

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

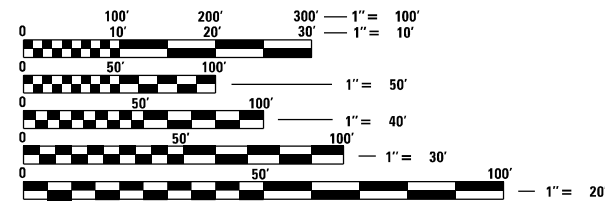
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-1) BP	SANGAMON	8	1
		ILLINOIS	CONTRACT NO. 72M52	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

FAI ROUTE 55 (I-55)
SECTION (84-5-1) BP
PROJECT NHPP-1HPQ(593)
BRIDGE PAINTING
SANGAMON COUNTY

C-96-018-21

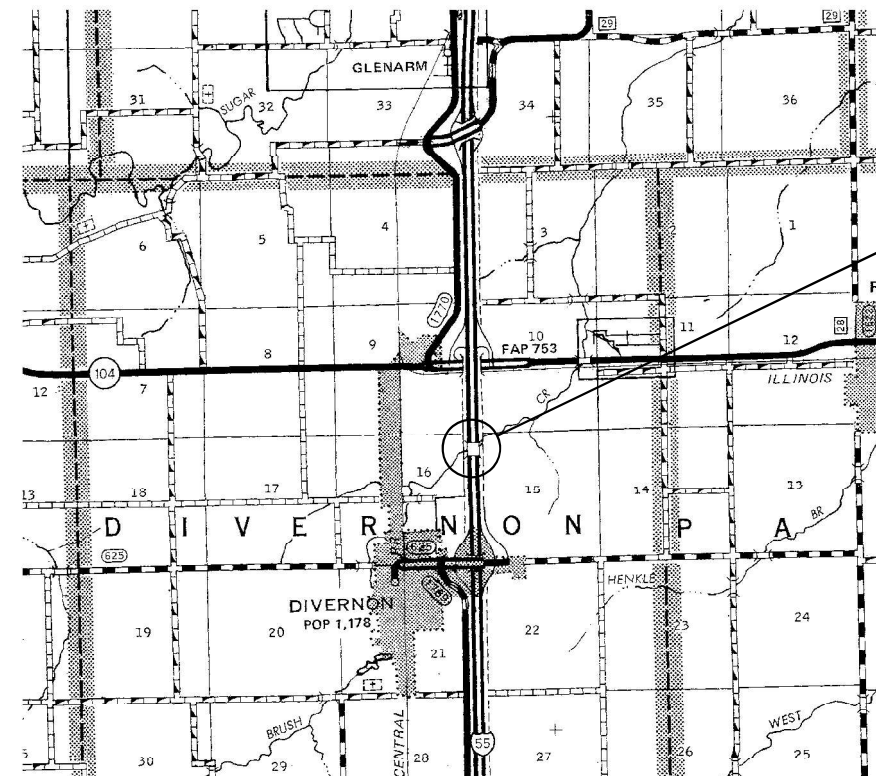


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

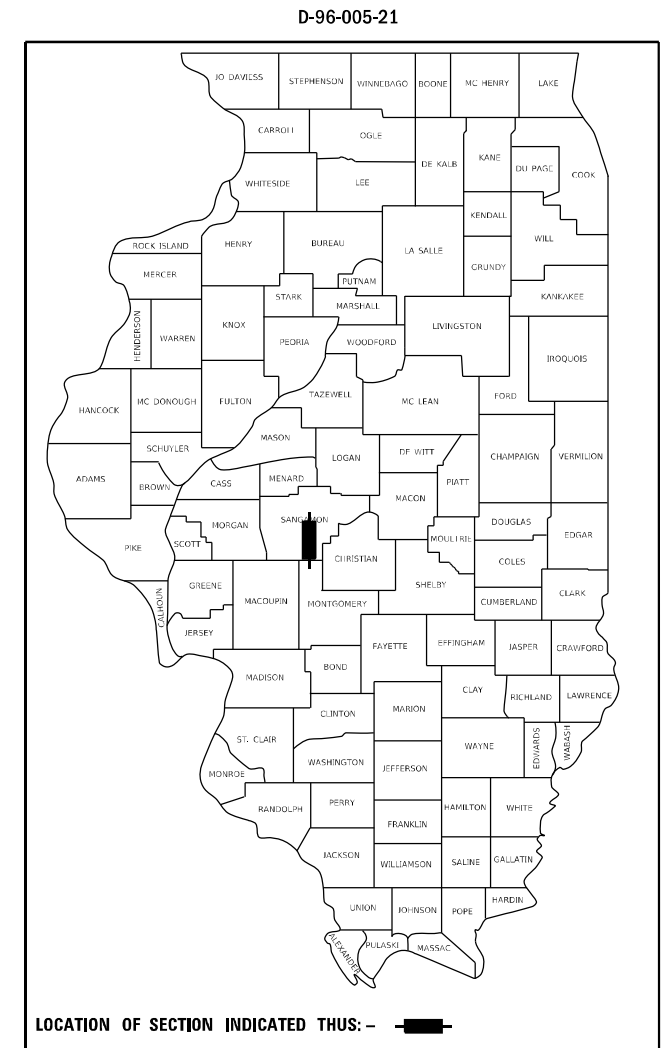
BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY - (217) 785-9290

CONTRACT NO. 72M52



LOCATION #1 & #2
SN 084-0107 & 0108
I-55 OVER BRUSH CREEK
0.7 MI SOUTH OF IL 104

GROSS LENGTH = 160 FT. = 0.03 MILE
NET LENGTH = 160 FT. = 0.03 MILE



LOCATION OF SECTION INDICATED THIS: - [black rectangle] -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED November 25 2020

John P. Myer
REGIONAL ENGINEER

January 29, 2021
Scott A. Elk
ENGINEER OF DESIGN AND ENVIRONMENT

January 29, 2021
James M. Dun
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 13

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS



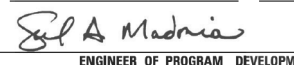
1	COVER SHEET
2	INDEX, STANDARDS, GENERAL NOTES, & SIGNATURES
3	SUMMARY OF QUANTITIES
EXISTING	BRIDGE PLANS (FOR INFORMATION ONLY)
4-8	LOCATION #1 & #2: SN 084-0107 & 0108

HIGHWAY STANDARDS

000001-08
001006
701101-05
701106-02
701901-08

GENERAL NOTES:

1. WORK SHALL CONSIST OF BLASTING AND PAINTING STRUCTURAL STEEL AT LOCATIONS DESCRIBED IN THE SPECIAL PROVISIONS. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL AREAS TO BE PAINTED SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL EXISTING STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COATS SHALL BE AS DESCRIBED IN THE SPECIAL PROVISIONS.
2. THE USE OF AIR MONITORS WILL BE REQUIRED AT LOCATIONS AS CALLED OUT IN THE SPECIAL PROVISIONS.
3. THE SSPC-QP-1 AND SSPC-QP2 PAINTING CONTRACTOR CERTIFICATIONS WILL BE REQUIRED.
4. CARE SHALL BE TAKEN NOT TO DAMAGE RUBBER BEARING OR JOINT COMPONENTS DURING BLASTING AND CLEANING OPERATIONS. ANY DAMAGE TO THESE COMPONENTS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. RUBBER COMPONENTS SHALL NOT BE PAINTED.
5. UPON COMPLETION OF PAINTING OPERATIONS, THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM PIER OR ABUTMENT CAPS UPON WHICH PAINTING OPERATIONS TOOK PLACE. FINAL CLEANUP SHALL BE CONSIDERED INCIDENTAL TO THE PAINT PAY ITEM FOR THE RESPECTIVE LOCATION. THE ENGINEER SHALL HAVE THE RIGHT TO WITHHOLD PAYMENT UNTIL SATISFACTORY CLEANUP IS ACHIEVED.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6	
EXAMINED	November 23 20 20
	
ENGINEER OF OPERATIONS	
EXAMINED	November 23 20 20
	
ENGINEER OF PROJECT IMPLEMENTATION	
EXAMINED	November 25 20 20
	
ENGINEER OF PROGRAM DEVELOPMENT	

MODEL: Default
FILE: \\MAILS-CO\OPERATIONS\bridge\bridgeplans_CAD\72M52 - 0840107 & 0108_paintstandards.dgn

USER NAME = dudleybm	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 11/25/2020	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, STANDARDS,
GENERAL NOTES, & SIGNATURES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-1) BP	SANGAMON	8	2
CONTRACT NO. 72M52				
		ILLINOIS	FED. AID PROJECT	

BM: #33 Elev. 592.84, a Cut on NW Corner of bridge Abut #1155 of Sta. 552107

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.I. 55	84-5-2B	Sangamon	375	91	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class A Exc. for Struct.	Cu.Yds.		10	10
Class B Exc. for Struct.	Cu.Yds.		190	190
Class X Concrete	Cu.Yds.	214.5	264.8	479.3
Reinf. Bars	Lbs.	58,500	21,440	79,940
Structural Steel	L.S.	0.2		0.2
Aluminum Railing	Lin.Ft.		310	310
Slope Wall (6")	Sq.Yds.		1,160	1,160
Steel Piles (8BP36)	Lin.Ft.		400	400
Test Piles (Steel 8BP36)	Ea.		1	1
Crested Piles up to 20'	Lin.Ft.		216	216
Name Plates	Ea.	1		1
Protective Coat	Sq.Yds.		833	833
Bridge Seat Sealant	L.S.		0.5	0.5

GENERAL NOTES
All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
Diaphragm connections may be adapted to shop welding subject to approval by the Engineer.
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Conc. The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.
Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
Anchor bolts shall be set before fastening diaphragms over supports.
Sloped wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 sq. ft.
Class A/B Excavations for structures includes excavation for sloped wall.
The Contractor shall drive 1 Steel (8BP36) test pile in a permanent location at South Abutment as directed by the Engineer before ordering the remainder of piles.
The embankment configuration shown shall be the minimum embankment that must be constructed prior to the construction of the abutments.
Fasteners shall be high strength bolts 3/4", open holes 13/16", unless otherwise noted.

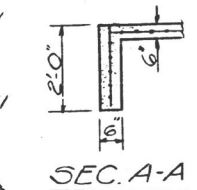
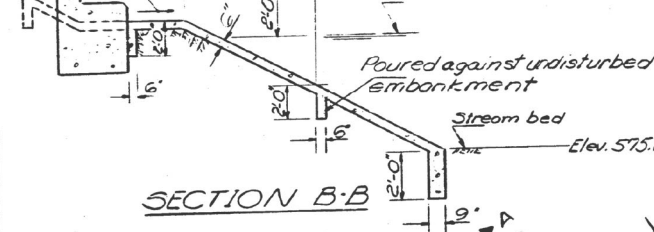
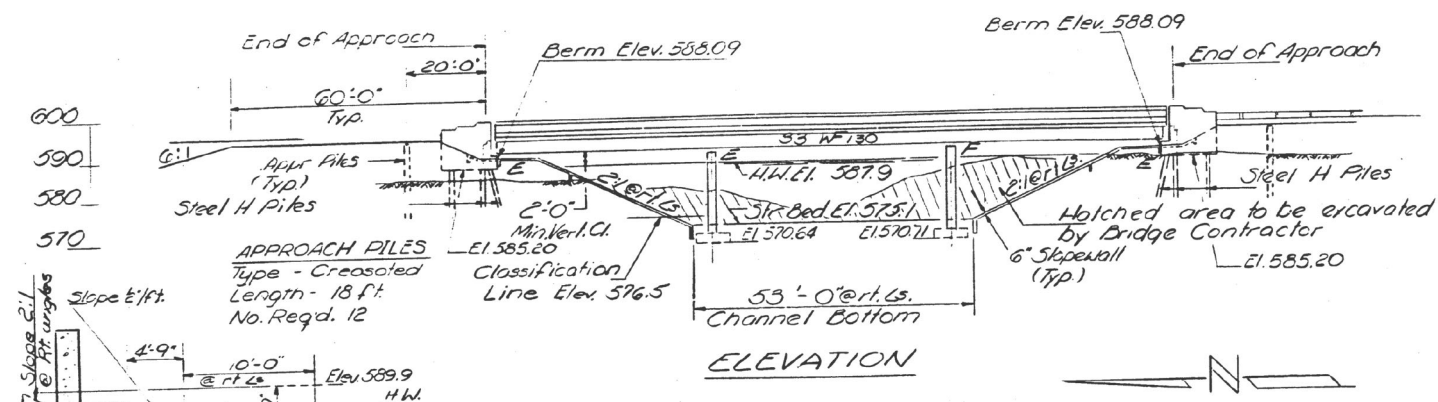
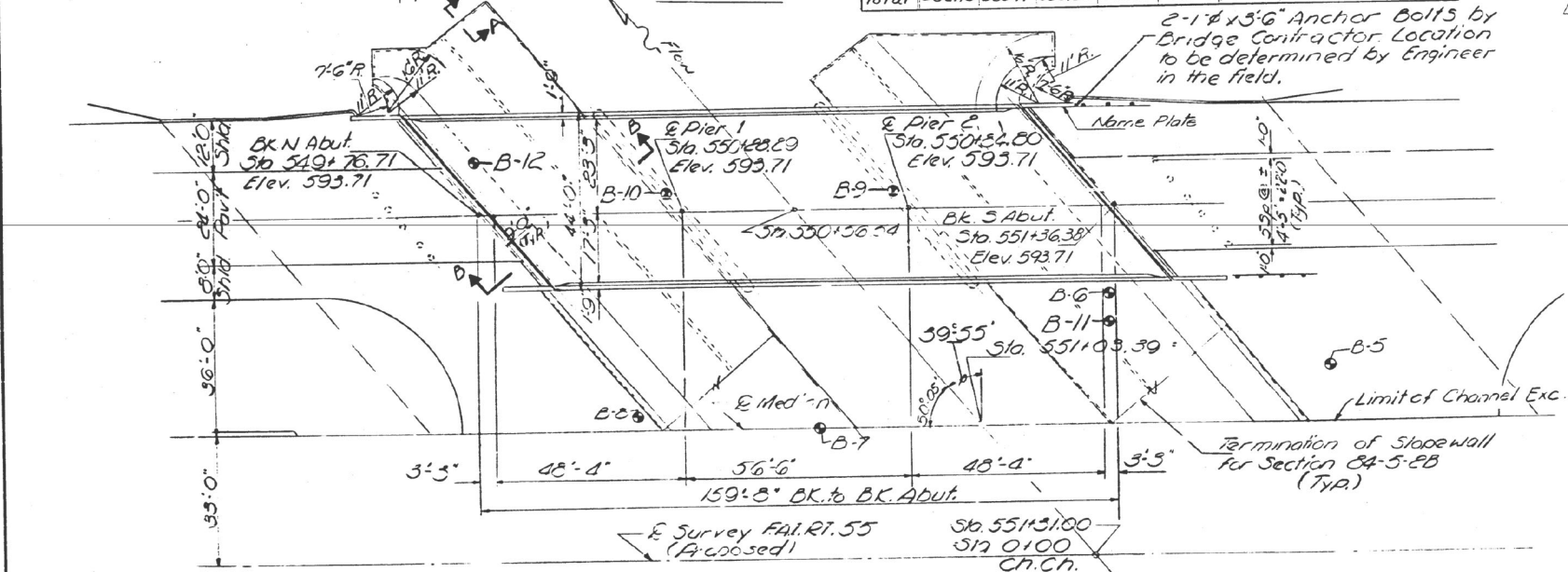
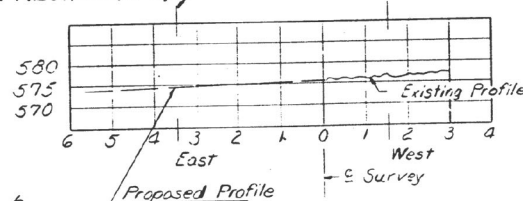
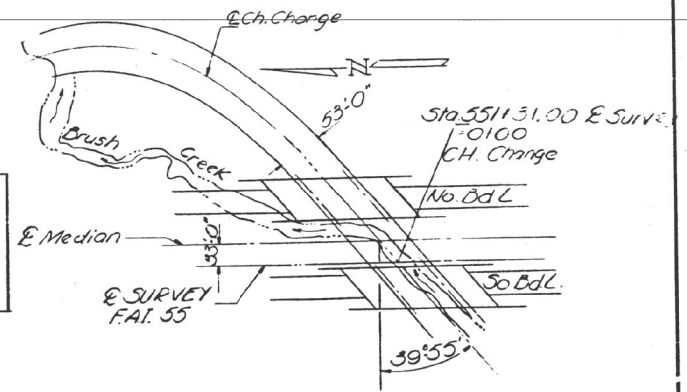


Table of Moments and Reactions - Interior Beam

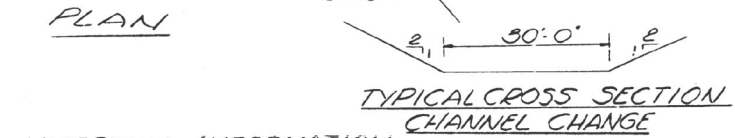
Loc.	Moments (Kt Kips)				Reactions (Kips)		
	4.5p1	5.5p2	6.5p1	7.5p1	N. Abut.	Pier 2	S. Abut.
D.L.	206.39	334.13	149.89	334.13	224.0	70.49	70.49
L.L.	330.59	258.78	319.97	258.78	330.59	60.69	117.76
Imp	96.00	71.00	66.00	71.00	96.00	16.41	31.80
Total	632.98	663.91	535.86	663.91	632.98	147.18	220.05



STATION 550+56.54
BUILT 19 BY
STATE OF ILLINOIS
FAI.RT. 55 SEC. 84-5-2B
FA PROJ. I-55-2 (4A)
LOADING HS 20 & ALT.
NAME PLATE
(See Std 2113-1)

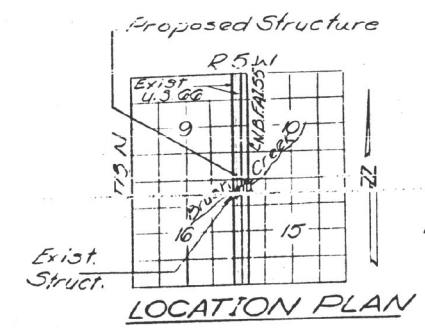


PROPOSED GRADE FAI.RT.55
Along Edge of PAVT
VC=450'
-1.0% 0.00%



WATERWAY INFORMATION
Drainage Area 17,700 Acres
Character rolling, cultivated
Flood Frequency 1:50 yr. 430.3 cfs
Present Opening 630.3 cfs
Proposed Opening 950.3 cfs
Ordinary Water Elev. 576.5
Low Water Elev. 575.5
Q = 4800 cfs

DESIGN STRESSES
fc = 4000 psi (Deck Slab)
fc = 4000 psi (Culvert, Pier cap, Sub)
fs = 20,000 psi (Reinf)
fs = 20,000 psi (Struct)
vc = 75 psi (Figs)
n = 10
δ Deflection L/1000
Allow 25% for future WS
LOADING HS 20-44 & ALT.



GENERAL PLAN & ELEVATION
PROJECT I-55-2 (4A)
FAI.RT. 55 OVER BRUSH CRK.
FAI.RT. 55 SEC. 84-5-2B
SANGAMON COUNTY
STATION 550+56.54
N.B.D. C.A.N.E.S.

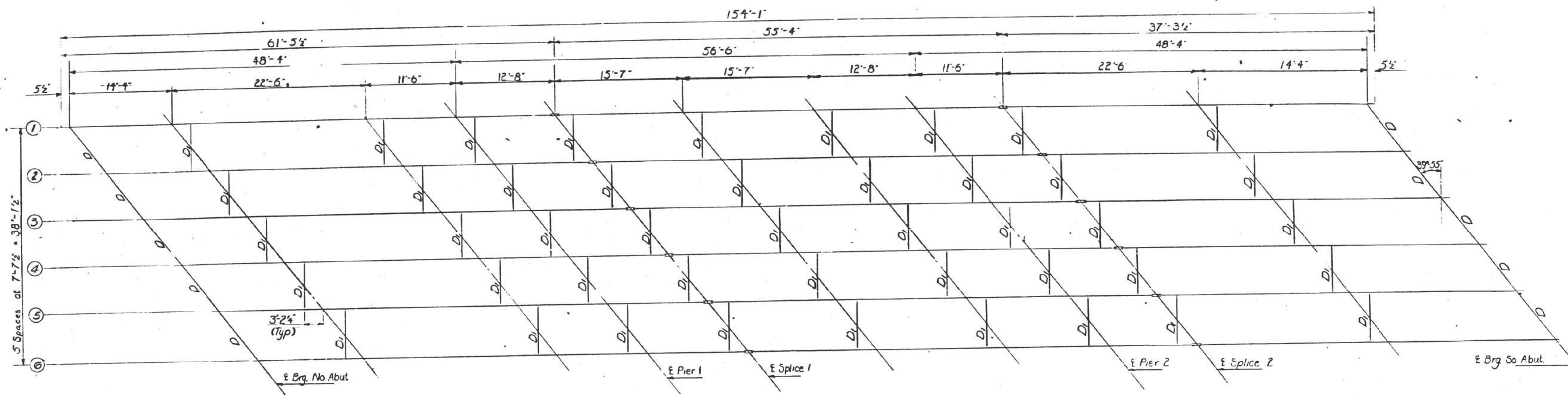
DESIGNED: [Signature]
CHECKED: A. Borroza
DRAWN: [Signature]
EXAMINED: [Signature]
APPROVED: [Signature]

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USER NAME = dudleybm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS, SN 084-0107 (FOR INFORMATION ONLY)	F.A.I. RTE. 55	SECTION (84-5-1) BP	COUNTY SANGAMON	TOTAL SHEETS 8	SHEET NO. 4
PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -						CONTRACT NO. 72M52	
PLOT DATE = 11/25/2020	DATE	REVISED -			SCALE:	SHEET OF SHEETS	STA. TO STA.	ILLINOIS	FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

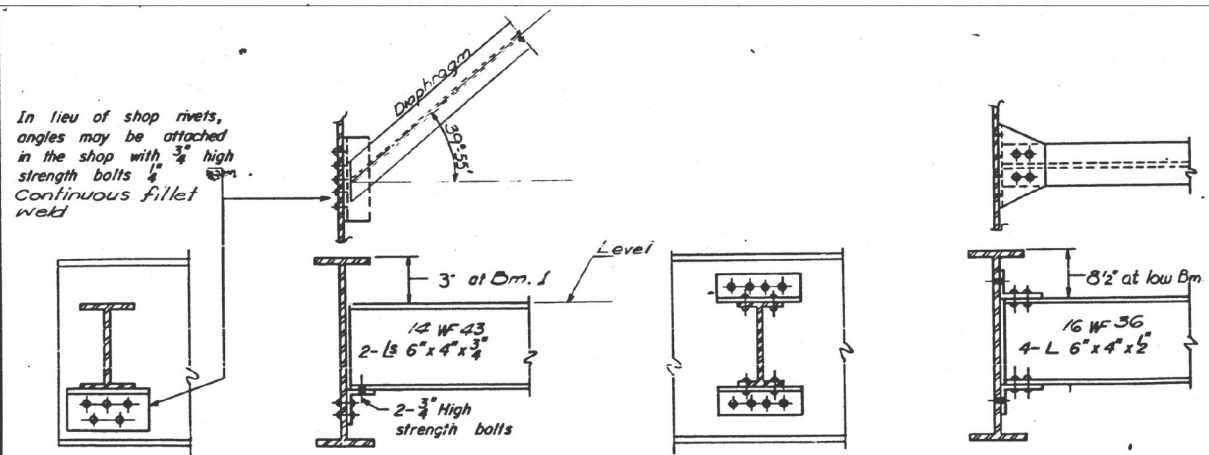
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 13 SHEETS
55	84-5-2B	Sangamon	375	96	



PLAN
(All Bms 33W/130)

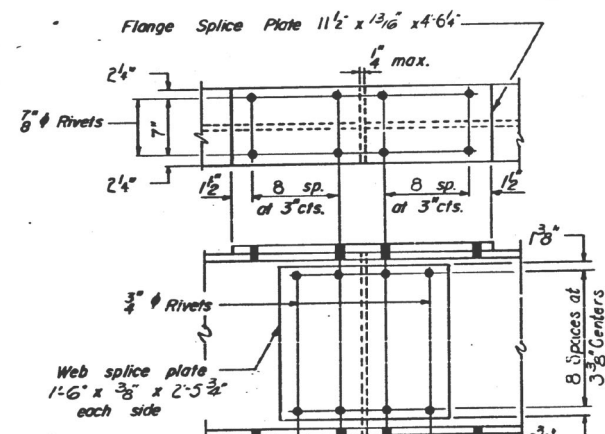
ELEVATION AT TOP OF BEAM

Beam	#1	#2	#3	#4	#5	#6
Elev.	592.59	592.75	592.88	592.98	592.86	592.72



DIAPHRAGM D
10 Required

DIAPHRAGM DI
45 Required



SPLICE
12 Required

DESIGNED by *Richard H. Gatterman*
CHECKED *M. L. Mc Gee*
DRAWN *J. Schneller*
EXAMINED *Richard H. Gatterman*
PASSED *Mc Baumann*
APPROVED *Richard H. Gatterman*

FRAMING PLAN
F.A.I. RT. 55 SEC. 84-5-2B
SANGAMON COUNTY
STA. 550+56.54
NORTH BD. LANES

I-2-D 9-1-65

USER NAME = dudleybm	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 11/25/2020	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS, SN 084-0107
(FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-1) BP	SANGAMON	8	5
			CONTRACT NO. 72M52	
ILLINOIS FED. AID PROJECT				

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BM: #33 Elev. 592.24, a Cut on NW Corner of bridge Abut. Rt. 135 of Sta. 552+07
 Existing No. Bd. Struct. Simple Span 36 W/Bm-closed Abuts. 44'-0" width, to be removed by Contractor before new constr. Exist. So. Bd. Struct. to remain.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEETS
P.A. 55	84-5-2B-1	Sangamon	315	104	14

GENERAL NOTES

All reinforcement bars shall be lapped 2d diameters unless otherwise shown.

Diaphragm connections may be adapted to shop welding subject to approval by the Engineer.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange to a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before fastening diaphragms over supports.

Sloped wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 sq. ft.

Class A/B Excavations for structures includes excavation for slope wall.

The Contractor shall drive 1 Steel (58BP36) test pile in a permanent location at North Abutment as directed by the Engineer before ordering the remainder of piles.

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

Fasteners shall be high strength bolts 3/4", open holes 1/8", unless otherwise noted.

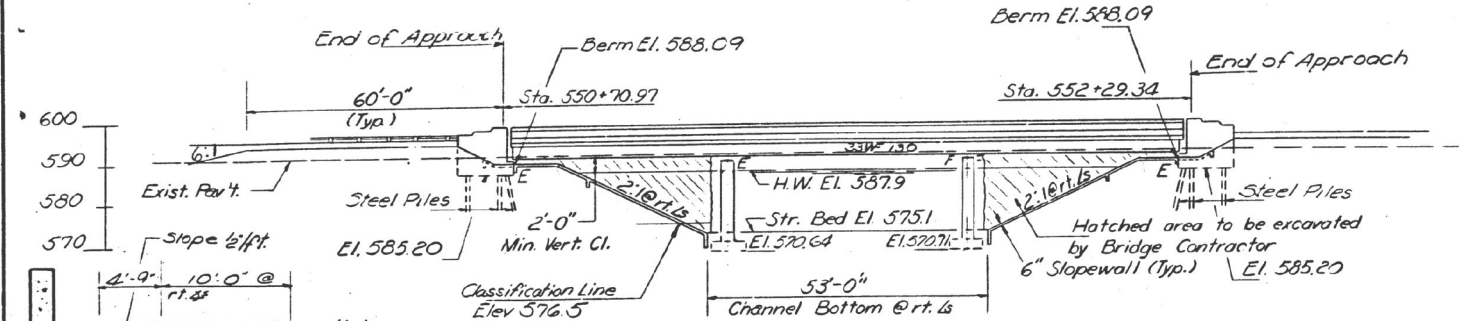


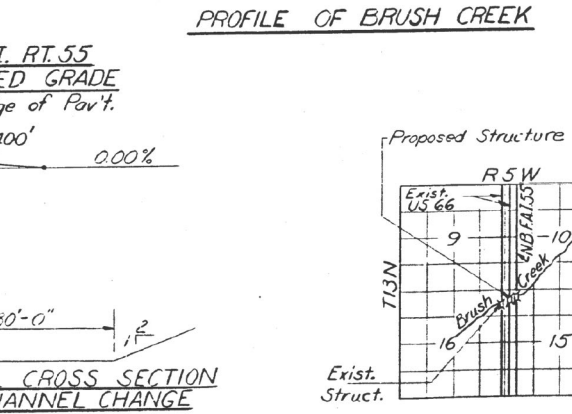
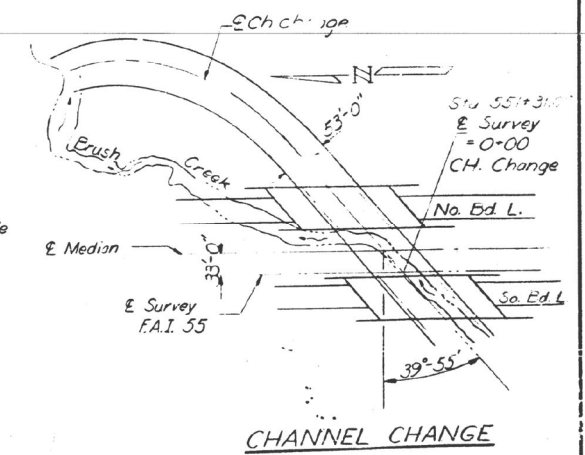
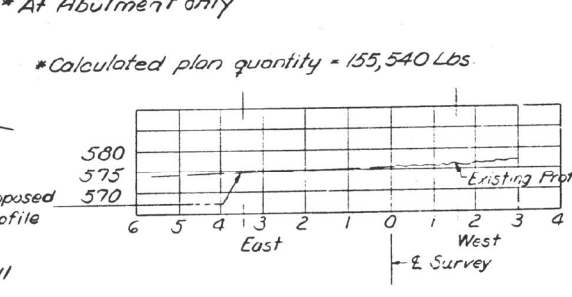
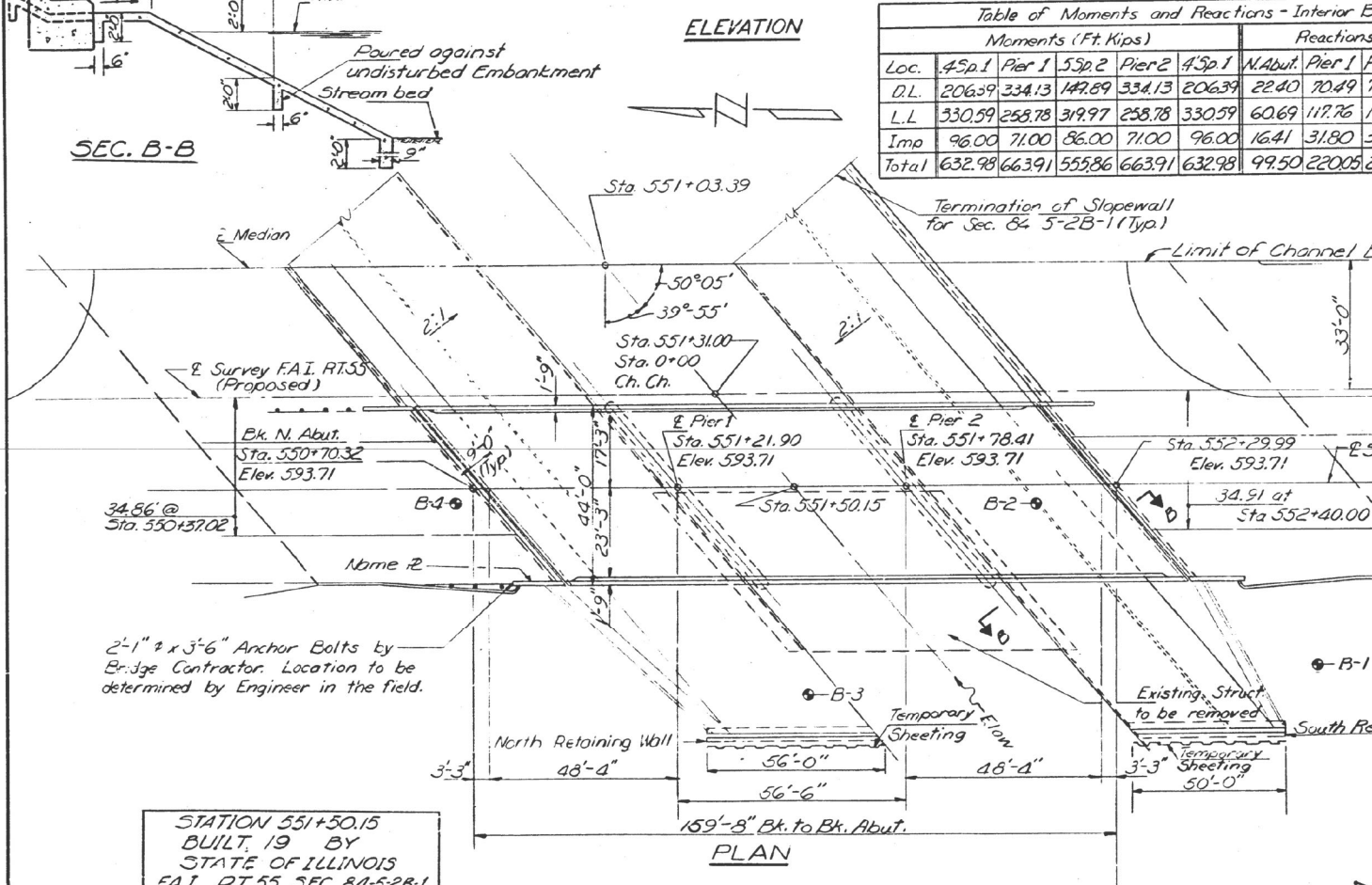
Table of Moments and Reactions - Interior Beam

Loc.	Moments (Ft. Kips)				Reactions (Kips)				
	4Sp1	Pier 1	5Sp2	Pier 2	4Sp1	N. Abut.	Pier 1	Pier 2	S. Abut.
O.L.	206.39	334.13	147.89	334.13	206.39	22.40	70.49	70.49	22.40
L.L.	330.59	258.78	319.97	258.78	330.59	60.69	117.76	117.76	60.09
Imp	96.00	71.00	86.00	71.00	96.00	16.41	31.80	31.80	16.41
Total	632.98	663.91	555.86	663.91	632.98	99.50	220.05	220.05	99.50

ELECTRICAL CONDUIT LOCATION

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Removal of Existing Struct.	Ea.		1	1
Class A* Exc. for Struct.	Cu. Yds.		660	660
Class B* Exc. for Struct.	Cu. Yds.		480	480
Class X Concrete	Cu. Yds.	214.5	440.9	655.3
Reinforcement Bars	Lbs.	58,540	3,720	95,810
Structural Steel	L.S.	0.2	0.2	
Aluminum Railing	Lin. Ft.	310	310	
Slope Wall (6")	Sq. Yds.		1770	1770
Steel Piles (88BP36)	Lin. Ft.		376	376
Test Piles (Steel 88BP36)	Ea.		1	1
Protective Coat	Sq. Yds.		833	833
Name Plates	Ea.	1	1	
Bridge Seat Sealant	L.S.		0.5	0.5
Porous Granular Embankment	Cu. Yds.		270	270
Temporary Sheeting	Sq. Ft.		1960	1960



STATION 551+50.15 BUILT 19 BY STATE OF ILLINOIS FAI. RT. 55 SEC. 84-5-2B-1 FA. PROJ. I-55-2(44) LOADING HS 20 & ALT.

NAME PLATE See Std. 2113-1

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

SEPT 9 1969

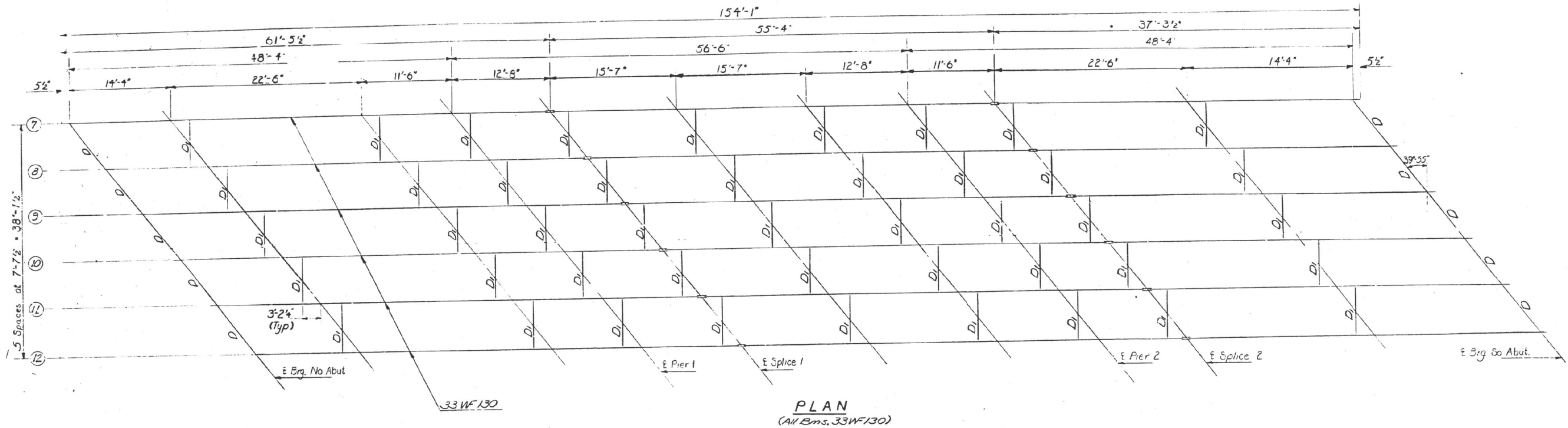
WATERWAY INFORMATION

Drainage Area	17,700 Acres
Character	rolling & cultivated
Req'd Opening (50yr. Fl.)	950 sq. ft.
Present Opening	633 sq. ft.
Proposed Opening	950 sq. ft.
Ordinary Water Elev.	576.3
Low Water Elev.	575.5
Q =	4800 c.f.s.

fc = 1,200 psi (Deck Slab)
 fc = 1,400 psi (Curb, parapet, Sub)
 fs = 20,000 psi (Reinf.)
 fs = 20,000 psi (Struct.)
 vc = 75 psi (Ftgs.)
 n = 10
 Δ Deflection 4/1000
 Allow 25% for future WS
 LOADING H.S. 20-44 & ALT.

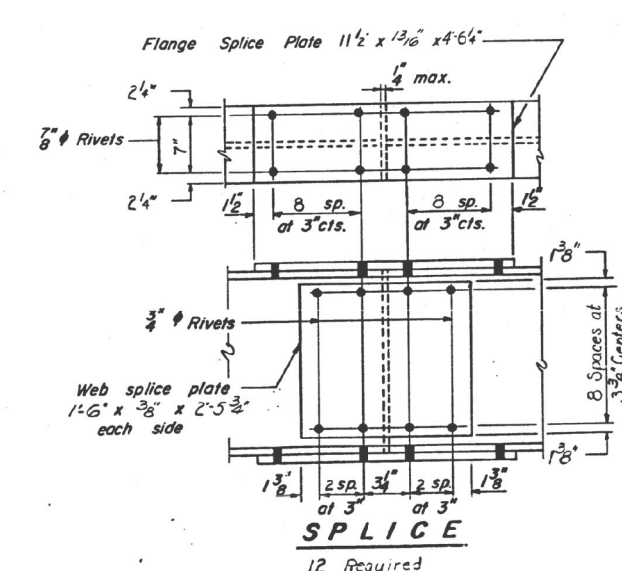
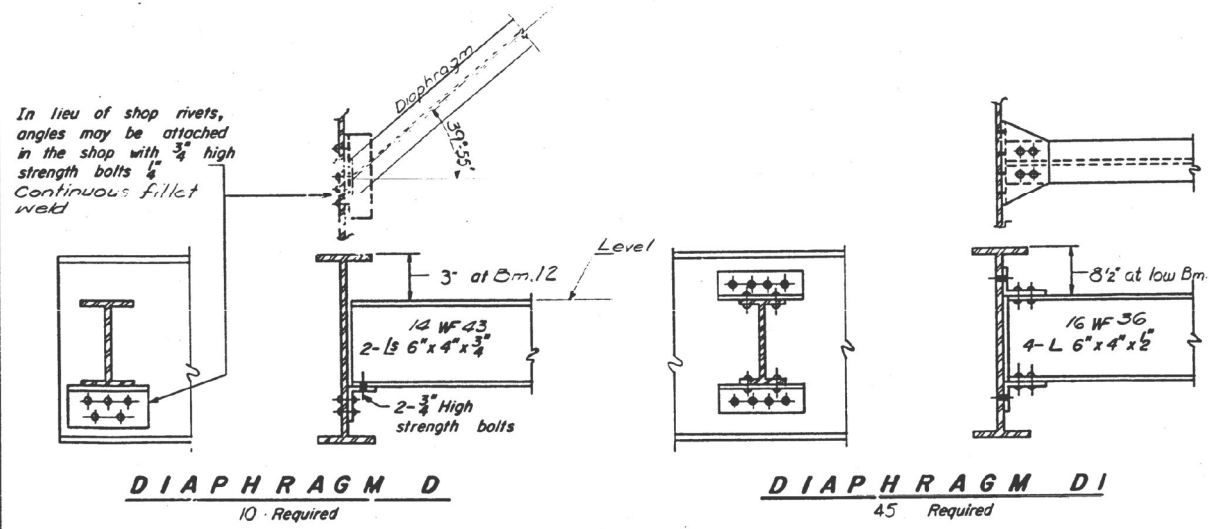
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
84-5-2B-1	84-5-2B-1	Sangamon	375	110	14 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



ELEVATION AT TOP OF BEAM

Stn.	+7	+8	+9	+10	+11	+12
Elev.	592.72	592.86	592.98	592.83	592.75	592.53



DESIGNED: [Signature]
CHECKED: K. P. [Signature]
DRAWN: J. Schneller
CHECKED: [Signature]

EXAMINED: [Signature] SEPT. 9 1969
PASSED: [Signature]
APPROVED: [Signature]

FRAMING PLAN
F.A.I. RT. 55 SEC. 84-5-2B-1
SANGAMON COUNTY
STATION 551+50.15
SOUTH B.D. LANES

I-2-D 9-1-55

USER NAME = dudleybm	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 11/25/2020	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS, SN 084-0108
(FOR INFORMATION ONLY)

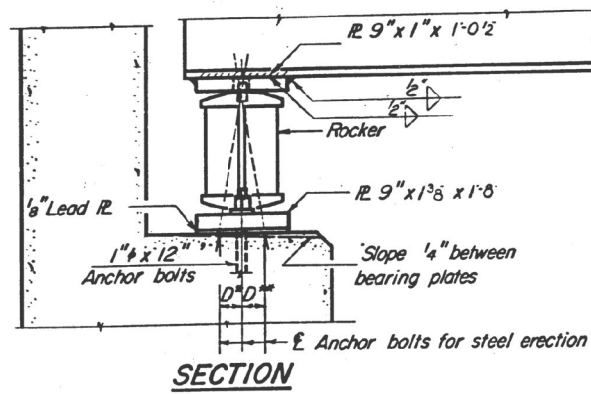
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-1) BP	SANGAMON	8	7
CONTRACT NO. 72M52				
ILLINOIS FED. AID PROJECT				

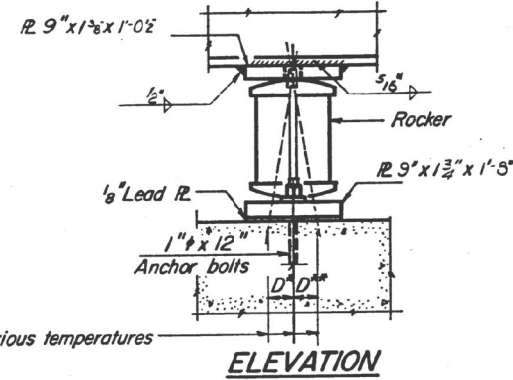
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STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

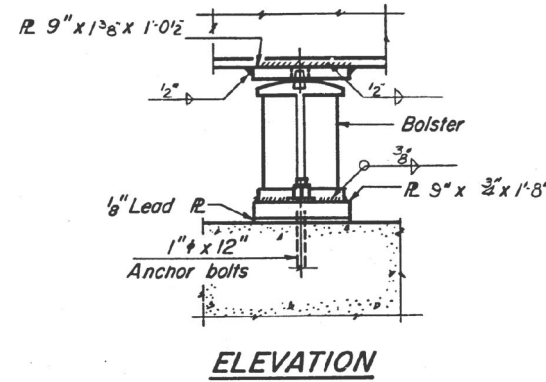
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55	84-5-2B	Sangamon	375	97	23 SHEETS
FED. ROAD DIST. NO. 7					



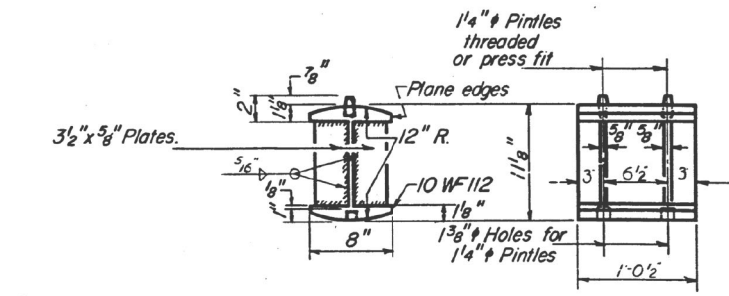
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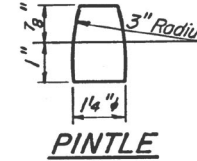
ELEVATION



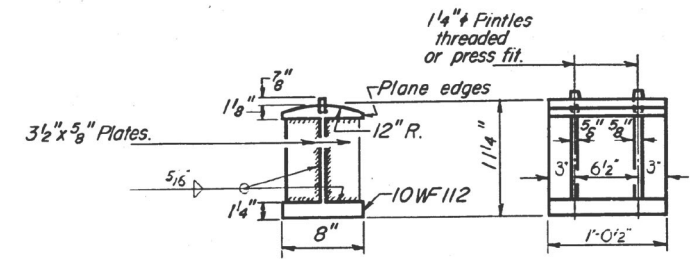
ELEVATION



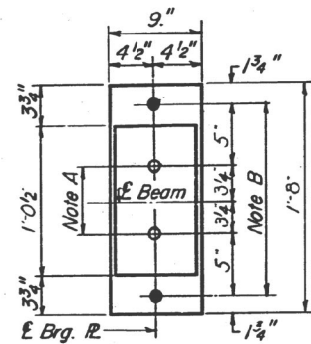
ROCKER



PINTLE



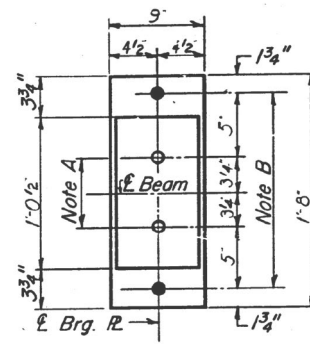
BOLSTER



PLAN

AT ABUTMENTS

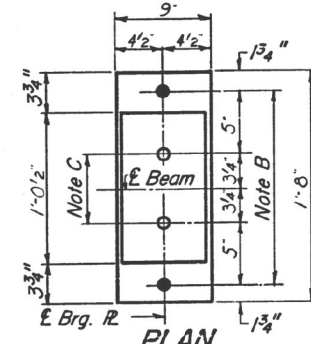
NOTE A
1 3/8\"/>



PLAN

AT PIER 1

NOTE B
1 1/2\"/>



PLAN

AT PIER 2

NOTE C
1 3/8\"/>

BEARING ASSEMBLY DETAILS

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
- D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.
- b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

DESIGNED	SEPT 9 1969
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED

I-2-B 9-1-55

BEARING DETAIL
F.A.I. RT. 55 SEC. 84-5-2B
SANGAMON COUNTY
STATION 550+56.54
NORTH BD. LANES

MODEL: D:\p\dtp\... FILE NAME: C:\OPERATIONS\Bids\Bids\Bids\Bids_CAD\72M52_0840107 & 0108_paint\brgdetail.dwg

USER NAME = dudleybm	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 11/25/2020	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS, SN 084-0107 & 0108 (FOR INFORMATION ONLY)			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-1) BP	SANGAMON	8	8
CONTRACT NO. 72M52				
ILLINOIS FED. AID PROJECT				