

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
774		EFFINGHAM	344	120

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT
• 107WRS-1, 107BY, 107BY-1 & 107B-2
CONTRACT NO. 94827

SHEET NO. 1
OF 14 SHEETS

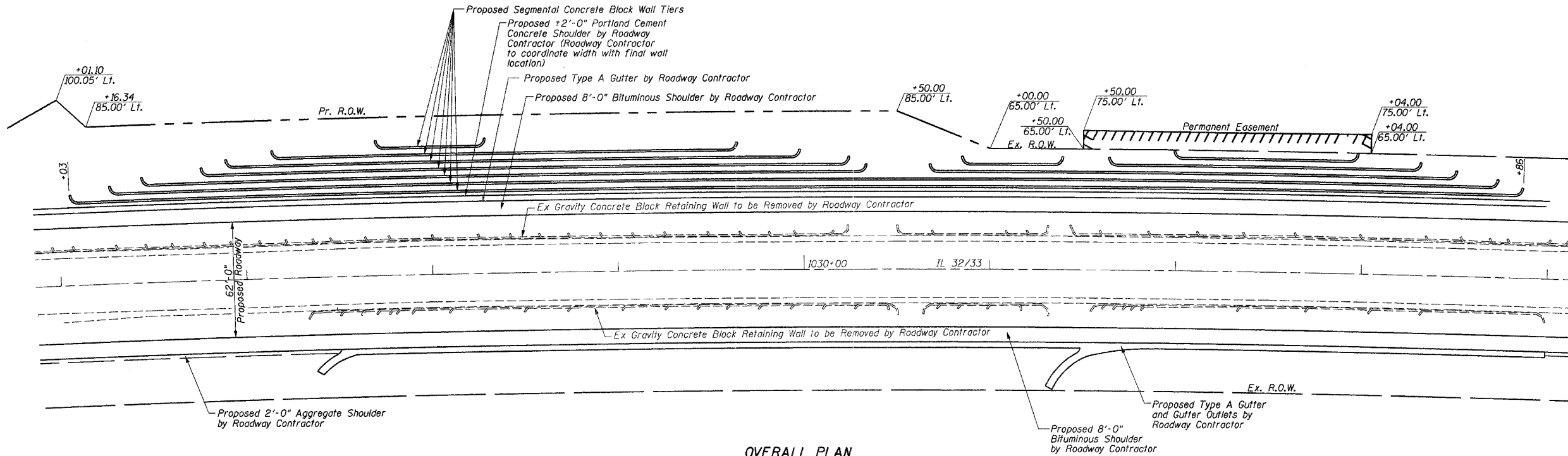
Benchmarks:

BM #60: 79' RT, Sta. 1024+86, Elev. 548.63
Chisled "X" on North Flange Bolt of Fire Hydrant

BM #12: 18' RT, Sta. 1030+71, Elev. 570.76
Chisled "□" Back of Gutter at Southwest Corner of Drop Inlet

Existing Structure:

Existing Structure consists of a Gravity Concrete Block Retaining Wall with approximately 850' of total length. Entire Retaining Wall to be removed. Removal by Roadway Contractor. Two lane, two way traffic to be maintained at all times per Stage Construction Plans. No salvage.



OVERALL PLAN

(Soil Nailed Walls not shown for clarity)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
EARTH EXCAVATION (SPECIAL)	CU YD	13,527
GEOCOMPOSITE WALL DRAIN	SO YD	490
PIPE DRAINS, 4"	FOOT	3,832
SEGMENTAL CONCRETE BLOCK WALL	SO FT	20,815
SOIL NAILED WALL	SO FT	14,690

SEQUENCE OF CONSTRUCTION:

- Entire Tiered Soil-Nailed Wall to be constructed first, utilizing top down construction.
 - Excavate temporary 2:1 maximum backslope above and beyond top of upper most soil nailed wall tier.
 - Excavate at wall face to below (next) soil nail elevation or as indicated in the soil nailed wall shop drawings.
 - Drill and grout soil nails.
 - Place geocomposite wall drain weepholes, reinforcement and apply shotcrete.
 - Once sufficient strength is obtained, install soil nail head against shotcrete.
 - Repeat steps 2 through 5, lapping reinforcement to upper layer and splicing geocomposite wall drain with weep hole until bottom of tier is reached.
 - Repeat steps 2 through 6 at next tier offset until lowest tier is completed.
- Segmental Concrete Block Wall to be constructed, bottom up, once soil-nailed wall is completed.
 - Excavate at the lowest level tier as required to install front pipe drain and backfill with select granular backfill.
 - Place the granular leveling pad and set the initial course of block at tier.
 - Place pipe drain behind block and backfill between soil nailed wall and block wall with select granular backfill.
 - Place subsequent courses of block. Select granular backfill and soil reinforcement (as required) per shop drawings to within 2 feet from top of tier.
 - Move to next tier and repeat steps 2 through 4.
 - Set remaining 2 feet of block on previous tier, place geotechnical fabric between walls and backfill with cohesive material.
 - Repeat steps 2 through 6 until upper most tier is reached. Grade to final 3:1 backslope.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification
for Highway Bridges

GENERAL NOTES:

- Wall layout based on cross-sections printed in plans and best available data. See Sheets 7-14 of 14 for Soil Borings. Layout may be varied in field to suit actual conditions with approval of the Engineer.
- Contractor to verify utility locations with J.U.L.I.E. prior to any excavation work.
- Soil Nails AASHTO M-31 (or 60 or 75) or ASTM A 722 (Grade 150)
Grout AASHTO T106 f'c = 3000 psi
Shotcrete f'c 3000 psi
Concrete Block ASTM C 1372
- See Special Provisions for additional requirements.

HORIZ. CURVE DATA

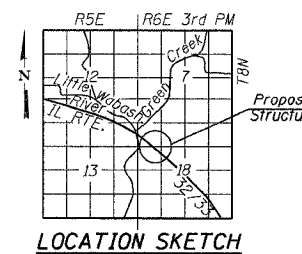
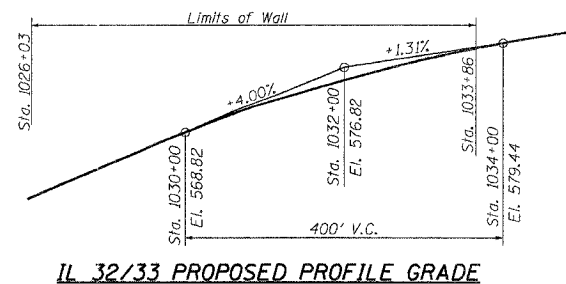
P.I. = Sta. 1014+09.68
 $\Delta = 25^{\circ}19'45''$ (RT)
 $D = 0^{\circ}30'00''$
 $R = 11,456.75'$
 $L = 5,064.76'$
 $T = 2,574.44'$
 $E = 285.69'$
 $S.E. = 1.56\%$
 P.C. = Sta. 988+35.24
 P.T. = Sta. 1039+00.00
 SE Attained Sta. 985+68.57 to Sta. 989+68.57
 SE Removed Sta. 1037+66.67 to Sta. 1041+66.67

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Sheila J. Kiffinger 12/30/23
 Sheila J. Kiffinger, P.E., S.E. Date
 Structural Engineer License No. 081-005283
 Expiration Date: 11/30/2004



GENERAL PLAN
ILLINOIS ROUTE 32/33
F.A.P. ROUTE 774
SECTION 107 WRS-1, 107BY,
107BY-1 & 107B-2
EFFINGHAM COUNTY
RETAINING WALL
STA. 1026+03.00 LT. TO STA. 1033+86.00 LT.
STRUCTURE NUMBER 025-W008