

MICROFILMED
MAR 29 1982

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
LAW-378-04.80
WINDSOR TOWNSHIP
LAWRENCE COUNTY
STRUCTURE REPLACEMENT

PLAN NO. BR-15-75

| | | |
|-----------------|--|-----------------|
| LAWRENCE COUNTY | | OHIO |
| LAW-378-04.80 | | FHWA REGION 5 |
| STATE | | FEDERAL PROJECT |

1
18

CONVENTIONAL SIGNS

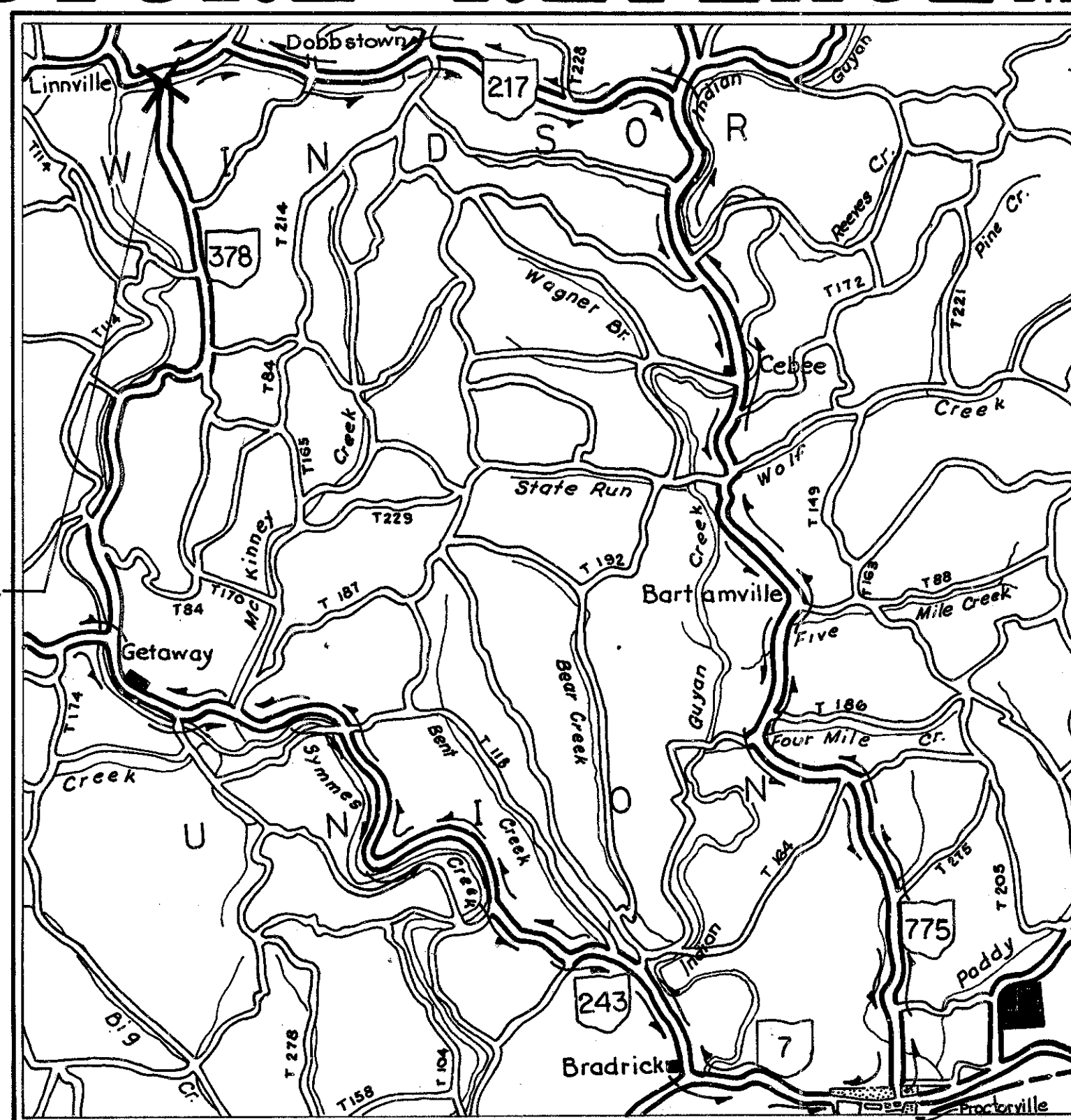
| | | | |
|--------------------------|----------------|-----------------------------------|-------------|
| County Line | ----- | Limited Access (only) | LA |
| Township Line | ----- | Right of Way (only) | RW |
| Section Line | ----- | Limited Access & Right of Way | LA & RW |
| Corporation Line | ----- or ----- | Existing Right of Way | ----- |
| Fence Line (existing) | ---x---x--- | Property Line (in existing fence) | ---x---x--- |
| Center Line | ----- | Railroad | ----- |
| Trees | ☉, Stumps | ⌘, (to be removed) | ⌘ |
| Utility Poles: Telephone | ⊕ | Power | ⊕ |
| | | Light | ⊕ |
| | | Guardrail (existing) | —•—•—•—•— |
| | | Guardrail (proposed) | —•—•—•—•— |

INDEX OF SHEETS

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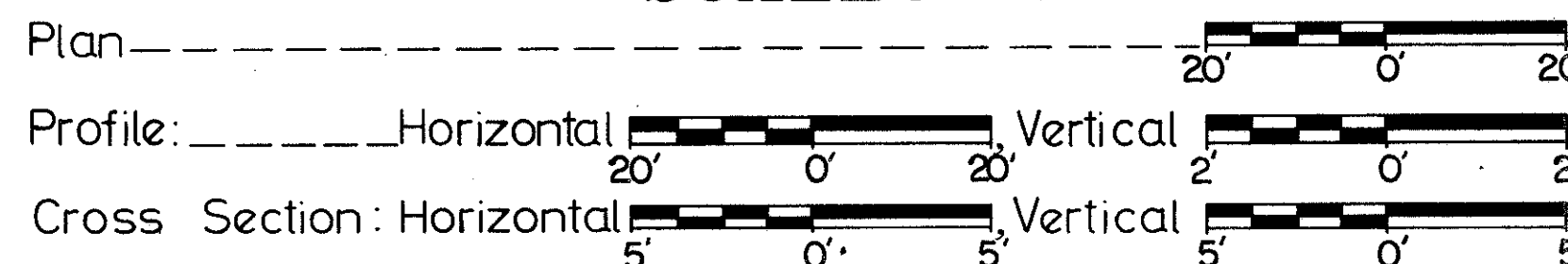
LINE DATA

Begin Work Sta. 253+50
End Work Sta. 259+00
Net Length of Work 550 Lin. Ft. or 0.104 Miles.



LOCATION & DETOUR MAP
Portion to be improved -----
State Roads -----
Other Roads -----
SCALE 1"=1 MILE

SCALES



1975 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 to traffic of the highway and that detours will be provided as indicated on the plans.

Approved Dennis R. Harwood
Date 7-1-75 District Deputy Director of Transportation

Approved Robert B Pfeifer
Date 2-12-76 Engineer of Bridges

Approved O. L. Zook
Date 5-28-76 Engineer of Maintenance

Approved Thomas W Major
Date 5-28-76 Chief Engineer, Operations

Approved Howard E. Nolan
Date 6-1-76 Assistant Deputy Director, Program Development

Approved _____
Date _____ Chief Engineer, Construction

Approved _____
Date _____ Chief Engineer, Design

Approved David A. Wein
Date 6-2-76 Assistant Director, Department of Transportation

Approved Robert D. Juch
Date 6-2-76 Director, Department of Transportation

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

| | | | |
|-----------|---------|--|--|
| BP-5 | 8-11-75 | | |
| DBR-2-73 | 4-10-73 | | |
| GR-4 | 11-9-71 | | |
| MC-3 | 6-1-73 | | |
| PSBD-1-71 | 9-1-71 | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | |
|-----------------------------|---------|
| SUPPLEMENTAL SPECIFICATIONS | |
| 55 803 | 1-22-76 |
| | |
| | |
| | |

UTILITY OWNERS

GENERAL TELEPHONE CO.
824 SEVENTH ST.
PORTSMOUTH, OHIO

BUCKEYE RURAL ELECTRIC CO.
GALLIPOLIS, OHIO

COLUMBIA GAS TRANSMISSION CORP.
P.O. BOX 1273
CHARLESTON W.V. 25325

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Note:
Remove existing bridge. (Payment shall be included under item No. 203) Excavation not including embankment construction. Existing 5x16' Plank Top bridge.

Existing 2" gas line

16'-0" Drive (Place 304 aggregate on drive) @ Sta. 253+72.65

Dumped Rock Fill, Type B

FR-518
-STA. 255+75.22 = 10+00

Existing 2" gas lines
@ Sta. 257+10

Existing three strand barb wire fence.

16'-0" Drive

Existing 1" gas line.

253+00

+50

254+00

+50

Gas Valves

255+00

+50

256+00

+50

N-00°-00'

257+00

+50

258+00

+50

BENCH MARK
□ Cut on handwall at south east corner @ Jct. of 378 & 217. Elevation = 588.89

Begin. Work

WORK LIMIT

Dumped Rock Fill, Type B

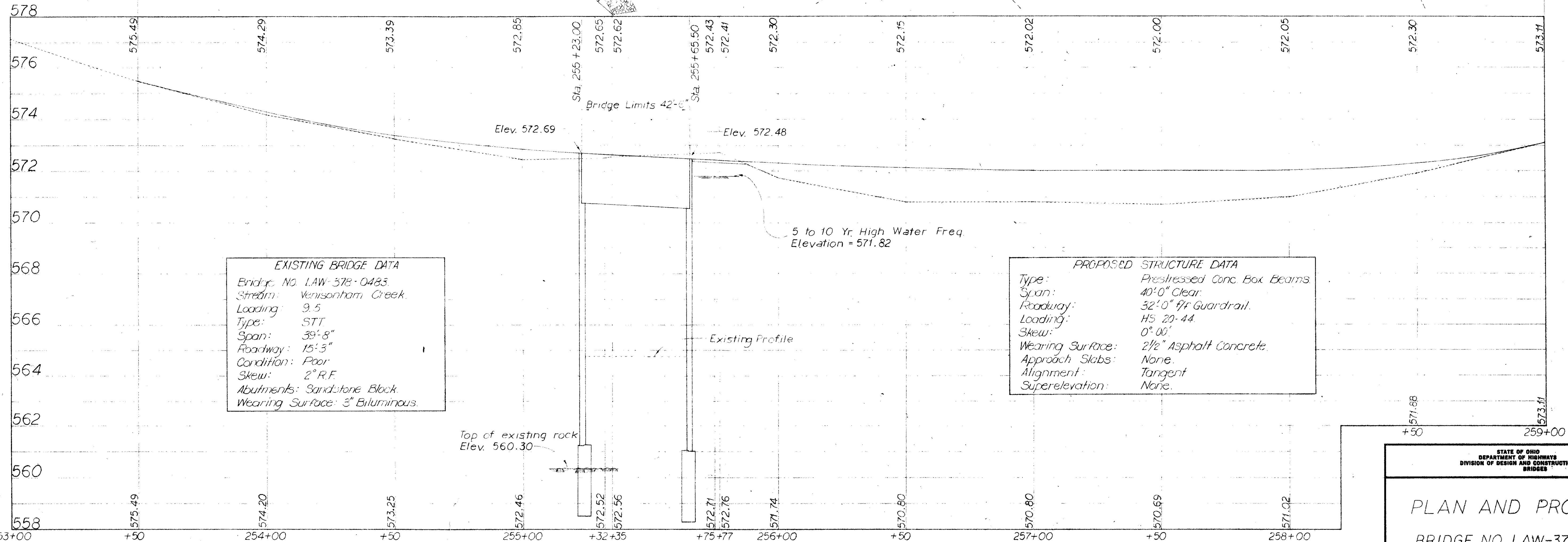
PLAN

CHANNEL

GR-4 Anchor Assembly (Typical at all four (4) corners)

Lateral Conduit Pipes

End Work



EXISTING BRIDGE DATA

Bridge No. LAW-378-0483

Stream: Venisonham Creek

Loading: 9.5

Type: STT

Span: 39'-8"

Roadway: 15'-3"

Condition: Poor

Skew: 2° R.F.

Abutments: Sandstone Block

Wearing Surface: 3" Bituminous

PROPOSED STRUCTURE DATA

Type: Prestressed Conc Box Beams

Span: 40'-0" Clear

Roadway: 32'-0" w/ Guardrail

Loading: HS 20-44

Skew: 0° 00'

Wearing Surface: 2 1/2" Asphalt Concrete

Approach Slabs: None

Alignment: Tangent

Superelevation: None

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BRIDGES

PLAN AND PROFILE

BRIDGE NO. LAW-378-0484

LAWRENCE COUNTY

| | | | | | | |
|----------|--------|--------|---------|----------|------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| N.L.H. | N.L.H. | N.L.H. | J.E.B. | MPB | 6-75 | |

GENERAL NOTES

REFERENCE shall be made to Standard Drawings BP-5 dated 6-1-72, DBR-2-73 dated 4-10-73, GR-4 dated 11-9-71, MC-3 dated 6-1-73, PSBD 1-71 dated 9-1-71.

DESIGN SPECIFICATIONS: This structure conforms to Standard Specifications for Highway Bridges adopted by the American Association of State Highway Officials 1973 the 1974 AASHTO Interim Specifications, and the Ohio Supplement to these specifications.

DESIGN DATA:

Design Loading - HS 20-44

Concrete Class C - Unit stress 1,200 p.s.i. for superstructure.

Unit stress 1,333 p.s.i. for substructure.

Concrete for Prestressed Concrete Beams - Unit stress 2,200 p.s.i. Compression.

444 p.s.i. Tension.

Prestressing strand ASTM A416, $f_s = 270,000$ p.s.i., Working stress = 0.40 f_s .

Reinforcing steel ASTM A615, A616 or A617 - Unit stress 20,000 p.s.i.

PRESTRESSED BEAMS

1. Design Loading:

Live load HS 20-44 with interstate alternate loading

Superimposed dead load 225 lbs. per Lin. Ft.

2. Concrete stresses:

Min. concrete strength at 28 days $f_c = 5,500$ p.s.i.

Min. concrete strength at time of initial prestress $f_{ti} = 4,000$ p.s.i.

3. Prestressing strands, 1/2" Dia. 270^k seven wire, uncoated.

Stress-relieved strand $A_s = 0.154$ in.

Initial Tension = 28,900 lbs. per strand.

4. Applicable PSBD-1-71 Details.

Section showing wall thickening at guard rail anchors.

Beam lifting inserts.

Anchor dowels (Fixed).

Details of transverse tie rods.

Diaphragms and transverse tie rods.

Normal crown treatment, joint at $\frac{1}{2}$ of roadway.

Beam dimensional tolerances.

48" wide non-composite beams, B21-48.

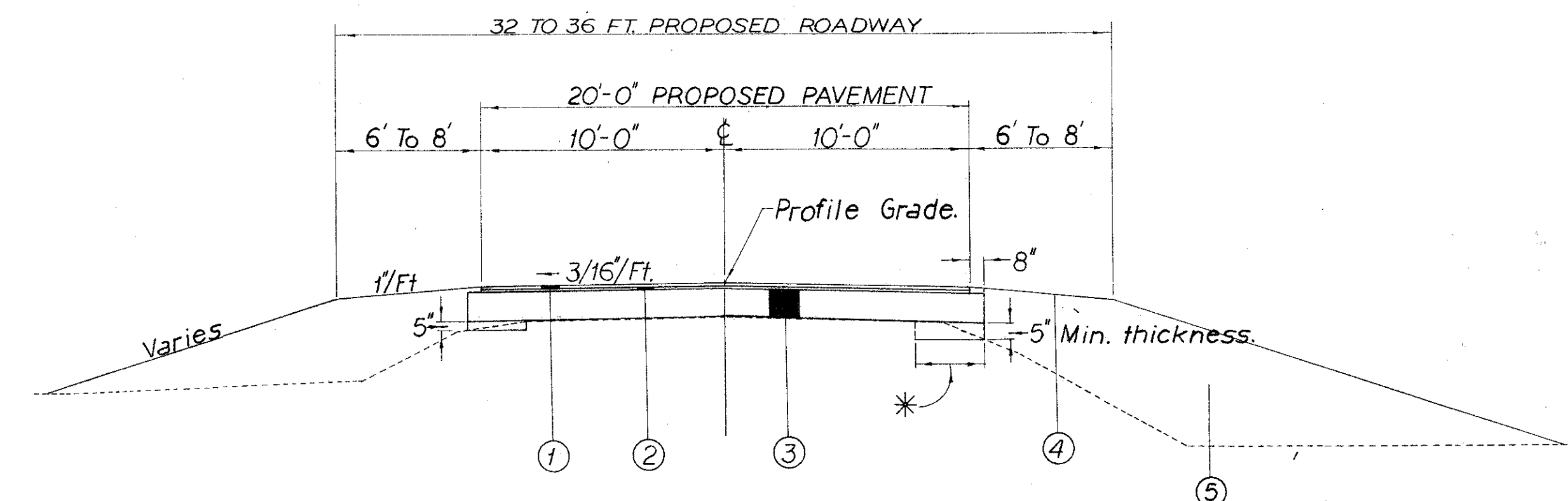
5. Beam shop drawings shall show complete details of reinforcing steel.

BEAM FINISHING: Texturing of the tops of beams shall be done so as to provide a uniform surface with a gritty texture.

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of .76 tons per square foot.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. Suitable waste masonry may be placed as Bank Protection as directed by the Engineer.

FIELD OFFICE: The Contractor shall provide a 150 Sq. Ft. minimum field office as in Item 619 and shall provide and maintain sanitary provisions as per Item 107.06 which is to be included in Lump Sum bid for item 619.



TYPICAL SECTION

The above typical section applies between the following stations:
Sta. 253+50 to Sta. 255+23. = 173 L.F.
Sta. 255+65.50 to Sta. 259+00. = 334.50 L.F.

LEGEND

- ① 404 1" - Asphalt Concrete AC-20
- ② 403 1" - Asphalt Concrete AC-20
- ③ 301 Bituminous aggregate base AC-20 or (RT-11 or RT-12) Variable thickness.
- ④ 659 Seeding and mulching.
- ⑤ 203 Embankment as per cross section.

* Additional 301 material placed at variable widths as per cross sections.

| | | | | | | |
|---|--------|--------|---------|----------|------|---------|
| STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BRIDGES | | | | | | |
| GENERAL NOTES & TYPICAL SECTION BRIDGE NO. LAW-378-0484 | | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| M.R.H. | M.R.H. | M.R.H. | Q.E.B. | MPB | 6-75 | |

UNRECORDED
MAR 29 1982

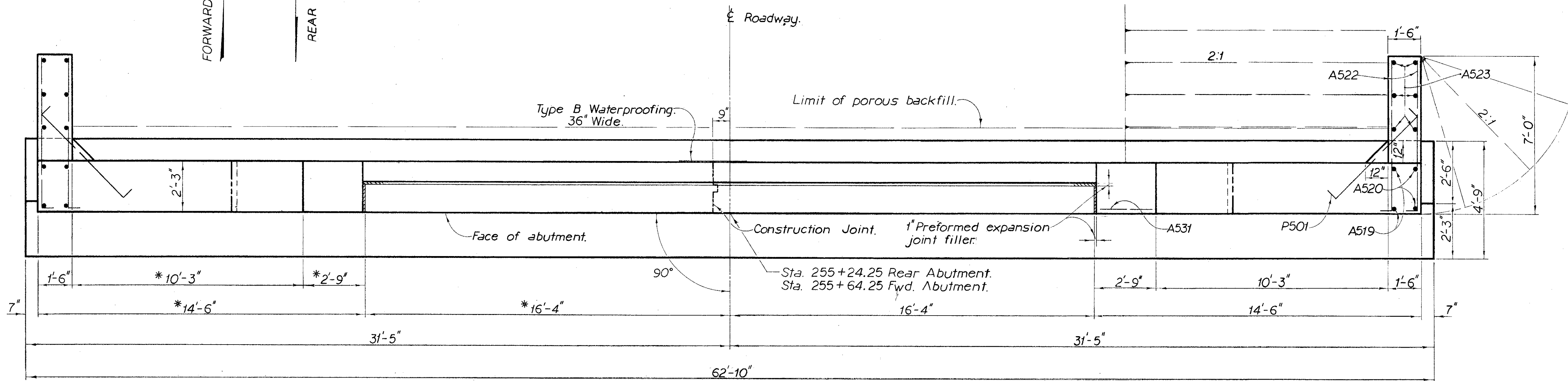
FORWARD ABUTMENT
REAR ABUTMENT

Porous Backfill shall extend from 6" inches below the weep holes upward to the plane of the subgrade within the roadway area extended laterally to the surface of the embankment slopes. Backfill shall not be placed higher than 4'-6" prior to placing the concrete box beams.

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

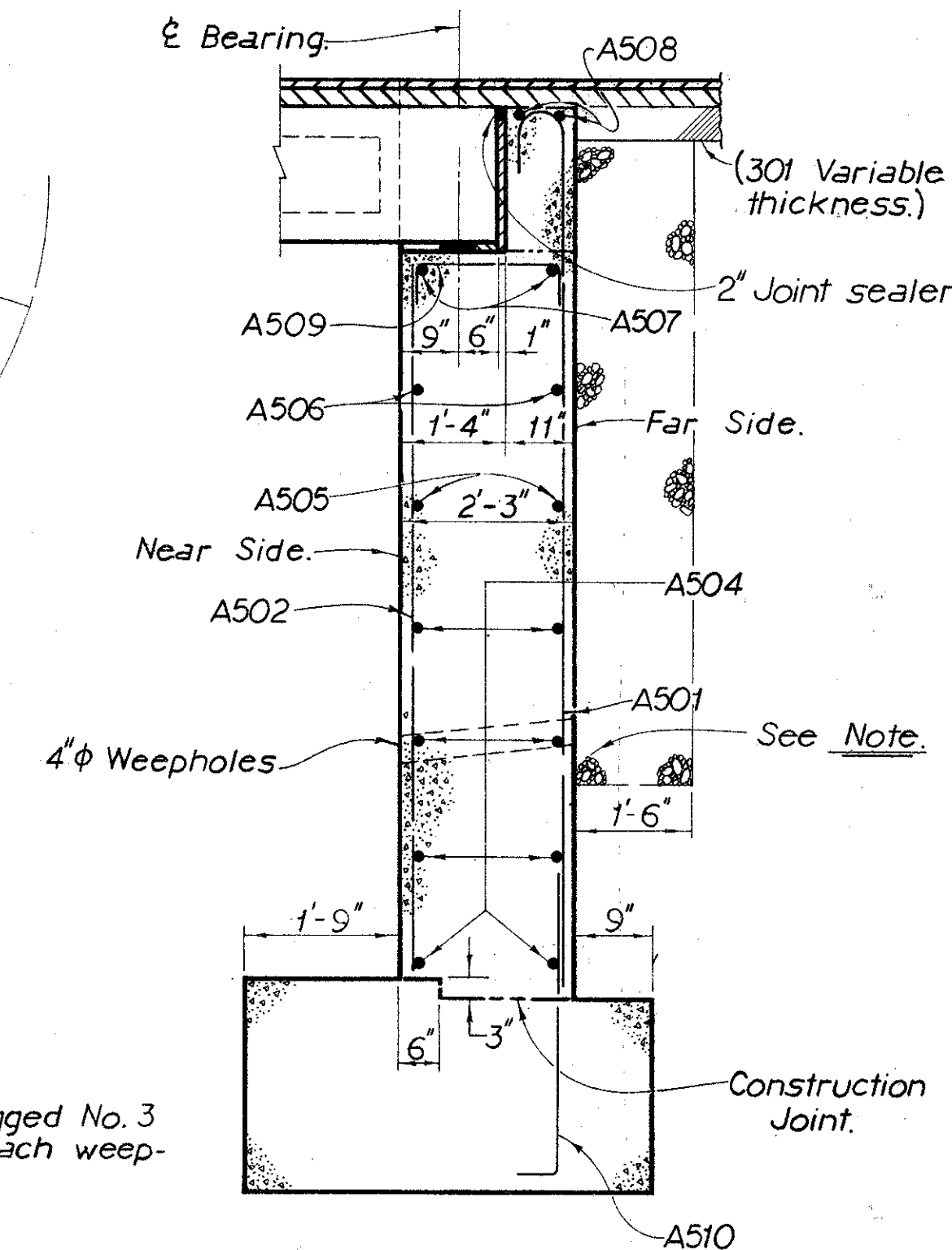
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LAW-378-04.80



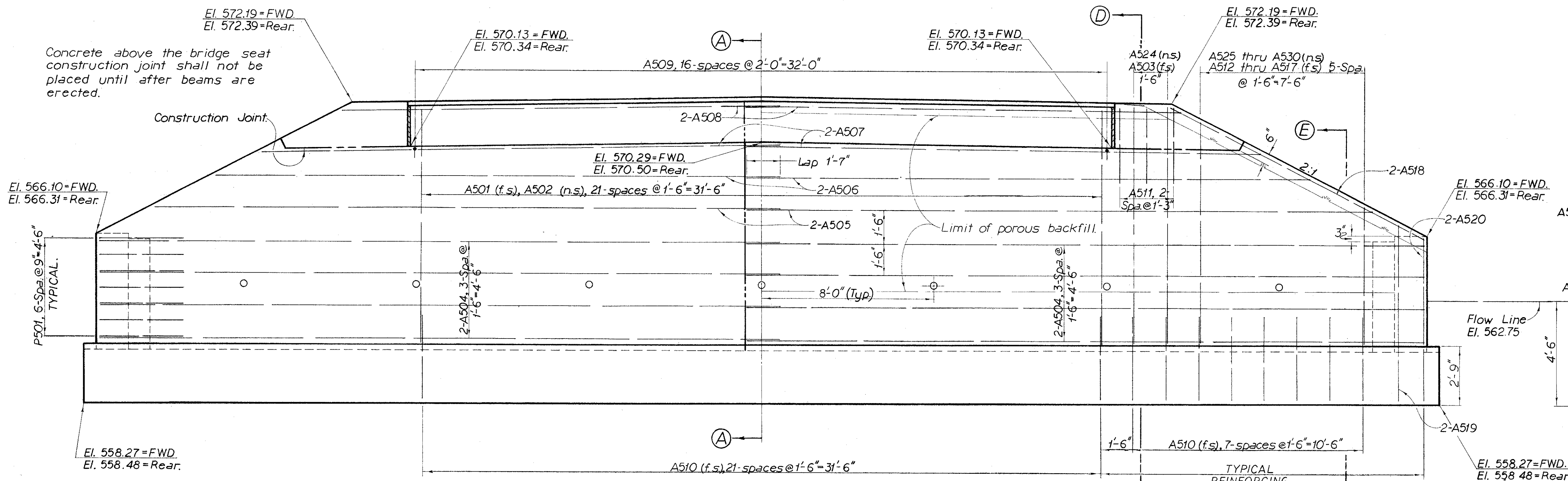
*These dimensions will vary depending on actual beam dimensions. The 16'-4" dimension includes a 4" allowance for prestressed beam fit-up tolerances.

PLAN (TYP)

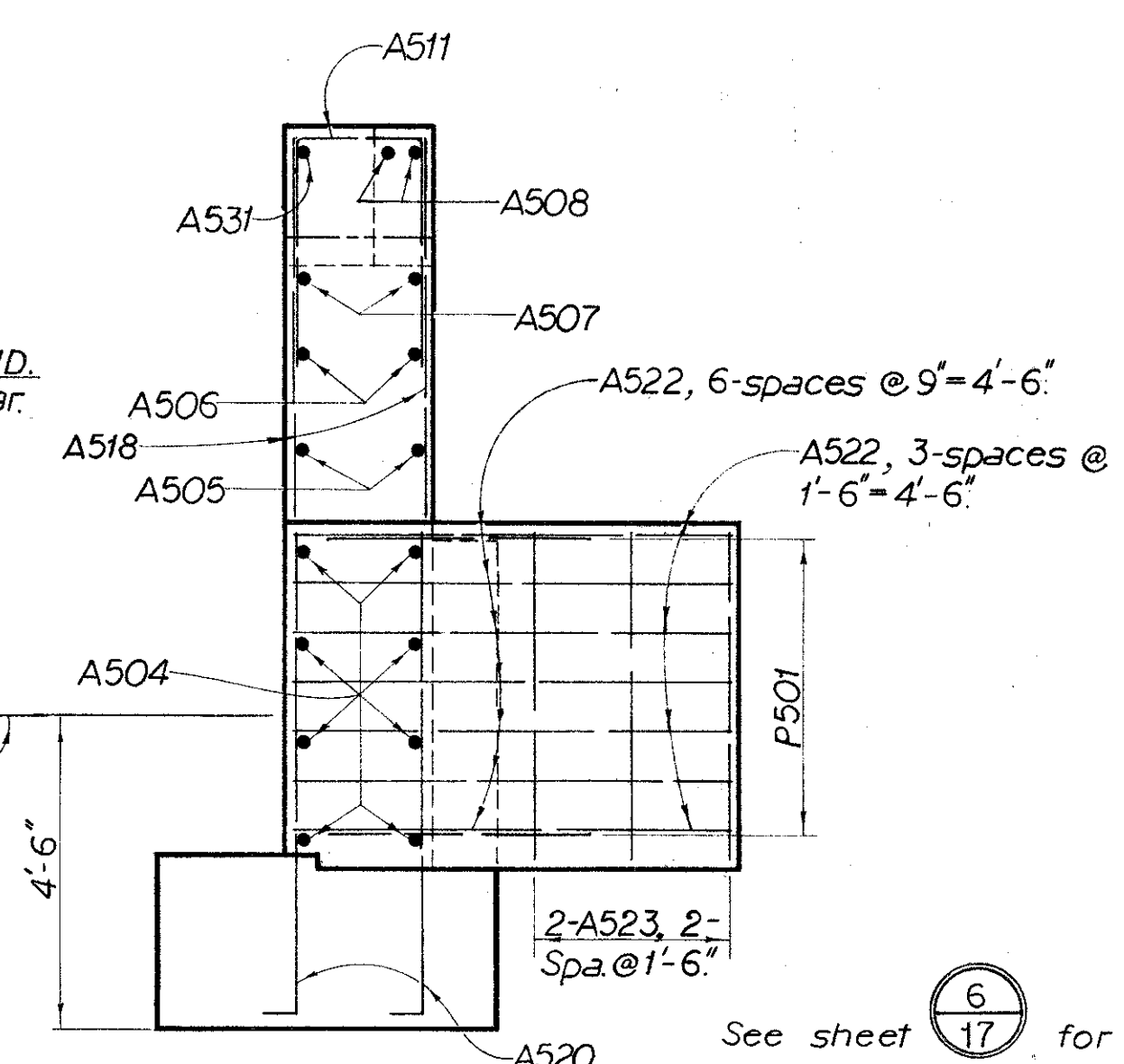


Note:
2 Cu. Ft. of bagged No. 3 aggregate at each weep-hole. (Typical.)

SECTION A-A



Concrete above the bridge seat construction joint shall not be placed until after beams are erected.



See sheet 17 for Sections D-D and E-E.

END VIEW

ABUTMENT ELEVATION (TYP)

Portions of Abutment Footings will be placed in bedrock. If any soft areas occur in the soil stratum where the abutment footings will be founded on the existing subsoils, the soft areas shall be removed and replaced with compacted materials. (Include with structure excavation).

Note:
Special care shall be taken during backfilling behind the forward abutment to insure maximum compaction in the 203.

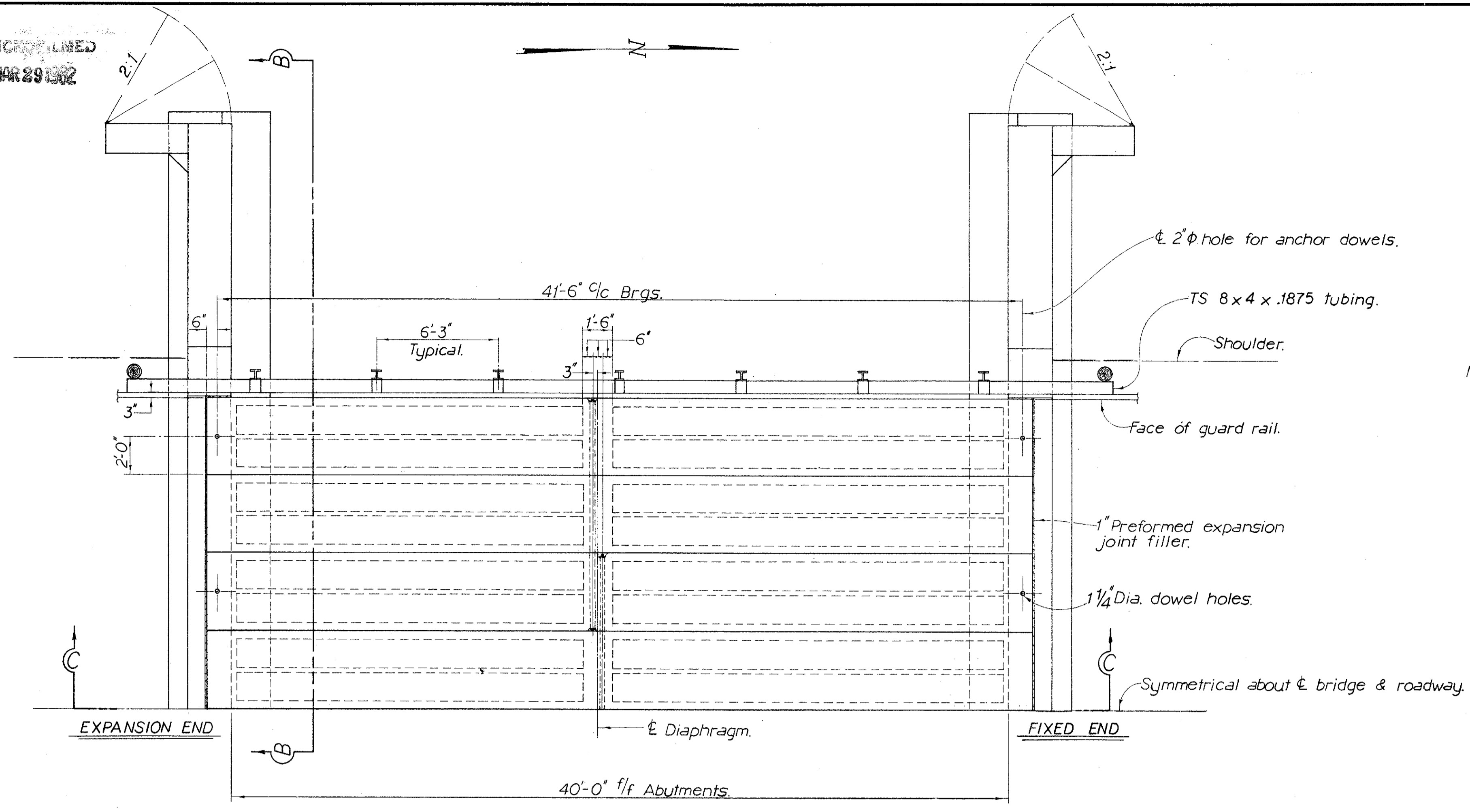
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|---|--------|--------|---------|----------|------|---------|
| STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BRIDGES | | | | | | |
| ABUTMENT DETAILS BRIDGE NO. LAW-378-0484 | | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| J.R.H. | J.R.H. | J.R.H. | J.R.B. | MPB | 6-75 | |

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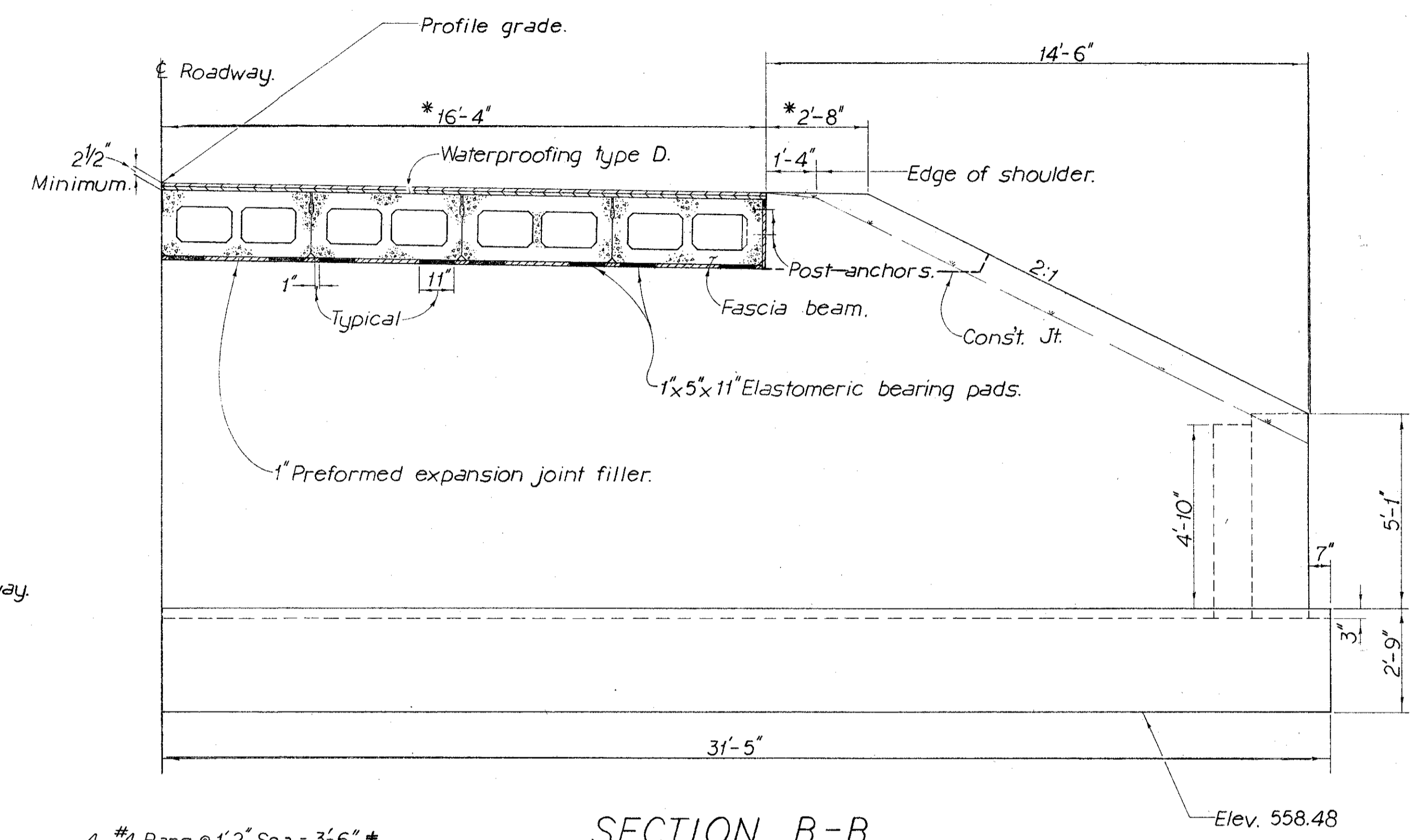
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| FED. RD. DIVISION | STATE | PROJECT | |
| 2 | OHIO | | |

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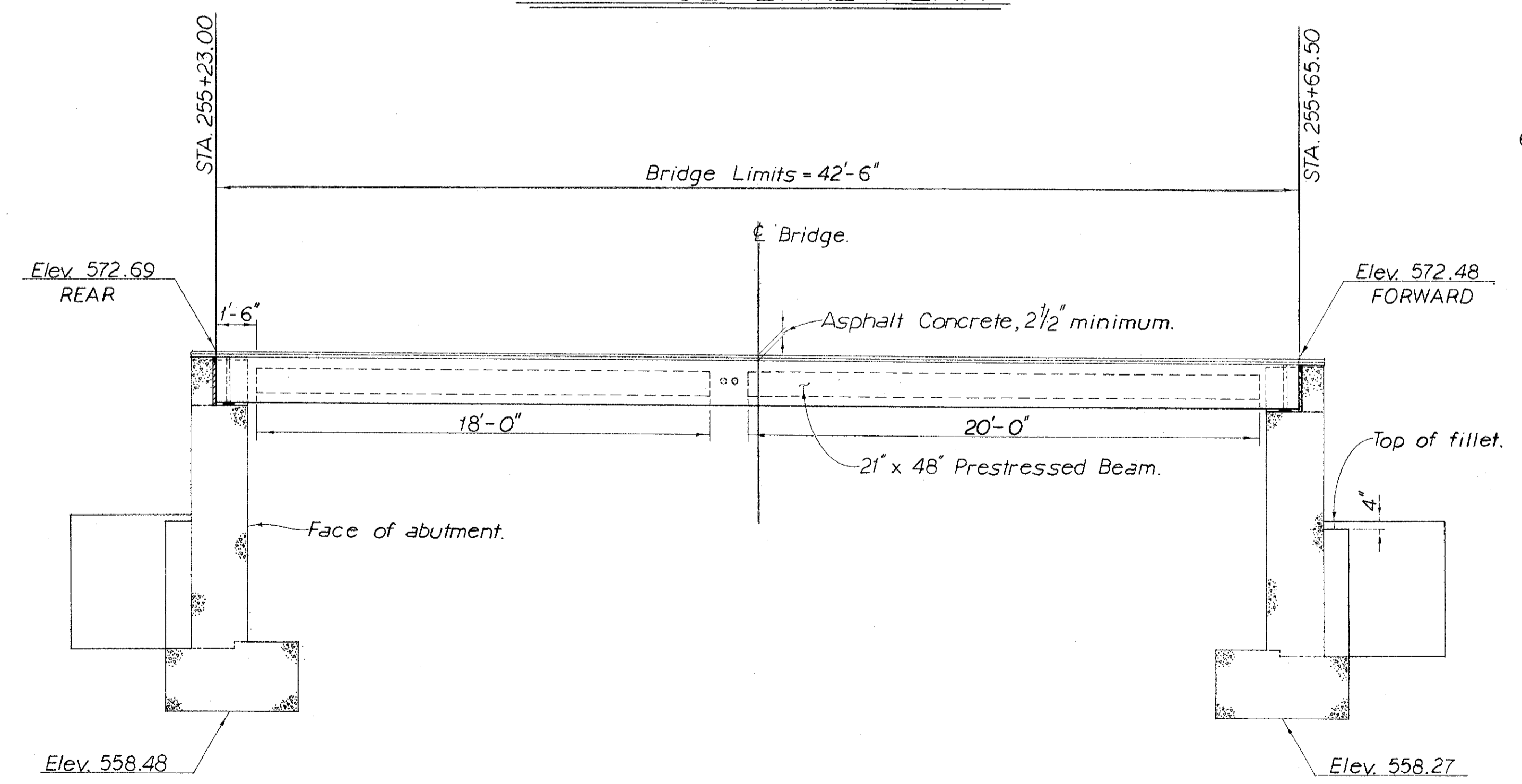
LAW-378-04.80



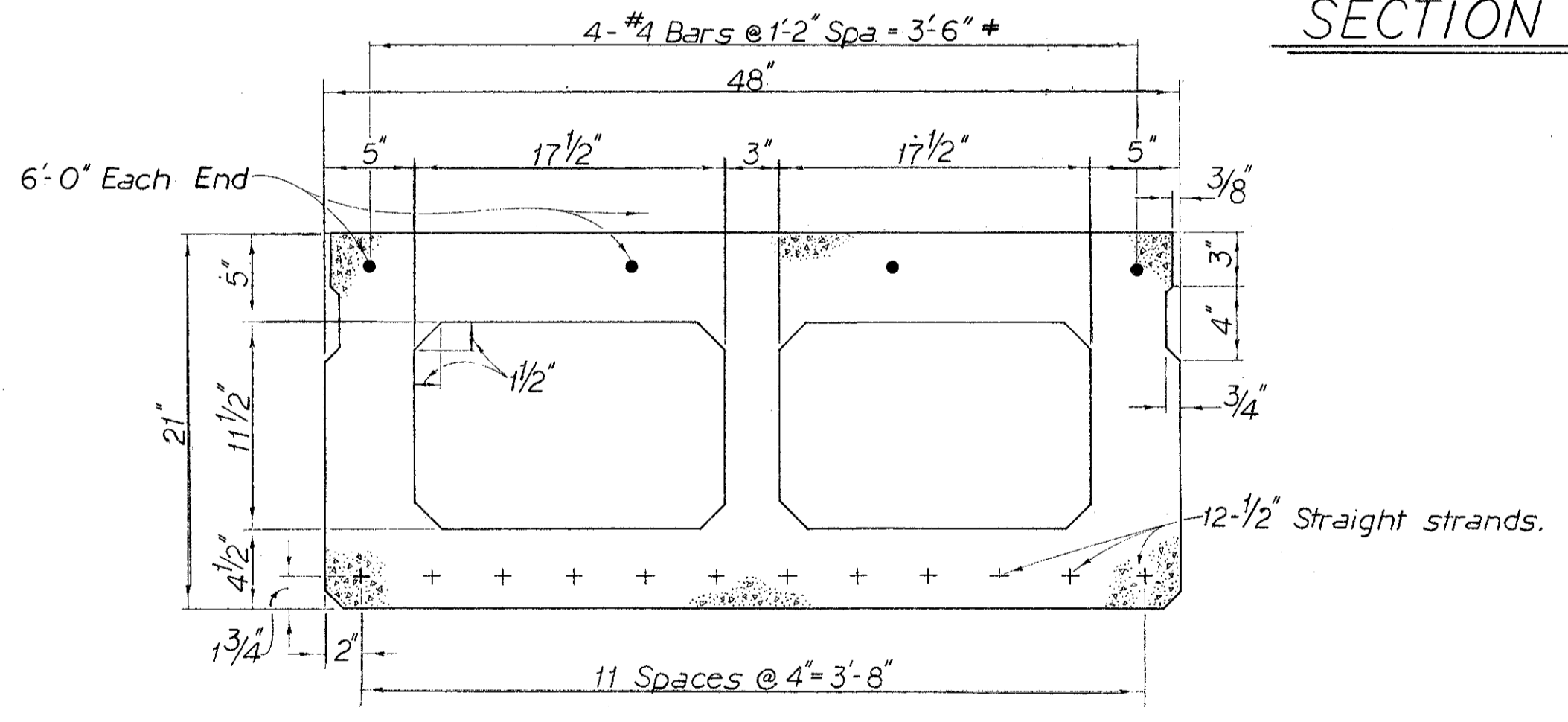
HALF GENERAL PLAN



SECTION B-B



SECTION C-C



21" x 48" PRESTRESSED BEAM

* These dimensions will vary depending on actual beam dimensions. The 16'-4" dimension includes a 4" allowance for pre-stressed beam fit-up tolerances.

These bars are in addition to the six No. 4 bars full length of beams shown on Std. Drwg. PSBD-1-71.

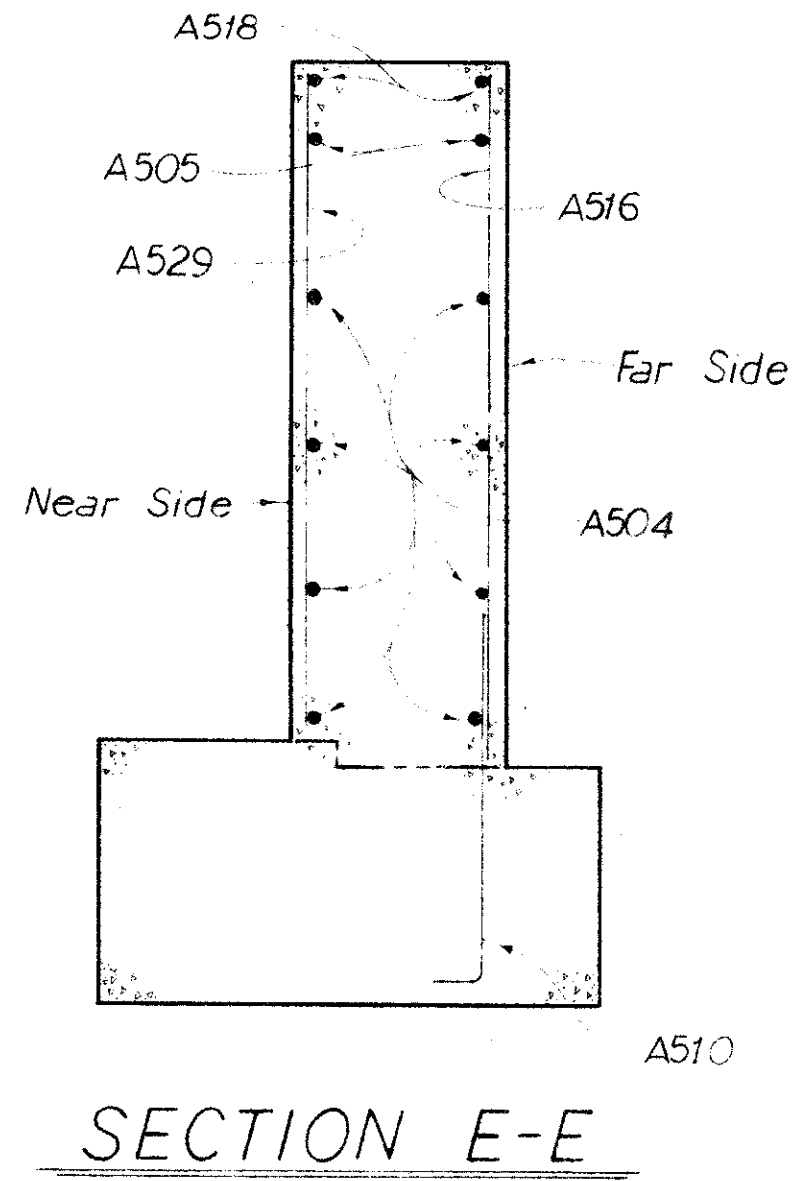
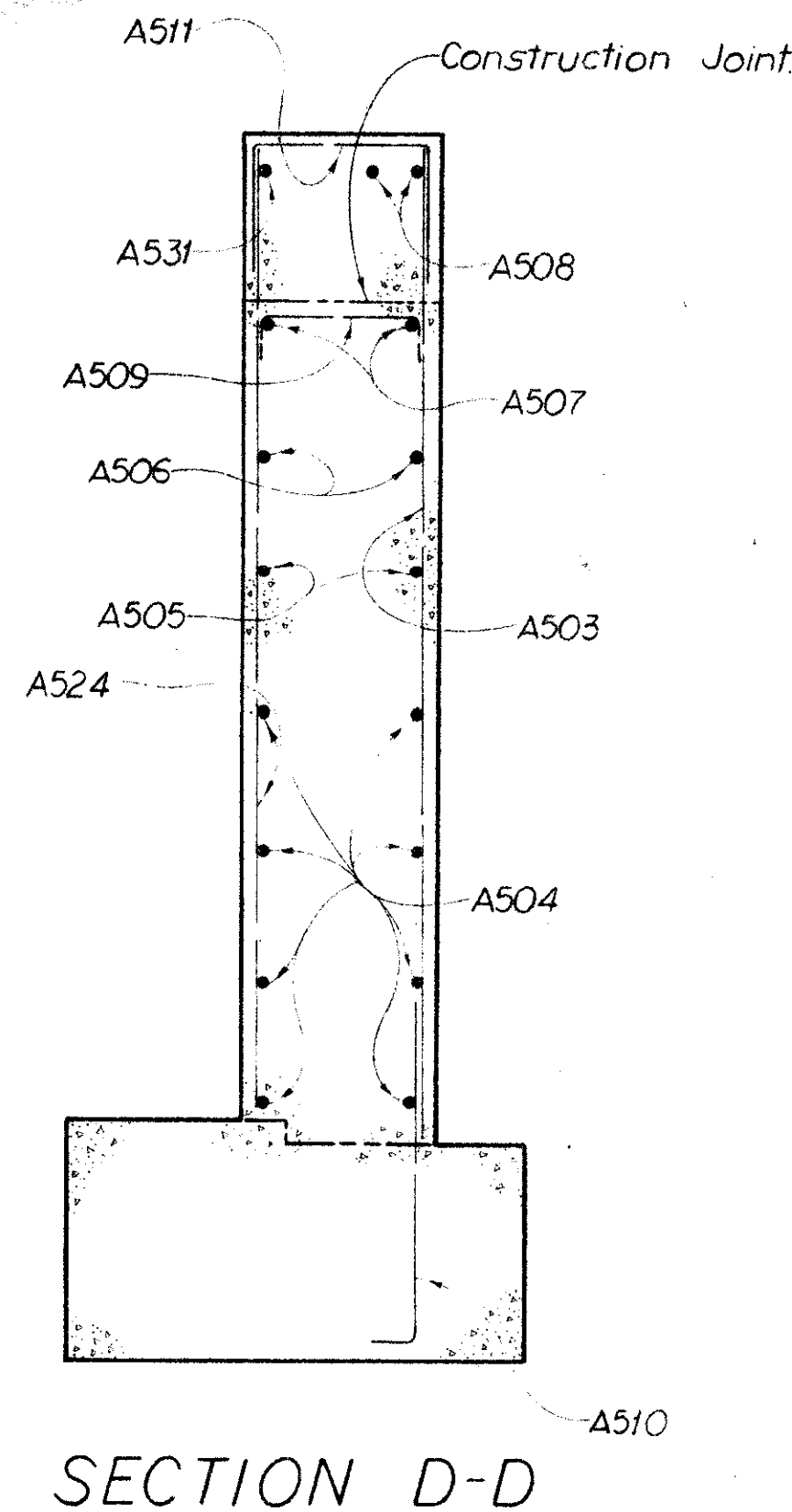
Prestressing strands are 1/2" uncoated seven wire stress-relieved strand with an initial tension of 28,900 pound per strand Sec. 515.

Calculated camber at time of paving is 3/4". This includes allowance for creep.

Calculated deflection due to weight of surface course and railing is negligible.

Net final camber of beams is 3/4". This is 3/4" in excess of the required value. This excess amount shall be compensated for by thickening the 403 leveling course from 1 1/4" at center of span to 2" at ends of span.

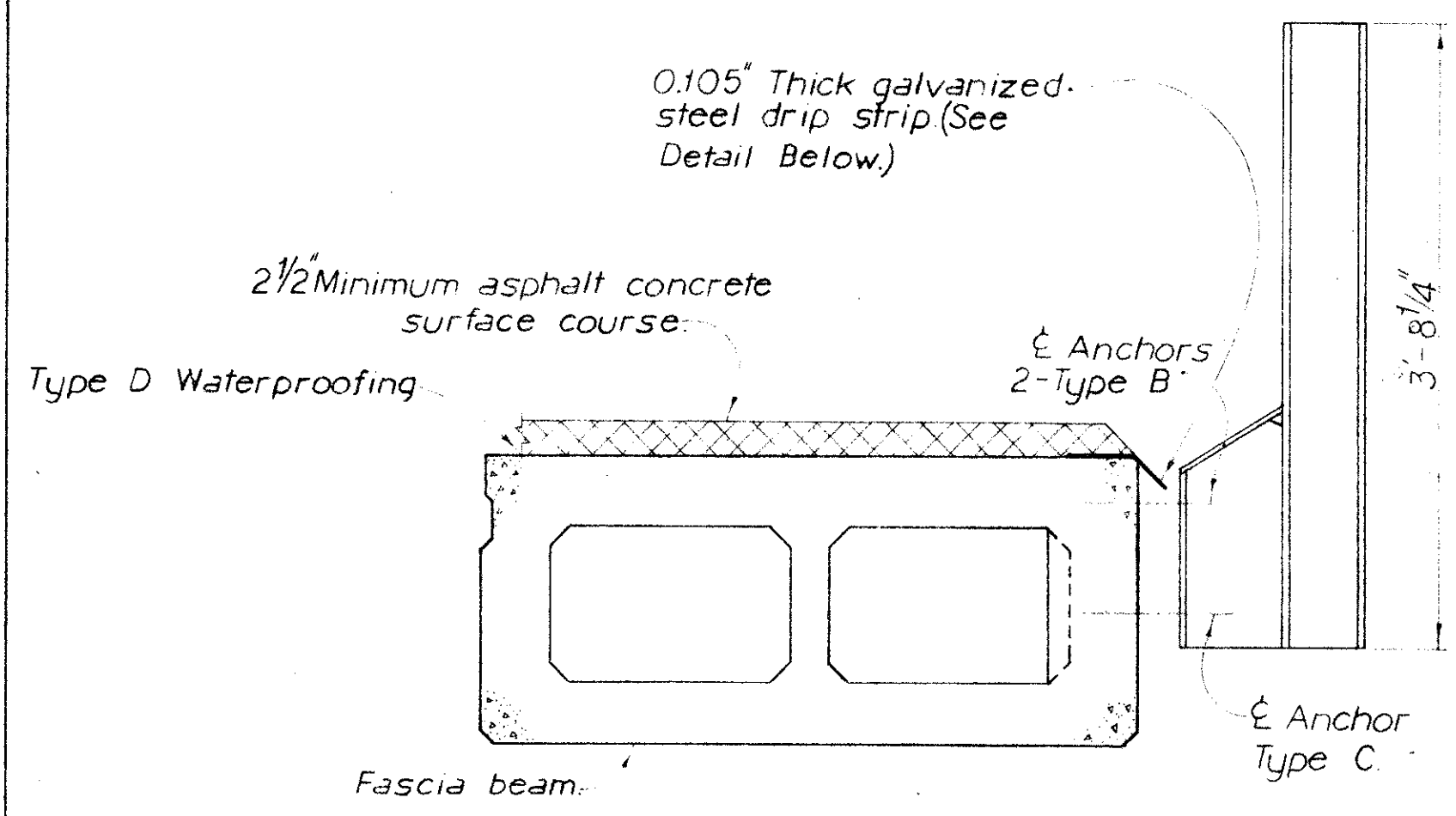
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|---|--------|--------|---------|----------|------|---------|
| STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BRIDGES | | | | | | |
| SUPERSTRUCTURE DETAILS | | | | | | |
| BRIDGE NO. LAW-378-0484 | | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| J.R.H. | J.R.H. | J.R.H. | QCB | MPB | 6-75 | |



SECTION D-D

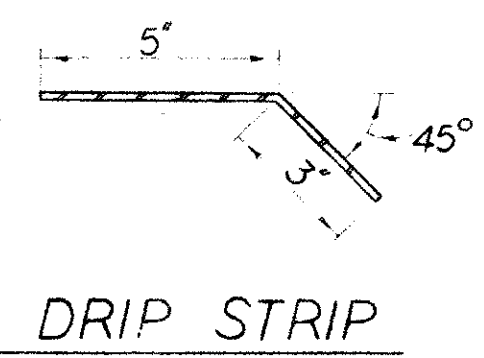
SECTION E-E

| STEEL LIST | | | | | BENDING DIAGRAMS | |
|------------|-----|--------|--------|-----|------------------|--|
| MARK | NO. | LENGTH | WEIGHT | SHP | | |
| A501 | 44 | 12'-1" | 554 | B | | |
| A502 | 44 | 9'-0" | 413 | S | | |
| A503 | 8 | 11'-2" | 93 | S | | |
| A504 | 32 | 31'-4" | 1,046 | S | | |
| A505 | 8 | 29'-0" | 242 | S | | |
| A506 | 8 | 26'-0" | 217 | S | | |
| A507 | 8 | 23'-9" | 198 | S | | |
| A508 | 8 | 20'-0" | 167 | S | | |
| A509 | 34 | 2'-11" | 103 | B | | |
| A510 | 76 | 4'-4" | 344 | B | | |
| A511 | 12 | 8'-11" | 112 | B | | |
| A512 | 4 | 10'-6" | 44 | S | | |
| A513 | 4 | 9'-9" | 41 | S | | |
| A514 | 4 | 9'-0" | 38 | S | | |
| A515 | 4 | 8'-3" | 35 | S | | |
| A516 | 4 | 7'-6" | 31 | S | | |
| A517 | 4 | 6'-9" | 28 | S | | |
| A518 | 8 | 13'-2" | 110 | S | | |
| A519 | 8 | 8'-6" | 71 | B | | |
| A520 | 8 | 8'-0" | 67 | B | | |
| A522 | 44 | 7'-2" | 329 | B | | |
| A523 | 24 | 5'-0" | 125 | S | | |
| A524 | 8 | 10'-9" | 90 | S | | |
| A525 | 4 | 9'-11" | 41 | S | | |
| A526 | 4 | 9'-2" | 38 | S | | |
| A527 | 4 | 8'-5" | 35 | S | | |
| A528 | 4 | 7'-8" | 32 | S | | |
| A529 | 4 | 6'-11" | 29 | S | | |
| A530 | 4 | 6'-2" | 26 | S | | |
| A531 | 4 | 2'-5" | 10 | S | | |
| P501 | 28 | 6'-2" | 180 | B | | |



POST ANCHORAGE DETAIL

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



DRIP STRIP

| GENERAL SUMMARY | | | |
|-----------------|-------|----------|---|
| ITEM | TOTAL | UNIT | DESCRIPTION |
| 202 | Lump | Lump | Structure removed |
| 202 | 23.5 | Sq. Yds. | Pavement removed |
| 202 | 108 | Lin. Ft. | Guard rail removed for storage |
| 203 | 9 | Cu. Yds. | Embankment |
| 203 | 1,119 | Cu. Yds. | Excavation not including embankment construction |
| 301 | 214 | Cu. Yds. | Bituminous aggregate base AC-20 or (RT-11 or RT-12) |
| 403 | 41 | Cu. Yds. | Asphalt concrete AC-20 |
| 404 | 37 | Cu. Yds. | Asphalt concrete AC-20 |
| 503 | 283 | Cu. Yds. | Unclassified excavation |
| 503 | Lump | Lump | Cofferdams, cribs and sheeting |
| 503 | 20 | Cu. Yds. | Rock excavation |
| 509 | 5,028 | Lbs. | Reinforcing steel |
| 510 | 8 | Ea. | Dowel holes |
| 511 | 99 | Cu. Yds. | Class C concrete, abutments |
| 511 | 58 | Cu. Yds. | Class C concrete, footings |
| 512 | 8 | Sq. Yds. | Type B waterproofing |
| 512 | 162 | Sq. Yds. | Type D waterproofing |
| 515 | 8 | Ea. | Prestressed concrete bridge members |
| 516 | 138 | Sq. Ft. | 1" Preformed expansion joint filler AASHTO-M-153 |
| 516 | 13 | Sq. Ft. | 1" Elastomeric bearing pads 1" x 5" x 11" |
| 516 | 71 | Lin. Ft. | Joint sealer, 705.02 |
| 517 | 85 | Lin. Ft. | Railing (deep beam rail with steel posts and bolts) |
| 518 | 46 | Cu. Yds. | Porous backfill |
| 601 | 47 | Cu. Yds. | Dumped rock fill, type B |
| 606 | 4 | Ea. | Anchor assembly |
| 614 | Lump | Lump | Maintaining traffic |
| 619 | Lump | Lump | Field office |
| 623 | Lump | Lump | Construction layout stakes |
| Special | 54 | Sq. Ft. | Galvanized steel drip strip |
| 603 | 20 | Lin. Ft. | 43" x 27" Conduit, Type D (707.02) |
| 304 | 13 | Cu. Yds. | Aggregate base |

Note:
Galvanized Steel Drip Strip: Prior to applying deck membrane waterproofing a bent galvanized steel drip strip, 8" x 0.105" shall be installed along the edges of the deck as shown. The strips shall be fastened at 3'-0" maximum with power driven pins or #10 galvanized expansion screws subject to the approval of the Engineer. The strips shall be placed the full length of the deck. Where splices are required a 3" (min) lap shall be used, with a fastener through the lap. Steel shall meet the requirements of ASTM A568 and galvanizing shall be in accordance with 711.02. Payment shall be at the contract price bid for item special, Sq. Ft., Galvanized steel drip strip, which shall include all materials, labor, tools and incidentals necessary to complete the item.

| | | | | | | |
|---|--------|--------|---------|----------|------|---------|
| STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION DISTRICT 3 OFFICE | | | | | | |
| GENERAL SUMMARY AND STEEL LIST BRIDGE NO. LAW-378-0484 | | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| J.R.H. | J.R.H. | J.R.H. | g.e.b. | M.P.B. | 6-75 | |

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GEOLOGY OF THE SITE

THE STRUCTURE SITE IS LOCATED ON THE FLOODPLAIN AND OVER VENISONHAM CREEK IN AN AREA WHERE MODERATELY DEEP VALLEY FILL OVERLIES SHALE AND SANDSTONE BEDROCK, OF PENNSYLVANIAN AGE.

EXPLORATION

THE EXPLORATION CONSISTED OF TWO DRIVE SAMPLE-CORE BORINGS, MADE ON JUNE 19 AND 20, 1974.

INVESTIGATIONAL FINDINGS

BORINGS DISCLOSED THAT SLOPING BEDROCK SURFACE ENCOUNTERED AT 10-FOOT DEPTH, ELEVATION 562 FEET IN THE REAR PORTION OF THE STRUCTURE SITE AND AT 22-FOOT DEPTH, ELEVATION 550 FEET IN THE FORWARD PORTION IS OVERLAIN BY LOOSE AND MEDIUM-DENSE SANDS AND SILTS AND MEDIUM-STIFF CLAYS. THE BORINGS WERE TERMINATED AT 25 AND 32-FOOT DEPTHS, ELEVATIONS 547 AND 540 FEET AFTER PENETRATING 10 AND 15 FEET BELOW BEDROCK SURFACE.

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

- Coal
- Weathered Mudstone or Claystone
- Mudstone or Claystone
- Weathered Shale
- Shale
- Weathered Siltstone
- Siltstone

LEGEND

- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
X = Number of Blows for First 6 inches.
Y = Number of Blows for Second 6 inches.
Z = Number of Blows for Third 6 inches
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Indicates Final Measurement of Penetration, in Inches.
- Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone
- Boulders or Cobbles

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with post performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

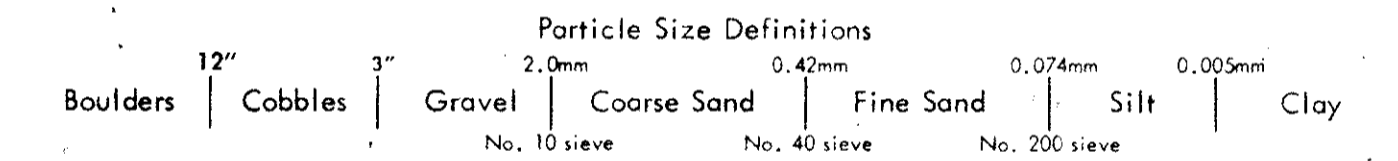
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140-pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



LOG OF BORING

Date Started 6-20-74 Sampler Type SS Dia. 1 3/8" Water Elev. 562.3'
 Date Completed 6-20-74 Casing Length Dia.
 Boring No. B-2 Station & Offset 255+20, 6' RT (REAR ABUTMENT) Surface Elev. 572.3'

| Elev. | Depth | Std. Pen. (N) | Rec. ft. | Loss ft. | Description | Sample No. | Physical Characteristics | | | | | | | SHTL Class. | | |
|-------|-------|---------------|----------|----------|--|------------|--------------------------|--------|--------|--------|--------|----|----|-------------|------|--------|
| | | | | | | | % Agg. | % C.S. | % F.S. | % Silt | % Clay | LL | PI | | W.C. | |
| 572.3 | 0 | | | | | | | | | | | | | | | |
| 569.8 | 2 | | | | | | | | | | | | | | | |
| 667.3 | 4 | 3/2/3 | | | BROWN SANDY CLAY | 1 | 4 | 10 | 19 | 36 | 31 | 31 | 12 | 20 | | A-6a |
| 564.8 | 6 | 3/5/7 | | | GRAY SILTY CLAY | 2 | 0 | 2 | 5 | 49 | 44 | 40 | 16 | 20 | | A-6b |
| 562.3 | 8 | 4/10/38 | | | BROWN SANDY CLAY | 3 | 0 | 4 | 23 | 41 | 32 | 31 | 11 | 17 | | A-6a |
| 560.3 | 10 | | | | TOP OF WEATHERED ROCK | | | | | | | | | | | |
| 560.3 | 12 | 35/58 | | | BROWN WEATHERED SHALE | 4 | 32 | 6 | 22 | 27 | 13 | 26 | 9 | 6 | | VISUAL |
| 557.3 | 14 | | 3.2 | 0.0 | SANDSTONE, BROWN, FIRM, FINE-GRAINED, MEDIUM-BEDDED, MICACEOUS. NO CORE LOSS | | | | | | | | | | | |
| 552.3 | 16 | | 0.9 | 4.1 | SANDSTONE, BROWN, FIRM, MEDIUM-GRAINED.* | | | | | | | | | | | |
| 550.3 | 20 | | | | SANDSTONE, SHALY, MICACEOUS, FIRM. NO CORE LOSS | | | | | | | | | | | |
| 547.3 | 24 | | 5.1 | 0.0 | SANDSTONE, BROWN, FIRM, MEDIUM-TO-COARSE-GRAINED, THICK-BEDDED. NO CORE LOSS | | | | | | | | | | | |

BOTTOM OF BORING

* DRILLER NOTE: RAN 5 FEET, LOST CORE, WENT BACK IN, REDRILLED, CUT CORE AWAY, ONLY PICKED UP 0.9 FEET.

LOG OF BORING

Date Started 6-19-74 Sampler Type SS Dia. 1 3/8" Water Elev. 564.7'
 Date Completed 6-19-74 Casing Length Dia.
 Boring No. B-3 Station & Offset 255+98, 4' LT (FORWARD ABUTMENT) Surface Elev. 571.7'

| Elev. | Depth | Std. Pen. (N) | Rec. ft. | Loss ft. | Description | Sample No. | Physical Characteristics | | | | | | | SHTL Class. | | |
|-------|-------|---------------|----------|----------|--|------------|--------------------------|--------|--------|--------|--------|----|----|-------------|------|-------|
| | | | | | | | % Agg. | % C.S. | % F.S. | % Silt | % Clay | LL | PI | | W.C. | |
| 571.7 | 0 | | | | | | | | | | | | | | | |
| 569.2 | 2 | | | | | | | | | | | | | | | |
| 566.7 | 4 | 6/4/3 | | | BROWN SANDY CLAY | 1 | 0 | 11 | 22 | 35 | 32 | 19 | 11 | 18 | | A-6a |
| 564.2 | 6 | 2/3/5 | | | BROWN SANDY SILTY | 2 | 0 | 22 | 20 | 29 | 29 | 28 | 10 | 19 | | A-4a |
| 561.7 | 8 | 2/2/2 | | | BROWN SANDY CLAY | 3 | 0 | 2 | 23 | 44 | 31 | 30 | 11 | 23 | | A-6a |
| 559.2 | 10 | 2/2/3 | | | BROWN AND GRAY SANDY SILT | 4 | 0 | 2 | 28 | 44 | 26 | 26 | 8 | 23 | | A-4a |
| 556.7 | 12 | 2/5/9 | | | BROWN AND GRAY SANDY SILT | 5 | 9 | 11 | 33 | 28 | 19 | 25 | 8 | 15 | | A-4a |
| 554.2 | 14 | 14/9/8 | | | GRAY SILTY GRAVELLY SAND | 6 | 32 | 4 | 33 | 17 | 14 | 21 | 5 | 23 | | A-2-4 |
| 551.7 | 16 | 17/16/10 | | | BROWN AND GRAY SILTY GRAVELLY SAND | 7 | 16 | 6 | 43 | 21 | 14 | 20 | 5 | 18 | | A-2-4 |
| 549.7 | 20 | 33/47 | | | BROWN AND GRAY SILTY SAND | 8 | 0 | 5 | 64 | 21 | 10 | NP | NP | 13 | | A-3a |
| 539.7 | 22 | | | | TOP OF ROCK | | | | | | | | | | | |
| 539.7 | 24 | | | | | | | | | | | | | | | |
| 539.7 | 26 | | | | | | | | | | | | | | | |
| 539.7 | 28 | | | | | | | | | | | | | | | |
| 539.7 | 30 | | | | | | | | | | | | | | | |
| 539.7 | 32 | | 7.8 | 2.2 | SANDSTONE, GRAY, COARSE-GRAINED, MEDIUM-SOFT, THICK-BEDDED, JOINTED AND BROKEN IN PART, FRIABLE. CORE LOSS 22% | | | | | | | | | | | |

BOTTOM OF BORING

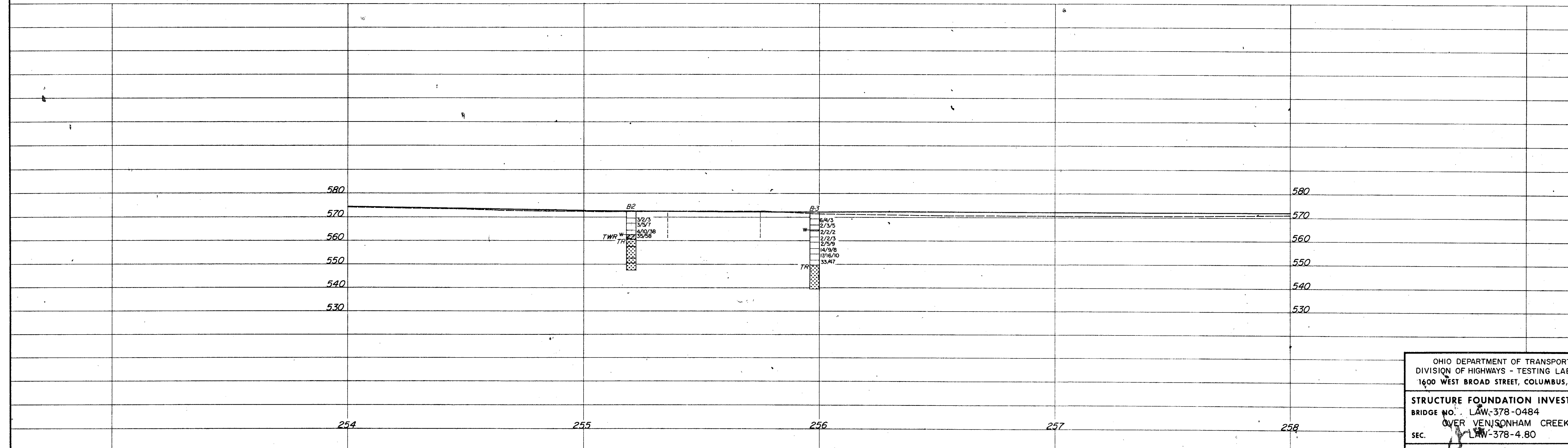
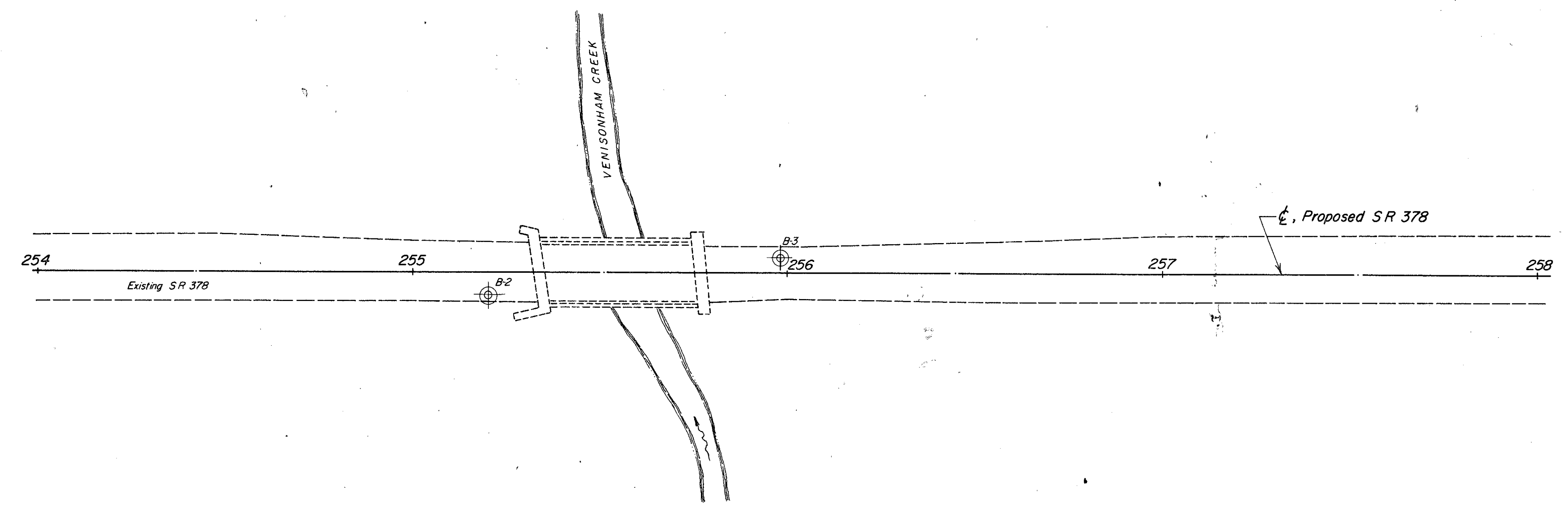
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS - TESTING LABORATORY
 1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. LAW-378-0484
 OVER VENISONHAM CREEK
 SEC. LAW-378-4.80

CHECKED BY R. D. R. REVIEWED BY R. D. R. DATE 7/17/74

MICROFILMED
MAR 20 1982

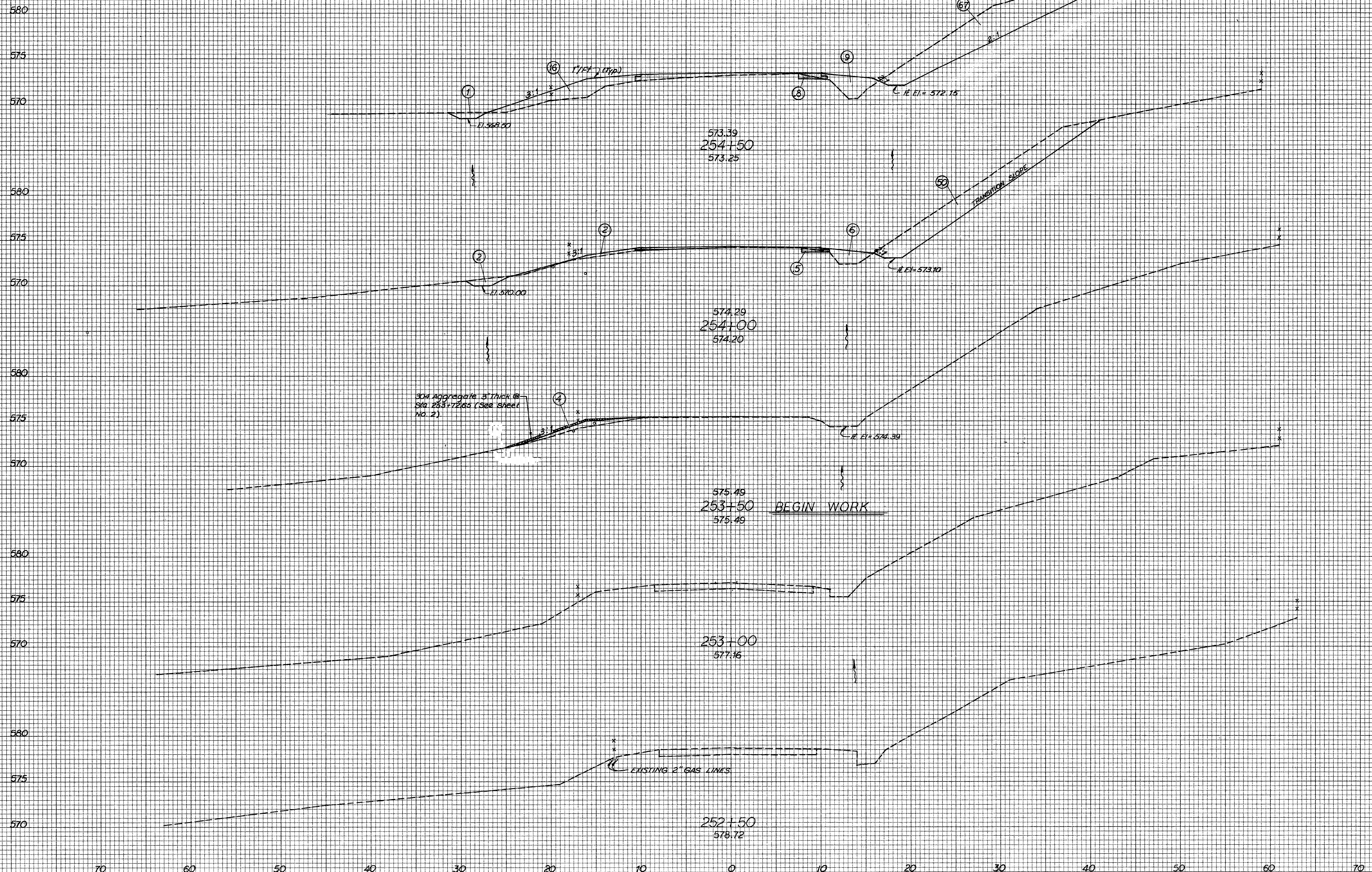


OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - TESTING LABORATORY
1400 WEST BROAD STREET, COLUMBUS, OHIO 43223

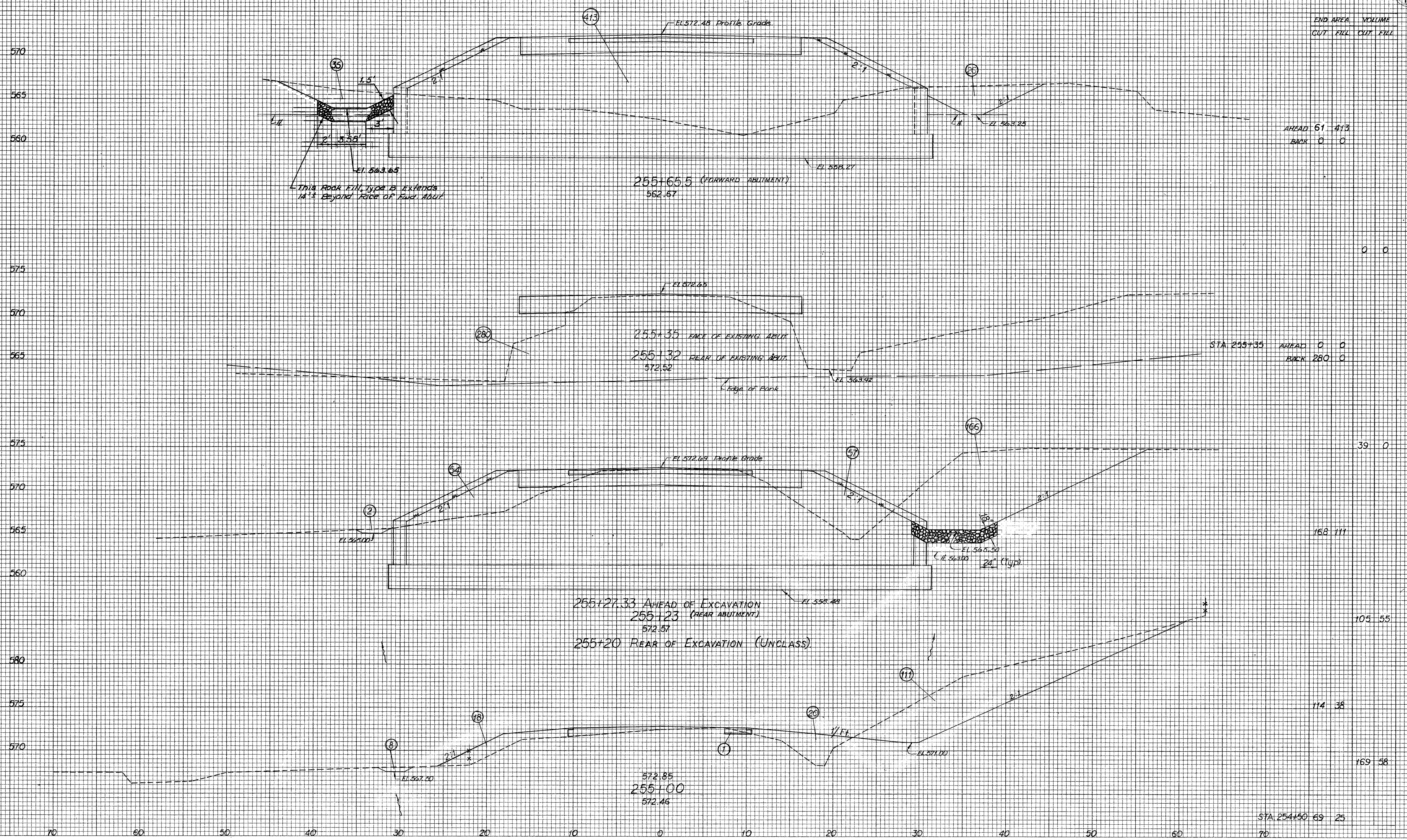
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. LAW-378-0484
OVER VENISONHAM CREEK
SEC. LAW-378-4.80

PLAN AND PROFILE
DRAWN BY L. N. L. CHECKED BY R. D. R. REVIEWED BY R. D. R. DATE 7/17/74

SCALE: 1" = 20'



| END AREA | | VOLUME | |
|----------|------|--------|------|
| CUT | FILL | CUT | FILL |
| 69 | 25 | | |
| | | 173 | 31 |
| 53 | 8 | | |
| | | 49 | 11 |
| 0 | 4 | | |



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

AHEAD 61 413
BACK 0 0

STA 255+35
AHEAD 0 0
BACK 280 0

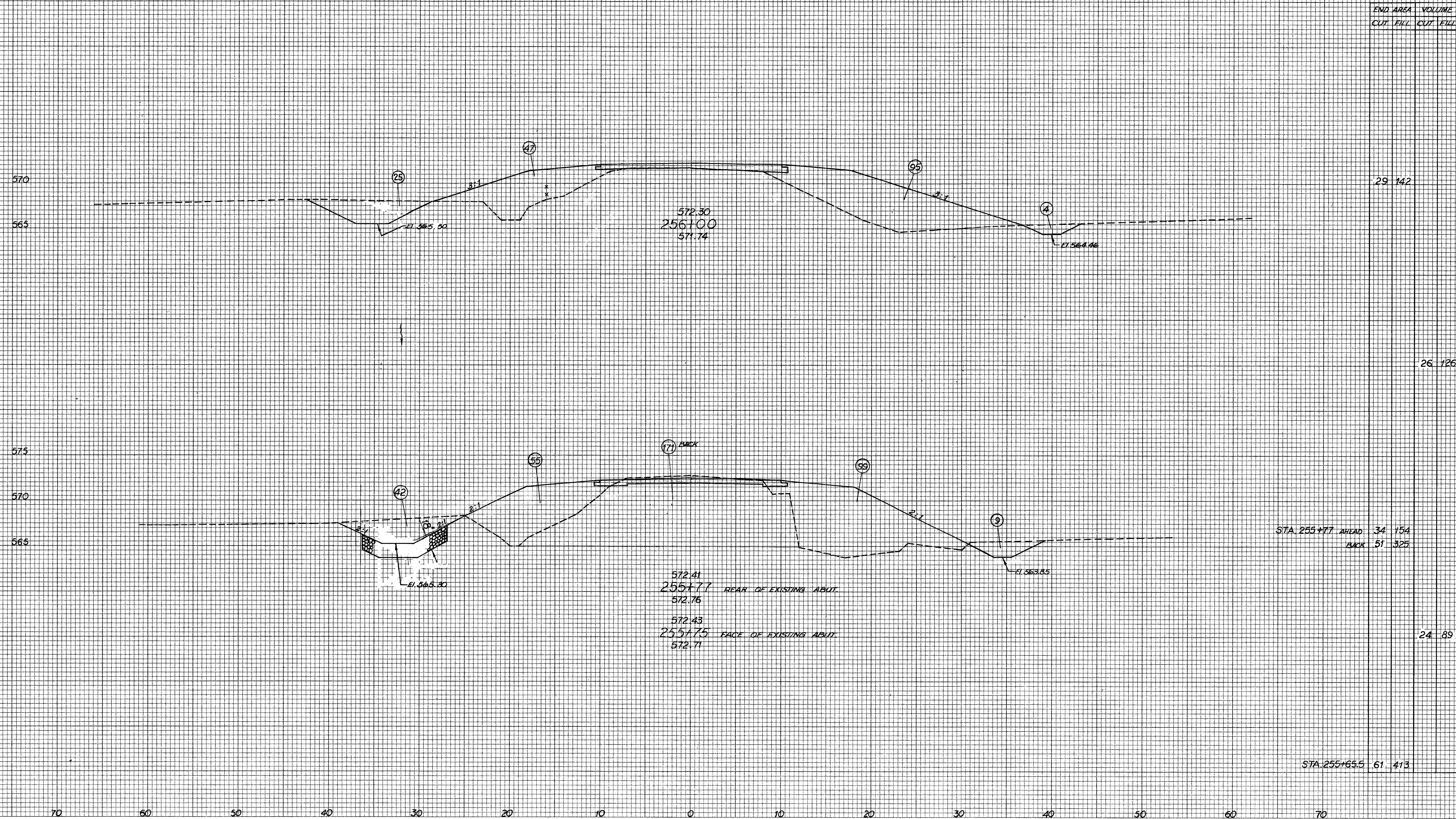
168 111

105 55

114 38

169 58

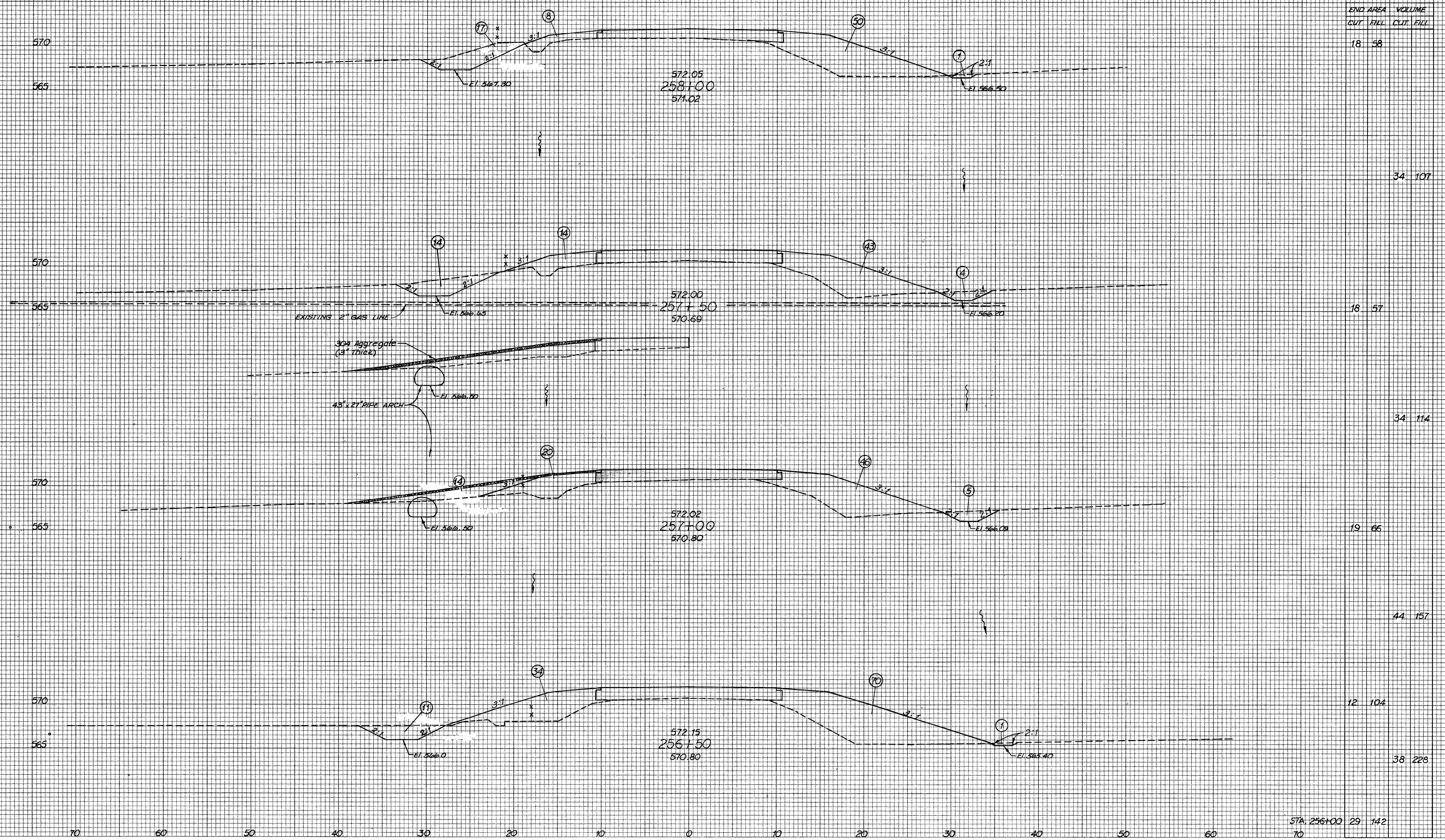
STA 254+50 69 25



STA. 255+77 AHEAD 34 154
BACK 51 325

572.41
255+77 REAR OF EXISTING ABUT.
572.76
572.43
255+75 FACE OF EXISTING ABUT.
572.71

STA. 255+65.5 61 413



| END AREA | | VOLUME | |
|----------|------|--------|------|
| CUT | FILL | CUT | FILL |
| 18 | 58 | | |

| | |
|----|-----|
| 34 | 107 |
|----|-----|

| | |
|----|----|
| 18 | 57 |
|----|----|

| | |
|----|-----|
| 34 | 114 |
|----|-----|

| | |
|----|----|
| 19 | 66 |
|----|----|

| | |
|----|-----|
| 44 | 157 |
|----|-----|

| | |
|----|-----|
| 12 | 104 |
|----|-----|

| | |
|----|-----|
| 38 | 228 |
|----|-----|

STA. 256+00 29 142

575

570

259+50
575.01

TOTAL CUT = 713 Cu. Yds.
TOTAL FILL = 1,128 Cu. Yds.

TOTAL CUT = 1,278 Cu. Yds.
+ 4 Cu. Yds. Drive Pipe @ Sta. 257+10
1,279 Cu. Yds.

| END AREA | VOLUME |
|----------|--------|
| CUT | FILL |
| 0 | 0 |
| 11 | 49 |
| 11 | 53 |
| 27 | 103 |
| 18 | 58 |

TOTAL FILL = 1,128 Cu. Yds.
+ 23 Cu. Yds. Drive Pipe @ Sta. 257+10
1,151 Cu. Yds.

570

565

259+00 END WORK
573.11

0 0

11 49

570

565

572.30
258+50
571.88

El. 567.36

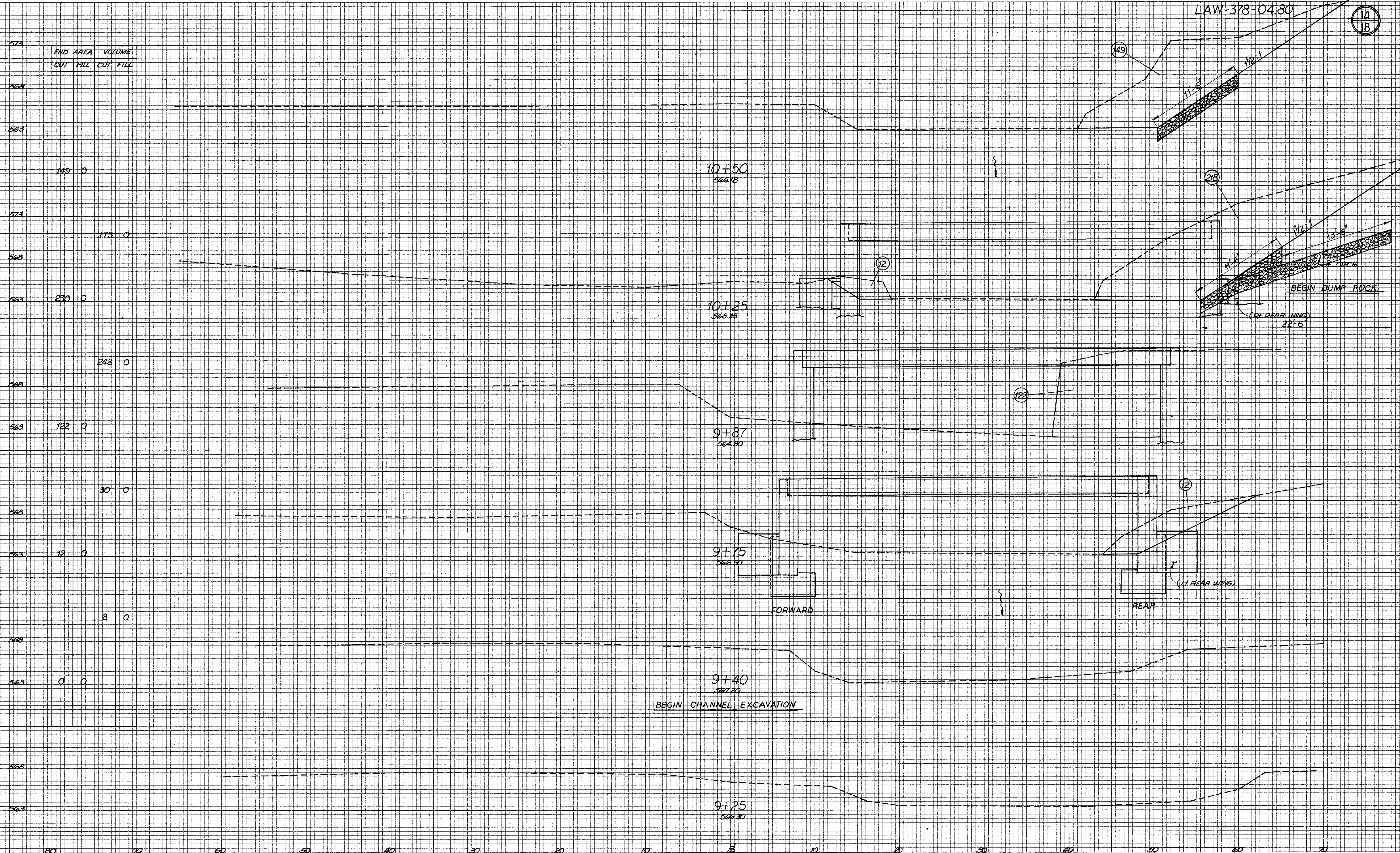
11 53

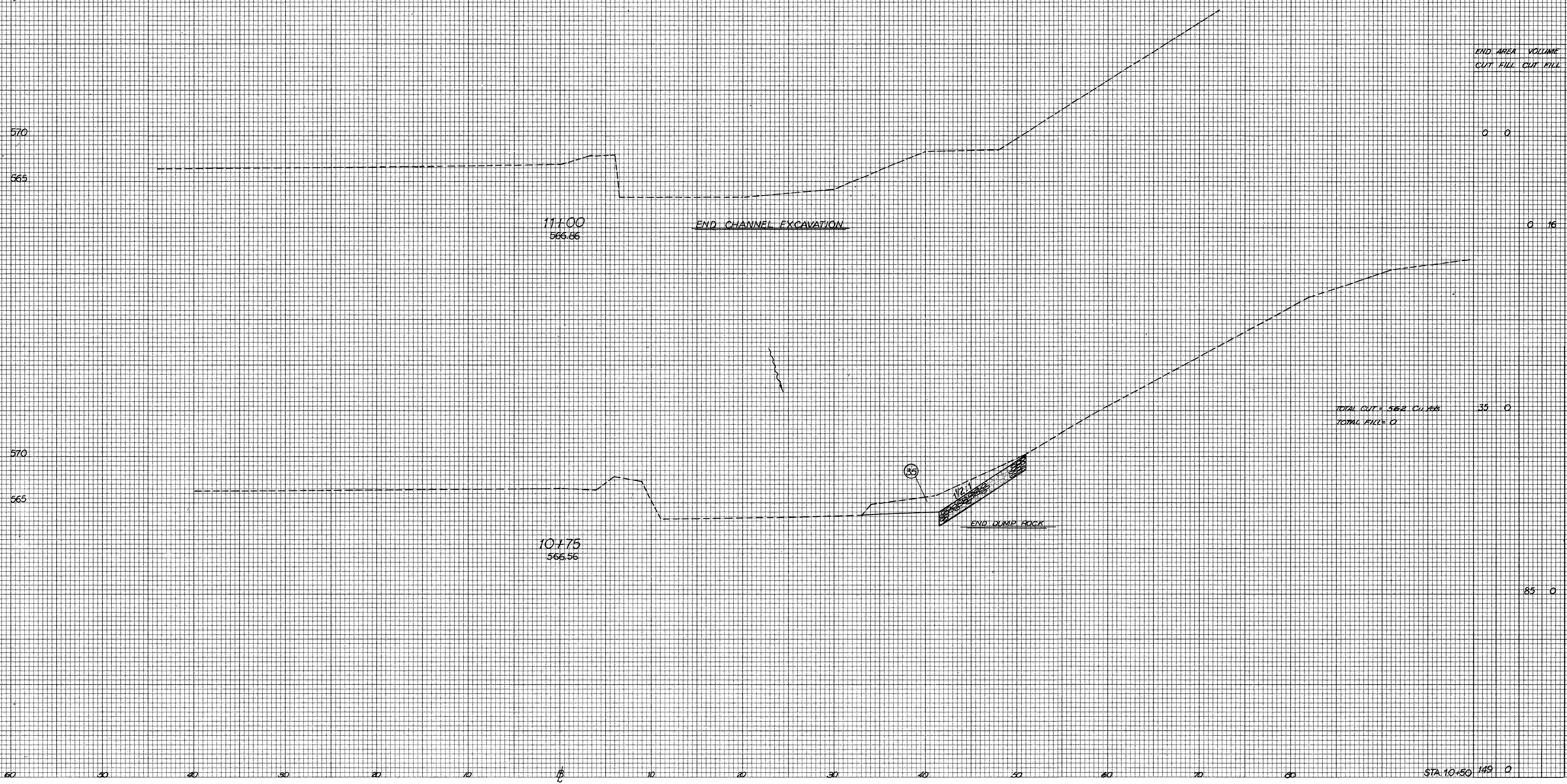
27 103

STA. 258+00 18 58

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

| END | AREA | | VOLUME | |
|-----|------|------|--------|------|
| | CUT | FILL | CUT | FILL |
| 573 | | | | |
| 568 | | | | |
| 563 | | | | |
| 149 | 0 | | | |
| 573 | | | | |
| 568 | 175 | 0 | | |
| 563 | 230 | 0 | | |
| 568 | | | | |
| 563 | 248 | 0 | | |
| 568 | | | | |
| 563 | 122 | 0 | | |
| 568 | | | | |
| 563 | 30 | 0 | | |
| 568 | | | | |
| 563 | 12 | 0 | | |
| 568 | | | | |
| 563 | 8 | 0 | | |
| 568 | | | | |
| 563 | 0 | 0 | | |
| 568 | | | | |
| 563 | | | | |
| 568 | | | | |
| 563 | | | | |





11+00
566.86

END CHANNEL EXCAVATION

10+75
566.56

END DUMP ROCK

TOTAL CUT = 562 Cu Yds
TOTAL FILL = 0

STA. 10+50 149 0

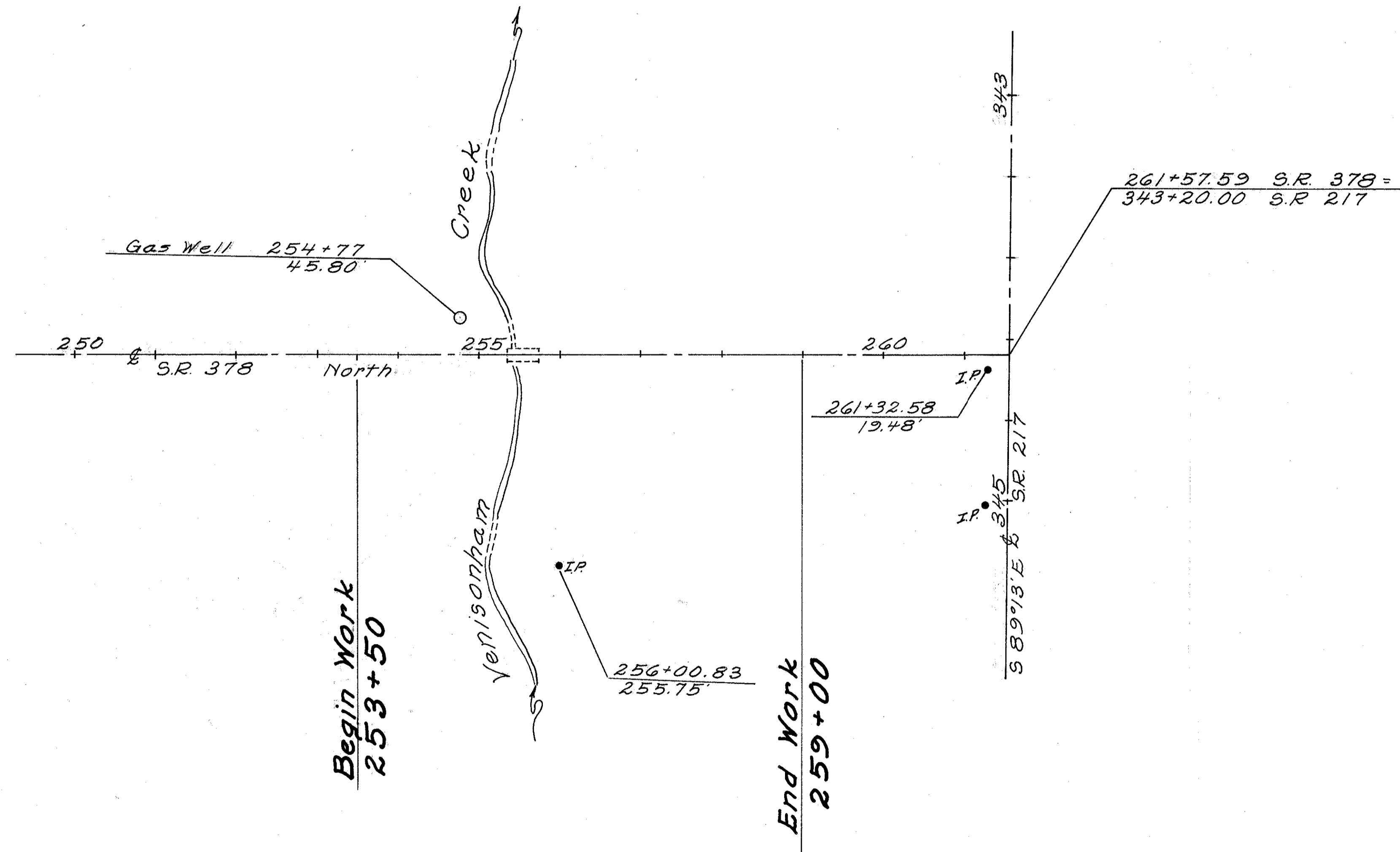
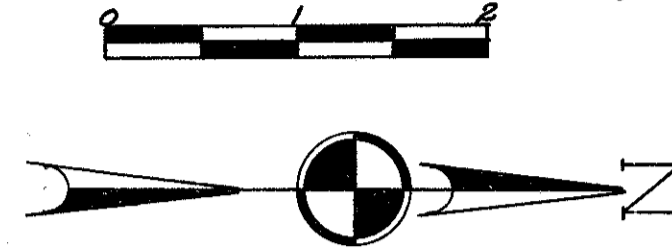
LOCATION PLAN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
 LAW-378-04.80
 SEC 18, T-2, R-16
 WINDSOR TWP
 LAWRENCE COUNTY

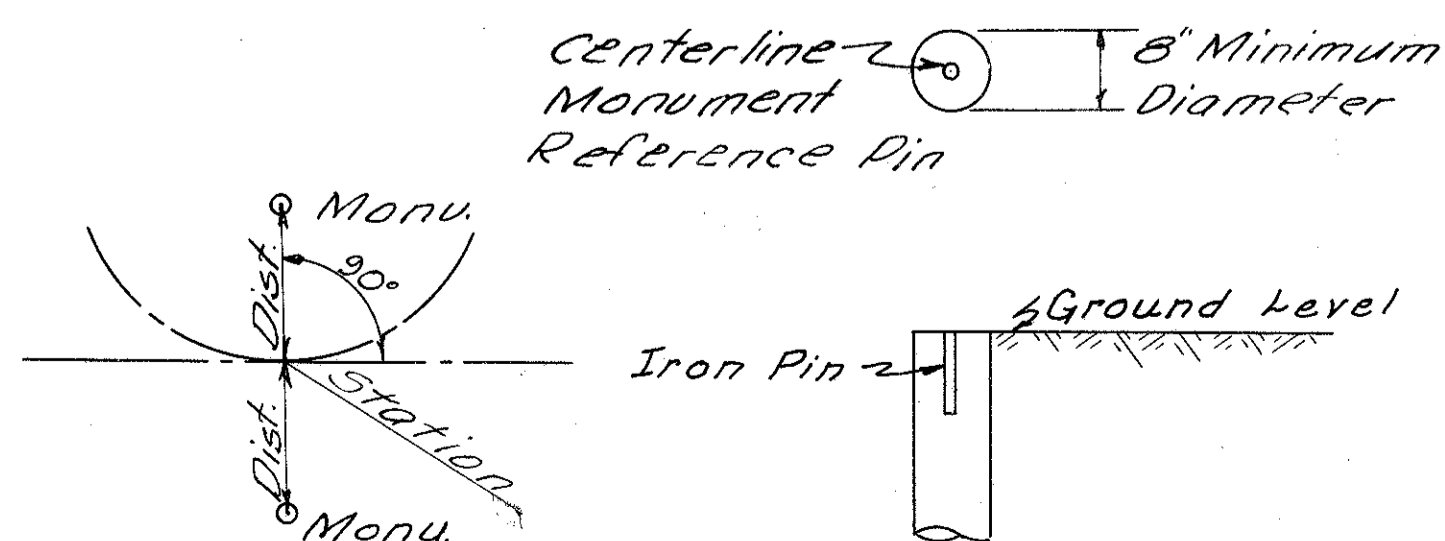
| | | | |
|-------------|-------|---------|--|
| FHWA REGION | STATE | PROJECT | |
| 5 | OHIO | | |

16
18

1
3



~DETAIL FOR SETTING MONUMENTS~



REFERENCE MONUMENTS TO BE SET AFTER CONSTRUCTION

| Station | Dist. fr. C | | Station | Dist. fr. C | |
|---------|-------------|-----|---------|-------------|-----|
| | Lt. | Rt. | | Lt. | Rt. |
| 253+50 | 15 | 14 | | | |
| 256+00 | 16 | 16 | | | |
| 258+50 | 13 | 13 | | | |
| | | | | | |
| | | | | | |

Recorded in the Lawrence County Record of Plats; Book _____ Page _____ Date _____

I hereby certify that this plat is a true declaration of a survey made by the Ohio Department of Transportation.
 Date Jan 14, 76
Carl J. Smith P.S. 5406

PROPERTY PLAN

| | | |
|-------------|-------|---------|
| FHWA REGION | STATE | PROJECT |
| 5 | OHIO | |

17
18

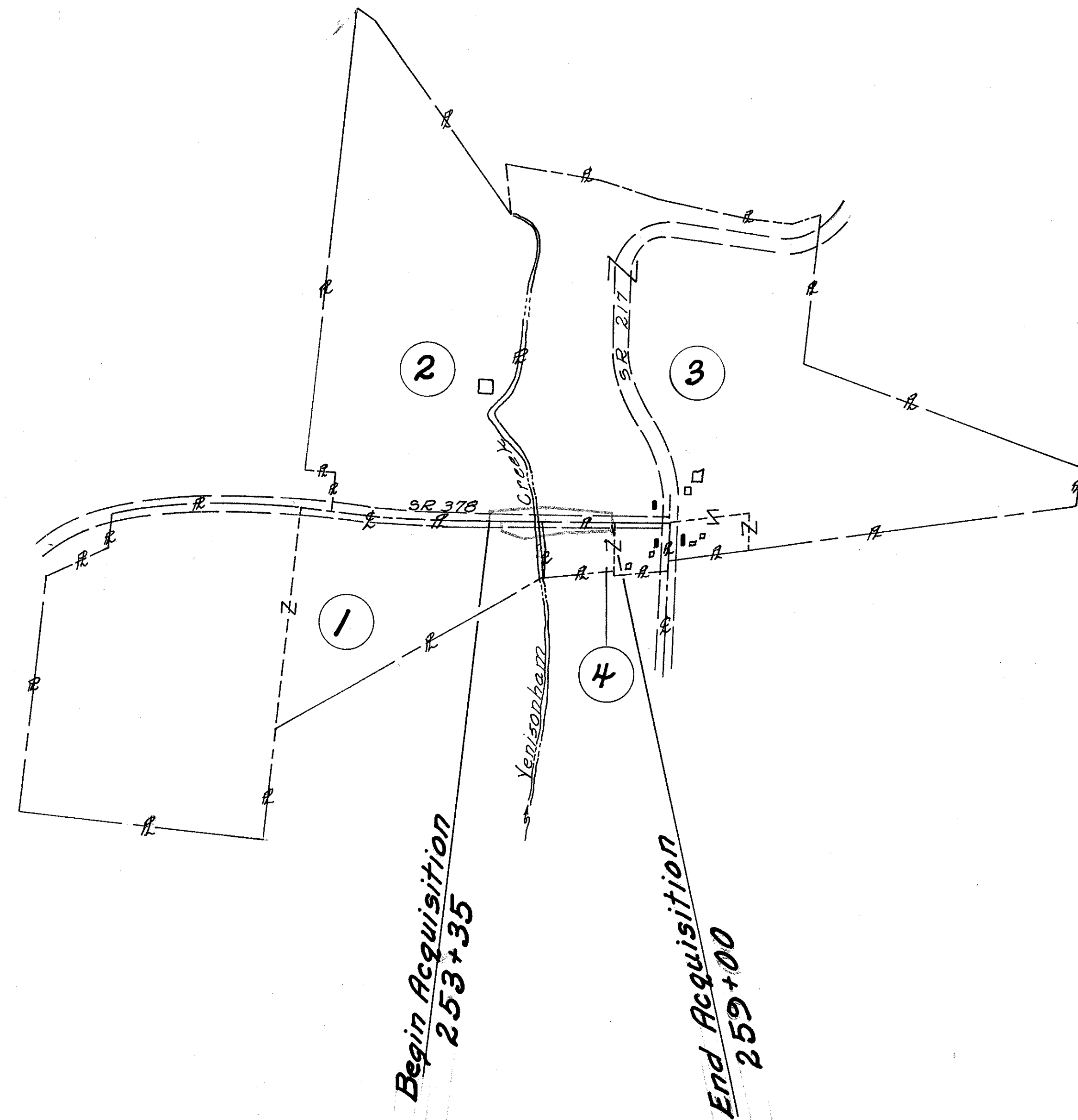
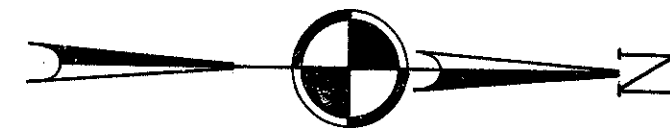
UTILITIES
 General Telephone Company
 824 Seventh Street
 Portsmouth, Ohio 45662

Buckeye Rural Electric Co-op
 143 Third Ave.
 Gallipolis, Ohio 45631

Columbia Gas Transmission Corp.
 P.O. Box 1273
 Charleston, W. Va. 25325

LAW-378-04.80
 SEC 18, T-2, R-16
 WINDSOR TWP
 LAWRENCE COUNTY

2
3



- ① Wilbur E. Myers & Alice S. Myers
- ② Floyd Dunfee & Marie Dunfee
- ③ Vance Saunders & Lorene Saunders
- ④ Frank Carpenter & Maxine Carpenter

| | | |
|-------------------------|----------------------|----|
| Completion Date 1-13-76 | | |
| Revised | Revision Description | By |
| | | |

Sec 18, T-2, R-16
Windsor Twp

| | | | |
|-------------|-------|---------|--|
| FHWA REGION | STATE | PROJECT | |
| 5 | OHIO | | |

18
18

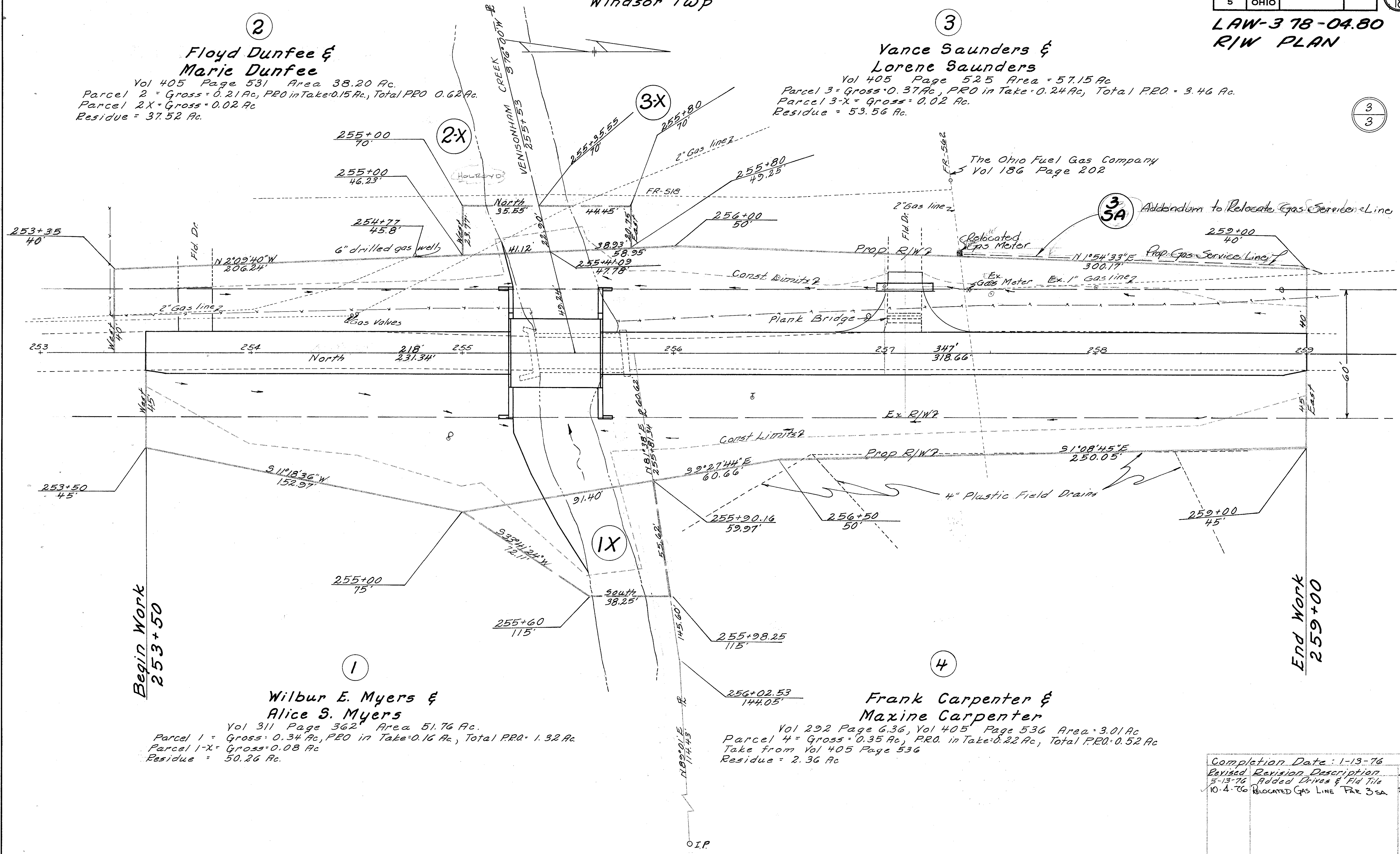
LAW-378-04.80
R/W PLAN

②
Floyd Dunfee & Marie Dunfee
Vol 405 Page 531 Area 38.20 Ac.
Parcel 2 = Gross = 0.21 Ac, P.R.O. in Take = 0.15 Ac, Total P.R.O. = 0.62 Ac.
Parcel 2X = Gross = 0.02 Ac
Residue = 37.52 Ac.

③
Vance Saunders & Lorene Saunders
Vol 405 Page 525 Area = 57.15 Ac
Parcel 3 = Gross = 0.37 Ac, P.R.O. in Take = 0.24 Ac, Total P.R.O. = 3.46 Ac.
Parcel 3-X = Gross = 0.02 Ac
Residue = 53.56 Ac.

①
Wilbur E. Myers & Alice S. Myers
Vol 311 Page 362 Area 51.76 Ac.
Parcel 1 = Gross = 0.34 Ac, P.R.O. in Take = 0.16 Ac, Total P.R.O. = 1.32 Ac.
Parcel 1-X = Gross = 0.08 Ac
Residue = 50.26 Ac.

④
Frank Carpenter & Maxine Carpenter
Vol 292 Page 6.36, Vol 405 Page 536 Area = 3.01 Ac
Parcel 4 = Gross = 0.35 Ac, P.R.O. in Take = 0.22 Ac, Total P.R.O. = 0.52 Ac
Take from Vol 405 Page 536
Residue = 2.36 Ac.



③ SA Addendum to Relocate Gas Service Line

The Ohio Fuel Gas Company
Vol 186 Page 202

| | |
|-------------------------------------|-----|
| Completion Date: 1-13-76 | |
| Revised Revision Description | By |
| 5-13-76 Added Drives & Fid Tile | EDB |
| 10-4-76 RELOCATED GAS LINE PAR 3 SA | RLG |