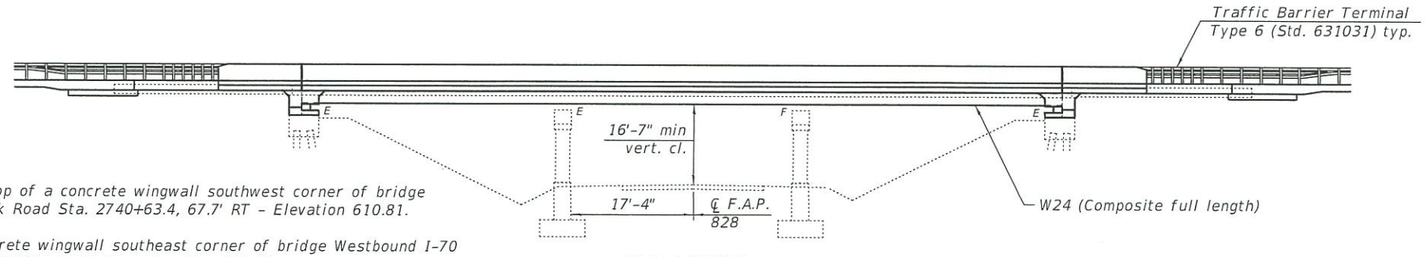
Benchmark: Chiseled square on top of a concrete wingwall southwest corner of bridge Eastbound I-70 over Spring Creek Road Sta. 2740+63.4, 67.7' RT - Elevation 610.81.

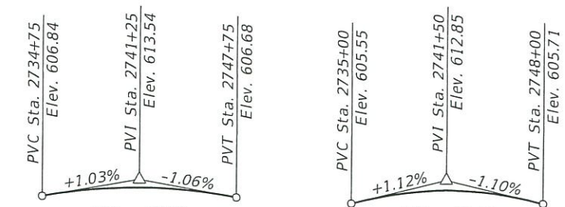
Chiseled square on top of a concrete wingwall southeast corner of bridge Westbound I-70 over Spring Creek Road Sta. 2742+04.0, 25.6' LT - Elevation 610.06.

S.N. 025-0016 E.B. and S.N. 025-0017 W.B. Built in 1960 as F.A.I. Rte. 70, Section 25-5HB-5 at Sta. 2741+37.68. The existing structure is a dual 3 span (2 @ 41'-5½" & 1 @ 37'-9") steel continuous multi-beam structure on stub abutments and three column piers with footings on rock. The length is 120'-8" Bk. to Bk. of abutments and 43'-3" O. to O. of deck with a skew angle of 10°20'57". Existing superstructure is to be removed and replaced.
Traffic to be maintained utilizing cross overs.

No salvage.



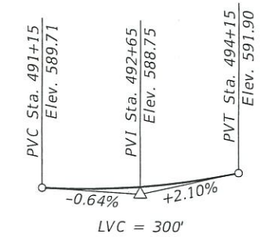
ELEVATION



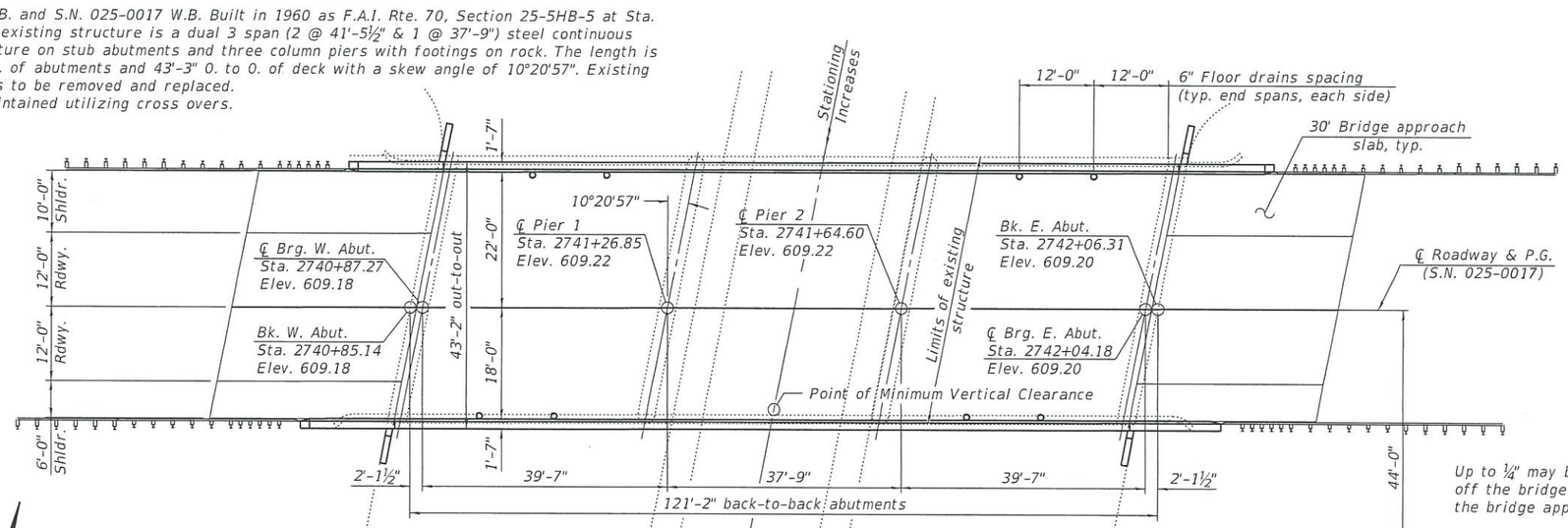
PROFILE GRADE
Along ℄ I-70 (EB)

PROFILE GRADE
Along ℄ I-70 (WB)

The profile grade shows the final elevations after grinding.



PROFILE GRADE
Along ℄ F.A.P. 828 (Spring Creek Rd.)



PLAN

Up to ¼" may be ground off the bridge deck and the bridge approach slabs.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications,
7th Edition with 2015 and 2016 Interims
2006 Seismic Retrofitting Manual for Highway Structures

LOADING HL-93

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

SEISMIC DATA

Seismic Retrofit Category A

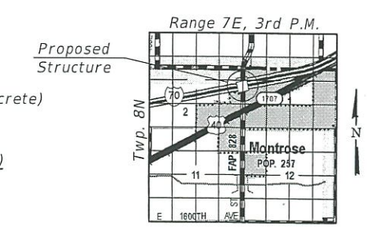
DESIGN STRESSES

FIELD UNITS (New Construction)

f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

FIELD UNITS (Existing Construction)

fc = 1,400 psi
fs = 20,000 psi (Reinforcement)
fs = 18,000 psi (Structures)
V = 75 psi (Footings)
n = 10



LOCATION SKETCH

APPROVED
OCT 02 2017
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN & ELEVATION
I-70 OVER F.A.P. 828 (SPRING CREEK ROAD)
F.A.I. RTE. 70 - SEC (25-4-1, 25-5)R
EFFINGHAM COUNTY
STATION 2741+37.68
STRUCTURE NO. 025-0016 (EB)
STRUCTURE NO. 025-0017 (WB)

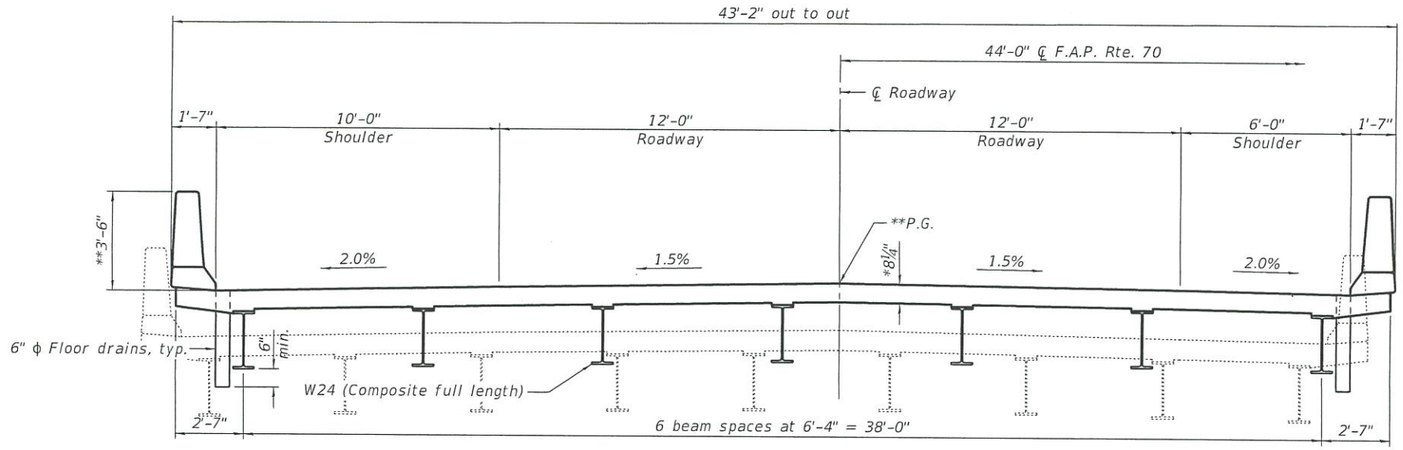
DESIGNED	-	VICTOR MERCADO-VAZQUEZ
CHECKED	-	NICHOLAS R. BARNETT
DRAWN	-	IAN J. ANDREWS
CHECKED	-	V.M.V./N.R.B.

OCTOBER 2, 2017

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	(25-4-1, 25-5) R	EFFINGHAM		
		CONTRACT NO. 74599		
		ILLINOIS FED. AID PROJECT		



CROSS SECTION

(Looking west at S.N. 025-0016, Looking east at S.N. 025-0017 similar)
* Prior to Grinding
** After Grinding

HIGHWAY CLASSIFICATION

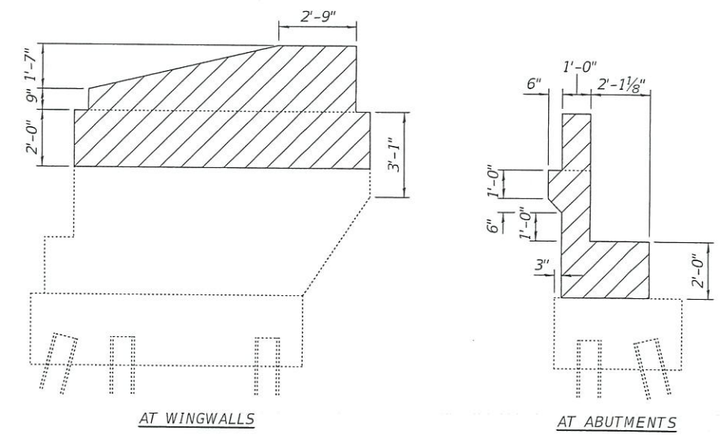
F.A.I. Rte. 70 (E.B.) - Rte. I-70
Functional Class: Interstate
ADT: 11400 (2020); 15400 (2040)
ADTT: 5951 (2020); 8039 (2040)
DHV: 1140 (2020)
Design Speed: 75 m.p.h.
Posted Speed: 70 m.p.h.
One-Way Traffic
Directional Distribution: 100:0

HIGHWAY CLASSIFICATION

F.A.I. Rte. 70 (W.B.) - Rte. I-70
Functional Class: Interstate
ADT: 11300 (2020); 15300 (2040)
ADTT: 5955 (2020); 8063 (2040)
DHV: 1130 (2020)
Design Speed: 75 m.p.h.
Posted Speed: 70 m.p.h.
One-Way Traffic
Directional Distribution: 100:0

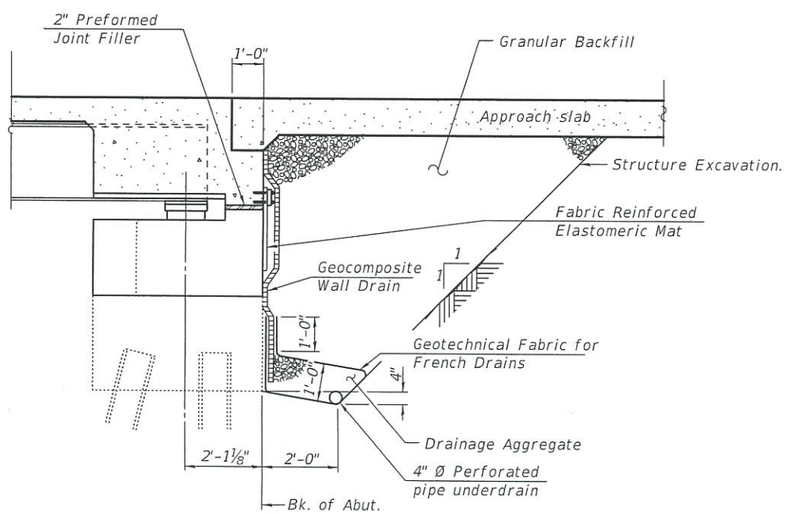
HIGHWAY CLASSIFICATION

F.A.P. Rte. 828 - Spring Creek Rd.
Functional Class: Minor Arterial
ADT: 3450 (2020); 3950 (2040)
ADTT: 725 (2020); 830 (2040)
DHV: 362 (2020)
Design Speed: 50 m.p.h.
Posted Speed: 45 m.p.h.
Two-Way Traffic
Directional Distribution: 52:48



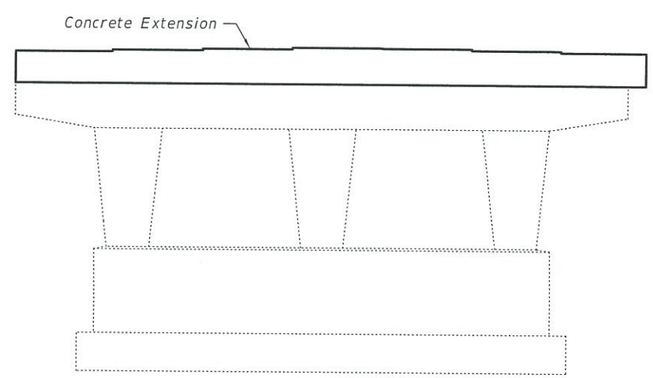
CONCRETE REMOVAL

APPROVED
OCT 02 2017
AS A BASIS FOR
PREPARATION OF DETAILED PLANS



SECTION THRU SEMI-INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. ∠'s)



PIER SKETCH

SCOPE OF WORK

1. Remove and replace existing superstructure.
2. Make new deck composite full length.
3. Reconfigure existing abutments and wingwalls to semi-integral configuration.
4. Construct vertical concrete pier extension.
5. Construct approach slabs.

DETAILS

I-70 OVER F.A.P. 828 (SPRING CREEK ROAD)
F.A.I. RTE. 70 - SEC (25-4-1, 25-5)R
EFFINGHAM COUNTY
STATION 2741+37.68
STRUCTURE NO. 025-0016 (EB)
STRUCTURE NO. 025-0017 (SB)

DESIGNED -	VICTOR MERCADO-VAZQUEZ
CHECKED -	NICHOLAS R. BARNETT
DRAWN -	IAN J. ANDREWS
CHECKED -	V.M.V./N.R.B.

OCTOBER 2, 2017

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	(25-4-1, 25-5) R	EFFINGHAM		
		CONTRACT NO. 74599		
		ILLINOIS FED. AID PROJECT		