" E 190'

N 0°13'09" E

N 0°12'46" W

N 0°43'23" E 161.04

N 0°43'23" W 161.04

N 89°16'37" E 82.50

N 57°29'40" E 266.73

154+72.18
564+88.15
365+15.54
564+79.82
365+11.00

364+25
33

164+33.28
147.43

374+55.45

375+53.64

220.32'

93 WL

93 WD

94 WL

94 WD

3 WL

LA RW

RW

CONSTRUCTION LIMITS

519 LIN. FT. R/W FENCE

1097 LIN. FT. R/W FENCE

313+40
93
WOVEN WIRE FENCE

OHIO EDISON 4 WIRES (ON R/W)

OHIO EDISON - 3 WIRES

12" GAS LINE T.PL. Nº 1

16" GAS LINE T.PL. Nº 2

18" GAS LINE T.PL. Nº 3

BEARING BREAK

SHED

BARN

CISTERN

8" TO 10" APPLE ORCHARD

10" TO 12" APPLE ORCHARD

APPLE ORCHARD

1-15" WALNUT

17-6"-8" APPLE

12" ELM

6" MAPLE

20" WALNUT

10" WALNUT

18" APPLE

1-24" WALNUT

19-6"-8" APPLE

TREE ROW

6"-10" CHERRIES

10" APPLES

15" APPLE

10" APPLE

18" APPLE

6" ELM

6" MAPLE

6" CHERRY

LOT 1

LOT 3

● = IRON FOUND
◉ = PROPOSED MONUMENT
■ = EXISTING MONUMENT

GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE : OCTOBER 15, 1965

Nº	REVISIONS	DATE	MADE BY
1	Changed Pcl 1-WL to 94-WL	12-19-66	Lw
2	Changed Pcl. 2-WL to 93 WL	12-19-66	Lw
3	Added leader line to Pcl. 93 & 94	3-30-67	IrieK

K.S.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 12/40

MATCH TO R/W SHEET 10 OF 40

MATCH TO R/W SHEETS 13 & 14 OF 40

STA. 165+00 — STA. 180+00 (MAINLINE)

STA. 180+00 (RAMP "A")

STA. 180+00 (RAMP "B")

BEGIN SHEET

END SHEET

MARY V. MATUS Mc FANN

4 WL

T.B.A. = 10.997 Ac
P.R.O. = 4.976 Ac
TOTAL = 15.973 Ac

2-12" POPLAR
2-12" APPLE

TO N.W. PROP. COR. 1834.44

N 89°09'54" E

ELBERT M. WILTSHIRE &
KATHRYN E. WILTSHIRE

T.B.A. = 17.461 Ac
P.R.O. = 4.030 Ac
TOTAL = 21.491 Ac

3 WL

6-12"-15" W. CHERRY
2-12"-15" APPLE
6-12"-15" W. CHERRY
4-12"-18" MAPLE
2-12"-15" APPLE
3-12" HICKORY
1-18" BEECH
2-24" MAPLE
4-12" ASH
1-12" WILLOW
4-12" ASH
1-24" HICKORY
1-18" APPLE
1-24" ELM
1-12" APPLE
PINE GROVE
1-36" MAPLE
1-24" CHERRY

END ACQUISITION
SUM-271-0.50
EQUATION
STA. 5+76+76.27
STA. 166+66.45

BEGIN ACQUISITION
SUM-271-2.98
STA. 166+66.45

3 X

T.B.A. = 0.055 Ac

171+82.57
214.83
N 2°58'24" E
BEGIN RELOC. CHANNEL
RELOC. 46+85.5
Δ = 5°30'36" Rt.
R = 3650.00'
T = 175.00'
L = 350.00'
171+58.30
251.62

WOODS

LA RW

CONSTRUCTION LIMITS

N 50°41'46" E
503.02'

(1,458 LIN. FT. R/W FENCE)

N 51°25'40" E
266.73'

167+00
149

NOSE STA. 170+88.87

172+00
200

172+35.27
200

N 56°58'24" E
304.73'

P.C. STA. 173+88.87

176+00
200

C.S. STA. 177+48.95

177+60.17
313.24

N 21°42'45" E
516.22

178+75.85

91.28

496.59' TO ℄ SURVEY ℄

1831.61' TO N.E. PROPERTY CORNER

RAMP "A"

1 - 12" POPLAR
2 - 12" CHERRY
2 - 12" APPLE

1 - 12" APPLE
1 - 12" CHERRY
2 - 12" POPLAR

℄ - SURVEY (I-271)
N 56°58'24" E

170

175

173+57
50°00' CULV

394.34'

STRUCTURE No.
SUM-271-0321

DRIVE TO BE ABANDONED (FIELD)

Re 376.34
516.29

32°18'3"

136+66.45

DRIVE TO BE ABANDONED (FIELD)

240.42'

WOODS

STA. 171+37

172

173

174

176

178

S 48°50'36" E

74°58'30"

64.4'

3-12" APPLE
2-12" CHERRY

2-12" APPLE
1-12" MAPLE
1-15" MAPLE

RAMP "B"

93 WL

LA RW

CONSTRUCTION LIMITS

N 59°50'09" E
230.63'

167+00
120

168+63 CCE
126.48

171+50
140

(1469 LIN. FT. R/W FENCE)

OIL WELL

GAS WELL

STORAGE TANKS

484'

N 71°44'33" E
568.75'

P.C.C. STA. 176+58.71

176+80
285

255.96

N 68°22'51" E

331'

173+00
320

282.23'

N 48°26'36" E

STA. 180+00 (RAMP "B")

PEMCO INC.
A CORPORATION

93 WL

803.13'

N 85°16'37" E

CCE 880

(LL)

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

1-12" POPLAR

15-12" MAPLE
1-12" SYCAMORE
1-12" POPLAR
1-12" HICKORY
1-15" ELM
1-15" OAK

3-12" POPLAR
1-20" MAPLE
2-20" CHERRY
1-18" MAPLE
1-15" POPLAR
3-12" HICKORY
7-12" ELM

4-20" HICKORY
4-12" POPLAR
1-12" APPLE
1-12" BEECH

OIL WELL

3-12" W. CHERRY

1-12" MAPLE

3-12" APPLE
1-12" MAPLE

2-12" ELM

1-18" CHERRY
1-12" APPLE
1-12" ELM

3 CCE 1260

641.52 (DEED)
641.45 (CALC.)
S 0°19'57" E

GAS WELL

GORDON A. STOUFFER
&
VERNON B. STOUFFER

● = PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO.	REVISIONS	MADE BY	DATE
1	ADDED GAS LINE	C.B.	6-4-65
2	CHANGED PCL. 2-WL TO 93-WL	lw	12-20-66
3	ADDED LEADER LINE @ 1/4	Irwk	3-30-67
4	Deleted 3" E.O.G. Pipe Line at sta 170+21.10 Per I.O.C. from W. Drugan dated 9/28/67	10/20/67	Lec

STA. 165+00 TO STA. 180+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 13/40

MATCH TO R/W SHEET 12 OF 40

MATCH TO R/W SHEET 14 OF 40

MATCH TO R/W SHEET 15 OF 40

BEGIN SHEET STA.180+00(MAINLINE)

STA.180+00(RAMP "B")

STA.193+00(MAINLINE) END SHEET

MARY V. MATUS McFANN (4 WL)

ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE (3 WL)

ELBERT M. WILTSHIRE & KATHRYN E. WILTSHIRE (3-1 WL)

MARY V. MATUS McFANN (4-1 WL)

℄ SURVEY (I-271)

N 56°58'24"E

2331.03' TO PROP COR.

N 89°09'54"E

183+57.75

193°24'45"

STA. 185+97.0

DRIVE TO BE ABANDONED

OHIO EDISON CO. 138 KV G WIRES

OHIO EDISON EASEMENT LINE

103.87'

184+12.86 (188.00')

91°58'52" 215.00'

185+50.00 (195')

91°58'52" 215.00'

65.86'

N 10°06'25"E

155.24'

P.C. STA. 187+12.15

91°58'52" 215.00' (247')

EXISTING LIMITED ACCESS LINE

N 4°49'28"W

226.17'

187+38.03 (I-271)

187+08.10 ℄-77

SUB-TAN.

190

150'

150'

LOT 1

LOT 16

NEGOTIATED AS AN EASEMENT UNDER CONT. SUM. U.S. 21-15 55

1333.55'

RAMP "C"

150

TRACT 3

TRACT 6

S.C. STA. 189+22.62

℄ SURVEY CURVE DATA

P.I. STA. 195 + 17.76

Δ = 23°18'16" RT.

D_c = 1° 28'

R = 3906.53'

L_c = 1588.94'

T = 805.61'

E = 82.20'

TBA = 20.416 AC

PRO = 4.594 AC

TOTAL = 25.010 AC

WOODS

NOTE: PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-1, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FOR I-271.

N 89°09'54"E 783.79' TO PROPERTY CORNER

STA. 191+46.19

RAMP "B"

STA. 184+02

202.73'

N 48°26'34"E

181+21.25

P.T. STA.

181+00

30°

385.43'

N 51°35'42"E

533 LIN. FT. R/W CONSTRUCTION LIMITS FENCE

60'

OHIO EDISON EASEMENT LINE

230.01'

N 5°25'55"W

℄ EXIST. I-77

N 4°49'28"W

915

913+51.85

197.32'

150.36'

189+14.41

358.74'

633.43'

STA. 185+46.19

℄ EXISTING LIMITED ACCESS LINE

87+42.69

T.S. STA. 185+

25C.38'

N 66°36'09"E

666.61'

CONSTRUCTION LIMITS

LA. RW (550 LIN. FT. R/W FENCE)

2-15"APPLE
1-20"MAPLE
1-18"MAPLE
2-12"APPLE

2-15"APPLE
3-12"MAPLE
3-12"POPLAR

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

WOODS

294'

184+50.43 (470.61')
910+70 (207.50')

LA RW

LA (89)

557.48'
N 5°25'55"W

NEGOTIATED AS AN EASEMENT UNDER CONT. SUM. U.S. 21-15 55

910

185

150'

557.48'
N 5°25'55"W

557.47'
N 4°49'28"W

LOT 1
LOT 16

1-15"OAK
3-18"BEECH

2-12" ELM
4-12" BEECH
1-15" MAPLE

TBA = 1.860 AC
PRO = 2.940 AC
TOTAL = 4.800 AC

MEADOWS DEVELOPMENT CORPORATION aka MEADOWS DEVELOPMENT CORP., An OHIO CORPORATION

MATCH LINE "A-A" STA. 907+00

OHIO EDISON EASEMENT LINE (EAST SIDE)

181+92.20
91°04'08"

℄ EXIST. I-77
N 4°49'28"W

N 89°10'37"E
352.55'

904+98.02

184+50.15
91°04'08"

557.47'
N 4°49'28"W

814.28'
TO S.E. PROPERTY CORNER

150.36'

907+00
150

RC STA. 182+69.62
178 RT. 90°
L 803.78

2-15"APPLE
3-20"CHERRY
1-36"SYCAMORE
1-24"CHERRY

3-20"CHERRY
6-15"CHERRY

1-12"CHERRY
6-12"ELM
1-12"MAPLE

NOTE: ▨ LAND, SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

◉ = PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

PRELIMINARY SUBMITTAL	DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION	DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE PA. 3-1WL	IRICK	3-30-67
2.	Revised ℄ 3-1WL	White	11-13-69

M.L. STA. 180+00 TO STA. 193+00 - S. OF ℄

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 14/40

MATCH TO R/W SHEETS 16 & 17 OF 40

GRAPHIC SCALE

0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

NOTE: ▨ LAND, SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

1-15" CHERRY
1-15" APPLE
2-12" POPLAR

2-24" APPLE

2-12" CHERRY

STA. 190+50 (RAMP "A")

℄ RW (1,068 LIN. FT. R/W FENCE)

190

RAMP "D"

LYONS TRANSPORTATION CO., A CORPORATION

5 WL

T.B.A. = 9.614 Ac

924+00
170

STA. 924+00 (I-77)

EXISTING LIMITED ACCESS LINE

175

180

185

℄

N 27°26'45" E 500.75

182+32.32
C47.04

RAMP "A"

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

2714.84' TO PROPERTY CORNER

760'

LANE TO BE ABANDONED

N 89°21'51" E

OHIO EDISON EASEMENT

OHIO EDISON CO. 138 KV & WIRES

60'

OHIO EDISON EASEMENT

STA. 172+35.00

℄ SURVEY CURVE DATA
P.I. STA. 195+17.76
Δ = 23°18'16" RT.
D_c = 1°28'
R = 3906.53'
L_c = 1588.94'
T = 805.61'
E = 82.20'

630'

503.62'
N 4°49'28" W

NEGOTIATED AS AN EASEMENT UNDER CONT. SUM. U.S. 21-15.55

℄ - EXIST. I-77

1-18" ASH
1-12" ASH
5-12"-15" HICKORY

1-15" ELM
2-12" BEECH
2-15" POPLAR

EXISTING LIMITED ACCESS LINE

T.S. STA. 170+35.00

186+64.63
518+56.38
(243.07)
(170')

320
N 4°49'28" W

N 4°49'28" W 1339.55

MARY V. MATUS McFANN
4-1 WL

0.04'

MON. FD
919+19.37

918+83.99

S.T. STA. 187+51.33

38.43'
N 16°32'51" W

186+41.23
518+00
(147.74')
(150')

170'

150'

250'
N 4°49'28" W

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4
NORTH

STA. 193+00 (MAINLINE)
END SHEET

MATCH TO R/W SHEET 15 OF 40

N 21°42'45" E
516.22'
CONSTRUCTION LIMITS

STA. 180+00 (RAMP "A")

P.C. STA. 182+23.49

LANE TO BE ABANDONED

WOODS

MARY V. MATUS McFANN
4 WL

C.S. STA. 185+51.53

BEGIN SHEET
STA. 180+00 (MAINLINE)

233.03' TO PROPERTY CORNER
N 89°09'54" E
496.99' TO RAMP ℄

ELBERT M. WILTSHIRE &
KATHRYN E. WILTSHIRE
3 WL

182+57.78

32°11'30"

385.00'
BRASS CAP

℄ SURVEY (I-271)

185

19°22'45"

STA. 185+97.0

N 56°58'24" E

P.C. STA. 187+12.15

189+35.03 I-271
917+08.10 I-77

190

150'

MATCH TO R/W SHEET 13 OF 40

M.L. STA. 180+00 TO STA. 193+00 - N. OF ℄

MATCH TO R/W SHEET 12 OF 40

C.&E.

MATCH TO R/W SHEETS 13 & 14 OF 40

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT OF WAY SHEET 15/40

ELBERT M. WILTSHIRE &
KATHRYN E. WILTSHIRE
3-1 WL

STA. 194+00 (RAMP "B")

BEGIN SHEET — STA. 193+00 (MAINLINE)

7-12" ELM
5-12" BEECH
1-12" MAPLE

2-15" ELM
9-12" MAPLE
1-12" MAPLE
2-24" STUMP
1-18" OAK
1-12" HICKORY

N 85°05'54" E
633.43' TO I-77 LA LINE

IRON FD. & USED

195 + 82.29
697.61

(768 LIN FT. R/W FENCE)
N 41°01'32" E
213.17'

1-15" MAPLE
1-12" BEECH
13-12" ELM

1-24" MAPLE
2-24" BEECH
2-12" BEECH
3-20" BEECH
8-12" ELM
1-12" MAPLE

196+00
550

N 58°30'18" E
502.59'

8-12" ELM
1-20" BEECH
2-12" BEECH

MEADOWS DEVELOPMENT CORPORATION
MEADOWS DEVELOPMENT CORP., OHIO

3-15" BEECH
1-12" BEECH
1-36" STUMP
3-15" STUMP

1-20" BEECH
2-24" BEECH
2-15" MAPLE
3-15" CHERRY

IRON PIN FD. IN 28" BEECH

(CALC. FROM FIELD TIE)
S 53°42'23" E TO ℄ SURVEY
NO. 17 40" E
492.42' TO ℄ SURVEY

THEODORE M. SCHUPP
6-2 WL
T.B.A. = 5.192 Ac

N 35°23'44" E
430.18'

CONSTRUCTION LIMITS
LA RW

MARY V. MATUS McFANN
4-1 WL

C.S. STA. 193 + 53.11

195

N 57°02'06" W
℄ 4' PAVED CHANNEL

S.C. STA. 195 + 53.11

196+15
60.00'

196+36

WOODS

6-2 WL

RAMP "C"

℄ SURVEY (I-271)

195

P.I. STA. 195+17.76

N 56°58'24" E

℄ SURVEY CURVE DATA
P.I. STA. 195 + 17.76
Δ = 23°18'16" RT.
D_c = 1°28'
R = 3906.53'
L_c = 1588.94'
T = 805.61'
E = 82.20'

RAMP "B"
200

198+21.72
284.67'

P.O.C. STA. 199+72.22
88.52' RT. 199+75

200+00
160

END SHEET — STA. 200+00 (MAINLINE)

410'

C.S. STA. 205+07.48

S 0°03'53" E
604.95'

200+00
120

284.67'
S 30°08'56" E

(544 LIN FT. R/W FENCE)
LA RW

320.45'
N 40°05'14" W

195 + 28.68
354.34'

(LL)

(LL)

S 89°47'10" E 1271.47'
N 89°22'48" E

HUB FD. & USED

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

EXISTING LIMITED ACCESS LINE

℄ - EXIST. I-77

150'

STA. 924+00 (I-77)

LOT 1
LOT 16
TRACT 3
TRACT 6

2-12-18" OAK
2-18" BEECH

1-15" MAPLE
1-15" OAK
1-15" POPLAR
1-18" BEECH
3-12"-15" HICKORY

MARY V. MATUS McFANN
4-1 WL

T.B.A. : 20.416 Ac
P.R.O. : 4.554 Ac
TOTAL : 25.01 Ac

1-36" BEECH
1-15" HICKORY
1-24" STUMP
1-12" STUMP
2-16" BEECH

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

2-15" BEECH
2-15" OAK
3-12" OAK
1-15" ELM

2-15" HICKORY
1-24" STUMP
1-18" BEECH
2-15" ELM

3-15" HICKORY
2-18" STUMP
1-15" POPLAR
4-15" OAK

3-15" POPLAR
1-12" STUMP
2-24" BEECH
6-15" POPLAR
3-18" STUMP

S.T. STA. 207+07.48

STA. 208+00 (RAMP "B")

NOTE: PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-1, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FOR I-271.

NOTE: ▨ LAND, SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

◉ PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE P.I. 6-2WL	IRICK	3-30-67
2	Revised P.I.'s for P.I 3-1WL, 6-2 WL	White	11-13-69

MATCH TO R/W SHEET 18 OF 40

STA. 193+00 TO STA. 200+00

MATCH TO R/W SHEETS 16 & 17 OF 40

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 16/40

MATCH TO R/W SHEET 14 OF 40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

THEODORE M. SCHUPP
6 WL
T.B.A. = 1.390 AC
P.R.O. = 3.638 AC
TOTAL = 5.028 AC

LYONS TRANSPORTATION CO.
A CORPORATION
5 WL

GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE P.I. 6 WL	IRICK	3-30-67

NOTE: ▨ LAND, SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

PROPERTY LINE AS PER CONTRACT SUM. U.S. 21-15.55

STA. 924+00 (I-77)

STA. 190+50 (RAMP "A")
P.T. STA. 190+40.55

N 21°24'51" E
CONSTRUCTION LIMITS
1902.78'

2526.64' TO PROPERTY CORNER
N 89°22'48" E

189+53.39 (1103.46')

S.T. STA. 193+12.56

L.A. R/W

N 43°47'01" E
251.47'

254.60'

193+36.88

193+81 ℄ RAMP "A"
50.00 CUL'V.

CHANNEL CURVE DATA
P.I. STA 50+77
Δ = 4°30'
R = 400
T = 15.72
L = 31.42'

96'x42'

P.C.

P.T.

S.C. STA. 195+72.56

P.I. 194+38.51 (1185.04')
926+10.85 (255')

FIELD DRIVE

OHIO EDISON EASEMENT LINE

100'

OHIO EDISON CO. 138 KV
6 WIRES

OHIO EDISON EASEMENT LINE

P.C.C. STA. 198+14.15

N 4°32'51" E
521.97'
(1,045 LIN. FT. R/W FENCE)

L.A. R/W

193+29.89 (1634.16')
534+00 (170')

260'

CONSTRUCTION LIMITS

P.T. STA. 203+75.48
78' LT. 936+40.44

320'

193+97.45 (1880.41')
936+00 (170')

936+00
60'

S 85°10'32" W

190+51.64' (701.13')
924+00 (170')

190+39.77' (765.50')
925+00 (150')

101.98'

N 6°29'05" E

197'

203'

N 4°49'28" W

201'

N 10°32'06" W

300'

N 4°45'28" W

192+34.81 (1351.67')
925+00 (170')

261'

273'

192+17.32' (1157.83')
925+00 (150')

182.41'

926+97.09 (I-77 PLANS)
926+97.00 (CALC. AS PER I-271 PLANS)
191+40.24' (548.00')

NEGOTIATED AS AN EASEMENT
UNDER CONTRACT SUM. U.S. 21-1555

NEGOTIATED AS AN EASEMENT
UNDER CONTRACT SUM. U.S. 21-15.55

925

926+85.97

926+03

MON. FD. 925+54.86

0.04'

930

℄ - EXIST. I-77
N 4°49'28" W

935

STA. 935+14

936+60

MON. FD. 936+58.07

0.06'

940

MATCH TO R/W SHEET 17 OF 40

I-77 STA. 924+00 TO STA. 940+00-W. OF ℄

MATCH TO R/W SHEET 16 OF 40

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 17/40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
RANGE 12 WEST
TOWNSHIP 4 NORTH

STA. 924+00 (I-77)

℄ - EXIST. I-77

925 930 935 940

N 4°49'28" W

326+85.57

326+60

150

320

220

RP (90 LA)

NEGOTIATED AS AN EASEMENT
UNDER CONT. SUM. U.S. 21-15.55

EXISTING LIMITED ACCESS LINE

1333.55'

RP (91 LA)

NEGOTIATED AS AN EASEMENT
UNDER CONT. SUM. U.S. 21-15.55

585.06'

RAMP "B"

N 4°49'28" W

LA RW

PC

PT

194+82.99 (644.09')

4" PAVED PLANTING STRIP

213.52 @ RAMP "B" 50'00 CULV.

215

CONSTRUCTION LIMITS

N 28°34'26" W 273.13'

N 11°09'53" W

195+54.95 (1430.50')
933.00' (150')

PT. STA. 219+39.11

342.22'

S 85°10'32" W

938+07.68
150'

EXIST. LIMITED ACCESS LINE

938+28.27 (178.59')
150'

STA. 222+39.11
END RAMP "B"
91' RT.
938+

TRACT 3
TRACT 6

LOT 1
LOT 16

MARY V. MATUS Mc FANN

4-1 WL

THEODORE M. SCHUPP

6-1 WL

TBA : 3.626 Ac
PRO : 3.373 Ac
TOTAL : 6.999 Ac

664.30'

N 89°22'48" E

195+83.23 (1160.10')
930+50 (300')

LOT 1

LOT 16 LOT 12

195+94.74
1131.32'

N 33°51'48" E

80.30'

195+41.35
1175.82'

LOT 12

N 33°51'48" E

195+05.16
1093.58'

6-1 X

0.0534 Ac

196+56.22
1151.87'

LOT 16

TS STA 12 (1,249 LIN. FT. R/W FENCE)

+ 74.35

545.93
6°40'45"

210

LA RW

N 46°05'14" W

191+88.62
CTR 200.23

336.45'

(LL) RP

THEODORE M. SCHUPP

6-1 WL

STA. 208+00 (RAMP "B")

894.47' TO ℄ OF I-77

RP 604.55' TO SUB-TAN
S 0°03'53" E

HUB FD. & USED

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 12 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

RP PROPERTY LINE AS PER CONT. SUM. U.S. 21-15.55

MATCH TO R/W SHEET 15 OF 40

NOTE: ▨ LAND SO INDICATED, WAS NEGOTIATED AS AN EASEMENT, BUT WITH THE UNDERLYING FEE REMAINING IN THE NAME OF THE ORIGINAL OWNER.

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE Pd. 6-1 WL	IRICK	3-30-67

I-77 STA. 924+00 TO STA. 940+00 - E. OF ℄

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 18/40

1-20"POPLAR
3-15"POPLAR
6-15"POPLAR

3-18"STUMP
1-18"BEECH
4-15"OAK

1-18"BEECH
1-15"HICKORY
1-24"BEECH
4-12"MAPLE
3-12"BEECH
3-18"BEECH
3-15"ELM

1-18"APPLE
2-12"HICKORY
1-15"ELM

1-15"STUMP

1-15"OAK

2-12"APPLE

1-15"APPLE

3-15"POPLAR

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

THEODORE M. SCHUPP

6-2 WL

THEODORE MONEGAN &
MABEL MONEGAN

9 WL

NOTE: PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-W, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FOR I-271.

MATCH TO R/W SHEET 15 OF 40

STA. 200+00

(ELIM. FROM DEED) 375.74 TO PROP CORNER

℄

WOODS

200+00 120

LA RW

N 72°15'10"E 300.52

CONSTRUCTION LIMITS

202.55 150.02

1322.82'

LA RW

N 80°16'40"E

215+00 150

STA. 215+00

(1,508 LIN. FT. R/W FENCE)

SUB-TAN. N 80°16'40"E

152.32 TO TAN

152.32

202+62.11

78°24'40" (DEF. TAN.)

304.34

205

210

℄-SURVEY (I-271)

N 80°16'40"E

STA. 212+20

STA. 212+62

SHED

5'

RUINS OF WELL

GAS WELL

STORAGE TANKS

LANE TO BE ABANDONED

BEGIN SHEET

MATCH TO R/W SHEET 19 OF 40

END SHEET

CONSTRUCTION LIMITS

200+00 160

LA RW

N 74°52'04"E 224.04

202+33.04 145.45

P.T. STA. 203+01.09

1328.27'

N 80°16'40"E

LA RW

(1,468 LIN. FT. R/W FENCE)

215+00 150

WOODS

1-15"SYCAMORE
1-20"ASH
3-12"CHERRY

1-12"HICKORY
1-15"CHERRY
4-12"ELM

END

2082.21'02" (CALC)
2077.40' (DEED)

BEGIN

4" FARM TILE

25'

1000.6' (DEED)

N 68°18'33"E

211+55.31
2177.40'

N 83°20'25"W

386.8' (DEED)

N 0°42'56"W
391.53' TO ℄-SURVEY

S 8°37'29"W (CALC)
S 6°15'30"W (DEED)

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

THEODORE MONEGAN &
MABEL MONEGAN

9 WL

T.B.A. = 9.086 AC

MEADOWS DEVELOPMENT CORPORATION
aka MEADOWS DEVELOPMENT CORP.
AN OHIO CORPORATION

VERNON B. STOUFFER

10 WL

℄ SURVEY
CURVE DATA

P.I. STA. 195+17.76
Δ = 23°18'16" RT.
D_C = 1° 28'
R = 3906.53'
L_C = 1588.94'
T = 805.61'
E = 82.20'

N 0°17'42"E

432.42'

(CALC. FROM FIELD TIE) 536.23' TO ℄-SURVEY

68°30'(CALC) 68°30'(DEED)

IRON PIN FD. IN 28" BEECH

1-12"OAK
1-12"CHERRY
1-12"HICKORY
2-20"BEECH

5-12"ELM
5-20"STUMP
1-15"HICKORY
2-12"HICKORY
2-12"BEECH
3-15"STUMP

6-12"ELM

1-12"APPLE

3-12"APPLE

◉ PROPOSED MONUMENTS

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE Pcl. 6-2WL & 9WL	ERICK	3-30-67
2	Revised Name Pcl. 10	Lee	8-25-67
3.	Revised Pt's Pcl. 9WL & 10WL	white	11-13-69

STA. 200+00 TO STA. 215+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 19/40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 16 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

BRIARWOOD ALLOTMENT
VOL. 46, PG. 169-170

EXISTING R/W

WHITETHORN CIRCLE (50')

N 63°13'52"E 432.51'(PLAT)

N 0°42'56"W 475.64'(PLAT) 1116.17' ± TO LOT COR.

THEODORE MONEGAN & MABLE MONEGAN

9 WL

LOT 11

ALBERT JORDAN & WANDA JORDAN

11 WL

T.B.A. = 1.533 AC

2-18"MAPLE
1-12"MAPLE
2-12"POPLAR
1-12"W.CHERRY
1-18"APPLE
1-15"MAPLE
2-10"OAK
1-12"OAK

2-12"POPLAR
1-12"HICKORY
2-15"MAPLE

1 STY. FR. HSE.

SEPTIC TANK

DRAIN PIPE

I.P. FD. (SEE DETAIL)

MON. FD. (SEE DETAIL)

121.03'(PLAT)

N 76°16'44"E

260.00'(PLAT)

WOODEN RAIL FENCE

DRILLED WATER WELL

LOT 12

WILLIAM C. ETZEL

12 WL

T.B.A. = 2.934 AC

WILLIAM ROBERT DILLON & MARJORIE C. DILLON

LOT 13

13 WL

T.B.A. = 1.479 AC

CISTERN

1 STY. FR. HSE.

GAR.

SEPTIC TANK

500.00'(PLAT)

JOHN & ARLENE M. HUDAK

LOT 14

14 WL

T.B.A. = 1.637 AC

N 64°47'45"E 633.36'(PLAT)

N 64°40'45"E 1552 LIN. FT. R/W FENCE

N 80°16'40"E 1322.82'

STA. 215+00

STA. 230+00

N 0°42'56"W

579.41'(PLAT) N 25°05'22"E

219+98.30 2000.30

S 33°01'23"E 209.95

103.26'

218+00 2.30'

215+00 1.50'

216+11.50

295.41'

STORAGE TANKS

224+60 100.00

N 13°43'16"W 500.00'(PLAT)

N 78°32'53"E

LA RW

260.21'

227+31.77 165.51'

N 13°43'16"W

N 73°06'16"E 256.48

222+01 140.'

P.C. STA. 223+28.27

CONSTRUCTION LIMITS

2-12"ELM 1-12"W.CHERRY 2-12"MAPLE 1-12"POPLAR

2-15"MAPLE 1-15"OAK

4-15"MAPLE

1-12"ELM 1-15"CHERRY 3-15"MAPLE 5-12"MAPLE

4-15"MAPLE 4-18"BEECH 3-18"OAK 8-18"OAK 1-12"HICKORY 3-24"OAK

10-18"BEECH 1-18"ELM

2-18"ELM 12-18"BEECH 1-18"OAK 10-12"BEECH

7-15"MAPLE 6-18"BEECH 1-15"W.CHERRY 3-12"BEECH

1-24"MAPLE 1-24"OAK 2-18"ELM 1-18"BEECH 7-15"MALE

2-12"HICKORY 1-15"BEECH 10-15"MAPLE 1-24"MAPLE 1-24MAPLE

STRUCTURE No SUM-271-0423 227+35.82

STA. 230+00 N 0°42'56"W

633.36'(PLAT)

MATCH TO R/W SHEET 18 OF 40

MATCH TO R/W SHEET 20 OF 40

BEGIN SHEET

END SHEET

℄-SURVEY (I-271)

N 87°16'44"E 255.0'(PLAT)

I.P. FD.(SEE DETAIL)

215+40

215+87.70

42.87'

215+88.53 87.47'

216+30.91

157.15'

LA RW

N 80°16'40"E 1328.27'

148.72'

215+48.52 150.42'

215+00 150'

391.53' 396.80'(CALC.) 411.4'(DEED)

217+00 2.10'

N 80°16'40"E 308 LIN. FT. R/W FENCE

275'

218+59.62

218+48.63 25.28'

219+65 50.00' CULV.

220

N 80°16'40"E

101.47'

I.P. FD.(SEE DETAIL)

WOODS

1-30" OAK
5-12" HICKORY
2-20" BEECH
3-15" OAK

1-12"BEECH 16-12"ELM 14-12"OAK 1-12"CHERRY

1-15"MAPLE 1-15"OAK 14-12"OAK

STRUCTURE No SUM-271-0422 218+76.20

219+75 2.10'

362'

DRIVE TO BE ABANDONED

OIL WELL 2-12"HICKORY 1-20" BEECH 9-12" OAK 3-12" BEECH

MEADOWS DEVELOPMENT CORPORATION aka MEADOWS DEVELOPMENT CORP., an OHIO CORPORATION.

N 87°16'44"E 514.61'(PLAT)

I.P. FD. (SEE DETAIL)

120.02'(PLAT)

N 76°16'44"E 260.00'(PLAT)

I.P. FD. (SEE DETAIL)

230.00'(PLAT)

I.P. FD. (See Detail)

205.27' (PLAT)

℄ SURVEY CURVE DATA
P.I. STA. 227+35.56
Δ = 1°54'55" LT.
Dc = 1°26'
R = 3906.53'
Lc = 812.48'
T = 407.71'
E = 21.22'

VERNON B. STOUFFER

10 WL

T.B.A. = 5.668 AC

1-12" HICKORY
1-12" BEECH
6-12" OAK
2-12" ELM
6-24" BEECH
5-30" OAK

2-30" OAK
5-12" HICKORY
2-20" BEECH
3-15" OAK

224+66.82 82.82'

225+27 50.00' CULV.

227+26.41

229+79.84

229+29.29 329.92'

329 50.00' CULV.

15 WL

230+00 20.'

N 80°16'40"E 353.27'

N 78°29'47"E 887.55'

225+29.27 329'

℄ RELOCATED CHANNEL

LA RW 534.34'

N 73°00'28"E 526.48'

10 X

6.055 AC

6-24" OAK 4-24" BEECH 3-12" OAK 5-12" BEECH

13-12" BEECH 6-20" OAK

3-15" BEECH 5-24" BEECH 1-12" OAK 4-20" OAK

10-12" BEECH 3-24" BEECH 1-20" ELM 16-18" BEECH

7-15" OAK 5-20" BEECH 6-20" OAK 4-12" BEECH

NOTE: PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-1, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FOR I-271.

WOODS

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 15 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PROPOSED MONUMENTS

■ • EXIST. MON. FD.
● • EXIST. IRON PIN FD.
□ • CORRECT POSITION OF MONUMENTS *
○ • CORRECT POSITION OF PINS *

* COMPUTED FROM BASE LINE

PARTIAL - KEY PLAN FOR ALLOTMENT

N 83°20'25"W

LOT 15 LOT 16

WHITETHORN CIRCLE W.

WHITETHORN CIRCLE E.

823.86' N 80°06'14"E BASE LINE

BRIARWOOD ALLOTMENT VOL. 46 PG. 169-170

50' ST.

TWIG RD.

LOT 10 LOT 11 LOT 12 LOT 13 LOT 14 LOT 15 LOT 16

1 2 3 4 5 6 7 8 9 10 11 12 13 14

DETAIL "1"

DETAIL "2"

DETAIL "3"

DETAIL "4"

DETAIL "5"

DETAIL "6"

DETAIL "7"

DETAIL "8"

DETAIL "9"

DETAIL "10"

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE
1	ADDED LEADER LINE P.I. 11 & 14	IRICK	3-30-67
2	Revised Name Pcl 10 etc.	Lee	8-25-67
3	Revised Pt's Pcl 9WL & 10WL	White	11-13-69

STA. 215+00 TO STA. 230+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT OF WAY SHEET 20/40

MATCH TO R/W SHEET 19 OF 40

MATCH TO R/W SHEET 21 OF 40

STA. 230+00

STA. 245+00

BEGIN SHEET

END SHEET

TWIG RD. 50'

EXISTING R/W

N 89°17'04"E 200.00' (PLAT)

9-15"MAPLE
12-15"OAK

15-15"OAK
3-15"POPLAR

10-15"OAK
3-36"OAK
3-15"MAPLE

6-12"OAK
6-12"MAPLE
5-15"OAK

5-15"OAK
2-36"BEECH
2-15"MAPLE
3-12"BEECH

2-15"BEECH
1-36"MAPLE
8-18"HICKORY
2-24"BEECH
5-15"OAK

4-15"OAK
2-15"MAPLE
3-15"POPLAR
2-24"OAK

8-12"OAK
4-18"OAK
3-15"MAPLE

1-12"BEECH
12-15"OAK
1-24"OAK
2-15"MAPLE

6-12"OAK
6-18"MAPLE
3-12"MAPLE

4-24"OAK
15-15"OAK

1-24"MAPLE
3-18"OAK
9-18"MAPLE
2-36"MAPLE
3-15"BEECH

1 STY. BR. HSE. CISTERN GAR.

SEPTIC TANK

1 STY. FR. HSE.

Δ = 34°02'11"
CH = 29.27'
ARC = 29.70'
R = 50.00'

LOT 15
JOHN & ARLENE M. HUDAK
14 WL

LOT 16
JAMES COMMISSO & EVELYN COMMISSO
15 WL
T.B.A. = 1.381 Ac

LOT 17
RICHARD H. BACKDERF & MARY ANNE BACKDERF
16 WL
T.B.A. = 3.964 Ac

ARTHER D. & PATRICIA ANN SCHENK
17 WL
T.B.A. = 0.813 Ac

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 11 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH
WILLIAM C. ETZEL
18 WL
T.B.A. = 26.701 Ac

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 10 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

3-12"OAK
1-18"BEECH
1-15"W.CHERRY
16-18"MAPLE

8-15"MAPLE
1-18"OAK
4-24"BEECH
3-12"OAK
3-15"ELM

N 62° 42' 06" W 414.75' (PLAT)

311.54' LT. 239+62.09

I.P. FD. (SEE DETAIL)

N 0°42'56" W 633.36' (PLAT)

N 0°42'56" W 587.17' (PLAT)

S 87° 30' (PLAT) N 60° 17' 35" W

N 88°53'24" E

354.31'

N 67°56'40" E 969.67'

LA RW

241+06.83 206.58

243+47.25 206.58

WATER LINE

PUMP

SPRING

SEPTIC TANK

WATER LINE

SPRING BOX & PUMP

N 44°47'45" E 306.24'

230+59.27 196.47'

N 82°44'45" E 201.31'

N 0°42'56" W 232.45' 149.45'

N 49°52'29" E 291.41'

232+30.34 232.91'

370.22'

N 69°37'13" E 404.21'

1513 LIN. FT. R/W FENCE

CONSTRUCTION LIMITS

236+53.99 140.51'

WOODS

℄ SURVEY CURVE DATA
D = 11°54'58" LT.
R = 482.58'
L = 3206.53'
T = 1612.48'
E = 407.71
P.I. = 21.22
P.I. 227+35.98

P.T. STA. 231+40.75

210'

160'

180'

N 0°21'56" W 401.08'

N 0°21'56" W 250'

STRUCTURE No SUM-271-0456

231+92.74

128.24'

237+66.42

238+39.66

238+85 80.00 ON LV

238+15.66 CL 55° RT.

℄ - SURVEY (I-271)
N 68° 21' 41" E

235

240

BRIARWOOD ALLOTMENT
VOL. 46, PG. 169-170

I.P. FD. (SEE DETAIL)

19.78' RT. 231+46.55

205.27' (PLAT)

N 76°16'44" E 183.23' (PLAT)

I.P. FD. (SEE DETAIL)

(ANGLE BREAK) 125.00' RT. 235+28.75

11

12

13

10 WL

2-50.00 100.0'

N 75°46'44" E 436.42' (PLAT) 775.30' (CALC.) 792.0' (ST'ZEL'S DEED) 803.88' (STOUFFER'S DEED)

LA RW

N 68°21'52" E 768.58'

℄ RELOCATED CHANNEL

VERNON B. STOUFFER
10 X

150.00' (PLAT) 214.05'

3°14'24"

320+50.00 257.61'26"

340.50 340.50 (PLAT) (CALC.)

N 75°46'44" E

RELOC. CHANNEL

CONSTRUCTION LIMITS

887.55' N 78°25'47" E

231+40.75 350'

963.03' N 55°46'29" E

320 LIN. FT. R/W FENCE

241+18.38

2-12"HICKORY
36-12"OAK
2-15"BEECH
1-20"BEECH

5-20"OAK
3-12"HICKORY
27-12"OAK
3-15"POPLAR

280.15'

LA RW

N 68°21'41" E

242+50 191.23'

1-20"BEECH

245+00 191.23'

130.19' N 68°21'41" E

TBA 0.40Ac.

10 AX

245+25 LT. 240+98.94

240+98.92 245.92

1-20"BEECH
27-15"OAK
1-24"OAK

VERNON B. STOUFFER

10 AL WL
T.B.A. = 2.872 Ac

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 15 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 14 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

201.18' N 59°46'29" E

301.01'

1-36"ASH
33-18"OAK
11-12"OAK
1-15"HICKORY

S 73°03'24" W

1727' S 32°56" W

235+00 215.36'

242+00 300.00'

2359.48' (D) N 10°31'01" W

10-12"OAK
5-15"BEECH
2-20"OAK
1-12"HICKORY
14-15"OAK

34-18"OAK
7-20"OAK

DETAIL "14"

350.77' N 42°47'47" W TO ANGLE PT. IN E. CHANNEL OF LOT 15

94.2'

Q.R.

DETAIL "11"

592.17' N 0°42'56" W TO ANGLE PT. IN E. CHANNEL OF LOT 15

N 0°42'56" W 92.50'

10.26'

DETAIL "12"

0.97'

N 76°16'44" E 140'

N 76°16'44" E 183.58' TO I.P. IN SE COR. OF LOT 16

DETAIL "13"

30.2'

LIN.

N 75°28'31" E

10.0'

436.31' TO I.P. AT ANGLE BREAK IN S. LINE OF LOT 10

N 75°46'44" E

(SEE KEY PLAN & LEGEND ON SHEET 19 OF 40)

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO.	REVISIONS	MADE BY	DATE
1	Changed Pcl. 19WL to 10AWL.		11-9-65
2	Name Change Pcl. 17-WL	Lee	3-27-67
3	Added Leader line Pcl. 18 WL	ERIC K.	3-20-67
4	Revised Name Pcl. 10	Lee	8-25-67
5	Added Pcl. 10-A-X Plat Change Order		10-24-69
6.	Revised Name 10A-X Revised ICS Pcl 10AL	White	11-13-69

STA. 230+00 TO STA. 245+00

1-20"BEECH	2-12"HICKORY	3-20"OAK	4-12"BEECH	5-12"OAK
14-15"OAK	2-20"BEECH	5-12"OAK	4-12"BEECH	4-24"OAK
1-20"OAK	9-15"OAK		1-12"HICKORY	
6-12"OAK				

6-12"OAK	1-18"CHERRY	1-24"HICKORY	7-20"OAK	
2-24"OAK	5-20"POPLAR	12-15"OAK	15-12"OAK	
6-20"BEECH	4-12"BEECH	3-12"ELM	1-20"BEECH	
8-18"OAK	3-12"OAK	1-12"STUMP	1-15"CHERRY	
6-12"BEECH	5-18"OAK			
	3-24"BEECH			

NOTE; PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-1, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FOR I-271.

10 A-X

MEADOWS DEVELOPMENT CORPORATION aKa MEADOWS DEVELOPMENT CORP., AN OHIO CORPORATION

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 21/40

MATCH TO R/W SHEET 20 OF 40

STA. 245+00

BEGIN SHEET

STA. 260+00

END SHEET

MATCH TO R/W SHEET 22 OF 40

N 68°21'41" E 240'

252.60 (D) 420'

S 70°46'20" E 118.42'

N 1°28'35" W 1,303' (D) ℄ R

1-256+05.03 423.88

10-18" OAK
12-12" OAK
1-12" CHERRY
2-12" MAPLE
3-12" BEECH
17-15" OAK
1-12" SYCAMORE
9-15" OAK
8-12" OAK
4-12" BEECH

RICHARD YAPPEL & LENA YAPPEL

20 WL

T.B.A. = 2.352 Ac

1-18" OAK
9-15" OAK
1-24" OAK

255+89.78 382.52'

122.115'

3446.30' (D)
3442.77' (OCCUP) ℄ R

645.33'
N 87°20'51" E

STA. 255+47.73
268.31' LT.

CONSTRUCTION LIMITS

772.67' (OCCUP)
775.50' (D)

℄ R

N 88°21'28" E

FILL AND GRADE

8-12" SYCAMORE
3-12" MAPLE
3-12" ELM
4-12" WILLOW

480 LIN. FT. R/W FENCE

N 67°56'46" E 969.67'

1-24" MAPLE
4-15" OAK
10-12" MAPLE
1-36" BEECH
2-36" OAK

2-24" MAPLE
12-15" MAPLE

1-15" W. CHERRY
4-15" STUMP
10-15" MAPLE
1-24" MAPLE

249.00 240'

CONSTRUCTION LIMITS

WOODS

FURNACE RUN

3-12" OAK
16-12" MAPLE

4-15" STUMP
10-12" OAK

10-15" STUMP
10-15" MAPLE
1-12" MAPLE

2-15" W. CHERRY
5-15" STUMP
15-15" MAPLE

18 WL

WILLIAM C. ETZEL

T.B.A. = 26.701 Ac

N 36°55'55" E 421.90'

LA RW

620' x 10' x 10' TWIN BOX CULVERT

STA. 252+52±

STA. 255+55±

250 ℄ SURVEY (I-271) 255

N 68°21'41" E

STA. 254+86

LANE TO BE ABANDONED

LOT 10 N 88°19'19" E
LOT 14
877.98 (CALC.)
877.80 (D)

10 WL

780.15' 520 LIN. FT. R/W FENCE

N 68°21'41" E

LA RW

245+00 19.23'

249.00 19.23'

250+52.28 213.35

150.80'

41.66'

280.32' 253.20'

℄ R

FIELD DRIVE

MEADOWS DEVELOPMENT CORPORATION aka MEADOWS DEVELOPMENT CORP. AN OHIO CORPORATION

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 14 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

VERNON B. STOUFFER

10 WL

T.B.A. = 2.872 Ac

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 10 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

WOODS

FURNACE RUN

CONSTRUCTION LIMITS

15-12" OAK
1-15" CHERRY

10-12" SYCAMORE
20-12" ELM

9-12" OAK

43-12" OAK
2-12" BEECH

561.06'
S 87°41'05" E

LOT 10
LOT 14

N 88°19'19" E

LA RW

558.35'
N 34°03'32" E

(LL)

WILLIAM C. ETZEL

TYPE I FUNDS

GRAPHIC SCALE

0 50 100 150 200

TO S. LINE OF LOT 14
2481.60' (D)
N 0°31'04" W

35-15" OAK
4-12" HICKORY

6-12" HICKORY
1-20" ELM
53-12" OAK

10-12" OAK
1-12" BEECH
1-12" HICKORY
4-20" OAK

11-12" OAK
6-12" ELM

20-12" OAK

8-12" ELM
2-12" OAK

12-15" OAK
2-15 HICKORY

11-12" OAK
1-12" CHERRY

200'

255+50 480

N. 68°21'41" E.

257+50 480

NOTE: PARCEL 10-AX ACQUIRED RIGHT RESIDUES OF PARCELS 3-1, 6-2, 9 AND 10 AFTER THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS ACQUIRED LANDS FOR I-271.

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE : OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	Changed Pcl. 19WL to 10AWL.		11-9-65
2	ADDED LEADER LINE Pcl 20WL	IRICK	3-30-67
4	Revised Name Pcl. 10	Lee	8-25-67
5.	Revised PE Pcl 10 AWL.	White	11-13-69

● = IRON PIN, FD.
◉ = PROPOSED MONUMENTS

STA. 245+00 TO STA. 260+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 22/40

MATCH TO R/W SHEET 21 OF 40

MATCH TO R/W SHEET 23 OF 40

2-15" MAPLE
5-18" BEECH
7-12" OAK

2-18" BEECH
11-18" OAK
1-12" BEECH
7-12" OAK

2-18" STUMP
12-12" OAK
14-15" OAK
2-12" BEECH
2-24" OAK

~PINE GROVE~
100 TO 125 TREES
PER 100 FT.
(THRU STA. 268)

3-8" PINE
10-10" POPLAR

1-18" OAK
1-15" HICKORY
1-12" OAK
2-36" OAK
8-12" PINE

1-12" BEECH
4-12" ELM
2-18" ELM
1-24" ELM

~APPLE ORCHARD~
42 TREES
(THRU STA. 274)

2-15" ELM
6-12" APPLE

RICHARD YAPPEL &
LENA YAPPEL

20 WL

T.B.A. = 2.352 Ac

WOODS

ESTATE OF
VACLAV SCHMIDT, INCOMPETENT,
& MARIE SCHMIDT (DECEASED)
INCOMPETENT

21 WL

T.B.A. = 5.859 Ac

ESTHER A. REPLOGLE
& CHARLES R. REPLOGLE SR.

22 WL

T.B.A. = 3.858 Ac

STA. 260+00

STA. 275+00

LA RW

645.33'
N 61° 20' 51" E

262+00
172.40

263+36
172.40

136.00'

N 68° 21' 41" E

1330 LIN. FT. R/W FENCE

718.46'
N 63° 25' 58" E

CONSTRUCTION LIMITS

3543.40'(OCCUP.) TO ℄ S.R. 303
3545.15'(DEED)
N 1° 25' 03" W

341.55' TO ℄ S.R. 303
S 0° 31' 21" E

210+69.79
222.65

320.52'

275+14.07
201.44

3388.59' TO ℄ S.R. 303
243.41'

P.C. STA. 267+60.12

180'

772.67(OCCUP.)
775.50(D)
N 88° 21' 28" E

STA. 262+70.0
1.27 LT.

262+73.8
3.78
4.71

265

℄ - SURVEY (I-271)
N 68° 21' 41" E

268+94.36

269+67.66

270

STA. 272+92

STA. 273+89.80

3254.75' TO ℄ S.R. 303
235.78'
N 0° 46' 27" W

(LANE TO BE ABANDONED)

DICK WRIGHT & OPAL
CAROLYN WRIGHT

23 WL

18 WL

T.B.A. = 3.858 Ac
WOODS

602.10' TO PROP. COR.
230.78'

3 GUY WIRES

441.27'
N 56° 11' 40" E

BEGIN SHEET

END SHEET

118.53'

CONSTRUCTION LIMITS

1330 LIN. FT. R/W FENCE

692.99'

N 68° 21' 41" E

400.0'

181.73'

268+39.79
167.57' RT.

272+72.71
201.29

OHIO EDISON
4 WIRES (69 KV)

MARKED STONE FD.
270.78' RT. OF STA. 272+94.25

1134.54' TO PROP. COR.

(LL)

WILLIAM C. ETZEL

18 WL

(LL)

558.95'
N 34° 05' 32" E

621.11'

N 1° 25' 03" W

1480.79' TO PROP. COR.

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 10 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

ESTATE OF
VACLAV SCHMIDT, INCOMPETENT
& MARIE SCHMIDT, (DECEASED)
(INCOMPETENT)

LOT 10
LOT 14
LOT 9
LOT 13

333.84'
S 0° 31' 21" E

1667.01' TO PROP. COR.
N 1° 24' 32" W

TALL MON
FD. & USED

℄ SURVEY
CURVE DATA

P.I. STA. 285+23.13
Δ = 48° 34' 45" LT.
D_c = 1° 28'
R = 3906.53'
L_c = 3312.22'
T = 1763.01'
E = 379.40'

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 9 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

N 0° 46' 27" W

1564.20 TO PROP. COR.

DELAWARE COMPANY

2-APPLE
2-12" MAPLE
1-12" MAPLE

13-20" OAK
4-20" BEECH
10-12" OAK
6-12" BEECH

13-20" OAK
4-20" BEECH
10-12" OAK
6-12" BEECH

1-20" MAPLE
12-15" OAK
2-18" BEECH
1-12" ELM
3-18" HICKORY

~PINE GROVE~
60 TREES PER 100 FT.
(THRU STA. 267)

4-12" MAPLE
5-12" OAK
4-12" BEECH

1-12" HICKORY
1-18" CHERRY
2-12" MAPLE
1-18" HICKORY

1-20" CHERRY
1-18" MAPLE
1-12" MAPLE
2-20" OAK

2-12" MAPLE

● IRON PIN FD.
◉ PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	Added Leader line P.I.s 20, 21 & 22	I.RICK	3-30-67

STA. 260+00 TO STA. 275+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 23/40

MATCH TO R/W SHEET 22 OF 40

MATCH TO R/W SHEET 25 OF 40

BEGIN SHEET

END SHEET

STA. 275+00

STA. 290+00

ESTHER A. REPLOGLE & CHARLES R. REPLOGLE SR.

22 WL

DICK WRIGHT & OPAL CAROLYN WRIGHT

23 WL

T.B.A. = 14.559

ROBERT PHINNEY

24 WL

325.75' TO ℄ S.R. 303 FROM ℄ I-271

N 0°46'27" W

PI

215+14.07

201.44

285'

LA RW

744.82'

N 52°01'57" E

1421 LIN. FT. R/W FENCE

283.00 165'

CONSTRUCTION LIMITS

475.91'

N 43°54'44" E

289.00 190'

457.50'

N 33°22'27" E

WOODS

WOODS

STA. 276+47

194'

STA. 279+97

280

℄ SURVEY (I-271)

STA. 283+41

285

LANE TO BE ABANDONED

STA. 289+92.94

2345.87' TO ℄ S.R. 303

N 0°55'27" W

2771.43'

542.57'

441.27'

N 56°11'40" E

277.00 180'

LA RW

315.45'

N 55°06'00" E

525.66'

N 46°30'35" E

1573 LIN. FT. R/W FENCE

264'

212'

OHIO EDISON 4 WIRES (69 KV)

280+00 209'

288.00 205'

CONSTRUCTION LIMITS

LA RW

294.40'

N 34°15'10" E

1351.25' TO PROP. COR.

(355.83' TO PROP. COR.)

287+79.09

171.43'

(LL)

2-12"MAPLE

2-12"APPLE
1-12"MAPLE
2-12"HICKORY
2-18"ELM
1-24"ELM

PROPOSED MONUMENTS

GRAPHIC SCALE

0 50 100 150 200

TYPE I FUNDS

℄ SURVEY CURVE DATA

P.I. STA. 285+23.13

Δ = 48°34'45" LT.

D_C = 1°28'

R = 3906.53'

L_C = 3312.22'

T = 1763.01'

E = 379.40'

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 9 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE
1	Added Leaded line Pel. 24WL & 23WL	IRICK	3-30-67

STA. 275+00 TO STA. 290+00

1-18"BEECH
8-24"OAK
1-18"ELM
4-12"OAK

14-12"OAK

3-15"STUMP
5-18"OAK
1-18"BEECH
4-12"OAK
1-15"HICKORY
1-18"ELM

2-18"STUMP
3-15"ELM
4-12"OAK
7-18"OAK

10-12"OAK
5-15"OAK

3-15"OAK
4-15"ELM
3-12"MAPLE
5-12"ELM

3-18"ELM
1-36"OAK
6-12"OAK

6-12"OAK
3-15"OAK
2-24"OAK

1-18"WALNUT
1-12"CHERRY
2-15"OAK

3-12"OAK

2-20"MAPLE
5-12"CHERRY

2-12"MAPLE

2-12"HICKORY
2-12"ELM
1-12"BEECH
2-12"MAPLE

4-18"BEECH
4-12"MAPLE
4-12"ELM
1-12"HICKORY

3-20"BEECH
3-12"HICKORY
1-12"CHERRY
11-12"OAK
1-20"MAPLE

3-12"HICKORY
8-18"OAK
2-12"BEECH
1-12"CHERRY
9-12"ELM

10-12"OAK
7-12"ELM
1-20"MAPLE
1-12"MAPLE
1-12"HICKORY

4-20"OAK
1-24"MAPLE
2-12"HICKORY
19-12"OAK

8-18"OAK
5-12"MAPLE
4-12"HICKORY
4-20"MAPLE
1-15"BEECH
3-20"OAK

6-12"MAPLE
2-20"MAPLE
1-24"OAK
13-12"OAK

14-12"OAK
12-18"MAPLE
2-20"OAK

5-12"MAPLE
2-20"OAK
21-12"OAK

4-12"OAK
1-12"HICKORY

KEY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

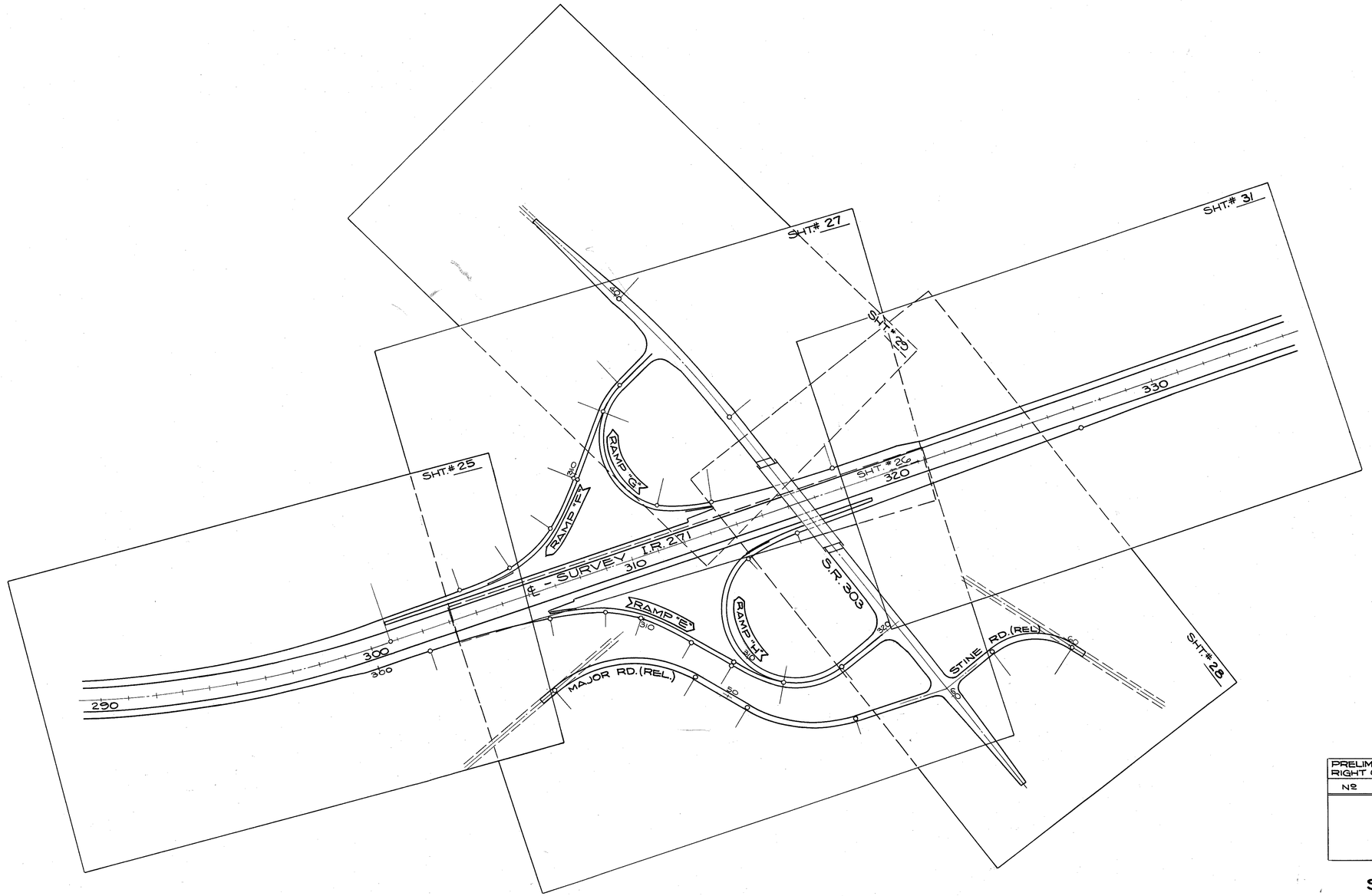
RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 24/40



GRAPHIC SCALE

0 200' 400' 600' 800'

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE

KEY MAP

STA. 290+00 TO STA. 335+00

INTERCHANGE WITH S.R. 303

C. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 25/40

2-12"ELM
1-12"CHERRY
7-24"OAK
6-15"OAK

8-24"OAK
8-12"MAPLE
6-12"ELM

1-15"CHERRY

DICK WRIGHT &
OPAL CAROLYN WRIGHT

23 WL

LOT 5
LOT 9

℄ N 0° 55' 27" W 2363.87' TO ℄ - S.R. 303

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

ROBERT PHINNEY

24 WL

T.B.A. = 24.230 Ac
P.R.O. = 1.185 Ac
TOTAL = 25.415 Ac

457.50'
N 33° 22' 27" E

282+80.52
192.36'

LA RW

310.25'
N 38° 45' 38" E

296+00
140'

1459 LIN. FT. R/W FENCE

CONSTRUCTION LIMITS

454.63'
N 21° 55' 16" E

300+72.34
150'

FIELD DRIVE

P.T. STA. 300+72.34

LA RW

P.C. STA. 303+72.84

428.71'
N 15° 40' 00" E

305+00
180'

STA. 290+00

STA. 305+00

BEGIN SHEET MATCH TO R/W SHEET 23 OF 40

END SHEET MATCH TO R/W SHEETS 26 & 27 OF 40

23 WL

WOODS

289+22.24

340

295

℄ - SURVEY (I-271)

300

PEACH ORCHARD
~130 TREES -
6" TO 8" TO BE REMOVED

302

304

RAMP "F"

N 19° 46' 56" E

FIELD DRIVE TO BE ABANDONED

RAMP "E"

303

304

N 19° 46' 56" E SUB-TANGENT

542.97'
N 34° 15' 10" E

LA RW

CONSTRUCTION LIMITS

802.72'
N 24° 44' 08" E

1539 LIN. FT. R/W FENCE

293+00
165'

300+72.34
155'

P.C. STA. 302+00

628.45'
N 21° 44' 34" E

LA RW

24 WL

FIELD DRIVE

ROBERT PHINNEY

EXIST. R/W LINE

26 WD

MAJOR RD.

N 20° 34' 32" E
70.62'

41+50
15'

℄ SURVEY
CURVE DATA

P.I. STA. 285+23.13
Δ = 48° 34' 45" LT.
D_c = 1° 28'
R = 3906.53'
L_c = 3312.22'
T = 1763.01'
E = 379.40'

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 9 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

4-12"MAPLE

1-18"POPLAR
1-15"MAPLE
3-12"ELM

2-20"ELM

1-12"CHERRY
34-APPLE

LOT 5
LOT 9

PROPOSED MONUMENTS

EAST LINE LOT 5

RICHFIELD TWP. LINE

BOSTON TWP.

N 0° 43' 29" W

38+47.62
29.75

0.25'

EXIST. R/W (60') T.R. 72

EXIST. PAVT.

℄ GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

STA. 290+00 TO STA. 305+00

MATCH TO R/W SHEET 25 OF 40

BEGIN SHEET

STA. 305+00

ROBERT PHINNEY
24 WL

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

MATCH TO R/W SHEET 27 OF 40

℄-SURVEY

N 19°46'56"E

STA. 50+00 RELOC. S.R 303
STA. 316+40.60 I-271

317+08.07
50+00 (S.R 303)
317+57.67
50+00
STINE RD

SUM-271-2.98

RIGHT OF WAY SHEET 26/40

FED. RD.	STATE	PROJECT	
2	OHIO		

3-10" WILLOWS
IRON FD.
10-12" WILLOWS
(I-271)
TRACT 6
(60') NO. 43'29"W
TRACT 7
3/2 SS-WB-WB
50.0' NAR
50.0'
514+39.44
315

EXIST R/W LINE
℄-R/W MAJOR RD.
(T.R.172)
℄-BOSTON TWP. LINE
EXIST. R/W LINE

306
307
308
309
310
46
45
44

1554 LIN. FT. R/W FENCE
N 21°44'34" E
LA R/W
628.45

307+00.42 (176.50)
43°51'02" (176.50')
307+43.93 (192.52')
44°29.40" (192.52')
45°27'43"
3.45°
S.C. STA. 308+53.07
N 39°59'55" E
1339.00 (R50.0)
157.70 (160')
C.S. STA. 309+87.32
N 60°24'44" W
199.02'

NOSE C.S. STA. 306+53.07

RAMP "E"

RICHFIELD TWP.
N 1°52'14" W
EXIST. PAVMT. 21'-0"

MAJOR RD. (RELOC.) T.R. 172
R/W
R = 395.74'

N 20°36'32" E
70.62'
42+15.25
45.0'
EXIST. PAVT.

R/W CURVE DATA
Δ = 70°40'26" RT.
R = 395.74'
T = 280.59'
Lc = 488.13'
CH. LGTH. = 457.78'
CH. BRG. = N 33°27'59" E

RELOCATED
MAJOR RD.
℄-CURVE DATA
Δ = 70°40'26" RT.
Dc = 13°
R = 440.74'
T = 312.45'
Lc = 543.65'
P.I. STA. 45+27.74

JAMES C. KENNEDY
26 WL | 26 WD | 26 X

NOTE ▨: GIVEN BY DIRECTOR'S DEED TO SUMMIT COUNTY ENGINEER

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

26 WL
T.B.A. = 12.056 Ac
P.R.O. = 1.302 Ac
TOTAL = 13.358 Ac

RAMP "H"
4" TILE
311
312
313
314
315
316
317

TEMPORARY
RUNAROUND

WESTERN RESERVE TEL. CO
1-CABLE
OHIO BELL TELEPHONE CO
1 CABLE, 1 LINE

SEE DETAIL, LOWER LEFT, THIS SHEET, FOR AN UNRECORDED DIVISION OF THIS PROPERTY

STA. 311+87.32
310+51.04 (337.35')
47°58'50" (336.0')
3/2
302.16 ℄ RAMP "E"
50°00' CCW

T.S. STA. 315+57.37
N 68°45'12" E
R/W
CONSTRUCTION LIMITS
316.97'

312+58.91 (618.89)
50+75.87 (38.0')
P.C. 50+75.87
132.48'

50+75.87
45.0'

T.B.A. = 2.828 Ac
P.R.O. = 0.258 Ac
TOTAL = 3.086 Ac

51+50
45

51+80
75

26 WD

26 X
0.078 Ac

6" APPLE

LA-RW CURVE DATA
Δ = 49°03'15" LT.
R = 439.46'
T = 200.52'
Lc = 376.24'
CH. LGTH. = 364.86'
CH. BRG. = N 44°16'35" E

62+02 RELOC. MAJOR RD.
58+64.45 CULVERT

CH. BRG. N 43°18'28" E
120.10'
R = 522.46'
R/W

R/W CURVE DATA
Δ = 49°03'15" LT.
R = 522.46'
T = 238.40'
Lc = 447.30'
CH. LGTH. = 433.77'
CH. BRG. = N 44°16'35" E

RELOCATED
MAJOR RD.
℄-CURVE DATA
Δ = 49°03'15" LT.
Dc = 12°
R = 477.46'
T = 217.86'
Lc = 408.78'

54+84.65
45.0'

P.T. STA. 317+79.00 (RAMP "E")
54+84.65 (38.0')
315 99.93 (779.16')
N 19°44'57" E
330.42'
LA R/W
N 19°44'57" E
55
R = 522.46'
R/W
CONSTRUCTION LIMITS
291.46'
261.66' N 19°44'57" E
54+84.65
45.0'

STA. 55+56.74 (RELOC. S.R 303)
STA. 320+27.41 (RAMP "E")

SHRUB
4-10" ELMS
18" HICKORY
3-12" PINES
BRUSH
4" TILE
SEPTIC TANK
CISTERN
10" ELM
6" ELM
3-18" PINES
3 1/2 STY. FR. HSE
2-6" PINES
WELL
10" PINE
10" APPLE
7-10" PINES
10" PINE
2 1/2 STY. FR. HSE
6" OAK
2-12" APPLES
8" PINE
2-6" PINES
ABANDONED
2-20" MAPLE
58+84.65 (45.0')
57+16.11 (45.0')
18-12" PINE
1-20" WILLOW
2-12" PINE
25-APPLE
39-APPLE
1-12" MAPLE
20-APPLE
4-12" CHERRY

STREETSBORO RD. (S.R. 303)
EXIST.
RELOC. S.R 303
STINE RD
EXIST. R/W LINE
CONSTRUCTION LIMITS
20" WILLOW
6" PINE
OHIO EDISON
1 WIRE (12.5 KV)
21-10" ELMS
20" ELM
6" ELM
30-12" PINES
N 13°55'35" E
1554 LF R/W FENCE
S 6°45'09" E
455.42'
ROBERT PHINNEY
28 WL
OHIO EDISON
4 WIRES (12.5 KV)
BASKETBALL HOOP
GRAVE
GAR.
1 STY. BRICK HSE
WELL
SEPTIC TANK
4" TILE
S 89°44'57" W
1.5" C.I.P.
N 89°44'57" E
EXIST. R/W LINE
CONSTRUCTION LIMITS
N 70°58'07" E
30-12" PINES
N 13°55'35" E
1554 LF R/W FENCE
EXIST R/W LINE
6" ELM
6" ELM
3/2 SS-WB-WB
50.0' NAR
50.0'
514+39.44
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
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354

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 27/40

- ◉ PROPOSED MONUMENTS
- ▣ PROPOSED MONUMENT ASSEMBLIES

GRAPHIC SCALE

0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE

MATCH TO R/W SHEET 29 OF 40

NOTE: FOR DETAILS & CALCULATIONS OF PARCELS 23T, 24WD, 24-1T, 24T, 25WD, 25T, 25-1T, 30WD, SEE RIGHT-OF-WAY SHEET 29 OF 40. (23 T)

DICK WRIGHT & OPAL CAROLYN WRIGHT (23 WD)

TONY SORMA & ANN Y. SORMA (25 T) (25 WD) (25-1 T) SEE SHEET 29

ROBERT PHINNEY (24 WL) (24 WD) (24 T) (24-1 T) SEE SHEET 25 — SEE SHEET 29

FRED L. ROLLER & EDITH ROLLER
(30 WL) T.B.A. = 0.215 Ac; P.R.O. = 0.293 Ac; TOTAL = 0.508 Ac
(30 WD) T.B.A. = 1.006 Ac; P.R.O. = 0.342 Ac; TOTAL = 1.348 Ac
(30 T) 0.085 Ac

R/W CURVE DATA
Δ = 5°00'
R = 2504.79'
T = 126.63'
Lc = 253.49'
Ch = 253.41'
Ch. Brg. N 83°07'20" E

(30 WD) SEE R/W SHEET 27A OF 40 FOR RELOCATION OF LIMITED ACCESS LINE FOR PARCELS 29-WL, 30-WL AND THE ESTABLISHMENT OF POINT OF PERMISSIBLE ACCESS (OHIO SPORTS CENTER INC. ACCESS). THE SERVICE ROAD INTERSECTING SR. 303 AT STATION 40+65, LEFT SHALL BE CLOSED AND PERMANENTLY EXTINGUISHED.
THE ABOVE REVISIONS HAVE BEEN RECORDED IN THE DIRECTORS JOURNAL, VOL. 59, PA. 1921, DATED SEPT. 20, 1974.

LLOYD L. BIGELOW (29 WL) T.B.A. = 7.048 Ac; P.R.O. = 0.482 Ac; TOTAL = 7.530 Ac

(29-2 T) 0.392 Ac

RELOC. S.R. 303 CURVE DATA
Δ = 8°46'24" RT.
Dc = 1°30'
R = 3819.72'
T = 293.02'
Lc = 584.89'
P.I. STA. 43+10.60

EXIST. S.R. 303 (CONSULTANTS SURVEY) CURVE DATA
Δ = 13°35'19" RT.
Dc = 5°
T = 136.53'
Lc = 271.78'
P.C. STA. 46+68.07
P.T. STA. 49+39.85
P.I. STA. 48+04.60

EXIST. S.R. 303 (ROADWAY PLANS) CURVE DATA
Δ = 13°50' RT.
Dc = 5°
T = 135.16'
Lc = 270.0'

LA/RW CURVE DATA
Δ = 7°53'38"
R = 1175.94'
T = 81.14'
Lc = 162.01'
Ch = 161.89'
Ch. Brg. N 84°55'22" E

CHANNEL CURVE DATA
Δ = 32°15'
Dc = 50'
T = 14.44'
R = 28.14'
L = 41.85'

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7

BEGIN SHEET STA. 305+00

END SHEET STA. 320+00

MATCH TO R/W SHEET 25 OF 40

MATCH TO R/W SHEET 26 OF 40

MATCH TO R/W SHEET 31 OF 40

M.L. STA. 305+00 TO STA. 320+00-W. OF ℄

RELOCATED SHED AND MOVED DITCH ELIMINATION PRE 12/20/65

C.S.E.

PARCEL Nº	OWNER	VOL/PG	DEED AREA	TOTAL P.R.O.	TO BE ACQUIRED GROSS TAKE	TO BE ACQUIRED P.R.O. IN TAKE	TO BE ACQUIRED NET TAKE	RESIDUE
1 WD	DANIEL O EMMETT & ALICE H	5177/137	1,130.818	19.895	6678	5681	947	1,123.871
1 WA	EMMETT	3674/663					800	
2 WL	OHIO SPORTS CENTER INC	5408/22	6,780,114	24,943	7374	0	7374	6,734,843
2 WD		5413/121			62,840	24,343	37,857	
2					20,308	0	20,308	
3 WD	GULF OIL CORP	4901/357	71,130	0	3512	0	3512	67,618
3					57.56	0	57.56	
4 LA	STATE OF OHIO	4587/647	37.403	36,948	15,647	15,647	0	21,756
5 WA	RICH HILLS CORP						500	
6 WA	J J & M J BISTRICKY						500	
7 WA	J J & R M PAYNE						1575	

STATE	PROJECT	
OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET

27A / 40

R/W CURVE DATA

③ ARC = 284.73' R = 3880.72' CH = 284.66' CH. BRG = N 81°54'54" E

④ ARC = 284.32' R = 3869.72' CH. = 284.26 CH. BRG. = N 81°55'23" E

TBA = 37,857 S.F.
PRO = 24,343 S.F.
TOTAL = 62,840 S.F.

OHIO SPORTS CENTER INC.

AREA = 20,308 S.F.

D.O. & A.H. EMMETT

V. & M. SCHMIDT

RICH HILLS CORP.

J.J. & M.J. BISTRICKY

J.J. & R.M. PAYNE

OHIO SPORTS CENTER INC.

℄ CURVE DATA
RELOC S.R.303
Δ = 4°30'48"
Dc = 1°30'00"
R = 3819.72'
T = 150.57'
Lc = 300.89'
P.I. STA. 136+35.16

℄ CURVE DATA
RELOC S.R.303
Δ = 1°00'28"
Dc = 1°30'00"
R = 3819.72'
T = 38.55'
Lc = 77.19'
P.I. STA 122+00.00

R/W CURVE DATA

① ARC = 21.67' R = 3880.72' CH = 21.67' CH BRG = N 84° 10' 15" E

② ARC = 20.50' R = 3880.72' CH = 20.50' CH BRG = N 84° 10' 47" E

GULF OIL CORP

AREA = 5256 S.F.

AREA = 362 S.F.

AREA = 15,647 S.F.

AREA = 7374 S.F.

OHIO SPORTS CENTER INC.

PROPOSED POINT OF ACCESS 110' WIDE LEFT OF STA. 42+73.00

SERVICE ROAD (TO BE ABANDONED)

EXIST R/W

PROP R/W FENCE

EXIST R/W FENCE

EXIST GUARD RAIL

TOP OF BACK SLOPE

EXIST LA

RAMP 'E'

RICHFIELD TOWNSHIP / BOSTON TOWNSHIP

STA. 50+00 S.R. 303 ℄ I-271

STA. 316+40.60 ℄ I-271

℄ CURVE DATA
EXIST REVISED S.R. 303
Δ = 5°25'04"
Dc = 1°30'00"
R = 3819.72'
T = 180.73'
Lc = 361.15'
P.I. STA. 44+27.01

℄ CURVE DATA
EXIST S.R. 303
Δ = 8°46'24"
Dc = 1°30'00"
R = 3819.72'
T = 293.02'
Lc = 584.69'
P.I. STA. 43+10.68

OHIO SPORTS CENTER INC.

THE STANDARD OIL CO.

MARATHON OIL CO.

EHC	RESIDUE - PARCEL 3 & 3WD		6/6/74
	CORRECTED DISTANCE: ℄		
NAME	REVISION		DATE

RIGHT OF WAY PLANS

FORM D.O.A.-R.W.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 28 / 40

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 7 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 8 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

RELOC. STINE RD.
CURVE DATA
Δ = 71°13'10" RT.
R = 250'
T = 179.05'
Lc = 310.75'
P.I. STA. 59+13.35

℄ SURVEY (I-271)

℄ RELOC. STINE RD. (T.R. 171)

℄ RELOC. S.R. 303

℄ RELOC. MAJOR RD. (T.R. 172)

ELDEN N. McVEY & CLAUDIA W. McVEY — 31

RICHARD H. BIGELOW & JANE A. BIGELOW

LLOYD L. BIGELOW — 29 WL

JENNIE BIGELOW — 32 WL

ROBERT PHINNEY — 28 WL

JAMES C. KENNEDY — 26 WL

EMILY K. MILLER f.k.a. EMILY VIRGINIA KENNEDY — 27 WD

29-1 T — 0.083 Ac

28 T — 0.410 Ac

27 T — 0.390 Ac

29 WD — T.B.A. = 0.139 Ac, P.R.O. = 0.0081 Ac, TOTAL = 0.220 Ac

28 WD — T.B.A. = 1.197 Ac, P.R.O. = 0.555 Ac, TOTAL = 1.756 Ac

27 WD — T.B.A. = 0.367 Ac, P.R.O. = 0.325 Ac, TOTAL = 0.692 Ac

28 WL — T.B.A. = 0.410 Ac, P.R.O. = 0.744 Ac, TOTAL = 1.154 Ac

NOTE: GUGEN BY DIRECTOR'S DEED TO SUMMIT COUNTY ENGINEER

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

№	REVISIONS	MADE BY	DATE
1	NAME CHANGE PCL. 27-WD & T	LEE	4/8/69
2	NAME ADDED		2/18/86

◉ PROPOSED MONUMENTS
▣ PROPOSED MONUMENT ASSEMBLIES

MATCH TO R/W SHEET 26 OF 40

AUXILIARY SHEET (E. OF ℄ - STA. 320+00)

K & E

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 29/40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 5 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

LOT 1
LOT 5

LOT 1
LOT 5

NOTE: SEE R/W SHEET 27A OF 40 FOR RELOCATION OF LIMITED ACCESS LINE FOR PARCELS 29-WL, 30-WL AND THE ESTABLISHMENT OF POINT OF PERMISSIBLE ACCESS (OHIO SPORTS CENTER INC. ACCESS). THE SERVICE ROAD INTERSECTING SR 303 AT STATION 40+65, LEFT SHALL BE CLOSED AND PERMANENTLY EXTINGUISHED.
THE ABOVE REVISIONS HAVE BEEN RECORDED IN THE DIRECTORS JOURNAL, VOL. 59, PA. 921, DATED SEPTEMBER 20, 1974

MATCH TO R/W SHEET 27 OF 40

MATCH TO R/W SHEET 27 OF 40

FRED L. ROLLER &
EDITH ROLLER

30 T — 0.085 Ac

30 WD — TBA = 1.006 Ac; PRO = 0.362 Ac; TOTAL = 1.368 Ac

30 WL — TBA = 0.215 Ac; PRO = 0.293 Ac; TOTAL = 0.508 Ac

DICK WRIGHT &
OPAL CAROLYN WRIGHT

23 WD — TBA = 0.146 Ac; PRO = 0.241 Ac; TOTAL = 0.387 Ac

23 T — 0.535 Ac

ROBERT PHINNEY

24 WD — TBA = 0.035 Ac; PRO = 0.030 Ac; TOTAL = 0.065 Ac

24 T — 0.213 Ac

24-1 T — 0.0685 Ac

TONY SORMA &
ANN Y. SORMA

25 WD — TBA = 0.0600 Ac; PRO = 0.0913 Ac; TOTAL = 0.1522 Ac

25 T — 0.229 Ac

25-1 T — 0.1395 Ac

TEMPORARY RUNAROUND CURVE DATA

① Δ = 51°45' RT; Dc = 23°; R = 249.11'; T = 120.83'; Lc = 225.00'; P.I. 136+88.41

② Δ = 48°04'19" LT; Dc = 23°; R = 249.11'; T = 111.10'; Lc = 209.01'; P.I. 139+54.06

RELOC. S.R. 303 CURVE DATA
Δ = 8°46'24" RT.
Dc = 1°30'
R = 3819.72'
T = 293.02'
Lc = 584.89'
P.C. STA. 40+17.58 (RELOC.)
P.C. STA. 39+87.77 (EXIST.)

■ PROPOSED MONUMENT ASSEMBLIES

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

NO	REVISIONS	MADE BY	DATE

AUXILIARY SHEET (W. OF ℄ - STA. 320+00)

RELOCATED SHED-ADDED DITCH ELIMINATION - FIRES 12/20/65

K.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT OF WAY SHEET

30
40

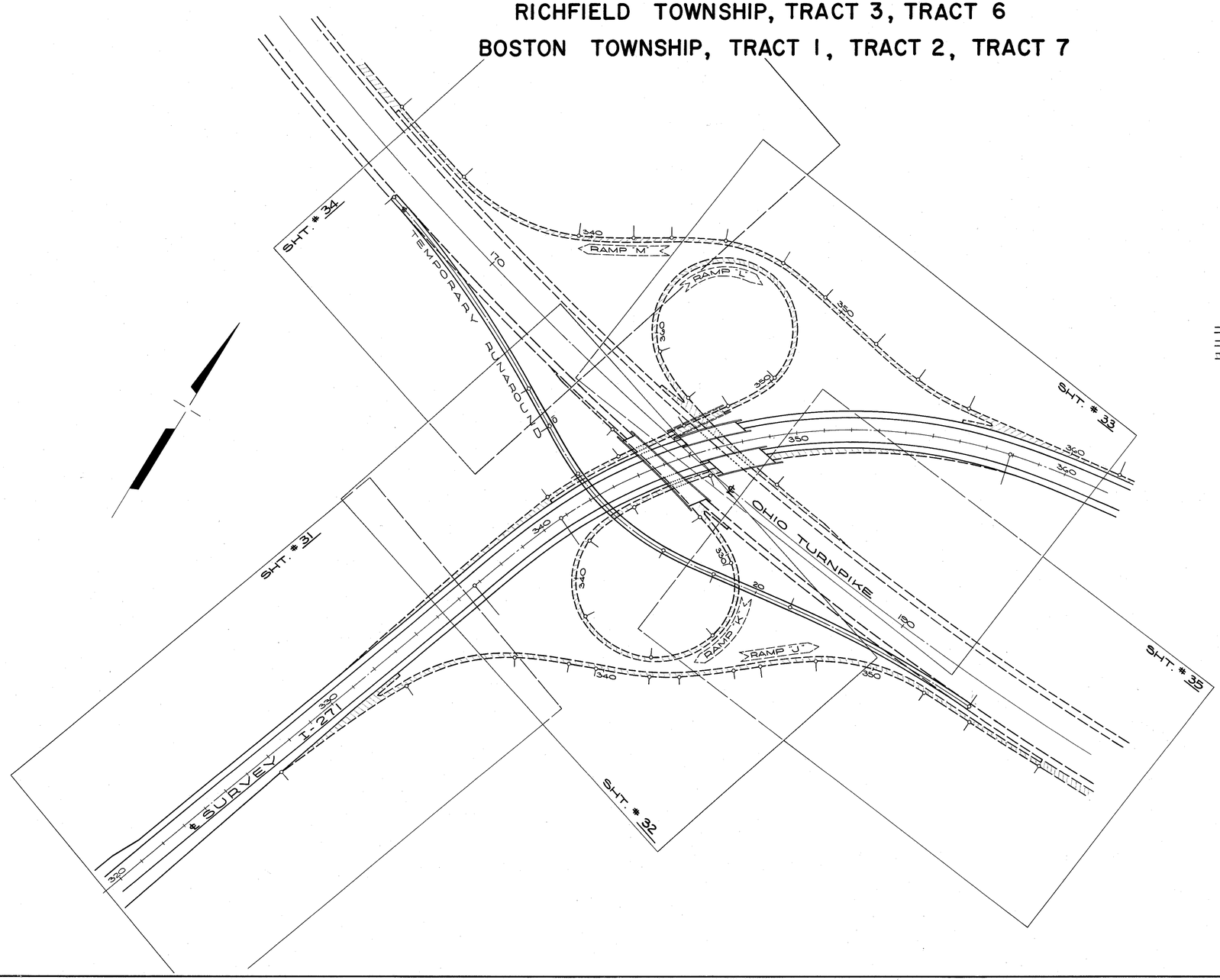
KEY MAP

SUMMIT - 271 - 2.98

SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP, TRACT 3, TRACT 6

BOSTON TOWNSHIP, TRACT 1, TRACT 2, TRACT 7



LEGEND

- PROPOSED CONSTRUCTION
- EXISTING CONSTRUCTION
- FUTURE CONSTRUCTION

GRAPHIC SCALE

0 200 400 600 800

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE : OCTOBER 15, 1965

No	REVISIONS	DATE	MADE BY

KEY MAP
STA. 320+00 TO STA. 360+00
INTERCHANGE WITH
OHIO TURNPIKE

K.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM 271 2.98
RIGHT-OF-WAY SHEET

31/40

5-12"APPLE 2-12" APPLE 1-18"STUMP 16-15"PINE 1-15"CHERRY 2-15"MAPLE 3-15"CHERRY

1-12"CHERRY
1-12"ELM

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 6
RANGE 12 WEST
TOWNSHIP 4 NORTH

RICHFIELD TOWNSHIP E. LINE TRACT 6
BOSTON TOWNSHIP W. LINE TRACT 7

MATCH TO R/W SHEETS 26 & 27 OF 40
BEGIN SHEET STA. 320+00

SHED
WIRE FENCE
SHED
WOODEN FOOT BRIDGE
EXIST. GRAVEL DR.
STONE CONC. CULV.
SPLIT RAIL FENCE
CHERRY & APPLE ORCHARD (8" TO 16" TREES)
SPLIT RAIL FENCE
OUT HOUSE
1 STY. FR. HSE.
BAR
PICKET FENCE
WIRE FENCE
FIELD DRIVE
321+00 220'
321+00 150'
323+00 150'
320+50 220'
320+00 150'
50'
N 19°46'56"E 200'
PINES
CHERRY
RELOC. DRIVE
250.36'
2390'
8" CHERRY
323+00 TAC 10'
320+50 155.65'
101 APPLE
8" APPLE
14" APPLE
EXIST. GRAVEL DRIVE (TO BE ABANDONED)
OHIO EDISON 1 WIRE (12.5 KV)
4" TILE
PRIVATE GAS LINE

29-1 T 0.210 Ac

LLOYD L. BIGELOW
T.B.A. = 7.048 Ac
P.R.O. = 0.482 Ac
TOTAL = 7.530 Ac
29 WL

LA RW
N 16°42'35"E 1228.66'
1604 LIN. FT. R/W FENCE
CONSTRUCTION LIMITS
OPEN FIELD
29 WL

322+24.89 215.64'
1713.00' (OCC.) TO STONE
1718.10' (D) TO TURNPIKE RIGHT-OF-WAY
1718.10 (D) RT
(LL)
1723.1' (OCC.)
451.13'
LA RW
(INELIGIBLE FOR FEDERAL PART. ON LEFT SIDE ℄ 94,138 Sq. Ft. (2.16 Ac.)
Limit of Federal Participation
FUTURE CONSTRUCTION LIMITS
INELIGIBLE FOR FEDERAL PARTICIPATION
N 1°15'02"W
15- 6"-10" MAPLES
RAMP "L"
(FUTURE CONSTRUCTION)
ELIGIBLE FOR FEDERAL PARTICIPATION

326+65.60
2" PRIVATE GAS LINE 601.36'
℄ SURVEY (I-271)
325 330 N 19°46'56"E 335
2-15"MAPLES
3-15"CHERRIES
1" PRIVATE GAS LINE
32 WL
T.B.A. 1,435,999 Sq. Ft (32.966 Ac.)
(ELIGIBLE FOR FEDERAL PARTICIPATION)
635,628 Sq. Ft. (14.596 Ac.)
330
(FUTURE CONSTRUCTION)
RAMP "J"
335
ELIGIBLE FOR FEDERAL PARTICIPATION
INELIGIBLE FEDERAL PARTICIPATION
Limit of Federal Participation

REGULATOR BOX
N 1°15'02"W 484.46'
142.93'
213.87'
329+00 160
10"-12" PINE ROW
329+13.42
N 15°13'57"E
788.24'
N 23°30'04"E
Meet Existing Fence
330+00 225
529.74'
N 33°04'20"E
LA RW
TYPE 47 R/W FENCE
335+00 400
597.27'
N 10°43'36"E
7-12"CHERRY
3-20"CHERRY
MATCH LINE STA. 336+50
END SHEET STA. 336+00
MATCH TO R/W SHEET 32 OF 40

53+42.20
℄ STATE ROAD T.R. 71 (GO)
N 75°-56'-07"E
55'
EXISTING R/W LINE
EXISTING R/W LINE
321.02'
56+69.22
SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH
7-12"PINE
24-12"PINE
2-12"MAPLE
335.72' (D)
339.72' (OCC.)
305.0' (OCC.)
N 11°32'32"W
22.6'
ELDEN N. McVEY
CLAUDIA W. McVEY
SEPTIC TANK
31
2½ STY. FR. HSE.
18.6'
6-12" PINES
225.05' (D)
224.13' (OCC.)
N 75°-56'-07"E

JENNIE BIGELOW
32 WL
T.B.A. = 32.966 Ac

32 WL
T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION
RIGHT SIDE ℄, 706,233 Sq. Ft. (16.21 Ac.)

TYPE I FUNDS
GRAPHIC SCALE
0 50 100 150 200

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965 RIGHT-OF-WAY COMPLETION DATE : OCTOBER 15, 1965			
№	REVISIONS	DATE	MADE BY
1	Revised T.B.A. Pcl. 32-WL	5-19-66	
	Participation Limits Added	11-23-66	
2	Added Eligibility and Ineligibility Breakdown Pcl. 34-WL	12-16-66	Lee
3	Revised Eligibility Breakdown Pcl. 34-WL	12-21-66	Lee
4	Revised Gas Line on Pcls. 29 & 32 WL	8/31/67	Lee Irick

● = IRON PIN FOUND
◉ = PROPOSED MONUMENTS

STA. 320+00 TO STA. 336+00

C.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT-OF-WAY SHEET
32/40

MATCH TO R/W SHEET 34 OF 40

MATCH TO R/W SHEET 33 OF 40

MATCH TO R/W SHEET 35 OF 40

OHIO TURNPIKE
CURVE DATA
P.I. STA. 186+10.91
Δ = 38°21'52" LT.
D = 0°29'27"
T = 4061.36'
L = 7816.89'
R = 11,674.30'
E = 686.28'

OHIO TURNPIKE

EXISTING EASTBOUND LANES

EASTBOUND LANES

TEMPORARY

RUNAROUND

RAMP "L"

RAMP "J"

RAMP "K"

(FUTURE CONSTRUCTION)

EXISTING LIMITED ACCESS (OHIO TURNPIKE)
PROPOSED LIMITED ACCESS (I-271)

PROPERTY OF THE STATE OF OHIO

OHIO TURNPIKE COMMISSION
STATE OF OHIO

T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION
RIGHT SIDE ℄ 706,233 Sq. Ft. (16.21 Ac.)

T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(ELIGIBLE FOR FEDERAL PARTICIPATION
635,628 Sq. Ft. (14.596 Ac.)

T.B.A. 1,435,999 Sq. Ft. (32.966 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION
(LEFT SIDE ℄ 94,138 Sq. Ft. (2.16 Ac.)

T.B.A. 10.071 Ac.

T.B.A. 1.848 Ac.

T.B.A. 10.783 Ac.

TEMPORARY RUNAROUND
CURVE DATA
Δ = 12°45'
R = 3819.72'
D = 1°30'
L = 850'

TEMPORARY RUNAROUND
CURVE DATA
Ls = 200'
θs = 6°
L.T. = 133.41'
S.T. = 66.74'
p = 1.744'
k = 99.964'
Ts = 426.08'
Lc = 427.45'
Δ = 37°55'50"

CONSTRUCTION & SURVEY CURVE DATA
Δ = 63°21'00" RT
Dc = 3°00'
Ls = 400'
R = 1909.86'
θs = 6°00'
Ts = 1380.48'
Es = 338.38'
Lc = 1711.67'
L.T. = 266.82'
S.T. = 133.47'
Δc = 51°21'00"
Tc = 918.13'
Ec = 209.23'
P.I. STA. 350+57.87

SUBSTITUTE CURVE DATA FOR RIGHT-OF-WAY ONLY
D = 2°54'.76
Δ = 22°14'.58"
L = 566.70'
R = 2000.00'
T = 133.47'
P.C. 339+01.73
P.C.C. 340+77.43
P.C.C. 357+89.10
P.T. 360+55.80

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 1
LOT 3
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 4 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

JENNIE BIGELOW
32-T 32-WL

LLOYD L. BIGELOW
29-T 29-WL
SEE SHT. 34

NOTE: TEMPORARY RUNAROUND AS SHOWN IS NOT CORRECT. SEE PLAN & PROFILE SHEETS OF RUNAROUND FOR CORRECT LOCATION AND GEOMETRICS.

ELIGIBLE FOR FEDERAL PARTICIPATION
INELIGIBLE FOR FEDERAL PARTICIPATION

Limit of Federal Participation

FUTURE CONSTRUCTION LIMITS

Note: Parcels 44-WL, and part of 32-WL are Eligible for Federal Participation, Parcels 29-I-WL, 32-T, 44-T, 44-IT, and part of 32-WL are Ineligible for Federal Participation.

GRAPHIC SCALE
0 50 100 150 200
TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : OCTOBER 15, 1965

No	REVISIONS	DATE	MADE BY
1	Revised Areas and take lines Pcl. 32-WL & Pcl 32-T	3-12-66	Gp
	Participation Limits Added	*11-23-66*	
2	Added Eligibility and Ineligibility Breakdown Pcl. 32-WL	12-16-66	Lee
3	Revised Eligibility Breakdown Pcl. 32-WL	12-21-66	Lee

INTERCHANGE
INTERSTATE 271 &
OHIO TURNPIKE
STA. 336+00 (I-271) TO TURNPIKE INTERSECTION

PROPOSED MONUMENTS

MATCH LINE STA. 336+00
MATCH TO R/W SHEET 31 OF 40

MATCH LINE STA. 336+50

K.E.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98
RIGHT OF WAY SHEET

33
40

MATCH TO R/W SHEET 36 OF 40

MATCH TO R/W SHEET 34 OF 40

Note: Parcels 44-WL, 44-1WL, 44-Aer, and part of 34-WL are Eligible for Federal Participation, Parcels 35-WL, 35-1WL, 44-T, 44-1T, and part of 34 WL, are Ineligible for Federal Participation.

BERNARD PRUSSAK, OWNER; ANNA J. PRUSSAK, LIFE ESTATE
35 WL
T.B.A. = 0.844 Ac

35-1 WL
T.B.A. = 0.015 Ac

F.A. REED

WOODS

FUTURE CONSTRUCTION LIMITS

RAMP "M"

RAMP "L"

(FUTURE CONSTRUCTION)

ABANDONED OIL WELL

HENRY G. BENDER
34 WL
T.B.A. 1,580,487 Sq.Ft. (36.283 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION
715,220. Sq. Ft.
16.423 Ac.

INELIGIBLE FOR FEDERAL PARTICIPATION

ELIGIBLE FOR FEDERAL PARTICIPATION

Limit of Federal Participation

CONSTRUCTION CENTERLINE SURVEY CURVE DATA
Δ = 63°21'00" RT.
Dc = 3°00'
Lc = 400'
Rc = 1909.86'
Φs = 6°00'
Ts = 1380.48'
Es = 358.38'
Lc = 711.67'
L.T. = 266.82'
S.T. = 133.47'
Δc = 51°21'00"
Ec = 269.23'
P.I. STA. 350+57.87

SUBSTITUTE CURVE DATA FOR RIGHT-OF-WAY ONLY
R = 2546.76'
Dc = 2°14'55"
Lc = 266.70'
Δ = 6°00'
T = 133.47'
P.C. 338+10.73
P.C.C. 340+77.43
P.C.C. 357+88.10
P.T. 360+55.80

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 3 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

OHIO TURNPIKE COMMISSION
STATE OF OHIO

44 T
T.B.A. = 10.071 Ac

44 Aerial
T.B.A. = 1.245 Ac

44-1 WL
T.B.A. 0.753 Ac

44-1 T

44 WL

OHIO TURNPIKE CURVE DATA
Δ = 36°21'52" LT.
Dc = 0°29'27"
R = 4064.32'
T = 1316.85'
L = 11,674.30'
E = 686.25'
P.I. STA. 186+10.91

EXISTING WESTBOUND LANES

EXISTING LIMITED ACCESS LINE

CONSTRUCTION LIMITS

MEET EXISTING FENCE

OHIO TURNPIKE

MATCH LINE "A-A" (SEE BELOW)

MATCH LINE STA. 360+00

1-15" ELM
1-15" CHERRY
1-12" HICKORY
8-15" OAK
9-12" OAK

5-18" OAK
1-12" MAPLE

IRON PIN FOUND 30'± SOUTH OF BOSTON MILLS RD.

IRON PIN AT PROPERTY CORNER

I.P. FD.

STONE FD.

Dirt Apron
15 Dirt Dr. Approach
14' Gate

Access For Ohio Edison Co Only

Gas Well

1-12" CHERRY
12-12" ELM

MATCH LINE STA. 360+00

MATCH LINE "A-A"

PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	DATE	MADE BY
1	Added distance to Lot Corner	11-10-65	
2	Revised Pcl. 35WL & 35-1WL	6-14-66	
3	ABANDONED OIL WELL LOCATED Pcl 34WL	10-7-66	HLS(BHA)
4	Gas Well Located Pcl. 34 WL	11-7-66	Tullis
5	Participation Limits Added / Added Eligibility and Ineligibility Breakdown For Pcl. 34-WL	11-23-66 / 12-15-66	Lee

INTERCHANGE
INTERSTATE 271 & OHIO TURNPIKE
TURNPIKE INTERSECTION TO STA. 360+00 (I-271)

Revised Eligibly Breakdown Pcl. 34-WL 12-21-66 Lee
ADDED CONTINUATION OF FENCE 12/20/66

Added 14' Gate & Drive Apron to Pcl. 34-WL Per IOC. from F.H. Strahl dated 10-5-68, Lee 10-16-68

MATCH TO R/W SHEET 32 OF 40

STA. 346+08.40 I-271
STA. 179+98.89 OHIO TURNPIKE

E.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98
RIGHT-OF-WAY SHEET

34/40

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 4 TRACT 5
RANGE 12 WEST
TOWNSHIP 4 NORTH

MATCH THIS AREA TO LOWER RIGHT HAND SECTION ~THIS SHEET~

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 4 TRACT 5
RANGE 12 WEST
TOWNSHIP 4 NORTH

TEMPORARY RUNAROUND CURVE DATA
Δ = 12°45'
R = 3819.72'
D_c = 1°30'
L_c = 850.0'

P.R.C. STA. 0+00
BEGIN RUNAROUND

TRACT 5
TRACT 7
EAST LINE
WEST LINE
LOT 4
LOT 4
LOT LINE EXTENDED
S 88°23'46" W

EXISTING LIMITED ACCESS (O.T.)
PROPOSED TEMPORARY R/W (I-271)
CH. BRG. = S 73°57'26" E
CH. LGTH. = 1695.35'
L_c = 1693.30'
R = 11,674.30'

LLOYD L. BIGELOW
29 T
29 WL
29-1 WL
0.094Ac
0.08Ac

GAS WELL IN PAR. 29 T IS NOT TO BE DISTURBED.

EXIST. R/W FENCE
TEMPORARY RUNAROUND
EXISTING EASTBOUND LANES
OHIO TURNPIKE COMMISSION STATE OF OHIO
44 T
OHIO TURNPIKE
TO STA. 161+00
EXISTING WESTBOUND LANES

N 0°43'29" W
166+53.83 (TURNPIKE STA.)
RICHFIELD TOWNSHIP
BOSTON TOWNSHIP
T = 51.03' (LOC. TAN.)

¢ OHIO TURNPIKE
CURVE DATA
P.I. STA. 186+10.91
Δ = 38°21'52" LT.
D_c = 0°29'27"
T = 4061.36'
L = 7816.89'
R = 11,674.30'
E = 686.28'

EXIST. R/W FENCE
MEET EXISTING FENCE
344+53.19 (129.35' LT.)
344+09.07 (129.34' LT.)
N 1°04'44" W
Gas Well
HENRY G. BENDER
34 WL
Gas Well

NOTE: TEMPORARY RUNAROUND AS SHOWN IS NOT CORRECT. SEE PLAN & PROFILE SHEETS OF RUNAROUND FOR CORRECT LOCATION AND GEOMETRICS.

EXISTING LIMITED ACCESS
CH. BRG. = S 73°57'26" E
CH. LGTH. = 1695.35'
L_c = 1693.30'
R = 11,674.30'

TYPE 4T FENCE
44 T
44 WL
PROPOSED TEMPORARY R/W (I-271)
EXIST. R/W FENCE
P.R.C. STA. 0+00
BEGIN RUNAROUND

PROPERTY OF THE STATE OF OHIO

161+00
220
N 20°02'32" E
220'

EXISTING EASTBOUND LANES
OHIO TURNPIKE
EXISTING WESTBOUND LANES
(FUTURE CONSTRUCTION)
RAMP "M"
EXIST. R/W FENCE
EXISTING LIMITED ACCESS

CONSTRUCTION LIMITS
RAMP "M"
RAMP "L"
(FUTURE CONSTRUCTION)
WOODS
N 66°18'52" E
340
345
TYPE 4T FENCE
EXIST. LIMITED ACCESS (OHIO TURNPIKE) PROPOSED LIMITED ACCESS (I-271)
BRG. = S 73°58'41" E
LGTH. = 1505.84'
L_c = 1503.30'
R = 11,674.30'

TRACT 5, LOT 4
TRACT 7
166+53.83
N 0°43'29" W
T = 51.03' (LOC. TAN.)

OIL WELL
RICHFIELD TWP.
BOSTON TWP.
348+12.76
90°01'54"
452.36' TO PROP. CORNER
151.37'
N 81°15'00" W
748.11' (CALC.) CORNER
94.79'
748.34' (D) TO PROPERTY
S 85°38' W
242.02' (D)

MATCH THIS AREA TO UPPER LEFT HAND SECTION ~THIS SHEET~

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

JENNIE BIGELOW
32 T
32 WL
0.544Ac

(LL)
S 55°-0'-02" E
377.22'
S 66°-36'-53" E
385.37'
390 L.W. FT. FENCE
N 11°-15'-02" W
1733.11' (CALC.) TO
34H51/86
634.01'
342+48.48
LT. 0.4
STORAGE SHED
SURVEY MONUMENT
343+0
228.2'
172+12.46 (TURNPIKE)
220'
24'
16'
SHED
29 T
32 T
0.544 Ac
32 WL

TO STA. 176+10
TO STA. 175+00

SUMMIT COUNTY
BOSTON TOWNSHIP
TRACT 7
RANGE 11 WEST
TOWNSHIP 4 NORTH

PROPERTY OF THE STATE OF OHIO

34 WL
T.B.A. 1,580,487 Sq. Ft. (36.283 Ac)
(INELIGIBLE FOR FEDERAL PARTICIPATION)
715,220 Sq. Ft. (16.423 Ac.)

35-1 WL
35 WL

BERNARD PRUSSAK, OWNER ; ANNA J. PRUSSAK, LIFE ESTATE

INTERCHANGE
INTERSTATE 271 & OHIO TURNPIKE
+OHIO TURNPIKE STA. 161+00 TO STA. 175+00

MATCH TO R/W SHEETS 32 & 33 OF 40

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT-OF-WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	DATE	MADE BY
1	Revised 32-WL and added R/I 291-WL	3/12/66	GE
2	Revised Pcl. 35WL & 351-WL	6/19/66	GMA
3	OIL WELL LOCATED Pcl 34WL	10-2-66	HCS (BHA)
4	GAS Well Located Pcl. 34WL	11-7-66	TWillis
5	Added Eligibility and Ineligibility Breakdown For Pcl. 34-WL	12-15-66	Lee

G Revised Eligibility Breakdown Pcl 34-WL 12-21-66 Lee

C. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT-OF-WAY SHEET

35/40

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

(LL)

MATCH TO R/W SHEETS 32 & 33 OF 40

MATCH LINE STA. 197+00

CH. BRG. = S 80°01'08" E
CH. LGTH. = 488.44'
R = 11,429.30'

659.87' N 45° 29' 54" E

350+68.07 (184+00 (248'))

1920.93' TO PROPERTY CORNER ALONG TURNPIKE LIMITED ACCESS LINE

134.32' N 64° 36' 28" E

182+86.65 (168.79')
345+25 (130')

245' N 8° 45' 15" E

44-1 WL

44 Aerial

RW

N 4° 27' 16" E 430.85' (MEAS. & DEED) 543.75' (CALC. FROM DEED) TO SURVEY

188+23.25 (248')

111.85' (USED) 112.93' (CALC. FROM DEED)

FORMER PROPERTY LINE

EXISTING LIMITED ACCESS LINE

℄ EXIST. R/W FENCE

℄ FORMER RE

LOT 2
LOT 3

1792.2' (D) MANCZ
1791.1' MEAS.
1791.2' (T) DEED

1605.00' (D) TO PROPERTY CORNER
N 89° 15' 46" E

EXISTING WESTBOUND LANES

℄ WESTBOUND LANES

PROPERTY OF THE STATE OF OHIO

348+65.27 (325.94')
184+00

183 185 190 195

OHIO TURNPIKE

CH. BRG. = S 84° 40' 53" E
CH. LGTH. = 1399.13'
R = 11,674.30'

44-1 T

T.B.A. = 10.783 Ac

OHIO TURNPIKE COMMISSION
STATE OF OHIO

134.2' (TURNPIKE COMM.) N 0° 28' 14" W

188+44.00

OHIO EDISON 4 WIRES 23 K.V.

OHIO TURNPIKE CURVE DATA
Δ = 36° 21' 52" LT.
Dc = 0° 28' 27"
T = 4061.36'
L = 7816.89'
R = 11,674.30'
E = 686.28
P.I. STA. 186+10.91

END RUNAROUND
P.R.C. STA. 28+85.22
(17' RT. ℄ STA.)

EXISTING EASTBOUND LANES

℄ EASTBOUND LANES

NOTE: TEMPORARY RUNAROUND AS SHOWN IS NOT CORRECT. SEE PLAN & PROFILE SHEETS OF RUNAROUND FOR CORRECT LOCATION AND GEOMETRICS

TEMPORARY RUNAROUND CURVE DATA
Δ = 11° 15'
Dc = 38° 13' 72"
T = 132.30'
L = 259.90'
R = 150'

TEMPORARY RUNAROUND

(FUTURE CONSTRUCTION)

330 20 21 22 23 24 25 26 27 28 355

CH. BRG. = S 81° 32' 34" E
CH. LGTH. = 836.26'
Lc = 836.43'
R = 11,854.30'

351+33.38 (816.11')
188+70.56 (220')

P.C. 21+35.22

1702.09' (D) TO PROPERTY CORNER ALONG TURNPIKE LIMITED ACCESS LINE
1685.82' (CALC.)

CH. BRG. = S 79° 29' 14.5" E
CH. LGTH. = 1685.54
R = 11,854.30
Lc = 1689.76

ST 18+31.18

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 3 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

44-1 T

CH. BRG. = S 85° 07' 06" E
CH. LGTH. = 636.75'
Lc = 636.83'
R = 11,854.30'

CONSTRUCTION LIMITS (FUTURE)

EXISTING LIMITED ACCESS LINE (O.T.)

636.35' (D) ALONG TURNPIKE LIMITED ACCESS LINE

361+32.10 (1117.23')
195+00 (280')

361+28.55 (1136.98')
195+00 (300')

N 3° 30' 26" E

CH. BRG. = S 87° 22' 50" E
CH. LGTH. = 307.67'
Lc = 307.71'
R = 11,974.30'

EXIST. R/W FENCE

TYPE 47 FENCE

353+64.86 (1057.52')
191+00 (350')

1556.45' S 88° 46' 41" E

LA RW

CH. BRG. = S 88° 07' 01" E
CH. LGTH. = 615.35'
R = 11,974.30'
Lc = 615.42'

JENNIE BIGELOW

32 WL

T.B.A. 1,435,999 S.F. (32.966 Ac.)
(INELIGIBLE FOR FEDERAL PARTICIPATION)
(Right side ℄ 706,233 Sq. Ft. (16.21 Ac.)

RAMP "K"

RAMP "J"

350+74.65 (666.85')
186+78.05 (260')

33 WL

237.42'

LOT 3
LOT 4

RALPH EARL WEAVER & MARTHA C. WEAVER

33 WL

T.B.A. = 2.203 Ac

347+78.52
1053.79'

RW

324.25' N 5° 25' 06" E

493.92' N 5° 25' 06" E

TO PROPERTY CORNER

CONSTRUCTION LIMITS (FUTURE)

WOODS

345 335

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 4 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : OCTOBER 15, 1965

Nº	REVISIONS	DATE	MADE BY
1.	REVISED BEARING & Distance R132WL	5/12/66	SC
2.	name changed Pcl 33 WL	8/10/66	W
3	Added Eligibility and Ineligility Breakdown For Parcel 32-WL	12-16-66	Lee
4	Revised Eligibility Pcl. 32 WL	12-21-66	Lee

INTERCHANGE
INTERSTATE 271 & OHIO TURNPIKE

TURNPIKE STA. 183+00 TO 197+00

K.& E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98

RIGHT OF WAY SHEET 35A / 40

HENRY G. BENDER

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

FRANCIS HAWKSWELL Et. Al.

(LL)

(LL)

EXIST. R/W FENCE

FORMER ℄

1605.00' (D)
1797.20' (MANCZ DEED)
1761.20' (O.T. DEED)
1761.20' (T)

LOT 2
LOT 3

OHIO TURNPIKE
CURVE DATA
Δ = 38°21'52" LT.
D = 0°25'27"
T = 4006.36'
L = 7816.89'
R = 11,674.30'
E = 686.28'
P.I. STA. 186+10.91

EXISTING WESTBOUND LANES

℄ WESTBOUND LANES

MATCH LINE STA. 197+00

P.C.C. CII BRG. = S 84°40'53" E
CII. LGTH. = 1399.13'
R = 1400.00'
Lc = 11,674.30'

198+00 (10 T.)
3644+11.96 (1.271)
891.18'

203+88

200

℄ OHIO TURNPIKE

PROPERTY OF THE
STATE OF OHIO

63°

EXISTING
1560 x 72 C.M.P.

EX. STING 216 x 36" RCCP

204+87
35 LT.

205

5699.94' (D)
5710.40'
(O.T. DEED)

℄ EASTBOUND LANES

EXISTING EASTBOUND LANES

(FUTURE CONSTRUCTION)

360

365

RAMP "J"

44-1 T

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 3 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

300
2°05'46" E

198+00 (300') O.T.
3644+11.96 (1.271)
891.18'

S 1°42'14" E

235'

FUTURE CONSTRUCTION LIMITS

MEET EXISTING FENCE

206+13.29 (280') O.T.
372+61.94 (1265.86') I-271

525.60'

EXIST. R/W FENCE ℄

5954'

206+12.87 (339.54') O.T.
372+50.58 (1325.16') I-271

℄ 615.41'

EXISTING LIMITED ACCESS (OHIO TURNPIKE)
PROPOSED LIMITED ACCESS (I-271)

367+36.74 (1230.58')
201+00 (300')

CH. BRG. = N 89°09'05" E
CH. LGTH. = 525.56'
R = 11,954.30'
Lc = 525.60'

TYPE 47 FENCE

1556.45'
S 88°46'41" E

LA
RW

LOT 3
LOT 4

CH. BRG. = S 88°07'01" E
CH. LGTH. = 615.35'
R = 11,974.30'
Lc = 615.42'

367+39.28 (1210.75')
201+00 (280')

0°28'35" E

S 1°42'14" E

33 WL — RALPH EARL WEAVER & MARTHA C WEAVER

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 4 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE : OCTOBER 15, 1965

Nº	REVISIONS	DATE	MADE BY
1	Name changed Pcl 33WL	8/10/06	W.I.

INTERCHANGE
INTERSTATE 271 & OHIO TURNPIKE
TURNPIKE STA. 197+00 TO 207+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271- 2.98

RIGHT OF WAY SHEET 36/40

MATCH TO R/W SHEET 33 OF 40

MATCH TO R/W SHEET 37 OF 40

BEGIN SHEET

END SHEET

STA. 360+00

STA. 375+00

BOSTON MILLS ROAD C.H. 32 (60')

EXISTING R/W

℄ SURVEY (I-271)

STA. 366+41.20

CONSTRUCTION LIMITS

1805 LIN. FT. R/W FENCE

Type 47 Fence

LANE TO BE ABANDONED

HENRY G. BENDER

34 WL

WOODS

T.B.A. 1,580,487 Sq. Ft. (36.283 Ac.)

ELIGIBLE FOR FEDERAL PARTICIPATION

865,267 Sq. Ft. (19.86 Ac)

FRANCIS HAWKSWELL Et. Al.

(SEE BELOW)

36 WL

HAZEL HOFFMAN

T.B.A. = 1.003 Ac

37 WL

FRANCES HAWKSWELL

T.B.A. = 1.00 Ac

38 WL

FRANCIS HOAG & MARION HOAG

39 WL

T.B.A. = 0.374 Ac

FRANCIS HAWKSWELL, HAZEL HOFFMAN, FRANCIS & MARION HOAG

36 WL

T.B.A. = 1.959 Ac

SEE BELOW

1 STY. FR. HSE.

SEPTIC TANK

SPRING

RUINS

GAS WELL

WELL

OHIO EDISON 4 WIRES (69 KV)

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

● = IRON PIN FOUND

◉ PROPOSED MONUMENTS

GRAPHIC SCALE

0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE : MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE : OCTOBER 15, 1965

№	REVISIONS	MADE BY	DATE
1	GAS WELL LOCATED Pcl 34 WL	HCS(BHA)	10-4-66
2	Added Eligibility and Ineligibility Breakdown for Pcl 34 WL	Lee IRICK	12-15-66
3	Names added Pcl 36 WL		2-24-67

3-12"BEECH
3-12"MAPLE
7-12"OAK
7-18"OAK

2-12"MAPLE
8-24"OAK
6-15"OAK

1-15"CHERRIE
3-12"MAPLE
2-24"OAK
20-15"OAK

4-18"OAK
9-12"OAK

12-18"OAK
13-12"OAK

8-24"OAK
8-15"OAK

7-18"OAK
1-24"OAK

2-12"HICKORY
3-12"OAK

11-12"OAK
4-12"HICKORY
1-12"MAPLE
11-20"OAK

16-15"OAK
8-24"OAK

10-15"OAK
1-24"OAK

2-18"MAPLE
5-15"HICKORY
5-15"OAK

4-12"MAPLE
2-15"HICKORY
7-18"OAK
1-36"OAK

3-12"OAK
5-12"ELM

4-12"OAK
8-15"OAK
6-12"ELM

1-18"OAK
7-12"HICKORY
23-12"OAK
2-12"CHERRY

7-12"ELM
32-12"OAK
2-20"OAK
1-12"HICKORY

5-20"OAK
7-12"HICKORY
10-12"ELM
26-12"OAK

4-12"ELM
15-12"OAK
7-12"HICKORY
4-20"OAK
2-12"CHERRY

21-12"OAK
3-12"CHERRY
5-12"HICKORY
5-18"OAK

1-12"BEECH
8-12"POPLAR
2-18"OAK
6-12"HICKORY
3-12"MAPLE
5-18"POPLAR
4-12"OAK

5-12"OAK
6-18"OAK
7-15"POPLAR

5-12"ELM
5-12"POPLAR
1-20"OAK
8-12"OAK

STA. 360+00 TO STA. 375+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271- 2.98

RIGHT OF WAY SHEET 37/40

MATCH TO R/W SHEET 36 OF 40

MATCH TO R/W SHEET 38 OF 40

BEGIN SHEET

END SHEET

STA. 375+00

STA. 390+00

4-18" HICKORY
3-12" POPLAR
4-18" OAK

2-12" POPLAR
2-12" OAK
1-18" HICKORY
1-12" MAPLE
2-15" WALNUT
1-12" PINS

1-12" WALNUT

1-12" HICKORY
5-12" OAK

3-12" PINE
3-15" OAK

2-12" BEECH
6-12" ELM

438.40' (ROADWAY PLANS) P.I.
419.07' (D)

N 73°53'58" W

30'

30'

N 62°21'32" E
655.77' TO ANGLE PT. (ROADWAY PLANS)
344.72' (D)

N 64°15'58" E
232.50' TO ANGLE POINT (D)

EXISTING R/W LINE

BOSTON MILLS RD. (C.H. 32)

60'

N 64°46'32" E
602.59' TO BEARING BREAK

200.14' (D)
201.85' (OCCUP.)

EXISTING R/W LINE

12" HICKORY

6" PINES

12" ELMS

10" PINE

8" PINES

2 STY. FR. HSE.

DBL. GAR.

6" PINE

BARN

SHED

HAZEL HOFFMAN,
FRANCIS & MARION HOAG
& FRANCIS HAWKSWELL

36 WL

WOODS

SPRING

150' SEPTIC TANK

2-8" PINES

378+05.91
240'

375+86.91
237.51

74.40' (D)
74.91' (OCC.)

N 77°16'04" E

N 62°42'31" E
375.86' TO PROP. CORN.
378.28' (D)

N 83°53'43" E
42.15'

S 75°14'16" E
310.48'

LA RW

381+00
120'

N 78°21'11" E
410.99'

385+16.98
247.20'

385.51' (OCC.)

N 70°22'18" E
260.39'

LA RW

(1,501 LIN. FT. R/W FENCE)

CONSTRUCTION LIMITS

HAZEL HOFFMAN
37 WL

36 WL

N 62°44'26" E
378.58' (OCC.)
378.98' (D)

N 2°23'56" E
315.65'37" (OCC.)
428.54' (D)
221.08'

STRUCTURE No. SUM-271-0715
5'10" x 45'

P.C. STA. 378+05.91

(LANE TO BE ABANDONED)

FRANCES HAWKSWELL
38 WL

N 83°07'56" E
375+26
50.00' CULV.

STA. 377+33

OLD GAS WELL

380

82°50'

STA. 380+16.80

384+89.67

GAS WELL TO BE PLUGGED BY CONTRACTOR

41 WL

(TO BE ABANDONED)

FIELD DRIVE

HARRY HORVITZ
41 WL
T.B.A. = 9.713 Ac

1-20" OAK
7-12" ELM
1-15" CHERRY

℄ - SURVEY (I-271)

N 83°07'56" E
375+48.14
176.22'

375+86.98
176.98'

N 7°56'03" E
375+87.04
134.27'

N 76°19'56" E
502.1' (D)

FRANCIS HOAG
MARION HOAG
39 WL

LIGHT WOODS

40 WL

WELL

PAT 10

117.26'

N 83°07'56" E
375+68.16
280'

285.84' (D)
N 2°23'56" E

(LL)

(LL)

(LL)

THEOPHILE PRUSAK &
SOPHIE PRUSAK
40 WL
T.B.A. = 8.01 Ac

WOODS

(ABANDONED) GAS LINE E.O.G. Co. CF-434

305.54'

LA RW

Type 47 Fence

N 77°25'52" E

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

(LANE TO BE ABANDONED)

191.63'

N 1°00'40" W
820.92' TO PROPERTY CORNER (DEED)

CONSTRUCTION LIMITS

383+14.04
88.04'

553.81'

N 77°25'52" E

LA RW

350+00
100'

1-12" BEECH

1-12" CHERRY
2-15" HICKORY

2-12" ELM
3-12" POPLAR

1-10" WALNUT

1-20" OAK
2-20" OAK
12-12" POPLAR

℄ SURVEY
CURVE DATA
P.I. STA. 397+73.97
Δ = 28°53'34" LT.
D_c = 0°45'
R = 7639.44'
L_c = 3852.37'
T = 1968.07'
E = 249.43'

● = IRON PIN FOUND
◉ = PROPOSED MONUMENTS

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965

Nº	REVISIONS	MADE BY	DATE
1	NAMES ADDED P.I. 36WL	I.RICK	2-24-67
2	ADDED LEADER LINE P.I. 40 & 41	I.RICK	3-30-67
3	Revised Bearing On P.I. 40WL Northerly L.A. Line	I.RICK	6-3-68
4	ADDED GAS WELL TO PCL. 41-WL PER L.O.C. FROM H. STRAHL DATED 9-6-68	LEE	9-9-68

STA. 375+00 TO STA. 390+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98

RIGHT OF WAY SHEET 38/40

BOSTON MILLS ROAD C.H. 32 (60')

℄ EXISTING R/W

BEARING BREAK

N 64°46'32" E 602.58' TO PROPERTY CORNER

164.40'

335.60' (D)

N 66°44'02" E

333.31' (D) TO ANGLE BREAK N 44°24'02" E (CALC. FROM DEED)

PARKING AREA

OUTHOUSE

SHED

THE STATE OF OHIO

42 WL

3-24"BEECH 5-15"BEECH
1-24"OAK 9-15"OAK
4-15"BEECH 2-18"POPLAR
3-18"OAK

N 88°56'05" E

742.50' TO PROPERTY CORNER (D)

900.00' TO PROPERTY CORNER (D)

WOODS

WAREHOUSE & MAINTENANCE BLDGS.

1 STY. BLOCK BLDG.

1 STY. BLOCK BLDG.

STORAGE AREA

HARRY HORVITZ

41 WL

T.B.A. ± 97.13 Ac

N 42°26'06" W 824.59' (D) (CALC.)

5-12"OAK
13-18"OAK
1-12"BEECH

7-18"OAK
4-12"OAK

1-15"BEECH
10-18"OAK
1-12"POPLAR
11-12"OAK

3-15"BEECH
6-18"OAK
6-12"OAK

3-18"BEECH
1-36"OAK
1-12"BEECH
6-18"OAK

THE STATE OF OHIO

42 WL

T.B.A. ± 89.93 Ac

2-24"POPLAR
2-15"BEECH
6-24"OAK
1-12"ELM
3-12"OAK

4-18"POPLAR
5-18"OAK
3-15"BEECH

2 PLASTIC WATER LINES & 2 ELECTRIC WIRES

LA RW

N 60°57'05" E 590.51'

400+00 200.00'

395+00.78 209.82'

N 70°22'18" E 388.57'

(1,468 LIN. FT. R/W FENCE)

N 70°22'18" E 940.39'

CONSTRUCTION LIMITS

STA. 390+00

STA. 405+00

400+00.68 213.27'

MON. FD. 156.0'

DRILLED WELL

FIELD DRIVE (TO BE ABANDONED)

227.15'

41 WL

42 WL

WOODS

141.15'

STRUCTURE No. SUM-271-0.66 422+35

BEGIN PROJECT SUM-271-7.65 STA. 405+00

395

395+69.03

℄ - SURVEY (I-271)

400

STA. 402+00

402+35 50.00 CULV

400+06.19

MATCH TO R/W SHEET 37 OF 40

MATCH TO R/W SHEET 39 OF 40

BEGIN SHEET

END SHEET

4-20"OAK
4-18"BEECH
7-12"BEECH
1-15"POPLAR

1-20"POPLAR

310.42' N 11°42'11" E TO PROPERTY CORNER

400+17.76 213.52'

957.47' N 55°57'38" E

41-1 WL

HARRY HORVITZ

41-1 WL

(LL)

476.20' 1000.00' 29°30' (D) (CALC.)

390+00 200

LA RW

WOODS

839.88' Type 47 Fence N 71°05'06" E

393+18.83 155.09'

S 89°22'52" W 650.00' (D) (CALC.)

133.53'

515.23' N 71°05'06" E

LA RW

HARRY HORVITZ

41 WL

CENTERLINE SURVEY CURVE DATA

P.I. STA. 397+73.97
Δ = 28°53'34" LT.
Dc = 0°45'
R = 7639.44'
Lc = 3852.37'
T = 1968.07'
E = 249.43'

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

GRAPHIC SCALE

0 50 100 150 200

TYPE I FUNDS

5-12"BEECH 2-20"OAK 4-15"OAK

1-20"CHERRY 4-20"OAK 1-20"MAPLE 9-12"OAK

1-18"BEECH 6-20"OAK 1-20"POPLAR 4-12"BEECH 2-12"OAK

5-12"BEECH 3-12"OAK 1-20"OAK

3-12"OAK

1-12"BEECH 4-20"OAK 1-15"CHERRY 3-12"OAK

3-20"OAK 22-12"-18"OAK

10-18"OAK 13-12"OAK

1-18"BEECH 1-12"BEECH 18-15"-20"OAK

3-18"OAK 2-20"POPLAR 4-12"BEECH 1-12"CHERRY 5-20"OAK 5-18"BEECH

6-12"BEECH 5-18"OAK 2-24"POPLAR 7-12"OAK 1-15"BEECH

2-20"POPLAR 1-15"CHERRY 2-12"POPLAR 2-15"OAK

■ = MONUMENT FOUND
◉ = PROPOSED MONUMENTS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE
1	Added Leaded line Pcl 41 WL	IrickK	3-30-67

STA. 390+00 TO STA. 405+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT OF WAY SHEET 39/40

3-18"BEECH
1-24"OAK
3-15"OAK

10-15"OAK

5-15"OAK
1-24"OAK

1-12"CHERRY
1-15"OAK
1-24"OAK

2-24"OAK
2-12"APPLE
1-12"OAK
4-15"ASH

1-24"OAK
5-15"OAK

1-24"BEECH
4-15"OAK
3-15"POPLAR

2-18"CHERRY
2-24"OAK
3-12"BEECH
4-18"OAK
2-24"BEECH

2-12"BEECH
6-24"OAK
2-24"BEECH
1-18"STUMP
5-12"POPLAR

8-12"OAK
1-12"MAPLE
1-15"PINE
10-12"POPLAR
1-24"POPLAR

4-12"PINE
10-12"POPLAR
14-15"OAK

5-12"POPLAR
2-18"OAK
1-12"BEECH
3-12"OAK

4-15"POPLAR
7-15"OAK
2-12"PINE

8-15"OAK
1-15"OAK
7-12"PINE
1-12"BEECH
1-15"CHERRY
4-12"OAK

THE STATE OF OHIO
42 WL

205.68' TO PROPERTY CORNER (OCC.)
1205.62' (D)
N 20°14'06" E

405+06.65
243.72'

MON. FD.

42 WL
THE STATE OF OHIO

150.0'

406+50.07
79.44'

MON. FD.

STA. 405+00

MATCH TO R/W SHEET 38 OF 40

224.33' (CALC.)
N 11°42'11" E
699.90' TO PROPERTY CORNER (OCC.)
700.00' (D)

41-1 WL

365.11' (OCC.)

405+06.15

BEGIN SHEET

418

409+75.11

℄ SURVEY CURVE DATA
P.I. STA. 387+73.97
Δ = 28°53'34" LT.
Dc = 0°45'
R = 7639.44'
Lc = 3852.37'
T = 1968.07'
E = 249.43'

℄ SURVEY (I-271)

415

FIRST METHODIST CHURCH OF BEDFORD, OHIO
43 WL
T.B.A. = 16.863 Ac
P.R.O. = 0.123 Ac
TOTAL = 16.986 Ac

417+00
320'

LA RW
N 54°14'22" E
650.00'

416+00
220'

N 83°48'58" E
140.09'

CONSTRUCTION LIMITS

N 55°21'44" E
926.04'
(1,627 LIN. FT. R/W FENCE)

HEAVY TIMBER

PT. STA. 416+58.26

STA. 420+00

MATCH TO R/W SHEET 40 OF 40

700'
320'

419+72

N 54°14'22" E

73'

GAS WELL

43 WL
(SEE ABOVE)

430'-54" TYPE 41 STRUCTURE No. SUM-271-S7.98

HEAVY TIMBER

END SHEET

CONSTRUCTION LIMITS

TYPE 47 FENCE

557.47'
N 55°51'38" E
LA RW

412+47.67
(C.B.B.)

1569.77' TO PROPERTY CORNER (D)
1569.93' TO PROPERTY CORNER (D)
N 88°56'05" E
380.00' (D)

415+54.45
340.62'

LA RW
N 52°56'21" E
348.55'

N 11°57'16" E
405.51'

419+00
340'

2-12"OAK

7-12"OAK
1-18"OAK
1-12"WALNUT
1-20"HICKORY

HARRY HORVITZ
41-1 WL
T.B.A. = 4.098 Ac

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE

1-12"CHERRY
1-15"OAK
1-12"WALNUT
1-20"HICKORY

5-18"OAK
11-12"OAK
1-12"HICKORY

6-18"OAK
4-12"OAK

1-18"OAK
2-12"POPLAR

3-12"POPLAR
1-12"CHERRY
8-12"OAK
1-18"POPLAR

5-12"OAK
1-12"CHERRY
1-24"OAK
3-18"POPLAR
1-12"HICKORY

5-15"OAK
8-18"POPLAR
1-20"BEECH
1-20"OAK

3-15"OAK
1-15"POPLAR
1-20"BEECH
1-24"PINE
2-15"PINE
1-24"OAK

7-12"PINE
8-12"BEECH
4-12"OAK
1-12"POPLAR

4-12"ELM
1-20"ELM
2-12"POPLAR
4-12"OAK

3-15"OAK
2-12"OAK
7-12"PINE
1-20"OAK

1-12"OAK
4-20"OAK
2-15"OAK
6-12"PINE

■ = MONUMENT FOUND
◉ = PROPOSED MONUMENTS

STA. 405+00 TO STA. 420+00

K.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-2.98
RIGHT OF WAY SHEET 40/40

MATCH TO R/W SHEET 39 OF 40

BEGIN SHEET

STA. 420+00

1-18" BEECH
2-12" CHERRY
1-12" ELM

3-15" OAK
10-24" OAK
3-24" BEECH
3-12" PINE

4-12" APPLE
4-15" CHERRY
8-15" OAK
1-12" BEECH
4-12" POPLAR

FIRST METHODIST CHURCH OF BEDFORD, OHIO

T.B.A. = 16.863 Ac
P.R.O. = 0.123 Ac
TOTAL = 16.986 Ac

43 WL
43 WA

LA RW N 54° 14' 22" E 650.00'

1 STY FR CAMP HSE

GRAVEL DRIVE

SWIMMING POOL

KIDDIE POOL

BATH HOUSE

(TO BE ABANDONED)

WOODS

HUB SET AT INTERSECTION OF TANGENTS

OHIO EDISON 2 WIRES (12.5 KV)

3-18" WILLOWS

END WORK SUM.-271-2.98 STA. 421+97.75

POINT OF ACCESS FOR FIRST METHODIST CHURCH ACCESS UNDER BRIDGE ONLY. STA. 424+16 LT. 16' WIDTH

430' 54" TYPE A CULVERT No STRUCTURE No SUM-271-07.87

SPRING BOX

DAM

OCCUPATION SURVEY P.C. 74+67.45 ROWY. PLANS

LIGHT WOODS

GAS WELL

RAILROAD COMMUNICATION LINES

RIVER

6" PINE

8" PINE

WOODS

WELL

1 STY FR RIVERVIEW INN

GAR

10" ELM

GRAVEL PARKING AREA

SEPTIC TANK

6" PINE

8" PINE

2-6" PINES

8" ELM

6" PINE

2-6" PINES

1 STY FR. HSE

2" HICKORY

WELL

GAR

24" PINE

GRAVEL

8" PINE

6" PINE

8" PINE

OHIO BELL TELEPHONE CO I-CABLE

B. & O. R.R.

CUYAHOGA

E. LINE LOT 2 TRACT 1

S. & W. LINE LOT 45

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

OCCUPATION CURVE DATA
Δ = 31° 12' 05" RT.
T = 106.71'
Dc = 14° 59' 38"
R = 382.17'
Lc = 208.12'
P.I. STA. 75+74.19

ROADWAY CURVE DATA
Δ = 31° 13' RT.
T = 106.71'
Dc = 15°
Lc = 208.11'
R = 381.97'
P.I. STA. 75+73.45

Lot 1 Lot 2 Tract 1 Tract 1

425+95.97
599.99'

OCCUPATION SURVEY P.C. 76+15.60 P.T. 78+24.09 ROADWAY PLANS

425+29.03
87.17

425+18.46

425+38.69
87.17

WOODS
LIGHT BRUSH

425 ℄ - SURVEY

STA. 425+49.26 ℄ I-271 = STA. 72+99.30 ℄ R/W C.H. 9

GAS WELL

338.69'

N 54° 14' 22" E
369.99

LA RW

N 54° 14' 22" E 87.17

422+00 87.17

422+00 LIMIT

422+87 87.17

425+12 87.17

N 54° 14' 22" E 75'

43T

T.B.A. = 0.052 Ac
PICNIC AREA

POINT OF ACCESS FOR FIRST METHODIST CHURCH. ACCESS UNDER BRIDGE ONLY. STA. 422+52 RT. 16' WIDTH

SHED
BACKSTOP

LA RW N 11° 57' 16" E 405.5'

END ACQUISITION SUM-271-2.98 STA. 425+49.26

BEGIN ACQUISITION SUM-271-7.65 STA. 425+49.26

RW MON. FD

70+34.19

EXIST R/W

(C.H. 9)

OHIO EDISON 7 WIRES (12.5 KV)

END PROJECT SUM-271-2.98 STA. 421+49.25

FIRST METHODIST CHURCH OF BEDFORD, OHIO

43 WL (FOR ACREAGE SEE ABOVE)

6-12" PINE
3-15" OAK
1-20" ELM
2-12" POPLAR
1-20" OAK

1-12" PINE
3-20" OAK
1-20" MAPLE
12-12" OAK
3-24" OAK

3-12" BEECH
1-15" OAK
16-12" CHERRY
4-12" OAK

ROADWAY PLANS CURVE DATA
Δ = 35° 36' LT.
T = 184.15'
Lc = 356.33'
Dc = 10°
(CORROBORATED BY CONSULTANTS SURVEY)
P.I. STA. 68+61.97

P.I. IRON FD. & USED 68+61.97

83.78' (D) N 54° 32' 37" E

WALTER PAULINE W. A. BURTON ET UX

133.43' TO CORNER (D) N 131° 23' W

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

● = IRON PIN FOUND
■ = MONUMENT FOUND

GRAPHIC SCALE
0 50 100 150 200

TYPE I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: OCTOBER 15, 1965			
Nº	REVISIONS	MADE BY	DATE

STA. 420+00 TO STA. 435+00

K. & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 2.98

S1C

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

SUM - 271 - 2.98
SUMMIT COUNTY
RICHFIELD & BOSTON TOWNSHIPS

I - 271 - ( )

LIMITED ACCESS

1963 SPECIFICATIONS

- LIMITED ACCESS -

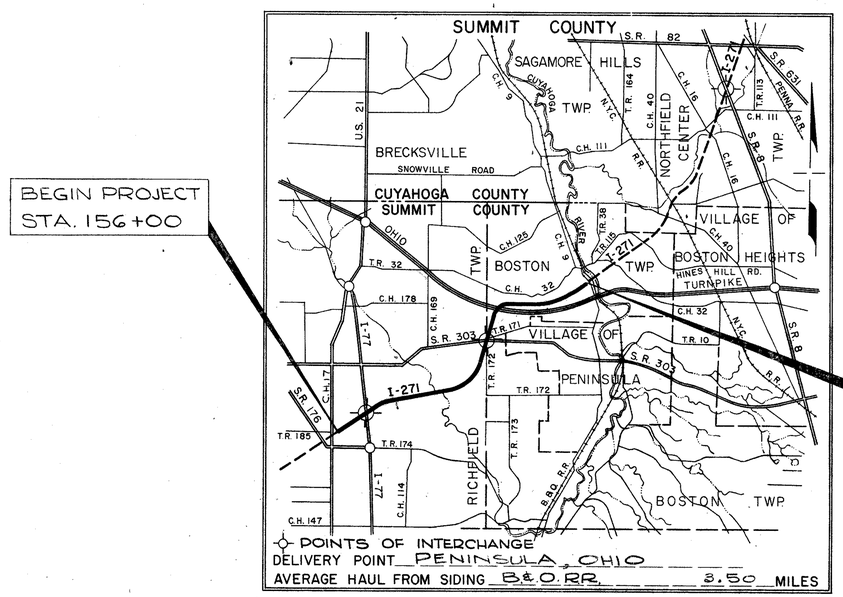
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH PROVISIONS OF SECTION 5511.02 REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad
Power Poles
Telephone Poles
Power or Telephone Poles with guys
Tower Line
Trees or Stumps (existing)
Limited Access
Right of Way
Limited Access & Right of Way

~ INDEX OF SHEETS ~

1-2-3-4-5	CENTERLINE PLATS
6-7-8	PROPERTY MAPS
9	SUMMARY SHEET
10	KEY MAP (I-77 INTERCHANGE)
11	STA. 560+00 TO STA. 165+00
12	STA. 165+00 TO STA. 180+00
13-14-15-16-17	I-271 INTERCHANGE WITH INTERSTATE 77 (STA. 180+00 TO STA. 200+00 - I-271) (STA. 924+00 TO STA. 940+00 - I-77)
18	STA. 200+00 TO STA. 215+00
19	STA. 215+00 TO STA. 230+00
20	STA. 230+00 TO STA. 245+00
21	STA. 245+00 TO STA. 260+00
22	STA. 260+00 TO STA. 275+00
23	STA. 275+00 TO STA. 290+00
24	KEY MAP (S.R. 303 INTERCHANGE)
25	STA. 290+00 TO STA. 305+00
26-27-28-29	I-271 INTERCHANGE WITH S.R. 303 (STA. 305+00 TO STA. 320+00 - I-271) (STA. 35+00 TO STA. 65+00 - RELOC. S.R. 303)
30	KEY MAP (OHIO TURNPIKE INTERCHANGE)
31	STA. 320+00 TO STA. 336+00
32-33-34-35 35-1	I-271 INTERCHANGE WITH OHIO TURNPIKE (STA. 336+00 TO STA. 360+00 - I-271) (STA. 161+00 TO STA. 196+00 - OHIO TURNPIKE)
36	STA. 360+00 TO STA. 375+00
37	STA. 375+00 TO STA. 390+00
38	STA. 390+00 TO STA. 405+00
39	STA. 405+00 TO STA. 420+00
40	STA. 420+00 TO STA. 435+00



BEGIN PROJECT STA. 156+00

END PROJECT STA. 421+49.75

POINTS OF INTERCHANGE

DELIVERY POINT PENINSULA, OHIO

AVERAGE HAUL FROM SIDING B&O.RR. 8.50 MILES

LOCATION MAP

SCALE OF MILES 0 2

PORTION TO BE IMPROVED
STATE ROADS
OTHER ROADS

PLAN 1" = 50'
PROFILE: HORIZONTAL 1" = 50'
PROFILE: VERTICAL 1" = 5' & 1" = 10'
CROSS SECTIONS: HORIZONTAL & VERTICAL 1" = 10'

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT OF WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DIVISION DEPUTY DIRECTOR

APPROVED _____
DATE _____ ENGINEER OF BRIDGES

APPROVED _____
DATE _____ ENGINEER OF LOCATION AND DESIGN

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED _____
DATE _____ FIRST ASSISTANT DIRECTOR

APPROVED _____
DATE _____ DIRECTOR OF HIGHWAYS

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS							
B-T-70-71	11-15-60	I-8 I Nº2	2-1-63	I-15 Nº5-B	2-1-63	CSB-2-56 Sht. 2&3	2-2-50
B-T-71R	3-2-53	I-8 C.B. Nº5	2-1-63	I-15 Nº6	2-1-63	RB-1-55	2-2-55
DR-1	1-3-55	I-8 C.B. Nº6	2-1-63	I-21-23	3-10-64	FAC I-1	2-25-64
F-1	2-1-63	I-8 C.B. Nº8	2-1-63	L-1	4-1-50	FAC I-2	2-25-64
F-2	2-1-63	I-8 M.H. Nº1	2-1-63	L-2	4-1-50	SD-1-63 Sht. 1-4	11-12-63
F-3	2-1-63	I-8 I Nº1	2-1-63	L-3	4-1-50	CSB-2-63 Sht. 1	11-12-63
G-707	4-1-64	I-8 C.B. 2-2-A&B	2-1-63	L-3A	4-1-50	FSB-1-62	1-15-63
HW-1	8-1-63	I-12	2-1-63	L.J. Nº1	7-1-58	A-1 Sht. 1,2&3	5-23-63
HW-2	8-1-63	I-14G	1-22-52	R.I-1	9-1-64		
HW-3	8-1-63	I-15 Nº1	11-15-60	T-35	1-2-56		
HW-E	2-1-63	I-15 Nº2-A	8-17-60	T. J.	9-12-60		
SP-53	6-30-61	I-15 Nº2-B	6-1-57	AS-1-54	7-5-62		
I-1	11-15-60	I-15 Nº4	12-1-54	AR-1-57	4-2-62		

SUPPLEMENTAL SPECIFICATIONS	
CE - 101.04	5-22-56
S-101	7-12-62
I-212	6-23-61
I-120	4-5-61
L-120	1-2-62
M-106.11	1-26-61
M-206.14	7-15-49
S-307	10-1-64
T-335	10-28-63

PREPARED AND RECOMMENDED BY
BEISWENGER, HOCH & ARNOLD, CONSULTING ENGINEERS
AKRON OHIO CLEVELAND

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

_____ DIVISION ENGINEER

_____ DATE

FILE NO.	SUMMIT COUNTY ~ SUM-271-2.98
	DATE OF LETTING _____ 1965
	CONTRACT NO. _____

I-95
408 1.63

GENERAL INFORMATION

INTRODUCTION

The project consists of the construction of 5.0 miles of IR 271, beginning approximately 0.6 mile west of IR 77 and approximately 0.2 mile north of the Old USR 21 and SR 176 intersection, extending northeastward, and terminating approximately 0.3 mile north of the Ohio Turnpike and approximately 0.2 mile west of the Cuyahoga River. Included in this report are soil profiles of the IR 77-IR 271 Interchange ramps, SR 303, and the SR 303-IR 271 Interchange ramps.

For proposed maximum cuts and maximum fill embankments, see the Project Index on this sheet.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment traverses a glaciated, rolling and deeply dissected portion of the Allegheny Plateau, where thin to deep glacial drift overlies shale and sandstone bedrock, of upper Mississippian and Pennsylvanian age.

Several slump and slide areas were observed along the project.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical soil auger, hand auger (in areas of difficult access), and rotary type drill rig, between September 2 and December 11, 1964.

INVESTIGATIONAL FINDINGS

Materials occurring immediately below proposed grade are predominantly comprised of sandy silts (A-4a and A-4b) and silt clays (A-6a), generally having low moisture contents and moisture contents in the lower portion of the plastic range, as well as shale bedrock.

Bedrock is anticipated in the following excavation areas:

Between stations 270+00 and 291+00, Eastbound Lanes - shale at grade, in the ditches, and lower portions of the backslopes.

Between stations 301+00 and 305+00, Eastbound Lanes - shale at grade, in the ditches, and lower portions of the backslopes.

Between stations 325+00 and 341+00 - shale at both grades and in the ditches; shale and sandstone in the lower portions of the backslopes.

Frost susceptible silts were encountered within three feet below proposed grade at mainline stations 382+00, 391+00, 398+55, 406+00, Ramp A station 183+00, Ramp B station 205+00.

Materials in the embankment foundation areas are predominantly comprised of sandy silts (A-4a and A-4b) and silt clays (A-6a), generally having low moisture contents and moisture contents in the lower portions of the plastic range.

Wet materials were encountered at mainline stations 159+25, 168+00, 207+00, 219+55, 221+00, 225+15, 229+53, 232+00, 238+00, 239+00, 256+00, 257+80, 259+55, 361+75, 367+00, 369+00, 376+80, 379+15, 403+00, Ramp B station 185+50, Ramp E station 311+00, and Ramp H station 316+25.

Materials containing organic matter were encountered at mainline stations 168+00, 372+00, 376+80, 403+00, 406+00, and 417+20.

Elastic clays were encountered at mainline stations 403+00 and 417+20.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS — 410 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel or stone fragments	A-1-a(0)	A-1-a	72	14	8	- 6 -		NP	NP	14	4
Gravel and/or stone fragments with sand	A-1-b(0)	A-1-b	46	15	18	11	10	23	1	13	5
Coarse and fine sand	------	A-3a	10	15	44	18	13	NP	NP	18	2
Gravel and/or stone fragments with sand and silt	A-2-4(0)	A-2-4	40	10	17	18	15	23	5	12	9
Stone fragments with sand, silt and clay	A-2-6(0)	A-2-6	63	2	2	17	16	33	11	14	1
Sandy silt	A-4(4)	A-4a	22	8	16	31	23	25	5	14	89
Silt	A-4(8)	A-4b	3	2	4	62	29	28	2	22	64
Silt and clay	A-6(8)	A-6a	13	4	8	35	40	31	11	17	214
Silty clay	A-6(11)	A-6b	8	8	5	30	49	38	18	20	6
Elastic clay	A-7-5(11)	A-7-5	19	3	18	42	18	62	18	51	2
Clay	A-7-6(13)	A-7-6	7	2	4	35	52	44	20	22	8
Random fill			VISUAL CLASSIFICATION								
Bouldery zone			VISUAL CLASSIFICATION								
Weathered shale			VISUAL CLASSIFICATION								1
Weathered sandstone			VISUAL CLASSIFICATION								1
Shale			VISUAL CLASSIFICATION								4
Various other materials			VISUAL CLASSIFICATION								

Sod and/or Topsoil =X'= Approximate depth.

Berm material.

Auger boring - plan view.

Drive sample and/or core boring - plan view.

Auger boring plotted to vertical scale only.

Drive sample and/or core boring plotted to vertical scale only.

NOTE: Figures beside borings indicate water content in percent. e.g. 15

● Water content nearly equal to or greater than liquid limit.

⊖ Indicates a non-plastic material with a high water content.

——W Free water.

Number of blows for "Standard Penetration" test.
X=number of blows for first 6 inches.
Y=number of blows for second 6 inches.

B Indicates broken rock interval.

SOIL PROFILE

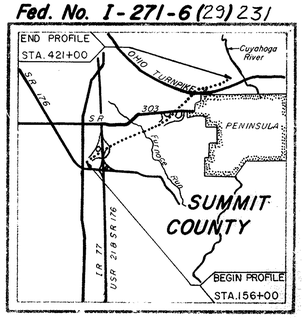
1
53

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

Fed. No. I-271-6(29)231



LOCATION MAP

Recon—P.D.B.—8/25/64 to 9/4/64
Drilling—Auger—C.M.C.B.A.J.P.—9/2/64-9/17/64, 9/29/64
Core—J.W.B.—10/29/64 to 12/11/64
Drafting—R. D.C., A.D.B., B.G.W., R.C.B. - 2/10/65

PROJECT INDEX

STATIONS FROM - TO	PLAN VIEW SHEET	PROFILE SHEET	CUT MAX.	FILL EMB. MAX.
IR 271				
156+00 - 199+00	3	5	24'	26'
199+00 - 252+00	6	7	41'	62'
252+00 - 284+00	8	9	52'	100'
284+00 - 316+00	11	11	101'	127'
316+00 - 348+00	12	13	41'	31'
348+00 - 380+00	14	15	17'	75'
380+00 - 412+00	15	16	67'	66'
412+00 - 421+00	18	17	44'	20'
IR 77 INTERCHANGE				
Ramp A				
171+00 - 199+00	7	10	21'	26'
Ramp B				
171+00 - 202+00	4 & 5	12	20'	33'
Ramp C				
199+00 - 203+00	4 & 5	20	14'	20'
Ramp D				
167+00 - 198+00	4 & 5	20	12'	12'
SR 303 INTERCHANGE				
SR 303				
39+00 - 61+00	21	22	11'	25'
Ramp E				
206+00 - 221+00	21	22	44'	20'
Ramp F				
301+00 - 316+00	21	22	17'	
Ramp G				
306+00 - 314+00	21	22	17'	
Ramp H				
306+00 - 312+00	21	23	16'	17'

TE-95
400-1-63

SOIL PROFILE

2
53

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
150+00	CL	0.4-3.0	22	8	15	24	31	27	6	11	A-4a
159+25	CL	0.4-2.0	18	6	13	31	32	30	11	15	A-6a
		2.0-5.0	28	9	15	24	24	33	10	12	A-4a
		5.0-8.0	0	11	55	19	15	NP	NP	22	A-3a
		8.0-14.0	27	4	8	28	33	26	11	15	A-6a
		14.0-20.0	20	8	15	29	28	23	5	13	A-4a *
		20.0-21.5	21	7	30	26	16	NP	NP	9	A-4a *
160+00	CL	0.4-2.5	17	5	13	29	36	33	11	14	A-6a
		2.5-8.0	14	18	26	21	21	NP	NP	13	A-4a
		8.0-14.0	18	5	10	30	37	27	11	13	A-6a *
		14.0-16.0	Brown Silty Sand, Gravel and Stone Fragments								Visual *
		16.0-20.0	25	7	26	33	9	19	4	12	A-4a *
164+00	CL	0.4-4.0	0	3	11	38	48	35	11	16	A-6a
		4.0-8.5	21	6	12	27	34	30	11	14	A-6a *
		8.5-12.5	47	3	7	22	21	NP	NP	13	A-6a *
		12.5-16.0	36	21	24	11	12	NP	NP	15	A-1-b
		16.0-17.0	25	7	27	23	18	NP	NP	9	A-4a
168+00	40'Lt	0.4-4.0	0	7	20	44	29	23	6	17	A-4a
		4.0-8.0	0	9	12	45	34	35	11	33	A-6a
		8.0-11.0	51	6	12	17	14	24	6	6	A-2-4
		11.0-12.0	21	9	14	30	26	21	7	11	A-4a
170+00	75'Lt	0.3-3.0	14	6	12	40	28	33	11	16	A-6a
171+00	CL	0.4-3.0	22	4	9	34	31	31	11	14	A-6a
173+00	CL	0.3-4.0	21	6	17	30	26	29	10	13	A-4a
		4.0-7.0	47	12	26	8	7	NP	NP	15	A-1-b
		7.0-10.0	24	6	5	37	28	32	11	11	A-6a
		10.0-12.0	32	9	7	26	26	30	11	10	A-6a
177+70	115'Rt	0.4-2.0	15	7	33	24	21	NP	NP	12	A-4a
178+00	50'Lt	0.2-2.0	23	7	15	32	23	28	7	12	A-4a
184+00	65'Rt	0.4-2.0	0	10	25	36	29	NP	NP	10	A-4a
187+60	CL	0.0-2.0	0	6	12	42	40	40	12	16	A-6a
190+95	CL	0.0-6.0	0	5	14	36	45	30	11	13	A-6a
		6.0-12.0	27	6	10	28	29	22	5	14	A-4a
		12.0-18.0	24	7	11	28	30	23	5	14	A-4a
		18.0-24.0	21	5	11	31	32	24	7	15	A-4a
		24.0-30.0	24	5	10	33	28	24	7	18	A-4a
196+50	CL	0.0-4.0	0	6	2	62	30	32	10	13	A-4b
		4.0-9.0	0	4	16	31	49	24	11	19	A-6a
		9.0-13.0	0	1	2	32	65	31	11	22	A-6a
		13.0-18.0	20	5	9	30	36	29	11	17	A-6a
203+00	20'Rt	0.0-5.0	0	2	6	46	46	37	14	14	A-6a
		5.0-10.0	9	4	14	30	43	35	13	17	A-6a *
		10.0-14.0	23	4	7	27	39	30	11	16	A-6a *
		14.0-17.0	0	3	6	23	68	29	11	16	A-6a
207+00	60'Lt	0.3-5.0	0	0	10	41	49	28	11	12	A-6a
		5.0-10.0	0	4	7	31	58	28	11	15	A-6a
		10.0-15.0	31	3	6	30	30	27	11	15	A-6a
207+00	65'Rt	0.4-5.0	18	2	11	26	43	33	11	13	A-6a
		5.0-11.0	17	3	6	29	45	30	11	15	A-6a
		11.0-16.0	0	4	7	37	52	34	15	13	A-6a *
		16.0-20.0	0	3	4	39	54	29	11	14	A-6a *
		20.0-24.0	0	3	5	58	34	28	8	26	A-4b
214+00	55'Lt	0.0-4.0	0	3	9	57	31	31	12	13	A-6a
		4.0-8.0	11	26	18	34	11	NP	NP	9	A-4a
		8.0-12.0	6	4	29	48	13	NP	NP	16	A-4a
215+00	42'Rt	0.0-0.9	Random Fill								Visual
		0.9-4.0	23	5	9	37	26	30	4	12	A-4a
217+00	80'Lt	0.0-4.0	12	4	7	45	32	29	12	14	A-6a
		4.0-8.0	18	6	11	34	31	28	11	13	A-6a
		8.0-10.0	33	5	10	30	22	29	9	12	A-4a
219+55	92'Lt	0.0-4.5	0	3	14	53	30	36	8	15	A-4b
		4.5-8.0	19	2	5	37	37	29	11	16	A-6a
		8.0-14.0	0	0	1	69	30	32	11	29	A-6a
		14.0-20.0	0	0	1	16	83	30	11	37	A-6a
		20.0-25.0	16	4	7	50	23	NP	NP	16	A-4b
		25.0-30.0	0	0	0	77	23	NP	NP	21	A-4b
221+00	77'Lt	0.3-5.0	10	4	10	37	39	29	11	13	A-6a
		5.0-11.0	11	5	10	36	38	27	11	13	A-6a
		11.0-15.0	14	6	11	29	40	25	11	17	A-6a
221+00	40'Rt	0.3-6.0	26	2	6	31	35	33	11	12	A-6a
		6.0-11.0	0	0	0	36	64	42	18	28	A-7-6
		11.0-15.0	0	0	1	55	44	NP	NP	34	A-4b
225+15	75'Lt	0.5-5.0	14	3	8	27	48	32	13	19	A-6a
		5.0-7.0	0	1	1	64	34	32	11	23	A-6a
		7.0-12.0	0	0	1	61	38	NP	NP	27	A-4b
		12.0-17.0	0	0	1	38	61	31	11	28	A-6a
		17.0-22.0	0	0	0	25	75	34	11	31	A-6a
		22.0-25.0	0	1	1	28	70	32	11	30	A-6a
225+25	70'Rt	0.0-5.0	Brown Silt								Visual
		5.0-7.0	40	2	6	32	30	49	23	16	A-7-6
		7.0-9.0	5	1	6	33	35	NP	NP	19	A-4b
		9.0-14.0	18	7	9	39	27	NP	NP	20	A-4a
		14.0-19.0	12	4	4	50	30	NP	NP	15	A-4b
		19.0-25.0	9	5	6	50	30	NP	NP	11	A-4b
225+25	160'Rt	0.5-4.0	0	12	27	32	29	NP	NP	11	A-4a
		4.0-6.0	Brown Clayey Silty Sand and Gravel								Visual
		6.0-8.0	12	3	4	50	31	NP	NP	13	A-4b
227+00	101'Lt	0.4-3.5	0	5	13	40	42	NP	NP	8	A-4a
227+00	25'Lt	0.6-5.0	37	3	7	25	28	32	11	10	A-6a
		5.0-9.0	0	3	41	13	43	35	13	17	A-6a
		9.0-12.0	13	7	13	34	33	27	11	15	A-6a
227+00	100'Rt	0.6-5.0	0	2	5	33	60	36	12	17	A-6a
		5.0-9.0	0	0	0	31	69	39	23	32	A-6b
		9.0-15.0	0	0	2	29	69	34	11	26	A-6a
229+53	80'Lt	0.0-3.0	0	5	4	26	65	38	14	21	A-6a
		3.0-5.0	0	0	0	55	45	30	4	28	A-4b
		5.0-10.0	0	0	0	52	48	31	8	27	A-4b
		10.0-15.0	0	0	0	33	67	33	11	29	A-6a
		15.0-21.0	0	0	0	34	66	34	11	30	A-6a
		21.0-25.0	23	7	6	38	26	24	11	18	A-6a
232+00	80'Lt	0.6-5.0	22	3	8	34	33	31	11	15	A-6a
		5.0-10.0	25	3	7	34	31	32	11	15	A-6a
232+00	98'Rt	0.0-5.0	0	4	13	37	46	32	11	14	A-6a
		5.0-9.0	0	0	0	53	47	28	3	21	A-4b
		9.0-15.0	0	0	1	77	22	NP	NP	18	A-4b
232+15	CL	0.4-4.0	34	6	10	28	22	24	4	9	A-4a
		4.0-9.5	0	5	6	32	57	31	11	17	A-6a
		9.5-15.0	0	0	1	31	68	37	11	29	A-6a
235+00	CL	0.6-5.0	21	5	9	32	33	30	11	13	A-6a
		5.0-10.0	14	9	23	31	23	NP	NP	16	A-4a *
237+75	102'Rt	0.5-5.0	0	2	20	45	33	28	7	15	A-4a
		5.0-10.0	36	6	11	29	18	26	7	12	A-4a
238+00	30'Lt	0.0-5.0	Random Fill								Visual
		5.0-7.5	0	2	3	50	45	NP	NP	29	A-4b
		7.5-10.0	34	24	27	- 15 -		NP	NP	9	A-1-b
239+00	10'Rt	0.0-6.0	0	4	7	45	44	33	12	14	A-6a
		6.0-10.0	0	0	0	51	49	NP	NP	29	A-4b
240+00	47'Rt	0.4-5.0	0	0	0	40	60	32	11	16	A-6a
		5.0-10.0	0	0	6	9	15	70	39	12	27	A-6a
241+65	75'Rt	0.0-4.0	0	4	8	41	47	34	12	14	A-6a
		4.0-7.0	0	1	1	30	68	40	17	28	A-6b
		7.0-10.0	0	3	6	34	57	32	11	26	A-6a
242+00	130'Lt	0.2-5.0	20	4	7	33	36	33	11	12	A-6a
		5.0-10.0	24	5	9	31	31	31	12	13	A-6a
		10.0-14.0	30	7	10	30	23	28	11	14	A-6a
		14.0-17.0	17	6	9	33	35	29	11	15	A-6a
		17.0-22.0	21	5	18	25	31	24	11	15	A-6a
		22.0-27.0	0	0	0	21	79	39	11	24	A-6a
		27.0-30.0	0	7	13	71	9	NP	NP	9	A-4b
242+00	30'Lt	0.0-5.0	25	0	26	18	31	31	10	13	A-4a *
		5.0-10.0	16	5	9	29	41	32	13	15	A-6a *
242+00	62'Rt	0.0-4.0	46	3	6	19	26	31	11	13	A-6a
		4.0-7.5	0	2	6	46	46	29	11	14	A-6a
		7.5-10.0	0	0	0	37	63	33	15	26	A-6a
249+60	CL	0.2-5.0	21	2	7	31	39	36	14	20	A-6a
		5.0-9.0	18	4	7	26	46	35	13	23	A-6a
		9.0-13.0	14	4	3	32	47	35	13	21	A-6a
		13.0-15.0	39	17	11	16	17	25	9	16	A-2-4
		15.0-20.0	0	0	0	50	50	32	9	27	A-4b
251+00	CL	0.0-5.0	16	3	8	36	35	28	11	16	A-6a
		5.0-9.0	12	3	6	32	47	31	9	22	A-6a
		9.0-15.0	4	1	1	62	32	29	4	19	A-4b
		15.0-20.0	0	0	0	66	34	NP	NP	21	A-4b
253+00	CL	0.0-5.0	Brown Sand and Gravel								Visual
		5.0-10.0	0	1	0	33	66	35	11	28	A-6a
		10.0-15.0	0	1	1	44	54	33	11	28	A-6a
		15.0-19.0	0	1	1	39	59	36	12	24	A-6a
		19.0-23.0	0	1	1	31	67	36	11	28	A-6a
256+00	CL	0.0-4.0	69	17	7	- 7 -		NP	NP	13	A-1-a
		4.0-7.0	32	2	9	20	37	37	14	27	A-6a
		7.0-13.5	12	3	4	56	25	NP	NP	16	A-4b
256+00	180'Rt	0.0-5.0	25	12	30	20	13	NP	NP	8	A-2-4
		5.0-7.5	62	7	7	15	9	NP	NP	20	A-1-b
		7.5-12.0	12	2	4	62	20	NP	NP	19	A-4b
		12.0-15.0	39	6	7	31	17	NP	NP	16	A-4a
256+00	310'Rt	0.0-5.0	61	17	14	- 8 -		NP	NP	6	A-1-a
		5.0-10.0	72	14	7	- 7 -		NP	NP	15	A-1-a
257+80	CL	0.0-4.0	0	3	2	38	57	35	11	16	A-6a
		4.0-8.5	0	0	0	83	17	NP	NP	26	A-4b
		8.5-14.0	58	4	6	21	11	NP	NP	7	A-2-4
		14.0-18.0	35	6	6	31	22	25	11	11	A-6a
259+55	CL	0.0-3.0	0	2	4	28	66	39	17	21	A-6b
		3.0-6.0	12	2	5	62	19	NP	NP	21	A-4b
		6.0-11.0	0	0	0	83	17	NP	NP	19	A-4b
		11.0-16.0	0	0	0	77	23	NP	NP	22	A-4b
		16.0-21.0	0	0	0	66	34	NP	NP	23	A-4b
		21.0-25.0	0	0	1	72	27	NP	NP	23	A-4b
		25.0-27.0	0	1	0	80	19	NP	NP	28	A-4b
		27.0-30.0	38	7	8	32	15	NP	NP	19	A-4a
260+25	CL	0.0-5.0	30	10	13	22	25	24	8	11	A-4a
		5.0-10.0	0	0	0	28	72	39	15	33	A-6a
		10.0-15.0	0	0	5	29	66	32	11	28	A-6a
		15.0-18.5	32	9	7	31	21	NP	NP	13	A-4a
261+12	CL	0.3-5.0	23	5	7	31	34	32	11	10	A-6a *
		5.0-10.0	20	15	25	19	21	24	7	10	A-4a *
		10.0-14.0	37	11	14	22	16	23	6	14	A-4a
		14.0-20.0	18	6	10	33	33	25	11	16	A-6a
		20.0-25.0	29	8	9	25	29	23	6	11	A-4a
264+00	85'Lt	0.6-5.0	19	2	6	25	48	36	11	14	A-6a
		5.0-9.0	22	5	8	32	33	30	11	15	A-6a
		9.0-13.0	16	6	8	36	34	28	11	14	A-6a
		13.0-17.0	20	10	17	28	25	20	4	13	A-4a *
		17.0-22.0	17	4	8	30	32	22	11	14	A-6a *
		22.0-27.5	12	5	10	35	38	25	11	17	A-6a
268+00	80'Lt	0.6-4.0	17	4	9	34	36	34	12	12	A-6a
		4.0-9.0	25	11	15	26	23	25	7	10	A-4a
		9.0-14.0	18	4	7	35	36	28	11	17	A-6a
		14.0-21.0	18	5	9	37	31	26	11	16	A-6a
		21.0-24.0	23	8	13	31	25	24	7	16	A-4a
		24.0-27.0	32	8	6	37	17	21	3	9	A-4a *
		27.0-30.0	22	6	19	34	19	NP	NP	15	A-4a *
268+25	90'Rt	0.6-4.0	0	2	7	38	53	37	13	25	A-6a
		4.0-8.0	14	4	8	38	36	32	11	19	A-6a
		8.0-12.0	19	5	10	36	30	26	11	18	A-6a
		12.0-15.0	27	7	11	33	22	22	4	18	A-4a
275+00	70'Lt	0.6-4.0	26	5	8	29	32	30	11	13	A-6a
		4.0-8.0	14	6	11	34	35	28	11	13	A-6a
		8.0-11.0	33	13	17	22	15	NP	NP	9	A-4a
		11.0-15.0	21	7	19	30	23	20	5	8	A-4a
		15.0-21.0	33	8	14	26	19	20	3	9	A-4a
281+00	100'Lt	0.6-4.0	17	4	9	38	32	34	12	12	A-6a
		4.0-7.0	27	7	8	29	29	32	11	11	A-6a
287+00	80'Lt	0.6-5.0	15	6	8	31	40	32	12	12	A-6a
		5.0-10.0	19	6	9	29	37	31	11	15	A-6a
		10.0-15.0	33	6	5	22	34	34	11	17	A-6a
		15.0-17.0	42	3	3	31	21	29	11	12	A-6a
		17.0-19.5	57	3	2	21	17	31	11	20	A-6a
		19.5-23.0	34	13	8	24	21	29	6	14	A-4a
293+00	CL	0.6-5.0	32	8	14	24	22	26	6	11	A-4a
		5.0-9.0	26	5	7	34	28	29	13	14	A-6a *
		9.0-12.5	22	5	4	40	29	32	11	12	A-6a *
296+00	CL	0.6-5.0	12	4	9	39	36	37	15	14	A-6a
		5.0-8.0	24	11	15	29	21	23	6	19	A-4a *
		8.0-11.0	18	6	9	35	32	26	11	16	A-6a *
		11.0-15.0	30	11	16	28	15	NP	NP	12	A-4a
		15.0-17.0	38	10	12	28	12	NP	NP	11	A-4a
303+00	CL	0.6-5.0	15	7	10	30	38	33	13	13	A-6a
		5.0-10.0	35	11	9	37	29	31	11	12	A-6a
		10.0-12.0	53	5	9	22	17	32	11	8	A-6a *
308+00	CL	0.6-5.0	17	10	16	16	26	28	8	12	A-4a *
		5.0-9.0	16	7	16	24	33	32	12	13	A-6a
311+00	CL	0.6-4.0	33	1	1	46	26	33	14	13	A-6a *
		4.0-7.0	41	6	23	5	23	34	13	14	A-6a
323+00	CL	0.6-5.0	15	5	13	33	34	28	11	14	A-6a
		5.0-10.0	11	6	8	37	38	29	11	16	A-6a
		10.0-15.0	12	7	8	38	35	24	11	18	A-6a *
		15.0-20.0	8	5	9	40	38	24	11	16	A-6a *
330+00	CL	0.6-5.0	0	6	9	43	42	29	11	16	A-6a
		5.0-10.0	14	6	9	43	28	25	5	15	A-4a
		10.0-15.0	31	8	11	34	26	27	9	14	A-4-2
		15.0-22.5	0	9	42	19	30	29	8	16	A-4a
336+00	CL	0.6-5.0	13	5	8	40	34	30	11	17	A-6a
		5.0-10.0	15	5	8	36	36	31	11	16	A-6a
		10.0-14.0	Gray Broken Clay Shale							13	Visual
		14.0-17.0	Gray Broken Clay Shale							9	Visual
343+50	CL	0.6-5.0	20	3	8	35	34	37	14	13	A-6a *
		5.0-6.5	14	40	9	15	22	39	18	21	A-6b *
		6.5-9.0	Gray Broken Clay Shale							15	Visual
349+15	CL	0.6-4.0	21	3	6	40	31	33	11	11	A-6a
		4.0-10.0	31	6	8	34	21	27	7	12	A-4a *
		10.0-15.0	33	9	3	45	10	NP	NP	15	A-4a
355+40	CL	0.5-5.0	25	4	5	34	32	37	17	5	A-6b *
		5.0-10.0	Brown Broken Weathered Shale							17	Visual *
361+75	CL	0.4-3.0	50	9	9	20	12	25	4	12	A-2-4
		3.0-9.0	26	3	9	43	20	24	4	23	A-4a
		9.0-14.0	36	1	1	36	26	32	11	25	A-6a
		14.0-18.0	34	0	2	38	26	32	11	11	A-6a
362+00	200'Lt	0.0-2.5	47	5	6	21	21	NP	NP	6	A-4a
367+00	CL	0.4-6.0	0	2	2	38	58	37	14	21	A-6a
		6.0-10.0	0	1	1	48	50	34	13	12	A-6a
		10.0-14.0	0	0	1	50	49	30	11	93	A-6a
		14.0-20.0	0	0	1	41	58	31	11	49	A-6a
369+00	107'Lt	0.0-5.0	0	2	4	44	50	36	11	26	A-6a
		5.0-10.5	0	0	1	31	68	43	20	19	A-7-6
		10.5-13.0	0	1	3	66	30	NP	NP	23	A-4b
		13.0-17.5	0	0	1	45	54	35	11	29	A-6a
		17.5-22.0	0	0	1	69	30	NP	NP	27	A-4b
		22.0-26.5	0	1	3	69	27	NP	NP	28	A-4b
		26.5-30.0	0	0	55	31	14	NP	NP	27	A-4a
372+00	205'Lt	0.0-6.0	0	2	1	40	57	41	17	26	A-7-6
		6.0-9.0	0	1	2	55	42	38	12	31	A-6a
		9.0-11.0	31	6	9	32	22	36	11	25	A-6a
		11.0-15.0	40	3	7	34	16	25	6	11	A-4a
376+80	CL	0.0-4.0	15	9	38	26	12	29	7	40	A-4a
		4.0-6.0	84	9	3	- 4 -		NP	NP	22	A-1-a
		6.0-8.0	57	9	7	14	13	23	4	8	A-1-b
379+15	CL	0.4-4.0	0	0	4	51	45	41	19	26	A-7-6
		4.0-7.0	0	1	1	81	17	NP	NP	26	A-4b
		7.0-9.0	0	1	0	86	13	NP	NP	22	A-4b
		9.0-14.0	0	0	0	28	72	39	15	19	A-6a
		14.0-20.0	0	0	0	64	36	NP	NP	23	A-4b
382+00	60'Lt	0.4-5.0	17	4	8	31	40	30	11	15	A-6a
		5.0-12.0	0	2	2	52	44	29	7	19	A-4b
		12.0-15.0	0	2	3	37	58	28	11	20	A-6a
385+00	70'Rt	0.4-6.0	0	2	6	44	48	32	11	16	A-6a
		6.0-12.0	24	5	7	34	30	29	11	18	A-6a
		12.0-18.5	20	5	7	34	34	32	11	17	A-6a
		18.5-25.0	14	7	10	38	31	22	5	14	A-4a
		25.0-30.0	11	3	5	42	39	27	11	18	A-6a
397+00	CL	0.0-5.0	0	6	9	44	41	34	14	12	A-6a
		5.0-8.0	0	7	11	43	39	30	11	15	A-6a
		8.0-13.0	13	4	7	43	33	26	11	16	A-6a
		13.0-18.0	18	3	8	38	33	26	11	16	A-6a
		18.0-23.0	0	5	9	46	40	28	11	17	A-6a
		23.0-30.0	0	4	2	49	45	30	11	19	A-6a
398+55	CL	0.0-5.0	0	3	6	58	33	34	8	20	A-4b *
403+00	CL	0.4-3.0	0	3	12	60	25	37	8	51	A-4b
		3.0-5.0	38	5	19	25	13	52	10	40	A-7-5
408+00	CL	0.0-4.0	0	8	13	27	52	47	23	19	A-7-6
411+00	CL	0.0-3.0	Light-Brown Clay								Visual
414+00	43'Lt	0.0-3.0	Brown Clay								Visual *
417+00	CL	0.3-3.5	Brown Clay								Visual *
417+20	115'Lt	0.0-4.0	0	1	17	59	23	73	25	62	A-7-5
		IR 77 INTERCHANGE									
		Ramp A									
183+00	BL	0.4-5.0	5	7	21	31	36	27	11	13	A-6a *
		5.0-7.0	0	1	9	78	12	NP	NP	20	A-4b *
		7.0-13.0	11	6	10	38	35	27	11	13	A-4a *

TE-95
400-1-63

SOIL PROFILE

3
53

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

SUMMARY OF SOIL TEST DATA (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
		Ramp B (Cont'd)									
188+90	3L	0.0-5.0	0	5	17	44	34	28	11	13	A-6a
		5.0-9.0	0	4	13	41	42	25	11	17	A-6a
		9.0-15.0	0	2	8	50	40	23	5	15	A-4b
		15.0-21.5	0	4	8	50	38	23	6	17	A-4b
		21.5-23.0	45	1	16	30	8	NP	NP	19	A-4a
		23.0-30.0	19	7	11	33	30	23	6	17	A-4a
194+00	3L	0.0-5.0	17	6	14	30	33	28	7	11	A-4a
196+20	3L	0.0-3.0	11	7	12	32	38	33	14	16	A-6a
206+00	3L	0.4-6.0	0	2	5	40	53	36	12	13	A-6a
		6.0-10.0	0	3	8	40	49	31	11	16	A-6a
		10.0-14.5	0	1	3	36	60	30	11	20	A-6a
		14.5-19.0	0	1	2	41	56	30	11	21	A-6a
		19.0-24.0	0	5	12	50	31	19	3	15	A-4b *
		24.0-30.0	26	8	14	30	22	23	6	10	A-4a
210+00	3L	0.4-3.0	28	10	15	23	24	27	7	11	A-4a
		3.0-9.0	17	5	8	42	28	21	4	17	A-4a
		9.0-14.0	0	19	16	33	32	27	6	18	A-4a *
		14.0-19.0	54	1	11	26	8	NP	NP	5	A-2-4
		19.0-21.0	20	10	10	38	22	23	6	13	A-4a
213+25	3L	0.0-5.0	0	3	29	29	39	32	10	15	A-4a
		5.0-10.0	17	7	11	32	33	25	11	15	A-6a
		10.0-16.0	17	6	13	34	30	25	11	14	A-6a
		Ramp D									
174+00	BL	0.2-4.0	23	3	8	30	36	35	14	13	A-6a
		4.0-8.0	13	6	14	38	29	27	11	15	A-6a
		8.0-13.0	22	6	9	33	30	26	11	16	A-6a
		13.0-18.0	23	4	6	34	33	25	11	15	A-6a *
		18.0-22.0	34	1	9	35	21	21	6	15	A-4a
		22.0-28.0	26	5	10	29	30	25	11	12	A-6a
183+00	BL	0.4-3.0	13	8	15	28	35	33	13	14	A-6a
		3.0-7.0	18	6	13	34	29	26	11	12	A-6a
		7.0-12.0	13	8	13	40	26	22	7	11	A-4a *
		12.0-13.5	19	18	34	17	12	NP	NP	15	A-3a
		13.5-18.0	24	8	15	31	22	21	5	14	A-4a
		RELOCATED SR 303 INTERCHANGE									
		Relocated SR 3C3									
37+00	12'Rt	0.4-5.0	10	3	9	40	38	36	17	21	A-6b *
		5.0-10.0	14	6	12	36	32	26	11	15	A-6a
46+00	CL	0.6-5.0	42	3	8	25	22	29	11	16	A-6a
		5.0-8.0	32	4	9	29	26	28	11	15	A-6a
		8.0-10.0	63	2	2	17	16	33	11	14	A-2-6
59+00	12'Rt	0.4-6.0	30	5	8	30	27	29	11	15	A-6a *
		Ramp E									
311+00	BL	0.6-4.0	0	5	10	44	41	30	11	14	A-6a *
		4.0-6.0	0	2	7	69	22	NP	NP	28	A-4b
		6.0-9.0	13	7	10	38	32	25	6	14	A-4a
		9.0-10.0	Gray Broken Weathered Sandstone							4	Visual

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
316+00	BL	0.6-4.0	17	5	8	50	20	23	5	15	A-4b
319+00	3L	0.4-5.0	0	3	7	44	46	33	12	13	A-6a
		5.0-10.0	0	3	9	45	43	31	11	15	A-6a
		10.0-13.0	11	5	8	41	35	29	11	15	A-6a
		13.0-15.0	17	5	11	39	28	23	11	19	A-6a
		Ramp F									
309+00	3L	0.6-5.0	14	7	15	27	37	30	11	12	A-6a
		5.0-11.0	25	4	10	29	32	34	11	13	A-6a *
		11.0-12.0	Gray Broken Clay Shale							7	Visual *
314+00	3L	0.6-5.5	0	10	18	38	34	31	11	15	A-6a
		Ramp H									
316+25	BL	0.5-2.0	15	7	8	45	25	29	11	28	A-6a
		DRIVE SAMPLE SOIL TEST DATA									
245+00	55'Lt	5.0-6.0	26	5	7	29	33	29	11	18	A-6a
		10.0-11.0	38	6	6	24	26	24	6	16	A-4a
		15.0-16.0	33	4	3	31	29	26	11	15	A-6a
		20.0-21.0	24	1	3	23	49	36	14	20	A-6a
		25.0-26.0	39	7	10	23	21	24	8	15	A-4a
		30.0-31.0	33	5	3	32	27	25	11	15	A-6a
		35.0-36.0	0	6	1	54	39	24	8	15	A-4b
		40.0-41.0	0	1	0	37	62	30	11	23	A-6a
		45.0-46.0	0	0	0	27	73	33	12	24	A-6a *
		50.0-51.0	0	0	0	45	54	30	11	29	A-6a
		55.0-56.0	0	0	0	29	71	43	16	26	A-7-6
		60.0-61.0	0	0	1	29	70	45	17	32	A-7-6
275+12	9'Lt	5.0-6.0	14	8	10	32	36	29	9	17	A-4a
		10.0-11.0	36	6	12	29	17	21	5	16	A-4a
		15.0-16.0	Gray Sandy Clayey Silt and Stone Fragments							-	Visual
		20.0-20.5	33	6	15	28	18	19	3	10	A-4a
		25.0-25.3	Gray Sandy Clayey Silt and Stone Fragments							-	Visual *
286+85	CL	5.0-6.0	32	6	7	23	32	32	11	16	A-6a
		10.0-11.0	51	4	6	19	20	27	6	15	A-4a *
		15.0-16.0	47	2	1	28	22	36	11	15	A-6a
		20.0-21.0	50	9	4	22	15	28	8	14	A-4a
330+00	CL	5.0-6.0	28	5	7	33	27	29	11	17	A-6a
		10.0-11.0	29	6	9	31	25	29	8	15	A-4a
		15.0-16.0	38	5	6	25	26	30	11	18	A-6a
		20.0-21.0	39	9	10	24	18	26	6	18	A-4a
301+00	CL	5.0-6.0	0	3	9	40	48	32	11	17	A-6a
		10.0-11.0	11	4	9	39	37	33	11	19	A-6a
		15.0-16.0	10	4	9	42	35	28	11	21	A-6a
		20.0-21.0	14	4	10	39	33	26	5	19	A-4a
		25.0-26.0	18	3	7	43	29	27	11	15	A-6a
		30.0-31.0	0	3	11	50	36	25	5	17	A-4b
		35.0-36.0	0	2	4	54	40	26	7	18	A-4b *
		40.0-41.0	0	2	5	53	40	24	4	18	A-4b
		45.0-46.0	0	1	2	65	32	NP	NP	18	A-4b *
		50.0-51.0	0	1	10	70	19	NP	NP	23	A-4b
		55.0-56.0	0	1	18	68	13	NP	NP	21	A-4b
		60.0-61.0	0	0	8	75	17	NP	NP	22	A-4b
406+00	**100'Rt**	**5.0-6.0**	**11**	**5**	**10**	**34**	**40**	**28**	**11**	**17**	**A-6a**
		10.0-11.0	**0**	**10**	**52**	**34**	**4**	**28**	**7**	**18**	**A-4b**
		15.0-16.0	**14**	**5**	**8**	**42**	**31**	**30**	**11**	**17**	**A-6a**
		20.0-21.0	**0**	**8**	**8**	**50**	**34**	**29**	**9**	**22**	**A-4b**
		25.0-26.0	**7**	**5**	**8**	**51**	**29**	**32**	**11**	**20**	**A-6a**
		30.0-31.0	**19**	**4**	**6**	**35**	**36**	**27**	**11**	**15**	**A-6a**
		35.0-36.0	**7**	**2**	**4**	**43**	**44**	**30**	**11**	**20**	**A-6a**
		40.0-41.0	**27**	**2**	**3**	**36**	**32**	**28**	**11**	**20**	**A-6a**
		45.0-46.0	**0**	**1**	**1**	**62**	**36**	**26**	**4**	**22**	**A-4b**
		50.0-51.0	**0**	**2**	**2**	**50**	**46**	**29**	**7**	**18**	**A-4b**
		55.0-56.0	**0**	**1**	**0**	**71**	**28**	**NP**	**NP**	**26**	**A-4b**
		60.0-61.0	**0**	**2**	**1**	**50**	**47**	**29**	**6**	**23**	**A-4b**
		65.0-66.0	**0**	**0**	**2**	**70**	**28**	**NP**	**NP**	**9**	**A-4b**
		70.0-71.0	**Gray Sand and Silt**								**Visual**
		75.0-76.0	**0**	**2**	**4**	**75**	**19**	**NP**	**NP**	**21**	**A-4b**
		80.0-81.0	**0**	**0**	**1**	**82**	**17**	**NP**	**NP**	**21**	**A-4b**
		85.0-86.0	**0**	**2**	**6**	**75**	**17**	**NP**	**NP**	**16**	**A-4b**

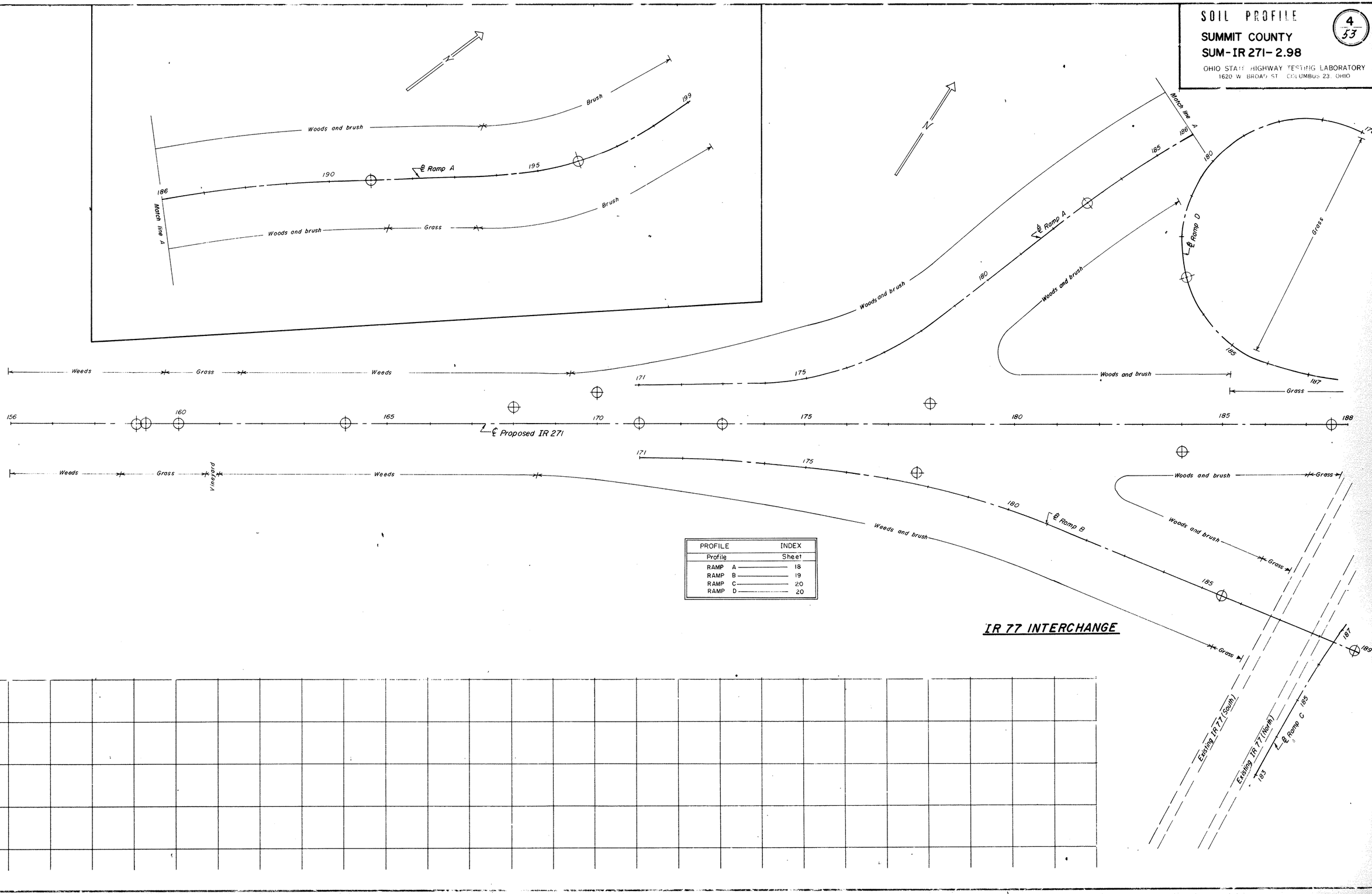
SOIL PROFILE

4
53

SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO



PROFILE	INDEX
Profile	Sheet
RAMP A	18
RAMP B	19
RAMP C	20
RAMP D	20

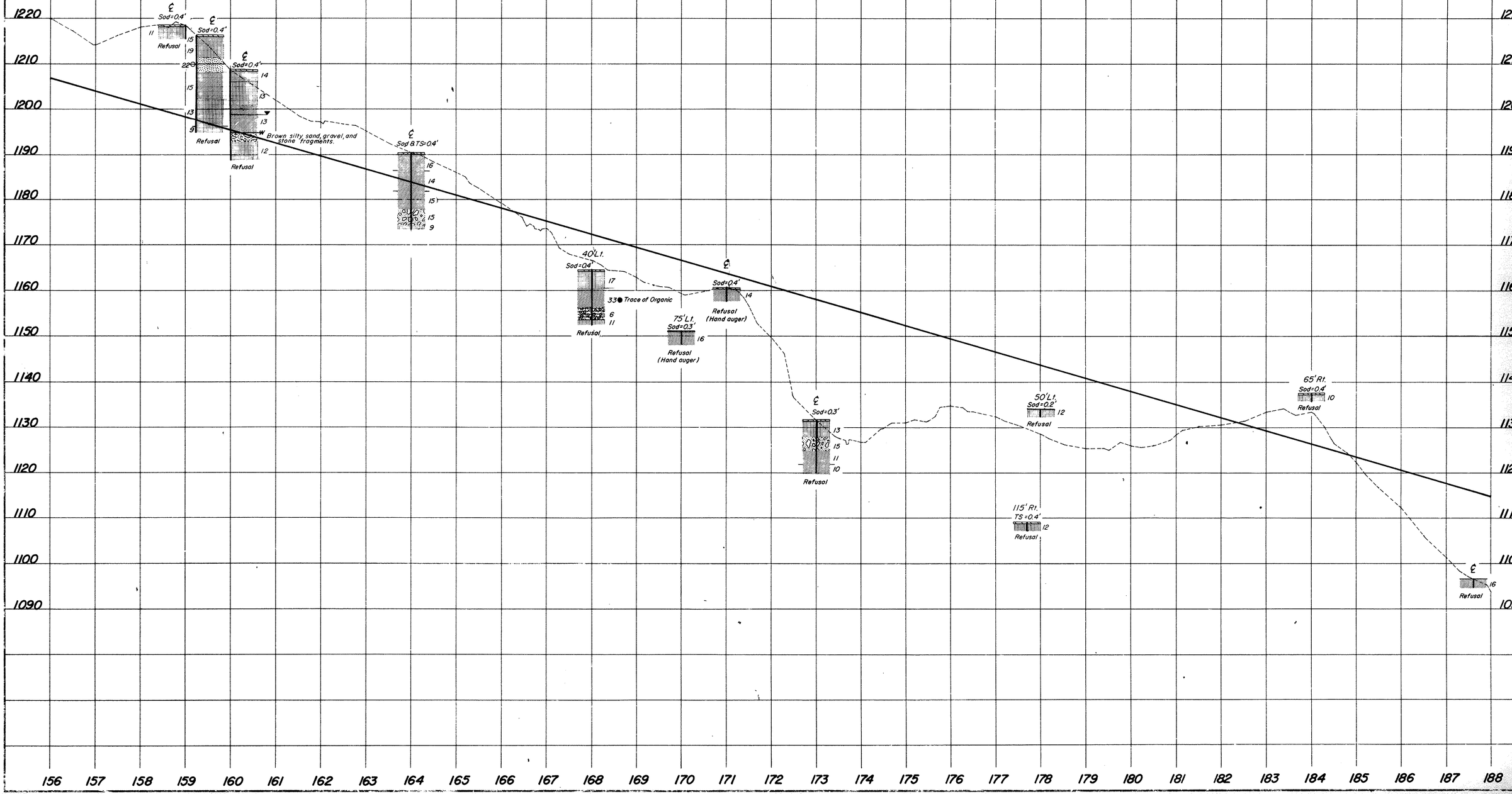
IR 77 INTERCHANGE

SOIL PROFILE

SUMMIT COUNTY
SUM- IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

5/53



SOIL PROFILE

6
53

SUMMIT COUNTY
SUM-271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. [illegible] COLUMBUS 23 OHIO

Match Line A

Grass

℄, Ramp D

Existing I.R. 77 (South)

Existing I.R. 77 (North)

Woods

℄, Ramp C

℄, Ramp B

Scattered trees and brush

Cultivated

℄, Proposed IR 271

Oil well

℄, Ramp B (Cont'd)

PROFILE INDEX	
Profile	Sheet
RAMP A	18
RAMP B	19
RAMP C	20
RAMP D	20

IR 77 INTERCHANGE

SOIL PROFILE

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

7/33

Proposed Grade, Ramp D

℄ 13 14 14 15 18

℄ 13 19 22 17

Proposed Grade, Ramp B

20' Rt. 14 17 16 16
Refusal (Boulders)

Eastbound Lanes

60' Lt. Sod=0.3 12 15 15

65' Rt. Sod=0.4' 13 15 13 14 26

Westbound Lanes

55' Lt. 13 9 16

42' Rt. Fill material 12
Refusal (Boulders)

80' Lt 14 13 12

92' Lt. 15 16 29 37 16 21

1110 1100 1090 1080 1070 1060 1050 1040 1030 1020 1010 1000 990 980 970 960 950 940 930

188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220

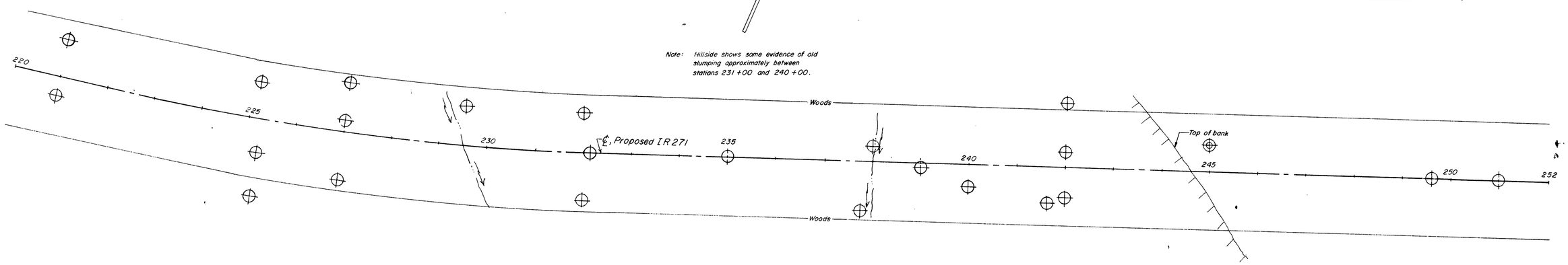
SOIL PROFILE

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23 OHIO

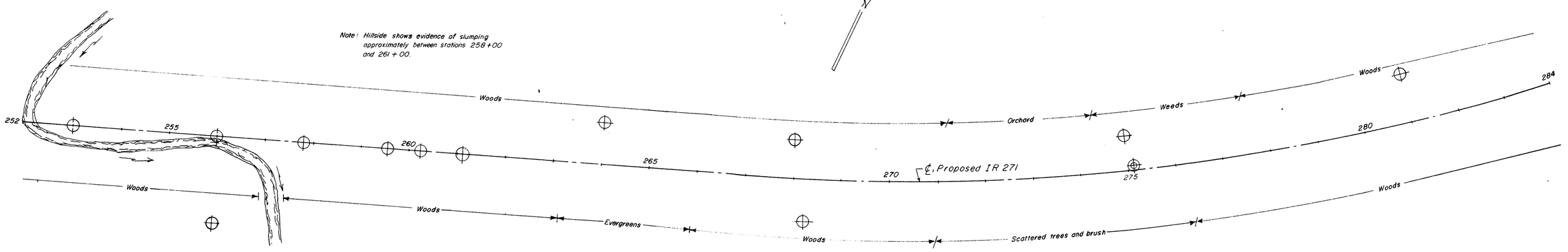
8/53

CROSS SECTION INDEX	
Station	Sheet
225+00	24
227+00	24
232+00	25
242+00	25



Note: Hillside shows some evidence of old slumping approximately between stations 231+00 and 240+00.

N



Note: Hillside shows evidence of slumping approximately between stations 258+00 and 261+00.

Note: For cross sections of stations 256+00 and 275+00, see sheets 26 and 27, respectively.

SOIL PROFILE

SUMMIT COUNTY
SUM-IR 271 - 2.98

9/53

OHIO STATE HIGHWAY TEST LABORATORY
1627 W. BROAD ST. COLUMBUS 23, OHIO

1020 1010 1000 990 980 970 960 950 940 930 920 910 900 890 880 870 860

220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252

77' Lt.
Sod=0.3'
13
13
17

40' Rt.
Sod=0.3'
12
28
34⊖

70' Rt.
Fill-Brown silt
16
19
20
15
11

25' Lt.
TS=0.6'
10
17
15

80' Lt.
21
28●
27
29
30
18

℄
TS=0.4'
9
17
29

℄
TS=0.6'
13
16

Eastbound Lanes

Westbound Lanes

102' Rt.
TS=0.5'
15
12

30' Lt.
Fill material
29⊖
9
Refusal
(Boulders)

10' Rt.
TS=0.4'
14
29⊖

47' Rt.
TS=0.4'
16
27

30' Lt.
13
15

55' Lt.
20/21 18
14/26 16
15/19 15
11/22 29
19/17 15
18/18 15
14/21 15
13/18 23
9/11 24
7/8 29●
11/13 26
7/8 32

℄
TS=0.2'
20
23
21
16
27

℄
16
22
19
21

SOIL PROFILE

SUMMIT COUNTY
SUM-IR 271 - 2.98

10
53

OHIO STATE HIGHWAY TESTING LABORATORY
1627 W BROAD ST COLUMBUS 23 OHIO

Eastbound Lanes
Westbound Lanes

℄ 21 21 19 22 23 23 28 19

85'Lt. Sod=0.6' 14 15 14 13 14 17 Refusal

80'Lt. Sod=0.6' 12 10 17 16 W

90'Rt. Swamp Sod=0.6' 25 19 15 18 18

70'Lt. Sod=0.6' 13 13 9 8 9 Refusal

9'Lt. 31/47 17 7/10 16 15/20 Gray sandy clayey silt and stone fragments. 24/47 10 50/4 Gray sandy clayey silt and and stone fragments. Top of Rock

Shale, gray, very arenaceous, soft to firm, non-fissile, jointed and broken, with many clay seams, slightly weathered. Core loss 4%.

x = Refusal

100'Lt. Sod=0.6' 12 11 Refusal

℄ 16 26 7 11 Refusal (Boulders)

℄ TS=0.3' 10 10 14 16 11 Refusal (Boulders)

℄ 11 33 28 13 Refusal (Boulders)

℄ W Brown sand and gravel 28 28 24 28 Refusal (Hole caved in at elevation 859.4')

℄ 13 27 16 Refusal (Boulders)

990 980 970 960 950 940 930 920 910 900 890 880 870 860 850 840 830

990 980 970 960 950 940 910 900 890 880 870 860 850 840

1100 1090 1080 1070 1060 1050 1040 1030 1020 1010 1000 990 980 970 960 950 940

252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284

SOIL PROFILE

SUMMIT COUNTY
SUM-IR 271 - 2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23 OHIO

11/53

Note: For cross section of station 287+00, see sheet 27.

Woods | Weeds | Woods | Weeds | Orchard | Brush and weeds | Weeds

℄, Ramp F

℄, Ramp G

℄, Proposed IR 271

Woods | Weeds | Orchard | Brush and weeds

Existing Major Rd.

Orchard | Grass

℄, Ramp E

℄, Ramp H

Note: For complete plan view of SR 303 interchange, see sheet 21.

Auger – Core Boring

Westbound Lanes

Eastbound Lanes

℄ Sod=0.6'

16/29 | 15/25 | 15/24 | 14/18

Top of Rock

Shale, gray, arenaceous, fissile, medium-firm to firm, jointed and badly broken, slightly weathered in top 17.0', with sandstone and clay seams. Core loss 7%.

℄ Sod=0.6'

11 | 14 | 12

Refusal

℄ Sod=0.6'

14 | 19 | 16 | 12 | 11

℄ Sod=0.6'

13 | 12 | 8

Top of Rock

Shale, brown to gray, fissile, arenaceous, medium-firm, jointed and broken, slightly weathered with clay seams. Core loss 19%.

60' Lt. Sod=0.6'

12 | 13

Refusal

℄

13 | 14

Refusal (Boulders)

1120 1110 1100 1090 1080 1070 1060

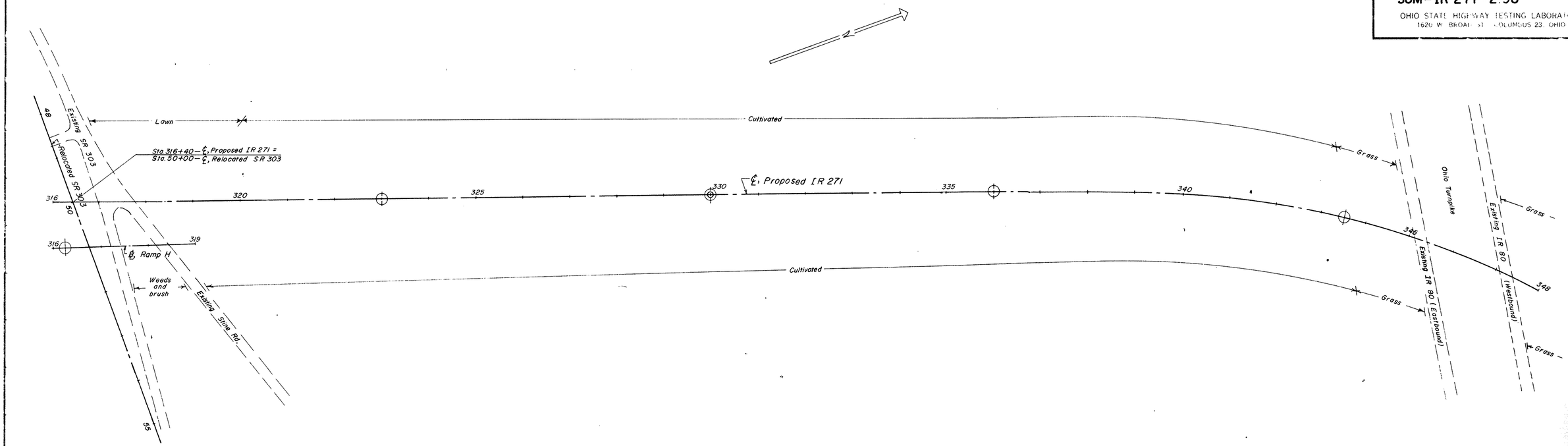
284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316

SOIL PROFILE

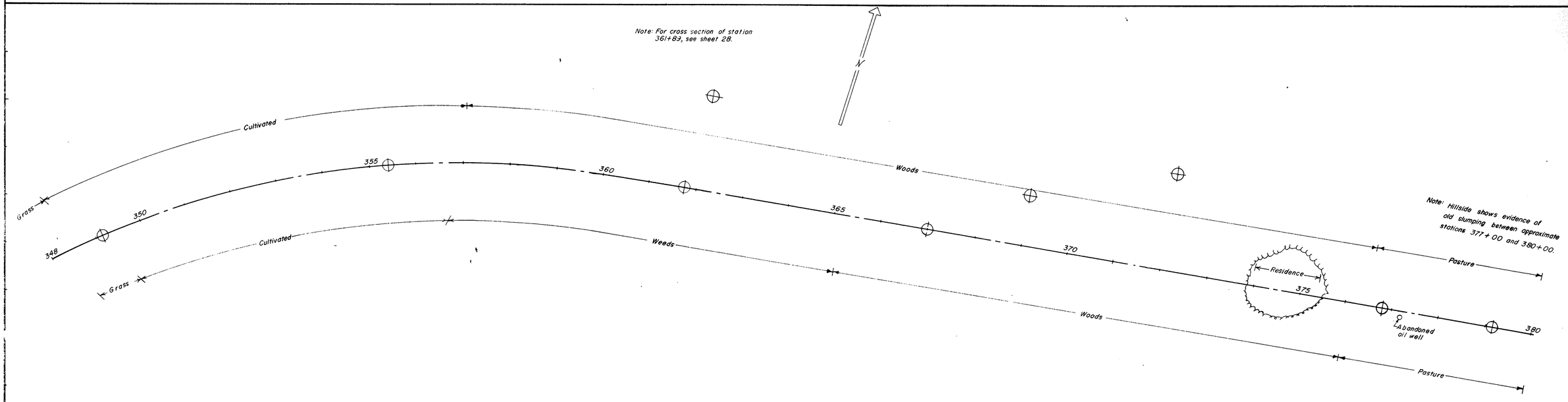
SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. - COLUMBUS 23, OHIO

12
53



Note: For cross section of station 361+83, see sheet 28.



Note: Hillside shows evidence of old slumping between approximate stations 377+00 and 380+00.

SOIL PROFILE

13/53

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

Proposed Grade, Relocated S R 303

1110 1100 1090 1080 1070 1060 1050 1040 1030 1020 1010 1000 990 980

316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348

℄ Sod=0.6'

14 16 18 16

Refusal

Auger – Core boring

℄ Sod=0.6'

16 15 14 16

Top of Rock

A. A. Sandstone, gray, very fine-grained, argillaceous and calcareous, broken and jointed. Core loss 3%.

B.

B. Shale, gray, arenaceous, fissile, broken, medium-firm, with sandstone and limestone seams, slightly weathered in top 5.0'. Core loss 6%.

℄ Sod=0.6'

17 16 B 13 B 9

Refusal

℄, Existing Eastbound Ohio Turnpike

℄ Sod=0.6'

13 21 B 15

Refusal

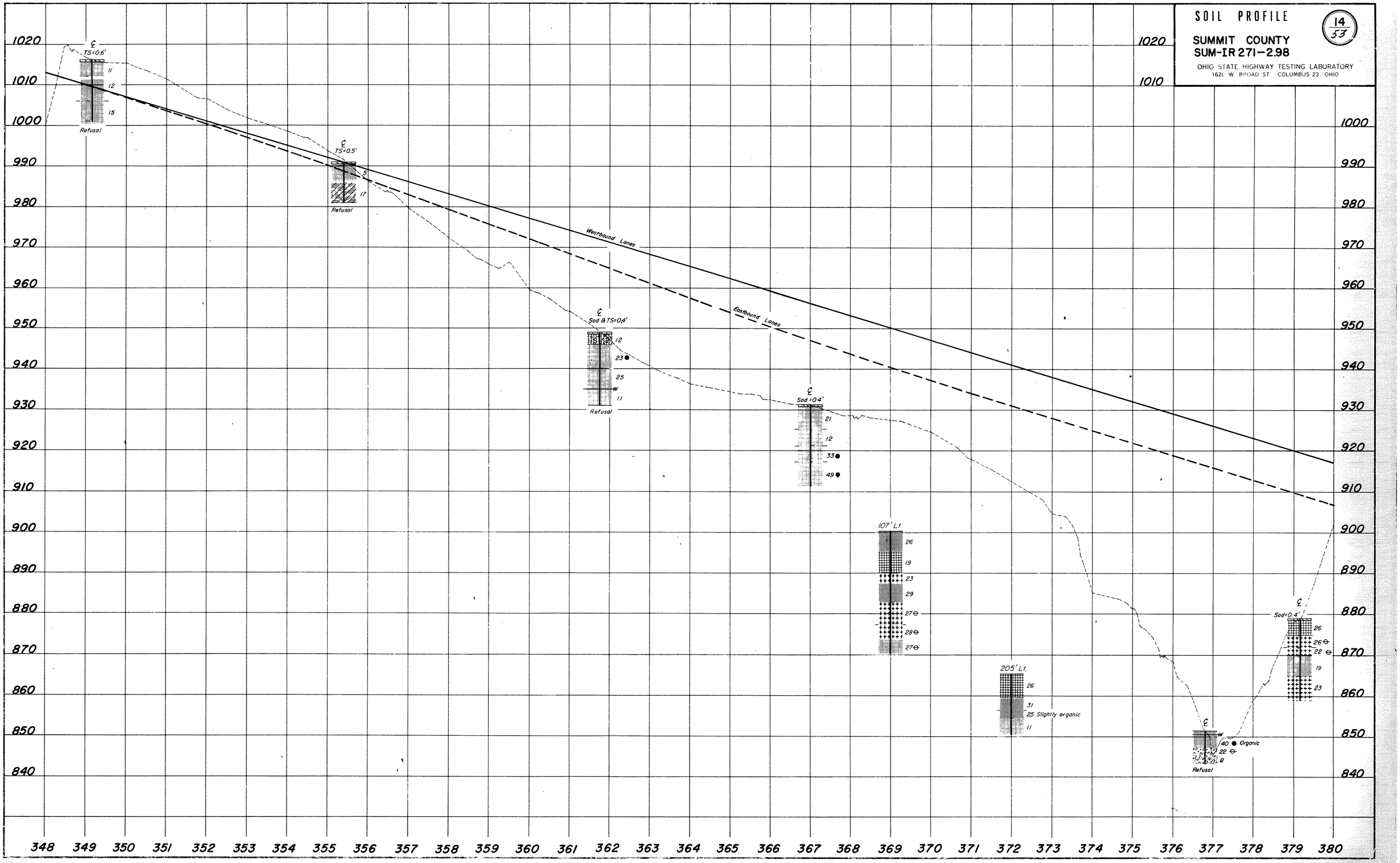
℄, Existing Westbound Ohio Turnpike

SOIL PROFILE

(14/53)

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO



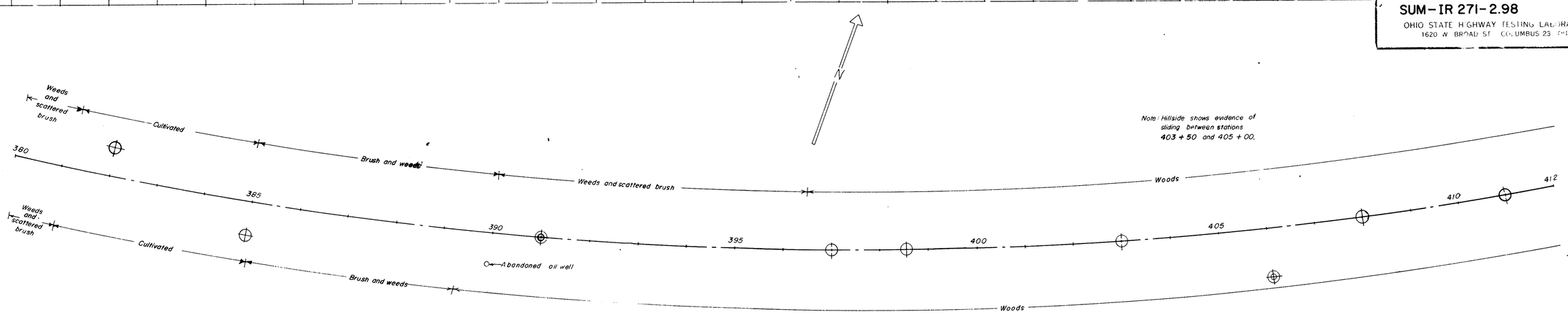
SOIL PROFILE

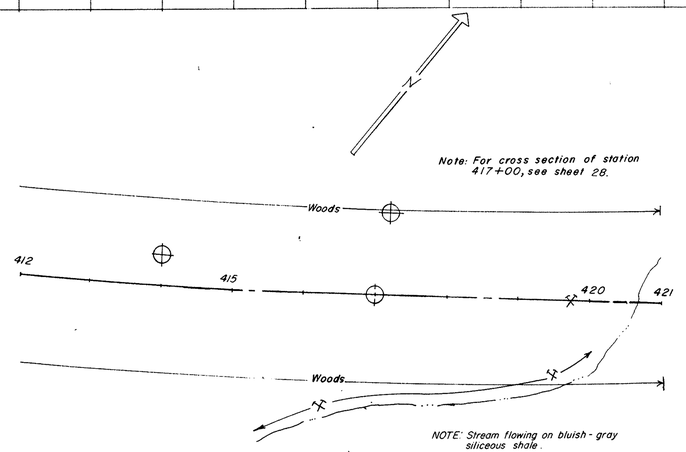
15
33

SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23 OHIO





SOIL PROFILE

16/53

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

930 920 910 900 890 880 870 860 850 840 830 820 810 800 790 780

380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412

60' Lt.
TS=0.4'
15
19
20

70' Rt.
Sod=0.4'
16
18
17
14
18

℄
(16/24) 17
(11/25) 19
(11/20) 21
(16/27) 19
(13/17) 15
(20/23) 17
(18/20) 18
(16/21) 18
(13/28) 18
(33/38) 23
(28/37) 21
(20/21) 22

Sandstone boulders

Westbound Lanes

Eastbound Lanes

℄
Sod=0.4'
12
15
16
16
17
19

℄
20
Refusal
(Hand auger)

100' Rt.
(23/33) 17
(14/28) 18
(12/20) 17
(14/15) 22
(17/24) 20
(19/24) 15
(13/18) 20
(16/19) 20
(18/25) 22
(15/22) 18
(12/21) 26
(19/21) 23
(14/17) 9
(32/34) Gray sand and silt
(31/39) 21
(34/38) 21
(41/46) 16

℄
19
Refusal
(Hand auger)

℄
Light-brown clay
Refusal
(Hand auger)

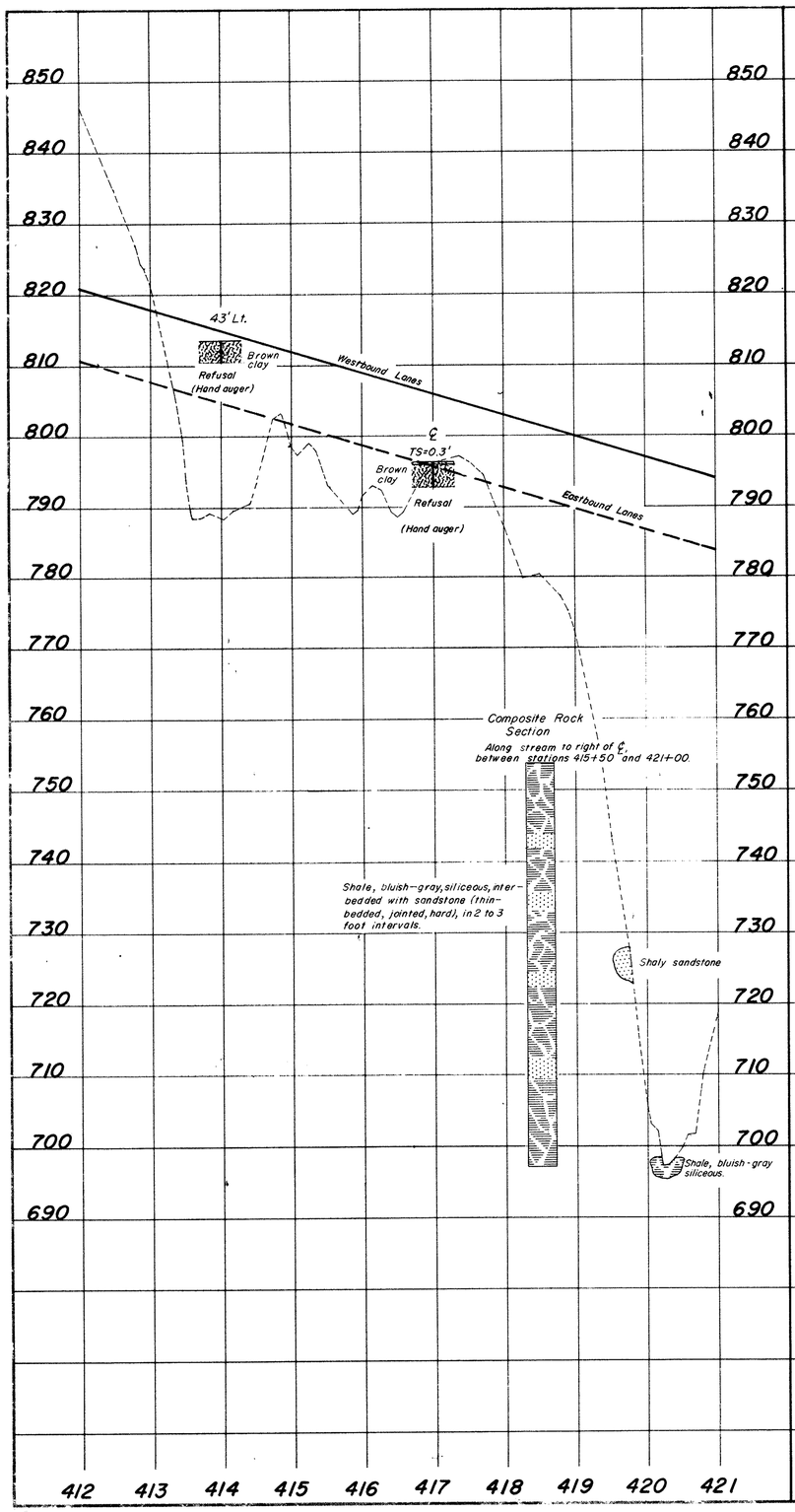
℄
TS=0.4
51 ● Trace of organic
40 Slightly organic
Refusal
(Hand auger)

SOIL PROFILE

17
53

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO



SOIL PROFILE

18/53

SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23 OHIO

1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
1070
1060
1050

(Sta. 171+00-℄, Proposed IR 271)
90' Rt.
Sod=0.4'
14
Refusal
(Hand auger)

(Sta. 173+00-℄, Proposed IR 271)
95' Rt.
Sod=0.5'
13
15
11
10
Refusal

℄
Sod=0.4'
13
20
13
15
10
W
14

℄
Sod=0.4'
19
16
13
W17

℄
Sod=0.3'
13
14
16
18

Ramp A

IR 77 INTERCHANGE

171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199

SOIL PROFILE

19
53

SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23 OHIO

Ramp B

(Sta. 171+00-℄, Proposed IR 271) 82' Lt. Sod=0.4' — 14 — Refusal (Hand auger)

(Sta. 173+00-℄, Proposed IR 271) 88' Lt. Sod=0.3' — 13, 15, 11, 10 — Refusal

(Sta. 177+70-115' Rt., Proposed IR 271) 25' Rt. TS=0.4' — 12 — Refusal

℄ Sod=0.3' — 13, 20, 17, 16, 12, 12, 13, 16

℄, IR 77

Proposed Grade, Ramp C

℄ — 13, 17, 15, 17, 19, 17

℄ — 11 — Refusal (Hand auger)

Proposed Grade, Westbound Lane (IR 271)

Proposed Grade, Eastbound Lane (IR 271)

℄ — 16 — Refusal (Hand auger)

Ramp B (Cont'd)

℄ Sod=0.4' — 13, 16, 20, 21, 15, 10

℄ Sod=0.4' — 11, 17, 18, 5, W, 13

℄ — 15, 15, 14

IR 77 INTERCHANGE

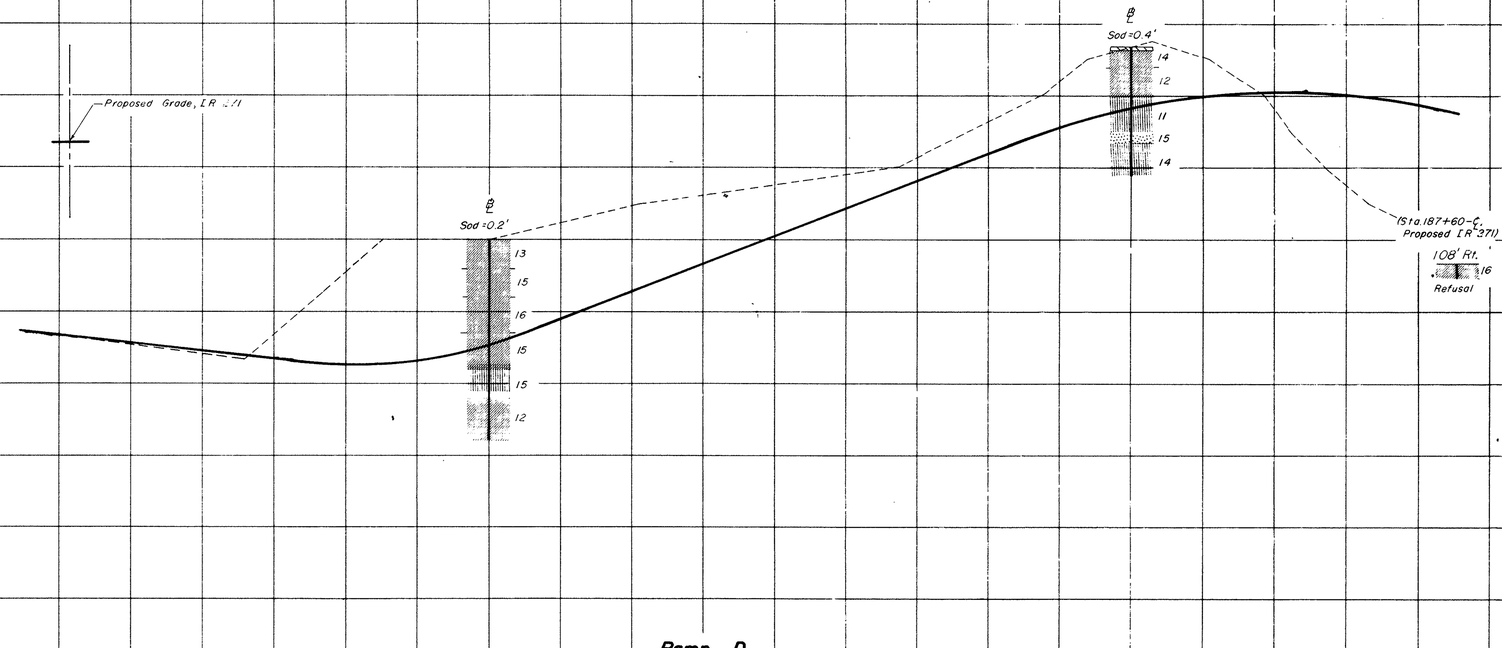
SOIL PROFILE

20/53

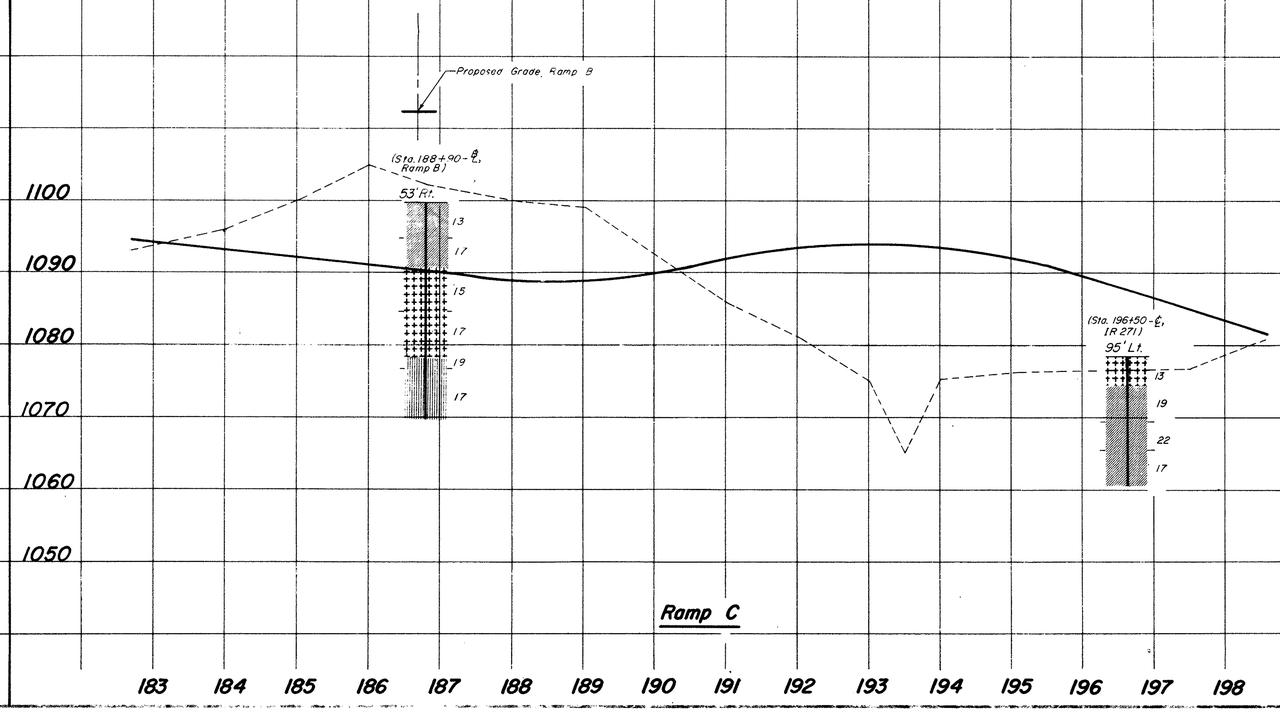
SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO



Ramp D



Ramp C

IR 77 INTERCHANGE

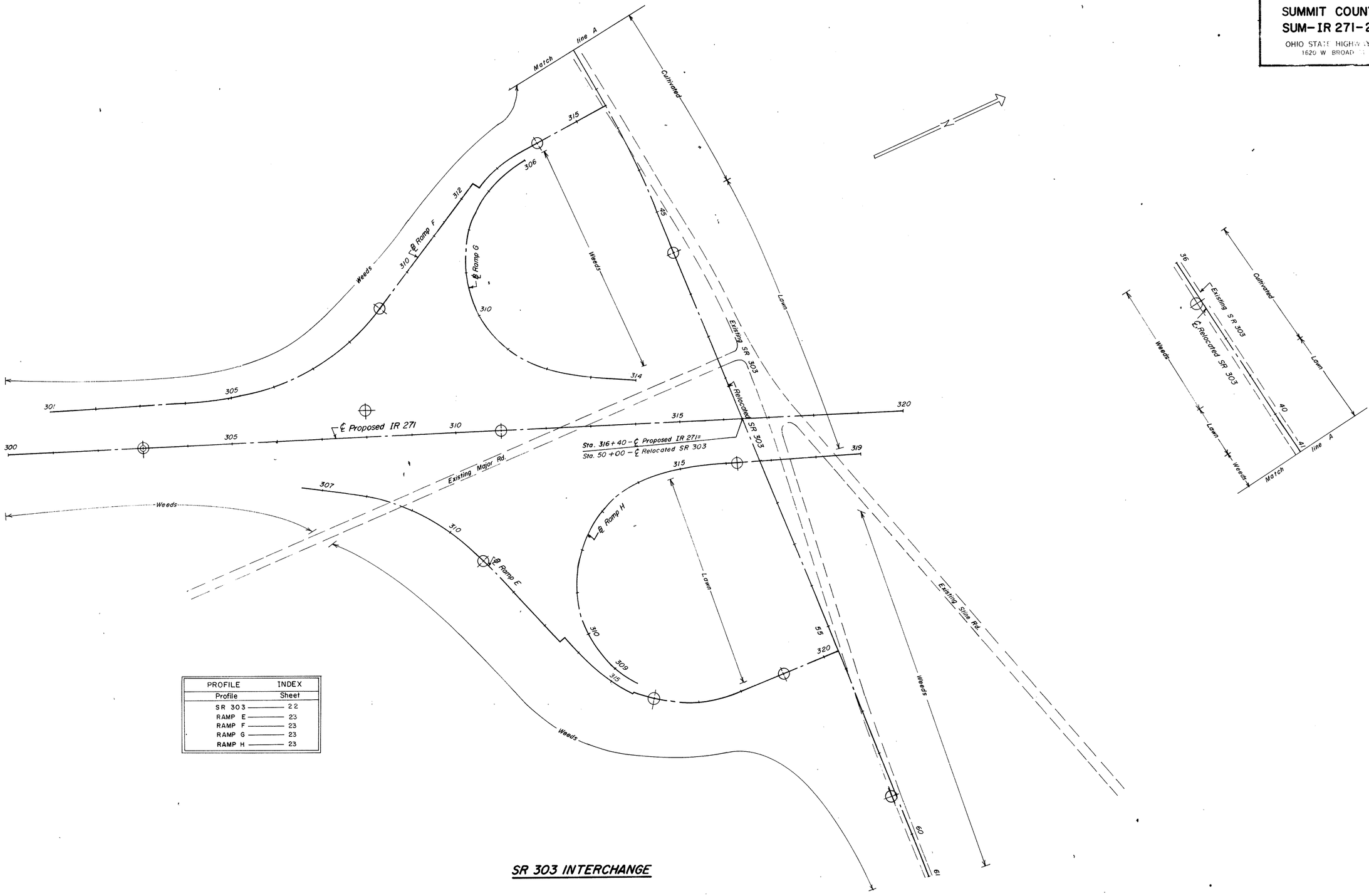
SOIL PROFILE

SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

21/33



PROFILE INDEX	
Profile	Sheet
SR 303	22
RAMP E	23
RAMP F	23
RAMP G	23
RAMP H	23

SR 303 INTERCHANGE

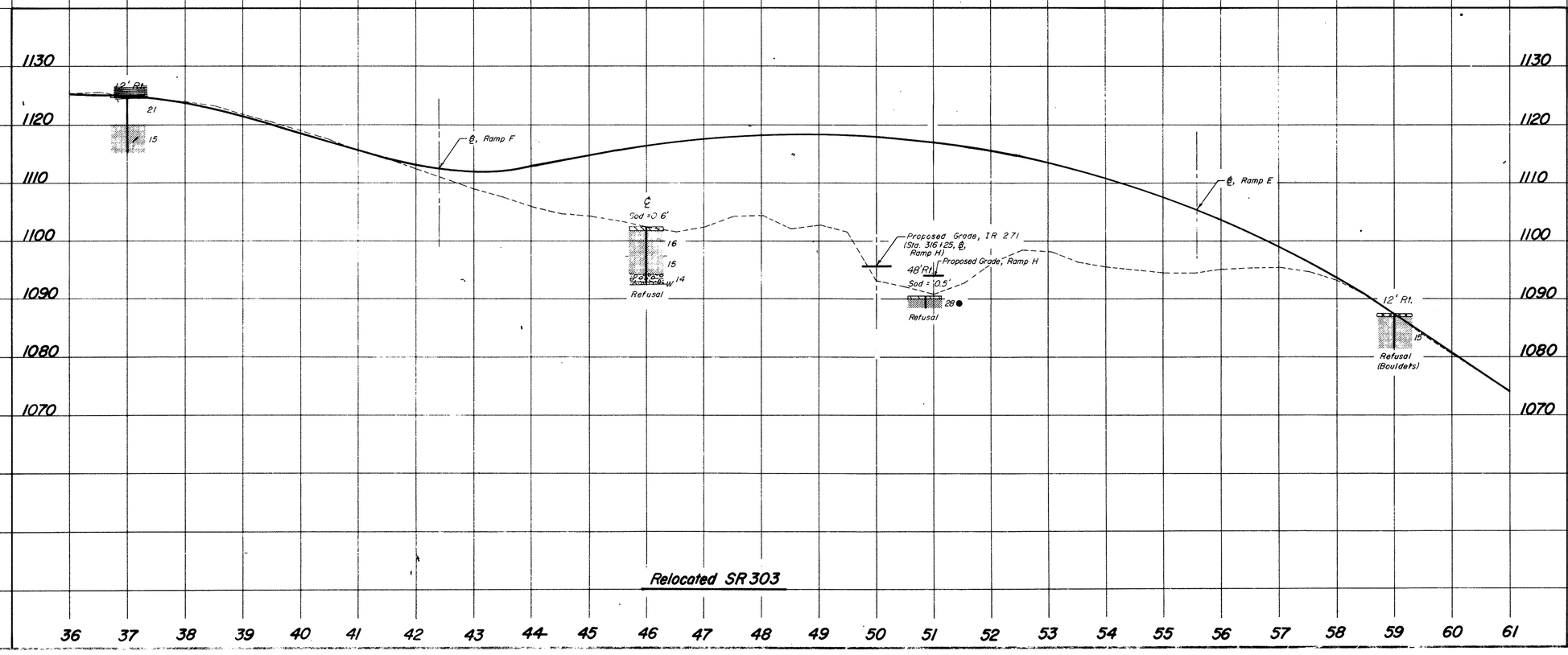
SOIL PROFILE

SUMMIT COUNTY

SUM-IR 271-2.98

22/53

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO



SR 303 INTERCHANGE

SOIL PROFILE

SUMMIT COUNTY

SUM-IR 271 - 2.98

OHIO STATE HIGHWAY ESTIMATING DIVISION
1620 W. BROAD ST. COLUMBUS 23, OHIO

23
53

Ramp G

(Sta. 311+00-℄, I.R. 271) 165' Rt.

Sod=0.6'

13

14

Refusal (Boulders)

Ramp E

℄ SR 303

℄ Sod=0.6'

14

28

14

4

Refusal

℄ Sod=0.6'

15

Refusal

℄ Sod=0.4'

13

15

15

19

Ramp F

Auger - Core Boring (Sta. 303+00-℄, IR 271) 102' Rt.

Sod=0.6'

13

12

8

Top of Rock

Shale, brown to gray, fissile, arenaceous, medium-firm, jointed and broken, slightly weathered with clay seams. Core loss 19%.

℄ Sod=0.6'

12

13

8 7

Refusal

℄ Sod=0.6'

15

Refusal

℄, S R 303

Ramp H

Proposed Grade, SR 303

(Sta. 311+00-℄, Ramp E) 210' Lt.

Sod=0.6'

14

28

14

4

Refusal

℄ Sod=0.5'

28

Refusal

SR 303 INTERCHANGE

SOIL PROFILE

24/53

SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

Sta. 227+00

8
Refusal
(Hand auger)

TS =0.6'
10
17
15

Sod =0.6'
17
32
26

1000 990 980 970 960 950 940 930 920

110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210

Sta. 225+00

(Sta. 225+15)
TS =0.5'
19
23
27
28
31
30

(Sta. 225+25)
Fill- Brown silt
16
19
20
15
11

(Sta. 225+25)
TS =0.5'
11
Brown clayey silty sand & gravel
13
Refusal
(Boulders)

1000 990 980 970 960 950 940 930 920 910

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190

SOIL PROFILE

25/53

SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

Sta. 242+00

TS=0.2'
12
13
14
15
15
24
9

13
15

(Sta. 241+65)
14
13
20
14
26
26

Sta. 232+00

Sod=0.6'
15
15

(Sta. 232+15)
TS=0.4'
9
17
29

14
31
18

990 980 970 960 950 940 930 920 910 900

140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180

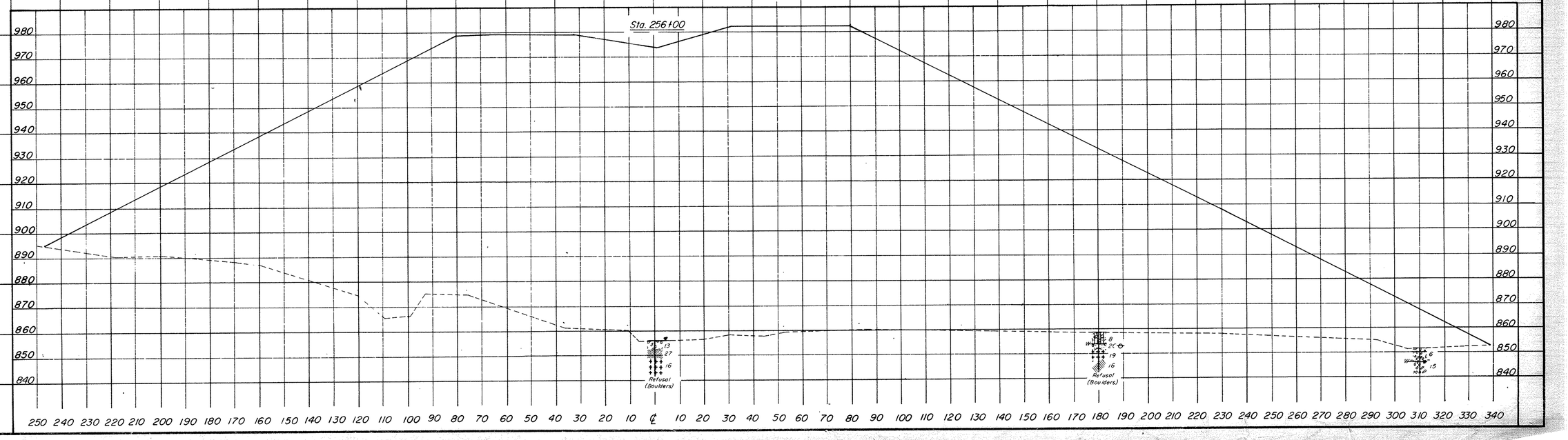
SOIL PROFILE

26/33

SUMMIT COUNTY

SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO



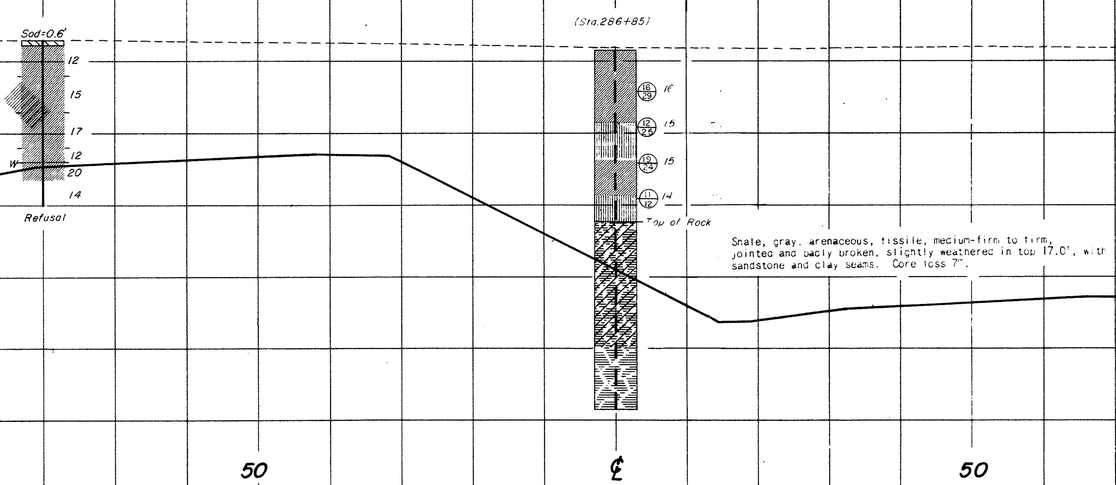
SOIL PROFILE

27/53

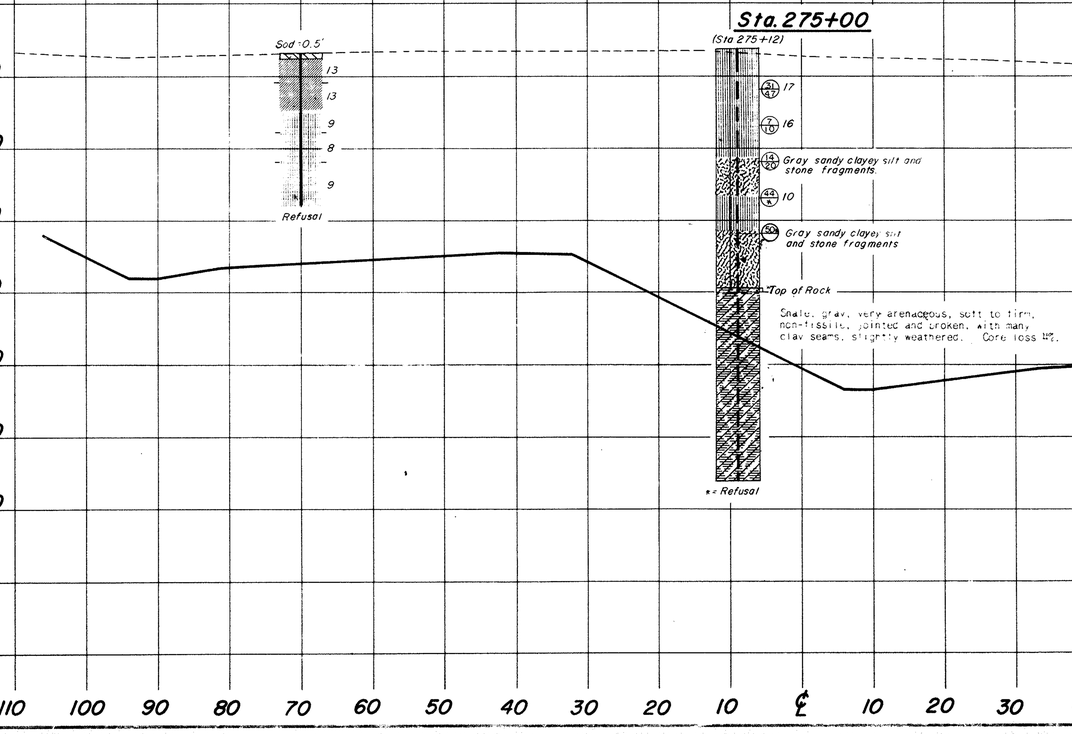
SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

Sta.287+00



Sta.275+00



SOIL PROFILE

28
33

SUMMIT COUNTY
SUM-IR 271-2.98

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W [illegible] COLUMBUS, OHIO

Sta. 417+00

TS =0.3'
Brown clay
Refusal
(Hand auger)

(Sta. 417+20)
62 Organic
Refusal
(Hand auger)

Stream flowing on shale bedrock

Sta. 361+89

(Sta. 361+75)
Sod & TS =0.4'
12
23
25
W
11
Refusal

(Sta. 362+00)
6
Refusal
(Boulders)
(Hand auger)

TE - 118
600 - 11 - 64

SUMMIT COUNTY
SUM-IR271-2.98

1/3

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Moderately deep glacial-derived soil overlies limestone and shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of two drive sample-core borings, made on January 19 and 21, 1965, and five drive rod penetration tests, made on March 16, 17, and 18, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered unstratified, dense and very dense gravel, sand, and silt overlying boulders. The borings were terminated at 42' and 44 foot-depths, elevations 1048 and 1044 feet, after penetrating 9 and 10 feet of boulders.

Rod soundings met gradual increase in penetration resistance with increase in depth and were terminated upon encounter with medium-high resistance and refusal to penetration 32 to 41 feet below ground surface, elevations 1070 to 1058 feet, considered to be in very dense gravels, sands, silts, and boulders, as revealed by the borings.

Free water was encountered in rod sounding holes numbers 1, 5, and 9, between elevations 1112 and 1084 feet.

No test penetrated to bedrock surface.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test. X = Number of Blows for First 6 inches. Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Defipitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

LOG OF BORING

Date Started 1-19-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 1-19-65 — Casing: Length — Dia. —
Boring No. B-8 — Station & Offset 188+63, 20' Lt. (FORWARD PIER) — Surface Elev. 1088.1'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL. Class.
1088.1	0														
	2														
	4														
1083.1	6	3/8			Gray Sandy Gravelly Clay	1	18	6	10	31	35	27	11	17	
1080.6	8	7/11			Gray Sandy Gravelly Silt	2	29	6	10	26	29	26	6	17	
1078.1	10	6/9			Gray Gravelly Sandy Silt	3	17	7	14	32	30	22	4	15	
1075.6	12	23/35			Gray Silty Gravelly Sand	4	30	15	28	15	12	NP	NP	8	
1073.1	14	29/40			Gray Silty Sandy Gravel	5	W	I	S	U	A	L		11	
1070.6	16	22/27			Gray Sandy Gravelly Silt	6	32	11	13	32	12	NP	NP	12	
1068.1	18	12/12			Gray Sandy Gravelly Silt	7	W	I	S	U	A	L	22	6	9
	20														
	22														
1063.1	24														
	26	26/44			Gray Gravel	8	85	8	3	4		NP	NP	10	
	28														
1058.1	30														
	32	28/28			Gray Silty Sand	9	8	8	72	9	3	NP	NP	21	
	34														
1053.1	36	29/50 (0.9')			Gray Silt and Shale Fragments	10	42	5	7	34	12	24	4	16	
1052.1	38				Gray Sandy clayey silt with boulders and cobbles.										
	40		3.2	1.8											
	42														
1044.1	44		2.8	8.4											

BOTTOM OF BORING

Weathered

LOG OF BORING

Date Started 1-21-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 1-21-65 — Casing: Length — Dia. —
Boring No. B-3 — Station & Offset 186+53, 7' Rt. (REAR PIER) — Surface Elev. 1090.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL. Class.
1090.0	0														
	2														
	4														
1085.0	6	6/7			Gray Gravelly Silt	1	W	I	S	U	A	L	24	7	17
1082.5	8	11/12			Gray Gravelly Sandy Silt	2	17	7	12	37	27	24	7	14	
1080.0	10	12/12			Gray Sandy Silt	3	9	8	22	36	25	NP	NP	14	
1077.5	12	15/16			Gray Sandy Silt	4	0	10	26	45	19	NP	NP	16	
1075.0	14	7/10			Gray Sandy Silt	5	12	5	11	38	34	22	6	15	
1072.5	16	7/16			Gray Sandy Gravelly Silt	6	23	5	12	32	28	22	5	18	
1070.0	18	15/15			Gray and Brown Sandy Gravelly Silt	7	34	6	19	25	16	19	3	12	
1067.5	20	22/35			Gray and Brown Sandy Silt	8	12	10	30	32	16	NP	NP	23	
1065.0	22	14/20			Gray Silty Gravelly Sand	9	28	11	25	24	12	NP	NP	11	
	24														
	26														
1060.0	28	30/60			Gray Gravelly Silt with Stone Fragments	10	23	9	31	24	13	NP	NP	10	
1057.0	30														
	32														
	34														
	36		2.0	3.0	Brownish-gray silty clay with limestone boulders and cobbles.										
	38														
	40		1.3	8.7											
1048.0															

BOTTOM OF BORING

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0354
RAMP B (IR271) OVER IR 77
SEC. SUM-IR271-2.98

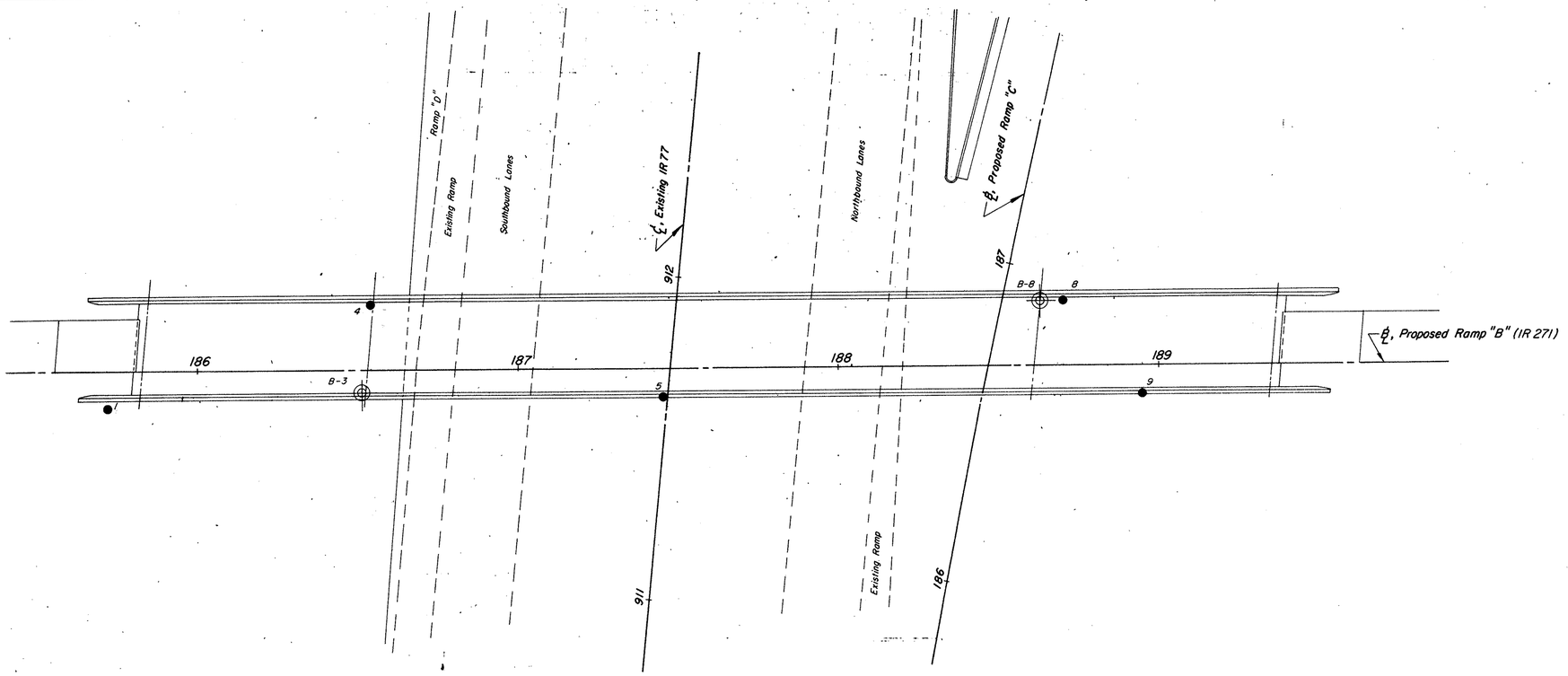
CHECKED BY	REVIEWED BY	DATE
R.H.P.	R.D.R.	3/23/65

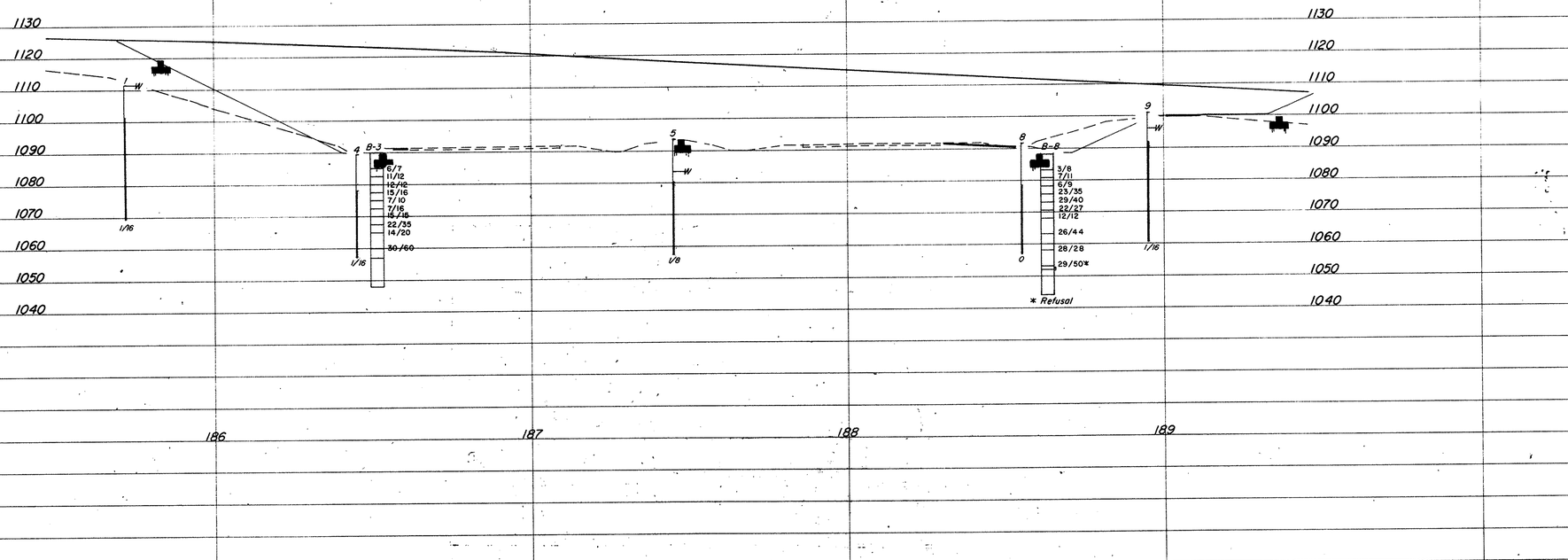
TE - 119
500 - 11 - 64

30/53

SUM-IR271-2.98

2/3





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0354
RAMP B (IR 271) OVER IR 77
SEC. SUM-IR271-2.98

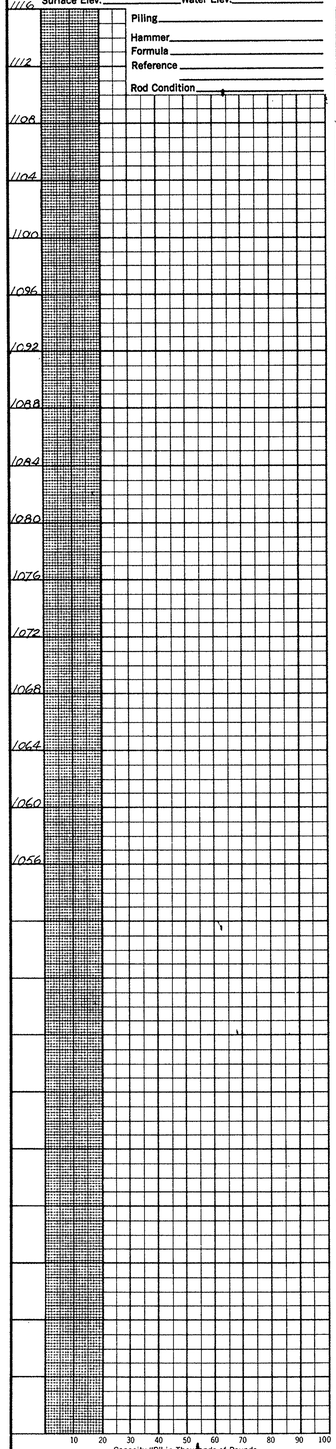
PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.C.	R.H.P.	R.D.R.	3/23/65

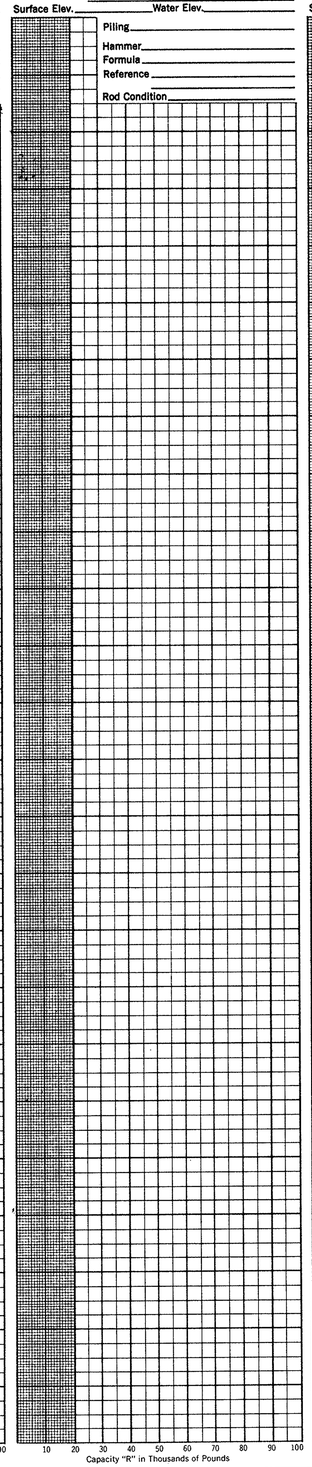
TR-114
1000-1-64

31
53
3
3

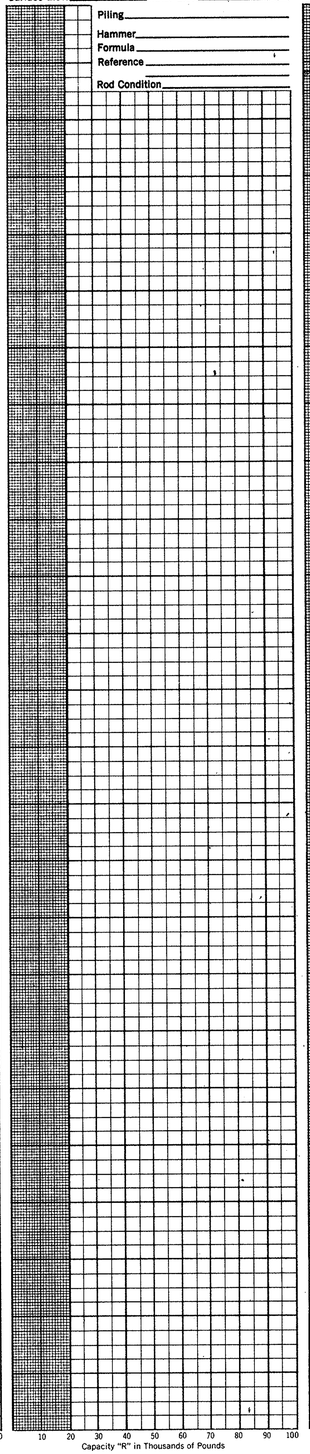
Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____



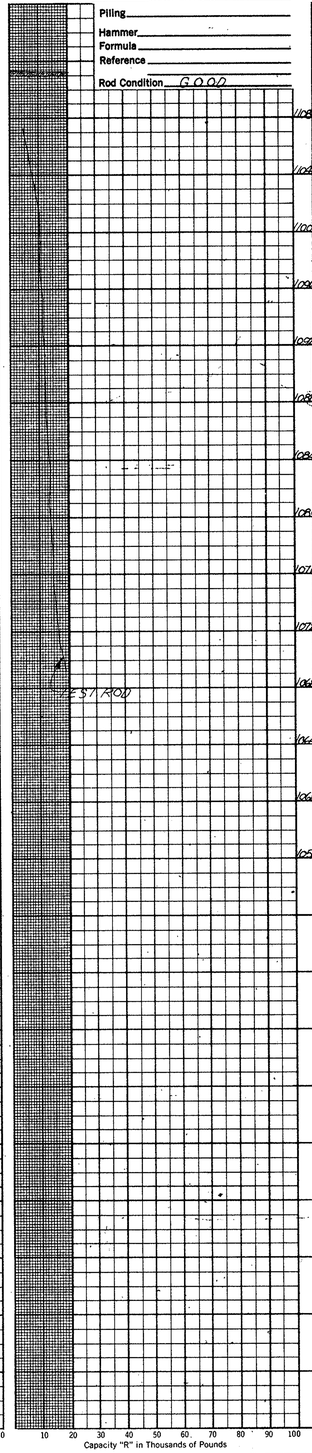
Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____



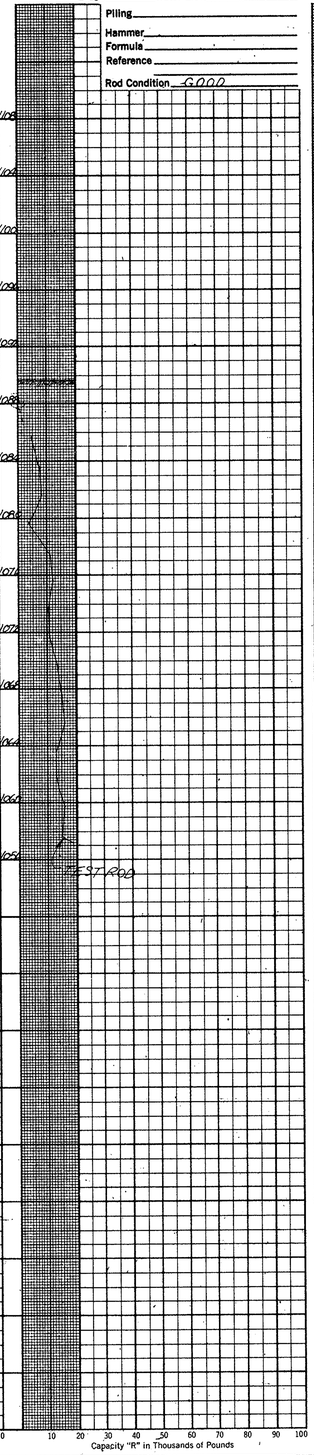
Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____



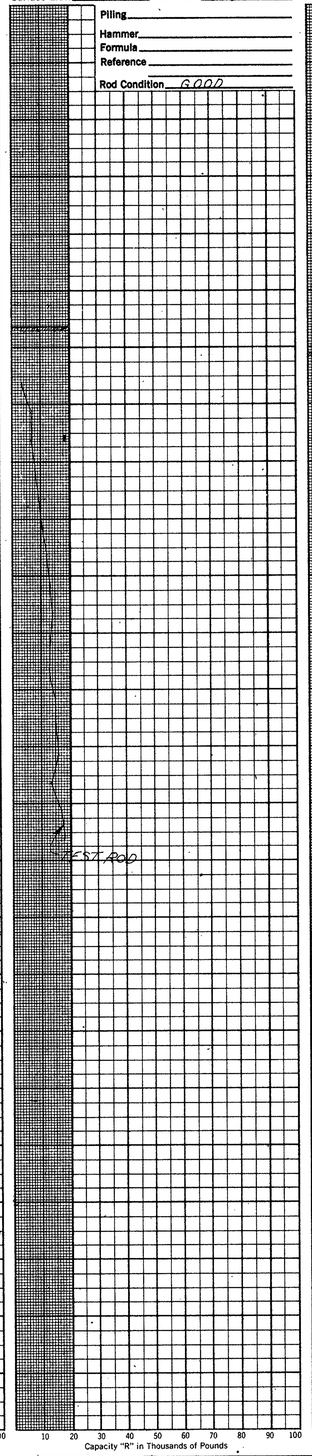
Test Location No. 1
Station & Offset 185+72, 12' RT. REAR ABUTMENT
Surface Elev. 1111.3 Water Elev. 1111.3
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD



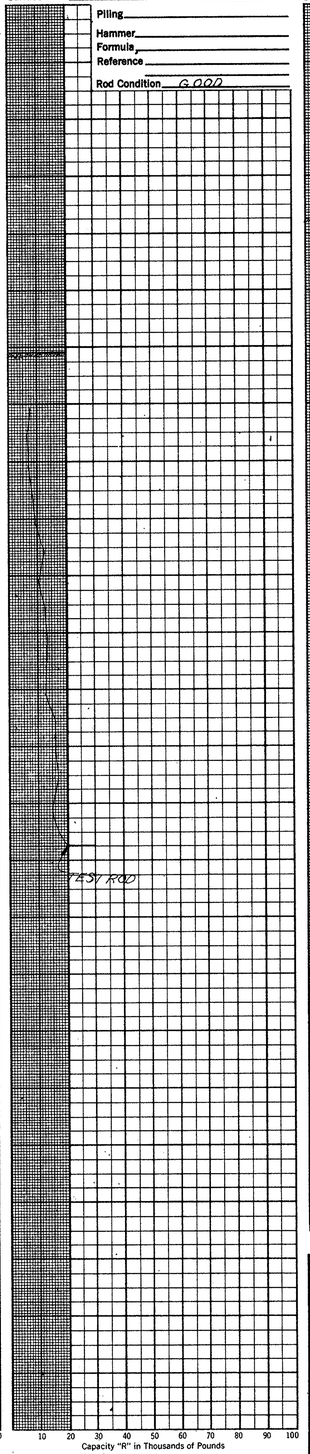
Test Location No. 4
Station & Offset 186+54, 20' LT REAR PIER
Surface Elev. 1089.7 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD



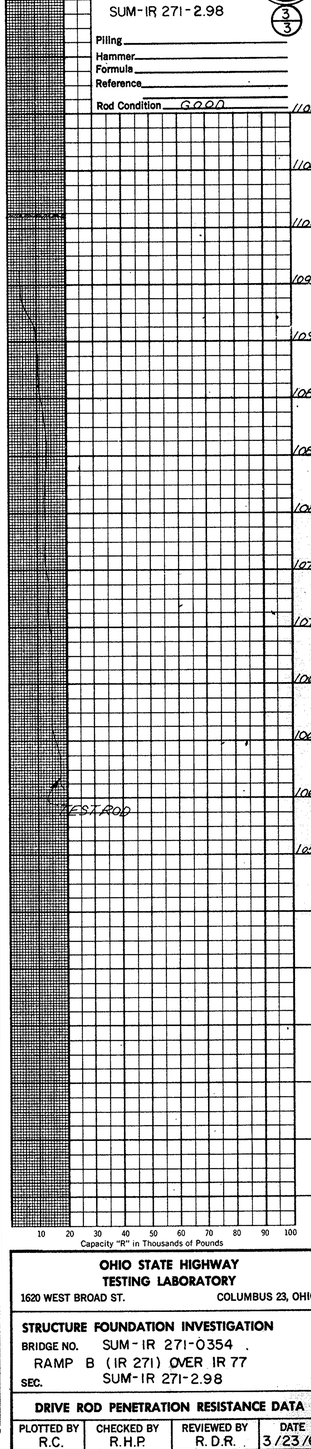
Test Location No. 5
Station & Offset 187+25, 9' RT. CENTER PIER
Surface Elev. 1093.5' Water Elev. 1083.5'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD



Test Location No. 8
Station & Offset 188+70, 20' LT FORWARD PIER
Surface Elev. 1091.7' Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD



Test Location No. 9
Station & Offset 188+95, 9' LT FORWARD ABUTMENT
Surface Elev. 1101.0 Water Elev. 1096.0'
SUM-IR 271-2.98
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD



OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0354 .
RAMP B (IR 271) OVER IR 77
SEC. SUM-IR 271-2.98

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.H.P.	R. D.R.	3/23/65

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Moderately deep glacial-derived soil overlies limestone and shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of two drive sample-core borings, made between January 25 and 29, 1965, and ten drive rod penetration tests, made on February 16 and March 3, 1965.

INVESTIGATIONAL FINDINGS

The borings disclosed that bedrock surface, encountered at 47-foot depth, elevation 1038 feet, in the forward portion of the structure site, and not encountered in the rear portion of the structure site, is overlain by unstratified dense and very dense, stiff and very stiff, gravel and silt and clay, as well as boulders. Boring B-16 was terminated after penetrating 8 feet below bedrock surface, elevation 1030 feet. Boring B-5 was terminated after penetrating 15 feet of material requiring in excess of 30 blows per foot in the standard penetration test, at 38-foot depth, elevations 1049 feet, in boulders.

Rod soundings met gradual increase in penetration resistance with increase in depth and were terminated upon encounter with refusal or near-refusal to penetration 32 to 41 feet below ground surface, elevations 1052 to 1058 feet, considered to be in very dense gravel and silt, as revealed by the borings.

No free water was observed in any of the rod sounding holes.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test. X = Number of Blows for First 6 inches. Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone

LOG OF BORING

Date Started 1-27-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 1-29-65 — Casing: Length — Dia. —
Boring No. B-5 — Station & Offset 187+88, 77' Rt (REAR PIER) — Surface Elev. 1086.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1086.6	0														
1084.1	2	5/7			Gray Sandy Silt	1	0	7	15	37	41	24	6	14	
1081.6	4	5/7			Gray Silt and Clay	2	0	6	12	25	57	PL	+18	16	
1079.1	6	4/6			Gray Clayey Silt	3	0	6	13	25	56	29	9	19	
1076.6	8	6/7			Gray Gravelly Silt	4	29	4	10	26	31	25	6	18	
1074.1	10	3/5			Gray Gravelly Silt	5	18	5	6	30	41	25	6	18	
1071.6	12	4/7			Gray Sandy Gravelly Silt	6	23	6	9	28	34	25	7	19	
1069.1	14	5/9			No Sample Recovered										
1066.6	16	17/31			Gray and Brown Gravelly Sandy Silt	7	26	11	20	23	20	19	2	12	
1061.6	18	21/31			Brown Silty Gravelly Sand	8	23	14	40	15	8	NP	NP	14	
1056.6	20	50/*			Gray Silty Sand and Stone Fragments	9	46	8	12	23	11	NP	NP	13	
1053.6	22		1.8	0.2	Diorite, sandstone, and shale boulders and cobbles with gray clayey silt.										
1048.6	24		1.6	1.4	BOTTOM OF BORING										

*Refusal

LOG OF BORING

Date Started 1-25-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 1-27-65 — Casing: Length — Dia. —
Boring No. B-16 — Station & Offset 190+65, 90' Lt (FORWARD PIER) — Surface Elev. 1084.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1084.8	0														
1082.3	2	10/12			Gray Gravelly Silt	1	23	3	6	28	40	29	9	31	
1079.8	4	9/20			Gray Gravelly Sandy Silt	2	16	6	10	33	35	25	5	16	
1077.3	6	3/6			Gray Sandy Silt	3	0	4	21	52	23	NP	NP	18	
1074.8	8	4/11			Gray Gravelly Sandy Silt	4	15	7	13	48	17	25	4	15	
1072.3	10	5/9			Gray Gravelly Sandy Clay	5	V	I	S	U	A	L	PL=	19	14
1069.8	12	7/12			Gray Sandy Gravelly Silt	6	32	9	13	13	33	25	8	17	
1067.3	14	4/9			Gray Gravelly Silt	7	47	5	6	22	20	23	5	16	
1064.8	16	9/12			Gray Gravelly Sandy Silt	8	15	6	11	29	39	27	8	18	
1059.8	18	7/5			Gray Silty Sandy Gravel	9	42	9	12	17	20	21	4	15	
1054.8	20	50/*			Brown and Gray Gravelly Sandy Silt	10	23	8	29	25	15	NP	NP	9	
1049.8	22	45/*			Gray Silty Sandy Gravel, Trace of Plant Tissues	11	34	9	23	20	14	16	2	11	
1044.8	24	26/26			Gray Silt with Stone Fragments	12	43	7	6	28	16	25	6	15	
1039.8	26	50* (0.1')													
1037.8	28		3.2	1.8	TOP OF ROCK										
	30				Shale, gray, arenaceous, fissile, medium-firm, with many sandstone seams and stringers, broken and jointed intervals. No core loss.										
	32		5.0	0.0											
1029.8	34				BOTTOM OF BORING										

*Refusal

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

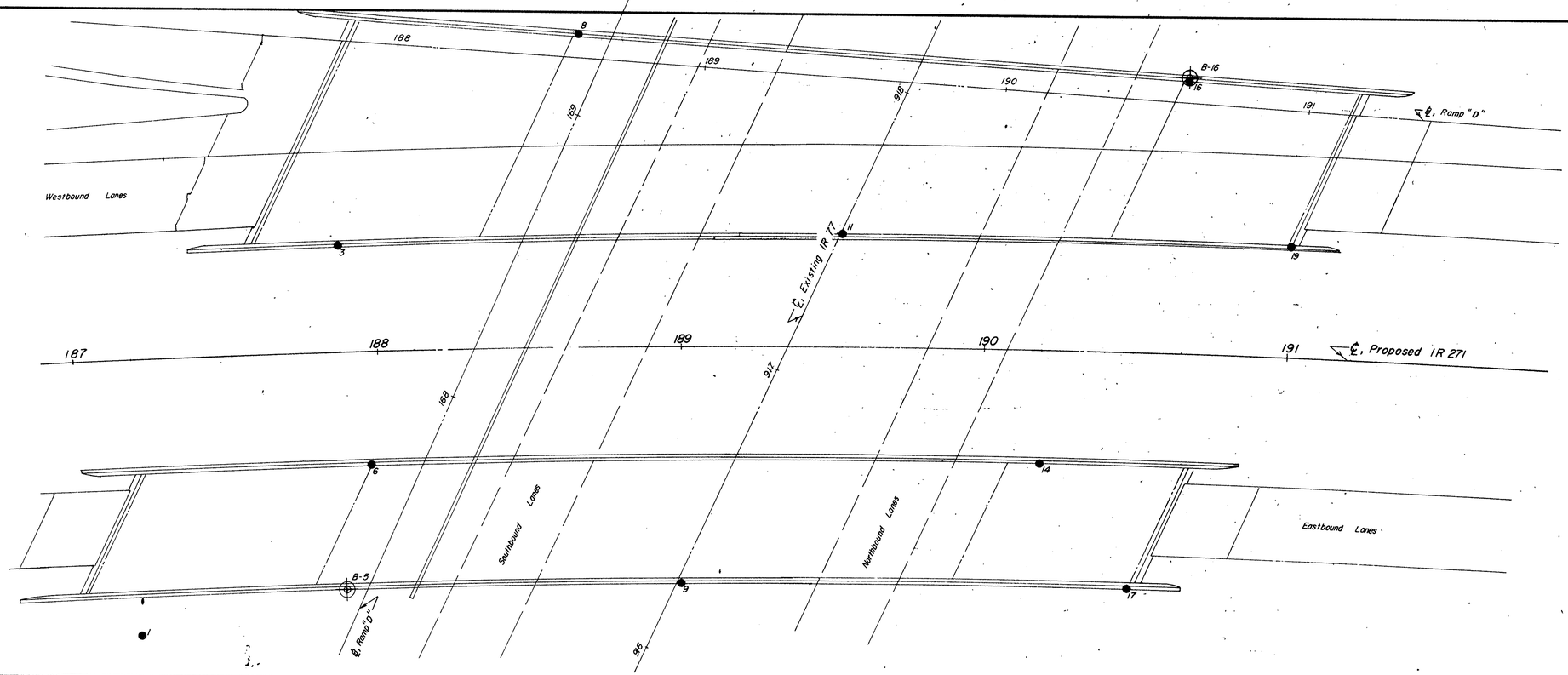
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0358 L/R
IR 271 OVER IR 77
SEC. SUM-IR 271-2.98

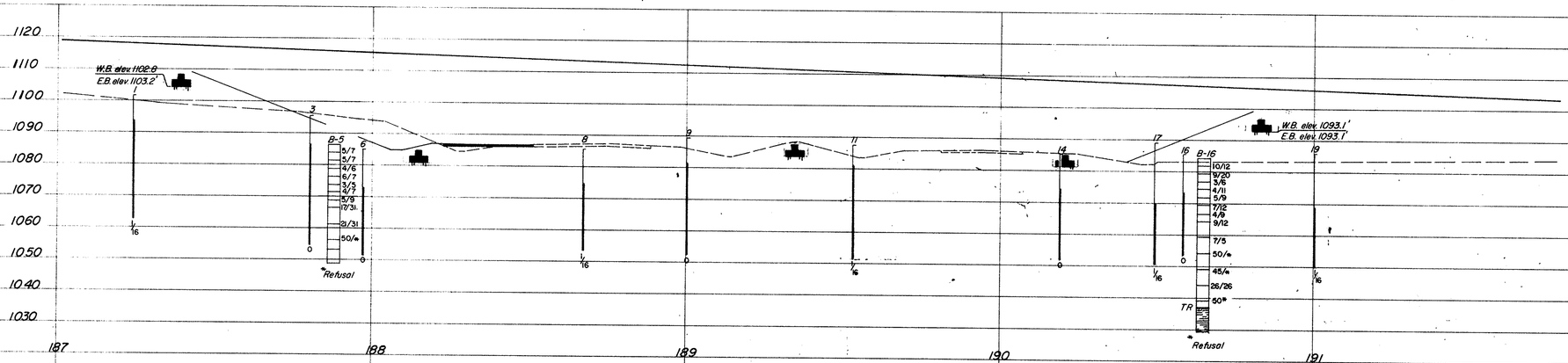
CHECKED BY	REVIEWED BY	DATE
R.H.P.	R.D.R.	3/17/65

TE - 119
500 - 11 - 64

33
33
2
4

SUM-IR 271-2.98





SCALE: 1" = 20'

REVISED-4/1/65

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. SUM-IR 271-0358 L/R
IR 271 OVER IR 77

SEC. SUM-IR 271-2.98

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	R.H.P.	R.D.R.	3/17/65

TR-114
1000-11-64

34
53

SUM-IR 271-2.98 3/4

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Capacity "R" in Thousands of Pounds

Test Location No. 1
Station & Offset 187+24.00' RT.
REAR ABUTMENT
Surface Elev. 1101.8 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BENT-12'

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 187+88.35' LT
REAR ABUTMENT
Surface Elev. 1095.5 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BENT-8'

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 187+97.37' RT
REAR PIER
Surface Elev. 1086.0 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BADLY BENT

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 188+67.102' LT
REAR PIER
Surface Elev. 1085.7' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 189+00.77' RT
REAR PIER
Surface Elev. 1089.2' Water Elev. DRY Hole
Closed at El. 1084.2'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BENT

TEST ROD

Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0358 L/R
IR 271 OVER IR 77
SEC. SUM-IR 271-2.98

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.H.P.	R.D.R.	3/17/65

TE-114
1000-1-64

35
53
4
4

SUM-IR 271-2.98

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No. 11
Station & Offset 189+53.37' LT CENTER PIER
Surface Elev. 1087.7' Water Elev. DRY-Hole Closed at El 1083.7'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BENT-8"

Test Location No. 14
Station & Offset 190+19.37' RT FORWARD PIER
Surface Elev. 1085.3' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BENT

Test Location No. 16
Station & Offset 190+65.90' LT FORWARD PIER
Surface Elev. 1085.3' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

Test Location No. 17
Station & Offset 190+49.77' RT FORWARD ABUTMENT
Surface Elev. 1089.0' Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

Test Location No. 19
Station & Offset 191+00.36' LT FORWARD ABUTMENT
Surface Elev. 1085.9' Water Elev. DRY-Hole Closed at El 1082.9'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

1104 1100 1096 1092 1088 1084 1080 1076 1072 1068 1064 1060 1056 1052 1048

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0358 L/R
IR 271 OVER IR 77
SEC. SUM-IR 271-2.98

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.H.P.	R.D.R.	3/17/65

TE - 118
600 - 11 - 64

SUMMIT COUNTY
SUMMIT-IR271-2.98

36/33
5

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Moderately deep glacial-derived soil overlies limestone and shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of two drive sample-core borings, and nine drive rod penetration tests, made between March 3 and 17, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered unstratified, dense and very dense gravel, sand, silt, and stiff and very stiff clays, overlying relatively flat-lying bedrock surface, encountered at 63 and 65-foot depths, elevation 1018 feet. The borings were terminated at 70 and 75-foot depths, elevations 1011 and 1009 feet, after penetrating 7 and 10 feet below bedrock surface. An artesian condition was encountered in boring B-8 at 30-foot depth, elevation 1054 feet.

Rod soundings met gradual increase in penetration resistance with increase in depth and were terminated upon encounter with medium-high and high resistance to penetration 37 to 52 feet below ground surface, elevations 1045 to 1038 feet, considered to be in very dense gravels, sands, and silts, as revealed by the borings.

Free water was encountered in rod sounding holes at ground surface.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test. X = Number of Blows for First 6 inches. Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8" / 3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0378 L/R
OVER RAMP B
SEC. SUM-IR271-2.98

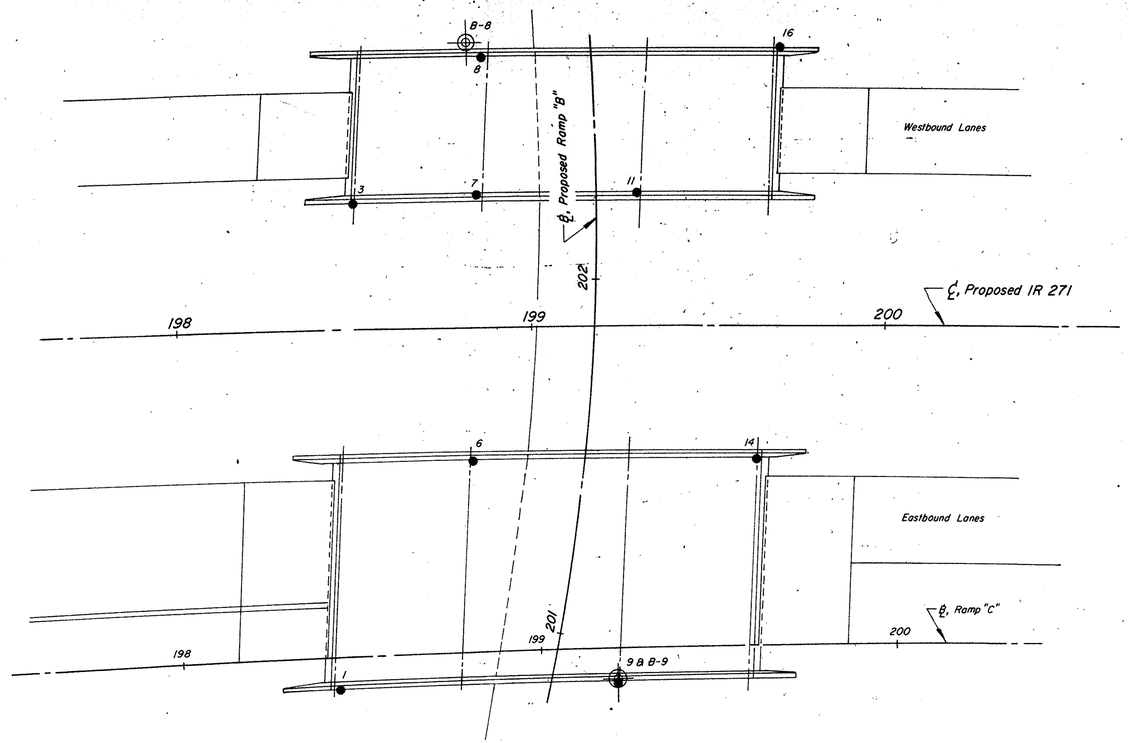
CHECKED BY	REVIEWED BY	DATE
L.N.L.	R.D.R.	3/30/65

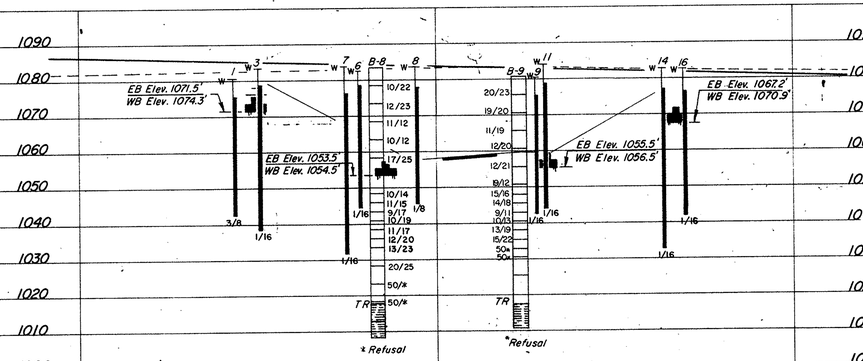
TE - 119
00 - 11 - 64

37
53

2
5

SUM-IR271-2.98





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0378 L/R
OVER RAMP B
SEC. SUM-IR271-2.98

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.C.	L.N.L.	R.D.R.	3/30/65

TE - 122
600 - 11 - 64

SUM-IR271-2.98

38
53

3
5

LOG OF BORING

Date Started 3-9-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 3-9-65 | Casing: Length 35' | Dia. 3 1/2"
Boring No. B-8 | Station & Offset 198+83, 79' Lt (REAR PIER) | Surface Elev. 1083.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1083.6	0														
	2														
	4														
1078.6	6	10/22			Brown and Gray Silt and Clay	1	0	3	4	38	55	35	13	20	
	8														
1073.6	10	12/23			Brown and Gray Silt and Clay	2	0	2	3	38	57	34	12	17	
	12														
	14														
1068.6	16	11/12			Gray Clayey Silt	3	0	1	4	39	56	30	10	21	
	18														
1063.6	20	10/12			Gray Sandy Silt	4	0	25	20	31	24	23	7	14	
	22														
	24														
1058.6	26	17/25			Gray Gravelly Silt	5	31	6	7	29	27	19	5	14	
	28														
1053.6	30				No Sample Recovered - Sand Heaving in Casing										
	32														
	34														
1048.6	36	10/14			Gray Clayey Silt	6	0	8	11	37	44	27	9	19	
1046.1	38	11/15			Gray Sandy Silt	7	0	10	12	51	27	27	10	19	
1043.6	40	9/17			Gray Sandy Gravelly Silt	8	26	7	11	28	28	24	7	12	
1041.1	42	10/19			Gray Sandy Gravelly Silt	9	31	8	7	32	22	24	6	18	
1038.6	44														
	46	11/17			Gray Sandy Silt	10	0	26	19	28	27	20	5	18	
1036.1	48	12/20			Gray Gravelly Sandy Silt	11	17	9	10	32	32	25	9	16	
1033.6	50	13/23			Gray Sandy Gravelly Silt	12	24	6	9	37	24	26	9	16	
	52														
	54														
1028.6	56	20/25			Gray Sandy Gravelly Silt	13	V	I	S	U	A	L	23	8	19
	58														
1023.6	60	50/*			Brown and Gray Sandy Gravelly Silt	14	42	5	11	28	14	21	2	14	
	62														
1018.6	64				TOP OF ROCK										
1018.1	66	50/*			Gray Silt and Stone Fragments	15	60	5	2	18	15	30	8	22	
	68		1.3	3.7	Clay shale, gray, very soft and crumbly, very badly broken, with few thin sandstone seams, with 0.5' dolomitic limestone seam at base. Core loss 70%.										
1013.1	70														
	72		3.1	1.9	Shale, gray, fissile, jointed and broken, with few thin sandstone and clay seams. Core loss 40%.										
1008.6	74				BOTTOM OF BORING										

*Refusal

LOG OF BORING

Date Started 3-11-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 3-17-65 | Casing: Length 40' | Dia. 3 1/2"
Boring No. B-9 | Station & Offset 199+23, 98' Rt (FORWARD PIER) | Surface Elev. 1080.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1080.8	0														
	2														
	4														
1075.8	6	20/23			Brown and Gray Silt and Clay	1	0	3	6	35	56	34	13	21	
	8														
1070.8	10	19/20			Brown and Gray Silt and Clay	2	0	3	5	37	55	33	11	21	
	12														
	14														
1065.8	16	11/19			Gray Sandy Silt	3	0	10	19	34	37	20	5	14	
	18														
1060.8	20	12/20			Gray Clayey Silt	4	0	6	13	34	47	27	9	20	
	22														
	24														
1055.8	26	12/21			Gray Gravelly Silt	5	30	3	6	32	29	27	9	17	
	28														
1050.8	30	19/12			Gray Silty Sandy Gravel	6	54	9	13	13	11	19	3	20	
1048.3	32	15/16			Gray Gravelly Sand	7	21	58	15	-6-		NP	NP	21	
1045.8	34	14/18			Gray Gravelly Silt	8	46	5	6	20	23	29	8	19	
1043.3	36	9/11			Gray Sandy Gravel	9	69	26	3	-2-		NP	NP	13	
1040.8	38														
	40	10/13			Gray Silty Sandy Gravel	10	45	31	7	9	8	19	4	16	
1038.3	42	13/19			Gray Gravelly Sand	11	22	59	13	-6-		NP	NP	14	
1035.8	44	15/22			Gray Silty Sandy Gravel	12	42	11	8	25	14	24	8	16	
1033.3	46	50*			Sandstone - Boulders										
1030.8	48	50*			Sandstone - Boulders with Sand and Gravel										
	50														
	52														
1025.8	54														
	56				Gray, dolomitic sandstone cobbles and fragments with gray clayey silt.										
	58														
	60														
	62														
1017.8	64		1.8	3.2	TOP OF ROCK										
	66				Shale, gray, fissile, soft to medium-firm, jointed and broken, with dolomitic sandstone comprising 26% of the interval. Core loss 30%.										
	68		3.5	1.5											
1010.8	70				BOTTOM OF BORING										

*Refusal

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

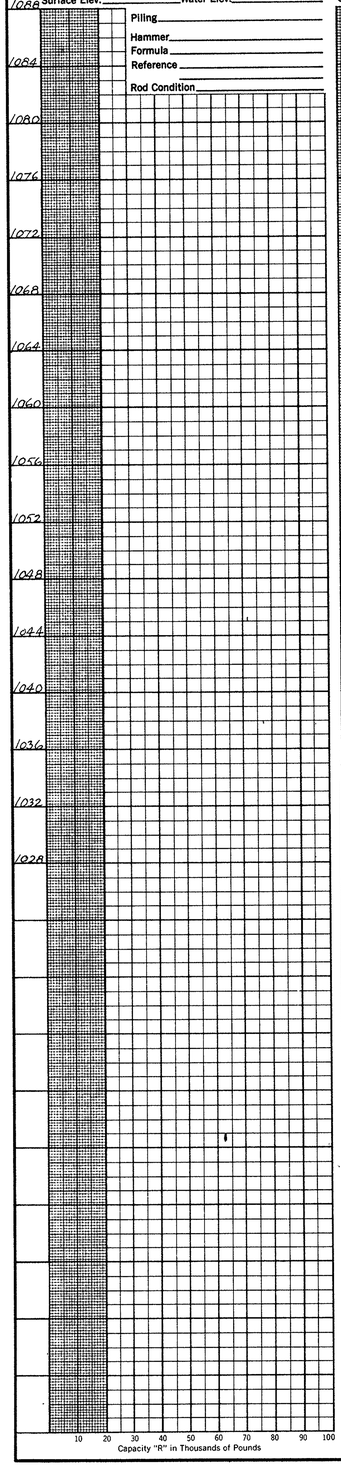
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0378 L/R
OVER RAMP B
SEC. SUM-IR271-2.98

BORING DATA

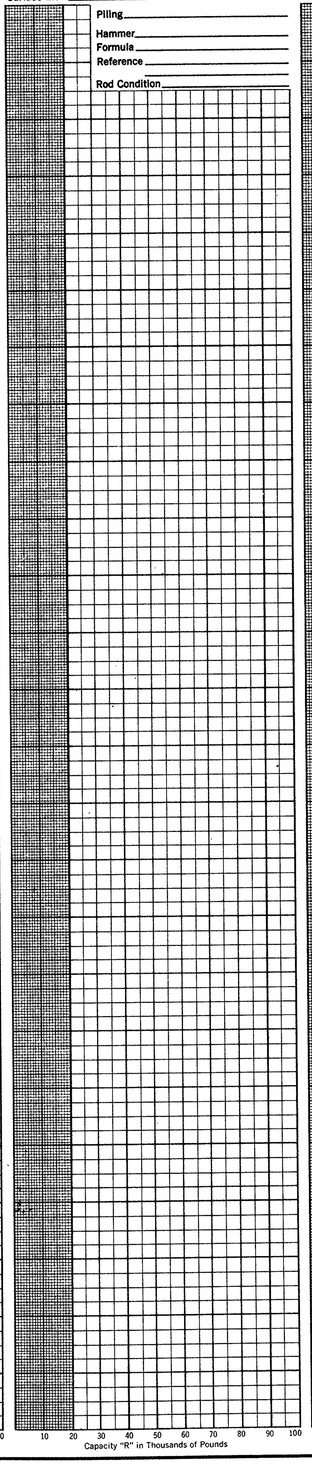
TYPED BY	CHECKED BY	REVIEWED BY	DATE
B.J.R.	R.C.	R.D.R.	3/30/65

TR-114
1000-1-64

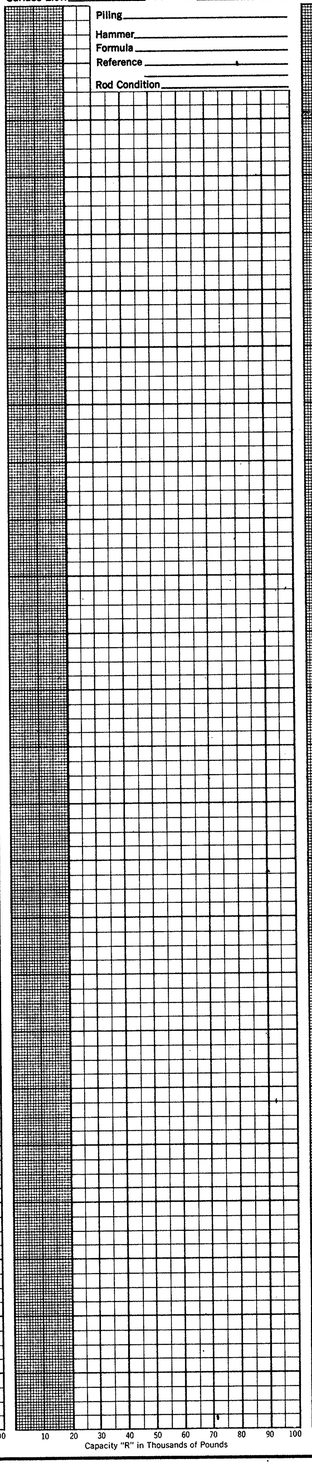
Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____



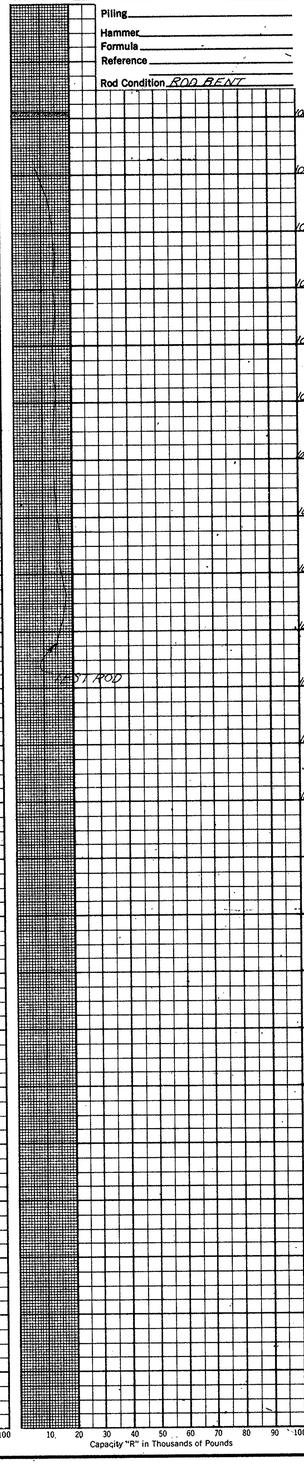
Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____



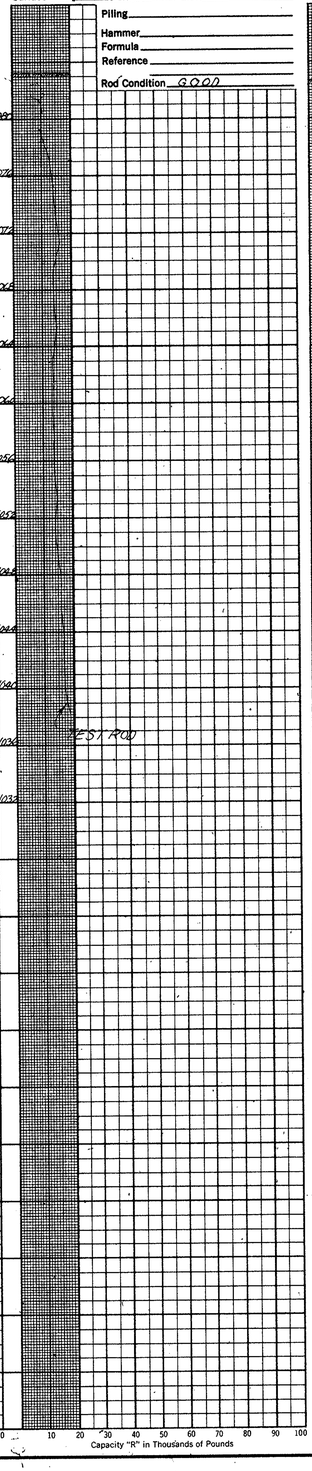
Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____



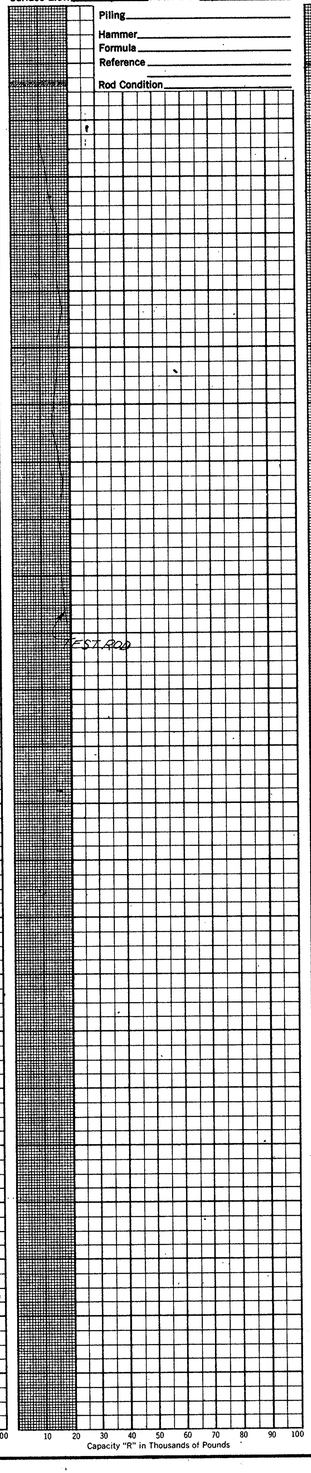
Test Location No. 1
Station & Offset 198+23, 100' RT.
REAR ABUTMENT
Surface Elev. 1080.5 Water Elev. 1080.5'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BENT



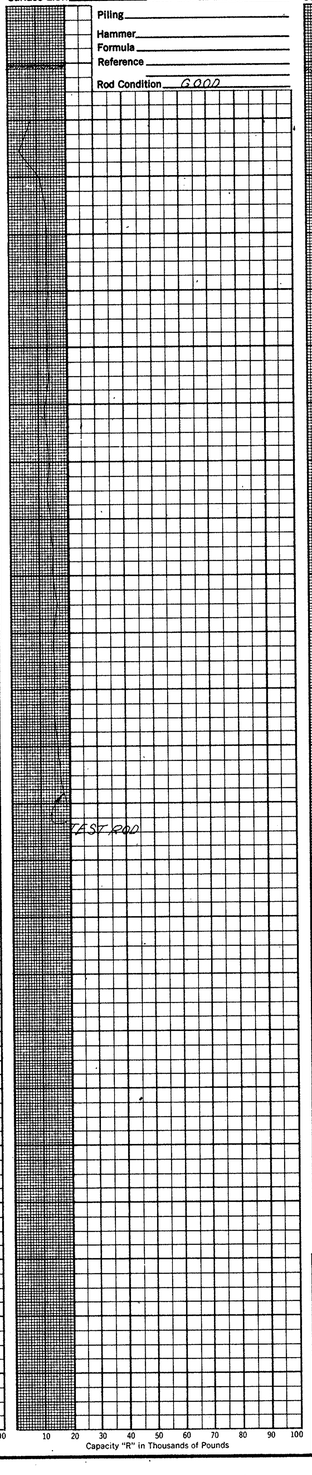
Test Location No. 3
Station & Offset 198+50, 35' LT.
REAR ABUTMENT
Surface Elev. 1083.3' Water Elev. 1083.3'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD



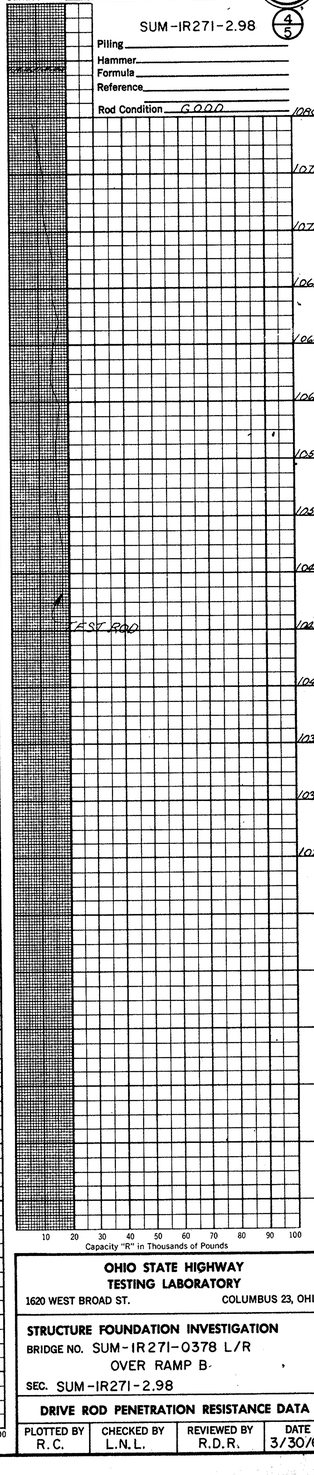
Test Location No. 6
Station & Offset 198+83.37' RT.
REAR PIER
Surface Elev. 1082.7' Water Elev. 1082.7'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____



Test Location No. 7
Station & Offset 198+85.37' LT.
REAR PIER
Surface Elev. 1083.9' Water Elev. 1083.9'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD



Test Location No. 8
Station & Offset 198+87.75' LT.
REAR PIER
Surface Elev. 1083.6' Water Elev. 1083.6'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD



39
53

SUM-IR271-2.98

4
5

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0378 L/R
OVER RAMP B
SEC. SUM-IR271-2.98

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	3/30/65

TC-114
10000-1-64

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

1088 1084 1080 1076 1072 1068 1064 1060 1056 1052 1048 1044 1040 1036 1032 1028

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 199+23.99' RT
FORWARD PIER
Surface Elev. 1080.8' Water Elev. 1080.8'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 11
Station & Offset 199+30.37' LT
FORWARD PIER
Surface Elev. 1084.0' Water Elev. 1084.0'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 14
Station & Offset 199+63.37' RT
FORWARD ABUTMENT
Surface Elev. 1082.8' Water Elev. 1082.8'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 16
Station & Offset 199+69.77' LT
FORWARD ABUTMENT
Surface Elev. 1082.5' Water Elev. 1082.5'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

40/53 5/5

SUM-IR271-2.98

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0378 L/R
OVER RAMP B
SEC. SUM-IR271-2.98

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	3/30/65

TE - 118
600 - 11 - 64

SUMMIT COUNTY
SUM-IR 271-2.98

41/53
1/3

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Moderately deep glacial-derived soil overlies limestone and shale bedrock, of Upper Mississippian and Lower Pennslyvanian ages.

EXPLORATION

The exploration consisted of three drive sample borings, made between April 15 and 27, 1965.

INVESTIGATIONAL DISCLOSURES

The borings encountered dense and extremely dense gravels, sands, silts and boulders. The borings were terminated at 31 and 50-foot depths, elevations 829 and 816 feet, after penetrating in excess of 30 feet of material requiring in excess of 30 blows per foot in the standard penetration test.

The borings did not penetrate to bedrock surface.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
  X = Number of Blows for First 6 inches.
  Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Boulders
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system-and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8" / 3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

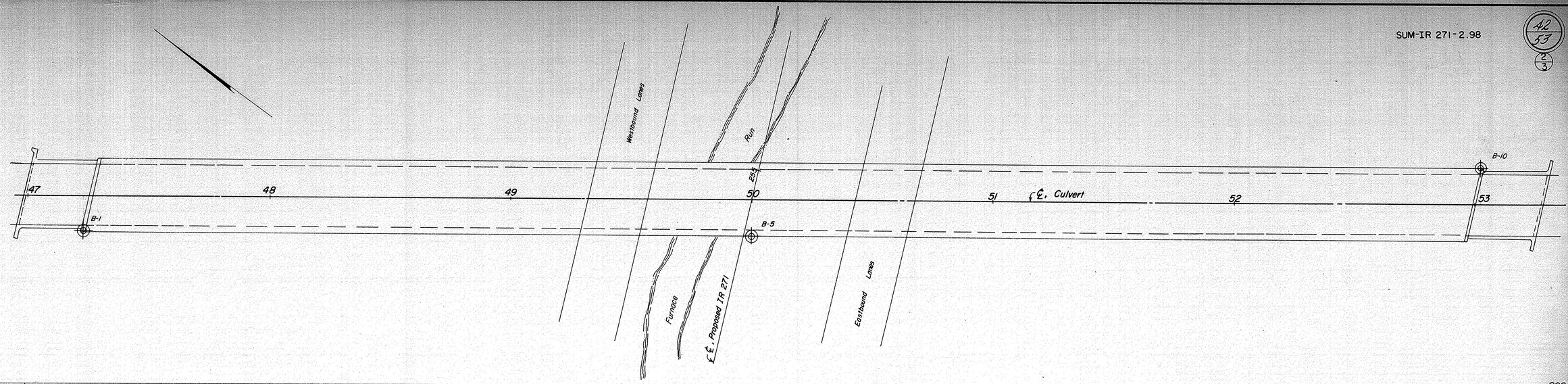
BRIDGE NO. SUM-IR 271-0485
BOX CULVERT
SEC. SUM-IR 271-2.98

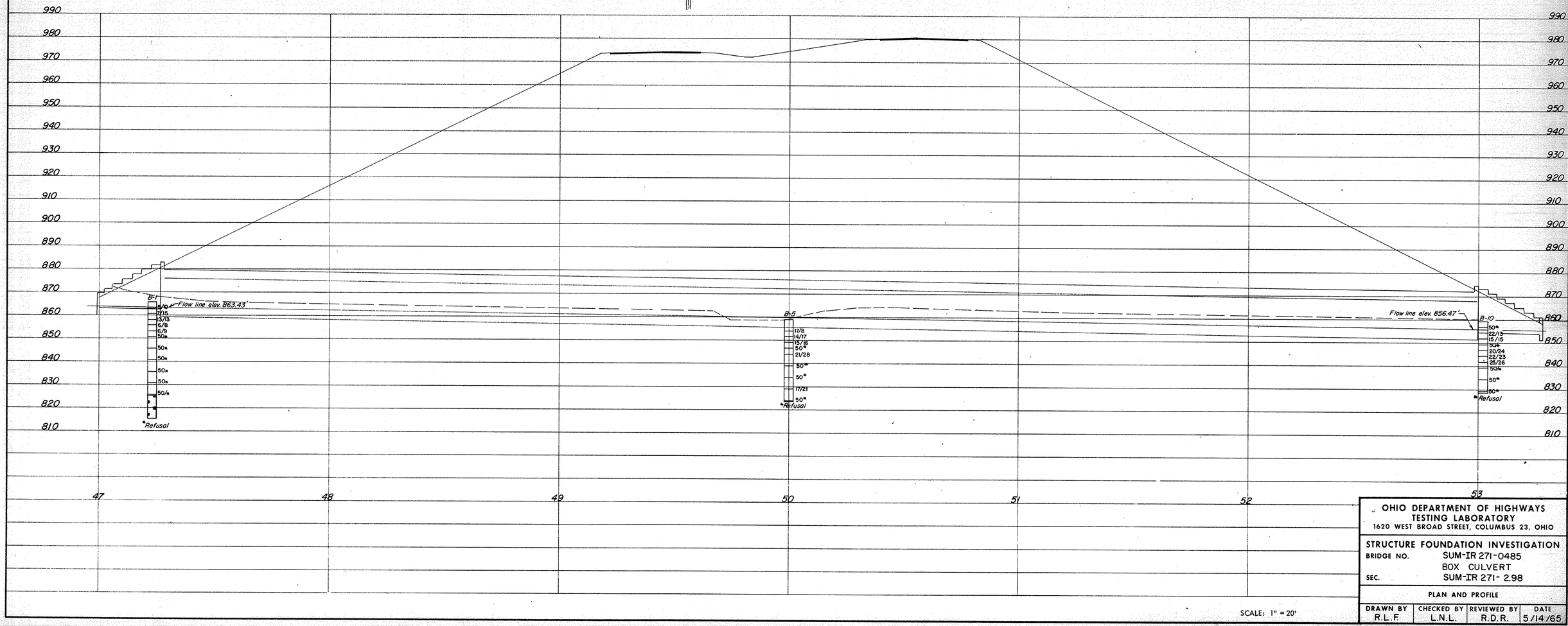
CHECKED BY	REVIEWED BY	DATE
L.N.L.	R.D.R.	5/14/65

TE - 119
500 - 11 - 64

SUM-IR 271-2.98

42
53
3





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. SUM-IR 271-0485
BOX CULVERT
SEC. SUM-IR 271- 2.98

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F	L.N.L.	R.D.R.	5/14/65

TE - 122
600 - 11 - 64

SUM - IR 271 - 2.98

43/53

LOG OF BORING

Date Started 4-25-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 4-26-65 | Casing: Length 35' | Dia. 3 1/2" | Surface Elev. 865.7'
Boring No. B-1 | Station & Offset 47+23, 25' Rt (CULVERT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
865.7	0														
863.2	2–4	5/10			Brown and Gray Silty Sandy Gravel	1	34	13	17	18	18	23	6	15	
860.5	6–8	7/15			Brown and Gray Silt and Clay	2	0	2	8	33	57	37	14	31	
858.2	8–10	13/13			Grayish-Brown Silt	3	8	3	7	43	39	26	6	22	
855.7	10–12	6/8			Gray Silt	4	0	3	8	50	39	22	2	24	
853.2	12–14	6/9			Gray Clayey Silt	5	0	2	4	49	45	PL	+22	22	
850.7	14–16	50* (0.7')			Gray Sandy Gravelly Silt	6	36	6	9	33	16	21	3	14	
845.7	18–20	50* (0.7')			Gray Sandy Gravelly Silt	7	27	7	12	37	17	22	4	13	
840.7	22–24	50* (0.9')			Gray Silt	8	0	7	9	53	31	22	4	14	
835.7	26–28	50* (0.6')			Gray Gravelly Silt	9	37	8	6	39	10	25	8	13	
830.7	30–32	50* (0.7')			Gray Gravelly Silt	10	26	6	6	51	11	23	6	12	
825.7 / 825.2	34–36	50/*			Gray Silt with Stone Fragments	11	36	5	2	35	22	22	7	11	
	38–40		3.6	1.4											
	42–44														
	46–48		4.7	0.3	Dark gray clay and stone fragments with many fractured shale boulders.										
815.7	50				BOTTOM OF BORING										

*Refusal

LOG OF BORING

Date Started 4-21-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 4-23-65 | Casing: Length 35' | Dia. 3 1/2" | Surface Elev. 859.0'
Boring No. B-5 | Station & Offset 50+00, 15' Rt (CULVERT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
859.0	0														
854.0	4–6	17/8			No Sample Recovered. (Boulders) (Driller's Description)										
851.8	6–8	14/17			Gray Gravelly Silt	1	27	5	9	32	27	NP	NP	12	
849.0	10–12	15/16			Gray Sandy Gravelly Silt	2	27	9	9	46	9	NP	NP	12	
846.5	12–14	50* (0.2')			Gray Broken Stone Fragments	3	V	I	S	U	A	L			
844.0	14–16	21/28			Gray Sandy Gravelly Silt	4	31	6	11	31	21	22	5	13	
839.0	20–22	50*			No Sample Recovered - Boulder (Driller's Description)										
834.0	24–26	50* (0.8')			Gray Sandy Gravelly Silt	5	34	11	10	27	18	NP	NP	13	
829.0	30–32	17/21			Gray Sandy Silt	6	13	6	11	45	25	22	5	14	
824.0 / 823.7	34–36	50* (0.6')			Gray Sandy Gravelly Silt	7	28	14	10	26	12	NP	NP	11	

BOTTOM OF BORING

*Refusal

LOG OF BORING

Date Started 4-26-65 | Sampler Type SS | Dia. 1 3/8" | Water Elev. —
Date Completed 4-27-65 | Casing: Length 25' | Dia. 3 1/2" | Surface Elev. 859.5'
Boring No. B-10 | Station & Offset 53+02, 15' Lt (CULVERT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
859.5	0														
857.0	2–4	50*													
854.5	6–8	22/13			Brown Silty Sandy Gravel	1	52	24	9	10	5	NP	NP	13	
852.0	8–10	15/15			Gray Silt	2	0	1	2	54	43	NP	NP	31	
849.5	10–12	50/*			Gray Sandy Silt	3	9	5	6	50	30	NP	NP	20	
847.0	12–14	20/24			Gray Sandy Gravelly Silt	4	27	10	13	30	20	NP	NP	13	
844.5	14–16	22/23			Gray Gravelly Sandy Silt	5	26	15	15	30	14	NP	NP	20	
842.0	16–18	25/26			Gray Silty Gravel	6	V	I	S	U	A	L	NP	NP	11
839.5	20–22	50/*			Gray Sandy Gravelly Silt	7	32	11	16	29	12	NP	NP	14	
834.5	24–26	50* (0.7')			Gray Sandy Gravelly Silt	8	33	8	9	36	14	NP	NP	16	
829.5 / 828.7	30–32	50* (0.8')			Gray Sandy Gravelly Silt	9	27	9	7	36	21	NP	NP	27	

BOTTOM OF BORING

*Refusal

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM - IR 271 - 0485
BOX CULVERT
SEC. SUM - IR 271 - 2.98

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
B.J.R.	R.C.	R.D.R.	5/14/65

TE - 118
600 - 1 - 64

44
53
1
3

SUMMIT COUNTY
SUM-IR271-2.98

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Deep glacial-derived soil overlies limestone and shale bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of two drive sample-core borings and ten drive rod penetration tests, made on February 16 and 17, 1965.

INVESTIGATIONAL FINDINGS

The borings disclosed that sloping bedrock surface, encountered at 6-foot depth, elevation 1093 feet, in the rear portion of the structure site, and at 2-foot depth, elevation 1090 feet, in the forward portion of the structure site, is overlain by very dense, very stiff silt and clay containing stone fragments. The borings were terminated after penetrating 18 and 20 feet below bedrock surface, elevations 1074 and 1073 feet.

Rod soundings met very rapid increase in penetration resistance with increase in depth and were terminated upon encounter with refusal or near-refusal to penetration 2 to 12 feet below ground surface, elevations 1092 to 1080 feet, considered to be on or slightly below bedrock surface, as revealed by the borings.

No free water was observed in any of the rod sounding holes.

If it is the intention to found pier units on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area.

Unconfined compression tests on similar shale bedrock indicate a crushing strength on the order of 150 tons per square foot.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test. X = Number of Blows for First 6 inches. Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system-and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm

LOG OF BORING

Date Started 2-17-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 2-17-65 — Casing: Length — Dia. —
Boring No. B-4 — Station & Offset 49+09, 35' Lt (REAR PIER) — Surface Elev. 1098.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1098.6	0														
	2														
	4														
1093.6		50*			Brown and Gray Clay and Shale Fragments	1	53	6	3	22	16	35	11	20	
1092.6	6	(0.4')			TOP OF ROCK										
	8		3.3	0.7											
	10														
	12		4.7	0.3	Shale, gray, arenaceous, fissile, medium-firm, with many sandstone seams in bottom 6.0'. Core loss 5%.										
	14														
	16														
	18		5.0	0.0											
	20														
	22		5.0	0.0											
1073.6	24				BOTTOM OF BORING										

*Refusal

LOG OF BORING

Date Started 2-16-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 2-16-65 — Casing: Length — Dia. —
Boring No. B-7 — Station & Offset 51+03, 30' Rt (FORWARD PIER) — Surface Elev. 1092.5'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1092.5	0														
	2				Brown sandy silt with sandstone fragments (Driller's description).										
1090.0					TOP OF ROCK										
	4		0.7	1.3											
	6														
	8		3.5	1.5	Shale, gray. arenaceous, non-fissile, firm, with few clay seams and many sandstone seams and stringers. Core loss 21%.										
	10														
	12		4.6	0.4											
	14														
	16														
1074.5	18		5.0	0.0											
1072.5	20				Limestone, gray, argillaceous, hard. No core loss.										
					BOTTOM OF BORING										

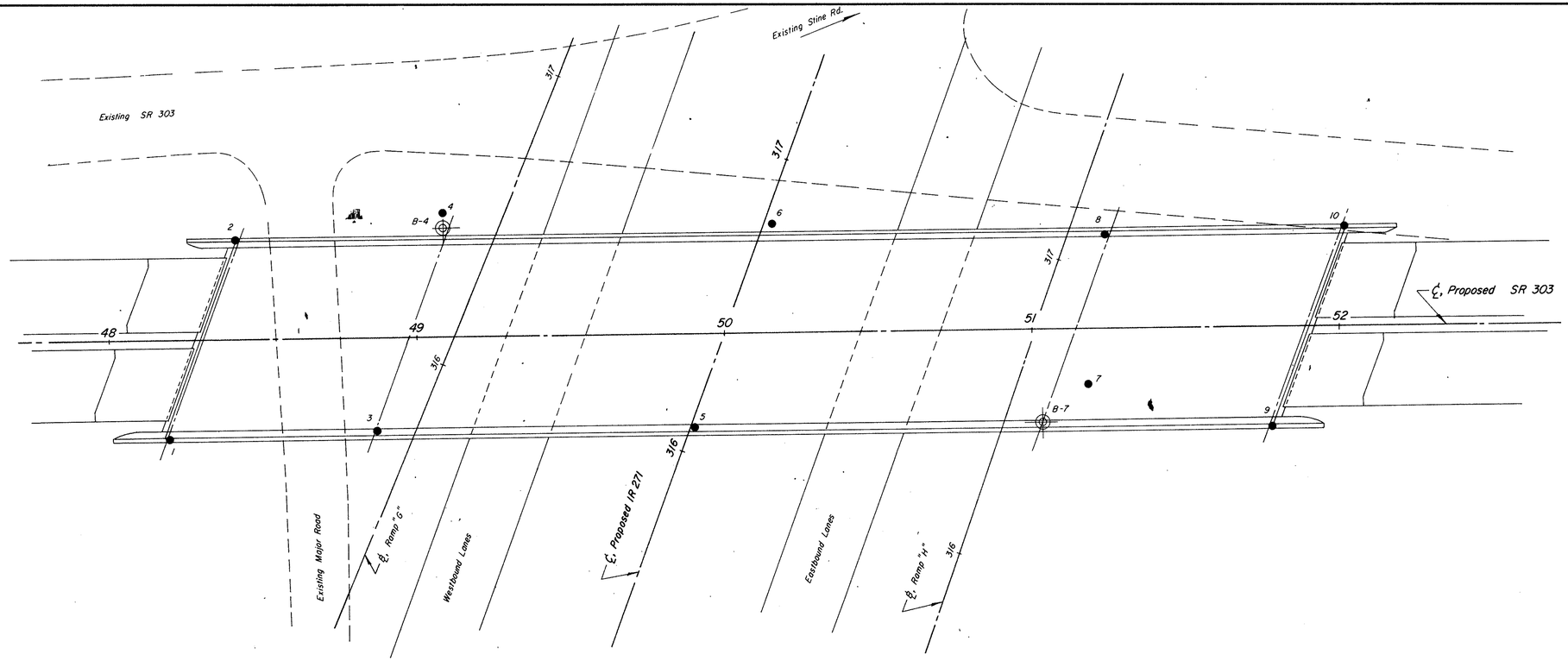
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

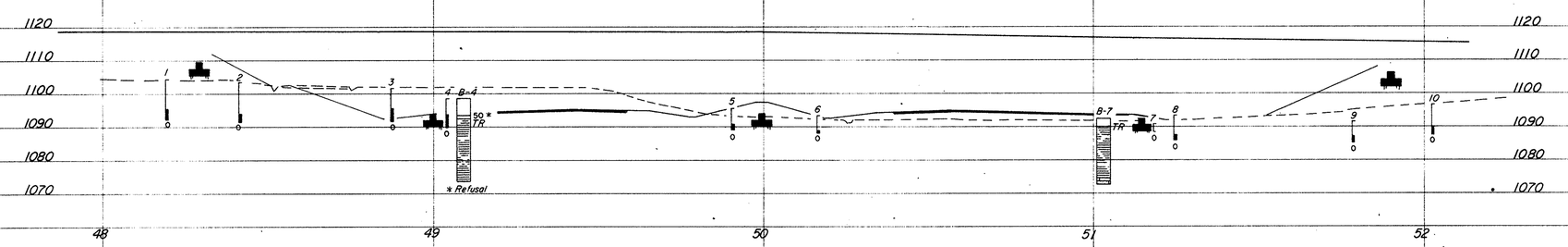
OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0602
UNDER RELOCATED SR 303
SEC. SUM-IR271-2.98

CHECKED BY	REVIEWED BY	DATE
R.H.P.	R.D.R.	3/3/65

TC - 119
100 - 11 - 64





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0602
UNDER RELOCATED SR 303
SEC. SUM-IR271-2.98

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.C.	R.H.P.	R.D.R.	3/3/65

TE-115
500-1-64

46
53

3
3

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

1106 1102 1098 1094 1090 1086 1082

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 1
Station & Offset 48+18, 33' RT
REAR ABUTMENT
Surface Elev. 1102.3 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Test Location No. 2
Station & Offset 48+41, 32' LT
REAR ABUTMENT
Surface Elev. 1103.4 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ROD BENT

TEST ROD

Test Location No. 3
Station & Offset 48+87 30' RT
REAR PIER
Surface Elev. 1101.8 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Test Location No. 4
Station & Offset 49+09 40' LT
REAR PIER
Surface Elev. 1098.6 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Test Location No. 5
Station & Offset 49+90 30' RT
CENTER PIER
Surface Elev. 1095.6 Water Elev. ____
SUM-IR271-2.98
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

1106 1102 1098 1094 1090 1086 1082

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Test Location No. 6
Station & Offset 50+16, 35' LT
CENTER PIER
Surface Elev. 1093.3 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Test Location No. 7
Station & Offset 51+18, 18' RT
FORWARD PIER
Surface Elev. 1090.9 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Test Location No. 8
Station & Offset 51+24, 30' LT
FORWARD PIER
Surface Elev. 1093.4 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Test Location No. 9
Station & Offset 51+78, 32' RT
FORWARD ABUTMENT
Surface Elev. 1091.7 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Test Location No. 10
Station & Offset 52+02, 32' LT
FORWARD ABUTMENT
Surface Elev. 1090.8 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR271-0602
UNDER RELOCATED SR 303
SEC. SUM-IR271-2.98

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.H.P.	R.D.R.	3/3/65

TE - 118
600 - 11 - 64

SUMMIT COUNTY
SUM-IR 271-2.98

47/53
1/4

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Moderately deep glacial-derived soil overlies limestone and shale bedrock, of Upper Mississippian and Lower Pennsylvanian ages.

EXPLORATION

The exploration consisted of three drive sample-core borings, and seven drive rod penetration tests, made between March 24 and April 16, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered unstratified, dense and very dense gravel, sand, silt, and stiff and very stiff clays, and boulders overlying sloping bedrock surface. Bedrock was encountered at 62-foot depth, elevation 997 feet in the rear portion of the structure site, and at 77-foot depth, elevation 981 feet in the center portion of the structure site. Borings B-3 and B-6 were terminated at 75 and 80-foot depths, elevations 984 and 973 feet, after penetrating 8 and 13 feet below bedrock surface. Boring B-9 was terminated at 70-foot depth, elevation 979 feet, after penetrating 20 feet of very stiff silty clay containing cobbles.

Rod soundings met gradual increase in penetration resistance with increase in depth and were terminated upon encounter with high resistance and refusal to penetration 28 to 38 feet below ground surface, elevations 1031 to 1010 feet, considered to be in very dense gravels, sands, and silts, as revealed by the borings.

No free water was observed in any of the rod sounding holes.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
  X = Number of Blows for First 6 inches.
  Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Cobbles
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	8"	Cobbles	3"	Gravel	2.0mm (No. 10 sieve)	Coarse Sand	0.42mm (No. 40 sieve)	Fine Sand	0.074mm (No. 200 sieve)	Silt	0.005mm	Clay

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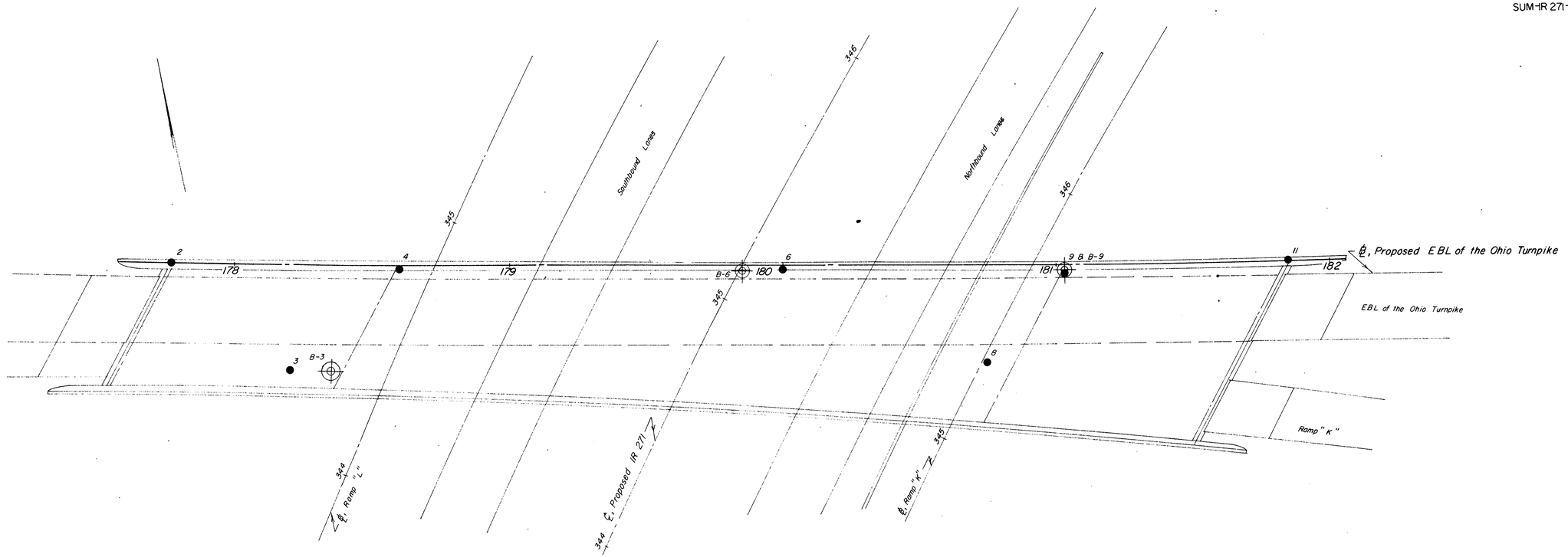
OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

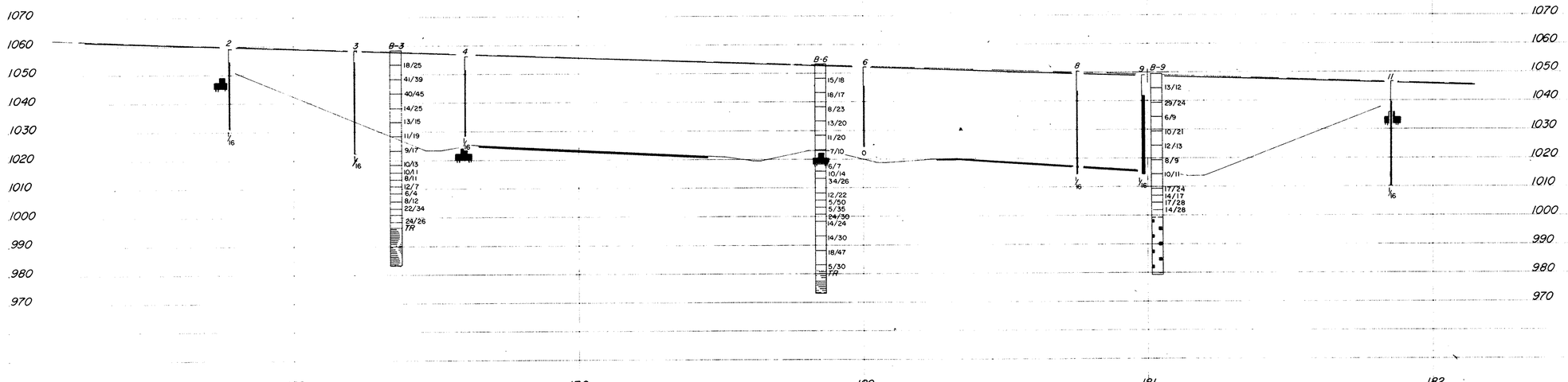
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0656
UNDER EBL OF THE OHIO TURNPIKE
SEC. SUM-IR 271-2.98

CHECKED BY	REVIEWED BY	DATE
L.N.L.	R.D.R.	4/29/65

SUM-IR 271-2.98

48/53 2/4





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. SUM-IR 271-0656
UNDER EBL OF THE OHIO TURNPIKE
SEC. SUM-IR 271-2.98

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	L.N.L.	R.D.R.	4/29/65

TE - 122
600 - 11 - 64

SUM - IR 271 - 2.98

LOG OF BORING

Date Started 3-24-65 | Sampler Type SS | Dia. 1 3/8"
Date Completed 4-9-65 | Casing: Length 57' | Dia. 3 1/2"
Boring No. B-3 | Station & Offset 178+36, 38' Rt (REAR ABUTMENT)
Water Elev. ——— | Surface Elev. 1058.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1058.6	0														
	2														
1053.6	4														
	6	18/25			Brown Gravelly Clay	1	19	4	9	37	31	29	12	13	
	8														
1048.6	10														
	12	41/39			Brown Clayey Sandy Gravel	2	38	14	8	21	19	27	13	8	
	14														
1043.6	16	40/45			Brown and Gray Silty Gravel	3	52	7	7	22	12	24	5	14	
	18														
1038.6	20														
	22	14/25			Brown and Gray Gravelly Clay	4	27	5	8	29	31	28	11	16	
	24														
1033.6	26	13/15			Reddish-Brown and Gray Clayey Silt	5	0	3	11	46	40	29	8	20	
	28														
1028.6	30	11/19			Reddish-Brown Gravelly Silt	6	18	6	7	37	32	24	7	15	
	32														
1023.6	34														
	36	9/17			Brown Silt and Clay	7	0	4	5	35	56	31	11	21	
	38														
1018.6	40	10/13			Brown Silty Gravelly Sand	8	16	34	21	18	11	NP	NP	14	
1016.1	42	10/11			Brown Silty Sand	9	0	30	42	16	12	NP	NP	13	
1013.6	44														
	46	8/11			Brown Silty Gravelly Sand	10	16	24	32	19	9	NP	NP	19	
1011.1	48	12/7			Brown Silty Gravelly Sand	11	19	35	19	17	10	NP	NP	19	
1008.6	50	6/4			Brown Silty Sand	12	0	45	25	16	14	NP	NP	16	
1006.1	52	8/12			Brown Gravelly Sand	13	46	41	9	-4-		NP	NP	17	
1003.6	54														
	56	22/34			Brown Sandy Silt	14	0	2	29	55	14	NP	NP	19	
1001.1	58														
					No Sample Recovered - Boulder (Driller's Description)										
998.6	60														
996.6	62	24/26			Brown Sandy Silt	16	24	1	17	46	12	NP	NP	21	
					TOP OF ROCK										
	64		2.5	0.5											
	66				Shale, gray, fissile, arenaceous, jointed and very badly broken to broken, with few clay seams, medium firm. Core loss 24%.										
	68		2.4	2.6											
	70														
	72		5.0	0.0											
	74														
983.6					BOTTOM OF BORING										

LOG OF BORING

Date Started 3-25-65 | Sampler Type SS | Dia. 1 3/8"
Date Completed 4-1-65 | Casing: Length ——— | Dia. ———
Boring No. B-6 | Station & Offset 179+85, 2' Rt (CENTER PIER)
Water Elev. ——— | Surface Elev. 1053.2'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1053.2	0														
	2														
1048.2	4														
	6	15/18			Brown Gravelly Clay	1	15	5	9	36	35	31	11	14	
	8														
1043.2	10	18/17			Gray Gravelly Sandy Clay	2	V	I	S	U	A	L		23	
	12														
	14														
1038.2	16	8/23			Brownish-Gray Gravelly Clay	3	29	5	6	31	29	33	12	18	
	18														
1033.2	20	13/20			Brownish-Gray Sandy Gravelly Silt	4	22	6	10	35	27	29	8	17	
	22														
1028.2	24														
	26	11/20			Brownish-Gray Sandy Clay	5	11	7	11	32	39	31	11	15	
	28														
1023.2	30	7/10			Brown Clayey Silt	6	0	6	10	39	45	33	9	22	
	32														
1018.2	34														
	36	6/7			Brown Silty Sand	7	0	18	55	17	10	NP	NP	13	
1015.7	38	10/14			Brown Silty Sand	8	0	12	63	10	15	NP	NP	22	
1013.2	40	34/26			Brown Silty Sandy Gravel	9	45	15	15	16	9	NP	NP	15	
	42														
	44														
1008.2	46	12/22			Brownish-Gray Clayey Silt	10	0	1	3	56	40	28	7	21	
1005.7	48	5/50			Brown Silty Sandy Gravel	11	35	9	23	21	12	NP	NP	12	
1003.2	50	5/35			Brown Silty Sandy Gravel	12	47	10	9	15	19	24	5	7	
1000.7	52	24/30			Brown Sandy Gravelly Silt	13	31	3	14	39	13	NP	NP	17	
	54														
998.2	56	14/24			Brown Sandy Silt	14	0	1	27	51	21	NP	NP	16	
	58														
993.2	60	14/30			Gray Gravelly Sandy Silt	15	20	2	27	37	14	NP	NP	17	
	62														
	64														
988.2	66	18/47			Brownish-Gray Silty Sand and Stone Fragments	16	V	I	S	U	A	L	25	9	24
	68														
983.2	70	5/30			Gray Silty Sand and Stone Fragments	17	V	I	S	U	A	L	PL	-19	11
981.2	72														
					TOP OF ROCK										
	74		2.7	0.3											
	76				Shale, gray, argillaceous, arenaceous in parts, medium-firm with few clay seams, jointed, fissile, very badly broken. Core loss 3%.										
	78		5.0	0.0											
973.2	80				BOTTOM OF BORING										

LOG OF BORING

Date Started 4-13-65 | Sampler Type SS | Dia. 1 3/8"
Date Completed 4-16-65 | Casing: Length 70' | Dia. 3 1/2"
Boring No. B-9 | Station & Offset 181+03, 2' Rt (FORWARD PIER)
Water Elev. ——— | Surface Elev. 1049.3'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1049.3	0														
	2														
1044.3	4														
	6	13/12			Brown Gravelly Clay	1	18	5	5	36	36	31	11	18	
	8														
1039.3	10														
	12	29/24			Brown Gravelly Silt	2	24	4	8	31	33	28	8	13	
	14														
1034.3	16	6/9			Brown and Gray Gravelly Clay	3	21	3	7	34	35	34	12	18	
	18														
1029.3	20	10/21			Gray and Brown Silty Gravel	4	52	5	3	23	17	30	10	11	
	22														
1024.3	24														
	26	12/13			Brown and Gray Sandy Clay	5	10	4	9	36	41	32	12	15	
	28														
1019.3	30	8/9			Brown Sandy Clay	6	13	5	11	33	38	31	11	17	
	32														
1014.3	34														
	36	10/11			Brown Silty Gravel	7	56	4	5	17	18	29	9	15	
	38														
1009.3	40	17/24			Brown Silty Gravelly Sand	8	32	6	32	15	15	NP	NP	15	
1006.8	42	14/17			Brown Silty Sandy Gravel	9	47	9	15	17	12	NP	NP	9	
1004.3	44														
	46	17/28			Brown Silty Sandy Gravel	10	51	9	15	15	10	NP	NP	13	
1001.8	48	14/28			Brown Silty Sand with Stone Fragments	11	33	11	27	18	11	NP	NP	10	
999.3	50														
	52														
	54														
	56														
	58														
	60														
	62				Brownish-gray silty clay with stone fragments and cobbles.										
	64														
	66														
	68														
979.3	70				BOTTOM OF BORING										

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0656
UNDER EBL OF THE OHIO TURNPIKE
SEC. SUM-IR 271-2.98

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
B.J.R.	R.C.	R.D.R.	4/29/65

TR-11-A
10-00-1-64

50
13
4
4

SUM-IR271-2.98

Test Location No. —

Station & Offset —

Surface Elev. — Water Elev. —

Piling —

Hammer —

Formula —

Reference —

Rod Condition —

1063 1059 1055 1051 1047 1043 1039 1035 1031 1027 1023 1019 1015 1011 1007

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 2

Station & Offset 177+77 CL REAR ABUTMENT

Surface Elev. 1059.0' Water Elev. DRY-Hole Closed at El. 1052.0'

Piling —

Hammer —

Formula —

Reference —

Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 3

Station & Offset 178+21.3' RT REAR PIER

Surface Elev. 1058.7' Water Elev. —

Piling —

Hammer —

Formula —

Reference —

Rod Condition —

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 4

Station & Offset 178+60.2' RT REAR PIER

Surface Elev. 1056.5' Water Elev. DRY-Hole Closed at El. 1050.5'

Piling —

Hammer —

Formula —

Reference —

Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 6

Station & Offset 180+00.2' RT CENTER PIER

Surface Elev. 1052.1' Water Elev. DRY-Hole Closed at El. 1042.1'

Piling —

Hammer —

Formula —

Reference —

Rod Condition GOOD

1055 1051 1047 1043 1039 1035 1031 1027 1023 1019 1015 1011 1007

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 8

Station & Offset 180+75.35' RT FORWARD PIER

Surface Elev. 1050.7' Water Elev. DRY-Hole Closed at El. 1042.7'

Piling —

Hammer —

Formula —

Reference —

Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 9

Station & Offset 181+03.3' RT FORWARD PIER

Surface Elev. 1029.0' Water Elev. DRY-Hole Closed at El. 1043.0'

Piling —

Hammer —

Formula —

Reference —

Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 11

Station & Offset 181+86.6' CL FORWARD ABUTMENT

Surface Elev. 1046.6 Water Elev. DRY-Hole Closed at El. 1036.6

Piling —

Hammer —

Formula —

Reference —

Rod Condition GOOD

1055 1051 1047 1043 1039 1035 1031 1027 1023 1019 1015 1011 1007

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0656
UNDER EBL OF THE OHIO TURNPIKE
SEC. SUM-IR 271-2.98

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	4/29/65

TE - 118
600 - 11 - 64

SUMMIT COUNTY
SUM-IR 271- 2.98

1/3

GEOLOGY OF THE SITE

The structure site is located upon the glaciated Allegheny Plateau. Moderately deep glacial-derived soil overlies limestone and shale bedrock, of Upper Mississippian and Lower Pennsylvanian ages.

EXPLORATION

The exploration consisted of two drive sample borings and eight drive rod penetration tests, made between March 24 and April 1, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered unstratified, dense and extremely dense gravel, sand, silt, and boulders. The borings were terminated at 30-foot depth, elevation 961 feet, after penetrating in excess of 30 feet of material requiring in excess of 30 blows per foot in the standard penetration test. Borings located approximately 125 feet back of the rear abutments, obtained for the structure SUM-IR 271-0656, were extended to elevation 979 and 973 feet, and disclosed shale bedrock, encountered at 72-foot depth, elevation 981 feet, is overlain by dense and extremely dense gravel, sand, silt, and boulders.

Rod soundings met rapid increase in penetration resistance with increase in depth and were terminated upon encounter with high resistance and refusal to penetration 6 to 25 feet below ground surface, elevations 988 to 964 feet, considered to be in extremely dense gravels, sands, silts, and boulders, as revealed by the borings.

No free water was observed in any of the rod sounding holes.

No test penetrated to bedrock surface.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test. X = Number of Blows for First 6 inches. Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W---- Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system-and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8" / 3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)		0.005mm

LOG OF BORING

Date Started 3-31-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 4-1-65 — Casing: Length 25' — Dia. 3 1/2"
Boring No. B-8 — Station & Offset 347+61, 96' Rt (REAR PIER) — Surface Elev. 991.3'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
991.3	0														
988.8	2	50* (0.4')			Brown Silty Sandy Gravel	1	54	17	15	-14-		NP	NP	10	
986.3	4														
	6	25/26			Brown Silty Sandy Gravel	2	58	14	10	-18-		NP	NP	14	
	8														
981.3	10	50* (0.7')			Brown Silty Sandy Gravel	3	58	14	12	-16-		NP	NP	9	
	12														
	14														
976.3	16	50/*			Brown and Gray Silty Sandy Gravel	4	43	4	22	21	10	19	1	11	
973.8	18	50/*			Brown Silty Sandy Gravel	5	49	22	10	-19-		NP	NP	9	
971.3	20	50/*			Grayish-Brown Silty Sandy Gravel	6	58	10	7	15	10	PL	=20	8	
	22														
	24														
966.3	26	50* (0.7')			Brown Sandy Silt	7	0	1	29	55	15	NP	NP	22	
	28				BOTTOM OF BORING										
961.3	30	(0.7')			Gray Silty Sandy Gravel	8	46	27	12	-15-		NP	NP	10	
960.6															

*Refusal

LOG OF BORING

Date Started 3-25-65 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 3-30-65 — Casing: Length 25' — Dia. 3 1/2"
Boring No. B-10 — Station & Offset 347+25, 75'Lt (FORWARD PIER) — Surface Elev. 992.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
992.0	0														
989.5	2	50* (0.7')			Brown Silty Sandy Gravel	1	40	13	21	-26-		NP	NP	10	
987.0	4														
	6	50/*			Brown Silty Sandy Gravel	2	67	12	9	-12-		NP	NP	12	
984.5	8	50*			No Sample Recovered - Boulders										
982.0	10	50* (0.2')			Gray Stone Fragments	3	V	I	S	U	A	L			
979.5	12														
	14	50*			No Sample Recovered - Large Gravel (Driller's Description)										
977.0	16	50* (0.3')			Gray Stone Fragments	4	V	I	S	U	A	L			
974.5	18	50*			No Sample Recovered - Gravel		V	I	S	U	A	L			
972.0	20	50*			No Sample Recovered - Gravel and Sand (Driller's Description)										
969.5	22				Brown Sand (Wash Sample)	5	9	82	6	-3-		NP	NP	17	
	24														
967.0	26	50* (0.3')			Brown Silty Sandy Gravel	6	49	12	14	17	8	NP	NP	13	
	28				BOTTOM OF BORING										
962.0	30	50* (0.6')			Gray Sandy Silt	7	11	5	22	51	31	NP	NP	21	
961.4															

*Refusal

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

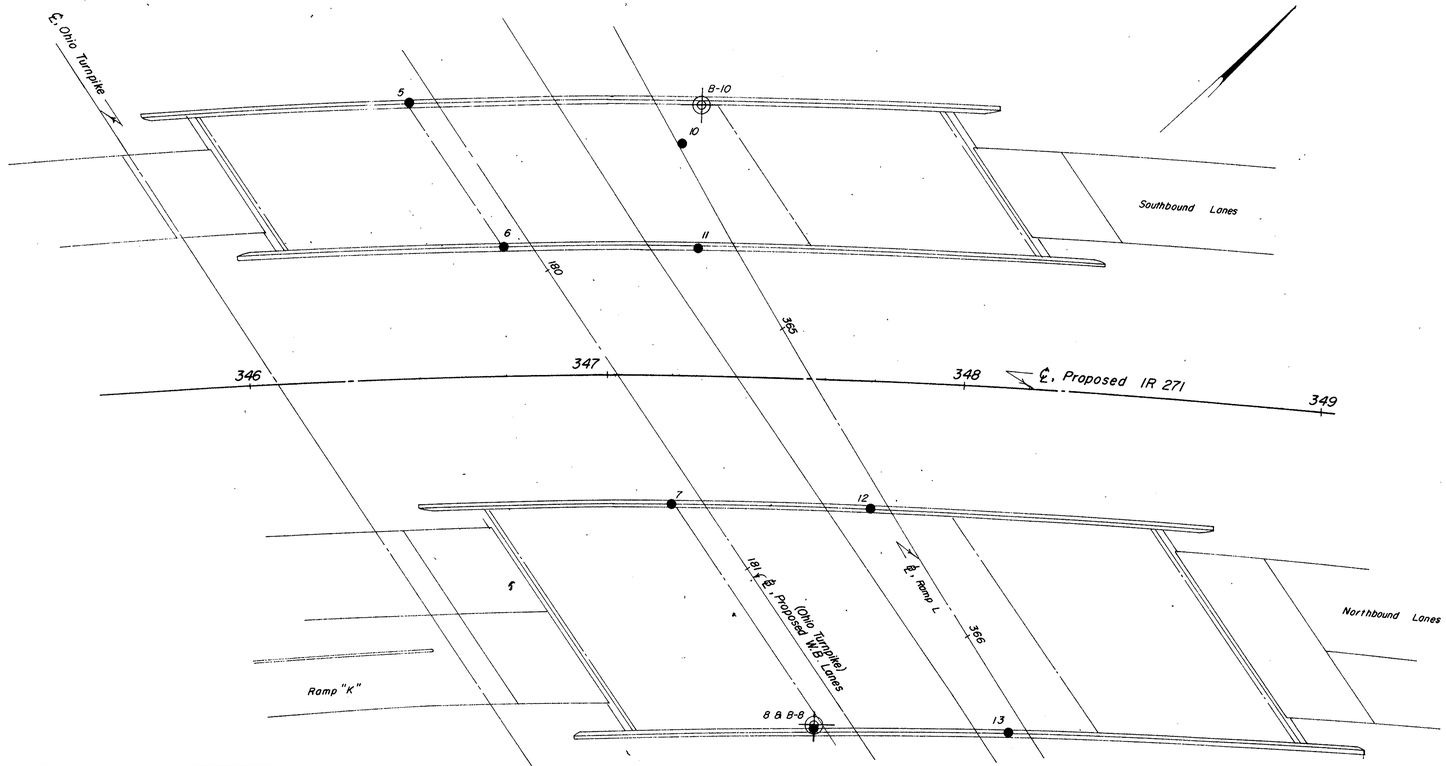
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0658 L/R
IR 271 OVER W B L OF OHIO TURNPIKE
SEC. SUM-IR 271- 2.98

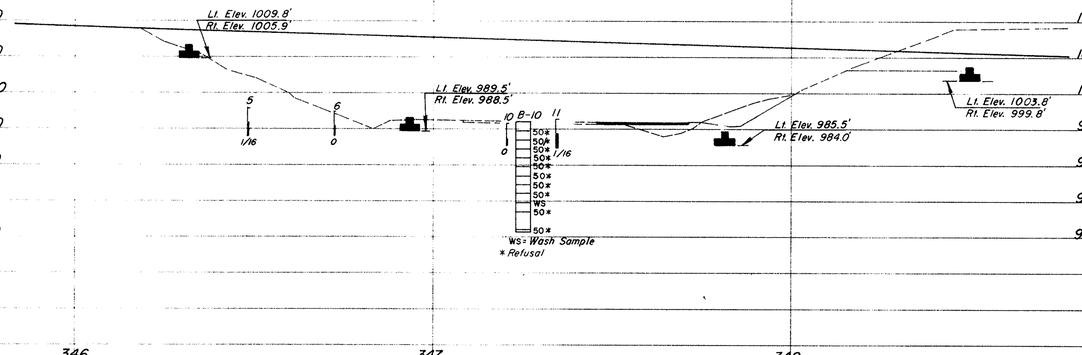
CHECKED BY	REVIEWED BY	DATE
L.N.L.	R.D.R.	4/21/65

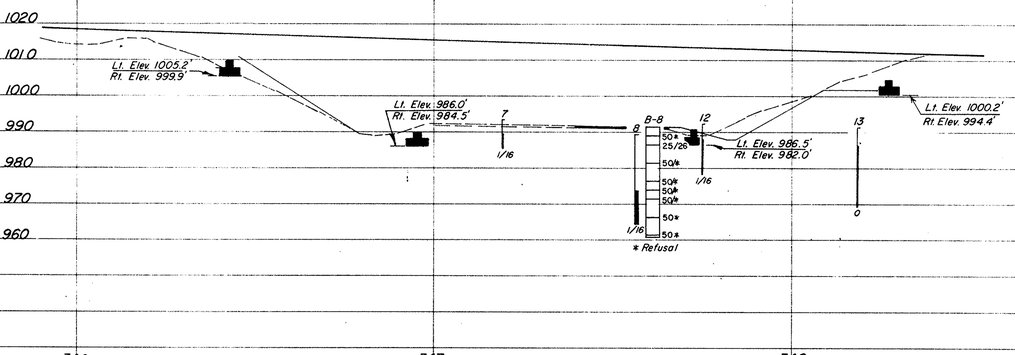
TE - 119
500 - 11 - 64

SUM-IR 271-2.98

12
13







SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION

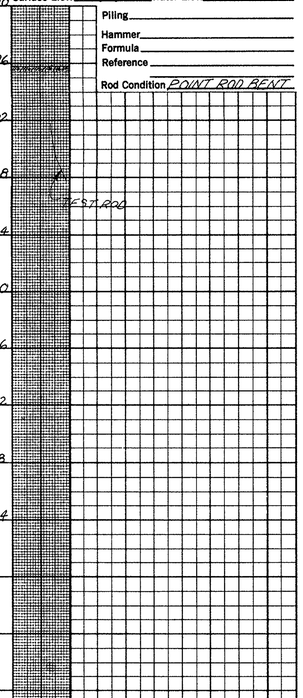
BRIDGE NO. SUM-IR 271-0658 L/R
IR 271 OVER WB L OF OHIO TURNPIKE
SEC. SUM-IR 271-2.98

PLAN AND PROFILE

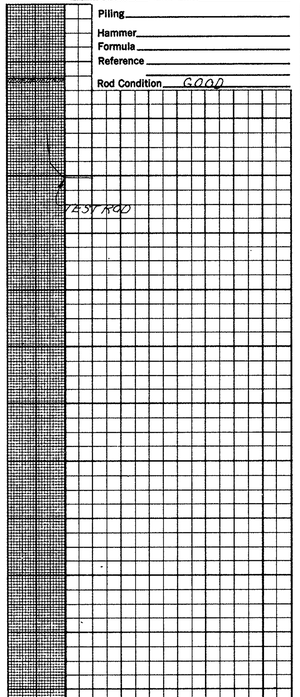
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R.L.F.	L.N.L.	R.D.R.	4/21/65

TE-114
1000-1-64

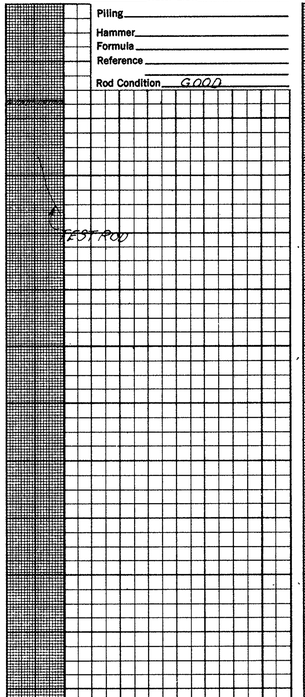
Test Location No. 5
Station & Offset 346+48.76'LT REAR PIER
Surface Elev. 995.8' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition POINT ROD BENT



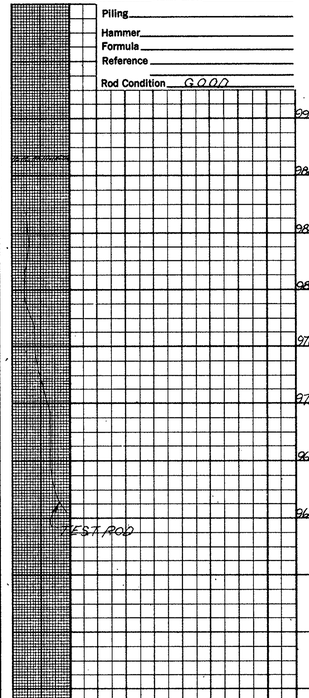
Test Location No. 6
Station & Offset 346+72.36'LT REAR PIER
Surface Elev. 994.9' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition GOOD



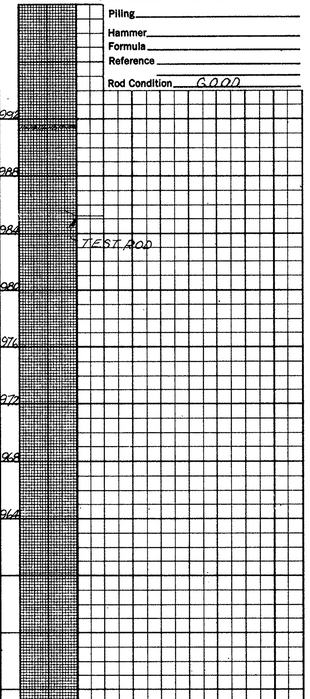
Test Location No. 7
Station & Offset 347+18.36'RT REAR PIER
Surface Elev. 993.3' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition GOOD



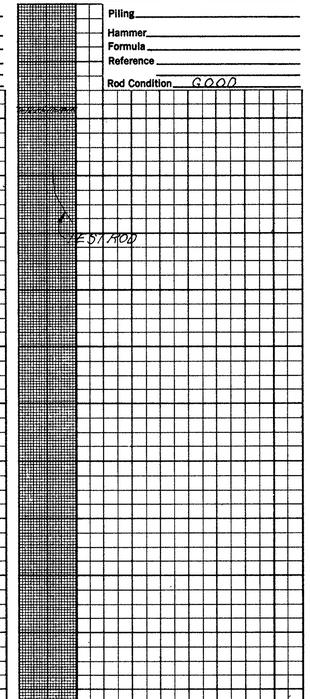
Test Location No. 8
Station & Offset 347+61.97'RT REAR PIER
Surface Elev. 989.4' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition GOOD



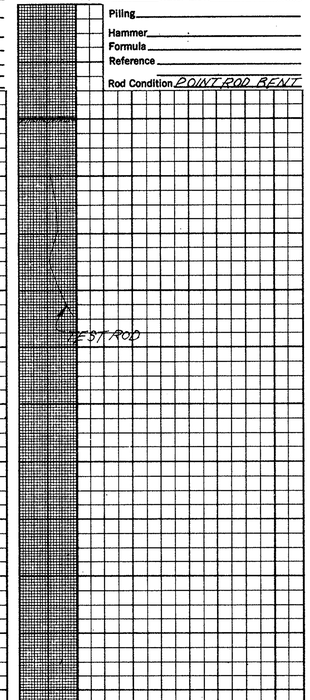
Test Location No. 10
Station & Offset 347+20.64'LT FORWARD PIER
Surface Elev. 991.6' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition GOOD



Test Location No. 11
Station & Offset 347+25.35'LT FORWARD PIER
Surface Elev. 992.8' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition GOOD

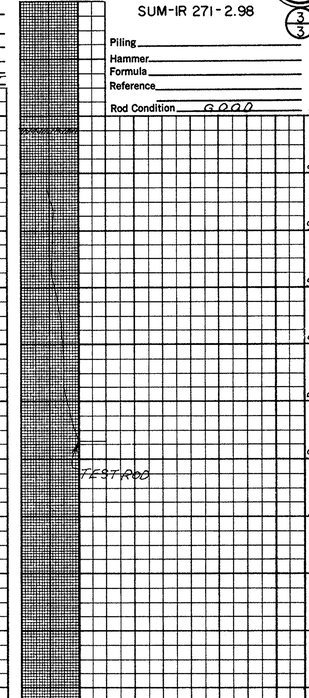


Test Location No. 12
Station & Offset 347+75.35'RT FORWARD PIER
Surface Elev. 992.1' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition POINT ROD BENT



Test Location No. 13
Station & Offset 348+18.95'RT FORWARD PIER
Surface Elev. 991.2' **Water Elev.**
Piling
Hammer
Formula
Reference
Rod Condition GOOD

SUM-IR 271-2.98



OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0658 L/R
IR 271 OVER WB L OF OHIO TURNPIKE
SEC. SUM-IR 271-2.98

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	4/21/65