

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
04-09116	-90-BR	WINNEBAGO	15	4
ILLINOIS		FED. AID PROJECT		

BENCHMARKS:

B.M.- No. 300, Railroad Spike in East Face of 2nd Wood Power Pole South of Spring Creek Road on West Side of Brookview Road, approx. 44ft West of Back of Curb Elev. = 766.82'

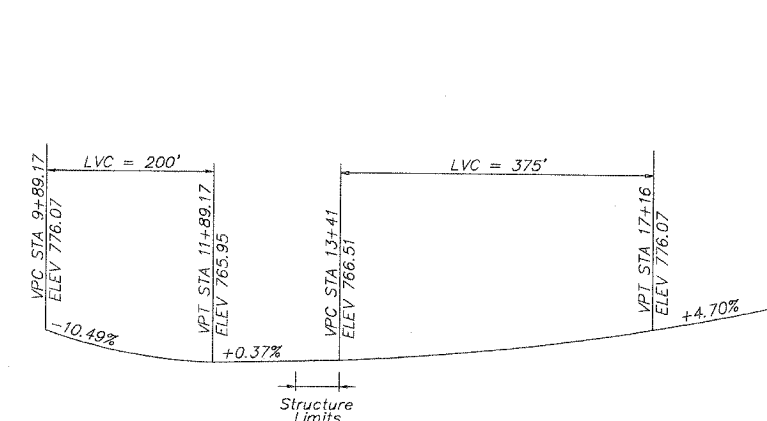
B.M.- No. 301, Railroad Spike in North Face of Wood Power Pole Near the Southwest Corner of Brookview Bridge Elev. = 765.20'

EXISTING STRUCTURE: S.N. 101-3061; Built in 1950, three span bridge that is 46 ft. long with steel beam spans varying from 13.1 ft. to 14.6 ft. long with two 12 inch thick concrete piers. The reinforced concrete deck with bituminous overlay is 24.2 ft. wide with sub-standard steel railings. The steel beams are supported at the structure limits by limestone abutments with concrete caps. Structure will be closed for demolition and construction.

Salvage- None

GENERAL NOTES

- The Contractor shall drive 2 test piles, as specified, in permanent locations as directed by the Engineer before ordering the remaining piles. The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.
- The Metal Shell piles shall be according to ASTM A 252 Grade 3.
- See Special Provisions for boring logs.
- The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast, Prestressed Concrete Products. Corrosion Inhibitor, per Article 1020.05 (b)(12) of the Standard Specification, shall be used in the concrete for the precast, prestressed deck beams.



ROADWAY PROFILE GRADE

SCOPE OF WORK

Existing structure to be removed and replaced with a precast prestressed deck beam bridge supported by pile bent abutments and pier.

HIGHWAY CLASSIFICATION

Brookview Road
ADT: 550 (2004)
Functional Class: Local Road
Design Speed: 20 mph

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Standard Specifications - 17th ed.

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.325%
Site Coefficient (S) = 1.5

PILE DATA (PIER)

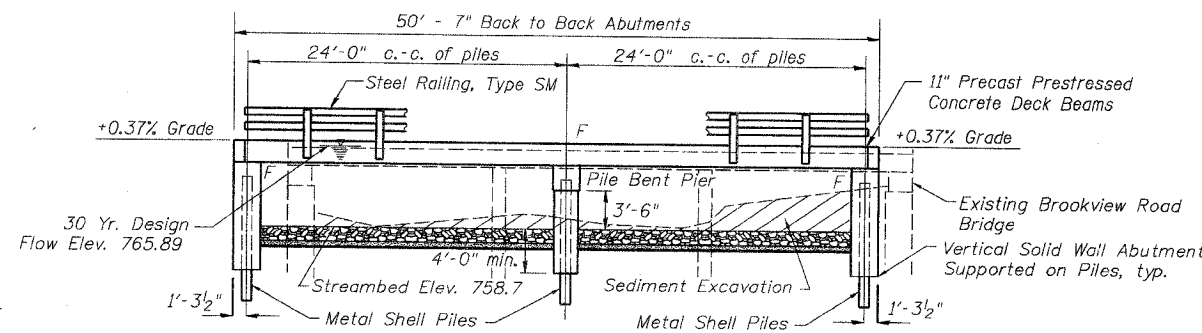
Type & Size: Metal Shell - 12 in. dia. x 0.179 in. Walls
Nominal Required Bearing: 204 kips
Allowable Resistance Available: 68 kips
Estimated Length: 38Feet
Number Required: 6 (Includes 1 Test Pile)

PILE DATA (2- ABUTS.)

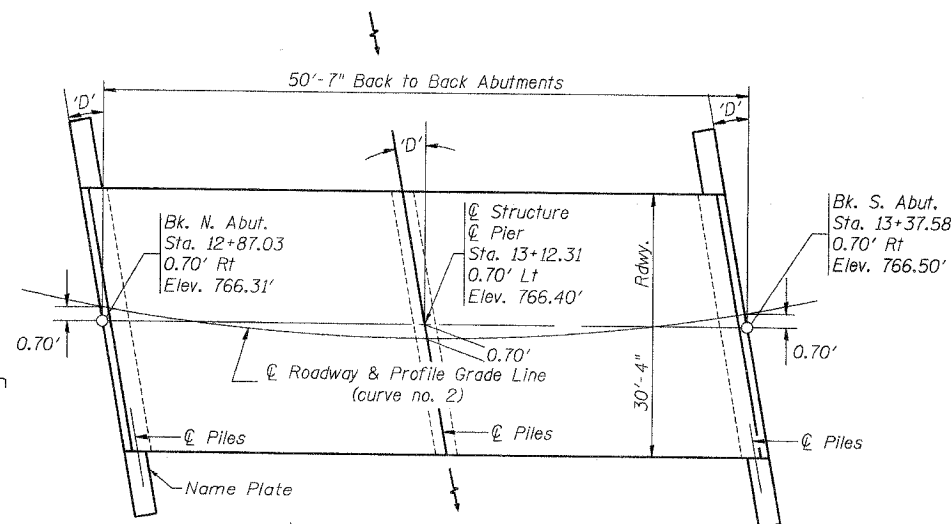
Type & Size: Metal Shell - 12 in. dia. x 0.179 in. Walls
Nominal Required Bearing: 192 kips
Allowable Resistance Available: 64 kips
Estimated Length: 37Feet
Number Required: 10 (Includes 1 Test Pile located in South Abutment)

GENERAL NOTES

Soils information for final foundation design to be based on Geotechnical Engineering Report dated May 19, 2005 prepared by Terracon.



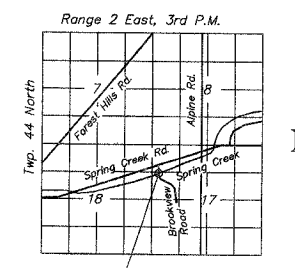
ELEVATION



PLAN

Skew Angle 'D' = 15° Right Forward

CURVE NO. 2
P.I. STA. = 14+39.98
Δ = 68° 20' 35"
D = 25° 08' 25"
R = 227.90'
T = 154.71'
L = 271.84'
E = 39.35'
S.E. RUN = Normal Crown
P.C.C. STA = 12+85.26
P.T. STA = 15+57.10



LOCATION SKETCH

BILL OF MATERIAL - BRIDGE

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Removal of Existing Structures	Each				1
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	28.4			28.4
Waterproofing Membrane System	Sq. Yd.	165			165
Concrete Structures	Cu. Yd.		21.4	52.6	74.0
Precast Prestressed Concrete Deck Beams (11" Depth)	Sq. Ft.	1484			1484
Steel Bridge Rail, Type SM	Foot	98			98
Reinforcement Bars	Pound		1679	6452	8131
Furnishing Metal Shell Piles - 12"	Foot		190	333	523
Driving Piles	Foot		190	333	523
Test Pile Metal Shells	Each		1	1	2
Name Plates	Each	1			1
Concrete Encasement	Cu. Yd.		1.6	2.8	4.4
Portland Cement Mortar Fairing Course	Foot	294			294

INDEX OF SHEETS

- GENERAL PLAN & ELEVATION
- P.P.C. DECK BEAM SUPERSTRUCTURE
- P.P.C. DECK BEAM DETAILS
- P.P.C. DECK BEAM PILE BENT ABUTMENTS
- P.P.C. DECK BEAM PILE BENT PIER
- STEEL BRIDGE RAIL, TYPE SM
- NAME PLATE
- PILE DETAILS

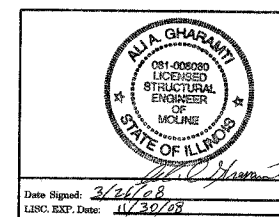
GENERAL PLAN & ELEVATION

BROOKVIEW ROAD BRIDGE
OVER SPRING CREEK
ROCKFORD ROAD DISTRICT
WINNEBAGO COUNTY
SECTION 04-09116-00-BR

SPRING CREEK
BUILT 2008 BY
ROCKFORD ROAD DISTRICT
WINNEBAGO COUNTY
SEC. 04-09116-00-BR
STATION 13+12
STR. NO. 101-3096 LOADING HS20-44

LETTERING FOR NAME PLATE

Locate Name Plate at Northwest Corner of Bridge (See Std. CN)



"I certify that to the best of my knowledge, information, and belief, this bridge is designed and structurally adequate for the design loading shown on the plans, the design is an economical one for the style of structure and complies with the requirements of the current A.A.S.H.T.O. standard specifications for highway bridges."

WATERWAY INFORMATION

Drainage Area = 5.74 SQ.MI. Low Grade Elev. = 765.98 @ Sta. 11+88

Flood Yr.	Freq. C.F.S.	Q	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater EL.			
		Exist.	Prop.	Exist.	Prop.	Exist.			
Design	30	1150	222.37	265.02	765.62	0.38	0.27	766.00	765.89
Base	100	1480	222.37	265.02	765.94	0.50	0.46	766.44	766.40
Overtopping	50	1268	222.37	265.02	765.73	0.44	0.34	766.17	766.07

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