Benchmark: See Alignment Sheet (Sheet 2) Existing Structure: S.N. 056-3067, single span Pratt Pony truss with open abutments on timber piles. Back to back of abutment length of 71'-0", span of 65'-0," Contractor shall remove existing structure and replace with a single span precast prestress box beam superstructure on open abutments. Back to back of abutment lenath of 72'-6". span of 70'-0". A detour route shall be provided to accommodate traffic. No Salvage 1'-6" Min. −33" x 36" P.P.C. Deck Beams Vert. Clearance -±1:2 (V:H) (Typ.) -- DHW El. 908.19 (25 Yr.) Elev. ±906.17 Streambed -Elev. ±901.11 Steel H Piles (HP12x84) ±30'-0" Channel Bottom

Bridge Approach Pavement 30' Std. 420401 (Typ.)

Back of W. Abut.

Sta. 99+63.75

El. 913,22

-Bridge Approach Pavement

EAK

AJS

RAP

JAR

DESIGNED

CHECKED

CHECKED

Connector (PCC) (Typ.)

See Roadway Plans

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

Approx. Natural

Ground Line

Pourous Granular

Embankment (Special)

±906.17

Steel H Piles (HP12x84)

-Back of E. Abut,

Sta. 100+36.25

El. 913.22

Stations Increase

8 Oa

(TVD.)

Profile

000

0

70'-0"

72'-6" Back to Back Abutments

PLAN

Grade Line

Traffic Barrier Terminal

Std. 631032 Type 6A

(Typ. All Corners)-

GENERAL NOTES

Layout of slope protection system may be varied in the field to suit ground

The contractor shall drive two test piles in a permanent location, one at the east abutment

The top surface of the beams shall be finished according to Article 504.06 of the Standard

and one at the west abutment as directed by the Engineer before ordering the remainder of piles.

Specification except that the surface shall not be roughened by brooming. The finished surface

shall be free of depressions of high spots with sharp corners, and the top edge of keys shall be

The embankment configuration shown shall be the minimum embankment

erected according to Article 503.10(c) of the Standard Specifications and are

Reinforcement bars shall conform to the requirements of AASHTO

that must be constructed prior to construction of the abutments.

included in quantity of structural steel.

conditions as directed by the Engineer.

rounded or chamfered a minimum of 4".

M31, M42 or M53 Grade 60.

Expansion guards which are not cast in the precast unit shall be fabricted and

TOTAL SHEET NO. SHEET NO. 6 SHEETS 37 23 0083 02-00270-00-BR MCHENRY

CONTRACT NO.: 83872

DESIGN STRESSES

FIELD UNITS = 3,500 psi

= 60.000 psi (reinforcement)

PRECAST PRESTRESSED JNITS $f'_{c} = 5,000 \text{ psi}$

 $f'_{ci} = 4,000 psi$

 $f_s' = 270,000 \text{ psi } (1/2^m) \text{ low lax. strands})$ $f'_{si} = 201.960 \text{ psi } (1/2" \phi \text{ low lax. strands})$

SEISMIC DATA

Seismic Performance Category (SPC) = A Bedrock Acceleration Coefficient (A) = 0.034g Site Coefficient (S) = 1.0

LOADING HS20-44

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

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 thru 2006 Interims

Backfill with uncompacted Porous Granular Embankment (Special) by Bridge Contractor Bridge Omission - Const. it. after superstructure is in place. Approach Pavement Geocomposite Wall Drain Aggregate -Bk. of Abut *4" • Perforated Pipe Drain Bottom Сар

Excavation for placing Porous Granular Embankment (Special) is paid for as Structure Excavation.

**Geotechnical fabric for french drains.

TOTAL BILL OF MATERIAL

Note: All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersection with the side slopes. The pipes shall drain into concrete headwalls (Article 601.05 of the Standard Specificiation.

UNIT QTY.

Cu. Yd. 240

Sq. Yd. 442

Sq. Yd. 442

260

272

260

7300

140

1120

1120

40

39

Sq. Yd.

Cu. Yd

Cu. Yd.

Sq. Yd.

Cu. Yd.

Pound

Foot

Foot

Each

Foot

Sa Yd

EACH

Included in the cost of Pipe Underdrains for structure, and Highway Standard 601101)

ilter Fabric

Protective Coat

Structure Excavation

Concrete Structures

Bridge Deck Grooving

Driving Steel Piles

lame Plate

Removal of Existing Structures

Concrete Wearing Surfaces

teel Bridge Rail, Type SM

est Piles Steel HP 12 X 84

eocomposite Wall Drain

Reinforcement Bars, Epoxy Coated

urnishing Steel Piles HP 12 X 84

Pipe Underdrains for Structures , 4

NORTH BRANCH OF KISHWAUKEE RIVER BUILT 2007 BY HARTLAND TOWNSHIP SEC. 02-00-270-00-BR Pourous Granular Embankment (Special) Stone Riprap, Class A4

STA. 100+00 STR. NO. 056-3171 LOADING HS 20

MCHENRY COUNTY

NAME PLATE

FA PROJ.

See Std. 515001

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.

* Indicates pay item covered by a special provision.

Precast, Prestressed Concrete Deck Beams (33" depth)

ITEM

STRAND

ILLINOIS DEPARTMENT OF TRANSPORTATION GENERAL PLAN

T.R 0083 (STREIT ROAD) OVER NORTH BRANCH OF THE KISHWAUKEE RIVER T.R. 0083 SECTION 02-00270-00-BR MCHENRY COUNTY S.N. 056-3171

DATE: 08/07/2006 SCALE:

WATERWAY INFORMATION

North Branch

Project

Kishwaukee River-

Drainage Area = 15.58 Sq. Mi. Proposed Low Grade Elev. 910.61 © Sta. 95+50									
Flood	Freq.	a	Opening	Sq. Ft.	Nat.	Head - Ft.		Headwater El.	
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
	-	-	-	-	-	-	-	-	~
Design	25	1192	254.54	248.53	907.86	0.28	0.33	908.14	908.19
Base	100	1541	284.46	278.00	908.34	0.32	0.39	908.66	908.73
Overtopping	>500	2435	343.73	335.21	909.27	1.38	1.27	910.65	910.54
Max Calc	-	_	-	_	_	-	-	-	-

LLINOIS STRUCTURAL NO. 081005819 (Expires 11/30/06)

PROFILE GRADE

-1.00%

ELEVATION

(Looking South, Downstream)

Stone Riprap

Class A4

Sta. 100+00

EI, 913,25 -

-Name Plate

Тур.)

+1.00%

V.C. = 400.0'

LOCATION SKETCH

0

12'-(Eastbo