

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	TOTAL SHEETS
		WOODFORD	24	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

\* 05-00018-00-BR  
CONTRACT #89414

TOTAL BILL OF MATERIAL

Item	Unit	Superstructure	Substructure	Total
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		113	113
Concrete Structures	Cu. Yd.		35	35
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	358		358
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1432		1432
Steel Railing, Type S-1	Foot	120		120
Reinforcement Bars, Epoxy Coated	Pound		3552	3552
Furnishing Steel Piles HP12x53	Foot		522	522
Driving Steel Piles	Foot		522	522
Test Pile Steel HP12x53	Each		1	1
Name Plates	Each	1		1
Protective Coat	Sq. Yd.	93		93
Pedestrian Railing	Foot	117		117
Stone Dumped Riprap, Class A5	Ton		469	469
Filter Fabric	Sq. Yd.		374	374

Note: A3 sealcoat quantity included in roadway plans.

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified).
2. All construction joints shall be bonded.
3. Grouting keyways shall be incidental to the cost of the PPC Deck Beams.
4. The top surface of the beams shall be finished according to Article 504.06 of the Standard Specification. The finished surface shall be free of depressions or high spots with sharp corners.
5. After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a min. of 24 hrs. prior to grouting the shear keys.
6. The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.
9. The contractor shall drive 1 test pile as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
10. A Corrosion inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
11. Excavation behind existing abutment walls shall be done before removing the existing superstructure.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

LOADING HS20-44

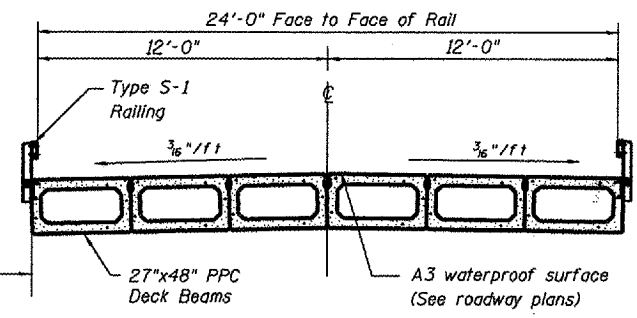
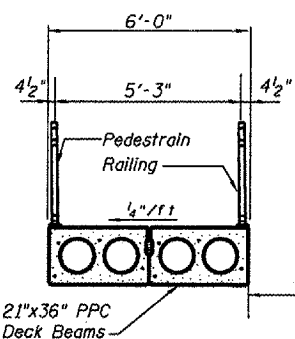
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.048g  
Site Coefficient (S) = 1.2

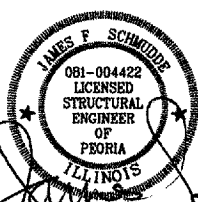
DESIGN STRESS

f'c = 3500 psi (cast-in-place)  
fy = 60000 psi (reinforcement)  
f'c = 5000 psi (precast)  
fs = 24000 psi (non-prestressed reinforcement)  
f'ci = 4000 psi (precast)  
f'si = 201960 psi (prestressed strands)  
f's = 270000 psi (prestressed strands)

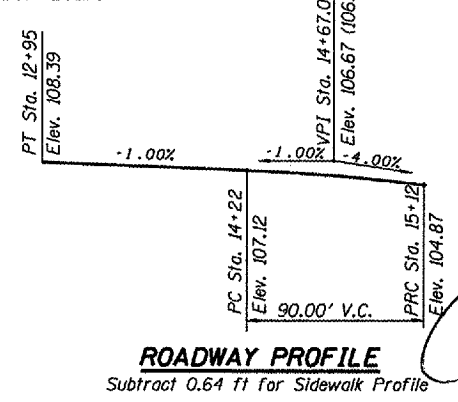


STRUCTURE CROSS SECTION

Looking East



JAMES F. SCHMUDE  
LICENSED STRUCTURAL ENGINEER  
ILLINOIS NO. 4422 EXPIRES 11-30-08  
DATE 5-16-07



ROADWAY PROFILE

Subtract 0.64 ft for Sidewalk Profile

WATERWAY INFORMATION

Drainage Area = 22.7 SQ. MI. Low Grade Elev. = 101.79 @ Sta. 16+62

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	30	2666	240	400	103.7	1.2	0.5	104.9	104.2	
Base	100	3562	240	436	104.3	1.1	0.5	105.4	104.8	
Overtopping										
Max. Calc.	500	4776	240	484	105.1	1.3	1.3	106.4	106.4	

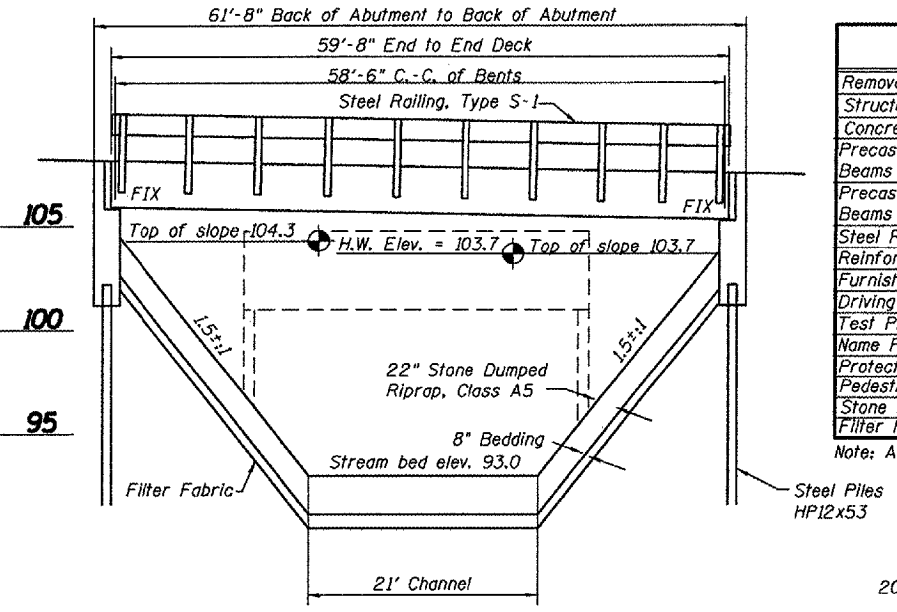
GENERAL PLAN & ELEVATION  
WALNUT STREET OVER SNAG CREEK  
SECTION 05-00018-00-BR  
WOODFORD COUNTY  
STATION 13+91.11

B.M. - chisled square NE wingwall of Walnut St bridge at Walnut & Washington St Elev. 102.92

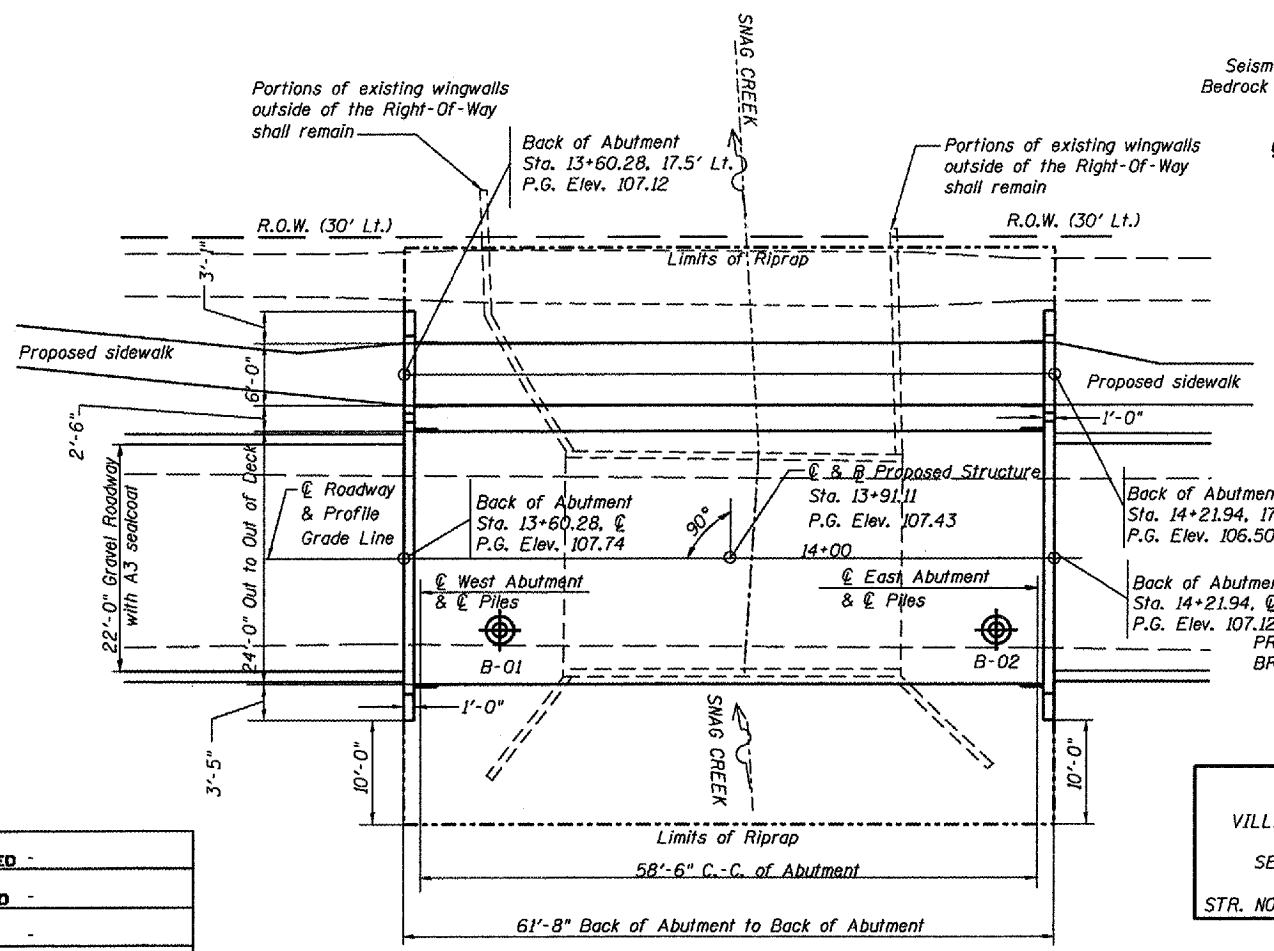
Fire hydrant NW corner Walnut & Washington St. north cap bolt Elev. 103.19

Existing Structure- Sta. 13+91.11 Single span reinforced concrete slab on closed concrete abutments with a separate pedestrian structure. Structures are to be removed completely except portions may be left in place that are one (1) foot or more below final grade. Also, any portion of the existing wingwalls outside of the Right-Of-Way shall remain.

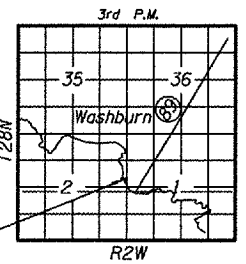
Salvage- No Salvage  
Paid for as one removal of existing structure.



ELEVATION



PLAN



LOCATION SKETCH

SNAG CREEK  
BUILT 2007 BY  
VILLAGE OF WASHBURN AND  
WOODFORD COUNTY  
SEC. 05-00018-00-BR  
STATION 13+91.11  
STR. NO. 102-7405 LOADING HS20

NAME PLATE

Locate Name Plate at S.W. Corner of Bridge (See Std. 515001)

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

GP-1 (04-04-05)