

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

STATE

FHWA REGION	STATE	PROJECT
5	OHIO	STATE

1/89

DEL-36-7.48

DEL-36-7.48

CITY OF DELAWARE DELAWARE TOWNSHIP, DELAWARE COUNTY

MICROFILMED
FEB 18 1987

MICROFILMED
FEB 18 1987

CONVENTIONAL SIGNS

CENTER LINE	
PROPERTY LINE	
R/W WITHOUT LIMITED ACCESS	
R/W EASEMENT LINE	
EXISTING R/W	
CORPORATION LINE	
CONSTRUCTION LIMITS	
EXISTING FENCE LINE	
POWER POLES	
TELEPHONE POLES	
RAILROAD TRACKS	
TREE	
WATER LINE - VALVE	
GAS LINE - VALVE	
STORM SEWER - INLET	
SANITARY SEWER - MANHOLE	
FIRE HYDRANT	
YARD LIGHT	
ADVERTIZING SIGN	
UNDERGROUND TELEPHONE LINE & PULL BOX	
EXISTING R/W MONUMENTS FOUND	
MAILBOX	

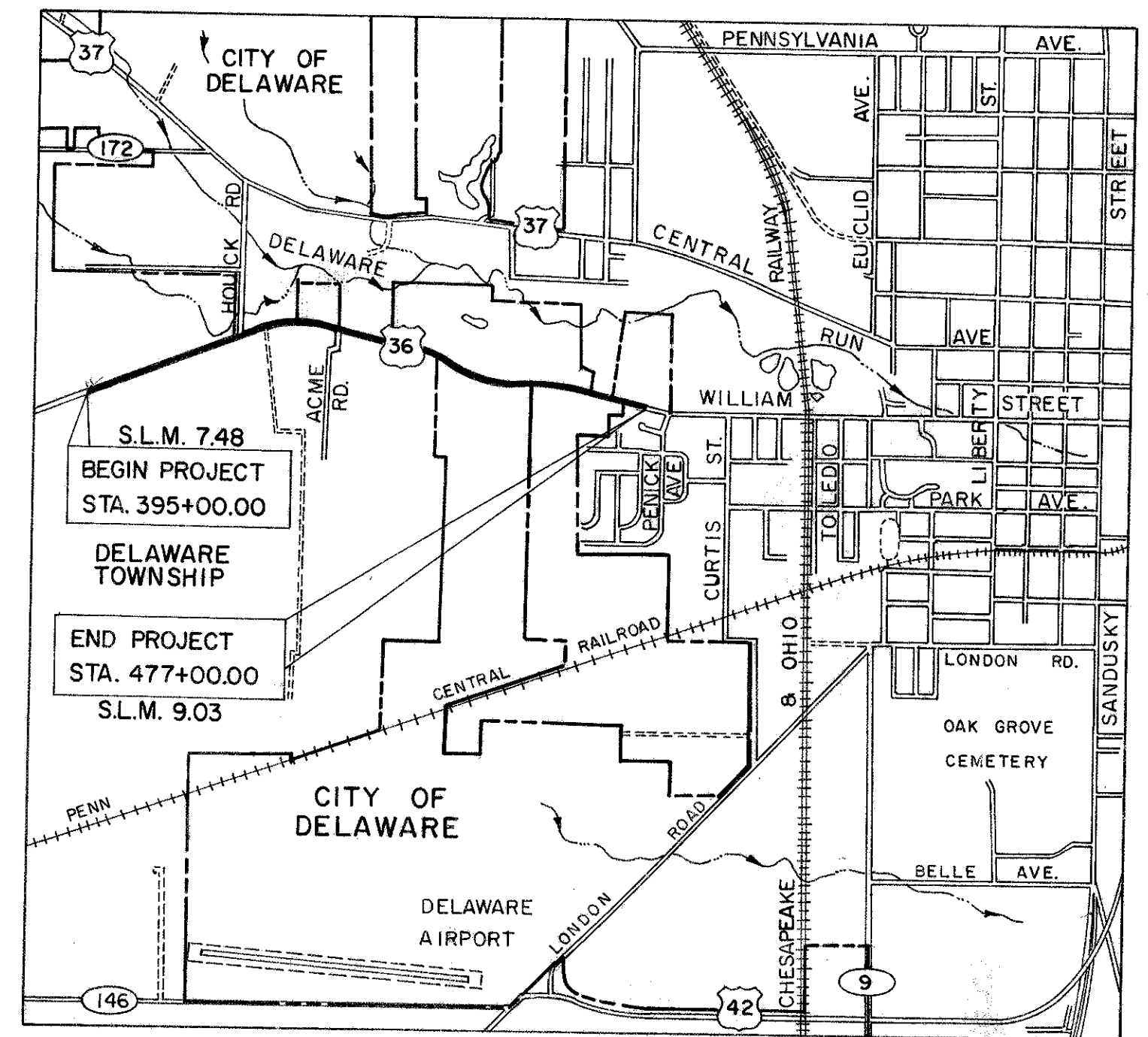
INDEX

TITLE SHEET	1
SCHEMATIC PLAN & DETOUR MAP	2
TYPICAL SECTION	3-5
GENERAL NOTES	6-10
GENERAL SUMMARY AND SUB-SUMMARY	11-15
PLAN AND PROFILE	16-26
STORM SEWER PROFILE	27
MISCELLANEOUS DETAILS	28-29
CULVERT DETAILS	30-36
PAVEMENT DETAILS	37-38
PAVEMENT ELEVATION TABLES	39-41
TRAFFIC CONTROL PLAN	42-48
CROSS SECTIONS	51-79
RIGHT-OF-WAY PLANS	80-89

SHEET NOS 49,50 OMITTED

LINE DATA

BEGIN PROJECT	STA. 395+00
END PROJECT	STA. 477+00
TOTAL LENGTH OF PROJECT	8200 L.F. or 1.553 MI.
ADD FOR APPROACHES	
WEST END STA. 394+00 to 395+00	100 L.F.
EAST END STA. 477+00 to 478+07	107 L.F.
	207 L.F.
TOTAL WORK LENGTH	8407 L.F. or 1.592 MI.



LOCATION MAP
0 1/2 1 MILE
PORTION TO BE IMPROVED
OTHER ROADS

DESIGN DESIGNATION	
1975 ADT	= 4949
1993 ADT	= 9898
DHV	= 1485
D	= 50%
T	= 14%
V	= 50 MPH

1977 SPECIFICATIONS

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

The Right of Way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will require the closing of the highway to traffic and that detours will be provided as indicated on the plans.

APPROVED DATE 4/14/75	<i>Ray Spurgeon</i> CITY ENGINEER, CITY OF DELAWARE
APPROVED DATE 4/16/75	<i>Robert Walker</i> CITY MANAGER, CITY OF DELAWARE
APPROVED DATE 4-9-75	<i>Don W. Clark</i> DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION
APPROVED DATE	ENGINEER, BUREAU OF LOCATION AND DESIGN
APPROVED DATE	ASSISTANT DEPUTY DIRECTOR FOR HIGHWAY DESIGN
APPROVED DATE	ASSISTANT DEPUTY DIRECTOR FOR REAL ESTATE
APPROVED DATE 6-29-77	<i>R.E. Butler</i> CHIEF ENGINEER, DESIGN AND PLANNING
APPROVED DATE	CHIEF ENGINEER, CONSTRUCTION
APPROVED DATE	ASSISTANT DIRECTOR, DEPARTMENT OF TRANSPORTATION
APPROVED DATE 6-29-77	<i>David L. Weir</i> DIRECTOR, DEPARTMENT OF TRANSPORTATION

SCALE IN FEET

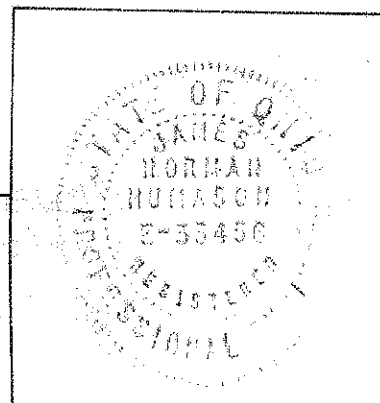
PLAN	=	
PROFILE HORIZONTAL	=	
PROFILE VERTICAL	=	
CROSS SECTIONS	=	

STANDARD CONSTRUCTION DRAWINGS

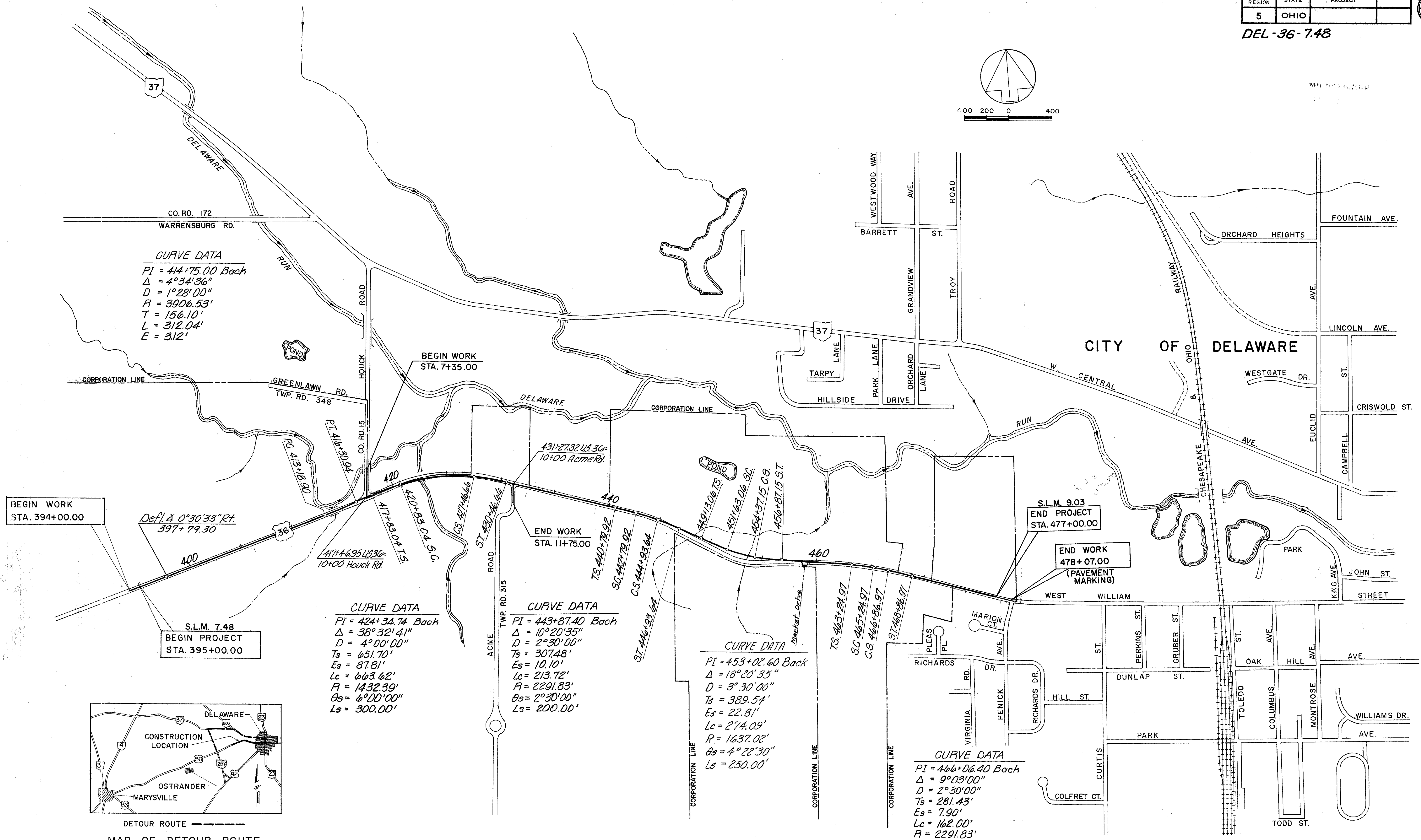
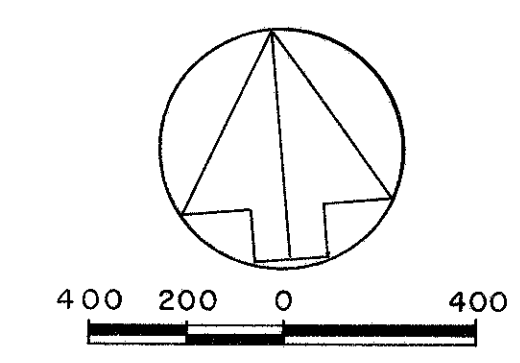
BP-5	8-11-75	MC-1	6-13-69	MH-3	6-12-75	BP-2	12-6-76	SUPPLEMENTAL SPECIFICATIONS	
BP-6	6-1-65	MC-3	6-1-73			BP-4	12-6-76	814	1-1-69
BP-7	12-6-76	MC-4	7-26-76						
CB-2-2-A & B	6-1-65	MC-8	6-12-75					844	11-8-74
CB-5	9-1-69	MH-5	6-12-75					1001	4-3-77
HW-4	1-1-70	TC-51.10	6-2-75						
L-1	6-1-73	TC-51.11	6-2-75						
		TC-71.10	12-1-75						

BURGESS & NIPLE, LIMITED
CONSULTING ENGINEERS
2015 WEST FIFTH AVENUE, COLUMBUS, OHIO
FOR THE STATE OF OHIO

James P. Humason, P.E. #33456



FILE NO.	DELAWARE COUNTY	DEL-36-7.48
DATE OF LETTING		
CONTRACT NO.		



CURVE DATA
 PI = 414+75.00 Back
 $\Delta = 4^{\circ}34'36''$
 $D = 1^{\circ}28'00''$
 $R = 3906.53'$
 $T = 156.10'$
 $L = 312.04'$
 $E = 312'$

Defl. $\Delta 0^{\circ}30'33''$ Rt.
 $397+79.30$

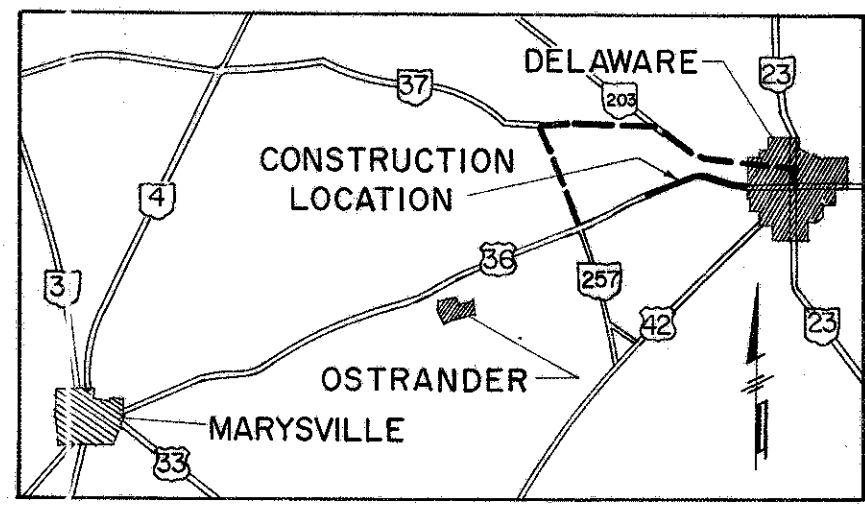
S.L.M. 7.48
BEGIN PROJECT
STA. 395+00.00

CURVE DATA
 PI = 424+34.74 Back
 $\Delta = 38^{\circ}32'41''$
 $D = 4^{\circ}00'00''$
 $T_s = 651.70'$
 $E_s = 87.81'$
 $L_c = 663.62'$
 $R = 1432.39'$
 $\theta_s = 6^{\circ}00'00''$
 $L_s = 300.00'$

CURVE DATA
 PI = 443+87.40 Back
 $\Delta = 10^{\circ}20'35''$
 $D = 2^{\circ}30'00''$
 $T_s = 307.48'$
 $E_s = 10.10'$
 $L_c = 213.72'$
 $R = 2291.83'$
 $\theta_s = 2^{\circ}30'00''$
 $L_s = 200.00'$

CURVE DATA
 PI = 453+02.60 Back
 $\Delta = 18^{\circ}20'35''$
 $D = 3^{\circ}30'00''$
 $T_s = 389.54'$
 $E_s = 22.81'$
 $L_c = 274.09'$
 $R = 1637.02'$
 $\theta_s = 4^{\circ}22'30''$
 $L_s = 250.00'$

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 $L_c = 162.00'$
 $R = 2291.83'$
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 $L_s = 200.00'$



DETOUR ROUTE
MAP OF DETOUR ROUTE
 0 1 2 3 4 5 6
 SCALE IN MILES

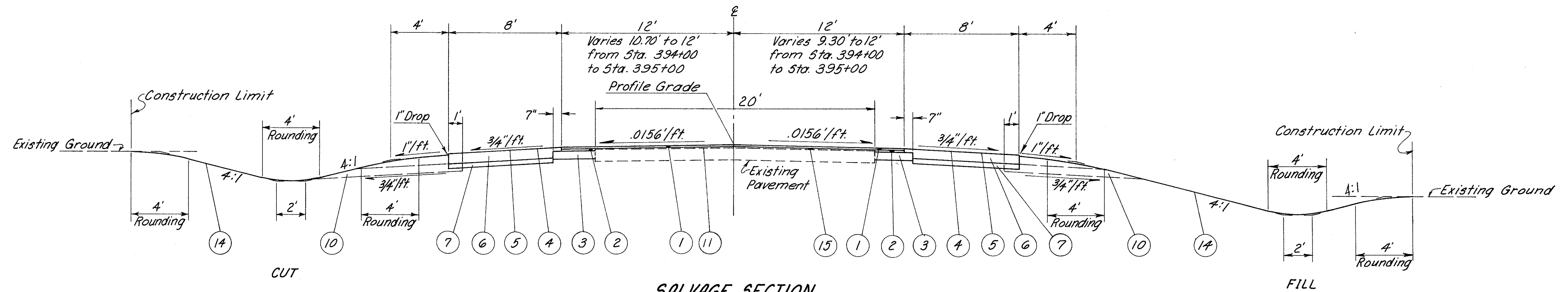
TYPICAL SECTIONS

TYPE 404 ON 301

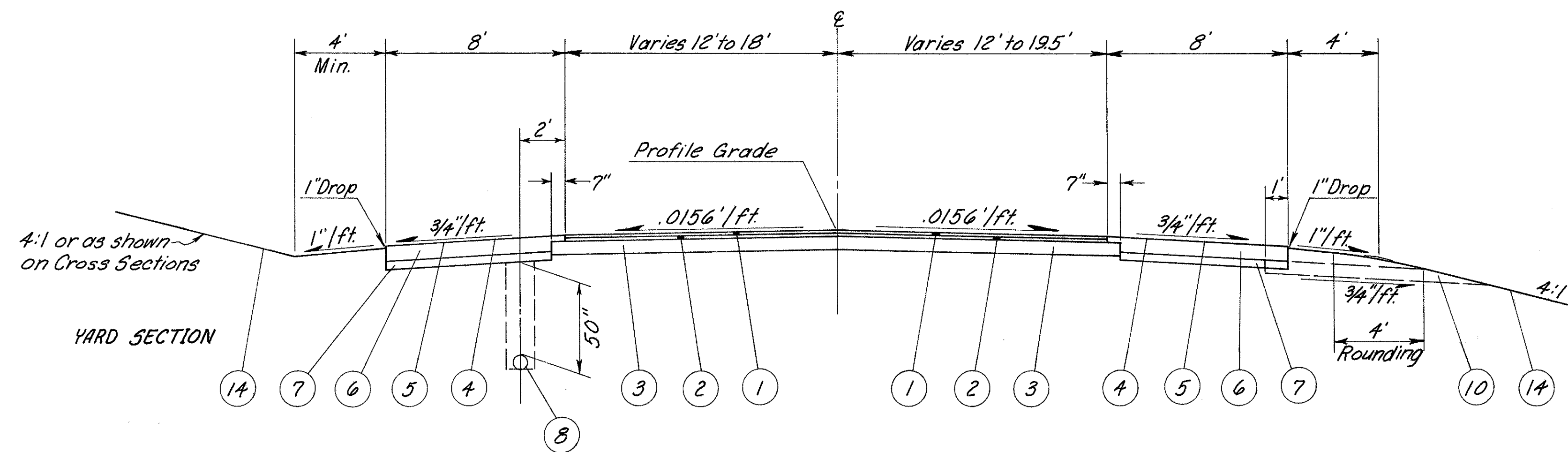
QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY _____ DATE _____	5	OHIO	
CHKD _____ DATE _____			

3
89

DEL-36-7.48



SALVAGE SECTION
Sta. 394+00 to Sta. 406+50
Sta. 432+50 to Sta. 438+50



TANGENT SECTION

Sta. 406+50 to Sta. 412+00.90
Sta. 431+28.67 to Sta. 432+50
Sta. 438+50 to Sta. 439+94.92
Sta. 447+88.64 to Sta. 448+33.23
Sta. 457+66.98 to Sta. 462+29.97
Sta. 469+81.97 to Sta. 472+72.50

- ① Item 404 1 1/4" Asphalt Concrete, AC 20
- ② Item 402 1 3/4" Asphalt Concrete, AC 20
- ③ Item 301 7" Bituminous Aggregate Base; 702.01, AC 20; or 702.09, RT-11 or RT-12
- ④ Item 408 Bituminous Prime Coat; 702.09, RT-2 or RT-3; 702.02, MC-30 or MC-70; or 702.03, Primer 20, applied at a rate of 0.40 gal. per sq. yd..
- ⑤ Item 409 Seal Coat, using 0.008 cu. yds. No. 8 cover aggregate per sq. yd. and 0.30 gal. bituminous material; 702.09, RT-9 or RT-10; 702.02, MC-800 or MC-3000; 702.04, RS-1, RS-2, CR5-1 or CR5-2; or 702.03, CBAE-800 per sq. yd..
- ⑥ Item 304 8" Aggregate Base
- ⑦ Item 310 4" Subbase

- ⑧ Item 605 6" Deep Pipe Underdrains
- ⑩ Item 605 Aggregate Drains
- ⑪ Item 407 Tack Coat: 702.04, SS-1, SS-1h, MS-2 or RS-1; or 702.02, RC-250; applied at the rate of 0.10 gal. per sq. yd.
- ⑫ Item 608 4" Concrete Walk
- ⑬ Item 609 Curb, Standard Type 6
- ⑭ Item 659 Seeding and Mulching
- ⑮ Item 402 0" Min. Asphalt Concrete, AC 20
Preleveling Course (See Note in Proposal)

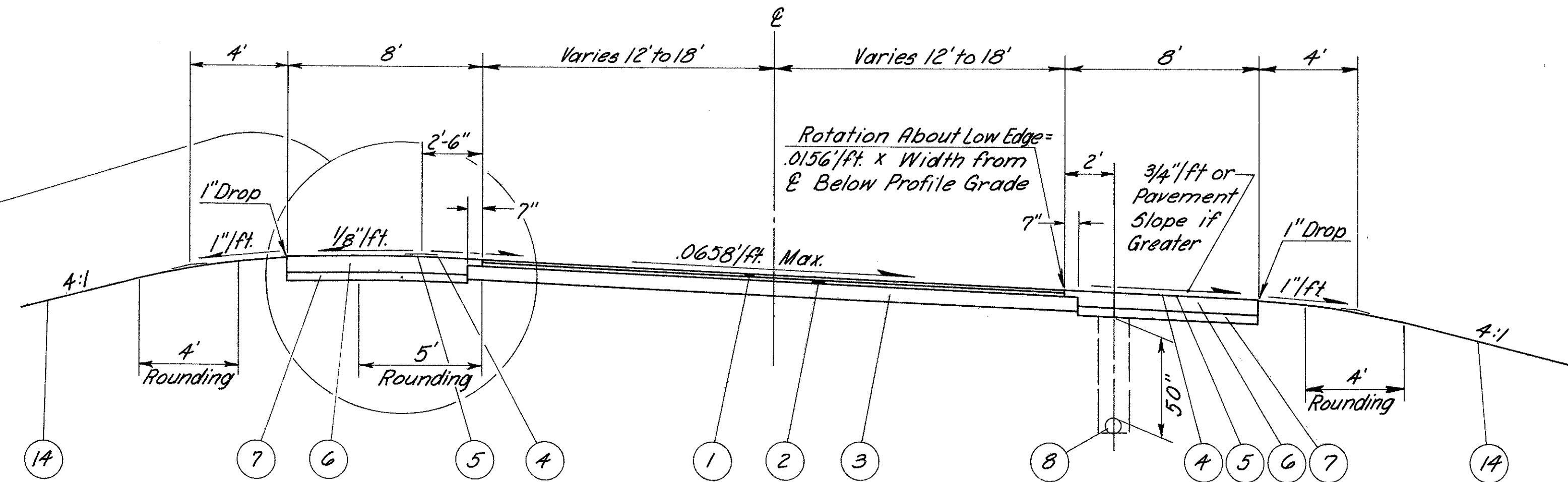
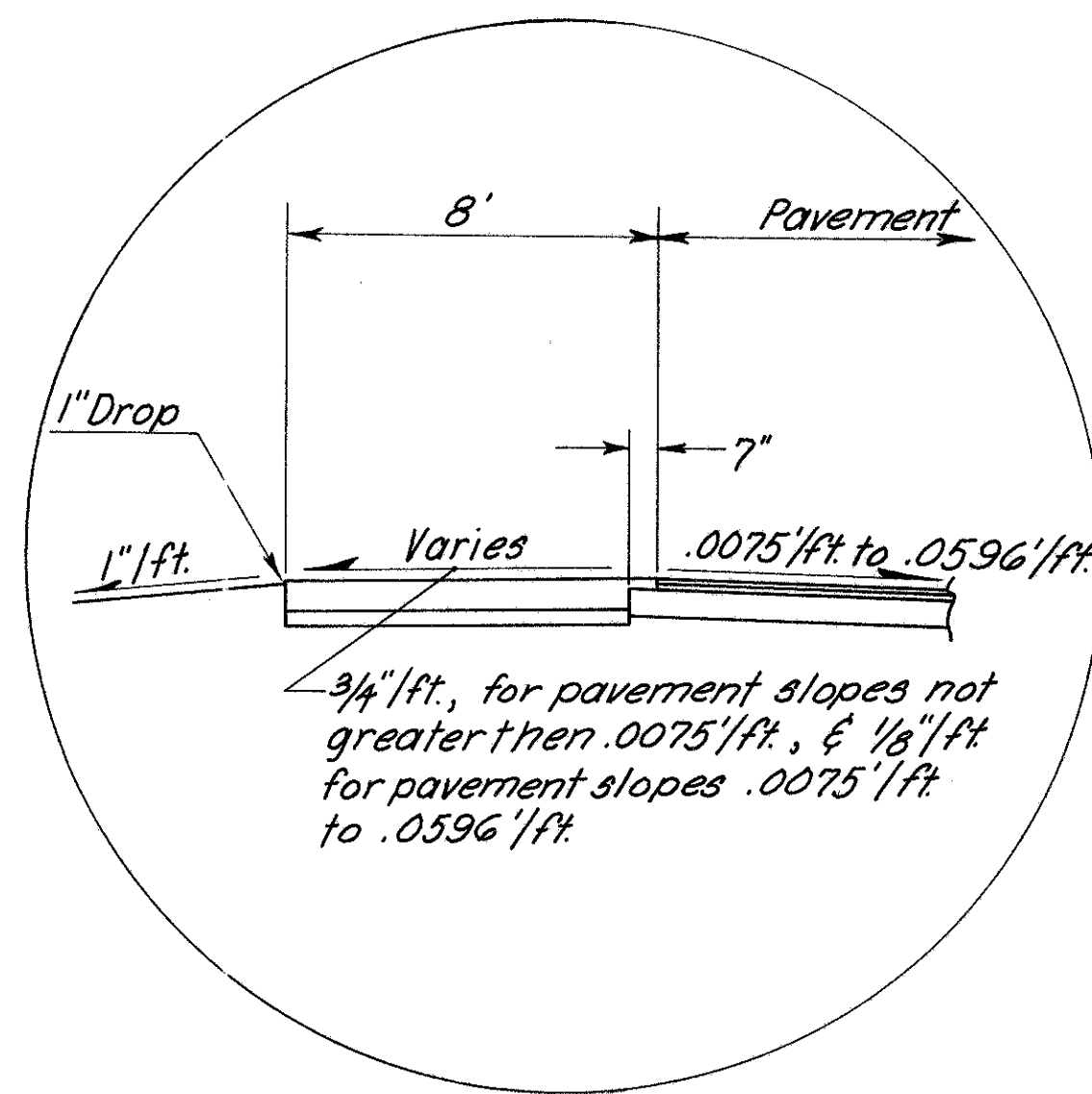
TYPICAL SECTIONS

TYPE 404 ON 301

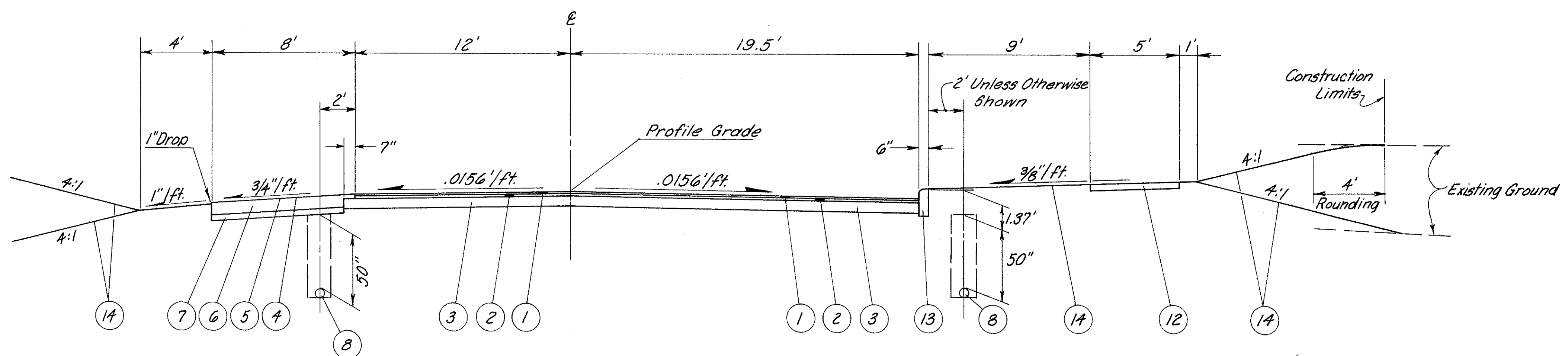
QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY _____ DATE _____	5	OHIO	
CHKD _____ DATE _____			

4
89

DEL-36-7.48



SUPERELEVATED SECTION
 Sta. 412+00.90 to Sta. 431+28.67
 Sta. 439+84.92 to Sta. 447+88.64
 Sta. 448+33.23 to Sta. 457+66.98
 Sta. 462+29.97 to Sta. 469+81.97



CURB SECTION
 Sta. 472+72.50 to Sta. 477+00.00

- | | |
|--|--|
| <ul style="list-style-type: none"> ① Item 404 1/4" Asphalt Concrete, AC 20 ② Item 402 1 3/4" Asphalt Concrete, AC 20 ③ Item 301 7" Bituminous Aggregate Base; 702.01, AC 20; or 702.09, RT-11 or RT-12 ④ Item 408 Bituminous Prime Coat; 702.09, RT-2 or RT-3; 702.02, MC-30 or MC-70; or 702.03, Primer 20 applied at a rate of 0.40 gal. per sq. yd. ⑤ Item 409 Seal Coat, using 0.008 cu. yd. No. 8 cover aggregate per sq. yd. and 0.30 gal. bituminous material; 702.09, RT-9 or RT-10; 702.02, MC-800 or MC-3000; 702.04 RS-1, RS-2, CR5-1 or CR5-2; or 702.03, CBAE-800 per sq. yd. ⑥ Item 304 8" Aggregate Base ⑦ Item 310 4" Subbase | <ul style="list-style-type: none"> ⑧ Item 605 6" Deep Pipe Underdrains ⑩ Item 605 Aggregate Drains ⑪ Item 407 Tack Coat: 702.04, SS-1, SS-1h, MS-2 or RS-1; or 702.02, RC-250; applied at the rate of 0.10 gal. per sq. yd. ⑫ Item 608 4" Concrete Walk ⑬ Item 609 Curb, Standard Type 6 ⑭ Item 659 Seeding and Mulching ⑮ Item 402 0" Min. Asphalt Concrete, AC 20 Preleveling Course (See Note in Proposal) |
|--|--|

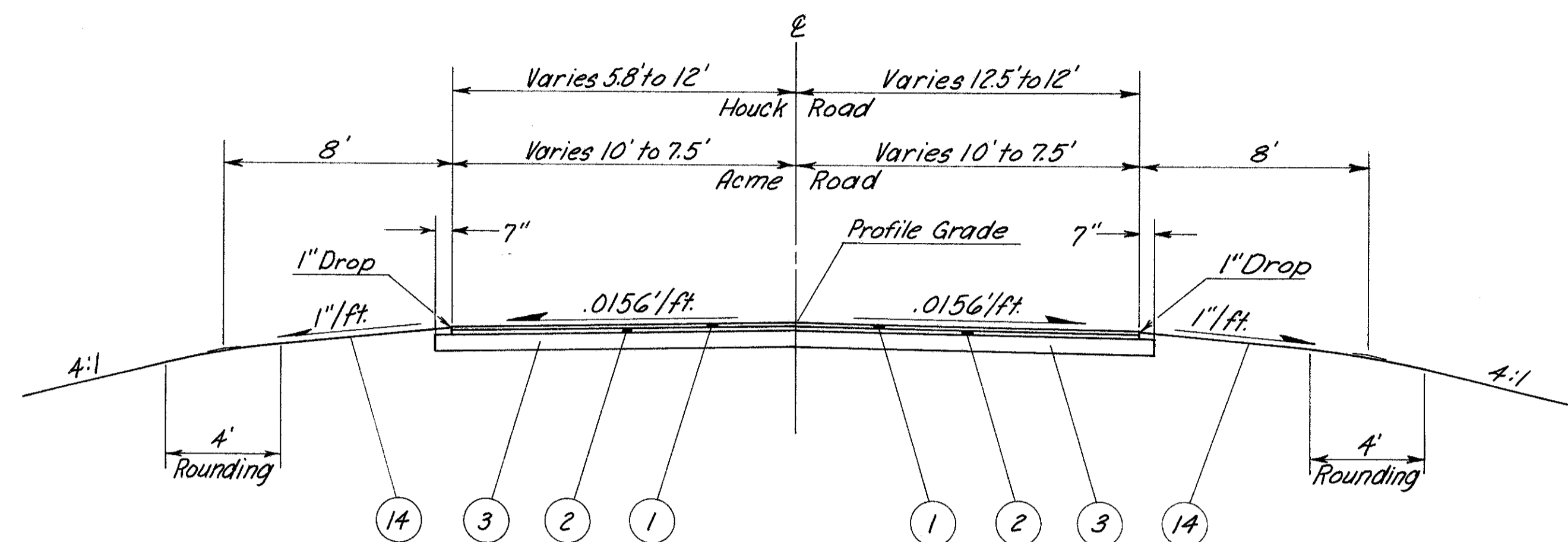
TYPICAL SECTIONS

TYPE 404 ON 301

QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY _____ DATE _____	5	OHIO	
CHKD _____ DATE _____			

5
89

DEL-36-7.48



HOUCK ROAD

Sta. 7+50 to Sta. 8+95.4

ACME ROAD

Sta. 10+58.5 to Sta. 11+10

MARKET DRIVE

Sta. 9+52.3 To 9+88

- ① Item 404 1/4" Asphalt Concrete, AC 20
- ② Item 402 1 3/4" Asphalt Concrete, AC 20
- ③ Item 301 7" Bituminous Aggregate Base; 702.01, AC 20;
or 702.09, RT-11 or RT-12
- ⑭ Item 659 Seeding and Mulching

GENERAL NOTES

QUANTITY CALCULATIONS
BY: SEL DATE: 3/75
CHKD: JNH DATE: 3/75
BURGESS & NIPLE, LIMITED

DEL-36-748

6
89

FIELD OFFICE

The Contractor shall provide a suitable field office having a minimum of 300 sq. ft. of floor space and in addition to the requirements of Item 619, he shall provide and maintain sanitary provisions as per 107.06. All the above is included in the lump sum price bid for Item 619, Field Office.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

The rounded corners shown on the typical sections, apply to all cross sections even though otherwise shown on these plans.

UNDERGROUND UTILITIES

The locations of the underground utilities shown on the plans have been obtained by diligent field checks and searches of available records. It is believed that they are essentially correct, but the State of Ohio does not guarantee their accuracy or completeness.

UTILITY OWNERSHIP

City of Delaware
(Waters & Sewers) City Hall
Delaware, Ohio 43015

Del-Co Water Company, Inc.
6773 Olentangy River Road (Sta. 394+00 to Sta. 414+00)
Delaware, Ohio 43015

Columbia Gas of Ohio, Inc.
68 N. Sandusky Street
Delaware, Ohio 43015

Columbus & Southern Ohio Electric Company
215 North Front Street
Columbus, Ohio 43216

General Telephone Company of Ohio
1300 Marion-Sandusky Road North
Marion, Ohio 43302

Ohio Edison Company
47 North Main Street (Sta. 394+00 to Sta. 405+50)
Akron, Ohio 44308

ELEVATION DATUM

All elevations are based on USGS datum.

REMOVAL OF EXISTING PIPE

The removal of all existing pipe drains which would normally be removed in various excavation items shall be included for payment in the unit price bid for the respective excavation items, unless otherwise itemized in the plans.

REMOVAL OF TREES AND STUMPS

All trees and stumps specifically marked for removal within the construction limits of this project shall be removed under the lump sum price bid for Item 201 Clearing and Grubbing, except that those trees for which protection and preservation work is indicated elsewhere in these plans shall not be removed.

The following is an approximate estimate of the number of trees and stumps to be removed.

<u>SIZES</u>	<u>NO. TREES</u>	<u>NO. STUMPS</u>
18"	32	2
30"	8	1
48"	3	0
60"	0	0

The above estimate is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps outside of the limits of construction but within the right-of-way and/or easement lines. Payment for the removal of these additional trees or stumps shall be included in the lump sum price bid for Item 201 Clearing and Grubbing.

MONUMENTS

Monuments shall be constructed in accordance with details shown on Standard Drawing MC-1. For locations, see Sheet No.80.

SEEDING

Quantities for Item 659, Seeding and Mulching, as per plan, are calculated for the soil areas between lines ten (10) feet outside the work limits, as shown on the cross sections, or to the right-of-way line if such line is less than ten (10) feet from the work limits.

Item 659, seeding mixture for the entire project, shall be:

55% Creeping Red Fescue (*Festuca rubra*)
35% Kentucky Bluegrass (*Poa pratensis*)
5% Red Top (*Agrostis alba*)
5% White Dutch Clover (*Arifolium repens*)

The seed bed for seeding Item 659 shall be loosened to a minimum depth of 2".

When asphalt is used as a tie, it shall be applied at the rate of 100 gallon per ton of straw in lieu of the specified rate. No asphalt shall be applied when the air temperature is below 40 degrees F. When straw is used as a mulch, it shall be applied at such a rate as to insure a minimum two (2) inch depth loose measure.

The actual operation of seeding, Item 659, shall not be performed between dates of October 15 and February 14.

ITEM 659 - COMMERCIAL FERTILIZER (18-46-0), AS PER PLAN

Fertilizer with the analysis of 18-46-0 shall be uniformly applied at the rate of fifteen (15) pounds per 1,000 square feet over the entire area to be seeded or sodded and worked into a depth of not less than two (2) inches.

ITEM 203 - PROOF ROLLING

An estimated quantity for this item has been included in the general summary for use in proof rolling of subgrade for the new pavement and treated shoulders.

Item 203 - Proof Rolling - 11 hours

GENERAL NOTES

QUANTITY CALCULATIONS
BY 302 DATE 3/75
CHKD JNH DATE 3/75
BURGES & NIPLE, LIMITED

DEL-36-748

7
89

DUST CONTROL

A quantity of calcium chloride and water is provided for use for dust control as directed by the Engineer.

Item 616 - Calcium Chloride	40 Tons
Item 616 - Water	180 M.Gal.

MANHOLES AND CATCH BASINS

The top elevation shown on the plans is the top of casting for manholes, grate elevation for catch basins in ditches and top of curb for catch basins in curbed areas.

Stationing and distance right or left to manholes and catch basins in ditches is to the center of the manhole or catch basin. The stationing point on the No. 3 catch basin is at the face of curb at the center of the catch basin.

MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

Sanitary manholes shall be reconstructed using precast sections in accordance with Standard Drawings MH-3 & MH-5 and with joints as per 706.11.

ITEM SPECIAL - FILL AND PLUG EXISTING CULVERT

This item shall consist of the construction of bulkheads in the existing culvert and filling the area thus sealed off with sand or other granular material approved by the Engineer.

Bulkheads shall be located at the limits of the area to be filled as indicated on the plans. The bulkheads shall consist of brick or concrete masonry with a minimum thickness of 12 inches.

The fill material shall be pumped into place or placed by some other means approved by the Engineer so that, after settlement, at least 90 percent of the cross-sectional area of the culvert for its entire length shall be filled. The footage of filled and plugged culvert to be paid for shall be the actual number of linear feet (measured along the centerline of the culvert from outer face to outer face of bulkheads) filled and plugged as described above.

The footage, measured as provided above, shall be paid for at the contract unit price bid per linear foot for "Item Special, Fill and Plug Existing 5'x4' Box Culvert", which price and payment shall constitute full compensation for furnishing, hauling and placing all the necessary materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

DRIVEWAYS AND MAILBOX APPROACHES

Driveways shall be constructed in accordance with the details shown on Sheet 28 and widths as shown on Sheet 15.

Mailbox approaches shall be constructed with details shown on Standard Construction Drawing BP-6. The mailbox approach width shall be eight feet. To construct the mailbox approach, remove the top two inches of 304 stabilized aggregate shoulder and replace with asphalt as detailed for residence drives on Sheet 28.

The following quantities are included in the plans for mailbox approaches:

Item 404	Asphalt Concrete, AC 20	34 C.Y.
Item 408	Bit. Prime Coat: 702.02, MC-30 or MC-70; 702.03, Primer 20; or 702.09, RT-2 or RT-3	243 GAL.

Where feasible, mailbox approaches shall be combined with driveways. Location of approaches shall be verified by the Engineer.

PAVEMENT REPLACEMENT

The following quantities are provided to restore the pavement where sewers are installed under pavement to be salvaged. The pavement shall be replaced in accordance with the detail on Sheet 29.

<u>Location</u>	<u>Item 301 - Bituminous Aggregate Base</u>
433+53	3 C.Y.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

Connections of proposed longitudinal drainage to the proposed corrugated metal structure shall be by means of a shop fabricated stub on the structure. The stub shall meet the requirements of 707 and have a minimum length of two feet and a minimum thickness of 0.079 inches.

Location and elevation of the stub are to be considered approximate and may be adjusted by the Engineer.

Payment for providing the connection described shall be included in the unit price bid for Item 603.

CONNECTIONS TO EXISTING PIPE

Where the plans provide for proposed conduit to be connected to, or to cross either over or under an existing sewer, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade before he starts to lay the proposed conduit.

Payment for all operations described above shall be included in the unit price bid for the pertinent 603 conduit items.

WATERING AND MOWING PERMANENT SEEDED AREAS

The following estimated quantities are to be used as directed by the Engineer to promote growth and to care for the permanent seeded areas, as per 659.09.

659 Water	68 M. Gal.
659 Mowing	140 M. Sq. Ft.

GENERAL NOTES

QUANTITY CALCULATIONS
BY SP DATE 3/75
CHKD. JNH DATE 3/75
BURGESS & NIPLE, LIMITED

DEL - 36-7.48

8
89

ITEM 605 - AGGREGATE DRAINS

Aggregate drains shall be placed at fifty (50) foot intervals on each side of normal crowned sections and at twenty-five (25) foot intervals on the low side only of superelevated sections, except where Item 605 Pipe Underdrains have been provided.

An aggregate drain shall be placed at the low point of each sag vertical curve.

EROSION CONTROL

Items 601 and 660 are provided in the plans for erosion control. Rock or turf 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.

TREATED SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS

Treated sanitary flow may be discharged into the highway drainage system provided the owner has secured the approval of the local health authorities and has acquired from the Ohio Transportation Department, the official permit to have the connection made.

In each case where a permit has been issued for a sanitary connection to be made into a highway drainage conduit, it shall be provided with an inspection well, in accordance with the detail shown on standard drawing MC-8.

The following estimated quantities have been included in the general summary, for use as directed by the Engineer, in making the above described connections:

Item 603, 6" Conduit, Type C, 50 Lin. Ft.
*Item 604, Inspection Wells, 1 Each

Necessary bends or branches shall be included for payment in the pertinent conduit item.

None of the above materials shall be ordered by the Contractor until authorized by the Engineer.

*No inspection well is required if effluent is discharged into an open ditch, channel, catch basin or manhole.

TRENCH FOR WIDENING

If the detour is not in effect when widening in salvage areas, trench excavation for base widening shall be performed only on one side of the pavement at a time. The open trench shall be adequately maintained and protected with drums or barricades at all times. Placement of proposed subbase and base material shall follow as closely as possible behind the excavation operations. The length of widening trench which is open at any one time shall be held to a minimum and shall at all times be subject to approval of the Engineer.

LIGHTS AND SIGNS AT ADJACENT ROAD INTERSECTIONS

The Contractor shall, in addition to the general requirements of Item 614 on this project, perform the following:

Provide, erect, and maintain standard 48" x 30" size "Road Closed" signs, sign supports, and lights at the following locations during periods in which the affected roads are closed to traffic:

1. U.S.R. 36 just east of County Road No. 5 (Section Line Road).
2. U.S.R. 36 just west of Penick Avenue.
3. County Road No. 15 (Houck Road) just south of S.R. 37.

Payment for providing, erecting, maintaining and removing lights, signs, and sign supports shall be included in the lump sum price bid for "Item 614 Maintaining Traffic".

614 - EXISTING SIGNS

Existing signs located within the roadwork areas which are necessary for interim or permanent traffic control shall be removed and reerected in locations indicated by the plans or as approved by the Engineer. Stop signs shall be maintained at all times while traffic is maintained. The cost of removal, reerection and subsequent removal if required will be considered a subsidiary work item, the cost of which will be included in the price bid for the roadway items. The signs which are to be reerected outside the paved berms shall be located with the center line of support on the point of intersection (P.I.) of the shoulder.

MAINTENANCE OF TRAFFIC

U.S. Route 36

Traffic may be detoured as shown on Sheets 1 and 2 between May 1 and October 1, unless otherwise approved by the Director. When the detour is not in effect, two way traffic shall be maintained at all times.

The Contractor shall maintain local traffic, including egress and ingress to private drives, at all times. The following quantities have been provided to be used as directed by the Engineer to maintain local traffic and access to private drives:

Item 410 - Traffic Compacted Surface Course, Type A or B	3,000 C.Y.
Item 616 - Calcium Chloride	60 Tons
Item 616 - Water	60 M.Gal.

County Road No. 15 (Houck Road) and
Township Road No. 315 (Acme Road)

Local traffic shall be maintained at all times, except as noted below, by the use of the existing pavement and/or temporary roadways surfaced with 410 aggregate and stabilized with Item 616. One way traffic will be permitted during paving operations.

The following quantities have been provided to be used as directed by the Engineer:

Item 410 - Traffic Compacted Surface Course, Type A or B	150 C.Y.
Item 616 - Calcium Chloride	3 Tons
Item 616 - Water	3 M.Gal.

ESTIMATED QUANTITIES

Estimated quantities of materials shall not be ordered by the Contractor until directed by the Engineer.

Turnarounds will be maintained for local school buses, if needed. Their locations will be as directed by the engineer.

The following quantities have been provided to be used as directed by the engineer.

Item 410 - Traffic Compacted Surface Course, Type A or B	50 C.Y.
Item 616 - Calcium Chloride	1 Ton
Item 616 - Water	1 M. Gal.

GENERAL NOTES

QUANTITY CALCULATIONS
BY SCL DATE 3/75
CHKD. JNH DATE 3/75
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DEL-36-748

9
89

FARM DRAINS AND HOUSE DRAINS

All farm drains and active house drains, such as yard, roof, basement and other similar pipe drains which are encountered during construction, shall be provided with an unobstructed outlet under the direction of the Engineer. Sanitary drains, other than sanitary sewer services, shall be subject to the requirements of the note titled "Treated Sanitary Flow Into Highway Drainage Systems". Sanitary drains shall be defined as those which carry effluent from all plumbing fixtures, to include floor drains, sinks, septic tanks, backing bed outlets and drains from livestock lots and barns.

Existing drains, which are located below the roadway ditch elevations and which cross the roadway, shall be replaced within the construction limits with Item 603, Conduit, Type B, one commercial size larger than the existing conduit, or shall be connected to the existing or proposed storm sewer.

Existing drains, which are encountered above the elevation of the roadway ditches, shall be outletted into the roadway ditch using 603 Type F Conduit. The optimum outlet elevation shall be, if possible, one foot above the flowline elevation of the ditch. Lateral tile fields which cross the roadway shall be intercepted by 603 Type E Conduit and carried in a longitudinal direction to an adequate outlet or roadway crossing.

The location, type, size and grade of required replacements shall be determined by the Engineer during construction and payment shall be made on final measurements.

The following estimated quantities have been included in the General Summary for the work noted above:

Item 603 - 6" Conduit, Type B - 100 l.f.
Item 603 - 8" Conduit, Type B - 100 l.f.
Item 603 - 6" Conduit, Type C - 100 l.f.
Item 603 - 8" Conduit, Type C - 100 l.f.
Item 603 - 6" Conduit, Type F - 50 l.f.
Item 603 - 8" Conduit, Type F - 50 l.f.

Necessary bends or branches shall be included for payment in the pertinent conduit item.

None of the above materials shall be ordered by the Contractor until requested by the Engineer.

ALTERNATE METHODS-TRAFFIC

If the Contractor so elects, he may submit alternate methods for the maintenance of traffic provided the intent of the above provisions is followed and no additional inconvenience to the traveling public results therefrom. No alternate plan shall be placed into effect until approval has been granted, in writing, by the Director.

WATER WORK GENERAL NOTES

QUANTITY CALCULATIONS
BY SPR DATE 3/75
CHKD. JNH DATE 3/75
BURGESS & NIPL, LIMITED

	STATE	PROJECT	
	OHIO		

10
89

DEL-36-748

Specifications

All water line relocations shall be made in accordance with Supplemental Specification 814, Water Mains and Service Branches. This specification is modified by the following notes.

COORDINATION OF WORK

The authorized representative designated by the City of Delaware Water Department will inspect the water work. Construction and materials shall meet the approval of the designated representative of the City of Delaware and the Project Engineer. All instructions and requests for approval of materials and construction shall be submitted to the Project Engineer. The Contractor shall notify the City of Delaware Water Department 48 hours in advance of planned time for taking existing water main out of service.

VALVE BOX ADJUSTED TO GRADE, AS PER PLAN

This work shall consist of resetting the existing valve box to grade at the locations shown on the plans or as directed by the Engineer.

The Contractor shall excavate around the valve box without injuring the box or pipe and reset the telescope, base and hood. If it is necessary to adjust the existing valve box beyond its designed limits, an extension shall be furnished and installed. After the valve box has been adjusted to grade, the backfilling and surface restoration work shall be done.

Payment will be made at the contract unit price bid per each for "Item 814 - Valve Box Adjusted to Grade, As Per Plan", which shall constitute full compensation for furnishing of all labor, materials, small tools and equipment required to complete this item of work in place.

SERVICE BRANCHES LOWERED

The existing service branches shall be lowered in accordance with "Item 814 - Service Branches Lowered". The Contractor shall lower within the construction limits only those services which have less than 42" of cover at the service box.

The following estimated quantities have been included in the General Summary for the work noted above:

Item 814 Service Branches Lowered 100 L.F.

SERVICE BOXES ADJUSTED TO GRADE

The existing service boxes shall be adjusted in accordance with "Item 814 - Service Boxes Adjusted to Grade".

The following estimated quantities have been included in the General Summary for the work noted above:

Item 814 Service Boxes Adjusted to Grade 8 Ea.

SERVICE STOPS AND BOXES REMOVED AND RESET

The existing service stops and boxes shall be removed and reset in accordance with "Item 814 - Service Stops and Boxes Removed and Reset".

The following estimated quantities have been included in the General Summary for the work noted above:

Item 814 Service Stops and Boxes
Removed and Reset 4 Ea.

CONNECTIONS TO EXISTING PIPE

At places where proposed pipe is to be connected to existing pipe, 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.

GENERAL SUMMARY

QUANTITY CALCULATIONS		FHWA REGION	STATE	PROJECT
BY <i>D.F.C.</i>	DATE <i>2/75</i>	5	OHIO	
CHKD <i>S.P.</i>	DATE <i>2/75</i>			

DEL-36-748

SHEET NUMBER																												ITEM	TOTAL	UNIT	DESCRIPTION	
6	7	8	9	14	15	17	18	19	20	21	22	23	24	25	26	30	31	32	33	34	35	36	38	80	87	88						
<i>Lump</i>																												201	<i>Lump</i>		ROADWAY <i>Clearing and Grubbing</i>	
																												202	802	L.F.	<i>Pipe Removed 24" & Under</i>	
																												202	213	L.F.	<i>Pipe Removed Over 24"</i>	
																												202	1135	S.F.	<i>Sidewalk Removed</i>	
																												202	388	L.F.	<i>Curb & Gutter Removed</i>	
																												202	101	S.Y.	<i>Pavement Removed</i>	
																												202	1	EA.	<i>Septic Tank Removed</i>	
																												202	2	EA.	<i>Catch Basin Removed</i>	
																												202	2	EA.	<i>Catch Basin Abandoned</i>	
																												202	<i>Lump</i>		<i>Structures Removed</i>	
																												202	<i>Lump</i>		<i>Portions of Structures Removed</i>	
																												203	17301	C.Y.	<i>Excavation not including Embankment Construction</i>	
																												203	48218	C.Y.	<i>Embankment</i>	
																												203	34279	S.Y.	<i>Subgrade Compaction</i>	
																												203	11	Hrs.	<i>Proof Rolling</i>	
																												410	3200	C.Y.	<i>Traffic Compacted Surface, Type A or B</i>	
																												202	<i>Lump</i>		<i>Parcel No. 21-WD, Removal of one concrete block garage</i>	
																												202	<i>Lump</i>		<i>Parcel No. 26-WD, Removal of one 1/2-story brick residence, one concrete block garage</i>	
																												604	34	EA.	<i>Reference Monument</i>	
																												608	1440	S.F.	<i>4" Concrete Walk</i>	
																												616	244	M. Gal.	<i>Water</i>	
																												616	104	Tons	<i>Calcium Chloride</i>	
																												Spec.	45	L.F.	<i>Fill and Plug Existing 5'x4' Box Culvert</i>	
																												EROSION CONTROL				
																												659	68	M. Gal.	<i>Water</i>	
																												659	140	M. Sp. Ft.	<i>Mowing</i>	
																												601	138	C.Y.	<i>Rock Channel Protection, Type A with bedding</i>	
																												601	138	C.Y.	<i>Rock Channel Protection, Type B with bedding</i>	
																												601	193	S.Y.	<i>Riprap, using 6" Reinforced Concrete Slab</i>	
																												659	4	Tons	<i>Commercial Fertilizer (18-46-0), As Per Plan</i>	
																												659	57337	S.Y.	<i>Seeding and Mulching, As Per Plan</i>	
																												660	5341	S.Y.	<i>Sodding</i>	

DEL-36-748

GENERAL SUMMARY

* FARM DRAIN OUTLETS

SHEET NUMBER																				ITEM	TOTAL	UNIT	DESCRIPTION
8	9	16	17	18	19	20	21	22	23	24	25	26	30	31	32	33	34	35	36				
						0.4	0.2					0.3	10.3	5.9		0.4	1.5	1.8	1.5	602	22.3	C.Y.	Concrete Masonry
																86				603	86	L.F.	Conduit Type A, 18" 706.01, 706.02 or 706.08 or 21" 707.05
																132			158	603	290	L.F.	Conduit Type A, 33" 706.02 or 706.08 or 36" 707.05
																			168	603	168	L.F.	42" Conduit Type A, 706.02, 1500-D Load, or 707.05
													112	122						603	234	L.F.	Conduit Type A, 66" 706.02 or 78" 707.07
													176							603	176	L.F.	53"x83" Conduit Type D, 706.04 Class HE-A
							188		100		65	36								603	489	L.F.	6" Conduit, Type B
																				603	100	L.F.	8" Conduit, Type B
									130		72	122								603	324	L.F.	12" Conduit, Type B
																78				603	78	L.F.	18" Conduit, Type B
																				603	150	L.F.	6" Conduit, Type C
																				603	100	L.F.	8" Conduit, Type C
												144	180		67	103				603	494	L.F.	12" Conduit, Type C, 706.01 Cl. 3, 706.02, 706.08 E.S. or 707.13
												176								603	176	L.F.	15" Conduit, Type C
																				603	523	L.F.	18" Conduit, Type C, 706.01 Cl. 3, 706.02, 706.08 E.S. or 707.13
																				603	284	L.F.	12" Conduit, Type D
							28			32		126		54	44					603	424	L.F.	15" Conduit, Type D
								200	70	98			56							603	28	L.F.	18" Conduit, Type D
																				603	180	L.F.	36" Conduit, Type D
																				603	170	L.F.	6" Conduit, Type F
																				603	120	L.F.	8" Conduit, Type F
																				603	10	L.F.	15" Conduit, Type F
																				603	10	L.F.	18" Conduit, Type F
																				604	18	EA.	Standard No. 2-2-B Catch Basin
																				604	2	EA.	Standard No. 5 Catch Basin, with Grate B
																				604	1	EA.	Inspection Wells
																				605	3731	L.F.	6" Deep Pipe Underdrain
																				605	2130	L.F.	Aggregate Drains
																				604	2	EA.	Manhole Reconstructed to Grade, as per plan

GENERAL SUMMARY

QUANTITY CALCULATIONS BY <u>D.F.C.</u> DATE <u>2/75</u> CHKD <u>SCB</u> DATE <u>2/75</u>	FHWA REGION 5	STATE OHIO	PROJECT
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13
89

DEL-36-748

SHEET NUMBER															ITEM	TOTAL	UNIT	DESCRIPTION	
6	7	8	10	14	15														
															38				PAVEMENT
	3				4167											301	4170	C.Y.	Bituminous Aggregate Base: 702.01, AC 20; or 702.09, RT-11 or RT-12
					3505											304	3505	C.Y.	Aggregate Base
					1442											310	1442	C.Y.	Subbase
					1138											402	1138	C.Y.	Asphalt Concrete, AC 20
					853											404	853	C.Y.	Asphalt Concrete, AC 20
	34				145											404	179	C.Y.	Asphalt Concrete, AC 20. (Driveways)
					411											407	411	Gal.	Tack Coat: 702.04, SS-1, SS-1h, MS-2 or FS-1; or 702.02, FC-250
					14											407	14	Tons	Cover Aggregate
	243				6765											408	7008	Gal.	Bituminous Prime Coat: 702.09, RT-2 or RT-3; 702.02, MC-30 or MC-70; or 702.03, Primer 20
					4209											409	4209	Gal.	Seal Coat Bituminous Materials: 702.09, RT-9 or RT-10; 702.02, MC-800 or MC-3000; 702.04, FS-1, FS-2, CR5-1 or CR5-2; or 702.03, CBAE-800.
					113											409	113	C.Y.	Seal Coat Cover Aggregate No. 3
					163											452	163	S.Y.	6" Plain Portland Cement Concrete Pavement
															389	609	389	L.F.	Concrete Curb, Standard Type 6
																			WATER WORK
					20											814	20	L.F.	8" Ductile Iron Water Pipe ASA Cl. 2 Including Fittings
					1											814	1	EA.	Fire Hydrant
					1											814	1	EA.	Fire Hydrant Removed and Disposed of
					4											814	4	EA.	Valve Box Adjusted to Grade, as per plan
			8													814	8	EA.	Service Boxes Adjusted to Grade
			100													814	100	L.F.	Service Branches Lowered
			4													814	4	EA.	Service Stop and Boxes Removed and Reset
																			TRAFFIC CONTROL
																			For Quantities See Sheet <u>43</u>
																619	Lump		Field Office
																623	Lump		Construction Layout Stakes
																614	Lump		Maintaining Traffic

DEL-36-748

SUB - SUMMARY

WATER WORK QUANTITIES											
LOCATION	See Sheet No.	8/4				45° Bend	Concrete Masonry (Estimating Only)				
		8" Ductile Iron Pipe ASA C.I. & w/ fittings	Fire Hydrant	Fire Hydrant Re- moved & Disposed of	Valve Box Adjusted to Grade, as per plan						
REF		LF	Ea.	Ea.	Ea.	Ea.	C.Y.				
W101	432+62, 20' Lt.	20				1					
W102	433+42 to 433+62, 20' Lt.	20	20				4	6			
W103	437+67, 20' Lt.	21				1					
W104	472+69, 24' Rt.	26				1					
W105	472+70, 24' Rt.	26				1					
W106	475+72, 27' Rt.	26		1	1			1			
TOTALS			20	1	1	4					

EARTHWORK AND SEEDING QUANTITIES				
LOCATION		203		SOIL AREA
		EXCAVATION	EMBANKMENT	
FROM	TO	C.Y.		S.Y.
Mainline				
395+00	405+00	1037	947	6531
405+00	413+00	1704	2754	5355
413+00	421+00	2528	9389	7320
421+00	429+00	1136	5894	6877
429+00	437+00	1897	238	3758
437+00	445+00	493	2627	5105
445+00	453+25	894	11706	9992
453+25	461+00	2612	10564	8377
461+00	469+00	3096	450	4251
469+00	477+00	1515	3527	4593
Houck Road				
7+40	9+50	289	122	878
Acme Road				
10+50	11+10	100	0	151
TOTALS		17,301	48,218	63,188

ITEM 659 SEEDING AND MULCHING, AS PER PLAN

Soil Area 63,188 S.Y.
 Sodding -5,341 S.Y.
 Riprap -193 S.Y.
 Rock -317 S.Y.
 Seeding & Mulching, as per plan = 57,337 S.Y.

ITEM 659 COMMERCIAL FERTILIZER, AS PER PLAN

Seeding & Mulching, as per plan . . . 57,337 S.Y.
 Sodding 5,341 S.Y.
 Total 62,678 S.Y.

62,678 S.Y. x 0.0000675 = 4.23 Tons Fertilizer, as per plan

DEL-36-748

SUB-SUMMARY

DRIVEWAY QUANTITIES											
CENTERLINE STATION	Δ or Δ* RANGE REF.	TYPE	WIDTH	LENGTH		304	402	404	408	452	
				BEYOND APPROACH	FT.	L.F.	Aggregate Base	Asphalt Concrete	Asphalt Concrete AC 20	Bituminous Prime Coat	6" Plain Concrete
		RES	COM	FIELD	FT.	L.F.	C.Y.	C.Y.	C.Y.	GAL.	S.Y.
396+61.5L	1	.	.	.	12	12	8				
398+66R	2	.	.	.	12	3	8		4	33	
404+25L	1	.	.	.	12	12	9		4	29	
405+99R	3	.	.	.	14	0	9		5	39	
409+36L	1	.	.	.	12	14	8				
414+85L	4	.	.	.	16	43	38	5	5	49	
417+18R	4	.	.	.	12	0	11				
420+00L	90°	.	.	.	12	0	5				
420+55R	2	.	.	.	12	43	17		7	56	
427+68R	2	.	.	.	12	14	11		4	33	
427+93L	2	.	.	.	16	4	11		5	37	
428+32R	2	.	.	.	12	0	7		4	33	
430+69R	2	.	.	.	14	24	16		5	36	
430+96L	3	.	.	.	16	0	10		5	42	
432+48R	1	.	.	.	12	4	6		4	31	
437+56R		.	.	.	12	8	7				
433+84L	2	.	.	.	14	6	10		6	40	
435+38L	1	.	.	.	20	0	7		5	35	
436+12R	1	.	.	.	12	0	5		4	29	
437+43L	3	.	.	.	12	6	10		5	36	
439+53L	1	.	.	.	14	17	12		4	30	
442+80R	1	.	.	.	12	8	7		4	29	
446+82L	3	.	.	.	12	118	43		5	36	
442+87L	2	.	.	.	12	30	14				
453+06L	81°	.	.	.	12	212	70		4	33	
460+80L	1	.	.	.	20	23	23	3	3	35	
433+00R	1	.	.	.	12	16	9				
461+19R	1	.	.	.	12	13	8				
463+64L	1	.	.	.	12	7	7		4	29	
464+30R	2	.	.	.	14	2	9		5	36	
466+26R	1	.	.	.	14	4	7		4	30	
466+47L	1	.	.	.	16	26	27	2	2	32	
467+25L	1	.	.	.	16	4	10	2	2	32	
467+38R	2	.	.	.	12	5	8		4	33	
468+64L	1	.	.	.	12	2	5				
469+06R	1	.	.	.	12	26	13		4	29	
469+81R	1	.	.	.	12	0	5		4	29	
470+17R	2	.	.	.	12	0	7		4	33	
470+77L	1	.	.	.	12	13	9		4	29	
472+06R	1	.	.	.	22	7	15	4	4	37	
472+87.5R	2	.	.	.	12	2.5	9		3	18	
474+52R	1	.	.	.	18	14					63
474+95R	1	.	.	.	10	23	5		2	11	28
475+60R	1	.	.	.	10	27	5		2	13	28
476+03L	2	.	.	.	12	0	7		4	33	
476+16R	1	.	.	.	8	10	2		1	5	28
476+78.5R	1	.	.	.	8	0					21
TOTALS							549	16	145	1150	168

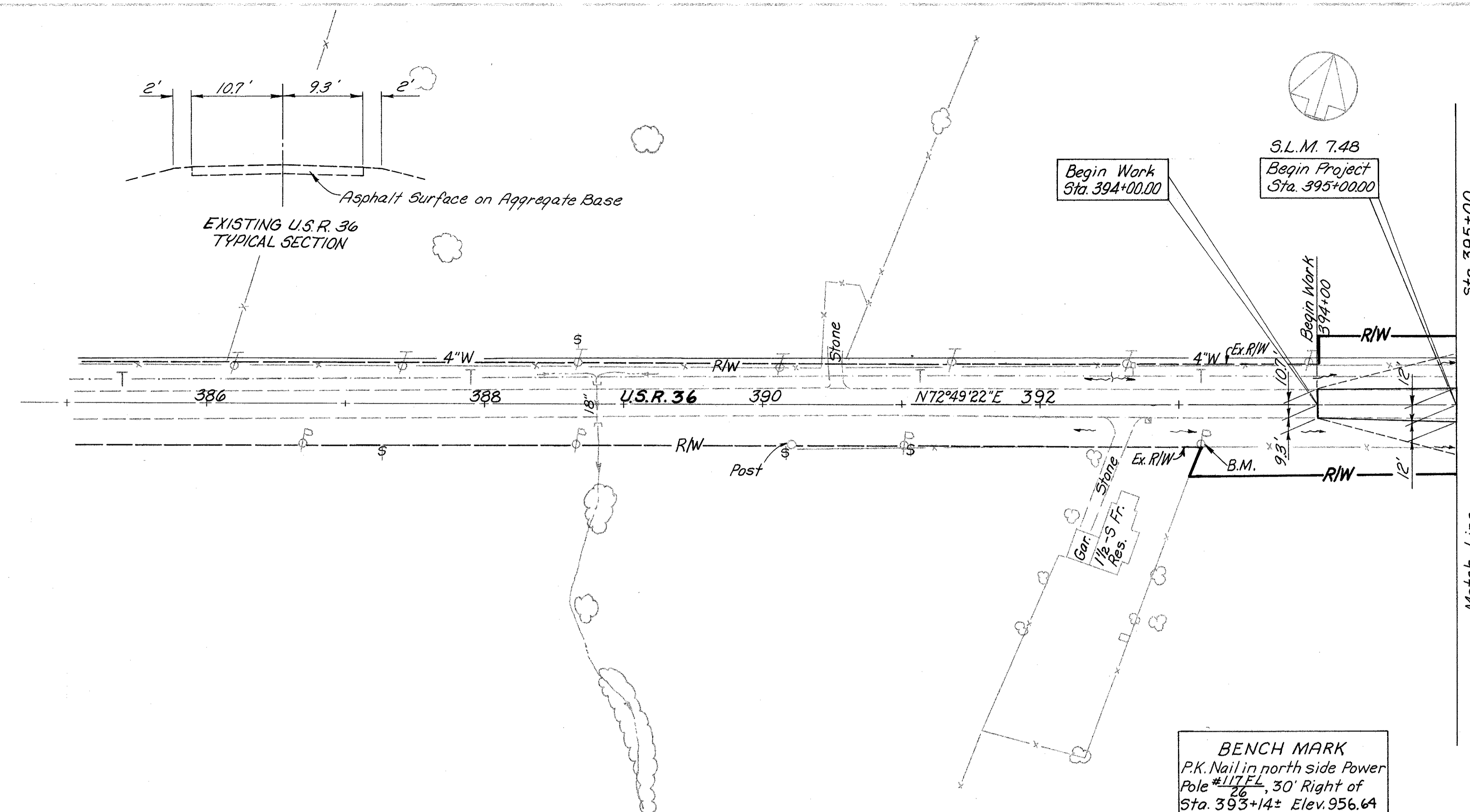
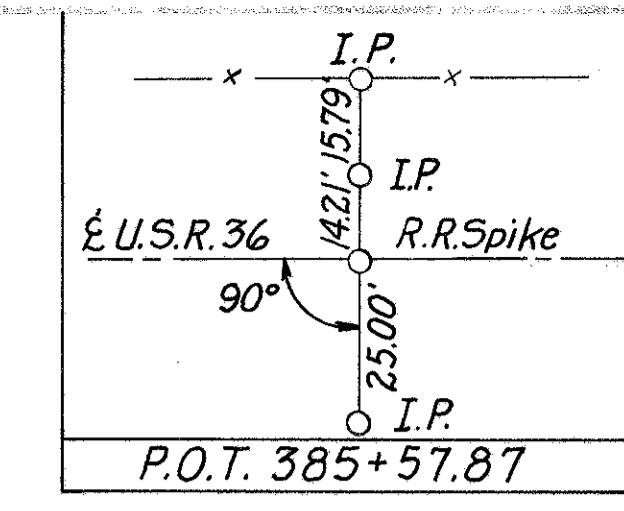
* Range Reference as indicated by Table on Sheet 28

Carry to Pavement Table Carry to Pavement Table Carry to Pavement Table

PAVEMENT QUANTITIES															
LOCATION	LENGTH	AVERAGE WIDTH	203	301	304	310	402	402	404	407	408	409	409		
			Subgrade Compaction	Bituminous Aggregate Base	Aggregate Base	Subbase	Asphalt Concrete	Asphalt Concrete Preleveling Course	Asphalt Concrete	Tack Coat	Bituminous Prime Coat	Seal Coat Aggregate	Seal Coat Bituminous Material		
FROM	TO	FT.	FT.	S.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	GAL.	GAL.	C.Y.	GAL.		
MAINLINE															
394+00	395+00	100	22	22	6			2	2	9	22				
395+00	406+50	1150	24	512	128			24	91	107	256				
406+50	412+50	600	24	1600	326			78		56					
412+50	414+50	200	26.6	591	120			29		21					
414+50	416+50	200	32.6	724	146			35		25					
416+50	417+83.04	133.04	36	532	107			26		18					
417+83.04	419+25	141.96	33.9	535	108			26		19					
419+25	420+75	150	28.75	479	97			23		17					
420+75	422+25	150	24.85	414	84			20		14					
422+25	432+50	1025	24	2733	557			133		95					
432+50	438+50	600	24	266	66			12	41	56	133				
438+50	472+63	3413	24	9101	1856			442		316					
472+63	472+72.5	9.5	27.75	29	6			1		1					
472+72.5	473+11	38.5	31.5	135	27			7		5					
473+11	477+00	389	31.5	1362	270			66		47					
MAINLINE SHOULDERS															
394+00	395+00 Lt. & Rt.	100x2	4	88		18	8				36	0.8	26		
395+00	417+30 Lt. & Rt.	2230x2	8	3964		840	408				1586	31.8	1190		
417+30	418+30 Rt.	100x1	8	89		19	9				36	0.7	27		
418+30	431+09 Lt. & Rt.	1279x2	8	2274		482	234				910	18.2	682		
431+09	431+68 Lt.	59x1	8	52		11	5				21	0.4	16		
431+68	458+75 Lt. & Rt.	2707x2	8	4812		1021	495				1925	39	1444		
458+75	459+75 Lt.	100x1	8	89		19	9				36	0.7	27		
459+75	472+68 Lt. & Rt.	1293x2	8	2299		488	236				920	18	690		
472+68	475+76 Lt.	308x1	8	274		58	28				110	2.2	82		
HOUCK ROAD															
Quantities from Sheet 37					748	152		37		27					
MARKET DRIVE															
Quantities from Sheet 38					288	56		14		10					
ACME ROAD															
Quantities from Sheet 37					267	55		13		10					
From Driveway Table							549		16		1150				
TOTALS					34,279	4,167	3505	1,442	1004	134	853	411	6730	112	4184

ITEM 407 TACK COAT AGGREGATE COVER
Estimated Quantity=14 Tons

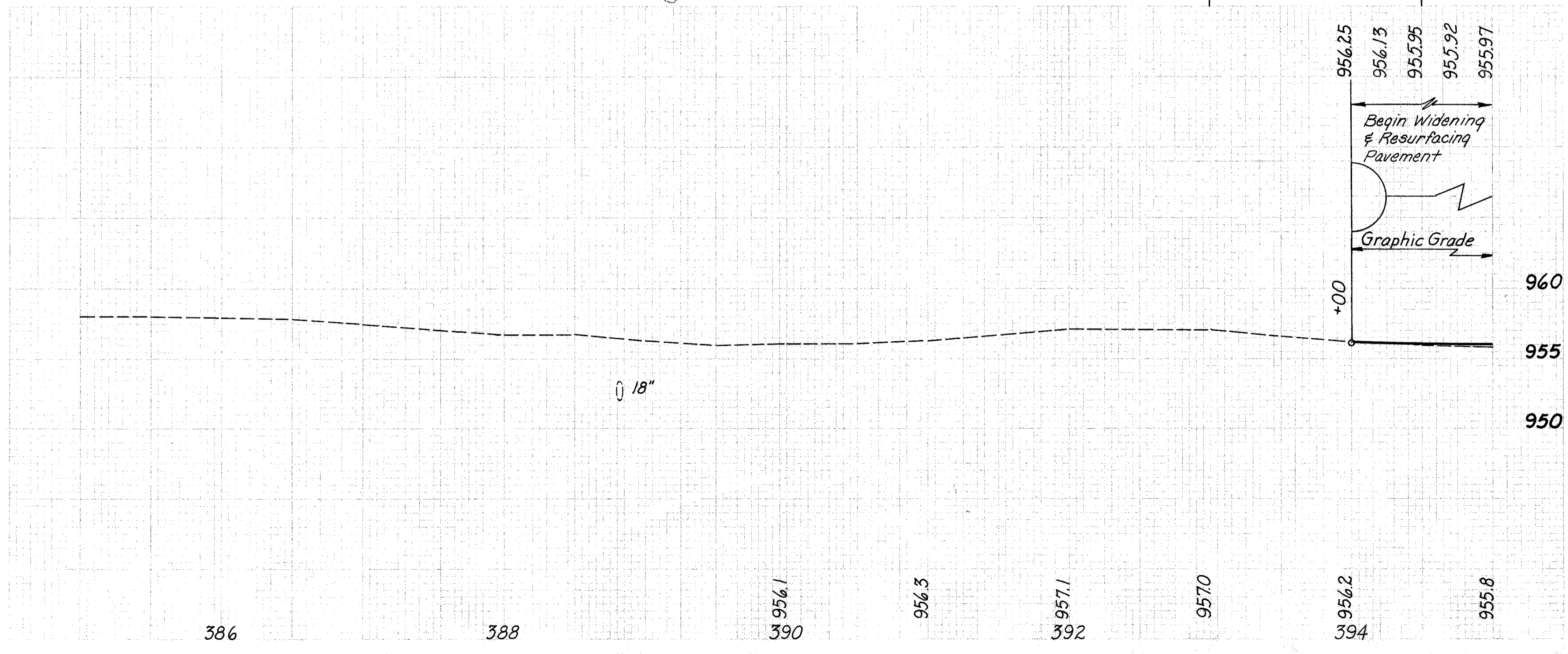
DEL-36-748



BENCH MARK
P.K. Nail in north side Power Pole #117FL, 30' Right of Sta. 393+14± Elev. 956.64

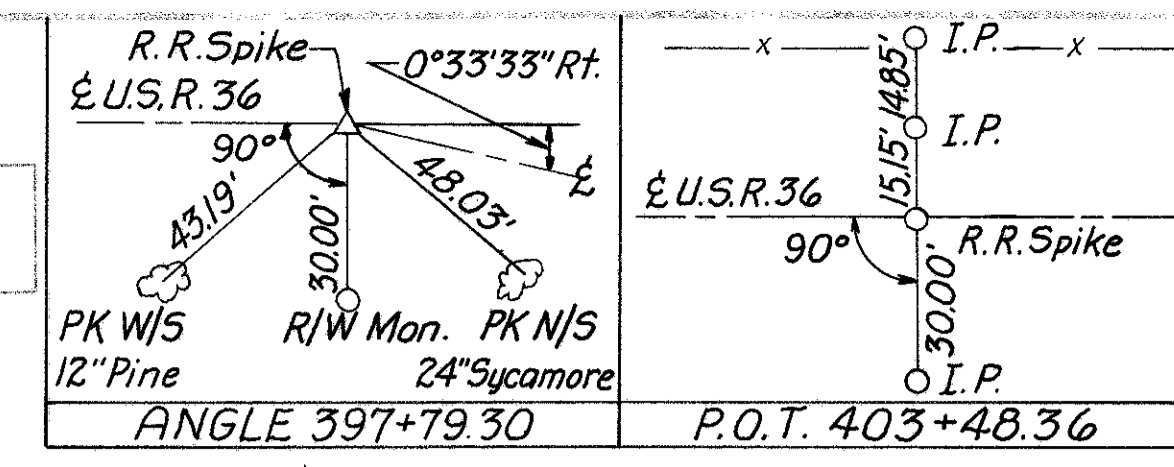
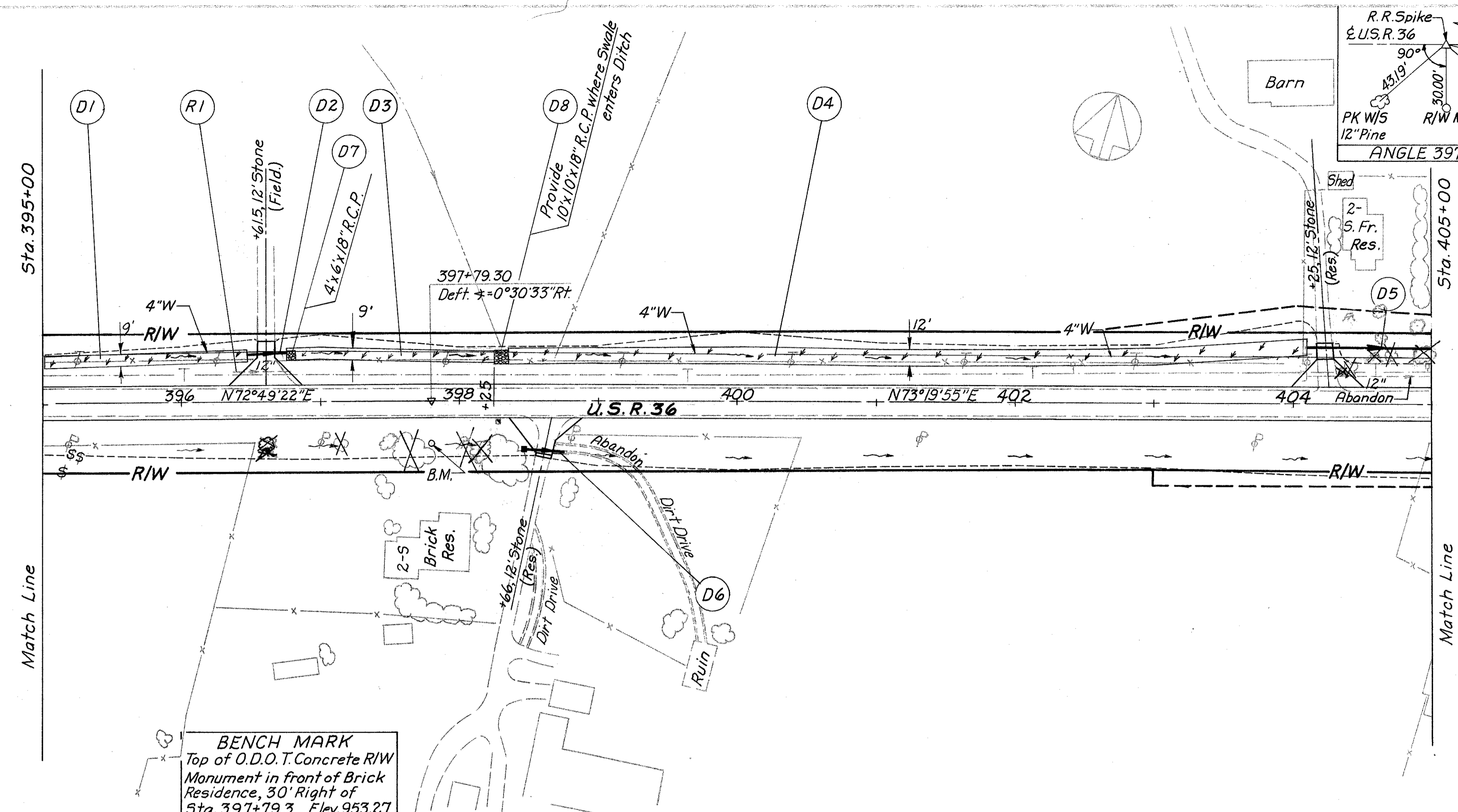
REF.	LOCATION	LF	Aggregate Drains
	394+00 to 395+00 Lt. & Rt.	40	605
TOTAL		40	

For Pavement Elevations See Pavement Elevation Tables



385+00 TO 395+00

DEL-36-748



DRAINAGE AND EROSION CONTROL

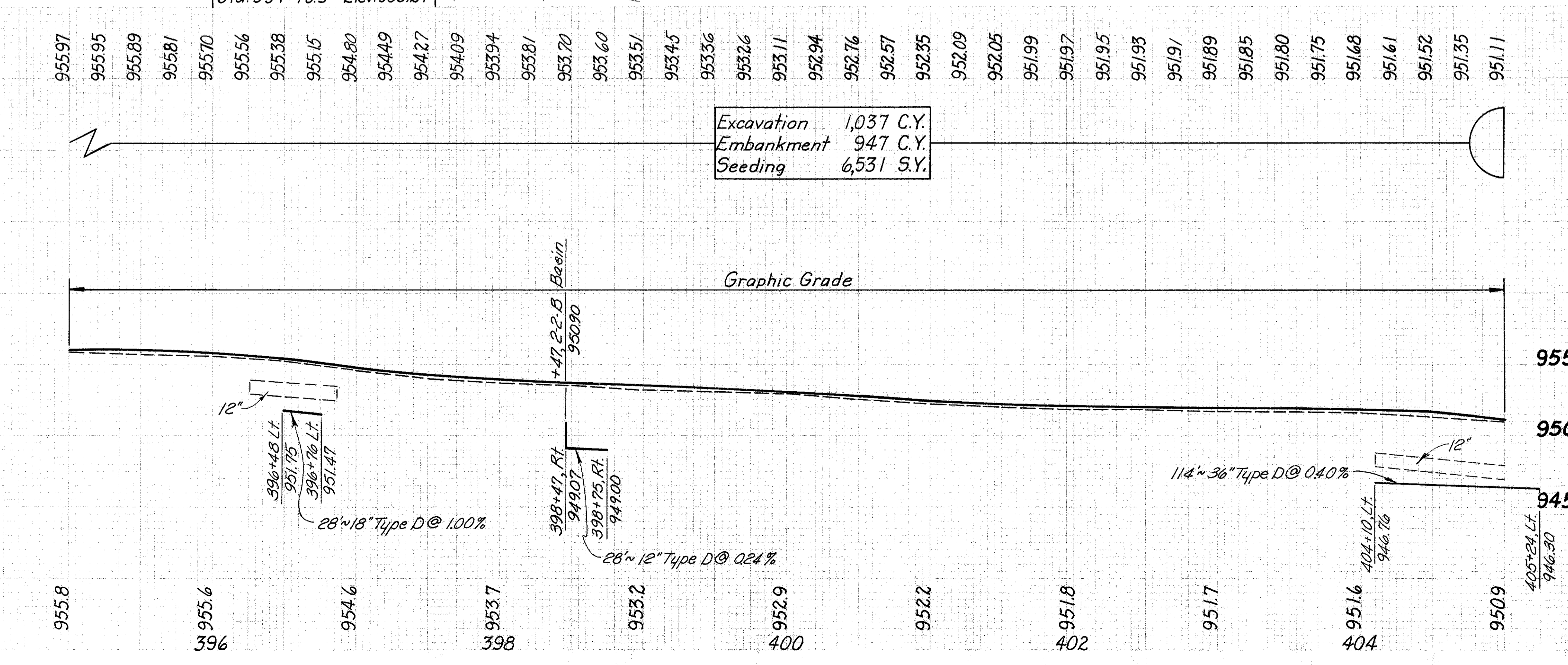
REF.	LOCATION	C.Y.	L.F.	L.F.	L.F.	Ea.	L.F.	Sq.
D1	395+00 Lt. to 396+48 Lt.							148
D2	396+48 Lt. to 396+76 Lt.			28				
D3	396+82 Lt. to 398+25 Lt.							143
D4	398+35 Lt. to 404+10 Lt.							767
D5	404+10 Lt. to 405+00 Lt.				90			
D6	398+47 Rt. to 398+75 Rt.		28			1		
D7	396+76 Lt. to 396+82 Lt.	2						
D8	398+25 Lt. to 398+35 Lt.	7						
	395+00 to 405+00 Lt. & Rt.						370	
TOTAL		9	28	28	90	1	370	1058

ROADWAY

REF.	LOCATION	L.F.
R1	396+38 Lt. to 396+80 Lt.	42
TOTAL		42

202
Pipe Removed 24" and Under

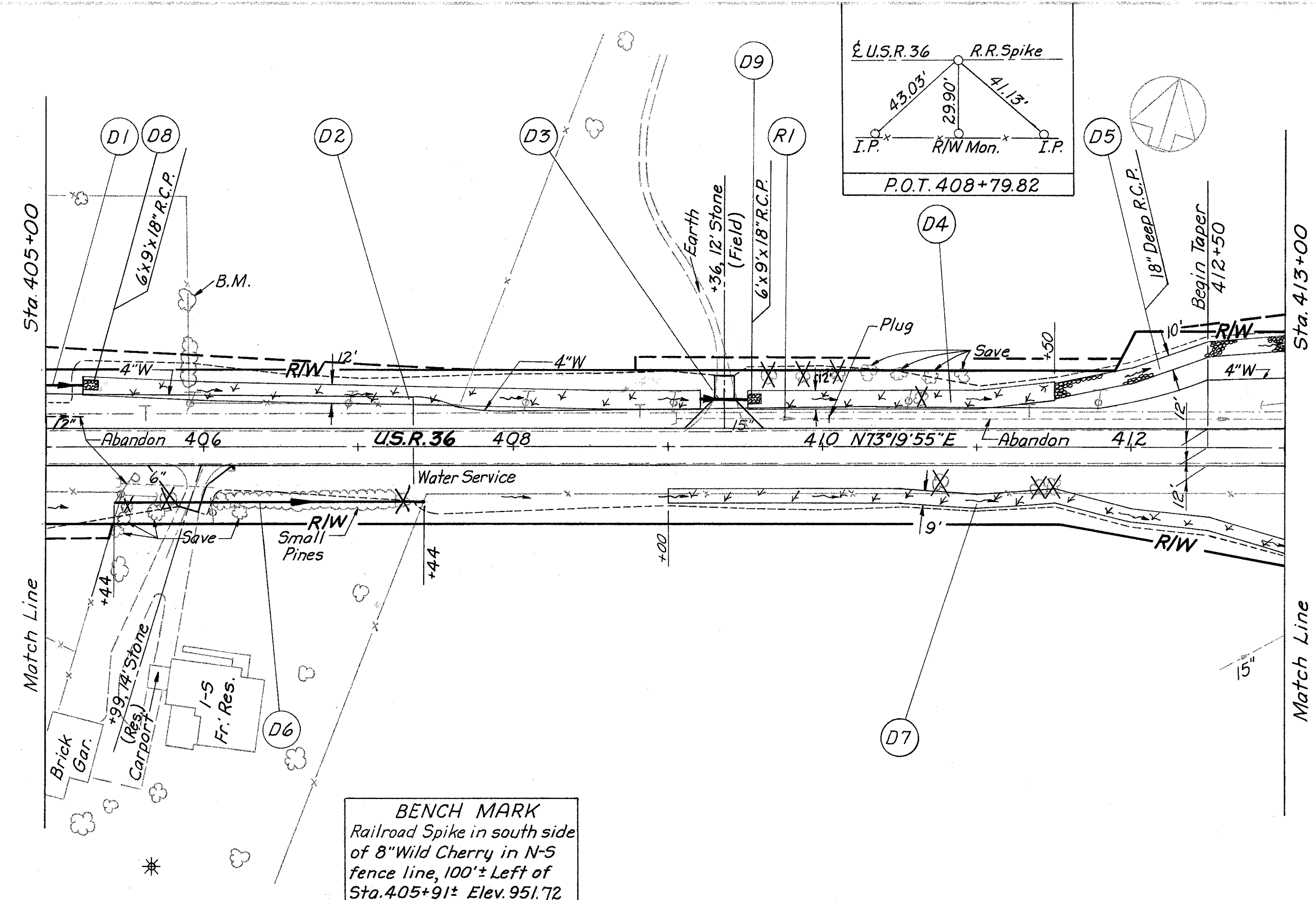
Excavation 1,037 C.Y.
 Embankment 947 C.Y.
 Seeding 6,531 S.Y.



For Driveway Details See Sheet 28
 For Driveway Quantities See Sheet 15

395+00 TO 405+00

DEL-36-748



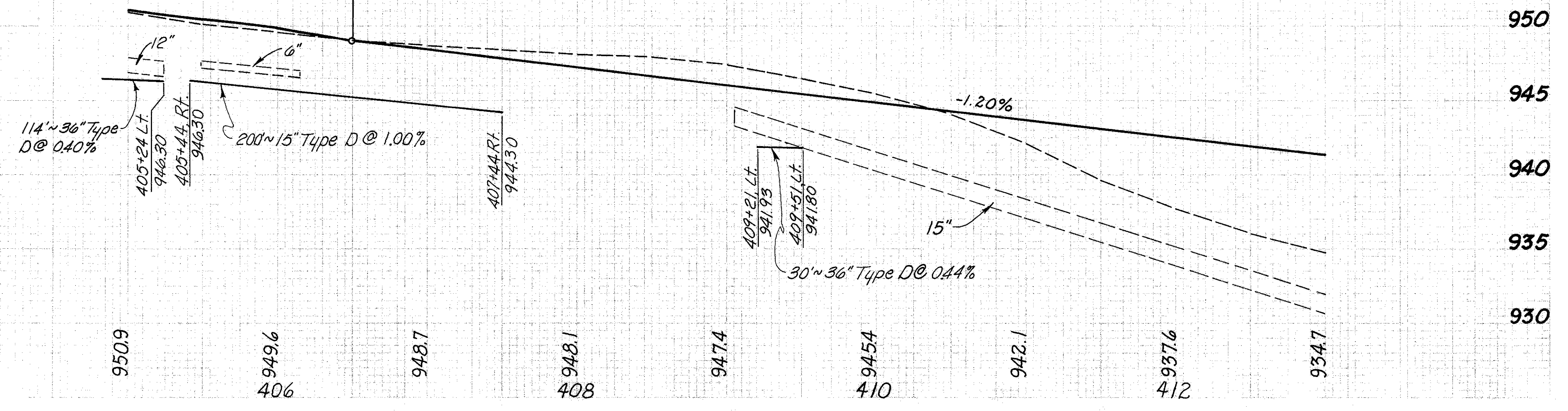
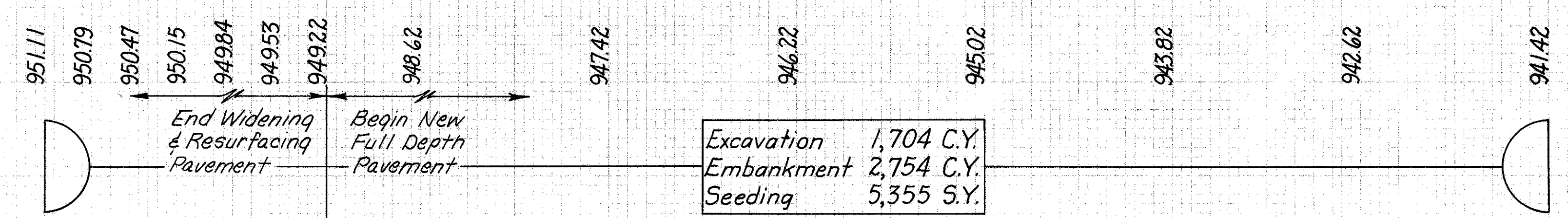
DRAINAGE AND EROSION CONTROL

REF.	LOCATION	C.Y.	LF	LF	LF	S.Y.
D1	405+00 Lt. to 405+24 Lt.			24		
D2	405+33 Lt. to 409+21 Lt.					516
D3	409+21 Lt. to 409+51 Lt.			30		
D4	409+60 Lt. to 411+50 Lt.					253
D5	411+50 Lt. to 413+00 Lt.	86				
D6	405+44 Rt. to 407+44 Rt.		200			
D7	409+00 Rt. to 413+00 Rt.					407
D8	405+24 Lt. to 405+33 Lt.	4				
D9	409+51 Lt. to 409+60 Lt.	4				
	405+00 to 409+60 Lt. & Rt.				270	
TOTAL		94	200	54	270	1176

BENCH MARK
 Railroad Spike in south side of 8" Wild Cherry in N-S fence line, 100'± Left of Sta. 405+91± Elev. 951.72

ROADWAY

REF.	LOCATION	LF
R1	409+05 Lt. to 410+05 Lt.	100
TOTAL		100

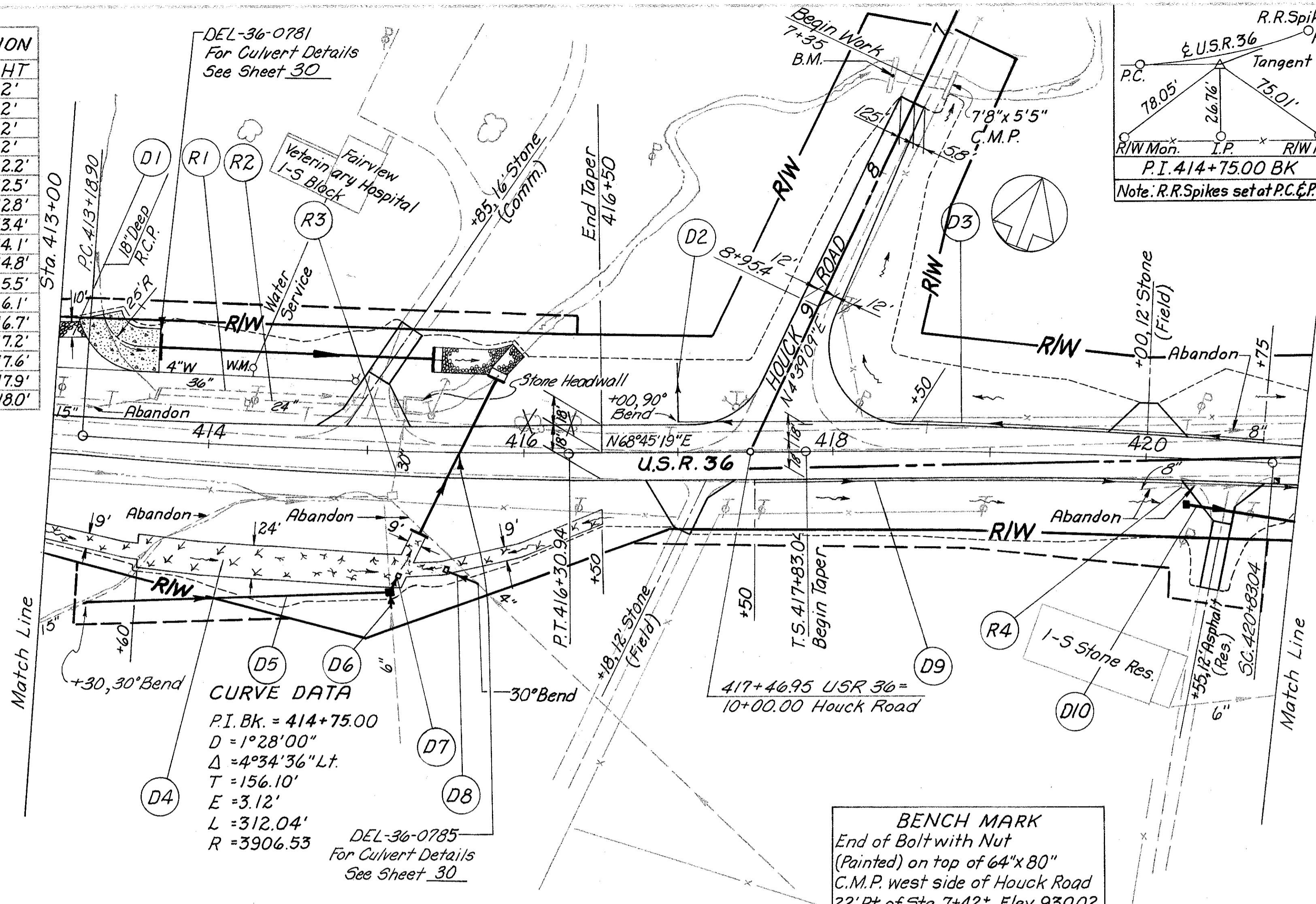


405+00 TO 413+00

PAVEMENT TRANSITION

LOCATION	LEFT	RIGHT
412+50	12.2'	12.2'
+75	12.2'	12.2'
413+00	12.4'	12.2'
+25	12.7'	12.2'
+50	13.2'	12.2'
+75	13.6'	12.5'
414+00	14.0'	12.8'
+25	14.5'	13.4'
+50	15.1'	14.1'
+75	15.7'	14.8'
415+00	16.2'	15.5'
+25	16.6'	16.1'
+50	17.0'	16.7'
+75	17.4'	17.2'
416+00	17.8'	17.6'
+25	17.9'	17.9'
416+50	18.0'	18.0'

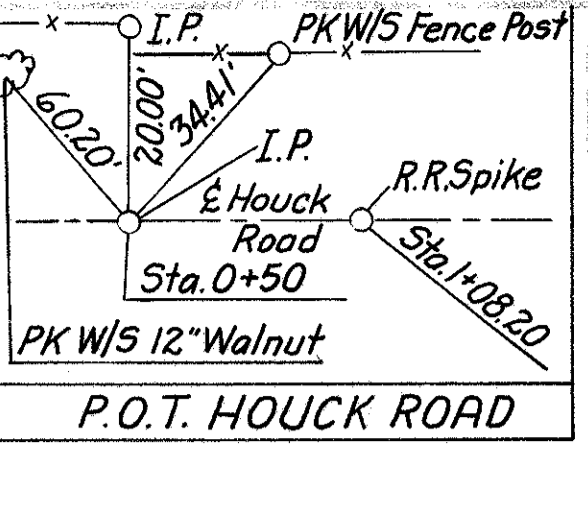
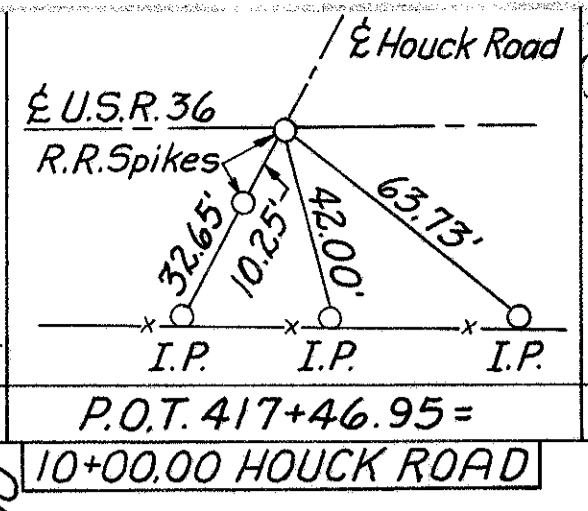
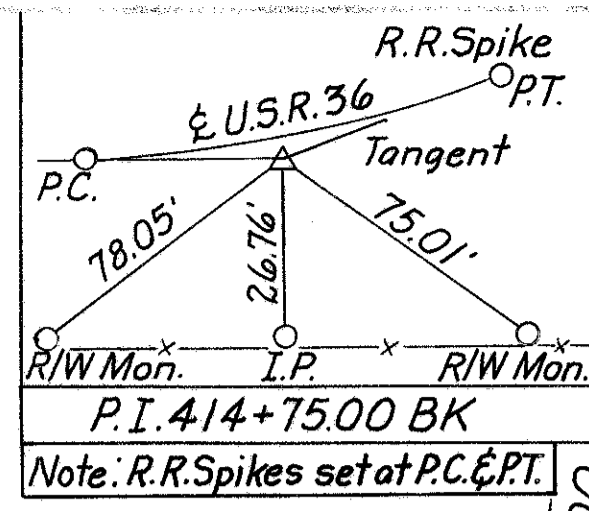
DEL-36-0781
For Culvert Details
See Sheet 30



CURVE DATA
P.I. Bk. = 414+75.00
D = 1°28'00"
Δ = 4°34'36" Lt.
T = 156.10'
E = 3.12'
L = 312.04'
R = 3906.53

DEL-36-0785
For Culvert Details
See Sheet 30

BENCH MARK
End of Bolt with Nut
(Painted) on top of 64"x80"
C.M.P. west side of Houck Road
22' Rt. of Sta. 7+42± Elev. 930.02



DEL-36-748

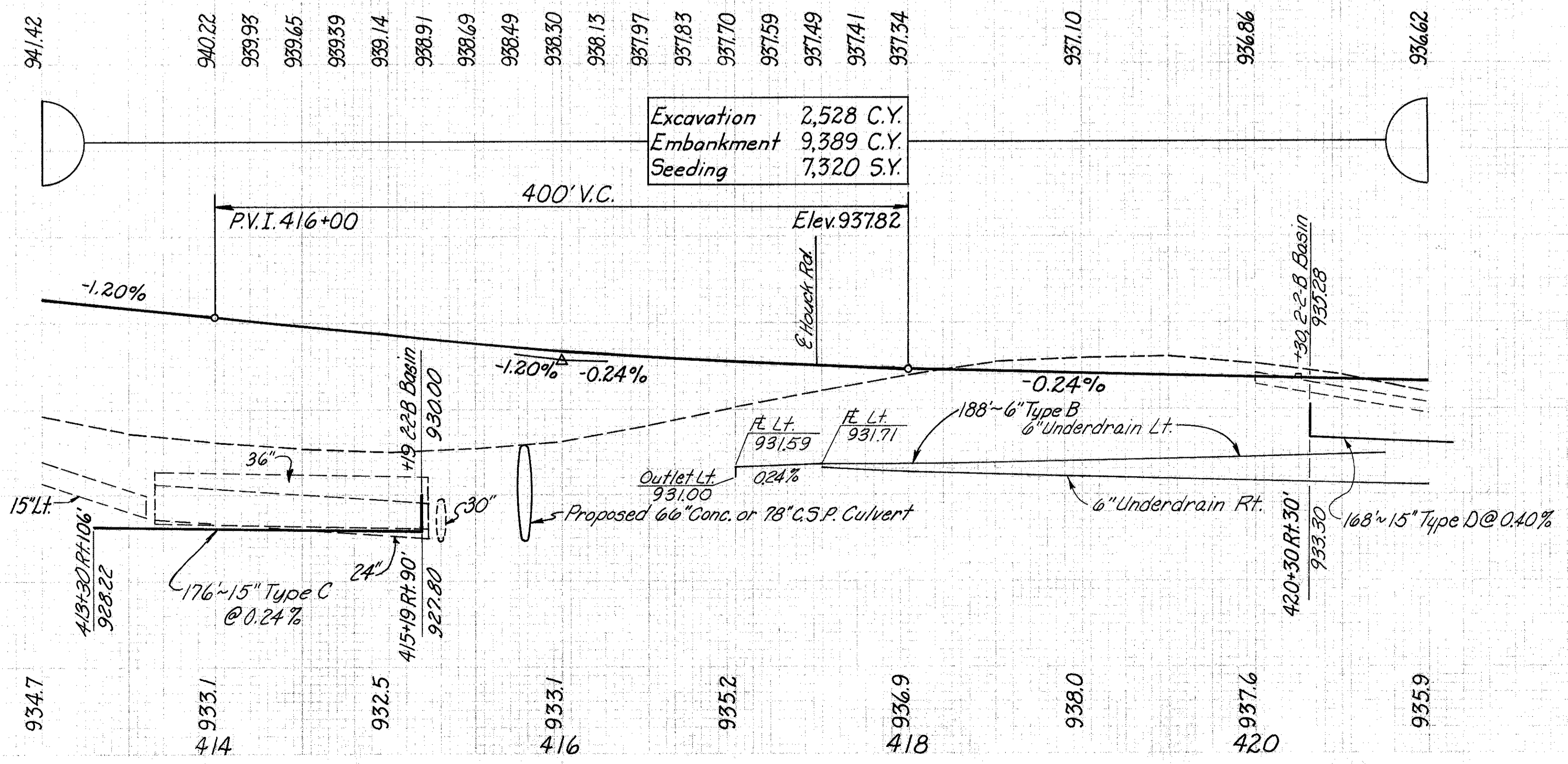
PAVEMENT TRANSITION

LOCATION	LEFT	RIGHT
T.S. 417+83.04	180'	180'
418+00	17.8'	18.0'
+25	17.5'	17.9'
+50	17.1'	17.8'
+75	16.6'	17.6'
419+00	15.7'	17.3'
+25	14.9'	16.9'
+50	14.2'	16.2'
+75	13.5'	15.4'
420+00	12.9'	14.8'
+25	12.3'	14.5'
+50	12.1'	14.1'
+75	12'	13.7'
421+00	12'	13.3'
+25	12'	13.0'
+50	12'	12.7'
+75	12'	12.5'
422+00	12'	12.2'
422+25	12'	12'

DRAINAGE AND EROSION CONTROL

REF.	LOCATION	C.Y.	LF	LF	LF	LF	LF	Ea.	LF	LF	S.Y.
D1	413+00 Lt. to 413+16 Lt.	8									
D2	417+00 Lt. to 418+50 Lt.		188								
D3	418+50 Lt. to 420+75 Lt.										
D4	413+00 Rt. to 416+50 Rt.									225	
D5	413+30 Rt. to 415+19 Rt. 90'			176							672
D6	415+19 Rt. 90' to Rt. 100'				10						
D7	415+19 Rt. 80' to Rt. 90'					10					
D8	415+53 Rt. 76' to 415+69 Rt. 8'										
D9	417+50 Rt. to 421+00 Rt.									350	
D10	420+30 Rt. 30' to 421+00 Rt. 37'			70							
	413+00 to 421+00 Lt. & Rt.									140	
	TOTAL	8	188	176	70	30	10	2	575	140	672

Excavation 2,528 C.Y.
Embankment 9,389 C.Y.
Seeding 7,320 S.Y.



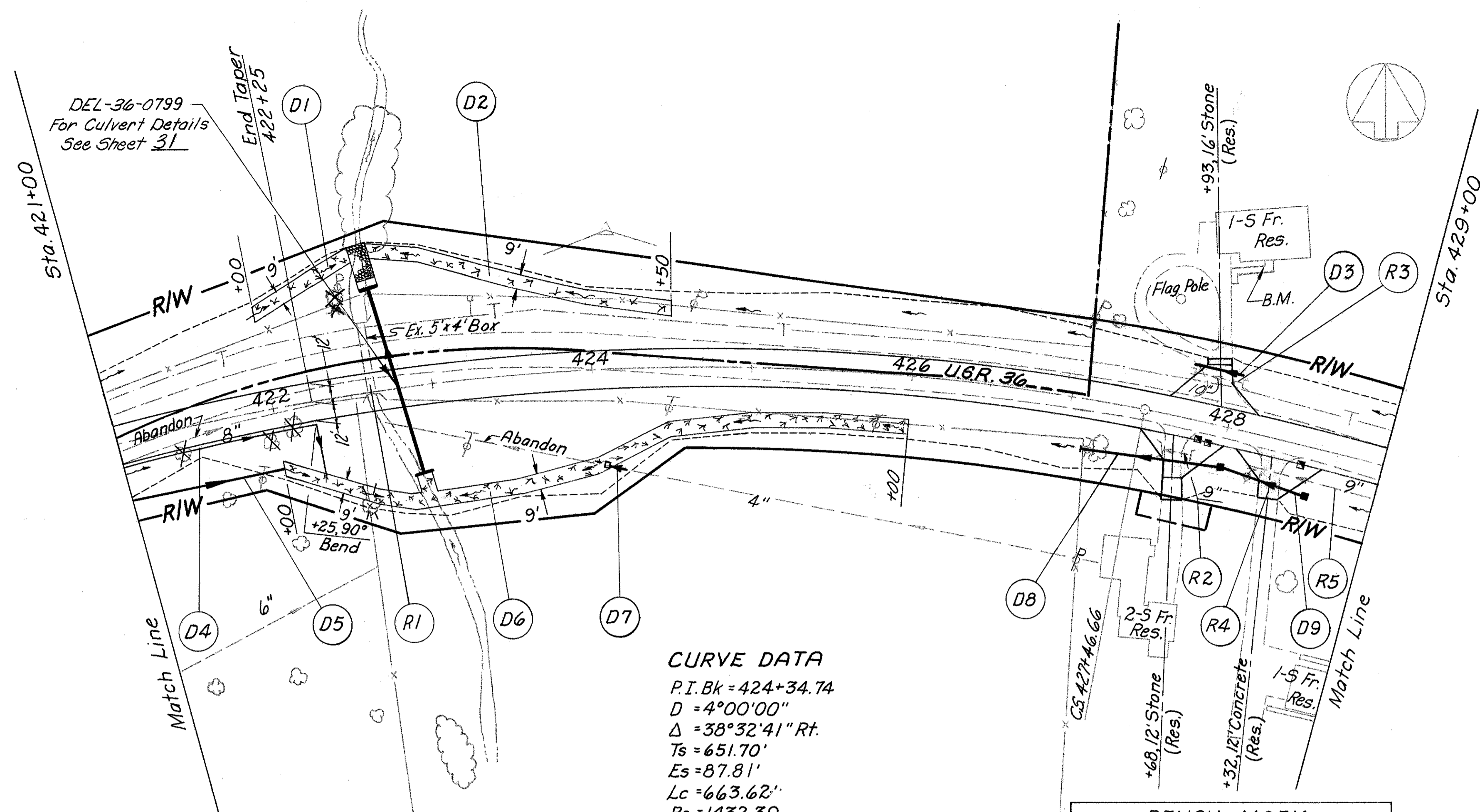
ROADWAY

REF.	LOCATION	LF	LF	Ea.
R1	413+68 Lt. to 415+22 Lt.			157
R2	413+67 Lt. to 415+22 Lt.		158	
R3	415+16 Rt. 27' to 415+25 Lt. 29'		56	
R4	420+25 Rt.			1
	TOTAL	158	213	1

For Cross Road Profile and Pavement Detail See Sheet 37
For Pavement Elevations See Pavement Elevation Tables

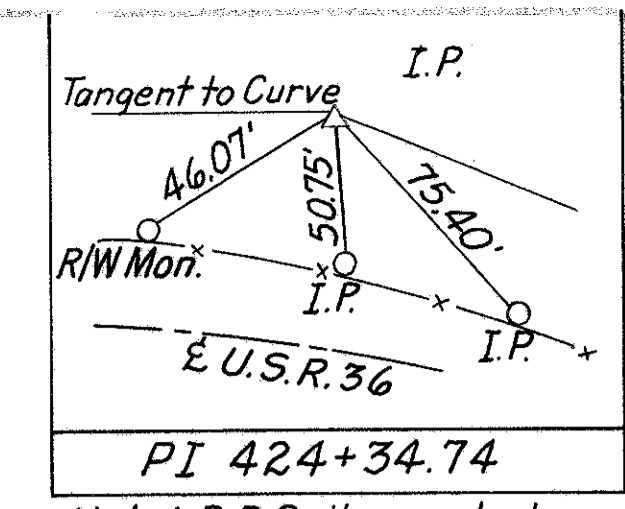
For Houck Rd. X-Sections See Sheet 78.

413+00 TO 421+00



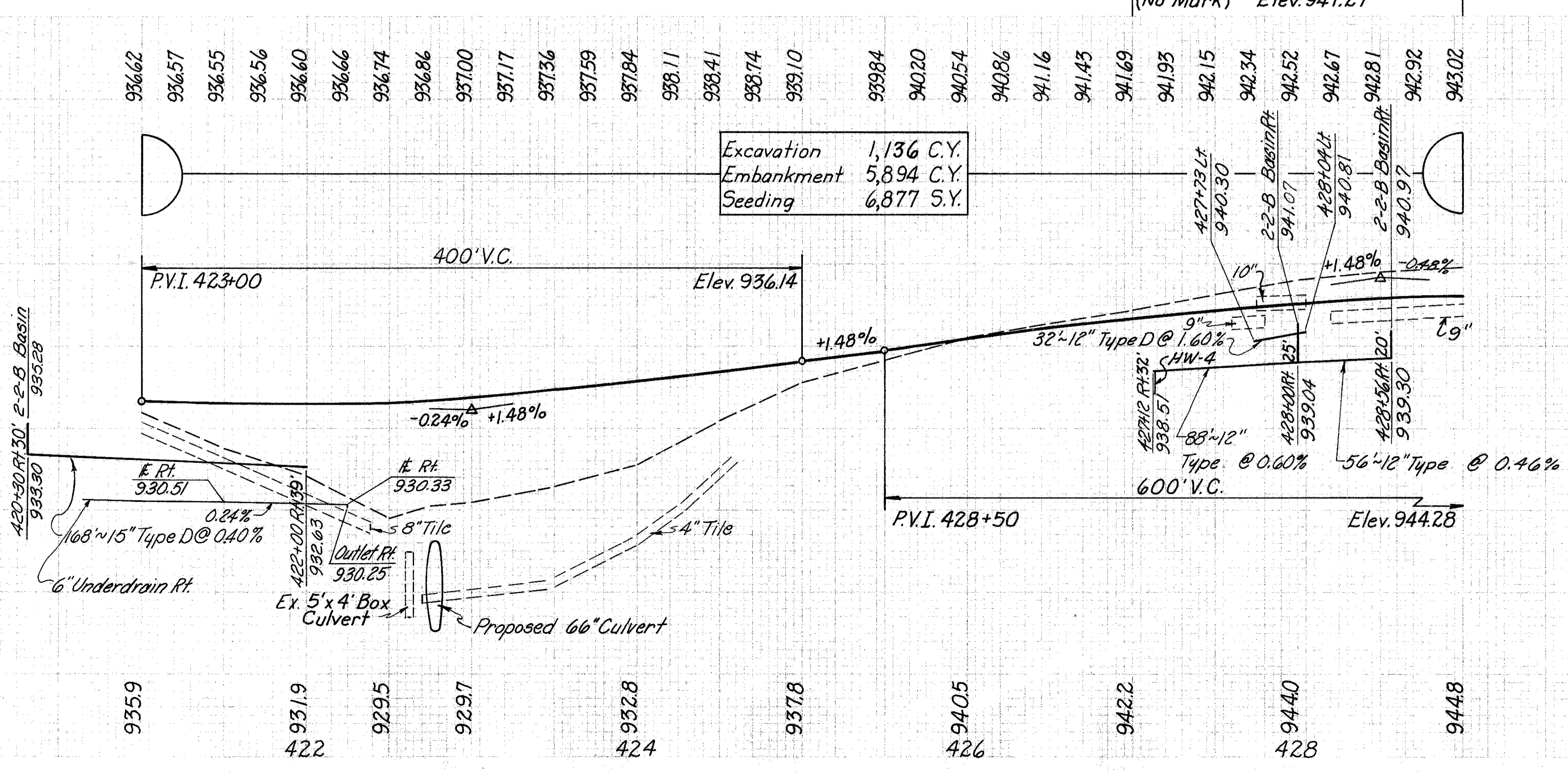
CURVE DATA
 P.I. Bk = 424+34.74
 D = 4°00'00"
 $\Delta = 38°32'41''$ Rt.
 Ts = 651.70'
 Es = 87.81'
 Lc = 663.62'
 Rc = 1432.39
 Qs = 6°00'00"
 Ls = 300.00'

BENCH MARK
 Top of south west corner of bottom step to front entrance of #1798 Marysville Rd, 97' Lt. of Sta. 428+00± (No Mark) Elev. 941.27



Note: R.R. Spikes set at T.S., S.C. and C.S.

REF.	LOCATION	DRAINAGE AND EROSION CONTROL								
		Concrete Masonry	12" Type C, 70% of Class 3	12" Type D	15" Type D	6" Type F	Standard No 22-B Catch Basin			
D1	422+00 Lt. to 422+59 Lt.									
D2	422+71 Lt. to 424+50 Lt.									
D3	427+73 Lt. to 428+04 Lt.		32							
D4	421+00 Rt. to 422+25 Rt.				10					
D5	421+00 Rt. 37' to 422+00 Rt. 39'			98		148				
D6	422+00 Rt. to 426+00 Rt.						1			
D7	424+08 Rt. 60' to 424+18 Rt. 63'				10					
D8	427+12 Rt. 32' to 428+00 Rt. 25'	0.2	88							
D9	428+00 Rt. 25' to 428+56 Rt. 30'	0.2	56							
	421+00 to 429+00 Lt. & Rt.						210			
TOTAL		0.4	144	32	98	20	2	148	210	679



ROADWAY		Pipe Removed 24" and under	Pavement Removed	Fill & Plug Existing Culvert	
REF.	LOCATION	L.F.	S.Y.	L.F.	
R1	422+63 Rt. 2' to Lt. 43'		54		
R2	427+63 Rt. to 427+81 Rt.	20		45	
R3	427+73 Lt. to 428+03 Lt.	30			
R4	428+32 Rt.		49		
R5	428+17 Rt. to 429+00 Rt.	82			
TOTAL			132	49	45

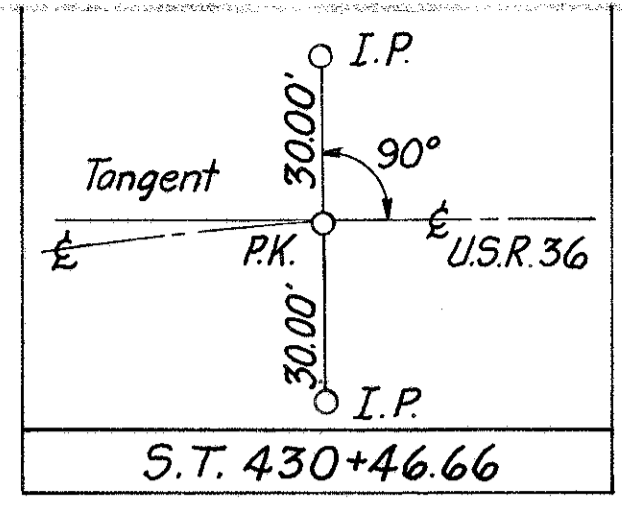
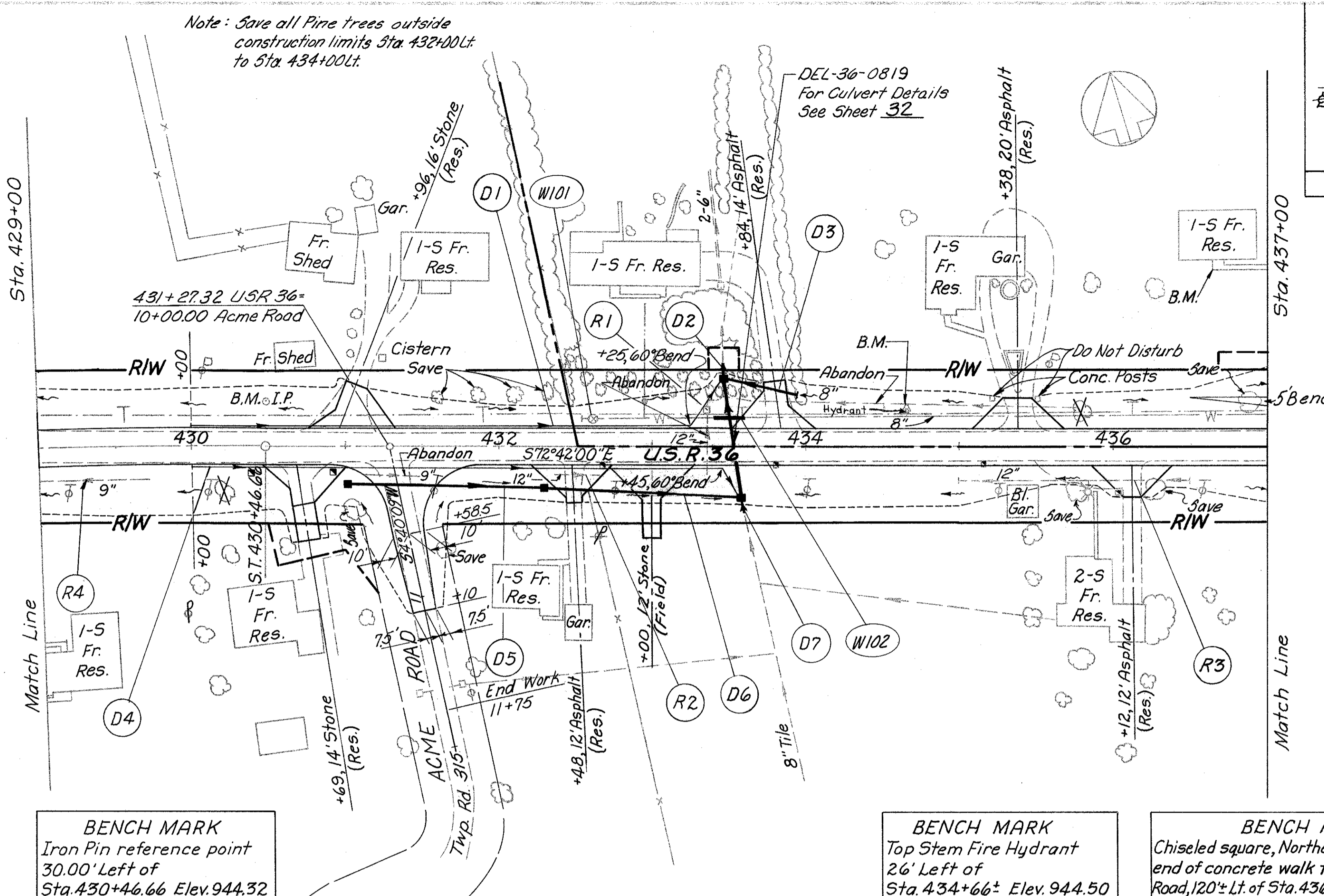
For Pavement Elevations See Pavement Elevation Tables

421+00 TO 429+00

Note: Save all Pine trees outside construction limits Sta. 432+00 Lt. to Sta. 434+00 Lt.

QUANTITY CALCULATIONS	DATE	PROJECT
BY RJC	7/74	
CHKD SCP	7/74	
REGION	STATE	
5	OHIO	

DEL-36-748



▲ 706.01 Class 3, 706.02, 706.08 E.S. or 707.13

REF	LOCATION	603		604		605		602			
		LF	Eq	LF	Eq	LF	Eq	LF	Eq		
D1	430+00 Lt. to 433+45 Lt.										
D2	433+45 Lt. 45' to Lt. 55'										
D3	433+45 Lt. to 433+95 Lt.										
D4	430+00 Rt. to 433+59 Rt.	100		50							
D5	431+00 Rt. to 432+30 Rt.	27		130							
D6	432+30 Rt. 25' to 433+59 Rt. 25'	27		130							
D7	433+59 Rt. 33' to Rt. 43'										
429+00 to 437+00 Lt. E.R.T.								150			
TOTAL		100	130	180		20	20	2	610	150	0.2

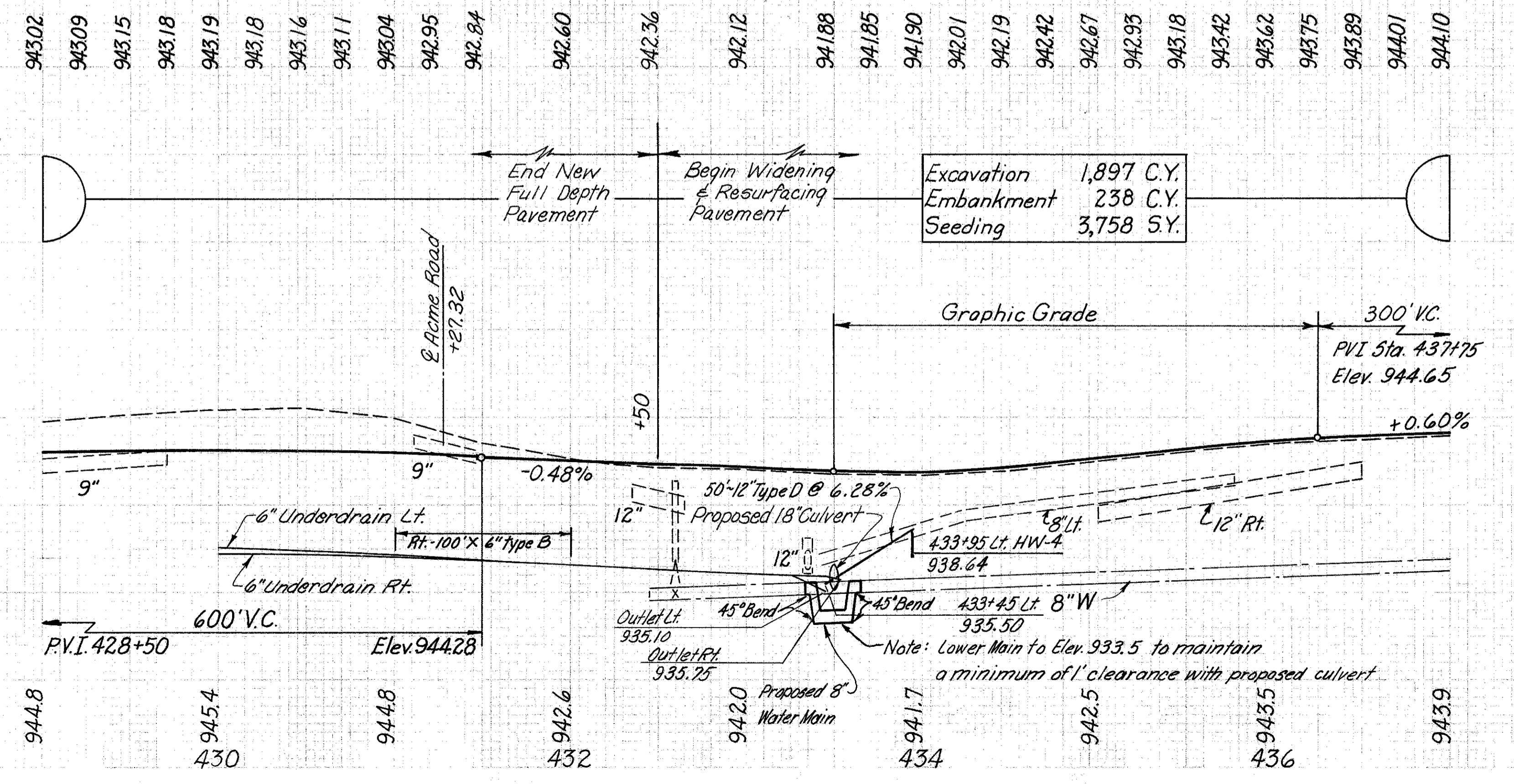
BENCH MARK
Iron Pin reference point
30.00' Left of
Sta. 430+46.66 Elev. 944.32

BENCH MARK
Top Stem Fire Hydrant
26' Left of
Sta. 434+66± Elev. 944.50

BENCH MARK
Chiseled square, Northeast corner of west
end of concrete walk to #1560 Marysville
Road, 120± Lt. of Sta. 436+72± Elev. 942.64

ROADWAY

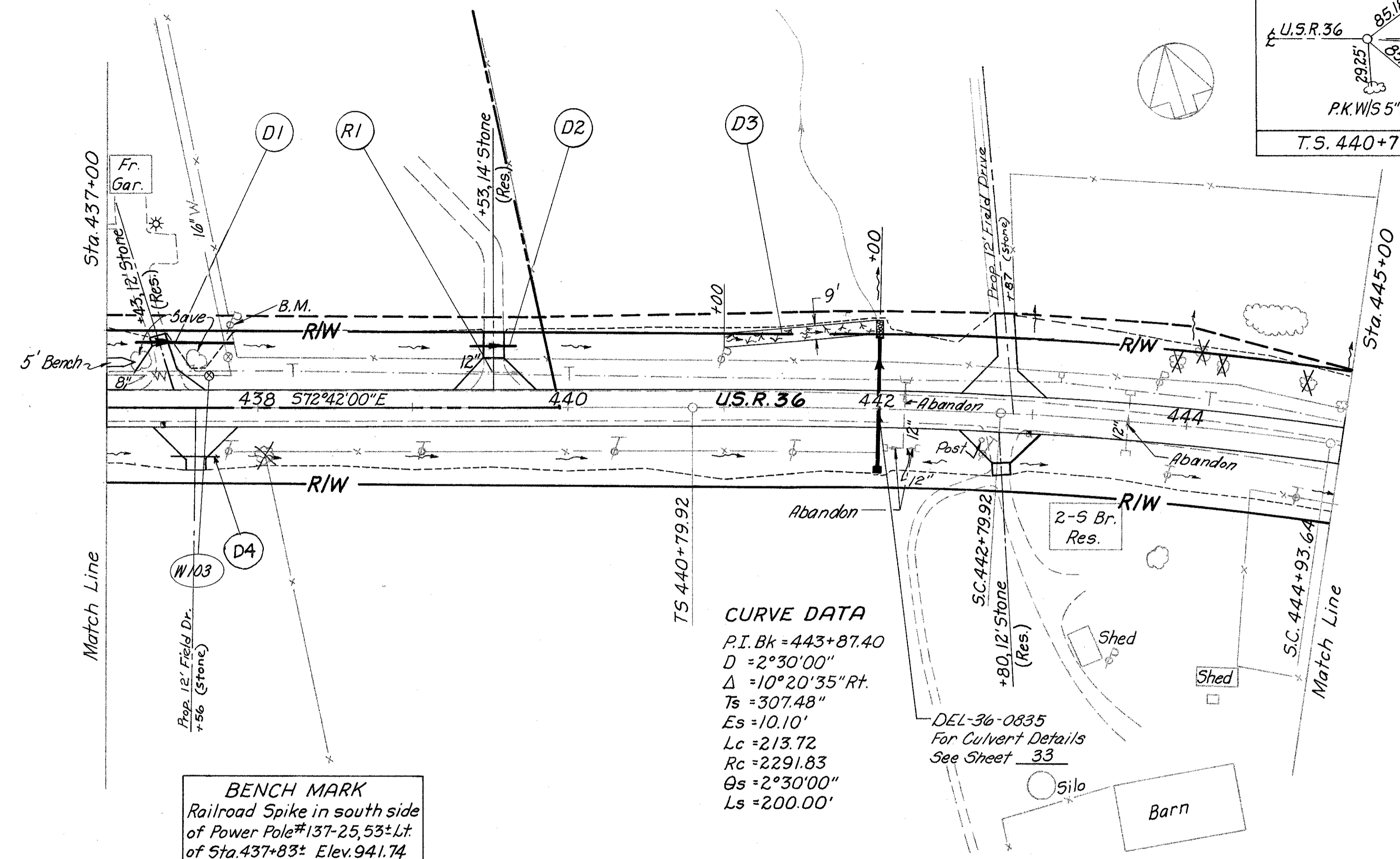
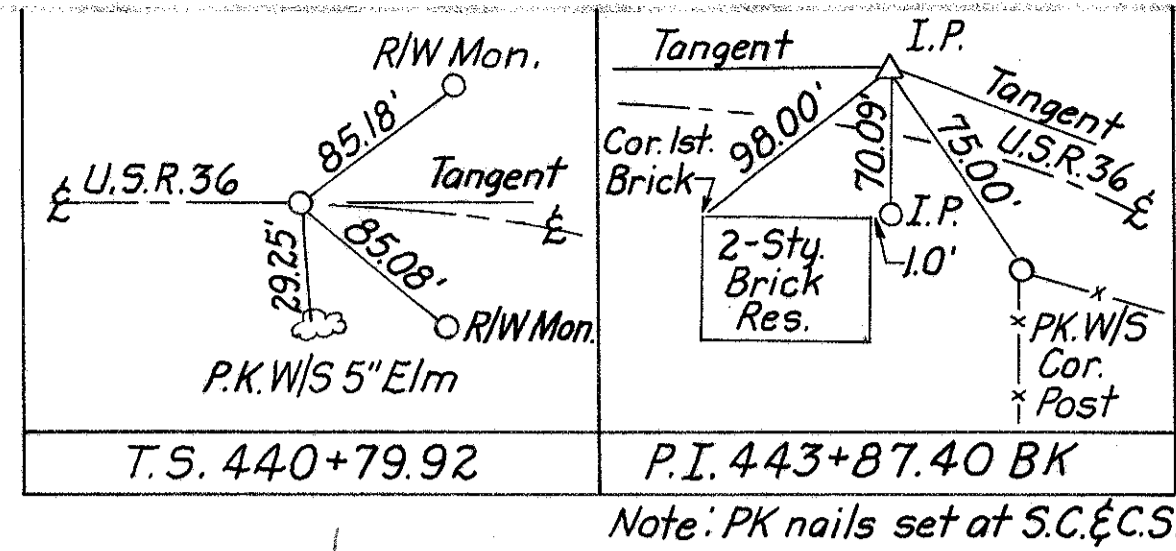
REF	LOCATION	LF	Eq
R1	433+36 Lt.		1
R2	432+36 Rt. to 432+66 Rt.	30	
R3	435+00 Rt. to 436+50 Rt.	150	
R4	429+00 Rt. to 429+72 Rt.	72	
TOTAL		252	1



950 For Cross Road Profile and Pavement Detail See Sheet 37
 (W) For Water Work Quantities See Sheet 14

429+00 TO 437+00

DEL-36-748



BENCH MARK
 Railroad Spike in south side
 of Power Pole #137-25, 53' Lt.
 of Sta. 437+83: Elev. 941.74

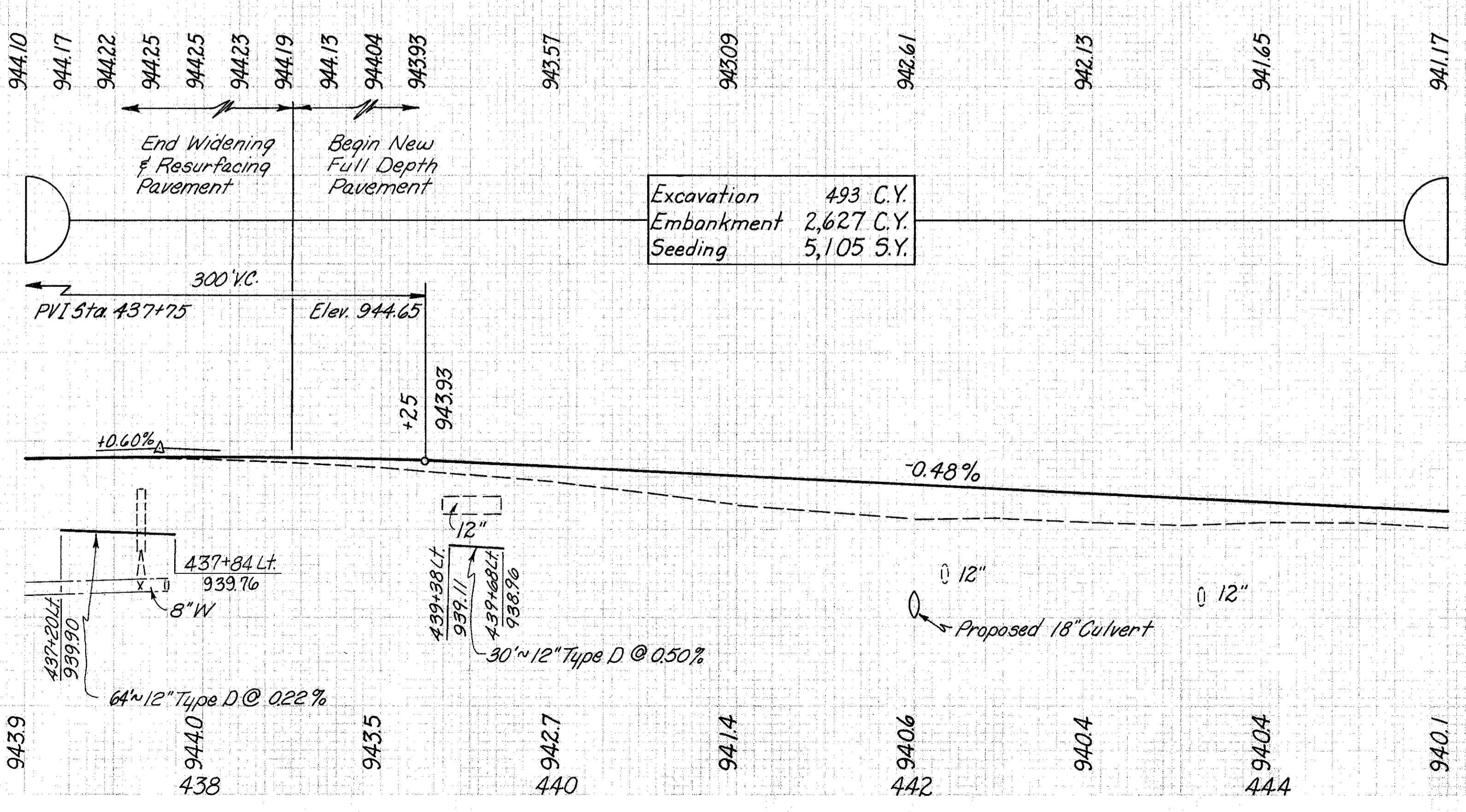
CURVE DATA
 P.I. Bk = 443+87.40
 D = 2°30'00"
 Δ = 10°20'35" Rt.
 Ts = 307.48'
 Es = 10.10'
 Lc = 213.72
 Rc = 2291.83
 Os = 2°30'00"
 Ls = 200.00'

DRAINAGE AND EROSION CONTROL

REF.	LOCATION	LF	L.F. 54	603	605	660
D1	437+20 Lt. to 437+84 Lt.	64				
D2	439+38 Lt. to 439+68 Lt.	30				
D3	441+00 Lt. to 442+00 Lt.				100	
D4	437+40 Rt. to 437+72 Lt.	32				
	437+00 to 445+00 Lt. & Rt.		280			
TOTAL				126	280	100

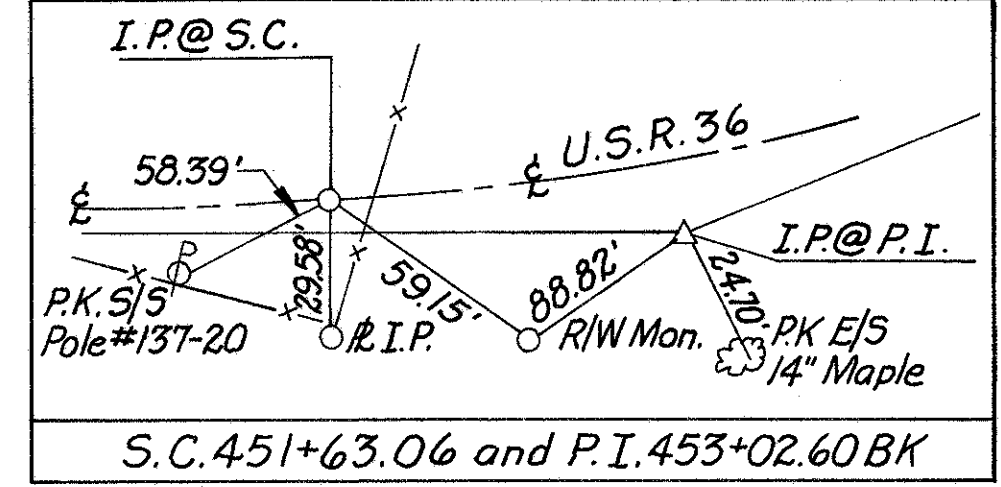
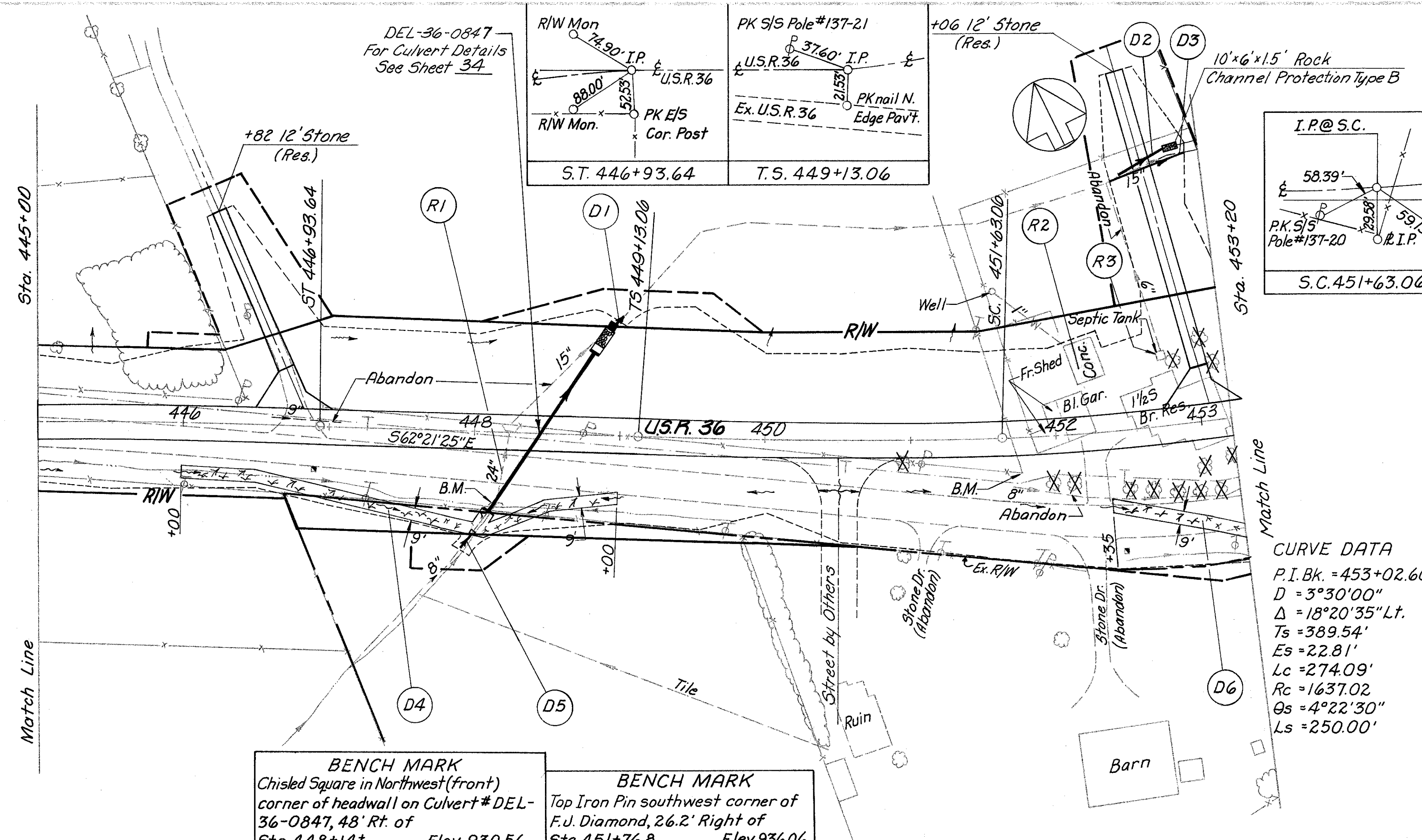
ROADWAY

REF.	LOCATION	LF	202
R1	439+36 Lt. to 439+73 Lt.	37	
TOTAL			37



For Pavement Elevations See Pavement Elevation Tables
 For Water Work Quantities See Sheet 14

437+00 TO 445+00



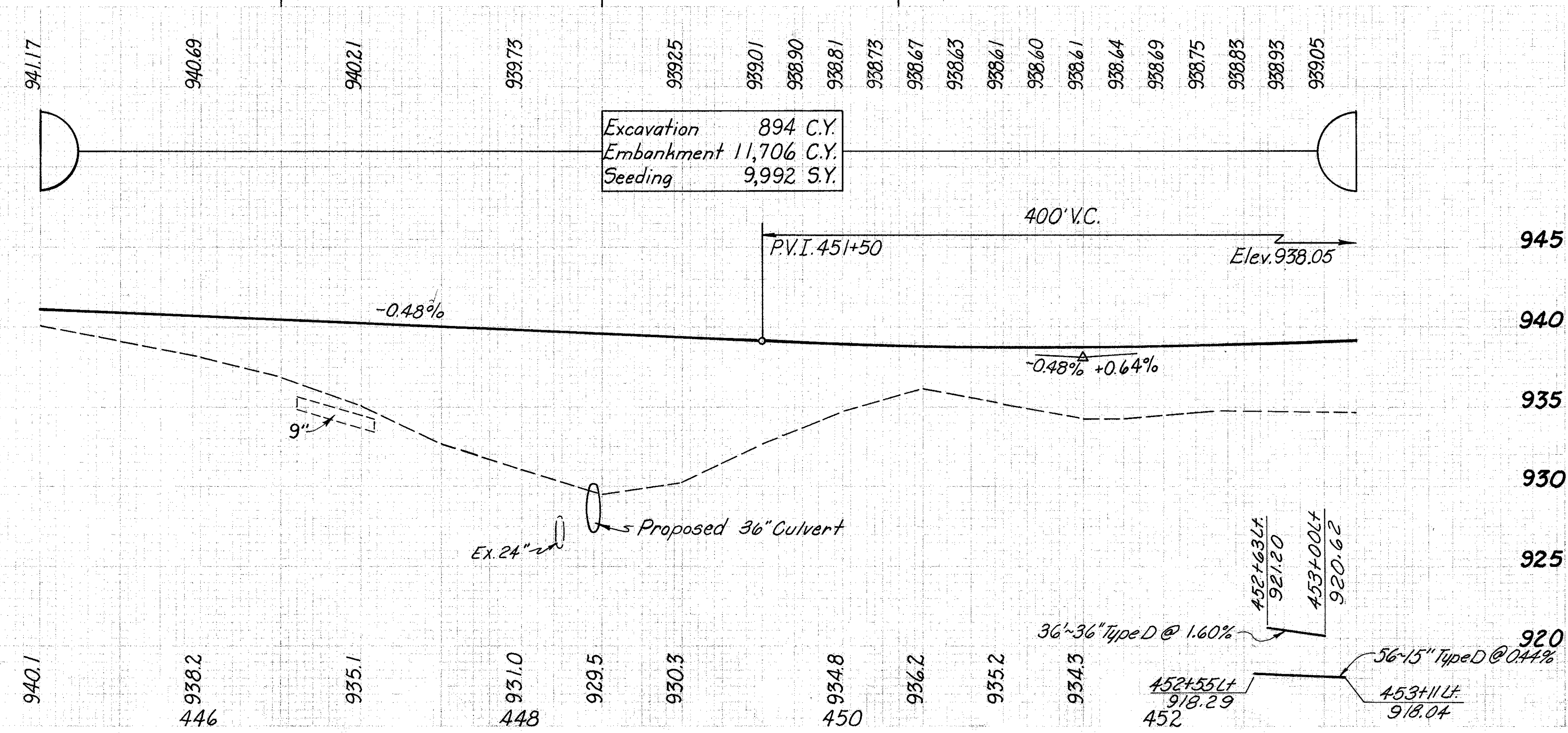
CURVE DATA
 P.I. Bk. = 453+02.60
 D = 5°30'00"
 Δ = 18°20'35" Lt.
 Ts = 389.54'
 Es = 22.81'
 Lc = 274.09'
 Rc = 1637.02'
 Os = 4°22'30"
 Ls = 250.00'

BENCH MARK
 Chisled Square in Northwest (front) corner of headwall on Culvert # DEL-36-0847, 48' Rt. of Sta. 448+14± Elev. 930.56

BENCH MARK
 Top Iron Pin southwest corner of F.J. Diamond, 26.2' Right of Sta. 451+76.8 Elev. 936.06

DRAINAGE AND EROSION CONTROL		601	60.3		604	605	660
REF.	LOCATION	C.Y.	LF	LF	LF	LF	S.Y.
D1	448+93 Lt. 75' to 449+00 Lt. 84'	34					
D2	452+63 Lt. 176' to 453+00 Lt. 191'	4	36				
D3	452+55 Lt. to 453+11 Lt.		56				
D4	446+00 Rt. to 449+00 Rt.						320
D5	447+93 Rt. 81' to 448+00 Rt. 71'			10			34
D6	452+35 Rt. to 453+20 Rt.						300
	445+00 to 453+20 Lt. & Rt.						300
TOTAL		4	56	36	10	10	1 300 414

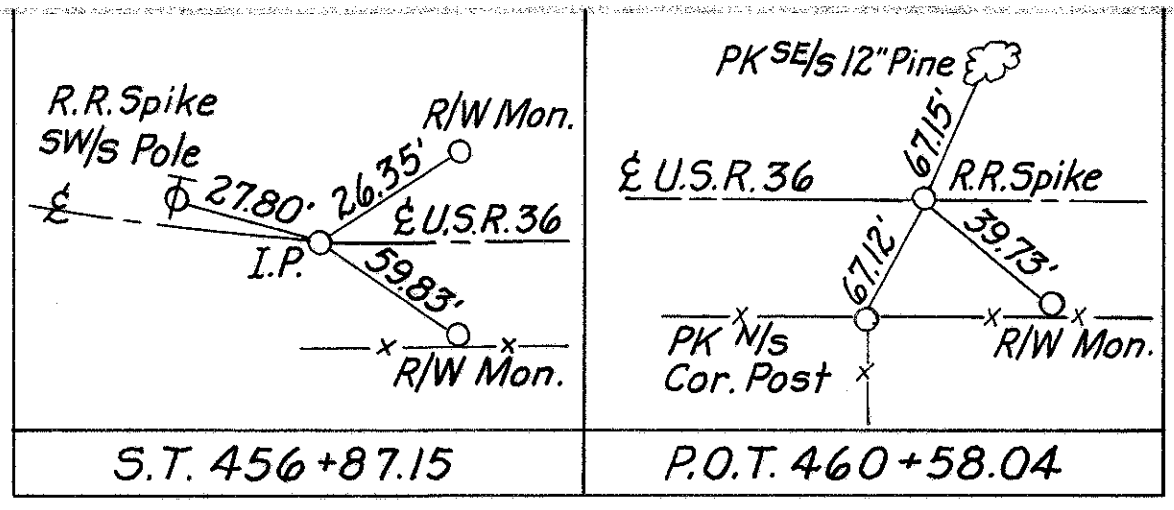
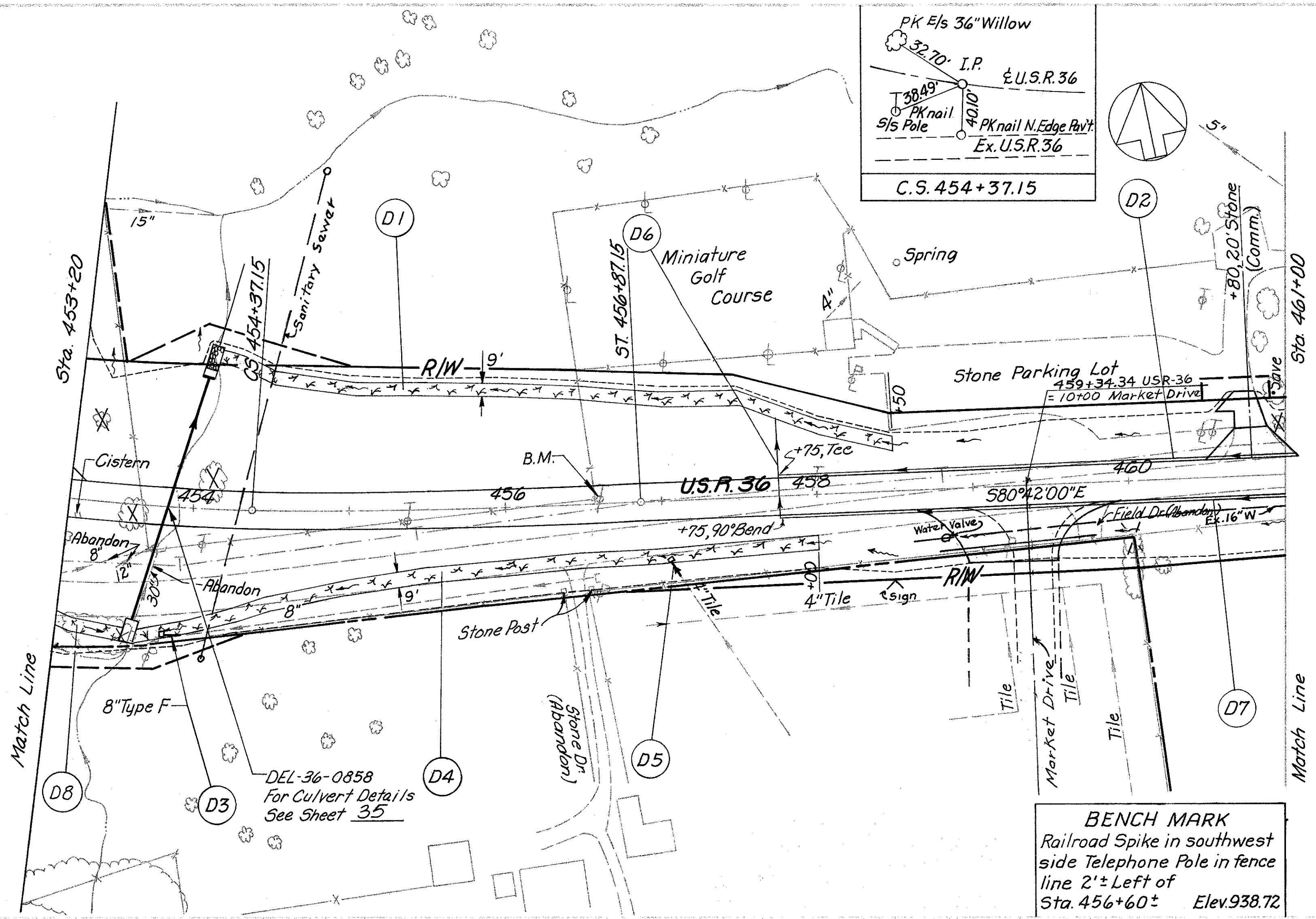
ROADWAY		202	202
REF.	LOCATION	LF Lump	Ea.
R1	448+25 E to 448+15 Rt.	50	
R2	452+25 Lt. 50'	Lump	
R3	452+76 Lt. 49'		1
TOTAL		50 Lump	1



For Pavement Elevations See Pavement Elevation Tables

445+00 TO 453+20

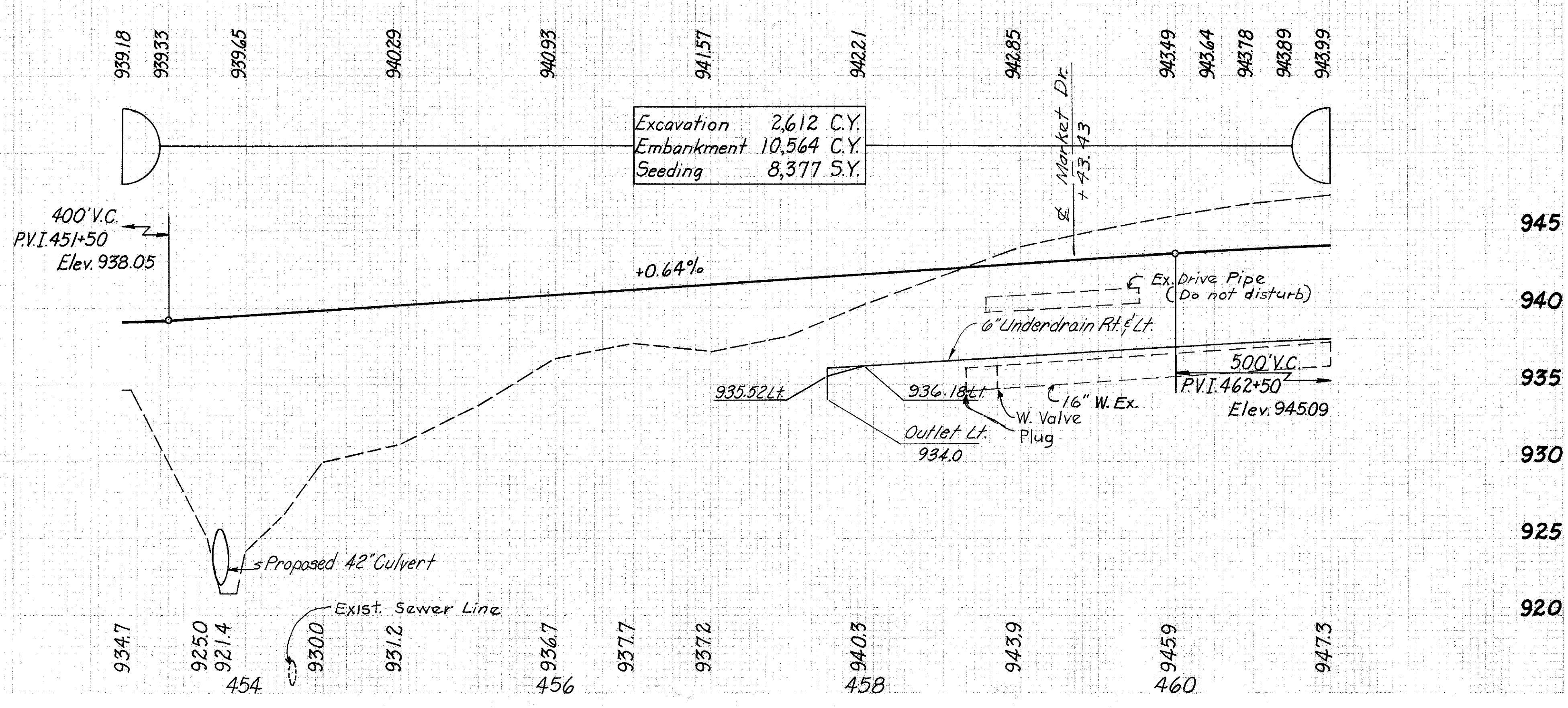
DEL-36-748



DRAINAGE AND EROSION CONTROL

REF.	LOCATION	603		605		660		6\"/>	
		6\"/>							
D1	454+15 Lt. to 458+50 Lt.								
D2	457+75 Lt. to 461+00 Lt.								
D3	453+85 Rt. 83' to 453+95 Rt. 83'			10					
D4	453+72 Rt. to 458+00 Rt.								443
D5	457+05 Rt. 40' to 457+10 Rt. 49'		10						
D6	457+75 Rt. to 457+75 Lt.	65							1
D7	457+75 Rt. to 461+00 Rt.				325				
D8	453+20 Rt. to 453+64 Rt.								44
	453+20 to 461+00 Lt. & Rt.				180				
TOTAL		65	10	10	650	180	927		

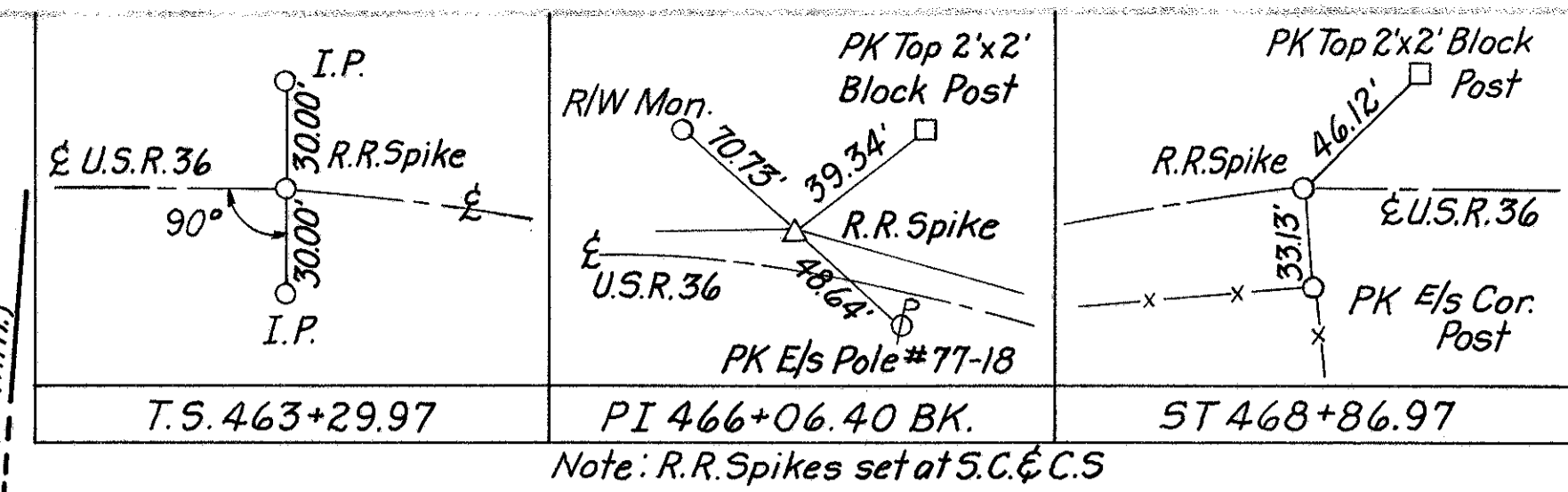
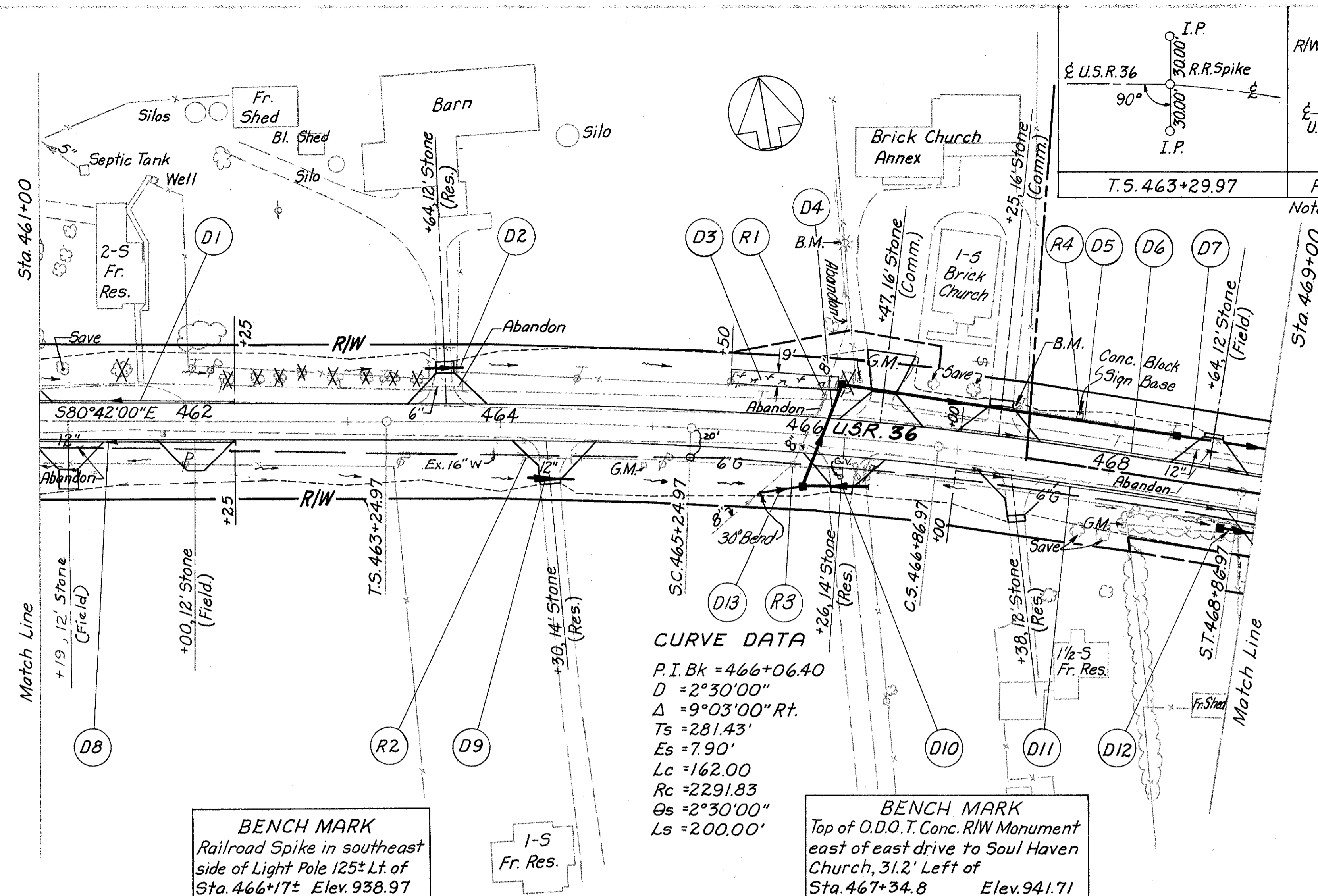
Excavation 2,612 C.Y.
Embankment 10,564 C.Y.
Seeding 8,377 S.Y.



For Pavement Elevations See Pavement Elevation Tables
For Market Drive Details & Quantities See Sheet No. 38

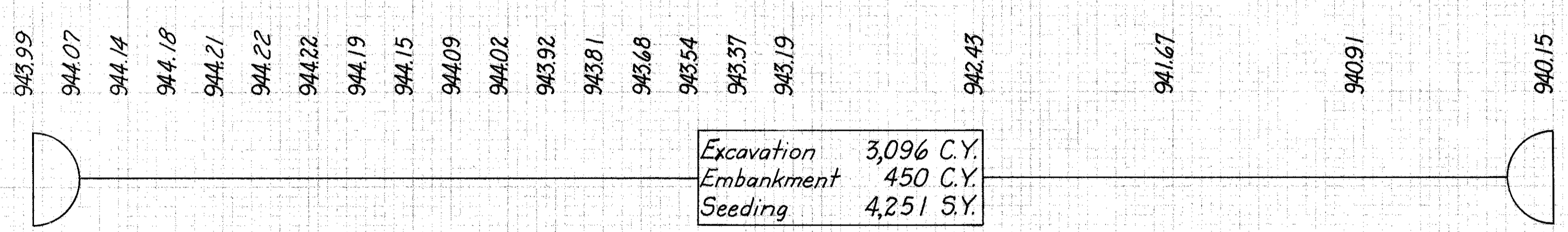
453+20 TO 461+00

DEL-36-748



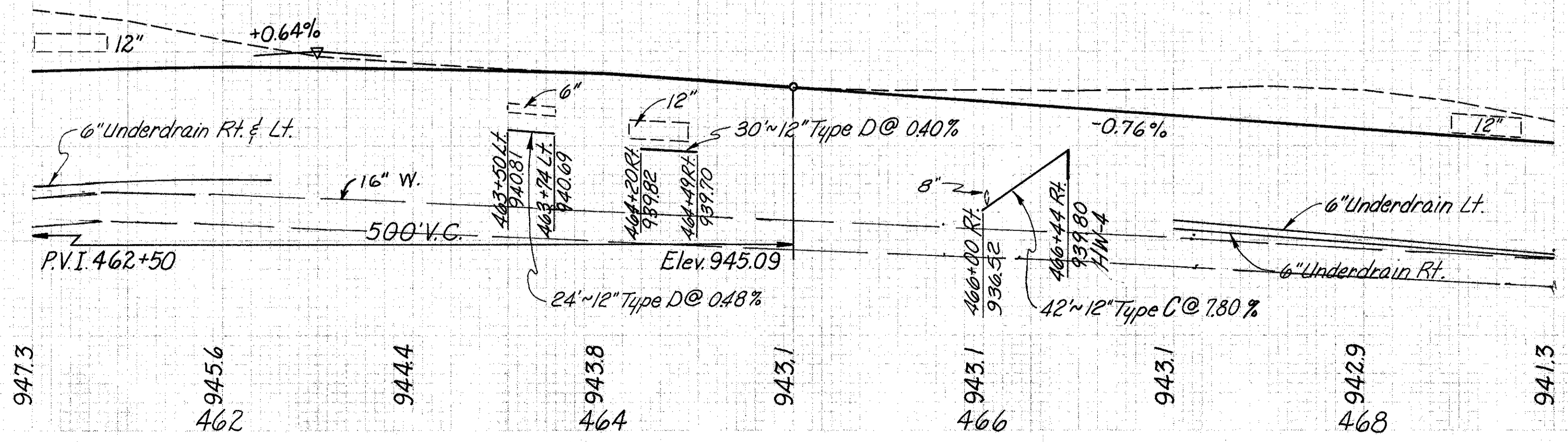
DRAINAGE AND EROSION CONTROL

REF.	LOCATION	LF	LF	LF	LF	Eq	LF	LF	34	G.Y.	LF	LF
D1	461+00 Lt. to 462+25 Lt.											
D2	463+50 Lt. to 463+74 Lt.											
D3	465+50 Lt. to 466+20 Lt.											
D4	466+00 Rt. 35' to 466+20 Lt. 35'	27	72			1						
D5	466+20 Lt. 35' to 468+40 Lt. 30'	27		222		1						
D6	467+00 Lt. to 469+00 Lt.									200		
D7	468+40 Lt. 30' to 469+00 Lt. 30'	27		60		1						
D8	461+00 Rt. to 462+25 Rt.									125		
D9	464+20 Rt. to 464+49 Rt.					30						
D10	466+00 Rt. 35' to 466+44 Rt. 30'			42							0.2	
D11	467+00 Rt. to 469+00 Rt.									200		
D12	468+75 Rt. 25' to 469+00 Rt. 25'	27	25			1						
D13	465+71 Rt. to 466+00 Rt. 35'										30	1
	461+00 to 469+00 Lt. & Rt.								120			
TOTAL		72	67	282	54	4	650	120	70	0.2	30	



ROADWAY

REF.	LOCATION	LF	Eq	Lump
R1	466+11 Lt. 26'			1
R2	464+16 Rt. to 464+47 Rt.	31		
R3	465+93 Rt. 20'			1
R4	467+76 Lt. 32'			Lump
TOTAL		31	2	Lump

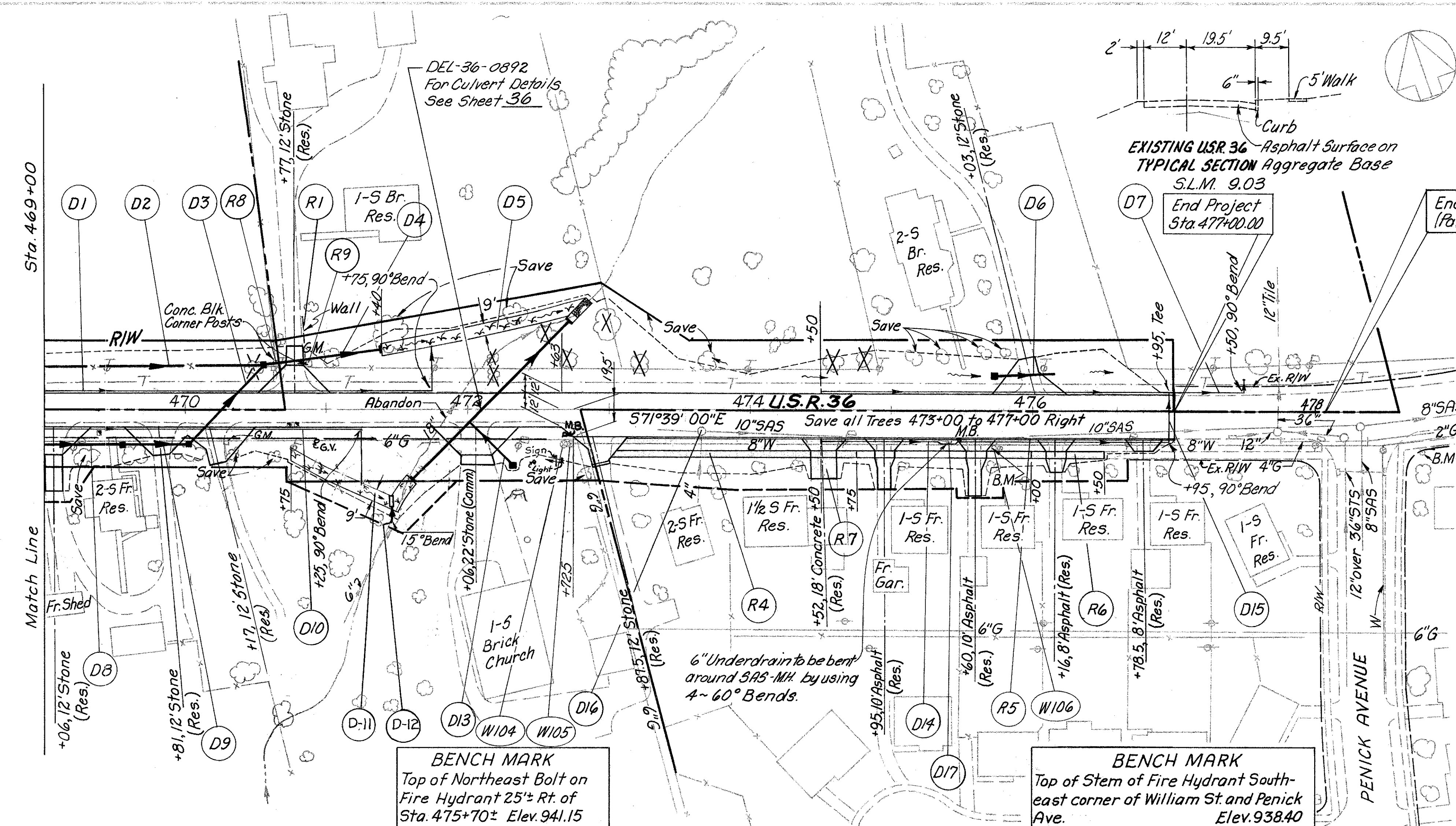
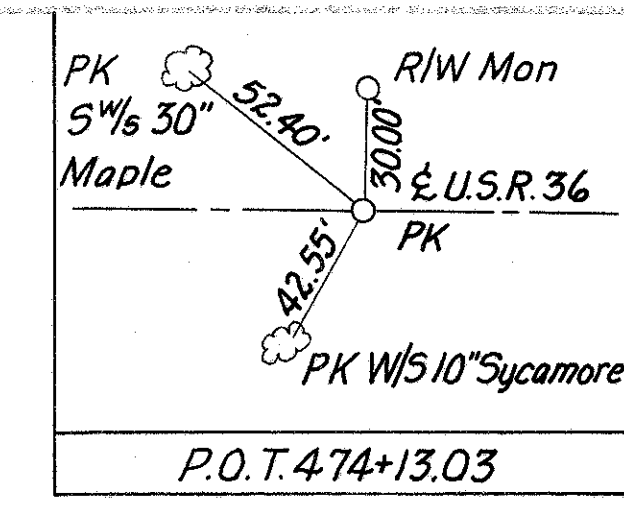


945
940
935

For Pavement Elevations See Pavement Elevation Tables

461+00 TO 469+00

DEL-36-748



End Project Sta. 477+00.00
 End Work Sta. 478+07 (Pavement Marking)

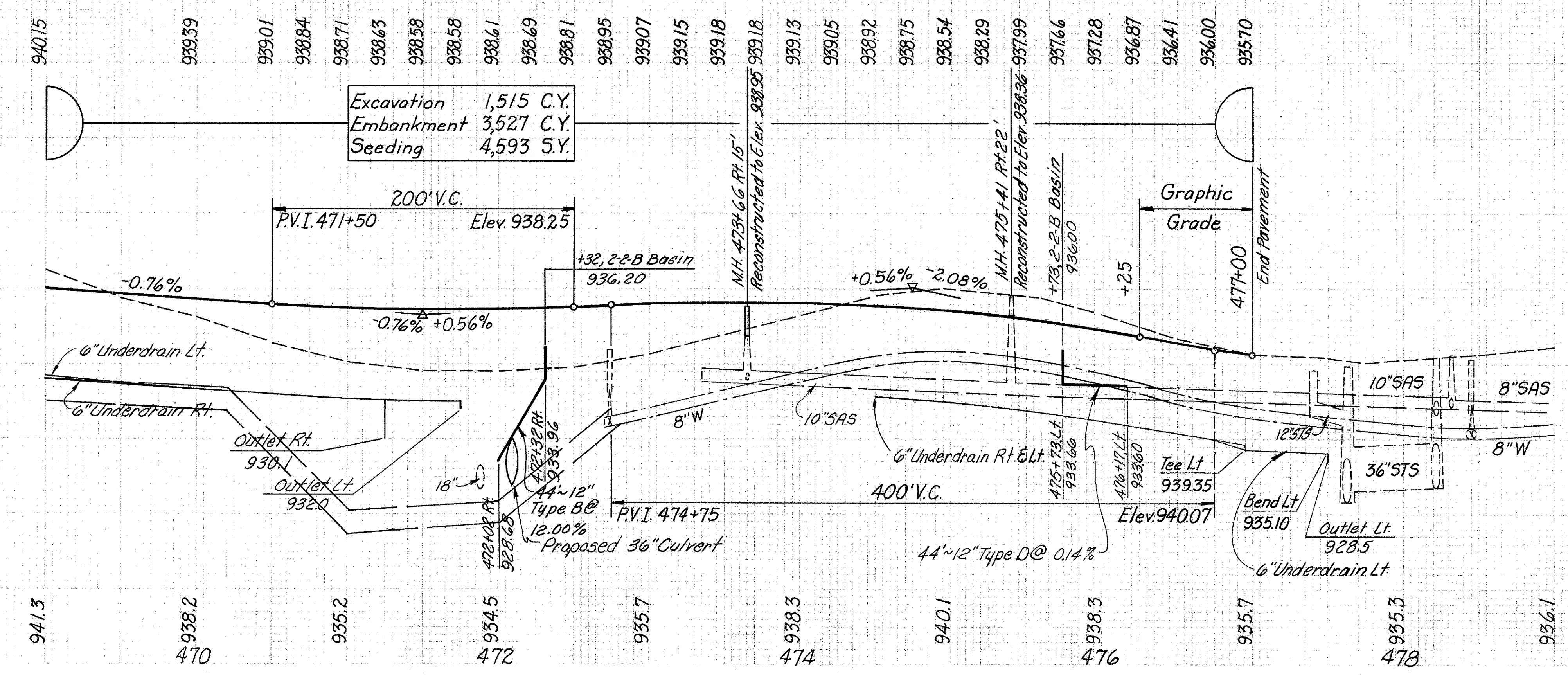
DRAINAGE AND EROSION CONTROL

REF.	LOCATION	Concrete Masonry	6" Type B	12" Type B	12" Type C	18" Type C	12" Type D	6" Type F	Standard No. 228 Catch Basin	6" Deep Pipe Underdrain Aggregate Drains	Sodding	6" Bend	6"x6" Tee	Manhole Reconstructed to Grade, as per plan
REF.	LOCATION	C.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	Ea.	L.F.	L.F.	S.Y.		Ea.
D1	469+00 Lt. to 471+75 Lt.							10						
D2	469+00 Lt. 30' to 470+55 Lt. 31'	27				155								
D3	470+03 Rt. 25' to 470+55 Lt. 31'	27		78										
D4	470+55 Lt. 31' to 471+40 Lt. 42'	27	0.31		86									
D5	471+40 Lt. to 472+76 Lt.													
D6	475+73 Lt. 25' to 476+17 Lt. 26'						44							
D7	474+50 Lt. to 477+50 Lt.							10						
D8	469+00 Rt. 25' to 469+55 Rt. 25'	27												
D9	469+55 Rt. 25' to 470+03 Rt. 25'	27												
D10	469+00 Rt. to 471+25 Rt.							10						
D11	470+75 Rt. to 471+60 Rt.													
D12	471+46 Rt. 68' to Rt. 78'													
D13	472+02 Rt. to 472+32 Rt. 38'													
D14	474+50 Rt. to 476+95 Rt.													
D15	476+95 Rt. to Lt.							10						
D16	473+66 Rt. 15'													
D17	475+41 Rt. 22'													
	469+00 to 474+50 Lt. E.P.T.													
TOTAL		0.31	36	122	103	241	44	40	5			1098	70	245

BENCH MARK
 Top of Northeast Bolt on Fire Hydrant 25'± Rt. of Sta. 475+70± Elev. 941.15

BENCH MARK
 Top of Stem of Fire Hydrant Southeast corner of William St. and Penick Ave. Elev. 938.40

For Pavement Details See Sheet 38
 For Water Work Quantities See Sheet 14

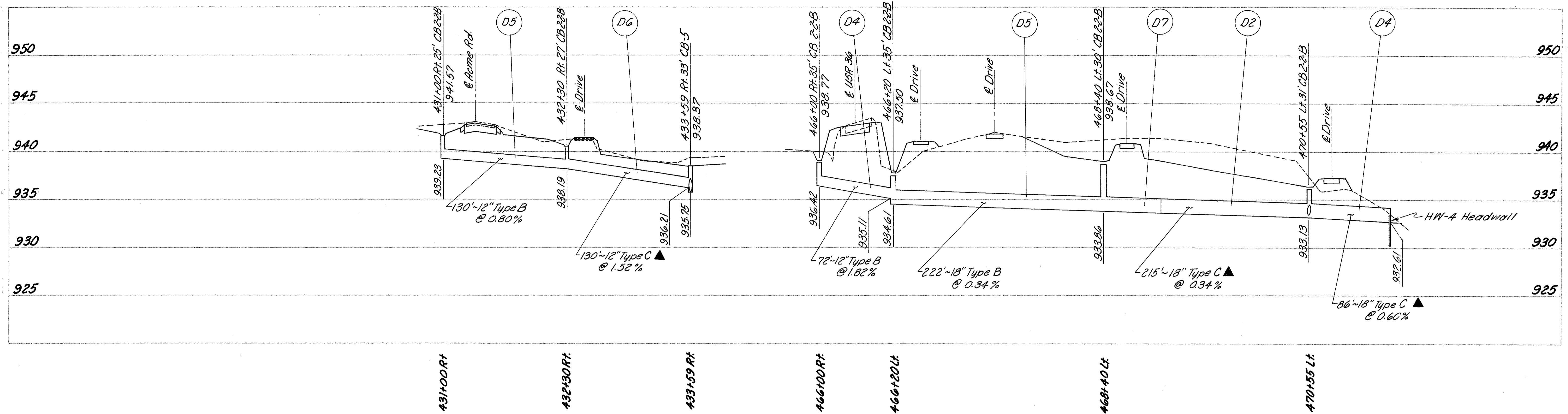


ROADWAY

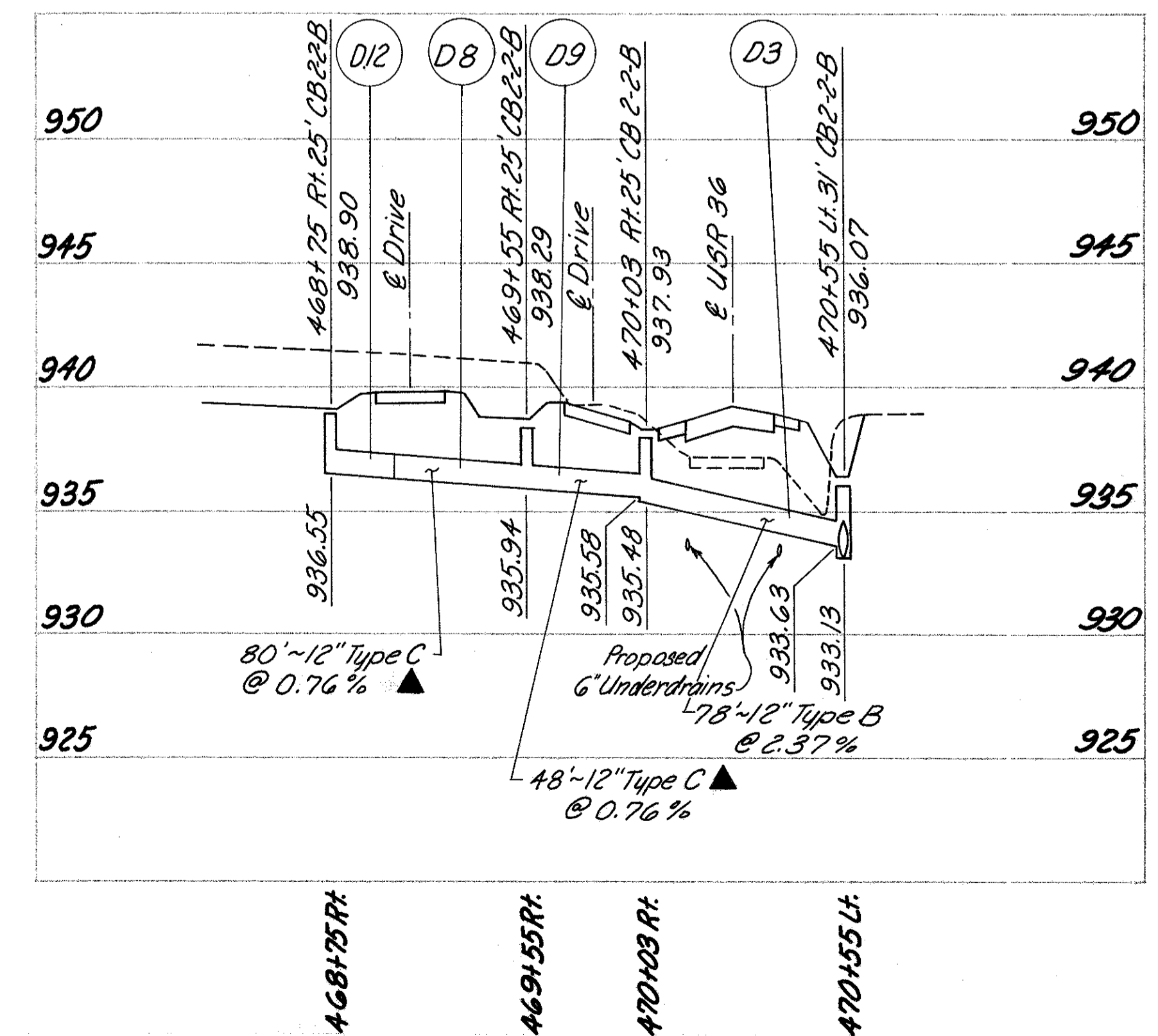
REF.	LOCATION	Sidewalk Removed	Pavement Removed	Curb & Gutter Removed	Portions of Structures Removed	Structures Removed
REF.	LOCATION	S.F.	S.Y.	L.F.	Lump	Lump
R1	470+85 Lt.					
R4	473+04 Rt. to 474+75 Rt.	855				
R5	473+12 Rt. to 477+00 Rt.			388		
R6	476+00 Rt. to 476+50 Rt.	250				
R7	474+52 Rt.			52		
R8	470+64, Lt. 32'					Lump
R9	470+87, Lt. 32'					Lump
TOTAL		1105	52	388	Lump	Lump

469+00 TO 479+00

DEL-36-7.48



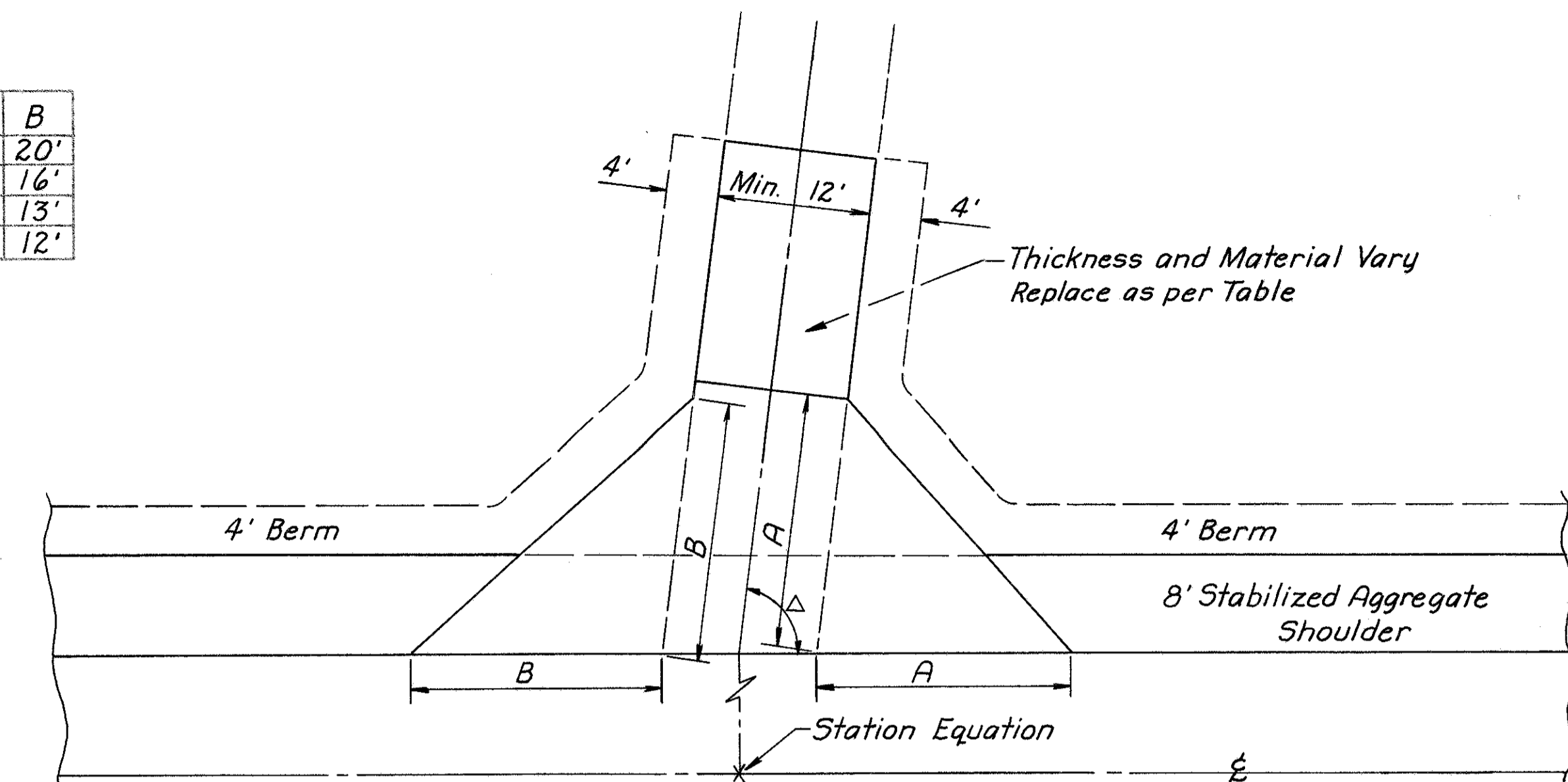
▲ 706.01 Cl. 3, 706.02, 706.08 E.S., 707.13



STORM SEWER PROFILES

DEL-36-7.48

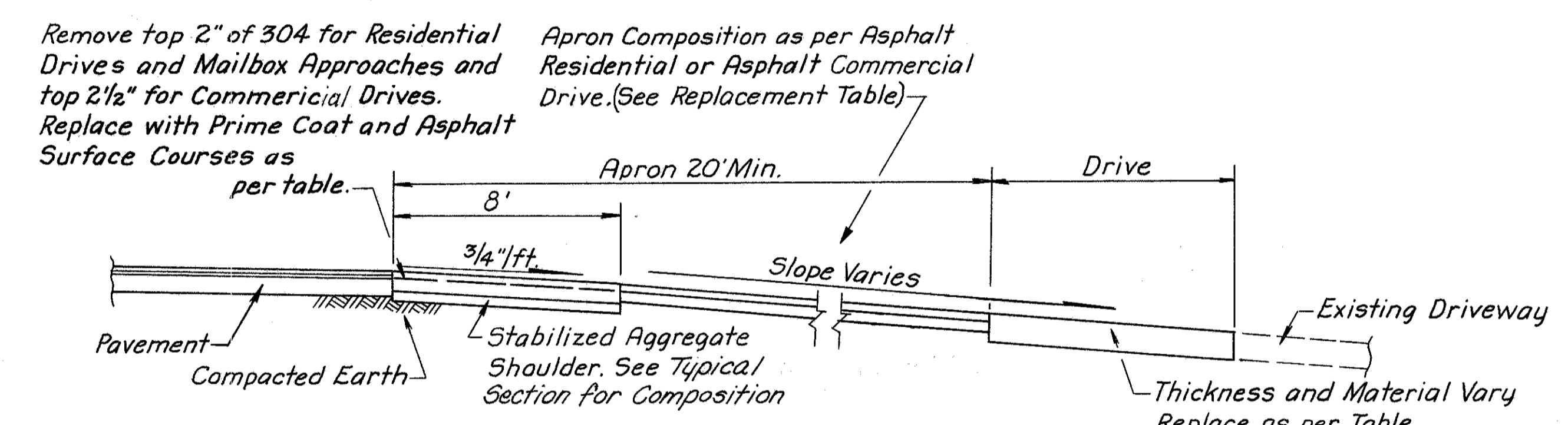
REF.	Δ Range	A	B
1	85° to 90°	20'	20'
2	75° to 85°	25'	16'
3	65° to 75°	28'	13'
4	55° to 65°	33'	12'



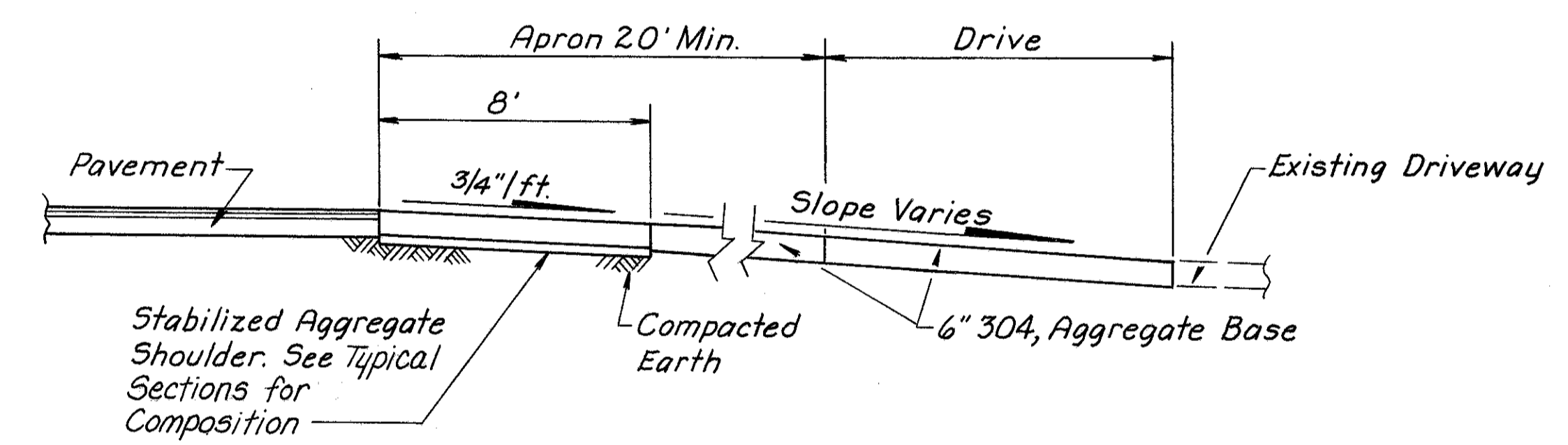
TYPE 2 DRIVEWAY DETAIL

Type of Existing Driveway	Replacement Material	
	Residential	Commercial
Concrete	6"-452	8"-452
Asphalt	2-1" 404 on 408 on 6" 304	1 1/4" 404 on 1 1/4" 402 on 408 on 8" 304
Stone	8"-304	10"-304

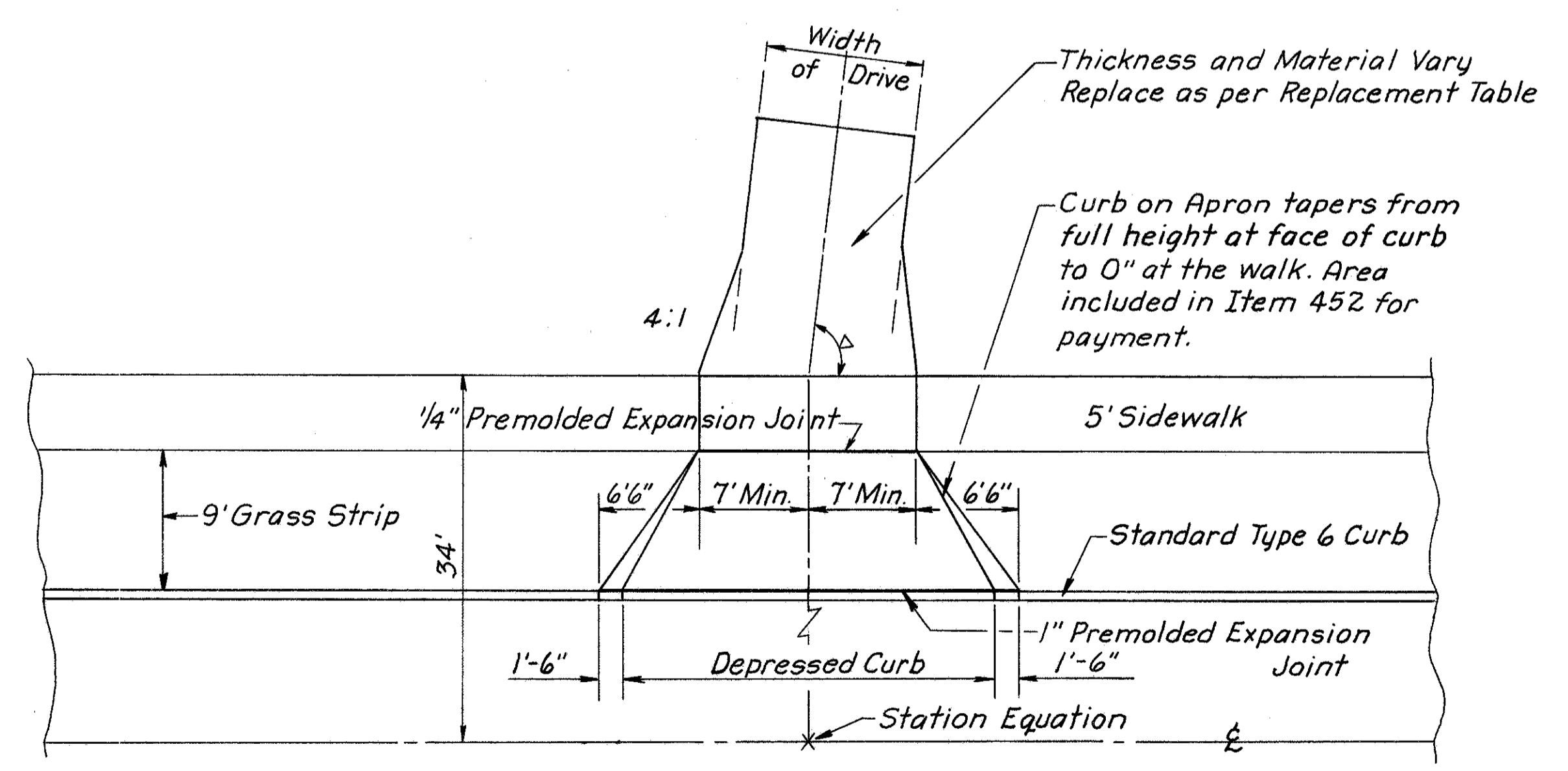
NOTE: Replace field drives with 6"-304, Aggregate Base.



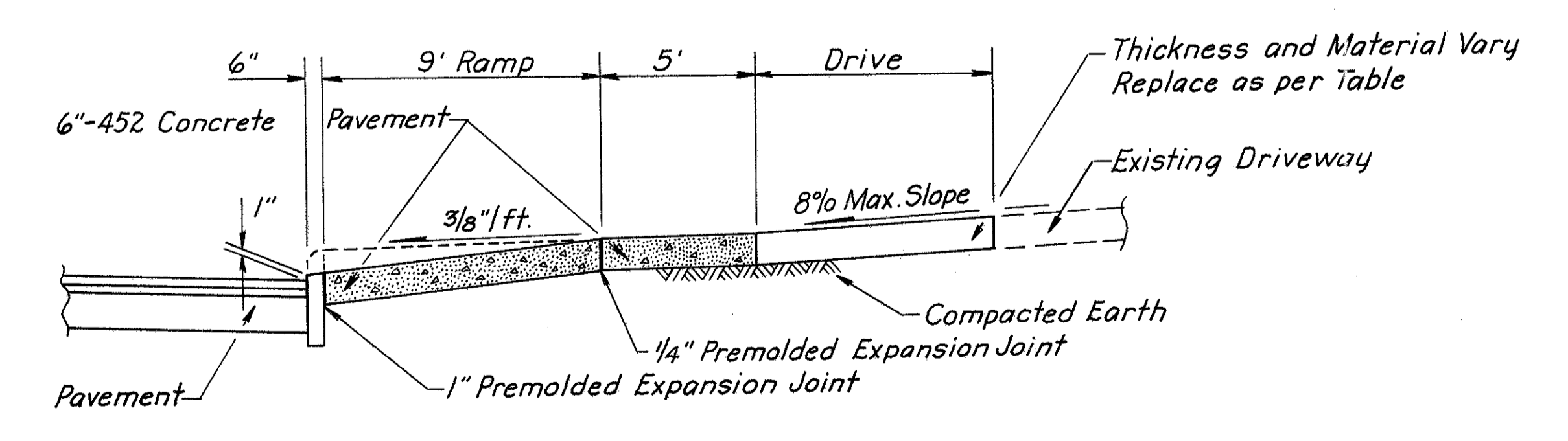
RESIDENTIAL AND COMMERCIAL DRIVEWAY PROFILE



FIELD DRIVEWAY PROFILE

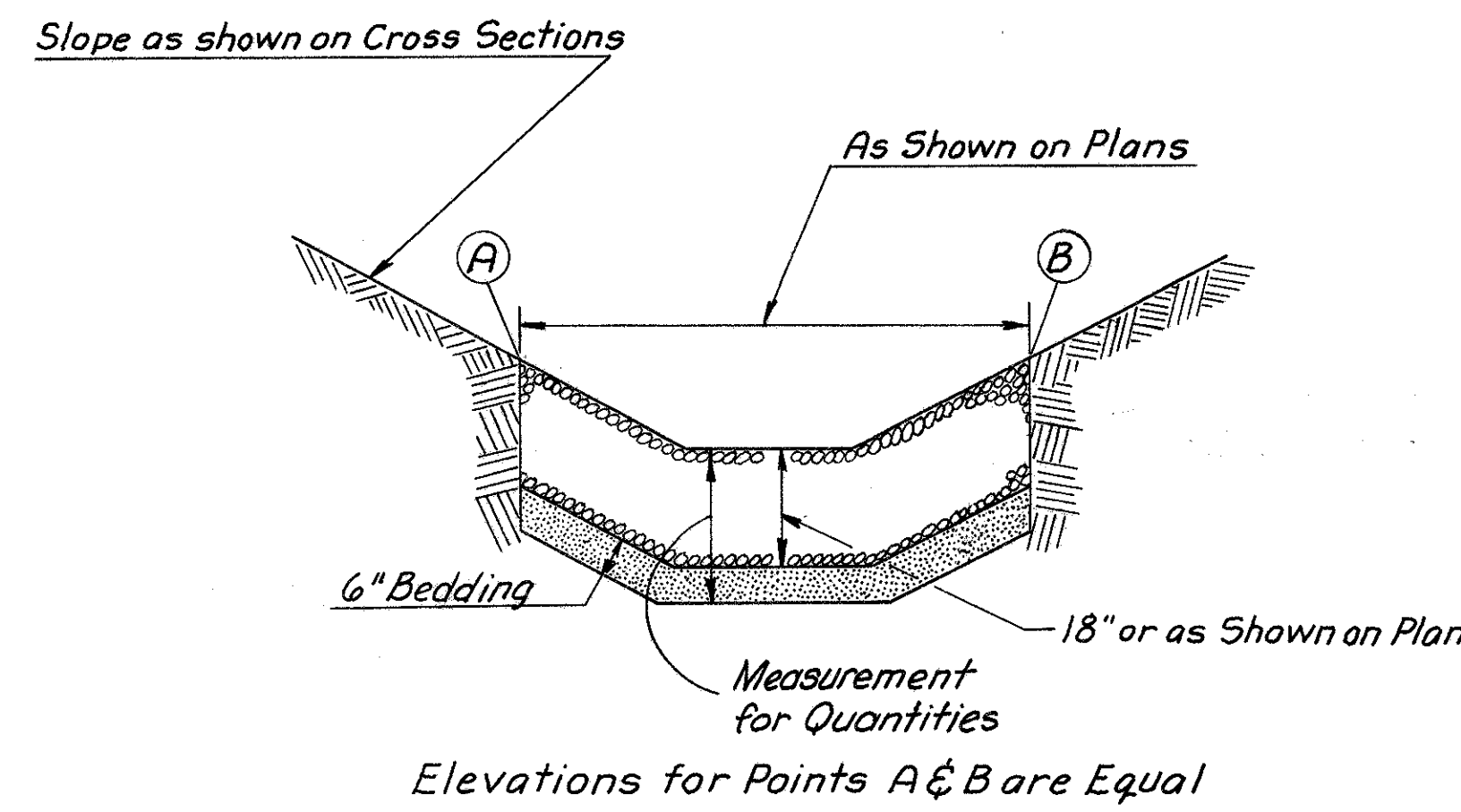


CURBED DRIVEWAY DETAIL

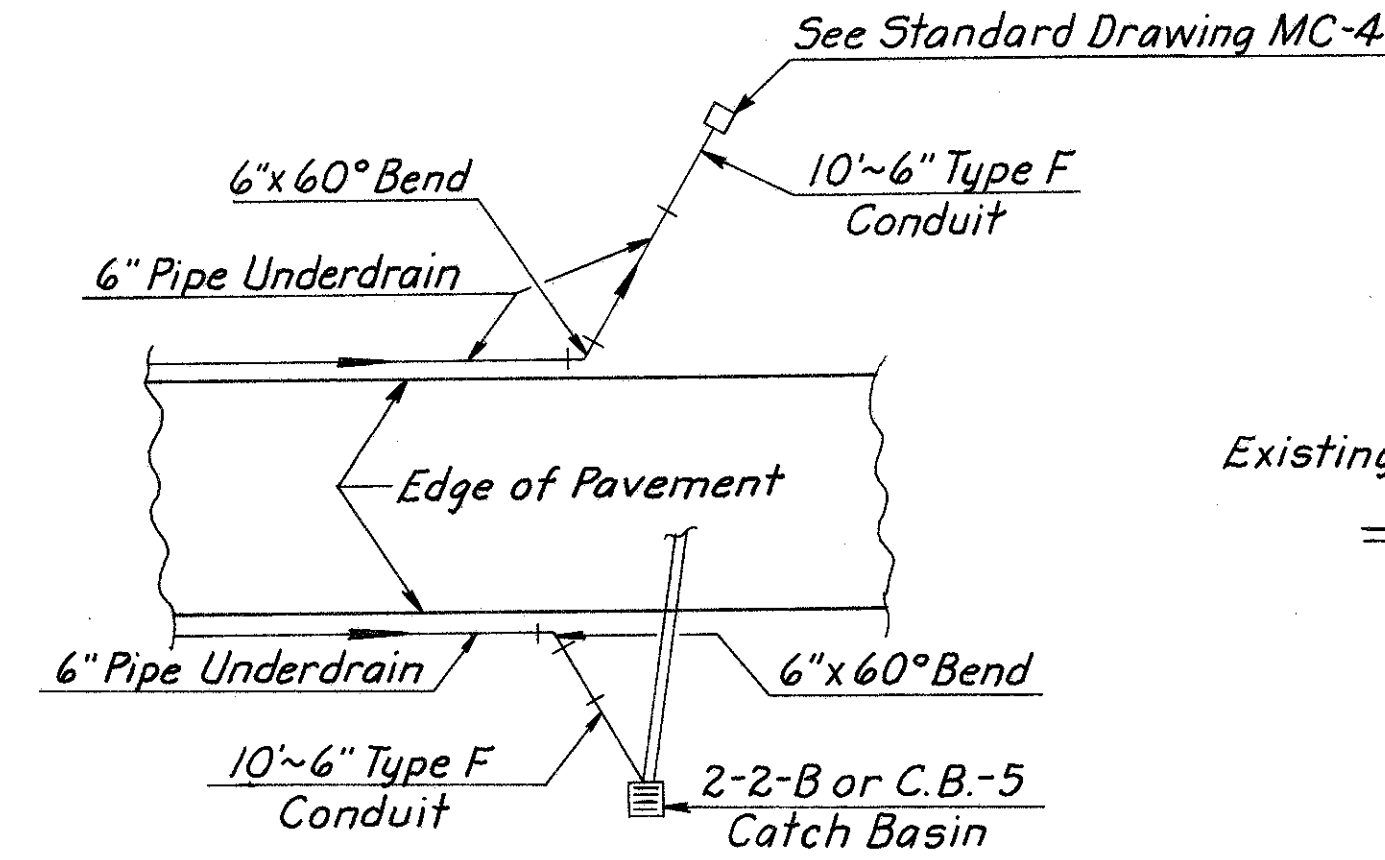
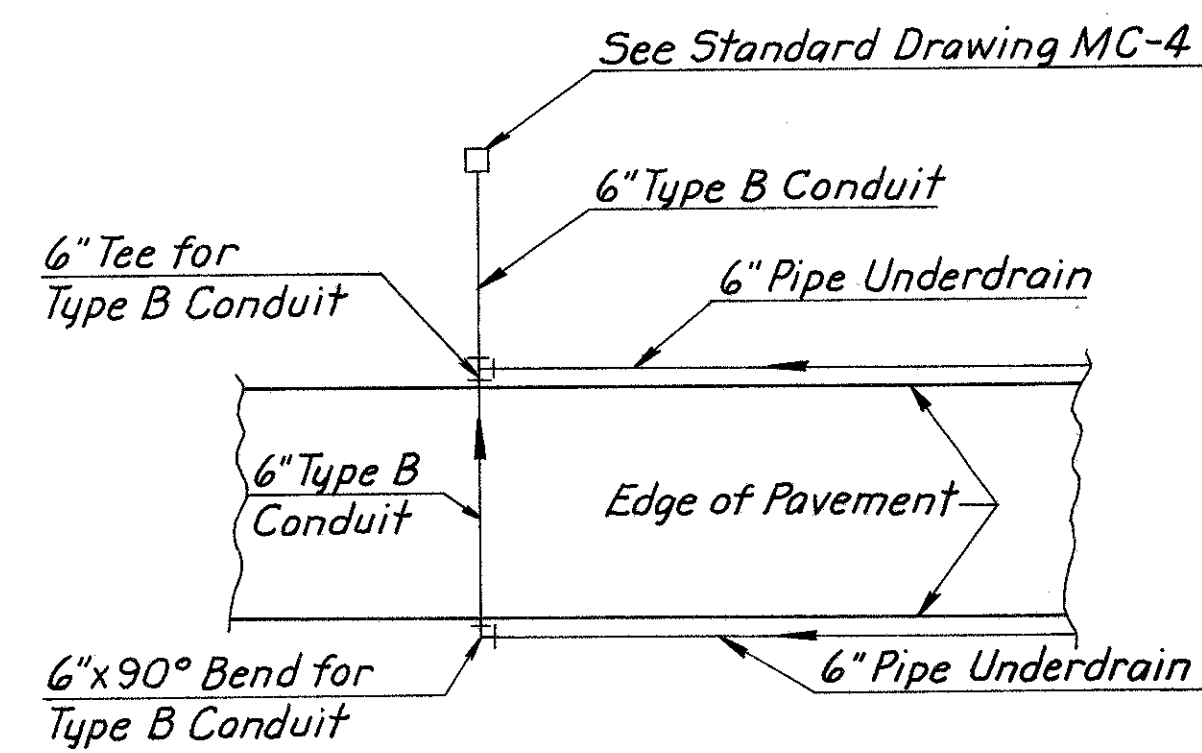


CURBED DRIVEWAY PROFILE

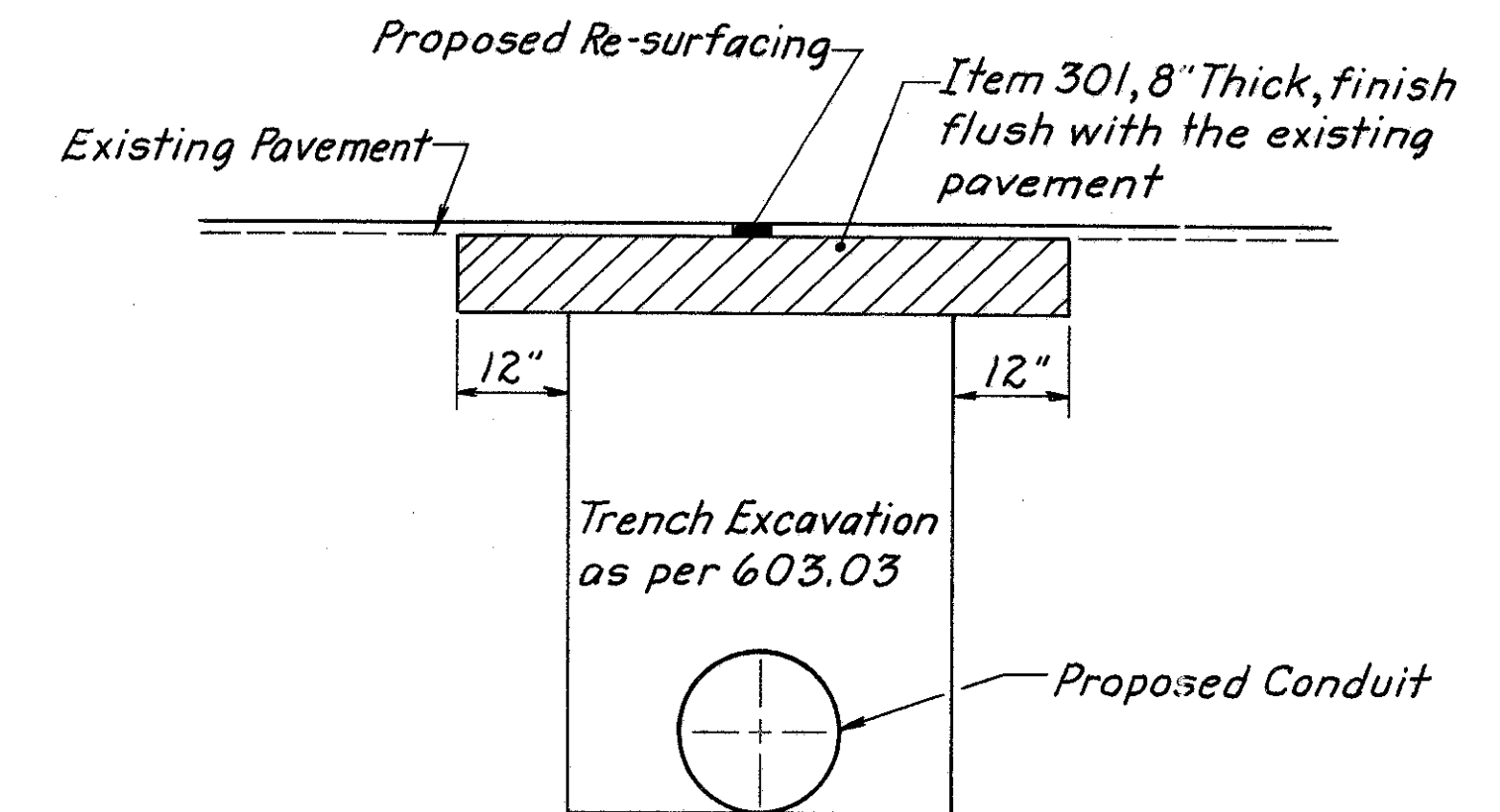
DEL-36-748



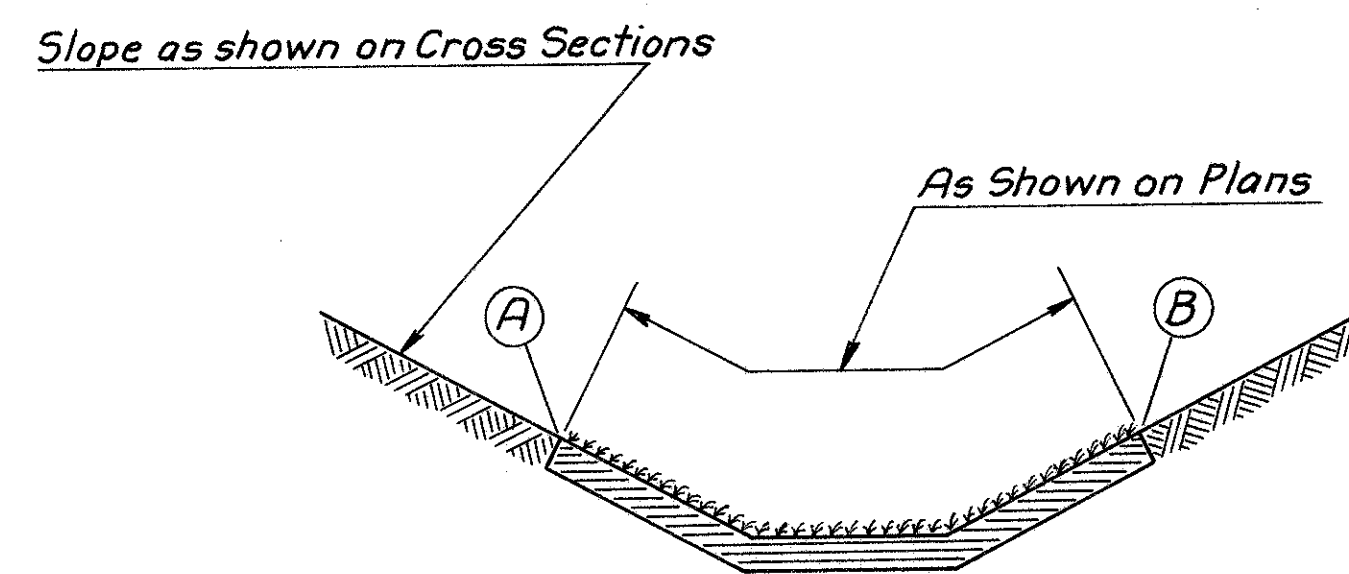
ROCK CHANNEL PROTECTION DETAIL



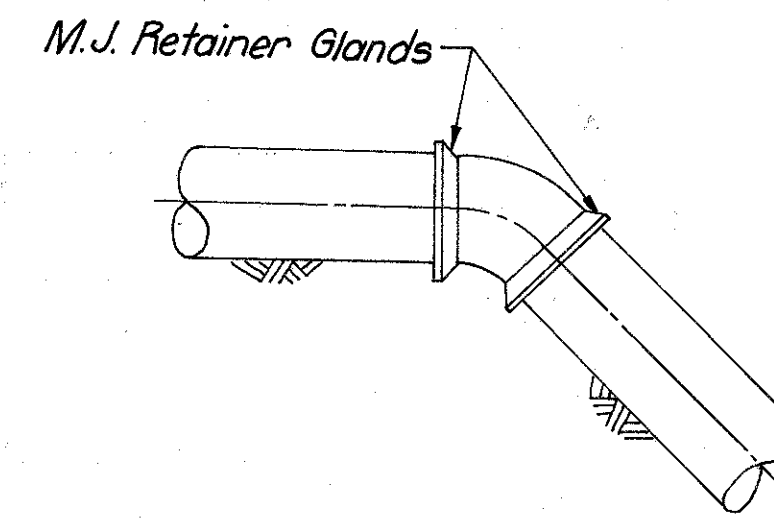
PIPE UNDERDRAIN DETAILS



PAVEMENT REPLACEMENT DETAIL
For location and quantities See General Notes

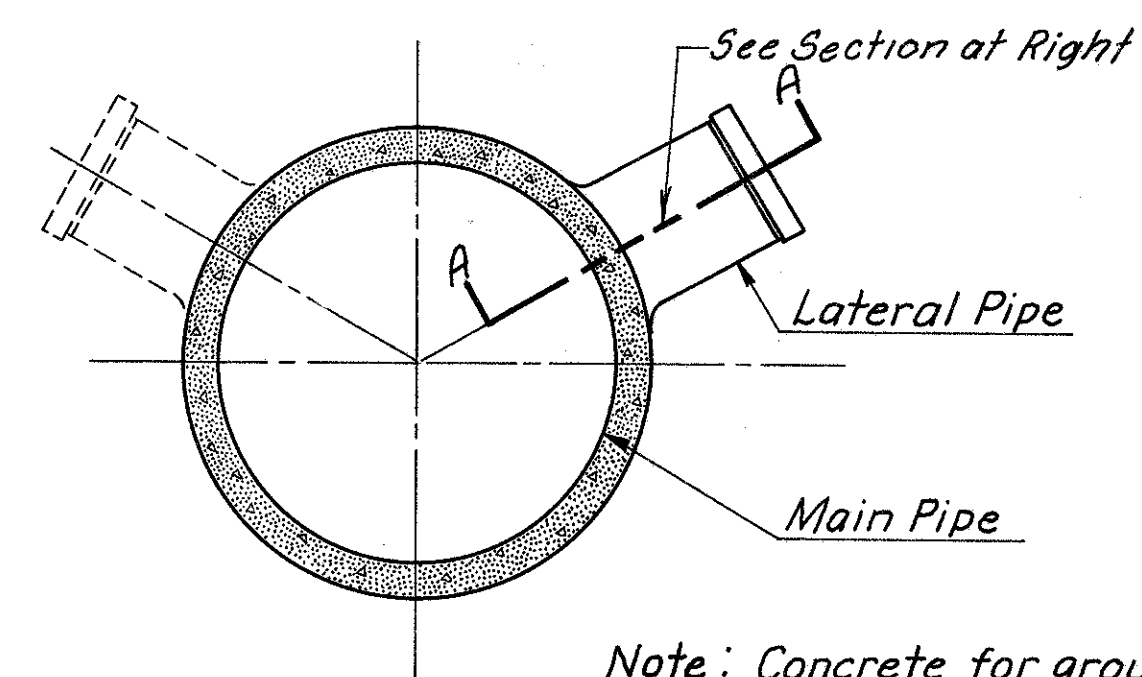


660 SODDING DITCHES

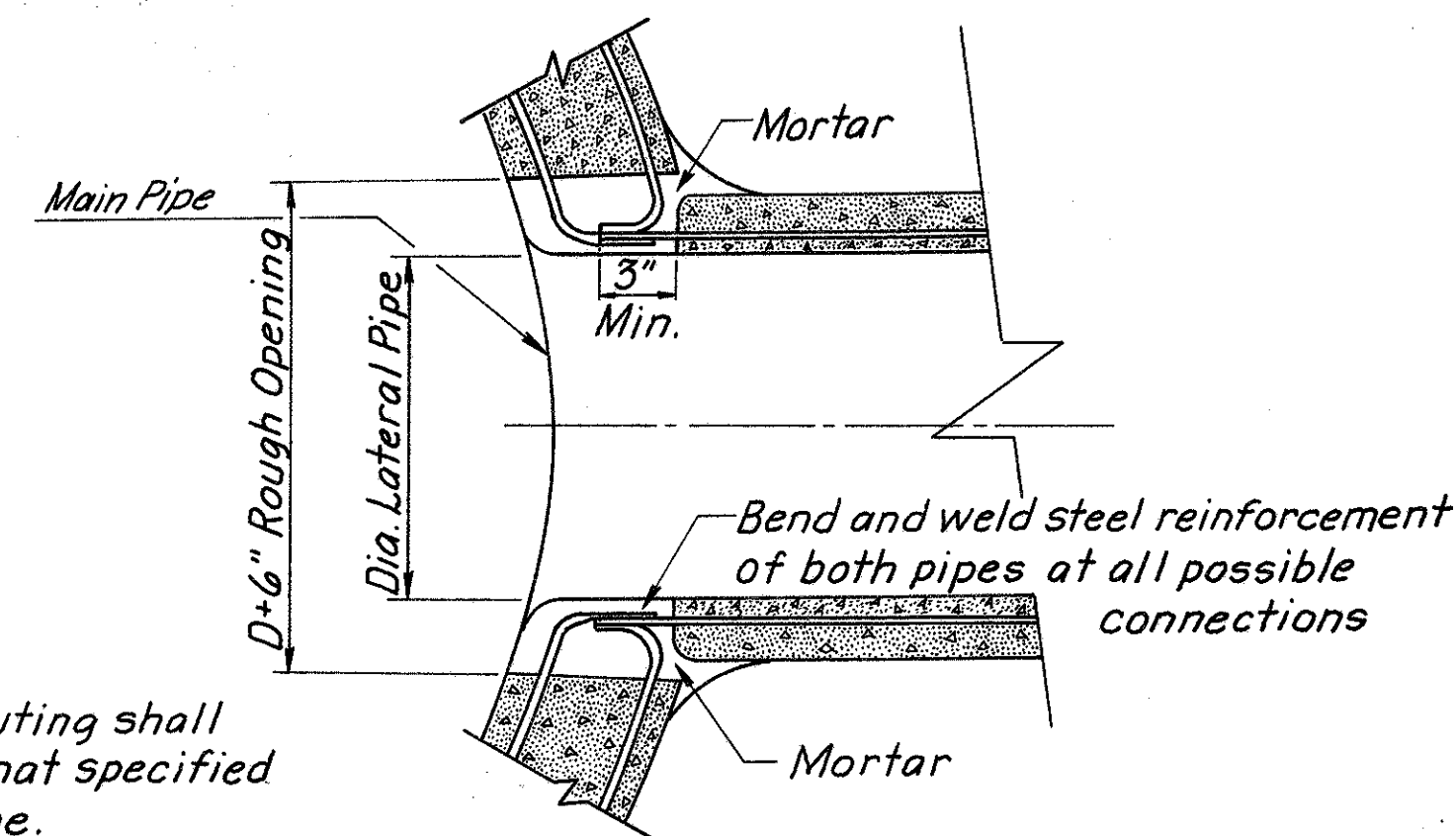


RESTRAINED FITTING DETAIL

NOTE: Mechanical Joint Retainer Glands shall be used in lieu of tie-rods or concrete reaction backing. The steel set screws shall be tightened to 75 foot-pounds torque. The cost of restrained fittings shall be included in the unit price bid for Item 814 Water Pipe.



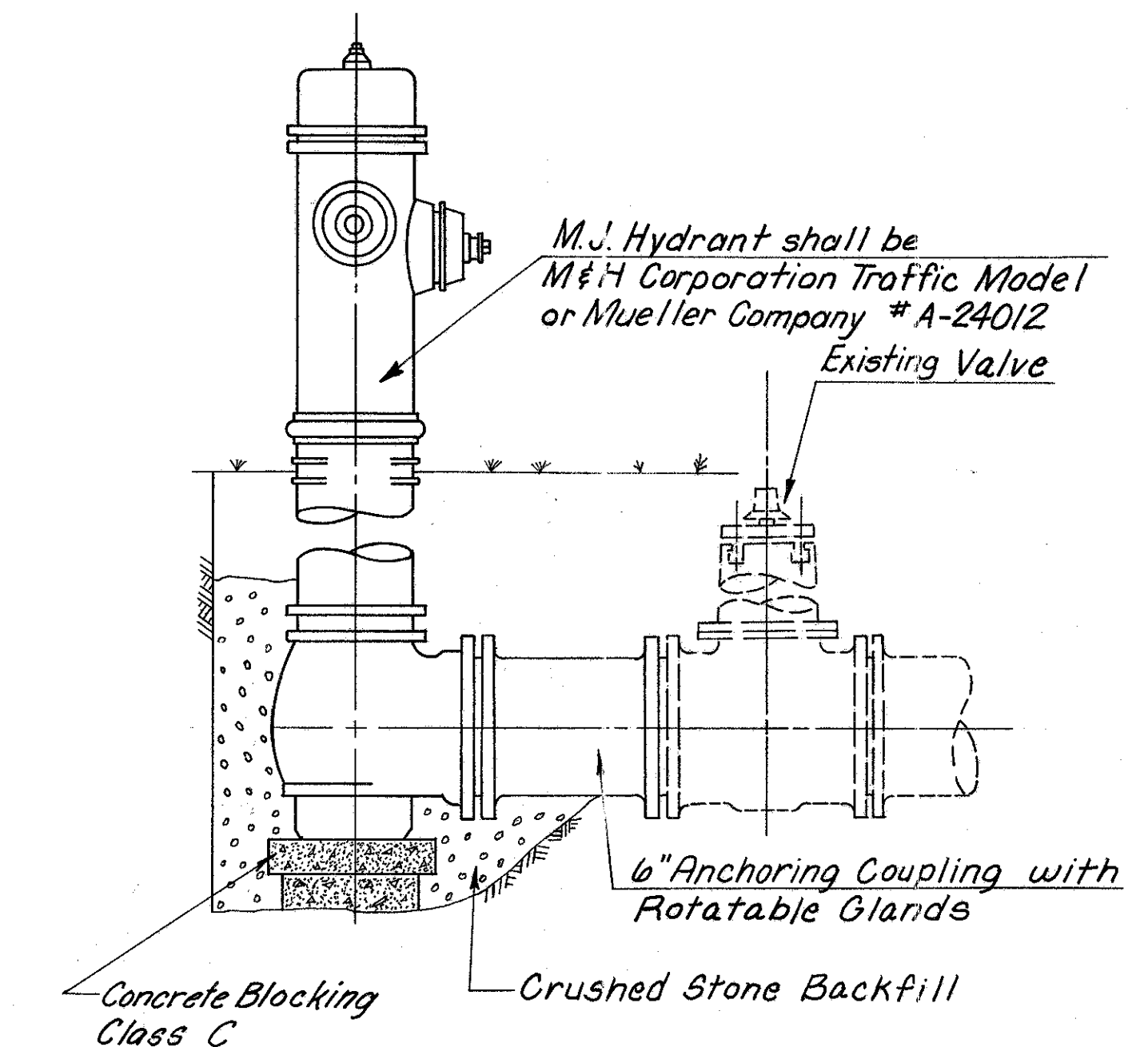
ELEVATION



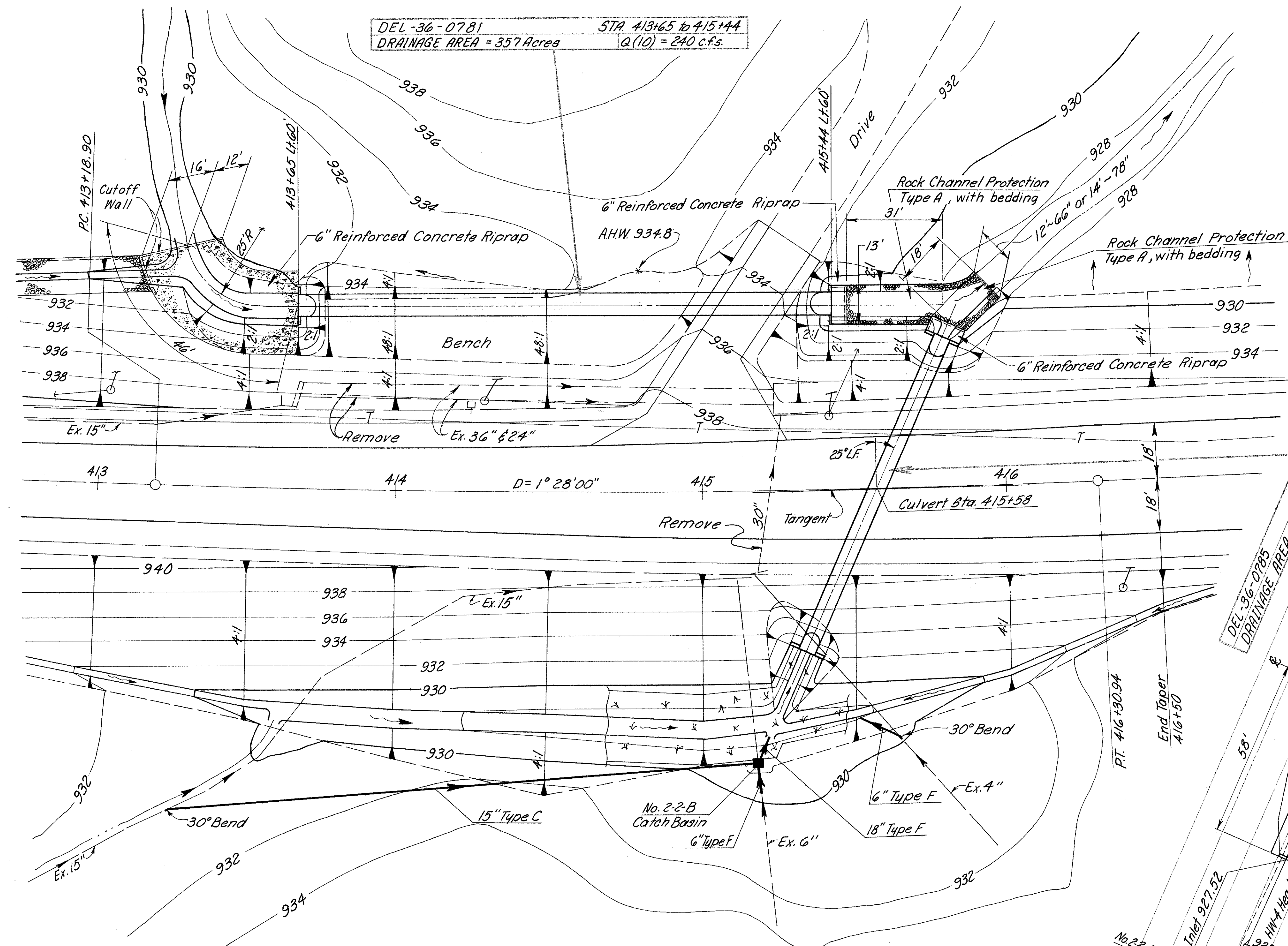
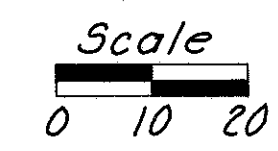
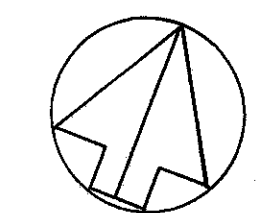
SECTION A-A

PRE-FABRICATED "T" CONNECTION

Note: Concrete for grouting shall be the same as that specified for pertinent pipe.
Note: For bituminous coated corrugated steel pipe, the "T" or saddle branch shall be shop fabricated by the manufacturer.

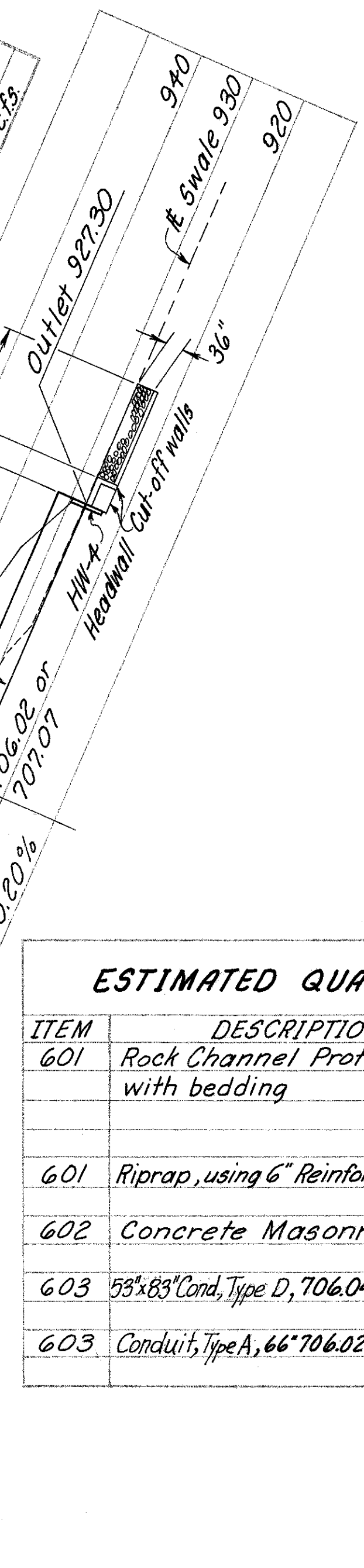


FIRE HYDRANT INSTALLATION

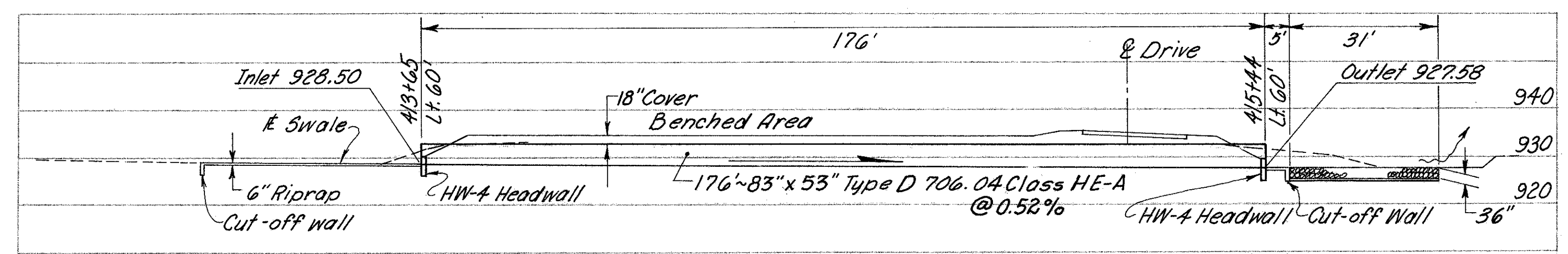


DEL-36-0781
 601 Rock - $\frac{31 \times 13 \times 35}{27} = 52 \text{ C.Y.}$
 601 Riprap - $\frac{5 \times 13' + (36 \times 12') + (57 \times 16')}{9} = 157.34$
 602 Masonry - $2.23 \times 2 = 4.46 \text{ C.Y.}$

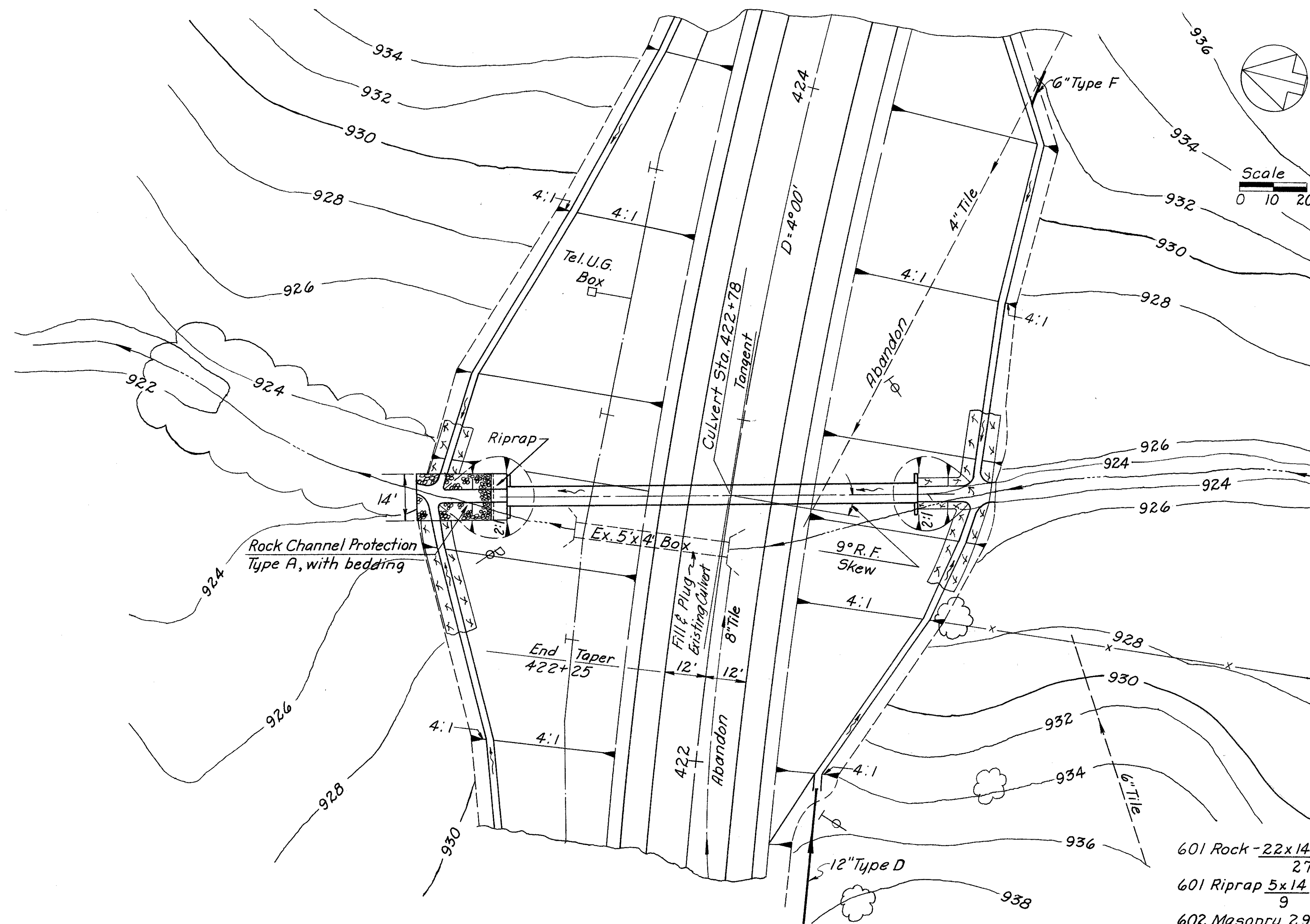
DEL-36-0785
 601 Rock - $\frac{18 \times 14 \times 3.5}{27} = 33 \text{ C.Y.}$
 601 Riprap - $\frac{5 \times 14'}{9} = 8.54$
 602 Masonry $2.94 \times 2 = 5.88 \text{ C.Y.}$



ESTIMATED QUANTITIES					
ITEM	DESCRIPTION	UNIT	DEL-36-0781	DEL-36-0785	TOTAL QUANTITIES
601	Rock Channel Protection, Type A with bedding	C.Y.	52	33	85
601	Riprap, using 6" Reinforced Conc. Slab	S.Y.	157	8	165
602	Concrete Masonry	C.Y.	4.46	5.88	10.34
603	53"x83" Cond, Type D, 706.04 Class HE-A	LF	176		176
603	Conduit, Type A, 66" 706.02, or 78" 707.07	LF		112	112

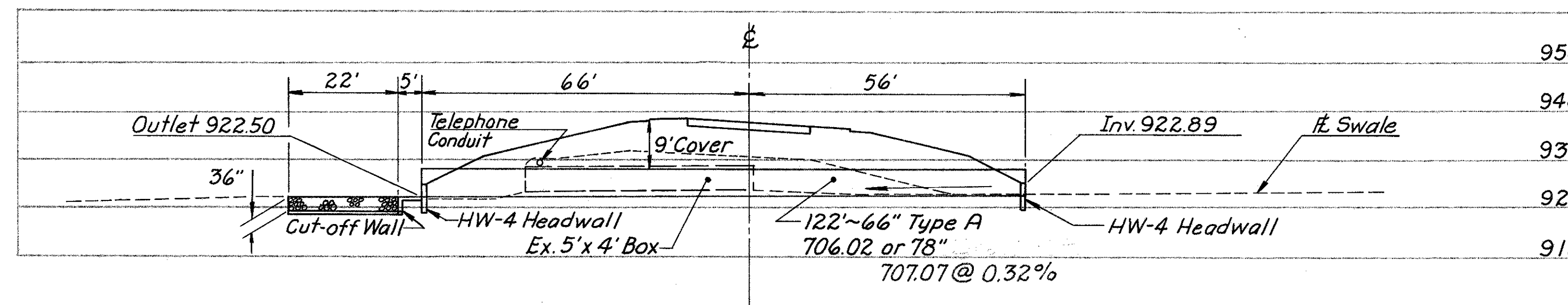


DEL-36-7.48

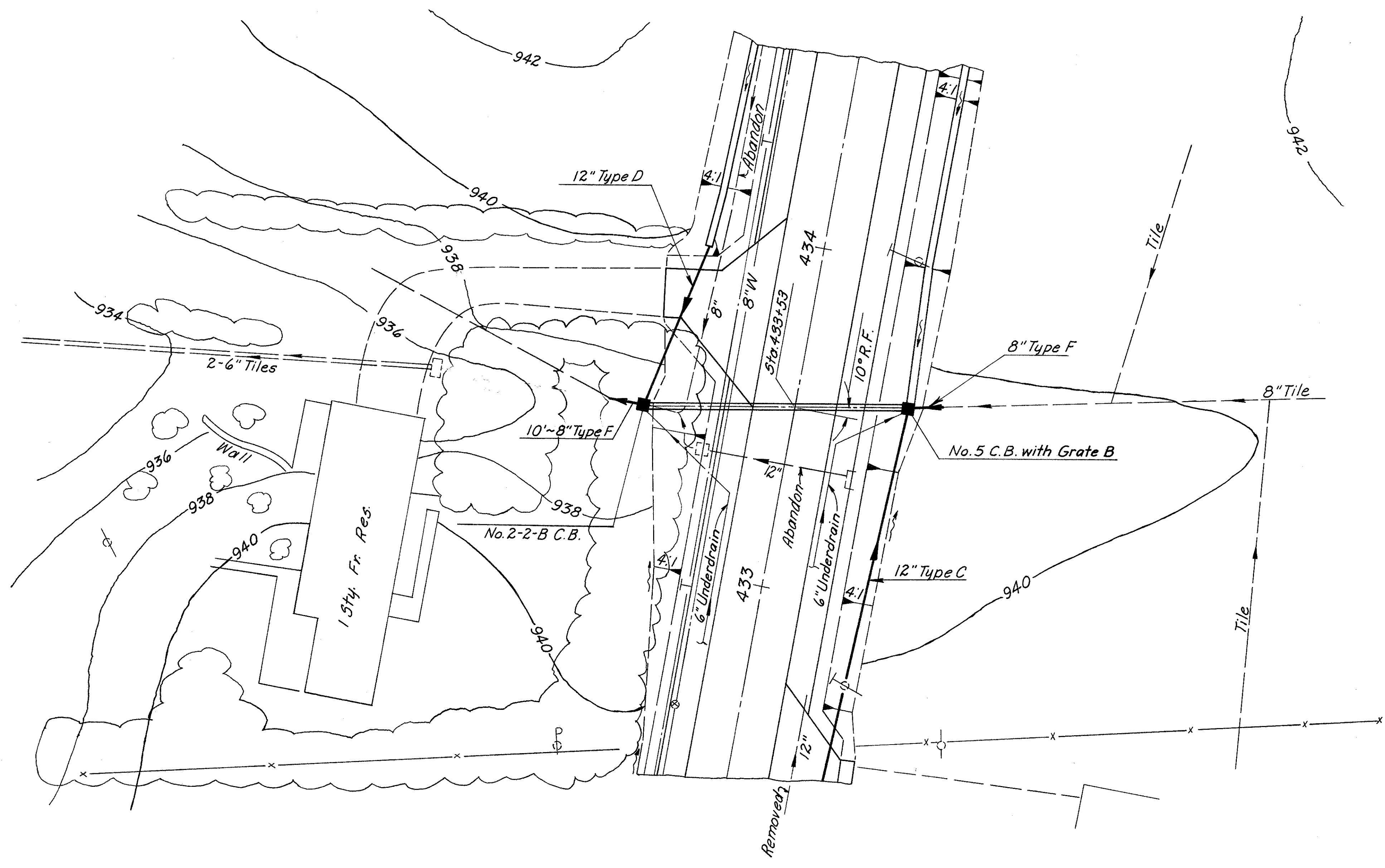
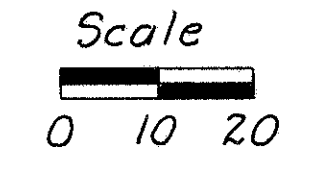
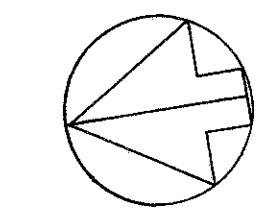


601 Rock - 22x14x3.5 = 40 C.Y.
27
601 Riprap 5x14 = 8 S.Y.
9
602 Masonry 2.94 x 2 = 5.88 C.Y.

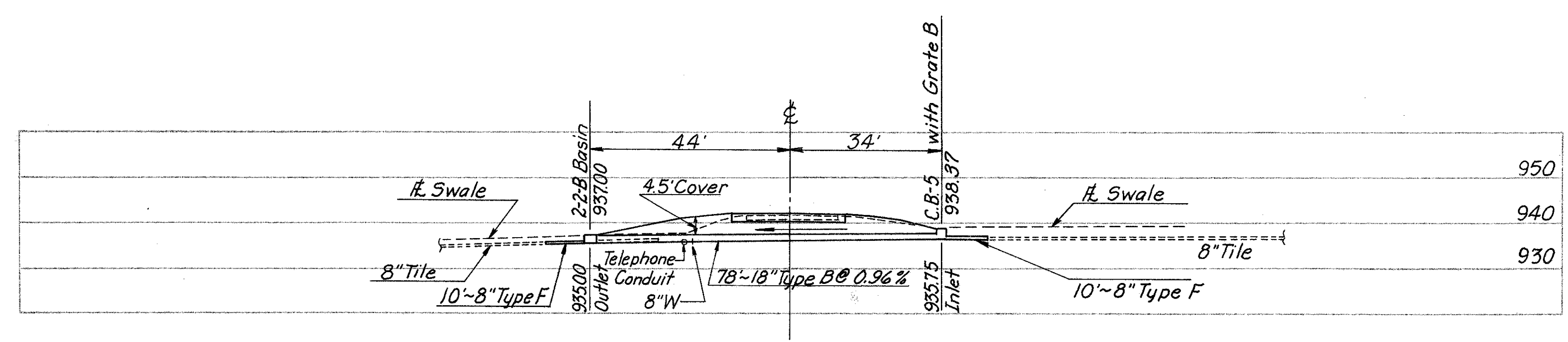
DEL-36-0799		STA. 422+78	
DRAINAGE AREA - 368 ACRES		Q(25) = 247 c.f.s.	
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUAN.
601	Rock Channel Protection, Type A with bedding	C.Y.	40
601	Riprap, using 6" Reinforced Conc. Slab	S.Y.	8
602	Concrete Masonry	C.Y.	5.88
603	Conduit type A, 66" 706.02, or 78" 707.07	L.F.	122



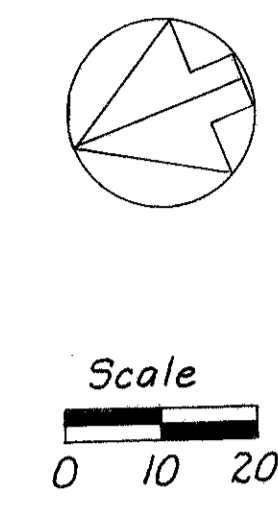
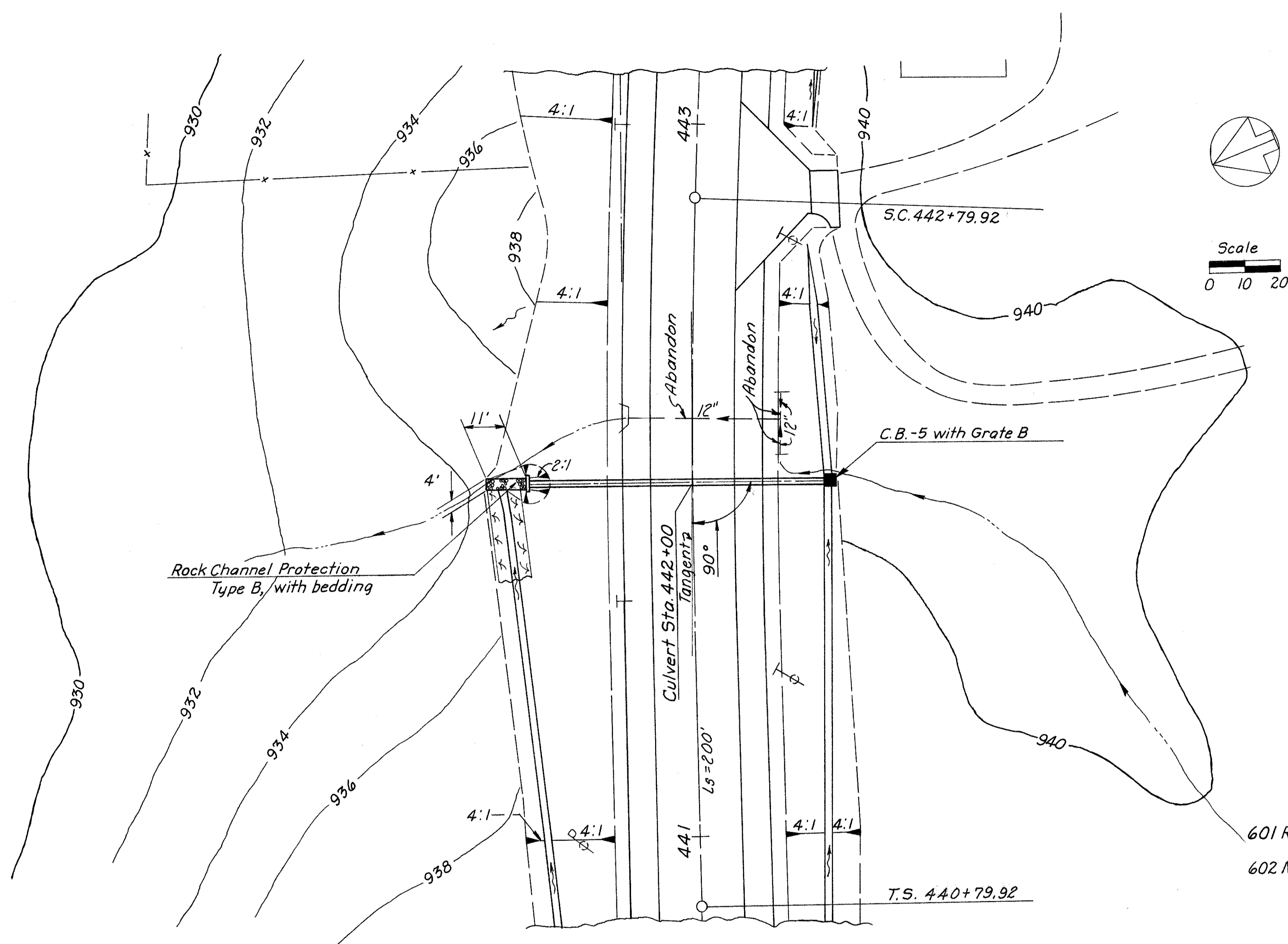
DEL-36-748



DEL-36-0819		STA. 433+53	
DRAINAGE AREA = 7 Acres		Q(25) = 12 c.f.s.	
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUAN.
603	18" Conduit, Type B	L.F.	78
604	Std. No. 5 Catch Basin with Grate B	EA.	1
604	Std. No. 2-2-B Catch Basin	EA.	1

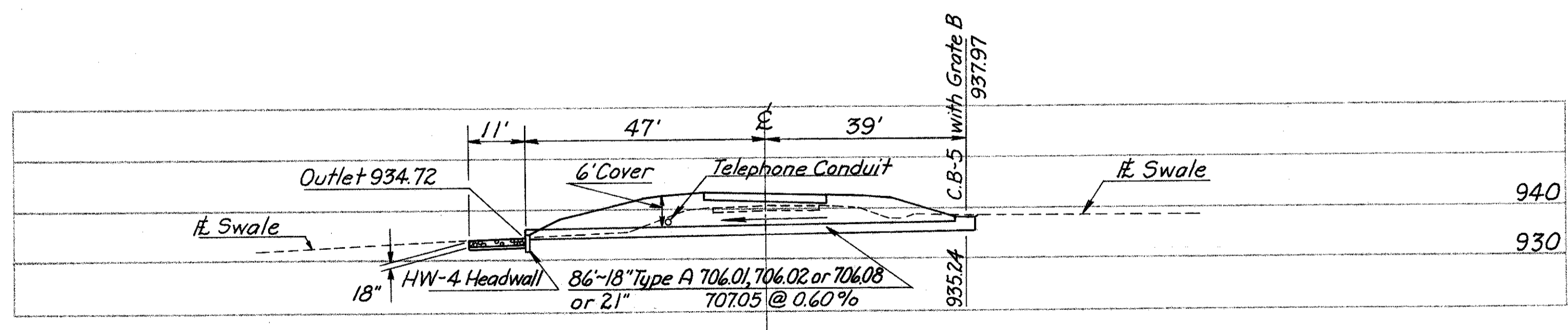


DEL-36-748

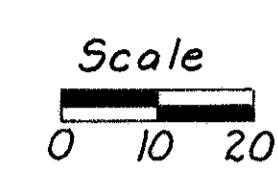
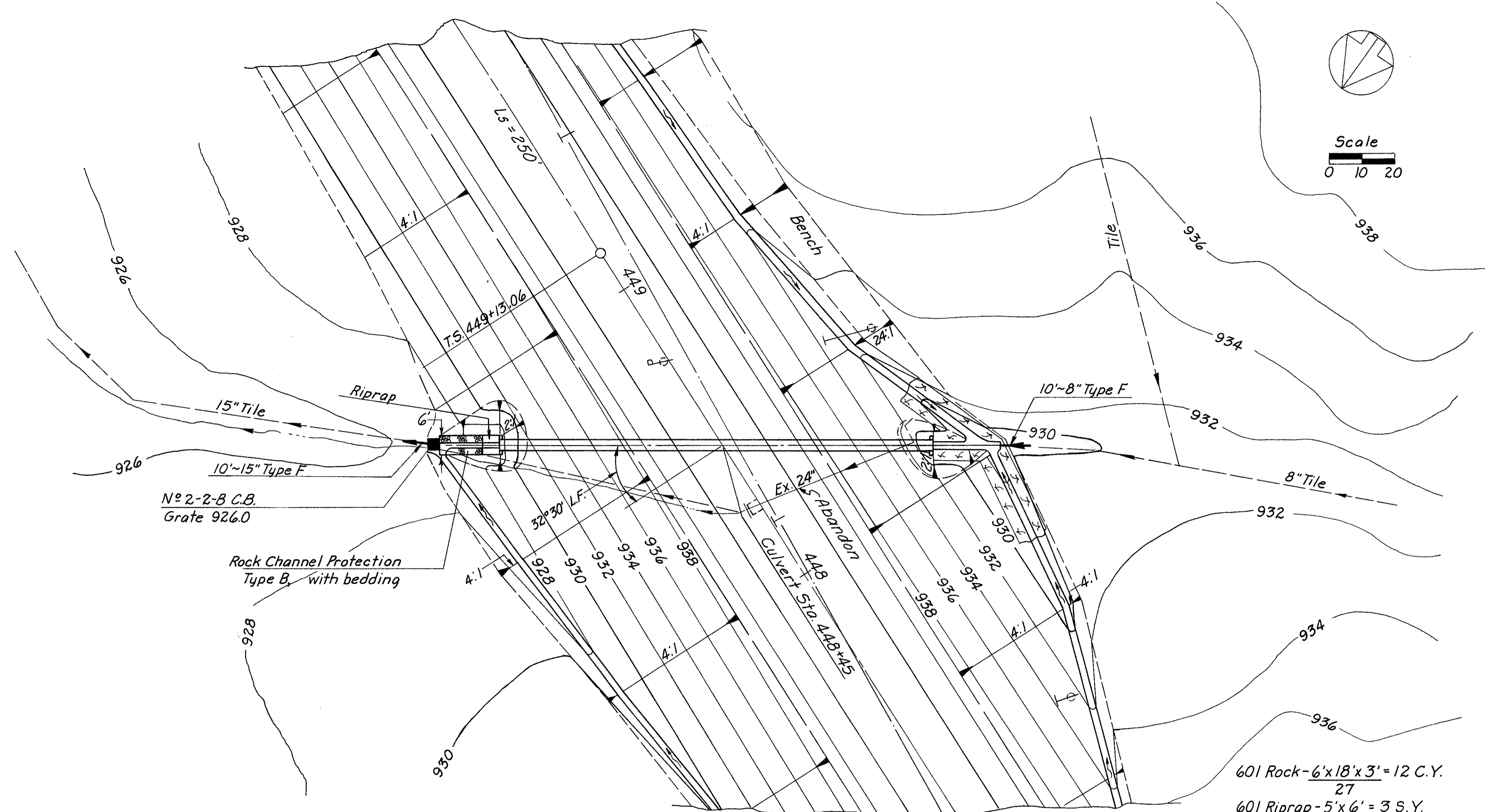


601 Rock 11'x4'x2' = 3 C.Y.
27
602 Masonry 0.39 C.Y.

DEL-36-0835		STA. 442+00	
DRAINAGE AREA = 7 Acres		Q(25) = 13 c.f.s.	
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUAN.
601	Rock Channel Protection Type B with bedding	C.Y.	3
602	Concrete Masonry	C.Y.	0.39
603	Cond., Type A, 18", 206.01, 206.02 or 206.08; or 21" 21" 207.05	L.F.	86
604	Std. No. 5 Catch Basin with Grate B	EA.	1

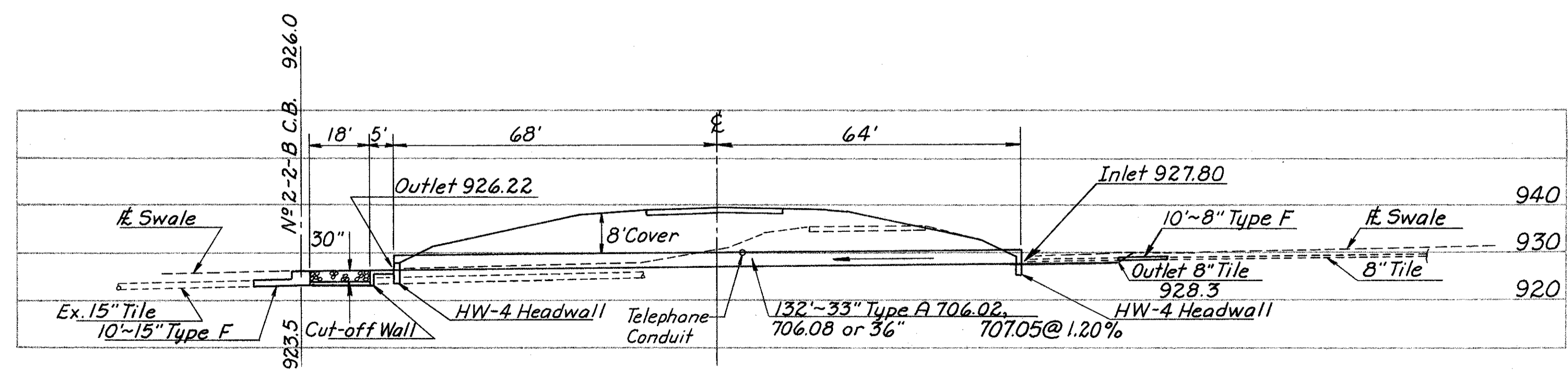


DEL-36-748

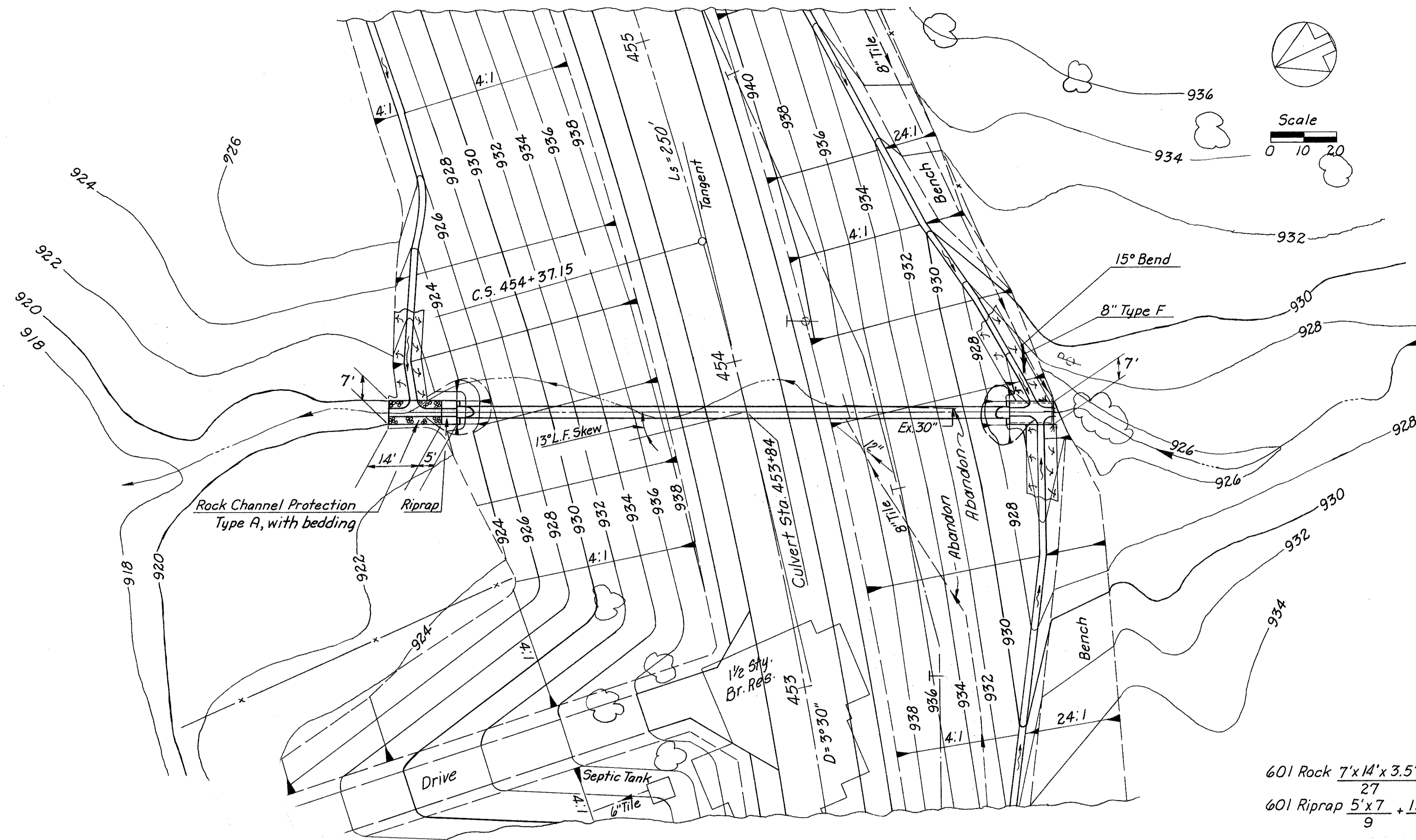


- 601 Rock - 6'x18'x3' = 12 C.Y.
- 27
- 601 Riprap - 5'x6' = 3 S.Y.
- 9
- 602 Masonry 0.76 x 2 = 1.52 C.Y.

DEL-36-0847		STA. 448+45	
DRAINAGE AREA = 38 Acres		Q(25) = 48 c.f.s.	
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUAN.
601	Rock Channel Protection, Type B with bedding	C.Y.	12
601	Riprap, using 6" Reinforced Conc. Slab	S.Y.	3
602	Concrete Masonry	C.Y.	1.52
603	Cond. Type A, 33', 706.02 or 706.08; or 36" 707.05	L.F.	132

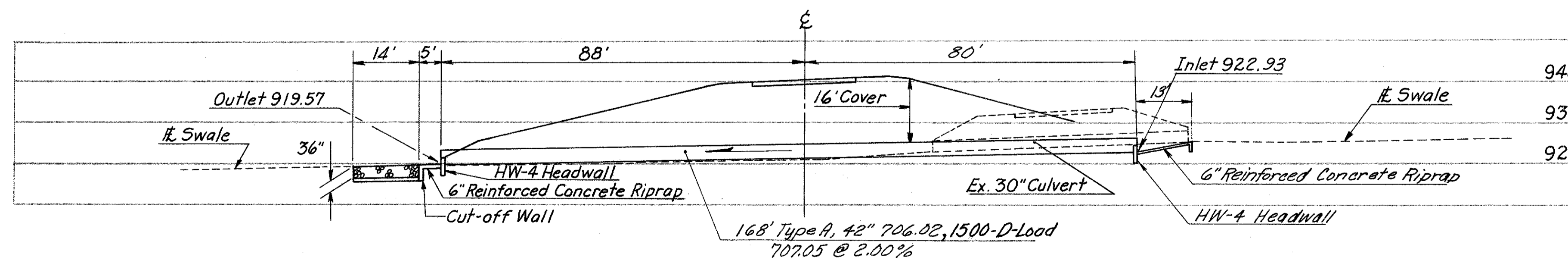


DEL-36-748

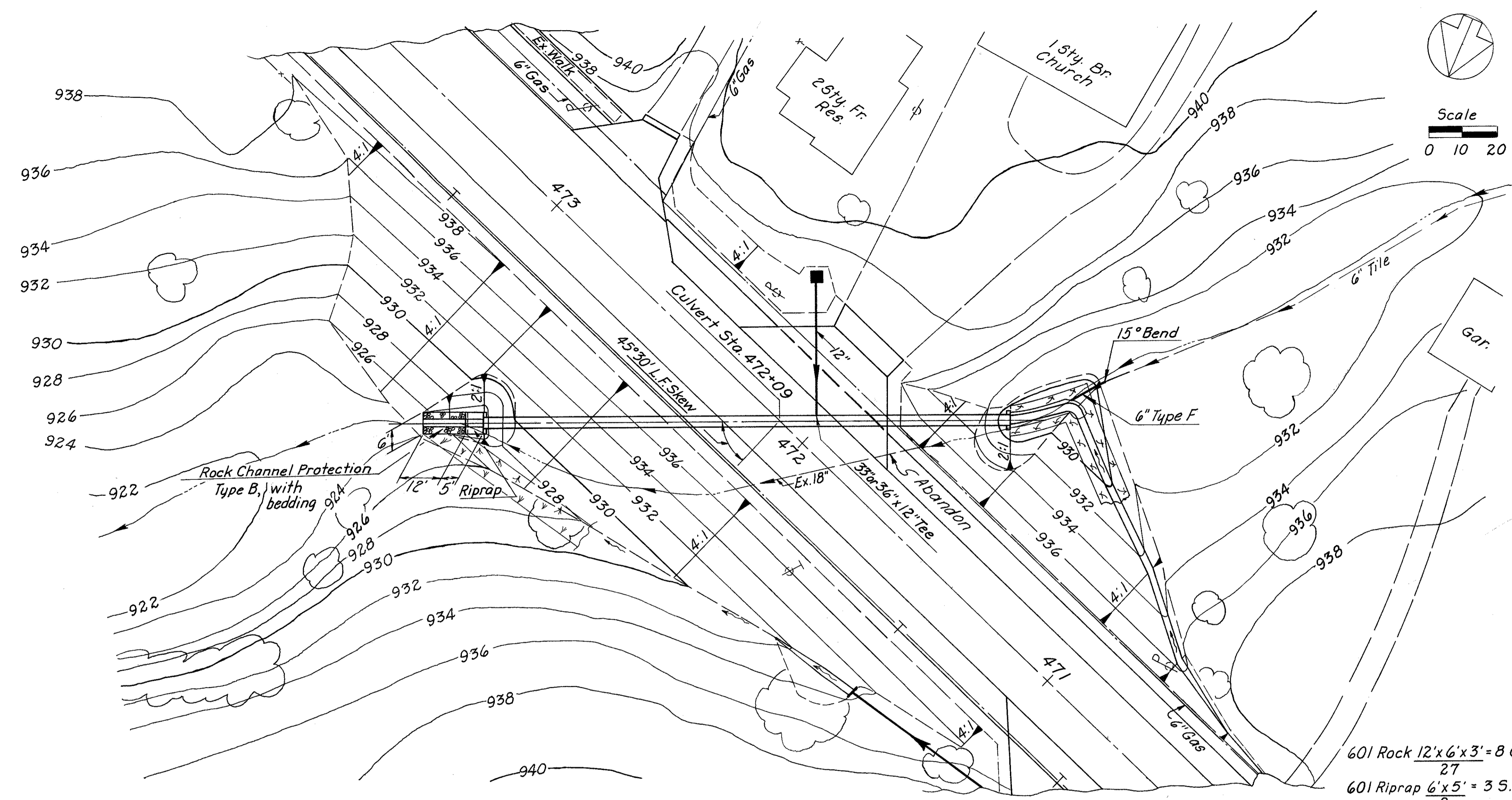


- 601 Rock 7'x14'x3.5' = 13 C.Y.
- 601 Riprap $\frac{27}{9} \times 7 + \frac{13 \times 7}{9} = 14.5 \text{ Y.}$
- 602 Masonry 0.92x2 = 1.84 C.Y.

DEL-36-0858		STA. 453+84	
DRAINAGE AREA = 54 Acres		Q(25) = 78 c.f.s.	
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUAN.
601	Rock Channel Protection, Type A with bedding	C.Y.	13
601	Riprap, using 6" Reinforced Concrete Slab	S.Y.	14
602	Concrete Masonry	C.Y.	1.84
603	Conduit, Type A, 42" 706.02, 1500-D-Load or 707.05	L.F.	168

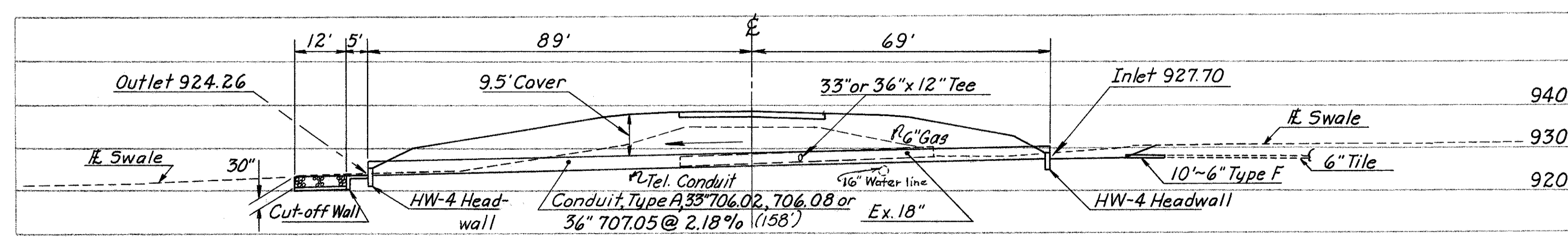


DEL-36-748

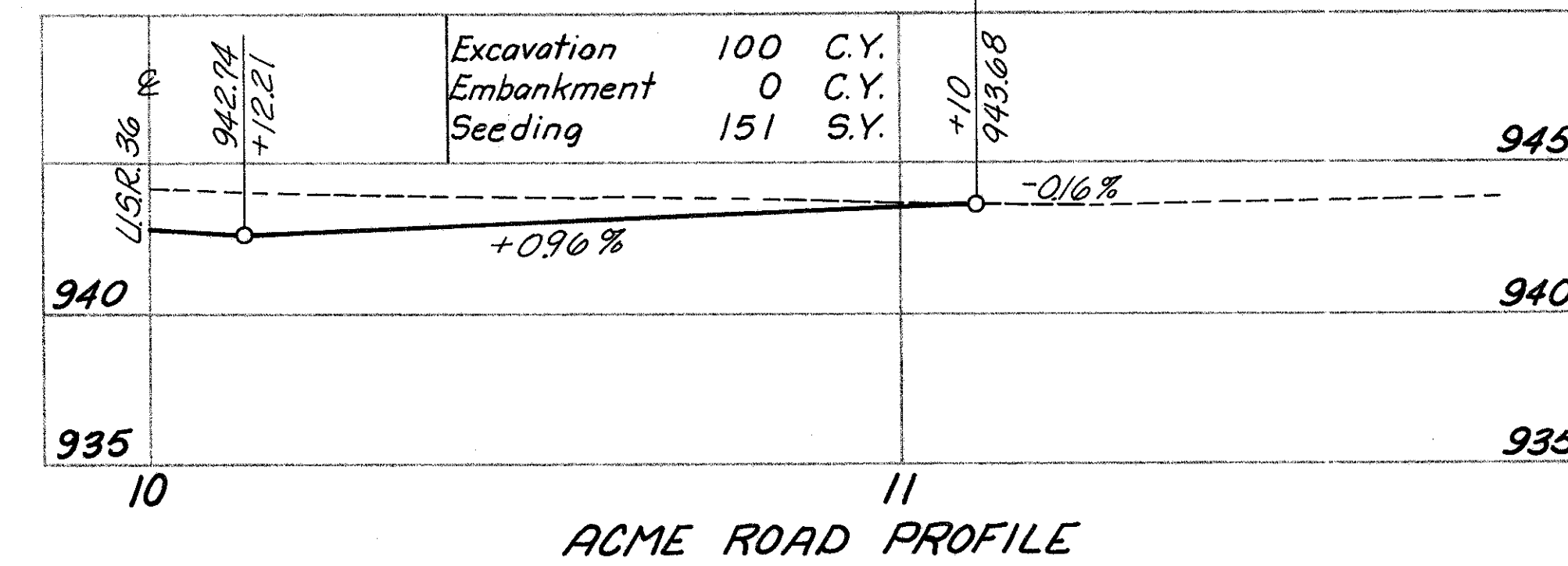
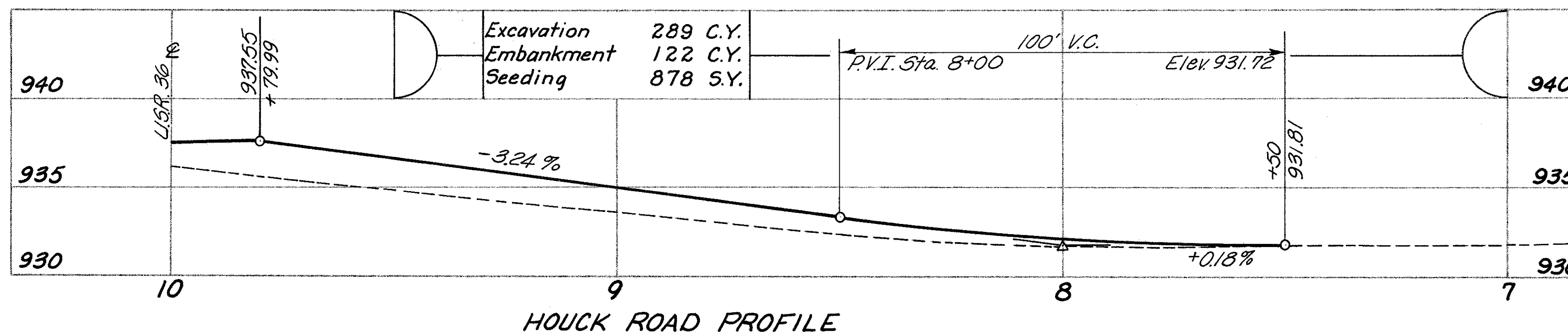
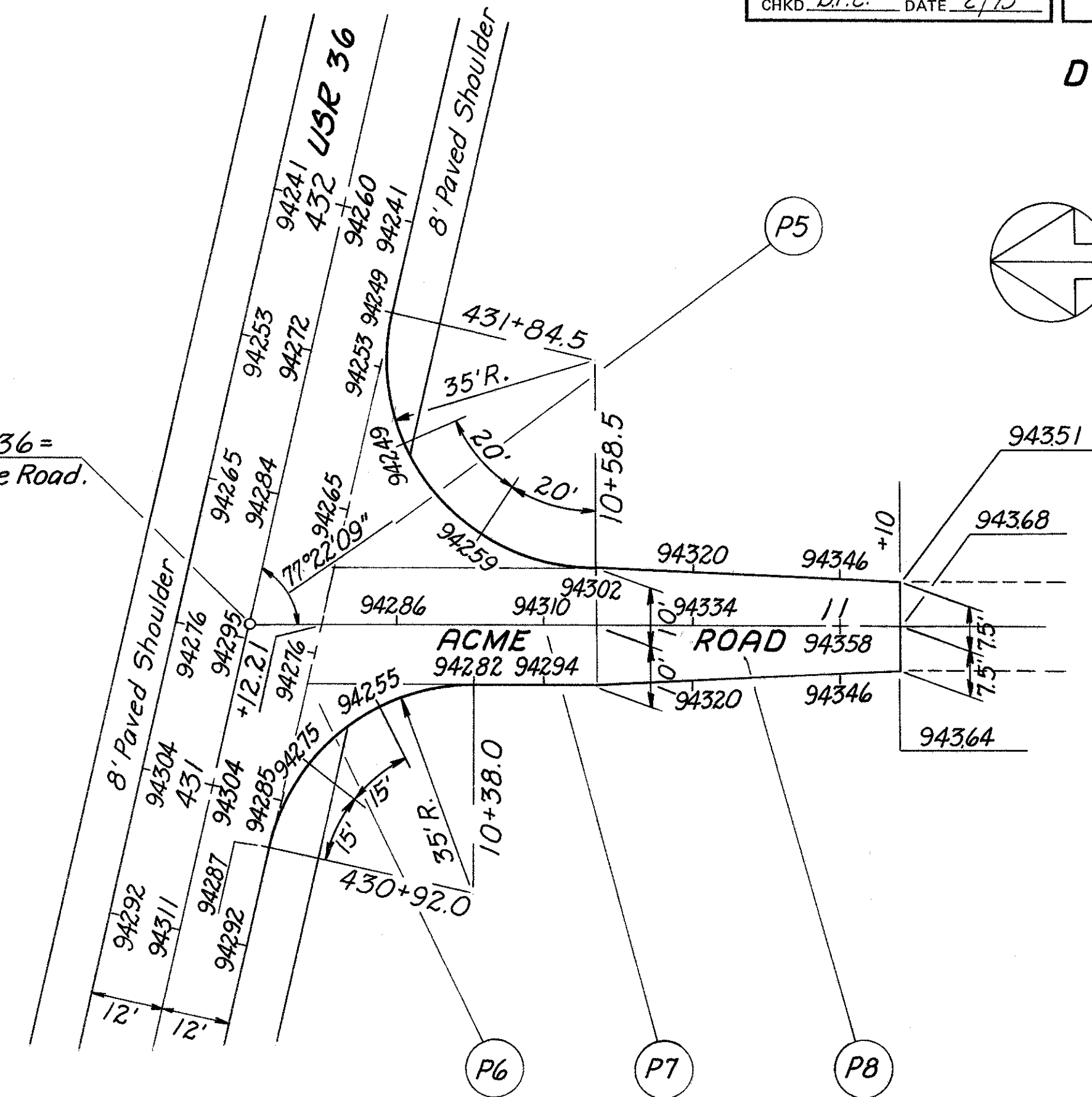
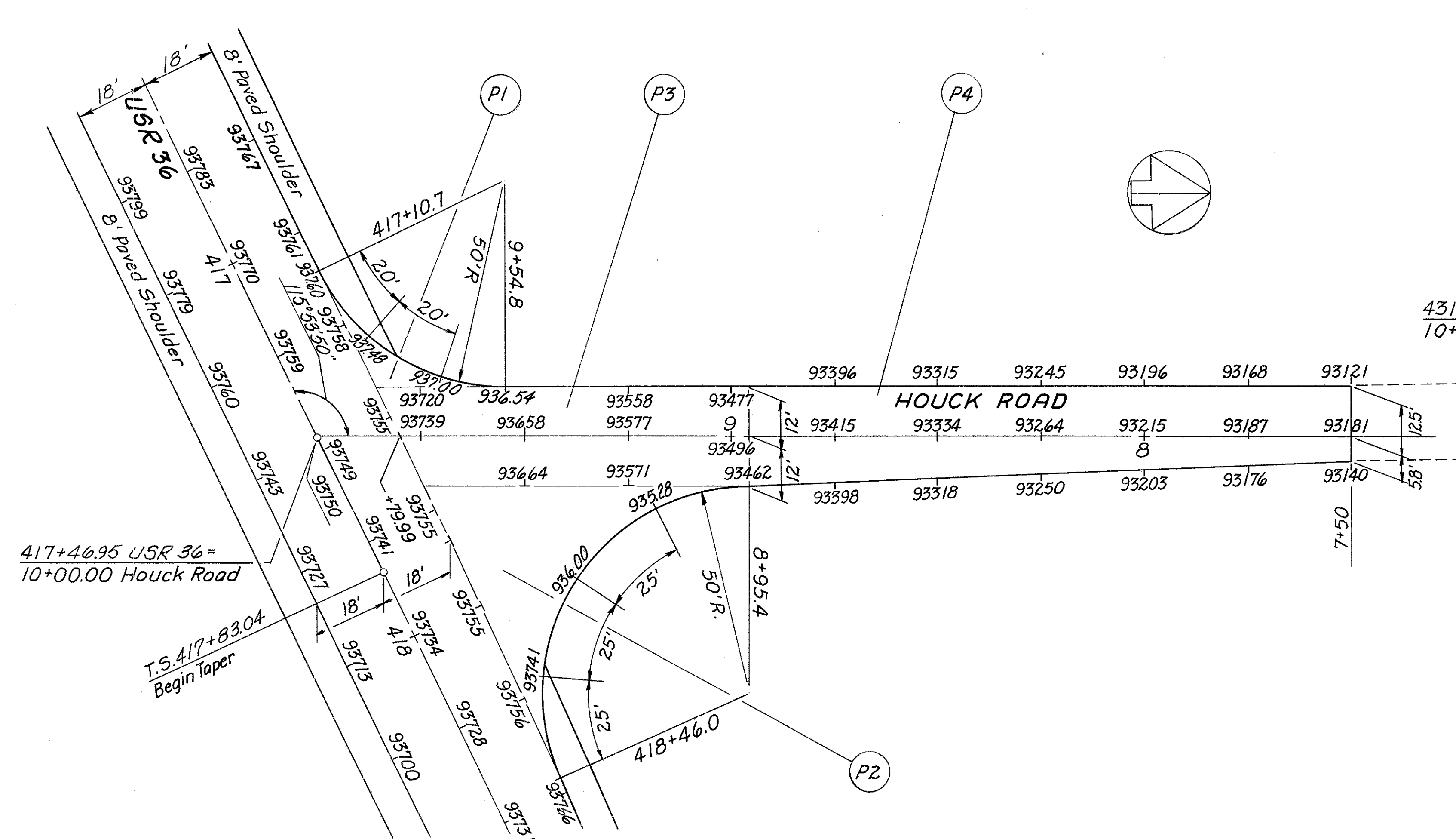


- 601 Rock 12' x 6' x 3' = 8 C.Y.
- 601 Riprap 6' x 5' = 3 S.Y.
- 602 Masonry 0.76 x 2 = 1.52 C.Y.

DEL-36-0892		STA. 472+09	
DRAINAGE AREA = 27 Acres		Q(25) = 52 c.f.s.	
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUAN.
601	Rock Channel Protection, Type B with bedding	C.Y.	8
601	Riprap, using 6" Reinforced Conc. Slab	S.Y.	3
602	Concrete Masonry	C.Y.	1.52
603	Conduit, Type A, 33" 706.02, 706.08 or 36" 707.05	L.F.	15.8
	33" x 12" Tee or 36" x 12" Tee	E.A.	1

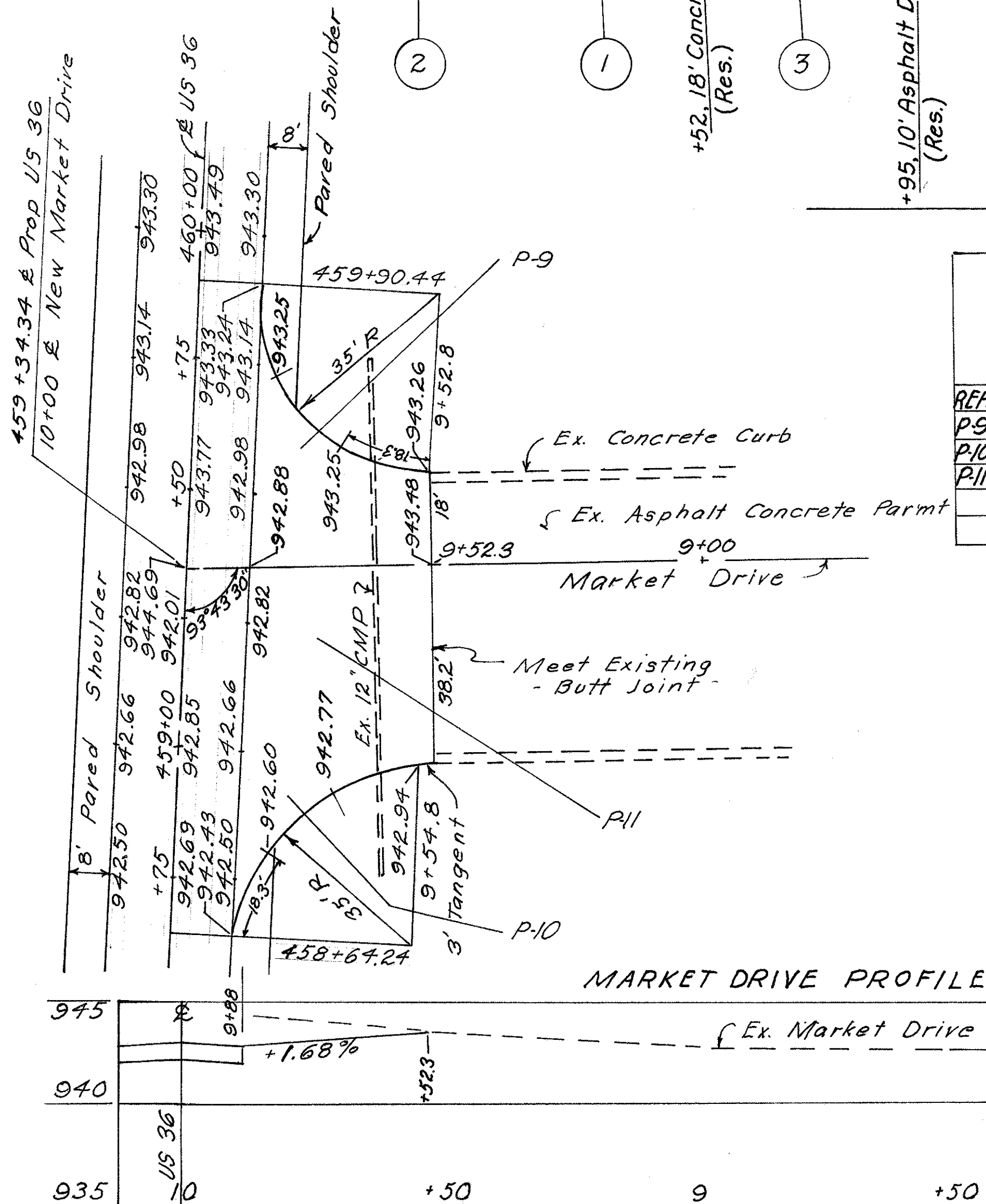
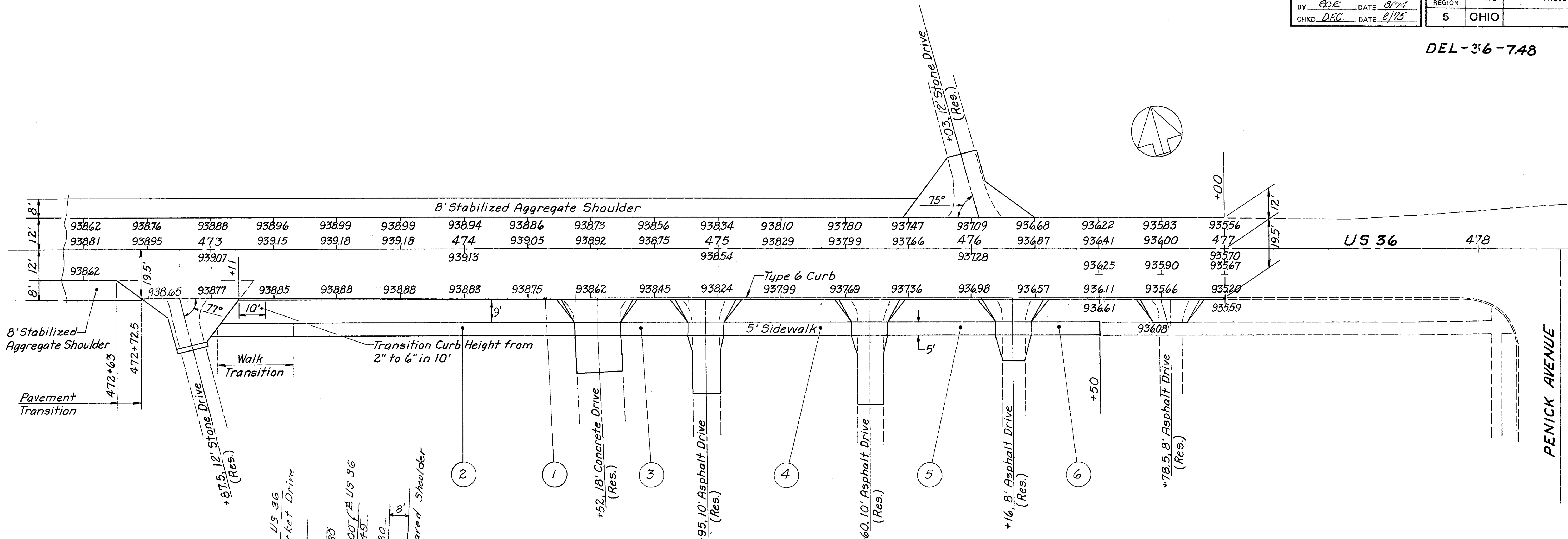


DEL-36-748



PAVEMENT QUANTITIES		LENGTH OR AREA	AVERAGE WIDTH	203	301	402	404
REF.	LOCATION	FT. or SF.	FT.	Subgrade Compaction	Bituminous Aggregate Base	Asphalt Concrete	Asphalt Concrete
HOUCK ROAD							
P1	9+54.8 to 9+79.99 Rt.	1635.F.		18	4	1	1
P2	8+95.4 to 9+79.99 Lt.	1454.S.F.		162	33	8	6
P3	8+95.4 to 9+79.99	203025.F.		226	45	11	8
P4	7+50 to 8+95.4	1454.FT.	21.15	342	70	17	12
TOTALS				748	152	37	27
ACME ROAD							
P5	10+12.21 to 10+58.5 Lt.	4305.F.		48	10	2	2
P6	10+12.21 to 10+38 Rt.	148 S.F.		16	4	1	1
P7	10+12.21 to 10+58.5	92585.F.		103	20	5	4
P8	10+58.5 to 11+10	515.FT.	17.5	100	21	5	3
TOTALS				267	55	13	10

Quantities carried forward to Sub-Summary



MARKET DRIVE		203	301	402	404
Pavement Quantities		Subgrade	Bituminous	Asphalt	Asphalt
		Compaction	Aggregate	Concrete	Concrete
REF	Location	AREA	S.Y.	C.Y.	C.Y.
P-9	9+88 to 9+52.8 Rt.	263	29	*6.3	1.4
P-10	9+88 to 9+54.8 Lt.	263	29	*6.3	1.4
P-11	9+88 to 9+51.2 R.	2068	230	42.9	8
Totals			288	56	14

* Add 32 Sq.Ft. For 7" Step

Quantities Carried to Sub-Summary

CURB AND SIDEWALK		608	609
REF.	LOCATION	S.F.	L.F.
1	473+11 to 477+00		389
2	473+02 to 474+44	710	
3	474+62 to 474+88	130	
4	475+02 to 475+53	255	
5	475+67 to 476+10	215	
6	476+24 to 476+50	130	
TOTALS		1440	389

PAVEMENT ELEVATION TABLES

STATION	LEFT EDGE	CENTER LINE	RIGHT EDGE	STATION	LEFT EDGE	CENTER LINE	RIGHT EDGE	STATION	LEFT EDGE	CENTER LINE	RIGHT EDGE
394+00.00	956.08	956.25	956.10	405+00.00	950.92	951.11	950.92	416+00.00	938.02	938.39	938.75
394+25.00	955.96	956.13	955.97	405+25.00	950.60	950.79	950.60	416+25.00	937.85	938.15	938.45
394+50.00	955.77	955.95	955.78	405+50.00	950.28	950.47	950.28	416+50.00	937.73	937.97	938.21
394+75.00	955.74	955.92	955.74	405+75.00	949.96	950.15	949.96	416+75.00	937.67	937.83	937.99
395+00.00	955.78	955.97	955.78	406+00.00	949.65	949.84	949.65	417+00.00	937.61	937.70	937.79
395+25.00	955.76	955.95	955.76	406+25.00	949.34	949.53	949.34	417+25.00	937.58	937.59	937.60
395+50.00	955.70	955.89	955.70	406+50.00	949.03	949.22	949.03	417+50.00	937.55	937.49	937.43
395+75.00	955.62	955.81	955.62	406+75.00	948.73	948.92	948.73	417+75.00	937.55	937.41	937.27
396+00.00	955.51	955.70	955.51	407+00.00	948.43	948.62	948.43	418+00.00	937.55	937.34	937.13
396+25.00	955.37	955.56	955.37	407+25.00	948.13	948.32	948.13	418+25.00	937.56	937.28	937.00
396+50.00	955.19	955.38	955.19	407+50.00	947.83	948.02	947.83	418+50.00	937.66	937.31	936.94
396+75.00	954.96	955.15	954.96	407+75.00	947.53	947.72	947.53	418+75.00	937.76	937.34	936.89
397+00.00	954.61	954.80	954.61	408+00.00	947.23	947.42	947.23	419+00.00	937.83	937.35	936.83
397+25.00	954.30	954.49	954.30	408+25.00	946.93	947.12	946.93	419+25.00	937.91	937.38	936.78
397+50.00	954.08	954.27	954.08	408+50.00	946.63	946.82	946.63	419+50.00	937.95	937.38	936.73
397+75.00	953.90	954.09	953.90	408+75.00	946.33	946.52	946.33	419+75.00	938.00	937.39	936.68
398+00.00	953.75	953.94	953.75	409+00.00	946.03	946.22	946.03	420+00.00	938.01	937.37	936.62
398+25.00	953.62	953.81	953.62	409+25.00	945.73	945.92	945.73	420+25.00	938.03	937.36	936.57
398+50.00	953.51	953.70	953.51	409+50.00	945.43	945.62	945.43	420+50.00	938.00	937.36	936.52
398+75.00	953.41	953.60	953.41	409+75.00	945.13	945.32	945.13	420+75.00	938.12	937.35	936.47
399+00.00	953.32	953.51	953.32	410+00.00	944.83	945.02	944.83	421+00.00	938.07	937.28	936.41
399+25.00	953.26	953.45	953.26	410+25.00	944.53	944.72	944.53	421+25.00	938.02	937.23	936.37
399+50.00	953.17	953.36	953.17	410+50.00	944.23	944.42	944.23	421+50.00	937.98	937.19	936.35
399+75.00	953.07	953.26	953.07	410+75.00	943.93	944.12	943.93	421+75.00	937.98	937.19	936.37
400+00.00	952.92	953.11	952.92	411+00.00	943.63	943.82	943.63	422+00.00	938.00	937.21	936.41
400+25.00	952.75	952.94	952.75	411+25.00	943.33	943.52	943.33	422+25.00	938.05	937.26	936.47
400+50.00	952.57	952.76	952.57	411+50.00	943.03	943.22	943.03	422+50.00	938.13	937.34	936.55
400+75.00	952.38	952.57	952.38	411+75.00	942.73	942.92	942.73	422+75.00	938.25	937.46	936.67
401+00.00	952.16	952.35	952.16	412+00.00	942.43	942.62	942.43	423+00.00	938.39	937.60	936.81
401+25.00	951.90	952.09	951.90	412+25.00	942.13	942.32	942.19	423+25.00	938.56	937.77	936.98
401+50.00	951.86	952.05	951.86	412+50.00	941.83	942.02	941.95	423+50.00	938.75	937.96	937.17
401+75.00	951.80	951.99	951.80	412+75.00	941.53	941.72	941.71	423+75.00	938.98	938.19	937.40
402+00.00	951.78	951.97	951.78	413+00.00	941.23	941.42	941.53	424+00.00	939.23	938.44	937.65
402+25.00	951.76	951.95	951.76	413+25.00	940.92	941.14	941.35	424+25.00	939.50	938.71	937.92
402+50.00	951.74	951.93	951.74	413+50.00	940.61	940.91	941.19	424+50.00	939.80	939.01	938.22
402+75.00	951.72	951.91	951.72	413+75.00	940.31	940.65	940.96	424+75.00	940.13	939.34	938.55
403+00.00	951.70	951.89	951.70	414+00.00	940.00	940.35	940.67	425+00.00	940.49	939.70	938.91
403+25.00	951.66	951.85	951.66	414+25.00	939.70	940.06	940.39	425+25.00	940.86	940.07	939.28
403+50.00	951.61	951.80	951.61	414+50.00	939.41	939.78	940.13	425+50.00	941.23	940.44	939.65
403+75.00	951.56	951.75	951.56	414+75.00	939.15	939.54	939.91	425+75.00	941.59	940.80	940.01
404+00.00	951.49	951.68	951.49	415+00.00	938.89	939.29	939.67	426+00.00	941.93	941.14	940.35
404+25.00	951.42	951.61	951.42	415+25.00	938.65	939.06	939.46	426+25.00	942.25	941.46	940.67
404+50.00	951.33	951.52	951.33	415+50.00	938.42	938.84	939.25	426+50.00	942.55	941.76	940.97
404+75.00	951.16	951.35	951.16	415+75.00	938.22	938.64	939.05	426+75.00	942.82	942.03	941.24

PAVEMENT ELEVATION TABLES

STATION	LEFT EDGE	CENTER LINE	RIGHT EDGE	STATION	LEFT EDGE	CENTER LINE	RIGHT EDGE	STATION	LEFT EDGE	CENTER LINE	RIGHT EDGE
427+00.00	943.08	942.29	941.50	438+00.00	944.06	944.25	944.06	449+00.00	939.06	939.25	939.22
427+25.00	943.32	942.53	941.74	438+25.00	944.04	944.23	944.04	449+25.00	938.94	939.13	939.19
427+50.00	943.52	942.74	941.96	438+50.00	944.00	944.19	944.00	449+50.00	938.82	939.01	939.18
427+75.00	943.59	942.87	942.15	438+75.00	943.94	944.13	943.94	449+75.00	938.71	938.95	939.19
428+00.00	943.67	943.08	942.33	439+00.00	943.85	944.04	943.85	450+00.00	938.62	938.92	939.22
428+25.00	943.78	943.09	942.48	439+25.00	943.74	943.93	943.74	450+25.00	938.54	938.98	939.26
428+50.00	943.72	943.17	942.62	439+50.00	943.62	943.81	943.62	450+50.00	938.48	938.98	939.32
428+75.00	943.71	943.22	942.73	439+75.00	943.50	943.69	943.50	450+75.00	938.44	938.92	939.40
429+00.00	943.69	943.26	942.83	440+00.00	943.41	943.57	943.38	451+00.00	938.42	938.96	939.50
429+25.00	943.64	943.27	942.98	440+25.00	943.34	943.45	943.26	451+25.00	938.41	939.01	939.61
429+50.00	943.60	943.28	942.96	440+50.00	943.27	943.33	943.14	451+50.00	938.42	939.08	939.74
429+75.00	943.51	943.25	942.99	440+75.00	943.20	943.21	943.02	451+75.00	938.45	939.14	939.83
430+00.00	943.48	943.28	943.00	441+00.00	943.17	943.09	942.90	452+00.00	938.50	939.19	939.88
430+25.00	943.28	943.18	942.99	441+25.00	943.15	942.97	942.78	452+25.00	938.56	939.25	939.94
430+50.00	943.15	943.16	942.97	441+50.00	943.12	942.89	942.66	452+50.00	938.64	939.33	940.02
430+75.00	943.05	943.11	942.92	441+75.00	943.10	942.82	942.54	452+75.00	938.74	939.43	940.12
431+00.00	942.92	943.04	942.85	442+00.00	943.08	942.75	942.42	453+00.00	938.86	939.55	940.24
431+25.00	942.77	942.95	942.76	442+25.00	943.06	942.68	942.38	453+25.00	938.99	939.68	940.37
431+50.00	942.65	942.84	942.65	442+50.00	943.04	942.61	942.18	453+50.00	939.14	939.83	940.52
431+75.00	942.53	942.72	942.53	442+75.00	943.02	942.54	942.06	453+75.00	939.38	939.99	940.68
432+00.00	942.41	942.68	942.41	443+00.00	942.92	942.43	941.94	454+00.00	939.46	940.15	940.84
432+25.00	942.29	942.48	942.29	443+25.00	942.80	942.31	941.82	454+25.00	939.62	940.31	941.00
432+50.00	942.17	942.36	942.17	443+50.00	942.68	942.19	941.70	454+50.00	939.78	940.44	941.18
432+75.00	942.05	942.24	942.05	443+75.00	942.56	942.07	941.58	454+75.00	939.94	940.54	941.14
433+00.00	941.93	942.12	941.93	444+00.00	942.44	941.95	941.46	455+00.00	940.10	940.64	941.18
433+25.00	941.81	942.00	941.81	444+25.00	942.32	941.83	941.34	455+25.00	940.26	940.74	941.22
433+50.00	941.69	941.88	941.69	444+50.00	942.20	941.71	941.22	455+50.00	940.42	940.84	941.26
433+75.00	941.66	941.85	941.66	444+75.00	942.08	941.59	941.10	455+75.00	940.58	940.94	941.38
434+00.00	941.71	941.90	941.71	445+00.00	941.94	941.46	940.98	456+00.00	940.74	941.04	941.34
434+25.00	941.82	942.01	941.82	445+25.00	941.72	941.29	940.86	456+25.00	940.98	941.14	941.38
434+50.00	942.00	942.19	942.00	445+50.00	941.58	941.12	940.74	456+50.00	941.06	941.25	941.42
434+75.00	942.23	942.42	942.23	445+75.00	941.28	940.95	940.62	456+75.00	941.22	941.41	941.47
435+00.00	942.48	942.67	942.48	446+00.00	941.06	940.78	940.50	457+00.00	941.38	941.57	941.54
435+25.00	942.74	942.93	942.74	446+25.00	940.84	940.61	940.38	457+25.00	941.54	941.73	941.64
435+50.00	942.99	943.18	942.99	446+50.00	940.62	940.45	940.26	457+50.00	941.70	941.89	941.74
435+75.00	943.23	943.42	943.23	446+75.00	940.48	940.33	940.14	457+75.00	941.86	942.05	941.86
436+00.00	943.43	943.62	943.43	447+00.00	940.28	940.21	940.02	458+00.00	942.02	942.21	942.02
436+25.00	943.56	943.75	943.56	447+25.00	940.03	940.09	939.90	458+25.00	942.18	942.37	942.18
436+50.00	943.70	943.89	943.70	447+50.00	939.86	939.97	939.78	458+50.00	942.34	942.53	942.34
436+75.00	943.82	944.01	943.82	447+75.00	939.69	939.85	939.66	458+75.00	942.50	942.69	942.58
437+00.00	943.91	944.10	943.91	448+00.00	939.54	939.73	939.54	459+00.00	942.66	942.85	942.66
437+25.00	943.98	944.17	943.98	448+25.00	939.42	939.61	939.42	459+25.00	942.82	943.01	942.82
437+50.00	944.03	944.22	944.03	448+50.00	939.38	939.49	939.34	459+50.00	942.98	943.17	942.98
437+75.00	944.06	944.25	944.06	448+75.00	939.18	939.37	939.28	459+75.00	943.14	943.33	943.14

PAVEMENT ELEVATION TABLES

STATION	LEFT EDGE	CENTER LINE	RIGHT EDGE
460+00.00	943.30	943.49	943.30
460+25.00	943.45	943.64	943.45
460+50.00	943.59	943.78	943.59
460+75.00	943.70	943.89	943.70
461+00.00	943.80	943.99	943.80
461+25.00	943.88	944.07	943.88
461+50.00	943.95	944.14	943.95
461+75.00	943.99	944.18	943.99
462+00.00	944.02	944.21	944.02
462+25.00	944.03	944.22	944.03
462+50.00	944.07	944.22	944.03
462+75.00	944.09	944.19	944.00
463+00.00	944.10	944.15	943.96
463+25.00	944.09	944.09	943.90
463+50.00	944.12	944.02	943.83
463+75.00	944.11	943.92	943.73
464+00.00	944.10	943.86	943.62
464+25.00	944.07	943.78	943.49
464+50.00	944.03	943.69	943.35
464+75.00	943.96	943.57	943.18
465+00.00	943.88	943.44	943.00
465+25.00	943.79	943.30	942.81
465+50.00	943.60	943.11	942.62
465+75.00	943.41	942.92	942.43
466+00.00	943.22	942.73	942.24
466+25.00	943.03	942.54	942.05
466+50.00	942.84	942.35	941.86
466+75.00	942.65	942.16	941.67
467+00.00	942.42	941.95	941.48
467+25.00	942.13	941.71	941.29
467+50.00	941.84	941.47	941.10
467+75.00	941.55	941.23	940.91
468+00.00	941.26	940.99	940.72
468+25.00	940.97	940.75	940.53
468+50.00	940.68	940.53	940.34
468+75.00	940.39	940.34	940.15
469+00.00	940.12	940.15	939.96
469+25.00	939.89	939.96	939.77
469+50.00	939.65	939.77	939.58
469+75.00	939.41	939.58	939.39
470+00.00	939.20	939.39	939.20
470+25.00	939.01	939.20	939.01
470+50.00	938.82	939.01	938.82
470+75.00	938.65	938.84	938.65

STATION	LEFT EDGE	CENTER LINE	RIGHT EDGE
471+00.00	938.52	938.71	938.52
471+25.00	938.44	938.63	938.44
471+50.00	938.39	938.58	938.39
471+75.00	938.39	938.58	938.39
472+00.00	938.42	938.61	938.42
472+25.00	938.50	938.69	938.50
472+50.00	938.62	938.81	938.62
472+75.00	938.76	938.95	938.65
473+00.00	938.88	939.07	938.77
473+25.00	938.96	939.15	938.85
473+50.00	938.99	939.18	938.88
473+75.00	938.99	939.18	938.88
474+00.00	938.94	939.13	938.83
474+25.00	938.86	939.05	938.75
474+50.00	938.73	938.92	938.62
474+75.00	938.56	938.75	938.45
475+00.00	938.35	938.54	938.24
475+25.00	938.10	938.29	937.99
475+50.00	937.80	937.99	937.69
475+75.00	937.47	937.66	937.36
476+00.00	937.09	937.28	936.98
476+25.00	936.68	936.87	936.57
476+50.00	936.22	936.41	936.11
476+75.00	935.83	936.00	935.66
477+00.00	935.56	935.70	935.20

TRAFFIC CONTROL GENERAL NOTES

	STATE	PROJECT	42 89
	OHIO		

DEL-36-748

202 - REMOVAL OF GROUND MOUNTED SIGN INSTALLATIONS FOR STORAGE

This work shall consist of the removal of sign installations as shown on the plans.

Work shall consist of the removal of sign supports, signs and foundations and the disposal of surplus material.

All signs, supports and accessories removed shall be stored within the limits of the project at locations approved by the Engineer for removal by state forces.

To assure maintenance of adequate traffic control at all times, no signs shall be removed without the approval of the Engineer.

Payment for removal of ground mounted sign installations will include all necessary labor and equipment required to perform the required work as indicated above.

Basis of payment will be as follows:

- (1) 202 Removal of Ground Mounted Major Sign Installations for Storage, at the contract bid price per each, for signs forty (40) square feet or greater.
- (2) 202 Removal of Ground Mounted Sign Installations for Storage, at the contract bid price per each, for signs less than forty (40) square feet.

844 - REMOVE AND REERECT GROUND MOUNTED SIGNS

This work shall include the removal of each sign and the reerection on the ground mounted support at the location shown in the plans.

Basis of payment will be as follows and will include all labor, materials, equipment and incidentals necessary to perform the required work:

- (1) 844 Remove and Reerect Ground Mounted Major Signs, at the contract price bid per each, for signs forty (40) square feet or greater.
- (2) 844 Remove and Reerect Ground Mounted Signs, at the contract price bid per each, for signs less than forty (40) square feet.

844 - SIGNS, BY TYPE

Sign face background material shall be Type F reflective sheeting unless otherwise specified in the plans. The proposed background color and legend type shall be shown on each sign layout shop drawing submitted for review in accordance with 844.04.

844 - DRIVE POSTS

Drive posts shall be steel in accordance with 712.20.

844 - ALTERNATE DESIGNS FOR SIGN SUPPORTS

If the Contractor desires to furnish alternate design(s) or materials for sign supports, the alternate design(s) shall be submitted to the state at least 21 days prior to opening of bids. The bidder will be notified as to acceptance or rejection of alternate design at least 7 days before bids are to be opened. Submissions shall be made to the Ohio Department of Transportation, Bureau of Design Services, 25 South Front Street, Columbus, Ohio 43215.

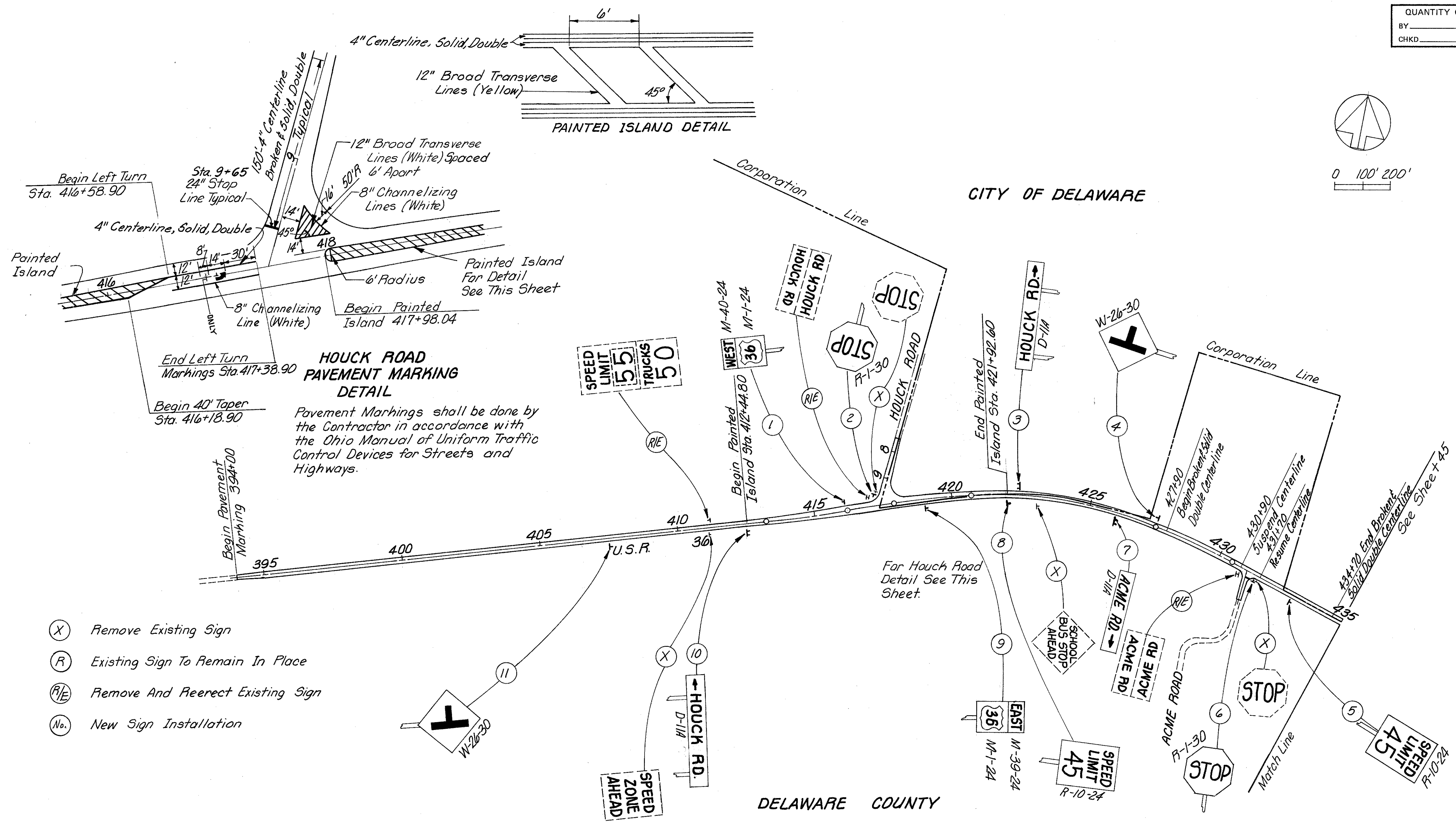
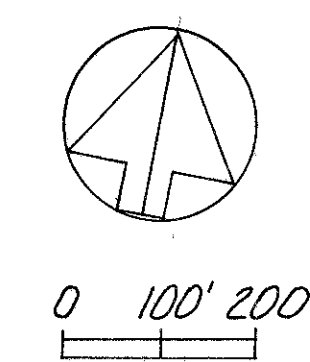
PAVEMENT MARKING SCHEDULE		ITEM 621																	
Sheet	LOCATION	Center Lines : Solid, Double		Center Lines : Broken & Solid, Double		Center Lines : Broken, Single		Broad Transverse Lines : 12" (White)		Broad Transverse Lines : 12" (Yellow)		Stop Lines : 24"		Edge Lines (White)		Lane Arrows		Word (ONLY) On Pavement Channelizing Line (White)	
		L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	L.F.	EA.	EA.	L.F.				
44	394+00 to 411+44.80			1745								3490							
44	411+44.80 to 412+84.80	140										280							
44	412+84.80 to 417+38.90	826						526				908	1	1	80				
44	417+38.90 to 417+98.04											59							
44	417+98.04 to 421+52.60	709						501				729							
44	421+52.60 to 422+92.60	140										280							
44	422+92.60 to 435+00		600	527								2416							
45	435+00 to 476+57		600	3457							30	7960							
45	476+57 to 478+07		150									150							
44	White Island, Houck Rd.							98											95
44	7+50 to 9+65, Houck Rd.		150	65							12	395							
44	10+25 to 11+75, Acme Rd.		150								15	300							
	TOTALS	1815	1650	5794				98	1027		57	16967	1	1	175				
				or 1.75 Mi.					or 1125 L.F.			or 321 Mi.							

SHEET 43	SHEET 44	SHEET 45	SHEET 44											SHEET 45						TOTAL	UNIT	DESCRIPTION							
			Sign Location	416+00	9+60, Houck Rd.	422+50	427+50	433+00	10+25, Acme Rd.	426+00	422+00	419+00	412+50	407+50	454+25	464+25	436+00	444+00	470+50				450+00	473+12	9+75 Market Drive				
			Sign Number	1	2	3	4	5	6	7	8	9	10	11	7	8	1	2	3				4	5	6				
Sign Code Number	M-1-24-2	M-40-24	R-1-30	D-11A	M-26-30	R-10-24	R-1-30	D-11A	R-10-24	M-1-24-2	M-39-24	D-11A	M-26-30	D-11A	D-11A	R-10-24	R-10-24	R-10-24	N-1-40	R-1-30									
	4	12																							202	16	EA.	Removal of Ground Mounted Sign Installations For Storage	
3.21																										621	3.21	MI.	Edge Lines
1.75																										621	1.75	MI.	Center Lines
175																										621	175	L.F.	Channelizing Lines
57																										621	57	L.F.	24" Stop Lines
1125																										621	1125	L.F.	12" Broad Transverse Lines
1																										621	1	EA.	Lane Arrows
1																										621	1	EA.	Word (ONLY) on Pavement, as per plan
			6	6.25		6.25	5	6.25		5	6		6.25													844	74	S.F.	Signs, Flat Sheet
			15	15	10.5		15	15	10.5		15	15	10.5		12	12	10.5									844	66	S.F.	Signs, Extru Sheet
	3	2													27	27	27	15	15	15	28	15				844	370	L.F.	Ground Mounted Supports, No. 3 Steel Post, Driven
																										844	5	EA.	Remove and Rereect Ground Mounted Signs

QUANTITY CALCULATIONS		FHWA REGION	STATE	PROJECT
BY _____	DATE _____	5	OHIO	
CHKD _____	DATE _____			

44
89

DEL-36-7.48



HOUCK ROAD PAVEMENT MARKING DETAIL
 Pavement Markings shall be done by the Contractor in accordance with the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways.

SPEED LIMIT 55 TRUCKS 50

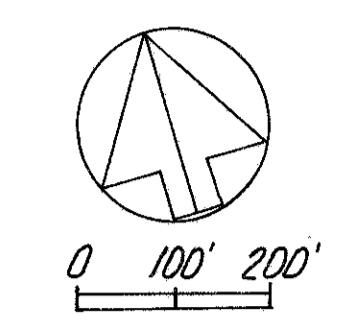
- (X) Remove Existing Sign
- (R) Existing Sign To Remain In Place
- (RE) Remove And Reerect Existing Sign
- (No.) New Sign Installation

DELAWARE COUNTY

For Quantities See Sheet 43

QUANTITY CALCULATIONS		FHWA REGION	STATE	PROJECT
BY _____	DATE _____	5	OHIO	
CHKD _____	DATE _____			

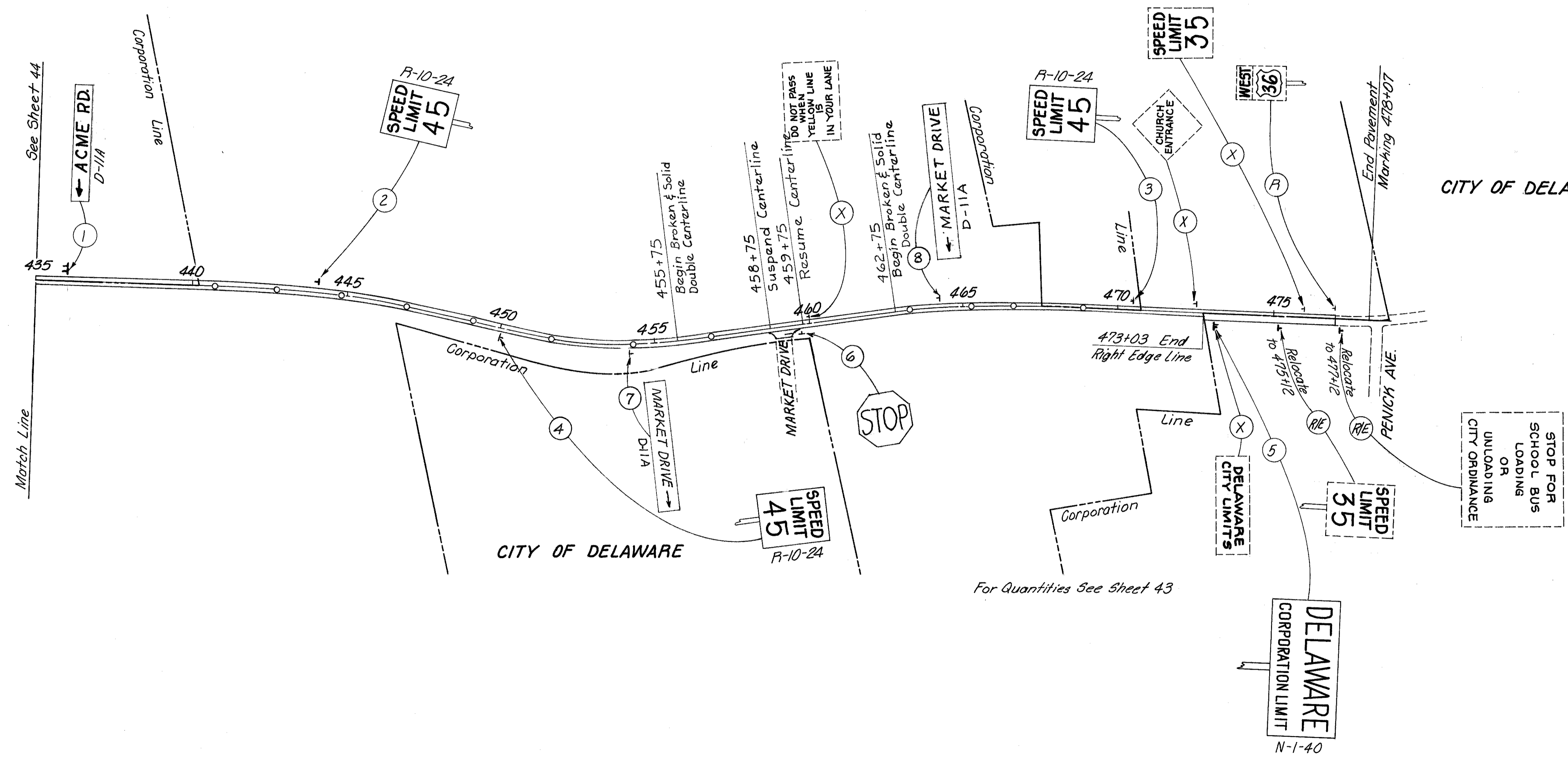
DEL-36-7.48



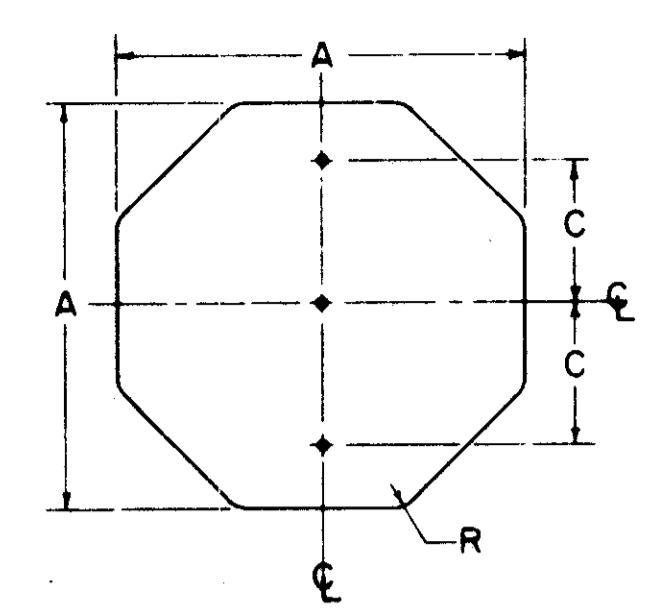
The Contractor shall Remove 8 sign installations: 5, W-1 and W-2 Curve Signs, 1 W-32 Large Arrow Sign, and 2 R-10 and R-16 Speed Limit Signs, none of which are located on this plan.

DELAWARE COUNTY

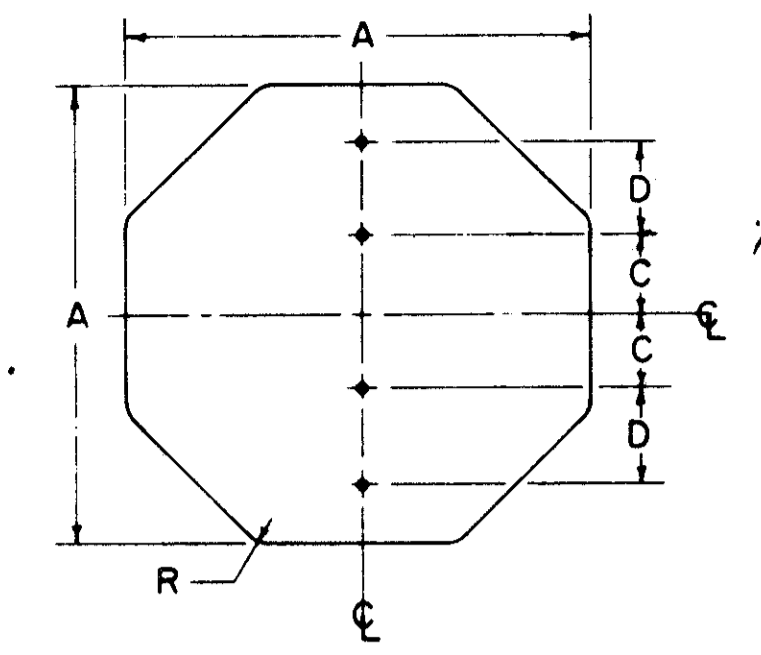
CITY OF DELAWARE



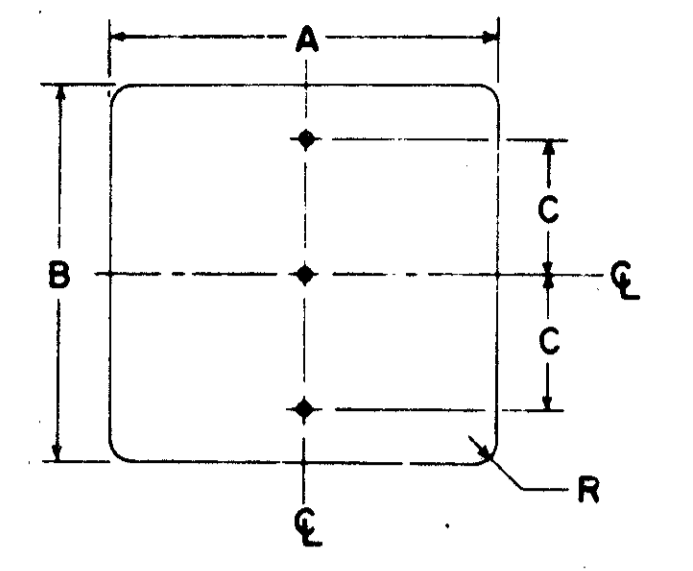
For Quantities See Sheet 43



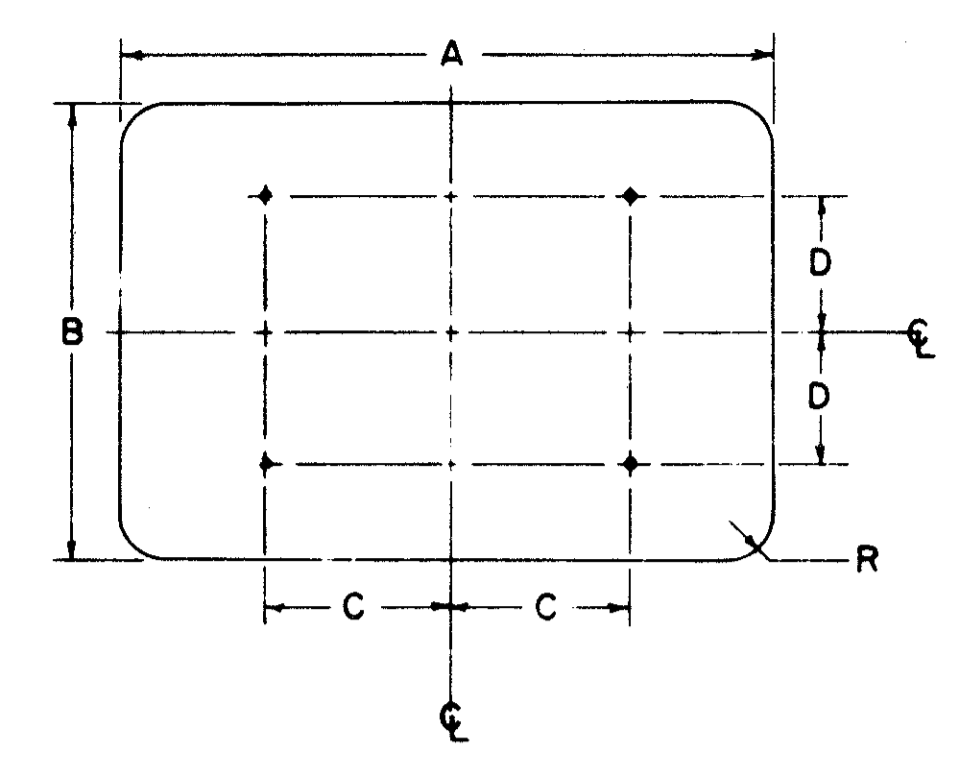
A	C	R	GAUGE
30	8	1 1/2	.080
36	8	1 1/2	.080



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

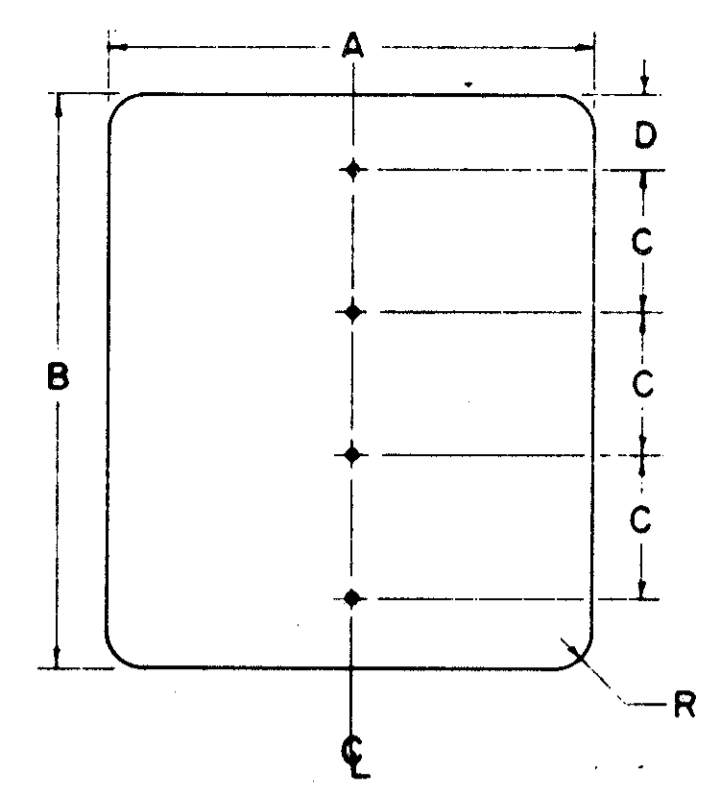


A	B	C	R	GAUGE
24	30	8	1 1/2	.063
24	48	15	1 1/2	.100
30	36	11	1 1/2	.080
30	42	12	1 1/2	.080
36	36	11	1 1/2	.080
36	42	15	1 1/2	.080
36	48	15	1 1/2	.080
48	24	10	3	.100
48	36	13	3	.100

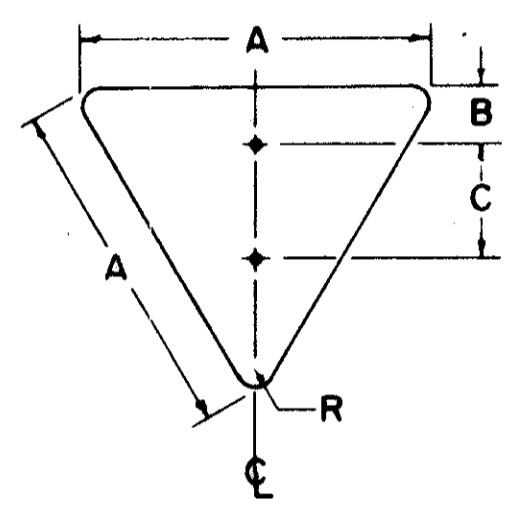


A	B	C	D	R	GAUGE
48	48	22	16	3	.100
48	60	22	22	3	.100

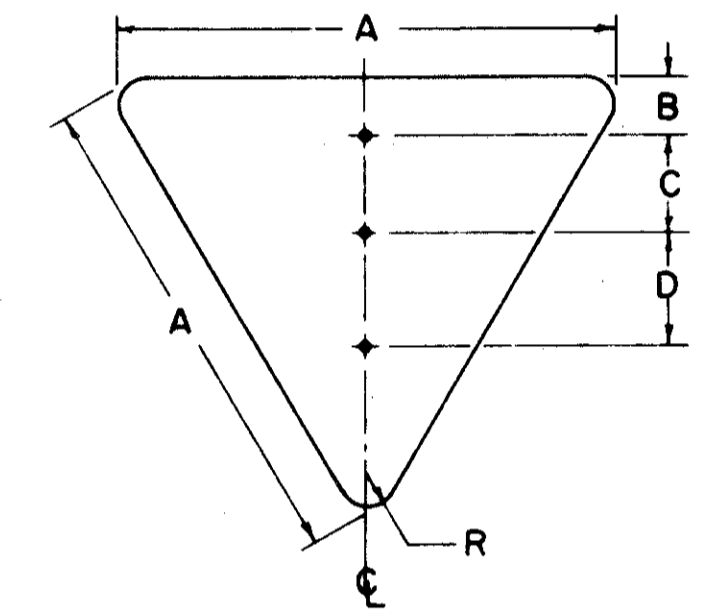
SPEED LIMIT SIGNS ON TWO SUPPORTS



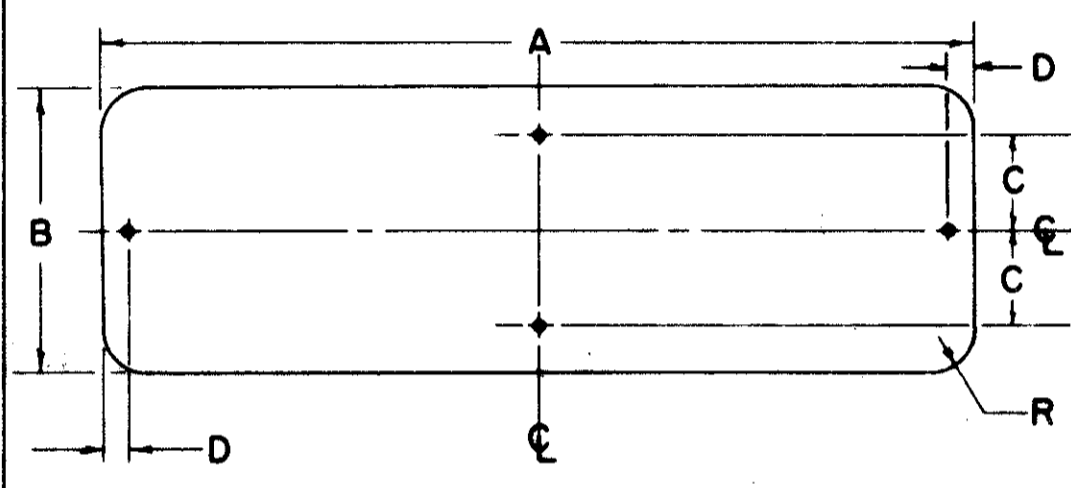
A	B	C	D	R	GAUGE
48	48	12	6	3	.100
48	60	15	7 1/2	3	.100



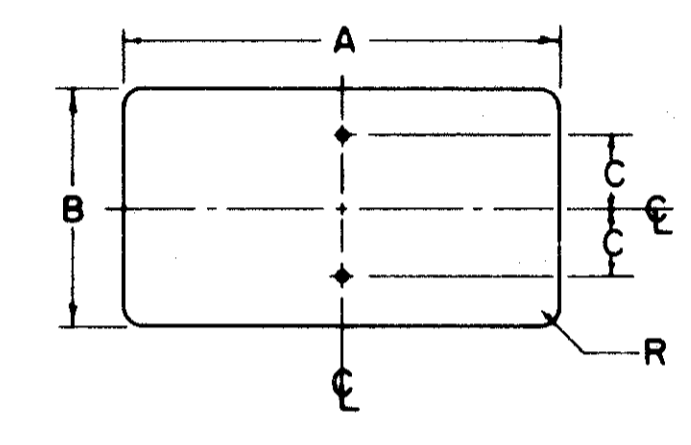
A	B	C	R	GAUGE
36	3	16	2 1/2	.080



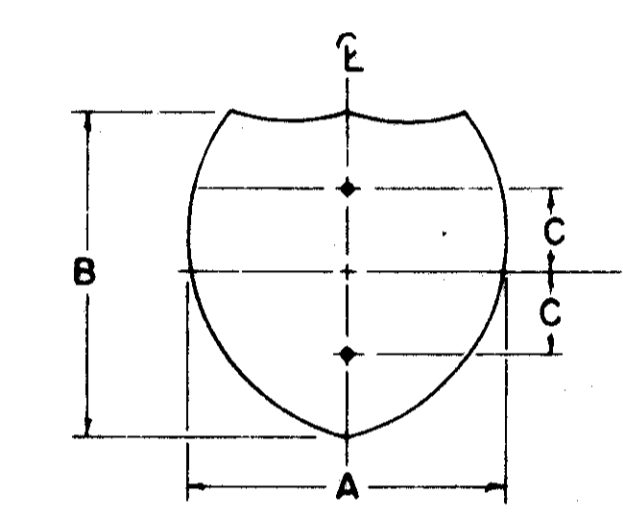
A	B	C	D	R	GAUGE
48	4	10	15	3	.100
60	5	10	15	4	.100



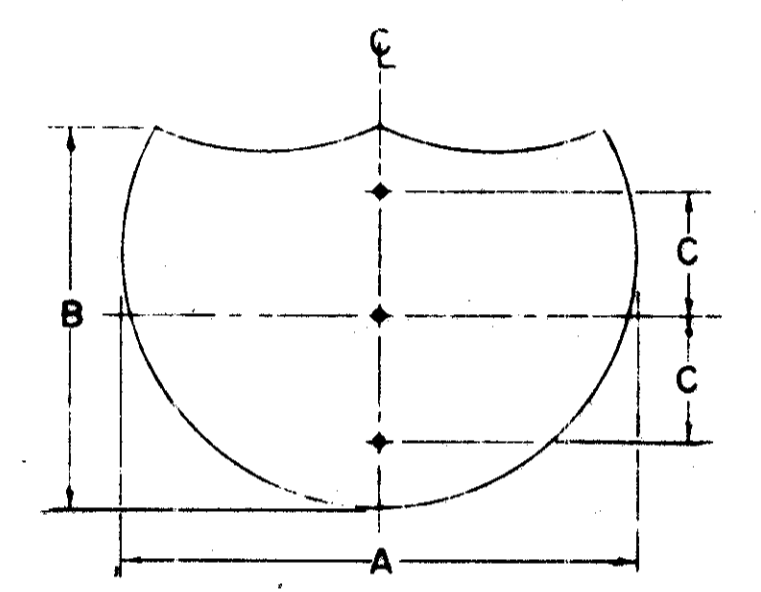
A	B	C	D	R	GAUGE
36	12	4	1	1 1/2	.080
72	12	-	16	1 1/2	.100
60	12	-	13	1 1/2	.100



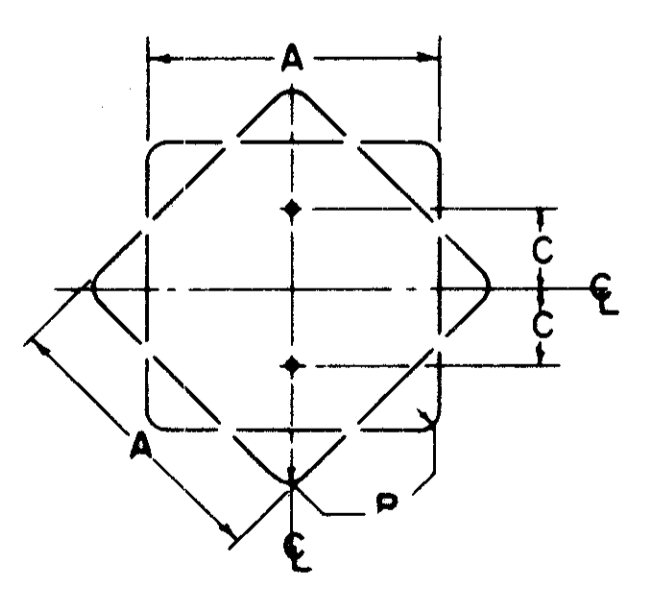
A	B	C	R	GAUGE
12	6	1 1/2	1 1/2	.063
20	15	6	1 1/2	.063
24	12	4 1/2	1 1/2	.063
24	18	7 1/2	1 1/2	.063
8	26	8	1	.063
36	18	7 1/2	1 1/2	.080



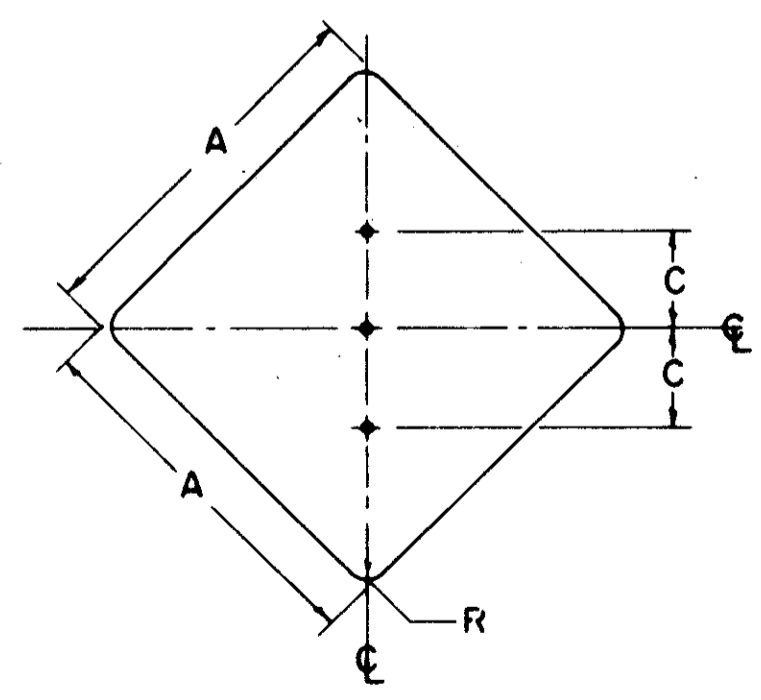
A	B	C	GAUGE
24	24	8	.063
30	24	8	.080



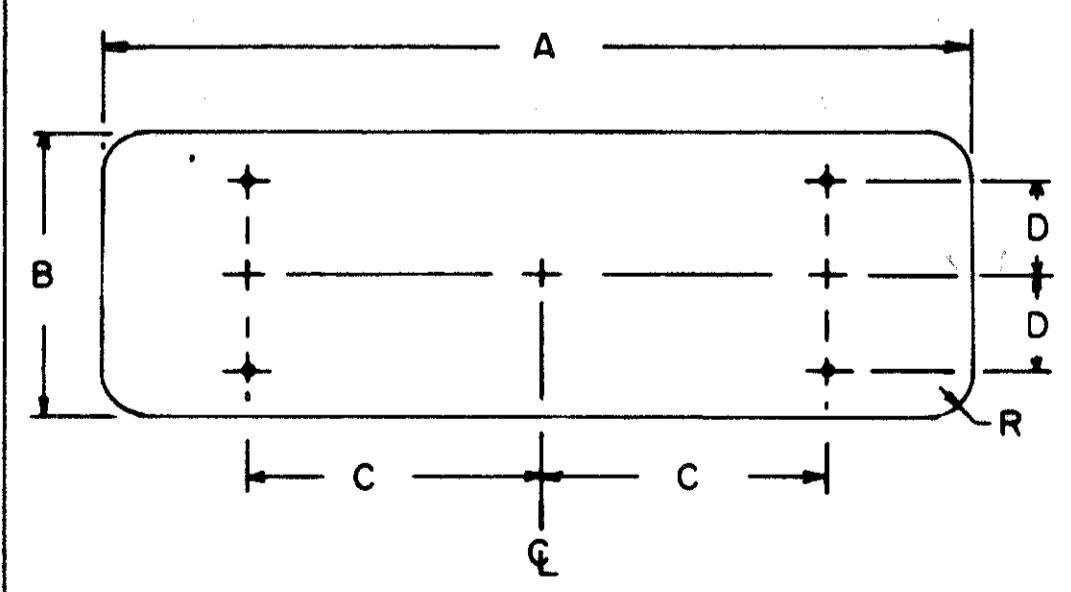
A	B	C	GAUGE
36	36	11	.080
48	36	11	.100



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

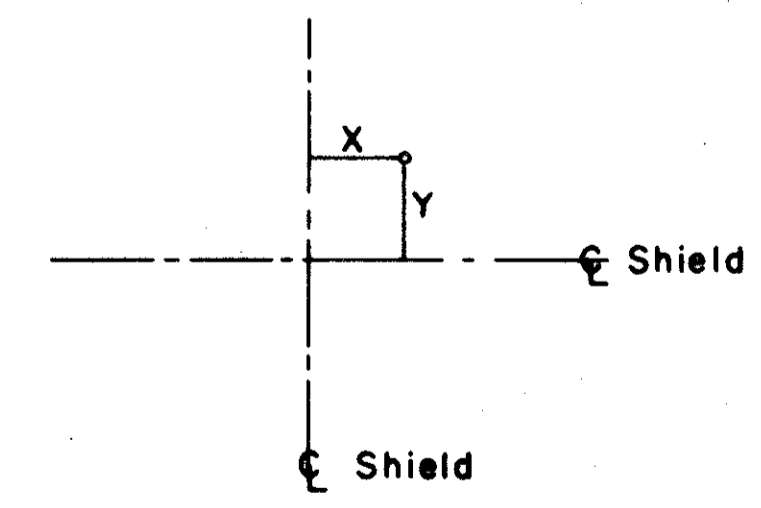


A	C	R	GAUGE
36	12	1 1/2	.080
48	14	3	.100



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

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



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

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

NOTES:

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

MATERIAL

FLAT SIGN BLANKS SHALL BE FURNISHED IN ALUMINUM ALLOY 6061-T6, (ASTM-B209, GS11A-T6) WITH MILL FINISH.

BOLT HOLES

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

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

SIGN BLANK
DETAILS

SBD

APPROVED _____
ENGINEER OF TRAFFIC

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

DEL-36-748

NOTES

- THE NEAR EDGE OF ALL MAIN LINE SIGNS, EXCEPT GORE INSTALLATIONS, SHALL BE LOCATED TWO FEET (2') BACK OF GUARD RAIL FACE. THIS DIMENSION SHALL BE DETERMINED BY ROADWAY TYPICAL SECTION 3 USED WHETHER OR NOT GUARD RAIL IS PRESENT.
ON RAMP'S THE NEAR EDGE OF SIGNS SHALL BE LOCATED TWO FEET (2') BACK OF GUARD RAIL FACE. THIS DIMENSION WILL BE DETERMINED AND USED AS FOR MAIN LINE ABOVE.
ON APPROACHES THE NEAR EDGE OF SIGNS, SHALL BE
(A) TWO FOOT (2') BEHIND EXISTING GUARD RAIL
(B) TWO FEET (2') FROM THE EDGE OF PAVED OR TRAVELED SHOULDER WITH A MINIMUM OF 6' FROM EDGE OF ROADWAY PAVEMENT.

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

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

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

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

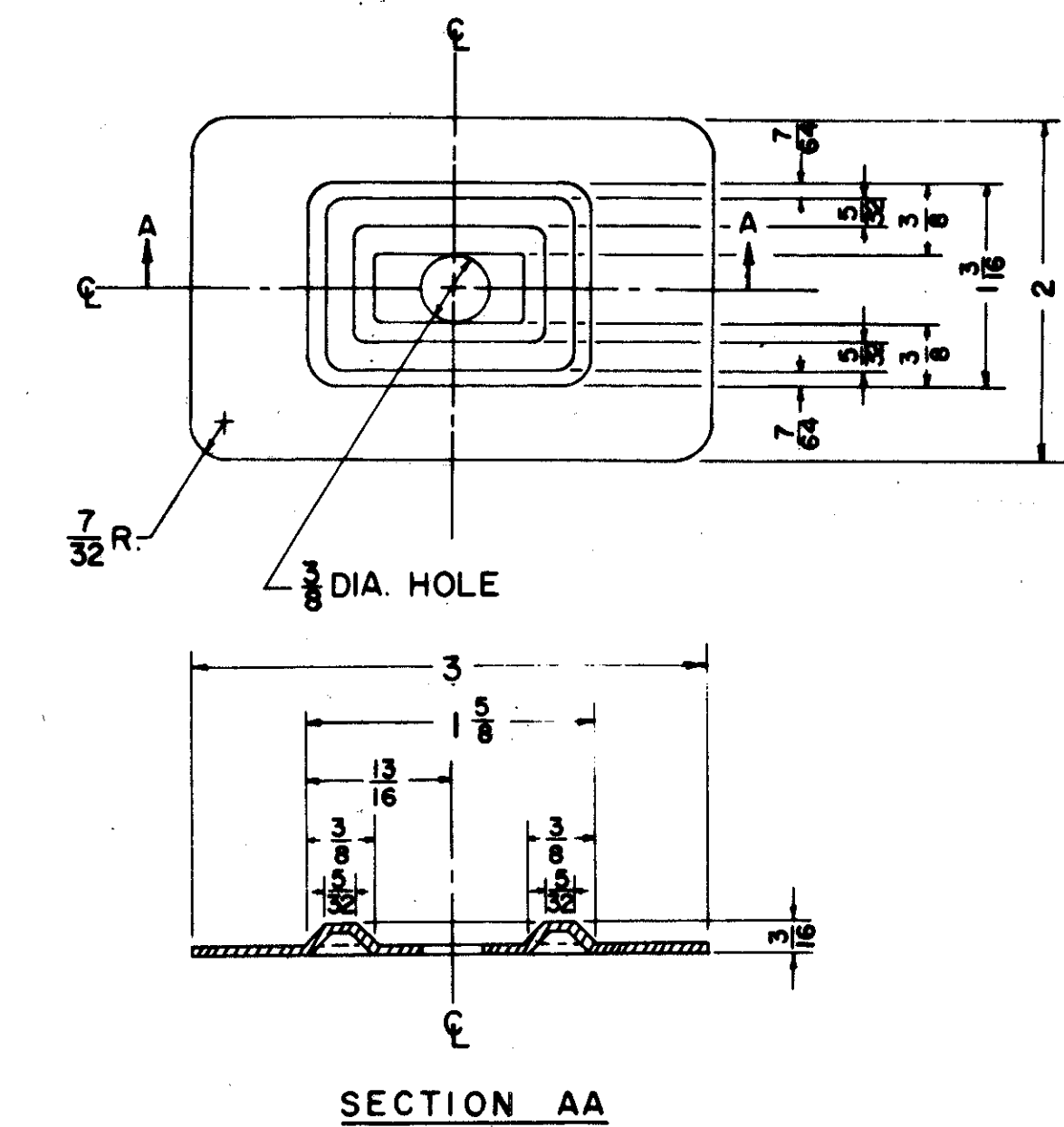
- HORIZONTAL CLEARANCES SHOWN PERTAIN TO NON-CURBED SECTIONS. SECTIONS WITH UNMOUNTABLE CURB SHALL HAVE A HORIZONTAL CLEARANCE OF 2'-0" MINIMUM FROM THE CURB FACE TO THE SIGN EDGE.

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

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

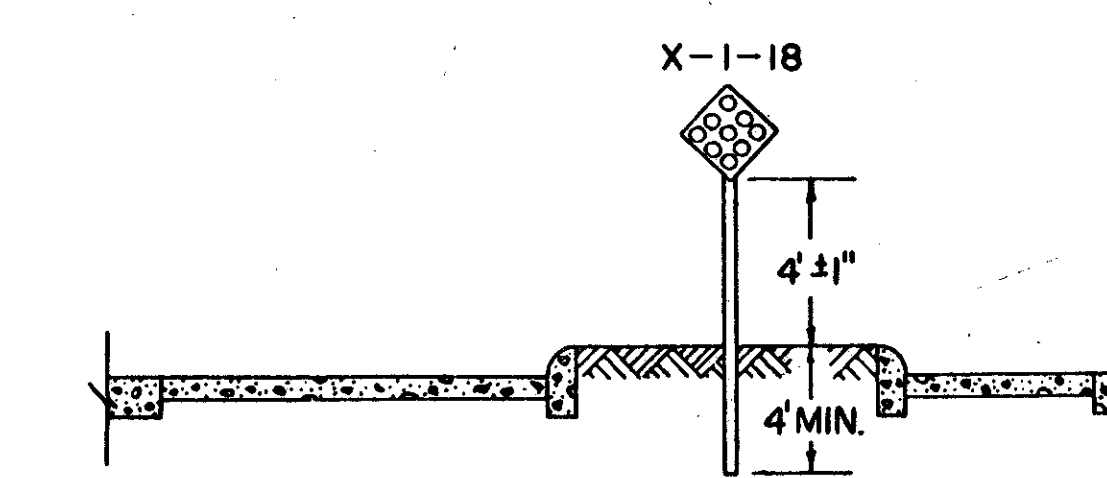
- SOIL PLATES SHALL BE ATTACHED TO ALL 6 LB. BEAMS BETWEEN POSTS AS DETAILED ON THIS SHEET, EXCEPT WHERE BEAMS ARE PLACED IN CONCRETE MEDIANS AS COVERED IN NOTE 2.

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS	
TYPICAL PLACEMENT OF SIGNS	TPS-1
APPROVED _____ ENGINEER OF TRAFFIC	DATE 9-27-67 7-12-68 5-13-69 3-5-71 12-21-71 3-7-72



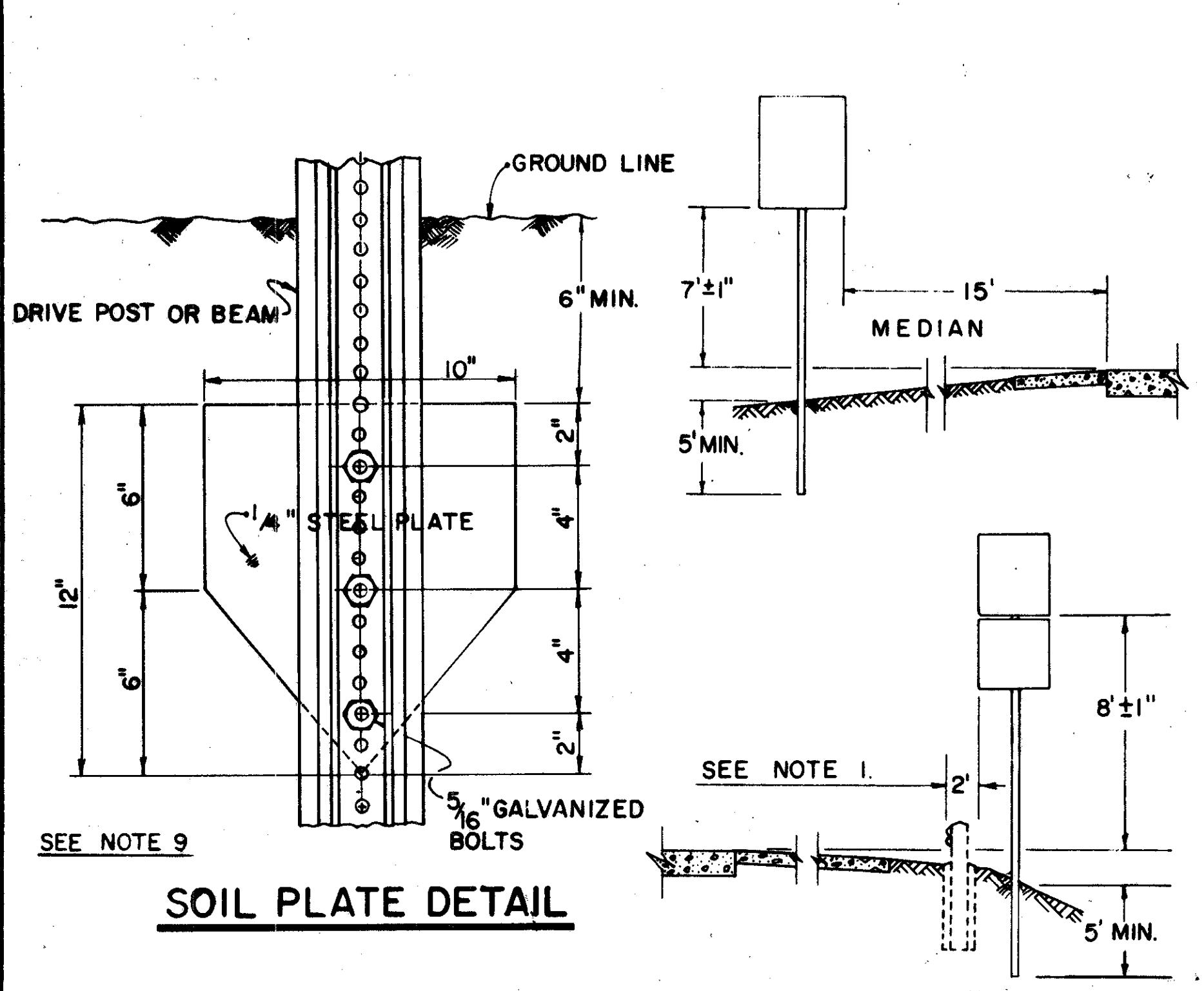
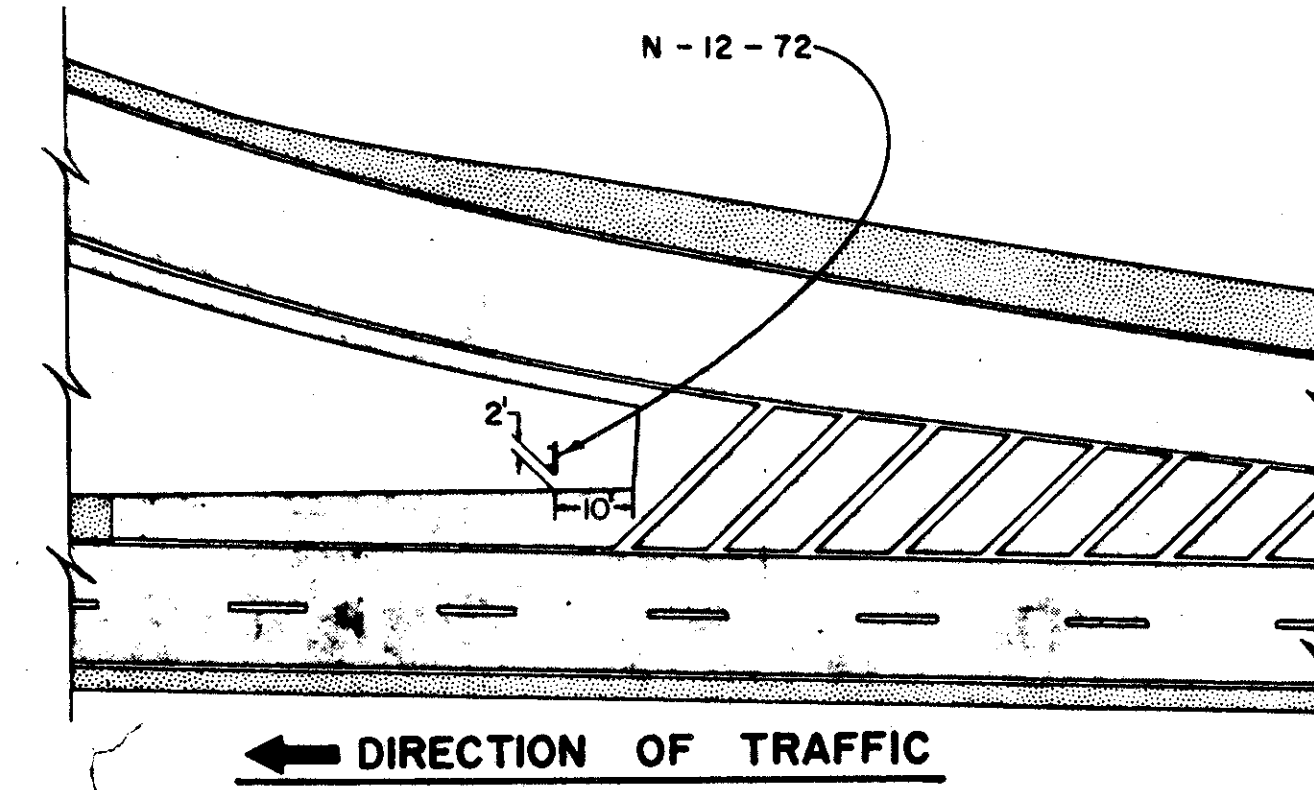
NOTE:
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.
METAL SHALL BE 16 GAUGE STEEL.
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL

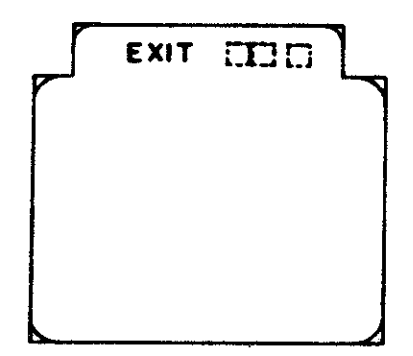
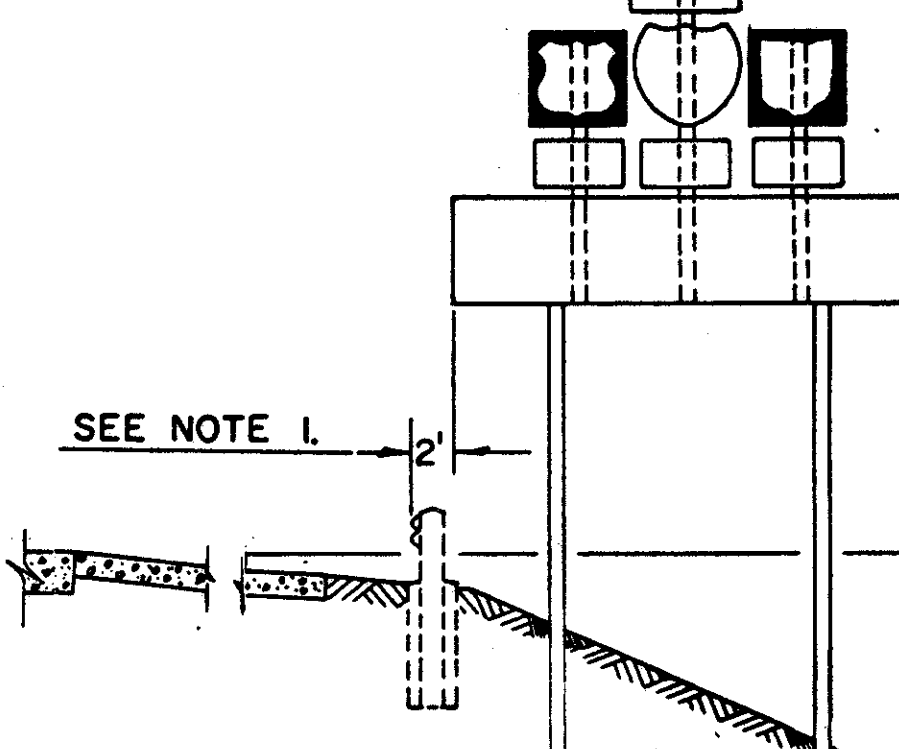
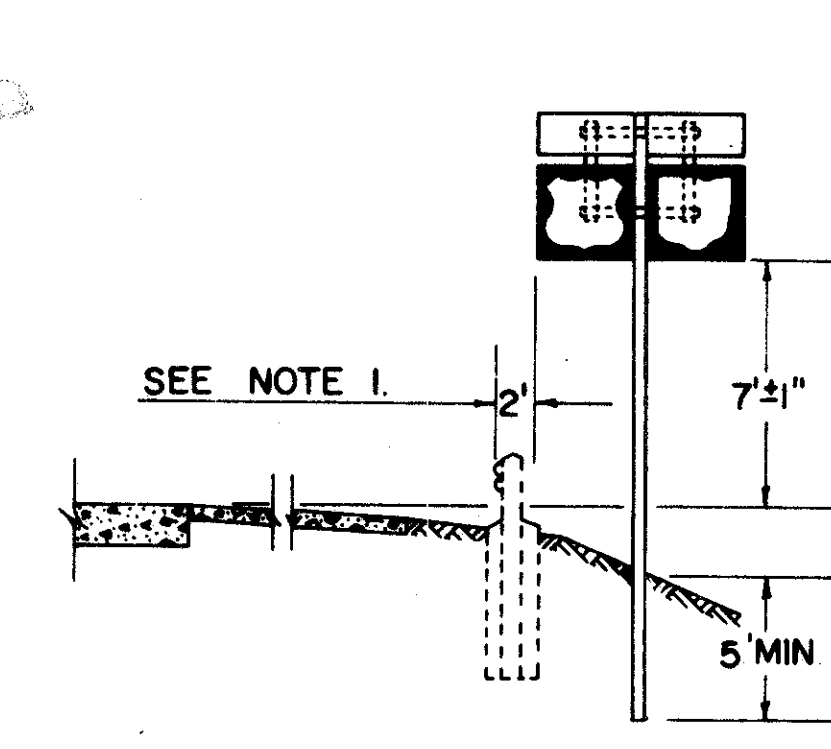
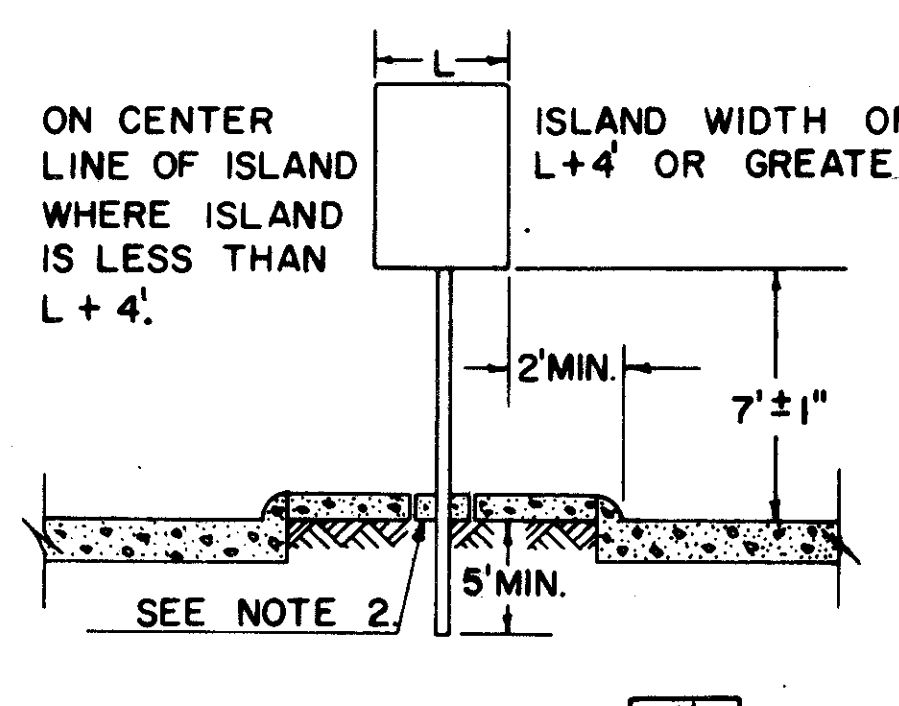
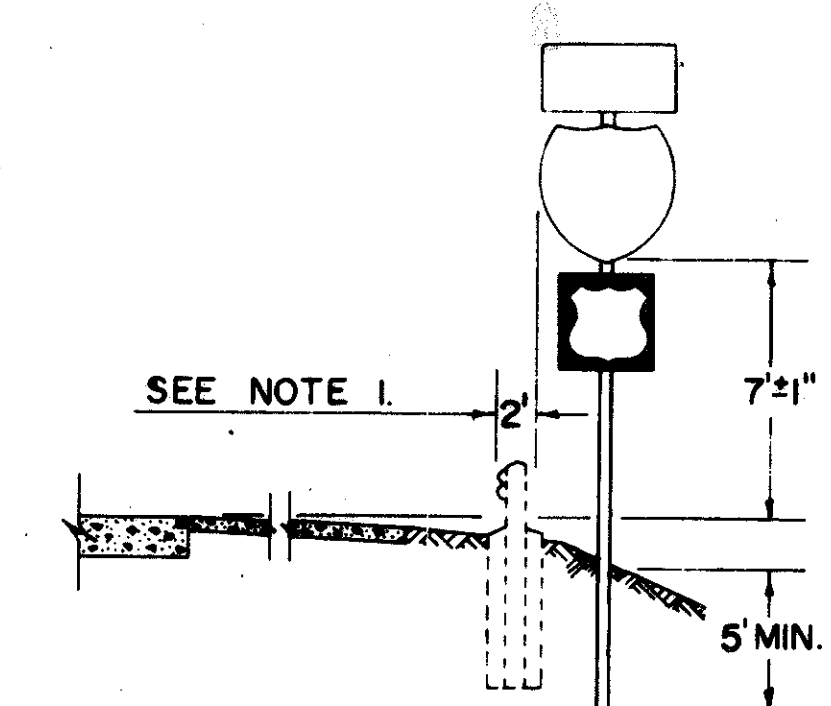
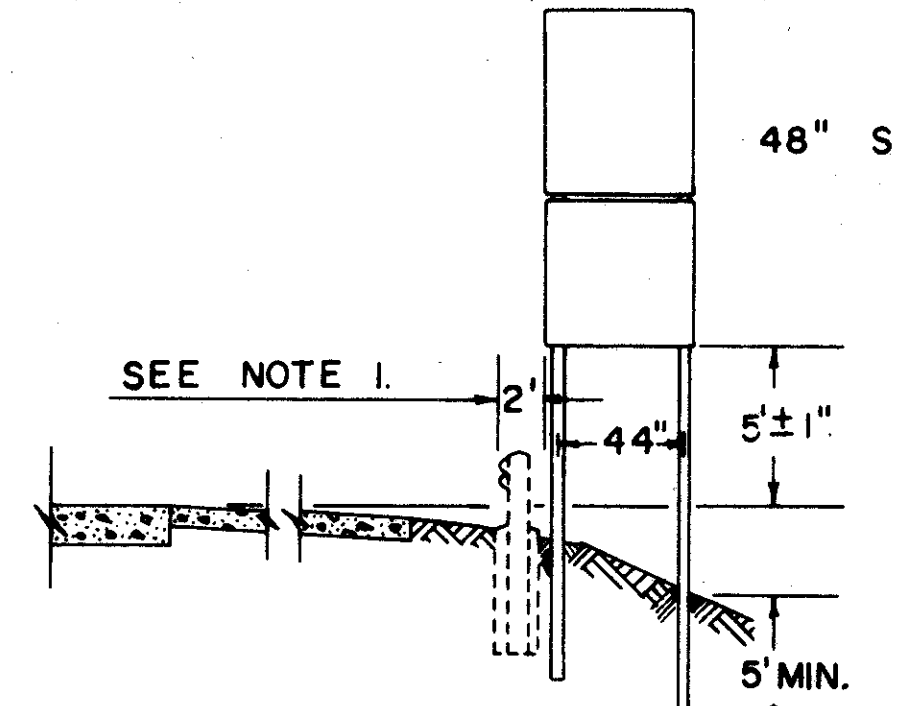
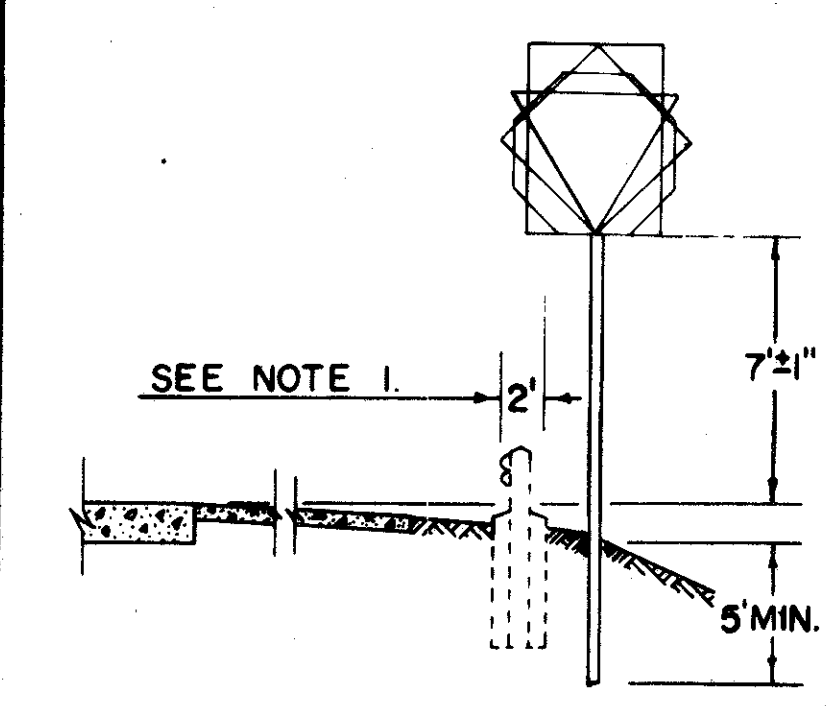
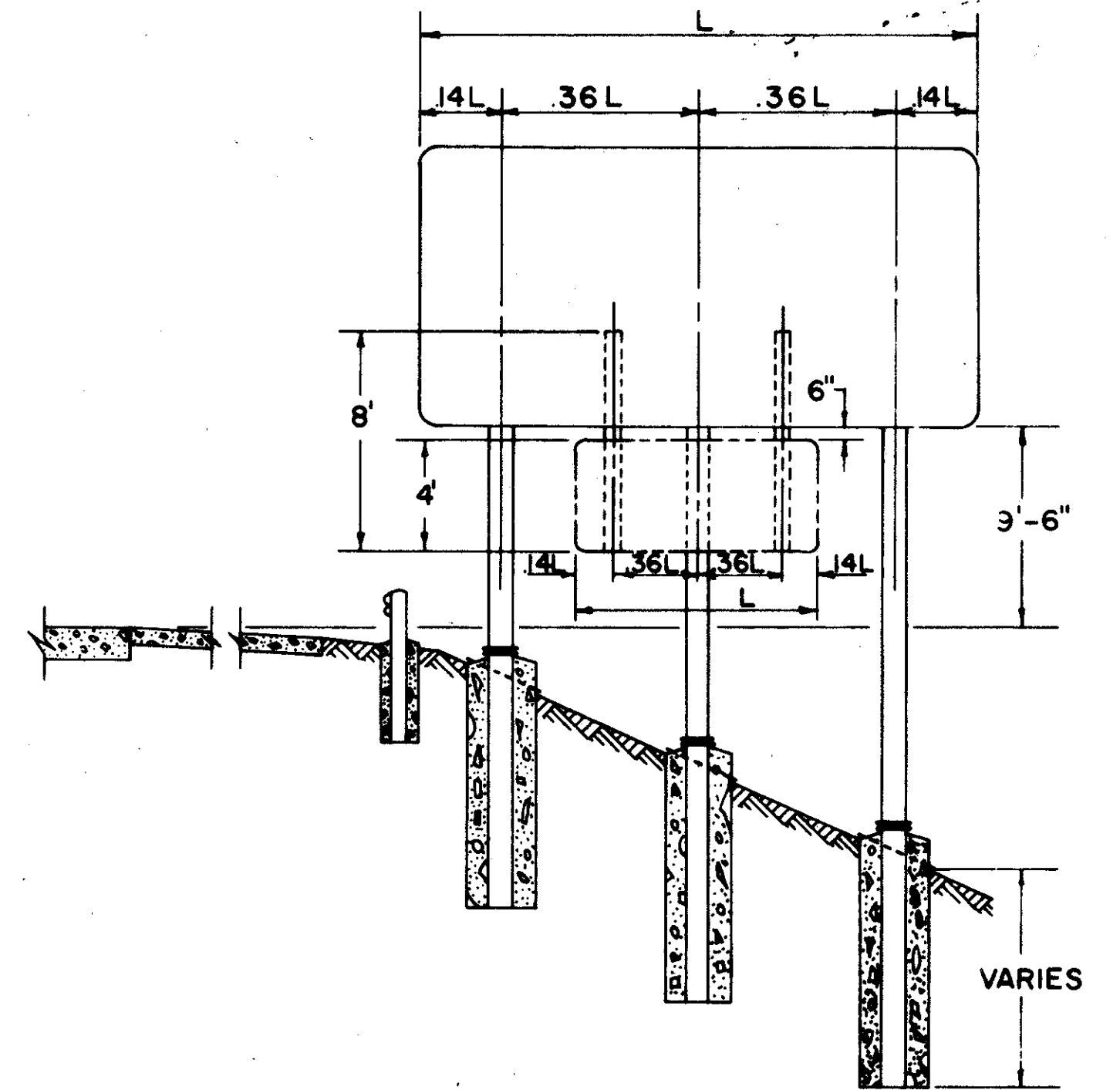
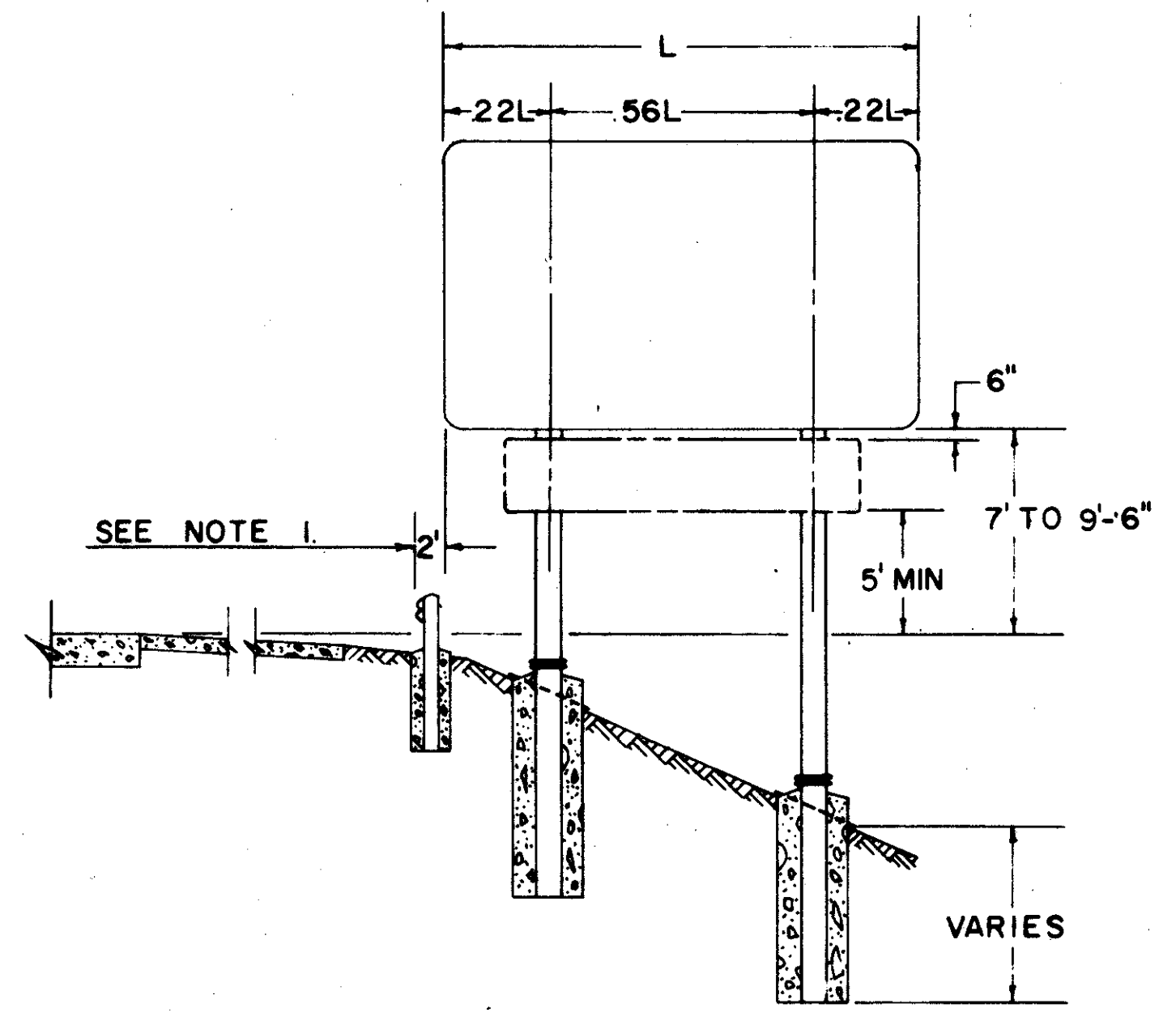


SIGN SUPPORT SPACING

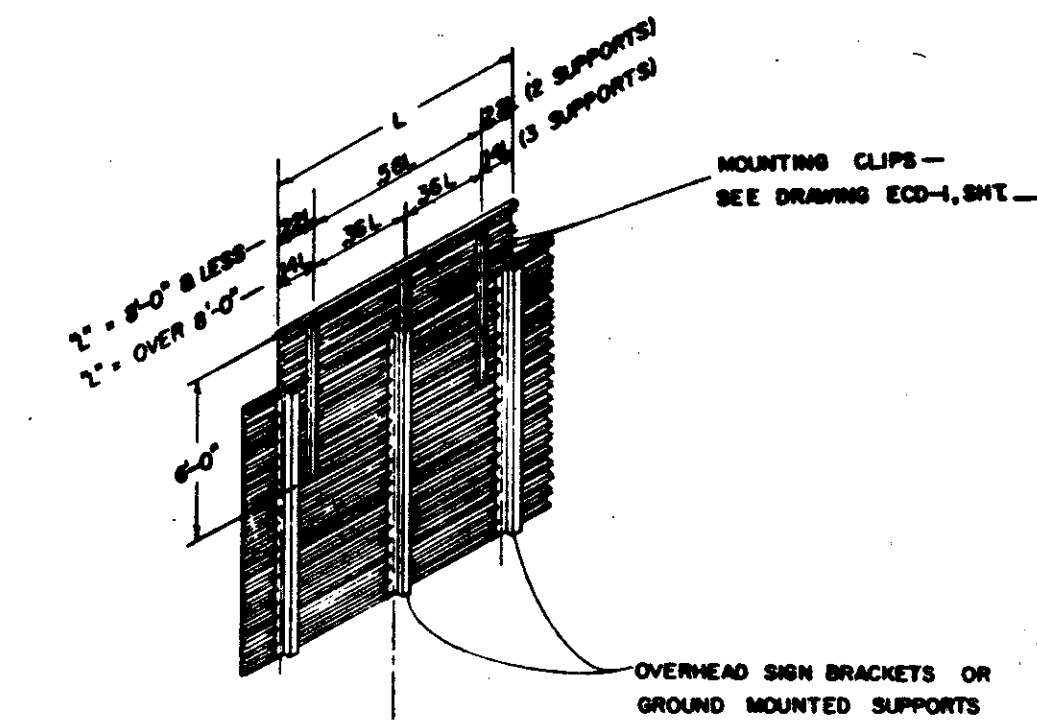
L=FT	2 SUPPORTS				3 SUPPORTS				
	.22	.56	.14	.36	L=FT	.22	.56	.14	.36
5.0	1.10	2.80	0.70	1.80	17.0	3.74	9.52	2.38	6.12
6.0	1.32	3.36	0.84	2.16	18.0	3.96	10.08	2.52	6.48
7.0	1.54	3.92	0.98	2.52	19.0	4.18	10.64	2.66	6.84
8.0	1.76	4.48	1.12	2.88	20.0			2.80	7.20
9.0	1.98	5.04	1.26	3.24	21.0			2.94	7.56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



SOIL PLATE DETAIL



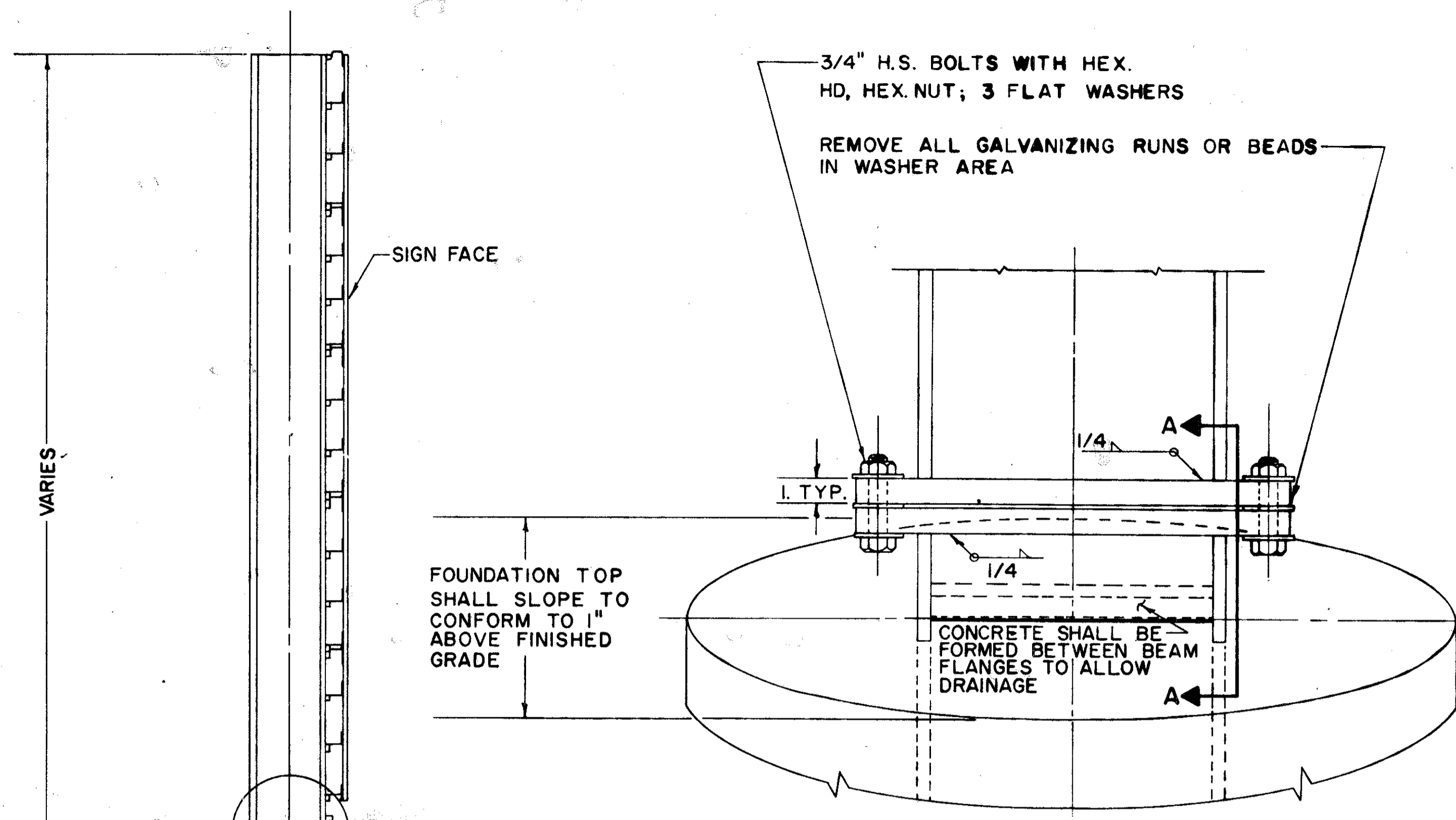
"EXIT" SIGN ATTACHMENT DETAIL



OVERHEAD SIGN BRACKETS OR GROUND MOUNTED SUPPORTS

← DIRECTION OF TRAFFIC

DEL-36-748

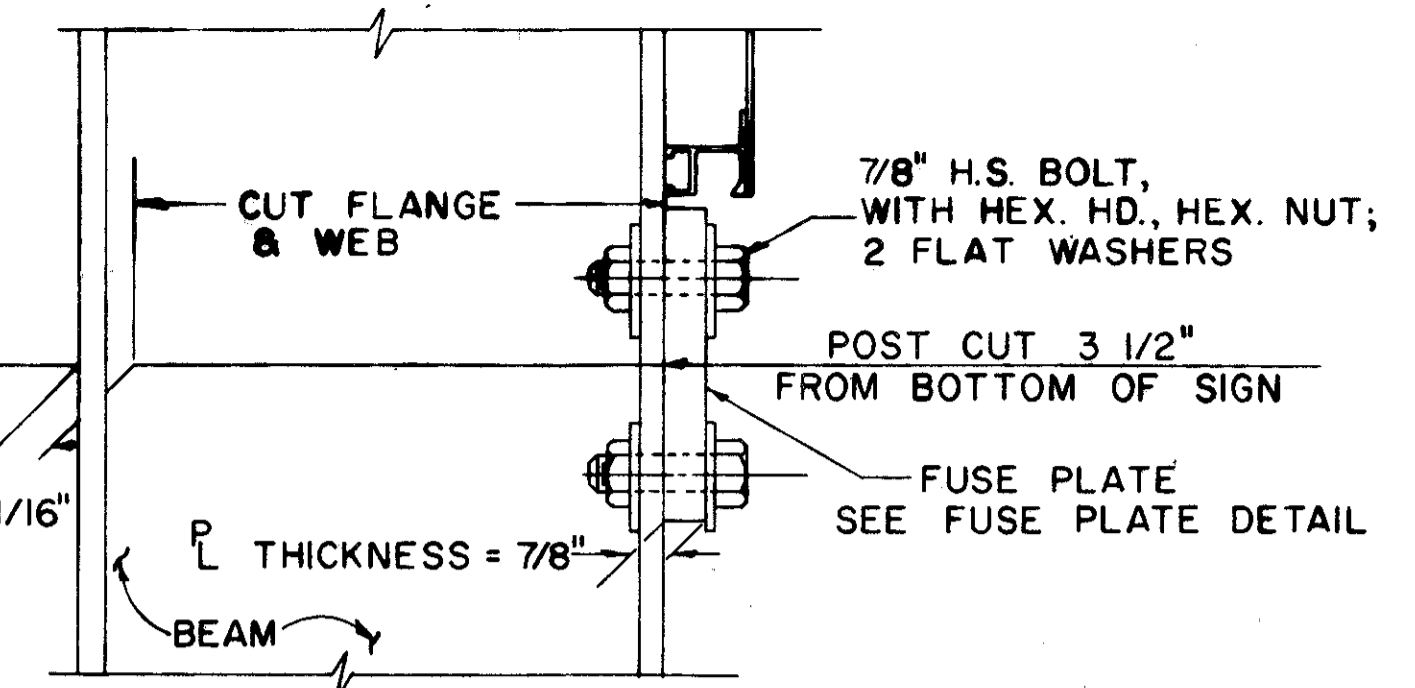


BOLTING PROCEDURE

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

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

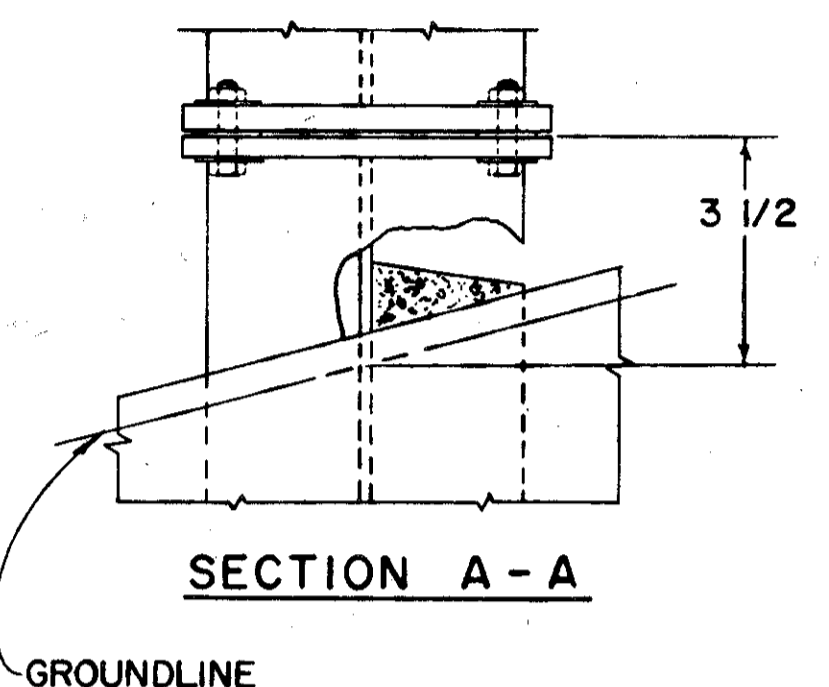
VIEW "A" ROTATED 180°



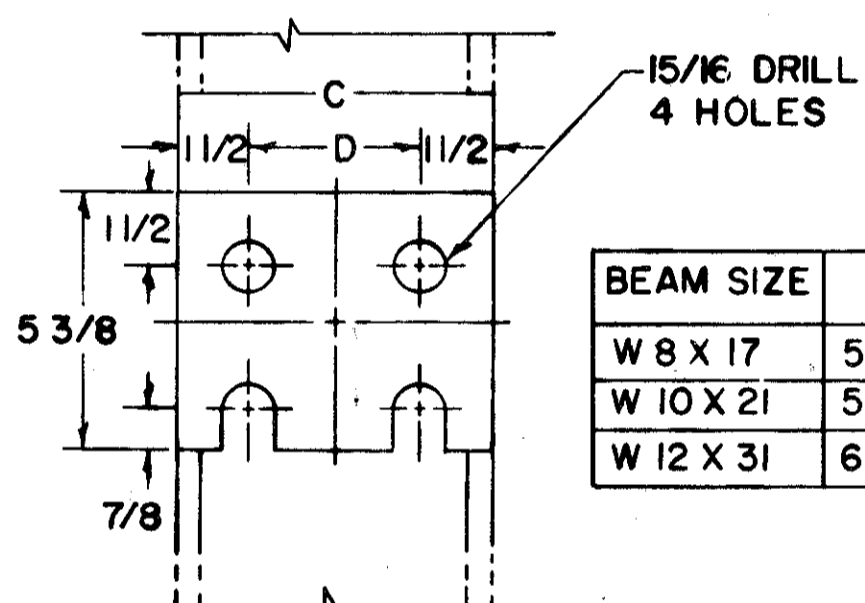
FABRICATOR NOTE: ALL FRICTION FUSE BOLTS SHALL BE TIGHTENED IN THE SHOP FOLLOWING A METHOD APPROVED BY THE ENGINEER. TIGHTENING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM RESIDUAL TENSION IN EACH BOLT OF 36,050 LBS.

NOTE: INSTALL FUSE PLATE WITH NOTCHES TOWARD BASE

DETAIL "B"

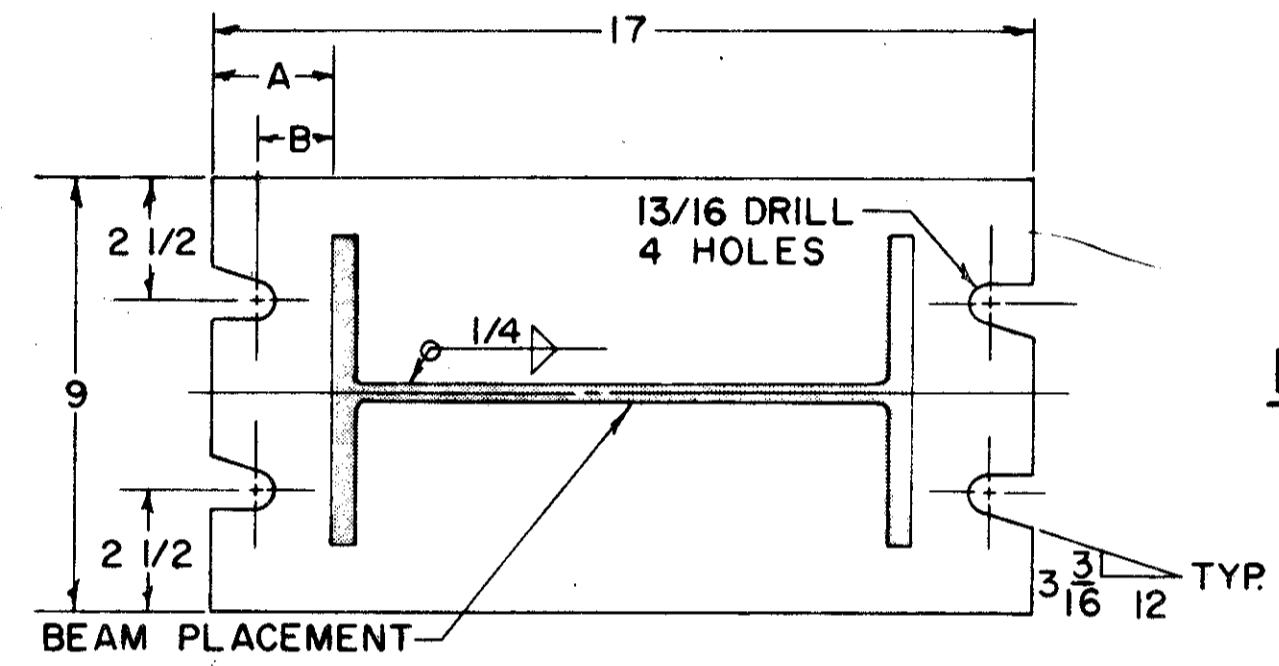


SECTION A-A



FUSE PLATE DETAIL

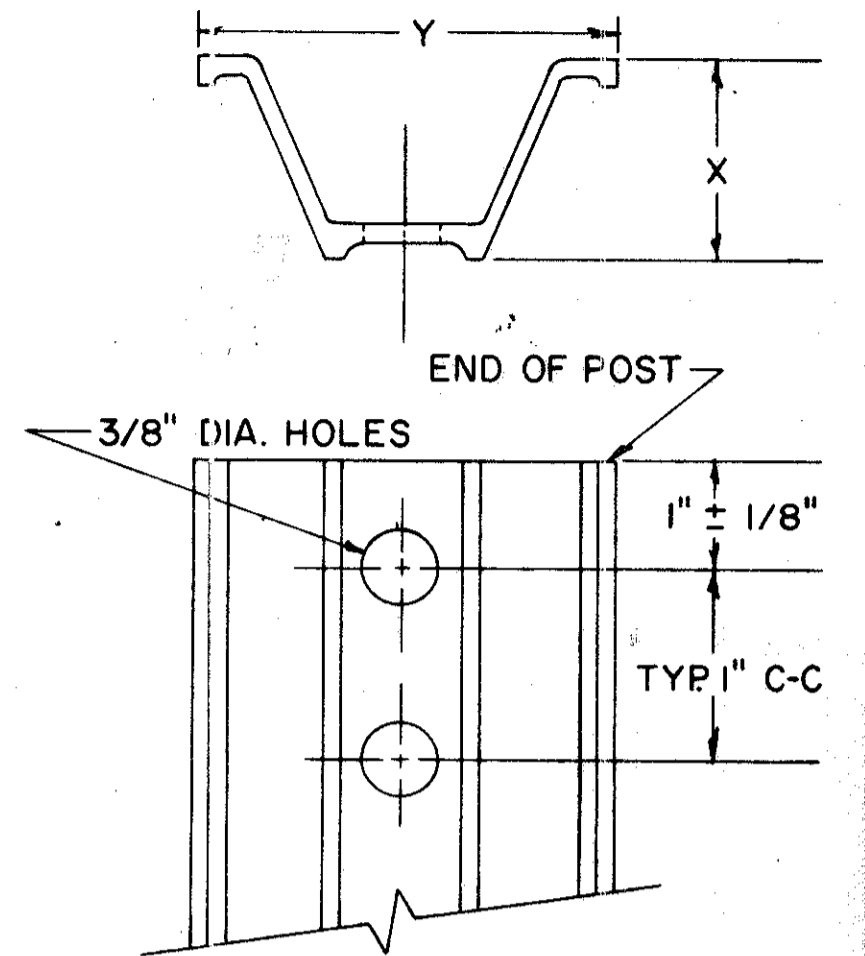
BEAM SIZE	C	D
W 8 X 17	5 1/4"	2 1/4"
W 10 X 21	5 3/4"	2 3/4"
W 12 X 31	6 1/2"	3 1/2"



BASE PLATE DETAIL

(TOP VIEW)

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



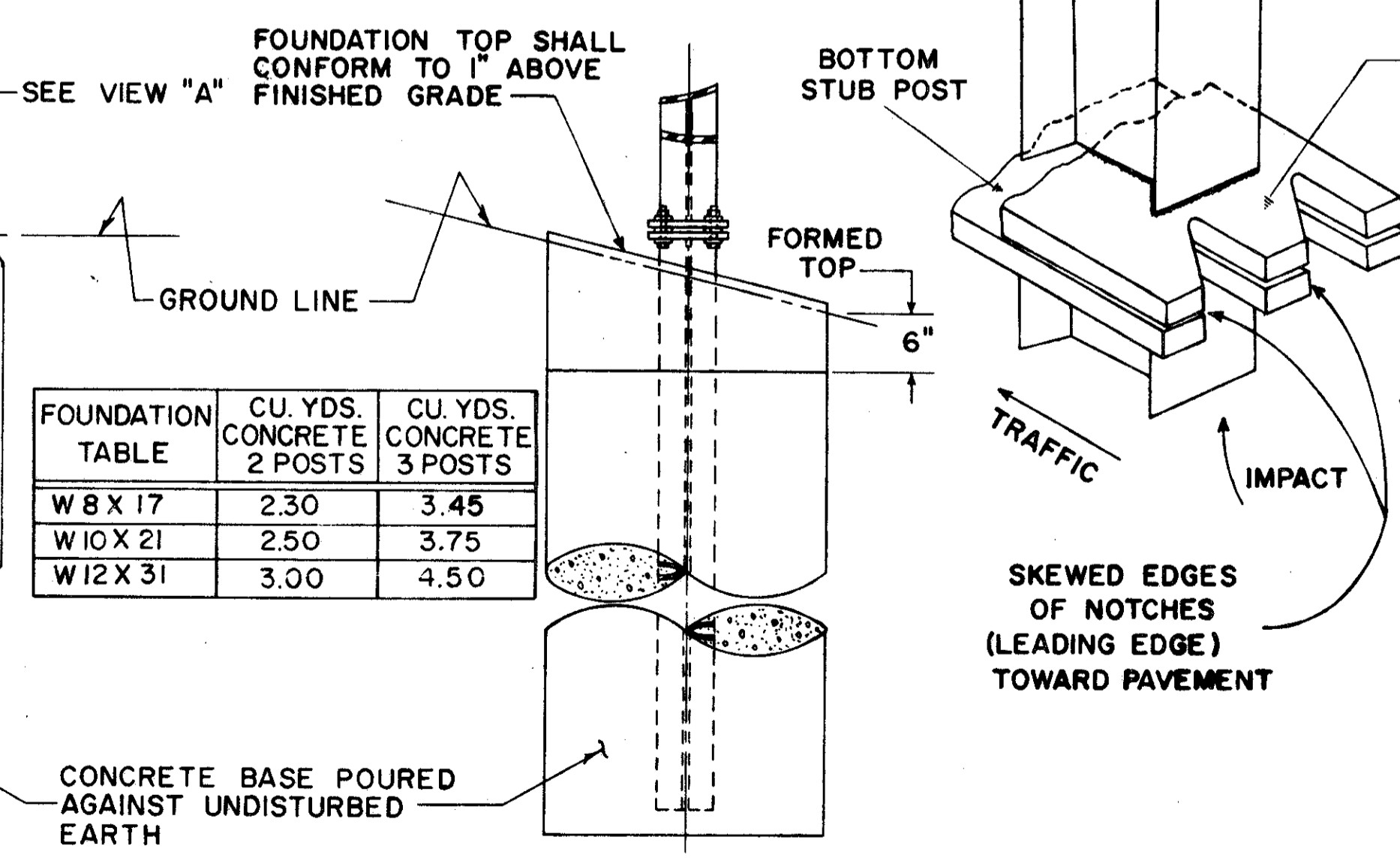
WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 15/32"	3 1/16"
3.00 #	1 7/8"	3 1/2"
4.00 #	2"	3 5/8"

DRIVE POST DETAIL

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

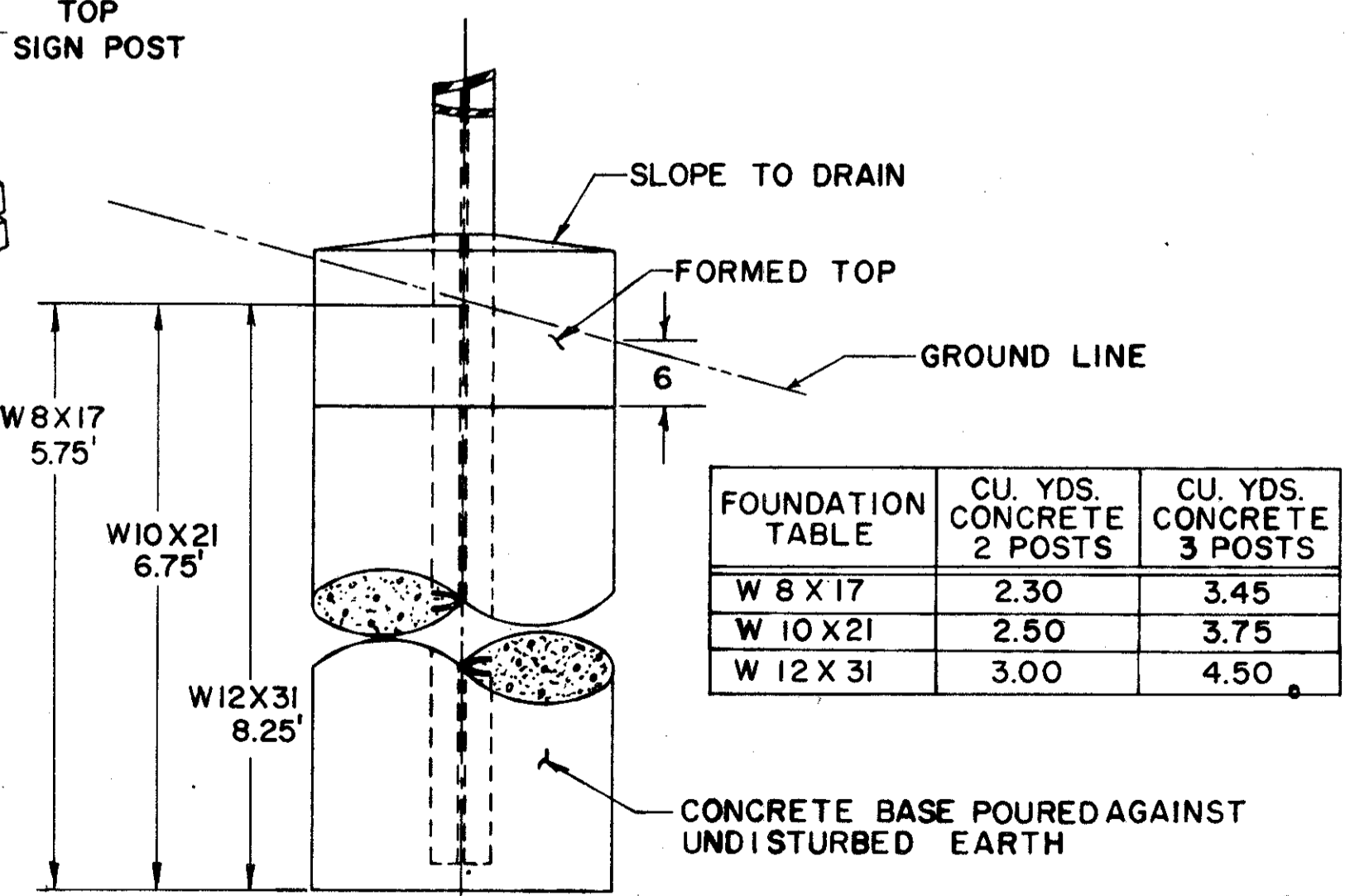
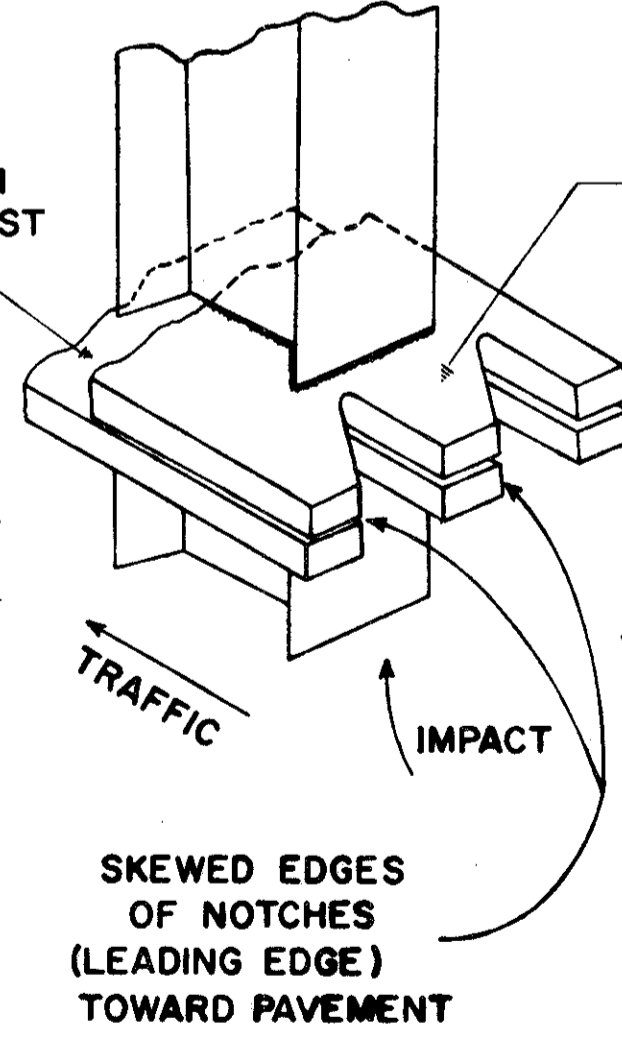
1. 511 FOUNDATIONS
2. 1710.01 STRUCTURAL STEEL SHAPES & PLATES
3. 711.09 H.S. STEEL BOLTS, NUTS & WASHERS

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SHOWN



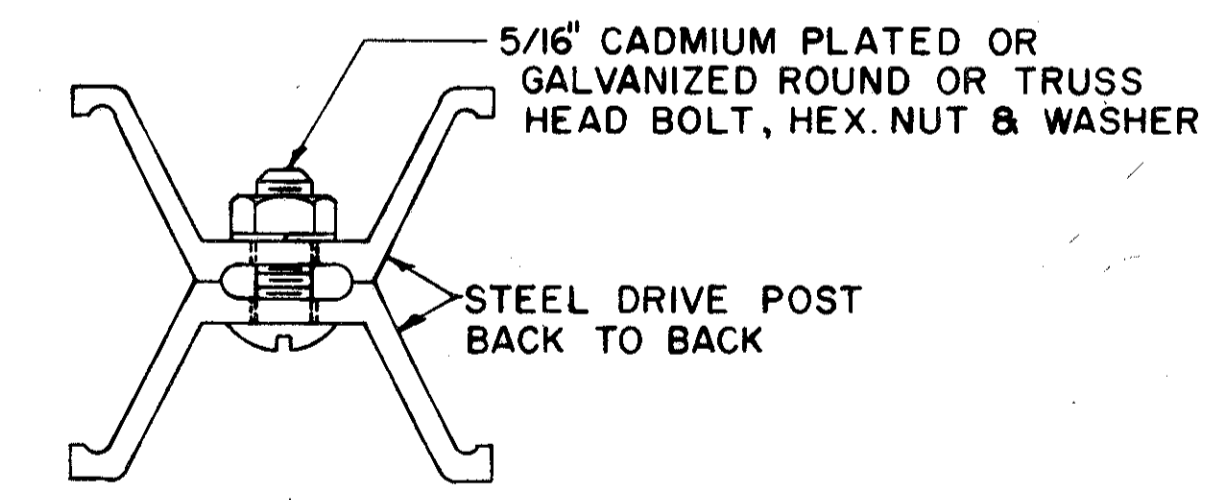
FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
W 8 X 17	2.30	3.45
W 10 X 21	2.50	3.75
W 12 X 31	3.00	4.50

BREAKAWAY SIGN SUPPORT

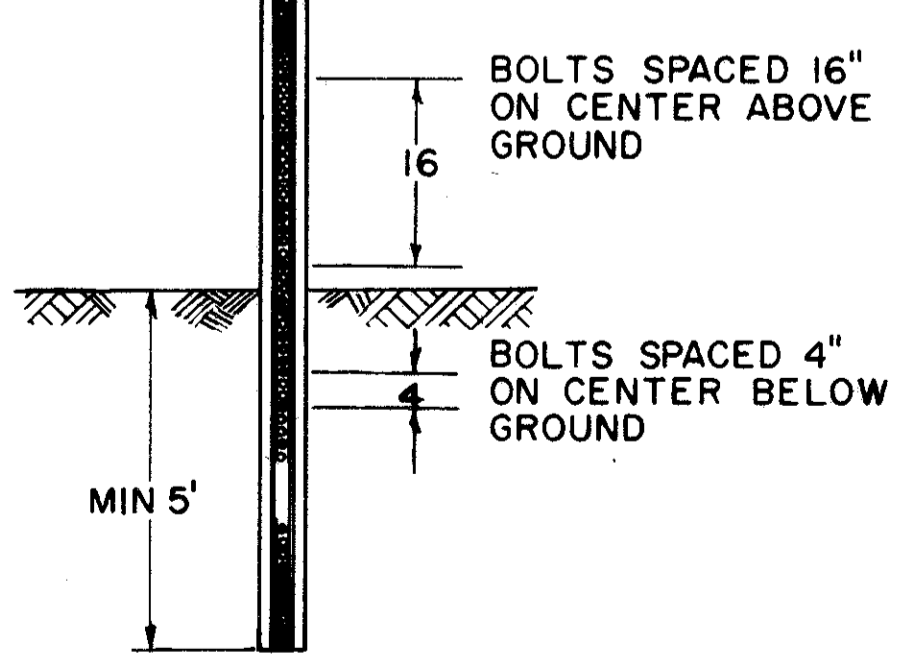


FRONT ELEVATION STANDARD SUPPORT

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



6# BEAM DETAIL



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

**GROUND MOUNTED
SIGN SUPPORTS**

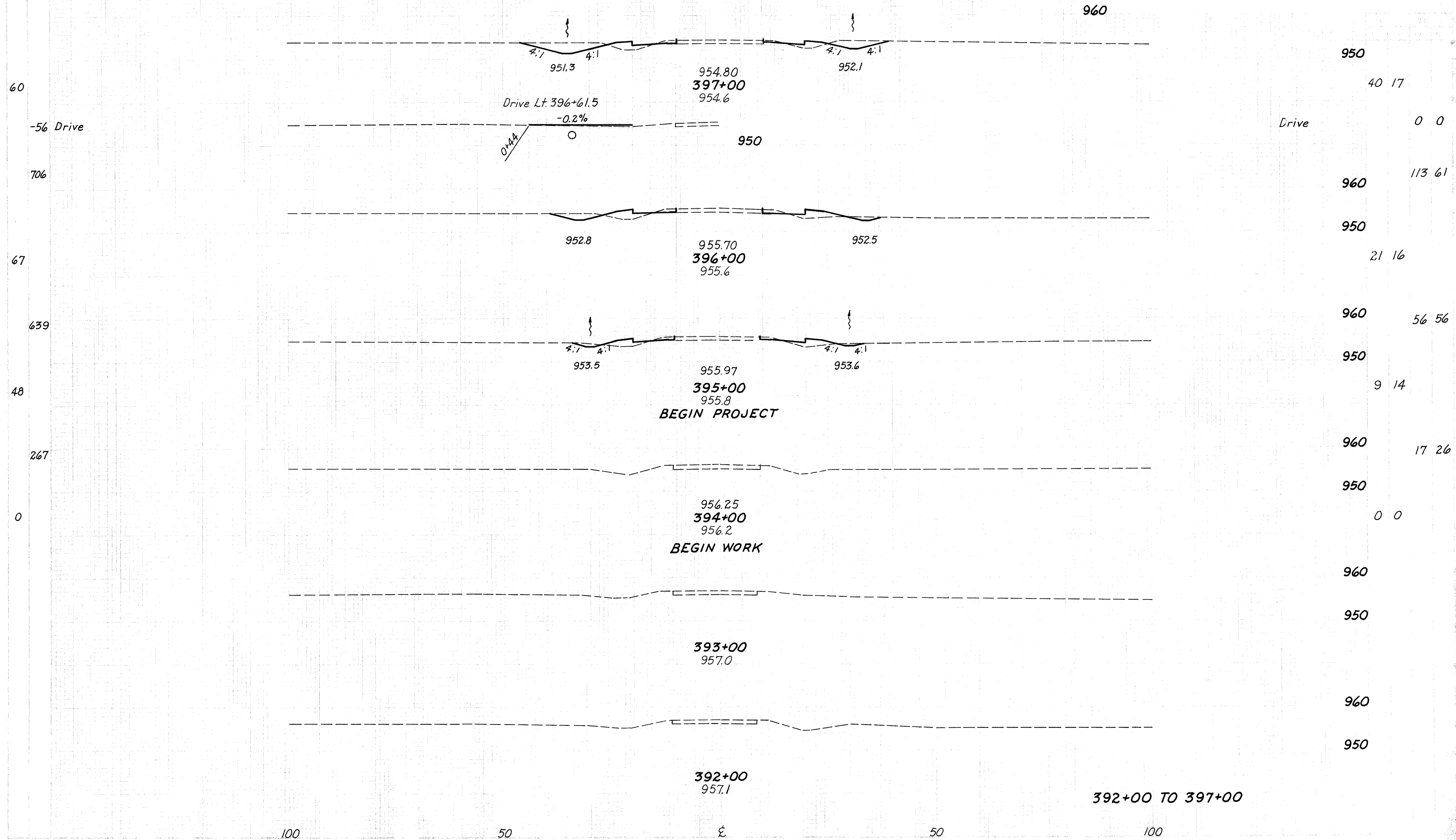
DATE:
5-10-68
7-12-68
5-23-69
9-16-69
12-20-71

GMSS

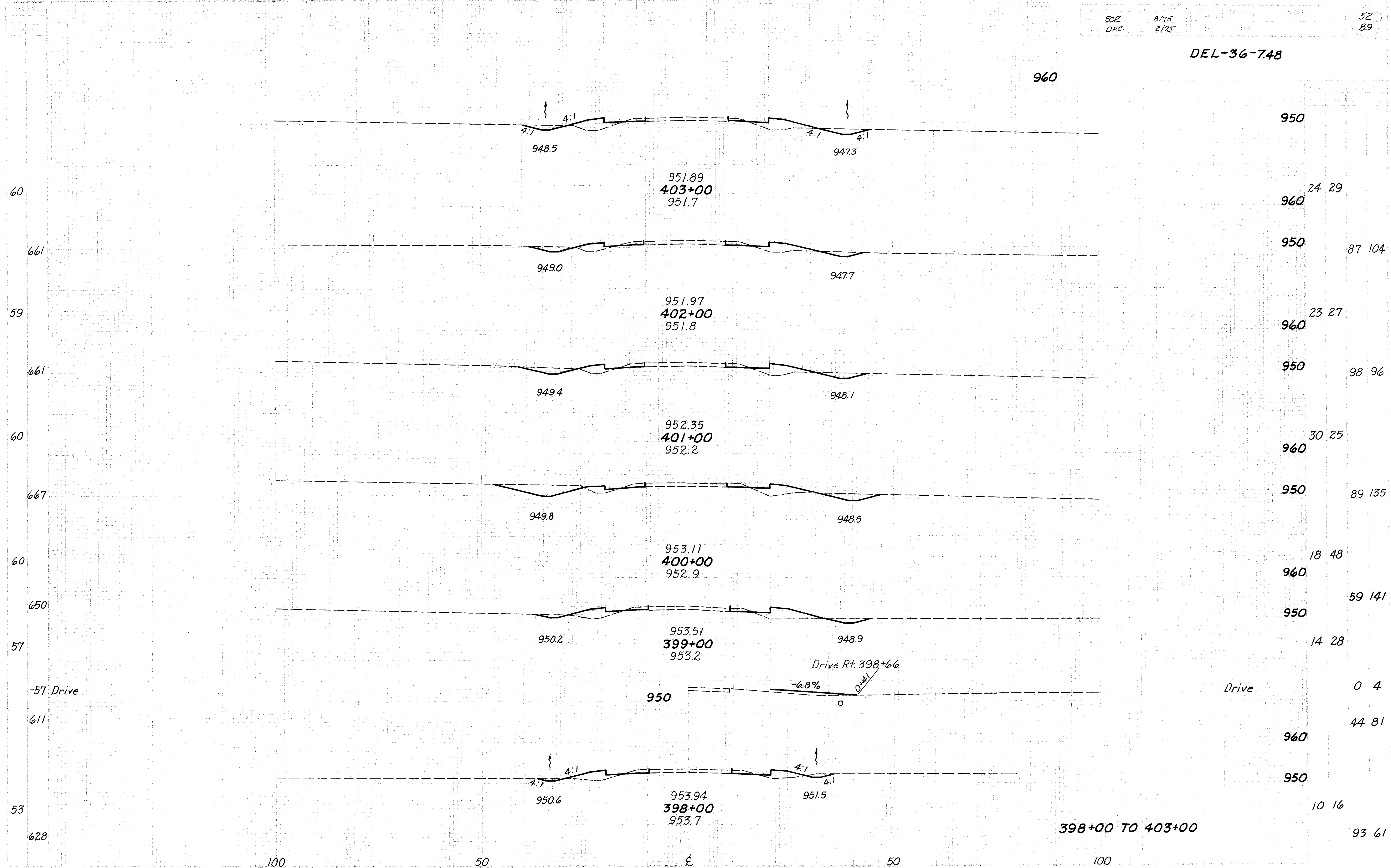
APPROVED _____
ENGINEER OF TRAFFIC

STRUCTURAL SUPPORTS

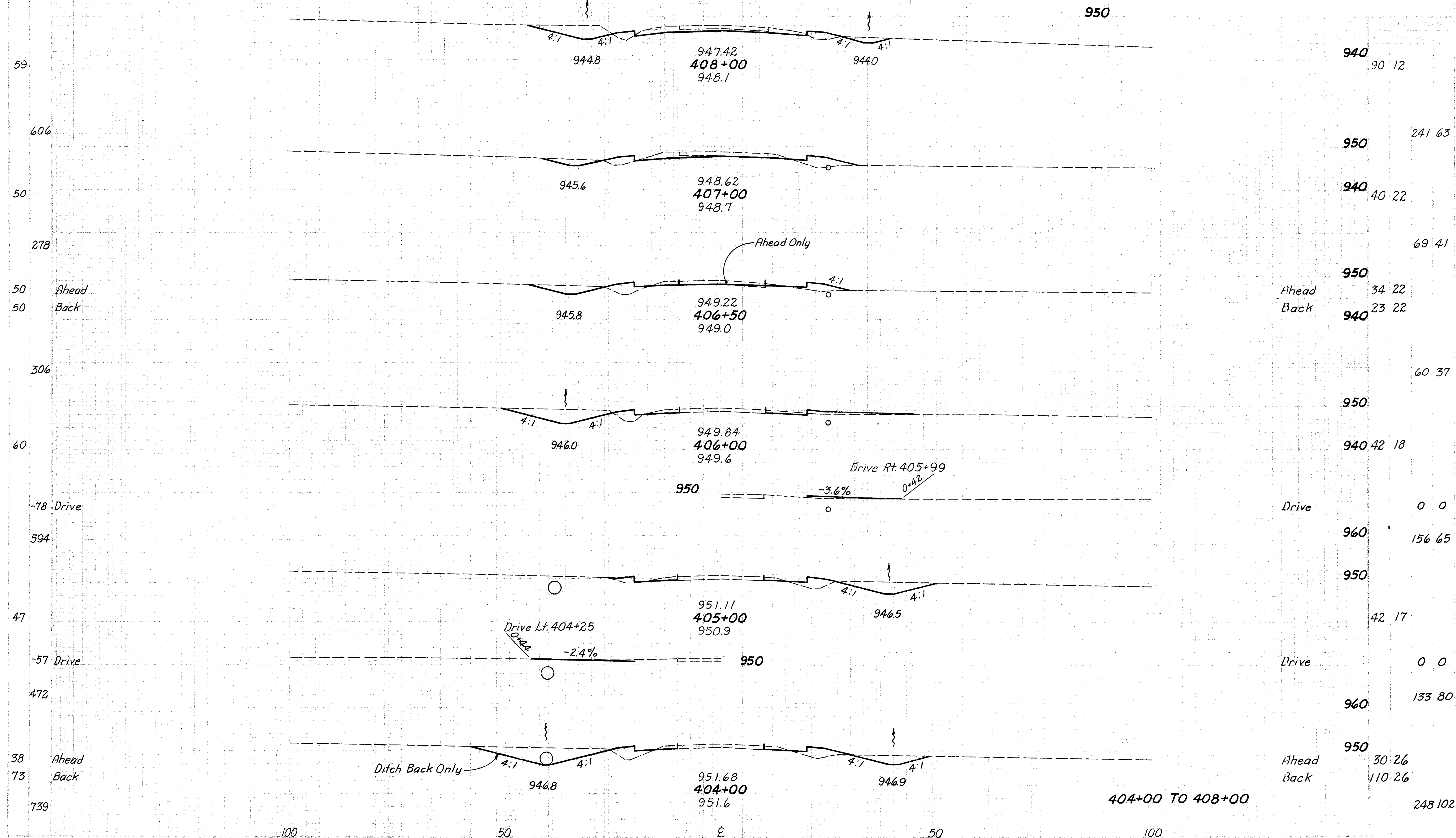
DEL-36-748



DEL-36-748



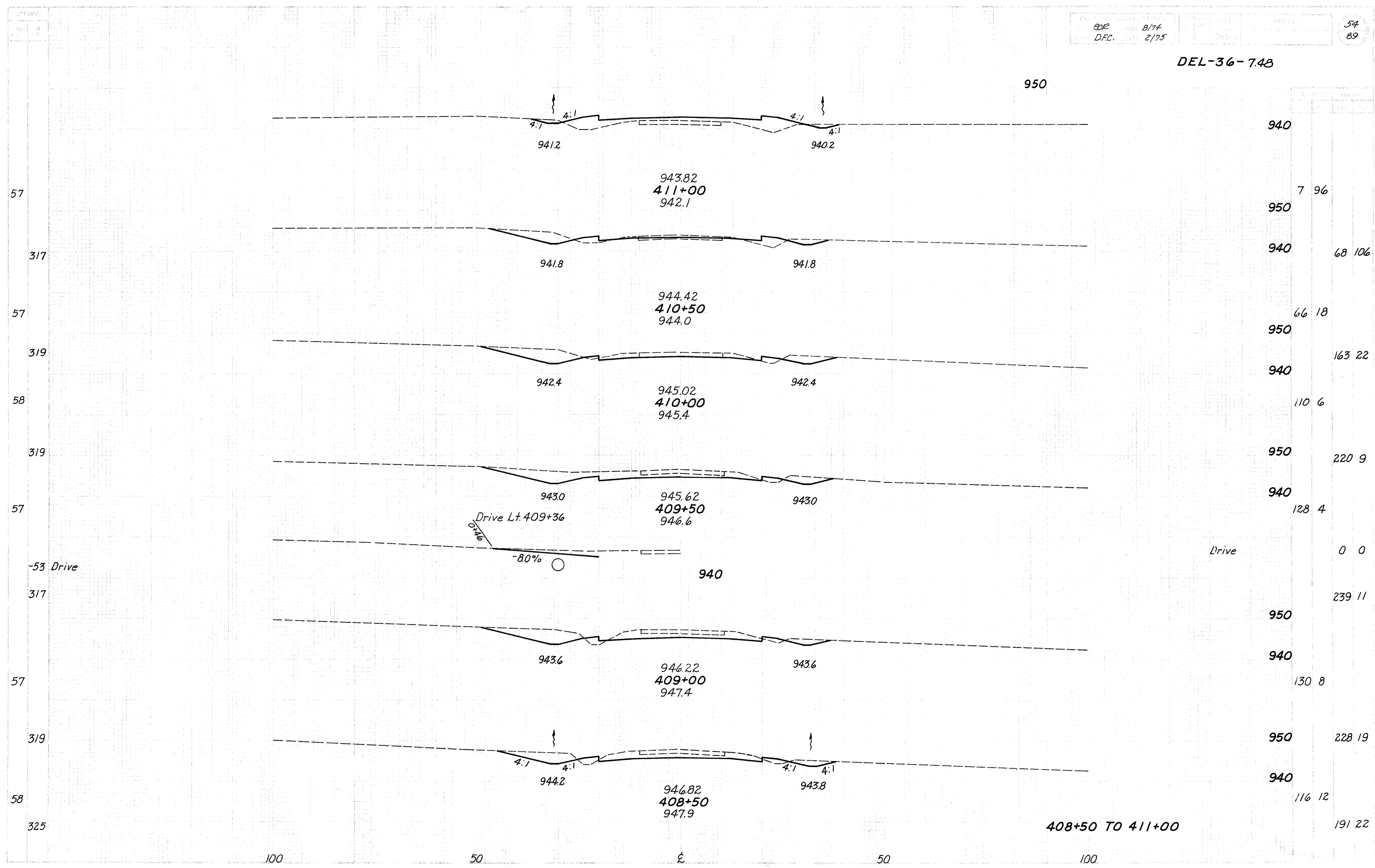
DEL-36-748



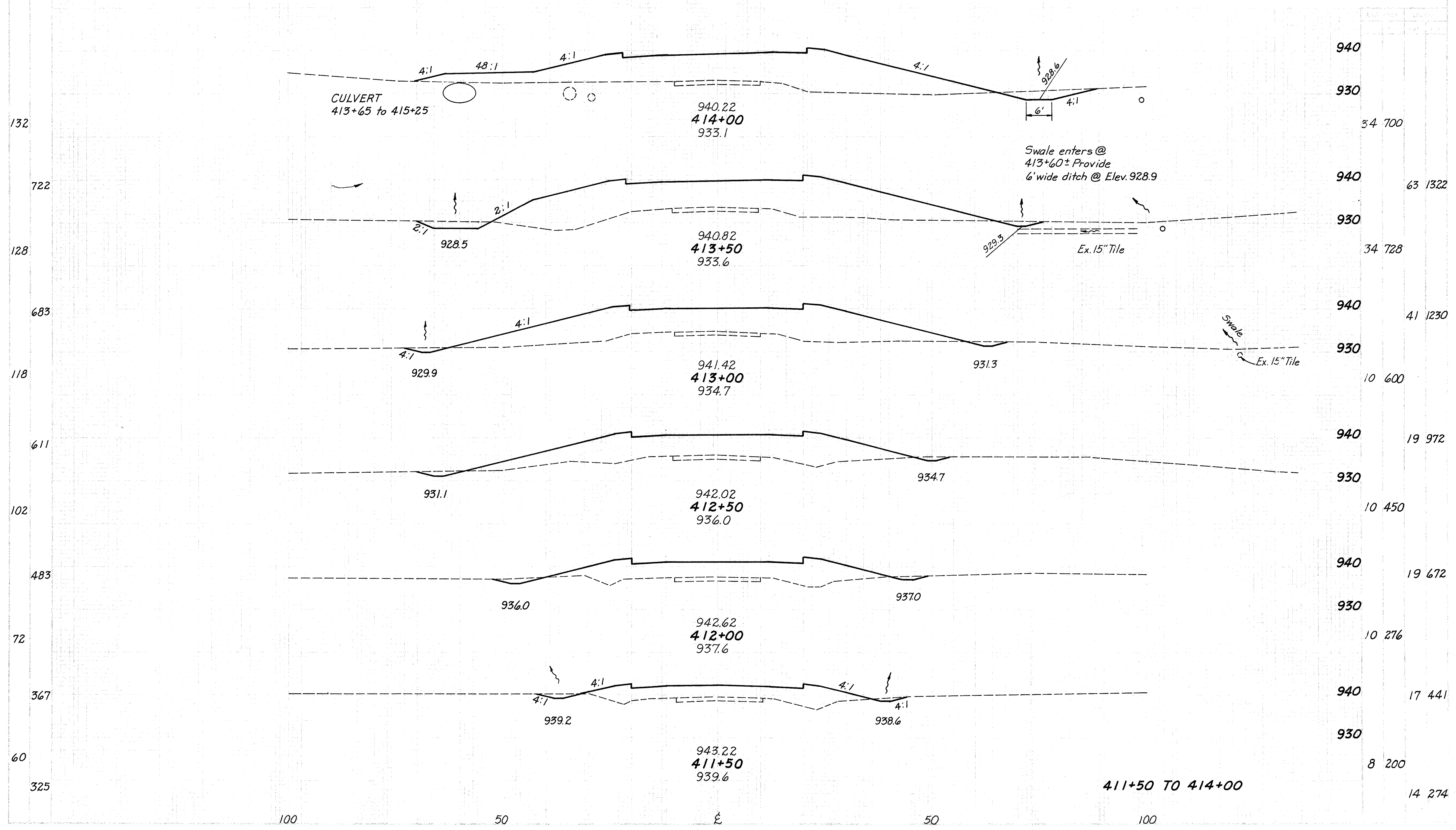
404+00 TO 408+00

248 102

DEL-36-748



DEL-36-748



CULVERT
413+65 to 415+25

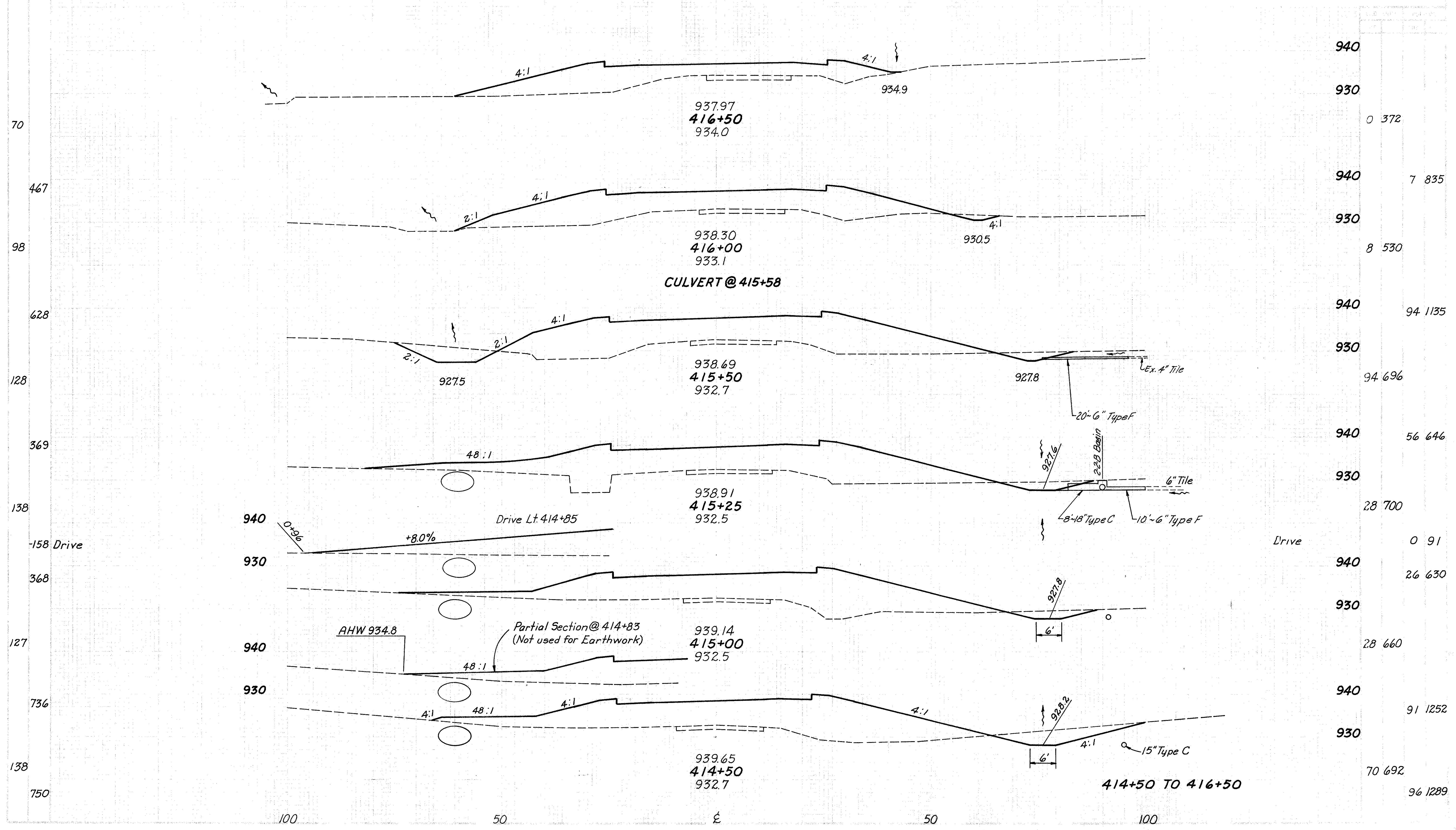
Swale enters @
413+60± Provide
6' wide ditch @ Elev. 928.9

Ex. 15" Tile

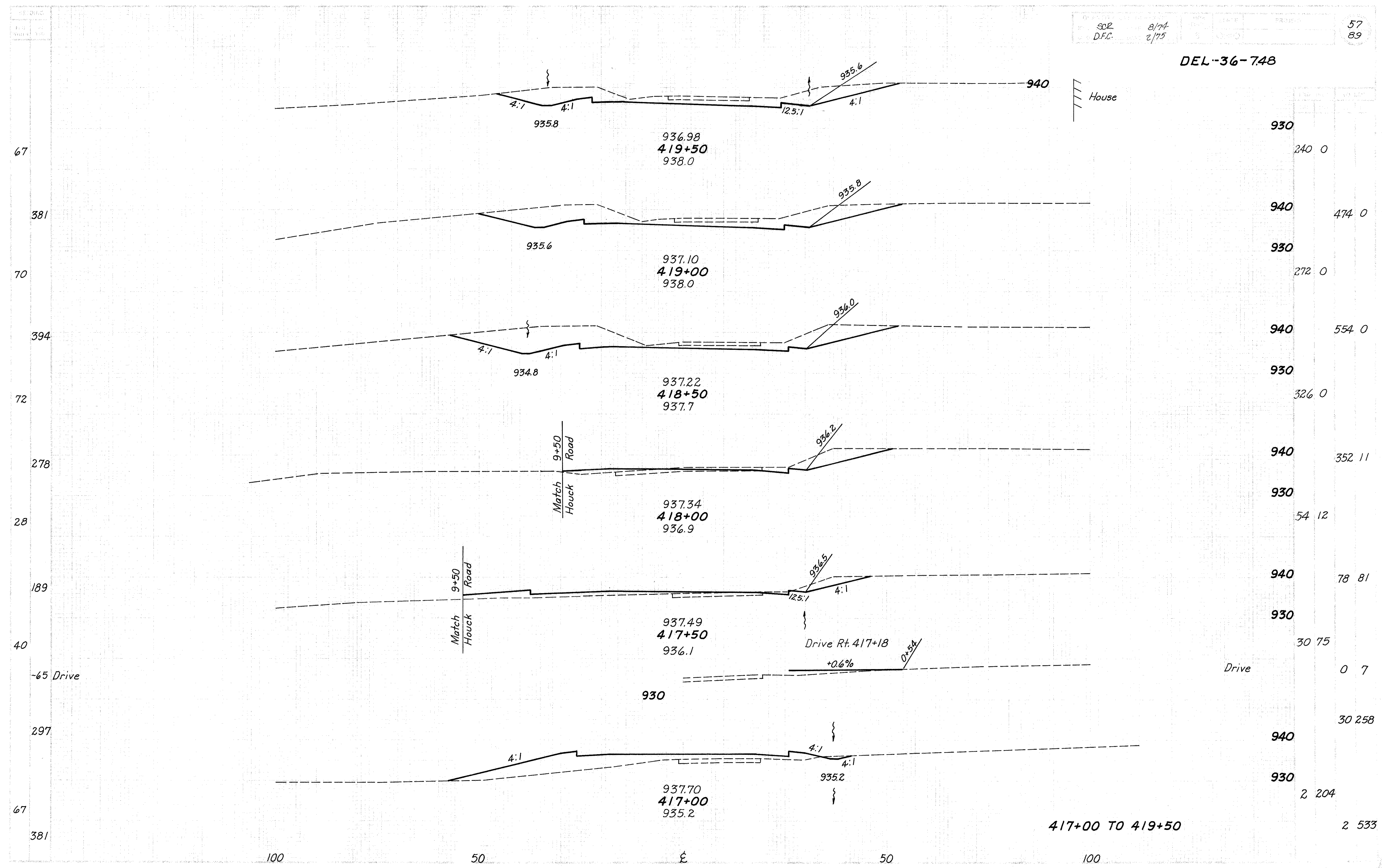
Swale
Ex. 15" Tile

411+50 TO 414+00

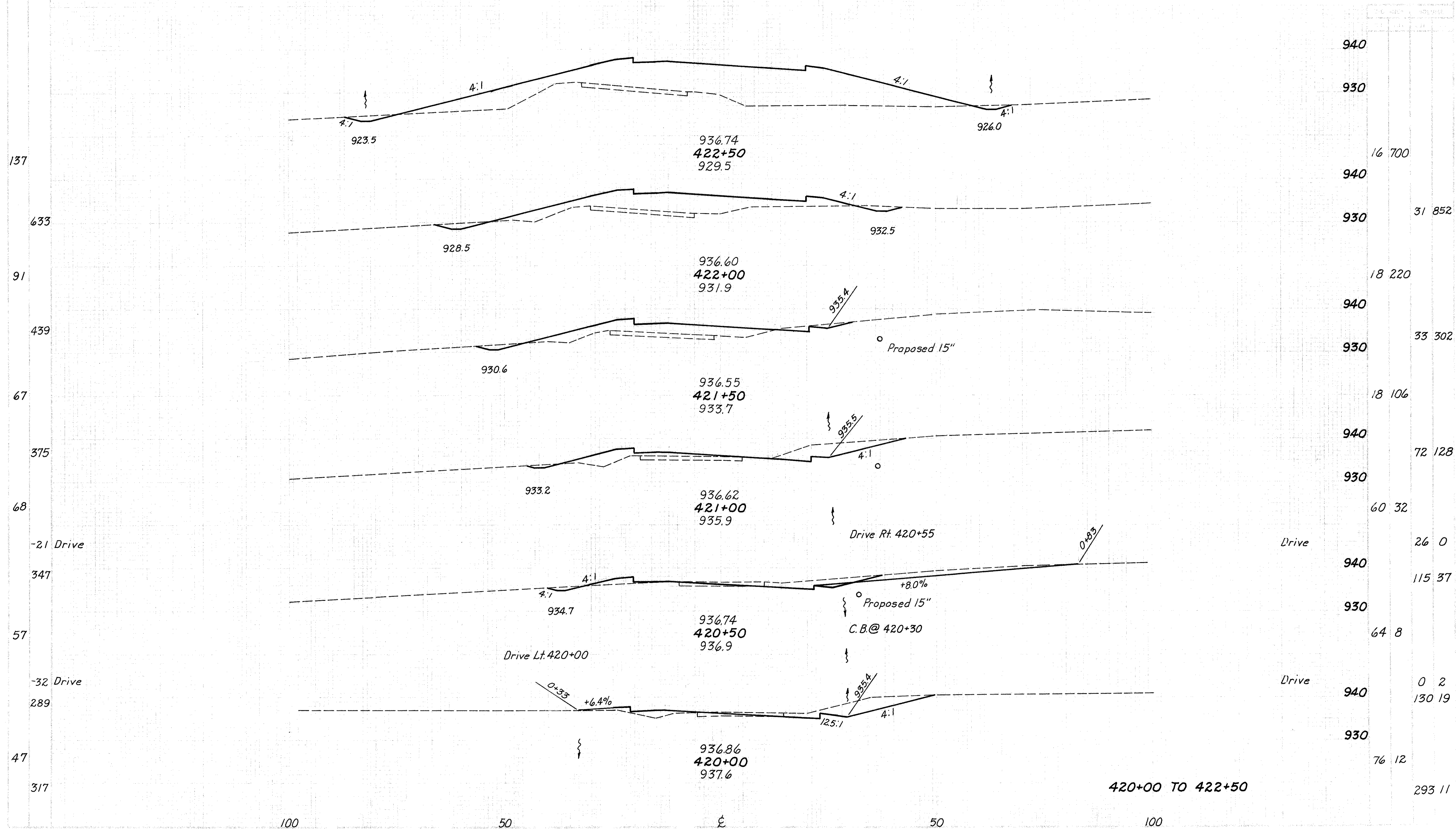
DEL-36-748



DEL-36-748



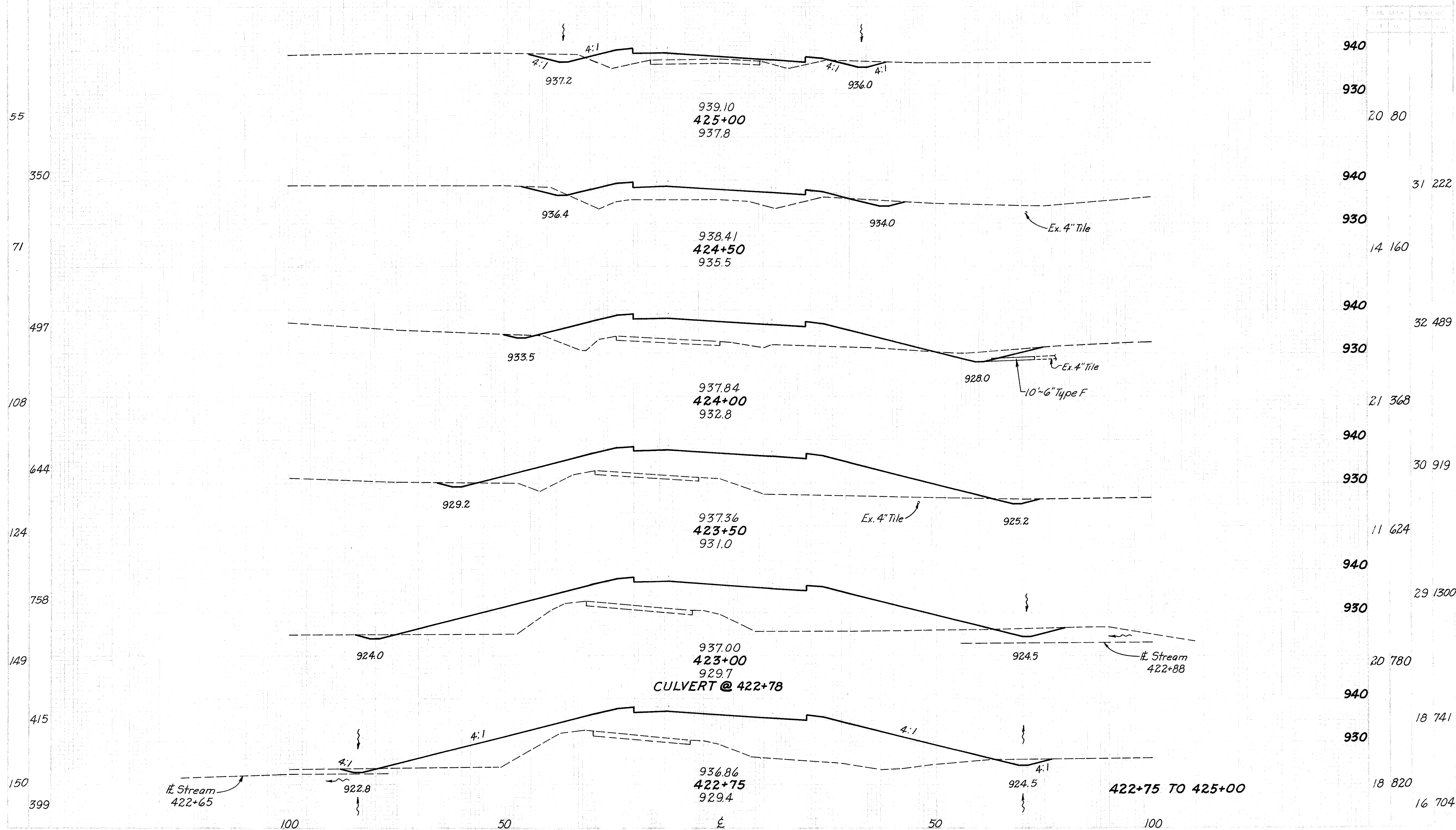
DEL-36-748



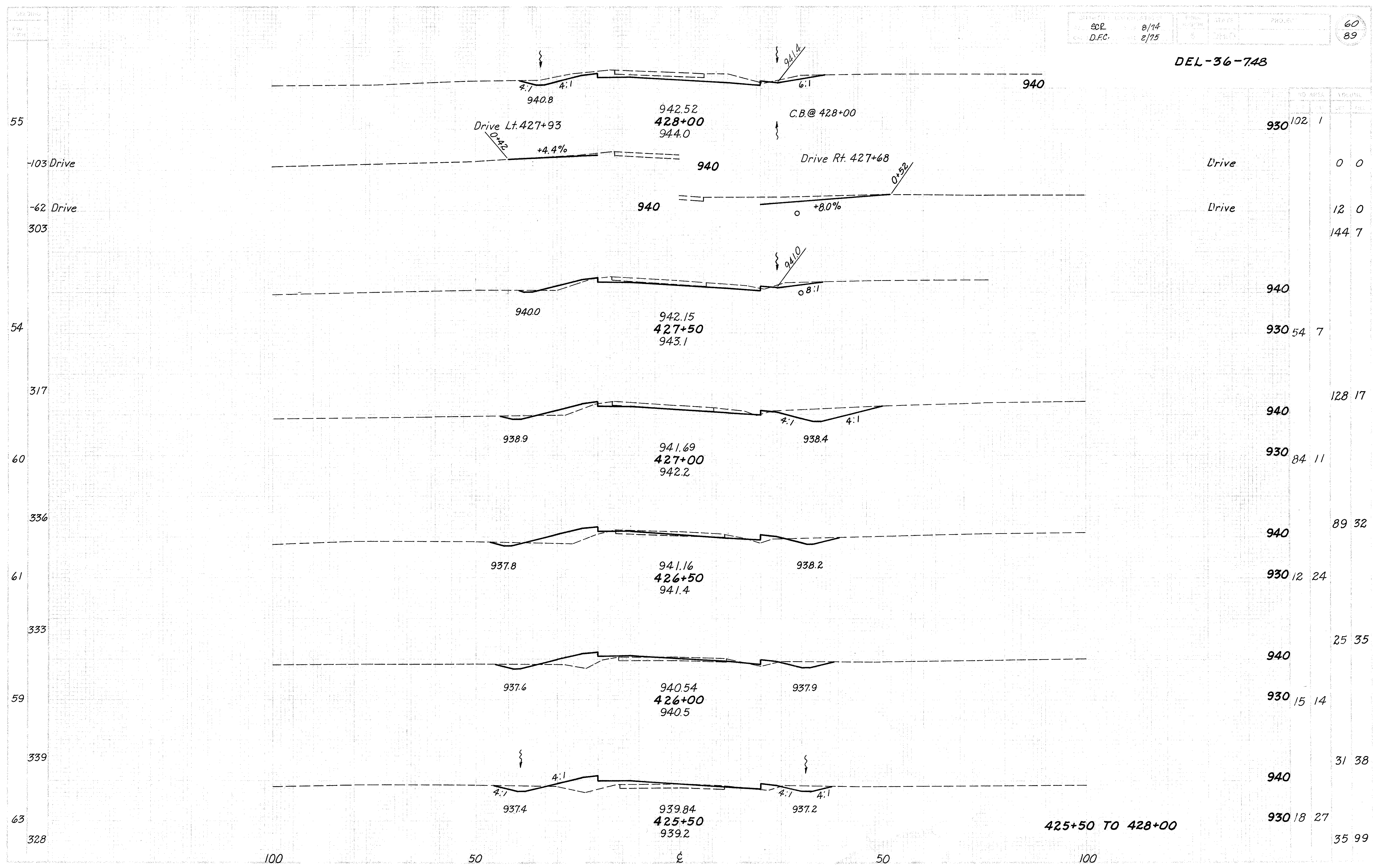
420+00 TO 422+50

293 11

DEL-36-748

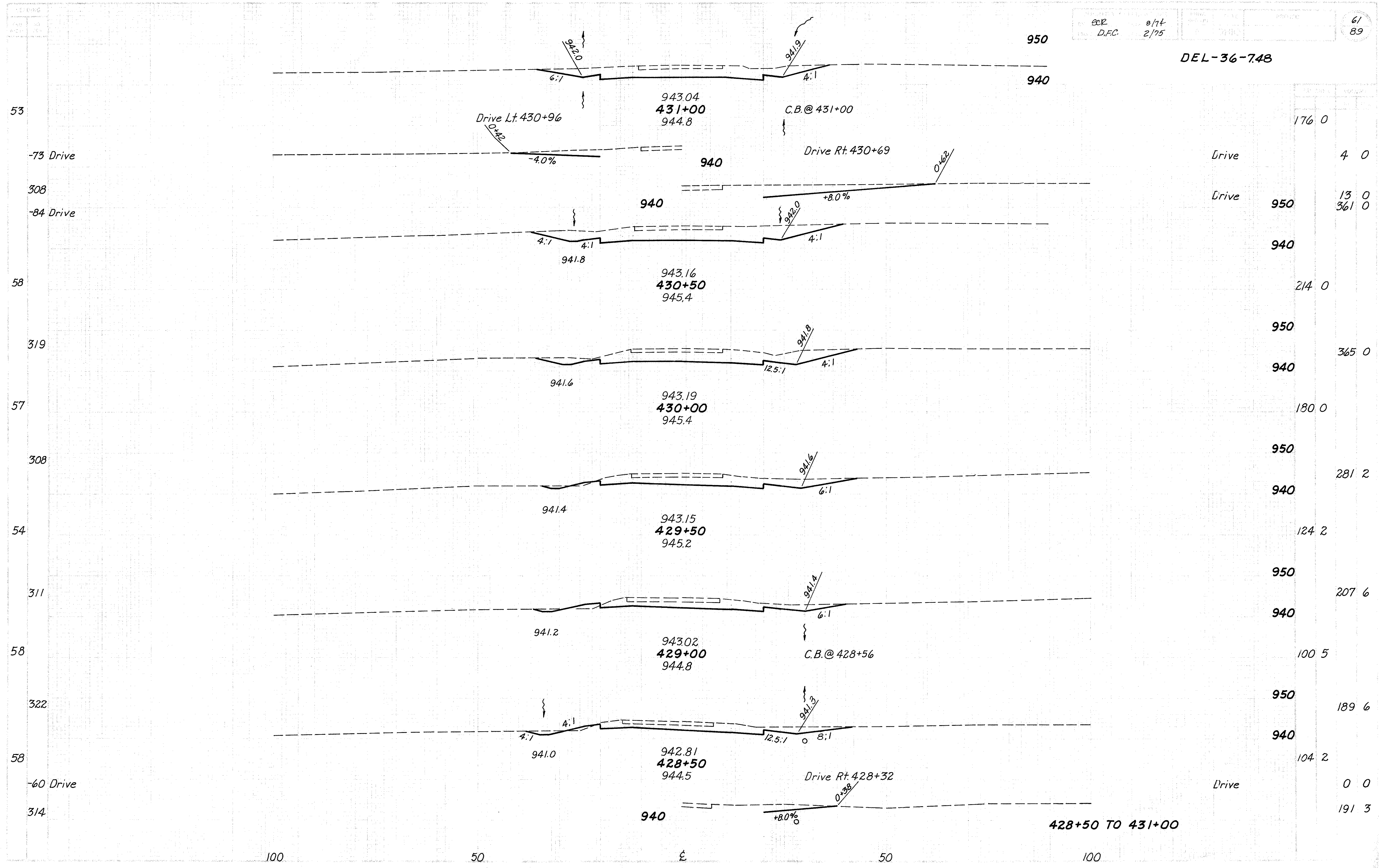


DEL-36-748



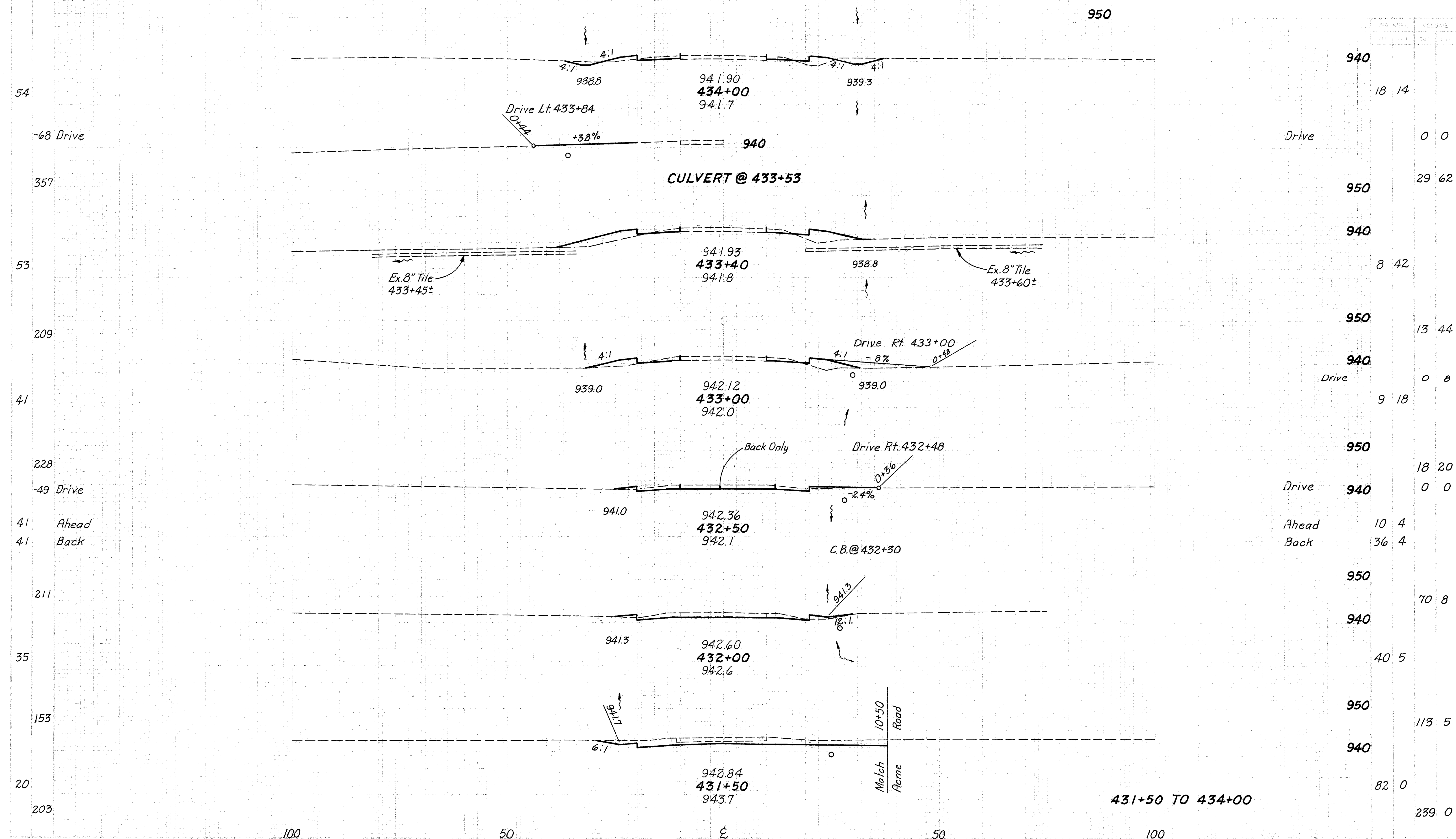
NO	AREA	VOLUME
930	102 1	
Drive		0 0
Drive		12 0
		144 7
940		
930	54 7	
		128 17
940		
930	84 11	
		89 32
940		
930	12 24	
		25 35
940		
930	15 14	
		31 38
940		
930	18 27	
		35 99

425+50 TO 428+00

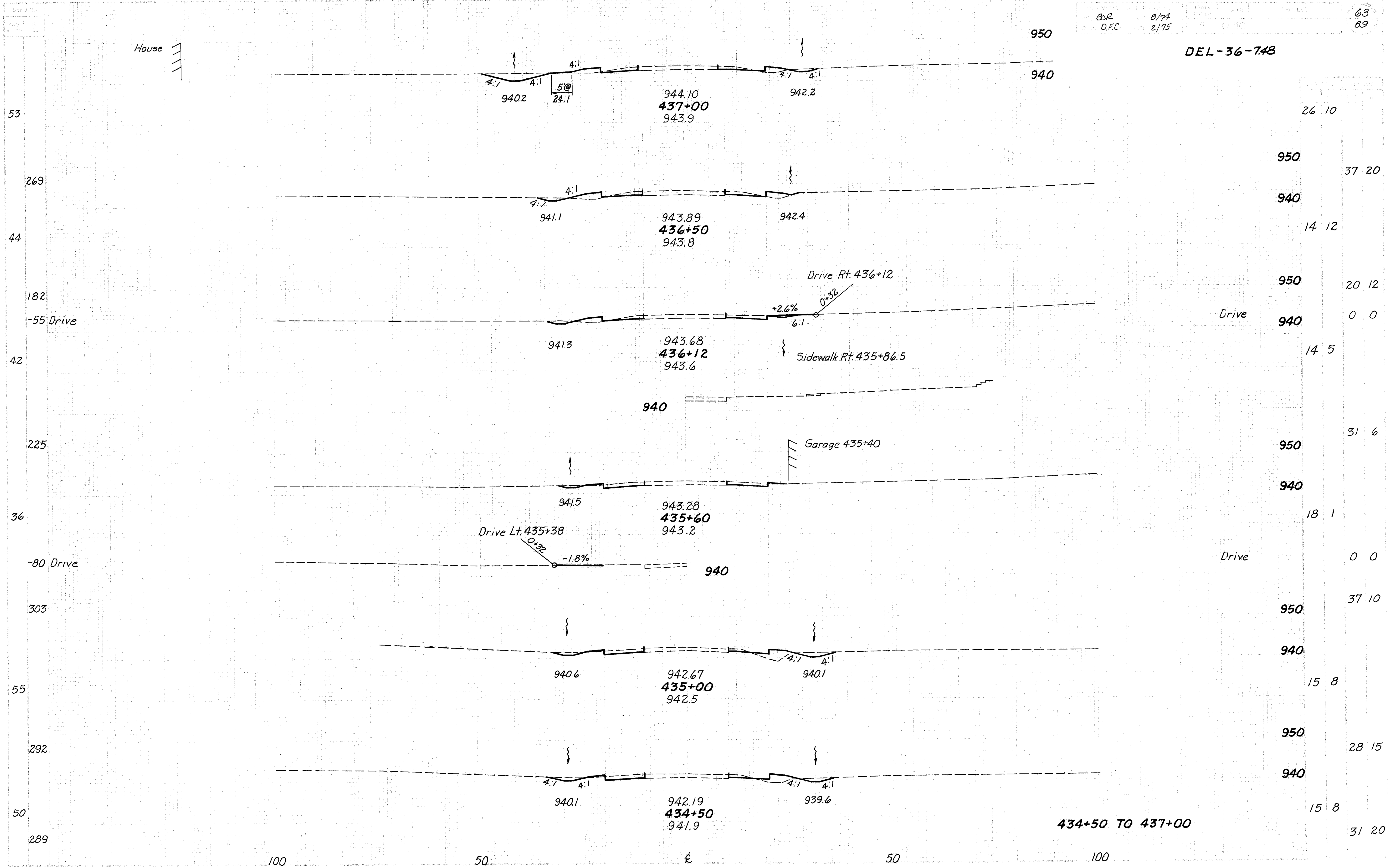


428+50 TO 431+00

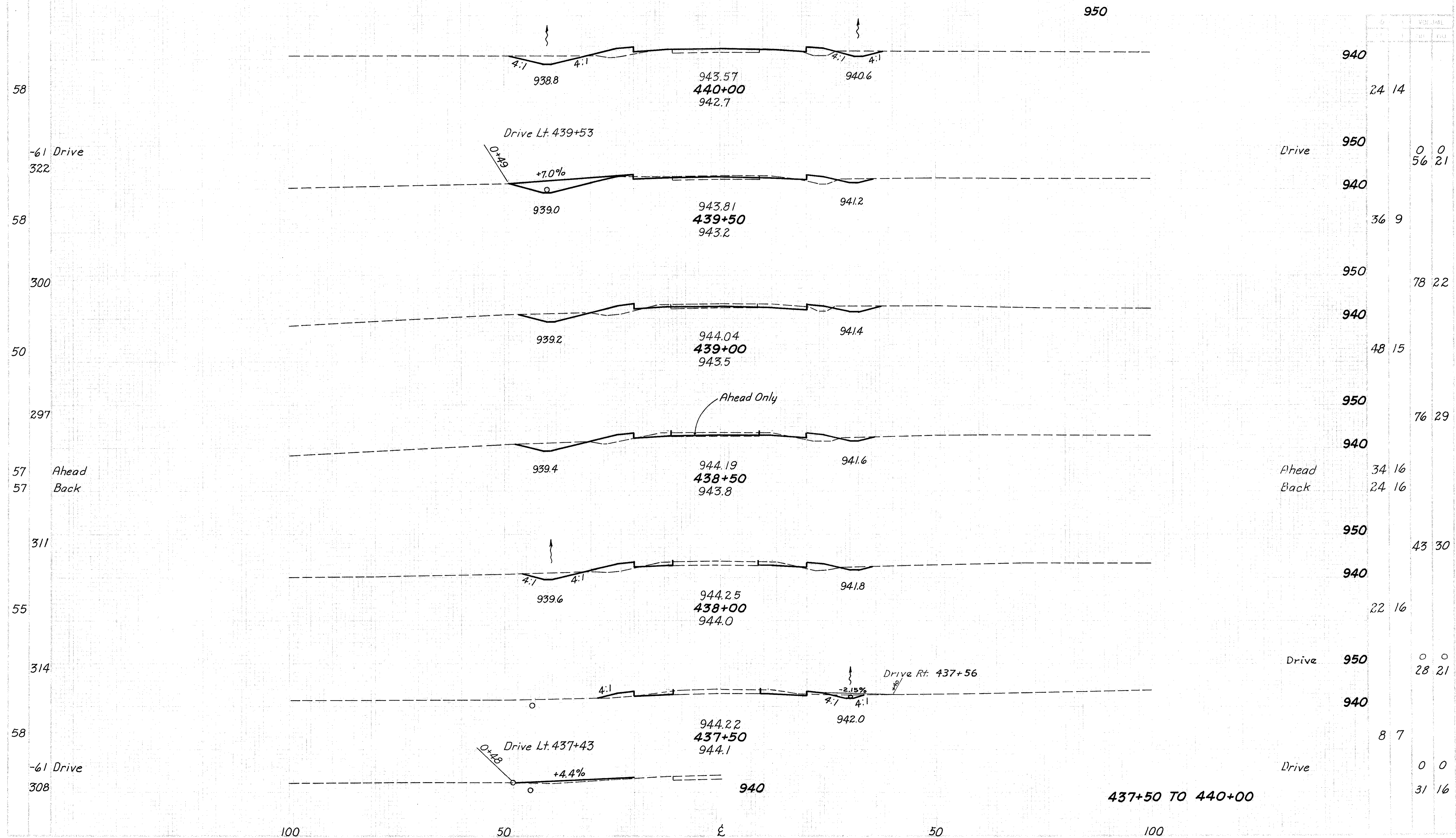
DEL-36-748



DEL-36-748

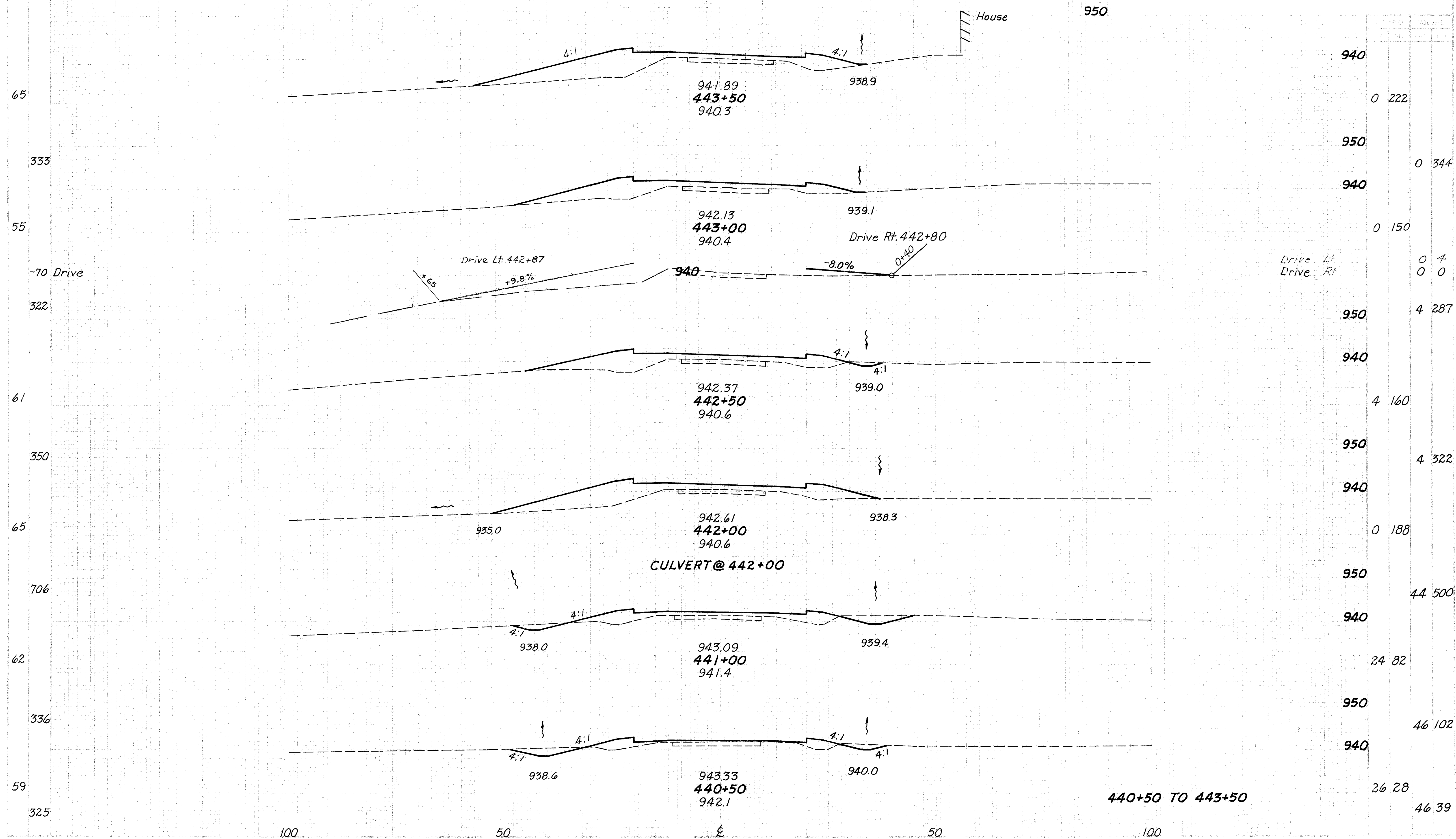


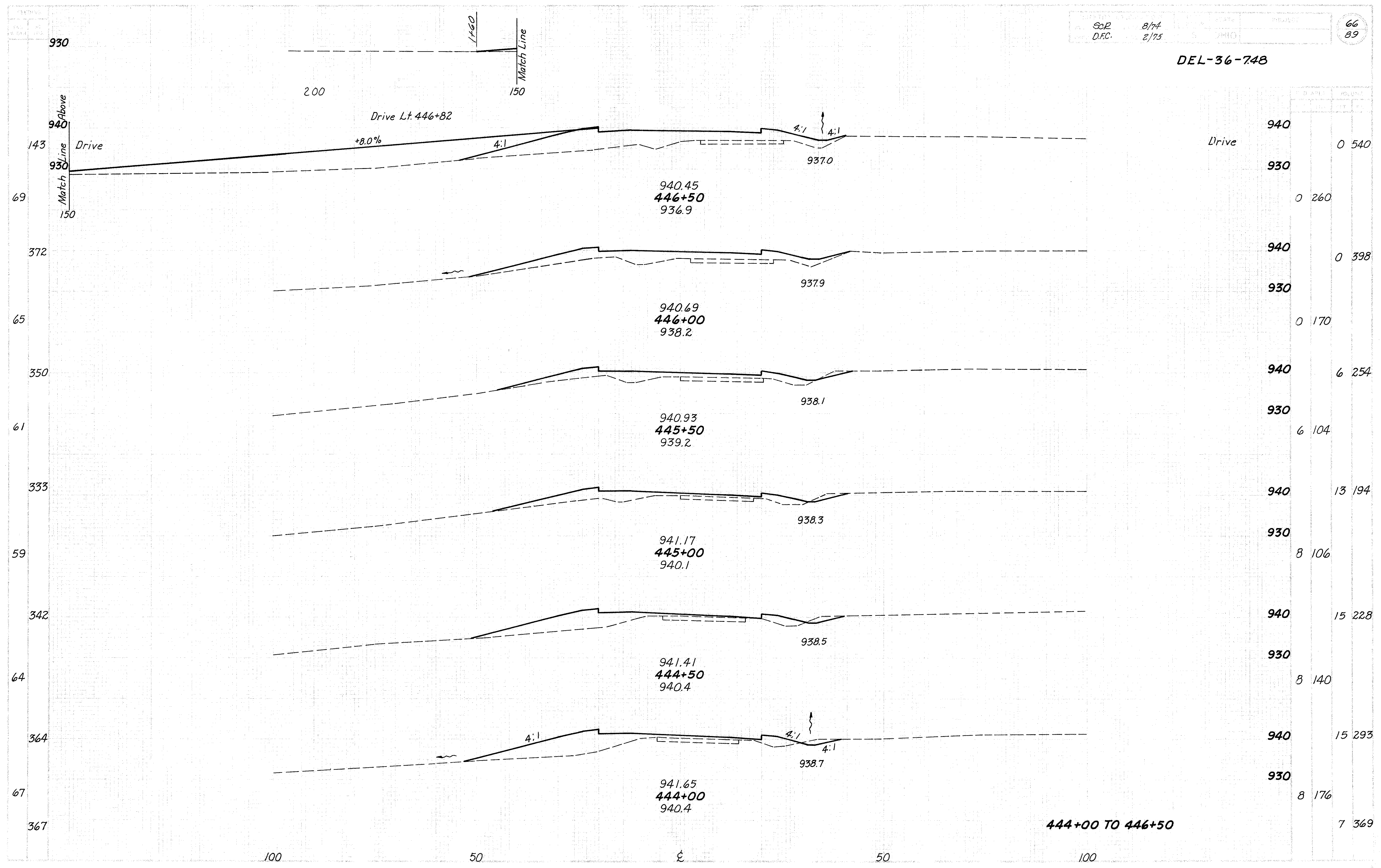
DEL-36-748

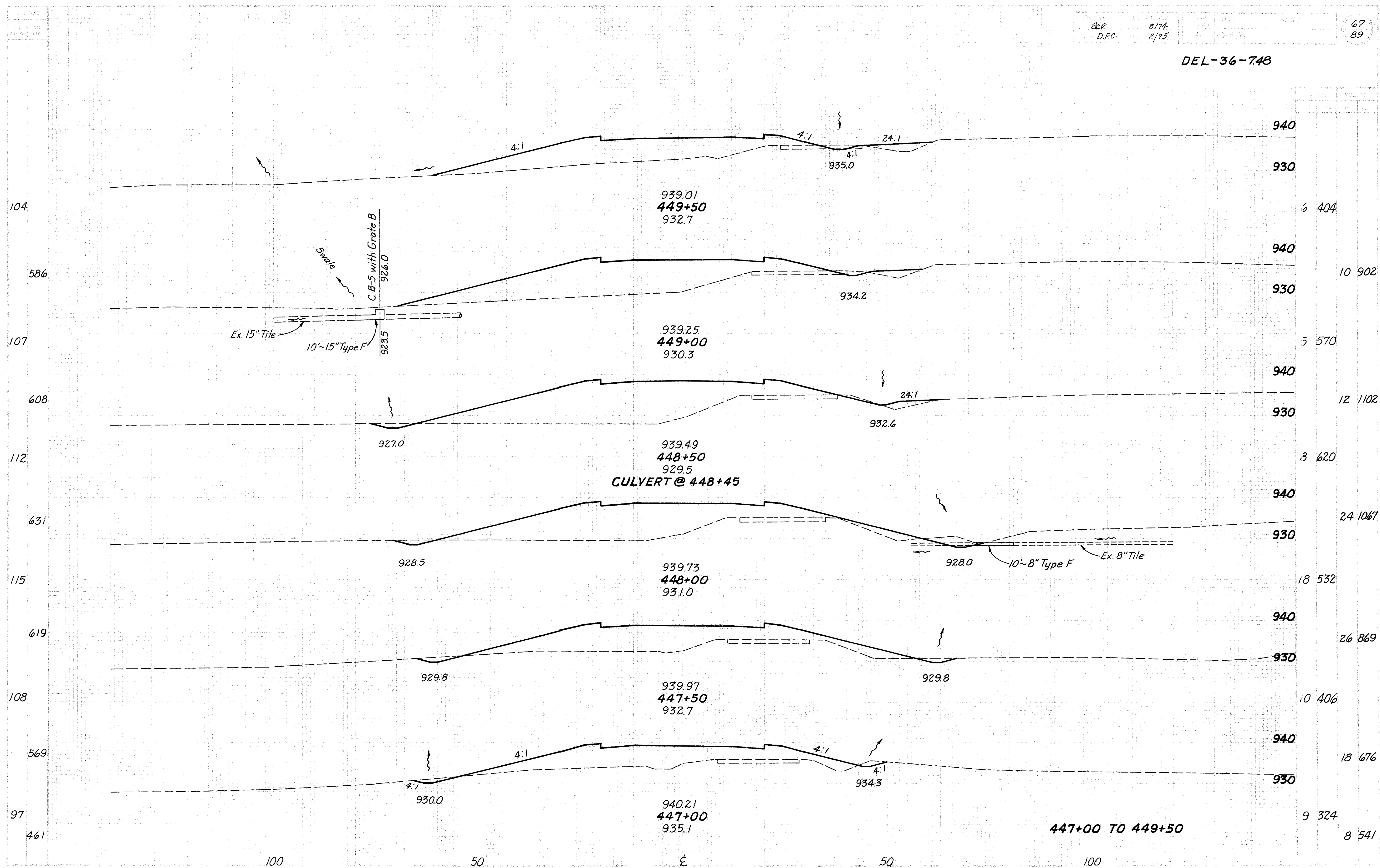


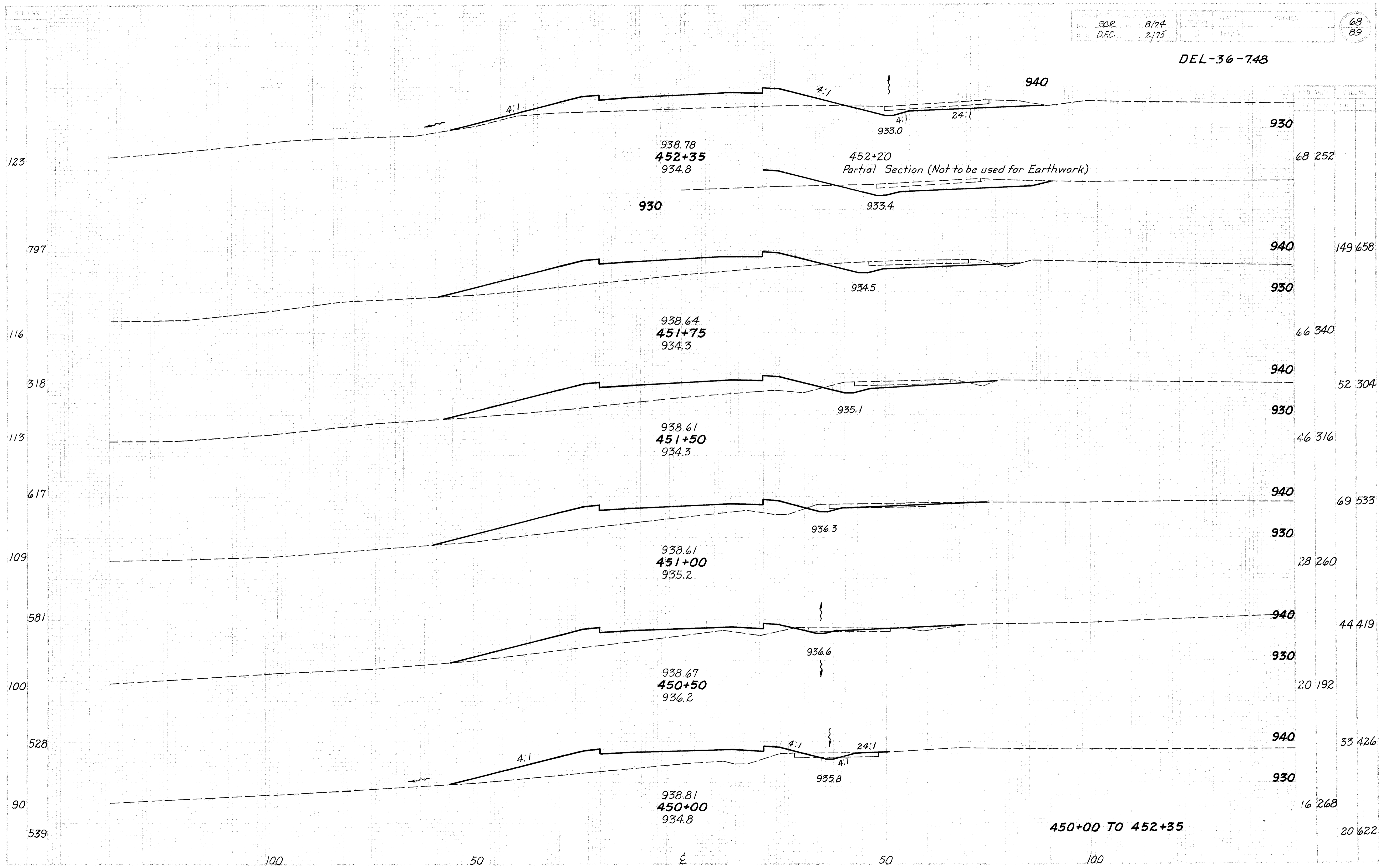
437+50 TO 440+00

DEL-36-74B

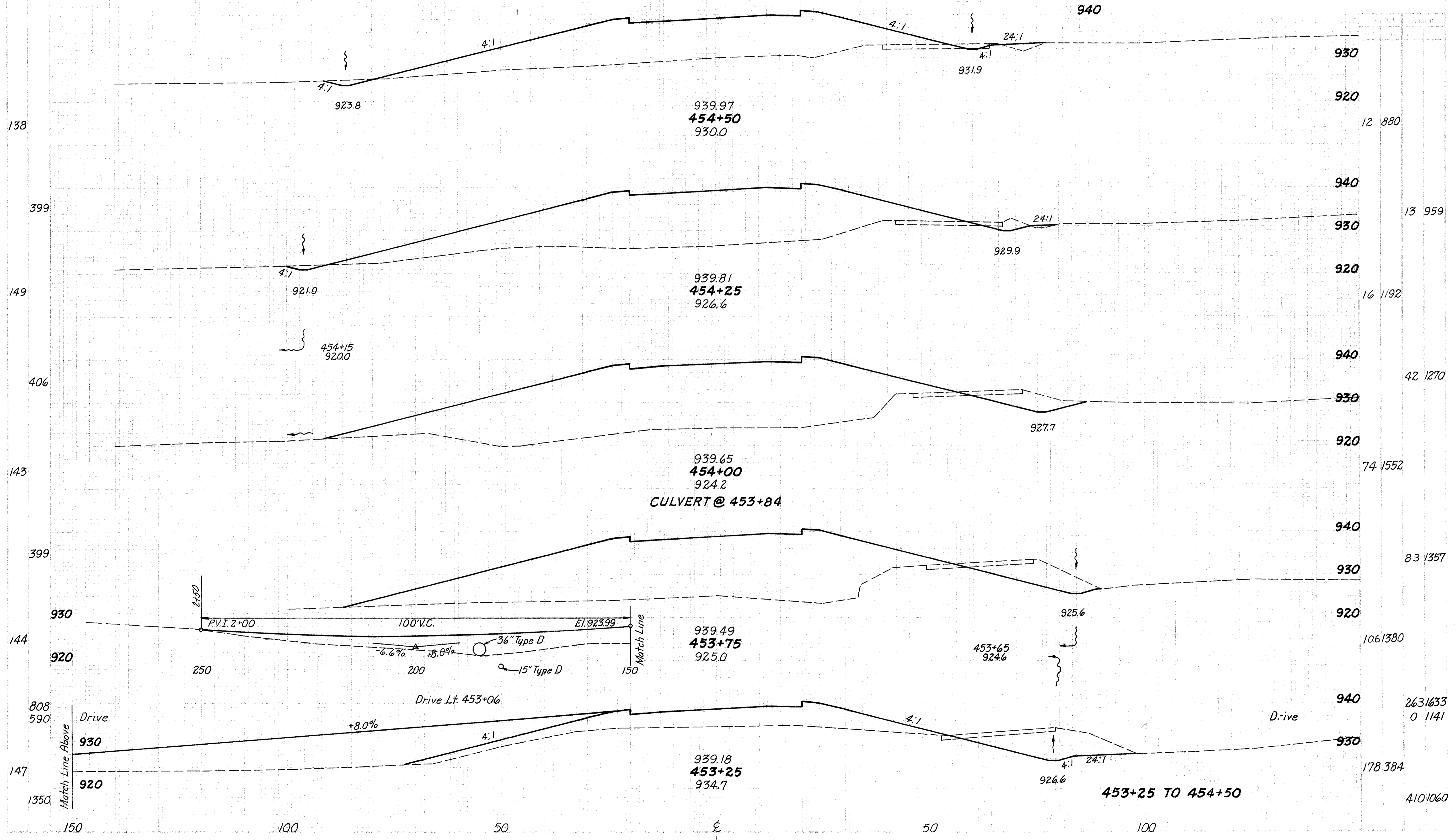


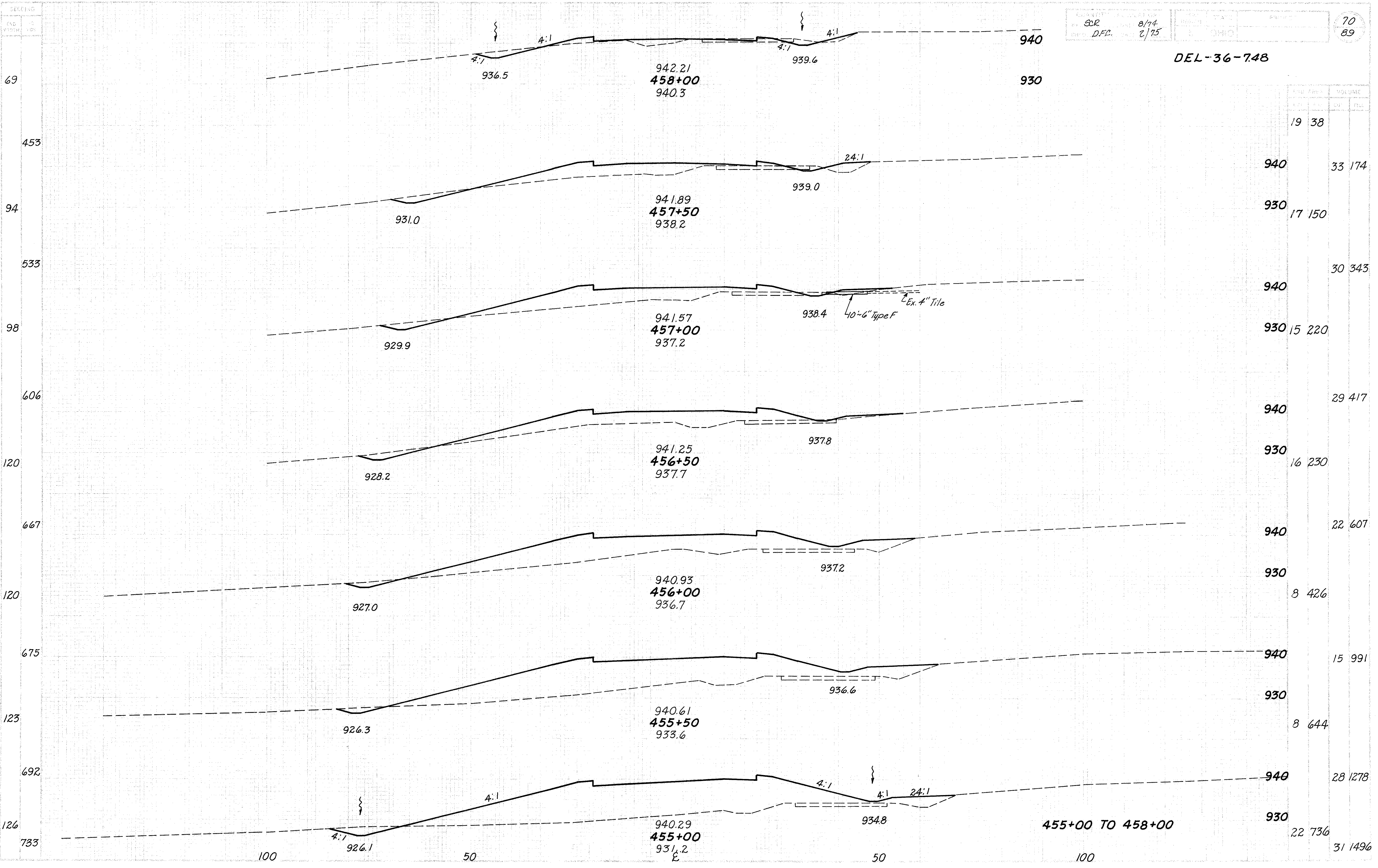






DEL-36-748





SCR 8/74
DFP. 2/75

DEL-36-748

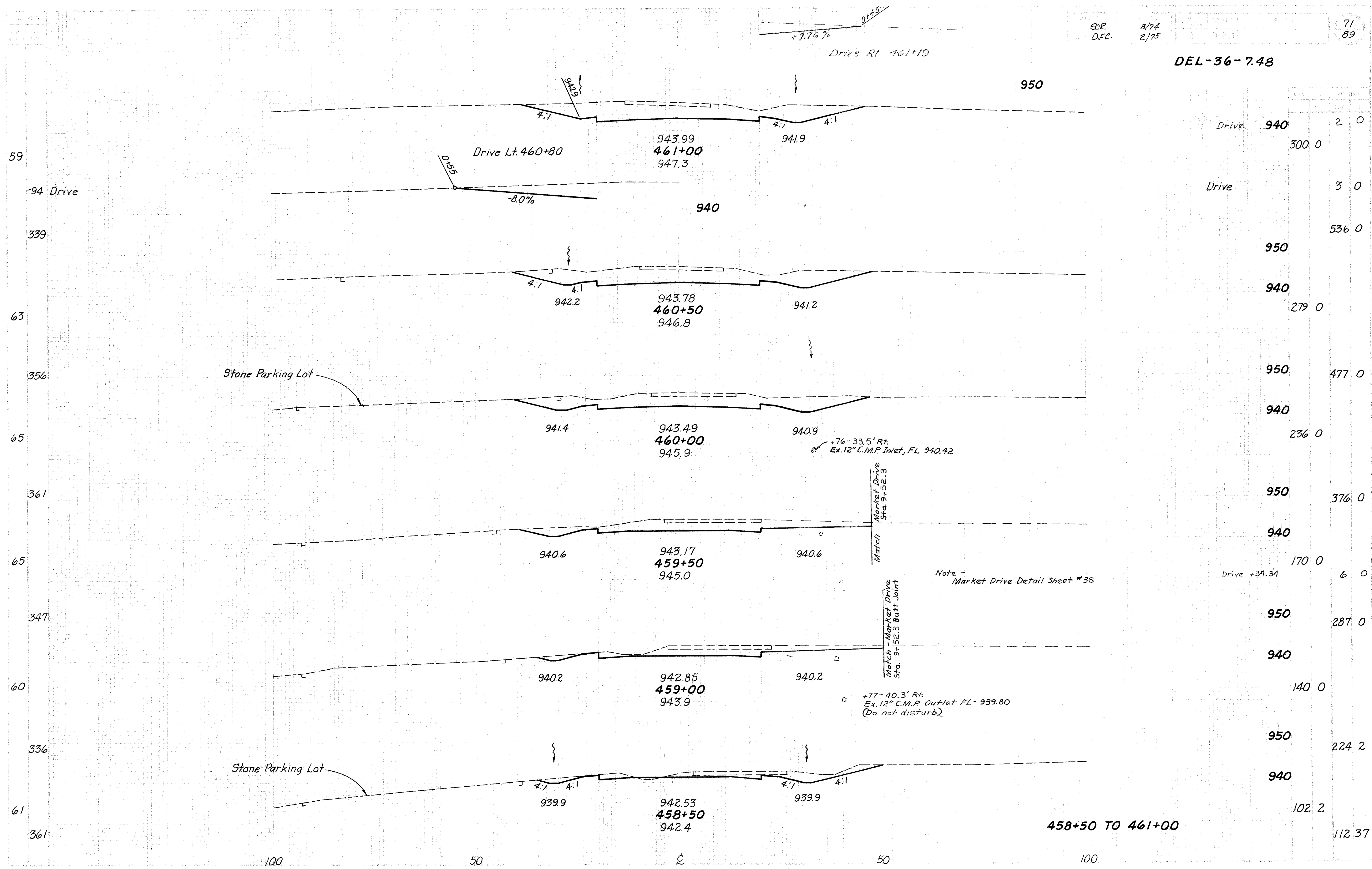
70
89

Layer	Station	Top Elevation	Bottom Elevation	Volume
1	458+00	940.3	942.21	19 38
2	457+50	938.2	941.89	33 174
3	457+00	937.2	941.57	17 150
4	456+50	937.7	941.25	30 343
5	456+00	936.7	940.93	15 220
6	455+50	933.6	940.61	29 417
7	455+00 TO 458+00	931.2	940.29	16 230
8	455+00 TO 458+00	934.8	940.29	22 607
9	455+00 TO 458+00	934.8	940.29	8 426
10	455+00 TO 458+00	934.8	940.29	15 991
11	455+00 TO 458+00	934.8	940.29	8 644
12	455+00 TO 458+00	934.8	940.29	28 1278
13	455+00 TO 458+00	934.8	940.29	8 644
14	455+00 TO 458+00	934.8	940.29	22 736
15	455+00 TO 458+00	934.8	940.29	31 1496

S&P
D.F.C. 8/74
2/75

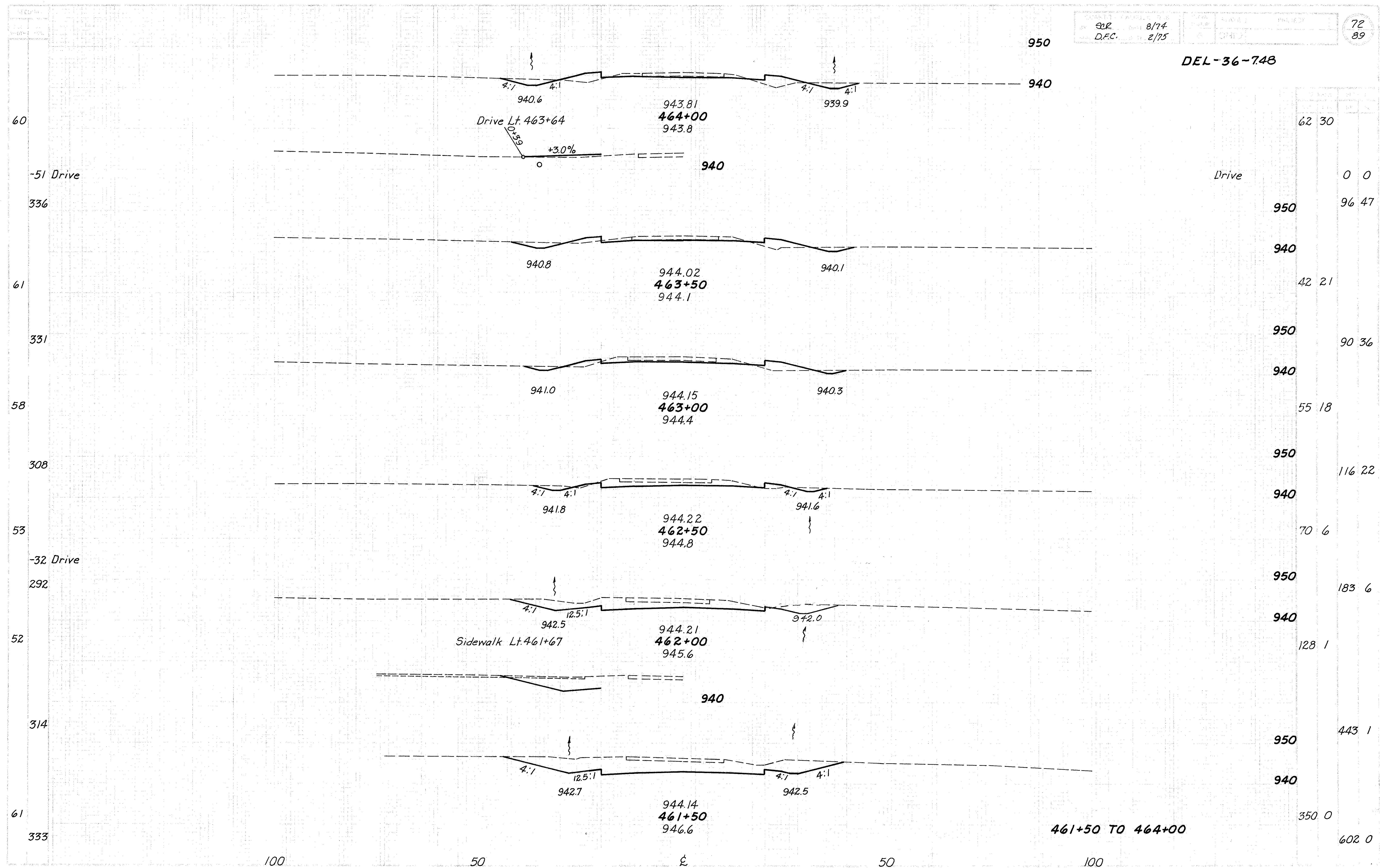
71
89

DEL-36-7.48



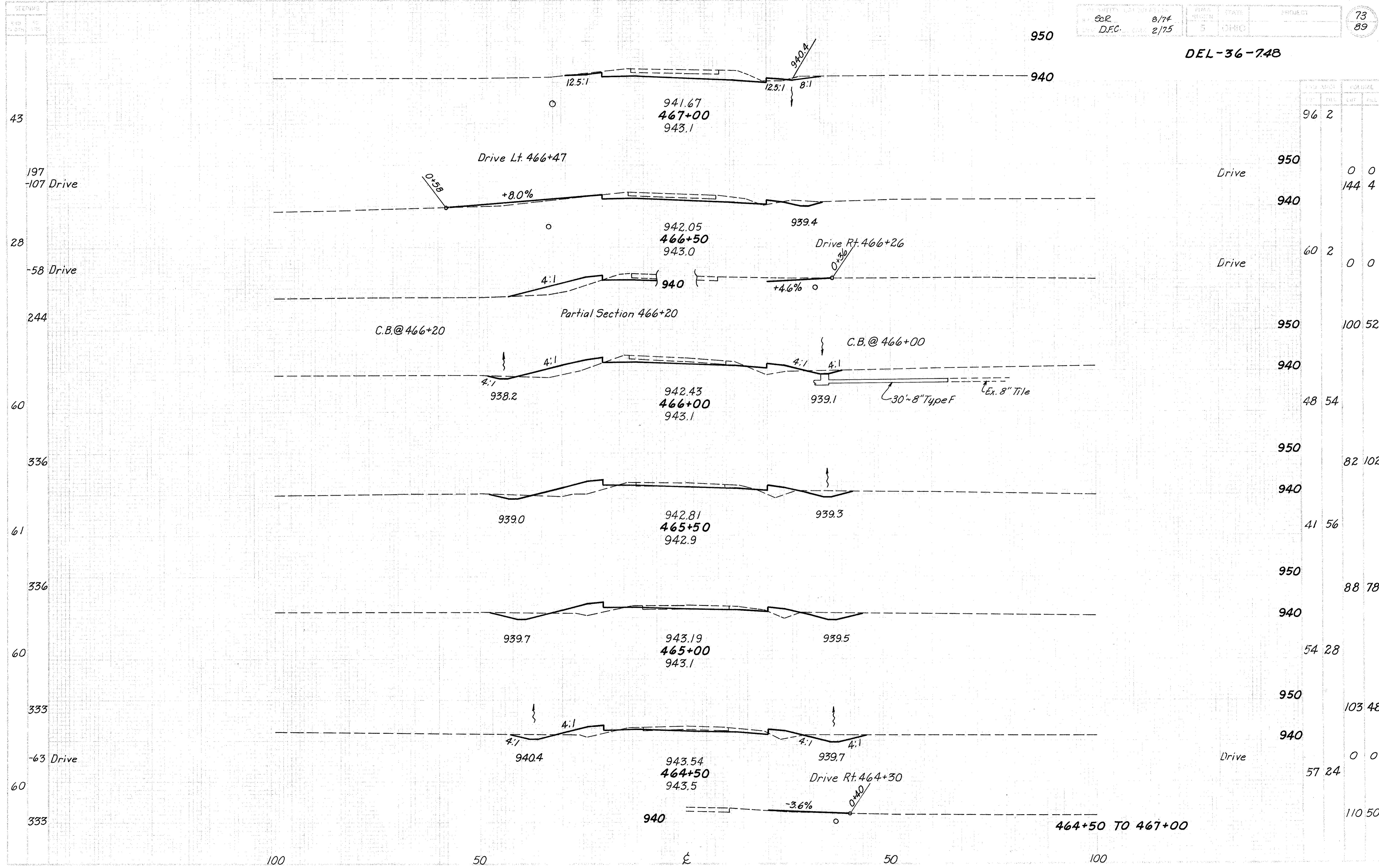
Drive	Area	Volume
Drive 940	2	0
	300	0
Drive	3	0
	536	0
	950	
	940	
	279	0
	950	
	477	0
	940	
	236	0
	950	
	376	0
	940	
	170	0
Drive +34.34	6	0
	950	
	287	0
	940	
	140	0
	950	
	224	2
	940	
	102	2
	458+50 TO 461+00	112.37

DEL-36-748

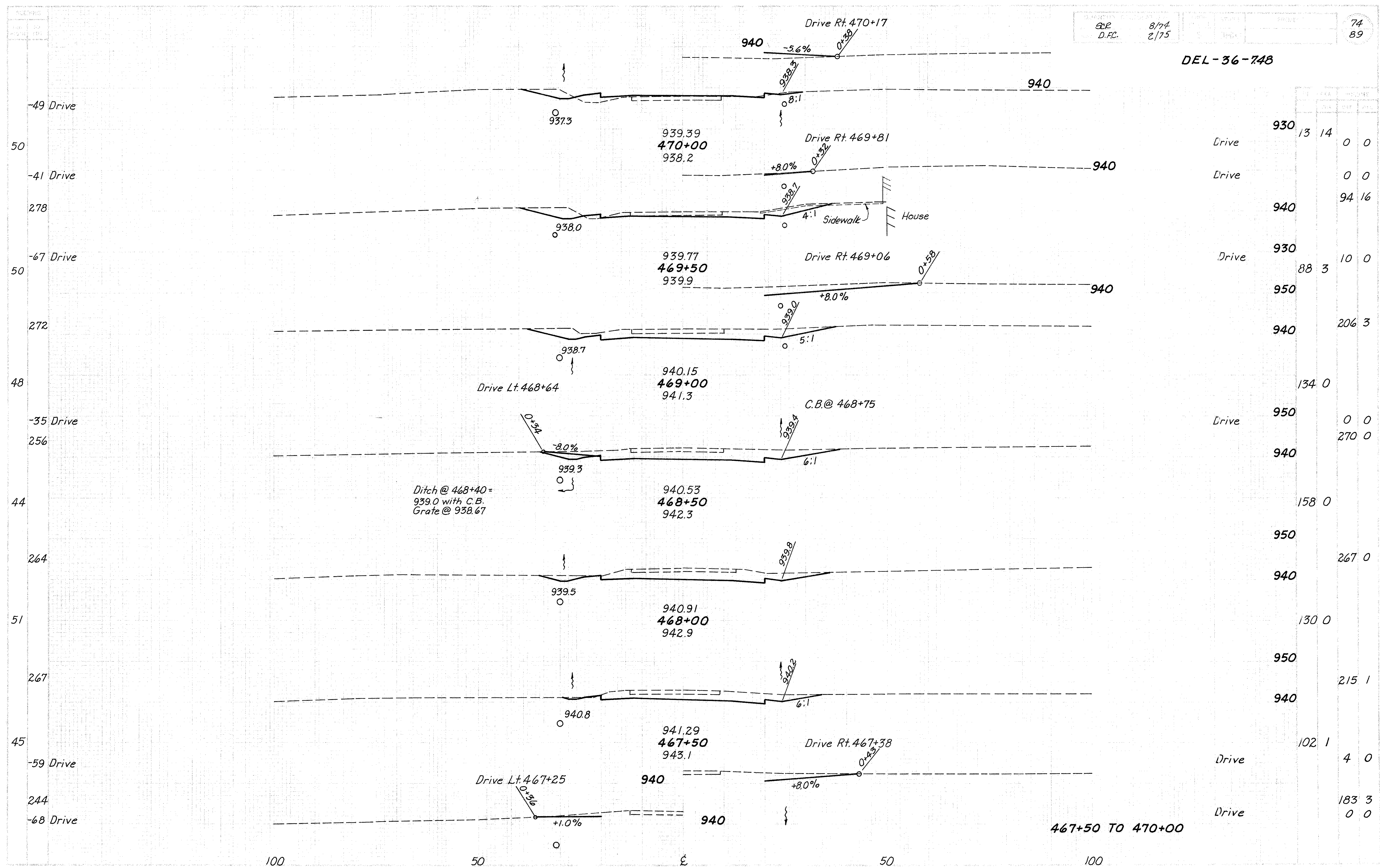


461+50 TO 464+00

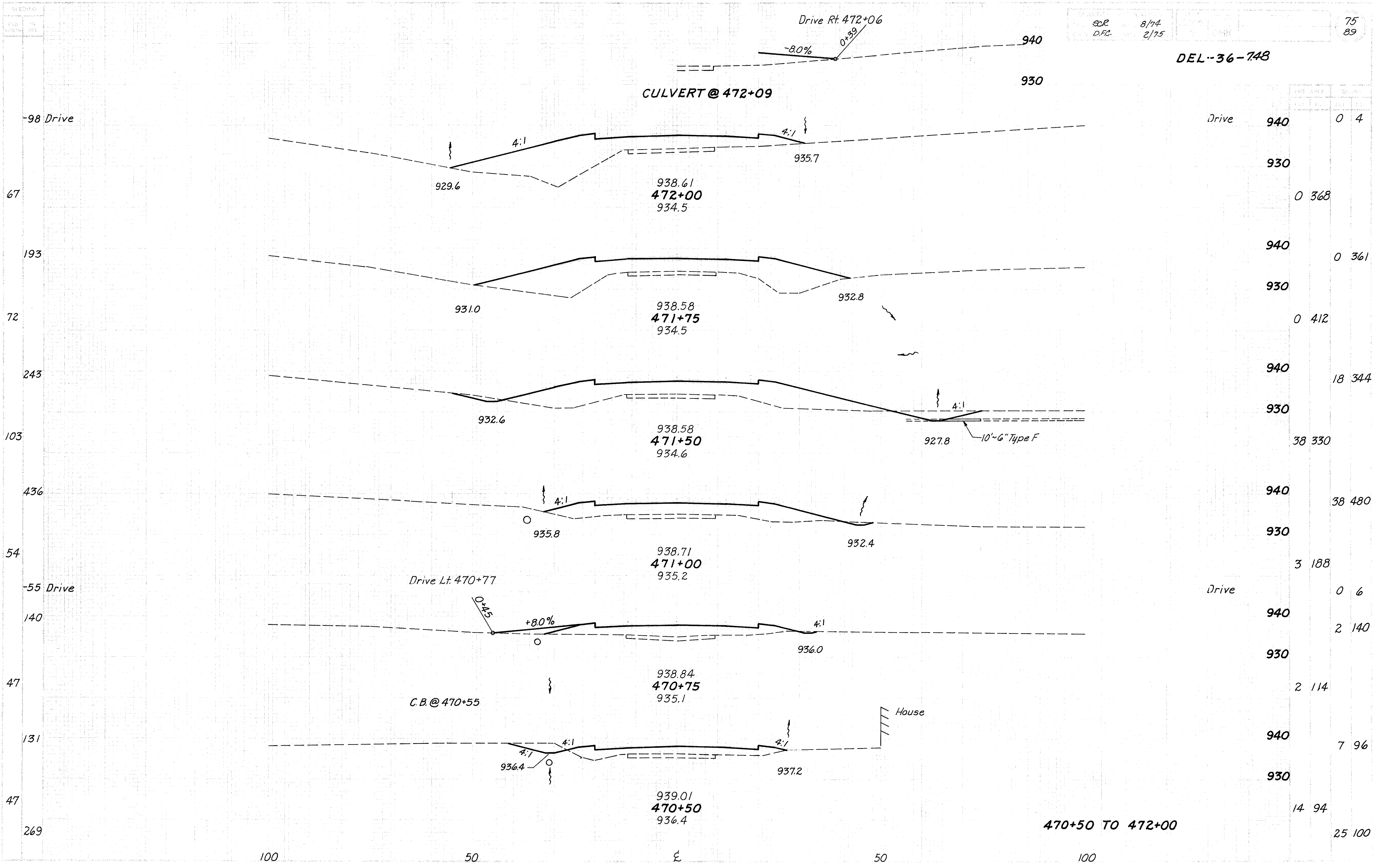
DEL-36-748



DEL-36-748



467+50 TO 470+00



SCR 8/74
 D.F.C. 2/75

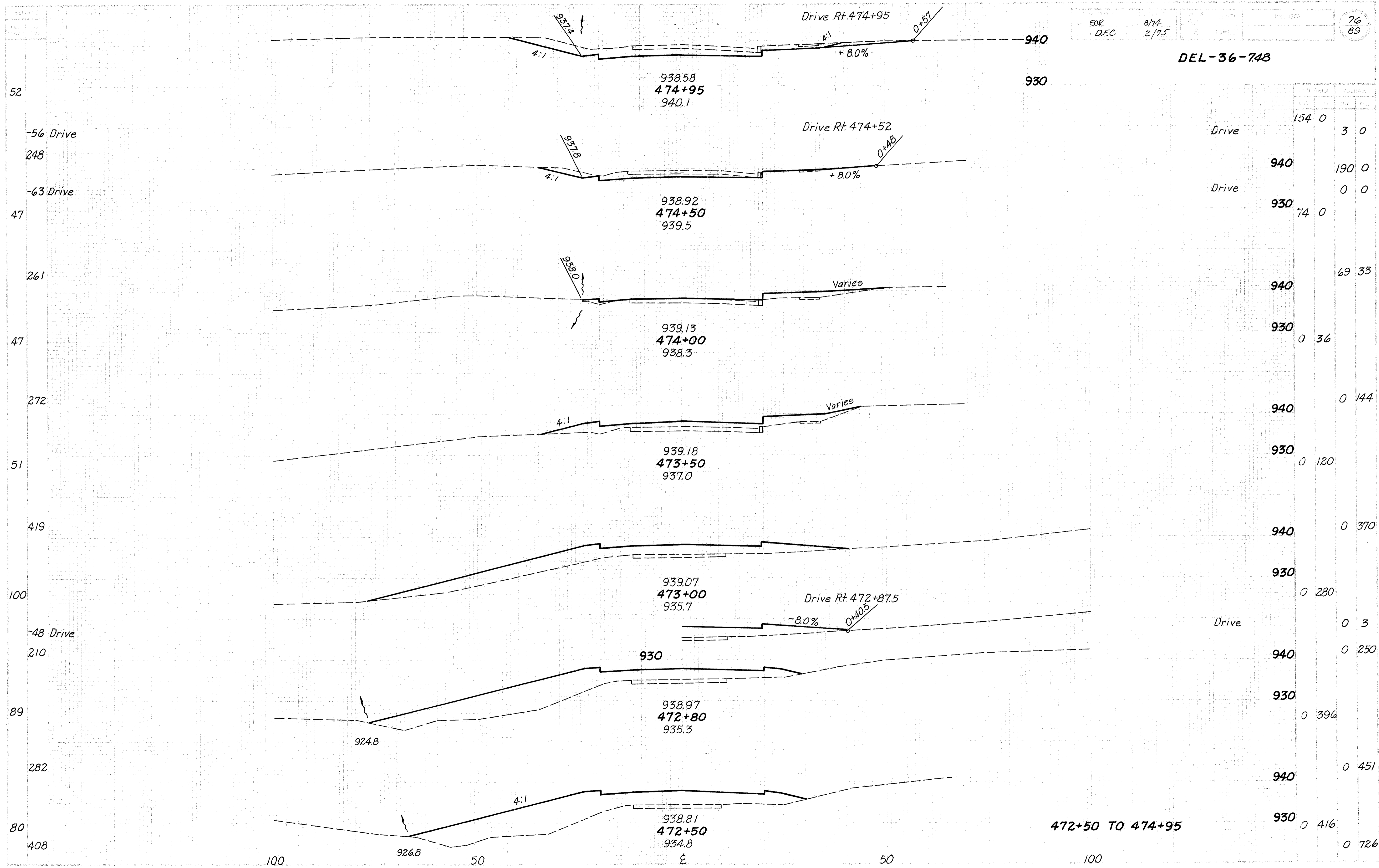
DEL-36-748

75
89

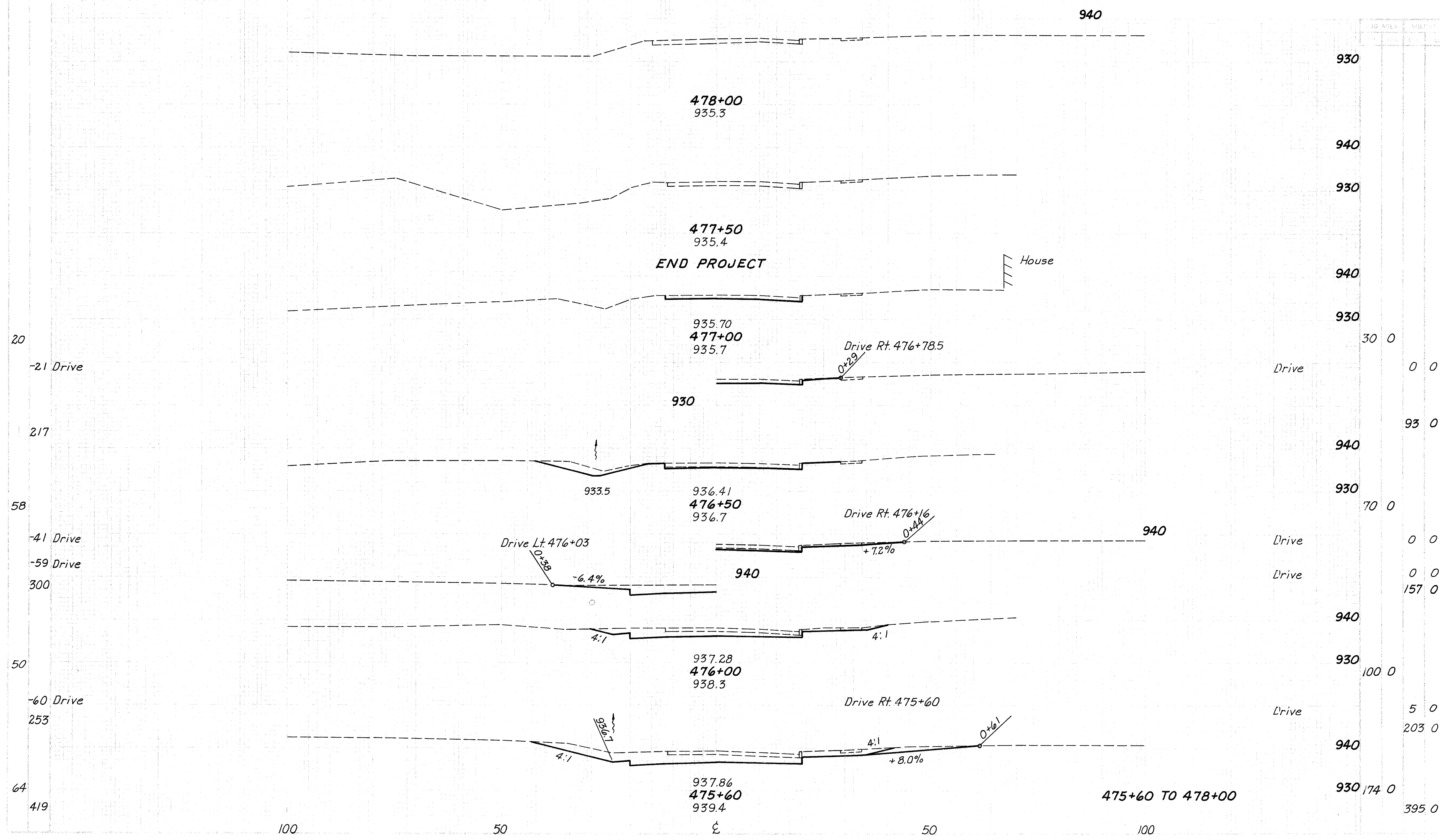
Station	Area	Volume
940	0	4
930	0	368
940	0	361
930	0	412
940	18	344
930	38	330
940	38	480
930	3	188
940	0	6
930	2	140
940	2	114
930	7	96
940	14	94
930	25	100

470+50 TO 472+00

DEL-36-748

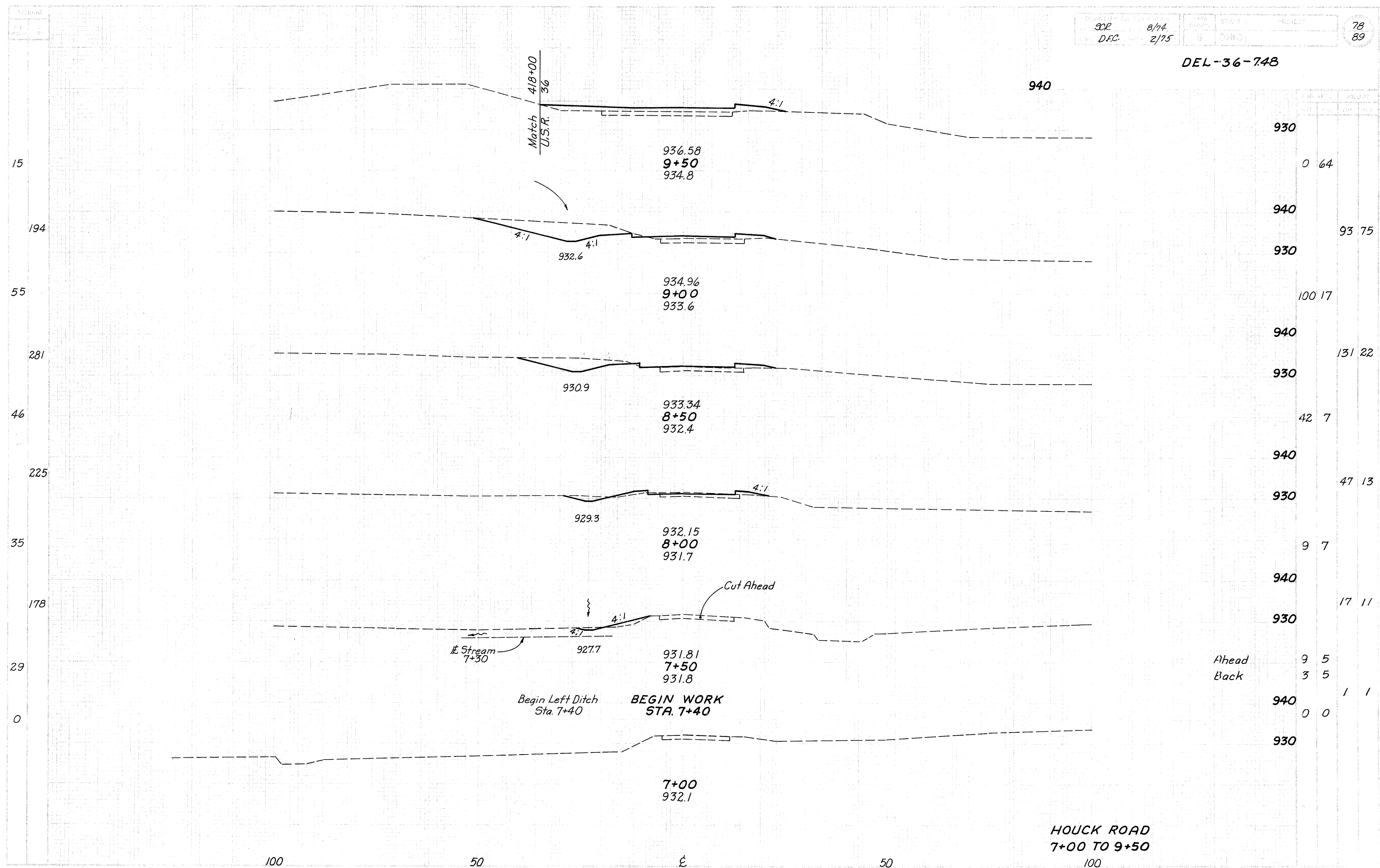


DEL-36-74B



475+60 TO 478+00

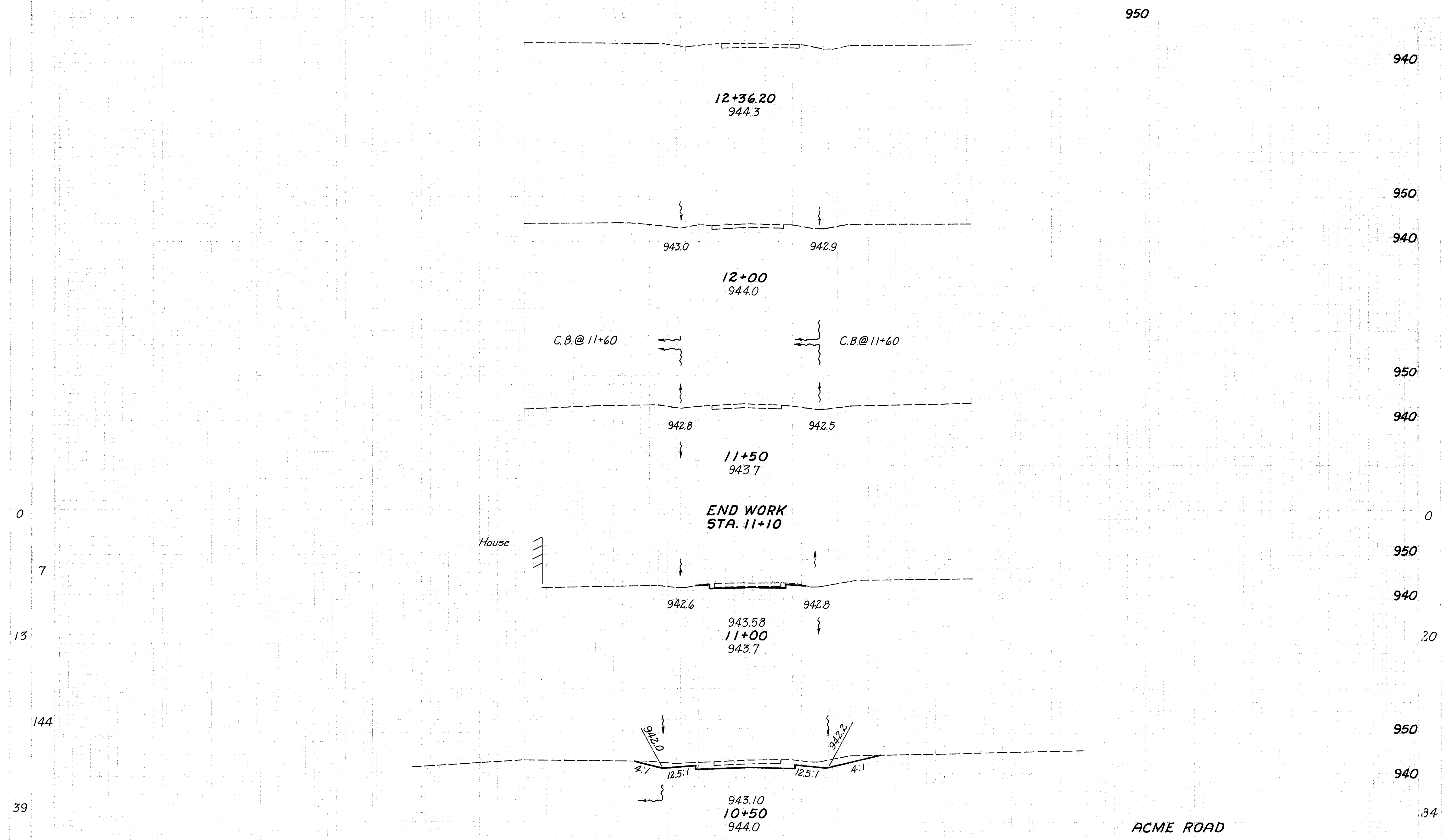
DEL-36-748



HOUCK ROAD
 7+00 TO 9+50

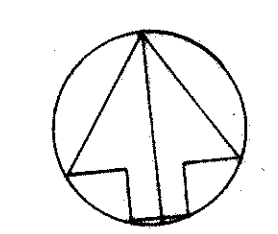
DEL-36-748

950

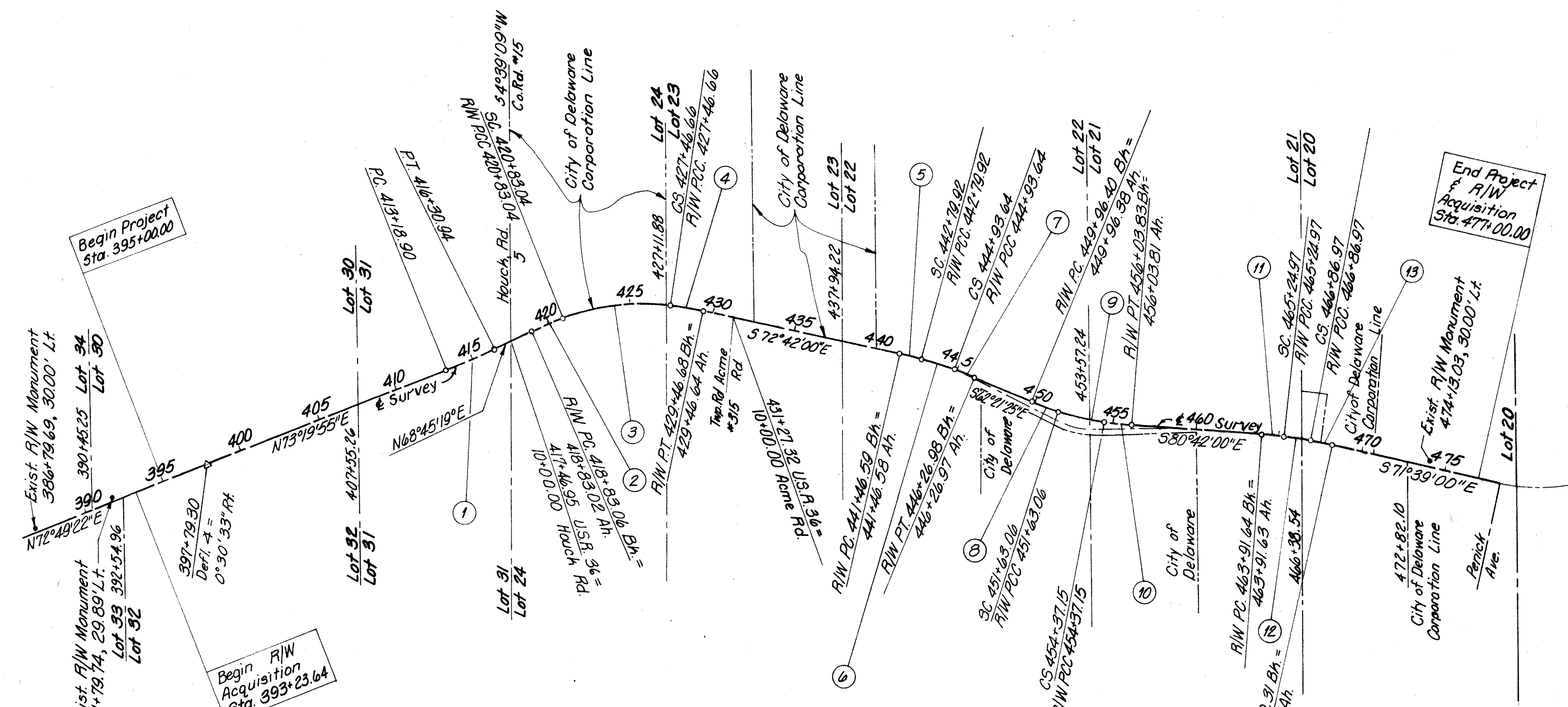


CENTER LINE SURVEY PLAT

U. S. ROUTE 36 SEC. 7.48
DELAWARE TWP. & CITY OF DELAWARE
3RD. QTR. T. 5N. R. 19W. U.S.M.L.



0 200 400
SCALE IN FEET

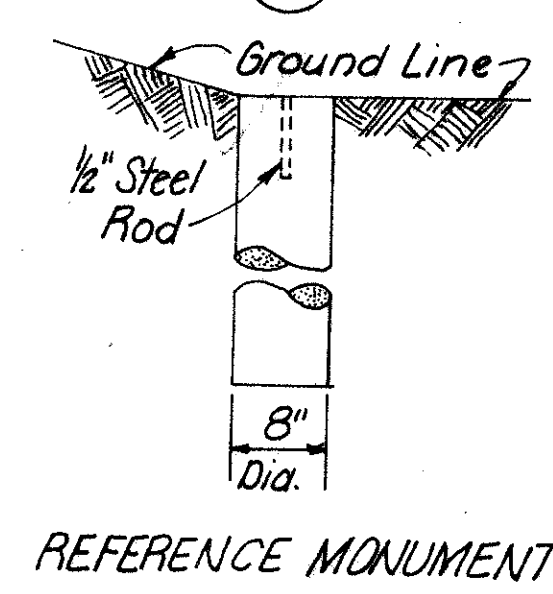


Signed _____
Date _____ District Deputy Director

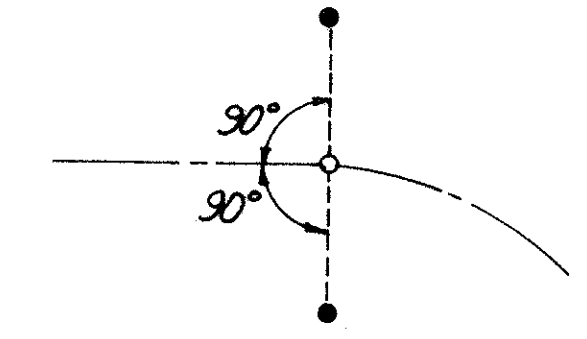
Received _____ 19____
Received _____ 19____
Book _____ Page _____
County Recorder

CURVE	P.I. (back)	D	Δ	T	E	L	R
1	414+75.00	1°28'00"	4°34'36"	156.10	3.12	312.04	3906.53
2	419+83.12	2°59'59"	6°00'00"	100.10	2.62	200.02	1910.02
3	424+20.91	4°00'00"	26°32'41"	337.87	39.31	663.62	1432.39
4	428+46.76	2°59'59"	6°00'00"	100.10	2.62	200.02	1910.02
5	442+13.26	1°52'30"	2°30'00"	66.68	0.73	133.34	3055.90
6	443+86.86	2°30'00"	5°20'35"	106.94	2.49	213.72	2291.83
7	445+60.32	1°52'30"	2°30'00"	66.68	0.73	133.34	3055.90
8	450+79.76	2°37'29"	4°22'30"	83.38	1.59	166.68	2182.86
9	453+00.42	3°30'00"	9°35'35"	137.36	5.75	274.09	1637.02
10	455+20.53	2°37'39"	4°22'30"	83.38	1.59	166.68	2182.86
11	464+58.32	1°52'30"	2°30'00"	66.68	0.73	133.34	3055.90
12	466+06.00	2°30'00"	4°03'00"	81.03	1.43	162.00	2291.83
13	467+53.65	1°52'30"	2°30'00"	66.68	0.73	133.34	3055.90

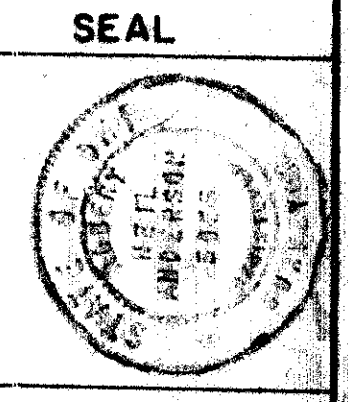
STATION	MONUMENTS		OF CENTERLINE LOCATION	
	LEFT	RIGHT	NORTH	EAST
397+79.30 Defl. Pt.	30.00	30.00	1,832,023.499	227,926.747
P.O.T. 403+00.00	30.00	30.00	1,832,172.850	228,425.566
P.O.T. 408+00.00	30.00	30.00	1,832,316.263	228,904.557
P.C. 413+18.90	30.00	30.00	1,832,465.097	229,401.654
P.T. 416+30.94	35.00	35.00	1,832,566.435	229,696.692
R/W P.C. 418+83.06 Bk.	35.00	35.00	1,832,657.788	229,931.673
P.O.C. 424+00.00	30.00	30.00	1,832,769.346	230,434.047
R/W P.T. 429+46.68 Bk.	25.00	25.00	1,832,693.634	230,972.583
P.O.T. 435+75.00	25.00	25.00	1,832,506.778	231,572.512
R/W P.C. 441+46.59 Bk.	30.00	30.00	1,832,336.801	232,118.245
R/W P.T. 446+26.98 Bk.	30.00	30.00	1,832,153.461	232,561.490
R/W P.C. 449+96.40 Bk.	30.00	30.00	1,831,982.060	232,888.750
R/W P.T. 456+03.83 Bk.	30.00	30.00	1,831,790.514	233,462.168
P.O.T. 460+00.00	25.00	25.00	1,831,726.488	233,853.151
R/W P.C. 463+91.64 Bk.	30.00	30.00	1,831,663.199	234,239.641
R/W P.T. 468+20.31 Bk.	30.00	35.00	1,831,560.882	234,655.414
P.O.T. 474+00.00	30.00	35.00	1,831,378.376	235,205.642



TYPICAL REFERENCE MONUMENT LOCATION



I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF TRANSPORTATION IN 1974 BY BURGESS & NIPLE LIMITED
Robert N. Anderson DATE October 22, 1974
 ROBERT N. ANDERSON NO. 5055



PROPERTY MAP

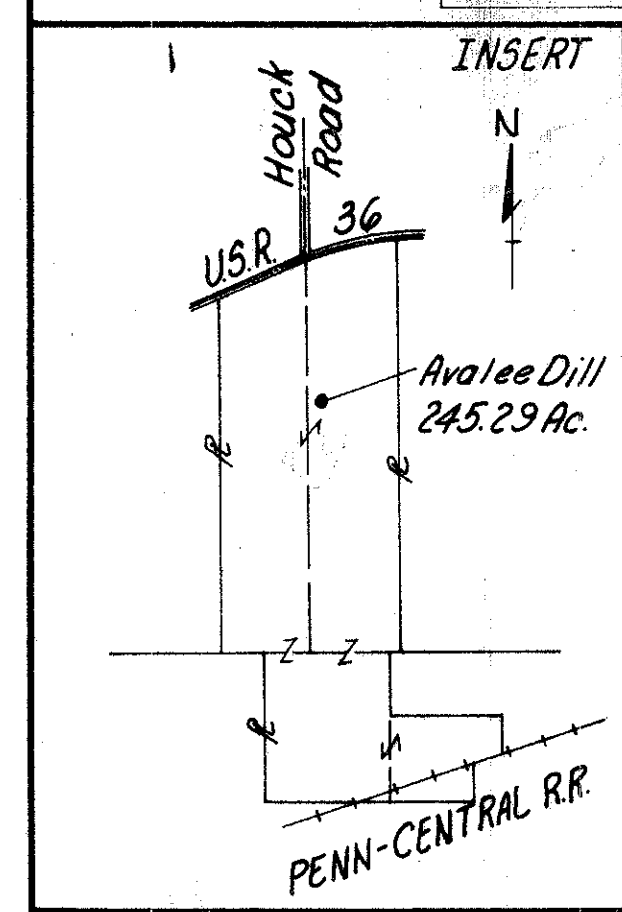
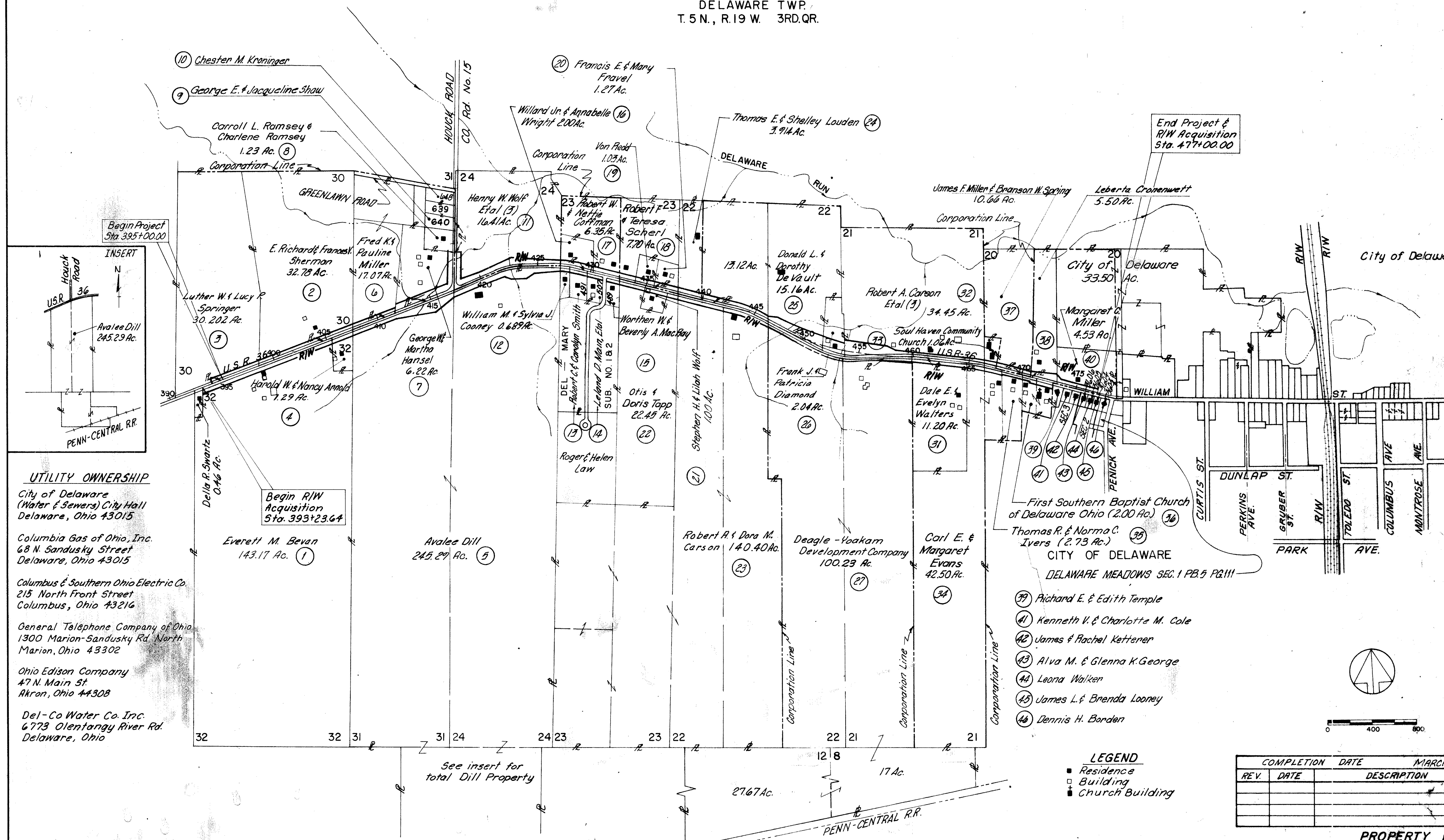
CITY OF DELAWARE
&
DELAWARE TWP.
T. 5 N., R. 19 W. 3RD. QR.

FED. NO. DIVISION	STATE	PROJECT
2	OHIO	

DEL-36-748

81
89

2
10



- UTILITY OWNERSHIP**
- City of Delaware
(Water & Sewers) City Hall
Delaware, Ohio 43015
 - Columbia Gas of Ohio, Inc.
68 N. Sandusky Street
Delaware, Ohio 43015
 - Columbus & Southern Ohio Electric Co.
215 North Front Street
Columbus, Ohio 43216
 - General Telephone Company of Ohio
1300 Marion-Sandusky Rd. North
Marion, Ohio 43302
 - Ohio Edison Company
47 N. Main St.
Akron, Ohio 44308
 - Del-Co Water Co. Inc.
6773 Olentangy River Rd.
Delaware, Ohio

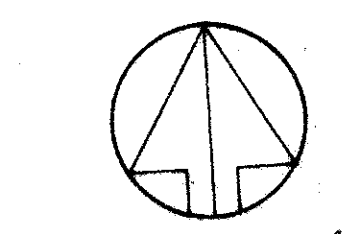
Begin R/W Acquisition Sta. 393+23.64

End Project & R/W Acquisition Sta. 477+00.00

First Southern Baptist Church of Delaware Ohio (2.00 Ac.)
Thomas R. & Norma C. Ivers (2.73 Ac.)
CITY OF DELAWARE
DELAWARE MEADOWS SEC. 1 PB. 5 PG. III

- 39 Richard E. & Edith Temple
- 41 Kenneth V. & Charlotte M. Cole
- 42 James & Rachel Ketterer
- 43 Alva M. & Glenna K. George
- 44 Leona Walker
- 45 James L. & Brenda Looney
- 46 Dennis H. Borden

- LEGEND**
- Residence
 - Building
 - ⊠ Church Building



REV.	DATE	DESCRIPTION

PROPERTY MAP

See insert for total Dill Property

27.67 Ac.

17 Ac.

PENN-CENTRAL R.R.

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

PARCEL NO.	OWNER	DEED RECORD		RECORD AREA ACRES	TOTAL P.R.O. ACRES	TO BE ACQUIRED (ACRES)			NET RESIDUE		TYPE FUNDS	SHEET NO.	REMARKS
		BOOK	PAGE			GROSS IN TAKE	P.R.O. IN TAKE	NET TAKE	BLDGS.	ACRES LEFT			
1-WD 1-T	Everett M. Beran	182 186	46,47 140	143.17	0.85	1.42 0.06	0.85	0.57 0.06	—	—	141.75	566	Slope & Grade
2-WD 2-T	E. Richard & Frances V. Sherman	384	508	32.78	0.62	1.03 0.12	0.62	0.41 0.12	—	—	31.75	566	Build Driveway, Slope & Grade
3-WD	Luther W. & Lucy Springer	328	17	30.20	0.56	0.53	0.32	0.21	—	—	29.43	5	
4-WD	Harold W. & Nancy Arnold	344	454	1.29	0.14	0.23	0.14	0.09	—	—	1.06	6	
5-WD 5-T 5-T1	Avalee Dill	206 232 388	77 198 624	245.29	1.35	2.77 0.06 0.15	1.35	1.42 0.06 0.15	—	—	242.52	667	Connect drainage tile Build Driveway, Slope & Grade
6-WD 6-T	Fred K. & Pauline Miller	297	439	17.07	0.28	0.47 0.07	0.28	0.19 0.07	—	—	16.60	6	Build Driveway, Slope & Grade
7-WD 7-T	George W. & Martha Hansel	278	549	6.22	0.56	1.28 0.13	0.56	0.72 0.13	—	—	4.94	667	Build Driveway, Slope & Grade
8	Carroll L. & Charlene Ramsey	326	779										NOT REQUIRED
9	George E. & Jacqueline Shaw	352	115										Lots 640 & 641 Fred A. Miller Subd'n. NOT REQUIRED
10	Chester M. Kroninger	324 358	576 819										Lot 639 NOT REQUIRED
11-WD	Henry W. Wolf, John D. Wolf & Stephan H. Wolf	358	703	16.41	1.14	1.75	0.84	0.91	—	—	14.36	7	
12-WD 12-T	William M. & Sylvia Cooney	301	14	0.69	0.07	0.12 0.02	0.07	0.05 0.02	—	—	0.57	7	Build Driveway
13-WD	Robert C. & Carolyn Smith	330	151	0.96	—	0.08	—	0.08	—	—	0.88	7	Lot 491 Del-Mary Subd'n. P.B. 5 Pg. 269

PARCEL NO.	OWNER	DEED RECORD		RECORD AREA ACRES	TOTAL P.R.O. ACRES	TO BE ACQUIRED (ACRES)			NET RESIDUE		TYPE FUNDS	SHEET NO.	REMARKS
		BOOK	PAGE			GROSS IN TAKE	P.R.O. IN TAKE	NET TAKE	BLDGS.	ACRES LEFT			
14-WD 14-T	Leland D. & Vera J. Main	310	455	0.75	—	0.06 0.03	—	0.06 0.03	—	—	0.69	7	Lot 507 Del-Mary Subd'n. P.B. 5 Pg. 269 Build Driveway, Slope & Grade
15-WD	Worthen W. & Beverly A. Mac Rae	377	6	0.60	—	0.05	—	0.05	—	—	0.55	7	Lot 489 Del-Mary Subd'n. P.B. 5 Pg. 269
16-WD	Willard Jr. & Annabelle Wright	256	428	2.00	0.21	0.34	0.21	0.13	—	—	1.66	7	
17-WD	Robert W. & Nettie Coffman	343	267	6.35	0.16	0.27	0.16	0.11	—	—	6.08	7	
18-WD 18-T	Robert F. & Teresa Scherl	265 316	343 120	7.70	0.10	0.18 0.01	0.10	0.08 0.01	—	—	7.52	8	Connect drain tile
19-WD	Von Redd	323	508	1.03	0.11	0.19	0.11	0.08	—	—	0.84	8	
20-WD 20-T	Francis E. & Mary Fravel	240 267	257 203	1.27	0.15	0.26 0.03	0.15	0.11 0.03	—	—	1.01	8	Build Driveway, Slope & Grade
21-WD	Stephan H. & Lilah Wolf	353	302	1.00	0.14	0.24	0.14	0.10	Yes	—	0.76	8	Building encroaches existing R/W
22-WD 22-WD1	Otis & Doris Tapp	210	219	22.45	0.23	0.27 0.12	0.17	0.10 0.06	—	—	22.06	8	
23-WD	Robert A. & Dora M. Carson	219 240 299	117 307 231	140.40	0.59	0.93	0.59	0.34	—	—	139.47	8	Take is from V.219- Pg. 117 & V.299-Pg.231
24-WD 24-T	Thomas E. & Shelly Louden	370	708	3.77	—	0.09 0.05	—	0.09 0.05	—	—	3.68	8	Louden Subd'n Lots 4852-4854 incl. P.B. 10 Pg. 124 Build Driveway, Slope & Grade

P.R.O. indicates Present Road Occupied
P. indicates Personal Property

Total Number of Owners _____ 38
Total Number of Owners with Structures _____ 2
Total Take Owners _____ 0

COMPLETION DATE		
REV.	DATE	DESCRIPTION
		MARCH 25, 1976

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

PARCEL NO.	OWNER	DEED RECORD		RECORD AREA ACRES	TOTAL P.R.O. ACRES	TO BE ACQUIRED (ACRES)				NET RESIDUE		TYPE FUNDS	SHEET NO.	REMARKS
		BOOK	PAGE			GROSS INTAKE	P.R.O. INTAKE	NET TAKE	BLDGS.	ACRES LEFT	ACRES RIGHT			
25-WD 25-T 25-T1 25-T2	Donald L. & Dorothy DeVault	256 370	441 681	28.28	0.83	2.07 0.15 0.18 0.08	0.83	1.24 0.15 0.18 0.08	P	26.21			8&9	Slope & Grade Build Driveway Connect drain tile, Slope & Grade
26-WD 26-T	Frank J. & Patricia Diamond	309	370	2.04	0.14	0.67 0.32	0.14	0.53 0.32	Yes	1.37			9	Build Driveway
27-WD 27-T 27-T1	Deagle-Yokum Development Company	386	12	144.90	0.95	1.13 0.04 0.05	0.95	0.18 0.04 0.05			143.77		9	Outlet existing tile Slope & Grade
28														NOT USED
29														NOT USED
30														NOT USED
31-WD	Dale E. & Evelyn Walters	260	579	11.20	0.34	0.59	0.34	0.25			10.61		9&10	
32-WD 32-T 32-T1 32-T2	Robert A. Carson, Mary Jane Halverson & William W. Carson	251 366	426 588	34.45	0.87	2.19 0.05 0.02 0.02	0.87	1.32 0.05 0.02 0.02	P	32.26			9&10	Slope & Grade Build Driveway Slope & Grade
33-WD 33-T	Soul Haven Community Church	233 236	224 507	1.06	0.07	0.12 0.02	0.07	0.05 0.02		0.94			10	Build Driveway, Slope & Grade
34-WD	Carl E. & Margaret Evans	209 304	472 432	42.50	0.22	0.38	0.22	0.16			42.12		10	
35-WD 35-T	Thomas R. & Norma C. Ivers	382	410	2.73	0.14	0.19 0.04	0.14	0.05 0.04	P		2.54		10	Build Driveway, Slope & Grade
36-WD 36-T	First Southern Baptist Church	303 335	336 398	2.00	0.19	0.30 0.05	0.19	0.11 0.05	P		1.70		10	Slope & Grade
37-WD	James F. Miller & Branson W. Spring	341	777	10.66	0.22	0.37	0.22	0.15		10.29			10	

PARCEL NO.	OWNER	DEED RECORD		RECORD AREA ACRES	TOTAL P.R.O. ACRES	TO BE ACQUIRED (ACRES)				NET RESIDUE		TYPE FUNDS	SHEET NO.	REMARKS
		BOOK	PAGE			GROSS INTAKE	P.R.O. INTAKE	NET TAKE	BLDGS.	ACRES LEFT	ACRES RIGHT			
38-WD	Leberta Cronerwett	326	575	5.50	0.17	0.39	0.17	0.22			5.11		10	
39-T	Richard E. & Edith Temple	293	528	13,383SF		16,635F		16,635F			13,383SF		10	Lot 3702 Delaware Meadows S.3 Build Driveway, Slope & Grade
40-WD	Margaret C. Miller	153	108	4.53	0.41	0.47	0.27	0.20			3.92		10	
41-T	Kenneth V. & Charlotte M. Cole	389	375	10,000SF		16,000SF		16,000SF			10,000SF		10	Lot 3703, Sec. 3 Build Driveway, Slope & Grade
42-T	James & Rachel Ketterer	332	480	10,000SF		16,000SF		16,000SF			10,000SF		10	Lot 3704, Sec. 3 Build Driveway, Slope & Grade
43-T	Alva M. & Glenna George	386	652	7,500SF		12,800SF		12,800SF			7,500SF		10	Lot 3606, Sec. 1 Build Driveway, Slope & Grade
44-T	Leona Walker	326	477	7,500SF		9,000SF		9,000SF			7,500SF		10	Lot 3605, Sec. 1 Build Driveway, Slope & Grade
45	James L. & Brenda Looney	375	246											Lot 3604, Sec. 1 NOT REQUIRED
46	Dennis H. Borden	332 341	548 166											Lot 3603, Sec. 1 NOT REQUIRED

Delaware Meadows Subdivision

P.R.O. indicates Present Road Occupied
P. indicates Personal Property

COMPLETION DATE		
REV.	DATE	DESCRIPTION
		MARCH 25, 1975

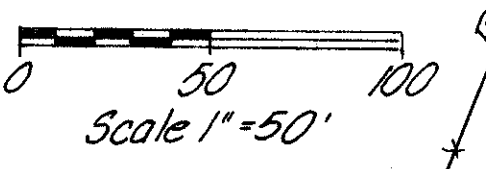
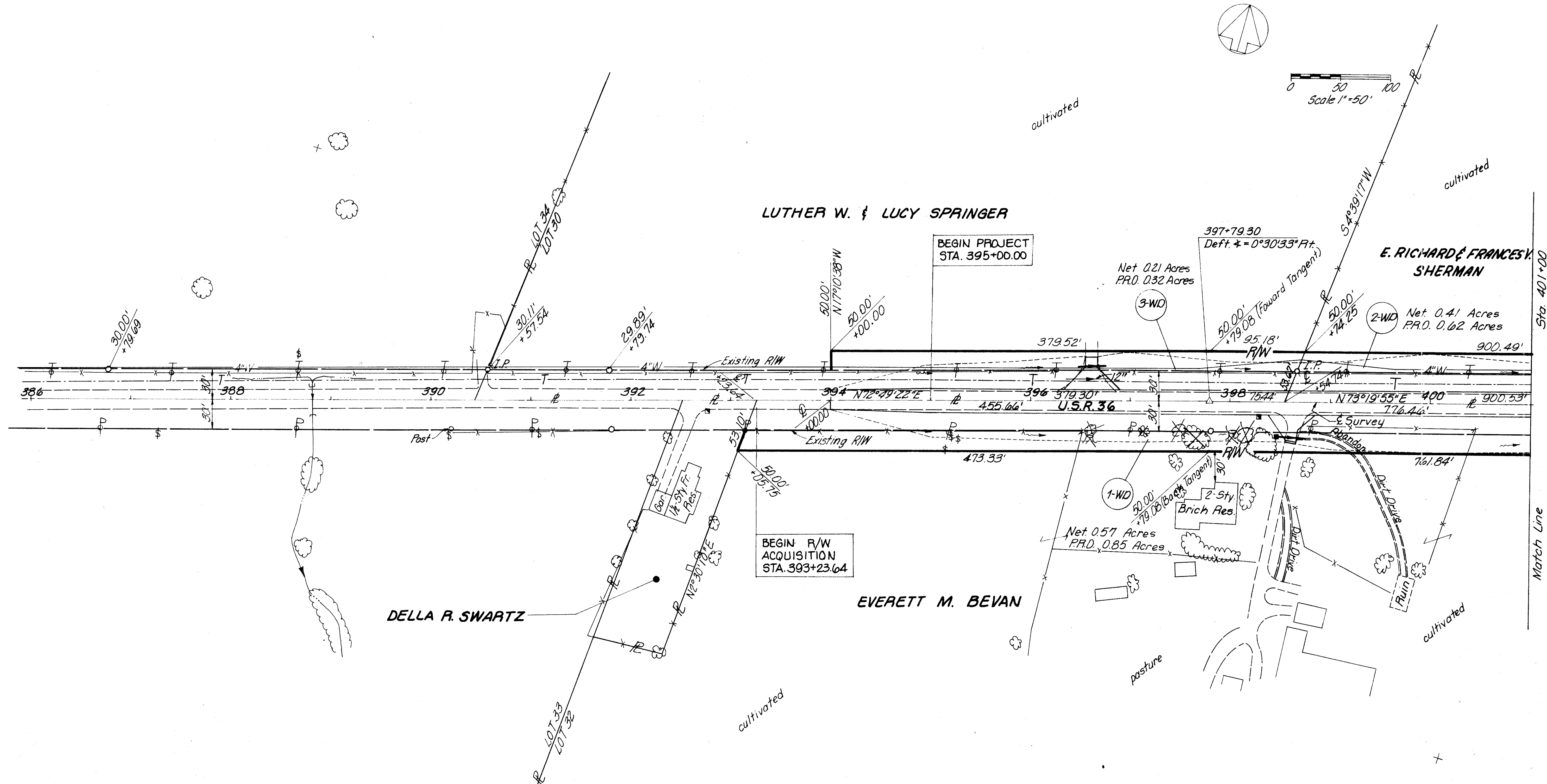
DELAWARE TWP.
T.5N., R.19W. 3RD.QR.

QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY _____ DATE _____	5	0-110	
CHKD _____ DATE _____			

84
89

DEL-36-7.48

R/W PLAN 5
10



REV.	DATE	DESCRIPTION

COMPLETION DATE MARCH 25, 1975

RIGHT OF WAY 386+00 to 401+00

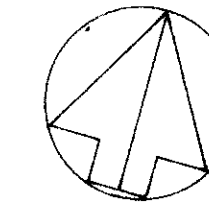
DELAWARE TWP
T.5N., R.19W. 3RD.QR.

QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY _____ DATE _____	5	OHIO	
CHKD _____ DATE _____			

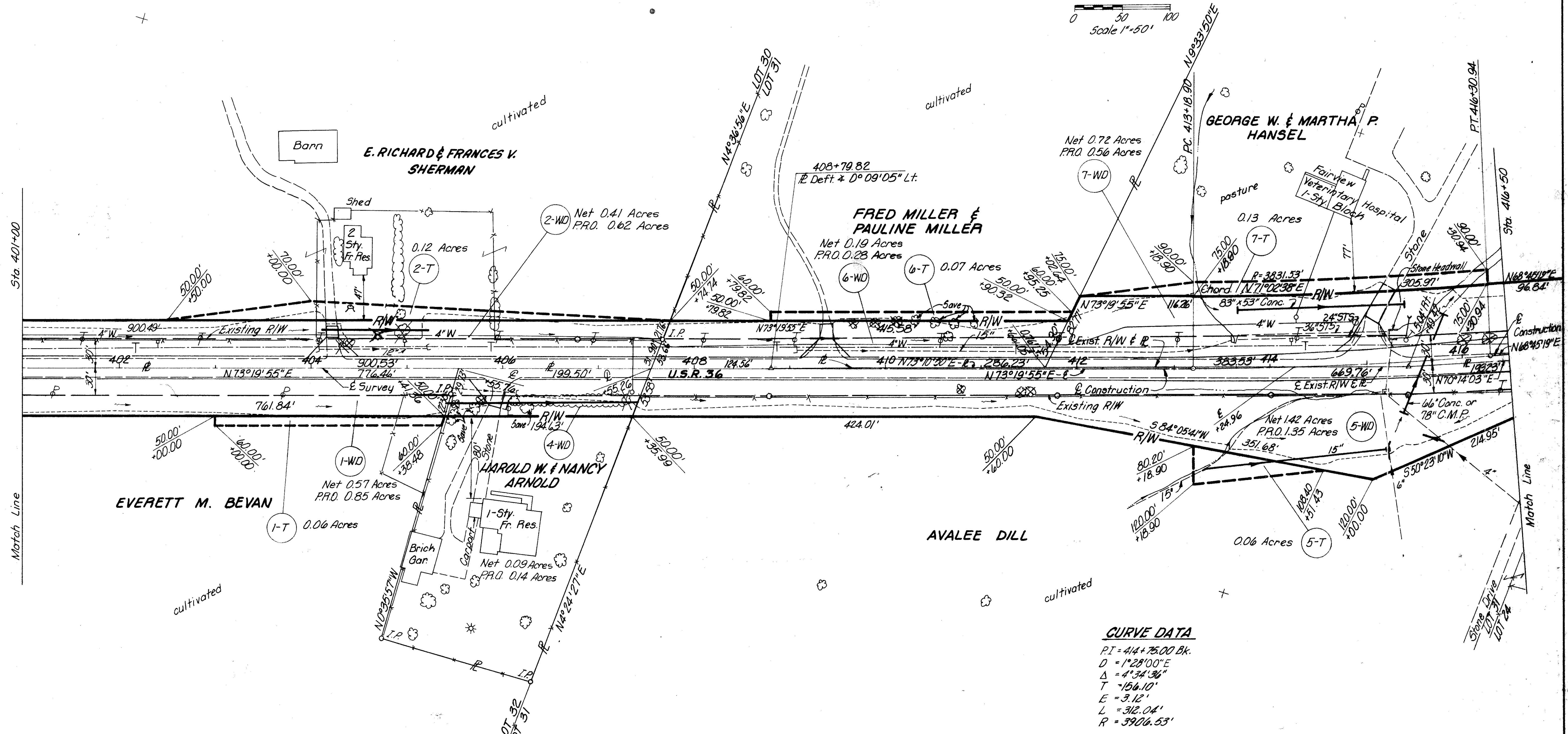
85
89

DEL-36-748

R/W PLAN 6
10



0 50 100
Scale 1"=50'



CURVE DATA

PI = 414+75.00 Bk.
D = 1°28'00"E
Δ = 4°34'36"
T = 156.10'
E = 3.12'
L = 312.04'
R = 3906.53'

COMPLETION DATE		MARCH 25, 1975
REV.	DATE	DESCRIPTION

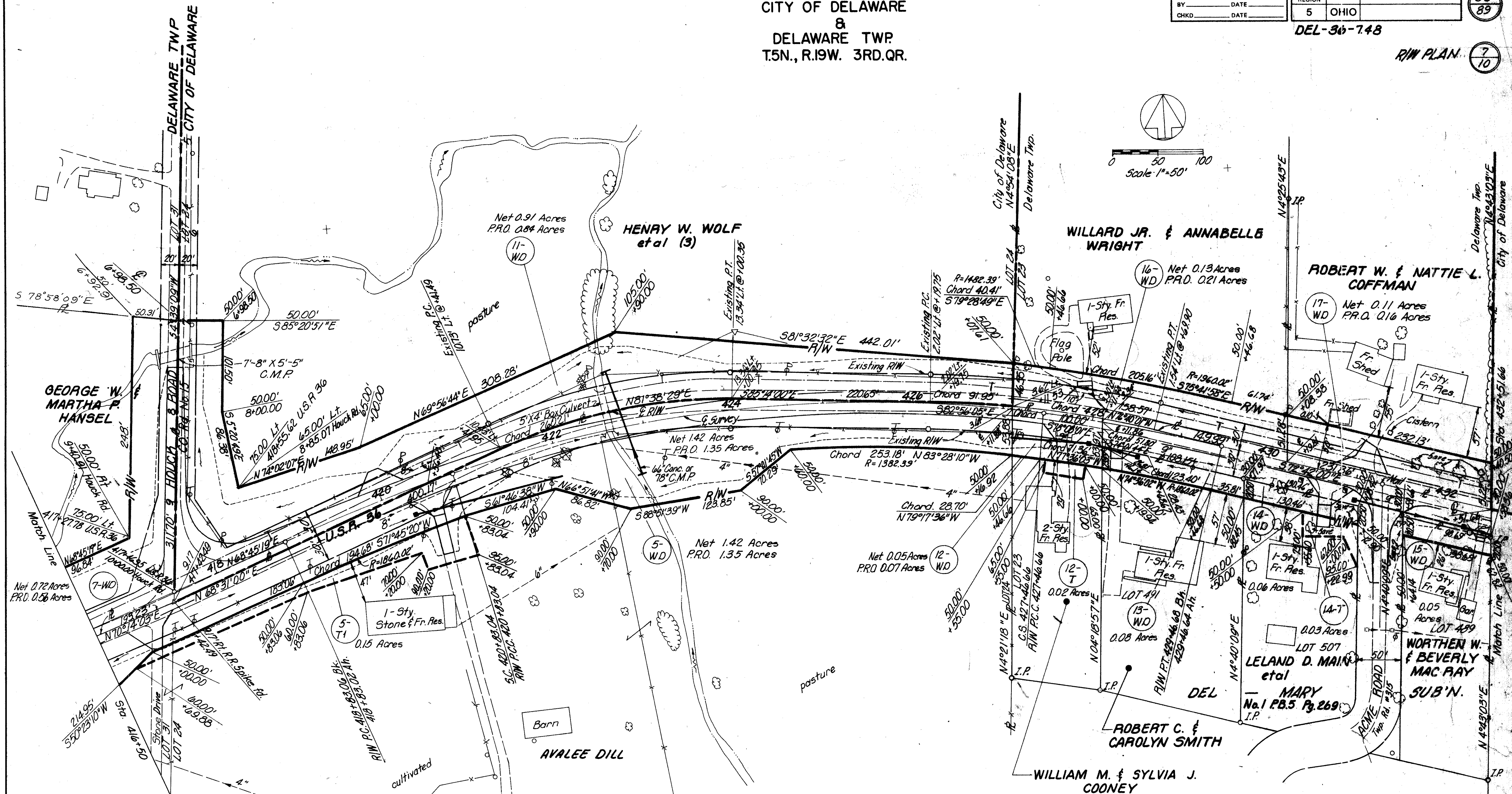
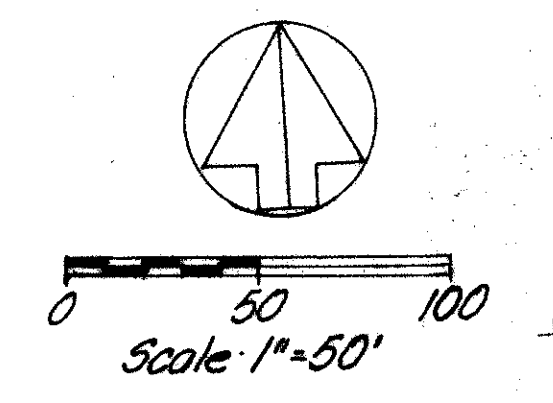
RIGHT OF WAY 401+00 to 416+50

CITY OF DELAWARE
&
DELAWARE TWP
T.5N., R.19W. 3RD. QR.

QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY: _____ DATE: _____	5	OHIO	
CHKD: _____ DATE: _____			

DEL-36-748

R/W PLAN 7/10



CURVE DATA EXISTING R/W

D = 10°00'00"
Δ = 26°15'00"
T = 133.60'
L = 262.50'
R = 572.96'
C = 260.21'

CURVE DATA

P.I. = 419+03.12 Bk.
D = 8°59'59"
Δ = 6°00'00"
T = 100.10'
L = 200.02'
R = 1910.02'

P.I. = 424+20.91 Bk.
D = 4°00'00"
Δ = 26°32'41"
T = 337.87'
L = 663.62'
R = 1432.39'

P.I. = 428+46.76 Bk.
D = 2°59'59"
Δ = 6°00'00"
T = 100.10'
L = 200.02'
R = 1910.02'

CURVE DATA EXISTING R/W

D = 5°00'00"
Δ = 12°32'00"
T = 125.84'
L = 250.67'
R = 1145.32'
C = 250.17'

COMPLETION DATE	MARCH 25, 1973	
REV.	DATE	DESCRIPTION

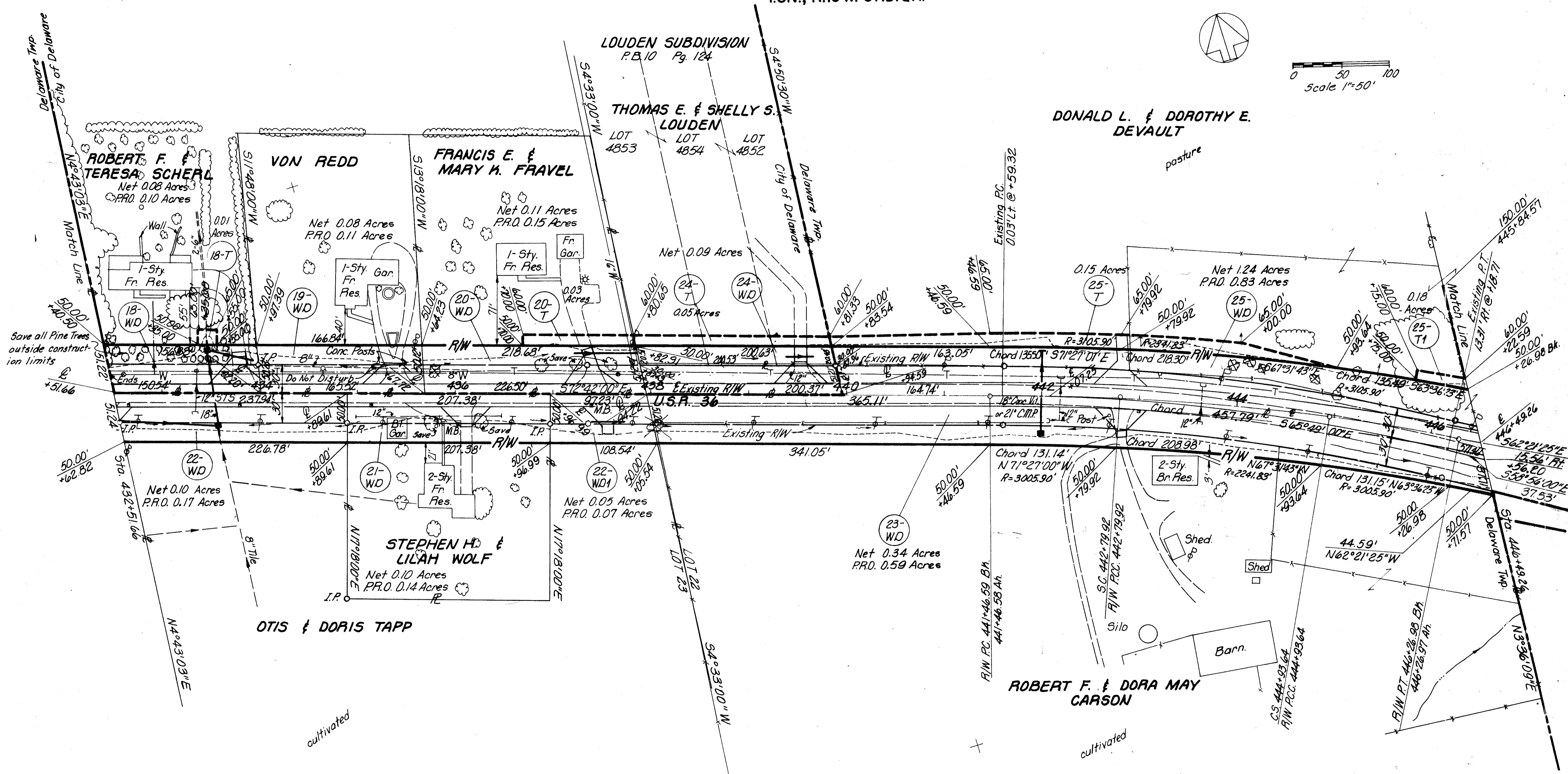
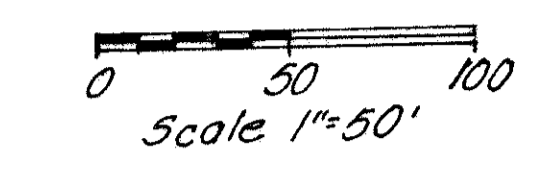
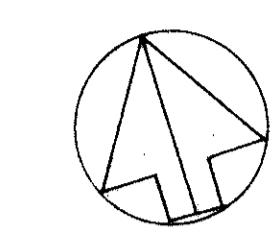
RIGHT OF WAY 416+50 to 432+51.66

CITY OF DELAWARE
&
DELAWARE TWP.
T.5N., R.19W. 3RD.QR.

QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY _____ DATE _____	5	OHIO	
CHKD _____ DATE _____			

DEL-36-748

R/W PLAN



CURVE DATA EXISTING R/W

D = 3°00'00"
Δ = 13°46'00"
T = 230.55'
L = 458.89'
R = 1909.86'
C = 457.79'

CURVE DATA

P.I. = 442+13.26 Bk.	P.I. = 443+96.86 Bk.	P.I. = 445+60.32 Bk.
D = 1°52'30"	D = 2°30'00"	D = 1°52'30"
Δ = 2°30'00"	Δ = 5°20'35"	Δ = 2°30'00"
T = 66.68'	T = 106.94'	T = 66.68'
L = 133.34'	L = 213.72'	L = 133.34'
R = 3055.90'	R = 2291.83'	R = 3055.90'

COMPLETION DATE MARCH 25, 1975

REV.	DATE	DESCRIPTION

RIGHT OF WAY 432+51.66 to 446+49.26

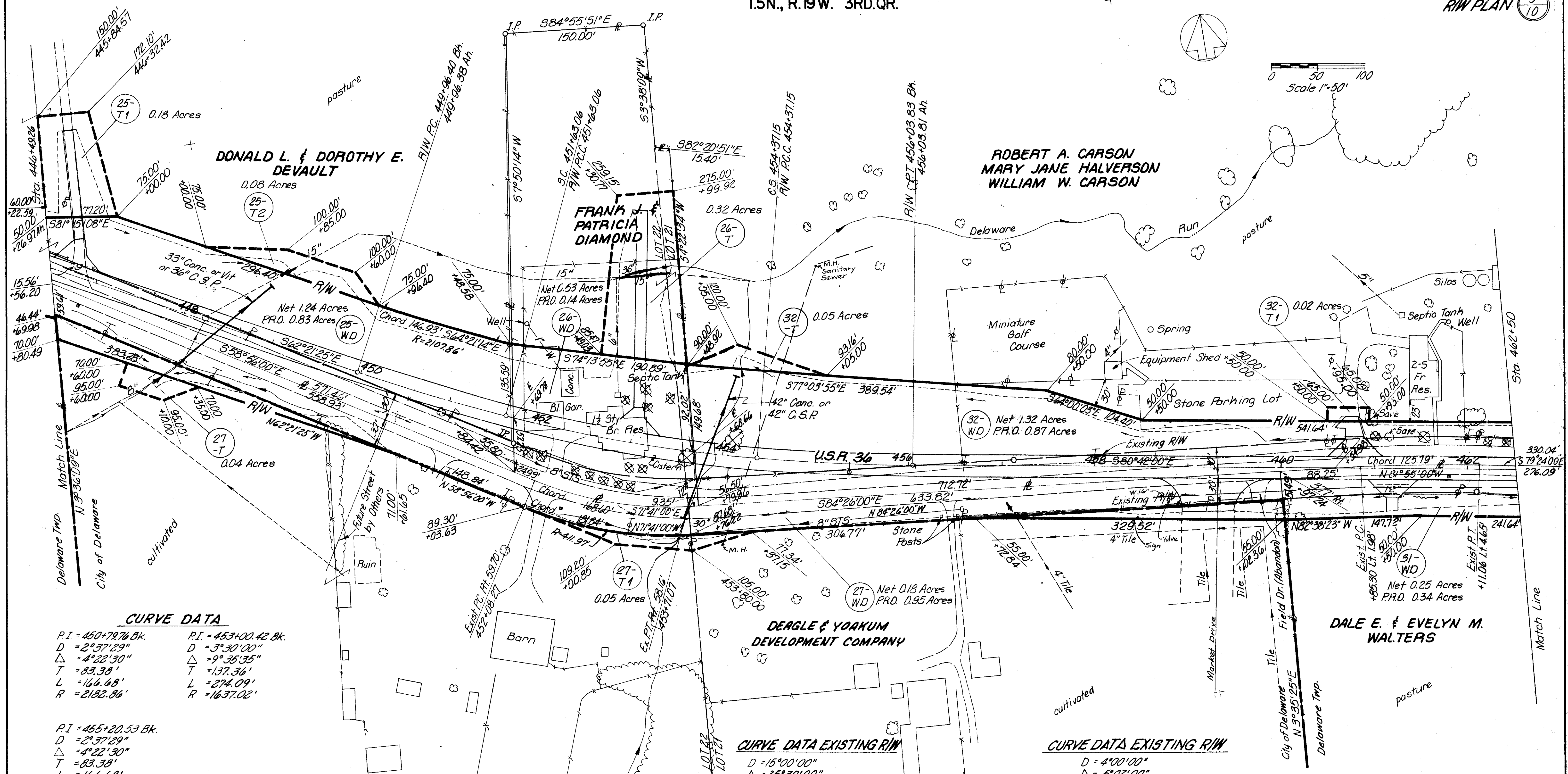
CITY OF DELAWARE
&
DELAWARE TWP
T.5N., R.19W. 3RD.QR.

QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY: _____ DATE: _____	5	OHIO	
CHKD: _____ DATE: _____			

88
89

DEL-36-748

R/W PLAN 9
10



CURVE DATA

P.I. = 450+79.76 Bk. P.I. = 453+00.42 Bk.
 D = 2° 37' 29" D = 3° 30' 00"
 Δ = 4° 22' 30" Δ = 9° 35' 35"
 T = 83.38' T = 137.36'
 L = 166.68' L = 274.09'
 R = 2182.86' R = 1637.02'

P.I. = 455+20.53 Bk.
 D = 2° 37' 29"
 Δ = 4° 22' 30"
 T = 83.38'
 L = 166.68'
 R = 2182.86'

CURVE DATA EXISTING R/W

D = 15° 00' 00"
 Δ = 25° 30' 00"
 T = 86.43'
 L = 170.00'
 R = 381.97'
 C = 168.60'

CURVE DATA EXISTING R/W

D = 4° 00' 00"
 Δ = 5° 02' 00"
 T = 62.96'
 L = 125.83'
 R = 432.39'
 C = 125.79'

COMPLETION DATE		MARCH 25, 1975
REV.	DATE	DESCRIPTION

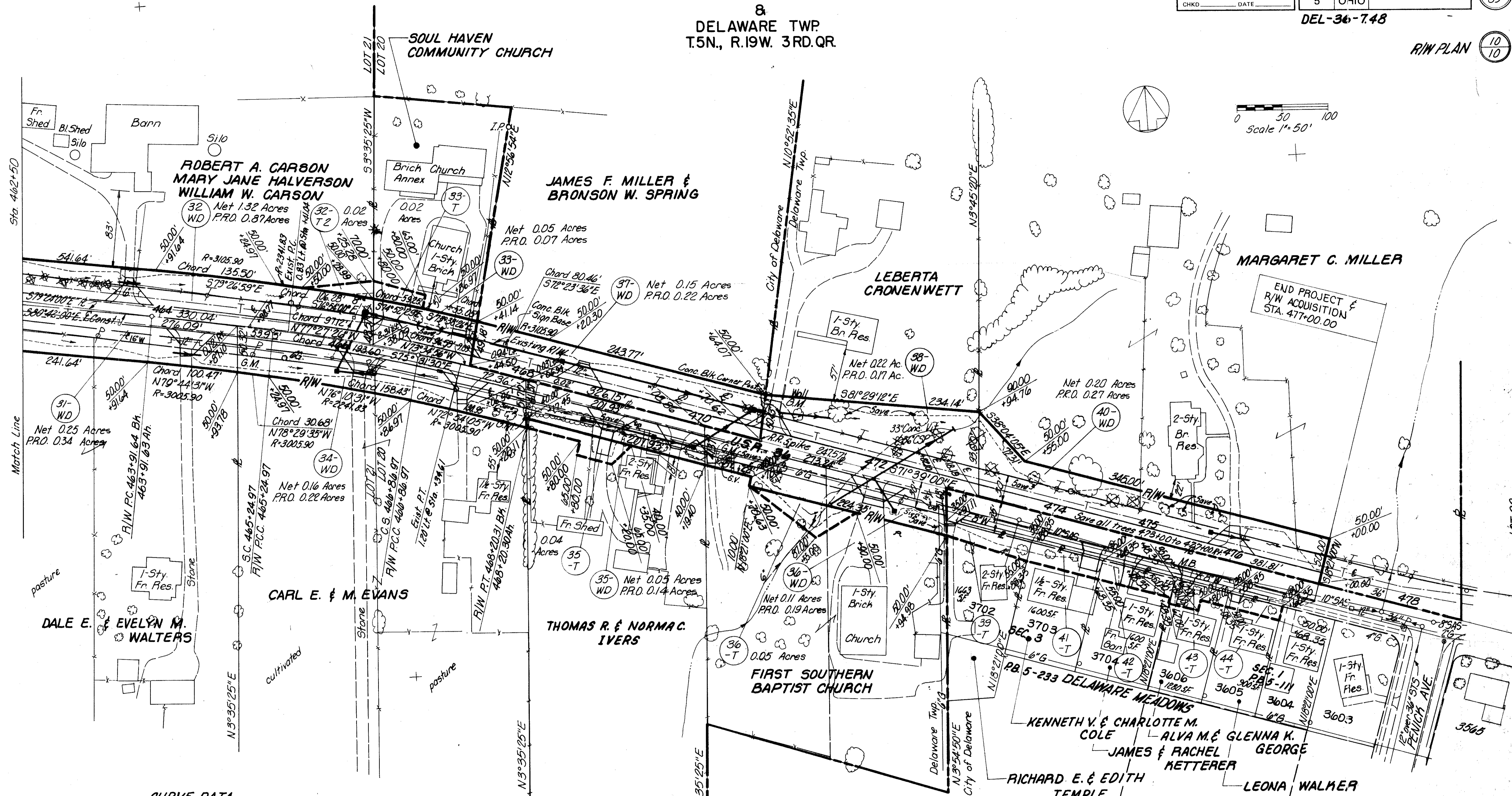
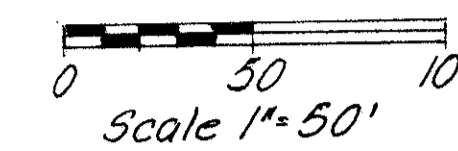
RIGHT OF WAY 446+49.26 to 462+50

CITY OF DELAWARE
&
DELAWARE TWP.
T.5N., R.19W. 3RD.QR.

QUANTITY CALCULATIONS	FHWA REGION	STATE	PROJECT
BY _____ DATE _____	5	OHIO	
CHKD _____ DATE _____			

DEL-36-748

R/W PLAN



CURVE DATA

P.I. = 464+58.32 Bk.	P.I. = 466+06.00 Bk.	P.I. = 467+53.65 Bk.
D = 1°52'30"	D = 2°30'00"	D = 1°52'30"
Δ = 2°30'00"	Δ = 4°03'00"	Δ = 2°30'00"
T = 66.68'	T = 81.03'	T = 66.68'
L = 133.34'	L = 162.00'	L = 133.34'
R = 3055.90'	R = 2291.83'	R = 3055.90'

CURVE DATA EXISTING R/W

D = 4°00'00"
Δ = 7°45'00"
T = 97.02'
L = 193.75'
R = 1432.39'
Ch = 193.60'

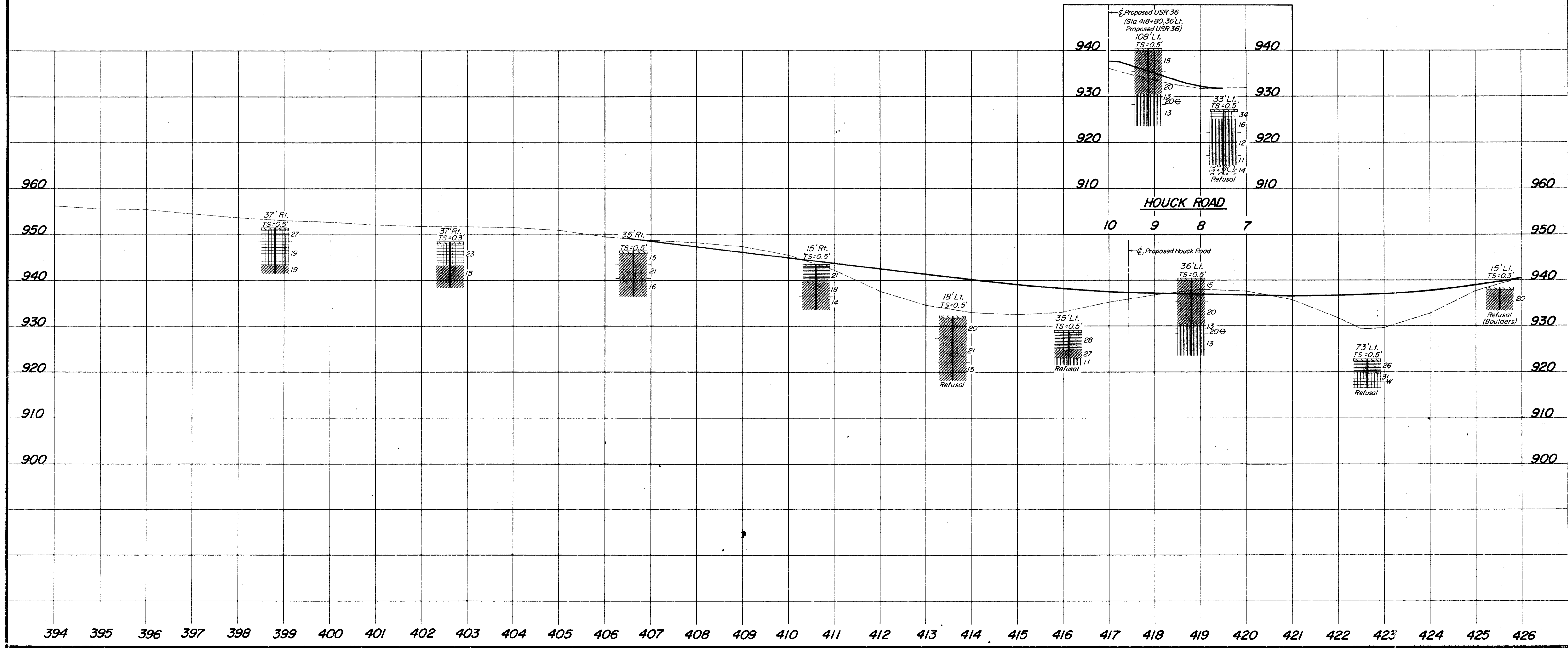
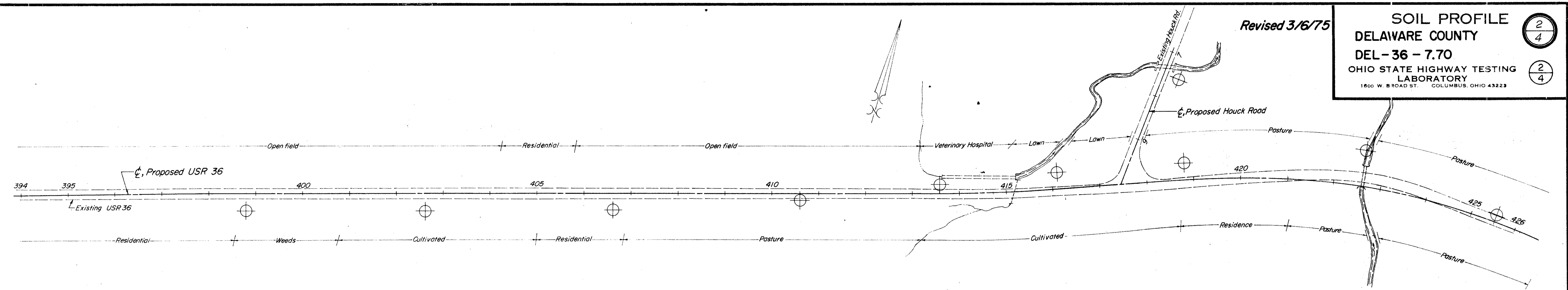
COMPLETION DATE		MARCH 25, 1975
REV.	DATE	DESCRIPTION

RIGHT OF WAY 462+50 to PENICK AVE.

Revised 3/16/75

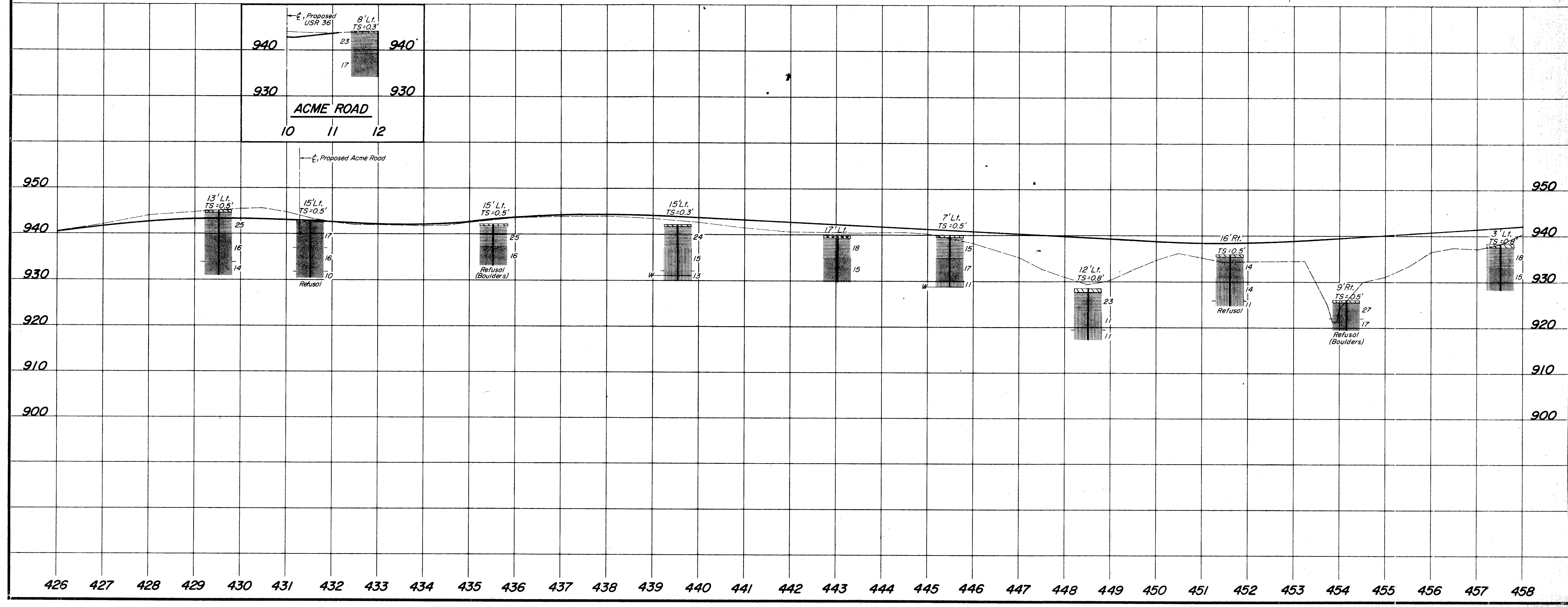
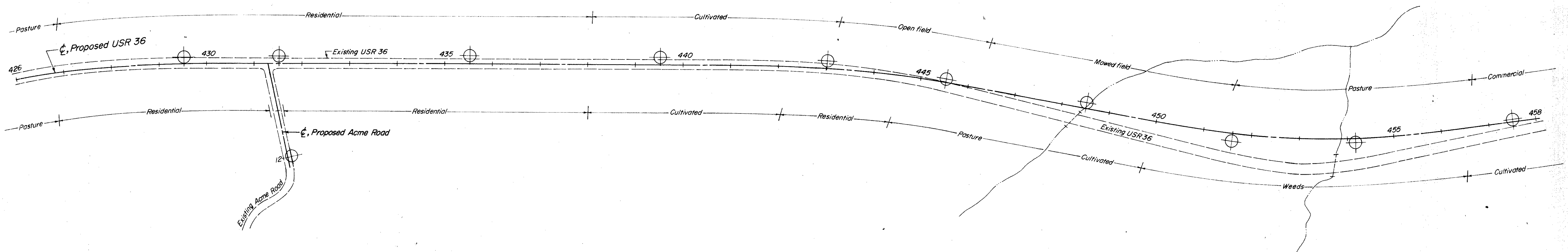
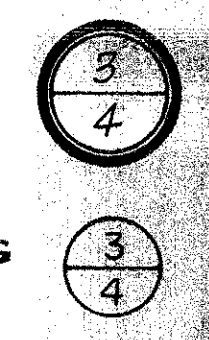
SOIL PROFILE
DELAWARE COUNTY
DEL-36-7.70
OHIO STATE HIGHWAY TESTING
LABORATORY
 1600 W. BROAD ST. COLUMBUS, OHIO 43223



Revised 3/6/75

SOIL PROFILE
 DELAWARE COUNTY
 DEL-36-7.70
 OHIO STATE HIGHWAY TESTING
 LABORATORY
 1600 W. BROAD ST. COLUMBUS, OHIO 43223



Revised 3/6/75

SOIL PROFILE
 DELAWARE COUNTY
 DEL - 36 - 770
 OHIO STATE HIGHWAY TESTING
 LABORATORY
 1800 W. BROAD ST. COLUMBUS, OHIO 43221

4
 4
 3
 4

