RF-49 (6)

FHWA REGION	STATE	PROJECT	
5	OHIO	RF-49 (6)	

RIC-30-16.37

1 / 125

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
RIC-30-16.37
RICHLAND COUNTY
MIFFLIN TOWNSHIP
GRADE SEPARATION OF REED RD. WITH USR 30

MICROFILMED NOV 18 '76

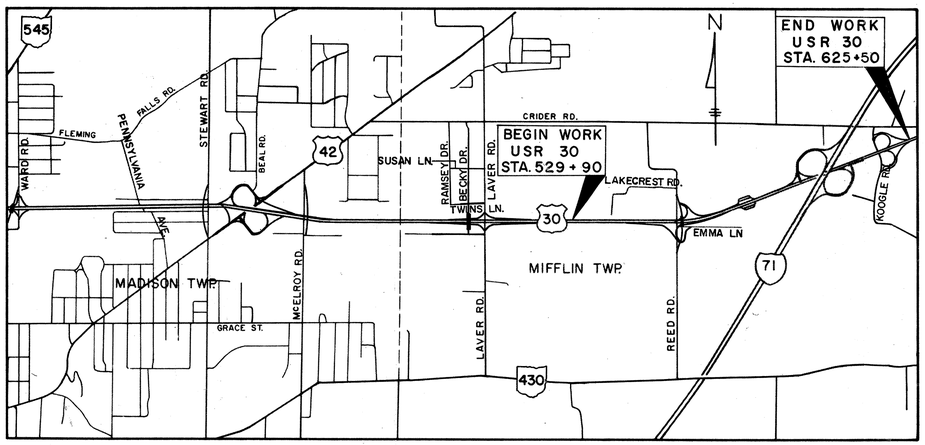
MICROFILMED JUL 20 '78

CONVENTIONAL SIGNS

TREES AND STUMPS (EXISTING)	
TREES (TO BE REMOVED IN NON-LA R/W)	
FENCE LINE	
POLE LINE	
COUNTY LINE	
TOWNSHIP LINE	
SECTION LINE	
CORPORATION LINE	
CENTER LINE	
GUARD RAIL	EXISTING / PROPOSED
EXISTING PIPE	G W S
RAILROAD	
PROPERTY LINE	RR
EXISTING RIGHT OF WAY	
PROPOSED RIGHT OF WAY	R/W
PROPOSED LIMITED ACCESS RIGHT OF WAY	LA
PROPOSED LIMITED ACCESS AND RIGHT OF WAY	LA / R/W

INDEX OF SHEETS

SHEET NUMBERS 14, 98, 109-113, 118 DELETED FROM PLANS.



LOCATION MAP

0 2000 4000 6000

SCALE IN FEET

PORTIONS TO BE IMPROVED

STATE HIGHWAYS & OTHER ROADS

LINE DATA

PROJECT RIC-30-16.37 PROJECT LENGTH = 0.00

WORK	BEGIN STATION	SUSPEND STATION	RESUME STATION	END STATION	LENGTH LIN. FT.	LENGTH MILES
U.S.R. 30	529+90	582+10	606+90			
		607+10	625+20	625+50	5270	
REED ROAD	11+90			37+10	2520	
EMMA LANE	0+32.38			8+75	842.62	
WORK-TOTAL LENGTH					8632.62	1.634

SCALES

PLAN	1" = 50'
PROFILE HORIZONTAL	1" = 50'
PROFILE VERTICAL	1" = 5'
CROSS SECTIONS	1" = 10'

SCALE IN FEET

1" = 50' 0 50 100 150

STANDARD DRAWINGS

BP-1	6-1-65			HW-4	1-1-70	AS-1-72	6-30-72	
BP-2	12-1-68	F-2	5-1-76	MC-10	5-1-76	RB-1-55	2-2-59	
		F-3	5-1-76	MC-3	6-1-73	SD-1-69 SHTS. 1,2,3&4	6-12-69	
		F-5	5-1-76	MC-4	7-26-76	SR-1-67 SH. 1 OF 3	10-15-71	808 1-1-71
BP-5	8-11-75	L-1	6-1-73	MC-5	6-12-75	TC-7.65	10-1-74	
BP-6	6-1-65			MC-6	6-1-65	TC-21.10	10-1-74	844 11-8-74
BP-7	1-1-66	GR-2B	11-9-71	MC-7	10-15-76	TC-22.10	10-1-74	838 3-18-70
CB-2-2-A&B	6-1-65	GR-3	11-9-71	MC-8	6-12-75	TC-51.10	6-2-75	847 4-3-76
CB-4	9-1-69	GR-4	11-9-71	TC-61.10	12-1-75	TC-51.11	6-2-75	836 3-12-75
CB-5	9-1-69	GR-5	1-1-71	TC-71.10	12-1-75	HL-1	9-6-73	1001 1-3-77
CB-6	6-1-65	GR-6	1-1-71			HL-10	1-21-76	5625 1-11-74
CB-458A	6-6-68					HL-15	1-21-76	S713 1-11-74

SUPPLEMENTAL SPECIFICATIONS

FILE NO. ____

RICHLAND COUNTY RIC-30-16.37

DATE OF LETTING ____

CONTRACT NO. ____

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 TRANSPORTATION IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02, REVISED CODE OF OHIO.

1977 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION 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 TO TRAFFIC OF THE HIGHWAY, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED DATE 10-27-76 — H. R. Reader — DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED DATE 11-16-76 — Robert B. Pfeifer — ENGINEER, BUREAU OF BRIDGES

APPROVED DATE 12-14-76 — W. J. Cunningham — ENGINEER, BUREAU OF ROADWAY DESIGN

APPROVED DATE 12-14-76 — John B. Ellis — ASSISTANT DEPUTY DIRECTOR FOR HIGHWAY DESIGN

APPROVED DATE 12-14-76 — Lee Bellamy — ASSISTANT DEPUTY DIRECTOR FOR REAL ESTATE

APPROVED DATE 12-14-76 — Howard E. Flora — ASSISTANT DEP. DIRECTOR FOR PROGRAM DEVELOPMENT

APPROVED DATE 12-14-76 — R. E. Cathell — CHIEF ENGINEER, DESIGN

APPROVED DATE 12-14-76 — Lynn D. Richman — CHIEF ENGINEER, CONSTRUCTION

APPROVED DATE 12-14-76 — Dennis R. Harwood — CHIEF ENGINEER, OPERATIONS

APPROVED DATE 12-14-76 — David L. Weis — ASSIST. DIRECTOR, DEPARTMENT OF TRANSPORTATION

APPROVED DATE 12/14/76 — Richard D. Jackson — DIRECTOR, DEPARTMENT OF TRANSPORTATION

Prepared and Recommended By
SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES, INC.
Consulting Engineers
MANSFIELD OHIO WOOSTER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: ____

DIVISION ADMINISTRATOR ____ DATE

Rev. 2-9-77

RAMP D CURVE DATA

P.I. STA. D562+84.76
Δ = 143°-57'-22"
D = 29°-48'-47"
R = 192.18'
T = 590.71'
L = 482.86'

P.I.s STA. D556+29.33
Δs = 29°-48'-47"
Ls = 200.00'
LT = 135.28'
ST = 68.43'
X = 194.65'
Y = 34.02'
P = 8.59'
K = 99.10'
Cs = 197.60'

REED RD. CURVE DATA

P.I. STA. 28+80.00
Δ = 15°-01'-11"
D = 7°-00'-00"
R = 818.51'
T = 107.90'
L = 214.57'

P.I. STA. 32+31.95
Δ = 18°-56'-21"
D = 8°-00'-00"
R = 716.20'
T = 119.46'
L = 236.74'

RAMP C CURVE DATA

P.I. STA. C555+87.65
Δ = 59°-20'-57"
D = 25°-00'-00"
R = 229.18'
T = 130.59'
L = 237.40'

P.I. STA. C558+78.01
Δ = 29°-40'-42"
D = 28°-00'-00"
R = 204.63'
T = 54.22'
L = 105.99'

P.I.s STA. C560+09.98
Δs = 33°-30'-00"
Ls = 200.00'
LT = 125.18'
ST = 80.19'
X = 192.05'
Y = 44.26'

P.I. STA. C562+58.04
Δ = 14°-02'-11"
D = 5°-30'-00"
R = 1041.74'
T = 128.25'
L = 255.21'

RAMP E CURVE DATA

OUTSIDE E.P.
P.I. STA. E572+16.20
Δ = 56°-56'-39"
R = 50.00'
T = 27.12'
L = 49.69'

INSIDE E.P.
P.I. STA. E572+16.80
Δ = 33°-12'-42"
R = 92.93'
T = 27.71'
L = 53.86'

RAMP A CURVE DATA

P.I. STA. A544+30.00
Δ = 3°-33'-00"
D = 0°-45'-00"
R = 7639.44'
T = 236.74'
L = 473.33'

P.I. STA. A551+96.27
Δ = 61°-35'-43"
D = 25°-00'-00"
R = 229.18'
T = 136.61'
L = 246.38'

P.I. STA. A555+13.56
Δ = 28°-55'-09"
D = 25°-00'-00"
R = 229.18'
T = 59.10'
L = 115.68'

RAMP B CURVE DATA

P.I. STA. B552+95.99
Δ = 107°-48'-43"
D = 29°-48'-47"
R = 192.18'
T = 263.61'
L = 361.63'

P.I.s STA. B554+62.44
Δs = 29°-48'-47"
Ls = 200.00'
LT = 135.28'
ST = 68.43'
X = 194.65'
Y = 34.02'
P = 8.59'
K = 99.10'
Cs = 197.60'

USR 30 CURVE DATA

P.I. STA. 560+00
Δ = 21°-06'-00"
D = 1°-28'-00"
R = 3906.53'
T = 727.56'
L = 1438.64'

EMMA LANE CURVE DATA

P.I. STA. 1+26.30
Δ = 95°-21'-58"
D = 81°-51'-04"
R = 70.00'
T = 76.88'
L = 116.51'

P.I. STA. 2+84.06
Δ = 16°-25'-30"
D = 7°-00'-00"
R = 818.51'
T = 118.13'
L = 234.64'

REED RD. CURVE DATA

P.I. STA. 16+43.74
Δ = 19°-59'-56"
D = 8°-00'-00"
R = 716.20'
T = 126.28'
L = 249.99'

P.I. STA. 20+74.28
Δ = 23°-39'-48"
D = 8°-00'-00"
R = 716.20'
T = 150.03'
L = 295.79'

EMMA LANE CURVE DATA

P.I. STA. 5+44.84
Δ = 95°-09'-55"
D = 67°-24'-24"
R = 85.00'
T = 93.03'
L = 141.18'

UTILITY OWNERS

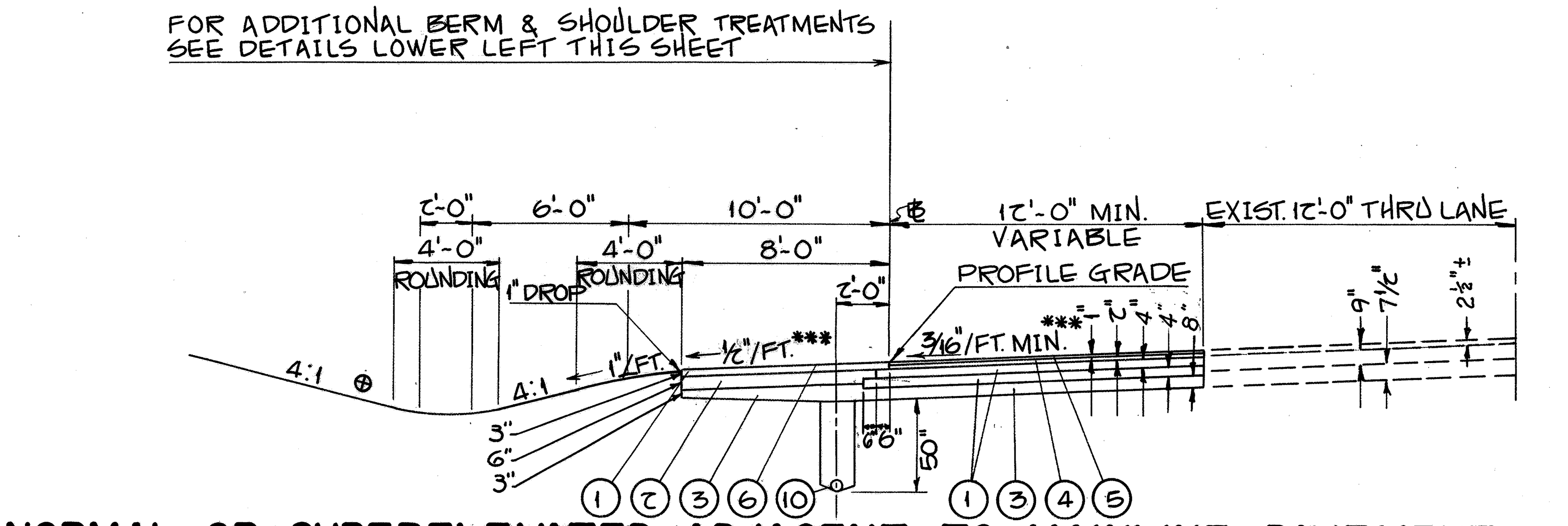
ELECTRICITY	OHIO EDISON COMPANY	47 NORTH MAIN STREET AKRON, OHIO
TELEPHONE	UNITED TELEPHONE COMPANY	25 S. MULBERRY STREET MANSFIELD, OHIO
GAS	COLUMBIA GAS OF OHIO, INC. COMPANY	99 NORTH FRONT STREET COLUMBUS, OHIO

DESIGN DESIGNATION
(WEST OF REED ROAD)
CURRENT ADT (1966) 8020
DESIGN YEAR ADT (1988) 16842
DESIGN HOURLY VOLUME 15 %
DIRECTIONAL DISTRIBUTION 60-40
PERCENT OF B & C TRUCKS 9% DHV
DESIGN SPEED 60 M.P.H.

DESIGN DESIGNATION
(EAST OF REED ROAD)
CURRENT ADT (1966) 7309
DESIGN YEAR ADT (1988) 15360
DESIGN HOURLY VOLUME 15 %
DIRECTION DISTRIBUTION 60-40
PERCENT OF B & C TRUCKS 9 % DHV
DESIGN SPEED 60 M.P.H.

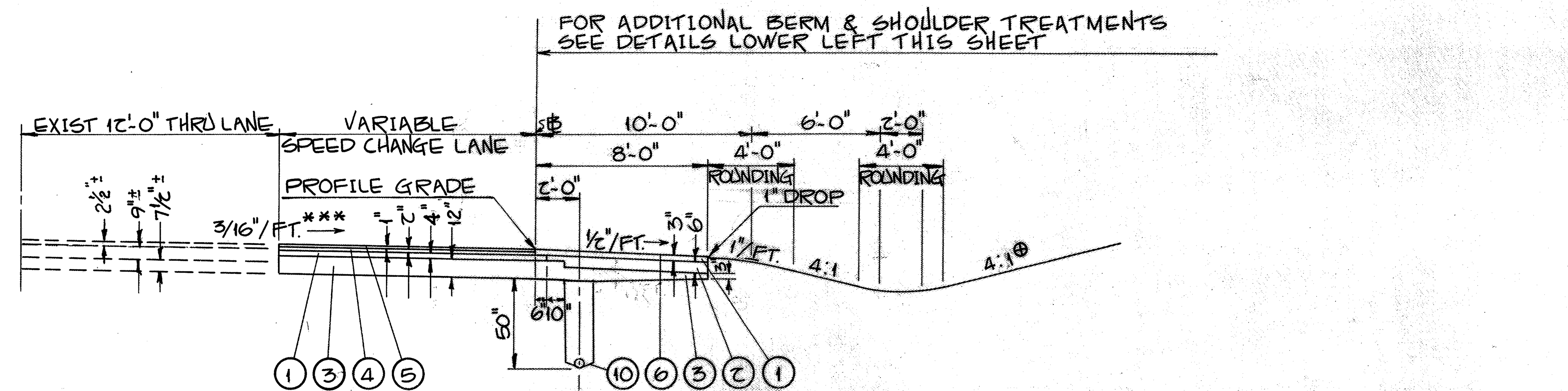
GEOMETRIC LAYOUT & SCHEMATIC PLAN

USR 30 SPEED CHANGE LANES
TYPICAL SECTIONS
404 ON 301



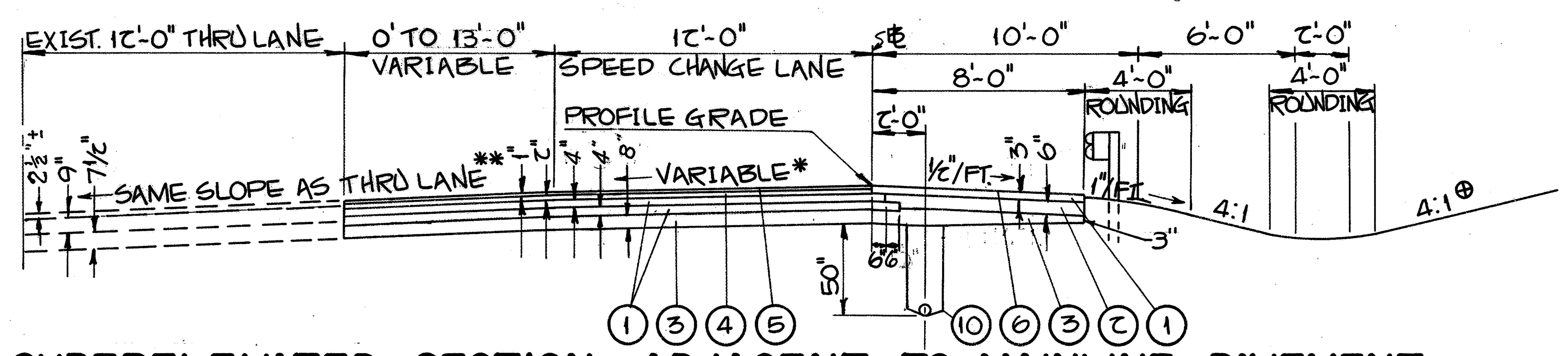
NORMAL OR SUPERELEVATED ADJACENT TO MAINLINE PAVEMENT

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
563+85		571+01.08	W.B.L. USR 30	AS SHOWN ON X-SECTIONS
C561+29.79		C563+85	RAMP C	AS SHOWN ON X-SECTIONS



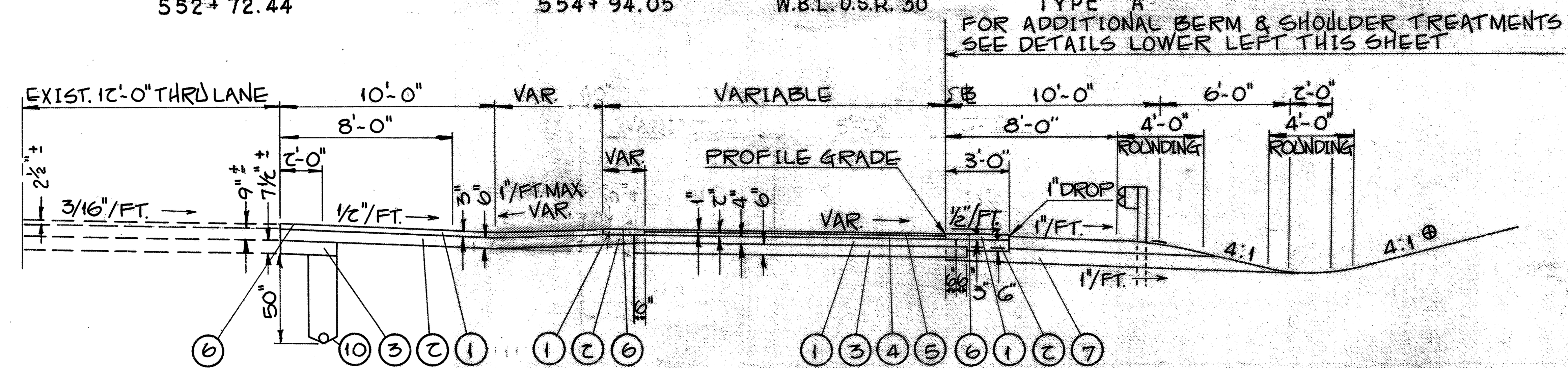
NORMAL SECTION ADJACENT TO MAINLINE PAVEMENT

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
540+00.80		541+93.26	E.B.L. USR 30	TYPE C
A541+93.26		A548+00.80	RAMP A	TYPE B
544+91.27		552+72.44	W.B.L. U.S.R. 30	AS SHOWN ON CROSS SECTIONS
552+72.44		554+94.05	W.B.L. U.S.R. 30	TYPE A



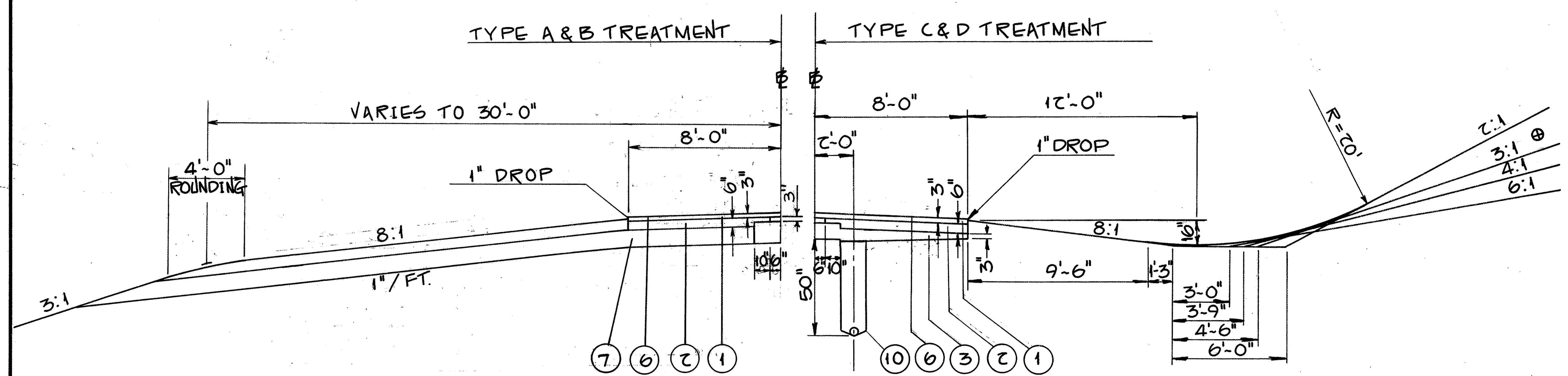
SUPERELEVATED SECTION ADJACENT TO MAINLINE PAVEMENT

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
555+94.01		566+54.92	E.B.L. USR 30	AS SHOWN ON X-SECTIONS



NORMAL SECTION WITH RAMP DETACHED FROM MAINLINE PAVEMENT

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
548+01.23		555+94.01	E.B.L. USR 30	AS SHOWN ON X-SECTIONS
B553+94.01		B555+94.01	RAMP B	AS SHOWN ON X-SECTIONS
554+94.05		561+23.72	W.B.L. USR 30	AS SHOWN ON X-SECTIONS
E571+01.08		E572+38.78	RAMP E	TYPE D



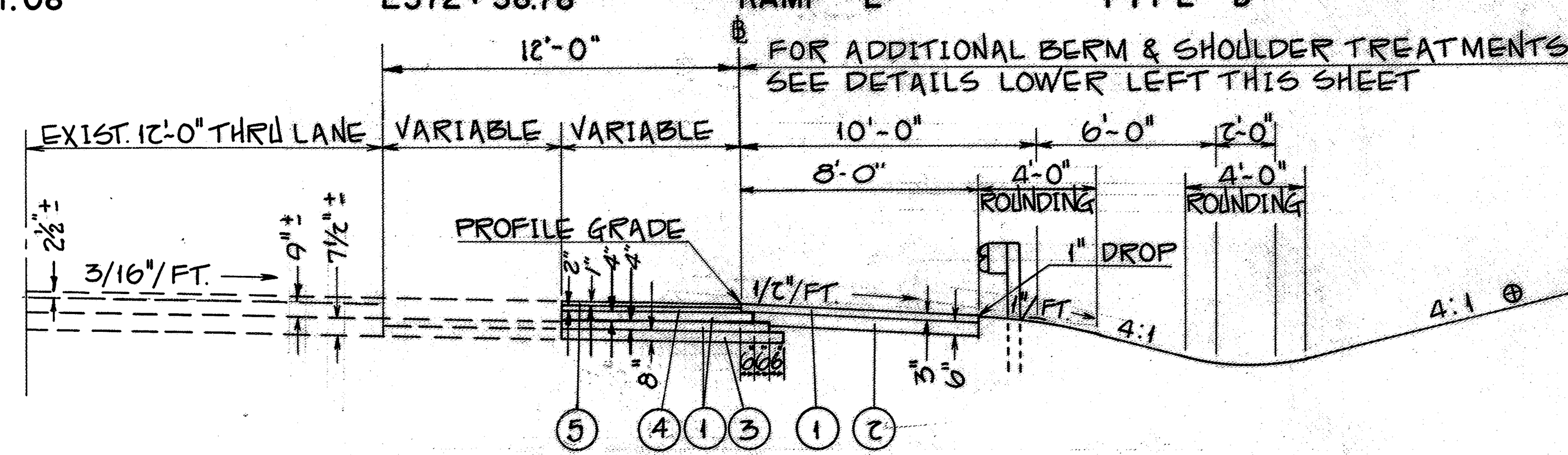
BERM & SHOULDER TREATMENT

TYPE A TREATMENT: AS INDICATED ABOVE

TYPE B TREATMENT: ADD UNDERDRAIN AS SHOWN IN TYPE C

TYPE C TREATMENT: AS INDICATED ABOVE

TYPE D TREATMENT: DELETE ITEMS ③ & ⑩



NORMAL OR SUPERELEVATED ADJACENT TO MAINLINE PAVEMENT

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
566+54.92		570+01.92	E.B.L. USR 30	AS SHOWN ON X-SECTIONS

ITEM LEGEND

① 301 BITUMINOUS AGGREGATE BASE: 702.01, AC-20; OR 702.09, RT-11 OR 12

② 304 AGGREGATE BASE

③ 310 SUBBASE

④ 402 ASPHALT CONCRETE, AC-20

⑤ 404 ASPHALT CONCRETE, AC-20

△⑥ 409 SEAL COAT, COVER AGGREGATE USING 0.008 CU. YD. NO. 8 AGGREGATE PER SQ. YD. AND 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE PROPOSAL NOTE)

⑦ 605 AGGREGATE DRAIN

⑩ 605 PIPE UNDERDRAIN (DEEP)

609 CONCRETE CURB STD. TYPE 8

451 REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

△ 409 SEAL COAT BITUMINOUS MATERIAL: 702.02, MC-800 OR MC-3000; 702.03, CBAE-800; 702.04, RS-1, RS-2, CRS-1 OR CRS-2; OR 702.09, RT-9 OR RT-10.

PAVEMENT NOTES

* AS SHOWN ON DETAIL SHEET

** UNLESS OTHERWISE SHOWN ON DETAIL SHEET

*** OR RATE OF SUPERELEVATION IF GREATER

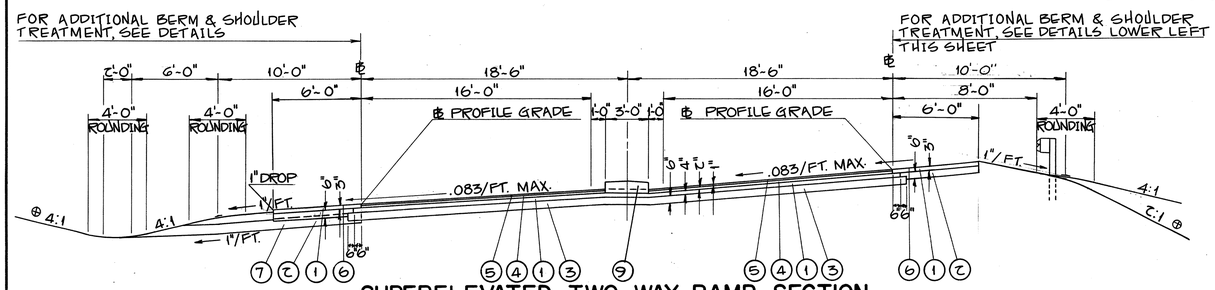
⊕ ALL SLOPES SHOWN ON X-SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

4
125

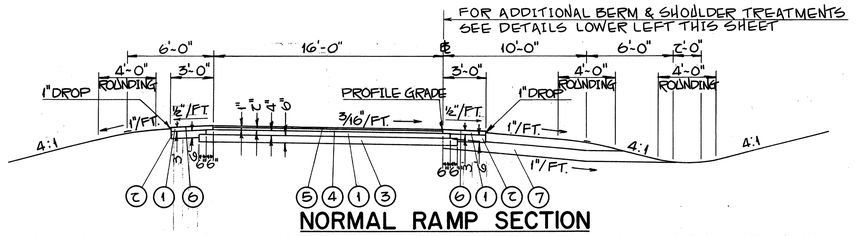
RIC-30-16.37

RAMP
TYPICAL SECTIONS
404 ON 301



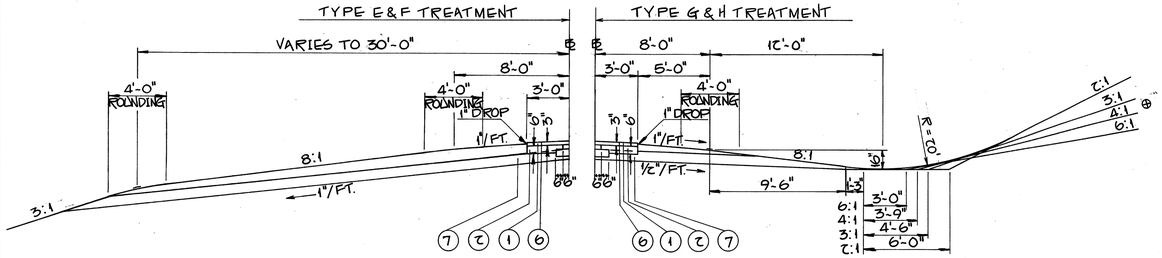
SUPERELEVATED TWO WAY RAMP SECTION

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
A553+87.19		A556+63.54	RAMP A	TYPE H
D559+15.54		D562+06.21	RAMP D	TYPE E



NORMAL RAMP SECTION

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
A548+00.80		A549+24.91	RAMP A	TYPE B



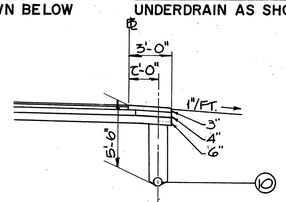
BERM & SHOULDER TREATMENT

TYPE E TREATMENT: AS INDICATED ABOVE

TYPE F TREATMENT: ADD UNDERDRAIN AS SHOWN BELOW

TYPE G TREATMENT: AS INDICATED ABOVE

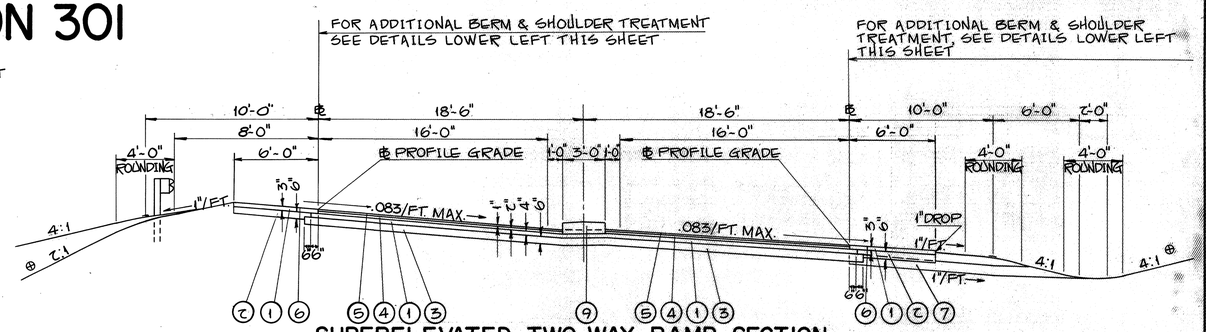
TYPE H TREATMENT: ADD UNDERDRAIN AS SHOWN BELOW



UNDERDRAIN DETAIL

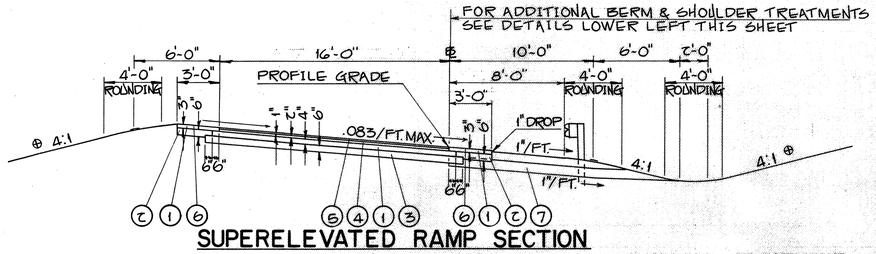
FOR UNDERDRAIN LOCATIONS SEE APPROPRIATE PLAN & PROFILE SHEETS

⊕ ALL SLOPES SHOWN ON X-SECTIONS



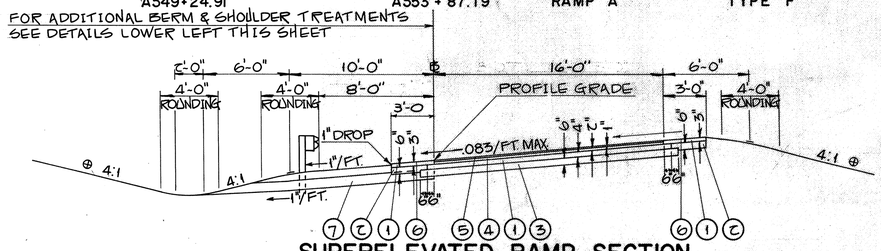
SUPERELEVATED TWO WAY RAMP SECTION

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
B549+38.98		B551+91.69	RAMP B	TYPE F
C554+27.76		C557+61.73	RAMP C	AS SHOWN ON X-SECTIONS



SUPERELEVATED RAMP SECTION

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
B551+91.69		B553+25	RAMP B	TYPE F
B553+25		B553+94.01	RAMP B	TYPE H
A549+24.91		A553+87.19	RAMP A	TYPE F



SUPERELEVATED RAMP SECTION

STATION	TO	STATION	LOCATION	SHOULDER TREATMENT
D554+94.05		D556+94.05	RAMP D	AS SHOWN ON X-SECTIONS
D556+94.05		D559+15.54	RAMP D	TYPE F
C557+61.73		C561+29.79	RAMP C	TYPE F

ITEM LEGEND

① 301 BITUMINOUS AGGREGATE BASE: JTNS 702.01, AC-20; OR 702.09, RT-11 OR 12.
② 304 AGGREGATE BASE
③ 310 SUBBASE
④ 402 ASPHALT CONCRETE, AC 20
⑤ 404 ASPHALT CONCRETE, AC 20
△⑥ 409 SEAL COAT, COVER AGGREGATE USING 0.008 CU. YDS. NO. 8 AGGREGATE PER SQ. YD. AND 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE PROPOSAL NOTE)
⑦ 605 AGGREGATE DRAIN
⑨ 612 CONCRETE MEDIAN PAVEMENT
⑩ 605 PIPE UNDERDRAIN (DEEP)

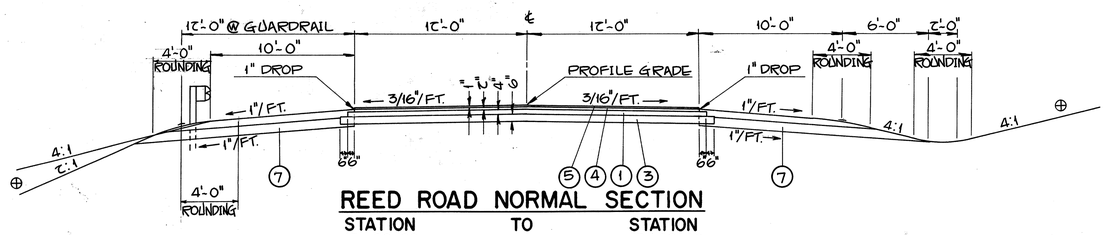
△ 409 SEAL COAT BITUMINOUS MATERIAL: 702.02, MC-800 OR MC-3000; 702.03, CBAE-800; 702.04, RS-1, RS-2, CRS-1 OR CRS-2; OR 702.09, RT-9 OR RT-10.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

5
125

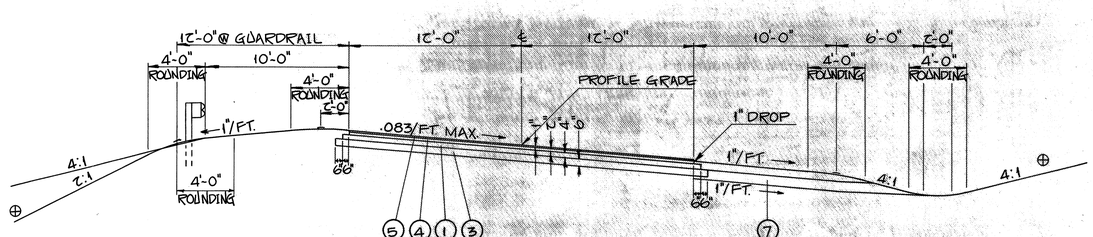
RIC-30-16.37

REED ROAD - EMMA LANE
TYPICAL SECTIONS
404 ON 301



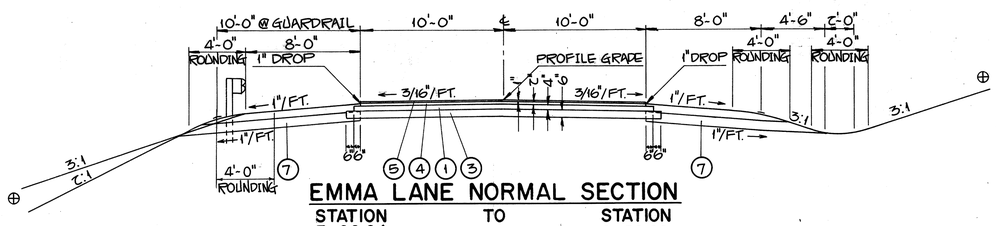
REED ROAD NORMAL SECTION

STATION	TO	STATION
13+00.00		13+42.46
35+24.57		36+00.00



REED ROAD SUPERELEVATED SECTION

STATION	TO	STATION
13+42.46		18+45.84
30+49.57		35+24.57



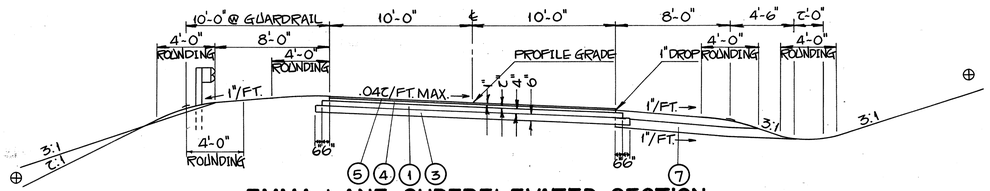
EMMA LANE NORMAL SECTION

STATION	TO	STATION
7+08.24		8+50.00

LAKECREST ROAD NORMAL SECTION

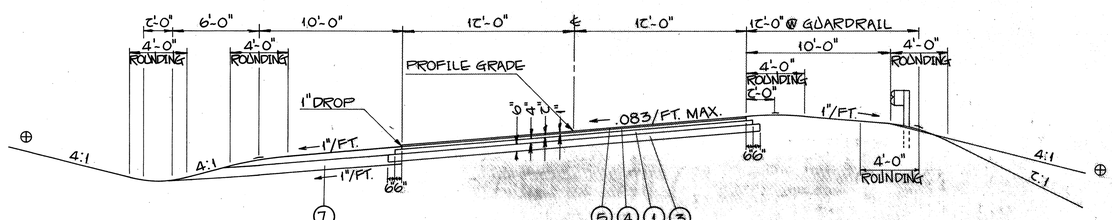
STATION	TO	STATION
19+33		19+50

* VARIES FROM 8'-0" TO 10'-0"



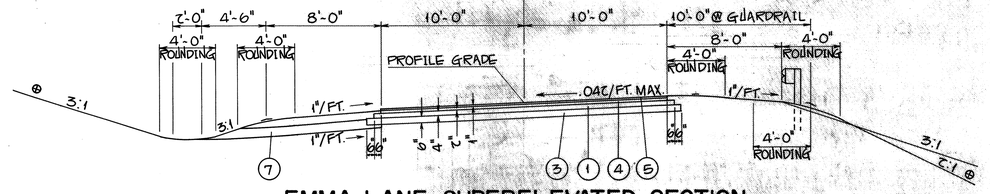
EMMA LANE SUPERELEVATED SECTION

STATION	TO	STATION
0+32.38		0+81.38
4+00.57		7+08.24



REED ROAD SUPERELEVATED SECTION

STATION	TO	STATION
18+45.84		23+29.69
26+69.19		30+49.57



EMMA LANE SUPERELEVATED SECTION

STATION	TO	STATION
0+81.38		4+00.57

ITEM LEGEND

(1)	301 BITUMINOUS AGGREGATE BASE: 702.01,	AC-20; OR 702.09, RT-110R12
(3)	310 SUBBASE	
(4)	402 ASPHALT CONCRETE,	AC20
(5)	404 ASPHALT CONCRETE,	AC20
(7)	605 AGGREGATE DRAIN	

⊕ ALL SLOPES SHOWN ON X-SECTIONS

GENERAL NOTES

FED. AID SYSTEM NO.	STATE	PROJECT	
2	OHIO		

6 / 125

RIC-30-16.37

QUANTITIES CALC D.A.A 7/5/71

QUANTITIES CK'D R.O.R 7/5/71

FIELD OFFICE. THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 400 SQ. FT. OF FLOOR SPACE AND, IN ADDITION TO THE REQUIREMENTS OF ITEM 619, HE SHALL PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL OF THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS. THE ROUNDED CORNERS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

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 DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

LOCATIONS OF GUARDRAIL. THE LOCATIONS OF GUARDRAIL RUNS AS SHOWN IN THESE PLANS ARE SUBJECT TO ADJUSTMENT TO ASSURE THAT THE PLANNED INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

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

REMOVAL OF EXISTING PIPE. THE REMOVAL OF ALL EXISTING PIPE DRAINS WHICH WOULD NORMALLY BE REMOVED IN VARIOUS EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

REMOVAL OF TREES AND STUMPS. ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES 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"	459	
30"	36	2
48"	"	0
60"	"	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. THE EXISTING PAVEMENT AS INDICATED ON THE PLANS SHALL BE REMOVED AND DISPOSED OF, THE OLD ROADWAY 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 THE ABOVE WORK, EXCEPT SEEDING, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202 (203).

SEEDING AND SODDING. QUANTITIES 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.

ITEM SPECIAL, DRILLED WELL ABANDONED. THE EXISTING CONCRETE OR STONE SLAB WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED OF. THE CASING SHALL BE CUT OFF AT LEAST ONE (1) FOOT BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST ONE (1) FOOT BELOW THE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS. THE WELL SHALL BE FILLED FROM BOTTOM TO TOP WITH CLEAN PUDDLED CLAY OR CONCRETE.

THE UNIT PRICE BID FOR EACH "DRILLED WELL ABANDONED" SHALL INCLUDE PAYMENT FOR ALL LABOR, TOOLS, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. THE FOLLOWING ADDITIONAL ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY:

ITEM SPECIAL, DRILLED WELL ABANDONED 2 EACH

202 GUARD RAIL REMOVED FOR RE-USE OR STORAGE (GALVANIZED). THE EXISTING GALVANIZED TYPE 5 GUARDRAIL INCLUDING THE ANCHOR ASSEMBLIES DESIGNATED FOR REMOVAL SHALL BE CAREFULLY DISMANTLED AND THE GALVANIZED RAIL ELEMENTS, STORED FOR EITHER RE-USE ELSEWHERE ON THE PROJECT OR REMOVAL BY STATE FORCES. ALL POSTS AND MISCELLANEOUS HARDWARE SHALL BE DISPOSED OF BY THE CONTRACTOR. ALL POST HOLES SHALL BE FILLED AND TAMPED AND THE CONCRETE ENCASEMENT FOR THE ANCHOR ASSEMBLIES SHALL BE REMOVED TO AT LEAST ONE (1) FOOT BELOW THE SUBGRADE.
PAYMENT FOR ALL THE ABOVE SHALL BE AT THE UNIT PRICE BID FOR ITEM 202 GUARD RAIL REMOVED FOR RE-USE OR STORAGE, MEASURED BY THE LINEAR FOOT CENTER TO CENTER OF THE ANCHOR ASSEMBLY TERMINAL POSTS.

ANCHOR ASSEMBLY, AS PER PLAN. 25 RAIL ELEMENTS SALVAGED UNDER 202 GUARD RAIL REMOVED FOR RE-USE OR STORAGE ON THIS PROJECT MAY BE USED IN LIEU OF FURNISHING NEW RAIL ELEMENTS FOR 606 ANCHOR ASSEMBLY, AS PER PLAN. THE GALVANIZED RAIL ELEMENTS MUST BE RENOVATED AS PER THE REQUIREMENTS OUTLINED UNDER GUARD RAIL, TYPE 5 AS PER PLAN NOTE, PRIOR TO INSTALLATION. ALL NEW HARDWARE SHALL BE FURNISHED.
PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 606 ANCHOR ASSEMBLY, AS PER PLAN.

CONNECTIONS TO EXISTING PIPE. WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, 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 CONDUIT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

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, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. 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 603 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	50 LIN. FT.
ITEM 603	8" CONDUIT TYPE B	50 LIN. FT.
ITEM 603	6" CONDUIT TYPE E	50 LIN. FT.
ITEM 603	8" CONDUIT TYPE E	50 LIN. FT.
ITEM 603	10" CONDUIT TYPE E	50 LIN. FT.
ITEM 603	12" CONDUIT TYPE E	50 LIN. FT.
ITEM 603	6" CONDUIT TYPE F	50 LIN. FT.
ITEM 603	8" CONDUIT TYPE F	50 LIN. FT.
ITEM 603	10" CONDUIT TYPE F	50 LIN. FT.
ITEM 603	12" CONDUIT TYPE F	50 LIN. FT.
ITEM 601	TYPE B ROCK CHANNEL PROTECTION, WITH BEDDING	5 CU. YDS.

NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL REQUESTED BY THE ENGINEER.

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.

GUARDRAIL TYPE 5, AS PER PLAN: GALVANIZED RAIL ELEMENTS SALVAGED UNDER 202 ON THIS PROJECT MAY BE USED IN LIEU OF FURNISHING NEW RAIL ELEMENTS FOR 606 GUARDRAIL. IF SALVAGED RAIL IS USED, IT MUST BE RENOVATED PRIOR TO INSTALLATION AND ALL NEW POSTS AND NEW HARDWARE SHALL BE FURNISHED AS PER STANDARD DRAWING GR-2B.
EXISTING GALVANIZED RAIL ELEMENTS SHALL BE CLEANED OF RUST, DIRT AND OTHER FOREIGN MATERIALS, INTERMEDIATE POST BOLT SLOTS FOR TYPE 5 SHALL BE FIELD PUNCHED OR DRILLED. AREAS ON WHICH THE SPELTER COATING HAS BEEN DAMAGED AND INTERMEDIATE HOLES SHALL BE REPAIRED OR REGALVANIZED IN ACCORDANCE WITH AASHO SPECIFICATION M36-731 SECTION 23 OR THEY MAY BE REPAIRED UNDER THE DIRECTION OF THE ENGINEER WITH STICK-FORM GALVANIZING REPAIR COMPOUND MEETING THE REQUIREMENTS OF FSS O-G-93.
PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 606 GUARD RAIL.

WATER AND MOWING PERMANENT SEEDED AREAS. THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS, AS PER 659.09.

△ 659	WATER	200 M GAL.
△ 659	MOWING	300 M SQ. FT.

TREATED SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS. TREATED SANITARY FLOW MAY BE DISCHARGED INTO THE HIGHWAY DRAINAGE SYSTEM PROVIDED THE OWNER HAS SECURED THE APPROVAL OF THE LOCAL HEALTH AUTHORITIES AND HAS ACQUIRED FROM THE STATE HIGHWAY DEPARTMENT THE OFFICIAL PERMIT TO HAVE THE CONNECTION MADE.

IN EACH CASE WHERE A PERMIT HAS BEEN ISSUED FOR A SANITARY CONNECTION TO BE MADE INTO A HIGHWAY DRAINAGE CONDUIT, IT SHALL BE PROVIDED WITH AN INSPECTION WELL, IN ACCORDANCE WITH THE DETAIL SHOWN ON STANDARD DRAWING MC-8.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN MAKING THE ABOVE DESCRIBED CONNECTIONS:

ITEM 603	6" CONDUIT TYPE C	80 LIN. FT.
ITEM 604	INSPECTION WELL	4 EACH

NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL AUTHORIZED BY THE ENGINEER. NO INSPECTION WELL IS REQUIRED IF EFFLUENT IS DISCHARGED INTO AN OPEN DITCH, CHANNEL, CATCH BASIN OR MANHOLE.

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 SPEED CHANGE LANE AND RAMP PAVEMENTS AND PAVED SHOULDERS.

LOCATION AND SIZE OF PIPE. THE LOCATION, TYPE, DEPTH AND SIZE OF ALL EXISTING PIPES ARE SHOWN AS NEARLY EXACT AS THE AVAILABLE INFORMATION WILL PERMIT. THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATIONS FOUND DURING CONSTRUCTION.

CATCH BASIN GRATE ELEVATION. FOR CATCH BASINS WITH INCLINED GRATES, THE GIVEN ELEVATION IS LOCATED IN THE UPSTREAM END OF THE GRATE ON THE CENTERLINE OF THE DITCH.

ROCK CHANNEL PROTECTION. ROCK CHANNEL PROTECTION AT THE OUTLET OF PIPES, AS SHOWN ON THE PLANS, SHALL BE PLACED IMMEDIATELY AFTER THE PIPE HAS BEEN PLACED AND THE OUTLET CHANNEL CUT.

EROSION CONTROL. AN 18" STRIP OF SOD SHALL BE PLACED ALONG BOTH SIDES OF PAVED GUTTER AND CONCRETE RIP RAP TO PREVENT EROSION. THE ABOVE ITEM HAS BEEN INCLUDED IN QUANTITIES OF 660 SODDING.

DUST CONTROL. AN ESTIMATED AMOUNT OF 616 CALCIUM CHLORIDE AND 616 WATER HAS BEEN PROVIDED FOR DUST CONTROL, AS DIRECTED BY THE ENGINEER, AS SHOWN BELOW:

ITEM 616	WATER	10 M. GAL.
ITEM 616	CALCIUM CHLORIDE	1 TON

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 PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NONPREFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

WATER POLLUTION, SOIL EROSION AND SILTATION CONTROL. THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR EROSION AND SILTATION CONTOL MEASURES:

△ 207	TEMPORARY SEEDING AND MULCHING	23,000	SQ. YD.
207	STRAW OR HAY BALES	100	EACH
207	TEMPORARY SLOPE DRAINS	300	LIN. FT.
207	TEMPORARY BENCHES, DIKES, DAMS AND SEDIMENT BASINS	1200	CU. YD.
△ 659	MOWING	300	M SQ. FT.
* 659	COMMERCIAL FERTILIZER (12-12-12)	5	TON
△ 659	REPAIR SEEDING AND MULCHING	6,000	SQ. YD.
△ 659	WATER	50	M GAL

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. ESTIMATED QUANTITIES OF MATERIALS SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

* QUANITY CARRIED TO SHEET 10.
△ QUANITIES CARRIED TO SHEET 11.

Rev. 2-9-77

GENERAL NOTES

QUANTITIES CALC. DAA 6/11/71
QUANTITIES CK'D. TDM 7/13/71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

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MAINTENANCE OF TRAFFIC
IN EACH DIRECTION

U.S.R. 30. TWO-LANE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON U.S.R. 30 EXCEPT THAT DURING ACTUAL CONSTRUCTION OPERATIONS ON ADJOINING SPEED CHANGE LANES AND RAMPS, ONE-LANE DIRECTIONAL TRAFFIC WILL BE PERMITTED. SPEED CHANGE LANE CONSTRUCTION SHALL NOT BE PERFORMED ON SATURDAYS, SUNDAYS OR HOLIDAYS. TWO TRAFFIC LANES IN EACH DIRECTION WILL BE REQUIRED ON THESE DAYS. TO PROVIDE FOR ONE-LANE DIRECTIONAL TRAFFIC, THE CONTRACTOR SHALL FURNISH AND ERECT TEMPORARY BARREL OR DRUM BARRICADES IMMEDIATELY PRIOR TO WORK ON ADJACENT SPEED CHANGE LANES. IT SHALL BE UNDERSTOOD THAT THE CONTRACTOR SHALL ADJUST SIGNS AND ALL TEMPORARY BARREL BARRICADES TO PROVIDE FOR TWO-LANE DIRECTIONAL OPERATIONS AND AT LEAST TWENTY-TWO (22) FEET OF TRAVEL PAVEMENT. BARRELS SHALL NOT BE LESS THAN 30 GALLON CAPACITY IN SIZE. THEY SHALL BE PAINTED YELLOW AND SHALL BE PROTECTED BY LIGHTING DEVICES OR REFLECTORIZATION. EACH BARREL SHALL BE PARTIALLY FILLED WITH GRAVEL, SAND OR OTHER SUITABLE MATERIAL TO PROVIDE STABILITY FROM TRAFFIC-INDUCTED CURRENTS AND WINDS.
SEE BELOW FOR ADDITIONAL DETAILS.
TRENCH EXCAVATION FOR SPEED CHANGE LANES SHALL BE PERFORMED ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIALS SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE LENGTH OF THE SPEED CHANGE LANE TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINMUM AND SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL ESTABLISH A 45 MPH ADVISORY SPEED THROUGH THE CONSTRUCTION AREA ON EXISTING U.S.R. 30 PRIOR TO THE CONSTRUCTION OPERATIONS ON SPEED CHANGE LANES OR RAMPS.

EMMA LANE. TWO-WAY TRAFFIC AND ACCESS TO EXISTING U.S.R. 30 EAST AND WESTBOUND LANES SHALL BE MAINTAINED AT ALL TIMES BY USE OF EXISTING PAVEMENT, THE PROPOSED PAVEMENT AND THE TEMPORARY ROAD AND MEDIAN CROSSOVER, AS SHOWN ON SHEET NO. 15 THE TWO-WAY TRAFFIC SHALL REMAIN IN EFFECT UNTIL SUCH TIME AS THE COMPLETE INTERCHANGE BECOMES OPERATIVE AND THE TRAFFIC PLACED THEREON.

REED ROAD SOUTH OF U.S.R. 30. TRAFFIC SHALL BE MAINTAINED AS OUTLINED IN 614 OF THE GENERAL SPECIFICATIONS UNTIL SUCH TIME AS THE PROPOSED CONSTRUCTION OF REED ROAD FROM STATION 13+00 TO STATION 20+00, EMMA LANE FROM STATION 0+20 TO STATION 8+50, THE TEMPORARY ROAD OFF OF EMMA LANE AND THE MEDIAN CROSSOVER HAS BEEN SUFFICIENTLY COMPLETED TO ALLOW REED ROAD TRAFFIC SOUTH OF U.S.R. 30 ACCESS TO U.S.R. 30 EAST AND WESTBOUND LANES. ACCESS TO U.S.R. 30 FROM REED ROAD SOUTH OF U.S.R. 30 SHALL REMAIN IN EFFECT BY USE OF THE EXISTING PAVEMENT, PROPOSED PAVEMENT, TEMPORARY ROAD AND MEDIAN CROSSOVER UNTIL SUCH TIME AS THE COMPLETE INTERCHANGE BECOMES OPERATIVE AND THE TRAFFIC PLACED THEREON.

REED ROAD NORTH OF U.S.R. 30. TRAFFIC SHALL BE MAINTAINED AS OUTLINED IN 614 OF THE GENERAL SPECIFICATIONS UNTIL SUCH TIME AS THE PROPOSED CONSTRUCTION OF REED ROAD FROM STATION 29+00 to STATION 36+00, RAMP C FROM STATION C553+51 TO STATION C561+29, RAMP D FROM STATION D554+94 TO STATION D562+69, TEMPORARY ROAD FROM RAMPS C AND D TO U.S.R. 30 AND THE MEDIAN CROSSOVER, AS SHOWN ON SHEET NO. 15 HAS BEEN SUFFICIENTLY COMPLETED TO ALLOW REED ROAD TRAFFIC NORTH OF U.S.R. 30 ACCESS TO U.S.R. 30 EAST AND WESTBOUND LANES. ACCESS TO U.S.R. 30 FROM REED ROAD NORTH OF U.S.R. 30 SHALL REMAIN IN EFFECT BY USE OF THE EXISTING PAVEMENT, PROPOSED PAVEMENT, TEMPORARY ROAD AND MEDIAN CROSSOVER UNTIL SUCH TIME AS THE COMPLETE INTERCHANGE BECOMES OPERATIVE AND THE TRAFFIC PLACED THEREON.

LAKECREST ROAD. LAKECREST ROAD IS TO BE MAINTAINED AND OPEN AT ALL TIMES DURING CONSTRUCTION.

INGRESS AND EGRESS TO TRUCK TERMINAL. ACCESS TO THE TRUCK TERMINAL MUST BE MAINTAINED AT ALL TIMES FROM EXISTING U.S.R. 30 AND EXISTING REED ROAD UNTIL SUCH TIME AS THE INTERCHANGE RAMPS, TRUCK TERMINAL DRIVE AND PROPOSED REED ROAD ARE SUFFICIENTLY COMPLETE TO ALLOW COMPLETE INGRESS AND EGRESS TO THE TRUCK TERMINAL.

LIGHTS, SIGNS AND BARRICADES AT ADJACENT ROAD INTERSECTION. THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF 614 - MAINTAINING TRAFFIC, ON THIS PROJECT PERFORM THE FOLLOWING: ERECT AND MAINTAIN STANDARD 48" X 30" SIZE "ROAD CLOSED" SIGNS, SIGN SUPPORTS AND LIGHTS AT THE FOLLOWING LOCATIONS DURING THE PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

REED ROAD AT STATE ROUTE 430
REED ROAD AT CRIDER ROAD

SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED" SIGNS SHALL BE AS DETAILED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING, AND REMOVING LIGHTS, SIGNS AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 614 - MAINTAINING TRAFFIC."

614 - MAINTAINING TRAFFIC. AN ESTIMATED AMOUNT OF 410 - TRAFFIC COMPACTED SURFACE TYPE A OR B FOR MAINTAINING TRAFFIC AND 616 - CALCIUM CHLORIDE HAS BEEN PROVIDED FOR MAINTAINING TRAFFIC AS SHOWN BELOW:

	410		616	
REED ROAD	1000	CU. YDS.	20	TONS
EMMA LANE	400	CU. YDS.	8	TONS
LAKE CREST ROAD	50	CU. YDS.	1	TONS
TOTAL	1450	CU. YDS.	29	TONS

PAYMENT FOR ALL OF THE ABOVE MAINTENANCE OF TRAFFIC INCLUDING BARREL BARRICADES, EXCEPT FOR 615 TEMPORARY ROADS AND CLASS B TEMPORARY PAVEMENT, AND 410 - TRAFFIC COMPACTED SURFACE TYPE A OR B AND 616 - CALCIUM CHLORIDE, SHALL BE INCLUDED IN THE LUMP SUM BID FOR 614 - MAINTAINING TRAFFIC.

PERMANENT TRAFFIC CONTROL DEVICES. ALL PERMANENT TRAFFIC CONTROL DEVICES, (SIGNS, PAVEMENT MARKING AND DELINEATORS) SHALL BE IN PLACE AND ACCEPTED BY THE ENGINEER BEFORE A ROADWAY IS REOPENED TO TRAFFIC.

WORK AREA. THE CONTRACTOR SHALL NOT PERMIT HIS WORKMEN TO PARK THEIR CARS WITHIN THE LIMITED ACCESS RIGHT OF WAY ON U.S.R. 30. HE MAY NOT STORE MATERIAL OR EQUIPMENT IN THE MEDIAN OR BETWEEN THE PAVEMENT AND THE ROADWAY DITCH ON U.S.R. 30. ANY SPILLAGE OF SOIL OR MATERIALS ON THE PAVEMENT SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR AT HIS OWN EXPENSE. NO EARTHWORK OTHER THAN MATERIAL EXCAVATION FROM OR REQUIRED FOR MEDIAN CONSTRUCTION SHALL BE HAULED ALONG OR ACROSS U.S.R. 30 ROADWAYS.

U.S.R. 30 MAINTENANCE OF TRAFFIC (CONT'D.) TRAFFIC CONTROL SHALL BE MAINTAINED AS INDICATED IN THE PERTINENT ITEMS OF THE SPECIFICATIONS AND AS OUTLINED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION WITH LATEST REVISIONS.

ONE TRAFFIC LANE ON U.S.R. 30 MAY BE CLOSED TO TRAFFIC DURING HOURS OTHER THAN 7:00 AM TO 9:00 A.M. AND 4:00 PM. TO 6:00 P.M. MONDAY THROUGH FRIDAY.

DURING THE ERECTION OF OVERHEAD SIGN SUPPORTS, IT MAY BE NECESSARY TO STOP BOTH TRAFFIC LANES. THIS WORK SHALL BE ARRANGED SO THAT THE STOPPAGE IS LESS THAN TEN (10) MINUTES IN ANY THIRTY (30) MINUTE PERIOD. THE CONTRACTOR SHALL PROVIDE THE SERVICES OF AN AUTHORIZED MUNICIPAL OR COUNTY POLICE OFFICER OR STATE HIGHWAY PATROLMAN WITH PATROL CAR AT EACH SITE WHERE A TRAFFIC STOPPAGE OCCURS FOR ERECTION OF OVERHEAD SUPPORTS. THE PATROLMAN SHALL ASSIST IN CONTROLLING TRAFFIC AND INFORMING THE DRIVER OF THE NATURE OF THE DELAY.

ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614.

CALCULATIONS

203 PROOF ROLLING (SPEED CHANGE LANES & RAMPS)
FROM SHEET NO. 8: UBGRADE COMPACTION = 29,050 - 7,282 (REED & EMMA) = 21,768 SQ YDS.
21,768 SQ. YDS. ÷ 3,000 SQ. YDS./HR. = 7.26 HR.
TO SHEET NO. 8 USE 7 HOURS

659 SEEDING & MULCHING DEDUCTIONS

FROM SHEET NO. 8:	PAVED GUTTER TYPE I-6 129'x 6'÷9	=	86.0 SQ. YDS.
FROM SHEET NO. 8:	PAVED GUTTER TYPE I-4 447'x 4'÷9	=	198.7 SQ. YDS
FROM SHEET NO. 8:	RIP-RAP USING 6" REINFORCED CONCRETE SLAB	=	158.0 SQ. YDS.
FROM SHEET NO. 8:	ROCK CHANNEL PROTECTION TYPE A, 24 x 3/2.5	=	28.8 SQ. YDS.
FROM SHEET NO. 8:	ROCK CHANNEL PROTECTION TYPE B, 250 x 3/2	=	375.0 SQ. YDS.
FROM SHEET NO. 10:	SODDING AREA	=	7575.0 SQ. YDS
FROM SHEET NO. 10:	REINFORCED SODDING	=	93.0 SQ. YDS.
FROM SHEET NO. 10:	SEEDING & JUTE MATTING	=	6136.0 SQ. YDS.
	TOTAL DEDUCTIONS	=	14,650.5 SQ. YDS
FROM SHEET NO. 10:	SEEDING & MULCHING	=	110,910.0 SQ. YDS.
	TOTAL FROM ABOVE	=	-14,650.5 SQ. YDS.
	ADJUSTED SEED & MULCHING AREA		96,259.5 SQ. YDS.
	TO SHEET NO. 11 USE 96,260 SQ.YDS		

659 COMMERCIAL FERTILIZER (12-12-12)

THIS SHEET:	SEEDING & MULCHING	=	96,260.0 SQ. YDS.
THIS SHEET:	SODDING	=	7,575.0 SQ. YDS.
THIS SHEET:	SPECIAL BERM & SLOPE PROTECTION	=	93.0 SQ. YDS
THIS SHEET:	SEEDING & JUTE MATTING	=	6,136.0 SQ YDS
	TOTAL	=	110,064.0 SQ. YDS.

110,064 SQ. YDS. X 0.00009 TON/SQ. YDS = 9.91 TONS
TO SHEET NO 10

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RIC. - 30 - 16.37

QUANTITIES CALC. SWR 6/2/71

QUANTITIES CK'D. D.A.A. 6/2/71

SUMMARY OF TABLES

FROM SHEET NO.	201 CLEARING AND GRUBBING	202 GUARD RAIL REMOVED FOR REUSE OR STORAGE	202 PAVEMENT REMOVED	202 PAVED GUTTER REMOVED	202 CURB REMOVED	202 CURB & GUTTER REMOVED	202	202 PIPE REMOVED 24" & UNDER	202 PIPE REMOVED OVER 24"	202 CATCH BASIN REMOVED	202 PORTIONS OF STRUCTURES REMOVED		203 EMBANKMENT	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	203 SUBGRADE COMPACTION	203 PROOF ROLLING		301 BITUMINOUS AGGREGATE BASE 7OC OIL (AC-20) OR 7OC ORTHOTRIC	304 AGGREGATE BASE	310 SUBBASE		407 ASPHALT CONCRETE (AC-20)	407 ASPHALT CONCRETE (AC-20)	404 ASPHALT CONCRETE (AC-20) DRIVEWAYS	407 TACK COAT	407 COVER AGGREGATE	409 SEAL COAT BITUMINOUS MATERIAL (SEE PROPOSAL NOTE)	409 SEAL COAT COVER AGGREGATE USING NO. 8 AGGREGATE	410 TRAFFIC COMPACTED SURFACE TYPE A OR B	411 STABILIZED CRUSHED AGGREGATE				452 8" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT	601 PAVED GUTTER TYPE 1-9	601 PAVED GUTTER TYPE 1-4	601 RIP-RAP USING 6" REINFORCED CONCRETE SLAB	601 ROCK CHANNEL PROTECTION TYPE A W/BEDDING	601 ROCK CHANNEL PROTECTION TYPE B W/BEDDING		602 CONCRETE MASONRY	FROM SHEET NO.	
	LUMP		LIN.FT.	SQ.YD.	LIN.FT.	LIN.FT.	LIN.FT.		LIN.FT.	LIN.FT.	EACH	CU.YD.		CU.YD.	CU.YD.	SQ.YD.	HR.		CU.YD.	CU.YD.	CU.YD.		CU.YD.	CU.YD.	CU.YDS.	GAL.	TON	GAL.	CU.YD.	CU.YD.	CU.YDS.				SQ.YD.	LIN.FT.	LIN.FT.	SQ.YD.	CU.YD.	CU.YD.		CU.YD.	
6,7	LUMP															7													1450										5			6,7	GENERAL NOTES
15																																										15	TEMPORARY RD.
																																										USR 30 P&P
16					80								202	125																											16	537+00 TO 548+00
17				1257	45		362		70				4054	2152	1410			117.5	235.1	88.0								423	11.3								277		11			17	548+00 TO 559+00
18		300			182								1096	6285																							170				18	559+00 TO 570+00
19				103		95							35	2333	738			101.2	66.0	66.0		13.3	6.6					150	4.0													19	570+00 TO 581+00
																																											REED RD. P&P
27									298		1		3877	1511	1578			182.3	32.1	284.0		87.7	43.9	12.8																		27	13+00 TO 19+00
28				280	41				122	70			50661	1757	2029			231.8		381.5		120.2	60.1							21.6				564								28	19+00 TO 30+00
29									138	30			1524	7238	1755			202.0	91.0	313.6		97.5	84.5																			29	30+00 0 38+00
																																											EMMA LANE P&P
42									76				23,570	418	1920			223.8	47.6	351.2		106.7	53.3	16.8																		42	0+20.38 TO 10+00
																																											RAMPS
50													825	730	2250			235.3	101.9	661.6		85.6	42.8					213	5.7													50	A541+93.76 TO A547+00
51													4282	4670	3702			397.2	123.4	525.9		147.5	73.8					284	7.6													51	A547+00 TO A557+41.60
55									217		1		1078	3411	3783			607.7	211.4	739.0		139.8	70.0	16.6				373	10.0		9.7											55	B548+73.74 TO B555+94.01
58													11,930	1909	4840			630.5	196.5	764.0		186.4	93.2					410	10.9													58	C553+51.60 TO E604+00
59													13	1002	1710			266.5	100.7	288.1		57.4	28.7					197	5.3													59	E571+01.08 TO E572+38.78
64													7926	2746	3335			346.5	158.2	811.3		119.3	59.6					350	9.3													64	D564+94.05 TO D66E+68.55
																																											DRAINAGE DETAILS
78													0	19																											78	REED RD DRAINAGE
79													41	1030																											79	CUL. 55C+39.30, USR 30
80																																								80	CUL. C7+80, REED RD.
80													0	20																											80	CUL. D560+66.64, RAMP D
82												1.0																													82	CUL. 565+55.49, USR 30
83													44	172																											83	CUL. 14+55, REED RD.
83																																								83	SS. 14+45.55 TO 15+50
85																																								85	SS. 5+70 TO 558+60
85																																								85	SS. 553+07 TO 559+00
86													19	205																											86	CUL. 32+35, REED RD
88																																							88	SS. 33+18.81 TO 34+77
88																																							88	SS. 33+90 TO 35+50
89																																							89	CUL. C559+00, RAMP C
120																																							120	R/W FENCE SUM.
	LUMP		300	1640	348	95	362		926	100	2	1.0	118,437	38,135	29,050	7		3542.3	1363.9	5274.2		1161.4	616.5	46.2	14	0.46	2400	64.1	1450	31.3				564	129	447	168	24	238		10.61		TOTALS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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RIC. - 30 - 16.37

QUANTITIES CALC. S W R 6/2/71

QUANTITIES CK'D. D.A.A. 6/2/71

SUMMARY OF TABLES

FROM SHEET NO.	603 CONDUIT TYPE A 706.02 30"	A 706.02 2250 D-LOAD OR 707.05 TYPE C 33"	A 48" 706.02 CLASS III OR 54" 707.05 TYPE C	A 48" 706.02 1250 D-LOAD, OR 54" 707.05, TYPE C	A 707.05, TYPE C 54"	B 6"	B 8"	B 12"	B 15"	C 12"	C 15"	C 18"	C 6"	C 12"	C 15"	C 18"	C 21"	D 12"	D 15"	E 6"	E 8"	E 10"	E 12"	F 6"	F 8"	F 10"	F 12"	604 CATCH BASINS, STANDARD NO. 22B	4	5	5-A	6	INSPECTION WELLS	605 6" DEEP PIPE UNDERDRAINS	AGGREGATE DRAINS	FROM SHEET NO.
	←								LINEAR FT.																				EACH						LIN. FT.		
6,7						50	50						80							50	50	50	50	50	50	50	50						4				6.7
15																																				15
16																																		93		16
17																												12						1493		17
18						60																						20						1246		18
19																																			170	19
27																																			424	27
28																			29																593	28
29													209																						375	29
42													74																						460	42
50																																		507		50
51																												20						727		51
55																			32									10						613		55
58																																			529	58
59																																			282	59
64																												10						577	682	64
78								42																												78
79		100																																		79
80			258																																	80
80			172																														1			80
82		20						6																												82
83					84																															83
83								64				106																				2				83
85								104		28			60																	3							85
85								149							174	282	40													2	2		1				85
86				146	64																											1				86
88								167				87																	3							88
88										160																			1							88
89								120																								1				89
121																																				121
		120	430	146	64	84	110	50	48	604	160	28	193	363	60	174	282	40	32	29	50	50	50	50	122	50	50	50	7	4	3	2	1	4	5256	3022	TOTALS

604

SUMMARY OF TABLES

FED. RD. DIVISION	STATE	PROJECT	
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QUANTITIES CALC. S.W.R. 6/2/71

QUANTITIES CK'D. D.A.A. 6/2/71

SUMMARY OF TABLES

FROM SHEET NO.	606 GUARDRAIL TYPE B, AS PER PLAN LIN.FT.	606	606 ANCHOR ASSEMBLY, AS PER PLAN EACH	606 ANCHOR ASSEMBLY BARRIER DESIGN EACH	606	606 BRIDGE TERMINAL ASSEMBLY, TYPE A EACH	607 FENCE TYPE 47 LIN.FT.	609 CURB TYPE 6 LIN.FT.	611 REINFORCED CONCRETE APPROACH SLAB, T=15" SQ.YD.	612 CONCRETE MEDIAN PAVEMENT SQ.YD.	614 MAINTAINING TRAFFIC LUMP	616 WATER M.GAL.	616 CALCIUM CHLORIDE TON	619 FIELD OFFICE LUMP	615 CLASS B TEMPORARY PAVEMENT SQ.YD.	615 TEMPORARY ROADS LUMP	659 SEEDING AND MULCHING SQ.YD.	659 COMMERCIAL FERTILIZER 12-12-12 TON	660 SODDING SQ.YD.	660 REINFORCED SODDING SQ.YD.	667 SEEDING AND JUTE MATTING SQ.YD.	SPECIAL DRILLED WELLS ABANDONED EACH	202 SEPTIC TANKS REMOVED EACH	FROM SHEET NO.
6,7											LUMP	10	30	LUMP				14.91				2		6,7
15															1192	LUMP								15
16	750		4														8059							16
17	1400		4	2													14061		92		506			17
18	787.5		6														13415		57		602			18
19																	2296				306			19
27																	9027		1453		396			27
28	662.5		4			4			133.4								15797			93	1000			28
29	188.06		1														5236		3626		155			29
42	650		4														8263		1903		313	1	1	42
50																	7814				331			50
51										101.7							8501				1052			51
55								137									4697		361		397	1	2	55
58	349.44		1							117.6							10063				540			58
59								50									854							59
64								141									6445				496			64
78																			43		42			78
79																	1322		17					79
80																			15					80
80																								80
82																			8					82
83																								83
83																								83
85																								85
85																								85
86																								86
88																								88
88																								88
89																								89
121							5236																	121
TOTALS	4287.50		24	2		4	5236	328	133.4	219.3	LUMP	10	30	LUMP	1192	LUMP	*10,910	14.91	7575	93	6136	4	3	

*QUANTITY CARRIED TO CALCULATIONS ON SHEET NO.7

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GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
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QUANTITIES CALC. S W R 6/2/71

QUANTITIES CK'D. D.A.A. 6/2/71

ITEM			QUANTITY	UNIT	DESCRIPTION
					ROADWAY TYPE CODE 6203 (EXCEPT AS NOTED)
201			LUMP	LUMP	CLEARING AND GRUBBING
202			300	LIN. FT.	GUARD RAIL REMOVED FOR RE-USE OR STORAGE
202			1640	SQ.YD.	PAVEMENT REMOVED
202			348	LIN.FT.	PAVED GUTTER REMOVED
202			95	LIN.FT.	CURB REMOVED
202			362	LIN.FT.	CURB AND GUTTER REMOVED
202			921	LIN.FT.	PIPE REMOVED, 24" AND UNDER
202			100	LIN.FT.	PIPE REMOVED OVER 24"
202			2	EACH	CATCH BASIN REMOVED
202			1	CU.YD.	PORTIONS OF STRUCTURE REMOVED
203			118,437	CU.YD.	EMBANKMENT
203			38,135	CU.YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203			29,050	SQ.YD.	SUBGRADE COMPACTION
203			7	HOURS	PROOF ROLLING
410			1450	CU.YD.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
606			428750	LIN.FT.	GUARDRAIL TYPE 5, AS PER PLAN
606			2	EACH	ANCHOR ASSEMBLY, BARRIER DESIGN
606			24	EACH	ANCHOR ASSEMBLY, AS PER PLAN
606			4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE A
607			5236	LIN.FT.	FENCE TYPE 47
615			1192	SQ.YD.	TEMPORARY PAVEMENT, CLASS B
615			LUMP	LUMP	TEMPORARY ROADS
616			10	M.GAL.	WATER
616			30	TON	CALCIUM CHLORIDE
SPECIAL			4	EACH	DRILLED WELLS ABANDONED
202			3	EACH	SEPTIC TANKS REMOVED
					EROSION CONTROL TYPE CODE Y 005
660			7575	SQ.YD.	SODDING
660			93	SQ.YD.	REINFORCED SODDING
667			6136	SQ. YD.	SEEDING AND JUTE MATTING
207			23,000	SQ. YD.	TEMPORARY SEEDING AND MULCHING
207			100	EACH	STRAW OR HAY BALES
207			300	LIN. FT.	TEMPORARY SLOPE DRAINS
207			1200	CU. YD.	TEMPORARY BENCHES, DIKES, DAMS AND SEDIMENT BASINS
659			14.91	TON	COMMERCIAL FERTILIZER (12-12-12)
659			6,000	SQ. YD.	REPAIR SEEDING AND MULCHING
659			250	M GAL.	WATER
659			96,260	SQ. YD.	SEEDING AND MULCHING
659			600	M SQ. FT.	MOWING
					EROSION CONTROL CONTINUED ON SHEET 12

ITEM			QUANTITY	UNIT	DESCRIPTION
					PAVEMENT
301			3542	CU.YD.	BITUMINOUS AGGREGATE BASE; 702.01 , AC-20; OR 702.09, RT-11 OR RT-12
304			1364	CU.YD.	AGGREGATE BASE
310			5275	CU.YD.	SUBBASE
402			1161	CU.YD.	ASPHALT CONCRETE , AC-20
404			617	CU.YD.	ASPHALT CONCRETE , AC-20
404			46	CU.YD.	ASPHALT CONCRETE , AC-20 (DRIVEWAYS)
407			14	GAL.	TACK COAT; 702.04, SS-1, SS-1h, MS-2 OR RS-1 OR 702.02, RC-250.
407			0.5	TON	COVER AGGREGATE
409			2400	GAL.	SEAL COAT BITUMINOUS MATERIAL; 702.02, MC-800 OR MC-3000; 702.03, CBAE-800; 702.04, RS-1, RS-2, CRS-1, OR CRS-2; OR 702.09, RT-9 OR RT-10.
409			64	CU.YD.	SEAL COAT COVER AGGREGATE NO. 8
411			31	CU.YD.	STABILIZED CRUSHED AGGREGATE
452			564	SQ.YD.	8" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT
609			328	LIN.FT.	CURB TYPE 6
611			133	SQ.YD.	REINFORCED CONCRETE APPROACH SLAB (T=15"), MODIFIED AS PER PLAN
612			219	SQ.YD.	CONCRETE MEDIAN PAVEMENT

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GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
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QUANTITIES CALC. SWR 6/2/71

QUANTITIES CK'D. D.A.A. 6/2/71

* 50' Farm Drains

TYPE CODE 6203 (EXCEPT AS NOTED)

ITEM			QUANTITY	UNIT	DESCRIPTION
					EROSION CONTROL (CONT'D.) TYPE CODE Y005
601			129	LIN.FT.	PAVED GUTTER TYPE I-6
601			447	LIN.FT.	PAVED GUTTER TYPE I-4
601			168	SQ.YD.	RIPRAP, USING 6" REINFORCED CONCRETE SLAB
601			24	CU.YD.	ROCK CHANNEL PROTECTION, TYPE A WITH BEDDING
601			238	CU.YD.	ROCK CHANNEL PROTECTION, TYPE B WITH BEDDING
					DRAINAGE
602			10.6	CU. YD.	CONCRETE MASONRY
603			120	LIN.FT.	30" CONDUIT TYPE A, 706.02 ✓
603			430	LIN.FT.	33" CONDUIT TYPE A, 706.02 2250 D-LOAD OR 707.05, TYPE C
603			64	LIN.FT.	CONDUIT TYPE A, 48" 706.02 OR 54" 707.05 TYPE C
603			146	LIN.FT.	CONDUIT TYPE A, 48" 706.02 1250 D-LOAD OR 54" 707.05 TYPE C
603			84	LIN.FT.	54" CONDUIT TYPE A, 707.05, TYPE C
603			110 *	LIN.FT.	6" CONDUIT TYPE B
603			50 *	LIN.FT.	8" CONDUIT TYPE B
603			48	LIN.FT.	12" CONDUIT TYPE B
603			604	LIN.FT.	15" CONDUIT TYPE B
603			160	LIN.FT.	12" CONDUIT TYPE C, 706.01 Cl.3, 706.02, 706.08 ES OR 707.13
603			82	LIN.FT.	15" CONDUIT TYPE C, 706.01 Cl.3, 706.02, 706.08 ES OR 707.13
603			193	LIN.FT.	18" CONDUIT TYPE C, 706.01 Cl.3, 706.02, 706.08 ES OR 707.13
603			363	LIN.FT.	6" CONDUIT TYPE C
603			60	LIN.FT.	12" CONDUIT TYPE C
603			174	LIN.FT.	15" CONDUIT TYPE C
603			282	LIN.FT.	18" CONDUIT TYPE C
603			40	LIN.FT.	21" CONDUIT TYPE C
603			32	LIN.FT.	12" CONDUIT TYPE D
603			62	LIN.FT.	15" CONDUIT TYPE D
603			50	LIN.FT.	6" CONDUIT TYPE E
603			50	LIN.FT.	8" CONDUIT TYPE E
603			50	LIN.FT.	10" CONDUIT TYPE E
603			50	LIN.FT.	12" CONDUIT TYPE E
603			122	LIN.FT.	6" CONDUIT TYPE F
603			50	LIN.FT.	8" CONDUIT TYPE F
603			50	LIN.FT.	10" CONDUIT TYPE F
603			50	LIN.FT.	12" CONDUIT TYPE F
604			7	EACH	STANDARD NO. 2-2B CATCH BASIN
604			4	EACH	STANDARD NO. 4 CATCH BASIN
604			3	EACH	STANDARD NO. 5 CATCH BASIN
604			2	EACH	STANDARD NO. 5A CATCH BASIN
604			1	EACH	STANDARD NO. 6 CATCH BASIN
604			4	EACH	INSPECTION WELL
605			5256	LIN.FT.	6" DEEP PIPE UNDERDRAINS
605			3022	LIN.FT.	AGGREGATE DRAINS ✓

ITEM			QUANTITY	UNIT	DESCRIPTION
					TRAFFIC CONTROL
					FOR TRAFFIC CONTROL GENERAL SUMMARY (SEE SHEET NO. 99)
					STRUCTURES OVER 20 FT. SPAN
					ESTIMATED QUANTITIES FOR STRUCTURE NO. RIC-30-1637 (SEE SHEET NO. 91)
614			LUMP	LUMP	MAINTAINING TRAFFIC
619			LUMP	LUMP	FIELD OFFICE
623			LUMP	LUMP	CONSTRUCTION LAYOUT STAKES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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ELEVATIONS AT "A" & "B" ARE THE SAME

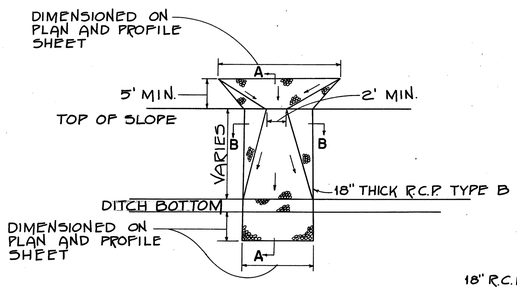
SLOPES SHOWN ON X-SECTIONS

NOTE: WIDTH OF JUTE MATTING SHOWN ON THE PLAN AND PROFILE SHEETS IS THE ACTUAL WIDTH OF MATTING STRIP TO BE PLACED IN THE DITCH CONFORMING TO THE SLOPES ON THE X-SECTIONS. JUTE MATTING WIDTHS SHALL BE 7'-6" OR 11'-0" WIDTHS.

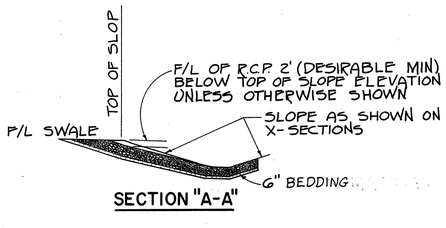
DITCH PROTECTION USING JUTE MATTING

NOTE: ROCK CHANNEL PROTECTION WILL CHANGE TO AGGREGATE AS PER 601.05 WITHIN THE 30' RECOVERY AREA.

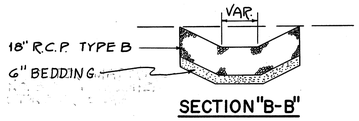
NOTE: PAY QUANTITY COMPUTED TO INCLUDE TYPE B ROCK AND BEDDING.



PLAN

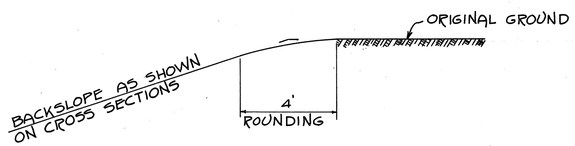


SECTION "A-A"

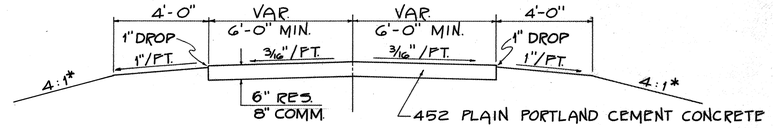


SECTION "B-B"

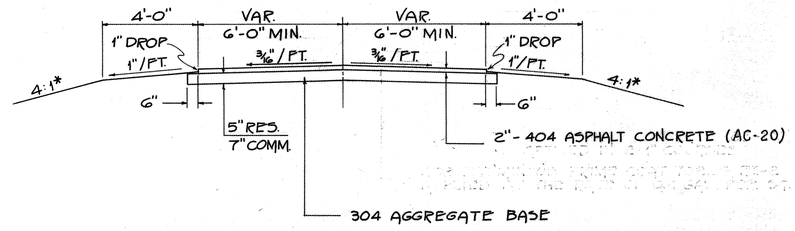
EROSION CONTROL AT SWALES



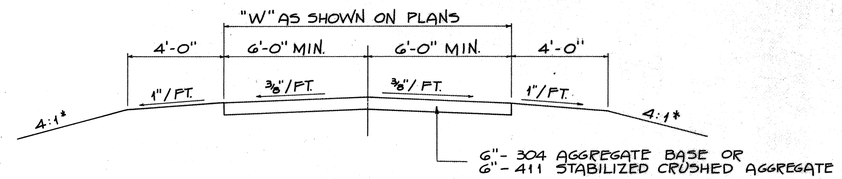
DETAIL OF BACKSLOPE ROUNDING



452 - COMMERCIAL & RESIDENCE DRIVE TYPICAL SECTION

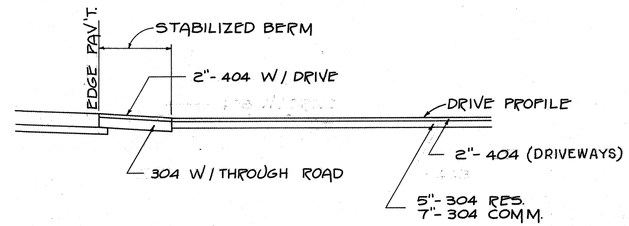


404 ON 304 - COMMERCIAL & RESIDENCE DRIVE TYPICAL SECTION



304 - RESIDENCE & FIELD DRIVE TYPICAL SECTION

* UNLESS OTHERWISE SHOWN ON DRIVE CROSS SECTION FOR DETAILS NOT SHOWN SEE STANDARD CONSTRUCTION DRAWING NO. BP-6



COMMERCIAL & RESIDENCE DRIVE PROFILE ACROSS STABILIZED BERM

DRIVEWAY DETAILS

Sheet 14 omitted from plan

QUANTITIES CALC. LGB 2/5/71
QUANTITIES CK'D. SWR 4/6/71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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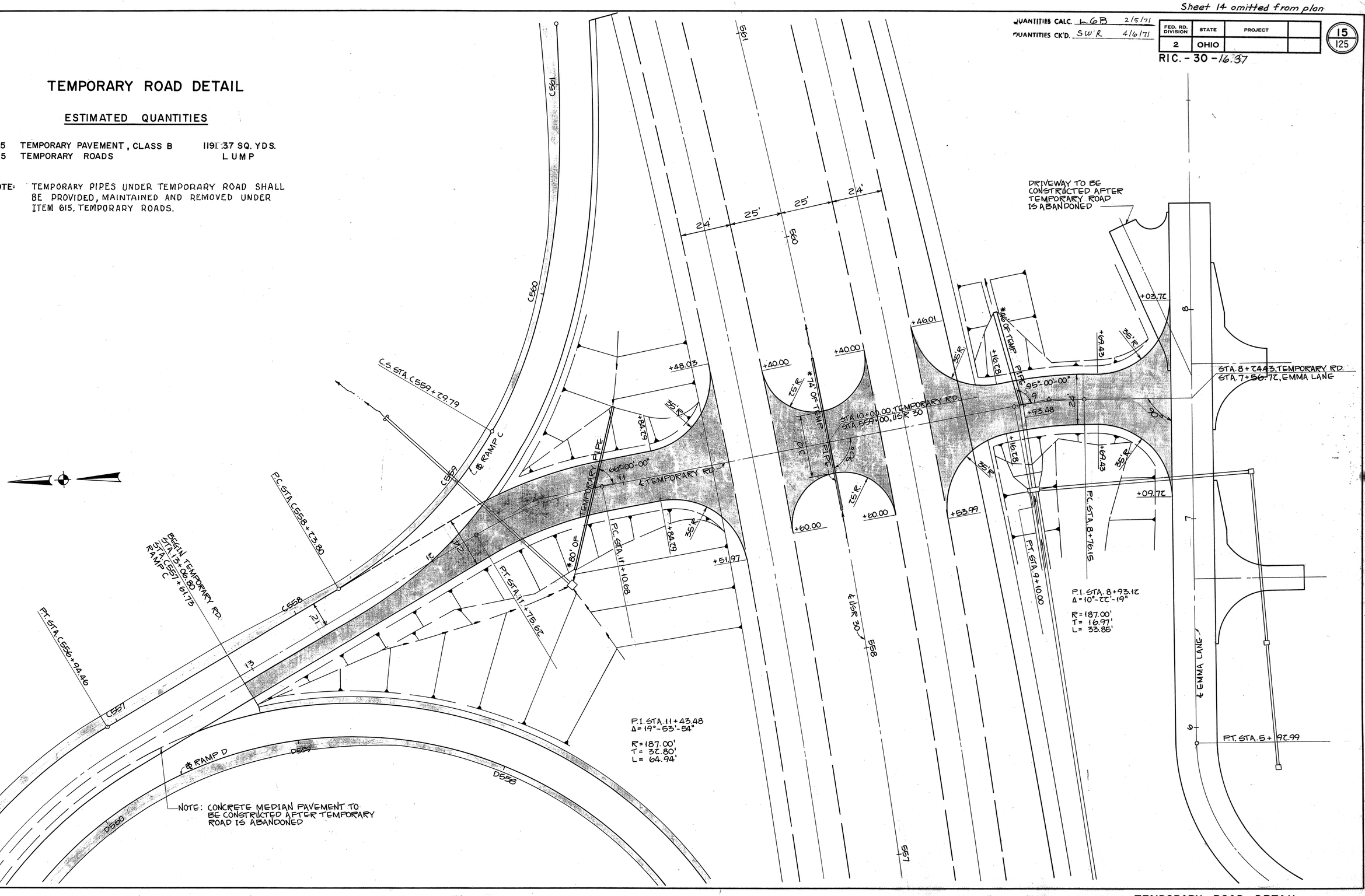
TEMPORARY ROAD DETAIL

ESTIMATED QUANTITIES

615	TEMPORARY PAVEMENT, CLASS B	1191.37 SQ. YDS.
615	TEMPORARY ROADS	LUMP

* NOTE: TEMPORARY PIPES UNDER TEMPORARY ROAD SHALL BE PROVIDED, MAINTAINED AND REMOVED UNDER ITEM 615, TEMPORARY ROADS.



TEMPORARY ROAD DETAIL

REFERENCE SHEETS	SHT. NO.
RAMP D ACCELERATION LANE DETAIL	69
RAMP A DECELERATION LANE DETAIL	68

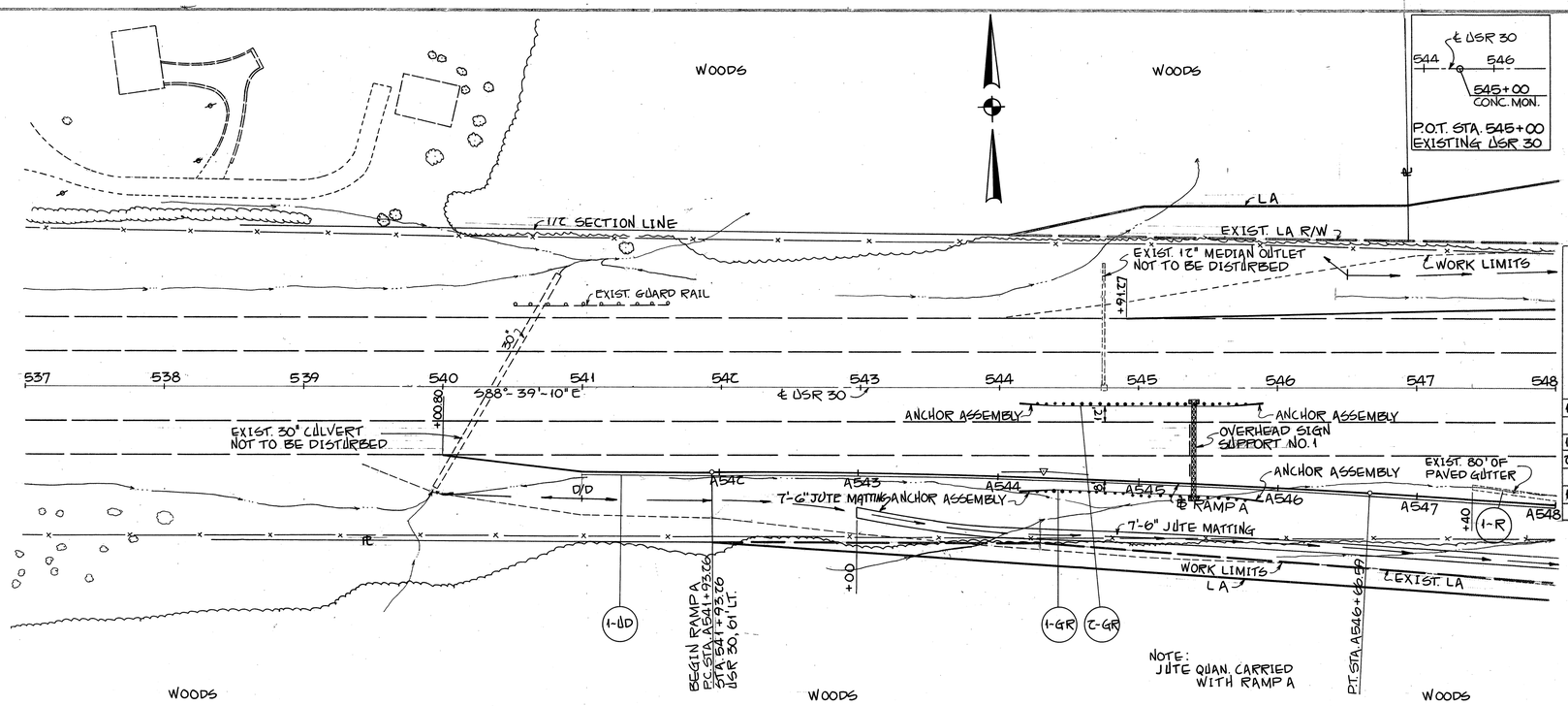
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

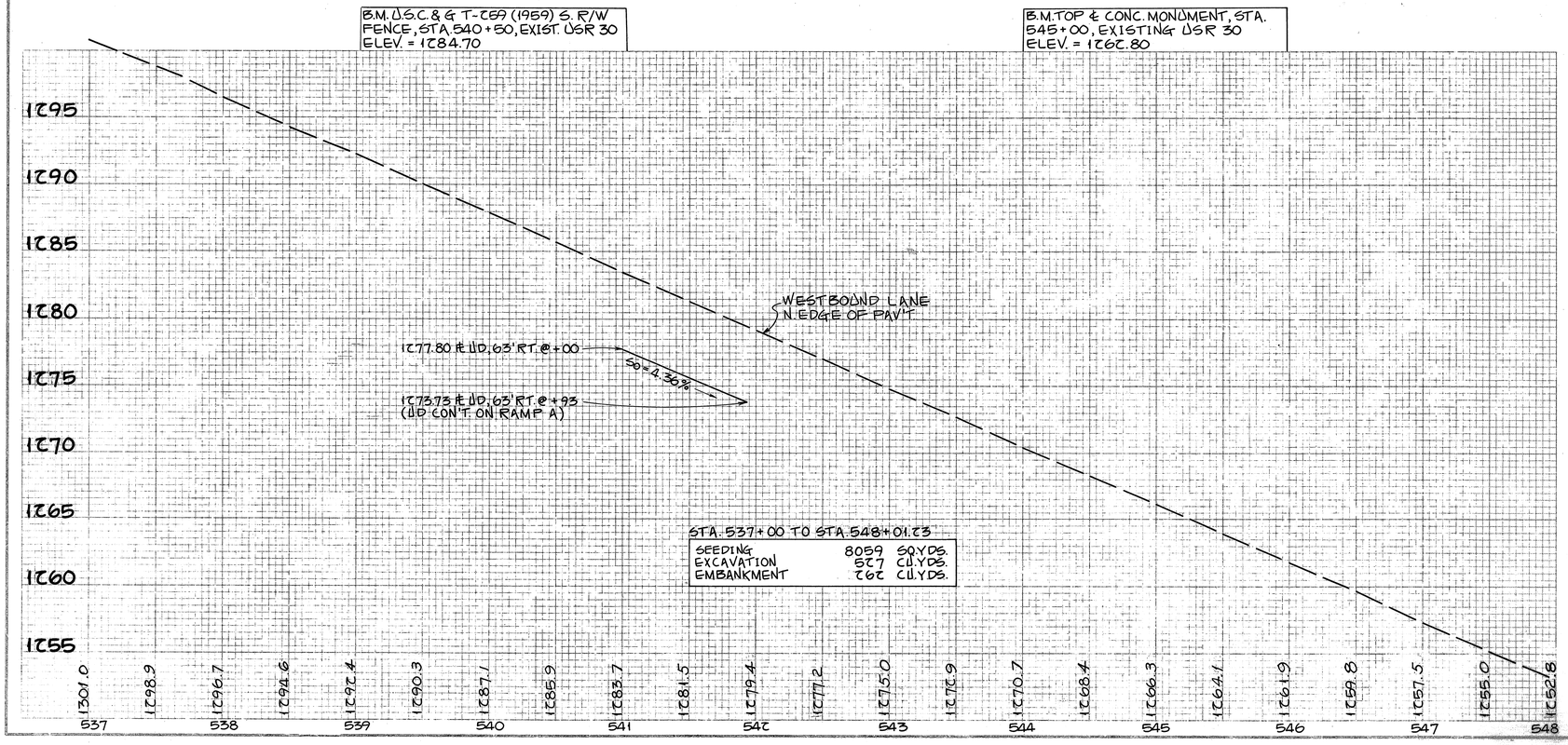
16
125

QUANTITIES CALC. D.A.A. 2/15/71

QUANTITIES CK'D. L.G.B. 2/19/71



REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 PAVED GUTTER REMOVED LIN. FT.	605 DEEP PIPE UNDERDRAINS 6" LIN. FT.		606 GUARDRAIL TYPE 5, AS PER PLAN LIN. FT.	606 ANCHOR ASSEMBLY AS PER PLAN EACH			
1-DD	RT.	541+00	541+93		93						
1-GR	RT.	A544+15.35	A545+90.54				175	2			
2-GR	RT.	544+15	545+90				175	2			
1-R	RT.	547+40	548+20	80							
		TOTALS		80	93		350	4			



STA. 537+00 TO STA. 548+01.23

SEEDING	8059	SQ.YDS.
EXCAVATION	527	CU.YDS.
EMBANKMENT	292	CU.YDS.

USR 30, STA. 537+00 TO STA. 548+00

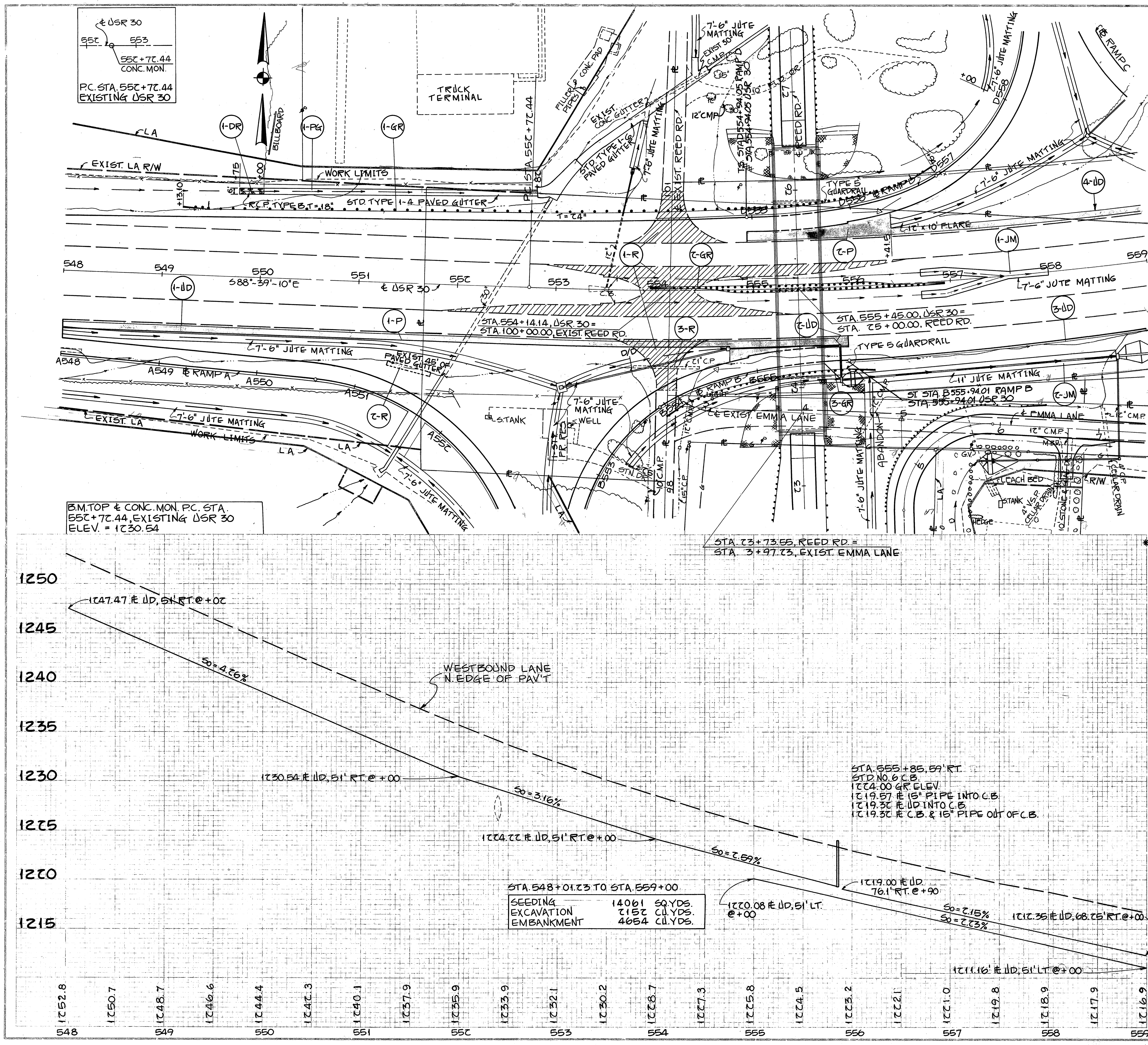
REFERENCE SHEETS	SHT. NO.
RAMP A P&P	50-51
RAMP B P&P	55
RAMP D P&P	64
30" CULVERT EXTENSION	79
EMMA LANE QUANTITIES	42
RAMPS A,B & D GRADING PLAN	49
STORM SEWER SYSTEMS	85

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/3/71

QUANTITIES CK'D. S.W.R. 3/23/71



STA. 548+01.23 TO STA. 559+00		
SEEDING	14061	SQ. YDS.
EXCAVATION	2152	CU. YDS.
EMBANKMENT	4654	CU. YDS.

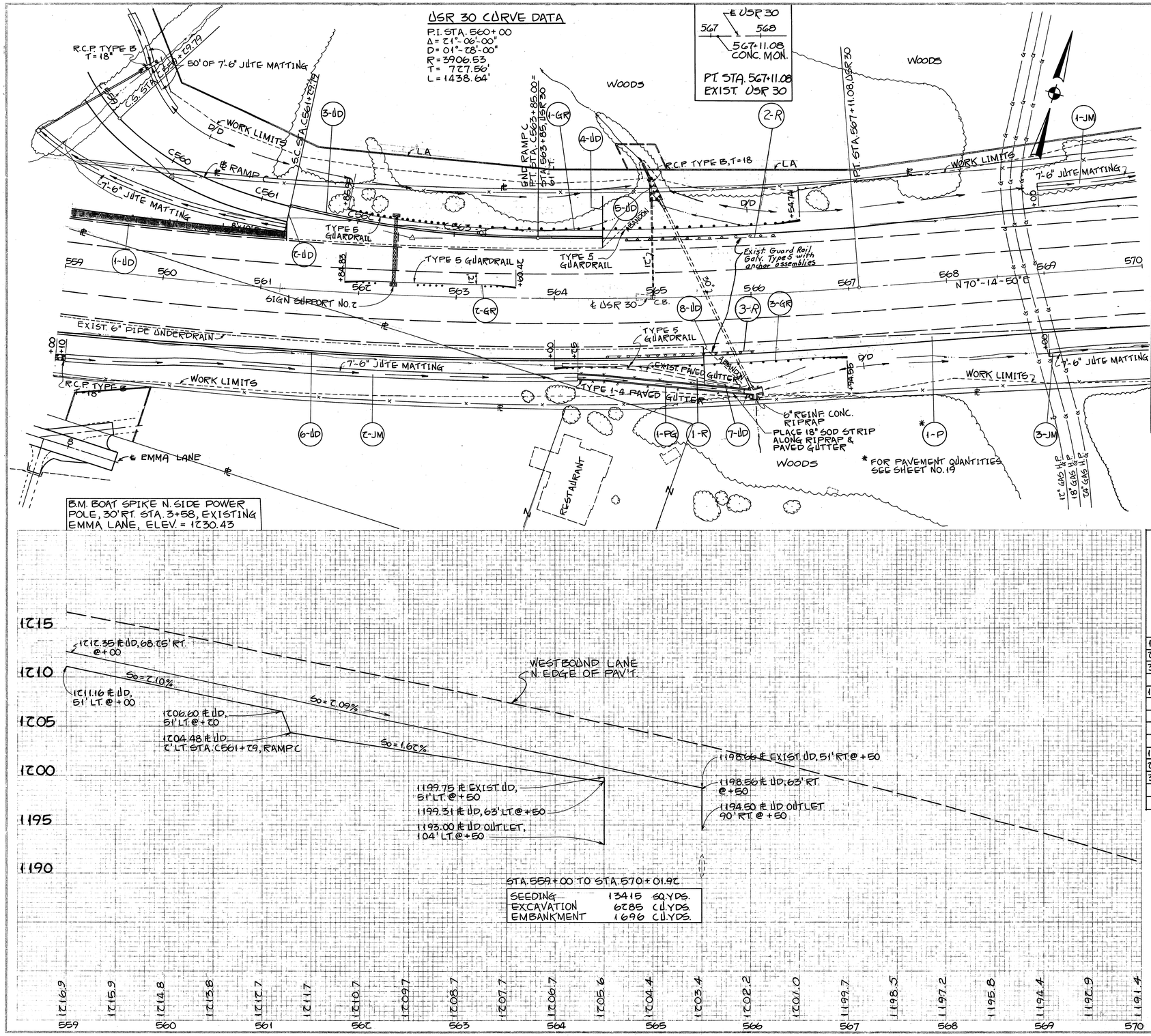
REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION	301 BITUMINOUS AGGR. BASE USING 702.01 (AC-20) OR 702.09 RT-11 OR 12	304 AGGREGATE BASE	310 SUBBASE	409 SEAL COAT: COVER AGGR. USING 0.008 C.Y. NO. 8 AGGREGATE PER SQ. YD.	409 SEAL COAT: BITUMINOUS MATERIAL USING 0.30 GAL. PER SQ. YD. (SEE PROPOSAL NOTE)		
				SQ. YDS.	CU. YDS.	CU. YDS.	CU. YD.	SQ. YDS.	GAL.		
1-P	RT.	548+01.23	555+94.01	782	65.2	130.4	49.6	6.3	235		
2-P	LT.	554+94.05	561+23.72	628	52.3	104.7	38.4	5.0	188		
TOTALS				1410	117.5	235.1	88.0	11.3	423		

REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 PAVEMENT REMOVED	202 CURB & GUTTER REMOVED	202 PIPE REMOVED 24" AND UNDER	601 PAVED GUTTER TYPE 1-4	603 6" CONDUIT TYPE F	605 DEEP PIPE UNDERDRAINS	202 PAVED GUTTER REMOVED	660 SODDING
				SQ.YD.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	SQ.YD.
1-R	LT.&RT.	554+14.14		1257	362						
2-R	RT.	551+30	551+75							45	
3-R	RT.	553+80	554+46			70					
1-PG	LT.	550+00	552+77				277				92
1-UD	RT.	548+02	555+78						782		
*2-UD	RT.	555+78	555+85					12			
3-UD	RT.	555+90	559+00						316		
4-UD	LT.	555+00	559+00						395		
TOTALS				1257	362	70	277	12	1493	45	92

* ONE 6" × 45° BEND

REFERENCE NO.	SIDE	STATION FROM	STATION TO	606 GUARDRAIL TYPE 5, AS PER PLAN		606 ANCHOR ASSEMBLY, AS PER PLAN	606 ANCHOR ASSEMBLY BARRIER DESIGN			601 ROCK CHANNEL PROTECTION TYPE B, W/BEDDING	667 SEEDING & JUTE MATTING
				LIN.FT.		EACH	EACH			CU.YD.	SQ.YD.
1-DR	LT.	549+75	550+00							11	
1-JM	LT.&RT.	556+70	558+00								176
2-JM	RT.	555+85	558+60								330
1-GR	LT.	USR 30 549+13.10	RAMP D D556+94.00	725		2					
2-GR	₵	553+95	556+95	500			2				
3-GR	RT.	RAMP B B553+94	USR 30 556+23.99	175		2					
TOTALS				1400		4	2			11	506

USR 30, STA. 548+00 TO STA. 559+00



REFERENCE SHEETS	SHT. NO.
RAMP B ACCELERATION LANE	69
RAMP C P & P	58
MEDIAN OUTLET CULVERT	24
30" CULVERT EXTENSION	82
RAMP C & S.C.L. DETAILS	73

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

18
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RIC-30-16.37

QUANTITIES CALC. D.A.A. 2/16/71

QUANTITIES CK'D. LGB 2/22/71

REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 Guard Rail Removed for Re-use or Storage (Each)	202 PAVED GUTTER REMOVED	603 CONDUIT TYPE B 6"	603 CONDUIT TYPE F 6"	605 DEEP PIPE UNDERDRAIN 6"	BENDS & BRANCHES 6"-90° BEND	BENDS & BRANCHES 6" TEE		
				LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.				
3-R	RT.	564+50±	566+00±	150*								
2-R	LT.	564+75±	566+25±	150*								
1-R	RT.	564+08	565+85		182							
1-UD	LT.	559+00	561+20					217				
2-UD	LT.	USR 30 561+20	RAMP C C561+29			36			2			
3-UD	LT.	RAMP C C561+29	USR 30 564+50					370				
4-UD	LT.	564+50					10	31		1		
5-UD	LT.	564+50				12			1			
6-UD	RT.	559+00	565+50					661				
7-UD	RT.	565+50					10	17		1		
8-UD	RT.	565+50				12			1			
TOTALS				300	182	60	20	1246				

* Includes 2 anchor assemblies

REFERENCE	SIDE	STATION FROM	STATION TO	606 GUARDRAIL TYPE 5 AS PER PLAN		606 ANCHOR ASSEMBLY AS PER PLAN		601 PAVED GUTTER TYPE 1-4	660 SODDING	667 SEEDING & JUTE MATTING	
				LIN.FT.		EACH		LIN.FT.	SQ.YDS.	SQ.YDS.	
1-JM	LT.	569+00	570+00							83	
2-JM	RT.	559+10	564+75							436	
3-JM	RT.	569+00	570+00							83	
1-PG	RT.	564+75	565+90					170	57		
1-GR	LT.	RAMP C C561+84.95	USR 30 563+86.74	412.5		2					
2-GR	LT.	561+84.83	563+60.47	125.0		2					
3-GR	RT.	564+00	566+94.58	250		2					
TOTALS				787.5		6		170	57	602	

USR 30, STA. 559+00 TO STA. 570+00

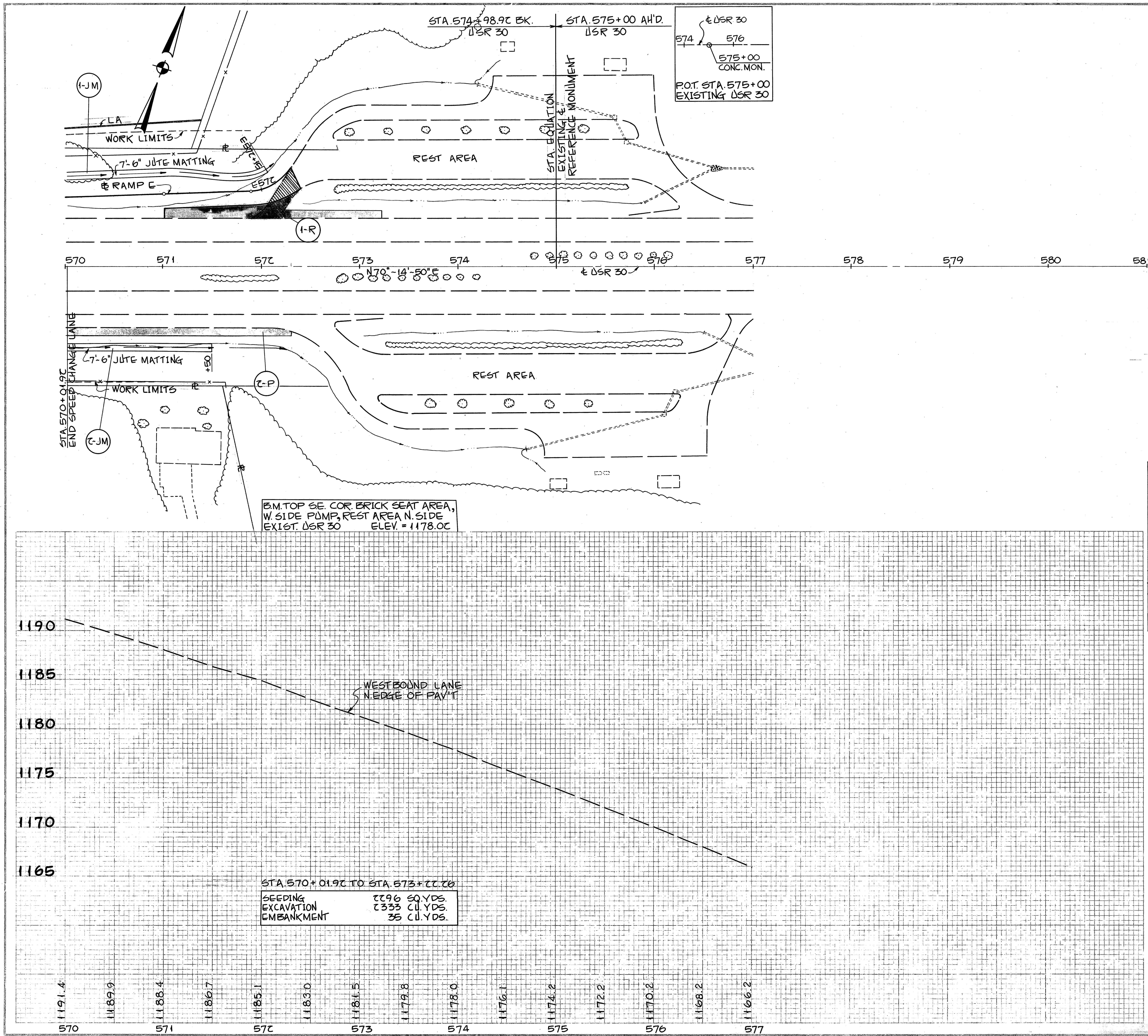
REFERENCE SHEETS	SHT. NO.
RAMP E DETAIL	74

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/1/71

QUANTITIES CK'D. HGB 3/5/71



REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 PAVEMENT REMOVED SQ. YD.	202 CURB REMOVED LIN. FT.		667 SEEDING & JUTE MATTING SQ. YD.				
1-JM	LT.	USR 30 570+00	RAMP E E572+15				181				
2-JM	RT.	570+00	571+50				125				
1-R	LT.	571+84.87	572+39.87	103	95						
TOTALS				103	95		306				

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION SQ. YDS.	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC-20) OR 702.09, RT.11 OR 12 CU. YDS.	304 AGGREGATE BASE CU. YDS.	409 SEAL COAT COVER AGGREGATE USING 0.008 CU. YD. NO. 8 AGGREGATE PER SQ. YD. CU. YD.	409 SEAL COAT BITUMINOUS MATERIAL USING 0.30 GAL. PER SQ. YD. (SEE PROPOSAL NOTE) GAL.	402 ASPHALT CONCRETE (AC-20) CU. YDS.	404 ASPHALT CONCRETE (AC-20) CU. YDS.	310 SUBBASE CU. YDS.	605 AGGREGATE DRAINS LIN. FT.
1-P	RT.	566+54.92	570+01.92	542	84.9	33.3	2.4	91	13.3	6.6	66.0	96
2-P	RT.	570+01.92	572+30	196	16.3	32.7	1.6	59				74
TOTALS				738	101.2	66.0	4.0	150	13.3	6.6	66.0	170

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

20
125

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		7	1		
				3	16
				14	3
		1	1		
				2	2
		0	0		
				0	0
		0	0		
		39	7		
				105	28
		22	9		
				55	18
		8	1		
				15	2
		0	0		
				0	0
		0	0		

STA. 541+93.26 AHD
STA. 541+93.26 BK.

1270
1260
1270
1260
1270
1280
1270
1280
1290
1280
1290
1290

1266.46
544+91.27
1262.5

STA. 544+91.27
BEGIN ACCELERATION
LANE FOR RAMP D

1270.45
544+00
1266.0

1274.80
543+00
1270.8

1279.43
541+93.26
1275.0

BEGIN RAMP A
STA. 541+93.26

1283.45
541+00
1279.2

1287.85
540+00.80
1283.5

STA. 540+00.80
BEGIN DECELERATION LANE
FOR RAMP A

1292.20
539+00
1288.2

1296.53
538+00
1292.7

M.L. RAMP A
EDGE OF PAV'T.
10'
8'
BK & AHD
BK.
12'
8'
8:1
6:1
1277.48
TO RAMP A
RT. DITCH
1281.53
D/D
OUTLET RT. DITCH
BK & AHD INTO
EXIST. CULVERT

ADD FOR EXTRA WIDTH
SHOULDER IN MEDIAN ON
RT. STA. 543+950 TO
STA. 562+05

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

USR 30, STA. 538+00 TO STA. 544 + 91.27

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

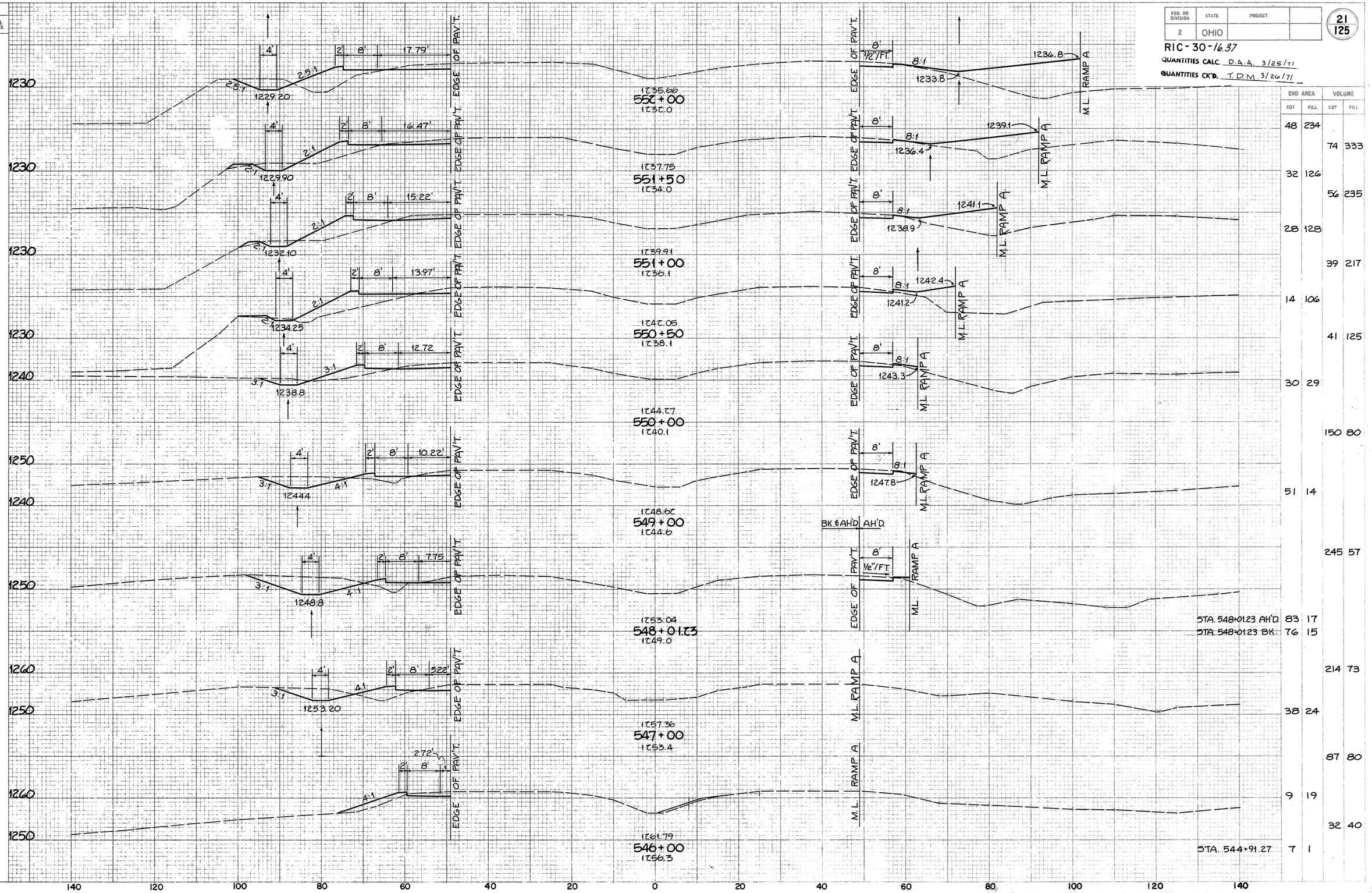
21
125

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
		48	234		
				74	333
		32	126		
				56	235
		28	128		
				39	217
		14	106		
				41	125
		30	29		
				150	80
		51	14		
				245	57
		STA. 548+01.23 AH'D		83	17
		STA. 548+01.23 BK.		76	15
				214	73
		38	24		
				87	80
		9	19		
				32	40
		STA. 544+91.27		7	1



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

USR 30, STA. 546+00 TO STA. 552+00

SEEDING

LBS/1000	SQ. YDS.

QUANTITIES CALC. D.A.A. 3/25/71
QUANTITIES CK'D. T.D.M. 3/26/71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

22
125

RIC-30-16.37

QUANTITIES CALC
QUANTITIES CK'D

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
STA. 555+94 AH'D.	20	270		
STA. 555+94 BK.	19	0		
				32 0
			16 0	
				42 606
				24 2
STA. 554+94 AH'D.	9	2		
STA. 554+94 BK.	9	154		
				11 164
STA. 554+75 AH'D.	23	313		
STA. 554+75 BK.	22	306		
				121 404
			85 52	
				262 255
			136 163	
				360 231
			253 87	
				168 79
			76 68	
				166 405
STA. 552+00	48	234		

1230
1220
1210

M.L. RAMP D — 10' — 122270 — EDGE OF PAV'T.
3:1 — 1222.8 — 1224.3 — 1224.33 — 555+94 — 1220.0 — 1221.8
STA. 555+94.01
END RAMP B
BEGIN SPEED CHANGE LANE
EDGE OF PAV'T. — 2.5' — 8' — 2' — 8' — 2' — BK & AH'D. — AH'D. — 10' — 8:1 — DIKE — 1222.4 — FOR EARTHWORK ONLY — M.L. EMMA LANE
FROM RAMP B RT. DITCH

M.L. RAMP D — 10' — 1222393 — EDGE OF PAV'T.
3:1 — 1224.0 — 1224.5 — 1225.57 — 555+45 — 1220.0 — 1223.1
EDGE OF PAV'T. — 10' — 122544 — 1/8"/FT. — M.L. RAMP B
ADD FOR MOUNDED MEDIAN
STA. 553+58 TO STA. 557+58

STA. 554+94.05
END ACCELERATION LANE
BEGIN RAMP D
M.L. REED RD. — 1219.4 — 8:1 — 2' — 8' — 25' — BK. — BK & AH'D. — 10" — EDGE OF PAV'T.
3:1 — 1225.0 — 1226.8 — 1226.97 — 554+94 — 1220.0 — 1224.8
EDGE OF PAV'T. — 10' — 1226.85 — M.L. RAMP B

2' — 8' — 24.53 — EDGE OF PAV'T.
8:1 — 1216.3
3:1 — 1225.9 — 1227.4 — 554+75 — 1220.6 — 1225.1
EDGE OF PAV'T. — BK & AH'D. — AH'D. — 8' — 1/2" — M.L. RAMP B — 1227.37 ELEV. PAVED BERM

M.L. REED RD. M.L. CUL. CHAN. — 1218.7
2' — 8' — 22.03' — EDGE OF PAV'T.
3:1 — 1228.0 — 1229.2 — 1228.06 — 554+14 — 1228.2 — 1227.0
EDGE OF PAV'T. — 8' — 1229.19 — 1231.2 — 1228.1 — M.L. RAMP B

FOR DETIAILS & QUANITITIES OF MEDIAN OUTLET SEE SHEET NO. 78
STA. 553+60, 10.5' RT. 1229.6 IE MEDIAN DITCH
STA. 553+56, 13' RT. 1229.0 IE MEDIAN DITCH
D/D
2' — 8' — 21.45' — EDGE OF PAV'T.
M.L. CUL. CHAN. — 1221.2 — 1227.00
42' OF 12" PIPE ON S_o = 8.18%
79' OF EXIST. 12" PIPE ON 2.49%
1223.92 IE 12" PIPE STA 553+66.50, 77.30' LT.
1220.48 IE OUTLET 12" PIPE STA 553+75.55 USR 30, 118.36' LT.
STD. HW-4 HEADWALL
RCP TYPE B 3'X5'X18"
1230.10 — 553+50 — 1228.4
STA. 553+50 ON ℄ EXIST. 2'x2' CB 1228.77 GR. ELEV. 1225.89 IE CB & 12" PIPE OUT OF CB
EDGE OF PAV'T. — 8' — 1231.31 — 8:1 — 1228.1 — 1230.9 — M.L. RAMP B

2' — 8' — 20.21' — EDGE OF PAV'T.
3:1 — 1226.5 — M.L. CUL. CHANNEL
FINAL C.S. PLOTTED 5-14-71 C. BOYD
1231.91 — 553+00 — 1229.2
EDGE OF PAV'T. — 8' — 1232.63 — 8:1 — 1228.0 — 1229.4 — M.L. RAMP A&B
CATCH BASIN STA. 553+07, 100' RT.
TO CULVERT CHANNEL

2' — 8' — 19.53' — EDGE OF PAV'T.
4' — 3:1 — 1227.1 — M.L. CUL. CHANNEL
1232.95 — 552+72.44 — 1230.0
EDGE OF PAV'T. — 8' — 1/8"/FT. — 1233.56 — 8:1 — 1229.5 — 1231.7 — M.L. RAMP A

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

USR 30, STA. 552+72.44 TO STA. 555+94

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

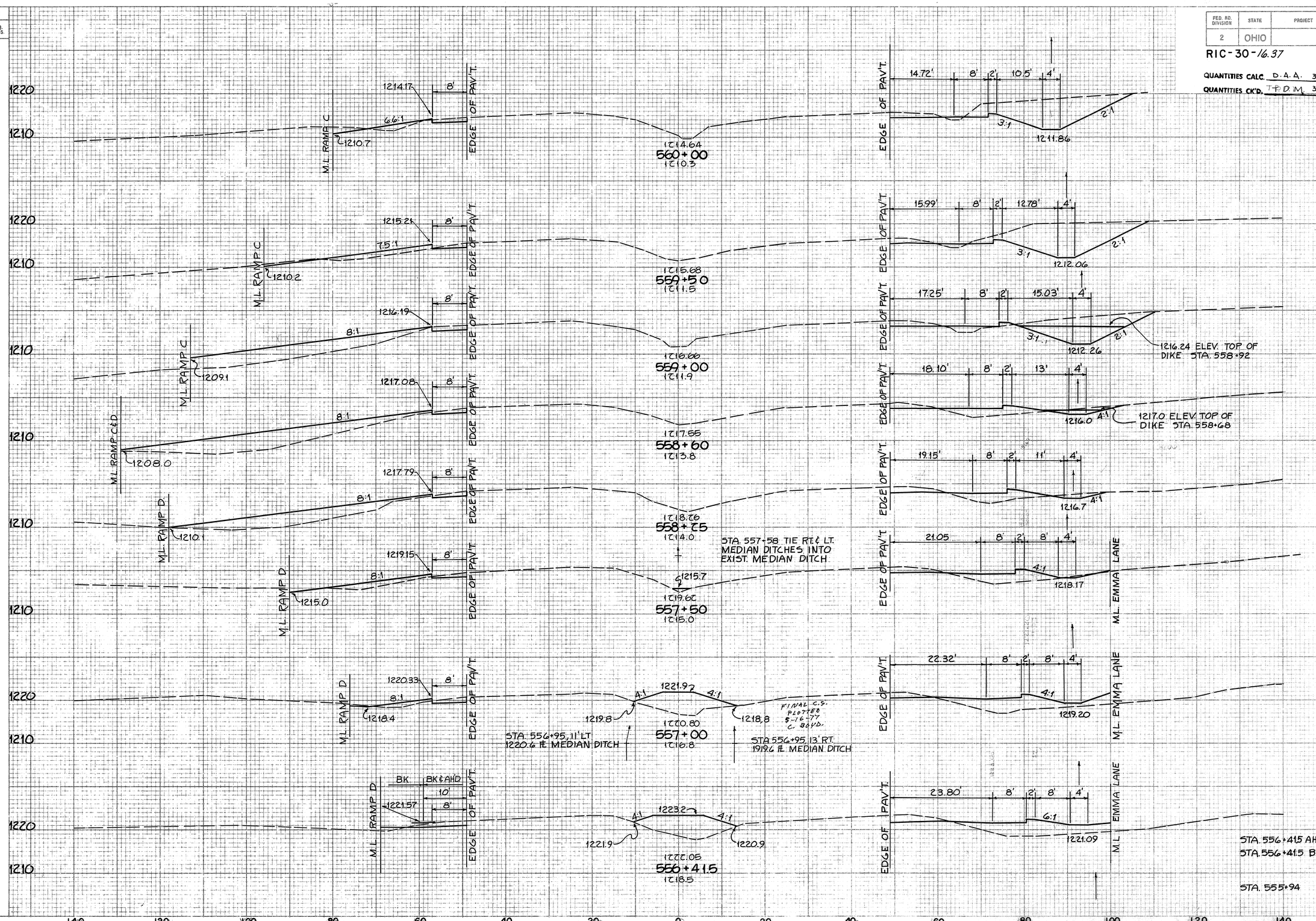
23
125

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.P.D.M. 3/26/71

END AREA		VOLUME	
CUT	FILL	CUT	FILL
182	13		
		347	40
193	30		
		306	170
137	154		
		124	270
31	211		
		38	236
28	153		
		72	303
24	65		
		39	145
18	92		
		47	192
STA. 556+41.5 AH'D.	25	85	
STA. 556+41.5 BK.	27	88	
		41	315
STA. 555+94	20	270	



USR 30, STA. 556+41.5 TO STA. 560+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

24
125

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING	
END WIDTH	SQ. YDS

OUTLET INTO EXISTING CHANNEL

6' OF 12" PIPE ON 3.0 = 7.67%

E 1186.6

E 1189.52'

STA 565+01.5, 93' LT.
CONC. COLLAR (SEE STD. DRWG. MC-4)
1189.06 FT. OUTLET 12"
PIPE -99' LT. @ STA 565+01.50
@ STD. HW-4 HEADWALL

1191.7

1198.3

FROM RAMP C LT. DITCH

1213.16

1210.9

AH'D BK. & AH'D

BK BK & AH'D

EDGE OF PAV'T.

M.L. RAMP C

M.L. RAMP

1204.73	565+00	1200.5	STA 565+01.5 EXIST. 2'X2' C.B. 1201.67 GRATE ELEV. 1198.67 FT. C.B. & 12" PIPE OUT OF C.B.
1205.39	564+50	1201.8	
1206.76	563+85	1203.0	
1208.53	563+00	1204.9	
1210.55	562+00	1206.3	
1212.08	561+23.72	1207.8	
1213.63	560+50	1209.5	

1200.7

1204.05

1205.40

1207.17

1209.25

1210.74

1211.66

ADD FOR EXTRA WIDTH SHOULDER IN MEDIAN ON LT. STA 561+00 TO STA 563+95

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	33	196		
			111	288
	87	115		
			217	196
STA 563+85 AH'D	93	48		
STA 563+85 BK.	49	30		
			162	83
	54	23		
			5	124
			243	57
	77	8		
			218	18
STA 561+23.72 AH'D	77	5		
STA 561+23.72 BK.	85	7		
			259	26
	105	12		
			266	23
STA 560+00	182	13		

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

USR 30, STA 560+50 TO STA. 565+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

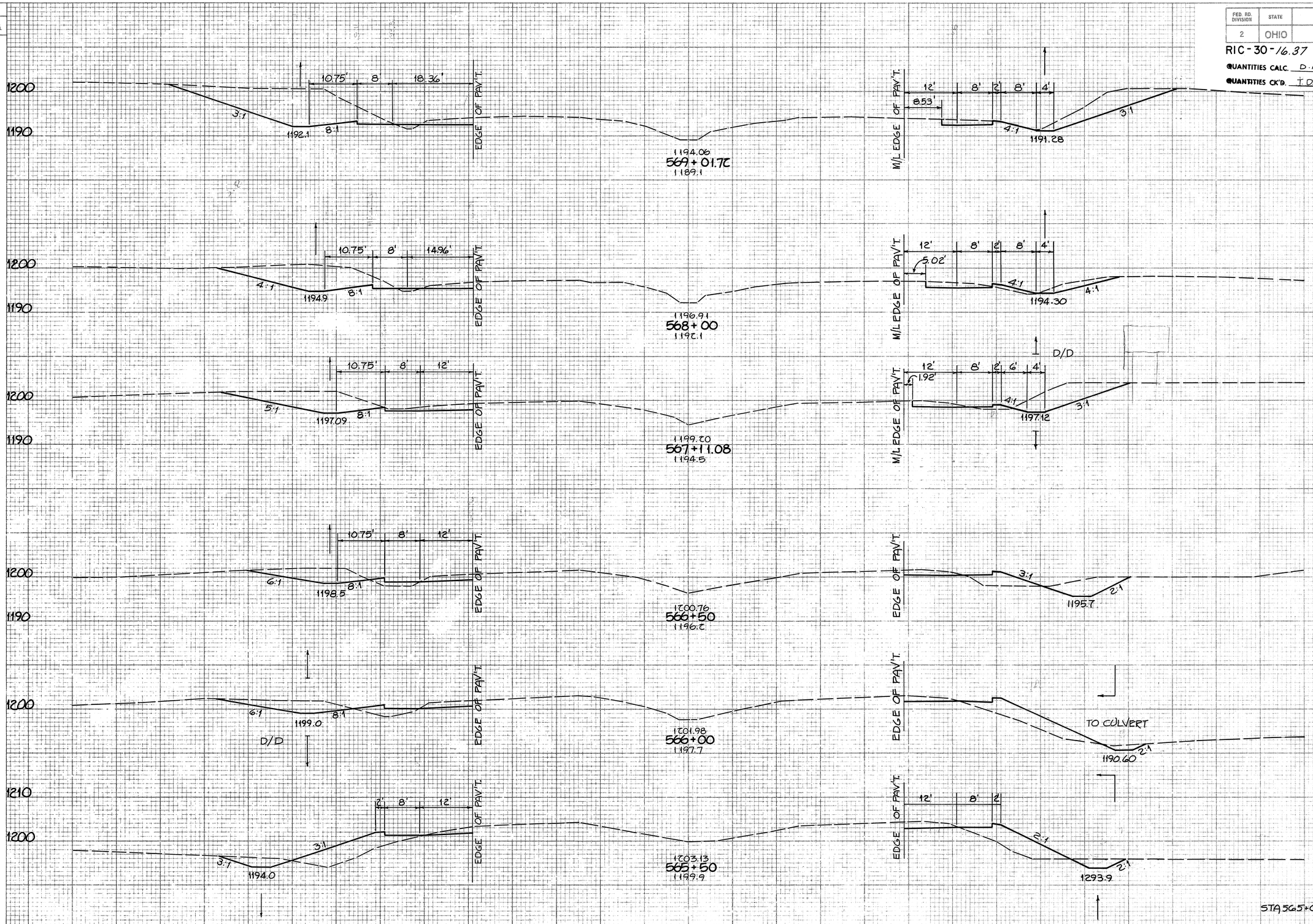
25
125

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		346	4		
				1000	26
		185	10		
				657	26
		214	6		
				388	53
		129	41		
				197	124
		84	93		
				138	224
		65	149		
				91	319
		STA 565+00	33	196	



USR 30, STA. 565+50 TO STA. 569+01.72

SEEDING	
END WIDTH	SQ. YDS.

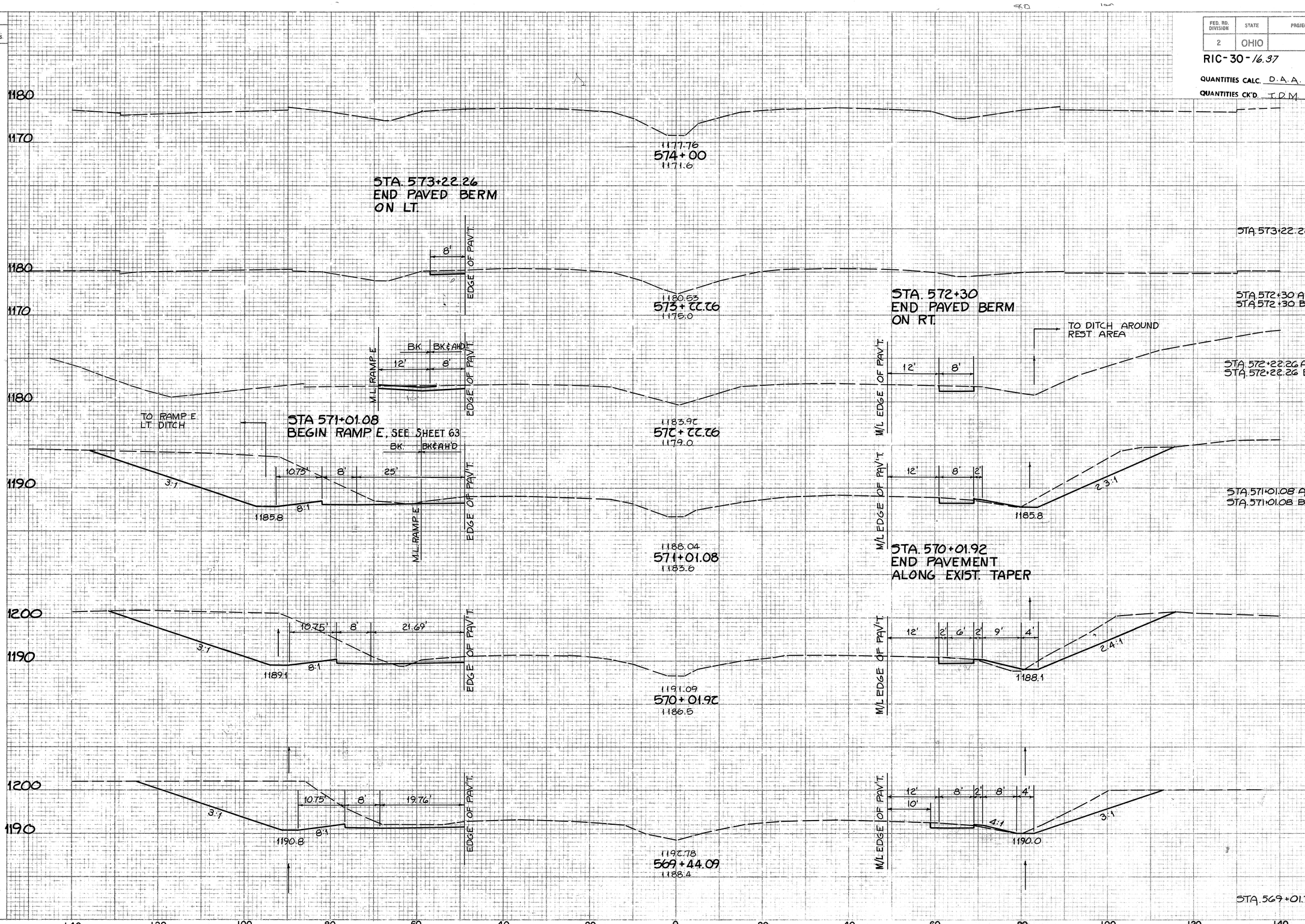
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

26
125

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA. 573+22.26	6	0		
			24	0
STA. 572+30 AH'D	8	0		
STA. 572+30 BK.	18	0		
			5	0
STA. 572+22.26 AH'D	18	0		
STA. 572+22.26 BK.	30	0		
			334	9
STA. 571+01.08 AH'D	119	4		
STA. 571+01.08 BK.	548	4		
			1970	26
	525	10		
			1035	14
	442	3		
			618	5
STA. 569+01.72	346	4		

USR 30, STA. 569+44.09 TO STA. 574+00

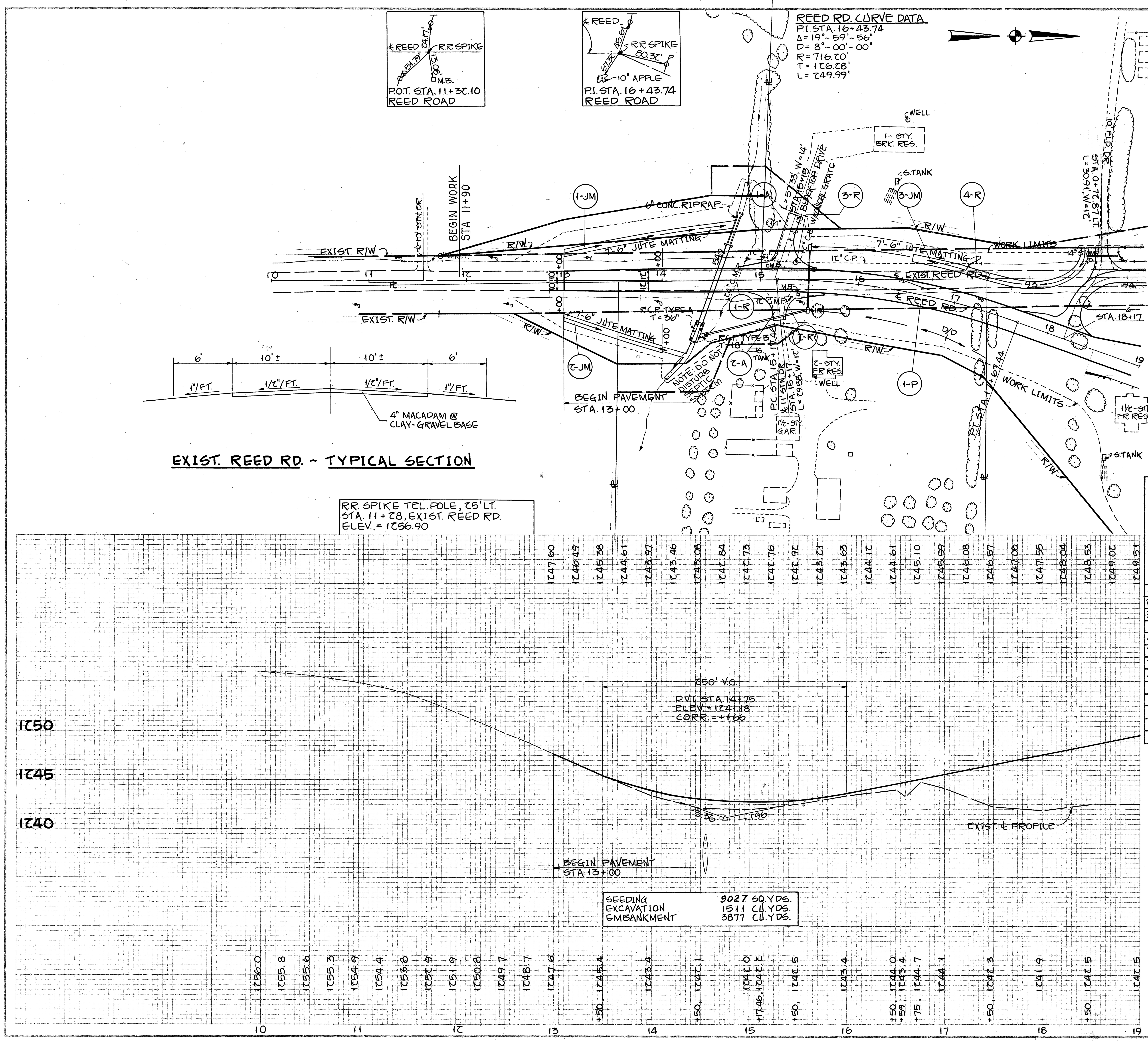
REFERENCE SHEETS	SHT. NO.
DRIVE DETAILS	37
DRIVE QUANTITIES, SEE RAMP B SHEET	55
CULVERT STA. 14+55	83
S.S. STA. 14+45 TO STA. 15+50	83
SUPERELEVATION TABLE	48

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/4/71

QUANTITIES CK'D. S.W.R. 3/22/71



REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION SQ. YDS.	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC-20) OR 702.09, RT-10 OR 12 CU. YDS.	304 AGGREGATE BASE CU. YDS.	310 SUBBASE CU. YDS.	402 ASPHALT CONCRETE (AC-20) CU. YDS.	404 ASPHALT CONCRETE (AC-20) CU. YDS.		404 ASPHALT CONCRETE (AC-20) DRIVEWAYS CU. YDS.
1-P	℄	13+00	19+00	1578	182.3		284.0	87.7	43.8		
1-A	LT.	15+15				19.9					7.9
2-A	RT.	15+17				12.2					7.9
TOTALS				1578	182.3	32.1	284.0	87.7	43.8		12.8

REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 PIPE REMOVED 24" & UNDER LIN. FT.	202 CATCH BASIN REMOVED EACH			605 AGGREGATE DRAINS LIN. FT.		667 SEEDING & JUTE MATTING SQ. YD.
1-JM	LT.	13+00	14+65							140
2-JM	RT.	13+00	14+00							89
3-JM	LT.	REED RD. 16+50	FLD. DR. 1+04							167
1-R	LT.&RT.	14+67	14+84	46						
2-R	RT.	15+08	15+37	29						
3-R	LT.	15+00	15+34	34	1					
4-R	LT.	REED 15+34	EXIST. REED 92+50	189						
1-P	℄	13+00	19+00					424		
TOTALS				298	1			424		396

Sodding Areas:

℄ @ Sta 15+00± Lt to Sta 16+50± Lt	*628 s.y.*
Drive @ Sta 15+17 Rt to ℄ Sta 17+44± Rt	*825 s.y.*
Total	*1453 s.y.*

Note: See sheet 83 For proposed gas line @ proposed culvert.

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REED RD., STA. 13+00 TO STA. 19+00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

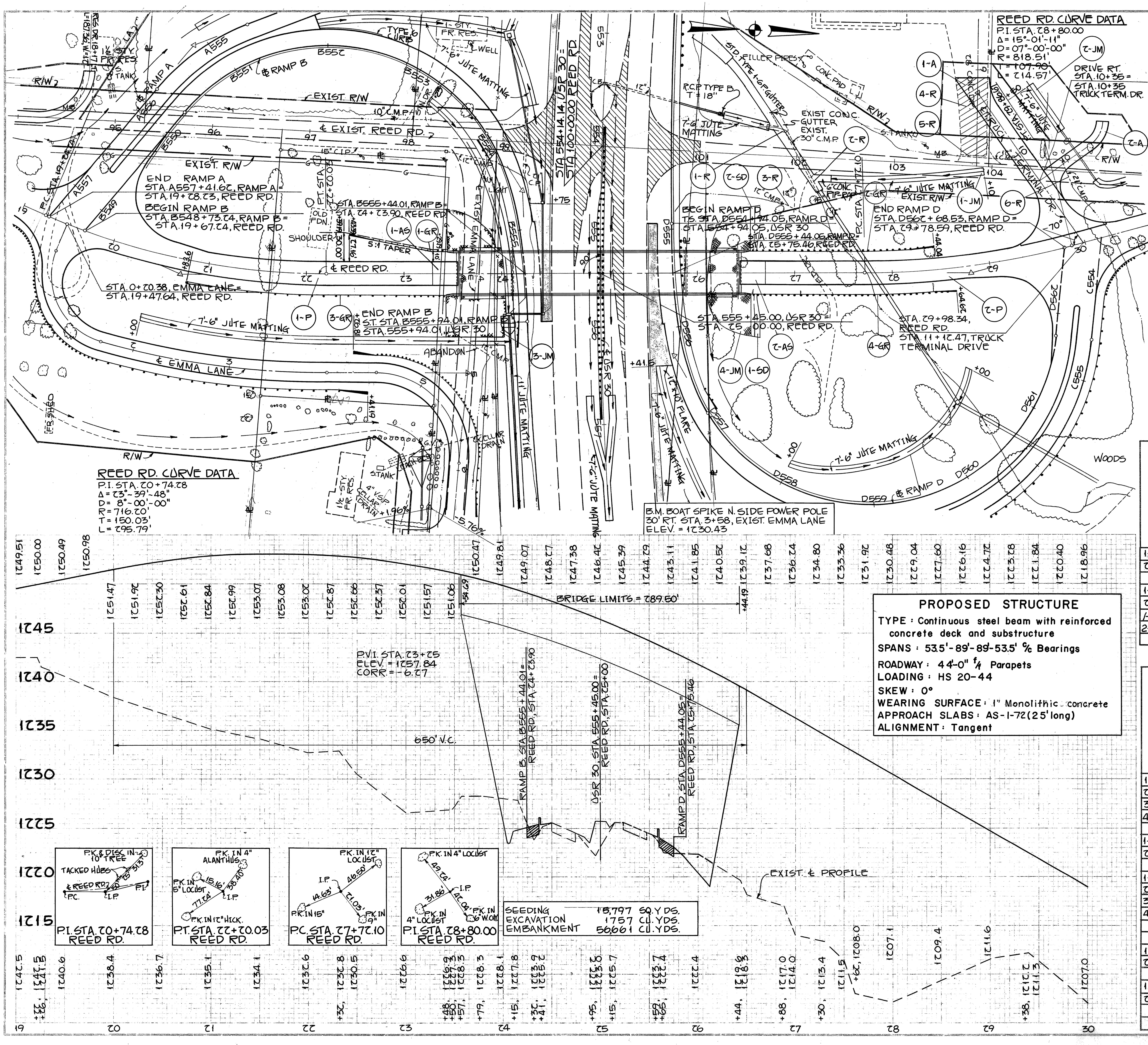
28 / 125

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/4/71

QUANTITIES CK'D. S.W.R. 3/22/71

REFERENCE SHEETS	SHT. NO.
DRIVE DETAILS	76
EXIST. REED RD. TYPICAL SECTION	27
RAMPS A & B P&P	50-51, 55
RAMPS C & D P&P	58, 64
RAMP DETAILS	69-70
STORM SEWER SYSTEM	85
REED RD. P&P	27-29
EMMA LANE P&P	42
CULVERT SYSTEM	78-81
SUPERELEVATION TABLE	48



PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure

SPANS: 53.5'-89'-89'-53.5' c/c Bearings

ROADWAY: 44'-0" f/f Parapets

LOADING: HS 20-44

SKEW: 0°

WEARING SURFACE: 1" Monolithic concrete

APPROACH SLABS: AS-1-72 (25' long)

ALIGNMENT: Tangent

REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 PIPE REMOVED 24" & UNDER LIN. FT.	202 PIPE REMOVED OVER 24" LIN. FT.		202 PAVED GUTTER REMOVED LIN. FT.	202 PAVEMENT REMOVED SQ. YDS.			
1-R	LT.	EXIST. REED 101+68	EXIST. REED 101+88.5				41				
2-R	LT.&RT.	EXIST. REED 101+88.5	EXIST. REED 102+24.2		70						
3-R	RT.	EXIST. REED 101+92	EXIST. REED 102+26	34							
4-R	LT.	EXIST. REED 103+69.5	EXIST. REED 103+99					280			
5-R	LT.	EXIST. REED 103+65	EXIST. REED 104+25	60							
6-R	LT.&RT.	EXIST. REED 104+73	EXIST. REED 104+84	28							
TOTALS				122	70		41	280			

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION SQ. YDS.	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC-20) OR 702.09 RT. 11 ORIG (SEE PROPOSAL NOTE) CU. YDS.	310 SUBBASE CU. YDS.	402 ASPHALT CONCRETE (AC-20) CU. YDS.	404 ASPHALT CONCRETE (AC-20) CU. YDS.	411 STABILIZED CRUSHED AGGREGATE CU. YD.	452 PLAIN PORTLAND CEMENT CONCRETE PAVEMENT, T=8" SQ. YD.	603 CONDUIT TYPE D 15" LIN. FT.
1-P	℄	19+00	23+29.69	1146	130.8	201.5	63.7	31.8			
2-P	℄	26+69.19	30+00	883	101.0	155.8	49.1	24.5			
1-A	LT.	TRUCK TERMINAL DR. 29+98.34								564.0	
2-A	LT.	DR. OFF OF TRUCK DR. 10+35							21.6		62
1-AS	℄	23+29.69	23+54.69			12.1	3.7	1.9			
2-AS	℄	26+44.19	26+69.19			12.1	3.7	1.9			
TOTALS				2029	231.8	381.5	120.2	60.1	21.6	564.0	62

REFERENCE NO.	SIDE	STATION FROM	STATION TO	605 AGGREGATE DRAINS LIN. FT.	606 GUARDRAIL TYPE 5, AS PER PLAN LIN. FT.		407 TACK COAT GAL.	407 COVER AGGREGATE TON	606 BRIDGE TERMINAL ASSEMBLY, TYPE A EACH	606 ANCHOR ASSEMBLY AS PER PLAN EACH	611 T=15" REINFORCED CONCRETE APPROACH SLABS SQ. YD.	660 REINFORCED SODDING SQ. YD.	667 SEEDING & JUTE MATTING SQ. YD.
1-JM	LT.	27+37	29+10										131
2-JM	LT.	TRUCK TERMINAL DR. 9+50	10+07										48
3-JM	LT.&RT.	BRIDGE SLOPES 23+41	24+02										485
4-JM	LT.&RT.	BRIDGE SLOPES 26+10	26+54										336
1-SD	RT.	26+57										45	
2-SD	LT.	26+57										48	
1-GR	LT.	22+43.39	23+41.69		75				1	1			
2-GR	LT.	26+54.61	28+44.04		162.5				1	1			
3-GR	RT.	20+83.6	23+41.69		237.5				1	1			
4-GR	RT.	26+54.61	28+64.62		187.5				1	1			
1-AS	℄	23+29.69	23+54.69				7	0.23			66.7		
2-AS	℄	26+44.19	26+69.19				7	0.23			66.7		
1-P	℄	19+00	23+29.69	393									
2-P	℄	26+69.19	30+00	200									
TOTALS				593	662.5		14	0.46	4	4	133.4	93	1000

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REED RD., STA. 19+00 TO STA. 30+00

SEE SHEET 88 FOR ELEVATION CHANGES LINE 1-T, 2-T, 3-T, 4-T C. BOYD 2-16-77

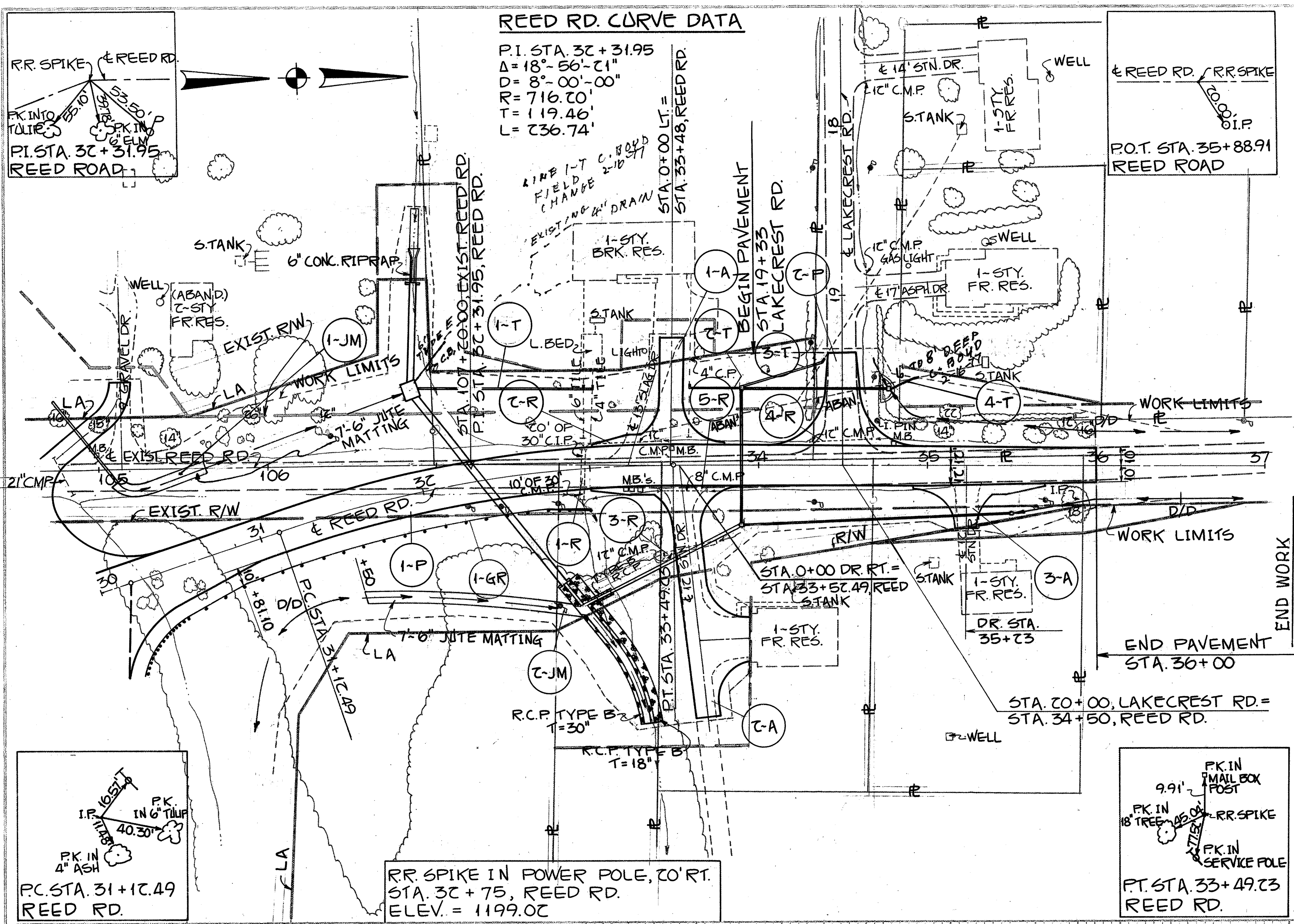
REFERENCE SHEETS	SHT. NO.
EXIST. REED RD. TYPICAL SECTION	28
DRIVE DETAILS	77
CULVERT STA. 32+35	86
ST. SEWER STA. 33+18.81 TO STA. 34+77	88
S.S. STA. 33+90 TO STA. 35+50	88
SUPERELEVATION TABLE	48
LAKECREST RD. DETAILS	77

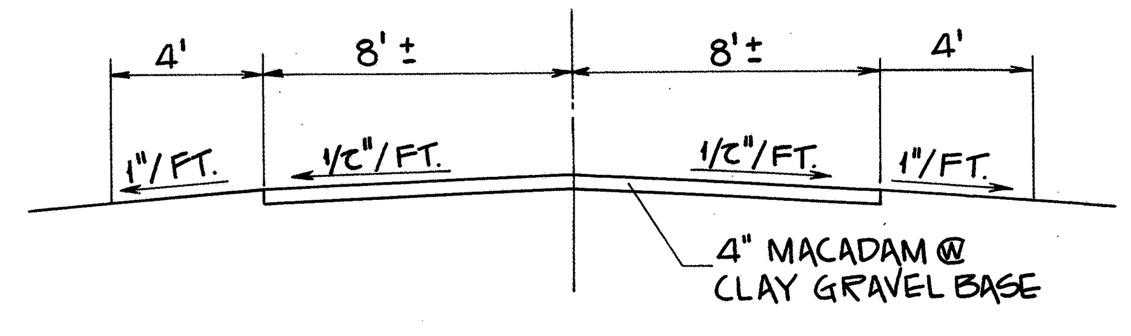
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		29 / 125

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/4/71

QUANTITIES CK'D. SWR 3/22/71





EXIST. LAKECREST RD. ~ TYPICAL SECTION

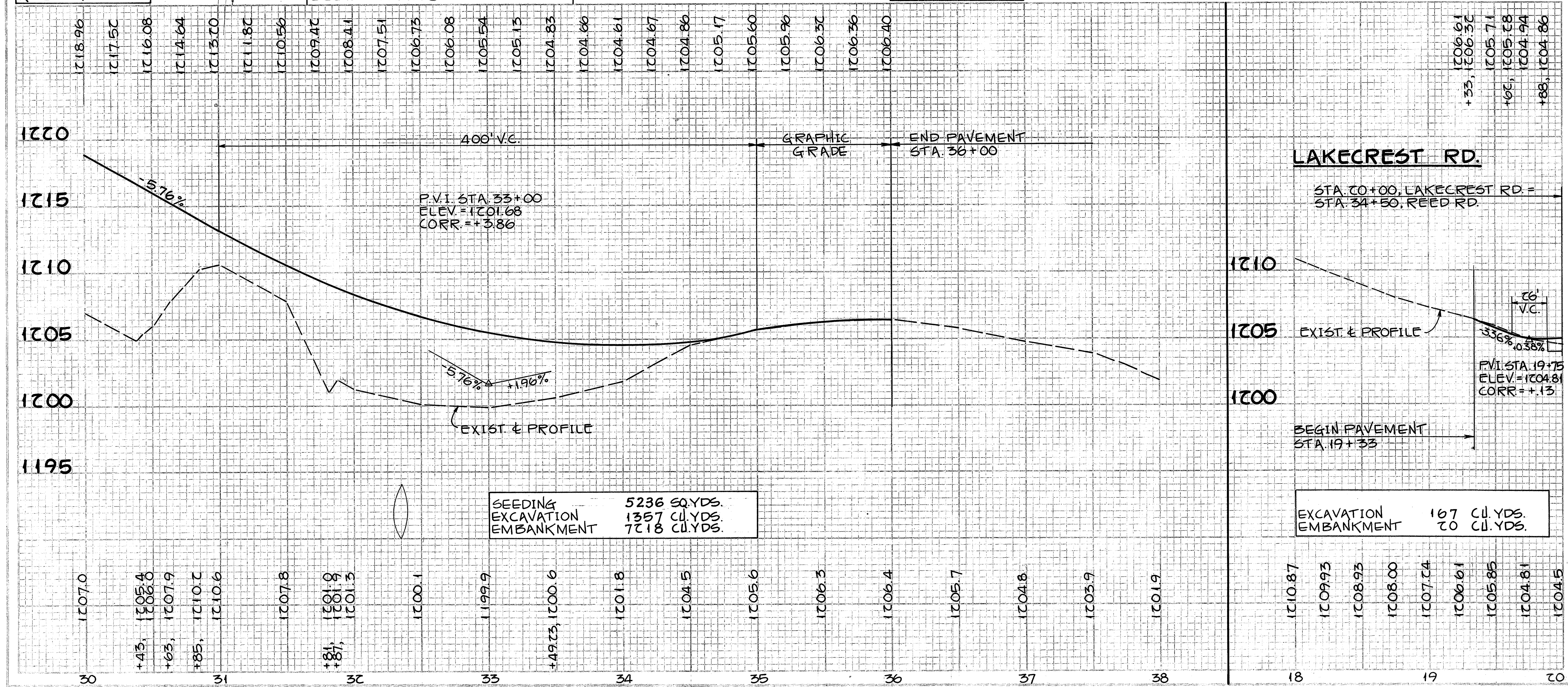
REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 PIPE REMOVED 24" & UNDER	202 PIPE REMOVED OVER 24"	603 6" CONDUIT TYPE C	606 GUARDRAIL TYPE 5, AS PER PLAN	606 ANCHOR ASSEMBLY, AS PER PLAN	BENDS & BRANCHES 6" TEE	BENDS & BRANCHES 6"-90° BEND	BENDS & BRANCHES 6"-30° BEND	667 SEEDING & JUTE MATTING	
				LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH				SQ. YD.	
1-JM	LT.	30+30	30+86									50	
2-JM	RT.	31+50	32+86									105	
1-GR	RT.	30+81.10	32+99.92				188.06	1					
1-R	LT.&RT.	32+97			30								
2-R	LT.	33+02.5	33+42.5	40									
3-R	RT.	33+44	33+76	32									
4-R	LT.	34+30	34+67	37									
5-R	RT.	33+41	33+70	29									
* 1-T	LT.	32+04	33+04			108			1	1			
* 2-T	LT.	33+60	33+90			30				1			
* 3-T	LT.	33+90	34+38			51					1		
* 4-T	LT.	34+77	34+95			20					1		
TOTALS				138	30	209	188.06	1	X	X	X	155	

* NOTE: FOR TILE OUTLET ELEVATIONS, SEE SHEET NO'S. 86 & 88

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC-20) OR 702.09 RT. 11 OR 12 (SEE PROPOSAL NOTE)	304 AGGREGATE BASE	310 SUBBASE	402 ASPHALT CONCRETE (AC-20)	404 ASPHALT CONCRETE	404 ASPHALT CONCRETE DRIVEWAYS		605 AGGREGATE DRAINS
				SQ. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.			LIN. FT.
1-P	℄	30+00	36+00	1579	181.5		281.5	87.7	43.9			375
2-P	℄	LAKECREST RD. 19+33	19+88	176	20.5		32.1	9.8	4.9			
1-A	LT.	33+48				20.4				8.0		
2-A	RT.	33+52.49				59.4				23.1		
3-A	RT.	35+23				11.2				4.6		
TOTALS				1755	202.0	91.0	313.6	97.5	48.8	35.7		375

SODDING AREAS

Prop. Res. Drive @ Exist. Reed Rd. Sta. 104+76±Lt. to ℄ Sta. 32+07±Lt.	=	1163 S.Y.
℄ @ Sta. 32+07±Lt. to Lakecrest Rd. (Lt.)	=	1150 S.Y.
Lakecrest Rd. (Lt.) to Sta. 36+50 (Lt.)	=	633 S.Y.
Dr. Rt. Sta. 33+52.49 Rt. to Sta. 36+50 (Rt.)	=	680 S.Y.
TOTAL	=	3626 S.Y.



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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

30
125

RIC - 30 - 16.37

QUANTITIES CALC. O.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		0	0		

1250

1260

1250

12+50
1249.7

BEGIN EARTHWORK
STA. 12+50

12+00
1251.9

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

REED ROAD STA. 12+00 TO STA. 12+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

31/125

RIC-30-16.37

QUANTITIES CALC. O.A.A. 3/25/71
QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING END WIDTH	SQ. YDS

1250
1240
M.L. RAMP A
BK. & AH'D. BK.
1249.51
19+00
1247.5
1235.4
AH'D. BK. & AH'D.
12'
M.L. DRIVE LT.
1248.53
18+50
1247.5
OUTLET IN SWALE
FOR DETAILS OF DRIVES ON LT. STA. 18+17 AND FIELD DRIVE SEE SHEET NO'S. 38 & 75
BK. BK. & AH'D.
10'
4:1
1243.5
1247.55
18+00
1241.9
FINAL C.S. 6-26-78 R.M.
OUTLET IN SWALE
D/D
4:1
1243.3
1245.59
17+00
1244.1
1241.0
1241.4
1243.63
16+00
1243.4
1240.3
F.C. 6-26-78 R.M.
FOR DETAILS OF STORM SEWER SYSTEM SEE SHEET NO. 83
TO CATCH BASIN
FOR DETAILS OF DRIVE ON RT. STA. 15+17 SEE SHEET NO'S. 37 & 83
TO CATCH BASIN
FOR DETAILS OF DRIVE ON LT. STA. 15+15 SEE SHEET NO'S. 37 & 83
1247.73
15+00
1247.0
FOR DETAILS OF CULVERT STA. 14+55 SEE SHEET NO. 83
TO CULVERT
10' 12' 12' 10'
1243.97
14+00
1243.4
1237.50
OUTLET INTO CULVERT CHANNEL
1231.3
1230
10' 10' 10' 10'
1247.60
13+00
1247.6
F.C. 6-26-78 R.M.
BEGIN PAVEMENT STA. 13+00
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA. 19+00 AH'D	1	479		
STA. 19+00 BK.	110	552		
ADD FOR BASEMENT				111
			102	864
STA. 18+50 AH'D	0	381		
STA. 18+50 BK.	0	303		
ADD FOR FIELD DRIVE			41	17
ADD FOR DRIVE STA. 18+17 LT.			100	370
			0	501
STA. 18+00 AH'D	0	238		
STA. 18+00 BK.	28	337		
			172	503
	65	35		
			378	120
	139	30		
			263	228
	3	93		
ADD FOR DRIVE STA. 15+17 RT.			10	31
ADD FOR DRIVE STA. 15+15 LT.			2	26
			109	650
	56	258		
			257	537
	83	32		
			77	30
STA. 12+50	0	0		

REED RD., STA. 13+00 TO STA. 19+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

32
125

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	2130		
		0	3719
0	1886		
		0	2959
0	1310		
		0	2061
0	916		
		0	1534
0	741		
		1	1130
1	479		

STA 19+00 AH'D

M.L. RAMP B
M.L. EMMA LANE
20'
10'
12'
8:1
4:1
1253.07
21+50
1234.1
1250
1230

M.L. RAMP B
M.L. EMMA LANE
20'
10'
12'
8:1
4:1
1252.84
21+00
1235.1
1250
1230

FINAL C.S. PLOTTED 6-26-78 R.M.

M.L. RAMP B
M.L. EMMA LANE
12'
6:1
1252.30
20+50
1236.7
1250
1240

M.L. RAMP B
M.L. EMMA LANE
12'
8:1
1251.47
20+00
1238.4
1250
1240

M.L. RAMP A
M.L. EMMA LANE
1250.49
19+50
1240.0
1250
1240

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

REED RD., STA. 19+50 TO STA. 21+50

SEEDING	
END WIDTH	SQ. YDS

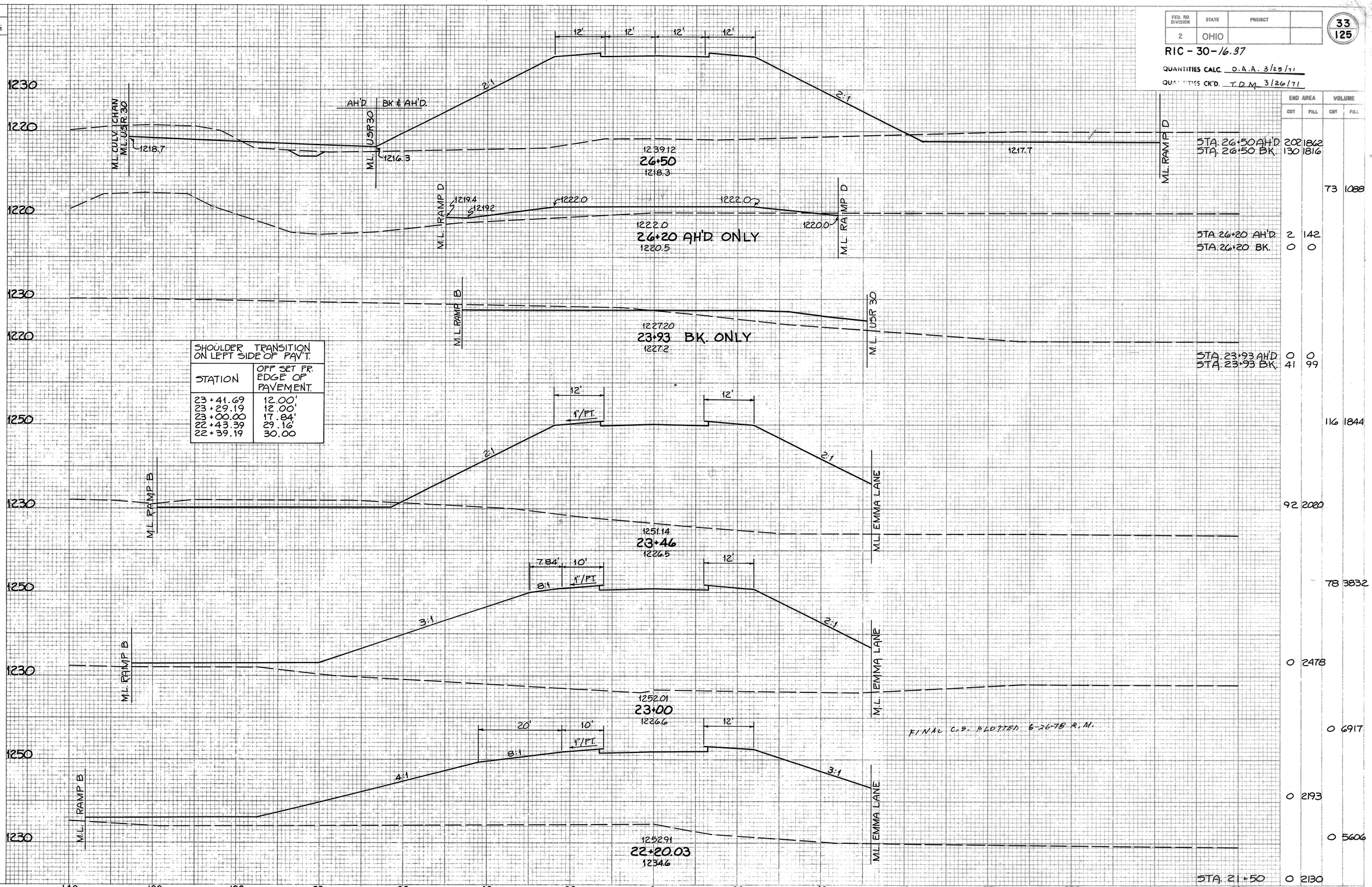
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

33
125

RIC - 30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71



SHOULDER TRANSITION ON LEFT SIDE OF PAV'T.	
STATION	OFF SET FR. EDGE OF PAVEMENT.
23+41.69	12.00'
23+29.19	12.00'
23+00.00	17.84'
22+43.39	29.16'
22+39.19	30.00

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA. 26+50 AH'D	202	1862		
STA. 26+50 BK.	130	1816		
			73	1088
STA. 26+20 AH'D.	2	142		
STA. 26+20 BK.	0	0		
			116	1844
STA. 23+93 AH'D	0	0		
STA. 23+93 BK.	41	99		
			92	2080
			78	3832
			0	2478
			0	6917
			0	2193
			0	5606
STA. 21+50			0	2130

FINAL C.S. PLOTTED 6-26-78 R.M.

REED RD. STA 22+20.03 TO STA 26+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

...S CALC. D.A.A. 3/25/71

QUA...TITIES CK'D. T.D.M. 3/26/71

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
29+50	0	695		
ADD FOR DRIVE OFF OF TRUCK TR. DR. →			8	200
ADD FOR TRUCK TERMINAL DRIVE →			141	2937
			0	1302
STA. 29+10.33 AH'D.	0	1077		
STA. 29+10.33 BK.	2	1388		
			102	3828
28+50	84	2038		
			330	6492
27+72.10	145	2462		
			505	5976
27+00	233	2014		
			403	3589
STA. 26+50 AH'D	202	1862		

REED RD. STA. 27+00 TO STA. 29+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

35
125

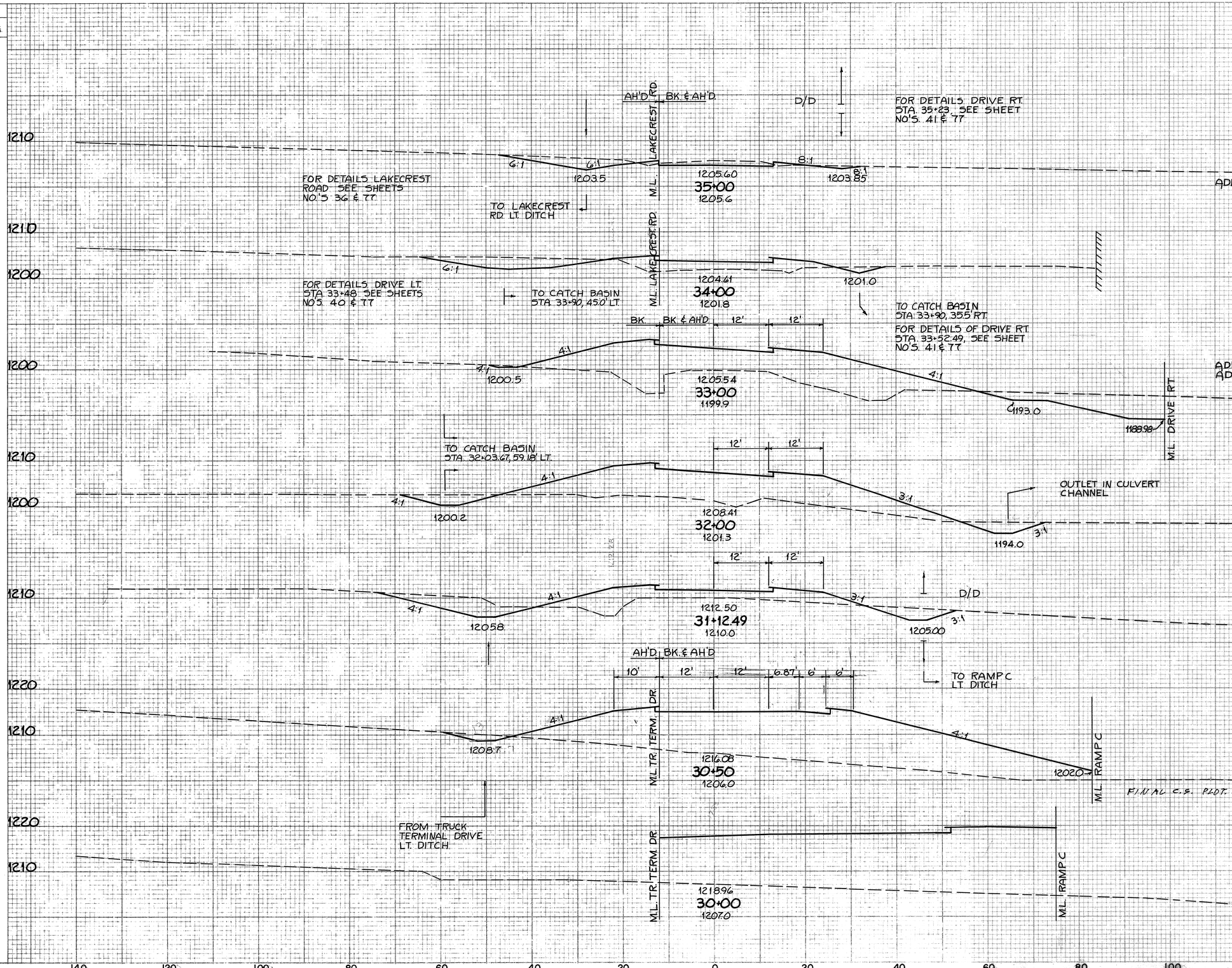
RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING

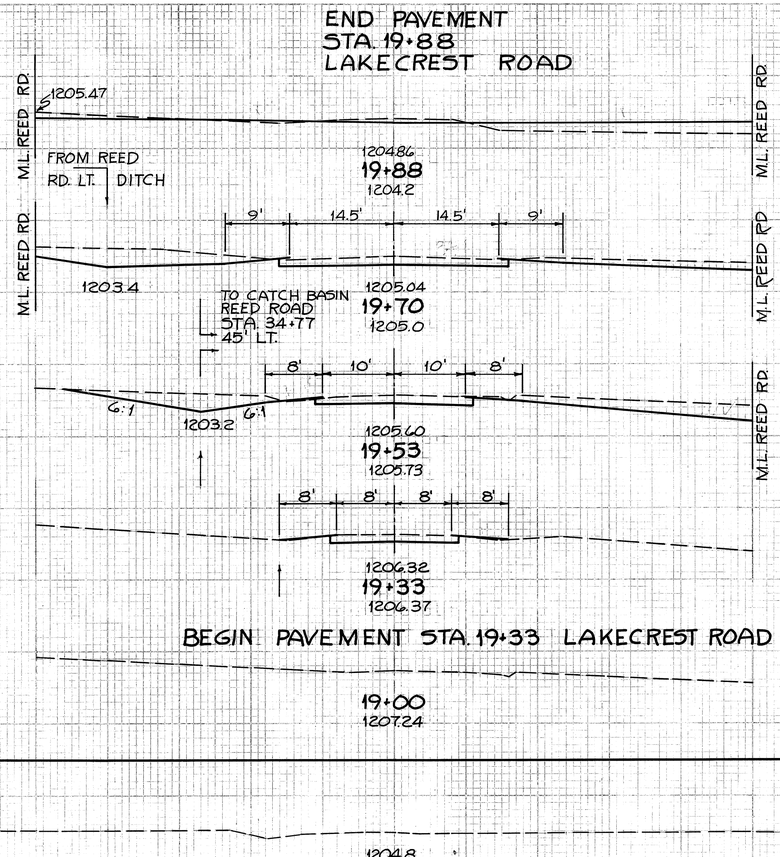
END WIDTH	SQ. YDS.



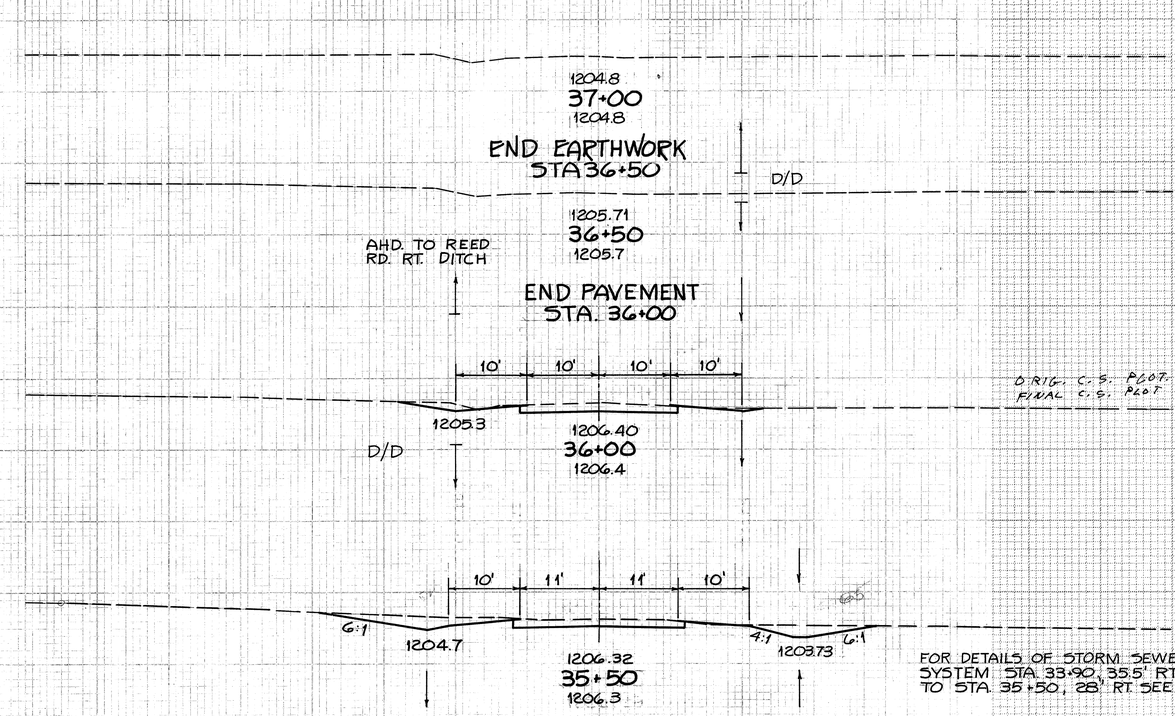
	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA 35+00 AH'D	65	6		
STA 35+00 BK.	25	3		
ADD FOR DRIVE STA. 35+23 RT. →			3	2
			61	131
	8	68		
			241	798
ADD FOR DRIVE STA. 33+52.49 RT. →			42	245
ADD FOR DRIVE STA. 33+48 LT. →			47	88
STA 33+00 AH'D	122	363		
STA 33+00 BK.	124	527		
			331	1856
	55	475		
			256	1032
	103	162		
			134	1310
STA 30+50 AH'D	13	970		
STA 30+50 BK.	0	806		
			0	1750
	0	1084		
			0	1617
STA. 29+50	0	695		

REED RD. STA. 30+00 TO STA. 35+00

SEEDING	
END STATION	SQ. YDS.



LAKECREST ROAD X-SECTIONS
STA. 19+00 TO STA. 19+88



ORIG. C.S. PLOT 5-16-77 C. BOYD
FINAL C.S. PLOT 6-27-78 R. MARTIN

SED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

36
125

RIC. - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA. 19+88 AH'D.	0	0		
STA. 19+88 BK.	18	53		
			45	18
	118	0		
			73	1
	114	1		
			49	1
STA. 19+33 AH'D.	18	2		
STA. 19+33 BK.	0	0		
STA. 36+50	0	0		
			30	0
	32	0		
			91	0
	66	0		
			121	6
STA. 35+00 AH'D.	65	6		

REED ROAD STA. 35+50 TO STA. 37+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

37
125

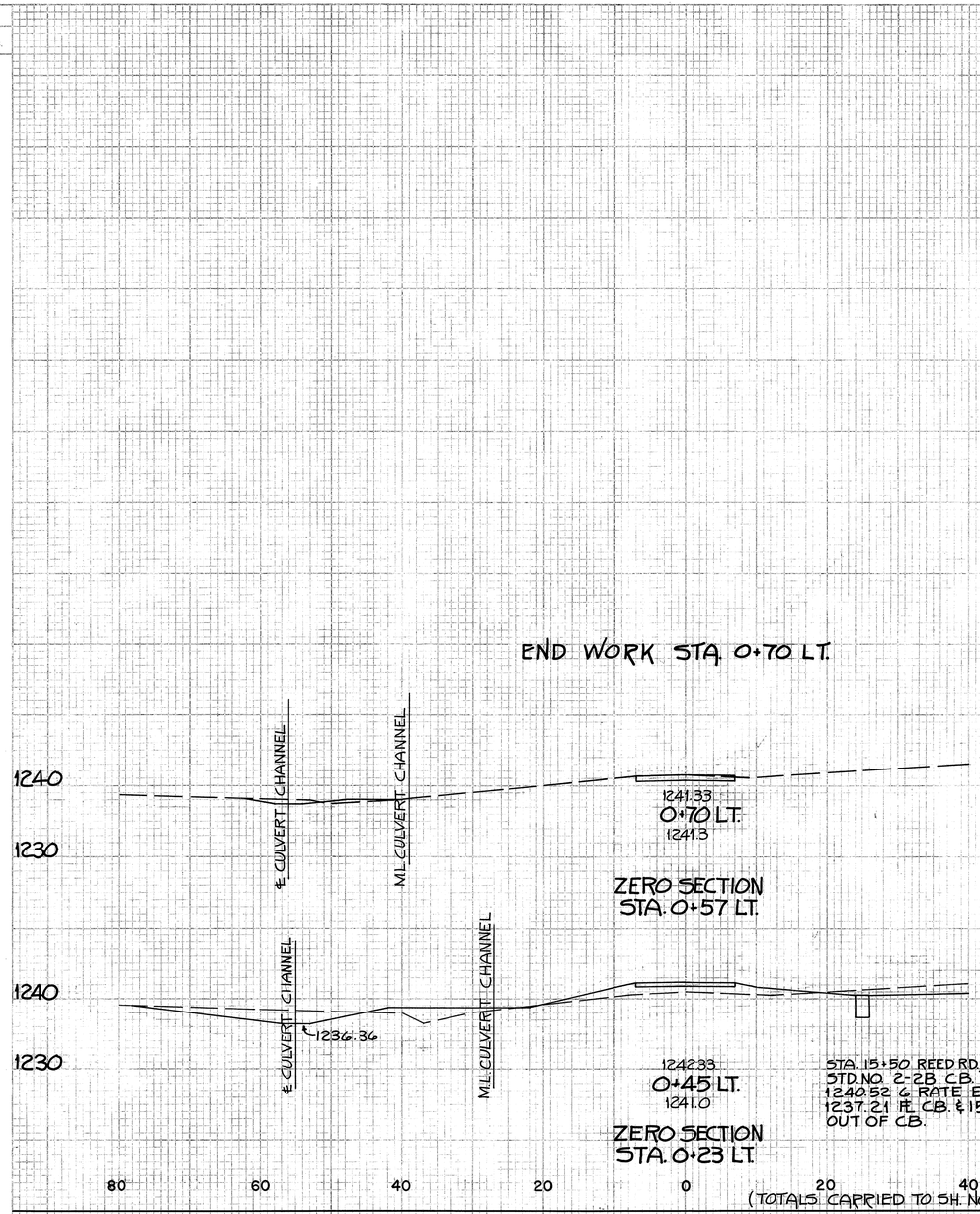
RIC - 30 - 16.37

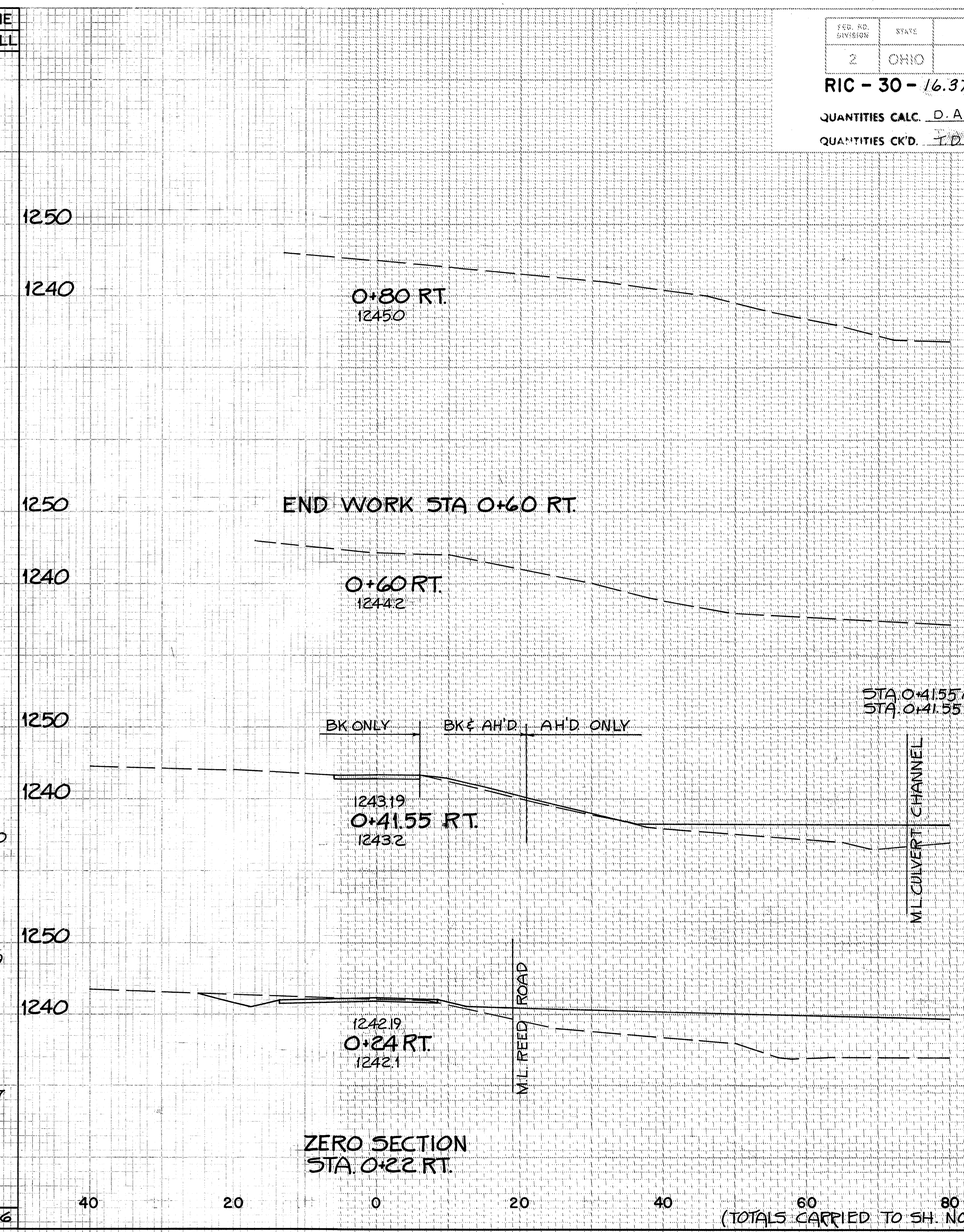
QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

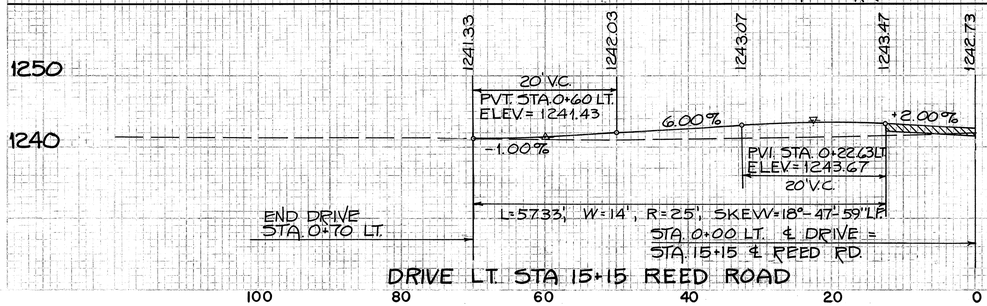
SEEDING	
END WIDTH	SQ. YDS.

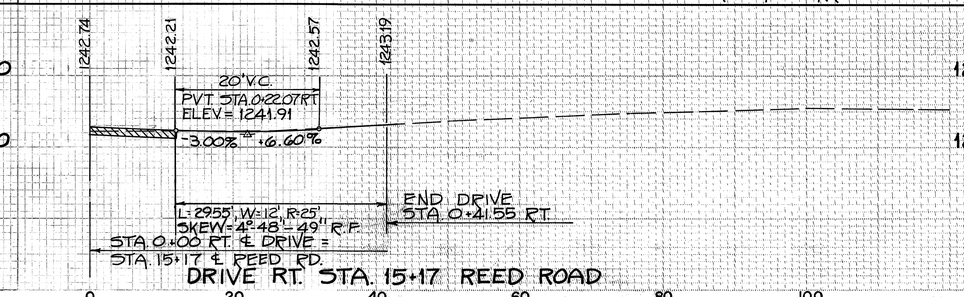
END AREA		VOLUME	
CUT	FILL	CUT	FILL
10	0		
		2	0
0	0		
		0	9
0	42		
		0	17
0	0		
TOTALS		2	26





END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		0	26
STA. 0+41.55 AH'D		0	76
STA. 0+41.55 BK.		7	5
			9 4
		22	8
			1 1
0	0		
TOTALS		10	31





DRIVE X-SECTIONS REED ROAD

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

38
125

RIC - 30-16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. TDM. 3/26/71

SEEDING	
END WIDTH	SQ. YDS.

AHD BK & AHD

STA 1+00 AHD 25 22
STA 1+00 BK 21 22

1240 — 1246.50 — 1+00 LT — 1246.3 — ML REED RD

1240 — ML FLD DR — 1246.51 — 0+90 LT — 1246.1 — ML REED RD

1240 — ML FLD DR — 1246.60 — 0+80 LT — 1245.9 — ML REED RD

1240 — ML REED RD — 1246.77 — 0+70 LT — 1245.5 — ML REED RD

1240 — ML REED RD — 1246.97 — 0+60 LT — 1245.0 — ML REED RD

1240 — ML REED RD — 1247.17 — 0+50 LT — 1244.7 — ML REED RD

1240 — ML REED RD — 1247.57 — 0+30 LT — 1243.8 — ML REED RD

1240 — ML REED RD — 1247.93 — 0+12 LT BEGIN DRIVE — 1243.0 — ML REED RD

40 30 20 10 ℄ 10 20 30 40

END DRIVE STA 1+99.36 LT

1240 — 1248.80 — 1+99.36 LT — 1248.8 — ML RAMP A

1240 — 1247.68 — 1+70 LT — 1247.7 — ML RAMP A

1240 — 1247.28 — 1+50 LT — 1247.3 — ML RAMP A

1240 — ML REED RD — 1246.90 — 1+30 LT — 1246.9 — ML REED RD

40 30 20 10 ℄ 10 20 30 40

END DRIVE STA 1+03.77 LT

1240 — ML REED RD — 1247.23 — 1+03.77 LT — 1247.2 — ML DR. LT

32' OF 12" TYPE D CONDUIT ON S_o = 1.00%

ML REED RD: 3:1, 2:1 — 1243.60 ℄ OUTLET 16' LT — 1246.96 — 0+96.08 LT — 1246.9 — 1243.92 ℄ INLET 16' RT — 2:1, 3:1 ML DR. LT

1240

30 20 10 ℄ 10 20 30

BEGIN DRIVE STA 0+72.87 LT

1246.58 1246.60 1246.80 1247.23

BEGIN DRIVE STA 0+72.87 LT — END DRIVE STA 1+03.77 LT

GRAPHICAL GRADE

1250

1240

L = 30.90', W = 12', R = 25'

0+50 1+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		6	10
14	30		
		3	16
0	60		
		1	24
1	71		
		3	29
13	86		
		3	35
5	105		
		2	101
0	169		
		0	138
0	246		
STA 1+00 AH'D	25	22	
(TOTALS CARRIED TO SH. NO. 31)	TOTALS	100	370

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
13	0		
		18	1
20	1		
		17	1
26	0		
		19	1
26	3		
		28	14
TOTALS			

FLD DRIVE OFF DRIVE LT STA 18+17 REED ROAD

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		6	0
		11	0
		69	0
		30	17
		0	40
TOTALS			

TOTALS CARRIED TO SH. NO. 31 → TOTALS 41 17

1247.73 1247.93 1247.77 1247.57 1247.37 1247.17 1246.97 1246.75 1246.60 1246.51 1246.50 1246.56 1246.73 1246.90 1247.09 1247.28 1247.50 1247.68 1247.98 1248.35 1248.80

STA 0+00 DRIVE LT = STA 18+17 REED RD

50' V.C. PVI STA 0+96 LT ELEV = 1246.25

50' V.C. PVI STA 1+87 LT ELEV = 1247.98

1250

1240

-2.00% +1.90% +5.90%

L = 187.36', W = 12', R = 25'

END DRIVE STA 1+99.36 LT

0+00 0+50 1+00 1+50 2+00 2+50

DRIVE LT STA 18+17 REED ROAD

REED ROAD DRIVE PROFILES & X-SECTIONS

SEEDING	
CUD. WIDTH	SQ. YDS.

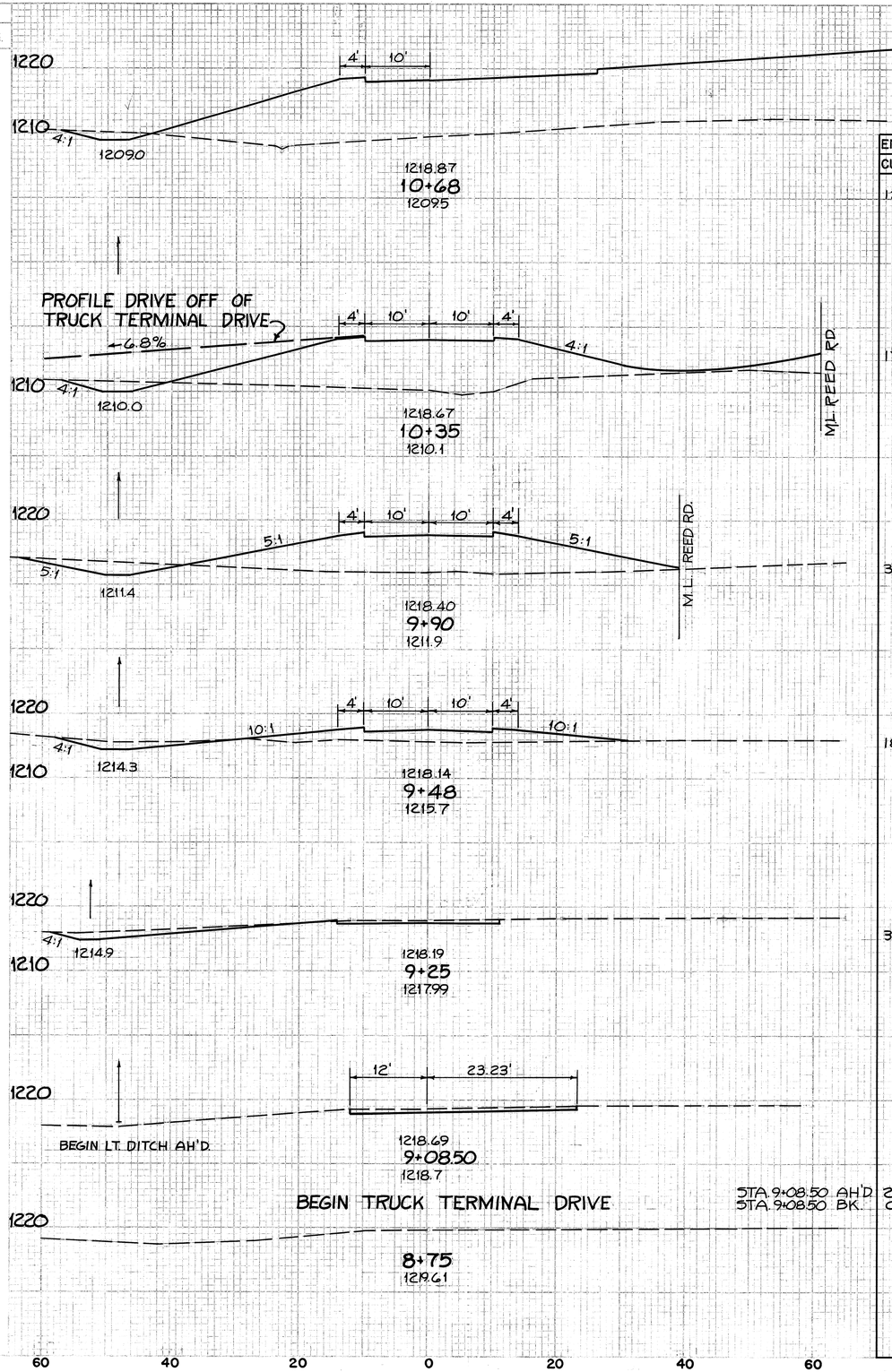
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

39
125

RIC-30-16.37

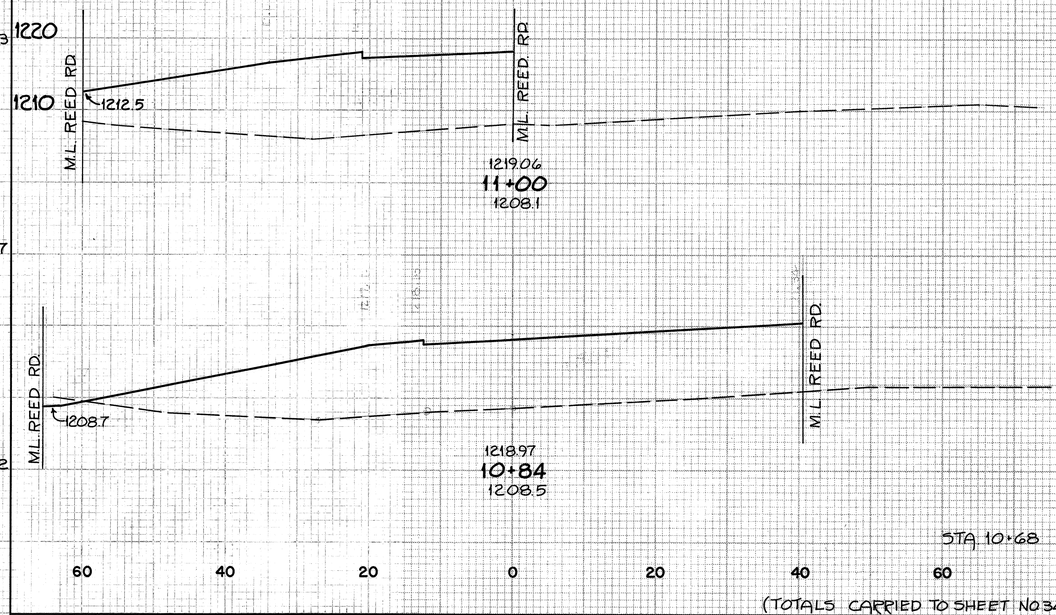
QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71



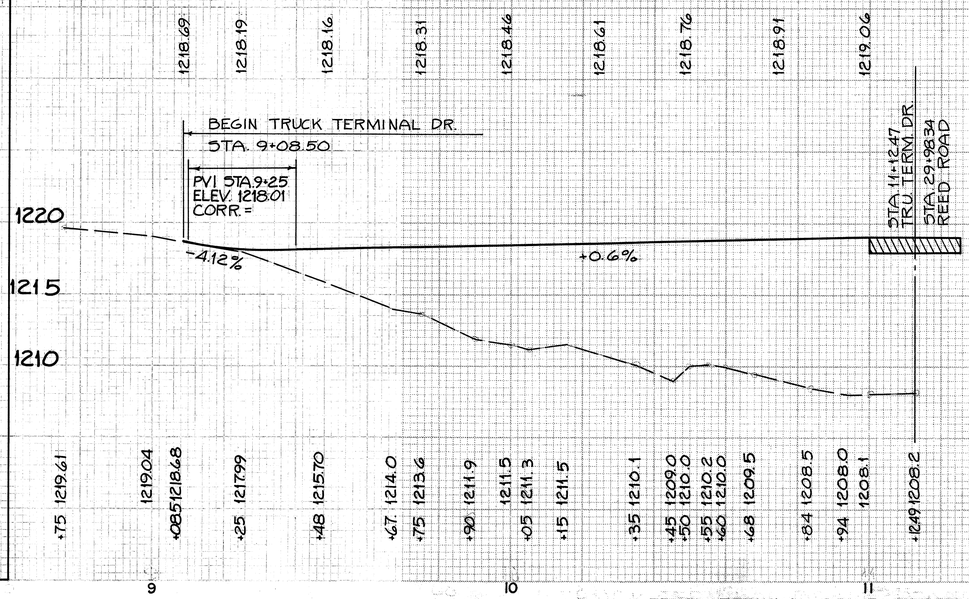
END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	1001		
		18	863
17	411		
		40	597
31	305		
		38	302
18	83		
		22	35
34	0		
		17	0
21	00		
00	00		

STA. 11+20
END TRUCK TERMINAL DRIVE



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
STA. 11+20	0	0		
			0	204
	0	551		
			1	401
	4	804		
			5	535
STA. 10+68	12	1001		
(TOTALS CARRIED TO SHEET NO 34)	TOTALS	141	2937	

PROFILE TRUCK TERMINAL DRIVE OFF REED ROAD
STA. 29+98.34



TRUCK TERMINAL DRIVE PROFILE & X-SECTIONS

RIC – 30 – 16.37

QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		2	93
3	153		
		4	106
3	1		
		2	1
5	0		
TOTALS		8	200

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	0		
		8	1
21	2		
		24	13
65	46		
		13	35
6	141		
		2	39
0	0		
		0	0
0	0		
TOTALS		47	88

SEEDING
END WIDTH
SQ. YDS.
END DRIVE
STA. 10+25
ZERO SECTION
STA. 10+20
M.L. TRUCK TERMINAL DR.
62' OF 15" TYPE D CONDUIT ON S.= 3.11%
1208.94 ℄ OUTLET 15" DR. PIPE
STA 9+87, 34' LT.
1210.87 ℄ INLET 15" DR. PIPE
STA 9+87, 28' RT.
1215.93
9+87
1211.3
1213.73
9+50
1213.3
1214.05
9+39.14
1214.1
BEGIN DRIVE STA. 9+39.14
(TOTALS CARRIED TO SH. NO. 34)
END DRIVE STA. 0+75 LT.
1203.00
0+75 LT.
1203.0
1202.87
0+60 LT.
1202.2
1202.5
M.L. REED RD. ℄ LAKECREST RD.
1203.93
0+45 LT.
1201.8
1200.1
1201.5
1202.0
1203.2
1204.82
0+35 LT.
1201.5
STA. 0+20 LT. ZERO SECTION
STA. 0+12 LT. BEGIN DRIVE
(TOTALS CARRIED TO SH. NO. 35)
BEGIN DRIVE
STA. 9+39.14
20 V.C.
PVI. STA 9+50
ELEV. = 1213.41
CORR. = +0.32
-5.88%
+6.80%
STA 10+35 DRIVE
STA. 10+35 TRUCK TERMINAL DRIVE
DRIVE OFF OF TRUCK TERMINAL DRIVE
EXIST. REED RD. STA. 105+14 LT.
DRIVE LT. STA. 33+48
REED ROAD
30' V.C.
PVI STA. 0+60 LT.
ELEV. = 1202.28
CORR. = +2.59
+4.8%
-11.00%
+1.20%
PVI. STA. 0+30 LT.
ELEV. = 1205.58
CORR. = -0.46
STA. 0+00 DRIVE LT.
STA. 33+48 REED RD.
END DRIVE
STA. 0+75 LT.
9+50
10+00
1+00
0+50
0+00

REED RD. DRIVE PROFILES & X-SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

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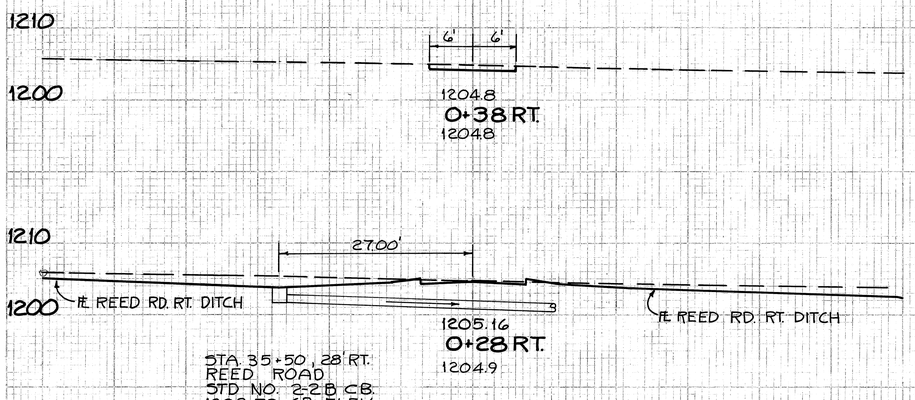
QUANTITIES CALC. D.A.A. 3/25/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING	
END WIDTH	SQ. YDS.

END DRIVE STA 0+38 RT.



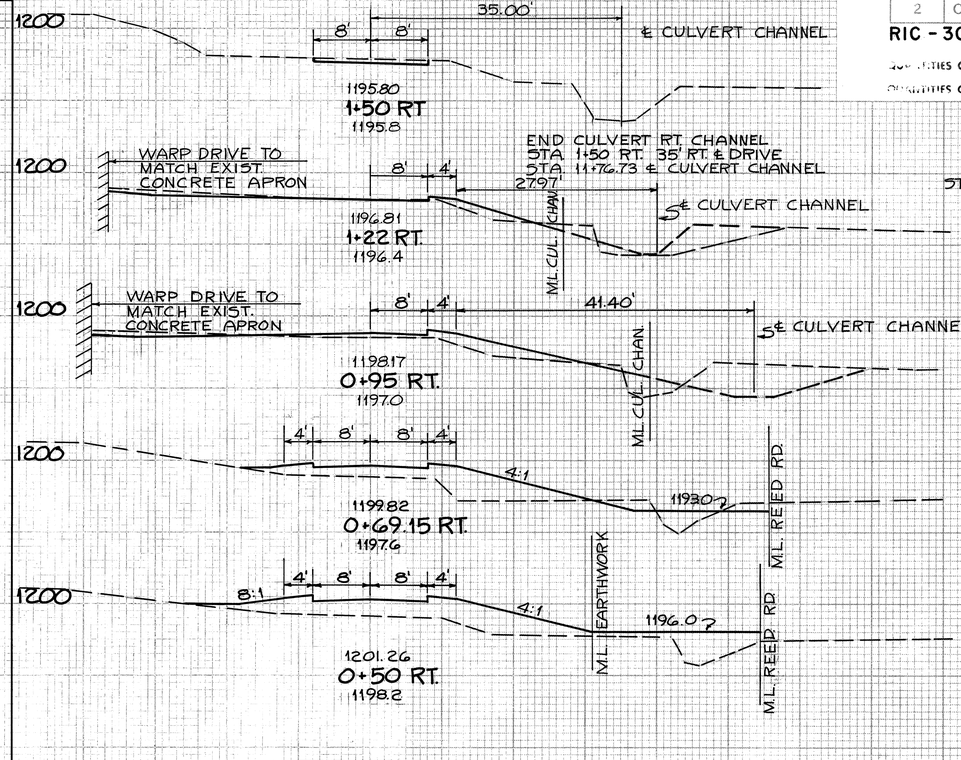
STA. 35+50, 28' RT.
REED ROAD
STD NO. 2-2B CB.
1203.73 GR. ELEV.

ZERO SECTION STA. 0+11 RT.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8	0		
		2	1
3	1		
		1	1
0	0		
TOTALS		3	2

(TOTALS CARRIED TO SH. NO. 35)

END DRIVE STA. 1+50 RT.

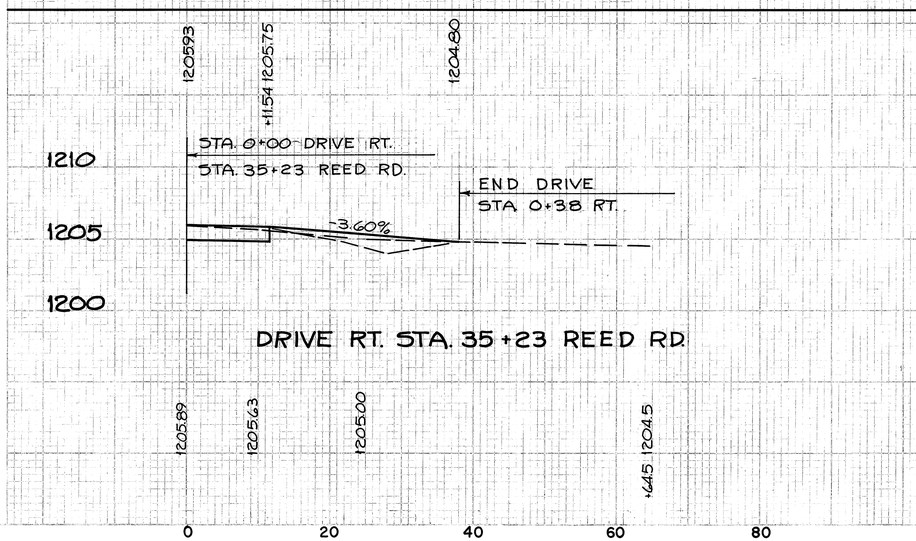


ZERO SECTION STA. 0+22 RT.

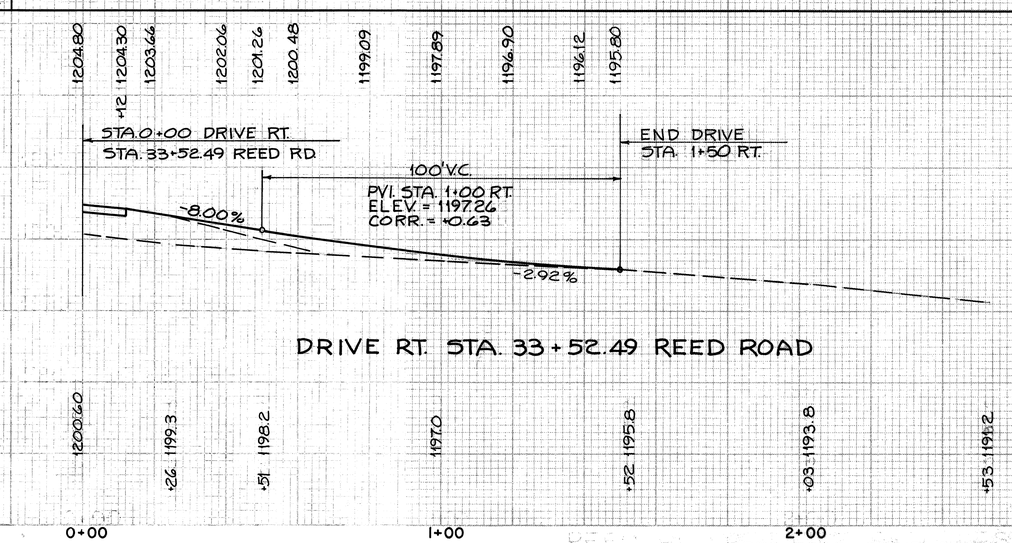
BEGIN DRIVE STA. 0+00 RT.
REED ROAD STA. 33+52.49

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA. 1+50 RT.	9	0		
			12	6
	14	12		
			13	28
	12	45		
			12	71
	14	104		
			5	79
	0	118		
			0	61
	0	0		
			0	0
STA. 0+00 RT.	0	0		
TOTALS	42	245		

(TOTALS CARRIED TO SH. NO. 35)



DRIVE RT. STA. 35+23 REED RD.



DRIVE RT. STA. 33+52.49 REED ROAD

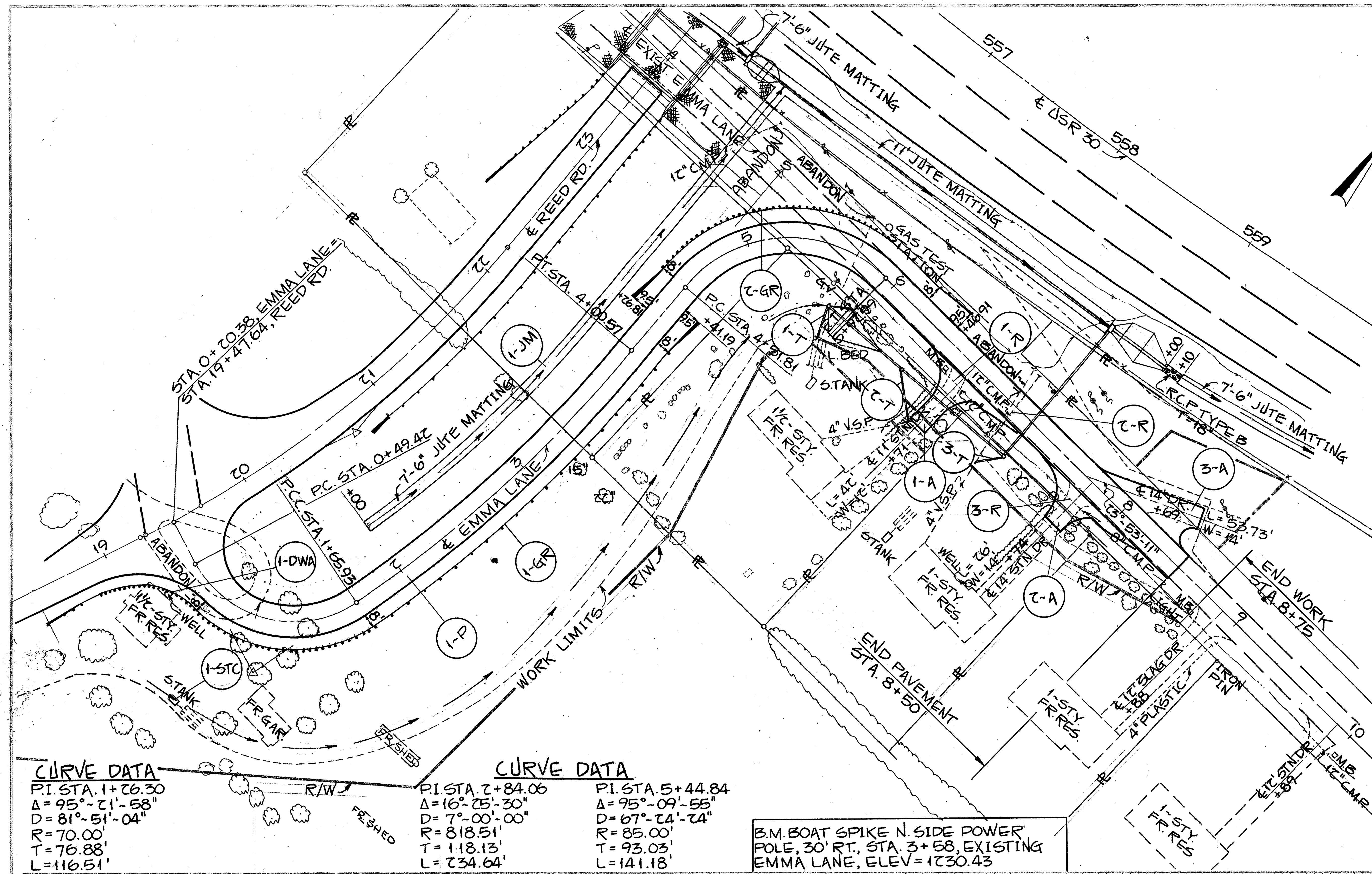
REED ROAD DRIVE PROFILES & X-SECTIONS

REFERENCE SHEETS	SHT. NO.
EMMA LANE DRIVE DETAILS	75
EMMA LANE STORM SEWER DETAILS	85
EMMA LANE SUPERELEVATION TABLE	48
INTERSECTION DETAIL	71

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/5/71
QUANTITIES CK'D. S.W.R. 3/23/71

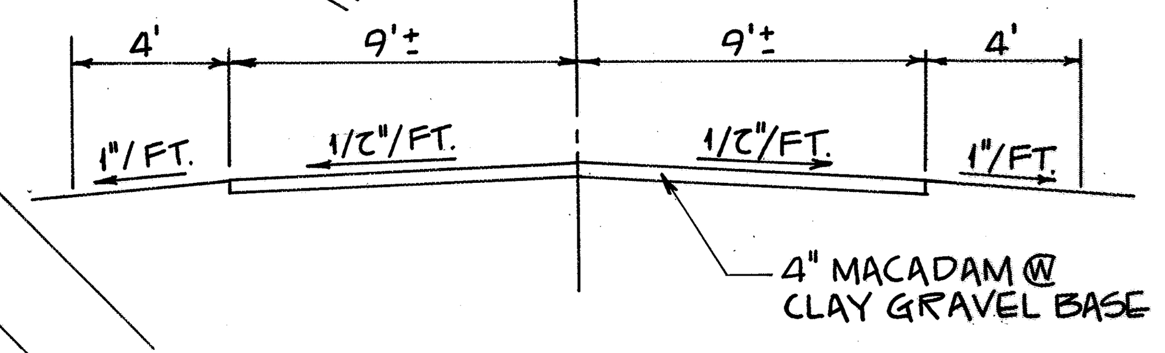


CURVE DATA
P.I. STA. 1+26.30
Δ = 95°-21'-68"
D = 81°-51'-04"
R = 70.00'
T = 76.88'
L = 116.51'

CURVE DATA
P.I. STA. 2+84.06
Δ = 16°-25'-30"
D = 7°-00'-00"
R = 818.51'
T = 118.13'
L = 234.64'

P.I. STA. 5+44.84
Δ = 95°-09'-55"
D = 67°-24'-24"
R = 85.00'
T = 93.03'
L = 141.18'

B.M. BOAT SPIKE N. SIDE POWER POLE, 30' RT. STA. 3+58, EXISTING EMMA LANE, ELEV = 1230.43



EXIST. EMMA LN. - TYPICAL SECTION

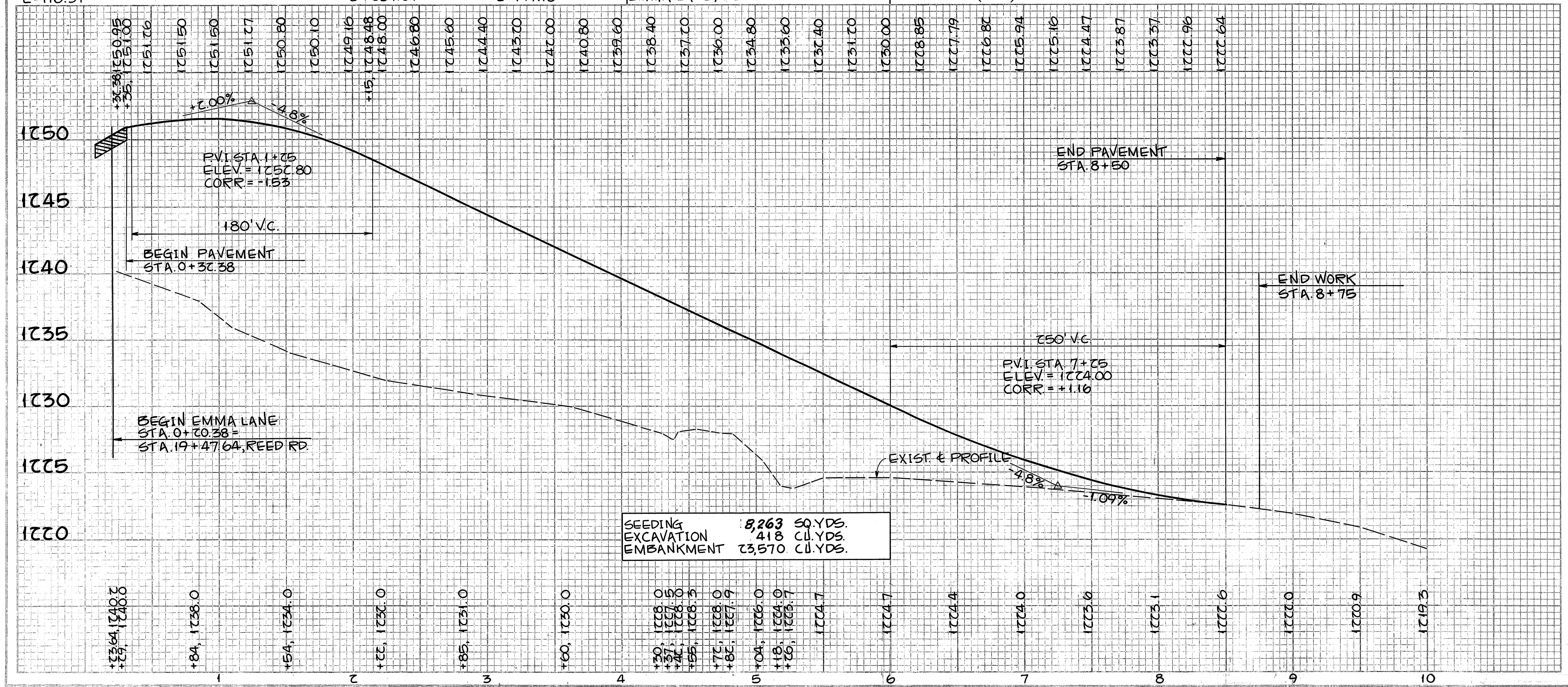
REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 PIPE REMOVED 24" & UNDER	603 6" CONDUIT TYPE C	606 GUARDRAIL TYPE 5, AS PER PLAN	606 ANCHOR ASSEMBLY, AS PER PLAN	BENDS & BRANCHES 6"-90° BEND	BENDS & BRANCHES 6"-60° BEND	202 Septic Tanks Removed	SPECIAL DRILLED WELL ABANDONED	667 SEEDING & JUTE MATTING
				LIN. FT.	LIN. FT.	LIN. FT.	EACH			EACH	EACH	SQ. YDS.
1-GR	RT.	REED RD 18+50	EMMA LN. 4+41.19			450	2					
2-GR	LT.	4+26.81	6+46.91			200	2					
1-R	RT.	6+60	6+76	16								
2-R	LT.&RT.	7+03	7+09.5	40								
3-R	RT.	7+64	7+84	20								
1-STC	RT.	0+85								1		
1-DWA	RT.	0+56									1	
1-JM	LT.	EMMA LN. 2+00	USR 30 556+03									313
* 1-T	RT.	5+70			22							
* 2-T	RT.	6+40			34			1				
* 3-T	RT.	7+22.50			18				1			
TOTALS				76	74	650	4	X	X	1	1	313

* NOTE: FOR TILE OUTLET ELEVATIONS INTO CATCH BASINS, SEE SHEET NO. 85

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION	301 BITUMINOUS AGGREGATE BASE USING 702.01(AC20) OR 702.09, RT-11 OR 12	304 AGGREGATE BASE - 5"	310 SUBBASE 4"	402 ASPHALT CONCRETE 2" (AC20)	404 ASPHALT CONCRETE 1" (AC20)	404 Asphalt Concrete (Driveways) 2"	605 AGGREGATE DRAIN
				SQ. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	Cu. Yds.	LIN. FT.
1-P	℄	0+32.38	8+50	1920	223.8		351.2	106.7	53.3		460
1-A	RT.	6+71				14.4				5.7	
2-A	RT.	7+74				12.0				4.9	
3-A	LT.	7+69				21.2				6.2	
TOTALS				1920	223.8	47.6	351.2	106.7	53.3	16.8	460

Sodding Area:

℄ Sta 3+33± Rt to Sta 8+75 Rt = 1903 s.y.



SEEDING	8,263 SQ. YDS.
EXCAVATION	418 CU. YDS.
EMBANKMENT	23,570 CU. YDS.

Rev 2-9-77

EMMA LANE, STA. 0+20.38 TO STA. 10+00

SEEDING	
GRID WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

43
125

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71

END AREA	
CUT	FILL

1250
1230

M.L. REED RD.

2' 12' 10'
12:1
1242.07
3:1
1228.0
1244.40
3+00
1230.0

20 1245

1250
1230

M.L. REED RD.

2' 12' 12'
12:1
1246.66
3:1
1228.6
1249.16
2+00
1232.1

INITIAL C.S. PLOT 3-16-71 C. BODA
FINAL C.S. PLOT 6-22-78 R. MARTIN

65 5263

15 1597

1250
1230

M.L. REED RD.

12'
12:1
1247.0
3:1
1230.4
1250.38
1+65.93
1233.2

15 2128

8 1776

1250
1230

M.L. REED RD.

12'
10:1
1248.7
3:1
1234.5
1251.50
1+00
1236.0

24 4052

12 1543

STA. 0+75 BEGIN
PT. DITCH AH'D.

1250
1230

M.L. REED RD.

10.00' 10.75'
M.L. REED RD.
1251.75
0+49.42
1239.0

11 2575

STA. 0+49.42 AH'D. 0 1206
STA. 0+49.42 BK. 0 0

BEGIN EARTHWORK, STA. 0+49.42

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

EMMA LANE, STA. 0+49.42 TO STA. 3+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

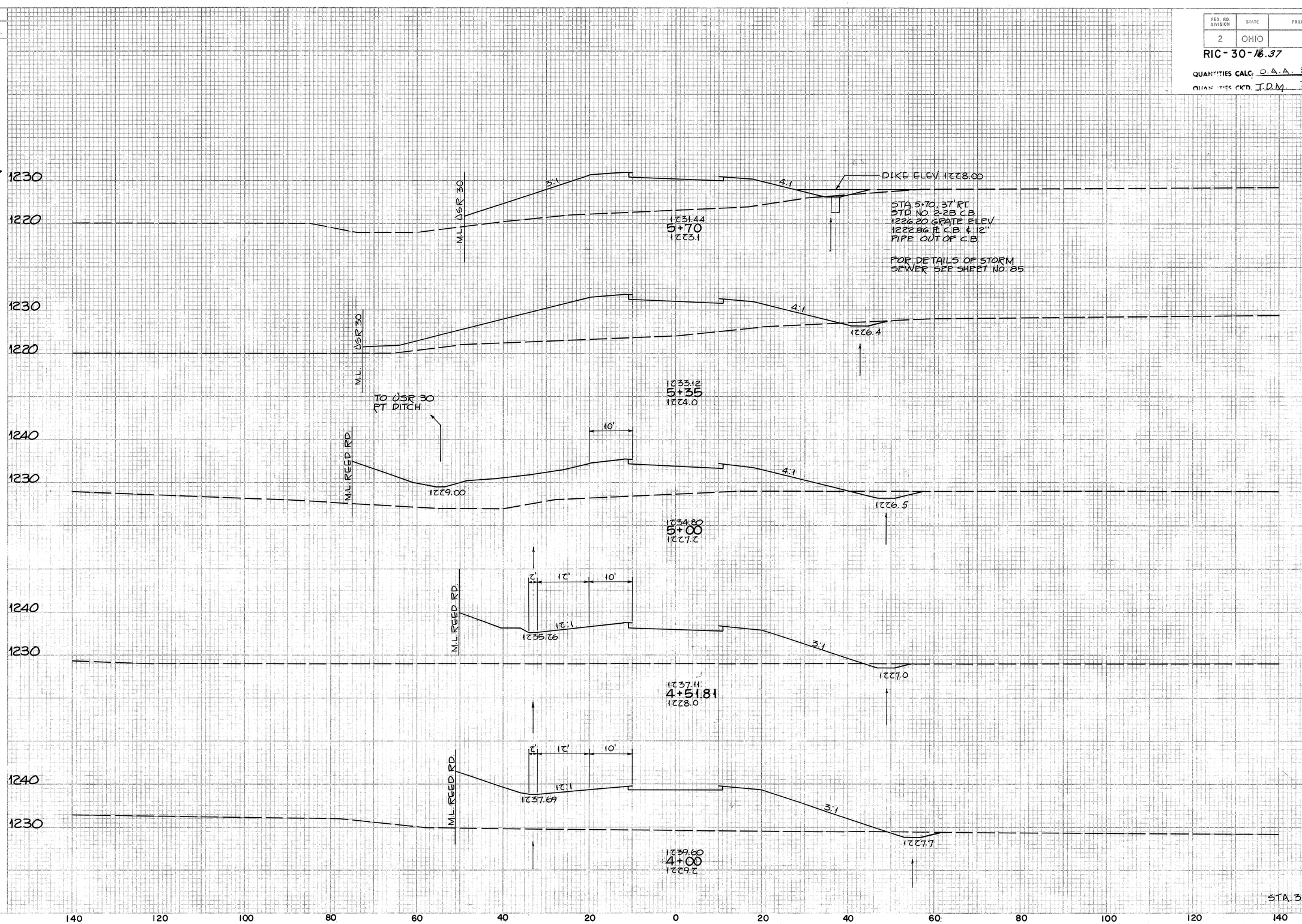
44
125

RIC-30-18.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. J.D.M. 3/26/71

SEEDING		END AREA		VOLUM	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	F
		3	501		
				7	723
		8	614		
				16	852
		17	701		
				21	1237
		7	685		
				16	1442
		10	818		
				56	3820
		STA. 3+00	20	1245	



EMMA LANE, STA. 4+00 TO STA. 5+70

SEEDING	
END WIDTH	SQ. YDS.

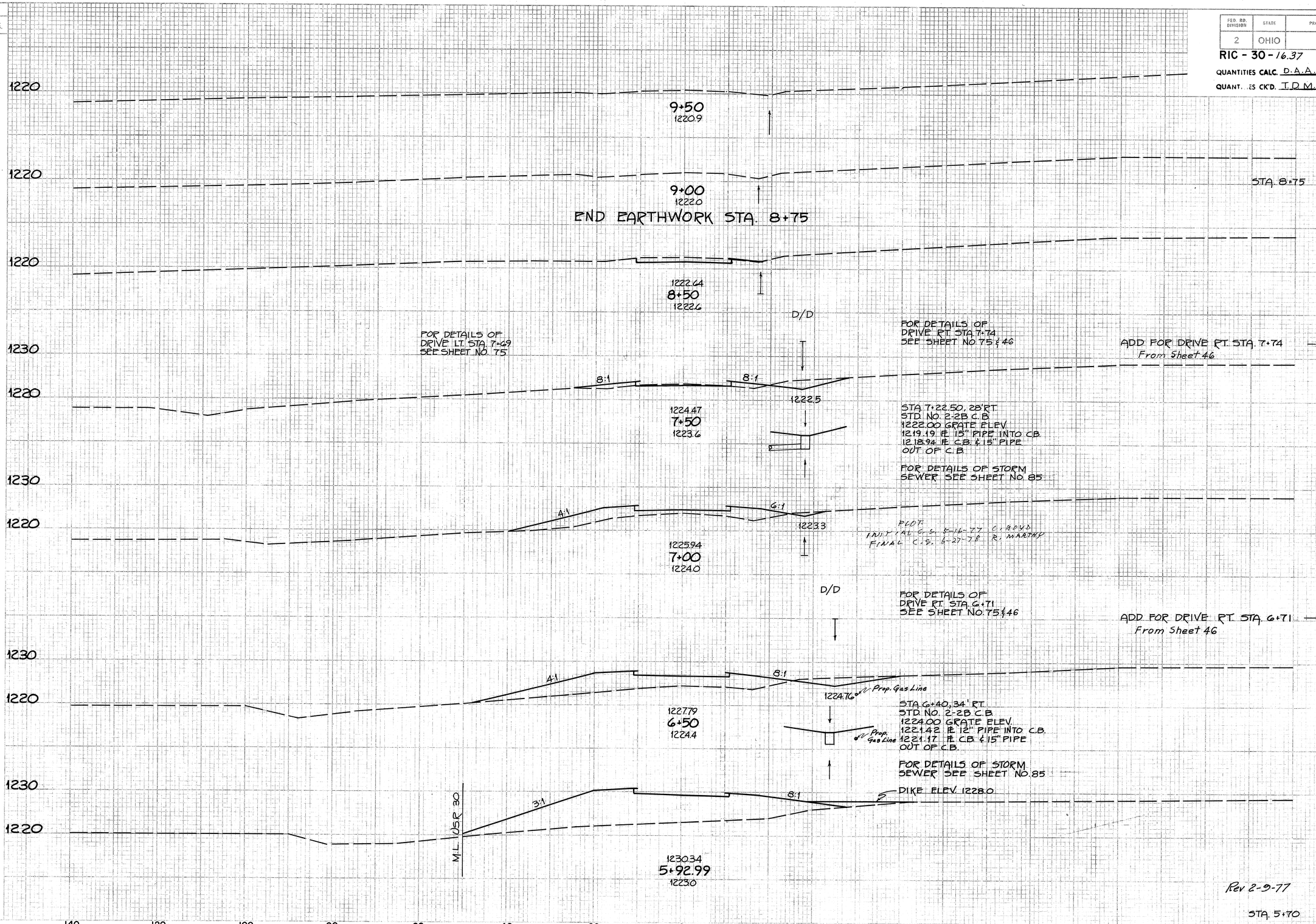
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

45
125

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANT. CK'D. T.D.M. 3/26/71



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		10	1
22	1		
		89	35
ADD FOR DRIVE RT. STA. 7+74 From Sheet 46 →		4	0
26	18		
		28	115
4	106		
		27	272
ADD FOR DRIVE RT. STA. 6+71 From Sheet 46 →		2	4
25	188		
		26	654
0	431		
		1	397
STA. 5+70		3	501

Rev 2-9-77

EMMA LANE STA. 5+92.99 TO STA. 9+50

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

46
125

RIC - 30 - 16.37

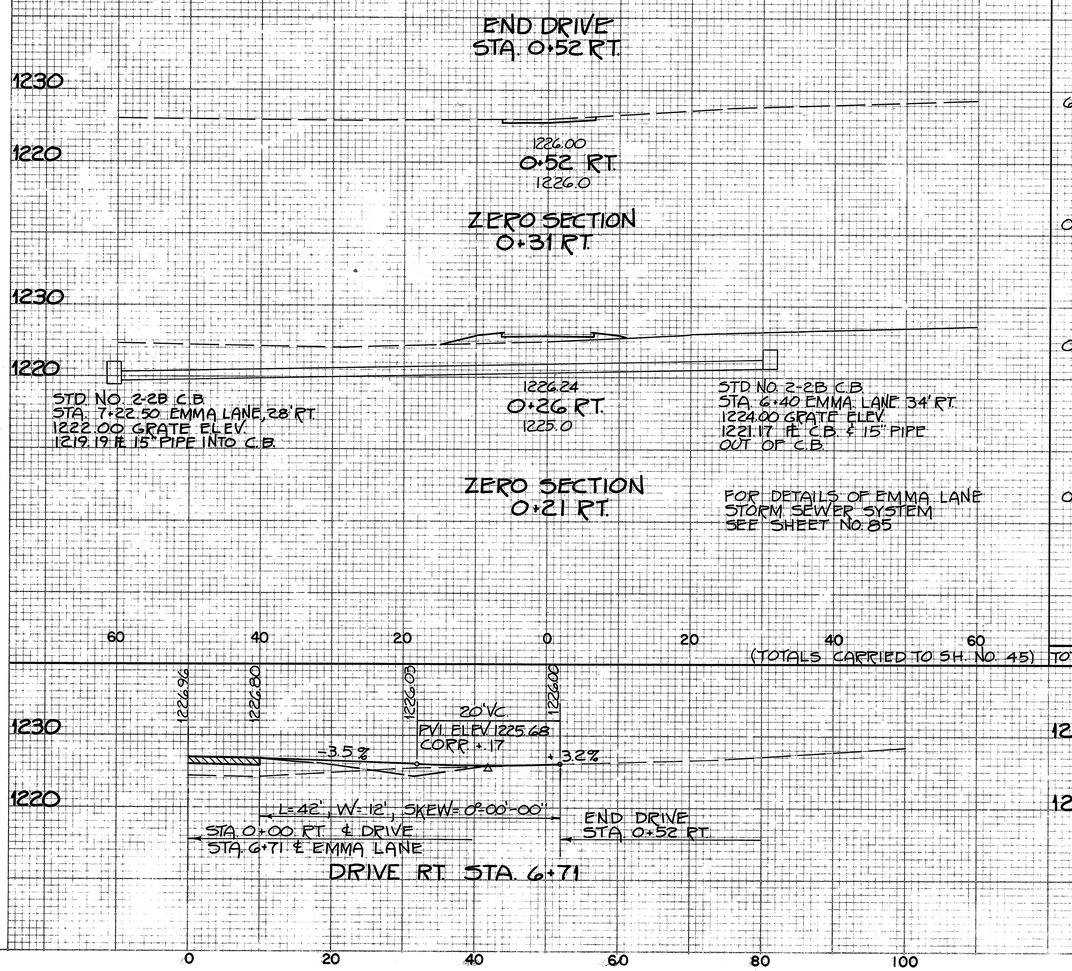
QUANTITIES CALC. D.A.A. 3/26/71

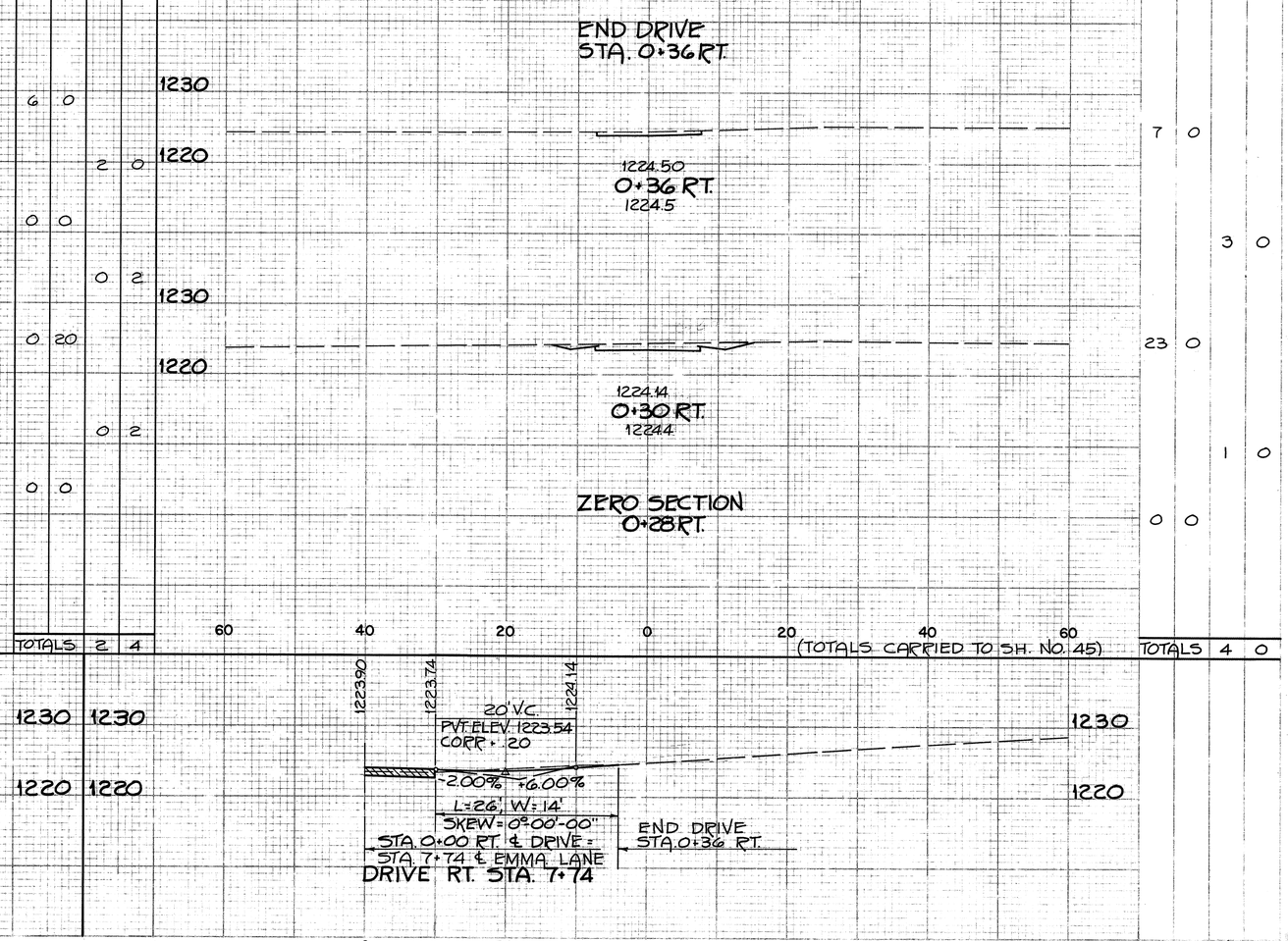
QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6	0		
		2	0
0	0		
0	2		
0	20		
0	2		
0	0		
TOTALS	2	4	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		7	0
		3	0
		23	0
		1	0
0	0		
TOTALS	4	0	





DRIVEWAYS - EMMA LANE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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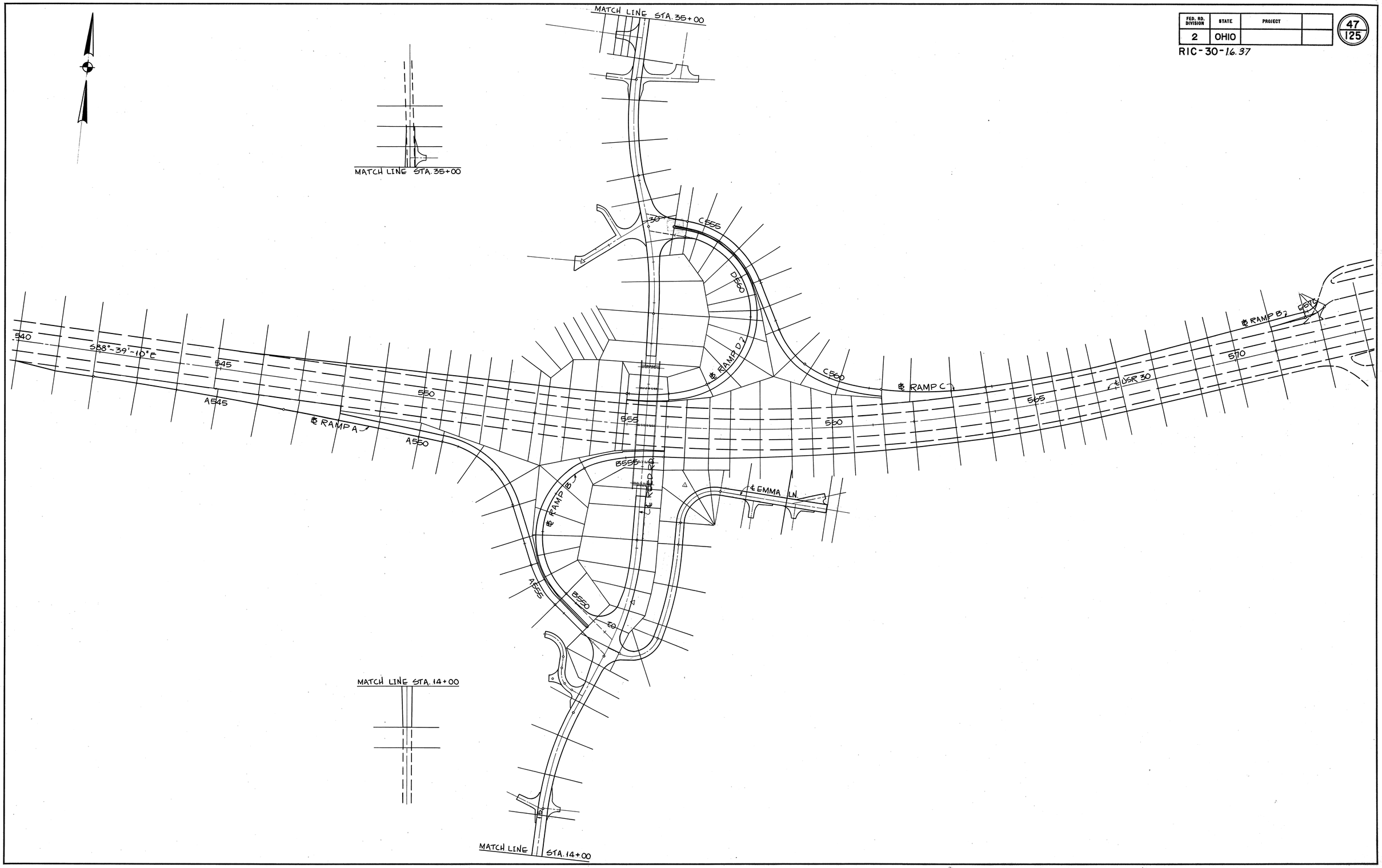

CROSS SECTION LAYOUT PLAN

REED RD. INTERCHANGE
SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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QUANTITIES CALC. D.A.A. 3/23/70

QUANTITIES CK'D. S.W.R. 3/8/71

RAMP A

STATION	LT. EDGE (16' Lt.)	℄ RT. EDGE
A548+00.80	1252.87	1252.62
+25	1251.78	1251.53
+50	1250.65	1250.40
+75	1249.51	1249.26
A549+00	1248.37	1248.12
+24.91	1247.24	1246.99
+25	1247.23	1246.98
+50	1246.09	1245.84
+75	1245.36	1244.71
A550+00	1244.43	1243.58
+25	1243.56	1242.51
+50	1242.80	1241.55
+59.66	1242.54	1241.21
+75	1242.04	1240.71
A551+00	1241.31	1239.98
+25	1240.70	1239.37
+50	1240.21	1238.88
+75	1239.83	1238.50
A552+00	1239.57	1238.24
+14.05	1239.47	1238.14
+25	1239.33	1238.09
+50	1239.09	1238.05
+75	1238.98	1238.14
A553+00	1238.97	1238.33
+25	1239.09	1238.65
+50	1239.32	1239.08
+75	1239.66	1239.62
+80.03	1239.75	1239.75
A554+00	1240.12	1240.28
+25	1240.64	1241.00
+50	1241.16	1241.72
+75	1241.67	1242.43
A555+00	1242.19	1243.15
+05.15	1242.30	1243.30
+07.09	1242.36	1243.36
+23	1243.01	1243.87
+50	1243.93	1244.59
+75	1244.84	1245.30
A556+00	1245.76	1246.02
+25	1246.68	1246.74
+50	1247.60	1247.46
+63.54	1248.09	1247.84

RAMP B

STATION	LT. EDGE (16' Lt.)	℄ RT. EDGE
B549+38.98	1248.10	1247.80
+50	1247.67	1247.28
+75	1246.69	1246.10
B550+00	1245.71	1244.92
+25	1244.74	1243.75
+32.39	1244.45	1243.40
+50	1243.74	1242.57
+75	1242.64	1241.47
B551+00	1241.87	1240.54
+25	1241.10	1239.77
+50	1240.49	1239.16
+75	1239.93	1238.60
B552+00	1239.31	1237.98
+25	1238.63	1237.30
+50	1237.89	1236.56
+75	1237.09	1235.76
B553+00	1236.22	1234.89
+25	1235.30	1233.97
+50	1234.31	1232.98
+75	1233.27	1231.94
+94.01	1232.43	1231.10

RAMP C

STATION	℄ LT. EDGE	RT. EDGE (16' Rt.)
C554+27.76	1219.58	1220.06
+50	1219.70	1219.99
+75	1219.57	1219.67
+87.61	1219.42	1219.42
C555+00	1219.20	1219.10
+25	1218.65	1218.35
+50	1218.09	1217.59
+75	1217.61	1216.91
C556+00	1217.16	1216.76
+12.61	1216.94	1215.94
+25	1216.72	1215.72
+34.13	1216.56	1215.56
+50	1216.29	1215.42
+75	1215.87	1215.20
C557+00	1215.46	1214.99
+25	1215.07	1214.80
+50	1214.69	1214.62
+59.13	1214.56	1214.56
+75	1214.33	1214.46
C558+00	1213.97	1214.30
+25	1213.63	1214.16
+50	1213.31	1214.04
+75	1212.99	1213.92
C559+00	1212.69	1213.82
+25.13	1212.39	1213.72
+50	1212.10	1213.43
+75	1211.81	1213.14
C560+00	1211.51	1212.84
+25	1211.22	1212.55
+50	1210.92	1212.25
+75	1210.63	1211.96
+79.79	1210.57	1211.90
C561+00	1210.33	1211.50
+25	1210.04	1211.01
C561+29.79	1209.98	1210.91

RAMP D

STATION	℄ LT. EDGE	RT. EDGE (16' Rt.)
D556+94.05	1218.27	1219.60
D557+00	1218.08	1219.41
+25	1217.79	1218.62
+50	1216.50	1217.83
+75	1215.71	1217.04
D558+00	1214.92	1216.25
+25	1214.21	1215.54
+50	1213.50	1215.00
+75	1213.29	1214.62
D559+00	1213.07	1214.40
+25	1213.01	1214.34
+50	1213.12	1214.45
+75	1213.39	1214.72
+80.01	1213.47	1214.80
D560+00	1213.83	1215.00
+25	1214.43	1215.40
+50	1215.19	1215.96
+75	1216.11	1216.68
D561+00	1217.00	1217.57
+25	1218.37	1218.54
+46.21	1219.26	1219.26
+50	1219.40	1219.38
+75	1220.14	1219.92
D562+00	1220.61	1220.13
+06.21	1220.68	1220.17

REED ROAD

STATION	LT. EDGE	℄	RT. EDGE
13+42.46	1245.63	1245.72	1245.53
+50	1245.21	1245.38	1245.19
+75	1244.50	1244.61	1244.42
14+00	1243.93	1243.97	1243.78
+17.46	1243.60	1243.60	1243.41
+25	1243.50	1243.46	1243.27
+50	1243.24	1243.08	1242.89
+54.96	1243.22	1243.03	1242.84
+75	1243.13	1242.84	1242.55
15+00	1243.14	1242.73	1242.32
+17.46	1243.24	1242.74	1242.24
+25	1243.30	1242.76	1242.22
+50	1243.58	1242.92	1242.62
+75	1244.00	1243.21	1242.42
16+00	1244.54	1243.63	1242.72
+17.46	1244.97	1243.97	1242.97
+25	1245.12	1244.12	1243.12
+45.84	1245.53	1244.53	1243.53
+50	1245.59	1244.61	1243.63
+67.44	1245.84	1244.95	1244.06
+75	1245.95	1245.10	1244.25
17+00	1246.32	1245.59	1244.86
+25	1246.68	1246.08	1245.48
+50	1247.05	1246.57	1246.09
+67.44	1247.30	1246.91	1246.52
+75	1247.41	1247.06	1246.71
18+00	1247.78	1247.55	1247.32
+25	1248.14	1248.04	1247.94
+45.84	1248.45	1248.45	1248.45
+48.67	1248.49	1248.50	1248.51
+50	1248.51	1248.53	1248.55
+75	1248.87	1249.02	1249.17
+90.90	1249.10	1249.33	1249.56
+98.67	1249.22	1249.48	1249.74
19+00	1249.24	1249.51	1249.78
+24.24	1249.60	1249.99	1250.38
+25	1249.60	1250.00	1250.40
+28.23	1249.65	1250.06	1250.47
+32.50	1249.72	1250.13	1250.58
+47.64	1249.93	1250.44	1250.95
+50	1249.97	1250.49	1251.01
+67.24	1250.22	1250.83	1251.44
+75	1250.33	1250.98	1251.63
+96.74	1250.66	1251.41	1252.16
20+00	1250.70	1251.47	1252.24
+25	1251.30	1251.96	1252.38
+45.84	1251.24	1252.24	1253.24
+50	1251.30	1252.30	1253.30
+54.69	1251.36	1252.36	1253.36
+55.09	1251.37	1252.37	1253.37
+75	1251.71	1252.61	1253.51
+95.77	1252.00	1252.80	1253.60
21+00	1252.07	1252.84	1253.61
+25	1252.34	1252.99	1253.64
+50	1252.55	1253.07	1253.59
+54.69	1252.58	1253.08	1253.58
+15	1252.68	1253.08	1253.48
22+00	1252.75	1253.00	1253.29
+17.19	1252.74	1252.93	1253.12
+25	1252.68	1252.87	1253.00
+50	1252.47	1252.66	1252.68
+54.69	1252.42	1252.61	1252.61
+75	1252.18	1252.37	1252.32
23+00	1251.82	1252.01	1251.90
+25	1251.38	1251.57	1251.39
+29.69	1251.29	1251.48	1251.29

REED ROAD

STATION	LT. EDGE	℄	RT. EDGE
26+69.19	1237.83	1238.02	1237.83
+75	1237.49	1237.68	1237.51
27+00	1236.05	1236.24	1236.13
+25	1234.61	1234.80	1234.75
+44.19	1233.51	1233.70	1233.70
+50	1233.17	1233.36	1233.39
+75	1231.73	1231.92	1232.07
+81.69	1231.35	1231.54	1231.73
28+00	1230.20	1230.48	1230.76
+04.19	1229.94	1230.24	1230.54
+25	1228.64	1229.04	1229.44
+50	1227.07	1227.60	1228.13
+64.19	1226.18	1226.78	1227.38
+70.91	1225.80	1226.40	1227.00
+75	1225.56	1226.16	1226.76
29+00	1224.21	1224.72	1225.32
+10.33	1223.53	1224.13	1224.73
+25	1223.68	1223.28	1223.88
+29.57	1223.42	1223.02	1223.62
+50	1221.34	1221.84	1222.34
+75	1220.03	1220.40	1220.77
+78.59	1219.84	1220.19	1220.54
+86.66	1219.42	1219.73	1220.04
30+00	1218.71	1218.96	1219.21
+18.09	1217.76	1217.96	1218.08
+25	1217.40	1217.52	1217.64
+42.96	1216.46	1216.49	1216.52
+49.57	1216.11	1216.11	1216.11
+50	1216.08	1216.08	1216.08
+75	1214.77	1214.64	1214.51
+92.96	1213.83	1213.61	1213.39
31+00	1213.45	1213.20	1212.95
+17.49	1212.81	1212.50	1212.19
+25	1212.02	1211.82	1211.44
+50	1211.06	1210.56	1210.06
+75	1210.05	1209.42	1208.79
32+00	1209.16	1208.41	1207.66
+25	1208.39	1207.51	1206.63
+49.57	1207.74	1206.74	1205.74
+50	1207.73	1206.73	1205.73
+75	1206.95	1206.08	1205.21
33+00	1206.29	1205.54	1204.79
+25	1205.75	1205.13	1204.51
+49.23	1205.34	1204.84	1204.34
+49.57	1205.34	1204.84	1204.34
+50	1205.33	1204.83	1204.33
+75	1205.03	1204.66	1204.29
34+00	1204.86	1204.61	1204.36
+12.07	1204.71	1204.62	1204.43
+25	1204.79	1204.67	1204.48
+49.57	1204.86	1204.86	1204.67
+50	1204.86	1204.86	1204.67
+75	1205.11	1205.17	1204.98
35+00	1205.47	1205.60	1205.41
+24.57	1205.76	1205.95	1205.76

EMMA LANE

STATION	LT. EDGE	PROFILE GRADE ℄	RT. EDGE
+98.98	1251.42	1251.51	1251.60
1+00	1251.41	1251.50	1251.59
+25	1251.05	1251.27	1251.49
+50	1250.46	1250.80	1251.14
+65.38	1249.98	1250.40	1250.82
+68.93	1249.96	1250.38	1250.80
+75	1249.68	1250.10	1250.52
2+00	1248.74	1249.16	1249.58
+25	1247.58	1248.00	1248.42
+50	1246.38	1246.80	1247.22
+75	1245.18	1245.60	1246.02
3+00	1243.98	1244.40	1244.82
+16.57	1243.18	1243.60	1244.02
+25	1242.82	1243.20	1243.58
+50	1241.75	1242.00	1242.25
+75	1240.67	1240.80	1240.93
4+00	1239.60	1239.60	1239.60
+25	1238.28	1238.40	1238.52
+50	1237.45	1237.20	1236.95
+51.81	1237.37	1237.11	1236.85
+75	1236.37	1236.00	1235.63
+84.57	1235.96	1235.54	1235.12
5+00	1235.22	1234.80	1234.38
+25	1234.02	1233.60	1233.18
+50	1232.82	1232.40	1231.98
+75	1231.62	1231.20	1230.78
+90.99	1230.76	1230.34	1229.92
6+00	1230.39	1230.00	1229.61
+25	1229.11	1228.85	1228.59
+45.74	1228.12	1227.96	1227.80
+50	1227.93	1227.79	1227.63
+75	1226.83	1226.82	1226.66
+76.99	1226.74	1226.74	1226.58
7+00	1225.82	1225.94	1225.78
+08.74	1225.51	1225.67	1225.51
+25	1225.00	1225.16	1225.00
+50	1224.31	1224.47	1224.31
+75	1223.71	1223.87	1223.71
8+00	1223.21	1223.37	1223.21
+25	1222.80	1222.96	1222.80
+50	1222.48	1222.64	1222.48

GRADING PLAN
USR 30 - REED RD. INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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STA. C553+51.60, RAMP C = STA. 30+18.09, REED RD.

STA. D562+68.53, RAMP D = STA. 29+78.59, REED RD.

TRUCK TERMINAL POSITIVE DRAINAGE OUTLET

BENCH

℄ RAMP A

℄ USR 30

STA. B555+85.05, USR 30 = STA. 30+00, REED RD.

TS STA. D554+94.05, RAMP D = STA. B554+94.05, USR 30

℄ RAMP D

TS STA. B555+94.01, RAMP B = STA. 555+94.01, USR 30

℄ RAMP B

℄ REED RD.

℄ EMMA LANE

STA. C563+85.00, RAMP C = STA. 563+85, USR 30

℄ RAMP C

STA. B548+73.24, RAMP B = STA. 19+67.24, REED RD.

STA. 0+20.38, EMMA LANE = STA. 19+47.64, REED RD.

STA. A557+41.62, RAMP A = STA. 19+28.23, REED RD.

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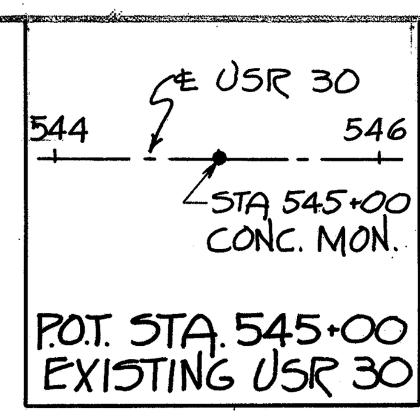
GRADING PLAN

RIC-30-16.37

QUANTITIES CALC. S.W.R. 2/1/71
QUANTITIES CK'D. D.A.A. 2/23/71

REFERENCE SHEETS	SHT. NO.
RAMP A DECELERATION LANE	68
UNDERDRAIN QUANTITIES	16
GUARDRAIL QUANTITIES	16
SUPERELEVATION TABLE	48

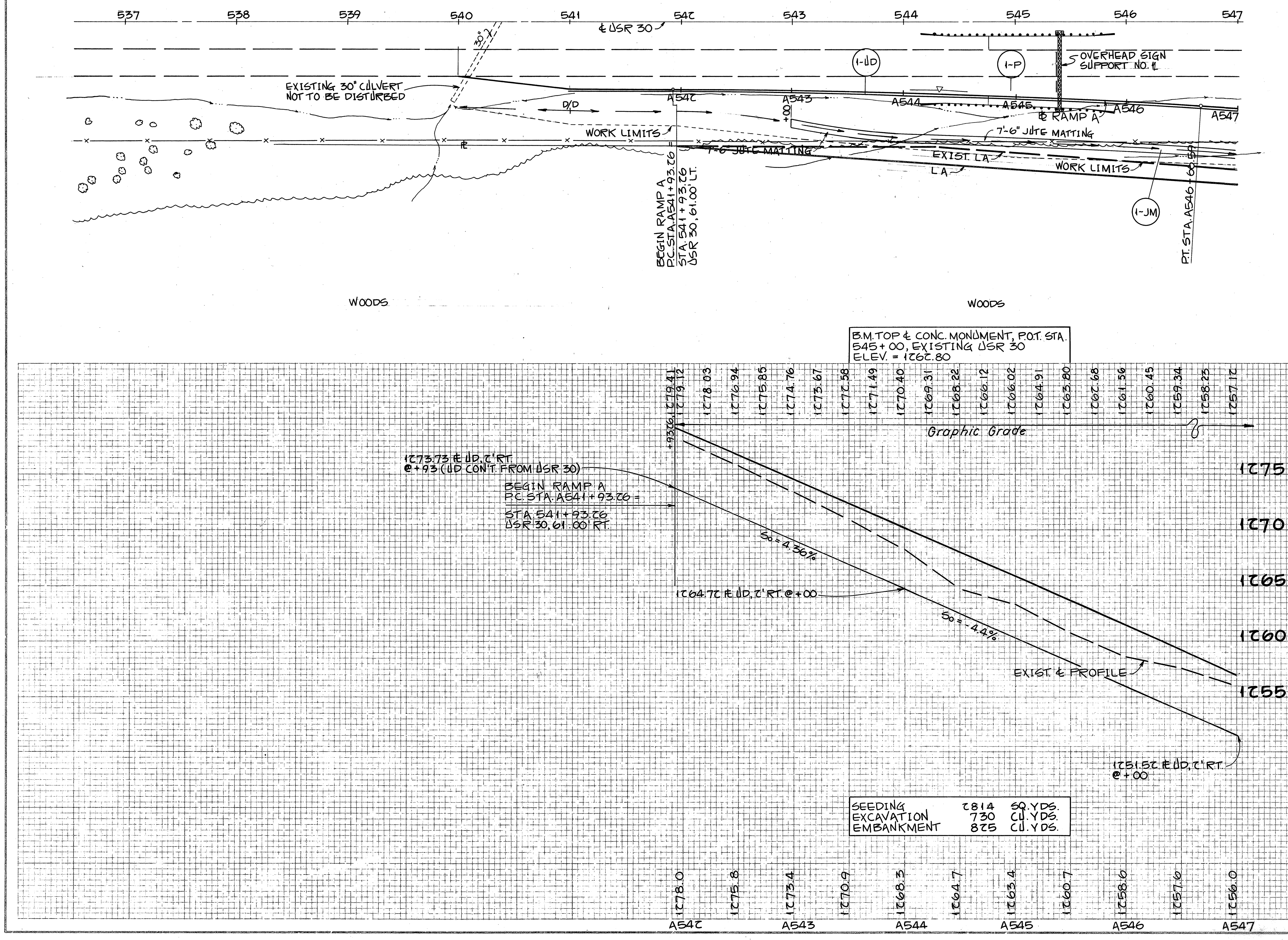


RAMP A CURVE DATA

P.I. STA. A544+30.00
Δ = 03°-33'-00"
D = 0°-45'-00"
R = 7639.44'
T = 236.74'
L = 473.33'

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC 20) OR 702.09, RT. 11 ORIZ.	304 AGGREGATE BASE	310 SUBBASE	402 ASPHALT CONCRETE (AC 20)	404 ASPHALT CONCRETE (AC 20)	409 SEAL COAT: COVER AGGREGATE USING 0.008 CU.YD. NO. 8 AGGREGATE PER SQ.YD.	409 SEAL COAT: BITUMINOUS MATERIAL USING 0.30 GAL. PER SQ.YD. (SEE PROPOSAL NOTE)
				SQ.YD.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	GAL.
1-P	℄	USR 30 540+00.80	RAMP A A548+00.80	2250	235.3	101.9	661.6	85.6	42.8	5.7	213
TOTALS				2250	235.3	101.9	661.6	85.6	42.8	5.7	213

REFERENCE NO.	SIDE	STATION FROM	STATION TO			605 6" DEEP PIPE UNDERDRAINS		667 SEEDING & JUTE MATTING			
						LIN.FT.		SQ.YD.			
1-JM	RT.	A543+00	A547+00					331			
1-UD	RT.	A541+93	A547+00			507					
TOTALS						507		331			



RAMP A, STA. A541+93.26 TO STA. A547+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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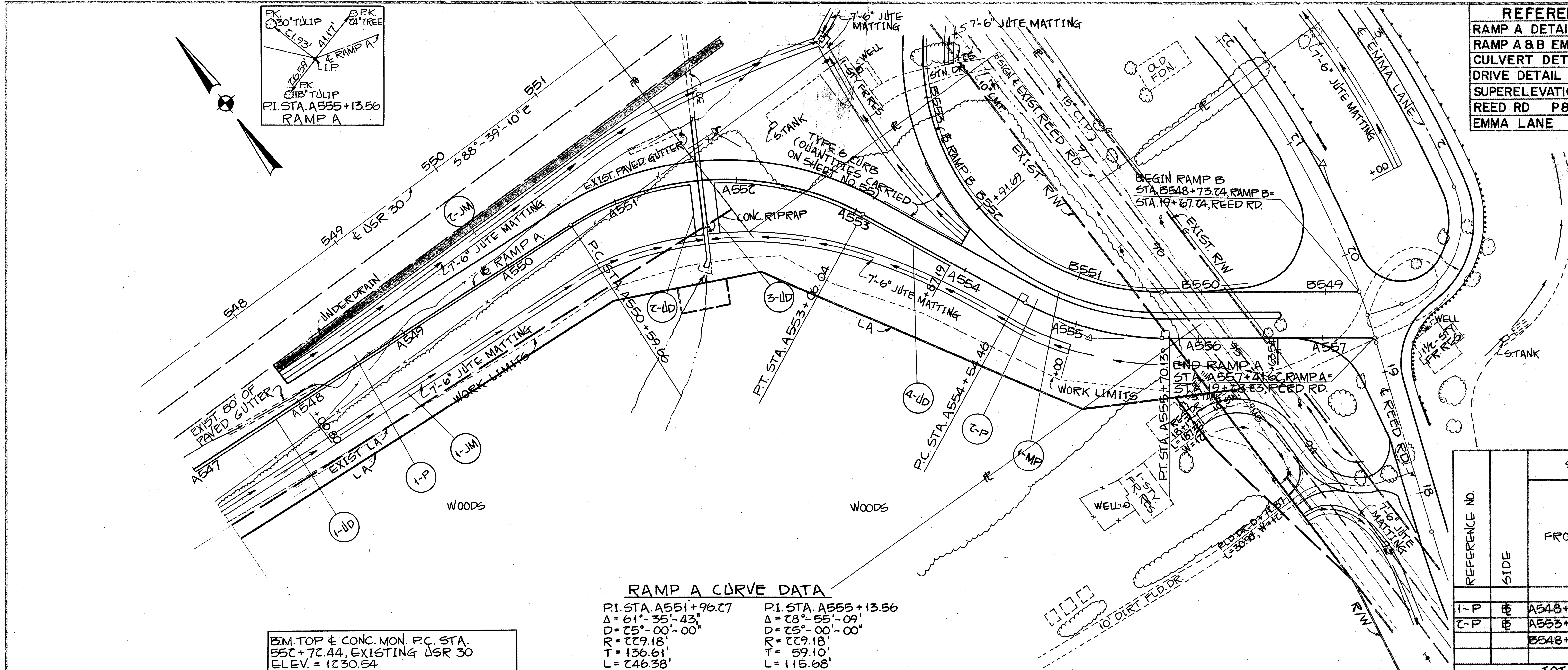
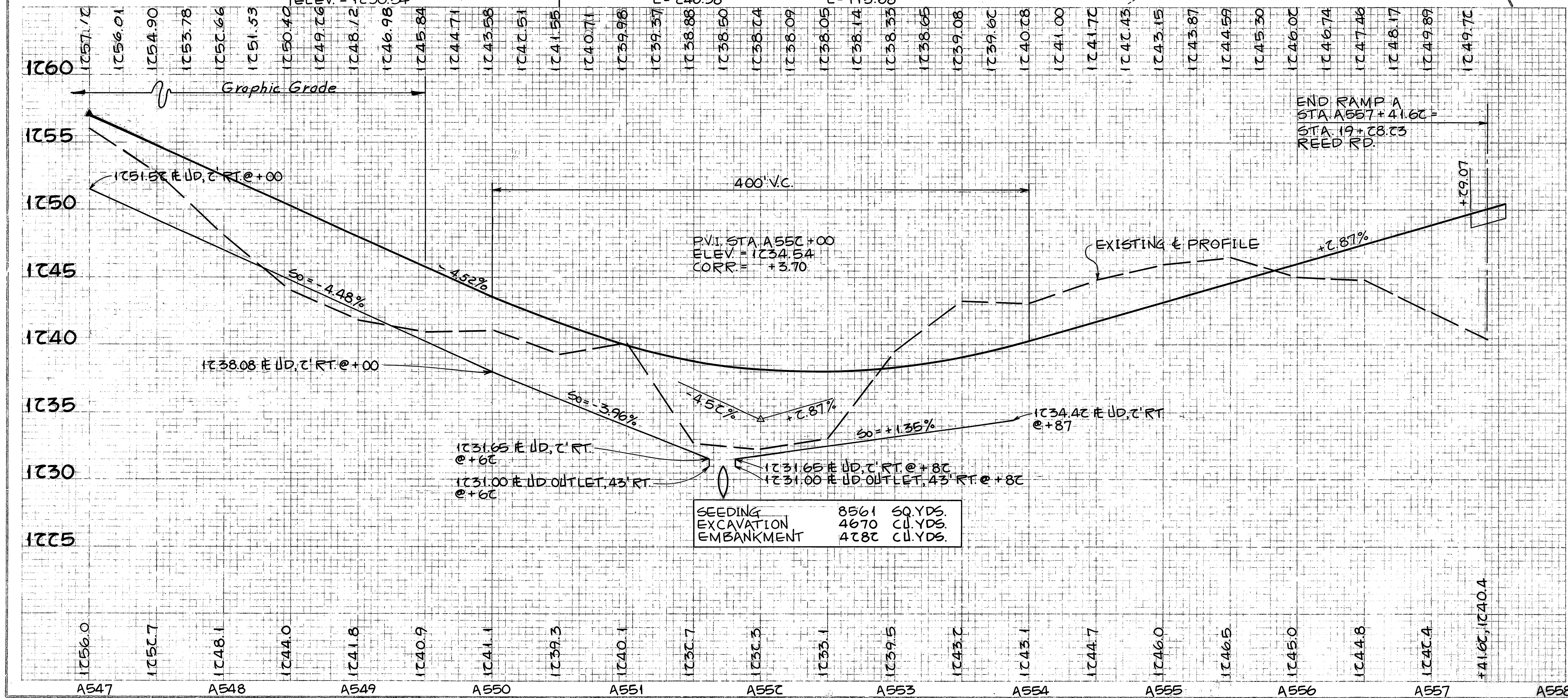
RIC - 30 - 16.37

QUANTITIES CALC. SWR 2/1/71

QUANTITIES CK'D. D.A.A. 2/23/71

REFERENCE SHEETS	SHT. NO.
RAMP A DETAILS	68
RAMP A & B EMMA LN. INTERSECTION	71
CULVERT DETAIL	79
DRIVE DETAIL STA.18+17 REED RD	75
SUPERELEVATION TABLE	48
REED RD P&P	27-29
EMMA LANE P&P	42





REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION SQ.YD.	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC20) OR 702.09, RT. 11 OR 12 CU.YD.	304 AGGREGATE BASE CU.YD.	310 SUBBASE CU.YD.	402 ASPHALT CONCRETE (AC 20) CU.YD.	404 ASPHALT CONCRETE (AC 20) CU.YD.	409 SEAL COAT: COVER AGGREGATE USING 0.008 CU.YD. NO. 8 AGGREGATE PER SQ.YD. CU.YD.	409 SEAL COAT: BITUMINOUS MATERIAL USING 0.30 GAL. PER SQ.YD. (SEE PROPOSAL NOTE) GAL.
1-P	℄	A548+00.80	A553+87.19	1494	161.2	50.8	220.0	58.8	29.4	3.5	131
2-P	℄	A553+87.19	A557+29.07	2208	236.0	72.6	305.9	88.7	44.4	4.1	153
		B548+86.02	B551+91.69								
TOTALS				3702	397.2	123.4	525.9	147.5	73.8	7.6	284

REFERENCE NO.	SIDE	STATION FROM	STATION TO	603 6" CONDUIT TYPE F LIN. FT.	605 6" DEEP PIPE UNDERDRAINS LIN. FT.	BENDS & BRANCHES 6"-90° BENDS	612 CONCRETE MEDIAN SQ.YD.	667 SEEDING & JUTE MATTING SQ.YD.
1-UD	RT.	A547+00	A551+62		461			
2-UD	RT.	A551+62		10	31	1		
3-UD	RT.	A551+82		10	31	1		
4-UD	RT.	A551+82	A553+87		204			
1-MP	LT.	A553+87.19	A556+65.01				101.7	
1-JM	RT.	A547+00	A555+00					629
2-JM	LT.	A548+01	A552+42					423
TOTALS				20	727		101.7	1052

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RAMP A, STA. A547+00 TO STA. A557+41.62

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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125

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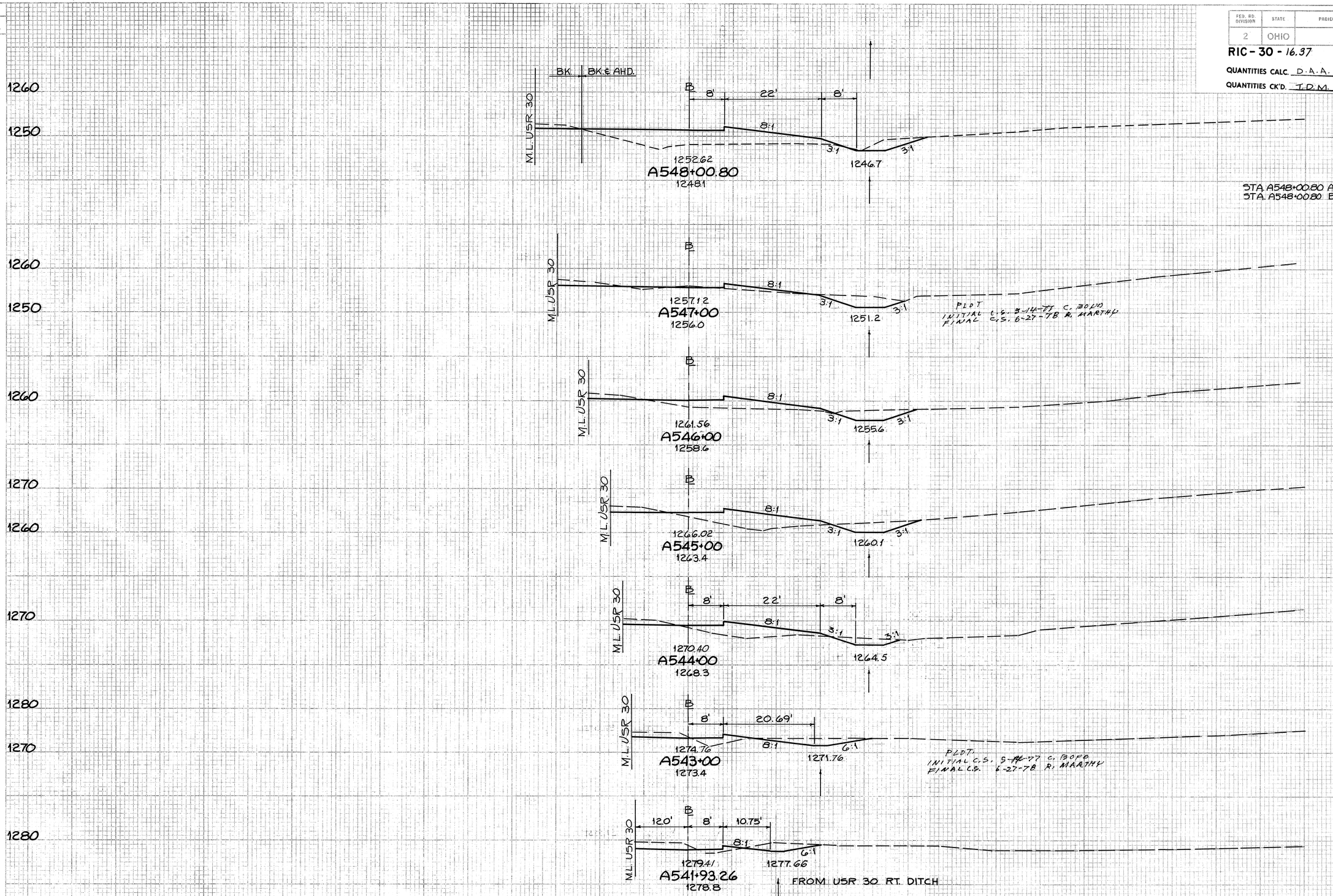
QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
STA. A548+00.80 AHD.	20	152		
STA. A548+00.80 BK.	28	152		
				142 312
	48	15		
			161	133
	39	57		
				152 254
	43	80		
				133 256
	29	58		
				128 137
	40	16		
				156 45
	39	7		

RAMP A STA. A541+93.26 TO STA. A548+00.80

SEEDING	
END WIDTH	SQ. YDS.

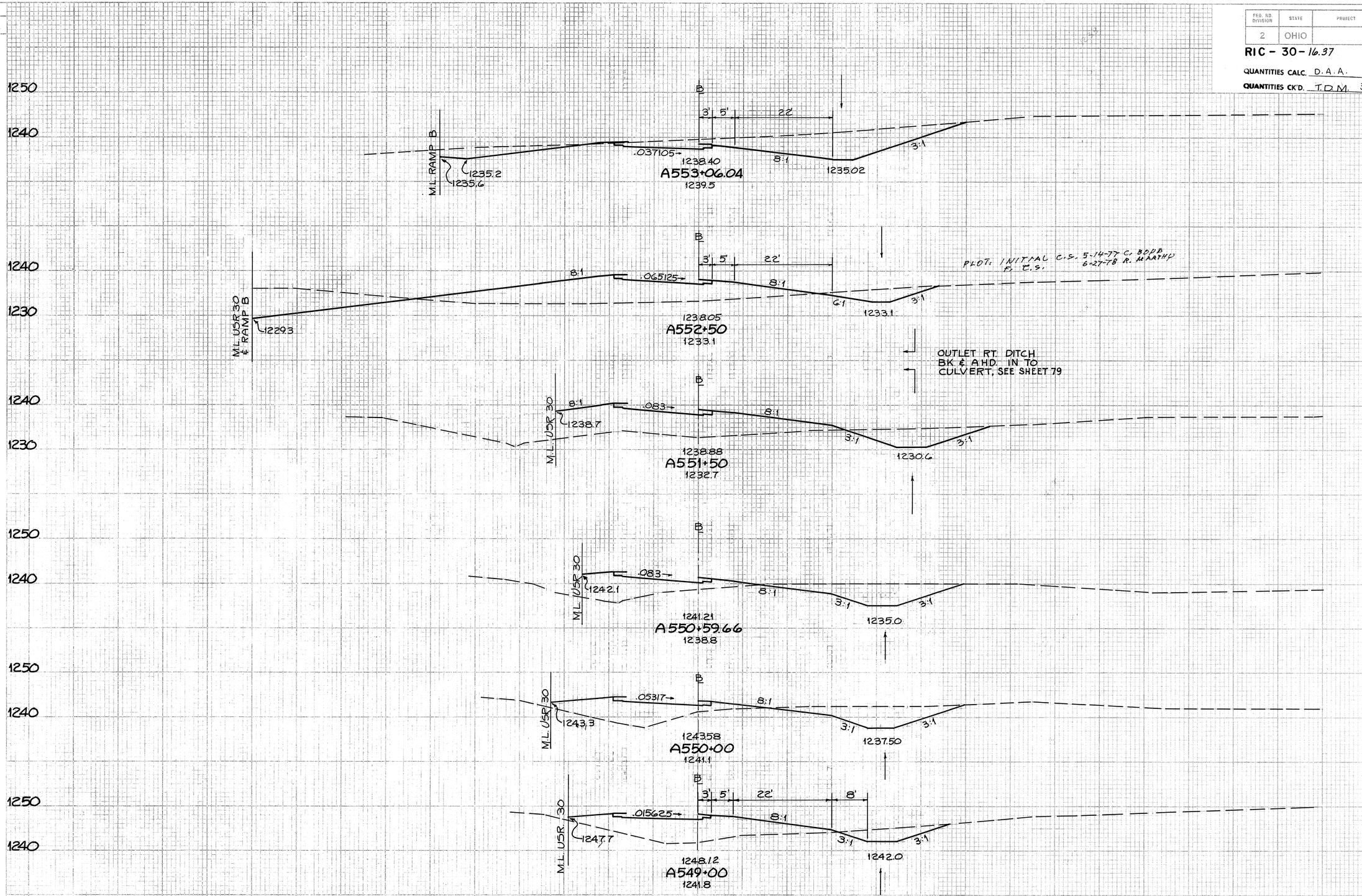
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

53
125

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
289	1		
		486	331
179	318		
		481	1130
81	292		
		333	698
118	125		
		249	295
107	142		
		283	652
46	210		
		121	665
STA. 548+00.80	20	152	

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

RAMP A STA. A549+00 TO STA. A553+06.04

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

54
125

RIC - 30 - 16.37

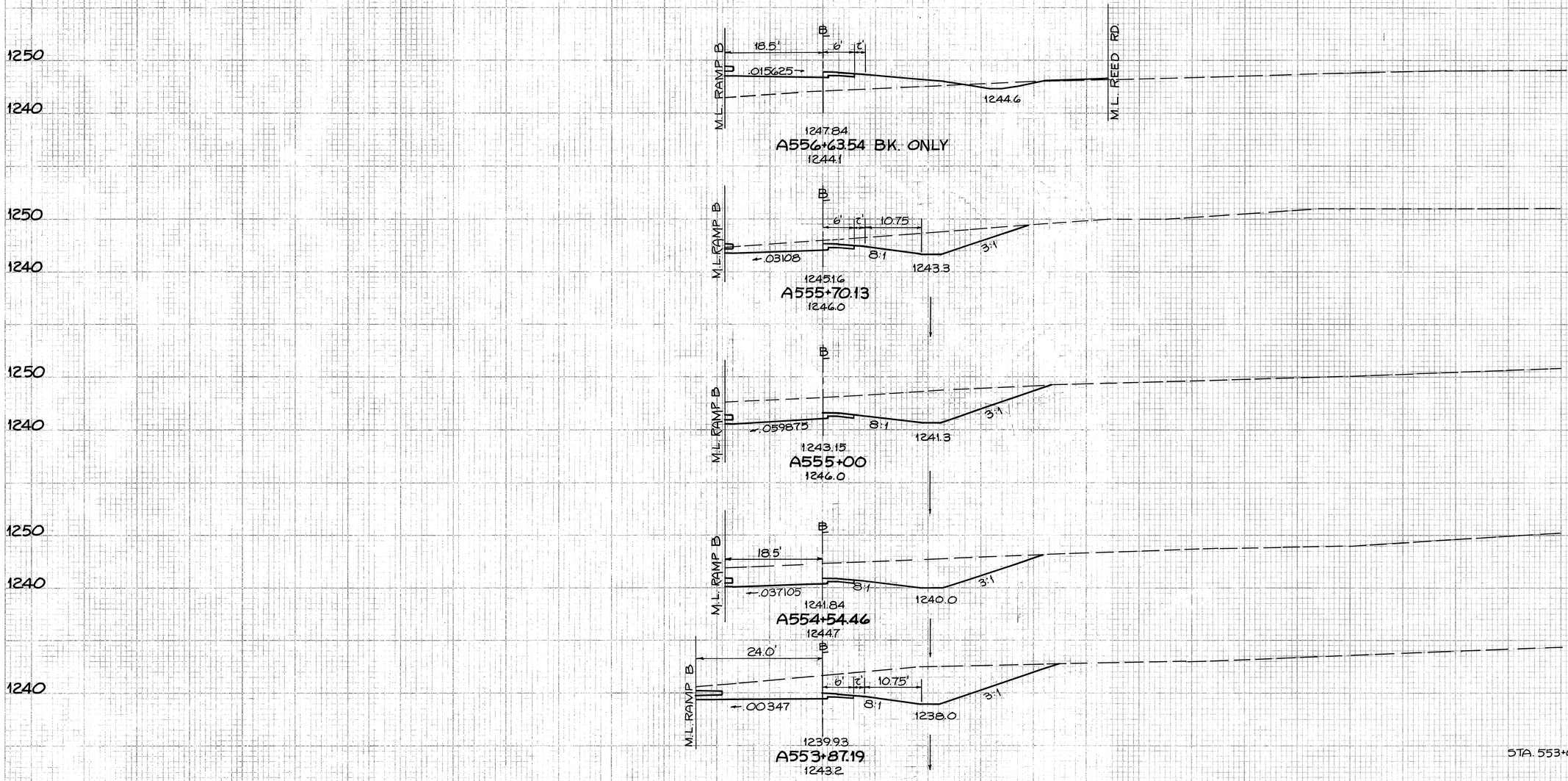
QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING

STA.	SQ. YDS.

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	10	114		
			227	197
	121	0		
			471	0
	242	0		
			390	0
	220	0		
			627	0
	283	0		
			860	2
STA. 553+06.04	289	1		



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

RAMP A STA. A553+87.19 TO STA. A556+63.54

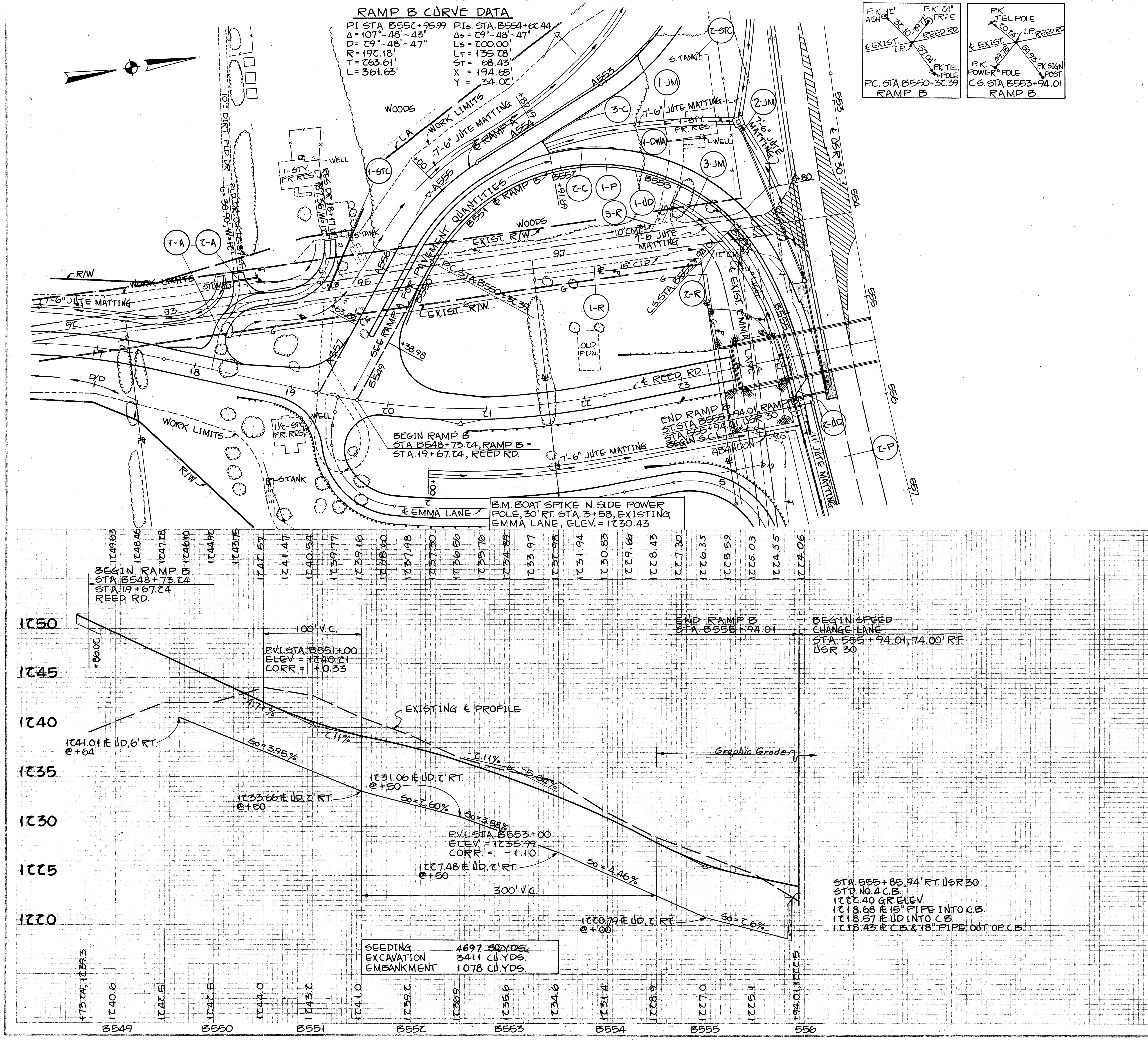
REFERENCE SHEETS	SHT. NO.
RAMP B DETAILS	70
RAMP A & B & EMMA LN. INTERSECTION	71
STORM SEWER	85
DR. AT STA.18+17 REED RD.	75
SUPERELEVATION TABLE	48
REED RD. P&P	27-29
EMMA LANE P&P	42

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

QUANTITIES CALC. SWR 2/15/71

QUANTITIES CK'D. D.A.A. 3/26/71



SODDING AREA:
Drive @ Exist. Reed Rd. Sta. 93+57 ± Lt. to L/A. fence @ Exist. Reed Rd. Sta. 94+90 ± Lt.
Quantity = 361 S.Y.

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION SQ.YD.	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC-20) OR 702.09, RT-11 OR 12 CU.YD.	304 AGGREGATE BASE CU.YD.	310 SUBBASE CU.YD.	402 ASPHALT CONCRETE (AC-20) CU.YD.	404 ASPHALT CONCRETE (AC-20) CU.YD.	409 SEAL COAT: COVER AGGREGATE USING 0.008 CU.YD. NO. 8 AGGREGATE PER SQ.YD. CU.YD.	409 SEAL COAT: BITUMINOUS MATERIAL USING 0.30 GAL. PER SQ.YD. (SEE PROPOSAL NOTE) GAL.
1-P	℄	B551+91.69	B555+94.01	1012	106.7	30.8	154.2	39.7	19.9	2.2	82
2-P	RT.	USR 30 555+94.01	USR 30 566+54.92	2771	501.0	136.7	584.8	100.1	50.1	7.8	291
1-A	LT.	REED RD 18+17				43.9					
TOTALS				3783	607.7	211.4	739.0	139.8	70.0	10.0	373

REFERENCE NO.	SIDE	STATION FROM	STATION TO	202 PIPE REMOVED 24" & UNDER LIN.FT.	202 CATCH BASIN REMOVED EACH	404 ASPHALT CONCRETE AC-20 DRIVEWAYS CU.YD.	411 STABILIZED CRUSHED AGGREGATE CU.YD.	603 CONDUIT TYPE D 12" LIN.FT.	603 CONDUIT TYPE F 6" LIN.FT.	605 DEEP PIPE UNDERDRAIN 6" LIN.FT.	BENDS & BRANCHES 6"-45° BEND	
1-UD	RT.	B549+64	B555+67							598		
2-UD	RT.	B555+67	B555+85						10	15	1	
1-R	RT.	EXIST. REED 96+84	EXIST. REED 98+10	126								
2-R	LT.&RT.	EXIST. EMMA 2+80		54	1							
3-R	LT.	EXIST. REED 97+85	EXIST. REED 98+22	37								
1-A	LT.	REED RD. 18+17				16.6						
2-A	LT.	FLD. DR. 0+72.87					9.7	32				
TOTALS				217	1	16.6	9.7	32	10	613	X	

REFERENCE NO.	SIDE	STATION FROM	STATION TO	609 CURB TYPE 6				202 SEPTIC TANKS REMOVED EACH	SPECIAL DRILLED WELL ABANDONED EACH	667 SEEDING & JUTE MATTING SQ.YD.	
1-JM	LT.	B551+90	B553+46							158	
2-JM	LT.	B553+46	B553+98							56	
3-JM	RT.	B553+25	B555+85							183	
1-STC	LT.	B550+15						1			
2-STC	LT.	B553+09						1			
1-DWA	LT.	B553+28							1		
2-C	LT.	B551+91.69	B552+52	66							
3-C	LT.	A553+16	A553+87.19	71							
TOTALS				137				2	1	397	

Rev. 2-9-77

RAMP B, STA. B548+73.24 TO STA. B555+94.01

SEEDING	
END WIDTH	SQ. YDS

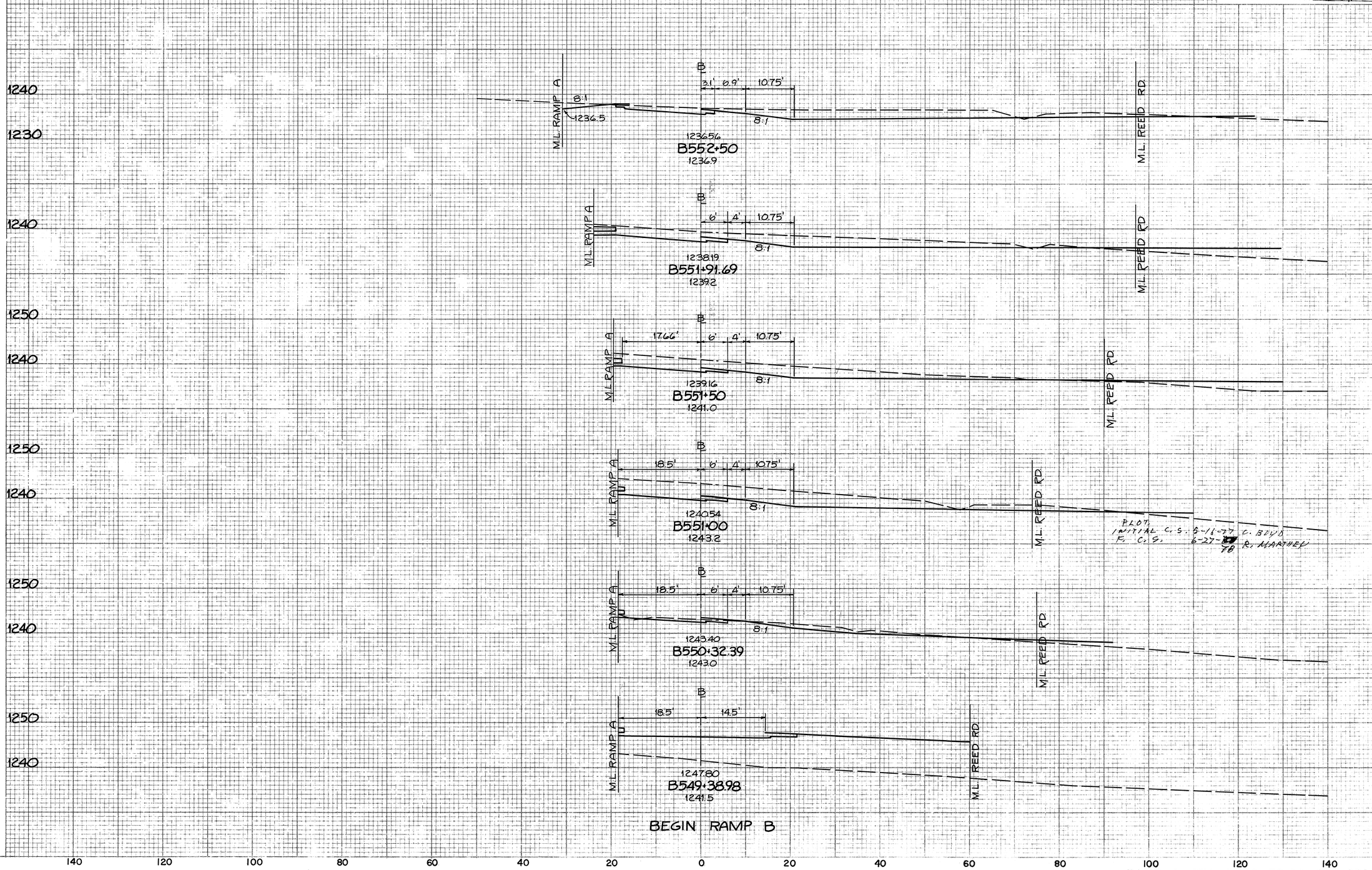
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

56
125

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71



PLOT. INITIAL C.S. 5-16-77 C. BOYD
F. C.S. 6-27-78 R. MARTHEY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
163	0		
		368	5
178	5		
		267	5
168	2		
		366	2
227	0		
		327	8
34	6		
		59	901
0	515		

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

57
125

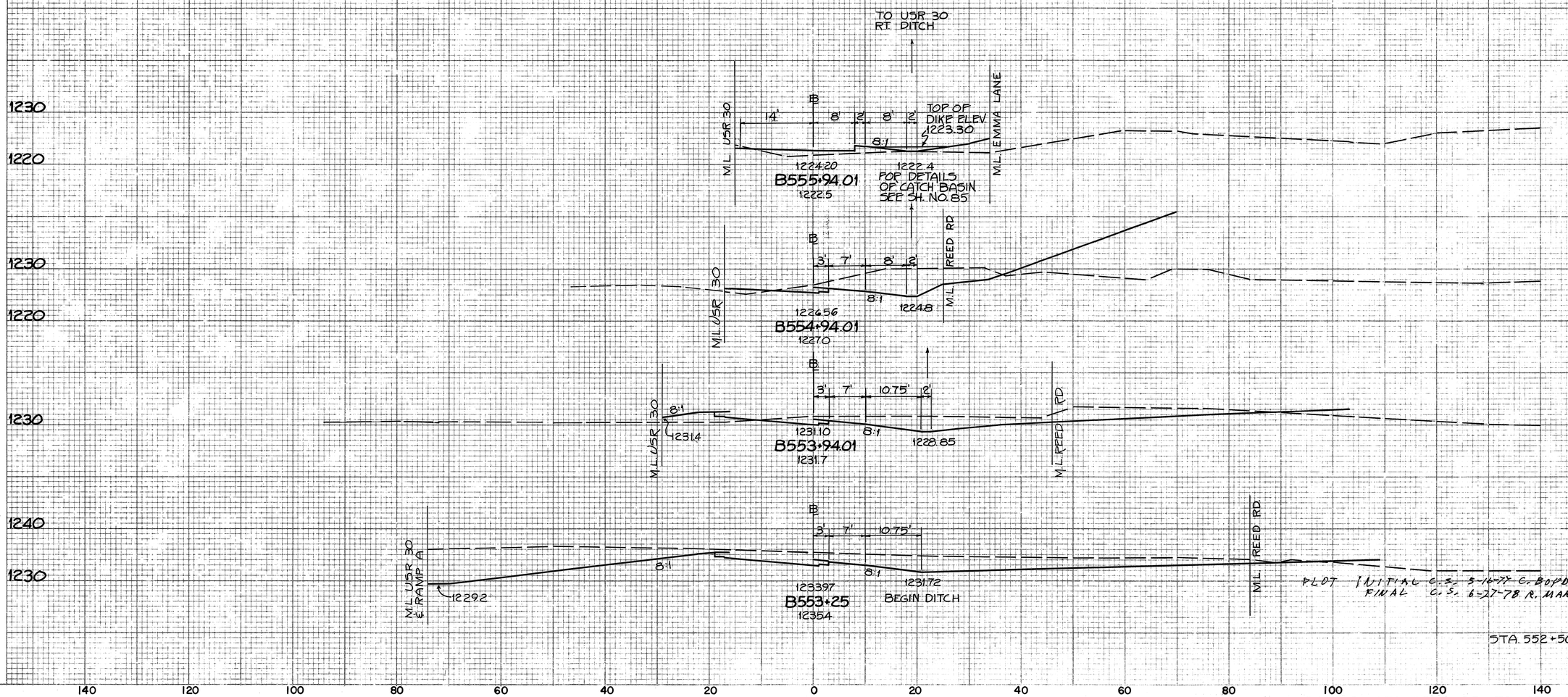
RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1	39
		180	83
		96	6
		348	48
		92	20
		670	26
		432	0
		826	0
		163	0

END RAMP B
STA. B555+94.01



RAMP B STA. B553+25 TO STA. B555+94.01

REFERENCE SHEETS	SHT. NO.
RAMP C DETAILS	73-74
RAMP C & D REED RD. INTERSECTION	72
RAMP D P & P	64
REED RD. P & P	27-29
CULVERT SYSTEM	78-81
SUPERELEVATION TABLE	48

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

58

QUANTITIES CALC. S.W.R. 2/19/71

QUANTITIES CK'D. D.A.A. 2/26/71

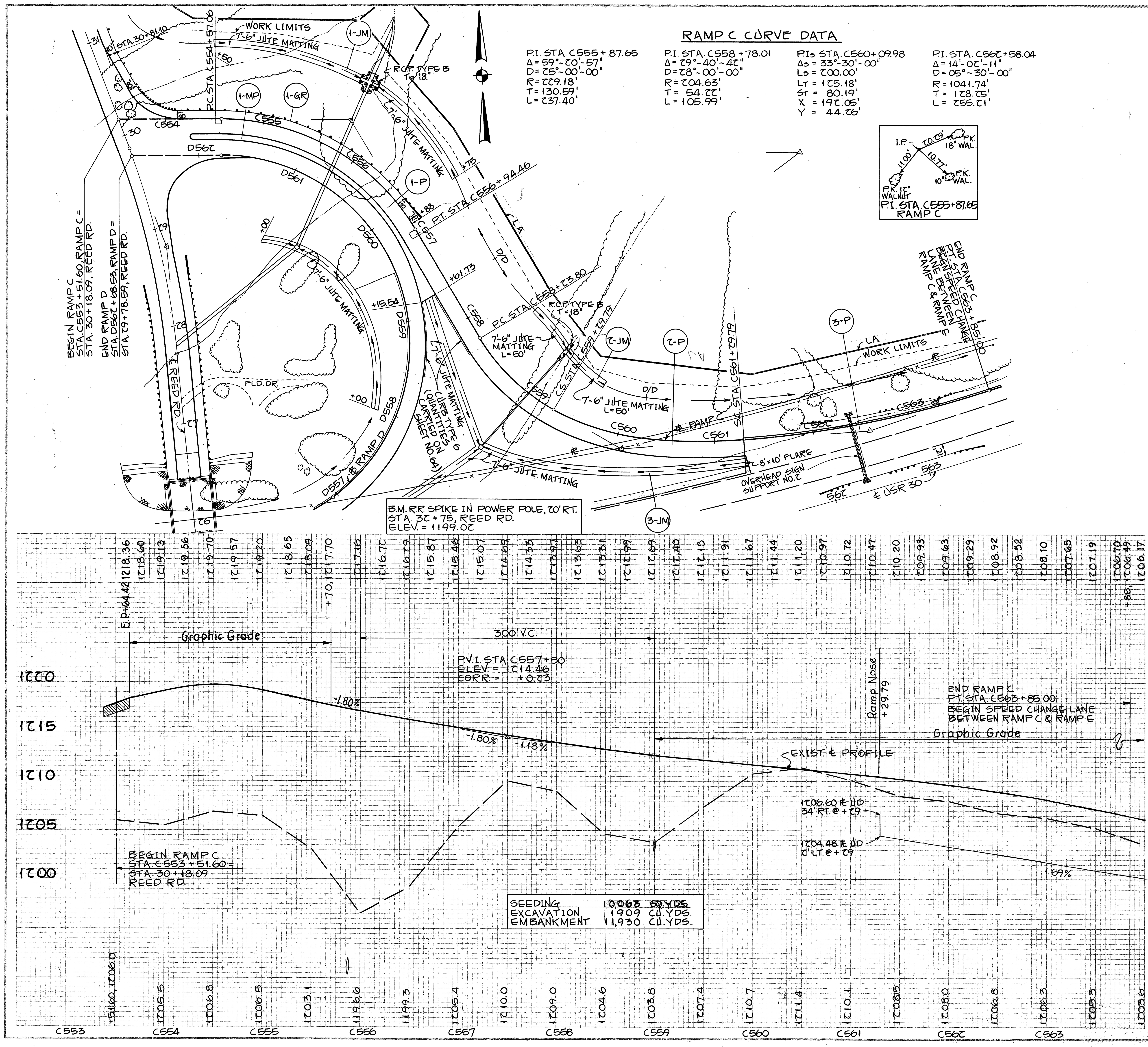
RAMP C CURVE DATA

P.I. STA. C555 + 87.65
Δ = 59°-20'-57"
D = 25°-00'-00"
R = 229.18'
T = 130.59'
L = 237.40'

P.I. STA. C558 + 78.01
Δ = 29°-40'-42"
D = 28°-00'-00"
R = 204.63'
T = 54.22'
L = 105.99'

PIs STA. C560 + 09.98
Δs = 33°-30'-00"
Ls = 200.00'
LT = 125.18'
ST = 80.19'
X = 192.05'
Y = 44.26'

P.I. STA. C562 + 58.04
Δ = 14°-02'-11"
D = 05°-30'-00"
R = 1041.74'
T = 128.25'
L = 255.21'



SEEDING	10,063	SQ. YDS.
EXCAVATION	1,909	CU. YDS.
EMBANKMENT	11,930	CU. YDS.

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION SQ. YD.	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC-20) OR 702.09, RT. 11 OR 12 CU. YD.	304 AGGREGATE BASE CU. YD.	310 SUBBASE CU. YD.	402 ASPHALT CONCRETE (AC-20) CU. YD.	404 ASPHALT CONCRETE (AC-20) CU. YD.	409 SEAL COAT: COVER AGGREGATE USING 0.008 CU. YD. NO. 8 AGGREGATE PER SQ. YD. CU. YD.	409 SEAL COAT: BITUMINOUS MATERIAL USING 0.30 GAL. PER SQ. YD. (SEE PROPOSAL NOTE) GAL.
1-P	℄	C553+64.42	C557+61.73	2379	254.1	83.9	319.5	94.2	47.1	4.5	170
		D559+15.54	D562+55.78								
2-P	℄	C557+61.73	C561+29.79	960	103.3	39.1	125.6	37.2	18.6	2.3	87
3-P	℄	C561+29.79	USR 30 567+11.08	1501	273.1	73.5	318.9	55.0	27.5	4.1	153
TOTALS				4840	630.5	196.5	764.0	186.4	93.2	10.9	410

REFERENCE NO.	SIDE	STATION FROM	STATION TO	605 AGGREGATE DRAINS LIN. FT.	606 GUARDRAIL TYPE 5, AS PER PLAN LIN. FT.	606 ANCHOR ASSEMBLY, AS PER PLAN EACH		612 CONCRETE MEDIAN SQ. YD.		667 SEEDING & JUTE MATTING SQ. YD.	
1-JM	LT.	C554+50	C556+75							233	
2-JM	LT.	C558+30	C559+72							83	
3-JM	RT.	C558+98	C561+30							224	
1-GR	LT.	REED RD. 30+81.10	RAMP C C556+88		349.44	1					
1-MP	RT.	C554+26.26	C557+61.73					117.6			
1-P	℄	C553+64.42	C557+61.73	190							
		D559+15.54	D562+55.78								
2-P	℄	C557+61.73	C561+29.79	255							
3-P	℄	C561+29.79	USR 30 567+11.08	84							
TOTALS				529	349.44	1		117.6		540	

RAMP C, STA. C553+51.60 TO STA. C563+85

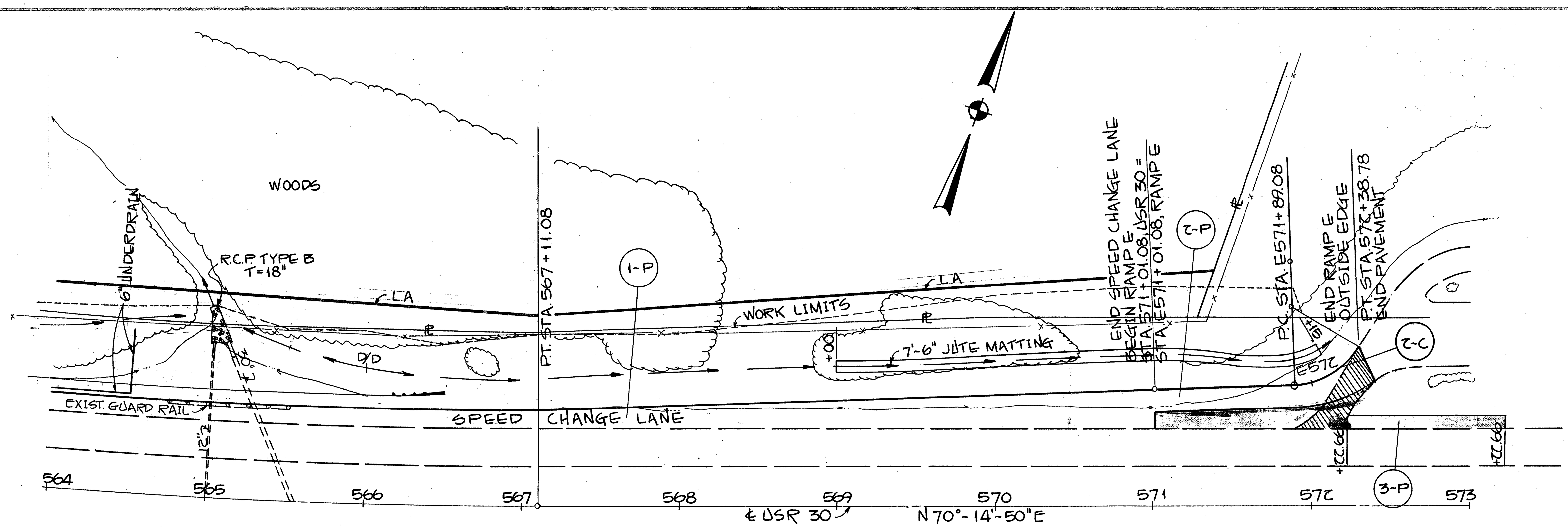
REFERENCE SHEETS	SHT. NO.
SPEED CHANGE LANE DETAIL	73-74
RAMP E DETAILS	74
RAMP E X-SECTIONS	63
CULVERT STA.565+55.49	82

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

QUANTITIES CALC. D.A.A. 3/1/71

QUANTITIES CK'D. LGB 3/5/71



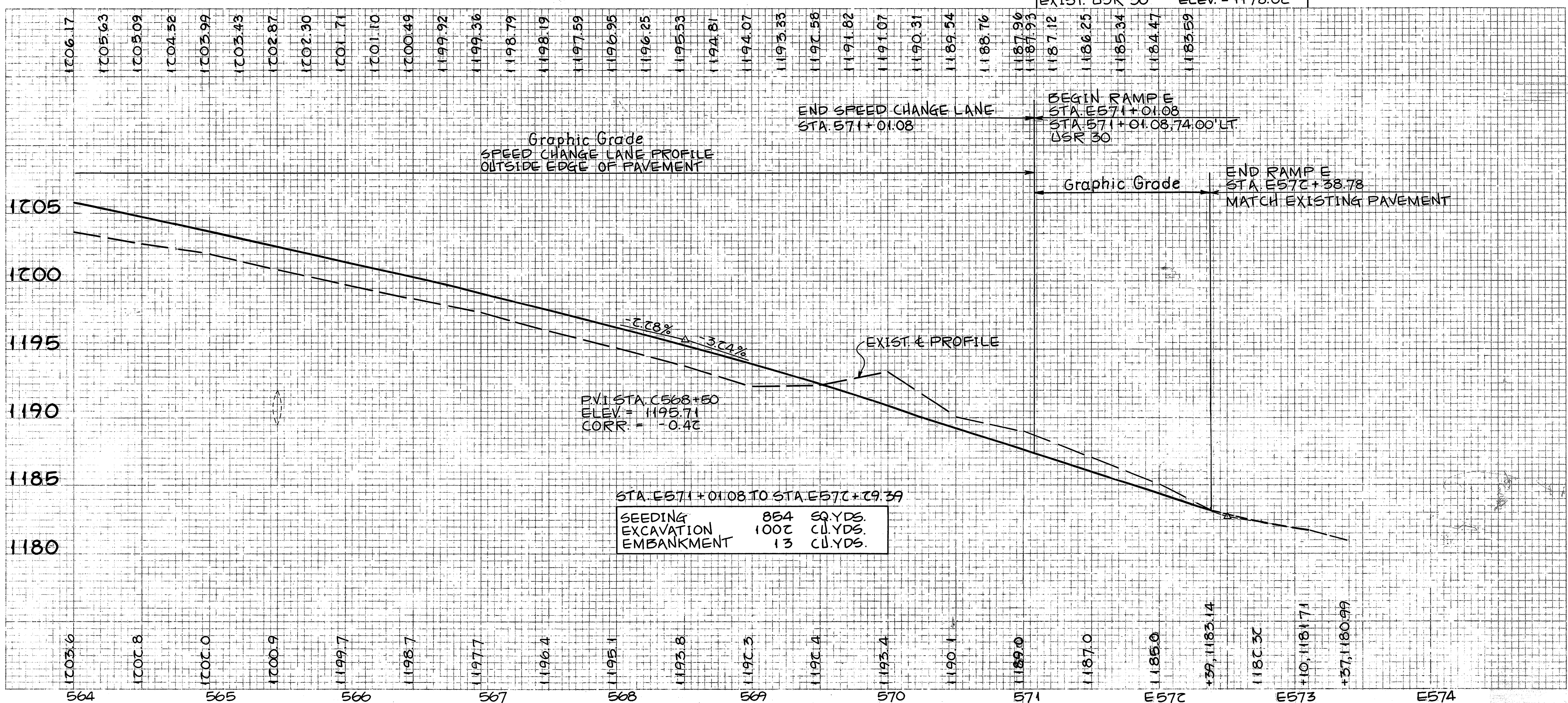
RAMP E CURVE DATA

OUTSIDE EDGE OF PAVEMENT	INSIDE EDGE OF PAVEMENT
P.I. STA. E572+16.20	P.I. STA. E572+16.80
Δ = 56°-56'-39"	Δ = 33°-12'-42"
R = 50.00'	R = 92.93'
L = 49.69'	L = 53.86'
T = 27.12'	T = 27.71'

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION SQ.YD.	301 BITUMINOUS AGGREGATE BASE USING 702.01 (AC-20) OR 702.09, RT.110 RIC CU.YD.	304 AGGREGATE BASE CU.YD.	310 SUBBASE CU.YD.	402 ASPHALT CONCRETE (AC-20) CU.YD.	404 ASPHALT CONCRETE (AC-20) CU.YD.	409 SEAL COAT: COVER AGGREGATE USING 0.008 CU.YD. NO.8 AGGREGATE PER SQ.YD. CU.YD.	409 SEAL COAT: BITUMINOUS MATERIAL USING 0.30 GAL. PER SQ.YD. (SEE PROPOSAL NOTE) GAL.
1-P	℄	USR 30 567+11.08	USR 30 571+01.08	1148	214.2	49.8	245.1	44.5	22.3	2.8	104
2-P	℄	E571+01.08	E572+38.78	304	30.8	7.9	43.0	12.9	6.4	0.4	16
3-P	LT.	USR 30 571+01.08	USR 30 573+22.66	258	21.5	43.0				2.1	77
TOTALS				1710	266.5	100.7	288.1	57.4	28.7	5.3	197

REFERENCE NO.	SIDE	STATION FROM	STATION TO	605 AGGREGATE DRAINS LIN.FT.	609 CURB TYPE 6 LIN.FT.
1-C	RT.	E571+01.08	E572+42.94		
2-C	℄	E571+89.08	E572+38.78		50
1-P	℄	USR 30 567+11.08	USR 30 571+01.08	152	
2-P	℄	E571+01.08	E572+38.78	30	
TOTALS				182	50

B.M. TOP S.E. COR. BRICK SEAT AREA, W. SIDE PUMP, REST AREA N. SIDE EXIST. USR 30 ELEV. = 1178.02



SPEED CHANGE LANE AND RAMP E, STA. E571+01.08 TO STA. E572+38.78

SEEDING	
END WIDTH	SQ. YDS

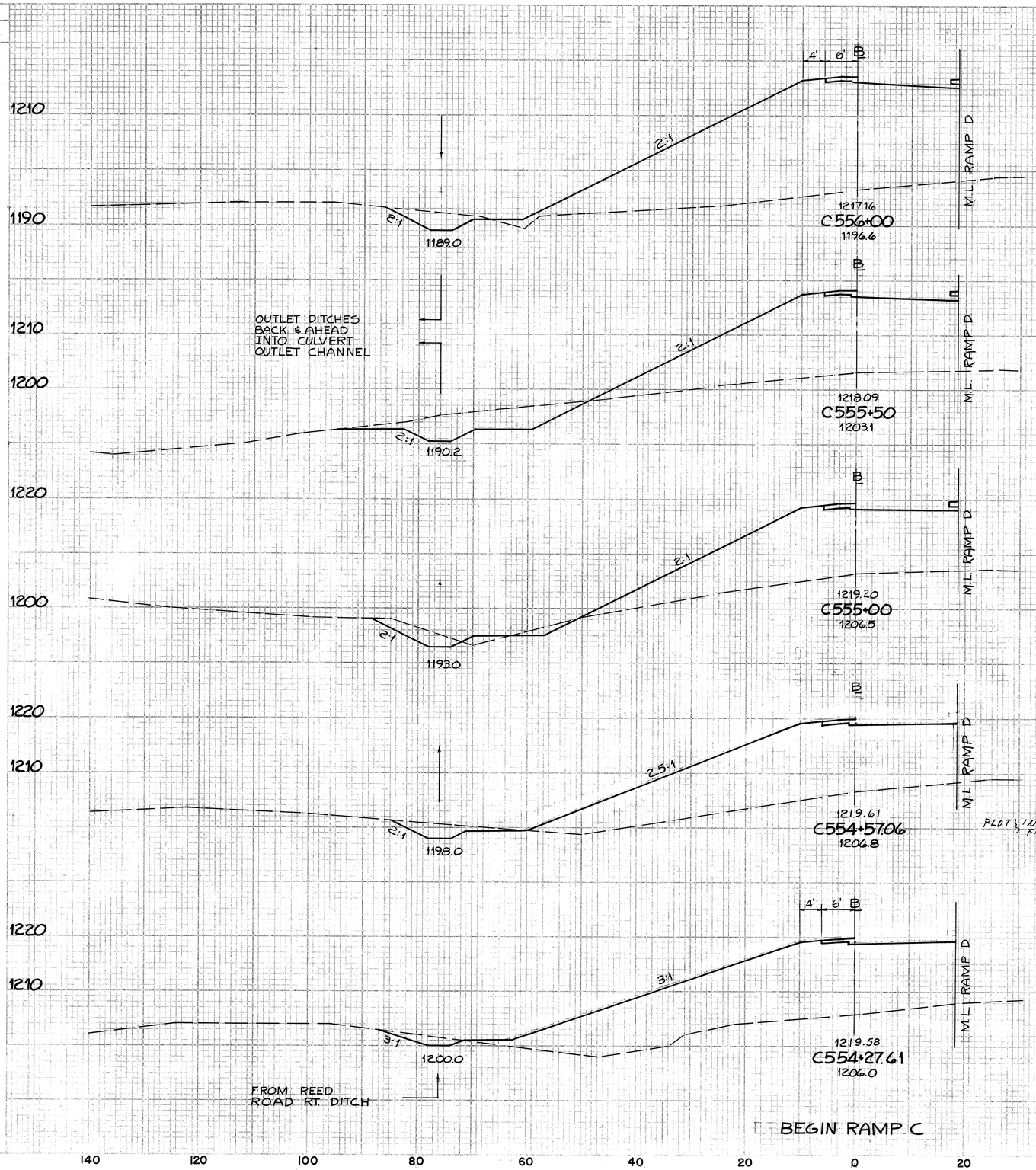
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

60

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71



END AREA		VOLUME	
CUT	FILL	CUT	FILL
34	1097		
		141	1655
118	690		
		146	1211
40	618		
		56	1107
		30	774
		25	900
		16	876

SEEDING	
END WIDTH	SQ. YDS.

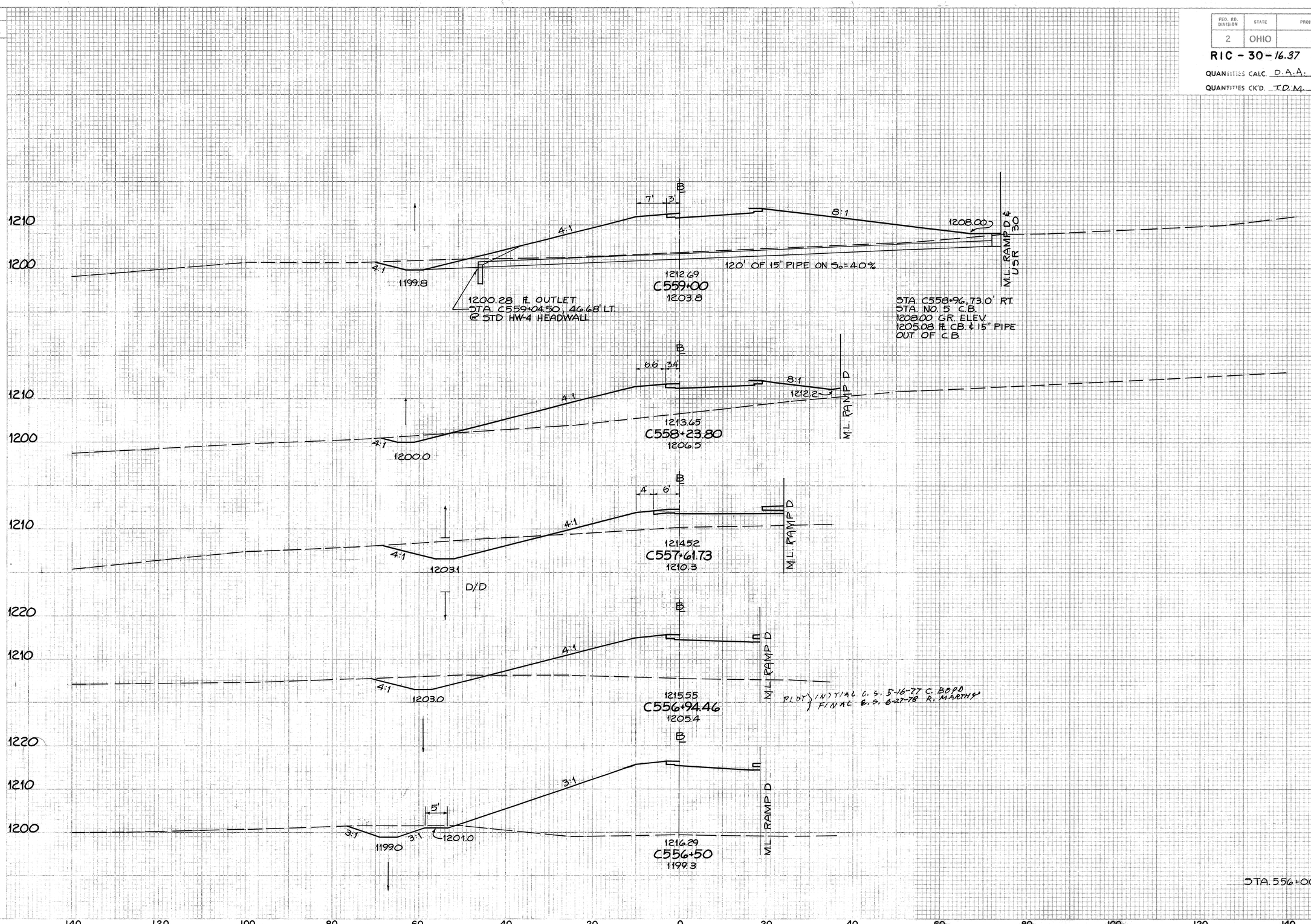
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

61

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
28	668		
		61	1504
15	398		
		116	630
86	150		
		167	695
48	408		
		68	1013
34	822		
		63	1777
STA. 556+00	34	1097	

RAMP C STA. C556+50 TO STA. C559+00

END RAMP C STA. 563+85

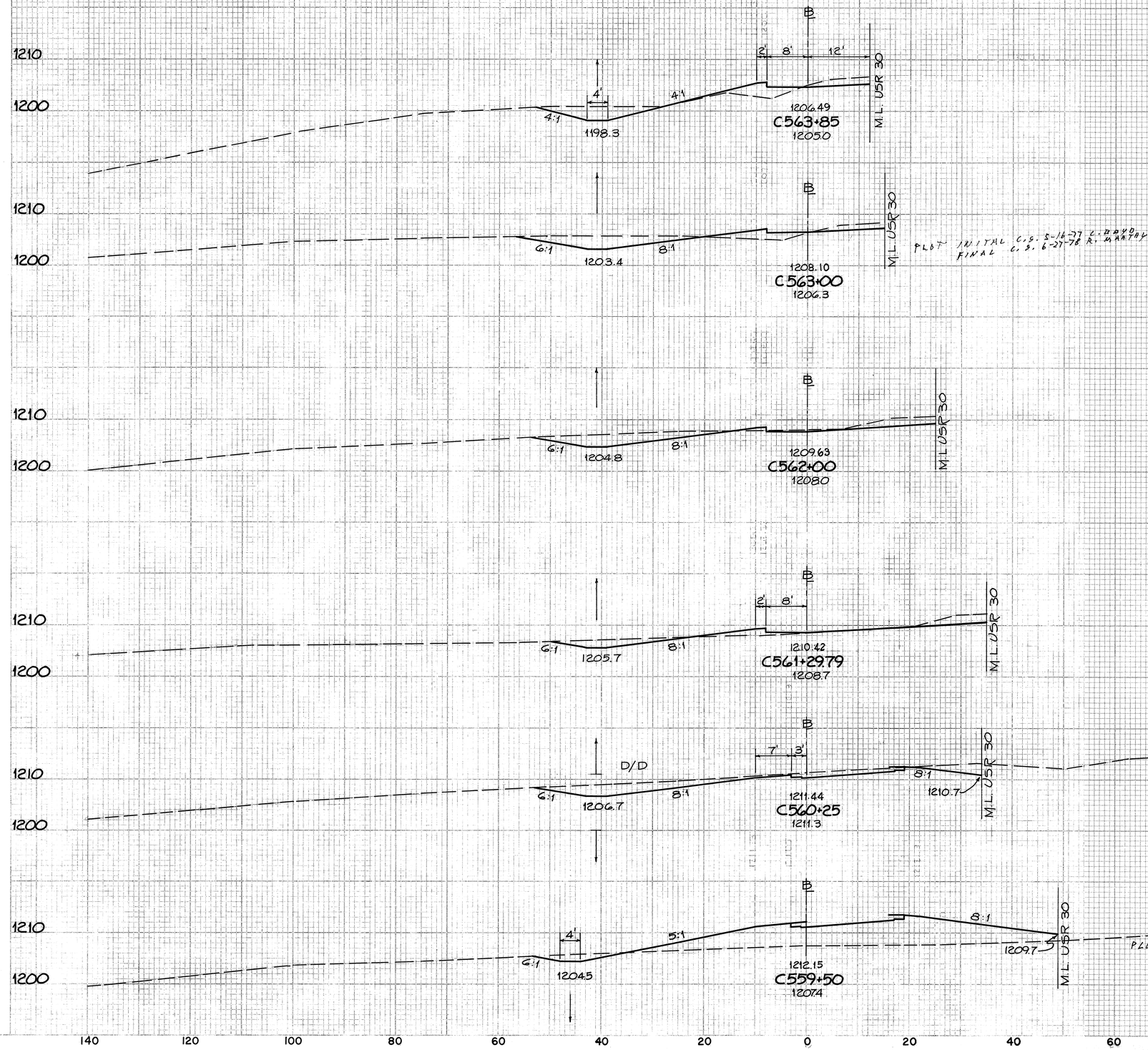
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

62

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71



RAMP C STA. C559+50 TO STA. C563+85

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		54	26		
				187	76
		65	22		
				267	46
		79	3		
				157	22
		42	14		
				264	27
		94	0		
				151	389
		15	280		
				40	878
		STA 559+00	28	668	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

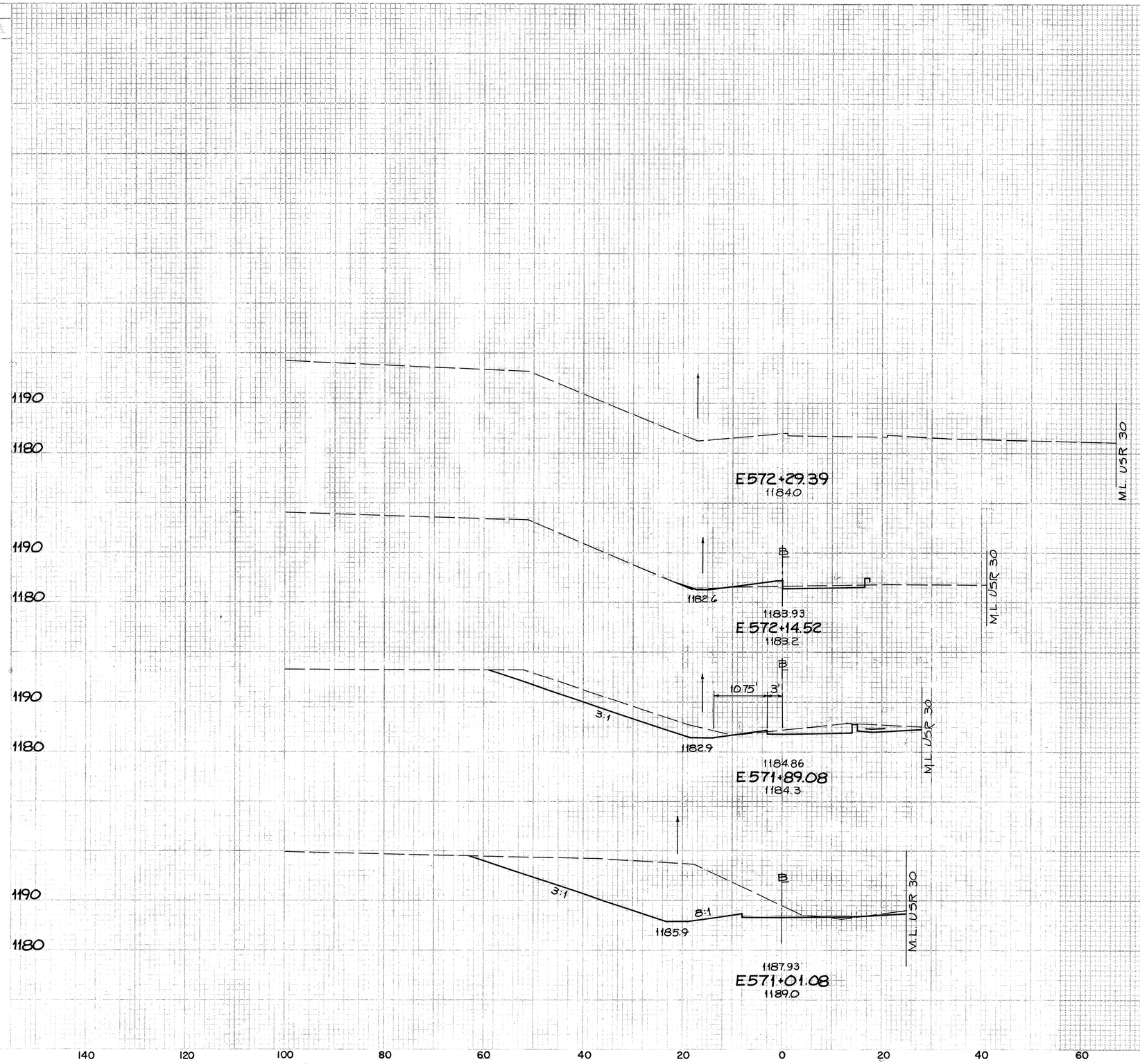
63

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		0	0		
				3	2
				10	7
				72	4
		142	2		
				927	7
		427	2		



RAMP E STA. E571+01.08 TO STA. E572+29.39

REFERENCE SHEETS	SHT. NO.
RAMP D DETAILS	69-70-72
SUPERELEVATION TABLE	48
REED RD P&P	27-29
REED RD DETAILS	76-77
CULVERT SYSTEM	78-81
RAMP C P&P	58

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

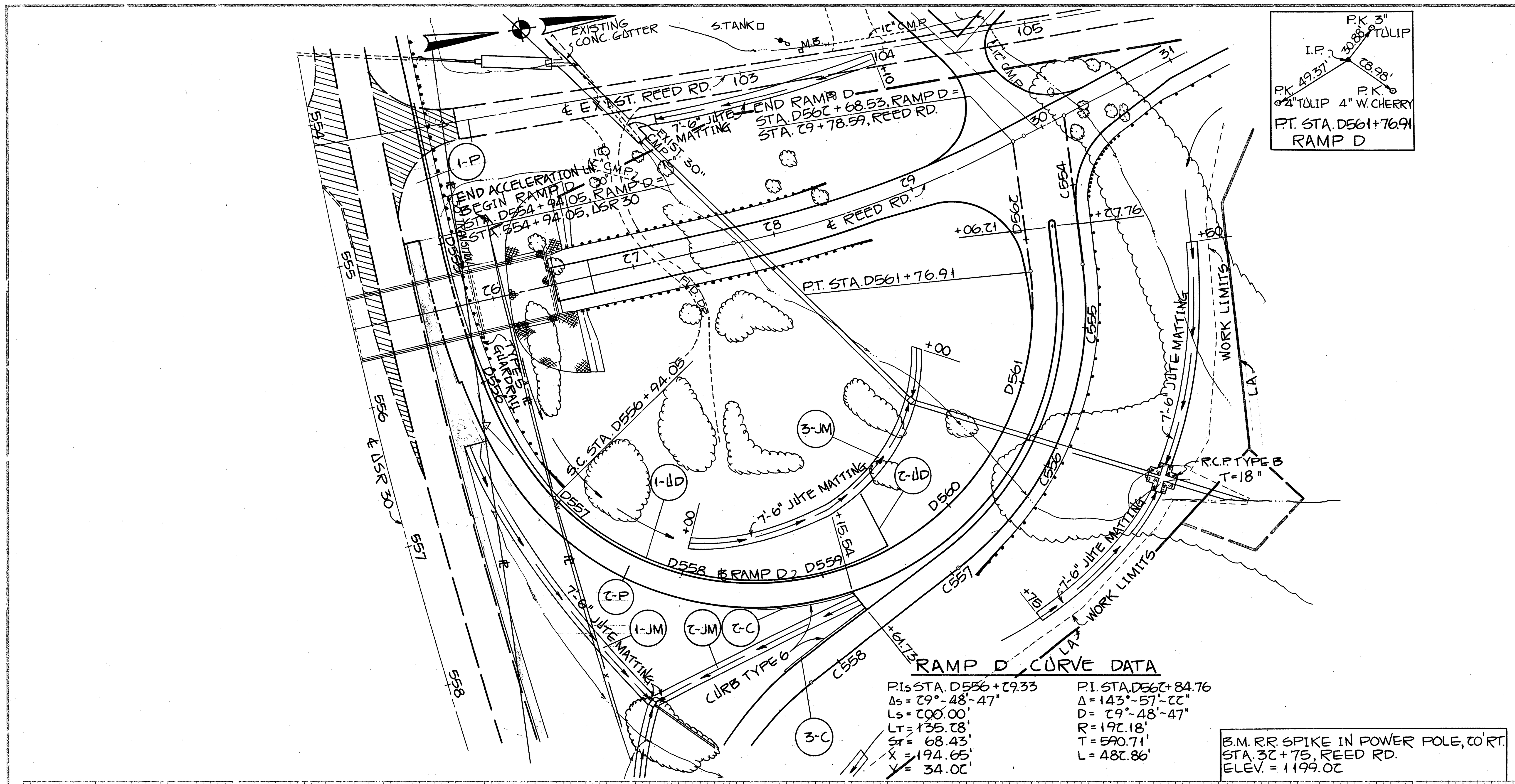
RIC-30-16.37

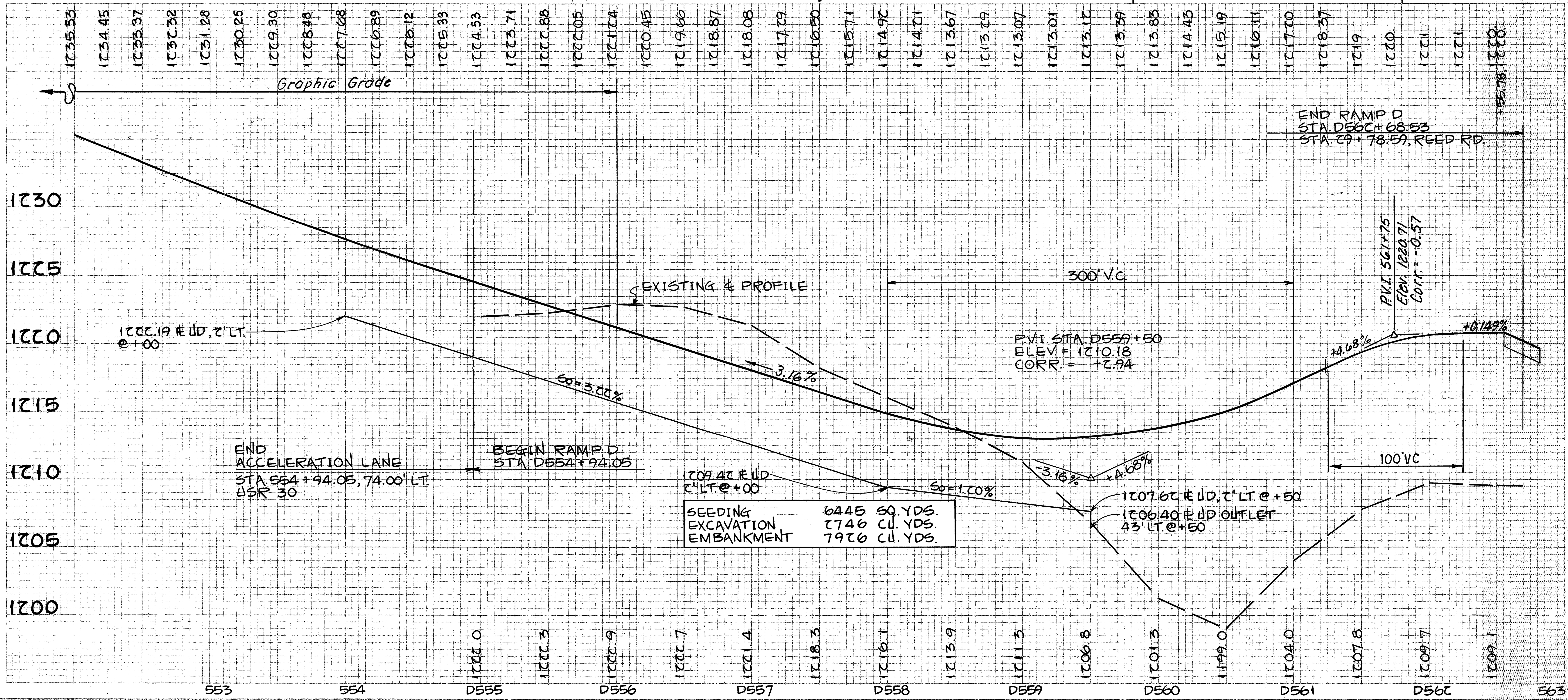
QUANTITIES CALC. D.A.A. 3/3/71

QUANTITIES CK'D. L.G.B. 3/10/71

REFERENCE NO.	SIDE	STATION FROM	STATION TO	203 SUBGRADE COMPACTION SQ.YDS.	301 BITUMINOUS AGGREGATE BASE USING 702.01(AC20) OR 702.09, RT.110RTC CU.YD.	304 AGGREGATE BASE CU.YDS.	310 SUBBASE CU.YDS.	402 ASPHALT CONCRETE (AC 20) CU.YD.	404 ASPHALT CONCRETE (AC 20) CU.YD.	409 SEAL COAT COVER AGGREGATE USING 0.008 CU.YD. NO.8 AGGREGATE PER SQ.YD. CU.YD.	409 SEAL COAT BITUMINOUS MATERIAL USING 0.30 GAL PER SQ. YD. (SEE PROPOSAL NOTE) GAL.
1-P	LT.	USR 30 544+91.27	USR 30 554+94.05	2275	234.5	125.9	649.8	77.6	38.8	7.0	264
2-P	℄	D554+94.05	D559+15.54	1060	112.0	32.3	161.5	41.7	20.8	2.3	86
TOTALS				3335	346.5	158.2	811.3	119.3	59.6	9.3	350

REFERENCE NO.	SIDE	STATION FROM	STATION TO		603 6" CONDUIT TYPE F LIN.FT.	605 6" DEEP PIPE UNDERDRAIN LIN.FT.	605 AGGREGATE DRAIN LIN.FT.	BENDS & BRANCHES 6"-90° BEND			609 CURB TYPE 6 LIN.FT.	667 SEEDING & JUTE MATTING SQ.YDS.
1-JM	RT.	D556+35	D558+03									181
2-JM	RT.	D558+03	D559+16									127
3-JM	LT.	D558+00	D561+00									188
1-UD	LT.	USR 30 554+00	RAMP D D559+50			546						
2-UD	LT.	D559+50			10	31		1				
2-C	RT.	D558+53	D559+15.54								69	
3-C	RT.	C557+61.73	C558+33								72	
1-P	LT.	USR 30 544+91.27	USR 30 554+74.05				289					
TOTALS					10	577	289	X			141	496





FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

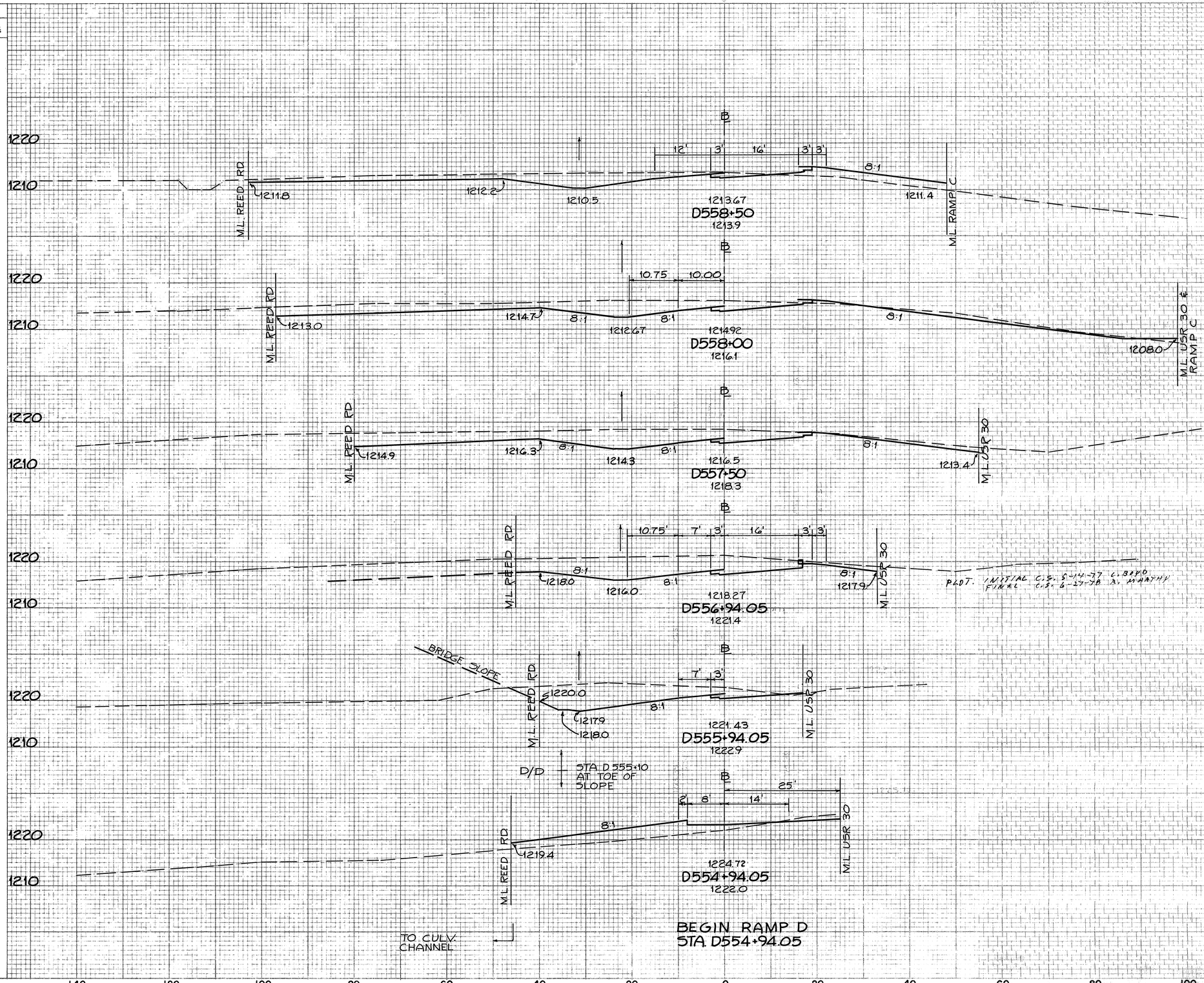
65

RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
			148		52
					368
			249		8
					480
			269		0
					523
			236		0
					761
			175		1
					343
			10		102



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

RAMP D STA. D554+94.05 TO STA. D558+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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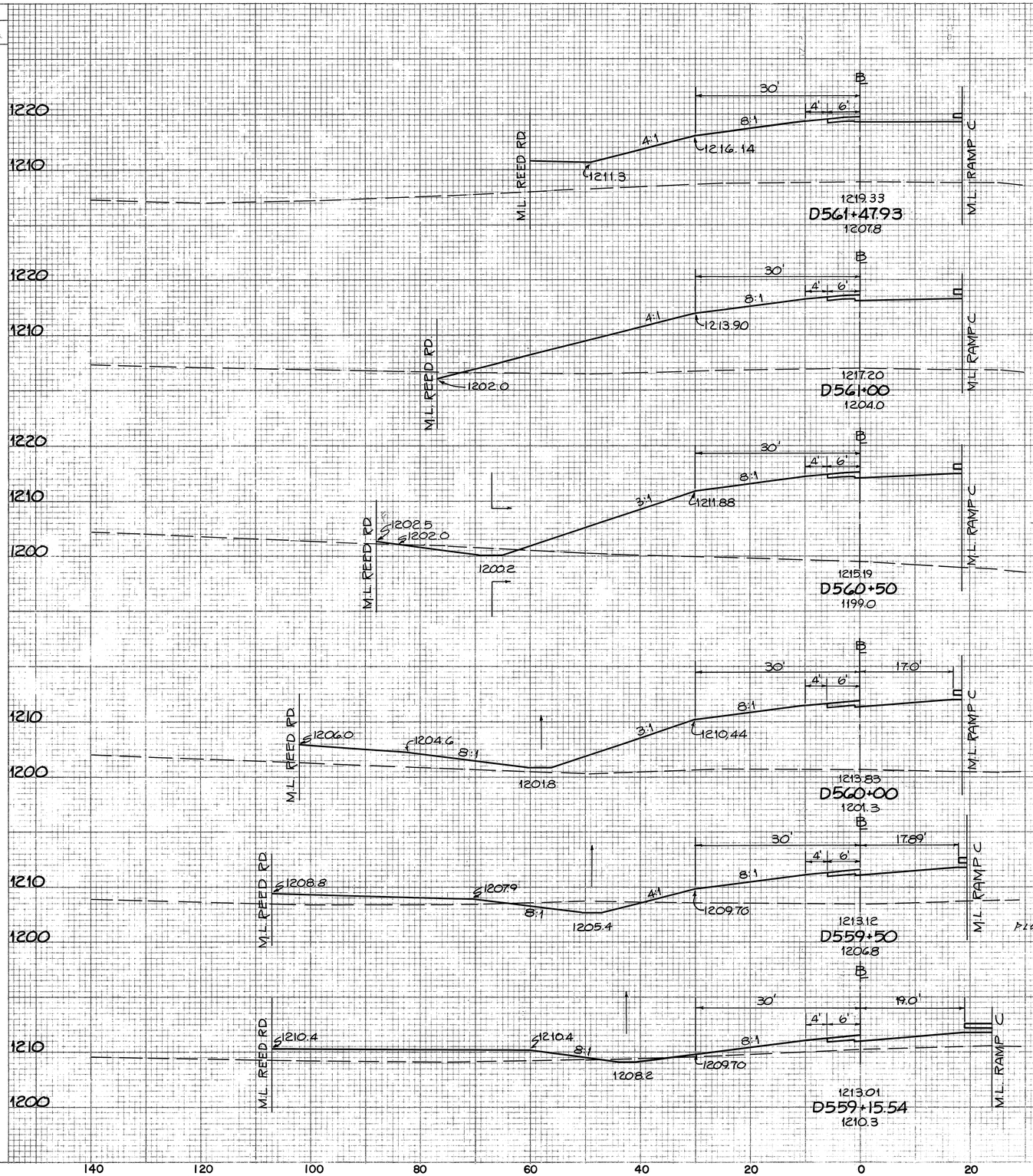
RIC - 30 - 16.37

QUANTITIES CALC. D.A.A. 3/26/71

QUANTITIES CK'D. T.D.M. 3/26/71

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		0	696		
				3	1350
		3	825		
				19	1617
		18	921		
				17	1579
		0	784		
				27	1016
		29	313		
				21	332
		4	207		
				184	314
		STA. 558+50		148	52



PLOT. INITIAL C.S. 5-16-77 C.B.
FINAL C.S. 6-27-78 R.M.

RAMP D STA. D559+15.54 TO STA. D561+47.93

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

…ES CALC. D. A. A. 3/26/71

QUANTITIES CK'D. T. D. M. 3/26/71

END RAMP D
STA. D562+68.53

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	792		
		0	761
0	611		
		0	701
0	696		

RAMP D STA. D561+76.91 TO STA. D562+68+53

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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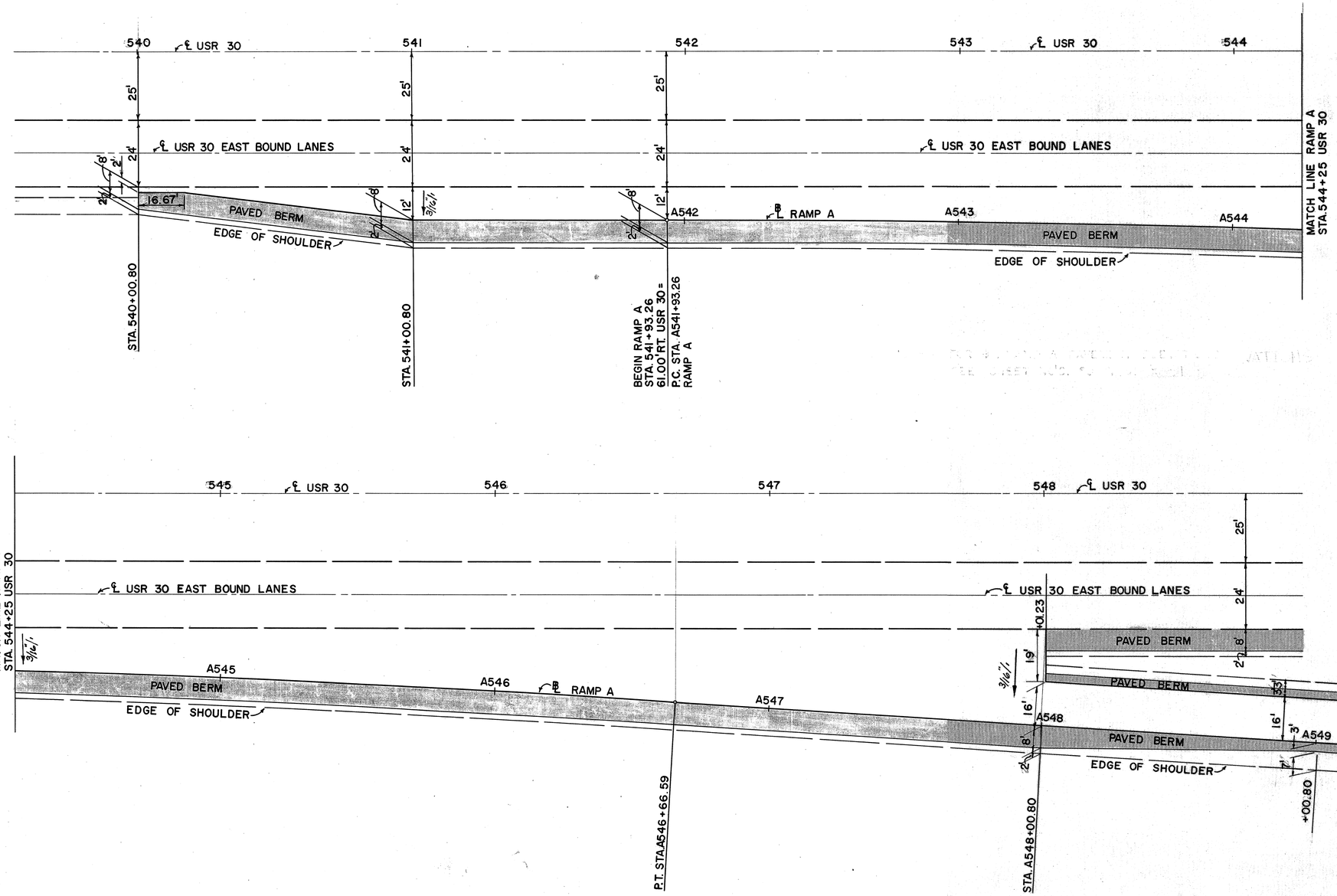
RIC - 30 - 16.37

RAMP A DECELERATION LANE DETAIL
USR 30 & REED ROAD INTERCHANGE



RAMP A DECELERATION LANE DETAILS

RAMP D ACCELERATION LANE DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

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STATION	OFFSET	CORR. TO EXIST. EDGE ELEV.
544+91.27	.00	.0
545+00	.22	.0
+25	.84	-.01
+50	1.47	-.02
+75	2.09	-.03
546+00	2.72	-.04
+25	3.34	-.05
+50	3.97	-.06
+75	4.59	-.07
547+00	5.22	-.08
+25	5.84	-.09
+50	6.47	-.10
+75	7.02	-.11
548+00	7.72	-.12
+25	8.34	-.13

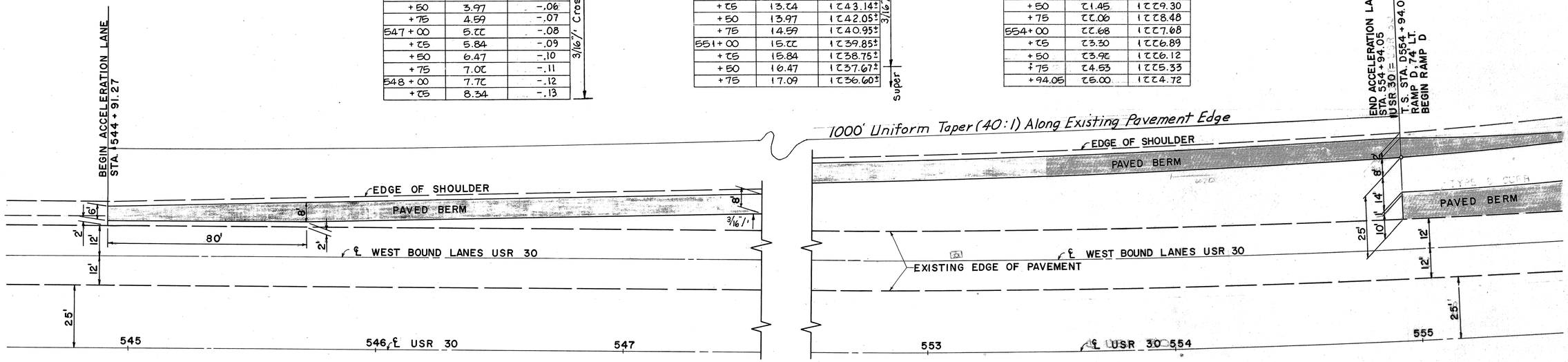
3/16"/' Cross Slope

STATION	OFFSET	EDGE ELEVATION
548+50	8.97	1250.67±
+75	9.59	1249.63±
549+00	10.22	1248.58±
+25	10.84	1247.49±
+50	11.47	1246.41±
+75	12.09	1245.32±
550+00	12.72	1244.23±
+25	13.24	1243.14±
+50	13.97	1242.05±
+75	14.59	1240.95±
551+00	15.22	1239.85±
+25	15.84	1238.75±
+50	16.47	1237.67±
+75	17.09	1236.60±

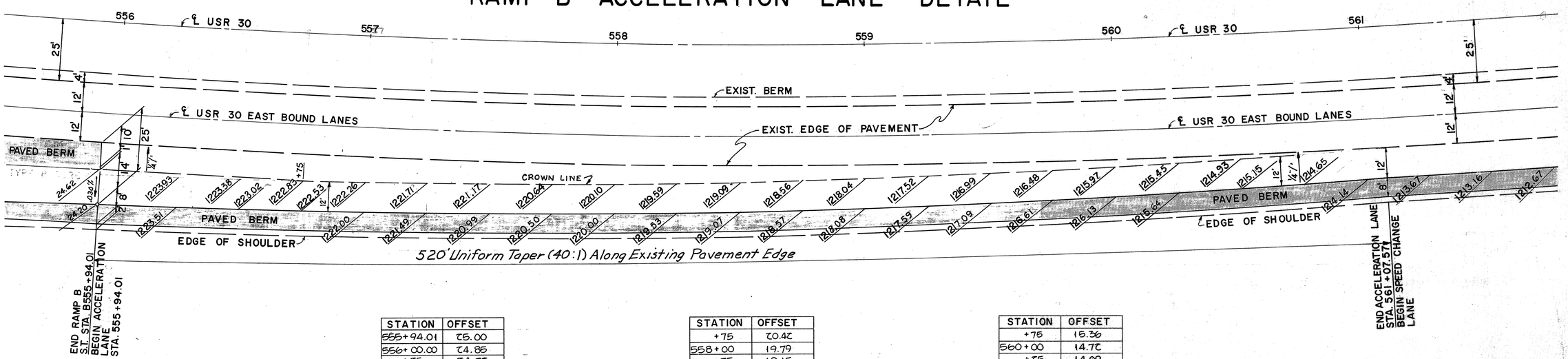
3/16"/' Cross Slope

Super

STATION	OFFSET	EDGE ELEVATION
552+00	17.72	1235.53
+25	18.34	1234.45
+50	18.97	1233.37
+72.44	19.53	1232.44
+75	19.59	1232.32
553+00	20.21	1231.28
+25	20.83	1230.25
+50	21.45	1229.30
+75	22.06	1228.48
554+00	22.68	1227.68
+25	23.30	1226.89
+50	23.92	1226.12
+75	24.53	1225.33
+94.05	26.00	1224.72



RAMP B ACCELERATION LANE DETAIL



STATION	OFFSET
555+94.01	25.00
556+00.00	24.85
+25	24.22
+50	23.58
+75	22.95
557+00	22.32
+25	21.68
+50	21.05

STATION	OFFSET
+75	20.42
558+00	19.79
+25	19.15
+50	18.52
+75	17.89
559+00	17.25
+25	16.62
+50	15.99

STATION	OFFSET
+75	15.36
560+00	14.72
+25	14.09
+50	13.46
+75	12.82
561+00	12.19
+07.57	12.00

RAMPS B & D ACCELERATION LANES

RAMPS B & D ENTRANCE TERMINALS DETAILS
USR 30 & REED ROAD INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

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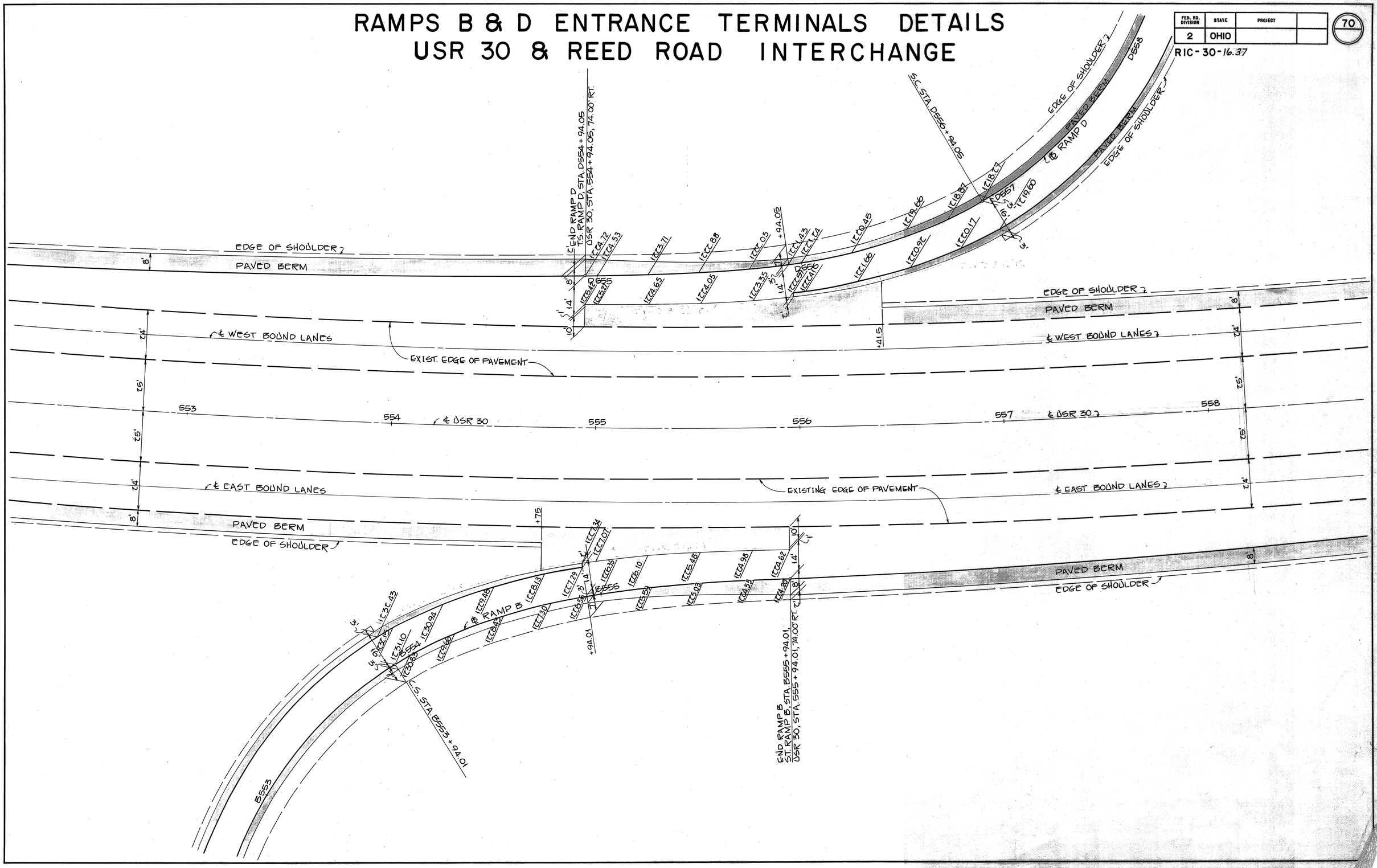

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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RIC-30-16.37

RAMP B CURVE DATA

P.I. STA. B552+95.99
Δ = 107°-48'-43"
D = 29°-48'-47"
R = 192.18'
T = 263.61'
L = 361.65'

REED RD. CURVE DATA

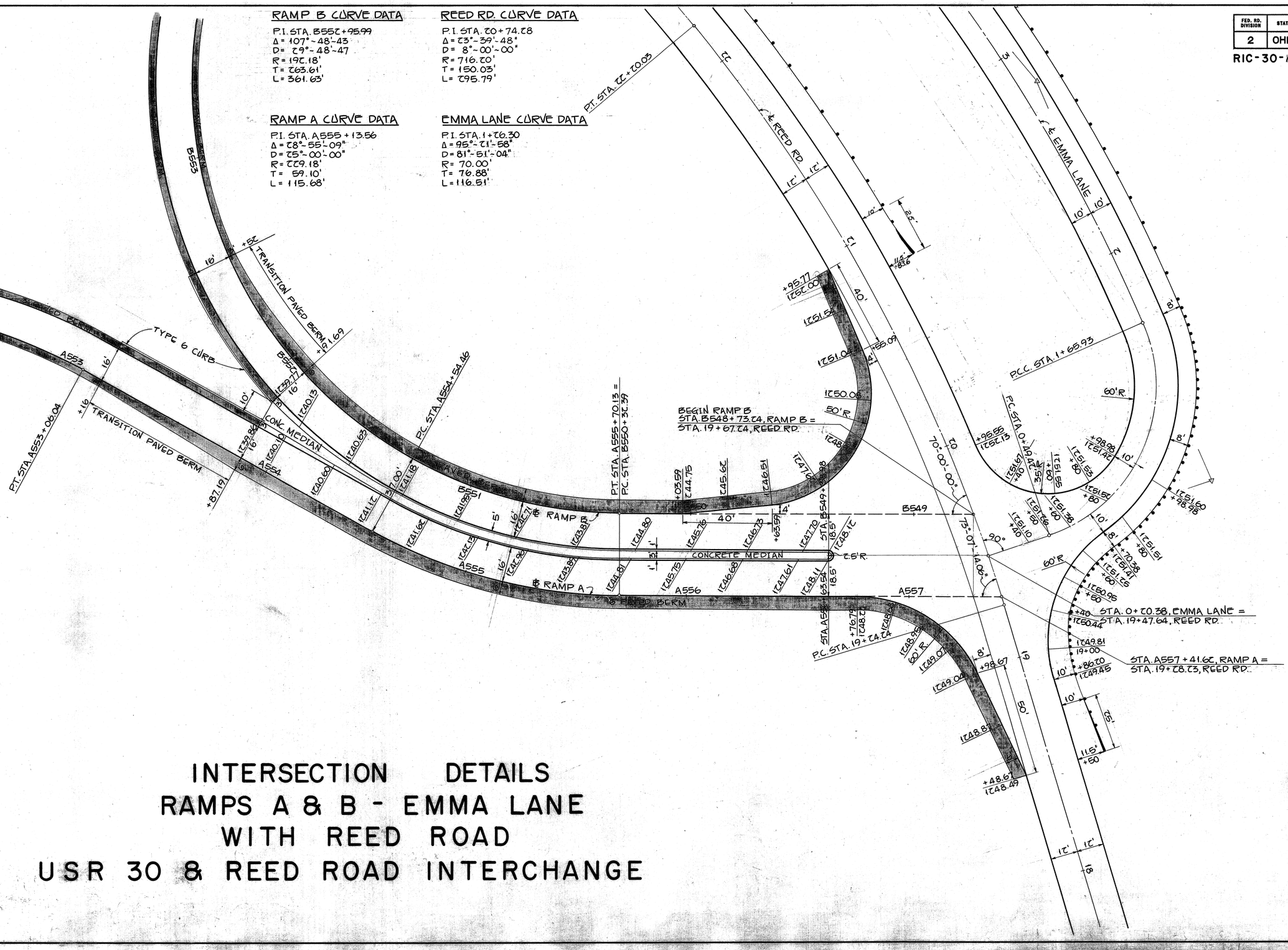
P.I. STA. 20+74.28
Δ = 23°-39'-48"
D = 8°-00'-00"
R = 716.20'
T = 150.03'
L = 295.79'

RAMP A CURVE DATA

P.I. STA. A555+13.56
Δ = 28°-55'-09"
D = 25°-00'-00"
R = 229.18'
T = 59.10'
L = 115.68'

EMMA LANE CURVE DATA

P.I. STA. 1+26.30
Δ = 95°-21'-58"
D = 81°-51'-04"
R = 70.00'
T = 76.88'
L = 116.51'



INTERSECTION DETAILS
RAMPS A & B - EMMA LANE
WITH REED ROAD
USR 30 & REED ROAD INTERCHANGE

INTERSECTION RAMP A, RAMP B & EMMA LANE WITH REED RD.

INTERSECTION DETAILS - RAMPS C & D WITH REED RD.
USR 30 & REED RD. INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

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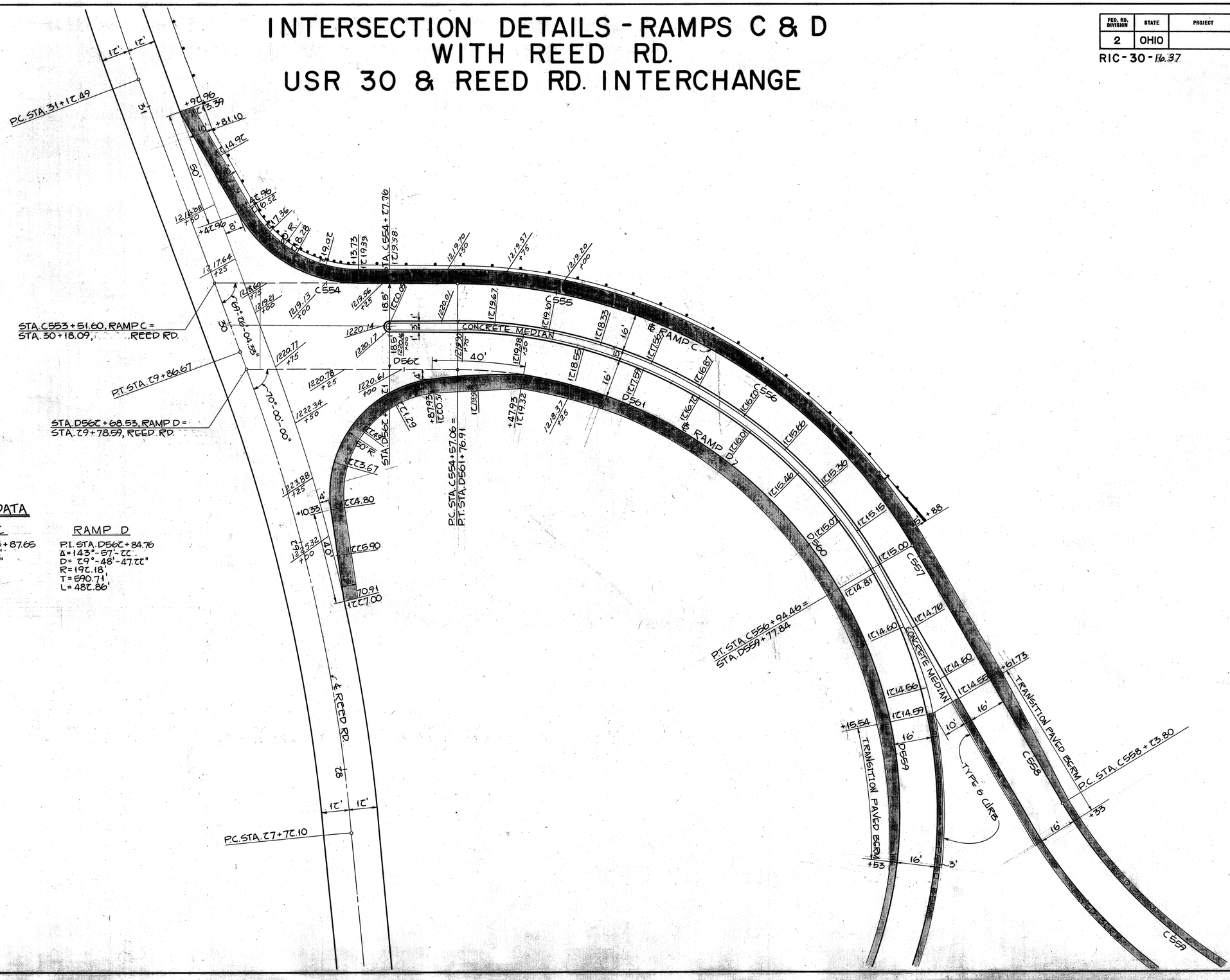

CURVE DATA

REED RD.	RAMP C	RAMP D
P.I. STA. 28+80.00	P.I. STA. C555+87.65	P.I. STA. D562+84.76
Δ = 15°-01'-11"	Δ = 59°-20'-57"	Δ = 143°-57'-22"
D = 7°-00'-00"	D = 25°-00'-00"	D = 29°-48'-47.22"
R = 818.51'	R = 229.18'	R = 197.18'
T = 107.90'	T = 130.59'	T = 590.71'
L = 214.57'	L = 237.40'	L = 487.86'

INTERSECTION RAMP C & RAMP D W/ REED ROAD

RAMP C & SPEED CHANGE LANE DETAILS
USR 30 & REED ROAD INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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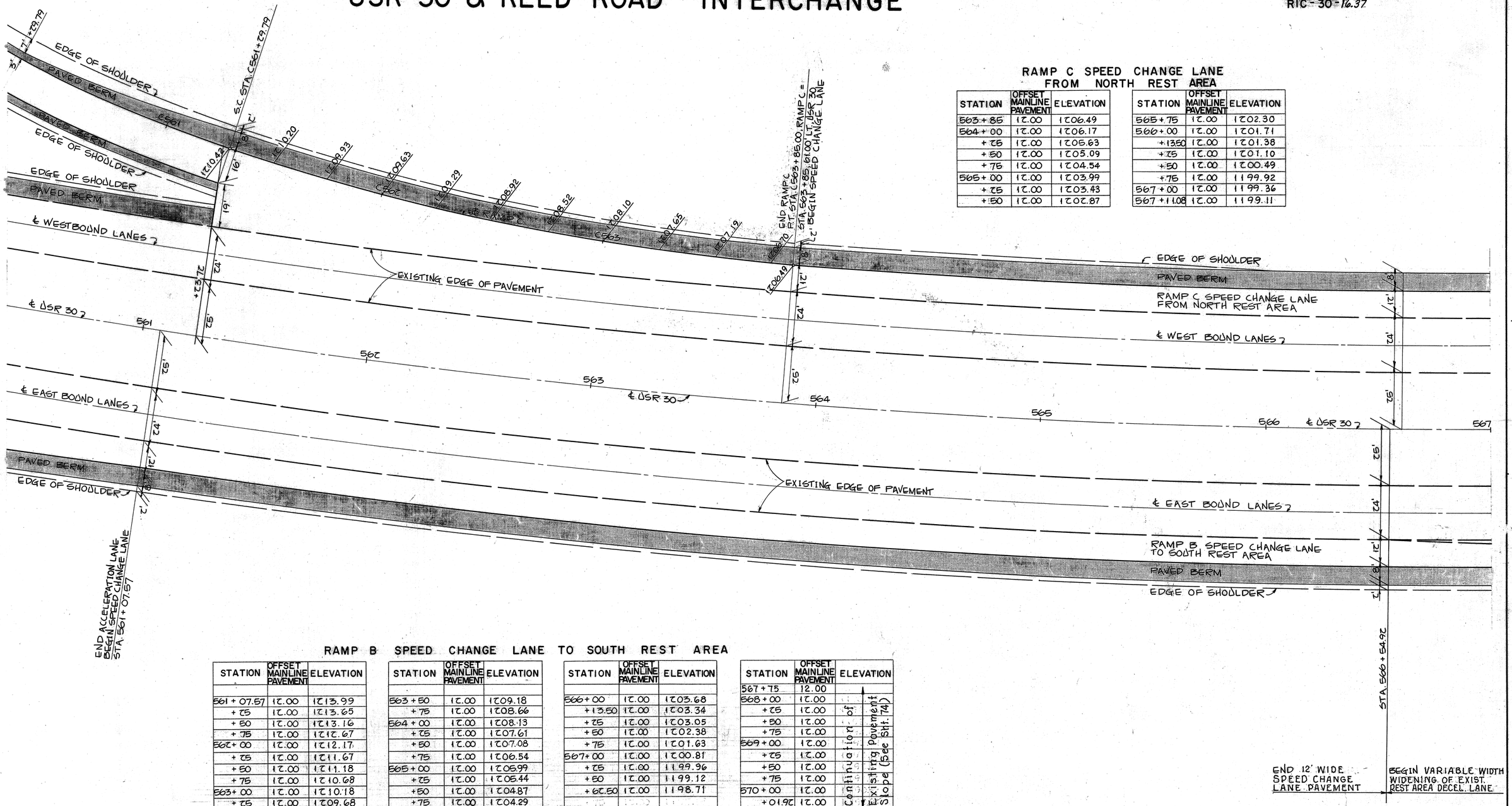
RIC - 30 - 16.37



RAMP C SPEED CHANGE LANE FROM NORTH REST AREA

STATION	OFFSET MAINLINE PAVEMENT	ELEVATION
563+85	12.00	1206.49
564+00	12.00	1206.17
+25	12.00	1205.63
+50	12.00	1205.09
+75	12.00	1204.54
565+00	12.00	1203.99
+25	12.00	1203.43
+50	12.00	1202.87
565+75	12.00	1202.30
566+00	12.00	1201.71
+13.50	12.00	1201.38
+25	12.00	1201.10
+50	12.00	1200.49
+75	12.00	1199.92
567+00	12.00	1199.36
567+11.08	12.00	1199.11

RAMP B SPEED CHANGE LANE TO SOUTH REST AREA

STATION	OFFSET MAINLINE PAVEMENT	ELEVATION
561+07.57	12.00	1213.99
+25	12.00	1213.65
+50	12.00	1213.16
+75	12.00	1212.67
562+00	12.00	1212.17
+25	12.00	1211.67
+50	12.00	1211.18
+75	12.00	1210.68
563+00	12.00	1210.18
+25	12.00	1209.68
563+50	12.00	1209.18
+75	12.00	1208.66
564+00	12.00	1208.13
+25	12.00	1207.61
+50	12.00	1207.08
+75	12.00	1206.54
565+00	12.00	1205.99
+25	12.00	1205.44
+50	12.00	1204.87
+75	12.00	1204.29
566+00	12.00	1203.68
+13.50	12.00	1203.34
+25	12.00	1203.05
+50	12.00	1202.38
+75	12.00	1201.63
567+00	12.00	1200.81
+25	12.00	1199.96
+50	12.00	1199.12
+67.50	12.00	1198.71
567+75	12.00	
568+00	12.00	
+25	12.00	
+50	12.00	
+75	12.00	
569+00	12.00	
+25	12.00	
+50	12.00	
+75	12.00	
570+00	12.00	
+01.92	12.00	

Continuation of Existing Pavement Slope (See Sht. 74)

END 12' WIDE SPEED CHANGE LANE PAVEMENT

BEGIN VARIABLE WIDTH WIDENING OF EXIST. REST AREA DECEL. LANE

RAMP E & SPEED CHANGE LANE DETAILS
USR 30 & REED ROAD INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

74

RIC-30-16.37

OUTSIDE EDGE OF PAVEMENT
P.I. STA. E57C+16.20
Δ = 56°-56'-39"
R = 50.00'
T = 27.12'
L = 49.69'

INSIDE EDGE OF PAVEMENT
P.I. STA. 57C+16.80
Δ = 33°-12'-42"
R = 90.93'
T = 27.71'
L = 53.86'

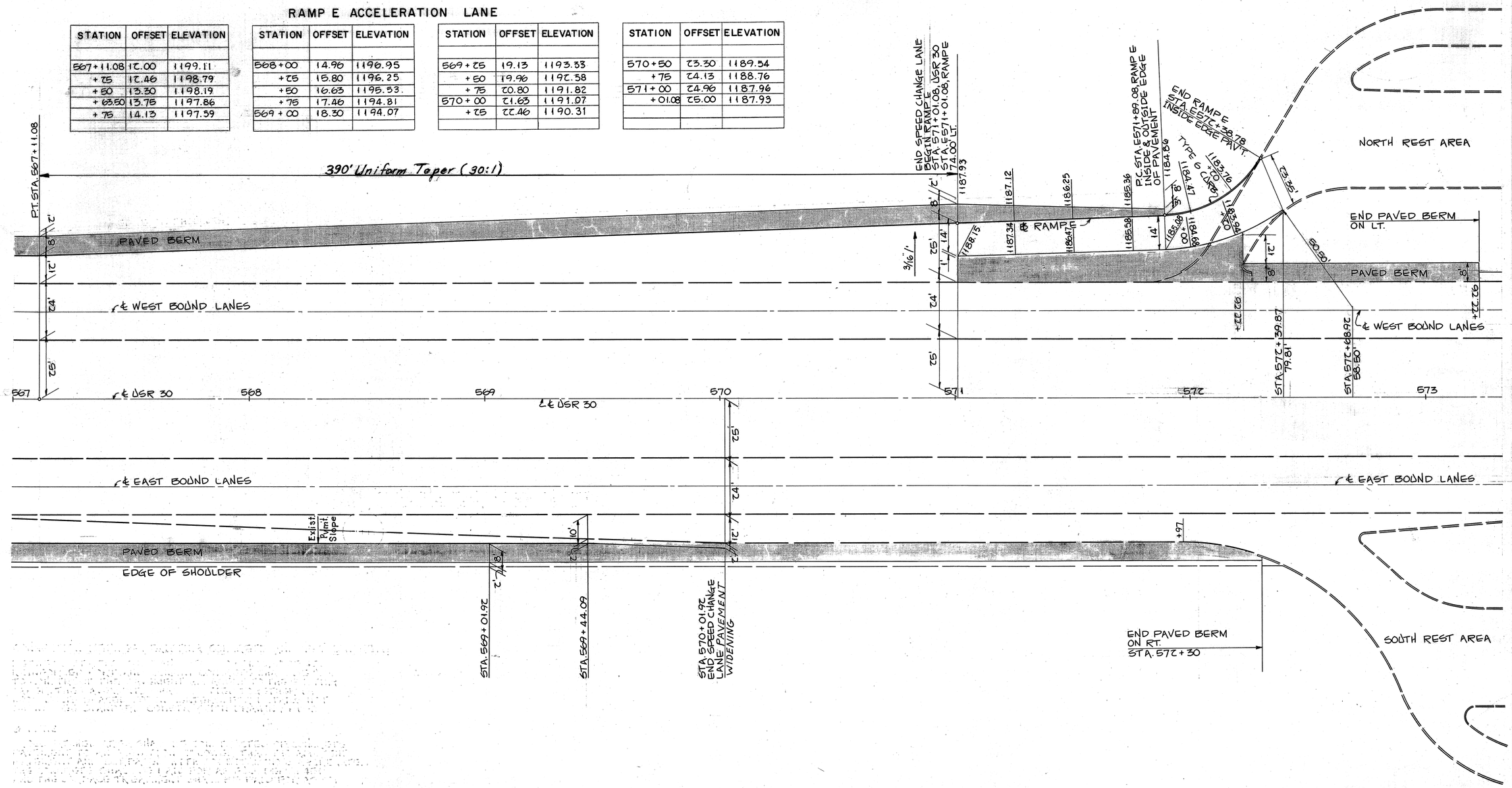
RAMP E ACCELERATION LANE

STATION	OFFSET	ELEVATION
567+11.08	12.00	1199.11
+25	12.46	1198.79
+50	13.30	1198.19
+63.50	13.75	1197.86
+75	14.13	1197.59

STATION	OFFSET	ELEVATION
568+00	14.96	1196.95
+25	15.80	1196.25
+50	16.63	1195.53
+75	17.46	1194.81
569+00	18.30	1194.07

STATION	OFFSET	ELEVATION
569+25	19.13	1193.33
+50	19.96	1192.58
+75	20.80	1191.82
570+00	21.63	1191.07
+25	22.46	1190.31

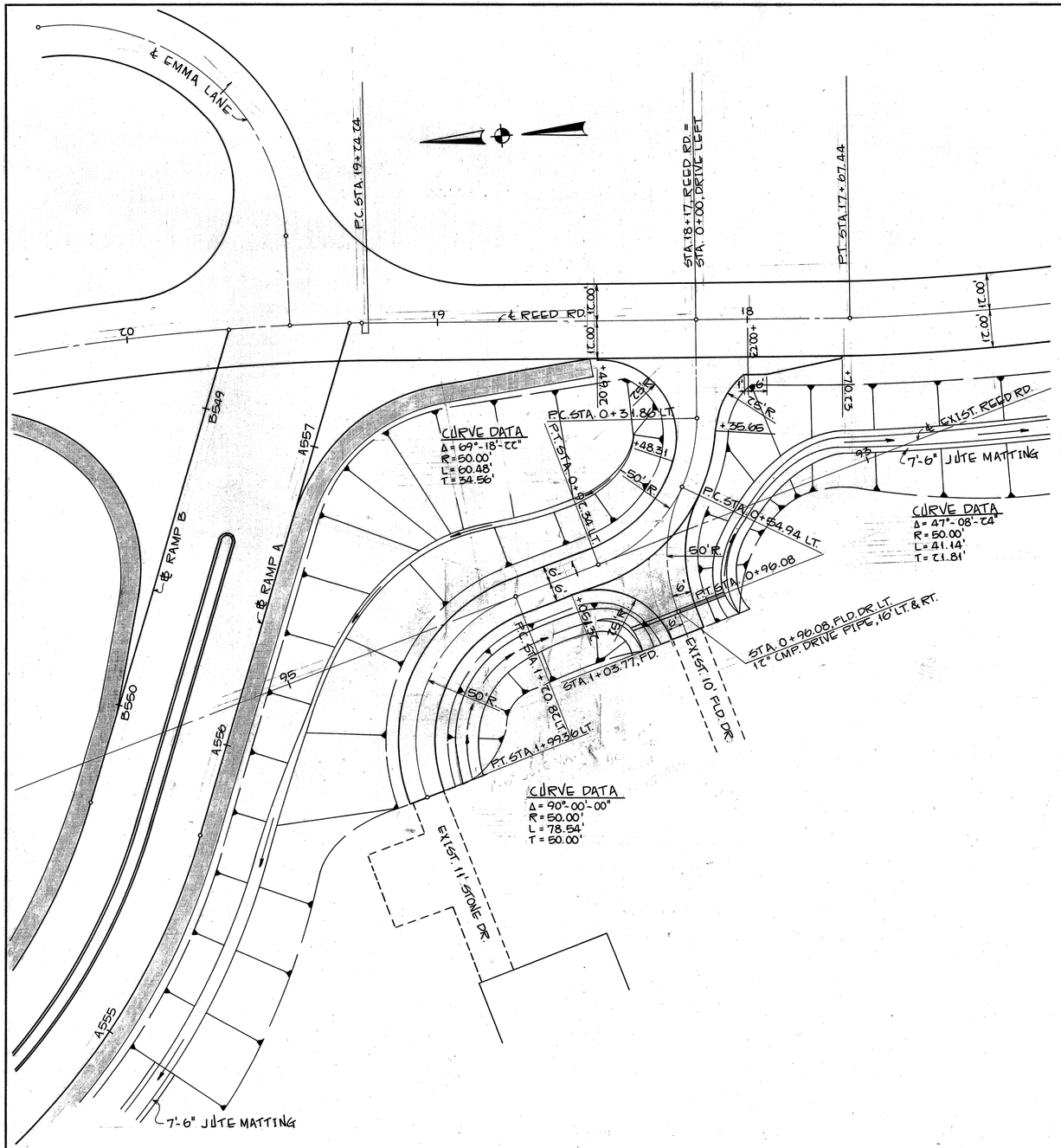
STATION	OFFSET	ELEVATION
570+50	23.30	1189.54
+75	24.13	1188.76
571+00	24.96	1187.96
+01.08	25.00	1187.93



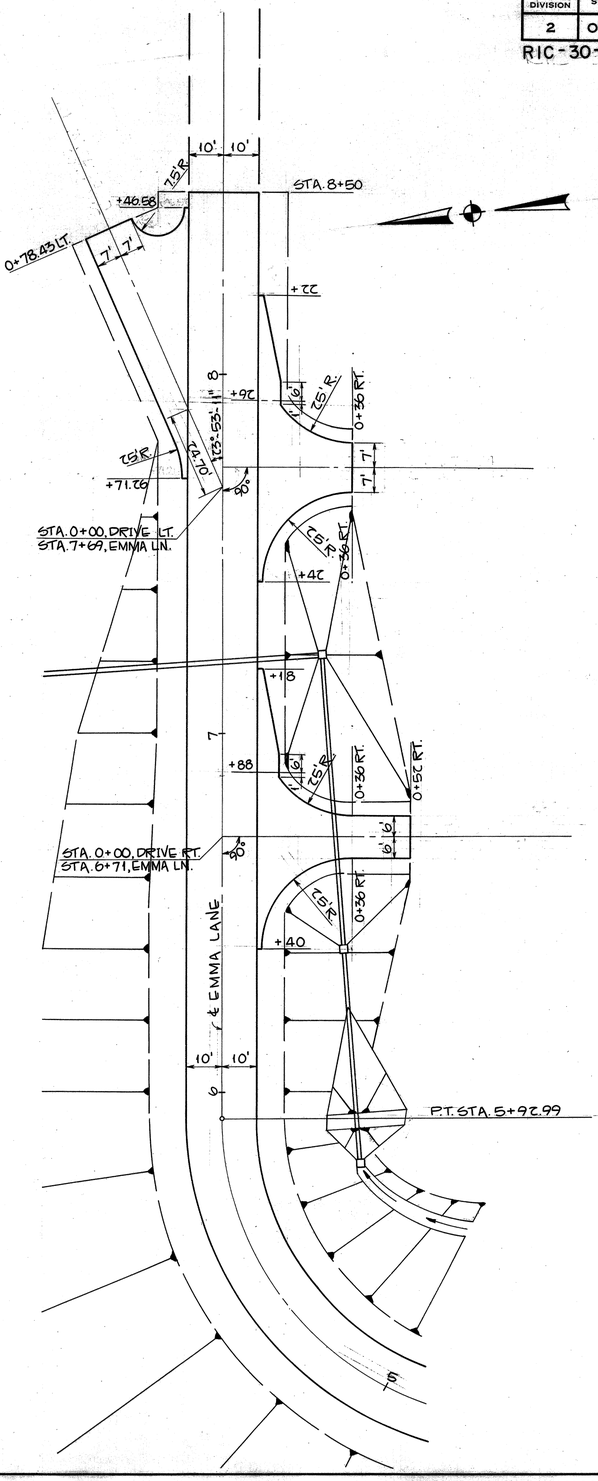
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

75
125

RIC-30-16.37



DRIVE LEFT STA. 18+17, REED ROAD



Rev. 2-9-77

DRIVE DETAILS, EMMA LANE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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RIC-30-16.37

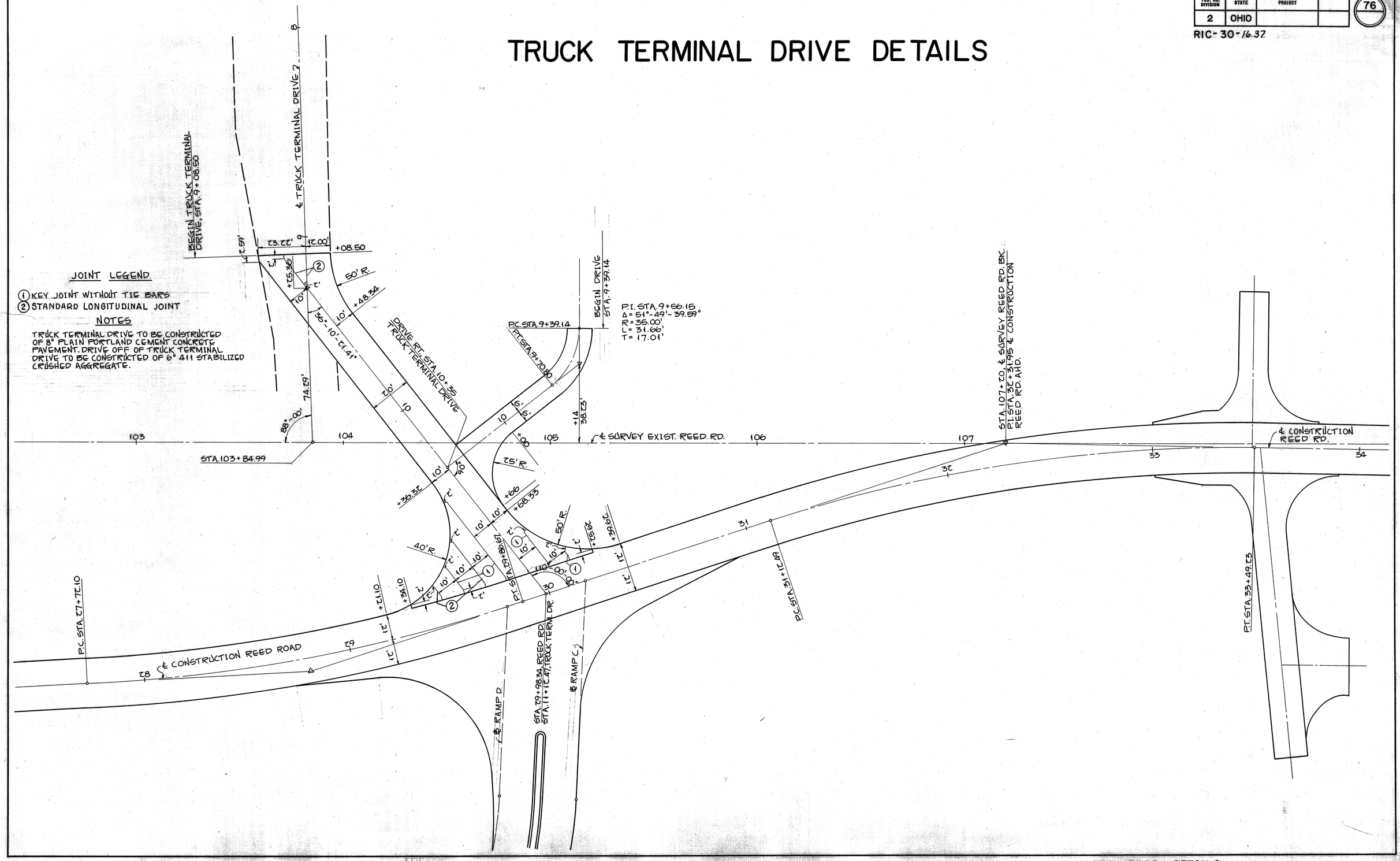
TRUCK TERMINAL DRIVE DETAILS

JOINT LEGEND

(1) KEY JOINT WITHOUT TIE BARS
(2) STANDARD LONGITUDINAL JOINT

NOTES

TRUCK TERMINAL DRIVE TO BE CONSTRUCTED OF 8" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT. DRIVE OFF OF TRUCK TERMINAL DRIVE TO BE CONSTRUCTED OF 6" 411 STABILIZED CRUSHED AGGREGATE.



REED ROAD DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

77

RIC - 30 - 16.37

END DRIVE
STA. 0+75 LT.

BEGIN PAVEMENT
STA. 19+33
LAKECREST RD.

19
℄ LAKECREST RD.

STA. 107+20, ℄ SURVEY REED RD. BK.
PI STA. 32+31.95, ℄ CONSTRUCTION
REED RD. AHD.

STA. 0+00, DR. LT. =
STA. 33+48, REED RD.

END PAVEMENT
STA. 36+00
REED RD.

100' TAPER

℄ SURVEY REED RD. & 1/4 SECTION LINE

1/4 SECTION LINE
℄ SURVEY REED RD.
℄ CONSTRUCTION REED RD.

℄ CONSTRUCTION REED RD.

STA. 0+00, DRIVE RT. =
STA. 33+50.49, REED RD.

STA. 20+00, LAKECREST RD. =
STA. 34+50, REED RD.

P.C. STA. 31+12.69

P.T. STA. 33+49.23

STA. 1+04.67

1-STORY
FRAME
RESIDENCE
WITH BASEMENT

END DRIVE AT FOUNDATION
TO BASEMENT GARAGE

END DRIVE
STA. 1+50 RT.

STA. 35+23
W = 12'

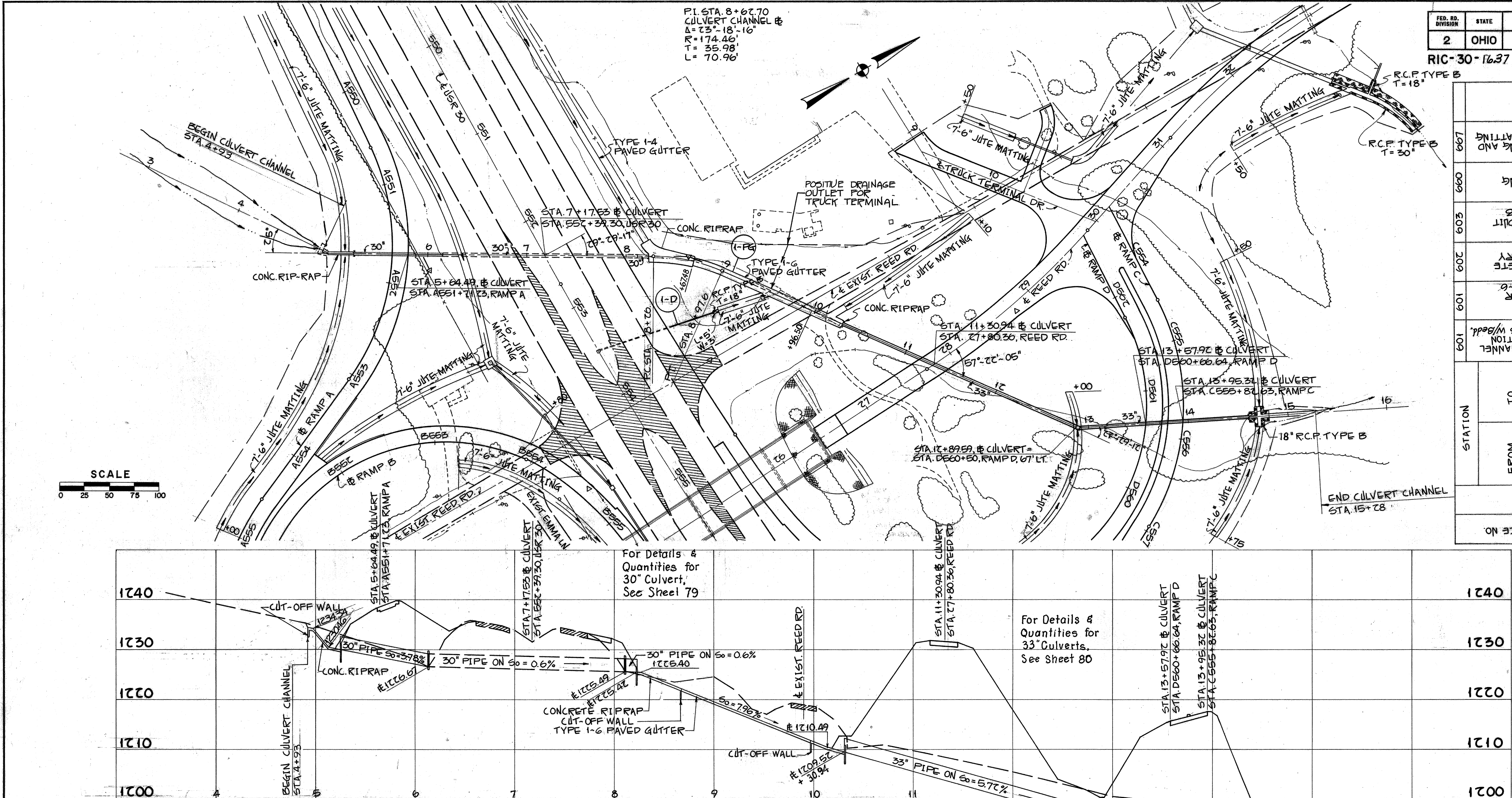
REED ROAD DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

78/125

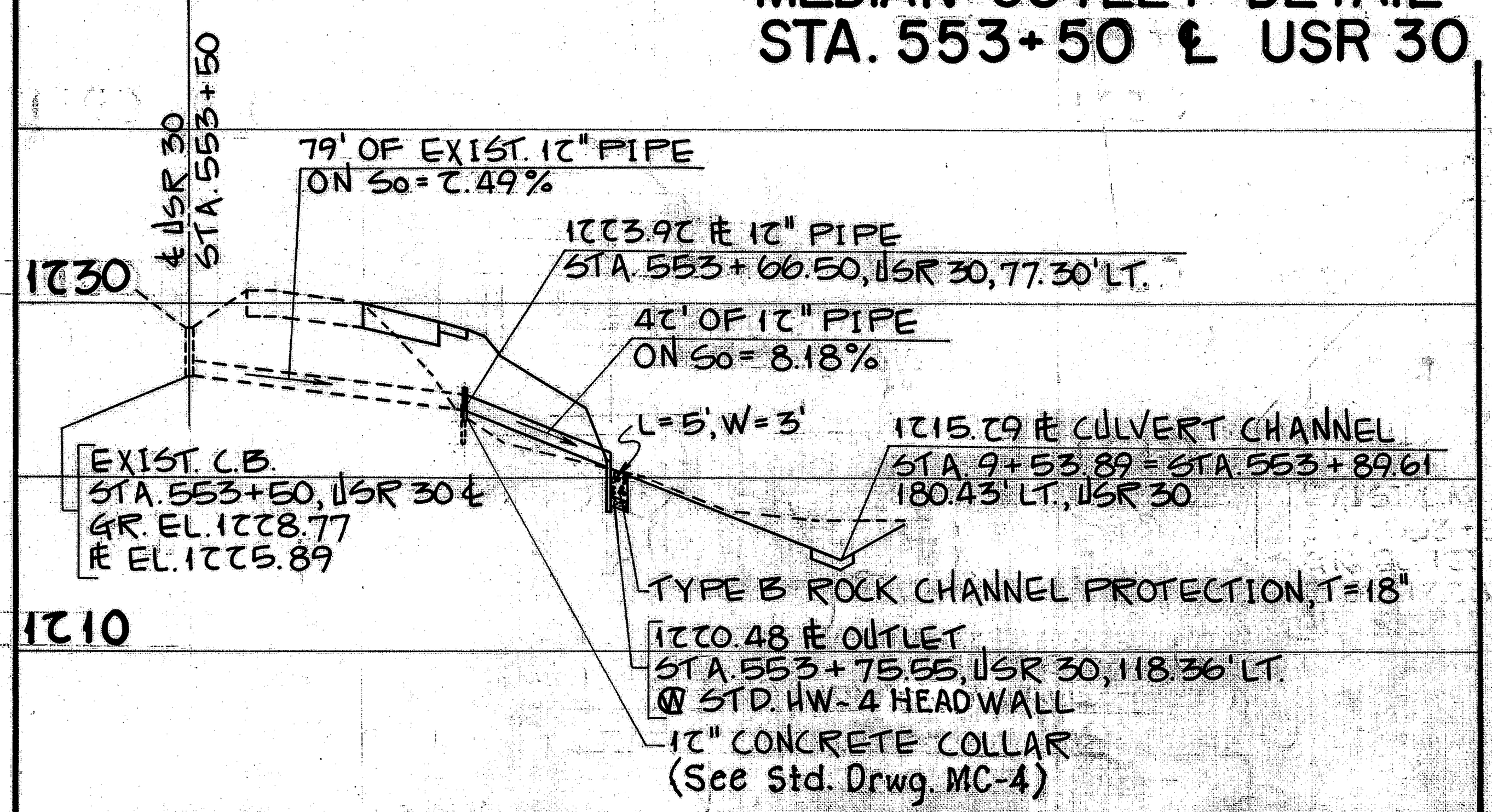
RIC-30-16.37

REFERENCE NO.	SIDE	STATION FROM	STATION TO	601 ROCK CHANNEL PROTECTION TYPE B w/Bedd. CU.YDS.	601 PAVED GUTTER TYPE 1-6 LIN.FT.	602 CONCRETE MASONRY CU.YDS.	603 12" CONDUIT TYPE B LIN.FT.	660 SODDING SQ.YDS.	667 SEEDING AND JUTE MATTING SQ.YDS.
1-D	RT.	CULVERT ℄ 8+63	CULVERT ℄ 9+53.89	1		0.20	42		42
1-PG	℄	CULVERT ℄ 8+67.48	CULVERT ℄ 9+96.50		129			43	
TOTALS				1	129	0.20	42	43	42



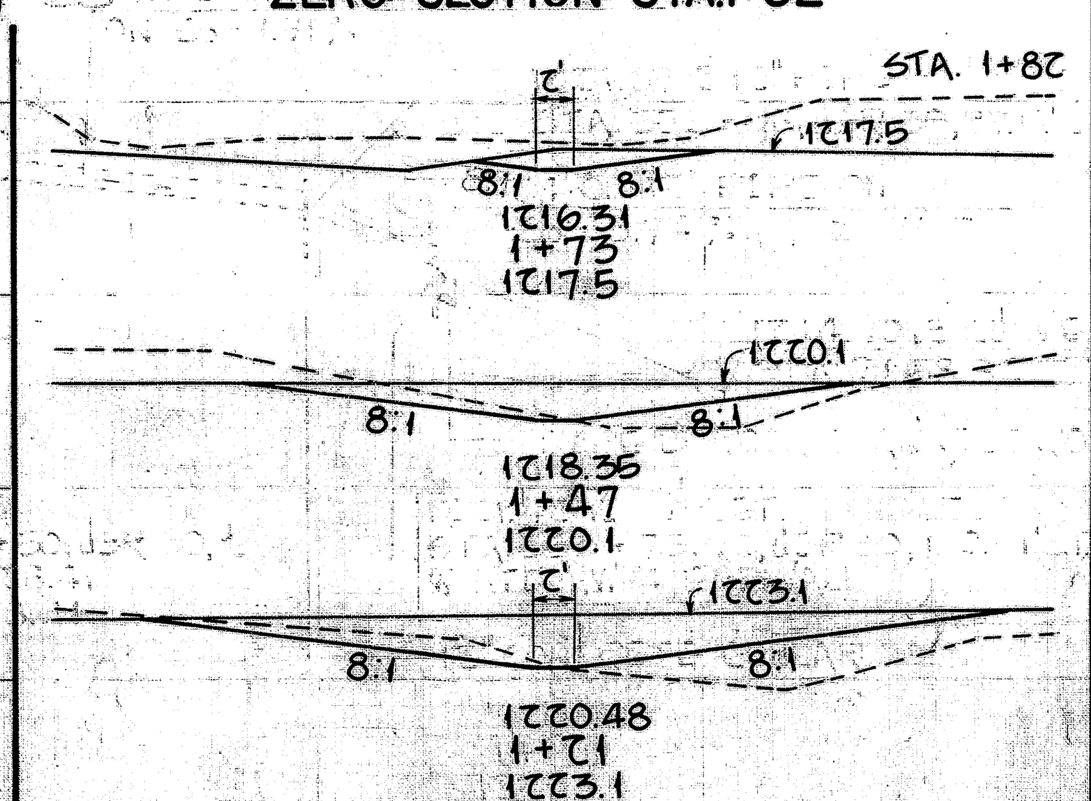
P.I. STA. 8+62.70
CULVERT CHANNEL ℄
Δ= 23°-18'-16"
R= 174.46'
T= 35.98'
L= 70.96'
BEGIN CULVERT CHANNEL
STA. 4+93
7'-6" JUTE MATTING
℄ USR 30
TYPE 1-4 PAVED GUTTER
POSITIVE DRAINAGE OUTLET FOR TRUCK TERMINAL
℄ TRUCK TERMINAL DR.
STA. 7+17.53 ℄ CULVERT
STA. 552+39.30, USR 30
CONC. RIPRAP
CONC. RIP-RAP
TYPE 1-6 PAVED GUTTER
STA. 5+64.49 ℄ CULVERT
STA. A551+71.23, RAMP A
R.C.P. TYPE B T=18"
L=5' W=3'
℄ EXIST. REED RD.
CONC. RIPRAP
STA. 11+30.94 ℄ CULVERT
STA. 27+80.36, REED RD.
R.C.P. TYPE B T=18"
R.C.P. TYPE B T=30"
STA. 13+57.92 ℄ CULVERT
STA. D560+66.64, RAMP D
STA. 13+95.32 ℄ CULVERT
STA. C555+82.63, RAMP C
STA. 12+89.59 ℄ CULVERT = STA. D560+50, RAMP D, 67' LT.
18" R.C.P. TYPE B
END CULVERT CHANNEL
STA. 15+28
℄ RAMP A
℄ RAMP B
℄ RAMP C
℄ RAMP D
℄ EXIST. REED RD.
EXIST. EMMA LN.
SCALE
0 25 50 75 100
1240
1230
1220
1210
1200
1190
1180
CUT-OFF WALL
30" PIPE S0=3.78%
30" PIPE ON S0 = 0.6%
CONC. RIPRAP
℄ 1226.67
30" PIPE ON S0 = 0.6%
1225.40
For Details & Quantities for 30" Culvert, See Sheet 79
CONCRETE RIPRAP
CUT-OFF WALL
TYPE 1-6 PAVED GUTTER
S0=7.96%
℄ 1210.49
CUT-OFF WALL
℄ 1209.52 + 30.94
33" PIPE ON S0=5.72%
For Details & Quantities for 33" Culverts, See Sheet 80
℄ 1194.72
℄ 1192.16
33" PIPE ON S0 = 2.5%
℄ 1187.80
℄ 1186.20
18" R.C.P. TYPE B
END CULVERT CHANNEL STA. 15+28
BEGIN CULVERT CHANNEL STA. 4+93

MEDIAN OUTLET DETAIL
STA. 553+50 ℄ USR 30



℄ USR 30 STA. 553+50
79' OF EXIST. 12" PIPE ON S0 = 2.49%
1223.92 ℄ 12" PIPE
STA. 553+66.50, USR 30, 77.30' LT.
42' OF 12" PIPE ON S0 = 8.18%
L=5', W=3'
1215.29 ℄ CULVERT CHANNEL
STA. 9+53.89 = STA. 553+89.61 180.43' LT., USR 30
EXIST. C.B.
STA. 553+50, USR 30 ℄
GR. EL. 1228.77
℄ EL. 1225.89
TYPE B ROCK CHANNEL PROTECTION, T=18"
1220.48 ℄ OUTLET
STA. 553+75.55, USR 30, 118.36' LT.
@ STD. HW-4 HEADWALL
12" CONCRETE COLLAR (See Std. Drwg. MC-4)
1230
1210

END CHANNEL WORK
ZERO SECTION STA. 1+82



BEGIN CHANNEL STA. 1+21

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		1	0
8	0		
		8	0
9	0		
		10	0
11	0		
TOTAL		19	0

QUANTITIES CALC. S.W.R. 3/3/71
QUANTITIES CK'D. D.A.A. 6/2/71

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REED ROAD DRAINAGE SYSTEM

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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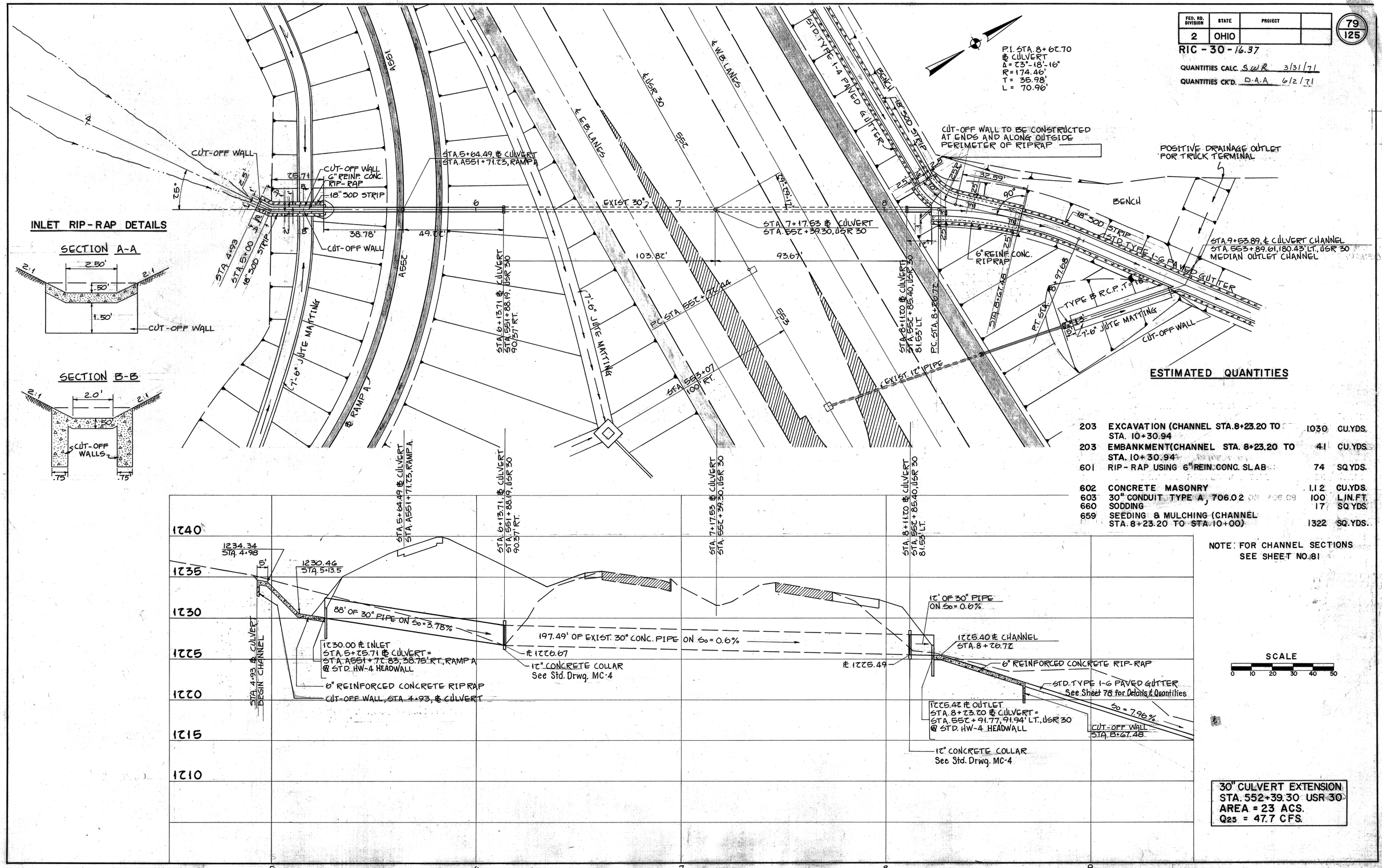
125

RIC - 30 - 16.37

QUANTITIES CALC. S.W.R 3/31/71

QUANTITIES CK'D. D.A.A 6/2/71



ESTIMATED QUANTITIES

203	EXCAVATION (CHANNEL STA. 8+23.20 TO STA. 10+30.94	1030	CU.YDS.
203	EMBANKMENT (CHANNEL STA. 8+23.20 TO STA. 10+30.94	41	CU.YDS.
601	RIP-RAP USING 6" REIN. CONC. SLAB	74	SQ.YDS.
602	CONCRETE MASONRY	1.12	CU.YDS.
603	30" CONDUIT TYPE A, 706.02	100	LIN.FT.
660	SODDING	17	SQ.YDS.
659	SEEDING & MULCHING (CHANNEL STA. 8+23.20 TO STA. 10+00)	1322	SQ.YDS.

NOTE: FOR CHANNEL SECTIONS SEE SHEET NO. 81

SCALE
0 10 20 30 40 50

30" CULVERT EXTENSION
STA. 552+39.30 USR 30
AREA = 23 ACS.
Q25 = 47.7 CFS.

REED ROAD DRAINAGE

QUANTITIES CALC. DAA 1/15/71
QUANTITIES CK'D. LGB 1/15/71

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC - 30 - 16.37

6" REINFORCED CONCRETE RIPRAP
STD. TYPE 1-6 PAVED GUTTER
18" SOD STRIP
CUT-OFF WALL
CUT-OFF WALL
BENCH
BENCH
7'-6" JUTE MATTING
P.C. STA. 27+76.10 REED
28 ℄ REED RD.
57°-27'-05"
20'
20'
5.44
9'
100.00'
158.65'
STA. 10+16.5 ℄ CULVERT
STA. 11+30.94 ℄ CULVERT = STA. 27+80.36, REED RD.
STA. 12+89.59, ℄ CULVERT
Δ = 27°-29'-12" LT.
STA. D560+50
67' LT., RAMP D
STA. 13+57.92 ℄ CULVERT
STA. D560+66.64, RAMP C
STA. 13+95.32 ℄ CULVERT
STA. C555+82.63, RAMP C
℄ RAMP D
℄ RAMP C
D560
C555
D560
C560
80°-52'
172.00'
7'-6" JUTE MATTING
7'-6" JUTE MATTING
OUTLET CULVERT CHANNEL INTO EXISTING SWALE STA. 15+28, ℄ CULVERT
SCALE
0 10 20 30 40 50

1230
1225
1220
1215
1210
1205
1200
1195
1190
1185
1180
10
11
12
13
14
15
1210.50 ℄ CHANNEL
STA. 10+14, ℄ CULVERT
S0 = 7.96%
258' OF 33" PIPE ON S0 = 5.72%
172' OF 33" PIPE ON S0 = 2.5%
STA. 11+30.94, ℄ CULVERT
STA. 27+80.36, ℄ REED RD.
STA. 13+57.92, ℄ CULVERT
STA. D560+66.64, RAMP D
STA. 13+95.32 ℄ CULVERT
STA. C555+82.63, RAMP C
1209.52 ℄ INLET
STA. 10+30.94, ℄ CULVERT
STA. 27+25.59, 83.71' LT.
REED RD. @ STD. HW-4 HEADWALL
6" REINFORCED CONCRETE RIPRAP
CUT-OFF WALL, STA. 9+96.50, ℄ CULVERT
STD. TYPE 1-6 PAVED GUTTER
STA. 12+89.59 ℄ CULVERT
STA. D560+50, 67' LT., RAMP D
STD. NO. 5-A CATCH BASIN
1200.20, GRATE ELEV.
1194.72 ℄ 33" PIPE INTO C.B.
1192.16 ℄ C.B. & 33" PIPE OUT OF C.B.
1187.86 ℄ OUTLET
STA. 14+61.59 ℄ CULVERT
STA. C555+75.79, 65.82' LT.
RAMP C @ STD. HW-4 HEADWALL
TYPE B, ROCK CHANNEL PROTECTION, T = 18", L = 20'
OUTLET CULVERT CHANNEL INTO EXISTING SWALE STA. 15+28, ℄ CULVERT

ESTIMATED QUANTITIES

STA. 27+80.36 REED RD.

601	RIP-RAP USING 6" REINFORCED CONCRETE SLAB	42	SQ.YDS.
602	CONCRETE MASONRY	0.68	CU.YDS.
603	33" CONDUIT TYPE A 706.02 (2250 D-LOAD OR 707.05, TYPE C [illegible]	258	LIN.FT.
660	SODDING	15	SQ.YDS.

STA. D560+66.64 RAMP D

601	ROCK CHANNEL PROTECTION TYPE B W/BED.	22	CU.YDS.
602	CONCRETE MASONRY	0.68	CU.YDS.
603	33" CONDUIT TYPE A 706.02 [illegible] 2250 D-LOAD, OR 707.05, TYPE C	172	LIN.FT.
604	STD. NO. 5-A CATCH BASIN	1	EACH
203	EXCAVATION (CHANNEL STA. 14+61.59 TO STA. 15+28)	20	CU.YDS.

NOTE: FOR CHANNEL SECTIONS SEE SHEET NO. 81

33" CULVERT
STA. 27+80.36
REED ROAD
AREA = 28 ACS.
Q_{25} = 56 CFS.

33" CULVERT
STA. D560+66.64
RAMP D
AREA = 30 ACS.
Q_{25} = 58.5 CFS.

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

RIC-30-16.37

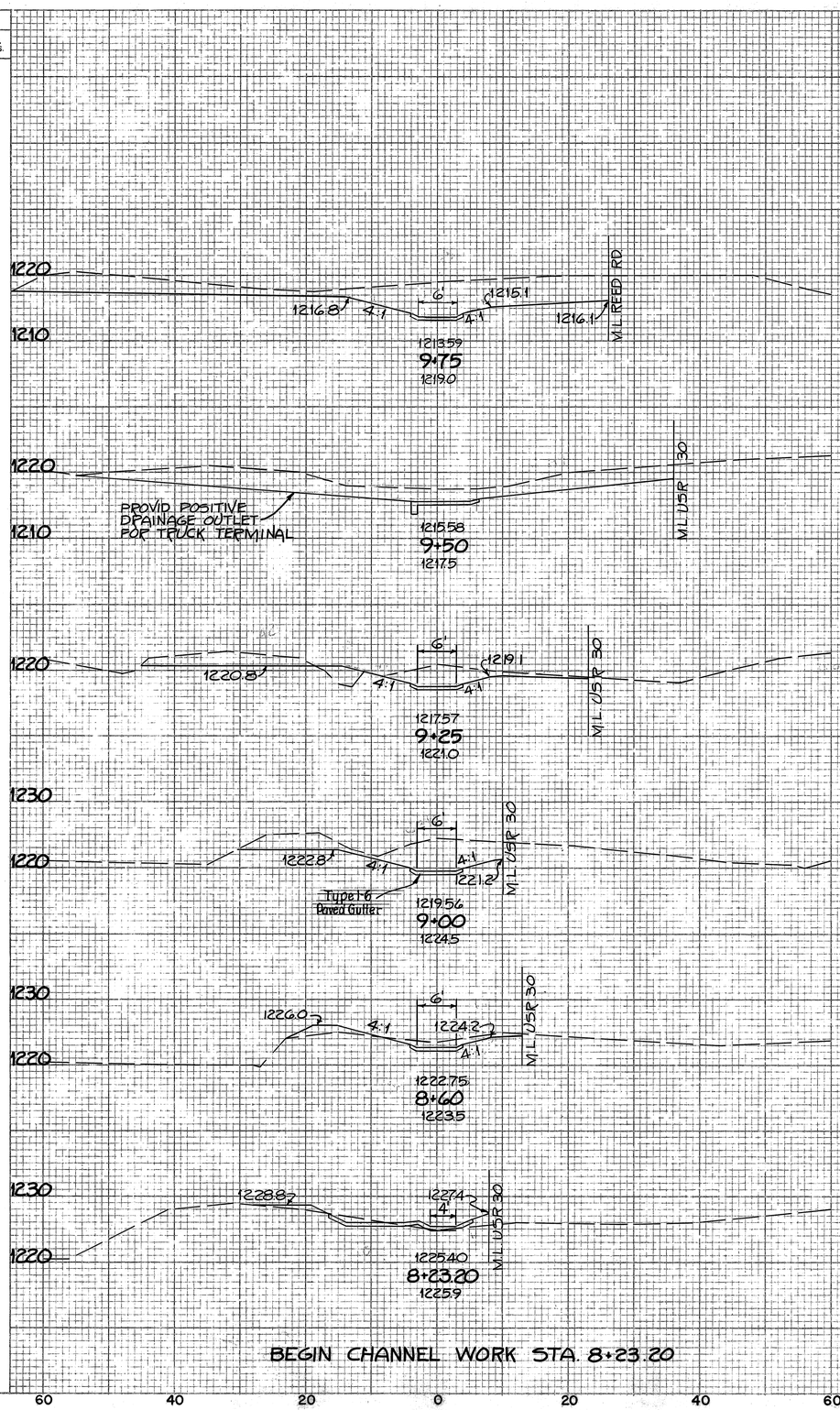
81

QUANTITIES CALC. LGB 11/13/70

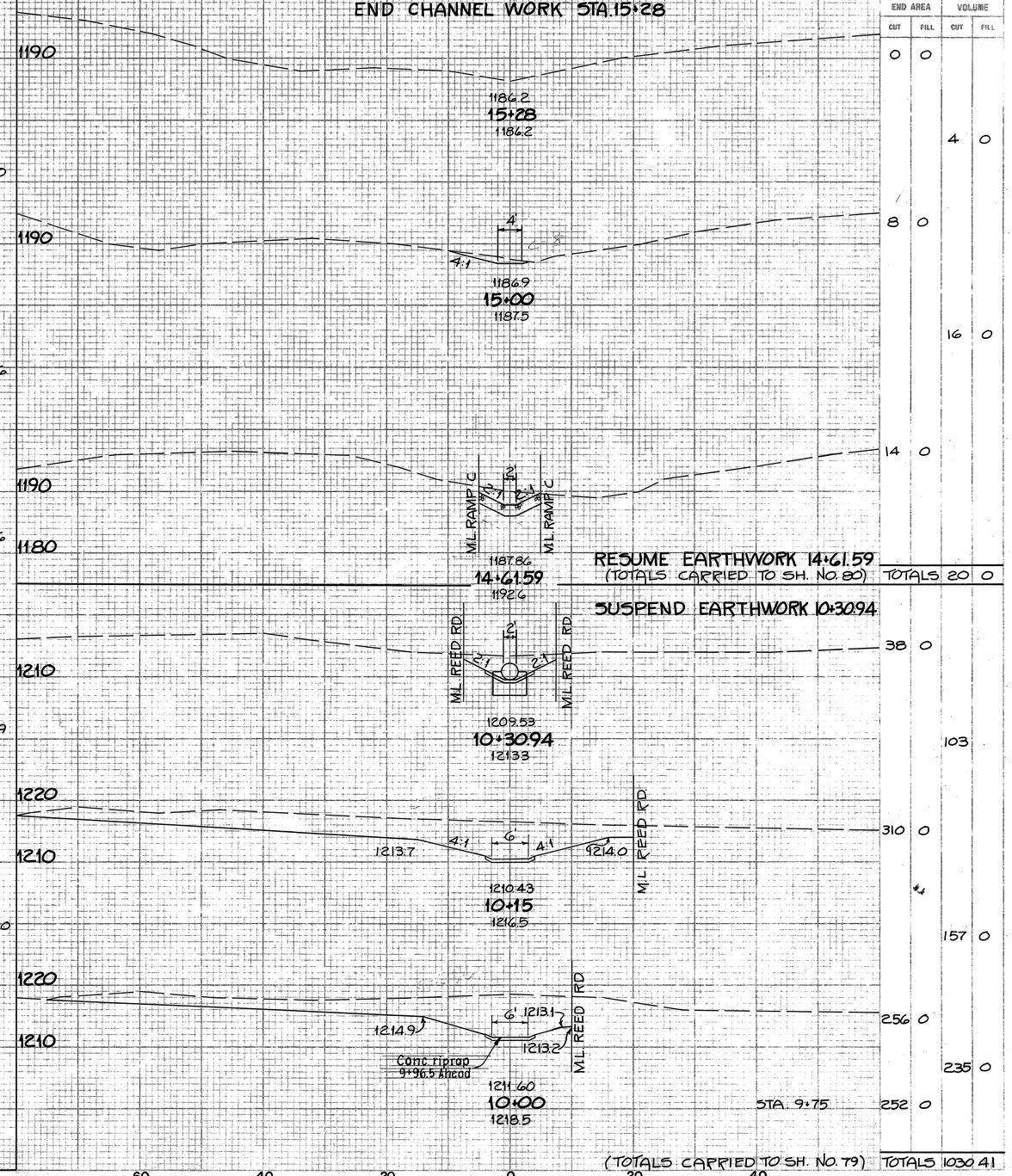
QUANTITIES CK'D. D.A.A. 3/26/71

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
252	0		
		209	0
199	0		
		131	6
84	14		
		87	6
105	0		
		90	9
16	12		
		18	20
10	17		



BEGIN CHANNEL WORK STA. 8+23.20



RESUME EARTHWORK 14+61.59

(TOTALS CARRIED TO SH. NO. 80)

SUSPEND EARTHWORK 10+30.94

STA. 9+75

(TOTALS CARRIED TO SH. NO. 79)

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		4	0
8	0		
		16	0
14	0		
		TOTALS	20 0
		38	0
		103	
		310	0
		157	0
		256	0
		235	0
		252	0
		TOTALS	1030 41

60 40 20 0 20 40 60 60 40 20 0 20 40

CHANNEL X-SECTION 30" CULVERT EXT. USR 30

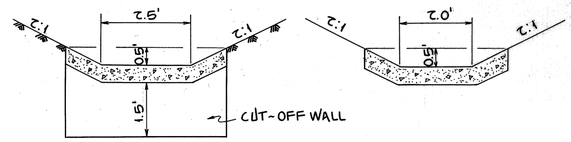
QUANTITIES CALC. D.A.A. 3/22/71
QUANTITIES CK'D. L.G.B. 3/22/71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

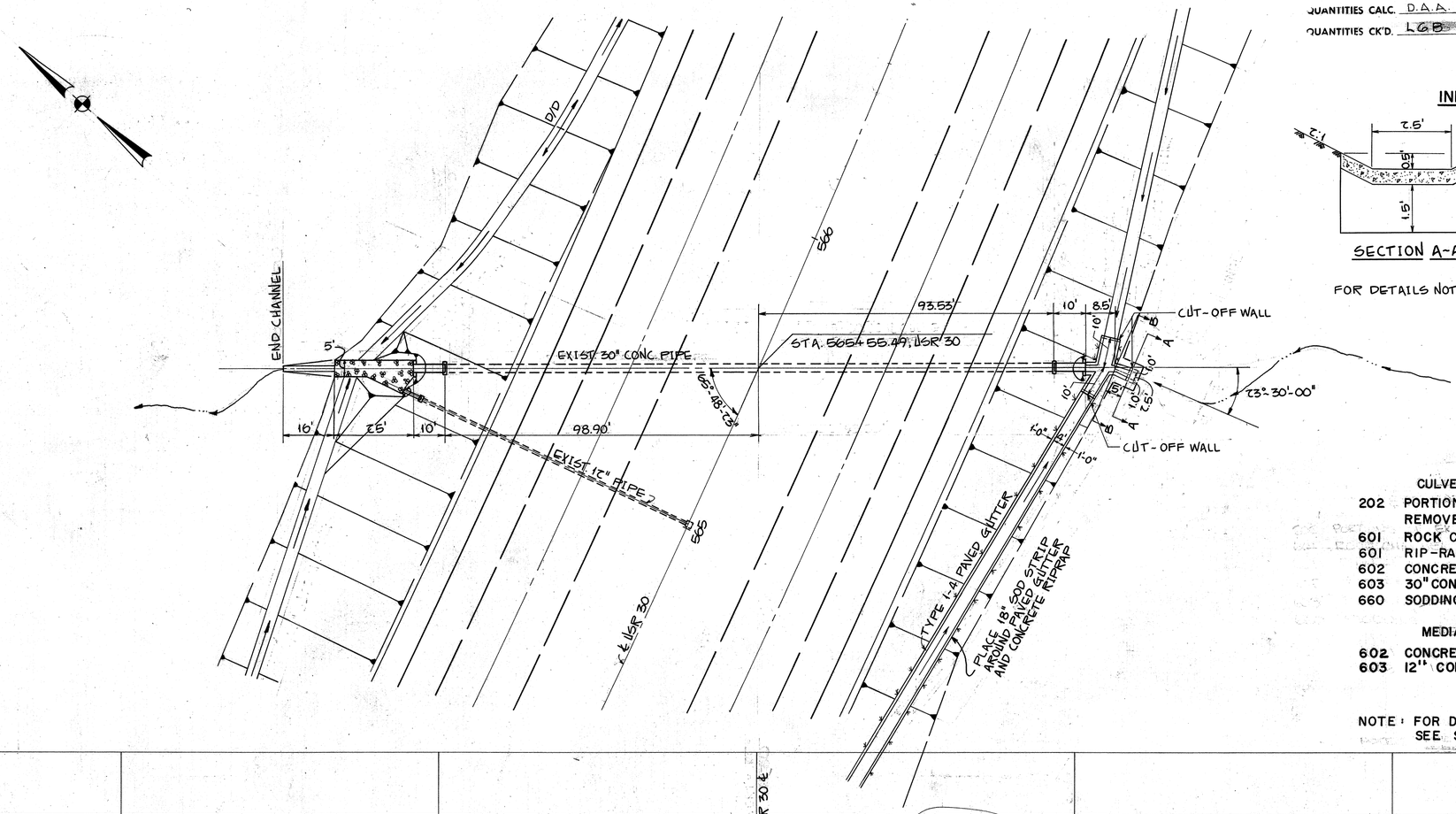
82

INLET RIP-RAP DETAILS



SECTION A-A SECTION B-B

FOR DETAILS NOT SHOWN, SEE STD. DRWG. MC-5



ESTIMATED QUANTITIES

CULVERT EXTENSION STA. 565 + 55.49

202	PORTIONS OF EXISTING STRUCTURES REMOVED. (EXIST. HEADWALLS & CONC. MASONRY)	1.0	CU. YDS.
601	ROCK CHANNEL PROTECTION TYPE B W/BED.	1.3	CU. YDS.
601	RIP-RAP USING 6" REINF. CONC. SLAB	16	SQ. YDS.
602	CONCRETE MASONRY	1.12	CU. YDS.
603	30" CONDUIT TYPE A, 706.02 OR 706.03	20	LIN. FT.
660	SODDING	18	SQ. YDS.

MEDIAN OUTLET EXTENSION STA. 565 + 01.50

602	CONCRETE MASONRY	0.21	CU. YDS.
603	12" CONDUIT TYPE B	6	LIN. FT.

NOTE : FOR DETAILS OF MEDIAN OUTLET EXTENSION SEE SHEET NO. 24

SCALE
0 10 20 30 40 50

30" CULVERT EXTENSION
STA. 565 + 55.49 USR 30
AREA = 7.8 ACS.
Q_{25} = 16.8 CFS.

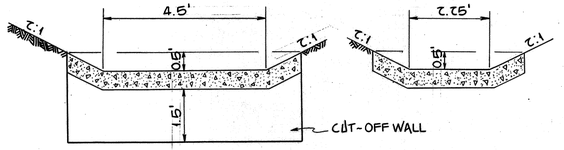
REED ROAD DRAINAGE

QUANTITIES CALC. D.A.A. 3/22/71
QUANTITIES CK'D. LGB 3/23/71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

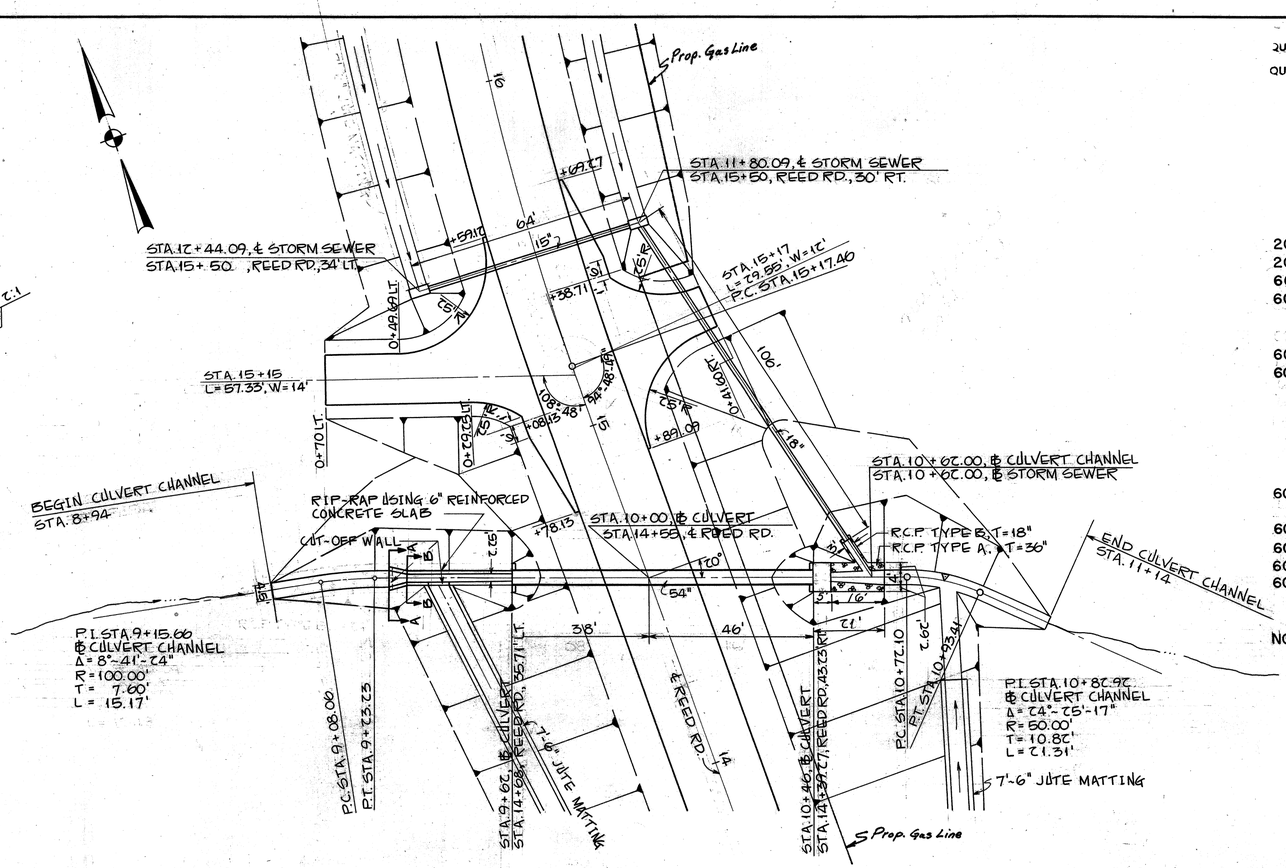
RIC - 30 - 16.37

INLET RIP-RAP DETAILS



SECTION A-A SECTION B-B

FOR DETAILS NOT SHOWN, SEE DRWG. MC-5



ESTIMATED QUANTITIES

STA. 14+55 REED ROAD

203	EXCAVATION (CHANNEL)	172 CU.YDS.
203	EMBANKMENT (CHANNEL)	44 CU.YDS.
601	ROCK CHANNEL PROTECTION TYPE A*	24 CU.YDS.
601	RIP-RAP USING 6" REINFORCED CONCRETE SLAB	21 SQ.YDS.
602	CONCRETE MASONRY	2.66 CU.YDS.
603	54" CONDUIT TYPE A, 707.05 TYPE C	84 LIN.FT.

* WITH BEDDING

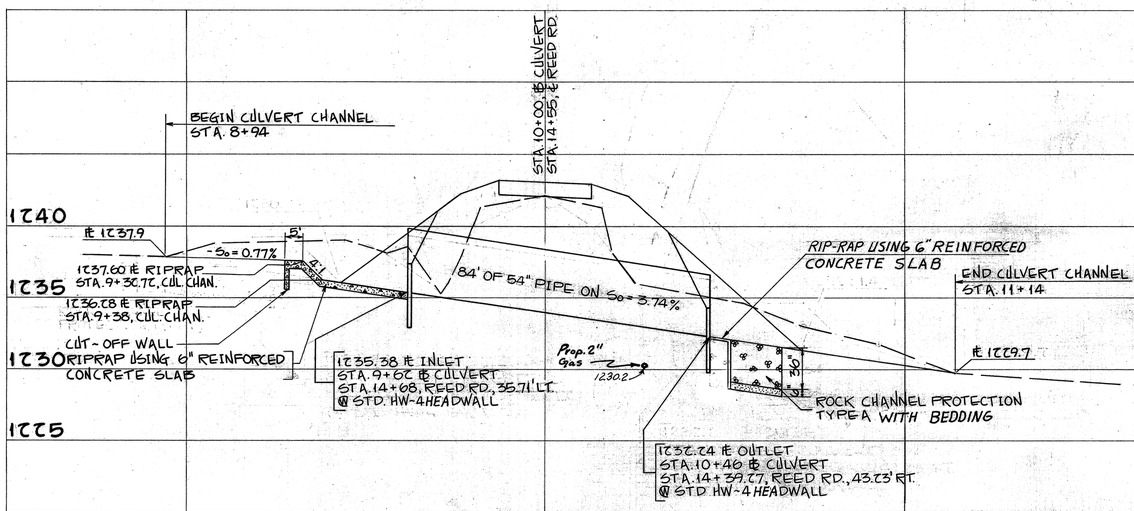
STA. 14+45.55 REED RD TO STA. 15+50 REED RD.

602	CONCRETE MASONRY	.31 CU.YDS.
603	15" CONDUIT TYPE B	64 LIN.FT.
604	STD. NO. 4 CATCH BASIN	2 EACH
601	ROCK CHANNEL PROTECTION TYPE B*	2 CU.YDS.
603	18" CONDUIT TYPE C 706.01 CL 3, 706.02, 706.08 ES OR 707.13	106 LIN.FT.

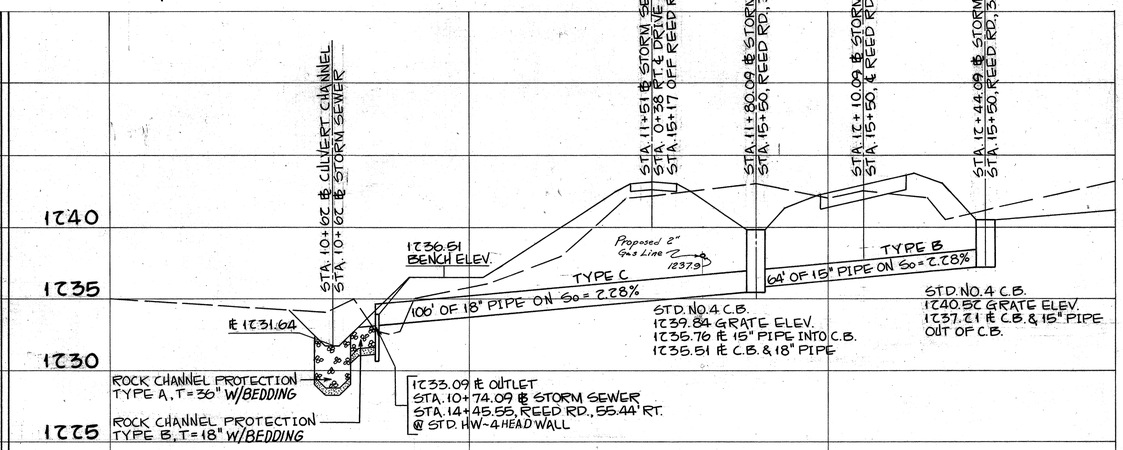
* WITH BEDDING

NOTE: FOR CHANNEL SECTIONS SEE SHEET NO. 84

SCALE
0 10 20 30 40 50



54" CULVERT
STA. 14+55
REED ROAD
AREA = 664 ACS.
Q_{25} = 100 CFS



STORM SEWER SYSTEM
STA. 14+45.55 REED RD TO
STA. 15+50 REED RD.

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9 10 11 10 11 12

REED ROAD DRAINAGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

84

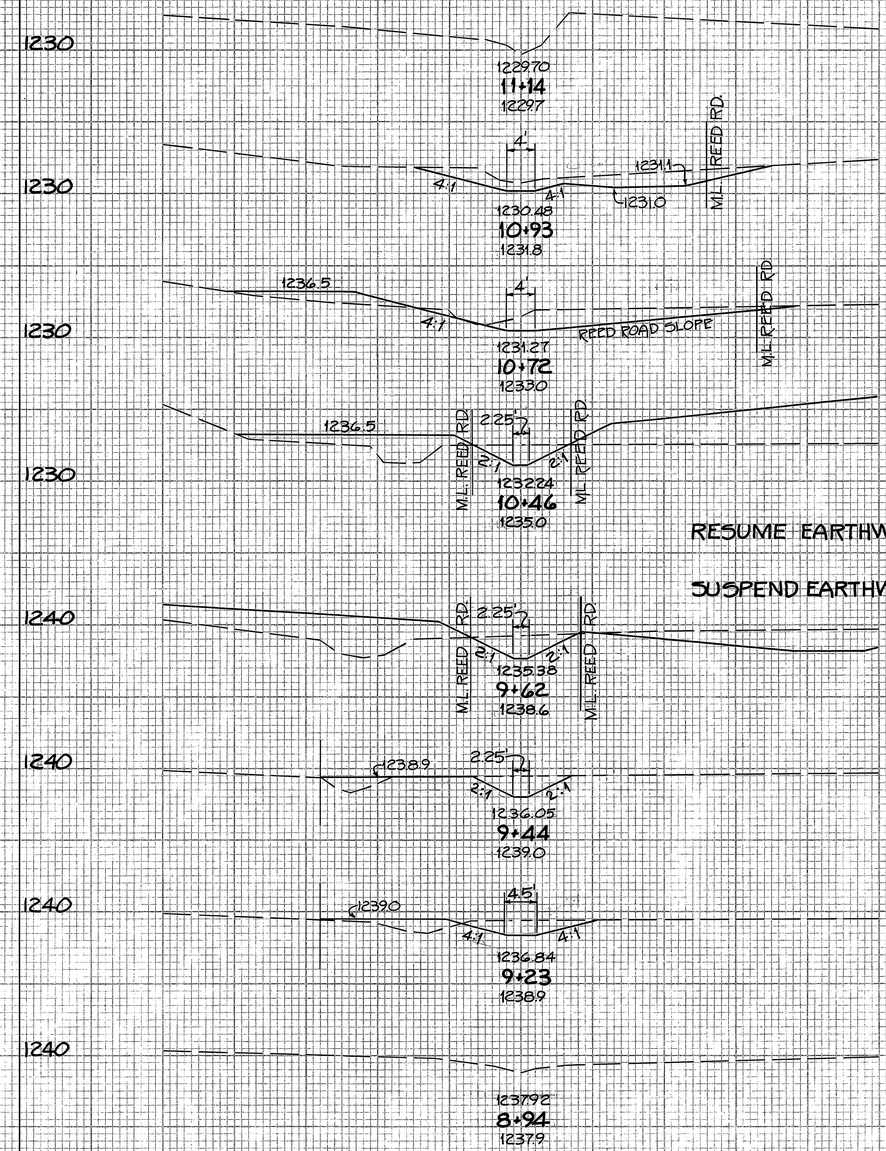
RIC - 30 - 16.37

QUANTITIES CALC. LGB 11/13/70

QUANTITIES CK'D. D.A.A. 3/17/70

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

END CHANNEL WORK STA. 11+14



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		23	0
60	0		
		49	9
66	24		
		42	12
22	0		
		21	4
26	0		
		24	11
38	12		
		13	8
24	15		
0	0		
(TOTALS CARRIED TO SH. NO. 83)		TOTALS 172	44

60 40 20 0 20 40 60

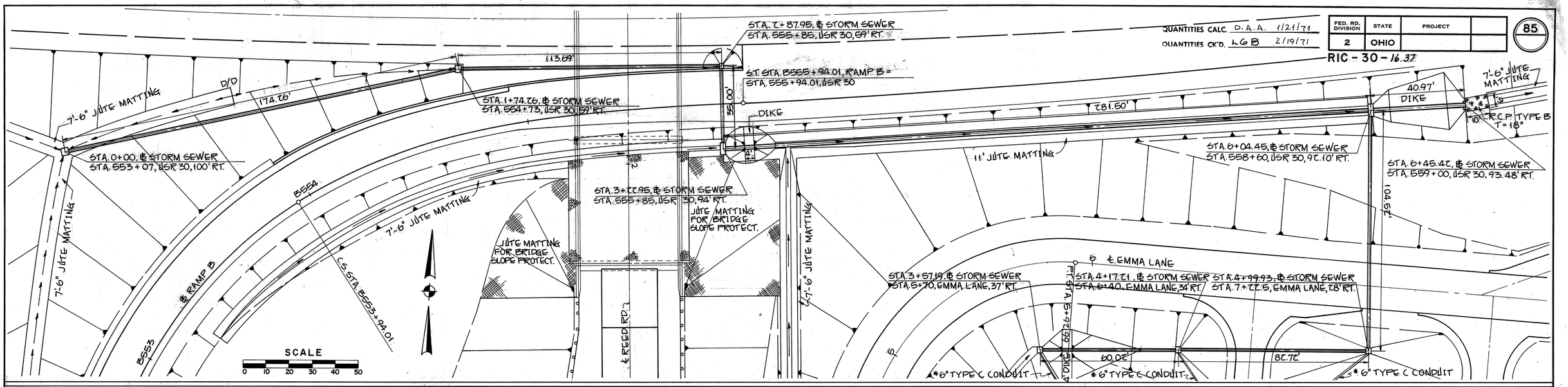
CHANNEL X-SECTIONS CULVERT STA. 14+55 REED ROAD

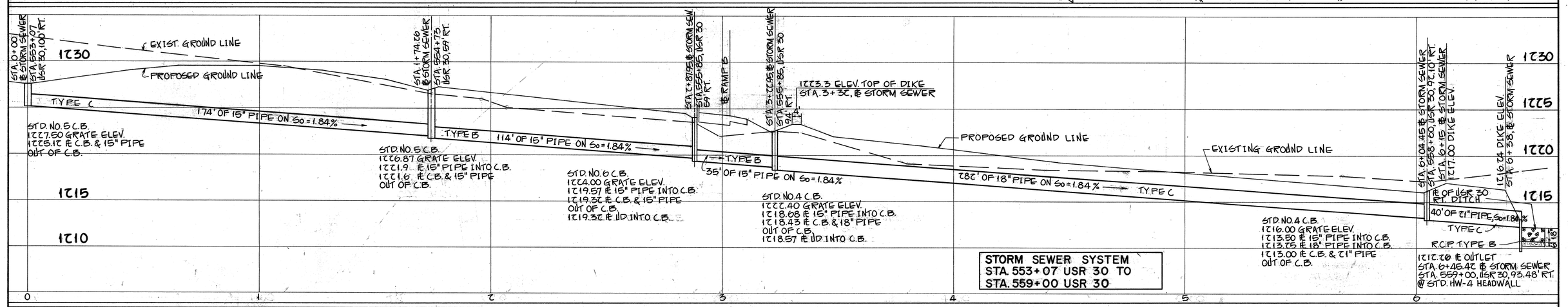
QUANTITIES CALC. D.A.A. 1/21/71
QUANTITIES CK'D. LGB 2/19/71

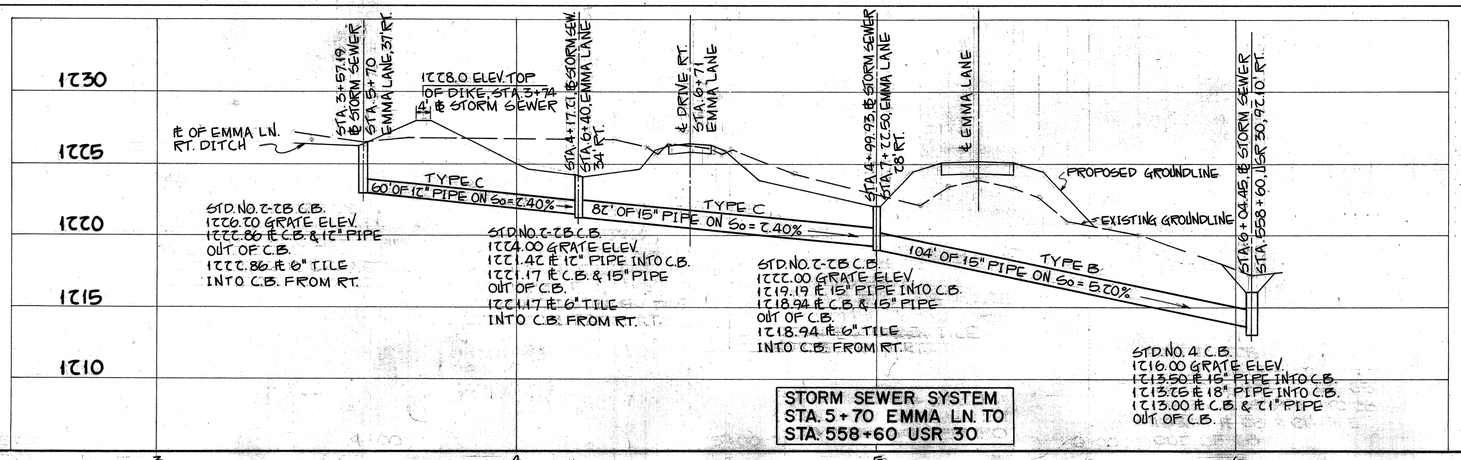
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

85







ESTIMATED QUANTITIES

STA. 553+07 USR 30 TO STA. 559+00 USR 30

602	CONCRETE MASONRY	0.39 CU. YDS.
603	21" CONDUIT TYPE C	40 LIN. FT.
603	18" CONDUIT TYPE C	282 LIN. FT.
603	15" CONDUIT TYPE B	149 LIN. FT.
603	15" CONDUIT TYPE C	174 LIN. FT.
603	STD. NO. 4 CATCH BASIN	2 EACH
604	STD. NO. 5 CATCH BASIN	2 EACH
604	STD. NO. 6 CATCH BASIN	1 EACH
601	ROCK CHANNEL PROTECTION TYPE B, WITH BEDDING	5 CU. YDS.

ESTIMATED QUANTITIES

STA. 5+70 EMMA LANE TO STA. 558+60 USR 30

603	15" CONDUIT TYPE B	104 LIN. FT.
603	12" CONDUIT TYPE C	60 LIN. FT.
604	STD. NO. 2-2B CATCH BASIN	3 EACH
603	15" CONDUIT TYPE C 706.01 Cl. 3, 706.02, 706.08 ES OR 707.13	82 LIN. FT

*NOTE: FOR LOCATION & ESTIMATED QUANTITIES OF 6" CONDUIT TYPE C SEE SHEET NO. 42

REED ROAD DRAINAGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

86
12.5

RIC - 30 - 16.32

QUANTITIES CALC. D.A.A. 1/19/71

QUANTITIES CK'D. L&B 2/19/71

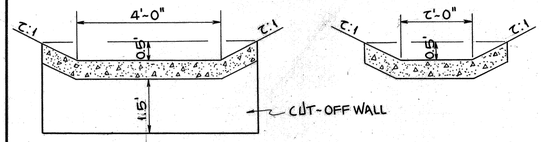
ESTIMATED QUANTITIES

603	CONDUIT TYPE A, 48" 706.02 1250 D-LOAD, OR 54" 707.05 TYPE C	146	LIN.FT.
203	EXCAVATION (CHANNEL)	205	CU.YDS.
203	EMBANKMENT (CHANNEL)	19	CU.YDS.
601	ROCK CHANNEL PROTECTION TYPE B *	124	CU.YDS.
601	RIP-RAP USING 6" REINF. CONC. SLAB	161	SQ.YDS.
602	CONCRETE MASONRY	2.66	CU.YDS.
603	CONDUIT TYPE A, 48" 706.02 LOR II	146	LIN.FT.
603	54" 707.05 TYPE C	64	LIN.FT.
604	STD. NO. 5-A CATCH BASIN	1	EACH

* WITH BEDDING

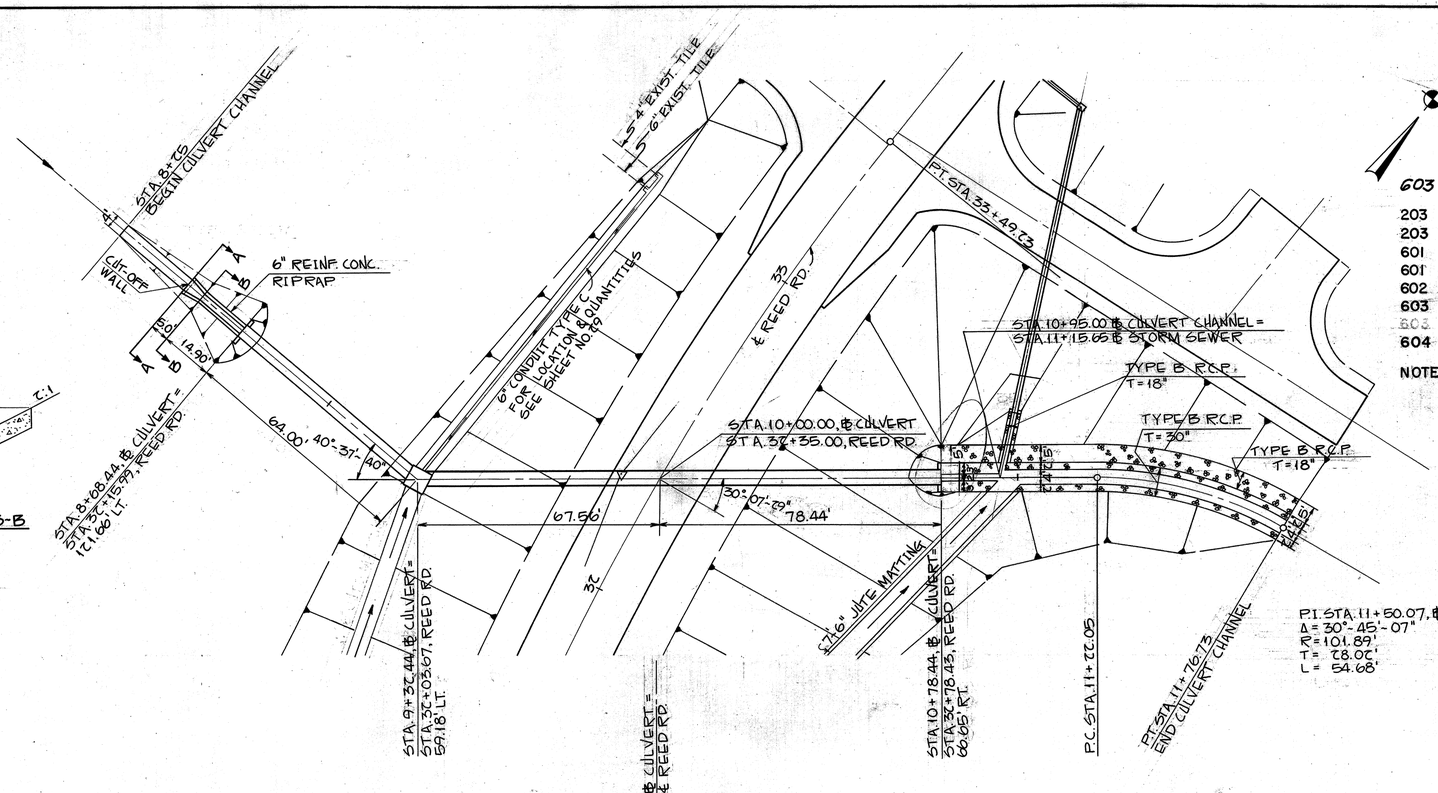
NOTE: FOR CHANNEL SECTIONS SEE SHEET NO. 87

INLET RIP-RAP DETAILS

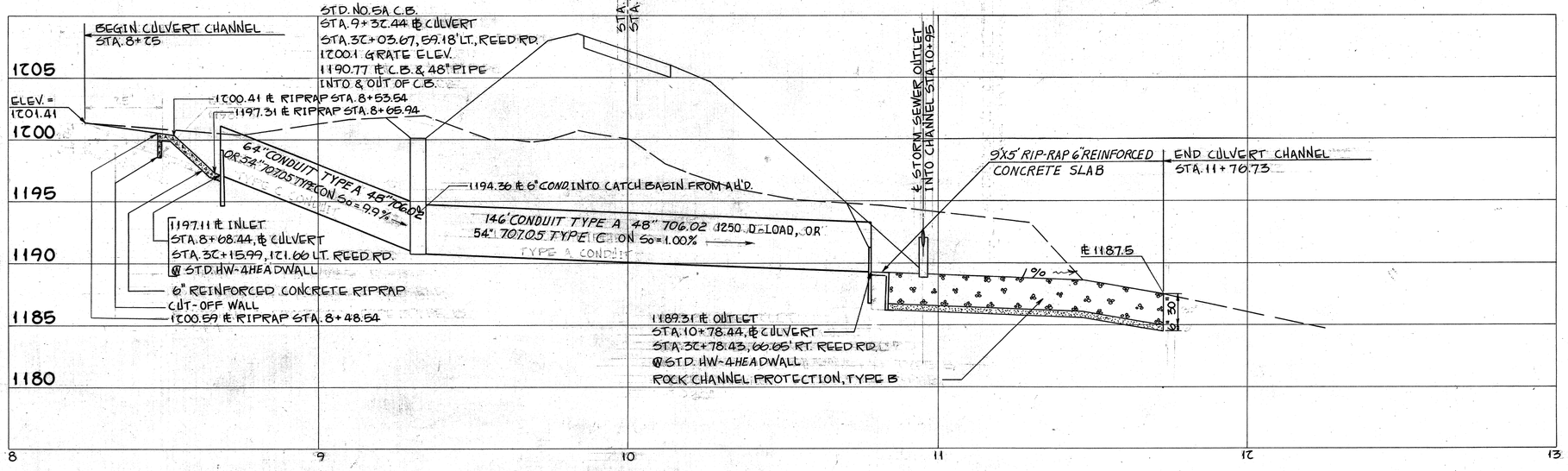


SECTION A-A SECTION B-B

FOR DETAILS NOT SHOWN, SEE STD. DRWG. MC-5



SCALE
0 10 20 30 40 50



CULVERT
STA. 32+35
REED RD.
AREA = 39.7 ACS
Q25 = 79.0 CFS

Rev. 2-9-77

REED ROAD DRAINAGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

87

RIC - 30 - 16.37

QUANTITIES CALC. LGB 11/13/70

QUANTITIES CK'D. D.A.A. 3/25/71

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

1200
1190

M.L. DRIVE 5' 8' M.L. REED RD.
11930
RCP T=18" RCP T=30"
1189.15
10+95
1194.3

79 0

43 2

1200
1190

M.L. DRIVE 5' 8' M.L. REED RD.
1196.0
1194.0
RCP T=18" RCP T=30"
1189.31
10+78.44
1194.8

60 6

RESUME EARTHWORK 10+78.44

END CHANNEL WORK STA. 11+76.73

1200
1190

E. REED RD LT. DITCH E. REED RD LT. DITCH
1200.1
9+32.44
1202.1

SUSPEND EARTHWORK 8+68.44

1200
1190

2:1 2:1
1197.11
8+68.44
1200.4

47 0

14 0

1210
1200

2' 2:1 2:1
1200.41
8+53.54
1200.8

4 0

2 0

1201.4
8+25
1201.4

0 0

BEGIN CHANNEL WORK STA. 8+25

1200
1190

5' 8'
RCP T=18" RCP T=30"
1187.5
11+76.73
1187.5

0 0

1200
1190

5' 8' M.L. DRIVE 1192.0 4:1
RCP T=18" RCP T=30"
W/BEDDING 1188.50 W/BEDDING
11+51
1188.50

18 2

37 4

1200
1190

5' 8' M.L. DRIVE 1192.0 4:1
RCP T=18" RCP T=30"
1188.85
11+25
1193.8

49 8

64 12

79 7

STA. 10+95 79 0

(TOTALS CARRIED TO SH. NO. 86) TOTALS 205 19

60 40 20 0 20 40 60 60 40 20 0 20 40 60

CHANNEL X - SECTION CULVERT STA. 32+35 REED ROAD

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30-16.37

QUANTITIES CALC. D.A.A. 1/19/71

QUANTITIES CK'D. L.G.B. 2/19/71

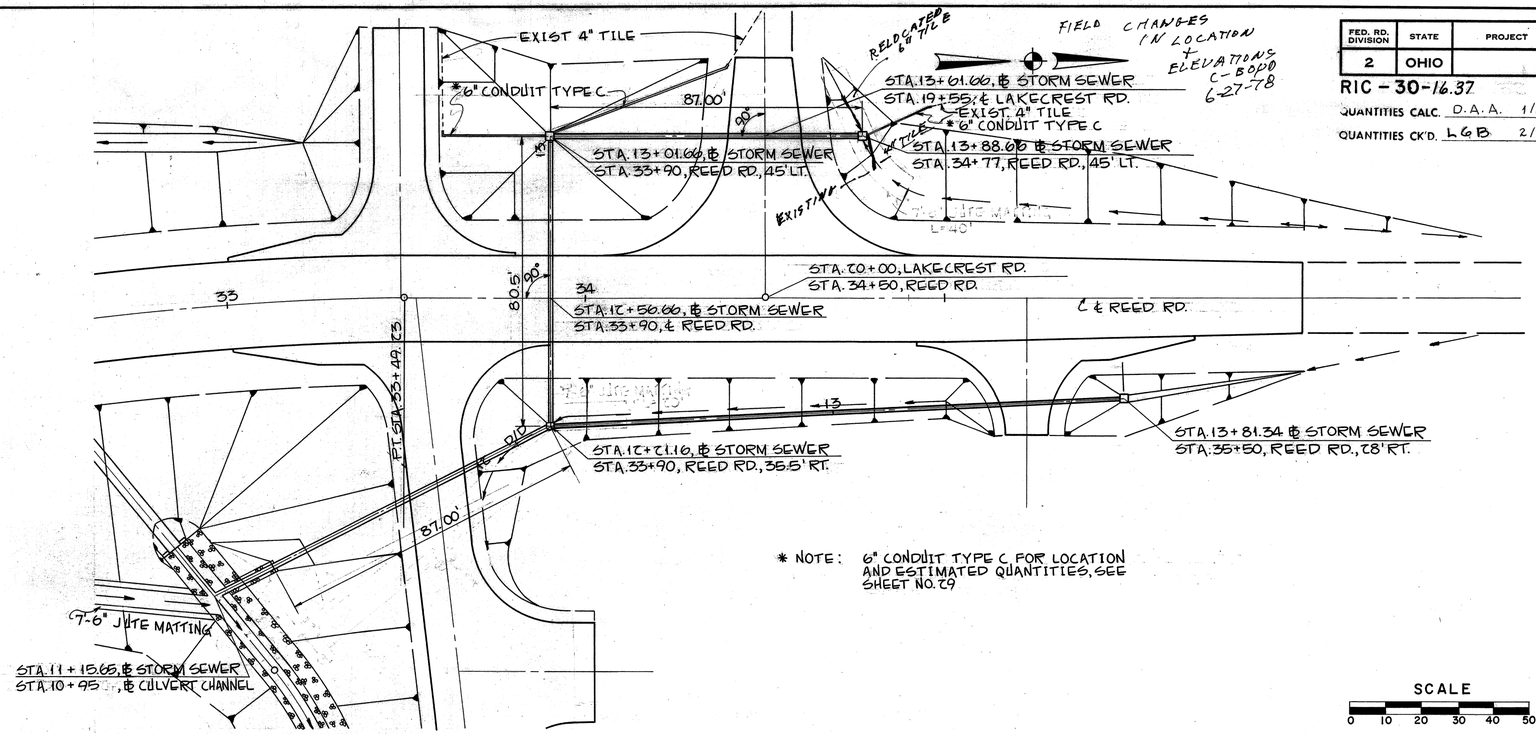
ESTIMATED QUANTITIES

STA. 33+18.81 REED RD TO STA. 34+77 REED RD.

602	CONCRETE MASONRY	0.33	CU. YDS.
603	18" CONDUIT TYPE C 706.01 CL3, 706.02, 706.08 ES OR 707.13	87	LIN. FT.
603	15" CONDUIT TYPE B	167	LIN. FT.
604	STD. NO. 2-2B CATCH BASIN	3	EACH
601	ROCK CHANNEL PROTECTION TYPE B W/BEDDING	3	CU. YDS.

STA. 33+90 REED RD. TO STA. 35+50 REED RD.

603	12" CONDUIT TYPE C 706.01 CL3 706.02, 706.08 ES OR 707.13	160	LIN. FT.
604	STD. NO. 2-2B CATCH BASIN	1	EACH



* NOTE: 6" CONDUIT TYPE C FOR LOCATION AND ESTIMATED QUANTITIES, SEE SHEET NO. 29

SCALE
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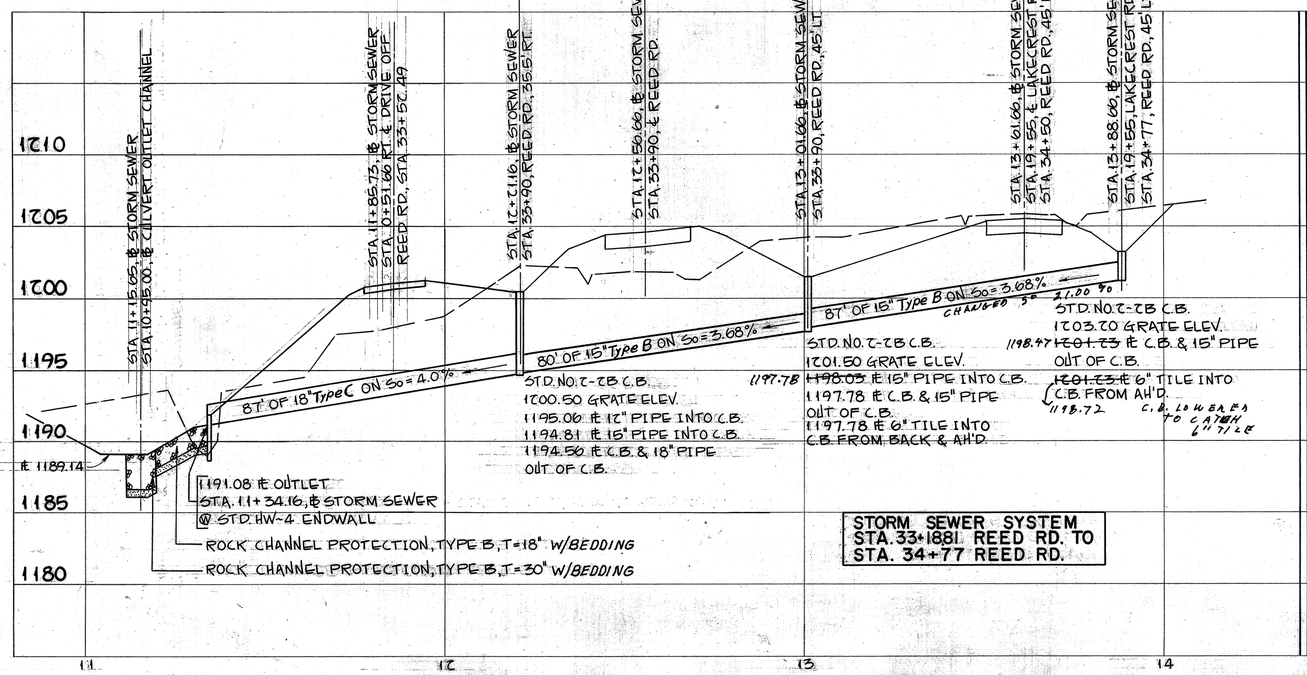

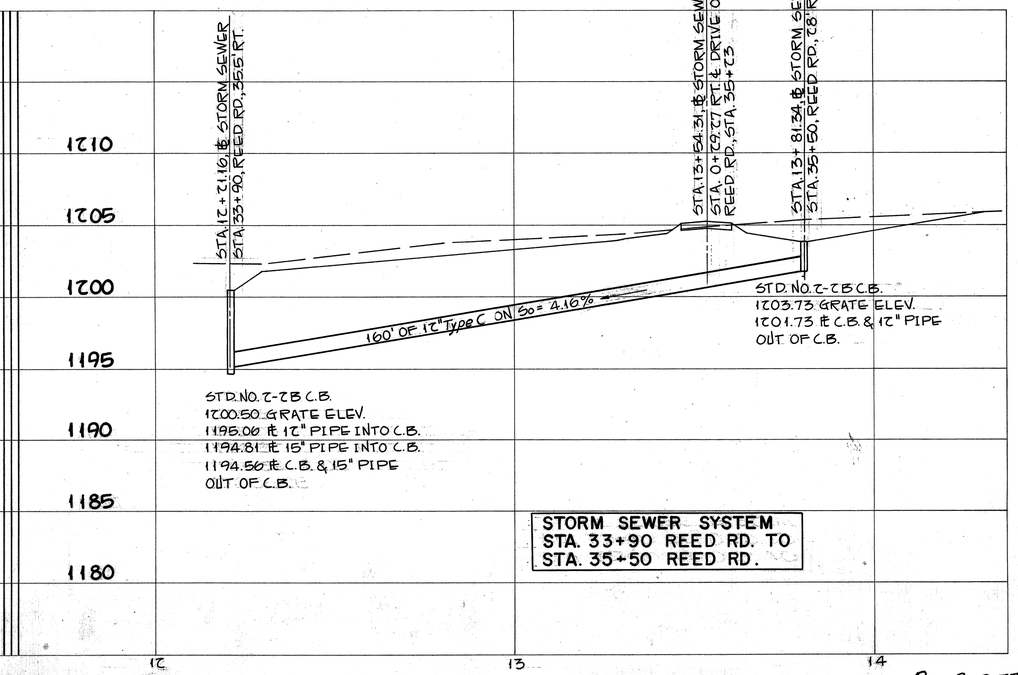

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REED ROAD DRAINAGE

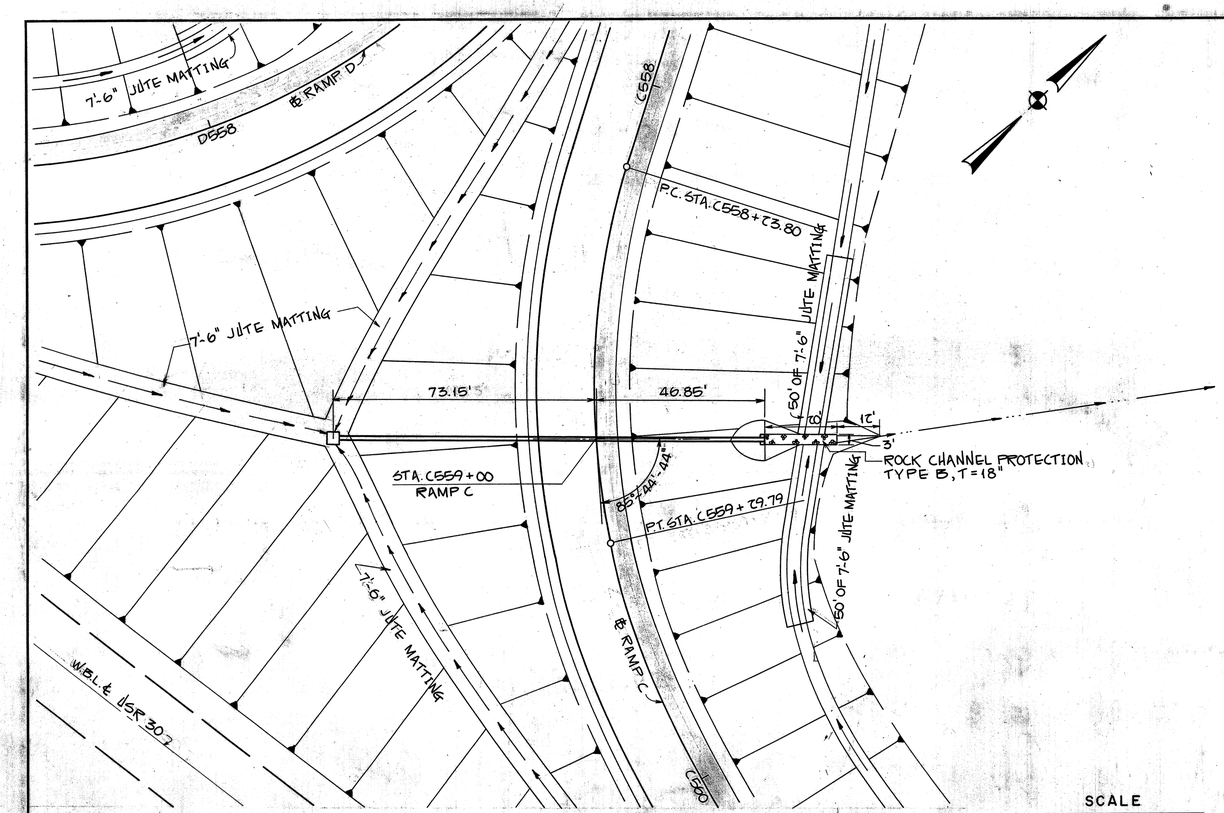
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

89

RIC. - 30 - 16.37

QUANTITIES CALC. SWR 3/31/71

QUANTITIES CK'D. D.A.A. 6/2/71



SCALE
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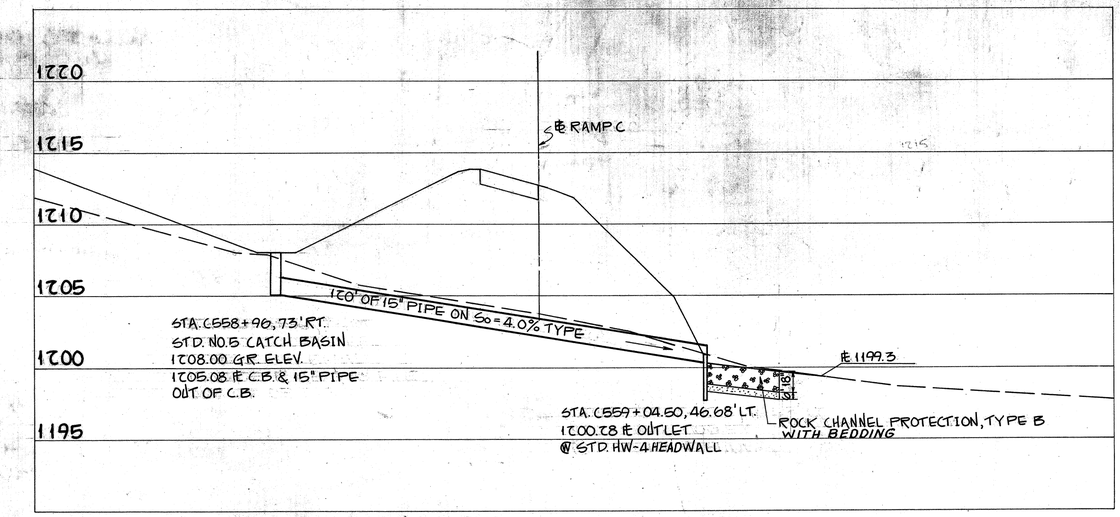


ESTIMATED QUANTITIES

601	ROCK CHANNEL PROTECTION TYPE B *W/BEDDING*	5	CU. YDS.
602	CONCRETE MASONRY	0.27	CU. YDS.
603	15" CONDUIT TYPE B	120	LIN. FT.
604	STD. NO. 5 CATCH BASIN	1	EACH

CULVERT
STA. C559+00.00
RAMP C
AREA = 1.4 ACS
Q_{25} = 7.9 CFS

REED ROAD DRAINAGE

B.M. - Top Conc. Mon. - ℄ Median
U.S.R. 30 Sta. 552 + 72.44
Elev. 1230.535

C.S. - Sta. B553 + 94.01

℄ U.S.R. 30

℄ Ramp B

CB

7'-6" Jute matting

Seeding and jute matting

End Approach Slab
Sta. 23 + 54.69

Top of slope
El. 1244.99

B-3

10.00' Required
10.45' Actual

3:1

2.00:1

46'-0" % Deck

22'-0"

1'-0"

9"

Crushed aggregate slope protection

Bench

7'-6" Jute matting

S.T. - Sta. B555 + 94.01 - Ramp B
- Sta. 555 + 94.01 (74.00 Rt.)
U.S.R. 30

CB

15"

14'

10'

12' 12' 25' 25' 12' 12'

℄ Ramp D

D555

D556

D557

T.S. - Sta. D554 + 94.05 - Ramp D
- Sta. 554 + 94.05 (74.00 Lt.) - U.S.R. 30

Point of minimum vertical clearance

T/s El. 1233.67

Begin Approach Slab
Sta. 26 + 44.19

℄ Reed Road
N. 02°-39'-01.16" W.

10.00' Req'd.
10.45' Actual

B-8

Reed Road - Sta. 25 + 00.00

℄ U.S.R. 30 - Sta. 555 + 45.00

2.07:1

Reinforced sodding

Seeding and jute matting

Paved gutter, Type 1-6

℄ Existing Reed Road (T.H. 289)

7'-6" Jute matting

Concrete Rip-rap

33"

P.I. - Sta. 27 + 72.10

SPIRAL DATA - RAMP "D"
P.I. - Sta. D556 + 29.33
Δ_s = 29°-48'-47.22"
L_s = 200.00'
L.T. = 135.28'
S.T. = 68.43'
X = 194.65'
Y = 34.02'

CURVE DATA - U.S.R. 30
P.I. - Sta. 560 + 00.00
Δ = 21°-06'
D = 1°-28'
R = 3906.53'
T = 727.56'
L = 1438.64'

SPIRAL DATA - RAMP "B"
P.I. - Sta. B554 + 62.44
Δ_s = 29°-48'-47.22"
L_s = 200.00'
L.T. = 135.28'
S.T. = 68.43'
X = 194.65'
Y = 34.02'

P.V.I. - Sta. 23 + 25
Elev. 1257.84
L.V.C. = 650'
Corr = -6.27'

+1.96 % -5.76 %

EMMA LANE

1'-6" Jute matting

7'-6" Jute Matting

S.C. - Sta. D556 + 94.05

1252.87 1252.66 1252.37 1252.01 1251.57 1251.06 +54.69 1250.47 1249.81 1249.07 1248.27 1247.38 1246.42 1245.39 1244.29 1243.11 1241.85 1240.52 +44.19 1239.12 - P.V.T. 1237.68 1236.24 1234.80 1233.36 1231.92

BRIDGE LIMITS = 289.50'

P.G. El. 1243.80

4.05'

15.00' Required
15.14 Actual

El. 1238.96

2.14:1

Crushed aggregate slope protection

Approximate top of rock

El. 1219.0

El. 1219.0

El. 1224.61

El. 1216.2

2.04:1

El. 1227.64

Profile grade

Existing ground

Steel "H" Piles (HP 10×42) The estimated average pay lengths are: Rear Abutment - 27', Pier 1 - 10', Pier 2 - 14', Pier 3 - 16', Forward Abutment - 29'.

+56.94 +10.44 +93.44 +38.44 +41.94

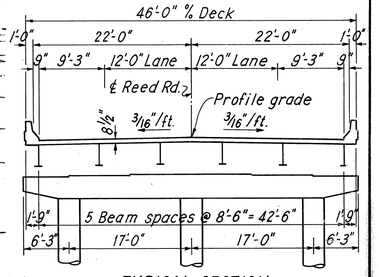
1240 1230 1220 1210 1200 1190

23 24 25 26 27

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

90

RIC-30-16.37



TYPICAL SECTION

EARTHWORK limits shown are schematic. Actual slopes shall conform to plan cross sections

- Core boring location
- Rod sounding location

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure
SPANS: 53.5'-89'-89'-53.5' % Bearings
ROADWAY: 44'-0" t/f Parapets
LOADING: HS 20-44
SKEW: 0°
WEARING SURFACE 1" Monolithic concrete
APPROACH SLABS: AS-1-72 (25' long) Modified
ALIGNMENT: Tangent
AVERAGE DAILY TRAFFIC: Reed Road (1988) = 1365. U.S.R. 30 (1988) = 16,105

SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES, INC.
Consulting Engineers
MANSFIELD OHIO WOOSTER

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SITE PLAN

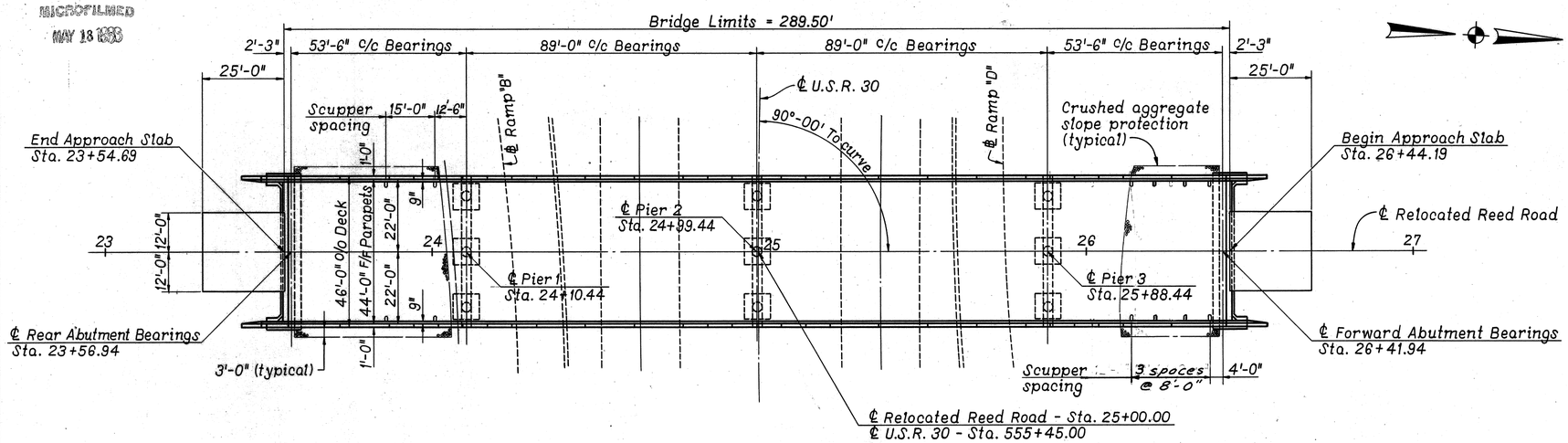
BRIDGE NO. RIC-30-1638
UNDER REED ROAD (T.H. 289)
RICHLAND COUNTY U.S.R. 30
STA. 555 + 45.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	RAK		JM	7-27-70	

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

91

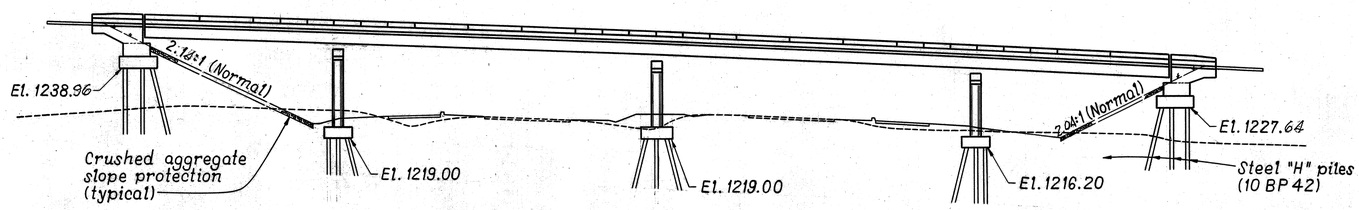
RIC - 30 - 16.37



GENERAL PLAN

P.V.I. - Sta. 23+25
Elev. 1257.84
L.V.C. = 650'
Corr. = -6.27'

+1.96% △ -5.76%



GENERAL ELEVATION

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN'L		
503	396	Cu.Yds.	Unclassified excavation		218	178			
505	Lump	Sum	Test Pile				Lump		
507	1720	Lin.Ft.	Steel H piles, H.P. 10 x 42		840	880			
509	88622	Lbs.	Reinforcing steel	49,309	13,123	26,190			
Special	51,342	Lbs.	Epoxy coated reinforcing steel (See Proposal Note)	51,342					
511	421	Cu.Yds.	Class C concrete, superstructure	421					
511	86	Cu.Yds.	Class C concrete, piers above footings			86			
511	159	Cu.Yds.	Class C concrete, footings		78	81			
511	100	Cu.Yds.	Class C concrete, abutments above footings		100				
513	390,316	Lbs.	Structural steel	390,316					
514	390,316	Lbs.	Field painting structural steel	390,316					
518	12	Each	Scuppers, including supports	12					
518	52	Cu.Yds.	Porous backfill		52				
518	77	Lin.Ft.	6" Perforated helical C.S.P. including specials, 707.01		77				
518	82	Lin.Ft.	6" Non-perforated helical C.S.P., 707.01		82				
601	480	Sq.Yds.	Crushed aggregate slope protection				480		
808	421	Units	Chemical admixtures for concrete, Type A, B or D	421					
838	3	Hrs.	Special pile tests				3		

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-72 (Dated 6-30-72); SD-1-69, sheets 1 thru 4 of 4 (dated 6-12-69); BR-1-67, sheet 1 of 3 (revised 10-15-71); RB-1-55 (revised 2-2-59); and to Supplemental Specifications 808 (dated 1-1-71); 836 (dated 3-1975) and 838 (dated 3-18-70)

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway Officials, 1965, including the Ohio "Supplement" to these specifications.

DESIGN DATA:

Design Loading - HS 20-44
Concrete Class "C" - unit stress 1200 p.s.i. for superstructure
unit stress 1333 p.s.i. for substructure
Structural Steel - ASTM A36 - unit stress 20,000 p.s.i.
Reinforcing Steel - ASTM A615, A616 or A617 - unit stress 20,000 p.s.i. Spiral reinforcement be plain bars ASTM A82 or A675.

EMBANKMENT CONSTRUCTION: The embankments shall be constructed to the level of the subgrade for a minimum distance of 200 feet back of the abutments. Excavation shall then be made for the abutments and Pier 1, and piles driven.

MAINTENANCE OF TRAFFIC: Four lanes of traffic with a minimum horizontal width extending 49' out both directions from ℄ U.S.R. 30 and a minimum vertical clearance of 13'-6" shall be maintained on ℄ U.S.R. 30 at all times.

PILES shall be driven to refusal on bedrock or to 20 blows per inch for the last few inches of penetration. The design load is 35 tons per pile for the abutment and Pier piles.

END DAMS AND SCUPPERS: Steel bar stock utilized for end dams and scuppers may be any weldable grade of low or mild carbon steel available commercially. This material is to be excluded from the requirements of 501.07 for test reports.

BACKWALL CONCRETE: In addition to the provisions of 511.08 backwall concrete or backwall concrete above the optional construction joint at the approach slab seat shall not be placed until after the deck concrete in the span adjacent to the abutment has not been placed.

SCUPPERS shall be in accordance with Standard Drawing SD-1-69 except that scupper pipes shall extend 8" below the bottom of the beams instead of 2".

Modify Standard Drawing AS-1-72 as follows:

(a) Dimension W = 24'-0"

(b) change clearance for top reinforcing steel to 3" from 2"

(c) omit jacking holes.

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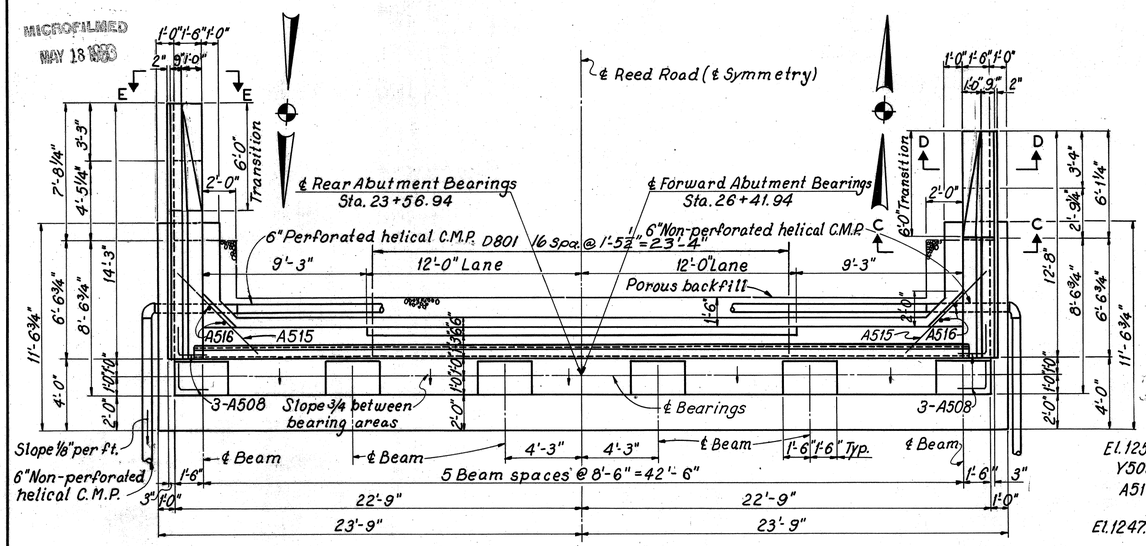
GENERAL PLAN, GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. RIC - 30 - 1638.12
UNDER REED ROAD (T.H. 289)
RICHLAND COUNTY U.S.R. 30
STA. 555 + 45.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	JM	RWH		LK	7-27-70	

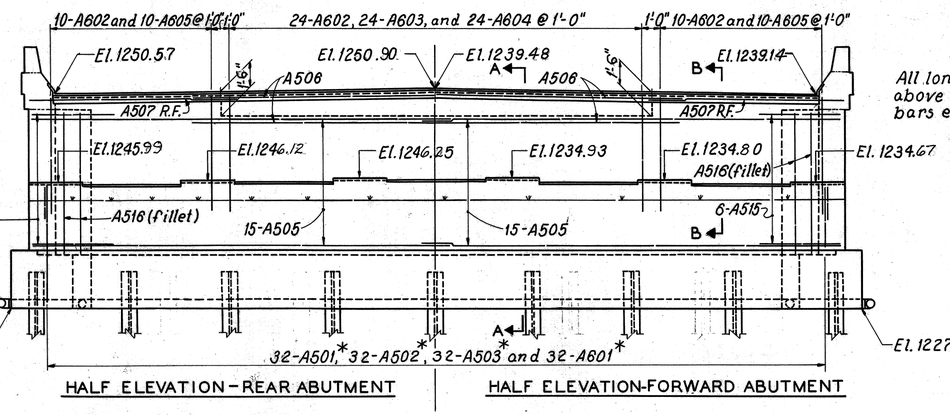
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37



HALF PLAN - REAR ABUTMENT

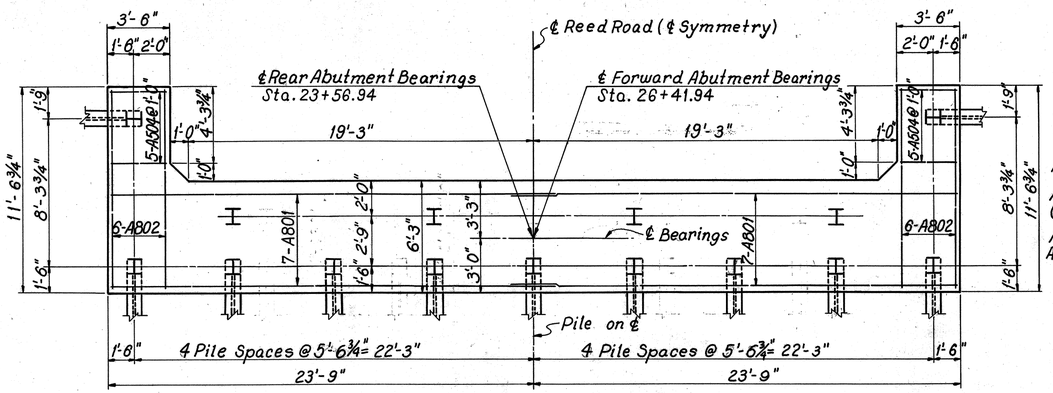
HALF PLAN - FORWARD ABUTMENT



*Bars shall be equally spaced between piles at approximately 1'-5" c/c

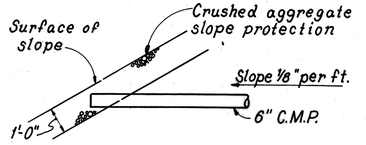
HALF ELEVATION - REAR ABUTMENT

HALF ELEVATION - FORWARD ABUTMENT

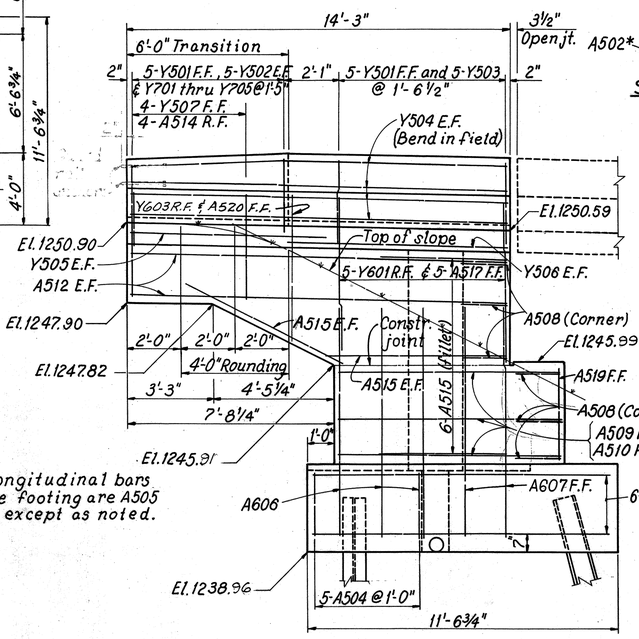


HALF FOOTING PLAN - REAR ABUTMENT

HALF FOOTING PLAN - FORWARD ABUTMENT

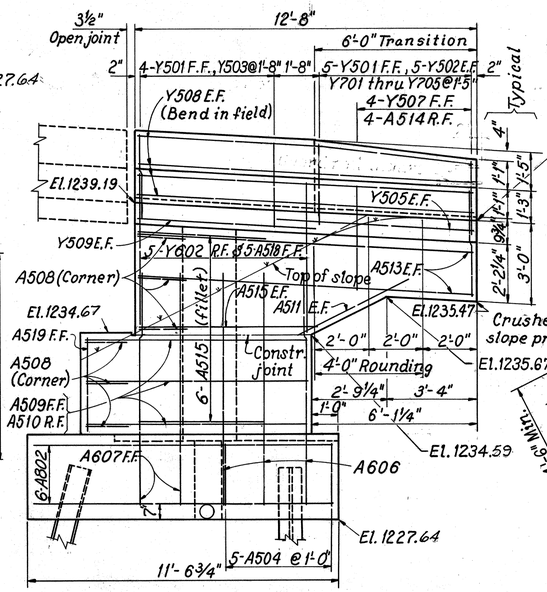


TERMINATION OF 6" C.M.P. AT FRONT SLOPE

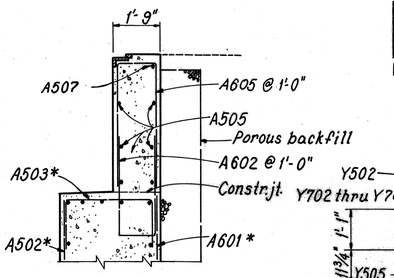


All longitudinal bars above footing are A505 bars except as noted.

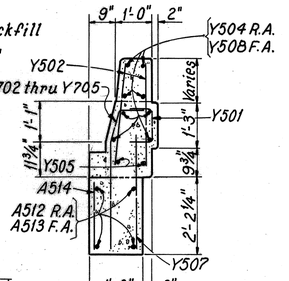
WINGWALL ELEVATION - REAR ABUTMENT



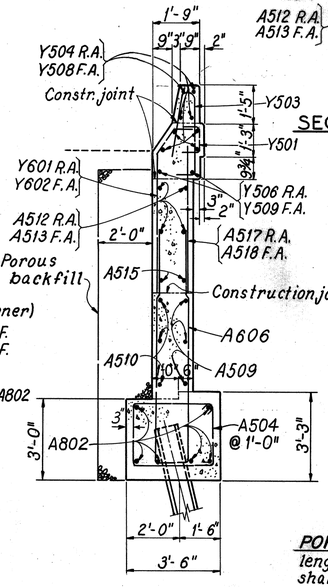
WINGWALL ELEVATION - FORWARD ABUTMENT

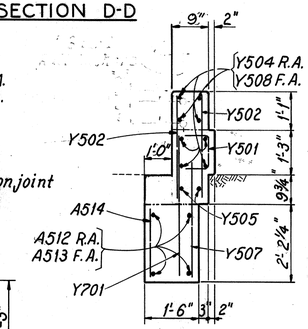


SECTION B-B

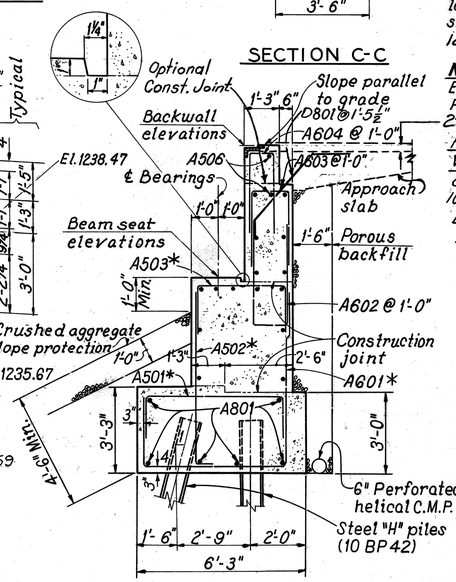


SECTION D-D





SECTION E-E



SECTION C-C

SECTION A-A

NOTES:

POROUS BACKFILL, 1.5 ft. thick for full length of abutment and 2 ft. thick for wings, shall extend up to the subgrade and laterally to the ends of the wing walls.

NOTATION: F.F.-Front Face; R.F.-Rear Face; E.F.-Each Face; R.A.-Rear Abutment; F.A.-Forward Abutment

PARAPET TRANSITION (AND WING-WALL ENDS) shall be as shown on Std. Dwg. BR-1-67 revised 10-15-71. Reinforcing steel shall be field bent or cut to fit the revised shape.

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ABUTMENTS

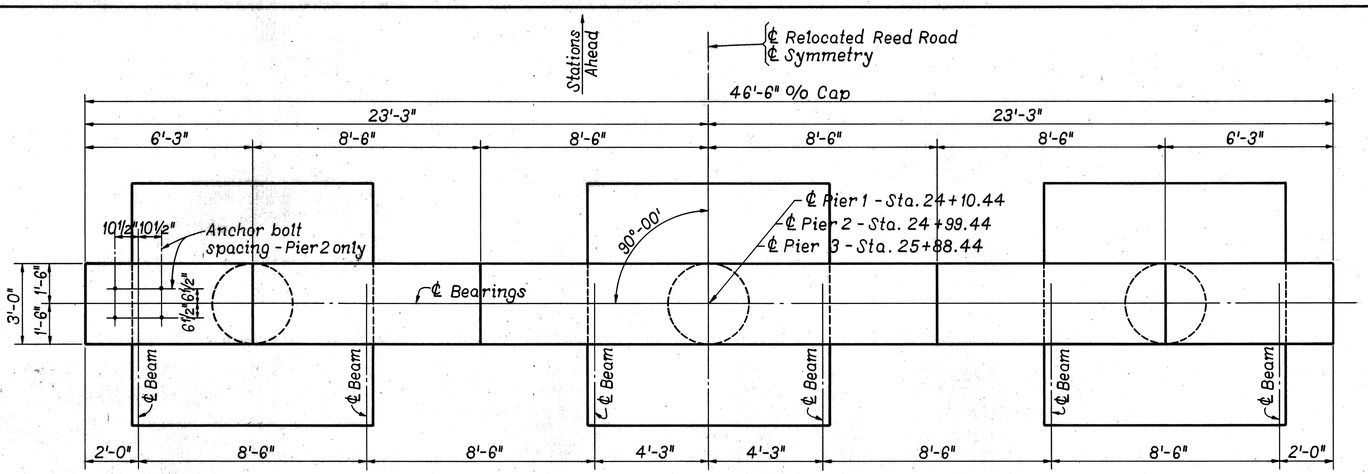
BRIDGE NO. RIC-30-1638
UNDER REED ROAD (T.H. 289)
RICHLAND COUNTY U.S.R. 30
STA. 555+45.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	TJS		JM	7-27-70	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

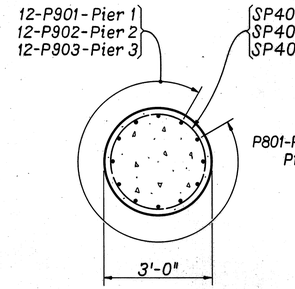
93

RIC - 30 -16.37

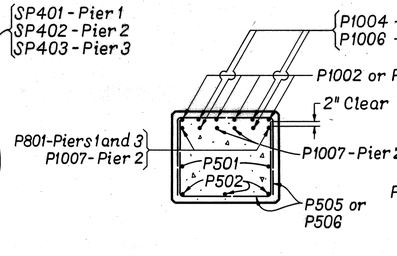


HALF PLAN - PIER 2

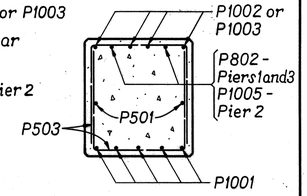
HALF PLAN PIER 1 AND 3



SECTION A-A



SECTION B-B



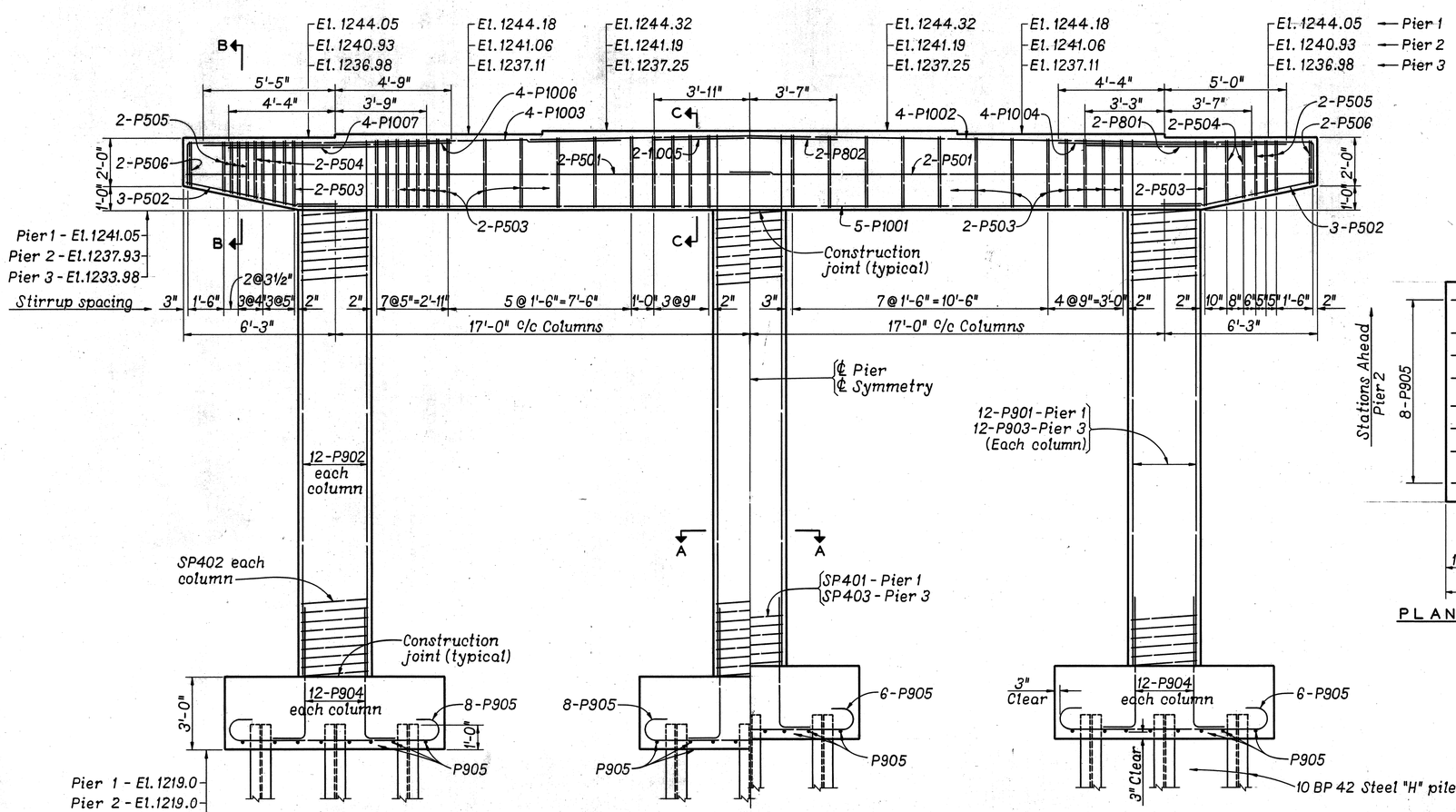
SECTION C-C

NOTES:

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat of Pier 2 so as to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.

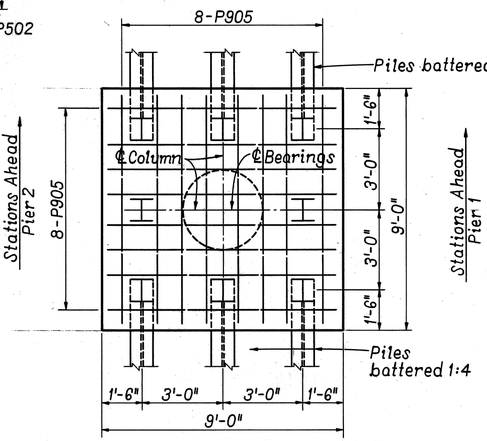
BATTERED PILES: The following piles shall be battered 1:4 in the direction of the U.S.R. 30 pavements: Pier 1 - front row; Pier 2 - both outside rows; Pier 3 - rear row.

BEARING ANCHORS: AT the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast in place.

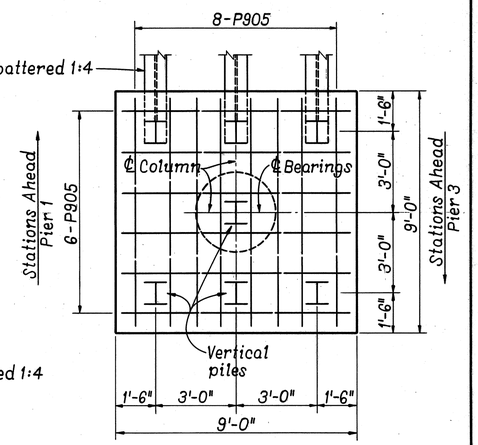


HALF ELEVATION - 2 PIER

HALF ELEVATION - PIERS 1 AND 3



PLAN OF TYPICAL FOOTING
PIER 2



PLAN OF TYPICAL FOOTING
PIERS 1 AND 3

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MANSFIELD OHIO WOOSTER

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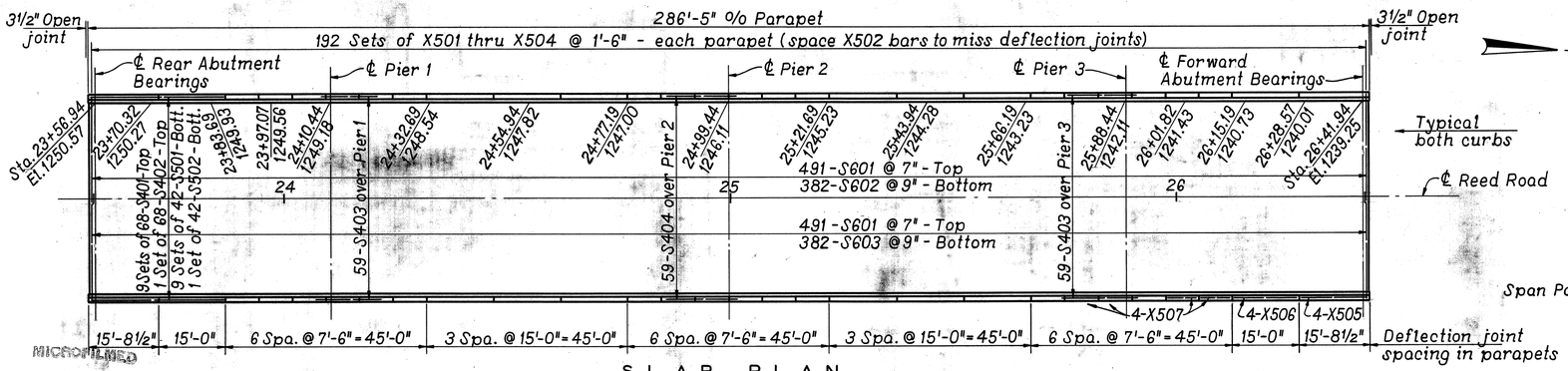
PIERS

BRIDGE NO. RIC - 30 - 1638
UNDER REED ROAD (T.H. 289)
RICHLAND COUNTY U.S.R. 30
STA. 555 + 45.00

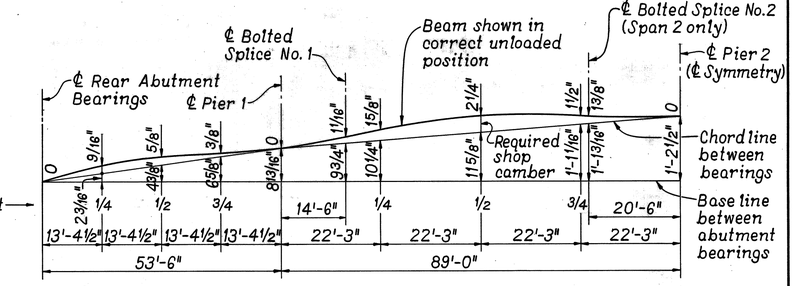
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	RWH		JM	7-28-70	

FED. RD. DIVISION	STATE	PROJECT		94
2	OHIO			

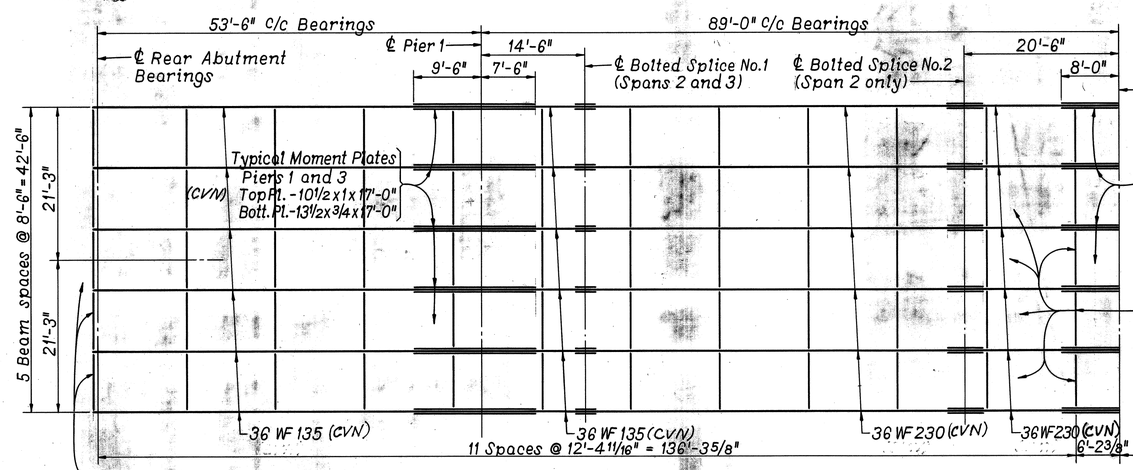
RIC - 30 - 16.37



SLAB PLAN



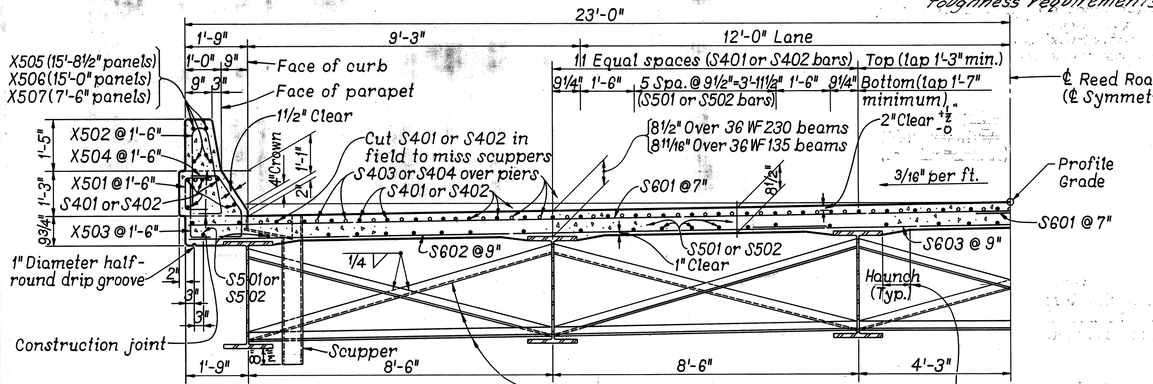
HALF BEAM LAYOUT DIAGRAM



HALF FRAMING PLAN

Note: Four S403 bars in Span 1 shall be cut and interrupted where they interfere with scuppers.

Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements.



DECK SLAB DEPTH: The distance shown from top of deck slab to top of steel beam is the design dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

Intermediate crossframe angles - 3x3x5/16. Weld both sides of vertical leg and top side of horizontal leg to beam with 1/4" continuous fillet weld.

A 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.

HALF TRANSVERSE SECTION

CAMBERING of beam is required in accordance with the following table:

DEFLECTION AND CAMBER - ALL BEAMS								
	END SPANS			MIDDLE SPANS				
SPAN LOCATION →	¼	½	¾	SPLICE NO. 1	¼	½	¾	SPLICE NO. 2 *
Deflection due to weight of steel	0	0	0	1/8"	1/8"	3/16"	1/8"	1/16"
Deflection due to remaining dead load	3/16"	1/8"	0	3/16"	7/16"	5/8"	5/16"	5/16"
Adjustment required for vertical curve	3/8"	1/2"	3/8"	3/4"	1 1/16"	1 7/8"	1 1/16"	1"
Required shop camber	9/16"	5/8"	3/8"	1 1/16"	15/8"	2¼"	1½"	13/8"

* Span 2 only

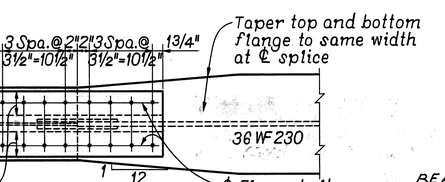
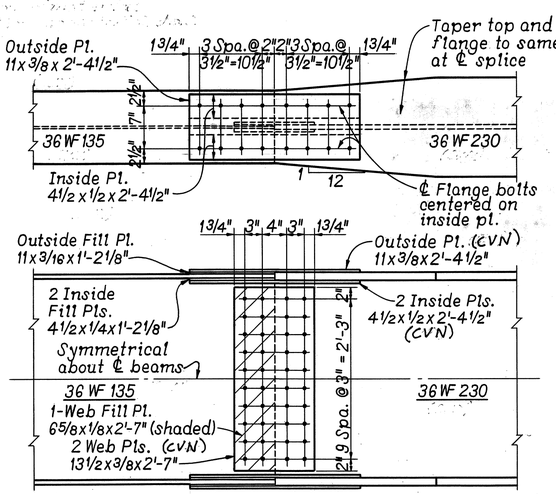


DIAGRAM SHOWING STAGGER OF S403 AND S404 BARS OVER PIERS



BOLTED BEAM SPLICE NO. 1

For Bolted Beam Splice No.2 see Standard Drawing SD-1-69, sheet 4.

STEEL ERECTION: During the erection of end dams and cross frames care shall be taken to insure that stringers, bearing parts and bridge seats remain in bearing contact.

NOTES:

ELEVATIONS shown on Slab Plan are at deck level at face of curb and are those which are required before the deck concrete is placed. These points are located at quarter points of each span.

END CROSSFRAMES, END DAMS, SCUPPERS, CURB PLATES, MOMENT PLATE WELDING, AND BOLTED BEAM SPLICES: See Standard Drawing SD-1-69, sheets 1 thru 4 of 4.

PARAPET: See Standard Drawing BR-1-67, sheet 1 of 3.

BEARINGS: See Standard Drawing RB-1-55 for the following:

Abutments: R-100
Piers 1 and 3: R-200
Pier 2: B-225

BEARINGS shall be in accordance with Standard Drawing RB-1-55 except that upper plate element shall be beveled to match roadway grade. Tabulated plate thickness C shall apply at centerline of plate.

SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES, INC.
Consulting Engineers
MANSFIELD OHIO WOOSTER

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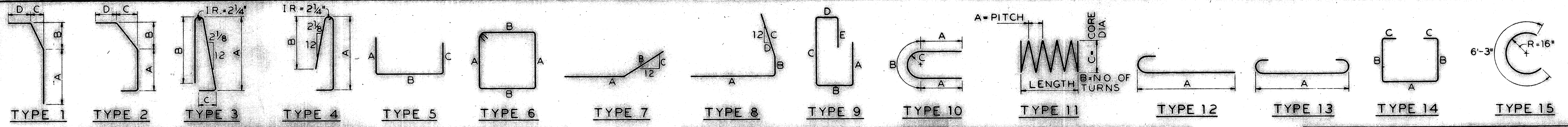
SUPERSTRUCTURE

BRIDGE NO. RIC - 30 - 1688.2
UNDER REED ROAD (T.H. 289)
RICHLAND COUNTY U.S.R. 30
STA. 555 + 45.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	RWH		JM	7-28-70	



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

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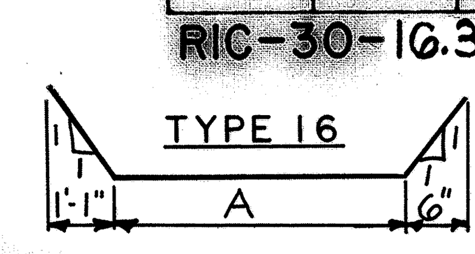


ABUTMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A501	64	8'-3"	5	1'-7"	5'-4"	1'-7"			551
A502	64	7'-0"	5	7½"	6'-6"	0			467
A503	64	6'-10"	5	1'-10"	3'-5"	1'-10"			456
A504	20	11'-0"	6	2'-3"	3'-0"				229
A505	60	23'-4"	Str.						1460
A506	4	27'-2"	Str.						113
A507	4	10'-8"	Str.						45
A508	24	3'-1"	5	1'-7"	1'-7"	0			77
A509	12	8'-2"	Str.						102
A510	12	4'-4"	Str.						54
A511	4	4'-6"	Str.						19
A512	8	13'-11"	Str.						116
A513	8	12'-4"	Str.						103
A514	16	1'-10"	Str.						31
A515	36	6'-6"	Str.						244
A516	8	7'-10"	Str.						65
A517	10	4'10"	Str.						50
A518	10	4'3"	Str.						44
A519	4	3'-10"	Str.						16
A520	2	5'-1"	Str.						11
A601	64	14'-1"	5	6'-6"	5'-4"	2'-7"			1354
[illegible]	[illegible]	8'-7"	5	3'-9"	1'-5"	3'-9"			1135
[illegible]	[illegible]	6'-7"	5	2'-9"	1'-5"	2'-9"			475
[illegible]	[illegible]	6'-7"	5	3'-0"	11"	3'-0"			475
[illegible]	40	10'-5"	5	4'-8"	1'-5"	4'-8"			626
[illegible]	12	18'-0"	5	8'-7"	1'-2"	8'-7"			324
[illegible]	8	8'-7"	Str.						103
[illegible]	28	24'-9"	Str.						1850
[illegible]	25	11'-0"	Str.						705
D801	34	5'-6"	16	3'-5"					499
Y501	38	2'-0"	5	7½"	1'-0"	7½"			79
[illegible]	40	2'-10"	Str.						118
[illegible]	16	6'-5"	4	3'-1"	2'-5"				117
[illegible]	16	13'-11"	Str.						232
Y505	8	7'-5"	Str.						62
[illegible]	4	8'-1"	Str.						34
Y507	16	3'-2"	Str.						53
[illegible]	16	12'-4"	Str.						206
[illegible]	4	6'-6"	Str.						27
[illegible]	10	6'-8"	1	4'-10"	11½"	9"	9"		100
[illegible]	10	6'-1"	1	4'3"	11½"	9"	9"		91
Y603	2	6'-11"	1	5'-1"	11½"	9"	9"		21
Y701	4	3'-11"	Str.						32
Y702	4	4'-7"	1	3'-0"	11½"	2¼"	9"		37
Y703	4	4'-8"	1	3'-0"	11½"	4"	9"		38
Y704	4	4'-9"	1	3'-0"	11½"	6"	9"		39
Y705	4	4'-10"	1	3'-0"	11½"	9"	9"		40
								TOTAL	13,123

PIERS

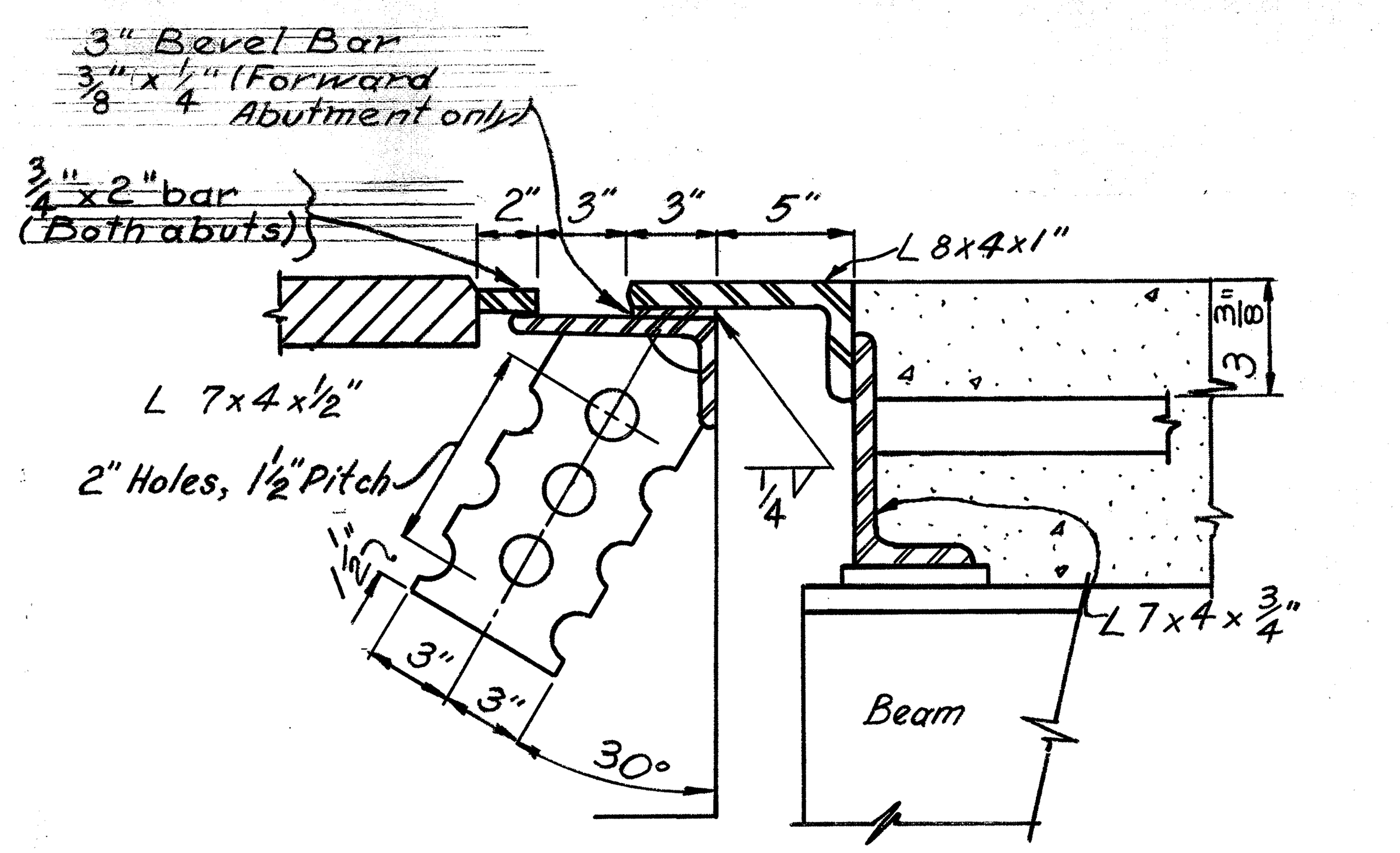
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P501	12	23'-11"	Str.						299
P502	12	6'-3"	7	4'-8"	1'-7"	2½			117
P503	176	7'-9"	5	2'-8"	2'-8"	2'-8"			1423
P504	32	6'-11"	5	2'-3"	2'-8"	2'-3"			231
P505	40	6'-5"	5	2'-0"	2'-8"	2'-0"			268
P506	12	5'-9"	5	1'-8"	2'-8"	1'-8"			72
P801	8	6'-10"	Str.						146
P802	4	7'-2"	Str.						77
P901	36	21'-10"	Str.						2672
P902	36	18'-9"	Str.						2295
P903	36	17'-7"	Str.						2152
P904	100	6'-6"	5	5'-6"	1'-3"	0			2387
P905	132	11'-0"	13	8'-6"					4937
P1001	15	37'-0"	Str.						2389
P1002	12	33'-4"	5	1'-8"	32'-0"	0			1721
[illegible]	12	18'-7"	5	1'-8"	17'3"	0			960
[illegible]	16	9'-4"	Str.						643
[illegible]	2	7'-10"	Str.						67
[illegible]	8	10'-2"	Str.						350
P1007	4	8'-1"	Str.						139
SP401	3	19'-0"	11	4½"	54	2'-8"			1090
SP402	3	15'-11"	11	4½"	55	2'-8"			909
SP403	3	14'-9"	11	4½"	42	2'-8"			847
								TOTAL	26,190

SUPERSTRUCTURE

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S404	59	41'-0"	Str.						1616
S501	378	30'-0"	Str.						11,827
S502	42	30'-5"	Str.						1332
S602	382	17'-8"	Str.						10,137
S603	382	30'-0"	Str.						17,213
X501	384	2'-0"	5	7½"	1'-0"	7½"			801
X502	384	5'-4"	3	2'-5"	2'-2"	7½"			2136
X503	384	2'-0"	5	7½"	1'-6"	0			801
X504	384	2'-10"	2	8"	11½"	9"	9"		1135
X505	16	15'-4"	Str.						256
X506	64	14'-8"	Str.						979
X507	144	7'-2"	Str.						1076
								TOTAL	49309

EPOXY COATED REINFORCING STEEL

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
S401	612	30'-0"	Str.						12,264
S402	68	27'-5"	Str.						1,245
S403	118	34'-0"	Str.						2,680
S601	982	23'-10"	Str.						35,153
								TOTAL	51,342



END DAM DETAILS
(For additional details, see Standard Drawing SD-1-69 sheet 1 of 4 sheets.)

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 A506 is a No. 5 size bar and P1002 is a No. 10 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils) expressed as nearest whole number. Spiral reinforcing bars shall conform to Item 509. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.80 lbs per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the pheriphery of the coil. The number of pounds of these spacers, based on 0.80 lbs per lin. ft. will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

Refer to CMS Sections 106.03, 700, 709.01 thru 709.05 and 709.08. Sufficient additional reinforcing steel shall be provided for sampling. Random samples shall be replaced in the structures by the additional steel, spliced in accordance with 509.08.

SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES, INC.
Consulting Engineers
MANSFIELD — WOOSTER
OHIO

6/6

REINFORCING STEEL
BRIDGE NO. RIC-30-1638
UNDER REED ROAD (T.H. 289)

RICHLAND COUNTY — U.S.R. 30

STA. 555 + 45.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RAK	RAK	RGS		JM 7/29/70	

SIGNING GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
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CALC.BY: CN 7-75
CHKD.BY: AOL 7-75
Rev by GEH 11-76

EXISTING SIGNS:

EXISTING SIGNS LOCATED WITHIN THE ROADWORK AREAS WHICH ARE NECESSARY FOR INTERIM OR PERMANENT TRAFFIC CONTROL SHALL BE REMOVED AND RE-ERECTED IN LOCATIONS INDICATED BY THE PLANS OR AS APPROVED BY THE ENGINEER. STOP SIGNS SHALL BE MAINTAINED AT ALL TIMES WHILE TRAFFIC IS MAINTAINED. THE COST OF REMOVAL, RE-ERECTION AND SUBSEQUENT REMOVAL IF REQUIRED WILL BE CONSIDERED A SUBSIDIARY WORK ITEM, THE COST OF WHICH WILL BE INCLUDED IN THE PRICE BID FOR THE ROADWAY ITEMS. THE SIGNS WHICH ARE TO BE RE-ERECTED OUTSIDE THE PAVED BERMS SHALL BE LOCATED WITH THE CENTER LINE OF SUPPORT ON THE POINT OF INTERSECTION (P.I.) OF THE SHOULDER.

620 DELINEATORS, BY TYPE:

THE CONTRACTOR SHALL HAVE THE OPTION OF DRIVING OR CONCRETE EMBEDDING DELINEATOR POSTS IN ACCORDANCE WITH DETAILS SHOWN ON TC-61.10.

POSTS MAY BE TRIMMED ON THE EMBEDDED END TO ADJUST FOR GRADE AND REQUIRED DELINEATOR MOUNTING HEIGHT. CONCRETE SHALL BE 499 CLASS C.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UNDERGROUND UTILITIES OR CABLE DURING PERFORMANCE OF THIS WORK.

COMPENSATION FOR THE ABOVE ITEM WILL BE INCIDENTAL TO VARIOUS DELINEATOR ITEMS INCLUDED WITHIN THIS PROJECT.

202 REMOVAL OF GROUND MOUNTED SIGN INSTALLATIONS FOR STORAGE:

THIS WORK SHALL CONSIST OF THE REMOVAL OF SIGN INSTALLATIONS AS SHOWN ON THE PLANS.

WORK SHALL CONSIST OF THE REMOVAL OF SIGN SUPPORTS, SIGNS AND FOUNDATIONS AND THE DISPOSAL OF SURPLUS MATERIAL.

ALL SIGNS, SUPPORTS AND ACCESSORIES REMOVED SHALL BE STORED WITHIN THE LIMITS OF THE PROJECT AT LOCATIONS APPROVED BY THE ENGINEER FOR REMOVAL BY STATE FORCES.

TO ASSURE MAINTENANCE OF ADEQUATE TRAFFIC CONTROL AT ALL TIMES, NO SIGNS SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

PAYMENT FOR REMOVAL OF GROUND MOUNTED SIGN INSTALLATIONS WILL INCLUDE ALL NECESSARY LABOR AND EQUIPMENT REQUIRED TO PERFORM THE REQUIRED WORK AS INDICATED ABOVE.

BASIS OF PAYMENT WILL BE AS FOLLOWS:

202 REMOVAL OF GROUND MOUNTED SIGN INSTALLATIONS FOR STORAGE, AT THE CONTRACT BID PRICE PER EACH, FOR SIGNS LESS THAN FORTY (40) SQUARE FEET.

202 REMOVAL OF GROUND MOUNTED SIGN SUPPORTS FOR STORAGE:

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF GROUND MOUNTED SIGN SUPPORTS AND FOUNDATIONS AS INDICATED IN THE PLANS.

ALL GROUND MOUNTED SIGN SUPPORTS TO BE REMOVED UNDER THIS ITEM SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE STORED WITHIN THE PROJECT FOR REMOVAL BY STATE FORCES.

THE WORK SHALL INCLUDE THE REMOVAL OF *ALL SUPPORTS AT EACH LOCATION IN SUCH A* MANNER AS TO AVOID BENDING, TWISTING OR OTHER DEFORMATION DAMAGE. THE FOUNDATIONS SHALL BE REMOVED TO A MINIMUM OF ONE FOOT BELOW THE GROUND SURFACE. BACKFILLING, RESTORATION AND DISPOSAL OF SURPLUS MATERIAL WILL ALSO BE INCLUDED IN THIS WORK.

BASIS OF PAYMENT WILL BE AS FOLLOWS WHICH PRICE WILL INCLUDE ALL LABOR AND EQUIPMENT NECESSARY TO PERFORM THE REQUIRED ITEM OF WORK:

1) 202 REMOVAL OF GROUND MOUNTED SIGN SUPPORTS, NO. 8 POSTS AND SMALLER, AT THE CONTRACT BID PRICE PER EACH.
2) 202 REMOVAL OF GROUND MOUNTED SIGN SUPPORTS, BEAMS LARGER THAN NO. 8 POSTS, AT THE CONTRACT BID PRICE PER EACH.

844 REMOVE AND RE-ERECT GROUND MOUNTED SIGNS:

THIS WORK SHALL INCLUDE THE REMOVAL OF EACH SIGN AND THE RE-ERECTION ON THE GROUND MOUNTED SUPPORT AT THE LOCATION SHOWN IN THE PLANS.

BASIS OF PAYMENT WILL BE AS FOLLOWS AND WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK:

1) 844 REMOVE AND RE-ERECT GROUND MOUNTED MAJOR SIGNS, AT THE CONTRACT PRICE BID PER EACH, FOR SIGNS FORTY(40) SQUARE FEET OR GREATER.

GROUNDING

EACH SIGN SUPPORT OR STRUCTURE SHALL BE GROUNDED WITH A #4 INSULATED CONDUCTOR. THE GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE SWITCH THEN TO THE COMPRESSION CONNECTOR IN THE SIGN SUPPORT THEN TO A 1" X10' 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.

202 REMOVE SIGN LIGHTING FIXTURES OR LUMINAIRES:

THIS WORK SHALL CONSIST OF THE DISMANTLING OF SIGN LIGHTING FIXTURES OR LUMINAIRES AND APPURTENANCES FOR STORAGE.

SIGN LIGHTING FIXTURES OR LUMINAIRES SHALL BE STORED WITHIN THE PROJECT FOR REMOVAL BY STATE FORCES.

BASIS OF PAYMENT WILL BE AS FOLLOWS WHICH PRICE WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK.

202 REMOVE SIGN LIGHTING FIXTURES OR LUMINAIRES FOR STORAGE, AT THE CONTRACT BID PRICE PER EACH

202 AND 844 REMOVE AND RE-ERECT OVERHEAD MOUNTED SIGNS:

THIS WORK SHALL CONSIST OF THE REMOVAL OF OVERHEAD MOUNTED SIGNS AND EITHER THEIR DISPOSAL OR RE-ERECTION ON ANOTHER OVERHEAD SIGN SUPPORT.

OVERHEAD MOUNTED SIGNS NOT RE-ERECTED WILL BE STORED WITHIN THE PROJECT FOR REMOVAL BY STATE FORCES.

THE WORK REQUIRED FOR RE-ERECTION SHALL INCLUDE THE REMOVAL OF SIGNS, SIGN ATTACHMENT ASSEMBLIES AND THE FURNISHING OF NEW HARDWARE AND REDRILLING OF SIGN BRACKETS, IF NECESSARY. IF DIRECTED BY THE ENGINEER, THE WORK SHALL ALSO INCLUDE FURNISHING NEW SIGN ATTACHMENT ASSEMBLIES FOR THE RE-ERECTION OF THE SIGN ON THE OVERHEAD SUPPORT. MATERIALS NOT REUSED WILL BECOME THE PROPERTY OF THE CONTRACTOR.

SIGN REFURBISHING, SIGN LIGHTING ITEMS AND SIGN SUPPORTS ARE SEPARATE ITEMS OF WORK.

TO ASSURE MAINTENANCE OF ADEQUATE TRAFFIC CONTROL AT ALL TIMES, NO SIGNS SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

BASIS OF PAYMENT WILL BE AS FOLLOWS WHICH PRICE WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED ITEM OF WORK:

1) 202 REMOVE OVERHEAD MOUNTED SIGNS FOR STORAGE, AT THE CONTRACT BID PRICE PER EACH.
2) 844 REMOVE AND RE-ERECT OVERHEAD MOUNTED SIGNS, AT THE CONTRACT BID PRICE PER EACH.

BALLASTS, AS PER PLAN:

IN ADDITION TO THE REQUIREMENTS OF 844.10, BALLASTS FOR MERCURY VAPOR LUMINAIRES SHALL BE LOCATED WITHIN THE LUMINAIRE HOUSING OR CONTAINED IN A WEATHERPROOF HOUSING CONTIGUOUS TO THE LUMINAIRE.

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THERE IS NO SHEET 98 a.aiken 12-18-89

CALC BY: CN 7-75
CHKD BY: RDL 7-75

SIGNING GENERAL NOTES

844 PADLOCKS AND KEYS:

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE PADLOCKS EQUAL TO MASTER NO. 4 BKA OR WILSON BOHANNAN 660 AND SHALL BE KEYED IN ACCORDANCE WITH 844.10.

PAYMENT WILL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

844 ALTERNATE DESIGNS FOR SIGN SUPPORTS:

IF THE CONTRACTOR DESIRES TO FURNISH ALTERNATE DESIGN(S) OR MATERIALS FOR SIGN SUPPORTS, THE ALTERNATE DESIGN(S) SHALL BE SUBMITTED TO THE STATE AT LEAST 21 DAYS PRIOR TO OPENING OR BIDS. THE BIDDER WILL BE NOTIFIED AS TO ACCEPTANCE OR REJECTION OF ALTERNATE DESIGN AT LEAST 7 DAYS BEFORE BIDS ARE TO BE OPENED. SUBMISSIONS SHALL BE MADE TO THE OHIO DEPARTMENT OF TRANSPORTATION, BUREAU OF DESIGN SERVICES, 25 SOUTH FRONT STREET, COLUMBUS, OHIO 43215.

POWER SUPPLY:

POWER FOR ALL SIGNS WILL BE 120 VOLTS SUPPLIED FROM THE NEAREST UTILITY COMPANY POLE. SEE DETAILS ON SHEET NO. 108 .

UNDERGROUND LINES SHALL BE IN PREASSEMBLED DUCT. LINES ON POLES SHALL BE IN TWO (2) INCH CONDUIT AND TERMINATE NEAR THE TOP OF THE SERVICE POLE THROUGH A SERVICE ENTRANCE HEAD AND IN THE SWITCH ENCLOSURE ON THE SIGN SUPPORT.

STANDOFF BRACKETS AND OTHER MISCELLANEOUS HARDWARE REQUIRED TO COMPLETE THE ELECTRIC INSTALLATIONS, AS PER PLAN, SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE VARIOUS ITEMS.

THE OVERHEAD LINES TO THE TOP OF SERVICE POLES WILL BE RUN BY THE UTILITY COMPANY.

PREASSEMBLED POLYETHYLENE DUCT WITH TWO CONDUCTORS, BY TYPE:

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PRE-ASSEMBLED POLYETHYLENE DUCT WITH TWO (2) CONDUCTORS, 600 VOLT, VERSATOL GEOPRENE TYPE AS ANACONDA OR GENERAL ELECTRIC SI-58006. CONDUCTORS SHALL BE COLOR CODED.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER LINEAL FOOT INSTALLED AND ACCEPTED FOR EACH SIZE CONDUCTOR.

844 REMOVE GROUND MOUNTED SIGN AND RE-ERECTION ON OVERHEAD SIGN SUPPORT, AS PER PLAN:

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING GROUND MOUNTED SIGN AT STATION 537+00 AND RE-ERECTING ON THE NEW OVER-HEAD SIGN SUPPORT AT STATION 545+40.

THIS WORK SHALL INCLUDE THE ADDITION OF A 1-0" PANEL BELOW BOTTOM SIGN BORDER FOR GLARE SHIELD, NOTCHED FOR FIXTURE SUPPORT ARMS.

WORK SHALL ALSO INCLUDE THE REMOVAL OF SIGN SUPPORTS AND FOUNDATIONS AS REQUIRED IN SECTION 202.

ALL SUPPORTS AND ACCESSORIES REMOVED SHALL BE STORED ON THE PROJECT FOR REMOVAL BY STATE FORCES. THIS WORK SHALL INCLUDE DISPOSAL OF ALL WASTE MATERIAL.

TO ASSURE MAINTENANCE OF ADEQUATE TRAFFIC CONTROL AT ALL TIMES, THIS SIGN SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

BASIS OF PAYMENT SHALL BE AT THE CONTRACT PRICE PER EACH FOR REMOVAL AND RE-ERECTION OF THIS SIGN, WHICH PRICE SHALL INCLUDE ALL THE ABOVE ITEMS OF WORK AND ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED ITEM OF WORK.

621 PAVEMENT MARKINGS REMOVED, BY TYPE:

THIS WORK SHALL CONSIST OF THE REMOVAL OR OBLITERATION OF PAVEMENT MARKINGS. THE MARKINGS SHALL BE REMOVED BY GRINDING, SANDBLASTING, CHEMICAL TREATMENT OR BY ANY OTHER METHOD APPROVED BY THE ENGINEER. UPON REMOVAL, ALL STAINS SHALL BE REMOVED BY USE OF KEROSENE, GASOLINE OR OTHER APPROVED SOLVENT. HOWEVER, THE APPEARANCE, TEXTURE OR STRENGTH OF THE PAVEMENT SHALL NOT BE INJURED IN ANY WAY.

PAYMENT FOR 621 PAVEMENT MARKINGS REMOVED, BY TYPE, WILL BE MADE AT THE CONTRACT BID PRICE PER LINEAR FOOT AND WILL CONSTITUTE FULL COMPENSATION FOR ALL WORK, INCLUDING MATERIALS, EQUIPMENT, LABOR, INCIDENTALS AND DISPOSAL OF SURPLUS MATERIALS.

625 PLAN SPECIFICATION REFERENCE

REFERENCE TO ITEM 625 & 713 IN THESE PLANS SHALL BE CONSIDERED TO READ AS RESPECTIVE REFERENCE TO ITEM S625 AND S713.

844 DRIVE POSTS

DRIVE POSTS SHALL BE STEEL IN ACCORDANCE WITH 712.20

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RIC. – 30 – 16.37

QUANTITIES CALC. SWR 7-1-71

QUANTITIES CK'D. TDM 7-9-71

TRAFFIC CONTROL GENERAL SUMMARY

TYPE CODE G203 (EXCEPT AS NOTED)

FROM SHEET NO. 105	106	107	ITEM	TOTAL	UNIT	DESCRIPTION
1			202	1	EACH	REMOVAL OF GROUND MOUNTED SIGN SUPPORT, NO.8 POST AND SMALLER
1			202	1	EACH	REMOVAL OF GROUND MOUNTED SIGN SUPPORT, BEAMS LARGER THAN NO.8 POST
14			202	14	EACH	REMOVAL OF GROUND MOUNTED SIGN INSTALLATIONS, FOR STORAGE
	2460		621	2460	LIN.FT.	PAVEMENT MARKINGS REMOVED, EDGE LINE
	7		620	7	EACH	DELINEATOR, TYPE A, POST MOUNTED
	140		620	140	EACH	DELINEATOR, TYPE D, POST MOUNTED
	4.33		621	4.33	MILES	EDGE LINES
	1.40		621	1.40	MILES	6" LANE LINES
	0.59		621	0.59	MILES	CENTER LINES
	1605		621	1605	LIN.FT.	CHANNELIZING LINES
	622		621	622	LIN.FT.	24" BROAD TRANSVERSE LINES
	166		847	166	LIN.FT.	24" STOP LINE, 847.09
	50		621	50	LIN.FT.	CURB MARKING
	200		621	200	SQ.FT.	ISLAND MARKING
	2		847	2	EACH	LANE ARROWS, 847.09
		4	844	4	EACH	MERCURY VAPOR LUMINAIRE WITH 100 WATT LAMP
		4	844	4	EACH	MERCURY VAPOR LUMINAIRE WITH 175 WATT LAMP
		4	844	4	EACH	BALLASTS, TYPE CMRI-100(120)
		4	844	4	EACH	BALLASTS, TYPE CMRI-175(120)
		7	844	7	EACH	SIGN WIRED
		2	844	2	EACH	DISCONNECT SWITCH WITH ENCLOSURE
		2	625	2	EACH	GROUND ROD
		2	844	2	EACH	PHOTOELECTRIC CONTROL
		4	625	4	EACH	PULL BOX 18", 713.09
		8	625	8	EACH	CONNECTOR KIT, TYPE 1
		2	625	2	EACH	SERVICE POLE
		1845	625	1845	LIN.FT.	TRENCH
		1925	625	1925	LIN.FT.	PREASSEMBLED POLYETHYLENE DUCT W/ NO.4 CONDUCTORS
8			844	8	EACH	BREAKAWAY BEAM CONNECTION
452		393	844	845	SQ.FT.	SIGNS ERECTED EXTRUSHEET
362			844	362	SQ.FT.	SIGNS ERECTED FLAT SHEET
		1	844	1	EACH	EXISTING SIGN PANELS REVISED WITH DEMOUNTABLE COPY
		1	844	1	EACH	REMOVE GROUND MOUNTED SIGN AND RE-ERECT ON OVERHEAD SIGN SUPPORT, AS PER PLAN.
		2	844	2	EACH	SIGN ATTACHMENT ASSEMBLY
214			844	214	LIN.FT.	GROUND MOUNTED SUPPORTS #3, DRIVEN
713			844	713	LIN.FT.	GROUND MOUNTED SUPPORTS #6, DRIVEN
155			844	155	LIN.FT.	GROUND MOUNTED SUPPORTS W8X17
		2	844	2	EACH	SIGN SERVICE
2			844	2	EACH	REMOVE AND RE-ERECT GROUND MOUNTED MAJOR SIGN
9.2			844	9.2	CU.YD.	CONCRETE FOR EMBEDDED FOUNDATIONS
		18.9	844	18.9	CU.YD.	CONCRETE FOR ANCHOR BASE FOUNDATIONS
		2	844	2	EACH	OVERHEAD SIGN SUPPORT, TYPE 7.65 DES. 6, MODIFIED 74' SPAN

Revised by GEH
Rev: 7-75 11-76

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Revised by GEH 11-76

EXISTING SIGNS (DASHED BORDER)
PROPOSED SIGNS (SOLID BORDER)
BEGIN WORK STA. 529+90
SPEED LIMIT 55
R-10-48
STA.530+00
TRUCKS 50
R-16A-48
MATCH LINE STA.538+00
¢ US R 30
BUILT WITH PROJECT RIC-30-7.18
STA.526+00
WEST M-40-36
30 M-1-36 STA 540+00
Reed Rd. NEXT RIGHT
STA.534+00
FOR DETAILS SEE SHEET NO. 103
FOR DETAILS SEE SHEET NO.104
DUCT CABLE
(a) 12'x6' WEST 30 Mansfield
(b) 11'x5' Laver Road EXIT 1 MILE
(c) 9'x5' Reed Rd.
STA.562+35
C 555+00 102'±
P.B. C555+00
EXIST. R-10-36 SPEED LIMIT 55
EXIST. R-16-36 TRUCKS 50
TO BE REMOVED STA. 569+00
MATCH LINE STA.570+00
¢ RAMP C
¢ RAMP A
¢ RAMP B
(a) 9'x6' 30 EAST Wooster
(b) 11'x9'-6" 71 Cleveland Columbus JCT 1 MILE
EXISTING SIGN AT STA.537+00 TO BE REMOVED & RELOCATED AT STA. 545+40
(c) 9'x5' Reed Rd.
STA.545+40
P.B. A 555+20
A555+20 60'±
¢ REED RD.
¢ EMMA LANE
FOR DETAILS SEE SHEET NO.104
FOR DETAILS SEE SHEET NO. 103
11'x5' Reed Road NEXT RIGHT STA.574+00
EXIST. RA-3-132 REST AREA REMOVE & RELOCATED AT STA.567+00
2-RR
EXIST. R-1-36 TO BE REMOVED
STOP
2-R
ONE WAY
DO NOT ENTER
REST AREA
SUSPEND WORK STA. 582+10
REST AREA STA.583+00
MATCH LINE STA.583+00
MATCH LINE STA.570+00
EXISTING SIGN AT STA. 567+00 TO BE REMOVED & RELOCATED AT STA.575+00
71 SOUTH Columbus LEFT LANE 11'x11'
1-RR
71 SOUTH Columbus LEFT LANE STA.580+00
30 EAST M-1-36 M-39-36 STA.582+00

NOTES:

ALL EXISTING SIGNS TO REMAIN IN PLACE EXCEPT AS NOTED
FOR GROUND MOUNTED SIGN SUPPORT QUANTITIES SEE SHEET NO.105

FOR OVERHEAD SIGN SUPPORT DETAILS AND QUANTITIES SEE SHEET NO'S. 107 & 108

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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EXISTING SIGNS (DASHED BORDER)

PROPOSED SIGNS (SOLID BORDER)

MATCH LINE STA. 583+00

MATCH LINE STA. 612+00

TO CRIDER RD.

GAS - FOOD LODGING

EXIT 176

Mansfield 7
Wooster 25
GAS FOOD LODGING

YIELD

℄ RAMP A

℄ RAMP B

℄ RAMP C

℄ RAMP D

℄ RAMP E

℄ RAMP F

℄ RAMP G

℄ RAMP H

℄ IR 71

℄ USR 30

RAMP 25 M.P.H.

SOUTH Columbus (71)

NORTH Cleveland (71)

RIGHT LANE

Cleveland 70
Columbus 70

WEST 30

EAST 30 Wooster

WEST 30 Mansfield

EXIT 176

EXIT 173

SUSPEND WORK STA. 607+10

RESUME WORK STA. 606+90

STA. 603+30

KEEP RIGHT

ONE WAY

Reed Rd. EXIT 1 MILE

Revise Sign Legend

SOUTH Columbus (71) RIGHT LANE EXIST. 11'x7' TO REMAIN IN PLACE

STA. 607+00

WEST 30 Mansfield EXIST. 11'x5.5'

11'x5'

PROHIBITED PEDESTRIANS BICYCLES FARM MACHINERY ANIMALS MOTORCYCLES OR MOPEDS LESS THAN 3 BRAKE(S)

Koogle Rd. EXIT ¼ MILE GAS FOOD LODGING

NORTH Cleveland (71)

75' OF EXISTING GUARD RAIL

75' OF EXISTING GUARD RAIL

STOP

DO NOT ENTER

GAS - FOOD LODGING

Mansfield 7
Wooster 25
Gas Food Lodging

585 590 595 600 605 610

570 575 580 585

500 505 510 515 520 525 530 535

SIGNING SCHEMATIC 2 OF 3

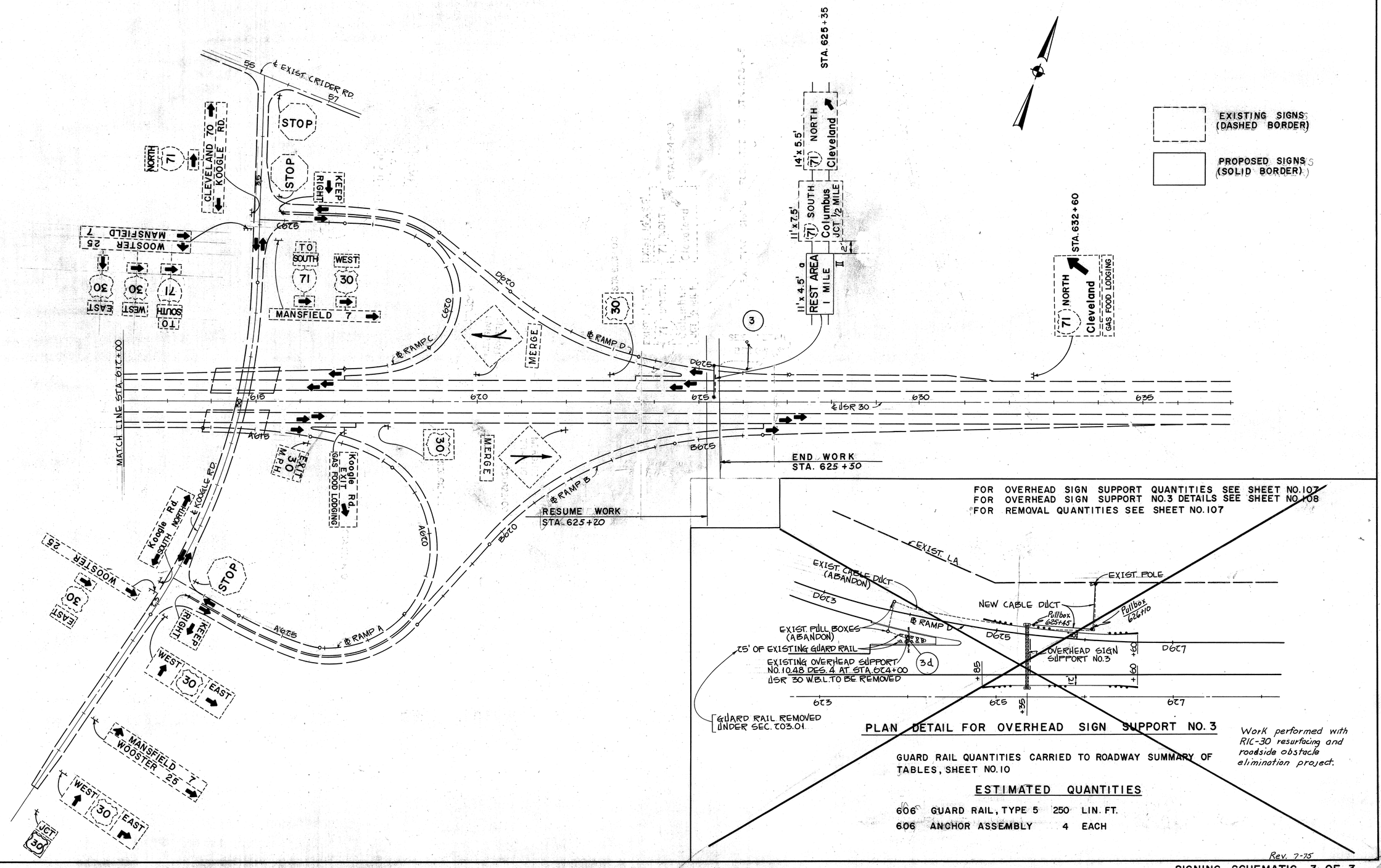
SIGNING SCHEMATIC 2 OF 3

QUANTITIES CALC. SWR 7-1-71
QUANTITIES CK'D. TDM 7-9-71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

102



FOR OVERHEAD SIGN SUPPORT QUANTITIES SEE SHEET NO. 107
FOR OVERHEAD SIGN SUPPORT NO. 3 DETAILS SEE SHEET NO. 108
FOR REMOVAL QUANTITIES SEE SHEET NO. 107

PLAN DETAIL FOR OVERHEAD SIGN SUPPORT NO. 3

GUARD RAIL QUANTITIES CARRIED TO ROADWAY SUMMARY OF TABLES, SHEET NO. 10

ESTIMATED QUANTITIES

606	GUARD RAIL, TYPE 5	250	LIN. FT.
606	ANCHOR ASSEMBLY	4	EACH

Work performed with RIC-30 resurfacing and roadside obstacle elimination project.

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SIGNING SCHEMATIC 3 OF 3

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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EXISTING DELINEATORS REMOVED UNDER 203.01
ESTIMATED NUMBER RIGHT OF U.S.R. 30 - 18
ESTIMATED NUMBER LEFT OF U.S.R. 30 - 14

WEST M-40-36
30 M-1-36
STA. 540+00
8
REMOVE EXIST. EDGE LINE FROM STA. 545+00 TO STA. 550+55
EDGE LINE (WHITE)
EDGE LINE (YELLOW)
6" LANE LINE
540
545
& USR 30
MATCH LINE STA. 550+00
CHANNELIZING LANE (WHITE)
REMOVE EXIST EDGE LINE FROM STA 540+00 TO STA. 544+30
6" LANE LINE
EDGE LINE (YELLOW)
EDGE LINE (WHITE)
24" BROAD TRANSVERSE LINES (WHITE)
DUCT CABLE
6" LANE LINE
EDGE LINE (YELLOW)
EDGE LINE (WHITE)
P.B.
30 EAST Wooster
II (a) 9'x6'
Cleveland Columbus JCT 1 MILE
71
(b) 11'x9'-6"
EXIST. SIGN AT STA. 537+00 TO BE REMOVED & RELOCATED AT STA. 545+40
Reed Rd.
II (c) 9'x5'
STA. 545+40
5
EXIT
GF-72
6'x5'
STA. 548+11
10
W-97-48 EXIT 25 M.P.H.
STA. 545+30
9
REMOVE EXIST D-11-72 REED RD STA. 549+00
3-R
II (c) 9'x5' Reed Rd.
II (b) 11'x5' Laver Road EXIT 1 MILE
II (a) 12'x6' WEST 30 Mansfield
STA. 562+35
2
EXIT GF-727
6'x5'
STA. 561+14
11
W-97-48 EXIT 25 M.P.H.
STA. 562+45
12
REMOVE EXIST R-1-36 STOP STA. 571+80
2-R
CHANNELIZING LINE (WHITE)
CURB MARKING (white)
Edge Line (Yellow)
& RAMP E
6" LANE LINE
EDGE LINE (YELLOW)
EDGE LINE (WHITE)
REMOVE EXIST. EDGE LINE FROM STA 562+80 TO STA. 567+90
6" LANE LINE
DUCT CABLE
EDGE LINE (WHITE)
EDGE LINE (YELLOW)
MATCH LINE STA. 560+00
561
565
570
573
& USR 30
24" BROAD TRANSVERSE LINES (WHITE)
CHANNELIZING LINE (WHITE)
EDGE LINE (WHITE)
6" LANE LINE
REMOVE EXIST. EDGE LINE FROM STA. 560+35 TO STA. 570+00
6" LANE LINE
EDGE LINE (YELLOW)
EDGE LINE (WHITE)
EXIST. RA-3-132 REST AREA
REMOVE AND RELOCATE AT STA. 567+00
2-RR

EXISTING SIGNS (DASHED BORDER)

PROPOSED SIGNS (SOLID BORDER)

○ TYPE A DELINEATOR
▪ TYPE D DELINEATOR
FOR GROUND MOUNTED SIGN QUANTITIES, SEE SHEET NO. 105
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 106
FOR DELINEATOR QUANTITIES, SEE SHEET NO. 106
FOR SIGN REMOVAL QUANTITIES, SEE SHEET NO. 105
FOR OVERHEAD SIGN SUPPORT DETAILS AND QUANTITIES, SEE SHEET NO'S 107 & 108

TRAFFIC CONTROL DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TYPE A DELINEATOR
TYPE D DELINEATOR

EXISTING SIGNS (DASHED BORDER)

PROPOSED SIGNS (SOLID BORDER)

FOR GROUND MOUNTED SIGN SUPPORT QUANTITIES, SEE SHEET NO. 105
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 106
FOR DELINEATOR QUANTITIES, SEE SHEET NO. 106
FOR SIGN REMOVAL QUANTITIES, SEE SHEET NO. 105

TRAFFIC CONTROL DETAILS

GROUND MOUNTED SIGN SUPPORT QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

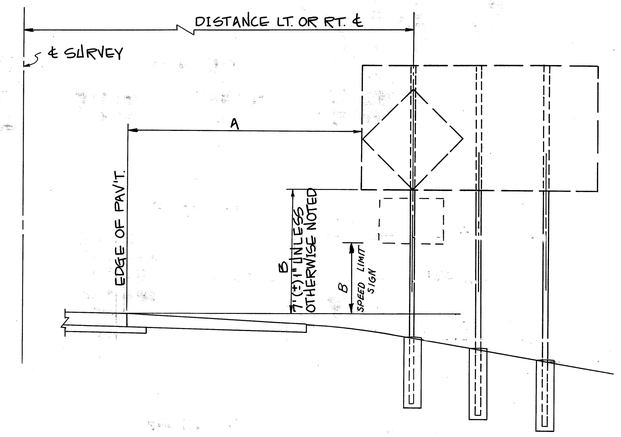
105

RIC-30-16.37

QUANTITIES CALC. SWR 7-1-71

QUANTITIES CK'D. TDM 7-9-71

SIGN NO.	STATION	DISTANCE LT. OR RT.	TYPE OF SIGN	NUMBER OF SUPPORTS	A	B							202 REMOVAL OF Ground Mounted SIGN INSTALLATION FOR STORAGE EACH	844 SIGNS, ERECTED EXTRUSHEET SQ. FT.	844 SIGNS ERECTED FLAT SHEET SQ. FT.	844 GROUND MOUNTED SUPPORTS #3 LIN. FT.	#6 LIN. FT.	W8X17 LIN. FT.	844 REMOVE & RE-ERECT GROUND MOUNTED MAJOR SIGN EACH	844 CONCRETE FOR EMBEDDED FOUNDATIONS CU. YDS.	844 BREAKAWAY BEAM CONNECTION EACH	202 REMOVAL OF GROUND MOUNTED SIGN SUPPORTS NO.8 POST SMALLER EACH	202 REMOVAL OF GROUND MOUNTED SIGN SUPPORTS BEAMS LARGER THAN NO 8 POST EACH
5	530+00 USR 30	60.17' LT.	R-10-48(48"x60")R-16A-48(48"x48")	C		5									36		39 21							
6	534+00 USR 30	61.54' RT.	GD 11'x5'	2	30	7								55				18.5 18.5		2.3		2		
7	574+00 USR 30	61.54' LT.	GD 11'x5'	2	15	↑								55				20.5 19.5		2.3		2		
8	540+00 USR 30	61.50' LT.	M-40-36(36"x18")M-1-36(36"x36")	1											13.5		17.5							
9	545+30 USR 30		W-97-48(48"x60")	1											20.5		18							
10	548+11 USR 30	60.36' RT.	GF-72 (6'x5')	C										30			18 18.50							
11	561+14 USR 30	60.36' LT.	GF-72 (6'x5')	C										30			18 18.50							
12	562+45 USR 30		W-97-48(48"x60")	1											20		18							
13	A 552+00 RAMP A	11.12' RT.	W-45-36(36"x36")	1		7									9		17							
14	552+00 USR 30	60.12' RT.	W-49R-48(48"x48")	1		7									16		18							
15	558+50 USR 30	60.12' LT.	W-49R-48(48"x48")	1		7									16		18							
16	C 559+00 RAMP C	11.12' LT.	W-45-36(36"x36")	1		7									9		17							
17/17A	C 556+50 RAMP C	10.98' LT.	D-4E (9'x3')R-41A-36(3'X2')	C		7								C7	6		16 16.50							
18	8+70 EMMA LANE	19.77' LT.	W-14-30(30"x30") W-143-18(18"x18")	1		8									8.5		17							
19/19A	A 555+00 RAMP A	10.98' LT.	D-4E (9'x3')R-41A-36(3'X2')	C		7								C7	6		16 16.5							
20	12+00 REED RD.	19.00' RT.	M-17-21 (21"x15") M-1-C4 (C4"x C4")	1		↑									6.2		15.50							
21	14+00 REED RD.	C4.76' RT.	M-52A-108 (9'X2.5')	C										22.5			15.5 16.5							
22	17+00 REED RD.	C5.C0' RT.	D-4B (10"x4")	C										40			17 18							
23	19+00 REED RD.	C5.50' RT.	C SIGNS BACK TO BACK D-11-7C (6'x1.5')	C										9 9		14.5 15								
24	A 557+00 RAMP A	13.00' RT.	R-148 (48"x48") R-41B-36(36"x36")	1											25 15.25		17							
25	20+35 REED RD.	3C.70' LT.	D-4A (10'x C) M-1-C4 (C4"x C4") M-39-C4 (C4"x 1C") M-C4-71 (71"x15")	C		7								C0	8.2		6.5	15 15.5							
26	A 556+55 RAMP A	18.50' LT.	R-37R-36(36"x48")	1		7									12		17							
27	B 550+00 RAMP B	10.50' RT.	R-15A-36(36"x36")	1		7									9		16							
28	19+90 REED RD.	C5.50' RT.	M-52A-108 (9'x2.5')	C		↑								22.5			15.5 16.5							
29	0+60 EMMA LANE	C4.00' LT.	R-1-30 (30"x30")	1											6.3		15.5							
30	3+50 EMMA LANE	21.12' LT.	W-45-36(36"x36")	1		↓									9		17							
31	D 561+50 RAMP D	10.50' LT.	R-15A-36(36"x36")	1		7									9		16							
32	C 554+35 RAMP C	18.50' RT.	R-37R-36(36"x48")	1		7									12		17							
33	C 553+90 RAMP C	16.00' LT.	R-1-48 (48"x48") R-41B-36(36"x36")	1		7									2.5		17							
34	29+20 REED RD.	30.00' RT.	D-4A (10'x C) M-1-C4 (C4"x C4") M-40-C4 (C4"x 1C") M-C4-71 (71"x15")	C		↑								C0	8.2		6.5	15 15.5							
35	29+35 REED RD.	C6.76' LT.	M-52A-108 (9'X2.5')	C										22.5			15.5 16.5							
36	3C+50 REED RD.	C5.C0' LT.	D-4B (10'x4')	C										40			17 18							
37	19+65 LAKECREST DR.	C0.00' RT.	R-1-30 (30"x30")	1											6.3		15.5							
38	35+00 REED RD.	C4.76' LT.	M-52A-108 (9'X2.5')	C										22.5			15.5 16.5							
39	37+00 REED RD.	C3.00' LT.	M-17-71 (71"x15") M-1-C4 (C4"x C4")	1											6.2		15.50							
40	582+00 USR 30	61.50' RT.	M-39-36(36"x18") M-1-36(36"x36")	1											13.5		17.5							
41	5+10 EMMA LANE	C0.00' LT.	W-3C-48(48"x C4")	1											8		15							
42	5+45 EMMA LANE	C0.00' LT.	W-3C-48(48"x C4")	1											8		15							
43	10+60 T.TERM. DR.	C7.00' RT.	R-1-30 (30"x30")	1											6.3		15.5							
1-RR	575+00 USR 30	6C.4C' RT.	EXIST. (11'x7')	C	17	↓												22 21	1	2.3		2		1
C-RR	567+00 USR 30	73.54' RT.	EXIST. RA-3-13C (11'x4.5')	2	30	7												17.5 17.5	1	2.3		2	1	
44	A 553+00 RAMP A	LT. & RT	R-41A-36 (3'x2')	1+1		7									6+6		16+16							
1&2R	569+00 & 571+00 USR-30	LT.-LT.											1+1											
3-R	549+00 USR 30	RT.											1											
4-R	100+85 EXIST. REED RD.	LT.											1											
45	C 558+00 RAMP C	LT. & RT	R-41A-36 (3'x2')	1+1		7									6+6		16+16							
5&6R	553+40 & 554+80 USR-30	℄ - ℄											1+1											
7-R	99+15 EXIST. REED RD.	RT.											1											
8-R	559+00 USR 30	LT.											1											
9-R	19+80 LAKECREST DR.	RT.											1											
10-R	99+00 EXIST. REED RD.	LT.											1											
11-R	C3+83 REED RD.	LT.											1											
12-R	C3+50 REED RD.	RT.											1											
13-R	94+70 EXIST. REED RD.	RT.											1											
14-R	551+00 USR 30	LT.											1											
	TOTALS												14	452	362.2	214	713	155	2	9.2	8	1	1	



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GROUND MOUNTED SIGN SUPPORT QUANTITIES

QUANTITIES CALC. SWR 7-1-71
QUANTITIES CK'D. TDM 7-9-71
Revised by GEH 11-76

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

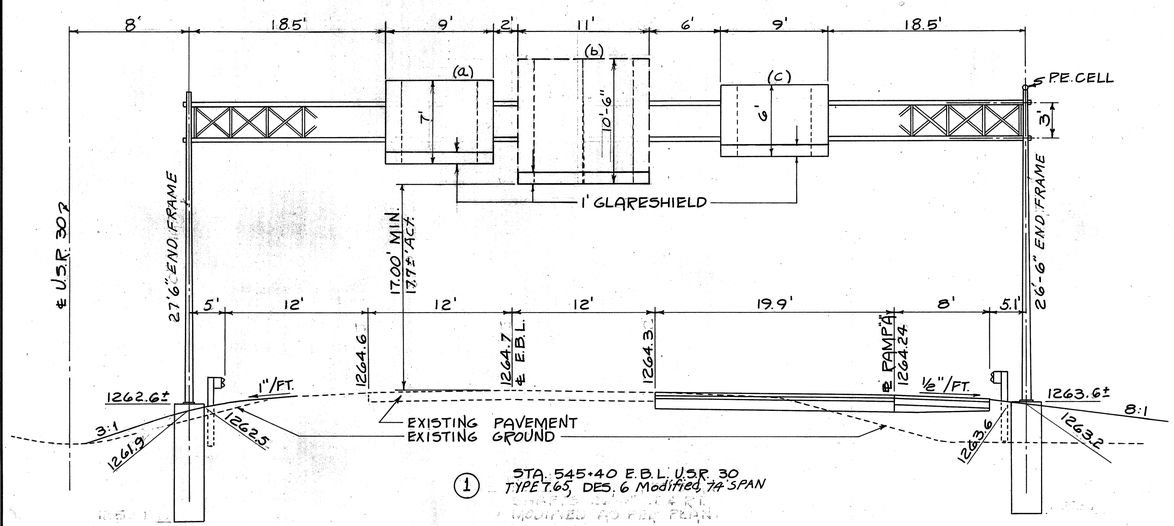
RIC - 30 - 16.37

107

SIZE: 9'X7' = 63 SQ. FT.
NO. OF BRACKETS = 2
HEIGHT = 7'

EXIST. (11'X9'-6") SIGN RELOCATED FROM STA. 537+00 U.S.R. 30
SIZE: 11'X10'-6" = 115.5 SQ. FT.
NO. OF BRACKETS = 2
HEIGHT = 10'-6"

SIZE: 9'X6' = 54 SQ. FT.
NO. OF BRACKETS = 2
HEIGHT = 6'

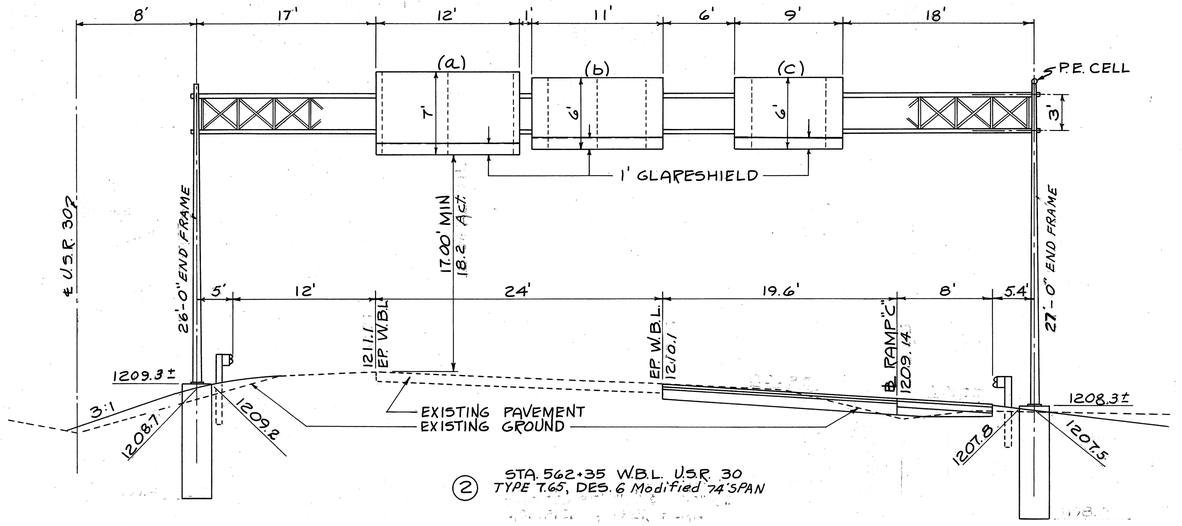


① STA. 545+40 E.B.L. U.S.R. 30
TYPE T.65, DES. 6 Modified, 74' SPAN

SIZE: 12'X7' = 84 SQ. FT.
NO. OF BRACKETS = 3
HEIGHT = 7'

SIZE: 11'X6' = 66 SQ. FT.
NO. OF BRACKETS = 2
HEIGHT = 6'

SIZE: 9'X6' = 54 SQ. FT.
NO. OF BRACKETS = 2
HEIGHT = 6'



② STA. 562+35 W.B.L. U.S.R. 30
TYPE T.65, DES. 6 Modified 74' SPAN

SUPPORT OR SIGN NO.	STATION	EFFECTIVE SIGN SIZE	WATTAGE PER SIGN	844 OVERHEAD SIGN SUPPORT TYPE 7.65, DES. 6 MODIFIED 74' SPAN	844 EXISTING SIGN PANELS Revised w/demountable COPY	844 CONCRETE FOR ANCHOR BASE FOUNDATIONS	844 REMOVE & REERECT OVERHEAD MOUNTED SIGNS	844 SIGNS ERECTED EXTRUSHEET	202 EXISTING LIGHTING LUMINAIRES	844 MERCURY VAPOR LUMINAIRE WITH 175 WATT LAMP	844 MERCURY VAPOR LUMINAIRE WITH 100 WATT LAMP	844 BALLASTS TYPE CMRI-175(120)	844 BALLASTS TYPE CMRI-100(120)	844 SIGNS WIRED	844 DISCONNECT SWITCH WITH ENCLOSURE	844 SIGN ATTACHMENT ASSEMBLY	625 GROUND ROD	844 PHOTOELECTRIC CONTROL	625 PULL BOX 18"; 713.09	625 CONNECTOR KIT TYPE I	844 SIGN SERVICE	625 SERVICE POLE	625 TRENCH	844 REMOVE GROUND MOUNTED SIGN & REERECT ON OVERHEAD SIGN SUPPORT AS PER PLAN	625 PREASSEMBLED POLYETHYLENE DUCT W/2 #4 CONDUCTORS	202	202	SUPPORT OR SIGN NO.
				EACH	EACH	CU. YD.	EACH	SQ. FT.	EACH	EACH	EACH	EACH	EACH	EACH			EACH							Lin. Ft.	EACH	Lin. Ft.	EACH		
1	545+40 E.B.L. U.S.R. 30			1		9.5								1	1		1	1	2	4		1	1020		1060			1
1a		9'X6'	175					63		1		1		1							1							1a
1b		11'X9.5'	175					11		1		1		1											1			1b
1C		9'X5'	100					54			1		1	1														1C
2	562+35 W.B.L. U.S.R. 30			1		9.4									1		1	1	2	4		1	825		865			2
2a		12'X6'	350					84		2		2		1							1							2a
2b		11'X5'	100					66			1		1	1														2b
2C		9'X5'	100					54			1		1	1														2C
3	625+35 W.B.L. U.S.R. 30																											3
3a		11'X4.5	100					60.5			1		1	1		2												3a
4	607+00 W.B.L. U.S.R. 30				1																							4
TOTALS				2	1	18.9	2	392.5		4	4	4	4	9	2	2	2	2	4	8	2	2	1845	1	1925			

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OVERHEAD SIGN SUPPORT DETAILS & QUANTITIES

THERE ARE
NO SHEETS 109-110-111
112-113
a. diler
12-18-89

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC - 30 - 16.37

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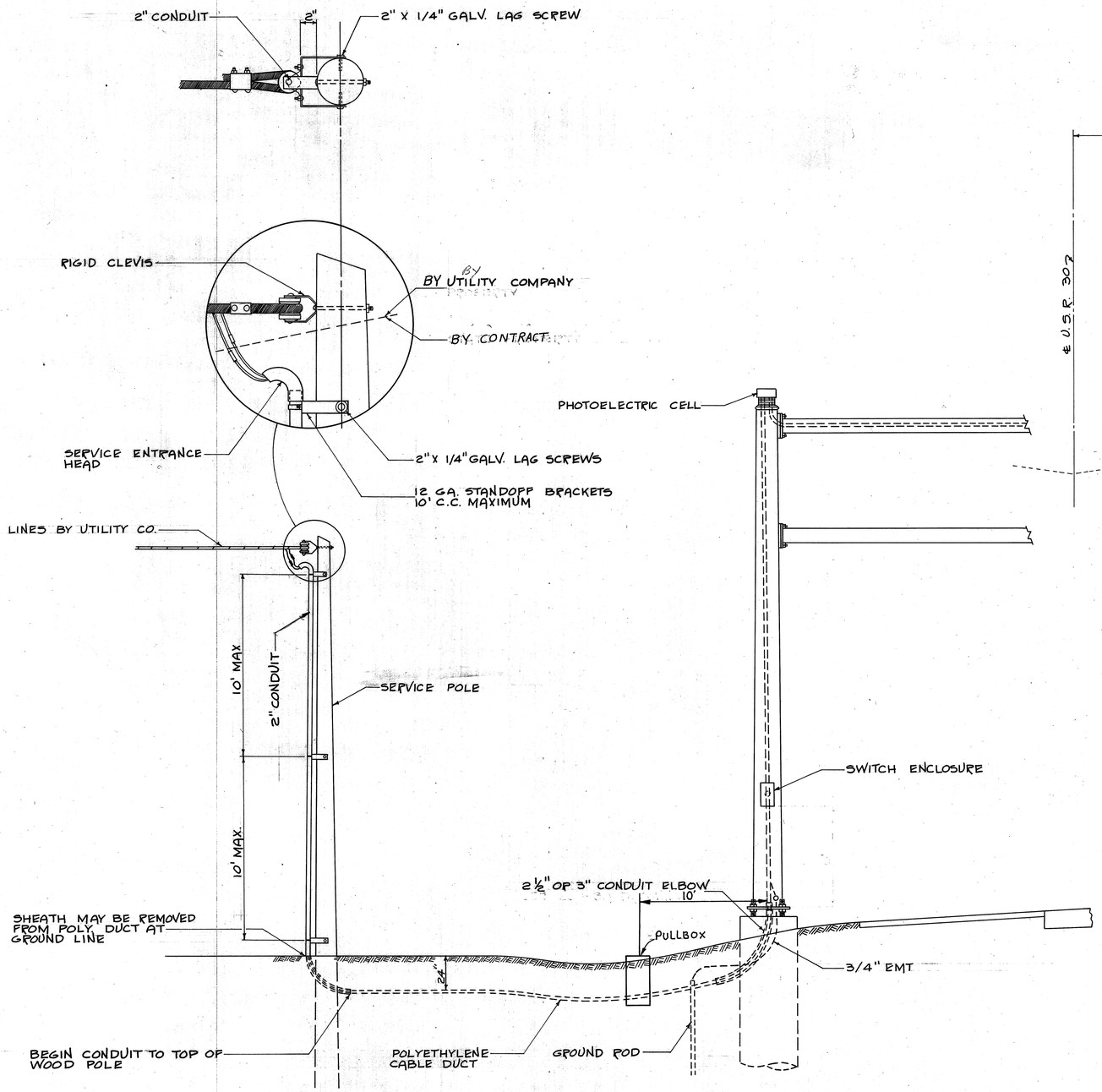
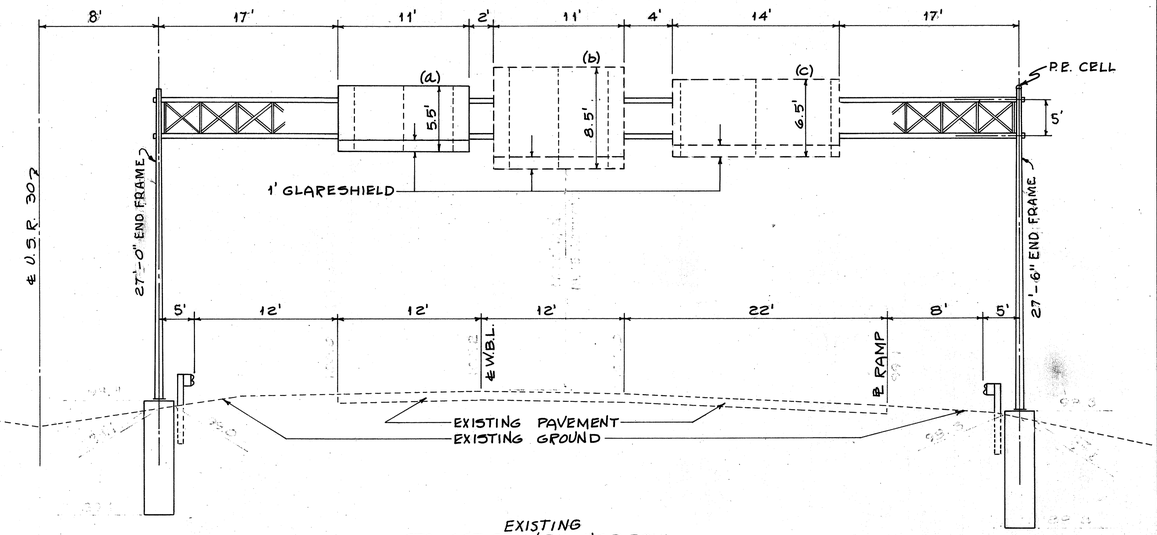


TYPICAL UNDERGROUND CONNECTION TO SIGN STRUCTURES

SIZE: 11'X5.5' = 60.5 SQ. FT.
NO. OF BRACKETS = 2
HEIGHT = 5.5'

EXIST. SIGN @ STA. 624+00
SIZE: 11'X8.5' = 93.5 SQ. FT.
NO. OF BRACKETS = 3
HEIGHT = 8.5'

EXIST. SIGN @ STA. 624+00
SIZE: 14'X6.5' = 91 SQ. FT.
NO. OF BRACKETS = 3
HEIGHT = 6.5'



EXISTING
STA. 625+35 W.B.L. U.S.R. 30
NO. 7.65, DES. 8 MODIFIED 76' SPAN

(3)

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OVERHEAD SIGN AND ELECTRICAL DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

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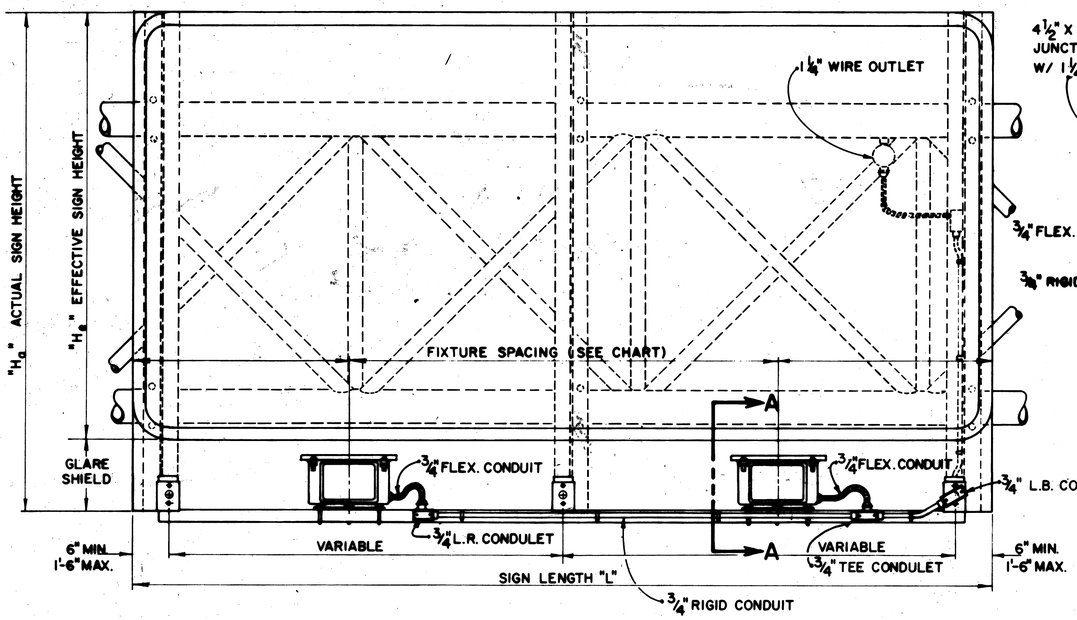
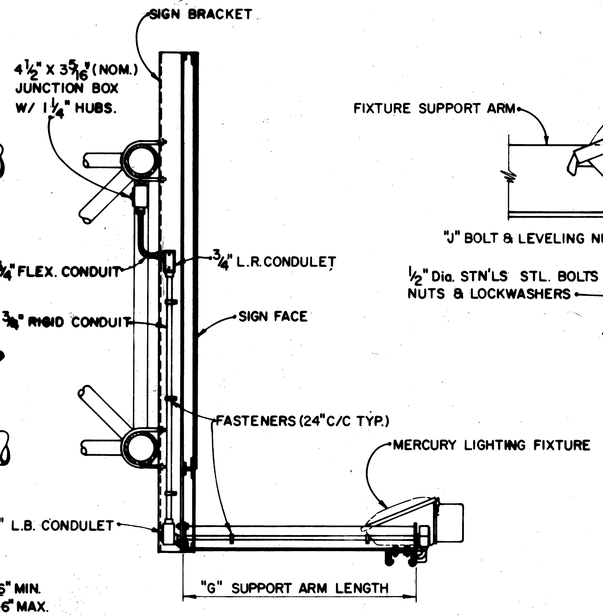
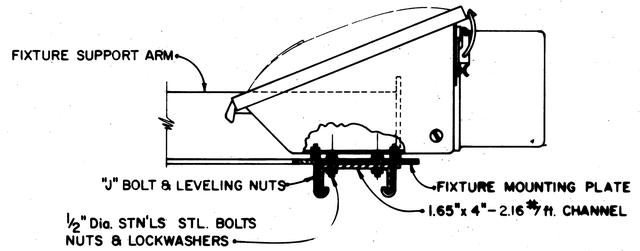
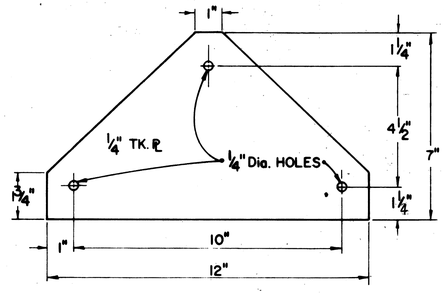






SECTION A-A



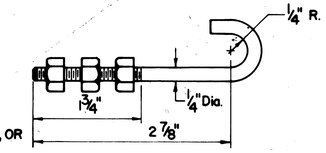
SIGN LENGTH "L"	NO. OF FIXTURES	LIGHT FIXTURE SPACING						SUPPORT ARM SPACING					NO. OF SIGN BRACKETS
4'-0"	1	2'-0"	2'-0"					6"	36"	6"			2
5'-0"	1	2'-6"	2'-6"					6"	48"	6"			2
6'-0"	1	3'-0"	3'-0"					6"	60"	6"			2
7'-0"	1	3'-6"	3'-6"					6"	72"	6"			2
8'-0"	1	4'-0"	4'-0"					10 3/8"	75 3/8"	10 1/4"			2
9'-0"	1	4'-6"	4'-6"					16 3/8"	75 3/8"	16 1/4"			2
10'-0"	1	5'-0"	5'-0"					10 3/8"	99 3/8"	10 1/4"			2
11'-0"	1	5'-6"	5'-6"					16 3/8"	99 3/8"	16 1/4"			2
12'-0"	2	3'-0"	6'-0"	3'-0"				6"	66"	66"	6"		3
13'-0"	2	3'-6"	6'-0"	3'-6"				6"	72"	72"	6"		3
14'-0"	2	4'-0"	6'-0"	4'-0"				8 5/8"	75 3/8"	75 3/8"	8 5/8"		3
15'-0"	2	4'-6"	6'-0"	4'-6"				14 5/8"	75 3/8"	75 3/8"	14 5/8"		3
16'-0"	2	4'-0"	8'-0"	4'-0"				8 5/8"	75 3/8"	99 3/8"	8 5/8"		3
17'-0"	2	4'-6"	8'-0"	4'-6"				14 5/8"	75 3/8"	99 3/8"	14 5/8"		3
18'-0"	2	4'-0"	10'-0"	4'-0"				8 5/8"	99 3/8"	99 3/8"	8 5/8"		3
19'-0"	2	4'-6"	10'-0"	4'-6"				14 5/8"	99 3/8"	99 3/8"	14 5/8"		3
20'-0"	3	4'-0"	6'-0"	6'-0"	4'-0"			7"	75 3/8"	75 3/8"	75 3/8"	6 7/8"	4
21'-0"	3	4'-6"	6'-0"	6'-0"	4'-6"			13"	75 3/8"	75 3/8"	75 3/8"	12 7/8"	4
22'-0"	3	4'-0"	7'-0"	7'-0"	4'-0"			7"	75 3/8"	75 3/8"	99 3/8"	6 7/8"	4
23'-0"	3	4'-6"	7'-0"	7'-0"	4'-6"			13"	75 3/8"	75 3/8"	99 3/8"	12 7/8"	4
24'-0"	3	4'-0	8'-0"	8'-0	4'-0"			7"	75 3/8"	99 3/8"	99 3/8"	6 7/8"	4
25'-0"	3	4'-6"	8'-0"	8'-0"	4'-6			13"	75 3/8"	99 3/8"	99 3/8"	12 7/8"	4
26'-0"	4	4'-0"	6'-0"	6'-0"	6'-0"	4'-0"		7"	99 3/8"	99 3/8"	99 3/8"	6 7/8"	4
27'-0"	4	4'-6"	6'-0"	6'-0"	6'-0"	4'-6"		13"	99 3/8"	99 3/8"	99 3/8"	12 7/8"	4

EFFECTIVE SIGN HEIGHT "H"	SUPPORT ARM LENGTH "G"	APPROX. AIMING ANGLE	LAMP WATTS	ANSI LAMP CODE	BALLAST TYPE
3'-0" to 5'-0"	2'-9"	0°	100	H38-4HT	CMRI-100-(a)
5'-1" to 6'-6"	3"-3"	0°	175	H39-22KB	CMRI-175-(a)
6'-7" to 10'-0"	4'-3"	2°	175	H39-22KB	CMRI-175-(a)
10'-1" to 13'-0"	5'-9"	8°	250	H37-5KB	CMRI-250-(a)
13'-1" to 15'-0"	7'-3"	8°	250	H37-5KB	CMRI-250-(a)

(a) = OPERATING VOLTAGE (120V., 208V., 240V., 277V., OR 480V.)

FIXTURE MOUNTING PLATE

(ALUMINUM)



"J" BOLT

(STAINLESS STEEL BOLT, NUTS & LOCKWASHERS)

BRUNING 44-580 10943

BUREAU OF DESIGN SERVICES
OHIO DEPARTMENT OF HIGHWAYS

MERCURY VAPOR SIGN LIGHTING DETAILS

STANDARD CONSTRUCTION DRAWING

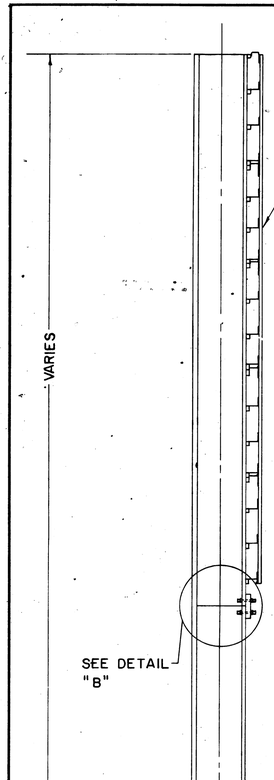
DATE 4-13-72

APPROVED _____
ENGINEER OF DESIGN SERVICES

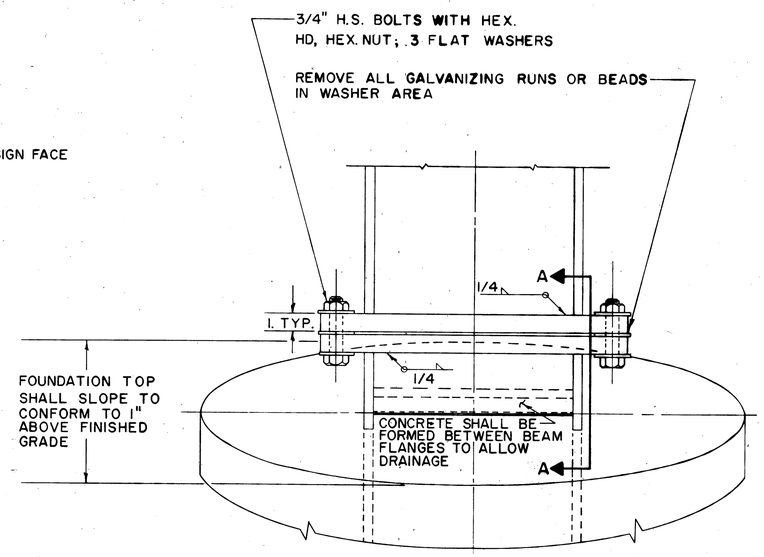
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-16.37

115



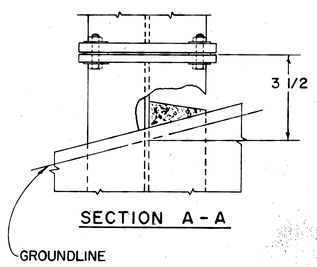
VIEW "A" ROTATED 180°



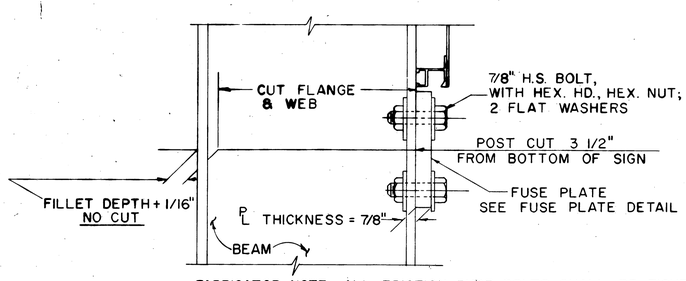
BOLTING PROCEDURE

1. ASSEMBLE POST TO STUB W/BOLTS & ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES.
2. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE W/12" TO 15" WRENCH TO BED & TO CLEAN BOLT THREADS. LOOSEN EACH BOLT IN TURN & RETIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE OF 750 IN. LBS.
3. BURR THREADS AT JUNCTION W/NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE: TIGHTEN THE H.S. BOLTS IN THE BASE CONNECTION ONLY TO GIVEN TORQUE DO. NOT OVER TIGHTEN



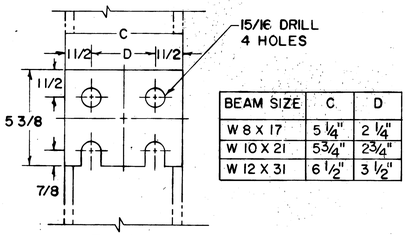
SECTION A-A



FABRICATOR NOTE: ALL FRICTION FUSE BOLTS SHALL BE TIGHTENED IN THE SHOP FOLLOWING A METHOD APPROVED BY THE ENGINEER. TIGHTENING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM RESIDUAL TENSION IN EACH BOLT OF 36,050 LBS.

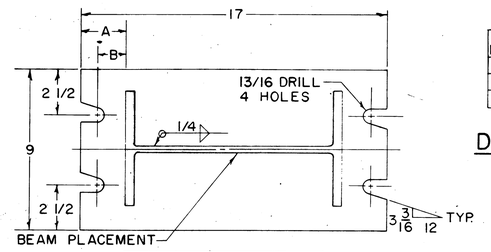
NOTE: INSTALL FUSE PLATE WITH NOTCHES TOWARD BASE

DETAIL "B"



BEAM SIZE	C	D
W 8 X 17	5 1/4"	2 1/4"
W 10 X 21	5 3/4"	2 3/4"
W 12 X 31	6 1/2"	3 1/2"

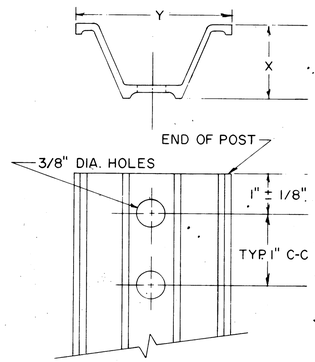
FUSE PLATE DETAIL



BEAM SIZE	A	B
W 8 X 17	4 1/2"	3 5/8"
W 10 X 21	3 1/2"	2 5/8"
W 12 X 31	2 1/2"	1 5/8"

BASE PLATE DETAIL

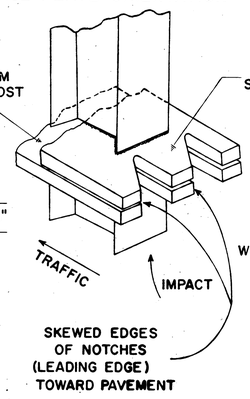
(TOP VIEW)

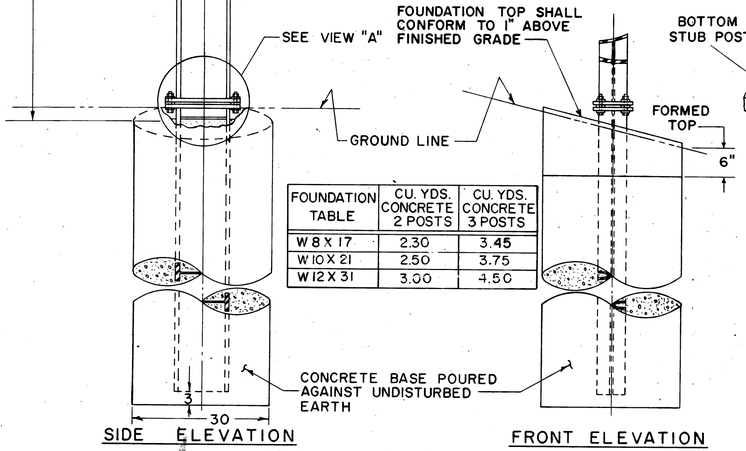


WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 15/32"	3 1/16"
3.00 #	1 7/8"	3 1/2"
4.00 #	2"	3 5/8"

DRIVE POST DETAIL

BREAKAWAY SIGN SUPPORT BASE PLATE ORIENTATION



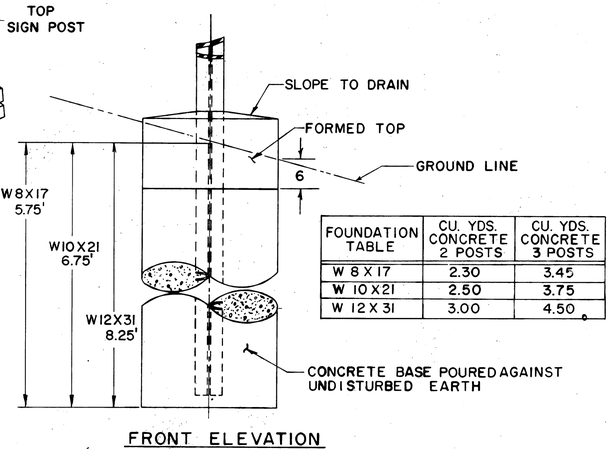


FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
W 8 X 17	2.30	3.45
W 10 X 21	2.50	3.75
W 12 X 31	3.00	4.50

SIDE ELEVATION

FRONT ELEVATION

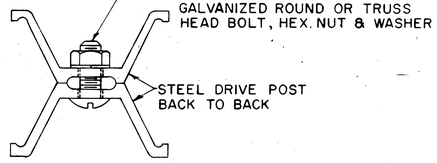
BREAK-AWAY SUPPORT

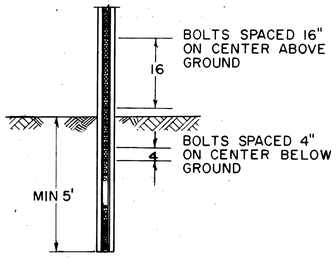


FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
W 8 X 17	2.30	3.45
W 10 X 21	2.50	3.75
W 12 X 31	3.00	4.50

FRONT ELEVATION STANDARD SUPPORT

STRUCTURAL SUPPORTS





6# BEAM DETAIL

NOTES: ALL MATERIALS SHALL CONFORM TO THE STATE OF OHIO, CONSTRUCTION & MATERIALS SPECIFICATIONS OR AS OTHERWISE SPECIFIED

1) 511 FOUNDATIONS
2) 711.01 STRUCTURAL STEEL SHAPES & PLATES
3) 711.09 H.S. STEEL BOLTS, NUTS & WASHERS

ALL DIMENSIONS IN INCHES UNLESS OTERWISE SHOWN

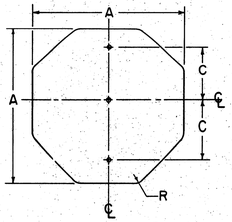
BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

GROUND MOUNTED SIGN SUPPORTS

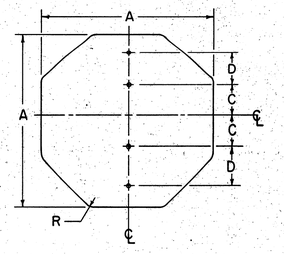
GMSS

APPROVED _____
ENGINEER OF TRAFFIC

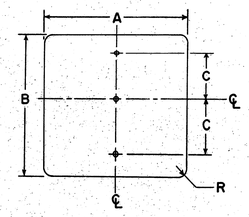
DATE
5-10-68
7-12-68
5-23-69
9-16-69
12-20-71



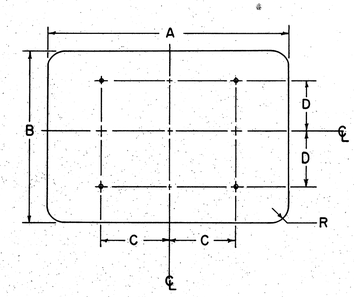
A	C	R	GAUGE
30	8	1 1/2	.080
36	8	1 1/2	.080



A	C	D	R	GAUGE
48	8	10	1 1/2	.100

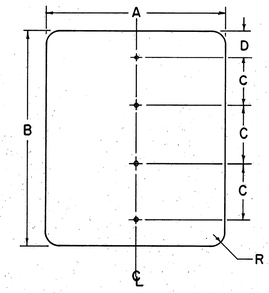


A	B	C	R	GAUGE
24	30	8	1 1/2	.063
24	48	15	1 1/2	.100
30	36	11	1 1/2	.080
30	42	12	1 1/2	.080
36	36	11	1 1/2	.080
36	42	15	1 1/2	.080
36	48	15	1 1/2	.080
48	24	10	3	.100
48	36	13	3	.100

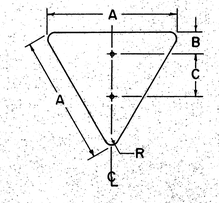


A	B	C	D	R	GAUGE
48	48	22	16	3	.100
48	60	22	22	3	.100

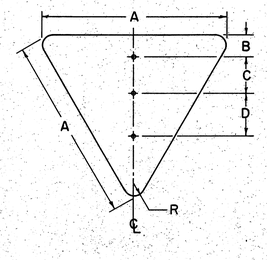
SPEED LIMIT SIGNS ON TWO SUPPORTS



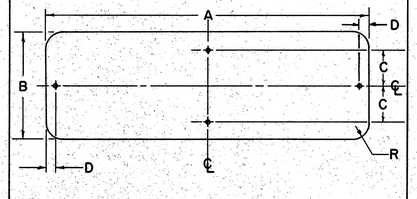
A	B	C	D	R	GAUGE
48	48	12	6	3	.100
48	60	15	7 1/2	3	.100



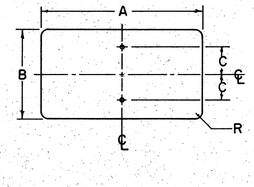
A	B	C	R	GAUGE
36	3	16	2 1/2	.080



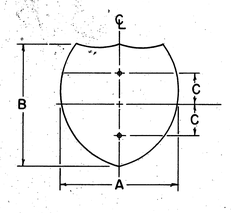
A	B	C	D	R	GAUGE
48	4	10	15	3	.100
60	5	10	15	4	.100



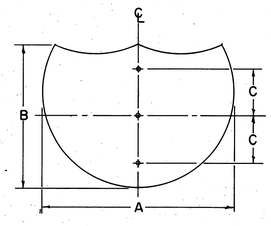
A	B	C	D	R	GAUGE
36	12	4	1	1 1/2	.080
72	12	—	16	1 1/2	.100
60	[illegible]	—	13	1 1/2	.100



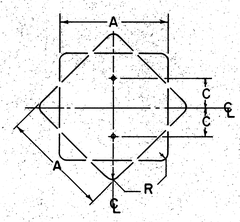
A	B	C	R	GAUGE
12	6	1 1/2	1 1/2	.063
20	15	6	1 1/2	.063
24	12	4 1/2	1 1/2	.063
24	18	7 1/2	1 1/2	.063
8	26	8	1	.063
36	18	7 1/2	1 1/2	.080



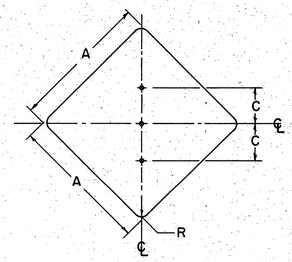
A	B	C	GAUGE
24	24	8	.063
30	24	8	.080



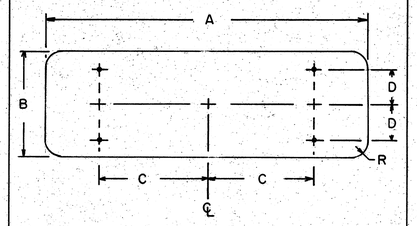
A	B	C	GAUGE
36	36	11	.080
48	36	11	.100



A	C	R	GAUGE
18	7 1/2	1 1/2	.063
24	8	1 1/2	.063
30	8	1 1/2	.080

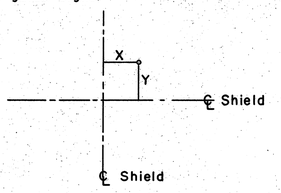


A	C	R	GAUGE
36	12	1 1/2	.080
48	14	3	.100



A	B	C	D	R	GAUGE
72	18	20	6	1 1/2	.100
72	24	20	8	1 1/2	.100
60	30	17	10	1 1/2	.100
96	18	27	6	1 1/2	.100

Location of holes on "Demountable Shields" (attached to guide signs)



SIZE	NO. HOLES	X	Y
(26) 24X24	4	7	7
30X24	4	8	8
(39) 36X36	4	10	10
		0	10
48X36	6	15	10

For notes on fastening see drawing for miscellaneous "Signing Items" sheet.

NOTES:

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

MATERIAL

FLAT SIGN BLANKS SHALL BE FURNISHED IN ALUMINUM ALLOY 6061-T6, (ASTM-B209, GSIIA-T6) WITH MILL FINISH.

BOLT HOLES

THE BOLT HOLES SHALL BE 3/8" IN DIAMETER, AND MAY BE DRILLED, BLANKED OR PUNCHED TO FINISHED SIZE.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

SIGN BLANK DETAILS

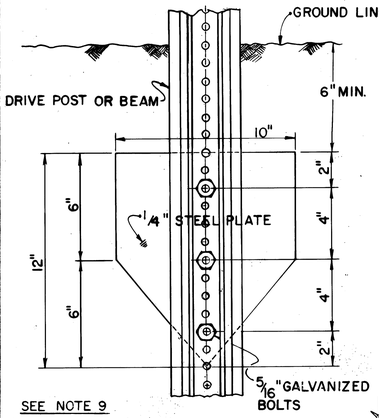
SBD

DATE
4-14-67
5-10-68
10-1-68
5-27-69
6-18-69

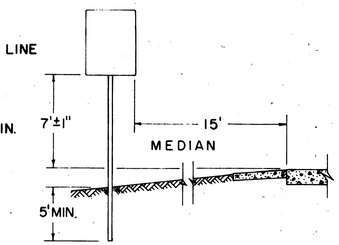
APPROVED_____
ENGINEER OF TRAFFIC

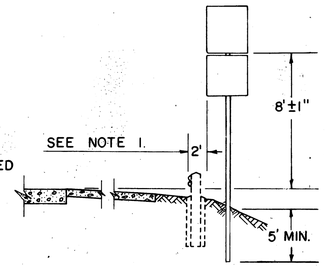
FED. RD. DIVISION	STATE	PROJ.		117
2	OHIO			

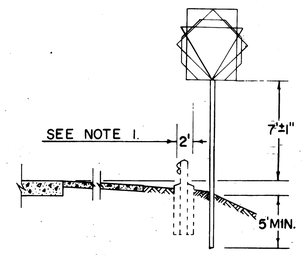
RIC-30-16.37

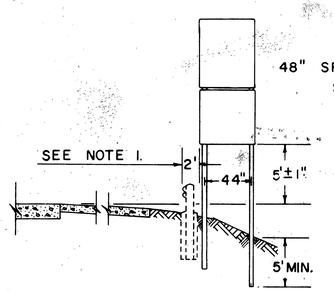


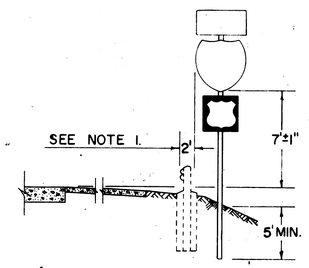
SOIL PLATE DETAIL

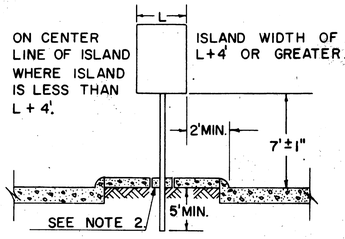


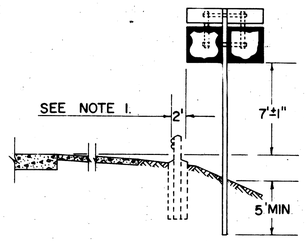


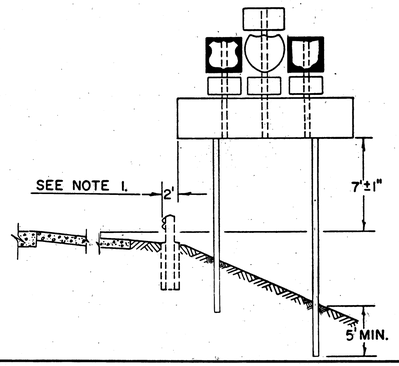


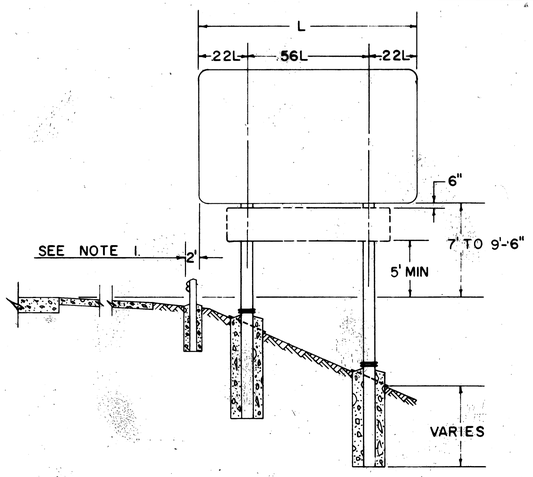


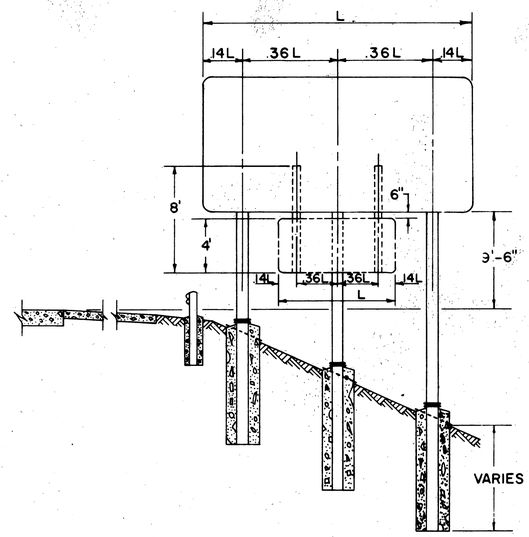


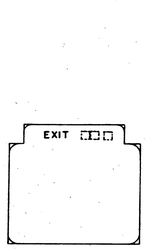


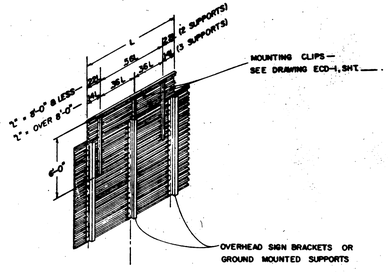




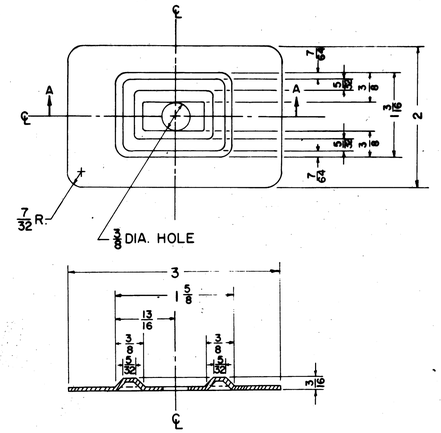






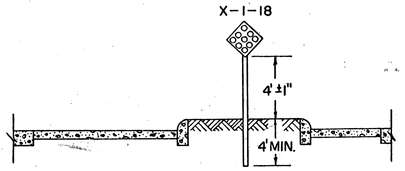


"EXIT" SIGN ATTACHMENT DETAIL



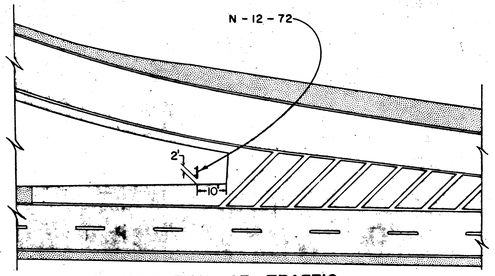
NOTE:
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.
METAL SHALL BE 16 GAUGE STEEL.
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL



SIGN SUPPORT SPACING

L=FT	2 SUPPORTS .22	2 SUPPORTS .56	3 SUPPORTS .14	3 SUPPORTS .36	L=FT	2 SUPPORTS .22	2 SUPPORTS .56	3 SUPPORTS .14	3 SUPPORTS .36
5.0	1.10	2.80	0.70	1.80	17.0	3.74	9.52	2.38	6.12
6.0	1.32	3.36	0.84	2.16	18.0	3.96	10.08	2.52	6.48
7.0	1.54	3.92	0.98	2.52	19.0	4.18	10.64	2.66	6.84
8.0	1.76	4.48	1.12	2.88	20.0			2.80	7.20
9.0	1.98	5.04	1.26	3.24	21.0			2.94	7.56
10.0	2.20	5.60	1.40	3.60	22.0			3.08	7.92
11.0	2.42	6.16	1.54	3.96	23.0			3.22	8.28
12.0	2.64	6.72	1.68	4.32	24.0			3.36	8.64
13.0	2.86	7.28	1.82	4.68	25.0			3.50	9.00
14.0	3.08	7.84	1.96	5.04	26.0			3.64	9.36
15.0	3.30	8.40	2.10	5.40	27.0			3.78	9.72
16.0	3.52	8.96	2.24	5.76	28.0			3.92	10.08



NOTES

1. THE NEAR EDGE OF ALL MAIN LINE SIGNS, EXCEPT GORE INSTALLATIONS, SHALL BE LOCATED TWO FEET (2') BACK OF GUARD RAIL FACE. THIS DIMENSION SHALL BE DETERMINED BY ROADWAY TYPICAL SECTION & USED WHETHER OR NOT GUARD RAIL IS PRESENT.

ON RAMPS THE NEAR EDGE OF SIGNS SHALL BE LOCATED TWO FEET (2') BACK OF GUARD RAIL FACE. THIS DIMENSION WILL BE DETERMINED AND USED AS FOR MAIN LINE ABOVE.

ON APPROACHES THE NEAR EDGE OF SIGNS SHALL BE

(A) TWO FOOT (2') BEHIND EXISTING GUARD RAIL

(B) TWO FEET (2') FROM THE EDGE OF PAVED OR TRAVELED SHOULDER WITH A MINIMUM OF 6' FROM EDGE OF ROADWAY PAVEMENT.

2. POSTS PLACED IN CONCRETE MEDIANS SHALL BE INSTALLED BY DRIVING THROUGH A 6" SLEEVE OR CORE DRILLED HOLE. THE HOLE SHALL BE FILLED WITH ASPHALTIC CONCRETE AFTER THE POST IS IN THE PROPER POSITION.

3. HORIZONTAL BACK BRACING SHALL ALWAYS BE MOUNTED ON THE FRONT FLANGE OF THE SUPPORT EXCEPT WHERE SIGNS ARE MOUNTED BACK TO BACK. BACK BRACING SHALL NEVER EXTEND ABOVE TOP EDGE OF UPPERMOST SIGN PLATE AND SHALL BE ATTACHED TO SUPPORTS USING 5/16" GALVANIZED STEEL BOLTS.

4. SCREWS, NUTS, AND WASHERS FOR SIGN ERECTION SHALL BE ALUMINUM EXCEPT AS NOTED ABOVE. 5/16" TRUSS HEAD SLOTTED MACHINE SCREWS WITH HEX. NUTS PLAIN AND LOCKWASHERS SHALL BE USED. PLAIN WASHERS SHALL BE 5/16" "WIDE", USED ON SIGN FACE ONLY

5. SIGN INSTALLATIONS SHALL BE PLACED SO THAT SUPPORTS ARE NOT PLACED IN DRAINAGE DITCHES.

6. HORIZONTAL CLEARANCES SHOWN PERTAIN TO NON-CURBED SECTIONS. SECTIONS WITH UNMOUNTABLE CURB SHALL HAVE A HORIZONTAL CLEARANCE OF 2'-0" MINIMUM FROM THE CURB FACE TO THE SIGN EDGE.

7. VERTICAL AND HORIZONTAL CLEARANCE BETWEEN SIGNS ON ONE ASSEMBLY SHALL BE A MAXIMUM OF 2" AND A MINIMUM OF 1".

8. GALVANIZED STEEL BEARING PLATES SHALL BE INCLUDED BETWEEN ALL SHEET ALUMINUM SIGNS ATTACHED TO VERTICAL SUPPORTS AT EACH SIGN BOLT LOCATION.

9. SOIL PLATES SHALL BE ATTACHED TO ALL 6 LB. BEAMS BETWEEN POSTS AS DETAILED ON THIS SHEET, EXCEPT WHERE BEAMS ARE PLACED IN CONCRETE MEDIANS AS COVERED IN NOTE 2.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

TYPICAL PLACEMENT OF SIGNS

TPS-1

DATE
9-27-67
7-12-68
5-13-69
3-5-71
12-21-71
3-7-72

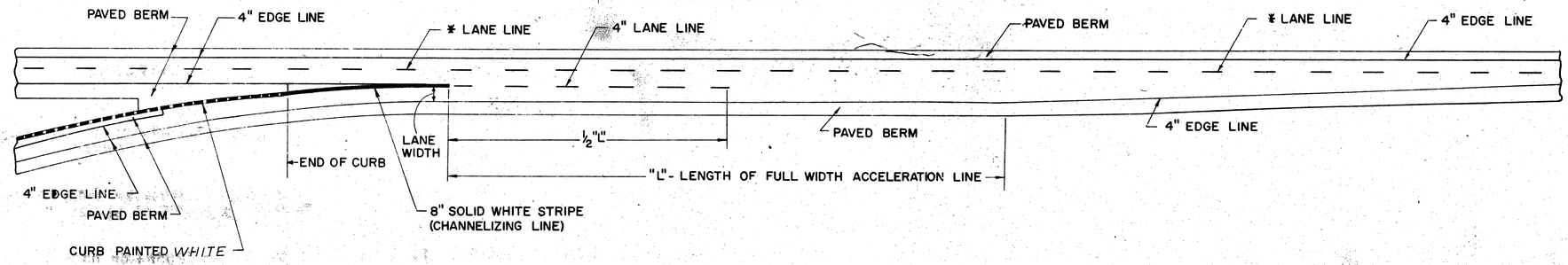
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

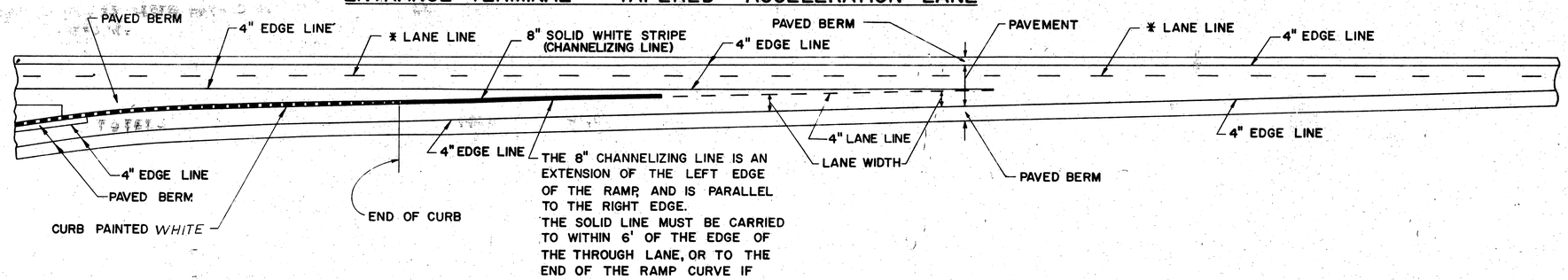
119

RIC-30-16.37

ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE

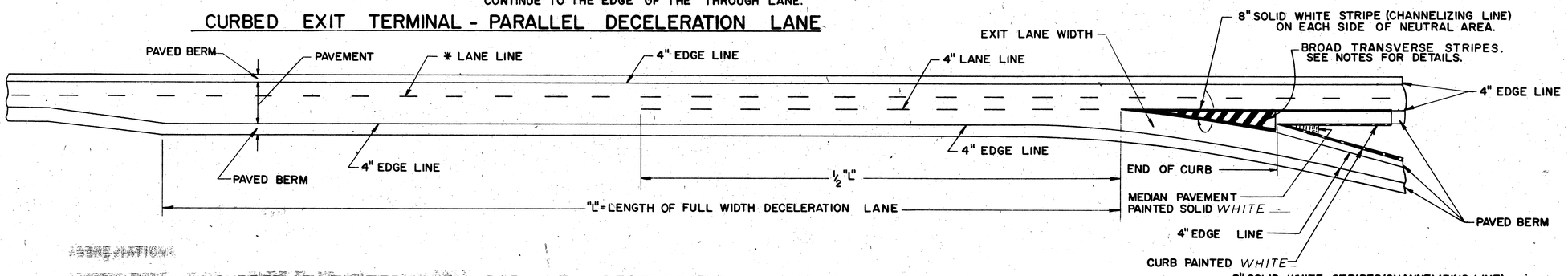


ENTRANCE TERMINAL - TAPERED ACCELERATION LANE

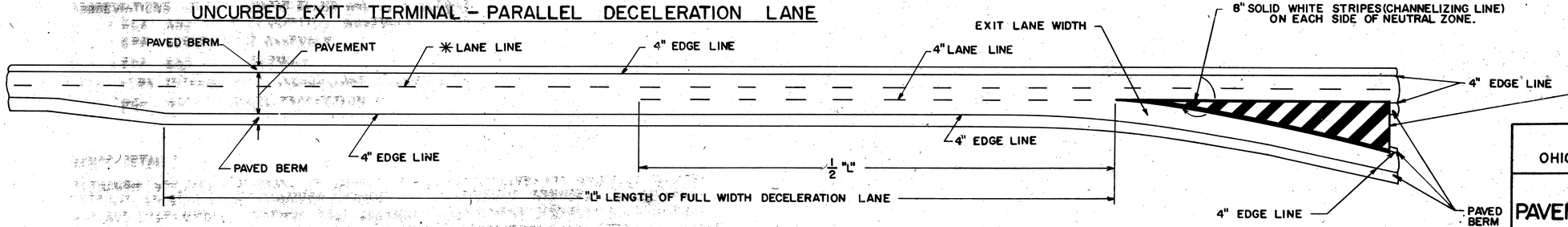


THE 8" CHANNELIZING LINE IS AN EXTENSION OF THE LEFT EDGE OF THE RAMP, AND IS PARALLEL TO THE RIGHT EDGE. THE SOLID LINE MUST BE CARRIED TO WITHIN 6' OF THE EDGE OF THE THROUGH LANE, OR TO THE END OF THE RAMP CURVE IF CLOSER. THE 4" DASHED LINE SHOULD CONTINUE TO THE EDGE OF THE THROUGH LANE.

CURBED EXIT TERMINAL - PARALLEL DECELERATION LANE



UNCURBED EXIT TERMINAL - PARALLEL DECELERATION LANE



NOTES

DIAGONAL STRIPES AT EXIT RAMPS SHALL BE 24" BROAD TRANSVERSE STRIPES, 62'-11", WITH A 6' SPACE BETWEEN STRIPES.

* 6" LANE LINE ON INTERSTATE HIGHWAYS ONLY.
4" LANE LINE ON ALL OTHER HIGHWAYS.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

PAVEMENT MARKING | 621

DATE
7-17-61
4-6-62
5-24-65
9-[illegible]-67
4-17-68
1-11-72

APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

RIGHT OF WAY FENCE SUMMARY

QUANTITIES CALC. D.A.A. 7-13-71
QUANTITIES CK'D. R.D.R 9-14-71

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

120
125

RIC-30-16.37

DESCRIPTION	SIDE	607 FENCE TYPE 47	601 ROCK CHANNEL PROTECTION TYPE B W/BEDDING	CORNER POST ASSEMBLY	END POST ASSEMBLY	ABUTMENT CONNECTION ASSEMBLY	INTERMEDIATE ANCHOR POST ASSEMBLY
		LIN. FT.	CU. YDS.				
STA. 541+60 USR 30 AROUND RAMP A TO	RT.	1466	13.3	3	1		2
STA. A556+75, RAMP A							
REED ROAD BRIDGE S.E. ABUTMENT CORNER TO	RT.	521		4		1	1
STA. 555+77 USR 30 TO STA. 560+05, USR 30							
STA. 32+78 REED RD. AROUND RAMP C TO	LT.	1987	33.3	5	1		6
STA. 571+46, USR 30							
STA. 543+92 USR 30 ALONG RAMP D TO	LT.	1262		4	1		4
STA. 29+23, REED RD.							
TOTALS		5236	46.6	16	3	1	13

NOTES

ABBREVIATIONS

ABBREVIATIONS USED IN THESE PLANS ARE AS FOLLOWS:

- ACA ABUTMENT CONNECTION ASSEMBLY
- CPA CORNER POST ASSEMBLY
- EPA END POST ASSEMBLY
- IAPA INTERMEDIATE ANCHOR POST ASSEMBLY
- RCP ROCK CHANNEL PROTECTION, TYPE B WITH BEDDING

FENCE DETAILS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN POST ASSEMBLIES AND CONNECTIONS ARE DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED AND CORNER, END AND INTERMEDIATE ANCHOR POST ASSEMBLIES, ABUTMENT CONNECTIONS, LINE POST ENCASEMENT IN DIP SECTIONS ETC. SHALL, WHERE NOT OTHERWISE INDICATED, BE PROVIDED IN ACCORDANCE WITH THE SPECIFICATIONS AND WITH STANDARD CONSTRUCTION DRAWINGS.

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

ROUTE RIC.-30 SEC. 4.74 COUNTY, OHIO TOTAL Nº OF OWNERS ____
TOTAL Nº OF STRUCTURES 13

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

121/125

RIC.-30-16.37
RIGHT OF WAY PLAN
1/5

RIGHT OF WAY TO BE ACQUIRED WITH STATE FUNDS

PARCEL Nº	TYPE FUNDS	PROPERTY OWNER	RECORDED VOL.	RECORDED PAGE	DEED AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. INTAKE	NET TAKE	NET RESIDUE LEFT	NET RESIDUE RIGHT	BLDG.	SHEET Nº	REMARKS
69BWD		ROBERT TAYLOR & WILLIAM KERRUISH	563 552	254 560	15,750*	0	2,655*	0	2655*	0	13,120*	NO	13	SL.2 HEATHERWOOD ALLOT.
69C		DUR-A-BUILT DEVELOPERS INC.	582	589	14,670*	0	NO	R/W	REQUIRED				13	SL.3 HEATHERWOOD ALLOT.
69D		" " "	591	483	12,615*	0	NO	R/W	REQUIRED				13	SL.4 HEATHERWOOD ALLOT.
70WD		" " "	584	177	0.53	0.07	0.18	0.07	0.11	0	0.35	NO	13	
71 WL		DOROTHY L. MESSNER nka DOROTHY L. HARRY	330 566	413 576	0.87	0.10	0.08	0	0.08	0	0	NO	13	
71 WD		" " " " "					0.21	0.10	0.11	0	0	NO	13	
71EL		" " " " "					0.58	0	0.58	0	0	YES	13	
71WL1		STATE OF OHIO	484	489	0.58	0	0.11	0	0.11	0	0.35	NO	13	SEE NOTE SHEET 13
71AWL		GULF OIL COMPANY	571	124	1.35	0.46	0.59	0.36	0.23	0	0	NO	13	
71AWD		" " "					0.22	0.10	0.12	0	0	NO	13	
71AEL		" " "					0.54	0	0.54	0	0	NO	13	
71AWL1		STATE OF OHIO	631	460	0.54	0	0.15	0	0.15	0	0.39	NO	13	
72WD		FREDRICK D. & MILDRED L. SMITH	521	202	1.12	0.59	1.12	0.59	0.53	0	0	YES	13	TOTAL TAKE
73WD		A.K. & LENA B. VANCE	355 352	202 487	1.12	0.59	1.12	0.59	0.53	0	0	YES	13	TOTAL TAKE
74 WL		CORRINE STOODT	378 315	187 114	2.24	1.17	1.07	1.04	0.03	0.90	0	NO	13	
74 WD		" "					0.27	0.13	0.14				13	
74T		Gailen A. & Virginia A. Myers	641	740	090*	0			0.10	0.90	0	NO	13	*Residue from 74WL
75WD		VERNON H. & WILMA CALLAHAN	329	545	2.23	1.17	0.18	0.13	0.05	1.01	0	NO	13	
75T		" " "							0.01				13	DRIVE
76WL		BEN A. & LORETTA M. FRANKS	439	419	1.64	0.11	0.58	0.11	0.47	0.76	0	NO	13	
76WD		" " "					0.30	0	0.30				13	
76WD1		" " "	439	419	0.76	0	0.02	0	0.02	0.74	0	NO	13	
77WD		ROBERT M. & WILMA M. SMITH	512	259	1.17	0.07	0.28	0	0.28	0.78	0	NO	14	
77WD1		" " "					0.11	0.07	0.04				14	
77T		" " "							0.01				14	DRIVE
78WD		FRED & ELIZABETH CRAWFORD	458 385	328 166	0.92	0.07	0.09	0	0.09	0.76	0	NO	14	
78WD1		" " "			0.83	0.07	0.12	0.07	0.05	0.71	0	NO	14	
78T		" " "							0.01				14	DRIVE
79WD		SHELLY ACRES SWIM CLUB INC.	559	643	122,445*	0	29,925*	0	29,925*	92,520*	0	NO	14	SUBLOTS 65,66,67,& 68 SHELLY ACRES ALLOT.
80WD		H. HALE & MARGARET A. HOUT	501	503	32,480*	0	5,195*	0	5,195*	27,285*	0	NO	14	SUBLOT 64 SHELLY ACRES ALLOT.
80T		" " "							400*			NO	14	DRIVE
80A		KENNETH D. & BETTY J. GILMORE	531	29	21,150*		NO	R/W	REQUIRED			NO	14	SHELLY ACRES ALLOT. SUBLOT 63 DRIVE
81WD		WAYNE E. & LA DONNA M. STRANG	517	222	27,360*	0	5,010*	0	5,010*	22,350*	0	NO	14	SHELLY ACRES ALLOT. SUBLOT 28
81T		" " "							625*			NO	14	DRIVE
81AT		THOMAS LEO & LYNN J. BROWN	524	253	21,150*				1,800*	21,150*	0	NO	14	SHELLY ACRES ALLOT. SUBLOT 29 DRIVE
81BT		FRANCES B. BILLINGSLEY	537	123	23,840*				1,040*	23,840*	0	NO	14	SHELLY ACRES ALLOT. SUBLOT 27 DRIVE
82WD		JOHN D. & ESTHER E. BRUMFIELD	272	172	1.00	0.13	0.45	0.13	0.32	0.55	0	NO	15	
83WD		TRENT H. & BERTHA M. LAUNDRE	489	324	1.00	0.09	0.15	0.09	0.06	0	0.85	NO	15	
83T		" " "							1970*			NO	15	DRIVE
84WD		CHARLES & BETTY JANE NORRIS	472	598	0.50	0.05	0.07	005	002	0.43	0	NO	15	
85WL		V.G. & WILMA DUDLEY	512	217	46.34	0.48	008	0	008	45.78	0	NO	15	
85AWD		RONALD H. & ELLEN JO DUDLEY	631	744	40.56*	0.45	008	0.05	003	0	4008	NO	15	*FORMERLY PART OF 85 WL
86WD		OHIO EDISON COMPANY	380	182	0.88	0.08	0.13	0.08	0.05	0	0.75	NO	15	
87WD		REV. J.L. & MALISIA OUTLAW	480	95	0.87	008	0.14	0.08	0.06	0	0.73	NO	15	

RIC.-30-8.32 REED RD.

PARCEL Nº	TYPE FUNDS	PROPERTY OWNER	RECORDED VOL.	RECORDED PAGE	DEED AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. INTAKE	NET TAKE	NET RESIDUE LEFT	NET RESIDUE RIGHT	BLDG.	SHEET Nº	REMARKS
89 -WD		Malcom C. & Minnie E. Leibhart	326 306	462 298	55.00	0.64	0.31	0.22	0.09	54.26	0	No	16	
89A-WD		Robert & Virginia Trammel & William & Judy Stifeler	660	571	8.05	0.25	0.43	0.25	0.18	7.62	0	No	16	
89A-X		" " " " " "					0.04		0.04				16	Channel
89B-WD		H. Robert & Patricia M. Gimbel	660	267	54.77	3.98	0.19	0.12	0.07	0	50.72	No	16	
90 -WD		Edward B. & Joann E. Boliantz	565	439	15.55	0.26	0.59	0.26	0.33	0	14.96	No	16	
90 - X		" " "					0.08		0.08				16	Channel
90 - T		" " "					0.02		0.02				16	Drive & Slopes
89CWD		Paul B. & Marilyn J. McClain	658	409	4.68	0.10	0.06	0.06	0.00	4.58	0	No	16	

RIGHT OF WAY TO BE ACQUIRED WITH STATE FUNDS

PARCEL Nº	TYPE FUNDS	PROPERTY OWNER	RECORDED VOL.	RECORDED PAGE	DEED AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. INTAKE	NET TAKE	NET RESIDUE LEFT	NET RESIDUE RIGHT	BLDG.	SHEET Nº	REMARKS
91 -WL		William T. & Elinor J. Jordan	383	379	47.60	0.35	0.10	0.05	0.05	47.10	0	No	16	*Taxed on
91 -WD		" " "					0.40	0.30	0.10				16	
91 -T		" " "					0.07		0.07				16	Drive & Slopes
91 -T1		" " "					0.06		0.06				16	Drive & Slopes
92 - WL		Albert Poth Jr. & Dorothy Werznack	549	255	30.74	12.64	0.25	0.09	0.16	16.33	0	No	16	
92 - WD		" " " "					0.17	0.10	0.07				16	
92 - LA		" " " "					0.53		0.53				16/18	
92A - LA		" " " "					1.01		1.01				16/18	
92A - X		" " " "					0.02		0.02				16/18	Channel
93 - WL		Trent H. & Bertha M. Laundre	510 495	412 414	1.66	1.22	1.66	1.22	0.44	0	0	Yes	16	Total Take
94 - WD		Alex H. & Pauline O. McClure	315	54 51	17.12	0.29	2.44	0.29	2.15	0	14.68	Yes	16	
94 - T		" " "					0.03		0.03					Drive & Slopes
95 - WL		Shell Oil Company	503	241	1.10	0.02	1.00	0.02	0.98	0	0	No	16	Lot 1E Lot 1A Pt. Hy-View Allot.
95 - WL-1		" " "					4300 sq'	0	4300 sq'					Total Take
96 - WD		Gail D. Noel	653	564 581	27,250 sq'	0	10840 sq'	0	10840 sq'	0	16410 sq'	No	16	Lot 1-A Hy-View Allot.
96 - T		" "					1300 sq'		1300 sq'					Drive & Slopes
97 - WD		Robert W. & Donna M. Lewis	464	505	20350 sq'	0	2165 sq'	0	2165 sq'	0	18185 sq'	No	16/19	Lot 2 Hy-View Allot.
97A - WD		Fred & Doris Holdsworth	473	21	20350 sq'	0	755 sq'	0	755 sq'	0	19595 sq'	No	19	Lot 3 Hy-View Allot.
98 - WL		Do Sol, Inc.	656	98	91,990 sq'	0	4420 sq'	0	4420 sq'	87570 sq'	0	No	19	Lots 14, 15, 16 Pt.
98 - T		" "					3370 sq'		3370 sq'				19	Hy-View Allot. (Drive)
99 - WL		The Standard Oil Company	494	453	19.30	0.56	6.20	0.56	5.64	0	13.10	No	17	
99 - X		" " " "					0.07		0.07					Channel
100 - WL		Reed Road, Inc.	515	276	2.50	0.52	0.59	0.52	0.07	1.91	0	No	17	
100 - T		" "					0.09		0.09					Drive & Slopes
101 - WL		James E. & Mary E. Constance	443	323	5.05	0.03	0.27	0	0.27	4.75	0	No	18	
102 - WL		Charles D. & Twila E. Sollenberger	587	523	12.00	0.49	0.14	0	0.14	11.37	0	No	18	
103 - WD		Lester S. & Maxine L. Zavelson	510	408	2.62	0.21	0.36	0.21	0.15	2.26	0	No	17	
103 - T		" " "					0.13		0.13					Drive & Slopes
103 - X		" " "					0.04		0.04					Channel
104 - WD		Elmer A. & Helen Weber	285	263	1.99	0.15	0.31	0.15	0.16	1.68	0	No	17	
104 - T		" " "					0.03		0.03					Drive
104 - T-1		" " "					0.06		0.06					Slopes
105 - WD		Windsor Land Improvement Company	553	94	11.79	0.04	0.12	0.04	0.08	0	11.67	No	17	
105A - X		Interstate Motel Corporation	632	85 83	33.67	0.22	0.12	0.00	0.12	0	33.45	No	17	Channel
106 - WD		Robert W. & Beverly A. Messner	595	374	0.72	0.09	0.17	0.09	0.08	0	0.55	No	17	
106A - T		" " "					0.13		0.13					Drive & Slopes
107 - WD		Wayne H. & Mary P. Bell	542	221	0.72	0.08	0.11	0.08	0.03	0	0.61	No	17	
107A - T		" " "					0.02		0.02					Drive & Slopes
108 - WD		Dwaine L. & Shirley M. Smith	449	176	18,000 sq'	1200 sq'	2661 sq'	1200 sq'	1461 sq'	15339 sq'	0	No	17	Lot 6 Lakeview Hills Allot.

PLANS PREPARED BY
STATE OF OHIO DEPT. OF
HIGHWAY DIV.-3
ASHLAND, OHIO

PLAN COMPLETED	4/3/68

REV. DATE	DESCRIPTION
LS12287 & 6-10-71 J.R.Y. 9-8-71 W.T. 9-30-71 5-1-72	RELETTERED ENTIRE SUMMARY SHEET Revised Par. 80A REED ROAD SUMMARY Revised parcels 89 WD & 91 WD Name Change Par 89D
4-27-72	Rev. Name & Area on Par 89A-WD Deleted 89CWD-R.R.S.
5-4-72 GAP	Deleted 100T1
6-1-73 J.R.Y.	Par. 98 Name Change
4/18/75 J.R.Y.	Par. 105A-X Name Change & Deed Area


SEE SHEET NO. 18
FED. RD. DIVISION 2
STATE OHIO
PROJECT
122
125
RIC-30-4.74
RIGHT-OF-WAY PLAN
SCALE 1" = 50'
RIC-30-8.32
16
19
REED RD. CURVE DATA
P.I. STA 16+43.74
Δ = 19°59'56"
D = 8°00'00"
R = 716.20'
T = 126.28'
L = 249.90'
P.I. STA 20+74.28
Δ = 23°39'48"
D = 8°00'00"
R = 716.20'
T = 150.03'
L = 295.79'
William T. & Elinor J. Jordan
Albert Poth Jr. & Dorothy Werznack
Paul B. & Marilyn J. McClain
Cont. 0.00 Ac.
P.R.O. 0.06 Ac.
Total 0.06 Ac.
Minnie E. & Malcolm C. Liebhart
Robert & Virginia Trammel and William & Judy Stiteler
Cont. 0.18 Ac.
P.R.O. 0.25 Ac.
Total 0.43 Ac.
Frank H. & Bertha M. Laundre
Shell Oil Co.
Alex. H. & Pauline O. McClure
Cont. 2.39 Ac.
P.R.O. 0.29 Ac.
Total 2.68 Ac.
H. Robert & Patricia M. Gimbel
Edward B. & Joann E. Boliantz
Gail O. Noel
Robert W. & Donna M. Lewis
EMMA LANE
Reloc. Reed Rd.
RAMP A
RAMP B
(Twp. Rd. 289)
HY. VIEW ALLOTMENT
DETAIL
To be used for Parcel 89WD Only
Minnie E. & Malcolm C. Liebhart
Cont. 0.09 Ac.
P.R.O. 0.22 Ac.
Total 0.31 Ac.
23.53'
11+63.76
50'
14+92.85
N 3°-34'-11"W
330.15'
R/W
N 89°-42'-35"W
Ex. R/W
S 86°-44'-15"E
52.26'
S 0°-17'-05.5"W
℄ Survey
326.69'
℄ 1/4 Sec Line & Exist Reed Rd.
6.47' Rt.
11+64.15
2.22' Rt.
14+90.82
EMMA LANE CURVE DATA
P.I. STA 1+26.30
Δ = 95°21'58"
D = 81°51'04"
R = 70.00'
T = 76.88'
L = 116.51'
P.I. STA 2+84.06
Δ = 16°25'30"
D = 7°00'00"
R = 818.51'
T = 118.13'
L = 234.64'
P.I. STA 5+44.84
Δ = 95°09'53"
D = 67°24'24"
R = 85.00'
T = 93.03'
L = 141.18'
USR 30 CURVE DATA
P.I. STA 560+00
Δ = 2°06'00"
D = 1°28'00"
R = 3908.53'
T = 727.56'
L = 1438.64'
TYPE FUNDS - State
Rev. 2-9-77
PLAN COMPLETED - 12-8-67
REV. DATE
DESCRIPTION
7/8/71
Revised complete plan due to line change
SEE SHEET NO. 19
RIC-30-4.74
RIC-30-8.32
SHEET 16 OF 19
RICHLAND COUNTY, MIFFLIN TOWNSHIP, SECTION 17, T-23N, R-17W
REED ROAD R/W 12+00 TO 25+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

123/125

RIC-30-4.74
RIGHT-OF-WAY PLAN
SCALE 1"=50'
RIC-30-8.32

17/19

U.S.R. 30 CURVE DATA
P.I. STA 560+00
Δ= 21°-06'-00"
D= 1°-28'-00"
R= 3906.53'
T= 727.56'
L= 1438.64'

REED RD. CURVE DATA

P.I. STA 28+80.00	P.I. STA 32+31.95
Δ= 15°-01'-11"	Δ= 18°-56'-21"
D= 7°-00'-00"	D= 8°-00'-00"
R= 818.51'	R= 716.20'
T= 107.90'	T= 119.46'
L= 214.57'	L= 236.74'

RAMP C CURVE DATA

P.I. STA C 555+87.65	P.I. STA C 558+78.01
Δ= 59°-20'-57"	Δ= 29°-40'-42"
D= 25°-00'-00"	D= 28°-00'-00"
R= 229.18'	R= 204.63'
T= 130.59'	T= 54.22'
L= 237.40'	L= 105.99'

TYPE FUNDS- State Rev. 2-9-77

PLAN COMPLETED- 12-8-67

REV. DATE		DESCRIPTION
7/8/71		Revised complete plan due to line change. T.A.
9-3-71	J.R.Y.	Rev. Cont. Par. 99 WL, 100 WL & 108 WD. Removed Par. 109 WD. Changed 105X to 105A-X, 106T to 106A-T & 107A-WD to 107A-T. Added Par. 100 T-1. Added 40' Drive Easement Par. 106 WD.
2-10-72	J.R.Y.	Added Leach Field Par. 108.
5-4-72		Deleted 100T1
4/18/75	J.R.Y.	Par. 105A-X Name Change
2-7-77	JKG	Removed or adjust. Jute Matting - Par. 103 WD, 106 WD & 108 WD

RIC-30-4.74
RIC-30-8.32 SHEET 17 OF 19

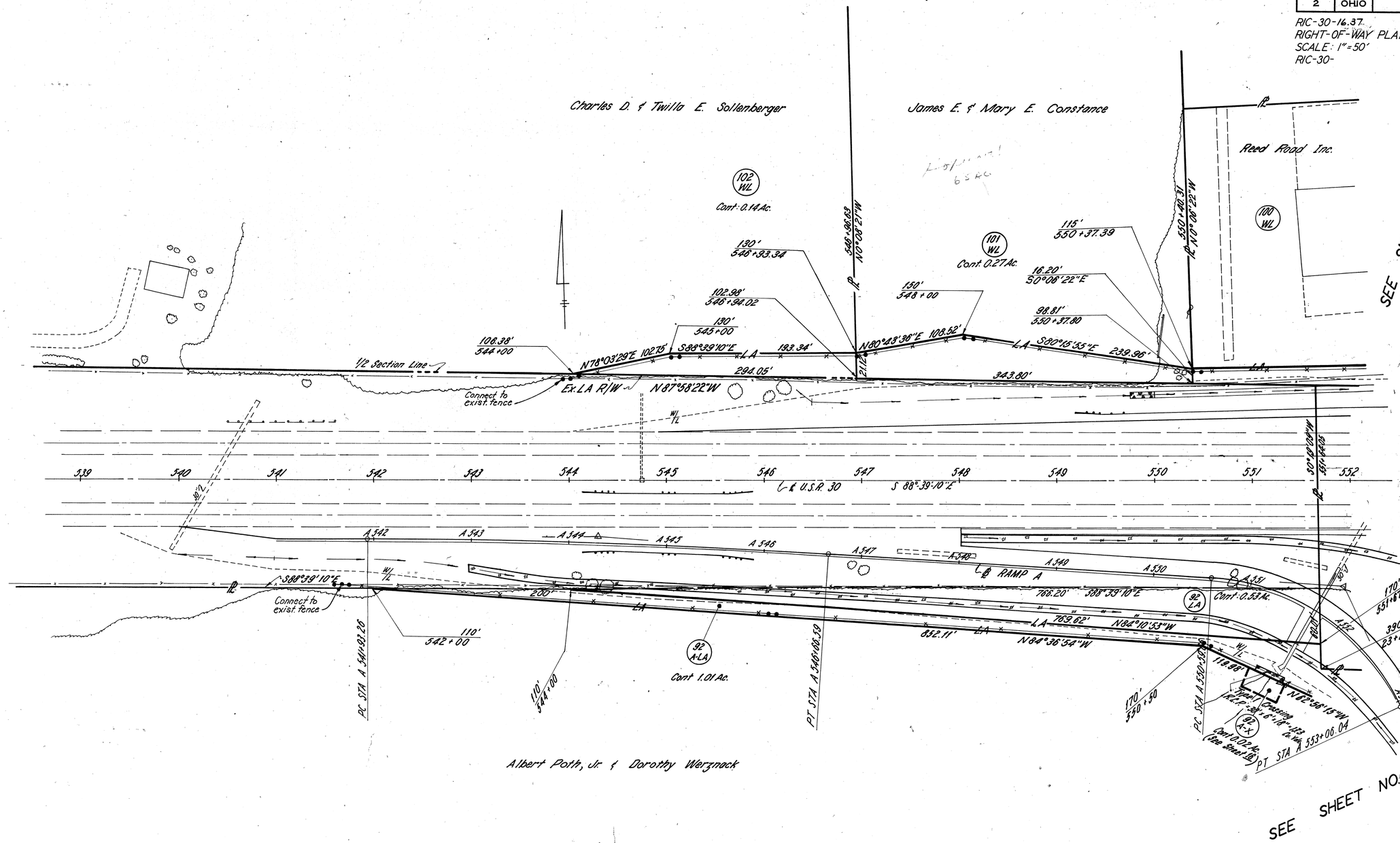
RICHLAND COUNTY, MIFFLIN TOWNSHIP, SECTION 17, T-23N, R-17W

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

124/125

4/5

RIC-30-16.37.
RIGHT-OF-WAY PLAN
SCALE: 1"=50'
RIC-30-



Albert Poth, Jr. & Dorothy Werzynack

TYPE FUNDS - State
PLAN COMPLETED - 12-8-67

REV. DATE	DESCRIPTION
7/8/71	Revised complete plan due to line change W.F. T.A.
9-3-71 J.R.Y.	Changed Par. 92X to 92A-X & Par. 92A-WL to 92A-LA.

RIC-30-4.74
RIC-30-8.32 SHEET 18 OF 19

RICHLAND COUNTY, MIFFLIN TOWNSHIP, SECTION 17, T-23N, R-17W

FED. RD. DIVISION
STATE
PROJECT
2
OHIO
RIC-30-16.37
RIGHT-OF-WAY PLAN
SCALE: 1"=50'
RIC-30-
125
125
5
5
ALSO SEE RIC-30-16.70
The Standard Oil Co.
USR 30 CURVE DATA
P.I. STA 560+00
Δ-21°-06'-00"
D-1°-28'-00"
R-3906.53'
T-727.58'
L-1438.64'
Connect to Exist. Fence
Do Sol, Inc.
RESTAURANT
HY VIEW ALLOTMENT
Gravel & Dirt Drive
Stone slag! broken B. top parking area.
Do not disturb fence
Robert W. & Donna M. Lewis
Fred & Doris Holdsworth
TYPE FUNDS-State
PLAN COMPLETED-12-8-67
REV. DATE
DESCRIPTION
7/8/71 Revised complete plan due to line change
4/12/72 Par 98 T added Save to TV tower
6-1-73 Par. 98 Name Change
RIC-30-4.74
RIC-30-8.32
SHEET 19 OF 19
RICHLAND COUNTY, MIFFLIN TOWNSHIP, SECTION 17, T-23N, R-17W

TE-95
5000-7-68

GENERAL INFORMATION

INTRODUCTION

THE PROJECT CONSISTS OF THE SOILS INVESTIGATION OF THE USR 30-REED ROAD INTERCHANGE RAMPS A, B, C AND D, RELOCATED REED ROAD AND RELOCATED EMMA LANE.

PROPOSED GRADES INDICATE THE FOLLOWING MAXIMUM PROPOSED CUTS AND FILL EMBANKMENTS:

	CUTS (MAX.)	FILL EMBANKMENTS (MAX.)
RELOCATED REED ROAD	-	26'
RAMP A	4'	8'
RAMP B	3'	11'
RAMP C	-	20'
RAMP D	4'	16'
RELOCATED EMMA LANE	-	17'

GEOLOGY OF THE PROJECT

THE PROJECT IS LOCATED ON A MODERATELY DISSECTED PORTION OF THE GLACIATED ALLEGHENY PLATEAU, IN AN AREA WHERE RELATIVELY THIN GLACIAL DRIFT OVERLIES SHALE, SANDSTONE AND LIMESTONE BEDROCK, OF MISSISSIPPIAN AGE.

EXPLORATION

EXPLORATORY BORINGS WERE MADE BY MEANS OF TRUCK-MOUNTED MECHANICAL SOIL AUGER, BETWEEN AUGUST 25 AND 27, 1970. INCLUDED IN THIS REPORT ARE LOGS OF BORINGS MADE FOR RIC-30-5.70 (TRANSMITTED OCTOBER 27, 1956) AND FOR THE STRUCTURE FOUNDATION INVESTIGATION.

INVESTIGATIONAL FINDINGS

MATERIALS ENCOUNTERED ON THE PROJECT WERE PREDOMINANTLY COMPRISED OF SANDY SILT (A-4a) AND SILT CLAY (A-4b), GENERALLY HAVING LOW MOISTURE CONTENTS AND MOISTURE CONTENTS IN THE LOWER PORTIONS OF THE PLASTIC RANGE.

WET MATERIALS WERE ENCOUNTERED AT RELOCATED REED ROAD STATIONS 14+50, 24+07 AND 25+88, AND RAMP A STATION 551+30.

MATERIAL CONTAINING ORGANIC MATTER WAS ENCOUNTERED AT RELOCATED REED ROAD STATION 33+00.

"SOIL INFORMATION - ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE. THE BUREAU OF TESTS AT 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE BUREAU OF ROADWAY DESIGN OR IN THE BRIDGE BUREAU AT 25 SOUTH FRONT STREET."

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS— 79 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 WITH SAND	A-1-b(0)	A-1-b	35	15	29	11	10	NP	NP	8	1
COARSE AND FINE SAND	-----	A-3a	24	19	38	7	12	NP	NP	11	2
GRAVEL WITH SAND AND SILT	A-2-4(0)	A-2-4	41	14	18	13	14	23	8	14	3
SANDY SILT	A-4(5)	A-4a	19	5	17	31	28	23	6	15	24
SILT	A-4(8)	A-4b	0	1	4	69	26	25	4	14	2
SILT AND CLAY	A-6(6)	A-6a	19	4	13	30	34	26	11	14	38
SILTY CLAY	A-6(10)	A-6b	13	2	12	33	40	33	18	18	5
CLAY	A-7-6(14)	A-7-6	20	3	19	22	36	54	29	38	1
WEATHERED SANDSTONE			VISUAL CLASSIFICATION								2
SANDSTONE			VISUAL CLASSIFICATION								1
LIMESTONE			VISUAL CLASSIFICATION								-

SOD AND/OR TOPSOIL=X'=APPROXIMATE DEPTH.

BERM MATERIAL.

AUGER BORING-PLAN VIEW.

DRIVE SAMPLE-CORE BORING-PLAN VIEW.

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY.

DRIVE SAMPLE-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.

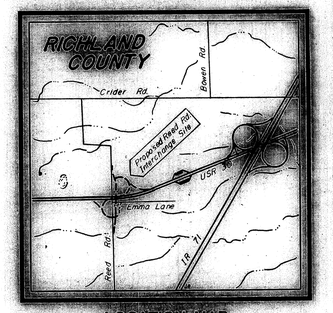
——W FREE WATER.

NUMBER OF BLOWS FOR "STANDARD PENETRATION" TEST.
X=NUMBER OF BLOWS FOR FIRST 6 INCHES.
Y=NUMBER OF BLOWS FOR SECOND 6 INCHES.

SOIL PROFILE
RICHLAND COUNTY
RIC-30-16.37
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS, OHIO 43223

1 of 7

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.



LOCATION MAP

Recon. S.L.S. 8/13/70
Drilling-Auger-L.M.D. 8/25/70 to 8/27/70
Drafting-A.F. 9/29/70

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.
					USR 30							
542+00	CL	0.3-2.0		8	5	13	30	44	30	13	22	A-6a
		2.0-9.0		4	4	16	28	48	27	9	17	A-4a
		9.0-11.0		SANDSTONE			-	-	NP	NP	10	VISUAL
545+00	35'Lt	0.3-3.5		0	2	10	46	42	30	11	22	A-6a
		3.5-8.0		20	4	17	14	45	30	13	13	A-6a
547+25	CL	0.3-4.0		7	3	13	31	46	31	13	17	A-6a
		4.0-8.0		13	4	15	27	41	28	11	18	A-6a
		8.0-12.5		6	5	20	36	33	24	8	24	A-4a
		12.5-17.0		2	3	35	33	27	NP	NP	21	A-4a
		17.0-18.0		5	5	12	37	41	23	6	16	A-4a
558+00	CL	0.4-7.5		15	3	14	32	36	27	9	19	A-4a
		7.5-10.0		22	4	10	33	31	25	5	16	A-4a
560+00	CL	0.4-6.0		12	4	14	34	36	26	9	13	A-4c
		6.0-12.0		18	6	17	29	30	26	9	13	A-4c
563+00	CL	0.3-4.0		7	4	15	44	30	23	4	12	A-4a
		4.0-9.0		11	6	18	35	30	21	4	11	A-4a
565+60	10'Rt	0.3-7.0		0	1	12	33	54	36	17	25	A-6a
		7.0-10.0		7	3	9	45	36	31	16	23	A-6b
		10.0-11.0		6	7	19	36	32	22	5	12	A-4a
					REED ROAD							
14+50	12'Lt	1.0-6.0		32	3	10	24	31	32	16	17	A-6b*
		6.0-8.0		0	3	9	47	41	32	11	32	A-6a
		8.0-14.0		30	6	16	25	23	23	6	15	A-4a
		14.0-15.5	(28	3	34	15	20	18	5	12)		VISUAL
					BROWN WEATHERED SANDSTONE							
17+50	CL	0.0-5.0		34	3	13	24	26	27	11	13	A-6a
		5.0-10.0		25	4	14	28	29	24	11	14	A-6a
20+00	CL	0.0-4.0		31	3	16	26	24	28	12	9	A-6a
		4.0-10.0		0	2	18	36	44	23	11	14	A-6a
		10.0-15.0		28	3	12	28	29	25	11	12	A-6a
23+00	CL	0.0-5.0		0	4	18	38	40	26	11	14	A-6a
		5.0-11.0		31	5	14	31	19	22	4	15	A-4a
		11.0-13.0	(21	5	57	8	9	NP	NP	6)		VISUAL
					BROWN WEATHERED SANDSTONE							
27+00	CL	0.0-3.0		20	3	8	36	33	27	11	14	A-6a
		3.0-7.0		48	11	14	15	12	23	6	10	A-2-4
		7.0-11.0		31	14	36	8	11	NP	NP	10	A-3a
		11.0-14.0		38	13	22	12	15	24	8	18	A-2-4
30+00	CL	0.0-4.0		0	1	7	53	39	25	8	12	A-4b
		4.0-9.0		29	3	10	31	27	25	11	13	A-6a
		9.0-12.0		0	0	2	85	13	NP	NP	15	A-4b
31+50	CL	0.0-4.0		0	1	10	40	49	32	16	13	A-6b*
		4.0-9.0		27	2	9	33	29	25	11	15	A-6a
		9.0-12.0		29	5	19	28	19	20	5	12	A-4a
		12.0-15.0		25	4	15	28	28	23	11	12	A-6a
33+00	12'Lt	0.0-3.0		34	7	15	17	27	30	14	15	A-6a
		3.0-5.0		20	3	19	22	36	54	29	38	A-7-6
		5.0-9.0		17	23	40	6	14	NP	NP	11	A-3a
35+00	12'Lt	0.0-5.0		25	3	13	33	26	25	11	8	A-6a*
		5.0-10.0		28	3	11	30	28	26	11	12	A-6a
					RAMP A							
549+00	BL	0.3-3.0		26	3	13	27	31	27	12	14	A-6a
		3.0-8.0		32	6	16	26	20	21	7	12	A-4a
		8.0-12.5		27	3	13	29	28	21	11	13	A-6a
551+30	BL	0.3-4.0		0	10	10	33	47	33	13	15	A-6a
		4.0-9.0		22	5	16	29	28	23	9	11	A-4a
		9.0-13.0		27	4	11	33	25	23	11	16	A-6a
		13.0-15.0		28	4	15	30	23	25	11	25	A-6a
552+30	BL	0.0-5.0		0	4	17	40	39	26	13	13	A-6a
		5.0-11.0		0	3	12	42	43	26	11	14	A-6a
		11.0-15.0		43	7	13	20	17	24	9	17	A-4a
553+80	BL	0.5-5.0		22	2	12	31	33	28	13	11	A-6a*
		5.0-10.0		29	5	14	25	27	24	11	11	A-6a*
		10.0-15.0		30	4	16	27	23	20	8	12	A-4a
					RAMP B							
550+35	BL	0.0-5.0		30	2	9	29	30	24	11	13	A-6a
		5.0-9.0		28	5	14	25	28	24	11	12	A-6a
		9.0-12.0		35	15	29	11	10	NP	NP	8	A-1-b
		12.0-15.0		29	5	16	24	26	20	7	15	A-4a
553+75	BL	0.3-5.0		27	1	11	27	34	26	11	12	A-6a
		5.0-9.0		0	1	15	41	43	24	11	16	A-6a
		9.0-12.0		21	1	29	28	21	19	3	17	A-4a
					RAMP C							
556+50	BL	0.0-6.0		30	3	14	28	25	26	11	11	A-6a
		6.0-9.5		36	19	19	12	14	23	10	13	A-2-4
557+50	BL	0.0-5.0		24	6	16	33	21	32	16	13	[illegible]
		5.0-10.0		30	10	17	23	20	20	5	12	[illegible]
560+40	BL	0.5-5.0		0	2	27	29	42	24	9	12	A-4a*
		5.0-10.0		0	2	21	40	37	24	11	16	A-6a
					RAMP D							
556+00	BL	0.0-4.0		27	2	26	16	29	25	11	11	A-6a*
		4.0-9.0		39	2	10	25	24	24	11	13	A-6a*
		9.0-12.0		16	5	14	42	23	NP	NP	15	A-4a
558+00	BL	0.0-4.0		22	2	13	32	31	27	11	12	A-6a*
		4.0-8.0		27	4	12	28	29	24	11	12	A-6a*
		8.0-12.0		32	3	11	31	23	22	6	14	A-4a
					DRIVE SAMPLE SOIL TEST DATA							
					REED ROAD							
24+07	17'Lt	2.5-3.5		23	5	22	23	27	24	8	20	A-4a
		5.0-6.0		11	2	12	43	32	26	11	16	A-6a
		7.5-8.5		18	4	15	31	32	25	11	16	A-6a
		10.0-11.0		0	4	52	25	19	NP	NP	13	A-4a
		12.5-13.5		12	8	21	37	22	20	4	18	A-4a
		15.0-16.0		8	3	10	45	34	25	11	20	A-6a
		17.5-18.1		36	14	24	16	10	NP	NP	11	A-2-4
25+08	17'Rt	2.5-3.5		8	5	16	36	35	26	11	16	A-6a
		5.0-6.0		18	5	15	30	32	23	7	15	A-4a
		7.5-8.5		0	5	41	24	30	20	6	19	A-4a
		10.0-11.0		8	4	30	34	24	NP	NP	17	A-4a
		12.5-13.5		14	6	14	35	31	24	7	16	A-4a
		15.0-16.0		-	-	-	-	-	21	6	14	A-4a
		17.5-18.5		5	5	9	38	43	33	14	18	A-6a
		20.0-21.0		12	6	32	25	25	19	5	14	A-4a

SOIL PROFILE

RICHLAND COUNTY

RIC- 30-16.37

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

2/7

PROFILE INDEX	
PROFILE	SHEET
Relocated Reed Rd.	3
Ramp A	3
Ramp B	3
Ramp C	4
Ramp D	4
Relocated Emma Lane	4

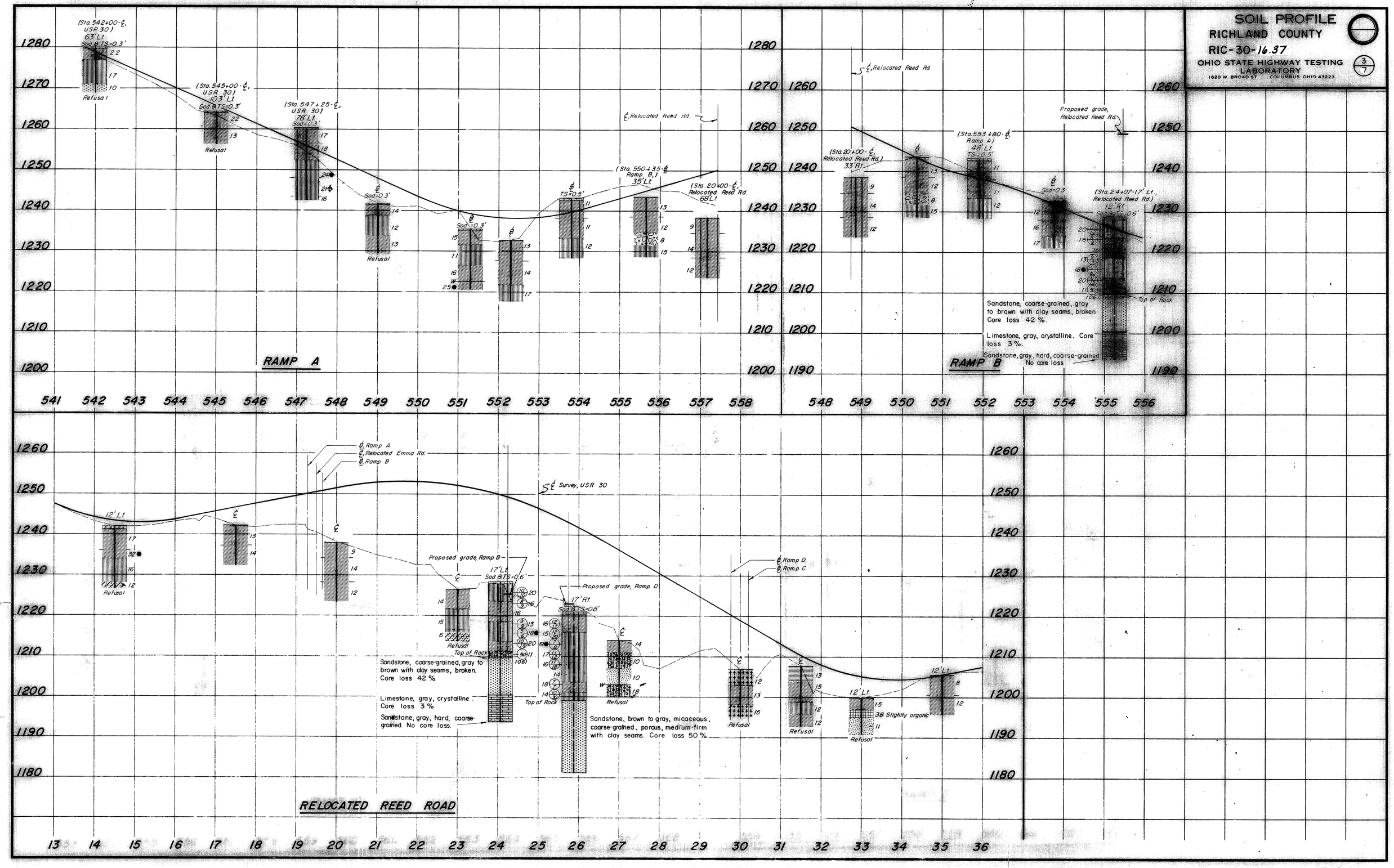
= Borings drilled for RIC-30-5.70, dated 10/27/56

Lakecrest Rd.
Residential
Residential
Woods
Brush and weeds
Weeds
Existing Reed Rd.
Weeds
Open field with scattered brush and weeds
Open field with scattered brush
Existing USR 30 (Westbound Lanes)
Existing USR 30 (Eastbound Lanes)
Woods
Woods
Open field
Open field
Open field
Open field
Existing Emma Lane
Residential
Residential
Open field
Max. 8' emb.
Max. 8' emb.
℄ Ramp D
℄ Ramp C
℄ Ramp B
℄ Ramp A
℄ Relocated Reed Rd.
℄ Relocated Emma Lane
℄ Survey. USR 30

TE - 96
1900-18-64

SOIL PROFILE
RICHLAND COUNTY
RIC-30-16.37
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST COLUMBUS, OHIO 43223

3/7



TE - 96
1900-12-88

SOIL PROFILE

RICHLAND COUNTY

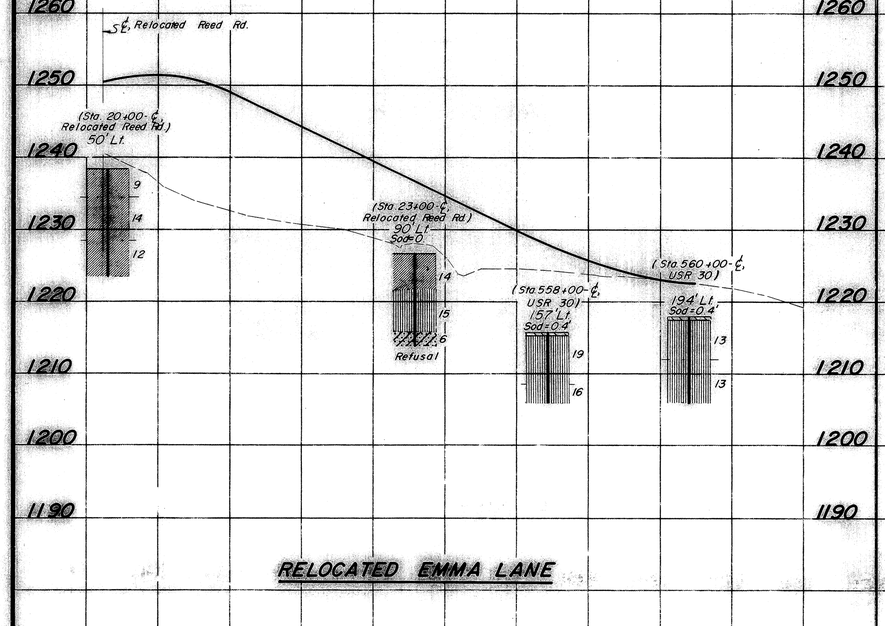
RIC- 30- 16.37

OHIO STATE HIGHWAY TESTING LABORATORY

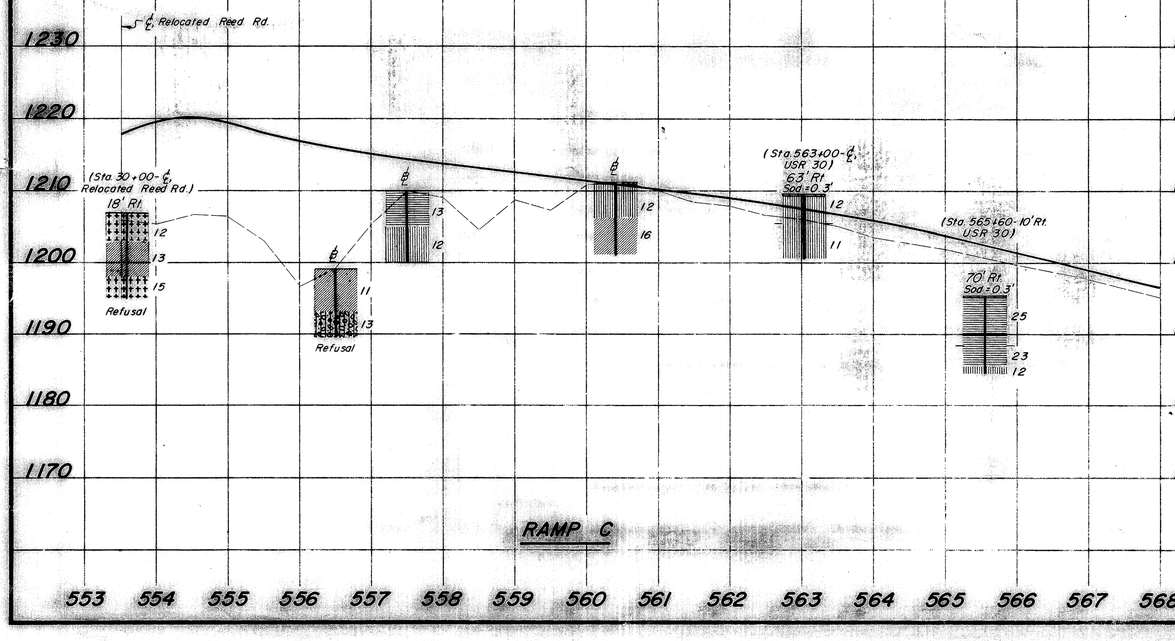
1620 W. BROAD ST. COLUMBUS OHIO 43223

4/7

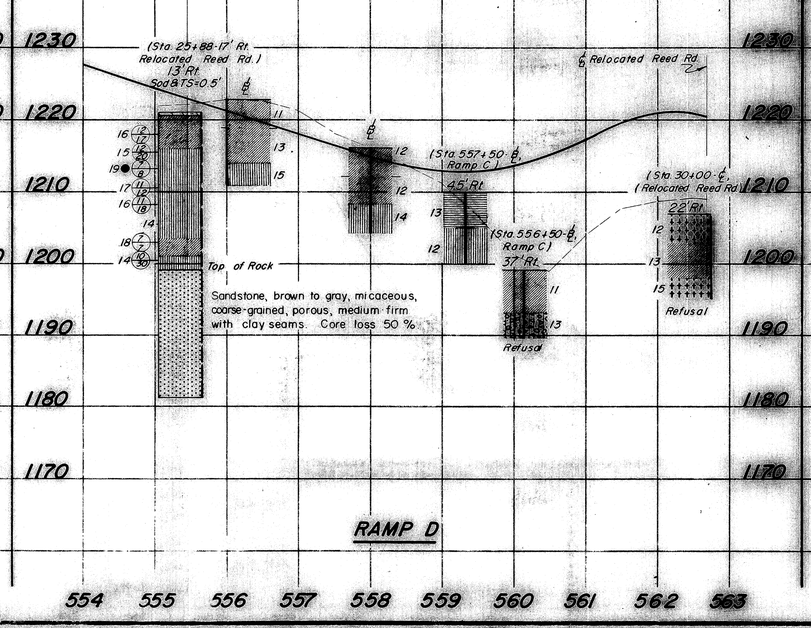
RELOCATED EMMA LANE



RAMP C



RAMP D



TE - 1 1 8
600 - 12 - 68

RICHLAND COUNTY
RIC - 30 - *16.37*

5
17

GEOLOGY OF THE SITE

THE STRUCTURE SITE IS LOCATED ON A GENTLY ROLLING PORTION OF THE MISSISSIPPI VALLEY PLAIN, IN AN AREA WHERE MODERATELY DEEP GLACIAL DRIFT OVERLIES SANDSTONE BEDROCK, OF MISSISSIPPIAN AGE.

EXPLORATION

THE EXPLORATION CONSISTED OF TWO DRIVE SAMPLE-CORE BORINGS AND FIVE DRIVE ROD PENETRATION TESTS, MADE BETWEEN APRIL 6 AND 9, 1970.

INVESTIGATIONAL FINDINGS

BEDROCK DISCLOSED GLACIATED SLOPING BEDROCK SURFACE, ENCOUNTERED AT 19 AND 22-FOOT DEPTHS, ELEVATIONS 1210 AND 1199 FEET, IS OVERLAIN BY MEDIUM-DENSE TO DENSE GRAVELLY SANDY SILT AND STIFF CLAYS. THE BORINGS WERE TERMINATED AT 35 AND 40-FOOT DEPTHS, ELEVATIONS 1194 AND 1181 FEET, AFTER PENETRATING 16 AND 18 FEET OF BEDROCK.

THE ROD SOUNDINGS ENCOUNTERED INCREASING RESISTANCE TO PENETRATION WITH INCREASING DEPTH AND WERE TERMINATED DUE TO REFUSAL OR NEAR-REFUSAL TO PENETRATION AT 17 TO 21-FOOT DEPTHS, ELEVATIONS 1211 AND 1199 FEET, CONSIDERED TO BE ON OR SLIGHTLY ABOVE BEDROCK SURFACE, AS REVEALED BY THE BORINGS.

NO FREE WATER OBSERVATIONS WERE MADE IN 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 Siltstone, Mudstone, or Claystone
- Siltstone, Mudstone, or Claystone
- Weathered Shale
- Shale
- Boulders or 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	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	12"	3" / 2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)		0.005mm

LOG OF BORING

Date Started 4-7-70 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 4-8-70 — Casing Length 20' — Dia. 3 1/2" — Surface Elev. 1228.6'
Boring No. B-3 — Station & Offset 24+07, 17' Lt. (Rear Pier)

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.
1228.6	0				Sod & Topsoil										
1228.2	2														
1226.1	4	10/10			Brown Sandy Gravelly Silt	1	23	5	22	23	27	24	8	20	A-4a
1223.6	6	8/9			Brown Silt and Clay	2	11	2	12	43	32	26	11	16	A-6a
1221.1	8				Brown Gravelly Sandy Clay	3	18	4	15	31	32	25	11	16	A-6a
1218.6	10	9/9			Brown Sandy Silt	4	0	4	52	25	19	NP	NP	13	A-4a
1216.1	12														
1213.6	14	5/6			Brown Sandy Silt	5	12	8	21	37	22	20	4	18	A-4a
1211.1	16	10/15			Brownish-Gray Silt and Clay	6	8	3	10	45	34	25	11	20	A-6a
1209.6	18	50 (0.6')			Brown Silty Sandy Gravel — TOP OF ROCK	7	36	14	24	16	10	NP	NP	11	A-2-4
	20		0.9	0.1											
	22				Sandstone, coarse-grained, gray to brown with clay seams, broken. Core Loss 42%.										
	24		2.3	2.7											
	26														
1200.4	28		3.9	1.1											
	30				Limestone, gray, crystalline. Core Loss 3%.										
	32														
	34		4.8	0.2											
1193.6	35				Sandstone, gray, hard, fine-grained. No Core Loss.										
1193.4					BOTTOM OF BORING										

LOG OF BORING

Date Started 4-6-70 — Sampler Type SS — Dia. 1 3/8" — Water Elev. —
Date Completed 4-7-70 — Casing Length 22' — Dia. 3 1/2" — Surface Elev. 1221.0'
Boring No. B-5 — Station & Offset 25+05, 17' Rt. (Forward Pier)

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.
1221.0	0				Sod & Topsoil										
1220.8	2														
1218.5	4	12/17			Brown Silt and Clay	1	8	5	16	36	35	26	11	16	A-6a
1216.0	6	12/20			Brown Gravelly Sandy Silt	2	18	5	15	30	32	23	7	15	A-4a
1213.5	8	7/8			Brown Sandy Silt	3	0	5	41	24	30	20	6	19	A-4a
1211.0	10	11/12			Brown Sandy Silt	4	8	4	30	34	24	NP	NP	17	A-4a
1208.5	12	11/18			Brown Sandy Silt	5	14	6	14	35	31	24	7	16	A-4a
1206.0	14				Gray Sandy Silt	6	-	-	-	-	-	21	6	14	A-4a
1203.5	16	7/7			Gray Silt and Clay	7	5	5	9	38	43	33	14	18	A-6a
1201.0	18	10/30			Brown Sandy Silt	8	12	6	32	25	25	19	5	14	A-4a
1199.0	20				TOP OF ROCK										
	22														
	24		2.0	1.0											
	26														
	28		0.8	4.2	Sandstone, brown to gray, micaceous, coarse-grained, porous, medium-firm with clay seams. Core Loss 50%.										
	30														
	32		1.3	3.7											
	34														
	36														
	38		4.9	0.1											
1181.0	40				BOTTOM OF BORING										

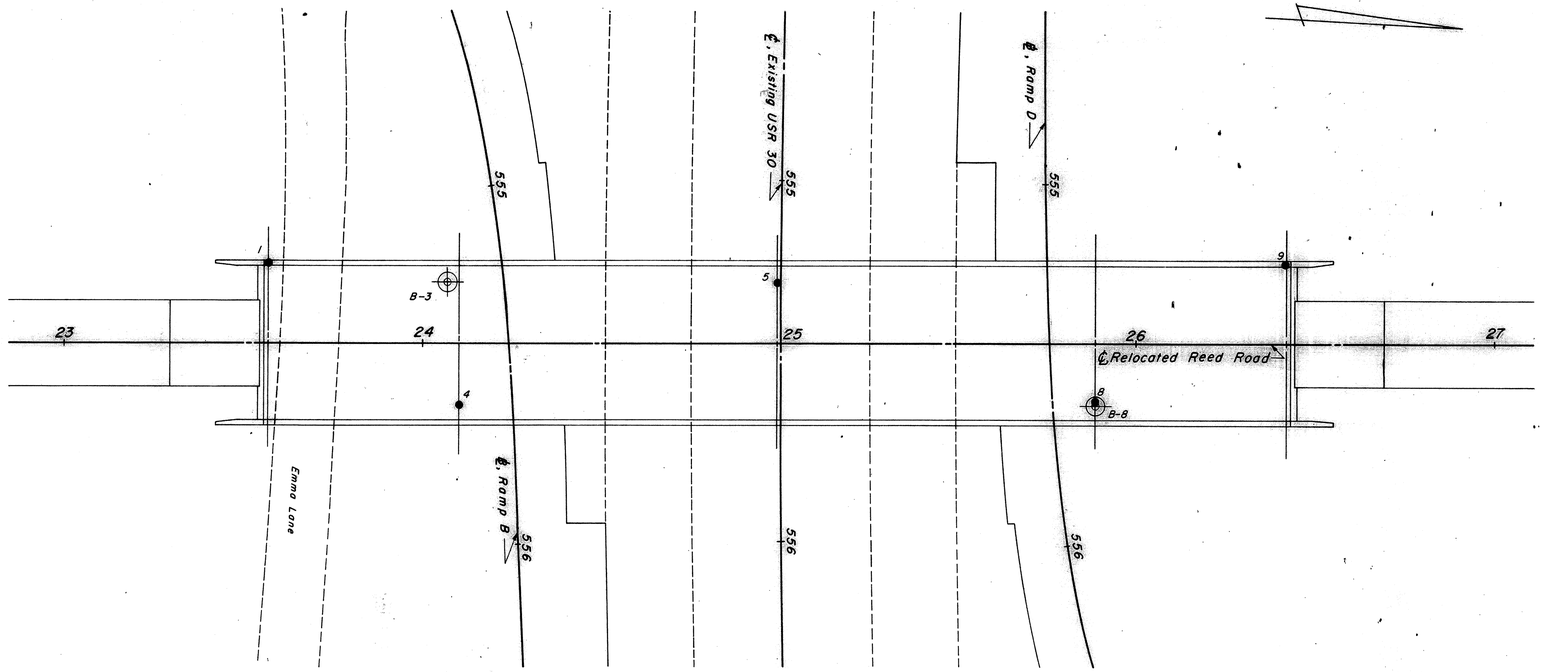
NOTE - Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

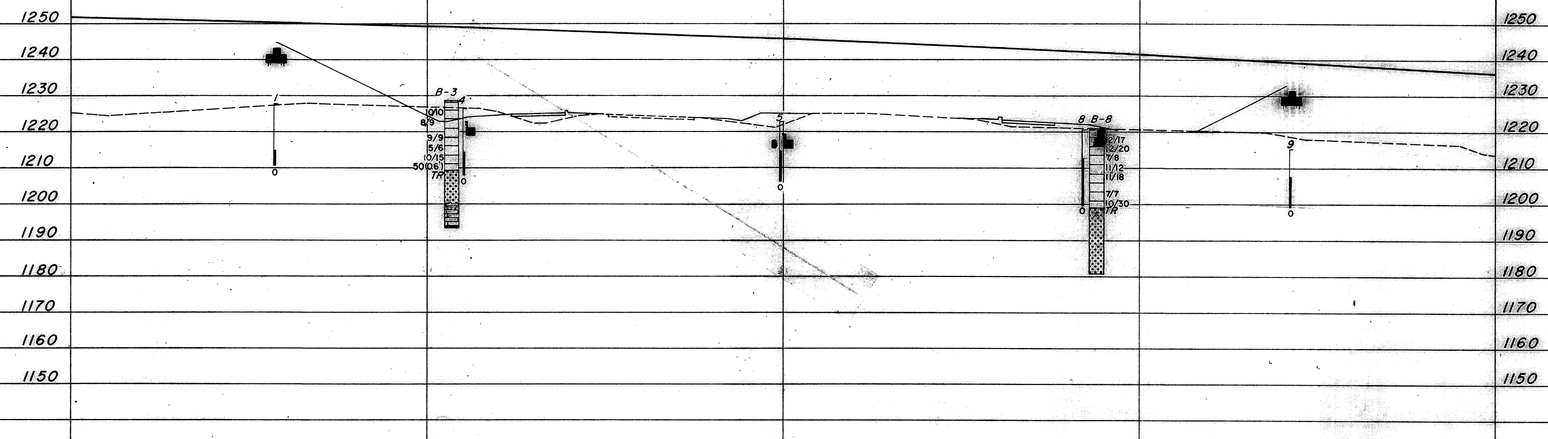
OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC - 30 - 0832
UNDER REED ROAD
SEC. RIC - 30 - 832

CHECKED BY	REVIEWED BY	DATE
R.D.R.	G.P.H.	4/22/70

RIC - 30 - 16.37





SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-30-0832
UNDER REED ROAD
SEC. RIC-30-8.32

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
J.E.C.	R.D.R.	G.P.H.	4/22/70

FE-114
1000-9-67

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

1232
1228
1224
1220
1216
1212
1208
1204
1200
1196

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. 1
Station & Offset 23+57 22'LT
REAR ABUTMENT
Surface Elev. 1227.1' Water Elev. DRY-Hole Closed @ El. 1217.1'
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. 4
Station & Offset 24+10.17'RT
REAR PIER
Surface Elev. 1226.5' Water Elev. DRY-Hole Closed @ El. 1218.5
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. 5
Station & Offset 24+99.17'LT
CENTER PIER
Surface Elev. 1227.9' Water Elev. _____
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. 8
Station & Offset 25+98.17'RT
FORWARD PIER
Surface Elev. 1220.8' Water Elev. DRY-Hole Closed @ El. 1210.8'
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. 9
Station & Offset 26+
Surface Elev. 1215.3
P
H
F
R
F

1208
1204
1200
1196

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. RIC-30-0832
UNDER REED ROAD
SEC. RIC-30-8.32

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.D.R.	G.P.H.	4/22/70

COLE CO.-BOM-10-67-1000