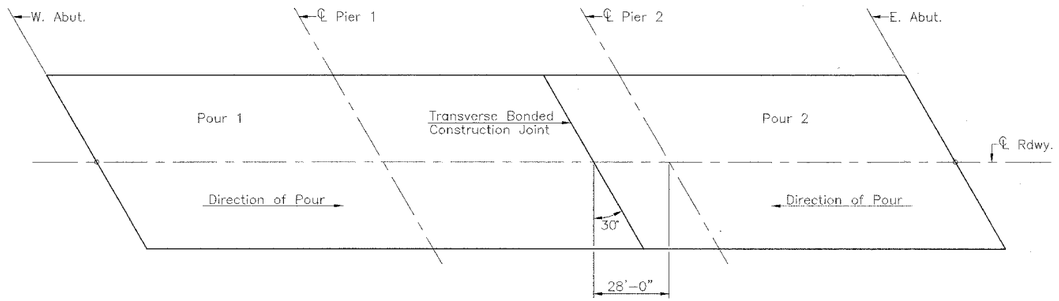
93392

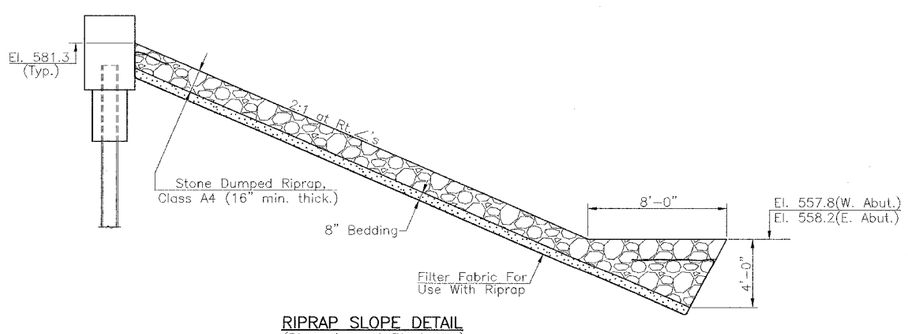
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 40	*	SANGAMON	33	8

* 00-00021-02-BR



DECK POURING SEQUENCE

The Contractor may alter the pouring sequence with the approval of the Engineer.



RIPRAP SLOPE DETAIL

(Dimensions at Rt. Angles)

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $^{7}/_{8}$"ø, open holes $^{15}/_{16}$"ø, unless otherwise noted.

Calculated weight of structural steel = 27100 Pounds (M270 G36)
Calculated weight of structural steel = 407100 Pounds (M270 G50)

Field welding of construction accessories will not be permitted to beams or girders.

Anchor bolts shall be set before bolting diaphragms over supports.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of A.A.S.H.T.O. M270, Grade 50.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M31, **M322,** Grade 60.

Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the engineer.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $^{1}/_{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $^{1}/_{8}$" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type 1 Elastomeric bearings, two $^{1}/_{8}$" adjusting shims shall be provided for each bearing and placed as detailed.

The Contractor shall drive one test pile in a permanent location at each substructure unit as directed by the Engineer before ordering the remainder of piles.

When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

All construction joints shall be bonded.

The contractor shall obtain a construction permit from the Illinois Department of Natural Resources (I.D.N.R.), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the I.D.N.R. permit number D52004161 which was issued for the permanent construction.

The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be gray, Munsell No. 5B 7/1. See Special provision for "Cleaning and Painting New Metal Structures".

TOTAL BILL OF MATERIAL

Item		Super	Sub	Total
Stone Dumped Riprap, Class A4	Ton		1115	1115
Filter Fabric	Sq. Yd.		1683	1683
Removal of Existing Structures	Each			1
Cofferdam Excavation	Cu. Yd.		1062	1062
Cofferdam (Pier 1)	Each		1	1
Cofferdam (Pier 2)	Each		1	1
Concrete Structures	Cu. Yd.		620	620
Concrete Superstructures	Cu. Yd.	360.9		360.9
Bridge Deck Grooving	Sq. Yd.	1378		1378
Seal Coat Concrete	Cu. Yd.		182	182
Protective Coat	Sq. Yd.	1378		1378
Elastomeric Bearing Assembly, Type 1	Each	12		12
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3798		3798
Reinforcement Bars (Epoxy Coated)	Pound	86810	83820	170630
Steel Railing Type SM	Foot	620		620
Furnishing Steel Piles, HP 10x57	Foot		1152	1152
Furnishing Steel Piles HP12x53	Foot		2392	2392
Driving Steel Piles	Foot		3544	3544
Test Pile, Steel HP 10x57	Each		2	2
Test Piles, Steel HP12x53	Each		2	2
Concrete Encasement	Cu. Yd.		4.8	4.8
Name Plates	Each	1		1
Bar Splicers	Each	82		82

DESIGN STRESSES
FIELD UNITS

f'c = 3500 psi
fy = 60000 psi (Reinf.)
Fy = 50000 psi (Structural Steel) (M270 Grade 50)
Fy = 36000 psi (Structural Steel) (M270 Grade 36)

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Specifications and 2003 Interim Specifications.

LOADING HS 20-44

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

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.8% g
Site Coefficient (S) = 1.5

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 "A.A.S.H.T.O. Standard Specifications For Highway Bridges".

Mark A Henderson 8/15/05
Expiration Date 11/30/2006

MARK A. HENDERSON 5012 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

GENERAL PLAN & ELEVATION
C.H. 40 OVER HORSE CREEK
SECTION 00-00021-02-BR
SANGAMON COUNTY

FILE NAME: SCH40GPE (REV. 3/14/05)