Bench Mark: BM 4500-2 Chiseled square on N.E. corner of N.W. wingwall @ bridge 5.230 m LT. Sta. 5+652.513. Elevation 232.171

Existing Structure: S.N. 010-0168 Built in 1968 as F.A. Rt. 11, Section 10-71HB-2, @ Sta. 18+54.00 (English)(TR 114). Structure consists of 4 span WF beams on pile bent spill-thru abutments and hammerhead piers on spread footings. 67.361 m Bk. to Bk. abuts.; 9.144 m O.-O. deck. Structure to be removed and replaced. Road closure will be used.

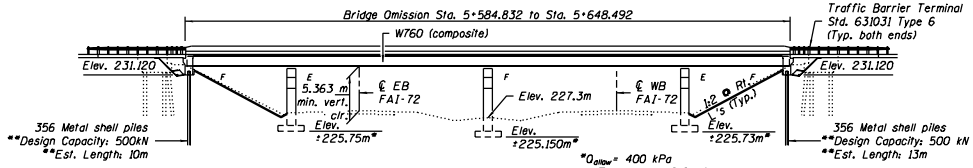
No salvage

Note: All dimensions are in millimeters (mm) except as noted.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

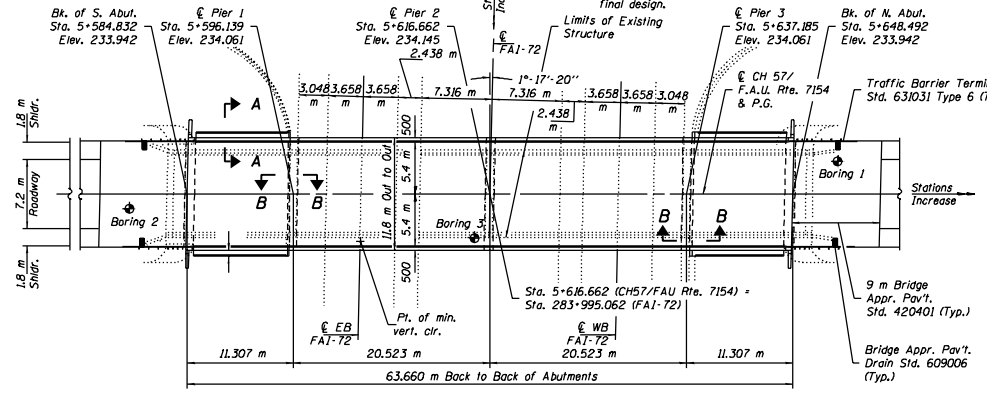
APPROVED
AS A BASIS FOR
PREPARATION OF DETAILED PLANS
DEC 20 2002

SHEET NO. 1
SHEETS

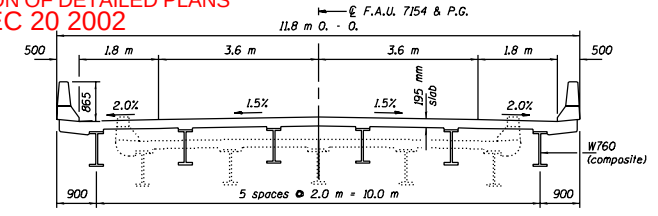


ELEVATION

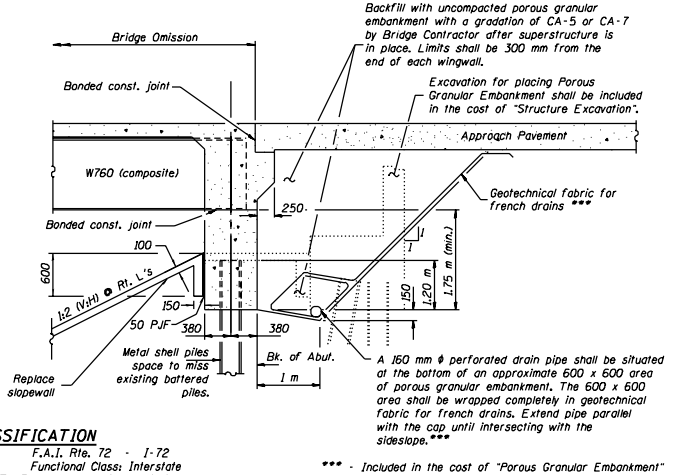
*q_{allow} = 400 kPa
The bottom of footing shall be below the existing footing a minimum of 150mm.
**Subject to refinement in final design.



PLAN

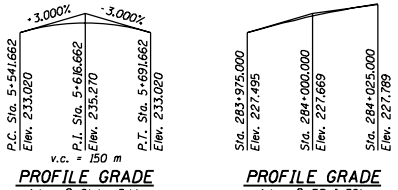


CROSS SECTION



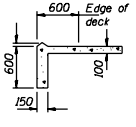
*** - Included in the cost of "Porous Granular Embankment"

SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

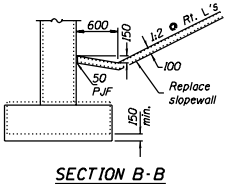


PROFILE GRADE
(along ℄ Staley Rd.)

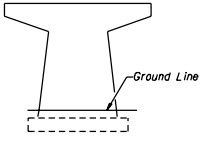
PROFILE GRADE
(along ℄ EB I-72)



SECTION A-A



SECTION B-B
(Typ. Piers 1 & 3)



PIER SKETCH
(Piers 1, 2, & 3)

HIGHWAY CLASSIFICATION

CH 57/F.A.U. Rte. 7154 - Staley Road
Functional Class: Minor Arterial (Urban)
ADT: 4,700 (2000); 7,100 (2020)
ADTT: 212(2000); 320(2020)
DHV: 650
Design Speed: 90 km/h
Posted Speed: 90 km/h

F.A.I. Rte. 72 - I-72
Functional Class: Interstate
ADT: 13,000 (2000); 19,200 (2020) (two way)
ADTT: 28.4%
DHV: 1500
Design Speed: 105 km/h
Posted Speed: 105 km/h

LOADING MS18

Allow 2.4 kN/m² for future wearing surface.

DESIGN SPECIFICATIONS

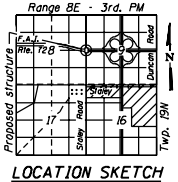
1996 AASHTO with 1997 thru 2002 Interims

DESIGN STRESSES

FIELD UNITS
f'_c = 24 MPa
f_y = 400 MPa (reinforcement)
f_y = 345 MPa (structural steel)
(M270 Grade 345)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.75%
Site Coefficient (S) = 1.0



LOCATION SKETCH

GENERAL PLAN
STALEY ROAD (CH57/F.A.U. ROUTE 7154)
OVER I-72
F.A.I. ROUTE 72 - SEC. (10-71HB-2)BR
CHAMPAIGN COUNTY
STATION 5+616.662
STRUCTURE NO. 010-0278

DESIGNED	Anthony Y. Vinson
CHECKED	G.G. Eicher
DRAWN	W.D. Collins
CHECKED	

EXAMINED 20
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

10-4-02

D-95-035-94