FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	S-80(2)	

1/231

S-80(2)

MICROFILMED MAY 29 1967 GROUND PHOTO LAB

HOL - 39 - 28.57
TUS - 39 - 0.00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
HOL-39-28.57 & TUS-39-0.00
WALNUT CREEK TOWNSHIP, HOLMES COUNTY
SUGAR CREEK TOWNSHIP & VILLAGE of SHANESVILLE, TUSCARAWAS COUNTY

MICROFILMED MAY 29 1967 GROUND PHOTO LAB

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line

Right-of-Way Only — RW —
Existing Right-of-Way
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Steam Railroad
Power Poles
Telephone Poles
Trees or Stumps (existing)
Trees or Stumps (to be removed)

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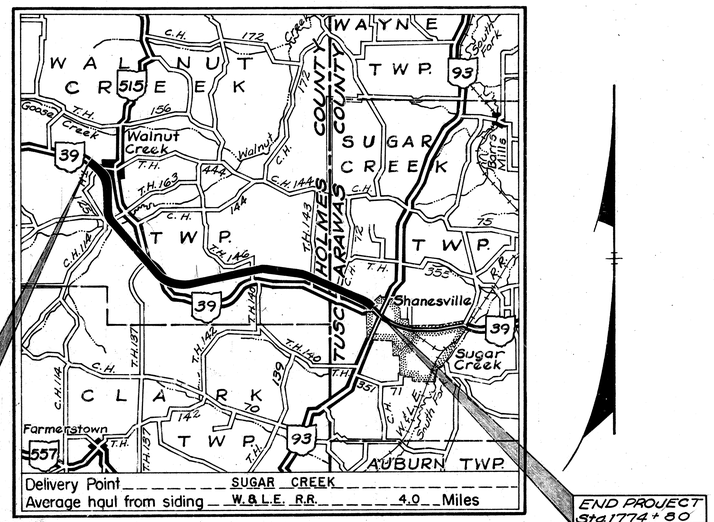
LINE DATA

Begin Project - Sta. 1509+60.00
Corp. Line Shanesville - Sta. 1771+47.17
Total Length of Project (Rural) ..... = 26,187.17 Lin. Ft. or 4.959 miles
Add For Approach Work (S.R. 39)
Sta. 1507+50 to Sta. 1509+60 = 210.00 Lin. Ft.
Add For Approach Work (Side Roads):
T.R. 125 & Conn @ Sta. 1514+74.82 = 693.98 Lin. Ft.
C.R. 114 @ Sta. 1555+69.00 = 901.00 Lin. Ft.
Conn. @ Sta. 1626+00.00 = 363.23 Lin. Ft.
T.R. 146 @ Sta. 1680+41.60 = 932.56 Lin. Ft.
T.R. 143 @ Sta. 1724+71.07 = 312.38 Lin. Ft.
C.R. 72 @ Sta. 1743+80.00 = 688.00 Lin. Ft.
Total Length of Work (Rural) ..... = 30,288.32 Lin. Ft. or 5.736 miles

Corp. Line Shanesville - Sta. 1771+47.17
End Project - Sta. 1774+80.00
Total Length of Project (Municipal) ..... = 332.83 Lin. Ft. or 0.063 miles
Add For Approach Work (S.R. 39)
Sta. 1774+80 to Sta. 1777+00 = 220.00 Lin. Ft.
Total Length of Work (Municipal) ..... = 552.83 Lin. Ft. or 0.104 miles

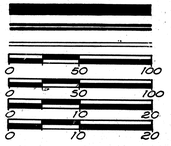
Total Length of Project = 26,187.17 + 332.83 = 26,520.00 Lin. Ft. or 5.022 miles
Total Length of Work = 30,288.32 + 552.83 = 30,841.15 Lin. Ft. or 5.841 miles



LOCATION MAP

SCALE OF MILES
0 1 2 3 4

Portion to be improved
State Roads
Other Roads
Plan
Profile: Horizontal
Profile: Vertical
Cross Sections: Horizontal & Vertical



1963 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Highways, including changes and supplemental specifications listed in the proposal shall govern this improvement.

The right of way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved Earl W. Nelson
Date 1-28-63 Division Deputy Director

Approved C.H. Utterback
Date 6-17-64 Engineer of Bridges

Approved R.D. Buckley
Date 7-7-64 Engineer of Location & Design

Approved R.E. Shultz
Date 7-7-64 Deputy Director of Design & Construction

Approved T.H. Boyd
Date 6-4-64 Deputy Director of Right of Way

Approved F.W. Wilson 7-7-64
Date 8-14-64 Deputy Director of Planning & Programming

Approved
Date First Assistant Director

Approved P.B. Mashuda
Date 9/14/64 Director of Highways

MICROFILMED MAY 29 1967 GROUND PHOTO LAB

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER — DATE

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		
FACT-1	2-25-64	I-1	11-15-60	SP-53	6-30-61			
FACT-2	2-25-64	I-8 CB.2-2A&B	2-1-63	AS-1-54	7-5-62			
DR-1	1-3-55	I-8 C.B. No. 8	2-1-63	A-1-54	12-1-54			
RI-1	7-15-58	I-8 M.H. No 1	2-1-63	CS-1-54	9-16-56			
T-35	1-2-56	I-8 M.H. No 1-A	2-1-63	P-1-54	2-2-59	I-1.24	Rev.	3-20-61
L-1	4-1-50	I-14 C	1-22-58	I-15 No. 2	11-15-60			
L-3	4-1-50	I-15 No. 1	11-15-60			S-101		7-12-62
L-3-A	4-1-50	I-15 No. 2-A	8-17-60					
HW-E	2-1-63	C-7.07	4-1-64					

File No.	HOL - 39 - 28.57 TUS - 39 - 0.00
	Date of Letting 19
	Contract No.

Rev. 8-20-64

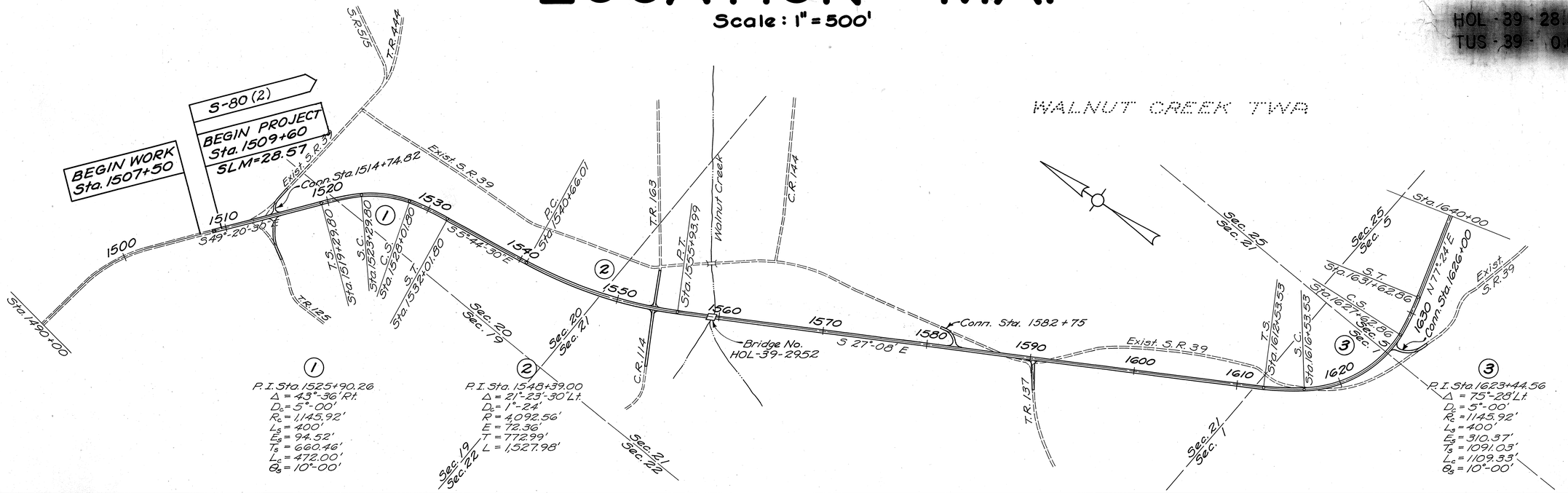
LOCATION MAP

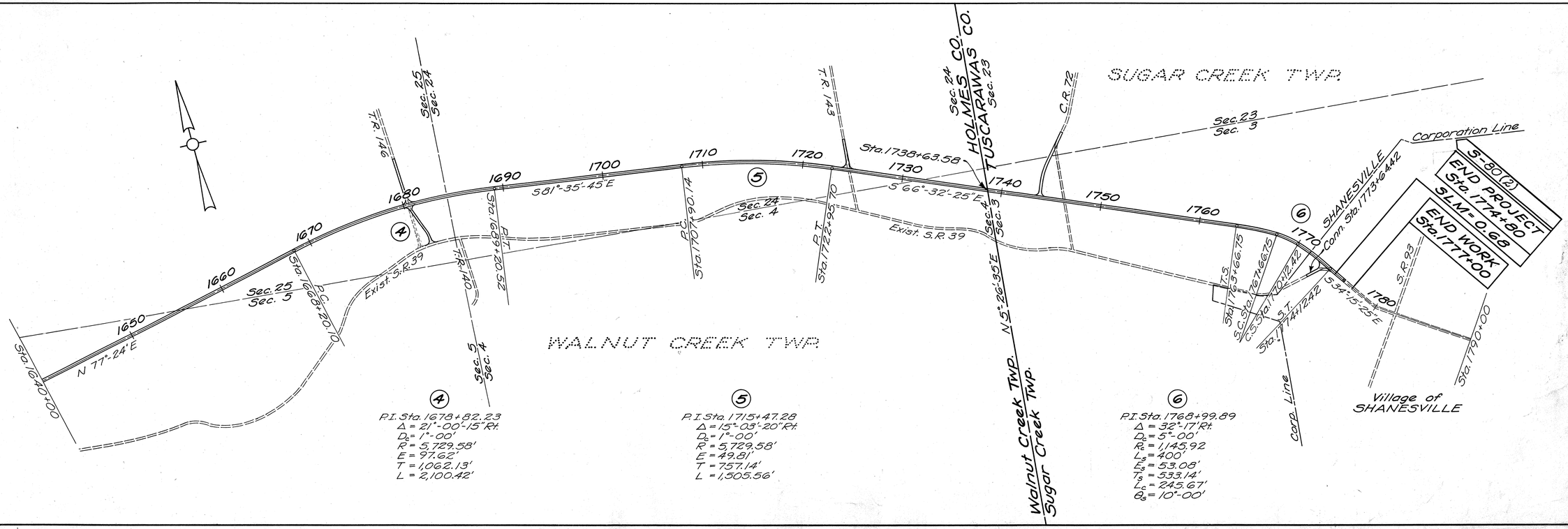
Scale: 1" = 500'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2 / 237

HOL - 39 - 28.57
TUS - 39 - 0.00





LOCATION MAP

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

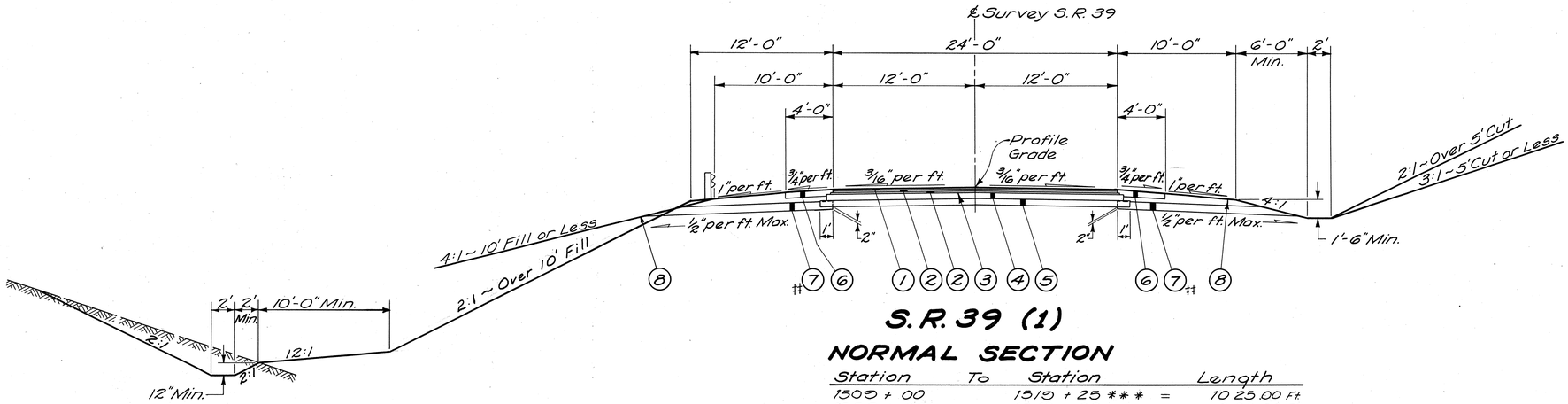
3
231

HOL - 39 - 28.57
TUS - 39 - 0.00

TYPICAL SECTIONS

TYPE T-35 on B-19

Scale: 3/16" = 1'-0"



S.R. 39 (1)

NORMAL SECTION

Station	To	Station		Length
1509 + 00		1519 + 25 ***	=	1025.00 Ft.
1532 + 00		1540 + 00	=	800.00 Ft.
1556 + 50		1558 + 65.22	=	215.22 Ft.
1558 + 65.22		1559 + 94.78	=	Bridge, plus approach slabs.
1559 + 94.78		1612 + 50	=	5255.22 Ft.
1631 + 50		1667 + 75	=	3625.00 Ft.
1689 + 50		1707 + 50	=	1800.00 Ft.
1723 + 50		1763 + 75	=	4025.00 Ft.
1774 + 25		1775 + 75 ***	=	150.00 Ft.
		Total	=	16,805.44 Lin. Ft.

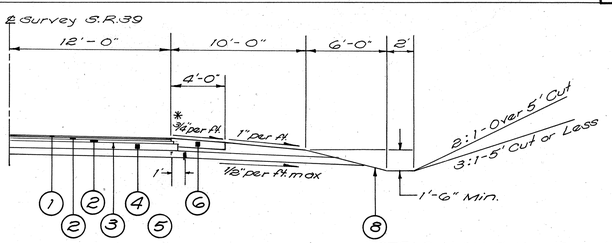
†Subbase drainage, in areas of rock excavation, shall be accomplished by extending the I-22 subbase through the shoulder (See Insert "A") rather than by I-9 stone underdrains. Rock may be encountered at the following locations:

NORMAL SECTION

Station	to	Station		Length
1589 + 50		1591 + 00	=	150.00
1631 + 50		1641 + 10	=	960.00
1644 + 50		1651 + 00	=	650.00
1663 + 50		1667 + 75	=	425.00
1694 + 80		1701 + 00	=	620.00
1736 + 00		1738 + 75	=	275.00
1744 + 50		1750 + 50	=	600.00
1760 + 25		1762 + 25	=	200.00
1774 + 25		1775 + 00	=	75.00
		Total	=	3,955.00

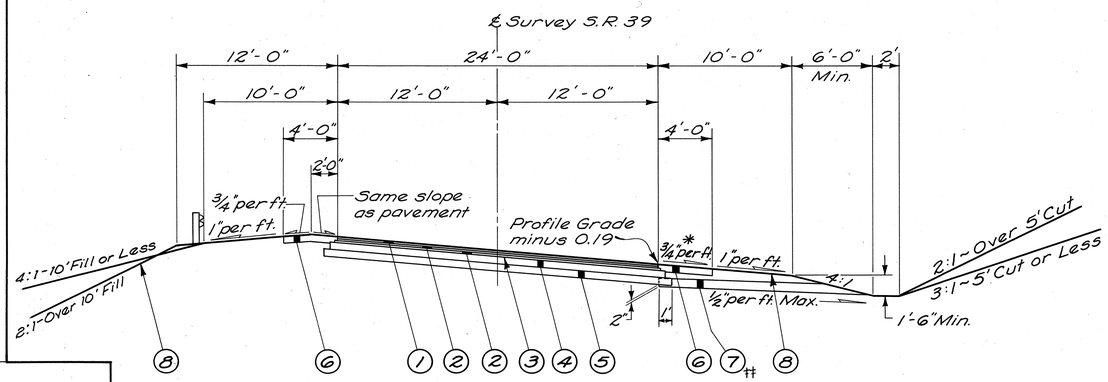
SUPERELEVATED SECTION

Station	to	Station		Length
1545 + 00		1546 + 00	=	100.00
1617 + 00		1618 + 50	=	150.00
1620 + 75		1625 + 60	=	485.00
1630 + 00		1631 + 50	=	150.00
1667 + 75		1668 + 00	=	25.00
1674 + 00		1683 + 10	=	910.00
1711 + 50		1721 + 00	=	950.00
1773 + 00		1774 + 25	=	125.00
		Total	=	2,895.00



INSERT "A"

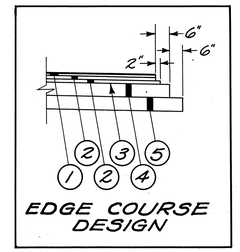
NOTE: Subbase drains through both shoulders of Normal Section and through the low shoulder of Superelevated Section.



S.R. 39 (2)

SUPERELEVATED SECTION

Station	To	Station		Length
1519 + 25		1532 + 00	=	1275.00 Ft.
1540 + 00		1556 + 50	=	1650.00 Ft.
1612 + 50		1631 + 50	=	1900.00 Ft.
1667 + 75		1689 + 50	=	2175.00 Ft.
1707 + 50		1723 + 50	=	1600.00 Ft.
1763 + 75		1774 + 25	=	1050.00 Ft.
		Total	=	9650.00 Lin. Ft.



EDGE COURSE DESIGN

LEGEND

**(1)	T-35	1" Asphaltic Concrete Surface Course, Type "C" (70-85)
**(2)	B-35	1½" Asphaltic Concrete Leveling Course, (70-85)
(3)	T-30	Bituminous Prime Coat, 0.40 Gal. per sq. yd., Sec. M-5.7, RT-2 or RT-3
(4)	B-19	6" Aggregate Base Course
(5)	I-22	6" Subbase
†(6)	I-18	6" Stabilized Crushed Aggregate Shoulders and Approaches
(7)	I-9	Stone Underdrains No. 2
(8)	L-9	Seeding and Protecting

NOTES

Reference shall be made to Standard Drawing RI-1 for details not shown.

*The slope of the stabilized shoulder shall be the same as the pavement slope for pavement slopes greater than 3/4" per ft.

**Thickness shown is designed thickness as described in Section T-35.01 and B-35.01.

† See note in proposal for additional stabilization with calcium chloride in the upper three (3) inches of this item.

***From Sta. 1509+00 to Sta. 1509+60, and from Sta. 1774+80 to Sta. 1775+75 the pavement width varies. See Sheets No. 14 and No. 179 for details.

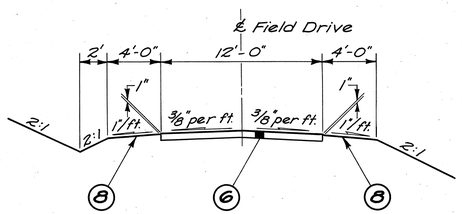
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

4/231

HOL - 39 - 28.57
TUS - 39 - 0.00

TYPICAL SECTIONS
TYPE T-35 on B-19

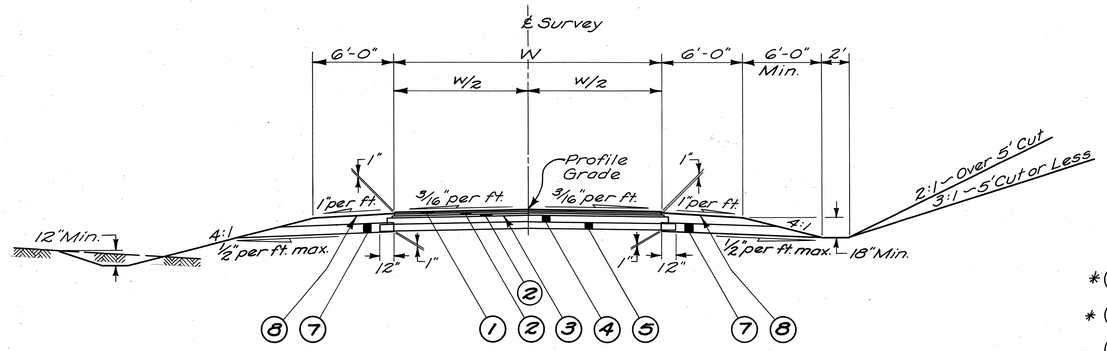
Scale: 3/16" = 1'-0"



FIELD DRIVE
Type 2

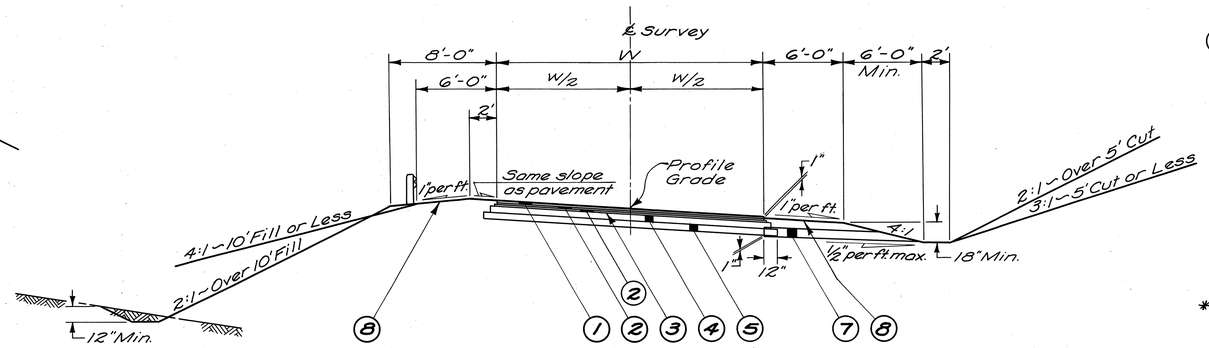


RESIDENCE DRIVE
Type 1



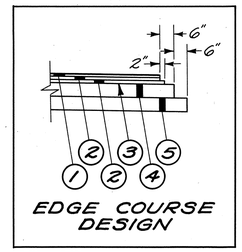
CONNECTIONS (3)
PROP. S.R. 39 WITH EXIST. S.R. 39
NORMAL SECTION

Conn. ~ Sta. 1514+74.82 . . . . . W = 20' 300'
Conn. ~ Sta. 1626+00 . . . . . W = 18' 376'
Conn. ~ Sta. 1773+64.42 . . . W = 20' 200'



CONNECTIONS (4)
PROP. S.R. 39 WITH EXIST. S.R. 39
SUPERELEVATED SECTION

Conn. ~ Sta. 1514+74.82 . . . W = 20'
Conn. ~ Sta. 1582+75 . . . . . W = 18' to 24' 240'
Conn. ~ Sta. 1626+00 . . . . . W = 18'



EDGE COURSE DESIGN

LEGEND

* (1)	T-35	1" Asphaltic Concrete Surface Course, Type "C" (70-85)
* (2)	B-35	1½" Asphaltic Concrete Leveling Course (70-85)
(3)	T-30	Bituminous Prime Coat, 0.40 Gal. per Sq. Yd., Sec. M-5.1, RT-2 or RT-3
(4)	B-19	6" Aggregate Base Course
(5)	I-22	6" Subbase
(6)	I-18	6" Stabilized Crushed Aggregate Shoulders and Approaches
(7)	I-9	Stone Underdrains No. 2
(8)	L-9	Seeding and Protecting
** (11)	I-18	8" Stabilized Crushed Aggregate Shoulders and Approaches
(12)	I-18	5" Stabilized Crushed Aggregate Shoulders and Approaches

NOTES

Reference shall be made to Standard Drawing RI-1 for details not shown.

* Thickness shown is designed thickness as described in Section T-35.01 and B-35.01.

** See note in proposal for additional stabilization with calcium chloride in the upper three (3) inches of this item.

TYPICAL SECTIONS

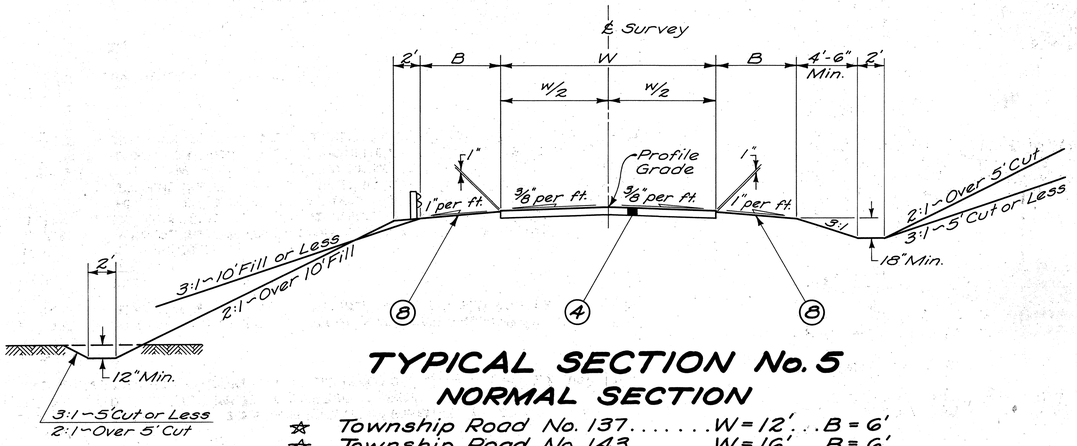
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

5
231

HOL - 39 - 28.57
TUS - 39 - 0.00

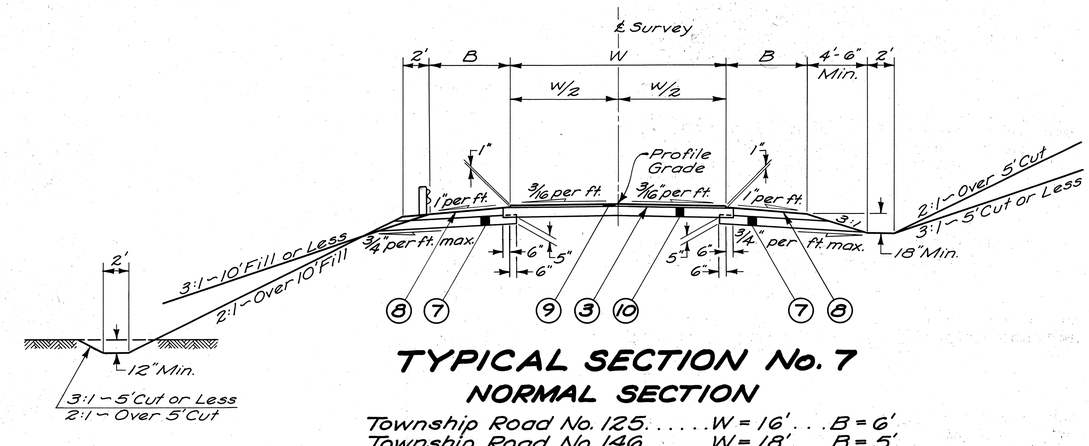
Scale: 3/16" = 1'-0"

SIDE ROADS



TYPICAL SECTION No. 5
NORMAL SECTION

★ Township Road No. 137 . . . . . W = 12' . . . B = 6'
★ Township Road No. 143 . . . . . W = 16' . . . B = 6'
★ County Road No. 72 . . . . . W = 18' . . . B = 5'



TYPICAL SECTION No. 7
NORMAL SECTION

Township Road No. 125 . . . . . W = 16' . . . B = 6'
Township Road No. 146 . . . . . W = 18' . . . B = 5'
County Road No. 114 . . . . . W = 18' . . . B = 5'

★ In lieu of the requirements of Sec. E-1.09(a), the subgrade of those portions of T.R. No. 137, T.R. No. 143 and C.R. No. 72 having a B-19 aggregate pavement without a bituminous surface course shall be compacted for a depth of six (6) inches to the density requirements in Table II Item E-1. Payment for this subgrade compaction shall be included in the unit price bid for Item E-1 Roadway Excavation.

NOTES

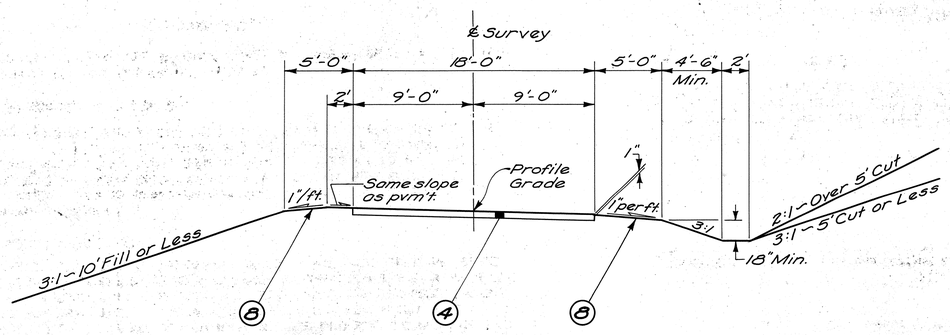
Reference shall be made to Standard Drawing RI-1 for details not shown.

* Thickness shown is designed thickness as described in Sec. T-35.01.

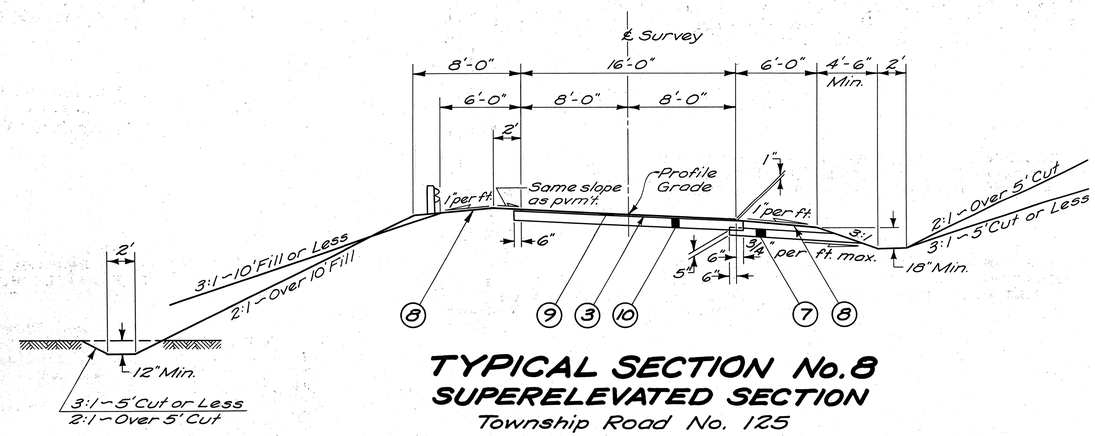
** See Note in Proposal for additional Stabilization with Calcium Chloride in the upper three (3) inches of this item when it is used as a Surface Course.

LEGEND

(3) T-30 Bituminous Prime Coat, 0.4 Gal. per Sq. Yd., Sec. M-5.7, RT-2 or RT-3
**(4) B-19 6" Aggregate Base Course
(7) I-9 Stone Underdrains No. 2
(8) L-9 Seeding and Protecting
*(9) T-35 1½" Asphaltic Concrete Surface Course, Type "A" (70-85)
(10) B-19 8" Aggregate Base Course



TYPICAL SECTION No. 6
SUPERELEVATED SECTION
★ County Road No. 72



TYPICAL SECTION No. 8
SUPERELEVATED SECTION
Township Road No. 125

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

6
231

HOL - 39 - 28.57
TUS - 39 - 0.00

GENERAL NOTES

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 60 MILES PER HOUR.

ELEVATION DATUM

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

FIELD OFFICE

THE CONTRACTOR SHALL, IN ACCORDANCE WITH SEC. S-0.01 (B), PROVIDE WITHIN 10 DAYS AFTER WORK IS STARTED ON THIS CONTRACT, FOR THE EXCLUSIVE USE OF THE STATE'S EMPLOYEES, A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 500 SQUARE FEET OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING ELECTRIC LIGHTS AND OFFICE EQUIPMENT IN THE FIELD OFFICE AND PROVIDE A 110-VOLT ALTERNATING CURRENT TO THE OFFICE DURING THE ENTIRE PERIOD OF CONSTRUCTION OF THIS PROJECT.

UTILITY ADJUSTMENT

ANY OR ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED 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 MAKES NO GUARANTEES AS TO THEIR ACCURACY OR COMPLETENESS.

CONSTRUCTION LAYOUT STAKES

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

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.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON STANDARD DRAWING R1-1 APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

NON RIGID PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS

AFTER THE EXISTING PAVEMENT HAS BEEN REMOVED, THE OLD ROADWAY SHALL BE PLOWED, HARROWED, AND DRAGGED TO A SMOOTH GRADE, THE OLD DITCHES FILLED, AND THE ENTIRE AREA SLOPED TO DRAIN AND LEFT IN A NEAT CONDITION READY FOR SEEDING. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT REMOVAL, ITEM E-8. SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM L-9.

NON RIGID PAVEMENT REMOVAL WITHIN NORMAL WORK LIMITS

REMOVAL AND DISPOSAL OF EXISTING NON RIGID PAVEMENT WITHIN THE WORK LIMITS SHALL BE MEASURED AND PAID FOR AS ITEM E-1, ROADWAY EXCAVATION.

SCARIFICATION OF EXISTING NON RIGID PAVEMENT

WITHIN THE LIMITS OF CONSTRUCTION, WHERE THE EXISTING NON RIGID PAVEMENT WILL HAVE LESS THAN SIX (6) INCHES OF FILL PLACED UPON IT, THE PAVEMENT SHALL BE THOROUGHLY SCARIFIED FOR ITS FULL DEPTH, MIXED WITH SUFFICIENT SOIL AND PROPERLY RECOMPACTED TO INSURE THE ELIMINATION OF ANY PLANES OF SEPARATION BETWEEN IT AND THE EMBANKMENT PLACED THEREON. PAYMENT FOR SCARIFICATION AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION.

REMOVAL OF EXISTING RIGID PAVEMENT

EXISTING RIGID TYPE PAVEMENTS SHALL BE REMOVED UNDER ITEM E-8 WHEN THEY ARE LOCATED LESS THAN 3 FEET BELOW THE PROPOSED PAVEMENT SUBGRADE IN PROPOSED PAVEMENT AREAS OR LESS THAN 3 FEET BELOW THE PROPOSED FINISHED SURFACE IN AREAS OUTSIDE THE PROPOSED PAVEMENT. WHEN EXISTING RIGID TYPE PAVEMENTS LIE BELOW THE ABOVE LIMITS, THEY SHALL NOT BE REMOVED. IN LIEU THEREOF, THEY SHALL BE BROKEN UP IN PLACE INTO PORTIONS NOT TO EXCEED ONE SQUARE FOOT IN AREA PRIOR TO PLACEMENT OF PROPOSED EMBANKMENT. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ROADWAY EXCAVATION ITEM E-1.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS LYING WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM E-9, REMOVAL OF TREES AND STUMPS, 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:

	12" - 18"	18" - 24"	24" - 30"
TREES	354	70	26
STUMPS			

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 E-9, REMOVAL OF TREES AND STUMPS.

DRIVEWAYS

ALL RESIDENCE DRIVES ON THIS PROJECT SHALL BE TYPE "1" STANDARD DRAWING DR-1 WITH THE APRON ONLY PAVED WITH 2" T-35, UNLESS OTHERWISE NOTED ON THE PLANS. ALL FIELD DRIVES ON THIS PROJECT SHALL BE TYPE "2" STANDARD DRAWING DR-1. LOCATION OF DRIVES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER, PROVIDED THERE IS NO ADDITIONAL COST TO THE STATE. DRIVES SHALL BE PLACED AT 90° TO THE CENTERLINE UNLESS OTHERWISE NOTED ON THE PLANS.

GUARD RAIL ADJUSTMENT

THE STATIONING OF INDIVIDUAL RUNS OF GUARD RAIL SHALL BE ADJUSTED, IF NECESSARY, BY THE ENGINEER AT THE TIME OF CONSTRUCTION TO ACCOMMODATE THE STANDARD PANEL LENGTHS FURNISHED.

SEEDING

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

L-9 COMMERCIAL FERTILIZER

ALL AREAS TO BE SEEDED UNDER ITEM L-9 OR SODDED UNDER L-10 SHALL HAVE COMMERCIAL FERTILIZER (12-12-12) APPLIED AT THE RATE OF TWENTY (20) POUNDS PER 1,000 SQUARE FEET.

DUST CONTROL

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE PREVENTION OR ALLEVIATION OF DUST NUISANCE

ITEM 1-4, CALCIUM CHLORIDE FOR DUST CONTROL = 4 TONS
ITEM 1-4, WATER FOR DUST CONTROL = 6 M GALS

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS SECTIONS ON THIS PLAN INDICATE SPECIFIC WIDTHS AND DEPTHS OF PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED AND ALL OTHER SLOPED FOUNDATION AREAS SHALL BE BENCHED AS SET FORTH IN SEC. E-1.04. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED BY THE PROVISIONS OF SEC. E-1.04.

ITEM E-1 ROADWAY EXCAVATION

THE REMOVAL AND DISPOSAL OF POLE STUBS, SEPTIC OR OTHER UNDERGROUND TANKS, PIPES, WELL OR CISTERN COVERS, BUILDING FOUNDATIONS OR OTHER MASONRY AS STATED IN ITEM E-1.03(C) SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION UNLESS OTHERWISE NOTED ON THE PLANS.

ITEM 1-1 15" ENCASEMENT PIPE CLASS C-1 AS PER PLAN

THIS ITEM SHALL CONSIST OF ENCASING WITH CORRUGATED METAL PIPE THE EXISTING THREE (3) INCH WATER LINE CROSSING THE PROPOSED HIGHWAY AT STATION 1539+49.96 AND THE EXISTING FOUR (4) INCH WATER LINE CROSSING THE PROPOSED HIGHWAY AT STATION 1512+76. MATERIAL FURNISHED FOR THIS ITEM SHALL BE BITUMINOUS COATED GALVANIZED CORRUGATED METAL NESTABLE PIPE AS MANUFACTURED BY ARMCO DRAINAGE AND METAL PRODUCTS, INC., OR CULVERT DIVISION OF THE REPUBLIC STEEL CORP. OR AN APPROVED EQUAL. THE PIPE AND COATING SHALL MEET THE APPROPRIATE MATERIAL REQUIREMENTS OF SECTION M-6.4 EXCEPT THAT THE PIPE SECTIONS SHALL BE HELD TOGETHER BY STITCHES, BOLTS, OR OTHER METAL FASTENERS IN ACCORDANCE WITH RECOMMENDATIONS AND DETAILS OF THE MANUFACTURER. LENGTH OF PIPE SECTIONS AND BASE METAL COMPOSITION OF THE FASTENING DEVICES SHALL ALSO BE IN ACCORDANCE WITH DETAILS OF THE MANUFACTURER. THE WORK OF INSTALLING THE ENCASEMENT SHALL BE SO PROSECUTED THAT A MINIMUM LENGTH OF THE EXISTING WATER LINE SHALL BE UNSUPPORTED AT ANY ONE TIME. THE WATER MAIN SHALL BE SUPPORTED WITHIN THE ENCASEMENT PIPE BY BLOCKING OR BRACING APPROVED BY THE ENGINEER, OR BY BEDDING THE MAIN IN SAND OR OTHER GRANULAR MATERIAL APPROVED BY THE ENGINEER. BEDDING MATERIAL, IF USED, SHALL OCCUPY AT LEAST 85 PER CENT OF THE CROSS-SECTIONAL AREA OF THE ENCASEMENT PIPE OUTSIDE THE MAIN. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ENCASEMENT PIPE, *Item I-1.*

MONUMENT ASSEMBLIES

STANDARD MONUMENT *ASSEMBLIES* WILL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING NO. RI-1. THEY WILL BE CONSTRUCTED AT LOCATIONS ITEMIZED ON SHEET NO. 217 OF THE CONSTRUCTION PLANS. THE COST OF FURNISHING AND PLACING MONUMENT BOXES, STEEL BARS, AND CLASS "C" CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 1-8, STANDARD MONUMENT ASSEMBLIES. TOTAL NUMBER OF MONUMENT ASSEMBLIES IS *28*.

LOCATION AND SIZE OF EXISTING PIPE

THE LOCATION, SIZE AND DEPTH OF ALL EXISTING PIPES ARE SHOWN AS NEAR AS THE AVAILABLE INFORMATION WILL PERMIT. THE STATE OF OHIO WILL NOT BE RESPONSIBLE FOR VARIATIONS FOUND DURING CONSTRUCTION. ANY ADDITIONAL PIPE NEEDED TO MAKE REQUIRED CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR THE APPROPRIATE TYPE AND SIZE. ALL PAYMENTS SHALL BE BASED ON FINAL MEASUREMENTS.

REMOVALS

ALL ITEMS MARKED FOR REMOVAL AND DISPOSAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF BY HIM UNLESS OTHERWISE SPECIFIED ON THE DETAILED PLANS.

REMOVAL OF EXISTING PIPE

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

CONNECTIONS TO EXISTING PIPE

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

PAVED BITUMINOUS COATED CORRUGATED METAL STRUCTURE

THE METAL PLATES THAT ARE INCORPORATED INTO THE LOWER 1/4 OF THIS SECTIONAL PLATE STRUCTURE SHALL BE SHOP COATED IN ACCORDANCE WITH SEC M-6.4(C) AND FIELD PAVED WITH A BITUMINOUS MATERIAL. THE REMAINDER OF THE PLATES NEED NOT BE BITUMINOUS COATED. THE PAVING SHALL CONSIST OF A MIXTURE OF HOT SAND AND SEC M-5.1 ASPHALT CEMENT OR OTHER BITUMINOUS MIXTURE ACCEPTABLE TO THE ENGINEER AND SHALL BE SPREAD AND COMPACTED TO THE SATISFACTION OF THE ENGINEER. THE COMPLETED PAVEMENT SHALL BE SMOOTH AND DURABLE AND SHALL HAVE A MINIMUM AVERAGE THICKNESS OF APPROXIMATELY ONE INCH OVER THE INSIDE CRESTS OF THE CORRUGATIONS. AFTER INSTALLATION OF THE STRUCTURE, DAMAGED OR WORN SPOTS IN THE BITUMINOUS COATING ON THE INSIDE AND OUTSIDE OF THE STRUCTURE SHALL BE RE-COATED USING MATERIALS AND METHODS RECOMMENDED BY THE MANUFACTURER AND AS DIRECTED BY THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 1-1 STRUCTURE.

PLUGGING PIPE

THE UPSTREAM ENDS OF ALL PIPE OR TILE LINES INTERCEPTED BY EARTHWORK EXCAVATIONS AND, WHERE INDICATED, THE ENDS OF PIPE LINES TO BE ABANDONED IN PLACE SHALL BE EFFECTIVELY BLOCKED AND COVERED. BROKEN PIECES AND PORTIONS OF PIPE OR TILE SHALL BE REMOVED UNTIL A WHOLE UNDAMAGED LENGTH IS ENCOUNTERED WHICH SHALL BE BLOCKED WITH CONCRETE, FLAT STONE OR BRICK LAID IN MORTAR, OR A PRECAST CLAY OR CONCRETE STOPPER. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1 ROADWAY EXCAVATION.

SPECIAL DITCHES

FOR SPECIAL DITCH GRADES, SEE CROSS SECTIONS.

PLACING SOD

EIGHTEEN (18") INCHES OF SOD SHALL BE PLACED ON ALL SLOPES ADJACENT TO PAVED GUTTER. A 2' SOD COLLAR SHALL BE PLACED AROUND THE EXPOSED ENDS OF ALL PIPE BETWEEN 12" AND 24" DIAMETERS INCLUSIVE, AND 3' SOD COLLAR SHALL BE PLACED AROUND THE EXPOSED ENDS OF ALL PIPE OVER 24" DIAMETER.

EROSION CONTROL

ITEMS 1-10, 1-14, AND L-10 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 NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

CONTRACTOR'S MAINTENANCE RESPONSIBILITY: On this project, the Contractor's responsibility for maintenance of the existing pavement per I-3 shall be limited to those portions of the existing pavement lying within the proposed work limits.

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GENERAL NOTES

SPRING DRAINS

REFERENCE IS MADE TO THE DETAILED DRAWING ON SHEET NO. 183 SHOWING THE METHOD OF DRAINING ANY SPRINGS THAT MAY BE ENCOUNTERED DURING THIS CONSTRUCTION. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 1-9 STONE UNDERDRAINS, NO. 1, AS PER PLAN = 15 LIN FT
ITEM 1-1 6" PIPE, SEC M-6.4(*h*), CLASS 1-3 AS PER PLAN = 250 LIN FT

CUT OFF WALLS FOR ITEM 1-10 RIPRAP

THE CUT OFF WALLS FOR ITEM 1-10 RIPRAP USING 6" REINFORCED CONCRETE SLAB SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM 1-10 RIPRAP USING 6" REINFORCED CONCRETE, AS PER PLAN.

CATCH BASINS, INLETS, AND PIPES

THE PROPOSED ELEVATIONS AND LOCATION OF CATCH BASINS, INLETS, PIPES AND THE ESTIMATED LENGTHS OF PIPES MAY BE ADJUSTED BY THE ENGINEER DURING CONSTRUCTION.

REINFORCED ENDS ON CORRUGATED METAL PIPE

REINFORCED ENDS WILL BE REQUIRED FOR THE EXPOSED ENDS OF ALL CORRUGATED METAL CLASS F-4 PIPE Sec. M-6.4(C) USED FOR ALL DRIVEWAYS AND UNDERDRAIN OUTLETS IF THE EXPOSED PIPE ENDS ARE UNPROTECTED BY HEADWALLS, CATCH BASINS OR MANHOLES. *Payment for reinforced ends shall be included in the unit price bid for the pertinent pipe item.*

ITEM 1-9 STONE UNDERDRAINS NO. 2

STONE UNDERDRAINS 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 SUPER-ELEVATED SECTIONS, EXCEPT WHERE 1-1 UNDERDRAINS HAVE BEEN PROVIDED. A STONE UNDERDRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

DRAINAGE OF BASE MATERIAL

WHERE THE BASE MATERIAL IS DRAINED BY 1-9 STONE UNDERDRAINS OR BY EXTENSIONS OF THE SUBBASE THROUGH THE SHOULDERS TO THE FILL SLOPE OR THE DITCH LINE, THE CONTRACTOR SHALL FINISH, SEED AND MULCH THE SLOPES SO AS NOT TO IMPEDE DRAINAGE OF THE BASE MATERIAL. THE ACTUAL AREA OF THE OUTCROP OF THE SUBBASE MATERIAL OR THE 1-9 UNDERDRAINS SHALL NOT BE SEEDED.

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 1-1 CLASS J-1 PIPE. EXISTING COLLECTORS AND ISOLATED FARM DRAINS WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL TILE FIELDS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY CLASS H-2 PIPE 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 1-1 6" PIPE, SEC M-6.6(*b*) OR M-6.8(*b*)	CLASS J-1	150 LIN FT
ITEM 1-1 8" PIPE, SEC M-6.6(*b*) OR M-6.8(*b*)	CLASS J-1	150 LIN FT
ITEM 1-1 12" PIPE, SEC M-6.6(*a*) OR M-6.8(*b*)	CLASS J-1	150 LIN FT
ITEM 1-1 6" PIPE	CLASS H-2	300 LIN FT
ITEM 1-1 8" PIPE	CLASS H-2	300 LIN FT
ITEM 1-1 12" PIPE	CLASS H-2	150 LIN FT
ITEM 1-1 8" PIPE, SEC M-6.4(*c*)	CLASS F-4	150 LIN FT
ITEM 1-1 12" PIPE	CLASS F-4	150 LIN FT
ITEM 1-5 6" PIPE SPECIALS	CLASS H-2	10 EACH
ITEM 1-5 8" PIPE SPECIALS	CLASS H-2	10 EACH
ITEM 1-5 12" PIPE SPECIALS	CLASS H-2	5 EACH
ITEM 1-10 DUMPED ROCK CHANNEL PROTECTION		20 CU YDS

ITEM 1-124 NEW WATER MAIN AS PER PLAN

THE EXISTING FOUR (4) INCH LEADED COCK JOINT WATER MAIN AT STATION 1512+76 SHALL BE ABANDONED FROM A POINT TWENTY-SIX (26) FEET LEFT OF CENTER LINE TO A POINT FORTY-FIVE (45) FEET RIGHT OF CENTERLINE AND REPLACED WITH A NEW FOUR (4) INCH CAST IRON WATER MAIN WITH MECHANICAL JOINT ENDS. THE NEW WATER MAIN SHALL BE LAID PARALLEL TO THE EXISTING MAIN AT A MINIMUM DEPTH OF THREE (3) FEET AND THE NEW MAIN SHALL BE ENCASED FROM THE EDGE OF BERM TO THE EDGE OF BERM WITH FIFTEEN (15) INCH ENCASEMENT PIPE, CLASS C-1 AS PER PLAN (SEE GENERAL NOTE.) THE EXISTING MAIN SHALL BE LEFT IN SERVICE EXCEPT FOR THE TIME REQUIRED TO CONNECT THE ENDS OF THE NEW MAIN. THE EXISTING THREE (3) INCH LEADED COCK JOINT WATER MAIN AT STATION 1681+39 SHALL BE REPLACED AFTER ROADWAY GRADING OPERATIONS WITH A NEW THREE (3) INCH CAST IRON WATER MAIN WITH MECHANICAL JOINT ENDS AT A MINIMUM DEPTH OF THREE (3) FEET. THE NEW MAIN SHALL HAVE TYPE 3 BACKFILL PLACED UPON IT TO A DEPTH OF AT LEAST SIX (6) INCHES ABOVE THE FLOW LINE. THE COST OF FURNISHING AND PLACING THE TYPE 3 BACKFILL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 1-124, 3" CAST IRON WATER MAIN, AS PER PLAN. *The existing 3" water main shall remain in service until replaced by a temporary 3" water main. Service in these lines shall not be interrupted except for the time required to make the end connections. The temporary main shall be built in accordance with Item I-124 and the cost of building and maintaining the temporary main shall be included in price bid for Item I-124, 3" Cast Iron Water Main, as per plan.*

GUARD RAIL ADJACENT TO BRIDGE
One (1) additional guard rail post shall be provided in the center of each panel of guard rail adjacent to the bridge; payment for which shall be included in the unit price bid for Item 715 Guard Rail.

ITEM T-10, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING NO. 3 OR NO. 34 AGGREGATE, AS DIRECTED BY THE ENGINEER, IN LIEU OF THE GRADING SPECIFIED UNDER ITEM T-10. ALL OTHER PROVISIONS OF ITEM T-10 SHALL APPLY. THE WEIGHTS TO BE USED IN CALCULATING THE YARDAGE TO BE PAID FOR UNDER THIS ITEM SHALL BE THE SAME AS THOSE INDICATED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR CRUSHER RUN OR BANK RUN MATERIALS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR MAINTAINING TRAFFIC AND SHALL BE USED AS DIRECTED, AND IN QUANTITIES REQUESTED BY THE ENGINEER:

ITEM T-10 = 1,374 CU YDS
ITEM T-10, AS PER PLAN = 4,120 CU YDS
ITEM I-4 CALCIUM = 110 TONS
CHLORIDE FOR DUST CONTROL

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS

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

1. ON THE RIGHT AT APPROXIMATE STA 1507+50
2. ON THE LEFT AT APPROXIMATE STA 1777+00

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1, "CODE N-54(1)-96(2), AND THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

PIPE UNDERDRAINS

AN ESTIMATED AMOUNT OF ITEM 1-1, CLASS 1-3 HAS BEEN PROVIDED FOR BASE DRAINAGE TO BE USED, IF NEEDED, AT THE DIRECTION OF THE ENGINEER. THE SIZE AND ESTIMATED AMOUNTS ARE LISTED BELOW:

ITEM 1-1 6" PIPE, SEC M-6.4(*h*)	CLASS 1-3	1000 LIN FT
ITEM 1-1 8" PIPE, SEC M-6.4(*c*)	CLASS F-4	50 LIN FT
ITEM 1-5 6" PIPE SPECIALS, SEC M-6.4(*h*)	CLASS 1-3	5 EACH

ROCK SUBGRADE

THE CONTRACTOR SHALL BE PAID FOR THE THICKNESS OF 1-22 SUBBASE MATERIAL SHOWN ON THE TYPICAL SECTIONS IN ROCK EXCAVATION AREAS. ANY POCKETS IN THE ROCK BELOW THE PLAN SUBGRADE ELEVATION SHALL DRAIN EITHER LONGITUDINALLY OR LATERALLY, AND ALL IRREGULARITIES IN THE ROCK BELOW THIS ELEVATION SHALL BE FILLED WITH 1-22 SUBBASE MATERIAL AT NO ADDITIONAL COST TO THE STATE.

REMOVAL OF COAL

IF COAL IS ENCOUNTERED IN THE SUBGRADE, IT SHALL BE EXCAVATED TO A DEPTH OF 18 INCHES BELOW THE BOTTOM OF THE SUBBASE AND REPLACED WITH SUITABLE EMBANKMENT MATERIAL. PAYMENT FOR WORK DESCRIBED ABOVE SHALL BE IN ACCORDANCE WITH ITEM E-1, *Roadway Excavation.*

FILLING DRIFT MINE ENTRY

AT APPROXIMATE STATION 1691+30, 25 FEET RIGHT, THE PRESENCE OF A DRIFT MINE ENTRY IS INDICATED ON THE SOIL PROFILE. THIS ABANDONED ENTRY SHALL BE BACKFILLED WITH SANDSTONE BEDROCK OBTAINED FROM ROADWAY EXCAVATION. MATERIAL SUITABLE FOR THIS PURPOSE CAN BE OBTAINED FROM THE EXCAVATION BETWEEN STATION 1695+00 AND STATION 1702+00. THE EXTENT OF FILLING SHALL BE DETERMINED BY THE ENGINEER AND SHALL BE PLACED IN ACCORDANCE WITH THE PROVISIONS OF SECTION E-1.08(*d*) OF THE SPECIFICATIONS. PAYMENT FOR FILLING THE DRIFT MINE ENTRY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION METHOD B, AS PER PLAN.

MAINTAINING TRAFFIC: *The Contractor shall maintain two-way traffic at all times on S.R.39. At least one-way traffic shall be maintained on all County & Township Rd. Traffic shall be maintained by use of either the existing pavement, the proposed pavement, or temporary roadways surfaced with T-10 aggregate and stabilized with I-4 Calcium Chloride. One-way traffic will be permitted over the grade of the new highway, for minimum periods of time consistent with the requirements of the specifications for protection of completed asphaltic concrete courses, during paving operations where construction overlaps existing pavement. The length of one-way traffic zones shall be kept to a minimum consistent with the requirements of the work. Maximum use shall be made of the existing pavement for traffic maintenance,*

HOLDING THE LENGTH AND DURATION OF TEMPORARY TRAFFIC LANES TO A MINIMUM. TEMPORARY TRAFFIC LANES SHALL BE SURFACED WITH T-10 MATERIAL, TREATED WITH CALCIUM CHLORIDE AND THE SURFACE MAINTAINED DAILY IN A MANNER SATISFACTORY TO THE ENGINEER. TWO-WAY TRAFFIC LANES SHALL BE SURFACED WITH AGGREGATE AT LEAST TWENTY (20') FEET WIDE AND ONE-WAY TRAFFIC LANES SHALL HAVE THE SURFACING AGGREGATE NOT LESS THAN TWELVE (12') FEET WIDE.

Payment for all of the above except for T-10 aggregate and I-4 Calcium Chloride shall be included in the price bid for Item I-3 Maintaining Traffic.

EARTHWORK AND SEEDING QUANTITIES

STATION TO STATION S. R. 39		EXCAVATION CUBIC YARDS	EMBANKMENT CUBIC YARDS	EMBANKMENT + 15% CUBIC YARDS	SEEDING SQUARE YARDS
1500+00	1510+00	174	7	8	247
1510+00	1520+00	4,538	45,518	52,346	12,938
1520+00	1530+00	6,406	52,555	60,438	13,387
1530+00	1540+00	18,308	8,416	9,678	9,260
1540+00	1550+00	15,300	7,585	8,723	9,361
1550+00	1560+00	1,288	18,441	21,207	10,643
1560+00	1570+00	1,743	15,146	17,418	12,658
1570+00	1580+00	1,455	9,951	11,444	12,195
1580+00	1590+00	6,796	5,173	5,949	10,699
1590+00	1600+00	6,323	10,684	12,287	10,992
1600+00	1610+00	3,971	15,220	17,503	17,067
1610+00	1620+00	14,558	9,032	10,387	11,347
1620+00	1630+00	34,012	8,114	9,331	12,315
1630+00	1640+00	206,367	272	313	21,787
1640+00	1650+00	54,289	16,981	19,528	13,872
1650+00	1660+00	12,598	136,810	157,332	20,206
1660+00	1670+00	34,752	28,460	32,729	12,771
1670+00	1680+00	29,020	6,962	8,006	10,387
1680+00	1690+00	9,552	66,824	76,848	14,376
1690+00	1700+00	52,447	49,077	56,439	15,972
1700+00	1710+00	9,259	41,954	48,247	14,007
1710+00	1720+00	97,634	1,063	1,222	14,063
1720+00	1730+00	6,081	23,478	27,000	11,505
1730+00	1740+00	20,371	22,782	26,199	12,358
1740+00	1750+00	70,752	16,594	19,083	14,165
1750+00	1760+00	3,935	49,254	56,642	13,524
1760+00	1770+00	5,643	93,108	107,074	16,655
1770+00	1780+00	4,990	10,465	12,035	5,200
SIDE ROADS					
T.R. 125 AND CONN @ 1514+75		2,130	887	1,020	3,042
C.R. 114		899	8,673	9,974	6,411
CONN @ 1582+75		327	354	407	642
T.R. 137		253	116	133	848
CONN @ 1626+00		323	7,117	8,185	2,275
T.R. 146		19,213	2,974	3,420	7,106
T.R. 143		416	1,745	2,007	1,784
C.R. 72		6,721	159	183	494
CONN @ 1773+64.42		570	10	12	245
TOTALS		763,614	791,961	910,757	376,804

TOTAL E-1 EXCAVATION TO SUMMARY	=	763,614	CU YDS
TOTAL E-4 BORROW TO SUMMARY = 910,757 - [763,614 + 2,000(SUITABLE E-3)]	=	145,143	CU YDS
TOTAL L-9 SEEDING	=	376,804	SQ YDS
DEDUCT L-10 SODDING	=	-14,949	SQ YDS
DEDUCT 1-10 DUMPED ROCK	=	- 5,330	SQ YDS
DEDUCT 1-14 PAVED GUTTER	=	- 877	SQ YDS
NET TOTAL L-9 SEEDING TO SUMMARY	=	355,648	SQ YDS

ITEM I-5 PIPE SPECIALS
Pipe without perforations will be permitted for use on this project for all Item I-5 Pipe Specials.

SEALING OF PIPE JOINTS
Where connections are made between rigid and flexible pipe sections or between pipe section of different kind or type of end fabrication, whether required by the plans, arising from permissible use of optional materials, or encountered in connection to existing facilities, the joint shall be sealed by means of a Class "E" concrete collar having a minimum thickness of 6 inches and a minimum length of 12 inches. Payment for sealing as described above shall be included in the unit price bid for the pertinent pipe item.

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CALCULATIONS

PERTINENT LENGTHS FOR CALCULATIONS		
TYPICAL SECTION NO. 1		
STATION 1509+00 TO STATION 1519+25 =	1,025.00 LIN FT	
STATION 1532+00 TO STATION 1540+00 =	800.00 LIN FT	
STATION 1556+50 TO STATION 1558+65.22 =	215.22 LIN FT	
STATION 1559+94.78 TO STATION 1612+50 =	5,255.22 LIN FT	
STATION 1631.50 TO STATION 1667+75 =	3,625.00 LIN FT	
STATION 1689+50 TO STATION 1707+50 =	1,800.00 LIN FT	
STATION 1723+50 TO STATION 1763+75 =	4,025.00 LIN FT	
STATION 1774+25 TO STATION 1775+75 =	150.00 LIN FT	
GROSS LENGTH =		16,895.44 LIN FT
DEDUCTIONS (VARIABLE WIDTH PAVEMENT):		
STATION 1509+00 TO STATION 1509+60 =	60.00 LIN FT	
STATION 1774+80 TO STATION 1775+75 =	95.00 LIN FT	
TOTAL DEDUCTIONS		-155.00 LIN FT
NET LENGTH TYPICAL SECTION NO. 1		16,740.44 LIN FT
TYPICAL SECTION NO. 2		
STATION 1519+25 TO STATION 1532+00 =	1,275.00 LIN FT	
STATION 1540+00 TO STATION 1556+50 =	1,650.00 LIN FT	
STATION 1612+50 TO STATION 1631+50 =	1,900.00 LIN FT	
STATION 1667+75 TO STATION 1689+50 =	2,175.00 LIN FT	
STATION 1707+50 TO STATION 1723+50 =	1,600.00 LIN FT	
STATION 1763+75 TO STATION 1774+25 =	1,050.00 LIN FT	
LENGTH TYPICAL SECTION NO. 2 =		9,650.00 LIN FT
TOTAL LENGTH OF 24' PAVEMENT - S.R. 39 =		26,390.44 LIN FT

ITEM T-35 ASPHALTIC CONCRETE SURFACE COURSE, TYPE "C"		
S. R. 39		
VOLUME = 26,390.44 × 24 × 0.0833 ÷ 27 =	1,954.07 CU YDS	
PAVEMENT TRANSITIONS, AVERAGE WIDTH = 22 FT		
STA 1509+00.00 TO STA 1509+60.00 = 60.00 LIN FT		
STA 1774+80.00 TO STA 1775+40.00 = 60.00 LIN FT		
VOLUME = 120.00 × 22 × 0.0833 ÷ 27 =	8.14 CU YDS	
WIDTH = 20 FT		
STA 1775+40.00 TO STA 1775+75.00 = 35.00 LIN FT		
VOLUME = 35.00 × 20 × 0.0833 ÷ 27 =	2.16 CU YDS	
ADD FOR FEATHERING =	4.91 CU YDS	
TOTAL =		1,969.28 CU YDS
T. R. 125		
ADD FOR INTERSECTION =		8.16 CU YDS
CONNECTION @ STA 1514+74.82		
ADD FOR INTERSECTION =	8.86 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22 FT		
STA 3+63.78 TO STA 4+23.78 = 60.00 LIN FT.		
VOLUME = 60.00 × 22 × 0.0833 ÷ 27 =	4.07 CU YDS	
WIDTH = 20 FT		
STA 2+25.00 TO STA 3+63.78 = 138.78 LIN FT		
VOLUME = 138.78 × 20 × 0.0833 ÷ 27 =	8.56 CU YDS	
ADD FOR FEATHERING =	1.39 CU YDS	
TOTAL =		22.88 CU YDS
C. R. 114		
ADD FOR INTERSECTION =		11.45 CU YDS
CONNECTION @ STA 1582+75		
ADD FOR INTERSECTION =	11.17 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 21 FT		
STA 8+01.28 TO STA 9+00.49 = 99.21 LIN FT		
VOLUME = 99.21 X 21 X 0.0833 ÷ 27 =	6.43 CU YDS	
WIDTH = 18 FT		
STA 7+75.00 TO STA 8+01.28 = 26.28 LIN FT		
VOLUME = 26.28 X 18 X 0.0833 ÷ 27 =	1.46 CU YDS	
ADD FOR FEATHERING =	0.42 CU YDS	
TOTAL =		19.48 CU YDS
T. R. 137		
ADD FOR INTERSECTION =		5.51 CU YDS
CONNECTION @ STA 1626+00		
ADD FOR INTERSECTION =	8.00 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 21 FT		
STA 0+76.90 TO STA 1+66.90 = 90.00 LIN FT		
VOLUME = 90.00 × 21 × 0.0833 ÷ 27 =	5.83 CU YDS	
WIDTH = 18 FT		
STA 1+66.90 TO STA 3+50.00 = 183.10 LIN FT		
VOLUME = 183.10 × 18 × 0.0833 ÷ 27 =	10.17 CU YDS	

ITEM T-35 ASPHALTIC CONCRETE SURFACE COURSE, TYPE "C"		
CONNECTION @ STA 1626+00 (CONTINUED)		
ADD FOR FEATHERING =	0.27 CU YDS	
TOTAL =		24.27 CU YDS
T. R. 146		
ADD FOR INTERSECTIONS =		12.15 CU YDS
T. R. 143		
ADD FOR INTERSECTION =		6.51 CU YDS
C. R. 72		
ADD FOR INTERSECTION =		5.80 CU YDS
CONNECTION @ STA 1773+64.42		
ADD FOR INTERSECTION =	11.96 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22 FT		
STA 1+00.00 TO STA 1+60.00 = 60.00 LIN FT		
VOLUME = 60.00 × 22 × 0.0833 ÷ 27 =	4.07 CU YDS	
WIDTH = 20 FT		
STA 1+60.00 TO STA 2+00.00 = 40.00 LIN FT		
VOLUME = 40.00 × 20 × 0.0833 ÷ 27 =	2.47 CU YDS	
ADD FOR FEATHERING =	1.48 CU YDS	
TOTAL =		19.98 CU YDS
TOTAL T-35 TYPE "C"		2,105.47 CU. YDS.
TO SUMMARY USE:		2,106 CU. YDS.

ITEM T-35 ASPHALTIC CONCRETE SURFACE COURSE, TYPE "A"		
T. R. 125		
PAVEMENT TRANSITION, AVERAGE WIDTH = 18 LIN FT		
STA 5+76.00 TO STA 6+36.00 = 60.00 LIN FT		
VOLUME = 60.00 × 18 × 0.1250 ÷ 27 =	5.00 CU YDS	
WIDTH = 16 FT		
STA 6+36.00 TO STA 8+40.00 = 204.00 LIN FT		
VOLUME = 204.00 × 16 × 0.1250 ÷ 27 =	15.11 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 14 FT		
STA 8+40.00 TO STA 9+00.00 = 60.00 LIN FT		
VOLUME = 60.00 × 14 × 0.1250 ÷ 27 =	3.89 CU YDS	
ADD FOR FEATHERING =	0.38 CU YDS	
TOTAL =		24.38 CU YDS
C. R. 114		
PAVEMENT TRANSITIONS, AVERAGE WIDTH = 19 FT		
STA 9+08.08 TO STA 9+38.08 = 30.00 LIN FT		
STA 10+60.38 TO STA 10+90.08 = 30.00 LIN FT		
VOLUME = 60.00 × 19 × 0.1250 ÷ 27 =	5.28 CU YDS	
WIDTH = 28 FT		
STA 6+50.00 TO STA 9+08.08 = 258.08 LIN FT		
STA 10+90.38 TO STA 15+00.00 = 409.62 LIN FT		
VOLUME = 667.70 × 18 × 0.1250 ÷ 27 =	55.64 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 17 FT		
STA 15+00.00 TO STA 15+50.00 = 50.00 LIN FT		
VOLUME = 50.00 × 17 × 0.1250 ÷ 27 =	3.94 CU YDS	
ADD FOR FEATHERING =	0.80 CU YDS	
TOTAL =		65.66 CU YDS
T. R. 146		
PAVEMENT TRANSITIONS, AVERAGE WIDTH = 19 FT		
STA 9+04.00 TO STA 9+34.00 = 30.00 LIN FT		
STA 10+67.62 TO STA 10+97.62 = 30.00 LIN FT		
VOLUME = 60.00 × 19 × 0.1250 ÷ 27 =	5.28 CU YDS	
WIDTH = 18 FT		
STA 5+70.00 TO STA 9.04.00 = 334.00 LIN FT		
STA 10+97.62 TO STA 14+23.00 = 325.38 LIN FT		
VOLUME=659.38 × 18 × 0.1250 ÷ 27 =	54.95 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 16.50 FT		
STA 5+25.00 TO STA 5+70.00 = 45.00 LIN FT		
VOLUME = 45.00 × 16.50 × 0.1250 ÷ 27 =	3.44 CU YDS	
ADD FOR INTERSECTION		
STA 14+23.00 TO STA 14+72.00 =	10.37 CU YDS	
ADD FOR FEATHERING =	0.22 CU YDS	
TOTAL =		74.26 CU YDS
TOTAL T-35, TYPE "A" =		164.30 CU YDS
TO SUMMARY USE:		165 CU YDS

ITEM B-35 ASPHALTIC CONCRETE LEVELING COURSE ALL LENGTHS ARE FROM T-35 COMPUTATIONS		
S. R. 39		
AVERAGE WIDTH (TWO 1-1/2" COURSES) = 24.1667 FT		
VOLUME = 26,390.44 × 24.1667 × 0.2500 ÷ 27 =	5,905.28 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22.1667 FT		
VOLUME = 120.00 × 22.1667 × 0.1500 ÷ 27 =	24.63 CU YDS	
WIDTH = 20.1667 LIN FT		
VOLUME = 35.00 × 20.1667 × 0.2500 ÷ 27 =	6.54 CU YDS	
TOTAL =		5,936.45 CU YDS
T. R. 125		
ADD FOR INTERSECTION =		23.72 CU YDS
CONNECTION @ STA 1514+74.82		
ADD FOR INTERSECTION =	25.74 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22.1667 FT		
VOLUME = 60.00 × 22.1667 × 0.2500 ÷ 27 =	12.31 CU YDS	
WIDTH = 20.1667 FT		
VOLUME = 138.78 × 20.1667 × 0.2500 ÷ 27 =	25.91 CU YDS	
TOTAL		63.96 CU YDS
C. R. 114		
ADD FOR INTERSECTION =		34.43 CU YDS
CONNECTION @ STA 1582+75		
ADD FOR INTERSECTION =	33.59 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 21.1667 FT		
VOLUME = 99.21 X 21.1667 X 0.2500 ÷ 27 =	19.44 CU YDS	
WIDTH = 18.1667 LIN FT		
VOLUME =26.28 X 18.1667 X 0.2500 ÷ 27 =	4.42 CU YDS	
TOTAL		57.45 CU YDS
T. R. 137		
ADD FOR INTERSECTION =		16.57 CU YDS
CONNECTION @ STA 1626+00		
ADD FOR INTERSECTION	24.04 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 21.1667 FT		
VOLUME=90.00 × 21.1667 × 0.2500 ÷ 27 =	17.64 CU YDS	
WIDTH = 18.1667 FT		
VOLUME = 183.10 × 18.1667 × 0.2500 ÷ 27 =	30.80 CU YDS	
TOTAL =		72.48 CU YDS
T. R. 146		
ADD FOR INTERSECTIONS =		36.55 CU YDS
T. R. 143		
ADD FOR INTERSECTION =		19.56 CU YDS
C. R. 72		
ADD FOR INTERSECTION		17.52 CU YDS
CONNECTION @ STA 1773+64.42		
ADD FOR INTERSECTION	36.07 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22.1667 FT		
VOLUME=60.00 × 22.1667 × 0.2500 ÷ 27 =	12.31 CU YDS	
WIDTH = 20.1667 FT		
VOLUME=40.00 × 20.1667 × 0.2500 ÷ 27 =	7.47 CU YDS	
TOTAL		55.85 CU YDS
TOTAL B-35 =		6,334.54 CU YDS
TO SUMMARY USE:		6,335 CU YDS

ITEM B-19 AGGREGATE BASE COURSE ALL LENGTHS ARE FROM T-35 COMPUTATIONS EXCEPT T.R. 137, T.R. 143 AND C.R. 72		
S. R. 39		
VOLUME = 26,390.44 × 25 × 0.50 ÷ 27 =	12,217.80 CU YDS	
PAVEMENT TRANSITIONS, AVERAGE WIDTH = 23 FT		
VOLUME = 120.00 × 23 × 0.50 ÷ 27 =	51.11 CU YDS	
WIDTH = 21 FT		
VOLUME = 35.00 × 21 × 0.50 ÷ 27 =	13.61 CU YDS	
TOTAL =		12,282.52 CU YDS

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HOL - 39 - 28.57
TUS - 39 - 0.00

ITEM B-19 AGGREGATE BASE COURSE (CONTINUED)		
T. R. 125		
ADD FOR INTERSECTION =	49.58 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 19 FT		
VOLUME = 60.00 × 19 × 0.6667 ÷ 27 =	28.15 CU YDS	
WIDTH = 17 LIN FT		
VOLUME = 204.00 × 17 × 0.6667 ÷ 27 =	85.63 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 15 FT		
VOLUME = 60.00 × 15 × 0.6667 ÷ 27	22.22 CU YDS	
TOTAL =		185.58 CU YDS
CONNECTION @ STA 1514+74.82		
ADD FOR INTERSECTION =	53.61 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 23 FT		
VOLUME = 60.00 × 23 × 0.50 ÷ 27 =	25.56 CU YDS	
WIDTH = 21 FT		
VOLUME = 138.78 × 21 × 0.50 ÷ 27 =	53.97 CU YDS	
TOTAL =		133.14 CU YDS
C. R. 114		
ADD FOR INTERSECTION =	69.47 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 20 FT		
VOLUME = 60.00 × 20 × 0.6667 ÷ 27 =	29.63 CU YDS	
WIDTH = 19 LIN FT		
VOLUME = 667.70 × 19 × 0.6667 ÷ 27 =	313.26 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 18 FT		
VOLUME = 50.00 × 18 × 0.6667 ÷ 27 =	22.22 CU YDS	
TOTAL =		434.58 CU YDS
CONNECTION @ STA1582+75		
ADD FOR INTERSECTION =	67.85 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22 FT		
VOLUME = 99.21 × 22 × 0.50 ÷ 27 =	40.42 CU YDS	
WIDTH = 19 FT		
VOLUME = 26.28 × 19 × 0.50 ÷ 27 =	9.25 CU YDS	
TOTAL		117.52 CU YDS
T. R. 137		
ADD FOR INTERSECTION =	33.40 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 16 FT		
STA 0+60.00 TO STA 1+80.00 = 120.00 LIN FT		
VOLUME = 120.00 × 16 × 0.50 ÷ 27 =	35.56 CU YDS	
WIDTH = 12 FT		
STA 1+80.00 TO STA 3+00.00 = 120.00 LIN FT		
VOLUME = 120.00 × 12 × 0.50 ÷ 27 =	26.67 CU YDS	
TOTAL =		95.63 CU YDS
CONNECTION @ STA 1626+00		
ADD FOR INTERSECTION =	48.51 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22 FT		
VOLUME = 90.00 × 22 × 0.50 ÷ 27 =	36.67 CU YDS	
WIDTH = 19 FT		
VOLUME = 183.10 × 19 × 0.50 ÷ 27 =	64.42 CU YDS	
TOTAL =		149.60 CU YDS
T. R. 146		
ADD FOR INTERSECTIONS =	73.81 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 20 FT		
VOLUME = 60.00 × 20 × 0.6667 ÷ 27 =	29.63 CU YDS	
WIDTH = 19 FT		
VOLUME = 659.38 × 19 × 0.6667 ÷ 27 =	309.34 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 17.50 FT		
VOLUME = 45.00 × 17.50 × 0.6667 ÷ 27 =	19.45 CU YDS	
ADD FOR INTERSECTION =	57.31 CU YDS	
TOTAL =		489.54 CU YDS
T. R. 143		
ADD FOR INTERSECTION =	39.53 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 18 FT		
STA 8+69.00 TO STA 9+29.00 = 60.00 LIN FT		
VOLUME = 60.00 × 18 × 0.50 ÷ 27 =	20.00 CU YDS	
WIDTH = 16 FT		
STA 7+05.00 TO STA 8+69.00 = 164.00 LIN FT		
VOLUME 164.00 × 16 × 0.50 ÷ 27 =	48.59 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 15 FT		
STA 6+75.00 TO STA 7+05.00 = 30.00 LIN FT		
VOLUME = 30.00 × 15 × 0.50 ÷ 27 =	8.33 CU YDS	
TOTAL =		116.45 CU YDS

ITEM B-19 AGGREGATE BASE COURSE (CONTINUED)		
C. R. 72		
ADD FOR INTERSECTION =	35.19 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 19 FT		
STA 9+08.00 TO STA 9+38.00 = 30.00 LIN FT		
VOLUME = 30.00 × 19 × 0.50 ÷ 27 =	10.56 CU YDS	
WIDTH = 18 FT		
STA 3+00.00 TO STA 9+08.00 = 608.00 LIN FT		
VOLUME = 608.00 × 18 × 0.50 ÷ 27 =	202.67 CU YDS	
TOTAL =		248.42 CU YDS
CONNECTION @ STA 1773+64.42		
ADD FOR INTERSECTION =	72.55 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 23 FT		
VOLUME = 60.00 × 23 × 0.50 ÷ 27 =	25.56 CU YDS	
WIDTH = 21 FT		
VOLUME = 40.00 × 21 × 0.50 ÷ 27 =	15.56 CU YDS	
TOTAL =		113.67 CU YDS
TOTAL B-19 =		14,366.65 CU YDS
TO SUMMARY USE:		14,367 CU YDS

ITEM I-22 SUBBASE ALL LENGTHS ARE FROM T-35 COMPUTATIONS		
S. R. 39		
VOLUME = 26,390.44 × 26 × 0.50 ÷ 27 =	12,706.51 CU YDS	
PAVEMENT TRANSITIONS, AVERAGE WIDTH = 24 FT		
VOLUME = 120.00 × 24 × 0.50 ÷ 27 =	53.33 CU YDS	
WIDTH = 22 FT		
VOLUME = 35.00 × 22 × 0.50 ÷ 27 =	14.26 CU YDS	
ADD FOR APPROACH SLABS, LENGTH = 50.00 LIN FT		
VOLUME = 50.00 × 26 × 0.50 ÷ 27 =	24.07 CU YDS	
ADD FOR EXTENDING I-22 THROUGH SHOULDER, LENGTH FROM TYPICAL SECTION		
LENGTH = 3,955 × 2 = 7,910.00 - 25.00 = 7,885.00 LIN FT		
VOLUME = 7,885.00 × 12.48 × 0.50 ÷ 27 =	1,822.31 CU YDS	
LENGTH = 2,895.00 LIN FT		
VOLUME = 2,895.00 × 12.48 × 0.50 ÷ 27 =	669.07 CU YDS	
DEDUCT FOR INTERSECTIONS =	- 98.00 CU YDS	
TOTAL =		15,181.55 CU YDS
T. R. 125		
ADD FOR INTERSECTION =		52.40 CU YDS
CONNECTION @ STA 1514+74.82		
ADD FOR INTERSECTION =	56.40 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 24 FT		
VOLUME = 60.00 × 24 × 0.50 ÷ 27 =	26.67 CU YDS	
WIDTH = 22 FT		
VOLUME = 138.78 × 22 × 0.50 ÷ 27 =	56.54 CU YDS	
TOTAL =		139.61 CU YDS
C. R. 114		
ADD FOR INTERSECTION =		70.40 CU YDS
CONNECTION @ STA 1582+75		
ADD FOR INTERSECTION =	68.66 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 23 FT		
VOLUME = 99.21 × 23 × 0.50 ÷ 27 =	42.26 CU YDS	
WIDTH = 20 FT		
VOLUME = 26.28 × 20 × 0.50 ÷ 27 =	9.73 CU YDS	
TOTAL =		120.65 CU YDS
T. R. 137		
ADD FOR INTERSECTION =		51.48 CU YDS
CONNECTION @ STA 1626+00		
ADD FOR INTERSECTION =	49.01 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 23 FT		
VOLUME = 90.00 × 23 × 0.50 ÷ 27 =	38.33 CU YDS	
WIDTH = 20 FT		
VOLUME = 183.10 × 20 × 0.50 ÷ 27 =	67.81 CU YDS	
TOTAL =		155.15 CU YDS
T. R. 146		
ADD FOR INTERSECTION =		94.59 CU YDS

ITEM I-22 SUBBASE (CONTINUED)		
T. R. 143		
ADD FOR INTERSECTION =		40.00 CU YDS
C. R. 72		
ADD FOR INTERSECTION =		37.62 CU YDS
CONNECTION @ STA 1773+64.42		
ADD FOR INTERSECTION =	95.29 CU YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 24 FT		
VOLUME = 60.00 ×24 × 0.50 ÷ 27 =	26.67 CU YDS	
WIDTH = 22 FT		
VOLUME = 40.00 × 22 × 0.50 ÷ 27 =	16.30 CU YDS	
TOTAL =		138.26 CU YDS
TOTAL I-22 =		16,081.71 CU YDS
TO SUMMARY USE:		16,081 CU YDS

ITEM I-18 STABILIZED CRUSHED AGGREGATE SHOULDERS AND APPROACHES		
S. R. 39		
END AREA = 1.8900 SQ FT		
VOLUME = 2×26,390.44 × 1.8900 ÷ 27 =	3,694.66 CU YDS	
PAVEMENT TRANSITION		
VOLUME = 2 × 120.00 × 1.8900 ÷ 27 =	16.80 CU YDS	
WIDTH = 20 FT		
VOLUME = 2 × 35.00 × 1.8900 ÷ 27 =	4.90 CU YDS	
APPROACH SLABS		
VOLUME = 2 × 50.00 × 1.8900 ÷ 27 =	7.00 CU YDS	
DEDUCT FOR INTERSECTIONS =	- 77.49 CU YDS	
DEDUCT FOR DRIVES AND MAILBOX APPROACH ROADS	- 117.81 CU YDS	
TOTAL I-18 =		3,519.66 CU YDS
TO SUMMARY USE:		3,520 CU YDS

ITEM I-9 STONE UNDERDRAINS NO. 2		
S. R. 39		
LENGTH OF S. R. 39 INCLUDING APPROACH SLABS = 26,595.44 LIN FT		
DEDUCT FOR INTERSECTIONS, DRIVES AND ROCK CUT=-7,745.00 LIN FT		
NET LENGTH = 18,850.44 LIN FT		
NUMBER REQUIRED = 18,850.44 ÷ 25 = 754 EACH		
ADD FOR SAG VERTICAL CURVES = 2 EACH		
LENGTH PER I-9 = 15.60 LIN FT		
TOTAL LENGTH = 756 × 15.60 =		11,793.60 LIN FT
T. R. 125		
ADD FOR INTERSECTION = 3 × 12.96 =	38.88 LIN FT	
STA 5+76 TO STA 9+00 = 324.00 LIN FT		
DEDUCT FOR DRIVES AND SHALLOW DITCHES = -124.00 LIN FT		
NET LENGTH = 200.00 LIN FT		
NUMBER REQUIRED = 200.00 ÷ 25 = 8 EACH		
LENGTH PER I-9 = 10.31 LIN FT		
LENGTH = 8 × 10.31 =	82.48 LIN FT	
TOTAL LENGTH =		121.36 LIN FT
CONNECTION @ STA 1514+74.82		
ADD FOR INTERSECTION = 3 × 13.40 =	40.20 LIN FT	
STA 2+25.00 TO STA 4+23.78 = 198.78 LIN FT		
DEDUCT FOR DRIVES AND SHALLOW DITCHES = - 48.00 LIN FT		
NET LENGTH = 150.78 LIN FT		
NUMBER REQUIRED = 150.78 ÷ 25 = 6 EACH		
LENGTH PER I-9 = 11.20 LIN FT		
LENGTH = 6 × 11.20 =	67.20 LIN FT	
TOTAL LENGTH =		107.40 LIN FT
C. R. 114		
ADD FOR INTERSECTION = 4 × 12.50 =	50.00 LIN FT	
STA 6+50.00 TO STA 9+38.08 = 288.08 LIN FT		
STA 10+60.38 TO STA 15+50.00 = 489.62 LIN FT		
DEDUCT FOR DRIVES AND SHALLOW DITCHES=-52.00 LIN FT		
NET LENGTH = 725.70 LIN FT		
NUMBER REQUIRED = 725.70 ÷ 25 = 29 EACH		
LENGTH PER I-9 = 9.39 LIN FT		
LENGTH = 29 × 9.39 =	272.31 LIN FT	
TOTAL LENGTH =		322.31 LIN FT
CONNECTION @ STA 1582+75		
ADD FOR INTERSECTION = 3 × 13.40 =	40.20 LIN FT	
STA 7+75.00 TO STA 9+00.49 = 125.49 LIN FT		
NUMBER REQUIRED = 125.49 ÷ 25 = 5 EACH		
LENGTH PER I-9 = 11.20 LIN FT		
LENGTH = 5 × 11.20 =	56.00 LIN FT	
TOTAL LENGTH =		96.20 LIN FT

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I-9 STONE UNDERDRAINS NO. 2 (CONTINUED)			
CONNECTION @ STA 1626+00			
ADD FOR INTERSECTION = 3 × 13.40 =		40.20 LIN FT	
STA 0+71.87 TO STA 3+50.00 =	278.13 LIN FT		
DEDUCT FOR SHALLOW DITCHES =	- 28.00 LIN FT		
NET LENGTH =	250.13 LIN FT		
NUMBER REQUIRED = 250.13 ÷ 25 =	10 EACH		
LENGTH PER I-9 = 11.20 LIN FT			
LENGTH = 10 × 11.20 =		112.00 LIN FT	
TOTAL LENGTH =			152.20 LIN FT
T. R. 146			
ADD FOR INTERSECTION = 3 × 12.50 =		37.50 LIN FT	
STA 5+25.00 TO STA 9+34.71 =	409.71 LIN FT		
STA 10+67.62 TO STA 14+23.00 =	355.38 LIN FT		
DEDUCT FOR DRIVES AND SHALLOW DITCHES =	-139.47 LIN FT		
NET LENGTH =	625.62 LIN FT		
NUMBER REQUIRED = 625.62 ÷ 25 =	25 EACH		
LENGTH PER I-9 = 9.39 LIN FT			
LENGTH = 25 × 9.39 =		234.75 LIN FT	
ADD FOR INTERSECTION = 3 × 9.39 =		28.17 LIN FT	
TOTAL LENGTH =			300.42 LIN FT
T. R. 143			
ADD FOR INTERSECTION = 4 × 12.96 =			51.84 LIN FT
C. R. 72			
ADD FOR INTERSECTION = 4 × 12.50 =			50.00 LIN FT
TOTAL I-9 =			12,995.33 LIN FT
TO SUMMARY USE:			12,995 LIN FT

ITEM T-30 BITUMINOUS PRIME COAT RATE OF APPLICATION = 0.40 GAL PER SQ YD			
S. R. 39			
VOLUME = 26,390.44 × 24.3333 × 0.40 ÷ 9 =		28,540.7 GALS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22.3333 FT			
VOLUME = 120.00 × 22.3333 × 0.40 ÷ 9 =		119.1 GALS	
WIDTH = 20.3333 FT			
VOLUME = 35.00 × 20.3333 × 0.40 ÷ 9 =		31.6 GALS	
TOTAL =			28,691.4 GALS
T. R. 125			
ADD FOR INTERSECTION =		121.7 GALS	
PAVEMENT VOLUME = 24.00 × 0.40 ÷ 0.0417 =		230.2 GALS	
TOTAL =			351.9 GALS
CONNECTION @ STA 1514+74.82			
ADD FOR INTERSECTION =		131.4 GALS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22.3333 FT			
VOLUME = 60.00 × 22.3333 × 0.40 ÷ 9 =		59.6 GALS	
WIDTH = 20.3333 FT			
VOLUME = 138.78 × 20.3333 × 0.40 ÷ 9 =		125.4 GALS	
TOTAL =			316.4 GALS
C. R. 114			
ADD FOR INTERSECTION =		166.7 GALS	
PAVEMENT VOLUME = 64.86 × 0.40 ÷ 0.0417 =		622.2 GALS	
TOTAL =			788.9 GALS
CONNECTION @ STA 1582+75			
ADD FOR INTERSECTION =		161.5 GALS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 21.3333 FT			
VOLUME = 99.21 × 21.3333 × 0.40 ÷ 9 =		94.1 GALS	
WIDTH = 18.3333 FT			
VOLUME = 26.28 × 18.3333 × 0.40 ÷ 9 =		21.4 GALS	
TOTAL =			277.0 GALS
T. R. 137			
ADD FOR INTERSECTION =			77.7 GALS
CONNECTION @ STA 1626+00			
ADD FOR INTERSECTION =		119.0 GALS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 21.3333 FT			
VOLUME = 90.00 × 21.3333 × 0.40 ÷ 9 =		85.3 GALS	
WIDTH = 18.3333 FT			
VOLUME = 183.10 × 18.3333 × 0.40 ÷ 9 =		149.2 GALS	
TOTAL =			353.5 GALS
T. R. 146			
ADD FOR INTERSECTIONS =		177.1 GALS	
PAVEMENT VOLUME = 63.67 × 0.40 ÷ 0.0417 =		610.7 GALS	
ADD FOR INTERSECTION =		103.5 GALS	
TOTAL			891.3 GALS
T. R. 143			
ADD FOR INTERSECTION =			92.4 GALS
C. R. 72			
ADD FOR INTERSECTION =			84.5 GALS
CONNECTION @ STA 1773+64.42			
ADD FOR INTERSECTION =		174.1 GALS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22.3333 FT			
VOLUME = 60.00 × 22.3333 × 0.40 ÷ 9 =		59.6 GALS	
WIDTH = 20.3333 FT			
VOLUME = 40.00 × 20.3333 × 0.40 ÷ 9 =		36.1 GALS	
TOTAL =			269.8 GALS

ITEM T-30 BITUMINOUS PRIME COAT (CONTINUED)		
TOTAL T-30 (PRIME COAT) =		32,194.8 GALS
TO SUMMARY USE:		32,195 GALS

ITEM T-30 BITUMINOUS TACK COAT RATE OF APPLICATION = 0.10 GAL PER SQ YD OF FEATHERING		
S. R. 39		
VOLUME = 60.00 × 20 × 0.10 ÷ 9 =		13.3 GALS
T. R. 125		
VOLUME = 10.00 × 12 × 0.10 ÷ 9 =		1.3 GALS
CONNECTION @ STA 1514+74.82		
VOLUME = 25.00 × 20 × 0.10 ÷ 9 =		5.6 GALS
C. R. 114		
VOLUME = 25.00 × 17 × 0.10 ÷ 9 =		4.7 GALS
CONNECTION @ STA 1582+75		
VOLUME = 15.00 × 18 × 0.10 ÷ 9 =		3.0 GALS
CONNECTION @ STA 1626+00		
VOLUME = 10.00 × 18 × 0.10 ÷ 9 =		2.0 GALS
T. R. 146		
VOLUME = 10.00 × 15 × 0.10 ÷ 9 =		1.7 GALS
CONNECTION @ STA 1773+64.42		
VOLUME = 25.00 × 20 × 0.10 ÷ 9 =		5.6 GALS
TOTAL T-30 (TACK COAT) =		37.2 GALS
TO SUMMARY USE:		37 GALS

ITEM E-1 COMPACTED SUBGRADE		
S. R. 39		
AREA = 26,390.44 × 24 ÷ 9 =	70,374.50 SQ YDS	
PAVEMENT TRANSITION, AVERAGE WIDTH = 22 FT		
AREA = 120.00 × 22 ÷ 9 =	293.33 SQ YDS	
WIDTH = 20 FT		
AREA = 35.00 × 20 ÷ 9 =	77.78 SQ YDS	
APPROACH SLABS, LENGTH = 50.00 LIN FT		
AREA = 50.00 × 24 ÷ 9 =	133.33 SQ YDS	
DEDUCT FOR ROCK CUT, LENGTH = 6,850.00 LIN FT		
AREA = 6,850.00 × 24 ÷ 9 =	-18,266.67 SQ YDS	
TOTAL =		52,612.27 SQ YDS
T R. 135		
ADD FOR INTERSECTION =	292.48 SQ YDS	
PAVEMENT AREA = 24.00 ÷ 0.0417 =	575.54 SQ YDS	
TOTAL =		868.02 SQ YDS
CONNECTION @ STA 1514+74.82		
ADD FOR INTERSECTION =	320.79 SQ YDS	
PAVEMENT AREA = 12.63 ÷ 0.0278 =	454.32 SQ YDS	
TOTAL =		775.11 SQ YDS
C. R. 114		
ADD FOR INTERSECTIONS =	412.37 SQ YDS	
PAVEMENT AREA = 64.86 ÷ 0.0417 =	1,555.40 SQ YDS	
TOTAL =		1,967.77 SQ YDS
CONNECTION @ STA 1582+75		
ADD FOR INTERSECTION =	402.22 SQ YDS	
PAVEMENT AREA = 7.89 ÷ 0.0278 =	283.81 SQ YDS	
TOTAL =		686.03 SQ YDS
T. R. 137		
ADD FOR INTERSECTION =	198.51 SQ YDS	
DEDUCT FOR ROCK CUT =	- 198.51 SQ YDS	
TOTAL =		0.00 SQ YDS
CONNECTION @ STA 1626+00		
ADD FOR INTERSECTION =	287.98 SQ YDS	
PAVEMENT AREA = 16.00 ÷ 0.0278 =	575.54 SQ YDS	
TOTAL =		863.52 SQ YDS
T. R. 146		
ADD FOR INTERSECTIONS =	437.75 SQ YDS	
PAVEMENT AREA = 74.04 ÷ 0.0417 =	1,775.54 SQ YDS	
DEDUCT FOR ROCK CUT =	- 1,167.02 SQ YDS	
TOTAL =		1,046.27 SQ YDS
T. R. 143		
ADD FOR INTERSECTION =	234.32 SQ YDS	
TOTAL =		234.32 SQ YDS

ITEM E-1 COMPACTED SUBGRADE (CONTINUED)		
C. R. 72		
ADD FOR INTERSECTION =	208.88 SQ YDS	
TOTAL =		208.88 SQ YDS
CONNECTION @ STA 1773+64.42		
ADD FOR INTERSECTION =	430.79 SQ YDS	
PAVEMENT AREA = 6.54 ÷ 0.0278 =	235.25 SQ YDS	
DEDUCT FOR ROCK CUT =	- 430.79 SQ YDS	
TOTAL =		235.25 SQ YDS
TOTAL E-1 =		59,497.94 SQ YDS
TO SUMMARY USE:		59,498 SQ YDS

GENERAL NOTES (CONTINUED)

ITEM I-1 ENCASEMENT PIPE, CLASS C-1, AS PER PLAN

This item shall consist of encasing with corrugated metal pipe the existing water main crossing the proposed highway located at Stations 1758+62.6, 1539 + 49.96 & 1512 + 76.

Material furnished for this item shall be bituminous coated galvanized corrugated metal nestable pipe as manufactured by Armco Drainage and Metal Products, Inc., or by the Culvert Division of the Republic Steel Corporation, or an approved equal. The minimum gage shall be 16. The pipe and coating shall meet the appropriate material requirements of Sec. M6.4 except that the pipe sections shall be held together by stitches, bolts, or other metal fasteners in accordance with recommendations and details of the manufacturer. Length of pipe sections and base metal composition of the fastening devices shall also be in accordance with details of the manufacturer.

The work of installing the encasement pipe shall be so prosecuted that a minimum length of the existing waterline shall be unsupported at any one time. The water main shall be supported within the encasement pipe by blocking or bracing approved by the Engineer, or by bedding the main in sand or

(Continued Below)

ITEM SPECIAL - MIXING CALCIUM CHLORIDE AND AGGREGATE		
S. R. 39 =		22,347.04 SQ YDS
T. R. 137 =		373.33 SQ YDS
T. R. 143 =		461.56 SQ YDS
C. R. 72 =		1,279.33 SQ YDS
TOTAL =		24,461.26 SQ YDS
TO SUMMARY USE:		24,461 SQ YDS

ITEM E-11 WATER RATE OF APPLICATION = 5 GALS PER CU YD		
TOTAL EMBANKMENT = 791,961 CU YDS		
EST WATER REQUIRED = 791,961 × 5 ÷ 1000 =	3,959.81 M GALS	
TOTAL I-22 = 16,081 × 5 ÷ 1000 =	80.41 M GALS	
TOTAL I-18 = 4,130 CU YDS		
EST WATER REQUIRED = 4,130 × 5 ÷ 1000 =	20.65 M GALS	
TOTAL B-19 = 14,367 CU YDS		
EST WATER REQUIRED = 14,367 × 5 ÷ 1000 =	71.84 M GALS	
TOTAL E-11 =		4,132.71 M GALS
TO SUMMARY USE:		4,133 M GALS

ITEM L-9 COMMERCIAL FERTILIZER RATE OF APPLICATION = 20 LBS PER 1000 SQ FT		
TOTAL AREA OF SEEDING AND SODDING = 370,597 SQ YDS		
WEIGHT = 370,597 × 9 × 20 ÷ 2000 × 1000 =	33.35 TONS	
TOTAL L-9 =		33.35 TONS
TO SUMMARY USE:		33.35 TONS

ITEM L-9 AGRICULTURAL LIMING MATERIAL RATE OF APPLICATION = 100 LBS PER 1000 SQ FT		
TOTAL AREA OF SEEDING AND SODDING = 370,597 SQ YDS		
WEIGHT = 370,597 × 9 × 100 ÷ 2000 × 1000 =	166.77 TONS	
TOTAL L-9 =		166.77 TONS
TO SUMMARY USE:		166.77 TONS

(Continued from above)
other granular material approved by the Engineer. Bedding material, if used, shall occupy at least 85 percent of the cross-sectional area of the encasement pipe outside the main.

Payment for all of the above shall be included in the unit price bid for the encasement pipe.

GENERAL SUMMARY

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HOL - 39 - 28.57
TUS - 39 - 0.00

ITEM	NOTES	CALC.	SHEET NUMBER 14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	160	162	165	167	168	170	173	175	177	ITEM	QUANT	UNIT	DESCRIPTION (Construction Type Code 6201)
																																										ROADWAY
E-1	763,614																																						E-1	763,614	Cu.Yds.	Roadway Excavation Method "B" as per plan
E-1		59,498																																					E-1	59,498	Sq.Yds.	Compacted Subgrade
E-4	145,143																																						E-4	145,143	Cu.Yds.	Borrow
E-8				369							752	1418	2,000	130	1248														676	405									E-8	6,998	Sq.Yds.	Removal and Disposal of Existing Pavement
E-8																													72								196		E-8	268	Sq.Ft.	Removal and Disposal of Existing Sidewalk
E-9	Lump																																						E-9	Lump	Lump	Removal of Trees and Stumps
E-11		4,133																																					E-11	4,133	M Gals.	Water
I-4	6																																						I-4	6	M Gals.	Water for Dust Control
I-4	114																																						I-4	114	Tons	Calcium Chloride for Dust Control
I-8	28																																						I-8	28	Each	Standard Monument Assemblies
I-13																													1176								236		I-13	1412	Sq.Ft.	4" Concrete Sidewalks
I-15								90.88																															I-15	90.88	Lin.Ft.	Guard Rail, Steel Beam Standard Type (Deep)
I-15				975	1150	325	450	650						212.5	937.5		525	1350	600	200	1200	787.5	1300		7125	650	400	1150	1469.5	293		300	87.5		375	200			I-15	15,700.00	Lin.Ft.	Guard Rail, Steel Beam Type (Shallow) or Flexible Steel Plate Tension Type Standard Strength
I-15				300											108																								I-15	408	Lin.Ft.	Guard Rail, Removed and Disposed of
I-18		3,520	31	42	50	54					138	24		59	54		38		34	22		43		16		18	102		25	114	11	13	13	12	42	34	12	10	I-18	4,531	Cu.Yds.	Stabilized Crushed Aggregate Shoulders and Approaches.
L-9	355,648																																						L-9	355,648	Sq.Yds.	Seeding and Protecting
L-9		33.35																																					L-9	33.35	Tons	Commercial Fertilizer (12-12-12)
L-9		166.77																																					L-9	166.77	Tons	Agricultural Liming Material
L-10				314	458	723	546	485			414	454	516	634	839	83	259	568	587	1036	349	460	989	209	1258	390	318	829	833	306	34	61	19	4	152	503	100	208	11	L-10	14,949	Sq.Yds.	Sodding
T-10	1374																																						T-10	1,374	Cu.Yds.	Traffic Compacted Surface Course for Maintaining Traffic
T-10	4120																																						T-10	4,120	Cu.Yds.	Traffic Compacted Surface Course, for Maintaining Traffic, as per plan.
Special		24,461		13							269			95														263		145					152				Special	25,398	Sq.Yds.	Furnishing and Mixing Calcium Chloride with Aggregate
																																									DRAINAGE
E-3					3	21					1631	805	18	21	3		2	34	9	12	8	3	3			39	8	16	2			14	4						E-3	2,050	Cu.Yds.	Channel Excavation
E-12																					110																		E-12	110	Lin.Ft.	Pipe Removed, 3" Water Main
E-12				38																									20	33	31	33		20					E-12	175	Lin.Ft.	Pipe Removed (15" and Under)
E-12																															29	42	45		26	29			E-12	171	Lin.Ft.	Pipe Removed, (Over 15")
S-24											Lump			Lump																										S-24	Lump	Lump	Removal of Existing Structures
I-1																												140											I-1	140	Lin.Ft.	8" Encasement Pipe, Class C-1, as per plan
I-1																														65	43						55		I-1	163	Lin.Ft.	12" Pipe, Class A-1
I-1																														76									I-1	76	Lin.Ft.	15" Pipe, Class A-1
I-1						91																																	I-1	91	Lin.Ft.	24" Pipe, Class A-1
I-1							85																																I-1	85	Lin.Ft.	15" Pipe Sec. M-6.4(d), Class A-1
I-1																																			71				I-1	71	Lin.Ft.	18" Pipe Sec. M-6.4(d), Class A-1
I-1				194		160															214					190	150											I-1	908	Lin.Ft.	24" Pipe Sec. M-6.4(d), Class A-1
I-1																			140						146										88			I-1	374	Lin.Ft.	30" Pipe Sec. M-6.4(d), Class A-1
I-1					230												200																						I-1	430	Lin.Ft.	30" Pipe Sec. M-6.4(d) 12 Gage, Class A-1
I-1																						228							298										I-1	526	Lin.Ft.	30" Pipe Sec. M-6.4(d) 10 Gage, Class A-1
I-1																															88								I-1	88	Lin.Ft.	30" Pipe Sec. M-6.4(d), Sec. M-6.6(b), or Sec. M-6.8(b), Class A-1
I-1																							176																I-1	176	Lin.Ft.	36" Pipe Sec. M-6.4(d) 10 Gage, Class A-1
I-1																		284																					I-1	284	Lin.Ft.	36" Pipe Sec. M-6.4(d) 8 Gage, Class A-1
I-1																		324																					I-1	384	Lin.Ft.	42" Pipe Sec. M-6.4(d) 8 Gage, Shop Elongated as per plan, Class A-1
I-1																																			128				I-1	128	Lin.Ft.	24" Pipe Sec. M-6.4(d) or Sec. M-6.6(d), Class A-1
I-1																												154											I-1	154	Lin.Ft.	30" Pipe Sec. M-6.4(d) or Sec. M-6.6(d), Class A-1

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FED. RD. DIVISION	STATE	PROJECT	
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HOL - 39 - 28.57
TUS - 39 - 0.00

GENERAL SUMMARY

No Federal Participation

ITEM	NOTES	CALC.	SHEET NUMBER 14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	160	162	165	167	168	170	173	175	177	ITEM	QUANT	UNIT	DESCRIPTION (Construction Type Code 6201)
																																										DRAINAGE (Continued)
I-1																					84																			I-1	84	Lin.Ft.	15" Pipe Sec. M-6.6(a) or Sec. M-6.8(b), Class A-1
I-1																														70		68						I-1	138	Lin.Ft.	18" Pipe Sec. M-6.6(a) or Sec. M-6.8(b), Class A-1
I-1															96																							I-1	96	Lin.Ft.	30" Pipe Sec. M-6.6(a) or Sec. M-6.8(b), Class A-1
I-1														118																		86						I-1	204	Lin.Ft.	36" Pipe Sec. M-6.6(a) or Sec. M-6.8(b), Class A-1
I-1												96																										I-1	96	Lin.Ft.	42" Pipe Sec. M-6.6(a), Class A-1
I-1																															92								I-1	92	Lin.Ft.	54" Pipe Sec. M-6.6(b), Class A-1
I-1														60	42																							I-1	102	Lin.Ft.	30" Pipe, Class B-1
I-1											42																											I-1	42	Lin.Ft.	36" Pipe, Class B-1
I-1				64#		198																																I-1	262	Lin.Ft.	15" Encasement Pipe, Class C-1, as per plan
I-1																														11								I-1	11	Lin.Ft.	6" Pipe, Class F-4
I-1	200				10	10	10											10		10		20		10			10		20		20								I-1	330	Lin.Ft.	8" Pipe Sec. M-6.4(c), Class F-4
I-1	150			50		44					34								48										42	146			40		118	48		I-1	720	Lin.Ft.	12" Pipe, Class F-4
I-1														52																								I-1	52	Lin.Ft.	15" Pipe, Class F-4
I-1					46															44																		I-1	90	Lin.Ft.	18" Pipe, Class F-4
I-1						46									46				36						42			152											I-1	322	Lin.Ft.	24" Pipe, Class F-4
I-1												40																										I-1	40	Lin.Ft.	53" x 34" Pipe, Sec. M-6.7(a) or 58" x 36" Sec. M-6.4(j)(c), Class G-1
I-1											108																											I-1	108	Lin.Ft.	11'-7" x 7'-5" Pipe, Sec. M-6.4(c)(g), 7.5 Gage, Class G-1
I-1	300																																					I-1	300	Lin.Ft.	6" Pipe, Class H-2
I-1	300																																					I-1	300	Lin.Ft.	8" Pipe, Class H-2
I-1	150			150																																		I-1	300	Lin.Ft.	12" Pipe, Class H-2
I-1	1000																																					I-1	1000	Lin.Ft.	6" Pipe Sec. M-6.4(h), Class I-3
I-1	250				140	74	26											162		4		250		16			134		124									I-1	1180	Lin.Ft.	6" Pipe Sec. M-6.4(h), Class I-3, as per plan
I-1	150																																					I-1	150	Lin.Ft.	6" Pipe Sec. M-6.6(b) or M-6.8(b), Class U-1
I-1	150																																					I-1	150	Lin.Ft.	8" Pipe Sec. M-6.6(b) or M-6.8(b), Class U-1
I-1	150																																					I-1	150	Lin.Ft.	12" Pipe Sec. M-6.6(a) or M-6.8(b), Class U-1
I-2				0.8	2.7	2.3	0.3				17.4	1.5		2.2	1.0			1.0	4.6	1.0		1.3	1.0	1.2		3.1	0.8	2.5	1.0		1.3	3.1	1.8		0.8	0.3	2.5		0.2	I-2	55.7	Cu.Yds.	Masonry
I-5	10																																					I-5	10	Each	6" Pipe Specials, Class H-2
I-5	10																																					I-5	10	Each	8" Pipe Specials, Class H-2
I-5	5																																					I-5	5	Each	12" Pipe Specials, Class H-2
I-5	5																																					I-5	5	Each	6" Pipe Specials, Sec. M-6.4(h), Class I-3
I-8				1																										1	1				2		1	I-8	6	Each	Standard No. 2-2-A Catch Basins
I-8																														1								I-8	1	Each	Standard No. 2-2-B Catch Basin
I-8						1	1																															I-8	2	Each	Standard No. 8 Catch Basins
I-8																			1					1			1											I-8	3	Each	Standard No. 1 Manholes
I-9	15				3	6	3											3		3		6		3			3		6										I-9	51	Lin.Ft.	Stone Underdrains, No. 1, as per plan
I-9		12,995																																				I-9	12,995	Lin.Ft.	Stone Underdrains, No. 8
I-10	30			160	28	115	11	53			145	112	125	160	92			216	418	186	51	167	12	189		14	115	30	87	212	84	33	17		87	12	33			I-10	2,874	Cu.Yds.	Dumped Rock Channel Protection
I-10				6	18	11						15		10	15			10	42	7		19	15	17	4		19	12	19	21	9	23	16		35		7			I-10	350	Sq.Yds.	Riprap Using 6" Reinforced Concrete Slab, as per plan
I-14											37			96	86				17	150						572	490		348	58				120					I-14	1974	Lin.Ft.	Standard Type 1 Paved Gutter
I-16																											1			1						1			I-16	3	Each	Catch Basins Abandoned

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GENERAL SUMMARY

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HOL-39-28.57
TUS-39-0.00

ITEM	NOTES	CALC.	SHEET NUMBER 14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	160	162	165	167	168	170	173	175	177	178	ITEM	QUANT	UNIT	DESCRIPTION Construction Type Code 6801
																																											PAVEMENT
B-19		14,367																																					B-19	14,367	Cu.Yds.	Aggregate Base Course
B-35		6,335																																					B-35	6,335	Cu.Yds.	Asphaltic Concrete Leveling Course (70-85)
B-35																													16									16	B-35	32	Lin.Ft.	Sealing Vertical Face of Existing Pavement
T-30		32,195																																					T-30	32,195	Gals.	Bituminous Prime Coat : Sec. M-5.7, RT-2 or RT-3
T-30		37																																					T-30	37	Gals.	Bituminous Tack Coat : Sec. M-5.5, MS-2 or RS-1 ; or Sec. M-5.2, RC-1 or RC-2, as per Sec. T-30.02
T-35		165																																					T-35	165	Cu.Yd.	Asphaltic Concrete Surface Course Type "A" (70-85)
T-35		2,106	12	16							8			15	8												4		9	32	4	5			5			4	T-35	2,228	Cu.Yds.	Asphaltic Concrete Surface Course Type "C" (70-85)
I-7								134																															I-7	134	Sq.Yds.	Reinforced Concrete Approach Slabs (T=13")
I-22		16,081																																					I-22	16,081	Cu.Yds.	Subbase
																																									BUILDING REMOVALS
E-10																																							E-10	Lump	Lump	Building Removal ; 1 Two Story Res., 1 Frame Garage, Parcel No. 14
E-10																																							E-10	Lump	Lump	Building Removal ; 1 Basement House, 1 Frame Garage, Parcel No. 31
E-10																																							E-10	Lump	Lump	Building Removal ; 1 Frame Garage, Parcel No. 46
																																								Lump	Lump	Construction Layout Stakes
I-3																																							I-3	Lump	Lump	Maintaining Traffic
																																									STRUCTURES OVER 20 Ft SPAN For Estimated Quantities
																																									HOL-39-2952 See Sheet No. 215
																																									WATERLINES TYPE CODE Y-060
I-124																					110																			I-124	110	Lin.Ft.	3" Cast Iron Water Main With Mechanical Joints, as per plan, Class 150
I-124				86 ≠																																			174	I-124	260	Lin.Ft.	4" Cast Iron Pipe, With Mechanical Joints, Class 150, as per plan.
I-124																																							1 ≠	I-124	1	Each	4"x4"x4" Cast Iron Tee, With Mechanical Joints.
I-124																																							1 ≠	I-124	1	Each	4" Gate Valve with Operating Nut & Stem with Mechanical Joints and Box.
I-124																																							4 ≠	I-124	4	Each	4"- ⅛ (11¼°) Cast Iron Bend with Mechanical Joints.
I-124																																							1 ≠	I-124	1	Each	4" Cast Iron Plug with Mechanical Joints.
I-8																																							2 ≠	I-8	2	Each	Valve Service Boxes Adjusted To Grade.
I-124																																							1 ≠	I-124	1	Each	Fire Hydrant Removed And Reset.
I-124																																							2 ≠	I-124	2	Each	Service Stops And Boxes Removed And Reset.
I-124																																							50 ≠	I-124	50	Lin.Ft.	New Service Branch, (1" Copper Line, Type "K")
I-124																																							1 ≠	I-124	1	Each	New Service Branch, (1" Copper Wye)
I-124																																							20 ≠	I-124	20	Lin.Ft.	New Service Branch, (¾" Copper Line, Type "K")

≠ No Federal Participation

Rev. 8-14-64. Rev. 8-20-64

GENERAL SUMMARY

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION | STATE | PROJECT
2 | OHIO |

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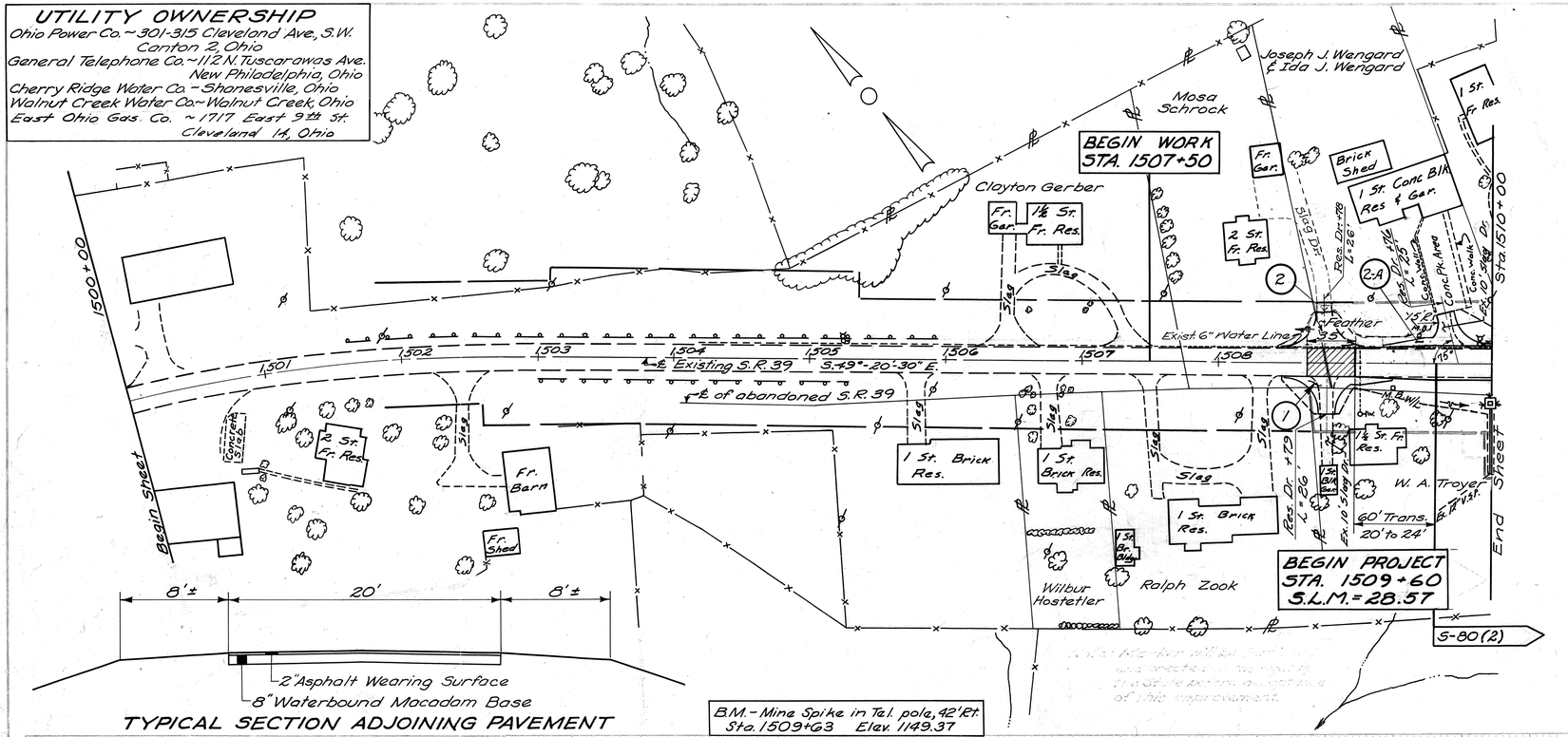
SEE SHEET NO.

UTILITY OWNERSHIP

Ohio Power Co. ~ 301-315 Cleveland Ave, S.W.
Canton 2, Ohio
General Telephone Co. ~ 112 N. Tuscarawas Ave.
New Philadelphia, Ohio
Cherry Ridge Water Co. ~ Shanesville, Ohio
Walnut Creek Water Co. ~ Walnut Creek, Ohio
East Ohio Gas Co. ~ 1717 East 9th St.
Cleveland 14, Ohio





TYPICAL SECTION ADJOINING PAVEMENT

B.M. - Mine Spike in Tel. pole, 42' Rt.
Sta. 1509+63 Elev. 1149.37

Exc.	174 Cu. Yds.
Emb.	7 Cu. Yds.
Emb. + 15%	8 Cu. Yds.

ESTIMATED QUANTITIES

T-35 2" Type "C"
I-18 5"

SHEET NO.	STATION TO STATION	SIDE	Cu. Yds.	Cu. Yds.
1	1506+79	Rt.	4	11
2	1508+78	Lt.	4	9
2-A	1509+76	Lt.	4	11
			12	31

TOTALS

Sta. 1500+00 to Sta. 1510+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

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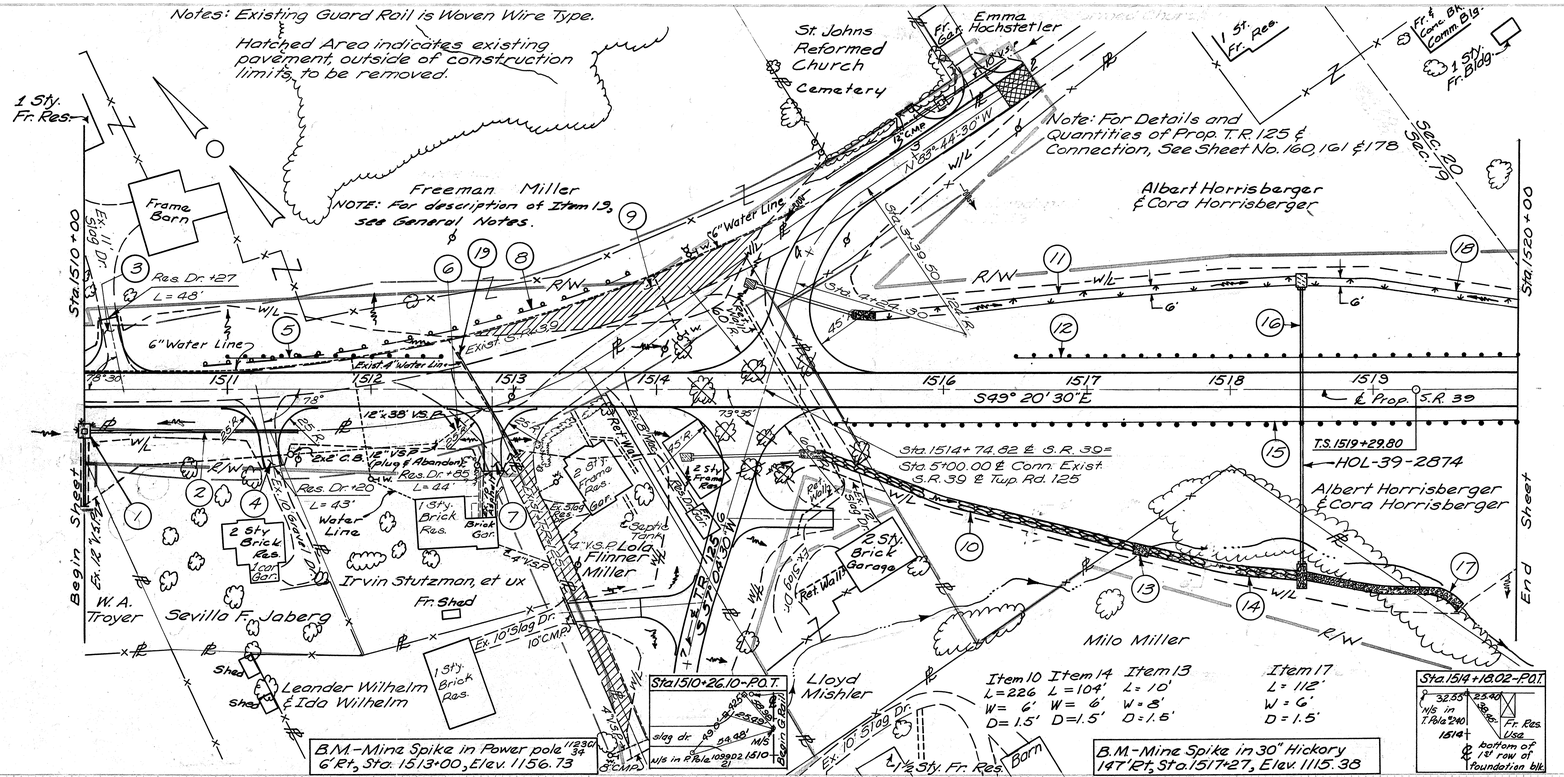
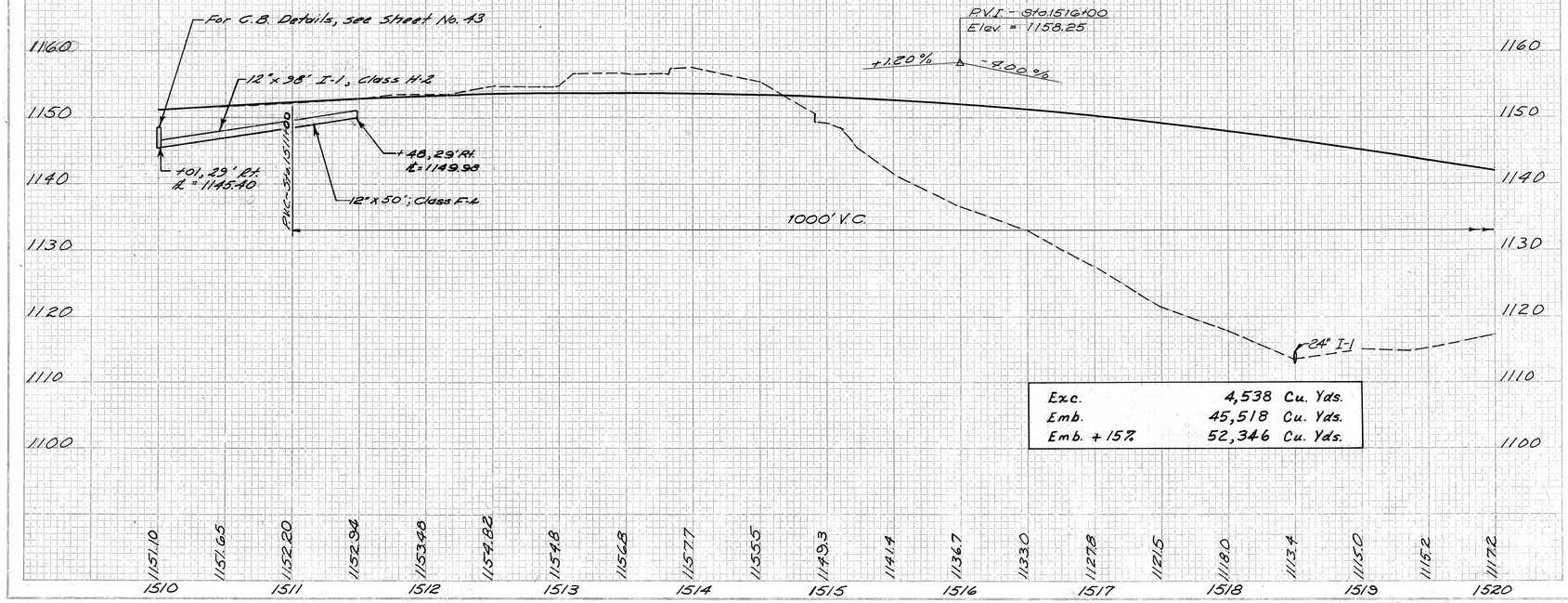
23.1

Notes: Existing Guard Rail is Woven Wire Type.

Hatched Area indicates existing pavement, outside of construction limits, to be removed.





Exc.	4,538 Cu. Yds.
Emb.	45,518 Cu. Yds.
Emb. + 15%	52,346 Cu. Yds.

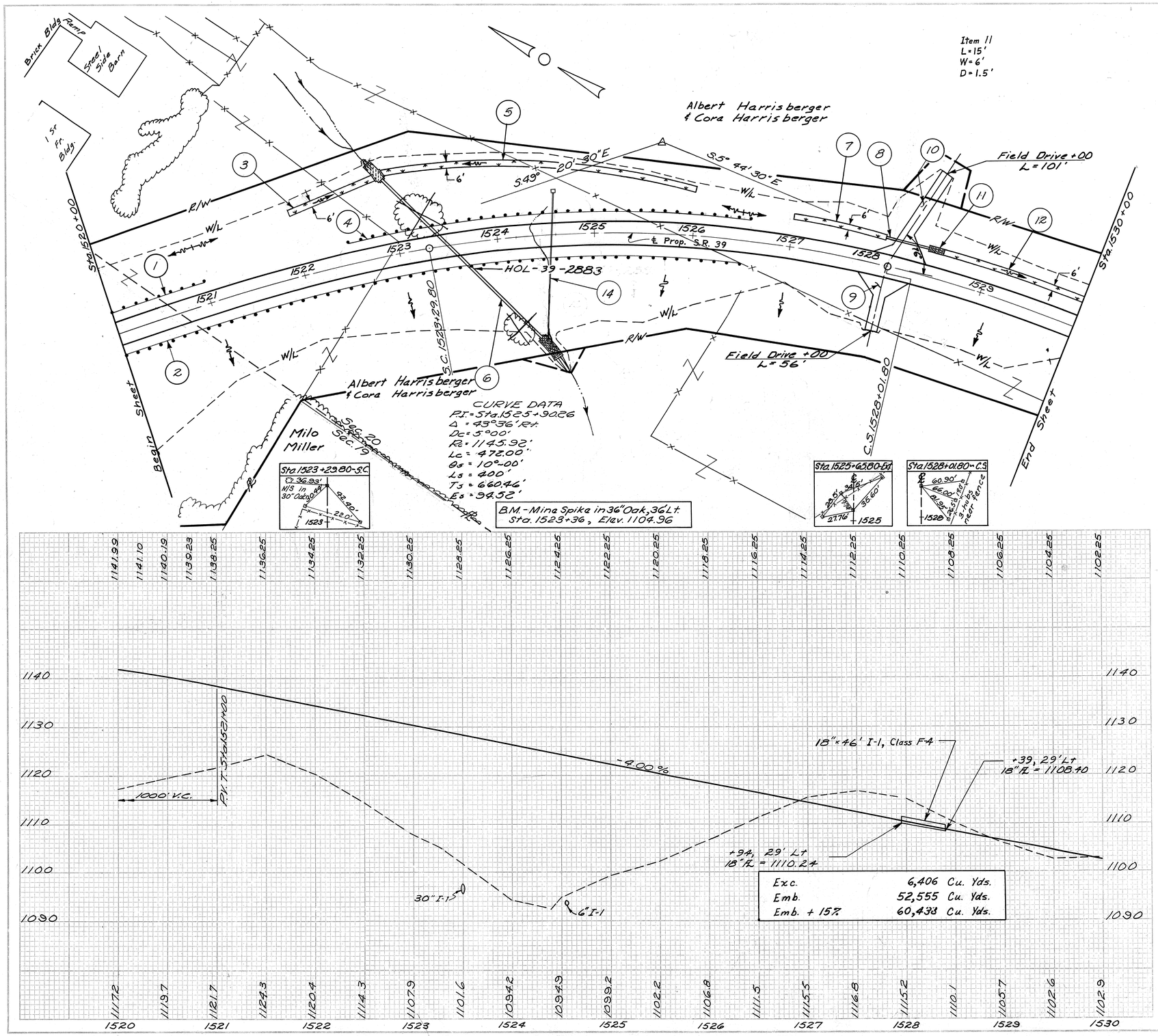
ESTIMATED QUANTITIES

** As per plan, See note on sheet 10.

*Sec. M-6.4(a)

REF. NO.	STATION TO STATION	SIDE	E-8 Removal & Disposal of Ex. Pvmt. Under C.B. Sq. Yds.	E-12 15" & Under Lin. Ft.	T-35 2" Type C Cu. Yds.	I-1 24"* Class A-1 Lin. Ft.	I-1 12" Class F-2 Lin. Ft.	I-2 Class "C" Cu. Yds.	I-10 Dump Rip-Rap C.Y.	I-10 Rock Rap C.Y.	I-15 Sta. Gal. Pipe Culv. Lin. Ft.	I-15 Gal. R. Pipe Culv. Lin. Ft.	SEE SHEET NO.
1	1510+00	Rt.											43
2	1510+50	Rt.											
3	1511+48	℄											
4	1510+50	℄											
5	1511+27	℄											
6	1511+00	Lt.					50						
7	1512+50	Lt.								150			
8	1512+45	Rt.										300	
9	1512+76	Rt.											
10	1512+85	℄											
11	1513+00	Lt.								75			
12	1513+52	Lt.											
13	1514+75	Lt.											
14	1514+50	Lt.										350	
15	1517+33	Rt.											
16	1517+33	Rt.											
17	1517+43	Rt.								4			
18	1518+41	Rt.								35			
19	1518+00	℄										475	
	1518+50	℄											
	1519+25	℄											
	1520+00	Rt.											
	1519+60	℄											
	1520+00	Lt.											
	1512+76	℄											
	Sub Totals		64	369	38	16	194	50	0.8	160	6	975	300
											39	3	
											42	344	86
											13	150	1
													187
													1

Sta. 1510+00 to Sta. 1520+00



Exc.	6,406 Cu. Yds.
Emb.	52,555 Cu. Yds.
Emb. + 15%	60,438 Cu. Yds.

HOL - 39 - 0.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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SEE SHEET NO. 182 183

** Sec. M-6.4(h) As Per Plan *** Sec. M-6.4 (c)

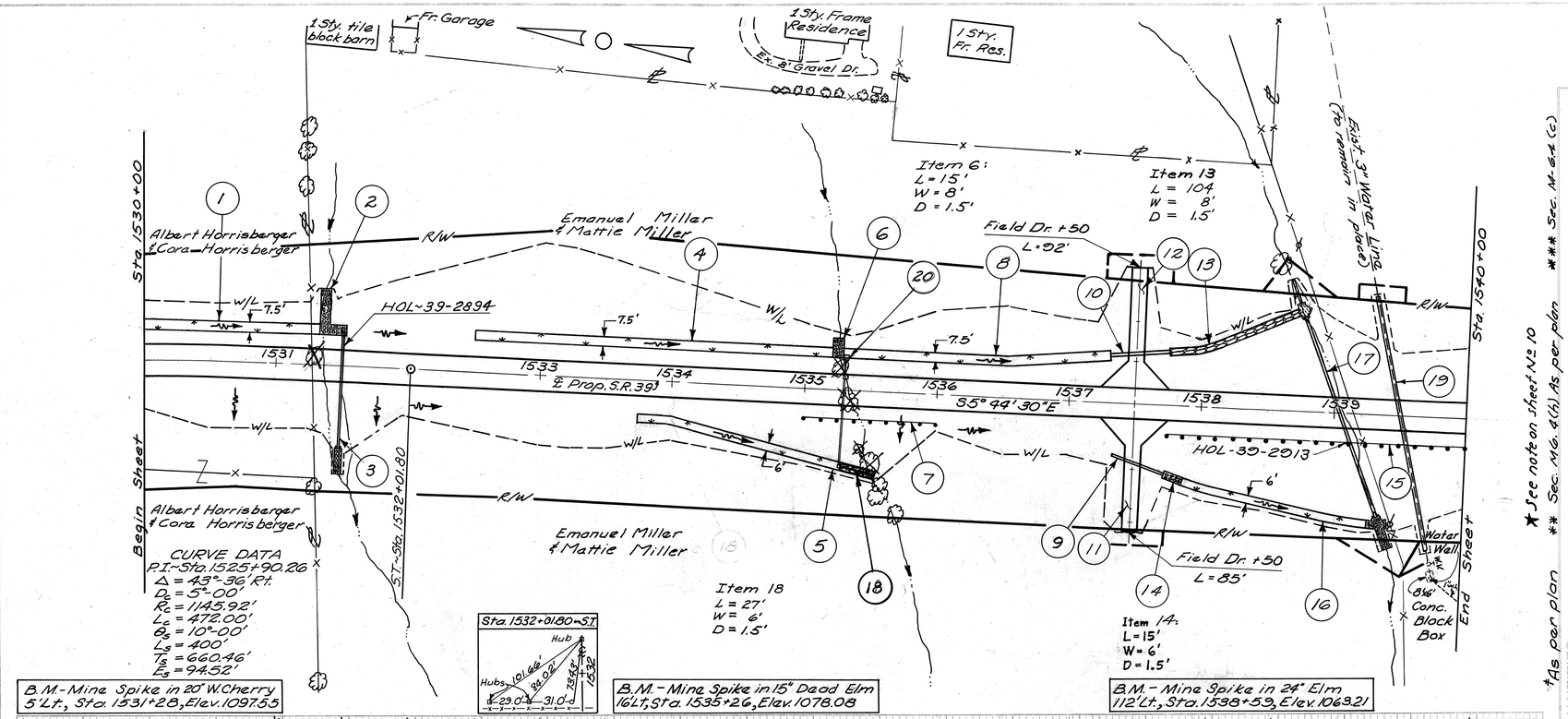
* M-6.4 (d) Gage 12

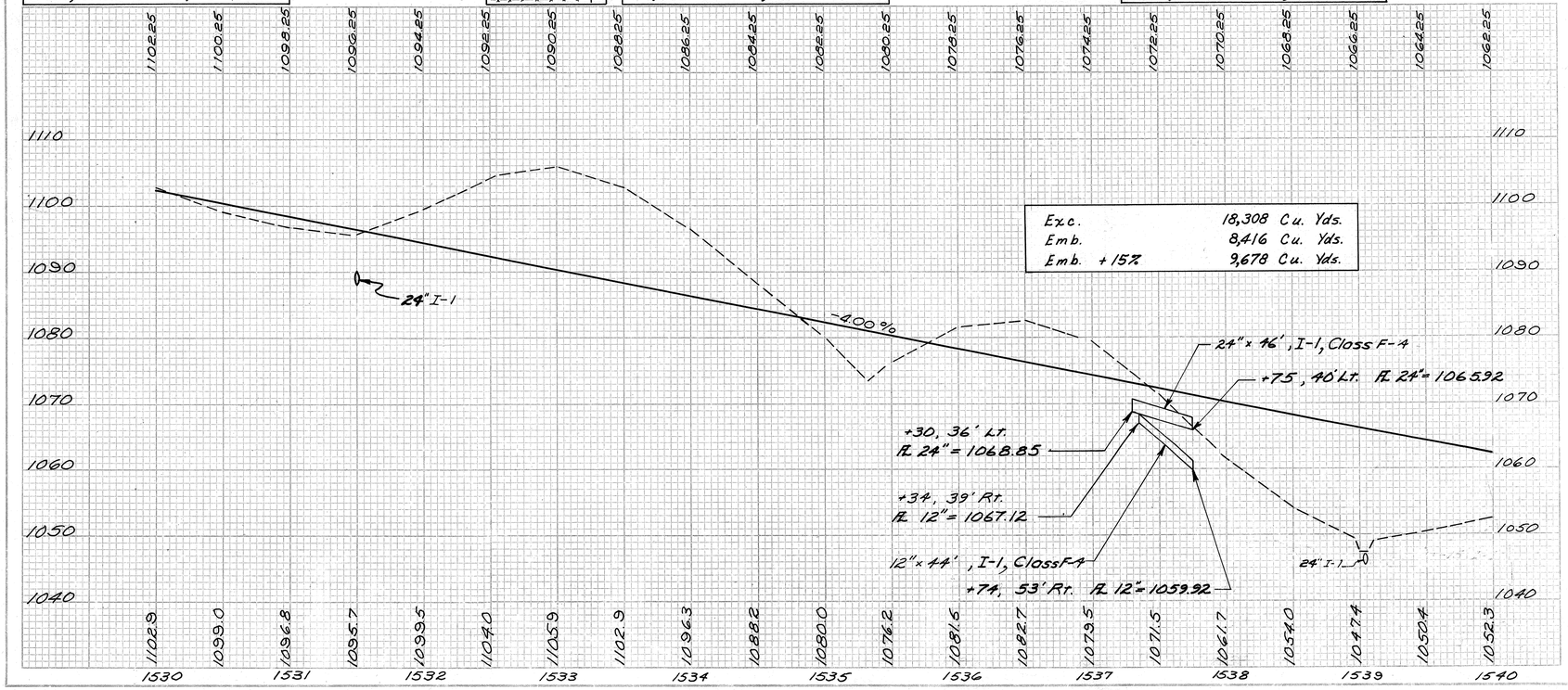
ESTIMATED QUANTITIES

| ITEM | I-9 | I-1 | I-2 | I-10 | I-10 | I-15 | I-18 | | |

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT			17
2	OHIO				231





* Sec. M-6.4(d)
** Sec. M-6.4(b) as per plan
*** Sec. M-6.4(c)
★ See note on sheet No 10
★ As per plan

ESTIMATED QUANTITIES

| SEE SHEET NO. | | | |

HOL - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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SEE SHEET NO. 60 183

Retng. Wall — Retng. Wall

CURVE DATA
P.I.: Sta 1548+39.00
Δ = 21° 23' 30"
D = 1° 29'
R = 4032.56'
T = 772.99'
L = 1527.98'
E = 72.56'

Sta 1540+00

P.C. 1540+66.01

Sta 1550+00

Emanuel A. Miller & Mattie Miller

R/W

W/L

7.5'

S.5° 44' 30" E.

1541 1542 1543 1544 1545 1546 1547 1548 1549

℄ Prop. S.R. 39

HOL.-39-2924

S.5° 44' 30" E

S 27° 08' E

Begin Sheet

End Sheet

1 2 3 4 5 7

B.M.-Mine Spike in 30" Oak
83' Rt., Sta. 1545+45, Elev. 1031.42

1052.25 1050.25 1048.25 1046.25 1044.25 1042.25 1040.25 1038.25 1036.25 1034.25 1032.25 1030.25 1028.25 1026.25 1024.25 1022.25

1070 1060 1050 1040 1030 1020

-4.00 %

15" I-1

Exc.	15,300 Cu. Yds.
Emb.	7,585 Cu. Yds.
Emb. + 15%	8,723 Cu. Yds.

1052.3 1054.7 1056.7 1055.6 1051.2 1046.8 1041.7 1041.7 1043.3 1044.0 1043.8 1045.1 1045.7 1042.8 1040.2 1037.5 1034.4 1031.4 1028.2 1024.4

1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550

ESTIMATED QUANTITIES

* Sec. M-6.4(a) ** Sec. M-6.4(b) As per Plan *** Sec. M-6.4(c)

REF. NO.	STATION TO STATION	SIDE	15" Class A-1 Lin.Ft.	I-2 Class C Cu.Yds.	I-8 Std. No.8 C.B. Each	I-10 Dumped Rock C.F. Cu.Yds.	L-10 Sq.Yds.	I-15 Std. Lin.Ft.	I-1 *** 8" Class A Lin.Ft.	F-9 No.1 Class 1S/Pd. F-3 F-4 Plan Lin.Ft.	Unit Lin.Ft.
1	1540+00 1541+00	Rt.						100			
2	1542+00 1545+50	Rt.						350			
3	1542+50 1545+09	Lt.				213					
4	1545+16	℄	85	0.3	1	11	2				
5	1546+00 1550+00	Lt.					331				
7	1545+15	Rt.							26	10	3
TOTALS			85	0.3	1	11	546	450	26	10	3

Sta. 1540+00 to Sta. 1550+00

HOL - 39 - 29.61
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT		19
5	OHIO			231

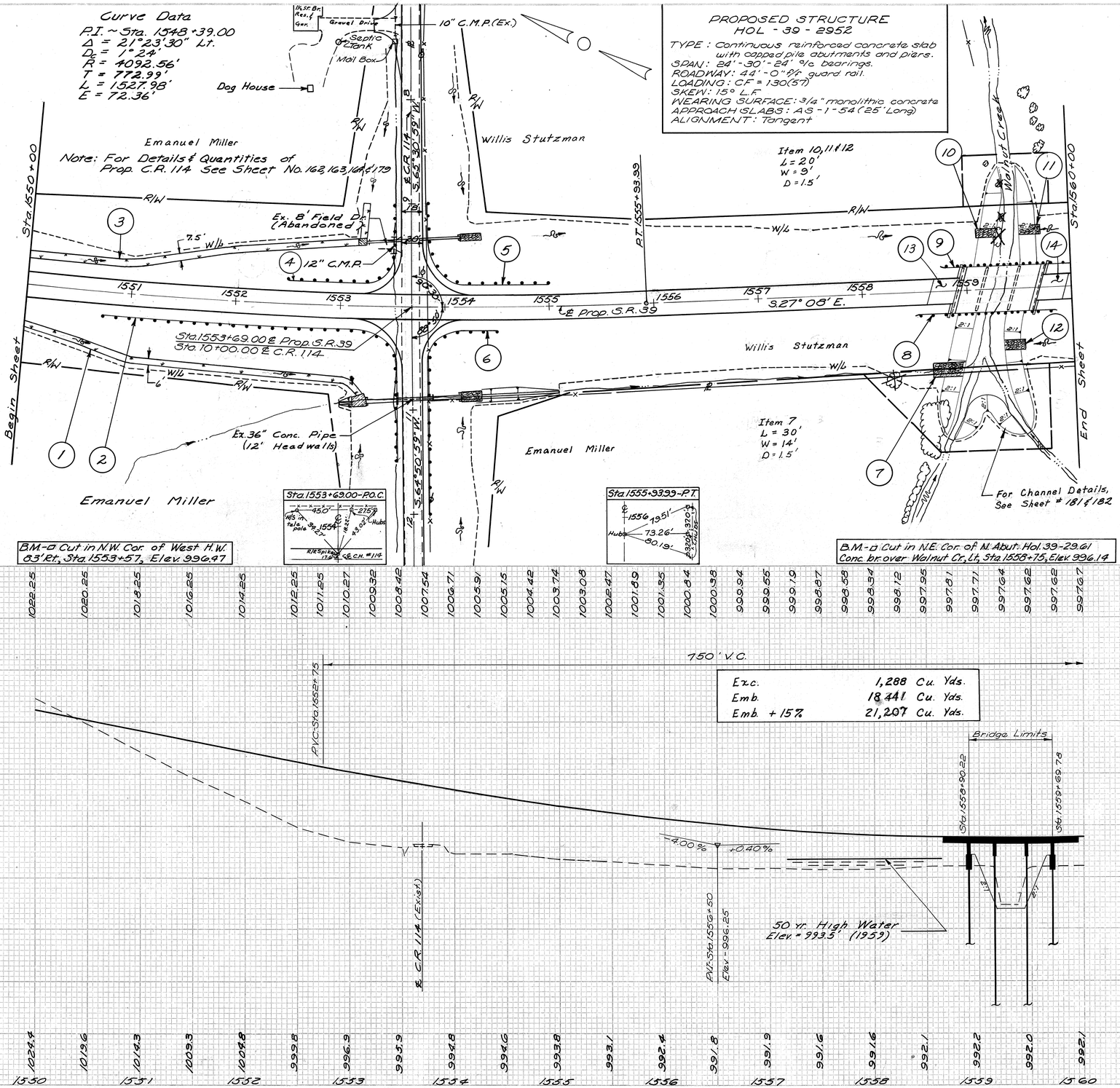
SEE SHEET NO.

Curve Data

P.I. ~ Sta. 1548+39.00
Δ = 21°23'30" Lt.
D_c = 1°24'
R = 4092.56'
T = 772.99'
L = 1527.98'
E = 72.36'

PROPOSED STRUCTURE
HOL - 39 - 2952

TYPE : Continuous reinforced concrete slab with capped pile abutments and piers.
SPAN : 24'-30'-24' c/a bearings.
ROADWAY: 44'-0" c/c guard rail.
LOADING : CF = 130(ST)
SKEW : 15° L.F.
WEARING SURFACE: 3/4" monolithic concrete
APPROACH SLABS : AS-1"-54 (25' Long)
ALIGNMENT : Tangent



ESTIMATED QUANTITIES

* Bridge Limits I-15 I-10 I-7 I-15 Std.
I-10 I-15 I-10 I-7 7-13" Std.
Approach Slabs Asphalt Slope Paving
22-A Beam (Deep)

PVT.	STATION TO STATION	SIDE	Cu. Yds.	Lin. Ft.	Sq. Yds.	Sq. Yds.	Lin. Ft.
1	1550+00 ~ 1553+20	Rt.					300
2	1550+75 ~ 1010+60	Rt.					
3	1550+00 ~ 1553+16	Lt.			263		12.5
#5	1552+30 ~ 9+40	Lt.					137.5
6	9+36 ~ 1555+00	Lt.					87.5
7	1553+66 ~ 1558+96	Rt.	23	*A544			
8	1558+552 ~ 1559+021	Rt.		*A544			
9	1559+79.79 ~ 1560+04.79	Lt.				10	
10	1553+10 ~ 1559+30	Lt.				10	
11	1553+52 ~ 1559+72	Lt.				10	
12	1553+34 ~ 1559+54	Rt.					
13	1558+65.22 ~ 1558+90.22	℄					67
14	1559+68.78 ~ 1559+94.78	℄					67
		TOTALS	53	9088	485	134	1350.0

Sta. 1550+00 to Sta. 1560+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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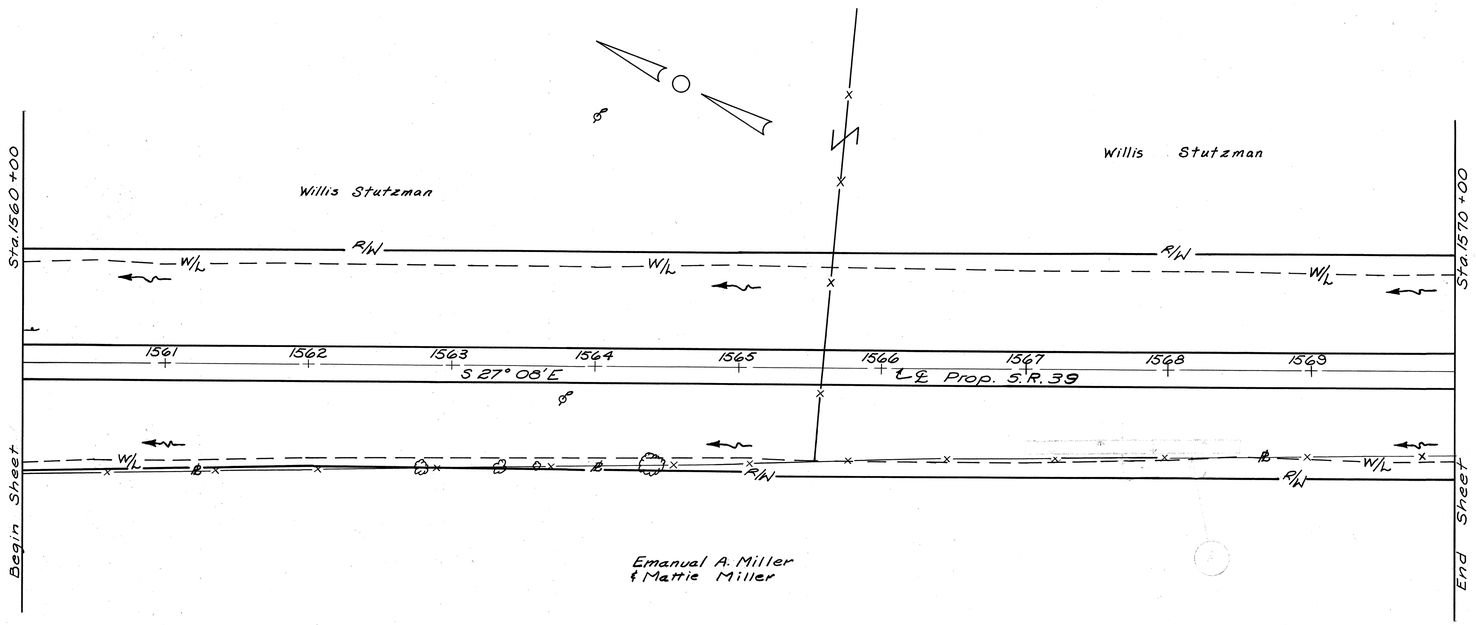
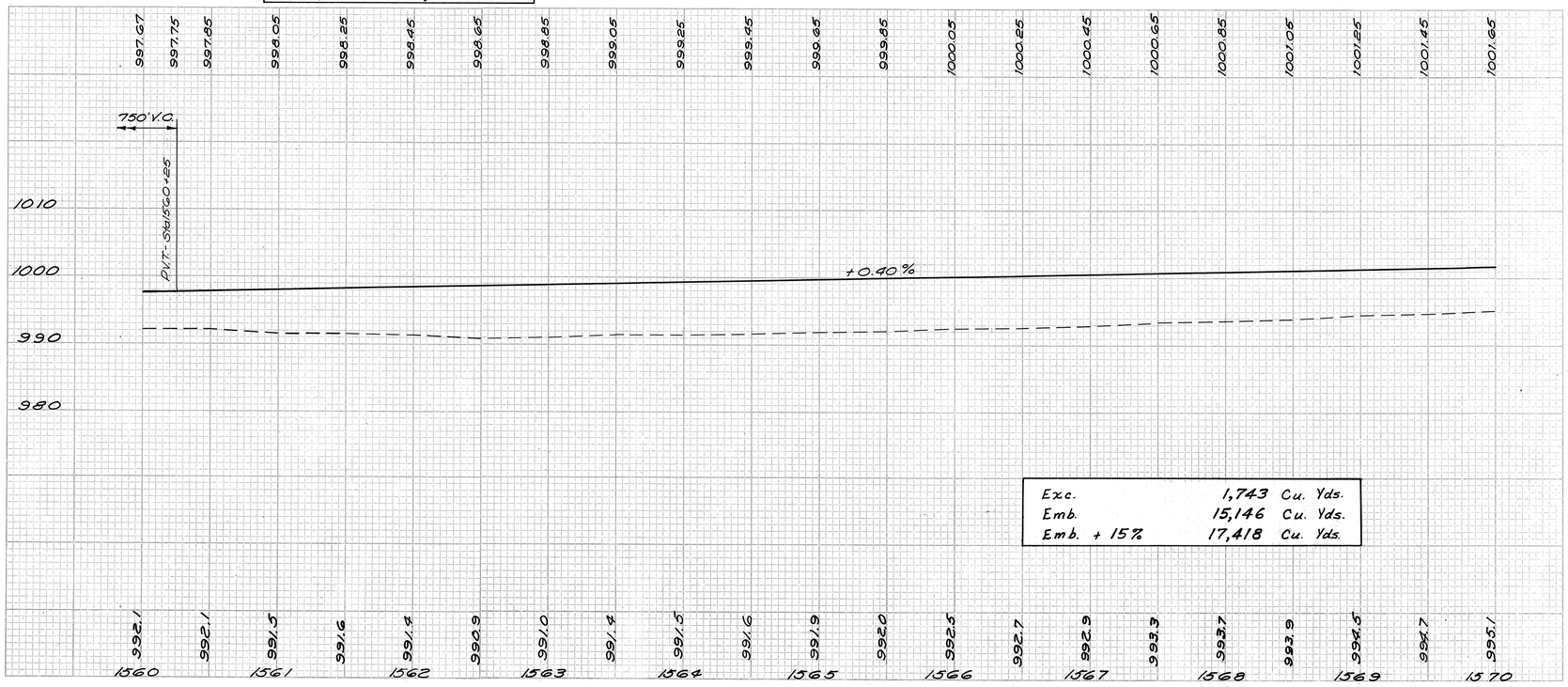
231



B.M - Mine Spike in 40" Oak
228' Lt, Sta. 1562+72, Elev. 992.61

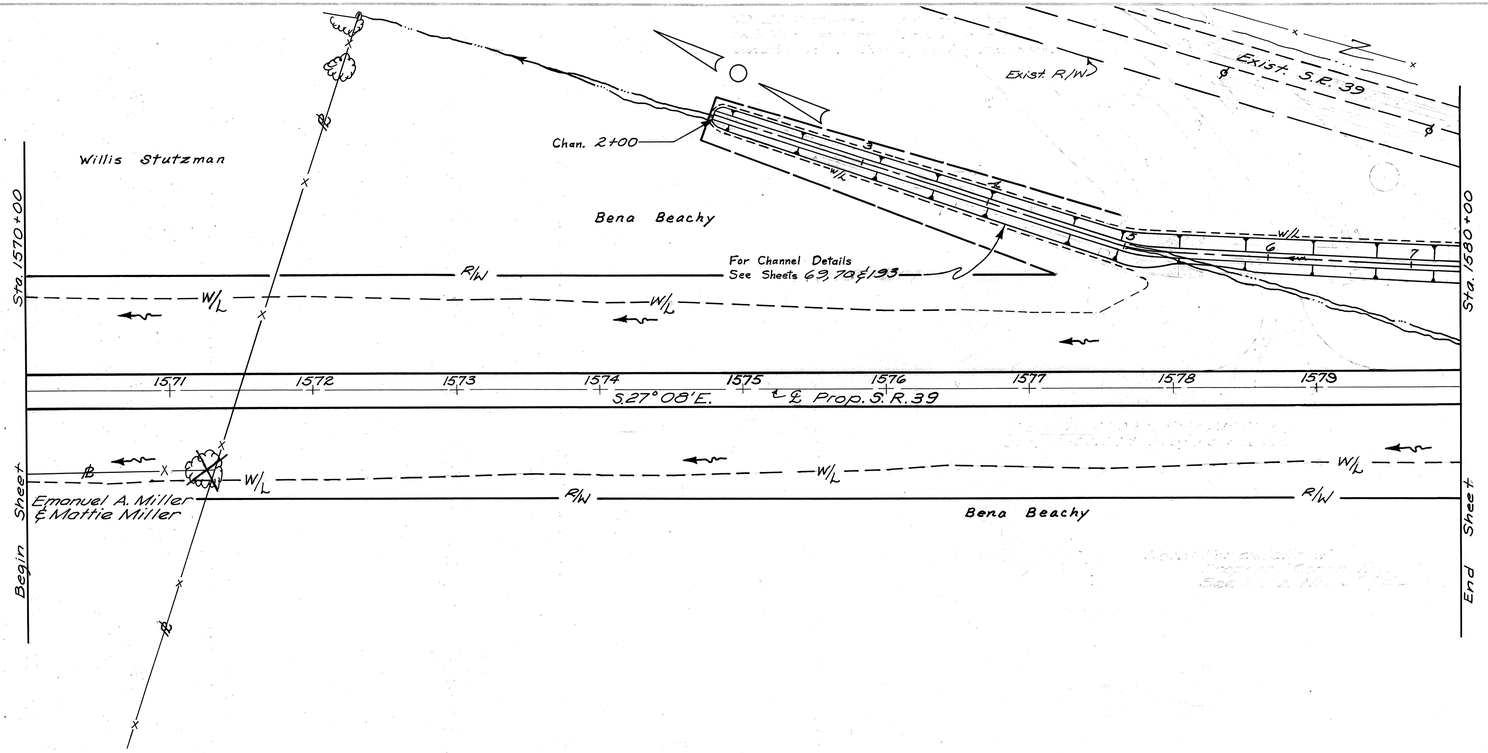


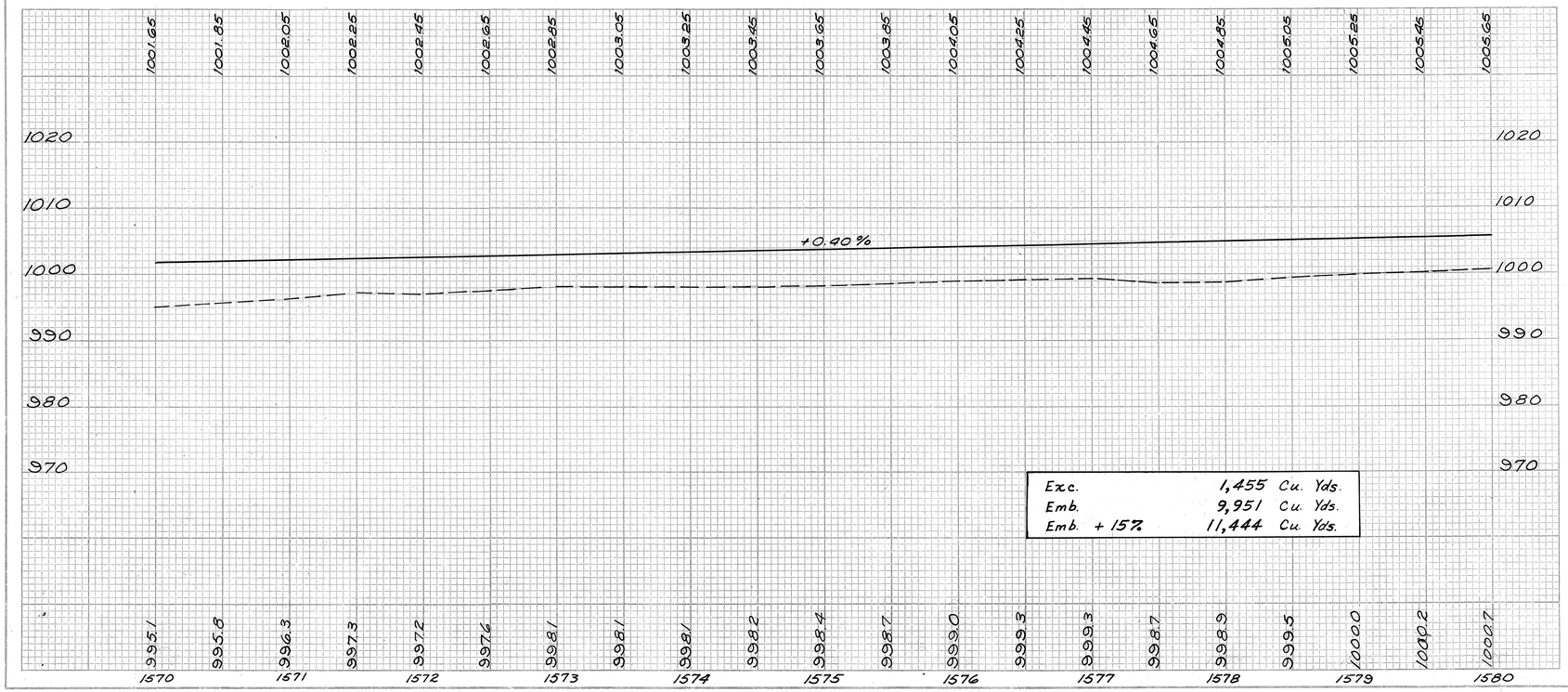
Exc.	1,743	Cu. Yds.
Emb.	15,146	Cu. Yds.
Emb. + 15%	17,418	Cu. Yds.

ESTIMATED QUANTITIES

DESIGN NO.	STATION TO STATION	SIDE	
			TOTALS

Sta 1560+00 to Sta 1570+00





Exc.	1,455	Cu. Yds.
Emb.	9,951	Cu. Yds.
Emb. + 15%	11,444	Cu. Yds.

HOL - [redacted]
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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SEE SHEET NO.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE

HOL-39-22.57
TUS-[illegible]-0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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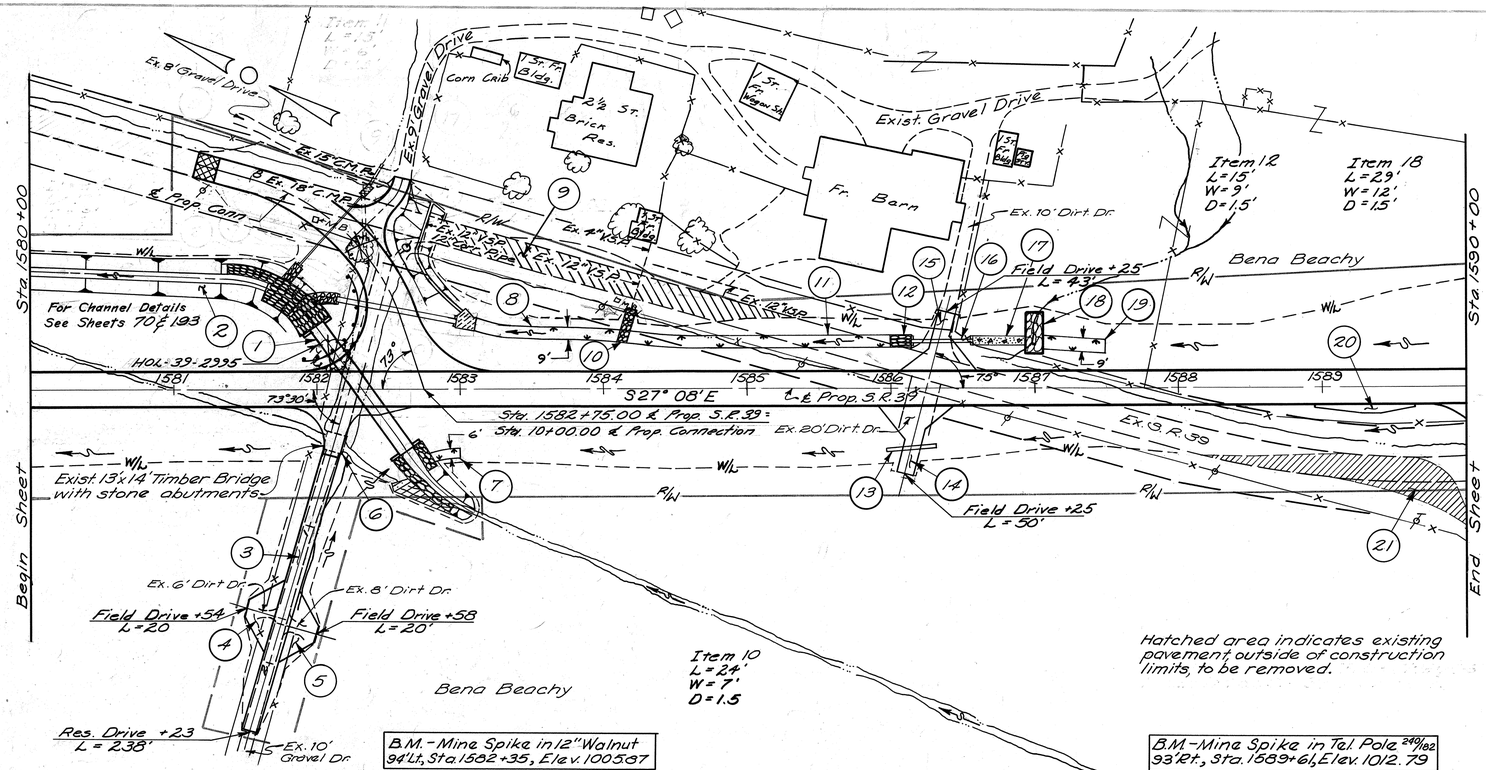
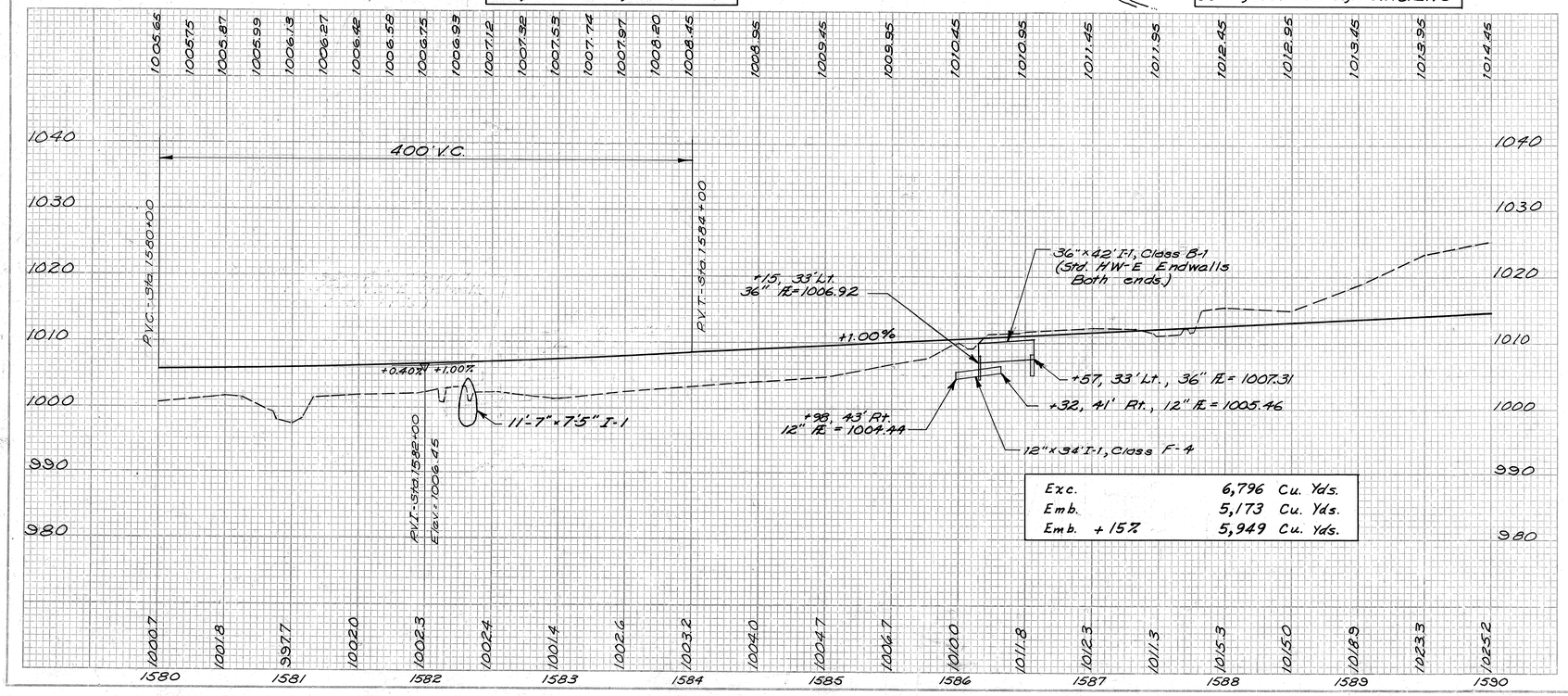
231





Exc.	6,796	Cu. Yds.
Emb.	5,173	Cu. Yds.
Emb. +15%	5,949	Cu. Yds.

ESTIMATED QUANTITIES

*11'-7"x 7'-5" Sec. M-6.41.01(g), Cage 7-5

REF. NO.	STATION TO STATION	SIDE	E-3 Remove & Dispose Type "C" Ex. Pvmt. Cu. Yds.	E-8 T-35 2" Sq. Yds.	S-24 Lump Lump Lin. Ft.	I-1 36" Class B-1 Lin. Ft.	I-1 12" Class F-4 Lin. Ft.	I-1 * Class G-1 Lin. Ft.	I-2 Class "C" Cu. Yds.	I-2 Class "E" Cu. Yds.	F-10 I-14 Dump Sta. Rock Type C.P. Cu. Yds.	T-18 5" Sq. Yds.	T-18 6" Sq. Yds.	T-18 8" Sq. Yds.	L-10 Sq. Yds.	Spec. Mixing Calcium Chloride Sq. Yds.	SEE SHEET NO.
1	1582+32	℄															194
2	1575+00 1583+00	Lt.	1626	6	Lump						109	14	18	60	42	269	
3	1582+23	Rt.											12				
4	1+54	Rt.												13			
5	1+58	Lt.												104			
6	1582+04	Rt.									9						
7	1582+80	Rt.									8				182		
8	1583+07	Lt.													4		
9	1583+15	Lt.			440								19				
10	1584+11	Lt.											17				
11	1584+18	Lt.													13		
12	1586+00	Lt.													12		
13	1585+38	Rt.									37				44		
14	1586+25	Rt.									19			4			
15	1586+25	Lt.															
16	1586+15	Lt.															
17	1586+57	Lt.															
18	1586+94	Lt.				42				1.2							
19	1587+06	Lt.															
20	1587+50	Lt.	5														
21	1589+35	Rt.		2													
	1588+17	1590+00	3.2														
	Sub Totals		163.1	752	8	Lump	42	34		1.2	16.2						
	TOTALS		163.1	752	8	Lump	42	34		1.2	16.2						

Sta 1580+00 to Sta 1590+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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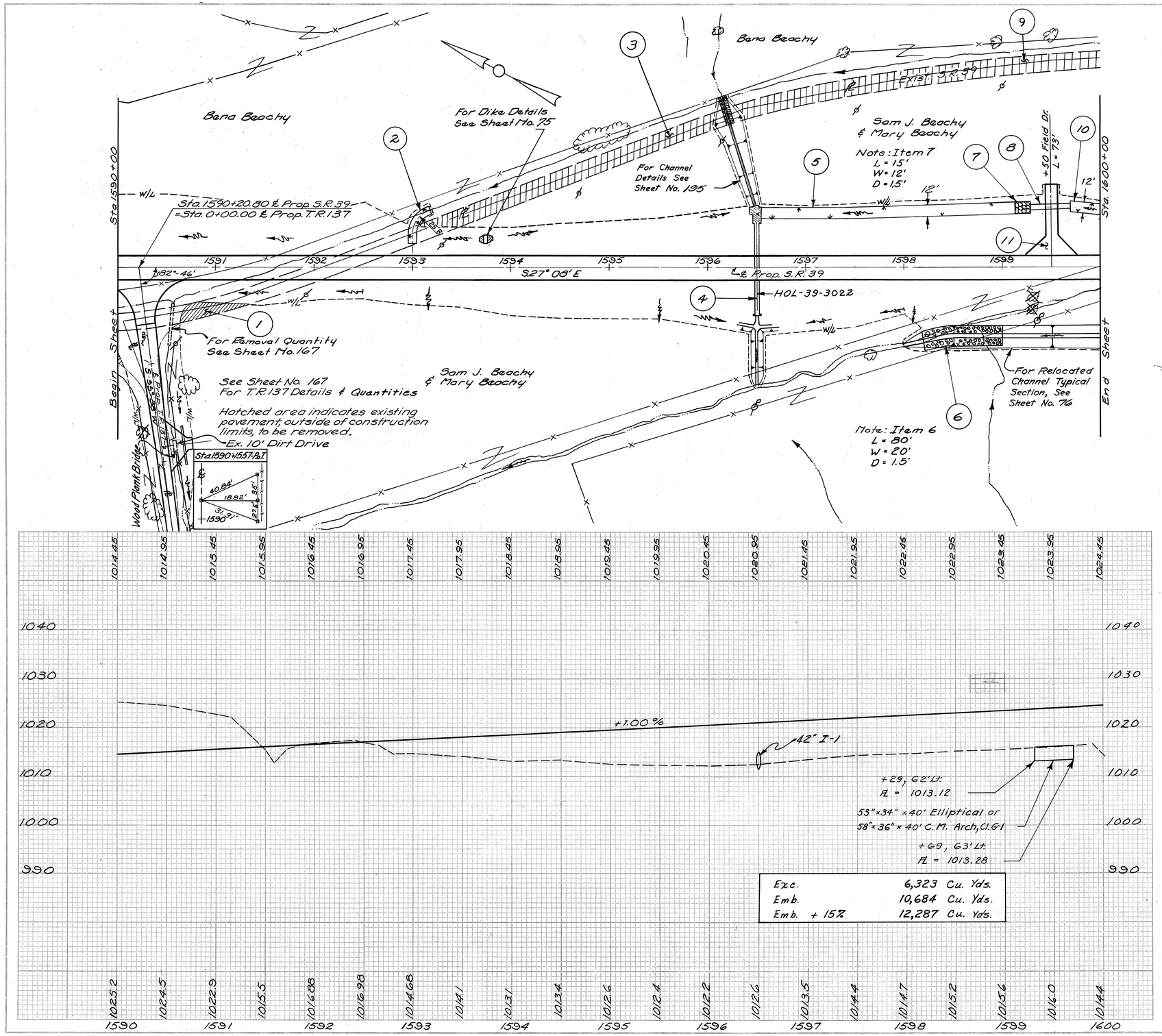


Exc.	6,323 Cu. Yds.
Emb.	10,684 Cu. Yds.
Emb. + 15%	12,287 Cu. Yds.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	* Sec. M-6.6(a) E-3 Cu. Yds.	E-8 Pvm't. Removal Sq. Yds.	I-1 * 42" Class A-1 Lin. Ft.	I-1 ** 53"×34" or *** 58"×36" Cl. G-1 Lin. Ft.	** Sec. M6.7(a) I-2 Class "C" Cu. Yds.	I-10 Dumped Rock C.P. Cu. Yds.	I-10 Riprap Sq. Yds.	I-18 6" Cu. Yds.	L-10 Sq. Yds.
1	1590+64 ~ 1591+34	Rt.		72							41
2	1593+00 ~ 1593+18	Lt.	12								
3	1593+05 ~ 1596+09	Lt.		606			1.5	13	15		14
4	1596+50	℄	193		96						346
5	1596+54 ~ 1599+14	Lt.						89			
6	1598+20 ~ 1599+00	Rt.						10			
7	1599+14 ~ 1599+29	Lt.									13
8	1599+29 ~ 1599+69	Lt.				40					
9	1596+28 ~ 1600+00	Lt.		740							40
10	1599+69 ~ 1600+00	Lt.								24	
11	1599+50	Lt.									
TOTALS			205	1418	96	40	1.5	112	15	24	454

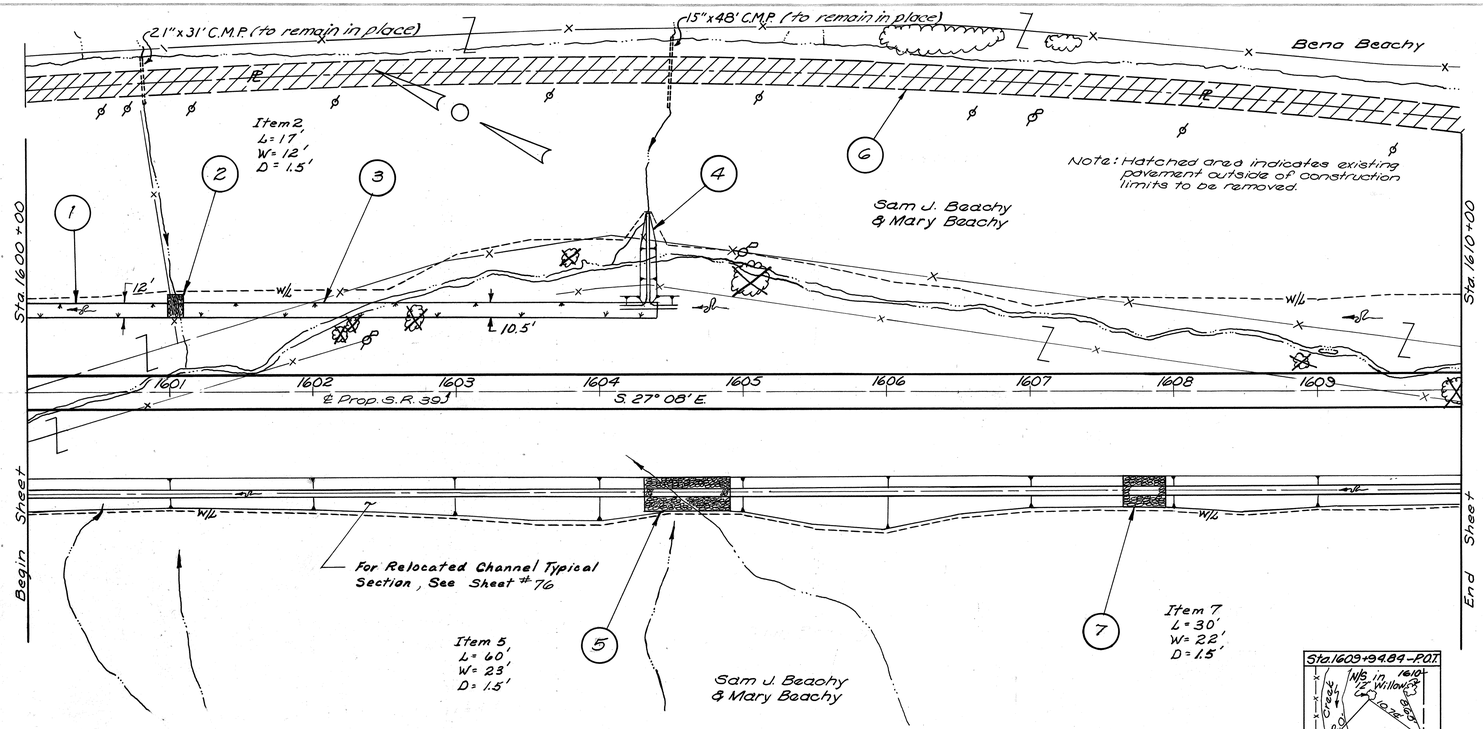
SEE SHEET NO.

195

Sta. 1590+00 to Sta. 1600+00

HGL - 39 - 28.57
TUS - 39 - 0.00

SEE SHEET NO. 78



Exc.	3,971 Cu. Yds.
Emb.	15,220 Cu. Yds.
Emb. + 15%	17,503 Cu. Yds.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-3 Cu. Yds.	E-8 Removal of Pavement Sq. Yds.	I-10 Dumped Rock C.F. Cu. Yds.	L-10 Sq. Yds. (3")
1	1600+00 - 1600+98	Lt.			11	395
3	1600+98 - 1601+10	Lt.				
4	1601+10 - 1604+40	Lt.	18		77	
5	1604+34 - 1604+90	Rt.				
6	1604+30 - 1610+00	Lt.		2000	37	
7	1607+65 - 1607+95	Rt.				
TOTALS			18	2000	125	516

Sta. 1600 +00 to Sta. 1610+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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Note: Hatched area indicates existing pavement, outside of construction limits, to be removed (items 1 and 9).

Bena Beachy

Brick retaining wall

Lawn

Walk

1 St. Brick House

Sec 21 Sec 1

Item 4: L = 120' W = 9' D = 1.5'

Item 14: L = 47' W = 8' D = 1.5'

Mildred Mae Christner

CURVE DATA
P.I. = 1623 + 44.56
Δ = 75°28' Lt.
D_c = 5°00'
R_c = 1145.92'
L_c = 1109.33'
θ_s = 10°00'
L_s = 400'
T_s = 1091.03'
E_s = 310.37'

Existing S.R. 39

Sta. 1610+00

Sam J. Beachy & Mary Beachy

Paul Pauline Flinner & Carl

Lester Hostetler

For Dike Details See Sheet No. 196

HOL-39-3051

S27° 08' E

Sta. 1612+53.53

S.C. 6 1616+53.53

Res. Dr. + 70 L = 60' W = 16'

Res. Dr. + 70 L = 113'

Item 3: L = 61' W = 20' D = 1.5'

For Relocated Channel Typical Section, See Sheet No. 76

Begin Street

End Street

Sta. 1620+00

Exist. 12" V.S.P. (Plug & Abandon)

Ex. 3'x3' Conc. Box

Prop. S.R. 39

Exist. 3' Gravel Drive

2 St. Fr. Res.

Garden

Fr. Barn

Fr. Bldg.

Conc. Blk. Bldg.

Fr. Shed

Item 15: L = 20' W = 6' D = 1.5'

B.M. - Mine Spike in 40" Oak, 163' Rt. Sta. 1614+14 Elev. 1037.30

Sta. 1612+53.53 - T.S.
N/S in three trees
Hub
82.26'
12.10'
16.30'
Elm Elm Walnut

Sta. 1616+53.53 - S.C.
Shrubs
1617
36.60'
12.70'
31.32'
N/S in tele. pole
SES39
Sta. 1619+00.00 - P.O.C.
+25
99.20'
20.90'
99.05'
Hub
Elev. 1035.45
Elev. 1037.45

600' V.C.

P.V.I. - Sta. 1614+00

+4.00%

+1.00%

+4.00%

36" I-1

+18, 42' Lt. ℄ = 1038.72

P.V.I. - Sta. 1611+00 Elev. 1035.45

+78, 41' Lt. ℄ = 1041.12

30" x 60" I-1, Class B-1 (Use Std HW-E Endwall at both ends)

15" x 52' I-1, Class F-4

+58, 56' Rt. 15" ℄ = 1062.72

+07, 45' Rt. 15" ℄ = 1067.00

Exc.	14,558	Cu. Yds.
Emb.	9,032	Cu. Yds.
Emb. + 15%	10,387	Cu. Yds.

1035.45 1035.97 1036.51 1037.09 1037.70 1038.34 1039.01 1039.72 1040.45 1041.22 1042.01 1042.84 1043.70 1044.59 1045.51 1046.47 1047.45 1049.45 1051.45 1053.45 1055.45 1057.45 1059.45 1061.45 1063.45 1065.45 1067.45 1069.45 1071.45

1080 1070 1060 1050 1040 1030 1020

1028.2 1028.9 1026.9 1027.0 1031.2 1032.2 1033.5 1039.5 1045.1 1046.5 1052.8 1056.6 1059.4 1061.9 1064.0 1065.2 1065.4 1068.2 1070.6 1070.5 1072.5

1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620

ESTIMATED QUANTITIES

*Sec. M-6.6(a) or M-6.8(b)

REF. NO.	STATION TO STATION	SIDE	E-3 Pavement Removal Cu. Yds.	E-8 Pavement Removal Sq. Yds.	T-35 2" Type "C" Lump	S-24 Lump	I-1* 36" Class A-1 Lin. Ft.	I-1 30" Class B-1 Lin. Ft.	I-1 15" Class F-4 Lin. Ft.	I-2 Class "C" Cu. Yds.	I-10 Dumped Rock C.P. Cu. Yds.	I-10 Rip-rap Sq. Yds.	I-14 Std. Type Lin. Ft.	I-15 Std. 5" Lin. Ft.	I-18 8" Cu. Yds.	L-10 Cu. Yds.	Special Mixing Calcium Chloride Sq. Yds.	SEE SHEET NO.
1	1610+00 to 1610+23	Lt.	2	44			118			1.2		10					13	
2		℄																
3	1611+85 to 1612+05	Rt.									68							
4	1612+02 to 1613+18	Lt.									60							
5	1612+50 to 1613+62.5	Rt.						60		1.0								
6	1613+18 to 1613+78	Lt.																
7	1613+70 to 1613+70	Lt.			9													
8		Rt.			6													
9	1613+43 to 1614+30	Lt.		86								96						
10	1613+78 to 1614+75	Lt.																
11	1614+05 to 1615+05	Rt.																
12	1614+75 to 1619+79	Lt.																
13	1619+30 to 1619+37	Rt.				Lump					25							
14	1619+79 to 1619+94	Lt.	19								7							
15	1619+43 to 1619+58	Rt.							52									
16	1619+58 to 1620+07	Rt.																
	SUBTOTALS		21	130	15	Lump	118	60	52	2.2	160	10	96	212.5	59	634	95	196
	TOTALS																	

Sta. 1610+00 to Sta. 1620+00

HOL - 39 - 28.57
TUS - 39 - [illegible]

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

26
231

Mildred Mae Christner

Sec.1 Sec.5

Item 10
L = 128'
W = 8'
D = 1.5'

Item 12
L = 20'
W = 12'
D = 1.5'

Item 14
L = 15'
W = 8'
D = 1.5'

Malva J. Miller
(aka) Malva Miller
Melvin Miller
Marvin Miller

CURVE DATA
P.I. - Sta. 1623+44.56
Δ = 75° 28' Lt.
D_c = 5° 00'
R_c = 1145.92'
L_c = 1109.33'
θ_s = 10° 00'
L_s = 400.'
T_s = 1091.09'
E_s = 310.37'

Sta. 1620+00

Field Drive Lt. +09
L = 48'

Fr. & Gravel Dr.

Begin Sheet

Fr. Barn

Fr. Shed

Fr. Shed

Gravel

Mildred Mae Christner

B.M - Mine Spike in P. Pole 1148/69
49' Rt, Sta. 1620+36, Elev. 1077.71

w/k

R/W

9'

6'

7.5'

Sta. 1626+00.00 ℄ Prop. S.R. 39
= Sta. 0+00.00 ℄ Prop. Conn.

℄ Prop. S.R. 39

Sta. 1627+62.86

Field Drive Lt. +00
L = 38'

Sta. 1630+00

End Sheet

1621 1622 1623 1624 1625 1626 1627 1628 1629

NOTE: Hatched area indicates pavement outside of construction limits to be removed.

Note:
For Prop. Details & Quantities, See Sheet No. 168 & 169

72.00

℄ Prop. Connection

HOL-39-30.74

Existing S.R. 39

Exist. 30" S.O. Conc. Box Culvert

Ex. Woven Wire Guard Rail

Sta. 1623+99.56 - P.I.
Creek
65.36'
58.38'
30" S.O. Conc. Box Culvert
Creek bank
Rock fill
Rock fill

Sta. 1627+62.86 - ℄ S
Hub
39.17'
32.05'
45.25'
1627
N/s in 3" Elm

B.M - Mine Spike in 30" W Cherry
331' Lt., Sta. 1625+34, Elev. 1101.36

1071.45 1073.45 1075.45 1077.45 1079.45 1081.45 1083.45 1085.45 1087.46 1089.45 1091.45 1093.45 1095.45 1096.43 1097.38

1096.30 1098.18 1100.02 1100.83 1101.61 1102.35 1103.06 1103.73 1104.37 1104.98 1105.55 1106.08 1106.58 1107.05

1110
1100
1090
1080
1070
1060

DVI - Sta. 1630+00
Elev. = 1111.45

+4.00%

-0.40%

+4.00%

30"I-1

+22, 34' Lt.
24" R = 1101.77

24" x 46' I-1, Class F-1

+76, 35' Lt.
24" R = 1100.16

+37, 35' Lt.
30" R = 1068.78

30" x 42' I-1, Class B-1

+95, 31' Lt.
30" R 1068.00

PVC - Sta. 1626+00

800' V.C.

Exc.	34,012 Cu. Yds.
Emb.	8,114 Cu. Yds.
Emb. + 15%	9,331 Cu. Yds.

1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630

ESTIMATED QUANTITIES * Sec. M-G.G(R) or M-G.8(2)

REF. NO.	STATION TO STATION	SIDE	E-3 Exist. Pavement Cu. Yds.	E-8 Exist. Pavement Sq. Yds.	7-35 2" Type "C" Cu. Yds.	I-1* 30" Class A-1 Lin. Ft.	I-1 30" Class B-1 Lin. Ft.	I-1 24" Class F-1 Lin. Ft.	I-2 Class "C" Cu. Yds.	I-10 Dumped Rock C.P. Cu. Yds.	I-14 F-15 Steel Piling Lin. Ft.	I-10 Class "C" Rip Rap Cu. Yds.	I-10 I-15 Class "B" Rip Rap Removed & Disposed of Sq. Yds.	I-10 Lin. Ft.	SEE SHEET NO.
1	1619+95 - 1620+37	Rt.					42								
2	1620+09	Lt.													
3	1620+09 - 1620+37	Lt.													
4	1620+37 - 1621+25	Lt.													
5	1620+07 - 1621+00	Rt.													
6	1620+75 - 1626+44	Rt.		1,248											
7	1621+25 - 1624+50	Lt.													
8	1625+25 - 0+59	Rt.													
9	1625+88 - 1627+36	Rt.	3			96			1.0	15					197
10	0+69 - 1628+50	Lt.								57					
11	1627+36 - 1627+56	Rt.													
12	1627+56 - 1628+61	Lt.								13					
13	1628+61 - 1628+76	Lt.								7					
14	1628+76 - 1629+22	Lt.						49							
15	1629+00 - 1627+00	Rt.													
16	1628+76 - 1629+22	Rt.													
17	1627+00 - 1630+00	Rt.													
18	1629+22 - 1630+00	Lt.													
19	1624+85 - 1625+83	Rt.													
	Sub-Totals		3	1,248	8	96	42	46	1.0	92	86	337.5	54	839	15 108
	TOTALS														

Sta 1620 + 00 to Sta 1630 + 00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

SEE SHEET NO.

Malva J. Miller
(a.ka)
Malva Miller
Melvin Miller
Marvin Miller

Sta 1630 + 00

S.T. 1631 + 62.86

Sta. 1640 + 00

R/W

W/L

1630 1631 1632 1633 1634 1635 1636 1637 1638 1639

N. 77° 24' E

℄ Prop. S.R. 39

75'

Begin Sheet

End Sheet

Malva J. Miller
(a.ka)
Malva Miller
Melvin Miller
Marvin Miller

Fr. Shed

Fr. Shed

Ex. 16' Gravel Drive

Fr. Shed

Payson M. Miller &
Ollis E. Miller

Jacob E. Miller
& Iva R. Miller

B.M. - Mine Spike in 24" Twin Willows
14' Lt., Sta. 1630+85, Elev. 1117.93

Sta 1631 + 62.86 - P.O.T.
26.03'
29.51'
11.50'
1632
3-nubs along fence line
1633

Sta 1634 + 53.41 - P.O.T.
20.95'
24.03'
30.90'
1634
4.3-0 Hickory
3 Nubs on Hillside

Sta 1637 + 74.67 - P.O.T.
47.95'
40.83'
40.92'
1637
5.6-0 & 6-0
3-Nubs

Sta 1638 + 86.90 - P.O.T.
N/S in 22"
30.0'
30.21'
28.59'
1638
N/S in 2" Apple

B.M. - Mine Spike in 24" W. Cherry
139' Lt., Sta. 1639 + 90, Elev. 1149.72

1170
1160
1150
1140
1130
1120
1110
1100

1107.05 1107.48 1107.88 1108.25 1108.58 1108.87 1109.13 1109.36 1109.55 1109.71 1109.83 1109.92 1109.98 1110.00 1109.98 1109.93 1109.85 1109.65 1109.45 1109.25 1109.05 1108.85 1108.65 1108.45 1108.25 1108.05 1107.85 1107.65 1107.45

1113.3 1115.5 1118.5 1121.2 1126.4 1133.7 1146.4 1158.0 1167.9 1172.3 1170.8 1166.8 1162.1 1157.7 1156.4 1159.7 1157.0 1148.2 1138.2 1129.8 1121.7

1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640

P.V.I. - Sta. 1630+00
Elev. = 1111.45

+4.00%

-0.40%

-0.40%

P.V.C. Sta. 1634+00

800' V.C.

Exc.	206,367 Cu. Yds.
Emb.	272 Cu. Yds.
Emb. + 15%	313 Cu. Yds.

ESTIMATED QUANTITIES

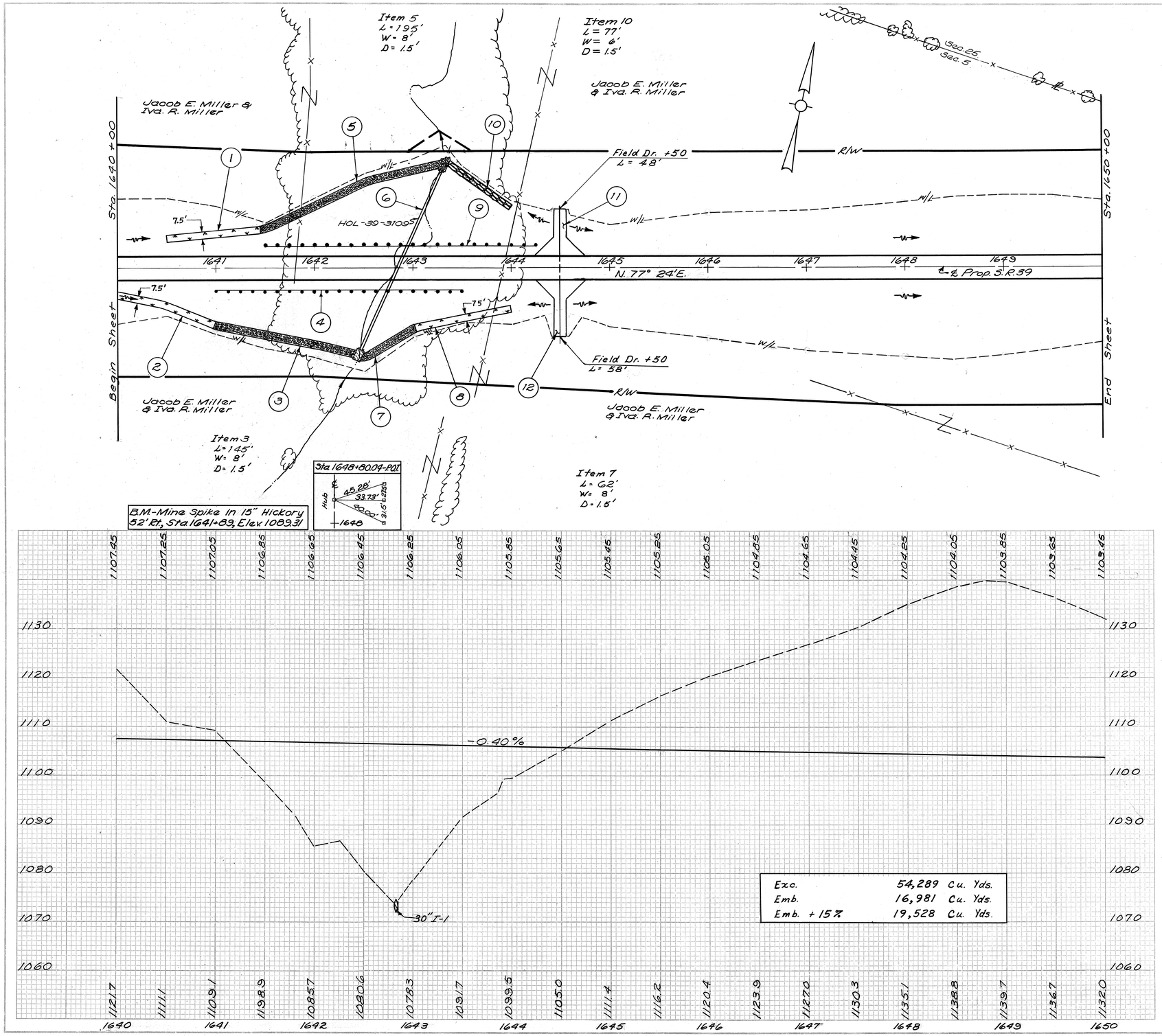
L-10

REF. NO.	STATION TO STATION	SIDE	Sq. Yds.
1	1630+00 - 1637+00	Rt.	83
TOTALS			83

Sta. 1630 +00 to Sta. 1640 +00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



Exc.	54,289	Cu. Yds.
Emb.	16,981	Cu. Yds.
Emb. + 15%	19,528	Cu. Yds.

ESTIMATED QUANTITIES

*Sec. M-6.4(d) 12 Gage

REF. NO.	STATION TO STATION	SIDE	E-3 Cu. Yds.	I-1 30" Class A-1* Lin. Ft.	I-2 Class "C" Cu. Yds.	I-10 Dumped Rock C.P. Cu. Yds.	I-10 Riprap Sq. Yds.	I-15 Std. Lin. Ft.	I-18 6" Cu. Yds.	L-10 Sq. Yds.
1	1640+50 - 1641+45	Lt.								79
2	1640+00 - 1640+98	Rt.								86
3	1640+98 - 1642+40	Rt.				64				
4	1641+00 - 1643+50	Rt.						250		
5	1641+45 - 1643+27	Lt.				87				
6	1642+83	Lt. & Rt.	2	200	1.0	11	10			11
7	1642+48 - 1643+03	Rt.				28				
8	1643+03 - 1644+00	Rt.								83
9	1641+50 - 1644+25	Lt.						275		
10	1643+37 - 1644+00	Lt.				26				
11	1644+50	Lt.							18	
12	1644+50	Rt.							20	
TOTALS			2	200	1.0	216	10	525	38	259

Sta. 1640+00 to Sta. 1650+00

HOL - 39 - 0.07
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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Item 7
L = 300'
W = 8'
D = 1.5'

Item 12
L = 155'
W = 6'
D = 1.5'

Harry Gerber Sr.

Item 1
L = 53'
W = 10'
D = 1.5'

Harry Gerber Jr.
& Doris Gerber

Sec. 26

Sec. 5

E/W

Jacob Miller
& Iva R. Miller

Sta 1650+00

Sta 1660+00

HOL-39-3134

HOL-39-3140

9'

1651 1652 1653 1654 1655 1656 1657 1658 1659

N. 77° 24' E.

℄ Prop. S.R. 39

7.5'

6'

6'

Begin Sheet

End Sheet

E/W

Jacob Miller
& Iva R. Miller

Roy Hostetler &
Lois Hostetler

Item 5
L = 295'
W = 8'
D = 1.5'

Item 13
L = 52'
W = 6'
D = 1.5'

Sta. 1658+39.18-P.O.T.
16" Oak 33.27' ℄
16" Hick. 23.70'
20" Oak 16.56'
1658

B.M.- Mine Spike in PPole 1148
121' Lt, Sta. 1651+50, Elev. 1121.37

B.M.-Mine Spike in 40" Elm
7' Rt, Sta. 1655+93, Elev. 1058.49

B.M.-Mine Spike in 18" W. Cherry
61' Rt, Sta. 1659+39, Elev. 1066.69

1130 1120 1110 1100 1090 1080 1070 1060 1050

1103.45 1103.25 1103.05 1102.85 1102.65 1102.45 1102.25 1102.17 1102.15 1102.17 1102.23 1102.35 1102.51 1102.72 1102.98 1103.29 1103.65 1104.05 1104.50 1105.00 1105.55 1106.14 1106.78 1107.47 1108.21 1109.00 1109.83 1110.72 1111.65 1112.62 1113.66 1114.75 1115.85

1032.0 1126.4 1119.4 1108.3 1098.6 1097.8 1096.6 1093.4 1088.9 1083.1 1075.2 1067.5 1054.3 1044.8 1052.4 1055.8 1064.2 1060.5 1059.9 1063.1 1072.5

600' V.C.

P.V.C.-Sta. 1653+00

P.V.T.-Sta. 1659+00

-0.40%

-0.40%

+4.20%

P.V.I.-Sta. 1656+00

Elev. = 1101.05

42" I-1

6" I-1

36" I-1

Exc.	12,598 Cu. Yds.
Emb.	136,810 Cu. Yds.
Emb. + 15%	157,332 Cu. Yds.

1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660

SEE SHEET NO. 99 200 201 183

*** Sec. M-6.1(6) As Per Plan † Sec. M-6.4(2)

ESTIMATED QUANTITIES

** Sec. M-6.4(6) Gage

	Flared Ends per Plan	I-10	I-10	I-15	L-10		
E-3	I-1** 36" Class A-1	I-1** 42" Class A-1	I-12 "C" Class C.P.	Dumped Rprap Rock	Std.	Sq. Yds.	Lin. Ft.	Sq. Yds.	Lin. Ft.
Cu. Yds.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Cu. Yds.					
28			29					42	
								246	
						800			
				131				203	
				133					
		324	3.4	23	21	550		14	
								13	
4			1.2	33	21			50	
				52					
8	264			17					
34	264	324	4.6	418	42	1350	568		

*Sec. M-6.4(6) Gage

REF. NO.	STATION TO STATION	SIDE	I-1 #36" Class A-1 Lin. Ft.	I-1 #42" Class A-1 Lin. Ft.	I-12 "C" Class C.P. Cu. Yds.	Dumped Rprap Rock Cu. Yds.	Std.	Sq. Yds.	Lin. Ft.	Sq. Yds.	Lin. Ft.
1	1651+50	Lt.									
2	1651+50 1652+00	Rt.									
3	1651+55 1654+00	Lt.									
4	1652+00 1660+00	Rt.									
5	1652+00 1654+80	Rt.									
6	1655+00 1658+00	Rt.									
7	1654+00 1656+75	Lt.									
8	1655+78	℄	4								
9	1654+50 1660+00	Lt.		324	3.4	23	21	550		14	
10	1659+00	℄								13	
11	1658+50 1659+33	Rt.	2	264		1.2	33	21		50	
12	1658+53 1660+00	Lt.									
13	1659+48 1660+00	Rt.									
15	1657+60	Lt.									
TOTALS			34	264	324	4.6	418	42	1350	568	

REF. NO.	STATION TO STATION	SIDE	I-1 #48" Class A-1 Lin. Ft.	I-9 No. 1 Class Class A-1 Lin. Ft.	I-3 #-4 Fiber Lin. Ft.	Lin. Ft.
1	1651+50	Lt.				
2	1651+50 1652+00	Rt.				
3	1651+55 1654+00	Lt.				
4	1652+00 1660+00	Rt.				
5	1652+00 1654+80	Rt.				
6	1655+00 1658+00	Rt.				
7	1654+00 1656+75	Lt.				
8	1655+78	℄				
9	1654+50 1660+00	Lt.				
10	1659+00	℄				
11	1658+50 1659+33	Rt.				
12	1658+53 1660+00	Lt.				
13	1659+48 1660+00	Rt.				
15	1657+60	Lt.	162	10	3	
TOTALS			162	10	3	

Sta. 1650+00 to Sta. 1660+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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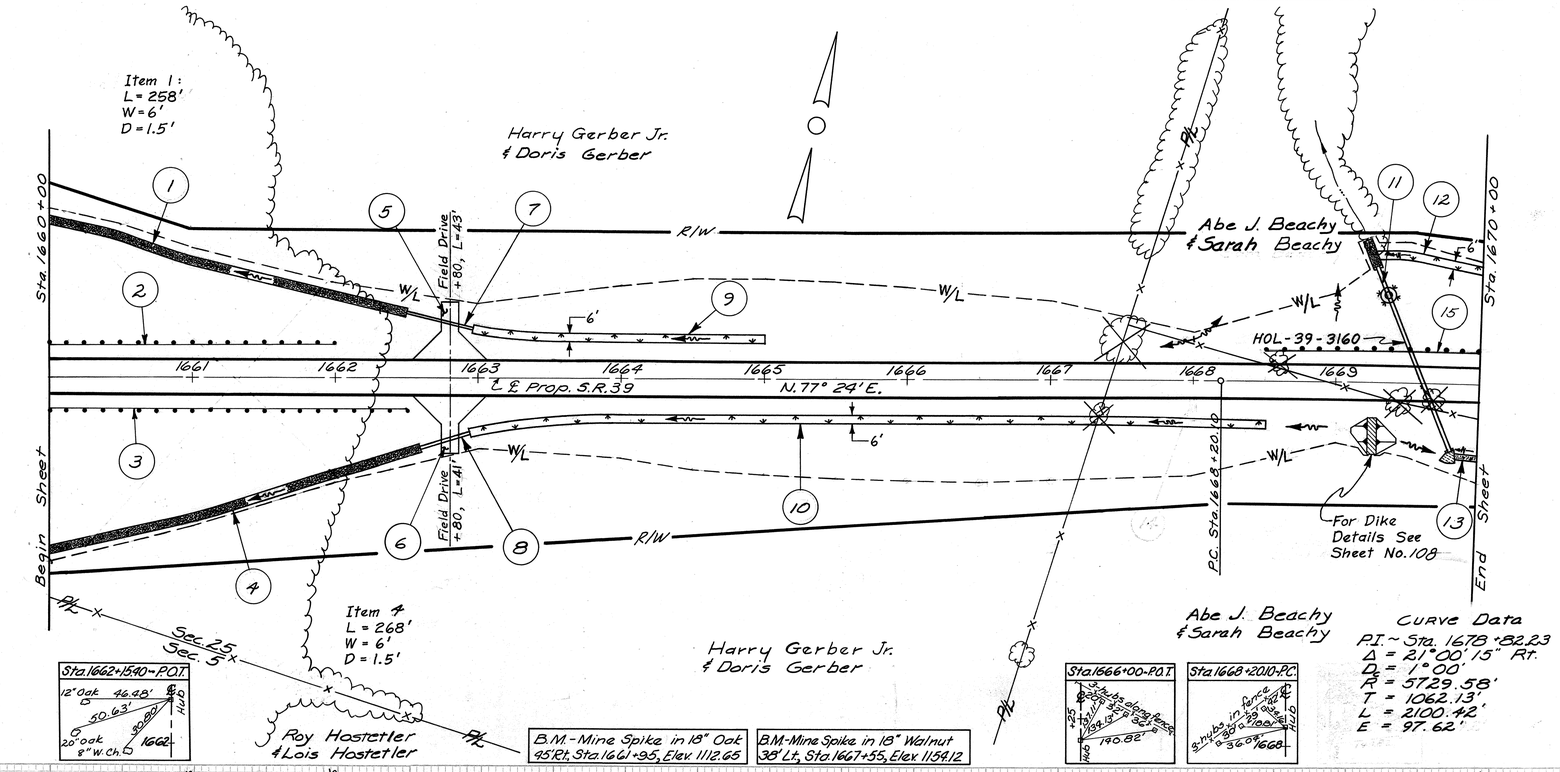
231



Exc.	34,752 Cu. Yds.
Emb.	28,460 Cu. Yds.
Emb. +15%	32,729 Cu. Yds.

ESTIMATED QUANTITIES

| SEE SHEET NO. | | |

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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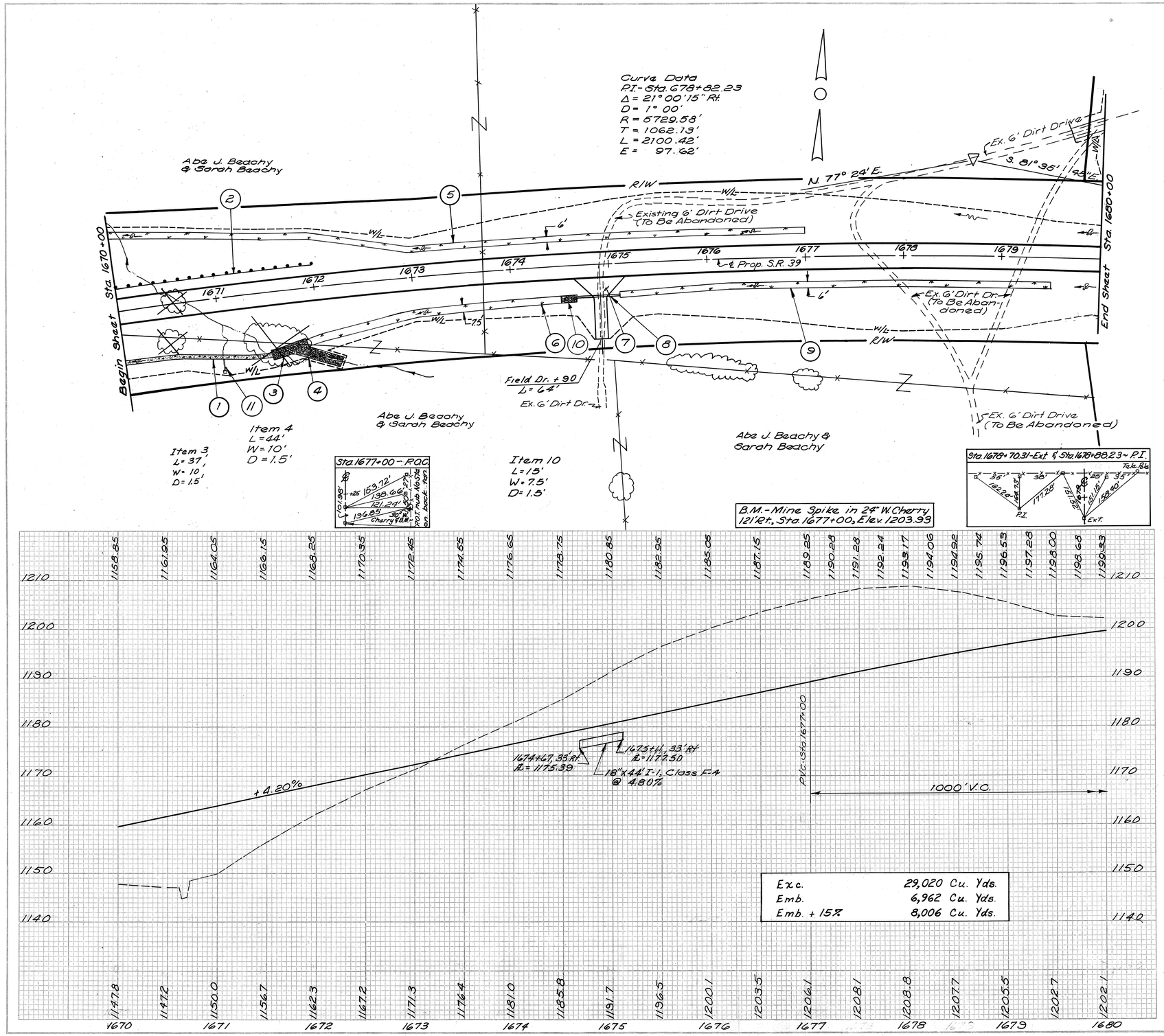
231



ESTIMATED QUANTITIES * Sec. M6.4(h) as per Plan ** Sec. M-6.4(c)

REF. NO.	STATION TO STATION	SIDE	E-3 Cu. Yds.	I-1 18" Class F-4 Lin. Ft.	I-10 Dumped Rock C.P. Cu. Yds.	I-14 Std. Type 1 Lin. Ft.	I-15 Std. Lin. Ft.	I-18 6" Cu. Yds.	L-10 Sq. Yds.	I-1 *6" Class F-3 Lin. Ft.	I-9 No. I 8** Class F-4 Lin. Ft.	I-9 No. I as per Plan Lin. Ft.
1	1670+00 - 1671+50	Rt.				150			50			
2	1670+00 - 1672+00	Lt.					200					
3	1671+50 - 1671+87	Rt.			21							
4	1671+75 - 1672+20	Rt.	12		24							
5	1670+00 - 1677+00	Lt.							471			
6	1671+87 - 1674+52	Rt.							219			
7	1674+90	Rt.						22				
8	1674+67 - 1675+11	Rt.		44					5			
9	1675+11 - 1679+50	Rt.							291			
10	1674+52 - 1674+67	Rt.			6							
11	1671+00	Rt.								4	10	3
TOTALS			12	44	51	150	200	22	1036	4	10	3

SEE SHEET NO. 109

Sta. 1670+00 to 1680+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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Note: For Details & Quantities of T.R. 146 See Sheet No. 170, 171, 172 & 179

Ex. 9' Gravel Dr.

Ex. 10' Dirt Dr.

℄ Prop. T.R. 146

S 2° 39' 54" W

Curve Data
P.I. - Sta. 1678+82.23
Δ = 21°00'15" Rt.
D = 1°00'
R = 5729.58'
T = 1062.13'
L = 2100.42'
E = 97.62'

Abe J. Beachy & Sarah Beachy

NOTE: For description of Item 11, see General Notes.

3" Water Line

Sec. 25 / Sec. 24

John E. Shetler & Sarah Shetler

Item 10
L = 157'
W = 6'
D = 1.5

Item 5
L = 135
W = 8
D = 1.5

Sta 1680+00

Sta 1690+00

R/W

W/L

6'

HOL-39-3190

HOL-39-3181

1681 1682 1683 1684 1685 1686 1687 1688 1689

℄ Prop. S.R. 39

S 81° 35' 45" E

PT = Sta. 1689+20.52

Begin Sheet

End Sheet

Sta. 1680+41.60 ℄ Prop. S.R. 39
Sta. 10+00.00 ℄ Prop. T.R. 146

Item 2
L = 100'
W = 6'
D = 1.5'

Abe J. Beachy & Sarah Beachy

Grace Glick

Christ C. Glick

John E. Shetler & Sarah Shetler

Sta 1684+20-P.O.C.
30" Cherry
20'
P.O.T. on Forward Tangent
Hub
Tangent

B.M. - Mine Spike in 24" W. Cherry
65' Rt. Sta. 1680+20, Elev. 1213.27

B.M. - Mine Spike in Power Pole 118-8 282' Lt., Sta. 1680+50, Elev. 1187.21

B.M. - Mine Spike in 10" Catalpa
111' Rt. Sta. 1684+64, Elev. 1179.93

B.M. - Mine Spike in 24" Stump
35' Lt., Sta 1689+50, Elev. 1181.69

Sta. 1689+2052 - P.T.
P.O.T. Sta. 1689+61.35
Hub

1199.33 1199.94 1200.52 1201.06 1201.57 1202.04 1202.48 1202.88 1203.25 1203.58 1203.88 1204.14 1204.37 1204.56 1204.72 1204.84 1204.93 1204.98 1205.00 1204.98 1204.93 1204.84 1204.72 1204.56 1204.37 1204.14 1203.88 1203.58 1203.25 1202.55 1201.85 1201.15 1200.45 1199.75 1199.05

1220 1210 1200 1190 1180 1170 1160

P.V.I. - Sta. 1682+00
Elev. = 1210.25

+4.20%

-7.40%

-1.40%

15" I-1

1000' V.C.

P.V.T. - Sta. 1687+00

24" I-1

1202.1 1200.1 1206.3 1210.2 1212.3 1210.8 1206.7 1200.5 1192.1 1183.7 1174.9 1167.1 1164.7 1167.9 1174.0 1173.4 1178.2 1183.4 1185.9 1186.3 1188.1

1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690

Exc.	9,552	Cu. Yds.
Emb.	66,824	Cu. Yds.
Emb. + 15%	76,848	Cu. Yds.

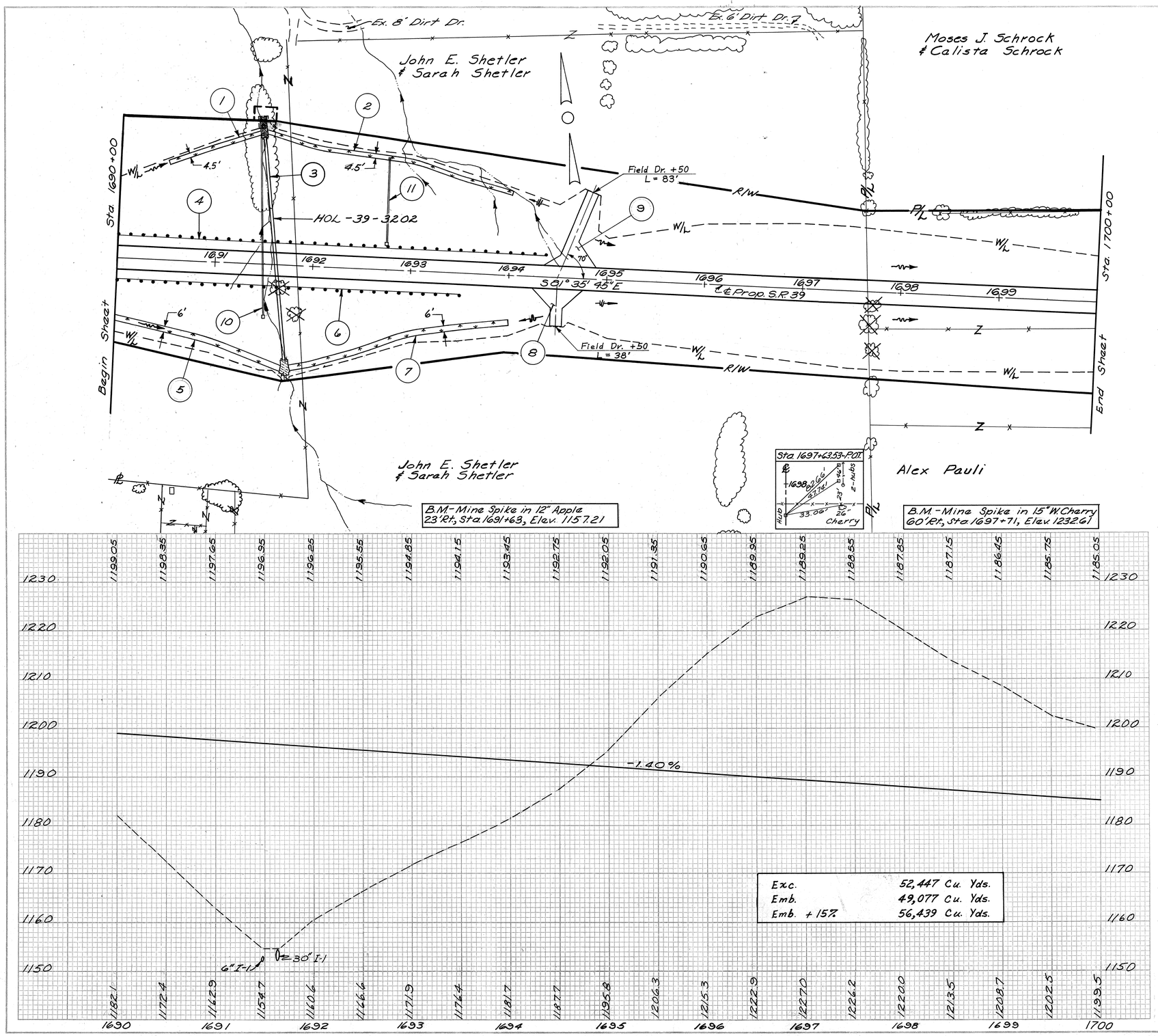
ESTIMATED QUANTITIES ***As per plan

| SEE SHEET NO. | | 203 | 204 | | |

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

33
23.1



ESTIMATED QUANTITIES

* Sec. M-6.4(d) Gage 10 * Sec. M-6.4(h), as per plan ‡ Sec. M-6.4(c)

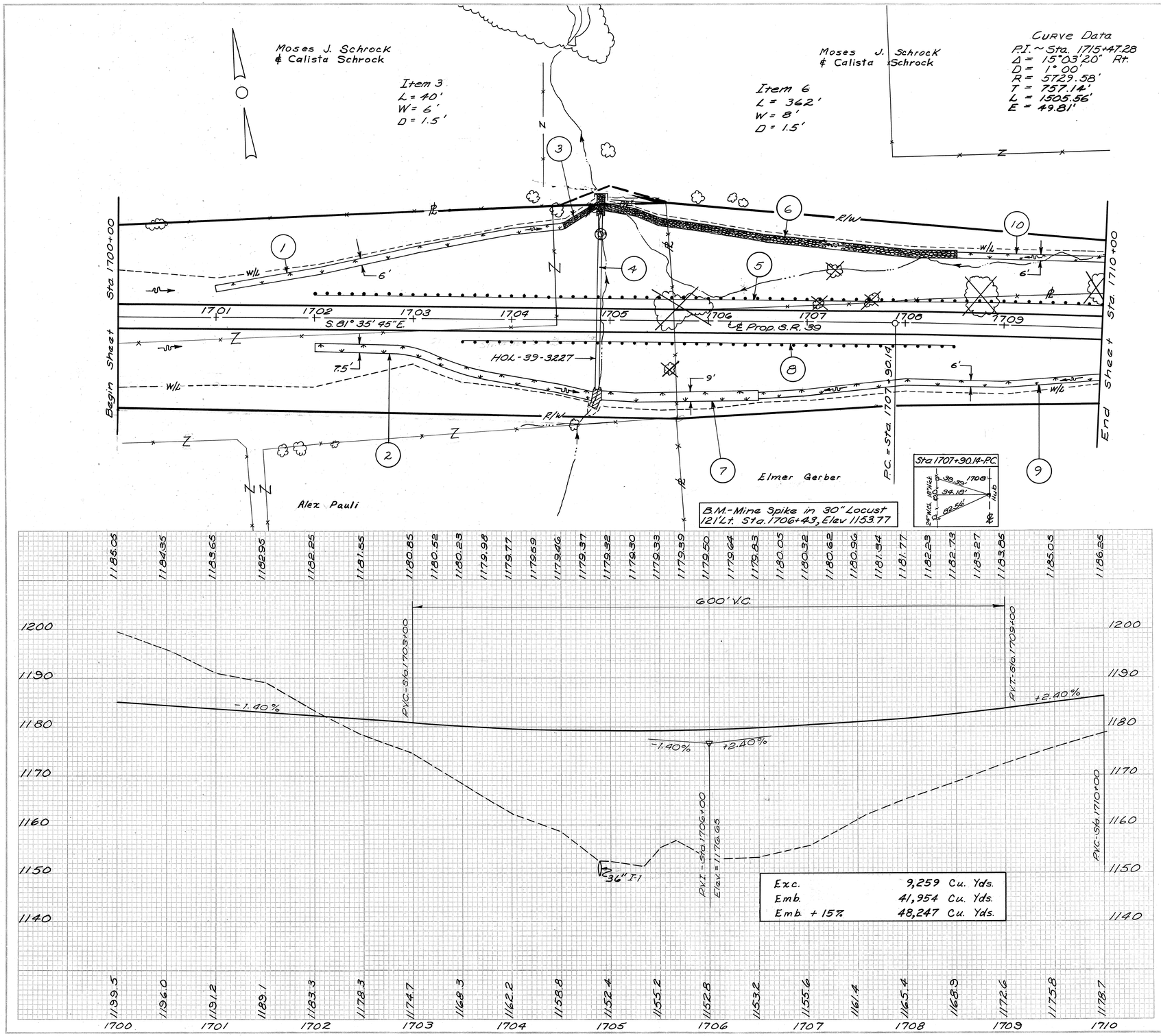
REF. NO.	STATION TO STATION	SIDE	E-3 Cu. Yds.	I-1* 30" Class A-1 Lin. Ft.	I-2 Class "C" Cu. Yds.	I-10 Dumped Rock C.P. Cu. Yds.	I-10 Riprap Sq. Yds.	I-15 Std. Lin. Ft.	I-18 6" Cu. Yds.	L-10 Sq. Yds.	I-1 ** 6" Class I-3 Lin. Ft.	I-1 8" ‡ Class F-4 Lin. Ft.	I-9 No. I Class Plan Lin. Ft.	SEE SHEET NO.
1	1690+50 - 1691+43	Lt.								49				
2	1691+49 - 1694+00	Lt.								129				
3	1691+63	℄	3	228	1.0	12	11			11				205
4	1690+00 - 1694+37.5	Lt.						437.5						
5	1690+00 - 1691+73	Rt.								118				
6	1690+00 - 1693+50	Rt.						350						
7	1691+80 - 1694+00	Rt.								153				
8	1694+50	Rt.							16					
9	1694+50	Lt.							27					
10	1691+50	Rt.									174	10	3	183
11	1692+75	Lt.					4				76	10	3	183
TOTALS			3	228	1.0	12	15	787.5	43	460	250	20	6	

Sta. 1690+00 to Sta. 1700+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

34
231



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	E-3	I-1 36" Class A-1 *	I-2 Class "C"	I-8 Std. Type 1 M.H.	I-10 Dumped Rock C.P.	I-10 Riprap	I-15 Std.	L-10
			Cu. Yds.	Lin. Ft.	Cu. Yds.	Each	Cu. Yds.	Sq. Yds.	Lin. Ft.	Sq. Yds.
1	1701+00 ~ 1704+50	Lt.								240
2	1702+00 ~ 1704+82	Rt.								239
3	1704+50 ~ 1704+85	Lt.					13			
4	1704+88	Lt/Rt.	3	176	1.2	1	15	17		18
5	1702+00 ~ 1710+00	Lt.							800	
6	1704+94 ~ 1708+50	Lt.					161			
7	1704+91 ~ 1706+50	Rt.								159
8	1703+50 ~ 1708+50	Rt.							500	
9	1706+50 ~ 1710+00	Rt.								233
10	1708+50 ~ 1710+00	Lt.								100
TOTALS			3	176	1.2	1	189	17	1300	989

* M6.4(d) 10 Gage

Sta. 1700 +00 to Sta. 1710 +00

HOL · 39 · 28.57
TUS · 39 · 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

35
231

SEE SHEET NO.

Z Ex 13' - 2' Ditch Lane

Curve Data
P.I. ~ Sta. 1715+47.28
Δ = 15°03'20" Rt.
D = 1°00
R = 5729.58'
T = 757.14'
L = 1505.56'
E = 49.81'

Moses J. Schrock
& Calista Schrock

R/W
W/L
S 81° 35' 45" E.
S 66° 32' 25" E.
Sta. 1710+00
Sta. 1720+00
Begin Sheet
End Sheet
1711 1712 1713 1714 1715 1716 1717 1718 1719
℄ Prop. S.R. 39

Moses J. Schrock
& Calista Schrock

Elmer Gerber

Mykola Ahijevych
& Maria Ahijevych

Sta 1715+42.92-Ent & Sta 1715+47.28-P.I.
180.20' 49.81' 139.72'
Ent. Hub
P.I. Hub
Ext. Hub
Gate Hub
Gate Hub
Br. Pos.
1715
Gate Drive

B.M.-Mine Spike in 36" Maple
146' Lt., Sta. 1710+75, Elev. 1182.81

B.M.-Iron Pin at West Gate Post
232' Lt., Sta. 1715+50, Elev. 1231.13

1186.25 1186.84 1187.40 1187.93 1188.44 1188.92 1189.38 1189.81 1190.21 1190.59 1190.94 1191.26 1191.56 1191.83 1192.08 1192.30 1192.49 1192.66 1192.80 1192.91 1193.00 1193.06 1193.10 1193.11 1193.09 1193.05 1192.98 1192.88 1192.76 1192.61 1192.44 1192.24 1192.01 1191.76 1191.48 1191.17 1190.84 1190.48 1190.10 1189.69 1189.25

1240 1230 1220 1210 1200 1190 1180 1170

P.V.I. Sta. 1717+00
Elev. = 1208.05
+2.40%
-3.48%
P.V.C. - Sta. 1710+00
1400' V.C.

1178.7 1183.0 1191.0 1195.6 1201.5 1208.6 1216.1 1223.6 1229.7 1234.2 1236.8 1237.4 1235.9 1232.2 1229.1 1226.7 1223.1 1218.9 1213.8 1208.0 1202.8

17/10 17/11 17/12 17/13 17/14 17/15 17/16 17/17 17/18 17/19 17/20

Exc.	97,634 Cu. Yds.
Emb.	1,063 Cu. Yds.
Emb. + 15%	1,222 Cu. Yds.

ESTIMATED QUANTITIES

* As Per Plan

REF. NO.	STATION TO STATION	SIDE	I-10	I-7 6" Mix(A) Class E-3 Lin.Ft.	I-1 8" ** Class E-4 Lin.Ft.	I-9 16.1 as per Plan Lin.Ft.	I-10 Riprap Sq. Yds.
			Sq. Yds.				
			69				
1	1710+00 ~ 1711+00	Rt.	140	16	10	3	4
2	1710+00 ~ 1712+00	Lt.					
3	1710+80	Ct.					
TOTALS			209	16	10	3	4

** See M-6.4 (c)

Sta. 1710+00 to Sta. 1720+00

HOL · 39 · 28.57
TUS · 39 · 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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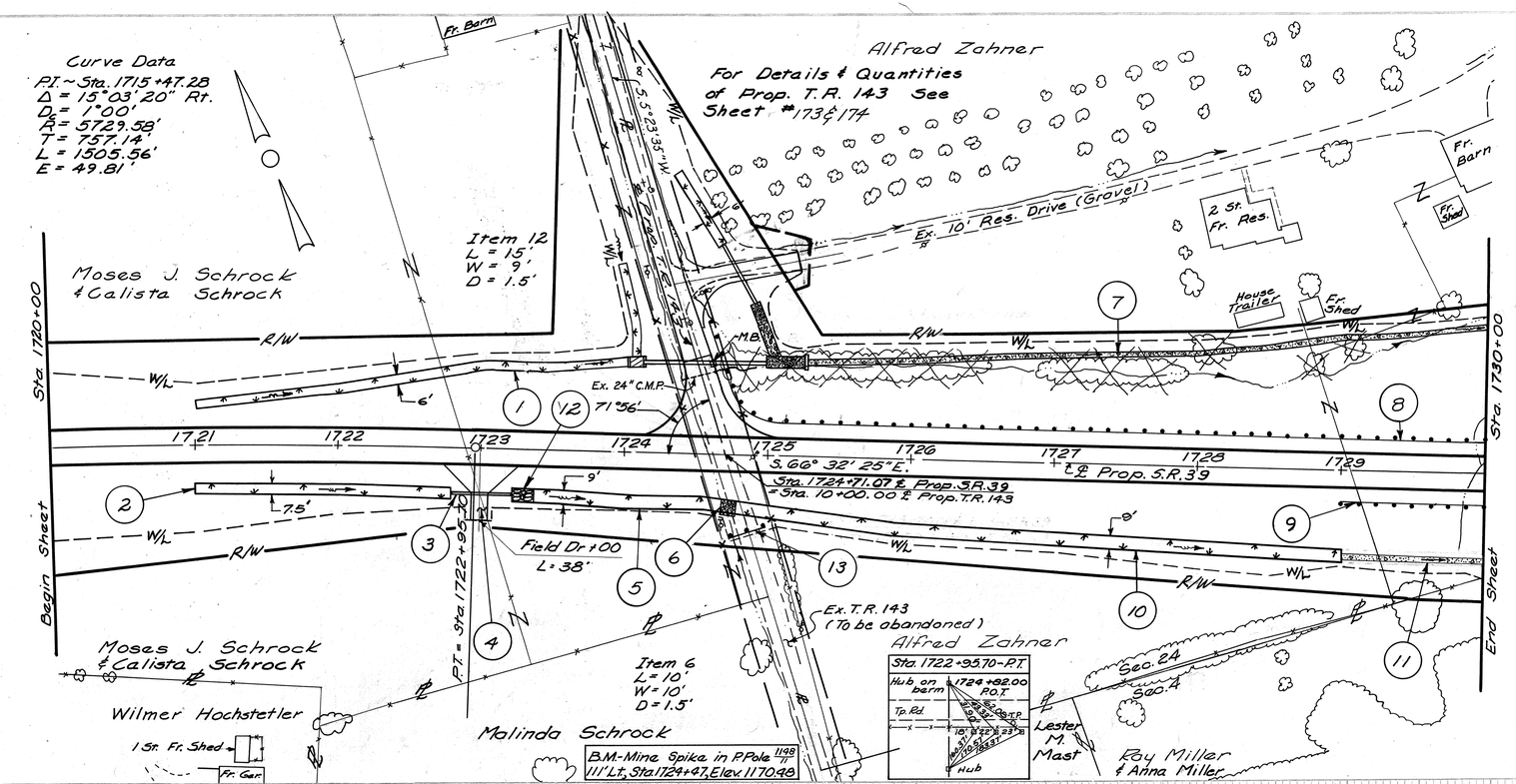
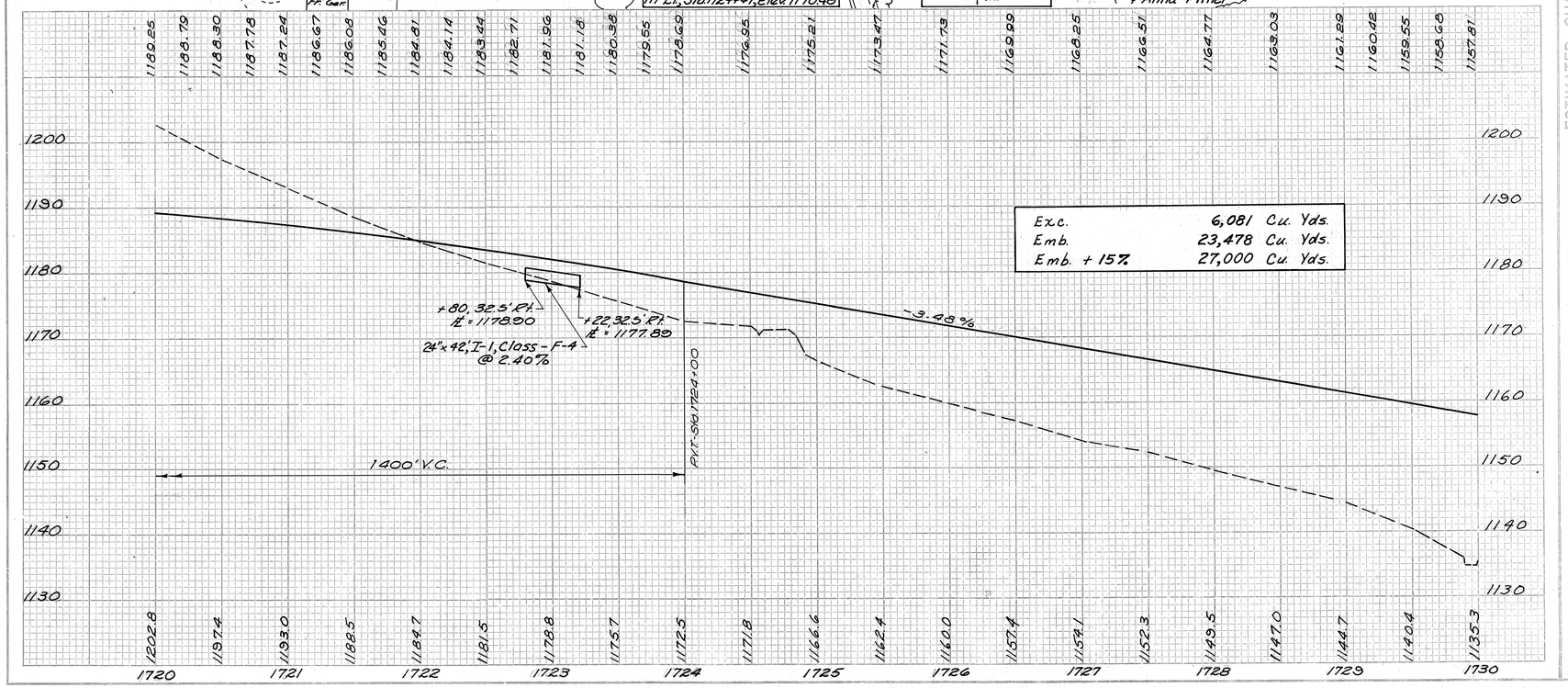
231

SEE SHEET NO.





Exc.	6,081 Cu. Yds.
Emb.	23,478 Cu. Yds.
Emb. + 15%	27,000 Cu. Yds.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 24" Class F-4 Lin. Ft.	I-10 Dumped Rock C.Y. Cu. Yds.	I-14 Std. Type 1 Lin. Ft.	I-15 Std. Lin. Ft.	I-18 6" Cu. Yds.	L-10 Sq. Yds.
1	1721+00 ~ 1724+00	Lt.						203
2	1721+00 ~ 1722+80	Rt.						140
3	1722+80 ~ 1723+22	Rt.	42					6
4	1723+37 ~ 1724+68	Rt.					16	130
5	1724+68 ~ 1724+78	Rt.						
6	1725+26 ~ 1730+00	Lt.		6	472	597.5		315
7	1724+58 ~ 1730+00	Lt.				100		
8	1729+00 ~ 1730+00	Rt.						423
9	1724+78 ~ 1729+00	Rt.						33
10	1729+00 ~ 1730+00	Rt.			100			
11	1723+22 ~ 1723+37	Rt.		8		25		
12	1724+75 ~ 1725+00	Rt.						
	TOTALS		42	14	572	712.5	16	1258

Sta. 1720+00 to Sta. 1730+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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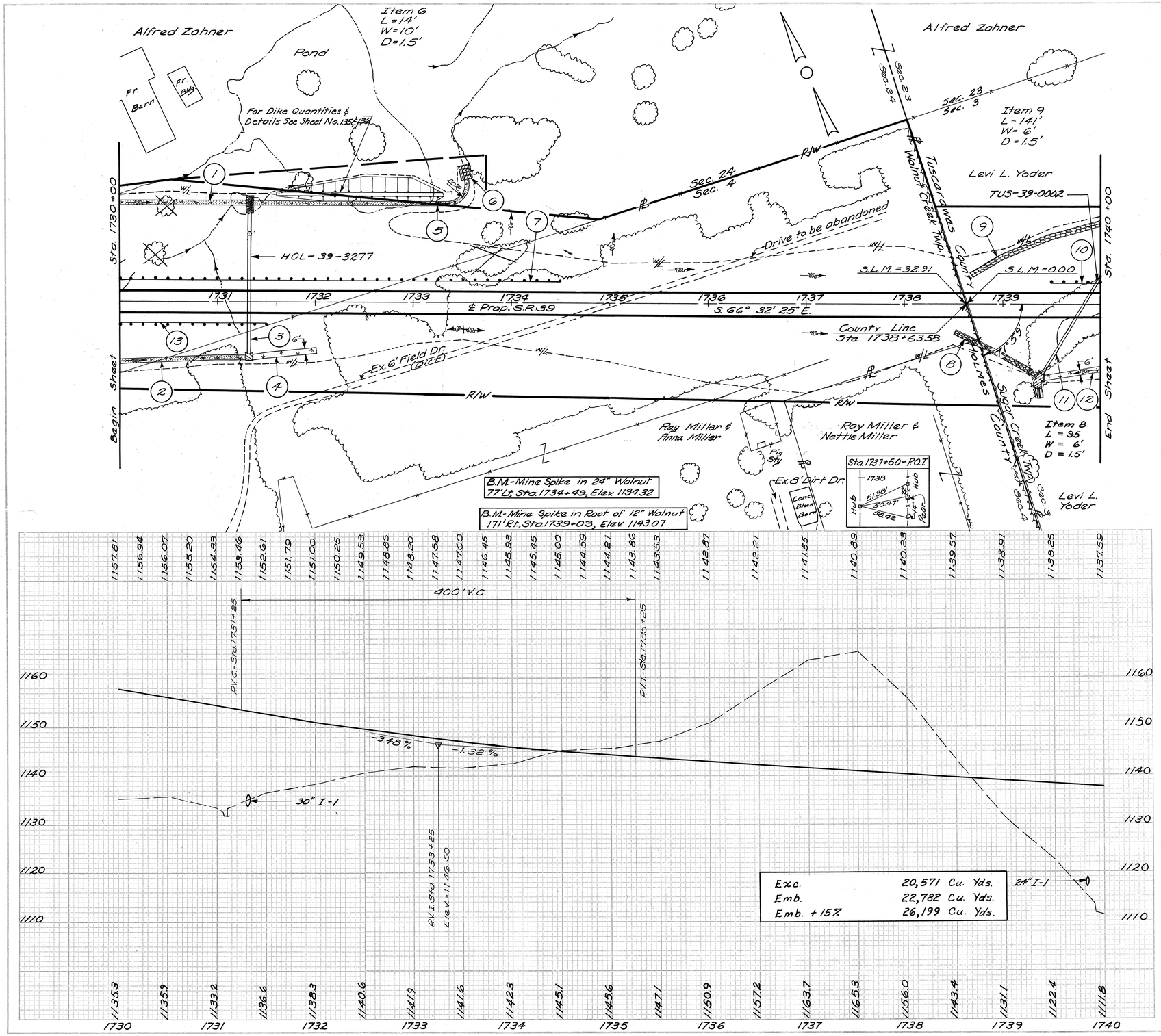
231



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	* Sec. M-6.4(d) E-3	I-1* 24" Class A-1	I-1* 30" Class A-1	I-2 Class "C"	I-8 Std. No. 1 Manhole	I-10 Dumped Rock C.P.	I-10 Riprap Rock Type 1	I-14 Std.	I-15 Std.	L-10
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Each	Cu. Yds.	Sq. Yds.	Lin. Ft.	Lin. Ft.	Sq. Yds.
1	1730+00 1731+28	Lt.								128		86
2	1730+00 1731+28	Rt.								128		43
3	1731+32	℄										18
4	1731+36 1732+00	Rt.										43
5	1731+36 1733+53.35	Lt.								234		156
6	1733+50	Lt.	30					8				
7	1730+00 1734+50	Lt.									450	
8	1738+50 1739+34	Rt.						32				
9	1738+65 1740+00	Lt.						47				
10	1739+50 1740+00	Lt.									50	
11	1739+83	℄	9	190		2.1		16	14			6
12	1739+44 1740+00	Rt.										38
13	1730+00 1731+50	Rt.										150
TOTALS			39	190	146	3.1	1	115	19	490	650	390

Sta. 1730+00 to Sta. 1740+00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. NO. DIVISION	STATE	PROJECT		
2	OHIO			

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231

NOTE: For description and disposition of hatched area, see Sheet No. 175

℄ Prop. C.R. 72

Note: Item 9
L = 40'
W = 6'
D = 1.5'

Levi L. Yoder

Note:
For Prop. C.R. 72 Details and Quantities, See Sheet No. 175 & 176

Exist. 8' Conc. Watering Trough

Exist. 1" Plastic Pipe (To remain in place)

Henry Zahner
(aka Henry M. Zahner)

Sta. 1743+80.00 ℄ Prop. S.R. 39

Sta. 10+00.00 ℄ Prop. C.R. 72

S. 23° 27' 35" W.

Sta. 1740+00

Sta. 1750+00

TUS-39-0002

TUS-39-0008

Ex. 12" V.S.P. (To be removed under E-1)

Exist. 16' Dirt Field Drive (To be abandoned)

℄ Prop. S.R. 39

S. 66° 32' 25" E.

Ex. 1" Plastic Pipe (To be abandoned)

Ex. 24" V.S.P.

C.B.

Field Drive +80
L = 36'

Begin Sheet

End Sheet

R/W

W/L

Levi L. Yoder

Ex. C.R. 72

Exist. 15' Dirt Field Drive

Henry Zahner
(aka Henry M. Zahner)

Sta. 1740+50-P.O.T.

Sta. 1746+16.55-P.O.T.

B.M.-Mine Spike in 20" poplar
138' Rt., Sta. 1742+95, Elev. 1128.24

B.M.-Mine Spike in Root of 36" Oak
57' Lt., Sta. 1745+79, Elev. 1166.59

1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750

1137.59 1136.93 1136.27 1135.61 1134.95 1134.29 1133.63 1132.97 1132.31 1131.65 1130.99 1130.33 1129.67 1129.01 1128.35 1127.69 1127.03 1126.37 1125.71 1125.05 1124.39

1170 1160 1150 1140 1130 1120 1110

1111.8 1121.5 1122.9 1124.3 1124.9 1116.8 1113.4 1121.8 1131.7 1139.6 1148.1 1156.2 1163.5 1171.4 1172.8 1171.8 1165.8 1156.4 1148.2 1141.4 1134.5

-1.52 %

24" I-1

6" I-1

Exc.	70,752 Cu. Yds.
Emb.	16,594 Cu. Yds.
Emb. +15%	19,083 Cu. Yds.

ESTIMATED QUANTITIES

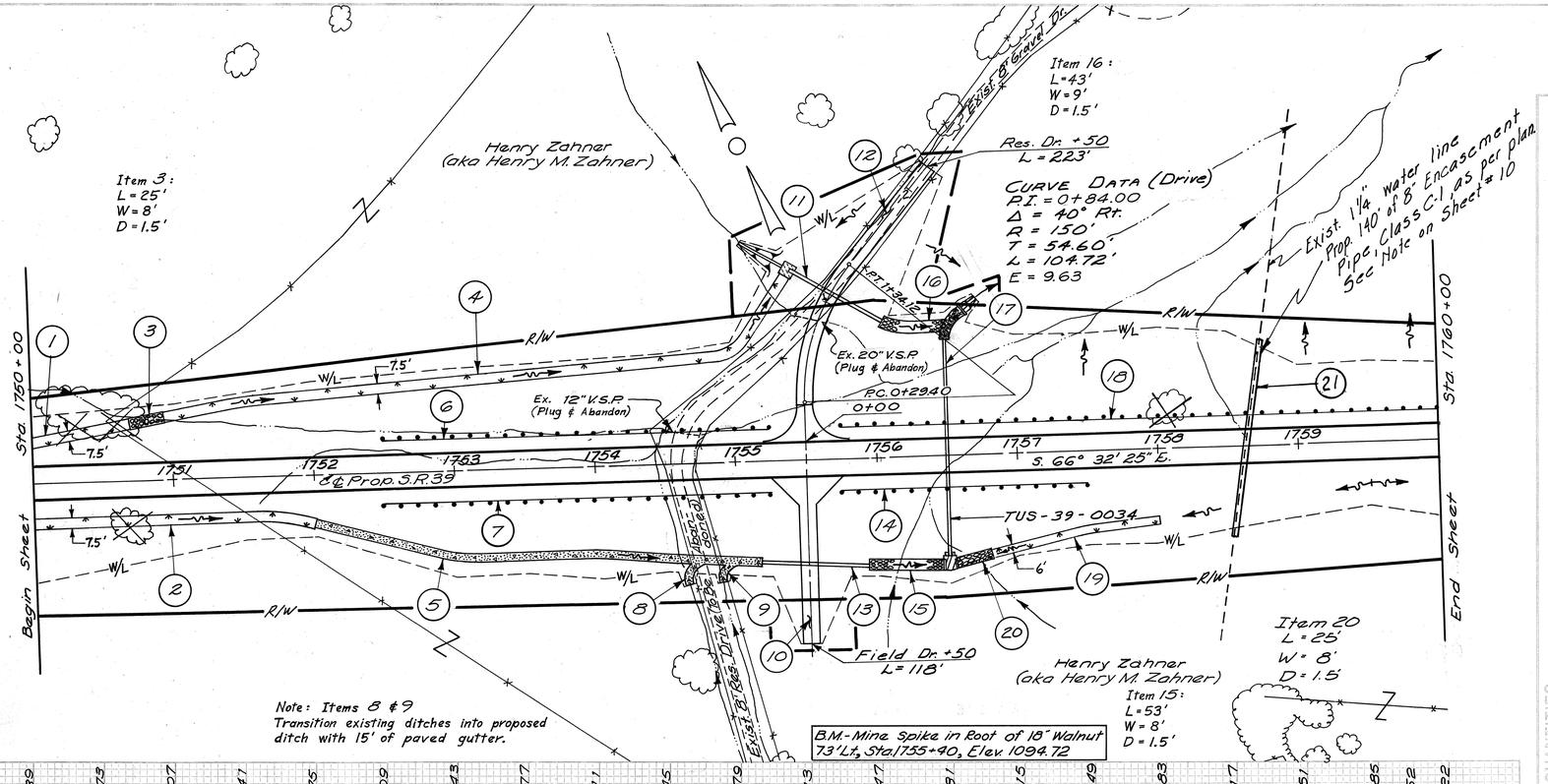
DESC. NO.	STATION TO STATION	SIDE	E-3 Cu. Yds.	I-1 24" Class A-1* Lin. Ft.	I-1 6"** Cl. I-3 Asparagus Lin. Ft.	I-1 8"*** Class F-4 Lin. Ft.	I-2 Class C Cu. Yds.	I-9 No. 1 Aggregate Lin. Ft.	I-10 Dumped Rip-Rap Cu. Yds.	I-10 Rip-Rap Sq. Yds.	I-15 Grid Lin. Ft.	I-16 C.B. Each	I-18 6" Cu. Yds.	L-10 Sq. Yds.
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Lin. Ft.	Cu. Yds.	Sq. Yds.	Lin. Ft.	Each	Cu. Yds.	Sq. Yds.
1	1740+00 - 1740+50	Rt.									362.5			35
2	1740+00 - 9+60	Lt.												
3	1742+25 - 1742+76	Rt.												97
4	1742+62	℄	8	150	134	10	0.8	3	1.5	12		1		6
5	1743+44 - 1743+00	Lt.												40
6	1743+80	Rt.											18	
7	1746+60 - 1746+97	Rt.									375			
8	1747+00 - 1750+00	Rt.							15					200
9	1740+00 - 1740+39	Lt.												
TOTALS			8	150	134	10	0.8	3	30	12	400	1	18	318

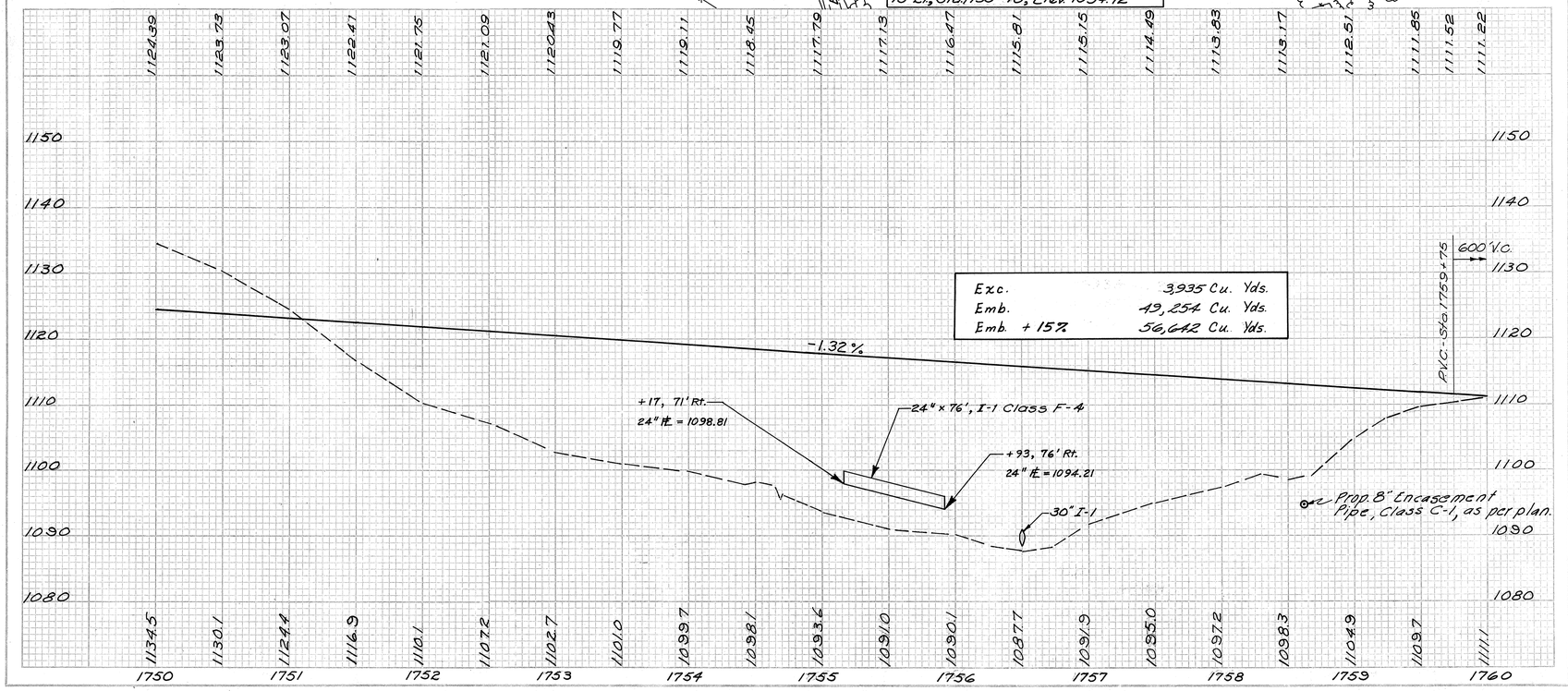
Sta. 1740 +00 to Sta. 1750 +00

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

39
23.1





ESTIMATED QUANTITIES

*Sec. M-6.4(a) or Sec. M-6.6(a)

DESC. NO.	STATION TO STATION	SIDE	E-9 T-35 2" Type C Cu. Yds.	I-1/* 30" Class A-1 Lin. Ft.	I-1 24" Class F-4 Lin. Ft.	I-2 Class C Cu. Yds.	I-10 Dumped Rock C.P. Cu. Yds.	I-10 Riprap Sq. Yds.	I-14 Std. Type 1 L.F.	I-15 Std. L.F.	I-16 5" C.Y.	I-18 6" C.Y.	I-18 8" C.Y.	I-10 8" Encasement Type C-1 L.F.	Misc. Mining Calcium Chloride S.Y.	SEE SHEET NO.
1	1750+00 1750+69	Lt.													58	180
2	1750+00 1752+00	Rt.													167	
3	1750+69 1750+94	Lt.														
4	1750+94 1755+42	Rt.													393	
5	1752+00 1755+17	Lt.													106	
6	1752+50 1755+25	Lt.													5	
7	1752+50 1755+25	Rt.													5	
8	1754+65 1754+88	Rt.													6	
9	1755+50 1+00 Res. Drive	Rt.													263	
10	1755+50	℄	13												6	
11	1755+17 1755+93	Lt.		4											58	
12	1755+93 1755+93	Rt.			76											
13	1755+175 1757+50	Rt.														
14	1755+93 1756+46	Rt.					24								12	
15	1756+07 1756+50	Lt.					22								81	
16	1756+50 1760+00	℄	3		154	2.5	19	10		425				140		
17	1755+175 1760+00	Lt.														
18	1755+175 1758+00	Rt.								175						
19	1756+54 1756+75	Rt.														
20	1758+62.6	℄					11									
21																
	Sub Totals		16	4	154	2.5	87	19	348/150	102			10	34.58	829	263
	TOTALS															140

Sta. 1750+00 to Sta. 1760+00

HOL-39-28.57
TUS-39-0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

40
231

Item: 6
L = 249'
W = 9'
D = 1.5

Item: 5
L = 30
W = 5'
D = 1.5'

Curve Data
P.I.-Sta. 1768+39.89
Δ = 32° 17' Rt.
Dc = 5° 00'
Rc = 1,145.92'
Lc = 245.67'
Θs = 10° 00'
Ls = 400'
Ts = 533.14'
Es = 53.08'

Item 1
L = 160'
W = 6'
D = 1.5'

Henry Zahner (aka Henry M. Zahner)

Henry Zahner (aka Henry M. Zahner)

Sta 1760+00

Begin Street

R/W

w/l

TUS-39-0050

9'

6'

6'

S.66° 32' 25" E.

℄ Prop. S.R. 39

1761 1762 1763 1764 1765 1766 1767 1768 1769

T.S. = Sta 1763+68.75

S.C. = Sta 1767+68.75

S.39° 15' 25" E.

John Hecker

Sta 1770+00

End Street

Edward G. Schlabach & Anna Schlabach

Sta 1767+66.75 - S.C.

Sta 1768+39.89 - P.I.

Henry Zahner (aka Henry M. Zahner)

BM-Mine Spike in 24" hickory 82' Rt. Sta. 1766+10, Elev. 1086.31

1111.22 1110.97 1110.78 1110.64 1110.55 1110.52 1110.55 1110.63 1110.76 1110.95 1111.19 1111.49 1111.84 1112.25 1112.71 1113.23 1113.80 1114.42 1115.10 1115.84 1116.63 1117.47 1118.37 1119.32 1120.30 1122.26 1124.22 1126.18 1128.14 1130.10 1132.06 1134.02 1135.98

600' V.C.

P.V.T. Sta. 1765+75

+3.92%

-1.32%

P.V.I. Sta. 1762+75

Elev. = 1107.56

30" I-I

1120 1110 1100 1090 1080 1070

1111.1 1112.5 1111.4 1111.8 1111.7 1104.1 1098.7 1083.9 1089.5 1079.9 1080.1 1079.3 1082.1 1087.5 1089.1 1089.1 1091.3 1095.6 1095.5 1105.1 1111.6

1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770

Exc.	5,643 Cu. Yds.
Emb.	93,108 Cu. Yds.
Emb. + 15%	107,074 Cu. Yds.

HOL-39-28.57
TUS-39-0.00

Sta. 1760+00 to Sta. 1770+00

* Sec. M-6.4(c)
** Sec. M-6.4(h), as per plan
*Sec. M-6.4(d), Gage 10.

ESTIMATED QUANTITIES

| SHEET NO. | | |

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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231

Item 5: Remove 80' of exist. 12" C.M.P. and plug the end of the remainder of pipe.

Note: For detail and quantities of proposed connection. See Sheet No. 177

For Quantities See Sheet No. 40

Sta. 1770+00

Corporation Line S. Patterville

Begin Sheet C.S. = Sta. 1770+12.42

Sta. 1770+1242 - C.S.
N/S in 24" Catalpa
15.0' @ 110°
35.0' @ 255°
Hub
1770

Sta. 1774+1242 - S.T.
N/S 14" Maple
17.07' @ 110°
N/S 20" Maple
63.82 @ 243°
Hub
1774
N/S 24" Maple

Sta. 1776+3766 - P.O.T.
N/S 12" Maple 1777
58.37' @ 110°
N/S 6" Maple
30.69' @ 255°
N/S
29.81' @ 243°
N/S P.Pole 1149A 58

Clara Daetz

Sta. 1773+64.42 & Prop. S.R.39 = Sta. 0+00.00 ℄ Prop. Conn.

S-80(2)

END PROJECT
Sta. 1774+80
SLM = 0.68

END WORK
Sta 1777+00

7-Story Brick Veneer Res.

Brick Walk Remove Under Ex.

Jacob Krutz

Ex. 8' Gravel Alley

Ex. 8' Gravel Drive

4" Gas Line

12" W.S.P. Drw.

8" V.S.P.

Low Stone Wall

Ex. Conc. Walk

Ex. Conc. Apron

Ex. Gravel Dr.

Parking Area

Exist. S.R. 39

4" Conc. Walk

Tile Manhole

Ex. Prop. C.L.

ST. = Sta. 1776+37.66

15" C.M.P. 12.42' @ 125° Lt.

Ex. Gravel Alley

Virgil H. & Vader Richard D. & Carol Hostetler

Note: For details of Pavement Transition Sta. 1774+80 to Sta. 1775+40 See Sheet No. 178

John Hecker

Bessie M. Warnes

B.M. - Mine Spike in P. Pole 1193 / 125
42' Rt, Sta. 1772+36, Elev. 1196.83

B.M. - Mine Spike in P. Pole 1193 / 58
27' Lt, Sta. 1776+37, Elev. 1155.85

TYPICAL SECTION ADJOINING PAVEMENT

5' 2' 16' 2' 5' 20'

7" Concrete Base
2" Asphalt Wearing Surface
8" Waterbound Macadam Base

PVC - 1774+00
EEX = 1151.66
PVT - 1776+00
PXC - Sta. 1772+00
+3.92%
+1.00%
25' Feather
400' V.C.

Exc.	4,990 Cu. Yds.
Emb.	10,465 Cu. Yds.
Emb. + 15%	12,035 Cu. Yds.

1135.98 1137.94 1139.90 1141.86 1143.82 1144.78 1145.69 1146.55 1147.37 1148.15 1148.88 1149.56 1150.20 1150.79 1151.34 1151.84 1152.29 1152.70 1153.07 1153.39 Exist.

1150 1140 1130 1120 1110 1100

1111.6 1117.5 1123.4 1131.0 1140.1 1147.3 1151.1 1155.5 1155.2 1153.4 1153.01 1153.10 1153.34 1153.98 1154.36 1154.61 1154.77 1154.80 1154.73 1154.61 1154.23

1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780

Rev. 8-20-64

SEE SHEET NO.

I-13 4" Conc. Sidewalk
I-1 18" Class F-A

Lin. Ft. Sq. Ft.

42 1176

ESTIMATED QUANTITIES

DESC. NO.	STATION TO STATION	SIDE	E-8 Removal of Present Sidewalk Sq. Yds.	E-8 Removal of Present Sidewalk Sq. Ft.	E-12 15" and Under Lin. Ft.	T-35 2" Type 'C' Cu. Yds.	I-18 5" Cu. Yds.	I-18 8" Cu. Yds.	I-15, L-10 Std. Lin. Ft.	B-35 Steel Post Lin. Ft.	Sq. Yds. Lin. Ft.
1	1770+00 - 1772+00	Rt.									131
2	1770+20 - 1772+34	Lt.									175
3	1770+00 - 1771+94	Lt.							193		
4	1770+00 - 1771+04	Rt.							100		
5	1773+64 - 1774+05	Rt.			20						
6	2+00 - 1775+75	Rt. & Lt.	658	5918		4	11	2		16	
7	1774+46.90	Rt.	18	162							
8	1775+75	Lt.					5	12			
9	1772+50	Lt.									
10	1772.54 - 1775+50	Lt.									
SUB-TOTALS			676	72	20	9	23	2	293	306	16
TOTALS							2.5				

Sta. 1770 +00 to Sta. 1780 +00

SUPERELEVATION TABLES

S.R. 39

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

42
23.1

CURVE NO. 1

P.I. STA 1525+90.26 $D_C = 5°00'$
$\Delta = 43°36'$ RT. $S = 0.0833$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1518+50	1146.63	1146.44	1146.63	1146.44
1518+75	1145.93	1145.79	1145.93	1145.74
1519+00	1145.21	1145.13	1145.21	1145.02
1519+25	1144.45	1144.44	1144.45	1144.26
1519+50	1143.67	1143.76	1143.67	1143.48
1519+75	1142.84	1143.04	1142.85	1142.65
1520+00	1141.99	1142.30	1142.05	1141.80
1520+25	1141.10	1141.52	1141.22	1140.91
1520+50	1140.19	1140.73	1140.37	1140.00
1520+75	1139.23	1139.88	1139.46	1139.04
1521+00	1138.25	1139.01	1138.54	1138.06
1521+25	1137.25	1138.12	1137.59	1137.06
1521+50	1136.25	1137.25	1136.66	1136.06
1521+75	1135.25	1136.36	1135.71	1135.06
1522+00	1134.25	1135.46	1134.76	1134.06
1522+25	1133.25	1134.57	1133.82	1133.06
1522+50	1132.25	1133.70	1132.88	1132.06
1522+75	1131.25	1132.81	1131.94	1131.06
1523+00	1130.25	1131.92	1130.99	1130.06
1523+25	1129.25	1131.03	1130.04	1129.06
1523+50	1128.25	1130.06	1129.06	1128.06
1523+75	1127.25	1129.06	1128.06	1127.06
1524+00	1126.25	1128.06	1127.06	1126.06
1524+25	1125.25	1127.06	1126.06	1125.06
1524+50	1124.25	1126.06	1125.06	1124.06
1524+75	1123.25	1125.06	1124.06	1123.06
1525+00	1122.25	1124.06	1123.06	1122.06
1525+25	1121.25	1123.06	1122.06	1121.06
1525+50	1120.25	1122.06	1121.06	1120.06
1525+75	1119.25	1121.06	1120.06	1119.06
1526+00	1118.25	1120.06	1119.06	1118.06
1526+25	1117.25	1119.06	1118.06	1117.06
1526+50	1116.25	1118.06	1117.06	1116.06
1526+75	1115.25	1117.06	1116.06	1115.06
1527+00	1114.25	1116.06	1115.06	1114.06
1527+25	1113.25	1115.06	1114.06	1113.06
1527+50	1112.25	1114.06	1113.06	1112.06
1527+75	1111.25	1113.06	1112.06	1111.06
1528+00	1110.25	1112.06	1111.06	1110.06
1528+25	1109.25	1110.95	1110.01	1109.06
1528+50	1108.25	1109.83	1108.95	1108.06
1528+75	1107.25	1108.72	1107.89	1107.06
1529+00	1106.25	1107.61	1106.84	1106.06
1529+25	1105.25	1106.50	1105.78	1105.06
1529+50	1104.25	1105.37	1104.72	1104.06
1529+75	1103.25	1104.26	1103.66	1103.06
1530+00	1102.25	1103.16	1102.61	1102.06
1530+25	1101.25	1102.05	1101.56	1101.06
1530+50	1100.25	1100.92	1100.49	1100.06
1530+75	1099.25	1099.81	1099.44	1099.06
1531+00	1098.25	1098.70	1098.38	1098.06
1531+25	1097.25	1097.59	1097.33	1097.06
1531+50	1096.25	1096.47	1096.27	1096.06
1531+75	1095.25	1095.36	1095.25	1095.06
1532+00	1094.25	1094.25	1094.25	1094.06
1532+25	1093.25	1093.19	1093.25	1093.06
1532+50	1092.25	1092.13	1092.25	1092.06
1532+75	1091.25	1091.07	1091.25	1091.06
1533+00	1090.25	1090.06	1090.25	1090.06

CURVE NO. 2

P. I. STA 1548+39.00 $D_C = 1°24'$
$\Delta = 21°23'30"$ LT $S = 0.0332$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1539+25	1065.25	1065.06	1065.25	1065.06
1539+50	1064.25	1064.06	1064.25	1064.11
1539+75	1063.25	1063.06	1063.25	1063.17
1540+00	1062.25	1062.06	1062.25	1062.24
1540+25	1061.25	1061.06	1061.25	1061.35
1540+50	1060.25	1060.06	1060.27	1060.47
1540+75	1059.25	1059.06	1059.33	1059.60
1541+00	1058.25	1058.06	1058.39	1058.72
1541+25	1057.25	1057.06	1057.46	1057.85
1541+50	1056.25	1056.06	1056.46	1056.86

CURVE NO. 2 CONTINUED

P.I. STA 1548+39.00 $D_C = 1°24'$
$\Delta = 21°23'30"$ LT $S = 0.0332$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1541+75	1055.25	1055.06	1055.46	1055.86
1542+00	1054.25	1054.06	1054.46	1054.86
1542+25	1053.25	1053.06	1053.46	1053.86
1542+50	1052.25	1052.06	1052.46	1052.86
1542+75	1051.25	1051.06	1051.46	1051.86
1543+00	1050.25	1050.06	1050.46	1050.86
1543+25	1049.25	1049.06	1049.46	1049.86
1543+50	1048.25	1048.06	1048.46	1048.86
1543+75	1047.25	1047.06	1047.46	1047.86
1544+00	1046.25	1046.06	1046.46	1046.86
1544+25	1045.25	1045.06	1045.46	1045.86
1544+50	1044.25	1044.06	1044.46	1044.86
1544+75	1043.25	1043.06	1043.46	1043.86
1545+00	1042.25	1042.06	1042.46	1042.86
1545+25	1041.25	1041.06	1041.46	1041.86
1545+50	1040.25	1040.06	1040.46	1040.86
1545+75	1039.25	1039.06	1039.46	1039.86
1546+00	1038.25	1038.06	1038.46	1038.86
1546+25	1037.25	1037.06	1037.46	1037.86
1546+50	1036.25	1036.06	1036.46	1036.86
1546+75	1035.25	1035.06	1035.46	1035.86
1547+00	1034.25	1034.06	1034.46	1034.86
1547+25	1033.25	1033.06	1033.46	1033.86
1547+50	1032.25	1032.06	1032.46	1032.86
1547+75	1031.25	1031.06	1031.46	1031.86
1548+00	1030.25	1030.06	1030.46	1030.86
1548+25	1029.25	1029.06	1029.46	1029.86
1548+50	1028.25	1028.06	1028.46	1028.86
1548+75	1027.25	1027.06	1027.46	1027.86
1549+00	1026.25	1026.06	1026.46	1026.86
1549+25	1025.25	1025.06	1025.46	1025.86
1549+50	1024.25	1024.06	1024.46	1024.86
1549+75	1023.25	1023.06	1023.46	1023.86
1550+00	1022.25	1022.06	1022.46	1022.86
1550+25	1021.25	1021.06	1021.46	1021.86
1550+50	1020.25	1020.06	1020.46	1020.86
1550+75	1019.25	1019.06	1019.46	1019.86
1551+00	1018.25	1018.06	1018.46	1018.86
1551+25	1017.25	1017.06	1017.46	1017.86
1551+50	1016.25	1016.06	1016.46	1016.86
1551+75	1015.25	1015.06	1015.46	1015.86
1552+00	1014.25	1014.06	1014.46	1014.86
1552+25	1013.25	1013.06	1013.46	1013.86
1552+50	1012.25	1012.06	1012.46	1012.86
1552+75	1011.25	1011.06	1011.46	1011.86
1553+00	1010.27	1010.08	1010.48	1010.88
1553+25	1009.32	1009.13	1009.53	1009.93
1553+50	1008.41	1008.22	1008.62	1009.02
1553+75	1007.54	1007.35	1007.75	1008.15
1554+00	1006.71	1006.52	1006.92	1007.32
1554+25	1005.91	1005.72	1006.12	1006.52
1554+50	1005.15	1004.96	1005.36	1005.76
1554+75	1004.42	1004.23	1004.63	1005.03
1555+00	1003.73	1003.54	1003.94	1004.34
1555+25	1003.08	1002.89	1003.29	1003.69
1555+50	1002.47	1002.28	1002.64	1002.99
1555+75	1001.89	1001.70	1001.99	1002.29
1556+00	1001.35	1001.16	1001.39	1001.62
1556+25	1000.84	1000.65	1000.84	1000.99
1556+50	1000.37	1000.18	1000.37	1000.39
1556+75	999.94	999.75	999.94	999.89
1557+00	999.55	999.36	999.55	999.44
1557+25	999.19	999.00	999.19	999.01
1557+50	998.87	998.68	998.87	998.68

CURVE NO. 3

P.I. STA 1623+44.56 $D_C = 5°00'$
$\Delta = 75°28'$ LT $S = 0.0833$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1629+75	1106.58	1106.39	1106.90	1107.41
1630+00	1107.05	1106.86	1107.32	1107.77
1630+25	1107.48	1107.29	1107.70	1108.10
1630+50	1107.88	1107.69	1108.04	1108.39
1630+75	1108.25	1108.06	1108.35	1108.63
1631+00	1108.58	1108.39	1108.62	1108.85
1631+25	1108.87	1108.68	1108.87	1109.03
1631+50	1109.13	1108.94	1109.13	1109.18
1631+75	1109.36	1109.17	1109.36	1109.33
1632+00	1109.55	1109.36	1109.55	1109.46
1632+25	1109.71	1109.52	1109.71	1109.55
1632+50	1109.83	1109.64	1109.83	1109.64

CURVE NO. 3 CONTINUED

P.I. STA 1623+44.56 $D_C = 5°00'$
$\Delta = 75°28'$ LT $S = 0.0833$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1613+25	1044.59	1044.40	1044.65	1044.90
1613+50	1045.51	1045.32	1045.63	1045.94
1613+75	1046.47	1046.28	1046.65	1047.01
1614+00	1047.45	1047.26	1047.68	1048.10
1614+25	1048.45	1048.26	1048.74	1049.21
1614+50	1049.45	1049.26	1049.80	1050.34
1614+75	1050.45	1050.26	1050.86	1051.45
1615+00	1051.45	1051.26	1051.91	1052.56
1615+25	1052.45	1052.26	1052.96	1053.66
1615+50	1053.45	1053.26	1054.03	1054.79
1615+75	1054.45	1054.26	1055.08	1055.90
1616+00	1055.45	1055.26	1056.14	1057.01
1616+25	1056.45	1056.26	1057.19	1058.12
1616+50	1057.45	1057.26	1058.25	1059.24
1616+75	1058.45	1058.26	1059.26	1060.26
1617+00	1059.45	1059.26	1060.26	1061.26
1617+25	1060.45	1060.26	1061.26	1062.26
1617+50	1061.45	1061.26	1062.26	1063.26
1617+75	1062.45	1062.26	1063.26	1064.26
1618+00	1063.45	1063.26	1064.26	1065.26
1618+25	1064.45	1064.26	1065.26	1066.26
1618+50	1065.45	1065.26	1066.26	1067.26
1618+75	1066.45	1066.26	1067.26	1068.26
1619+00	1067.45	1067.26	1068.26	1069.26
1619+25	1068.45	1068.26	1069.26	1070.26
1619+50	1069.45	1069.26	1070.26	1071.26
1619+75	1070.45	1070.26	1071.26	1072.26
1620+00	1071.45	1071.26	1072.26	1073.26
1620+25	1072.45	1072.26	1073.26	1074.26
1620+50	1073.45	1073.26	1074.26	1075.26
1620+75	1074.45	1074.26	1075.26	1076.26
1621+00	1075.45	1075.26	1076.26	1077.26
1621+25	1076.45	1076.26	1077.26	1078.26
1621+50	1077.45	1077.26	1078.26	1079.26
1621+75	1078.45	1078.26	1079.26	1080.26
1622+00	1079.45	1079.26	1080.26	1081.26
1622+25	1080.45	1080.26	1081.26	1082.26
1622+50	1081.45	1081.26	1082.26	1083.26
1622+75	1082.45	1082.26	1083.26	1084.26
1623+00	1083.45	1083.26	1084.26	1085.26
1623+25	1084.45	1084.26	1085.26	1086.26
1623+50	1085.45	1085.26	1086.26	1087.26
1623+75	1086.45	1086.26	1087.26	1088.26
1624+00	1087.45	1087.26	1088.26	1089.26
1624+25	1088.45	1088.26	1089.26	1090.26
1624+50	1089.45	1089.26	1090.26	1091.26
1624+75	1090.45	1090.26	1091.26	1092.26
1625+00	1091.45	1091.26	1092.26	1093.26
1625+25	1092.45	1092.26	1093.26	1094.26
1625+50	1093.45	1093.26	1094.26	1095.26
1625+75	1094.45	1094.26	1095.26	1096.26
1626+00	1095.45	1095.26	1096.26	1097.26
1626+25	1096.43	1096.24	1097.24	1098.24
1626+50	1097.38	1097.19	1098.19	1099.19
1626+75	1098.30	1098.11	1099.11	1100.11
1627+00	1099.18	1098.99	1099.99	1100.99
1627+25	1100.02	1099.83	1100.83	1101.83
1627+50	1100.83	1100.64	1101.64	1102.64
1627+75	1101.61	1101.42	1102.39	1103.35
1628+00	1102.35	1102.16	1103.07	1103.98
1628+25	1103.06	1102.87	1103.73	1104.58
1628+50	1103.73	1103.54	1104.34	1105.14
1628+75	1104.37	1104.18	1104.92	1105.66
1629+00	1104.98	1104.79	1105.48	1106.16
1629+25	1105.55	1105.36	1105.99	1106.62
1629+50	1106.09	1105.89	1106.47	1107.04

CURVE NO. 4

P.I. STA 1678+82.23 $D_C = 1°00'$
$\Delta = 21°00'15"$ RT. $S = 0.0237$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1667+00	1147.25	1147.06	1147.25	1147.06
1667+25	1148.30	1148.16	1148.30	1148.11
1667+50	1149.35	1149.27	1149.35	1149.16
1667+75	1150.40	1150.38	1150.40	1150.21
1668+00	1151.45	1151.54	1151.45	1151.26
1668+25	1152.50	1152.71	1152.51	1152.31
1668+50	1153.55	1153.89	1153.63	1153.36
1668+75	1154.60	1154.98	1154.70	1154.41
1669+00	1155.65	1156.03	1155.75	1155.46
1669+25	1156.70	1157.08	1156.80	1156.51
1669+50	1157.75	1158.13	1157.85	1157.56
1669+75	1158.80	1159.18	1158.90	1158.61
1670+00	1159.85	1160.23	1159.95	1159.66
1670+25	1160.90	1161.28	1161.00	1160.71
1670+50	1161.95	1162.33	1162.05	1161.76
1670+75	1163.00	1163.38	1163.10	1162.81
1671+00	1164.05	1164.43	1164.15	1163.86
1671+25	1165.10	1165.48	1165.20	1164.91
1671+50	1166.15	1166.53	1166.25	1165.96
1671+75	1167.20	1167.58	1167.30	1167.01
1672+00	1168.25	1168.63	1168.35	1168.06
1672+25	1169.30	1169.68	1169.40	1169.11
1672+50	1170.35	1170.73	1170.45	1170.16
1672+75	1171.40	1171.78	1171.50	1171.21
1673+00	1172.45	1172.83	1172.55	1172.26
1673+25	1173.50	1173.88	1173.60	1173.31
1673+50	1174.55	1174.93	1174.65	1174.36
1673+75	1175.60	1175.98	1175.70	1175.41
1674+00	1176.65	1177.03	1176.75	1176.46
1674+25	1177.70	1178.08	1177.80	1177.51
1674+50	1178.75	1179.13	1178.85	1178.56
1674+75	1179.80	1180.18	1179.90	1179.61
1675+00	1180.85	1181.23	1180.95	1180.66
1675+25	1181.90	1182.28	1182.00	1181.71
1675+50	1182.95	1183.33	1183.06	1182.76
1675+75	1184.00	1184.38	1184.10	1183.81
1676+00	1185.05	1185.43	1185.15	1184.86
1676+25	1186.10	1186.48	1186.20	1185.91
1676+50	1187.15	1187.53	1187.25	1186.96
1676+75	1188.20	1188.58	1188.30	1188.01
1677+00	1189.25	1189.63	1189.35	1189.06
1677+25	1190.28	1190.66	1190.36	1190.09
1677+50	1191.28	1191.66	1191.38	1191.09
1677+75	1192.24	1192.62	1192.34	1192.05
1678+00	1193.17	1193.55	1193.27	1192.98
1678+25	1194.06	1194.44	1194.16	1193.87
1678+50	1194.92	1195.30	1195.02	1194.73
1678+75	1195.74	1196.12	1195.84	1195.55
1679+00	1196.53	1196.91	1196.63	1196.34
1679+25	1197.28	1197.66	1197.38	1197.09
1679+50	1198.00	1198.38	1198.10	1197.81
1679+75	1198.68	1199.06	1198.78	1198.49
1680+00	1199.33	1199.71	1199.43	1199.14
1680+25	1199.94	1200.32	1200.04	1199.75
1680+50	1200.52	1200.90	1200.62	1200.33
1680+75	1201.06	1201.44	1201.16	1200.87
1681+00	1201.57	1201.95	1201.67	1201.38
1681+25	1202.04	1202.42	1202.14	1201.85
1681+50	1202.48	1202.86	1202.58	1202.29
1681+75	1202.88	1203.26	1202.98	1202.69
1682+00	1203.25	1203.63	1203.35	1203.06
1682+25	1203.58	1203.96	1203.68	1203.39
1682+50	1203.88	1204.26	1203.98	1203.69
1682+75	1204.14	1204.52	1204.24	1203.95
1683+00	1204.37	1204.75	1204.47	1204.18
1683+25	1204.56	1204.94	1204.66	1204.37
1683+50	1204.72	1205.10	1204.82	1204.53
1683+75	1204.84	1205.22	1204.94	1204.65
1684+00	1204.93	1205.31	1205.03	1204.74
1684+25	1204.98	1205.36	1205.08	1204.79
1684+50	1205.00	1205.38	1205.10	1204.81
1684+75	1204.98	1205.36	1205.08	1204.79
1685+00	1204.93	1205.31	1205.03	1204.74
1685+25	1204.84	1205.22	1204.94	1204.65
1685+50	1204.72	1205.10	1204.82	1204.53
1685+75	1204.56	1204.94	1204.66	1204.37
1686+00	1204.37	1204.75	1204.47	1204.18
1686+25	1204.14	1204.52	1204.24	1203.95
1686+50	1203.88	1204.26	1203.98	1203.69

CURVE NO. 4 CONTINUED

P.I. STA 1678+82.23 $D_C = 1°00'$
$\Delta = 21°00'15"$ RT. $S = 0.0237$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1686+75	1203.58	1203.96	1203.68	1203.39
1687+00	1203.25	1203.63	1203.35	1203.06
1687+25	1202.90	1203.28	1203.00	1202.71
1687+50	1202.55	1202.93	1202.65	1202.36
1687+75	1202.20	1202.58	1202.30	1202.01
1688+00	1201.85	1202.23	1201.95	1201.66
1688+25	1201.50	1201.88	1201.60	1201.31
1688+50	1201.15	1201.53	1201.25	1200.96
1688+75	1200.80	1201.18	1200.90	1200.61
1689+00	1200.45	1200.74	1200.50	1200.26
1689+25	1200.10	1200.27	1200.10	1199.91
1689+50	1199.75	1199.79	1199.75	1199.56
1689+75	1199.40	1199.36	1199.40	1199.21
1690+00	1199.05	1198.95	1199.05	1198.86
1690+25	1198.70	1198.53	1198.70	1198.51
1690+50	1198.35	1198.16	1198.35	1198.16

CURVE NO. 5

P.I. STA 1715+47.28 $D_C = 1°00'$
$\Delta = 15°03'20"$ RT. $S = 0.0237$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1706+75	1180.05	1179.86	1180.05	1179.86
1707+00	1180.32	1180.19	1180.32	1180.13
1707+25	1180.62	1180.55	1180.62	1180.43
1707+50	1180.96	1180.95	1180.96	1180.77
1707+75	1181.34	1181.45	1181.34	1181.15
1708+00	1181.77	1182.01	1181.80	1181.58
1708+25	1182.23	1182.59	1182.32	1182.04
1708+50	1182.73	1183.11	1182.83	1182.54
1708+75	1183.27	1183.65	1183.37	1183.08
1709+00	1183.85	1184.23	1183.95	1183.66
1709+25	1184.45	1184.83	1184.55	1184.26
1709+50	1185.05	1185.43	1185.15	1184.86
1709+75	1185.65	1186.03	1185.75	1185.46
1710+00	1186.25	1186.63	1186.35	1186.06
1710+25	1186.84	1187.22	1186.94	1186.65
1710+50	1187.40	1187.78	1187.50	1187.21
1710+75	1187.93	1188.31	1188.03	1187.74
1711+00	1188.44	1188.82	1188.54	1188.25
1711+25	1188.92	1189.30	1189.02	1188.73
1711+50	1189.38	1189.76	1189.48	1189.19
1711+75	1189.81	1190.19	1189.91	1189.62
1712+00	1190.21	1190.59	1190.31	1190.02
1712+25	1190.59	1190.97	1190.69	1190.40
1712+50	1190.94	1191.32	1191.04	1190.75
1712+75	1191.26	1191.64	1191.36	1191.07
1713+00	1191.56	1191.94	1191.66	1191.37
1713+25	1191.83	1192.21	1191.93	1191.64
1713+50	1192.08	1192.46	1192.18	1191.89
1713+75	1192.30	1192.68	1192.40	1192.11
1714+00	1192.49	1192.87	1192.59	1192.30
1714+25	1192.66	1193.04	1192.76	1192.47
1714+50	1192.80	1193.18	1192.90	1192.61
1714+75	1192.91	1193.29	1193.01	1192.72
1715+00	1193.00	1193.38	1193.10	1192.81
1715+25	1193.06	1193.44	1193.16	1192.87
1715+50	1193.10	1193.48	1193.20	1192.91
1715+75	1193.11	1193.49	1193.21	1192.92
1716+00	1193.09	1193.47	1193.19	1192.90
1716+25	1193.05	1193.43	1193.15	1192.86
1716+50	1192.98	1193.36	1193.08	1192.79
1716+75	1192.88	1193.26	1192.98	1192.69
1717+00	1192.76	1193.14	1192.86	1192.57
1717+25	1192.61	1192.99	1192.71	1192.42
1717+50	1192.44	1192.82	1192.54	1192.25
1717+75	1192.24	1192.62	1192.34	1192.05
1718+00	1192.01	1192.39	1192.11	1191.82
1718+25	1191.76	1192.14	1191.86	1191.57
1718+50	1191.48	1191.86	1191.58	1191.29
1718+75	1191.17	1191.55	1191.27	1190.98
1719+00	1190.84	1191.22	1190.94	1190.65
1719+25	1190.48	1190.86	1190.58	1190.29
1719+50	1190.10	1190.48	1190.20	1189.91
1719+75	1189.69	1190.07	1189.79	1189.50

CURVE NO. 5 CONTINUED

P.I. STA 1715+47.28 $D_C = 1°00'$
$\Delta = 15°03'20"$ RT $S = 0.0237$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1720+00	1189.25	1189.63	1189.35	1189.06
1720+25	1188.79	1189.17	1188.89	1188.60
1720+50	1188.30	1188.68	1188.40	1188.11
1720+75	1187.78	1188.16	1187.88	1187.59
1721+00	1187.24	1187.62	1187.34	1187.05
1721+25	1186.67	1187.05	1186.77	1186.48
1721+50	1186.08	1186.46	1186.18	1185.89
1721+75	1185.46	1185.84	1185.56	1185.27
1722+00	1184.81	1185.19	1184.91	1184.62
1722+25	1184.14	1184.52	1184.24	1183.95
1722+50	1183.44	1183.82	1183.54	1183.25
1722+75	1182.71	1183.00	1182.76	1182.52
1723+00	1181.96	1182.13	1181.96	1181.77
1723+25	1181.18	1181.22	1181.18	1180.99
1723+50	1180.38	1180.38	1180.38	1180.19
1723+75	1179.55	1179.45	1179.55	1179.36
1724+00	1178.69	1178.52	1178.69	1178.50
1724+25	1177.82	1177.63	1177.82	1177.63

CURVE NO. 6

P.I. STA 1768+99.89 $D_C = 5°00'$
$\Delta = 32°17'$ RT $S = 0.0833$ FT/FT

STATION	PROFILE ELEVATION	LT EDGE ELEVATION	℄ ELEVATION	RT EDGE ELEVATION
1762+75	1111.49	1111.30	1111.49	1111.30
1763+00	1111.84	1111.67	1111.84	1111.65
1763+25	1112.25	1112.14	1112.25	1112.06
1763+50	1112.71	1112.67	1112.71	1112.52
1763+75	1113.23	1113.27	1113.23	1113.04
1764+00	1113.80	1113.94	1113.80	1113.61
1764+25	1114.42	1114.67	1114.45	1114.23
1764+50	1115.10	1115.46	1115.19	1114.91
1764+75	1115.84	1116.33	1115.99	1115.65
1765+00	1116.63	1117.23	1116.84	1116.44
1765+25	1117.47	1118.18	1117.73	1117.28
1765+50	1118.37	1119.19	1118.68	1118.18
1765+75	1119.32	1120.26	1119.70	1119.13
1766+00	1120.30	1121.35	1120.73	1120.11
1766+25	1121.28	1122.44	1121.77	1121.09
1766+50	1122.26	1123.53	1122

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HOL · 39 · 28.57
TUS · 39 · 0.00

SEEDING END WIDTH	SEEDING SQ. YDS.
63	344
61	258
32	150
22	78
6	13
4	

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

1150
1140
1160

3:1
4:1

1152.25
1511 + 00
1152.2

12" I-1 (For Details and Quantities, See Sheet No. 15)
1150.8

I = 1150.0

1151.65
1510 + 50
1151.7

10' V.C.
E.P.
L = 48'
T-35
-17.5%

Sta. 1510+27 ~ ℄ Res. Dr. Lt.

Sta. 1510+00, 29' Lt.
Std. No. 2-2-A C.B.
R. Grate = 1148.40

3' Sod Collar

Proposed 12" Pipe shall be connected into the existing 12" Pipe. The depth and elevation of the existing pipe shall be determined before the proposed pipe is laid.

I = 1145.40
12" x 30' I-1, Class H-2
Existing 12" Pipe

Note: For 12" I-1 and C.B. Quantities See Sheet No. 15

1151.05
1510+00
1151.1

T-35
L-25'
E.P.
+2.7%

Sta. 1509+76 ~ ℄ Res. Dr. Lt.

1149.0

1150.45
1509+50
1150.4

Transition existing shoulder section from the existing widths and elevations at Sta. 1509+00 to meet the proposed at Sta. 1509+50.

T-35
L=26'
+12.0%
E.P.
1149.85
1509+00
1149.6
E.P.
L=26'
-3.5%
T-35

Sta. 1508+79 ~ ℄ Res. Dr. Rt.

Sta. 1509+00

Sta. 1508+63

Sta. 1508+78 ~ ℄ Res. Dr. Lt.

1508+50
1149.0

1508+00
1148.5

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	57	67		
			119	103
	72	44		
Add for Drive			3	14
			120	46
	58	6		
			85	6
Add for Drive			10	0
	34	1		
			54	1
Sta. 1509+00			24	0
Add for Drive Rt.			9	0
Add for Drive Lt.			16	0

Sta 1508+00 to Sta 1511+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
63	369				
		401	0		
				708	0
60	342				
		364	0		
				536	0
	306				
		215	0		
				337	0
50					
				33	0
		196	0		
	272				
				248	0
48					
		122	0		
	278			181	24
52					
		73	26		
	319				
63				12	9
				120	86

Add for Pavement Removal

1150.6

1153.51
1514+00
1157.7

1150.8 1151.5

1153.63
1513+50
1156.8

1151.0 1152.0

1153.61
1513+00
1154.8

E.P. 10' V.C. L = 44' T-35 +16.0%

Add for Drive → 33 0

Sta. 1512 + 85 ~ ℄ Res. Dr. Rt.

1151.2 1151.8

1153.47
1512+50
1154.8

3:1 1151.5

1153.19
1512+00
1153.5

1150.0

1152.79
1511+50
1152.9

E.P. 10' V.C. L = 43' T-35 I-18 +8.0% 10' V.C.

For Details and Quantities of 12" I-1 See Sheet No.15

Add for Drive → 12 9

Sta. 1511 + 20 ~ ℄ Res. Dr. Rt.

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Sta. 1511+50 to Sta. 1514+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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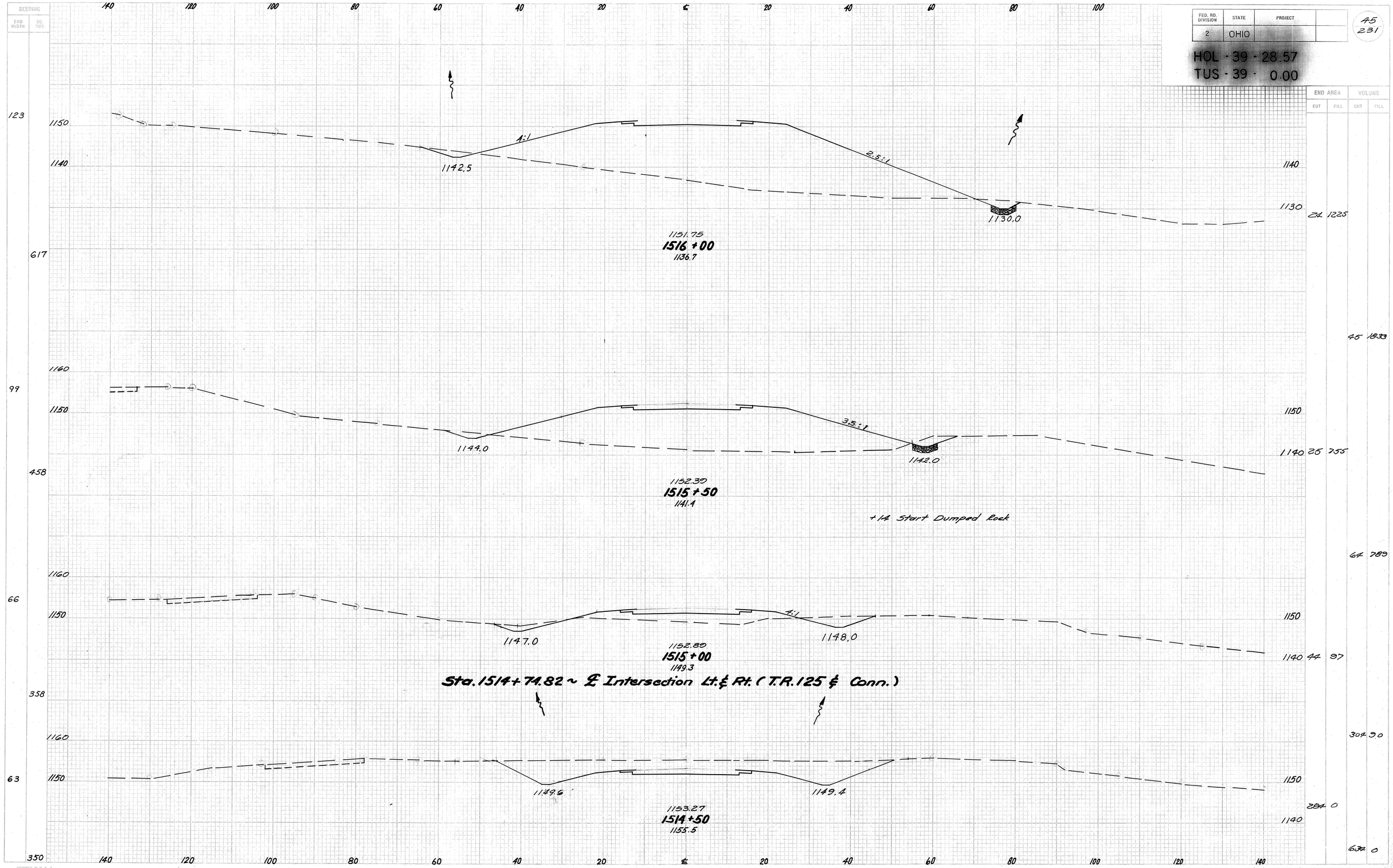
TUS - 39 - 0.00



Sta. 1514+50 to Sta. 1516+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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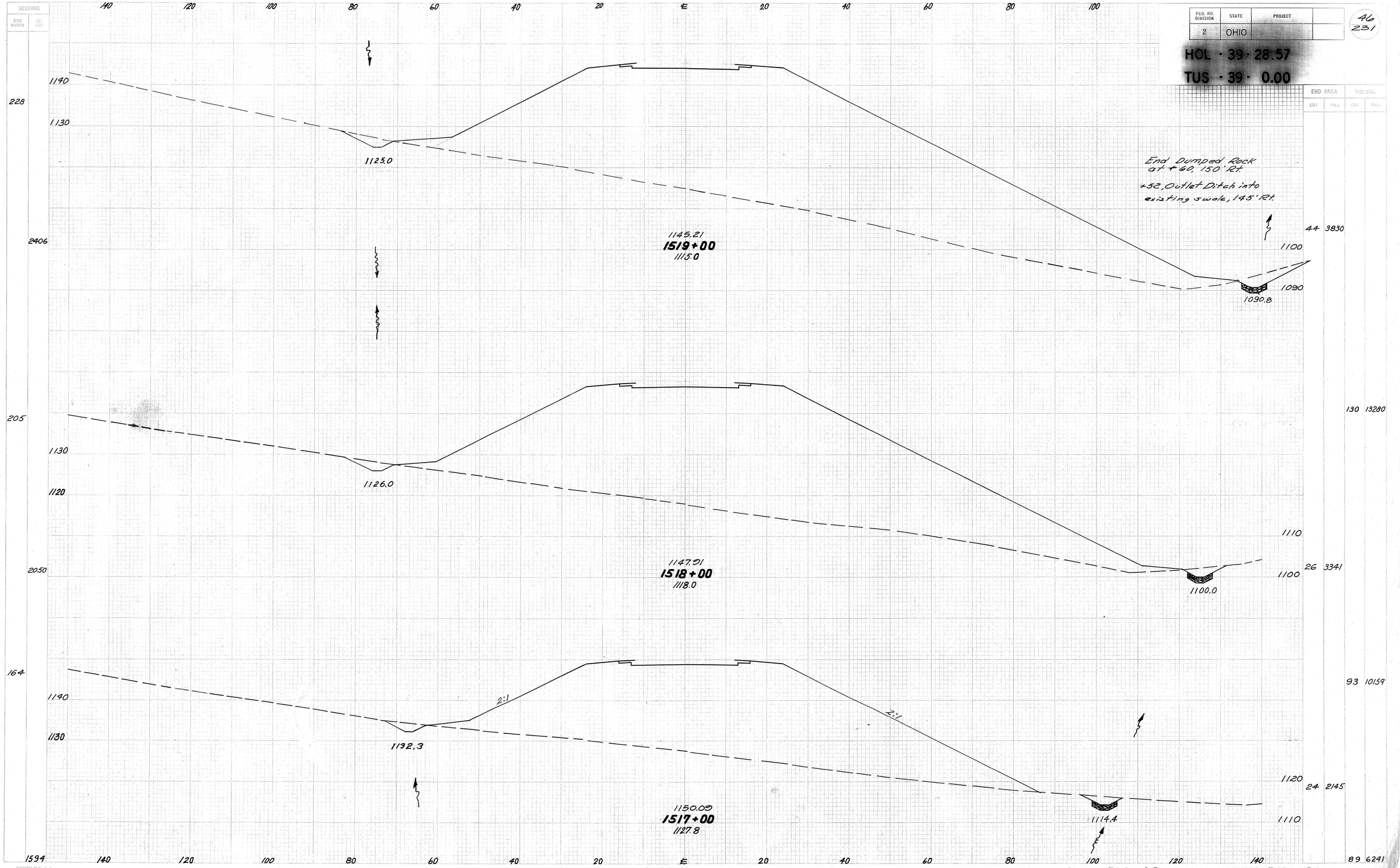
HOL · 39 · 28.57
TUS · 39 · 0.00



Sta. 1517+00 to Sta. 1519+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
119	1367	1124.0	1134.25 **1522+00** 1120.4	155	1356
127	1706	1130.0	1138.25 **1521+00** 1121.7	672	5615
180	2267	1128.0	1141.00 **1520+00** 1117.2	208	1676
				1063	8856
				369	3106
				765	12844

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

1130 1120 1190 1130 1190 1130 1120 1110 1120 1110 1110 1100

4:1 2:1

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Sta 1520+00 to Sta 1522+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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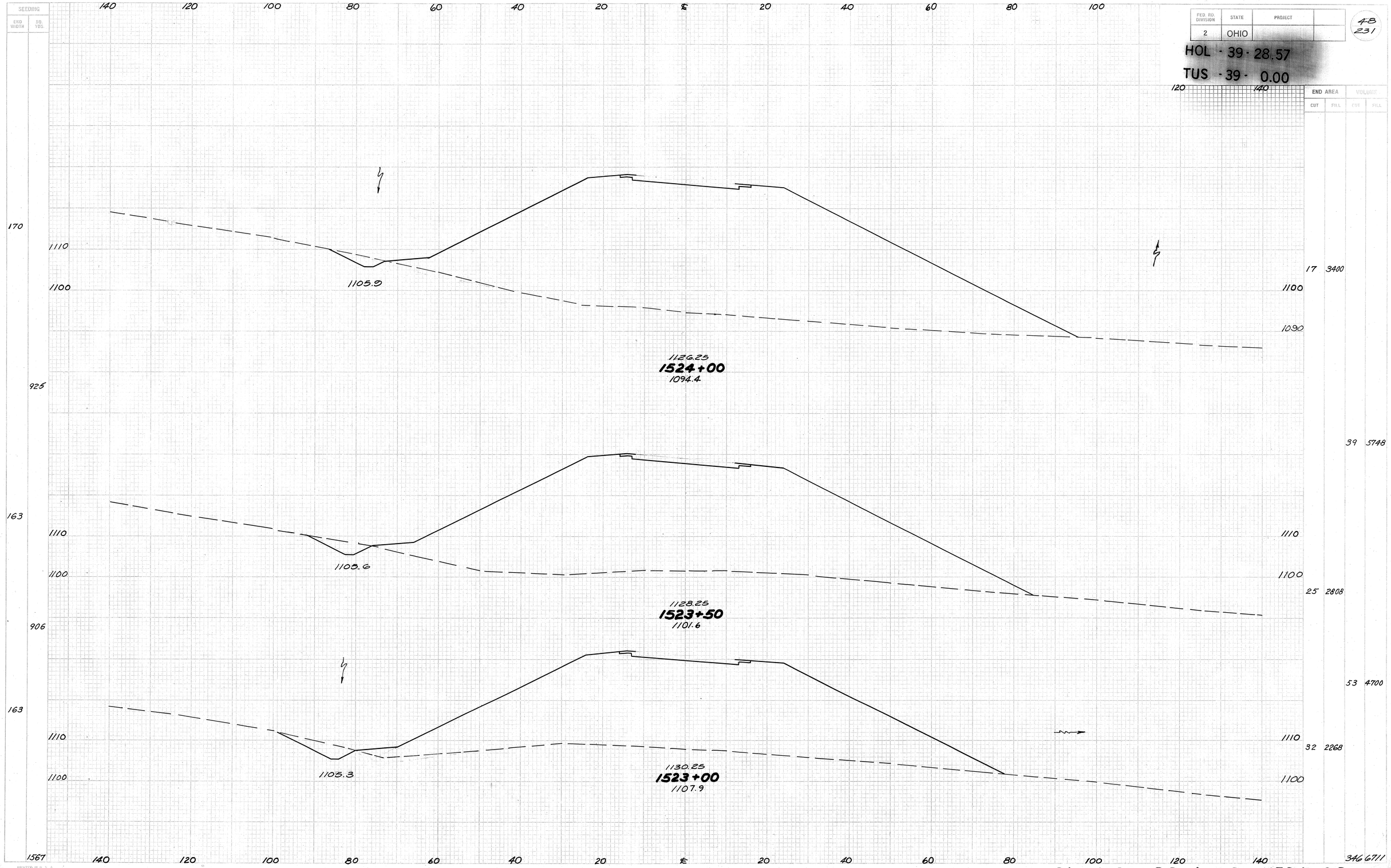
HOL - 39 - 28.57

TUS - 39 - 0.00



Sta. 1523+00 to Sta. 1524+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

40 231

SEEDING		END AREA		VOLUMES	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
135	778	220	1350	348	3397
145	867	156	2367	159	5102
167	936	16	3143	31	6058

140 120 100 80 60 40 20 E 20 40 60 80 100 120 140

1120
1110
1100
1090

2:1

1109.5

1120.25
1525+50
1102.2

1107.2

1122.25
1525+00
1099.2

1106.2

1124.25
1524+50
1094.9

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Sta. 1524+50 to Sta. 1525+50

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57
TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
Add for Drive Lt. →		194	17
Add for Drive Rt. →		23	12
446	0		
803	0		
422	0		
520	15		
140	16		
528	2211		
1090	145	1178	
338	2896		

Add for Drives

Sta. 1528+00 ℄ Field Dr. Lt.

+15.8%

L=101

10' V.C.

E/P

18"I-1 (For Details and Quantities, See Sheet No. 16)

18"I-1 (For Details and Quantities, See Sheet #16

1110.25
1528+00
1115.1

1107.6

For Earth work only

24:1

I-18

10%
L=36'

Sta. 1528+00 ℄ Field Dr. Rt.

1112.25
1527+50
1116.8

24:1

1109.8

4:1

4:1

1114.25
1527+00
1115.5

3:1

1112.0

2:1

1118.25
1526+00
1106.8

Sta. 1526+00 to Sta. 1528+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

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231

SEEDING				END AREA		VOLUME	
END WIDTH	SQ. YDS.			CUT	FILL	CUT	FILL
65	322	1110	1100.25 1530+50 1099.0	88	76		
51	361	1120	1102.25 1530+00 1102.9	128	16	200	85
79	442	1110	1104.25 1529+50 1102.6	49	178	164	180
80	994	1120	1106.25 1529+00 1105.7	93	98	131	256
				998	181		

Sta. 1529+00 to Sta. 1530+50

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ YDS	CUT	FILL	CUT	FILL
76					
				609	0
88				708	76
119				156	82
65					
81				58	43
68				66	84
				37	31
				118	68
554				286	200

1110
1100
1090

1094.25
1532+00
1095.5

+50, 29' Lt. Std #8 Catch Basin
℄ Grate = 1094.21

5.24%

2' Sod Collar

Channel, 2' Bottom, 2:1 Slopes

24" x 90', Cl 135 A-1

℄ = 1089.71

1096.25
1531+50
1095.7

℄ = 1085.00
+50, 62' Rt.

Dumped Rock Chan. Prot. (20' x 6' x 2.5' deep)

Std. HW-E Endwall

Note: For Quantities, see sheet No. 17

+36, 58' Lt.
Meet Existing Ground

34'

For earthwork only

Dumped Rock Chan. Prot.
Width = 8', Deep = 1.5', Length = 31+37

℄ Channel

+36, 30' Lt
℄ = 1095.00

Channel Cross Section	E-3	
Scale: 1" = 10'	E.A.	C.Y.
1531+36, 58' Lt	0	
		6
1099.33	20	
1531+36, 43' Lt		5
1101.5		
1531+36, 30' Lt	0	
Total	11	

Note: For E-3 & Dumped Rock Quantities, See Sheet No. 17

1096.81
1531+36
1095.3

1097.25
1531+25
1096.8

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Sta. 1531+25 to Sta. 1532+00

SEEDING	
END WIDTH	SQ. YDS.
126	
	353
128	
1133	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

53
231

HOL - 39 - 28.57

TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
78	944	69	87		
92	586			2094	161
119	340			2591	0
				1736	0
				1676	0
				1062	0

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

1090
1080
1070
1110
1100
1090
1080
1110
1100
1090
1080

9:1

4:1

1082.25
1535+00
1080.0

1072.0

1086.25
1534+00
1096.3

1088.25
1533+50
1102.9

Sta. 1533 + 50 to Sta. 1535+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
64	375				
71	145				
83	64				
61	193				
		435	0		
		529	315		
		136	340		
		54	230		
		36	391		
		8	115		
		20	385		
		41	219		

1078.25
1536+00
1081.5

2:1

+55 End Dumped Rock

1080.25
1535+50
1076.2

Outlet into Channel

Var.

1080.03
1535+33
1073.4

1065.8

+30 Start Dumped Rock

1.5'

1078.7

Var.

Dumped Rock Cham. Prot.
(8' width, 1.5' deep)

2.5:1

1081.25
1535+25
1074.9

1067.0

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Sta. 1535+25 to Sta. 1536+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
93	436			29	520
64	358			221	516
65				210	37
				702	34
				549	0
84				1176	0
				721	0
				1070	0

Add for Drive Lt. → 100 107

Add for Drive Rt. → 34 75

1070.25
1538+00
1061.7

+75 Start Dumped Rock

Note: For 12" & 24" I-1 Details See Sheet No. 17

For Drive Cross Sections See Sheet No. 180

I-18

L = 92'

+10 %

For earthwork only

10' V.C.

24" I-1

1072.25
1537+50
1071.5

Sta. 1537+50 ℄ Field Dr. Lt.

For earthwork only

3:1

-14.2 %

L = 85'

I-18

1065.0

12" I-1

Sta. 1537+50 ℄ Field Dr. Rt.

1064.3

2:1

1054.4

1070.8

4:1

1074.25
1537+00
1079.5

1076.25
1536+50
1082.7

Sta. 1536+50 to Sta. 1538+00

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SEEDING	
END WIDTH	SQ. YDS.

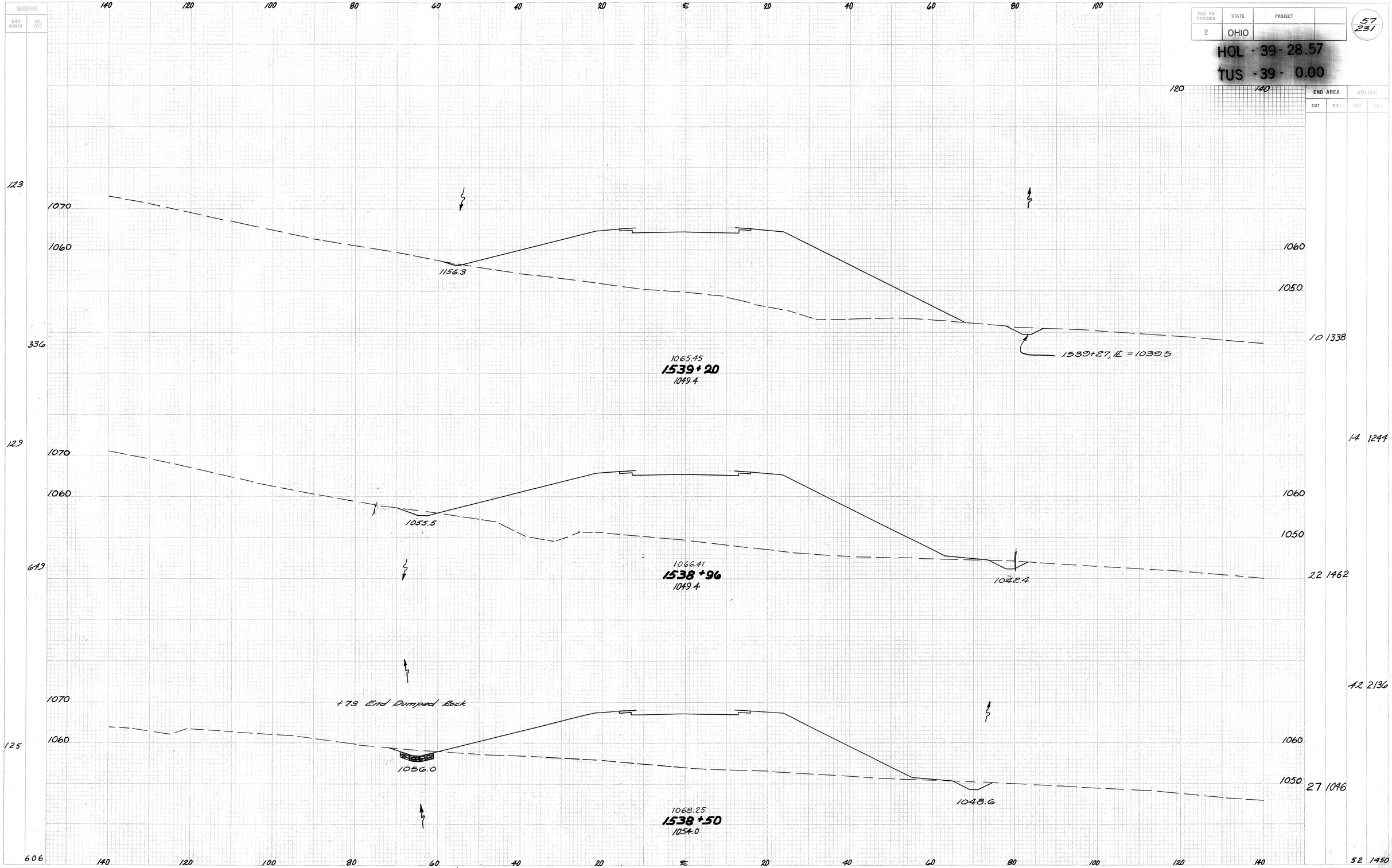
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

57
231

HOL - 39 - 28.57

TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 1538 + 50 to Sta. 1539 + 20

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ON SUE TRACE CLOTH

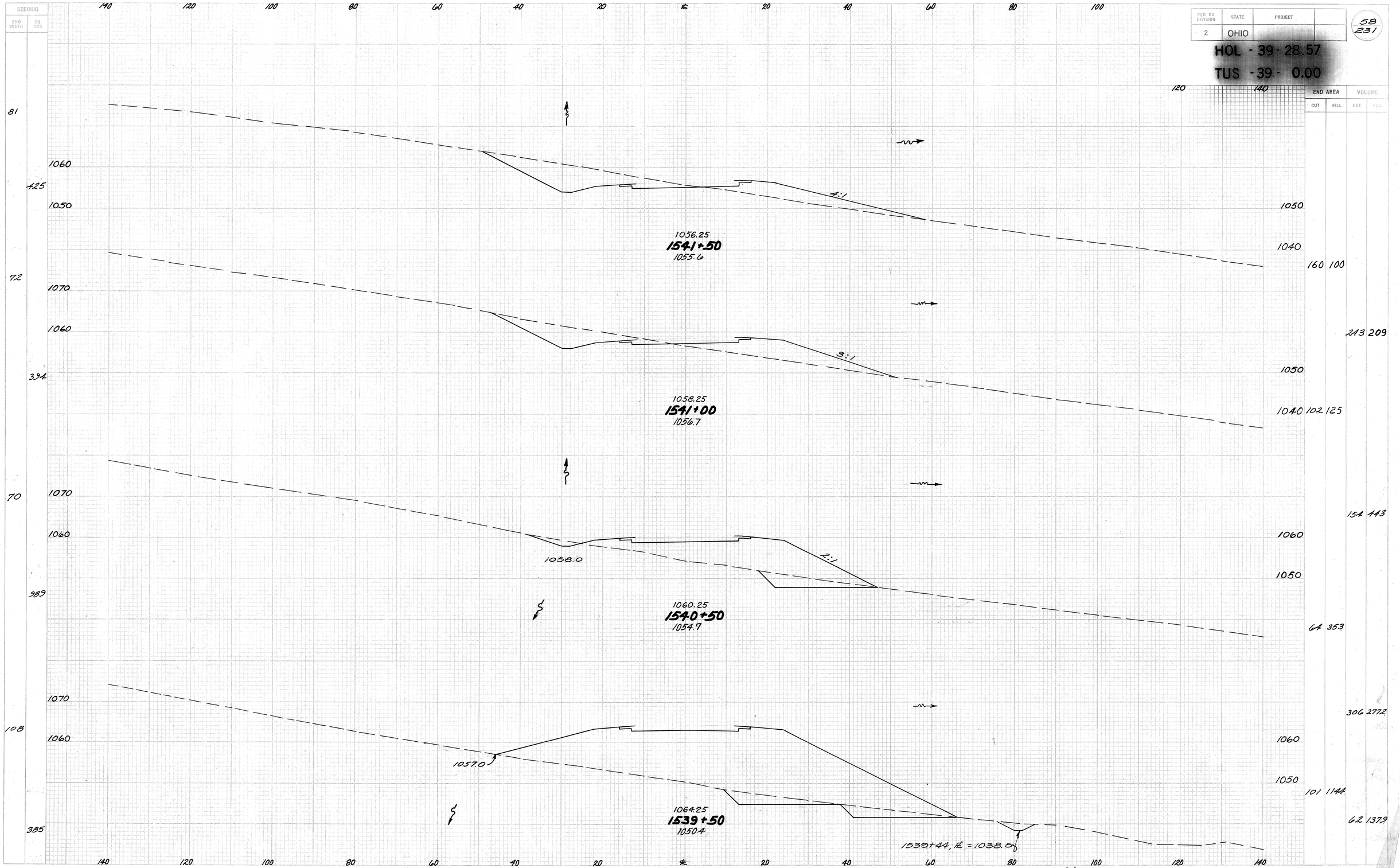
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

58
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
81	425			160	100
72	394			213	209
70	389			154	443
108	385			64	353
				306	2772
				101	1144
				62	1379
				102	125



Sta. 1539 + 50 to Sta. 1541 + 50

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ON KEUFFEL-TRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS
69	
364	
62	
694	
63	
378	
73	
856	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

59
231

HOL - 39 - 28.57
TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
204	92		
		303	317
123	250		
307	1550		
43	587		
43	925		
10	412	315	940

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

1060 1050 1040 1030

1044.25
1544+50
1044.0

1060 1050 1040 1030

1046.25
1544+00
1043.4

1047.0

2:1

1050 1040 1030

1050.25
1543+00
1041.7

1060 1050 1040 1030

1049.5

3:1

1052.25
1542+50
1046.8

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

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NI CYL-1206, CLOTH

Sta. 1542+50 to Sta. 1544+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

60
231

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
86					
145					
101					
233					
109					
164					
76					
403					

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

1070 1060 1070 1060 1070 1060 1070 1060 1070 1060

1030 1020 1030 1020 1030 1020 1030 1020 1030 1020

673 4

327 25

587 91

373 142

420 298

238 101

384 42

544 124

1040.25
1545+50
1045.1

1040.81
1545+36
1044.2

1042.25
1545+00
1043.8

2:1

2:1

+16, 29' Lt.
Std # 8 C.B.
Fl. = 1039.00

Fl. = 1035.00

11.90%

1041.61
1545+16
1041.8

15" x 8', Sec. M-6.4(d), Class A-1

+16, 56' Rt.
Fl. = 1025.00

20'

2' 6"

Std. HW-E Endwall

Dumped Rock (6' Width)

Note: For 15" I-1 Quantities
See Sheet # 18

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ON CURL TRACE CLOTH

Sta. 1545+00 to Sta. 1545+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

61
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
75	894				
86	1038	552	0		
100	1089	2481	0		
96	506	3274	0		
		980	0		
		788	0		
		880	4		
		3444	7		
		1438	7		

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

1050 1040 1060 1050 1070 1060 1070 1060

1030 1020 1030 1020 1030 1020 1030 1020 1040 1030

1026.25
1549+00
1031.4

1024.0

1030.25
1548+00
1037.5

1034.25
1547+00
1042.8

1038.25
1546+00
1045.7

Sta. 1546+00 to Sta. 1549+00

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DIETZGEN LINEN CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

62
231

HOL · 39 · 28.57

TUS · 39 · 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
102					
	369			21	641
76				76	1609
	389			20	228
64				82	250
	367			69	42
68				305	45
	794			260	7
				1504	13

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

1020
1010
1000

1006.5
4:1
2:1
1014.25
1552 +00
1004.8
1008.0

1030
1020
1010

1016.0
3.5:1
1018.25
1551 +00
1014.3
1007.0

1030
1020
1010

1020.25
1550 +50
1019.6
4:1
1013.0

1030
1020
1010

1022.25
1550 +00
1024.4
1018.0

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ON KEUFFEL-ESSER CLOTH

Sta. 1550 +00 to Sta. 1552 +00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

63
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING END WIDTH	SEEDING SQ. YDS.
72	124
68	221
69	418
119	639
111	592

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

Sta. 1553+69 ~ ℄ Intersection Lt. & Rt. (C.R. 114)

C.R. 114 C.R. 114

1000 990

1007.26
1553+85
995.2

1007.79
1553+69
996.65

1008.79
1553+40
996.7

2:1

1010.27
1553+00
996.9

996.0 994.2

3:1

1001.0 995.0

1012.25
1552+50
999.8

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	787		
		0	446
0	718		
		0	808
0	787		
		33	1252
44	306		
		67	1659
25	884		
		43	1412

Sta. 1552+50 to Sta. 1553+85

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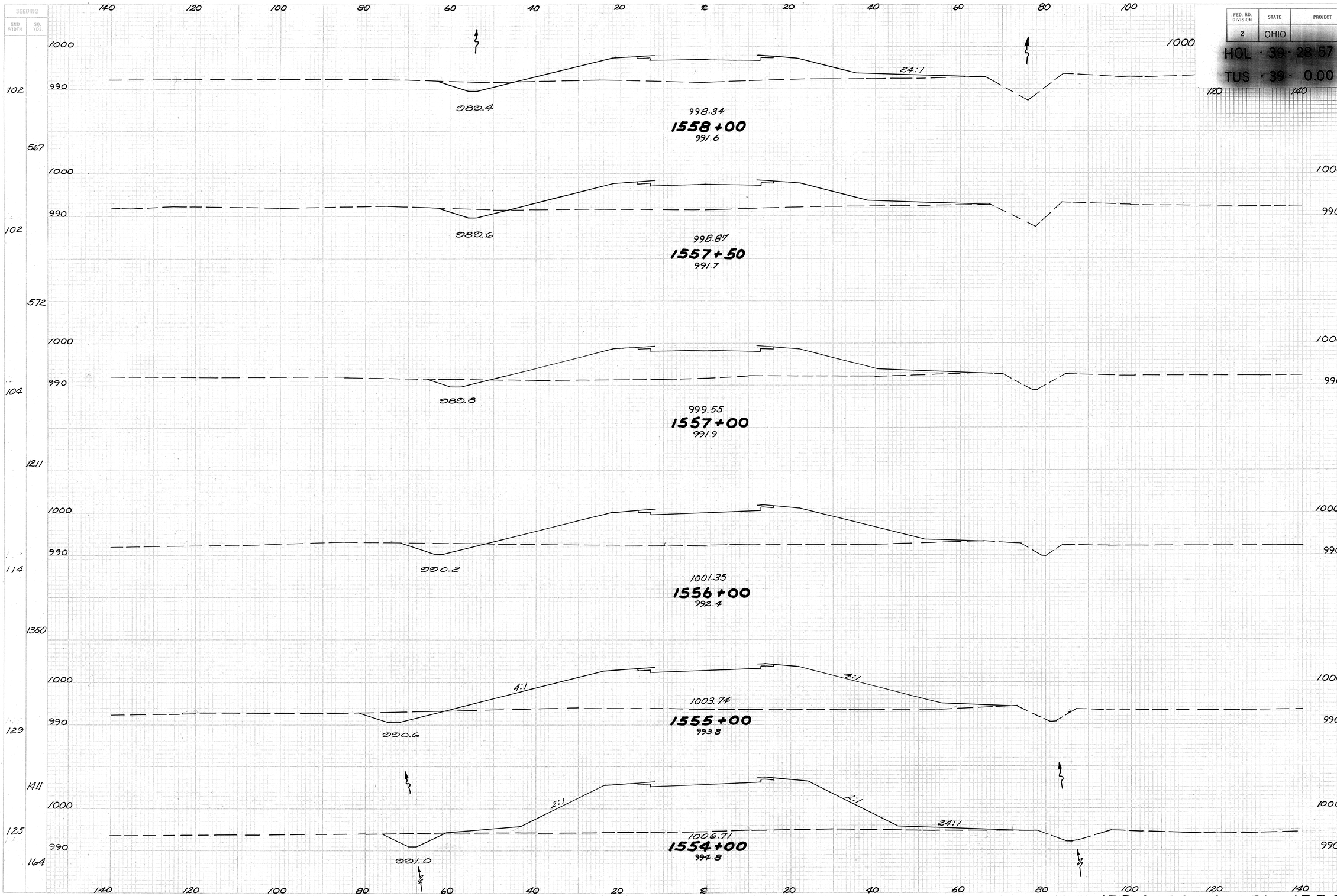
ON CUL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

64
231

HOL - 39 - 28.57
TUS - 39 - 0.00



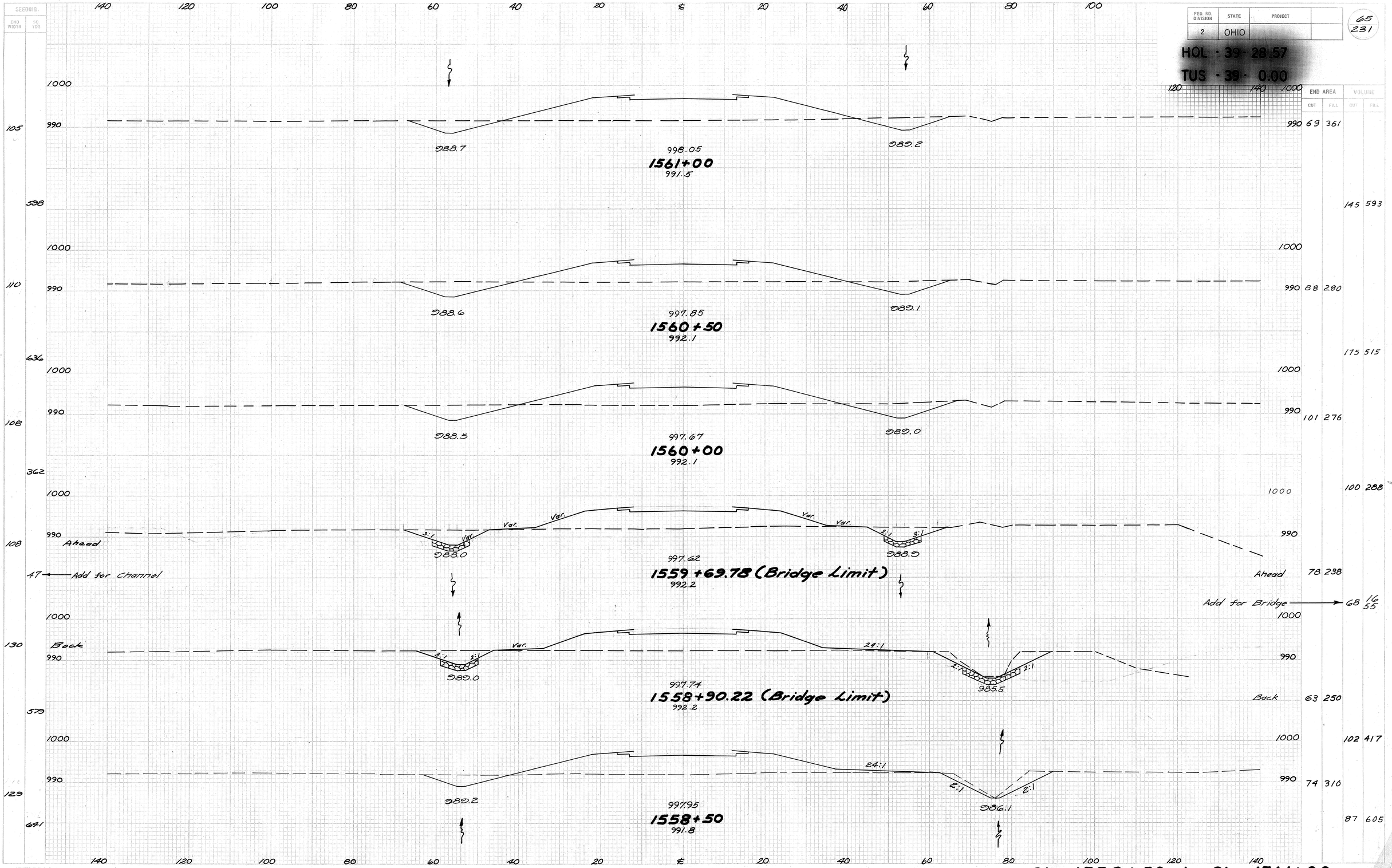
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20	342		
		37	691
20	404		
		34	815
17	476		
		80	2029
26	620		
		89	2615
22	792		
		82	2980
22	818		
		6	445

Sta. 1554+00 to Sta. 1558+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

65
231

HOL · 39 · 28.57
TUS · 39 · 0.00



Sta. 1558+50 to Sta. 1561+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

66
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140				
		1000		1000		
104		990		990	43	439
		990.1		990.6		
		1000.05				
		1566+00				82 801
		992.5				
	1161	1000		1000		
105		990		990	45	426
		989.9		990.4		
		999.85				
		1565+50				76 840
		992.1				
	1161	1000		1000		
104		990		990	37	482
		989.7		990.2		
		999.65				
		1565+00				135 1737
		991.9				
	1150	1000		1000		
103		990		990	36	456
		989.4		990.0		
		999.25				
		1564+00				126 1737
		991.8				
	1150	1000		1000		
104		990		990	32	482
		989.1		989.6		
		998.85				
		1563+00				153 1622
		991.0				
	1156	1000		1000		
104		990		990	51	394
		988.0		989.4		
		998.45				
		1562+00				222 1399
		991.4				
	1161	140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140				

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ON SOIL TRACS CLOTH

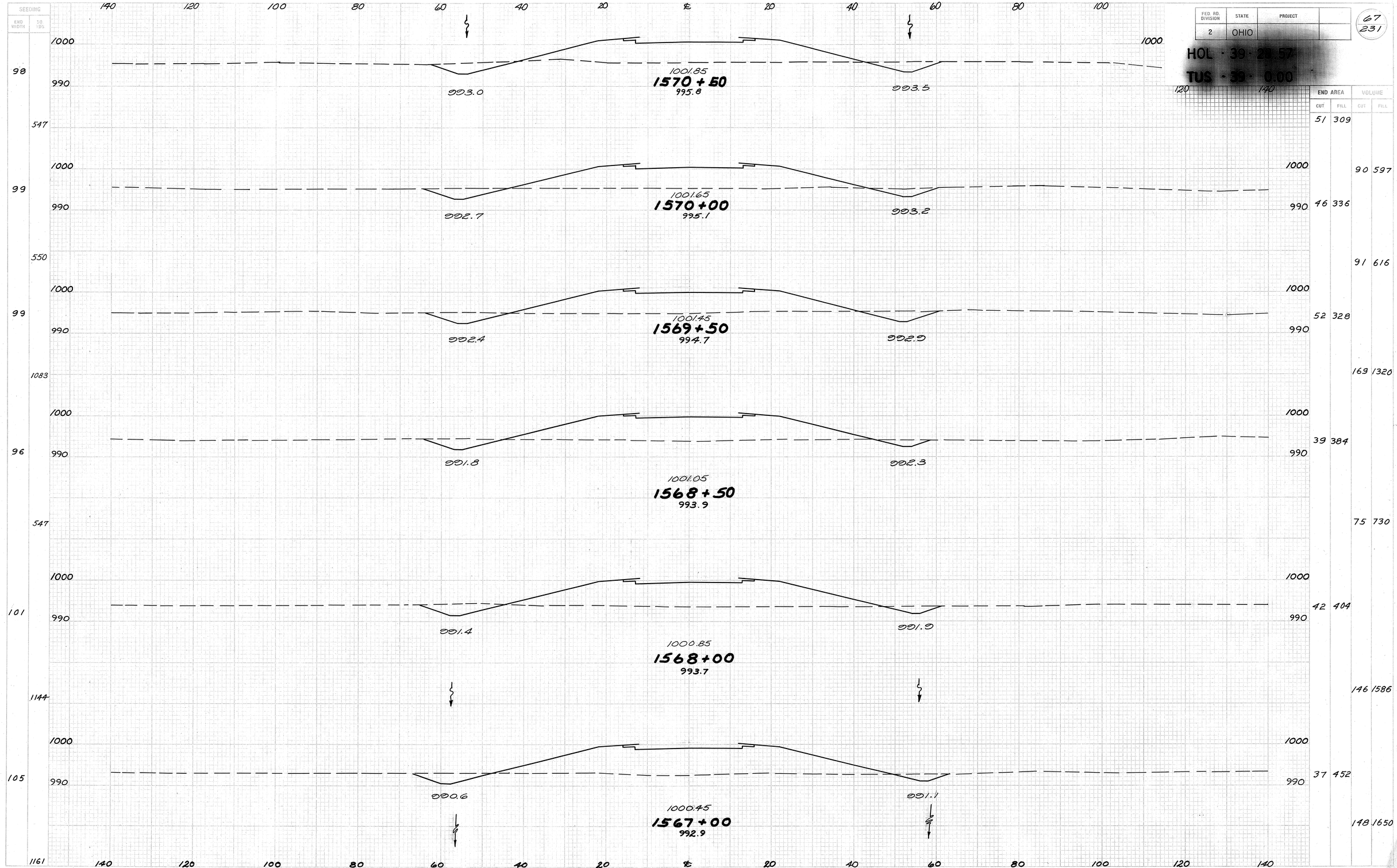
Sta. 1562+00 to Sta. 1566+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

67
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL
98	547	1570+50	51	309		
					90	597
99	550	1570+00	46	336		
					91	616
99	1083	1569+50	52	328		
					169	1320
96	547	1568+50	39	384		
					75	730
101	1144	1568+00	42	404		
					146	1586
105	1161	1567+00	37	452		
					148	1650



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ON KEUFFEL TRACE CLOTH

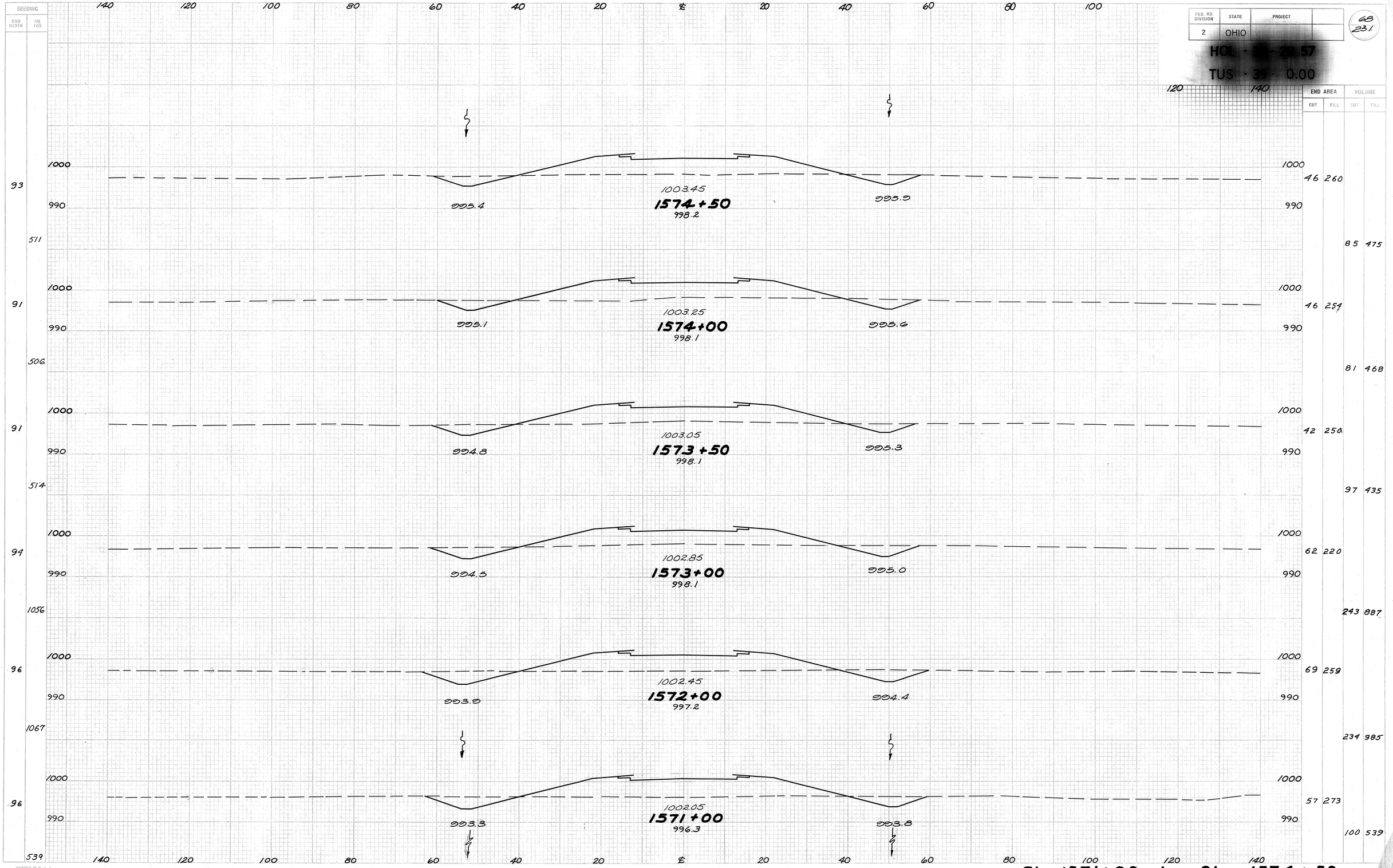
Sta. 1567+00 to Sta. 1570+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - [illegible] - 28.57

TUS - 39 - 0.00

68
231



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
46	260		
46	254		
42	250		
62	220		
69	259		
57	273		

Sta. 1571+00 to Sta. 1574+50

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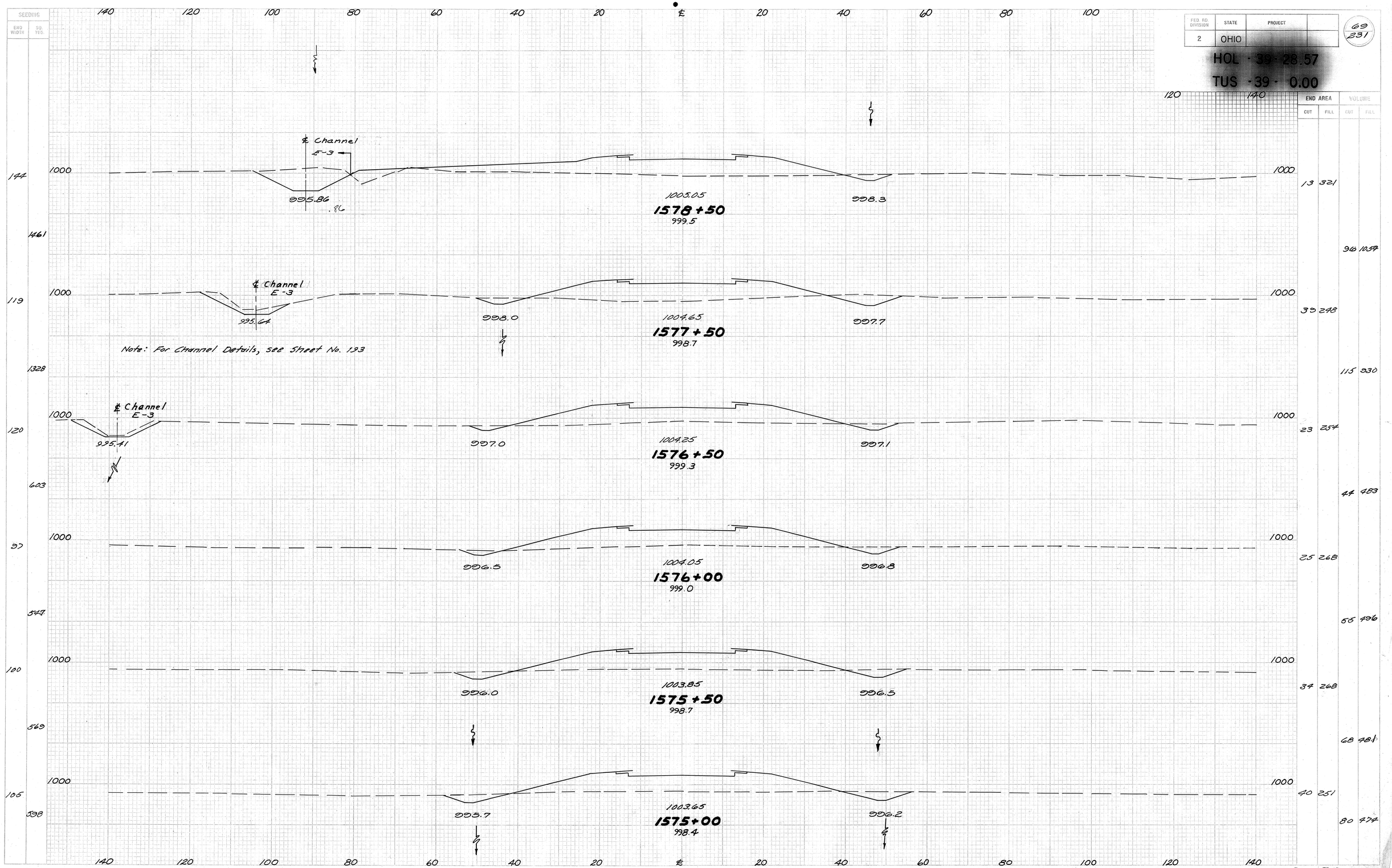
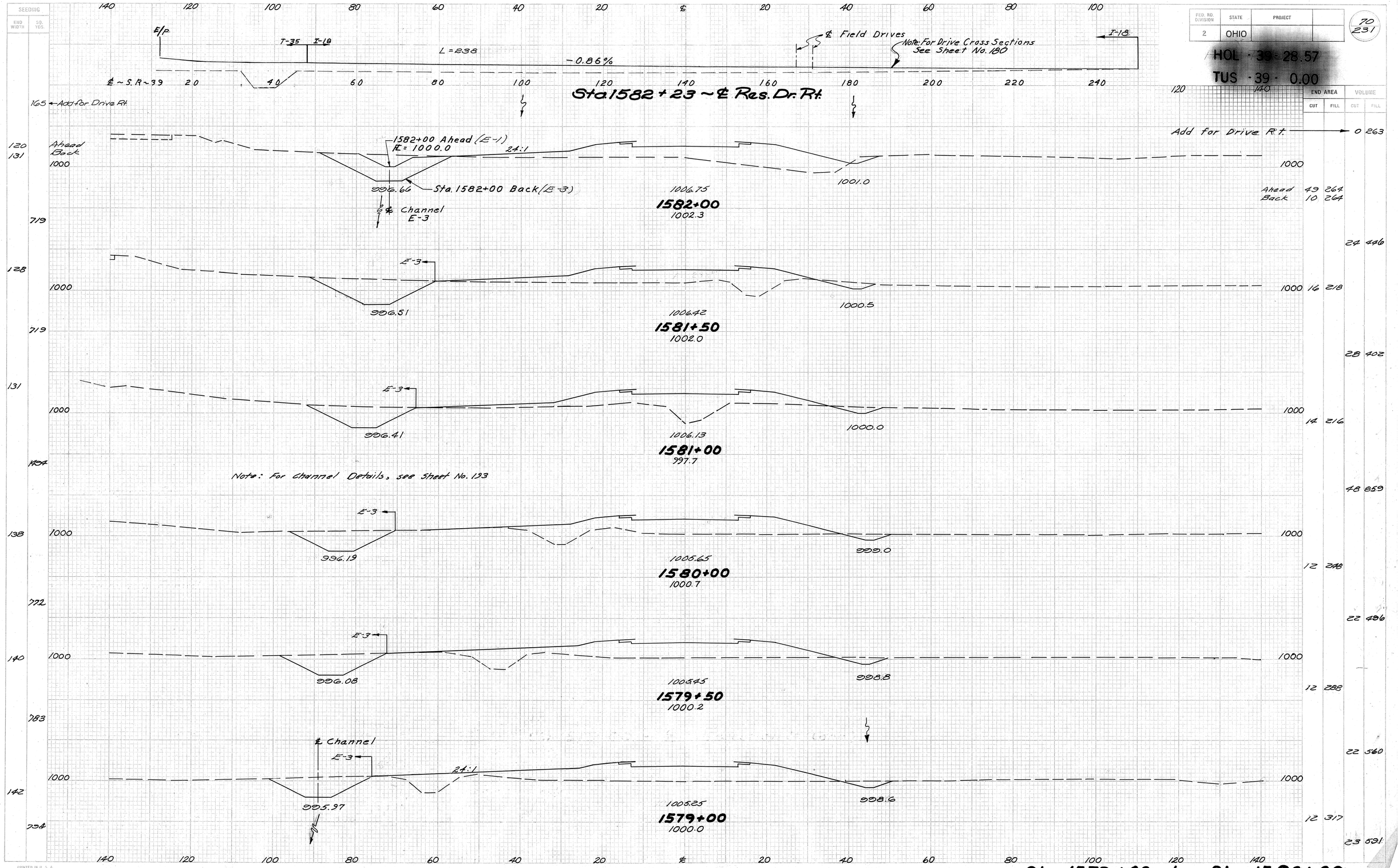
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

69
231

HOL - 39 - 28.57
TUS - 39 - 0.00



Sta. 1575+00 to Sta. 1578+50



FED. RD. DIVISION 2
STATE OHIO
PROJECT
70
231
HOL - 39 - 28.57
TUS - 39 - 0.00
SEEDING
END WIDTH
SQ. YDS.
E/P
T-35
I-18
L = 238
-0.86%
℄ Field Drives
Note: For Drive Cross Sections See Sheet No. 180
I-18
℄ ~ S.R. ~ 39
Sta. 1582 + 23 ~ ℄ Res. Dr. Rt.
165 ← Add for Drive Rt.
Add for Drive Rt.
Ahead
Back
1582+00 Ahead (E-1)
PL = 1000.0
24:1
996.66
Sta. 1582+00 Back (E-3)
℄ Channel E-3
1006.75
1582+00
1002.3
1001.0
Ahead 49 264
Back 10 264
E-3
996.51
1006.42
1581+50
1002.0
1000.5
16 218
E-3
996.41
1006.13
1581+00
997.7
1000.0
14 216
Note: For Channel Details, see Sheet No. 193
E-3
996.19
1005.65
1580+00
1000.7
999.0
12 248
E-3
996.08
1005.45
1579+50
1000.2
998.8
12 288
℄ Channel
E-3
24:1
995.97
1005.25
1579+00
1000.0
998.6
12 317
Sta. 1579 + 00 to Sta. 1582 + 00

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

71
231

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

68 436 1000 1005.2 1001.8 1000 19 206 43 398

1008.95
1584+50
1004.0

83 1000 1003.4 1001.6 1000 27 224

440 — Add for Pvm't Removal

1008.45
1584+00
1003.2

483

85 1000 1002.7 1001.4 1000 20 256 32 458

1007.97
1583+50
1002.6

497

93 1000 36" I-1 1001.7 1001.2 1000 15 239

1007.53
1583+00
1002.4

564

Sta. 1582+75 ~ ℄ Intersection Lt. (Conn.)

144 395

Add for Backfilling Right → 13

110 1000 Prop. Connection 36" I-1, For Quantities and Details, see Sheet No. 165 1000.6 1007.20 1000 140 188 175 918

639

1007.12
1582+50
1002.4

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

Sta. 1582+50 to Sta. 1584+50

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

72
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
56					
344					202 0
68					370 0
375					198 0
67					303 6
378					129 7
69					232 35
394					122 31
73					185 121
403					78 100
72					112 274
389					43 196
					59 372

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

1010

1011.95
1587+50
1011.3

For Earthwork Calculations Only
29'
℄ V-Ditch
(3:1 Side Slopes)
Dumped Rock
(12' Width)
1008.0
1.5'
1007.5
1011.45
1587+00
1012.3

1007.2
1010.95
1586+50
1011.8
1006.0

36" I-1 (For Quantities & Details, See Sheet No. 22)
I-18
L = 43'
10' V.C.
E/P
+12.5%
1007.0
1006.8
Sta. 1586+25 - Field Dr. Lt.

E/P
L = 50'
-9%
I-18
12" I-1 (For Quantities & Details, See Sheet No. 22)
Sta. 1586+25 - Field Dr. Rt.

1010.45
1586+00
1010.0
1004.5

1006.5
1009.95
1585+50
1006.7
1003.0

1006.0
1009.45
1585+00
1004.7
1002.0

Add for Drive Lt. → 5 40
Add for Drive Rt. → 16

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

7.3
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
90	483			1134	8
84	431			1991	15
71	367			1411	7
61	342			508	0
62	328			697	0
				245	0
				468	0
				260	0
				428	0

Sta. 1590+20.80 ~ ℄ Intersection Rt. (T.R. 137)

312 ← Add for Pavement Removal

1014.45
1590+00
1025.2

1010.3

1013.95
1589+50
1023.3

1010.0

1013.45
1589+00
1018.9

1000.7

1012.95
1588+50
1015.0

1000.4

1012.45
1588+00
1015.3

1000.1

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

1020 1010

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ON DIAL-TRACE CLOTH

Sta. 1588+00 + Sta. 1590+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
73	378				
				143	20
63	378			344	19
				229	0
73	419			573	4
				390	4
78	442			988	19
72					
				677	17
81	479			1521	23
				966	8
				1944	15

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

1030
1020
1040

1016.95
1592+50
1017.0

1016.45
1592+00
1016.9

1015.95
1591+50
1015.5

1015.45
1591+00
1022.0

1014.95
1590+50
1024.5

Add for Pavement Removal

Outlet into intersection Ditch

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ON CURL-TRACE CLOTH

Sta. 1590+50 to Sta. 1592+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

75
231

HOL - 39 - 28.57
TUS - 39 - 0.00

Note: For Channel & 42" Pipe Details
See Sheet #23

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140				
102		1020 / 1010 — For Earthwork Only; ℄ Channel; 1011.8; 1020.95 **1596+50** 1012.6; For Earthwork Only; 1010.5; ℄ Channel	1010	30	503	
	1017					65 1713
81		1020 / 1010 — 1012.9	1020 / 1010	5	422	
	1418	← Add for Pavement Removal				
	850	1019.95 **1595+50** 1012.4				19 1306
72		1020 / 1010 — 1014.0; 1018.95 **1594+50** 1013.4	1020 / 1010	5	283	
	367					
60		1020 / 1010 — 1014.3; 1018.45 **1594+00** 1013.1	1020 / 1010	9	234	13 999
	308	Dike Detail ~ Sta. 1593+75: 3:1, 4:1, 4:1, 4', 4:1, 3:1, 4:1, Top of Dike 1016.59, Edge of Berm, Scale: 1" = 10'				
51		1020 / 1010 — 1017.95 **1593+50** 1014.1	1020 / 1010	21	130	Add for Dike → 2 28 337
	278	Note: For Channel & Sod Quantities See Sheet #23				
49		1020 / 1010 — +18, 58' Lt Meet Ex. ℄; Sod (L=41', W=9'); ℄ Ex. Ditch; ℄ Proposed Ditch (2' Bottom 2:1 Slope) +00, 35' Lt ℄ = 1015.00; 1017.45 **1593+00** 1014.7	1020 / 1010	83	72	96 187
	339					209 85
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140				

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GIL-TRACE CLOTH

Sta. 1593+00 to Sta. 1596+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

76
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
125	689			89	513
123	686			87	517
124	586			104	344
87	508			31	875
96	536			9	442
97	553			19	850
				11	476
				22	882
				13	477
				40	907

Add for Drive Lt. → 0 122

I-1B
10' V.C.
L = 73'
-11.5%
53" x 34" Elliptical or 58" x 36" C.M. Arch (For Details & Quantities, See Sheet # 23)
For Earthwork Calculations Only
1013.2
1023.95
1599+50
1016.0
Sta. 1599+50 ~ ℄ Field Drive Lt.
24:1
1013.2

+00 End Dumped Rock
1023.45
1599+00
1015.6
1013.0
1012.5

60' Rt.
8'
4'
Var.
24:1
2:1
2:1
Typical Channel Cross Section

1022.95
1598+50
1015.2
1012.8
24:1
1011.8

+20 Start Dumped Rock
+00 Outlet Relocated Channel into Existing Channel 79' Rt.

1022.45
1598+00
1014.7
1012.6

1021.95
1597+50
1014.4
1012.4
1013.0

1021.45
1597+00
1013.5
1012.2
1012.0

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

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Sta. 1597+00 to Sta. 1599+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

77
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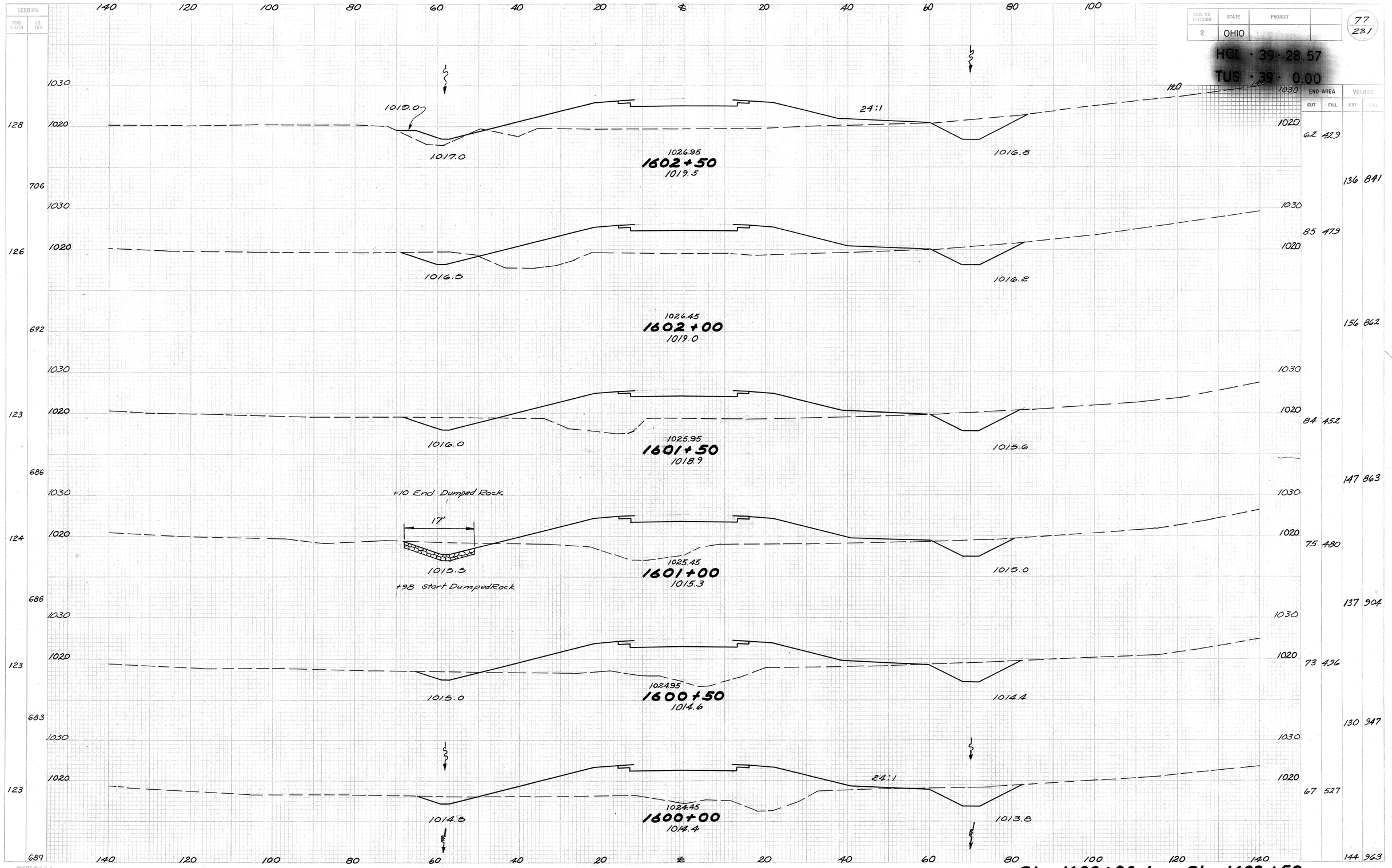
HOL · 39 · 28.57
TUS · 39 · 0.00



Sta. 1600+00 to Sta. 1602+50

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

78
2.31

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING
END WIDTH | SQ. YDS.

2000 ← Add for Pavement Removal

Channel ~ Sta. 1604+34 Lt.	E-3	
Scale: 1"=10'	E.A.	C.Y.
125' Lt.	0	
Limit E-1		4
1019.34	8	
1604+34, 100' Lt.		
1020.84		13
Limit E-1		
1018.30	12	
1604+34, 66' Lt.		1
1020.84		
60' Lt.	0	
E-3 Carried to Sheet #24	Total	18

END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL

1030 / 1020

1021.5 — 1019.5 — 24:1 — 1019.8

1029.45
1605+00
1022.7

+90 End Dumped Rock

130 357

224 671

1021.0 — 1019.0 — 23' — 1019.2

1028.95
1604+50
1022.5

+30 Start Dumped Rock

112 368

274 687

Limit E-1

+34, 125' Lt. Meet ℄ Ex. Channel

+34, 100' Lt. ℄ = 1019.34

℄ Channel

+34, 60' Lt. ℄ = 1018.84

1020.5 — 1018.5 — 1018.6

1028.45
1604+00
1021.9

184 374

330 744

1020.0 — 1018.0 — 1018.0

1027.95
1603+50
1020.9

172 429

297 823

1019.5 — 24:1 — 1017.4

1027.45
1603+00
1020.1

149 460

195 823

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

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Sta. 1603 + 00 to Sta. 1605 + 00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL
118	661	1608+00	82	351	132	608
120	650	1607+50	61	306	99	535
114	683	1607+00	46	337	124	663
132	781	1606+50	88	379	302	694
149	847	1606+00	238	371	429	686
156	886	1605+50	225	370	329	673

Sta. 1605 + 50 to Sta. 1608+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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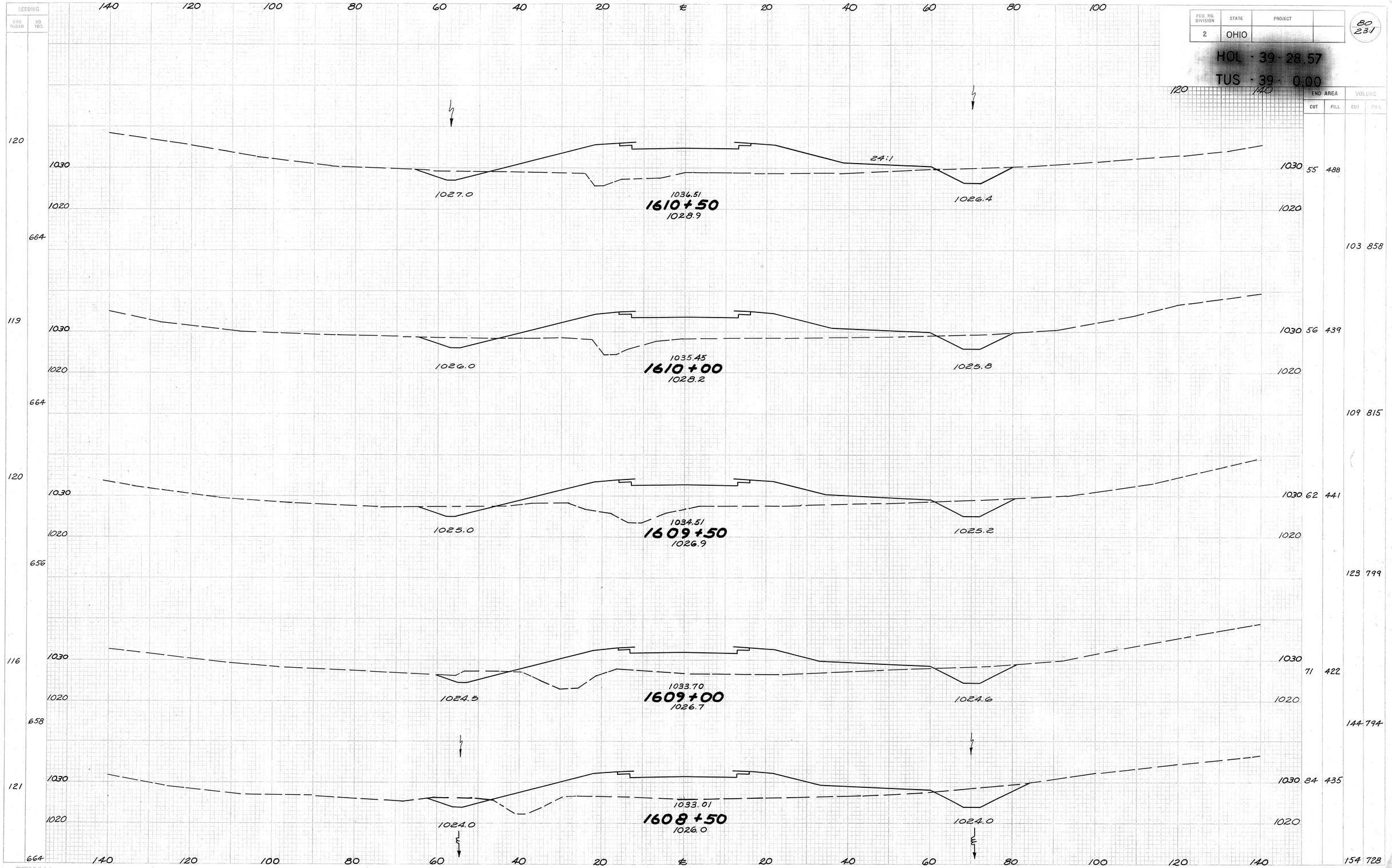
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL
120	664	1610+50	55	488	103	858
119	664	1610+00	56	439	109	815
120	656	1609+50	62	441	123	799
116	658	1609+00	71	422	144	794
121	664	1608+50	84	435	154	728



Sta. 1608 + 50 to Sta. 1610 + 50

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ON KOH-I-NOOR CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING				END AREA		VOLUME	
END WIDTH	SQ. YDS.			CUT	FILL	CUT	FILL
110	600	1040 / 1030	1033.0	18	666		
		1042.01	1030.5				
		1612+50					
		1032.2				57	1,111
106	360	1040 / 1030	+02 Start Dumped Rock; 1029.2	44	534		
		1040.45	1028.0				
		1612+00	+05 Outlet Channel into Ditch, 85' Rt & End Dumped Rock				
		1031.2				46	718
110	244	1040 / 1030	Hatched Area Indicates Dike, Elev. 1034.00 For Details, See Sheet #196; 1028.0	39	758		
		1039.57	1027.8				
		1611+70					
		1027.6				53	493
				Add for Dike →		29	
110	658	1040 / 1030	1029.0	105	573		
		1039.01	1027.6				
		1611+50	+50 Start Dumped Rock				
		1027.0				162	1,022
127	686	1040 / 1030	1028.0	70	531		
		1037.70	1027.0				
		1611+00					
		1026.9				116	944

Sta. 1611+00 to Sta. 1612+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL · 39 · 28.57
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SEEDING END WIDTH	SEEDING SQ. YDS.
84	422
68	369
65	419
86	497
93	564

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		1050	
	280	1040	50
		1050	384
		1040	213
	135		180
		1050	
	275		315
		1040	162
			160
			244
		1040	454
	29	Add for Drive Lt. →	92
	0	Add for Drive Rt. →	280
		1030	101
			330
			117
			907
		1040	
		1030	25
			650
			40
			1219

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

1070
1060
1050
1040
1030

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

1048.4
1051.45
1615+00
1052.8

+75 End Paved Gutter

Note: Use 3' Sod Strips on each side of Paved Gutter.

1060
1050

2:1
12:1
2:1
2:1

1046.4
1049.45
1614+50
1046.5

1613+78 Start Paved Gutter

1060
1050

T=35
L=60' +6.0%
10' V.C.
℄
1042.0
1047.45
1614+00
1045.0
℄
-10.0%
L=113'
I-18
10' V.C.
T=35
I-18

Note: For Drive Lt. Cross-Sections, See Sheet No. 180

Sta. 1613+70 ~ ℄ Res. Dr. Lt.

2 30"I-1

Note: For 30"I-1 Details & Quantities, See Sheet #25

30"I-1
1040.9

Sta. 1613+70 ~ ℄ Res. Dr. Rt.

1040
1030

2:1

1045.51
1613+50
1039.5
1033.0

+18 End Dumped Rock

1040
1030

3:1

1038.0
1031.0

130 ← Add for Pavement Removal

1043.70
1613+00
1033.5

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

Sta. 1613+00 to Sta. 1615+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

33
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
107	578				1026.4
101	556				1747.4
99	531			861.0	
92	489			1411.7	
				1031.28	
				450.22	
				676.67	

1090 1080 1070 1060 1050 1040

2:1 12:1 2:1

1056.4

1059.45
1617+00
1064.0

1054.4

1057.45
1616+50
1061.9

1052.4

1055.45
1616+00
1059.4

1050.4

1053.45
1615+50
1056.6

4:1

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

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Sta. 1615+50 to Sta. 1617+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

84
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
110	594	580	27	1198	29
104	600	714	4	1481	7
112	622	886	4	1850	7
112	608	1112	4	1380	7

+29 Outlet Ditch 68' Rt.

1067.45
1619+00
1070.6

1064.4 — 2:1 — 12:1 — 2:1 — 1062.0

1065.45
1618+50
1068.2

1062.4 — 2:1 — 12:1 — 2:1 — 1064.0

1063.45
1618+00
1065.4

1060.4 — 2:1 — 12:1 — 2:1 — 12:1

1061.45
1617+50
1065.2

1058.4 — 2:1 — 12:1 — 2:1 — 12:1

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

1090 1080 1090 1080 1100 1090 1100 1090 1060 1050 1050 1040 1050 1040

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ON CEIL-TRACE CLOTH

Sta. 1617+50 to Sta. 1619+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HQL · 39 · 28.57

TUS · 39 · 0.00

SEEDING END WIDTH	SEEDING SQ. YDS.
119	1228
102	1090
89	1080
475	1070
82	1080
542	1070
113	1080
614	1070

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

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		2161	4
		6541	15
		1374	4
		2020	4
		808	0
		266	8
		948	
		0	106
		235	9
		619	101
		434	100
		939	118

1110 1100 1090 1080 1070 1060

2:1 1:1 12:1 2:1

1079.45
1622+00
1098.8

+25 End Paved Gutter

1075.45
1621+00
1088.8

1073.45
1620+50
1080.5

+37 Start Paved Gutter
I-18
L = 48'
10' V.C.
+13.8%
E/P
E/P
L = 63'
-9.0%
T-35

Sta. 1620+09 ~ ℄ Field Dr. Lt.
30" I-1 (For Details & Quantities, See Sheet # 26)

Sta. 1620+08 ~ Res. Dr. Rt.
15" I-1 (For Details & Quantities, See Sheet # 25)

1071.45
1620+00
1072.5

1069.45
1619+50
1070.5

1069.0 1071.0 1068.2 1066.5 1066.2 1062.0

Add for Drive Lt. → 9 48
Add for Drive Rt. → 0 106

Channel Detail ~ Sta. 1619+75 Lt. — E-3

	E.A.	C.Y.
0+73	0	
		6
	24	
		8
	12	
	4	
	12	
	1	
0+34	0	
Total	19	

0+73, ℄ = 1075.5±
Dumped Rock (L=47', W=8', D=15')
Dumped Rock (2'x6'x2.5')
scale: 1"=10'
1071.70
0+59
1074.5
1068.70
0+47
1070.7
1067.60
0+37
1069.6
1619+75 = Chan. 0+00
15° L.F.
27"I-1 Limits E-1
℄ Survey
1619+85
PLAN Scale: 1"=20'

Dumped Rock & E-3 Quantities carried to Sheet # 25

Sta. 1619+50 to Sta. 1622+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

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231

SEEDING	
END WIDTH	SQ. YDS.
87	1120
	1110
113	1111
	1130
127	1120
	1120
131	1110
	1389

1248 ← Add for Pavement Removal

717

667

END AREA		VOLUME	
CUT	FILL	CUT	FILL
857	4		
		4634	15
1678	4		
		3558	7
2165	4		
		4196	7
2367	4		
		8385	15

1091.45
1625+00
1099.2

1087.45
1624+00
1102.7

1085.45
1623+50
1104.7

1083.45
1623+00
1103.4

Sta. 1623+00 to Sta. 1625+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING END WIDTH	SEEDING SQ. YDS.
76	861
79	517
107	631
120	589
92	517
94	1006

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

I-18 L=38' +12% 24" I-1 (For Details & Quantities See Sheet # 26)

Sta. 1629+00 ~ Field Dr. Lt. 1101.0 For Earthwork Calc. Only

Sta. 1629+00 ~ ℄ Field Dr. Lt.

1110.98
1629+00
1102.6

1097.5 4:1 1099.2

1102.35
1628+00
1092.5

+56 End Dumped Rock

12' 1.5' 1092.0 2:1 1090.6

1100.83
1627+50
1089.7

1091.0 2:1 1084.6

1099.18
1627+00
1092.7

1090.0 2.5:1 1082.0

Outlet into Culvert

1097.38
1626+50
1091.0

Sta 1626+00~℄ Intersection Rt (Connection)

Connection Sta. 1626+00

1089.0 3.5:1

+98 Start Dumped Rock

1095.45
1626+00
1087.1

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
74	196		
Add for Drive Lt. →		1	45
		183	1415
25	568		
		37	1387
15	930		
		167	1283
165	456		
		267	891
120	506		
		126	1143
16	728		
		1617	1355

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Sta. 1626+00 to Sta. 1629+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

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231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
139	795	1903	8	3319	11
147	747	1681	4	2670	7
122	597	1203	4	1929	7
93	461	880	4	1368	7
73	828	597	4	1243	370

1109.55
1632 + 00
1126.4

1109.13
1631 + 50
1121.2

1108.58
1631 + 00
1118.5

1107.88
1630 + 50
1115.5

1107.05
1630 + 00
1113.3

2:1 1:1 1:1 2:1

Sta. 1630 + 00 to Sta. 1632 + 00

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ON DIXIE TRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS.
239	
247	
210	
1029	
158	
825	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

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231

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7315	8		
		12,328	15
		5899	8
		8501	15
		3182	8
		4708	15

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

1150 1140 1130 1160 1170

2:1 1:1 12:1 2:1

1109.98
1633 + 50
1158.0

1109.98
1633 + 00
1146.4

1109.83
1632 + 50
1133.7

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ON CEL-TRACE CLOTH

Sta. 1632+50 to 1633+50

SEEDING

LBS. WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

30
231

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

200

1160
1150
282
2:1
1:1
1533
12:1 2:1 2:1 12:1
1109.65
1634+50
1172.3
1180
1170
10,863 B
2:1
1:1
13,123 15

1160
1150
270
2:1
1:1
1414
12:1 2:1 2:1 12:1
1109.85
1634+00
1167.9
1170
1160
9790 B
2:1
1:1
15838 15

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

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Sta. 1634+00 to Sta. 1634+50

SEEDING	
END WIDTH	SQ. YDS.
270	3083
285	1575

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

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231

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1420		8283 8	
		34691 30	
10450 B			
		19734 15	

1140 1120 1100 1080 1060 1040 1020 ℄ 1020 1040 1060 1080 1100 1120 1140

1150
1140
1130
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000
990
980
970
960
950
940
930
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
630
620
610
600
590
580
570
560
550
540
530
520
510
500
490
480
470
460
450
440
430
420
410
400
390
380
370
360
350
340
330
320
310
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

2:1
1:1
12:1
2:1
2:1
12:1
1100.05
1636+00
1162.1
1100.45
1635+00
1170.3
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000
990
980
970
960
950
940
930
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
630
620
610
600
590
580
570
560
550
540
530
520
510
500
490
480
470
460
450
440
430
420
410
400
390
380
370
360
350
340
330
320
310
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

A
A
1190
1180
140
160
180

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Sta. 1635 +00 to Sta. 1636 +00

SEEDING	
END WIDTH	SQ. YDS.
210	
240	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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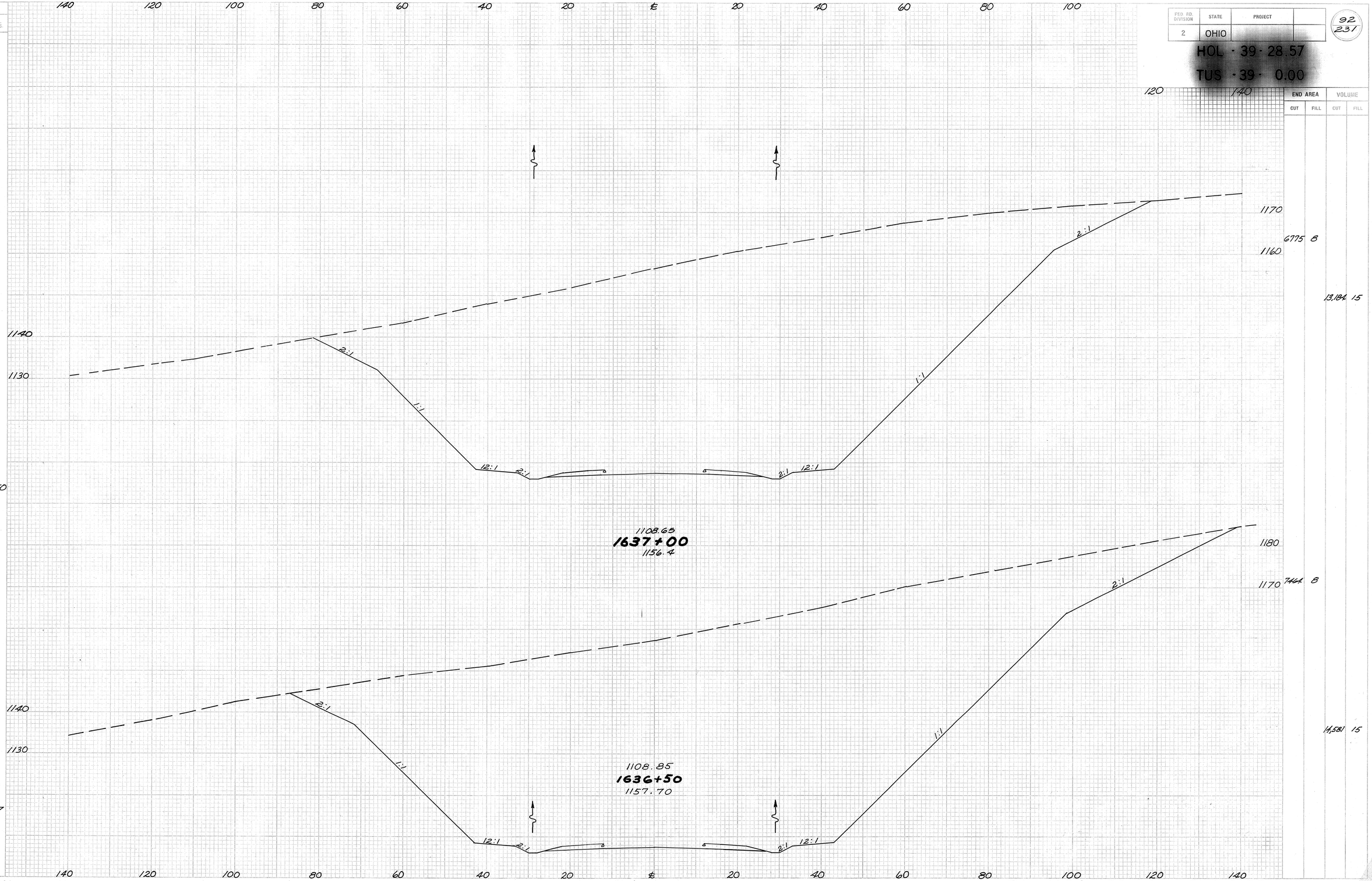
231

HOL - 39 - 28.57

TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6775	8		
		13,184	15
7464	8		
		14,581	15



Sta. 1636+50 to Sta. 1637+00

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SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

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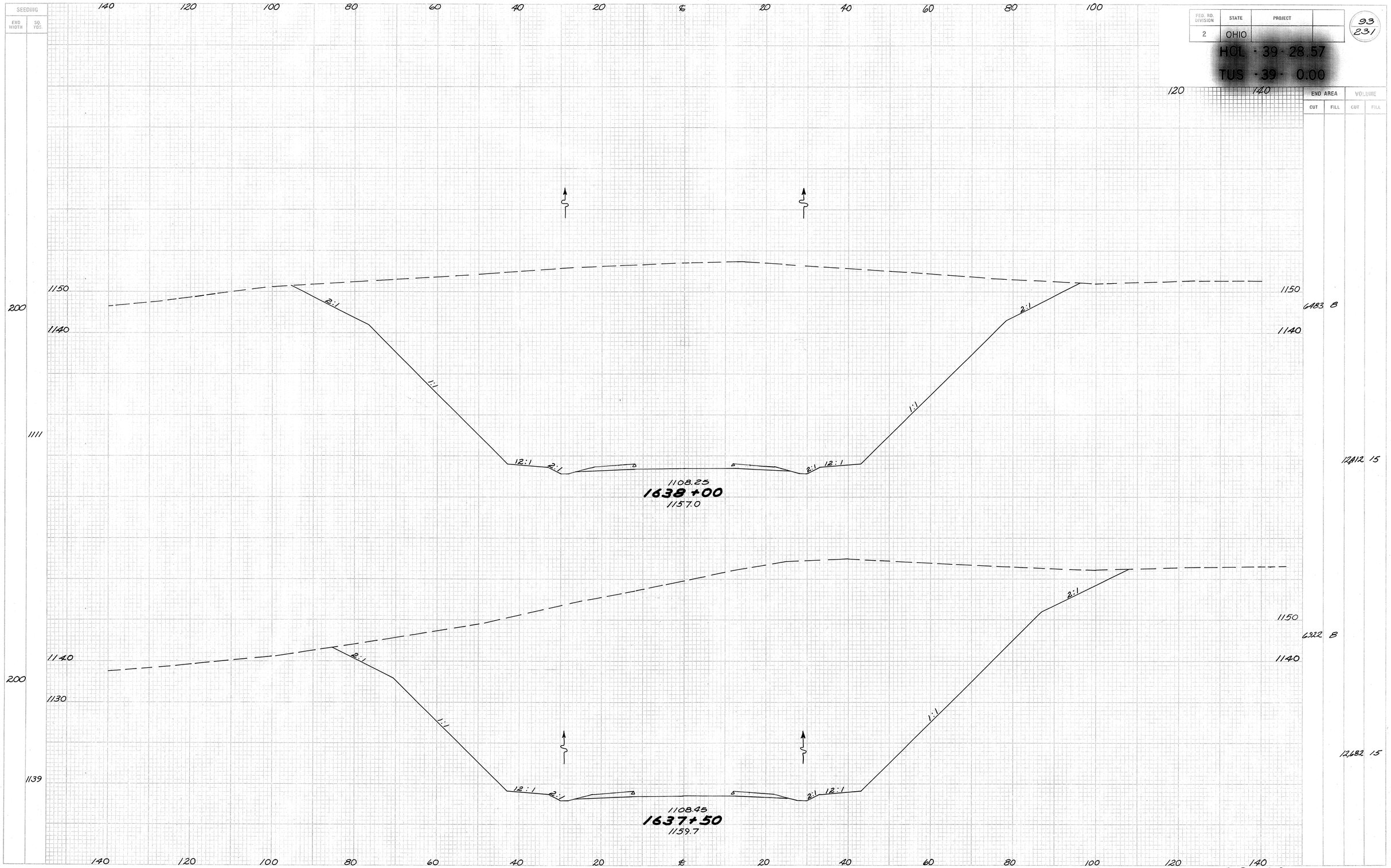
231

END AREA		VOLUME	
CUT	FILL	CUT	FILL



Sta. 1637+50 to Sta. 1638+00

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SEEDING	
END WIDTH	SQ. YDS.
105	1500
165	986
190	1083

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57

TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1428	8		
		9681	30
3800	8		
		8567	15
5452	8		
		11,051	15

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

1140 1130 1120 1110

2:1 1:1

1107.45
1640+00
1121.7

1140 1130 1120

2:1 1:1 12:1 2:1 2:1 1:1

1107.85
1639+00
1138.2

1150 1140 1130

2:1 1:1 12:1 2:1 2:1 12:1 1:1 2:1

1108.05
1638+50
1148.2

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

Sta. 1638+50 to Sta. 1640+00

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ON KOH-I-NOOR CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
185	903	56	2683		
140	667	61	1516	78	1,842
100	569	23	473	442	468
105	556	454	33	1063	38
95	556	694	8	1965	15

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

1090 1080 1090 1080 1100 1090 1120 1110 1120 1110 1100 1090 1100 1090 1110 1100 1110 1100

1079.0

1106.45
1642+50
1080.6

1077.0

+48 Begin Dumped Rock
+40 End Dumped Rock

2:1 2:1

1091.0

1085.0

1106.65
1642+00
1085.7

3:1 3:1 8'

1101.0

1091.0

1106.85
1641+50
1098.9

4:1 4:1

1103.0

1097.0
+00 Start Dumped Rock

1107.05
1641+00
1109.1

1107.25
1640+50
1111.1

1103.0

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

PRINTED IN U. S. A.
ON DUPLITRACE CLOTH

Sta. 1640 + 50 to Sta. 1642+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

96
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
		668	8		
75					
		1120		751	27
397		1110			
		143	21		
68					
		Add for Drive Lt. →		2	31
		Add for Drive Rt. →		57	13
				188	331
461		1110		60	337
98					
				217	1557
647					
		1100	174	1345	
135					
				185	3691
825		1100		26	2641
162					
				76	4930

1105.45
1645+00
1111.4

I-18
L = 48'
-12%
4:1
1099.0
For Earthwork Calculations Only

10'V.C.
L = 58'
+12%
I-18
For Earthwork Calculations Only

1105.65
1644+50
1105.0

Sta. 1644+50 ~ ℄ Field Dr. Lt.

Sta. 1644+50 ~ ℄ Field Dr. Rt.

3:1
4:1
1100.0
1093.0
1105.85
1644+00
1099.5

+00 End Dumped Rock

3:1
2:1
1097.0
1106.05
1643+50
1091.7
1073.0

+37 Start Dumped Rock

+27 End Dumped Rock

2:1
1091.0
1106.25
1643+00
1078.3
1072.5

Sta. 1643+00 to Sta. 1645+00

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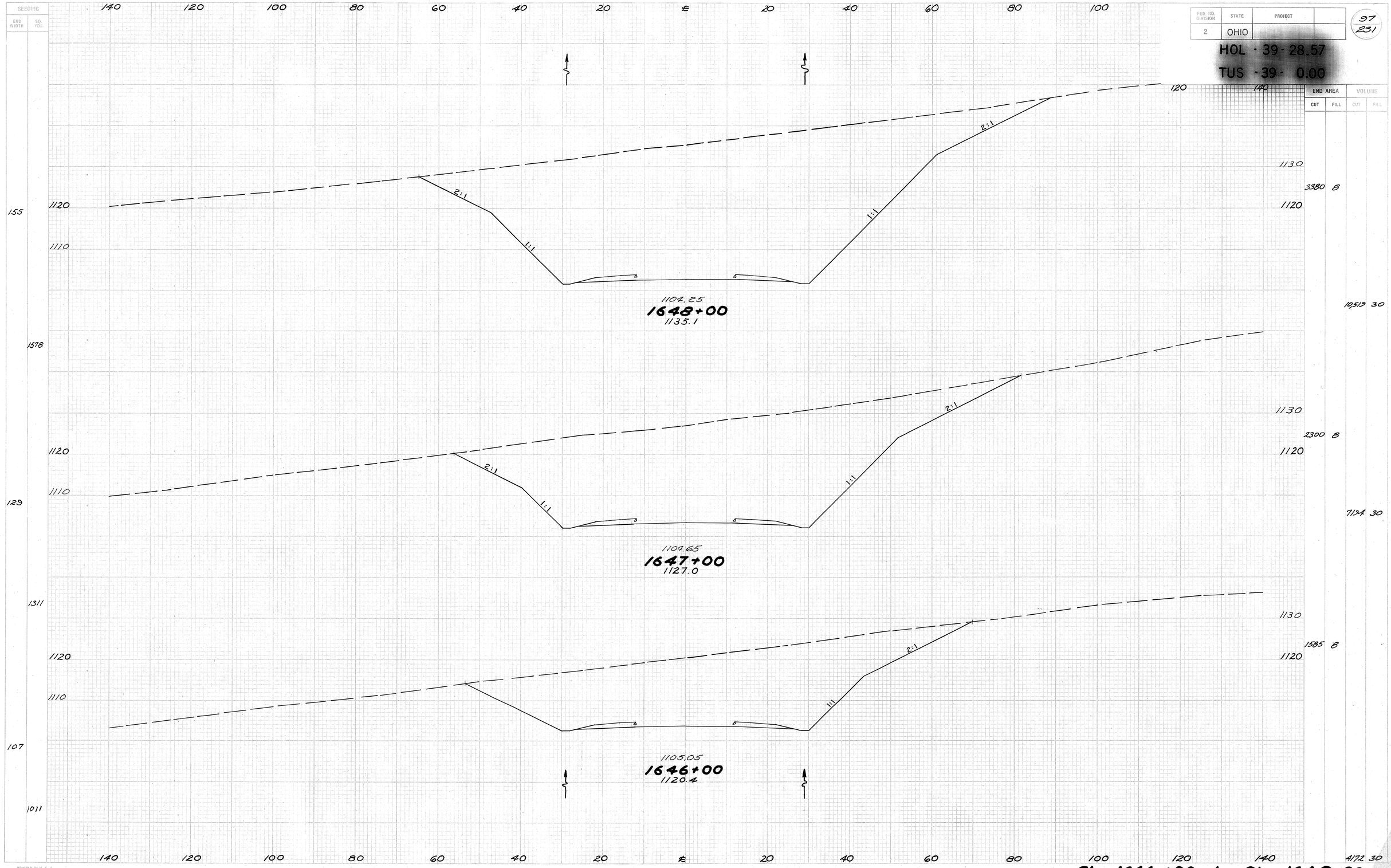
ON CURLTRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

97
231

HOL - 39 - 28.57
TUS - 39 - 0.00



Sta. 1646 +00 to Sta. 1648+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

98
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
149					
	856				7085.15
159					
	894				7355.15
163					
	883				6761.15

1140
1130
1120

2:1
1:1

1103.65
1649+50
1136.7

1103.85
1649+00
1139.7

1104.05
1648+50
1138.8

1130.3631.8

1130.4021.8

1130.3922.8

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

PRINTED IN U. S. A.
ON KEUFFEL-TAUSCHE CLOTH

Sta. 1648+50 to Sta. 1649+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

99
231

SEEDING

END WIDTH	SQ. YDS.
72	
	475
99	
	603
118	
	708
137	
	794

END AREA		VOLUME	
CUT	FILL	CUT	FILL
582	0		
		1987	7
1564	8		
		3551	15
2271	8		
		4812	15
2926	8		
		6071	15

+50, 77' Lt.
Meet Exist. Ground

Dumped Rock
(L=53', W=10', D=1.5')

℄ Channel
(2' Bottom, 2:1 Slopes)

Note: Dumped Rock & E-3 Quantities
Carried to Sheet # 29

+50, 30' Lt.
Meet ℄ Ditch

1102.85
1651+50
1108.3

1103.05
1651+00
1119.4

1103.25
1650+50
1126.4

1103.45
1650+00
1132.0

Channel Cross Section	E-3	
	E.A.	Cu. Yds.
1651+50, 77' Lt.	0	
		17
1105.00	32	
		11
1651+50, 48' Lt. 1108.5		
1651+50, 30' Lt.	0	
Scale: 1"=10'	Total	28

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ON CEIL-TRACE CLOTH

Sta. 1650+00 to Sta. 1651+50

SEEDING	
END WIDTH	SQ. YDS
202	
	1734
121	
	1250
104	
944	
66	
383	

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

1090
1080
1083.0
2:1
1102.98
1655+00
1075.2
1100
1090
1095.0
4:1
+00 Start Dumped Rock
1102.23
1654+00
1089.0
1110
1100
1098.0
3:1
1102.25
1653+00
1096.6
1110
1100
4:1
1102.65
1652+00
1098.6

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

100
231

120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	3450		
		193	8422
92	1038		
178	499		
		413	1167
48	131		
		583	121
		500	2357

1080
1070
2:1 2:1
1057.0
1055.0
End Dumped Rock at +80
1100
1090
1078.0
2:1 2:1
1100
1090
1097.0
+00 Start Dumped Rock

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

PRINTED IN U. S. A.
ON DIAZOTRACE CLOTH

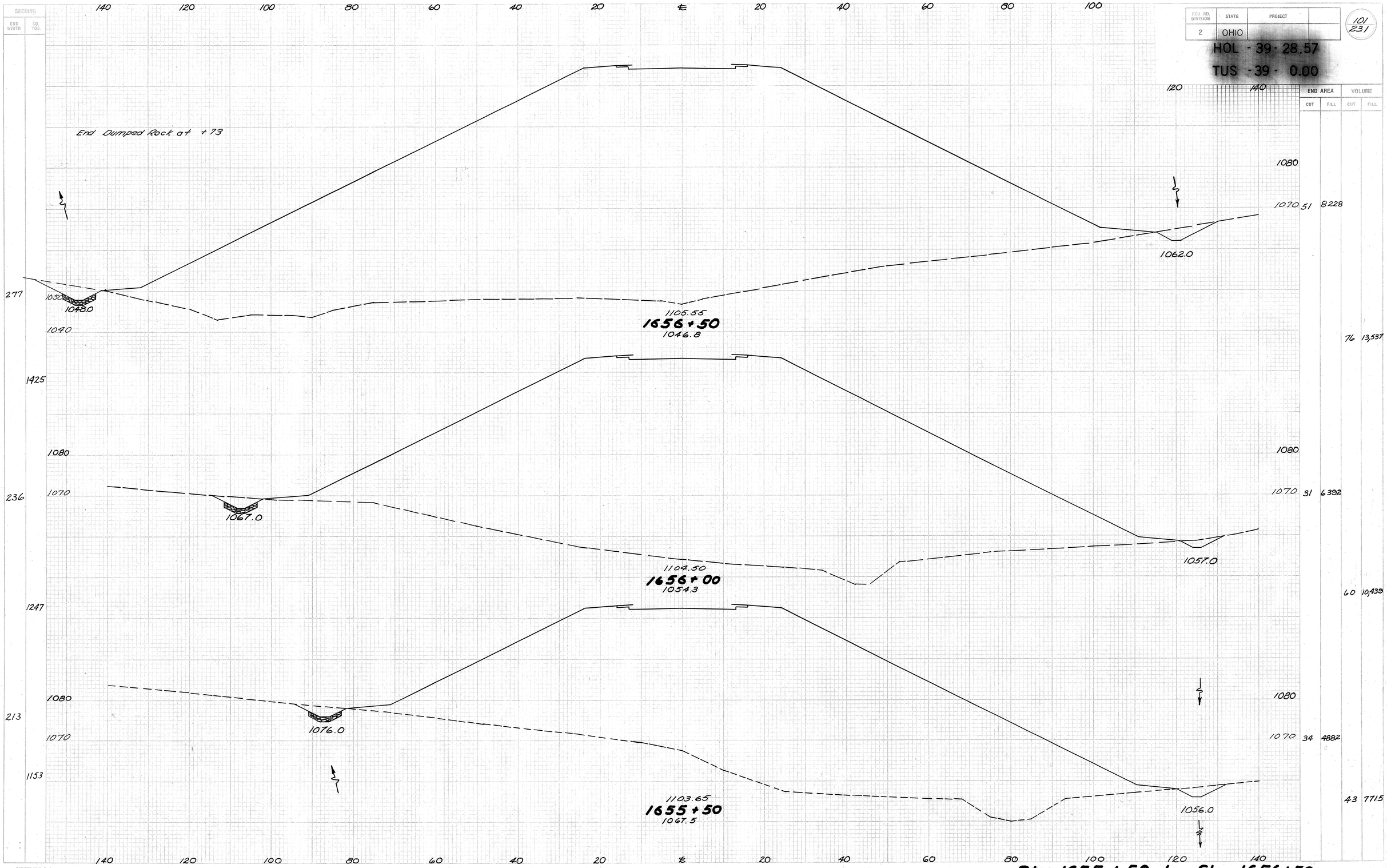
Sta. 1652+00 to Sta. 1655+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

101
231

HOL - 39 - 28.57

TUS - 39 - 0.00



Sta. 1655 + 50 to Sta. 1656+50

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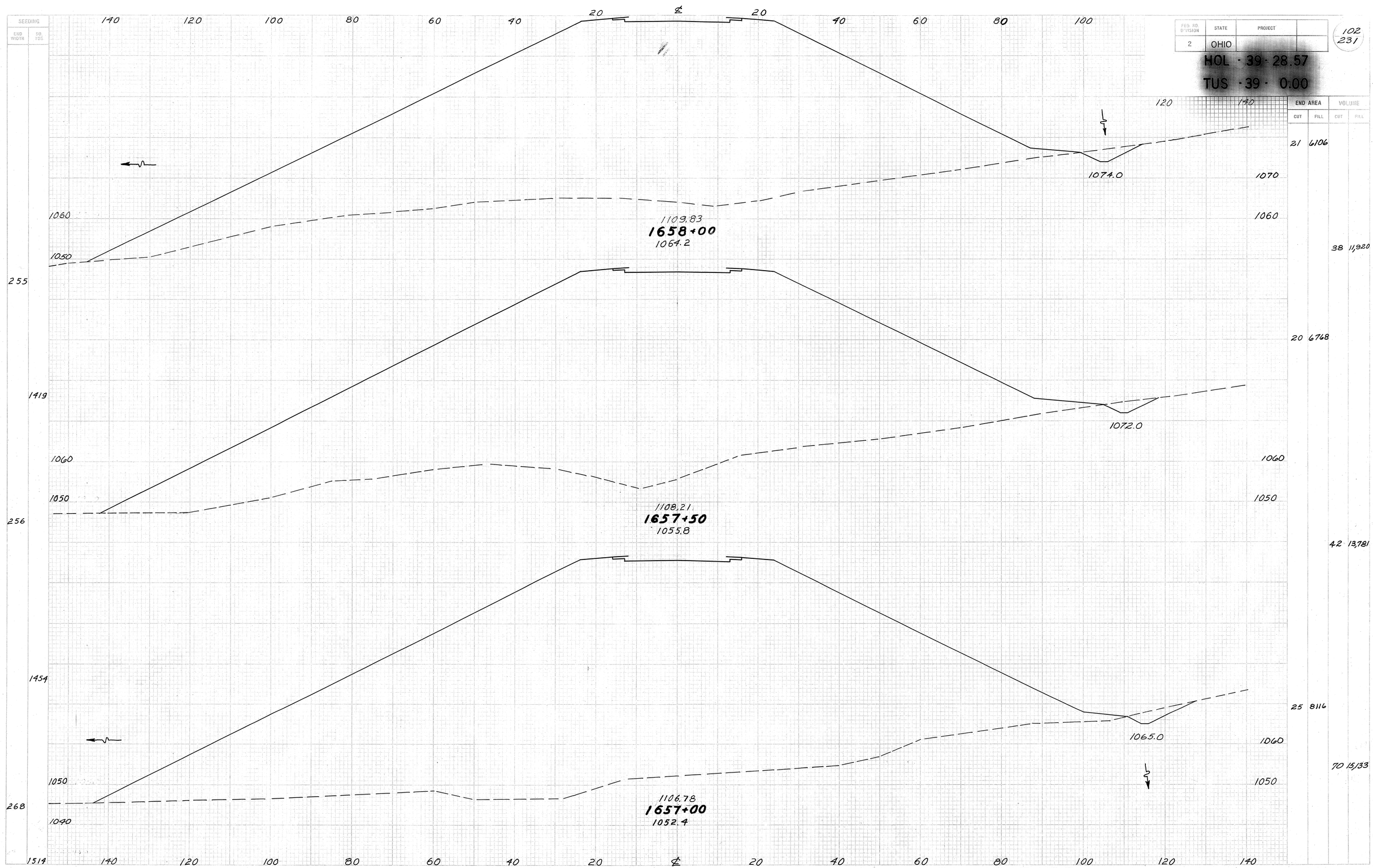
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

102
231

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		21	6106		
				38	11,920
255					
		20	6748		
1419					
256				4.2	13,781
1454					
		25	8116		
268				70	15,133
1519					



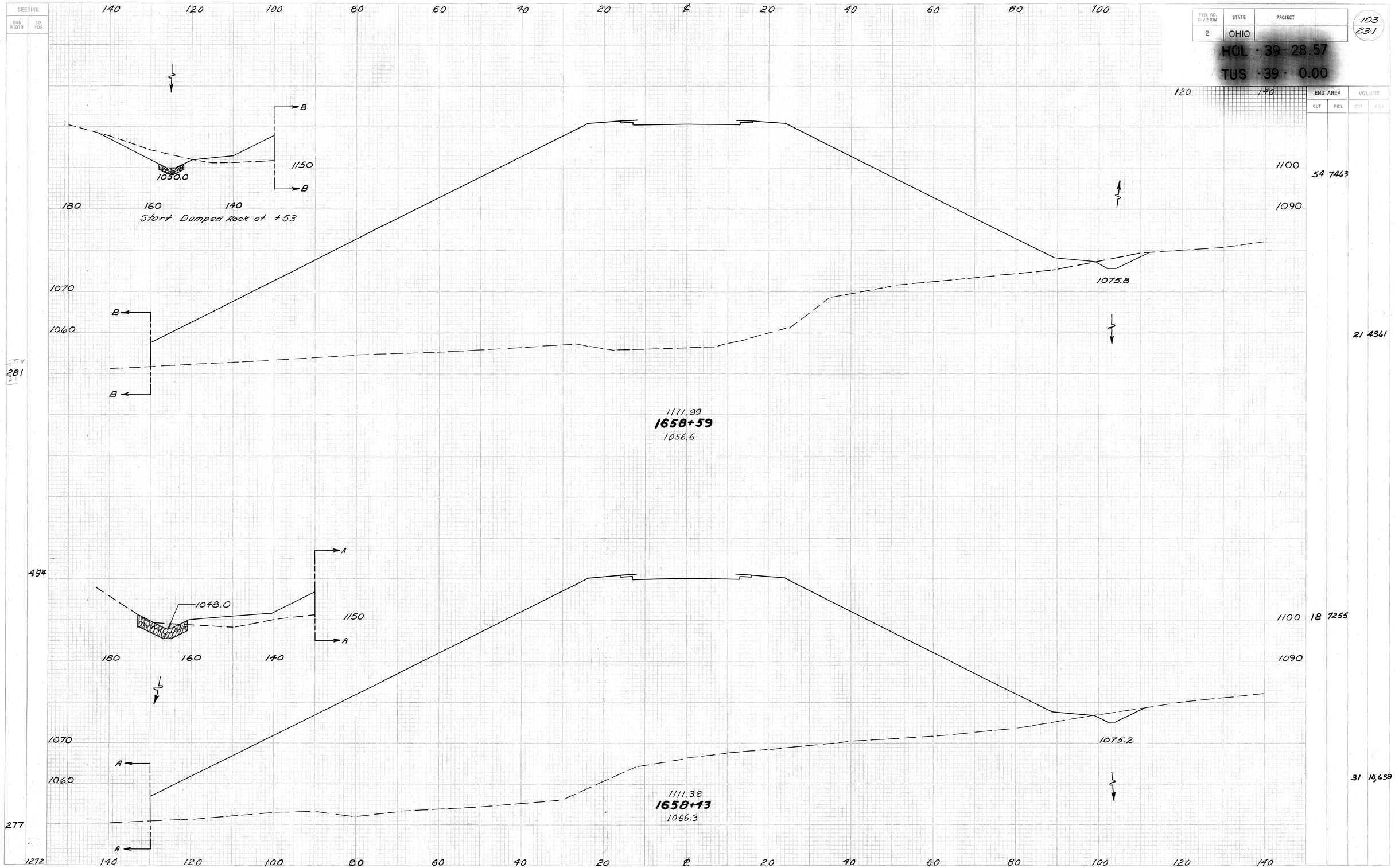
Sta. 1657+00 to Sta. 1658+00

PRINTED IN U. S. A.
OD GUIL TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

103
231

HOL - 39 - 28.57
TUS - 39 - 0.00



Sta. 1658+43 to Sta. 1658+59

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

104
231

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
140	226				
120	259				
100	1347				
80	1469				
60	270				
40	1255				
20					
20					
40					
60					
80					
100					
120		22	5476		
140		44	11,344		
		25	6776		
		58	13,580		
		38	7890		
		70	11,657		

1080 1070 1078.0

1117.85
1660+00
1072.5

1080 1070 1073.0

1080 1070 1069.0

1115.75
1659+50
1063.1

1070 1060 1066.0

Start Dumped Rock at +48

1070 1060 1061.0

1113.65
1659+00
1059.9

1070 1060 1069.0

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

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ON GOVT. TRACE CLOTH

Sta. 1659+00 to Sta. 1660+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

105
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING

END WIDTH	SQ. YDS
54	
	989
124	
	1678
178	
	1078
210	
	1211

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

1130
1120
1130
1120
1100
1090
1100
1090
1080

I-18 L = 43' 11% 10' V.C. E.P.
E.P. L = 41' 11% 10' V.C. I-18
12" I-1 (For Details & Quantities, See Sheet No. 30)
24" I-1 (For Details & Quantities, See Sheet No. 30)

Sta. 1662+80 – Field Drives Lt. & Rt.

End Dumped Rock at +50
End Dumped Rock at +58

1127.0 1130.45 **1663+00** 1132.3 1126.0
1117.0 1126.25 **1662+00** 1114.5 1109.0
1098.0 1122.05 **1661+00** 1092.5 1190.3
1087.0 1119.95 **1660+50** 1082.8 1082.0

4:1 2:1

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	289	0		
Add for Drive Lt. →			0	86
Add for Drive Rt. →			0	51
			580	1417
			24	765
			28	2802
			48	6440
			24	4153
			43	8916
			96	6606

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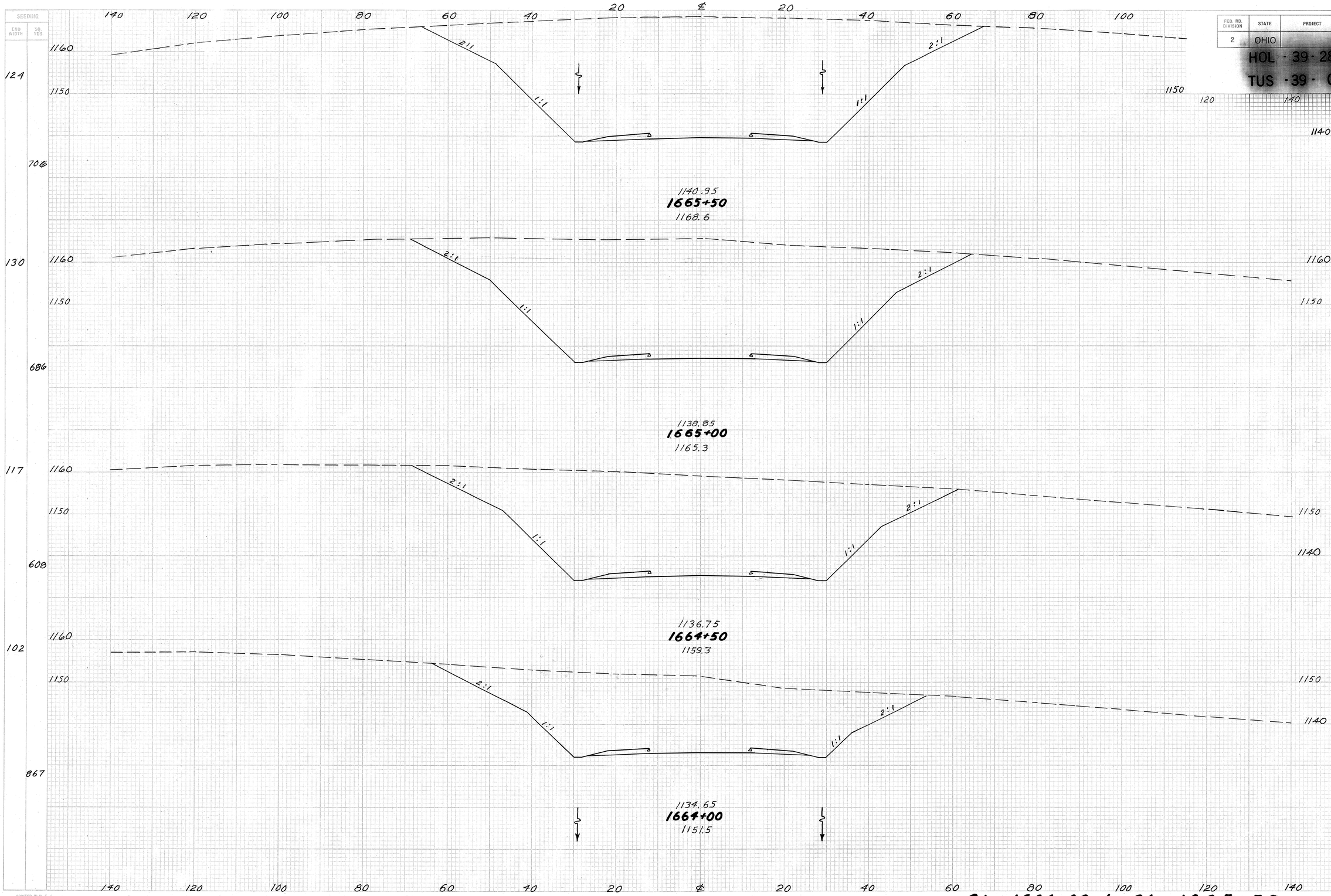
ON QUIL-TRACE CLOTH

Sta. 1660+50 to Sta. 1663+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

106
231

HOL - 39 - 28.57
TUS - 39 - 0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2683	8		
		4887	15
2595	8		
		4426	15
2185	8		
		3462	15
1554	8		
		3413	15

Sta. 1664+00 to Sta. 1665+50

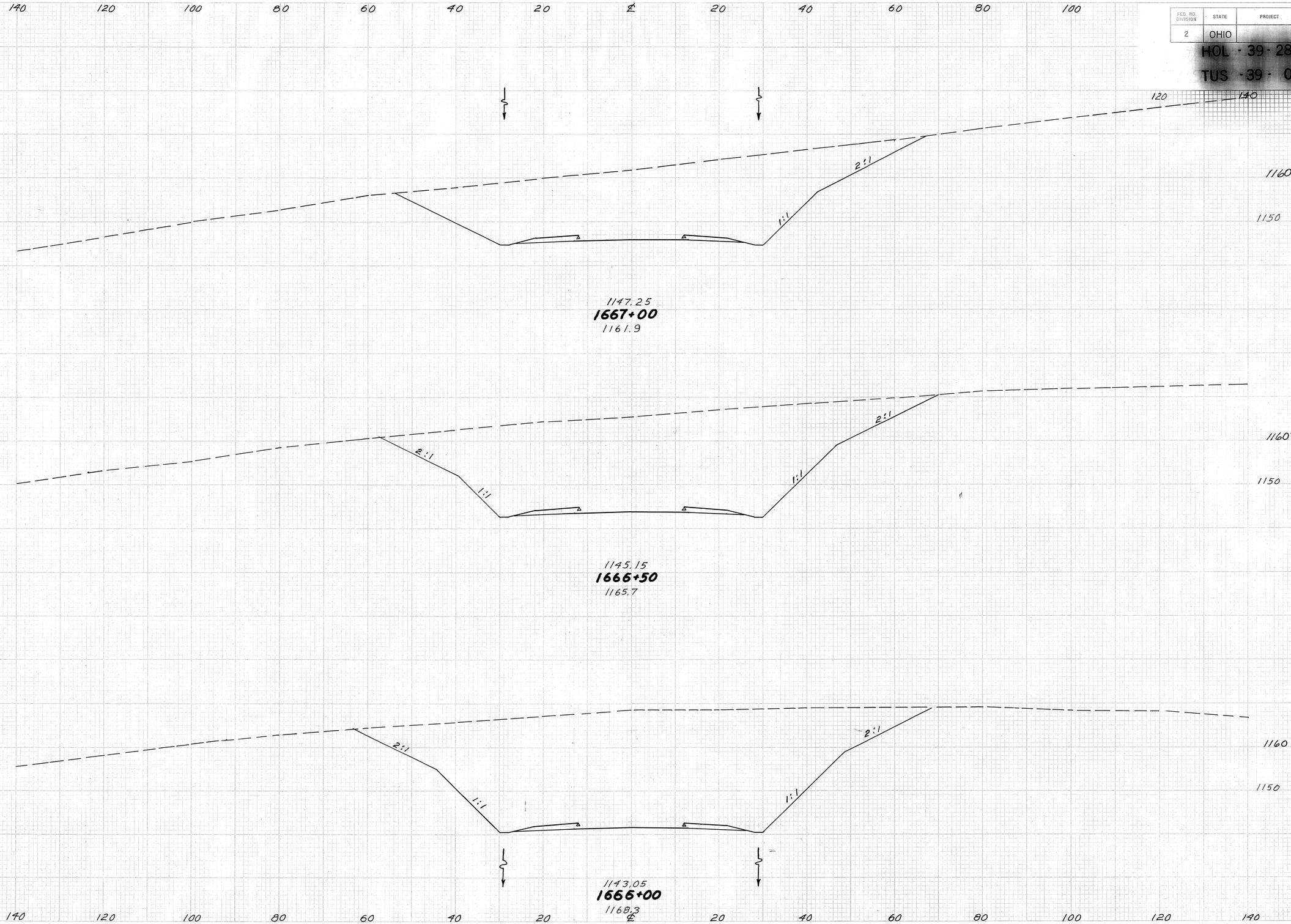
SEEDING	
END WIDTH	SQ. YDS.
104	600
112	647
121	681

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

107
231

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1476	8		
3240	15		
4147	15		
2456	8		
4758	15		
2023	8		



Sta. 1666+00 to Sta. 1667+00

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ON CUL TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

108
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING

END WIDTH	SQ. YDS.
116	675
127	572
79	817
68	956

END AREA		VOLUME	
CUT	FILL	CUT	FILL
19	938		
225	1936		
224	1153		
394	1660		
1160	202	640	
28			
1337	1193		
520	4		
3496	22		

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

1150 1140

1136.0

1159.85

1670+00

1147.8

1151.2

Begin Paved Gutter at +83

1150 1140

1129.0

1157.75

1669+50

1146.3

1152.0

1150 1140

2:1

1152.0

1155.65

1669+00

1150.7

1150 1140

4:1

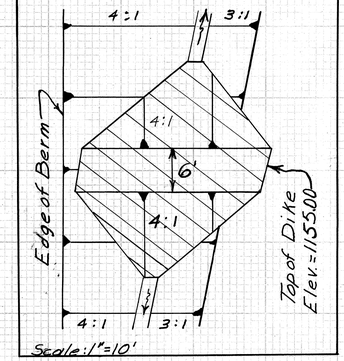
1155.45

1668+00

1155.1

1152.0

Dike Detail ~ Sta. 1669+25



Add for Dike

Sta. 1668+00 to Sta. 1670+00

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ON CURL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

109
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING END WIDTH	SEEDING SQ. YDS.
74	711
54	833
96	572
110	644
122	672
120	656

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
510	4		
			1017 33
39	14		
		135	639
34	331		
		62	964
33	710		
		66	1569
38	984		
		80	1839
48	1002		
		62	1796

1176.65
1674+00
1181.0

1172.45
1673+00
1171.3

1168.25
1672+00
1162.3

1166.15
1671+50
1156.7

1164.05
1671+00
1150.0

1161.95
1670+50
1147.2

End Dumped Rock at +87

For Quantities See Sheet No. 31

1671+75 59' Bt. = Chan. Sta 0+00

1672+20 78' Rt. = Chan Sta 0+48

Dumped Rock Chan. Protection L=44', W=10', D=1.5

15.10%

℄ = 1165.0

℄ = 1157.25

Channel Section

Begin Dumped Rock at +50

End Paved Gutter at +50

Channel Cross Sections

	E-3 EACY
0+48	0
	6
	14
	6
0+00	0

Scale 1"=10'

Total N2

PRINTED IN U. S. A. ON CUL-TRACE VELUM

Sta. 1670+50 to Sta. 1674+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

110
231

HOL · 39 · 28.57
TUS · 39 · 0.00

SEEDING END WIDTH	SEEDING SQ. YDS.
100	556
100	547
97	531
94	492
83	436

END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL

1584 4 | 2852 7

1496 4 | 2607 7

1320 4 | 2313 7

1184 4 | 1794 7

754 4 | 1370 7

Add for Drive Rt → 60 37

1200 1190 1180

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

1187.15
1676+50
1203.5

1185.05
1676+00
1200.1

1182.95
1675+50
1196.5

1180.85
1675+00
1191.7

1178.75
1674+50
1185.8

1177.0 18" I-1

1174.8 18" I-1

I-18 10' V.C. L=64' E/P 10' V.C. +9.0%

Sta. 1674+90 ~ ℄ Field Dr. Rt.

For Details and Quantities, See Sheet No. 31

Sta. 1674+50 to Sta. 1676+50

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

111
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
108		1210	1651 4		
		1200			
				3164 7	
	603				
		1210	1766 4		
		1200			
109				3280 7	
	603				
		1210	1976 4		
		1200			
108				3111 7	
	578				

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

1193.17
1678+00
1208.8

1191.28
1677+50
1208.1

1189.25
1677+00
1206.2

PRINTED IN U. S. A.
ON CURL-TRACE CLOTH

Sta. 1677+00 to Sta. 1678+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

112
231

SEEDING END WIDTH	SEEDING SQ. YDS.	140	120	100	80	60	40	20	℄	20	40	60	80	100	120	140	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
															1200	1190	128	46		
52																				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

113
231

HOL · 39 · 28.57

TUS · 39 · 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
70	417	629	4	1367	7
80	447	847	4	1538	7
81	506	814	4	1526	7
101	425	834	4	831	46

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

1210
1200

1203.88
1682+50
1210.8

1210
1200

1203.25
1682+00
1212.3

1210
1200

1202.48
1681+50
1210.2

Ex 3" Water Line

3' Min.

New Water Main ☆

Elev. 1197.0±

Ex. 3" Water Line

New Water Main ☆

1202.29
1681+39
1209.6

☆ Any pipe specials which may be needed to install the new 3" water main shall be included for payment in the price bid for the pipe

1210
1200
1190

1196.5

1197.0

1201.57
1681+00
1206.3

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

Sta. 1681+00 to Sta. 1682+50

PRINTED IN U. S. A.
ON EDIL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

114
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
174	864	18	2954	32	4397
137	675	17	1795	29	2481
106	917	14	884	57	1644
59	359	2	96	4	856
					7

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

1190 1180 1200 1190 1200 1190 1200 1190 1200 1190

1178.5

1172.50

1204.93
1685+00
1174.9

For Details of Pipe & Riprap See Sheet No. 204

+30 End Dumped Rock

1186.2

1182.0

+50 Start Dumped Rock

1205.00
1684+50
1183.7

1193.7

1187.5

1204.93
1684+00
1192.1

+00 Start Dumped Rock

1204.37
1683+00
1206.7

PRINTED IN U. S. A.
ON SUIL-TRACE CLOTH

Sta. 1683+00 to Sta. 1685+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

115
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
			29		4684
215					49 8487
1158			24		4482
202					44 8048
1097					
193			24		4210
1019					39 6633

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

1190
1180

1158.3

1203.88
1686+50
1167.9

1177.0

Begin Dumped Rock
of +10

1164.7

+00 End Dumped Rock

1204.37
1686+00
1164.7

1175.5

1170.0

1204.72
1685+50
1167.1

1173.5

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

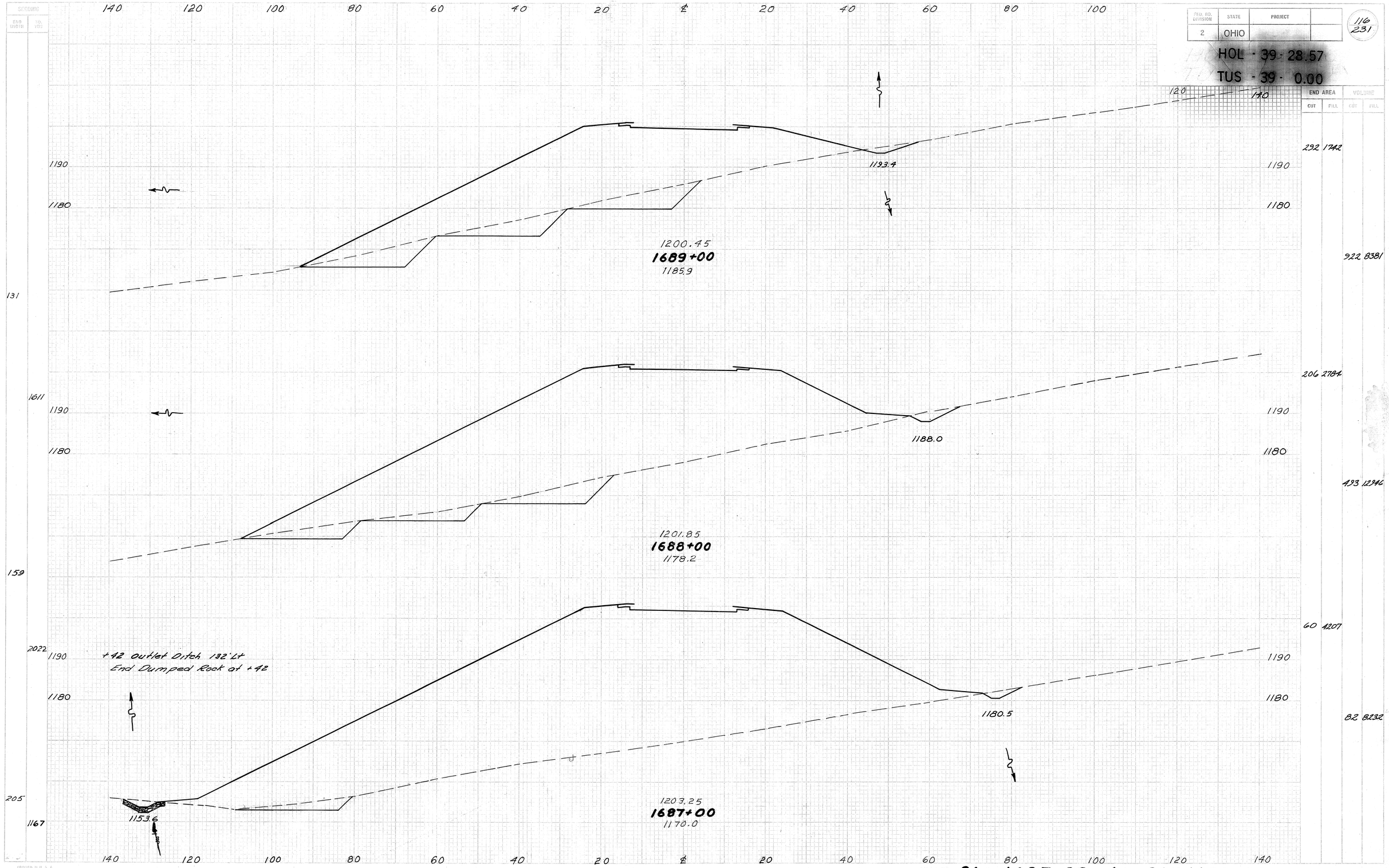
PRINTED IN U. S. A.
ON KOH-I-NOOR CLOTH

Sta. 1685+50 to Sta. 1686+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

116
231

HOL - 39 - 28.57
TUS - 39 - 0.00



Sta. 1687+00 to Sta. 1689+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

117
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
		26	3921		
202				293	10269
134		132	1624		
				253	2673
113		141	1263		
				401	2782

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

1190
1180

1153.0

1197.65
1691+00
1162.9

1171.0

1867

1189.0

1199.05
1690+00
1182.1

686

1193.0

1199.75
1689+50
1186.3

678

PRINTED IN U. S. A.
OH CVIL-TRACE CLOTH

Sta. 1689+50 to Sta. 1691+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

HQL - 39 - 28.57

TUS - 39 - 0.00

118
2.31

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		23	3161		
196					44 6891
	1161				
		24	4281		
222					44 9206
236	1272			23	5461
					45 8872
	1217				

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ON GUIL-TRACE CLOTH

Sta. 1691+50 to Sta. 1692+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[illegible]	

119
231

HOL · 39 · 28.57
TUS · 39 · 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		Add for Drive Lt. →		3	173
		Add for Drive Rt. →		2	8
88		26	301		
				142	1287
594					
761		131	1821		
148				293	4000
883		185	2499		
				193	5241
170					
1017					
				239	2634

I-18
10'V.C.
L=83'
-10%
E/P
Sta. 1694+50 ~ ℄ Field Dr. Lt.
Note: For Drive Lt. Cross-Sections, See Sheet No. 180
3.5:1
1179.0
1192.75
1694+50
1187.7
I-18
10'V.C.
L=38'
+12%
1190.0
Sta. 1694+50 ~ ℄ Field Dr. Rt.
2.5:1
1186.0
1193.45
1694+00
1181.7
1168.0
3:1
1183.0
1194.15
1693+50
1176.4
1161.0
1178.0
1194.85
1693+00
1171.9
1153.5
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
1190
1180

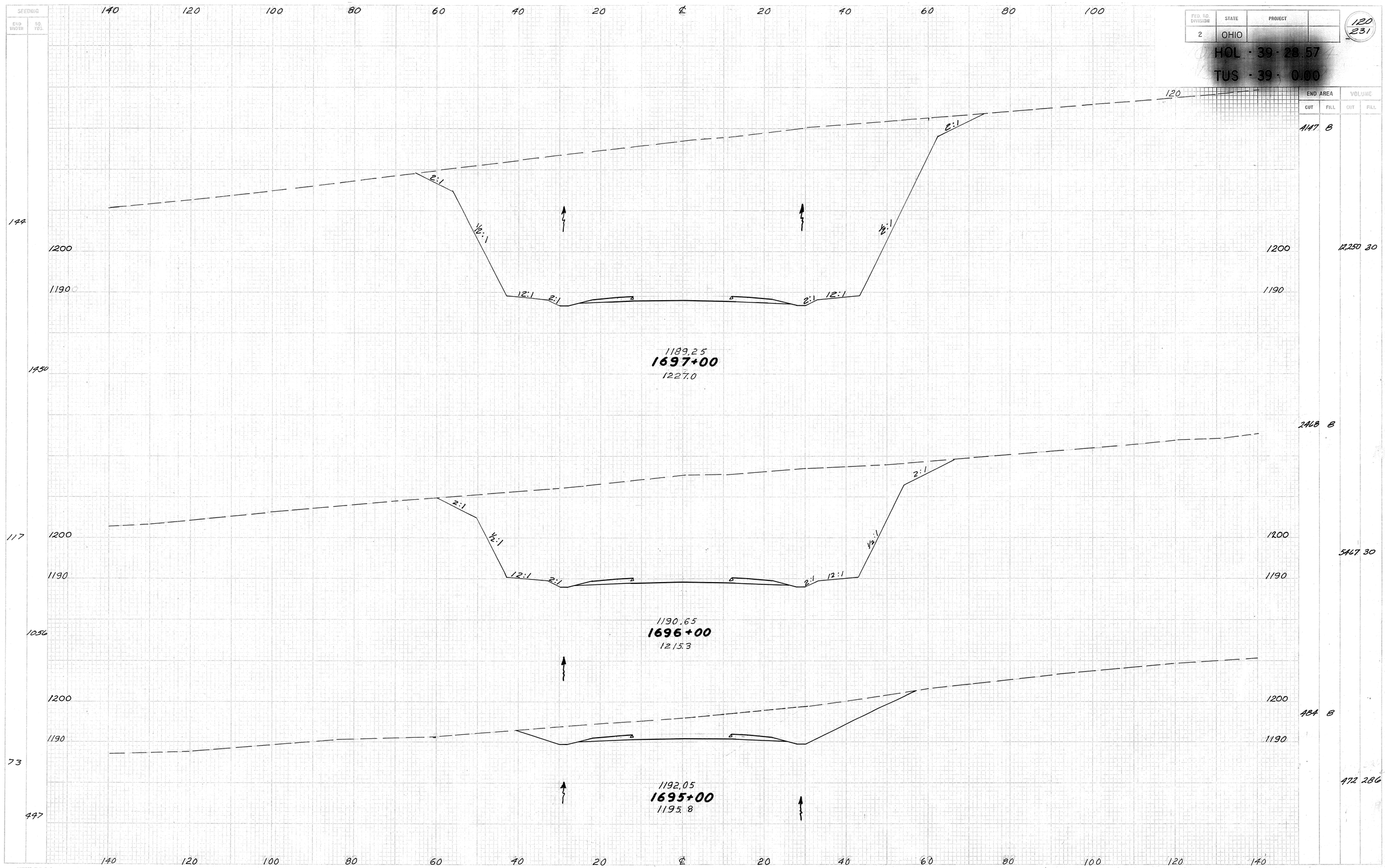
PRINTED IN U. S. A.
ON CIVIL-TRACE CLOTH

Sta. 1693+00 to Sta. 1694+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

120
231

HOL · 39 · 28.57
TUS · 39 · 0.00



Sta. 1695+00 to Sta. 1697+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

121
2.31

HOL · 39 · 28.57

TUS · 39 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
139			3454 8		7074 15
148			4186 8		7716 15
811					
797					

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

1200
1190

2:1
½:1
12:1
2:1
2:1
12:1
½:1
2:1

1187.85
1698+00
1220.0

1188.55
1697+50
1226.2

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ON CURL-TRACE CLOTH

Sta. 1697+50 to Sta. 1698+00

SEEDING	
END WIDTH	SQ. YDS.
84	1022
100	1211
118	1428

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

122
231

HOL - 39 - 28.57
TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
958	8		
1563	30		
1506	8		
2281	30		
2426	8		
10883	30		

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

1200
1190

2:1
1½:1
12:1

1183.65
1701+00
1191.2

1185.05
1700+00
1199.5

1186.45
1699+00
1208.7

Sta. 1699+00 to Sta. 1701+00

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ON CEIL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

123
231

HOL · 39 · 28.57
TUS · 39 · 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
143	736	33	1932	135	2,160
122	606	113	901	256	1772
96	1061	164	473	1036	903
95	994	428	18	2567	48

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

1170 1160 1151.0 3:1 1166.5 1170 1160

1179.77
1704+00
1162.2

1180 1170 1156.6 1172.5 1180 1170

1180.23
1703+50
1168.3

1180 1170 1161.0 1177.5 1180 1170

1180.85
1703+00
1174.7

1180 1170 1174.0 3:1 1180 1170

1182.25
1702+00
1183.3

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

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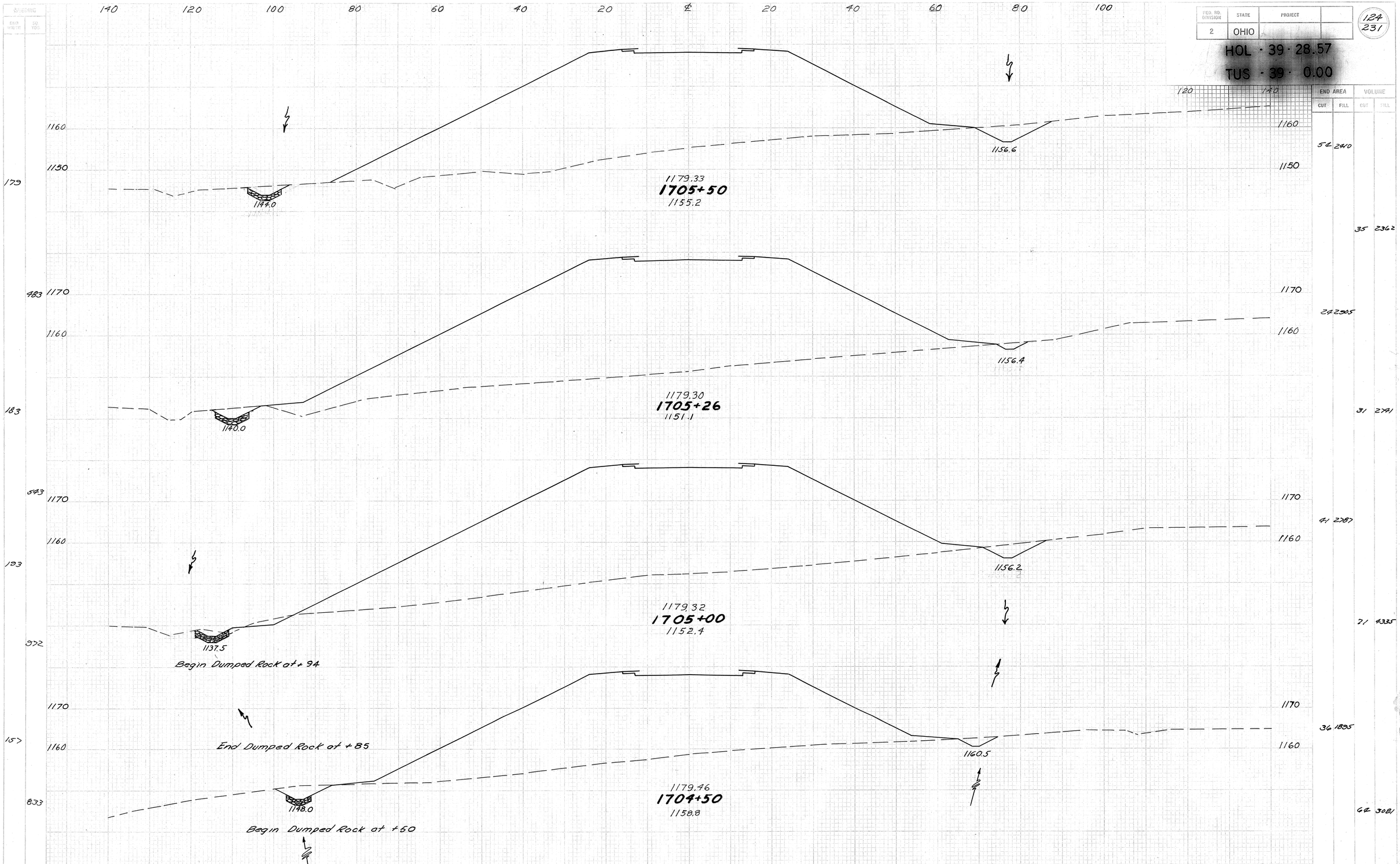
ON GUIL TRACE CLOTH

Sta. 1702 +00 to Sta. 1704+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

124
231

HOL · 39 · 28.57
TUS · 39 · 0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54	2410		
		35	2362
24	2905		
		31	2741
41	2787		
		71	4335
36	1895		
		64	3081

Sta. 1704+50 to Sta. 1705+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

125
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
120			26 1135		
150			89 5894		
150			221288		
151			13 2368		
151			56 4452		
171			48 2440		
172			32 4033		

End Dumped Rock at +50

1180.32
1707+00
1155.6

1181.77
1708+00
1165.4

1179.83
1706+50
1153.2

1179.50
1706+00
1152.8

Sta. 1706+00 to Sta. 1708+00

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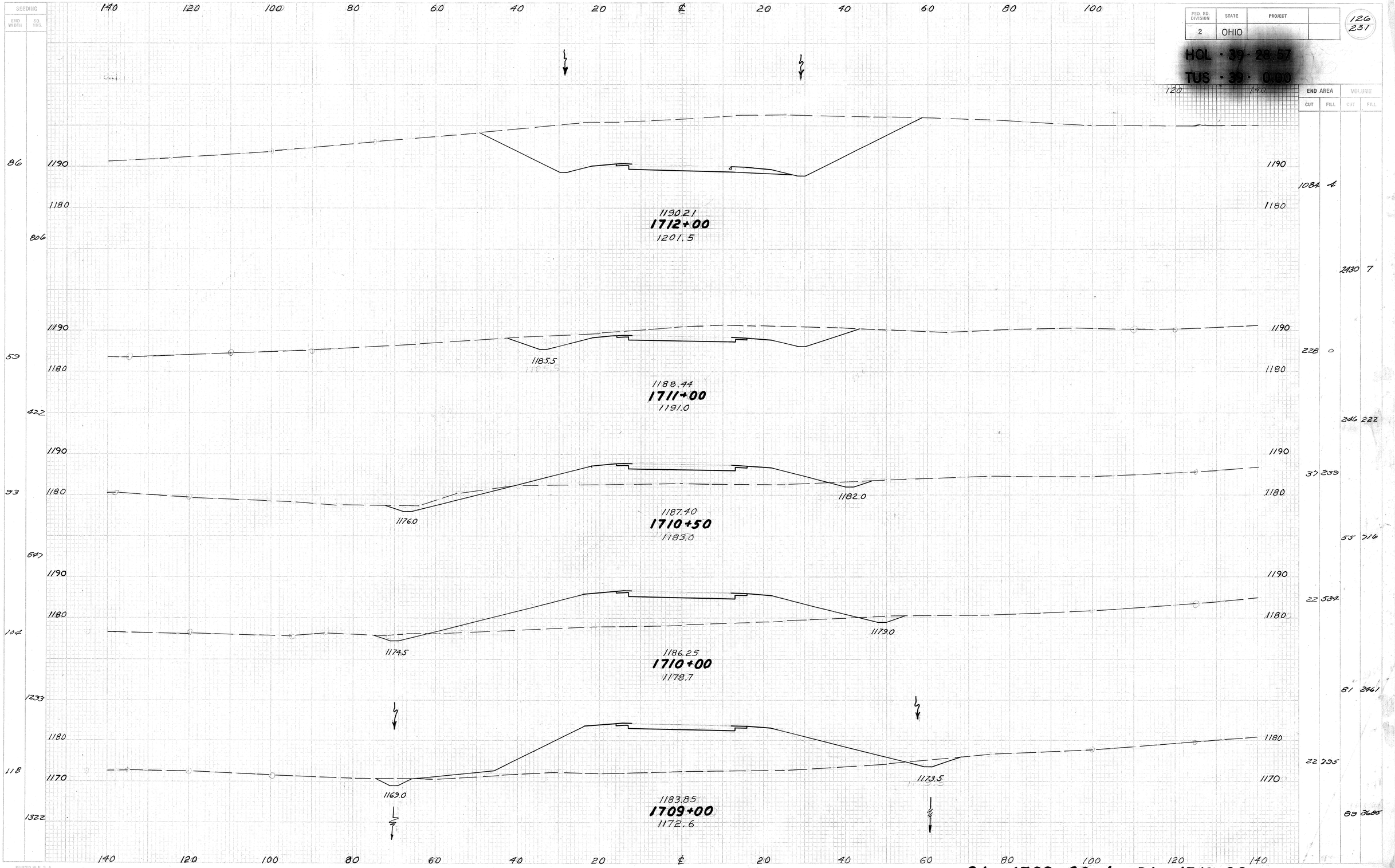
OF CULLTANE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

126
231

HOL · 39 · 28.57
TUS · 39 · 0.00



Sta. 1709+00 to Sta. 1712+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

127
231

HOL · 39 · 28.57
TUS · 39 · 0.00

SEEDING	
END WIDTH	SQ. YDS.
164	
143	
114	
1111	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4444 4			
7201 7			
3333 4			
10,433 15			
2301 4			
6219 15			

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

1200
1190
1200
1190

1192.80
1714+50
1234.2

1192.49
1714+00
1229.7

1191.56
1713+00
1216.1

Sta. 1713+00 to Sta. 1714+50

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ON CUL-TRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

129
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING	
END WIDTH	SQ. YDS.
129	1572
154	867
158	913

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3156	4		
		12839	15
3777	4		
		7316	7
4124	4		
		8171	7

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

1210
1200

2:1
1:1

1192.01
1718+00
1223.1

1192.76
1717+00
1229.1

1192.98
1716+50
1232.2

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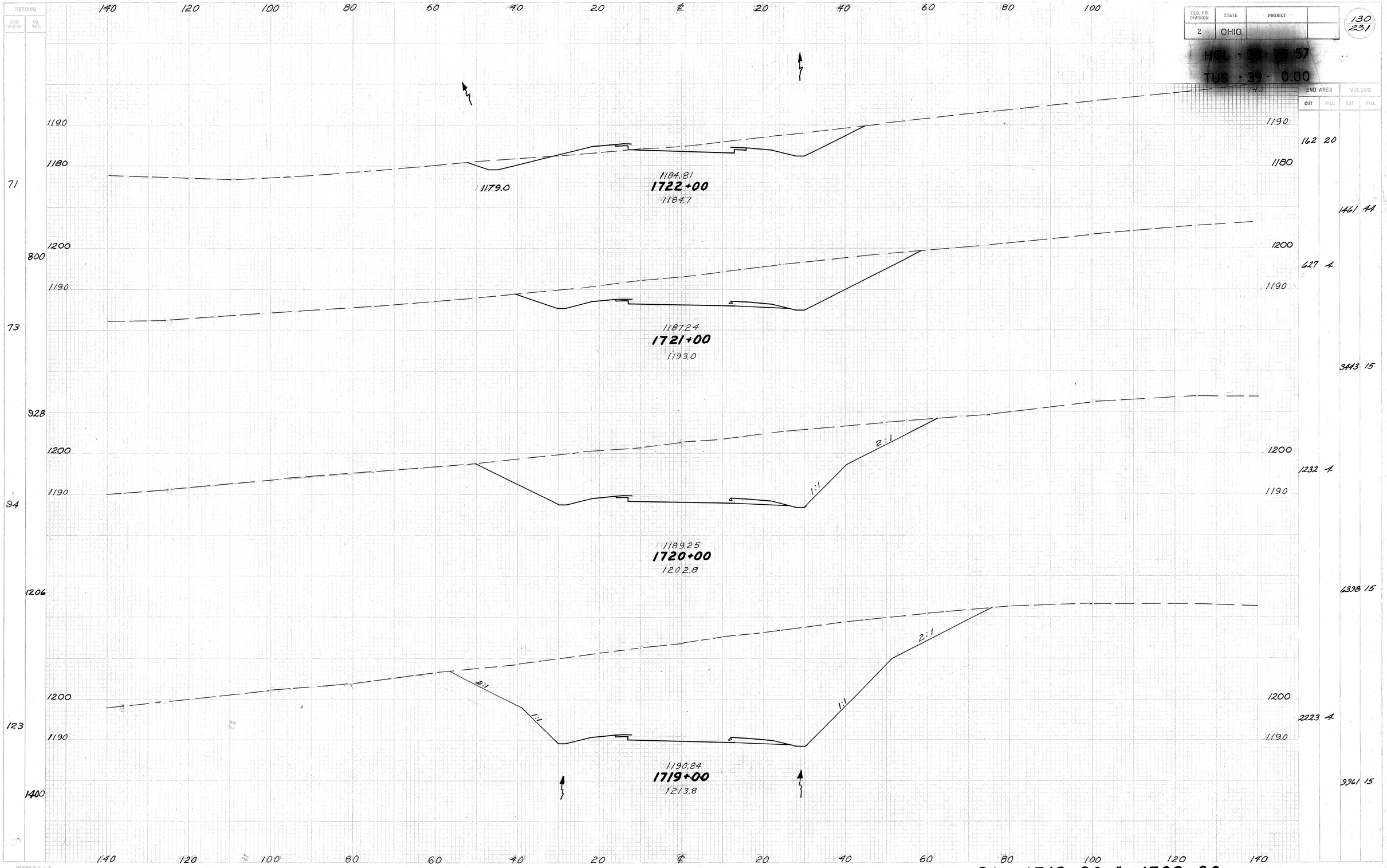
ON SUN-TRACE CLOTH

Sta. 1716+50 to Sta. 1718+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

130
231

HOL - 39 - 28.57
TUS - 39 - 0.00



Sta. 1719+00 to 1722+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

131
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140				
		1180				
87		1170 Var. 24" I-1 1171.0	120	120		
		1175.94				
		1724+79			10	210
		1171.2				
		1180				
266		**Sta. 1724+71.07 ~ ℄ Intersection Lt. (T.R. 143)**				
		1170 Var. 24"I-1 (For Details & Quantities See Sheet No. 207) 1173.0				
78		1180				
		1176.95				
		1724+50				
436		1171.8				
		1180				
79		1170 1175.0				
		1178.69				
439		**1724+00**				
		1172.5				
		1180				
79		1170 1168.0 1177.2				
		1180.38				
431		**1723+50**				
		1175.7				
		1180				
76		1170 1172.4 1178.4				
817		**Sta. 1723+00 ~ ℄ Field Dr. Rt.**				
		1181.96				
		1723+00				
		1178.8				
		140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140				

Includes a deduction of 71 cu. yds cut for Intersection → 3 242

127 240

Includes a deduction of 100 cu. yds cut for Intersection → 51 500

36 300

62 481

31 220

70 316

Add for Drive Rt. → 1 29

45 121

383 261

I-18
10'V.C.
L = 38'
+3%
For Earthwork Calculation Only
24" I-1 (For Details & Quantities See Sheet No. 36)

Sta. 1723+00 to Sta. 1724+79

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

132
231

HOL - 39 - [redacted]

TUS - 39 - 0.00

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		33	1241		
136				111	4278
	1433	27	1069		
122				122	3389
	1311	39	761		
114				73	1322
	614	40	667		
107				54	1067
	561	18	485		
95				11	270
	212				

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

1160 / 1150

1140.0

1164.77
1728+00
1149.5

1155.5

1160 / 1150

1146.0

1168.25
1727+00
1154.1

1160.0

1170 / 1160

1152.0

1171.73
1726+00
1160.0

1164.0

1170 / 1160

1155.5

1173.47
1725+50
1162.4

1167.0

Start Paved Gutter at +27
Note: Place a 3' sod strip on each side of Paved Gutter

1170 / 1160

1175.21
1725+00
1166.5

1170.0

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

Sta. 1725+00 to Sta. 1728+00

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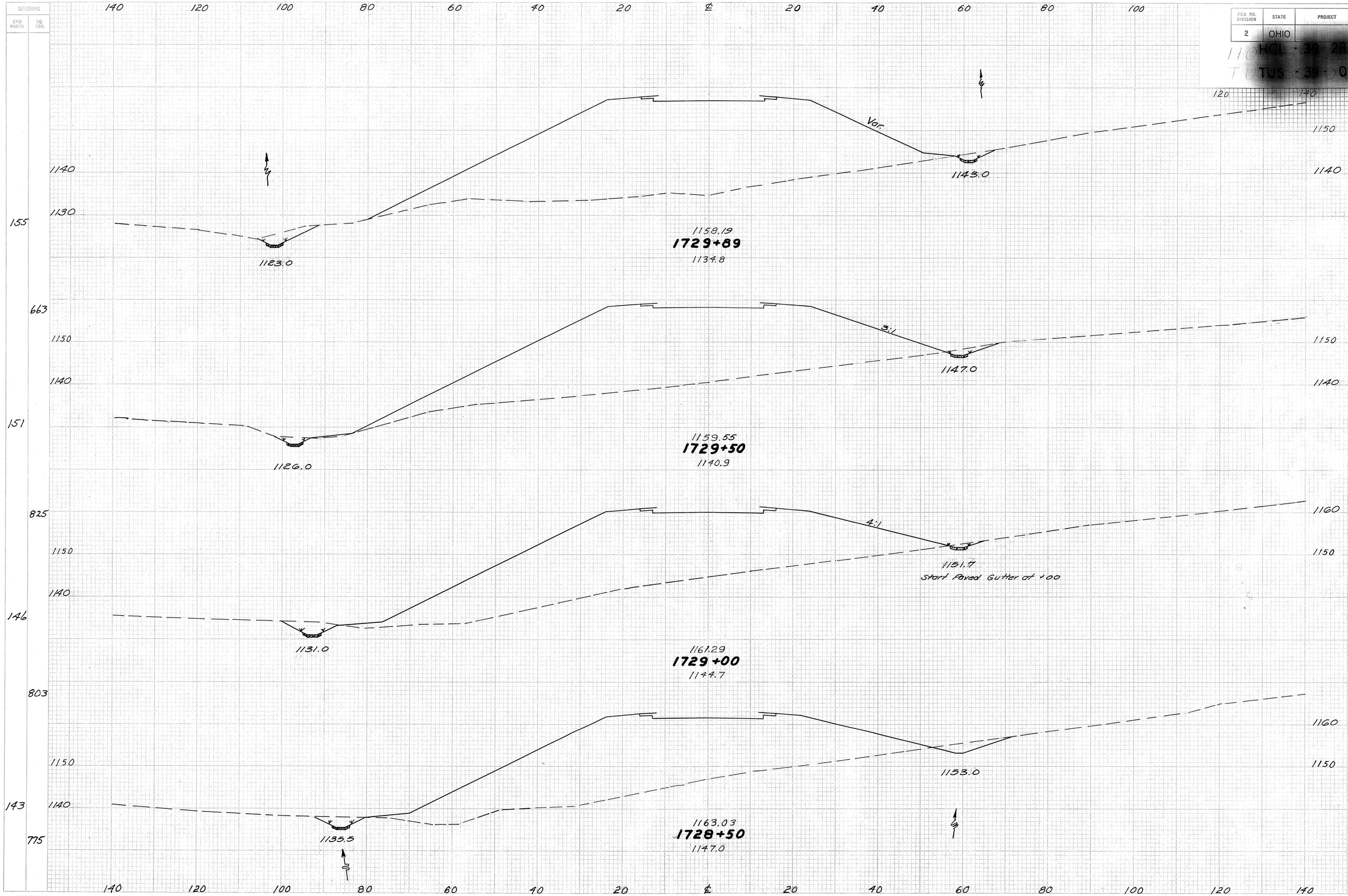
ON DEW-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

133
231

HOL - 39 - 28.57
TUS - 39 - 0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
33	1860		
		38	2487
19	1584		
		44	2868
28	1513		
		64	2707
41	1411		
		69	2456

Sta. 1728+50 to Sta. 1729+89

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ON DUL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

134
231

[redacted] - 28.57

TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		154	1412		
					3133144
	831			184	1983
					2873447
				126	1740
					3281
	881			70	1803
					2146

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

1140 1130 1150 1140

147

1117.5

3:1

1141.5

1152.61
1731+50
1136.6

Begin Paved Gutter at +36
Begin 3' sod strips each side

End Paved Gutter at +28
End 3' sod strips each side

End Paved Gutter at +28

2:1

1141.5

1154.33
1731+00
1133.2

152

1119.0

867 1140 1130 1150 1140

160

1120.5

1142.0

1156.07
1730+50
1135.9

881 1140 1130 1150 1140

157

1122.0

2:1

1142.5

1157.81
1730+00
1135.3

191

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

Sta 1730+00 to Sta 1731+50

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ON GUILTRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

135
231

HOL - 20 - 28.57
TUS - 35 - 0.00

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

1150
1140
1130
120

Seeding for Dike included

Pond

Water Level

1116.0

1148.20
1733+00
1141.9

1143.0

155 649

281 1594

758

1150
1140

153 Seeding for Dike included

Pond

Water Level

1116.5

1149.53
1732+50
1140.6

1144.0

143 1072

294 2056

811

1150
1140

139 Seeding for Dike included

Pond

4'

Water Level

1117.0

Note top of dike elev. is 3' above ditch Grade

1151.00
1732+00
1138.3

1143.0

163 1149

299 2371

794

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

PRINTED IN U. S. A.
ON SUN TRACE CLOTH

Sta. 1732+00 to Sta. 1733+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

136
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING	
END WIDTH	SQ. YDS.
73	
397	
70	
389	
70	
528	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
194	37		
		222	222
46	203		
54	479		
12	314		
		155	832

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

1160
1150
1140
1130
1120

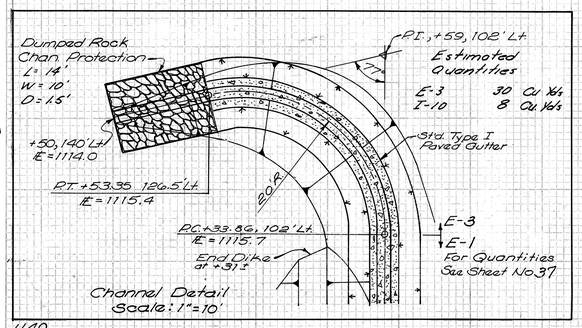
4:1

1145.00
1734+50
1145.1

3:1

1145.93
1734+00
1142.3

1147.00
1733+50
1141.6



Channel Detail
Scale: 1" = 10'

+34
1115.7
For earthwork Back Only

Add for ditch Lt. Sta. 1733+00 to Sta. 1733+34 → 42

Sta. 1733+50 to Sta. 1734+50

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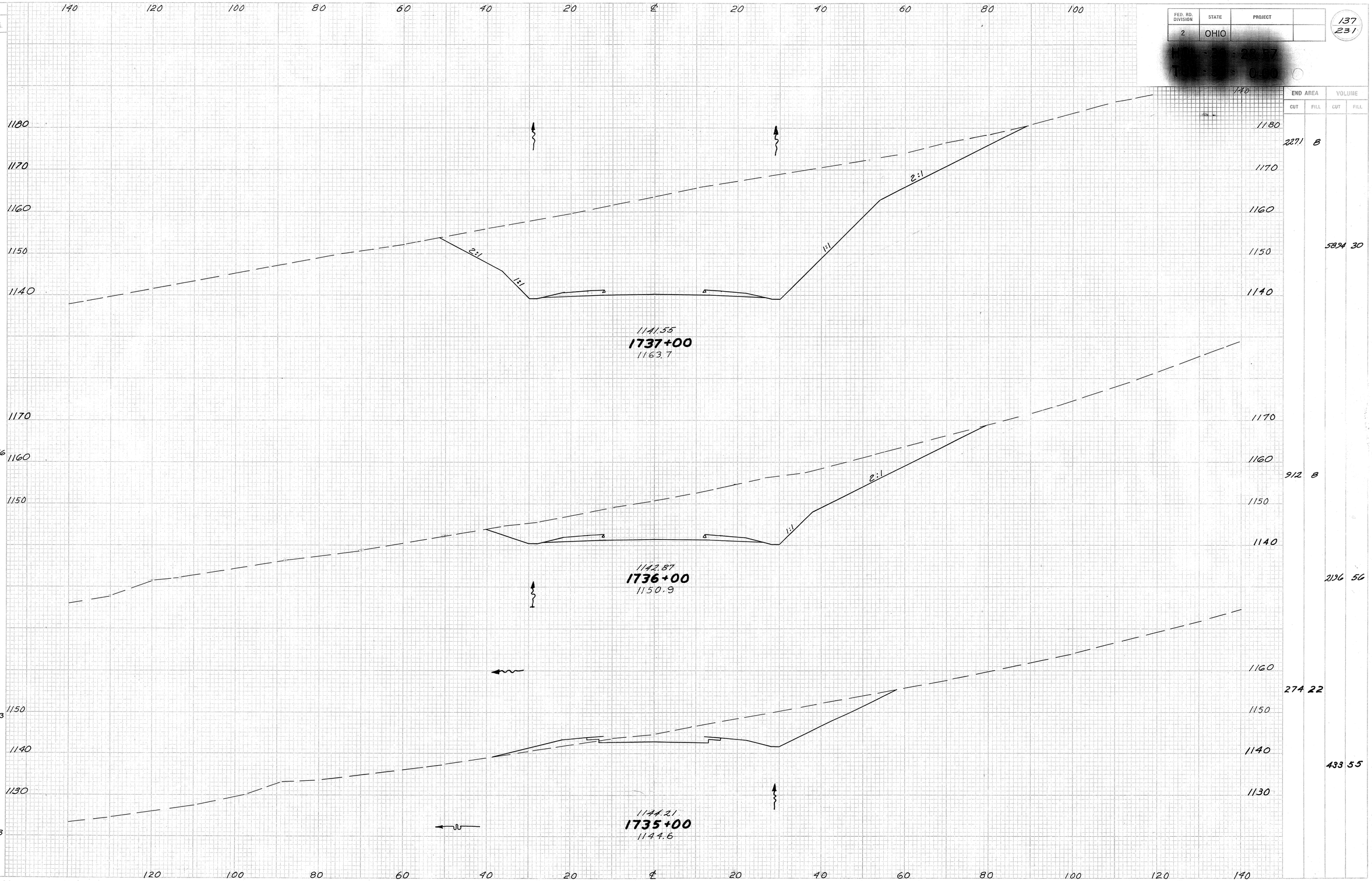
SEEDING	
END WIDTH	SQ. YDS.
130	
96	1256
72	933
	403

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

137
231

[redacted]

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2271	8		
		5834	30
912	8		
		2136	56
274	22		
		433	55



Sta. 1735+00 to Sta. 1737+00

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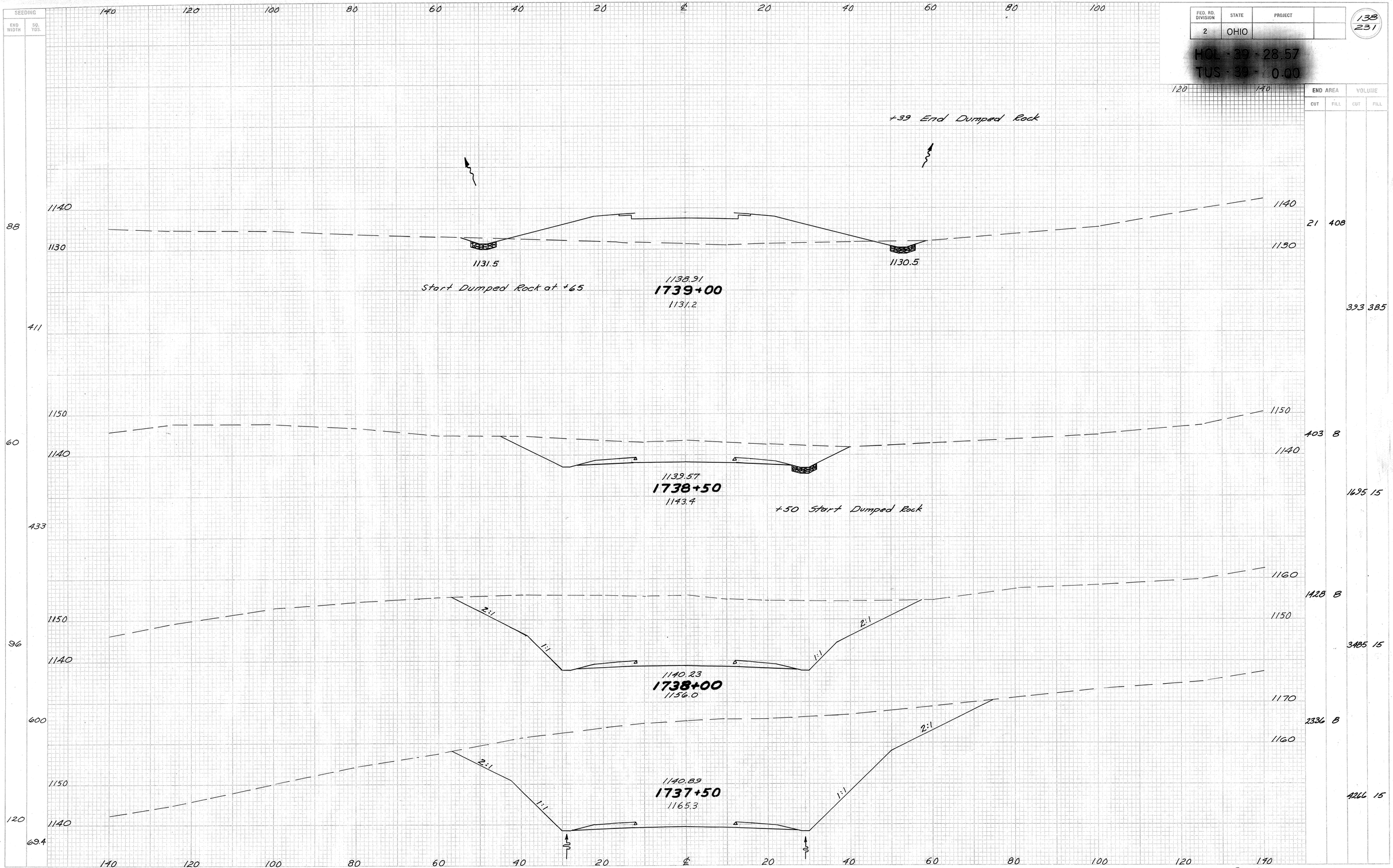
ON GUIL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

138
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
88	411	21	408	393	385
60	433		403	8	
				1635	15
96	600		1428	8	
				3485	15
120	694		2336	8	
				4266	15



Sta. 1737+50 to Sta. 1739+00

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ON CUL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

139
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
			11	1584	
					37 3268
	756				
			29	1945	
					44 3074
	761				
			19	1375	
	611				37 1651

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

1140
1130
1120
1110
130

2:1

1127.0

1136.93
1740+50
1121.5

1140
1130
1120
142

Outlet Ditch at Culvert

End Dumped Rock at +38

4:1

1125.8

1112.0

1137.59
1740+00
1110.4

1140
1130
1120
132

3:1

4:1

1124.3

1122.5

1138.25
1739+50
1122.4

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

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ON DUPLITRACE CLOTH

Sta. 1739+50 to Sta. 1740+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

140
231

HOL - 39 - 28.57

TUS - 39 - 0.00

SEEDING	
END WIDTH	SQ. YDS.

SEEDING	
END WIDTH	SQ. YDS.
120	
	460
110	
	148
112	
	533

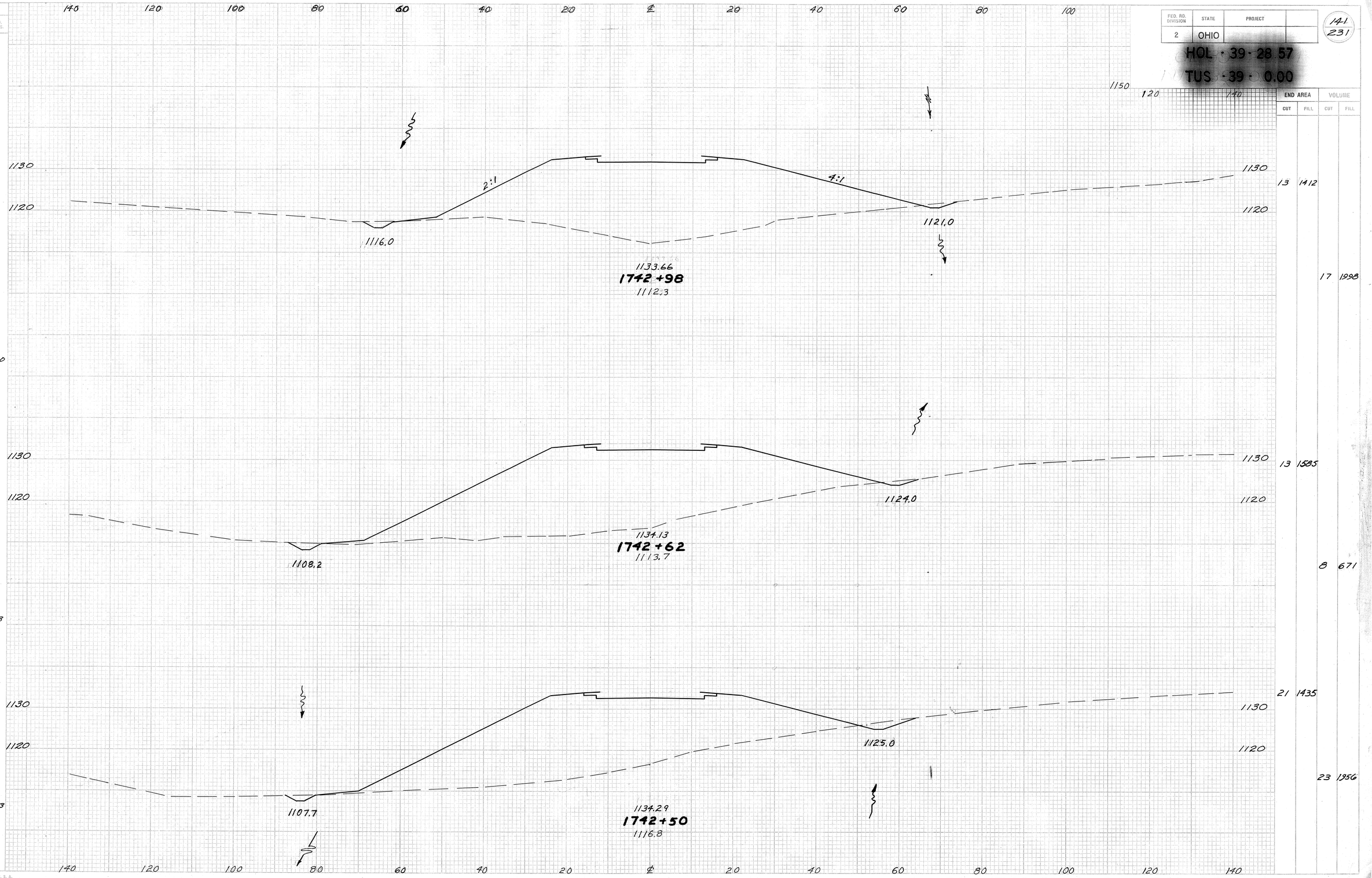
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

141
231

HOL · 39 · 28.57

TUS · 39 · 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		13	1412
		17	1998
		8	671
		21	1435
		23	1956



Sta. 1742+50 to Sta. 1742+98

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ON CHILTRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS.
177	
	892
136	
126	
91	
	983
86	
	535

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

142
231

HOL - 39 - 28.57

TUS - 39 - 0.00

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

1170 1160 1150 1140 1130 1120

2:1 1:1 2:1

1129.67
1746+00
1163.5

1130.33
1745+50
1156.2

1131.65
1744+50
1139.6

Sta. 1743+80 ~ ℄ Intersection Lt. (C.R. 72)

3:1

1126.5 1123.5

1132.97
1743+50
1121.8

20 40 60

I-18

E.P.

24' V.C.

L = 96'

-50%

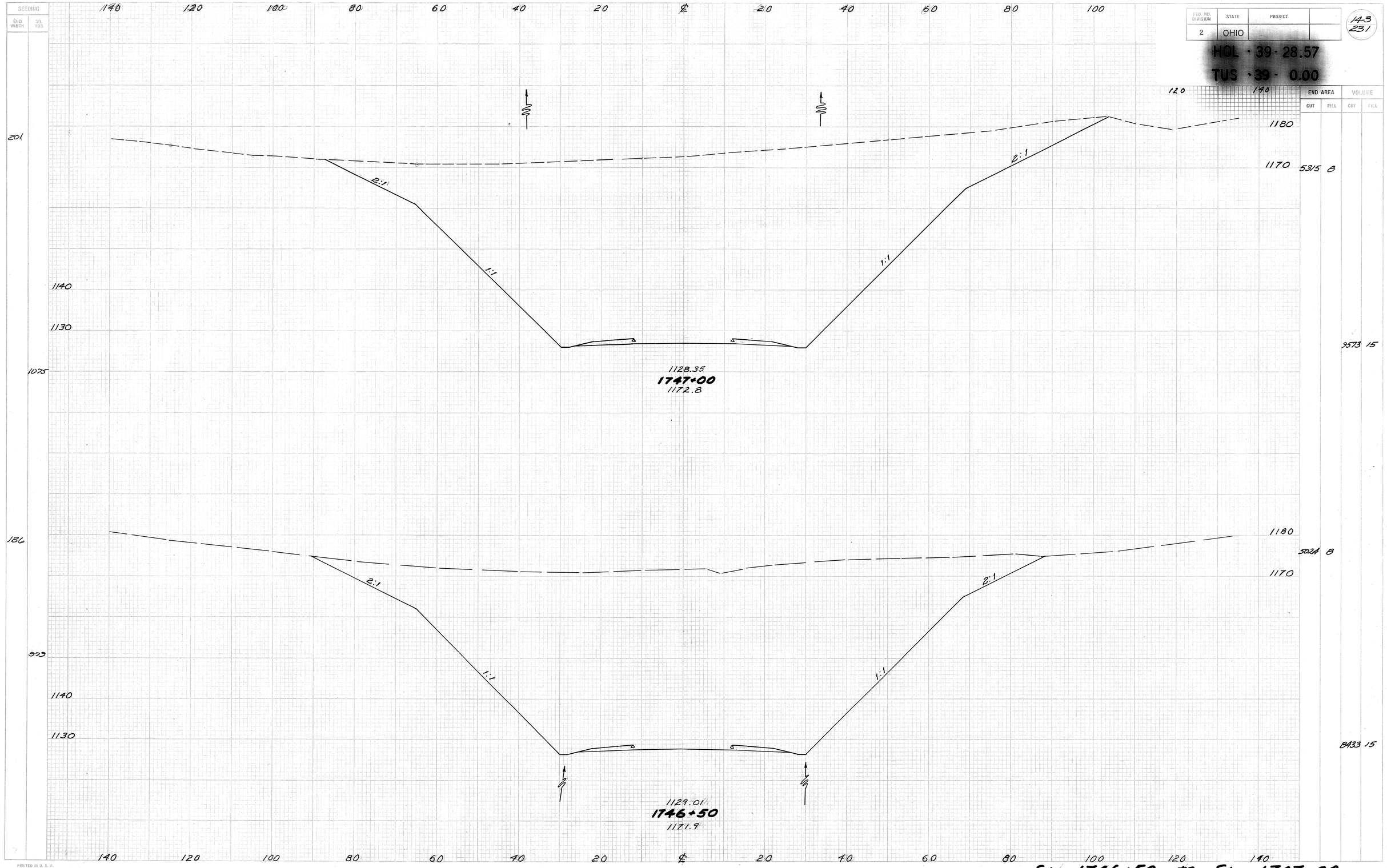
Sta. 1743+80 ~ Field Drive Rt.

Add for Drive → 50

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	4084	8	
			6369 15
	2794	8	
			6783 30
	874	8	
			1456 1148
20	612		
			32 1949

Sta. 1743+50 to Sta. 1746+00

PRINTED IN U. S. A.
ON CUEL-TRACE CLOTH



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

143
231

HOL · 39 · 28.57
TUS · 39 · 0.00

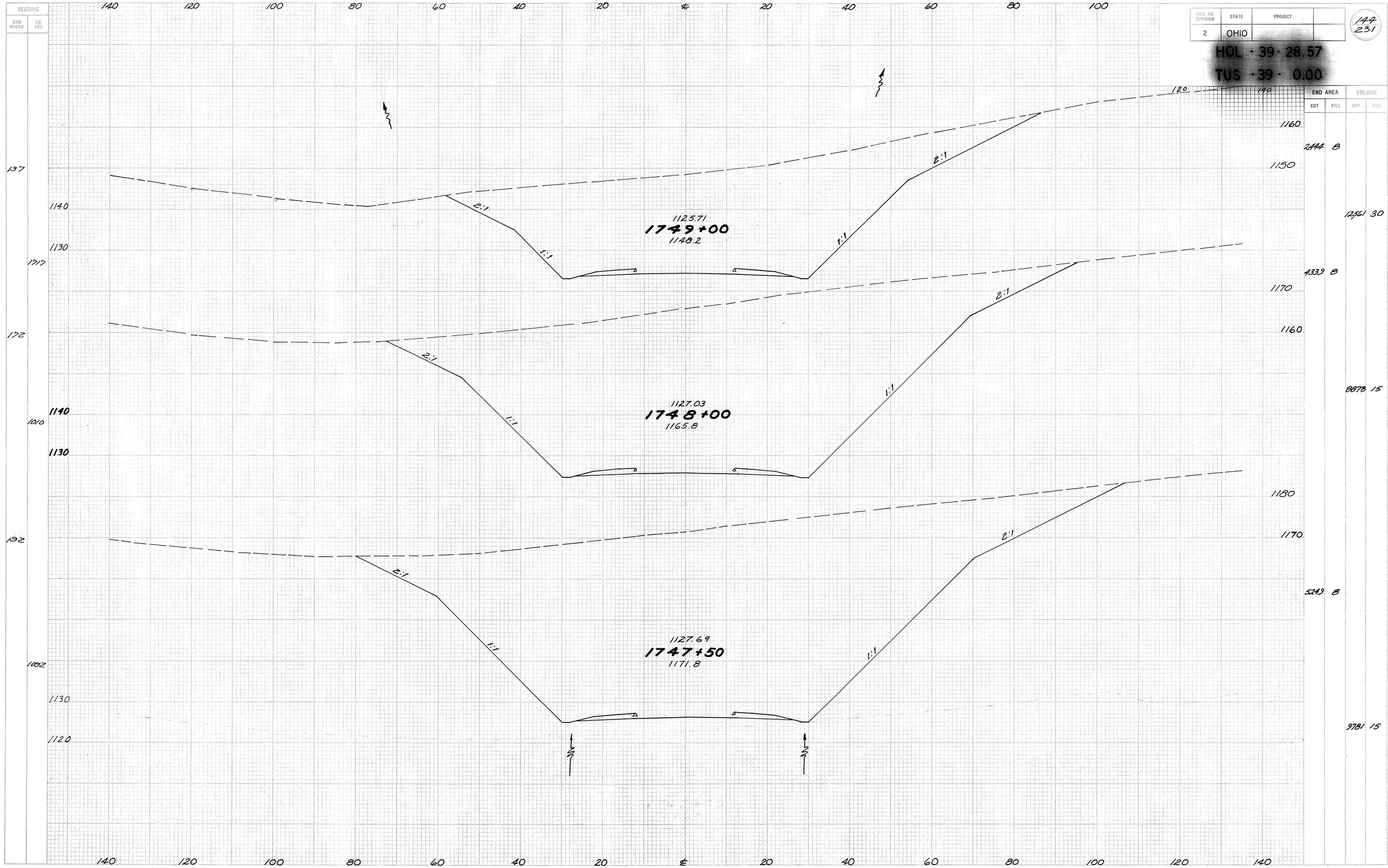
Sta. 1746+50 to Sta 1747+00

PRINTED IN U. S. A.
ON GUIL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

144
231

HOL · 39 · 28.57
TUS · 39 · 0.00



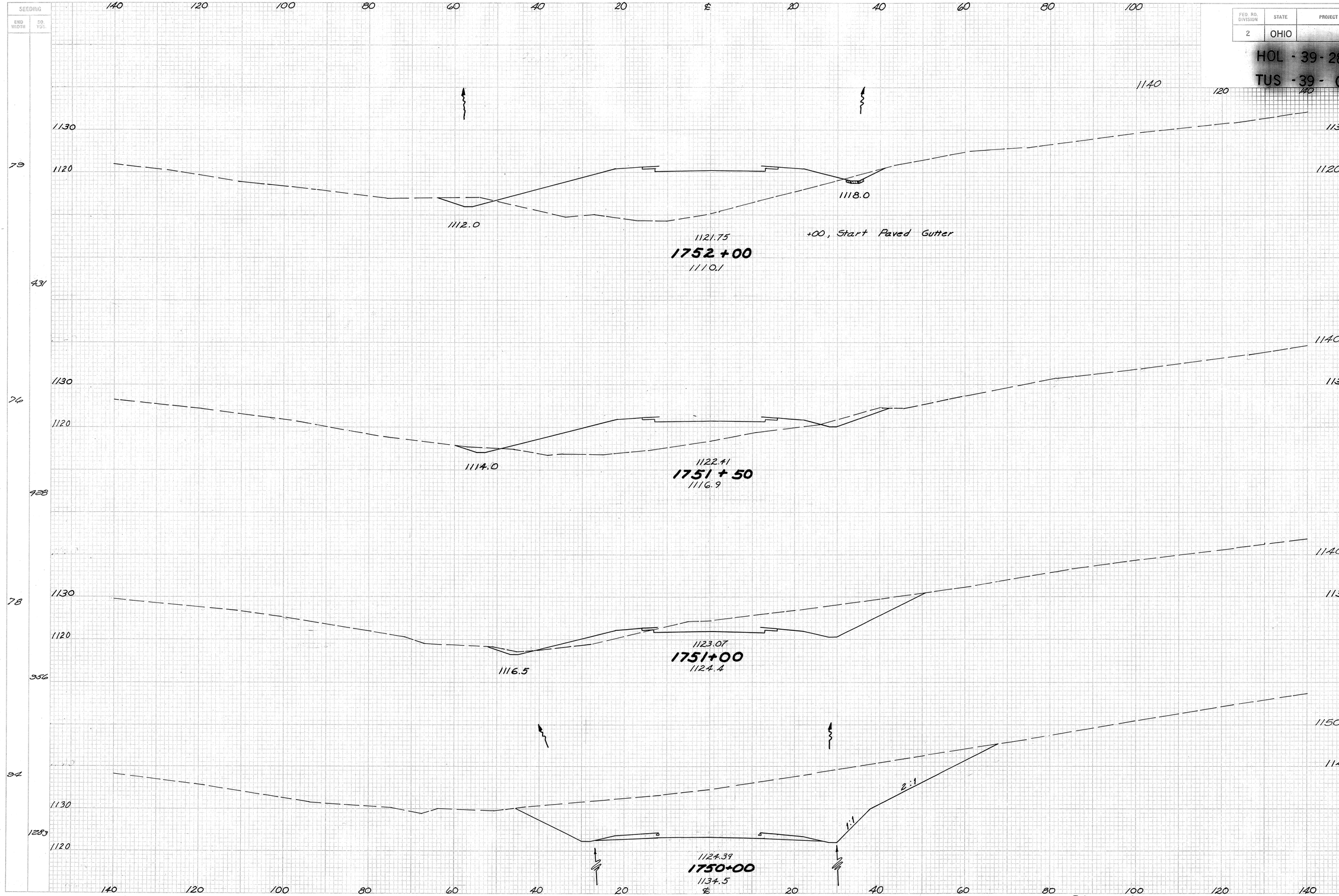
Sta. 1747+50 to Sta. 1749+00

PRINTED IN U. S. A.
ON GUN-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

145
231

HOL - 39 - 28.57
TUS - 39 - 0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23	640		
		45	892
26	323		
		257	329
252	32		
		2442	75
1067	8		
		6501	30

Sta. 1750+00 to Sta. 1752+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

14-6
2.31

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
			97		1429
130					
	700			125	2602
122			38		1381
	675			84	2408
121			53		1220
				141	3444

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

1130
1120
1101.6
1119.11
1754+00
1099.7
1105.0

1130
1120
1103.0
1119.77
1753+50
1101.0
1105.2

1130
1120
1105.0
1109.2
3:1

1130
1120
1120.43
1753+00
1102.7

Sta. 1753+00 to Sta 1754+00

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ON CURL-TRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

147
231

HQL - 39 - 28.57
TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

1110
1100
146
910 ← Add for Drive Lt.
1092.5
For Earthwork Calc. Only
-12 %
L = 118
20' V.C.
I-18
24" I-1 (For Details & Quantities See Sheet # 39)
1095.5
1110
1100
22 2240
Sta. 1755+50 ~ Field Drive Rt.
Note: For Drive Cross Sections See Sheet No. 180
Add for Drive Lt. → 89 2950
Add for Drive Rt. → 0 1026
1117.13
1755 + 50
1091.0
I-18 I-35
L = 243
-10 %
1110
1100
783
I-18
10' V.C.
24" I-1 (For Details See Sheet # 180 For Quantities See Sheet # 39)
1110
1100
42 3991
240 220 200 180 160 140 120 100 80 60 40 20 ℄
Sta. 1755+50 ~ Res. Dn. Lt.

1120
1110
1100
136
1095.2
+17, End Paved Gutter.
1099.0
1110
23 2060
1117.79
1755+00
1093.6
42 3375
728

1120
1110
1100
126
1099.0
1100.6
1110
22 1585
1118.45
1754+50
1098.1
1102791
711

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

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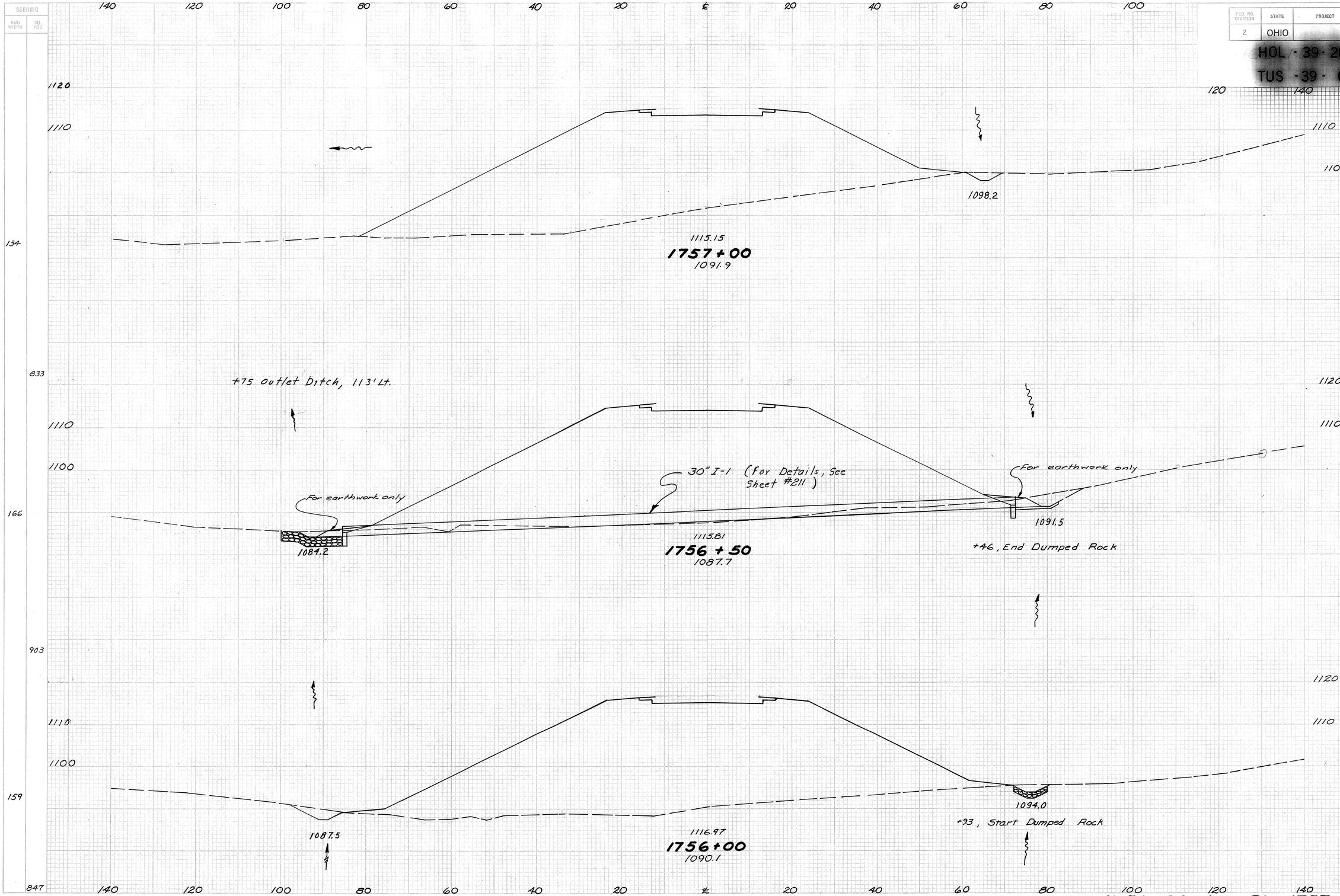
ON KEUFFEL-TRACE CLOTH

Sta. 1754+50 to Sta. 1755+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

148
231

HOL - 39 - 28.57
TUS - 39 - 0.00



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	2211		
		33	4494
27	2642		
		50	4743
27	2480		
		45	4370

Sta. 1756+00 to Sta. 1757+00

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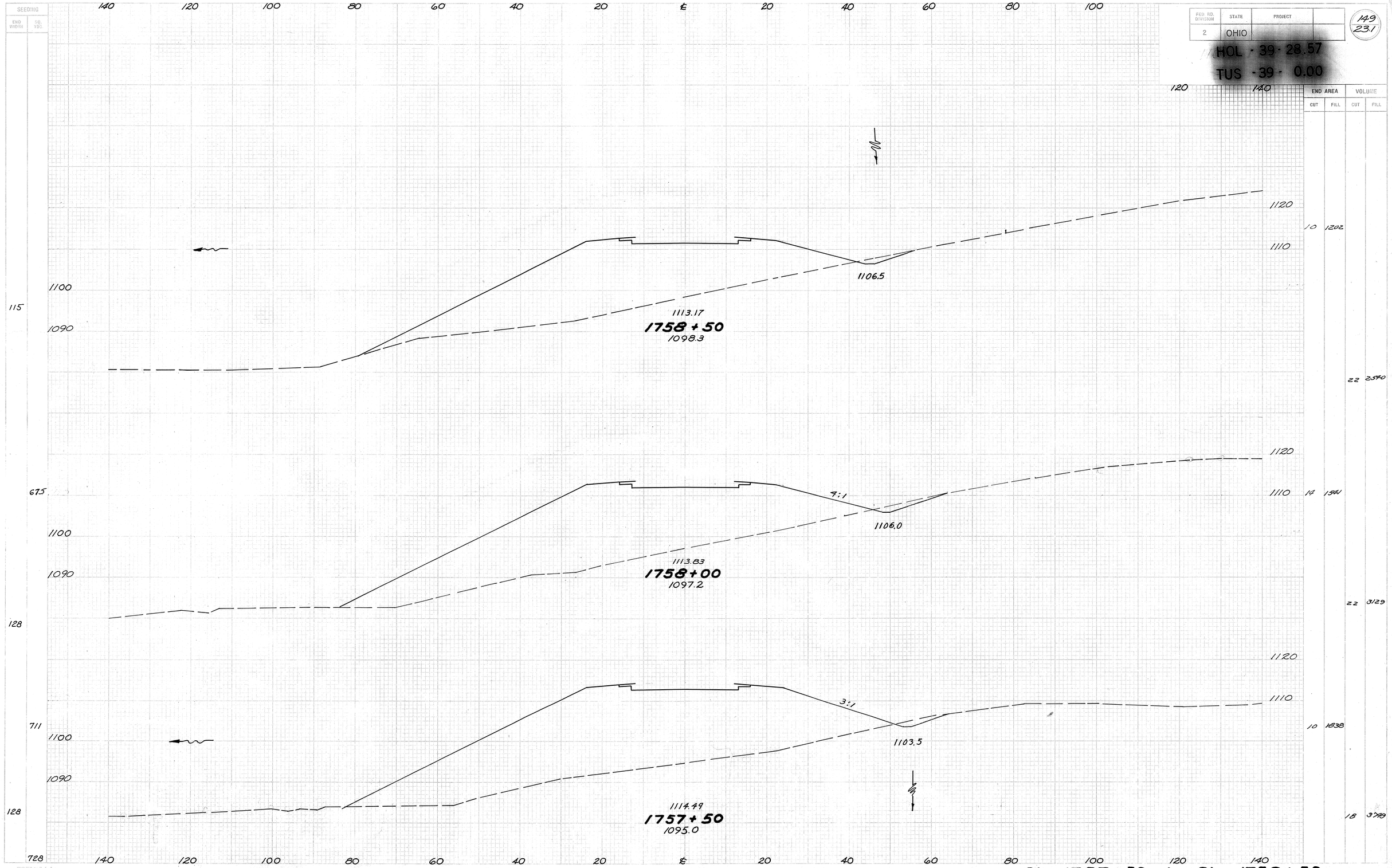
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

149
23.1

HOL - 39 - 28.57
TUS - 39 - 0.00



Sta. 1757+50 to Sta. 1758+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

150
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
		1120			
		1110	339	32	
63					
				501	93
		1120			
400		1110	202	68	
81					
		1120			
		1110	78	145	
425					
				86	590
72		1120			
		1110	15	492	
428					
82	547			23	1569

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

4:1
1110.78
1760 + 50
1112.4

4:1
1111.22
1760 + 00
1111.0

3:1
2:1
1111.85
1759 + 50
1109.6

2:1
4:1
1107.8

1112.51
1759 + 00
1104.9

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ON DUPLITRACE CLOTH

Sta. 1759 + 00 to Sta. 1760 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

151
231

SEEDING

END WIDTH	SQ. YDS.
113	558
88	439
70	428
84	439
74	381

END AREA / VOLUME

CUT	FILL	CUT	FILL
		96	1201
		82	295
		375	281
		323	8
			1108 15
		874	8
			1464 15
		707	8
		963	37

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

1110
1100

2:1
3.5:1
1090.5
1101.5
1111.84
1763+00
1098.7

3:1
1101.0
1106.5
1111.19
1762+50
1104.1
+50 Start Dumped Rock

1110
1100

1107.0
1107.0
1110.76
1762+00
1111.7

1107.5
1107.5
1110.55
1761+50
1118.8

1110
1100

1107.0
1107.0
1110.55
1761+00
1117.3

1120
1110

22 1002

1120
1110

82 295

1120
1110

1120
1110

1120
1110

Sta. 1761+00 to Sta. 1763+00

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ON THE TRUCK LEAN

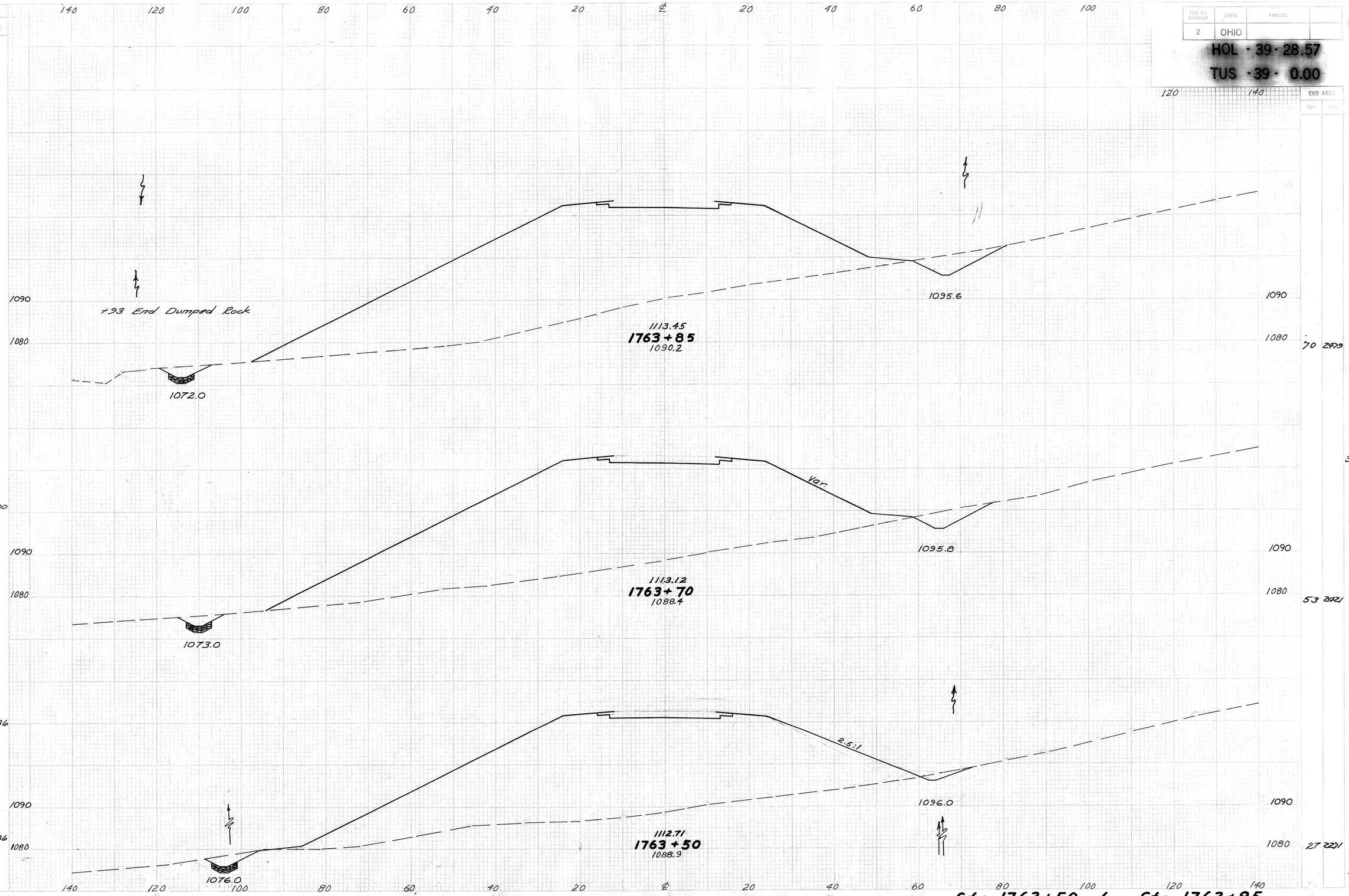
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

152
231

SEEDING	
END WIDTH	SQ. YDS.
183	
300	
177	
386	
170	786

END AREA	
CUT	FILL
70	2479
34	1361
53	2321
30	1738
27	2231
45	3031



Sta. 1763+50 to Sta. 1763+85

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ON CEIL-TRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS.
173	975
178	1006
184	306

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

153
231

HOL - 39 - 28.57

TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		26 3313	
		52 2075	
		48 5344	
		43 2637	
		31 1938	

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

1090
1080
1083.0
1116.63
1765+00
1080.1
1094.0

1090
1080
1077.5
1115.10
1764+50
1079.9
1095.0

1090
1080
+04, Start Dumped Rock
1070.6
1113.80
1764+00
1089.5
1095.5

Sta. 1764+00 to Sta. 1765+00

PRINTED IN U. S. A.
ON KEUFFEL-TRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

154
231

HOL - 39 - 28.57

TUS - 39 - 0.00

END AREA		YD. CME	
CUT	FILL	CUT	FILL

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

188 1044 188 179 978

1090 1080 1090 1080 1090 1080 1090 1080

+50 End Dumped Rock

1096.8

1122.26
1766 +50
1087.5

1086.0

Start Paved Gutter at + 42

39 3818

1095.7

1087.5

1120.30
1766 +00
1082.1

55 9209

1089.0

1090.0

1118.37
1765+50
1079.3

87 7932

78 7836

20 9232

51 7560

Sta. 1765 + 50 to Sta. 1766 + 50

PRINTED IN U. S. A.
ON DUPLITRACE CLOTH

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

135
231

HOL - 39 - 28.57
TUS - 39 - 0.00

END AREA		VOLUME	
CUT	FILL	CUT	FILL

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

195 1100 1090 1086

1097.5 1097.5

1128.14
1768+00
1091.3

52 4262

196 1100 1090 1072

1097.3 1094.0

1126.18
1767+50
1089.1

153 3570

120 3824

190 1100 1090 1050

1097.0 1091.0

End Paved Gutter at 1+00

1124.22
1767+00
1089.1

134 3703

89 3747

113 3005

Sta. 1767+00 to Sta. 1768+00

PRINTED IN U.S.A. ON VELLUM CLOTH

SEEDING	
END WIDTH	SQ. YDS.

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

156
231

HOL - 39 - 28.57
TUS - 39 - 0.00

120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL

+90, Start Dumped Rock

1120
1110

1100.0

1134.02
1769+50
1105.1

1112.0

1120
1110

23 3283

42 6930

172

978

1120
1110

1098.5

1132.06
1769+00
1095.5

1107.0

1120
1110

22 3699

54 9160

180

1329

1120
1110

1097.6

1129.51
1768+35
1095.6

1101.0

1120
1110

23 3911

43 5290

188

745

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

Sta. 1768+35 to Sta. 1769+50

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ON CUL-TRACE CLOTH

SLEEDING	
END WIDTH	SQ. YDS
84	
544	
112	
642	
119	
1606	
170	950

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

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

157
231

HOL - 39 - 28.57
TUS - 39 - 0.00

120 140

END AREA		VOLUME	
CUT	FILL	CUT	FILL
22	249		
44	1028		
25	861		
38	1997		
16	1293		
61	2137		
17	2592		
37	3485		

1140
1130
4:1
1133.0
1143.82
1772 + 00
1140.3
1141.0
3:1
1140
1130
3:1
1126.0
1141.86
1771 + 50
1131.0
4:1
1134.0
1140
1130
2:1
1119.0
1139.90
1771 + 00
1123.4
3:1
1128.5
1130
1120
1130
1120
+20, End Dumped Rock
1100.5
1135.98
1770 + 00
1111.6
2:1
1116.5
1130
1120

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

Sta. 1770 + 00 to Sta. 1772 + 00

PRINTED IN U. S. A.
ON VEIL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57

TUS - 39 - 0.00

158
231

| SEEDING | | |

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL · 39 · 28.57
TUS · 39 · 0.00

159
231

END AREA		VOL. LINE	
CUT	FILL	CUT	FILL

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

1160
1150
1140

House

1778+00
1154.8

1777+50
1154.6

1777+00
1154.4

1776+50
1154.0

1776+00
1153.5

1153.07
1775+50
1153.1

Transition the proposed shoulder and ditch section from the proposed widths and elevations at Sta. 1775+50 to meet the existing at Sta. 1775+75.

Sta. 1775+75 Back 26 0 | 31 0 | 40 0 | 139 0

0 | 36 | 26 | 183

Rev. 8-20-64

Sta. 1775+50 to Sta. 1778+00

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HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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231

Note: Hatched Area indicates existing pavement, outside of construction limits, to be removed.

For Intersection Details, see Sheet No. 178

For Water Line Relocation See Sheet No. 178

CURVE DATA
P.I.-Sta 3+83.63
Δ = 39° 11' Lt.
R = 124'
T = 44.13'
L = 84.80'
E = 7.62

CURVE DATA
P.I.-Sta 7+26.47
Δ = 20° 00' Lt.
D = 15° 00'
R = 381.97
T = 67.35'
L = 133.33'
E = 5.89'

B.M.-Mine Spike in Power pole 1236 6 Rt., Sta. 1513+00, Elev. 1156.73

B.M.-Mine Spike in 30" Hickory 147' Rt., Sta. 1517+27, Elev. 1115.38

Albert Horrisberger & Cora Horrisberger

Emma Hochstetler

St. John's Reformed Church

Cemetary

Freeman Miller

Milo Miller

Lloyd Mishler

Blake R. & Lola Miller

Robert L. Miller & Betty Miller

Leander Wilhelm & Ida Wilhelm

Irvin Stutzman et ux

Lola Flinner-Miller

Barn Work Sta. 0+00

Barn Work Sta. 2+25

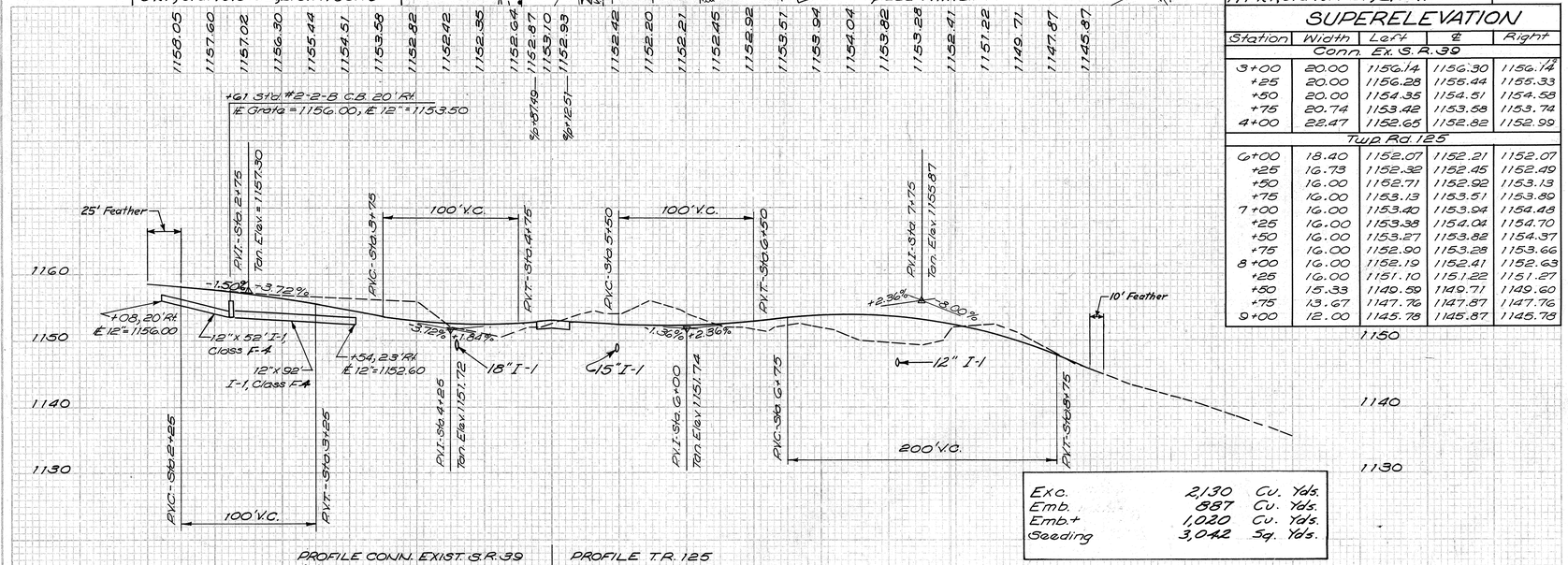
Sta. 1514+72.82 ℄ S.R. 39 = Sta. 5+00.00 & Conn. Exist. S.R. 39 & Twp. Rd. 125

S 37°-04'-30" W

12'-0"
3" Tar and Slag
TYPICAL ADJOINING SECTION T.R. - 125

SUPERELEVATION

Station	Width	Left	℄	Right
Conn. Ex. S.R. 39				
3+00	20.00	1156.14	1156.30	1156.14
+25	20.00	1156.28	1156.44	1156.33
+50	20.00	1154.35	1154.51	1154.58
+75	20.74	1153.42	1153.58	1153.74
4+00	22.47	1152.65	1152.82	1152.99
Twp. Rd. 125				
6+00	18.40	1152.07	1152.21	1152.07
+25	16.73	1152.32	1152.45	1152.49
+50	16.00	1152.71	1152.92	1153.13
+75	16.00	1153.13	1153.51	1153.80
7+00	16.00	1153.40	1153.94	1154.48
+25	16.00	1153.38	1154.04	1154.70
+50	16.00	1153.27	1153.82	1154.37
+75	16.00	1152.90	1153.28	1153.66
8+00	16.00	1152.19	1152.41	1152.63
+25	16.00	1151.10	1151.22	1151.27
+50	15.33	1140.59	1149.71	1149.60
+75	13.67	1147.76	1147.87	1147.76
9+00	12.00	1145.78	1145.87	1145.78



Exc.	2,130 Cu. Yds.
Emb.	887 Cu. Yds.
Emb.+	1,020 Cu. Yds.
Seeding	3,042 Sq. Yds.

Rev. 8-20-64

Sta. 2+00 to Sta. 9+10, Conn. & T.R. 125

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	*Sec. M-6.6(a) or Sec. M-6.8(b) E-8 Rem. & Disposal of Ex. Pavm't Sq. Yds.	**Sec. M-6.4(c) E-12 15" I-2 Type "C" Under Cu. Yds.	T-35 2" Lin. Ft.	I-1 12" Class A-1 Lin. Ft.	I-1 15" Class A-1 Lin. Ft.	I-1 18"* Class A-1 Lin. Ft.	I-1 6" Class F-4 Lin. Ft.	I-1 8"** Class F-4 Lin. Ft.	I-2 I-5 Class "C" C.B.	I-2 I-5 Sta. 22+A 22+B C.B.	I-6 Adjs. Rock Chan. C.B.	I-8 5" Lin. Ft.	I-8 8" Lin. Ft.	I-10 Sq. Yds.	I-10 Ramp Calcium Chloride Sq. Yds.	Special Mixing Calcium Chloride Sq. Yds.	SEE SHEET NO.
1	2+32	Rt.													10				
2	2+87	Rt.													7				
3	2+82	2+97	Rt.		15											13			
4	2+08	3+54	Rt.													5			
5		4+32	℄																
6		5+48	℄																
7		5+95	Lt.																
8	5+88	7+45	Rt.	405			5									13	13	11	
9		6+57	℄																
10		7+57	℄																
11		8+27	Lt.		18		5	65								8	1	57	39
12		8+47	Rt.													25			
13		8+91	Rt.		3											1			
					10											6			
					2														
	Sub Total			405	33	32	65	76	70	11	20	146	1.3	1	1	24	9	1	114	34	81	33	145	

Sta. 5+00 ~ ℄ Survey S.R. 39

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

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231

SEEDING END WIDTH	SEEDING SQ. YDS.	End Area Cut	End Area Fill	Volume Cut	Volume Fill	Seeding End Width	Seeding Sq. Yds
						4	22
71							
	328	66	120			17	142
47							
	222						
33							
	153						
22							
	106						
16							
28							
4							

Add For Intersection → 34 35

1152.35
4+50
1150.8
1149.4
Earthwork carried on S.R. 39

1152.82
4+00
1155.8

+50, E = 1153.60
+54, E 12" I-1 = 1152.60
1154.51
3+50
1157.0

1156.30
3+00
1156.68
12" I-1 (For Details, See Sheet #160)

1157.60
2+50
1157.99
12" I-1

End Seeding Sta. 2+25 ←
Begin Seeding Sta. 2+25 →
Transition the existing shoulders from the existing width and elevations at Sta. 2+25 to meet the proposed at Sta. 2+50.

L = 21'
10' V.C.
T-35
+2.7%
12" I-1

Sta. 2+87 Cemetery Dr. Rt.

L = 26'
10' V.C.
T-35
+6.3%
Garage
12" I-1

Sta. 2+32 Res. Dr. Rt.

Add For Res. Dr. Rt. Sta. 2+32 → 10 0

1150		113	0				
1150		150	14				
1150							
1150				244	13		
1150							
1150							
1150				154	2		
1150							
1150							
1150		53	2				
1150				76	5		
1150		29	3				
1150		25	1				
1150		26	0				

End Seeding Sta. 9+19 ←
Add for Pvm't Removal →

1145.87
9+00
1145.7
Garage
End Earthwork Sta. 9+19

1149.71
8+50
1150.8
1148.0
Water Line

1152.41
8+00
1152.0
1150.8
Water Line

1153.82
7+50
1149.6
1144.0
1151.0
Water Line

3:1
1153.94
7+00
1151.9
1152.4

3:1
1152.92
6+50
1151.6

Garage
12:1
1152.21
6+00
1153.9

Res.
1150.3
1152.21
5+59
1155.0
1149.5

Sta. 5+95 Res. Dr. Lt.

I-18
10' V.C.
L = 65'
I-18
T-35
-11.7%

Sta. 6+57 Res. Dr. Rt.

10' V.C.
L = 82'
T-35
I-18
+5.0%
I-18

Sta. 8+27 Res. Dr. Rt.

L = 27'
10' V.C.
T-35
+6%
Garage

Sta. 8+47 Res. Dr. Lt.

10' V.C.
L = 52'
10' V.C.
+3.0%

Sta. 8+91 Res. Dr. Rt.

10' V.C.
L = 21'
T-35
+5.0%

Sta. 8+47, 42' Lt., Res. Dr. Rt.

10' V.C.
T-35
I-18
L = 59'
+2%
10' V.C.
I-18

1150		0	0				
1150		30	0				
1150		89	0				
1150		27	34				
1150		36	167				
1150		13	100				
1150		41	79				
1150							
1150		163	0				
1150							
1150							
1150		

HOL · 39 · 28.57
TUS · 39 · 0.00

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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P.T. ~ Sta. 1555+93.99

Willis Stutzman

Emanuel A. Miller & Mattie Miller

For Intersection Details, see Sheet No. 179

Existing S.R. 39

BEGIN WORK Sta. 6+35

BEGIN NEW PAVEMENT Sta. 6+50

R/W

W/L

Ex. 10" C.M.P.

℄ E.C.R. 114
S. 65°30'59" W.

Feather

Exist. 24" C.M.P. (to remain in place)

+32. Res. Dr. L=26'

Ex. 12" C.M.P.

Mail Box

Ex. 8' Field Dr. (Abandoned)

Ex. 12" C.M.P.

Sta. 1553+69 - ℄ S.R. 39 -

Sta. 10+00 - ℄ C.R. 114

Oil Septic Tank

1 Story Br. Res.

Garage

Dog House

Guy Pole

Emanuel A. Miller & Mattie Miller

1555

1554

1553

1552

1551

30' Trans.

50' Rt.

Sta. 9+00.08

Sta. 10+00.08

Exist. 36" Conc. Pipe with 12' Headwalls

Emanuel A. Miller & Mattie Miller

END WORK Sta. 15+60

10' Feather

50' Trans. 18' to 16'

Shed

Exist. C.R. 114

Ex. 12" C.M.P. (To remain in Place)

END NEW PAVEMENT Sta. 15+50

Ex. 10' Dirt Dr.

Ex. 18' Gravel Dr.

2 Story Frame Residence

Frame Shed

Frame Barn

2½' 9' 9' 2½'

2" Traffic Bound Tar and Gravel Mixture

6" Gravel

ADJACENT TYPICAL SECTION

BM-□ Cut in N.W. Cor. of West H.W. 83' Rt. Sta. 1553+57, Elev. 996.47

Exc.	899 Cu. Yds.
Emb.	8,673 Cu. Yds.
Emb. + 15%	9,974 Cu. Yds.
Seeding	6,411 Sq. Yds.

℄ S.R. 39

100' V.C.

200' V.C.

150' V.C.

P.V.C.- Sta. 6+50

P.V.T.- Sta. 7+50

P.V.C.- Sta. 8+85

Elev. 1004.50

P.V.T.- Sta. 9+85

Elev. 1007.50

P.V.C.- Sta. 10+25

P.V.T.- Sta. 11+75

P.V.C.- Sta. 11+00

Tan. Elev. 1008.70

P.V.C.- Sta. 13+50

P.V.T.- Sta. 15+50

P.V.C.- Sta. 14+50

Tan. Elev. 997.64

P.V.T.- Sta. 7+00

Elev. 997.10

P.V.T.- Sta. 9+30

Tan. Elev. 1006.30

+4.00%

+2.00%

+0.40%

-3.16%

-1.36%

+0.72%

30" I-1

12" I-1

54" I-1

1010

1000

990

997.78 997.61 997.77 998.27 999.10 1001.10 1003.10 1005.08 1005.94 1006.25 1006.68 1007.29 1007.96 1008.40 1008.43 1008.30 1008.03 1007.61 1007.05 1006.33 1005.54 1003.96 1002.38 1000.80 1000.07 999.47 998.98 998.62 998.38 998.27 998.27 998.36

998.77 997.67 996.92 996.94 996.33 996.05 995.92 996.26 996.65 996.92 996.55 996.10 996.14 996.27 996.42 996.64 996.91 997.16 997.57 998.28 998.61

6 7 8 9 10 11 12 13 14 15 16

ESTIMATED QUANTITIES

MEM NO	STATION TO STATION	SIDE	E-3 Cu. Yds.	E-12 15" and Under Lin. Ft.	E-12 Over 15" Lin. Ft.	T-35 2" Type "C" Cu. Yds.	I-1 12" Class A-1 Lin. Ft.	I-1* 30" Class A-1 Lin. Ft.	I-1** 54" Class A-1 Lin. Ft.	I-2 Class "C" Cu. Yds.	I-8 Std. Pumped Rock Cu. Yds.	I-10 Rip-Rap Std. Each	I-10 Rip-Rap Std. Sq. Yds.	I-15 Lin. Ft.
1	7+00	℄												
2	7+32	Rt.												
3	7+24 - 7+40	Rt.												
4	9+08.5 - 9+40	Rt.												
5	8+98.5 - 9+36	Lt.												
6	9+00 - 9+33	Rt.												
7	9+34	℄												
8	10+88	℄												
9	10+62 - 11+99.5	℄												
10	10+60 - 11+47.5	Rt.												
TOTALS			14	31	29	4	43	88	92	3.1	1	33	23	300

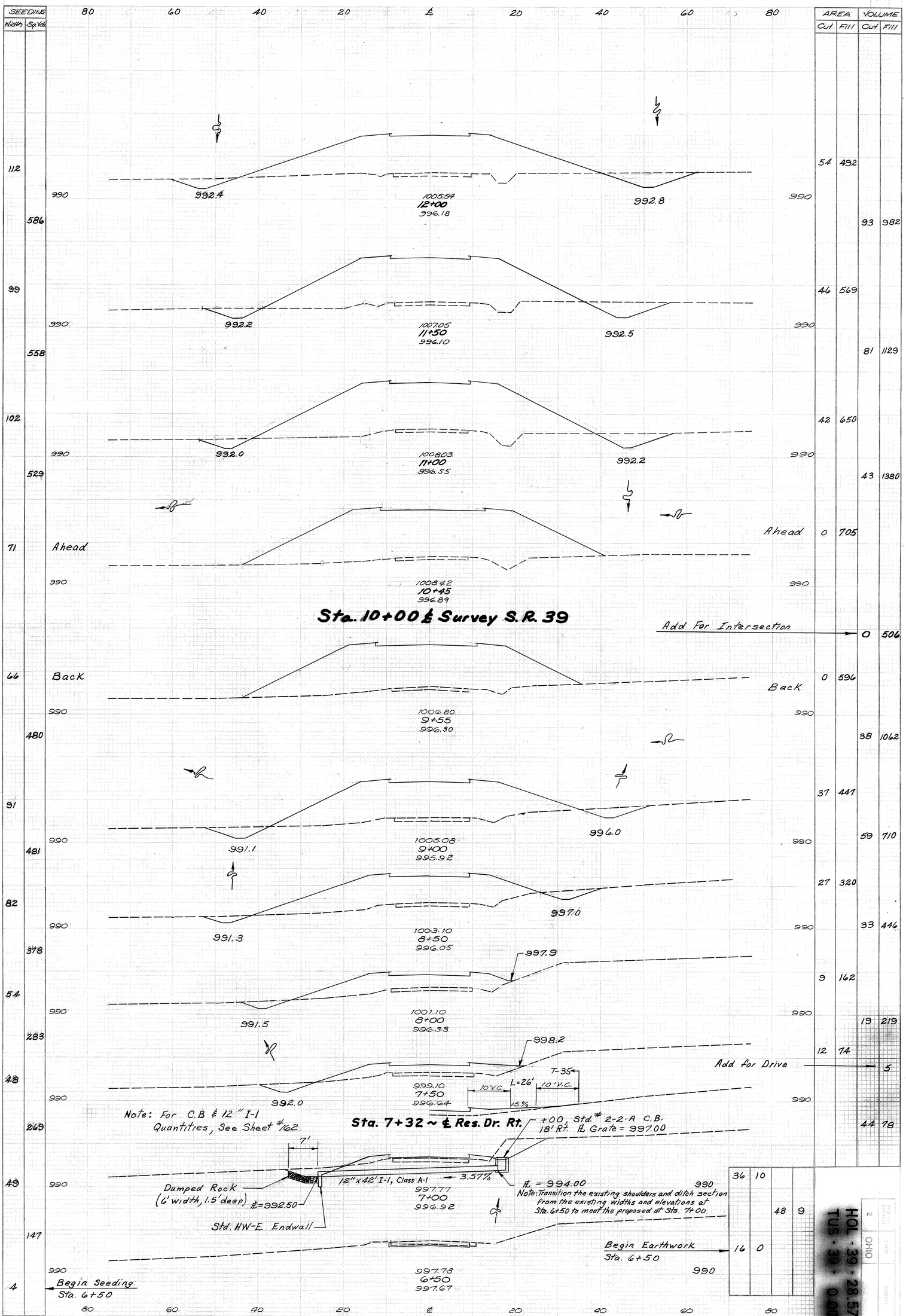
SEE SHEET NO. 163 190 191

* Sec. M-6.6(a), M-6.8(a) or Sec. M-6.6(d)** Sec. M-6.6(b)

11
11
23
11
16
5
18
1375
875
11 5
20 18
1.9
92
88
4
16
375
375

61

Sta 6+35 to Sta 15+60 ~ Co. Rd. # 114



Sta. 6+50 to Sta. 12+00 C.R. 114

HOL-39-28.57
TUS-39-0.00

163
231

SEEDING	
END WIDTH	SQ. YDS.

AREA		VOLUME	
CUT	FILL	CUT	FILL
0	10	15	31
16	23	44	43
31	23	103	46
80	27	221	54
159	31	394	71
267	46		

DIST. NO. DIVISION	STATE	PROJECT	
2	OHIO		

HOL - 39 - 28.57
TUS - 39 - 0.00

164
231

END AREA		VOLUME	
CUT	FILL	CUT	FILL
581		789	
94		102	
360			
56			

End Earthwork
Sta. 15+50

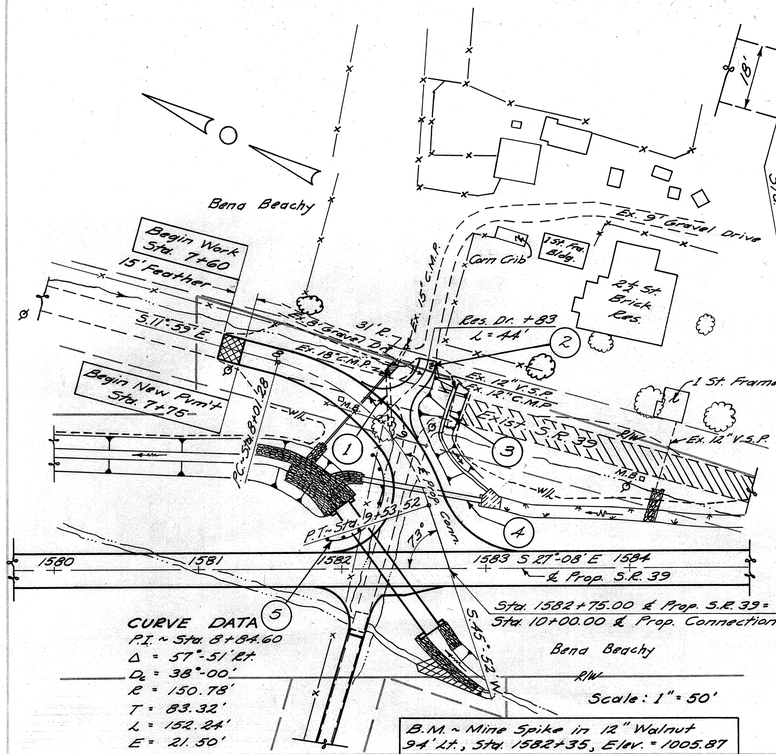
Note: Transition the proposed shoulders and ditch section from the proposed widths and elevations at Sta. 15+00 to meet existing at Sta. 15+50

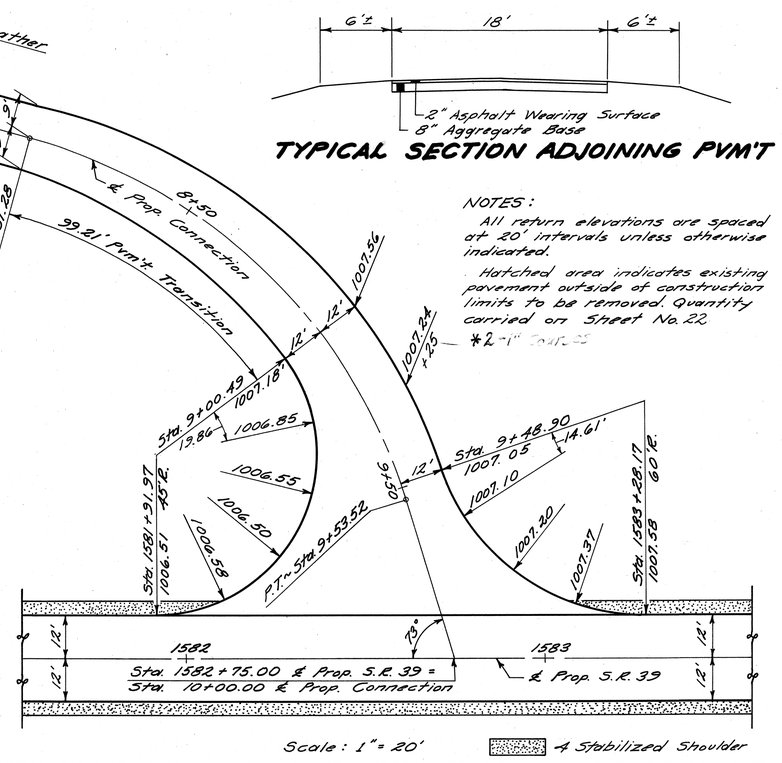
| | | |

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

165
231

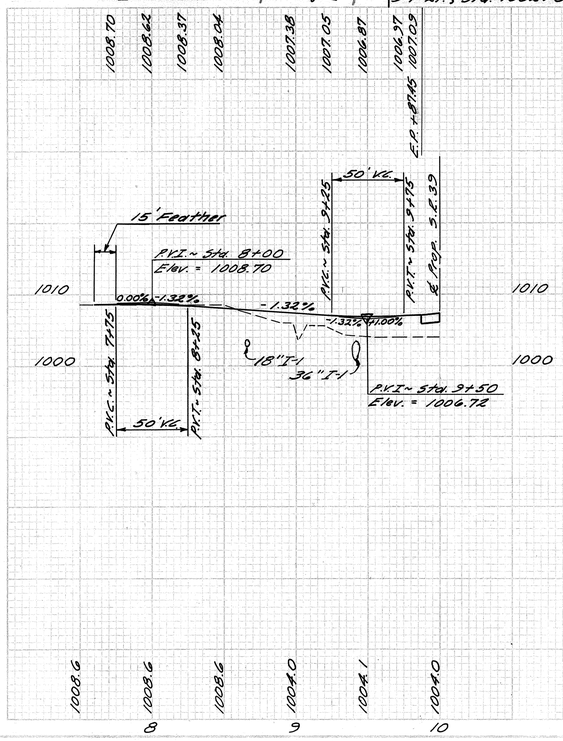




SUPERELEVATION TABLES

Station	Width	Lt. Edge	℄	Rt. Edge
7+75	18.00	1008.56	1008.70	1008.56
8+00	18.00	1008.62	1008.62	1008.48
8+01.28	18.00	1008.62	1008.61	1008.47
8+25	19.44	1008.52	1008.37	1008.22
8+50	20.94	1008.20	1008.04	1007.88
8+75	22.46	1007.83	1007.71	1007.53
9+00	23.98	1007.57	1007.38	1007.19

Exc.	327	Cu. Yds.
Emb.	354	Cu. Yds.
Emb. + 15%	407	Cu. Yds.
Seeding	642	Sq. Yds.

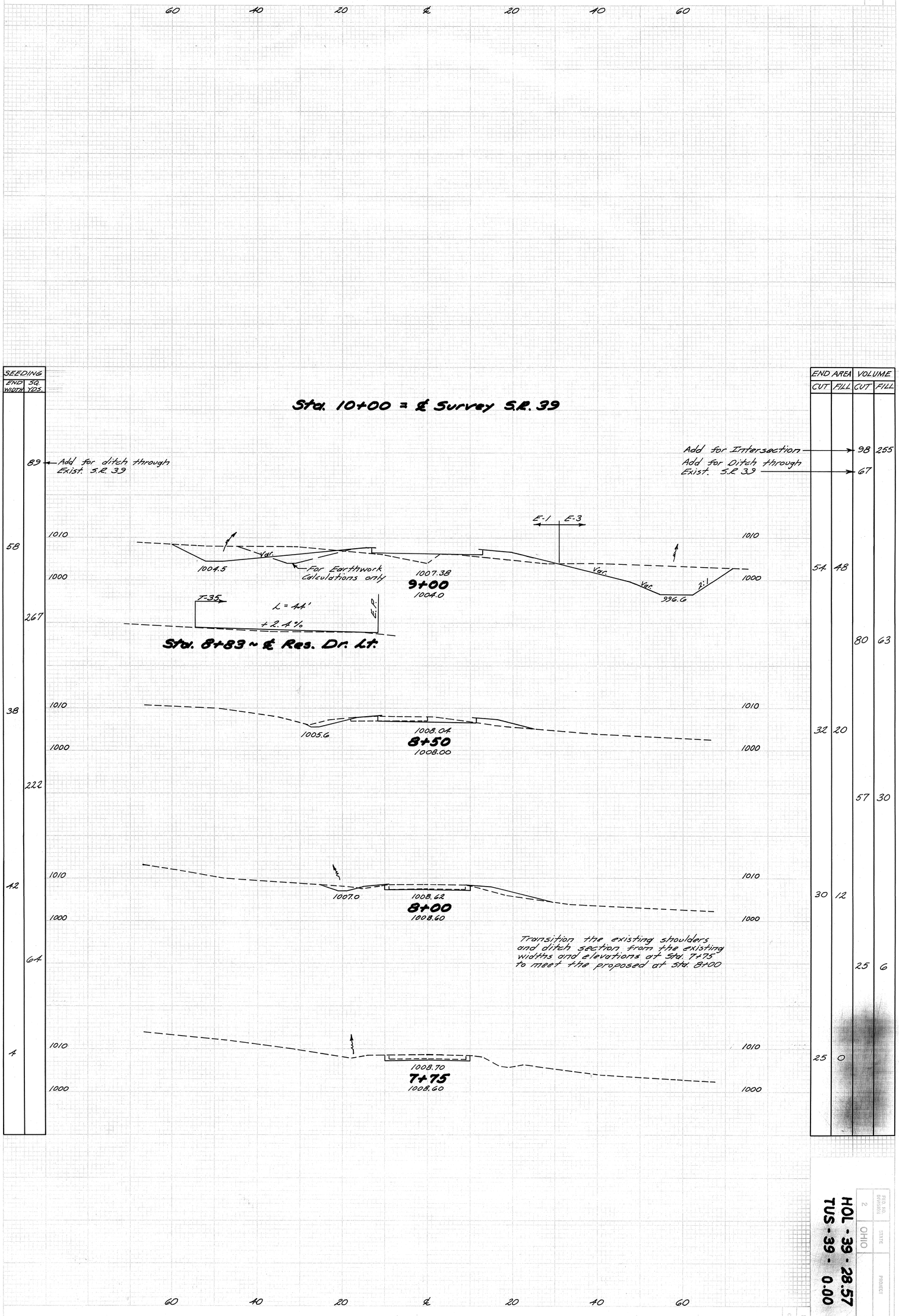


ESTIMATED QUANTITIES

* Sec. 1M-6.6(a) or M-6.8(b)

REF. NO.	STATION TO STATION	SIDE	E-3 E-12 ½" and Under Cu. Yds.	E-12 ½" Over 15" Lin. Ft.	7.35 2" Type "C" Lin. Ft.	I-1 18"* Class A-1 Lin. Ft.	I-1 36"* Class A-1 Lin. Ft.	I-2 Class "C" Cu. Yds.	I-5 Std.	I-10 Dump Rip Rap C.Y.	I-10 Rip Rap 5" Sq. Yds.	Cu. Yds.	Lin. Ft.	Sq. Yds.	Lin. Ft.	Sq. Yds.
1	8+66	℄	2									6				
2	8+83	Lt.		33								13				
3	8+96	Lt.										9				
4	9+10	℄										16				
5	9+43	℄										19				
	9+00	Lt.			5	68	86	1.2	87.5	9	9	87.5	17	13	19	13
	158+88	℄	2					0.6		8	7	1.8	86	68	5	42
												4	33	42	5	42
		TOTALS														

CONNECTION ~ Station 1582+75



60 40 20 ℄ 20 40 60
Sta. 10+00 = ℄ Survey S.R. 39
SEEDING
END WIDTH
SQ. YDS.
89
Add for ditch through Exist. S.R. 39
58
267
38
222
42
64
4
END AREA
CUT
FILL
VOLUME
CUT
FILL
Add for Intersection
98
255
Add for Ditch through Exist. S.R. 39
67
54
48
80
63
32
20
57
30
30
12
25
6
25
0
1010
1000
E-1
E-3
Var.
1004.5
For Earthwork Calculations only
1007.38
9+00
1004.0
996.6
2:1
T-35
L = 44'
+2.4%
E.P.
Sta. 8+83 ~ ℄ Res. Dr. Lt.
1005.6
1008.04
8+50
1008.00
1007.0
1008.62
8+00
1008.60
Transition the existing shoulders and ditch section from the existing widths and elevations at Sta. 7+75 to meet the proposed at Sta. 8+00
1008.70
7+75
1008.60
Sta. 7+75 to Sta. 9+00 Connection ~ Sta. 1582+75
HOL - 39 - 28.57
TUS - 39 - 0.00
OHIO
166
231

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

167
231

SEE SHEET NO.

Sam J. Beachy & Mary Beachy

Frame Shed

1 Story Fr. Out Bldg.

2 Story Frame Res.

Fr. Shed

Exist 7' Dirt Drive S

Field Dr. ± 85' L = 26'

Exist. 3'x11.5' Wood Plank Bridge To be removed under E-1 (Roadway Exc.)

Exist Timber Bridge (To Remain in Place)

Existing T.R. 137

Sta 1590+20.80 = Sta. 0+00

Ex. 18" x 45' C.M.P

℄ Prop T.R. 137 S 55°38' W

B.M.

120' Transition

End NEW Pvm't & Work Sta. 3+00

Bena Beachy

Sta 1590+20.80 ℄ Prop S.R. 39 = Sta. 0+00 ℄ Prop T.R. 137

Exist. S.R. 39

℄ Prop S.R. 39 S 27°08' E 1589

Scale: 1" = 50'

Hatched area indicates existing pavement outside of construction limits, to be removed. Quantities carried on Sheets 22 & 23

Sta 1590+1557 POT.

40.84'
18.82'
31.37'
1590.37

B.M. - Mine Spike in Tel. Pole 249/182 93' Rt, Sta. 1589+61, Elev. 1012.79

2'± 12' 2'±

4" Gravel & Slag Mixture

Typical Section of Adjoining Pvm't

Sta 1590+77.80 1015.04 40'R

1014.69

1014.17

1013.77

1013.58 Sta 0+58.77

7.88'

1013.35 +75

1012.76 +00

82°46'

℄ Prop T.R. 137

3/8"/ft.

1013.82

1013.64 Sta 0+54.89

1013.25 +75

1012.76 +00

120' Pvm't Trans. 20' to 12'

1014.02

1014.08

12.23'

1013.94 50'R Sta 1589+68.18

Sta 0+60

T-35 B-19

℄ Prop S.R. 39

Scale: 1" = 20'

Notes: Apron Pvm't Same Composition as S.R. 39

All return elevations are spaced at 20' intervals unless otherwise shown.

4' Stabilized Shoulder

	Exc.	Emb.	Emb. + 15%	Seeding
	253	116	133	848
	Cu. Yds.	Cu. Yds.	Cu. Yds.	Sq. Yds.

Seeding End Width	Seeding Area Sq. Yds.
0	
	211
38	
	444
42	
	193
52	

End Area Cut	End Area Fill	Volume Cut	Volume Fill
6	0		
		48	24
20	13		
		72	52
19	15		
		79	10
96	0		
		53	14

Exist. Sta. 3+02 Timber Bridge (to remain in place)

Transition the proposed shoulder and ditch section from the proposed widths and elevations at Sta. 2+50 to meet the existing at Sta. 3+00.

3+00 1009.5

2+00 1009.4

1+00 1011.9

0+63 1012.10

1009.50

1010.37

1006.8

1009.8

1013.03

1010.7

1011.3

1010.5

1013.68

Add for Drive

Add for Intersection

E-18 Over 15" — L-10

I-1, -12" Cl. F-4 — L-10

I-18 6' — L-10

REF. NO.	STATION TO STATION	SIDE	Lin. Ft.	Lin. Ft.	Cu. Yds.	Sq. Yds.
1	0+40 - 0+85	Lt.	45	40	4	
2	1+66 - 2+06	Lt.				
3	1+85	Lt.				

ESTIMATED QUANTITIES

45	40	13
45	40	4

TOTALS

Sta. 0+00 to Sta. 3+00 ~ T.R. 137

HOL-39-28.57
TUS-39-0.00

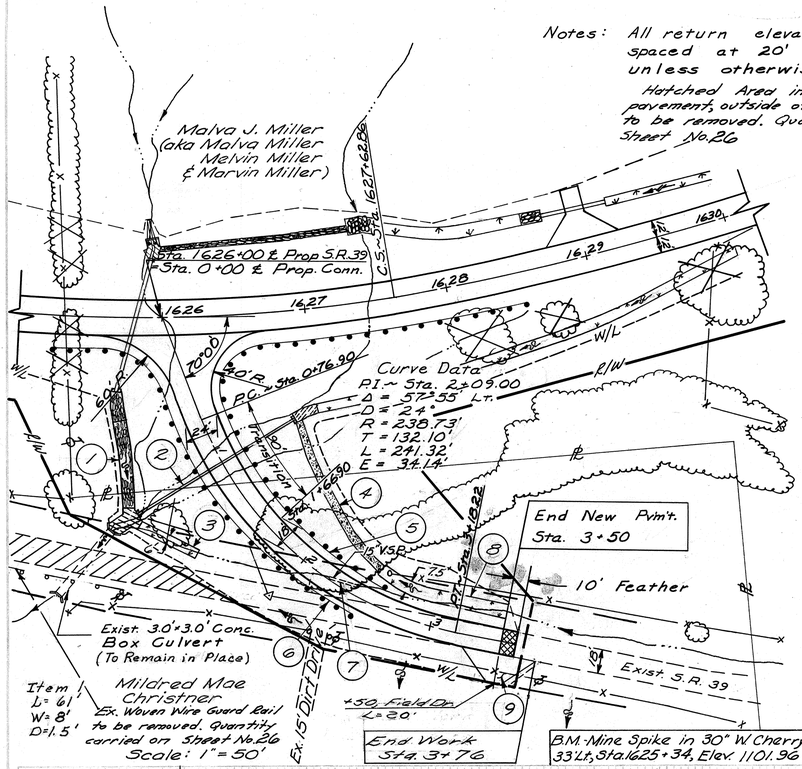
FED. ROAD PROJECT NO.	STATE	PROJECT	
2	OHIO		

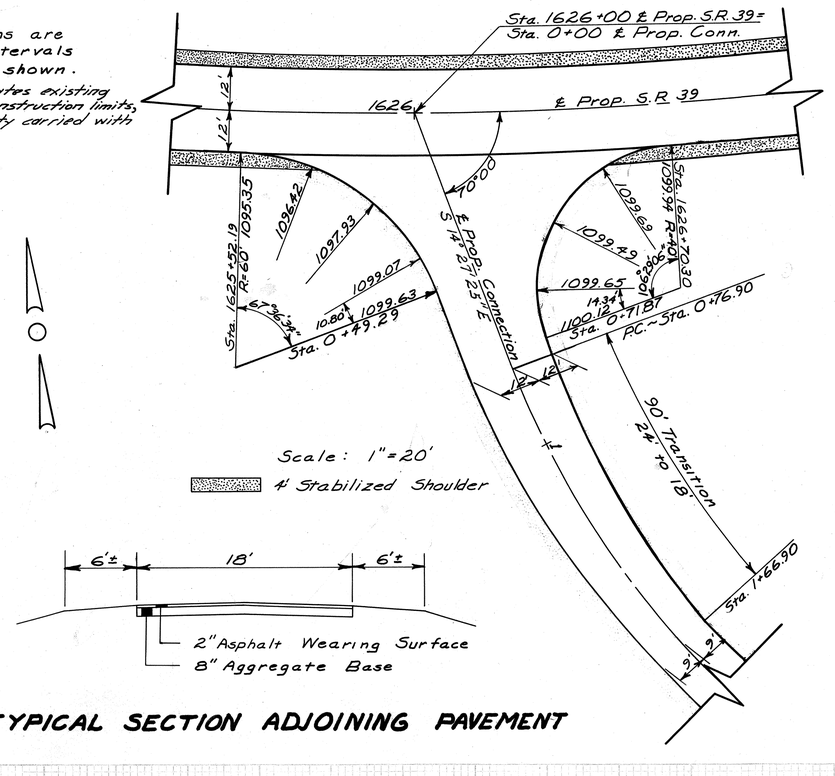
168
231

SEE SHEET NO. 198

Notes: All return elevations are spaced at 20' intervals unless otherwise shown.

Hatched Area indicates existing pavement, outside of construction limits, to be removed. Quantity carried with Sheet No. 26

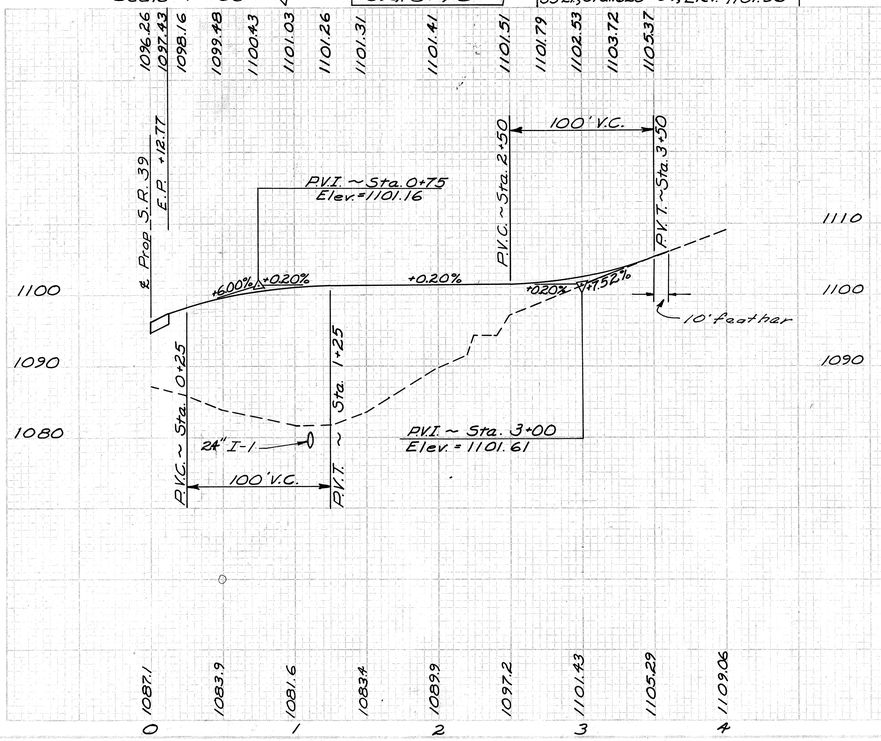




Scale: 1"=20'

4' Stabilized Shoulder

TYPICAL SECTION ADJOINING PAVEMENT



SUPERELEVATION

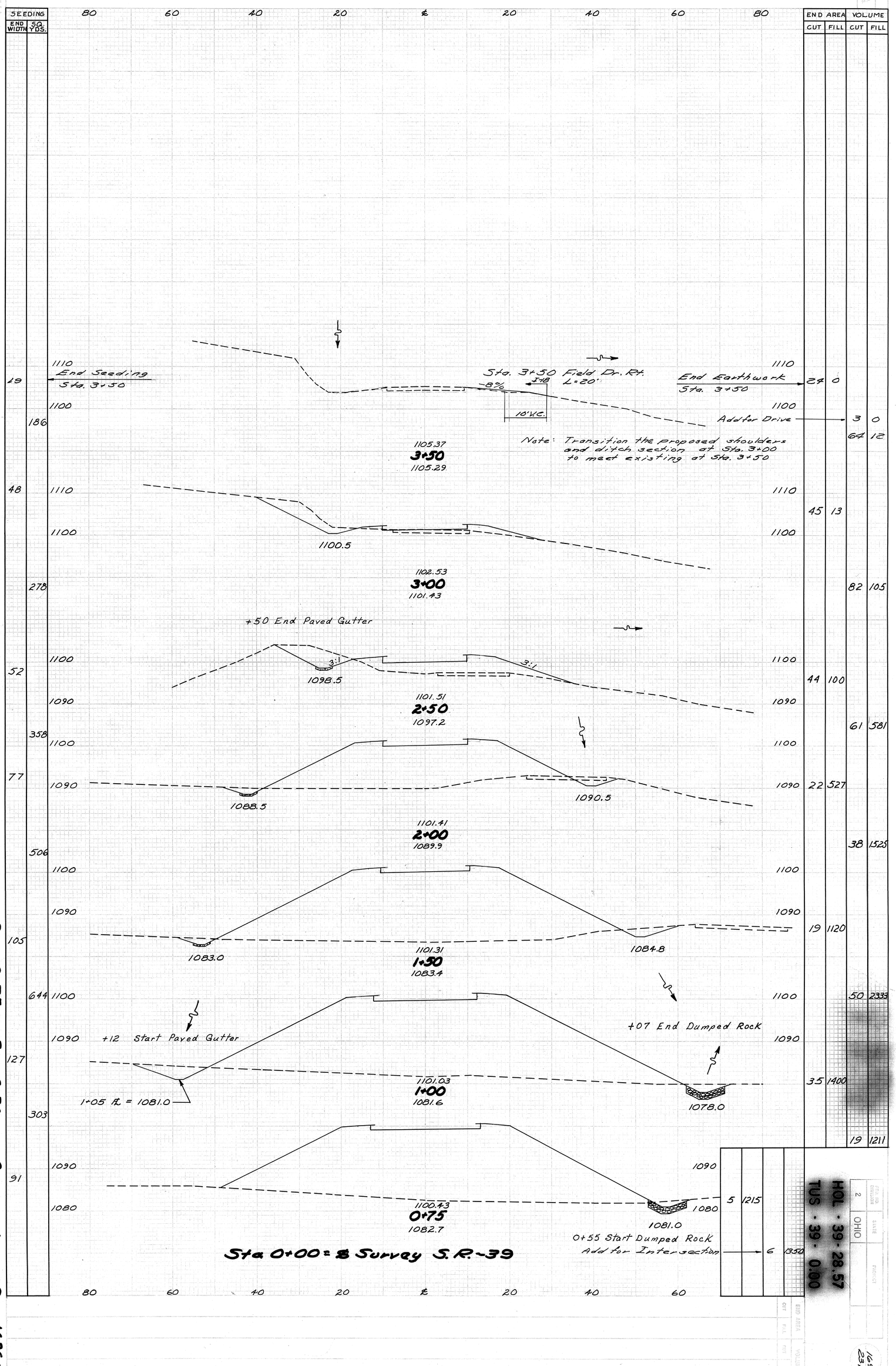
Station	Width	Lt. Edge	℄	Rt. Edge
0+75	24.00	1100.24	1100.43	1100.62
1+00	22.46	1100.85	1101.03	1101.21
1+25	20.80	1101.10	1101.26	1101.42
1+50	19.12	1101.16	1101.31	1101.46
1+75	18.00	1101.22	1101.36	1101.50
2+00	18.00	1101.27	1101.41	1101.55
2+25	18.00	1101.32	1101.46	1101.60
2+50	18.00	1101.37	1101.51	1101.65
2+75	18.00	1101.65	1101.79	1101.93
3+00	18.00	1102.39	1102.53	1102.67
3+25	18.00	1103.58	1103.72	1103.78
3+50	18.00	1105.23	1105.37	1105.31

Exc.	323	Cu. Yds.
Emb.	7,117	Cu. Yds.
Emb. + 15%	8,185	Cu. Yds.
Seeding	2,275	Sq. Yds.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	*Sec. M-6.4(d) or M-6.6(d) E-1.2 15" E Under Class A-1 Lin. Ft.	I-1 * 24" Class "C" Rock Cu. Yds.	I-2 I-10 Dumped Rock C.P. Cu. Yds.	I-10 Riprap Sq. Yds.	I-14 Std. Type 1 Lin. Ft.	I-15 Std 6" Lin. Ft.	I-18 L-10 Cu. Yds.	Sq. Yds.
1	0+55 1+07	Rt.								6
2	1+10 1+50	℄								29
3	1+16 1+50	Rt.								40
4	1+12 2+50	Lt.					120			
5	0+69 2+60	Lt.					175			
6	0+59 2+48	Rt.	20				200			
7	2+21 2+42	Lt.								77
8	2+50 3+50	Lt.								12
9	3+50	Rt.								
			20	128	0.8	27	35	120	375	12 152

CONNECTION ~ STA. 1626+00


SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
80 60 40 20 ℄ 20 40 60 80
19
186
48
278
52
358
77
506
105
644
127
303
91
1110
1100
1090
1080
End Seeding
Sta. 3+50
Sta. 3+50 Field Dr. Rt.
L=20'
-8%
I-18
10' V.C.
End Earthwork
Sta. 3+50
Add for Drive
Note: Transition the proposed shoulders and ditch section at Sta. 3+00 to meet existing at Sta. 3+50
1105.37
3+50
1105.29
1100.5
1102.53
3+00
1101.43
+50 End Paved Gutter
3:1
1098.5
1101.51
2+50
1097.2
1088.5
1090.5
1101.41
2+00
1089.9
1083.0
1084.8
1101.31
1+50
1083.4
+12 Start Paved Gutter
+07 End Dumped Rock
1+05 PL = 1081.0
1101.03
1+00
1081.6
1078.0
1100.43
0+75
1082.7
1081.0
0+55 Start Dumped Rock
Add for Intersection
24 0
3 0
64 12
45 13
82 105
44 100
61 581
22 527
38 1525
19 1120
50 2333
35 1400
19 1211
5 1215
6 1350
Sta 0+00 = ℄ Survey S.R.-39
Sta. 0+75 to Sta. 3+50 Connection ~ Sta. 1626+00
HOL · 39 · 28.57
TUS · 39 · 0.00
2
OHIO
169
231

HOL - 39 - 28.57
TUS - 39 - 0.00

SHEET	STATE	PROJECT	
2	OHIO		

170
231

171

Abe J. Beachy & Sarah Beachy

NOTE: For details of Intersections See Sheet No. 179

Begin Work Sta. 5+15

Begin New Pavement Sta. 5+25

End New Pvmt & Work Sta. 14+72.0

10' Feathering

45° Trans.

Ex. 8" V.S.P. (Plug & Abond)

Ex. to Prop.

Ex. Fire Hydrant

Ex. 4'x4' C.B.

Ex. 8" V.S.P. (Plug & Abond)

Ex. 18" C.M.P.

℄ Prop. T.R. 146

S. 2°58'54"W.

Ex. 12" V.S.P. (Plug & Abond)

68°30'

1 Story Frame Res.

Ex. 6" Gravel Dr.

Res. Dr. +22 L=26'

Ex. 3" Water Line

Sta. "HOL-39-3161

1681+08.00 40°R

Sta. 1680+41.60 = Sta. 10+00 ℄ Prop. T.R. 146

3°15'23" 06°E

Ex. 3" Water Line?

Ex. 4" abandoned Water Line

Ex. 1" Water Line

Water Valve

Thomas Miller

50°R

Ex. 12"x31' V.S.P. (Plug & Abandoned)

Ft. 14+06.13

50°Rt

Ex. 6" Gravel Dr.

Ex. 12" V.S.P.

Ex. 2" Water Line

2 Sty. Frame Res.

Water Valve

Gravel

Ex. 1" Water Serv. Line

Ex. 6" V.S.P.

1 Sty. Brick House

Frame Barn

2 Sty. Frame Res.

Fr. Shed

Frame Shed

Frame Water Closet

Field Dr. +45 L=78'

Item 9 L=15' W=6' D=1.5'

Exist 6' Dirt Dr.

Exist 10' Dirt Drive

Ex. 6' Dirt Dr? (To be abandoned)

Gate

3' 15' 3'

4" Gravel & Slag Mixture

TYPICAL SECTION ADJOINING PAVEMENT

Abe J. Beachy & Sarah Beachy

Abe J. Beachy & Sarah Beachy

B.M. ~ M.S. in P. Pole #1148/97, 17 Lt, Sta. 7+18, Elev. = 1197.21

B.M. ~ □ Cut in conc. headwall 30' Rt, Sta. 14+60, Elev. = 1214.88

CURVE DATA
P.I. = Sta. 13+50
Δ = 9°
D = 8°
R = 716.20'
L = 112.50'
T = 56.37'
E = 2.21'

℄ Prop. S.R. 39

Ex. St. S.R. 39

1193.66 1192.38 1191.35 1190.59 1190.07 1189.80 1189.80 1190.04 1190.55 1191.31 1192.32 1193.59 1195.11 1196.71 1198.06 1199.3 1199.93 1200.45 1200.70 (1.47.98') 1200.72 (+1.42) 1200.21 1200.08 1199.93 1199.98 1200.22 1200.67 1201.31 1202.16 1203.20 1204.44 1205.78 1207.04 1208.12 1209.05 1209.80 1210.39 1210.80 1211.06 1211.14 1211.14

1197.3 1195.1 1192.2 1189.4 1187.8 1187.1 1187.1 1188.1 1189.7 1192.0 1195.5 1200.5 1208.5 1216.2 1220.2 1222.7 1224.6 1225.3 1224.8 1220.0 1214.2 1211.14

5 6 7 8 9 10 11 12 13 14 15

1220 1210 1200 1190 1180

300' V.C.

Std. 2-2-A C.B. ℄ Grate = 1186.00

Std. 2-2-A C.B. ℄ Grate = 1187.80

P.V.C. Sta. 5+25

P.V.I. Sta. 8+25

P.V.I. Sta. 9+10 Elev. 1200.72

P.V.C. Sta. 10+25

200' V.C.

P.V.I. Sta. 13+50 Elev. 1211.44

P.V.I. Sta. 12+25

P.V.C. Sta. 12+50

200' V.C.

P.V.T. Sta. 14+50

Ex. ist. S.R. 39

+6.60% Δ 0.00%

+5.36%

0.00%

-1.00%

+00 18.5' Lt.

+50 29' Lt.

10' Feather

-5.63% Δ -6.00%

12"x 49' T-1 Class F-A

+20.45' Rt. ℄ = 1180.52

12" ℄ = 1182.50

12" ℄ = 1184.80

P.V.I. Sta. 6+75 Elev. 1185.21

P.V.C. Sta. 8+35 Elev. 1185.77

+88.46' Rt. ℄ = 1186.29

12"x 68' T-1, Class F-A

Elev. 1200.72

P.V.T. Sta. 9+85

150' V.C.

P.V.I. Sta. 11+25 Elev. 1199.08

Exc.	19,213	Cu. Yds.
Emb.	2,974	Cu. Yds.
Emb.* 15%	3,420	Cu. Yds.
Seeding	7,106	Sq. Yds.

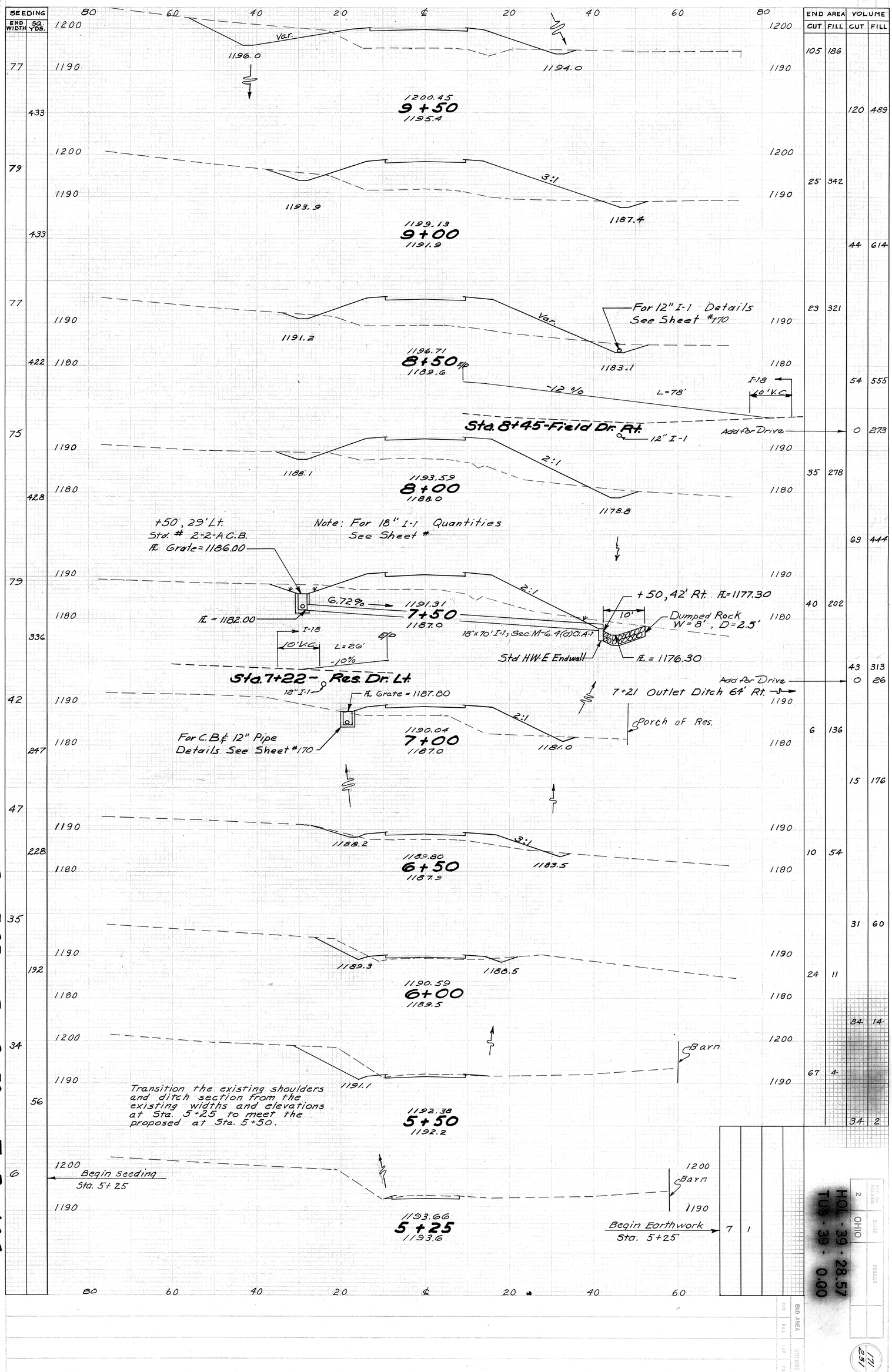
ESTIMATED QUANTITIES

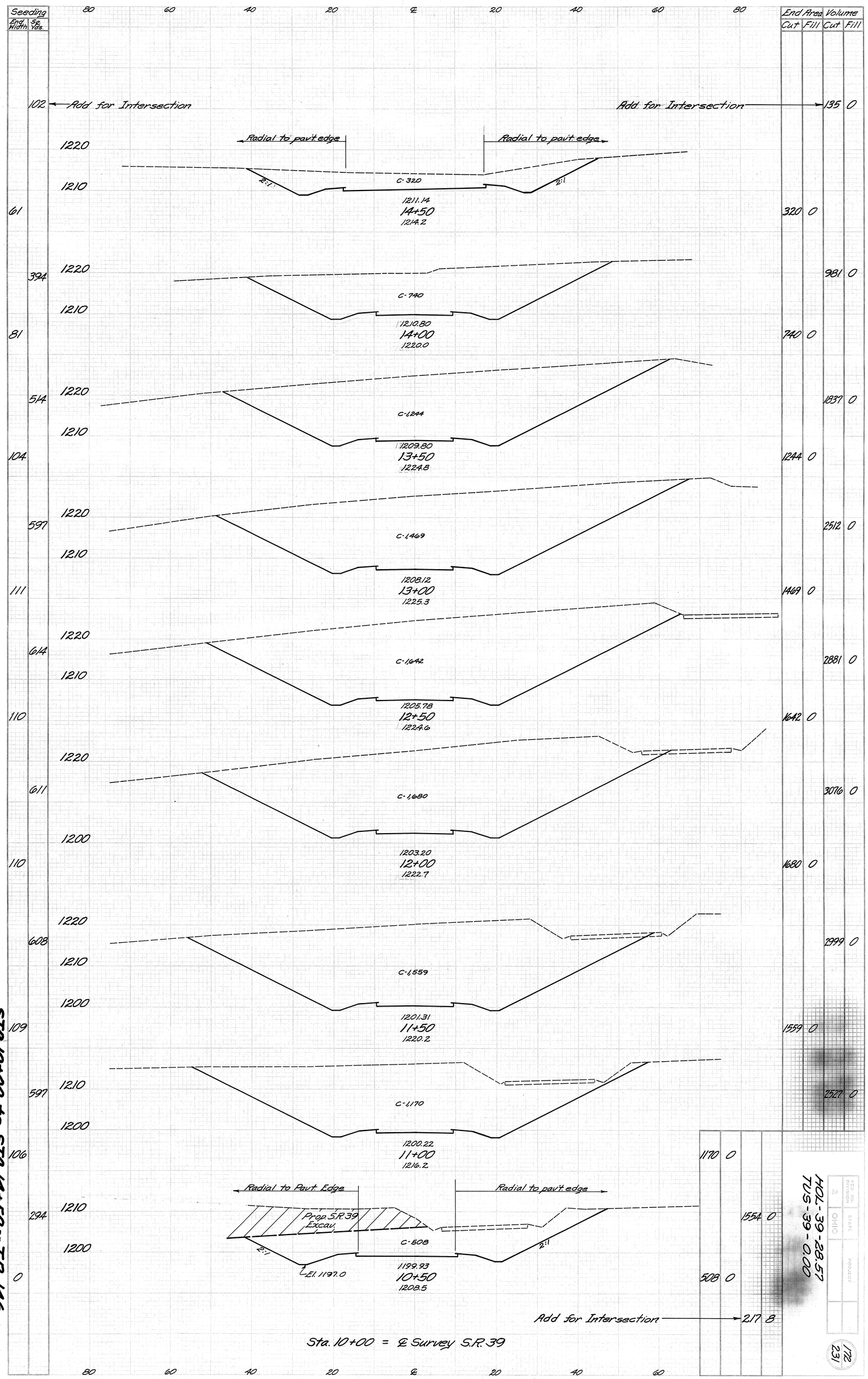
* Sec. M-6.4(D)

REF NO	STATION TO STATION	SIDE	T-35 E" Type C Cu. Yds.	E-12 Over 15" Lin. Ft.	T-1 18" Class F-A Lin. Ft.	T-8 Std. 2-2-A C.B. Each	T-10 Concr. Rock C.P. Cu. Yds.	T-15 Conc. Std. Lin. Ft.	T-16 C.B. Abond Each	T-18 6" Cu. Yds.	T-18 5" Cu. Yds.	T-20 Sq. Yds.
1	5+25 - 5+70	Rt.				1						4
2	5+25 - 6+95	Lt.			50							114
3	7+00 - 7+50	Lt.										9
4	7+00 - 7+46	Rt.										46
5	7+22	Lt.	5								12	
	7+23	Rt.		26								34
	7+50	℄										
6	7+54 - 8+05	Rt.			71	1	7		1			150
7	8+05 - 8+20	Rt.			0.3							4
8	8+50 - 8+25	Rt.					5	175				97
9	8+45	Rt.									20	67
10	7+55 - 9+35	Lt.										
11	8+20 - 8+88	Rt.			68							
12	12+00 - 13+00	Lt.										
13	12+00 - 13+00	Rt.						25				
14	12+75	Rt.										
15	12+00 - 13+00	Rt.										
16												
	Sub-Total		26	5	118	71	0.3	2	1	200	12	503

12-30 #2

Sta. 5+25 To Sta. 14+75.60 ~ T.R. 146

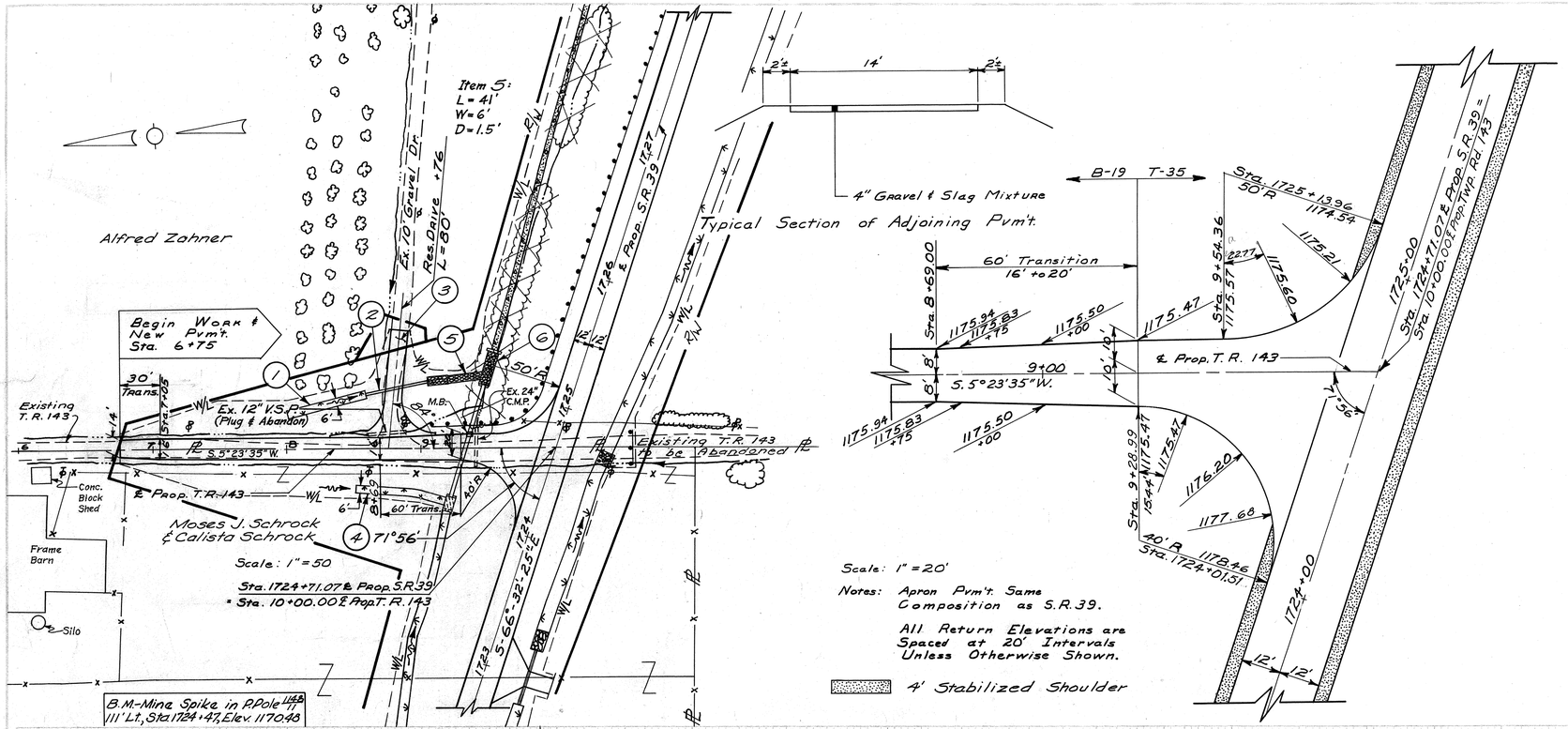

SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
80 60 40 20 ℄ 20 40 60 80
1200
1190
1180
Var.
1196.0
1194.0
1200.45
9+50
1195.4
105 186
120 489
3:1
1193.9
1187.4
1199.13
9+00
1191.9
25 342
44 614
1191.2
Var.
For 12" I-1 Details
See Sheet #170
1196.71
8+50 ℄p
1189.6
1183.1
23 321
54 555
-12 %
L=78'
I-18
10' V.C.
Sta. 8+45 - Field Dr. Rt.
12" I-1
Add Per Drive
0 273
2:1
1188.1
1193.59
8+00
1188.0
1178.8
35 278
69 444
+50, 29' Lt.
Std. # 2-2-A C.B.
℄ Grate = 1186.00
Note: For 18" I-1 Quantities
See Sheet #
2:1
+50, 42' Rt. ℄ = 1177.30
6.72%
1191.31
7+50
1187.0
℄ = 1182.00
10"
Dumped Rock
W=8', D=2.5'
40 202
I-18
10' V.C.
L=26'
℄p
-10%
18"x70' I-1, Sec. M-6.4(D) Cl. A-1
Std HW-E Endwall
℄ = 1176.30
43 313
Sta. 7+22 - Res. Dr. Lt.
12" I-1
Add Per Drive
0 26
℄ Grate = 1187.80
7+21 Outlet Ditch 64' Rt.
2:1
Porch of Res.
For C.B.℄ 12" Pipe
Details See Sheet #170
1190.04
7+00
1187.0
1181.0
6 136
15 176
3:1
1188.2
1189.80
6+50
1187.9
1183.5
10 54
31 60
1189.3
1188.5
1190.59
6+00
1189.5
24 11
84 14
Barn
Transition the existing shoulders
and ditch section from the
existing widths and elevations
at Sta. 5+25 to meet the
proposed at Sta. 5+50.
1191.1
67 4
1192.38
5+50
1192.2
34 2
Begin Seeding
Sta. 5+25
1193.66
5+25
1193.6
Barn
Begin Earthwork
Sta. 5+25
7 1
Sta. 5+25 to Sta. 9+50 ~ T. R. 146
HOL-39-28.57
TUS-39-0.00
OHIO
111
231


Seeding
End Width
Sq. Yds.
80 60 40 20 ℄ 20 40 60 80
End Area Volume
Cut Fill Cut Fill
102
← Add for Intersection
Add for Intersection →
135 0
Radial to pavt edge
Radial to pavt edge
1220
1210
C-320
2:1
2:1
1211.14
14+50
1214.2
61
320 0
394
C-740
1210.80
14+00
1220.0
81
740 0
981 0
514
C-1244
1209.80
13+50
1224.8
104
1244 0
1837 0
597
C-1469
1208.12
13+00
1225.3
111
1469 0
2512 0
614
C-1642
1205.78
12+50
1224.6
110
1642 0
2881 0
611
C-1680
1200
1203.20
12+00
1222.7
110
1680 0
3076 0
608
C-1559
1201.31
11+50
1220.2
109
1559 0
2999 0
597
C-1170
1200.22
11+00
1216.2
106
1170 0
2527 0
Radial to Pavt Edge
Radial to pavt edge
294
Prop. S.R. 39 Excav.
C-508
2:1
2:1
El. 1197.0
1199.93
10+50
1208.5
0
508 0
1554 0
Add for Intersection →
217 8
Sta. 10+00 = ℄ Survey S.R. 39
STR. 10+00 to STR. 14+50 -- T.R. 146
HOL-39-28.57
TUS-39-0.00
NO. REVISION
2
OHIO
STATE
PROJECT
172
231

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

173
231



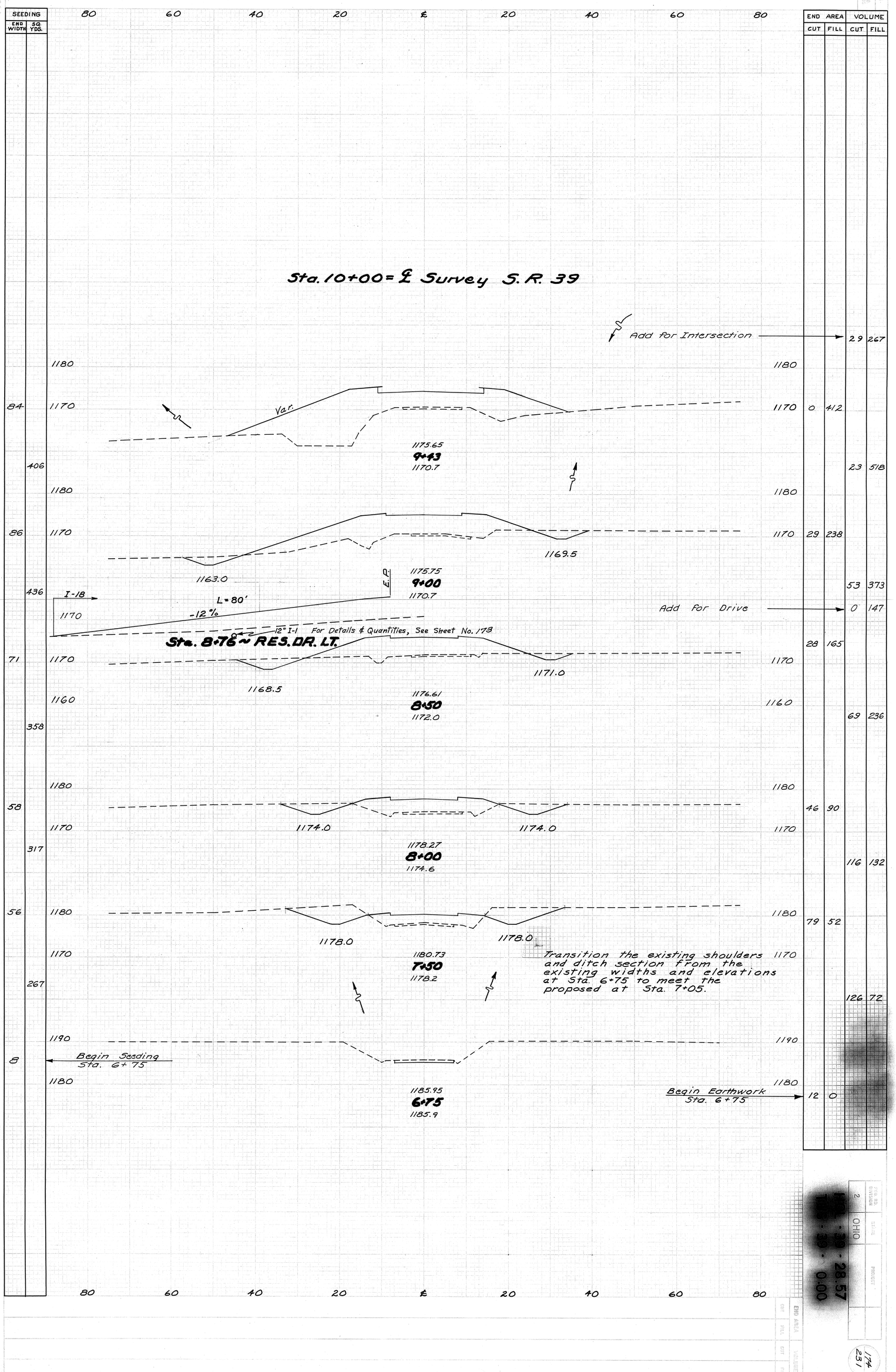
Exc.	416	Cu. Yds.
Emb.	1,745	Cu. Yds.
Emb. + 15%	2,007	Cu. Yds.
Seeding	1,784	Sq. Yds.

ESTIMATED QUANTITIES

*Sec. M-6.4(d)

REF. NO.	STATION TO STATION		SIDE	E-12 Over 15"	I-1* 30" Class A-1	I-1 12" Class F-4	I-2 Class "C"	I-10 Dumped Rock C.P.	I-10 Riprap	I-18 8"	L-10	Spec. Mixing Calcium Chloride
				Lin. Ft.	Lin. Ft.	Lin. Ft.	Cu. Yds.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.
1	8+00	8+59	Lt.								40	
2	8+59	9+05	Lt.								4	
3	8+76		Lt.							34		152
4	8+50	9+18	Rt.								45	
5	9+05	9+45	Lt.						14			
6	9+33		℄	29	88		2.5	19	7		11	
TOTALS				29	88	48	2.5	33	7	34	100	152

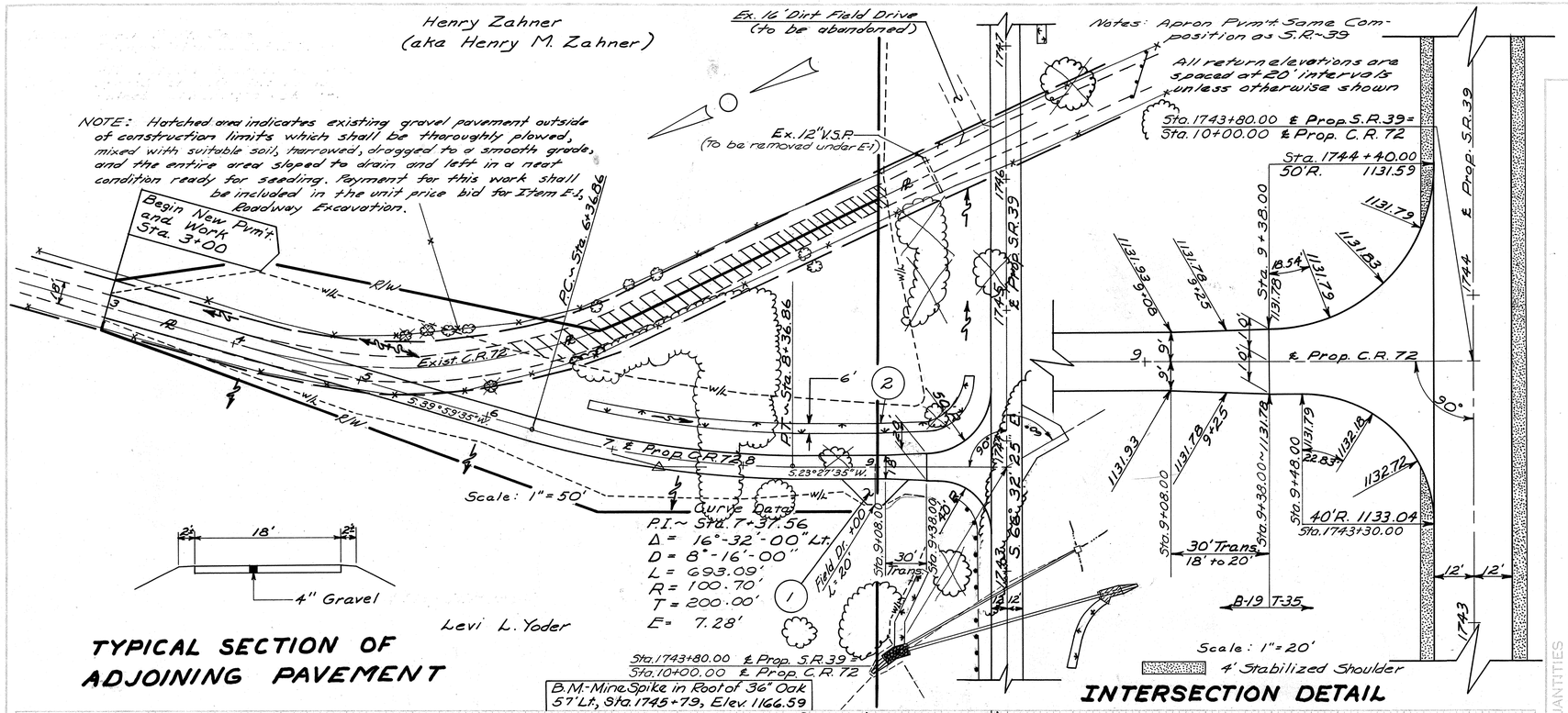
Sta. 6+75 to Sta. 10+00 ~ T. R. 143


SEEDING
END WIDTH
SQ. YDS.
80 60 40 20 ℄ 20 40 60 80
END AREA
CUT
FILL
VOLUME
CUT
FILL
Sta. 10+00 = ℄ Survey S.R. 39
Add for Intersection
29 267
1180
1170
84
Var.
1175.65
9+43
1170.7
406
23 518
86
1163.0
1169.5
1175.75
9+00
1170.7
436
I-18
L = 80'
-12 %
53 373
Add for Drive
0 147
12" I-I For Details & Quantities, See Sheet No. 179
Sta. 8+76 ~ RES. DR. LT.
71
1168.5
1171.0
28 165
1176.61
8+50
1172.0
1160
358
69 236
58
1174.0
1174.0
1178.27
8+00
1174.6
46 90
317
116 132
56
1178.0
1178.0
1180.73
7+50
1178.2
79 52
267
126 72
Transition the existing shoulders and ditch section from the existing widths and elevations at Sta. 6+75 to meet the proposed at Sta. 7+05.
8
Begin Seeding
Sta. 6+75
1185.95
6+75
1185.9
Begin Earthwork
Sta. 6+75
12 0
Sta. 6+75 to Sta. 9+43 ~ T.R. 143
OHIO
PID 69
2
PROJECT
END AREA
CALC
CHK
REV
DATE
174
231

HOL - 39 - 28.57
TUS - 39 - 0.00

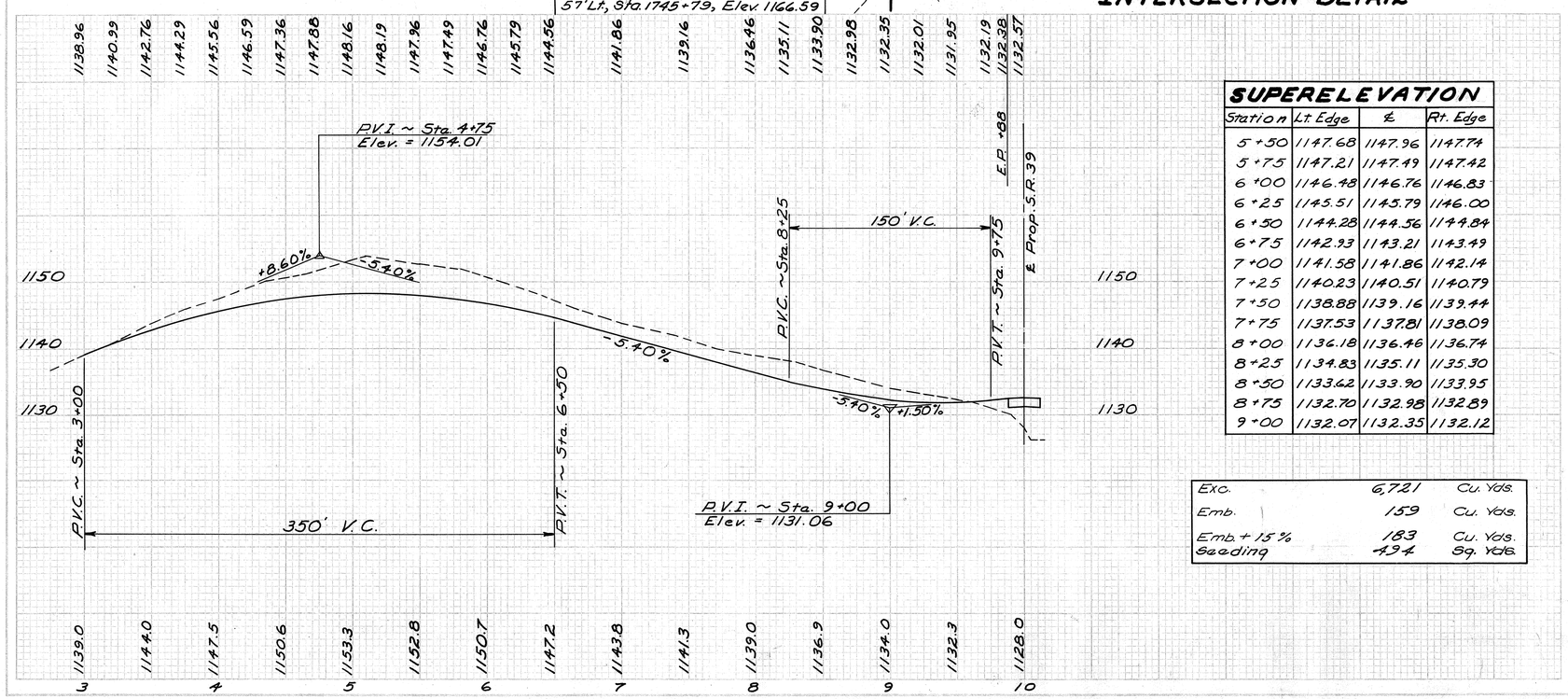
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

175
231



TYPICAL SECTION OF ADJOINING PAVEMENT

INTERSECTION DETAIL



SUPERELEVATION

Station	Lt. Edge	℄	Rt. Edge
5+50	1147.68	1147.96	1147.74
5+75	1147.21	1147.49	1147.42
6+00	1146.48	1146.76	1146.83
6+25	1145.51	1145.79	1146.00
6+50	1144.28	1144.56	1144.84
6+75	1142.93	1143.21	1143.49
7+00	1141.58	1141.86	1142.14
7+25	1140.23	1140.51	1140.79
7+50	1138.88	1139.16	1139.44
7+75	1137.53	1137.81	1138.09
8+00	1136.18	1136.46	1136.74
8+25	1134.83	1135.11	1135.30
8+50	1133.62	1133.90	1133.95
8+75	1132.70	1132.98	1132.89
9+00	1132.07	1132.35	1132.12

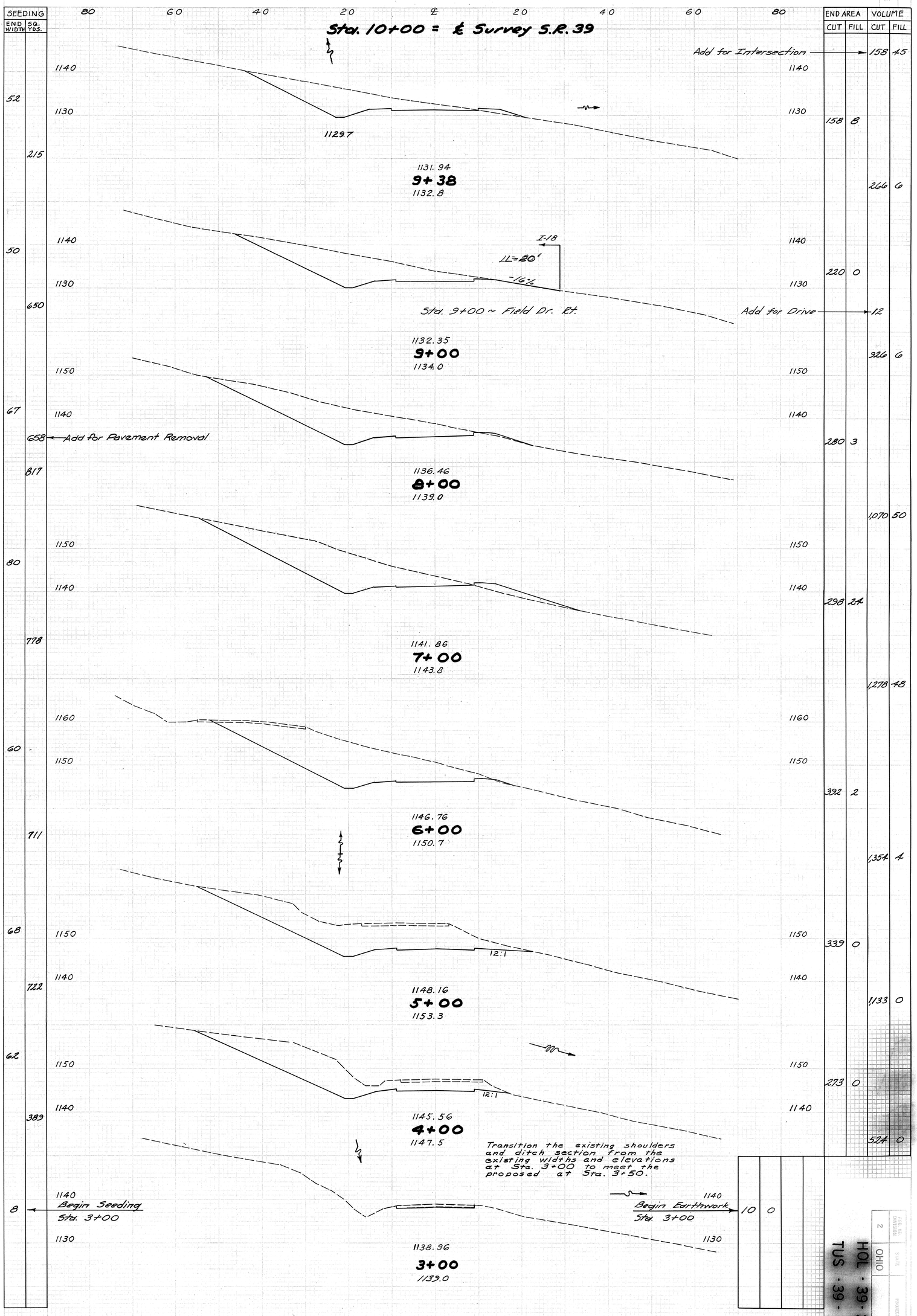
Exc.	6,721	Cu. Yds.
Emb.	159	Cu. Yds.
Emb. + 15%	183	Cu. Yds.
Seeding	494	Sq. Yds.

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-18 6"	L-10
			Cu. Yds.	Sq. Yds.
1	9+00	Rt.	12	
2	6+75 ~ 1744+50	Lt.		208

TOTALS 12 208

Sta. 3+00 to Sta. 10+00 ~ C.R. 72



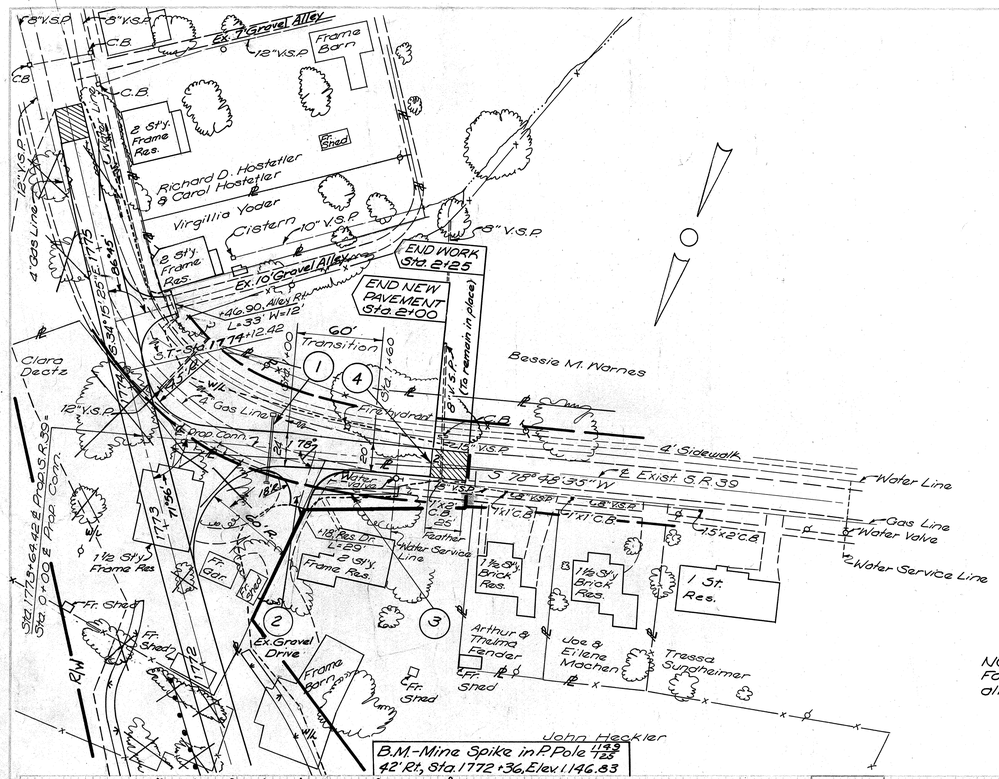
HOL - 39 - 28.57
TUS - 39 - 0.00
OHIO

HOL - 39 - 28.57
TUS - 39 - 0.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

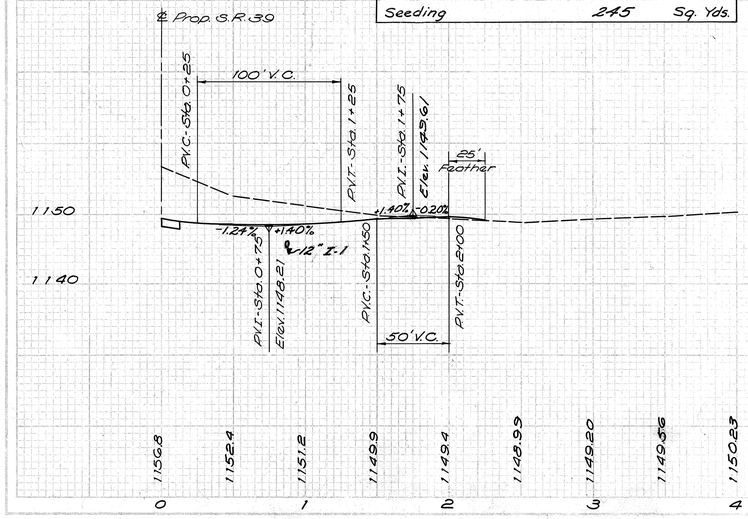
177
231

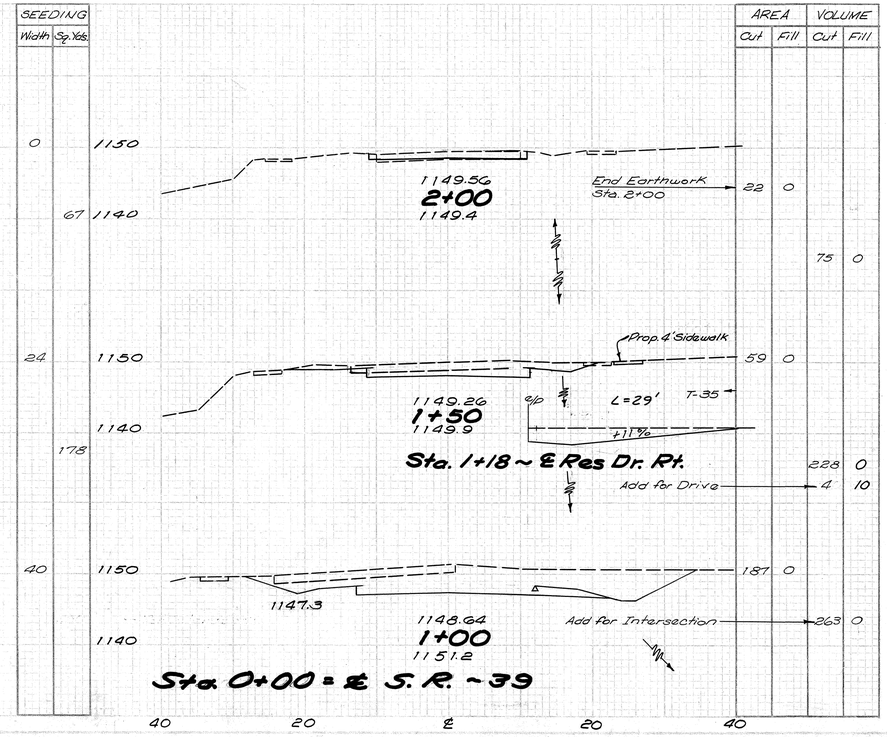
SEE SHEET NO. 213



NOTE:
For details of intersection & alley approaches - See Sheet No. 179

Exc.	570	Cu. Yds.
Emb.	10	Cu. Yds.
Emb. + 15%	12	Cu. Yds.
Seeding	245	Sq. Yds.





SEEDING		AREA		VOLUME	
Width	Sq. Yds.	Cut	Fill	Cut	Fill
		22	0		
				75	0
		59	0		
				228	0
		4	0	4	10
		187	0		
		263	0		

ESTIMATED QUANTITIES

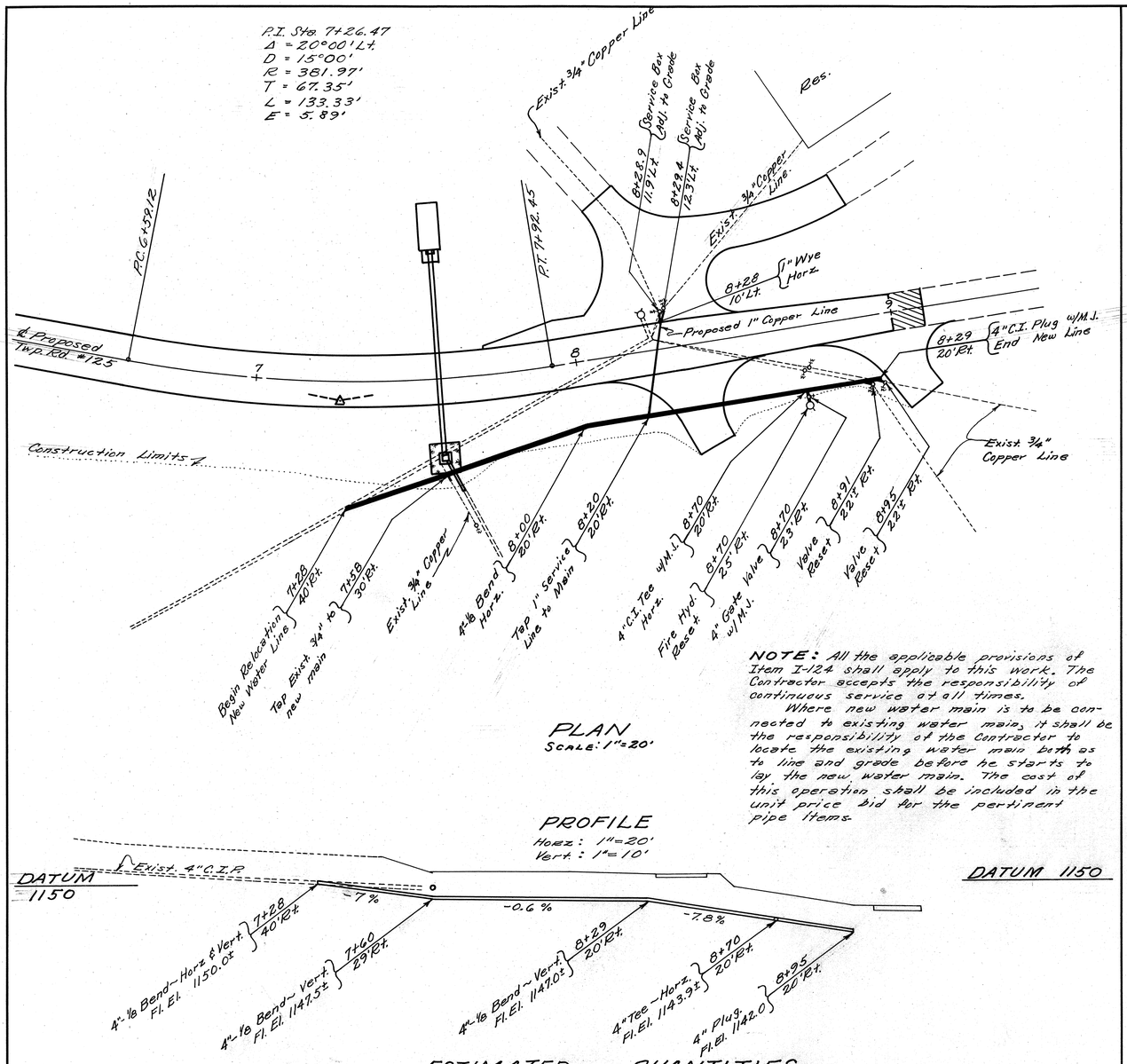
REF. NO.	SIDE	STATION TO STATION		E-8 Removing & Disposal Existing Sidewalk Sq. Ft.	T-35 2" Type C Class 4.1 Cu. Yds.	F-1 12" Lin. Ft.	F-2 Class "C" Cu. Yds.	F-8 STD. #3-A C.B. Each	F-13 4" Sq. Ft.	F-18 5" Cu. Yds.	L-10 Sq. Yds.	B-35 Vert. Face Lin. Ft.
1		0+87	℄	196	4	55	0.2	1	236	10	11	16
2		1+18	Rt.									
3		1+22	Rt.									
4		2+00	℄									
TOTALS				196	4	55	0.2	1	236	10	11	16

Sta. 0+00 to Sta. 2+00 ~ Connection ~ Sta. 1773+64.42

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

178
231

HOL - 39 - 28.57
TUS - 39 - 0.00



PLAN
SCALE: 1"=20'

NOTE: All the applicable provisions of Item I-124 shall apply to this work. The Contractor accepts the responsibility of continuous service at all times.

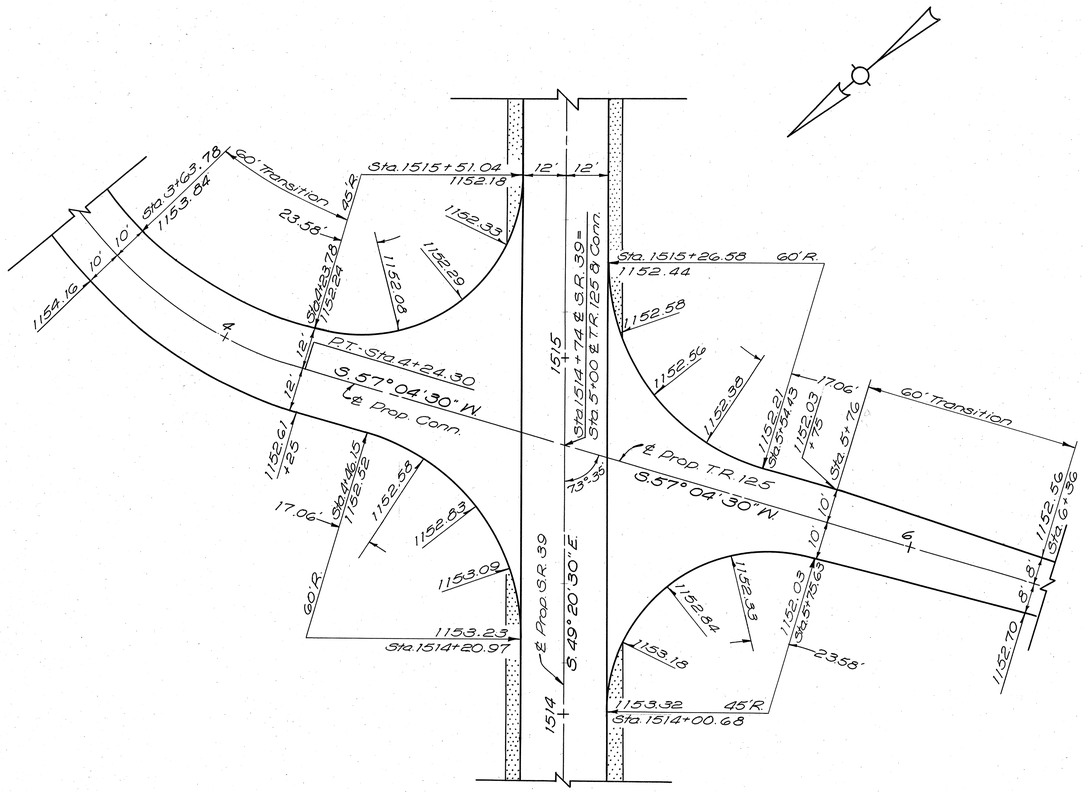
Where new water main is to be connected to existing water main, it shall be the responsibility of the Contractor to locate the existing water main both as to line and grade before he starts to lay the new water main. The cost of this operation shall be included in the unit price bid for the pertinent pipe items.

PROFILE
Horz: 1"=20'
Vert: 1"=10'

ESTIMATED QUANTITIES

I-124	4" Cast Iron Pipe with Mechanical Joints, Class 150.	174 Lin. Ft.
I-124	4"x4"x4" Cast Iron Tee with Mechanical Joints.	1 Each
I-124	4" Gate Valve with Operating Nut & Stem with Mechanical Joints and Box.	1 Each
I-124	4"-1/8 (11 1/4°) Cast Iron Bend with Mechanical Joints.	4 Each
I-124	4" Cast Iron Plug with Mechanical Joints.	1 Each
I-8	Valve Service Boxes Adjusted To Grade.	2 Each
I-124	Fire Hydrant Removed And Reset.	1 Each
I-124	Service Steps And Boxes Removed And Reset.	2 Each
I-124	New Service Branch (1" Copper Line, Type "K")	50 Lin. Ft.
I-124	New Service Branch (1" Copper Wye)	1 Each.
I-124	New Service Branch (3/4" Copper Line, Type "K)	20 Lin. Ft.

WATER LINE LAYOUT



NOTES

Apron Pvm't same composition as S.R. 39.

All return elevations are spaced at 20' intervals unless otherwise indicated.

INTERSECTION DETAIL
S.R. 39 with T.R. 125 and Conn.
Scale: 1" = 20'

4' Stabilized Shoulder

Rev. 8-20-64

INTERSECTION DETAIL

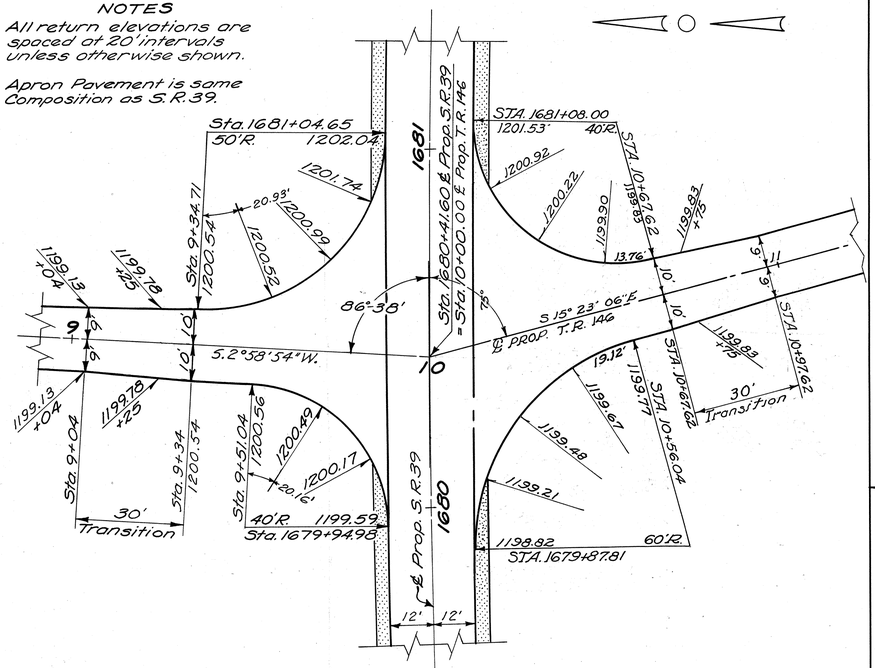
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

179
23.1

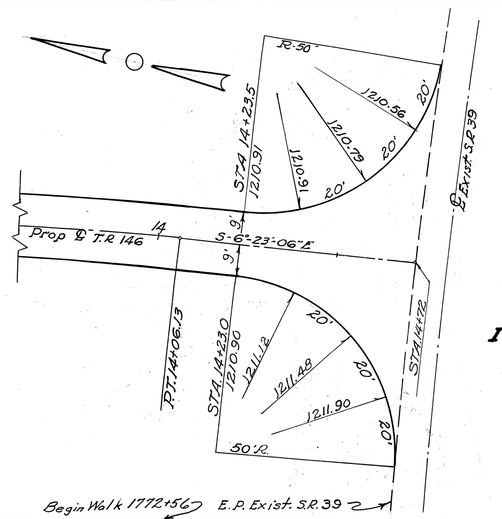
HOL - 39 - 28.57
TUS - 39 - 0.00

NOTES
All return elevations are spaced at 20' intervals unless otherwise shown.

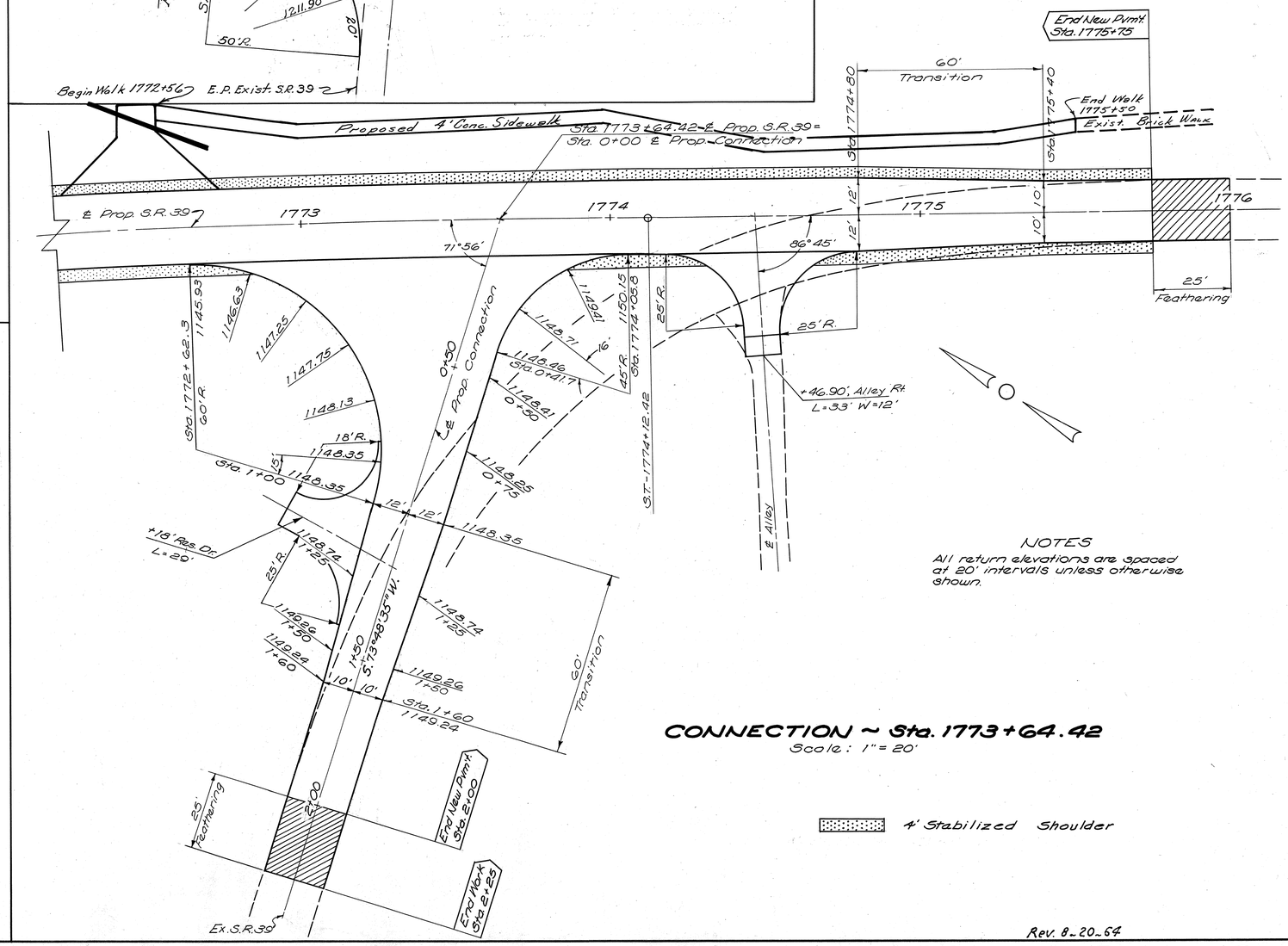
Apron Pavement is same Composition as S.R.39.



INTERSECTION S.R.39 & T.R. 146
Scale: 1" = 20'



INTERSECTION EX. 39 & TWP. RD. 146
Scale: 1" = 20'

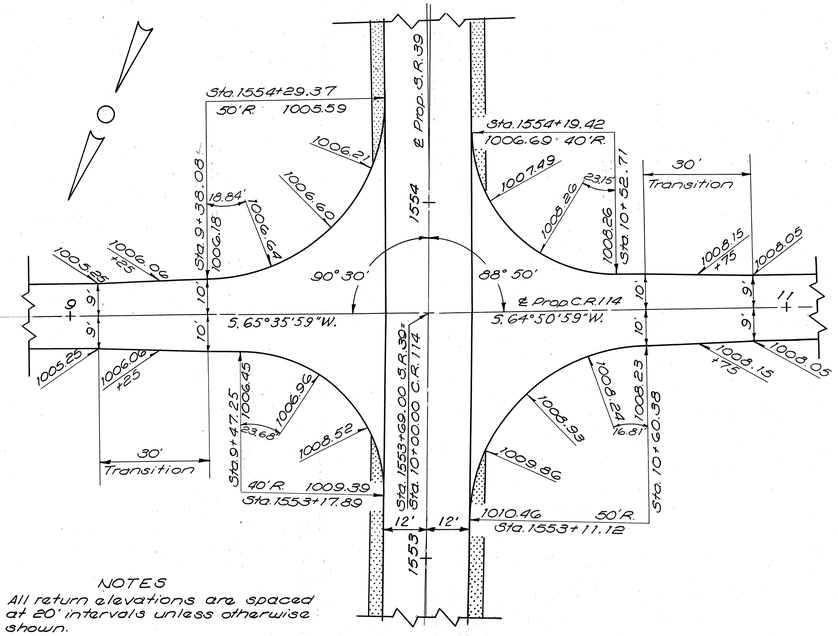


CONNECTION ~ Sta. 1773+64.42
Scale: 1" = 20'

NOTES
All return elevations are spaced at 20' intervals unless otherwise shown.

4' Stabilized Shoulder

L.J.P.



NOTES
All return elevations are spaced at 20' intervals unless otherwise shown.

Apron pavement is the same composition as S.R.39.

INTERSECTION S.R.39 & C.R.114
Scale: 1" = 20'

Rev. 8-20-64

INTERSECTION DETAILS

SEEDING

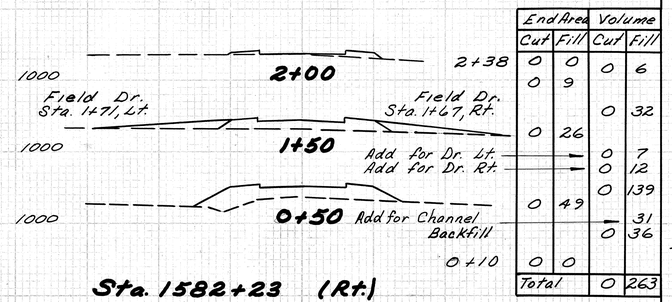
END WIDTH	SQ. YDS.

Note: All Quantities carried to main line cross sections
Sta. 0+00 of Drives = Edge of Pvmt. of S.R.-39

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

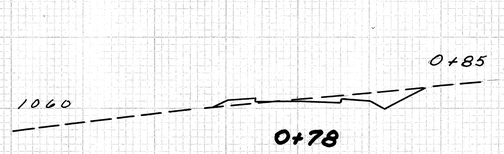
180
231

HOL - 39 - 28.57
TUS - 39 - 0.00



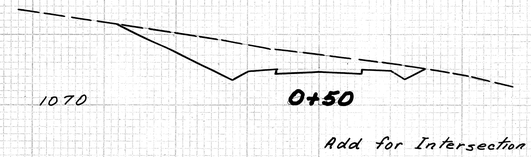
Sta. 1582+23 (Rt.)

	End Area		Volume	
	Cut	Fill	Cut	Fill
	0	0	0	6
	0	9		
			0	32
	0	26		
			0	7
			0	12
			0	139
	0	49	—	31
			0	36
	0	0		
Total			0	263



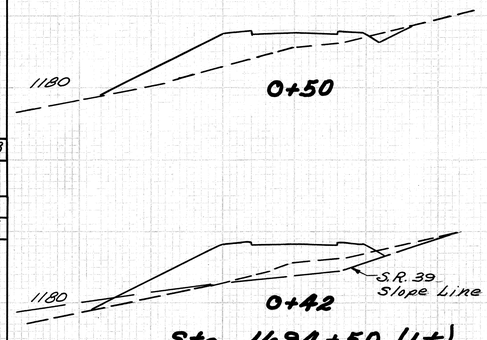
Sta. 1537+50 (Rt.)

	End Area		Volume	
	Cut	Fill	Cut	Fill
	0	0	9	6
	15	5		
			19	29
	11	34		
			6	18
	0	0		
				22
Total			34	75

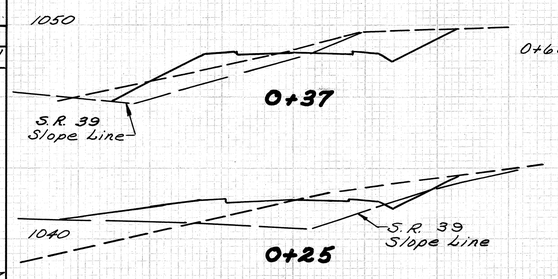


Sta. 1537+50 (Lt.)

	End Area		Volume	
	Cut	Fill	Cut	Fill
	0	0		
			78	0
	100	0		
			22	107
Total			100	107



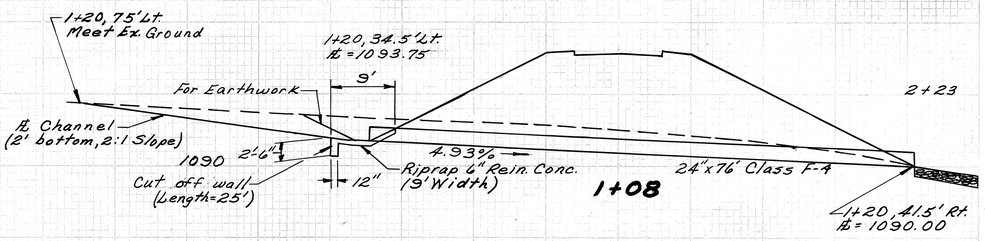
Sta 1694+50 (Lt.)

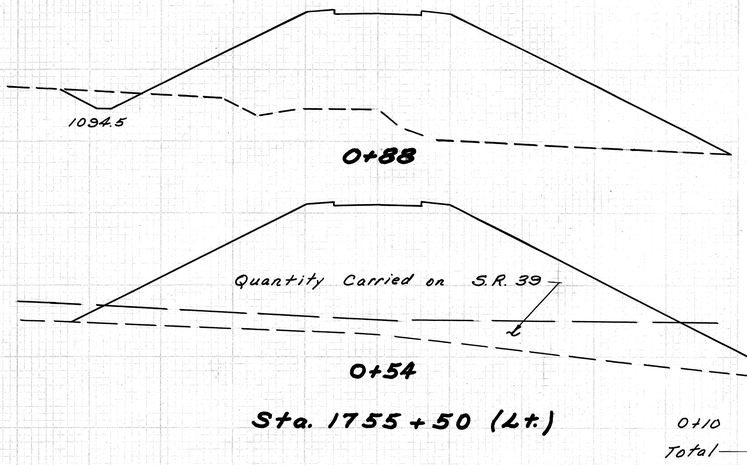


Sta. 1613+70 (Lt.)

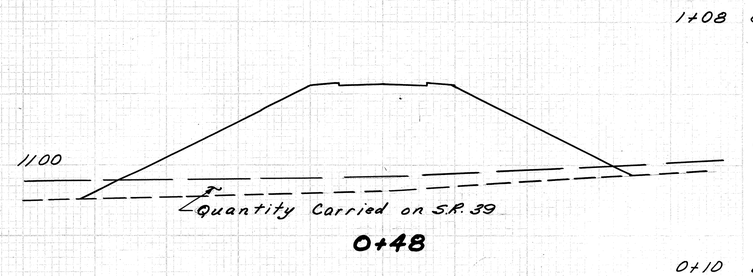
	End Area		Volume	
	Cut	Fill	Cut	Fill
0+83	0	0		
			2	62
	4	102		
			1	34
	0	130		
			0	77
0+10	0	0		
Total			3	173

	End Area		Volume	
	Cut	Fill	Cut	Fill
0+60	0	0		
			18	26
	42	60		
			10	38
	3	109		
			1	30
0+10	0	0		
Total			29	94





Sta. 1755+50 (Lt.)



Sta 1755+50 (Rt.)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2+23	0	0	
			62
			971
	29	456	
			17
			442
	16	737	
			10
			932
	0	743	
	0	605	
0+10	0	0	
Total →	89	2950	
1+08	0	0	
	0	629	
	0	565	
	0	397	
0+10	0	0	
Total →	0	1026	

20 ℄ 20 20 ℄ 20 40 20 ℄ 20 40

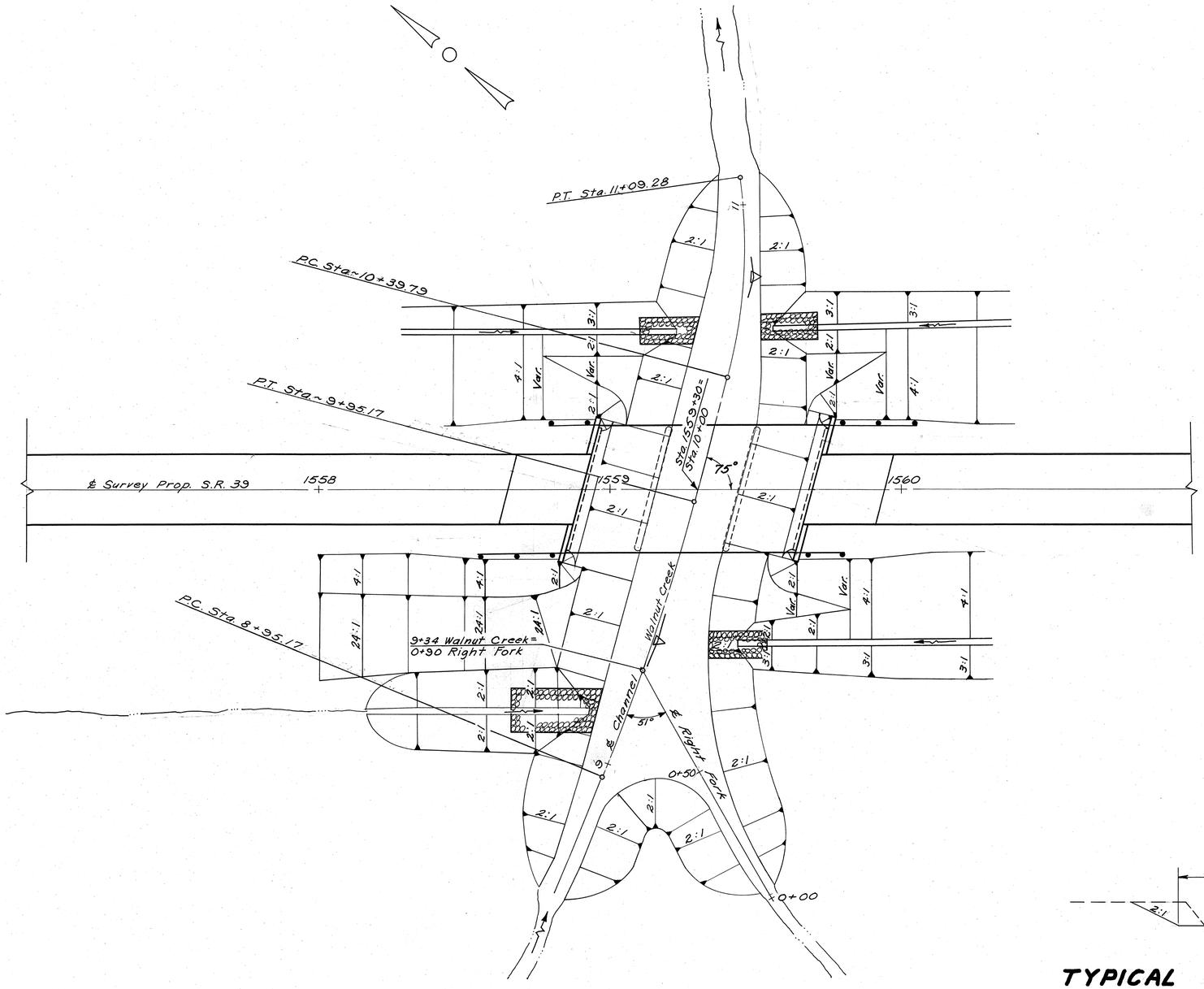
DRIVE CROSS SECTIONS

PRINTED IN U. S. A.
ON KEUFFEL-TRACE CLOTH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

181
231

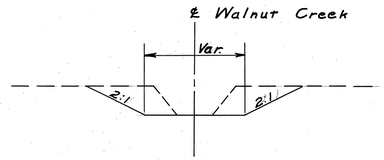
HOL - 39 - 28.57
TUS - 39 - 0.00



WALNUT CREEK WIDENING DETAIL
Scale : 1" = 20'

Curve Data
P.I. ~ Sta. 10+75
Δ = 22°-45' Lt.
R = 175.00'
T = 35.21'
L = 69.49'

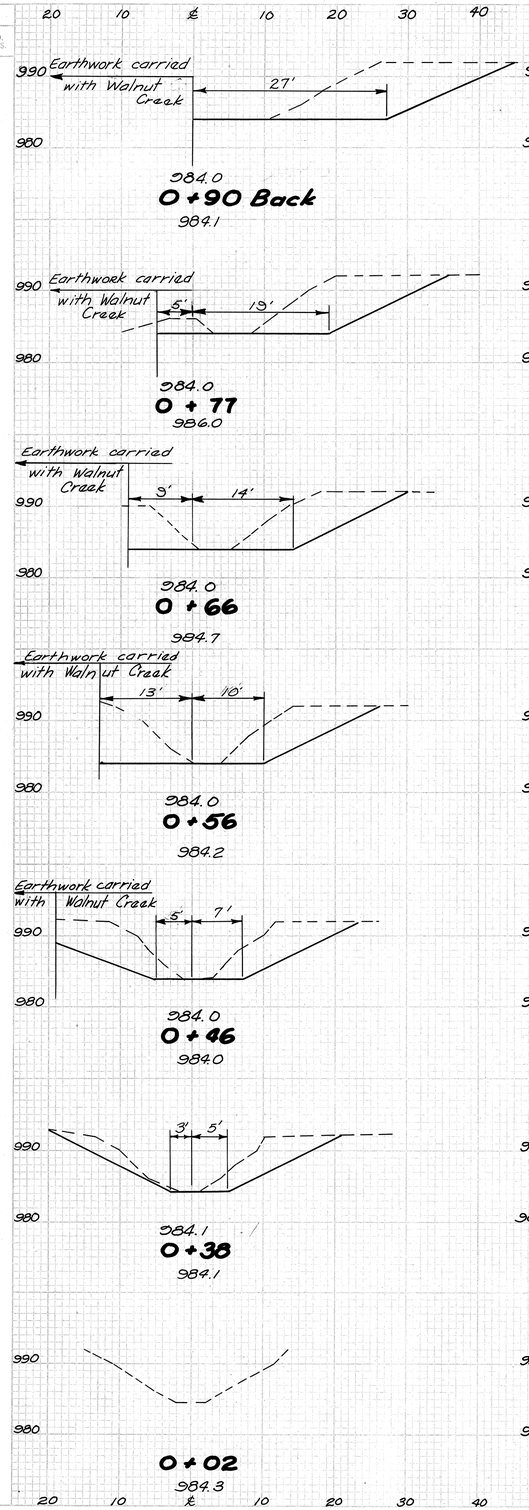
Curve Data
P.I. ~ Sta. 9+45.25
Δ = 8°-00' Lt.
R = 716.20'
T = 50.08'
L = 100.00'



TYPICAL CHANNEL SECTION

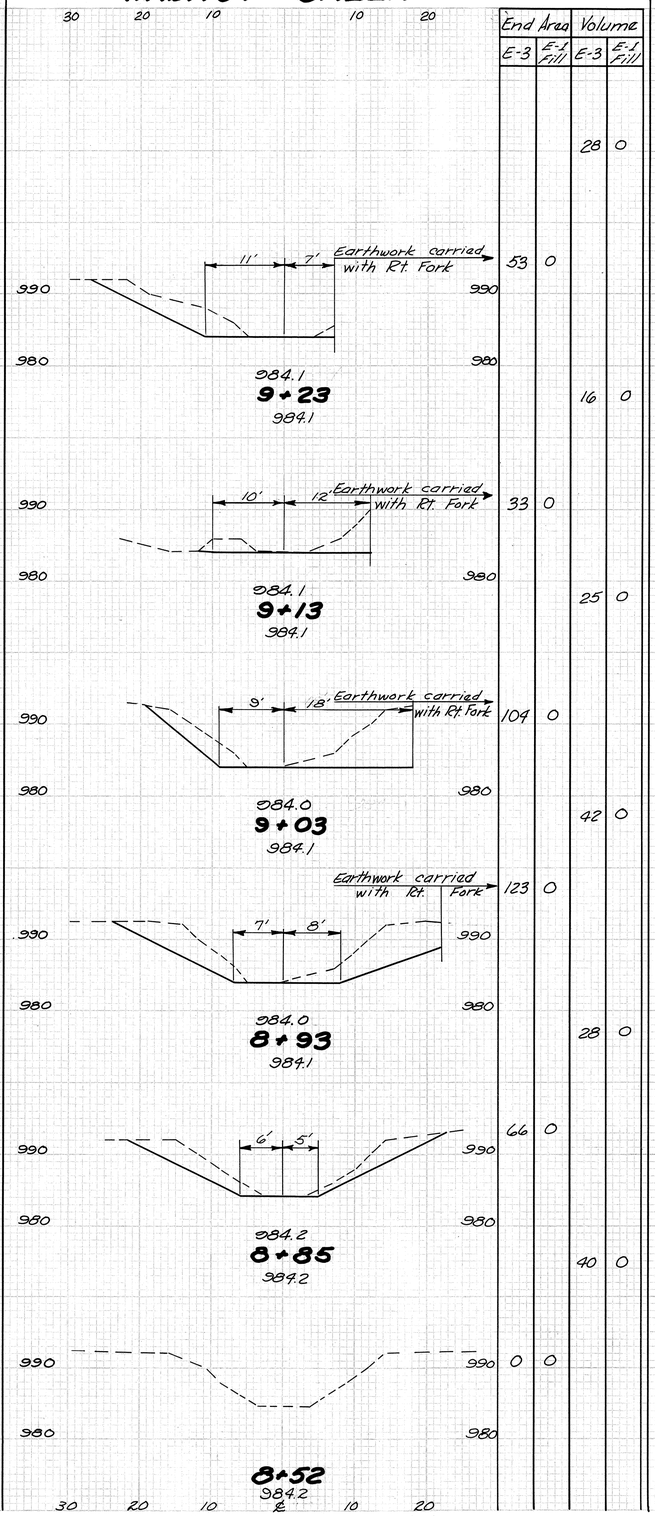
WALNUT CREEK WIDENING DETAIL

RIGHT FORK



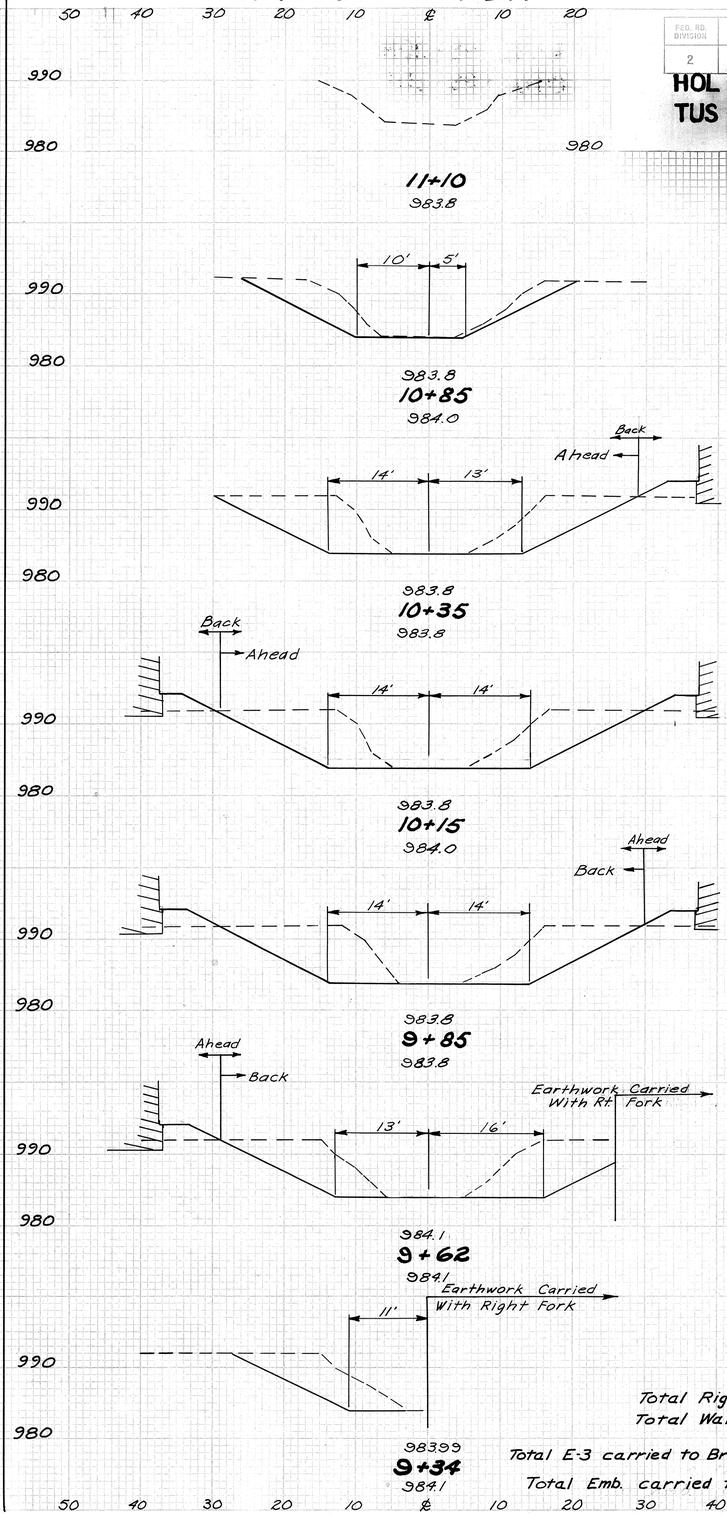
End Area E-3	End Area E-1 Fill	Volume E-3	Volume E-1 Fill
139	0		
		63	0
122	0		
		50	0
125	0		
		49	0
141	0		
		50	0
131	0		
		30	0
72	0		
		48	0
0	0		

WALNUT CREEK



End Area E-3	End Area E-1 Fill	Volume E-3	Volume E-1 Fill
		28	0
53	0		
		16	0
33	0		
		25	0
104	0		
		42	0
123	0		
		28	0
66	0		
		40	0
0	0		

WALNUT CREEK



FED. RD. DIVISION: 2 | STATE: OHIO | PROJECT:
182
23.1
HOL - 39 - 28.57
TUS - 39 - 0.00

END AREA E-3	END AREA E-1 Fill	VOLUME E-3	VOLUME E-1 Fill
0	0		
		37	0
79	0		
		237	0
Ahead 177	0		
Back 177	15		
		137	11
Ahead 193	15		
Back 193	30		
		217	32
Ahead 198	27		
Back 198	15		
		164	12
Ahead 188	14		
Back 188	0		
		140	0
82	0		

Total Right Fork = 290 0
Total Walnut Creek = 1111 55
Total E-3 carried to Bridge Plans → 1401
Total Emb. carried to Sheet No. 65 → 55

PRINTED IN U. S. A.
OH CHIL-TRACE CLOTH

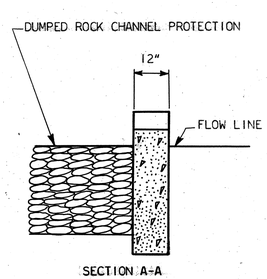
WALNUT CREEK CROSS SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

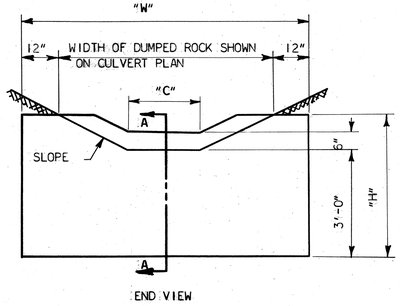
183
231

HOL - 39 - 28.57
TUS - 39 - 0.00

STATION	CHAN WIDTH "C"	CHAN SIDE SLOPES	HEIGHT "H"	WIDTH "W"	CONC CU YDS ENDSILL
1523+50	2'	4:1	4'-0"	12'-0"	1.7
1539+04	2'	2:1	4'-0"	8'-0"	1.1
1655+73	2'	2:1	5'-0"	12'-0"	1.9
9+33					
TR 143	2'	2:1	4'-6"	10'-0"	1.5
1739+83	2'	2:1	4'-3"	9'-0"	1.3
1765+50	2'	2:1	4'-6"	10'-0"	1.5



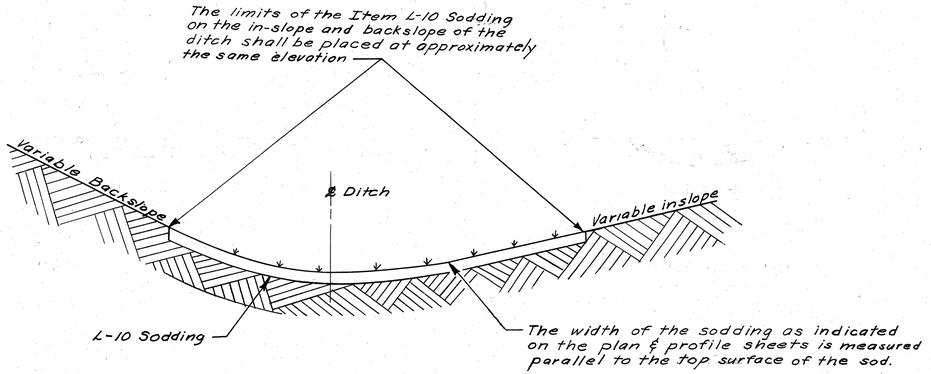
SECTION A-A



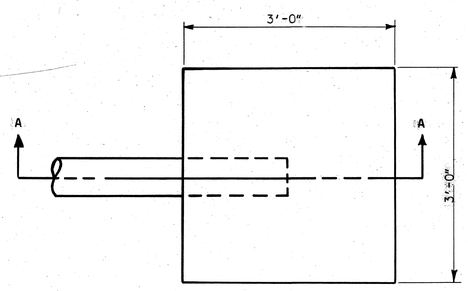
END VIEW

NOTES: CONCRETE FOR ENDSILLS SHALL BE CLASS "C"
ESTIMATED QUANTITIES: THE ESTIMATED QUANTITY OF CONCRETE FOR EACH ENDSILL IS CARRIED ON THE CULVERT PLAN THAT SHOWS THE ENDSILL.

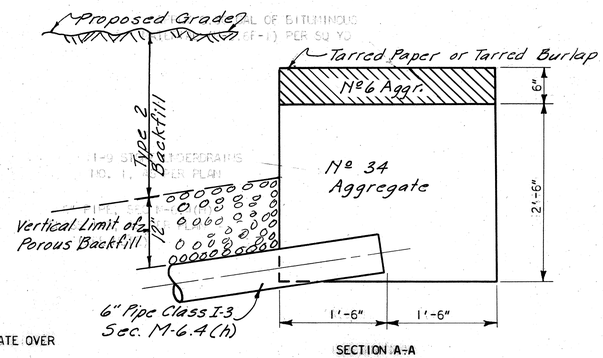
TYPICAL ENDSILL & DIMENSIONS



SODDED DITCH DETAIL SECTION



PLAN



SECTION A-A

NOTES: NO. 34 AGGREGATE SHALL BE USED WITH A 6" LAYER OF NO. 6 AGGREGATE OVER THE TOP, AND SEALED WITH *Tarred Paper or Tarred Burlap.*

Payment for necessary Excavation, Aggregates, and Tarred Paper or Tarred Burlap shall be included in THE UNIT PRICE BID PER LINEAR FOOT for "ITEM I-9 STONE UNDERDRAINS NO. 1, AS PER PLAN." SPRING DRAINS WILL BE PLACED AT LOCATIONS DESIGNATED BY THE ENGINEER.

THE CLASS I-3 PIPE FOR SPRING DRAINAGE SHALL BE COVERED WITH *TYPE* 3 POROUS BACKFILL MATERIAL TO A HEIGHT OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE. THE REMAINDER OF THE BACKFILL FOR THIS ITEM SHALL MEET THE SPECIFICATION REQUIREMENTS FOR *TYPE* 2 BACKFILL.

ESTIMATED QUANTITIES OF 15 LIN FT OF I-9 STONE UNDERDRAINS NO. 1, AS PER PLAN AND 250 LIN FT OF 6" PIPE, SEC M-6.4(H) CLASS I-3 AS PER PLAN, ARE CARRIED IN THE GENERAL SUMMARY FOR DRAINING SPRINGS. THIS ITEM SHALL BE NONPERFORMED IN THE EVENT THAT NONE ARE ENCOUNTERED.

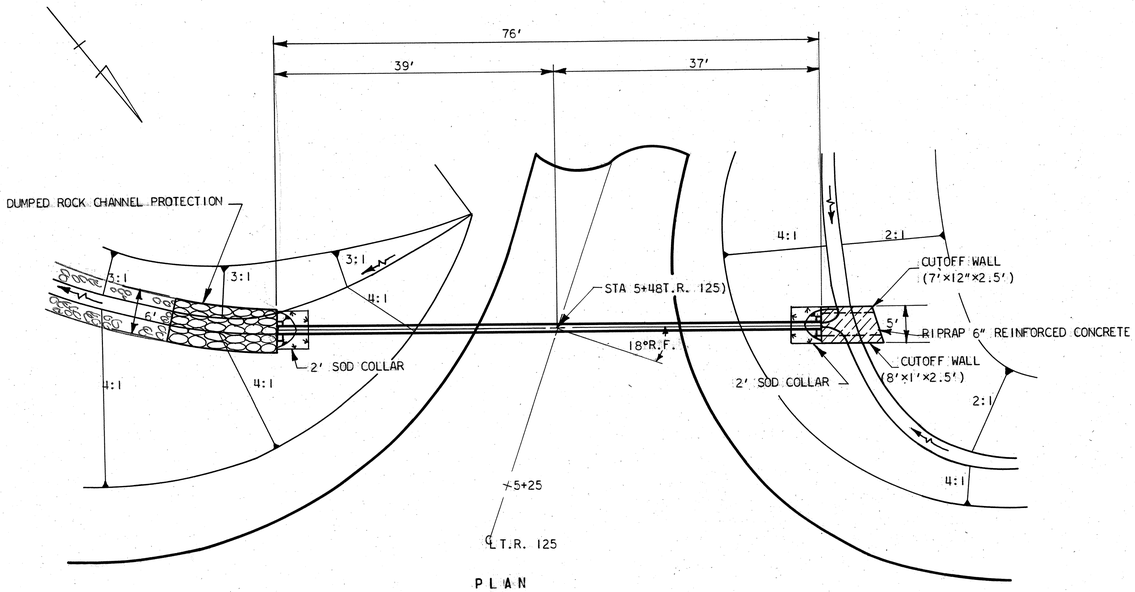
SPRING DRAIN DETAIL SECTION

SPECIAL DRAINAGE DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

184
231

HOL - 39 - 28.57
TUS - 39 - 0.00



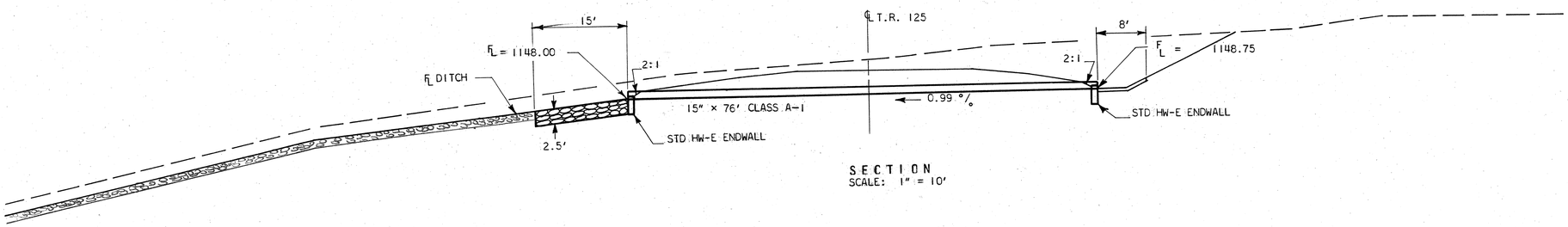
PLAN

DRAINAGE AREA = 1 ACRE
Q25 = 3.9 CFS

ESTIMATED QUANTITIES

1-1	15" PIPE, CLASS A-1	76 LIN FT
1-2	MASONRY, CLASS "C"	0.5 CU YDS
1-10	RIPRAP 6" REINFORCED CONCRETE	4 SQ YDS
1-10	DUMPED ROCK CHANNEL PROTECTION	8 CU YDS
1-10	SODDING	5 SQ YDS

STD DRWGS: 1-1; HW-E.



SECTION
SCALE: 1" = 10'

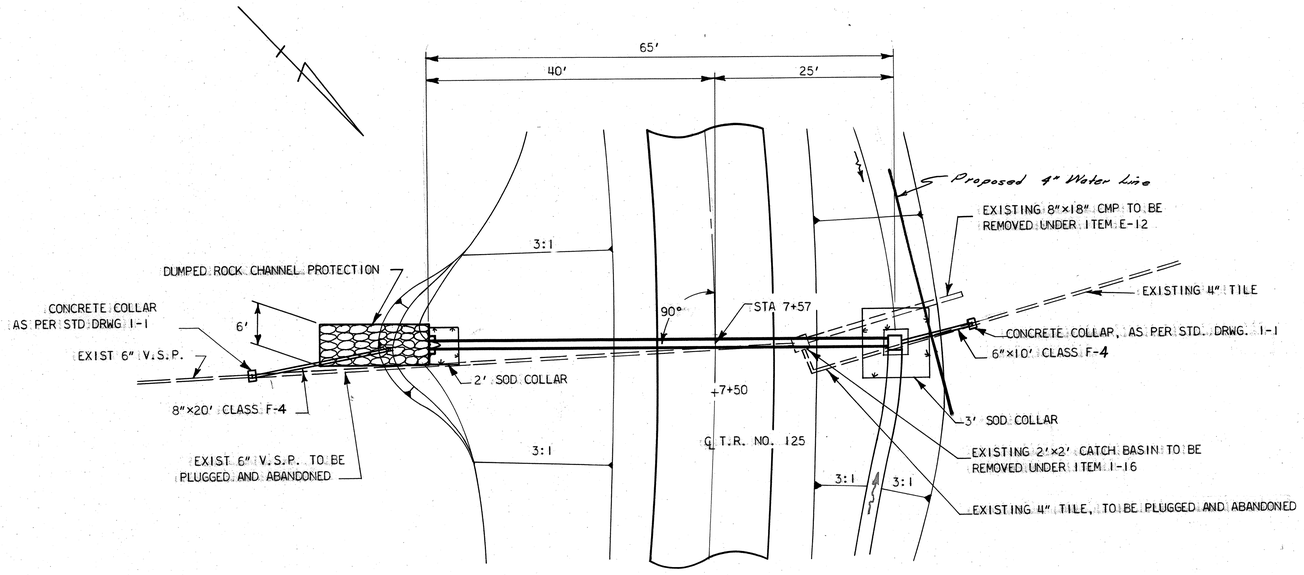
Designed	Checked	Inked
S.S.H. 11/23/62	J.H.W. 11/26/62	D.W.R. 11/29/62

PIPE DETAIL STA. 5+48 T.R. 125

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

185/231

HOL - 39 - 28 57
TUS - 39 - 0.00



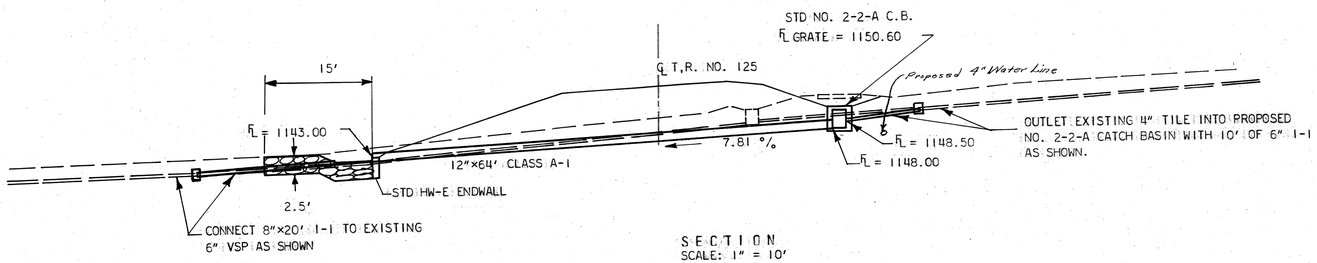
PLAN

DRAINAGE AREA = 0.6 ACRE
Q25 = 3.4 CFS

ESTIMATED QUANTITIES

I-1	12" PIPE, CLASS A-1	65 LIN FT
I-1	6" PIPE, CLASS F-4	11 LIN FT
I-1	8" PIPE, SEC M-6.4(C), CLASS F-4	20 LIN FT
I-2	MASONRY, CLASS "C"	0.2 CU YDS
I-8	STD. NO. 2-2-A CATCH BASIN	1 EACH
I-10	DUMPED ROCK CHANNEL PROTECTION	8 CU YDS
I-16	CATCH BASIN Abandoned	1 EACH
L-10	SODDING	11 SQ YDS
E-12	PIPE REMOVED, 15" AND UNDER	18 LIN FT

STD DRWGS: I-1; HW-E; I-8 C.B. 2-2-A AND B



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
11-9-62 P.M.S.	11-21-62 J.H.W.	11-23-62 D.W.R.

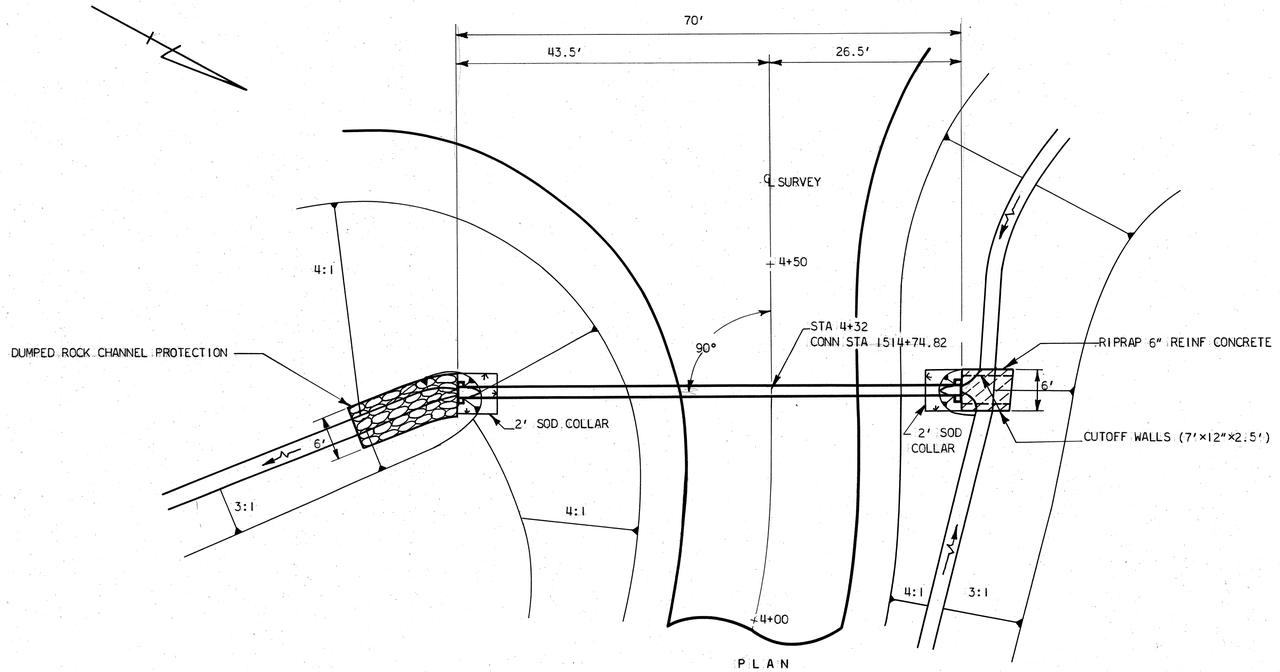
Rev. 8-20-64

PIPE DETAIL STA. 7+57 (T.R. #125)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

186
231

HOL - 39 - 28.57
TUS - 39 - 0.00



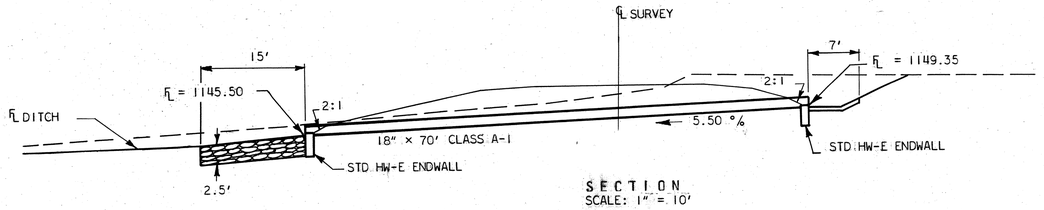
PLAN

DRAINAGE AREA = 1.5 ACRES
Q25 = 5.9 CFS

ESTIMATED QUANTITIES

I-1	18" PIPE, SEC M-6.6(A) OR M-6.8(B) CLASS A-1	70 LIN FT
I-2	MASONRY CLASS "C"	0.6 CU YDS
I-10	RIPRAP 6" REINFORCED CONCRETE	5 SQ YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	8 CU YDS
L-10	SODDING	5 SQ YDS

STD DRWGS: I-1; HW-E



SECTION
SCALE: 1" = 10'

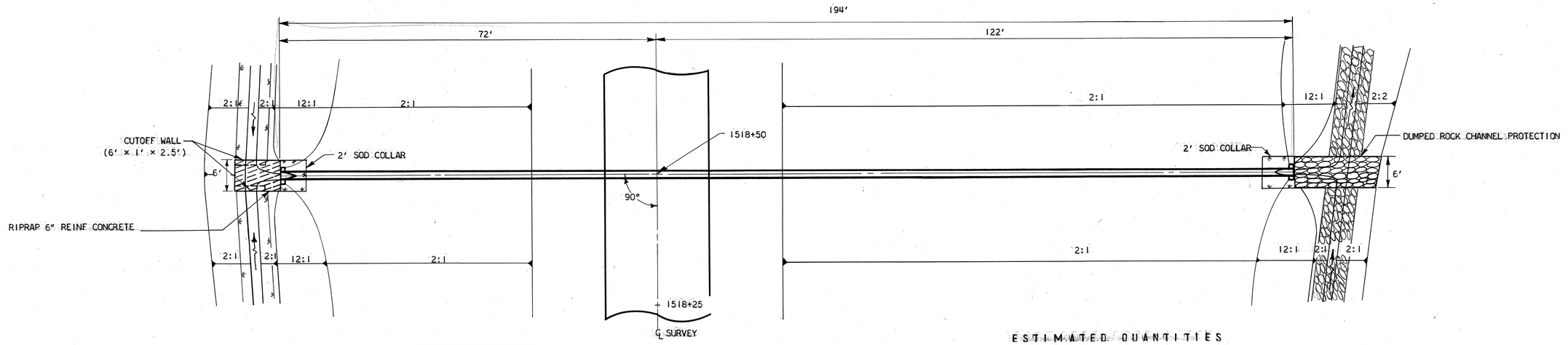
Designed	Checked	Inked
11-19-62	11-23-62	11-28-62
P.M.G.	J.H.W.	O.W.R.

PIPE DETAIL STA. 4+32 (Conn. Sta. 1514+74.82)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

187/231

HOL - [redacted]
TUS - [redacted] 0.00



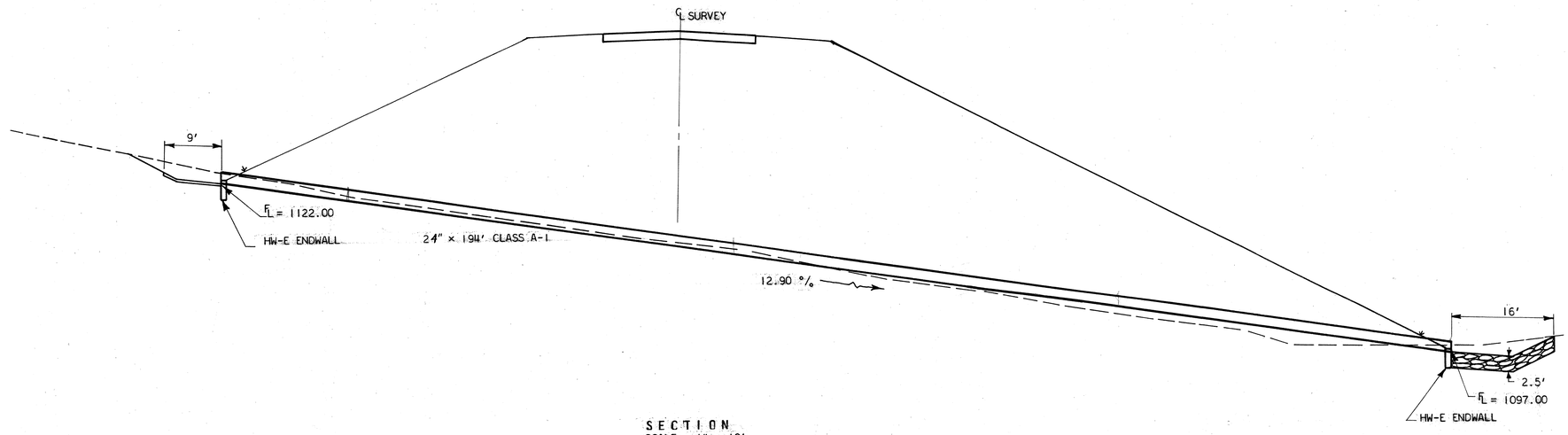
DRAINAGE AREA = 4.7 AC
Q25 = 16 CFS

PLAN

ESTIMATED QUANTITIES

1-1 24" PIPE, SEC 6.4(D) CLASS A-1	194	LIN FT
1-2 MASONRY, CLASS "C"	0.8	CU YDS
1-10 DUMPED ROCK CHANNEL PROTECTION	9	CU YDS
1-10 RIPRAP 6" REINFORCED CONCRETE	6	SQ YDS
L-10 SODDING	6	SQ YDS

STD DRWG'S: 1-1; HW-E



SECTION
SCALE: 1" = 10'

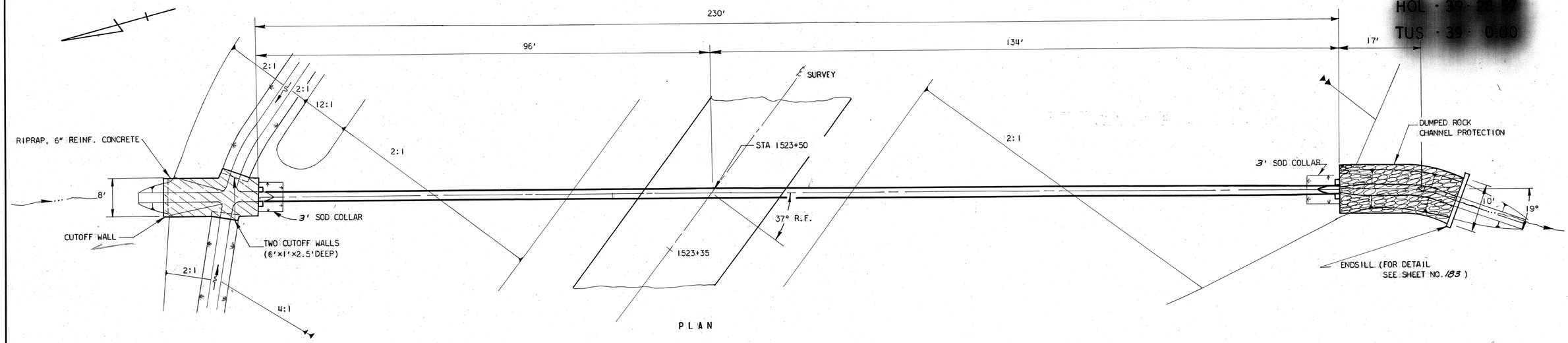
Designed	Checked	Inked
J. H. W. 9-13-62	J. R. E. 9-13-62	D. W. R. 10-9-62

PIPE DETAIL STA. 1518+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

188
231

HOL - 39 - [illegible]
TUS - 39 - 0.00



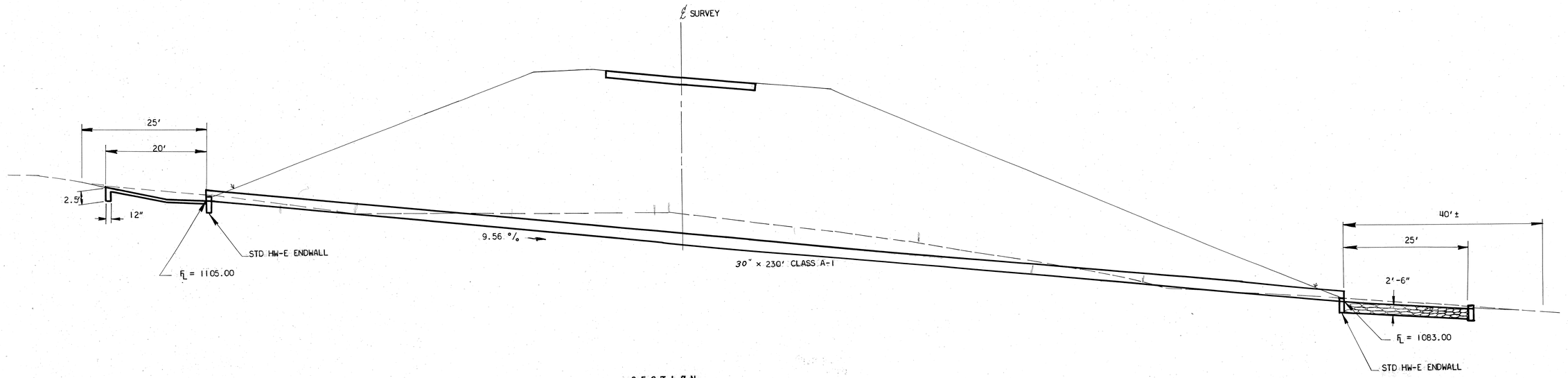
PLAN

DRAINAGE AREA = 11 AC
Q25 = 28 CFS

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	3	CU YDS
I-1	30" PIPE, SEC M-6.4(D) GAGE 12, CLASS A-1	230	LIN FT
I-2	MASONRY, CLASS "C"	2.7	CU YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	23	CU YDS
I-10	RIPRAP 6" REINFORCED CONCRETE	18	SQ YDS
L-10	SODDING	11	SQ YDS

STD DRWGS I-1; HW-E.



SECTION
SCALE: 1" = 10'

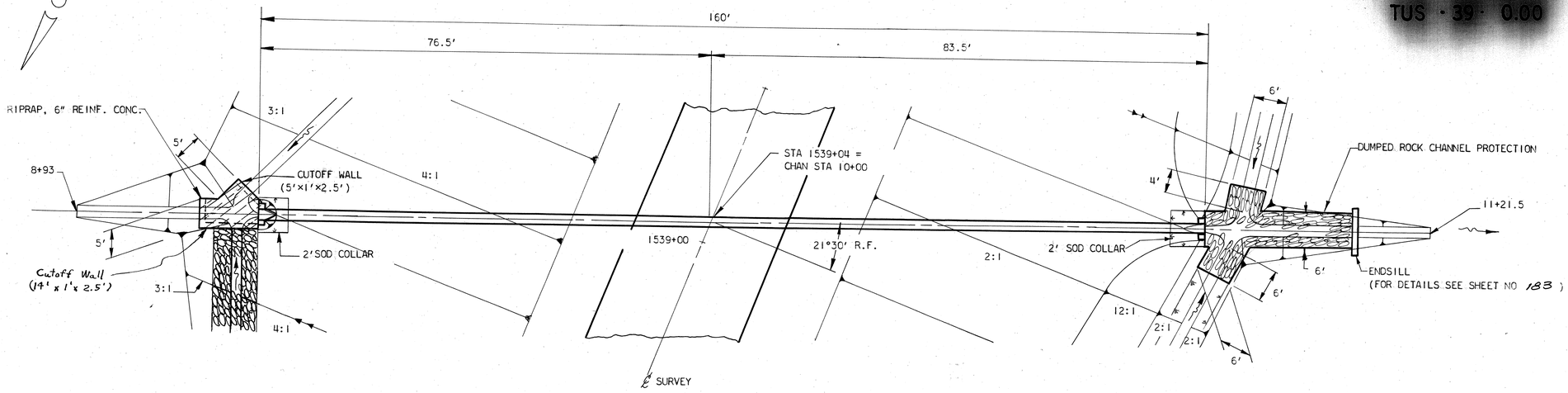
Designed	Checked	Inked
J.R.E. 8/28/62	P.M.G. 9/20/62	S.S.M. 10/5/62

Pipe Detail ~ Sta. 1523+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

189
231

HOL - 39 - 23.37
TUS - 39 - 0.00



PLAN

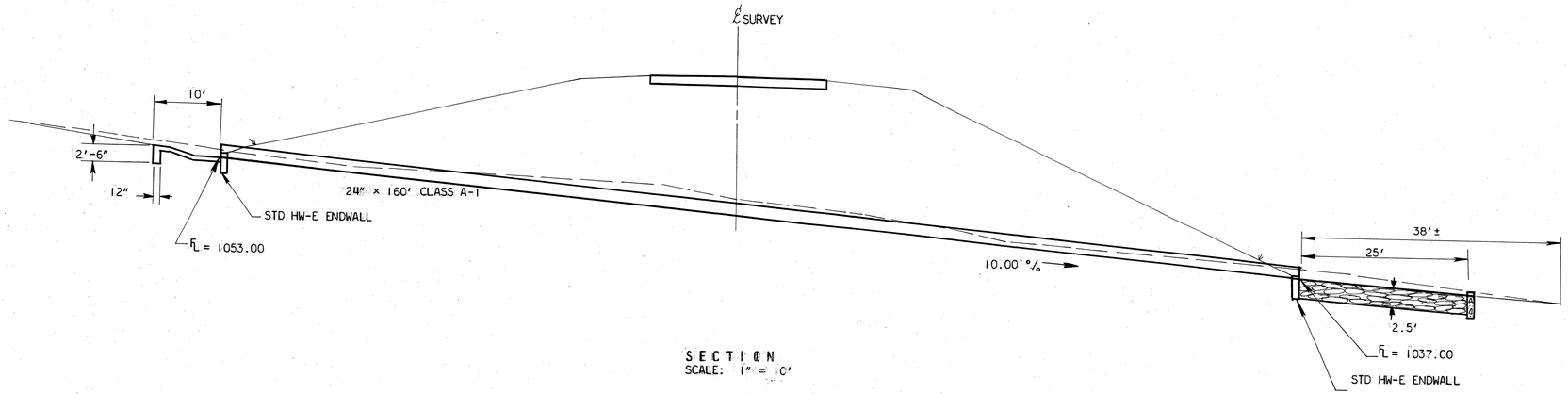
DRAINAGE AREA = 6.8 AC
Q25 = 21 CFS

CHANNEL CROSS SECTIONS	E-3 E.A.	E-3 C.Y.
11+21.5	0	
2:1 2:1		9
1036.50		
10+93		
1038.5	16	1
10+90	0	
9+16	0	
2:1 2:1		1
1054.50		
9+13.5	9	3
1055.5		
8+93	0	
SCALE: 1" = 10'	TOTAL	10

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	10	CU YDS
I-1	24" PIPE, SEC M-6.4(D), CLASS A-1	160	LIN FT
I-2	MASONRY, CLASS "C"	1.9	CU YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	19	CU YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	7	SQ YDS
L-10	SODDING	6	SQ YDS

STD DRWGS: I-1; HW-E.



SECTION
SCALE: 1" = 10'

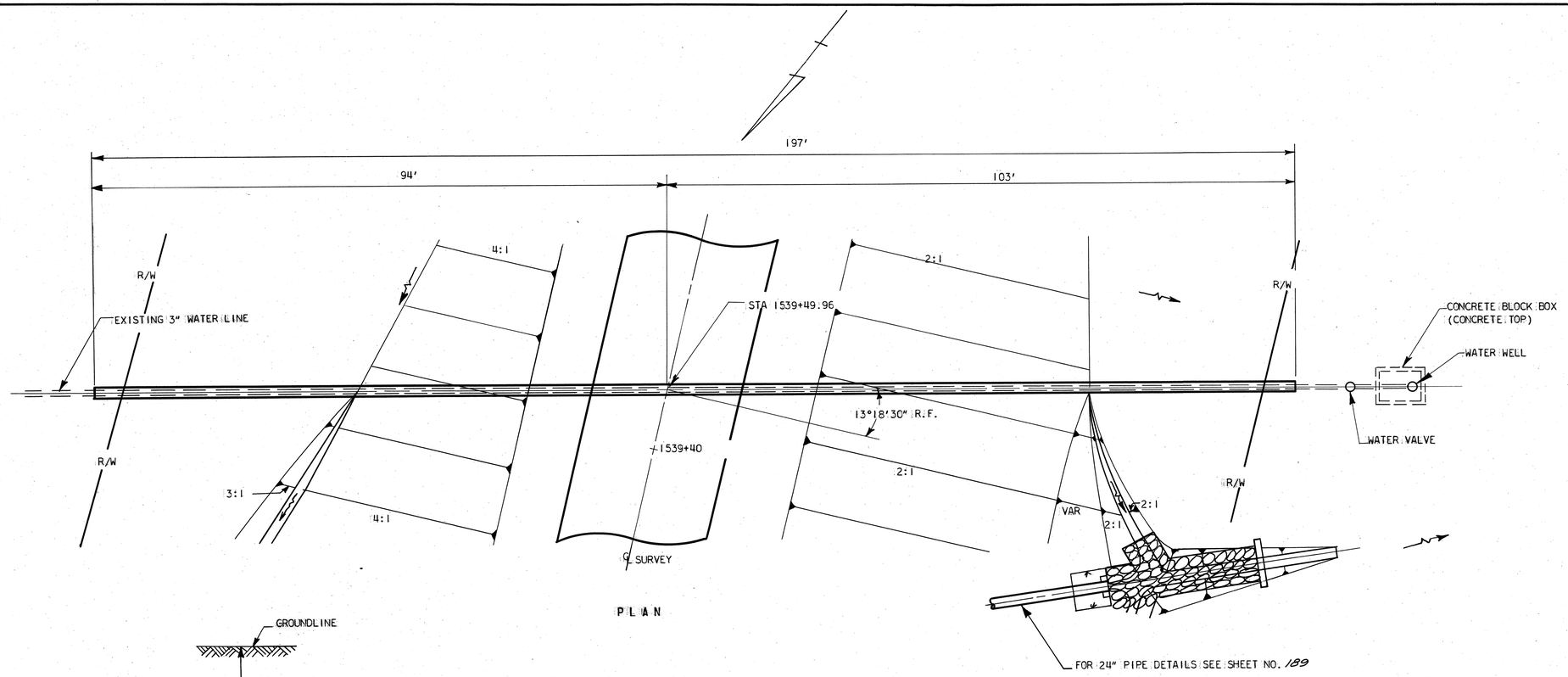
Designed	Checked	Inked
J.R.E. 8/28/62	P.M.G. 9/21/62	S.S.M. 10/3/62

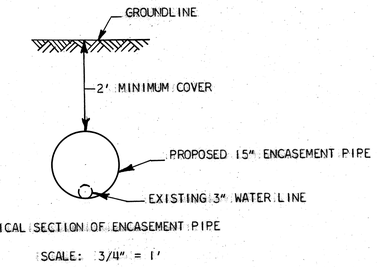
Pipe Detail ~ Sta. 1539+04

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

189-A
231

HOL - 39 - 28.57
TUS - 39 - 0.00





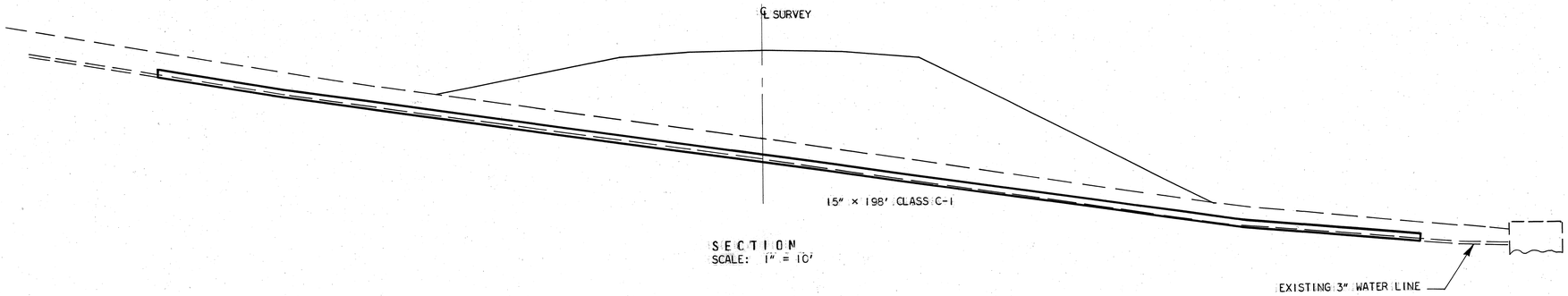
TYPICAL SECTION OF ENCASEMENT PIPE

SCALE: 3/4" = 1'

ESTIMATED QUANTITIES

1-1 15" ENCASEMENT PIPE CLASS C-1, AS PER PLAN = 198 LIN.FT

NOTE: FOR FULL PIPE DESCRIPTION, SEE GENERAL NOTES



SECTION
SCALE: 1" = 10'

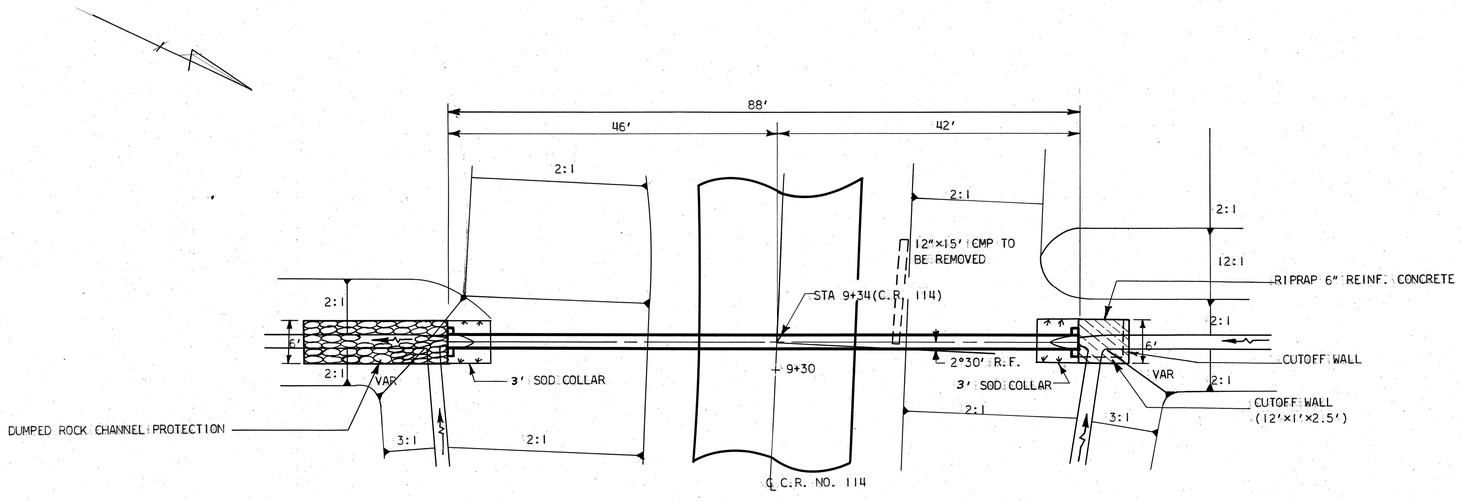
Designed	Checked	Inked
J.R.E. 11-28-62	P.M.G. 11-28-62	D.W.R. 12-3-62

ENCASEMENT PIPE DETAIL ~ Sta. 1539 + 49.96

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

190
231

HGL - [redacted] - 28.57
TUS - [redacted] - 0.00



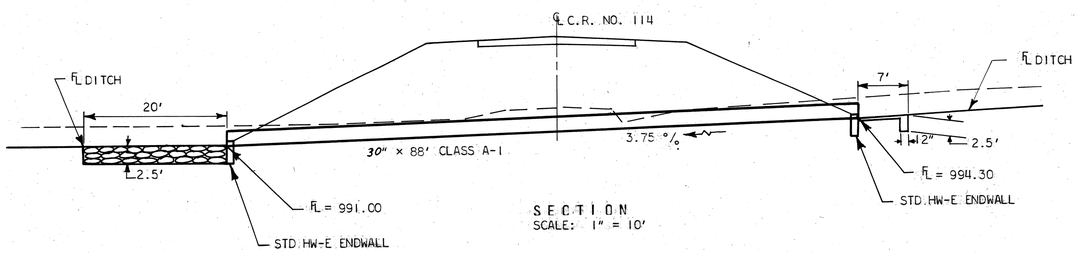
PLAN

DRAINAGE AREA = 8.5 ACRES
Q25 = 24 CFS

ESTIMATED QUANTITIES

E-12	PIPE REMOVED 15" AND UNDER	15 LIN FT
I-1	30" PIPE, SEC M-6.4(D), SEC M-6.6(B) OR SEC M-6.8(B) CLASS A-1	88 LIN FT
[illegible]	MASONRY, CLASS "C"	1.0 CU YDS
R-15	DUMPED ROCK CHANNEL PROTECTION	11 CU YDS
R-40	RIPRAP, 6" REINFORCED CONCRETE	5 SQ YDS
L-10	SODDING	11 SQ YDS

STD DRWGS: I-1; HW-E.



SECTION
SCALE: 1" = 10'

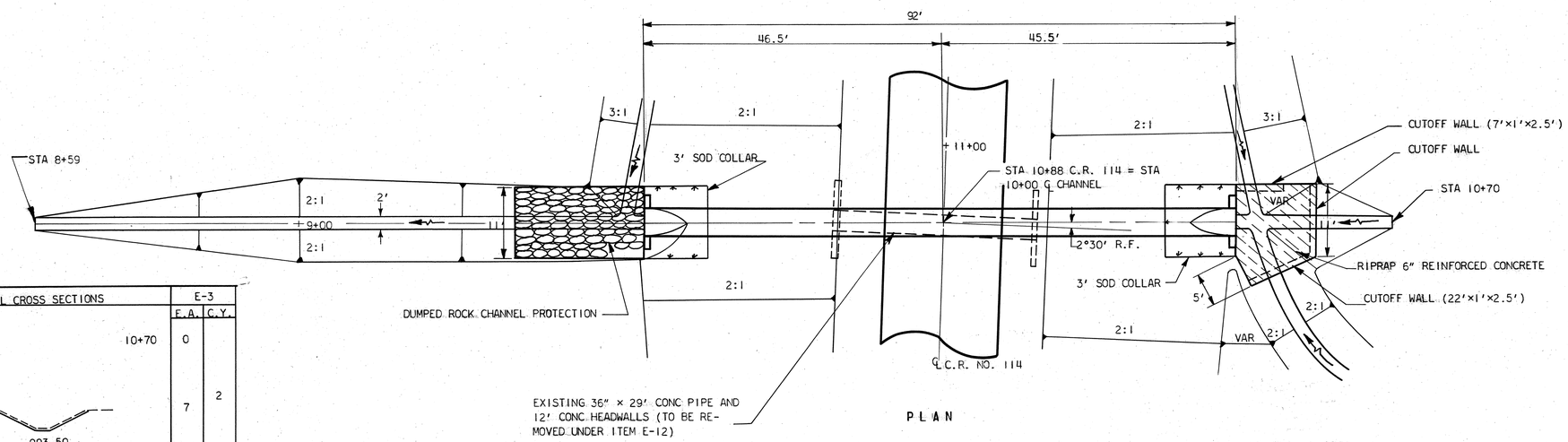
Designed	Checked	Inked
J.H.W. 11-7-62	J.R.E. 11-21-62	D.W.R. 11-23-62

PIPE DETAIL ~ STA. 9+34 (C.R. 114)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	[redacted]	

191/231

[redacted]



PLAN

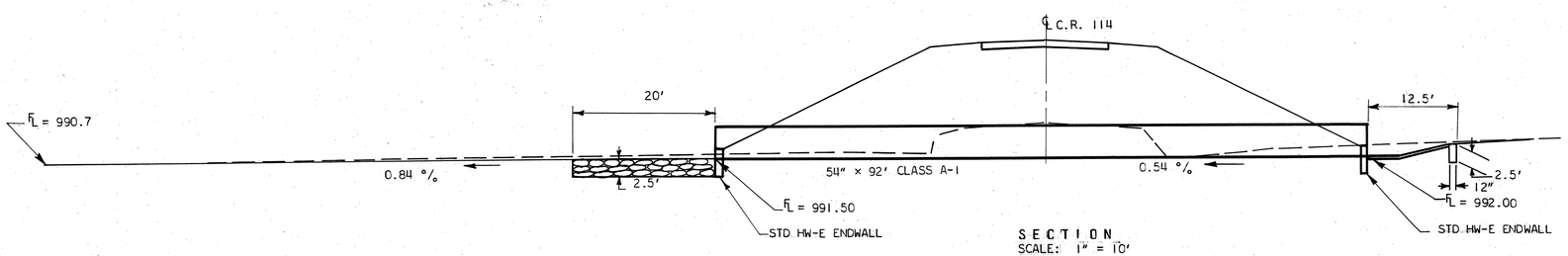
CHANNEL CROSS SECTIONS	E-3	
	E.A.	C.Y.
10+70	0	
993.50	7	2
10+58 AHEAD		
994.0		
991.49	5	
9+50 BACK		9
992.0		
990.85	5	
9+00		3
990.90	8+59	
SCALE: 1"=10'	0	
	TOTAL	14

DRAINAGE AREA = 110 ACRES
Q25 = 130 CFS

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	14	CU YDS
E-12	PIPE REMOVED, OVER 15"	29	LIN FT
I-1	54" PIPE, SEC. M-6.6(B) CLASS A-1	92	LIN FT
I-2	MASONRY CLASS "C"	1.9	CU YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	20	CU YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	18	SQ YDS
L-10	SODDING	16	SQ YDS

STD DRWGS. I-1; HW-E.



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
J.H. W. 11-5-62	J.R.E. 11-21-62	D.W.R. 11-23-62

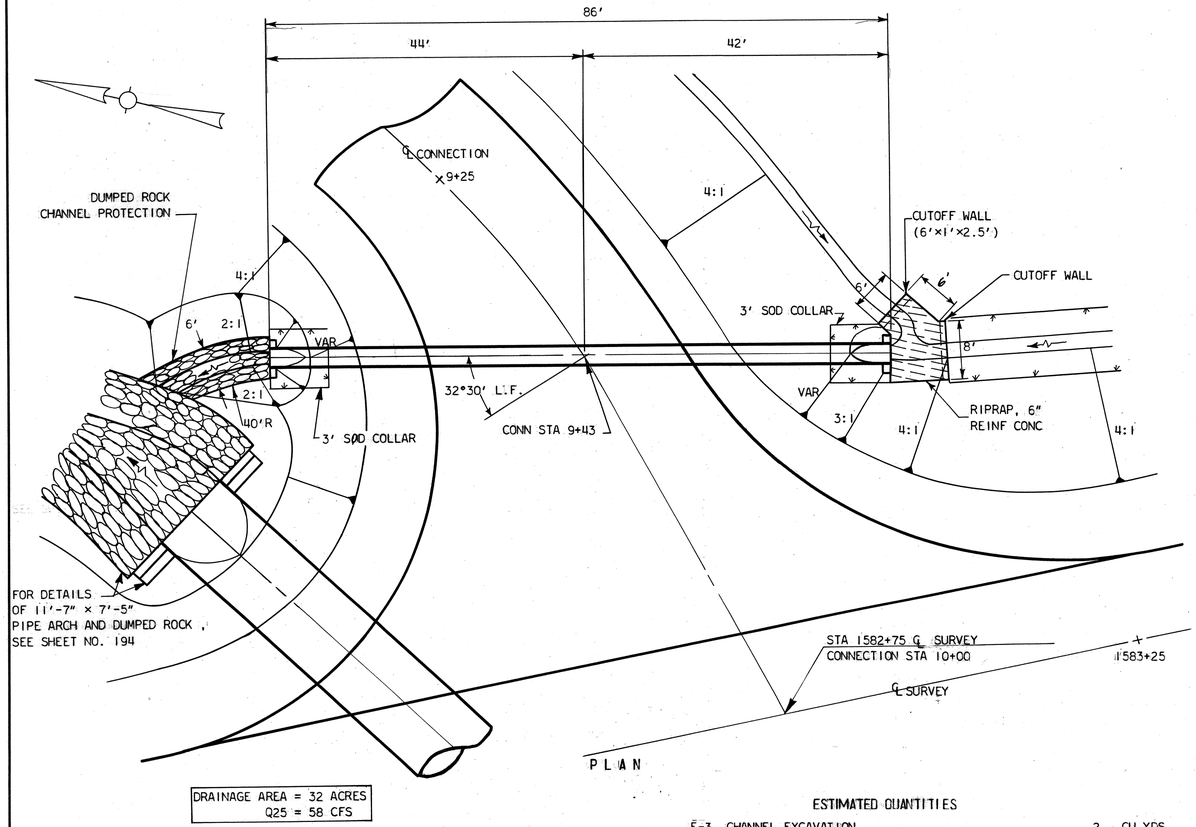
PIPE DETAIL ~ STA. 10+88 (C.R. 114)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

192
231

HOL - 39-28.57

TUS - 39- 0.00



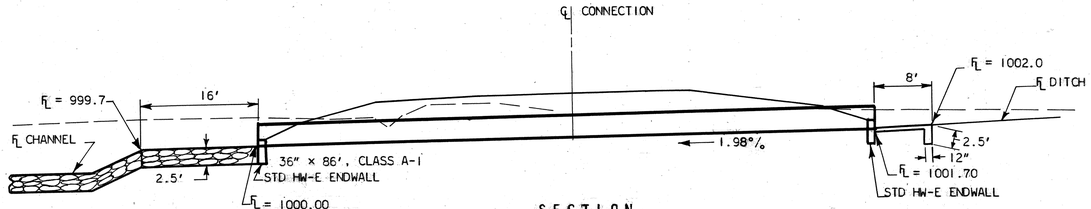
PLAN

DRAINAGE AREA = 32 ACRES
Q25 = 58 CFS

ESTIMATED QUANTITIES

E-3 CHANNEL EXCAVATION	2	CU YDS
I-1 36" PIPE, SEC M-6.6(A) OR SEC M-6.8(B) CLASS A-1	86	LIN FT
I-2 MASONRY, CLASS "C"	1.2	CU YDS
I-10 DUMPED ROCK CHANNEL PROTECTION	9	CU YDS
I-10 RIPRAP, 6" REINFORCED CONCRETE	9	SQ YDS
L-10 SODDING	13	SQ YDS

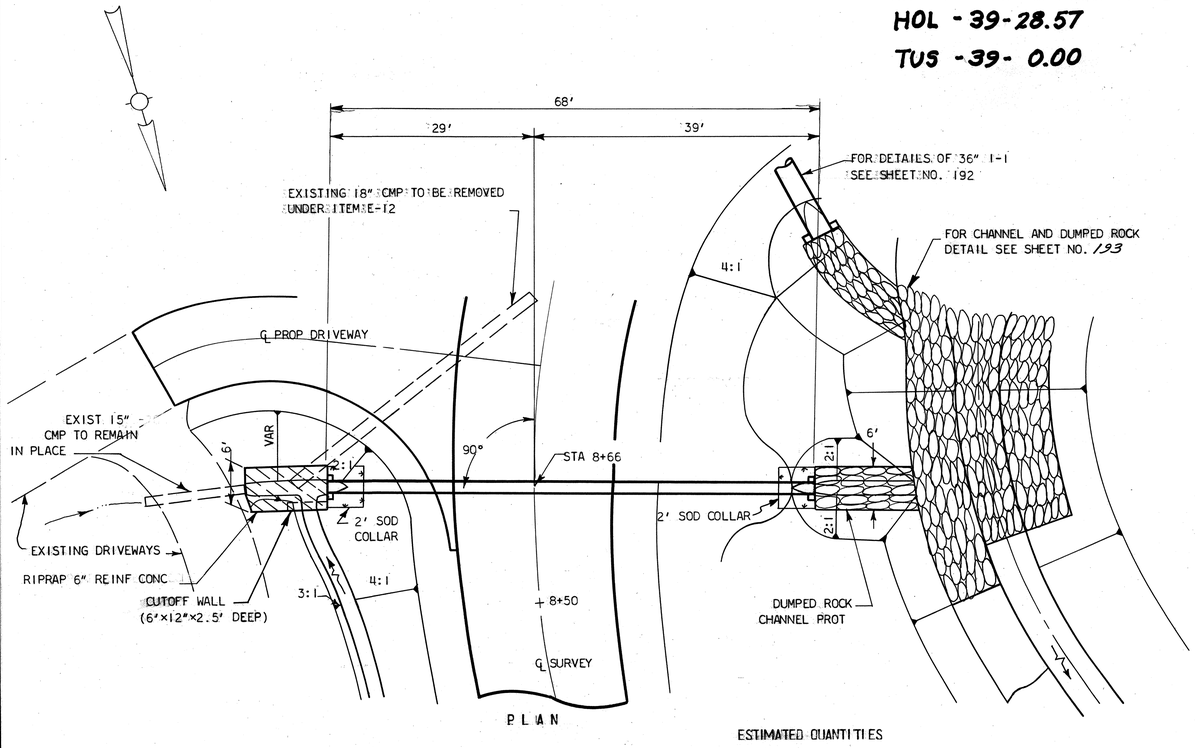
STD DRWGS: I-1; HW-E.



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
F.W.L. 3-13-63	P.M.G. 3-19-63	D.W.R. 3-15-63

PIPE DETAIL ~ Sta. 9+43 (Conn. Sta. 1582+75)

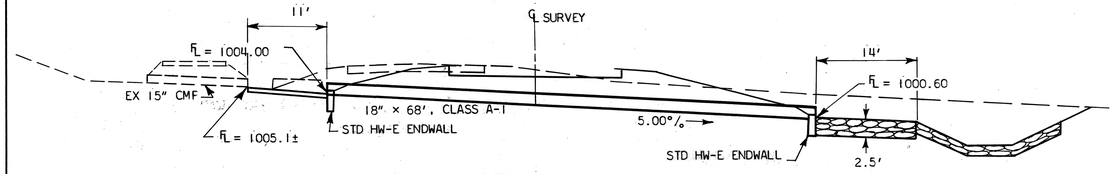


PLAN

ESTIMATED QUANTITIES

E-3 CHANNEL EXCAVATION	2	CU YDS
I-1 18" PIPE, SEC M-6.6(A) OR M-6.8(B), CLASS A-1	68	LIN FT
I-2 MASONRY, CLASS "C"	0.6	CU YDS
I-10 DUMPED ROCK CHANNEL PROTECTION	8	CU YDS
I-10 RIPRAP, 6" REINFORCED CONCRETE	7	SQ YDS
L-10 SODDING	6	SQ YDS
E-12 PIPE REMOVED, OVER 15"	42	LIN FT

STD DRWGS: I-1; HW-E.



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
F.W.L. 3-13-63	J. - 12-63	J.-14-63
F.W.L.	J.R.E.	D.W.R.

PIPE DETAIL ~ Sta. 8+66 (Conn. Sta. 1582+75)

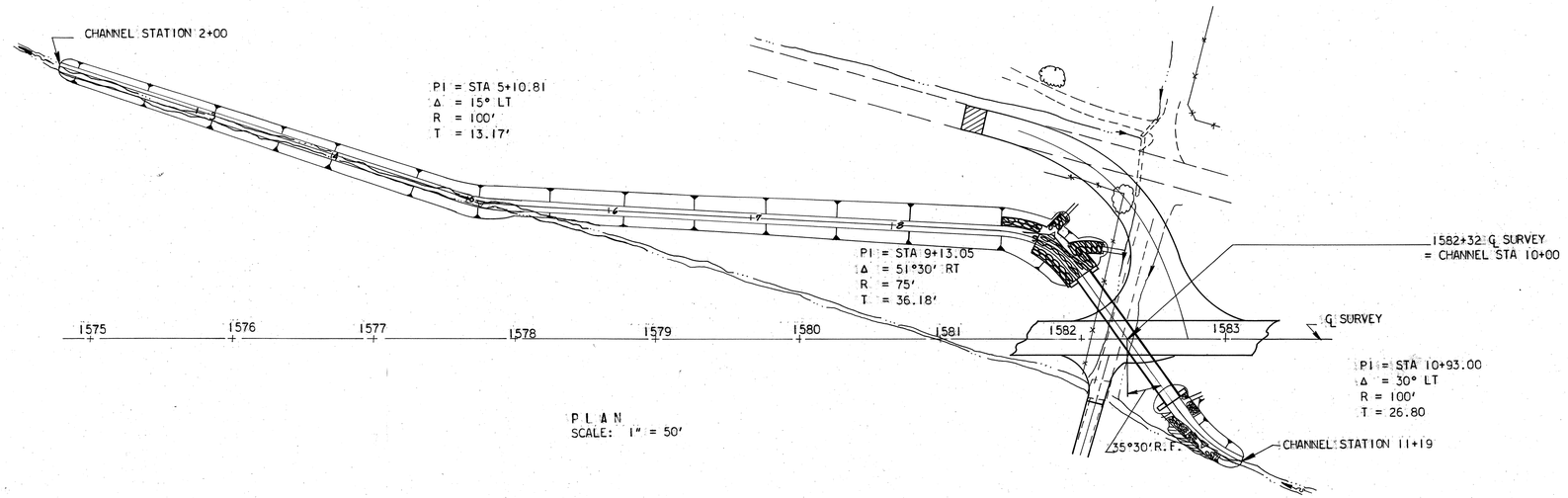
PIPE DETAILS ~ Conn. Sta. 1582+75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

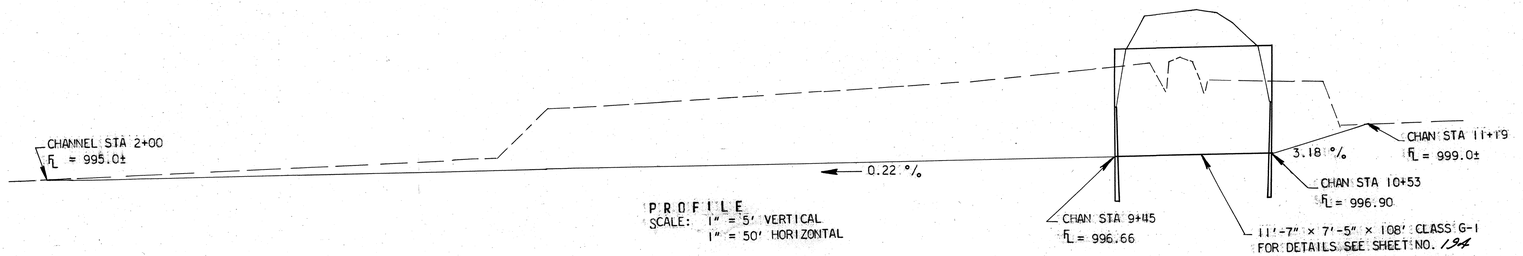
193
231

HOL - 39- 28.57

TUS - 39- 0.00



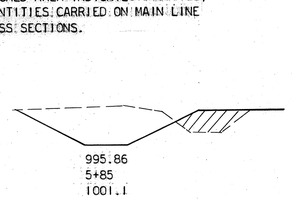
PLAN
SCALE: 1" = 50'

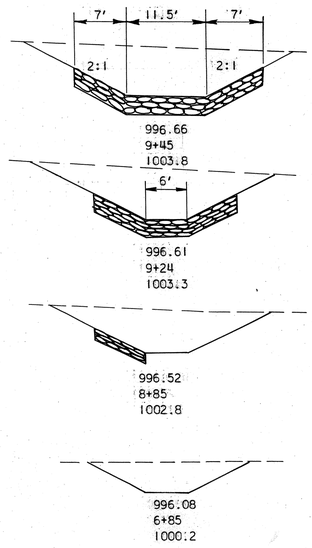


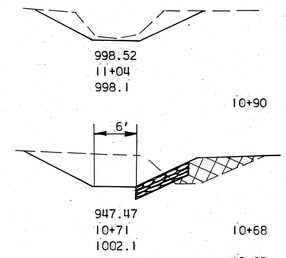
PROFILE
SCALE: 1" = 5' VERTICAL
1" = 50' HORIZONTAL

CHANNEL CROSS SECTIONS SCALE: 1" = 10'

HATCHED AREA INDICATES BACKFILL, QUANTITIES CARRIED ON MAIN LINE CROSS SECTIONS.







	E-3 E.A.	E-3 C.Y.
2+00	0	
	77	100
	31	25
	37	215
	17	32
5+85	77	
BACK	172	117
	129	166
	101	630
	69	270
11+19	0	
	27	54
10+90	0	
	61	31
	9	2
10+68	0	
10+63	0	
TOTAL	1626	* 13

	E-3 EMBANK E.A.	E-3 EMBANK C.Y.
11+19		
	8	11
10+90		

*QUANTITY CARRIED TO SHEET NO. 71

NOTE: E-3 QUANTITIES CARRIED TO SHEET NO. 22

Designed	Checked	Inked
F.W.L. 3-12-63	P.M.G. 3-13-63	S.S.M. 3-14-63

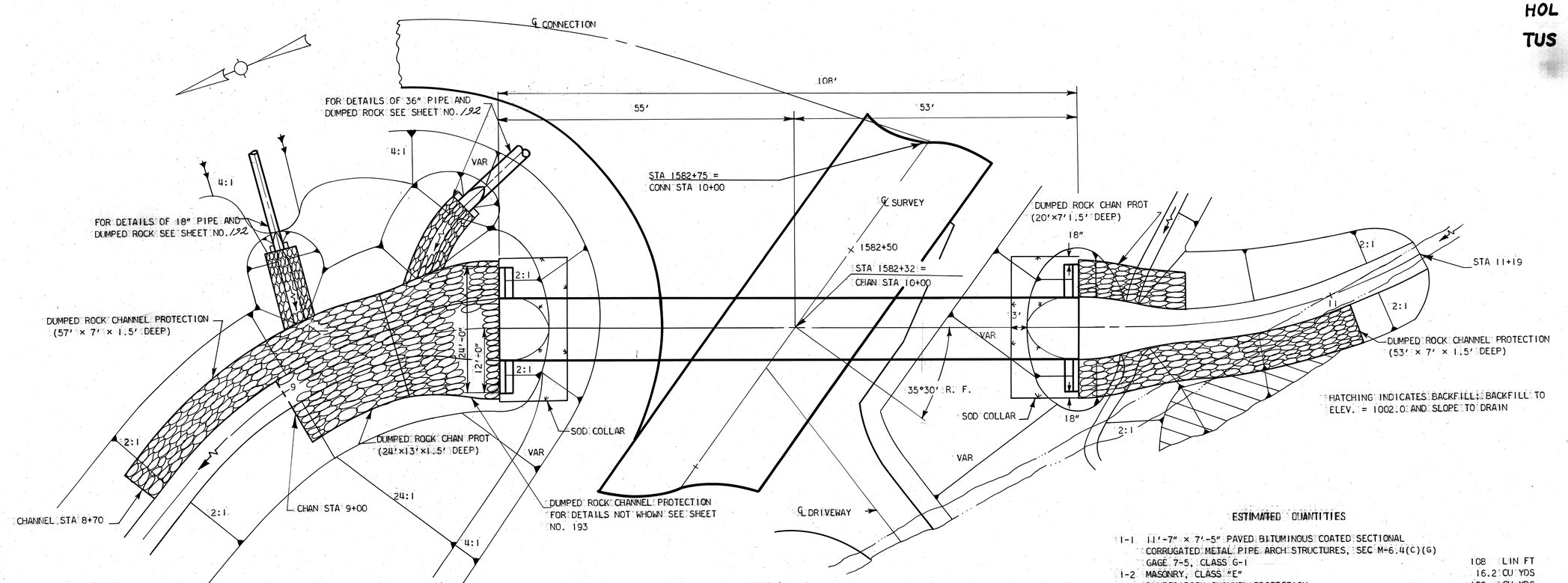
CHANNEL RELOCATION~Sta. 1575+00 ~ 1583+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

194
231

HOL -39-28.57

TUS -39- 0.00



PLAN

NOTE: FOR CHANNEL DETAILS AND QUANTITIES SEE SHEET NO. 193

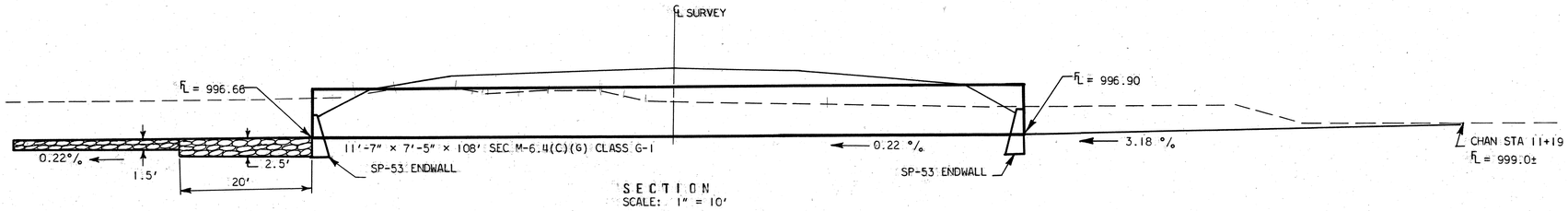
DRAINAGE AREA = 550 ACRES
Q25 = 370 CFS

NOTE: PIPE ENDS SHALL BE CUT IN A PLANE PARALLEL TO THE FINISHED EMBANKMENT SURFACE, AS PER STD DRWGS. FIELD PAVING SHALL BE PROVIDED THROUGHOUT THE BOTTOM QUARTER OF THE PIPE. FOR DESCRIPTION OF FIELD PAVING AND BITUMINOUS COATING SEE GENERAL NOTES

ESTIMATED QUANTITIES

1-1	11'-7" × 7'-5" PAVED BITUMINOUS COATED SECTIONAL CORRUGATED METAL PIPE ARCH STRUCTURES, SEC M-6.4(C)(G) GAGE 7-5, CLASS G-1	108 LIN FT
1-2	MASONRY, CLASS "E"	16.2 CU YDS
1-10	DUMPED ROCK CHANNEL PROTECTION	109 CU YDS
L-10	SODDING	42 SQ YDS

STD DRWGS: 1-1; SP-53.



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
10-5-62 P.M.G.	11-2-62 F.W.L.	3-14-63 O.W.R.

Revised 3-13-63 F.W.L.

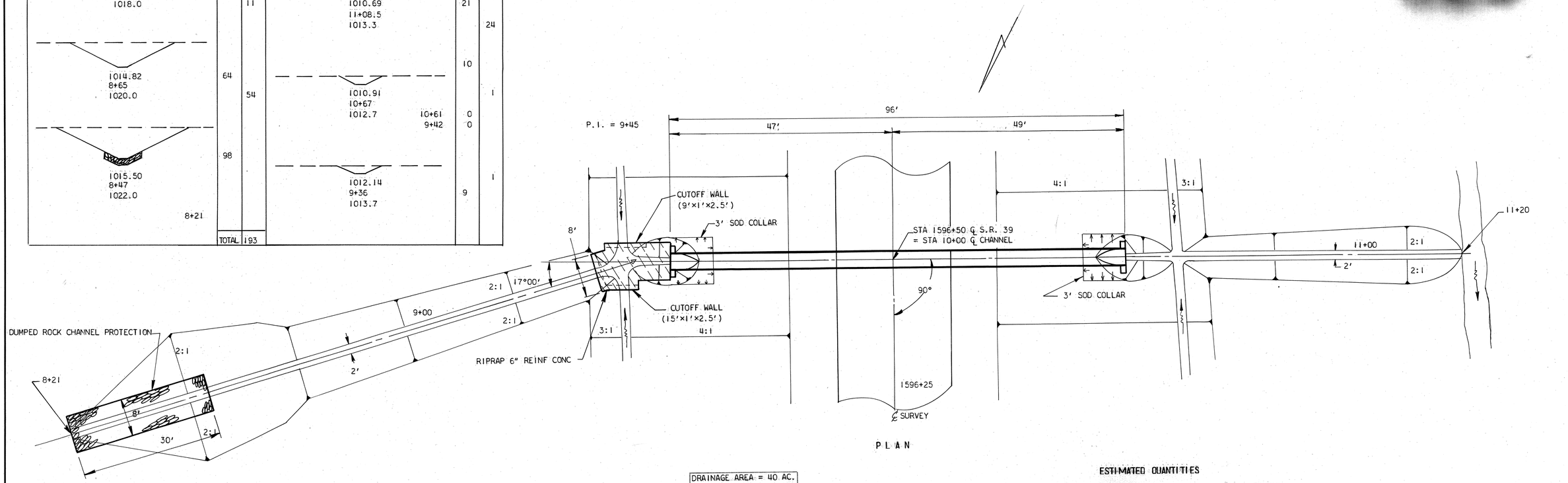
PIPE DETAIL STA. 1582+32

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

195
231

HOL - [illegible] 57
TUS - [illegible] 0.00

	E-3 E.A.	E-3 C.Y.	CHANNEL CROSS SECTIONS	E-3 E.A.	E-3 C.Y.
			SCALE: 1" = 10'		
		51	11+20	0	
1014.60 8+71 1018.0	33				4
		11	1010.69 11+08.5 1013.3	21	
					24
1014.82 8+65 1020.0	64			10	
		54	1010.91 10+67 1012.7		1
			10+61	0	
			9+42	0	
1015.50 8+47 1022.0	98				
			1012.14 9+36 1013.7	9	1
8+21					
	TOTAL	193			



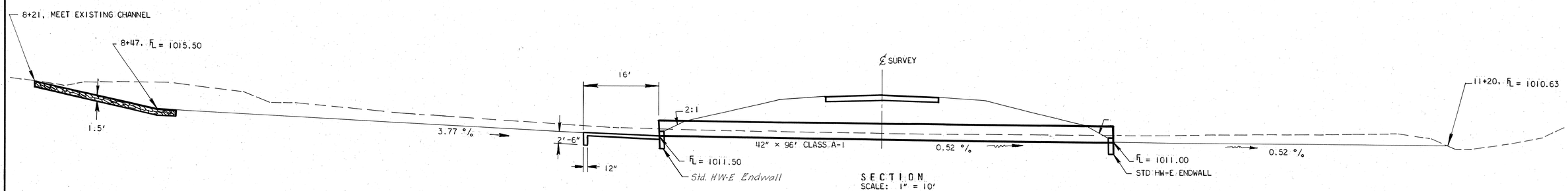
PLAN

DRAINAGE AREA = 40 AC.
Q25 = 68 CFS

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	193	CU YDS
I-1	42" PIPE SEC M-6.6(A) CLASS A-1	96	LIN FT
I-2	MASONRY CLASS "C"	1.5	CU YDS
L-10	SODDING	14	SQ YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	13	CU YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	15	SQ YDS

STD DRWGS: I-1; HW-E



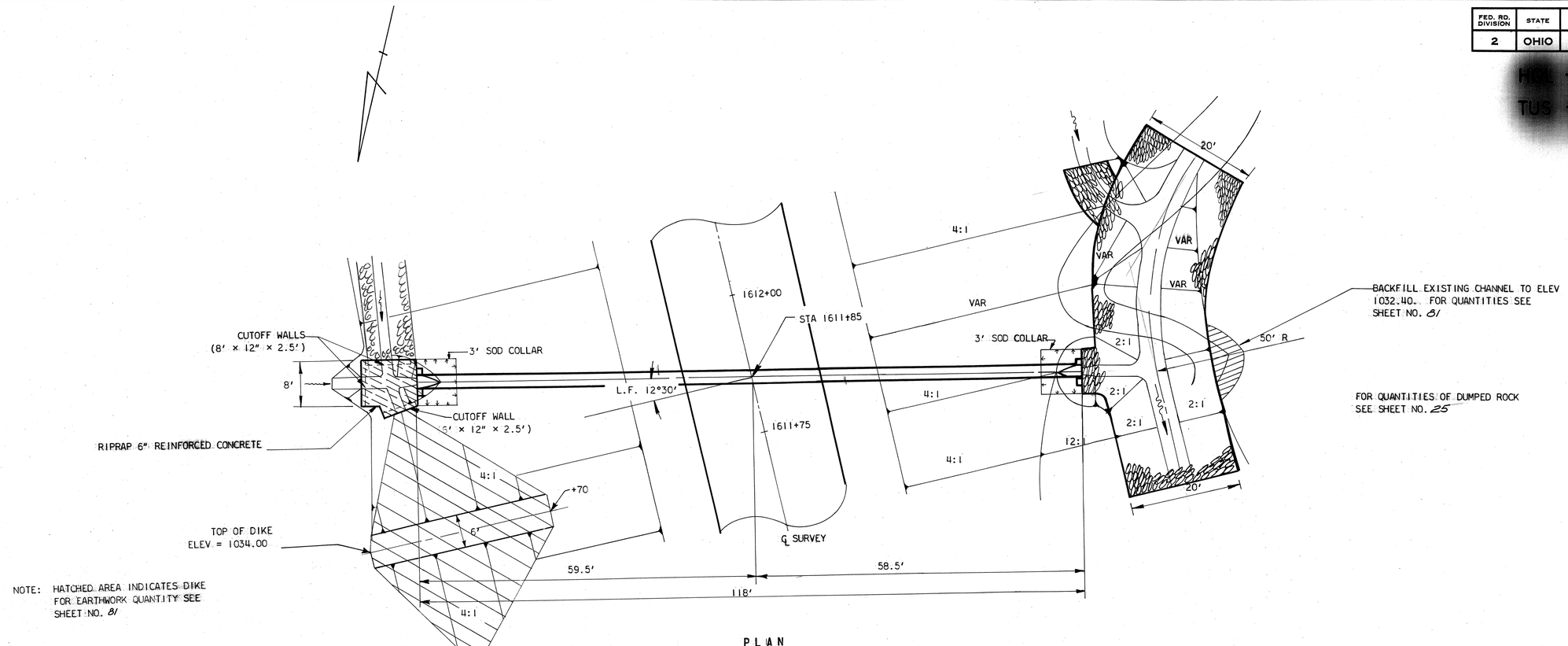
SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
J. H. W.	J. R. E.	S. S. M.
9/20/62	10/9/62	10/10/62

Pipe Detail ~ Sta. 1596 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

196
231



NOTE: HATCHED AREA INDICATES DIKE FOR EARTHWORK QUANTITY SEE SHEET NO. 81

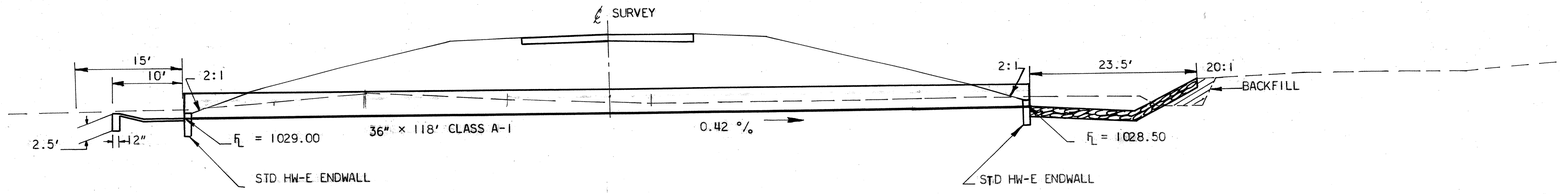
DRAINAGE AREA = 29 AC
Q25 = 55 CFS

PLAN

ESTIMATED QUANTITIES

1-1	36" PIPE, SEC M-6.6(A) OR SEC M-6.8(B) CLASS A-1	118 LIN FT
1-2	MASONRY, CLASS "C"	1.2 CU YDS
1-10	RIPRAP, 6" REINFORCED CONCRETE	10 SQ YDS
L-10	SODDING	13 SQ YDS
E-3	CHANNEL EXCAVATION	2 CU YDS

STD DRWG'S: 1-1; HW-E



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
J.H.W.	F.W.L.	S.S.M.
9/26/62	10/8/62	10/9/62

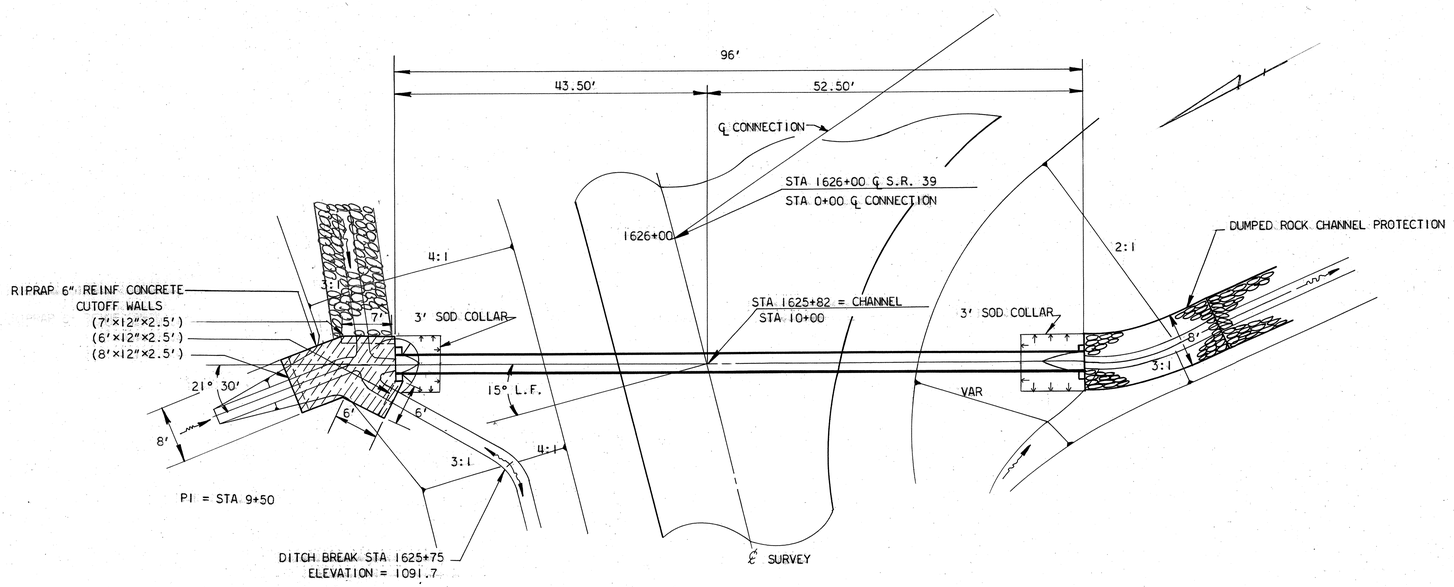
Pipe Detail ~ Sta. 1611+85

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

197
231

HOL - [redacted] 23.57

TUS - [redacted] 0.00



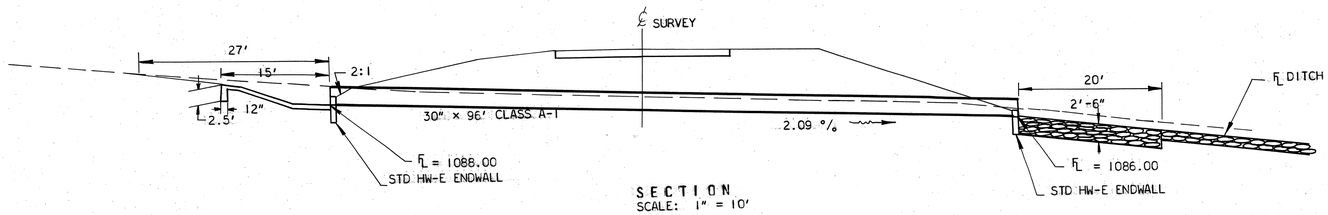
PLAN

DRAINAGE AREA = 15 ACRES
Q25 = 35 CFS

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	3	CU YDS
I-1	30" PIPE, SEC M-6.6(A), OR SEC. M-6.8(B), CLASS A-1	96	LIN FT
I-2	MASONRY, CLASS "C"	1.0	CU YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	15	CU YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	15	SQ YDS
L-10	SODDING	12	SQ YDS

STD DRWGS: I-1; HW-E.



SECTION
SCALE: 1" = 10'

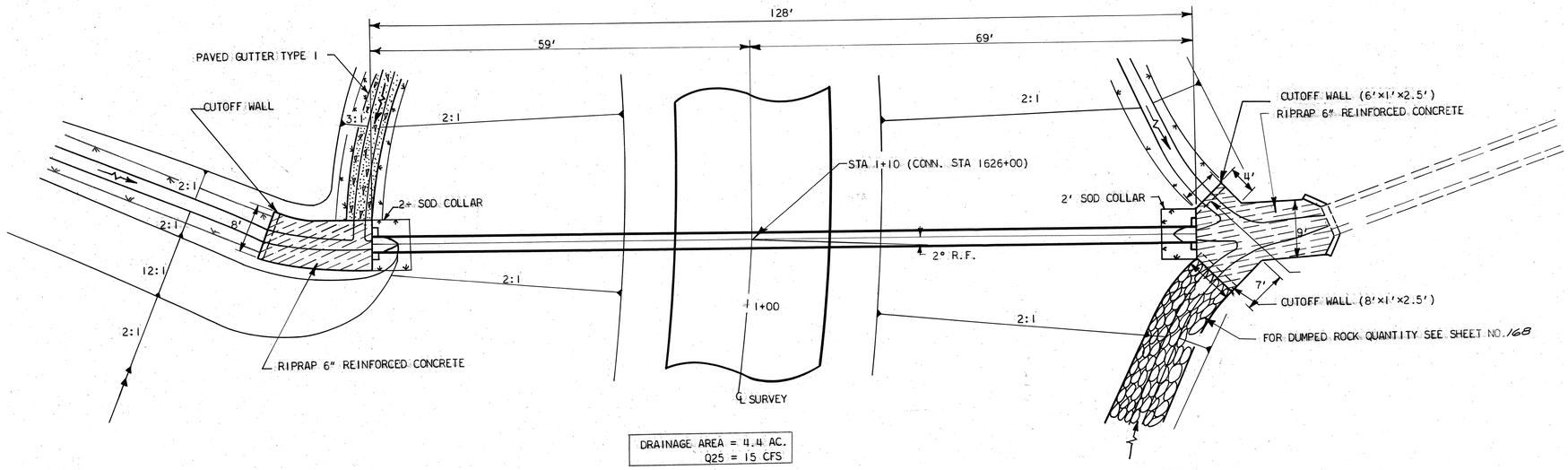
Designed	Checked	Inked
J.H.W.	P.M.G.	S.S.M.
10-23-62	10-26-62	11-2-62

Pipe Detail ~ Sta. 1625+82

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

128
231

HOL - [redacted] - 28.57
TUS - [redacted] - 0.00

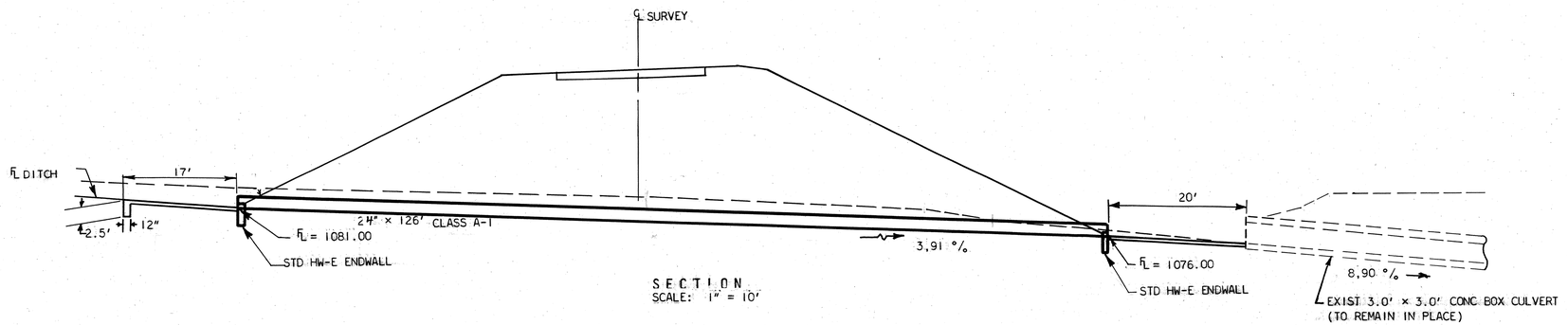


DRAINAGE AREA = 4.4 AC.
Q25 = 15 CFS

ESTIMATED QUANTITIES

1-1	24" PIPE, SEC M-6.6(D) OR SEC M-6.4(D), CLASS A-1	128 LIN FT
1-2	MASONRY, CLASS "C"	0.8 CU YDS
1-10	RIPRAP 6" REINFORCED CONCRETE	35 SQ YDS
L-10	SODDING	6 SQ YDS

STD DRWGS: 1-1; HW-E



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
J.H.W. 10-30-62	F.W.L. 11-2-62	D.W.R. 11-13-62

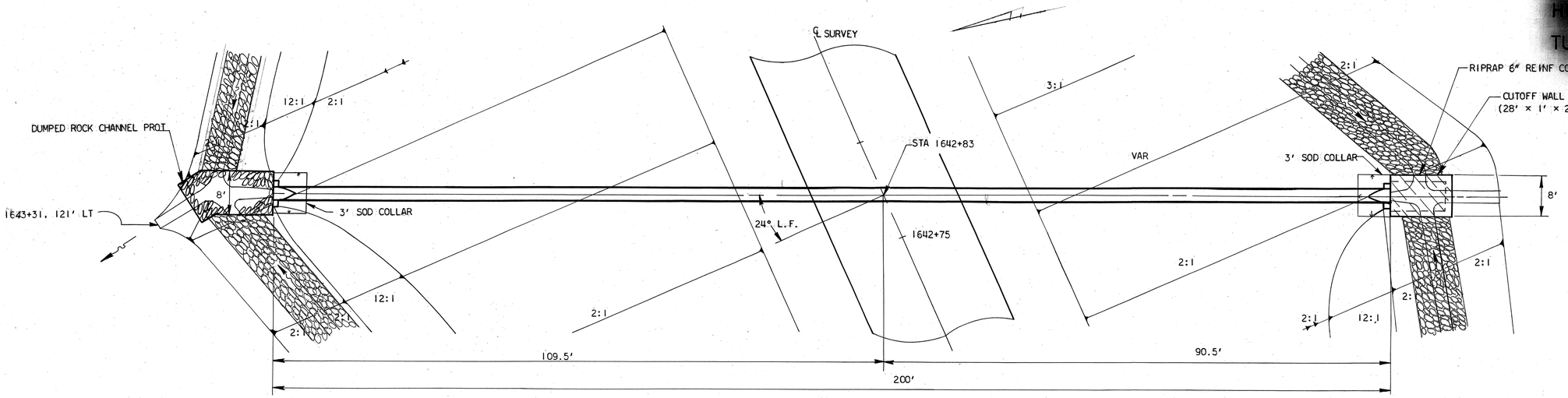
PIPE DETAIL~STA. 1+10 (CONN. STA. 1626+00)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

199
231

HW - [redacted] 28.57

TUS - [redacted] 0.00



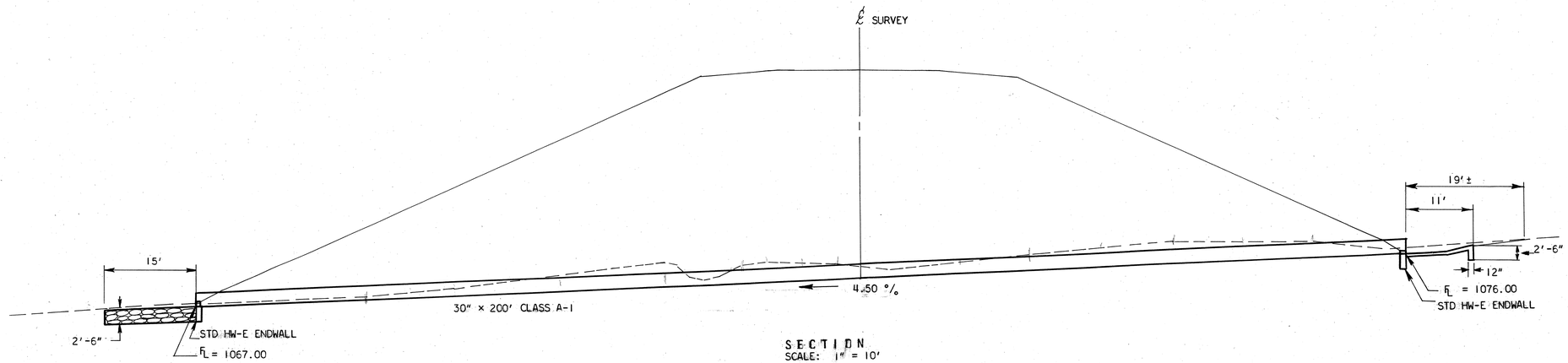
PLAN

DRAINAGE AREA = 15.4 AC
Q25 = 36 CFS

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	2 CU YDS
I-1	30" PIPE SEC M-6.4(D) GAGE 12 CLASS A-1	200 LIN FT
I-2	MASONRY, CLASS "C"	1.0 CU YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	10 SQ YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	11 CU YDS
L-10	SODDING	11 SQ YDS

STD DRWGS: HW-E; I-1.



SECTION
SCALE: 1" = 10'

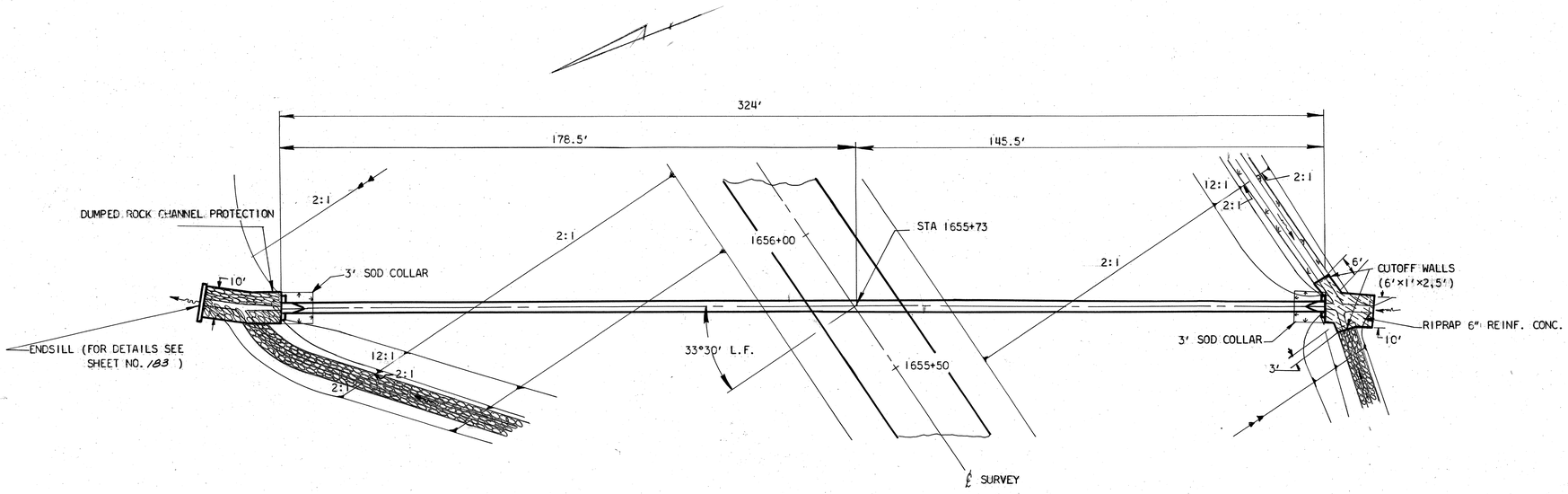
Designed	Checked	Inked
F.W.L. 6/17/62	J.R.E. 9/18/62	S.S.M. 10/3/62

Pipe Detail ~ Sta. 1642+83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

200
231

HOL - [redacted]
TUS - [redacted] 0.00



PLAN

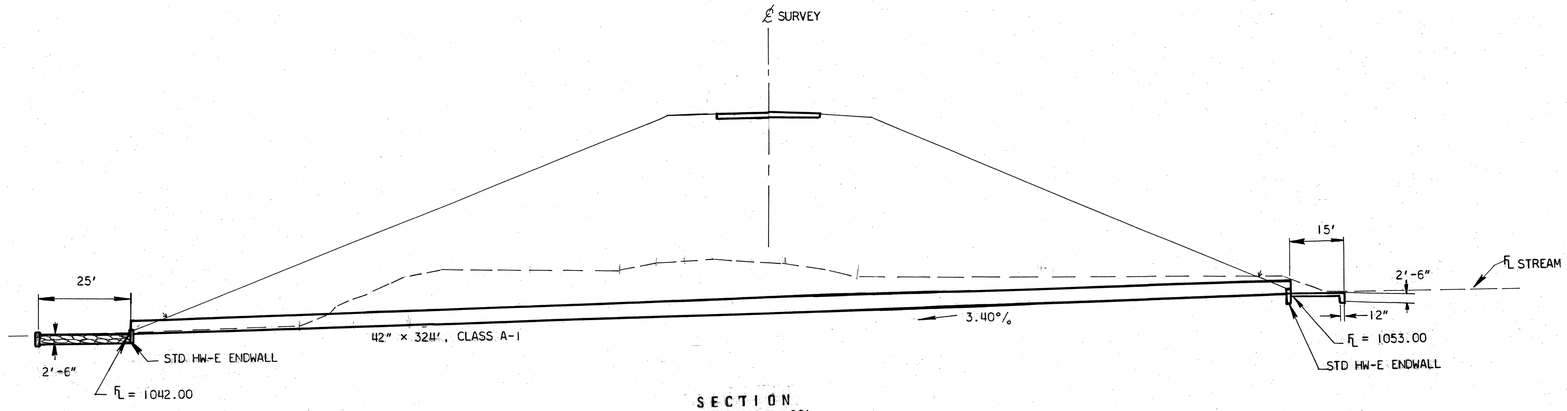
DRAINAGE AREA = 60 AC
Q25 = 85 CFS

ESTIMATED QUANTITIES

E-3 CHANNEL EXCAVATION	4	CU YDS
I-1 42" PIPE, SEC M-6.4(D), GAGE 8, *ELONGATED* AS PER PLAN CLASS A-1	324	LIN FT
I-2 MASONRY, CLASS "C"	3.4	CU YDS
I-10 DUMPED ROCK CHANNEL PROTECTION	23	CU YDS
I-10 RIPRAP, 6" REINFORCED CONCRETE	21	SQ YDS
L-10 SODDING	14	SQ YDS

STD DRWGS: I-1, I-N-E.

NOTE: THE 42" CORRUGATED METAL PIPE SHALL BE SHOP STRUTTED BY USE OF HORIZONTAL WIRES TO PRODUCE AND MAINTAIN A 5 % VERTICAL ELONGATION. THE WIRE STRUTS SHALL BE SATISFACTORILY REMOVED FROM THE INSIDE OF THE PIPE IMMEDIATELY AFTER COMPLETION OF THE OVERLYING EMBANKMENT CONSTRUCTION.



SECTION
SCALE: 1" = 20'

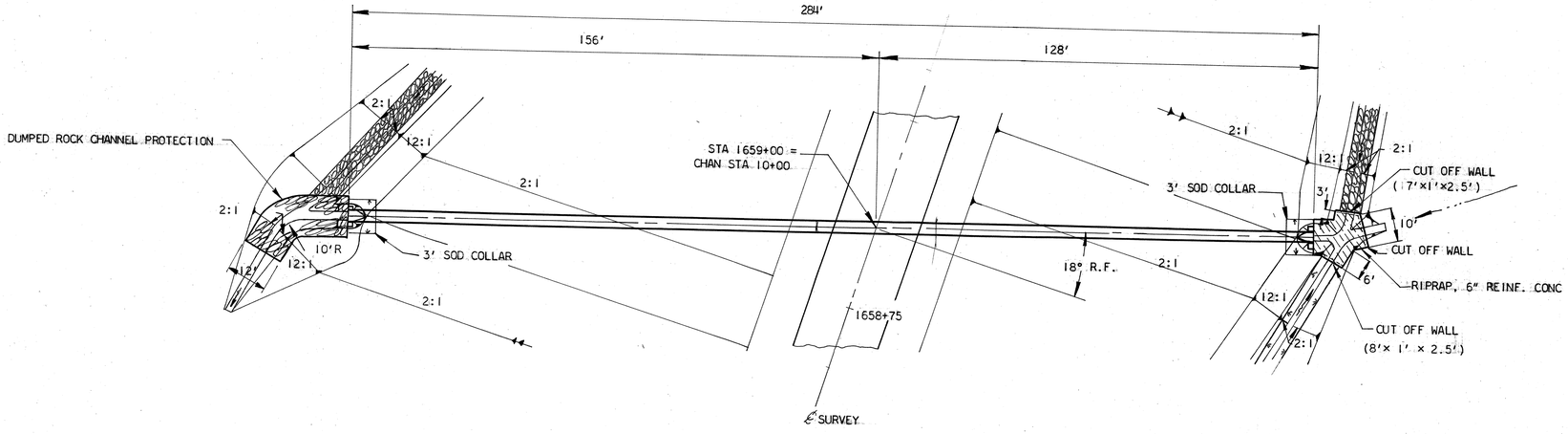
Designed	Checked	Inked
J.R.E. 8/21/62	T.H.W. 10/5/62	S.S.M. 10/5/62

Pipe Detail ~ Sta. 1655+73

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

201
231

HOL - [illegible]
TUS - [illegible]



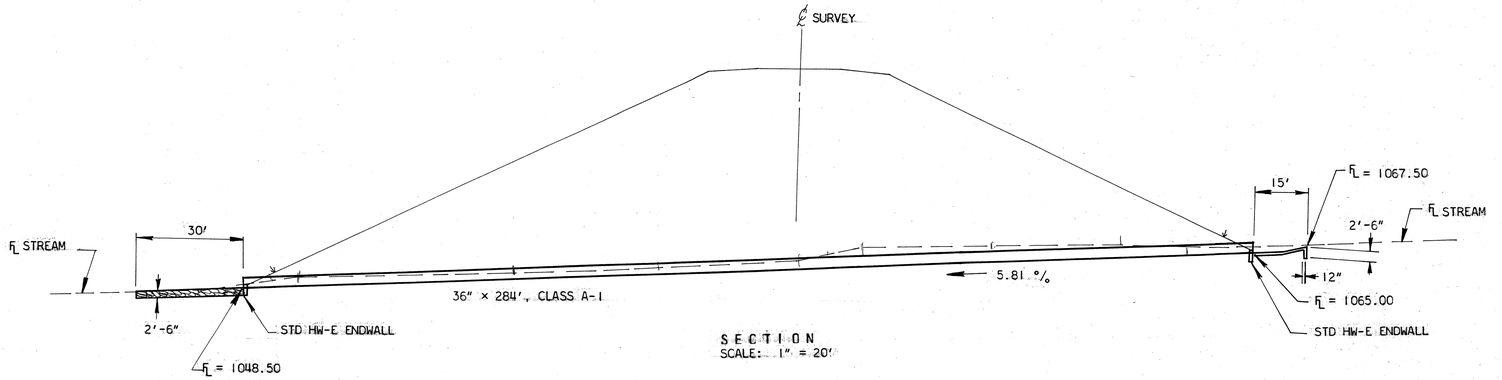
PLAN

DRAINAGE AREA = 32 AC
Q25 = 59 CFS

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	2 CU YDS
I-1	36" PIPE, SEC M-6.4(D), GAGE 8, CLASS A-1	284 LIN FT
I-2	MASONRY CLASS "C"	1.2 CU YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	33 CU YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	21 SQ YDS
L-10	SODDING	13 SQ YDS

STD DRWG'S: I-1; HW-E.



SECTION
SCALE: 1" = 20'

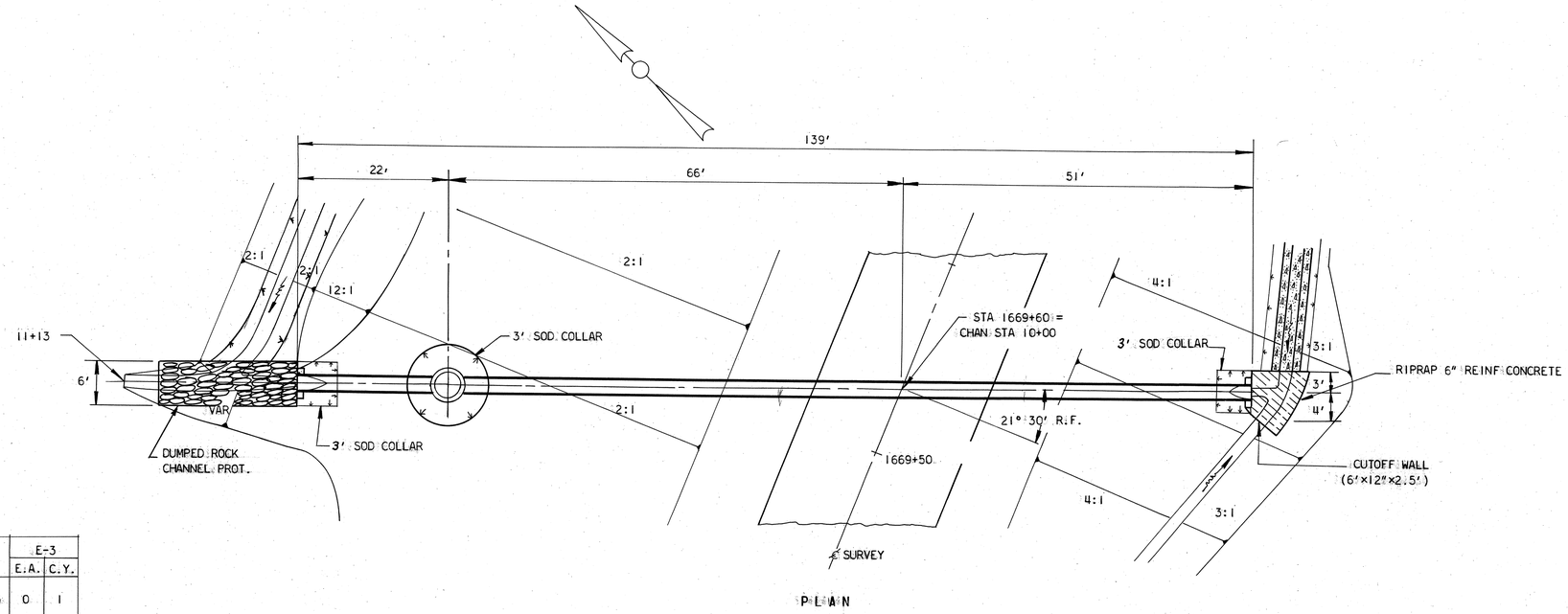
Designed	Checked	Inked
J.R.E. 8/17/62	F.W.L. 10/9/62	S.S.M. 10/9/62

Pipe Detail ~ Sta. 1659+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

202
231

HOL - [redacted] - 23.57
TUS - [redacted] - 0.00



PLAN

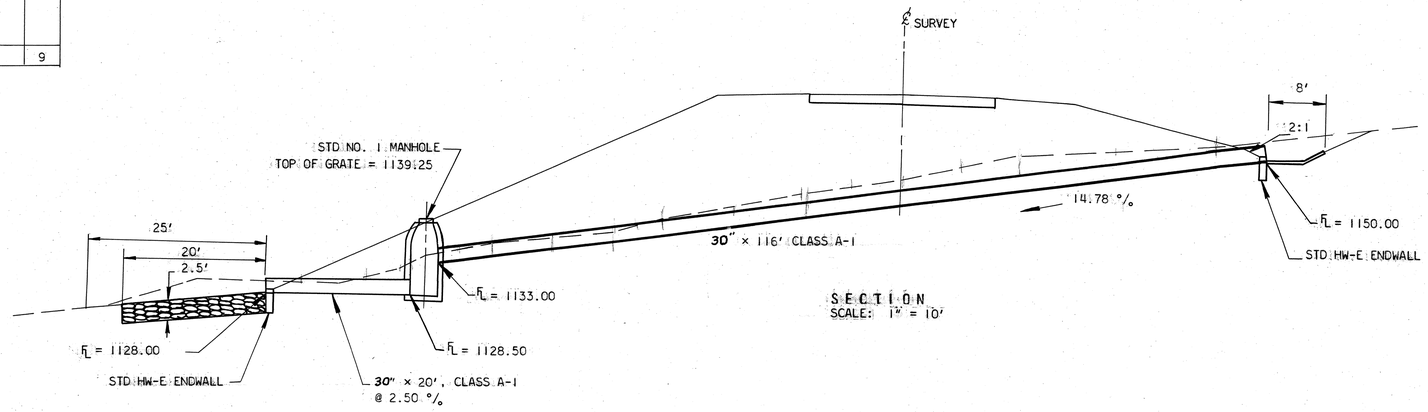
DRAINAGE AREA = .13 AC.
Q25 = 33 CFS

CHANNEL CROSS SECTIONS	E-3 E.A.	E-3 C.Y.
11+13	0	1
1126.50 11+03 1127.5		8
1128.00 10+88 AHEAD 1130.5	21	
SCALE: 1" = 10' TOTAL		9

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	9 CU YDS
I-1	30" PIPE, SEC M-6.4(D), CLASS A-1	140 LIN FT
I-2	MASONRY, CLASS "C"	1.0 CU YDS
I-8	STANDARD NO. 1 MANHOLE	1 EACH
I-10	RIPRAP, 6" REINFORCED CONCRETE	7 SQ YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	11 CU YDS
L-10	SODDING	17 SQ YDS

STD DRWGS: HW-E; I-1; I-8 MANHOLE NO. 1



SECTION
SCALE: 1" = 10'

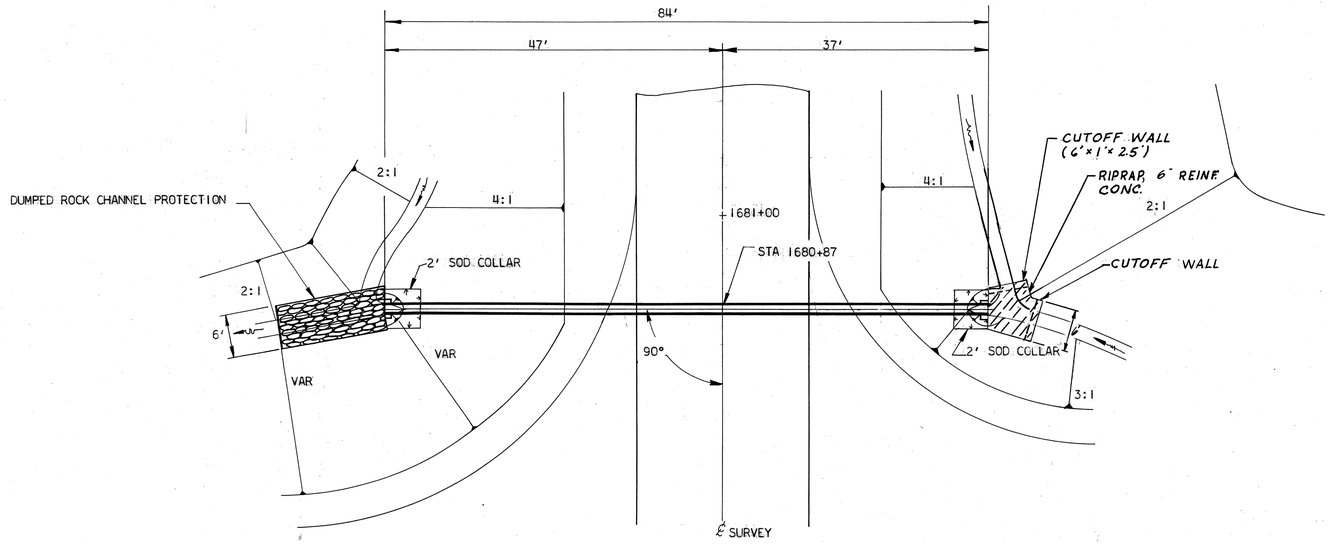
Designed	Checked	Inked
J.R.E. 8-23-62	J.H.W. 10-9-62	S.S.M. 11-2-62

Pipe Detail Sta. 1669+60

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

203
231

HOL - [redacted] - 28.57
TUS - [redacted] - 0.00



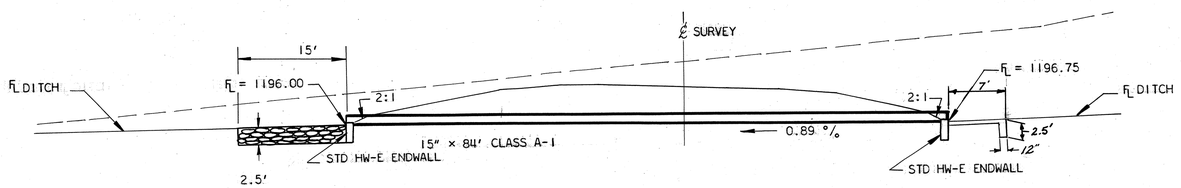
PLAN

DRAINAGE AREA = 1 ACRE
Q25 = 4 CFS

ESTIMATED QUANTITIES

I-1	15" PIPE, SEC M-6.6(A) OR M-6.8(B) CLASS A-1	84	LIN FT
I-2	MASONRY, CLASS "C"	0.5	CU YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	8	CU YDS
L-10	SODDING	5	SQ YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	6	SQ YDS

STD DRWGS: I-1; HW-E.



SECTION
SCALE: 1" = 10'

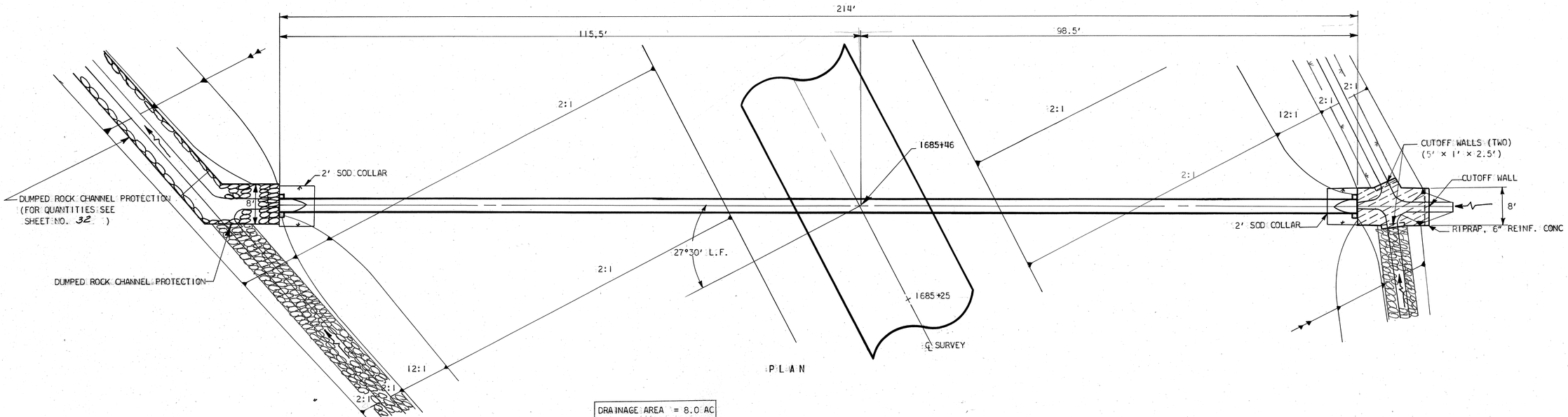
Designed	Checked	Inked
P.M.G.	J.H.W.	S.S.M.
10-23-62	10-31-62	11-1-62

Pipe Detail - Sta. 1680+87

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

204
231

HOL · [redacted] · 28.57
TUS · [redacted] · 0.00

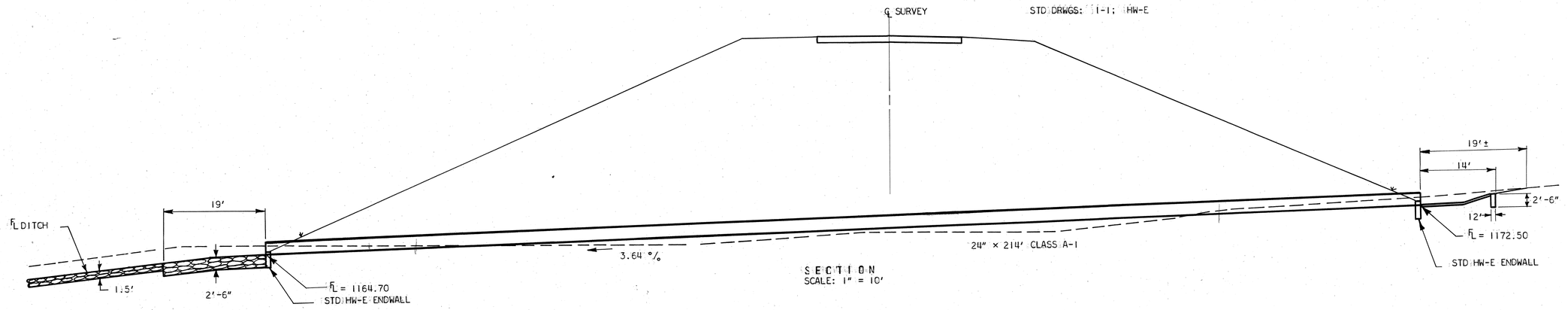


DRAINAGE AREA = 8.0 AC
Q25 = 23 CFS

ESTIMATED QUANTITIES

I-1	24" PIPE, SEC M-6.4(D), CLASS A-1	214	LIN FT
I-2	MASONRY, CLASS "C"	0.8	CU YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	14	CU YDS
I-10	RIPRAP 6" REINFORCED CONCRETE	13	SQ YDS
L-10	SODDING	6	SQ YDS
E-3	CHANNEL EXCAVATION	2	CU YDS

STD DRWGS: I-1; HW-E



SECTION
SCALE: 1" = 10'

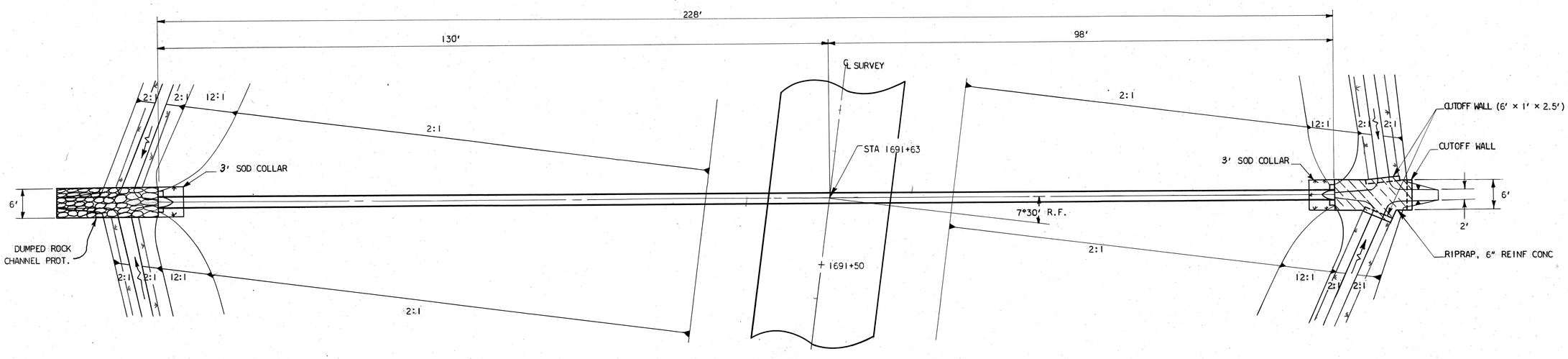
Designed	Checked	Inked
J.H.W. 9-7-62	J.R.E. 9-12-62	D.W.R. 10-9-62

PIPE DETAIL ~ STA. 1685+46

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

205
231

HOL - [redacted] 28.57
TUS - [redacted] 0.00



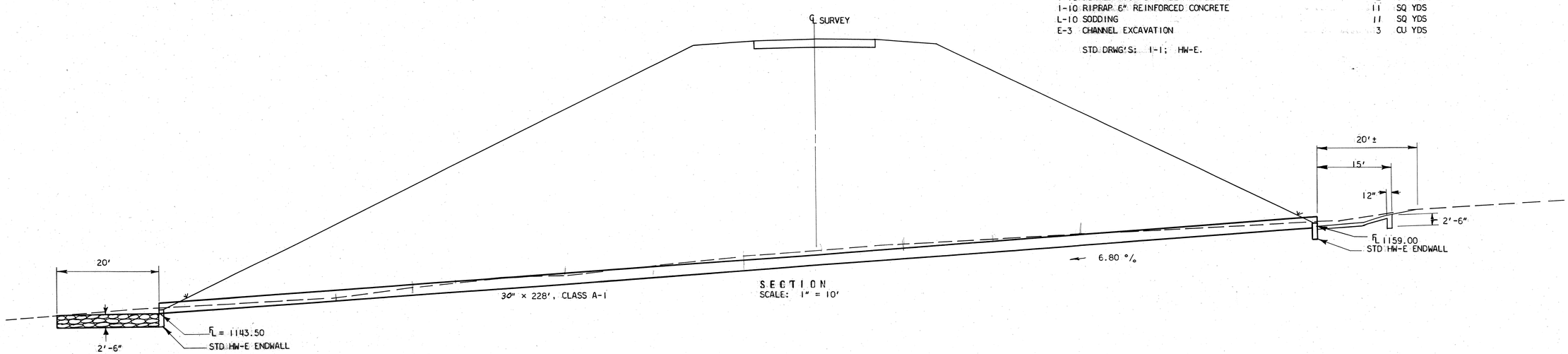
PLAN

DRAINAGE AREA = 12 AC
Q25 = 29 CFS

ESTIMATED QUANTITIES

1-1	30" PIPE SEC M 6.4(D) GAGE 10, CLASS A-1	228 LIN FT
1-2	MASONRY, CLASS "C"	7.0 CU YDS
1-10	DUMPED ROCK CHANNEL PROTECTION	12 CU YDS
1-10	RIPRAP 6" REINFORCED CONCRETE	11 SQ YDS
L-10	SODDING	11 SQ YDS
E-3	CHANNEL EXCAVATION	3 CU YDS

STD DRWG'S: 1-1; HW-E.



SECTION
SCALE: 1" = 10'

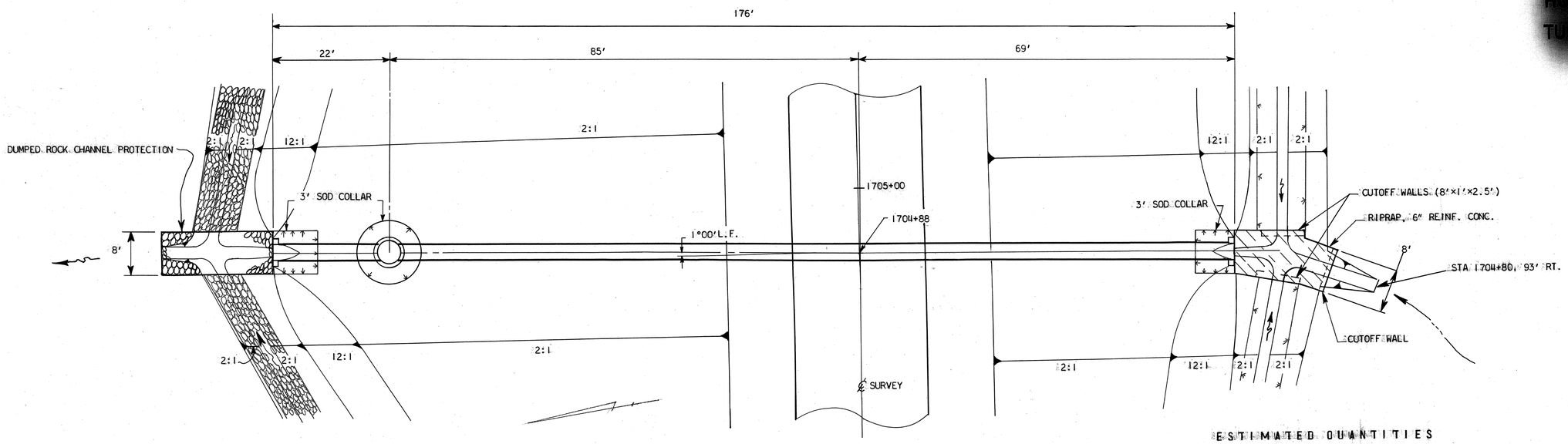
Designed	Checked	Inked
J. H. W. 8-23-62	J. R. E. 9-14-62	D. W. R. 9-21-62

PIPE DETAIL ~ STA. 1691+63

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

206
231

HGL - 28.57
TUS - 0.00



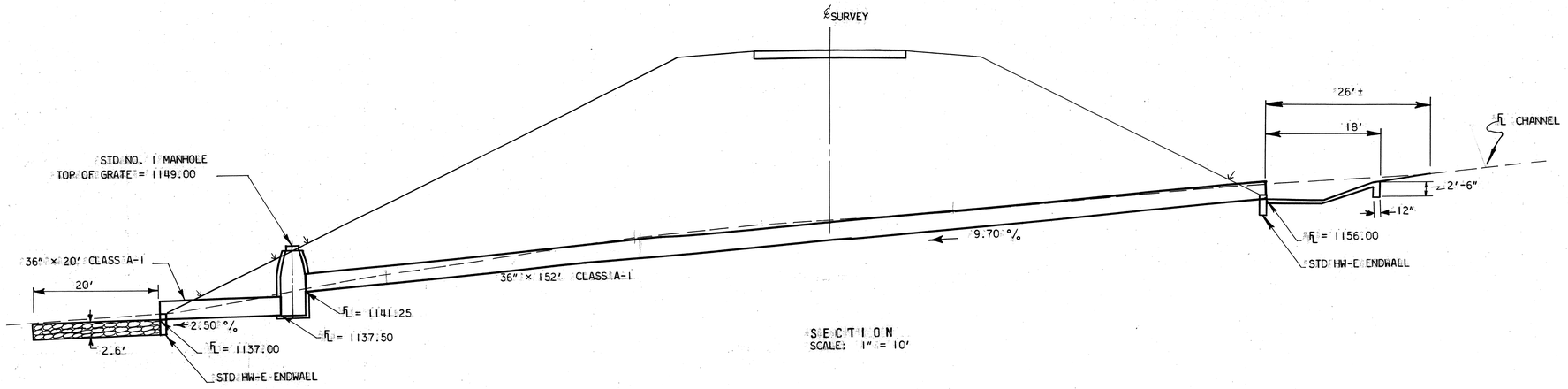
PLAN

DRAINAGE AREA = 24 AC
Q25 = 49 CFS

ESTIMATED QUANTITIES

1-1	36" PIPE, SEC M-6.4(D) GAGE 10, CLASS A-1	176	LIN FT
1-2	MASONRY, CLASS "C"	1.2	CU YDS
1-8	STANDARD NO. 1 MANHOLE	1	EACH
1-10	RIPRAP, 6" REINFORCED CONCRETE	17	SQ YDS
1-10	DUMPED ROCK CHANNEL PROTECTION	15	CU YDS
L-10	SODDING	18	SQ YDS
E-3	CHANNEL EXCAVATION	3	CU YDS

STD DRWG'S: HW-E; 1-1; 1-8 M.H. NO. 1



SECTION
SCALE: 1" = 10'

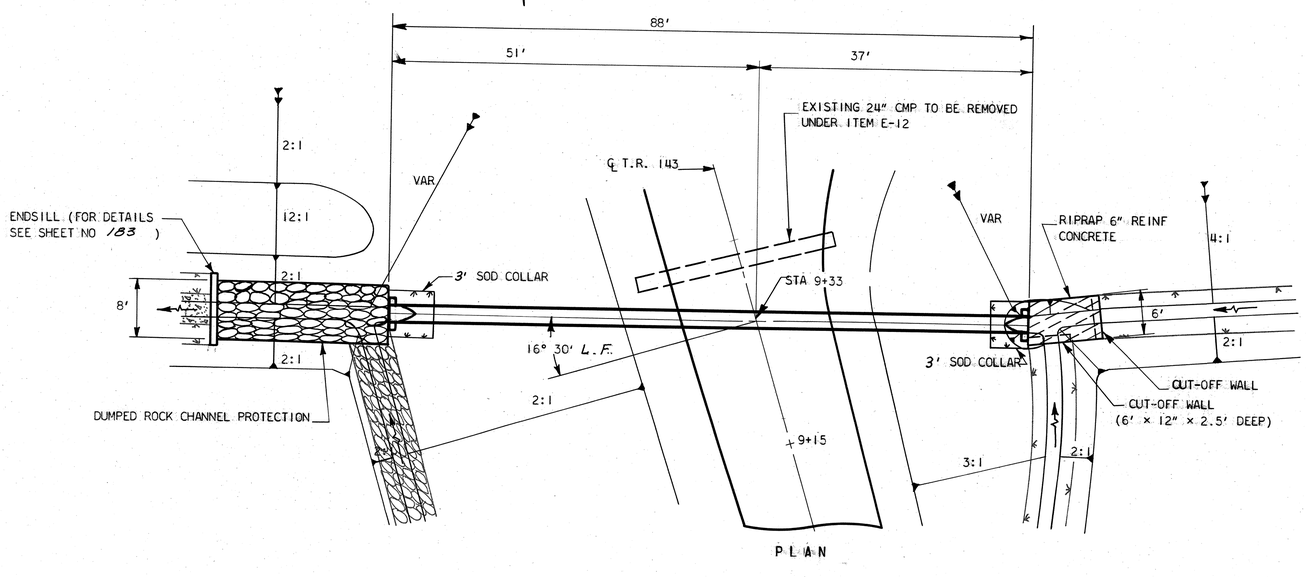
Designed	Checked	Inked
J.H.W. 8/27/62	J.R.E. 9/14/62	S.S.M. 9/18/62

PIPE DETAIL - STA. 1704+88

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

207
231

HOL - 39 - 28.57
TUS - 39 - 0.00



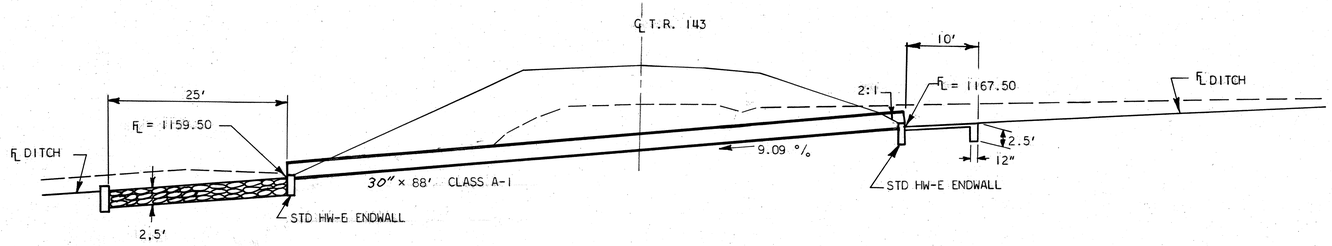
P L A N

DRAINAGE AREA = 12 ACRES
Q25 = 30 CFS

ESTIMATED QUANTITIES

I-1	30" PIPE, SEC M-6.4(D), CLASS A-1	88 LIN FT
I-2	MASONRY, CLASS "C"	2.5 CU YDS
I-10	RIPRAP, 6" REINF CONCRETE	7 SQ YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	19 CU YDS
L-10	SODDING	11 SQ YDS
E-12	PIPE REMOVED, OVER 15"	29 LIN FT

STD DRWGS: I-1; HW-E.



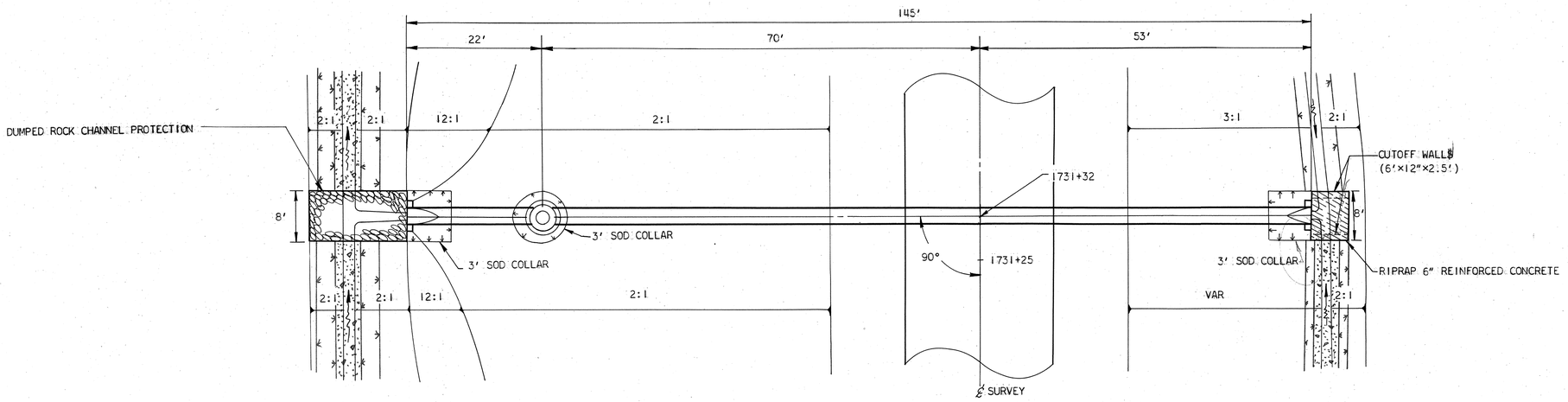
Designed	Checked	Inked
10-1-62	11-6-62	11-7-62
P.M.B.	F.W.L.	D.W.R.

Pipe Detail Sta. 9+33 T.R. 143

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

208
231

HOL - 39 - 28.57
TUS - [illegible] - 0.00



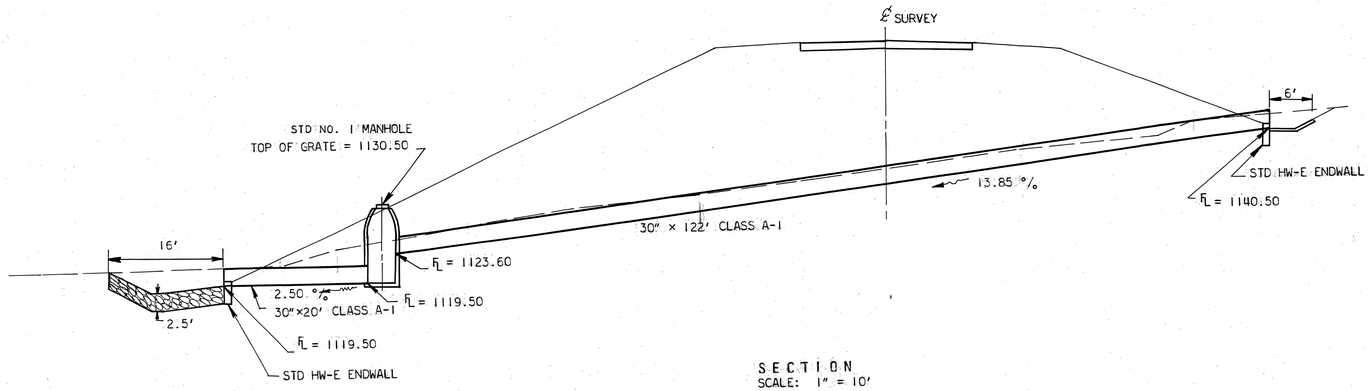
PLAN

DRAINAGE AREA = 14 AC.
Q25 = 34 CFS

ESTIMATED QUANTITIES

1-1	30" PIPE, SEC M-6.4(D) CLASS A-1	146	LIN FT
1-2	MASONRY, CLASS "C"	1.0	CU YDS
1-8	STANDARD NO. 1 MANHOLE	1	EACH
1-10	DUMPED ROCK CHANNEL PROTECTION	12	CU YDS
1-10	RIPRAP 6" REINFORCED CONCRETE	5	SQ YDS
L-10	SODDING	18	SQ YDS

STD DRWGS: 1-1; HW-E; 1-8 MANHOLE NO. 1



SECTION
SCALE: 1" = 10'

Designed	Checked	Inked
J.H.W.	P.M.G.	S.S.M.
10-16-62	10-25-62	10-30-62

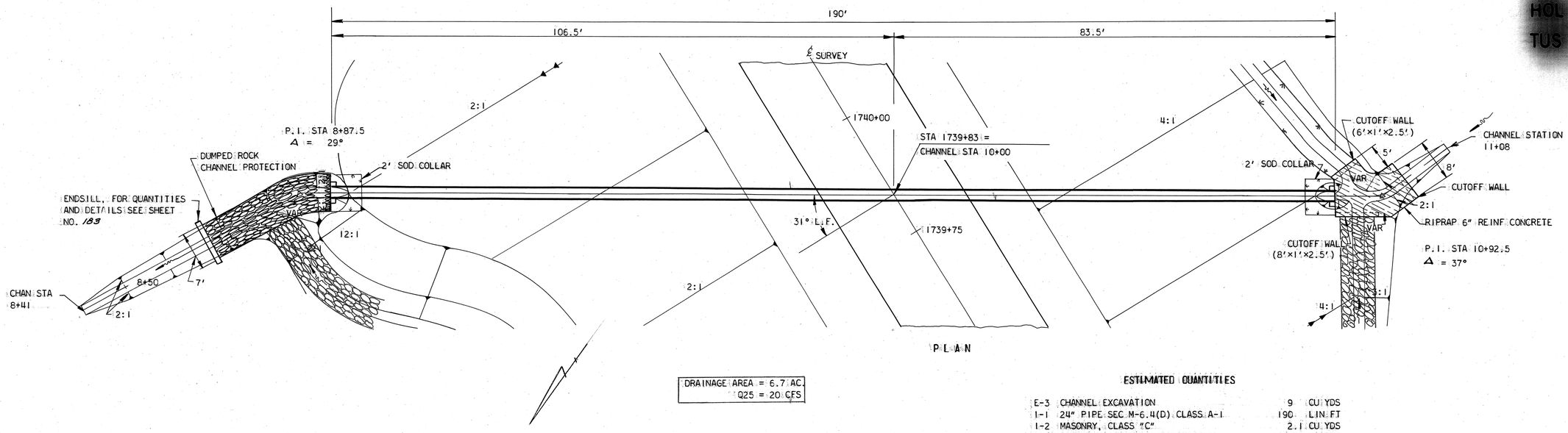
Pipe Detail ~ Sta. 1731+32

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

209/231

HOL - 39 - 28.57

TUS - 39 - 0.00



PLAN

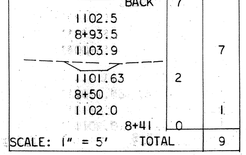
DRAINAGE AREA = 6.7 AC.
Q25 = 20 CFS

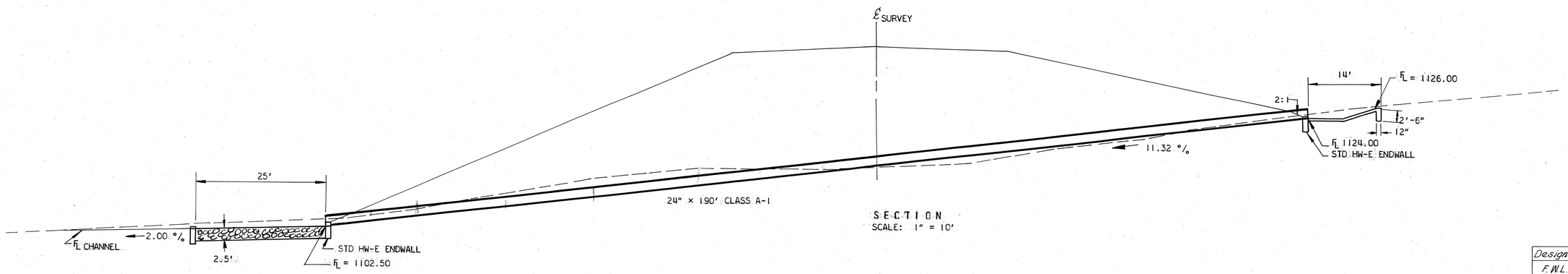
ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	9	CU YDS
I-1	24" PIPE SEC M-6.4(D) CLASS A-1	190	LIN FT
I-2	MASONRY, CLASS "C"	2.1	CU YDS
I-10	RIPRAP 6" REINFORCED CONCRETE	14	SQ YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	16	CU YDS
L-10	SODDING	6	SQ YDS

STD DRWGS: I-1; HW-E

CHANNEL CROSS SECTIONS	E-3 E.A.	C.Y.
ADD FOR INLET		1
BACK	7	
1102.5		
8+93.5		
1103.9		7
1101.63	2	
8+50		
1102.0		1
8+41	0	
SCALE: 1" = 5' TOTAL		9





SECTION
SCALE: 1" = 10'

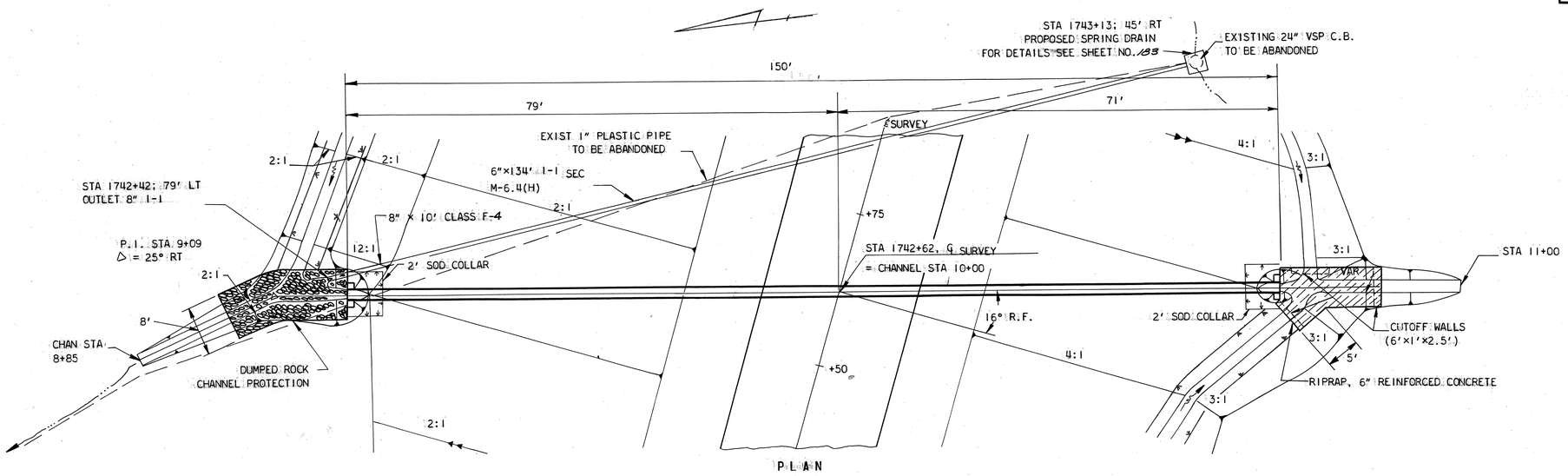
Designed	Checked	Inked
F.W.L. 10-11-62	P.M.G. 10-15-62	S.S.M. 10-31-62

Pipe Detail ~ Sta. 1739+83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

210
231

HOL - 39 - 28.57
TUS - 59 - 0.00



PLAN

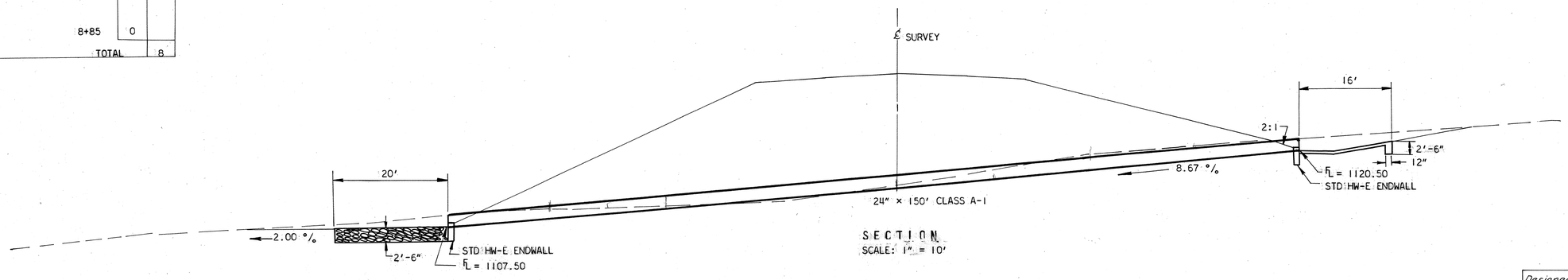
CHANNEL CROSS SECTIONS	E-3 E.A.	E-3 C.Y.
SCALE: 1" = 5' ADD FOR INLET		2
BACK	14	
1107.50 9+21 1109.6		5
2'	3	
1107.18 9+05 1108.0		1
8+85	0	
TOTAL		8

DRAINAGE AREA = 6.3 AC.
Q25 = 20 CFS

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	8	CU YDS
I-1	24" PIPE, SEC M-6.4(D) CLASS A-1	150	LIN FT
I-2	MASONRY, CLASS "C"	0.8	CU YDS
I-10	RIPRAP 6" REINFORCED CONCRETE	12	SQ YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	15	CU YDS
L-10	SODDING	6	SQ YDS
I-1	6" PIPE, SEC M-6.4(H) CLASS I-3 AS PER PLAN	134	LIN FT
I-9	STONE UNDERDRAIN NO. 1 AS PER PLAN	3	LIN FT
I-16	CATCH BASINS ABANDONED	1	EACH
I-1	8" PIPE, SEC M-6.4(C) CLASS F-4	10	LIN FT

STD DRWGS: I-1; HW-E



SECTION
SCALE: 1" = 10'

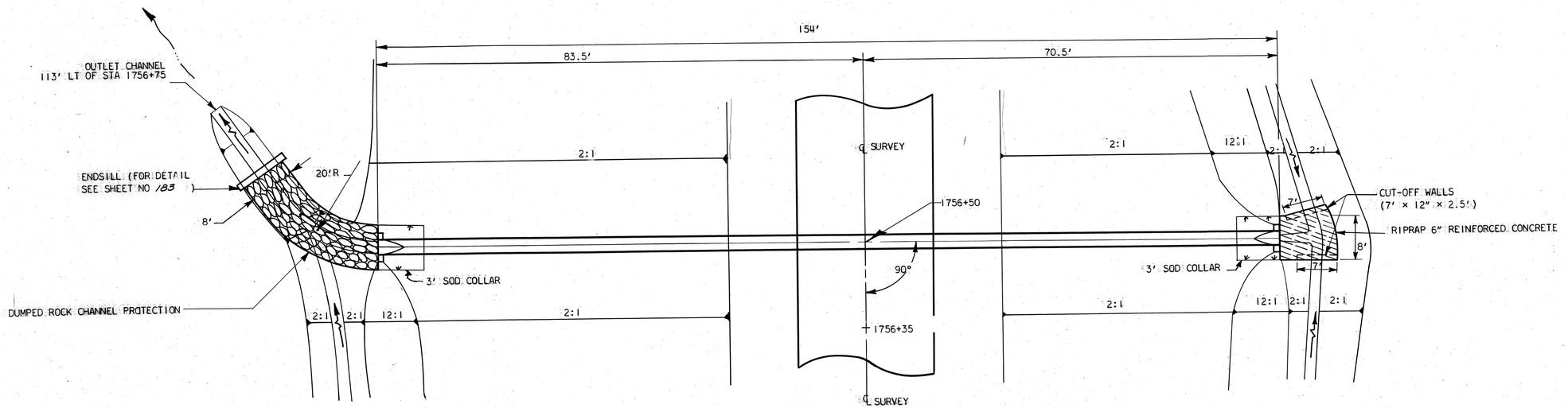
Designed	Checked	Inked
F.W.L. 10-11-62	P.M.G. 10-18-62	S.S.M. 10-30-62

Pipe Detail ~ Sta. 1742+62

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

211
231

HOL - 39 - 28.57
TUS - 39 - 0.00



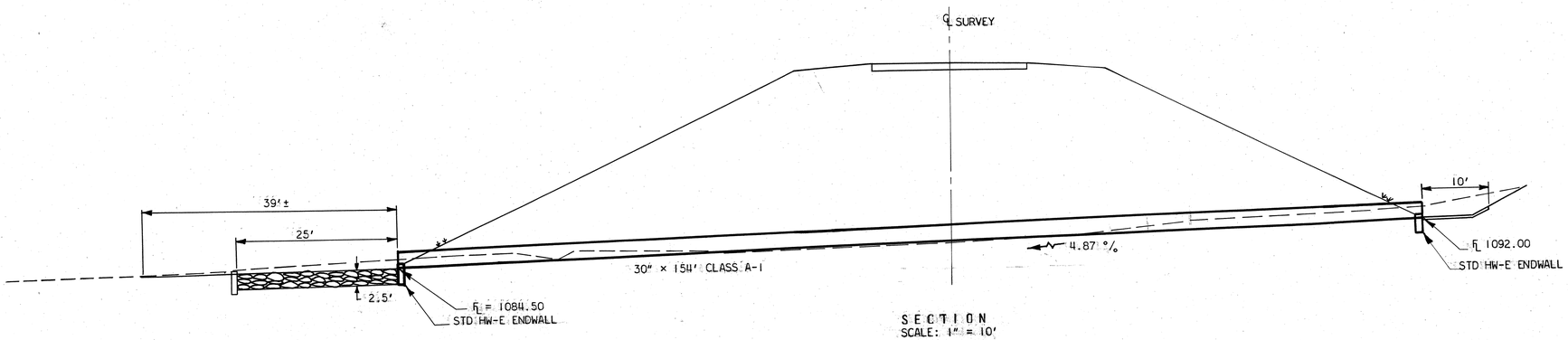
PLAN

DRAINAGE AREA = 18 AC.
Q25 = 39 CFS

ESTIMATED QUANTITIES

E-3	CHANNEL EXCAVATION	3 CU YDS
I-1	30" PIPE, SEC M-6.4(D), OR SEC M-6.6(D) CLASS A-1	154 LIN FT
I-2	MASONRY CLASS "C"	2.5 CU YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	19 CU YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	10 SQ YDS
L-10	SODDING	12 SQ YDS

STD DRWGS: I-1; HW-E.



SECTION
SCALE: 1" = 10'

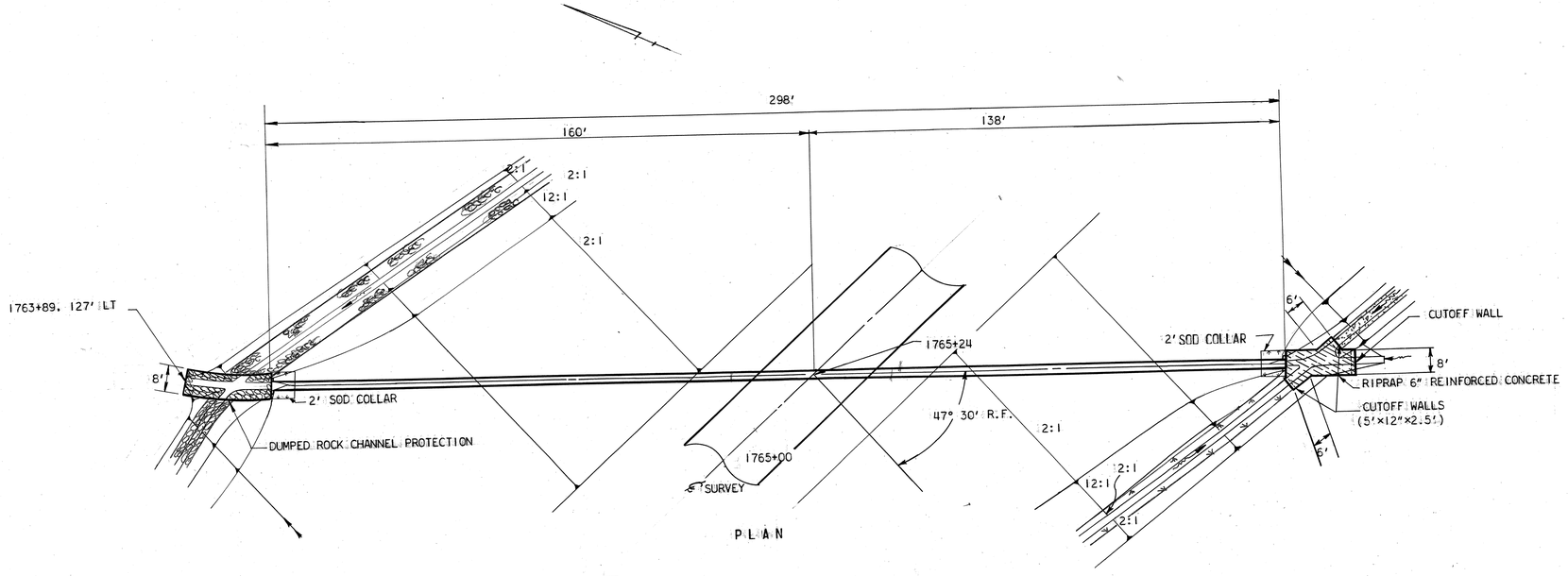
Designed	Checked	Inked
J.H.W. 10-15-62	P.M.S. 10-16-62	D.W.R. 11-8-62

PIPE DETAIL ~ STA. 1756+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

212
231

HOL - 39 - 28.57
TUS - 39 - 0.00



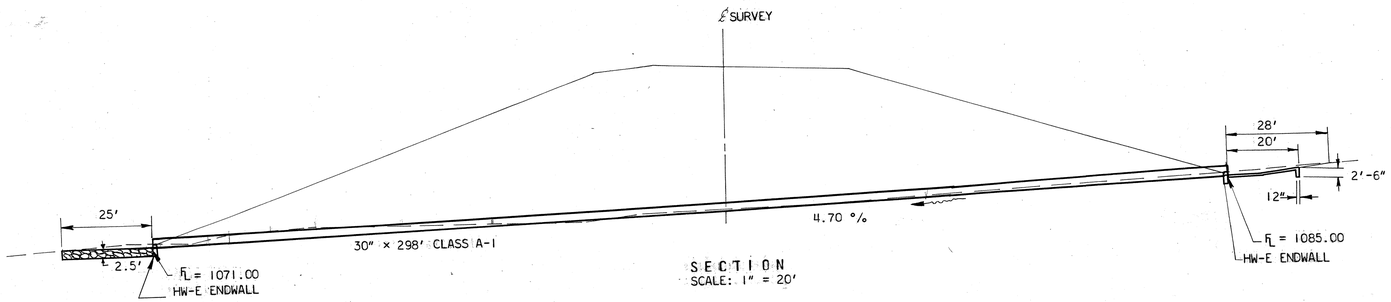
PLAN

DRAINAGE AREA = 15 AC.
Q25 = 36 CFS

ESTIMATED QUANTITIES

I-1	30" PIPE, SEC. M-6.4(D) GAGE 10 CLASS A-1	298	LIN. FT
I-2	MASONRY, CLASS "C"	1.0	CU. YDS
I-10	DUMPED ROCK CHANNEL PROTECTION	19	CU. YDS
I-10	RIPRAP, 6" REINFORCED CONCRETE	21	SQ. YDS
L-10	SODDING	12	SQ. YDS
E-3	CHANNEL EXCAVATION	2	CU. YDS

STD. DRWGS: I-1; HW-E.



SECTION
SCALE: 1" = 20'

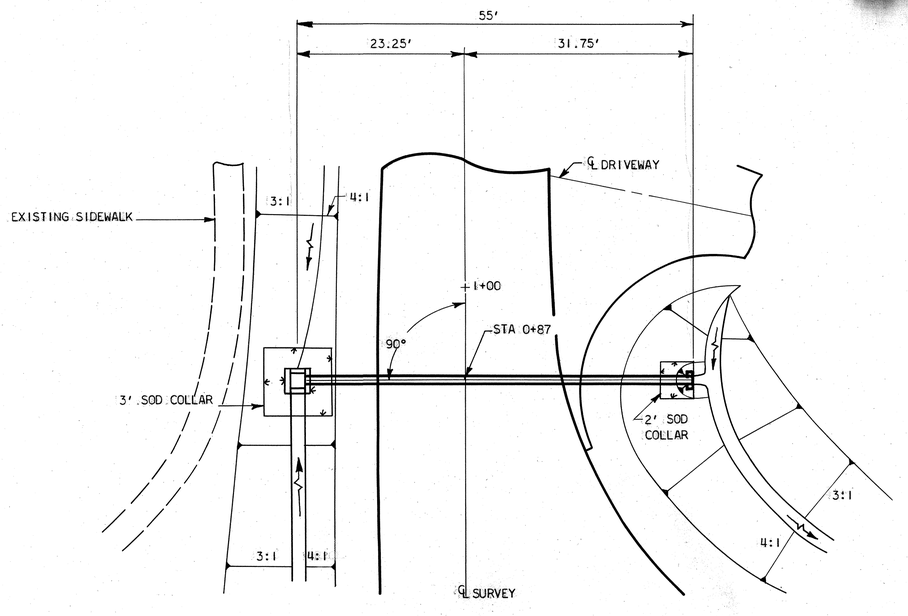
Designed	Checked	Traced
J.H.W. 9-18-62	J.R.E. 9-19-62	S.S.M. 10-30-62

Pipe Detail ~ Sta. 1765+24

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

213
231

HOL - 39 - 28.57
TUS - 39 - 0.00

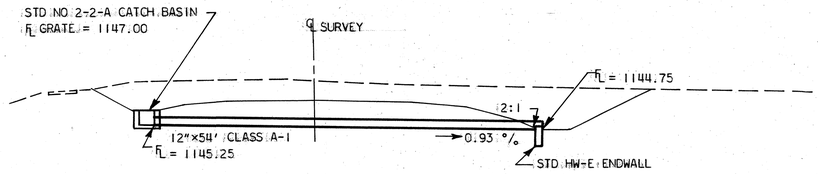


PLAN

DRAINAGE AREA = 0.2 ACRES
Q25 = 1.4 CFS

ESTIMATED QUANTITIES

I-1	12" PIPE, CLASS A-1	55 LIN. FT
I-2	MASONRY, CLASS "C"	0.2 CU. YDS
I-8	STD. NO. 2-2-A CATCH BASIN	1 EACH
L-10	SODDING	11 SQ. YDS



Designed	Checked	Inked
11-27-62 P.M.G.	11-27-62 J.R.E.	11-30-62 D.W.R.

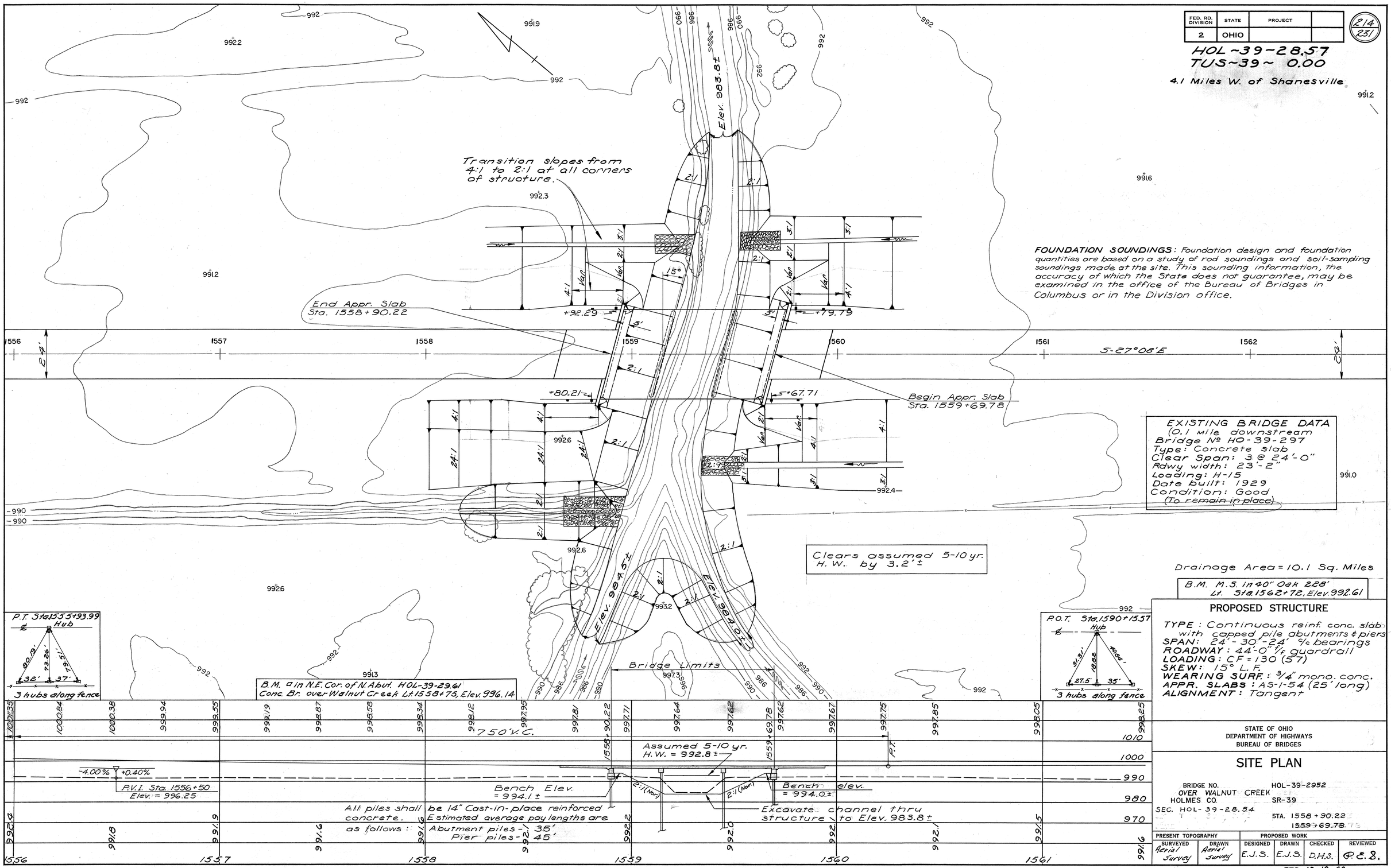
PIPE DETAIL Sta. 0+87 (Conn. Sta. 1773+64.92)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

214/231

HOL-39-28.57
TUS-39- 0.00

4.1 Miles W. of Shanesville



FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.

EXISTING BRIDGE DATA
(0.1 mile downstream
Bridge No HO-39-297
Type: Concrete slab
Clear Span: 3 @ 24'-0"
Rdwy width: 23'-2"
Loading: H-15
Date built: 1929
Condition: Good
(To remain in place)

Drainage Area = 10.1 Sq. Miles

B.M. M.S. in 40" Oak 228' Lt. Sta.1562+72, Elev. 992.61

PROPOSED STRUCTURE

TYPE: Continuous reinf. conc. slab with capped pile abutments & piers
SPAN: 24'-30'-24' c/c bearings
ROADWAY: 44'-0" f/f guardrail
LOADING: CF = 130 (57)
SKEW: 15° L.F.
WEARING SURF.: 3/4" mono. conc.
APPR. SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. HOL-39-2952
OVER WALNUT CREEK
HOLMES CO. SR-39
SEC. HOL-39-28.54
STA. 1558+90.22
1559+69.78

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	E.J.S.	E.J.S.	D.H.S.	P.E.S.

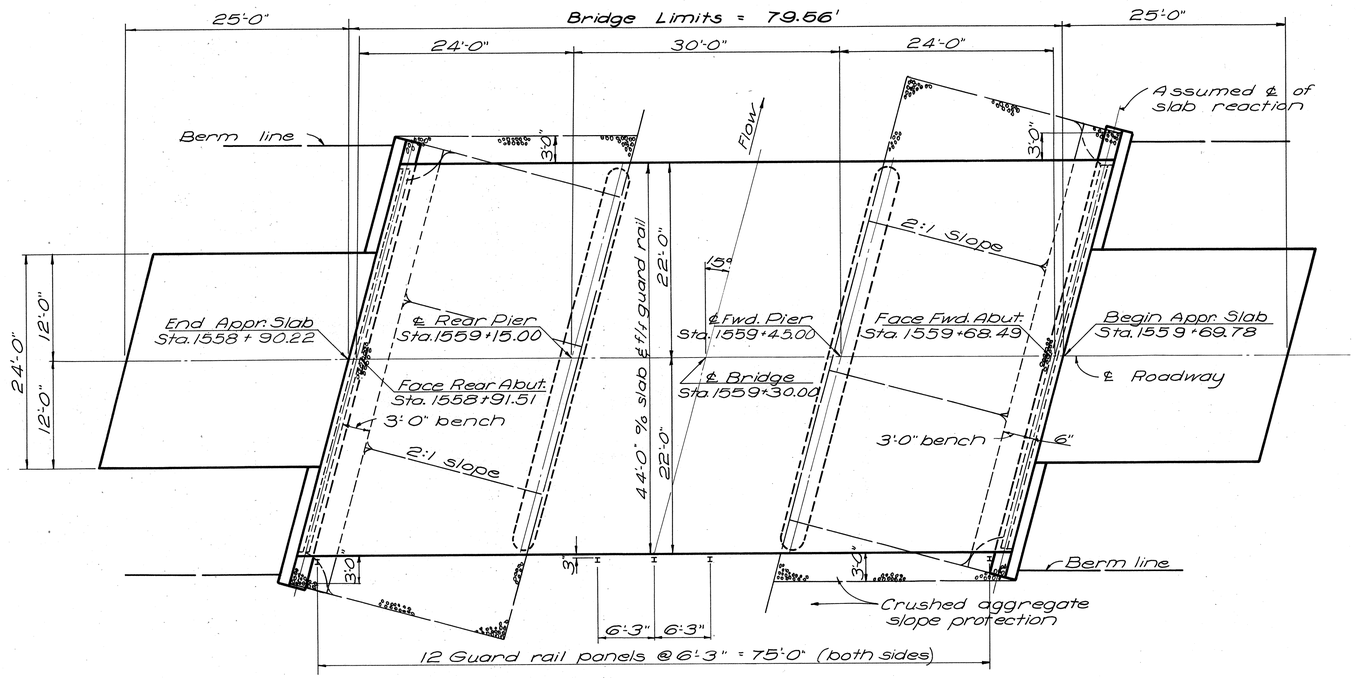
BFG 12-19-62

01-11365

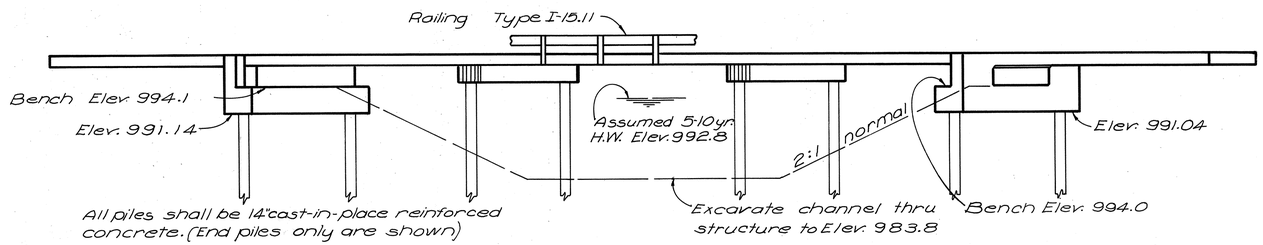
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

215
231

HOL-39-28.57
TUS-39-0.00



GENERAL PLAN



ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawings A-1-54, revised 12-1-54, C5-1-54, revised 7-16-56, and P-1-54, revised 2-2-59, and to Supplemental Specification S-101 dated 7-12-62.

PILES shall be driven to a minimum bearing capacity of 23 tons per pile for the abutments and 30 tons per pile for the piers.

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all the pier piles. If the encasement is omitted the pile casings shall have a thickness of metal not less than No. 7 gauge, and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface of the ground.

REINFORCING BAR CLEARANCE from top face of Superstructure shall be 2".

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abuts.	Piers	Super.	Genl		
E-2	59	Cu. Yds.	Unclassified excavation	59					
E-3	1401	Cu. Yds.	channel excavation				1401		
S-1	164	Cu. Yds.	Class "C" concrete, superstructure and pier		16	148			
			caps						
S-1	53	Cu. Yds.	Class "E" concrete, abutments	53					
S-4	45080	Lbs.	Reinforcing steel	5,768	4,572	34,740			
S-14	159.12	Lin. Ft.	Railing (Type I-15.11 with galvanized steel			159.12			
			posts and bolts)						
S-16	Lump	Sum	First test pile				Lump		
S-18	1280	Lin. Ft.	14" Cast-in-place reinforced concrete piles	560	720				
S-29	17	Cu. Yds.	Porous backfill	17					
I-10	320	Sq. Yds.	Crushed aggregate slope protection				320		
S-101	164	Each	Water-reducing, set-retarding admixture		16	148			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

2

GENERAL PLAN & ELEVATION NOTES & ESTIMATED QUANTITIES

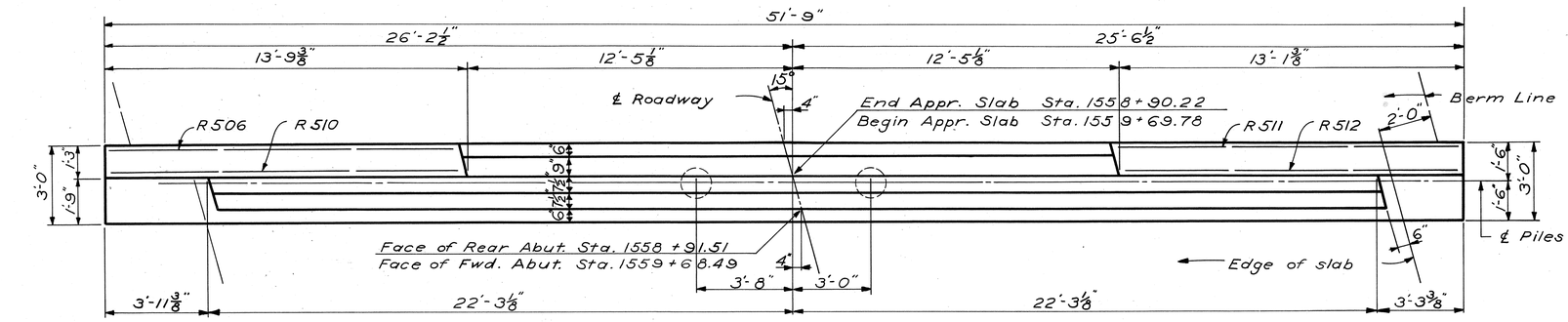
BRIDGE NO. HOL-39-2952
OVER WALNUT CREEK
HOLMES COUNTY STA. 1558 + 90.22
1559 + 69.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.B.H.	W.B.H.	CAM	R.L.D.	BFG	12-19-62	

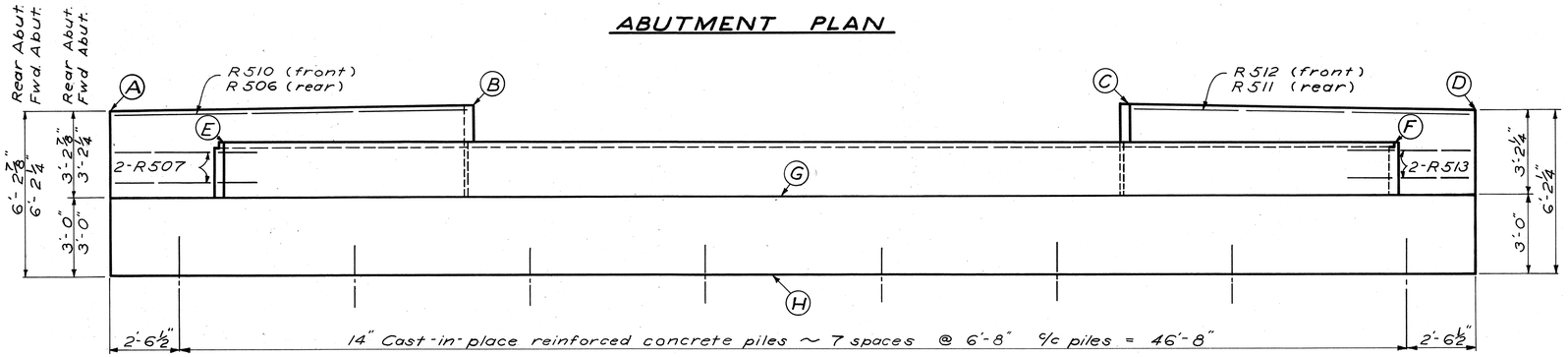
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

216/231

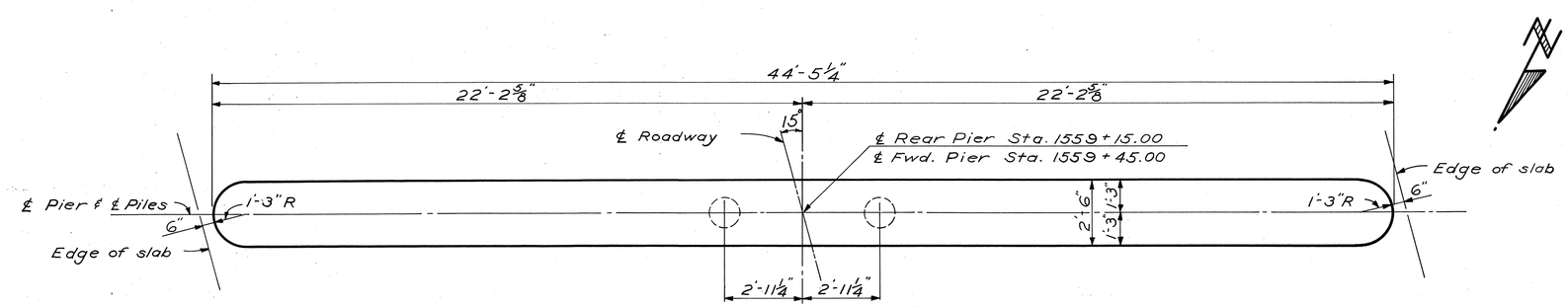
HOL-39-28.57
TUS-39-000



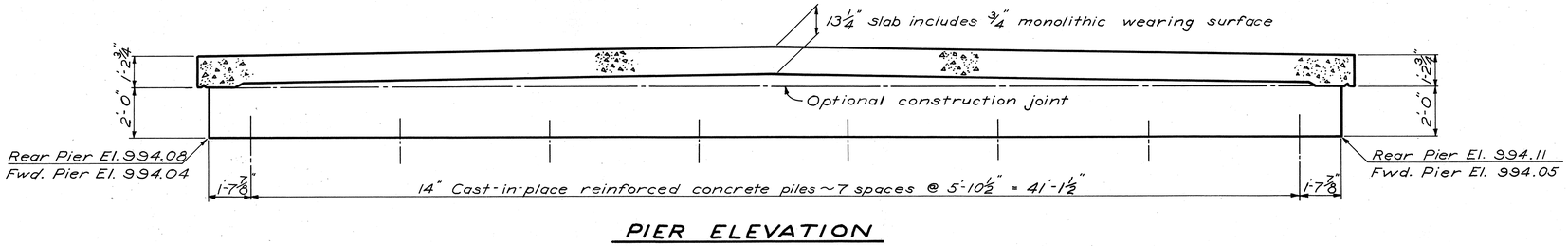
ABUTMENT PLAN



ABUTMENT ELEVATION



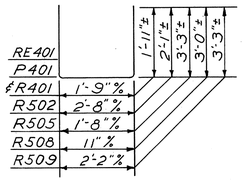
PIER PLAN

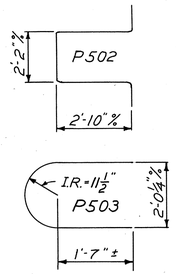


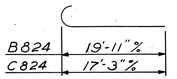
PIER ELEVATION

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp	Bending Diagrams
Abutments					
R1001	16	23'-8"	1629	S	
R801	16	27'-0"	1153	S	
R501	16	26'-6"	442	S	
R502	136	6'-7"	1071	B	
R503	8	22'-11"	191	S	
R504	24	5'-4"	134	S	
R505	34	7'-11"	281	B	
R506	2	13'-2"	27	S	
R507	8	5'-4"	45	S	
R508	28	6'-8"	195	B	
R509	28	8'-5"	246	B	
R510	2	13'-5"	28	S	
R511	2	13'-1"	27	S	
R512	2	12'-10"	27	S	
R513	8	4'-9"	40	S	
R401	64	5'-3"	232	B	
Piers					
P1001	8	45'-0"	1549	S	
P901	8	41'-11"	1140	S	
P701	96	4'-0"	785	S	
P501	4	41'-11"	175	S	
P502	68	9'-0"	638	B	
P503	8	6'-4"	53	B	
P401	64	5'-3"	232	B	
Superstructure					
A824	120	28'-1"	8998	S	
B824	38	21'-0	2131	B	
C824	40	18'-4	1958	B	
D824	19	19'-6"	989	S	
E824	20	15'-10"	845	S	
F924	80	23'-7"	6415	S	
G924	38	12'-10"	1658	S	
H924	40	10'-6"	1428	S	
J601	40	15'-3"	916	S	
K601	20	11'-6"	345	S	
M601	80	45'-0"	5407	S	
N601	54	45'-0"	3650	S	
Replacement Bars					
RE1001	1	7'-2"	-	S	
RE901	1	6'-10"	-	S	
RE801	1	6'-6"	-	S	
RE701	1	4'-0"	-	S	
RE601	1	5'-11"	-	S	
RE501	1	5'-7"	-	S	
RE401	1	5'-5"	-	B	







ELEVATIONS

	REAR ABUTMENT	FORWARD ABUTMENT
A	997.38	997.23
B	997.57	997.43
C	997.54	997.43
D	997.33	997.23
E	996.19	996.05
F	996.14	996.04
G	994.14	994.04
H	991.14	991.04

Note : For details not shown see Standard Drawings A-1-54 & P-1-54

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

3/3

ABUTMENT & PIER DETAILS & REINFORCING STEEL LIST
BRIDGE NO. HOL-39-2952
OVER WALNUT CREEK

HOLMES COUNTY STA 1558+90.22
1559+69.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.B.H.	W.B.H.	V.L.A.	R.L.D.	BFG	12-19-62	

CENTER LINE SURVEY PLAT

STATE ROUTE 39

HOLMES COUNTY SEC. 28.57

WALNUT CREEK TWP., R4W, T9N, SEC'S. 19, 20, 21, 1, 25, 5, 4, & 24.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

217/231

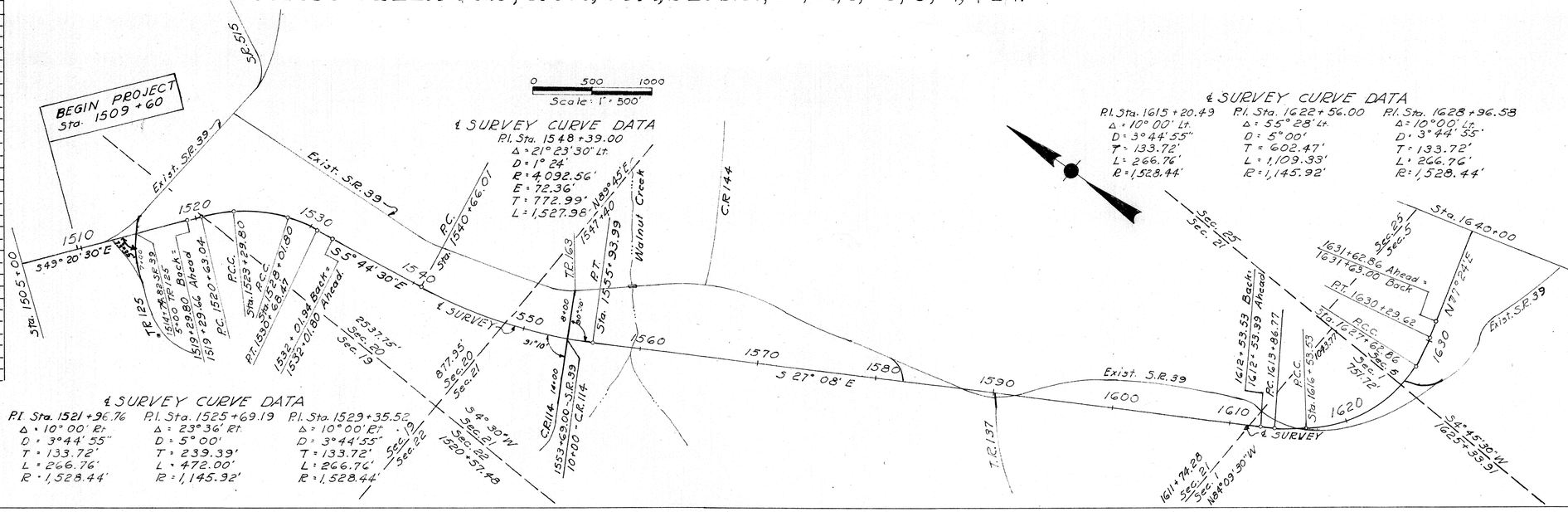
HOL-39-28.57
TUS-39-0.00

1/15

CENTERLINE REFERENCE MONUMENTS			
POINT	STATION	POINT	STATION
P.O.T.	1510 + 00.00		
P.C.	1520 + 63.04		
P.C.C.	1523 + 29.80		
P.C.C.	1528 + 01.80		
P.T.	1530 + 68.47		
P.C.	1540 + 66.01		
P.O.C.	1550 + 00.00		
P.T.	1555 + 39.99		
P.O.T.	1560 + 00.00		
P.O.T.	1570 + 00.00		
P.O.T.	1580 + 00.00		
P.O.T.	1590 + 00.00		
P.O.T.	1600 + 00.00		
P.O.T.	1610 + 00.00		
P.C.	1613 + 86.77		
P.C.C.	1616 + 53.53		
P.C.C.	1627 + 62.86		
P.T.	1630 + 29.62		
P.O.T.	1640 + 00.00		
P.O.T.	1650 + 00.00		
P.O.T.	1660 + 00.00		
P.C.	1668 + 20.10		
P.O.C.	1680 + 00.00		
P.T.	1689 + 20.25		
P.O.T.	1700 + 00.00		
P.C.	1707 + 90.14		
P.T.	1722 + 95.70		
P.O.T.	1730 + 00.00		

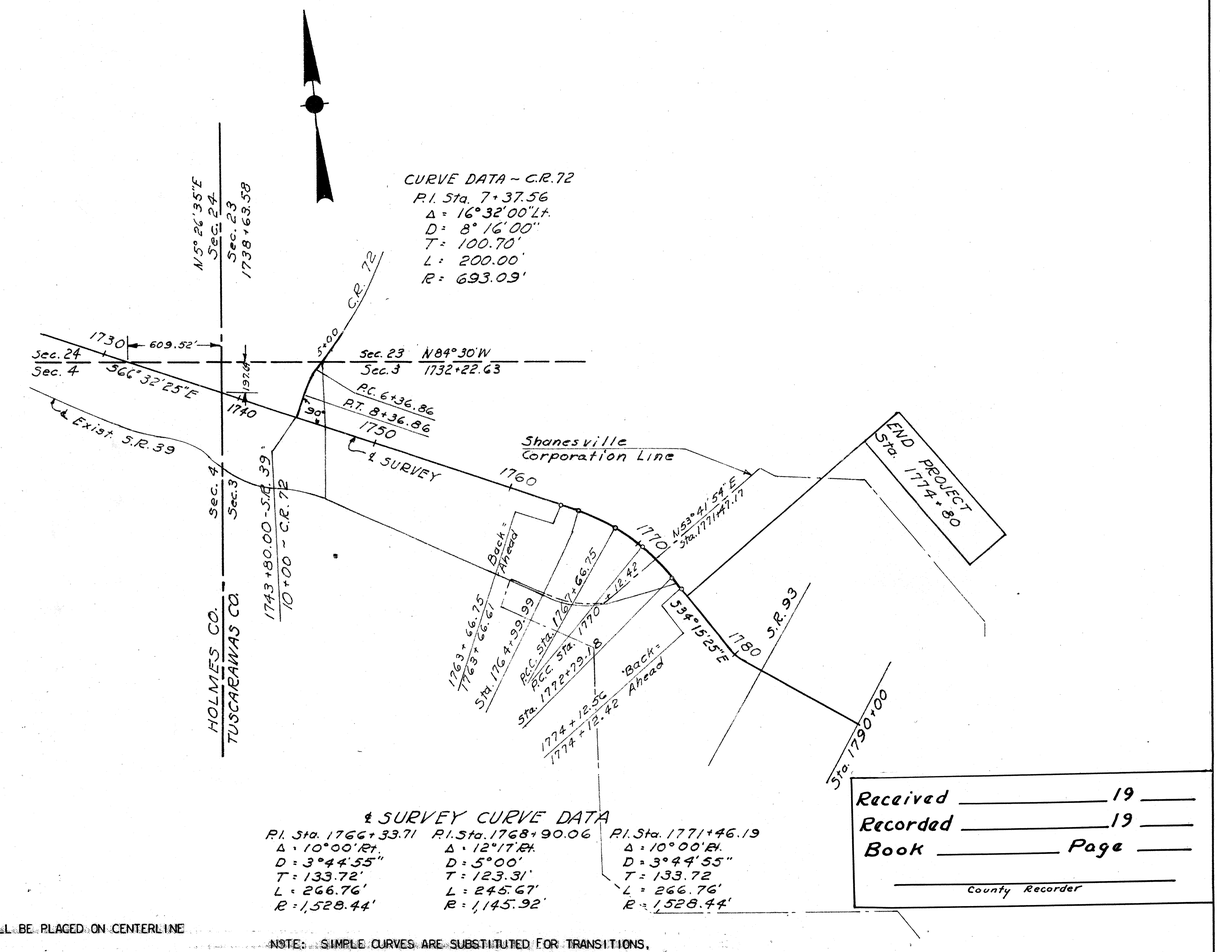
NOTE: SIMPLE CURVES ARE SUBSTITUTED FOR TRANSITION, FOR PURPOSES OF RIGHT OF WAY DESCRIPTIONS ONLY.

CENTERLINE REFERENCE MONUMENTS WILL BE PLACED IN THE CENTERLINE OF SURVEY DURING CONSTRUCTION.


BEGIN PROJECT Sta. 1509 + 60
Exist. S.R. 39
S.R. 515
0 500 1000
Scale: 1" = 500'
℄ SURVEY CURVE DATA
P.I. Sta. 1548 + 39.00
Δ = 21° 23' 30" Lt.
D = 1° 24'
R = 4,092.56'
E = 72.36'
T = 772.99'
L = 1,527.98'
℄ SURVEY CURVE DATA
P.I. Sta. 1615 + 20.49
Δ = 10° 00' Lt.
D = 3° 44' 55"
T = 133.72'
L = 266.76'
R = 1,528.44'
P.I. Sta. 1622 + 56.00
Δ = 55° 28' Lt.
D = 5° 00'
T = 602.47'
L = 1,109.33'
R = 1,145.92'
P.I. Sta. 1628 + 96.58
Δ = 10° 00' Lt.
D = 3° 44' 55"
T = 133.72'
L = 266.76'
R = 1,528.44'
℄ SURVEY CURVE DATA
P.I. Sta. 1521 + 96.76
Δ = 10° 00' Rt.
D = 3° 44' 55"
T = 133.72'
L = 266.76'
R = 1,528.44'
P.I. Sta. 1525 + 69.19
Δ = 23° 36' Rt.
D = 5° 00'
T = 239.39'
L = 472.00'
R = 1,145.92'
P.I. Sta. 1529 + 35.52
Δ = 10° 00' Rt.
D = 3° 44' 55"
T = 133.72'
L = 266.76'
R = 1,528.44'
C.R. 144
Walnut Creek
T.R. 163
T.R. 137
C.R. 114
Exist. S.R. 39
Sec. 25 Sec. 21
Sec. 25 Sec. 5
Sec. 20 Sec. 19
Sec. 20 Sec. 21
Sec. 22 Sec. 21
Sec. 22 Sec. 19
Sec. 21 Sec. 28
Sec. 1 Sec. 6
Sec. 1 Sec. 12
Sec. 21 Sec. 28
Sec. 21 Sec. 1
Sta. 1505 + 00
Sta. 1640 + 00
1631 + 62.86 Ahead = 1631 + 63.00 Back
P.T. 1630 + 29.62
P.C.C. 1627 + 62.86
1612 + 53.53 Back = 1612 + 35.39 Ahead
P.C. 1613 + 86.77
P.C.C. 1616 + 53.53
Sta. 1523 + 29.80 P.C.C.
Sta. 1528 + 01.80 P.C.C.
1532 + 01.94 Back = 1532 + 01.80 Ahead
Sta. 1530 + 68.47 P.C.
Sta. 1519 + 29.46 Ahead = 1519 + 29.80 Back
Sta. 1520 + 63.04 P.C.
Sta. 1540 + 66.01 P.C.
Sta. 1547 + 40
Sta. 1555 + 33.99 P.T.
1553 + 69.00 = 10 + 00 C.R. 114
1611 + 74.28
N 77° 24' E ℄ SURVEY
S 27° 08' E
S 55° 44' 30" E
S 4° 30" W
S 4° 45' 30" W
N 77° 24' E
N 84° 09' 30" W
N 87° 24' E
S 66° 32' 25" E
S 81° 35' 45" E
N 84° 55' W
N 84° 30' W
N 5° 26' 35" E
S 4° 40' 15" W
Sec. 23 N 84° 30' W 1732 + 22.63
Sec. 4 Sec. 3
Sec. 24 Sec. 4
Sec. 5 Sec. 4
Holmes Co. Tuscarawas Co.
1710 ℄ Survey 1720
1680 1690 1700 1710 1720 1730 1740 1650 1660 1670 1620 1630 1640 1610 1600 1590 1580 1570 1560 1550 1540 1530 1520 1510
2874.12 1655 + 28.65
1684 + 52.01
1640 + 00
1625 + 33.91
609.52'
4684.25'
2839.17'
2837.75'
877.95'
661.39'
657.04'
1737 + 63.58
1738 + 63.58
1722 + 95.70 P.T.
1707 + 90.14 P.C.
1689 + 20.25 P.T.
1683 + 20.10 P.C.
1684 + 20.25 P.T.
1680 + 14.80 S 82° 39' 10000 T.R. 146
1680 + 00 P.O.C.
1668 + 20.10 P.C.
1655 + 28.65 P.T.
1650 + 00 P.O.T.
1640 + 00 P.O.T.
1630 + 00 P.O.T.
1620 + 57.48
1610 + 00 P.O.T.
1600 + 00 P.O.T.
1590 + 00 P.O.T.
1580 + 00 P.O.T.
1570 + 00 P.O.T.
1560 + 00 P.O.T.
1550 + 00 P.O.T.
1540 + 00 P.O.T.
1530 + 00 P.O.T.
1520 + 00 P.O.T.
1510 + 00 P.O.T.
T.R. 125
T.R. 146
T.R. 140
T.R. 143
P.O.T. 1670 + 10.07
P.O.C. 1690 + 20.52
P.T. 1722 + 95.70
P.O.C. 1707 + 90.14
Exist. S.R. 39
Exist. S.R. 39
Exist. S.R. 39

CENTER LINE SURVEY PLAT
STATE ROUTE 39
TUSCARAWAS CO. SEC. 0.00
SUGAR CREEK TWP., R4W, T9N, SEC'S 23 & 3

0 500 1000
Scale: 1" = 500'



℄ SURVEY CURVE DATA

P.I. Sta. 1766+33.71	P.I. Sta. 1768+90.06	P.I. Sta. 1771+46.19
Δ = 10°00' Rt.	Δ = 12°17' Rt.	Δ = 10°00' Rt.
D = 3°44'55"	D = 5°00'	D = 3°44'55"
T = 133.72'	T = 123.31'	T = 133.72
L = 266.76'	L = 245.67'	L = 266.76'
R = 1,528.44'	R = 1,145.92'	R = 1,528.44'

Received _____ 19 ____
Recorded _____ 19 ____
Book _____ Page ____
County Recorder

CENTERLINE REFERENCE MONUMENTS WILL BE PLACED ON CENTERLINE OF SURVEY DURING CONSTRUCTION.

NOTE: SIMPLE CURVES ARE SUBSTITUTED FOR TRANSITIONS, FOR PURPOSES OF RIGHT OF WAY DESCRIPTIONS ONLY.

CENTERLINE REFERENCE MONUMENTS			
POINT	STATION	POINT	STATION
P.O.T.	1740 + 00.00		
P.O.T	1750 + 00.00		
P.O.T.	1760 + 00.00		
P.C.	1764 + 99.99		
P.C.C.	1767 + 66.75		
P.C.C.	1770 + 12.42		
P.T.	1772 + 79.18		
P.O.T	1780 + 00.00		

SIGNED _____
DIVISION ENGINEER
DATE _____

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN 1962 BY THE STATE OF OHIO.

REGISTERED SURVEYOR DATE _____

SURVEYOR'S SEAL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

218
231

HOL-39-28.57
TUS-39-0.00

2
15

DATE OF COMPLETION 3-11-62

Date	REVISIONS	Description

0 500 1000
Scale: 1" = 500'

PROPERTY MAP

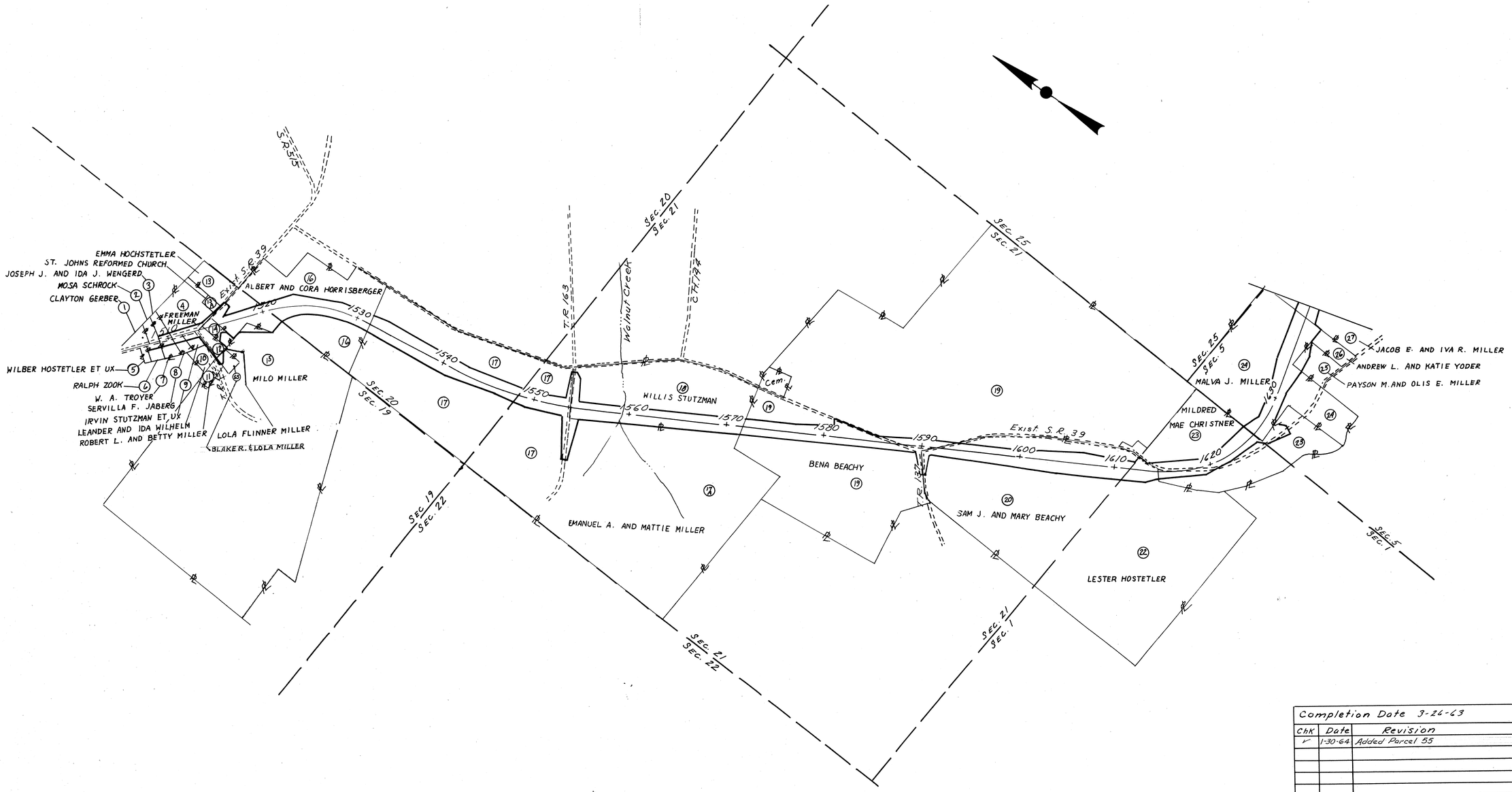
Scale 1/6000

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

218A 231

HOL-39-28.57
TUS-39-0.00

2A 15



Completion Date 3-26-63

Chk	Date	Revision
V	1-30-64	Added Parcel 55

PROPERTY MAP

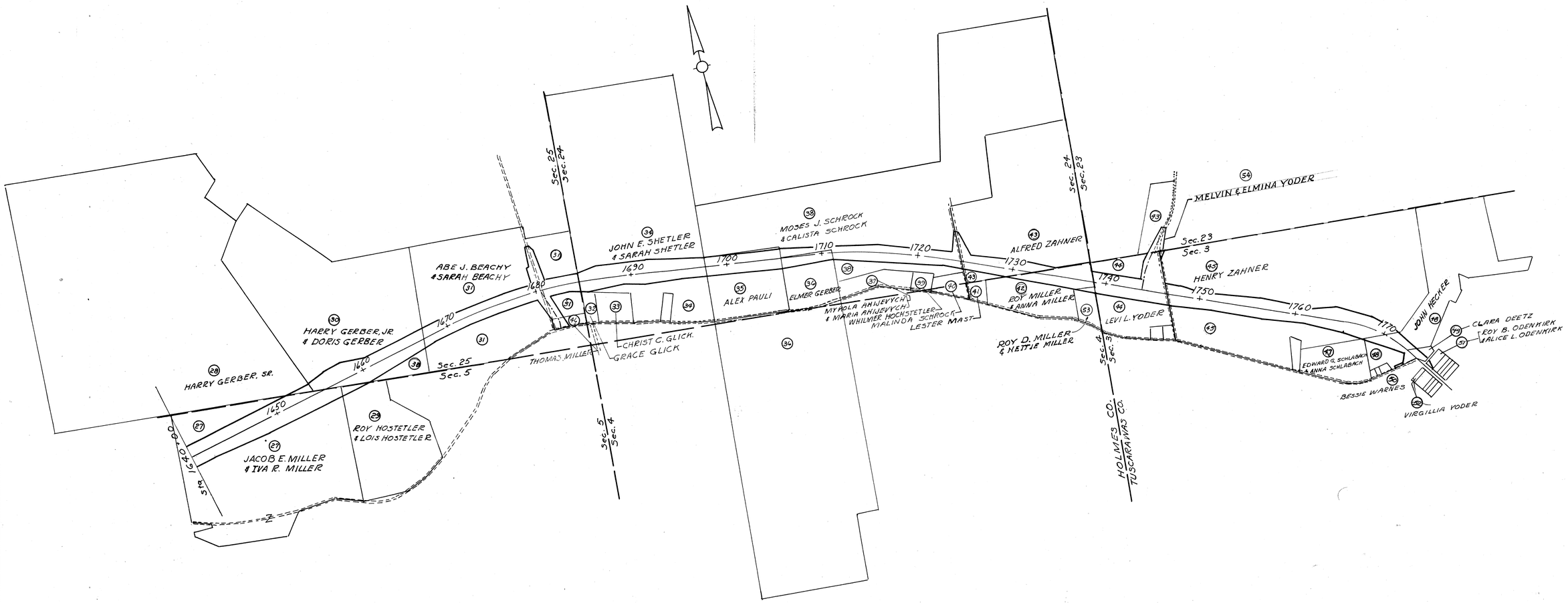
Scale 1/6000

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

218B / 231

2B / 15

HOL - 39 - 28.57
TUS - 39 - 0.00



Completion Date 3-26-63

Rev.	Date	Revisions
1	12-9-63	Relocated I.R. 146 Rt. Adjusted R/w on Parcels 31 & 46
1	12-27-63	Added Parcels 53 & 54.

SUMMARY OF ADDITIONAL R/W REQUIRED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HOL-39-28.57
TUS-39-0.00

219
231

3
15

PARCEL NO.	OWNER	DEED RECORD BOOK	PAGE	DATE	DEED AREA	TO BE ACQ'D LAND	TO BE ACQ'D BLDGS	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS
1	CLAYTON GERBER						NO			4	NO EASEMENT REQ'D
2	MOSA SCHROCK				0.44		NO			4	NO EASEMENT REQ'D
3	JOSEPH J. AND IDA J. WENGERD	147	273		0.59		NO			4	NO EASEMENT REQ'D
4	FREEMAN MILLER					0.03	NO	2.839		4	
5	WILBER HOSTETLER ET UX	119	592		0.28		NO			4	NO EASEMENT REQ'D
6	RALPH ZOOK				0.21		NO			4	NO EASEMENT REQ'D
7 7S	W. A. TROYER W. A. TROYER	64	532		0.50		 NO			4 4	NO EASEMENT REQ'D
8 8S	SERVILLA F. JABERG SERVILLA F. JABERG	125	6				NO NO			4 4	NO EASEMENT REQ'D
9	IRVIN STUTZMAN ET UX	120	79		0.49	0.03	NO		0.35	4	
10 10WA	LEANDER AND IDA WILHELM LEANDER AND IDA WILHELM	88 132	576 35		2.00 0.09	0.01	YES NO		1.93	4 4	
11 11WA	ROBERT L. AND BETTY MILLER ROBERT L. AND BETTY MILLER	124	57		0.671		NO NO			4 4	NO EASEMENT REQ'D
12	LOLA FLINNER MILLER	133	461		0.680	0.50	YES			4	SEE PARCEL 55
13 13WA	EMMA HOCHSTETLER EMMA HOCHSTETLER	98	525		1.25		NO NO			4 4	NO EASEMENT REQ'D
13A	ST. JOHNS REFORMED CHURCH						NO			4	NO EASEMENT REQ'D
14 14WA	LLOYD MISHLER LLOYD MISHLER	114	97		1.00	0.49	YES NO		0.42	4 4	
15	MILO MILLER	107	390		97.50	0.37	NO		97.13	4-5	
16 16WA 16X	ALBERT AND CORA HORRISBERGER " " " " " " " "					7.52 0.02	NO NO NO			4-5 5 5	
17 17A 17B 17C 17WA 17AWA 17X 17Y 17Z 17AX	EMANUEL A. AND MATTIE MILLER " "	120 141	395 503		137.97 0.78	8.86 0.21 0.09 0.73 0.02 0.02 0.02 0.26	NO NO NO NO NO NO NO NO NO NO	12.0	116.14	5-6 6 15 15 5 5 5 5 5 5 6	17-17A-17B-17C COMBINED FOR RESIDUE SEE 17-BWA & 17-CWA
18 18A 18X	WILLIS STUTZMAN WILLIS STUTZMAN WILLIS STUTZMAN					6.07 0.13 0.09	NO NO NO			6 15 6	18-18A COMBINED FOR RESIDUE
19 19A 19X 19Y 19Z 19WA	BENA BEACHY " " " " " " " " " "	144	159		168.58	6.48 0.06 0.39 0.02 0.01	NO NO NO NO NO NO	127.64	33.0	6-7-8 7-14 6 7 7 7	19-19A COMBINED FOR RESIDUE
20 20A 20X 20Y 20Z	SAM J. AND MARY BEACHY "	132	509		144.2	8.18 0.12 0.05 0.05 0.01	NO NO NO NO	1.0	134.48	7-8 14 7 7 7	20-20A COMBINED FOR RESIDUE
21	PAUL AND BEULAH FLINNER	137	259		0.412		NO			8	NO EASEMENT REQ'D
22 22WA	LESTER HOSTETLER " "	99	146		59.75	0.99	NO NO		58.62	8 8	
23	MILDRED MAE CHRISTNER					3.73	NO			8-9	
24	MALVA J. MILLER	80 80 84	8 423 109		25.00 10.00 25.00	7.26	NO	19.0	33.74	8-9	
25	PAYSON M. AND OLIS E. MILLER	145	240		2.86	0.51	NO		2.35	9	
26	ANDREW L. AND KATIE YODER	141	633		1.50		NO			9	NO EASEMENT REQ'D

PARCEL NO.	OWNER	DEED RECORD BOOK	PAGE	DATE	DEED AREA	TO BE ACQ'D LAND	TO BE ACQ'D BLDGS	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS
27 27X	JACOB E. AND IVA R. MILLER " " " " " "	143	81		56.84	9.12 0.02	NO NO	2.0	43.72	9 9	
28	HARRY GERBER SR.				138.50	0.27	NO.	138.23		9	
29 29X	ROY AND LOIS HOSTETLER " " " "	113	305		29.92	0.40 0.02	NO NO		29.52	9-10 10	
30 30X	HARRY GERBER JR. AND DORIS GERBER " " " " " "	144	41		60.00 91.00	6.60 0.02	NO. NO	150.0	1.0	9-10 9	
31 31A 31B 31AWA	ABE J. AND SARAH BEACHY " " " " " " " " " " " " " " "	121	283		46.86	6.54 0.51 0.74	NO NO. NO NO	26.14	12.19	10 15 15 15	
32	GRACE GLICK	116	113		1.00		NO			10	NO EASEMENT REQ'D
33	CHRIST C. GLICK				3.00		NO			10	NO EASEMENT REQ'D
34 34X	JOHN E. AND SARAH SHETLER " " " " "	132	437		72.00	6.72 0.01	NO NO	65.28	5.0	10-11 11	
35	ALEX PAULI	111	483		12.00	3.57	NO		8.43	11	
36	ELMER GERBER	102	230		80.75	1.34	NO		79.41	11	
37	MYKOLA AND MARIA AHIJEVYCH	135	382		3.416		NO			11	NO EASEMENT REQ'D
38 38X	MOSES J. AND CALISTA SHROCK " " " " " "	113	517		98.44	7.58 0.02	NO NO	88.68	2.0	11-12 11	
39	WHILMAR HOCHSTETLER	143	116		1.00		NO			12	NO EASEMENT REQ'D
40	MALINDA SCHROCK	120	508		1.84		NO			12	NO EASEMENT REQ'D
41	LESTER M. MAST	96 108	613 369		0.61 0.225		NO			12	NO EASEMENT REQ'D
42	RAY AND ANNA MILLER	109 110	398 271		6.00 1.10	2.99	NO		4.11	12	
43 43WA 43SL	ALFRED ZAHNER " " " "	111 209	295 482		36.00 25.88	3.31 0.20	NO NO NO	57.39	1.00	12 12 12	
44 44A 44X 44Y	LEVI YODER " " " " " "	296	348		122.44	3.59 1.11 0.04 0.01	NO NO NO NO	111.35	5.0	12 14 12 12	
45 45A 45WA 45AWA 45X	HENRY ZAHNER " " " " " " " "	44	409		44.18 7.08 20.00	10.13 0.02 0.02	NO NO NO NO NO	48.96	12.0	12-13 14 13 13 13	
46	THOMAS MILLER	108	232		1.0	0.30	YES	0.53		15	
47	EDWARD G. AND ANNA SCHLABACH	401	586		6.75	0.08	NO		6.67	13	
48 48A	JOHN HECKER " "				22.09	1.88 0.01	YES NO			13 13	48-48A COMBINED FOR RESIDUE SEE 48WA
49	CLARA DEETZ				1.09	0.69	YES	0.38		13	
50	BESSIE WARNER	381	448				NO			13	NO EASEMENT REQ'D
51	ROY B. AND ALICE L. ODENKIRK	401	28		0.45	0.03	NO	0.42		13	
52	VIRGILLIA YODER						NO			13	NO EASEMENT REQ'D
53	ROY D. AND NETTIE MILLER	144	563		1.903	0.173	NO		1.73	12	
54	MELVIN AND ELMINA YODER	238	107		107.54	0.21	NO	107.20		14	
17BWA 17CWA	EMANUEL A. AND MATTIE MILLER EMANUEL A. AND MATTIE MILLER									5 5	SEE 17-B SEE 17-C
48WA	JOHN HECKER						NO			13	SEE 48 & 48A
55 55T	BLAKE R. AND LOLA MILLER " " " "	124	138		0.459	0.03 0.07	NO NO		0.399	4 4	SEE PARCEL -12

SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

220
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13

HOL-39-28.57
TUS-39-0.00

HOLMES CO.
Walnut Creek Twp.
Sec. 19, T9N, R5W

BEGIN WORK
STA. 1507+50

BEGIN PROJECT
STA-1509+60

Village of Walnut Creek
(unincorporated)

St Johns Reformed Church

Emma Hochstetler

Clayton Gerber

Mosa Schrock

Joseph J. Wengard & Ida J. Wengard

Freeman Miller

Albert Horrisberger & Cora Horrisberger

Ralph Zook

Wilbur Hostetler

W.A. Troyer

Irvin Stutzman, et ux

Saville F. Jaberg

Lola Flinner Miller

Lloyd Mishler

Milo Miller

Leander Wilhelm & Ida Wilhelm

Blake R. & Lola Miller

Robert L. Miller & Betty Miller

TOTAL 0.78 Ac.
EX. R/W 0.75
NET 0.03 Ac.

Total 0.07
Ex. R/W 0.06
NET 0.01 Ac.

Total 0.03
Ex. R/W 0.02
Net 0.01 Ac.

Total 0.06
Ex R/W 0.03
NET 0.03 Ac.

Total 0.68 Ac
Total 0.18 Ac
Ex R/W 0.50 Ac
Net

Total 0.58
Ex. R/W 0.09
NET 0.49 Ac.

55-T = NET 0.07 Ac

Sta. 1514+74.82 & SR 39
Sta. 5+00 & Conn. Exist.
SR 39 & Twp. Rd 125

STA 1518+00

MATCH LINE

Sta. 1510+26.10 - P.O.T.
N/s in R/Pole opp. Sta 1510+21
s/lay dn.

Sta. 1514+19.02 - P.O.T.
N/s in I. R/Pole 1514
Bottom of 1st. row of foundation blk.
Fr. Res. Use

DATE OF COMPLETION 3-11-62

REVISIONS

Date	Description
3-22-63	Descriptions on Parcels 10WA, 11WA-11, 10, 12WA-12, 14, 15 & 16 modified.
12-4-63	Res. Dr. Lt. Sta. 1509+38 Changed to Sta. 1508+78. And Parcel 3WA removed.
1-30-64	Added Parcel 55 & 55T, Adjusted Acreage on Par. 12

Scale: 1" = 50'

Sta. 1505 to Sta. 1518+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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HOL-39 28.57
TUS-39 - 0.00

5/15

HOLMES CO.
Walnut Creek Twp.
Sec. 20, T9N R5W

Total - 7.76 Ac.
Ex. R/W - 0.24 Ac.
Net - 7.52 Ac.

Brick Bldg. Ramp
Steel Sided Barn
1 St. Frame Bldg.
1520+57.48 Sec. 20 Sec. 19 N 4° 30' E
T9N, R5W
T9N, R5W
Albert Horrisberger & Cora Horrisberger (16)
S 49° 20' 13" E 548.93'
STA. 1518+00
+00 95' Lt.
W/L
1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533
S 49° 20' 30" E
HOLMES CO. Walnut Creek Twp. Sec. 19. T9N, R5W
MATCH LINE
N 15° 27' 30" W 289.42'
Sta. 1519+29.80 Back Sta. 1521+96.76 Ahead
Sta. 1519+29.80 Back
S 45°
N 33° 39' 30" W 351.55'
1520+38.46 211.74 Rt.
15 Milo Miller 0.37 Ac.
PC. 1520+65.04
PC. 1523+29.80
N 40° 35' 24" W 403.14
N 38° 29' 29" W 199.16'
+39 124' Rt.
P.I. -1521+96.76
Δ = 10° 00'
D = 3° 44' 55"
T = 133.72'
L = 266.76'
R = 1528.44'
R/W
S 23° 08' 52" E 511.07'
1522+90 117.68 Rt.
1523+90 142 Rt.
19X 0.02 Ac.
Albert Horrisberger & Cora Horrisberger (16)
N 10° 32' 22" W 95.80
S 84° 51' 40" W 27.30'
P.I. -1525+69.19
Δ = 23° 36'
D = 5° 00'
T = 239.39'
L = 472.00'
R = 1145.92'
N 20° 47' 12" W 184.83'
PCC. 1528+01.80
+01.80 95'
N 10° 44' 37" W 249.78'
P.I. -1529+35.52
Δ = 10° 00'
D = 3° 44' 55"
T = 133.72'
L = 266.76'
R = 1528.44'
HOLMES CO. Walnut Creek Twp. Sec. 20, T9N, R5W
PT. 1531+68.56
+69.56 95'
S 80° 24' 30" W 83.47'
N 5° 44' 30" W 66.00'
+34.48 95'
Sta 532+01.91 Back Sta 533+01.80 Ahead
16 WA
1528+00 90' Lt.
1528+60 117' Lt.
1529+60 76.79' Lt.
Albert Horrisberger & Cora Horrisberger (16)
S 11° 38' 53" E 334.65'
1531+22.14 90' Lt.
N 80° 24' 30" E 28.14
Sta. 1531+00.6
Sta. 153+28.14
13± T/e Block Barn
Fr. Cr.
Emanuel A. Miller & Mattie Miller (17)
S 12° 09' 09" E 179.12'
MATCH LINE STA. 1533+00

Sta. 1528+01.80-CS
60.20'
66.00 (R&M)
(66.00)
3 Lines Post Fence
1528

Sta. 1525+65.80 Ent.
68.6
34.4
55.40'
27.76'
1523

Sta. 1523+29.80-SC
Ø 36.38
W/S 17
30° Oak
112.0
220
1523

1/St. Brick Res.
P.I. -1548+39.00
Δ = 21° 23' 30" Lt.
D = 1° 24'
T = 772.99'
L = 1,527.98'
R = 4092.56'
S 12° 59' E
HOLMES CO. Walnut Creek Twp Sec. 20, T9N, R5W
Retng. Wall
Retng. Wall
Emanuel A. Miller & Mattie Miller (17)
HOLMES CO. Walnut Creek Twp Sec. 21, T9N, R5W
N 89° 45' E
SEC. 20
SEC. 21
1547+00
+00 80' Lt.
STA. 1549+00
MATCH LINE
W/L
1546 1547 1548 1549
S 12° 56' 02" E 685.93'
Emanuel A. Miller & Mattie Miller
+00 75' Rt.
312° 56' 17" E 848.05'
+30 68' Rt.
37° 45' 45" W 22.42'
+30 85' Rt.
N 78° 10' 57" E 21.34'
+00 85' Rt.
N 12° 49' W 30.62'
30.36
17 Z 0.02 Ac.
17 WA
0.02 Ac.
17 X
17 WA
Total - 8.95 Ac.
Ex. R/W - 0.09 Ac.
Net - 8.86 Ac.
17
+00 110' Lt.
S 03° 38' 45" E 898.12'
STA 1533+00
1533+15 100' Lt.
1538+97 88.85' Lt.
1539+50 100' Lt.
1539+50 86.21' Lt.
17B WA
S 59° 58' 58" W 45.37'
1538+61 8" Water Line
S 62° 28' 17" E 30.39'
1538+40 30.29' Rt.
1537+25 92' Lt.
1537+15 92.44' Lt.
1537+25 91.45' Lt.
1537+15 91.18' Lt.
S 55° 44' 30" E
N 05° 44' 30" W 933.7'
1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545
PC. 1530+66.01
+00 75'
R/W
1540+00 75' Lt.
+08 93'
Water Well
Conc. Block Box
N 54° 14' 43" W 31.7'
17A WA
17 Y 0.02 Ac.
N 22° 42' 04" E 57.59'
1539+70 95' Rt.
1539+56 127' Rt.
1537+85 95' Rt.
1537+85 127' Rt.
Emanuel A Miller & Mattie Miller (17)
HOLMES CO. Walnut Creek Twp. Sec. 20. T9N. R5W

Sta. 1532+01.80-SC
Hub
Hubs 101.66'
80.00
1534
1532
29.0
31.0'

DATE OF COMPLETION 3-11-62

Date	REVISIONS Description
3-15-63	Parcels 17BWA & 17CWA removed.
3-22-63	Parcels 15 & 16 R/W modified.
3-25-63	Parcels 17BWA & 17CWA Added.

25 0 25 50 100
Scale: 1" = 50'

Sta. 1518+00 to Sta. 1549+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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15

HOL -39-28.57
TUS -39- 0.00

1st. Br. Res. & Gar.
Mail Box
Septic Tank
Dog House
Emanuel A. Miller & Mattie Miller (17)
Willis Stutzman (18)
Ex. R/W 3
Ex. R/W 4
Co. Rd. 114
continued on Sheet #15

STA. 1549+00
+00 80' Lt.
R/W
S 22° 33' 53" E
457.08'
W/L
+00 96.06
1553+67.07 95' Lt.
+40 91.53
S 21° 40' 54" E
222.54'
PT. 1555+93.99
+93.99 80' Lt.
S 27° 08' E
MATCH LINE
+00 75' Rt.
N 18° 34' 50" W
305.65'
+00 80' Rt.
+90 85.71
1553+68.69 90' Rt.
N 19° 28' 30" W 132.47'
+20 81.84
+50 105
N 28° 03' 47" W
831.31'
1558+00 76.59
N 21° 06' 41" E 105'
N 27° 08' W 105'
1558+70 155' Rt.
1559+75 73.75'
1559+75 185' Rt.
1562+00 70.10' Rt.
STA. 1565+00
MATCH LINE

Sta. 1555+93.99-P.T.
1556 +17.51
N40 73.26'
90.19'
1555+93.99 P.T.

Sta. 1553+69.00-P.O.C.
+00
N13°W tele pole
+69.00
1553+69.00 P.O.C.
N76°W 172.4' to C.H. 4"/e

HOLMES CO.
Walnut Creek Twp.
Sec. 21, T9N, R5W

Total 6.16 Ac.
Exist 0.09
Net 6.07 Ac.

0.09Ac (18 X)
+00 130' Lt.
+00 80' Lt.
S 27° 08' E
N 62° 52' E 50'
+80 130' Lt.
+80 80' Lt.
S 62° 52' W 50'
Walnut Creek
80'

Emanuel A. Miller & Mattie Miller (17)
Willis Stutzman (18)

0.26 Ac. (17A X)

Emanuel A. Miller & Mattie Miller (17A)

Bena Beachy (19)
Exist 18" x 20' C.M.P.
Ex. R/W
Exist S.R. 39
Ex. R/W

1574+80 20.05'
N 81° 18' 05" E 31.62'
1574+70 175'
S 10° 47' 57" E 309.20'
N 06° 19' 36" W 267.44'
1577+70 120'
S 29° 37' E 230.21'
1580+00 170'
1577+20 80'
S 33° 15' E 281.40'
STA. 1580+00

0.39 Ac. (19 X)

Bena Beachy (19)

HOLMES CO.
Walnut Creek Twp.
Sec. 21, T9N, R5W

Emanuel A. Miller & Mattie Miller (17)
Willis Stutzman (18)

STA. 1565+00
S 27° 08' E
1577.47'
R/W
W/L
1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580
S 27° 08' E
548.54'
MATCH LINE
N 28° 03' 47" W 1766.57'
930.31'
N 26° 45' 46" W
924.08'
1571+24.07 75' Rt.
1571+30.19 55' Rt.
N 79° 52' E 1571+47.00
1571+71.46 80' Lt.
141.11' 162.08'
N 27° 08' W 1885.93'

0.21 Ac. (17A)

Emanuel A. Miller & Mattie Miller

Total	7.94 Ac.
Ex. R/W	1.46
Net	6.48 Ac.

Bena Beachy (19)

HOLMES CO.
Walnut Creek Twp.
Sec. 21, T9N, R5W

DATE OF COMPLETION 3-11-62

REVISIONS

Date	Description
3-12-63	Parcel 19X changed
3-12-63	Parcel 19 changed - Approach moved from 1579+00 to 1582+75

25 0 25 50 100
Scale: 1" = 50'

Sta. 1549+00 to Sta. 1580+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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15

HOL-39-28.57
TUS-39-0.00

STA. 1580+00

MATCH LINE

Bena Beachy

Com Crib

1st. Fr. Bldg.

2½ St. Brick Res.

1st. Fr. Wagon Shed

Frame Barn

1st. Fr. Bldg.

Sp.

1st. Fr. Bldg.

Ex. St. S.R. 39

Ex. 16" C.M.P.

158+00 30' Lt.

159+00 170' Rt.

S27°08'E 100'

S8°52'E 416.7'

Ex. 12" I.S.P.

Ex. 4" I.S.P.

Ex. 12" I.S.P.

Ex. 12" I.S.P.

+96 60' Lt.

S29°59'45"E 500.61'

Ex. 12" I.S.P.

W/L

R/W

1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594

S27°08'E

N27°08'W 1885.93'

158+65 75' Rt.

158+20 235'

158+80 250'

158+30 90' Rt.

158+30 75' Rt.

158+15 75' Rt.

159+15 105' Rt.

19 WA

19 Y 0.02 Ac.

19 Bena Beachy

Sta. 1590+15.57 P.I.

Δ 27°0.35'

HOLMES CO.
Walnut Creek Twp.
Sec. 21, T9N, R5W

19 Bena Beachy

HOLMES CO.
Walnut Creek Twp.
Sec. 21, T9N, R5W

+00 85' Lt.

S27°08'E 431'

N27°53'03"W 344.34'

159+47.85

STA. 1595+00

MATCH LINE

1590+05 55' Rt.

N30°58'10"W 105.55'

Ex. 18" x 45' C.M.P.

1591+09 37' Rt.

N27°36'39"W 490.02'

+85 73.46'

1589+00 75' Rt.

N27°36'39"W 110'

S48°49'49"W 20.62'

1590+10 75' Rt.

For details of this approach, see sheet #14.

19A

Sam J. Beachy & Mary Beachy

20

Total 0.02
Ex. R/W 0.01
Net 0.01 Ac.

19 Z

Bena Beachy

S43°01'33"W 21.26'

1596+35 18.14'

1596+00 18.14'

S48°56'06"E 44.48'

N62°52'E 84'

S27°08'E

+00 85' Lt.

70.0'

1596+42.22 162'

S62°52'E 81.84'

1596+70 85' Lt.

20 X

S27°08'E 469'

R/W

W/L

STA. 1595+00

MATCH LINE

Sam J. Beachy & Mary Beachy

20

21" x 31" C.M.P.

HOLMES CO.
Walnut Creek Twp.
Sec. 21, T9N, R5W

Total 0.08
Ex. R/W 0.03
Net 0.05 Ac.

+00 85' Lt.

S31°08'16"E 501.22'

0.01 Ac.

20 Z

S48°56'06"E 53.85'

+00 120' Lt.

+50 140'

+50 117.58'

S62°51'59"W 22.42'

S24°21'42"E 827.15'

R/W

W/L

1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609

S27°08'E

STA. 1610+00

MATCH LINE

Elec. Service Line to Sam Beachy

N24°16'16"W 700.87'

+00 70' Rt.

1596+30 76.50'

1596+30 35.5'

1596+70 130'

1596+70 8.5'

1596+30 130'

40'

20 Y 0.05 Ac.

Total 8.50
Ex. R/W 0.32
Net 8.18

Sam J. Beachy & Mary Beachy

20

+00 105' Rt.

N27°08'W 906.16'

R/W

W/L

Sta. 1609+74.91 P.I.

Δ 9°55'

HOLMES CO.
Walnut Creek Twp.
Sec. 21, T9N, R5W

20

Sam J. Beachy & Mary Beachy

DATE OF COMPLETION 3-11-62

REVISIONS

Date	Description
3-12-63	Parcel 19 changed and approach added at 1582+75

25 0 25 50 100
Scale: 1" = 50'

Sta. 1580+00 to Sta. 1610+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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8
15

HOL-39-28.57
TUS-39- 0.00

HOLMES CO.
Walnut Creek Twp.
Sec. 21, T9N, R5W

Bena Beachy

19

HOLMES CO.
Walnut Creek Twp.
Sec. 1, T8N, R4W

HOLMES CO.
Walnut Creek Twp.
Sec. 5, T8N, R4W

Mildred Mae Christner

23

Total 4.78 Ac.
Ex R/W 1.05
Net 3.73 Ac.

P.I.-1615+20.49
Δ = 10° 00'
D = 3° 44' 55"
T = 133.72'
L = 266.76'
R = 1528.49'

P.I.-1622+56.00
Δ = 55° 28'
D = 5° 00'
T = 602.47'
L = 1109.33'
R = 1145.92'

Malva J. Miller
(aka Malva Miller)

24

7.26 Ac.

STA. 1610+00

MATCH LINE

S 84° 09' 30" E
Sta. 1611+74.28

SEC. 21 T9N R5W
SEC. 1 T8N R4W

N 41° 45' 36" E
1627.33'

SEC. 1 T8N R4W
SEC. 5 T8N R4W

S 34° 21' 12" E

Brick House Trailer

Gar.

Slag

Lawn

Wall

1 St. Brick House

C.B.

21

Paul Flinner
Beulah Flinner

R/W

W/L

1612+46.94
112' Lt.

1612+32.28
80' Lt.

1612+59.49
80' Lt.

S 27° 08' E

1612+55.53 Back
1612+53.39 Ahead

PC. 1613+86.77

PI 1614+65.14

S 38° 25' 59" E
635.99'

1614+60.45
33' Lt.

PC.C 1614+53.53

1620+20
90' Lt.

S 75° 21' 47" E
459.55

1625+23.42
130' Lt.

STA 1625+00

1625+00
60' Rt.

N 21° 33' 25" W
89.35'

Sam J. Beachy
& Mary Beachy

20

1611+06.16
105' Rt.

N 27° 08' 01" W
193.96'

+00
105' Rt.

1613+68
90.96' Rt.

1614+00
125' Rt.

1614+25
120' Rt.

1614+50
76.91' Rt.

N 39° 49' 42" W

R/W

V.L. 76.7'

V.L. 120.3'

Sta. 1614+60.23
70' Rt.

N 40° 54' 31" W
319.74'

Mildred Mae Christner

23

1617+67
42' Rt.

N 36° 15' 07" W
196.23'

M.B. on W.L.

1618+53
60' Rt.

Garden

2 St. Fr. Res.

Fr. Bldg.

Fr. Bldg.

Fr. Bldg.

Fr. Bldg.

Fr. Barn

Fr. Shed

Fr. Shed

Fr. Garage

1619+50
60' Rt.
Conc. Block

1622+00
60' Rt.

R/W R=1205.92'
L=315.71'

Existing S.R. 39

N 62° 30' 05" W
245.49'

Exist. 5'x3' Conc. Box Culvert

1625+00
60' Rt.

1625+46
137' Rt.

Mildred Mae Christner

23

22
WA

Lester Hostetler

22

Total 1.13 Ac.
Ex R/W .14
Net .99 Ac.

HOLMES CO.
Walnut Creek Twp.
Sec. 1, T8N, R4W

Sta. 1612+53.33 - T.S.
NS in Hub
three trees
S 82° 26' W 72.10'
1612
0+00
Elm Elm Walnut

Sta. 1616+53.33 - S.C.
1617
S 35° 59' W 95.50'
1616
S 3° 32' W 95.50'
NS in Tele. pole

Sta. 1619+00.00 - P.C.
+65
S 88° 21' W 89.90'
2.50' Rt. 3 NS in from edge of St. Rt. 39
+00

Sta. 1623+44.96 - P.I.
Creek
S 65° 36' E 98.38'
S 33° 36' W 3 Hubs on Tree Line
Point of Beg.
+00
+94

DATE OF COMPLETION 3-11-62

REVISIONS

DATE	DESCRIPTION
Dec. 3, 63	Changed equation Sta. 1613+53.39 Ahead to Sta. 1612+53.39 Ahead.

25 0 25 50 100
SCALE: 1" = 50'

Sta. 1610+00 to Sta. 1626+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

225
231

9
15

HOL-39-28.57
TUS-39-0.00

P.I. - 1628+96.58
Δ = 10° 00'
D = 3° 44' 55"
T = 133.72'
L = 266.76'
R = 1528.44'

Sta. 1631+62.86 - S.T.

Sta. 1634+55.41 - P.O.T.

Sta. 1637+74.67 - P.O.T.

Sta. 1638+86.90 - P.O.T.

Malva J. Miller (aka Malva Miller) (24)

Malva J. Miller (aka Malva Miller Melvin Miller & Marvin Miller) (24) 7.26 Ac.

Jacob E. Miller & Iva R. Miller (27)

Payson M. Miller & Otis E. Miller (25) 0.51 Ac.

Holmes Co. Walnut Creek Twp Sec. 5, T8N, R4W.

Andrew L. Yoder & Katie Yoder (26)

Jacob E. Miller & Iva R. Miller

Jacob E. Miller & Iva R. Miller (27) 9.12 Ac.

Harry Gerber Sr. (28) 0.27 Ac. Holmes Co. Walnut Creek Twp. Sec. 25, T9N, R4W

Harry Gerber Jr. & Doris Gerber (30) 0.02 Ac.

Roy Hostetler & Lois Hostetler (29) 0.40 Ac.

Jacob E. Miller & Iva. R. Miller (27)

Holmes Co. Walnut Creek Twp. Sec. 5, T8N, R4W

SEC. 25, T9N, R4W

SEC. 5, T8N, R4W

MATCH LINE STA. 1626+00

MATCH LINE STA. 1642+00

STA 1642+00

MATCH LINE STA. 1658+00

DATE OF COMPLETION 3-11-63

Date REVISIONS Description

3-22-63 Parcels 27, 28, 29 & 30 R/W modified.

25 0 25 50 100

Scale: 1" = 50'

Sta. 1626+00 to Sta. 1658+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

226
231

10
15

HOL-39-28.57
TUS-39- 0.00

Sta. 1659+39.15-P.O.T.
16" Oak 33.27'
16" Wich 23.76'
20" Oak 3.58'
1659

Sta. 1662+15.40-P.O.T.
12" Oak 46.98'
50.63'
30.80'
20" Oak
8" W.Ch.
1662

HOLMES CO.
Walnut Creek TWP.
Sec. 25, T9N, R4W.

Harry Gerber Jr.
& Doris Gerber.
(30) 6.60 Ac.

+50 / 105 Lt.
S 04°26'25"E
263.11'
+00 / 103 Lt.
N 77°24'01"E
676.24'
R/W
N 77°24'E
STA. 1658+00
MATCH LINE
1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674
S 73°47'29"W
746.70'
R/W
1659+67.77
190'
S 33°25'53"W
1659+19.6
161'
S 84°55'E
N 73°41'25"W
+50 / 92 Lt.
1659+90
190'

HOLMES CO.
Walnut Creek Twp.
Sec. 5, T9N, R4W.
(29 X) 0.02 Ac.
(29) Roy Hostetler
& Lois Hostetler

(30) Harry Gerber Jr.
& Doris Gerber.

+76.24 / 103' Lt.
N 5°17'E
1667.43'
N 77°14'15"E
176.14'
1669+50 / 105'
Abe J. Beachy
& Sarah Beachy
(31)
HOLMES CO.
Walnut Creek Twp.
Sec. 25, T9N, R4W.
N 84°28'08"E
356.47'
+00 / 80 Lt.
MATCH LINE
STA. 1674+00
N
N
823.93'
S 73°07'43"W
107.91'
+13 / 93' Rt.
+20.10 / 85' Rt.
P.C. Sta. 1668+20.10

(31) Abe J. Beachy
& Sarah Beachy

Total 6.70
Ex R/W 0.16
Net 6.54 Ac.

Sta. 1666+00-P.O.T.
+85 / 150' Rt. of Centerline Hwy.
138.13'
190.82'

Sta. 1668+20.10-P.C.
3 Hubs in Fence
+30 / 30' Rt.
+30.00 / 1664
H.P.

Sta. 1677+00-P.O.C.
+25 / 53.72'
139.66'
121.39'
196.25'
Tan. Abs. 196.34'
20.0 Ch. Tan.
Grantham

Sta. 1678+70.31-Ext. & Sta. 1678+89.23-P.I.
Tan. Abs.
55°
165.78'
111.28'
P.I.
30°
191.26'
27°15'
158.40'
Ext.

HOLMES CO.
Walnut Creek Twp.
Sec. 25, T9N, R4W.

Abe J. Beachy
& Sarah Beachy
(31)

Continued on Sheet #15

TWP. RD. 146

3" Water Line

R/W
W/L
R = 5809.58'
L = 1115.36'
STA. 1674+00
MATCH LINE
1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690
W/L
R/W
R = 5644.58'
L = 1457.94'

Abe J. Beachy &
Sarah Beachy
(31)

Continued on Sheet #15

(31)
P.I. = 1678+82.23
Δ = 21° 00' 15" Rt.
D = 1° 00
T = 1,062.13'
L = 2100.42'
R = 5729.58'

DATE OF COMPLETION 3-11-62

Date	REVISIONS	Description
Dec. 3, 63	- Changes made - Radius on R/W Line, Sta 1668+20 - 85' Rt. to 1683+00 - 85' Rt. Changed from 5044.58 to 5644.58, Changed Alignment & R/W on T.R. #146, Sta. 1680+41.60 Rt.	

25 0 25 50 100
Scale 1" = 50'

N 14°40'15"E
1684 + 32.19
SEC. 25
SEC. 24
1684+53.47
70' Lt.
+00 / 80' Lt.
N 83°01'31"E
55.18'
190.03'
190.03'
N 81°15'28"W
149.64'
1683+00 / 85' Rt.
N 78°09'28"W
1684+50.31 / 100' Rt.
+25 / 170' Rt.

John E. Shetler
& Sarah Shetler
(34)
N 79°22'56"E
267.96'
+50 / 145' Lt.
HOLMES CO.
Walnut Creek Twp.
Sec. 24, T9N, R4W
S 82°20'09"E
305'
H 89°26'14"W
391.28'
+20.52 / 70' Rt.
P.T. 1689+20.52
MATCH LINE
STA. 1690+00
S 75°30'E

(32) Grace Glick
(33) Christ C. Glick
(34) John E. Shetler
& Sarah Shetler

Sta. 1658+00 to Sta. 1690+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

227
231

HOL - 39 - 28.57
TUS - 39 - 0.00

11
15

HOLMES CO.
Walnut Creek Twp.
Sec. 24, T9N, R4W.

John E. Shetler
& Sarah Shetler
34

Moses J. Schrock
& Calista Schrock
38

HOLMES CO.
Walnut Creek Twp.
Sec. 24, T9N, R4W.

34 X 0.01 Ac.

38 X .02 Ac.

STA. 1690+00

STA. 1705+00

MATCH LINE

MATCH LINE

1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704

S 81° 35' 45" E

S 75° 29' 03" E
610.54'

R/W

S 89° 28' 47" E
794.95'

R/W

W/L

N 4° 46' E
Sta. 1697+66.71

1697+62.07
80' Lt.

170.29'
170.29'

1704+50
114.86'

1705+00
135'

N 76° 16' 06" E
72.39'

N 8° 24' 16" E
15'

+30
160'
145' Lt.

1691+55
145' Lt.

S 81° 35' 45" W
15'

S 58° 29' 16" W
15'

N 70° 15' 46" W
254.44'

S 88° 32' 19" W
233.45'

+00
80' Rt.

N 80° 03' 20" W
372.07'

+70
120' Rt.

1697+71.93
90' Rt.

3.57 Ac.

Alex Pauli

N 80° 52' 40" W
798.13'

34 6.72 Ac.
John E. Shetler
& Sarah Shetler

Sta. 1697+63.53 P.O.T.
1698.66
47.74'
2" pipe
2 ways
33.06'
20"
Cherry
Hole

S 9° 47' W
1697+66.71

HOLMES CO.
Walnut Creek Twp.
Sec. 24, T9N, R4W.

Moses J. Schrock
& Calista Schrock
38

Total 7.76
Ex. R/W 0.18
Net 7.58 Ac.

HOLMES CO.
Walnut Creek Twp.
Sec. 24, T9N, R4W.

Moses J. Schrock
& Calista Schrock
38

STA. 1705+00

STA. 1720+00

MATCH LINE

MATCH LINE

1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719

S 81° 35' 45" E

R/W

N 86° 24' 21" E
1057.95'

1705+62.89
11' Lt.

N 4° 46' 01" E
109.22'

1710+90.98
44' Lt.

S 89° 17' 59" E
530.80'

1716+00
95' Lt.

S 68° 39' 01" E
757.31'

W/L

W/L

N 82° 47' 39" W
310.29'

R/W

+90.14
85' Rt.

PC. = Sta. 1707+90.14

+04.36
70' Rt.

N 71° 13' 33" W
1673.94'

W/L

N 85° 23' 04" W
226.99'

111.00'

114.78'
114.78'

Alex Pauli

Elmer Gerber

35

S 4° 46' W
Sta. 1705+63.62

+70
120' Rt.

Elmer Gerber
36 1.34 Ac.

Sta. 1710+96.08

S 4° 48' 15" W

38
Moses J. Schrock
& Calista Schrock

Moses J. Schrock
& Calista Schrock

37
Myrola Ahijevych
& Maria Ahijevych

PI-1715+47.28
Δ = 15° 03' 20" Rt.
D = 1° 00'
T = 757.14'
L = 1505.56'
R = 5729.58'

Sta. 1707+90.14 P.C.
38.39
1708
34.18'
82.56'
N.C.D.
12" inch laterals

Sta. 1715+42.92 Ext. & Sta. 1715+47.28 P.I.
180.20'
99.81'
189.73'
Ref. hub
P.I. hub
Ref. hub
Ref. hub
17.73'
Ref. hub
17.73'
17.73'
17.73'
17.15'
17.15'
17.15

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

228 / 231

12 / 15

HOL - 39 - 28.57
TUS - 39 - 0.00

Sta. 1722+95.70 - P.T.
Hub on berm
1724+82.00 P.O.T.
Tp. Rd.
Hub

Holmes Co.
Walnut Creek Twp.
Sec. 24, T9N, R4W

Moses J. Schrock
& Calista Schrock
38

1723+47
310' Lt.

S66°32'25"E
22.83'

1723+69.95
310' Lt.

1723+91.90
310' Lt.

N 23°27'35"E
230'

TWP. RD. 143

S66°32'25"E
265.15'

43
Alfred Zahner

S68°49'25"E
26.05'

1724+16.16
+25
188' Lt.

43 WA

+35
120' Lt.

+35
85' Lt.

+47
80' Lt.

Total 3.49
Ex R/W 0.18
Net 3.31 Ac.

25 St. Fr. Res.

Frame Barn

Fr. Shed

Fr. Bldg.

Holmes Co.
Walnut Creek Twp.
Sec. 24, T9N, R4W

43
Alfred Zahner

Lake 0.20 Ac.

43 SL

+50
125' Lt.

S70°56'18"E
325.96

+75
150' Lt.

+75
95' Lt.

S61°15'29"E
326.35'

+70.05

1735+88.25
85' Lt.

S74°08'05"E
226.98'

Fr. Shed

House & Trailer

+25
Lt.

S68°30'54"E
290.17'

STA. 1720+00

R/W

W/L

STA. 1735+00

MATCH LINE

1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734

S66°32'25"E

N 84°30'W
567.54'

W/L

S63°37'42"E
196.85'

+95.70
55' Rt.

1724+22.27
65' Rt.

S63°24'11"E
456.79'

Sec. 24 T9N R4W
Sec. 4 T8N R4W

R/W

Ray Miller
& Anna Miller

Holmes Co.
Walnut Creek Twp.
Sec. 4 T8N, R4W
42

Moses J. Schrock
& Calista Schrock
38

N 65°46'25"W

P.T. = Sta. 1722+95.70

43
Alfred Zahner

S84°30'E
Sta. 1732+22.63

1729+48.35
90° Rt.

N23°05'E

Whilmer Hochstetler
39

1 St. Fr. Shed

40
Malinda Schrock.

41
Lester M. Mast

42
Ray Miller
& Anna Miller

Sta. 1737+50-P.O.T.
1738
Hub
61.38'
50.47'
58.42'
Fence

TUSCARAWAS CO.
Sugar Creek Twp.
Sec. 23, T9N R4W

Alfred Zahner
43

HOLMES CO.
Walnut Creek Twp.
Sec. 24, T9N, R4W

S5°26'35"E
Sta. 1738+65.38

1738+02.77
786.36'

Sec. 23, T9N, R4W
Sec. 3, T8N, R4W

44 X
0.09 Ac.

S66°32'24"E
55'

+60
135'

N23°27'35"E
15'

1740+25
100'

S23°27'35"W
100'

HOLMES CO
Walnut Creek Twp.

TUSCARAWAS CO
Sugar Creek Twp.

1738+31.06
100'

1740+60
100'

S66°32'24"E 752.93'

Levi L. Yoder
44

44 Y
0.01 Ac.

Total 3.70
Ex. R/W 0.11
Net 3.59 Ac.

+25
155'

+60
135'

+35
115'

+50
115'

+31
100'

S66°32'24"E
55'

S23°27'35"W
15'

P.T. 8+36.86

Continued on Sheet #14

Sta. 1746+16.55-P.O.T.
1747
30" Oak
Hub
Fence
C.H. #72

C.O. RD. #72

TUSCARAWAS CO.
Sugar Creek Twp.
Sec. 3, T8N, R4W

Henry Zahner
(aka Henry M. Zahner)

45
Total 10.24
Ex. R/W 0.11
Net 10.13 Ac.

1745+83.99
100'

1747+00
100'

S66°32'24"E
116.01'

S58°56'43"E
302.64'

R/W

STA. 1735+00

STA. 1750+00

MATCH LINE

1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749

S 66° 32' 25" E

1738+76.27
35.95' Rt.

1743+80
10+00

S83°58'25"E
210.66'

N65°49'31"W
726.01'

R/W

N65°31'39"W
222.82'

1738+74.30
99.06' Rt.

Ray D. Miller
& Nettie Miller
0.173 Ac.
53

HOLMES CO.
Walnut Creek Twp.
Sec. 4, T8N, R4W

Ray Miller &
Anna Miller
2.39 Ac.

Fig Sty

Conc. Block Barn

1738+97.08
10'

SEC. 4
SEC. 3

Sta. 1740+50-P.O.T.
14" Oak
44.40'
39.67'
16" Cherry
28.67'
10" Hedge
1740+

N65°39'55"W
785.93'

Henry Zahner

N70°08'57"W
317.71'

1746+88.82
15'

44
Levi L. Yoder

45

DATE OF COMPLETION 3-11-62

REVISIONS

DATE	DESCRIPTION
Dec. 3, 63 -	Changed Sta. offset at 1729+48.35-90' Lt. to 90' Rt.
Dec. 27, 63 -	Added Parcel 53 & Adjusted Acreage on Parcel 42

25 0 25 50 100
SCALE: 1" = 50'

Sta. 1720+00 to Sta. 1750+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

229
231

HOL-39-28.57
TUS-39-0.00

13
15

TUSCARAWAS CO.
Sugar Creek Twp.
Sec. 3, T8N, R4W.

Henry Zahner
(aka Henry M. Zahner)
45

STA. 1750+00

MATCH LINE

+00 95' Rt.

+00 60' Lt.

S71° 18' 13"E
602.08'

W/L

1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766

S66° 32' 25"E

N66° 05' 57"W
650.02'

1756+65
215'

45 WA

+00 160'

+00 101.67'

+00 110' Lt.

1756+35
107.46'

S 84° 14' E
57.13'

45 A

0.02 Ac.

S 23° 27' 35"W
81.50'

+90 125'

+90 103.46'

+20 135'

+00 99.46'

+00 135'

+50 100' Rt.

45 WA

Henry Zahner
(aka Henry M. Zahner)
45

R/W

S62° 22' 49"E
551.45'

+50 70' Lt.

S81° 06' 23"E
258.45'

+00 135' Lt.

S61° 26' 39"E
208.60'

STA. 1766+00

MATCH LINE

W/L

R/W

N69° 05' 05"W
450.44'

+00 80' Rt.

N61° 24' 21"W
460.62'

STA. 1763+66.75 Back =
STA 1763+66.61 Ahead.

PC. 164+93.99

+50 120' Rt.

Henry Zahner
(aka Henry M. Zahner)
45

47

Edward G. Schlabach
& Anna Schlabach

Evelyn E. Pauli

Roy B. Odenkirk & Alice L. Odenkirk
53 — 1st. Brick Res.
52 — 6.09 A.
51 — Jacob Kruta
N 55° 30' E
1774.26'
N 55° 30' E
1775.44'
+12.56 BACK (603.14')
+12.42 AHEAD (603.14')
N 34° 30' E
1774.26'
N 34° 15' E
1775.44'
+63.75 600' Rt.
S 18° 39' 25" E
280.06'
S 18° 39' 25" E
280.23'
S 34° 15' 25" E
1776 1777 1778 1779 1780
W/L
W.O.R.
12" U.S.P.
8" V.S.P.
Water Line
C.O.
Fr. Shed
Fr. Barn
Stock Alley
Alley
Corn. Block Garage
Tile Barn
Tile about Barn
2 St. Fr. Res.
1½ St. Fr. Res.
1½ St. Brick Res.
1½ St. Stucco Res.
Cistern
Fr. Shed
Fr. Barn
Fr. Barn
Fr. Barn

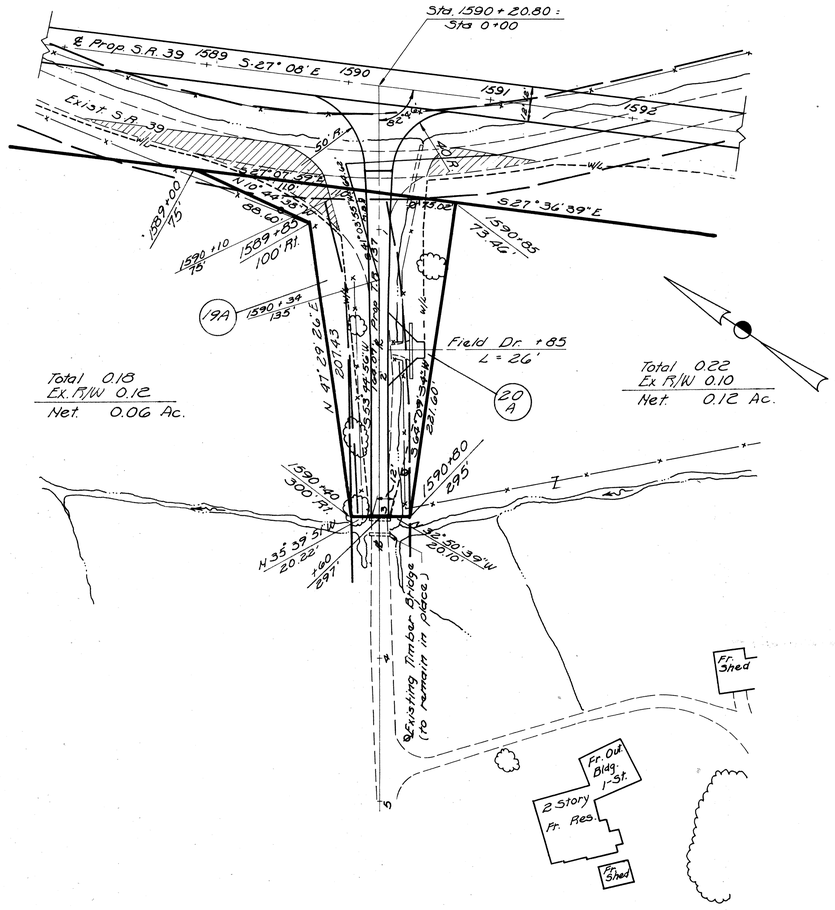
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

230 / 231

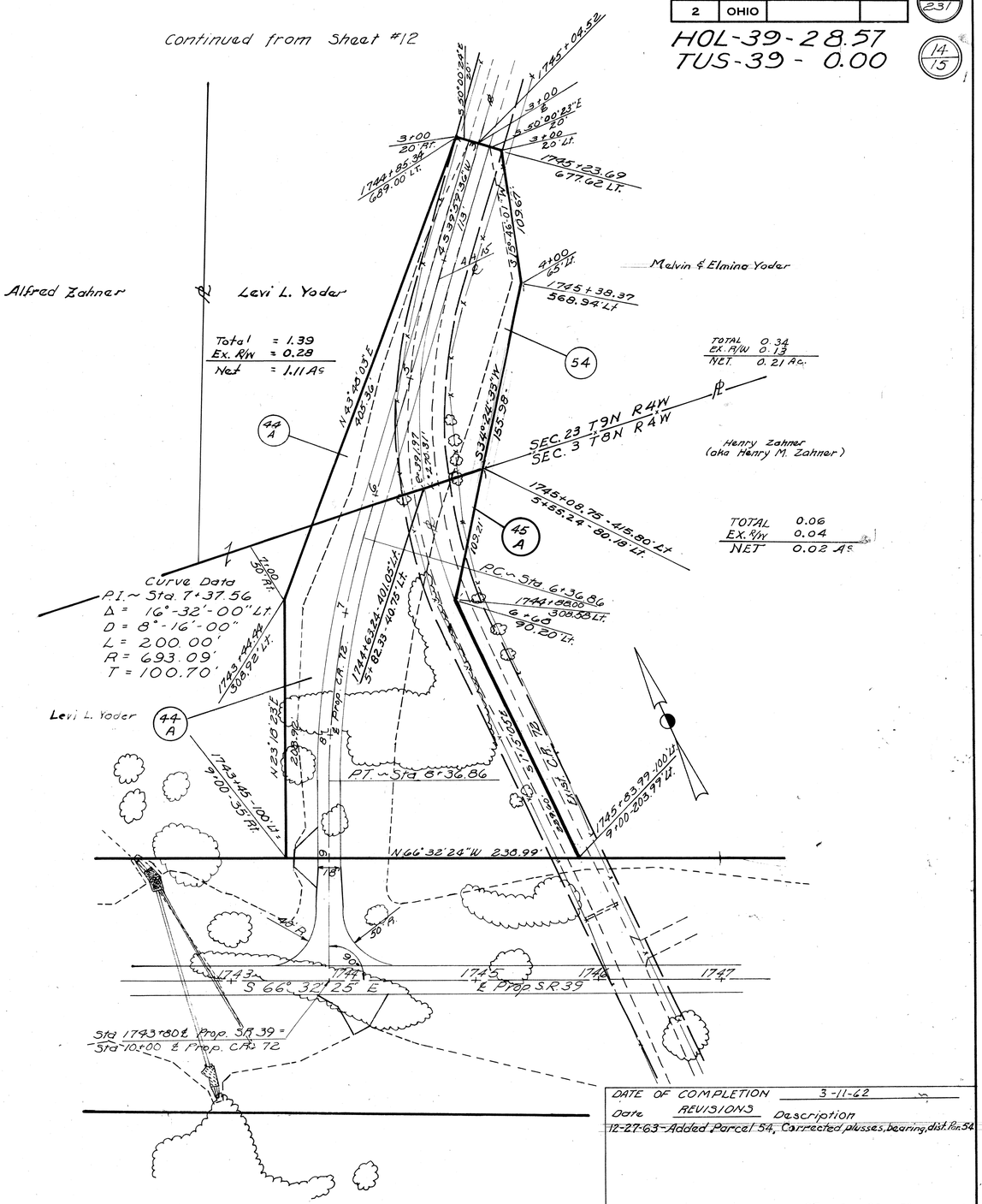
14 / 15

HOL-39-28.57
TUS-39 - 0.00

Continued from Sheet #7



Continued from Sheet #12



DATE OF COMPLETION 3-11-62

Date	REVISIONS	Description
12-27-63	Added Parcel 54, Corrected plusses, bearing, dist. Pcn 54	

25 0 25 50 100
Scale 1" = 50'

Detail of Twp. Rd #137 & Co Rd. #72

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

231
231

HOL-39-28.57
TUS-39-0.00

15
15

Continued from Sheet #10

Continued from Sheet #6

Existing S.R. 39

Ex. R/W

24" C.M.P.

1553+37.13
304.59

1553+67.96
365'

1554+14.74
300.15'

TOTAL 0.27
EX. R/W 0.18
NET 0.09 Ac.

15ft. Brk. Res.

Garage

45°

Mail Box
Septic Tank

Dog House

Emanuel A. Miller
and
Mattie Miller

17 B

Willis Stutzman

18 A

TOTAL 0.31
EX R/W 0.18
NET 0.13 Ac.

N 72°07'24"E
80.80'

Ex. R/W

S 57°53'44"W
200.00'

1553+00
90.06

1554+40
91.53

W&P 33.37'

N 61°40'24"W
71.35'

1553+67.07
95' Lt.

W/L

P.T. 1555+93.92

1551 1552 1553 1554 1555 1556

Sta. 1553+69 ℄ Prop. S.R. 39
Sta. 10+00 ℄ C.R. 114.

S 13°28'13"E
31.50'

S 28°03'46"E
154.29'

1553+10
85.11 Rt.

30" Conc. Pipe

1553+48.47
40 Rt.

1554+50
105'

1553+96.62-553.58 Rt.
15+60-20' Lt.

N 25°09'01"W
90'

12" C.M.P.

Frame Barn

Frame Shed

Shed

Emanuel A. Miller
and
Mattie Miller

17 C

Emanuel A. Miller
and
Mattie Miller

17 C

TOTAL 1.16
EX R/W 0.93
NET 0.73 Ac.

Continued from Sheet #10

Frame Barn

5+14
20' Rt.

5+14
20' Lt.

S 87°31'45"E

S 21°27'43"E
36.25'

5+47
35' Lt.

Fr. Shed

Ex 8" V.S.P.

Ex Fire Hydrant

Frame Shed

N 2°58'54"E

M.P.

1 St. Fr. Res.

N 28°32'00"E
24.17' Rt.

Gate

7.09
45°
2 St. Fr. Res.

7+19
67' Rt.

31 A

Total 0.88 Ac.
Ex. R/W 0.37
Net 0.51

Ex 4'x4' C.B.

Ex 18" C.M.P.

Ex 8" V.S.P.

Abe J. Beachy
and
Sarah Beachy

N 2°08'30"E
204.85'

Ex. 12 V.S.P.
1677+84.26 Rt.

Abe J. Beachy
and
Sarah Beachy

31A WA

1679+44
152' Lt.

1679+82
112' Lt.

1679+84.53
109.89' Lt.

S 88°37'27"W

Ex. 3" Water

1681+02.80 Lt.
9°-16.84-56.96' Lt.

℄ Prop. T.R. 146

W/L

1679+83.80 Lt.
9°-23.93' Rt.

1678 1679 1680 1681 1682

℄ Prop. S.R. 39

STA. 1680+41.60 ℄
STA. 10+00 Prop. ℄ T.R. 146

1679+85.85 Rt.
10+16.94-75.93 Rt.

1680+28.07-483.88 Rt.
14+83.29-1.17 Rt.

1680+28.07-483.88 Rt.
14+83.29-1.17 Rt.

N 39°49'39"E
152.69'

1681+40-85' Rt.
11+08.00-71.42' Lt.

N 10°22'22"W
226.70'

Ex. R/W

S 12°13'49"E
268.31'

31 B

CURVE DATA
P.I. = STA. 13+50
Δ = 9°00'
D = 8°00'
R = 716.20'
L = 112.50'
T = 56.37'
E = 2.21'

Abe J. Beachy
and
Sarah Beachy

TOTAL 0.95 Ac
EX R/W 0.21 Ac
NET 0.74 Ac.

P.C. 12+93.63

T.13

Ex. 1" Water Service line

Water Valve

Ex. 1" Water Line

1680+12.03-350.88 Rt.
13+83.47-98.00 Lt.

1681+37.80-340.42 Rt.
13+60.38 ℄

1682+03.43-346.31 Rt.
13+88.62-61.04 Lt.

Water Valve

S 86°44'54"W
161.04'

1 St. Brick Res

Gar

Fr. Gar

2 St. Fr. Res.

Thomas Miller

TOTAL 0.47 Ac
EX R/W 0.17 Ac
NET 0.30 Ac.

Pt. 14+06.13

50' R.

50' R.

Ex. R/W

S 12°13'49"E
117.33'

Ex. 2" Water Link

46

Exist. 6" V.S.P.

Ex. S. R. 39

S 81°20'22"W
117.72'

Exist. 12" V.S.P.

1680+28.07-483.88 Rt.
14+83.29-1.17 Rt.

1682+25.27-468.90 Rt.
14+80.00-12' Lt.

1681+56.04-444.44 Rt.
14+79.64-8' Lt.

Ex. R/W

N

Abe J. Beachy
and
Sarah Beachy

31 B

DATE OF COMPLETION 3-11-62

Date	REVISIONS Description
12-16-63	Relocated ℄ of Twp. Rd 146 Changed R/W Lines & Acreage on Parcels 31-B & 46.

25 0 25 100
Scale 1

Detail of Twp. Rd. 146 & Co. Rd. 114

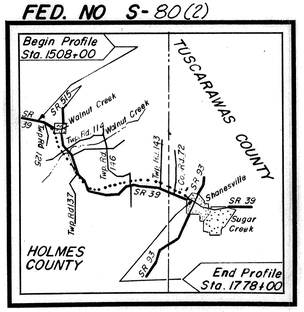
TE-95 (FORMERLY TE-54-A)
200-10-61

SOIL PROFILE

HOLMES-TUSCARAWAS COS. 1/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

FED. NO S-80(2)



LOCATION MAP

Recon- C.J.K. - 8/10/62

Drilling
Auger- T.R.S., B.E.B., L.M.D., J.A.G., 9/19/62 to 10/22/62
Core- H.W.H, J.R.V., W.R.B., 9/18/62 to 10/25/62

Drafting- A.F. - 11/28/62

GENERAL INFORMATION

INTRODUCTION

The project consists of the relocation of 5.1 miles of SR 39, beginning on SR 39 500 feet west of the junction of SR 39 and Twp. Rd. 125 extending southeastward, and terminating on SR 39, approximately 600 feet west of SR 93. Included in this report are the profiles of Twp. Rds. 116 and 143, and Co. Rd. 72.

Proposed grades indicate the following:

SR 39 - cuts, maximum 71 feet in depth; fill embankments, maximum 50 feet in height.

Twp. Rd. 116 - cut, maximum 18 feet in depth; fill embankment, maximum 7 feet in height.

Twp. Rd. 143 - cut and fill embankment, maximum 5 feet in depth and height.

Co. Rd. 72 - no grade change indicated.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment traverses a highly dissected portion of the Allegheny Plateau. Generally thin residual soils cover the uplands, and moderately deep to deep outwash fills the old valley, now occupied by Walnut Creek. Local bedrock consists of limestone, dolomite, sandstone, shale, indurated clay, coal, underclay, and clay bedrock, of Pennsylvanian age. Several rock exposures were noted and stratigraphic sections were measured. An area of surface movement was observed in the vicinity of station 617+00. Also, several areas of wet, poor surface drainage and spring horizons were observed along the project.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical earth auger, hand auger (in areas of difficult access), and rotary type drill rig, between September 19 and October 25, 1962.

INVESTIGATIONAL DISCLOSURES

Materials immediately below grade consist predominantly of silt clays, in the A-6a classification, and few silts and clays, having moisture contents in the lower portions of or below the plastic range, as well as shale, indurated clay, sandstone, limestone, clay bedrock and associated coal bedrock.

Bedrock is anticipated in the excavations at the following locations:

SR 39

Stations 1527+00 to 1528+50 - shale, in the left ditch and lower portion of the left backslope.

Stations 1532+50 to 1538+00 - shale and sandstone, in the left ditch and lower portion of the left backslope.

Stations 1585+00 to 1586+00 - shale, and clay, at grade and in the left ditch, shale in the left backslope.

Stations 1586+00 to 1592+50 - indurated clay, coal, limestone and shale in the left ditch and in the lower portion of the left backslope; weathered shale in the upper portion.

Stations 1590+00 to 1590+50 - shale and indurated clay, in the left ditch and left backslope.

Stations 1590+50 to 1601+00 - clay bedrock, shale and indurated clay, at grade, in the ditches and lower portion of the left backslope.

Stations 1616+00 to 1617+00 - shale, in the left ditch and left backslope.

Stations 1617+00 to 1618+50 - shale, at grade, in the left ditch and left backslope.

Stations 1618+50 to 1619+50 - shale, in the left ditch and backslope.

Stations 1620+75 to 1625+50 - shale, at grade, in the ditches and backslopes with a small interval of coal and limestone at approximate elevation 1000'.

Stations 1630+00 to 1630+50 - shale, at grade and in the ditches and shale, sandstone, coal, and clay bedrock in the backslopes.

Stations 1630+50 to 1631+10 - shale, at grade, and in the left ditch and backslope.

Stations 1631+10 to 1631+50 - shale, in the left ditch.

Stations 1631+00 to 1631+50 - shale, in the ditches.

Stations 1631+50 to 1651+00 - shale, at grade and in the ditches and backslopes.

Stations 1653+50 to 1661+00 - coal, at grade - coal and shale in the ditches.

Stations 1661+00 to 1662+00 - shale, at grade, in the ditches and backslopes.

Stations 1662+00 to 1662+50 - shale, in the right ditch.

Stations 1671+00 to 1693+10 - sandstone, at grade, in the ditches and backslopes.

Stations 1691+00 to 1701+00 - shale and sandstone at grade, sandstone in the ditches and backslopes.

Stations 1701+00 to 1702+50 - sandstone, in the right ditch and lower portion of the right backslope.

Stations 1711+50 to 1721+00 - shale, at grade, in the ditches and backslopes.

Stations 1735+00 to 1737+00 - shale, coal, and sandstone, in the right ditch and backslope.

Stations 1737+00 to 1739+75 - shale, at grade - shale, sandstone and coal in the ditches and backslopes.

Stations 1741+50 to 1750+50 - shale, at grade - shale and coal in the ditches and backslopes.

Stations 1750+50 to 1751+00 - shale, in the right ditch and backslope.

Stations 1760+00 to 1760+25 - shale, in the right ditch.

Stations 1760+25 to 1761+00 - shale, at grade, in the right ditch and backslope.

Stations 1761+00 to 1762+25 - shale, at grade, in the ditches and backslopes.

Stations 1773+00 to 1775+00 - shale, at grade, in the ditches and lower portions of backslopes.

Stations 1775+00 to 1776+00 - shale, in the left ditch.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 458 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel or stone fragments with sand and silt	A-2-4(0)	A-2-4	54	5	9	17	15	30	7	15	11
Gravel or stone fragments with sand, silt and clay	A-2-6(0)	A-2-6	50	8	11	11	20	37	16	15	2
Sandy silt	A-4(1)	A-4a	22	6	16	30	26	22	5	16	111
Silt	A-4(8)	A-4b	0	3	7	56	34	31	6	22	36
Plastic silt and clay	A-5(8)	A-5	0	3	6	30	61	42	9	33	3
Silt and clay	A-6(6)	A-6a	15	11	9	34	30	35	12	18	119
Silty clay	A-6(11)	A-6b	3	3	6	40	48	39	17	21	8
Plastic clay	A-7-5(12)	A-7-5	7	5	5	32	51	50	16	20	12
Clay	A-7-6(13)	A-7-6	10	3	4	24	50	47	20	21	51
Overburden			VISUAL CLASSIFICATION								
Underclay			VISUAL CLASSIFICATION								
Coal			VISUAL CLASSIFICATION								
Coal blossom			VISUAL CLASSIFICATION								
Clay bedrock			VISUAL CLASSIFICATION								3
Weathered indurated clay			VISUAL CLASSIFICATION								14
Weathered shale			VISUAL CLASSIFICATION								100
Weathered sandstone			VISUAL CLASSIFICATION								18
Indurated clay			VISUAL CLASSIFICATION								1
Shale			VISUAL CLASSIFICATION								28
Sandstone			VISUAL CLASSIFICATION								5
Dolomite			VISUAL CLASSIFICATION								
Limestone			VISUAL CLASSIFICATION								
Various other materials			VISUAL CLASSIFICATION								

Sod and/or Topsoil =X'= Approximate depth.

Perm material.

Auger boring - plan view.

Drive sample and/or core boring - plan view.

Auger boring plotted to vertical scale only.

Drive sample and/or core boring plotted to vertical scale only.

Number of blows for "Standard Penetration" test.
X=number of blows for the first 6 inches.
Y=number of blows for the second 6 inches.

Water content nearly equal to or greater than liquid limit.

Indicates a non-plastic material with high water content.

W Free water.

Static water level.

B Indicates broken rock interval.

NOTE: Figures beside borings indicate water content in percent. e.g. 15

Twp. Rd. 116

Stations 10+00 to 15+00 - sandstone, at grade and in the ditches; sandstone, indurated clay, and shale in the backslopes.

Twp. Rd. 143

Stations 11+50 to 12+00 - shale, in the ditches.

Stations 12+00 to 13+50 - shale, at grade, in the ditches and lower portions of the backslopes.

Co. Rd. 72

Vicinity of station 12+50 - shale, at grade and in the ditches.

Frost susceptible silts, in the A-4b classification, were encountered within three feet below proposed grade at SR 39 stations 1620+00 and 1702+00, and in the vicinity of Co. Rd. 72 stations 10+00 and 11+75. Plastic clay was encountered immediately below grade at station 1663+00.

In the embankment foundation areas, soils are predominantly comprised of the following:

SR 39 - silt clays and silts with some clays, in the A-6a, A-4 and A-7-6 classifications, having moisture contents generally in the lower portions of the plastic range. Wet materials, containing various amounts of organic matter, were encountered at the following stations:

1553+50 to 1557+65	1690+75	1756+00
1602+00	1691+10	1761+00
1610+00	1731+25	1770+00
1625+75	1742+00	

Twp. Rd. 116 - sandy silts and sandy gravels, in the A-4a and A-2-4 classifications.

Twp. Rd. 143 - silt clays, in the A-6a classification.

It is noted that the sidehill embankment foundation is comprised of thin soils overlying sloping bedrock throughout the entire project.

TE-54-A
100-10-60

SOIL PROFILE
HOLMES-TUSCARAWAS COS.
HOL-39- 28.57
TUS-39- 0.00
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

2
34

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.	SOIL CLASS.
					MAINLINE						
1500+00	12'Rt	0.0-3.0	Brown Broken Siliceous Snale							6	Visual *
1512+00	CL	0.0-5.0	38	11	13	21	25	33	7	13	A-1a *
		5.0-10.0	53	3	11	15	16	112	22	11	A-2-7
1515+25	CL	0.5-5.0	0	1	2	115	116	30	15	16	A-6a
		5.0-10.0	Brown Broken Siliceous Snale							9	Visual
		10.0-11.0	Brown Weatnered Snale							7	Visual
1517+00	CL	0.5-5.0	Brown Weatnered Siliceous Snale							9	Visual
		5.0-10.0	Brown Weatnered Siliceous Snale							9	Visual
		10.0-15.0	Brown Weatnered Siliceous Snale							11	Visual
		15.0-17.0	Gray Weatnered Snale							11	Visual
1517+00	115'Rt	0.5-11.0	16	3	2	25	52	101	16	20	A-7-6
		11.0-7.0	0	5	9	12	69	70	30	38	A-7-5
		7.0-9.0	Coal							—	Visual
		9.0-11.0	Light-Gray Weatnered Indurated Clay							8	Visual
1510+00	CL	0.5-5.0	0	3	11	35	50	101	13	16	A-7-5
		5.0-7.0	Coal							—	Visual
		7.0-10.0	Gray Weatnered Indurated Clay							9	Visual
1510+00	110'Rt	0.5-3.0	0	11	0	117	110	37	13	19	A-6a*
		3.0-5.0	Brown Weatnered Siliceous Snale							10	Visual
1521+00	CL	0.5-5.0	0	3	2	50	115	30	11	13	A-6a
		5.0-10.0	Brown Weatnered Snale							13	Visual
		10.0-12.0	Brown Extremely Weatnered Snale							17	Visual
1521+00	201'Rt	0.5-11.0	0	2	2	32	61	36	11	16	A-6a
		11.0-8.0	Brown and Gray Weatnered Clay Snale							6	Visual
		8.0-10.0	Brown Weatnered Snaly Sandstone							13	Visual
1528+00	CL	0.5-5.0	51	6	11	16	16	31	9	20	A-2-11
		5.0-10.0	111	3	13	16	22	36	9	20	A-11a
		10.0-12.0	Brown Weatnered Sandy Snale							111	Visual
1528+115	110'Rt	0.5-5.0	12	9	12	33	35	110	11	26	A-6a
		5.0-10.0	Brown Weatnered Snale							16	Visual
		10.0-111.0	Brown Weatnered Snale							10	Visual
1527+00	110'Lt	0.5-5.0	Brown Weatnered Sandy Snale							11	Visual
		5.0-10.0	Brown Weatnered Sandy Snale							10	Visual
1527+00	50'Rt	0.5-11.0	18	1	1	21	59	111	16	16	A-7-6
		11.0-9.0	Brown Weatnered Siliceous Snale							9	Visual
		9.0-12.0	Brown Weatnered Siliceous Snale							9	Visual
1530+00	65'Lt	0.5-11.0	30	5	5	27	33	36	11	16	A-6a
		11.0-5.0	Coal Blossom							—	Visual
		5.0-10.0	0	1	2	35	62	116	16	15	A-6b
1530+00	95'Rt	0.5-5.0	10	2	7	36	37	31	11	11	A-6a
		5.0-10.0	50	2	3	16	29	31	11	15	A-6a
		10.0-11.0	Coal Blossom							—	Visual
		11.0-15.0	Gray Weatnered Sandy Snale							9	Visual
1531+50	CL	0.0-6.0	30	3	8	28	23	32	11	12	A-6a *
		6.0-10.0	111	7	11	33	22	31	11	15	A-6a
1535+30	CL	0.0-5.0	23	6	13	22	36	32	11	9	A-6a
		5.0-10.0	57	2	6	17	16	133	7	9	A-2-11
		10.0-111.0	10	5	111	31	37	31	11	9	A-6a
1535+50	75'Rt	0.0-5.0	0	6	5	30	51	37	12	13	A-6a
		5.0-11.0	0	2	3	30	57	117	16	111	A-7-6
		11.0-111.0	Gray Weatnered Snale							13	Visual
1537+50	CL	0.0-5.0	0	1	111	113	113	139	11	9	A-6a *
		5.0-10.0	0	7	13	111	39	127	11	11	A-6a
1539+00	75'Lt	0.0-5.0	111	3	3	29	26	26	11	13	A-6a
		5.0-11.0	30	11	10	29	23	26	6	10	A-11a
		11.0-15.0	Gray Weatnered Indurated Clay							10	Visual
1539+00	CL	0.0-11.0	10	7	12	25	27	37	111	13	A-6a
		11.0-6.0	0	11	5	11	39	51	27	25	A-7-6
1539+20	75'Rt	0.0-11.0	27	3	11	9	57	119	29	21	A-7-6
		11.0-7.0	0	1	2	111	53	31	12	11	A-6a
		7.0-9.0	Black Carbonaceous Snale Fragments							—	Visual
		9.0-11.0	31	5	5	23	39	32	11	9	A-6a
		11.0-17.0	Gray Weatnered Snale							9	Visual
1541+00	50'Lt	0.0-5.0	52	3	10	13	17	28	7	11	A-2-11
		5.0-9.0	Brown Sandstone Fragments							—	Visual *
		9.0-15.0	26	0	0	30	39	28	11	9	A-6a *
		15.0-20.0	Gray Weatnered Snale							9	Visual
1541+00	50'Rt	0.0-11.0	16	3	7	32	35	33	11	13	A-6a
		11.0-6.0	0	1	1	9	83	51	26	33	A-7-6
		6.0-9.5	0	1	1	15	45	33	15	26	A-7-6
		9.5-11.0	22	5	6	13	41	33	26	33	A-7-6
1543+25	75'Rt	0.0-6.0	10	15	10	33	33	35	13	15	A-1a
		6.0-10.0	0	1	4	33	37	35	13	13	A-6b
		10.0-11.0	25	5	7	33	35	36	13	15	A-6a
		11.0-20.0	Gray Weatnered Snale							9	Visual
		20.0-22.0	Gray Weatnered Snale							9	Visual
1551+50	CL	0.0-3.5	17	3	7	33	35	33	13	11	A-6a *
		3.5-5.0	0	2	3	33	43	33	13	13	A-7-6
		5.0-6.0	Coal Blossom							—	Visual
		6.0-9.0	0	3	2	12	31	57	33	33	A-7-6

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SOIL CLASS.
1510+00	CL	0.0-5.0	0	3	5	16	73	116	22	16	A-7-6
		5.0-11.0	0	11	11	115	157	133	11	16	A-6a *
		11.0-15.0	0	11	16	16	57	33	13	11	A-6a
		15.0-17.0	Gray Weatnered Snale							10	Visual
1550+50	CL	0.0-2.0	0	2	111	25	55	113	17	19	A-7-6 *
		2.0-2.0	0	1	3	15	73	115	16	16	A-7-6
		2.0-10.0	0	1	2	29	33	27	116	20	A-7-6
1552+50	CL	0.0-5.0	0	3	5	17	116	33	111	19	A-6a
		5.0-9.0	0	3	6	115	115	115	293	291	A-7-6
		9.0-111.0	0	2	3	50	115	119	119	291	A-11b
		111.0-20.0	26	6	11	29	23	26	7	26	A-11a
		20.0-221.0	15	9	12	37	25	27	6	19	A-11a
1557+50	70'Rt	0.0-5.0	0	1	11	37	53	45	31	33	A-7-6
		5.0-11.0	0	1	5	25	29	45	3	33	A-11b
		11.0-16.0	0	3	9	115	111	33	11	21	A-6a
		16.0-20.0	0	1	1	50	15	33	7	29	A-11b
1559+10	CL	0.0-5.0	0	1	11	50	115	36	9	21	A-11b
		5.0-11.0	0	3	10	56	35	33	9	29	A-11b
		11.0-15.0	0	2	7	56	35	33	10	29	A-11b
		15.0-20.0	0	1	1	115	115	33	13	25	A-6a
1565+00	CL	0.0-2.0	0	2	11	37	57	58	21	20	A-7-6
		2.0-7.0	0	2	11	110	115	115	11	21	A-6a
		7.0-9.0	0	2	11	50	50	30	16	30	A-6a
		10.0-15.0	0	11	33	27	31	25	6	15	A-11a
		15.0-26.0	0	11	9	50	37	28	2	28	A-11b
1570+00	CL	0.0-2.0	0	6	15	33	33	33	6	17	A-11a
		2.0-2.0	0	1	1	153	33	113	28	26	A-7-6
		2.0-12.0	0	1	3	29	27	28	5	27	A-11b
		12.0-17.0	31	0	26	33	17	33	3	16	A-11a
		17.0-20.0	0	0	0	33	26	115	15	23	A-11b
1575+00	90'Rt	0.0-5.0	0	3	11	30	36	30	11	17	A-6a
		5.0-9.0	0	11	21	33	33	30	11	26	A-6a
		9.0-13.0	0	11	8	36	35	33	6	27	A-11b
		13.0-15.0	39	12	11	36	15	33	11	11	A-2-11
1580+50	110'Lt	0.0-3.0	0	0	11	56	30	36	10	28	A-11b
		3.0-6.0	0	3	15	33	36	33	10	25	A-11a
		6.0-9.0	0	3	5	35	33	33	11	30	A-6a
		9.0-12.0	21	3	11	33	21	33	11	35	A-11a
		12.0-18.0	0	3	3	33	21	33	11	35	A-11b
1582+30	CL	0.0-3.0	0	0	3	53	111	30	12	20	A-6a
		3.0-7.0	0	3	11	115	111	115	17	31	A-7-6
		7.0-11.0	28	3	7	17	11	27	6	15	A-2-11
		11.0-12.0	0	3	11	20	113	115	15	21	A-11b
		12.0-16.0	0	7	15	53	26	25	11	15	A-11b
1587+55	CL	0.0-5.0	0	6	11	113	111	32	11	20	A-6a *
		5.0-9.0	0	7	9	115	30	32	11	17	A-6a
		9.0-12.0	0	2	11	63	36	115	15	26	A-11b
1590+00	CL	0.0-3.0	0	11	5	13	79	115	15	15	A-7-6
		3.0-7.0	0	2	2	26	66	37	111	13	A-6a
		7.0-9.0	Black Broken Carbonaceous Snale							—	Visual
		9.0-11.0	Brown & Gray Weatnered Indurated Clay							9	Visual *
1593+00	CL	0.0-5.0	25	11	10	36	25	39	11	13	A-6a
		5.0-9.0	0	1	1	117	51	39	11	15	A-6a
		9.0-12.0	0	2	11	117	117	39	11	15	A-6a
1599+00	CL	0.0-11.0	13	6	10	15	23	26	12	12	A-6a
		11.0-6.0	0	6	39	23	30	33	7	27	A-11a
		6.0-10.0	43	3	11	15	16	133	6	15	A-2-11
		10.0-15.0	37	12	11	29	13	26	6	16	A-11a
1600+00	60'Rt	0.0-11.0	33	10	13	26	10	26	12	12	A-6a
		11.0-9.0	39	10	10	17	23	33	11	23	A-6a
		9.0-13.0	33	1	3	15	113	33	17	23	A-7-6
1602+00	CL	0.0-11.0	39	5	11	21	21	36	11	17	A-6a
		11.0-9.0	0	3	5	35	37	36	11	26	A-6a
		9.0-12.0	0	1	3	33	33	33	9	26	A-11b
		12.0-15.0	23	7	13	33	28	33	6	17	A-11a
1606+00	CL	0.0-11.0	26	3	11	21	36	13	13	15	A-6a
		11.0-7.0	17	13	13	9	28	36	11	26	A-2-6
		7.0-12.0	0	6	39	5	21	33	11	26	A-6a
		12.0-15.0	Dark Gray Broken Snale							16	Visual
1606+00	60'Rt	0.0-5.0	0	2	5	15	115	30	13	23	A-6a *
		5.0-7.0	0	2	5	11	29	30	13	25	A-6a
		7.0-11.0	35	5	15	20	21	36	16	16	A-11a
		11.0-15.0	35	5	13	15	33	25	11	15	A-11a
1610+00	35'Lt	0.0-3.0	0	2	13	15	36	37	33	11	15	A-6a
		3.0-9.0	0	11	11	13	15	36	33	11	15	A-6a
		9.0-9.0	11	5	11	13	15	35	37	15	17	A-11a
1610+00	60'Rt	0.0-5.0	0	11	13	51	26	13	17	17	A-6a
		5.0-7.0	Coal Blossom							—	Visual
		7.0-11.0	0	3	9	17	33	113	11	15	A-6a
		11.0-15.0	0	3	9	39	33	113	11	15	A-6a
1613+00	CL	0.0-11.0	0	3	13	21	53	36	11	28	A-6a
		11.0-9.0	0	3	13	23	31	53	15	21	A-7-6
		9.0-11.0	33	3	13	23	31	53	15	21	A-7-6
		11.0-11.0	33	3	13	23	31	53	15	21	A-7-6

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SOIL CLASS.
1611+60	50'Rt	0.0-5.0	21	3	7	111	22	31	11	17	A-6a
		5.0-9.0	33	2	6	116	16	37	12	21	A-6a
		9.0-12.0	33	2	12	32	11	30	7	20	A-11a
		12.0-15.0	Gray Broken Snale							13	Visual
1618+00	CL	0.0-5.0	Brown Broken Sandy Snale							9	Visual *
		5.0-10.0	Brown Broken Sandy Snale							10	Visual
		10.0-12.0	Brown Indurated Clay							9	Visual
1620+00	CL	0.0-5.0	0	3	9	57	31	35	9	11	A-11b *
		5.0-9.0	0	7	9	36	30	30	16	111	A-6b
		9.0-11.0	Brown Weatnered Sancy Snale							7	Visual
1623+50	117'Lt	0.0-5.0	Brown Weatnered Sancy Snale							10	Visual
		5.0-10.0	Brown Weatnered Sandy Snale							10	Visual
		10.0-111.0	Brown Weatnered Sandy Snale							11	Visual
1623+50	CL	0.0-1.5	0	1	3	111	116	110	23	19	A-7-6
		1.5-5.0	Brown Weatnered Snale							9	Visual
		5.0-12.0	Brown Weatnered Snale							10	Visual
		12.0-12.5	Gray Weatnered Snale							9	Visual
		12.5-21.5	Gray Weatnered Snale							11	Visual *
		21.5-22.0	Brown Clay Bedrock							—	Visual *
1625+50	CL	0.0-5.0	Brown Weatnered Snale							10	Visual *
		5.0-10.0	Brown Weatnered Snale							12	Visual
		10.0-12.0	Brown Weatnered Snale							13	Visual
1626+00	60'Rt	0.0-3.0	0	6	10	51	30	31	9	1,26	A-11b
		3.0-11.0	Coal Blossom							—	Visual
		11.0-9.0	0	1	0	55	26	33	9	13	A-11b
		9.0-111.0	Gray Weatnered Indurated Clay							9	Visual
1629+50	CL	0.0-11.0	116	3	3	25	23	110	15	16	A-6a *
		11.0-9.0	Brown Weatnered Snale							12	Visual
		9.0-12.0	Gray Broken Snale							7	Visual
1630+00	25'Lt	0.0-3.0	20	11	9	28	113	111	7	26	A-5
		3.0-5.0	0	11	3	25	61	33	11	19	A-6a
		5.0-7.5	Gray Weatnered Indurated Clay							10	Visual
		7.5-9.5	Brown Weatnered Sandstone							5	Visual
		9.5-10.0	Gray Weatnered Sandstone							11	Visual
1633+15	CL	0.0-5.0	116	6	5	10	21	112	13	15	A-7-6
		5.0-9.0	0	13	9	17	12	35	17	16	A-7-5
		9.0-11.0	Coal							—	Visual
		11.0-15.0	Gray Weatnered Snale							9	Visual
		15.0-19.0	Gray Weatnered Indurated Clay							5	Visual
1633+00	CL	0.0-5.0	10	2	11	31	30	30	11	17	A-6a
		5.0-10.0	Brown Weatnered Snale							11	Visual
		10.0-111.0	Brown Broken Snale							10	Visual
1638+00	CL	0.0-3.0	0	1	11	33	62	50	23	22	A-7-5
		3.0-9.0	Brown Weatnered Snale							13	Visual
		9.0-13.0	Brown Weatnered Snale							12	Visual
		13.0-19.0	Gray Weatnered Snale							12	Visual
		19.0-21.0	Coal							—	Visual
		21.0-23.0	Clay Bedrock							21	Visual
1641+00	CL	0.0-5.0	Brown Weatnered Snale							11	Visual *
		5.0-9.0	Brown Weatnered Snale							9	Visual
		9.0-12.0	Brown Weatnered Snale							9	Visual
1643+00	100'Rt	0.0-5.0	Brown Weatnered Snale							9	Visual
		5.0-10.0	Brown Weatnered Snale							10	Visual
		10.0-111.0	Brown Weatnered Sandy Snale							9	Visual
1643+00	100'Lt	0.0-3.0	0	11	13	29	111	133	7	15	A-11b
		3.0-5.0	0	16	26	29	31	19	15	19	A-11a
		5.0-7.0	0	9	5	21	32	37	17	33	A-6b
1648+50	CL	0.0-5.0	Brown Weatnered Snale							15	Visual *
		5.0-10.0	Brown Weatnered Snale							10	Visual
1649+00	CL	0.0-3.0	0	1	2	29	37	35	16	20	A-7-5
		3.0-9.0	38	12	13	23	16	36	16	112	A-11a
		9.0-13.0	Brown Weatnered Siliceous Snale							12	Visual
1651+00	CL	0.0-5.0	0	11	5	17	111	39	16	16	A-6b *
		5.0-7.0	111	6	3	16	23	31	11	16	A-6a
		7.0-10.0	0	16	12	13	29	32	9	15	A-11a
1651+55	150'Rt	0.0-3.0	0	11	10	35	30	33	11	16	A-6a
		3.0-9.0	Brownish-Gray Broken Sandstone							7	Visual
1651+00	CL	0.0-5.0	Brown Weatnered Snaley Sandstone							11	Visual
		5.0-10.0	Gray Weatnered Indurated Clay							9	Visual
1656+50	200'Rt	0.0-5.0	22	5	6	37	30	33	11	12	A-6a
		5.0-10.0	Brown Weatnered Snale							11	Visual
		10.0-12.0	Gray Clay Bedrock							13	Visual
1657+00	150'Lt	0.0-3.0	21	2	9	33	32	35	15	16	A-11a
		3.0-11.0	15	11	11	33	32	37	11	-	A-11a
1658+50	105'Lt	0.0-3.5	0	10	111	112	34	35	15	17	A-11a
1660+00	CL	0.0-11.0	15	9	10	35	29	35	11	16	A-6a

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SOIL CLASS.
1650+50	90'Rt	0.0-11.0	0	7	9	51	33	35	6	15	A-11b
1661+00	CL	0.0-5.0	Brown Weatnered Sandstone							11	Visual
1662+00	CL	0.0-11.0	0	11	7	19	63	56	23	25	A-7-5 *
		11.0-5.0	Coal Blossom							—	Visual
		5.0-10.0	0	1	11	116	119	110	15	13	A-6a
1665+75	CL	0.0-5.0	17	2	10	37	311	30	11	—	A-6a
1669+50	90'Lt	0.0-5.0	Brown Weatnered Sandstone							10	Visual
		5.0-7.0	Brown Weatnered Siliceous Snale							10	Visual
1669+50	CL	0.0-5.0	35	1	13	29	27	32	13	15	A-6a
		5.0-10.0	29	3	9	26	113	112	13	15	A-7-5
		10.0-15.0	Gray Broken Clay Snale							16	Visual
1671+00	35'Rt	0.0-5.0	0	2	5	35	50	110	16	10	A-6a
		5.0-10.0	Brown Weatnered Snale							12	Visual
		10.0-15.0	Brown & Gray Weatnered Snale							10	Visual
1672+00	CL	0.0-2.0	0	3	11	28	60	51	23	31	A-7-6 *
		2.0-3.0	Coal Blossom							—	Visual
		3.0-7.0	0	0	3	22	711	112	10	111	A-7-6
		7.0-9.0	Brown Weatnered Snale							7	Visual
1675+50	CL	0.0-5.0	Brown Weatnered Sandstone							10	Visual
		5.0-10.0	Brown Weatnered Sandstone							11	Visual *
		10.0-12.5	Brown Weatnered Sandstone							11	Visual *
1677+00	CL	0.0-5.0	Brown Weatnered Sandstone							7	Visual
		5.0-9.0	Brown Weatnered Sandstone							9	Visual
1680+55	CL	0.0-3.0	Brown Weatnered Sandstone							7	Visual *
1682+00	CL	0.0-5.0	Brown Weatnered Snaly Sandstone							9	Visual
		5.0-9.0	Brown Broken Sandstone							7	Visual
1685+75	CL	0.0-11.0	0	11	17	115	38	36	5	20	A-11a
		11.0-6.0	0	2	13	50	34	132	5	130	A-11b
		6.0-11.0	0	2	11	35	32	132	3	132	A-11b
		11.0-15.0	Coal							—	Visual
		15.0-17.0	Black Broken Carbonaceous Snale							11	Visual
1689+75	CL	0.0-11.0	25	7	26	23	10	115	119	9	A-11a
		11.0-10.0	23	11	33	30	30	115	119	130	A-11a
		10.0-15.0	36	11	6	31	30	30	1	130	A-11a
		15.0-20.0	0	7	5	51	37	32	5	11	A-11b
1691+40	150'Lt	0.0-11.0	15	7	30	27	31	30	6	30	A-11a
1691+75	100'Rt	0.0-5.0	0	11	6	30	111	36	11	12	A-6a
		5.0-10.0	22	6	5	23	111	115	111	15	A-7-5
		10.0-15.0	Black Carbonaceous Snale							15	Visual
		15.0-19.0	Coal							—	Visual
1691+75	CL	0.0-5.0	Brown Weatnered Siliceous Snale							—	Visual *
		5.0-10.0	Brown Weatnered Siliceous Snale							10	Visual
1697+00	CL	0.0-5.0	Brown Broken Snaly Sandstone							7	Visual
		5.0-10.0	Brown Broken Snaly Sandstone							7	Visual
		10.0-12.0	Brown Weatnered Sandstone							8	Visual
1702+00	CL	0.0-11.0	0	3	7	52	38	36	10	12	A-11b *
		11.0-9.0	Brown Weatnered Siliceous Snale							10	Visual *
		9.0-11.0	Brown Weatnered Siliceous Snale							11	Visual
1705+00	95'Lt	0.0-5.0	110	1	11	27	21	132		11	A-11a
		5.0-9.0	17	0	28	28	21	132	10	10	A-11a
		9.0-12.5	Dark Gray Broken Clay Snale							11	Visual
1705+00	CL	0.0-5.0	110	5	3	10	10	133	11	12	A-6a
		5.0-10.0	28	0	3	33	35	132		12	A-7-6
		10.0-15.0	21	3	5	17	111	115	16	13	A-7-6
		15.0-21.0	Gray Broken Clay Snale							11	Visual
1709+50	35'Lt	0.0-5.0	51	3	3	15	15	132		15	A-2-11
		5.0-11.0	0	3	3	17	33	16	13	10	A-11b
		11.0-15.0	0	3	3	26	65	113	15	132	A-7-6
		15.0-19.5	16	1	3	17	29	115	15	132	A-7-6
1709+00	60'Lt	0.0-5.0	0	3	3	12	39	28	11	11	A-6a
		5.0-9.0	0	3	3	17	36	28	11	213	A-6b
		9.0-13.0	38	3	3	17	36	35	17	213	A-6a
		13.0-15.0	38	3	3	28	35	35	11	213	A-6a
		15.0-20.0	Gray Weatnered Snale							13	A-7-6

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SOIL PROFILE
HOLMES-TUSCARAWAS COS.
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

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SUMMARY OF SOIL TEST DATA (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		ITEM	%	%	%	%	%	L.L.	P.I.	%	SOIL
		THICK.	AGG.	C.S.	F.S.	SILT	CLAY			U.C.	CLASS.
1715+00	CL	0.0-6.0	22	1	5	37	35	36	13	15	A-6a
1719+00	CL	0.0-5.0	30	2	10	31	27	29	3	11	A-1a
		5.0-10.0	Brown Weatnered Siliceous Shale							9	Visual
1722+00	CL	0.0-5.0	32	11	3	27	27	30	11	11	A-6a *
		5.0-9.0	Brown Weatnered Siliceous Shale							13	Visual
		9.0-10.0	Brownish-Gray Weatnered Siliceous Shale							13	Visual
1725+00	CL	0.0-5.0	28	2	11	21	11	30	11	15	A-6a
		5.0-9.0	15	5	11	36	33	36	11	33	A-6a
		9.0-10.0	Brown Weatnered Sandstone							9	Visual
1727+00	60'Lt	0.0-5.0	38	2	12	28	20	33	7	15	A-1a
		5.0-10.0	35	3	11	33	28	33	7	15	A-1a
		10.0-13.0	16	2	7	17	63	19	17	13	A-7-6
		13.0-13.0	Gray Broken Clay Shale							1	Visual
		13.0-19.0	Coal							—	Visual
1730+00	CL	0.0-2.0	32	2	1	33	32	30	13	15	A-6a
		2.0-9.0	15	2	5	36	32	31	13	11	A-6a
		9.0-15.0	Brown Weatnered Siliceous Shale							11	Visual
		15.0-20.0	Gray Broken Clay Shale							15	Visual
1731+00	CL	0.0-5.0	0	1	5	33	56	30	13	15	A-6a
		5.0-11.0	33	2	5	16	43	43	16	13	A-7-6
		11.0-16.0	Gray Clay Shale							13	Visual
		16.0-21.0	Gray Broken Clay Shale							13	Visual
1734+25	110'Lt	0.0-1.0	0	11	6	51	36	30	20	16	A-7-5
		1.0-2.0	30	0	13	33	30	15	15	30	A-1a
1737+50	90'Lt	0.0-1.0	15	15	7	15	31	30	11	21	A-6a
		1.0-2.0	11	5	11	25	53	-	-	15	A-6a
		2.0-2.0	30	11	9	11	30	17	13	30	A-7-5
1738+00	CL	0.0-6.0	0	5	7	28	60	35	12	20	A-7-6
		6.0-10.0	25	10	6	19	30	32	11	15	A-7-6
		10.0-15.0	Gray Weatnered Shale							15	Visual
1739+75	100'Lt	0.0-6.0	31	11	10	32	33	36	5	15	A-1a
1736+00	60'Lt	0.0-6.0	11	3	5	39	43	36	11	19	A-6a
		6.0-12.0	30	3	6	15	26	43	15	21	A-7-6
		12.0-11.0	0	11	6	17	73	11	16	20	A-5
		11.0-17.0	Coal							—	Visual
1736+50	CL	0.0-3.5	0	11	11	28	61	45	13	28	A-7-5
		3.5-6.0	Coal Blossom							—	Visual
		6.0-10.0	0	0	7	30	53	31	11	11	A-6a
1738+00	CL	0.0-11.0	Brown Weatnered Shale							15	Visual
		11.0-6.0	Coal							—	Visual
		6.0-9.0	Brown Weatnered Siliceous Shale							10	Visual
1740+00	CL	0.0-11.0	Brown Weatnered Siliceous Shale							10	Visual
		11.0-8.0	Brown Weatnered Siliceous Shale							11	Visual
		8.0-10.0	Gray Broken Clay Shale							9	Visual
1740+50	150'Lt	0.0-3.0	0	3	11	55	30	36	6	21	A-1b
		3.0-6.0	0	3	6	43	45	43	9	45	A-5
		6.0-9.0	0	5	11	50	31	37	7	19	A-1b
		9.0-12.0	Gray Weatnered Shale							9	Visual
1741+00	200'Lt	0.0-2.0	17	12	9	29	31	30	11	19	A-6a
		2.0-11.0	0	2	5	40	53	45	12	35	A-7-6
		11.0-6.0	10	5	6	26	43	43	12	40	A-7-5
		6.0-9.0	0	11	7	30	50	37	11	22	A-6a
		9.0-13.0	Gray Weatnered Shale							10	Visual
1741+00	CL	0.0-11.0	20	11	6	26	111	35	12	20	A-6a
		11.0-7.0	0	20	13	30	37	35	11	17	A-6a
		7.0-13.0	Brown Weatnered Shale							11	Visual
		13.0-19.0	Gray Weatnered Shale							9	Visual
1741+75	150'Lt	0.0-3.0	18	7	6	32	37	31	11	22	A-6a
		3.0-5.0	16	5	6	29	45	42	13	20	A-7-6
		5.0-7.0	20	3	11	31	42	35	11	27	A-7-6
		7.0-13.0	Brown Weatnered Shale							11	Visual
1742+00	95'Lt	0.0-2.0	0	11	0	40	47	30	11	21	A-6a
		2.0-5.0	10	0	7	30	36	33	11	20	A-6a
		5.0-9.0	10	3	11	38	35	43	13	26	A-6a
		9.0-10.0	15	0	2	27	55	30	12	12	A-6a
		10.0-13.0	Gray Broken Clay Shale							6	Visual
1742+65	25'Lt	0.0-11.0	7	0	0	37	30	36	11	23	A-6a
		11.0-7.0	0	3	11	29	28	35	20	22	A-7-6
		7.0-11.0	0	2	0	36	55	31	11	27	A-6a
1742+95	100'Rt	0.0-11.0	26	5	7	30	33	38	11	16	A-6a
		11.0-9.0	33	2	11	25	20	30	11	11	A-6a
		9.0-15.0	Brownish-Gray Weatnered Sandstone							6	Visual
		15.0-19.0	Brown Weatnered Shale							9	Visual
1743+00	CL	0.11-5.0	31	3	5	26	32	35	11	16	A-6a
		5.0-7.0	Brown Weatnered Shale							13	Visual
		7.0-9.5	Brown Weatnered Shale							-	Visual
		9.5-11.0	Black Coal							—	Visual
		11.0-12.0	Gray Weatnered Indurated Clay							9	Visual
		13.0-21.0	Gray Weatnered Indurated Clay							5	Visual *
		21.0-21.5	Brown & Gray Weatnered Siliceous Snale							13	Visual
1743+20	CL	0.0-5.0	0	2	7	61	30	30	5	25	A-1b
		5.0-9.0	0	0	0	30	61	53	13	20	A-7-5
		9.0-12.0	17	11	7	16	51	53	13	26	A-7-5
		12.0-17.0	27	0	5	17	42	35	16	20	A-7-6
1745+25	CL	0.0-5.0	10	11	7	30	30	30	15	15	A-6a
		5.0-10.0	Brown Weatnered Indurated Clay							10	Visual
1750+00	CL	0.5-11.0	0	1	11	55	30	27	3	21	A-1b
		11.0-5.0	Brown Weatnered Snale							10	Visual
		5.0-13.0	Brown Broken Clay Snale							10	Visual *
1751+00	35'Lt	0.0-5.0	15	2	6	30	37	31	11	13	A-6a
		5.0-9.0	Brown Weatnered Siliceous Snale							7	Visual
		9.0-11.0	Brown Weatnered Siliceous Snale							7	Visual
1751+00	15'Lt	0.0-11.0	0	10	10	37	35	33	5	10	A-1a
		11.0-7.0	0	3	6	11	51	30	12	26	A-6a
		7.0-12.0	10	5	6	17	53	31	13	26	A-7-6
		12.0-11.0	0	11	6	27	63	32	13	26	A-7-6
		11.0-17.0	Gray Weatnered Indurated Clay							12	Visual
1756+00	30'Lt	0.0-3.0	0	3	9	50	38	32	5	33	A-1b
		3.0-6.0	0	1	5	10	81	33	11	30	A-6a
		6.0-9.0	0	0	1	30	60	35	11	31	A-6a
		9.0-13.0	Gray Broken Siliceous Snale							5	Visual
1758+00	110'Lt	0.0-3.0	15	3	10	31	33	32	11	21	A-6a
		3.0-7.0	0	1	6	17	46	36	11	31	A-6a
		7.0-12.0	30	3	5	30	32	35	11	15	A-6a
1759+00	CL	0.0-6.0	33	2	9	35	22	30	5	11	A-1a
		6.0-11.0	0	1	3	16	70	43	13	10	A-7-5
1761+00	50'Lt	0.0-5.0	0	1	0	56	38	29	5	11	A-1b
		5.0-10.0	Brown Weatnered Siliceous Snale							9	Visual
1761+00	CL	0.0-5.0	Brown Weatnered Siliceous Snale							11	Visual
		5.0-10.0	Brown Weatnered Siliceous Snale							9	Visual *
		10.0-12.5	Brown Weatnered Siliceous Snale							9	Visual
1761+00	50'Rt	0.0-11.0	30	11	6	20	22	30	13	12	A-6a
		11.0-9.0	Brown Weatnered Siliceous Snale							7	Visual
		9.0-13.0	Brown Weatnered Siliceous Snale							6	Visual
1761+00	95'Lt	0.0-2.5	0	2	11	52	32	35	7	26	A-1b
		2.5-11.0	0	2	6	32	50	30	12	30	A-6a
		11.0-7.0	Gray Weatnered Snale							7	Visual
		7.0-12.0	Gray Weatnered Snale							11	Visual
1765+25	15'Rt	0.0-3.0	0	2	11	50	35	30	13	31	A-6a
		3.0-5.5	0	2	8	25	61	37	10	21	A-7-6
		5.5-7.0	Dark Gray Extremely Weatnered Snale							20	Visual
1766+65	110'Rt	0.0-3.0	0	5	10	33	32	37	11	26	A-6a
		3.0-7.0	0	3	11	43	33	36	11	30	A-1b
		7.0-10.0	25	2	3	33	21	36	13	10	A-6a
		10.0-12.0	Gray Weatnered Broken Clay Snale							11	Visual
1769+00	CL	0.5-5.0	0	11	3	47	39	37	11	21	A-6a
		5.0-10.0	Gray Weatnered Snale							10	Visual
1770+00	100'Lt	0.5-5.0	0	11	11	30	46	30	11	26	A-6a
		5.0-10.0	Brownish-Gray Weatnered Snale							9	Visual
1771+00	CL	0.5-5.0	0	2	11	11	53	11	16	21	A-7-6
		5.0-9.5	Brown Weatnered Siliceous Shale							9	Visual
1771+00	15'Rt	0.5-5.0	Grayish-Brown Broken Clay Snale							13	Visual
		5.0-10.0	Gray Weatnered Snale							13	Visual
1771+00	10'Lt	0.5-5.0	27	1	0	30	31	30	11	10	A-6a
		5.0-10.0	Brown Weatnered Snale							9	Visual
* * 1777+40	10' Lt										
5+00	10'Lt	0.5-11.0	Brown Weatnered Sandstone							10	Visual *
7+50	10'Rt	0.5-5.0	12	3	23	12	21	19	19	11	A-1a
		5.0-10.0	17	3	17	10	15	19	19	11	A-2-11
		10.0-12.0	11	3	29	13	11	19	19	13	A-2-11
13+00	10'Lt	0.5-3.0	Brown Weatnered Siliceous Snale							9	Visual
		3.0-7.0	Gray Weatnered Indurated Clay							9	Visual
11+70	CL	0.5-6.0	Brown Broken Sandstone							9	Visual *
			TOWNSHIP ROAD 113:								
7+50	21'Rt	0.0-5.0	31	7	6	17	36	37	12	17	A-6a
		5.0-6.0	Coal Blossom							—	Visual
		6.0-10.0	Gray Broken Clay Snale							15	Visual
13+00	CL	0.0-11.0	12	2	5	50	31	30	9	10	A-1b
		11.0-7.0	Brown Weatnered Siliceous Snale							9	Visual *
			COUNTY ROAD 72								
5+00	10'Rt	0.0-3.0	0	2	3	39	56	112	13	21	A-7-6 *
		3.0-6.0	10	3	5	22	52	119	21	15	A-7-6
		6.0-10.0	Brown Broken Clay Snale							111	Visual
7+50	9'Lt	0.0-3.0	27	2	10	32	29	30	11	9	A-6a
12+50	10'Lt	0.0-11.0	Brown Weatnered Siliceous Snale							9	Visual
		11.0-9.0	Brown Weatnered Siliceous Snale							9	Visual
		9.0-11.0	Gray Broken Clay Snale							7	Visual
11+75	10'Lt	0.0-11.0	0	5	9	52	35	29	6	16	A-1b
		11.0-7.0	0	11	5	32	52	35	13	21	A-6a
		7.0-9.5	Gray Weatnered Sandstone							7	Visual
			DRIVE SAMPLE SOIL TEST DATA								
			TAINTLINE								
1532+00	90'Lt	5.0-6.0	26	2	5	10	57	56	23	27	A-7-5
1500+00	70'Lt	5.0-6.0	32	3	5	12	48	57	27	30	A-7-5
1623+50	56'Lt	5.0-6.0	40	11	11	25	27	35	10	16	A-1a
1631+50	100'Rt	5.0-5.2	0	3	3	45	49	31	9	13	A-1a
1610+50	100'Rt	5.0-6.0	37	5	7	18	33	39	11	19	A-1a
1737+00	61'Rt	5.0-6.0	29	11	6	19	48	46	16	20	A-7-5
1717+00	CL	11.0-5.0	0	0	1	31	68	45	16	25	A-7-6
* * 1777+40	10'Lt	0.5-5.0	27	1	8	30	34	30	11	10	A-6a
		5.0-10.0	Brown Weathered Shale							9	Visual

TE-96 (FORMERLY TE-54-B)
2000-10-01

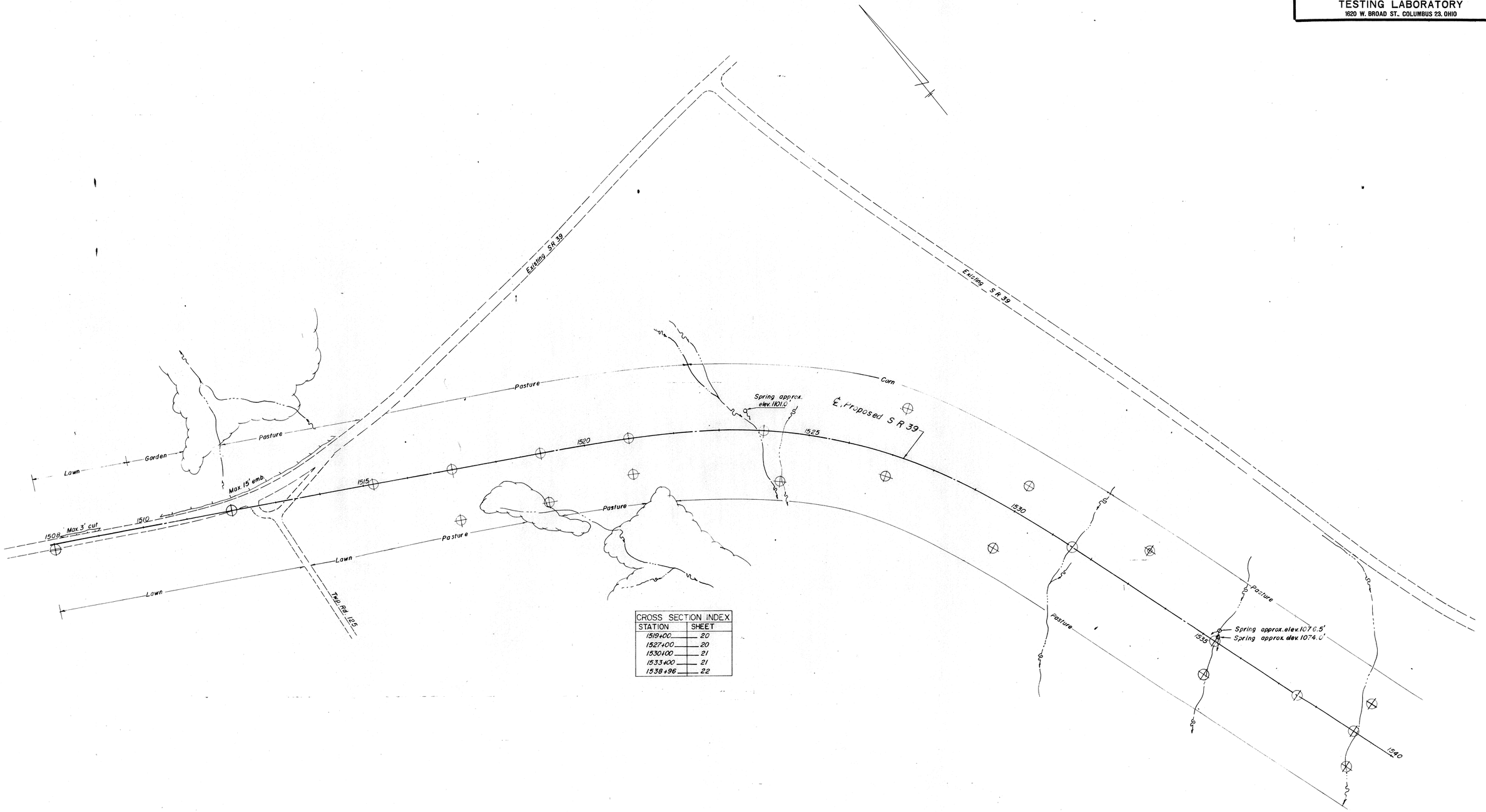
SOIL PROFILE

HOLMES-TUSCARAWAS COS.

HOL-39-28.57

TUS-39-0.00

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO



CROSS SECTION INDEX	
STATION	SHEET
1519+00	20
1527+00	20
1530+00	21
1533+00	21
1538+96	22

TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE

HOLMES-TUSCARAWAS COS

HOL-39-28.57

TUS-39-0.00

5/34

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

1160 1150 1140 1130 1120 1110 1100 1090 1080 1070 1060 1050 1040 1030 1020

12'Rt. B 13 11 6 Refusal

℄ 13 11

℄ Sod=0.5' 16 B 9 7 Refusal

℄ Sod=0.5' 9 9 11 11 Refusal

115'Rt. Sod=0.5' 20 34 8 Refusal

℄ Sod=0.5' 18 8 Refusal

℄ Sod=0.5 13 13 17 Refusal

80'Rt. Sod=0.5' 16 6 13 Refusal

℄ Sod=0.5 20 20 14 Refusal

110'Rt. Sod=0.5 26 16 10 Refusal

50'Rt. Sod=0.5' 16 9 8 Refusal

95'Rt. Sod=0.5 11 15 13 8 Refusal

℄ 12 15

90'Lt. Brown sandy clayey silt with stone fragments 27 Top of Rock-In-Place

NOTE: For complete descriptions of cored interval, see cross section 1533+00, sheet 21.

℄ 9 8 9

75'Rt. 13 14 13 Refusal

℄ 9 11

℄ 13 25 Refusal

75'Rt. 21 11 8 8 Refusal

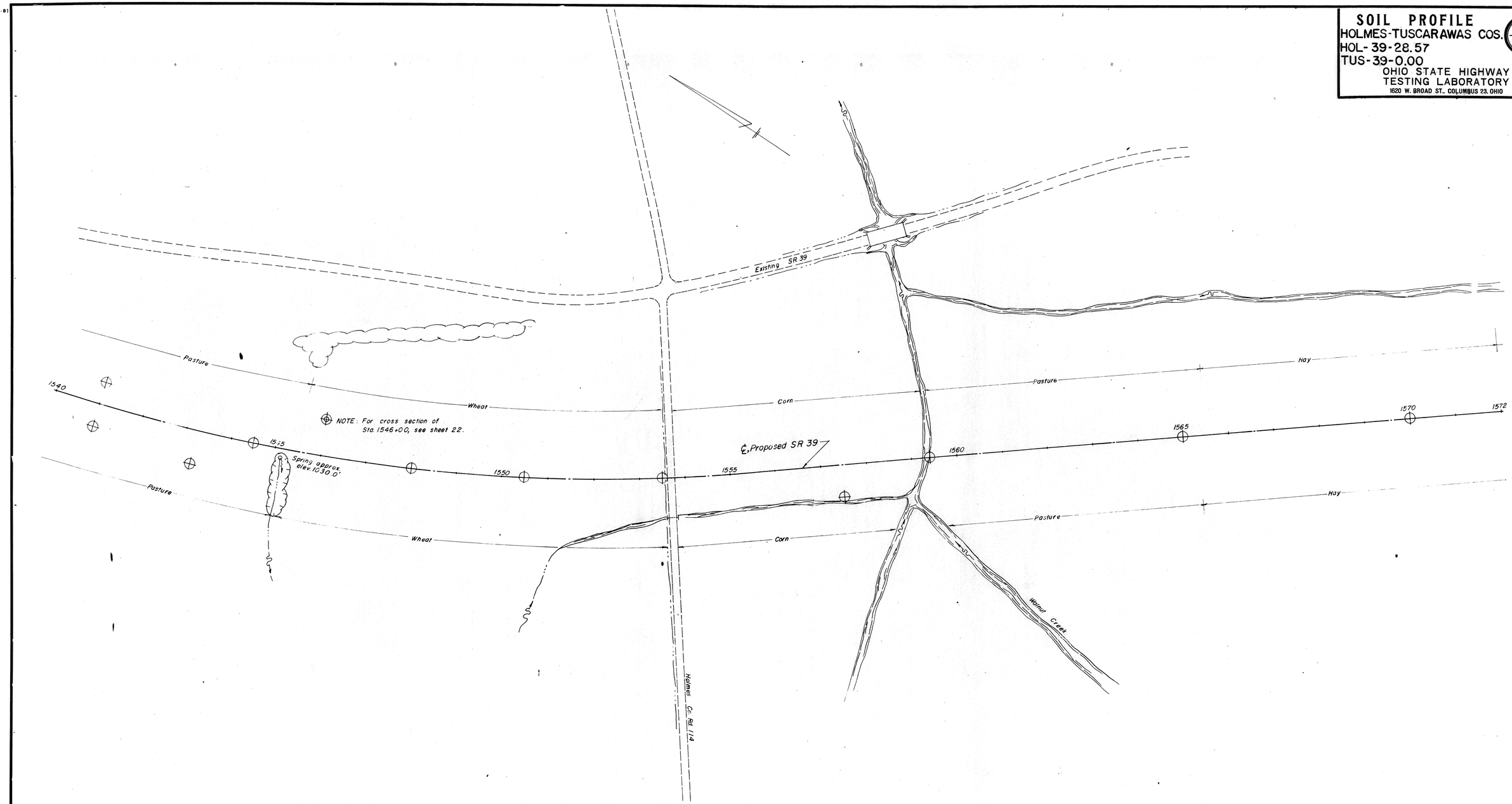
Black carbonaceous shale fragments

1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540

TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE
HOLMES-TUSCARAWAS COS.
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

6
34



TE-96 (FORMERLY TE-54-B)
D300-10-61

SOIL PROFILE

HOLMES-TUSCARAWAS COS.
HOL-39-28.57
TUS-39-0.00

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

7/34

1070
1060
1050
1040
1030
1020
1010
1000
990
980
970
960
950
940
930

50' Lt.
11
Brown sandstone fragments
9
8
50' Rt.
13
20
23
23
Refusal (Boulders)

75' Rt.
13
17
12
7
9
9
Refusal

℄
14
22
22
Refusal

80' Lt.
Brown sandy clay
Top of Rock-In-Place
9
NOTE: For complete descriptions of cored interval, see cross section of Sta. 1546+00, sheet 22

℄
19
10
11
10

℄
18
16
20

℄
18
24
24
20
W
19
Refusal

70' Rt.
28
29
21
29

℄
21
Trace of organic
29
Slightly organic
29
25

℄
20
21
30
W
19
24

℄
17
Slightly organic
25
27
16
23

1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572

TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE

HOLMES-TUSCARAWAS COS.

HOL-39-28.57

TUS-39-0.00

OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

8/34

Existing S R 39

Corn | Corn | Wheat | Hay | Barn yard | Pasture | Hay | Hay

1572 1575 1580 1585 1590 1595 1600 1604

NOTE: For cross section of Sta. 1590+00, see sheet 23.

Max. 8' cut

Max. 2' emb.

℄ Proposed S R 39

Hay | Corn | Hay | Hay | Hay | Hay

Walnut Creek

Twp. Rd. 127

1030 1020 1010 1000 990 980

90' Rt.
17
26
Slightly organic
27
14

40' Lt.
24
27
28
18
27
Refusal (Boulders)

℄
24
31
15
24
18

℄ Sod=0.5'
20
17
26

℄ Sod=0.5'
15
13
B
9
Refusal
70' Lt.
A.
B.

NOTE: For complete log of core boring and description of cored interval, see cross section of Sta. 1590+00, sheet 23.

℄ Sod=0.5'
13
18
18

℄ Sod=0.5'
12
27
15
W
16

60' Rt.
Sod=0.5'
W
20
24
23
Refusal

℄ Sod=0.5'
17
25
Slightly organic
30
17

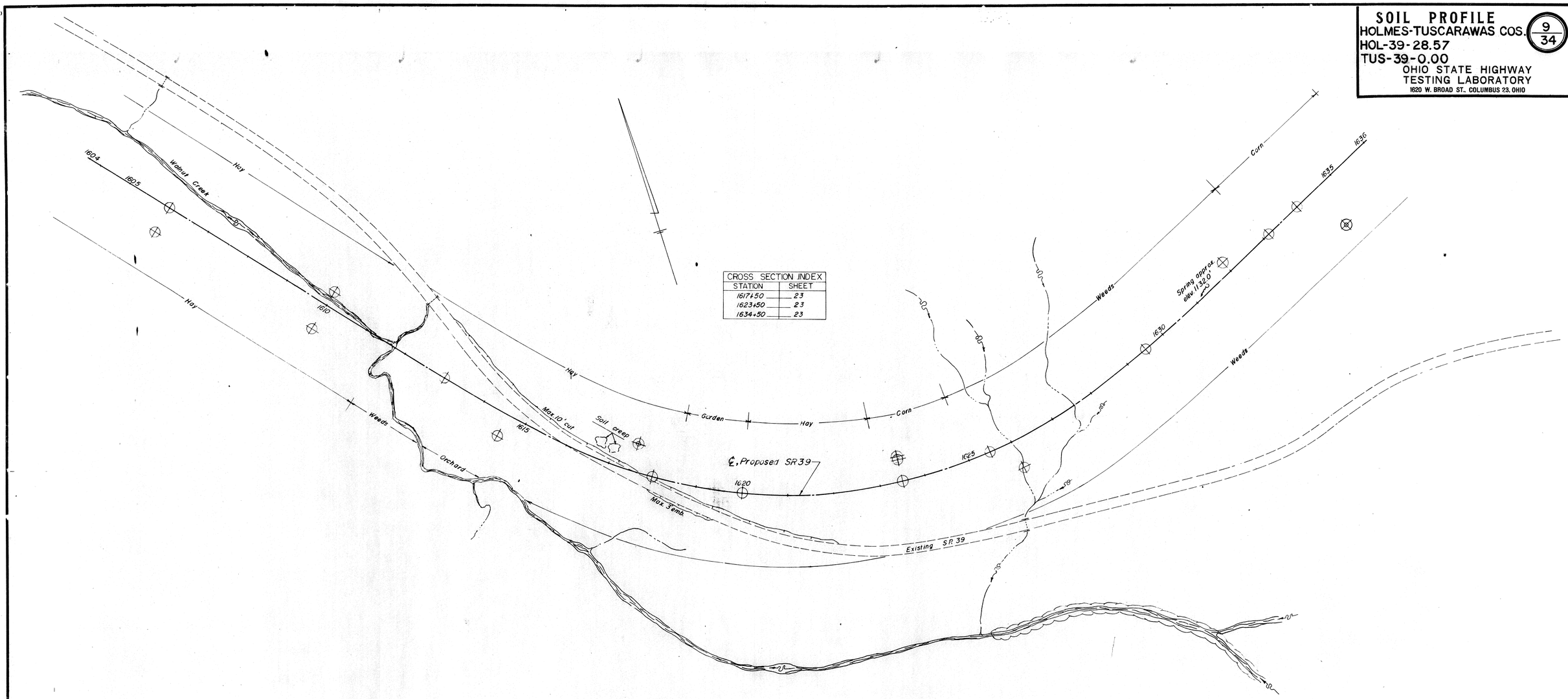
1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604

TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE
HOLMES-TUSCARAWAS COS.
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

9/34

CROSS SECTION INDEX	
STATION	SHEET
16174+50	23
1623+50	23
1634+50	23



TE-96 (FORMERLY TE-54-B)
2000-10-61

SOIL PROFILE

HOLMES-TUSCARAWAS COS. 10/34
HOL-39-28.57
TUS-39-0.00

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

1200
1190
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000

1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000

1200
1190
1180
1170
1160
1150
1140
1130
1120
1110
1100
1090
1080
1070

60'Rt.
Sod=0.5'
℄
Sod=0.5
20
26
16
W
15
12
20
14
W
B
16
Refusal

35'Lt.
Sod=0.5'
60'Rt.
Sod=0.5'
45
19
W
17
C
B
17
11
W
15
Refusal

℄
Sod=0.5'
25
21
W
17
19
Refusal

50'Rt.
Sod=0.5'
17
21
W
20
B
13

60'Lt.
Brown sandy clay silt with stone fragments.
Top of Rock-In-Place
℄
9
B
10
8
Refusal

NOTE: For complete description of cored interval, see cross section of Sta. 1617+50, sheet 23.

℄
Sod=0.5'
11
14
7

℄
TS=0.4'
18
19
10
8
W
11
Refusal

56'Lt.
E

℄
TS=0.5'
10
12
13

60'Rt.
Sod=0.5
26
12
5
Refusal

NOTE: For complete log of core boring and descriptions cored interval, see cross section of Sta. 1623+50, sheet 23.

℄
Sod=0.5'
16
12
B
7

100'Rt.
Top of Rock-In-Place
30±
C

℄
TS=0.5'
17
11
B
10
Refusal

℄
Sod=0.5'
15
16
C
9
5
Refusal

25'Lt.
Sod=0.5'
26
19
10
5
4
Refusal

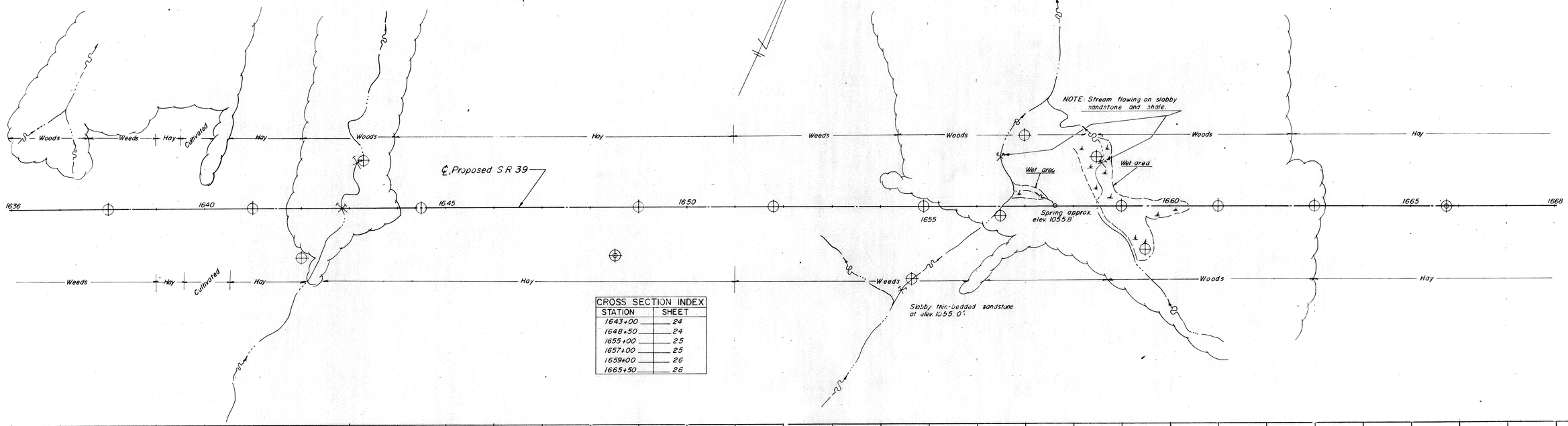
NOTE: For complete descriptions of cored interval see cross section of Sta. 1634+50, sheet 23.
℄-2" Penetration.

1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636

TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE
HOLMES-TUSCARWAS COS.
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

11
34



CROSS SECTION INDEX	
STATION	SHEET
1643+00	24
1648+50	24
1655+00	25
1657+00	25
1659+00	26
1665+50	26

TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE

HOLMES-TUSCARAWAS COS.

HOL-39-28.57

TUS-39-0.00

OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

12/34

1170 1160 1150 1140 1130 1120 1110 1100 1090 1080 1070 1060 1050 1040 1030 1020

1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668

℄ TS=0.5 22 13 12 12 W C 21 Refusal

℄ Sod=0.5' 11 9 8

100'Rt. TS=0.5' 9 10 9 Refusal

Rock Section ℄

℄ Sod=0.5' 15 10

100'Lt. TS=0.5 15 18 33 Refusal

Clay shale, brown and gray

Trace of organic

100'Rt. 19 14 24 Brown and gray clay

Top of Rock-In-Place

℄ Sod=0.5' 20 14 12 Refusal

NOTE: For complete descriptions of cored interval, see cross section of Sta. 1648+50, sheet 24.

℄ Sod=0.5' 18 16 15

℄ Sod=0.5' 11 8 Refusal

150'Rt. Sod=0.5' 19 B 7 Refusal

20'Rt. Sod=0.5' 12 11 W 13 Refusal

150'Lt. TS=0.5' 19 Refusal (Hand auger)

105'Lt. TS=0.5' 17 Refusal (Hand auger)

℄ TS=0.5' 10 Refusal (Hand auger)

90'Rt. TS=0.5' 15 Refusal (Hand auger)

℄ TS=0.5' 14 Refusal

Auger-Core Boring

℄ Sod=0.5' C 25 13

Top of Rock-In-Place

NOTE: For complete descriptions of cored interval, see cross section of Sta. 1665+50, sheet 26.

TE-96 (FORMERLY TE-54-B)
2300-10-61

SOIL PROFILE

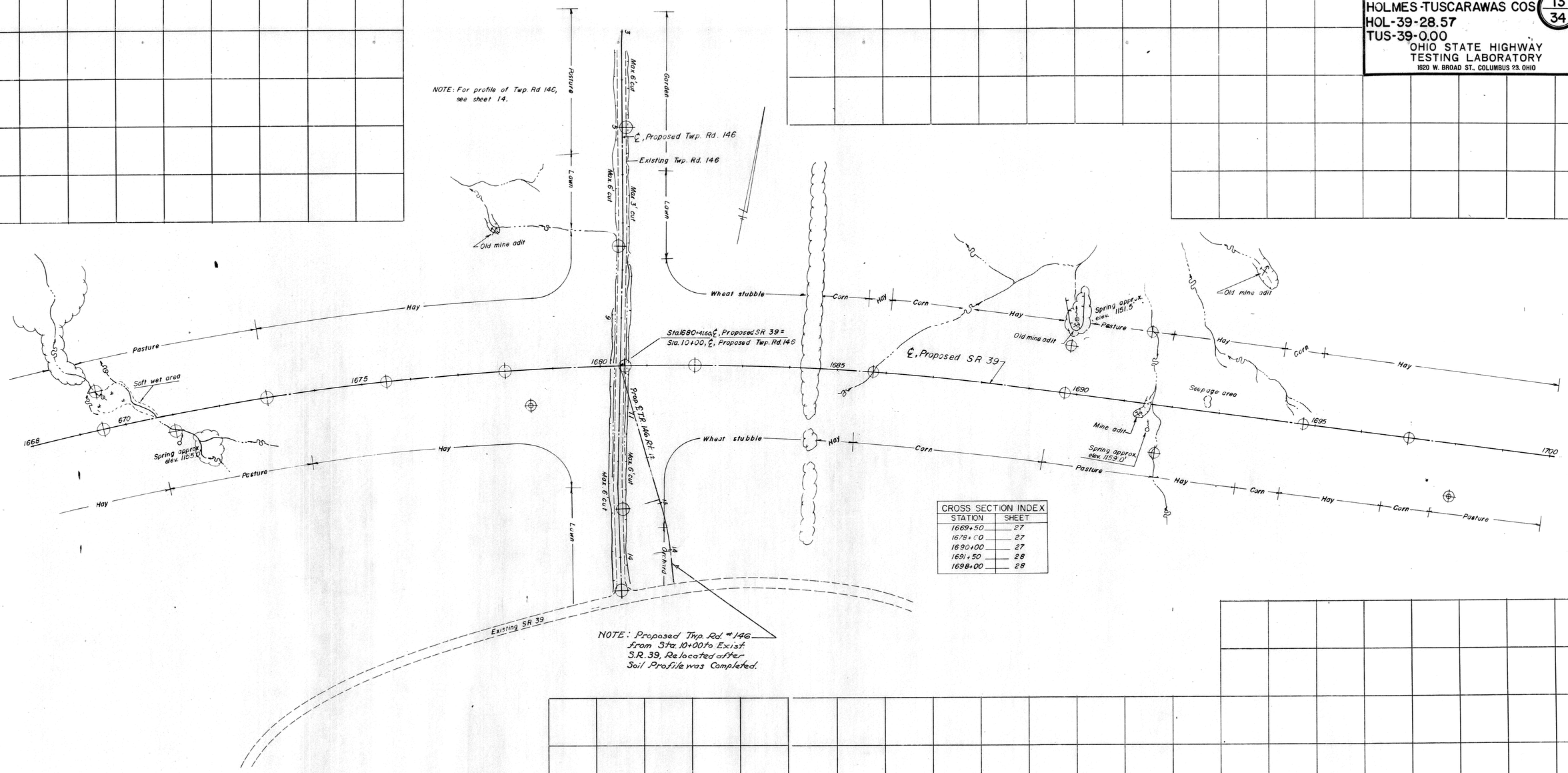
HOLMES-TUSCARAWAS COS

HOL-39-28.57

TUS-39-0.00

13/34

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO



CROSS SECTION INDEX	
STATION	SHEET
1669+50	27
1678+00	27
1690+00	27
1691+50	28
1698+00	28

TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE

HOLMES-TUSCARAWAS COS. 14/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Twp. Rd. 146

℄ Proposed Twp. Rd. 146

℄ Proposed S.R 39

(Sta 1678+45.0 - 75' Rt. Proposed S.R 39)

(Sta 1680+55 ℄ Proposed S.R 39)

Top of Rock-In-Place

10' Lt. Sod=0.5' — 10 — Refusal

10' Rt. Sod=0.5' — 14 / 18 / 13

12' Lt. Sod=0.5' — 7 — Refusal

185' Rt. — 8 — Refusal

10' Lt. Sod=0.5' — 9 / 9 — Refusal

NOTE: For complete description of cored interval, see cross section of Sta. 1678+00, sheet 27.

80' Lt. Sod=0.5' — 10 / 10 — Refusal

35' Rt. Sod=0.5' — 19 / 18 / 18

℄ Sod=0.5' — 18 / 19 / 16

℄ Sod=0.5' — 31 / 14 / 7 — Refusal

℄ — 10 / 11 / 14

75' Rt. — 7 / 8 — Refusal

℄ Sod=0.5' — 7 — Refusal

℄ TS=0.5' — 8 / 7 — Refusal

NOTE: For complete description of cored interval, see cross section of Sta. 1678+00, sheet 27.

Approx. 300' Lt. — Old mine adit

℄ — 20 / 30 / 22 — Refusal

℄ — 9 / 29 / 8 / 11

Approx. 150' Lt. — Old mine adit

100' Rt. — 12 / 15 / 10

Approx. 30 Rt. Mine adit

150' Lt. TS=0.6' — 28 — Refusal (Hand auger)

Approx. 310' Lt. — Old mine adit

112' Rt. — Brown sandstone fragments — Top of Rock-In-Place

℄ — 7 / 7 / 5 — Refusal

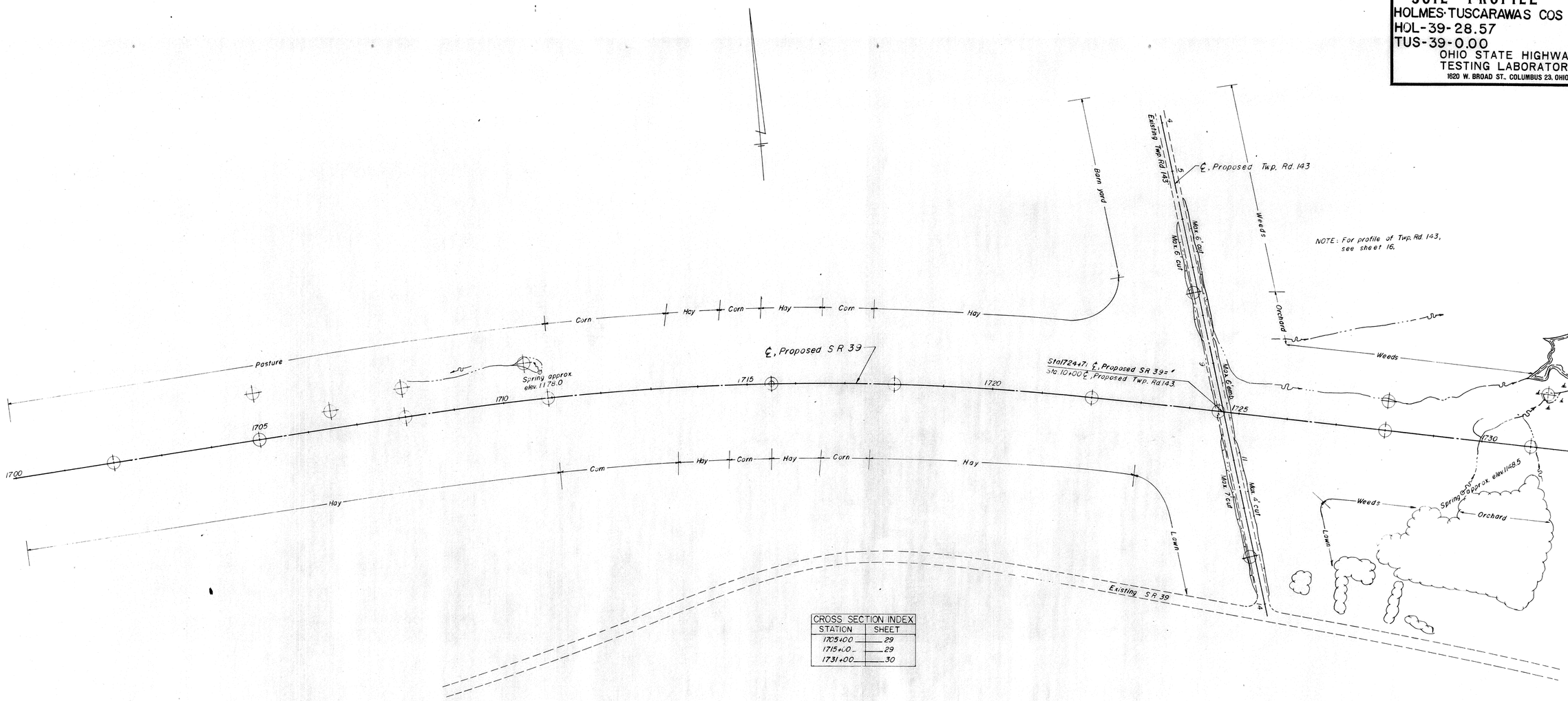
℄ — 10

NOTE: For complete descriptions of interval, see cross section of Sta. 1698+00, sheet 28

TE-95 (FORMERLY TE-54-A)
200-10-61

SOIL PROFILE
HOLMES-TUSCARAWAS COS
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

15
34



CROSS SECTION INDEX	
STATION	SHEET
1705+00	29
1715+00	29
1731+00	30

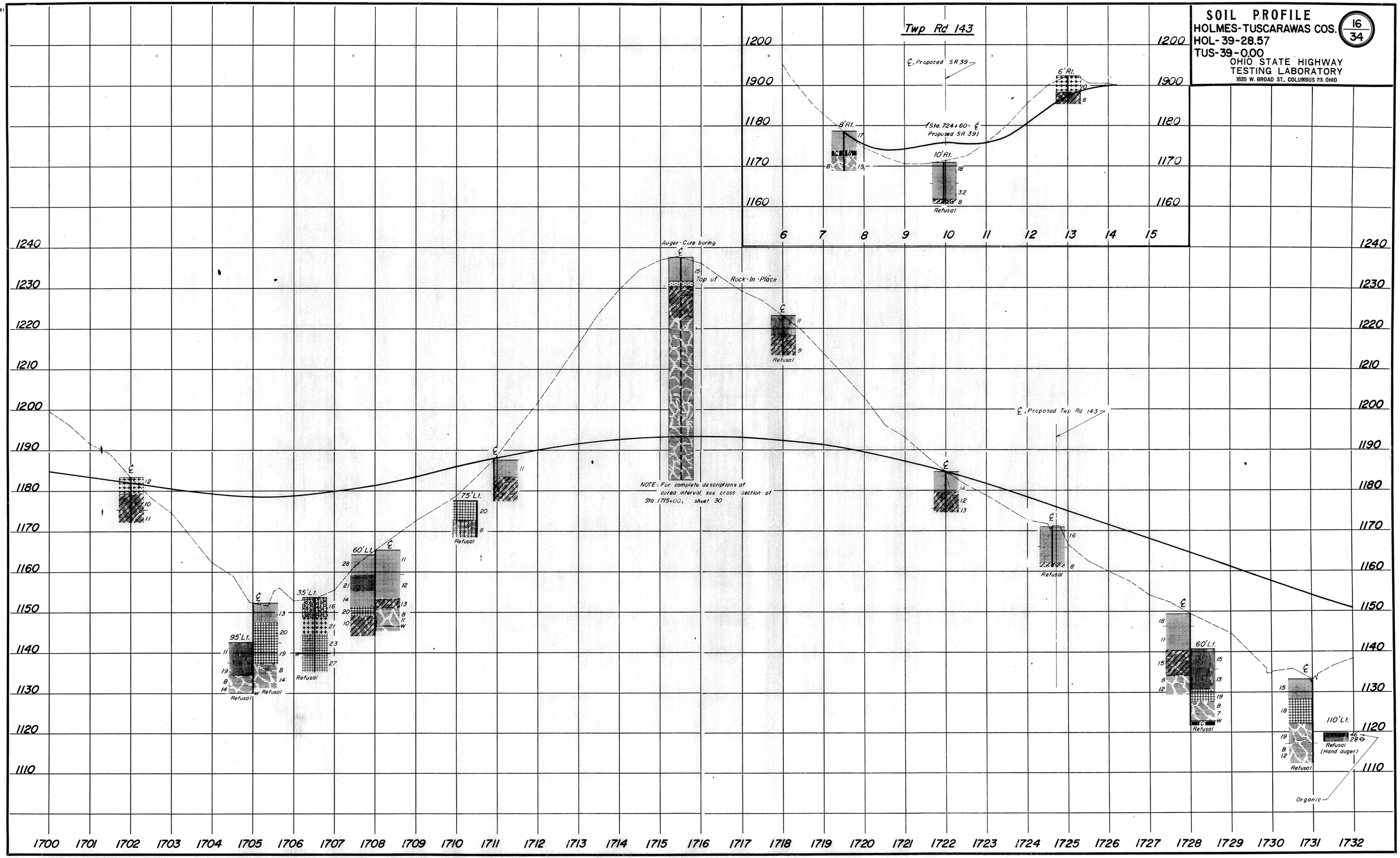
TE-96 (FORMERLY TE-54-B)
2300-10-61

SOIL PROFILE

HOLMES-TUSCARAWAS COS.
HOL-39-28.57
TUS-39-0.00

16/34

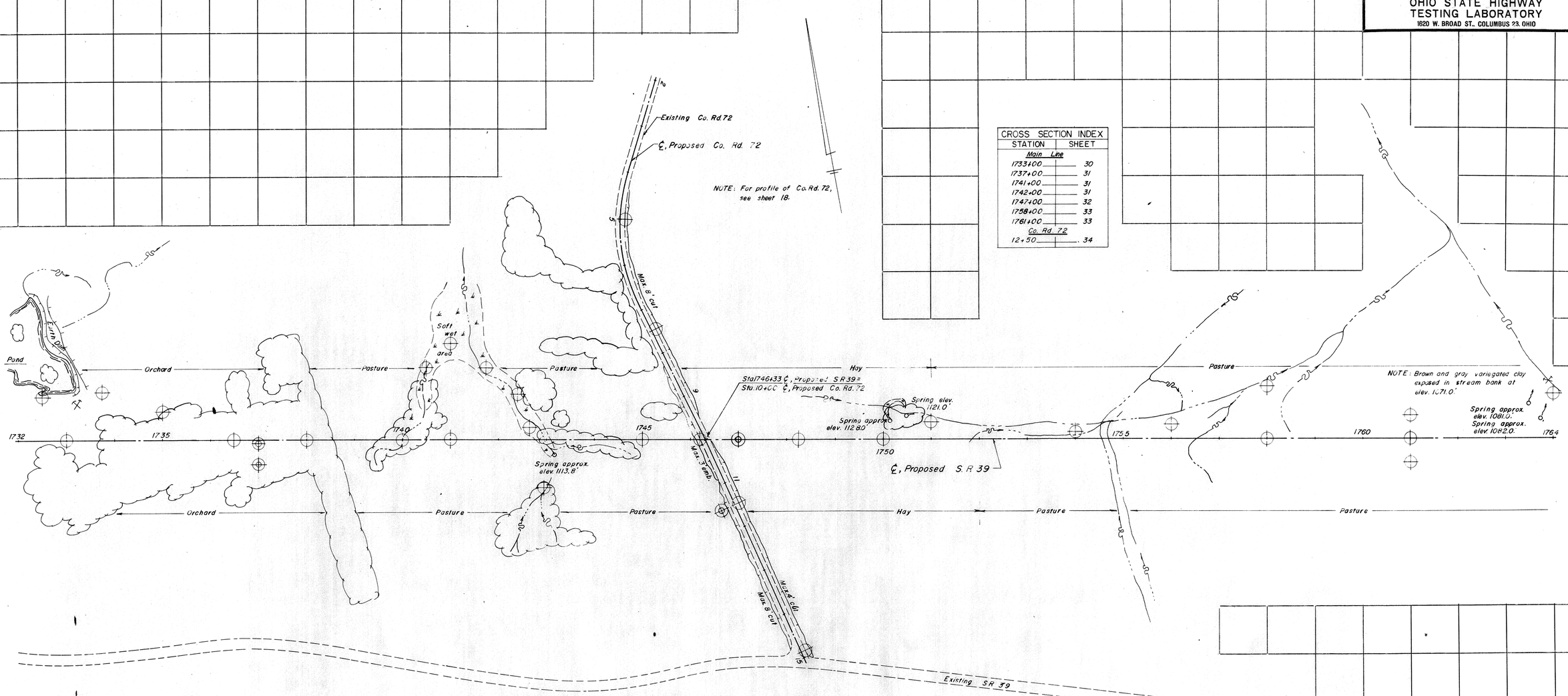
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO



TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE
HOLMES-TUSCARAWAS COS. 17/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

CROSS SECTION INDEX	
STATION	SHEET
Main Line	
1733+00	30
1737+00	31
1741+00	31
1742+00	31
1747+00	32
1758+00	33
1761+00	33
Co. Rd. 72	
12+50	34



TE-96 (FORMERLY TE-54-B)
2000-10-61

SOIL PROFILE

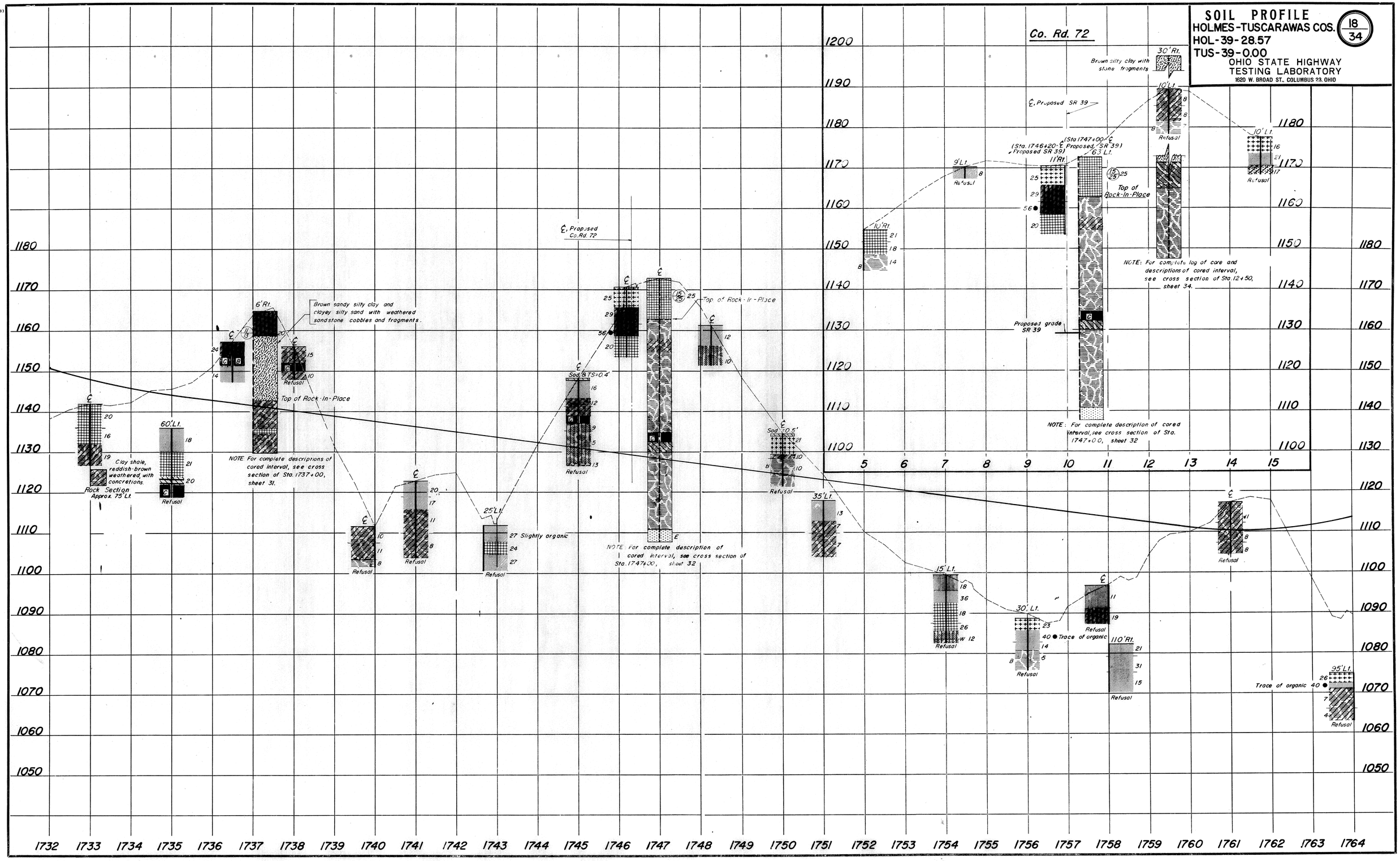
HOLMES-TUSCARAWAS COS. 18/34

HOL-39-28.57

TUS-39-0.00

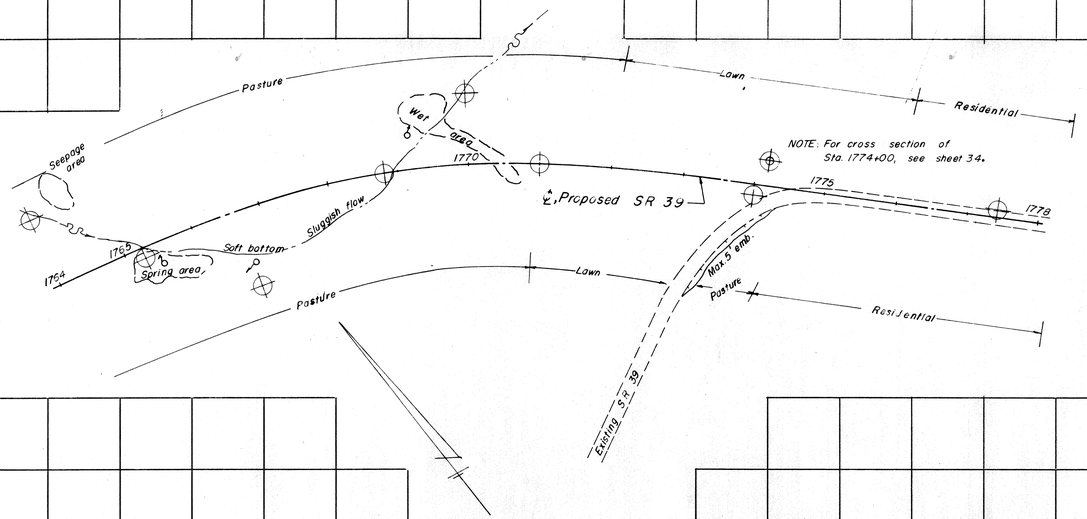
OHIO STATE HIGHWAY TESTING LABORATORY

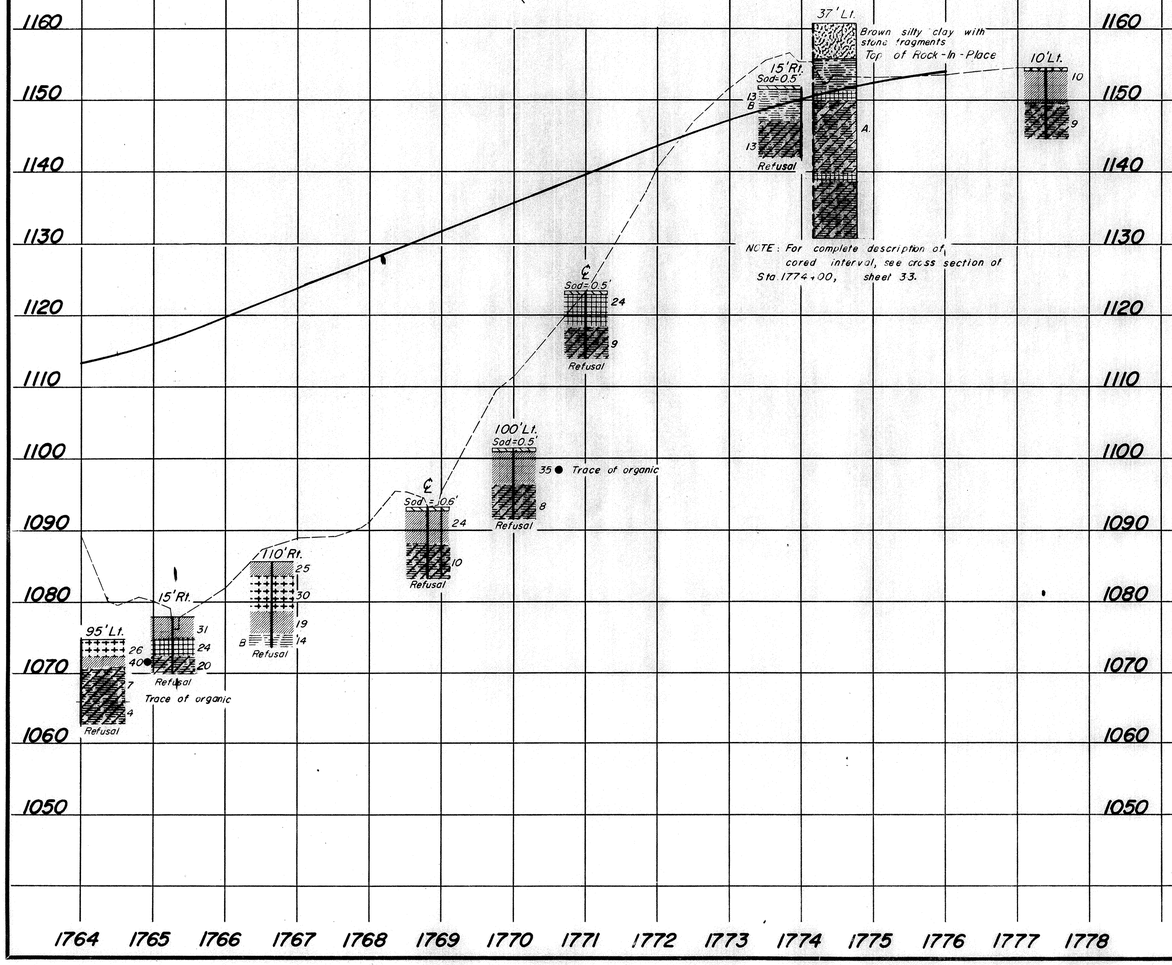
1620 W. BROAD ST., COLUMBUS 23, OHIO



TE-96 (FORMERLY TE-54-B)
2000-10-69

SOIL PROFILE
HOLMES-TUSCARAWAS COS. (19/34)
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO





TE-96 (FORMERLY TE-54-B)
2000-10-61

SOIL - PROFILE

HOLMES - TUSCARAWAS COS.

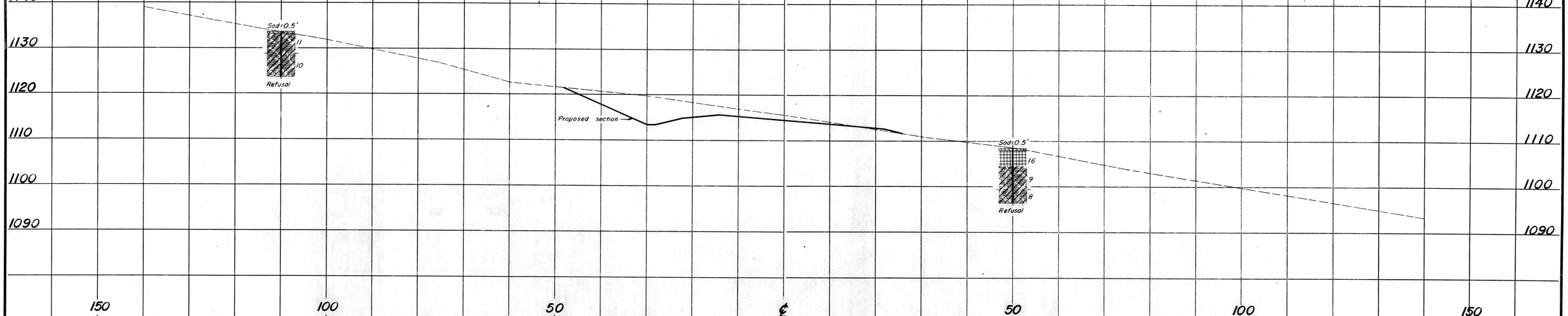
HOL - 39 - 28.57

TUS - 39 - 0.00

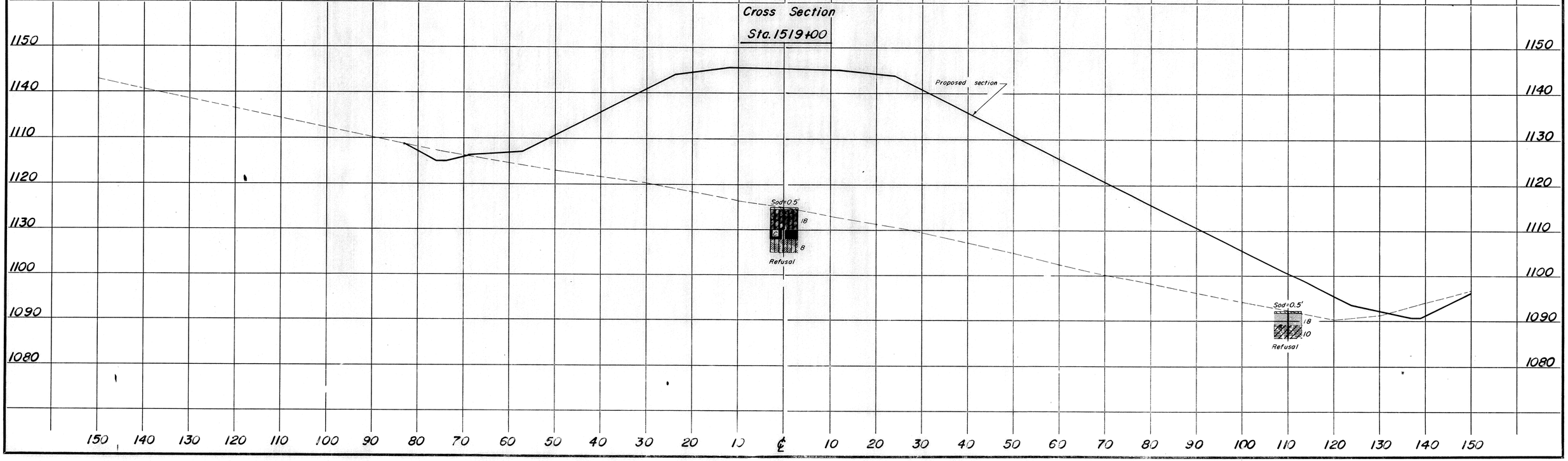
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

20
34

Cross Section
Sta. 1527+00



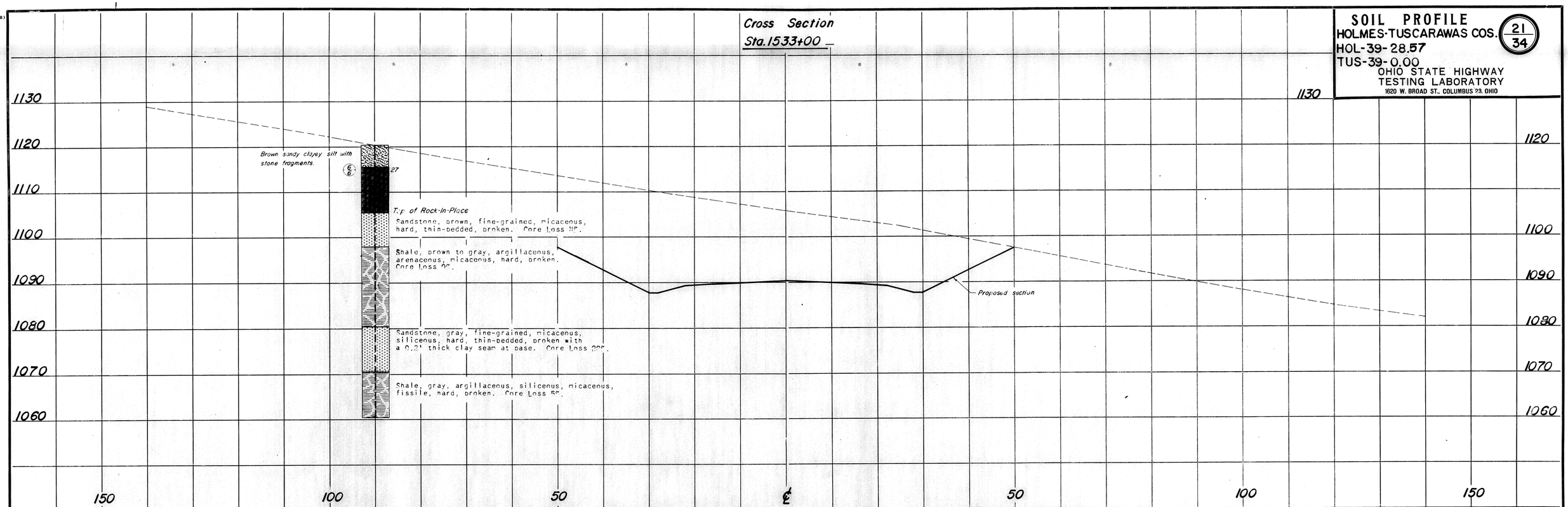
Cross Section
Sta. 1519+00



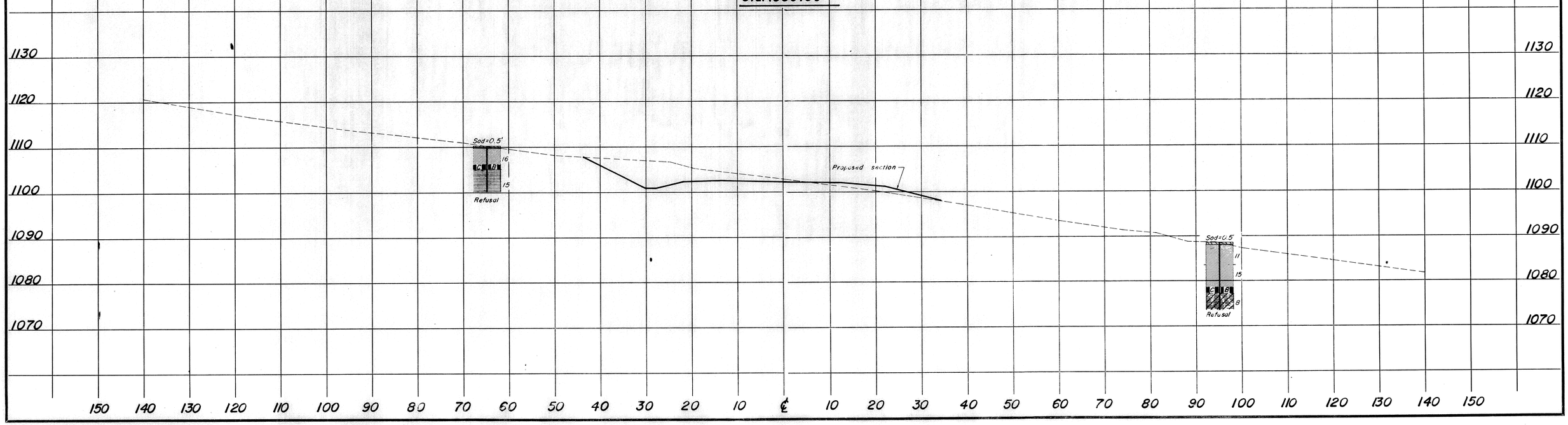
TE-96 (FORMERLY TE-54-B)
2000-10-61

SOIL PROFILE
HOLMES-TUSCARAWAS COS. 21/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 1533+00



Cross Section Sta. 1530+00



TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE
HOLMES-TUSCARAWAS COS. 22/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta.1546+00

Brown sandy clay

Top of Rock-In-Place

Shale, brown to gray, argillaceous, siliceous, fissile, soft, extremely weathered, crumbly to elev. 1050.0, firm, weatnered pacly broken below, with a clay seam from elevs. 1040.5' to 1036.7'. Core Loss 7%.

Limestone, gray, crystalline, fossiliferous, hard, dense, broken. No Core Loss.

Coal, black, vitreous, sulfur stained, fissile, jointed, hard, broken. No Core Loss.

Indurated Clay, gray, siliceous, hard, broken. No Core Loss.

Shale, gray, argillaceous, siliceous, fissile in part, hard, broken. No Core Loss.

Proposed section

Cross Section Sta.1538+96

(Sta 1539+00)
13
10
10

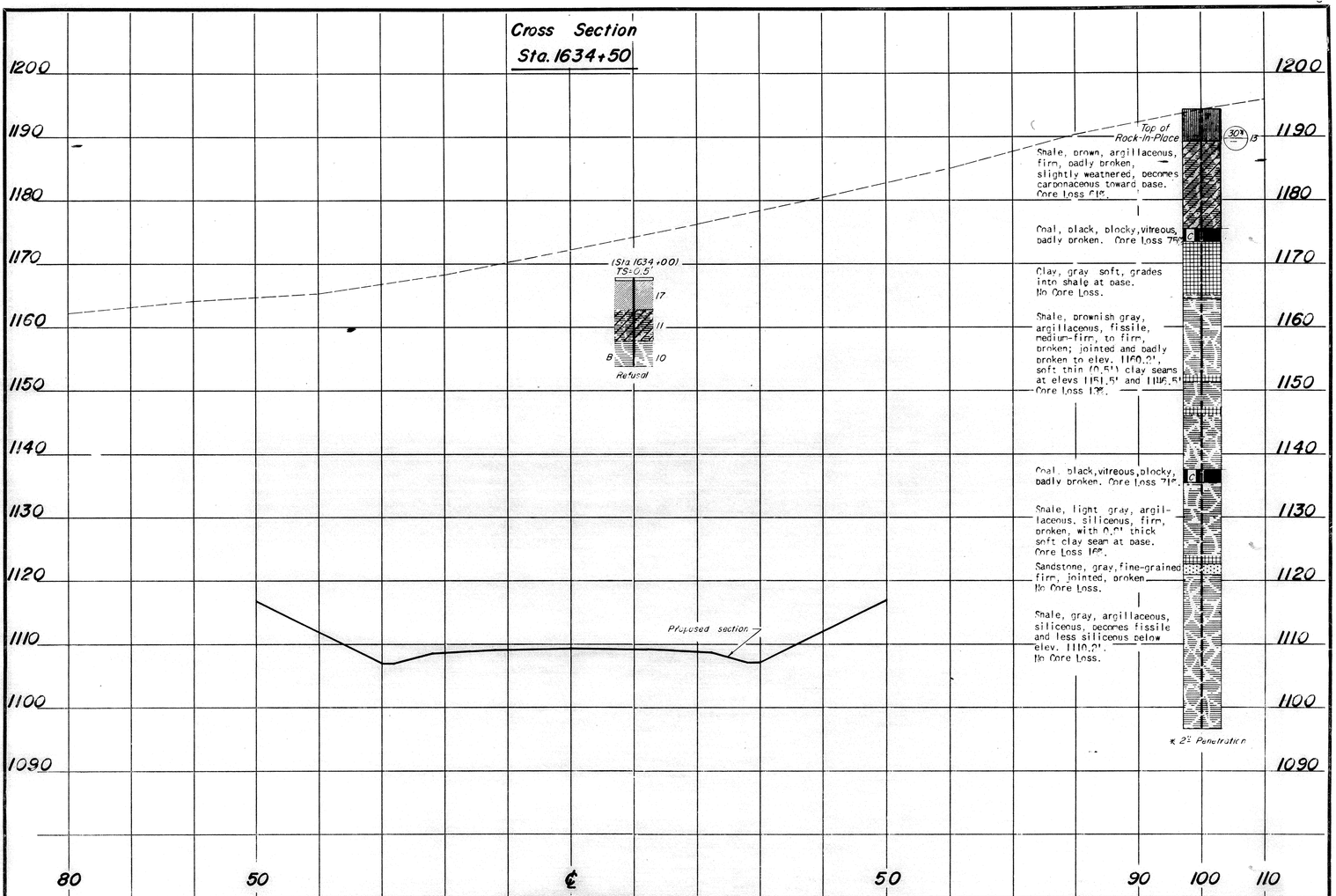
(Sta.1539+00)
13
25
Refusal

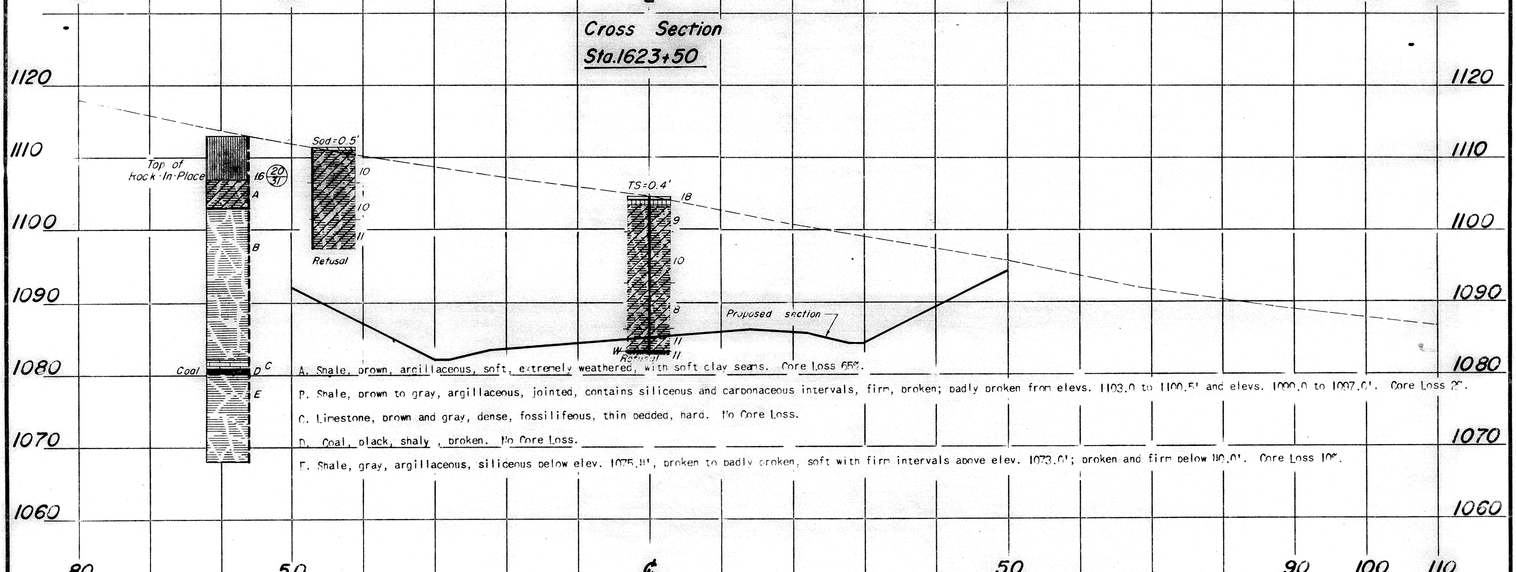
Proposed section

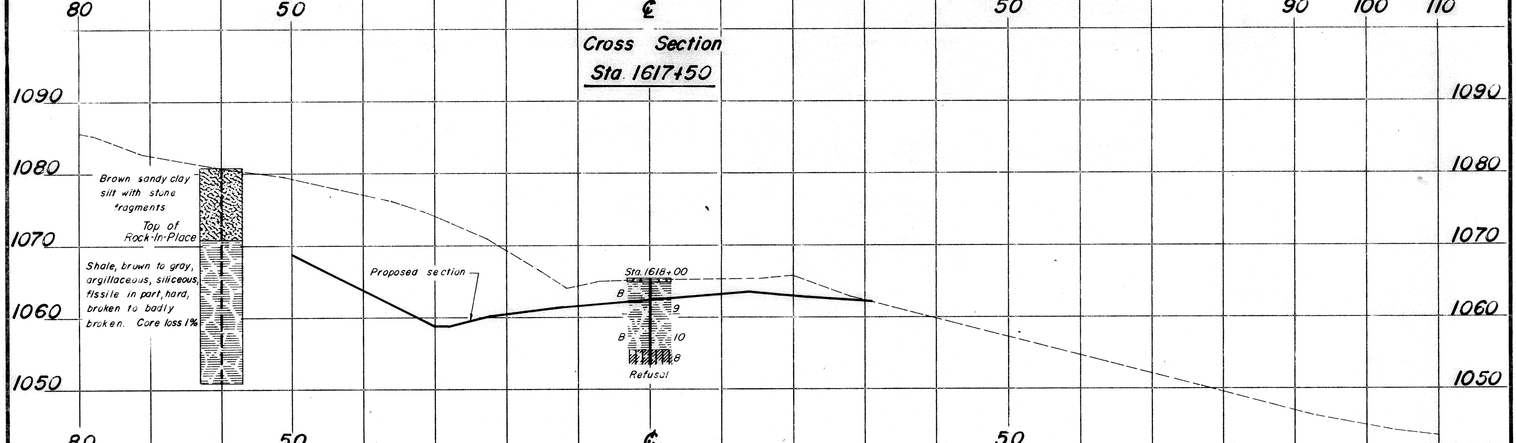
(Sta.1539+30)
21
11
Black carbonaceous shale fragments
8
8
Refusal

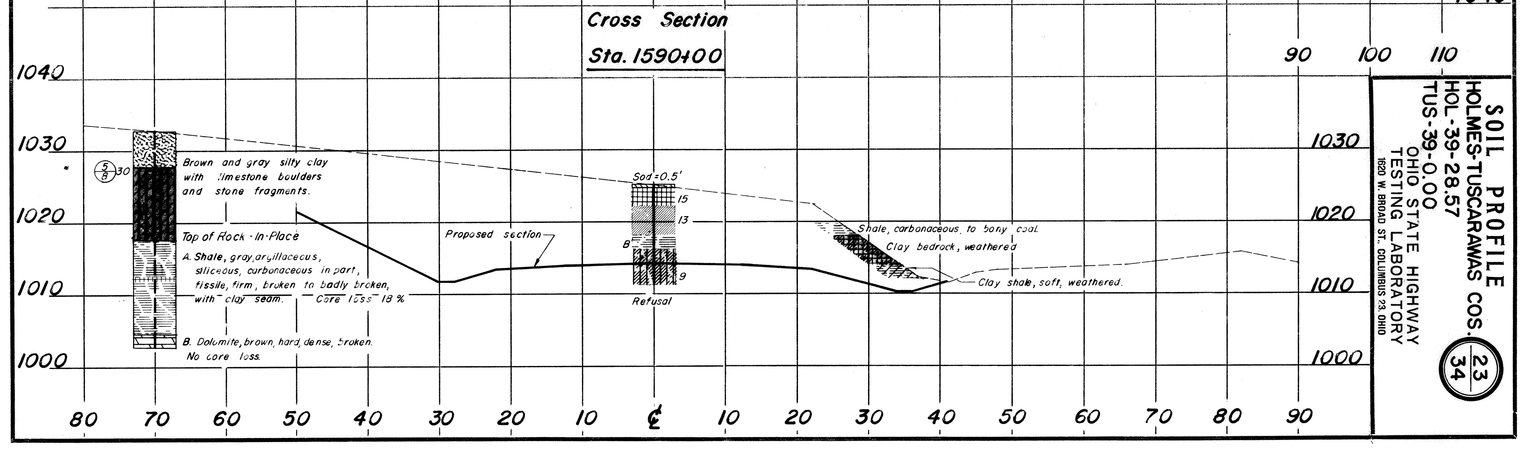
1080 1070 1060 1050 1040 1030 1020 1010

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150









SOIL PROFILE
HOLMES-TUSCARAWAS COS.
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

23/34

TE-96 (FORMERLY TE-54-B)
2300-10-61

SOIL PROFILE
HOLMES-TUSCARAWAS COS. 24/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta.1648+50

(Sta.1649+00)
Soil=0.5'
20
14
12
Refusal

Brown and gray clay
19 (14/24)
Top of Rock In-Place
Shale, dark-gray, carbonaceous, soft, extremely weathered. Core Loss 5%.
Clay, gray, carbonaceous to silicous, soft to very soft, broken; badly broken below elev. 1120.0'. Core Loss 5%.
Shale, gray and brown, silicous, argillaceous, fissile, jointed, broken to very broken, firm; badly broken, soft and extremely weathered in top 3.5 feet, slightly weathered from elevs. 1125.0' to 1121.1'. Core Loss 10%.

Proposed section

Cross Section Sta.1643+00

(Sta.1643+30)
TS=0.5'
15
18
Trace of organic 33
Refusal
Rock Section Sta.1643+15
Bony coal to carbonaceous shale
Clay bedrock to clay shale

Proposed section

Rock Section Sta.1642+80
Clay shale, brown and gray.

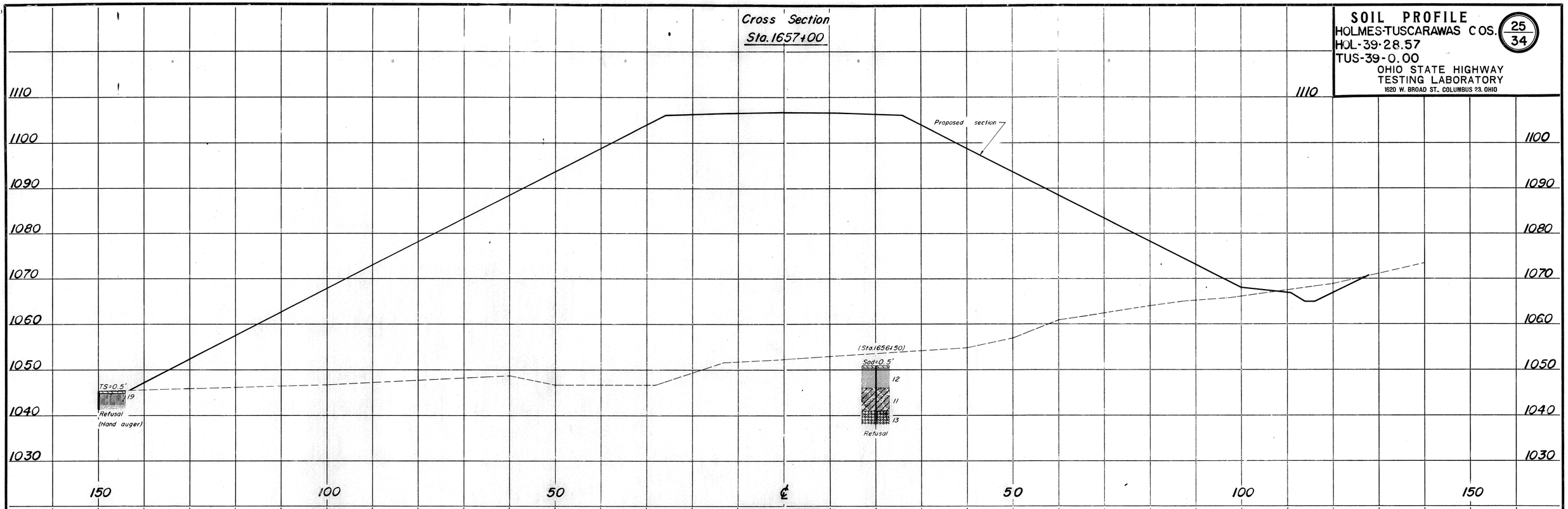
TE-96 (FORMERLY TE-54-B)
2000-10-61

SOIL PROFILE

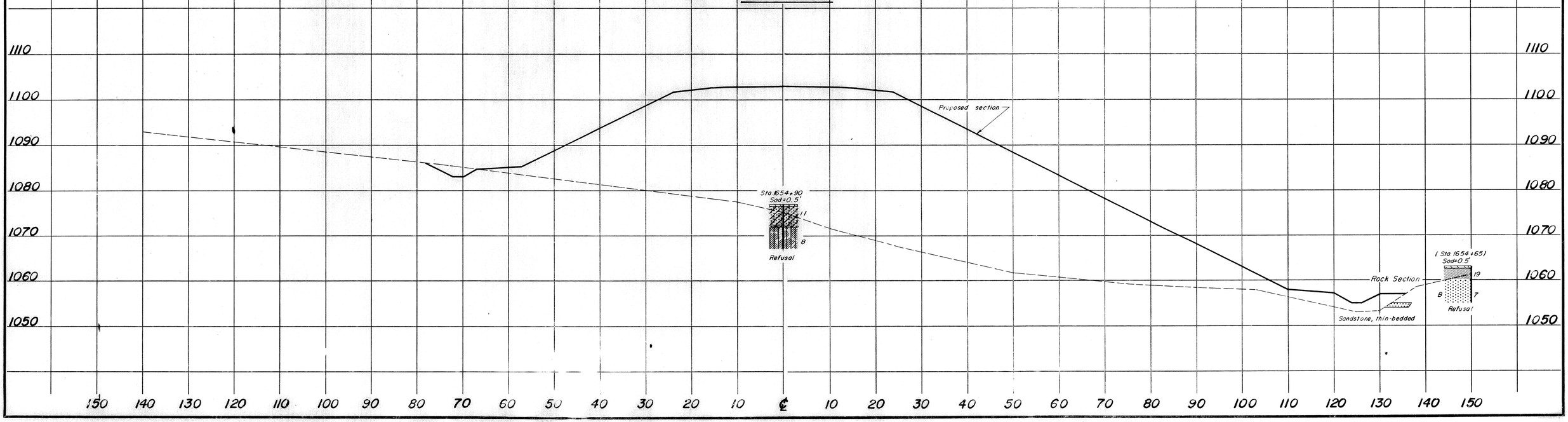
HOLMES-TUSCARAWAS COS. 25/34
HOL-39-28.57
TUS-39-0.00

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section
Sta. 1657+00



Cross Section
Sta. 1655+00



TE-95 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE

HOLMES-TUSCARAWAS COS. 26/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 1665+50

Auger-Core boring (Sta 1665+75)
Sod=0.5'

Top of Rock-In-Place

Shale, brown to gray, argillaceous, fissile in part, medium-firm to firm; very soft and crumbly zones from elevs. 1160.5' to 1160.5', 1151.0', 1140.5' and 1136.5' to 1131.5'; carbonaceous, broken to badly broken below elev. 1150.0'; extremely weatnered above elev. 1140.5'. Core Loss 13%.

Proposed section

Coal, black, shaly to blocky, vitreous, badly broken. Core Loss 11%.

Underclay, gray, soft and crumply. Core Loss 100%.*
*High core loss due, in part to drilling difficulties.

Cross Section Sta. 1659+00

Proposed section

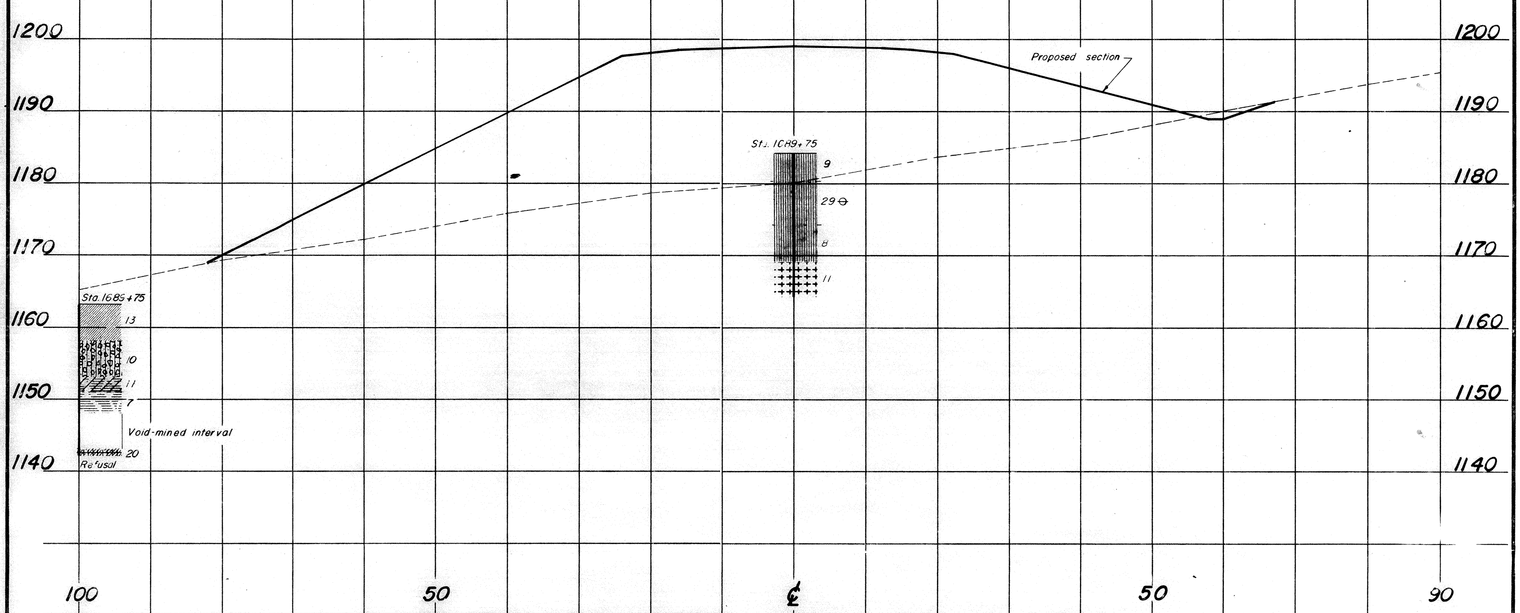
(Sta 1658+50)
TS=0.5'
17
Refusal
(Hand auger)

TS=0.5'
10
Refusal
(Hand auger)

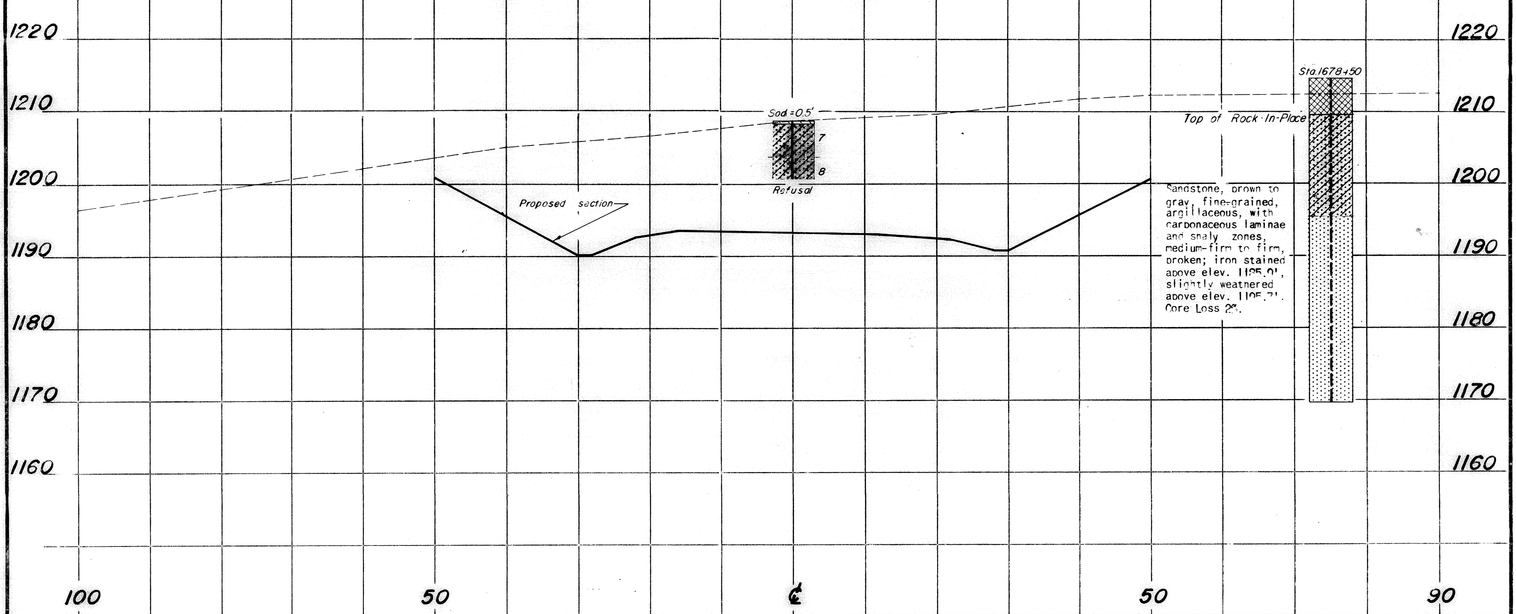
(Sta 1659+50)
TS=0.5'
15
Refusal
(Hand auger)

TE-96 (FORMERLY TE-54 B)
2300-10-61

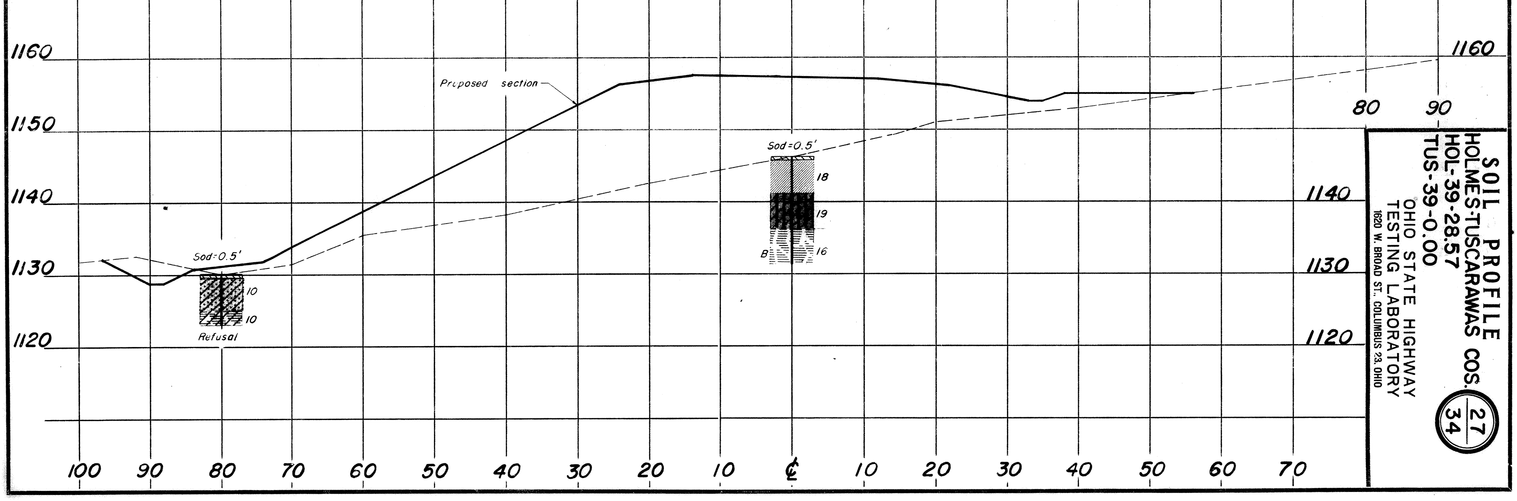
Cross Section
Sta. 1690+00



Cross Section
Sta. 1678+00



Cross Section
Sta. 1669+50



SOIL PROFILE
HOLMES-TUSCARAWAS COS
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1920 W. BROAD ST., COLUMBUS 23, OHIO

27
34

TE-96 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE
HOLMES-TUSCARAWAS COS. 28/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta 1698+00

Sta 1697+00
B 7
B 7
5
Refusal

Proposed section

Brown sandstone fragments
Top of Rock-In-Place

Sandstone, brown to gray, fine-grained, siliceous, micaceous, hard, massive, weathered in part, broken, with a soft to firm, crumbly zone from elevs. 1201.0' to 1196.0', and with small clay seams. — Core Loss 10%.

Shale, gray, argillaceous, siliceous, fissile, hard, broken to badly broken. Core Loss 7%.

Cross Section Sta. 1691+50

Proposed section

Approx. ground line

Sta. 1691+40
TS=0.0'
28
Refusal
(Hand auger)

Sta 1691+75
12
15
10
W
Refusal

1250 1240 1230 1220 1210 1200 1190 1180 1170 1160 1150 1140 1130

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

TE-96 (FORMERLY TE-54-B)
2300-10-01

SOIL PROFILE

HOLMES-TUSCARAWAS COS. 29/34
HOL-39-28.57
TUS-39-0.00

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section
Sta. 1715+00

Auger-Core boring
Sta. 1715+50

15

Top of Rock In Place

Sandstone, brown, fine-grained, broken, firm, slightly weathered. Core Loss 1½".

Shale, brown to gray, siliceous, fissile, jointed, firm, broken, carbonaceous laminae from elevs. 1225.6 to 1221.0 feet, soft zone from elevs. 1225.6 to 1222.5', medium-firm and slightly weathered above elev. 1222.5'. Core Loss 5".

Proposed section

1240
1230
1220
1210
1200
1190
1180
1170

150 100 50 ℄ 50 100 150

Cross Section
Sta. 1705+00

Proposed section

11
19
B 14
W
Refusal

13
20
19
B 14
Refusal

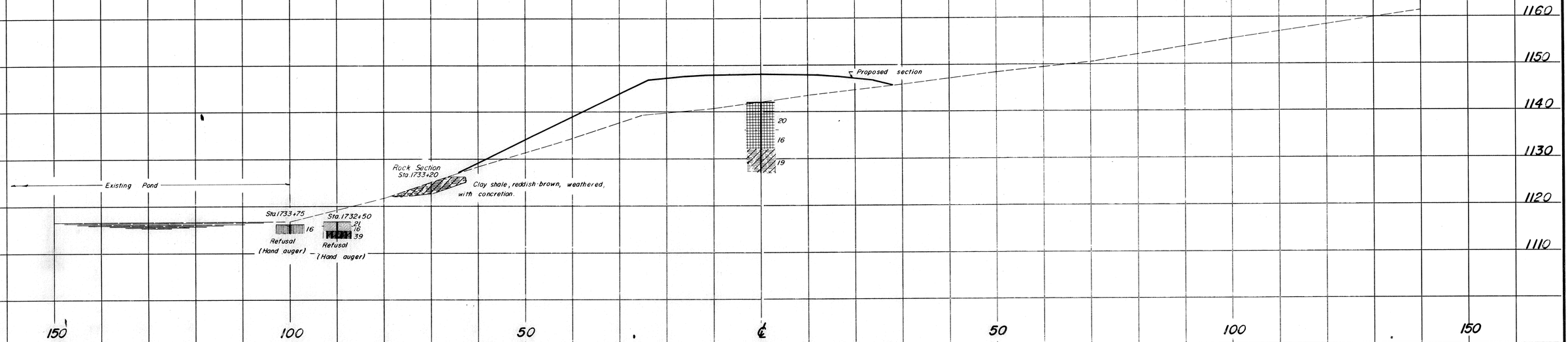
1180
1170
1160
1150
1140
1130
1120

150 140 130 120 110 100 190 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 10 20 30 40 50

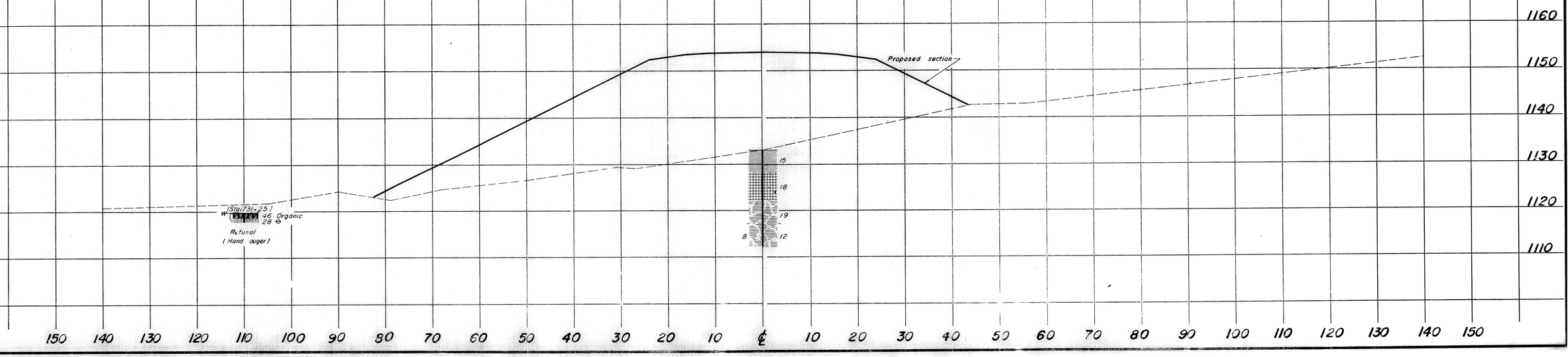
TE-96 (FORMERLY TE-54-B)
2000-10-61

SOIL PROFILE
HOLMES-TUSCARAWAS COS. 30/34
HOL-39-28.57
TUS-39-0.00
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section
Sta. 1733+00



Cross Section
Sta. 1731+00



TE-98 (FORMERLY TE-54-B)
2000-10-01

SOIL PROFILE

HOLMES-TUSCARAWAS COS. 31/34

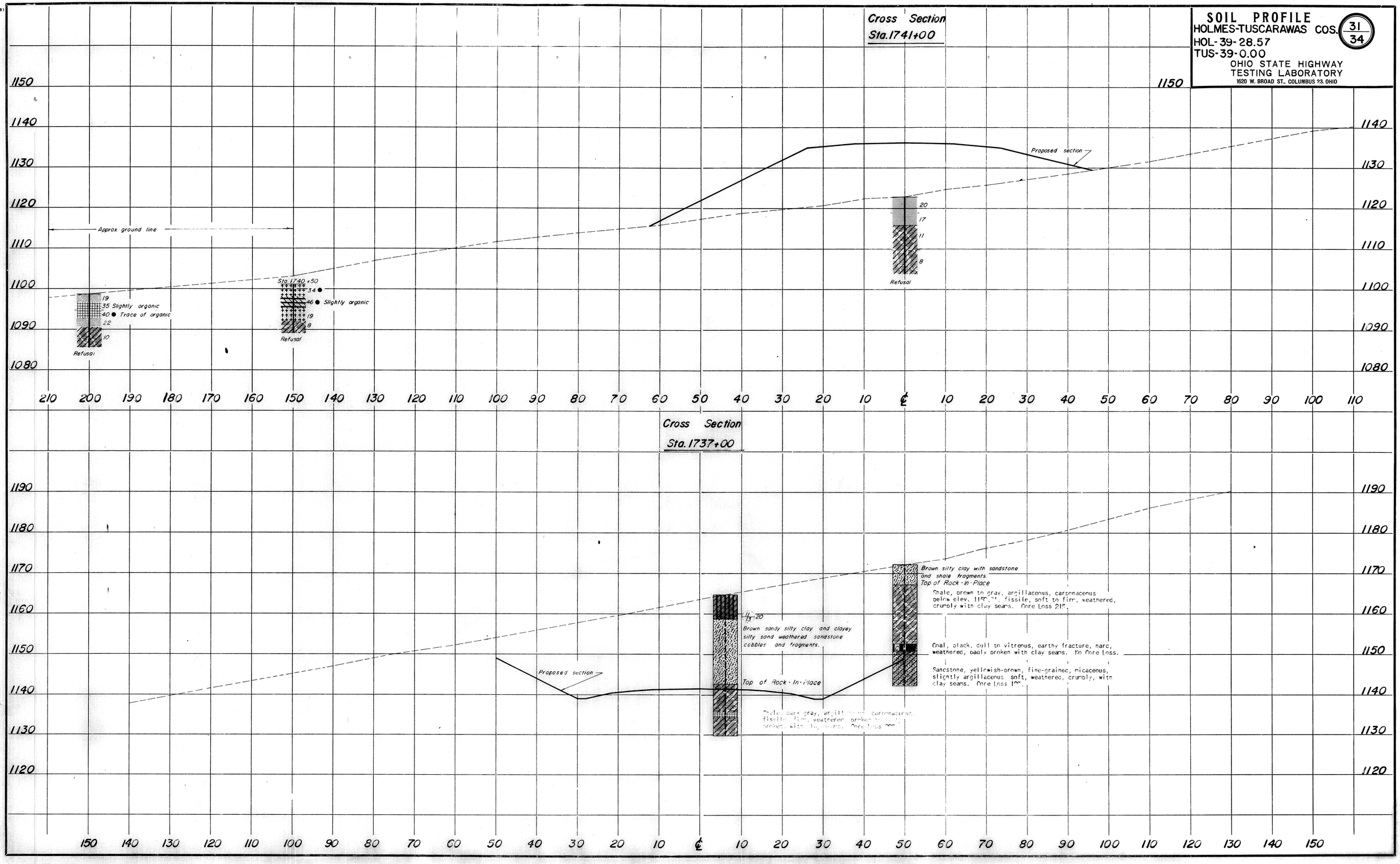
HOL-39-28.57

TUS-39-0.00

OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 1741+00



Cross Section Sta. 1737+00

TE-96 (FORMERLY TE-54-B)
2000-10-68

SOIL PROFILE

HOLMES-TUSCARAWAS COS. 32/34

HOL-39-28.57

TUS-39-0.00

OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

Cross Section Sta. 1747+00

25

Top of Rock In Place

Shale, light brown to dark gray, argillaceous, slightly arenaceous, slightly micaceous, carbonaceous below elev. 1152.0', soft, very weathered, crumply to elev. 1147.0'; firm to hard, slightly weathered from elevs. 1147.0' to 1143.0', broken; hard and broken below. Core Loss 7%.

Coal, black, vitreous, earthy fracture, jointed, hard, broken. No Core Loss.

Underclay, gray, firm, badly broken to crumply.

Core Loss 52%.

Proposed section

Shale, light gray, argillaceous, arenaceous, hard, broken. No Core Loss.

Sandstone, gray, fine-grained, silicous, slightly micaceous, hard, broken. No Core Loss.

Cross Section Sta. 1742+00

Proposed section

Sta 1741+75
22
28
27
11
Refusal

Sta 1742+40
34
30 ● Organic
6
3
8 6
Refusal

Sta 1742+65
27 Slightly organic
24
27
Refusal

Sta 1742+95
16
11
6
9
Refusal

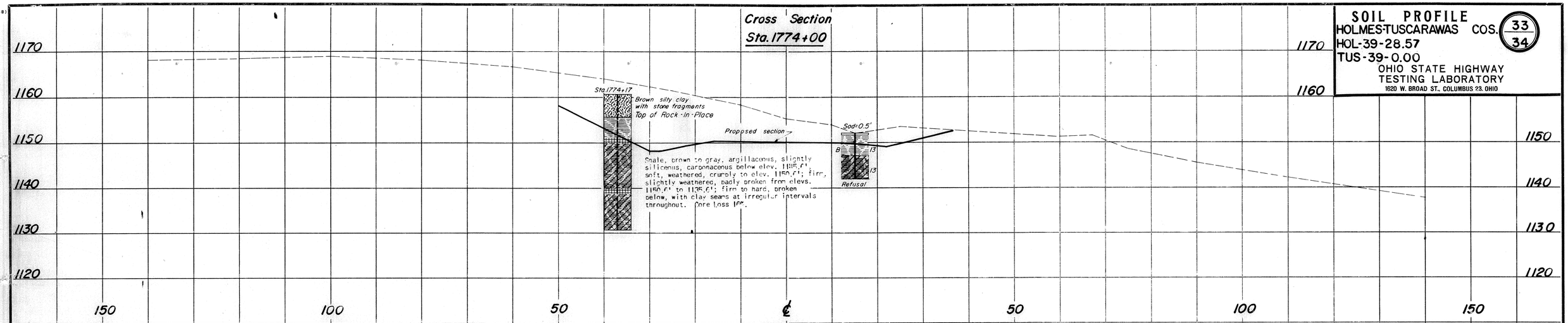
TE-96 (FORMERLY TE-54-B)
2300-10-61

SOIL PROFILE

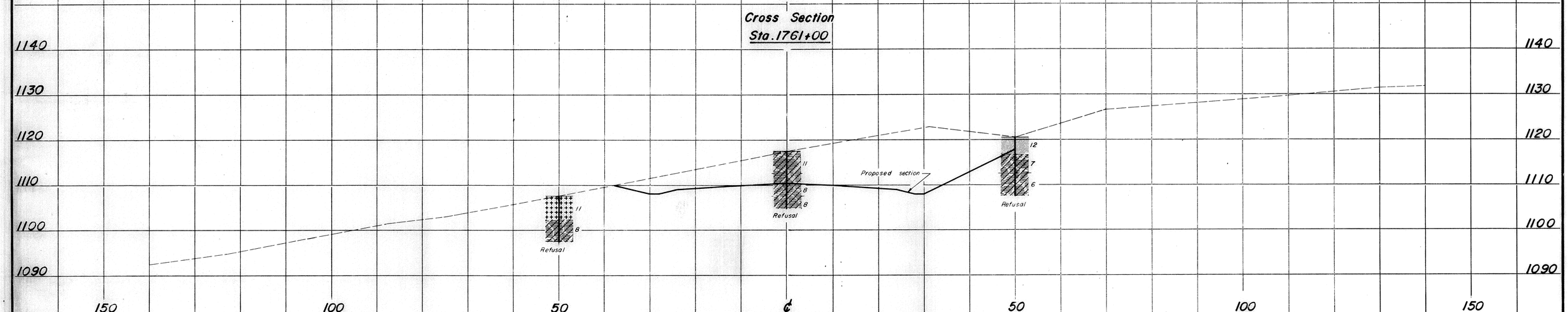
HOLMES-TUSCARAWAS COS. 33/34
HOL-39-28.57
TUS-39-0.00

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

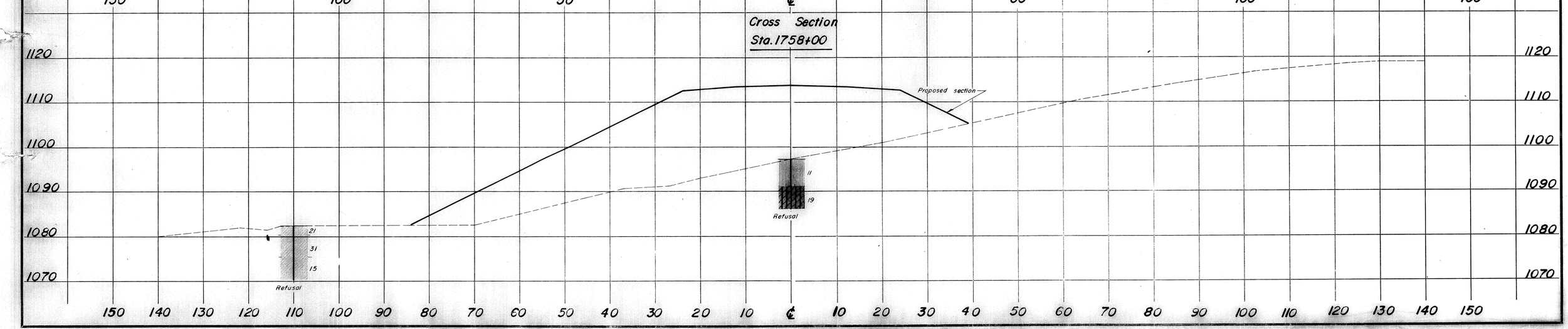
Cross Section
Sta. 1774+00



Cross Section
Sta. 1761+00



Cross Section
Sta. 1758+00



TE-96 (FORMERLY TE-54-B)
2000-10-61

SOIL PROFILE

HOLMES-TUSCARAWAS COS. 34/34

HOL-39- 28.57

TUS-39-0.00

OHIO STATE HIGHWAY
TESTING LABORATORY

1620 W. BROAD ST., COLUMBUS 23, OHIO

Co Rd 72
Cross Section
Sta. 12+50

℄, Proposed SR 39

Approximate ground line

Brown silty clay with stone fragments

Shale, brown to gray, argillaceous, siliceous carbonaceous below elev. 1177.5, hard, slightly weathered to elev. 1177.5, badly broken. Core Loss 8%.

Gray clay and coal fragments, possible mined interval. Core Loss 12%.

Gray underclay, soft to firm, crumbly. Core Loss 12%.

Shale, gray, argillaceous, arenaceous, carbonaceous below elev. 1152.5', fissile, hard, broken, vertically jointed from elevs. 1155.0' to 1151.2'. Core Loss 1%.

8
8
8 7
Refusal

Sta. 10+00
Proposed grade SR 39

1200
1190
1180
1170
1160
1150
1140
1130
1120

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150