

PROJECT ENGINEER: JIM MILLER (309) 671-3451

LIASON ENGINEER: LEISA LASTER (309) 671-3481

FOR INDEX OF SHEETS
SEE SHEET 2

LIST OF STANDARDS

- 000001-05
- 701001-01
- 701006-02
- 701011-01
- 701201-02
- 701301-02
- 701901

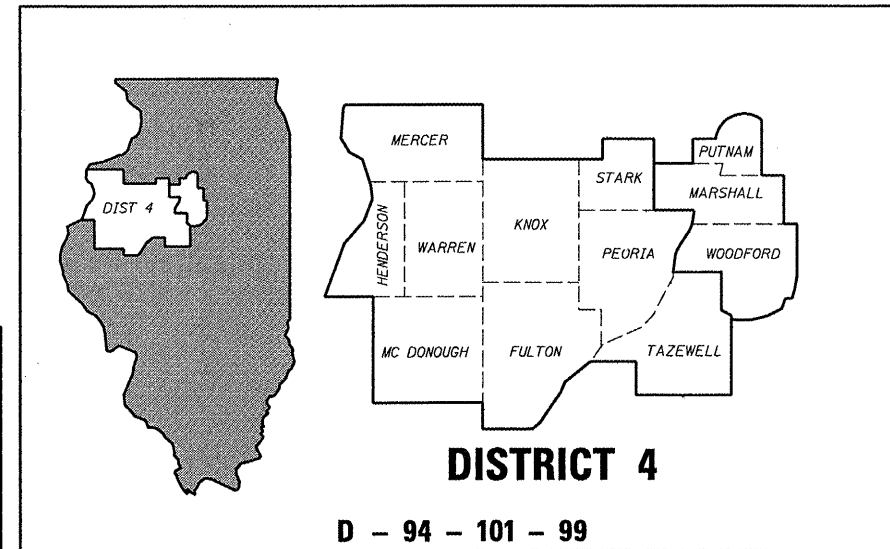
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLAN FOR PROPOSED
FEDERAL AID HIGHWAY**

VARIOUS ROUTES
VARIOUS COUNTIES
SECTION D4 SCOUR MITIGATION 2006
C-94-346-99

68012 66+4=70

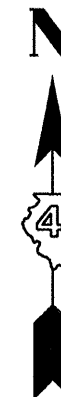
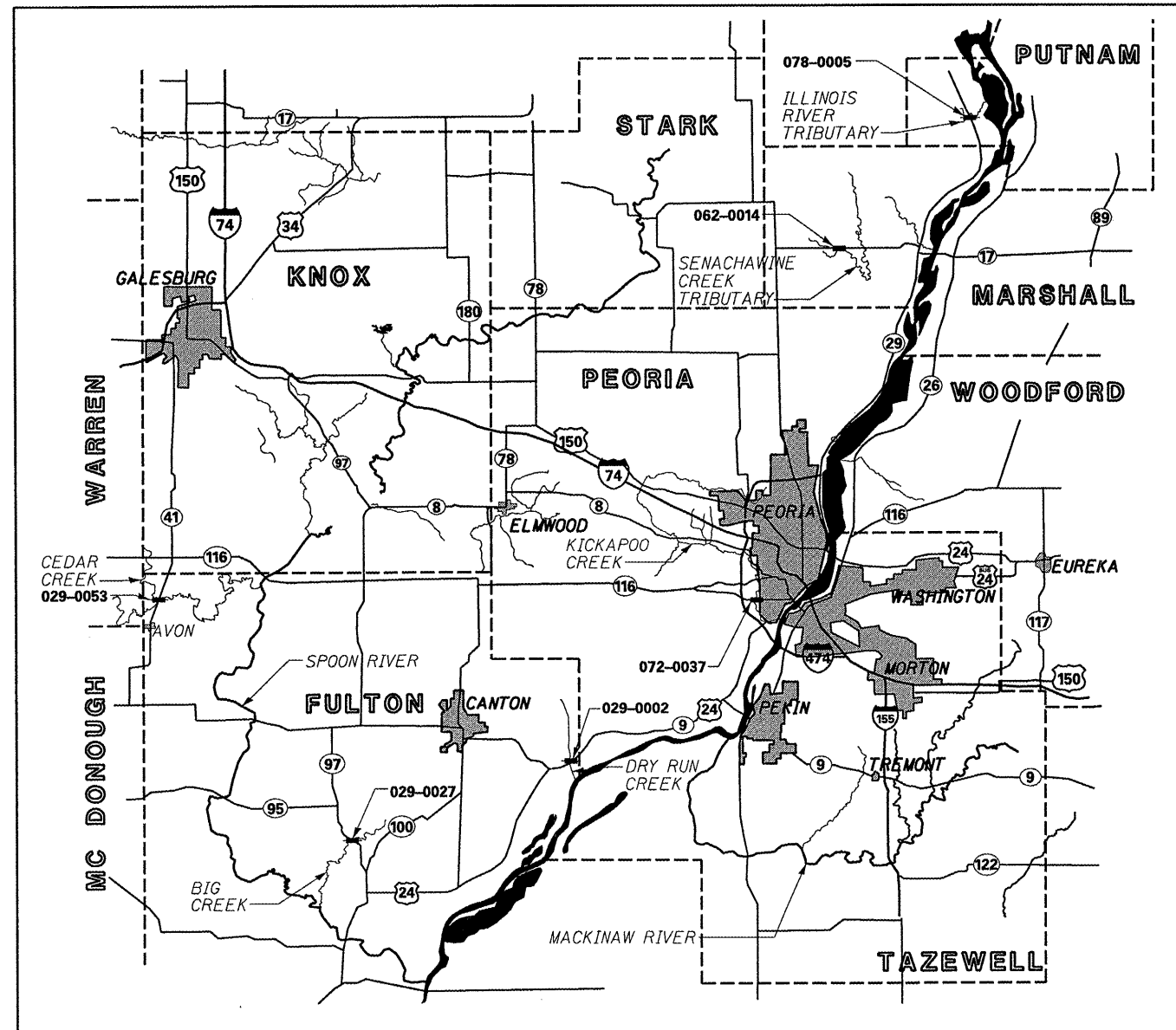
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66* | 1 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

* D4 SCOUR MITIGATION 2006

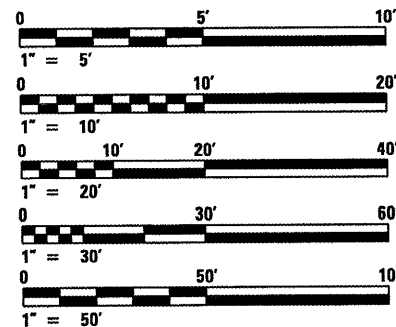


DESCRIPTION OF WORK
INSTALLATION OF SCOUR COUNTERMEASURES FOR 6 BRIDGES INCLUDING MINIMAL CHANNEL SHAPING & EXCAVATION ALONG WITH PLACEMENT OF GABIONS, SLOPE MATTRESS OR RIPRAP REVETMENT SYSTEMS. ROW TAKING REQUIRED.

TOTAL SHEETS = 66



ENGLISH RATIOS



PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REPRODUCED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REPRODUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 68012
CATALOG NO. 32124-01D



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Feb 11, 20 08
J. E. C... REGION 3 ENGINEER

March 21, 20 08
Eric E. Harn ENGINEER OF DESIGN AND ENVIRONMENT

March 21, 20 08
Christine M. Reed DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 2 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

* D4 SCOUR MITIGATION 2006

GENERAL NOTES

- Plan dimensions and details relative to existing structure (including High Water Elevation) have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- All information shown in each structure's Waterway Information Table was provided by the Illinois Department of Transportation.
- Commitments are not to be altered without the written approval of all parties to which the commitment was made.
- The Contractor shall be responsible for diverting the water flow from the construction area of each site. The Contractor may use either method of dewatering as described in the Dewatering Special Provision.
- During site preparation, areas below the final grade shall be brought to grade by placing compacted layers of Granular Subbase Material, Type C; areas of soft or otherwise unsuitable subgrade soils shall be excavated and replaced with compacted layers of Granular Subbase Material, Type C. Removal and replacement of unsuitable material shall be as directed by the Engineer and will be paid for in accordance to Article 109.04 (Force Account Basis) of the Standard Specifications. An assumed quantity for Granular Subbase Material, Type C, is included as part of each structure's mitigation details.
- Layout of scour protection systems may be varied in the field to suit ground conditions as directed by the engineer.
- All areas disturbed during construction shall be graded, fertilized, seeded and mulched as directed by the Engineer. Sections 250 and 251 of the Standard Specifications shall govern this work.
- It is anticipated that the majority of this work will not require highway traffic lane closures. Lane closures will be permitted on a limited basis and are restricted to one-lane daytime only closures in accordance to IDOT Standards 701201 and 701301.
- GABION ANCHOR STAKE layout shown on plan sheets is for information and estimation purposes only. Actual layout shall be determined in the field by the Contractor and approved by the Engineer and shall conform to the procedures stated in the special provisions.

SUGGESTED SEQUENCE OF CONSTRUCTION

- Install dewatering system and divert water flow from the construction area.
- Excavate to the lines, grades, contours, and dimensions shown. The prepared area shall be inspected and approved by the Engineer before further work can take place.
- Install filter fabric on the graded surfaces as shown on the drawings.
- Install site specific scour countermeasures. See detail sheets for specific installation procedures.
- Remove dewatering system. Grade and seed ground disturbed during construction.

COMMITMENTS

- S/N 072-0037 - The Contractor is required to obtain a Right of Entry Permit from the BNSF Railroad before working on their Right-of -Way.

Disposition of Utilities

| Structure Number | County | Route | Crossing | Utility | Owner | Location | Action |
|------------------|----------|--------|------------------------|--------------|----------------|----------|-----------------------|
| 029-0053 | Fulton | IL 41 | Cedar Creek | UG Gas | Illinois Power | ES | Relocate as Necessary |
| 062-0014 | Marshall | IL 17 | Senachwine Creek Trib. | UG Telephone | Unknown | S ROW | Caution |
| 072-0037 | Peoria | IL 116 | Kickapoo Creek | San Sewer | GPSD | W Creek | See Plans |
| 078-0005 | Putnam | IL 29 | Illinois River Trib. | UG Telephone | Verizon, Inc. | W ROW | Caution |

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISPOSITION OF UTILITIES,
GENERAL NOTES AND SUGGESTED
CONSTRUCTION SEQUENCING
SECTION D4 SCOUR MITIGATION 2006
VARIOUS ROUTES, SECTIONS
AND COUNTIES

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 3 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

| SUMMARY OF QUANTITIES | | | TOTAL QUANTITY | CONSTRUCTION TYPE CODE | | |
|-----------------------|--|-------|----------------|------------------------|--|--|
| CODE NO. | ITEM | UNIT | | 100% STATE | | |
| 20100110 | TREE REMOVAL (6-15 UNITS) | UNIT | 22 | 22 | | |
| 20200400 | EARTH EXCAVATION FOR STILLING BASIN | CU YD | 418 | 418 | | |
| 20300100 | CHANNEL EXCAVATION | CU YD | 4370 | 4370 | | |
| 25000300 | SEEDING, CLASS 3 | ACRE | 1.0 | 1.0 | | |
| 25000400 | NITROGEN FERTILIZER NUTRIENT | POUND | 90 | 90 | | |
| 25000500 | PHOSPHORUS FERTILIZER NUTRIENT | POUND | 90 | 90 | | |
| 25000600 | POTASSIUM FERTILIZER NUTRIENT | POUND | 90 | 90 | | |
| 25100630 | EROSION CONTROL BLANKET | SQ YD | 1966 | 1966 | | |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING | POUND | 100 | 100 | | |
| 28000400 | PERIMETER EROSION BARRIER | FOOT | 486 | 486 | | |
| 28100205 | STONE RIPRAP, CLASS A3 | TON | 341 | 341 | | |
| 28100209 | STONE RIPRAP, CLASS A5 | TON | 5299 | 5299 | | |
| 28200200 | FILTER FABRIC | SQ YD | 9556 | 9556 | | |
| 28400100 | GABIONS | CU YD | 1202 | 1202 | | |
| 28401000 | SLOPE MATTRESS 12" | SQ YD | 3155 | 3155 | | |
| 31101900 | SUBBASE GRANULAR MATERIAL, TYPE C | TON | 2167 | 2167 | | |
| 50100100 | REMOVAL OF EXISTING STRUCTURES | EACH | 2 | 2 | | |
| 63300205 | REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARD RAIL, TYPE A | FOOT | 50 | 50 | | |
| 67100100 | MOBILIZATION | L SUM | 1 | 1 | | |
| X0301852 | DEWATERING STRUCTURE NO. 1 | EACH | 1 | 1 | | |
| X0301853 | DEWATERING STRUCTURE NO. 2 | EACH | 1 | 1 | | |
| X0301854 | DEWATERING STRUCTURE NO. 3 | EACH | 1 | 1 | | |
| X0301855 | DEWATERING STRUCTURE NO. 4 | EACH | 1 | 1 | | |
| X0301856 | DEWATERING STRUCTURE NO. 5 | EACH | 1 | 1 | | |
| X0301857 | DEWATERING STRUCTURE NO. 6 | EACH | 1 | 1 | | |
| X0323655 | GABION ANCHOR STAKE | EACH | 489 | 489 | | |
| X7012610 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701201 | EACH | 3 | 3 | | |
| Z0048665 | RAILROAD PROTECTIVE LIABILITY INSURANCE | L SUM | 1 | 1 | | |

* D4 SCOUR MITIGATION 2006

SCHEDULE OF QUANTITIES

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 4 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

| SCHEDULE OF QUANTITIES | | | STRUCTURE NUMBER | | | | | |
|--|-------|--|------------------|----------|----------|----------|----------|----------|
| ITEM | UNIT | | 029-0002 | 029-0027 | 029-0053 | 062-0014 | 072-0037 | 078-0005 |
| TREE REMOVAL (6-15 UNITS) | UNIT | | 0 | 22 | 0 | 0 | 0 | 0 |
| EARTH EXCAVATION FOR STILLING BASIN | CU YD | | 418 | 0 | 0 | 0 | 0 | 0 |
| CHANNEL EXCAVATION | CU YD | | 145 | 1056 | 1657 | 89 | 1403 | 20 |
| SEEDING CLASS 3 | ACRE | | 0.1 | 0.02 | 0.07 | 0.02 | .17 | 0.02 |
| EROSION CONTROL BLANKET | SQ YD | | 370 | 200 | 440 | 28 | 820 | 108 |
| PERIMETER EROSION BARRIER | FOOT | | 39 | 25 | 0 | 0 | 422 | 0 |
| STONE RIPRAP, CLASS A3 | TON | | 0 | 0 | 0 | 0 | 341 | 0 |
| STONE RIPRAP, CLASS A5 | TON | | 155 | 159 | 718 | 550 | 2850 | 867 |
| FILTER FABRIC | SQ YD | | 671 | 1242 | 2902 | 324 | 3717 | 700 |
| GABIONS | CU YD | | 415 | 337 | 450 | 0 | 0 | 0 |
| SLOPE MATTRESS 12" | SQ YD | | 356 | 624 | 2175 | 0 | 0 | 0 |
| SUBBASE GRANULAR MATERIAL, TYPE C | TON | | 708 | 590 | 869 | 0 | 0 | 0 |
| REMOVAL OF EXISTING STRUCTURES | EACH | | 0 | 0 | 2 | 0 | 0 | 0 |
| REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARD RAIL, TYPE A | EACH | | 0 | 0 | 0 | 50 | 0 | 0 |
| DEWATERING STRUCTURE NO. 1 | EACH | | 1 | 0 | 0 | 0 | 0 | 0 |
| DEWATERING STRUCTURE NO. 2 | EACH | | 0 | 1 | 0 | 0 | 0 | 0 |
| DEWATERING STRUCTURE NO. 3 | EACH | | 0 | 0 | 1 | 0 | 0 | 0 |
| DEWATERING STRUCTURE NO. 4 | EACH | | 0 | 0 | 0 | 1 | 0 | 0 |
| DEWATERING STRUCTURE NO. 5 | EACH | | 0 | 0 | 0 | 0 | 1 | 0 |
| DEWATERING STRUCTURE NO. 6 | EACH | | 0 | 0 | 0 | 0 | 0 | 1 |
| GABION ANCHOR STAKE | EACH | | 239 | 102 | 148 | 0 | 0 | 0 |

QUANTITIES NOT OTHERWISE SHOWN

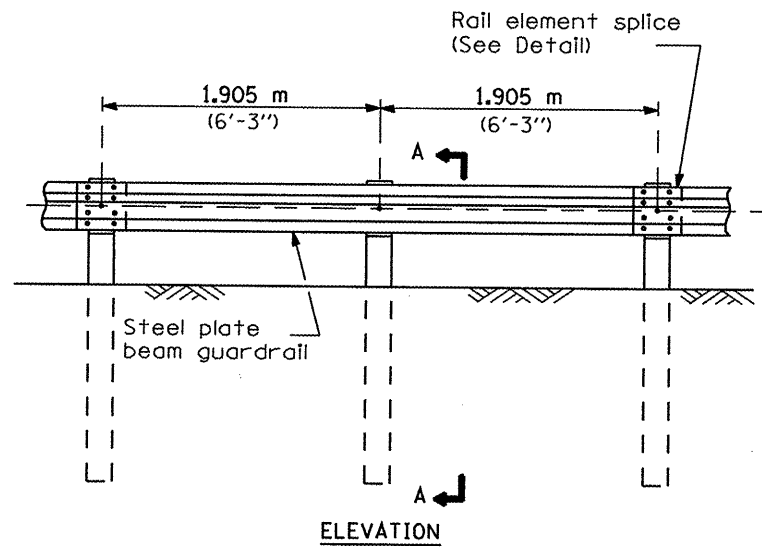
| ITEM | UNIT | TOTAL | DESCRIPTION |
|---|------|-------|---------------------|
| TRAFFIC CONTROL AND PROTECTION, STANDARD 701201 | EACH | 3 | SEE GENERAL NOTE #8 |

| ITEM | UNIT | TOTAL | LOCATION |
|--------------------------------|-------|-------|----------|
| SEEDING, CLASS 3 | ACRE | 1.0 | JOBSITE |
| NITROGEN FERTILIZER NUTRIENT | POUND | 90 | JOBSITE |
| PHOSPHORUS FERTILIZER NUTRIENT | POUND | 90 | JOBSITE |
| POTASSIUM FERTILIZER NUTRIENT | POUND | 90 | JOBSITE |
| EROSION CONTROL BLANKET | SQ YD | 1956 | JOBSITE |
| TEMP. EROSION CONTROL SEEDING | POUND | 100 | JOBSITE |
| MOBILIZATION | L SUM | 1 | JOBSITE |

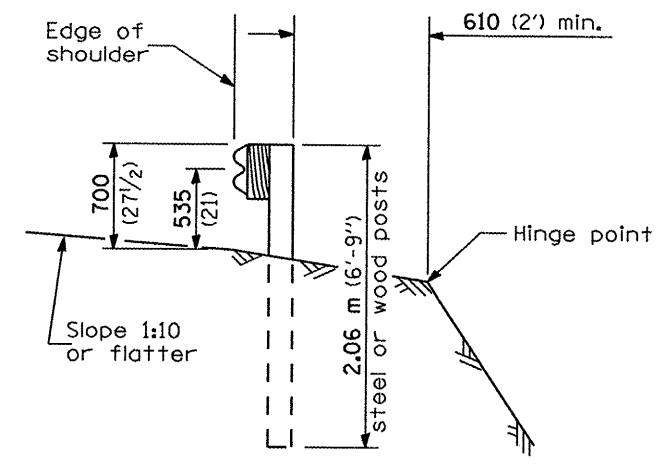
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|---------------------|---------|---------------------------|--------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | | | 4A |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |

68012

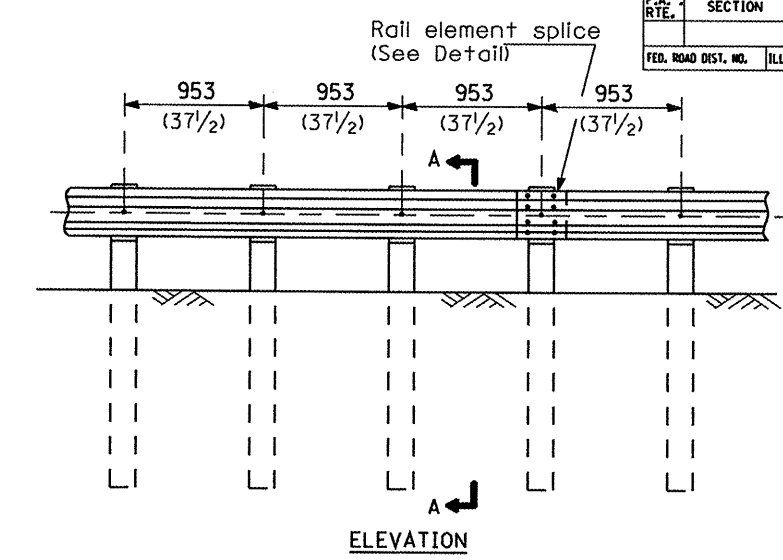
4A



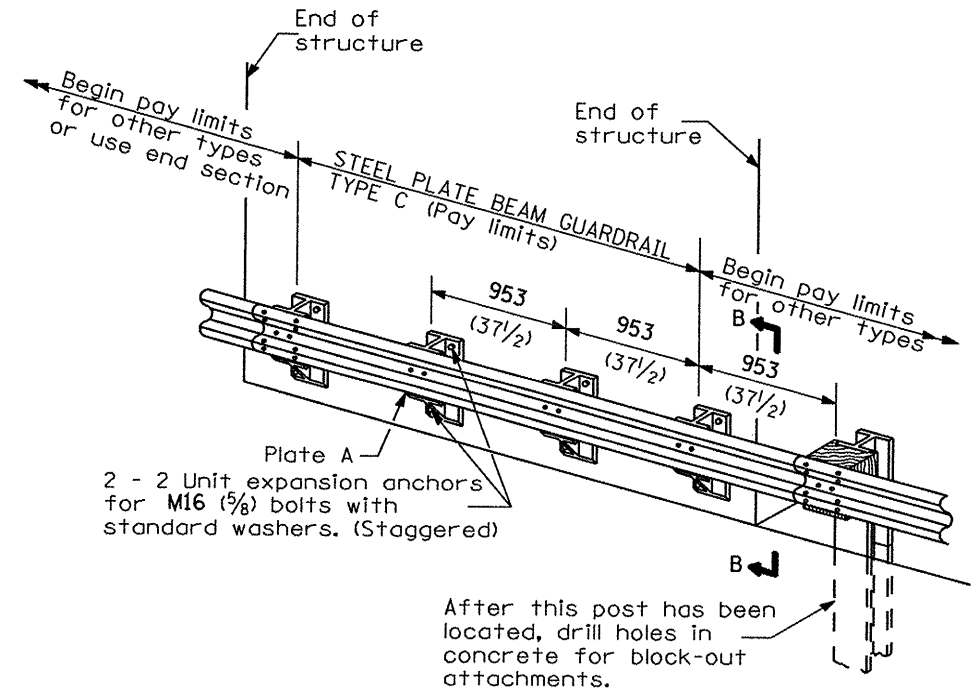
TYPE A
1.905 m (6'-3") Typical post spacing



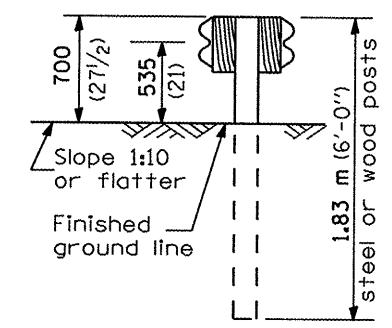
SECTION A-A



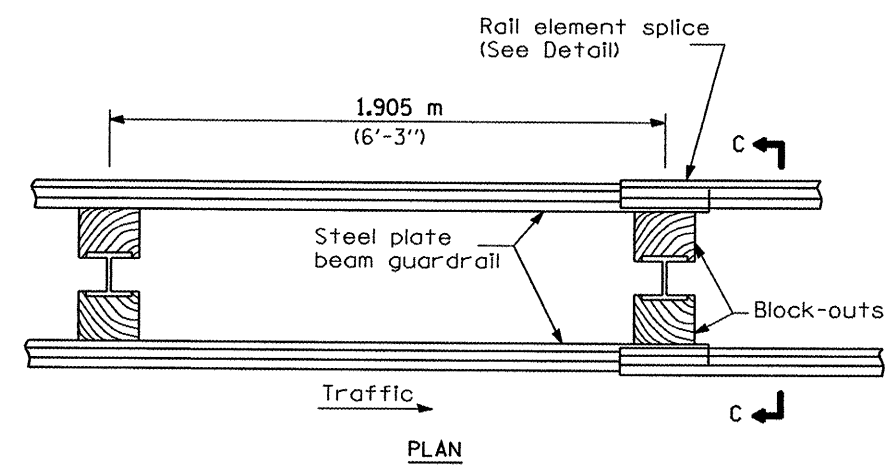
TYPE B
953 (37 1/2) Closed post spacing



TYPE C
953 (37 1/2) Block-out spacing



SECTION C-C



TYPE D
Double steel plate beam guardrail
1.905 m (6'-3") typical post spacing

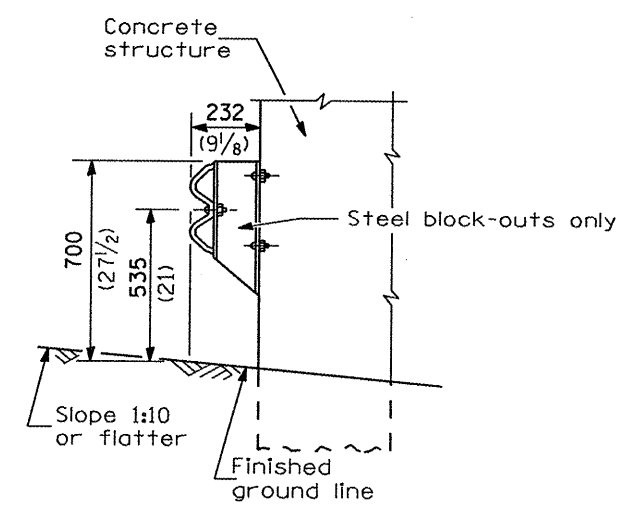
GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in millimeters (inches) unless otherwise shown.

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.

This detail is applicable to the guardrail system used prior to January 1, 2007. For details on the Midwest Guardrail System, see Standard 630001.



SECTION B-B

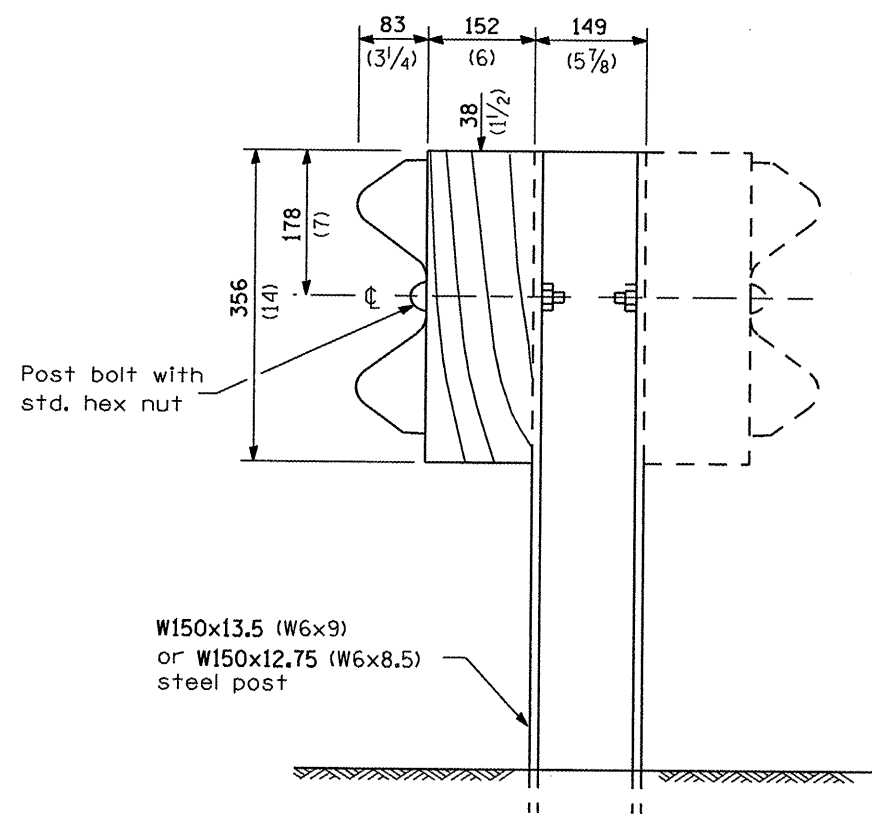
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

(Sheet 1 of 4)

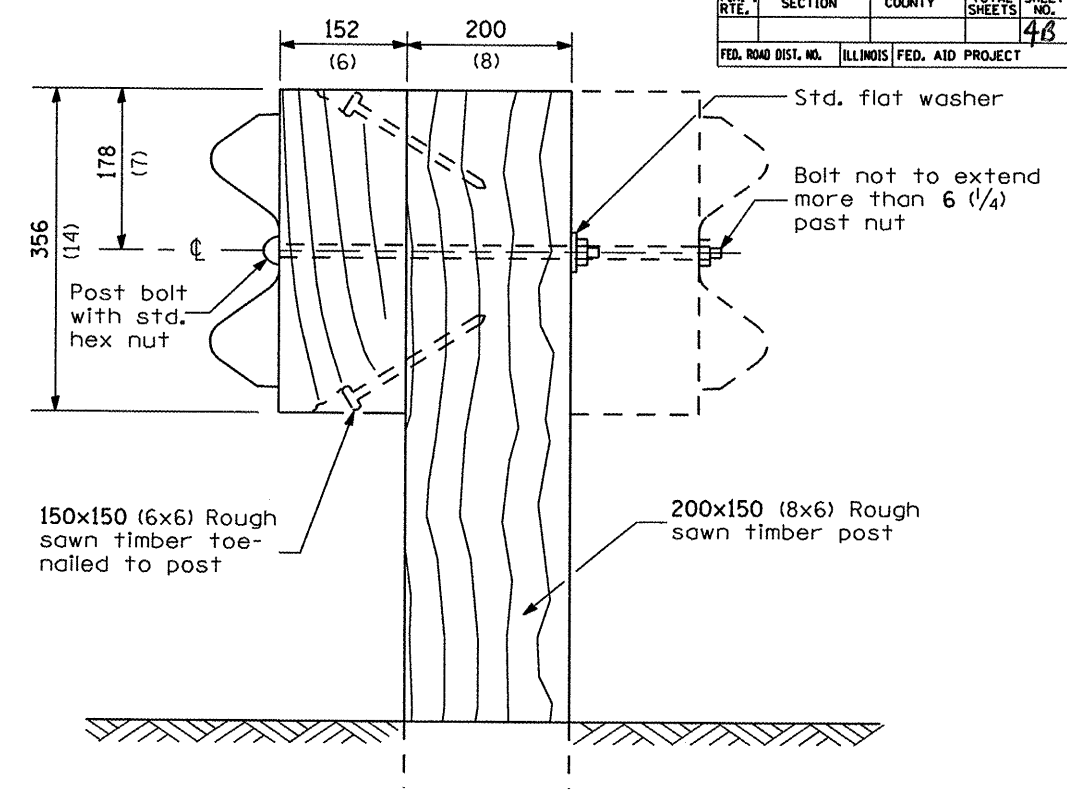
DETAIL

68012

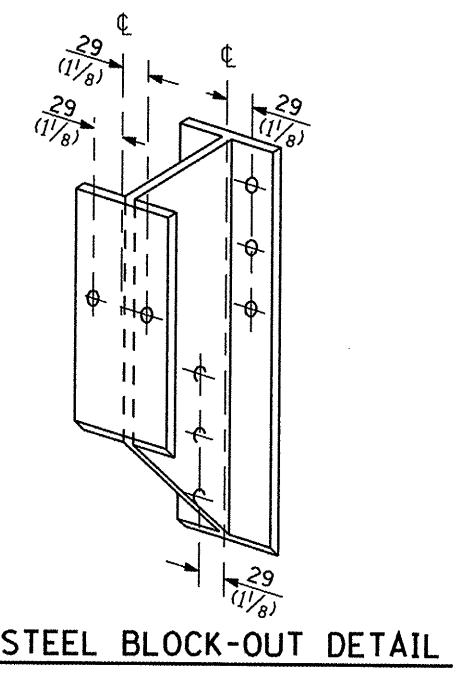
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| | | | | 48 |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |



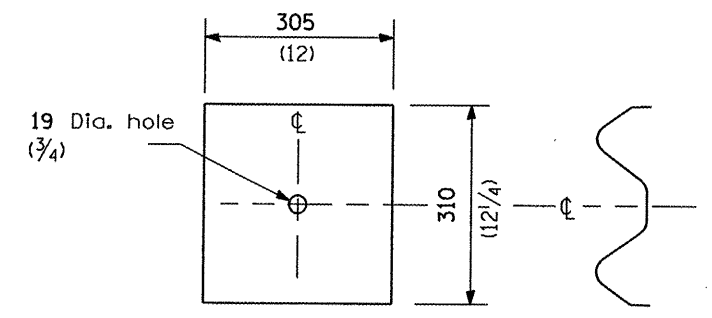
STEEL POST CONSTRUCTION



WOOD POST CONSTRUCTION



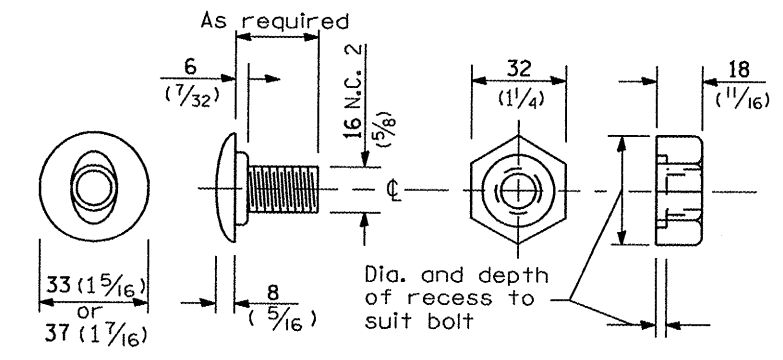
STEEL BLOCK-OUT DETAIL



NOTE

Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A



POST OR SPLICE BOLT & NUT

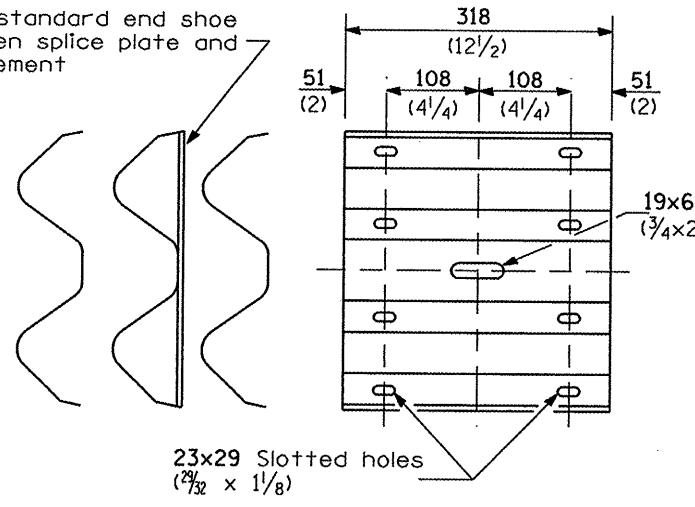
**REMOVE AND REERECT
STEEL PLATE BEAM GUARDRAIL**
(Sheet 2 of 4)
DETAIL

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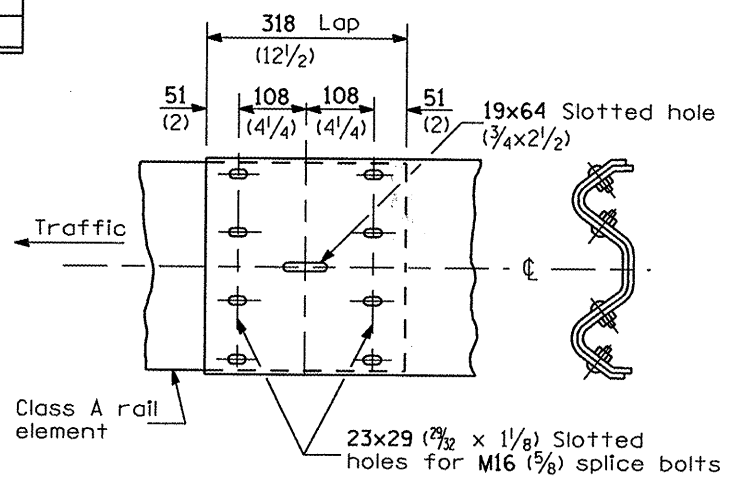
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|---------------------|----------|------------------|--------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | | 4C | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

68012

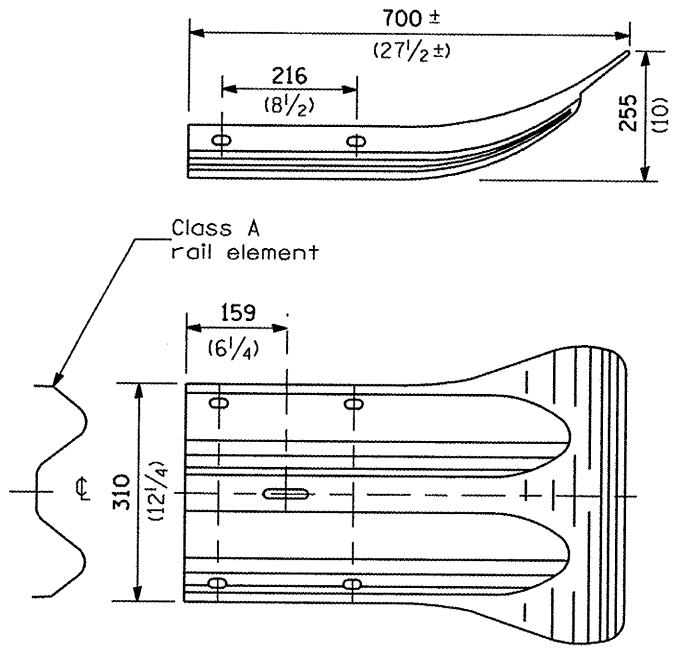
Place standard end shoe between splice plate and rail element



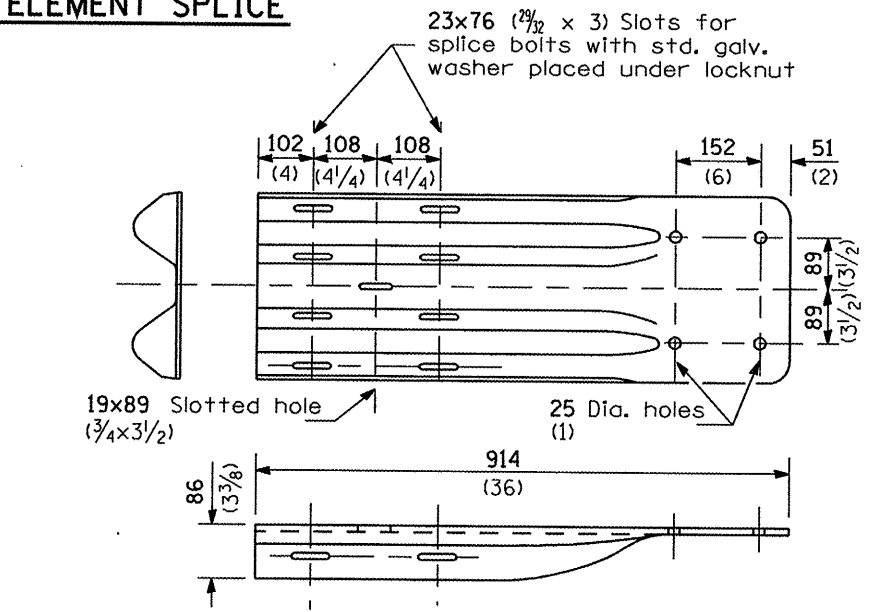
SPLICE PLATE



RAIL ELEMENT SPLICE



END SECTION



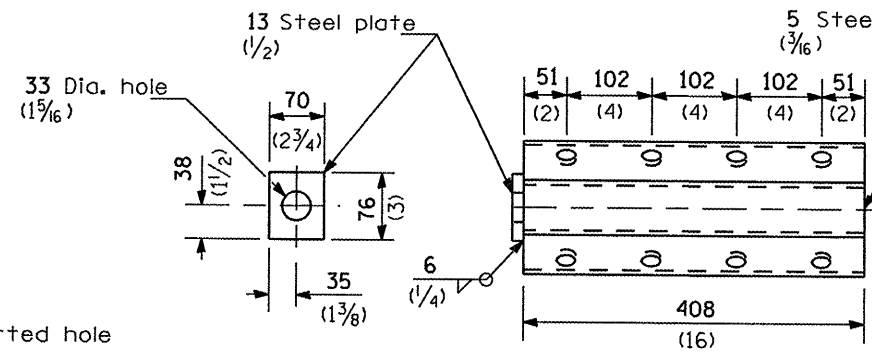
NOTE

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

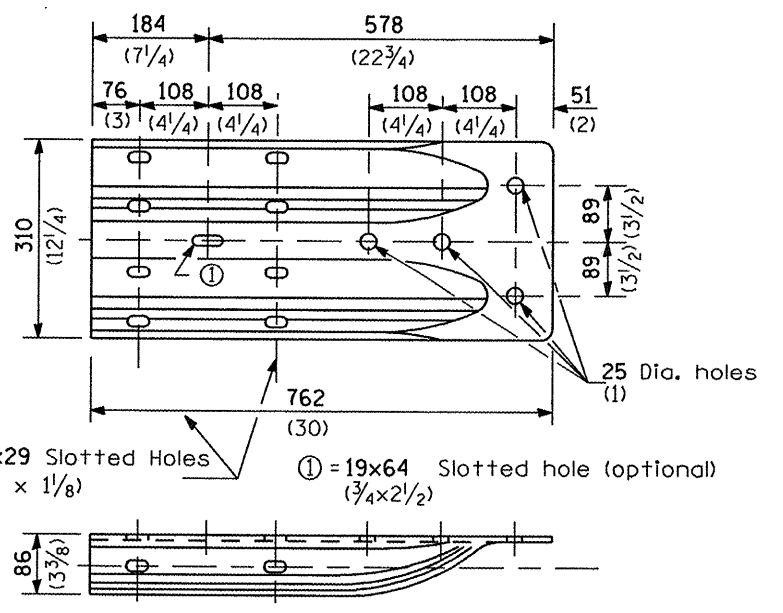
END SHOE



NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS



ALTERNATE END SHOE

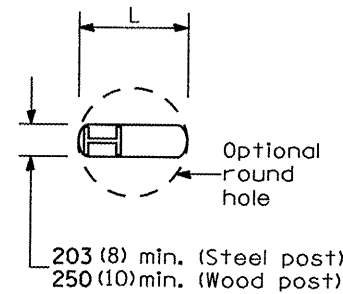
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

(Sheet 3 of 4)

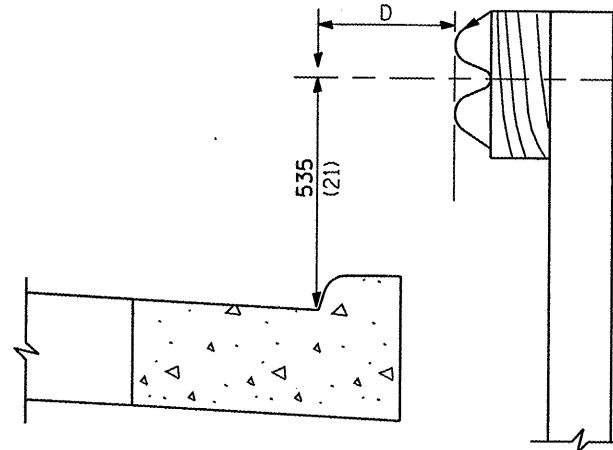
DETAIL

AC

68012



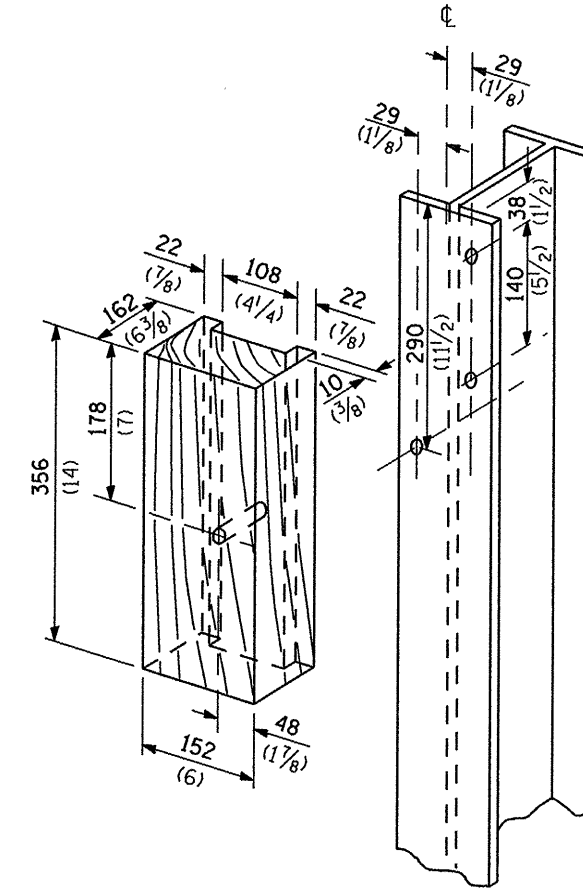
PLAN



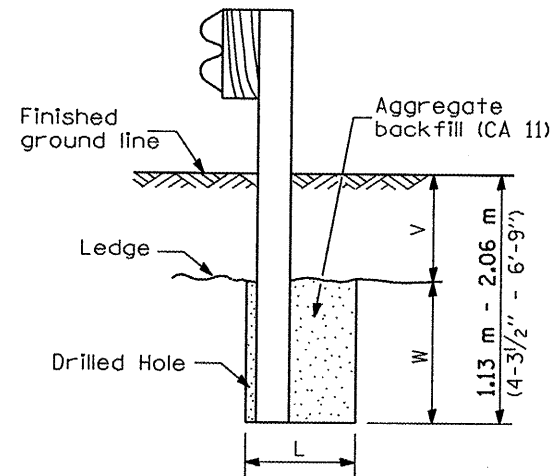
Note:
If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

GUARDRAIL PLACED BEHIND CURB

(D = 0 desirable to 300 (12) maximum)



WOOD BLOCK-OUT AND STEEL POST DETAILS

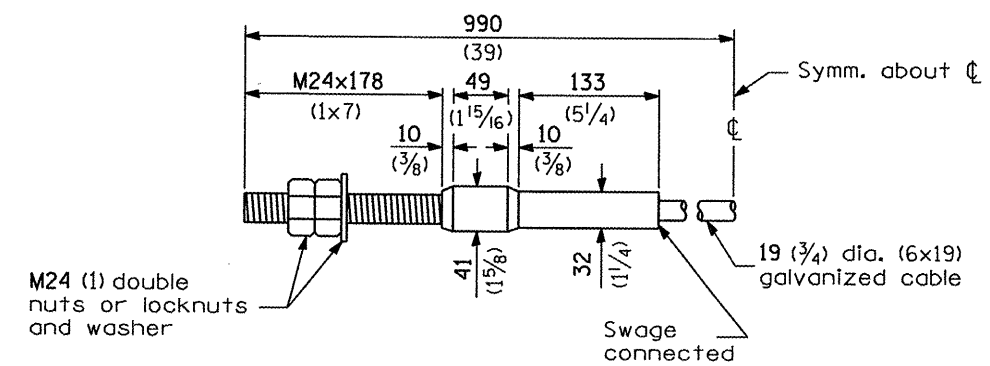


Note:
Ledge line is top of rock ledge or hard slag fill.

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

| V | W | L | |
|---------------------------------|---------------------|-------------|-------------|
| | | Steel Post | Wood Post |
| 0 - 460 (0 - 18) | 610 (24) | 530 (21) | 580 (23) |
| >460 - 825 (>18 - 41.5) | 305 (12) | 203 (8) | 250 (10) |
| >825 - 1.13 m (>41.5 - 53.5) | 305 - 0 (12 - 0) | 203 (8) | 250 (10) |



CABLE ASSEMBLY

(18,100 kg (40,000 lbs.) min. breaking strength)
Tighten to taut tension.

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL
(Sheet 4 of 4)
DETAIL

40

BENCHMARK: WHITE PAINT MARK ON TOP OF CONCRETE WINGWALL
ELEV. = 100.00 FT. (ASSUMED)

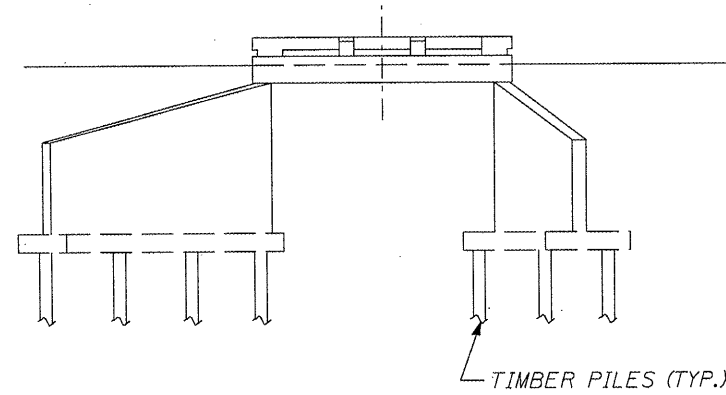
EXISTING STRUCTURE: SN 029-0002 IS A 44'-0" WIDE BY 21'-4" LONG R.C. SLAB ON R.C. CLOSED ABUTMENTS.

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 5 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

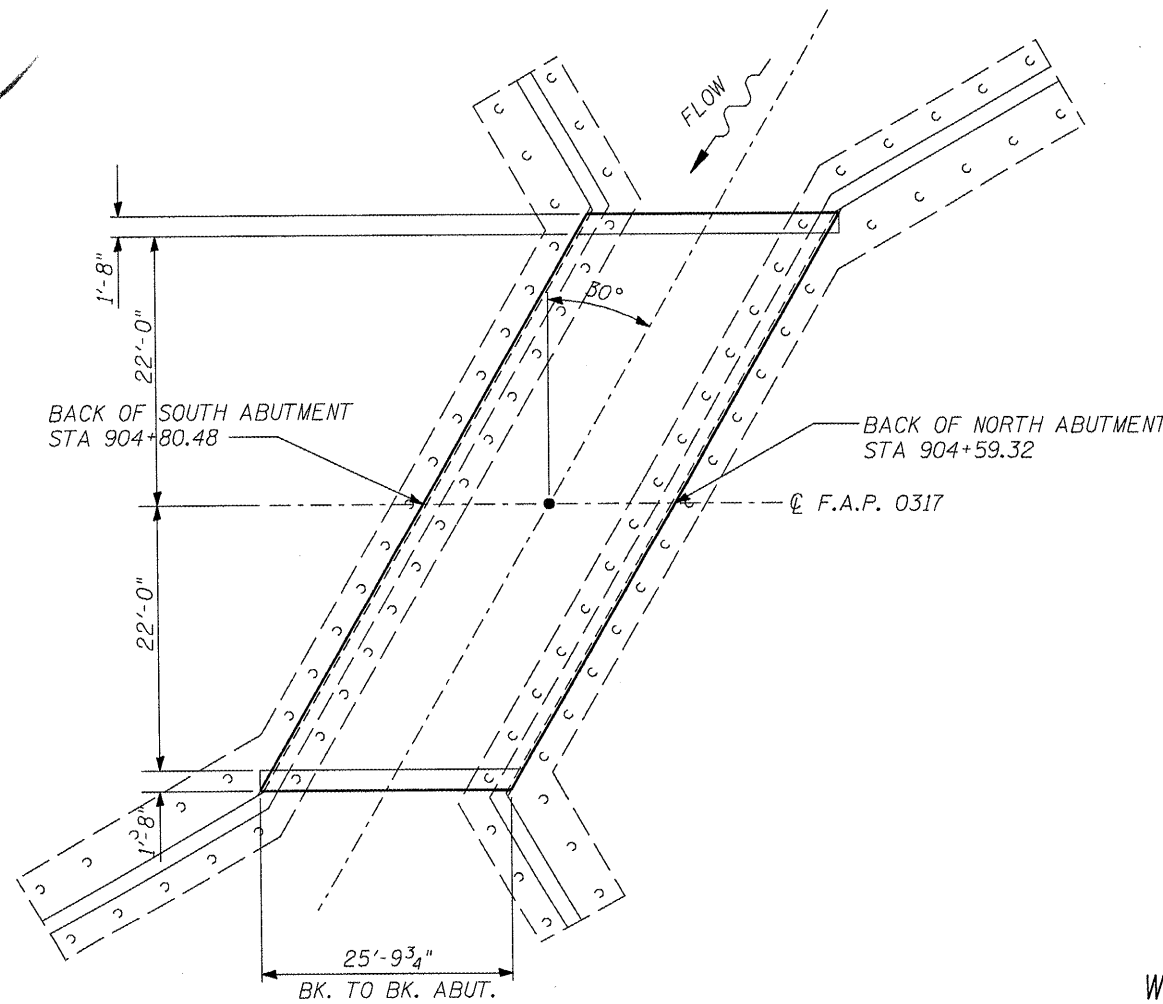
*** D4 SCOUR MITIGATION 2006**

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| 3 | SITE PLAN |
| 4 | DIMENSION PLAN |
| 5-6 | SITE PROFILE |
| 7-11 | CROSS SECTIONS |



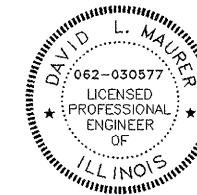
ELEVATION



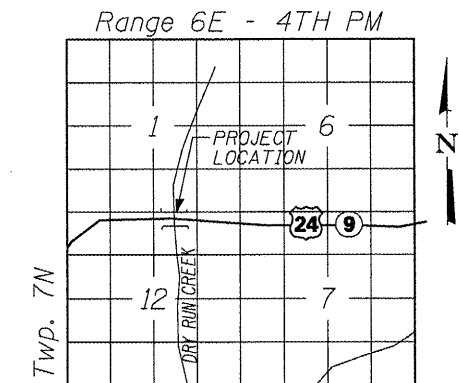
PLAN

EXISTING BRIDGE

| BILL OF MATERIALS | | |
|-------------------------------------|-------|-------|
| ITEM | UNIT | TOTAL |
| EARTH EXCAVATION FOR STILLING BASIN | CU YD | 418 |
| CHANNEL EXCAVATION | CU YD | 145 |
| PERIMETER EROSION BARRIER | FOOT | 38.5 |
| STONE RIP-RAP, CLASS A5 | TONS | 155 |
| FILTER FABRIC | SQ YD | 671 |
| GABIONS | CU YD | 415 |
| SLOPE MATTRESS 12" | SQ YD | 356 |
| SUB-BASE GRANULAR MATERIAL, TYPE C | TONS | 708 |
| GABION ANCHOR STAKES | EACH | 239 |
| DEWATERING STRUCTURE NO. 1 | EACH | 1 |



David L. Maurer
David L. Maurer, P.E.
Exp. Date 11/2009
P.E. No.: 062-030577

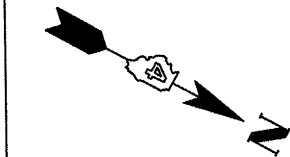


LOCATION SKETCH

WATERWAY/SCOUR INFORMATION

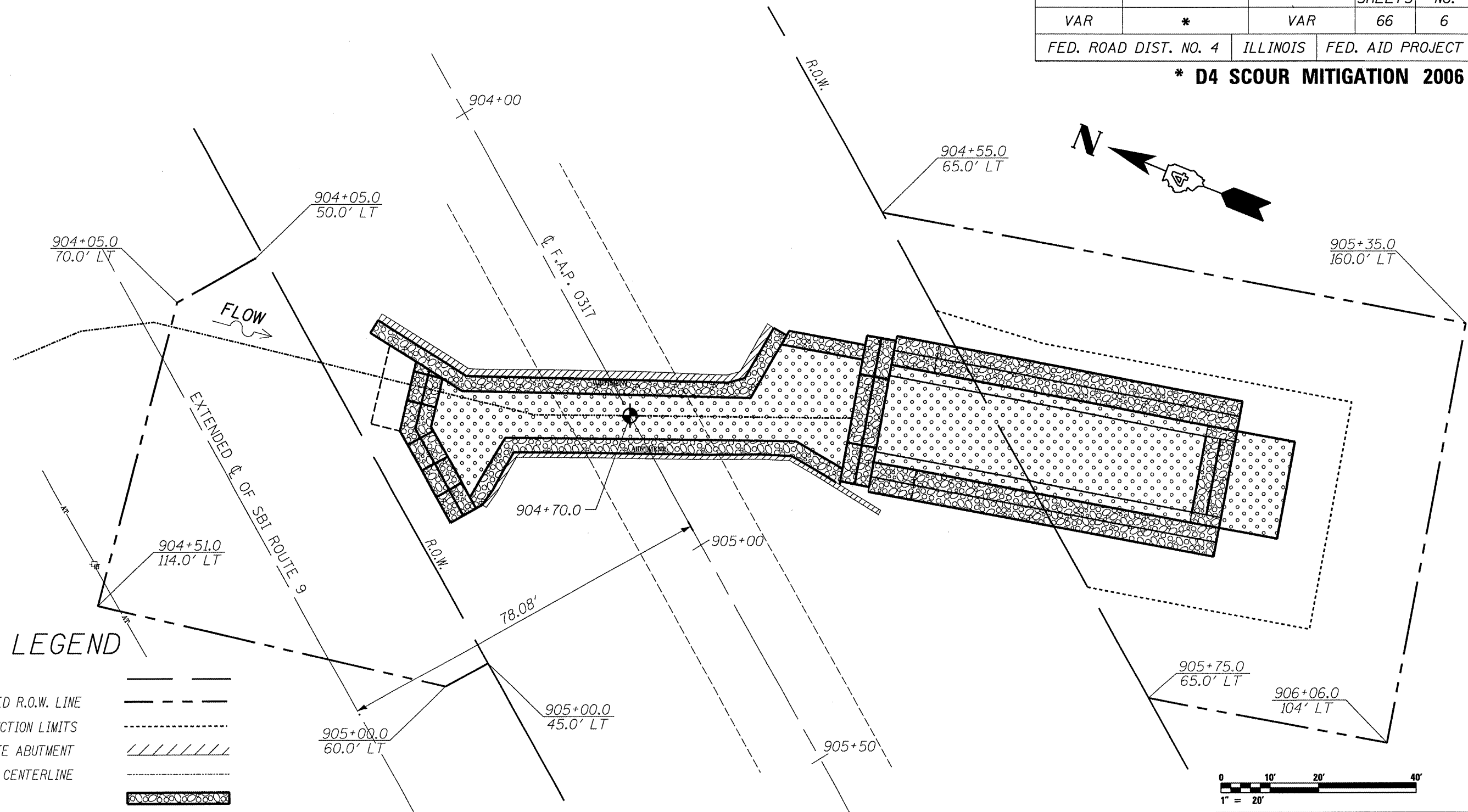
| | |
|-------------------------|-----------|
| DESIGN FLOOD | 100 YRS |
| DRAINAGE AREA | 0.6 SQ MI |
| FLOW | 974 CFS |
| FLOW DEPTH | 8.11 FT |
| OPENING REQUIRED | 82 SQ FT |
| OPENING PROVIDED | 154 SQ FT |
| CONTRACTION SCOUR DEPTH | 7 FT |

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
S.N. 029-0002
F.A.P. 0317 (U.S. RTE. 24)
OVER DRY RUN CREEK
FULTON COUNTY
SHEET 1 OF 11



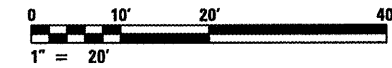
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 6 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



LEGEND

- R.O.W.
- PROPOSED R.O.W. LINE
- CONSTRUCTION LIMITS
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- GABION
- SLOPE MATTRESS
- AERIAL TELEPHONE
- TELEPHONE POLE
- TELEPHONE RISER

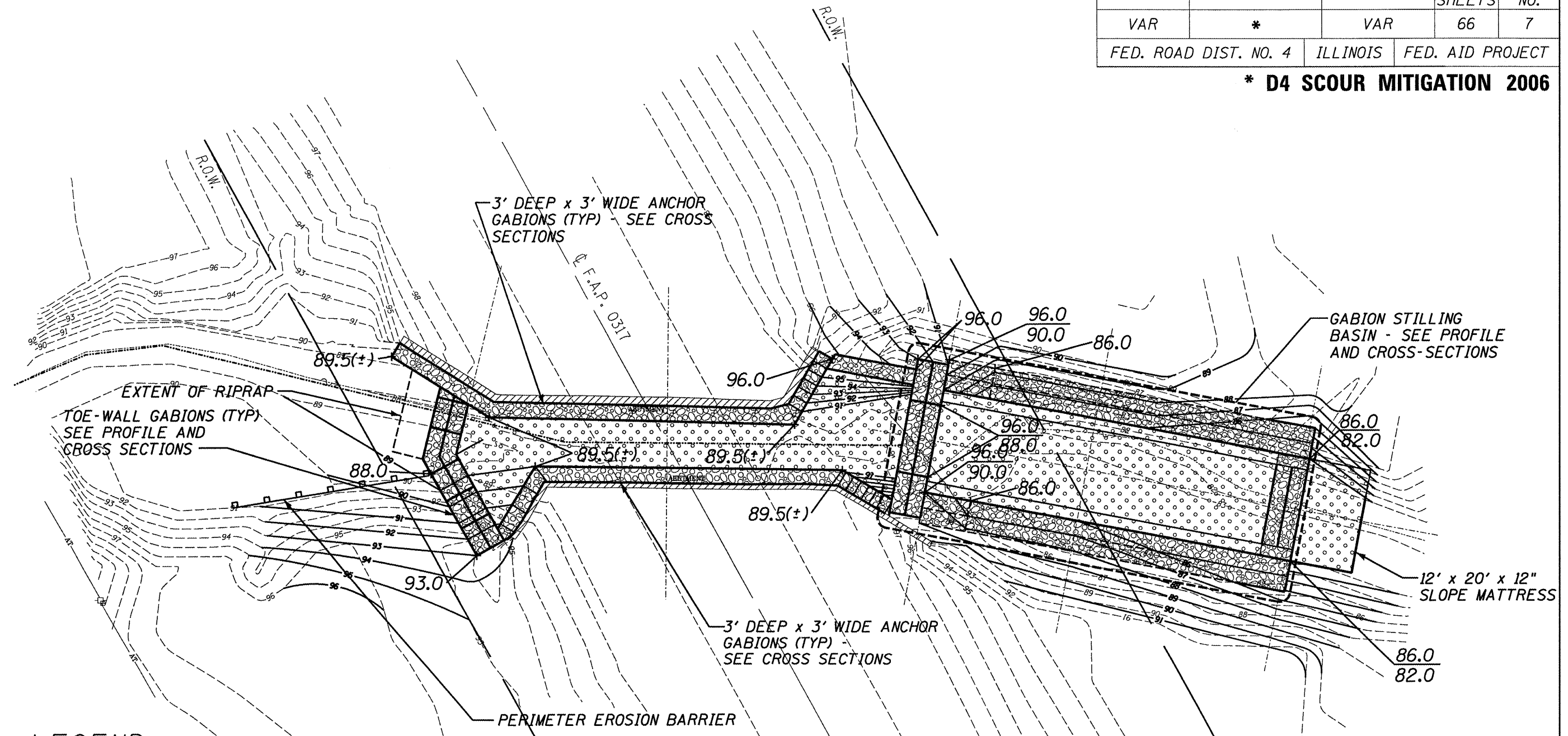


= INTERSECTION OF Q. OF EXISTING STRUCTURE AND Q. OF F.A.P. 0317

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROPOSED R.O.W. PLAN
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 2 OF 11

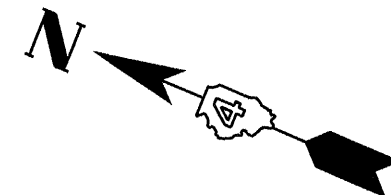
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 7 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



LEGEND

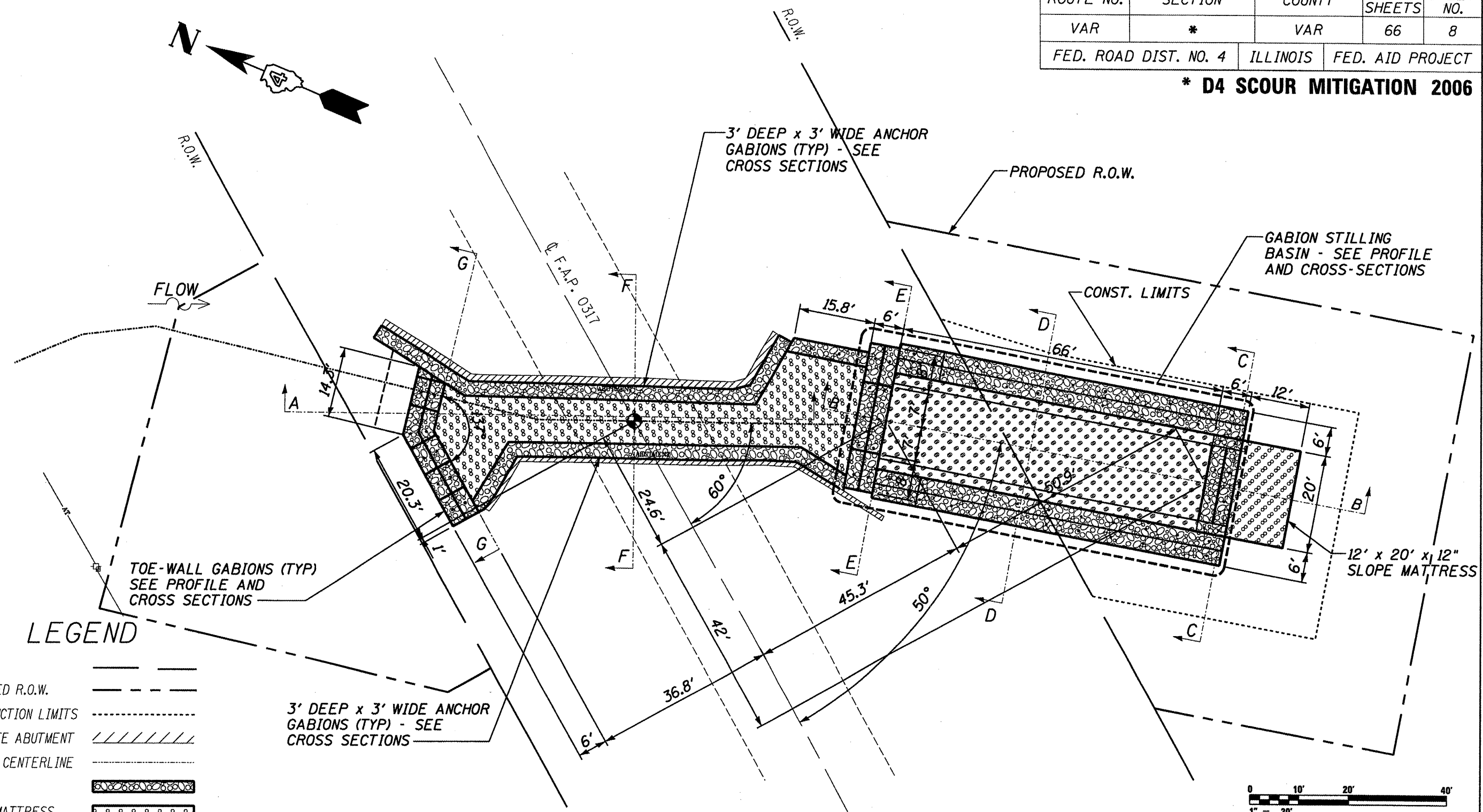
- R.O.W. ————
- EXISTING CONTOUR - - - - 95 - - - -
- PROPOSED CONTOUR ———— 95 ————
- PROPOSED ELEVATION 92.0 ✕
- CONCRETE ABUTMENT // // // //
- STREAM CENTERLINE - - - - -
- GABION [GABION PATTERN]
- SLOPE MATTRESS [SLOPE MATTRESS PATTERN]



ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED SITE PLAN
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 3 OF 11
 SCALE: 1" = 20'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 8 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

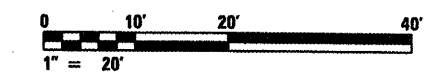


LEGEND

- R.O.W. ————
- PROPOSED R.O.W. - - - - -
- CONSTRUCTION LIMITS ·····
- CONCRETE ABUTMENT // // //
- STREAM CENTERLINE - - - - -
- GABION [Pattern]
- SLOPE MATTRESS [Pattern]
- GABION ANCHOR •
- AERIAL TELEPHONE AT ————
- TELEPHONE POLE □
- TELEPHONE RISER [Symbol]

NOTE: PROBE FOR FOOTINGS BEFORE INSTALLING ANCHOR STAKES. INSTALL NEXT TO FACE OF FOOTING IF DEPTH DOES NOT ALLOW INSTALLATION ON TOP OF FOOTING.

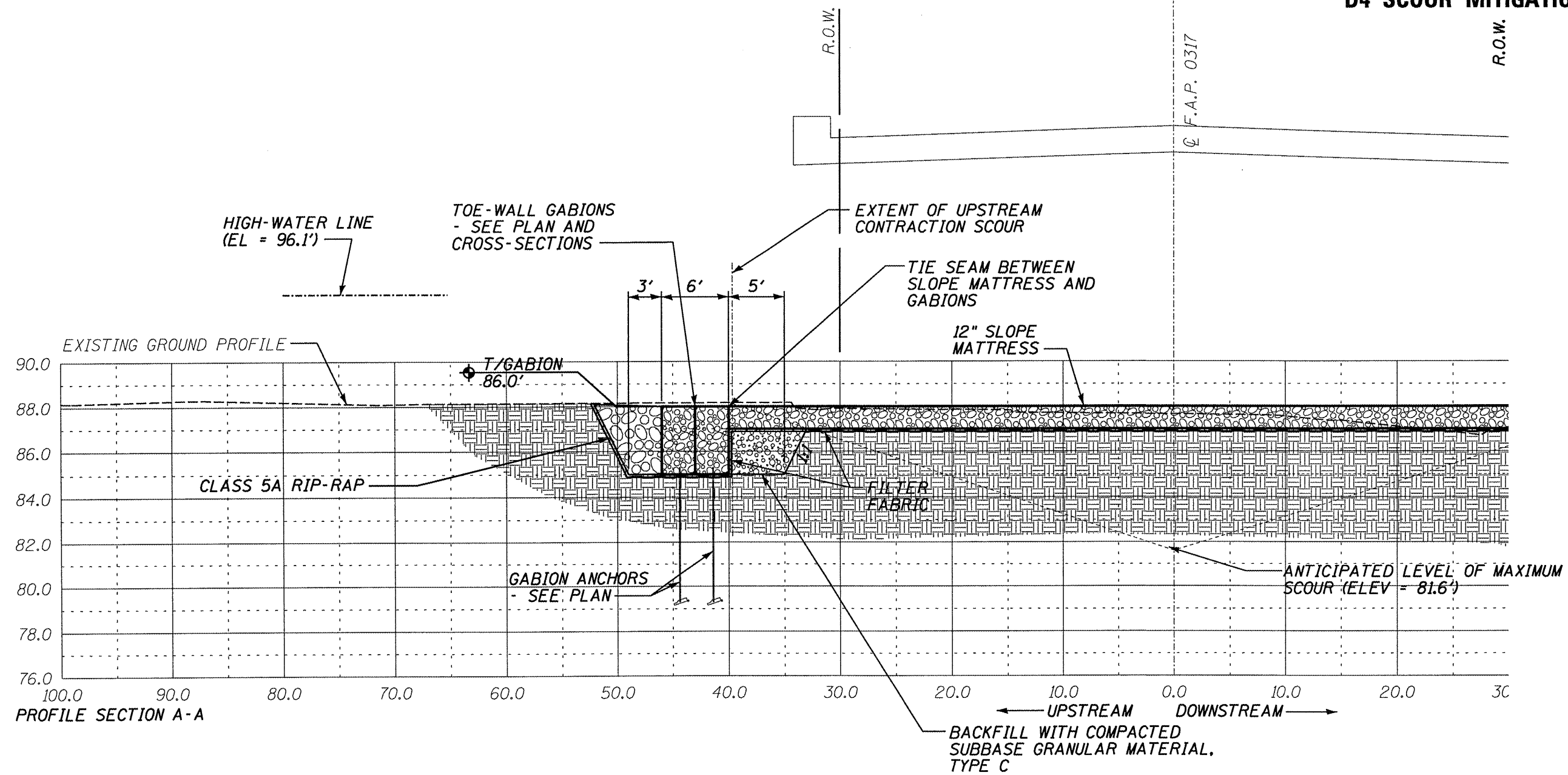
⊙ = INTERSECTION OF \bar{C} OF EXISTING STRUCTURE AND \bar{C} OF S.B.I. ROUTE 9



ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROPOSED DIMENSION PLAN
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 4 OF 11

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 9 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

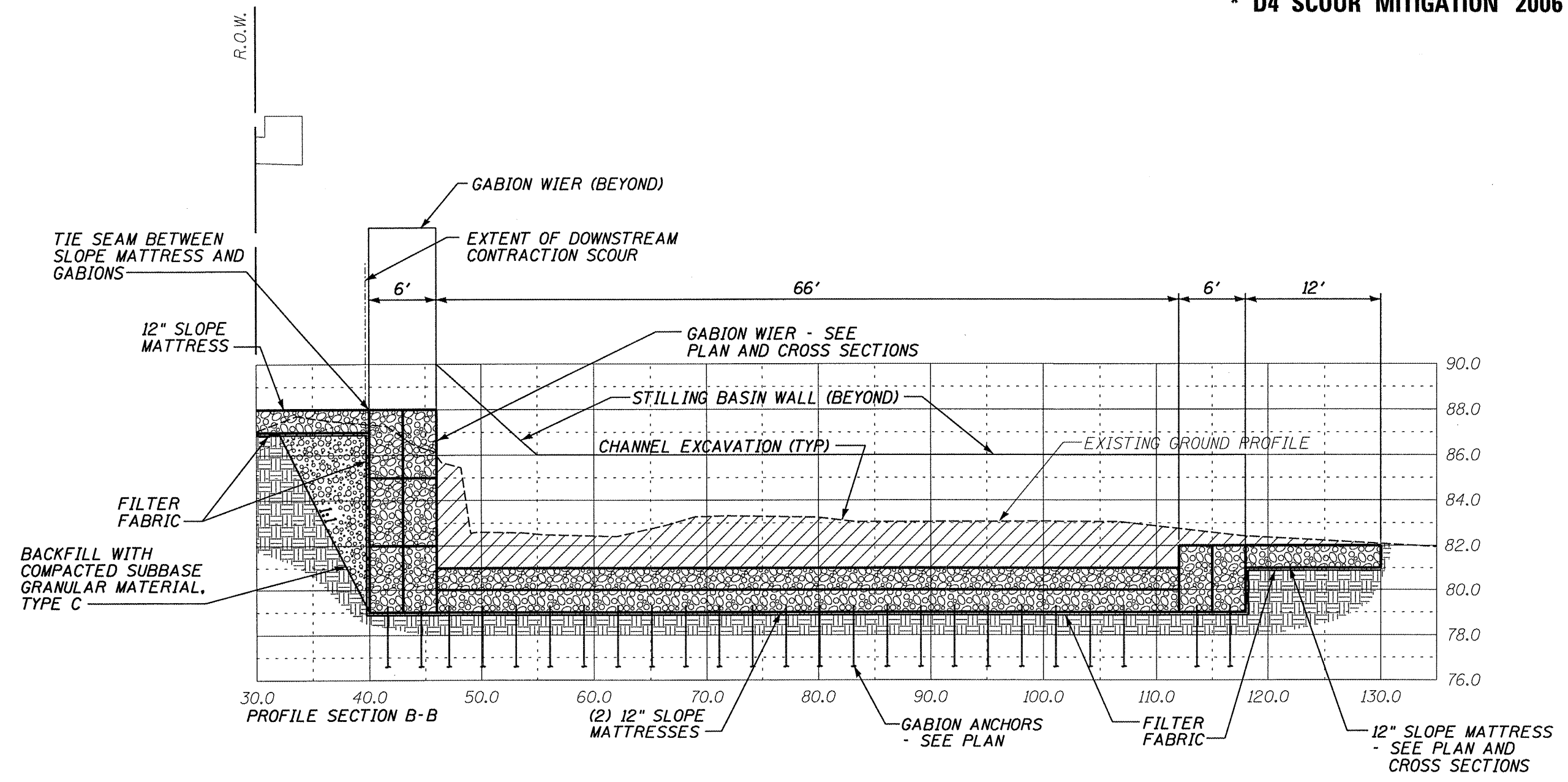


CALCULATED OPENING: 16'
 MAXIMUM SCOUR CALCULATION:
 CONTRACTION SCOUR EQUATION = 7 FT

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE PROFILE
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 5 OF 11
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 10 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



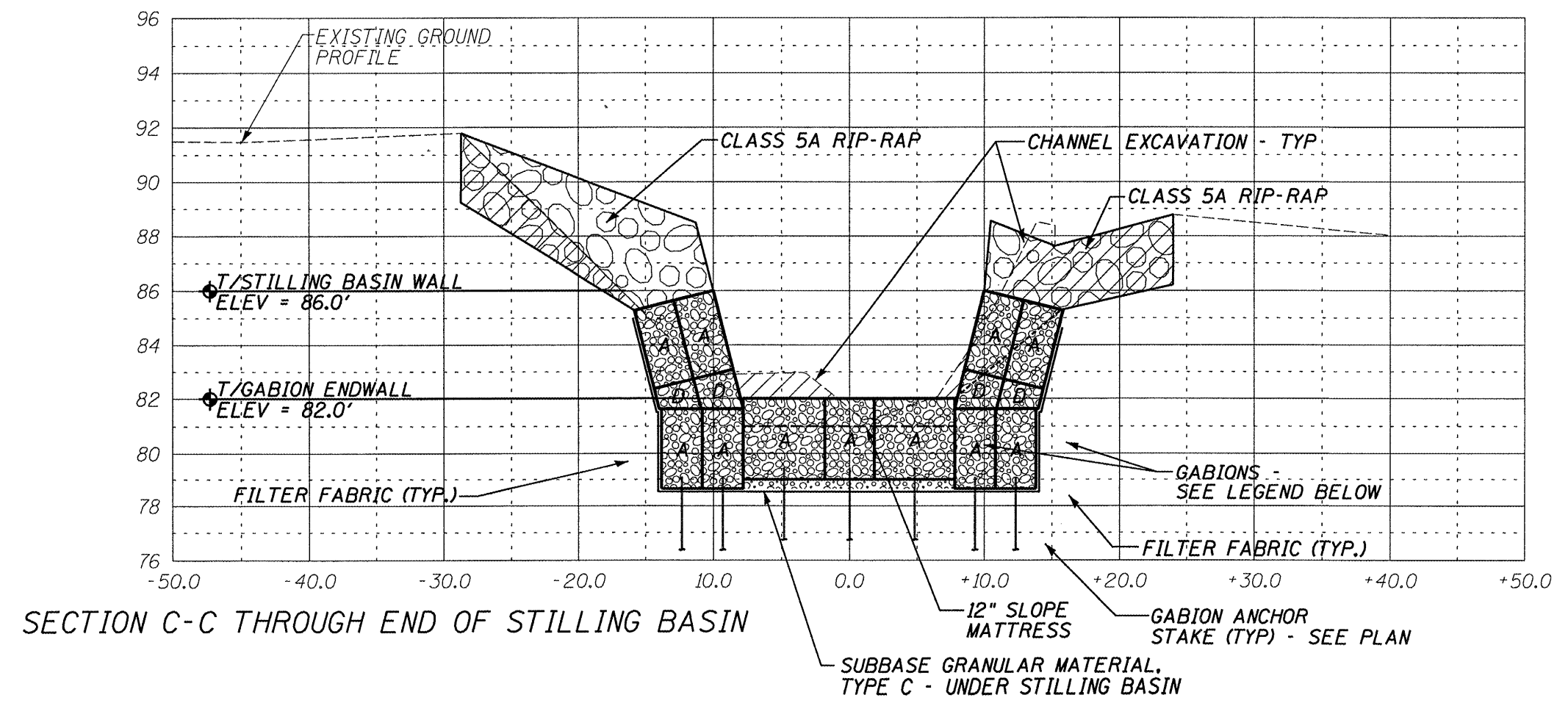
CALCULATED OPENING: 16'
 MAXIMUM SCOUR CALCULATION:
 CONTRACTION SCOUR EQUATION = 7 FT

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE PROFILE
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 6 OF 11
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'



| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 11 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



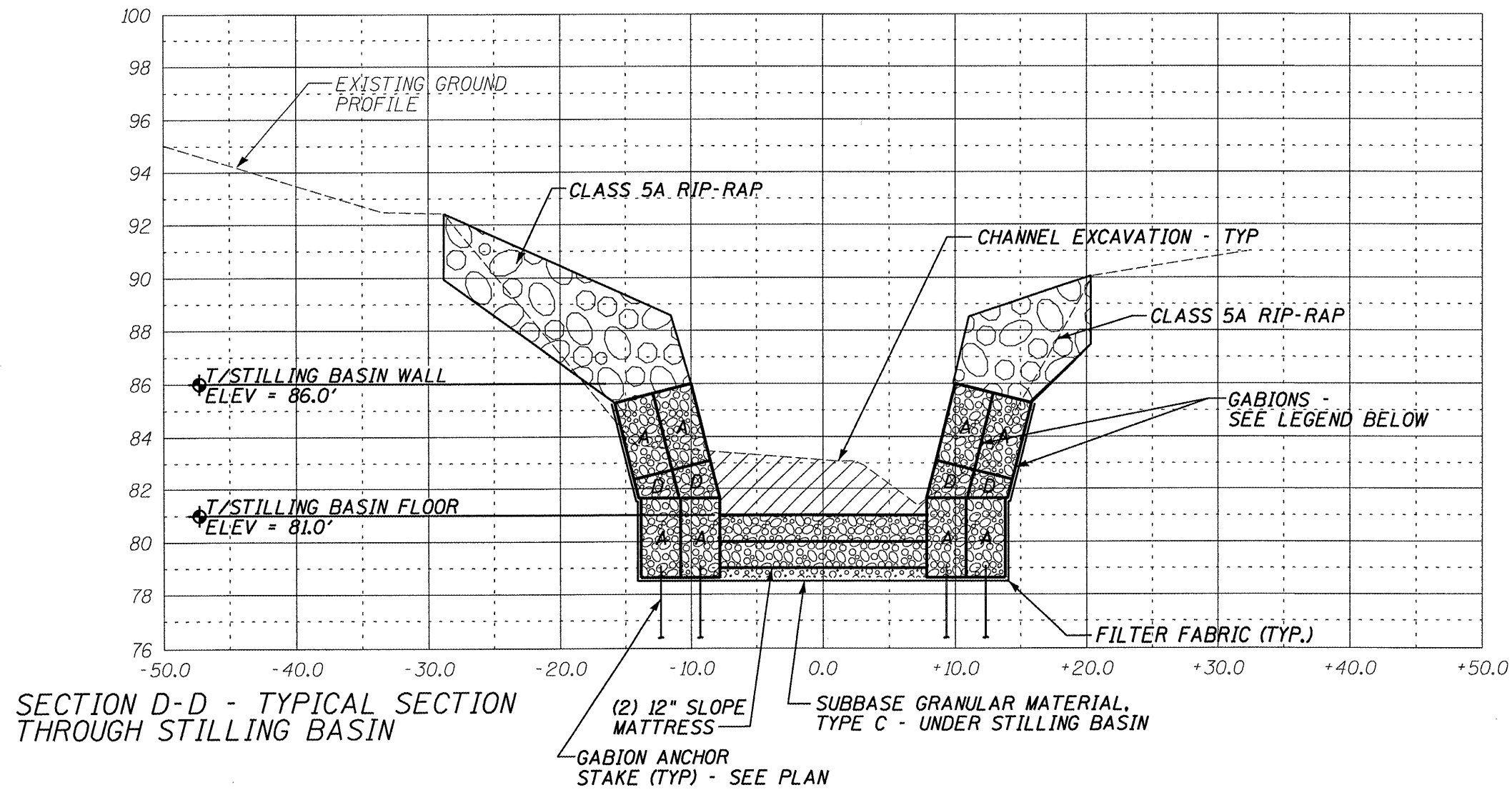
SECTION C-C THROUGH END OF STILLING BASIN

| MARK | LENGTH | WIDTH | HEIGHT |
|------|--------|-------|--------|
| A | 6' | 3' | 3' |
| D | 6' | 3' | 1 1/2' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 7 OF 11
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 12 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION D-D - TYPICAL SECTION THROUGH STILLING BASIN

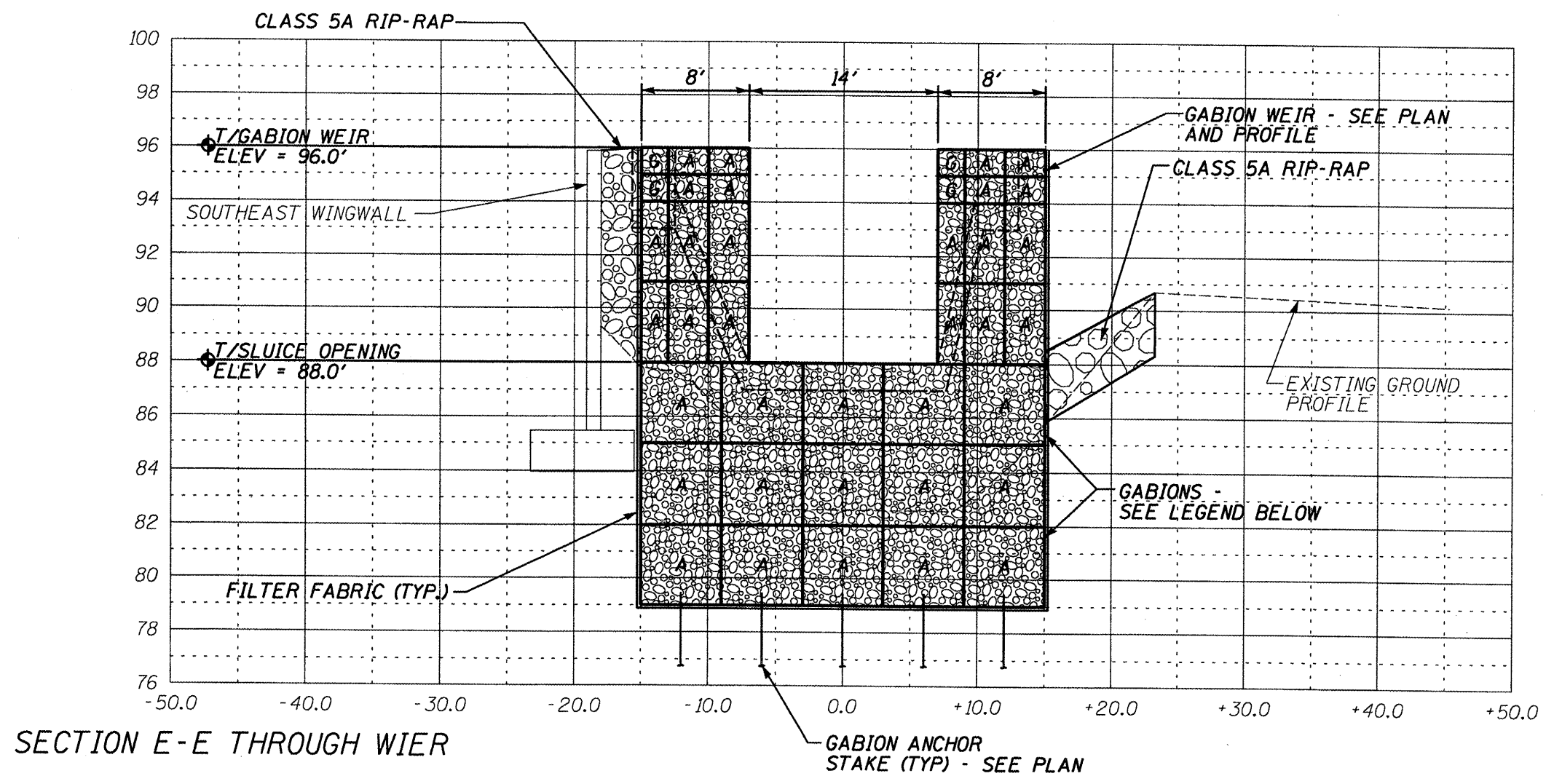
| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |
| D | 6' | 3' | 1 1/2' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 8 OF 11

SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 13 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



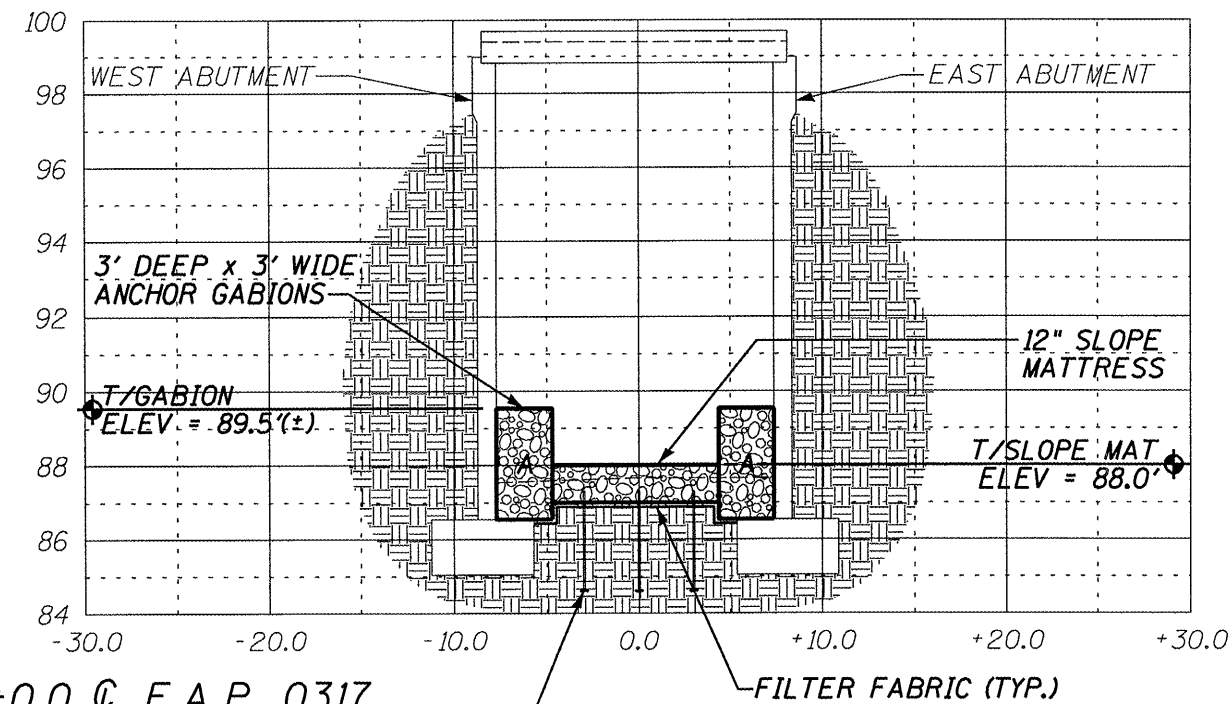
SECTION E-E THROUGH WIER

| MARK | LENGTH | WIDTH | HEIGHT |
|------|--------|-------|--------|
| A | 6' | 3' | 3' |
| G | 6' | 3' | 1' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 9 OF 11
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 14 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



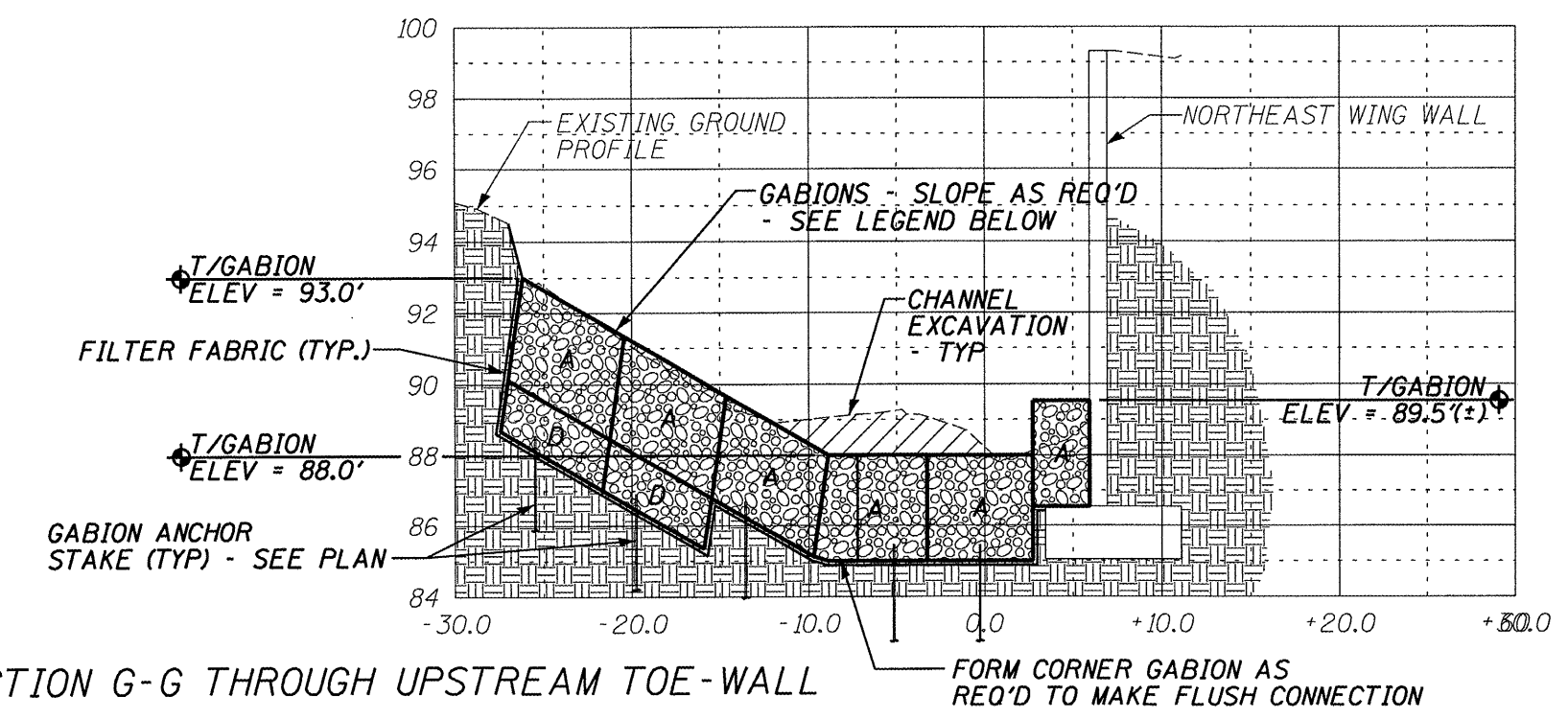
SECTION F-F - STA 0+0.0 @ F.A.P. 0317
 GABION ANCHOR
 STAKE (TYP) - SEE PLAN

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 10 OF 11
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 15 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION G-G THROUGH UPSTREAM TOE-WALL

| MARK | LENGTH | WIDTH | HEIGHT |
|------|--------|-------|--------|
| A | 6' | 3' | 3' |
| D | 6' | 3' | 1 1/2' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0002
 F.A.P. 0317 (U.S. RTE. 24)
 OVER DRY RUN CREEK
 FULTON COUNTY
 SHEET 11 OF 11
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

BENCHMARK: BRASS U.S.G.S. TOP OF SE WINGWALL
ELEV. = 503.92

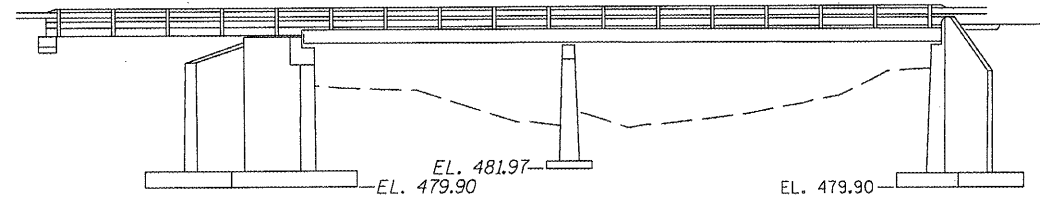
EXISTING STRUCTURE: SN 029-0027 IS A 40'-6" WIDE x 99'-4" LONG R.C. SLAB ON STRUCTURAL STEEL BEAM SUPERSTRUCTURE. WITH R.C. CLOSED ABUTMENTS.

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 16 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

INDEX OF SHEETS

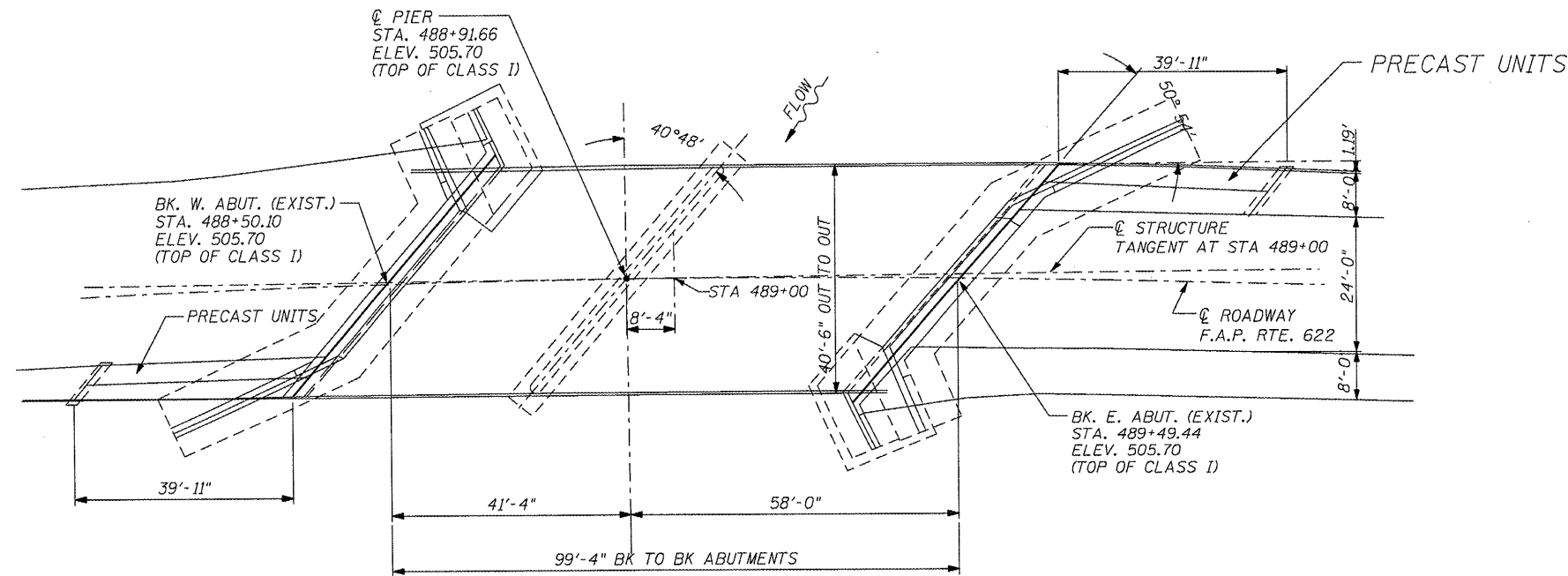
| SHEET NUMBER | DESCRIPTION |
|--------------|---|
| 1 | GENERAL PLAN AND PROFILE, SUMMARY OF QUANTITIES, LOCATION MAP |
| 2 | R.O.W. PLAN |
| 3 | PROPOSED SITE PLAN |
| 4 | PROPOSED DIMENSION PLAN |
| 5 | SITE PROFILE |
| 6-8 | CROSS SECTIONS |



ELEVATION

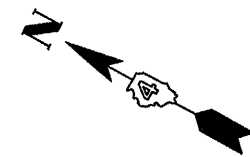


David L. Maurer, P.E.
Exp. Date 11/2009
P.E. No.: 062-030577



PLAN

EXISTING BRIDGE



BILL OF MATERIALS

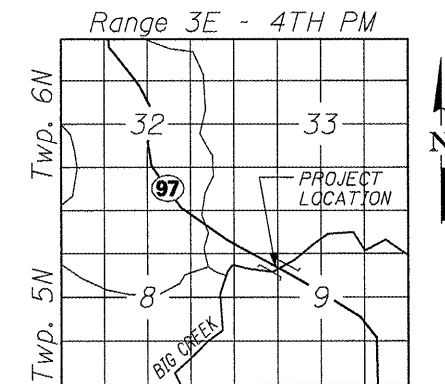
| ITEM | UNIT | TOTAL |
|------------------------------------|-------|-------|
| TREE REMOVAL (6-15 UNITS) | UNIT | 22 |
| CHANNEL EXCAVATION | CU YD | 1056 |
| PERIMETER EROSION CONTROL | FOOT | 25 |
| STONE RIP-RAP, CLASS A5 | TONS | 159 |
| FILTER FABRIC | SQ YD | 1242 |
| GABIONS | CU YD | 337 |
| SLOPE MATTRESS 12" | SQ YD | 624 |
| SUB-BASE GRANULAR MATERIAL, TYPE C | TONS | 590 |
| GABION ANCHOR STAKE | EACH | 102 |
| DEWATERING STRUCTURE NO. 2 | EACH | 1 |

TREE REMOVAL

| STA | OFFSET | UNITS |
|--------|--------|-------|
| 489+03 | 40' L | 8 |
| 489+03 | 40' L | 10 |
| 489+03 | 40' L | 4 |
| TOTAL | | 22 |

WATERWAY/SCOUR INFORMATION

| | |
|-------------------------|------------|
| DESIGN FLOOD | 100 YRS |
| DRAINAGE AREA | 53.1 SQ MI |
| FLOW | 6,672 CFS |
| FLOW DEPTH | 14.3 FT |
| REQUIRED FLOW AREA | 800 SQ FT |
| PROVIDED FLOW AREA | 946 SQ FT |
| CONTRACTION SCOUR DEPTH | 15 FT |



LOCATION SKETCH

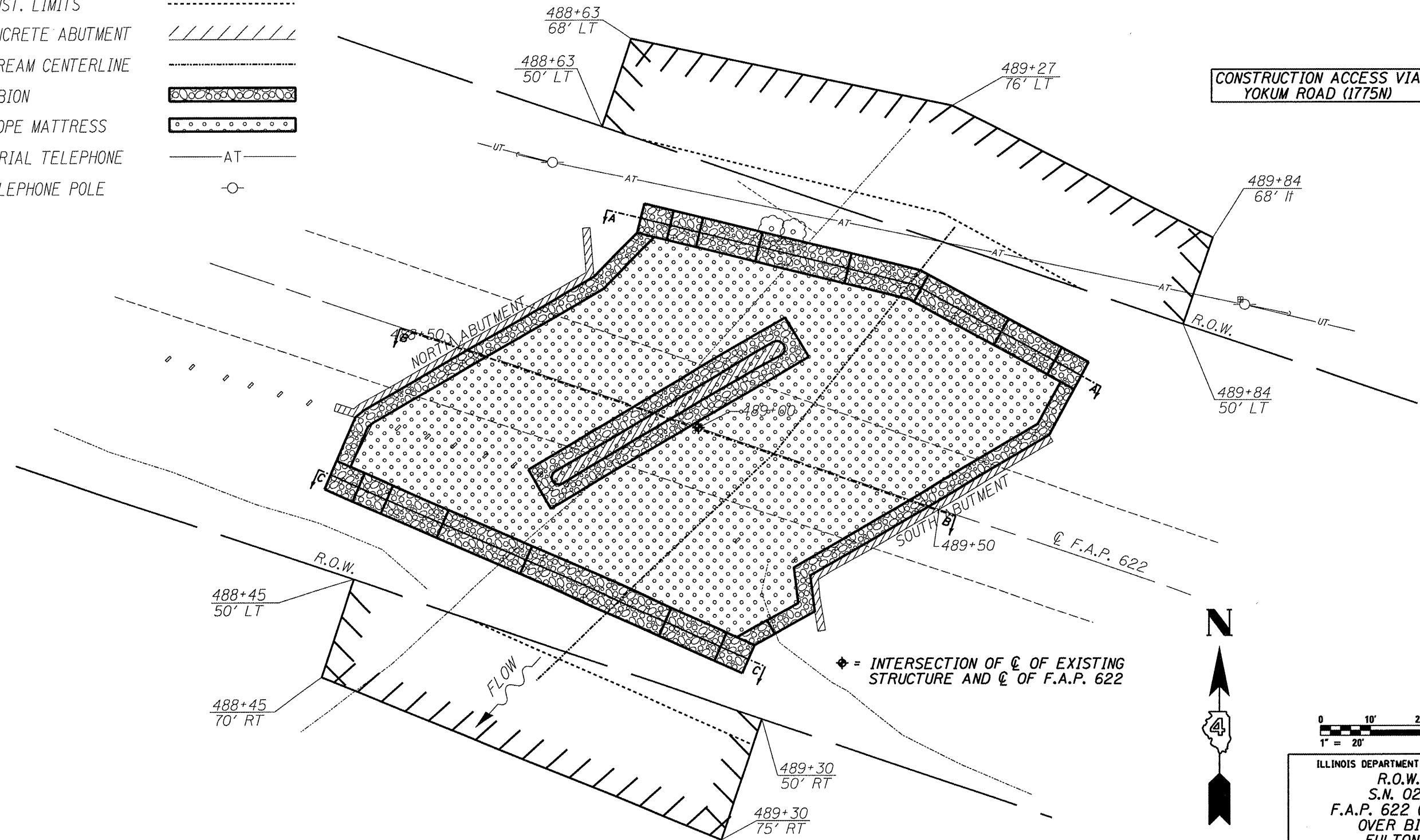
ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
S.N. 029-0027
F.A.P. 622 (IL. RTE. 97)
OVER BIG CREEK
FULTON COUNTY
SHEET 1 OF 8

LEGEND

- EXIST. R.O.W. LINE
- TEMPORARY EASEMENT
- CONST. LIMITS
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- GABION
- SLOPE MATTRESS
- AERIAL TELEPHONE
- TELEPHONE POLE

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 17 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



CONSTRUCTION ACCESS VIA
YOKUM ROAD (1775N)

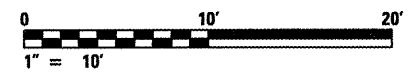
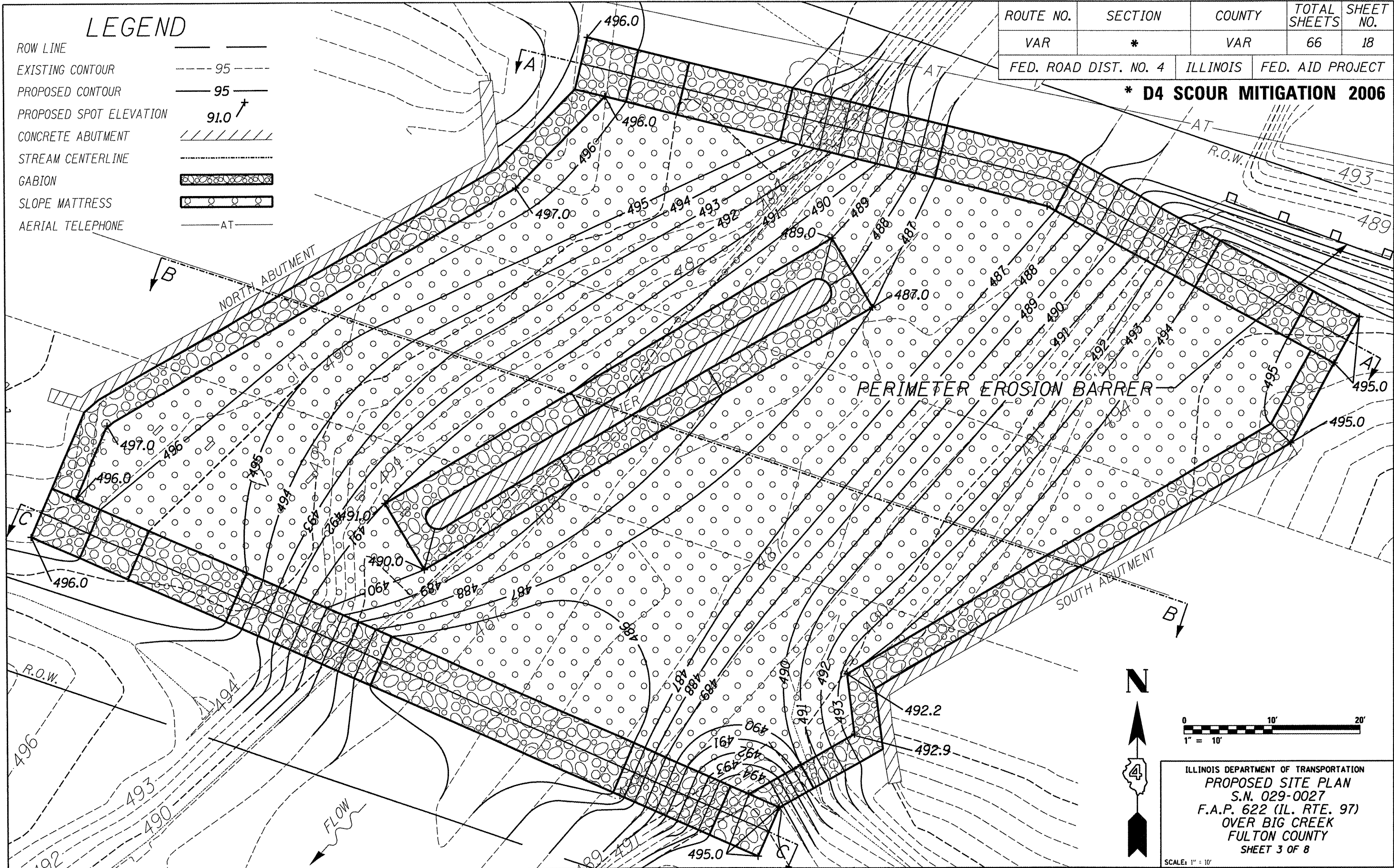
ILLINOIS DEPARTMENT OF TRANSPORTATION
R.O.W. PLAN
S.N. 029-0027
F.A.P. 622 (IL. RTE. 97)
OVER BIG CREEK
FULTON COUNTY
SHEET 2 OF 8

LEGEND

- ROW LINE
- EXISTING CONTOUR 95
- PROPOSED CONTOUR 95
- PROPOSED SPOT ELEVATION 91.0 ↗
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- GABION
- SLOPE MATTRESS
- AERIAL TELEPHONE AT

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 18 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

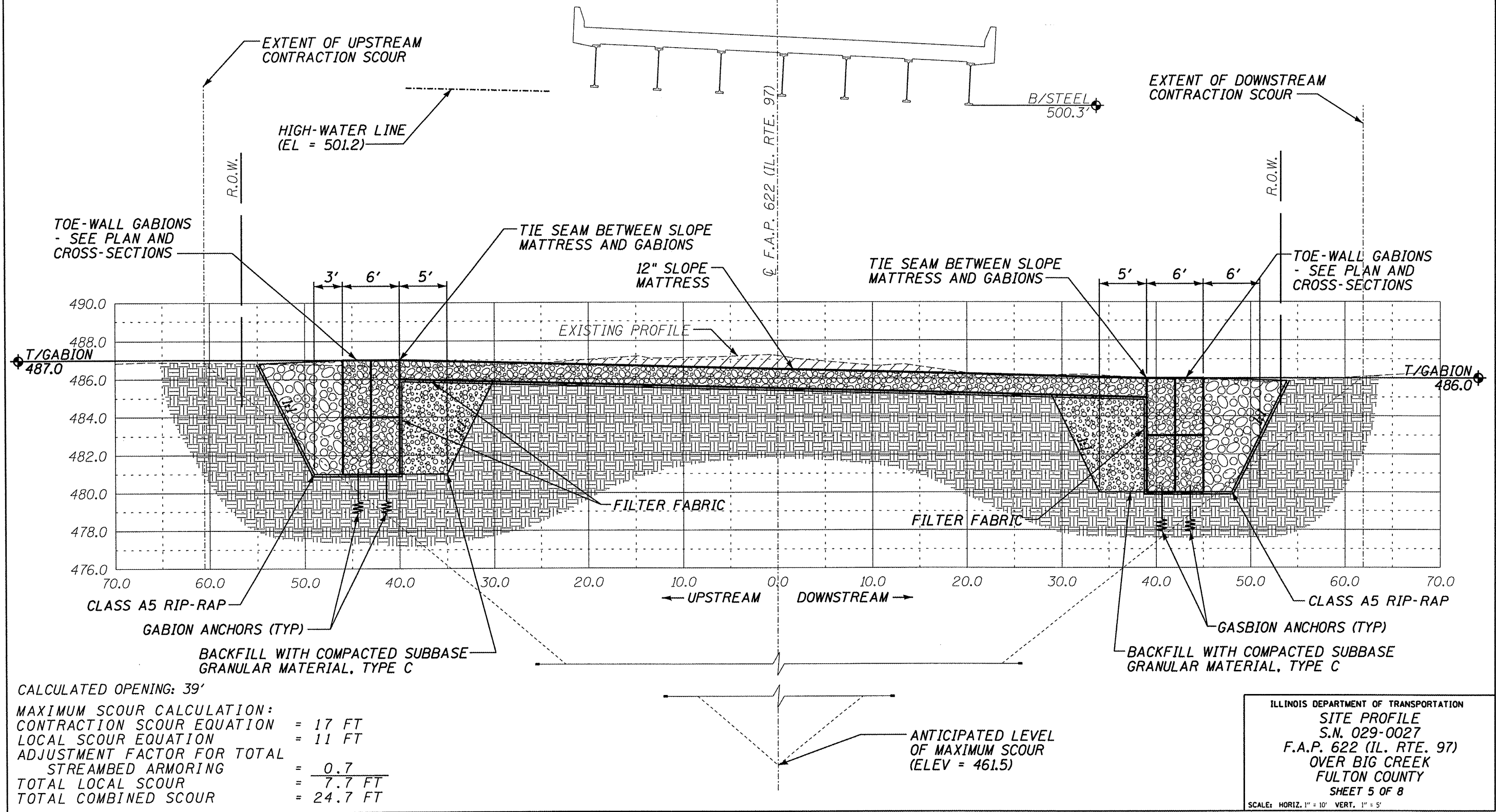


ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROPOSED SITE PLAN
 S.N. 029-0027
 F.A.P. 622 (IL. RTE. 97)
 OVER BIG CREEK
 FULTON COUNTY
 SHEET 3 OF 8

SCALE: 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 20 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



CALCULATED OPENING: 39'

MAXIMUM SCOUR CALCULATION:

CONTRACTION SCOUR EQUATION = 17 FT

LOCAL SCOUR EQUATION = 11 FT

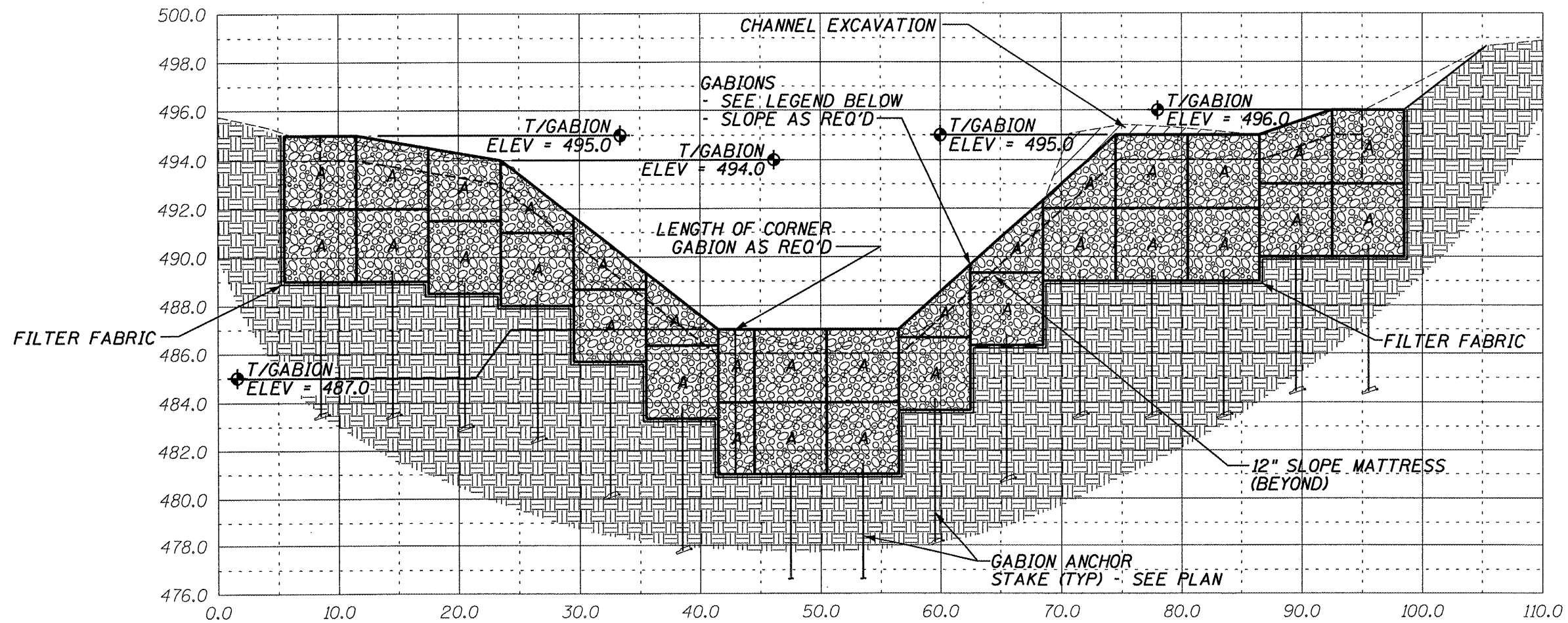
ADJUSTMENT FACTOR FOR TOTAL STREAMBED ARMORING = 0.7

TOTAL LOCAL SCOUR = 7.7 FT

TOTAL COMBINED SCOUR = 24.7 FT

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 21 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION A-A THROUGH NORTH GABION TOE-WALL

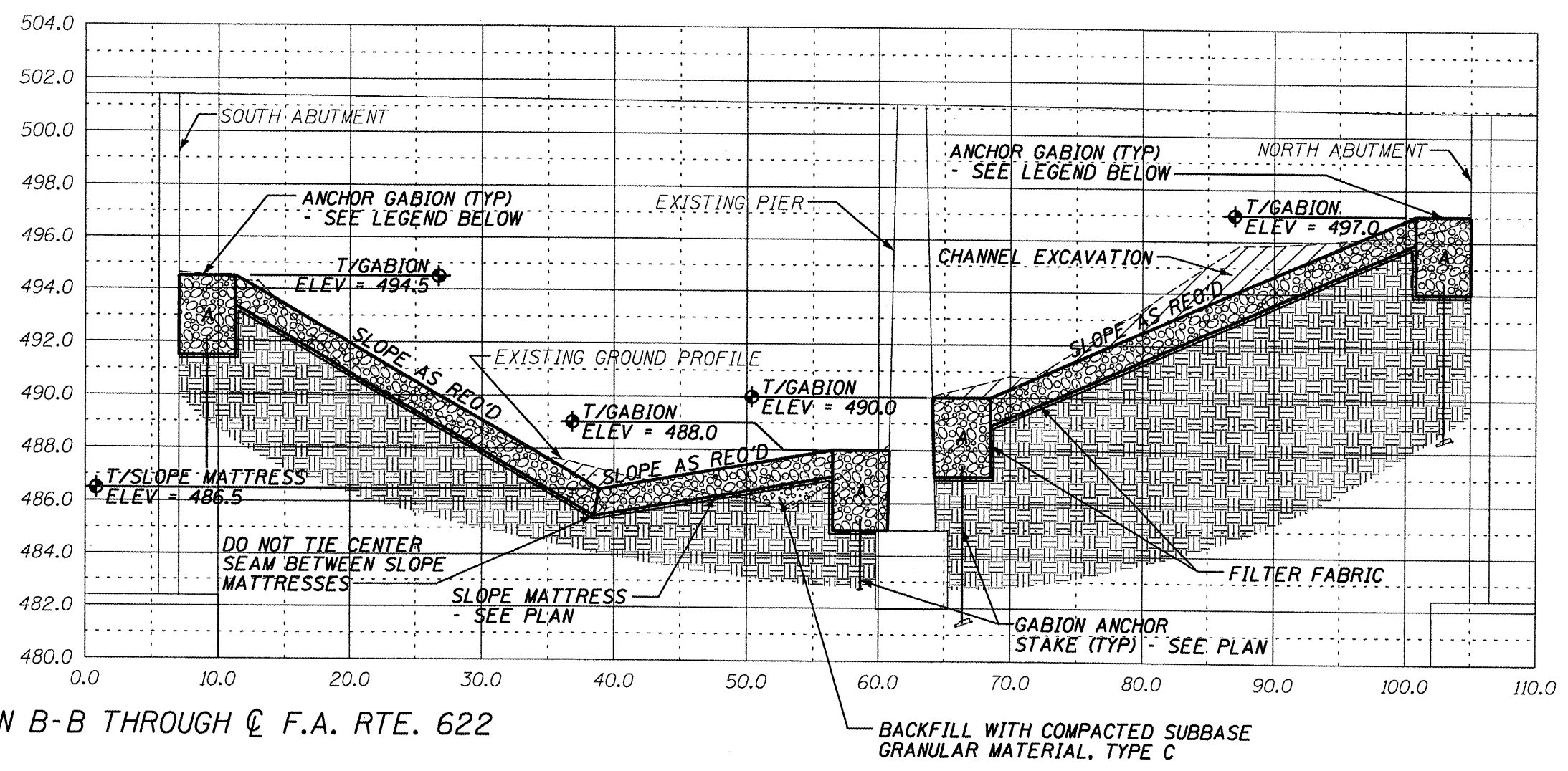
| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0027
 F.A.P. 622 (IL. RTE. 97)
 OVER BIG CREEK
 FULTON COUNTY
 SHEET 6 OF 8

SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 22 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



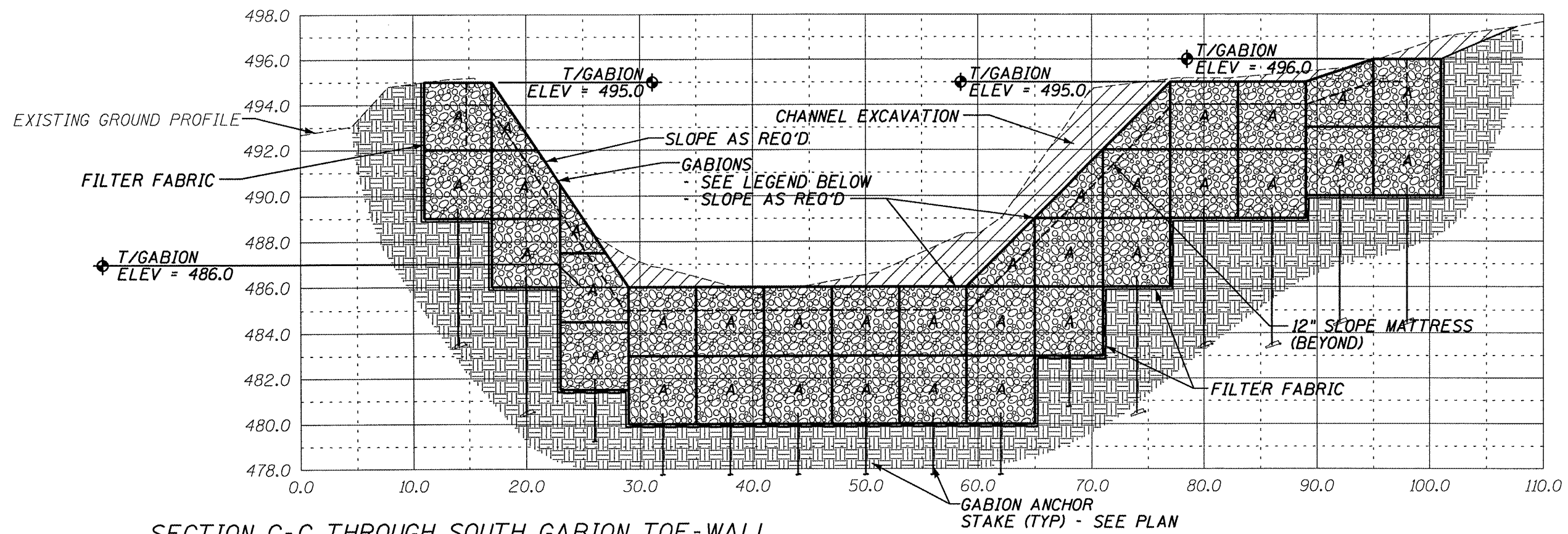
SECTION B-B THROUGH ϕ F.A. RTE. 622

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0027
 F.A.P. 622 (IL. RTE. 97)
 OVER BIG CREEK
 FULTON COUNTY
 SHEET 7 OF 8
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 23 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION C-C THROUGH SOUTH GABION TOE-WALL

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0027
 F.A.P. 622 (IL. RTE. 97)
 OVER BIG CREEK
 FULTON COUNTY
 SHEET 8 OF 8
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

BENCHMARK: BLACK MARKED SQUARE ON SE WINGWALL
ELEV. = 100.00

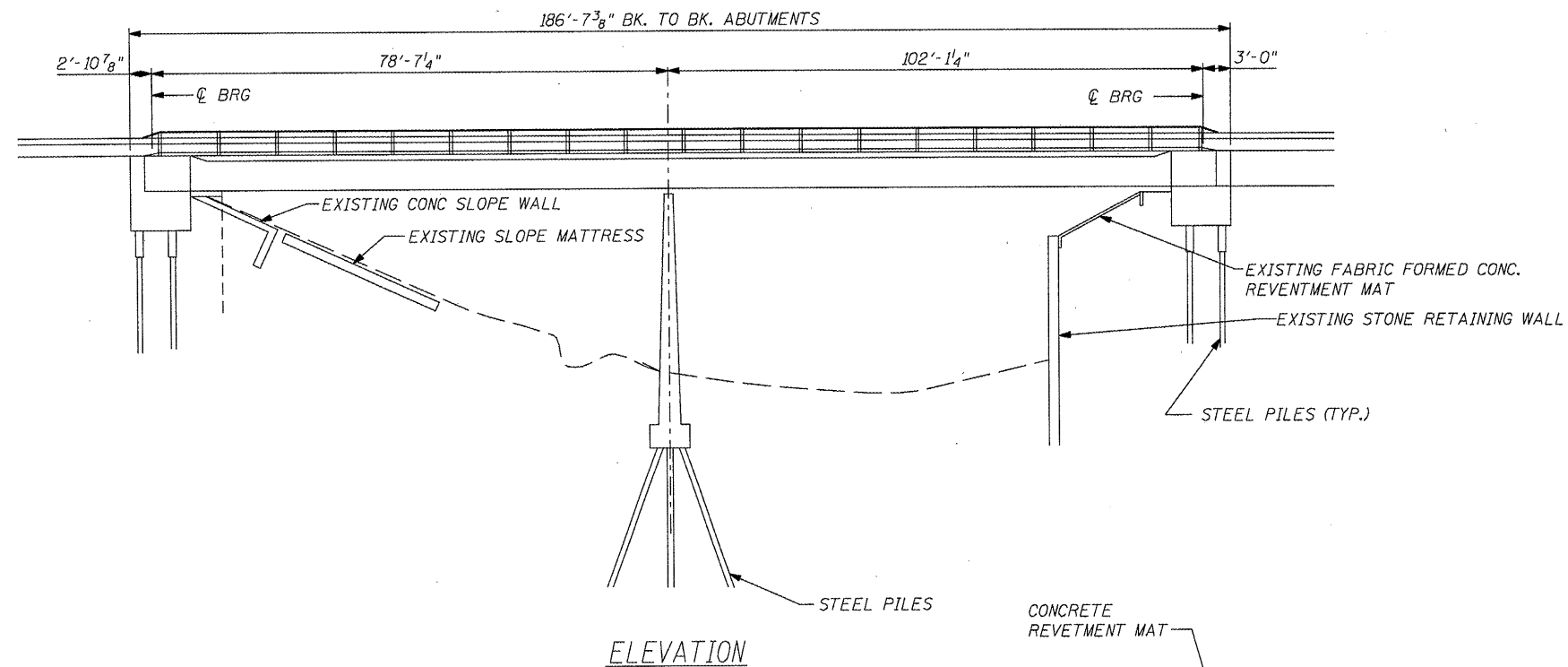
EXISTING STRUCTURE: SN 029-0053 IS A 38'-0" WIDE x 186'-7" LONG R.C. DECK WITH WELDED PLATE GIRDER SUPERSTRUCTURE WITH R.C. CLOSED ABUTMENTS.

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 24 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

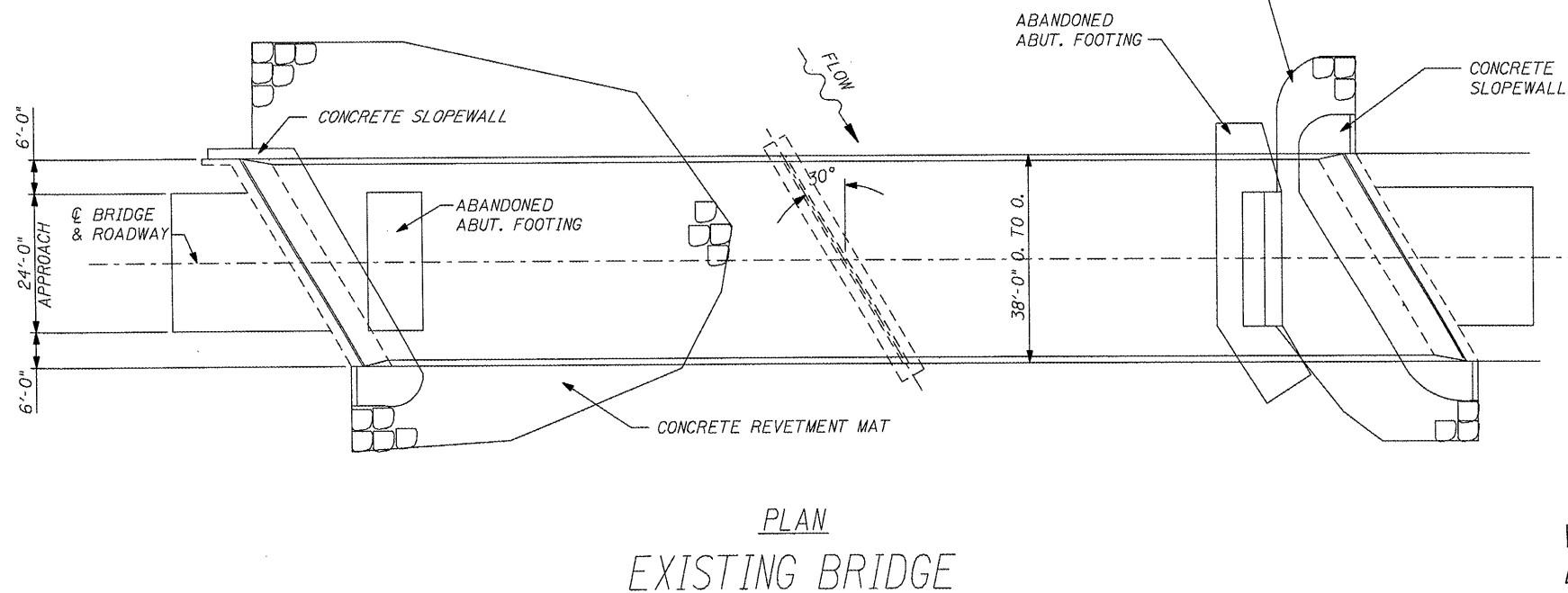
*** D4 SCOUR MITIGATION 2006**

INDEX OF SHEETS

| SHEET NUMBER | DESCRIPTION |
|--------------|---|
| 1 | GENERAL PLAN AND PROFILE, SUMMARY OF QUANTITIES, LOCATION MAP |
| 2 | R.O.W. PLAN |
| 3 | PROPOSED SITE PLAN |
| 4 | PROPOSED DIMENSION PLAN |
| 5-6 | SITE PROFILE |
| 7-11 | CROSS SECTIONS |



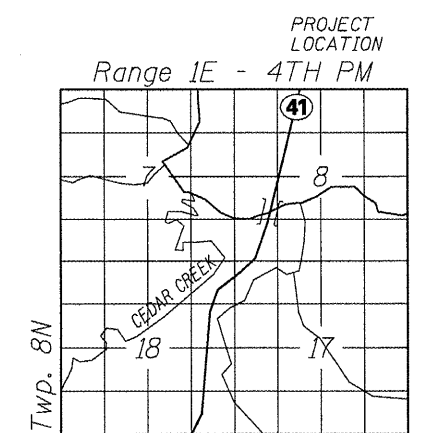
| ITEM | UNIT | TOTAL |
|------------------------------------|-------|-------|
| CHANNEL EXCAVATION | CU YD | 1657 |
| STONE RIP-RAP, CLASS A5 | TONS | 718 |
| FILTER FABRIC | SQ YD | 2902 |
| GABIONS | CU YD | 450 |
| SLOPE MATTRESS 12" | SQ YD | 2175 |
| SUB-BASE GRANULAR MATERIAL, TYPE C | TONS | 869 |
| REMOVE EXISTING STRUCTURE | EACH | 2 |
| GABION ANCHOR STAKES | EACH | 148 |
| DEWATERING STRUCTURE NO. 3 | EACH | 1 |



PLAN
EXISTING BRIDGE



DAVID L. MAURER
062-030577
LICENSED PROFESSIONAL ENGINEER
OF ILLINOIS
David L. Maurer, P.E.
Exp. Date 11/2009
P.E. No.: 062-030577



LOCATION SKETCH

WATERWAY/SCOUR INFORMATION

| | |
|-------------------------|-------------|
| DESIGN FLOOD | 100 YRS |
| DRAINAGE AREA | 252.6 SQ MI |
| FLOW | 17,240 CFS |
| FLOW DEPTH | 22.32 FT |
| OPENING REQUIRED | 1870 SQ FT |
| OPENING PROVIDED | 2382 SQ FT |
| CONTRACTION SCOUR DEPTH | 32 FT |

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
S.N. 029-0053
F.A.P. 574 (IL. RTE. 41)
OVER CEDAR CREEK
FULTON COUNTY
SHEET 1 OF 11

LEGEND

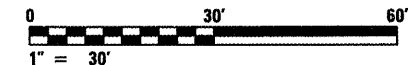
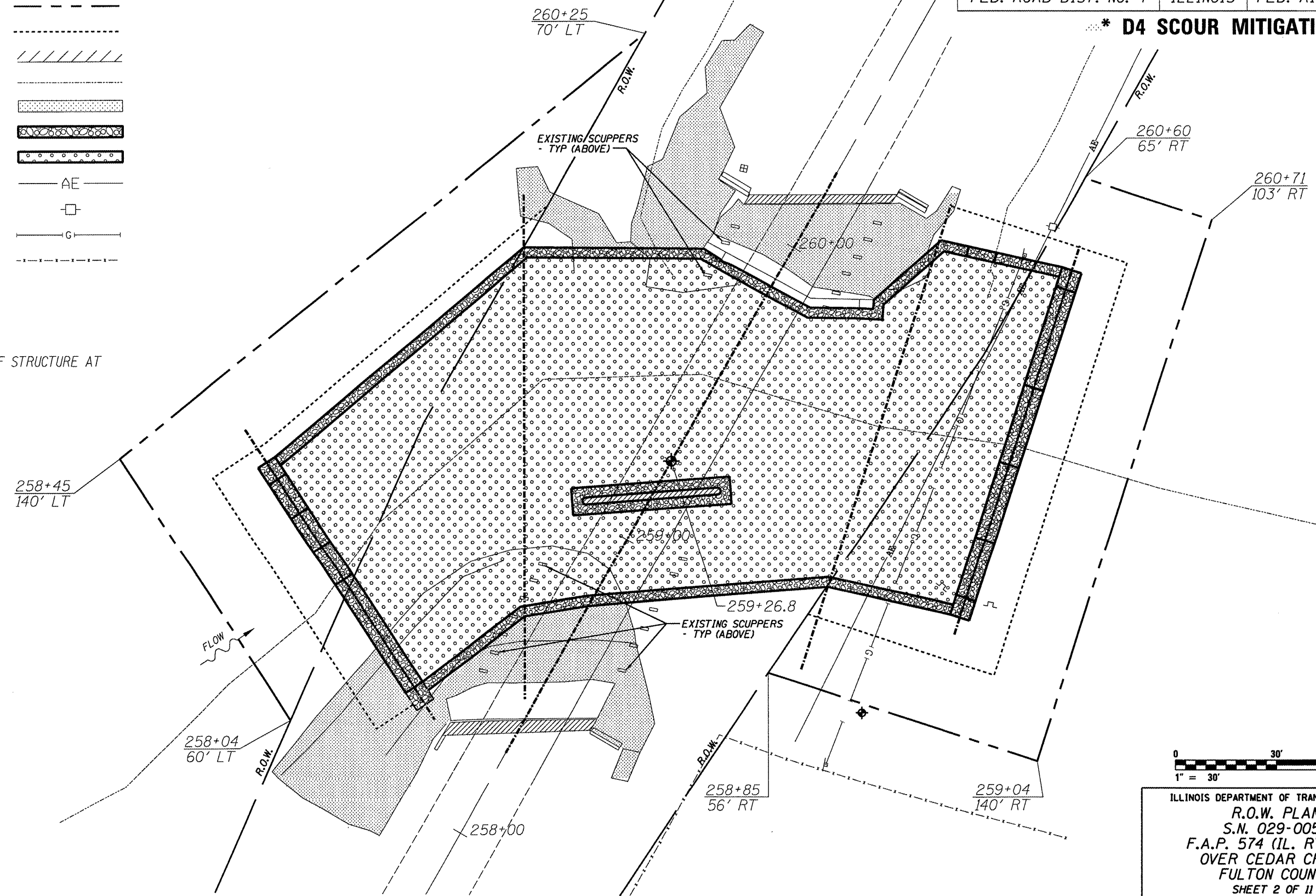
- R.O.W.
- PROPOSED R.O.W. LINE
- CONSTRUCTION LIMITS
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- EXISTING REVETMENT
- GABION
- PROP SLOPE MATTRESS
- AERIAL ELECTRIC AE
- ELECTRIC POLE □
- UNDERGROUND GAS LINE G
- EXISTING FENCE

INDICATES CENTER OF STRUCTURE AT
 C OF ROADWAY



| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 25 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

* D4 SCOUR MITIGATION 2006



ILLINOIS DEPARTMENT OF TRANSPORTATION
 R.O.W. PLAN
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 2 OF 11
 SCALE: 1" = 30'

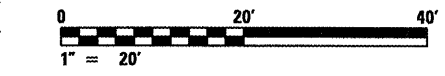
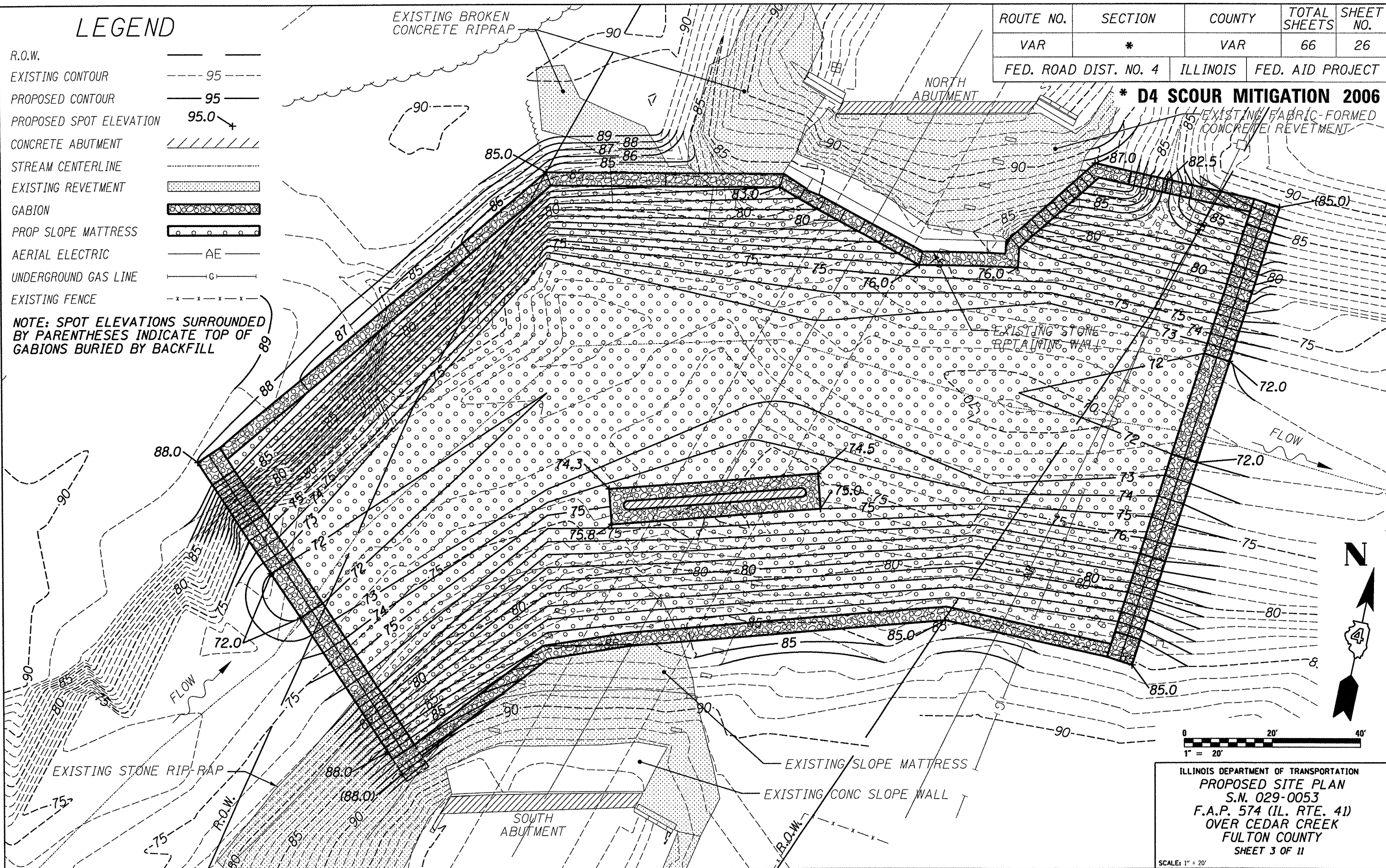
LEGEND

- R.O.W.
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- EXISTING REVETMENT
- GABION
- PROP SLOPE MATTRESS
- AERIAL ELECTRIC
- UNDERGROUND GAS LINE
- EXISTING FENCE

NOTE: SPOT ELEVATIONS SURROUNDED BY PARENTHESES INDICATE TOP OF GABIONS BURIED BY BACKFILL

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 26 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

* D4 SCOUR MITIGATION 2006



ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROPOSED SITE PLAN
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 3 OF 11

LEGEND

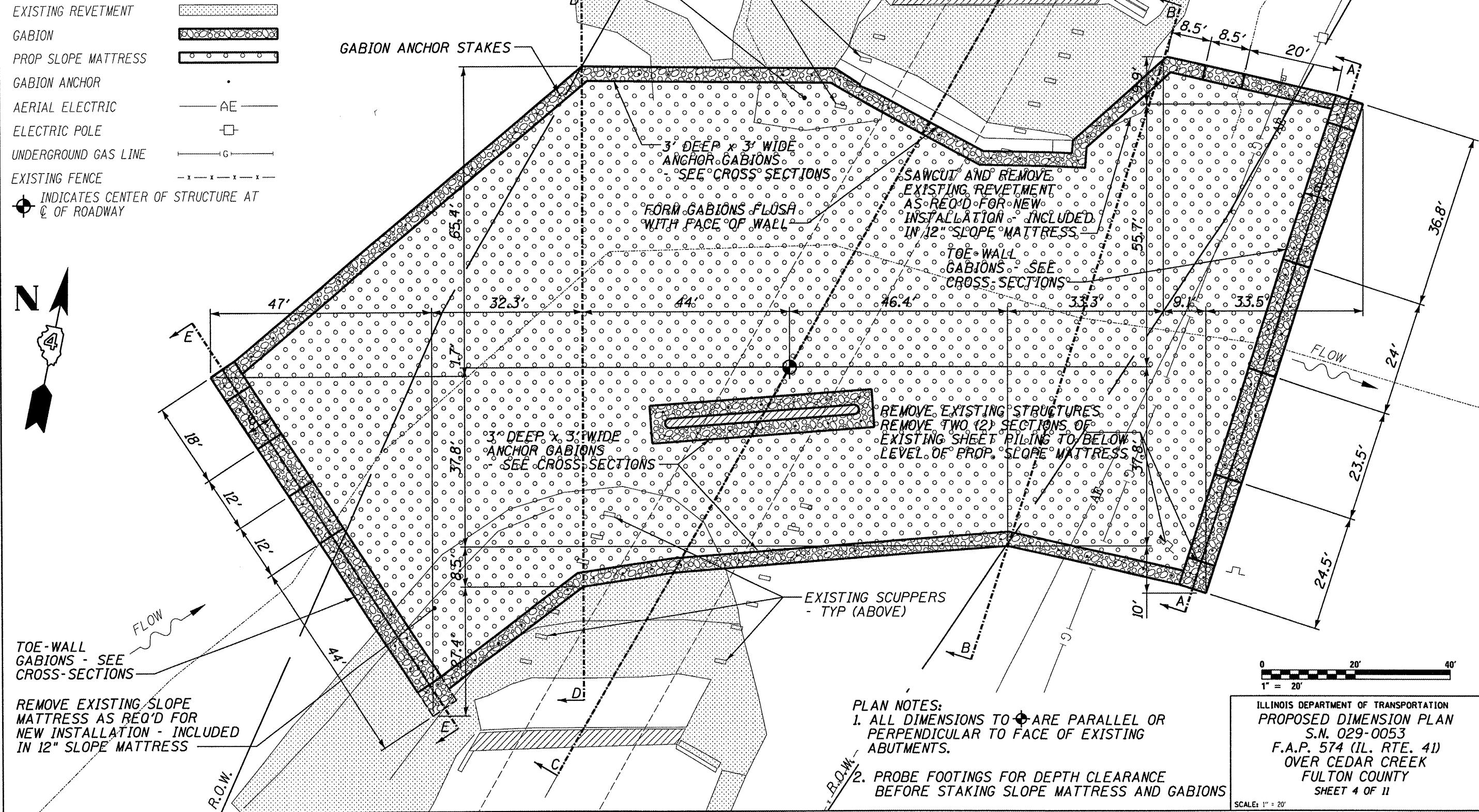
- R.O.W.
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- EXISTING REVETMENT
- GABION
- PROP SLOPE MATTRESS
- GABION ANCHOR
- AERIAL ELECTRIC
- ELECTRIC POLE
- UNDERGROUND GAS LINE
- EXISTING FENCE
- INDICATES CENTER OF STRUCTURE AT ϕ OF ROADWAY

REMOVE EXISTING RIP-RAP AS REQ'D FOR NEW INSTALLATION - INCLUDED IN CHANNEL EXCAVATION

EXISTING SCUPPERS - TYP (ABOVE)

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 27 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

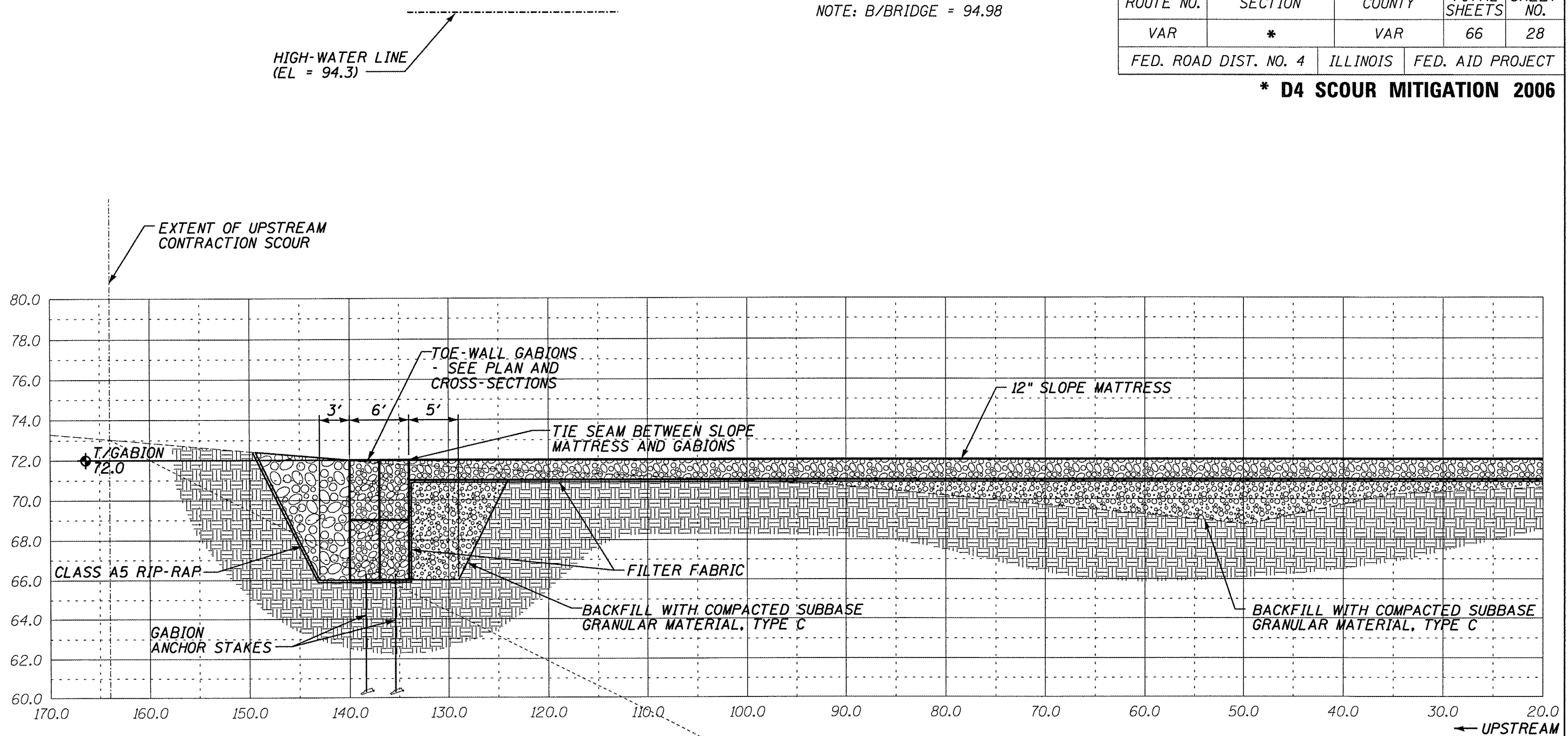
* D4 SCOUR MITIGATION 2006



NOTE: B/BRIDGE = 94.98

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 28 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

* D4 SCOUR MITIGATION 2006



CALCULATED OPENING: 99'
 MAXIMUM SCOUR CALCULATION:
 CONTRACTION SCOUR EQUATION = 32 FT
 LOCAL SCOUR EQUATION = 10 FT
 ADJUSTMENT FACTOR FOR TOTAL STREAMBED ARMORING = 0.7
 TOTAL LOCAL SCOUR = 7.0 FT
 TOTAL COMBINED SCOUR = 39.0 FT

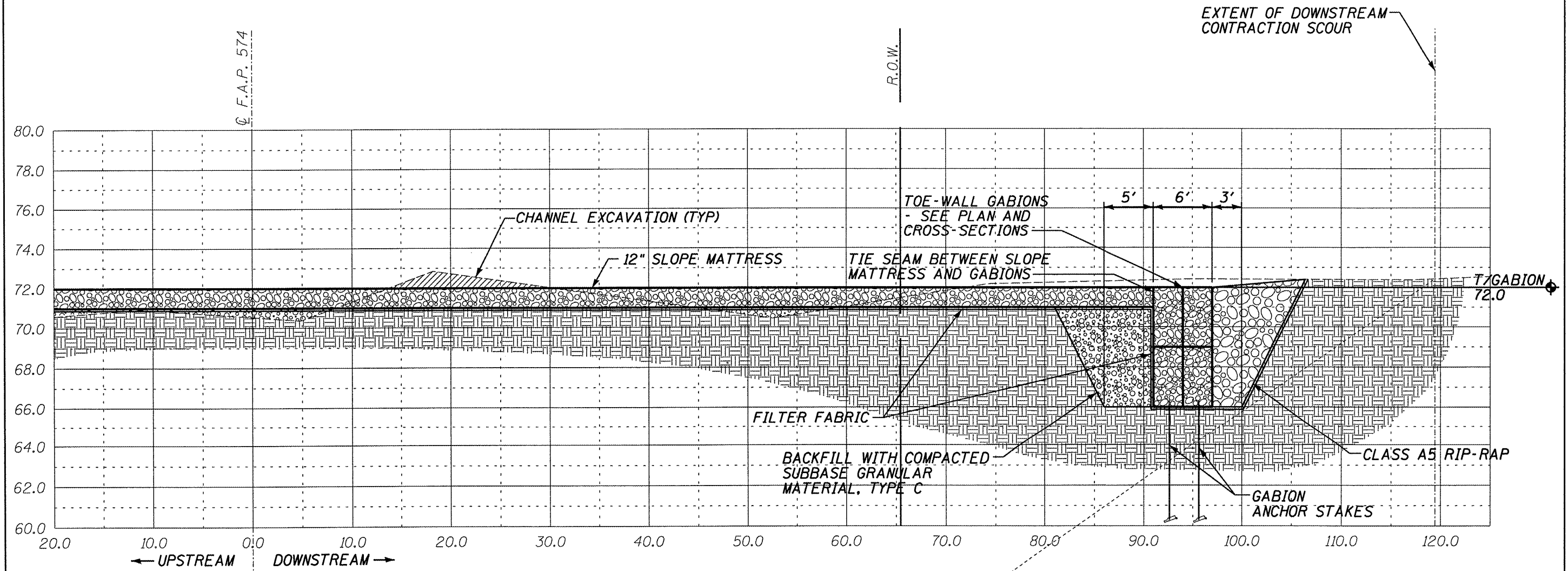
ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE PROFILE
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 5 OF 11
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'



NOTE: B/BRIDGE = 94.98

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 29 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

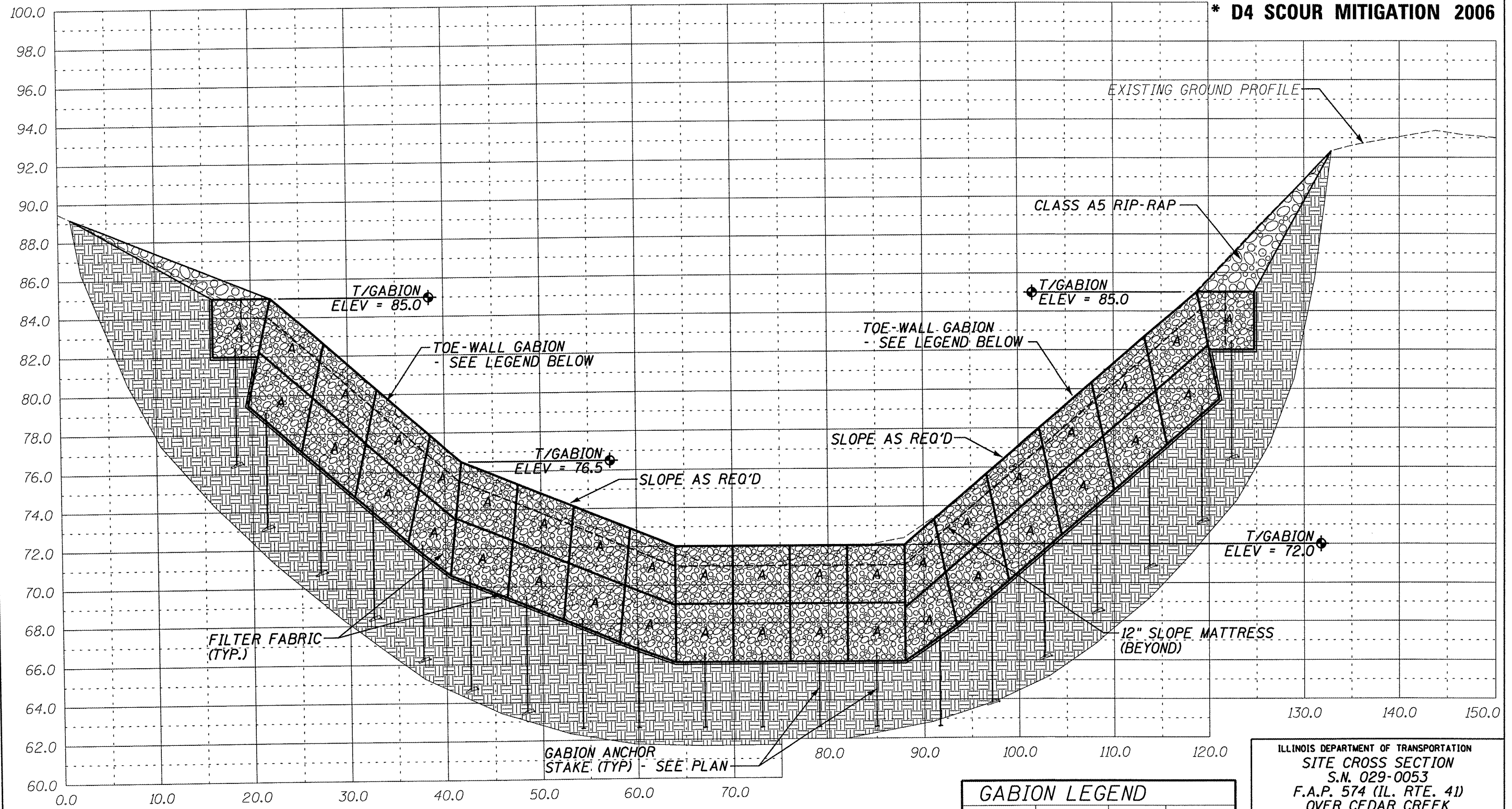
*** D4 SCOUR MITIGATION 2006**



ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE PROFILE
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 6 OF 11
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 30 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



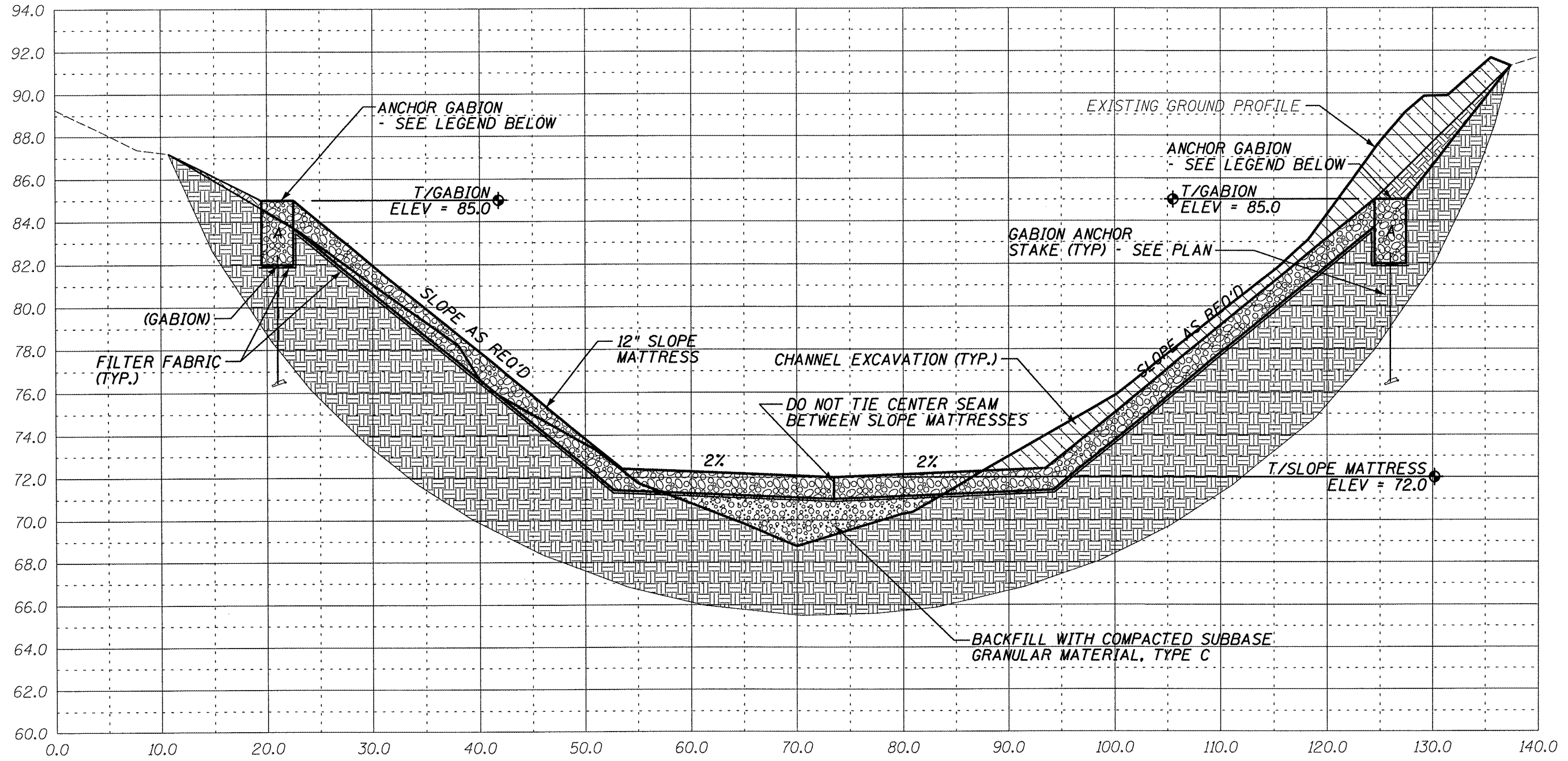
SECTION A-A THROUGH EAST GABION TOE-WALL

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 7 OF 11
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 31 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



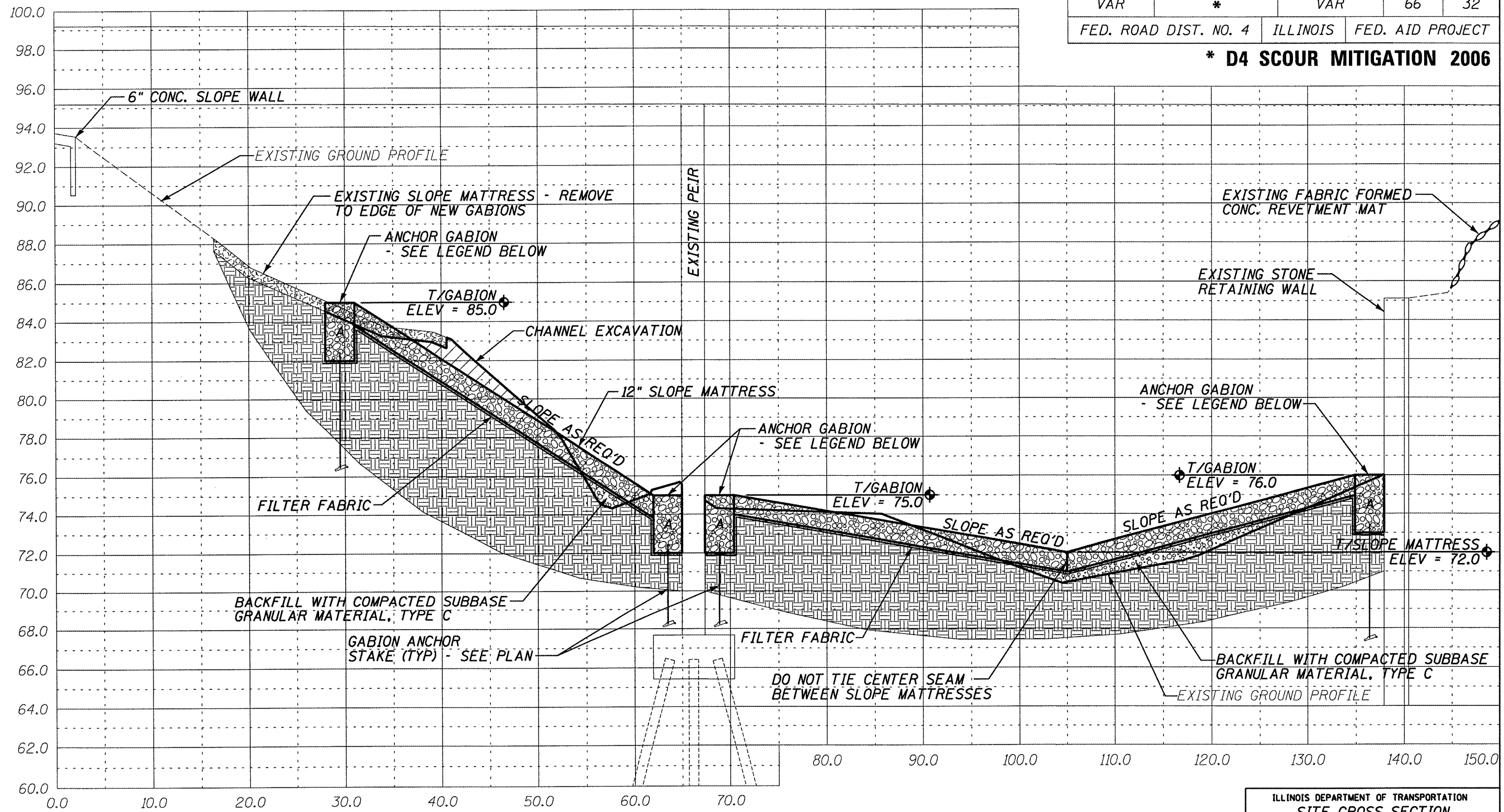
SECTION B-B

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 8 OF 11
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 32 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



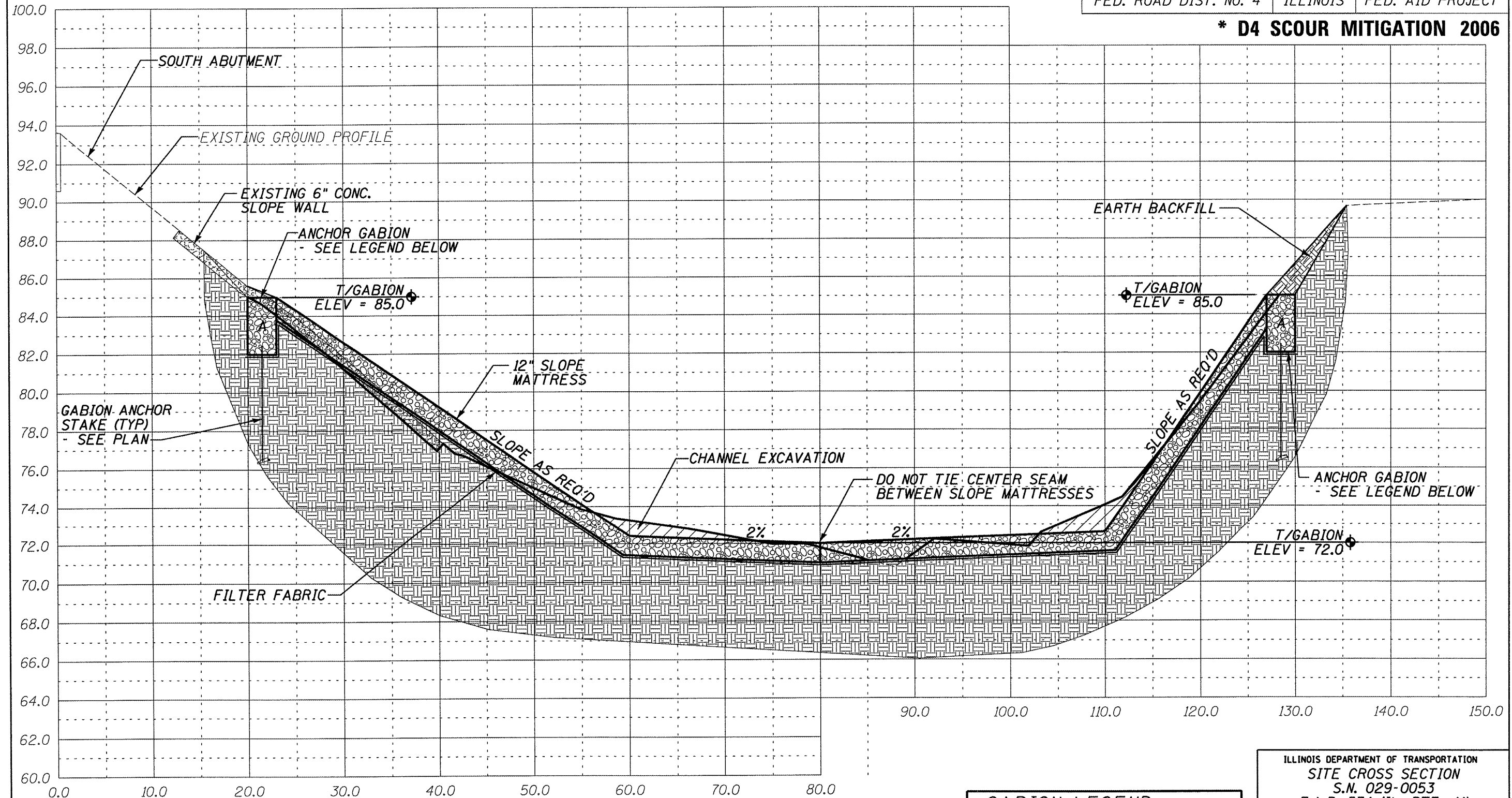
SECTION C-C THROUGH \odot F.A. 574

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 9 OF 11
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 33 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



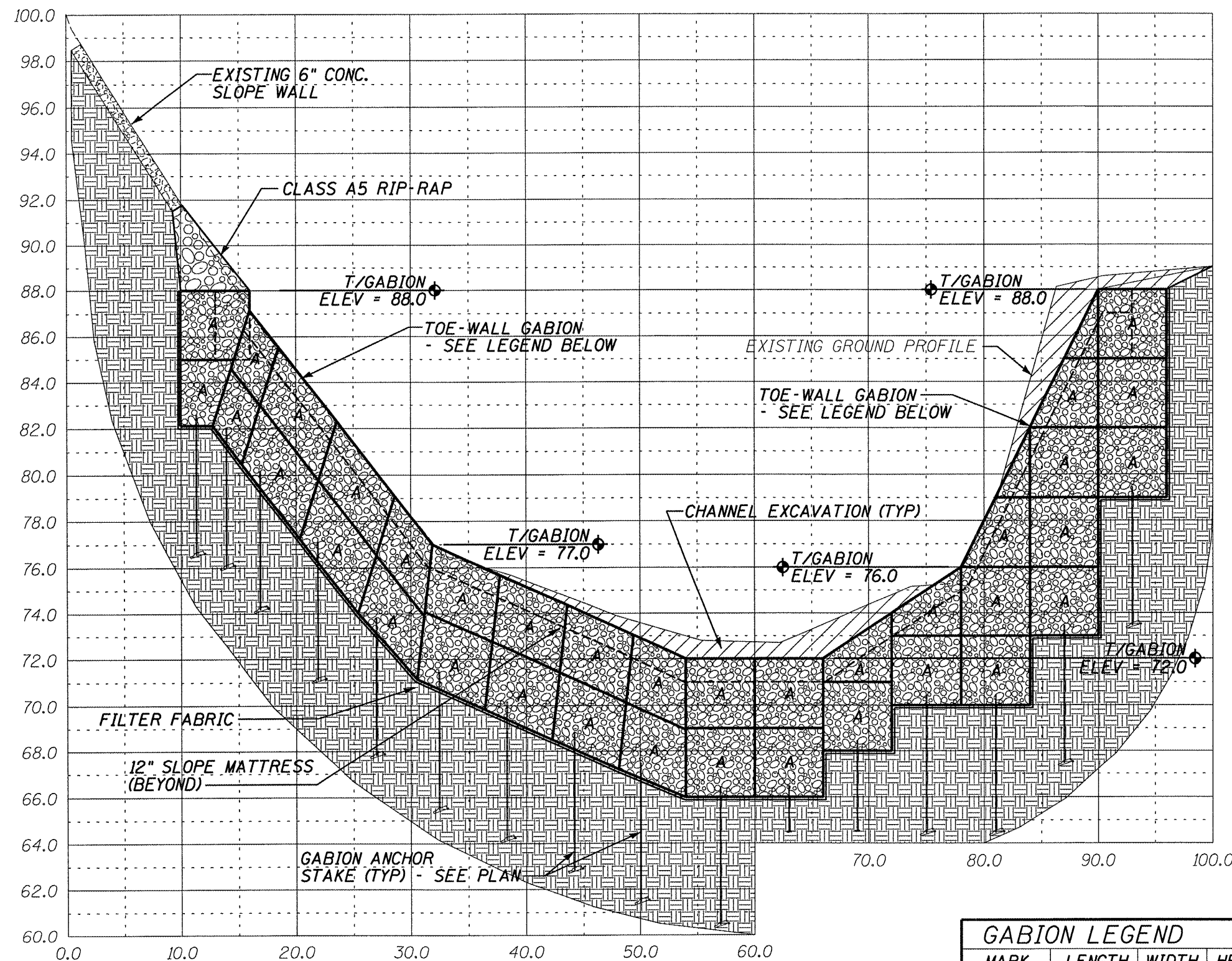
SECTION D-D

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 10 OF 11
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 34 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION E-E THROUGH WEST GABION TOE-WALL

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 029-0053
 F.A.P. 574 (IL. RTE. 41)
 OVER CEDAR CREEK
 FULTON COUNTY
 SHEET 11 OF 11
 SCALE: HORIZ. 1" = 10' VERT. 1" = 5'

BENCHMARK: CHISLED SQUARE ON THE SOUTH FACE OF THE NORTHEAST CORNER
ELEV. = 100.00

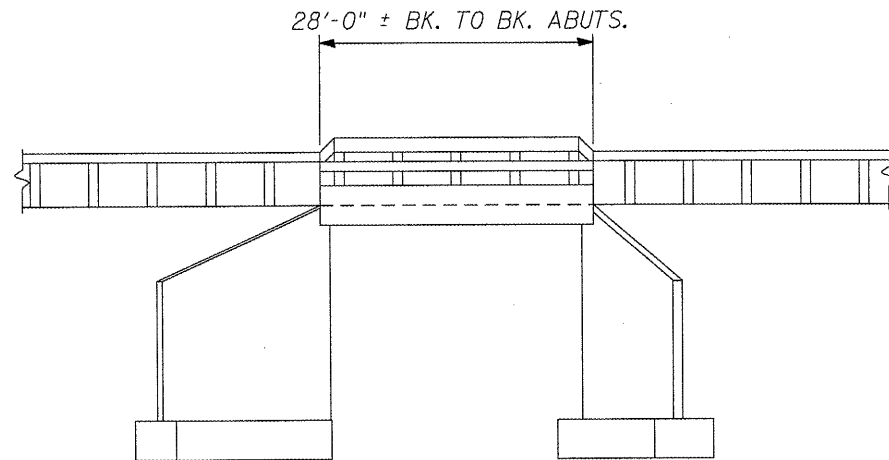
EXISTING STRUCTURE: SN 062-0014 IS A 40'-0" WIDE BY 28'-0" LONG R.C. SLAB. THE SUBSTRUCTURE CONSISTS OF R.C. ABUTMENTS AND WINGWALLS.

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 35 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

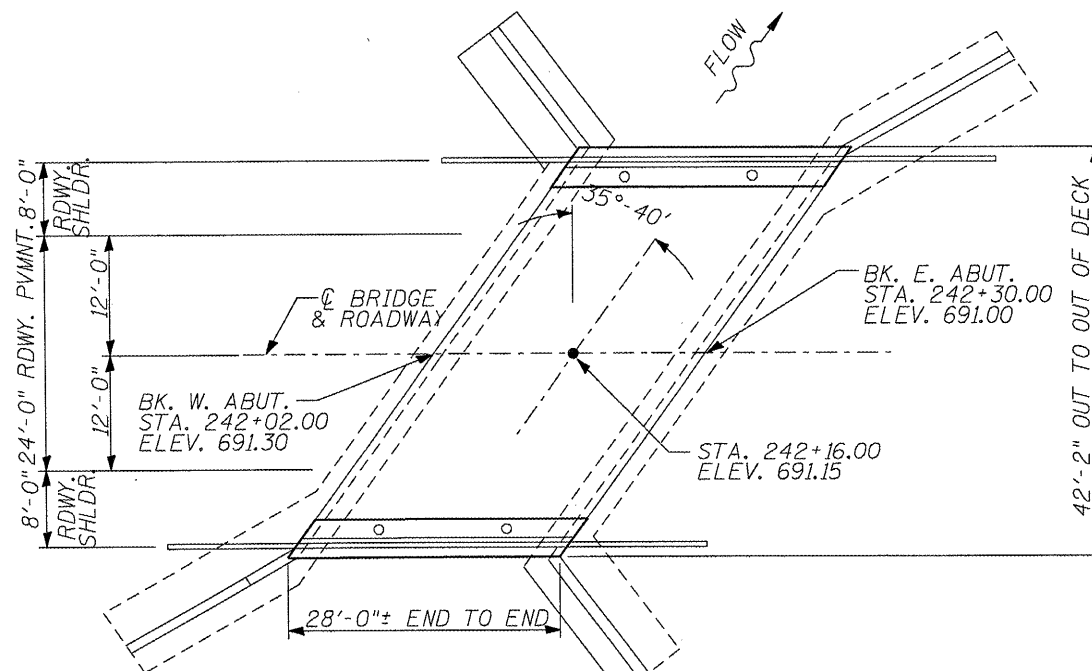
*** D4 SCOUR MITIGATION 2006**

INDEX OF SHEETS

| SHEET NUMBER | DESCRIPTION |
|--------------|---|
| 1 | GENERAL PLAN AND PROFILE, SUMMARY OF QUANTITIES, LOCATION MAP |
| 2 | R.O.W. PLAN |
| 3 | PROPOSED SITE PLAN |
| 4 | SITE PROFILE |
| 5-7 | SITE CROSS SECTIONS |



ELEVATION

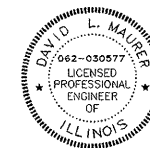


PLAN

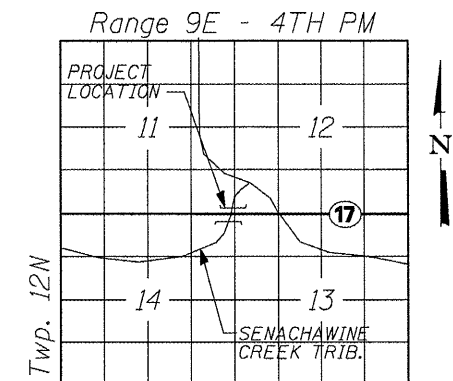
EXISTING BRIDGE

BILL OF MATERIALS

| ITEM | UNIT | TOTAL |
|---|-------|-------|
| CHANNEL EXCAVATION | CU YD | 89 |
| STONE RIP-RAP, CLASS A5 | TONS | 550 |
| FILTER FABRIC | SQ YD | 324 |
| REMOVE AND REPLACE STEEL PLATE GUARD RAIL, TYPE A | FOOT | 50 |
| DEWATERING STRUCTURE NO. 4 | EACH | 1 |



David L. Maurer, P.E.
Exp. Date 11/2009
P.E. No.: 062-030577



LOCATION SKETCH

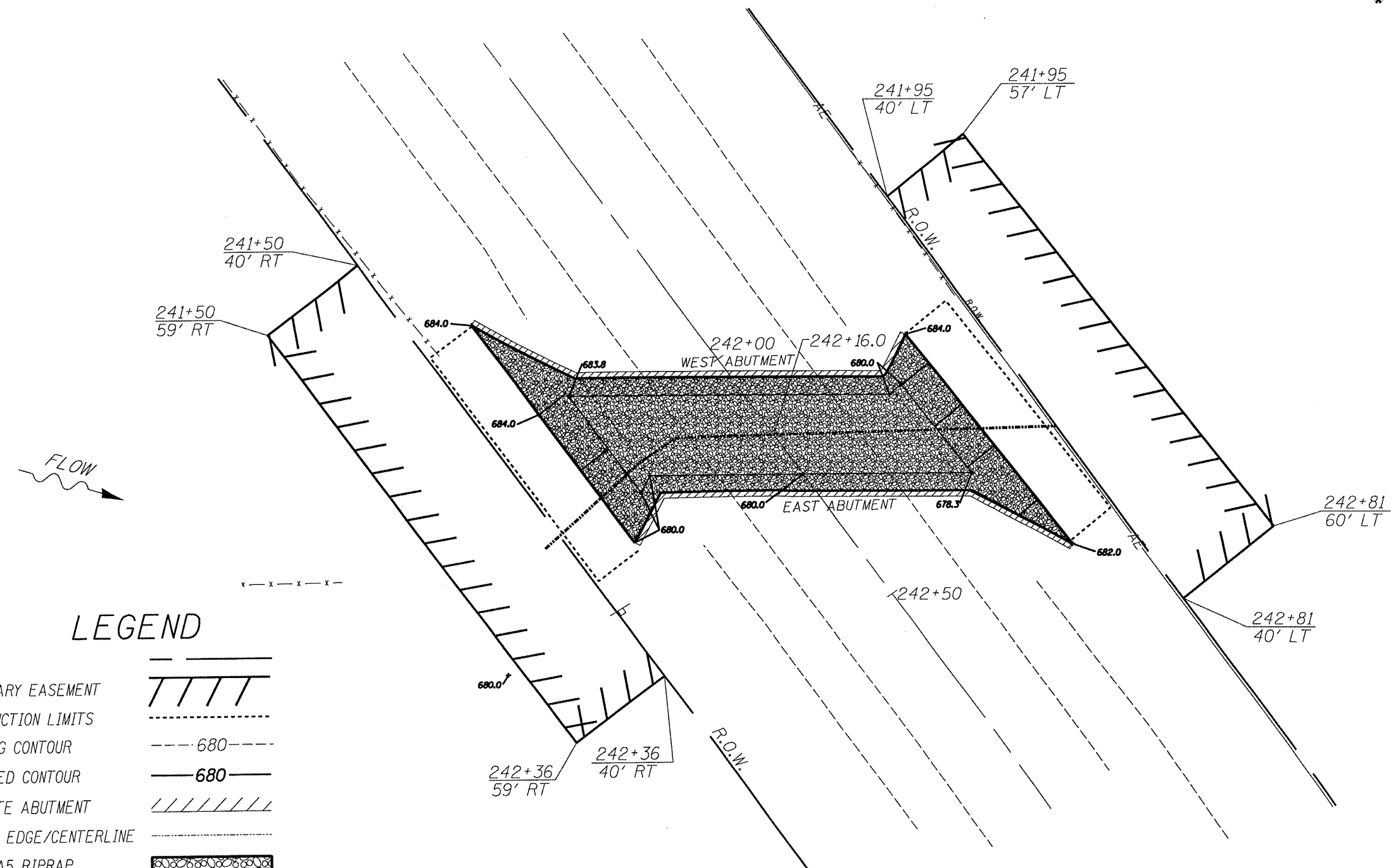
WATERWAY/SCOUR INFORMATION

| | |
|-------------------------|-----------|
| DESIGN FLOOD | 100 YRS |
| DRAINAGE AREA | 1.7 SQ MI |
| FLOW | 1,420 CFS |
| FLOW DEPTH | 8.96 FT |
| REQUIRED OPENING | 200 SQ FT |
| PROVIDED OPENING | 348 SQ FT |
| CONTRACTION SCOUR DEPTH | 7 FT |

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
S.N. 062-0014
F.A.P. 645 (IL. 17) OVER
SENACHAWINE CREEK TRIBUTARY
MARSHALL COUNTY
SHEET 1 OF 7

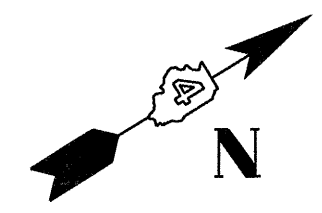
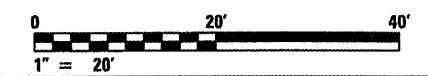
| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 36 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



LEGEND

- R.O.W.
- TEMPORARY EASEMENT
- CONSTRUCTION LIMITS
- EXISTING CONTOUR
- PROPOSED CONTOUR
- CONCRETE ABUTMENT
- STREAM EDGE/CENTERLINE
- CLASS A5 RIPRAP
- AERIAL ELECTRIC
- EXISTING FENCE

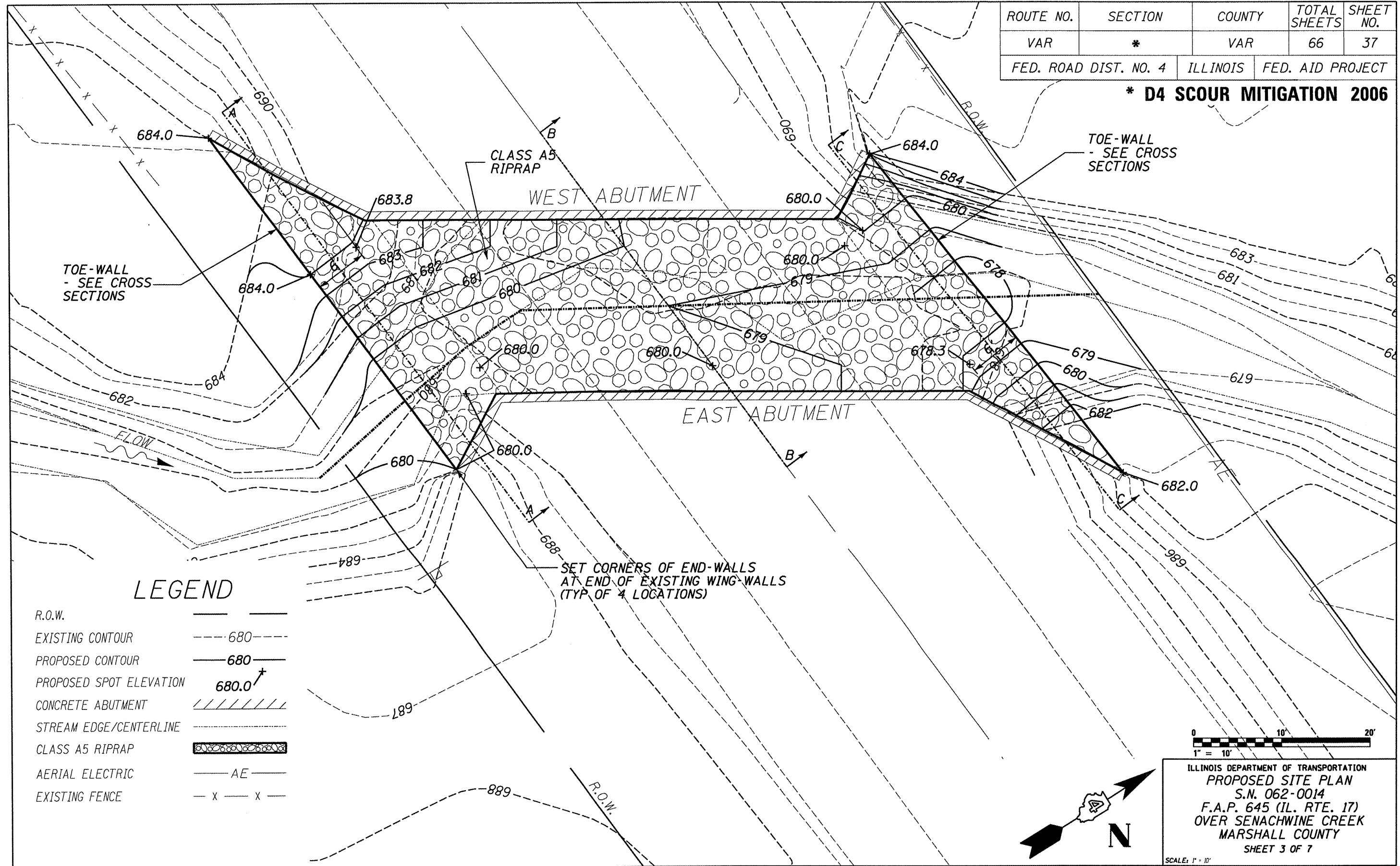


ILLINOIS DEPARTMENT OF TRANSPORTATION
R.O.W. PLAN
S.N. 062-0014
F.A.P. 645 (IL. RTE. 17)
OVER SENACHWINE CREEK
MARSHALL COUNTY
SHEET 2 OF 7

SCALE: 1" = 20'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 37 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

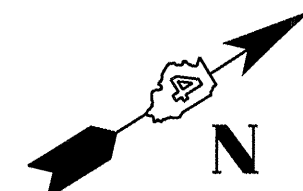
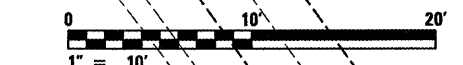
*** D4 SCOUR MITIGATION 2006**



LEGEND

- R.O.W. ————
- EXISTING CONTOUR - - - - - 680
- PROPOSED CONTOUR ———— 680
- PROPOSED SPOT ELEVATION 680.0 ↗
- CONCRETE ABUTMENT // // //
- STREAM EDGE/CENTERLINE - · - · - ·
- CLASS A5 RIPRAP [Pattern]
- AERIAL ELECTRIC ———— AE ————
- EXISTING FENCE - x - x -

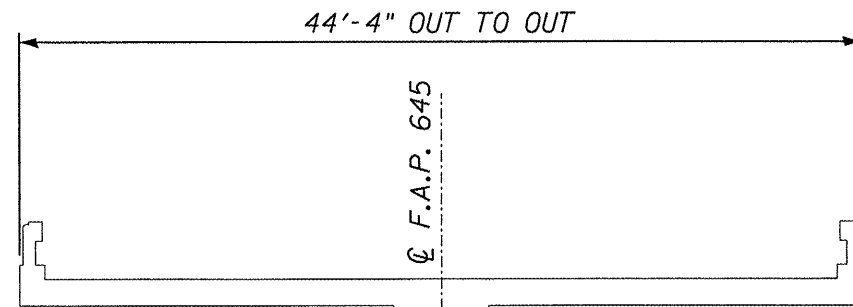
SET CORNERS OF END-WALLS
AT END OF EXISTING WING-WALLS
(TYP. OF 4 LOCATIONS)



ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED SITE PLAN
 S.N. 062-0014
 F.A.P. 645 (IL. RTE. 17)
 OVER SENACHWINE CREEK
 MARSHALL COUNTY
 SHEET 3 OF 7
 SCALE: 1" = 10'

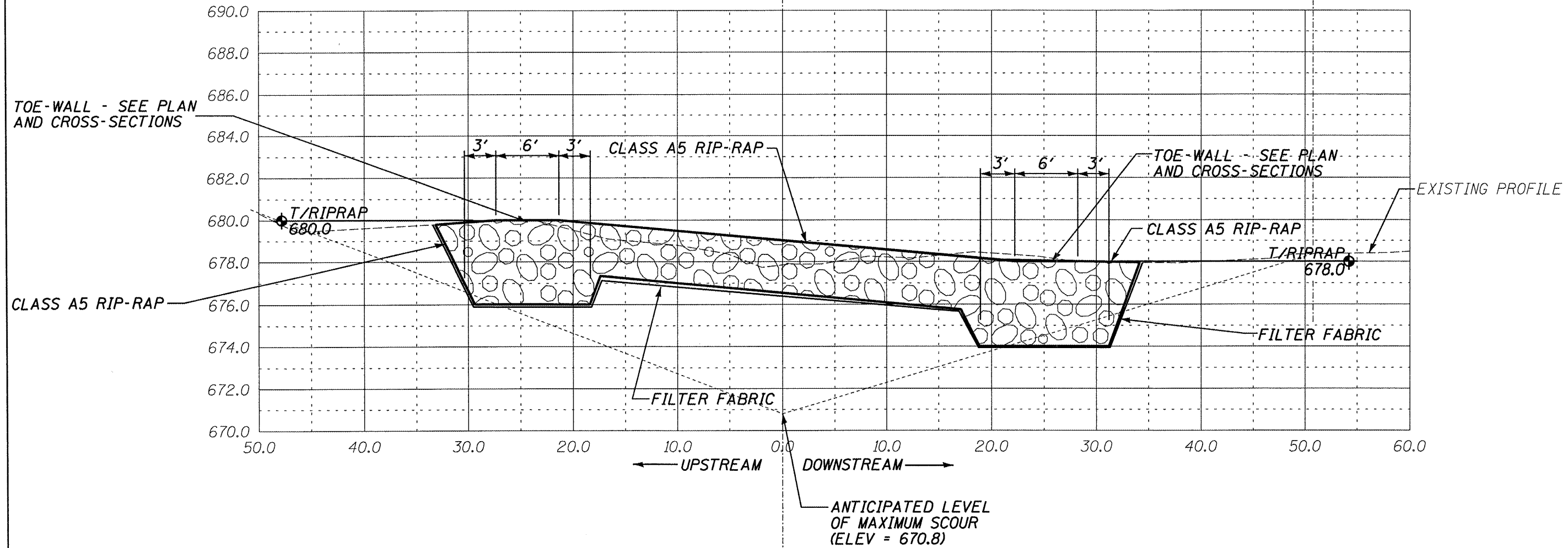
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 38 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



B/BRIDGE
694.0

EXTENT OF DOWNSTREAM
CONTRACTION SCOUR

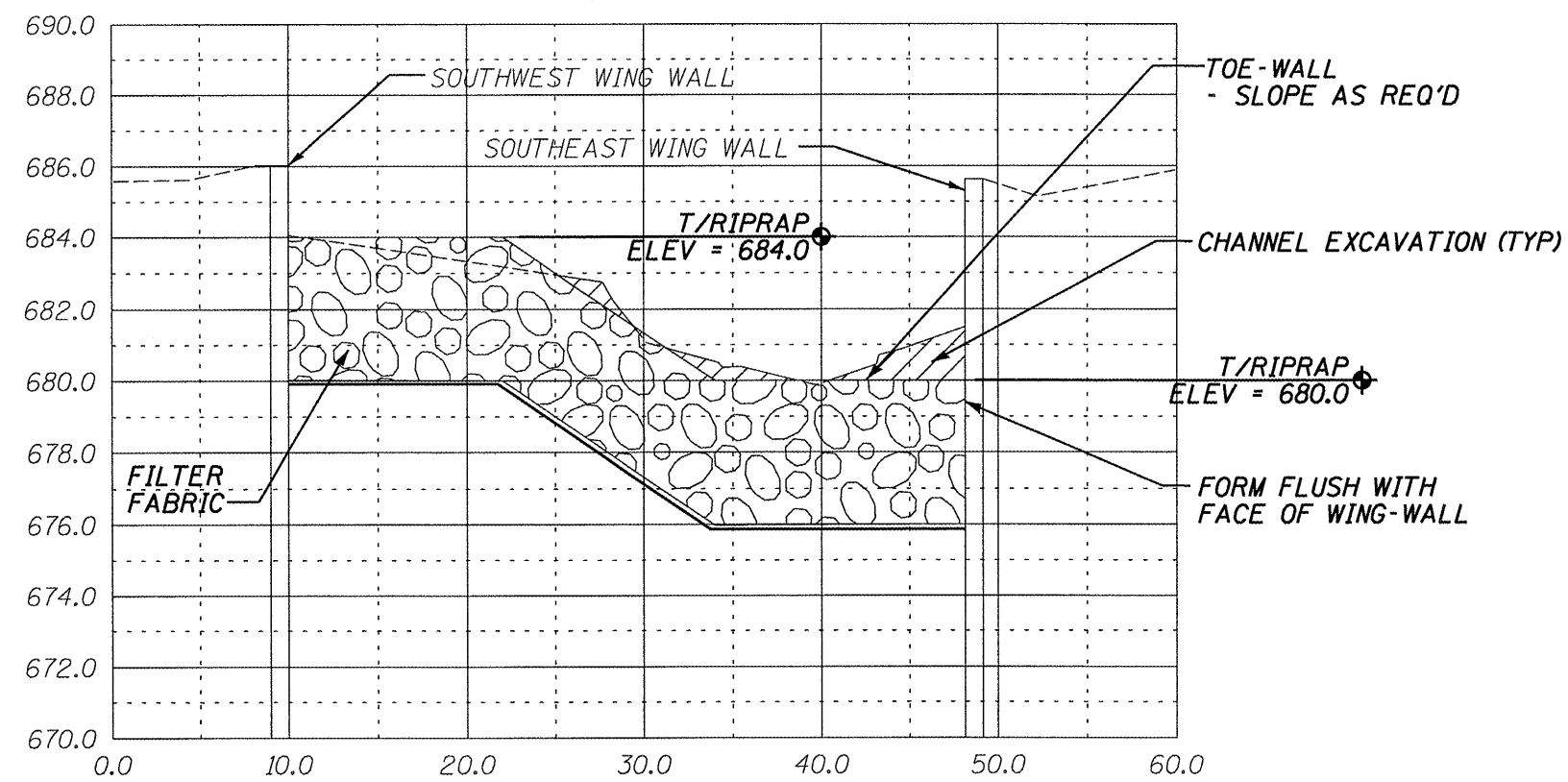


CALCULATED OPENING: 25 FT
 MAXIMUM SCOUR CALCULATION:
 CONTRACTION SCOUR = 7 FT

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE PROFILE
 S.N. 062-0014
 F.A.P. 645 (IL. RTE. 17)
 OVER SENACHWINE CREEK
 MARSHALL COUNTY
 SHEET 4 OF 7
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 39 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

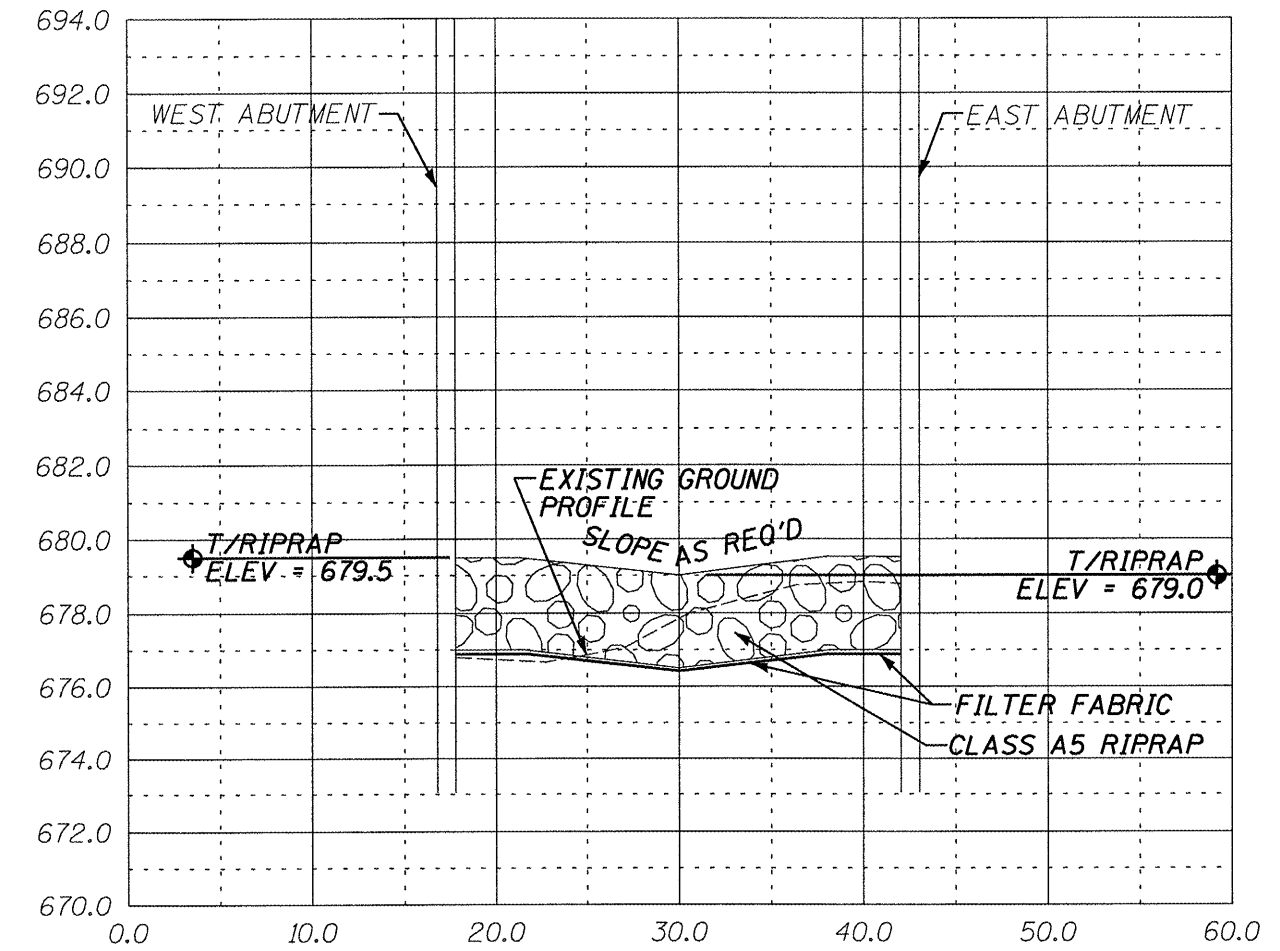


SECTION A-A THROUGH SOUTH TOE-WALL

ILLINOIS DEPARTMENT OF TRANSPORTATION
SITE CROSS SECTION
S.N. 062-0014
F.A.P. 645 (IL. RTE. 17)
OVER SENACHWINE CREEK
MARSHALL COUNTY
SHEET 5 OF 7
SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 40 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

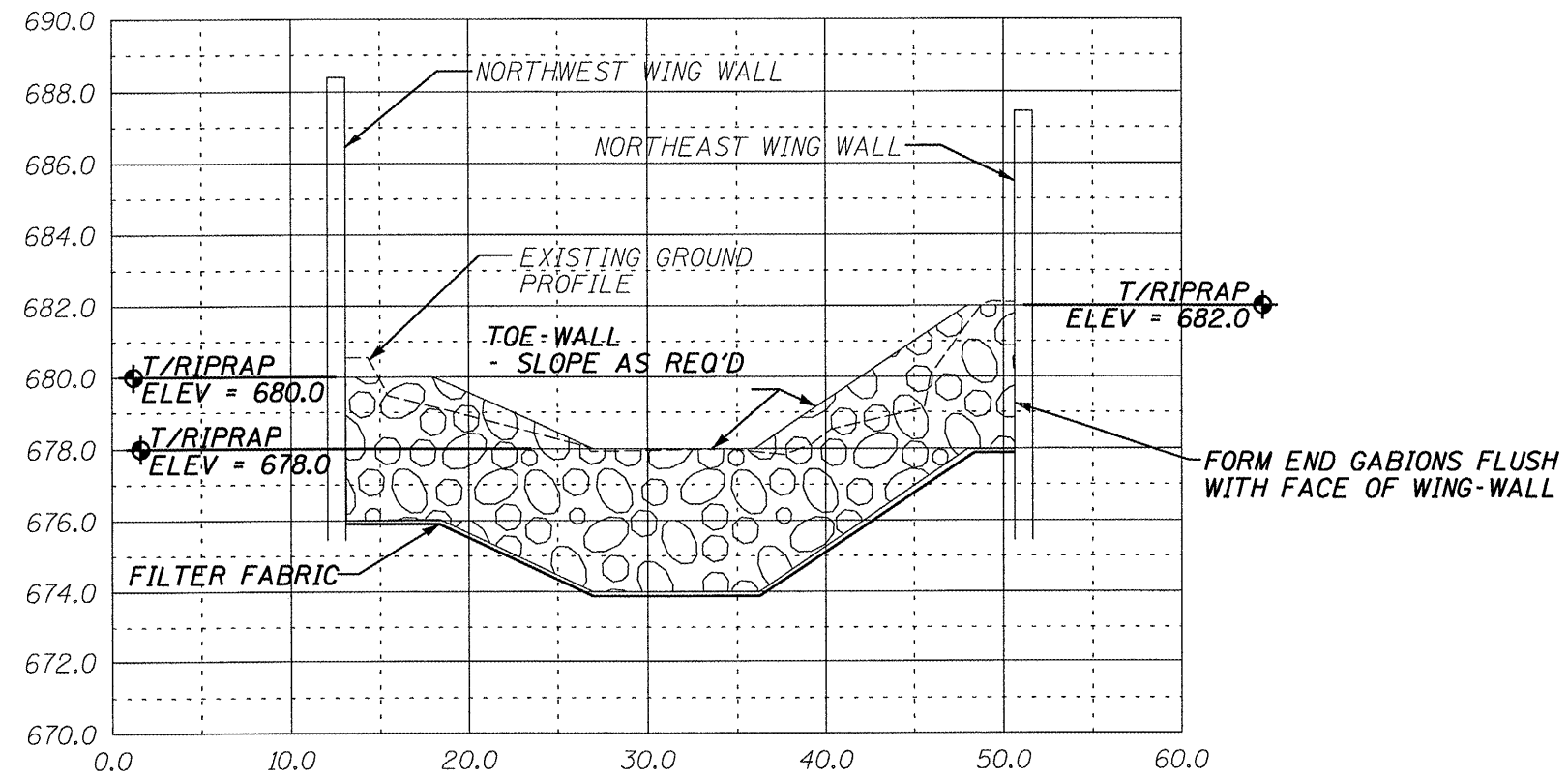


SECTION B-B THROUGH ϕ F.A.P. RTE. 645

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 062-0014
 F.A.P. 645 (IL. RTE. 17)
 OVER SENACHWINE CREEK
 MARSHALL COUNTY
 SHEET 6 OF 7
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 41 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION C-C THROUGH NORTH TOE-WALL

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 062-0014
 F.A.P. 645 (IL. RTE. 17)
 OVER SENACHWINE CREEK
 MARSHALL COUNTY
 SHEET 7 OF 7
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

BENCHMARK: TOP 3RD. STEP BRACKET ON TELEGRAPH POLE BTWN. TRACKS NORTH OF BRIDGE (2ND. BRACKET EAST SIDE OF POLE, 4' OFF GROUND) ELEV.= 475.62 FT.

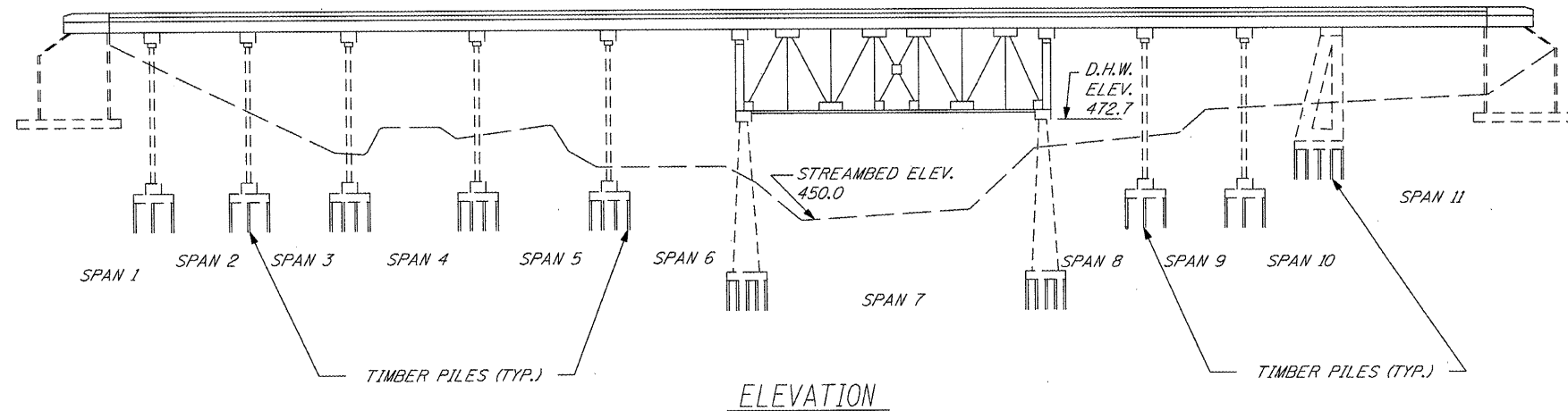
EXISTING STRUCTURE: SN 072-0037 IS AN 11 SPAN R.C. DECK ON STRUCTURAL STEEL 637'-10 1/4" BY 62'-0" SUPERSTRUCTURE WITH R.C. CLOSED ABUTMENTS AND PIERS.

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 42 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

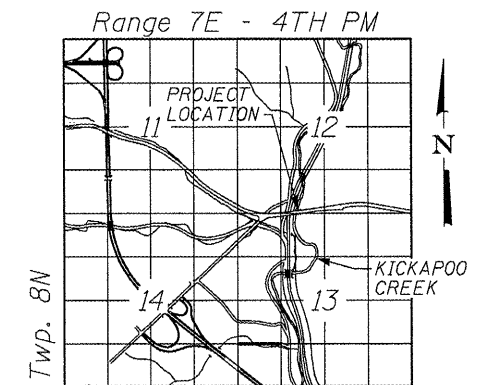
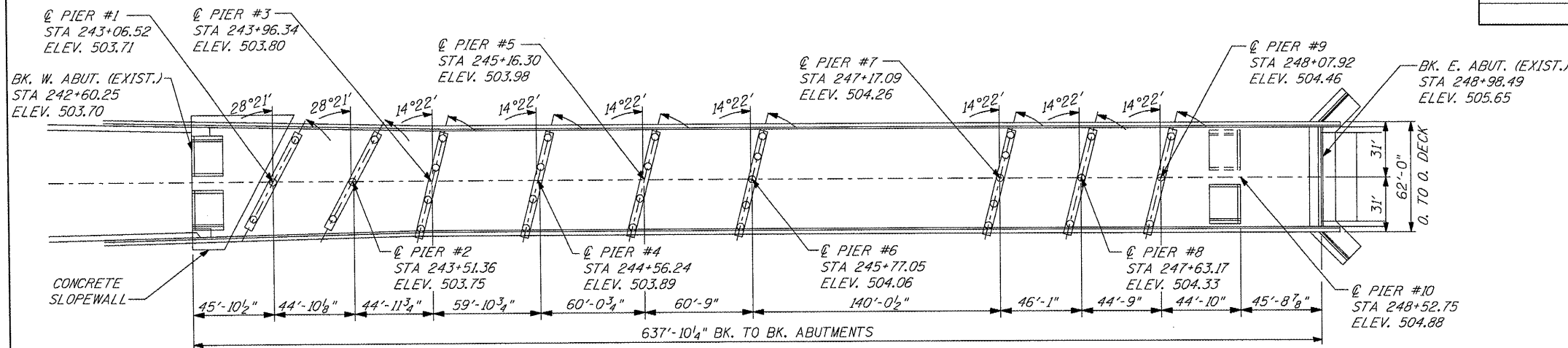
INDEX OF SHEETS

| SHEET NUMBER | DESCRIPTION |
|--------------|---|
| 1 | GENERAL PLAN AND PROFILE, SUMMARY OF QUANTITIES, LOCATION MAP |
| 2 | SITE PLAN |
| 3-4 | SITE DETAILS |
| 5-15 | CROSS SECTIONS |



BILL OF MATERIALS

| ITEM | UNIT | TOTAL |
|------------------------------------|-------|-------|
| CHANNEL EXCAVATION | CU YD | 1403 |
| PERIMETER EROSION CONTROL BARRIER | FOOT | 422 |
| FILTER FABRIC | SQ YD | 3717 |
| STONE RIP-RAP, CLASS A3, 12" | TONS | 341 |
| STONE RIPRAP, CLASS A5 | SQ YD | 2850 |
| DEWATERING STRUCTURE NO. 5 | EACH | 1 |
| RAILROAD PROT. LIABILITY INSURANCE | L SUM | 1 |

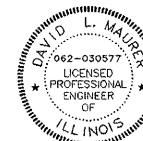


LOCATION SKETCH

WATERWAY/SCOUR INFORMATION

| | |
|-------------------------|-------------|
| DESIGN FLOOD | 100 YRS |
| DRAINAGE AREA | 295.2 SQ MI |
| FLOW | 5,600 CFS |
| FLOW DEPTH | 26 FT |
| CONTRACTION SCOUR DEPTH | 38 FT |

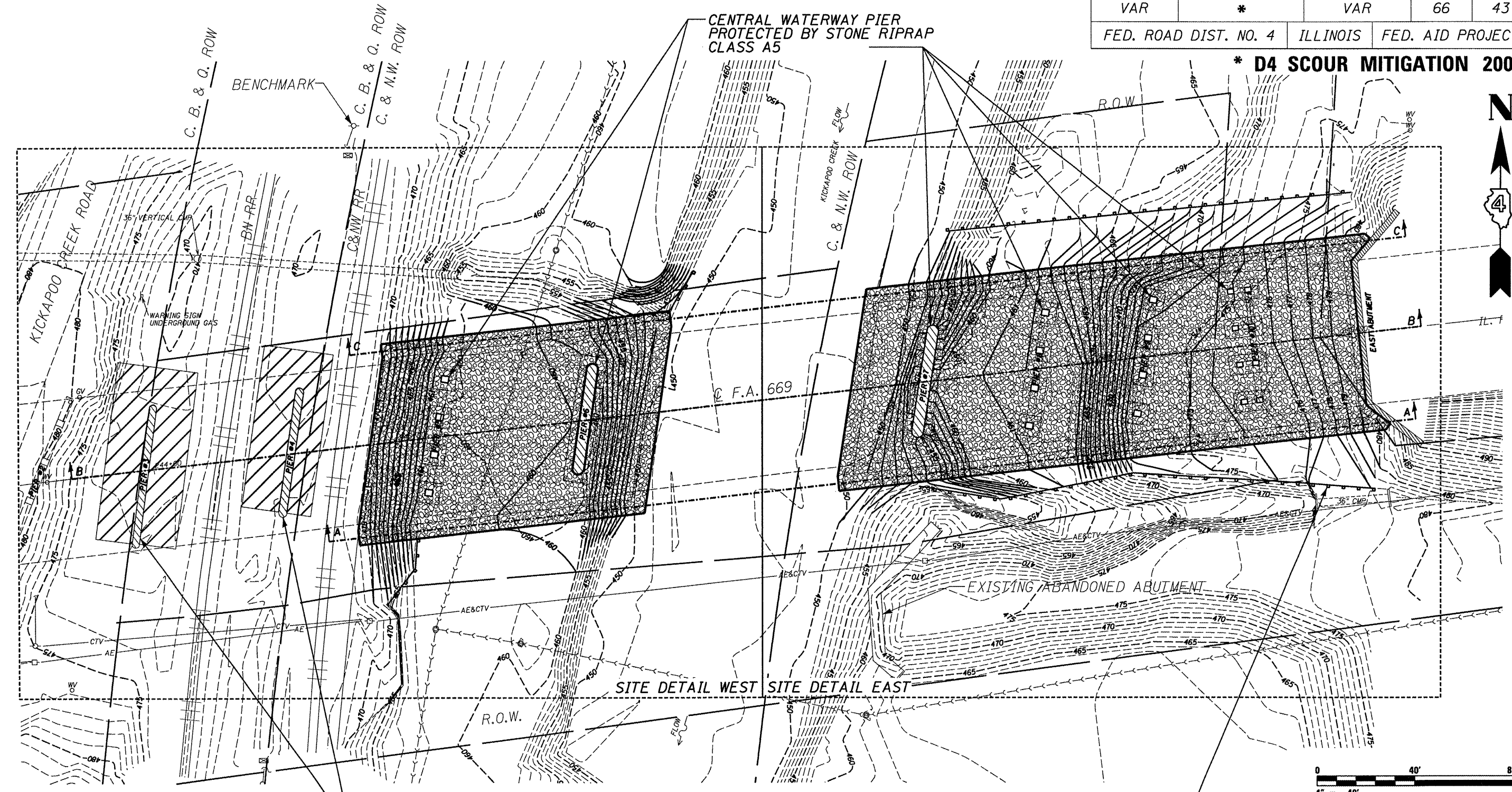
ILLINOIS DEPARTMENT OF TRANSPORTATION
 GENERAL PLAN & ELEVATION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SHEET 1 OF 15



David L. Maurer, P.E.
 Exp. Date 11/2009
 P.E. No.: 062-030577

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 43 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

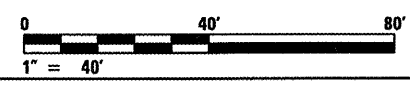
*** D4 SCOUR MITIGATION 2006**



FLOODPLAIN PIER PROTECTED BY RIP-RAP CLASS A3, 12"

CENTRAL WATERWAY PIER PROTECTED BY STONE RIPRAP CLASS A5

PERIMETER EROSION CONTROL BARRIER



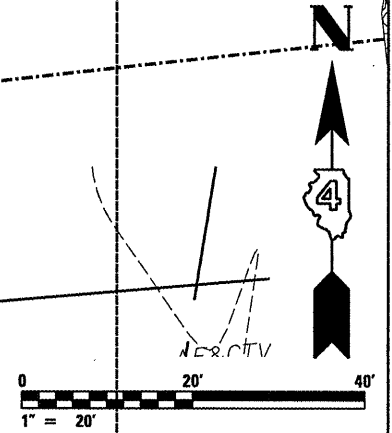
ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROPOSED SITE PLAN
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SHEET 2 OF 15

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 44 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

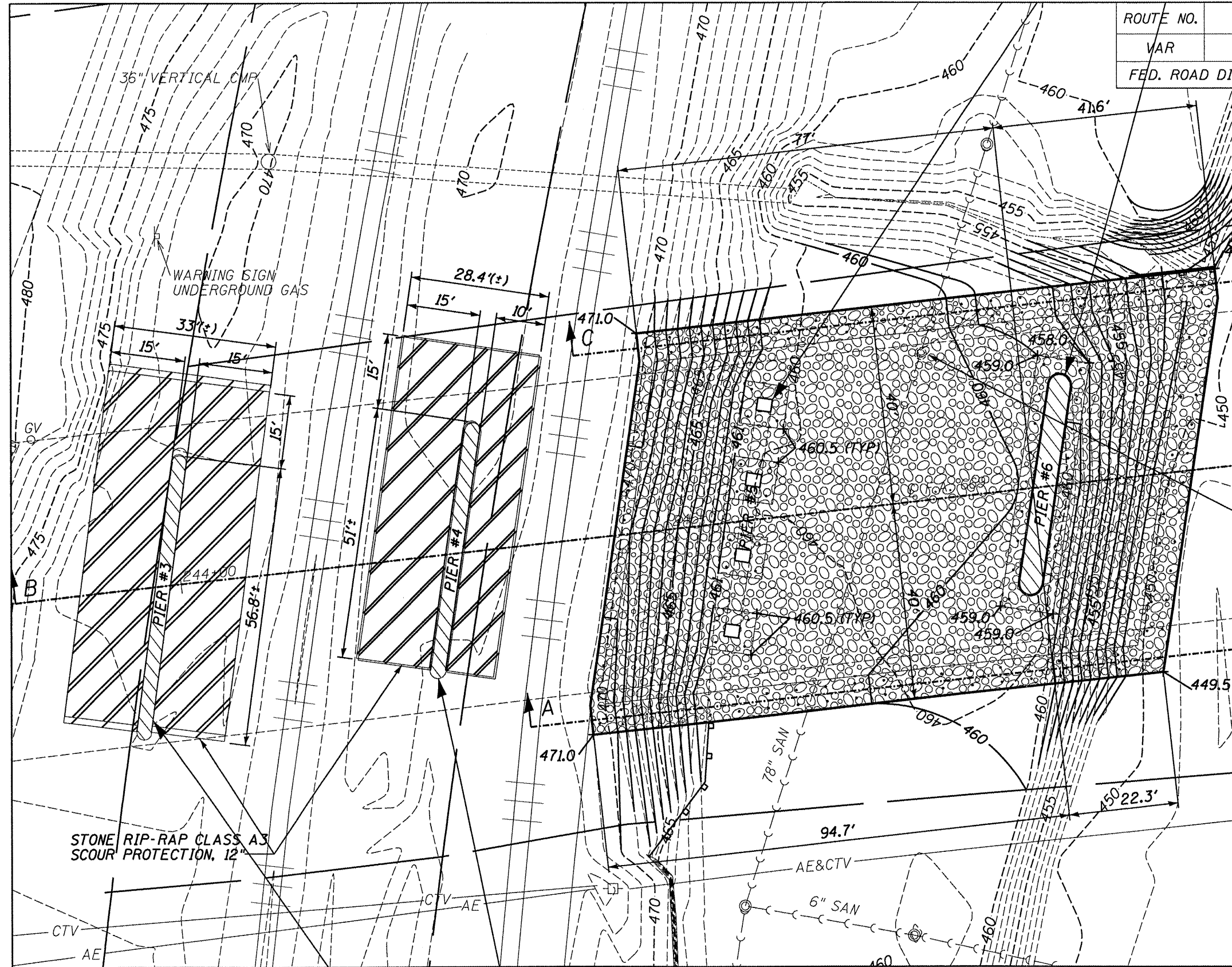
*** D4 SCOUR MITIGATION 2006**
LEGEND

- EXISTING CONTOUR --- 495 ---
- PROPOSED CONTOUR — 495 —
- PROP SPOT ELEVATION 480.5 ↗
- CONCRETE ABUTMENT ▨
- STONE RIPRAP CLASS A5 ▨
- STONE RIP-RAP CLASS A3 SCOUR PROTECTION 12" ▨
- PERIMETER EROSION CONTROL BARRIER ▬
- UTILITY POLE □
- AERIAL ELECTRIC — AE —
- CABLE TELEVISION — CTV —
- SANITARY MANHOLE ○
- SANITARY SEWER — S —

CONTRACTOR TO FIELD LOCATE EXISTING SANITARY MANHOLE AND NOTIFY ENGINEER IF RIM ELEVATION INTERFERES WITH INSTALLATION OF SCOUR COUNTERMEASURES.

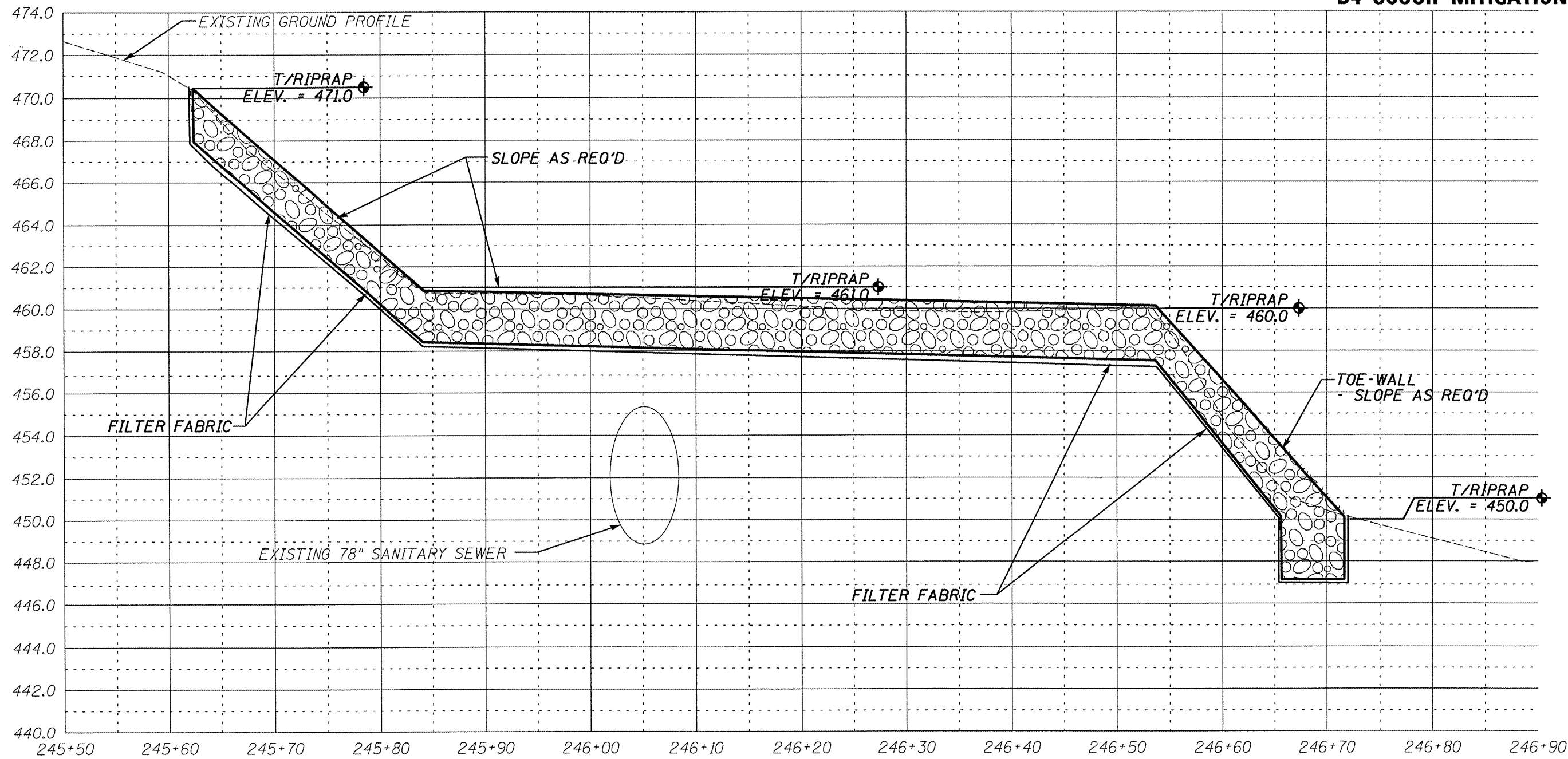


ILLINOIS DEPARTMENT OF TRANSPORTATION
SITE DETAIL WEST
S.N. 072-0037
F.A.P. 669 (IL RTE. 116) OVER
BN & CNW R.R., KICKAPOO CREEK
& CH 77 F.A. RTE. 669
PEORIA COUNTY
SCALE: 1" = 20'
SHEET 3 OF 15



| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 46 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

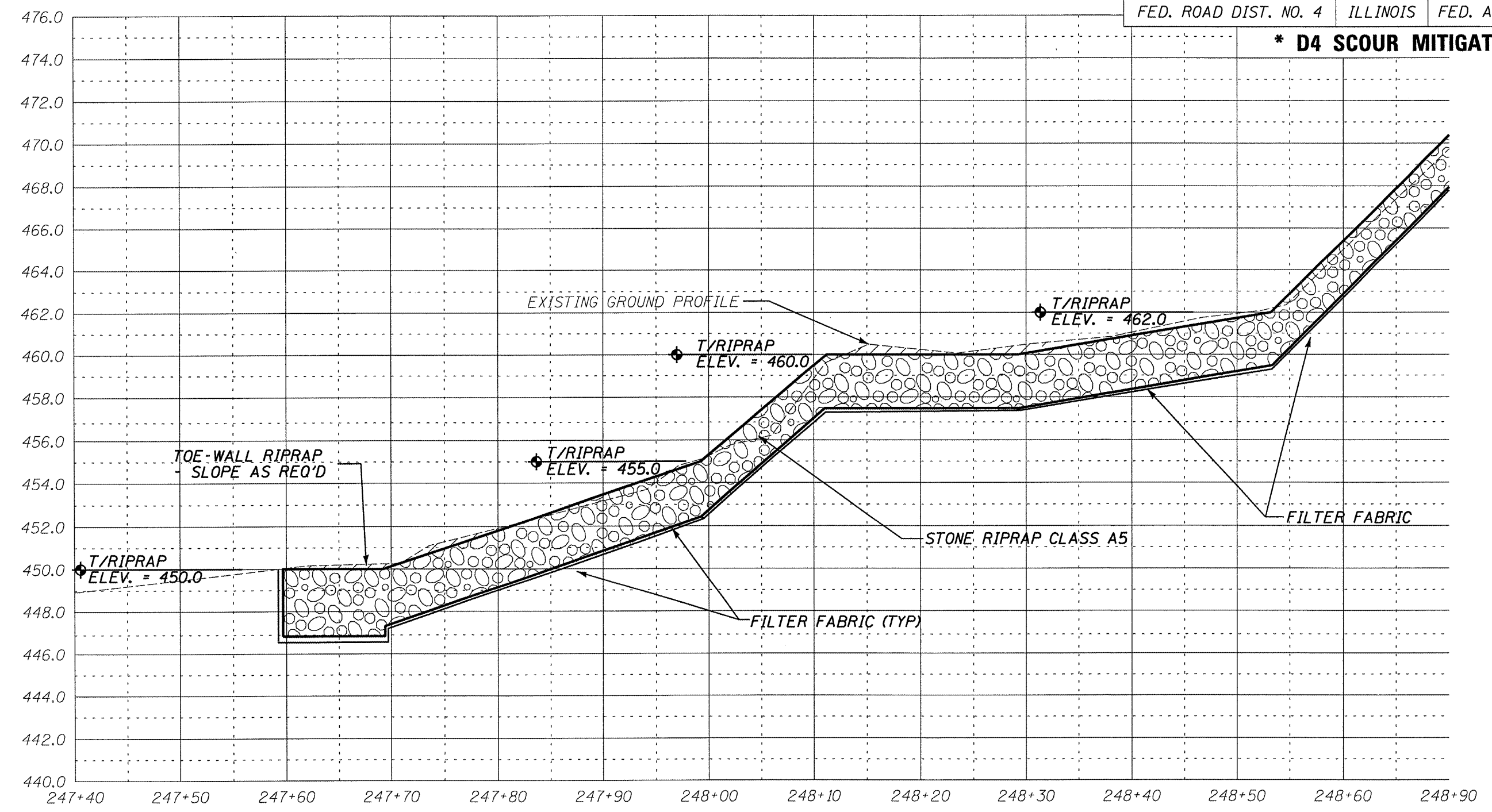


SECTION A-A THROUGH SOUTH END - WEST SECTION

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 5 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 47 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

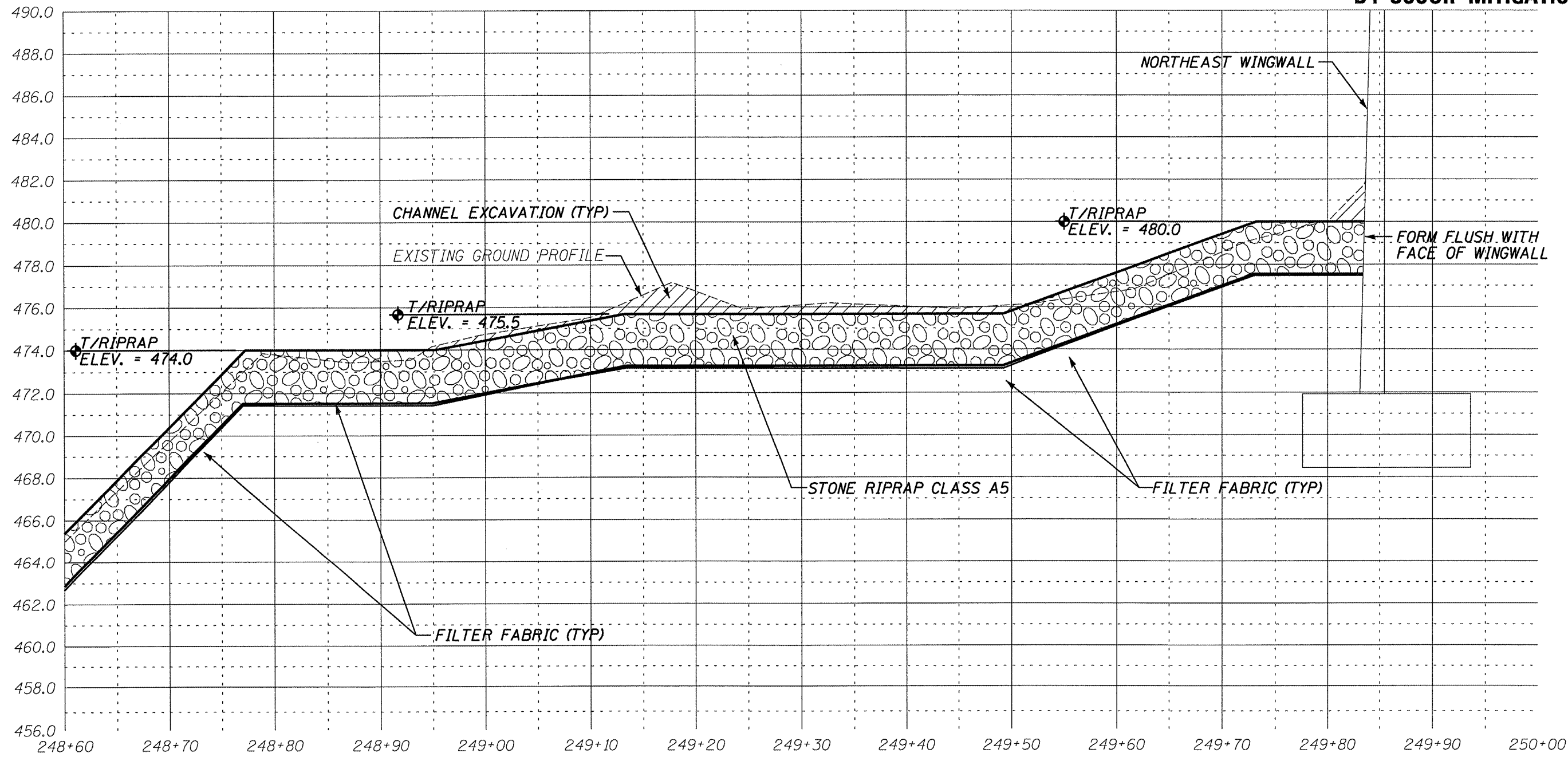


SECTION A-A THROUGH SOUTH END - CENTER SECTION

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 30' SHEET 6 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 48 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION A-A THROUGH SOUTH END - EAST SECTION

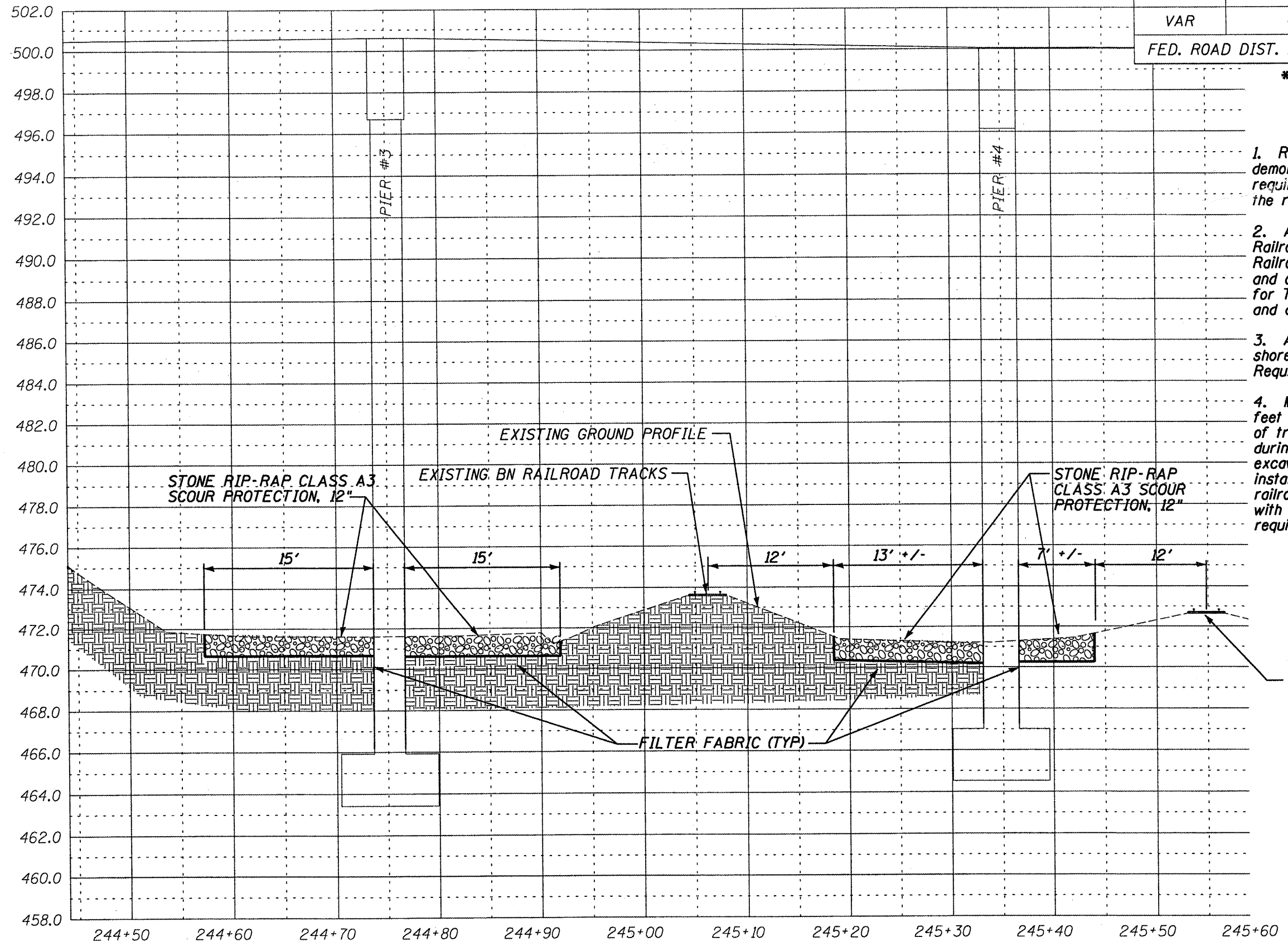
ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 7 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 49 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

NOTES:

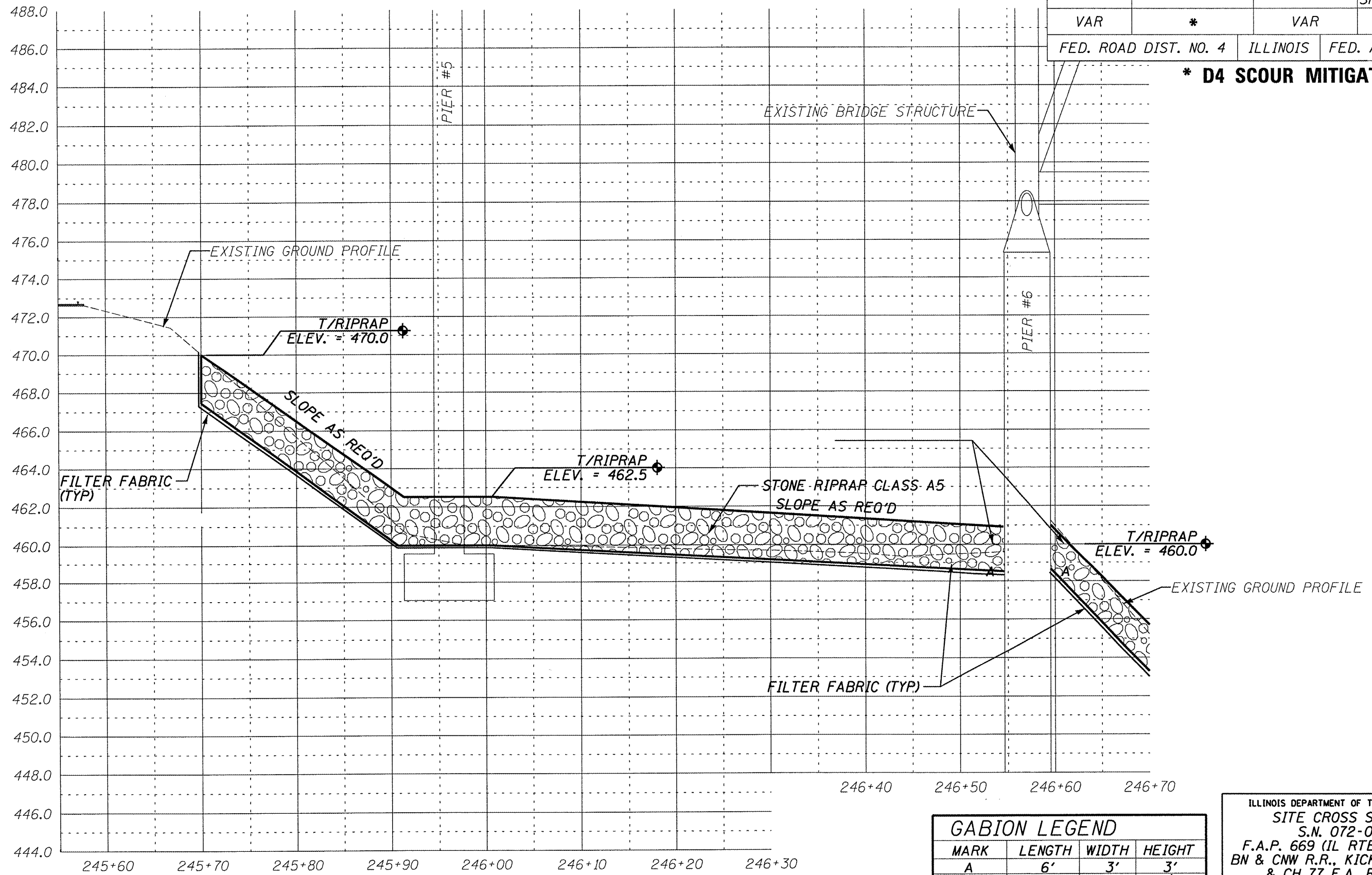
1. Railroad's review and approval of shoring, demolition, erection, and falsework are required and allow minimum of four weeks for the review and approval of each submittal.
2. Any shoring system that impacts the Railroad's operation and/or supports the Railroad's embankment shall be designed and constructed per Railroad Guidelines for Temporary Shoring. Railroad review and approval of shoring is required.
3. All excavation shall be sloped and/or shored per UPRR General Shoring Requirements.
4. Minimum Construction Clearance of 12 feet horizontal at right angle from centerline of track shall be maintained at all time during construction and all work such as excavation of existing embankment and installation of proposed riprap within the railroad right of way must be coordinated with the railroad and executed per railroad requirements.



ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 8 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 50 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

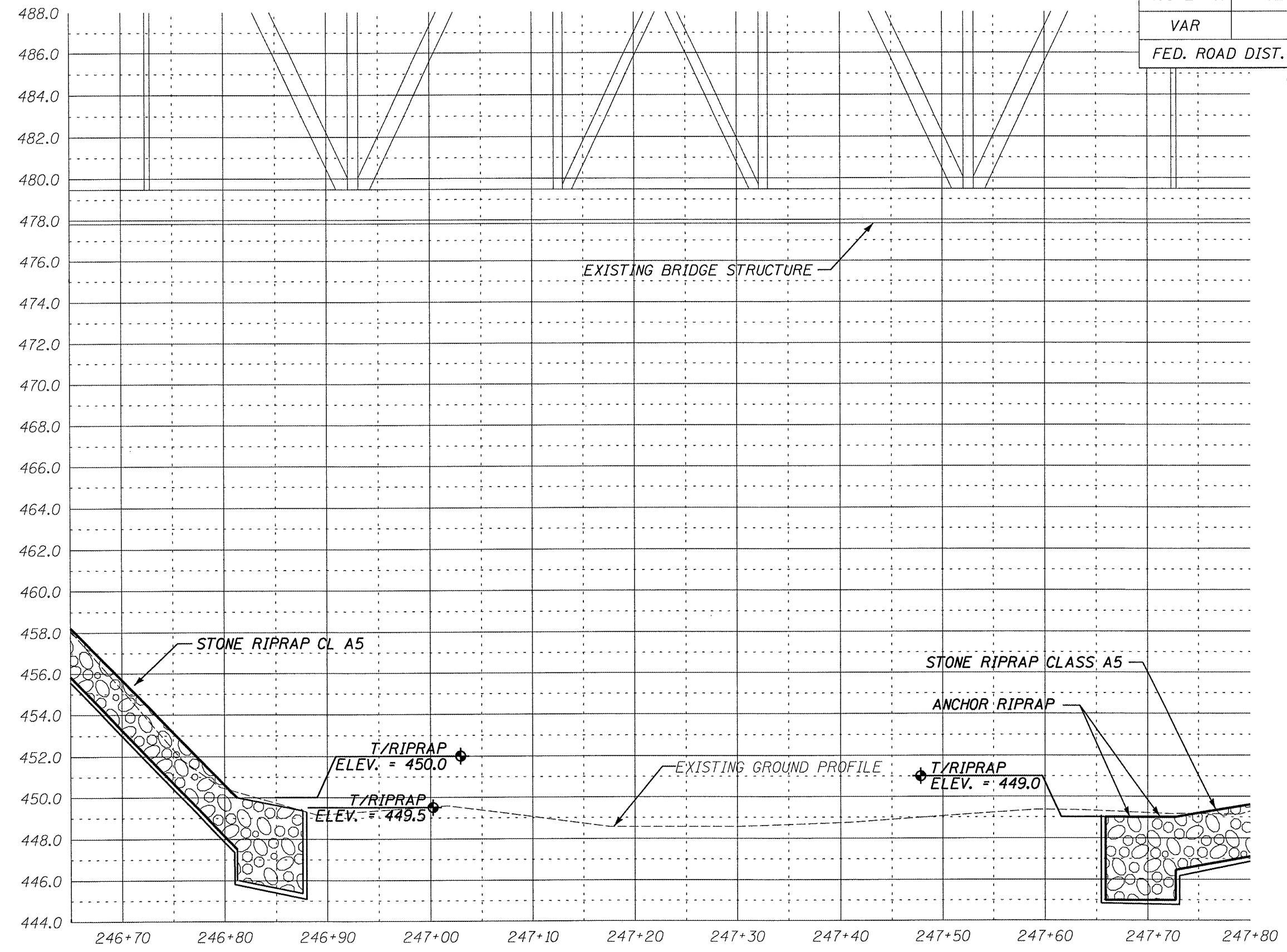


| MARK | LENGTH | WIDTH | HEIGHT |
|------|--------|-------|--------|
| A | 6' | 3' | 3' |
| D | 6' | 3' | 1 1/2' |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 9 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 51 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

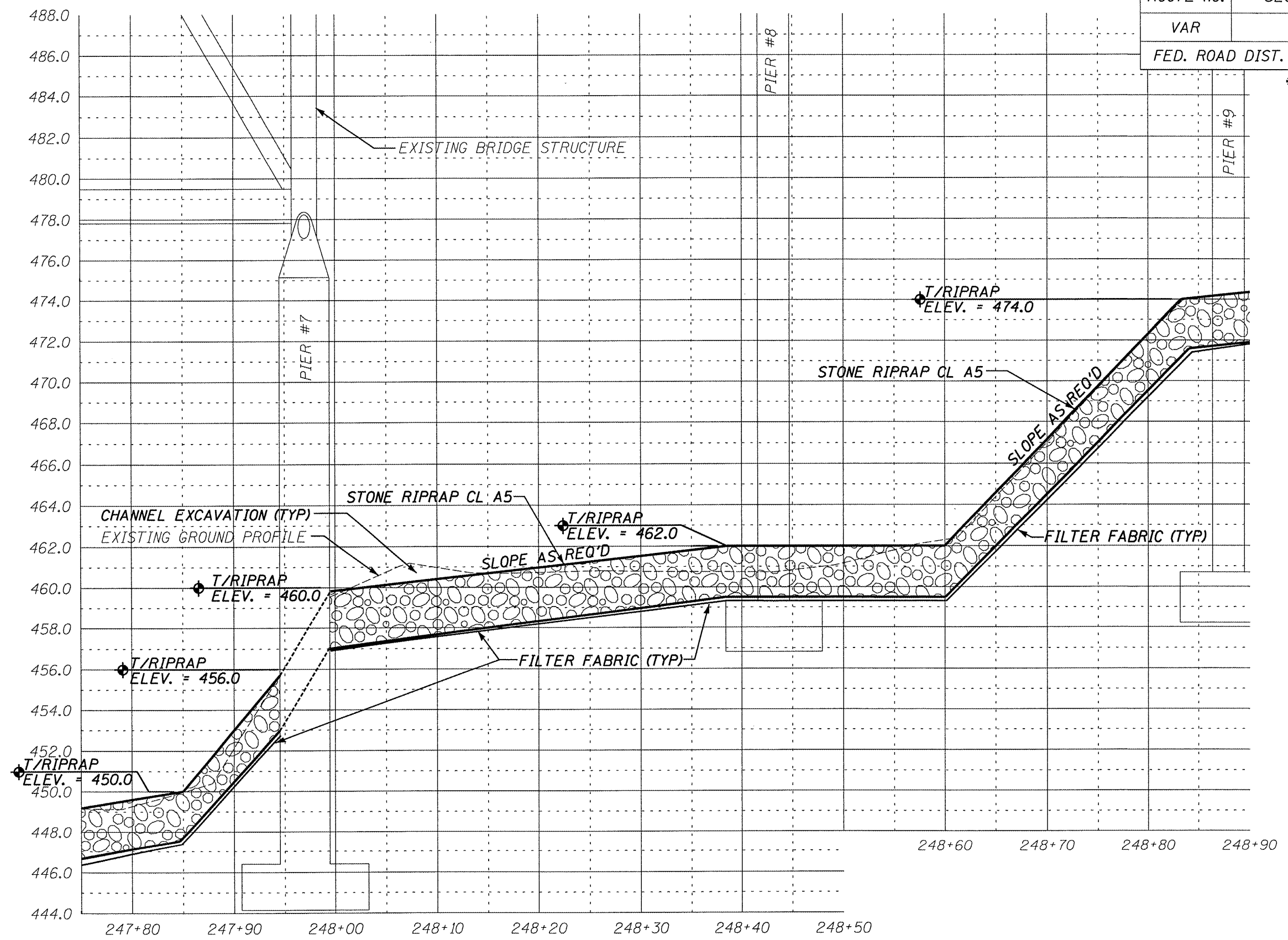
*** D4 SCOUR MITIGATION 2006**



ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 10 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 52 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

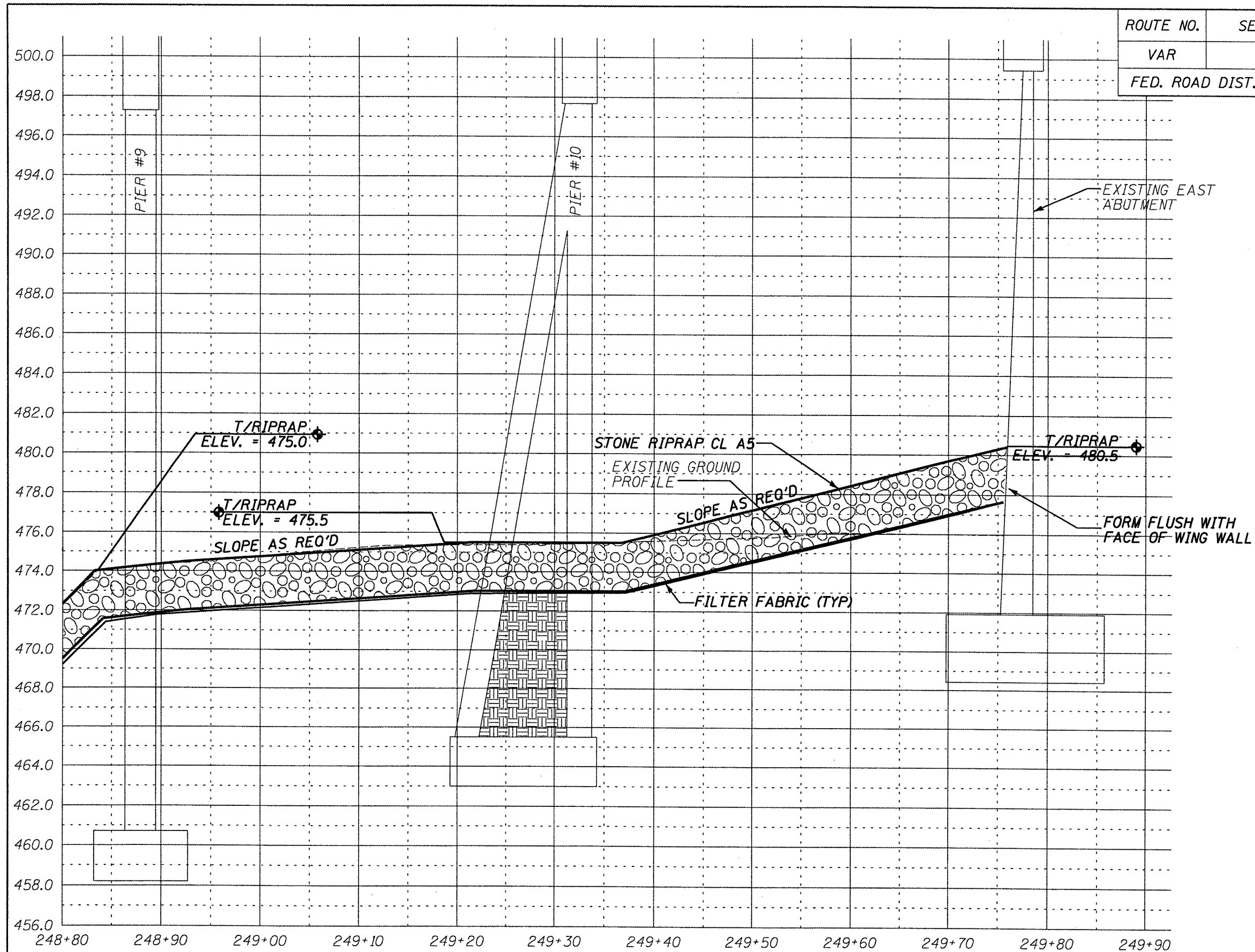
*** D4 SCOUR MITIGATION 2006**



ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 11 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 53 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

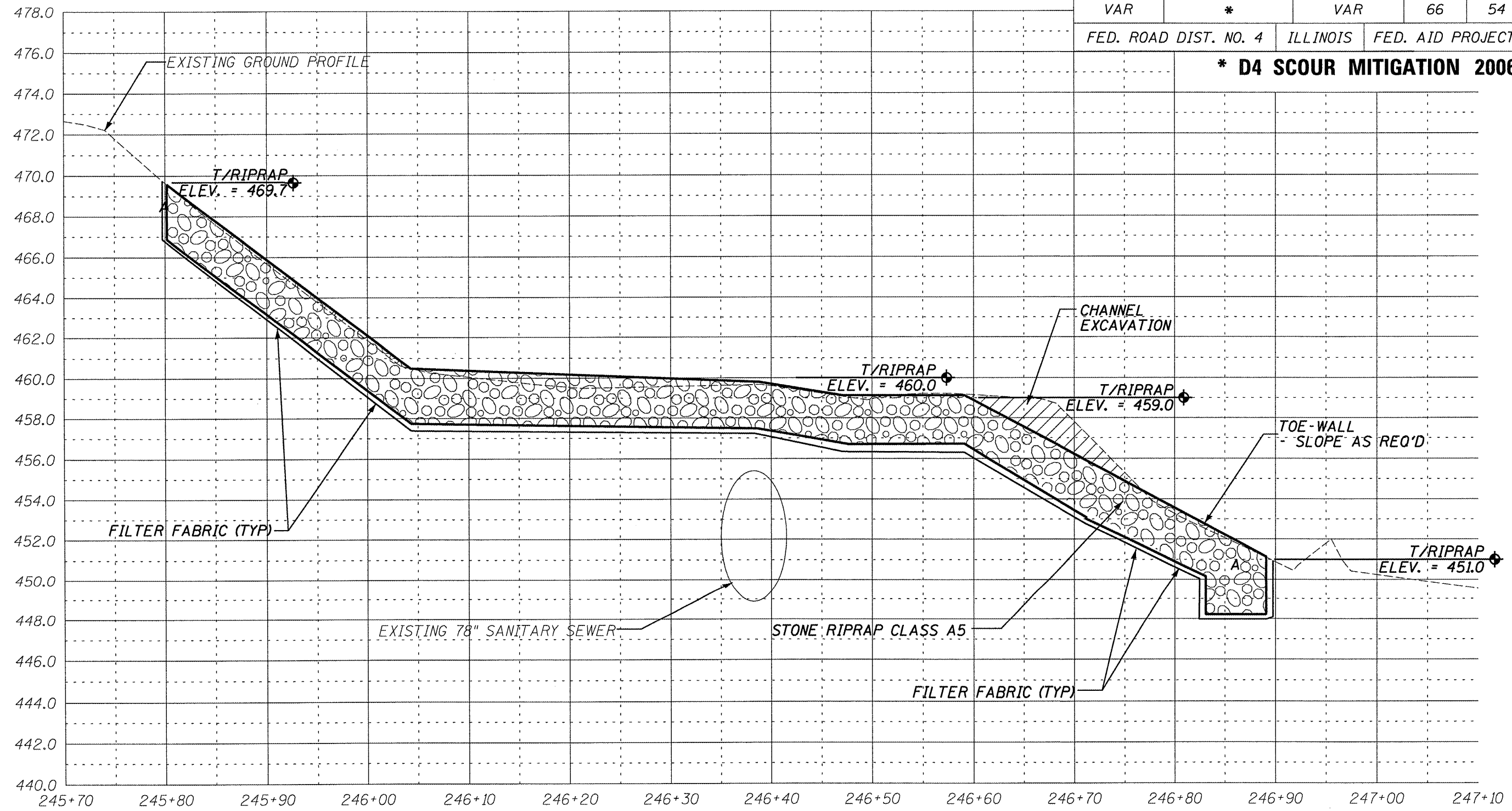
*** D4 SCOUR MITIGATION 2006**



ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 12 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 54 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

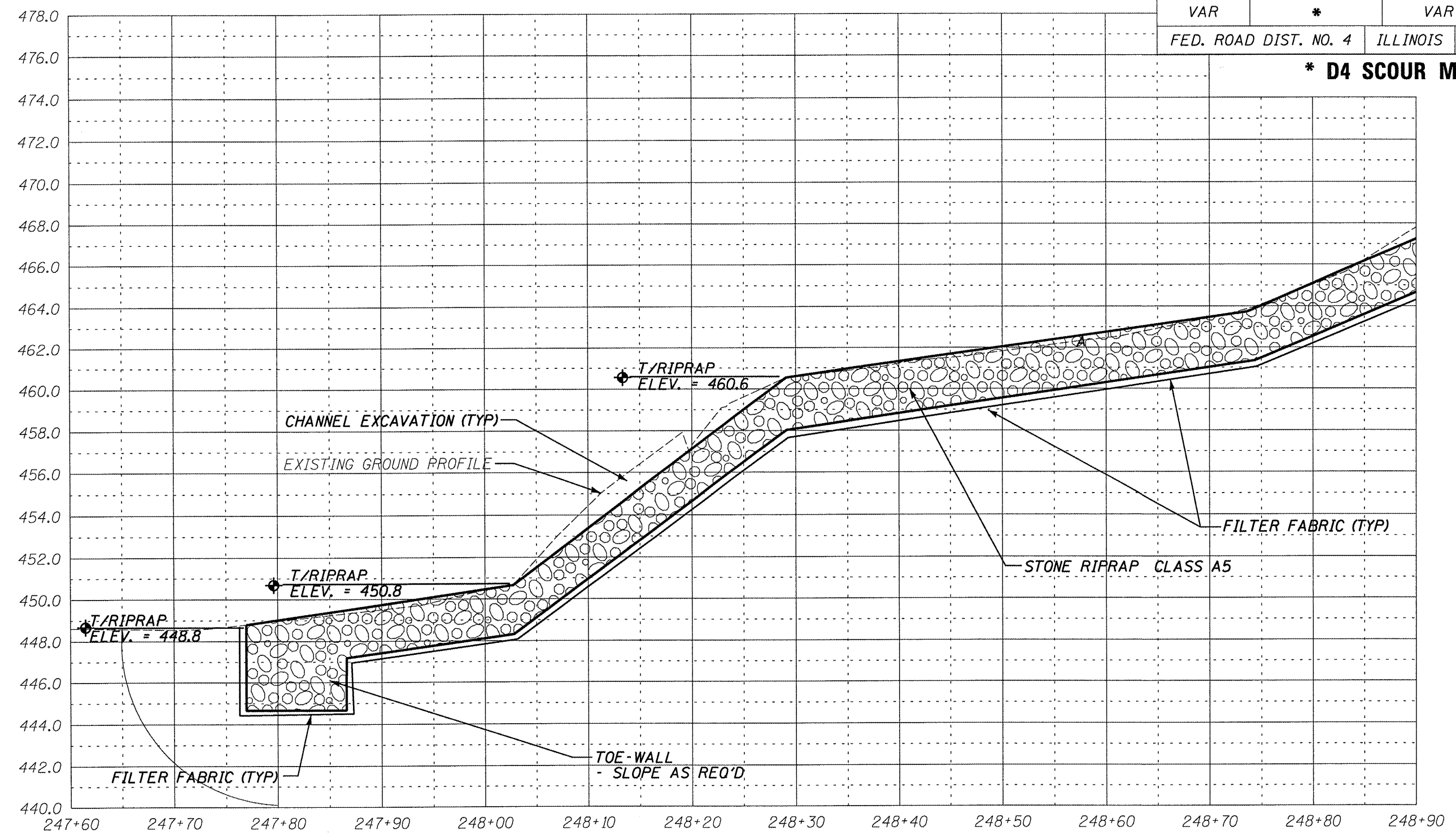


SECTION C-C THROUGH NORTH END - WEST SECTION

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 13 OF 15

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 55 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

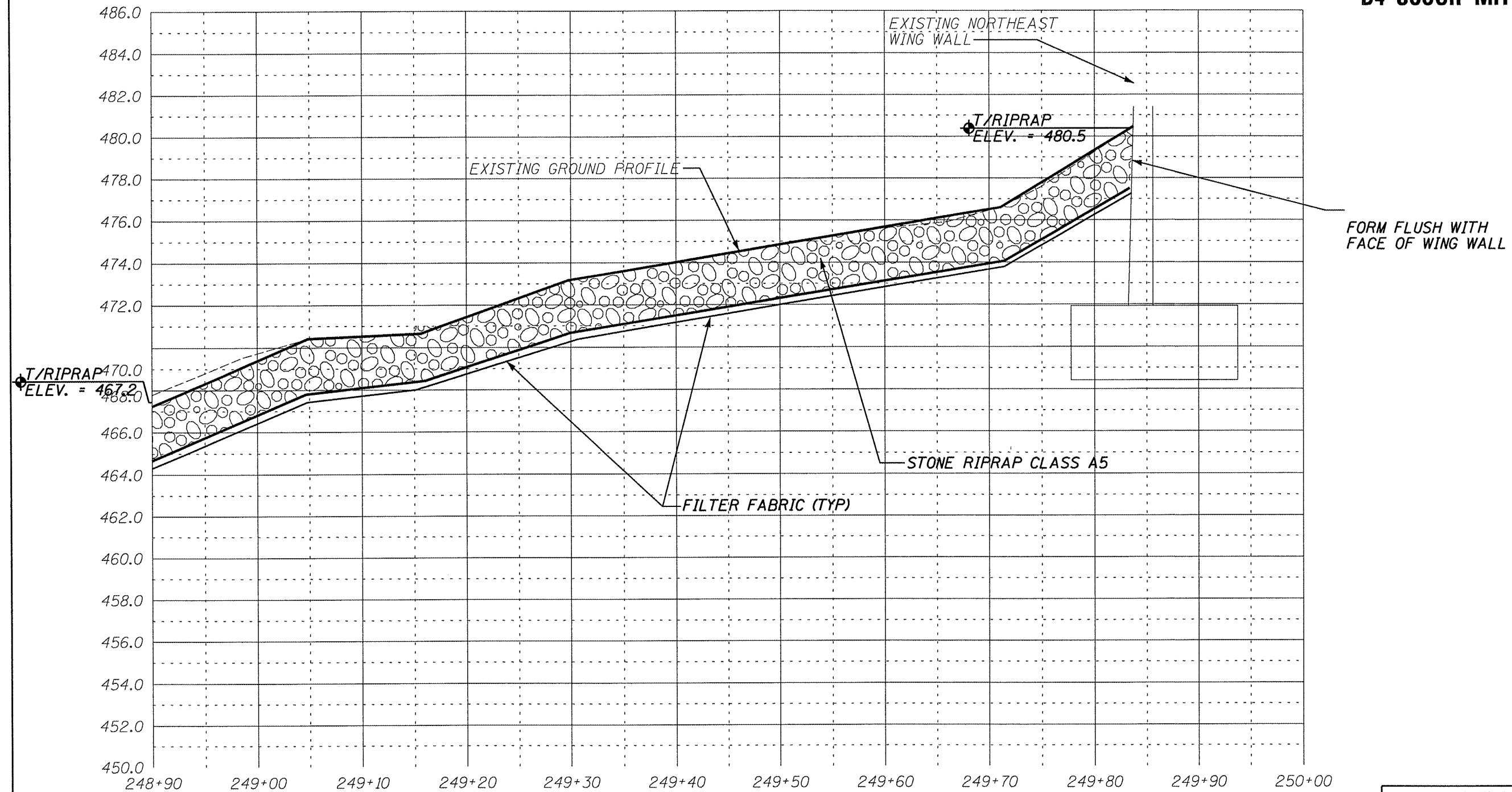


SECTION C-C THROUGH NORTH END - CENTER SECTION

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 14 OF 15

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 56 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION C-C THROUGH NORTH END - EAST SECTION

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 072-0037
 F.A.P. 669 (IL RTE. 116) OVER
 BN & CNW R.R., KICKAPOO CREEK
 & CH 77 F.A. RTE. 669
 PEORIA COUNTY
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10' SHEET 15 OF 15

BENCHMARK: CHISLED "□" ON WINGWALL CORNER
ELEVATION = 502.38

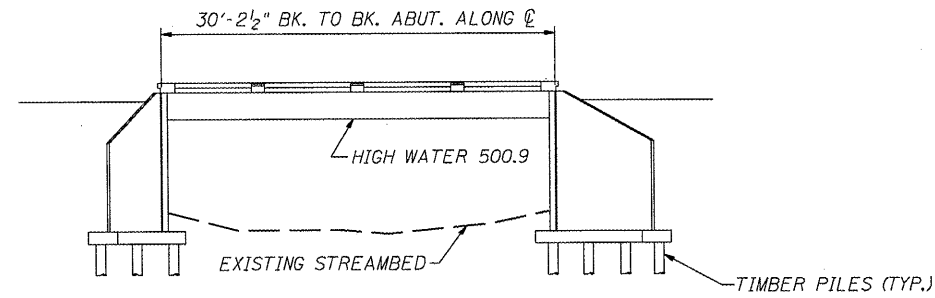
EXISTING STRUCTURE: SN 078-0005 IS A 44'-4" WIDE BY 30'-2½" LONG SUPERSTRUCTURE WITH A TWO-WAY REINFORCED CONCRETE SLAB ON R.C. CLOSED ABUTMENTS.

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 57 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

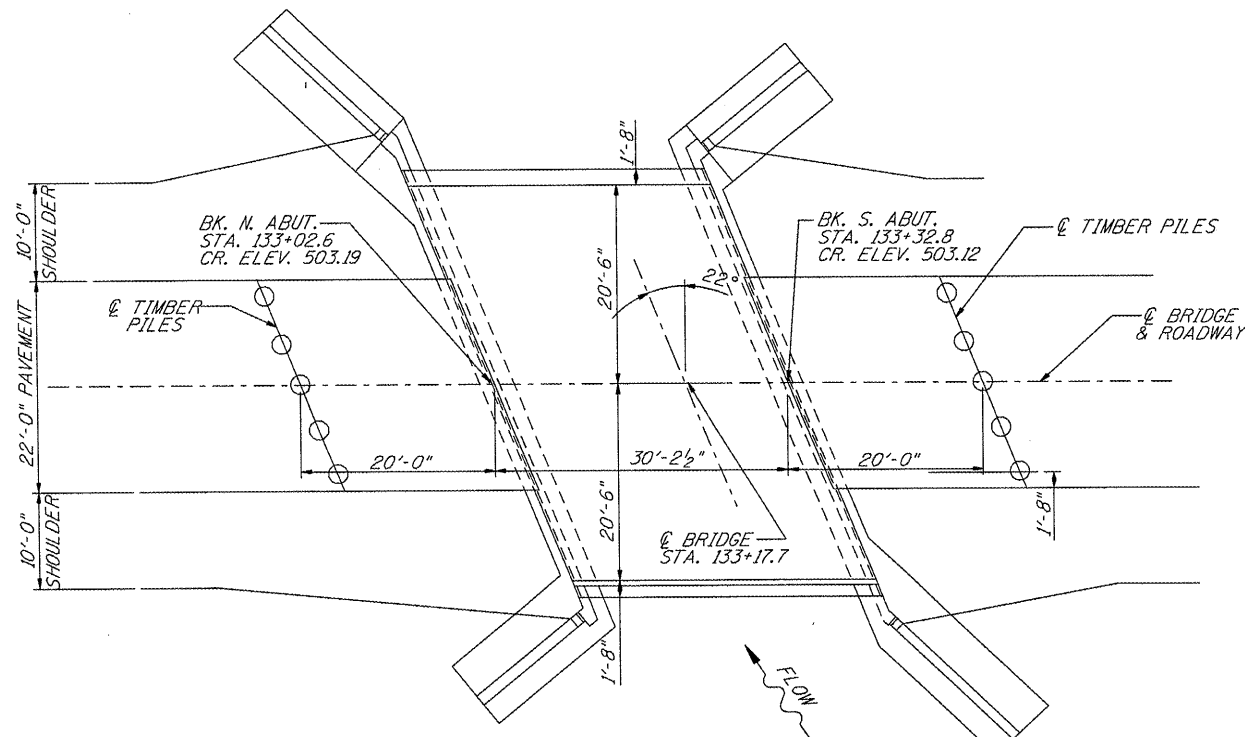
INDEX OF SHEETS

| SHEET NUMBER | DESCRIPTION |
|--------------|---|
| 1 | GENERAL PLAN AND ELEVATION, SUMMARY OF QUANTITIES, LOCATION MAP |
| 2 | R.O.W. PLAN |
| 3 | SITE PLAN |
| 4 | SITE PROFILE |
| 5-7 | SITE CROSS SECTIONS |



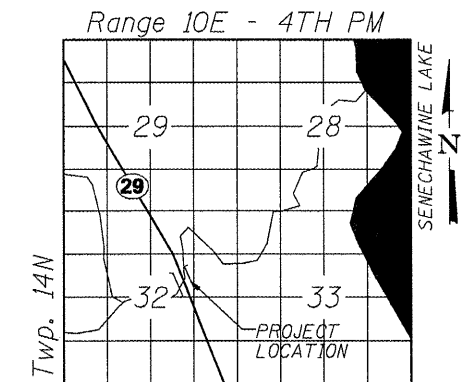
ELEVATION

| BILL OF MATERIALS | | |
|----------------------------|-------|-------|
| ITEM | UNIT | TOTAL |
| CHANNEL EXCAVATION | CU YD | 20 |
| STONE RIP-RAP, CLASS A5 | TONS | 867 |
| FILTER FABRIC | SQ YD | 700 |
| DEWATERING STRUCTURE NO. 6 | EACH | 1 |
| | | |
| | | |
| | | |



PLAN
EXISTING BRIDGE

DAVID L. MAURER
062-030577
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
David L. Maurer
David L. Maurer, P.E.
Exp. Date 11/2009
P.E. No.: 062-030577



LOCATION SKETCH

WATERWAY/SCOUR INFORMATION

| | |
|-------------------------|-----------|
| DESIGN FLOOD | 100 YRS |
| DRAINAGE AREA | 5.5 SQ MI |
| FLOW | 2,520 CFS |
| FLOW DEPTH | 12.9 FT |
| REQUIRED OPENING | 229 SQ FT |
| PROVIDED OPENING | 300 SQ FT |
| CONTRACTION SCOUR DEPTH | 96 FT |

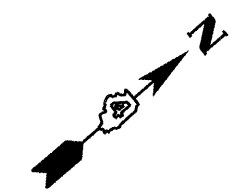
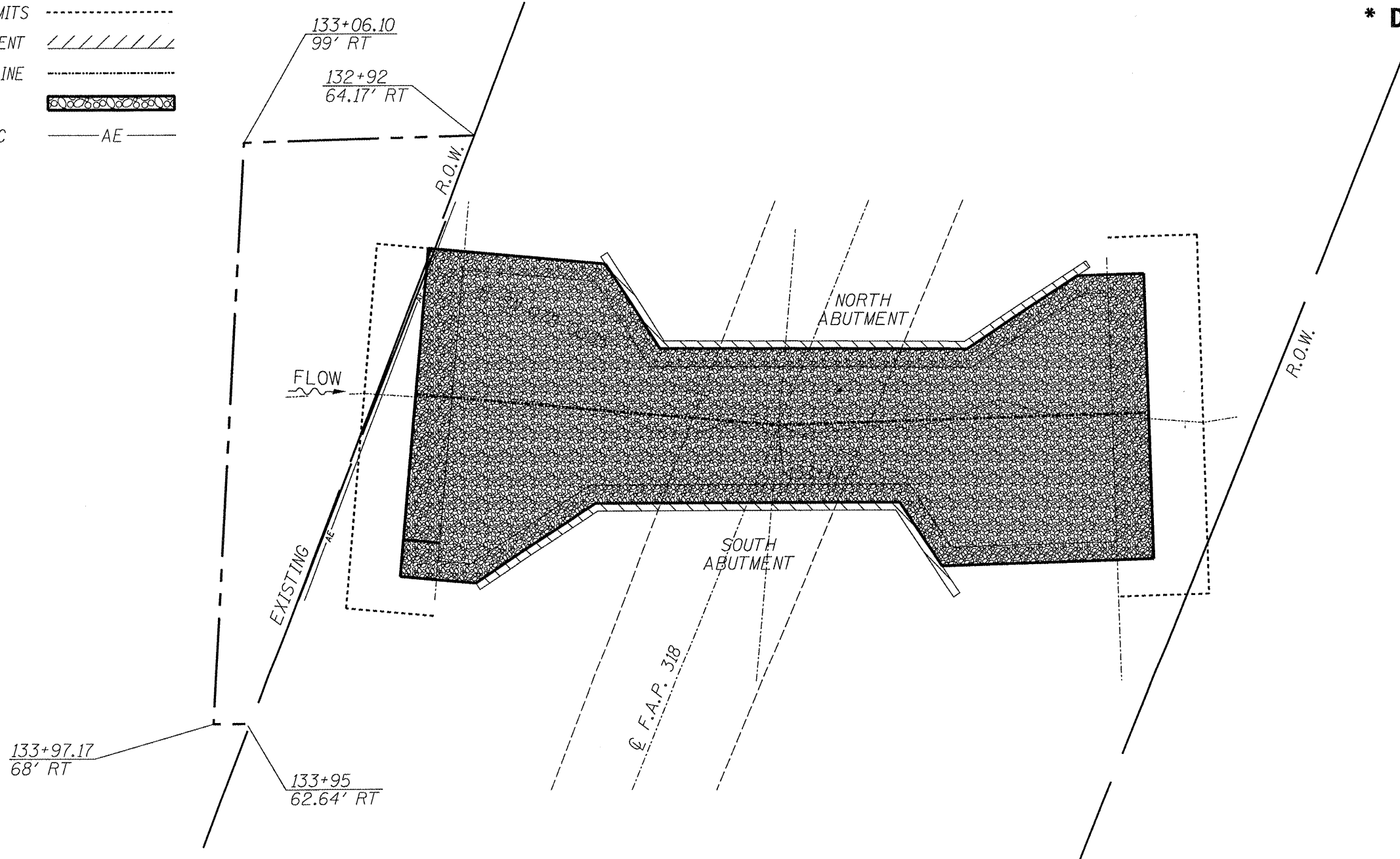
ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN & ELEVATION
S.N. 078-0005
F.A.P. 318 (IL 29)
OVER ILL. RIVER TRIBUTARY
PUTNAM COUNTY
SHEET 1 OF 7

LEGEND

- R.O.W.
- PROPOSED R.O.W. LINE
- CONSTRUCTION LIMITS
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- RIPRAP
- AERIAL ELECTRIC

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 58 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

* D4 SCOUR MITIGATION 2006

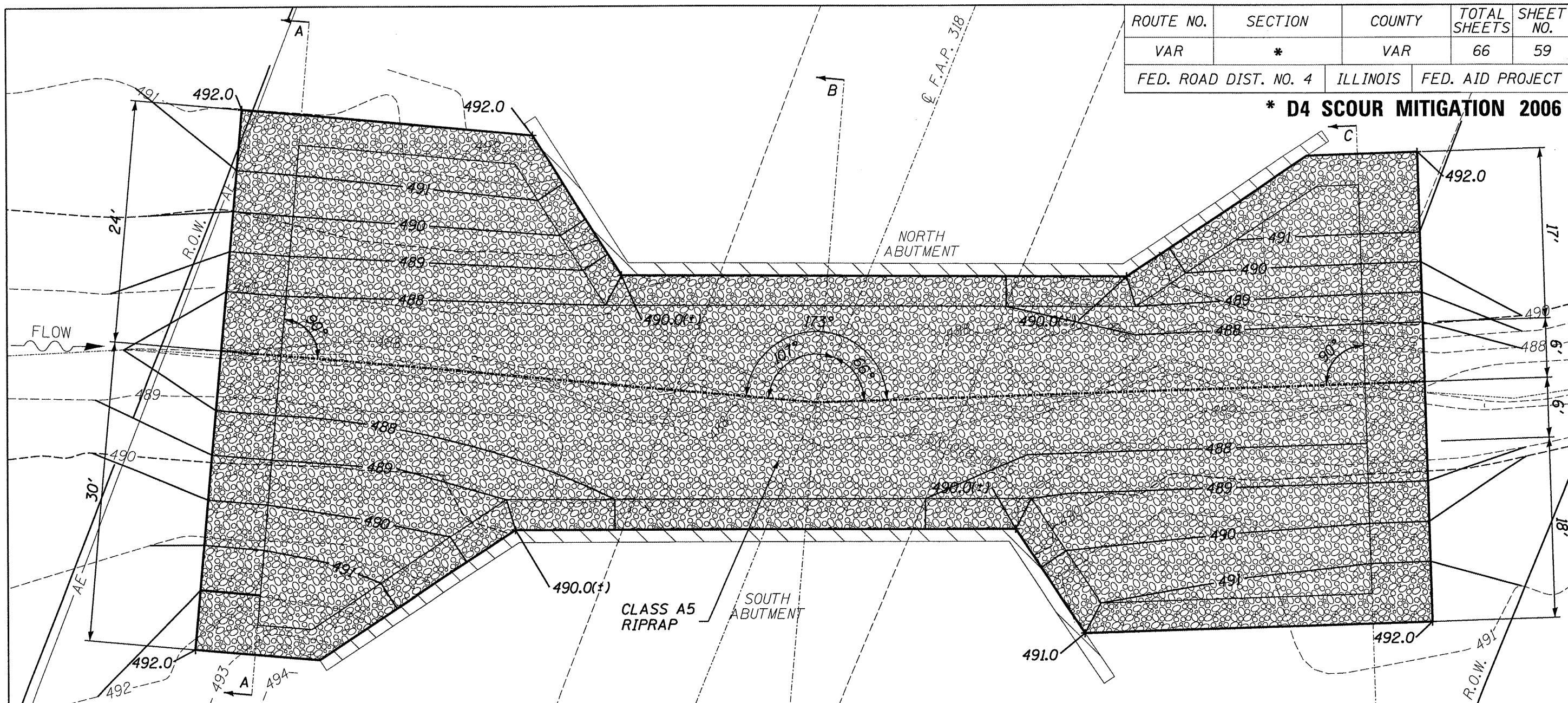


ILLINOIS DEPARTMENT OF TRANSPORTATION
 R.O.W. PLAN
 S.N. 078-0005
 F.A.P. 318 (IL 29)
 OVER ILL. RIVER TRIBUTARY
 PUTNAM COUNTY
 SHEET 2 OF 7

SCALE: 1" = 20'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 59 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

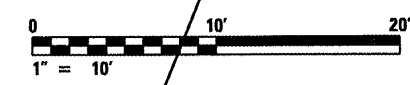
*** D4 SCOUR MITIGATION 2006**



LEGEND

- R.O.W. _____
- EXISTING CONTOUR - - - - 475 - - - -
- PROPOSED CONTOUR ——— 475 ———
- CONCRETE ABUTMENT // // // //
- STREAM CENTERLINE - - - - -
- RIPRAP [Pattern]
- AERIAL ELECTRIC ——— AE ———

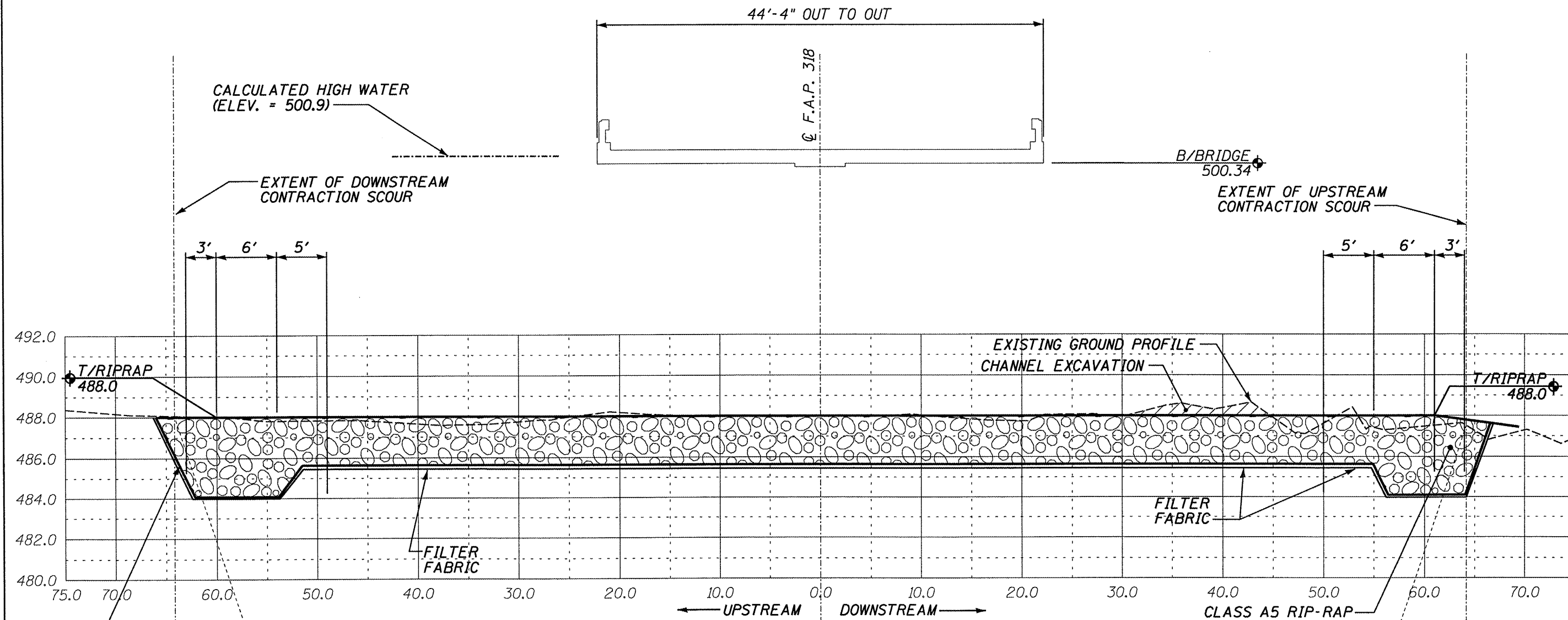
GENERAL NOTES:
 1. STREAMBED IS TYPICALLY DRY.
 IF WATER IS PRESENT DURING
 CONSTRUCTION, METHOD OF DEWATERING
 IS AT THE DISCRETION OF THE CONTRACTOR



ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED SITE PLAN
 S.N. 078-0005
 F.A.P. 318 (IL 29)
 OVER ILL. RIVER TRIBUTARY
 PUTNAM COUNTY
 SCALE: 1" = 10' SHEET 3 OF 7

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 60 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

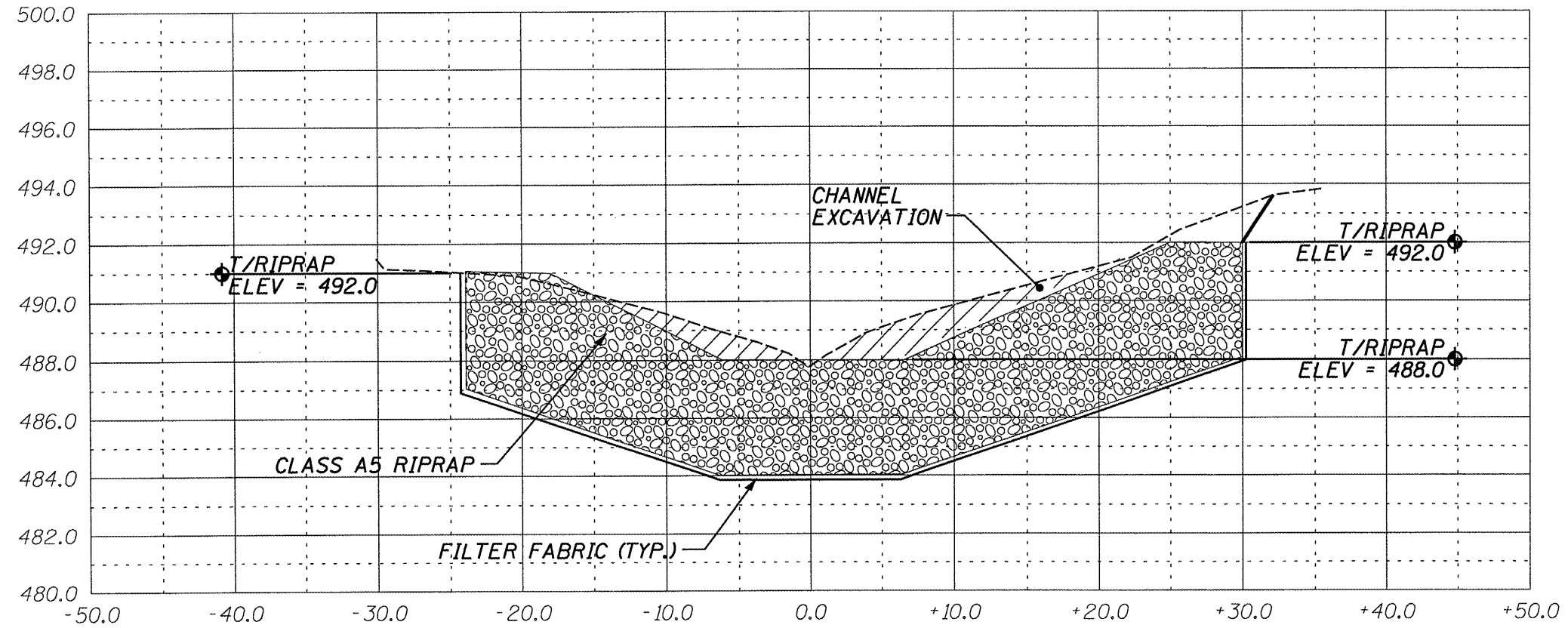


CALCULATED OPENING: 42 FT
 MAXIMUM SCOUR CALCULATION:
 CONTRACTION SCOUR = 96 FT

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE PROFILE
 S.N. 078-0005
 F.A.P. 318 (IL 29)
 OVER ILL. RIVER TRIBUTARY
 PUTNAM COUNTY
 SHEET 4 OF 7
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 61 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

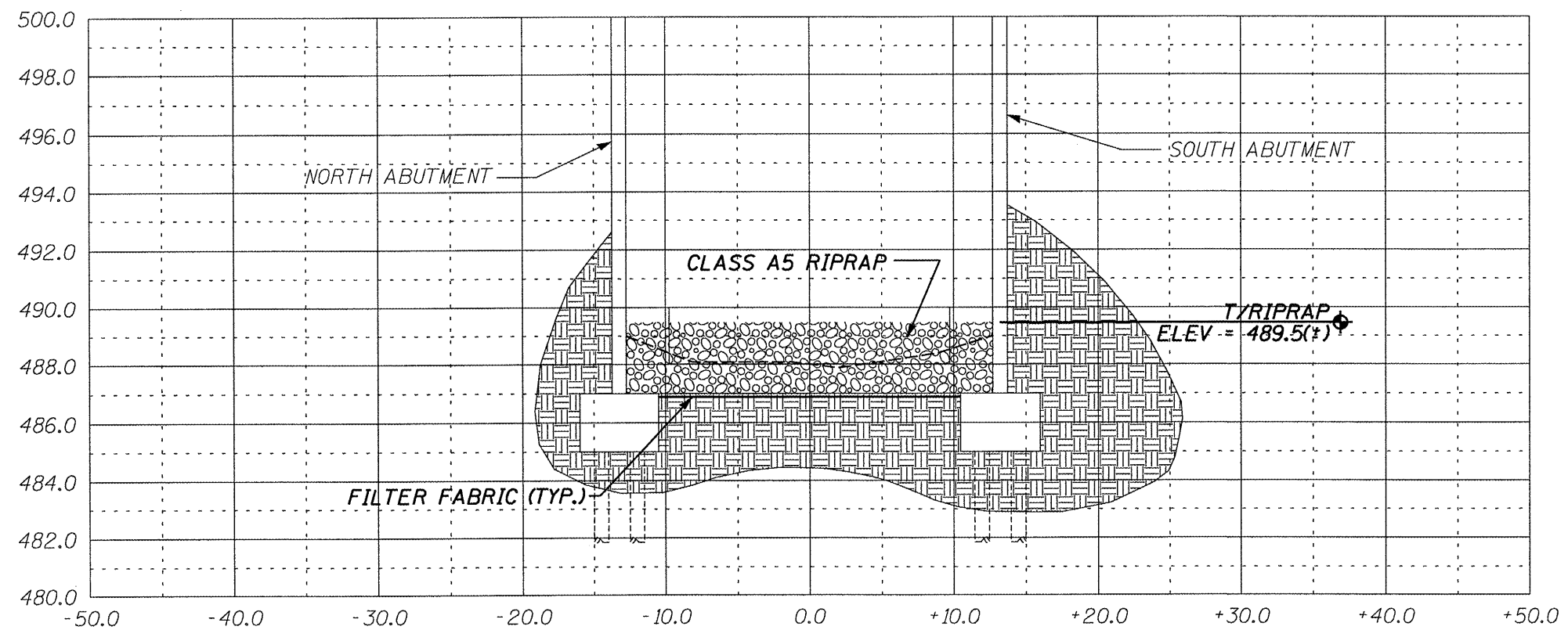


SECTION A-A

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 078-0005
 F.A.P. 318 (IL 29)
 OVER ILL. RIVER TRIBUTARY
 PUTNAM COUNTY
 SHEET 5 OF 7
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 62 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



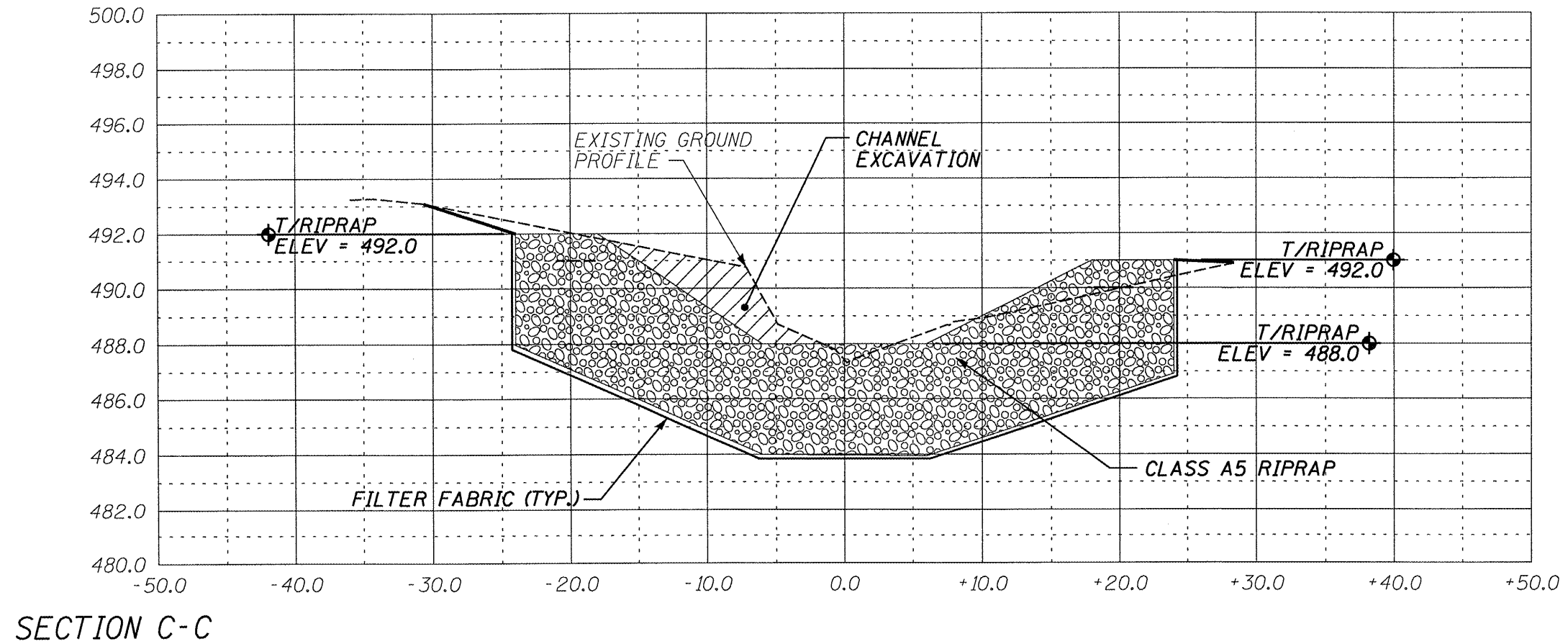
SECTION B-B THROUGH ϕ S.B.I. ROUTE 29

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 078-0005
 F.A.P. 318 (IL 29)
 OVER ILL. RIVER TRIBUTARY
 PUTNAM COUNTY
 SHEET 6 OF 7

SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 63 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**



SECTION C-C

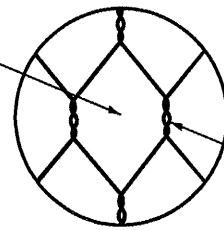
ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 078-0005
 F.A.P. 318 (IL 29)
 OVER ILL. RIVER TRIBUTARY
 PUTNAM COUNTY
 SHEET 7 OF 7
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

SUGGESTED INSTALLATION SEQUENCE

(SEE ALSO SECTION 284 OF THE STANDARD SPECIFICATIONS)

- INDIVIDUALLY ASSEMBLE THE EMPTY GABION BASKET UNITS.
- POSITION THE INITIAL LINE OF EMPTY GABION BASKET UNITS ON THE PREPARED SURFACE IN A DIRECTION PERPENDICULAR TO STREAM FLOW. SECURE ADJOINING BASKETS AND PARTIALLY FILL TO PROVIDE ANCHORAGE AGAINST DEFORMATION AND DISPLACEMENT DURING FILLING OPERATIONS.
- POSITION AND SECURE THE REMAINING EMPTY GABION BASKET UNITS ON THE PREPARED SURFACE AS SHOWN ON THE PLANS.
- PLACE THE BASKETS IN TENSION AND STRETCH TO REMOVE ANY KINKS FROM THE FABRIC. STRETCH THE EMPTY GABION BASKET UNITS IN A MANNER THAT WILL PREVENT UNRAVELING.
- FILL THE BASKET UNITS IN STAGES TO PREVENT LOCALIZED DEFORMATION. INTERNAL CONNECTING WIRES SHALL BE INSTALLED BETWEEN STONE LAYERS TO CONNECT THE FRONT FACE OF THE BASKET UNIT TO THE BACK FACE. AT NO TIME SHALL ANY CELL BE FILLED TO A DEPTH EXCEEDING 12 INCHES MORE THAN THE ADJOINING CELL. THE MAXIMUM HEIGHT FROM WHICH THE STONE MAY BE DROPPED INTO THE BASKET SHALL BE 3 FT.
- TIGHTLY STRETCH THE LID OVER THE STONE FILL USING A LID CLOSING TOOL APPROVED BY THE MANUFACTURER. USING CROWBARS OR OTHER SINGLE POINT LEVERAGE BARS FOR LID CLOSING SHALL BE PROHIBITED. TIGHTLY SECURE THE LID TO THE FILLED BASKET ALONG ALL EDGES, ENDS AND INTERNAL CELL DIAPHRAGMS.
- IN LIEU OF FILLING BASKETS IN PLACE, THE BASKETS MAY BE PREFILLED ON A LEVEL SURFACE AS INDICATED IN STEPS 5 AND 6. THE BASKETS CAN THEN BE LIFTED AND PLACED ON THE PREPARED SURFACE USING A MANUFACTURER'S APPROVED LIFTING TECHNIQUE. CARE SHALL BE TAKEN NOT TO ABRASE THE ZINC OR VINYL COATING OR PERMANENTLY DISTORT THE SHAPE OF THE BASKET IN TRANSPORTATION. ANY DAMAGE TO THE BASKETS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER. BASKETS SHALL BE PLACED TIGHTLY AGAINST AND SECURED TO BASKETS ALREADY IN PLACE.
- WHERE A COMPLETE GABION UNIT CANNOT BE INSTALLED AS SHOWN ON THE PLANS BECAUSE OF SPACE LIMITATIONS, THE BASKET UNIT SHALL BE CUT, FOLDED AND WIRED TOGETHER TO SUIT EXISTING SITE CONDITIONS.

FABRIC OPENING
NOMINAL DIMENSIONS
3 1/4" x 4 1/2"

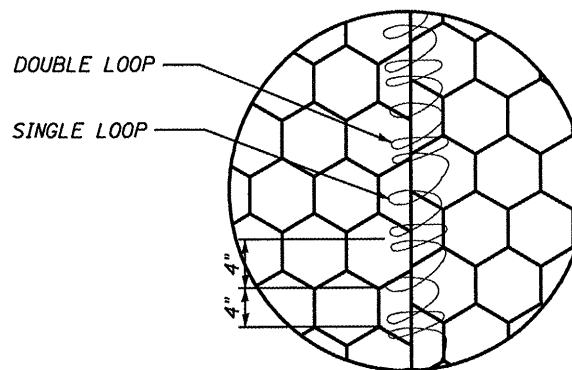


HEXAGONAL MESH
FABRIC WITH AT LEAST
THREE HALF TWISTS

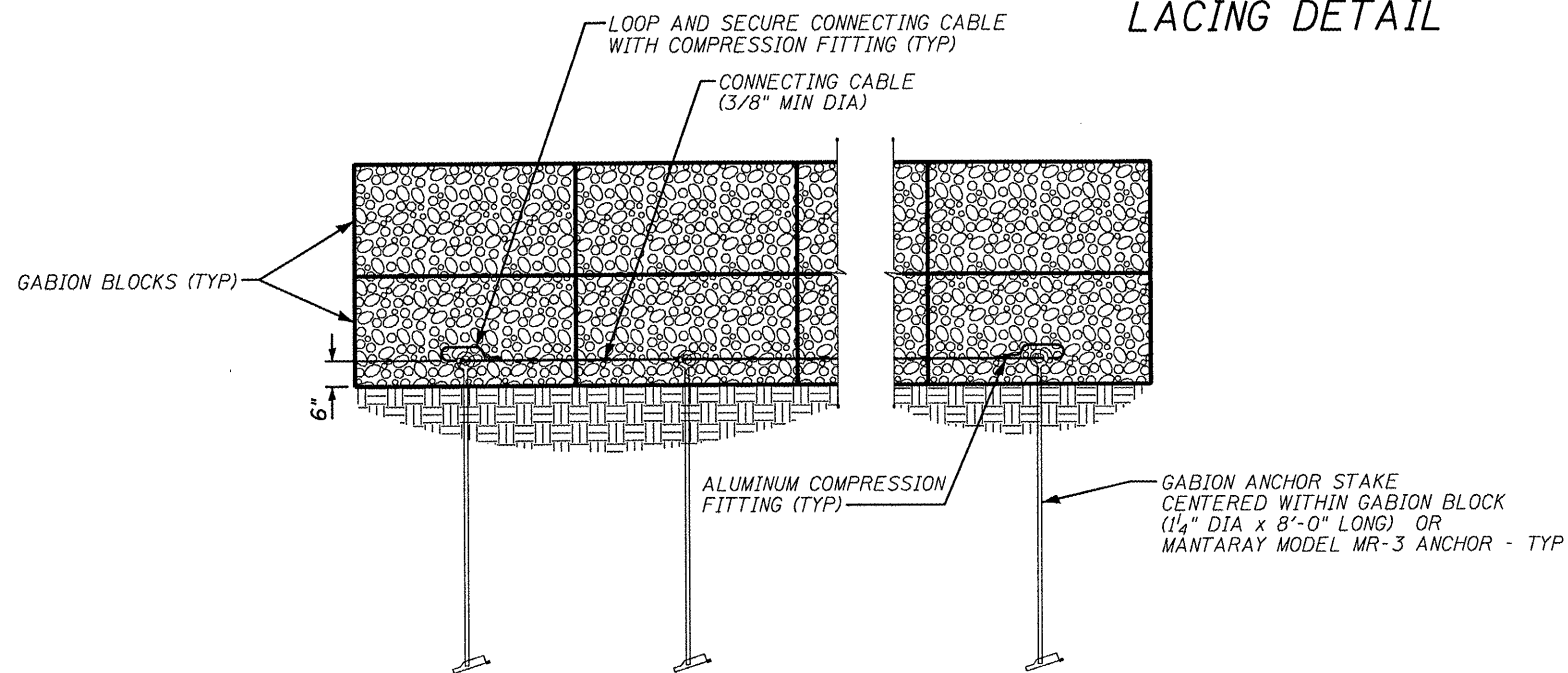
NOTES:

- GABION BASKETS SHALL BE CONSTRUCTED OF A GALVANIZED, ALUMINIZED, OR PVC-COATED GALVANIZED OR ALUMINIZED STEEL WIRE.
- STEEL WIRE SHALL CONFORM TO SECTION 1006.35 OF THE STANDARD SPECIFICATIONS

GABION FABRIC DETAIL



LACING DETAIL



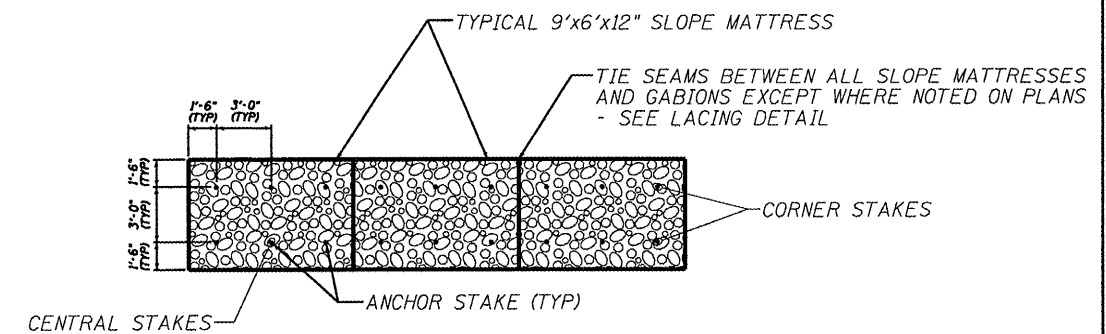
GABION ANCHOR STAKE SECURING DETAIL

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 64 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

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GABION BASKET NOTES:

- BASKETS SHALL BE OF SINGLE UNIT CONSTRUCTION. THE BASE, LID, ENDS AND SIDES SHALL BE EITHER WOVEN INTO A SINGLE UNIT OR ONE EDGE OF THESE MEMBERS CONNECTED TO THE BASE SECTION OF THE BASKETS. FOR PROPER ASSEMBLY, SEE LACING DETAIL.
- DIAPHRAGMS SHALL EQUALLY DIVIDE BASKETS WHERE THE LENGTH OF THE BASKET EXCEEDS 1/2 IT'S HORIZONTAL LENGTH.
- GABION BASKET ASSEMBLY, INSTALLATION, FILLING AND LID-CLOSING SHALL BE IN ACCORDANCE WITH SECTION 284 OF THE STANDARD SPECIFICATIONS.



NOTES:

- ANCHOR STAKES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 284 OF THE STANDARD SPECIFICATIONS.
- ANCHOR STAKES ARE TO BE PLACED ON THREE-FOOT CENTERS, WITH AN ARRANGEMENT AS SHOWN ABOVE, FOR ALL SLOPE MATRESSES LAID ON A SLOPE OF 2:1 OR GREATER.
- ANCHOR STAKES FOR SLOPE MATRESSES LAID ON SLOPE LESS THAN 2:1 AND GREATER THAN 10% SHALL OMIT THE CENTRAL STAKES SHOWN ABOVE - 4 STAKES PER 6'x9' MATRESS.
- ALL SLOPE MATRESSES LAID ON SLOPES LESS THAN 10% SHALL NOT HAVE ANCHOR STAKES.

TYPICAL ANCHOR STAKE LAYOUT DETAIL

| GABION LEGEND | | | |
|---------------|--------|-------|--------|
| MARK | LENGTH | WIDTH | HEIGHT |
| A | 6' | 3' | 3' |
| B | 9' | 3' | 3' |
| C | 12' | 3' | 3' |
| D | 6' | 3' | 1 1/2' |
| G | 6' | 3' | 1' |
| H | 9' | 3' | 1' |

ILLINOIS DEPARTMENT OF TRANSPORTATION

GABION DETAILS
SECTION D4 SCOUR
MITIGATION 2006
VARIOUS ROUTES
VARIOUS COUNTIES

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------|---------|----------|------------------|-----------|
| VAR | * | VAR | 66 | 65 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2006**

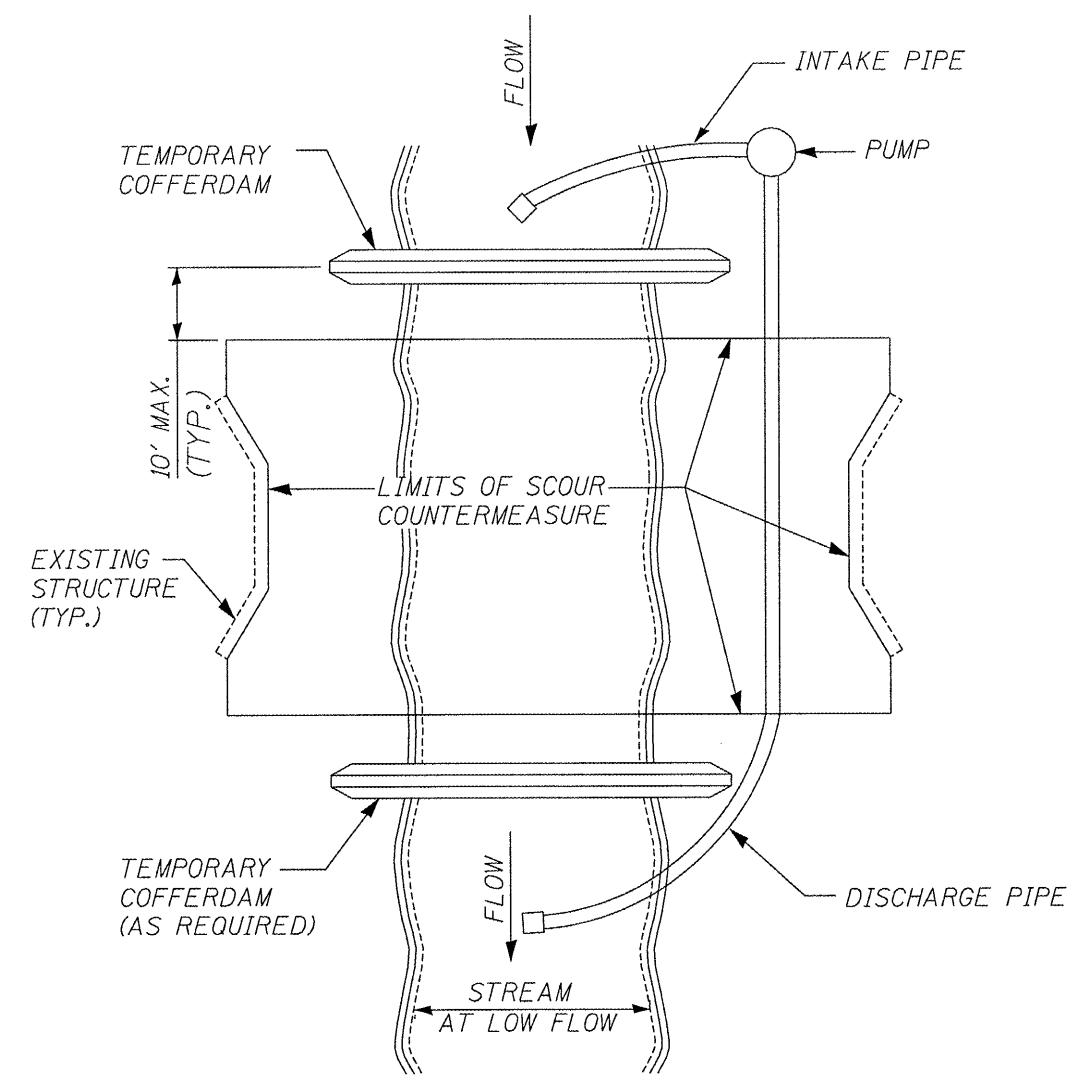


FIGURE D1. TEMPORARY COFFERDAM WITH PUMP BYPASS

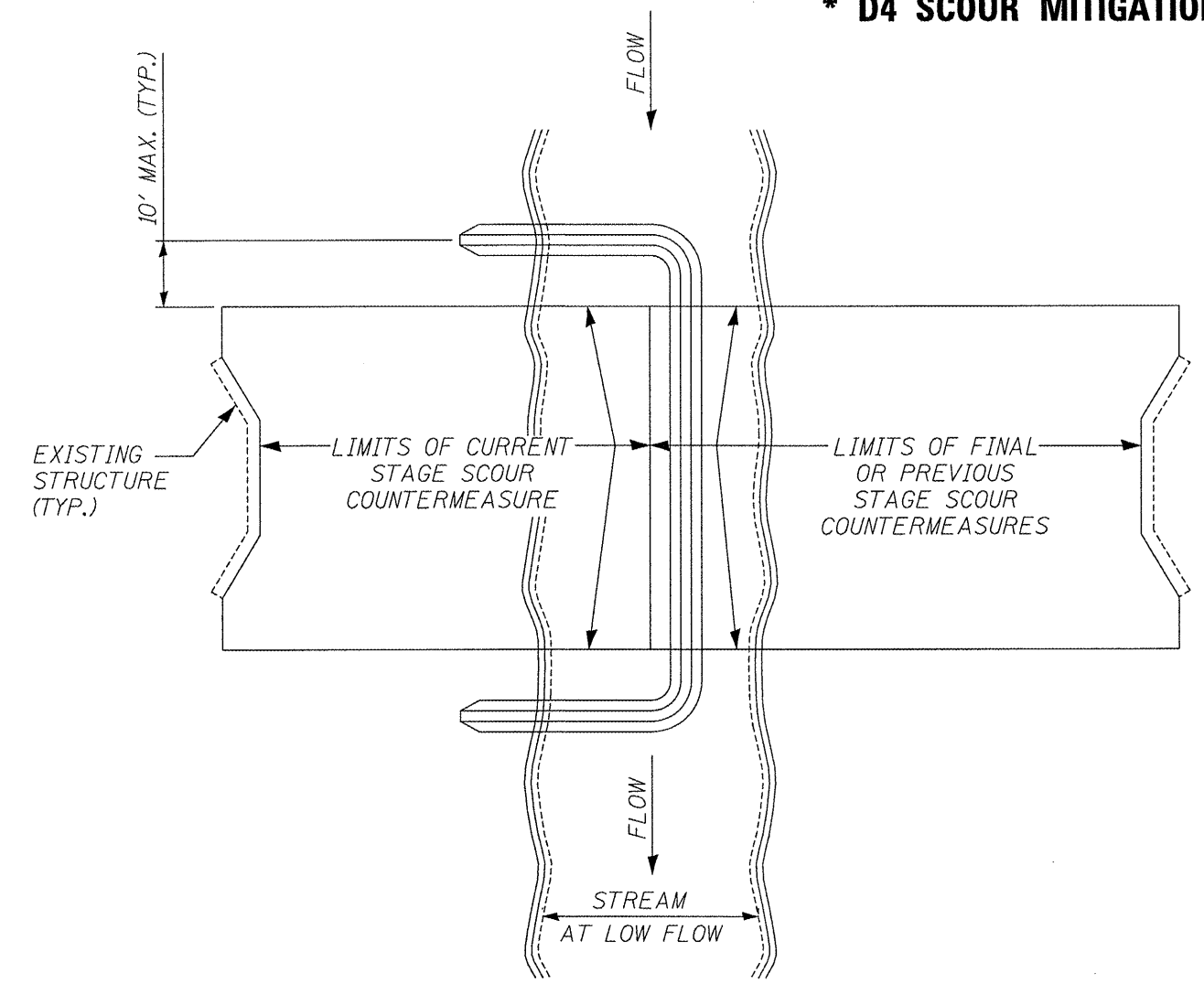


FIGURE D2. STAGED IN-STREAM CORRERDAM DIVISION

NOTE: DEWATERING SYSTEM DETAILS SHALL BE USED IN CONJUNCTION WITH THE PROJECT SPECIAL PROVISIONS.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DEWATERING SYSTEM DETAILS
 SECTION D4 SCOUR
 MITIGATION 2006
 VARIOUS ROUTES
 VARIOUS COUNTIES

| | | | | |
|-----------------------|---------|----------|------------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| VAR | * | VAR | 66 | 66 |
| FED. ROAD DIST. NO. 4 | | ILLINOIS | FED. AID PROJECT | |

*** D4 SCOUR MITIGATION 2002**

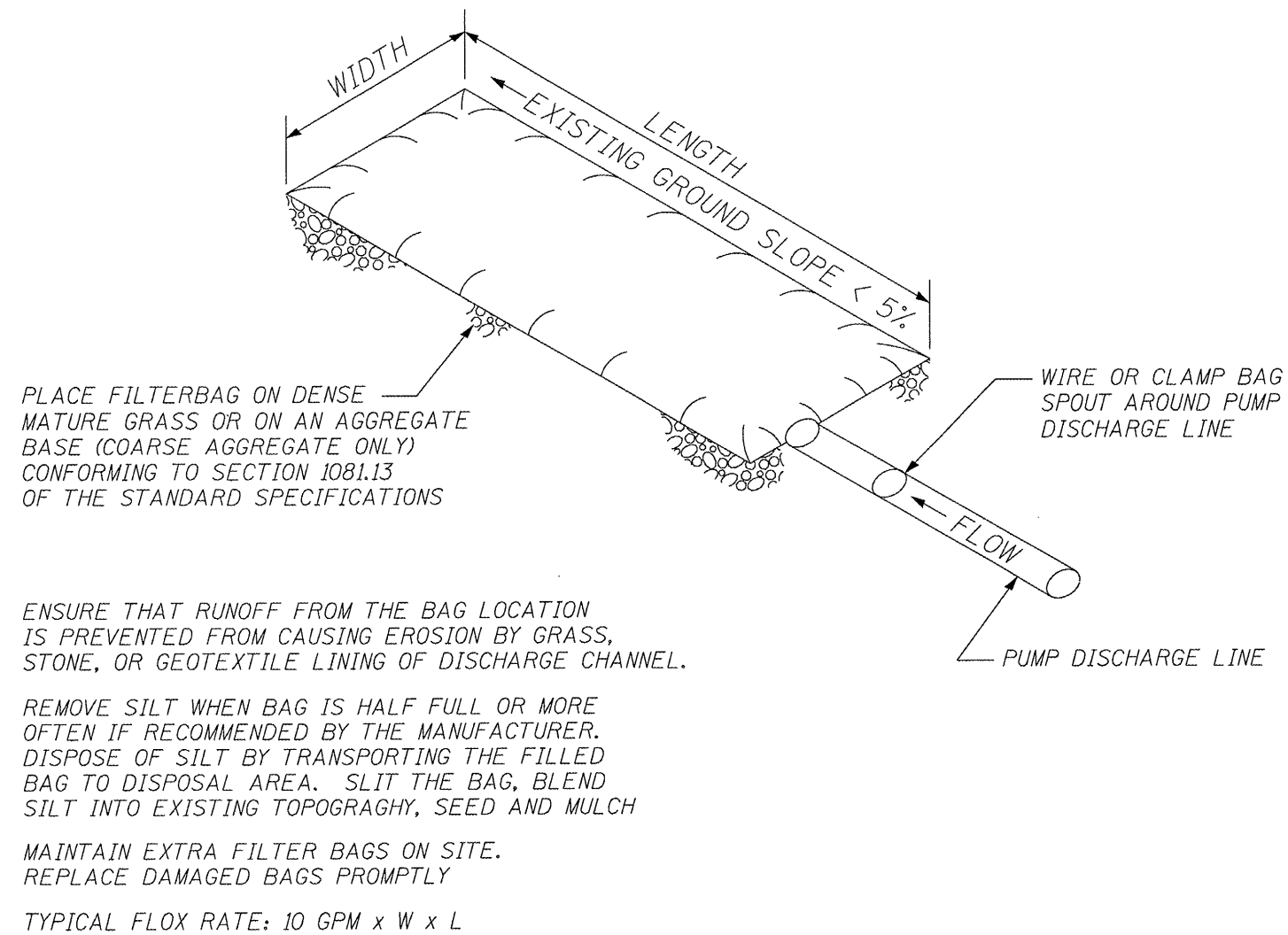


FIGURE S1. SEDIMENT FILTER BAG

NOTE: DEWATERING SYSTEM DETAILS SHALL BE USED IN CONJUNCTION WITH THE PROJECT SPECIAL PROVISIONS.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DEWATERING SYSTEM DETAILS
 SECTION D4 SCOUR
 MITIGATION 2006
 VARIOUS ROUTES
 VARIOUS COUNTIES