

05-24-13 SPECIAL LETTING ITEM 043

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.P. RTES. 322 & 714 (OLD U.S. BUS. RTE. 51 & IL. RTE. 105)
SECTION D7 BRIDGE PAINTING 2013-4

**BRIDGE PAINTING
MACON COUNTY**

C-97-053-13

F.A.P. RTES. 322 714	SECTION .	COUNTY MACON	TOTAL SHEETS 9	SHEET NO. 1
ILLINOIS			CONTRACT NO. 74613	

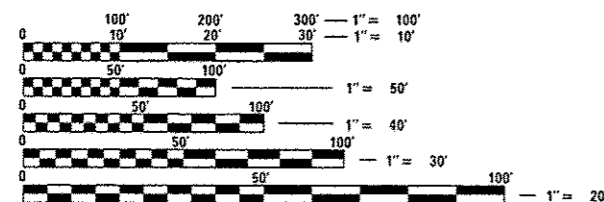
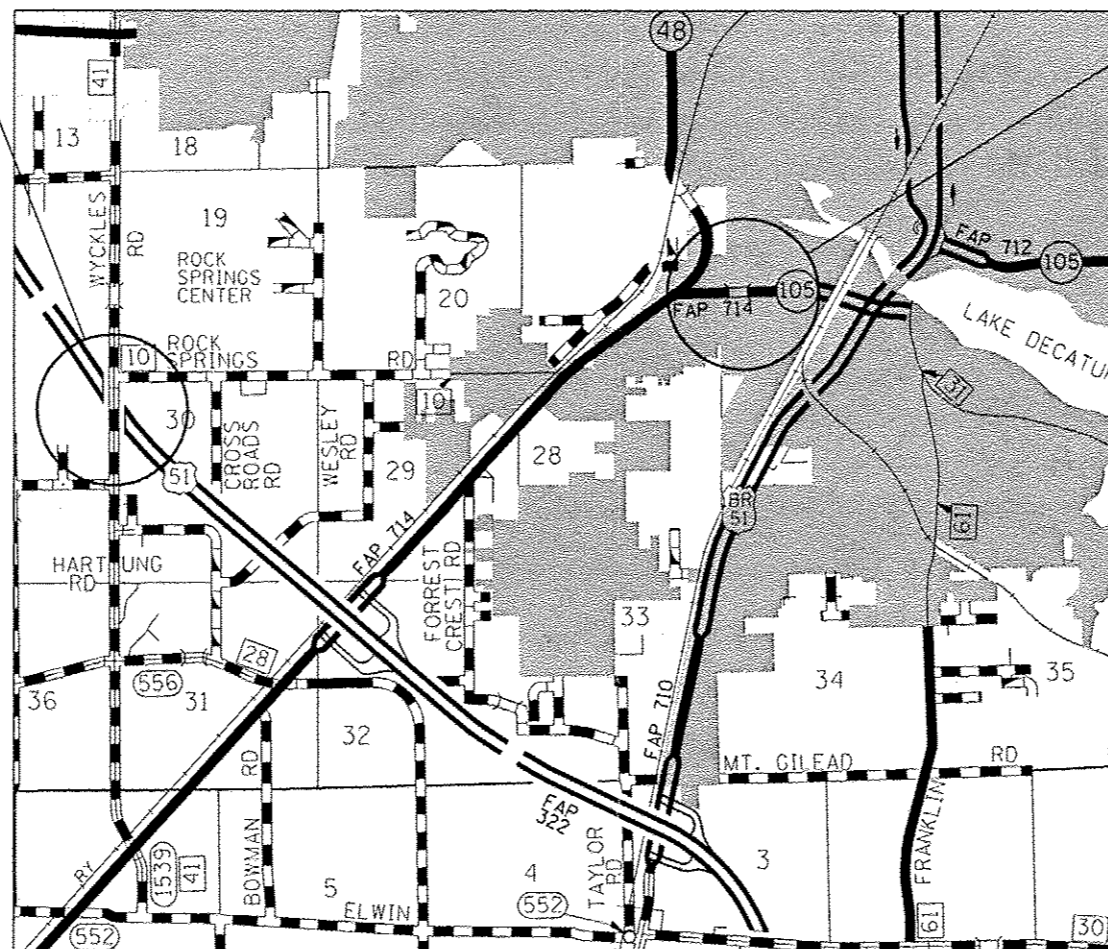
D7 BRIDGE PAINTING 2013-4
** 9+5=14
D-97-012-13

FOR INDEX OF SHEETS, SEE SHEET NO. 2



LOCATION 1
STA. 312 + 43.08
S.N. 058-0103

LOCATION 2
STA. 116 + 30.00
S.N. 058-0112



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 EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: TOM RONAN
PROJECT MANAGER: TOM RONAN
PHONE: (217)-342-8320
CONTRACT NO. 74613

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED MARCH 20 20 13
Roger L. Oriskany
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

April 26 20 13
John D. Baranzelli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

April 26 20 13
Omer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

LOCATION #1

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, GENERAL NOTES, & LOCATION DESCRIPTIONS
3	SUMMARY OF QUANTITIES
4-9D	EXISTING STRUCTURE PLANS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 9:

STANDARDS	DESCRIPTION
STANDARD 701101-03	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701106-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701400-06	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701402-09	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701606-08	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701901-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2012; THE SUPPLEMENTAL SPECIFICATIONS, THE RECURRING SPECIAL PROVISIONS, AND THE SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

THE PROPOSED PROJECT IS LOCATED AT 2 LOCATIONS IN MACON COUNTY IN DISTRICT 7, THE LOCATIONS ARE AT STRUCTURE NUMBERS 058-0103 AND 058-0112 IN MACON COUNTY.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF CLEANING AND PAINTING THE BRIDGES AS SPECIFIED IN THE PLANS AND SPECIAL PROVISIONS.

THE STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED AS SPECIFIED IN THE PLANS AND THE SPECIAL PROVISIONS.

ALL DECK DRAINS ON STRUCTURE NUMBER 058-0103 SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THEIR OWN EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ONLY STRUCTURAL STEEL IS TO BE PAINTED. ALL OTHER SURFACES WILL BE PROTECTED FROM BEING PAINTED. ALL PAINT AND OVERSPRAY WILL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

THE SSPC OPI AND OP2 PAINTING CONTRACTOR CERTIFICATION WILL BE REQUIRED FOR THIS PROJECT.

ROUTE: FAP 322
 MARKED: US 51
 SECTION: 58-20HB-2
 STATION: 312+43.08
 STRUCTURE NUMBER: 058-0103

TYPE OF BRIDGE: Wide Flange I Beams-4 Spans (6 Beams)
 LOCATION: 1 Mile southwest of Decatur
 FEATURE CARRIED/SPANNED: CH 41 over US 51

COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearing and other structural steel within 10 of the beam ends at the south abutment, all structural steel in span 4, and the remaining fascias girders, and their bearings, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

Three air monitors will be required at this location.

LOCATION #2

ROUTE: FAP 714
 MARKED: ILL 105
 SECTION: 128 8Y
 STATION: 116+30
 STRUCTURE NUMBER: 058-0112

TYPE OF BRIDGES: Wide Flange I Beams-3 Spans (10 Beams)
 LOCATION: 0.3 miles east of IL 48 on south side of Decatur
 FEATURE CARRIED/SPANNED: ILL 105 over Spring Creek

COLOR OF THE FINISH COAT SHALL BE GREEN, MUNSELL 10B 3/6.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All six weathering steel beams, including bearings and diaphragms, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. For the outer four beams, all structural steel, including bearings and diaphragms, within 5' (measured along the beam) of the abutments, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

Four air monitors will be required at this location.

FILE NAME -	USER NAME - steffennk	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, GENERAL NOTES AND STRUCTURE LOCATION DESCRIPTIONS	* DT BRIDGE PAINTING 2013-4		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\p\p\dot\steffennk\4613\3633\07	4613-shc-index.dgn	DRAWN -	REVISED -			322		MACON	9	2		
Default	PLOT SCALE = 1/8"=1'-0"	CHECKED -	REVISED -							CONTRACT NO. 74613		
	PLOT DATE = 4/29/2013	DATE -	REVISED -			SCALE: N/A	SHEET 1 OF 1 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NO.	REVISION	DATE	BY	CHKD.	NO. SHEETS
1	AS SHOWN				12
2					12

GENERAL NOTES

The main lead approval members of steel girders supported to frame splices shall conform to the Supplemental Requirements for North Bridges. The Contractor shall drive one test pile each in a permanent location at Pier 1 & Pier 2 as directed by the Engineer before ordering remainder of piles. See Proposal for Borings Log.

All reinforcement bars shall be spaced 24 diameters unless otherwise shown.

Foreshores shall be high strength concrete. Walls 18" deep with 4#11 bars at 12" spacing.

Calculated weight of Structural Steel = 114,323 + 310,710 Lbs. = 425,033 Lbs.

The Deck Lead Sillia Concrete post spaces 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 post supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before casting abutments over supports.

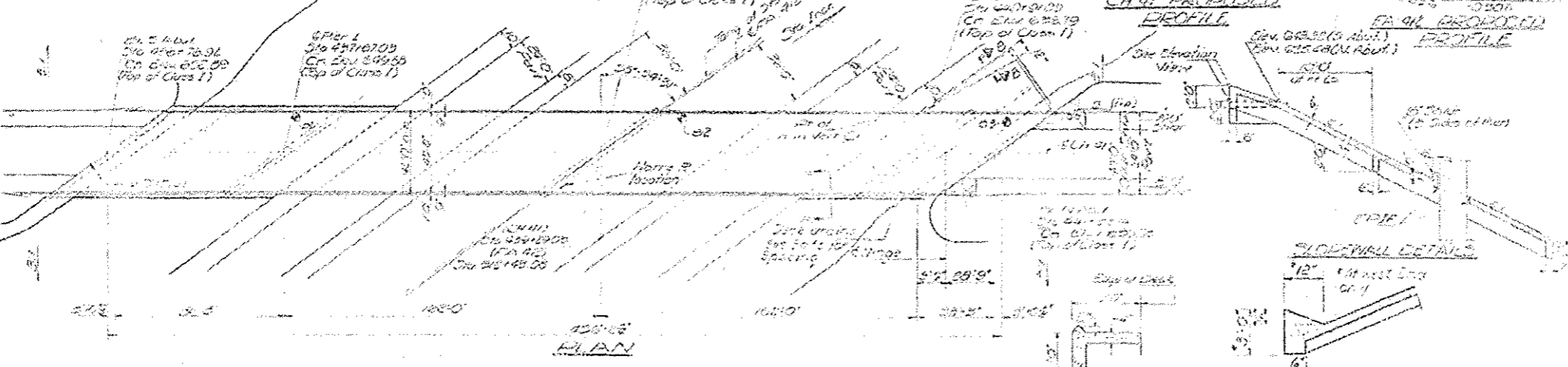
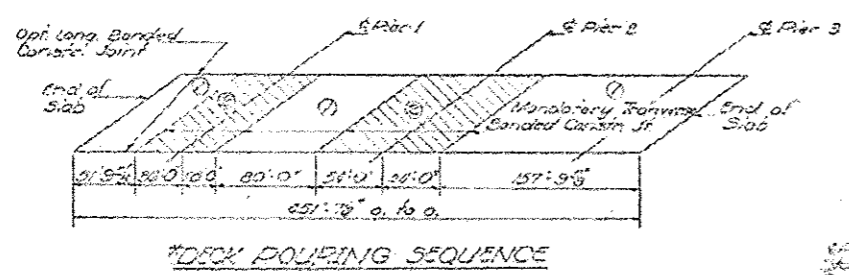
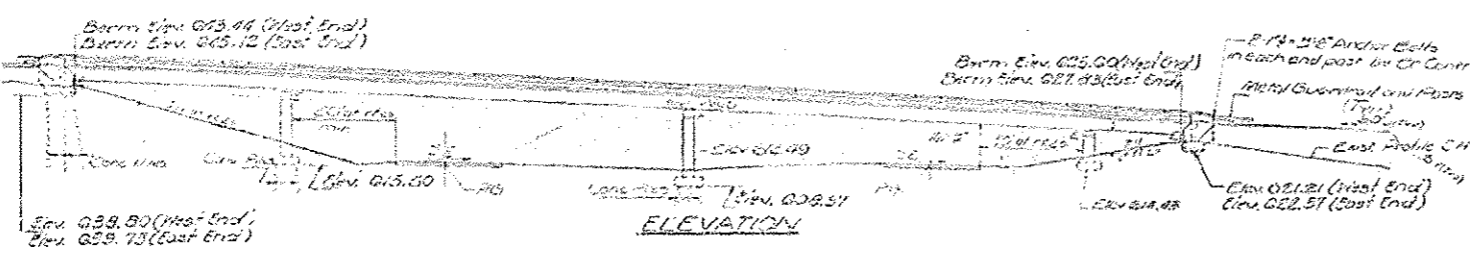
Slope was shall be reinforced with welded wire fabric #16 mesh, spacing 58" x 120" sq ft.

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

The concrete slab above the masonry construction and at the top of the slab shall be constructed of Class II Concrete, except for applications shall conform to the requirements of Normal Concrete.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made after by grinding the surface of or changing the bearing. Two 1/2" diameter studs of the dimensions of the bearing opening shall be provided for each bearing in addition to all other plates or shims.

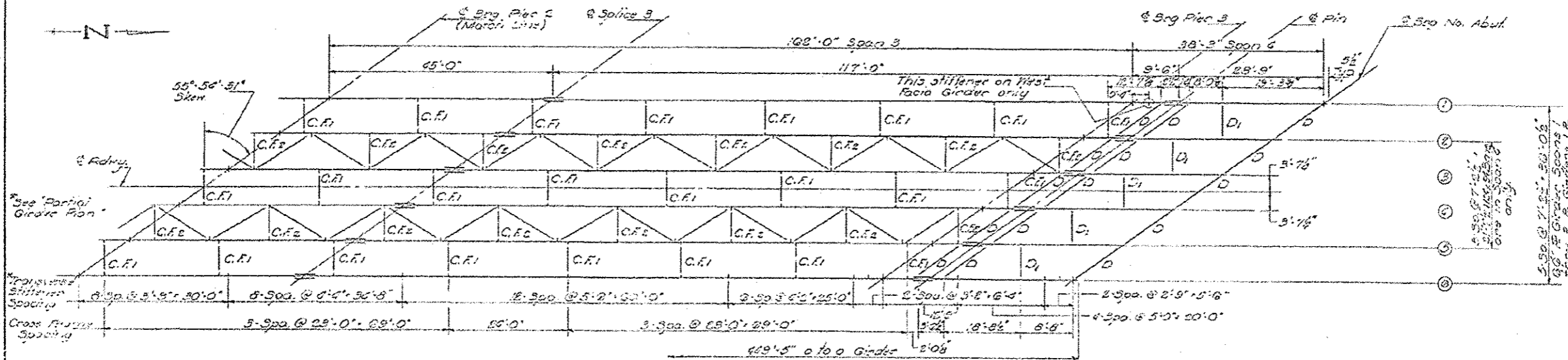
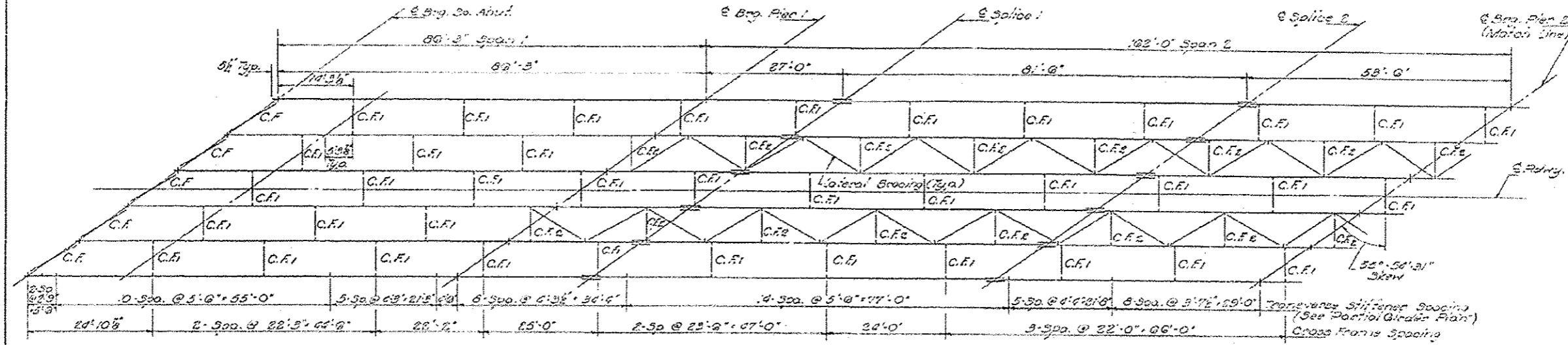


TOTAL BILLOF MATERIAL

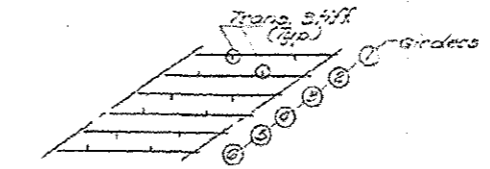
ITEM	UNIT	QUANTITY	PRICE	TOTAL
CONCRETE	CU YD	12,500	120.00	1,500,000
STEEL	TONS	150	300.00	45,000
CEMENT	TONS	100	100.00	10,000
WATERPROOFING	SQ YD	500	2.00	1,000
STRUCTURAL STEEL	TONS	100	300.00	30,000
WELDED WIRE FABRIC	SQ YD	1000	1.00	1,000
FORMWORK	SQ YD	1000	2.00	2,000
PAINT	SQ YD	1000	1.00	1,000
REINFORCEMENT BARS	TONS	50	300.00	15,000
CONCRETE PUMP	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,000
STEEL ERECTION	HOURS	100	100.00	10,000
CONCRETE PLACING	HOURS	100	100.00	10,000
FORMWORK	HOURS	100	100.00	10,000
PAINT	HOURS	100	100.00	10,00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	SHEET NO.	TOTAL SHEETS
10-372	58-20	51	21
PROJECT NAME		SHEET NO.	
Macon		21 SHEETS	



FRAMING PLAN



PARTIAL GIRDER PLAN
(Showing the size of stiffeners, spacing of stiffeners and girders)

DESIGNED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>
DRAWN	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>

EXAMINED	<i>[Signature]</i>
PASSED	
APPROVED	

NOTE:
For remainder of Structural Steel Details see sheets 1 through 18

STRUCTURAL STEEL
I.A. RT. 412 SEC. 58 2045-2
MACON COUNTY
STA. 55+45.08

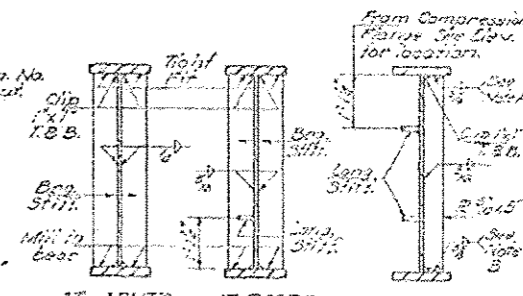
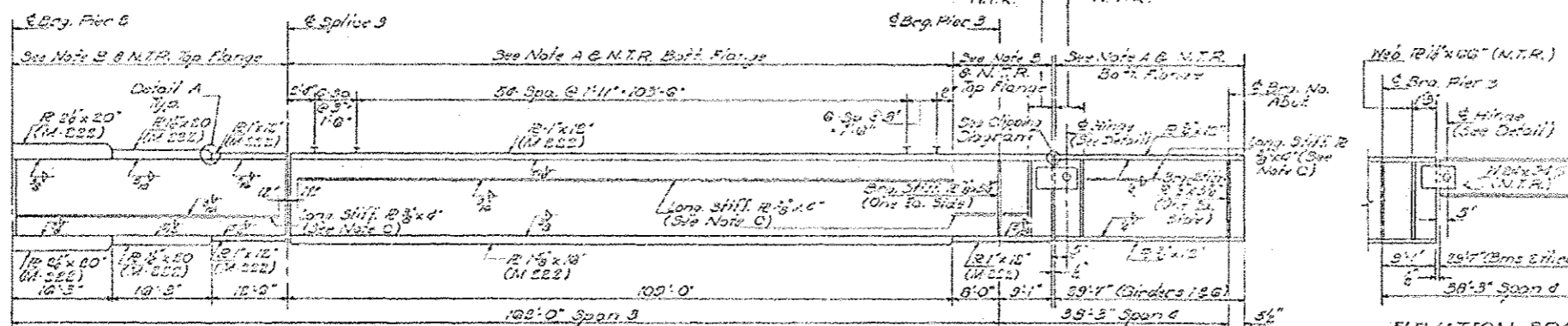
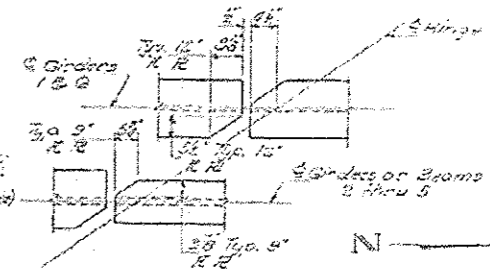
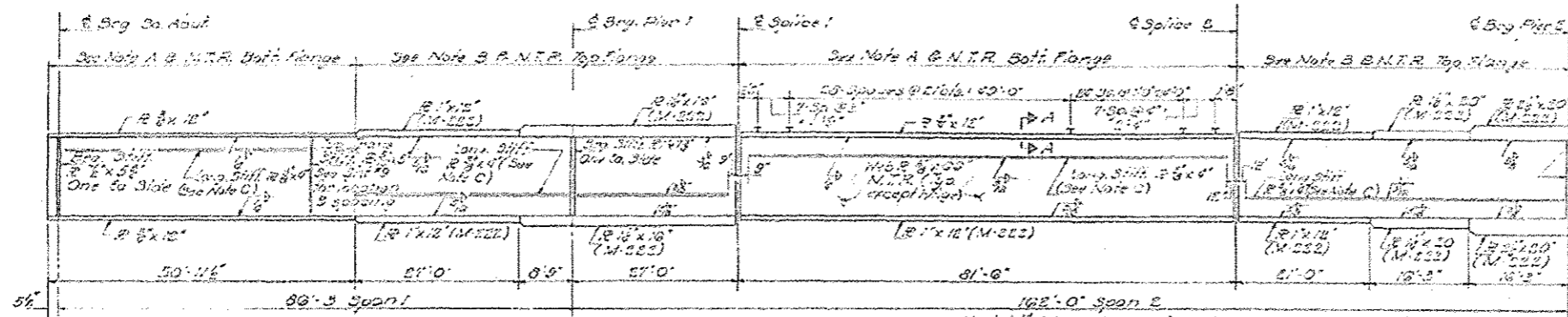
07 BRIDGE PAINTING 2013-4

ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	BY	NO.	REVISION
11-2	Mallon	51	22

SHEET NO. 10
21 SHEETS



GIRDER ELEVATION
(At Structural Steel only
See M-82 except as noted)

ELEVATION-SPAN 4
(Showing Brms & Truss)

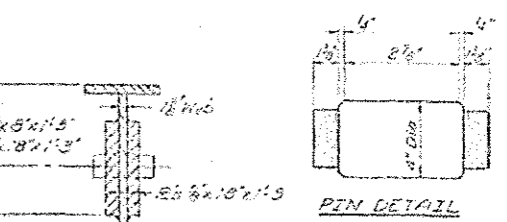
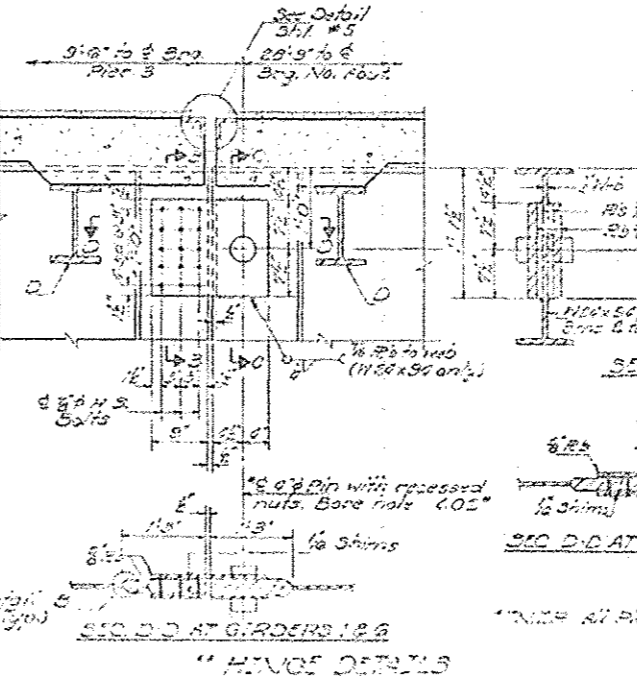
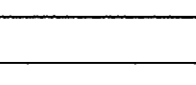
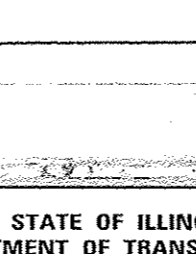
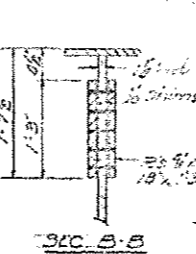
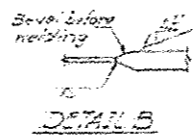
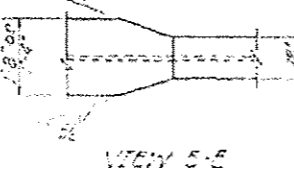
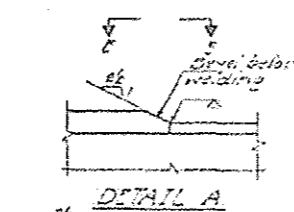
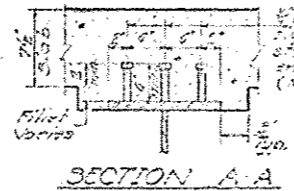
GIRDER CROSS SECTIONS

NOTES

Note A:
Transverse stiffeners in this area shall be welded to the top flange and 1/2\"/>

Note B:
Transverse stiffeners in this area shall be welded to the bottom flange and 1/2\"/>

Note C:
Longitudinal stiffeners are to be placed on the side of the web opposite the transverse stiffeners.
N.T.R. requires that the designated members conform to the supplemental requirements for Notch Toughness.



* Pin shall be S15 8350 steel, case hardened to a depth of 1/8\"/>

STRUCTURAL STEEL
A. S. 305 50 50 50 50 50
1200V 01111
S. T. S. 1111.03

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	BY	APP'D	SCALE	SHEET NO.
11-20-13	MS-2	MACON	51	24
PROJECT				21 SHEETS

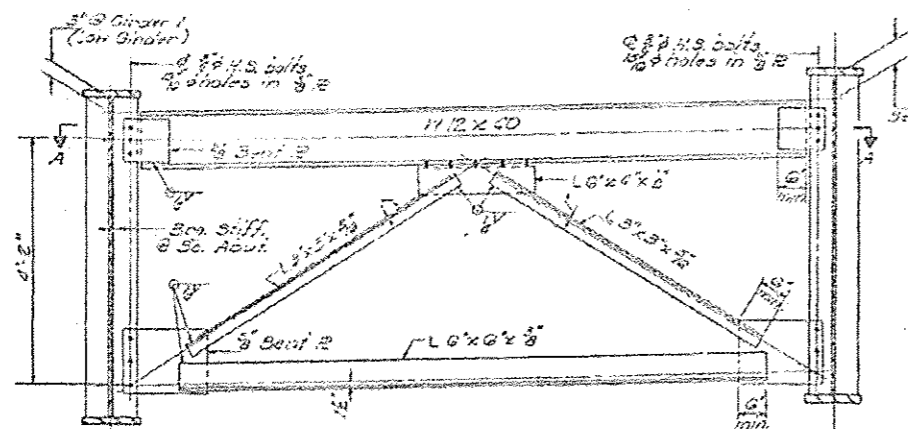
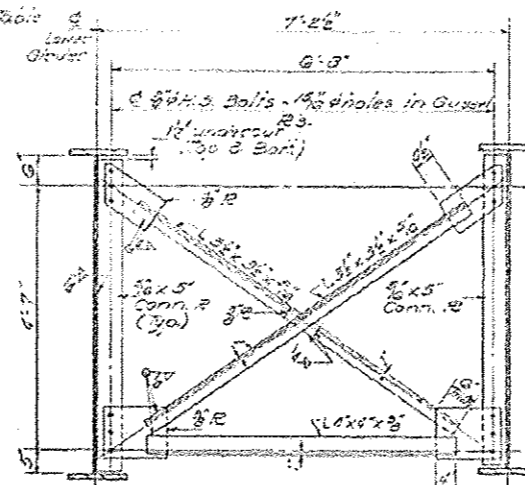


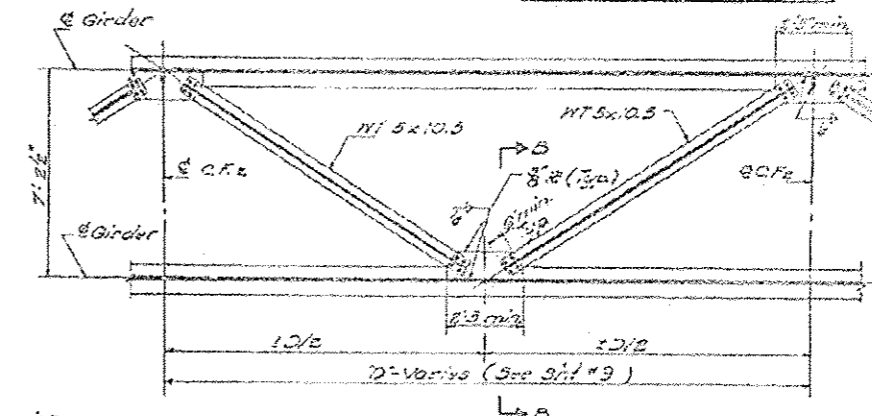
TABLE OF 'A' DIMENSIONS

Girder	2	3	4	5	6
A'	12'	16'	16'	16'	16'

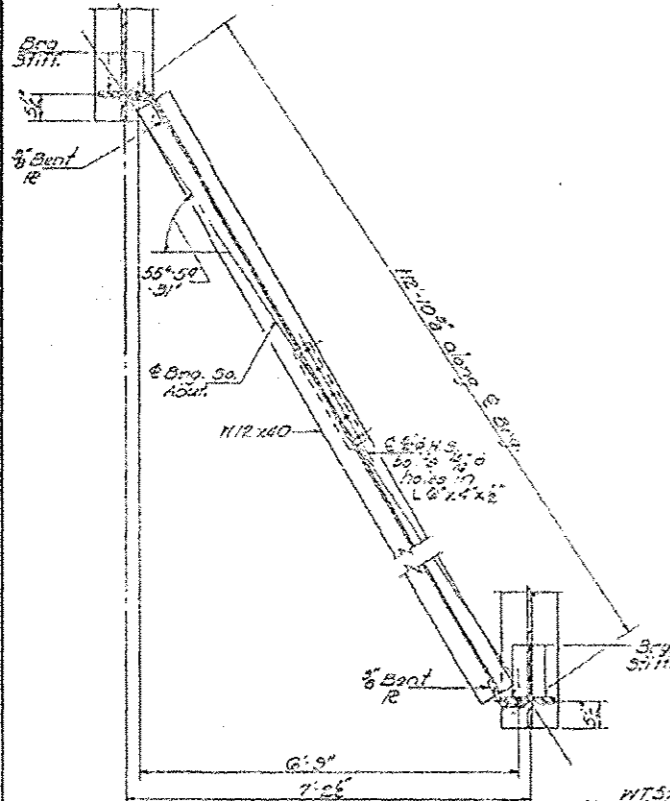
CROSS FRAME C.F.
No. Req'd: 5



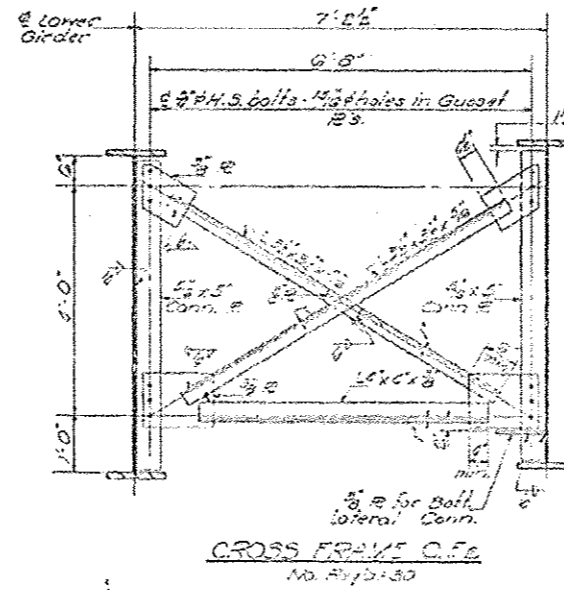
CROSS FRAME C.F.
No. Req'd: 60



TYR LATERAL BRACING PLAN



SECTION A-A



CROSS FRAME C.F.
No. Req'd: 30

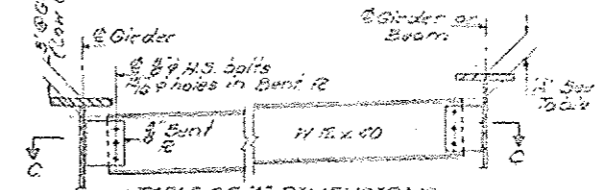
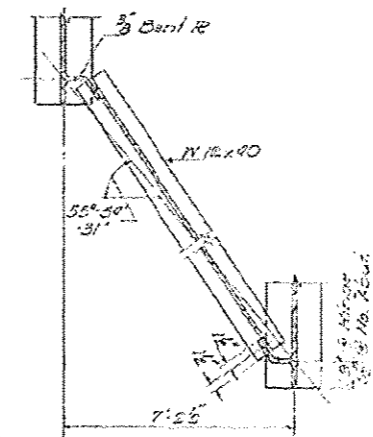
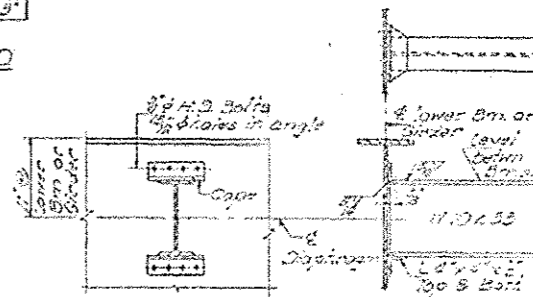


TABLE OF 'A' DIMENSIONS
Girder 2 3 4 5 6
A' 12' 16' 16' 16' 16'

DIAPHRAGM D
No. Req'd: 15



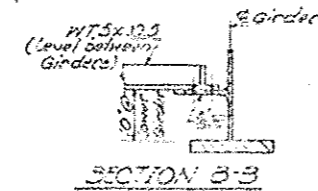
SECTION C-C



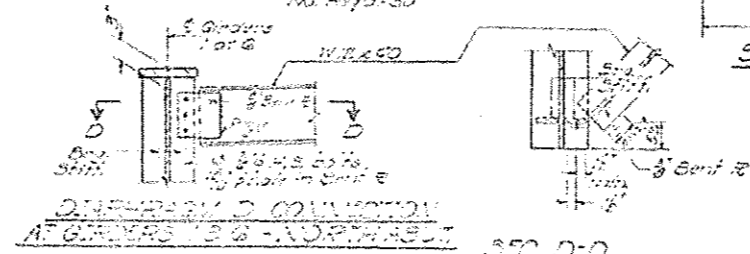
DIAPHRAGM D1
No. Req'd: 5

Note: Washers shall be required over 1/2" holes.

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	



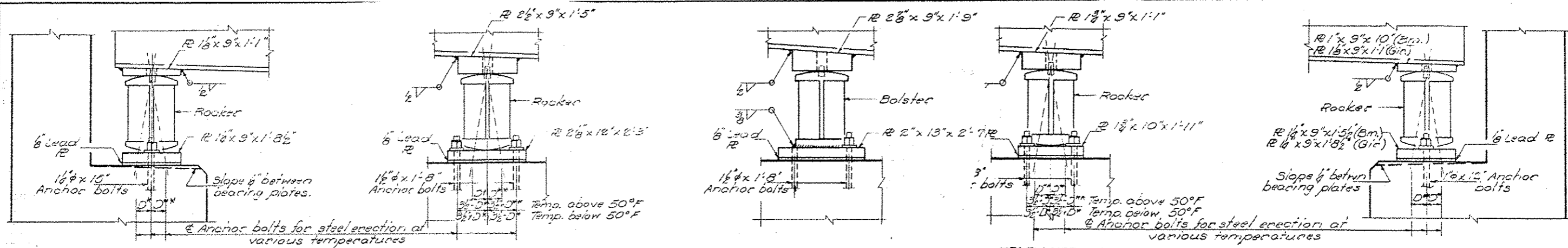
SECTION B-B



DIAPHRAGM D CONNECTION
A' GIRDERS 2 3 4 5 6

SEC D-D

STRUCTURAL STEEL DETAILS
F.A.P. 113
MACON COUNTY
STA. 31823.03



SECTION

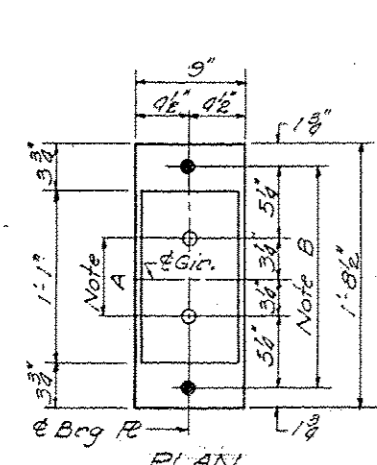
ELEVATION

ELEVATION

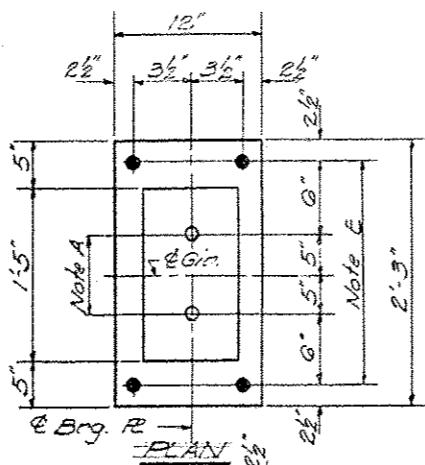
ELEVATION

SECTION

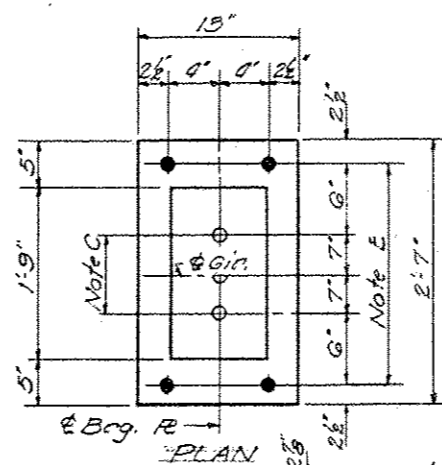
Beam = W20x90
Girder = GG-R Gir.



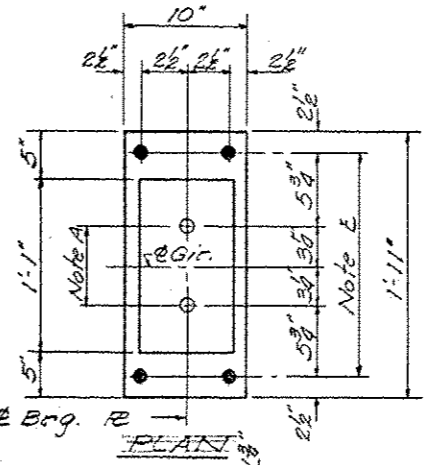
PLAN



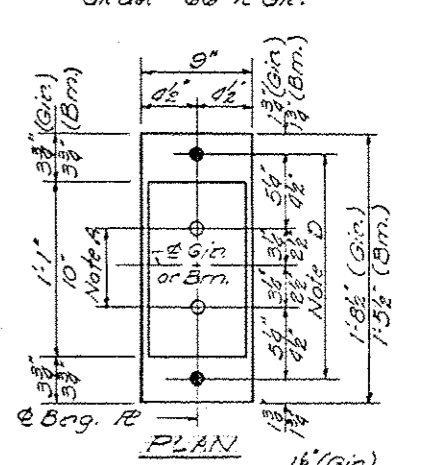
PLAN



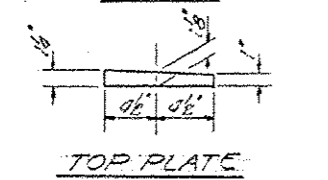
PLAN



PLAN

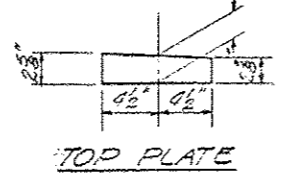


PLAN



TOP PLATE

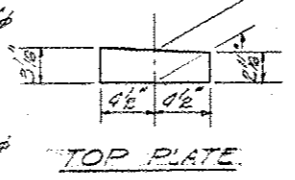
NOTE A:
1 1/2" Holes - 1" deep
in top R for pintles.
Thread or press fit
pintles into bottom
R



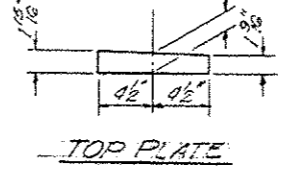
TOP PLATE

NOTE B:
1 1/2" Holes for 1 1/2"
anchor bolts.
1/2" x 2 1/2" x 2 1/2" R
washer under
nut.

NOTE E:
2" Holes for 1 1/2"
anchor bolts.
1/2" x 3" x 3" R
washer under nut

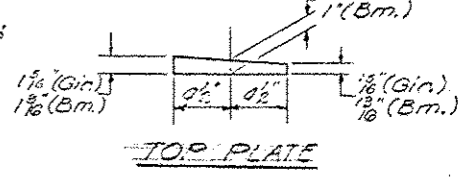


TOP PLATE



TOP PLATE

NOTE D:
1 1/2" Holes for 1"
anchor bolts.
1/2" x 2 1/2" x 2 1/2" R
washer under
nut.



TOP PLATE

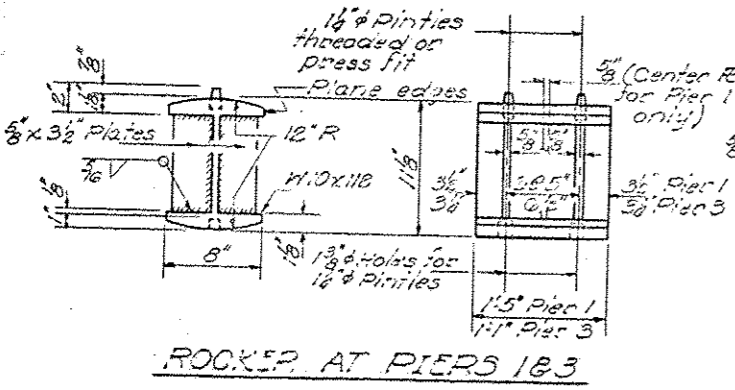
AT SOUTH ABUTMENT

AT PIER 1

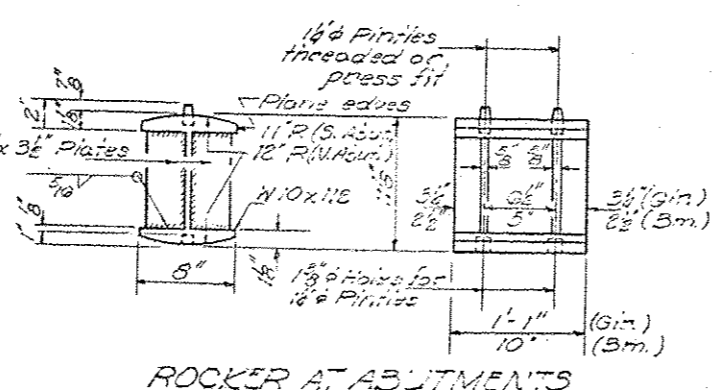
AT PIER 2

AT PIER 3

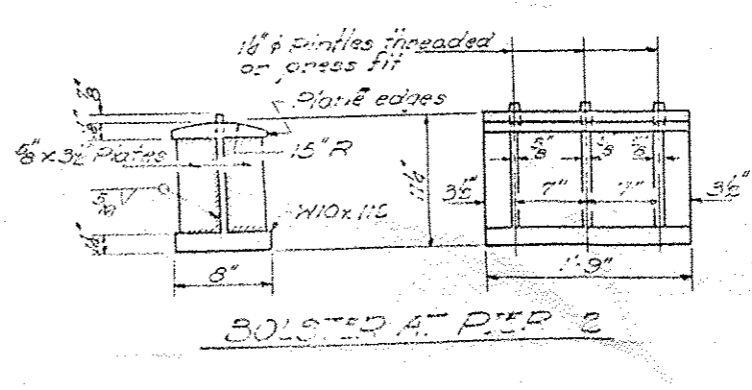
AT NORTH ABUTMENT



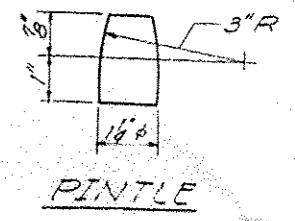
ROCKER AT PIERS 1 & 3



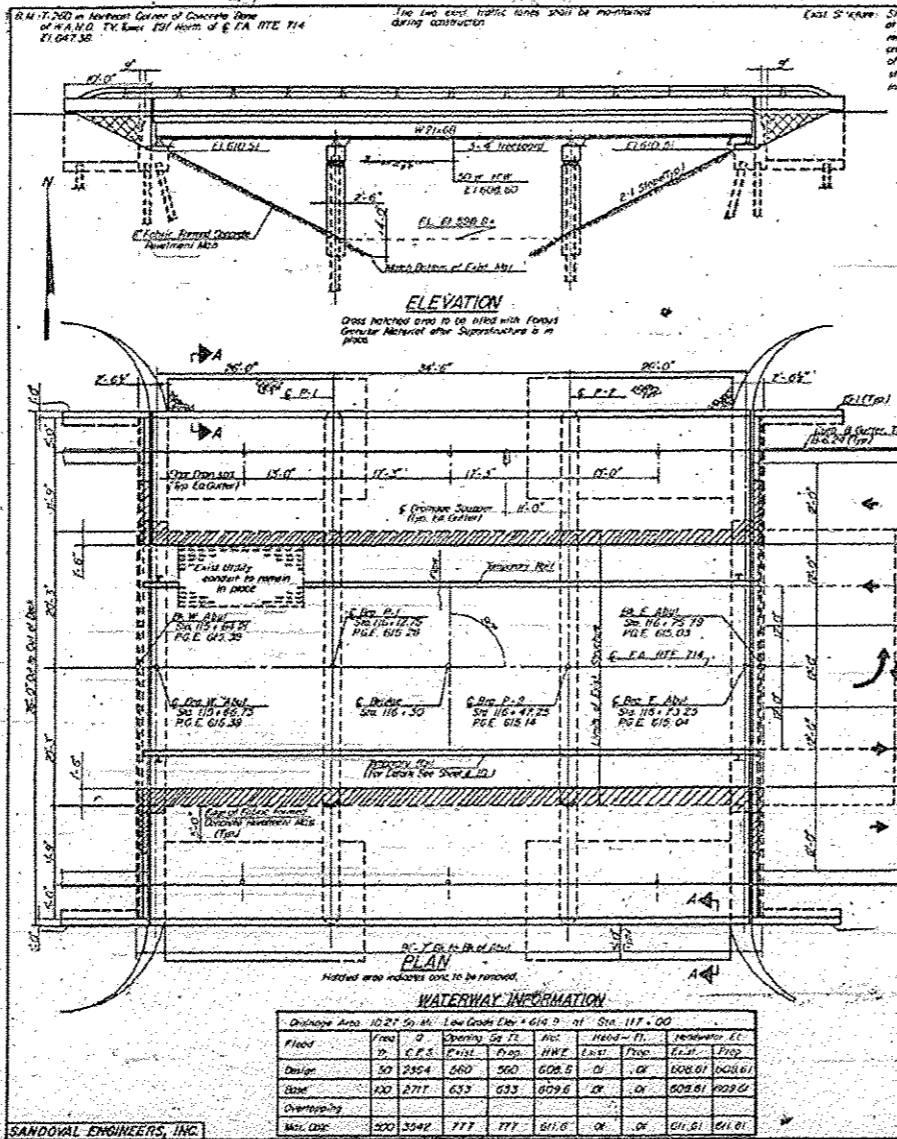
ROCKER AT ABUTMENTS



BOLSTER AT PIER 2



PINTLE



STATION 116+30
 BRIDGE 198- BY
 STATE OF ILLINOIS
 F.A. RTE 714 SECTION BY
 F.A. PROJ. F-714/1-1
 LEADING TO SD
 STA. 116+30-012
 NAME PLATE
 R04 94 21131

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class X Concrete-Super	cu yd	124.3	—	124.3
Class X Concrete	cu yd	—	24.2	24.2
Prime Coat Epoxy Control	sq yd	20,000	—	20,000
Reinforcement Bars	lbs	—	12,150	12,150
Structural Steel	Lump Sum	—	—	—
Performance Coat	sq yd	76	—	76
Forming Steel Pile	sq ft	—	1116	1116
Forming Steel Plate	sq ft	—	1116	1116
Top Piles-Steel HP #34	ea	—	2	2
Expansion Bolt	ea	—	100	100
Aluminum Rivets, Type L	ea	214	—	214
Rims Grade Bolt	ea	100	—	100
Structure Excavation	cu yd	—	207	207
Public Filled Concrete	cu yd	—	310	310
Drainage Scaffer (Special)	ea	—	2	2
Protective Coat	sq yd	440	—	440
Moisture Barrier	sq yd	—	1	1
Concrete Removal	cu yd	110	2.6	2.6
Form Release	cu yd	—	—	—

GENERAL NOTES

SEE PROPOSAL FOR BORING DATA.

FASTENERS SHALL BE HIGH STRENGTH BOLTS (AASHTO R 360, TYPE 31). BOLTS 3/4" Ø, OPEN HOLES 1 1/8" Ø, UNLESS OTHERWISE NOTED.

CALCULATED WEIGHT OF STRUCTURAL STEEL = 37,320.

FOR EPOXY-CONTROLLED AND/OR PRIME COAT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURE STEEL EXCEPT WHERE OTHERWISE NOTED.

FIELD WEIGHING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PILE SUPPORTS. FIELD WEIGHING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.

THE PAIR LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS, ZONE 2. THE COMPONENTS ARE THE VICE FLANGE BEAMS-PLUS ALL STEEL MATERIAL.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, A-102, OR M-33 GRADE 60.

WARRANTY OF WORK SHALL BE VALID IN THE FIELD TO THE EXTENT OF CONDITIONS AS DIRECTED BY THE ENGINEER.

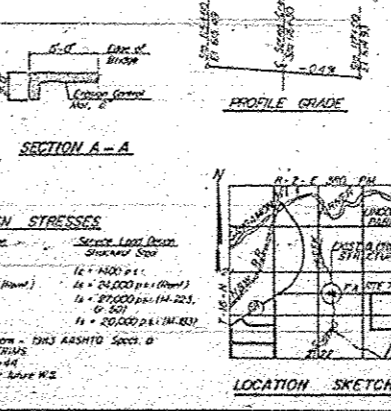
PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO MINOR CORRECTIONS OR VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR DETERMINATION OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR SHALL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 40,000 LBS., AND 3/4" Ø X 12" HEIGHT BOLTS.

BEARING SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE ESTABLISHED ELEVATIONS WITHIN A TOLERANCE OF 1/8" INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/2" ADVANTING SHIMS, OF THE THICKNESS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OF SHIMS.

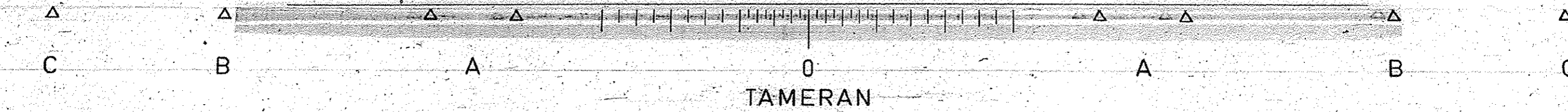
THE CONTRACTOR SHALL DRIVE 1-1/2" Ø X 10" DEEP PILES IN A PREPARATION LOCATION AT THE NEAR ABUTMENT AND 1' Ø X 12" AT PILE 2 AS DIRECTED BY THE ENGINEER BEFORE PROCEEDING WITH THE REMAINDER OF PILES.

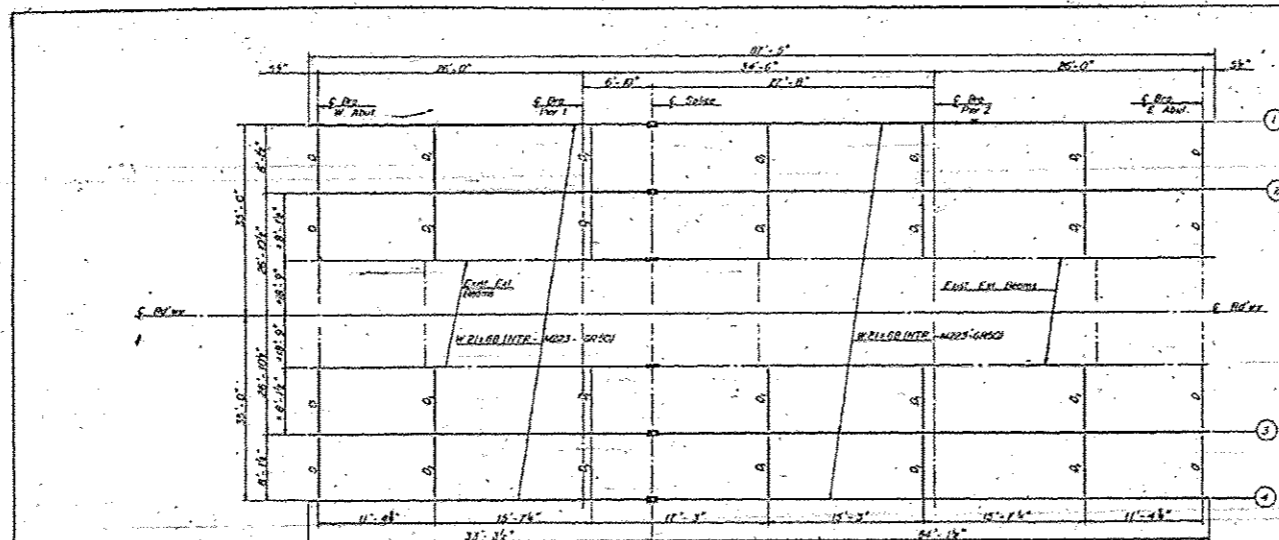
APPROVED
 FOR STRUCTURAL ADVISORY VIEW



WATERWAY INFORMATION

Challenge Auto	1027	50	45	Low Crown Elev.	616.0	at Sta.	117+00
Flood	700	0	Opening	50	500	Head	11
Design	50	2804	660	500	608.0	OK	OK
Base	120	2717	653	653	609.6	OK	OK
Overturning						OK	OK
Max. Crd.	500	3542	777	777	611.0	OK	OK





FRAMING PLAN
 (NTR - INCLUDES NOTES, SUPPORTS, REVISIONS)

DATE	11/14/13	BY	STJ	SHEET NO.	6
APP. DATE	11/14/13	BY	STJ	OF	10 SHEETS

INT. BEAM MOMENT TABLE

Location	Dim 1 (ft)	Dim 2 (ft)	Moment (ft-k)
W ADJ - W ADJ	14.00	14.00	14.00
W ADJ - Pier 1	13.34	13.34	13.34
W ADJ - Pier 2	17.4	17.4	17.4
W ADJ - E ADJ	13.74	13.74	13.74
W ADJ - Pier 3	11.2	11.2	11.2
W ADJ - E ADJ	23.0	23.0	23.0
W ADJ - Pier 4	20.7	20.7	20.7

INT. BEAM REACTION TABLE

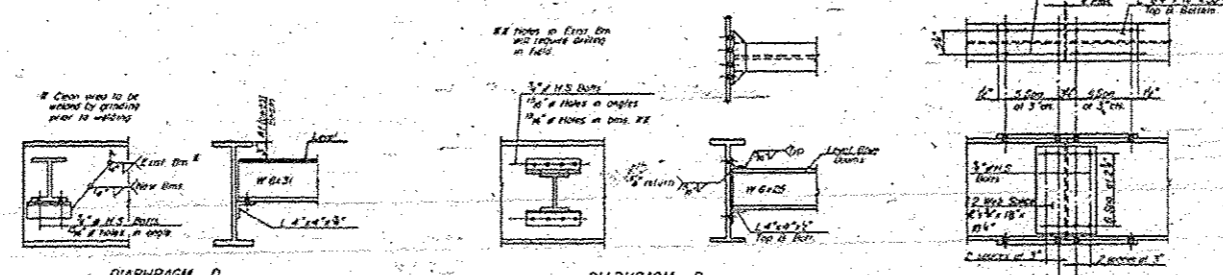
Location	Dim 1 (ft)	Dim 2 (ft)	Reaction (k)
W ADJ - W ADJ	14.0	14.0	45.1
W ADJ - Pier 1	13.34	13.34	44.8
W ADJ - Pier 2	17.4	17.4	13.4
W ADJ - Pier 3	11.2	11.2	13.3

NOTES:
 Prior to pouring deck slab contractor shall provide temporary hold down straps consisting of 2x8 metal straps at all new column beam supports. Secure straps with equipment bearing anchor bolts. Remove after deck slab has been poured.
 Connecting bolt holes for all diaphragms in bents 2 and 3 shall be 1/4" x 1/2" inch spaced holes. These spacing holes shall have 2x4 structural deck washer placed over them.
 The bolts for the spaced holes shall only be finger-tightened prior to the deck slab pour, and then be fully-tightened after the completion of the pour.

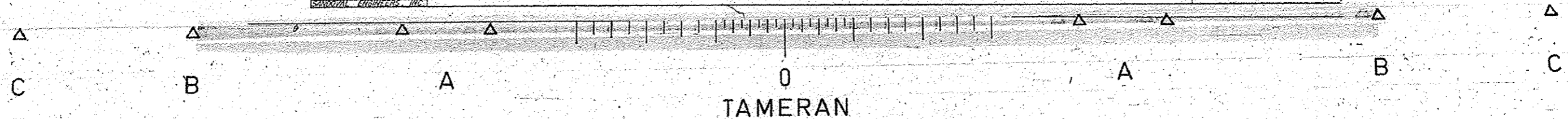
ELEVATIONS - TOP OF BEAMS

Location	Dim 1 (ft)	Dim 2 (ft)	Elevation
W ADJ - W ADJ	14.00	14.00	614.25
W ADJ - Pier 1	13.34	13.34	614.07
W ADJ - Pier 2	17.4	17.4	615.00
W ADJ - Pier 3	11.2	11.2	615.25
W ADJ - E ADJ	23.0	23.0	613.87

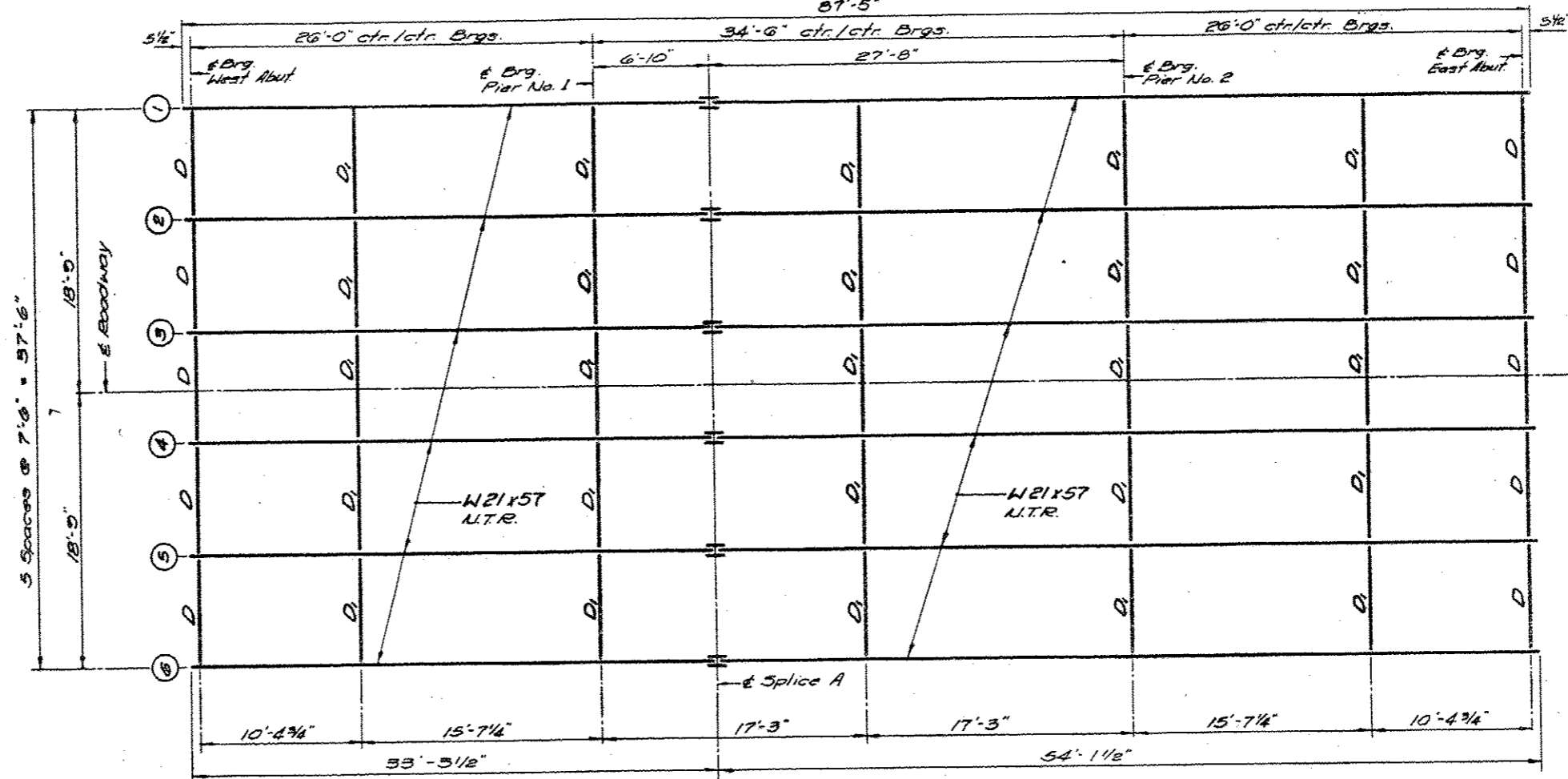
(For Fabrication Only)



STRUCTURAL STEEL
 FA RTE, 714
 SECTION 120 BY
 OVER
 SPRING CREEK
 MACON COUNTY
 STA. 116+30



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



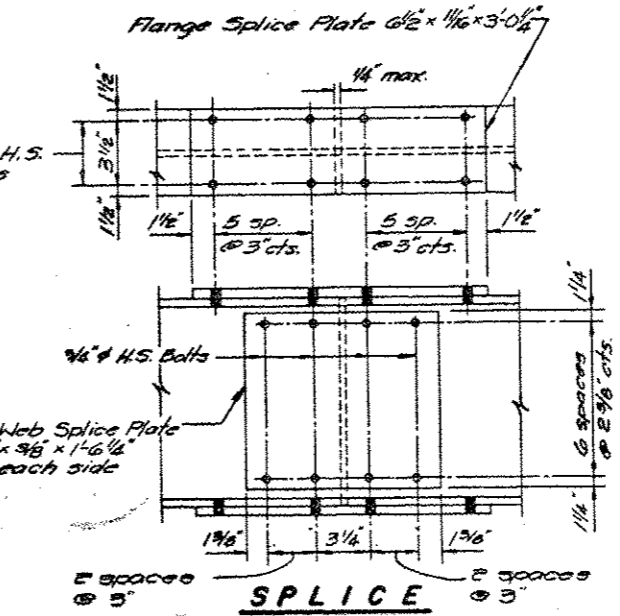
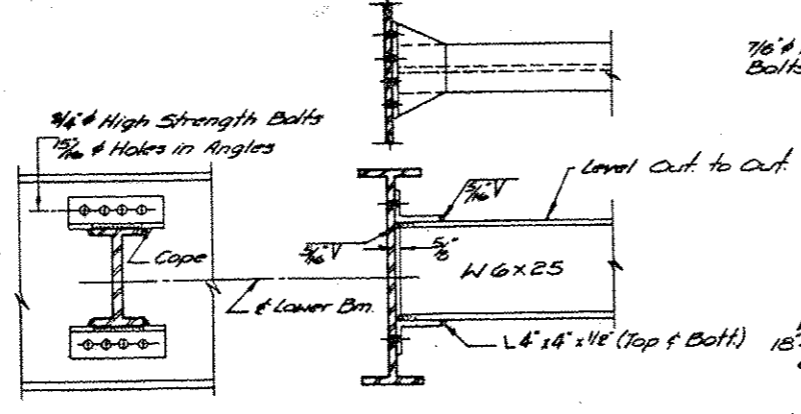
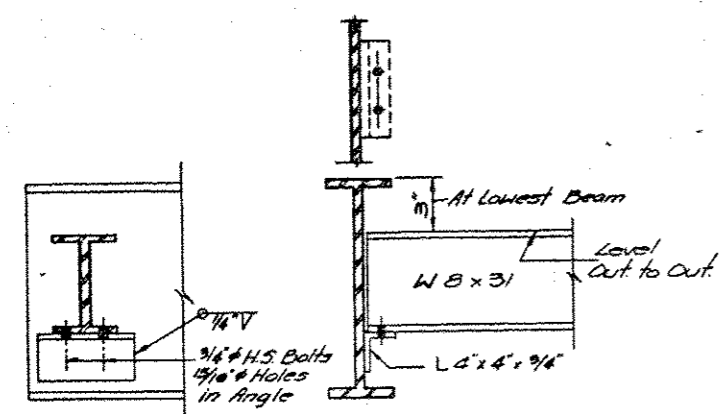
INTERI

To	C
By	(K)
M	(K)
M	(K)
M	(K)
M	(K)
M	(K)

INTE

R	(K)
R	(K)
T	(K)
R	(K)

Note:
Prior to pouring deck slab, temporary hold down straps, galvanized metal strips, bearings. Secure straps and anchor bolts. Remove at pour.



ELEVATIONS TOP OF
(For Fabrication)

Location	Elev.
6 Brg. West Abutment	61.0
6 Brg. Pier No. 1	61.0
6 Splice A	61.0
6 Brg. Pier No. 2	61.0
6 Brg. East Abutment	61.0

NOTE: Elevations tabular of beam flange at all

Note: Hardened washers shall be required over 1/2" holes in angles.

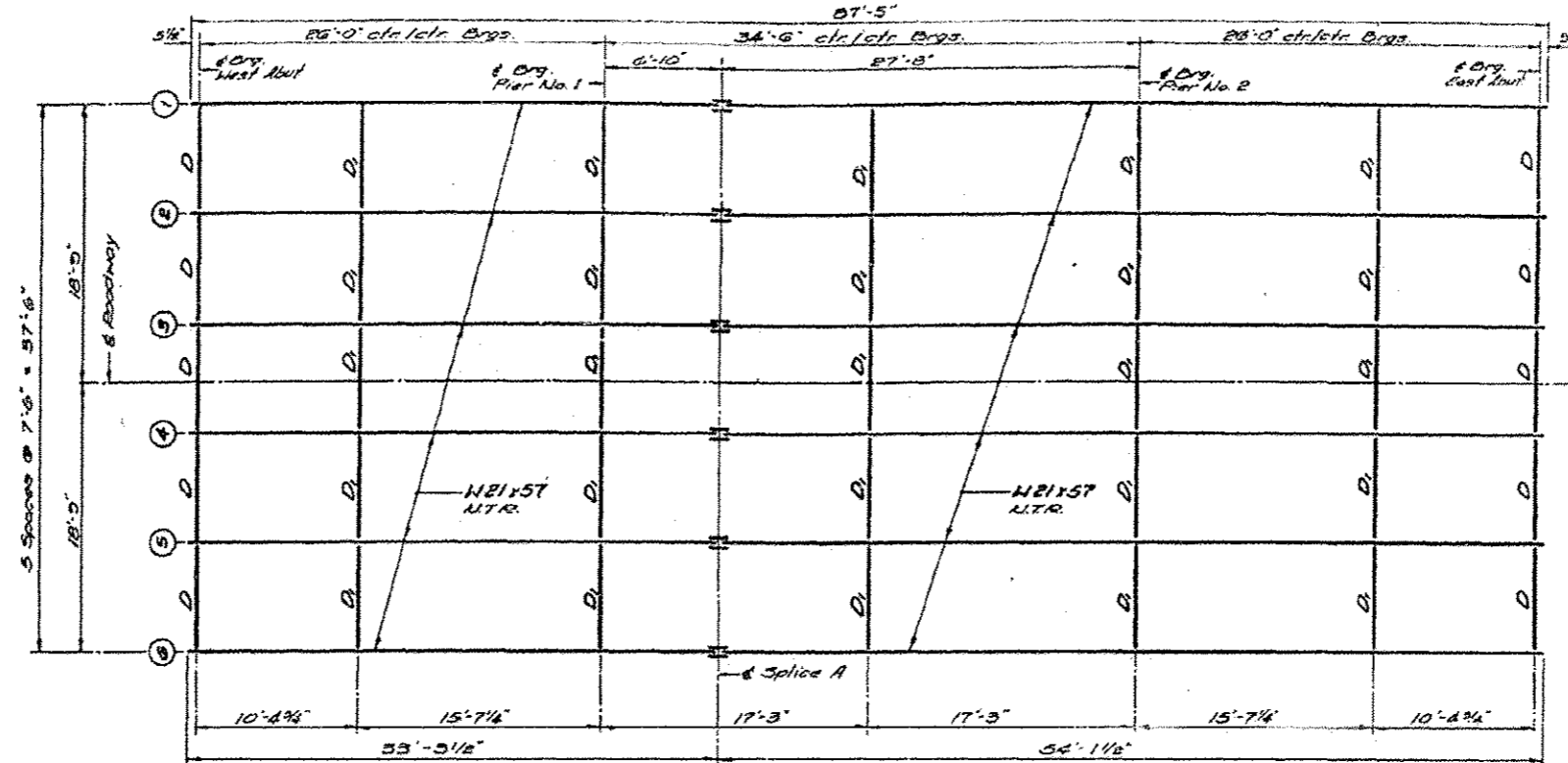
FILE NAME	USER NAME	DESIGNED	REVISED
DATE	SCALE	CHECKED	REVISED
PLOT DATE		DATE	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: N/A	SHEET 6 OF 6 SHEETS	STA. TO STA.	CONTRACT NO. 74613
ILLINOISIFIED AID PROJECT		TOTAL SHEETS: 99	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP RYE	128 BR	MACON	30	18



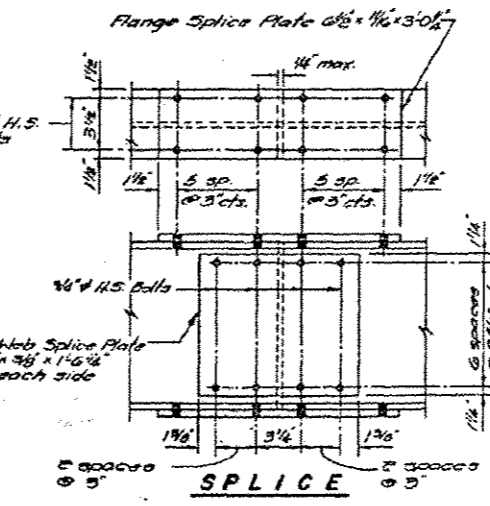
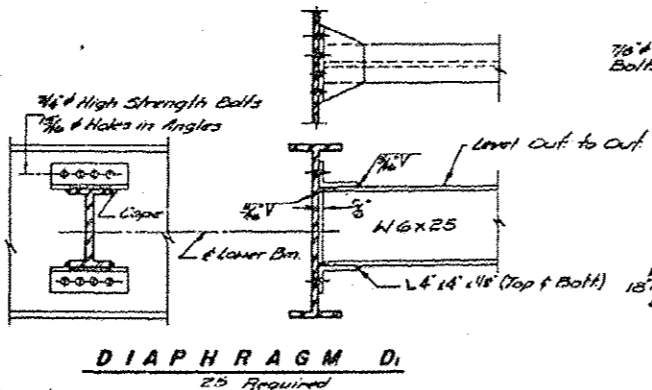
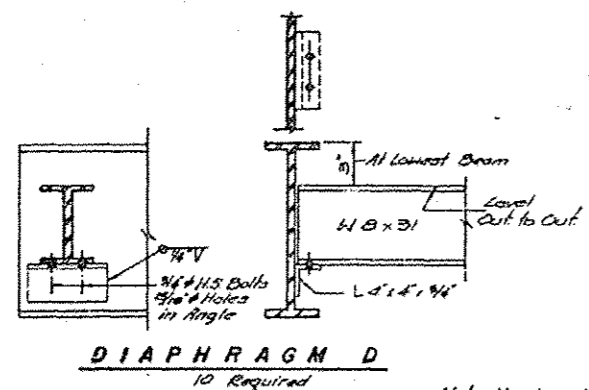
INTERIOR BEAM MOMENT TABLE

Location	04 Splice A	Pier No. 1	Pier No. 2	05 Splice B
Lo (k-ft)	1170	1170	1170	1170
Mo (k-ft)	1048	1048	1048	1048
M1 (k-ft)	45.3	45.3	45.3	45.3
M2 (k-ft)	106.4	106.3	106.2	106.2
M3 (k-ft)	37.9	37.9	37.9	37.9
M4 (k-ft)	209.6	209.3	209.3	209.3
Ro (k)	226.6	226.6	226.6	226.6

INTERIOR BEAM REACTION TABLE

Location	Reactions	Pier
R1 (k)	9.77	35.21
R2 (k)	20.70	36.00
R3 (k)	20.00	35.20
R4 (k)	20.57	35.21

FRAMING PLAN
(NTR indicates Notch Toughness Requirements)



Notes:
Prior to pouring deck slab contractor shall provide temporary hold down straps consisting of 2" x 1/2" galvanized metal strips at all abutment beam bearings. Secure straps with abutment bearing anchor bolts. Remove after deck slab has been poured.

ELEVATIONS TOP OF WF BEAMS
(For Fabrication Only)

Location	Beam No. 119	Beam No. 113	Beam No. 115
0 Org. West Abutment	614.35	614.54	614.66
0 Org. Pier No. 1	614.25	614.35	614.51
0 Splice A	614.20	614.35	614.51
0 Org. Pier No. 2	614.13	614.27	614.45
0 Org. East Abutment	614.04	614.10	614.31

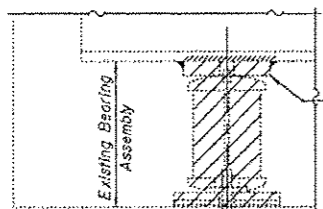
NOTE: Elevations tabulated above are to top of beam flange at all locations.

DESIGNED: D.H.G.
CHECKED: K.L.F.
DRAWN: J.M.B.
CHECKED: K.L.F.

Notes: Hardened washers shall be required over 1/2" holes in angles.
All contact surfaces of joints for the diaphragms at Abutments shall be free of paint or lacquer.

STRUCTURAL STEEL
FRAMING PLAN & DETAILS
FAP RYE, 714, SEC. 128 BR
MACON COUNTY
STATION 116+30

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

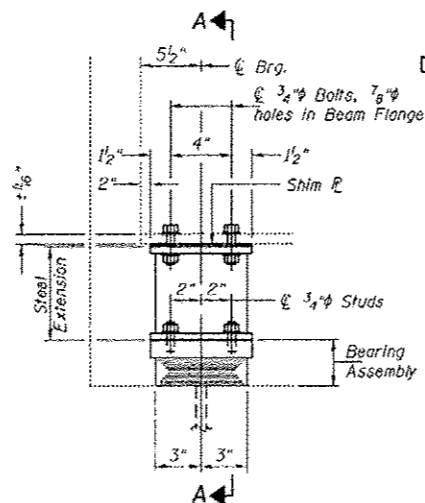


Existing R to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

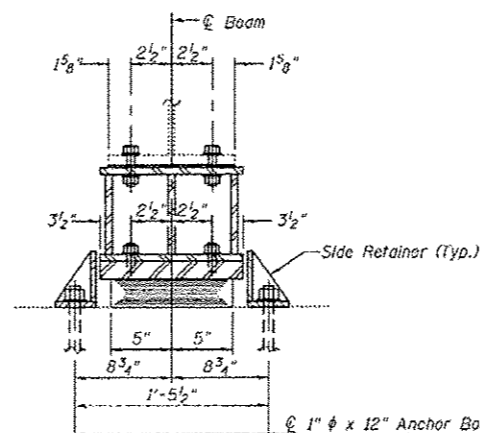
Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



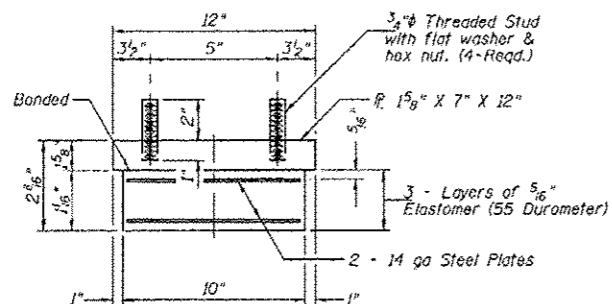
ELEVATION AT EAST AND WEST ABUTMENT



SECTION A-A

1" φ x 12" Anchor Bolts with 2 1/2" x 2 1/2" x 5/16" R washer under nut.

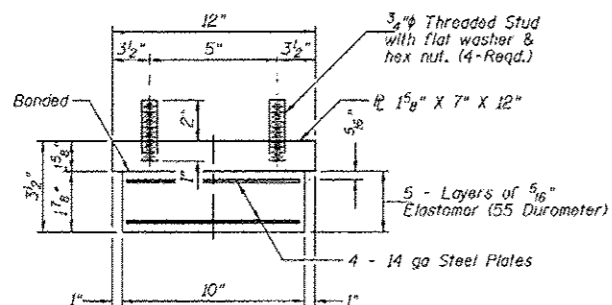
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. Jack capacity = 25 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



WEST ABUTMENT BEARING ASSEMBLY

(10 Req'd)

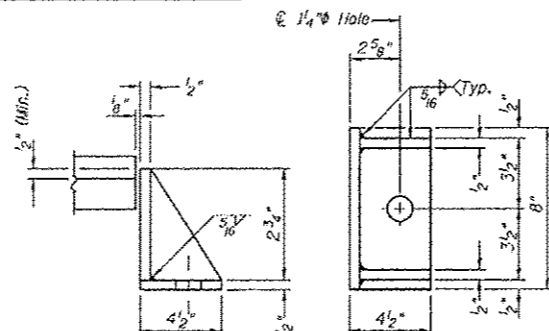
Note:
Shim plates shall not be placed under Bearing Assembly.



EAST ABUTMENT BEARING ASSEMBLY

(10 Req'd)

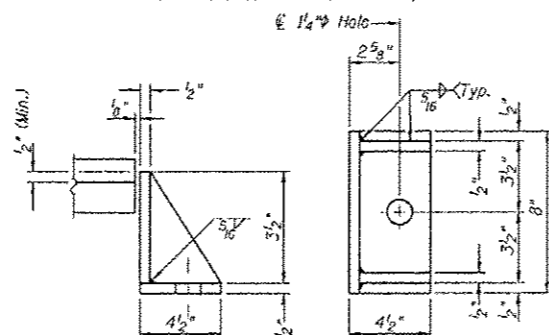
Note:
Shim plates shall not be placed under Bearing Assembly.



WEST ABUTMENT SIDE RETAINER

(20 Req'd)

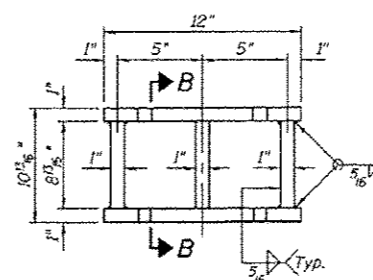
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



EAST ABUTMENT SIDE RETAINER

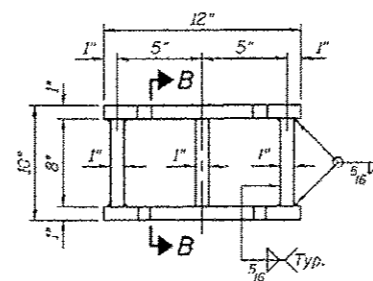
(20 Req'd)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



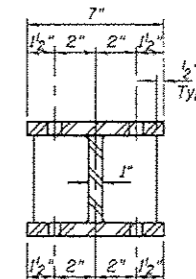
WEST ABUTMENT STEEL EXTENSION DETAIL

(10 Req'd)

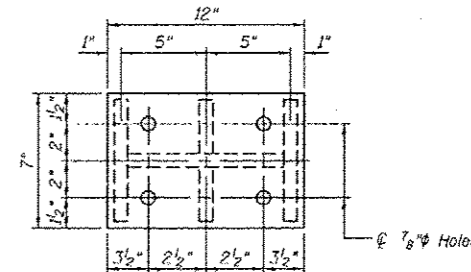


EAST ABUTMENT STEEL EXTENSION DETAIL

(10 Req'd)



SECTION B-B



PLAN TOP AND BOTTOM PLATE

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	20
Jack and Remove Existing Bearings	Each	20
Furnishing and Erecting Structural Steel	Pound	2,320
Anchor Bolts 1"	Each	40

WEST ABUTMENT BEAM REACTIONS

RR	(K)	10.7
Rt	(K)	32.4
Imp.	(K)	9.7
R (Total)	(K)	52.8

EAST ABUTMENT BEAM REACTIONS

RR	(K)	10.7
Rt	(K)	32.4
Imp.	(K)	9.7
R (Total)	(K)	52.8

**BEARING DETAILS
SN 058-0112**

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2	714	48X-2(W,RS), 128(W-1,RS-2) & 128BY	MACON	100	96
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 74405					

DESIGNED V.H.V.
CHECKED D.A.B.
DRAWN Drew Christopher
CHECKED V.H.V. D.A.B.
TYI/REPS 12-03-2008

March 4, 2010
EXAMINED [Signature]
PASSED [Signature]
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES