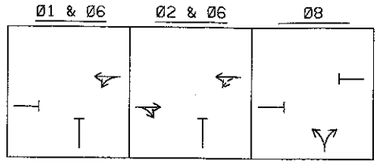
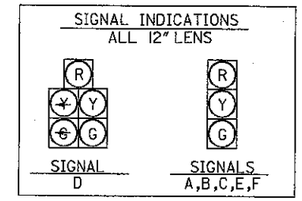
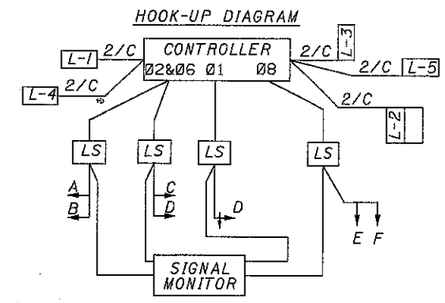
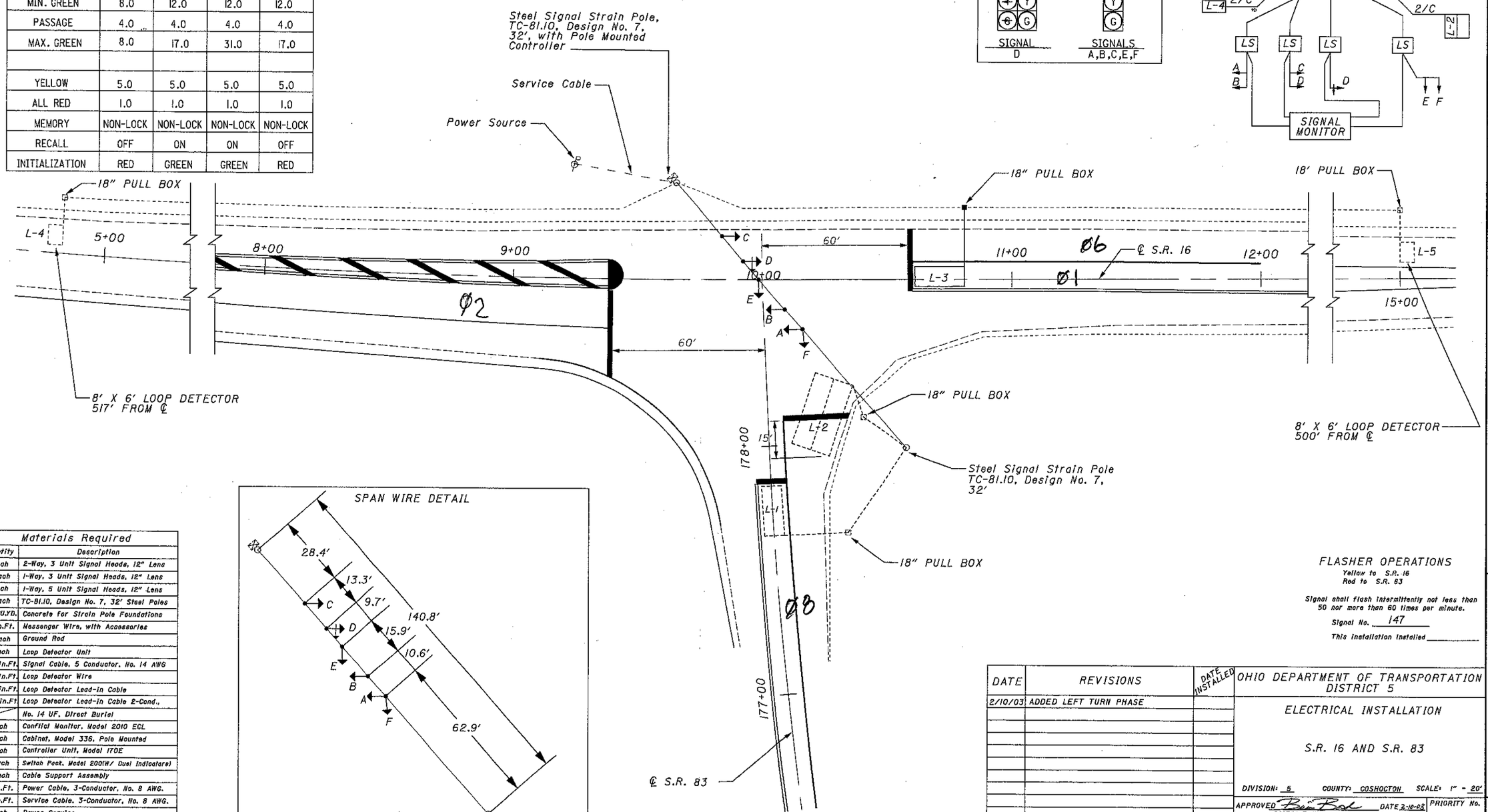


LOOP	SIZE	Ø	AMPLIFIER NO.	EXT.	DELAY	MODE	SLOT	TERM #'S
L-1	20 x 8	8	1		5.0 Sec.	PRESENCE	8	8 - D,E
L-2	30 x 16	8	1		8.0 Sec.	PRESENCE	8	8 - J,K
L-3	20 x 8	1	2		5.0 Sec.	PRESENCE	1	1 - D,E
L-4	8 x 6	2	3			PRESENCE	2	2 - D,E
L-5	8 x 6	6	4			PRESENCE	6	6 - D,E

INTERVAL	SIGNAL TIMING CHART			
	Ø1	Ø2	Ø6	Ø8
MIN. GREEN	8.0	12.0	12.0	12.0
PASSAGE	4.0	4.0	4.0	4.0
MAX. GREEN	8.0	17.0	31.0	17.0
YELLOW	5.0	5.0	5.0	5.0
ALL RED	1.0	1.0	1.0	1.0
MEMORY	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK
RECALL	OFF	ON	ON	OFF
INITIALIZATION	RED	GREEN	GREEN	RED







Materials Required	
Quantity	Description
1 Each	2-Way, 3 Unit Signal Heads, 12" Lens
3 Each	1-Way, 3 Unit Signal Heads, 12" Lens
1 Each	1-Way, 5 Unit Signal Heads, 12" Lens
2 Each	TC-81.10, Design No. 7, 32' Steel Poles
5.38 CU.YD.	Concrete for Strain Pole Foundations
141 Lin.Ft.	Messenger Wire, with Accessories
3 Each	Ground Rod
4 Each	Loop Detector Unit
347 Lin.Ft.	Signal Cable, 5 Conductor, No. 14 AWG
724 Lin.Ft.	Loop Detector Wire
658 Lin.Ft.	Loop Detector Lead-in Cable
1136 Lin.Ft.	Loop Detector Lead-in Cable 2-Cond., No. 14 UF, Direct Burial
1 Each	Conflict Monitor, Model 2010 ECL
1 Each	Cabinet, Model 336, Pole Mounted
1 Each	Controller Unit, Model 170E
4 Each	Switch Pack, Model 200W/ Dual Indicators)
2 Each	Cable Support Assembly
41 Lin.Ft.	Power Cable, 3-Conductor, No. 8 AWG.
51 Lin.Ft.	Service Cable, 3-Conductor, No. 8 AWG.
1 Each	Power Service
944 Lin. Ft.	Signal Cable, 7 Conductor, No 19, AWG

260

02/10/03

C0160675.DGN

FLASHER OPERATIONS
Yellow to S.R. 16
Red to S.R. 83

Signal shall flash intermittently not less than 50 nor more than 60 times per minute.

Signal No. 147

This Installation Installed _____

DATE	REVISIONS	DATE INSTALLED
2/10/03	ADDED LEFT TURN PHASE	

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5

ELECTRICAL INSTALLATION

S.R. 16 AND S.R. 83

DIVISION: 5 COUNTY: COSHOCTON SCALE: 1" = 20'

APPROVED Ben Bok DATE 2-10-03
DISTRICT TRAFFIC ENGINEER

PRIORITY No.

DESIGNED | DRAWN | REVISED | CHECKED | REVIEWED

SHEET ___ OF ___

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED BBK 02/10/03
CHECKED JS 02/11/03

SIGNAL DETAIL SHEET
S.R. 16 & S.R. 83

COS-16-6.75

1
1

COS-16-6.68	OHIO	1 / 17
	FHWA REGION 5	
	FEDERAL PROJECT	

TURN LANES

CALCULATED BY Rw DATE 3-20-85
CHECKED BY J.D. DATE 3-22-85

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
COS-16-6.68

JACKSON TOWNSHIP
COSHOCTON COUNTY

DESIGN DESIGNATION

Current A.D.T. (1985) =7200
Design Year A.D.T. (2005) =10080
D.H.V. 2005 =1001
D (Directional Distribution) = 50%
T (Percent B & C Trucks) = 20%
V (Design Speed = 55 MPH

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CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (existing) (proposed)
Center Line 352 353
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light.

Limited Access (only) LA
Right of Way (only) RW
Limited Access & Right of Way LA & RW
Existing Right of Way
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)

INDEX OF SHEETS

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General Summary 5
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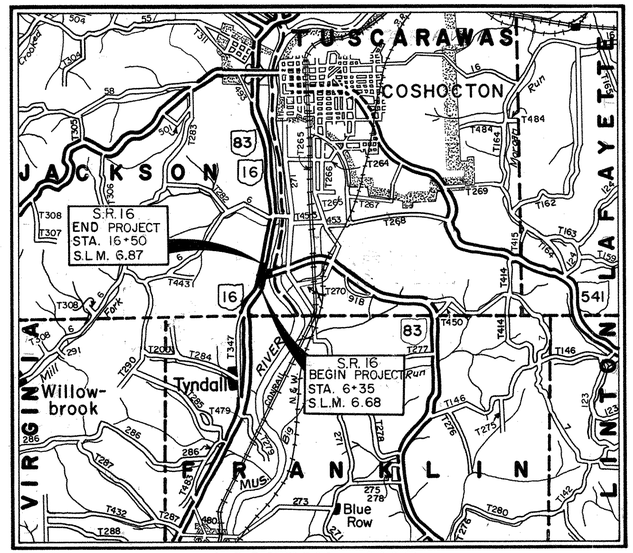
Maintaining Traffic 16
Right-of-way 17



LOCATION MAP

SCALE IN MILES
1 0 1 2 3

Portion to be improved
State & Federal Routes
Other Roads

SCALES

Plan Sheet 6: 0' 50' 100'; Sheet 7: 0' 20' 40'
Profile: Horizontal 0' 50' 100'; Vertical 0' 1' 2'
Cross Section: Horizontal 0' 10' 20'; Vertical 0' 10' 20'

1985 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.

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.

J-15

Approved John W. Hagan
Date 4-22-85 District Deputy Director of Transportation

Approved
Date Engineer, Bureau of Bridges and Structural Design

Approved James R. Longenecker
Date 7-5-85 Chief Engineer, Operations

Approved Warren J. Smith
Date 7-8-85 Director, Department of Transportation

LINE DATA

S.R. 16
Begin Work Sta. 4+75
End Work Sta. 17+50
Length of Work 1275.00 Lin. Ft. or 0.241 Mile

S.R. 83
Begin Work Sta. 170+35
End Work Sta. 178+49.01
Length of Work 814.01 Lin. Ft. or 0.154 Mile

Total Length of Work S.R. 16 & S.R. 83
= 2089.01 Lin. Ft. or 0.396 Mile

S.R. 16
Begin Project Sta. 6+35
End Project Sta. 16+50
Total Length of Project 1015.00 Lin. Ft. or 0.192 Mile

UNDERGROUND UTILITIES
48 HOURS
BEFORE YOU DIG
Call 800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

Plan Prepared By:
DISTRICT NO. 5
OHIO DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATIONS		
847	10-17-83	
947	10-17-83	
861	9-9-83	
961	9-9-83	

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
HL-10	6-1-79				
TC-21.20	1-20-84				
TC-81.10	1-20-84				
TC-82.10	8-29-84				
TC-83.10	1-20-84				
TC-84.20	1-20-84				
TC-85.20	1-20-84				
TC-71.10	4-9-79				
BP-5	1-11-85				

SEAL

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

Project: COS-16-6.65
Date of Letting 19__, Contract No.

LD0300 Rev. 1-1-81

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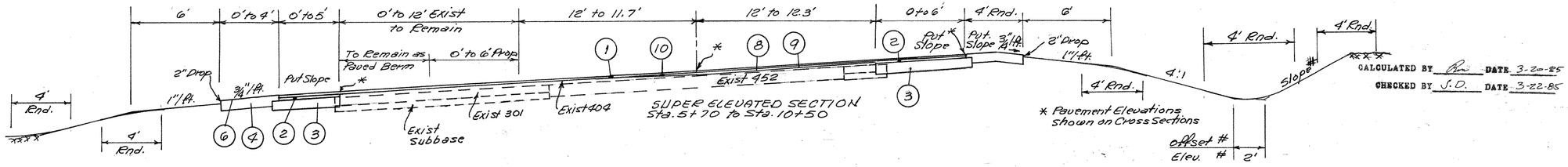
DEC 12 1985

FHWA REGION	STATE	PROJECT	
5	OHIO		

COS-16-6.68

TYPICAL SECTIONS

TYPE 404 on 301 or 452



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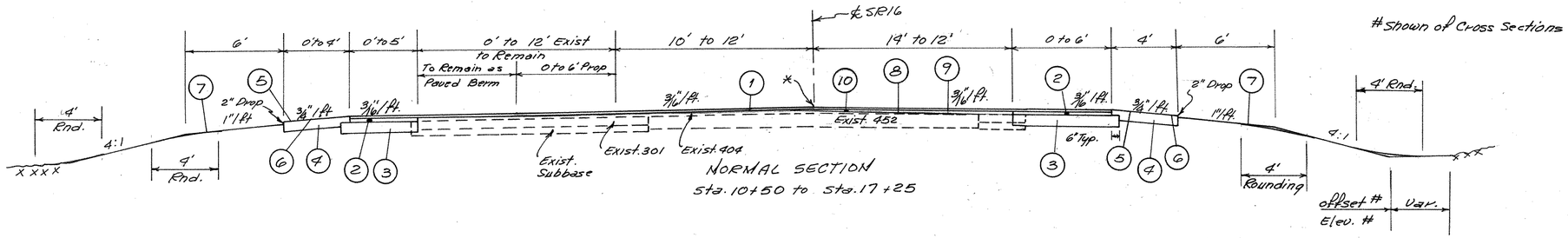
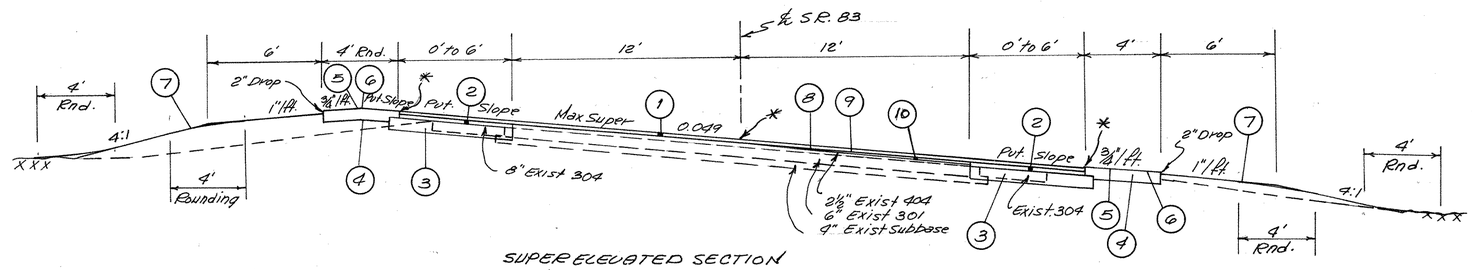
CHECKED BY J.O. DATE 3-22-85



shown of Cross Sections



SUPER ELEVATED SECTION

Sta. 171+00 to Sta. 178+49.01

1. Item 404 - 1 1/2" Asphalt Concrete, AC-20
2. Item 402 - 1 3/4" Asphalt Concrete, AC-20
3. Item 301 - 8" Bituminous Aggregate Base : AC-20, RT-11 or RT-12
4. Item 304 - 8" Aggregate Base
5. Item 408 - Bituminous Prime Coat, applied at the rate of 0.4 Gal./Sq. Yd.
6. Item 409 - Seal Coat Bituminous Material & Seal Coat @ 0.3 Gal./Sq. Yd. Cover Aggregate @ 0.008 C.Y./Sq. Yd.
7. Item 659 - Seeding & Mulching (See General Notes)
8. Item 407 - Tack Coat Bituminous Material, applied at the rate of 0.1 Gal./Sq. Yd.
9. Item 407 - Cover Aggregate, applied at the rate of 7 lbs./Sq. Yd.
10. Item 404 - Asphalt Concrete, AC-20 - Variable Leveling Course 0" Min - 4 1/2" Max. SR-16 0" Min - 5" Max. SR-83

CALCULATIONS

Total Areas		
Sta. 5+70 - 9+00	30 Ave x 330 = 9900	Feather Areas
Sta. 9+00 - 13+95	36 x 495 = 17820	[65+75+50] x 25.2 Ave ÷ 9 =
Sta. 13+95 - 17+25	30 Ave x 330 = 9900	532 S.Y.
Sta. 171+00 - 174+30	30.1 Ave x 330 = 9933	532 ÷ 2 = 266 S.Y.
Sta. 174+30 - 178+49.01	36 x 419.01 = 15085	
2 Radius Tapers	60 x 7 = 420	
2 Radius Returns By Planimeter	1052+1280 = 2332	
	65,390 ÷ 9 = 7,266 S.Y.	
Added Areas		
Sta. 5+70 - 9+00 Rt.	3 Ave x 330 = 990	
Sta. 9+00 - 9+50 Rt.	6 x 50 = 300	
Sta. 10+60 - 13+95 Rt.	6 x 335 = 2010	
Sta. 13+95 - 17+25 Lt.	3 Ave x 330 = 990	
Sta. 5+70 - 7+00 Lt.	1 Ave x 130 = 130	
Sta. 7+00 - 7+70 Lt.	0.5 Ave x 70 = 35	
Sta. 13+25 - 14+50 Lt.	2.5 Ave x 125 = 313	
Sta. 14+50 - 17+25 Lt.	2.5 Ave x 275 = 688	
Sta. 171+00 - 174+30 Rt. & Lt.	330 x 6 Ave = 1980	
Sta. 174+30 - 177+77 Rt. & Lt.	347 x 12 = 4164	
Sta. 177+77 - 178+02 Lt.	25 x 6 = 150	
2 Radius Tapers	60 x 7 = 420	
2 Radius Returns By Planimeter	920+1108 = 2028	
	14,198 ÷ 9 = 1,578 S.Y.	
Paved Berm Areas		
Sta. 7+70 - 9+50 Lt.	3 Ave x 180 = 540	
Sta. 9+50 - 12+00 Lt.	6 x 250 = 1500	
Sta. 12+00 - 13+25 Lt.	3 Ave x 125 = 375	
	2,415 ÷ 9 = 268 S.Y.	

CALCULATIONS

Area for 6" Overhang of 301	
Sta. 5+70 Lt. - 7+70 Lt.	200 L.F.
Sta. 13+25 Lt. - 17+25 Lt.	400 L.F.
Sta. 5+70 Rt. - 17+00 Lt.	1135 L.F.
Sta. 171+00 Rt. - 17+25 Rt.	1917 L.F.
	3,152 L.F. x .5 ÷ 9 = 175 S.Y.
Area for 304 Berm	
Sta. 5+70 - 7+70 Lt. =	200 x 4
Sta. 7+70 = 8+90 Lt. =	120 x 2 Ave.
Sta. 12+42 - 13+25 Lt. =	83 x 2 Ave.
Sta. 13+25 - 17+25 Lt. =	400 x 4
Sta. 5+70 Rt. - 17+00 Lt. =	1,135 x 4
Sta. 171+00 Rt. - 17+25 Rt. =	1917 x 4
200+400+1135+1917 =	3,152 L.F.
120+83 =	203 L.F.
[3.5 x 3152 + 2 x 203] ÷ 9 =	1271 S.Y.
.5 x 3152 ÷ 9 =	175 S.Y.
1271 + 175 =	1446 S.Y.
Pad Berm Leveling Course [(.13 Ave)(540) ÷ (.13 Ave)(1500) + (.08 Ave)(375)] ÷ 27 =	11 C.Y. of 404
Put & Pad Berm Surface Course (7266 S.Y. - 266 + 268)(0.0417) =	303 C.Y. of 404
Put. Leveling Course [[28](1155+198)(.0833) + (304)(.2083) Pad Berm] ÷ 27 =	103 C.Y. of 404
Item 402 - 1,578 S.Y. x 0.0486 =	77 C.Y.
Item 301 - (1,578 S.Y. + 175 S.Y.)(0.2222) =	390 C.Y.
Item 407 - 7,266 S.Y. - 1,578 S.Y. + 268 =	5956 x 0.1 = 596 Gal.
Item 407 - Cover Aggr -	5,956 x 7 ÷ 2000 = 20.85 Tons.
Item 408 -	1,446 S.Y. x 0.4 = 578 Gals
Item 409 -	1,446 S.Y. x 0.3 = 434 Gals 1446 x .008 = 12 C.Y. Cover Aggr.
Item 304 -	1,271 S.Y. x 0.2222 + 175 S.Y. x 0.0833 = 297 C.Y.
Item 404 - Tot.:	11 + 303 + 103 = 417 C.Y.
Item 659 Comm. Fert.	13,364 S.Y. x 9 x 20 ÷ 1000 ÷ 2000 = 1.20 Tons
Item 659 - Agri. Liming	13,364 S.Y. x 9 x 100 ÷ 1000 ÷ 2000 = 6.01 Tons

CALCULATIONS & TYPICAL SECTIONS

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GENERAL NOTES

ITEM 605 UNDERDRAINS FOR PULL BOXES:

Reference is made to Standard Drawing HL-10 for details of draining pull boxes. Underdrains for pull boxes shall be used as directed by the Engineer and shall be provided where the length required for a satisfactory outlet does not exceed approximately 20 feet. An estimated quantity of 40 linear feet of Item 605 4" shallow pipe underdrains is included in the General Summary for this purpose.

UNDERGROUND UTILITIES:

The locations of the underground utilities shown on the plans are as obtained from the owners of the utility as required by Section 153.64 ORC.

UTILITY OWNERSHIP:

The following utilities and owners are located within the work limits of this project:

Ohio Power Company
P.O. Box 400
Canton, Ohio 44701
216-456-8173

Ohio Bell Telephone
840 Orchard Street
Zanesville, Ohio 43701
614-454-3515

48 HOURS BEFORE YOU DIG Call... 800-362-2764 TOLL FREE OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY

Worthington Oil Co.
6610 Busch Blvd.
Columbus, Ohio 43229
614-846-9200

ITEM 632 POWER SUPPLY FOR TRAFFIC SIGNALS:

Electric power shall be obtained from Ohio Power at the location shown on the plans. Existing voltage is 120/240 volts.

All necessary work to install a complete operational system will be included in the various electrical bid items in this contract.

ITEM 614 MAINTAINING TRAFFIC:

In addition to Item 614, Maintaining Traffic, Construction and Material Specifications, the following shall apply:

Any closure for Signal Erection shall be implemented during non-peak hours,(non-peak hours are 9:00 a.m. to 3:00 p.m.). When it is necessary to close one lane of traffic adjacent to the work, the closure shall be accomplished by the application of traffic control devices as shown on sheet 16 of the plans. All advance warning signs for any condition which restricts traffic shall be erected before any such restriction is put into effect. All such signs shall be covered or removed from the view of traffic when they are not applicable, as determined by the Engineer. For work which is confined to the shoulder, traffic control application shall conform to Figure C-12 of the OMUTCD. If the Contractor fails to comply with the provisions for traffic control as set forth in these plans and provisions of the Manual of Uniform Traffic Control Devices (OMUTCD) and failure to comply results in a condition at the work site which is unsafe for traffic, the Engineer shall suspend work until the Contractor complies with the necessary requirements.

Payment for all the above shall be included in the lump sum price bid for Item 614, Maintaining Traffic.

ITEM 632 LOOP DETECTOR UNIT, BY TYPE, AS PER PLAN:

In addition to the requirements of 632 and 732.07 or 732.08, loop detector units shall have the following requirements or features:

The output device shall be a relay, and all contacts shall be included in the wiring harness.

The unit shall be self tuning.

The unit's electrical connection plugs or wiring harness shall allow ready replacement with a single channel unit as described in the final paragraph of 732.07.

~~WARRANTY OR GUARANTEE OF ELECTRICAL EQUIPMENT:~~

~~The Contractor shall warrant or guarantee satisfactory operation of electrical control equipment for a period of 90 days following acceptance of the equipment by the State. The Contractors responsibility shall be limited to necessary repairs, replacement of defective parts with parts equal to or better than those originally specified in remedying faulty installation in an approved manner including all labor, material and equipment costs related there to. During this period the Contractor shall be responsible for the maintenance and proper operation of all Contractor installed equipment. The Engineer shall contact the Contractor if the equipment failure is his responsibility. The Contractor shall provide the Engineer such addresses and phone numbers where his maintenance forces are located. The Contractor shall provide one or more persons to receive all calls and dispatch the necessary maintenance forces to correct the outage. The Contractor shall have sufficient personnel and equipment available to restore normal operation within 4 hours after notification. When the Contractor fails to respond to an outage or malfunction of equipment in accordance with the requirements described above, the Engineer may invoke the provisions of Section 105.15.~~

~~The following items shall be provided with specified guarantee:~~

~~1. Traffic signal controller and associated control equipment.~~

~~2. Loop detector units in addition to the manufacturers equipment for which guarantees are normally provided shall be assigned and delivered to the State.~~

~~The Contractor shall install and handle items in accordance with the manufacturers recommended procedures, provided such procedures are not in conflict with the plans and specifications. Costs for provision and performance of guarantees and warranties herein described will be incidental to and included in the unit price(s) bid for the various traffic control items.~~

ITEM 861 CONTROLLER, ACTUATED, 2-PHASE, SOLID STATE DIGITAL, MICROPROCESSOR TYPE, WITH POLE MOUNTED CABINET, AS PER PLAN:

The overlap programming shall be by use of an interchangeable plug-in printed circuit board assembly as described in Section 14 of NEMA TS-1-1983. In addition to NEMA requirements, the conflict monitor shall also have extended monitoring in accordance with Supplemental Specification 961.04, part 3b. The controller housing shall be keyed to the State master. Controller cabinet shall be painted yellow Federal Standard 595 color 13655. Controller cabinet size shall comply to the requirements of 861.

Payment for Item 861, Controller, Actuated, 2-Phase, Solid State Digital, Microprocessor Type, With Pole Mounted Cabinet, As Per Plan will be at the contract bid price per each complete and in place including all connections tested and accepted.

ITEM 632 LOOP DETECTOR LEAD-IN CABLE, 2C #14, AWG DIRECT BURIAL:

This item shall include the furnishing and installation of direct burial shielded cable by plowing or vibratory methods to a minimum depth of 18". Payment shall be made at the contract unit price per lin. ft. in place including all connections tested and accepted.

ITEM 619 FIELD OFFICE:

The Contractor shall provide a suitable field office having a minimum of 150 sq.ft. of floor space. Payment shall be at 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

CONTINGENCY QUANTITIES:

The Contractor shall not order materials or perform work for plan items set up to be used "as directed by the Engineer" unless authorized by the Engineer. The actual work locations and quantities used at the Engineer's discretion shall be made a matter of record by incorporation into the final change order governing completion of this project.

SEEDING:

Quantities for seeding are calculated for the soil areas between ten (10) feet outside the work limits, as shown on the cross sections, or to the right-of-way line, if such line is less than ten (10) feet from the work limits.

Included in the General Summary is a quantity to reseed area disturbed during construction and the storage area.

Item 659 Seeding and Mulching 1000 Sq.Yds.

TRENCH FOR WIDENING:

Trench excavation for base widening shall be only on one side of the pavement at a time. The open trench shall be adequately maintained and protected with drums or barricades at all times. Placement of proposed subbase and base material shall follow as closely as possible behind the excavation operations. The length of widening trench which is open at any one time shall be held to a minimum and shall at all times be subject to approval of the Engineer.

TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS:

References to Supplemental Specifications 843, 857, 858, 859, 957, 958 and 959 on the Traffic Control Standard Construction Drawings in these plans shall be considered to read as respective references to Items 861, 961, 630, 631, 632, 730, 731 and 732.

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614 WORK ZONE PAVEMENT MARKINGS

GENERAL

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND WHEN NECESSARY, REMOVE WORK ZONE RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE MAINTAINED IN GOOD CONDITION TO PROVIDE DAY AND NIGHT VISIBILITY. THE MARKINGS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER TO MAINTAIN REQUIRED VISUAL EFFECTIVENESS AND NIGHT VISIBILITY AT NO ADDITIONAL COST TO THE STATE.

THE CONTRACTOR SHALL, IN ADVANCE OF ANY SECTION OF ROADWAY LACKING OMUTCD FULL PATTERN STANDARD DIMENSION EDGE LINE OR CENTER LINE MARKINGS, ERECT A "NO EDGE LINES" (OW-167) SIGN OR "UNMARKED NO PASSING ZONES" (OW-168) SIGN OR BOTH AS MAY BE APPROPRIATE. THESE SIGNS SHALL BE IN PLACE PRIOR TO EXPOSING THE ROADWAY TO TRAFFIC. THESE SIGNS SHALL BE REPEATED EVERY 1 TO 2 MILES AND AT OTHER LOCATIONS AS NECESSARY. THESE SIGNS SHALL BE REMOVED WHEN THEY NO LONGER APPLY. THE COST FOR FURNISHING AND ERECTING AND SUBSEQUENTLY REMOVING THESE SIGNS SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC, UNLESS SPECIFICALLY ITEMIZED.

TEMPORARY PAVEMENT MARKING MATERIALS

UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE EITHER 621.02 PAINT OR 947.03 TYPE B OR C PREFORMED MATERIAL. WHERE PAVEMENT MARKING ARE NOT LIABLE TO BE TRACKED, EITHER CONVENTIONAL OR FAST DRYING PAINT MAY BE USED FOR 621.02.

PAINT

PAINTED MARKINGS SHALL BE IN ACCORDANCE WITH 621 EXCEPT THAT THE INCREASE OF 25 PERCENT IN THE APPLICATION RATE FOR NEW BITUMINOUS PAVEMENT AND PARAGRAPH 621.14 SHALL NOT APPLY.

TYPE B AND TYPE C PREFORMED MATERIAL

PREFORMED MATERIAL SHALL COMPLY WITH 947.03 EXCEPT THAT NO PREFORMED MATERIAL CONTAINING METAL SHALL BE PLACED ON ANY SURFACE UNLESS IT WILL BE REMOVED LATER BY THE CONTRACTOR. TEMPORARY PAVEMENT MARKINGS OF 947.03 PREFORMED MATERIAL SHALL BE REMOVED PRIOR TO PLACEMENT OF 621 OR 847 SURFACE COURSE MARKINGS AT THAT LOCATION. PREFORMED MATERIAL SHALL BE APPLIED IN ACCORDANCE WITH 847 EXCEPT AS MODIFIED HEREIN.

PLACEMENT

TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS CONFLICT WITH THE TRAFFIC PATTERN, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134.

TEMPORARY MARKING CLASSES

CLASS I MARKINGS

CLASS I MARKINGS SHALL BE APPLIED TO THE FULL DIMENSIONS AS DEFINED IN 621 WITH THE FOLLOWING ADDITIONS OR EXCEPTIONS:

1) LANE LINES SHALL BE 4-INCHES IN WIDTH.
2) TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
3) STOP LINES SHALL BE 12-INCHES IN WIDTH.
4) CROSS WALK LINES SHALL BE 8-INCHES IN WIDTH.

CLASS II MARKINGS

CLASS II MARKINGS (ABBREVIATED) SHALL BE DEFINED AS FOLLOWS:

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 4-INCH WIDE BY A MINIMUM OF 48-INCH LONG DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 4-INCH WIDE BY A MINIMUM OF 48-INCH LONG DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

GORE MARKINGS SHALL BE TWO CONTINUOUS, WHITE 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 1.6 GALLONS PER MILE FOR LANE LINE AND CENTER LINE AND 16 GALLONS PER MILE FOR GORE MARKINGS.

CONFLICTING EXISTING MARKINGS

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL CONFLICTING EXISTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC UNLESS SPECIFICALLY ITEMIZED.

THE CONTRACTOR SHALL ALSO REMOVE THE PRISMATIC RETRO-REFLECTOR WITHIN ANY RAISED PAVEMENT MARKER (RPM) WHICH IS IN CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS. WHEN THE TEMPORARY PAVEMENT MARKINGS ARE REMOVED AND THE RPM IS NO LONGER IN CONFLICT, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE RECESSED REFLECTOR ATTACHMENT AREA OF THE CASTING AND INSTALL A NEW PRISMATIC RETRO-REFLECTOR OF THE SAME KIND AND COLOR. THE COST FOR THIS WORK SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

INTERIM MARKINGS

WITHIN 21 CALENDAR DAYS AFTER OPENING ANY LENGTH OF PAVEMENT TO TRAFFIC, THE 621 OR 847 PAVEMENT MARKINGS CALLED FOR IN THE PLANS OR EQUIVALENT 614 CLASS I, PAINT MARKINGS SHALL BE APPLIED. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO PLACE AND MAINTAIN 614 CLASS I PAINT MARKINGS AS PART OF THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC.

FOR EACH CALENDAR DAY BEYOND 21 DAYS THAT THIS WORK SHALL REMAIN UNCOMPLETED, THE PROVISIONS OF 108.07 WILL BE INVOKED, EXCEPT THAT BETWEEN NOVEMBER 15 AND APRIL 15 WEATHER CONDITIONS SHALL NOT BE AN ACCEPTABLE REASON FOR EXTENSION.

METHOD OF MEASUREMENT

TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED, IN ACCORDANCE WITH 621.15.

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

BASIS OF PAYMENT

PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF THE MARKINGS.

ITEM	UNIT	DESCRIPTION
~~614~~	~~MILES~~	~~TEMPORARY LANE LINES, CLASS ____, *~~
614	MILES	TEMPORARY CENTER LINES, CLASS II, *
614	LIN. FT.	TEMPORARY CHANNELIZING LINES, CLASS I, *
~~614~~	~~MILES~~	~~TEMPORARY EDGE LINES, CLASS I, *~~
~~614~~	~~LIN. FT.~~	~~TEMPORARY GORE MARKINGS, CLASS II, *~~
~~614~~	~~LIN. FT.~~	~~TEMPORARY STOP LINES, CLASS I, *~~
~~614~~	~~LIN. FT.~~	~~TEMPORARY CROSSWALK LINES, CLASS I, *~~
~~614~~	~~EACH~~	~~TEMPORARY LANE ARROWS, CLASS I, *~~
~~614~~	~~EACH~~	~~TEMPORARY RAILROAD SYMBOL MARKINGS, CLASS I, *~~
~~614~~	~~EACH~~	~~TEMPORARY WORD "ONLY" ON PAVEMENT, 72-INCH, CLASS I, *~~
~~614~~	~~LIN. FT.~~	~~TEMPORARY TRANSVERSE LINES, CLASS I, *~~
~~614~~	~~LIN. FT.~~	~~TEMPORARY DOTTED LINES, CLASS I, *~~

*621 PAINT, 947.03 TYPE B OR 947.03 TYPE C

fh4

The following quantities have been carried to the General Summary to be used as directed by the Engineer.
Item 614 Temporary Center Lines, Class II, 0.58 Miles
Item 614 Temporary Channelizing Lines, Class I, 877 Lin. Ft.

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GENERAL SUMMARY

CALCULATED BY Rm DATE 3-20-85
CHECKED BY J.D. DATE 3-22-85

F.H.W.A. Region	STATE	PROJECT	
5	OHIO		

COS-16-6.68

ITEM	SHEET NUMBER 2	3	4	7	8	12	14	ITEM	QUANT.	UNIT	DESCRIPTION
											ROADWAY
203						611	247	203	858	Cu. Yd.	Excavation Not Including Embankment Construction
203						4066	297	203	4,363	Cu. Yd.	Embankment
202		155						202	155	Each	Raised Pavement Markers Removed for Storage
											EROSION CONTROL
659		1,000				9,133	3,231	659	13,364	Sq. Yd.	Seeding and Mulching
659	1.20							659	1.20	Ton	Commercial Fertilizer
659	6.01							659	6.01	Ton	Agricultural Liming
											DRAINAGE
605		40						605	40	Lin. Ft.	4" Shallow Pipe Underdrains
											PAVEMENT
301	390							301	390	Cu. Yd.	Bituminous Aggregate Base: AC-20; RT-11 or RT-12
304	297			14				304	311	Cu. Yd.	Aggregate Base
402	77							402	77	Cu. Yd.	Asphalt Concrete, AC-20
404	417							404	417	Cu. Yd.	Asphalt Concrete, AC-20
407	596							407	596	Gal.	Tack Coat
407	20.85							407	20.85	Ton	Cover Aggregate
408	578							408	578	Gal.	Bituminous Prime Coat
409	434							409	434	Gal.	Seal Coat Bituminous Material
409	12							409	12	Cu. Yd.	Seal Coat Cover Aggregate
											TRAFFIC CONTROL
632					1			632	1	Each	Strain Pole Type TC-81.10, Design 7, Modified 32'
632					1126			632	1126	Lin. Ft.	Loop Detector Lead-in Cable Nº 14 AWG, Direct Burial
632					2			632	2	Each	Vehicular Signal Head 3-Section, 12" Lens, 1-Way
632					2			632	2	Each	Vehicular Signal Head 3-Section, 12" Lens, 2-Way
632					2			632	2	Each	Loop Detector Unit Delay Type
632					3			632	3	Each	Loop Detector Unit
632					319			632	319	Lin. Ft.	Loop Detector Pavement Cutting
632					5.38			632	5.38	Cu. Yd.	Concrete for Anchor Base Foundations
632					1			632	1	Each	Strain Pole, Type TC-81.10, Design 7, Modified 34'
632					2			632	2	Each	Cable Support Assembly
632					142			632	142	Lin. Ft.	Messenger Wire 7 Strand, 3/8" Dia., with Accessories
632					347			632	347	Lin. Ft.	Signal Cable, 5-Conductor Nº 14 AWG
632					724			632	724	Lin. Ft.	Loop Detector Wire, Type E
632					658			632	658	Lin. Ft.	Loop Detector Lead-in Cable
632					41			632	41	Lin. Ft.	Power Cable 3 -Conductor Nº 8 AWG
632					51			632	51	Lin. Ft.	Service Cable, 3 -Conductor Nº 8 AWG
632					1			632	1	Each	Power Service
632					4			632	4	Each	Covering of Vehicular Signal Head
630					56			630	56	Lin. Ft.	Ground Mounted Supports, Nº 3 Post
630					46			630	46	Lin. Ft.	Ground Mounted Supports, Nº 4 Post
630					42			630	42	Sq. Ft.	Signs, Flat Sheet
621					0.71			621	0.71	Mile	Edge Lines
621					0.58			621	0.58	Mile	Center Lines
847					377			847	377	Lin. Ft.	Channelizing Lines, 947.02
847					75			847	75	Lin. Ft.	Stop Lines, 947.02
847					880			847	880	Lin. Ft.	Transverse Lines, 947.02
847					2			847	2	Each	Lane Arrows, 947.02
847					2			847	2	Each	Word on Pavement, 96-in. (Only), 947.02
625					2			625	2	Each	Ground Rod
625					4			625	4	Each	Pull Box, Metal, 18"
861					1			861	1	Each	Controller, Actuated, 2 Phase, Solid State Digital, Microprocessor Type, with Pole Mounted Cabinet, As Per Plan
614			377					614	377	Lin. Ft.	Temporary Channelizing Lines, Class I
614			0.58					614	0.58	Mile	Temporary Center Lines, Class II
614		Lump						614	Lump		Maintaining Traffic
619		Lump						619	Lump		Field Office
623								623	Lump		Construction Layout Stakes
624								624	Lump		Mobilization

LD0303
12-29-67

FHWA REGION	STATE	PROJECT	
5	OHIO		

6/17

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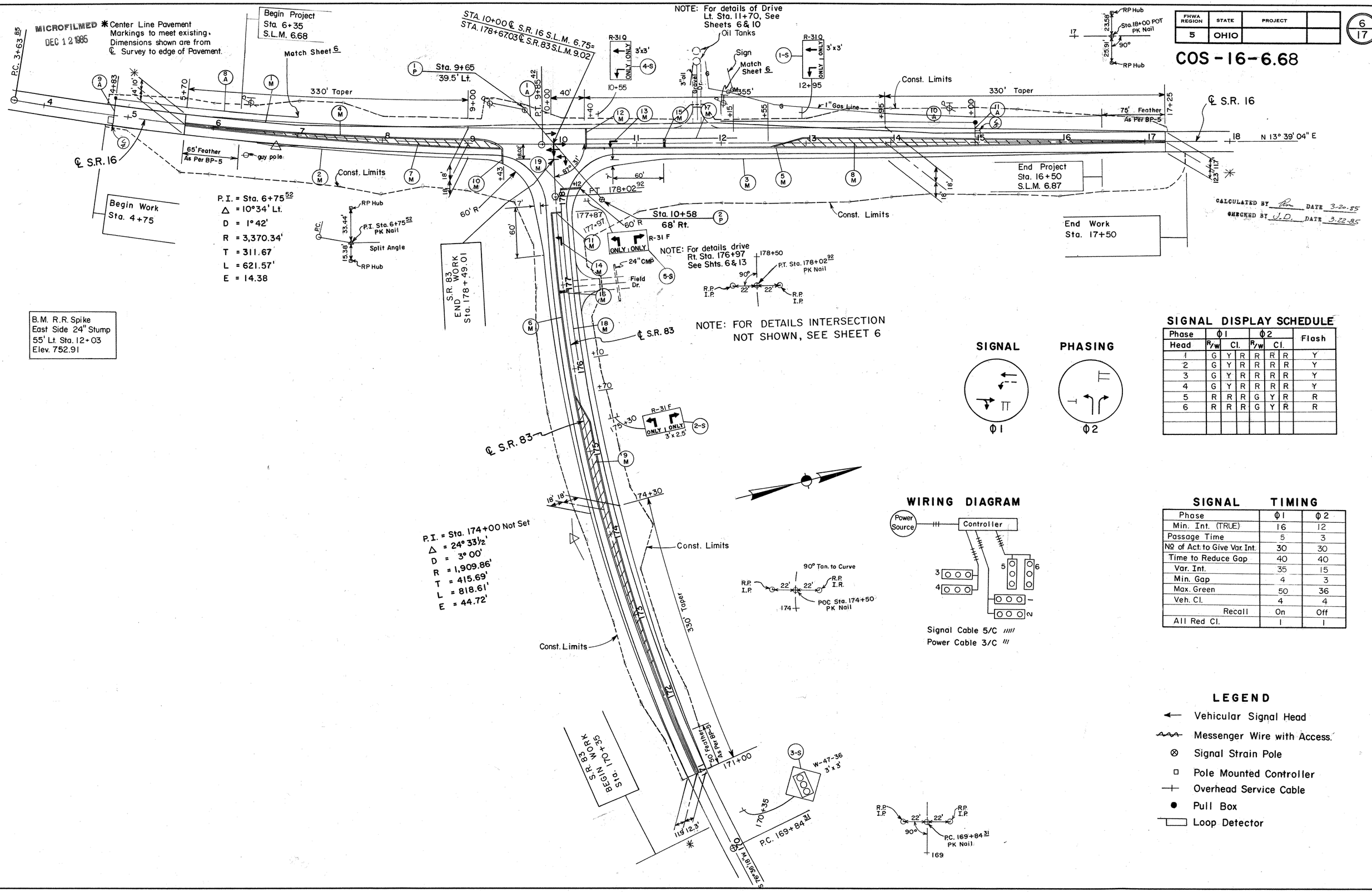

SIGNAL DISPLAY SCHEDULE

Phase	Φ1			Φ2			Flash
Head	R/W	Cl.		R/W	Cl.		
1	G	Y	R	R	R	R	Y
2	G	Y	R	R	R	R	Y
3	G	Y	R	R	R	R	Y
4	G	Y	R	R	R	R	Y
5	R	R	R	G	Y	R	R
6	R	R	R	G	Y	R	R

SIGNAL TIMING

Phase	Φ1	Φ2
Min. Int. (TRUE)	16	12
Passage Time	5	3
№ of Act. to Give Var. Int.	30	30
Time to Reduce Gap	40	40
Var. Int.	35	15
Min. Gap	4	3
Max. Green	50	36
Veh. Cl.	4	4
Recall	On	Off
All Red Cl.	1	1

LEGEND

- Vehicular Signal Head
- Messenger Wire with Access.
- Signal Strain Pole
- Pole Mounted Controller
- Overhead Service Cable
- Pull Box
- Loop Detector

4+75 — 17+50

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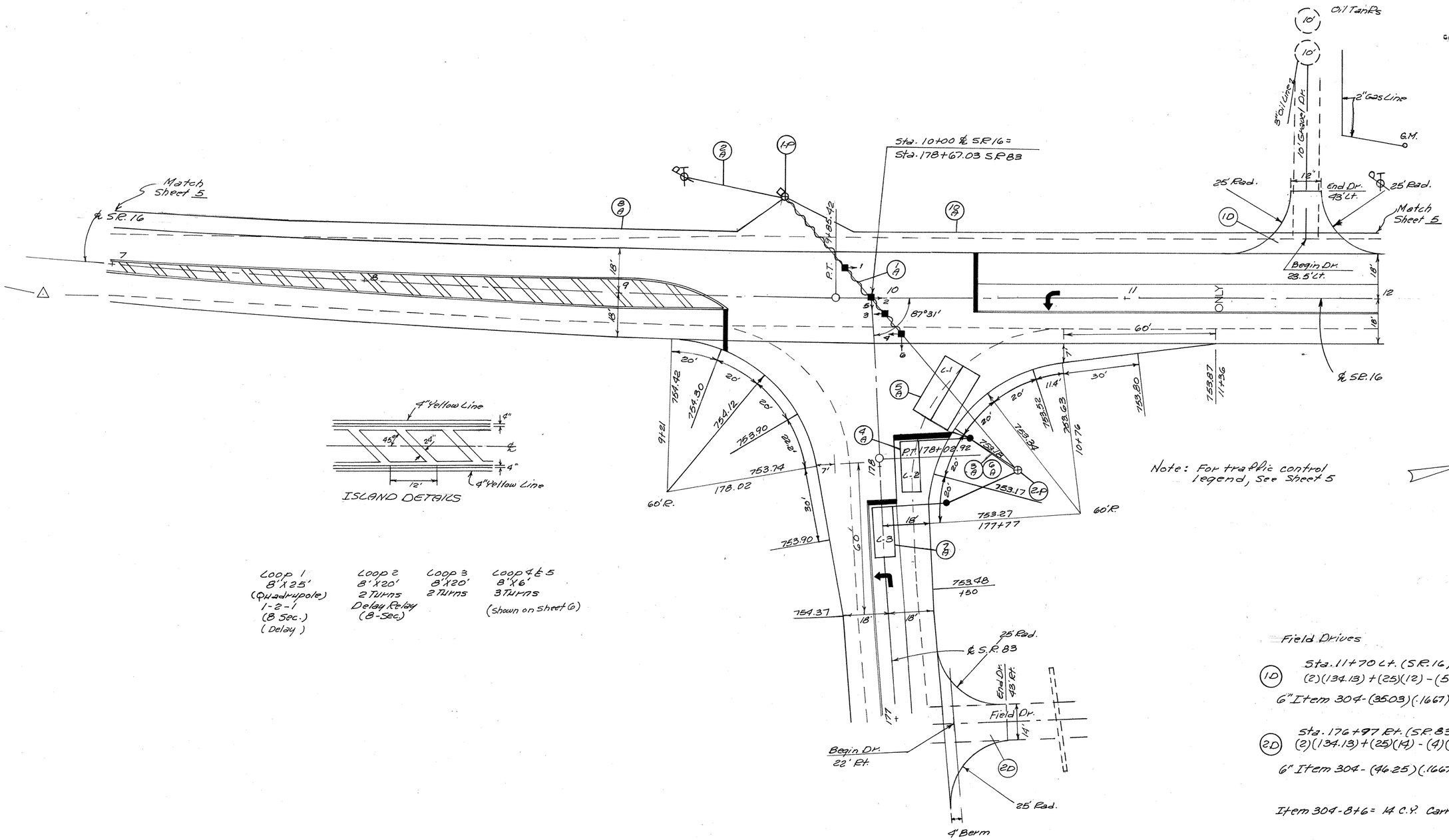
DEC 12 1985

FHWA REGION	STATE	PROJECT	
5	OHIO		

COS-16-6.68

CALCULATED BY Rm DATE 3-20-85
CHECKED BY J.D. DATE 3-22-85



Note: For traffic control legend, See Sheet 5

Loop 1	Loop 2	Loop 3	Loop 4 & 5
8'X25'	8'X20'	8'X20'	8'X6'
(Quadrupole)	2 Turns	2 Turns	3 Turns
1-2-1	Delay Relay		(Shown on Sheet 6)
(8 Sec.)	(8-Sec.)		
(Delay)			

Field Drives

(1D) Sta. 11+70 Lt. (S.R. 16)
(2)(134.13) + (25)(12) - (5.5)(96 Ave) = 315.26 ÷ 9 = 35.03 S.Y.
6" Item 304 - (35.03)(.1667) = 6 C.Y.

(2D) Sta. 176+97 Rt. (S.R. 83)
(2)(134.13) + (25)(14) - (4)(50.5) = 416.26 ÷ 9 = 46.25 S.Y.
6" Item 304 - (46.25)(.1667) = 8 C.Y.

Item 304 - 8+6 = 14 C.Y. Carried to General Summary

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DEC 12 1995

TRAFFIC CONTROL SUB-SUMMARY

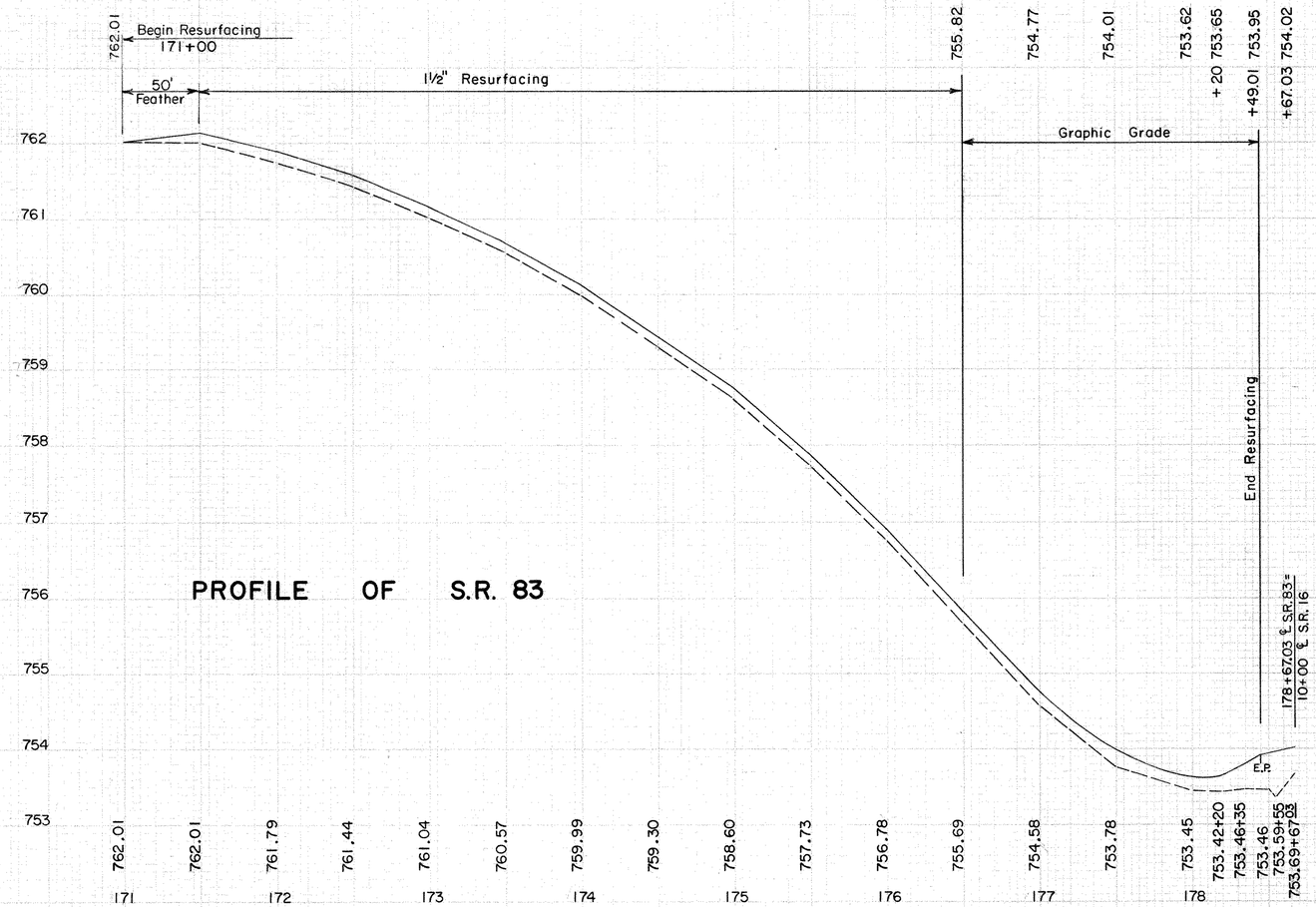
CALCULATED BY Rm DATE 3-22-85
CHECKED BY J.D. DATE 3-22-85

FHWA REGION	STATE	PROJECT	
5	OHIO		

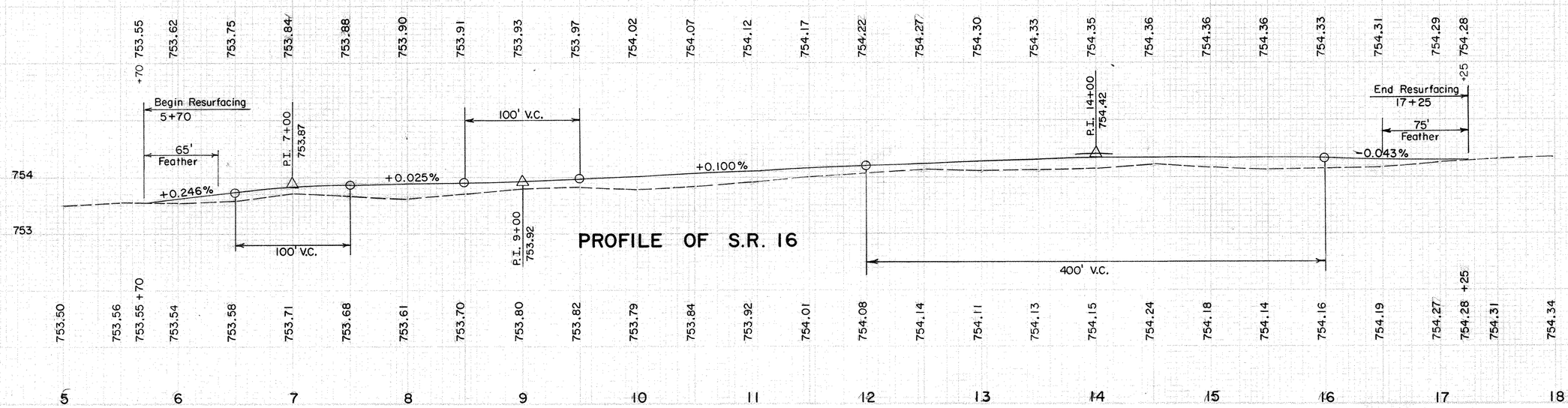
COS-16-6.68

Location	Mark	Side	Station to Station	Item 632 Vehicular Signal Head 3-Section, 12 Lens, 1-Way	Item 632 Vehicular Signal Head 3-Section, 12 Lens, 2-Way	Item 632 Loop Detector Unit, Delay Type	Item 632 Loop Detector Unit	Item 632 Loop Detector Pavement Cutting	Item 632 Concrete for Anchor Base Foundations	Item 632 Strain Pole, Type TC-81.19, Design 7, Modified 32'	Item 632 Cable Support Assembly	Item 632 Messenger Wire (Strand, 3/8 in Dia) with Accessories	Item 632 Signal Cable, 5 Conductor No. 14 AWG	Item 632 Loop Detector Wire, Type E	Item 632 Loop Detector Lead-in Cable	Item 632 Power Cable 3 Conductor No. 8 AWG	Item 632 Service Cable 3-Conductor No. 8 AWG	Item 632 Power Service	Item 632 Covering of Vehicular Signal Head	Item 630 Ground Mounted Supports, No. — Post 3	Item 630 Ground Mounted Supports, No. — Post 4	Item 630 Signs, Flat Sheet	621 Edge Lines (White)	621 Center Lines	Item 847 Channelizing Lines 847.02	Item 847 Stop Lines 847.02	Item 847 Transverse Lines 847.02 (Yellow)	Item 847 Lane Arrows 847.02 (Left)	Item 847 Word on Pavement, 96-in. 847.02 (Only)	Item 625 Ground Rod	Item 625 Pull Box, Metal, 18"	Item 632 Strain Pole Type TC-81.19, Design 7, Modified 32'	Item 632 Loop Detector Lead-in Cable #20 AWG 4 Pr. Direct Burial	861 Controller, Actuated 2 Phase, Solid State Digital Microprocessor Type, with Rack Mounted Cabinet, Fs Short, Fs Air Plan
				Each	Each	Each	Each	Lin.Ft.	Cu.Yd.	Each	Each	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Each	Each	Lin.Ft.	Lin.Ft.	Sq.Ft.		Miles	Miles	Lin.Ft.	Lin.Ft.	Lin.Ft.	Each	Each	Each	Each	Each	Each	Each
SR.16	1-S	Lt.	12+95 R-31Q																		15	9													
SR.83	2-S	Rt.	175+30 R-31F																	14-14		7.5													
SR.83	3-S	Rt.	170+35 W-47-36																		16	9													
SR.16	4-S	Lt.	10+55 R-31Q																		15	9													
SR.83	5-S	Rt.	177+97 R-31F																	14-14		7.5													
SR.16	1-M	Lt.	5+70 - 17+25																					0.22											
SR.16 & 83	2-M	Rt.-Lt.	5+70 - 171+00																					0.22											
SR.83 & 16	3-M	Rt.	171+00 - 17+25																					0.27											
SR.16	4-M	℄	5+70 - 9+43																						0.14										
SR.16	5-M	℄	10+40 - 17+25																						0.22										
SR.83	6-M	℄	171+00 - 177+87																						0.22										
SR.16	7-M	℄	5+70 - 9+43																									250							
SR.16	8-M	℄	12+55 - 17+25																									815							
SR.83	9-M	℄	171+00 - 175+70																									315							
SR.16	10-M	Rt.	9+43																								16								
SR.83	11-M	Rt.	177+87																								12								
SR.16	12-M	Lt.	10+40																								24								
SR.16	13-M	℄	10+70																										1						
SR.83	14-M	℄	177+55																										1						
SR.16	15-M	℄	11+30																											1					
SR.83	16-M	℄	176+95																											1					
SR.16	17-M	Lt.	10+40 - 12+15																							175									
SR.83	18-M	Rt.	176+10 - 178+12																							202									
SR.83	19-M	Rt.	178+12																								23								
SR16	1-P		9+65			2	3		2.69	1	1		108		127	41															1				1
	1-A		9+65 - 10+58	2	2							142	239		426				4																
	2-P		10+58						2.69		1				105																1		1		
SR16	2-A		9+25 - 9+65														51	1																	
SR83	3-A		178+09 - 10+58																													1		56	
	4-A		178+09					68						162																					
	5-A		178+14					109						178																					
	6-A		177+84 - 10+58																													1		36	
SR83	7-A		177+84					70						164																					
SR16	8-A		4+83 - 9+65																													1		492	
	9-A		4+83					42						108																					
	10-A		9+65 - 15+00																													1		542	
SR16	11-A		15+00					30						112																					
TOTALS			carried to General Summary	2	2	2	3	319	5.38	1	2	142	347	724	658	41	51	1	4	56	46	42		0.71	0.58	377	75	880	2	2	2	4	1	1126	1

CALCULATED BY Ron DATE 3-20-85
CHECKED BY J.D. DATE 3-22-85

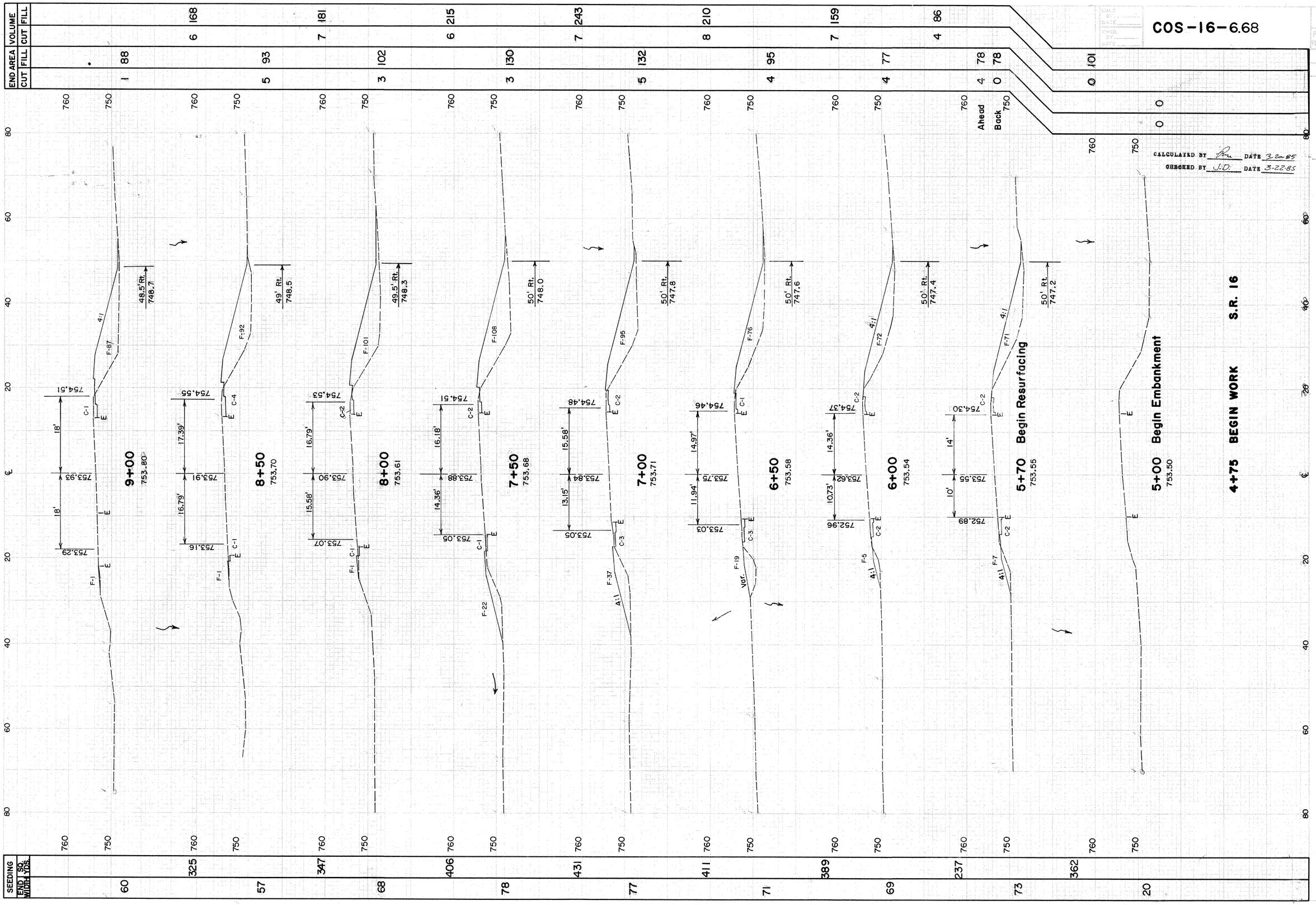


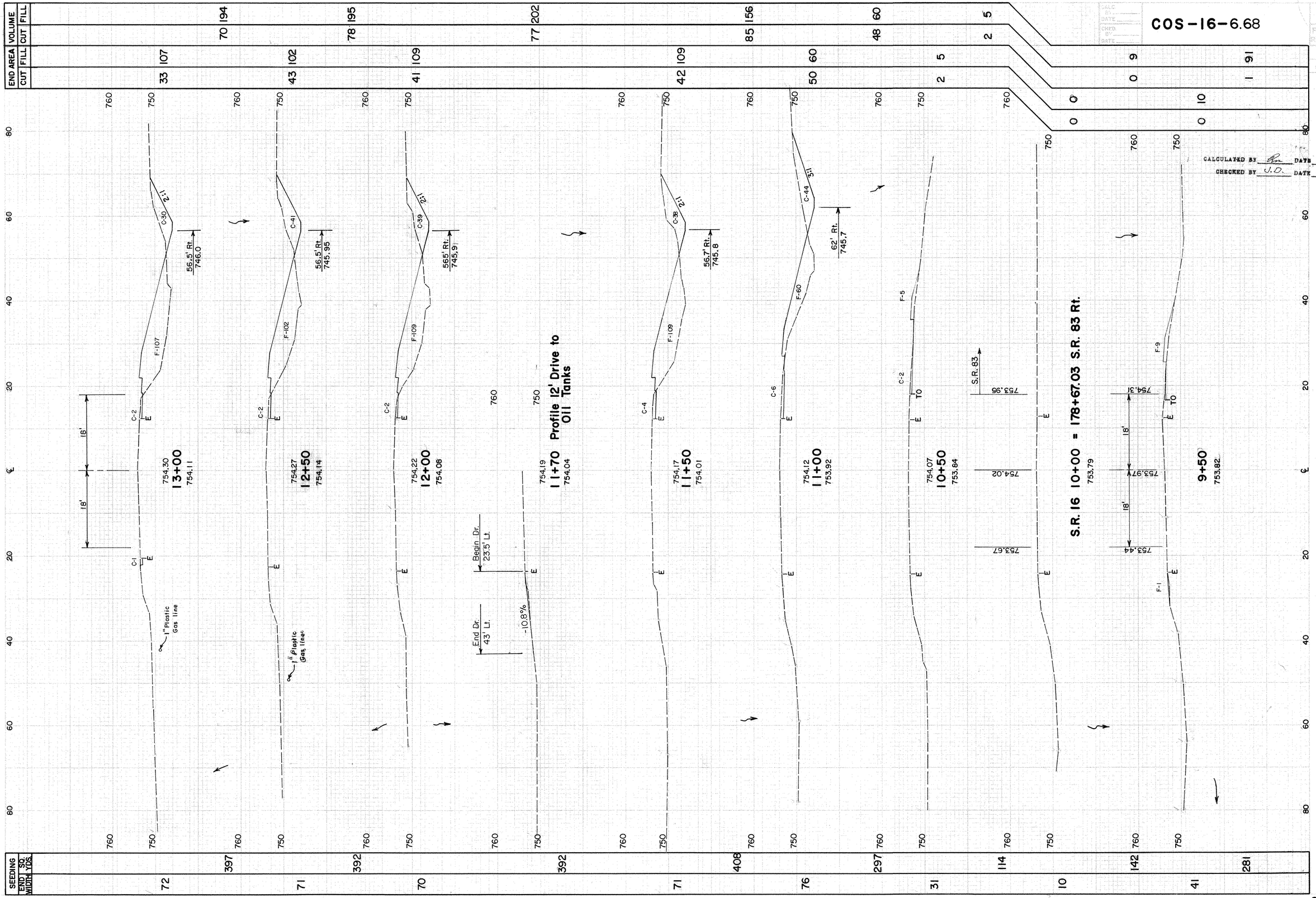
PROFILE OF S.R. 83



PROFILE OF S.R. 16

PROFILES OF S.R. 16 & S.R. 83

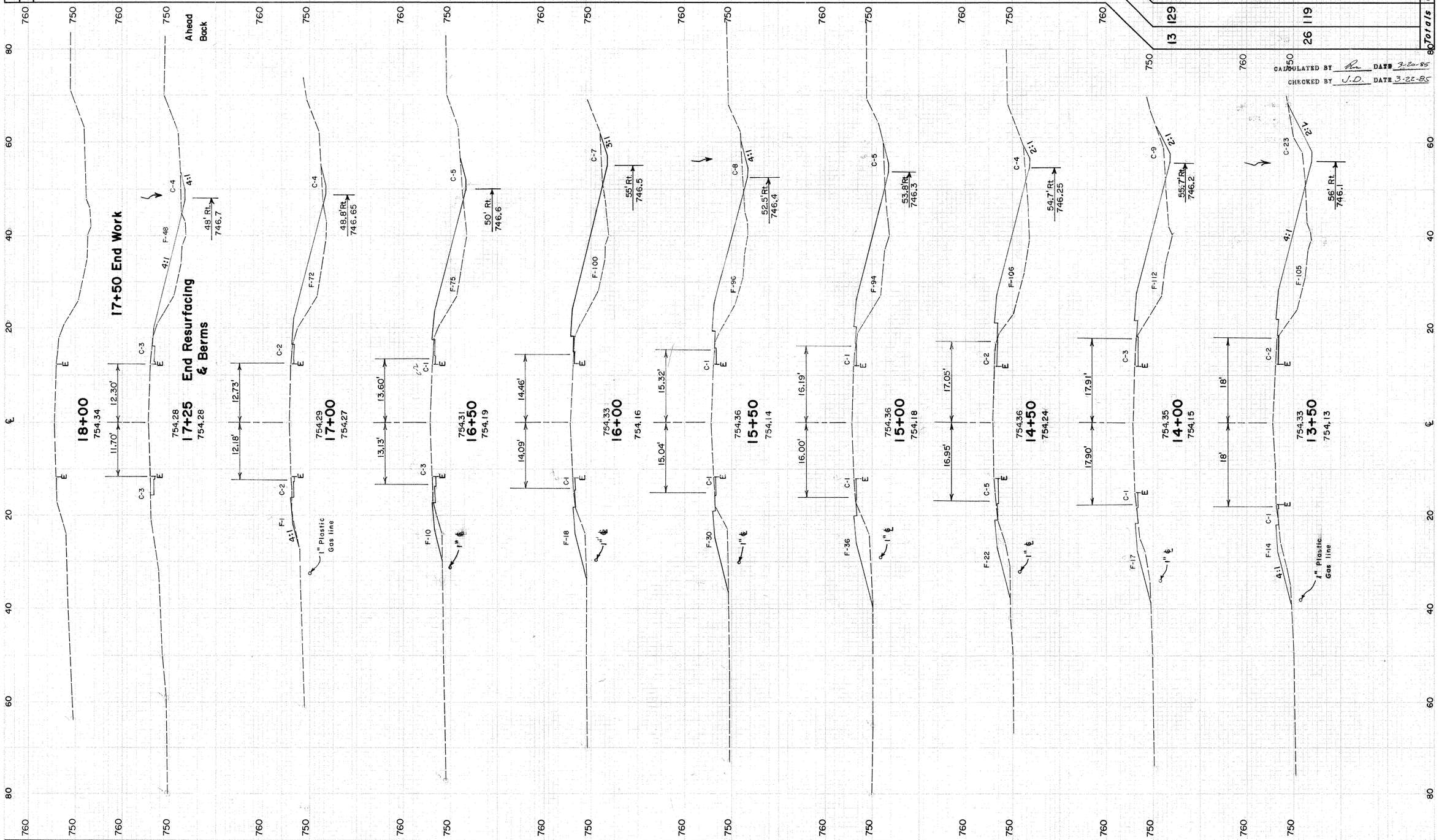

COS-16-6.68
OHIO
FHWA REGION 5
10
17
END AREA VOLUME
CUT FILL CUT FILL
CALCULATED BY DATE 3-20-85
CHECKED BY J.D. DATE 3-22-85
9+00 753.80
8+50 753.70
8+00 753.61
7+50 753.68
7+00 753.71
6+50 753.58
6+00 753.54
5+70 753.55
5+00 753.50
4+75 BEGIN WORK
Begin Resurfacing
Begin Embankment
S.R. 16
Ahead
Back
SEEDING
END AREA
MULCH YDS.
5+00-9+00 S.R. 16


END AREA VOLUME
CUT FILL CUT FILL
33 107 70 194
43 102 78 195
41 109 77 202
42 109 85 156
50 60 48 60
2 5 2 5
0 0 0 9
0 10 0 1
91
SEEDING
END SQ.
WIDTH YDS.
72 397
71 392
70 392
71 408
76 297
31 114
10 142
41 281
754.30
13+00
754.11
754.27
12+50
754.14
754.22
12+00
754.08
754.19
11+70
754.04
754.17
11+50
754.01
754.12
11+00
753.92
754.07
10+50
753.84
753.79
9+50
753.82
56.5' Rt.
746.0
56.5' Rt.
745.95
56.5' Rt.
745.9
56.7' Rt.
745.8
62' Rt.
745.7
1:2
3:1
C-30
C-41
C-39
C-38
C-44
F-107
F-102
F-109
F-60
F-5
F-9
F-1
C-1
C-2
C-4
C-6
E
TO
18'
1" Plastic Gas line
Begin Dr.
23.5' Lt.
End Dr.
43' Lt.
-10.8%
S.R. 83
753.95
754.02
753.67
754.31
753.97
753.44
S.R. 16 10+00 = 178+67.03 S.R. 83 Rt.
Profile 12' Drive to Oil Tanks
CALCULATED BY Rm DATE 3-22-85
CHECKED BY J.D. DATE 3-22-85
COS-16-6.68
OHIO
FHWA REGION 5
11
17
9+50 — 13+00 S.R. 16

OHIO FHWA REGION 5 — 12/17

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18+00	0	0	2	22
17+25	4	48	8	56
17+00	8	73	16	146
16+50	9	85	16	188
15+50	8	118	17	226
15+00	10	126	16	237
14+50	7	130	17	239
14+00	11	128	22	238
13+50	36	230	55	209
Totals	611	4066	129	119
	26		13	

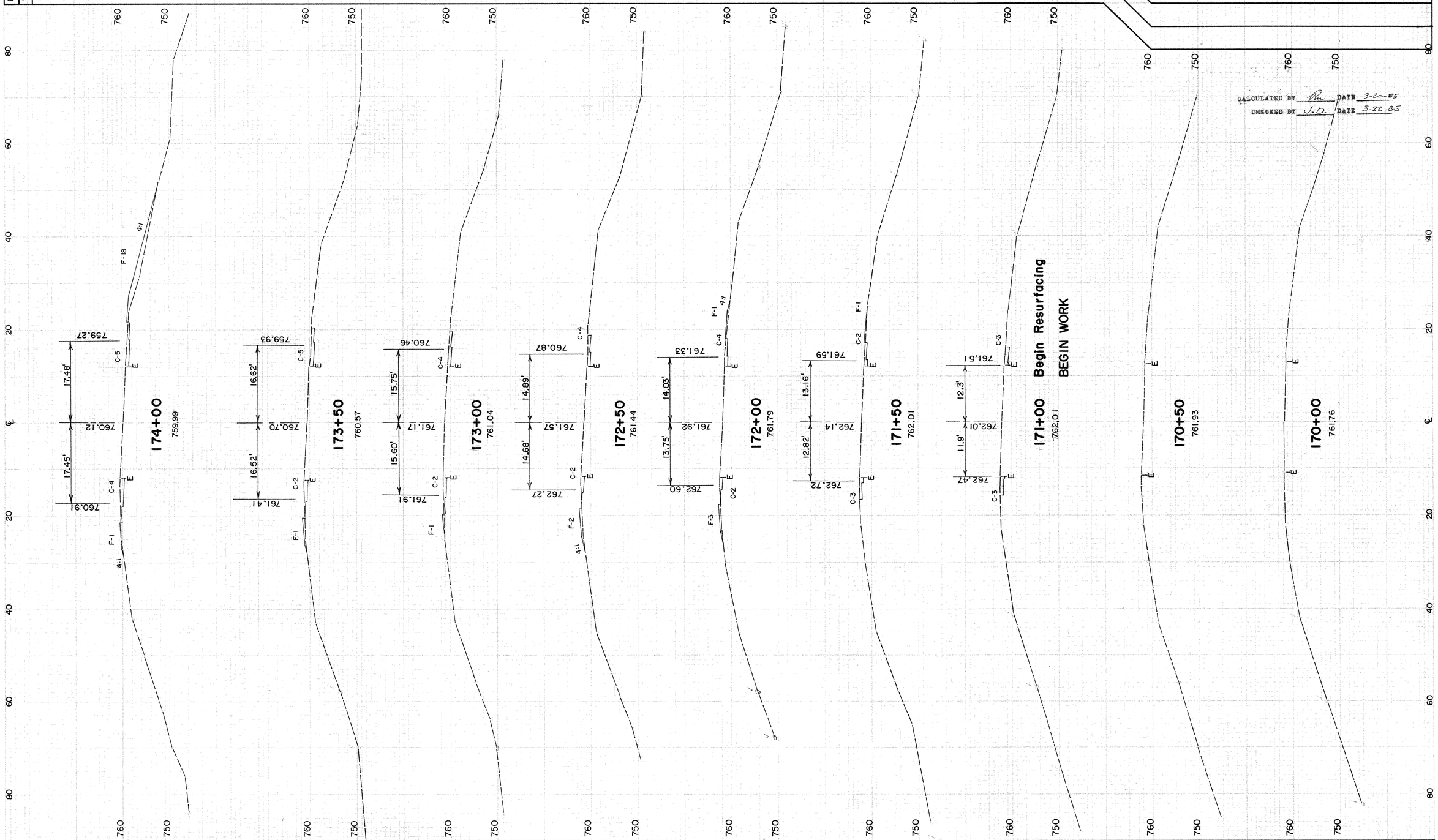
CALCULATED BY Rm DATE 3-20-85
CHECKED BY J.D. DATE 3-22-85



	SEEDING AND MULCH WIDTH	SEEDING AND MULCH SQ. YDS.
18+00	20	108
17+25	58	179
17+00	71	403
16+50	74	431
15+50	81	450
15+00	81	450
14+50	81	439
14+00	77	442
13+50	82	464
Total	85	436
		9133

3-19-85	
3-18-85	

	174+00	173+50	173+00	172+50	172+00	171+50	171+00	170+50	170+00
END AREA VOLUME CUT		9	7	6	6	6	5	6	6
END AREA VOLUME FILL		19	1	1	2	4	1	0	
CUT		15	12	11	11	10	10		
FILL		19	2	3	6	5	1		



	174+00	173+50	173+00	172+50	172+00	171+50	171+00
SEEDING END SQ. YDS.		236	144	147	181	183	139
WIDTH	57	28	24	29	36	30	20

170+00 — 174+00 S.R.83

DRAWINGS	Pm	3-18-85
AREAS	Pm	3-19-85

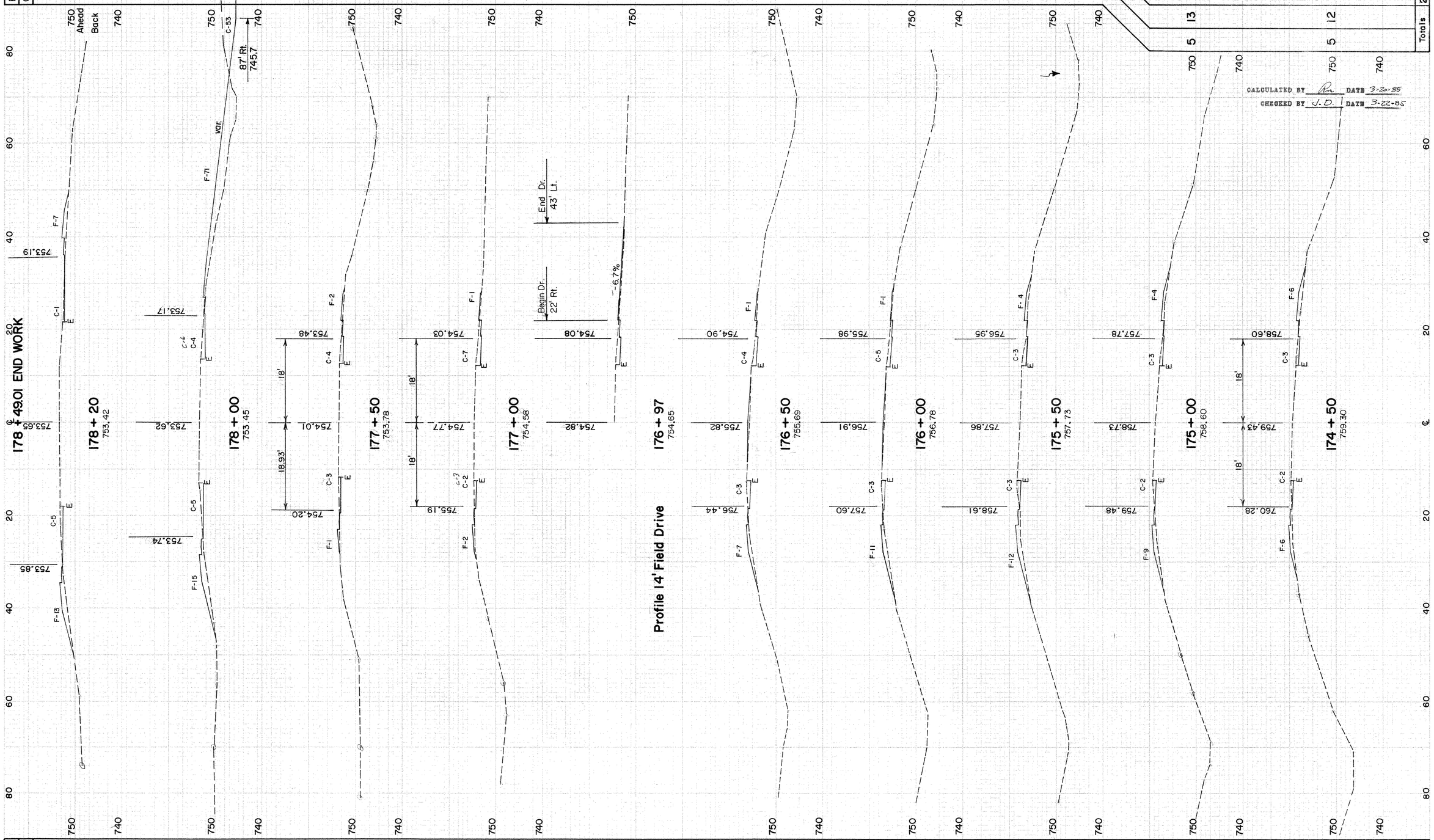
COS-16-6.68

OHIO FHWA REGION 5

14/17

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
178 + 49.01 END WORK	0	0		
178 + 20	6	20	25	39
178 + 00	62	86	64	82
177 + 50	7	3	15	6
177 + 00	9	3	15	10
176 + 97	7	8	14	19
176 + 50	8	12	13	26
176 + 00	6	16	10	27
175 + 50	9	23	13	29
175 + 00	13	29	12	13
174 + 50	5	12	5	5
Totals	247	297		

	SEEDING END WIDTH	SEEDING SQ. YDS.
178 + 49.01 END WORK	45	
178 + 20	98	159
178 + 00	33	364
177 + 50	35	189
177 + 00	42	214
176 + 97	43	236
176 + 50	48	253
176 + 00	46	261
175 + 50	43	247
175 + 00		278
174 + 50		
Total		3,231



CALCULATED BY Rm DATE 3-20-85

CHECKED BY J.D. DATE 3-22-85

174+50 — 178+20 S.R. 83

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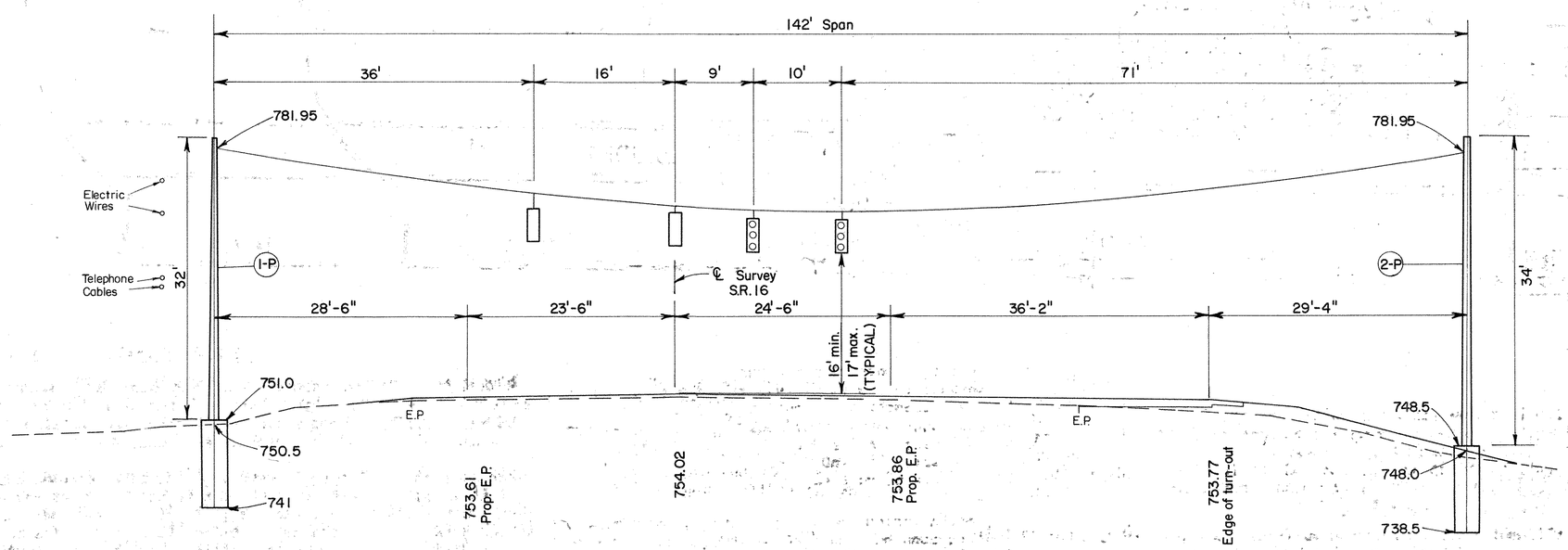
DEC 12 1985

SIGNAL PROFILE AND DETAILS

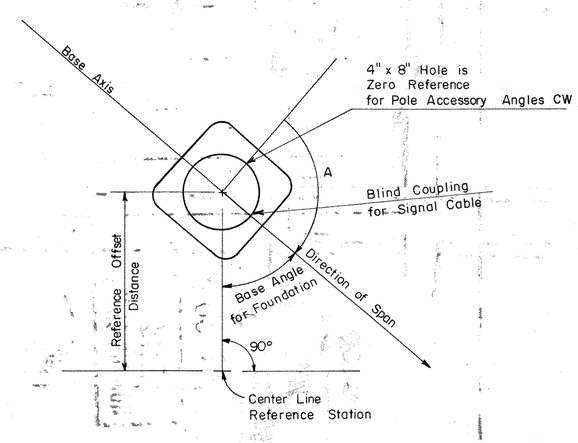
FHWA REGION	STATE	PROJECT	
5	OHIO		

COS-16-6.68

CALCULATED BY Pm DATE 3-20-85
CHECKED BY J.D. DATE 3-22-85



TC-81.10 Design 7



POLE	FOUNDATION STATION	FOUNDATION OFFSET	BASE ANGLE FOR FOUNDATION	ANGLE OF 4"x8" HANDHOLE	BLIND COUPLING SIZE	BLIND COUPLING ANGLE A	BLIND COUPLING FROM TOP
1-P	9+65	39.5' Lt.	40°	90°	*	*	*
2-P	10+58	68' Rt.	40°	90°	2"	90°	12"

* 1½" at 0°, 2½" at 270°, & 2" at 90° See SCD TC 83.10 for Locations

ORIENTATION DIAGRAM FOR STRAIN POLE

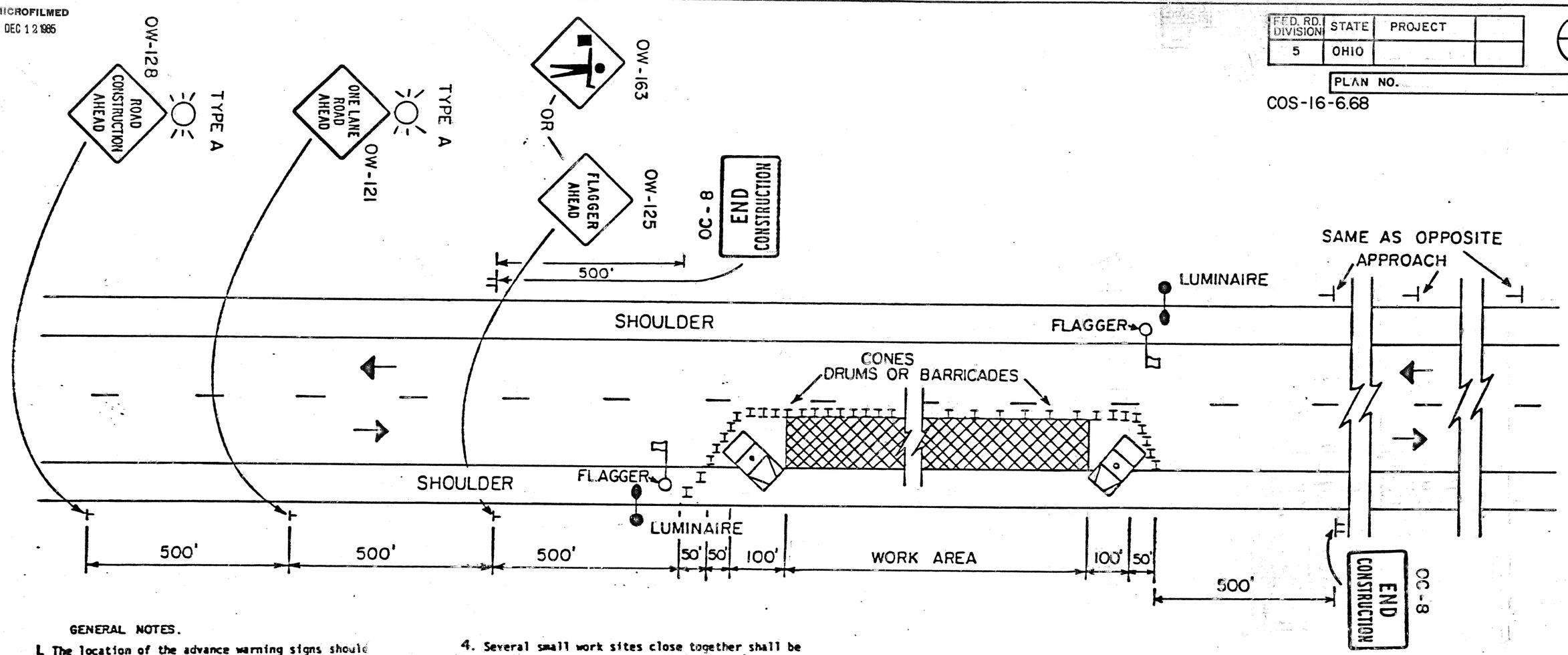
FLAGGERS REQUIRED
1 LANE OPEN
HIGHWAY

MICROFILMED
DEC 12 1985

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

PLAN NO.

COS-16-6.68



GENERAL NOTES.

1. The location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment. The distances shown are minimums.

2. Flaggers shall be used to control traffic continuously for as long as a one lane operation is in effect. The flaggers shall communicate with each other at all times as described in the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) in Section 7H: Control of Traffic Through Work Areas.

3. Cones drums or barricades shall be spaced at approximately 50' to 60' center to center for the first 1000 feet of the work area and at a maximum of 100' to 120' center to center for the balance of the work area. Cones, drums or barricades on the advance and return tapers shall be spaced at 10' center to center. Cones may be substituted for barricades or drums for short term lane closures. Cones shall not be used for night lane closures.

4. Several small work sites close together shall be combined into one work area to make a closure not more than 2000 feet long including tapers. Closures of more than 2000 feet may be approved by the Engineer. The minimum length between closures shall be 2000 feet. Only one side of the road shall be closed in any one work area.

5. The work vehicles shown at the beginning and end of the work area shall be in place and unoccupied whenever workers are in the work area. These work vehicles shall be removed from the pavement whenever workers are not in the work area. Other protective devices may be used in lieu of the work vehicles shown when approved by the Engineer. The vehicles shall be equipped with a 360° rotating or flashing amber beacon clearly visible a minimum of a ¼ mile.

6. The Type A flashing barricade warning lights shown on the "Road Construction Ahead" and the "One Lane Road Ahead" signs are required whenever a night lane closure is necessary.

7. Type C steady burning barricade warning lights shall be erected on drums or barricades for night lane closures. The maximum spacing shall be identical to the channelizing device spacing requirements described in Note 3.

8. Adequate area illumination to clearly identify the flagger station at night for long term operations shall be provided by using 150 watt minimum high pressure sodium luminaires or 250 watt minimum mercury luminaires. Luminaires shall be located adjacent to one flagger station for each direction of traffic as shown above. The mounting height for temporary luminaires shall be a minimum of 27 feet above the pavement and the overhead conductor clearance shall be 20 feet above the pavement.

OHIO DEPARTMENT OF TRANSPORTATION

FLAGGERS CLOSING ONE LANE OF A 2 LANE HIGHWAY

DATE 12/82

7G-1

Rev EEF 9/84

MICROFILMED
DEC 12 1985

COSHOCTON COUNTY, JACKSON TOWNSHIP
QUARTER 3 - TOWNSHIP 5 - RANGE 6 - USML

FHWA REGION	STATE	PROJECT	State Job No.
5	OHIO	100% State	6555(10)

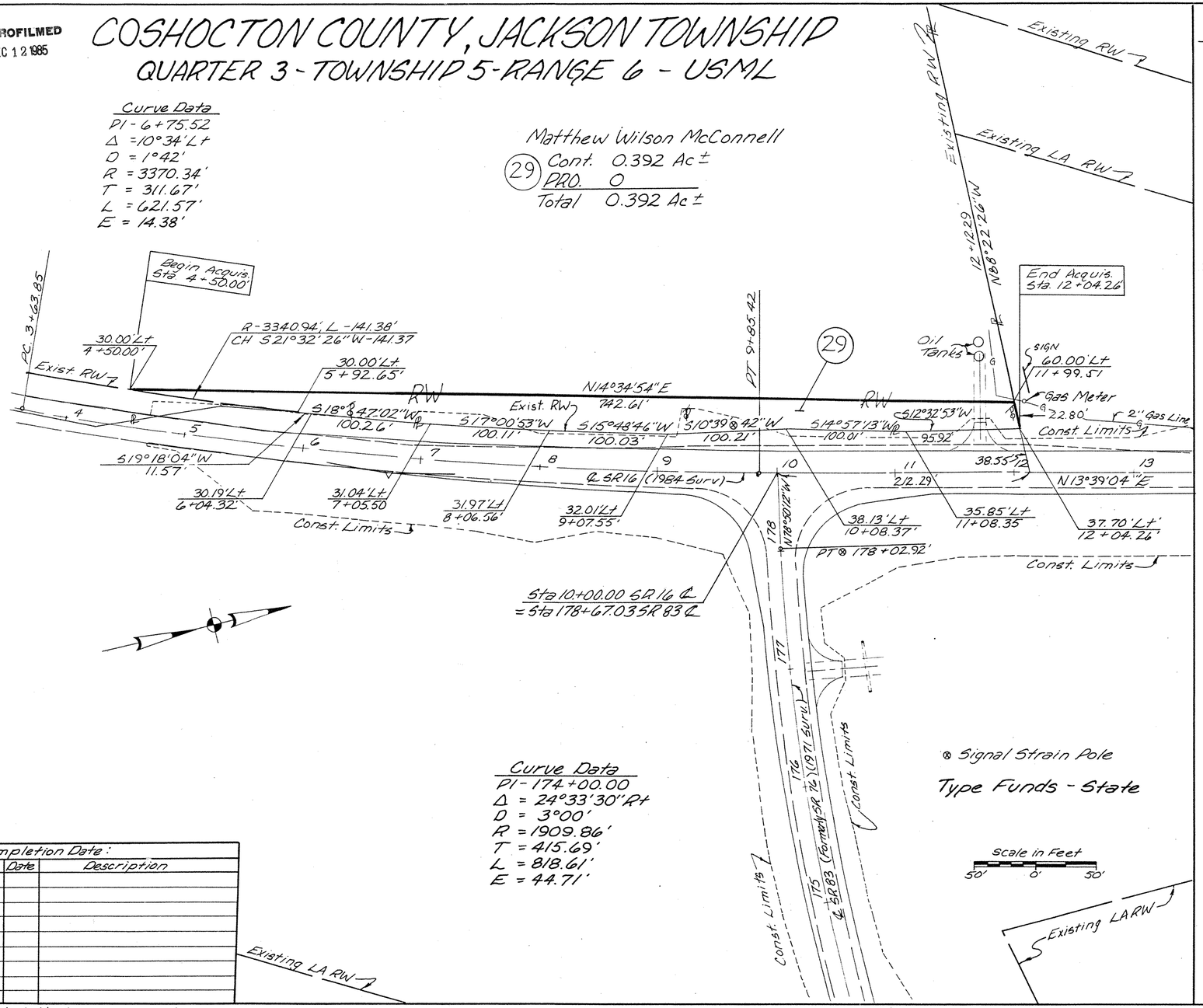
17/17

COS-16-6.65
COS-83-8.88
Right of Way Plan

1/1

Curve Data
PI - 6+75.52
Δ = 10°34' Lt
D = 1°42'
R = 3370.34'
T = 311.67'
L = 621.57'
E = 14.38'

Matthew Wilson McConnell
(29) Cont. 0.392 Ac±
PRO. 0
Total 0.392 Ac±

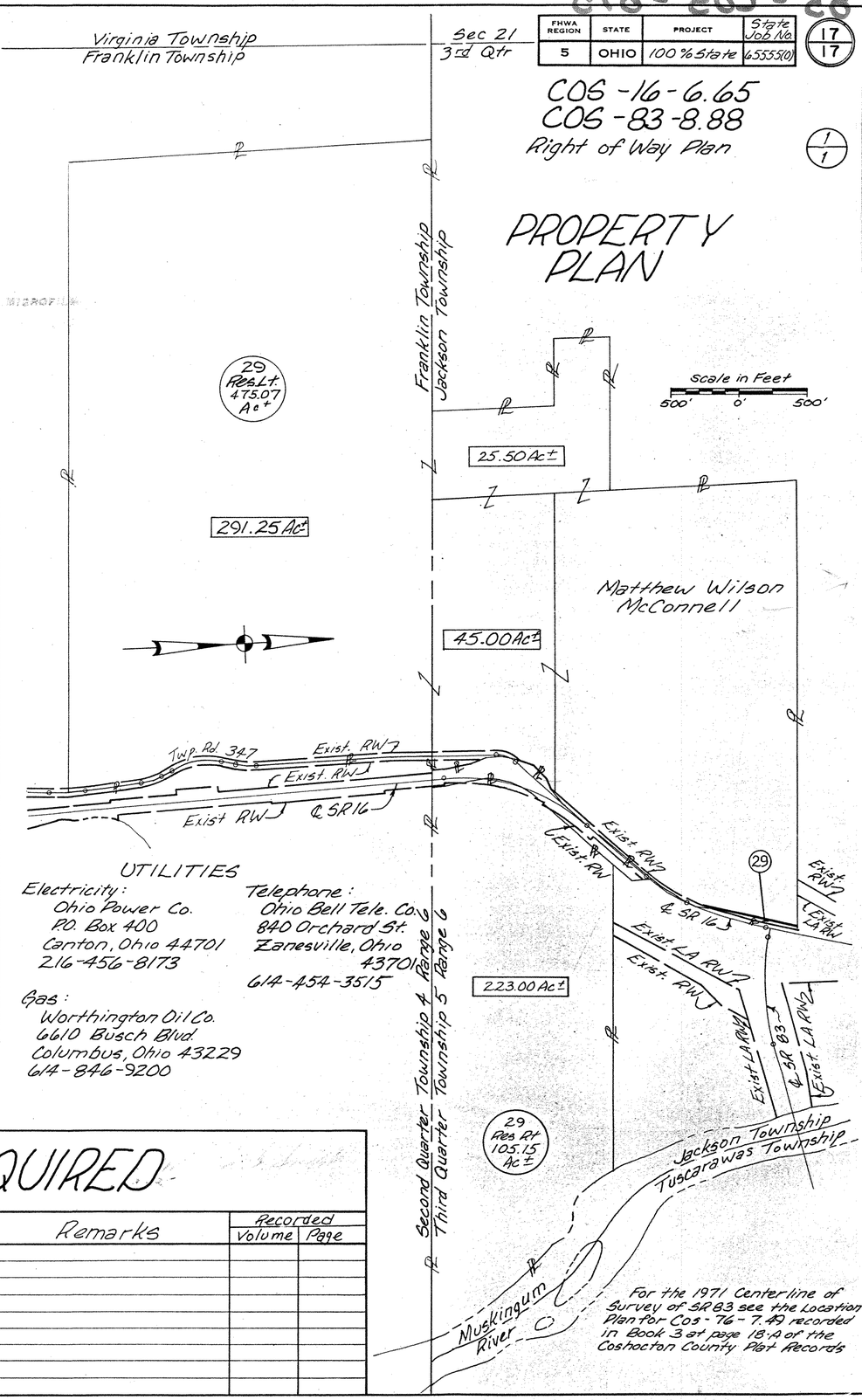


Curve Data
PI - 174+00.00
Δ = 24°33'30" Rt
D = 3°00'
R = 1909.86'
T = 415.69'
L = 818.61'
E = 44.71'

⊗ Signal Strain Pole

Type Funds - State

Scale in Feet
50' 0' 50'



UTILITIES

Electricity:
Ohio Power Co.
P.O. Box 400
Canton, Ohio 44701
216-456-8173

Telephone:
Ohio Bell Tele. Co.
840 Orchard St.
Zanesville, Ohio
43701
614-454-3515

Gas:
Worthington Oil Co.
6610 Busch Blvd.
Columbus, Ohio 43229
614-846-9200

For the 1971 Centerline of Survey of SR 83 see the Location Plan for COS-76-7.49 recorded in Book 3 at page 18-A of the Coshocton County Plat Records

Completion Date:

Rev.	Date	Description

Total No. Owners 1
Total Takes 0
Structure Parcels 0
Personalty Parcels 0

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

Parcel No.	Owner	Sheet No.	Deed Volume	Deed Page	Deed Area	Total PRO.	Gross Take	PRO. in Take	To Be Acquired Net Take	BLDG.	Net Residue Left	Net Residue Right	Type Fund	Remarks	Recorded Volume	Recorded Page
29	Matthew Wilson McConnell	1	237	667	584.75 Ac±	4.132 Ac±	0.392 Ac±	0	0.392 Ac±	No	475.07 Ac±	105.15 Ac±	State			
			238	112												
			261	509												
			269	930												